



EUROPEAN COMMISSION
DG Competition

PUBLIC VERSION

***Case M.9820 - DANFOSS / EATON
HYDRAULICS***

(Only the English text is authentic)

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 8(2) Regulation (EC) 139/2004
Date: 18/03/2021

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Brussels, 18.3.2021
C(2021) 1697 final

COMMISSION DECISION

of 18.3.2021

**declaring a concentration to be compatible with the internal market and the EEA
Agreement**

(Case M.9820 – DANFOSS / EATON HYDRAULICS)

(Text with EEA relevance)

(Only the English text is authentic)

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COMMISSION DECISION

of 18.3.2021

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(Case M.9820 – DANFOSS / EATON HYDRAULICS)

(Text with EEA relevance)

(Only the English text is authentic)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings¹, and in particular Article 8(2) thereof,²

Having regard to the Commission's decision of 21 September 2020 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

Having regard to the opinion of the Advisory Committee on Concentrations,

Having regard to the final report of the Hearing Officer in this case,

Whereas:

1. INTRODUCTION

- (1) On 17 August 2020, the Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation according to which Danfoss A/S (Denmark, hereinafter referred to as 'Danfoss' or the 'Notifying Party') would acquire within the meaning of Article 3(1)(b) of the Merger Regulation sole

¹ OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union (the 'TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

² For the purposes of this Decision, although the United Kingdom withdrew from the European Union as of 1 February 2020, according to Article 92 of the Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community (OJ L 29, 31.1.2020, p. 7), the Commission continues to be competent to apply Union law as regards the United Kingdom for administrative procedures which were initiated before the end of the transition period.

control of Eaton Hydraulics³ (Ireland, hereinafter referred to as ‘Eaton’) by way of purchase of stocks and assets (hereinafter referred to as the ‘Transaction’). Danfoss and Eaton are referred to as the ‘Parties’.

2. THE PARTIES AND THE CONCENTRATION

- (2) **Danfoss** is a global corporation active in the manufacturing of components and engineering technologies for refrigeration, air conditioning, heating, motor control and hydraulics for off-road machinery. Danfoss also provides solutions for renewable energy, for instance solar and wind power, as well as district energy infrastructure for cities. Danfoss is controlled by the Bitten & Mads Clausen's Foundation and maintains 71 factories and has 27 795 employees worldwide.
- (3) **Eaton** is part of a multinational group hereinafter referred to as the ‘Eaton Group’, a global corporation active in the supply of power management solutions for electrical, hydraulics, aerospace, and vehicle applications. Eaton comprises the hydraulics business segment of Eaton (excluding its golf grips and filtration businesses). It is made of two product divisions, (i) Fluid Conveyance and (ii) Power & Motion Controls, which are active in the supply of hydraulic components and systems for industrial and mobile equipment. Eaton is a publicly held Irish corporation.
- (4) On 21 January 2020, Danfoss and the Eaton Group entered into a Stock and Asset Purchase Agreement under which Danfoss has agreed to acquire Eaton from the Eaton Group. The agreed purchase price is USD 3 300 million (approximately EUR 3 000 million) in cash.
- (5) Post-Transaction, Danfoss will acquire sole control over Eaton. The Transaction therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

3. UNION DIMENSION

- (6) The Parties have a combined aggregate world-wide turnover of more than EUR 5 000 million (In 2019, Danfoss had a world-wide turnover of EUR [...] million and Eaton EUR [...] million). Each of them has a Union-wide turnover in excess of EUR 250 million (In 2019, Danfoss had a Union-wide turnover of EUR [...] million and Eaton of EUR [...] million), while they do not achieve more than two-thirds of their aggregate Union-wide turnover within one and the same Member State.
- (7) The Transaction therefore has a Union dimension pursuant to Article 1(2) of the Merger Regulation.

4. THE PROCEDURE

- (8) On 17 August 2020, the Notifying Party notified the Transaction to the Commission.
- (9) During its initial (Phase I) investigation, the Commission reached out to a large number of competitors and customers (that is distributors and Original Equipment Manufacturers ‘OEMs’) of the Parties requesting information through telephone calls and written requests for information pursuant to Article 11 of the Merger Regulation.

³ Eaton is a business of the Eaton Group that includes (i) the shares of Eaton Hydraulics LLC as well as (ii) several other entities belonging to the hydraulics division of the Eaton Group and certain assets from the Eaton Group, excluding its golf trips and filtration businesses.

- (10) In addition, the Commission sent several written requests for information to the Parties and reviewed internal documents of the Parties submitted at that stage.
- (11) On 21 September 2020, based on the initial market investigation, the Commission raised serious doubts as to the compatibility of the Transaction with the internal market and the functioning of the EEA Agreement, and adopted a decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation (hereinafter referred to as the ‘Article 6(1)(c) Decision’).
- (12) On 22 September 2020, the Commission provided a set of non-confidential versions of certain key submissions of third parties collected during the initial (Phase I) investigation to the Notifying Party.
- (13) On 1 October 2020, the Notifying Party submitted their written comments on the Article 6(1)(c) Decision (hereinafter referred to as the ‘Reply to the Article 6(1)(c) Decision’).
- (14) On 6 October 2020, a virtual state-of-play meeting took place between the Commission and the Parties.
- (15) On 12 October 2020, following a formal request by the Notifying Party dated 9 October 2020, the Commission extended the time-period pursuant to Article 10(3), first paragraph, of the Merger Regulation set for the adoption of a decision pursuant to Article 8 of the Merger Regulation in relation to the Transaction was extended by ten working days pursuant to Article 10(3), second paragraph, of the same regulation. The Notifying Party asked for the extension in order to allow them to submit additional advocacy papers.
- (16) On 21 October 2020, the Notifying Party submitted an advocacy paper on orbital motors (hereinafter referred to as the ‘Orbital Motors Advocacy Paper’).
- (17) On 10 November 2020, the Notifying Party submitted an advocacy paper on steering units (hereinafter referred to as the ‘Steering Advocacy Paper’).
- (18) During its Phase I and during its in-depth (Phase II) investigation, the Commission sent several requests for information to the Parties pursuant to Article 11(2) of the Merger Regulation, including the request for internal documents of 23 September 2020 addressed to Danfoss and the request for internal documents of 23 September 2020 addressed to Eaton.
- (19) In addition to collecting and analysing a substantial amount of information from the Parties (including internal documents and submissions), the Commission collected information through additional telephone calls and written requests for information addressed to the Parties’ competitors and customers pursuant to Article 11(2) of the Merger Regulation during the Phase II investigation.
- (20) On 24 November 2020, the Commission informed the Parties of the preliminary results of the Phase II investigation during a virtual state-of-play meeting.
- (21) On 25 November 2020, the Commission received a communication from the Notifying Party informing the Commission that it intended to discuss the possible submission of remedies.
- (22) On 27 November 2020, the Notifying Party presented to the Commission in a virtual meeting an informal and preliminary commitments concept (the ‘First Commitments Concept’) with a view to rendering the concentration compatible with the internal market.
- (23) On 27 November 2020, the Notifying Party requested the Commission to extend the periods provided for under Article 10(3) first subparagraph by 5 working days in

order to engage in further remedy discussions. This request was made pursuant to Article 10(3) second subparagraph, third sentence of the Merger Regulation.

- (24) On 27 November 2020, following the request of the Notifying Party, the Commission decided to extend the period for taking a decision pursuant to Article 8 of the Merger Regulation by a total of 5 working days in accordance with Article 10(3) second subparagraph, third sentence of the Merger Regulation.
- (25) Following this extension, the Commission informed the Parties during a state of play meeting held on 3 December 2020 that the First Commitment Concept was insufficient to remedy its concerns.
- (26) On 8 December 2020, the Commission adopted a Statement of Objections (the 'SO'), which was notified to the Notifying Party the same day. In the SO, the Commission set out the preliminary view that the Transaction would likely significantly impede effective competition in the internal market, within the meaning of Article 2 of the Merger Regulation, in relation to the supply of hydraulic steering units, electrohydraulic steering valves and orbital motors. That same day, the Notifying Party was granted access to the file.
- (27) On 21 December 2020, the Notifying Party presented the Commission with a revised preliminary commitments concept (the 'Second Commitments Concept').
- (28) On 22 December 2020, the Notifying Party submitted its reply to the SO (the 'Reply to the SO').
- (29) In a state-of-play meeting on 11 January 2021, the Commission informed the Notifying Party that the Second Commitments Concept was insufficient to remedy its concerns.
- (30) On 15 January 2021, the Notifying Party submitted a first form RM followed by a first draft Commitments on 18 January 2021, pursuant to Article 8(2) of the Merger Regulation, in order to address the competition concerns identified in the SO (the 'Commitments of 18 January 2021').
- (31) On 20 January 2021, a state-of-play meeting was held during which the Commission informed the Notifying Party that the Commitments of 18 January 2021 were insufficient to remedy its concerns.
- (32) On 20 January 2021, a Letter of Facts setting forth evidence corroborating the objections set out in the SO was sent to the Notifying Party.
- (33) On 21 January 2021, the Notifying Party requested the Commission to extend the periods provided for under Article 10(3) first subparagraph by 5 working days in order to engage in further remedy discussions. This request was made pursuant to Article 10(3) second subparagraph, third sentence of the Merger Regulation.
- (34) On 28 January 2021, the Notifying Party submitted a revised form RM and revised draft Commitments, pursuant to Article 8(2) of the Merger Regulation, in order to address the competition concerns identified in the SO (the 'Commitments of 28 January 2021' and the 'Form RM of 28 January 2021').
- (35) On 1 February 2021, the Commission launched a market test of the Commitments of 28 January 2021.
- (36) On 3 February 2021, the Notifying Party submitted its comments on the Letter of Facts ('Reply to the Letter of Facts').

- (37) On 8 February 2021, a state-of-play meeting was held in order to inform the Notifying Party of the result of the market test in relation to the Commitments of 28 January 2021.
- (38) On 15 February 2021, the Notifying Party submitted revised commitments pursuant to Article 8(2) of the Merger Regulation to address the competition concerns identified in the SO (the ‘Final Commitments’).
- (39) On 19 February 2021, the Commission sent a draft Article 8(2) decision to the Advisory Committee with the view of seeking the Committee’s opinion on it.
- (40) The meeting of the Advisory Committee took place on 8 March 2021.

5. INTRODUCTION AND COMMON FEATURES OF THE HYDRAULIC SYSTEMS AND COMPONENTS MARKETS

- (41) Hydraulic power systems (‘HPS’) are used in machines or in industrial plants for transferring mechanical energy from a certain mechanical energy source (e.g. from a diesel engine) to a certain point of use. The energy from the power source is converted into hydraulic energy through a pump, and back into mechanical energy through a hydraulic cylinder or a hydraulic motor. In this way, the mechanical energy of the diesel engine can be transported from the power source to its final point of use.
- (42) HPS find their use in a number of applications, which can broadly be classified as stationary and mobile. Stationary applications include industrial manufacturing plants, oil & gas and chemical plants, while mobile applications concern vehicles that can be driven on-road or off-road. The main customers of hydraulic systems and components for mobile applications are OEMs and distributors, active in the production of (i) agricultural machinery (for example tractors and harvesters) or (ii) construction machinery (for example excavators and lifts). The Notifying Party estimates that in the EEA there are more than 800 OEMs active in agriculture machines, and more than 600 OEMs active in construction machines.⁴ While large OEMs such as John Deere, Caterpillar or CNH, are served by the Parties directly, smaller OEMs are typically served through distributors. Smaller OEMs are often supplied through distributors due to the more limited volume of purchases. In addition, distributors typically provide to smaller OEMs additional services (for example system integration) which larger OEMs have the capability of undertaking in-house.

Figure 1 – Examples of machines using hydraulic systems

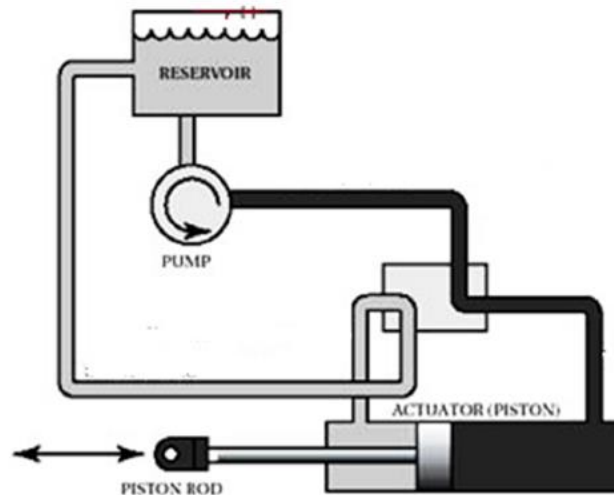


Source: Commission, based on figures in Form CO Sections 6 to 9 Introduction.

⁴ Form CO Sections 6 to 9 for Steering, Table 53.

- (43) An HPS typically consists of several key components: (i) a pump, (ii) a motor (or actuator), (iii) a number of valves, (iv) an oil reservoir, and automation and control components (that is software, electronic controllers, etc.); and, in the case of a system used for steering, (vi) a steering unit. The various components are typically connected through the so-called fluid conveyance parts (mainly pipes and hoses). Figure 2 shows the schematic of a typical HPS.





Figure 2 – Schematic of a typical hydraulic power system



Source: Form CO Sections 6 to 9 Introduction, figure 5

- (44) The pump generates a flow, which in turn creates pressure in the hydraulic system. The motor or actuator (in Figure 2 a cylinder or linear motor), converts that pressure into a mechanical force (as in Figure 2) or into a torque (in case of a rotating motion).
- (45) An HPS with steering purposes (also referred to as “steering system”) converts the steering command (e.g., the rotary movement of the steering wheel in the driver’s hand) into the angular turn of the wheels. Over the years, different steering technologies have evolved. As further explained in Sections 6.3.3.1 and 6.3.3.2 and recital (171), hydraulic steering units (‘HSU’) use pressurised hydraulic fluid generated by pumps to move an actuator (cylinder) that moves the wheels. In contrast, in electrohydraulic steering units, which are still hydraulic but electronically controlled, an electrohydraulic steering valve (‘ESV’) converts the hydraulic oil to the cylinders in proportion to the electronic input signal. Electric steering systems convert the power from an electric source (for example electricity coming from a battery) into steering motion through an electric system, which includes an electric motor.
- (46) Figure 3 below shows the three main steering system configurations, the typical types of machines in which they can be installed and the main steering components that are required.

Figure 3 – Three steering system configurations and main components by type of machine

Typical machine	Typical steering system	Main components required		
		Hydraulic Steering Unit (HSU)	Electro Hydraulic Steering Valve (ESV)	Electric motor
 Small machines	Hydraulic Steering system (manual steering)	✓		
 Large machines	Electro-Hydraulic Steering system	✓	✓	
 Large machines	Steer-by-wire system		✓	
 Small power machines/ future trend	Electric steering			✓

Source: Commission

- (47) OEMs typically undertake the following steps when selecting suppliers for HPS components: **The first step** of the procurement process occurs when a machine is in its design phase. It typically starts with an enquiry sent by an OEM (directly or through distributors) to various potential suppliers of a given component. Each supplier designs its technical solution and submits an offer. For each HPS component, a potential supplier is selected, and, on this basis, a prototype is built and tested. Upon a successful test of the prototype, **the second step** is to finalise supplying conditions, including price, schedules of deliveries, etc. Overall, the selection process is based on a number of criteria such as quality, product specifications, price, delivery time (time-to-market) and delivery performance.
- (48) The process of testing a certain HPS component intended to be employed in a certain machine is typically referred to as ‘homologation’ or ‘qualification’ process. In addition to the qualification of individual components, OEMs would typically qualify also its individual suppliers through, for example, financial audits. Typically, only new suppliers are to be qualified by an OEM, and suppliers that already had a commercial relationship with the OEM would typically not go through the supplier homologation process again.

6. PRODUCT MARKET DEFINITION

6.1. Legal Framework of the Commission’s assessment

- (49) The Commission’s Market Definition Notice defines a **relevant product market** as comprising all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products’ characteristics, their prices and their intended use.⁵ In its assessment, the Commission takes into account various factors, including:
- competitive constraints
 - demand substitution

⁵ See, for instance, paragraph 7 of Commission Notice on the definition of the Relevant Market for the purposes of Community competition law OJ C 372, 9.12.1997, p. 5 (‘Market Definition Notice’).

- (c) supply substitution
- (d) views of customers and competitors.

6.2. Introduction to the product market definition

6.2.1. Components for HPS belong to separate product markets

6.2.1.1. The Notifying Party's view

(50) The Notifying Party is of the view that the individual HPS components (such as pumps, valves or motors) belong to separate product markets. According to the Notifying Party, this stems from the fact that OEMs typically organise their sourcing processes at individual component level, and request quotations to suppliers for each component. In addition, the Notifying Party notes that none of the Parties offers a complete portfolio of components for HPS (e.g. neither Party produces mobile cylinders, gearboxes, filters, accumulators, clutches, drive shafts and reservoirs),⁶ and therefore would not be able to offer a full HPS.

6.2.1.2. The Commission's past practice

(51) The Commission has previously found that mobile hydraulic components constitute separate markets whereby each of the components (including pumps, motors and valves) can be considered as a separate market based on its respective functioning and application.⁷

6.2.1.3. The Commission's assessment

(52) On the basis of the evidence gathered during its investigation, and in line with the arguments of the Notifying Party, the Commission finds that each individual HPS component constitutes a separate product market.

(53) **First, on the demand side**, individual HPS components such as pumps, valves, or motors, are differentiated products which perform a specific function within the system, and which are, typically not substitutable with one another.

(54) In the first place, as explained in recitals 0-(45) above, each component serves a specific purpose and, with few exceptions, cannot be replaced by other products. The pump generates flow, which in turn creates pressure in the hydraulic system. The motor or actuator converts that pressure into mechanical force or torque. A reservoir holds hydraulic fluid. Valves are used to control the flow of hydraulic fluid in the HPS by opening, closing or partially closing the pathway of the hydraulic fluid.

(55) In the second place, the fact that each component serves a different purpose is complemented by the fact that the market investigation suggests that customers appear to have a tendency to procure such components individually. While in some instances customers may choose to procure more than one product as a system from a supplier, components from separate suppliers are often used in combination with each other and integrated in-house by the customer, as evidenced in recital (56) below.

(56) One major competitor of the Parties, who also sells integrated systems, explains that “[a]lthough systems might be engineered with customers, the mobile hydraulics

⁶ Form CO Sections 6 to 9 Introduction, paragraph 107; ‘[...]’, submitted the Notifying Party on 14 September 2020.

⁷ See for instance: M.2060 – *Bosch/ Rexroth*, recitals 23-24; M.3082 – *Pon/Nimbus/Geveke*, paragraph 10; IV/M.152 – *Volvo/Atlas*, paragraph 14; M.8190 – *Weichai/ Kion*, paragraphs 24-27.

market is predominantly a component business".⁸ An OEM further explains: "we want to be able to make our own system and buy from different suppliers".⁹ This customer's preference is in line with procurement practices in the industry. OEMs "typically purchase individual hydraulic components",¹⁰ and send request quotes from suppliers separately for each hydraulic component and choose the supplier who offers the most competitive price for each separate component, as further evidenced in recitals (58)-(59) below. One OEM explains: "We purchase individual components/component groups from and integrate them in our product".¹¹ Another describes the procurement process as follows: "Technical requirements analysis, identification of the suitable components, comparison of different suppliers and identification of the most cost-effective solution, technical assessment/validation, appointment of the supplier".¹²

- (57) **Second, from a supply side perspective,** different competitors are active in the supply of different components.
- (58) Competing manufacturers of one HPS component are not necessarily the same competing manufacturers of another HPS component. Neither the Parties nor their competitors supply all components of a complete hydraulic power system (e.g. neither Danfoss nor Eaton produce mobile rated hydraulic cylinders). Some manufacturers in fact supply a limited range of HPS components. Ognibene, for instance, only manufactures steering components, with a focus on cylinders and HSUs.
- (59) The fact that different competitors are active on different features of each component suggests that few if any manufacturers are capable of supplying an entire HPS system and therefore these manufacturers would not be able to supply a hypothetical market for HPS as a system, as opposed to individual components. In addition, this is also consistent with the fact that the technical differences explained in recital (45) entail differences in terms of manufacturing processes and equipment, which might prevent a manufacturer to switch its production from one type of HPS components to the other in a timely manner and without incurring additional costs.
- (60) **Third,** market participants contacted in the context of the market investigation broadly confirm that individual HPS components belong to separate product markets.
- (61) Although OEMs and distributors may have bought or considered buying bundles of several components or fully integrated systems in the past,¹³ a large majority¹⁴ of the

⁸ Reply to question 5.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁹ Reply to question 12.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

¹⁰ Replies to question 4 of Q1 – Phase I Questionnaire to competitors, DocID1959.

¹¹ Reply to question 5.1 of Q1 – Phase I Questionnaire to competitors, DocID1959.

¹² Reply to question 5.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

¹³ Replies to question 11 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964; Replies to question 25 of Q13 – Phase II Questionnaire to orbital motors OEMs DocID1963; Replies to question 9 of Q15 – Phase II Questionnaire to distributors, DocID1965.

¹⁴ Throughout this Decision, when the Commission refers to the (number of) respondents in relation to a given question of the market investigation or market test, this excludes all respondents that have not provided an answer to that question or replied 'I do not know', unless stated otherwise. For example, 'a majority of respondents' means a majority of respondents having replied to a given question and not having ticked 'I do not know'.

OEMs¹⁵ that replied during the market investigation indicated they typically send Requests for Quotations ('RFQs') for individual components,¹⁶ and only a limited number of OEMs that replied during the market investigation stated that they purchase HPS components from the same manufacturer.¹⁷ A significant number of OEMs and distributors have also indicated that they do not expect to purchase bundles of components or fully integrated systems in the next three to five years.¹⁸

(62) This market feature has been substantiated by the Parties' competitors. Although competitors contacted during the market investigation have confirmed that the sale of fully integrated systems or bundles of components can be envisaged with customers and does sometimes occur,¹⁹ a majority has indicated that they do not sell fully integrated systems in addition to individual components.²⁰ As explained by one major competitor of the Parties: "*Even if a system is designed in the context of a new project and a solution is engineered, the business is predominantly in mobile applications still done at component level.*"²¹

(63) On the basis of the evidence gathered during its investigation, and in line with the arguments of the Notifying Party, the Commission therefore finds that given the lack of demand-side and supply-side substitutability between the different HPS components, each individual HPS component is part of separate product markets.

6.2.2. *Components for HPS for mobile and for stationary applications belong to separate product markets*

6.2.2.1. The Notifying Party's view

(64) The Notifying Party distinguishes between industrial (i.e. stationary) and mobile applications.²²

(65) According to the Notifying Party, mobile and industrial hydraulic power systems fall into different product markets, due to different performance requirements, cost to manufacture and, ultimately, price. Functionally, mobile hydraulic components are not optimally suited for industrial applications in terms of noise levels, duty cycle (industrial application can require 24-hour operation) and useful life.²³

6.2.2.2. The Commission's past practice

(66) In cases *Bosch/Rexroth*, *Volvo/Atlas*, and *Robert Bosch/Hägglunds Drives*,²⁴ the Commission considered separate product markets for mobile and for stationary

¹⁵ For the purpose of the present Decision, the expression OEMs refers to those OEMs active in the manufacturing of mobile machines which carry HPS.

¹⁶ Replies to question 4 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; Replies to question 4 of Q2 – Phase I Questionnaire to indirect sale OEMs.

¹⁷ Replies to question 5 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; Reply to question 5 of Q2 – Phase I Questionnaire to indirect sale OEMs DocID1957.

¹⁸ Replies to question 12 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 26 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963; Replies to question 10 of Q15 – Phase II Questionnaire to distributors, DocID1965.

¹⁹ Replies to question 21 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

²⁰ Replies to question 5 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²¹ Reply to question 21.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

²² Form CO Sections 6 to 9 Introduction, paragraphs 67 to 89.

²³ Form CO Section 6 to 9 Introduction, paragraph 83.

²⁴ IV/M.152 – *Volvo/Atlas*, paragraph 14; M.2060 – *Bosch/Rexroth*, paragraphs 22; M.5314 – *Robert Bosch/Hägglunds Drives*

applications. The Commission found that HPS components for mobile and stationary applications were significantly different in design, size, pressure levels, resilience and life cycle. The expected life cycle and resilience were much higher with regard to HPS components for stationary hydraulics, since they were designed for continuous industrial operation. On the other hand, HPS components for mobile hydraulics were designed for mobile machines and as such weight-optimised and shake-proof. These differences and, consequently, their different function made them generally non-substitutable.

- (67) The Commission's assessment
- (68) On the basis of the evidence gathered during its investigation, and in line with the arguments of the Notifying Party, the Commission finds that HPS components for mobile and for stationary applications belong to separate product markets.
- (69) **First**, from a demand-side perspective, HPS components for mobile and for industrial applications are not substitutable.
- (70) **In the first place**, technical requirements and specifications are mostly different between HPS components for industrial and for mobile applications.
- (71) As explained by a former director of sales of Eaton “[m]obile applications often run for few hours a day. Industrial run 24/7. This makes for very different requirements”.²⁵ The same document also explains that while HPS for mobile applications are typically designed for being powered by a diesel or a gasoline engine, stationary HPS would typically run on electricity, which also makes the systems, and therefore the embedded components technically different. This is also confirmed by one of the Parties' main competitors, who explains that due to the differing technical requirements, “components are mostly realised either for the mobile or for the industrial market.”²⁶
- (72) **In the second place**, HPS components for mobile applications are typically customised for a specific machine which is widely sold (and therefore large numbers of those HPS components are supplied), while HPS components for industrial applications are rather based on standard components, and supplied for individual projects.
- (73) The same document quoted at recital (71) continues explaining that “[i]n mobile you design for a platform. In industrial it is one-off systems based on standard components”.²⁷ This indicates that OEMs would not be able to substitute HPS components for mobile applications with those for stationary applications, because the latter are typically more “standard”, whereas OEMs need components more tailored to their needs.
- (74) Therefore, the Commission considers that HPS components that are designed and manufactured for stationary applications would not meet the requirements of OEMs for mobile applications and are not substitutable with one another.
- (75) **Second**, from a supply-side perspective, HPS components for mobile and for stationary applications present important differences, which prevent a manufacturer from promptly switching its production from one type of HPS components to the other.

²⁵ Reply to pre-notification request for information 1, Annex A.4_1, page 1.

²⁶ Minutes of a call with a competitor on 8.6.2020, DocID0291.

²⁷ Reply to pre-notification request for information 1, Annex A.4_1, page 1.

- (76) Indeed, the technical differences explained in recital (45) entail differences in terms of manufacturing processes and equipment which might prevent a manufacturer to switch its production from one type of HPS components to the other in a timely manner and without incurring additional costs.
- (77) Moreover, an internal document of Eaton, reproduced below as Figure 4, explains that stationary and mobile applications are [content of internal document], which have fundamentally different sales cycles, which entails different business set-ups, business models and organisations.

Figure 4 – Market dynamics of mobile and stationary hydraulic components

[...]

- (78) **In the third place**, the Commission notes that Danfoss entering the markets for stationary applications is part of the Transaction rationale. This suggests that a company active in mobile applications cannot easily enter the market for stationary applications quickly and with limited investment.
- (79) On the basis of the evidence gathered during its investigation, and in line with the arguments of the Notifying Party, the Commission therefore finds that HPS components for stationary and for mobile application belong to separate product markets.

6.2.3. *Captive production is not part of the relevant markets*

6.2.3.1. The Commission's past practice

- (80) The Commission considered the markets for HPS components before. In particular, the Commission considered the market for HPS components in *Volvo/Atlas*, *Bosch/Rexroth* and *Weichai/Kion*.²⁸ The Commission's precedents however do not analyse whether captive production of HPS components are part of the relevant market.

6.2.3.2. The Notifying Party's view

- (81) The Notifying Party contends that in-house production of HPS components by OEMs is part of the relevant market. In particular, the Notifying Party contends that the ability of OEMs to manufacture hydraulic steering units in-house and to switch from outsourced production to in-house production means that external suppliers compete directly against the OEMs' in-house production capacities. External suppliers such as Danfoss and Eaton take into account the OEMs' ability to in-source production when setting their prices. For these reasons, in-house production should be considered as part of the relevant market.²⁹ With regards to ESVs in particular, the Notifying Party claims in the Reply to the SO that ESV suppliers must take into account in-house production when pricing, as OEMs decide whether the ESV business goes to an external supplier or remains in-house and, once an OEM has developed ESV in-

²⁸ M.2060 – *Bosch/ Rexroth*; IV/M.152 – *Volvo/Atlas*; M.8190 – *Weichai/ Kion*.

²⁹ Reply to the Article 6(1)(c) Decision, paragraph 146.

house, it can take even more business away from suppliers by marketing its solution to third party OEMs.³⁰

- (82) The Notifying Party further contends that even if the Commission were to consider the merchant market only, the competitive constraint exercised by the OEMs' in-house production capabilities should be considered in the competitive assessment.³¹

6.2.3.3. The Commission's assessment

- (83) On the basis of the evidence gathered during its investigation, and contrary to the arguments of the Notifying Party, the Commission finds that captive production of HPS components is not part of the relevant market.
- (84) **First**, as regard the relevant product markets defined in Sections 6.3, 6.4 and 6.5 below, there is at the most a very marginal in-house production by OEMs which is available to the market and thus influences the competitive conditions.
- (85) Concerning in-house production of HSUs, all but one OEMs contacted during the market investigation indicated that they currently produce HSUs in-house.³² This is confirmed by the fact that, according to the Notifying Party's own estimates, the market shares for HSUs in the EEA over the past three years are similar whether in-house production by OEMs is included or excluded.³³ This was confirmed by a competitor of the Parties, which stated "*I have been in this market for more than 25years. I have never had any OEM say that they were thinking about developing and manufacturing hydraulic steering units or integrated transmissions.*"³⁴
- (86) Concerning orbital motors, the Notifying Party does not claim that any OEM produces orbital motors in-house in the EEA.³⁵
- (87) Concerning ESVs, the Notifying Party only identified four OEMs, which would currently produce in-house. However, none of those OEMs appear to be actively selling their components to third parties on the market in any significant way. Indeed, based on the Notifying Party's own data on past and existing sales opportunities (the 'Opportunity Data'), none of the four OEMs identified have been considered by other OEMs alongside the Notifying Party for the supply of ESVs over the past 3 years (see Annex I - The Commission's analysis of the Parties' opportunity data, hereinafter referred to as 'Annex I').
- (88) In addition, only a small minority of the Parties' competitors are aware of (actual or potential) in-house production of ESVs by OEMs.³⁶
- (89) As explained by one OEM, in-house production by OEMs is not a feature of the HPS components markets: "*Hydraulic components like steering valves - I think this counts for across all industries - are not since 40 to 50 years produced by OEM's but purchased from suppliers*".³⁷

³⁰ Reply to the SO, paragraph 110.

³¹ Reply to the Article 6(1)(c) Decision, paragraph 146.

³² Reply to question 9 of Q14 Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

³³ Form CO Sections 6 to 9 on Steering, Tables 10 to 15.

³⁴ Reply to question 7.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

³⁵ Reply to the Article 6(1)(c) Decision, paragraphs 74-75.

³⁶ Replies to question 6 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

³⁷ Reply to question 6.1 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

- (90) This view is shared by competitors, one of which, for example, explains that: *“OEMs have the design control of their own machines, so they procure what they cannot provide and manufacture internally, for technical or cost reasons mostly. We do not believe that hydraulic suppliers compete against in-house production of their OEM customers. It may have sometimes been the case 10 or 20 years ago.”*³⁸
- (91) **Second**, OEMs that currently purchase the products defined in Sections 6.3, 6.4 and 6.5 below would not consider producing them in-house. OEMs are not interested in producing HPS components in-house, as this is not their core business, and would represent significant investments which would be difficult to recoup even through sales to third parties.
- (92) This has been confirmed by a majority of the OEMs which responded to the market investigation. A large majority of OEMs indicated that they do not have enough ability (e.g. know-how, technical skills, IP, etc.) and incentives to start the production in-house in case of a price increase of 5-10%, whether for HSUs,³⁹ ESVs⁴⁰ or orbital motors.⁴¹
- (93) The production of HPS components is not the core business of OEMs, which do not have the capabilities and infrastructure to produce them in-house. As explained by one OEM, *“our core business is not the in-house production for hydraulic components, we want and we need to buy them”*⁴² Another OEM confirms: *“We cannot manufacture such specific hydraulic components ourselves. We have neither the capacity nor the know-how and would have to create a completely new structure for this. This is not a starting point.”*⁴³ In fact, several other OEMs have indicated that they *“have no interest on in house manufacture”*⁴⁴, or *“don't have the manufacturing capabilities and expertise to manufacture hydraulics ourselves.”*,⁴⁵ nor *“the skills and capacity to produce these components ourselves”*.⁴⁶
- (94) Consequently, the costs involved in starting the production in-house appears to be an unsurmountable deterrent for OEMs, as *“investment are very high to make these components, profitability will be very difficult to be achieved.”*⁴⁷ This is confirmed by another OEM which explains *“We are not set up to produce these type of parts and the investment in machines and tools would not make it viable.”*⁴⁸

³⁸ Reply to question 7.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

³⁹ Replies to question 10 of Q14 – Phase II Questionnaire to OEMs – Steering and other products; Reply to question 6 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁴⁰ Replies to question 10 of Q14 – Phase II Questionnaire to OEMs – Steering and other products; Reply to question 6 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁴¹ Replies to question 24 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁴² Reply to question 10.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

⁴³ Reply to question 10.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

⁴⁴ Replies to question 10.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964..

⁴⁵ Replies to question 6.1 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956

⁴⁶ Replies to question 10.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

⁴⁷ Replies to question 10.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

⁴⁸ Reply to question 10.1 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

- (95) The fact that OEMs would not have the ability or incentive to start producing HPS components in-house has also been confirmed by competitors contacted during the investigation, a large majority of which indicated that they do not see in-house production by OEMs as becoming a more prominent feature of the market in the next three to five years.⁴⁹
- (96) Competitors have also confirmed that in-house production is not the OEMs' core business: *"The core competence of the typical OEM's is the design of a competitive machine and not the development of components or sub-systems which can be purchased from specialized suppliers. Today's machines are so complex that an OEM cannot get involved in the development and production of components and subsystems."*⁵⁰
- (97) Competitors have also confirmed that consequently, starting producing in-house would require significant and costly investments which would be difficult to recoup. As explained by one competitor: *"Steering system are really specific components (with usually a price below 150 EUR for standard steering unit and below 1000 EUR for electronic steering valves) with high manufacturing investment costs. The volumes of each OEM will make almost impossible an acceptable ROI. No critical mass for any of the OEM."*⁵¹ This is confirmed by several other competitors, according to which *"OEM are not showing interest in captive solutions in consideration of the absence of critical mass and limited value of the steering components on total cost for the relevant vehicles."*⁵², and *"the trend since years is more going to oposite [sic] with a combination of purchase and assembly; the Ratio of In House production is not raising and considered too expensive"*⁵³
- (98) Another competitor further explains: *"No OEMs have the designs or capability to produce hydraulic steering units. The barriers to entry are extremely high. First, capital spending of several million dollars is required to produce the steering units. The types of equipment are broaching machines, OD and ID grinding machines for gerotor shapes, & flat part grinding machines. Second, there is a very high cost of engineering to develop the steering units. The high cost of engineering is due to the complicated nature of the designs. These complicated devices have an complex rotor sets, fixed clearance with different metals, & high pressure shaft seal designs that are leak free."*⁵⁴
- (99) **Third**, OEMs that allegedly manufacture a certain HPS component in-house are not suppliers to other OEMs. Therefore, in the event of a price increase of a certain HPS component, only those OEMs that manufacture it in-house might decide to manufacture more of it and to reduce their purchases from external suppliers. However, as further explained in recital (100) below, the results of the market investigation have shown that such a possibility is not taken into account in

⁴⁹ Replies to question 8 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵⁰ Replies to question 6.4 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵¹ Reply to question 6.4 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵² Replies to question 8.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵³ Replies to question 8.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵⁴ Reply to question 6.4 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

commercial negotiations between suppliers and OEMs. The remaining OEMs (which represent the majority of the OEMs) would have not this choice, and would not be able to switch to components manufactured in-house.

- (100) Contrary to what the Notifying Party indicates in the Reply to the SO, the Commission considers that the threat of switching to or increasing in-house production is not factored into the commercial negotiations between OEMs and suppliers. In fact, a large majority of competitors which replied to the market investigation stated that in-house production, whether actual or potential, is not brought up by OEMs in the context of commercial negotiations.⁵⁵ A large majority of competitors who manufacture the product also indicated that they do not take into account in-house production by OEMs when setting their prices or strategy, whether for ESVs or HSUs.⁵⁶
- (101) Based on the evidence gathered during its investigation, the Commission therefore considers that in-house production by OEMs is not part of any relevant product market.

6.3. Hydraulic steering units

6.3.1. The Commission's past practice

- (102) The Commission previously examined markets for HPS components, in particular, in *Volvo/Atlas* and *Bosch/Rexroth*.⁵⁷ However, Commission's previous decisions did either not deal specifically with HSUs or leave the market definition for HSUs open.

6.3.2. The Notifying Party's view

- (103) The Notifying Party is of the view that HSUs constitute a separate product market from other steering components, and other HPS components generally (such as pumps, motors and valves). The Notifying Party also considers HSUs to be in a separate market from components used to achieve electrohydraulic steering such as ESVs.
- (104) The Notifying Party however submits that the market for HSUs should also encompass electric steering systems.⁵⁸ This is for the following main reasons:⁵⁹
- (a) There is a trend towards electrification of steering, which is increasingly competing with, and affecting the supply of, hydraulic steering units in Europe and the USA.
 - (b) Electric steering has already replaced hydraulic steering in vehicles such as forklifts and other smaller material handling vehicles, where limited steering force is needed.
 - (c) If an OEM opts for an electric system at the design phase, the HSUs are "out of the game".

⁵⁵ Reply to question 7 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵⁶ Reply to question 9 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1966.

⁵⁷ IV/M.152 – *Volvo/Atlas*; M.2060 – *Bosch/Rexroth*, paragraphs 49 to 52.

⁵⁸ Form CO Sections 6 to 9 on Steering, paragraphs 55 – 63; Reply to the Article 6(1)(c) Decision, paragraphs 106 – 113; Reply to the SO, paragraph 3.

⁵⁹ Form CO Sections 6 to 9 on Steering, paragraphs 55 – 63; Reply to the Article 6(1)(c) Decision, paragraphs 106 – 113, Reply to the SO, paragraph 3

(d) Although hydraulic steering is still the prevailing technology for heavier vehicles, the Parties expect that electric steering will become an alternative for heavier vehicles as well.

(105) Consequently, the Notifying Party contends that electric steering is increasingly an alternative to HSUs and should be considered as part of the relevant market, or that at a minimum, electric steering exerts a competitive constraint on the Parties, which would have to be considered in the Commission's competitive assessment.⁶⁰

6.3.3. *The Commission's assessment*

(106) The Commission concludes, based on the examined evidence, that HSUs form a distinct market from other HPS components for the reasons explained in Section 6.2.1.3. The Commission also considers that HSUs should be considered a separate product market from ESVs. Furthermore, the Commission concludes that electric steering does not form part of the market for HSUs.

6.3.3.1. HSUs and ESVs are part of different product markets

(107) The Commission is of the view that HSUs and ESVs are part of separate product markets.

(108) **First**, HSUs and ESVs are not substitutable from a demand-side perspective.

(109) Technically, they are distinct. HSUs uses pressurised hydraulic fluid generated by pumps to move an actuator (cylinder) that moves the wheels. Electrohydraulic steering, on the other hand, is still hydraulically powered but electronically controlled, for example by a joystick. Electrohydraulic steering can be achieved through an ESV which converts the hydraulic oil to the cylinders in proportion to the electronic input signal.⁶¹ The Notifying Party notes that “[c]ompared to *Hydraulic Steering*, *Electrohydraulic Steering* is technically more advanced in that it provides steering by a joystick and similar electronic input devices as well as GPS auto-guidance functionality. This improves the ergonomics, the driver comfort, and productivity of the machine.”⁶²

(110) The results of the market investigation also suggest they are distinct. Respondents to the market investigation indicated that there is a limited demand-side substitutability between HSUs and ESV-based electrohydraulic steering. In particular, it appears that OEMs have limited possibility to switch between HSUs and electrohydraulic steering units:

- Switching between HSUs and ESVs appears to be difficult even in the initial design phase when an OEM designs the product for which the steering unit is required. When asked about the effort it takes an OEM to switch from HSUs to ESVs in the development stage of a new product, only one OEM replied that switching was easy, while a large majority stated that switching was either possible but with some costs and/or timely setback or difficult with considerable financial and/or timely setback.⁶³
- Switching between HSUs and ESVs would be even more difficult at the production phase, where the OEM has already started production based on a

⁶⁰ Reply to the Article 6(1)(c) Decision, paragraph 113.

⁶¹ Form CO, Sections 6-9, Steering, paragraph 15.

⁶² Steering Advocacy Paper, paragraph 9.

⁶³ Replies to question 53 of Q12 – Phase II Questionnaire to competitors – Steering and other products, DocID1962.

chosen design. When asked about the effort it takes an OEM to switch from hydraulic steering units to electrohydraulic steering with an ESV after starting producing a new product: a majority of OEMs stated that switching was difficult for considering financial and/or timely setback, while four even indicated that switching was impossible.⁶⁴

- (111) This suggests that the two technologies are most likely not interchangeable, and therefore not competing, from a demand-side perspective at the initial design phase. This conclusion can be drawn even more clearly in relation to the production phase. One competitor explains that “[t]he change needs a redesign of the steering system, electrohydraulic steering valves need to be added and integrated into the machines design / dimensions. Therefore requires significant effort / cost and is not possible after SOP.”⁶⁵ Yet another competitor further explains that “[s]witching from hydraulic steering units to electrohydraulic steering units will always require a not negligible effort in hardware and software integration within the vehicle. Moreover, the test and the homologation phase will be much more expensive.”⁶⁶ Another competitor considers that switching is not possible during the production stage: “This is an architecture change and needs to be defined prior to the start of the program[me].”⁶⁷
- (112) In addition, there appears to be a considerable difference in price between HSUs and electrohydraulic steering solutions. According to the Notifying Party, the average sales price for an HSU would be EUR [...]; whereas the price of an ESV plus an HSU as a back up would be EUR [...]. In addition a pure ‘Steer-by-Wire’ system which is entirely based on ESVs⁶⁸ would be about EUR [...]. These price variations point at a lack of substitutability from a customer perspective, and HSUs forming a separate market from electrohydraulic steering.
- (113) **Second**, HSUs and electrohydraulic steering are also not substitutable from a supply-side perspective.
- (114) HSUs and electrohydraulic steering units present important technical differences, which prevent a manufacturer to promptly switch its production from one type of steering unit to the other. ESV appear to require considerably distinct technology and know-how as compared to their hydraulic counterparts.
- (115) As explained by one competitor: “From hydraulic steering to electro-hydraulic steering is already a significant step in know-how and understanding of developing and producing the products. It takes a lot of time for hydraulics companies to develop similar products.”⁶⁹
- (116) This has been confirmed by the market investigation, during which a large number of competitors have indicated that HSU, electrohydraulic units and fully electric

⁶⁴ Replies to question 53 of Q12 – Phase II Questionnaire to competitors – Steering and other products, DocID1962.

⁶⁵ Reply to question 53.1 of Q12 – Phase II Questionnaire to competitors – Steering and other products, DocID1962.

⁶⁶ Reply to question 53.1 of Q12 – Phase II Questionnaire to competitors – Steering and other products, DocID1962.

⁶⁷ Reply to question 53.1 of Q12 – Phase II Questionnaire to competitors – Steering and other products, DocID1962.

⁶⁸ Please see section 6.4.3.1. below for the details of the different types of electrohydraulic steering solutions.

⁶⁹ Reply to question 8.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

steering require different capabilities from a manufacturing perspective and have limited degree of supply-side substitutability.⁷⁰

(117) According to one competitor, the solutions entail “*different products, functioning and technology*”.⁷¹

(118) Given the lack of both demand-side and supply-side substitutability between HSUs and electrohydraulic steering systems, the Commission therefore considers that HSUs and electrohydraulic steering systems are not part of the same product market.

6.3.3.2. HSUs and electric steering are part of separate product markets

(119) Based on a review of the available evidence, the Commission considers that electric steering does not form part of the same product market with HSUs.

(120) **First**, electric steering systems are technically distinct from hydraulic steering systems. In electric steering the power-assist is generated by electric motors, rather than via hydraulic power as is the case for hydraulic steering systems. Electric steering systems eliminate the need for hydraulic components such as an HSU, pumps, hoses and a drive belt connected to the engine. The entire electric system can be packaged on the rack-and-pinion steering gear or in the steering column.⁷²

(121) **Second**, from a demand-side perspective, HSUs and electric steering systems are not substitutable.

(122) **In the first place**, a large majority of the OEMs that responded to the market investigation indicated that substitution of a hydraulic steering system with a fully electric steering system is not a cost-effective option.⁷³ A number of OEMs explained that electric steering systems have technical, economical and customer acceptance limitations when compared with hydraulic steering systems.⁷⁴

(123) One OEM explains: “*there is a trend for electrification, which might potentially replace hydraulic systems in the future. However, a complete replacement of hydraulic systems with electric ones can take place only when machines are fully electrical (i.e. when diesel engines are replaced by batteries and electric motors, and the different actuators as linear actuators as hydraulic cylinders will be replaced by fully electrical sub systems). The Company considers that in the mobile sector such a trend will take a long time and is not foreseen to occur on a large scale in the near future. Electrical machines are expected to remain a niche for several years*”⁷⁵

(124) The Notifying Party contends that from a functionality perspective the electric steering product is more comparable with a hydraulic steering system including a HSU, pump, cylinders, valves, hoses and fittings, rather than with the HSU alone, which undermines any attempt at comparing prices of HSUs with those of electric systems. However, the cost of the electric system is prohibitive even if compared to that of the hydraulic system as a whole, which will prevent electric systems from successfully challenging hydraulic solutions at a large scale in the near future.

⁷⁰ Replies to question 8 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁷¹ Reply to question 8 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁷² Form CO Sections 6 – 9 Steering, paragraphs 21 et seqq.

⁷³ Replies to question 10 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁷⁴ Replies to question 10.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁷⁵ Minutes of a call with a customer on 9.6.2020, DocID1986.

- (125) The estimates put forward by the Notifying Party of an average sales price per unit of EUR [...] for HSU system and between EUR [...] and EUR [...] for electric steering confirm this cost disparity.⁷⁶
- (126) In addition, results from the market investigation have indicated that the fully electric system is not a cost-effective option, not only because of the sheer price of the system as compared to that of the hydraulic one, but also taking into account switching costs (e.g. development, design, testing).
- (127) For example, one large OEM explained that “[u]sually [an] electric steering system is more expensive”,⁷⁷ and another OEM pointed out that “the change [from hydraulic to electric] would be very deep”. A number of OEMs that replied during the market investigation indicated that technical changes, extensive tests and the related costs are a limiting factor. For example, one OEM explained that “[n]ew system integration and full validation is need , specially critical for machine on road applications”⁷⁸ and another added that “[t]o make the two different systems interchangeable would require extensive and costly application development”.⁷⁹ One OEM explained that the changes would require different electronic systems and therefore the technical areas of competence would be different from the current ones.
- (128) When asked how much effort it takes an OEM to switch from hydraulic steering units to electric steering at the design phase, a large majority of competitors have either indicated that some costs and timely setback would be involved, or that switching was difficult with considerable financial and/or timely setback.⁸⁰ At the production phase, a large majority of competitors responded that switching was difficult with considerable financial and/or timely setback.⁸¹
- (129) One large competitor explains: “In case it would be technically feasible the change needs a full redesign of the steering system, therefore requires significant effort / cost and is not possible after SOP.”⁸² Another competitor further indicates that: “Switching from hydraulic steering units to electric steering units will always require a not negligible effort in hardware and software integration within the vehicle. Also, the test and the homologation phase will be much more expensive.”⁸³
- (130) Furthermore, the market investigation has yielded indications that for a non-insignificant number of OEMs, the substitution of a hydraulic steering system with an electric steering system would also entail overcoming regulatory barriers and testing requirements.⁸⁴ One OEM explained that “from a regulatory point of view, it is not possible to use electric steering on the road because it would not be compliant (NF-1459). From a technical point of view, the torque on the wheels that we have are

⁷⁶ Steering Advocacy Paper, Figure 7 and footnote 4.

⁷⁷ Reply to question 10.1 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁷⁸ Reply to question 10.1 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁷⁹ Reply to question 10.1 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁸⁰ Replies to question 52 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁸¹ Replies to question 52 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁸² Reply to question 52.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁸³ Reply to question 52.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁸⁴ Replies to question 10.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

*too large, therefore we must use hydraulic steering systems”.*⁸⁵ Another OEM stated that: “[T]he steering is a safety components and must be fine tune according to machine performances and specifications. In addition long expensive tests must be carried out to validate the steering system.”⁸⁶

- (131) Moreover, distributors that replied during the market investigation share the OEMs’ point of view. A large majority of them considers that electric steering and hydraulic steering systems either are not substitutable at all, or that they are substitutable only for certain machines.⁸⁷ In particular, one distributor explains that for smaller OEMs, switching to electric steering systems might be even more problematic than for larger OEMs: “[f]ully electronic steering units require electrification in CanBus level, where some of OEM applications are not so sophisticated yet. This would mean increased cost of the machine, whereas [a] standard out-of-the-box hydraulic steering unit is cheaper just to implement [the] hydraulic system. The bigger OEMs has [sic] different capabilities and more sophisticated system architecture already, and with higher quantities unit cost could be closer”.⁸⁸
- (132) **In the second place**, internal documents of the Parties suggest that they themselves consider that electrification of machines will remain limited in the near future. The documents suggest that this is due to the costs involved from a demand- and a supply-side perspective and technical limitations which mean that not all machines are subject to potential electrification.
- (133) For example, a study conducted by Eaton reveals that, due to the high costs of batteries, in the years to come electrification will [...]. Meanwhile, Danfoss’ documents suggest that electric steering is seen as [content of internal document].⁸⁹ Another Danfoss internal document suggests that electrification is [content of internal document]. In relation to agriculture, it is stated that: “[content of internal document]”; however, “[content of internal document]”. In relation to construction, it is stated that “[content of internal document].”⁹⁰ This suggests that electrification is not an option for all machines in agriculture and construction.
- (134) One competitor also stated that: *“It’s a topic too cost sensitive. In the near future however, we might see fully electric components for lighter machines.”*⁹¹, while another said *“Power density is the current limit to alternative steering systems.”*⁹² suggesting that the possibility to switch to fully electric systems is impacted by the level of power required.

⁸⁵ Reply to question 10.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956. Courtesy translation of the original text in French: “[d]’un point de vue réglementaire, on ne peut pas utiliser une direction électrique sur route parce que ce n’est pas réglementaire (NF-1459). D’un point de vue technique, le couple aux roues dont nous avons besoin est trop important, donc nous sommes obligés d’utiliser une direction hydraulique ».

⁸⁶ Reply to question 10.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁸⁷ Replies to question 8 of Q3 – Phase I Questionnaire to distributors, DocID1958.

⁸⁸ Reply to question 8.1 of Q3 – Phase I Questionnaire to distributors, DocID1958.

⁸⁹ Reply to the pre-notification request for information RFI 1, Annex – C.2.1, slides 9 and 14; and reply to pre-notification request of information RFI 9, Annex A.8.4.

⁹⁰ Danfoss Internal Document, ‘Project Bourbon Pre-Read Materials’, Doc ID001056-038150, RFI 020120471, slide 41.

⁹¹ Reply to question 38.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁹² Reply to question 38.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

- (135) **Third**, from a supply-side perspective, HSUs and electric steering systems are not substitutable.
- (136) **In the first place**, HSUs and electric steering systems are based on entirely different technologies, which require different production techniques and capabilities, so that a manufacturer could not readily switch production to electric steering systems in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative price.
- (137) The technical specificities of a fully electric steering system as compared to a hydraulic steering system require significant production modifications. As explained in an internal document of the Parties reproduced in Figure 5 those represent [content of internal document].

Figure 5 – Eaton’s assessment of main challenges for electric systems

[...]

Source: Reply to pre-notification RFI PN 5, Annex A.4_8.

- (138) **In the second place**, the fact that starting producing electric system would represent significant costs and risks is exemplified by the Notifying Party’s own business strategy in this regard.
- (139) For example, an internal document of the Notifying Party (Figure 6), which is active in the production of HSU, explains that it [content of internal document].

Figure 6 – Eaton’s assessment of main challenges for electric systems

[...]

Source: Reply to post-notification RFI 2, DocID 1058-38361, “M.9820-RFI020181219.pptx”, slide 3.

- (140) The Commission concludes that substitution from HSUs to electric steering is difficult and not cost-effective from both a supply and a demand-side perspective. It appears to be particularly challenging for larger applications; however, the conversion from hydraulic to electric appears to be limited even in relation to smaller machinery. The Notifying Party indicates that electrification is already occurring for smaller crane and material handling machines, in particular, forklifts. However, forklifts are just one type of machine and the material handling segment only represents a proportion the overall application segments.⁹³
- (141) Given the lack of both demand-side and supply-side substitutability between HSUs and electric steering systems, the Commission therefore considers that HSUs and electric steering systems are not part of the same product market.

6.3.3.3. HSU mobile components for on-road and off-road applications

The Notifying Party’s view

- (142) The Notifying Party explains that so-called “on-road” vehicles can refer to trucks (conventional, without a specific work function), buses, and coaches, as well as

⁹³ See, for example, Eaton internal document, “Commercial & Operational Overview”, Doc Id1043-35084, EAT-292878, slide 16, which suggests that [content of internal document].

specialized on-road vehicles with specific work functions such cement mixer trucks.⁹⁴

- (143) The Notifying Party contends that no separate markets should be defined for, on the one hand, HPS components used in those specialized on-road vehicles, which should in fact fall under the off-road category, and, on the other hand, HPS components used in vehicles, which primarily drive off-road, such as tractors, harvesters, road graders, cranes, wheel loaders or excavators.⁹⁵

The Commission's past practice

- (144) In its decision in *Volvo/Atlas*,⁹⁶ the Commission defined separate market for individual mobile hydraulic components. The Commission did not further consider whether a distinction between on-road and off-road applications was warranted within the separate markets for individual mobile hydraulic components.

The Commission's assessment

- (145) Contrary to the Notifying Party's view, the Commission concludes that HSUs for on-road vehicles with work functions are not part of the same product market as off-road vehicles.
- (146) **First**, the Commission finds that the Parties' themselves in their ordinary course of business documents only consider the supply of HSUs for the off-road market without HSUs for on-road vehicles.
- (147) **Second**, the Commission finds that there is limited demand-side substitutability. In particular, customers of HSUs for off-road vehicles do not tend to buy HSUs for on-road vehicles with work functions.
- (148) **Third**, the Commission finds that there is limited supply-side substitutability. In particular, HSUs for on-road vehicles with work functions work with completely different technologies compared to HSUs for off-road vehicles.
- (149) **Fourth**, the Commission further found that the market position of suppliers is significantly different in these two categories. In fact, most of the competitors supplying HSUs for on-road vehicles with work functions do not offer those for off-road vehicles and vice versa.

6.3.3.4. The market for HSUs is differentiated

- (150) The Commission considers, based on the examined evidence, that the market for HSU is comprised of differentiated products, with distinctions based on end-use, quality and geographic focus.
- (151) While the Commission has not found these different features to justify an even narrower product market definition, it preliminarily concludes that such products belong to a single although differentiated product market.
- (152) **First**, a large majority of the OEMs that replied during the market investigation indicated that HSUs for a certain end-use (e.g. for agriculture, for construction or for forestry) can never or only sometimes be substituted with HSUs for another end-

⁹⁴ Form CO, Sections 6 to 9 for Steering, Introduction, paragraph 94.

⁹⁵ Form CO Sections 6 to 9 Introduction, paragraph 94.

⁹⁶ IV/M.152 – *Volvo/Atlas*, paragraphs 13-14.

use.⁹⁷ The Parties' internal documents focus on specific end-applications such as, for example, tractors or wheel loaders.⁹⁸

- (153) Further, internal documents of the Parties indicate that a certain differentiation in terms of features and overall grade⁹⁹ of the HSUs (also referred to as “tier”) exists.¹⁰⁰
- (154) **Second**, there are some differences in terms of quality between the different HSUs offered by various competitors on the market.
- (155) M+S Hydraulic is mainly focused on the steering aftermarket¹⁰¹ and its products are not perceived to be of the same quality or performance levels as those of Danfoss and Eaton.¹⁰² Moreover, Danfoss and Eaton also hold important patents, which are not available to other players.¹⁰³ Chinese suppliers are not perceived to offer HSUs of the same quality as those of Danfoss or Eaton. This is also demonstrated by the lack of a market presence of companies like Zhenjiang and Sinjin Precision in the EEA to date. A large majority of OEM respondents to the market investigation indicated that they had never purchased HSUs from a Chinese supplier.¹⁰⁴
- (156) **Third**, manufacturers of HSUs do not all have the same geographic strategy. Danfoss and Eaton are larger players with a global presence whereas Ognibene and M+S Hydraulic are smaller and more geographically focused players.¹⁰⁵
- (157) As a result, the Commission considers that the market for HSUs is a differentiated market. The Commission will consider the impact of this conclusion in the competitive assessment in Section 8.3.3.1.

6.3.3.5. Conclusion on the product market definition for HSUs

- (158) In conclusion, in the light of the considerations in Sections 6.3.3.2 and 6.3.3.3, and taking into account the results of the market investigation and of all the evidence available to it, the Commission considers that there is a market for HSUs for off-road applications separate from on-road and separate from the markets for electrohydraulic steering and electric steering.
- (159) The Commission further considers that the market for HSUs is a differentiated market, for the reasons exposed in Section 6.3.3.1, with potential distinctions by end-use, quality and “tiers”.

⁹⁷ Replies to question 9 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; Replies to question 9 of Q2 – Phase I Questionnaire to indirect sale OEMs, DocID1957.

⁹⁸ For example see Danfoss internal document, DocID001055-035251, RFI020058479, slides 12 and 13 or Reply to request for information 9, Annex A.8_4, slides 14.

⁹⁹ The expressions “features and overall grade” in this context do not necessarily refer to quality and safety, but rather to comfort, steering functionalities and overall user driving experience. Certain low-end machines, while maintaining high standards in terms of safety and quality, do not require the same driving experience of higher-end machines.

¹⁰⁰ Reply to pre-notification request for information 3, Annex B.15_8, slides 4 and 52.

¹⁰¹ Minutes of call with a competitor, 11.6.2020, DocID1987.

¹⁰² Minutes of call with a competitor, 24.11.2020, DocID1987.

¹⁰³ Reply to question 36 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

¹⁰⁴ Replies to question 61 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

¹⁰⁵ Reply to question 47 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

6.4. Electro-hydraulic steering valves

6.4.1. *The Notifying Party's view*

- (160) Within electrohydraulic steering, the Notifying Party considers that the definition should include all ways to provide electrohydraulic steering functionality, i.e. integrated solutions, combined solutions, steering valves without safety functionality and 'pure Steer-by-Wire' (where the electrohydraulic steering system has no back up hydraulic steering unit).¹⁰⁶ The Notifying Party therefore included in the same market ESVs used in all electrohydraulic steering solutions because all solutions are targeted at achieving the same functionality namely to employ electronically controlled components, which make steering with a joystick or (automatic) GPS-guided steering functions possible.
- (161) Further, the Notifying Party considers that electric steering and alternative electrohydraulic steering solutions based on motors such as Ognibene's solution exerts a competitive constraint on electrohydraulic steering.
- (162) In the Reply to the SO, the Notifying Party further contends that the Commission is wrong to exclude alternative electrohydraulic steering solutions from the market, in particular the solution developed by Ognibene. In particular, the Notifying Party contends that there is no specific demand for ESV-based solutions, and that a customer would consider Ognibene's solution alongside the one of the Parties.¹⁰⁷

6.4.2. *The Commission's past practice*

- (163) The Commission previously examined markets for HPS components. In particular, the Commission examined components for HPS in *Volvo/Atlas* and *Bosch/Rexroth*.¹⁰⁸ However, the Commission's previous decisions do not deal specifically with ESVs.

6.4.3. *The Commission's assessment*

6.4.3.1. *ESVs used in all electrohydraulic solutions form part of the same product market*

- (164) The Commission agrees that ESVs used in all electrohydraulic solutions are part of the same market.
- (165) An ESV is most often an essential component for mobile machines using electrohydraulic steering, whereby the steering unit is still hydraulic but electronically controlled, for example by a joystick. The ESV conveys the hydraulic oil to the cylinders in proportion to the electronic input signal.
- (166) **First**, from a demand-side perspective, ESVs can be used in two different types of electrohydraulic steering systems:¹⁰⁹
- (a) A steering system design that consists of both an HSU and an ESV. This traditional steering system design is hereinafter referred to as 'Electrohydraulic Steering'.
 - (b) A steering system design that consists only of one or two (redundant system) ESV(s) (i.e., no HSU). This steering system design is hereinafter referred to as 'Steer-by-Wire'.

¹⁰⁶ Form CO Sections 6 – 9 for Steering, paragraph 41 and footnote 28.

¹⁰⁷ Reply to the SO, paragraphs 36 to 41.

¹⁰⁸ IV/M.152 – *Volvo/Atlas*, paragraph 14; M.2060 – *Bosch/Rexroth*, paragraphs 19 et seq.

¹⁰⁹ Form CO Sections 6 – 9 for Steering, paragraph 17.

- (167) The use of ESVs for both Electrohydraulic Steering and Steer-by-Wire was confirmed by customers of ESVs during the market investigation. Indeed, a majority of OEMs which have indicated that they purchase ESVs have indicated that they purchase ESVs both for traditional Electrohydraulic Steering solutions and for Steer-by-Wire solutions.¹¹⁰
- (168) This was also confirmed by internal documents of the Parties. In particular, one document from Eaton indicates that Eaton's ASV60 ESV can be used for both Electrohydraulic and Steer-by-Wire technologies.

Figure 7 – Eaton ESV can be used in different electrohydraulic steering solutions

[...]

Source : DocID 1043-81559 (Filename EAT-215246.pdf)

- (169) ESVs in Electrohydraulic Steering and Steer-by-Wire solutions enable the same features. As demonstrated by an internal document from the Notifying Party, both Electrohydraulic Steering and Steer-by-Wire employ electronically controlled components, such as the ESV, which make steering with a joystick or (automatic) GPS-guided steering functions possible. As shown in Figure 8 below, both Electrohydraulic Steering and Steer-by-Wire offer GPS auto-steering interface, joystick steering, and variable steering ratio, as well as better high-speed controllability for on-road vehicles.

Figure 8 – Traditional electrohydraulic steering and steer by wire solution offer common benefits

[...]

Source: DocID 1054-43057 (Filename: M.9820-RFI020003031.pdf)

- (170) **Second**, from a supply-side perspective, manufacturers of ESVs can potentially supply products for both traditional Electrohydraulic Steering and Steer-by-Wire. For example Bosch Rexroth, FEMA, Hydac, MOBIL ELEKTRONIC, and Hydraforce offer ESVs. However, the ESV offered by these suppliers can be, and is, combined with an HSU manufactured by a different supplier (e.g., Danfoss, Eaton, or others). For example, John Deere uses FEMA ESV with a Danfoss HSU on tractors, combines, and sprayers. Similarly, BOMAG GmbH uses a HYDAC ESV together with a Danfoss HSU on its rollers.¹¹¹
- (171) The Commission therefore considers that all ESVs used in any type of electrohydraulic solution are part of the same market.

¹¹⁰ Replies to question 20.1 of Q14 – Phase II questionnaire to OEMs – Steering and other products, DocID1964.

¹¹¹ Reply to pre-notification request for information 6.

6.4.3.2. Distinction between ESV and electric steering units

- (172) As a preliminary remark, the Commission notes that the Notifying Party does not contend that ESVs and electric steering form part of the same product market, but rather that electric steering exerts a competitive constraint on ESV.¹¹²
- (173) **First**, as explained in Section 6.3.3.2 above, from a demand-side perspective, fully electric solutions are not yet substitutable with other steering solutions such as HSUs or ESVs.
- (174) As noted in recital (123) above, one OEM explains: *“there is a trend for electrification, which might potentially replace hydraulic systems in the future. However, a complete replacement of hydraulic systems with electric ones can take place only when machines are fully electrical (i.e. when diesel engines are replaced by batteries and electric motors, and the different actuators as linear actuators as hydraulic cylinders will be replaced by fully electrical sub systems). The Company considers that in the mobile sector such a trend will take a long time and is not foreseen to occur on a large scale in the near future. Electrical machines are expected to remain a niche for several years”*¹¹³
- (175) **Second**, this trend is not yet sufficiently mature in the market as a whole and the only penetration area is limited to smaller, lighter machines. Indeed, corroborated by Danfoss internal correspondence from ordinary course of business, fully electric solutions are only likely to concern smaller vehicles like [...]. For bigger vehicles, i.e. 400-700 volts, fully electric solutions are *“currently not a big market need”*.¹¹⁴ As summarised by a competitor: *“It’s a topic too cost sensitive. In the near future however, we might see fully electric components for lighter machines.”*¹¹⁵ Another competitor further explains: *“I consider electric steering as full electric without any hydraulics. Therefore the applicability to heavy construction machines and agriculture machines needs to be questioned in general due to high load forces, which might require Hydraulic actuators for the final movement of the axle. In case it would be technically feasible the change needs a full redesign of the steering system, therefore requires significant effort / cost and is not possible after SOP.”*¹¹⁶
- (176) **Third**, documents from the ordinary course of business, as for example the one shown in Figure 9 below, indicate that ESVs are typically used in larger machines rather than smaller ones.

Figure 9 – Danfoss’ steering range

[...]

Source: Doc Id 1054-43057 (Filename: M.9820-RFI020003031.pdf)

- (177) As a result, fully electric solutions are even less likely to be substitutable with ESV than with HSU as fully electric machines have power limitations and weights, which make them unlikely to compete with machines currently using electrohydraulic steering. An internal document from Danfoss explains that tractors and combines [content of internal document - confidential market data].

¹¹² Form CO Sections 6 to 9 for steering, paragraphs 55 and 250.

¹¹³ Minutes of a call with a customer on 9.6.2020, DocID1986.

¹¹⁴ Reply to post-notification request for information, RFI 2, DocID1055-36627, M.9820-RFI020048915.

¹¹⁵ Reply to question 38.1 of Q12 – Phase II Questionnaire to competitors, DocID1966.

¹¹⁶ Reply to question 52.1 of Q12 – Phase II Questionnaire to competitors, DocID1966.

Figure 10 – Tractors and combines electrification assessment

[...]

Source: DocID 1053-5262 (Filename M.9820-RFI020396280.pdf)

- (178) [Content of internal document].
- (179) The Commission therefore considers at this stage that fully electric steering solutions do not exert a competitive constraint on ESVs.
- 6.4.3.3. Distinction between other electrohydraulic steering solutions and the Parties' solution
- (180) The Notifying Party contends that the electrohydraulic solution offered by Ognibene and other solutions based on motors instead of ESVs are part of the same market as ESVs. The Commission finds, on the basis of its investigation, that the evidence does not corroborate this claim. However, Ognibene's solution may exert some competitive constraint, as further discussed in the competitive assessment Section 6.4.3.3.
- (181) **First**, from a demand-side perspective, Ognibene's solution indeed differs from a traditional electrohydraulic solution such as the one offered by the Parties. In fact, the electro-hydraulic solution developed is named Digital Power Steering ('DPS') and includes an electric motor. The Ognibene DPS is placed over the off-highway vehicles traditional steering system, improving manoeuvrability and enabling the use of GPS and auto-guidance driving systems without any additional external steering system.
- (182) The DPS is characterised by a brushless motor able to modify the steering wheel torque, providing haptic feedbacks and controlling the HSU as a function of the driving strategy (synthetic boost curves, haptics signals in case of emergency/dangerous conditions, auto-guidance features, ...).
- (183) At low vehicle speed, the steering behaviour feels completely effortless; at high vehicle speed a higher "breaking" torque provided by the electric motor increases the system stability. Moreover, the electric motor is able to guarantee the steering wheel's complete return to zero in both forward and reverse manoeuvres.
- (184) Due to the differences in design, this system does not include an ESV. Although it provides a similar end use functionality and could operate as an external constraint to the Parties' Electrohydraulic Steering, the Commission does not consider that it is substitutable with the Parties' ESVs. As explained by one competitor: "*The electrohydraulic steering valves can be integrated with other technologies (like Ognibene is doing) but they cannot be substituted by now.*"¹¹⁷ In addition, ESVs is not an alternative for suppliers sourcing on a component-by-component basis, as further explained in recital (690) below.
- (185) **Second**, from a supply-side perspective, Ognibene has developed its own solution differently from a traditional electrohydraulic solution such as the one offered by the Parties precisely because of the high barriers to entry in the ESV market due to the patents owned by Danfoss: "*Given the numerous patents own by Danfoss in steering, the company had to develop an alternative design to achieve the same function in a*

¹¹⁷ Reply to question 38.1 in Q12 – Phase II questionnaire to competitors – steering and other products, DocID1966.

different way. Eaton developed an electro-hydraulic steering conceptually closer to Danfoss approach but also still different to avoid Danfoss patents.”¹¹⁸

- (186) **Finally**, the Parties’ claim that Ognibene’s DPS and other similar solutions should be considered as forming part of the same market as ESVs is undermined by the fact that the Parties themselves did not provide market shares taking into account Ognibene’s DPS solution.
- (187) The Commission therefore considers that the ESV and electrohydraulic solution offered by Ognibene and other solutions based on motors instead of ESVs are not part of the same product market. The extent to which these alternative solutions exert a competitive constraint on ESV will be further examined in the competition assessment in Section 8.4.3.3.

6.4.3.4. ESV mobile components for on-road and off-road applications

The Notifying Party’s view

- (188) The Notifying Party explains that so-called “on-road” vehicles can refer to trucks (conventional, without a specific work function), buses, and coaches, as well as specialized on-road vehicles with specific work functions such as cement mixer trucks.¹¹⁹
- (189) The Notifying Party contends that no separate markets should be defined for, on the one hand, HPS components used in those specialized on-road vehicles, which should in fact fall under the off-road category, and, on the other hand, HPS components used in vehicles which primarily drive off-road, such as, for example, tractors, wheel loaders or excavators.¹²⁰

The Commission’s past practice

- (190) In *Volvo/Atlas*,¹²¹ the Commission defined separate market for individual mobile hydraulic components. The Commission did not further consider whether a distinction between on-road and off-road applications was warranted within the separate markets for individual mobile hydraulic components.

The Commission’s assessment

- (191) Contrary to the Notifying Party’s view, the Commission preliminarily finds that ESVs for on-road vehicles with work functions are not part of the same product market as off-road vehicles.
- (192) **First**, the Commission finds that the Parties themselves in their ordinary course of business documents only consider the supply of ESVs for the off-road market without considering steering solutions for on-road vehicles.
- (193) **Second**, the Commission finds that there is limited demand-side substitutability. In particular, customers of ESVs for off-road vehicles do not tend to buy ESVs for on-road vehicles with work functions.
- (194) **Third**, the Commission finds that there is limited supply-side substitutability. In particular, ESVs for on-road vehicles with work functions work with completely different technologies compared to ESVs for off-road vehicles.

¹¹⁸ Minutes of a call with a competitor on 11.06.2020, DocID1987.

¹¹⁹ Form CO Sections 6 to 9 Introduction, paragraph 94.

¹²⁰ Form CO Sections 6 to 9 Introduction, paragraph 94.

¹²¹ IV/M.152 – *Volvo/Atlas*, paragraphs 13-14.

(195) **Fourth**, the Commission further found that the market position of suppliers is significantly different in these two categories. In fact, most of the competitors supplying ESVs for on-road vehicles with work functions do not offer those for off-road vehicles and vice versa.

6.4.3.5. The market for ESV is a differentiated market

(196) The Commission considers that the market for ESV is a differentiated market.

(197) As explained in Section 6.4.3.1, ESV can be used in two different types of electrohydraulic steering systems, namely the traditional Electrohydraulic Steering, and in Steer-by-Wire. As explained in recital 0 above, a similar valve is used on both solutions, and both solutions have similar features which make them substitutable from a demand-side perspective.

(198) However, as shown in Figure 8 above, both technologies also present marginal distinctions which set them apart. In particular, Steer-By-Wire solutions offer more design flexibility, eliminate hydraulic noise, and are easier to install. In Steer-by-Wire solutions, the steering column is eliminated, and HPS can be entirely removed from the cab and mounted strategically at another place of the vehicle in order to reduce cab noise and improve operator comfort.

(199) The two technologies also differ in terms of pricing. According to the Notifying Party's own estimates, the cost of traditional Electrohydraulic Steering is estimated at EUR [...], whereas the price of Steer-By-Wire is estimated at EUR [...], i.e. a [...] % difference.¹²²

(200) As a result, the Commission considers that the market for ESV is differentiated in relation to the end use of valves either in a traditional Electrohydraulic Steering or in a Steer By Wire, and will consider the impact of this conclusion in the competitive assessment in Section 8.3.3.1.

6.4.3.6. Conclusion on the product market definition for ESVs

(201) In the light of the considerations in Sections 6.4.3.2 to 6.4.3.5 and taking account of the results of the market investigation and of all the evidence available to it, the Commission considers that there is a market for ESVs for off-road applications separate from on-road, differentiated by type of solution in relation to the end use of valves (traditional Electrohydraulic Steering or Steer By Wire), which do not include captive sales, and is separate from the markets for electrohydraulic steering solutions based on motors and electric steering.

6.5. Orbital motors

6.5.1. *The Commission's past practice*

(202) The Commission's previous decisions do not deal specifically with orbital motors, or, more broadly, with hydraulic motors for mobile applications.

(203) In *Bosch/Rexroth*, consistent with the parties' view¹²³, the Commission considered that piston pumps, vane pumps and gear pumps for industrial applications are not

¹²² Steering Advocacy Paper, Figure 7 and footnote 4.

¹²³ While in an HPS pumps have different functions than motors, as explained by the Notifying Party, pumps have several similarities with motors and are often based on similar corresponding technologies (e.g. a radial piston pump is based on a technology that is similar to a radial piston motor). Therefore, to some extent, past practice dealing with hydraulic pumps might be informative also of hydraulic motors.

substitutable and therefore form different product markets.¹²⁴ However, substitutability of different motor technologies was not assessed.

6.5.2. *The Notifying Party's view*

- (204) According to the Notifying Party, hydraulic motors based on different technologies (i.e. orbital motors, piston motors, gear motors and vane motors), as well as electric motors are part of the same product market.¹²⁵ The Notifying Party is of the view that the different types of motors (including electric motors) are interchangeable and OEMs often switch from one type of motor to another for the same application, mainly because:¹²⁶
- (a) Orbital motors and motors based on other technologies have similar performance capabilities and perform the same functions;
 - (b) OEMs compare and choose motors of different technologies for the same function in a given machine.
- (205) The Notifying Party also considers that there is a high degree of supply-side substitutability between the various motor technologies and that manufacturers can switch production from one technology to another in the short-term without incurring significant additional costs or risks.¹²⁷
- (206) The Notifying Party also considers that, within orbital motors, no distinction should be made between different power levels,¹²⁸ or based on technical differentiations such as the types of valves they employ.¹²⁹
- (207) Finally, the Notifying Party considers that there should be no distinction between hydraulic motors (and therefore orbital motors) used for on-road and for off-road vehicles. The Notifying Party explains that hydraulic motors are typically not used in conventional on-road vehicles such as buses, conventional trucks and coaches, but are rather used in work functions of specialised on-road vehicles, as for example to rotate the drum in a cement truck, or to lift a crane in a crane truck.¹³⁰
- (208) Therefore, the Notifying Party contends that no separate markets should be defined for, on the one hand, orbital motors used in those specialised on-road vehicles, which should in fact fall under the off-road category, and, on the other hand, orbital motors used in vehicles which primarily drive off-road, such as tractors, wheel loaders or excavators.¹³¹

6.5.3. *The Commission's assessment*

- (209) The Commission finds, at this stage of the proceedings, that, contrarily to what the Notifying Party claims, orbital motors belong to a differentiated product market that is separate from the markets of other motor technologies.

¹²⁴ M.2060 - *Bosch/Rexroth*, section 1.1.

¹²⁵ Form CO, Sections 6 to 9 for motors, paragraphs 75-104; Reply to the Article 6(1)(c) Decision, paragraphs 26-36; Orbital Motors Advocacy Paper, paragraphs 9-52. Form CO Sections 6 to 9 for motors, paragraphs 75-118; Reply to the Article 6(1)(c) Decision, paragraphs 26-36; Reply to the SO, paragraph 12.

¹²⁶ Form CO Sections 6 to 9 for motors, paragraphs 78-98, 109-118.

¹²⁷ Form CO Sections 6 to 9 for motors, paragraphs 99-104.

¹²⁸ Form CO Sections 6 to 9 for motors, paragraphs 156-160.

¹²⁹ Reply to the Article 6(1)(c) Decision, paragraphs 37-46.

¹³⁰ Form CO Sections 6 to 9 Introduction, paragraph 94; Form CO Sections 6 to 9 On motors, paragraph 71.

¹³¹ Form CO Sections 6 to 9 Introduction, paragraph 94.

(210) In Section 6.5.3.1 the Commission will set out that, consistently with what the Notifying Party claims, orbital motors for on-road and for off-road applications belong to the same product market. Section 6.5.3.2 will demonstrate that orbital motors belong to a product market that is separate from those of other motor technologies, and Section 6.5.3.3 will concern the various existing differentiations of the market for orbital motors. Finally, Section 6.5.3.4 will summarise the main findings of Section 6.5.3.

6.5.3.1. Orbital motors for on-road and off-road applications belong to the same product market

(211) In line with the Notifying Party's view, the Commission finds that orbital motors for on-road vehicles with work functions and off-road vehicles are part of the same product market.

(212) The Commission finds that, looking at the demand-side, there are no technical differences between orbital motors used for work functions in on- and off-road vehicles. Furthermore, whether these work functions are installed on on- or off-road vehicles is not relevant to a customer's choice of orbital motor.

6.5.3.2. Orbital motors belong to a separate market from those of other motor technologies

(213) In this section, **Section A** will demonstrate that orbital motors and motors based on other technologies are not substitutable from a demand-side perspective. **First (A.1)**, demand-side substitutability between orbital motors and hydraulic motors based on different technologies is limited. **Second (A.2)**, demand-side substitutability between orbital motors and electric motors is limited. **Third (A.3)**, the Parties' internal documents extensively demonstrate the limited demand-side substitutability between orbital motors and motors of other technologies, including electric motors. **Fourth (A.4)**, the limited demand-side substitutability between orbital motors and motors of other technologies is further evidenced by the Notifying Party's variable profit margins that are very significant, suggesting very inelastic demand, or in other words, limited ability (or willingness) of demand to switch to alternative products.

(214) **Section B** will then demonstrate that there is also limited supply-side substitutability between orbital motors and motors based on different technologies.

A. Demand-side substitutability

A.1 Demand-side substitutability between orbital motors and hydraulic motors of different technologies appears to be limited

(215) The Commission considers that demand-side substitutability between orbital motors and hydraulic motors of different technologies is limited.

(216) In the Orbital Motors Advocacy Paper, the Notifying Party submits that the Parties' product data, Opportunity Data and price comparison show a significant across-technology substitution for orbital motors. These arguments can be summarised as follows. First, that a product data analysis, focusing on the speed and torque of motors of different technologies and manufacturers, shows significant overlaps between orbital motors and other technologies suggesting that different technologies are interchangeable from a purely technical point of view. Second, that an analysis of the Parties' Opportunity Data confirms that there is cross-technology substitution. Third, that there exists further economic evidence of cross-technology substitution. Fourth, that a price comparison shows that selected motors of the Parties are offered to similar price points as competing models of alternative technologies. The Commission has analysed the arguments presented in the Orbital Motors Advocacy Paper in detail in Annex II – The Commission's assessment of the Notifying Party's

advocacy paper on orbital motors (hereinafter referred to as ‘Annex II’), especially from a quantitative perspective, as well as in the assessment in this section.

- (217) **First**, from a technical point of view, only a limited number of orbital motors can be substituted with hydraulic motors that are based on other technologies.
- (218) When an OEM selects a certain motor for its HPS, certain technical requirements dictated by the specific machine characteristics need to be met. For example, a motor used for propelling a scissor lift (which is relatively small in size and relatively light in weight) would typically have to satisfy different technical characteristics in terms of, for example, torque¹³² and rotational speed^{133,134} compared to a motor used for the work function of, for example, a large skid steer loader, which would typically lift heavy objects.¹³⁵
- (219) As the Notifying Party explains,¹³⁶ each hydraulic motor technology has fundamentally different technical characteristics. Due to their technical characteristics, orbital motors are capable of producing high torque at low speed, which means that they are capable of delivering high torque even when the motor is rotating slowly or during its start-up phase. This is a feature that not all motors have.
- (220) A manufacturer of piston motors and gear motors explained that, while orbital motors are more suited for delivering high torque at low speed, gear motors and certain piston motors are more suited for operating at high speed.¹³⁷ The same manufacturer also explained that for this reason its motors are typically not in competition with the orbital motors of the Parties as they are employed for different applications (i.e. types of machines).
- (221) A distributor of the Parties’ products explained, in a different way, the same concept: “[t]he orbital motor is a Low Speed High Torque motor. If the function needs high speed or low torque the Orbital motor isn’t suitable. If the function have a big radial force a motor with a large bearing is needed”.¹³⁸
- (222) The Parties’ documents produced in their ordinary course of business also indicate a general lack of substitutability between hydraulic motors based on different technologies. For example, a document publicly available on Eaton’s website (and reproduced in Figure 11) shows that the motor torque and rotational speed which are required by a certain application dictate the choice of the appropriate motor technology. The document is addressed to Eaton’s potential customers and explains that “[b]y determining speed and torque requirements first, you can use the chart below to determine which Eaton motor category works best for you”. The chart identifies a clear area for which geroler (i.e. orbital motors) are the motors of choice.

¹³² A torque is a twisting force, which allows the motor and the element attached to the motor to rotate. The torque that a motor is capable to prove is a fundamental technical characteristic of a motor.

¹³³ Rotational speed is the speed at which the element attached to the motor rotates.

¹³⁴ As the Notifying Party explained in the Orbital Motors Advocacy Paper, paragraph 124, from a technical point of you, “the motor output (i.e., torque and speed) [is] what determines the selection of a motor”.

¹³⁵ See for instance, Form CO Sections 6 to 9 For motors, Table 2, in which the torque of scissor lifts is about 500-600 Nm, while that of skid steer loader is well above 1,500 Nm.

¹³⁶ Form CO Sections 6 to 9 For motors, paragraphs 9-46.

¹³⁷ Minutes of a call with a competitor on 05.11.2020, DocID2121.

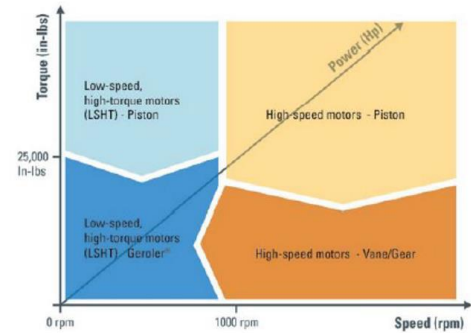
¹³⁸ Replies to question 13 of Q3 – Phase I Questionnaire to distributors, DocID1958.

Figure 11 – Eaton tutorial on how to select the best motor technology

6/19/2020

How to select the right motor for your application | high torque | Eaton

Eaton's motor solutions are divided into several divisions based on the type of motor and other technical details like speed and torque. By determining speed and torque requirements first, you can use the chart below to determine which Eaton motor category works best for your application.



Source: Doc ID 0172, page 2 Eaton website <https://www.eaton.com/us/en-us/products/motors-generators/high-torque/how-to-select-the-right-motor-for-your-application.html>.

- (223) In the Reply to the Article 6(1)(c) Decision, the Notifying Party claimed that the diagram in Figure 11 is only a schematic first indication, based on Eaton's experience of possible preferred choices of motors, and by no means this excludes competition among different motor technologies.¹³⁹
- (224) However, data provided by the Notifying Party in its Orbital Motors Advocacy Paper show that technical overlaps in terms of torque and speed between orbital motors and other hydraulic technologies (and specifically radial cam-lobe motors) occur only for certain large orbital motors, whereas for small orbital motors this is not typically the case (see Annex II).
- (225) The Parties' customers that replied during the market investigation seem to confirm that, while in certain limited instances more than one motor technology can in principle address the technical requirements of a certain machine,¹⁴⁰ there are a large number of cases for which other hydraulic motor technologies do not have the required technical characteristics, which instead orbital motors have.
- (226) For example, one OEM explained that its "[...] AWP¹⁴¹ uses orbital motors that can not be substituted cost effectively for telehandler steering, boom slewing and scissor propel. [The Company] also uses orbital motors in select machines that cannot be substituted cost effectively".¹⁴²
- (227) Another OEM explained that it cannot substitute orbital motors with other motors for its "[c]ommerical cleaning machines, work function, steering, propel".¹⁴³ Another OEM explained that it cannot substitute orbital motors in steering systems, and, in terms of machines, orbital motors cannot be substituted in forklifts, telescopic

¹³⁹ Reply to the Article 6(1)(c) Decision, paragraphs 32-33.

¹⁴⁰ Replies to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID 1956 and Replies to question 13 of Q3 – Phase I Questionnaire to distributors, DocID 1958.

¹⁴¹ The acronym 'AWP' is typically used for indicating Aerial Work Platforms and so is used for the purpose of the present SO.

¹⁴² Reply to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID 1956.

¹⁴³ Reply to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

handlers, compact wheel loaders, backhoe loaders.¹⁴⁴ Work functions for sweepers were also listed as cases where substitution of orbital motors is not feasible.¹⁴⁵

- (228) Distributors, which typically reflect the view of their customers, i.e. medium and small OEMs, also agreed that, particularly for small machines (and therefore where motors are expected to be small in size and in power), orbital motors cannot be substituted with motors of different technologies.¹⁴⁶
- (229) In certain cases, other technical requirements than mere performance requirements are the decisive factor for an OEM's choice of orbital motors, while hydraulic motors of different technologies cannot be an option.
- (230) One OEM, for example, explained that space is an important requirement in its machines and it prefers orbital motors over other motors because "*the [orbital] motors is [sic] very compact [and] it is [sic] difficult to change the technology*".¹⁴⁷
- (231) Another OEM explained that, while for most of its machines technical alternatives to orbital motors exist (because this OEM employs mainly large motors, for which, as explained, a certain degree of technology substitution with piston motors might exist), "[w]e could have particular cases in the material transport functions that, due to the dimensions, we can use only orbital motors".¹⁴⁸
- (232) Another large OEM explained that in its machines "*packaging integration and performance are critical, [and therefore] no alternatives [can be] identified [sic]*".¹⁴⁹
- (233) Therefore, although some technology substitutability might in principle exist for certain end-uses and functions, the Commission considers that in the majority of the cases, the technology of choice is well defined by the specific requirements of a machine and only in limited cases technical characteristics of orbital motors are similar to those of radial piston cam-lobe motors.
- (234) **Second**, even if, for certain applications, orbital motors have technical characteristics similar to those of piston motors (and particularly of radial piston cam-lobe motors), orbital motors are often a more cost-effective option for many OEMs.
- (235) The market investigation suggests that orbital motors have a better price point, compared to other technologies, particularly for motors of reduced power and torque and for those applications where machine cost is a strong competitive driver for OEMs.
- (236) A market participant explained that "*normally motors are very well staggered in terms of performances and costs. Only in few overlapping areas this possibility turns from "theoretical only" to doable" And there are huge space constrains in this*".¹⁵⁰
- (237) An OEM active in the manufacture of mini excavators explained that "[t]he swing motor for mini excavator can be substituted by a piston motor but not in a cost effective way. The piston motor use a technology much more expensive in term of manufacturing process".¹⁵¹ Another OEM provided a similar view: "*miniexcavators*

¹⁴⁴ Reply to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁴⁵ Reply to question 14 of Q2 – Phase I Questionnaire to indirect sale OEMs, DocID1957.

¹⁴⁶ Reply to question 13 of Q3 – Phase I Questionnaire to distributors, DocID1958.

¹⁴⁷ Reply to question 10.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁴⁸ Reply to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁴⁹ Reply to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁵⁰ Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁵¹ Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

(travel and swing motors): it is no efficient charging system (both economically and technologically [sic])”.¹⁵²

- (238) Another OEM stated that in “[m]obile crusher & screening equipment [orbital motors] are used for driving conveyors but cannot be substituted in a cost effective way”.¹⁵³
- (239) More generally, one OEM considers that “[o]rbital motors are popular for price reason only”,¹⁵⁴ while a distributor explained that “[s]imple applications might be harder to replace with for instance piston motors, due to cost”.¹⁵⁵
- (240) A distributor gave more specific explanations as to in which cases orbital motors appear to be more cost-effective option for OEMs, compared to other motors: “[i]n small motors 100cc...400 cc the orbital motor is most cost-effective solution but bigger ones especially if brakes are needed or the machine is electric one then piston type motors can be better”.¹⁵⁶
- (241) A competitor of the Parties which sells important quantities of piston motors in the EEA explained that “Orbital motors (which are not offered by the Company) is a second group of products for which the merger will reinforce Danfoss strong market position. The Company considers that this product is not substitutable in a costly efficient manner with other products based on different technologies (e.g. piston motors). Orbital motors target low/medium pressure and performance range with significant lower price level that cannot be achieved with an alternative solution”.¹⁵⁷
- (242) Internal documents of the Parties produced in their ordinary course of business are consistent with the respondents to the market investigation as they identify a number of machines for which orbital motors would be the most cost-effective choice for OEMs.
- (243) For example, for the swing function of excavators (that is the function allowing an excavator to rotate), Eaton clearly identifies [content of internal document].

Figure 12 – Eaton’s assessment of motors for swing function of excavators

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex B.15_15, slide 13

- (244) Concerning the “track” function of excavators (that is the propel function, which allows the wheels or the crawler to move), Figure 13 shows that Eaton considers that orbital motors are [content of internal document].

Figure 13 – Eaton’s assessment of motors for propel function of excavators

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex B.15_15, slide 14.

¹⁵² Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁵³ Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁵⁴ Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

¹⁵⁵ Reply to question 13 of Q3 – Phase I Questionnaire to distributors, DocID1958.

¹⁵⁶ Reply to question 12 of Q3 – Phase I Questionnaire to distributors, DocID1958.

¹⁵⁷ Non-confidential minutes of a call with a competitor on 8 June 2020, paragraph 36, DocID0291.

- (245) In its Orbital Motors Advocacy Paper, the Notifying Party claims that the fact that axial piston motors do not have technical characteristics directly comparable with those of orbital motors is not an obstacle for an OEM's adoption. According to the Notifying Party, if an axial piston motor is coupled with a mechanical gearbox, technical characteristics similar those of orbital motors can be achieved.
- (246) While what the Notifying Party claims is correct from a technical point of view, a large number of the OEMs indicated during the market investigation that they would not substitute an orbital motor with an axial piston motor plus a gearbox. The small minority that consider that they would make this substitution, however, also observed that this would apply only to a minority of the orbital motors they purchase.¹⁵⁸
- (247) OEMs also explained that an axial piston motor plus a gearbox would generally be more expensive, and the adoption of this solution would have certain merits only for those applications where the related increased efficiency would pay back the increased costs and where space limitations are not a constraint.¹⁵⁹
- (248) In the Orbital Motors Advocacy Paper, the Notifying Party also claimed that those motors based on other technologies that are not capable of providing torque and rotational speed¹⁶⁰ similar to those of orbital motors also compete with orbital motors, provided that their rated maximum torque is higher than the one of orbital motors. According to the Notifying Party, it is technically feasible to operate these motors at reduced torque, so that their torques and speeds can match those of certain orbital motors.¹⁶¹ In other words, the Notifying Party claims that OEMs can purchase motors rated for operating at higher torque and operate them at a torque that is below its capability.
- (249) A large majority of the OEMs that took a view in this respect does not agree with the claim of the Notifying Party indicating that they would typically not select a motor with higher technical capabilities than required by their machines, unless there is no other motor in the market which is a better fit.¹⁶² Some of these OEMs explained that such a selection would result in an overspecification of the motors, and cause, consequently, unnecessary additional costs.
- (250) One OEM, for example, explained “[a]ll of our businesses are highly competitive. We can't afford to use and (sic) expensive components that does not drive additional value to the customer. We have internal application engineers for each of our product lines that determine the optimal components that are needed to meet the specifications and the intended use of our machines”.¹⁶³ Similarly, another one said that “[t]hat would be to overspecify the product”.¹⁶⁴
- (251) In the context of the market investigation, only a minority of the respondents indicated that they would select a motor with higher capabilities than required. But even those suggested that this would happen only under circumstances that typically do not prevail today, as for example if such a choice does not come with extra costs for the OEM or for their customers. One of these OEMs, for example, explained

¹⁵⁸ Replies to question 16 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁵⁹ Replies to questions 16.1 and 17 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶⁰ Torque and rotational speed are two important technical characteristics of hydraulic and electric motors which defined if, prima-facie, a certain motor is capable to meet certain technical requirements.

¹⁶¹ Orbital Motors Advocacy Paper, paragraph 16.

¹⁶² Replies to question 18 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶³ Reply to question 18.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶⁴ Reply to question 18.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

“[w]e fit the best product we can source, both technically and commercially. If we can source a higher specification motor for a competitive price then we would consider this as an option”.¹⁶⁵

- (252) When it comes to past purchasing behaviour of OEMs, a large majority of them who expressed a view in this respect, indicated that they either never or only in some cases purchased hydraulic motors with technical characteristics above their requirements and operated them at reduced operating conditions.¹⁶⁶
- (253) **Third**, in those limited cases where orbital motors could theoretically be substituted with other motors (from both a technical and an economic point of view), in practice, OEMs appear to be reluctant in switching motor technologies. For an OEM, such a substitution would require a complete re-design of the HPS, with consequent technical risks and costs associated to the design changes. Therefore it is plausible that in case of a hypothetical price increase in orbital motors, for a number of cases where substitution with other technologies is theoretically possible, in practice OEMs would face difficulties in switching.
- (254) A majority of the OEMs that replied to market investigation and that purchase important quantities of orbital motors indicated that, even assuming that switching from orbital motors to a motor of a different technology is technically possible and that prices are comparable, there would be other factors preventing the switch.¹⁶⁷
- (255) One OEM explained that *“[r]eliability is a factor to consider, hydraulic motors are robust and suit our application, any change would need to be carefully considered”*.¹⁶⁸ Another OEM expressed a similar view by stating that *“[o]ther motor technologies have always to be tested and verified extensively prior to switches into serial production of our products”*.¹⁶⁹
- (256) The OEM that according to the data provided by the Notifying Party¹⁷⁰ purchases [information about purchasing volume] explained that the additional factors that might prevent switching include *“[p]ossible quality issues, logistics”*.¹⁷¹
- (257) Another large customer of the Parties invoked *“design rules (e.g. space), project cost vs advantages”*.¹⁷²
- (258) In addition to quality, reliability and, more generally, factors related to the risk of changing technologies, there are also costs associated to substituting orbital motors with a motor of a different technology. As the change of motor technology would entail re-designing the entire, or a large part of the HPS, even in those cases where OEMs are ready to take the risk of changing motor technology, the market investigation has shown that there are costs associated to the change, which might prevent these OEMs from switching to another technology.
- (259) A large majority of the OEMs that replied during the market investigation indicated that when designing a new machine, the HPS is partially or largely based on previous

¹⁶⁵ Reply to question 18.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶⁶ Replies to question 19 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶⁷ Replies to question 14 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶⁸ Reply to question 14.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁶⁹ Reply to question 14.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁷⁰ Reply to pre-notification request for information RFI PN 2, Annex D.30_1.

¹⁷¹ Reply to question 14.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁷² Reply to question 14.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

machines and only limited new features are introduced.¹⁷³ OEMs explained that there are a number of reasons explaining why they typically avoid re-designing the HPS from scratches when a new machine is designed.¹⁷⁴ One of these reasons appear to be the costs associated to the change, which also prevents OEMs from switching to a different motor technology.¹⁷⁵

- (260) One OEM underlined the associated costs of redesigning a machine, as possible reasons for not switching to a different motor technology mentioned the “[c]ost of re-designing our products and cost/time of validation”.¹⁷⁶
- (261) Similarly, a large customer of the Parties explained: “on the same machine we can not have different technology of motors in the sense to have interchangeable [sic] components. to substitute [sic] them we have to redesign the machine completely”.¹⁷⁷
- (262) A large OEM explained that “for orbital motors, substitutability is in principle possible for certain applications. For the Company, this could be a possibility, but is not a known substitution in current products without significant Research and Development”,¹⁷⁸ which hints at the costs associated to research and development as a factor potentially preventing the switch.
- (263) Another OEM explained that the cost of changing the motor technology would not be limited to the costs of a new design, but would also include the costs associated to safety certifications: “[w]e use orbital motors mainly for gripper applications and steering systems. A Substitution, especially for steering systems, is technically not possible without a renewed machine certification (incl. TÜV) taking place”.¹⁷⁹
- (264) OEMs’ reluctance in switching motor technology is also apparent from what an OEM stated: “Machines have been designed with orbital motors with good results so far, so we did not decide or have reasons to switch to other technology due to redesign and validation costs for our products”.¹⁸⁰
- (265) Another OEM explained that currently they are in the process of “[...] moving away from orbital motors”.¹⁸¹ This suggests that the substitution of orbital motors with motors of a different technology does not occur in a seamless way for OEMs, but it is rather a long-term process. This suggests that “postulating a hypothetical small, lasting change in relative prices and evaluating the likely reactions of customers to that increase a price increase”,¹⁸² it is unlikely that a large number of OEMs would readily switch motor technology.
- (266) Internal documents of Danfoss indicate that [content of internal document].

Figure 14 – Danfoss five forces analysis of HPS products for AWP

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex A.4_3, slide 45.

¹⁷³ Replies to question 40 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
¹⁷⁴ Replies to question 40.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
¹⁷⁵ Replies to question 40.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
¹⁷⁶ Reply to question 14.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
¹⁷⁷ Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.
¹⁷⁸ Non-confidential minutes of a call with a customer on 10 June 2020, paragraph 13, DocID1988.
¹⁷⁹ Reply to question 15 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.
¹⁸⁰ Reply to question 10.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
¹⁸¹ Reply to question 14 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.
¹⁸² Market Definition Notice, paragraph 15.

- (267) **Fourth**, the applications for which OEMs can choose between orbital motors and motors of a different hydraulic motor technology represent a small part of the market for orbital motors.
- (268) The Notifying Party provided a database in use in its ordinary course of business for the purpose of competitive intelligence and widely used in defining its strategies in the various business units.¹⁸³ The database contains sales of Danfoss and an estimate of its competitors' sales, broken down by a number of criteria, including OEMs that eventually purchased the product and the application (e.g. machine type). Figure 15 shows the 2019 sales of Danfoss (bars in red colour) and of its competitors (bars in blue colour) in the EEA, according to the machine classification internally used by Danfoss.

Figure 15 – EEA Orbital motors' sales (in EUR) in 2019 for various machine types

[...]

Source: Commission, based on data in Reply to pre-notification request for information PN 2, Annex D.30_1, excel file "Cleaned allMID".

- (269) Figure 15 shows that orbital motors are widely used in a number of machines. However, the majority of the sales seem to regard a limited number of machine types.
- (270) Another way of displaying the data of Figure 15 is to start from the sales of "Screening and Crushing" machines (for which the largest sale occur) and to sum up, one by one, the various machines types displayed on its right-hand side (namely Other Speciality, Excavator, etc). In this way, it is possible to visualise the cumulated sales of a certain number of machine types taken together. This is done in Figure 16, which shows the cumulated sales (as a % of the total sales of orbital motors in the EEA in 2019) of the various machine types.

Figure 16 – EEA cumulated sales (as % of total sales) of orbital motors in 2019 for various applications

[...]

Source: Commission, based on data in Reply to pre-notification request for information PN 2, Annex D.30_1, excel file "Cleaned allMID".

- (271) Figure 16 shows that 11 machines types account for about 80% of the total EEA sales of orbital motors in 2019. These machines types are (in order from the largest sales to the smallest): [confidential market data].
- (272) For each of these machine types, the Commission identified the OEMs that in 2019 purchased the largest amount of orbital motors (in value) and asked them, if in the past five years they switched from an orbital motor to a motor of a different technology (as for example, cam-lobe piston motor, gear motor, electric motor, etc). The replies indicate that, for each of those machine types, a large majority of the respondents either never switched or rarely/exceptionally switched from orbital motors to a motor of a different technology.¹⁸⁴ This suggests that for a large part of the market for orbital motors in the EEA, OEMs do not regularly switch from orbital motors to motors of a different technology.

¹⁸³ Reply to pre-notification request for information RFI PN 5, [Annex E.16_2, slides 27-33].

¹⁸⁴ Replies to question 10 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (273) In an attempt to demonstrate that orbital motors are part of a wider product market, which includes other motor technologies, the Notifying Party provided examples of machines for which in the past OEMs switched from orbital motors to a motor of a different technology, and vice-versa.¹⁸⁵ The examples cover a period of 10 years and include about 20 instances. These examples, however, do not seem to corroborate the Notifying Party's view that orbital motors are part of a wider product market.
- (274) **In the first place**, these examples are very limited in number. The Notifying Party did not specify if the examples refer to orbital motors sold in the EEA or in another region. Assuming that they refer to the EEA and do not include examples of switches occurred in other regions, it should be recalled that in the EEA there are about 800 OEMs active in agriculture machine manufacture and about 600 OEMs active in construction machine manufacture.¹⁸⁶ Therefore, in this context, 20 examples of switches in 10 years are a limited number.
- (275) This limited number of instances of switching should also be considered in comparison with the large number of cases in which OEMs switch suppliers of orbital motors. As the Opportunity Data of the Parties show in a period of 3 years, there were at least (but most likely more than) [...] instances in which OEMs switched suppliers of orbital motors.¹⁸⁷ In ten years, these would amount to more than [...] cases of switches of suppliers. This large number compares to a very limited number of examples of switches between one motor technology to another. This support the Commission's view that orbital motors and motors of different technologies (including electric motors) are part of different product markets.
- (276) **In the second place**, the limited number of examples provided by the Notifying Party are consistent with the OEMs' replies to the market investigation indicating that they would switch only in rare or occasional circumstances (see recital (272)).
- (277) For example, one OEM identified by the Notifying Party in its examples for having switched from orbital motors to an axial piston motor for one of its wheel loaders, indicated that in the last five years it has never switched between orbital motors and other types of motors for its wheel loaders.¹⁸⁸ This suggests that, assuming that the information provided by the Notifying Party is accurate, either the switch occurred more than 5 years ago, or the event was so rare, and probably of little importance, that the OEM did not deem it necessary to report about it when replying to the Commission's questionnaire during the market investigation.
- (278) The same applies to another example provided by the Notifying Party regarding an OEM respondent to the market investigation and that allegedly switched from orbital motors to radial piston cam-lobe motor for its roller machine. In its reply to the market investigation, this OEM also indicated that in the last five years it has never switched between orbital motors and other types of motors for its paver machines.¹⁸⁹
- (279) Furthermore, an analysis of the Parties' orbital motor sales supports the argument that a potential competition with motors of different hydraulic technologies concerns a limited part of the market.

¹⁸⁵ Form CO Sections 6 to 9 for motors, table 3.

¹⁸⁶ Form CO Sections 6 to 9 for Steering, Table 53.

¹⁸⁷ See Annex I, Table 5 on the so-called "replacing business" opportunities.

¹⁸⁸ Reply to question 10 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁸⁹ Reply to question 10 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (280) Danfoss' series T, and Eaton's VIS are large motors which, to some extent, compete with piston motors. However, those sales only represent a limited proportion of the market, as further explained in Section 8.5.3.5 below.
- (281) **Fifth**, OEMs that in the last five years switched from orbital motors to motors of a different technology (including electric motors) have been asked their reasons for such a switch, and a large majority indicated reasons not related either price or quality (which are two main parameters upon which competition takes place).¹⁹⁰
- (282) For example, one OEM that switched to electric motors, explained that the switch occurred for technical reasons,¹⁹¹ which indicates that the switch did not occur because quality and price (i.e. the main parameter where one would expect competition to take place) of the electric motor chosen were better, but rather because electric motors in general are a better technical fit to a particular function of a particular machine. Similarly, two OEMs, which for certain machines switched to gear motors, explained that gear motors provide better technical performance for the specific application.¹⁹²
- (283) **Sixth**, a large majority of the OEMs that replied during the market investigation and that purchase important quantities of orbital motors indicated that in the last five years have either never or only rarely rarely/exceptionally switched between orbital motors and other types of motors.¹⁹³
- (284) Therefore, based on the evidence available at this stage of the market investigation and explained in recitals (215)-(283), the Commission considers that orbital motors and hydraulic motors of other technologies are not substitutable from a demand-side perspective.

A.2 Demand-side substitutability between orbital motors and electric motors is limited and requires important changes of OEMs' machines

- (285) This section will demonstrate, that demand-side substitutability between orbital motors and electric motors is limited and requires important changes of OEMs' machines.
- (286) **First**, the assessment conducted in recitals (216) to (233) above with respect to demand-side substitutability of orbital motors with hydraulic motors of a different technology, to a large extent applies also to electric motor because, as explained in Annex II, from a technical point of view, only a limited number of orbital motors can be substituted with electric motors.
- (287) **Second**, and differently from the cases in which an OEM considers to substitute an orbital motor with a hydraulic motor of a different technology, a more important redesign of the machine would be required. In this case, in fact, the entire HPS for making the orbital motor operate would not be required (including the fluid conveyance system and the HPS control system), whereas a new set of electrical and electronic systems would be needed, in addition to a system for storing electricity (typically a battery) and a recharge system would be needed.

¹⁹⁰ Replies to questions 12 and 12.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁹¹ Reply to question 12.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

¹⁹² Replies to question 12.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963. Courtesy translation from German: '*technisch bessere Performance für die Anwendung*' and '*Da Zahradmotor unserer Anforderungen besser erfüllen*', DocID1963.

¹⁹³ Replies to question 10 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (288) In this respect, OEMs explained that the effort for electrifying a machine requires important efforts in terms of design and testing. For example, one OEM explained: *“there is a trend for electrification, which might potentially replace hydraulic systems in the future. However, a complete replacement of hydraulic systems with electric ones can take place only when machines are fully electrical (i.e. when diesel engines are replaced by batteries and electric motors, and the different actuators as linear actuators as hydraulic cylinders will be replaced by fully electrical sub systems). The Company considers that in the mobile sector such a trend will take a long time and is not foreseen to occur on a large scale in the near future. Electrical machines are expected to remain a niche for several years”*.¹⁹⁴
- (289) **Third**, machines with electrified functions (that is to say with an electric motor instead of an HPS) are a niche market and are expected to remain a niche for the foreseeable future.
- (290) **In the first place**, price elasticity between orbital motors and electric motors appear to be very limited. The Parties’ competitors in orbital motors that replied to the market investigation indicated that, for the machines that in 2019 cumulatively represented about 80% of the total orbital sales in the EEA (see recitals (268)-(271)) in the last five years they did not lose sales of orbital motors because certain OEMs decided to switch to electric motors.¹⁹⁵ One exception appears to be aerial lift machines,¹⁹⁶ for which one orbital motor manufacturer stated that *“[it] supplied orbital motors as travel drives on scissor lift AWP that were replaced with electric motors (circa 2015)”*.¹⁹⁷
- (291) These manufacturers also explained that in defining the price of their orbital motors, they do not take into account of the price of electric motors.¹⁹⁸ This indicates that they consider the price elasticity between orbital motors and electric motors to be very limited (that is to say, in case of a price increase of orbital motors, they do not expect that an important part of their customers would switch to electric motors).
- (292) **In the second place**, electrification would only interest a limited number of machines, and therefore only a limited number of machines have an electric motor instead of a dedicated HPS. The OEMs that responded to the market investigation mostly consider that electric systems are not economically and technically interchangeable with hydraulic power systems for many of the machine types that cumulatively account for 80% of EEA orbital motor sales in 2019.¹⁹⁹
- (293) One OEM active in height access equipment explained that for its machines *“[a] purely electrical operation is currently technically not possible”*,²⁰⁰ while another OEM active in construction machines explained that, while they do not exclude that in the future electric systems might become more competitive, at the moment this is not the case: *”for now, we do not consider the possibility to switch to fully electric [sic] system, mainly for cost reason. In the future it could be possible”*.²⁰¹

¹⁹⁴ Minutes of a call with a customer on 9.6.2020, DocID1986.

¹⁹⁵ Replies to question 5 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

¹⁹⁶ For clarify, aerial lifts are also referred to as aerial working platforms (‘AWP’).

¹⁹⁷ Reply to question 5.1 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

¹⁹⁸ Replies to question 6 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

¹⁹⁹ Replies to question 15 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

²⁰⁰ Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

²⁰¹ Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (294) Another OEM, which is active in municipal machines, for example, explained that “[electric] motors are available and technically possible although pricing is not comparable with hydraulic motors”.²⁰² Another OEM further adds “currently too expensive electric systems, therefore not interchangeable in terms of costs”, while another specifies that “electric system is not relevant for a swing or travel motor.”²⁰³ This view is further reinforced by another OEM that explained: “[w]e cannot switch to electric motors because other products as gearbox would have to be added, increasing the cost of the function and the size/dimensions of our products”. Another further explained that “for now, we do not consider the possibility to switch to fully electric system, mainly for cost reason. In the future it could be possible”.²⁰⁴
- (295) Another OEM further explained the level of changes that are needed, which explains why electric machines are expected to remain a niche in the foreseeable future: “there is a trend for electrification, which might potentially replace hydraulic systems in the future. However, a complete replacement of hydraulic systems with electric ones can take place only when machines are fully electrical (i.e. when diesel engines are replaced by batteries and electric motors, and the different actuators as linear actuators as hydraulic cylinders will be replaced by fully electrical sub systems). The Company considers that in the mobile sector such a trend will take a long time and is not foreseen to occur on a large scale in the near future. Electrical machines are expected to remain a niche for several years”.²⁰⁵
- (296) **In the third place**, the market investigation indicates that while for certain machines as for example those for screening and crushing or AWP, electric motors are a viable option and can replace an HPS, this option is limited to a small number of machines.
- (297) For example, one OEM that considers that for screening and crushing machines electric systems are economically and technically interchangeable with hydraulic power systems,²⁰⁶ when asked to explain its reply explained that this is the case “[...] only in the low performance range of shredders and sieving machines”.²⁰⁷
- (298) Another OEM, which is particularly active in AWP, explained that “[it] sees the trend of electric systems continuing at a gradual pace. There have not been any new global suppliers of orbital motors in 20+ years, only consolidation. This continues to drive the price point while the electric motor space is very competitive – realized by the falling of electrics and the continual price increases in orbitals”.²⁰⁸
- (299) Regarding AWP, Danfoss’ internal document reproduced in Figure 14 shows that, [content of internal document].
- (300) One manufacturer of orbital motors also explained why it considers that an electric system can replace an HPS only in a limited number of machines: “Fully electric machines without an internal combustion engine require a battery. Batteries are very expensive and are not a viable solution at this point for most customers. For machines with internal combustion engines, most of them have pumps on them to provide power for machine functions. It is very economical for the OEM to use a

²⁰² Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

²⁰³ Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

²⁰⁴ Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

²⁰⁵ Minutes of a call with a customer on 9.6.2020, DocID1986.

²⁰⁶ Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

²⁰⁷ Reply to question 15.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963. Original text in German reads ‘allerdings nur im niedrigen Leistungsbereich von Zerkleinerern und Siebmaschinen’.

²⁰⁸ Reply to question 13.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

*hydraulic motor rather than add a generator, electric motor, and gear box. One OEM, [...], switched to electric motors on their scissors lifts about 10 years ago, which are battery operated machines. They had a lot of durability issues and have subsequently gone back to orbital motors in the last 6 years. For street sweepers, some OEMs have talked about going to electric motors to run the brooms, but the large majority of sweepers still use orbital motors”.*²⁰⁹

- (301) Internal documents of the Parties appear to confirm what indicated by market participants, i.e. [content of internal documents].
- (302) For example, a study conducted by Eaton, [content of internal documents].

Figure 17 – Cost comparison of traditional versus fully electric machines

[...]

Source: The Notifying Party’s reply to RFI PN 3 _Annex_A.4_8, slide 20.

- (303) Internal documents of Danfoss are consistent with those of Eaton. For example, the internal document reproduced in Figure 18, dated June 2019 shows that Danfoss [content of internal documents].

Figure 18 – Danfoss’ impact assessment of electrification on hydraulic power systems

[...]

A.3 The Parties’ internal documents suggest that other motor technologies are part of different product markets

- (304) **First**, in their ordinary course of business, the Parties do not appear to be monitoring, assessing and comparing motors of different technologies, at least not with the same intensity and details used for orbital motors produced by competing manufacturers.
- (305) The Notifying Party provided all the Parties’ orbital motor strategy documents produced in their ordinary course of business in the years 2017, 2018 and 2019.²¹⁰ These documents typically provide a detailed assessment of other manufacturers of orbital motors, in terms of, for example, market shares, recent commercial activities, or, more in general of their activities (see for example Figure 19 for Danfoss and Figure 20 for Eaton). However, [content of internal documents].²¹¹

Figure 19 – Example of Danfoss’ competitive assessment in orbital motors

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex B.15_1, slide 13.

Figure 20 – Example of Eaton’s competitive assessment in orbital motors

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex A.4_9, slide 5.

²⁰⁹ Reply to question 5.1 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

²¹⁰ Reply to post-notification request for information RFI 6, question 2.

²¹¹ See for example, the way Danfoss assessed the threat of competing technologies for [...] in the Reply to pre-notification request for information RFI PN 3, Annex A.4_3, slides 44 and 45.

- (306) Another piece of evidence that, in their ordinary course of business, the Parties do not typically benchmark their orbital motors with motors of different technologies is provided by the reply provided to a Commission's request for information during the market investigation. The Commission requested the Notifying Party to provide the names, technical characteristics and, to the extent known, market price of the 3 motors of other technologies competing with the Parties' orbital motors, and to support the reply with documents produced in the Parties' ordinary course of business.²¹²
- (307) The documents provided by the Notifying Party and those reviewed by the Commission during the market investigation predominantly indicate that in most instances, the Parties were regularly assessing motors of different technologies, so they had to compile the data specifically for the reply to the Commission's request. It is to be noted that in other requests dealing with orbital motors, the Notifying Party was able to provide databases where extensive data on orbital motors of its competitors are reported.²¹³
- (308) **Second**, Danfoss' attempt to [business strategy].
- (309) [Business strategy].²¹⁴ [Business strategy].
- (310) [Content of internal documents],²¹⁵ [content of internal documents].

Figure 21 – [...]

[...]

Source: Reply to post-notification request for information RFI 2, DocID001061-026765 [emphasis added by the Commission].

- (311) In another internal document, reproduced in Figure 22, Danfoss explains [business strategy].²¹⁶ [Business strategy].

Figure 22 – [...]

[...]

- (312) **Third**, in their strategy documents of the last five years, where strategies of each business units are defined and reviewed, none of the Parties appears to be concerned of possible cannibalisation between orbital motors and motors of other technologies, including electric motors.
- (313) For example, Danfoss [business strategy].²¹⁷ [Business strategy],²¹⁸ [business strategy],²¹⁹ [business strategy].²²⁰ [Business strategy].

²¹² Reply to post-notification request for information RFI 6, question 4.e.

²¹³ See for instance, Reply to pre-notification request for information PN 2, Annex D.30_1.

²¹⁴ Reply to post-notification request for information RFI 6, question 6.a.

²¹⁵ Reply to post-notification request for information RFI 2, DocID001061-024941.

²¹⁶ See for example, Reply to post-notification request for information RFI 6, Annex B.6.c_2, slides 9 and 15.

²¹⁷ Reply to pre-notification request for information RFI PN 2, question 2.

- (314) With respect to electrification, Danfoss aims at becoming [business strategy].²²¹ [Content of internal documents].

Figure 23 – Danfoss’ competitive landscaping of its business unit which includes electric motors

[...]

Source: Form CO, Annex _Sections 1-5_V_5.4_1, slide 170.

Inelastic demand suggests limited demand-side substitutability

- (315) Lastly, the Commission notes in this context that the Notifying Party realises [...] variable profit margins in orbital motors. Based on statistics presented by the Notifying Party, it earns on average a contribution margin of [...] in its orbital motor sales.²²² The Commission recalls that, based on the well-known Lerner index, a firm’s variable profit margin is equal to the reciprocal of (minus) the elasticity of demand faced by the firm ($m = -1 / \epsilon$). The ability to set prices [analysis of margin data of the parties].
- (316) Based on the same source, the Notifying Party also [information about margin data].
- (317) Such [...] margins are suggestive of relatively inelastic demand, which is, in turn, indicative of limited ability and/or willingness on the part of consumers to divert their demand away from the goods in question when faced with a marginal price increase and substantial market power.
- (318) The Commission recalls that, based on economic theory, in the so-called modern critical loss framework²²³ there is a direct relationship between variable profit margins in a candidate product market (here orbital motors) and the share of demand that would need to divert to goods outside the candidate market (here motors of other technologies), following a uniform²²⁴ price increase in all products in the candidate market, for the price increase to be unprofitable. That would in turn mean, that the candidate product market is too narrow for a hypothetical monopolist to be able to profitably apply a SSNIP, and thus the relevant product market should be defined more broadly, to include some of the competing technologies (here other motor technologies) that were originally excluded from the candidate product market (here orbital motors). In this framework, [...] margins observed in orbital motors would necessitate unrealistically high diversions to other technologies, following a hypothetical uniform price increase in orbital motors, for those other technologies to form part of the same market.²²⁵
- (319) In view of the above, the Commission considers that the observed profit margins contradict the Notifying Party’s arguments as to the existence of significant cross-technology competition in the motors space.

²¹⁸ Form CO Annex _Sections 1-5_V_5.4_1.

²¹⁹ Form CO Annex _Sections 1-5_V_5.4_1, slides 202-227.

²²⁰ Form CO Annex _Sections 1-5_V_5.4_1, slides 91-99.

²²¹ Form CO Annex _Sections 1-5_V_5.4_1, slides 166-227.

²²² Orbital Motors Advocacy Paper, Annex 9, Table 5-3.

²²³ An analytical manifestation of the SSNIP test.

²²⁴ The term uniform refers to the fact that the hypothetical price increase is applied to all products in the candidate product market.

²²⁵ See equation (2) in Moresi, Serge and Salop, Steven C. and Woodbury, John, Market Definition in Merger Analysis (February 8, 2017). Forthcoming, as edited, in: Antitrust Economics for Lawyers (LexisNexis), Chapter 1, Available at SSRN: <https://ssrn.com/abstract=2906111>.

B. Supply side substitutability

- (320) In this Section, the Commission will demonstrate that, contrarily to what the Notifying Party claims, there is no supply-side substitutability between orbital motors and motors based on different technologies.
- (321) The Notifying Party claims that in the market for orbital motors there is a high degree of supply-side substitutability with other types of motors because manufacturers can switch production between different types of motors and market them in the short-term, without incurring significant additional costs or risks in response to small and permanent changes in relative prices.²²⁶
- (322) The market investigation does not support the Notifying Party's view, and indicates that a manufacturer that wants to switch production between different motor technologies would incur important costs and risks.
- (323) **First**, as explained in Section 8.5.3.7, barriers to entry in the market for orbital motors are high for manufacturers of motors of different technologies. A manufacturer that does not have orbital motors in its portfolio, in addition to the high investment costs, would incur, for example, important costs and risks related to the acquisition of the required expertise and know-how for manufacturing orbital motors.
- (324) **Second**, the mere fact that, as the Notifying Party claims,²²⁷ certain manufacturers would allegedly have engineering know-how, financial resources, and access to sales channels is not a sufficient element to conclude that these manufactures would be able to switch production without significant additional costs or risks.
- (325) In this respect, the Notifying Party itself explains that, assuming that a manufacturer is able to source different components of a motor from other manufacturers and assemble them in-house, it would take 12 to 24 months and between EUR 1 million and 2 million for expanding its portfolio to an additional type of motor.²²⁸
- (326) Even assuming that the estimates of the Notifying Party were realistic and therefore reliable for the present assessment, *quod non* as explained in the next recital, these estimates would not allow for a conclusion on the existence of a sufficient degree of supply-side substitutability within the meaning of the Commission's Market Definition Notice.²²⁹ On the contrary, the Market Definition Notice explains that "[w]hen supply-side substitutability would entail the need to adjust significantly existing tangible and intangible assets, additional investments, strategic decisions or time delays, it will not be considered at the stage of market definition".²³⁰
- (327) **Third**, the estimates of the Notifying Party regarding the time and resources required for entering the market for orbital motors appear to be underestimated.
- (328) During the market investigation, HPS manufacturers provided their estimates of time and investment required for setting-up a manufacturing facility.²³¹ In terms of time, one manufacturer indicated 1-2 years, whereas most manufacturers consider that 3 to 4 or even more than five years is a more accurate estimate. This estimate concerns only the set-up of a manufacturing facility, and does not take into account of the

²²⁶ Form CO Sections 6-9 for motors, paragraphs 99-103; Reply to the Article 6(1)(c) Decision, paragraph 30.

²²⁷ Form CO Sections 6-9 for motors, paragraph 100.

²²⁸ Form CO Sections 6-9 for motors, paragraph 102.

²²⁹ See for example, Commission Notice on Market definition, paragraphs 21-22.

²³⁰ Market Definition Notice, paragraph 23.

²³¹ Replies to question 29.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

additional time required for example for setting-up the business organisation, marketing the products and concluding agreements with distributors. Therefore, the time estimated by the Notifying Party for a manufacturer to start producing and selling orbital motors is very likely an underestimation.

- (329) With respect to the initial investment that a manufacturer should make for starting manufacturing orbital motors, the Notifying Party's estimation of EUR 1-2 million also appears to be an underestimation. The majority of the manufacturers of HPS that expressed a view during the market investigation indicate much higher resources at stake.²³² Referring to the investment required for the manufacturing facility, one manufacturer stated that it would require "[...] *many millions of EUR, depending on the width of the product portfolio*",²³³ and, similarly, another manufacturer stated that "*several million EUR investment (depending on product portfolio) [are] required for a company to establish a manufacturing facility and enter the market*".²³⁴ Other manufacturers provided more precise estimates. For example, one of them stated that the "*investment for a manufacturing volume of 100.000 orbital motors (estimated minimum size to justify a manufacturing footprint) is estimated [sic] in the range of 20 mio €*",²³⁵ which appears to be closer to the estimate of another manufacturer, which estimated costs of USD 15 million,²³⁶ than to the Notifying Party's estimate of EUR 1-2 million.
- (330) Therefore, the Commission considers that the Notifying Party's claims on supply side substitutability do not support that orbital motors and motors of other technologies belong to the same product market.

6.5.3.3. The market for orbital motors is a differentiated market

- (331) In the Form CO, the Notifying Party considers that it would not be appropriate to further distinguish the market for orbital motors.²³⁷ However, the results of the market investigation indicates at this stage that important differentiations of orbital motors exist. These are particularly important with respect to (i) applications and (ii) power level and other technical differentiations.
- (332) However, in the Reply to the SO, the Notifying Party indicated that it agrees with the Commission that a market for orbital motors would be a differentiated one, although the Notifying Party considers that the Commission did not sufficiently analyse the competitive dynamics that prevails in the different sub-segments of such market.²³⁸

Distinction by applications

- (333) The market investigation and the Notifying Party,²³⁹ suggest that certain differentiations between orbital motors sold for different machines exist.
- (334) **First**, both the Parties often assess their sales according to the machine where they are employed (e.g. agriculture machine, construction machine, etc), and in some cases they define their strategies according to the machines where orbital motors are

²³² Replies to question 29.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²³³ Reply to question 29.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²³⁴ Reply to question 29.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²³⁵ Reply to question 29.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²³⁶ Reply to question 29.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²³⁷ Reply to the Article 6(1)(c) Decision, paragraphs 37-46.

²³⁸ Reply to the SO, paragraphs 115 et seqq.

²³⁹ Reply to the SO, Annex 4; Orbital Motors Advocacy Paper, Annex 9, section 2.

intended to be sold.²⁴⁰ This suggests that, to some extent, conditions of competition might vary across different machine types.

- (335) **Second**, while certain OEMs that replied to the market investigation consider that an orbital motor sold for a certain application (e.g. agriculture, mining, construction etc.) is always interchangeable with, and therefore can also be sold for, a different application (i.e. it is always interchangeable between applications), other OEMs indicated that this is only sometimes the case.²⁴¹ This suggests that there might be at least some machines for which orbital motors are customised and therefore they cannot be readily sold for other machine types.
- (336) **Third**, as explained in Section 8.4.3.1, certain manufacturers appear to be particularly strong for certain machine types, whereas they have little or no presence for other machine types. The Notifying Party itself, in the Orbital Motors Advocacy Paper provided sales data of the Parties indicating that, for example, Eaton's sales of orbital motors for excavators are much larger than those of Danfoss,²⁴² while the opposite is true for a number of other machines.
- (337) **Fourth**, in the Orbital Motors Advocacy Paper, the Notifying Party explained that, in the case of excavators, for example, Eaton developed certain technical solutions specifically addressing the needs of excavators.²⁴³ This suggests that, in certain cases, a dedicated technical development might enable or facilitate the sales of orbital motors for certain machines.
- (338) Furthermore, as explained by Danfoss in its internal document reproduced in Figure 14 in Section 6.5.3.2, Danfoss is a strong supplier of orbital motors for AWP, and considers that it [content of internal documents].
- (339) In conclusion, the market investigation suggests that within the market for orbital motors, certain differences exist between the various orbital motors that are used for constructing the various machine types.

Technical differentiations by pressure and power level

- (340) Another differentiation within the market for orbital motors regards the power level and the pressure level at which they can be operated. As the Notifying Party explains, orbital motors can be classified between low power and medium power.²⁴⁴ Danfoss' portfolio of medium power orbital motors includes the so-called T-series motors, while Eaton's medium power orbital motors are the models called HP30, HP50, VIS30, VIS40 and VIS45.²⁴⁵ Although there is no direct relationship between pressure and power, medium power orbital motors are typically designed to operate at a higher pressure, compared to low power orbital motors. According to Danfoss' classifications, low power orbital motors operate at a pressure range of [...] bars, while the medium power ones at [...] bars.²⁴⁶
- (341) For the reasons explained below, while the Commission considers that all orbital motors are part of the same product market, to a certain extent, it acknowledges that

²⁴⁰ See for instance: Reply to post-notification request for information RFI 9, Annex D.13_1; Reply to pre-notification request for information RFI PN 3, Annex A.4_3.

²⁴¹ Replies to question 7 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²⁴² Orbital Motors Advocacy Paper, paragraph 119.

²⁴³ Orbital Motors Advocacy Paper, paragraphs 108-111.

²⁴⁴ Orbital Motors Advocacy Paper, paragraph 3 and Sections II and III.

²⁴⁵ Orbital Motors Advocacy Paper, table 1.

²⁴⁶ Orbital Motors Advocacy Paper, footnote 21.

the conditions of competition are not consistently the same across low power and medium power orbital motors, although those differences do not warrant the finding of separate product markets.

- (342) **First**, not all manufactures that supply lower power orbital motors also supply medium power ones. Therefore OEMs purchasing medium power orbital motors have a reduced number of available suppliers, which most likely result in different conditions of competition in the EEA. As Section 8.5.3.1 explains, in 2019 the Parties were the only suppliers in the EEA of orbital motors of medium power.
- (343) The fact that not all manufacturers can supply medium power orbital motors can be explained by the fact that, from a manufacturing point of view the pressure at which an orbital motor can operate, and power level that it can provide define certain manufacturing differences and not all manufacturers are able to manufacture all these various motors.²⁴⁷
- (344) **Second**, when collecting the Opportunity Data, both Parties distinguish between the power level of the orbital motors, and more specifically, they distinguish between low and medium power (see Annexes I and II). The fact the Parties have the need to classify the sales of their orbital motors by power level, suggests that conditions of competition are not exactly the same across these types of orbital motors.
- (345) As explained in recital (341) above, the Commission does not however consider that orbital motors of different power levels are part of separate product markets (see recitals (350)-(351) below). The Commission however considers that differentiation relevant for the competitive assessment and will examine it further in this context in section 8.5.3 below.
- (346) Indeed, evidence gathered in the course of the investigation indicates that there is a certain degree of supply-side substitutability at least for certain components of different orbital motors (e.g. of different power levels). Therefore, an orbital motor manufacturer active in a certain part of the market for orbital motors (for example, orbital motors of reduced power level) would exert, to a certain extent, a competitive constraint to other orbital motors because it possesses a number of capabilities and assets for starting manufacturing orbital motors that are different from those it currently produces.
- (347) This has been confirmed by the Notifying Party's reply to request for information RFI 20, question 3, recital 48, where the Notifying Party explains that it could use for the OMS series the shafts manufacturing capabilities it uses for other orbital motors. [Information on the Parties' manufacturing processes].²⁴⁸
- (348) A similar situation seems to occur for certain treatments that certain orbital motors' components require. The Notifying Party's reply to request for information RFI 20, explains in *paragraphs* 52 and 53 that Danfoss' plant in Nordborg provides heat treatment services not only for the orbital motors produced in that plant, i.e. different types of orbital motors but most noticeably medium power, but also for those manufactured in Wroclaw, where mainly medium power orbital motors are produced.
- (349) The Notifying Party itself admits in the Reply to the SO that a certain degree of supply side substitutability between low power and medium power orbital motors

²⁴⁷ Form CO Sections 6 to 9 for motors, paragraphs 14-20.

²⁴⁸ Notifying Party's reply to question 3 of RFI 20, paragraph 48.

exists: “[...] when looking at the segment for medium power orbital motors, potential entry by low power orbital motor suppliers represents a significant constraint because it is relatively easy to scale-up motors. This is the entry path Danfoss and others pursued. For example, Danfoss' T Series medium power orbital motor is a further development based on Danfoss' O Series, which is a large low power orbital motors”.²⁴⁹

- (350) In addition, the Notifying Party notices that there is no industry standard or commonly and unbiased definition of power levels of orbital motors. One direct consequence of this is that estimates of market shares by power level would not be robust because it is not possible to unequivocally allocate certain orbital motors to a power level or to another.²⁵⁰ As the Notifying Party explained,²⁵¹ the Parties themselves have different internal definitions of medium power orbital motors because Eaton classifies some of its orbital motors as high power orbital motors, which Danfoss classifies as medium power orbital motors.²⁵²
- (351) Furthermore, there are other motor characteristics than pressure and power that might lead an OEM to select a certain motor, as for example torque and rotational speed.
- (352) Based on the evidence gathered during its investigation, the Commission therefore considers that there is one overall market for orbital motors, with differentiations by power levels, which do not however constitute separate markets. This is because (i) not all orbital motor suppliers supply all power levels, and both parties classify the sales of their orbital motors by power level; however(ii) there is a certain degree of supply-side substitutability at least for certain components of different orbital motors and there is no industry standard or commonly and unbiased definition of power levels of orbital motors. The extent to which this differentiation impacts the competitive assessment will be examined in section 8.5.3 below.
- (353) The Commission will consider to what extent the differentiated nature of the market for orbital motors impacts the competitive assessment in Section 8.5.3 below.

6.5.3.4. Conclusion on the product market definition for orbital motors

- (354) In conclusion, in the light of the considerations in recitals (202) to (353) and taking account of the results of the market investigation and of all the evidence available to it, the Commission concludes that (i) orbital motors for on-road and off-road applications belong to the same product market; (ii) due to lack of demand-side and supply-side substitutability, the market for orbital motors is separate from those for motors based on other technologies, including electric motors; (iii) the market for orbital motors is a differentiated one, with distinctions between orbital motors for different applications and between different technical characteristics such as power and pressure.

6.6. Pumps

6.6.1. *The Commission's past practice*

- (355) The Commission has in past decisions defined separate product markets for hydraulic components for industrial applications, on the one hand, and mobile applications, on

²⁴⁹ Reply to the SO, paragraph 152 (cc).

²⁵⁰ Form CO sections 6 to 9 on motors, paragraphs 155-159.

²⁵¹ Form CO sections 6 to 9 on motors, paragraph 159.

²⁵² Reply to the 6(1)(c) Decision, paragraph 39.

the other hand.²⁵³ It has further defined separate product markets for individual components of hydraulic systems such as pumps.²⁵⁴ With regard to pumps, the Commission has considered that the technical design and modes of operation of certain types of pumps differ to such an extent that they are not interchangeable with one another. The Commission has therefore defined separate markets for individual types of pumps according to the following market delineation:

- (356) In *Bosch/Rexroth*²⁵⁵, the Commission defined a separate market for industrial hydraulics and, within this broader market, distinct and separate markets for piston pumps, vane pumps and gear pumps. In the Commission's view, vane pumps and gear pumps did not belong to the same market as piston pumps, as they could not be substituted for one another, due to the fact that gear pumps are always fixed-displacement pumps, while piston pumps are usually variable displacement pumps, and because gear pumps have a limited working pressure (maximum 200 bar).
- (357) Also in *Bosch/Rexroth*²⁵⁶, in the context of industrial hydraulics, the Commission did not consider axial and radial piston pumps to constitute separate markets, but concluded instead that due to their significant substitutability they form a single market for piston pumps.
- (358) In *Eaton Corporation/Aeroquip-Vickers*²⁵⁷, the Commission considered, but left open, whether the market for hydraulic piston pumps for mobile applications constituted a separate market.
- (359) In the same decision, *Eaton Corporation/Aeroquip-Vickers*, the Commission considered, but left open, whether to subdivide the market for piston pumps in two distinct markets for closed loop and open loop pumps and to further divide these markets into separate markets for light, medium and heavy duty piston pumps.²⁵⁸

6.6.2. *The Notifying Party's view*

- (360) The Notifying Party submits that in accordance with the Commission's decisional practice in *Bosch/Rexroth* and subsequent decisions, hydraulic systems should be sub-divided into separate markets for individual components, one such being the separate market for pumps. Further, the Notifying Party holds the view that, due to fundamental design differences, hydraulic components produced for industrial or mobile applications fall into separate markets. It further submits that the relevant market for pumps includes in-house production.²⁵⁹ The Notifying Party submits that no further distinction within pumps for mobile applications should be made, in particular no distinction between pumps by power levels or circuitry, by different types of pumps, between fixed and variable displacement pumps, between axial and

²⁵³ See M.8190 – *Weichai/Kion*, para. 23 et seq.; M.5314 – *Robert Bosch/Hägglunds Drives*, para. 9; M.2060 – *Bosch/Rexroth*, para. 21 et seq.; M.1922 – *Siemens/Bosch/Atecs*, para. 20; /M.1466 – *Eaton Corporation/Aeroquip-Vickers*, para. 7; M.152 – *Volvo/Atlas*, para. 13.

²⁵⁴ M.5314 – *Robert Bosch/Hägglunds Drives*, para. 15 et seq.; M.2060 – *Bosch/Rexroth*, para. 23 et seq.; M.1922 – *Siemens/Bosch/Atecs*, para. 20; M.1466 – *Eaton Corporation/Aeroquip-Vickers*; para. 8; M.152 – *Volvo/Atlas*, para. 14.

²⁵⁵ M.2060 – *Bosch/Rexroth*, para. 26 et seqq.

²⁵⁶ M.2060 – *Bosch/Rexroth*, para. 32.

²⁵⁷ M.1466 – *Eaton Corporation/Aeroquip-Vickers*, para. 7-10.

²⁵⁸ M.1466 – *Eaton Corporation/Aeroquip-Vickers*, para. 8-10.

²⁵⁹ Form CO, Section 6 for pumps, paragraph 33.

radial piston pumps, between axial piston pump bent axis and swash-plate technologies and by end application.²⁶⁰

6.6.3. *The Commission's assessment*

- (361) In line with past decisions, the Notifying Party's view and as concluded above (see Section 6.2.1 above), hydraulic pumps for constitute a distinct product market from other hydraulic components such as motors or steering units. Further, within the overall market for hydraulic pumps, pumps for mobile applications form a distinct product market from pumps for industrial applications. Further, within the market for mobile pumps, at least as concerns pumps for closed-loop systems, closed-loop pumps sold through different sales channels constitute segments rather than separate sub-product markets. While the market investigation provided some indications for further distinctions or at least segmentations within the market for closed-loop pumps for mobile applications, the market definition can be left open for the purposes of this decision as there are no competitive concerns for any plausible sub-product market.
- (362) The Commission investigated the following potential further distinctions of the overall market for hydraulic pumps for mobile applications: (a) by end-application, (b) by circuitry, (c) by technology, (d) by pressure range, (e) by sales channel, (f) by displacement type and (g) by control type.
- (363) As regards a **distinction by end-application**, a large majority of OEMs and all of the distributors and competitors who took a view in the Phase I market investigation submitted that pumps were at least sometimes substitutable between end-applications.²⁶¹ The results of the Phase II market investigation were comparable, with a large majority of market participants who took a view²⁶² saying that they were generally or at least partially substitutable in a cost effective way and did generally or at least to a relevant degree compete with each other for sales. However, since the Transaction does not raise competitive concerns under any plausible delineations by end-application, the Commission leaves open a distinction of the market for pumps for mobile applications by end-application for the purposes of the present decision.
- (364) As regards a **distinction by circuitry**, the Commission finds that there are strong indications that closed-loop pumps for mobile applications constitute a separate product market from open-loop pumps for mobile applications. Closed-loop pumps are a key element of hydraulic transmissions: they determine the pressure and flow of oil within the closed-loop circuit. The Commission's market investigation showed that closed-loop pumps and open-loop pumps differ in several fundamental aspects, making them generally non-substitutable both from a demand-side and a supply-side perspective. This was confirmed both by internal documents of the Parties as well as by responses of market participants in the market investigation.
- (365) As regards the demand-side, the Commission found strong indications that open-loop pumps cannot be used in place of closed-loop pumps. Closed loop pumps are significantly more complex to produce. A substitution would require a change of

²⁶⁰ Form CO, Section 6 for pumps, paragraphs 40 to 123.

²⁶¹ Replies to question 9 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; Replies to question 7 of Q3 – Phase I Questionnaire to distributors, DocID1958; Replies to question 7 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²⁶² Replies to question 63, 64 and 66 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962; Replies to question 29, 30 and 32 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 31, 32 and 34 of Q15 – Phase II Questionnaire to distributors, DocID1965.

circuitry, affecting most components in a hydraulic system and requiring an expensive redesign of the machine as a whole. While closed-loop pumps could generally be used in place of an open-loop pump in an open-loop hydraulic system, they are significantly more expensive due to their higher production costs and complexity, thus making them in practice generally non-substitutable for customers. As one distributor summarises: *“Open and close loop pumps are for two different system solutions. Either you go for one or the other. Therefor you can say that the solution “competes”, but not the pumps.”*²⁶³. This was confirmed by the Commission’s market investigation. A large majority of OEMs and all of the distributors²⁶⁴ who took a view in the Phase I market investigation said that hydraulic pumps used in a closed-loop hydraulic systems were substantially different from those used in open-loop systems and could not be substituted by one another. Relevant differences mentioned by market participants were pressure ranges, price, flow control and the change of circuitry would require an expensive redesign of a machine.²⁶⁵ One large OEM noted in this regard: *“Closed loop and open loop applications are very different. Closed loop systems are chosen due to the power density and efficiency benefits. These performance levels would not be possible in open loop. Similarly, the characteristics of an open loop system allow for the cost effective actuation of cylinders which is not easily done with a closed loop system.”*²⁶⁶ Another OEM explained: *“Generally speaking, a complete redesign of the [circuitry] system is very expensive in terms of engineering resources and, to my knowledge, has never been done during the serial life of the machine because there are impacts on almost all the functions of the machine. This kind of redisgn[sic] is considered during a model change only.”*²⁶⁷ Whereas a majority of competitors who took a view in the market investigation said they were theoretically substitutable, they further explained that in practice no customer would substitute them in light of their fundamental difference in design as regards inter alia pressure, breaking mode, price and flow control. While closed-loop pumps could be used theoretically in open-loop systems, they have higher productions costs and, therefore, are considerably more expensive. One competitor stated: *“[...] costwise it make no sense to use closed loop pumps in open loop applications”* and another competitor explained: *“[...] Since the closed-loop pumps have the higher technical requirements compared to open-loop pumps, technically they might be used also used for open loop-applications (downwards, not wise-versa). Commercially they naturally are more expensive; therefore, customers would prefer to choose a pure open-loop pump with lower price instead.”*²⁶⁸

- (366) However, since the Transaction does not raise competitive concerns under any plausible delineations by circuitry, the Commission leaves open a distinction of the market for closed-loop pumps for mobile applications by circuitry for the purposes of the present decision.

²⁶³ Reply to question 34.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁶⁴ Replies to question 12 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; replies to question 9 of Q3 – Phase I Questionnaire to distributors, DocID1958; replies to question 10 of Q3 – Phase I Questionnaire to distributors, DocID1958.

²⁶⁵ Replies to question 12.1 and 12.2 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; replies to question 10.1 and 10.2 of Q3 – Phase I Questionnaire to distributors, DocID1958.

²⁶⁶ Reply to question 12.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

²⁶⁷ Reply to question 12.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

²⁶⁸ Replies to question 9 and 9.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

- (367) As regards a **distinction by technology**, the results of the market investigation were mixed. A majority of OEMs and distributors who took a view in the Phase I market investigation stated that for a given machine more than one pump technology (gear pump, piston pump, vane pump) could be selected in a cost-effective way at least for some machines.²⁶⁹ However, a majority of competitors and customers who took a view in the Phase II market investigation said that they were generally not substitutable in a cost-effective way, whereas responses from distributors were mixed.²⁷⁰ However, since the Transaction does not raise competitive concerns under any plausible technological delineations, the Commission leaves open a distinction of the market for closed-loop pumps for mobile applications by technology (gear pump, piston pump, vane pump) for the purposes of the present decision. Similarly, and for the same reason, the Commission leaves open a plausible further distinction between radial and axial piston pumps.
- (368) As regards a **distinction by pressure range**, the Commission found strong indication in favour of a sub-distinction of the market for closed-loop pumps for mobile applications into three categories: low, medium and high. The internal documents of the Parties show, that the Parties themselves distinguish and analyse sales of closed-loop pumps for mobile applications by these three categories.²⁷¹ A majority of market participants in the market investigation further confirmed that this differentiation between heavy duty/high power and medium duty and light duty closed-loop pumps was an industry standard.²⁷² Further, a majority of competitors and customers who took a view in the Phase II market investigation said that they were generally not substitutable in a cost-effective way, whereas responses from distributors were mixed.²⁷³ However, since the Transaction does not raise competitive concerns under any plausible pressure range delineations, the Commission leaves open a distinction of the market for pumps for mobile applications by pressure range for the purposes of the present decision.
- (369) As regards a **distinction by sales channel**, responses of market participants who took a view in the Phase II market investigation as to closed-loop pumps sold through different sales channels (distributors, direct sales, indirect sales) demonstrate that they are segments of the same mobile pumps product markets. A majority of market participants indicated that they are at least partially substitutable. Further, a large majority of customers, competitors and large majority of distributors said that closed-loop pumps sold through different sales channels did generally compete with

²⁶⁹ Replies to question 11 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; replies to question 9 of Q3 – Phase I Questionnaire to distributors, DocID1958; replies to question 9 of Q4 – Phase I Questionnaire to competitors, DocID1959.

²⁷⁰ Replies to question 63, 64 and 66 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962; Replies to question 29, 30 and 32 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 31, 32 and 34 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁷¹ See for instance reply to pre-notification request for information PN 2 [Annex D.30_1, excel file “Cleaned allMID”].

²⁷² Replies to question 65 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962; Replies to question 31 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 33 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁷³ Replies to question 63 and 64 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962; Replies to question 30 and 31 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 32 and 33 of Q15 – Phase II Questionnaire to distributors, DocID1965.

each other or at least to a relevant degree.²⁷⁴ The Commission therefore concludes that at least closed-loop pumps sold through different sales channels are part of the same product markets and different sales channels do not constitute separate product markets. The Commission did not investigate this segmentation in relation to mobile pumps for open-loop systems. However, since the Transaction does not raise competitive concerns under any plausible sales channel delineations, the Commission leaves open a distinction of the market for pumps for mobile applications by sales channel for the purposes of the present decision.

- (370) As regards a **distinction by flow control**, a large majority of market participants who took a view in the market investigation said that closed-loop pumps with fixed displacement, on the one hand, and variable displacement on the other hand, were generally not substitutable in a cost-effective way. Similarly, a large majority of market participants who took a view in the market investigation said that closed-loop pumps with manual flow displacement, on the one hand, and automatic (electric, hydraulic) flow displacement, on the other hand, were generally not substitutable in a cost-effective way.²⁷⁵ However, since the proposed Transaction does not raise competitive concerns under all plausible flow control delineations, the Commission leaves open a distinction of the market for closed-loop pumps for mobile applications by type of flow control for the purposes of the present decision.
- (371) In conclusion, the Commission finds that within the overall market for pumps, there are separate product markets for pumps for mobile applications, on the one hand, and pumps for industrial applications, on the other hand. All other plausible market distinctions within mobile pumps remain open for the purposes of this decision.

7. GEOGRAPHIC MARKET DEFINITION

7.1. Previous Commission decisions

- (372) In previous decisions concerning HPS components, the Commission considered the market to be EEA-wide in light of the lack of tariffs and non-tariff barriers to trade, low transport costs, significant cross-border trade as well as harmonized regulations and standards within the EEA.²⁷⁶

7.2. The Notifying Party's arguments

- (373) The Notifying Party claims that the geographic scope of all HPS components markets should be considered as EEA-wide.²⁷⁷ The Notifying Party considers that the competition conditions are not sufficiently homogeneous globally to support a finding of a worldwide market due to:
- (a) pricing variations,

²⁷⁴ Replies to question 63 and 64 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962; Replies to question 30 and 31 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 32 and 33 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁷⁵ Replies to question 63 and 64 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962; Replies to question 30 and 31 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; Replies to question 32 and 33 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁷⁶ M. 2060 – *Bosch/Rexroth*, paragraph 58; IV/M.152 – *Volvo/Atlas*, paragraph 15 f.

²⁷⁷ See, Form CO Sections 6-9 On steering, paragraph 107-114, and Section 6-9 on motors, paragraphs 182-186 and Section 6 for pumps, paragraphs 126-130.

- (b) prevalence of local regional suppliers and
- (c) regulatory distinctions between regions.

(374) Further, they consider, that it would generally not be a sustainable business case to export HSUs, ESVs, orbital motors, pumps and all possible distinctions thereof²⁷⁸ from the EEA into the Asian market. Production costs and transport costs would be too high to earn a sustainable margin in Asia. As imports play a minor role, Asian suppliers with local production maintain a strong presence in Asia. European suppliers are generally not able to compete with Asian suppliers in Asia unless they have a production facility in China or India.

7.3. Legal Framework of the Commission's assessment

(375) The Commission's Market Definition Notice defines²⁷⁹ a relevant geographic market as the geographic area in which the merging companies offer their products and in which the conditions of competition are sufficiently homogeneous. In its assessment the Commission takes into account various factors, including:

- (a) Demand characteristics, including preferences for regional suppliers and need for a local presence;
- (b) Current geographic patterns of purchases;
- (c) Trade flows/patterns of shipments;
- (d) Barriers and switching costs associated with trade across areas, such as transport costs, tariffs, quotas and regulations and
- (e) Views of customers and competitors.

7.4. The Commission's assessment

(376) The Commission's market investigation broadly confirmed the Parties' view that all plausible markets for the supply of mobile HPS components discussed in Section 6 are still EEA-wide in scope.

(377) Both internal documents of the Parties as well as the results of the Commission's market investigation broadly confirmed the EEA-wide scope of the geographic markets as found in previous decisions. Neither source of evidence indicated significant changes in the market conditions as compared to those identified in previous decisions, which would justify a broader delineation of the geographic markets for HSUs, ESVs, orbital motors and pumps.

(378) While there are several competitors and customers with global sourcing teams and supply chains who view the market as global,²⁸⁰ overall responses to the Commission's questionnaires showed that most factors point in the direction of an EEA-wide rather than a global delineation of the mobile HPS components markets discussed in Section 6, namely:

- (a) the Parties' region-focussed internal analyses and reporting (see Section 7.4.1 below),

²⁷⁸ Throughout section 7, when referring to the overall product categories (e.g. HSUs, ESVs, orbital motors and pumps), the Commission refers at the same time to all possible distinctions thereof considered in Section 6.

²⁷⁹ See, for instance, paragraph 8 of Commission Notice on the definition of the Relevant Market for the purposes of Community competition law OJ C 372, 09.12.1997, p. 5 ('Market Definition Notice').

²⁸⁰ See, for instance, some replies to question 92 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

- (b) demand patterns and customer preferences in the EEA as compared to other regions (see Section 7.4.2 below),
- (c) regulatory product requirements and related expectations in the EEA as compared to other regions (see Section 7.4.3 below),
- (d) barriers associated with cross-regional trade such as lead/delivery times and reliability, tariffs and transport costs, resulting in a competitive advantage of localising production in a region (see Section 7.4.4 below),
- (e) a need for regional access (see Section 7.4.5 below),
- (f) significantly different market positions of suppliers in the EEA compared to their market position in other regions (see Section 7.4.6 below),
- (g) significant differences in pricing levels in the EEA as compared to pricing in other regions (see Section 7.4.7 below), and
- (h) no sufficiently clear cross-regional competition from Chinese suppliers in the foreseeable future (see Section 7.4.8 below).

7.4.1. *The Parties' internal analyses and reporting*

(379) The Commission found that the Parties themselves view the markets for the supply of HSUs, of ESVs, of orbital motors and of pumps and any plausible sub-segment thereof as regional. Their internal documents clearly show that in their internal reporting they analyse markets and plan market strategies for the supply of these HPS components (and therefore of HSUs, ESVs, orbital motors, pumps and all possible distinctions thereof) on a regional basis. Similarly, the competitive landscapes are analysed on a regional basis.²⁸¹

7.4.2. *Demand-patterns and customer preferences in the EEA as compared to other regions*

(380) With a view to the demand-side, the market investigation showed strong indications that customers in the EEA as compared to those in other regions have different expectations and requirements as regards HPS components both in terms of quality and in terms of technical solutions/performance.

(381) **As regards quality**, the market investigation confirmed, **firstly**, that there are significant differences in quality between HSUs, orbital motors and closed-loop²⁸² pumps produced by Western manufacturers as compared to HSUs, orbital motors and closed-loop pumps manufactured by Asian suppliers, as observed by a majority of both OEMs and competitors who took a view.²⁸³ Similarly, in light of its market investigation, the Commission expects the first ESVs Chinese manufacturers will offer on the market to be of lower quality compared to ESVs of Western manufacturers.

(382) **Secondly**, customer differences in the EEA as compared to other regions appear to differ substantially.

(383) **In the first place**, the market investigation showed that European OEMs, and consequently their distributors, seem to prioritise quality over price, while in other

²⁸¹ See, for instance, for orbital motors: Danfoss Internal Document, [content of internal documents].

²⁸² The Commission's Phase II market investigation was limited to closed-loop pumps, thus excluding open-loop pumps for mobile applications.

²⁸³ Replies to question 58 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 91 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

geographic regions price is the most important issue.²⁸⁴ Asked how Danfoss was able to gain its market position in orbital motors, a large majority of distributors who indicated a reason identified quality, followed by some mentions of customer/technical service and range of portfolio and R&D/innovation.²⁸⁵ Similarly, quality including durability and reliability was the competitive advantage most often mentioned by OEMs, when asked, which competitive advantages allowed Danfoss to become so strong in the EEA market, closely followed by a wide product range and branding.²⁸⁶ One distributor summarised in this regard: "[Danfoss] *meet[s] the Need of the European market.*"²⁸⁷ None of the distributors mentioned pricing of the products as a reason. Another distributor reported with regard to European customer preferences, that they have no intention to source less expensive products from China, as they "(...) *do not[]operate in markets where price is the most important is[s]ue for the customer.*"²⁸⁸ Further, a number of OEMs indicated that they preferred "*to buy regional or in Europe*".²⁸⁹

- (384) ***In the second place***, expectations and preferences of Chinese customers with regard to products of Chinese manufacturers appear to differ substantially when compared to expectations of European customers with regard to the quality of the products they purchase. As explained by a distributor in relation to Chinese products and customer expectations: "*Chinese products normally have other quality standards than western products. They can look the same but mechanical and volumetric efficiency are worse, normal[ly] also expected life are shorter due to lower precision and worse material.*"²⁹⁰ Further, a manufacturer explains the reason for which it considers that Chinese manufacturers sell limited quantities and steering units outside China: "[...] *Machines produced with such components target the Asian market with very limited warranty (usually 1 to 2 years) and failure is expected from [Asian] customers. One more reason why these products are not suitable for the European and American markets is that customers in the US or the EU expect very low failing rate even after the warranty period.*"²⁹¹
- (385) **Moreover, with regard to technical solutions/performance**, the market investigation likewise showed that there are relevant differences between HSUs, ESVs, orbital motors and closed-loop pumps sourced in different world regions, as observed by a majority of both OEMs and competitors who took a view.²⁹² Besides the quality related differences in performance, there are other technical differences mentioned by market participants such as different ports, different shafts for motors,

²⁸⁴ See replies from EEA based OEMs and distributors to question 61.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964 and questions 63.2 and 63.3.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁸⁵ Replies to question 26 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁸⁶ Replies to question 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

²⁸⁷ Reply to question 26 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁸⁸ Reply to question 63.3.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁸⁹ Some replies to question 61.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

²⁹⁰ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁹¹ Minutes of a call with a competitor on 05.06.2020, DocID0504.

²⁹² Replies to question 58 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 91 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

different pressure levels used and differences in measurements (mm vs inch) that customers demand in different regions.²⁹³

- (386) These different customer needs are confirmed by findings in the Parties' internal documents. For instance, minutes of a Danfoss strategic meeting discussing a [business strategy]²⁹⁴. [Content of internal documents].

Figure 24 – [...]

[...]

Figure 25 – European customer needs

[...]

Figure 26 – Value selling over price competition in Europe

[...]

- (387) Further, the internal documents of the Parties show, that HSUs, ESVs, orbital motors, pumps and all possible distinctions thereof, are produced for these varying regional customer preferences. For instance, internal document of Eaton confirms that they manufacture a [business strategy]²⁹⁵. [Business strategy]²⁹⁶. [Content of internal documents].

Figure 27 – Eaton – HSU in China for China

[...]

Source: Eaton internal document, "2017 Strategic Plan Hydraulic Group", DocID1043-44659, EAT-190867, slide 69. [emphases added by the Commission]

Figure 28 – Eaton – [...]

[...]

Source: Eaton internal document, "Steering Roadmap 2018", July 2018, DocID191-16 (Reply to pre-notification request for information RFI 3 [Annex B.15_8]), slide 52. [emphasis added by the Commission]

7.4.3. *Regulatory product requirements and related expectations in different regions*

- (388) Further, the Commission found that **regulatory differences**, in particular **safety and warranty regulations** lead to additional significant differences in product requirements and expectations and appear to affect customer preferences between the EEA as compared to other regions, in particular Asia.

²⁹³ Replies to question 61 of Q15 – Phase II Questionnaire to distributors, DocID1965.

²⁹⁴ Danfoss internal document, [content of internal documents].

²⁹⁵ See in this regard the finding of a differentiated product market, recitals (153) and (159).

²⁹⁶ Eaton internal document, internal email exchange, May 2019, DocID1042-64170, EAT-129277.

- (389) **In the first place**, the Commission found evidence of relevant regulatory differences in the internal document of the Parties, in particular EU safety and warranty legislation in form of regulations and directives as compared to other regions.
- (390) The Notifying Party argues that regulatory requirements for off-road vehicle steering components differ across the world. Additionally, conditions for using steer-by-wire technology differed. In the USA, for example, tractors are permitted to use steer-by-wire systems on the road, while in the EEA safety requirements still prohibit the use of this technology in on-road vehicles. In particular, EU Directive 2006/42/EC²⁹⁷ (hereinafter the ‘Machine Directive’) contained requirements for machinery (“*In the case of wheeled machinery, the steering system must be designed and constructed in such a way as to reduce the force of sudden movements of the steering wheel or the steering lever caused by shocks to the guide wheels*”). Outside of the EEA, there were no homologation requirements based on external regulations. that in the EEA there are significant regulatory homologation requirements, such as the Machine Directive, while outside the EEA, the machine specifications were only determined by internal OEM standards and best practices (which however can follow ISO standards), while conditions within the EEA are overall homogenous.²⁹⁸
- (391) The Notifying Party’s view was broadly confirmed by the results of the market investigation and internal documents of the Parties. For example, a Danfoss internal document prepared for presentation to different large OEM shows relevant regulations for off-road steering including the “Machine Directive”, which lays down mandatory essential health and safety requirements and CE markings, and EU Regulation 167/2013/EC²⁹⁹ on the approval and market surveillance of agricultural and forestry vehicles, see Figure 29³⁰⁰ below. This further shows that legislation and certification are relevant for OEMs. Another Danfoss internal document shows the broader “*European legal safety framework*”, see Figure 30 below.

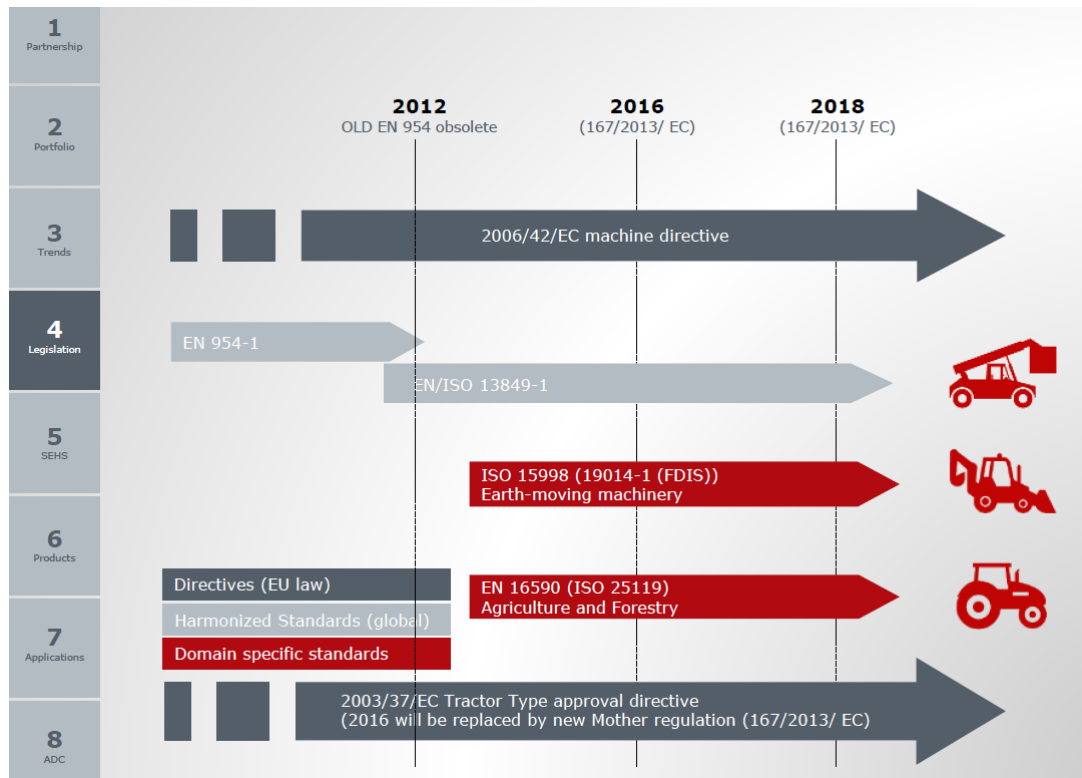
²⁹⁷ Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC, OJ L 157, 9.6.2006, p. 24–86.

²⁹⁸ For instance in relation to steering: Form CO, paragraph 112 to 114.

²⁹⁹ Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles, OJ L 60, 2.3.2013, p. 1–51.

³⁰⁰ The same slide was included in presentations to other large OEMs, see for instance, Danfoss internal document, “Caterpillar eSteering update”, 18 June 2018, Doc Id1054-27497, M.9820-RFI020000765.pdf, slide 10.

Figure 29 – Danfoss presentation to OEM -EU agricultural machinery legislation



Source: Danfoss internal document, “Claas SBW update », 15 November 2018, DocID1056-27944, RFI 2 - M9820-3 - M.9820-RFI020134234, part of slide 12.

Figure 30 – Danfoss - European legal safety framework

System safety – general - European “legal Safety framework”

CE marking

- Machinery (Directive 2006/42/EC) - MD
- Electromagnetic compatibility (Directive 2014/30/EU) - EMC
- Noise emission in the environment by equipment for use outdoors (Directive 2000/14/EC) - OND
- Radio equipment and telecommunications terminal equipment (Directive 2014/53/EU) - RED
- The restriction of the use of certain hazardous substances in electrical and electronic equipment (Directive 2011/65/EU) - RoHS
- Equipment and protective systems intended for use in potentially explosive atmospheres (Directive 2014/34/EU) - ATEX
-

Non-Road mobile machinery emissions

- Regulation (EU) 2016/1628 on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery

Road legislation for mobile machinery (national regulations)

See also [Impact Assessment Study on the EU harmonisation of the requirements for the road circulation of mobile machinery](#)

Tractor (agricultural and forestry vehicles)

- Regulation (EU) No 167/2013 on the approval and market surveillance of agricultural and forestry vehicles
- *NOTE: machinery mounted on those vehicles, are covered by the MD*

Source: Danfoss internal document, “System safety - general », Doc Id1054-23389, RFI 2 - M9820-1 - M.9820-RFI020002105, slide 6.

- (392) Further, warranty regulations differ between regions, not only between the EEA and China but also between the EEA and US. A Danfoss internal document confirms that [business strategy]. [Content of internal documents].³⁰¹
- (393) These regulatory differences were confirmed and further explained by responses of market participants in the market investigation. A large majority of market participants who expressed a view³⁰² observed regulatory differences between regions. An OEM reports in relation to the EEA:” *There are many regions, including the EU in particular, which require certain certifications and/or homologations as a requisite for entry into those markets. (...)*”³⁰³. Another OEM further explains: “[...] *Approved organizations such as DREAL in France or the TÜV in Germany certify that the machine presented meets their specifications in terms of management. To my knowledge, these bodies validate the operation of all the components, not the component alone.*”³⁰⁴
- (394) **In the second place**, the results of the market investigation show that these regulatory differences lead to significant differences in product requirements and also appear to affect customer preferences between regions. The Commission finds that HSUs, ESVs, orbital motors and pumps have to be compatible with very high safety standards in the EEA and should work for longer periods in light of the longer and stricter warranty regulations. In China, on the other hand, warranty periods are shorter, leading to longer expected life cycles and quality and appear to lead to customers focussing more on price. A manufacturer, for instance, mentions different technical and safety standards as well as different warranty laws as a reason why Chinese suppliers hardly sell to European customers: “[t]here are different technical and safety standards in Asia, therefore products manufactured in Asia are for the Asian market. These manufacturers tried to copy the products used in Europe but the lack of expertise in metallurgical properties lead to a highly reduced lifetime. Machines produced with such components target the Asian market with very limited warranty (usually 1 to 2 years) and failure is expected from customers. [...]”³⁰⁵ Another manufacturer considers that warranty and safety regulations will remain cross-regional trade barriers for the next couple of years: “[...] will limit entry into the market. As well as general risk and potential cost of entry into market. Hydraulics makes up one of the highest warranty / services costs and create many field issues.”³⁰⁶

³⁰¹ Danfoss internal document, e-mail, DocID1062-6908, RFI 2 - M9820-9 - M.9820-RFI020366636.

³⁰² Replies to question 91 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to question 58 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 60 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³⁰³ Reply to question 54.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁰⁴ Courtesy translation from French: “(...) *Les organismes agréés comme la DREAL en France ou le TUV en Allemagne certifient que la machine présentée répond à leur cahier des charges en matière de gestion de la direction. A ma connaissance, ces organismes valident le fonctionnement de l'ensemble des composants, pas du composant seul.* », reply to question 54.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁰⁵ Minutes of a call with a competitor on 05.06.2020, DocID0504.

³⁰⁶ Reply to question 37.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

(395) Further, internal documents of the Parties show that the different warranty regulations are being used to fight off cross-regional competition from China. [Business strategy - content of internal documents].³⁰⁷

(396) **In conclusion**, the relevant regulatory differences identified above lead to significantly different product requirements and expectations in the EEA as compared to other regions, in particular Asia, and show that competitive conditions differ to an appreciable extent between various regions in the world.

7.4.4. *Effects of delivery times, transport costs, tariffs and advantages of localisation*

(397) The Notifying Party argues that it would generally not be a sustainable business case to export hydraulic steering components, orbital motors and pumps from the EEA into the Asian market. Production costs and transport costs would be too high to earn a sustainable margin in Asia. European suppliers were generally not able to compete with Asian suppliers in Asia unless they had production facility in China or India. Accordingly, while this did not significantly affect supplies from Asian to the EEA, this was not true for supplies from the EEA to Asia, and therefore the market should not be considered worldwide.³⁰⁸

(398) The Notifying Party further argues that lead times and delivery reliability are important to OEMs. Therefore, having local production could offer a competitive advantage. If a supplier could not consistently ensure on-time-delivery, this might place a supplier at a disadvantage when bidding for new business. In order to compete, a supplier without production facilities in the EEA will have to find other ways to deliver products within the lead times expected by OEMs. For example, a supplier without local production might simply internalize the higher costs for maintaining longer supply lines, increase its inventory in the EEA and build up a local sales force in the EEA to engage directly with customers in local language and time zones. For example, Eaton had a local sales force in the EEA and a warehouse in the UK. Either way, making up for the lack of an EEA production facility would entail certain additional costs to steering suppliers. US-based and other non EEA-based (including Asian) competitors will experience similar competitive disadvantages due to longer lead times compared to EEA suppliers with a local production. There were thus advantages to having production facilities in different regions of the world. This was, however, by no means a strict requirement to be competitive.³⁰⁹

(399) The Notifying Party's view was broadly confirmed by the results of the market investigation and internal documents of the Parties. The Commission finds that traditional cross border trade barriers, such as differences in productions costs, long lead/delivery times and delivery reliability, transport costs and tariffs, constitute relevant barriers to trade when supplying HSUs, ESVs, orbital motors or pumps from outside the EEA to other world regions with more price competition. However, as regards the supply from other world regions to inside the EEA, in particular transport costs and tariffs are less relevant factors, while, with respect to lead/delivery times and delivery reliability, manufacturing locations, or, alternatively having warehouses in the EEA can, indeed, bring some competitive advantages as compared to directly supplying from outside the EEA to inside the EEA.

³⁰⁷ Eaton internal document, e-mail exchange, October 2019, DocID:1041-87268, EAT-261497.

³⁰⁸ See, for instance, in relation to steering Form CO, paragraph 109.

³⁰⁹ See, for instance, in relation to steering Form Co, paragraph 110.

- (400) **First, *delivery time*** is the barrier most frequently mentioned by market participants in the market investigation when asked whether there were barriers to supplying from outside the EEA to inside the EEA³¹⁰.
- (401) In light of the finding that delivery times/reliability are relevant for EEA OEMs and, therefore, might be a disadvantage for supplying from other regions, a notable number of orbital motor OEMs who took a view said having warehouses/sufficient inventory in the EEA was necessary to serve the EEA market, and a large majority indicated that warehouses in the EEA provided a certain competitive advantage to serve the EEA market.³¹¹ Similarly, another large OEM noted: “*The barriers can be overcome, but they include logistics, inventory burdens, supply inflexibility, potential delays in development, etc.*”³¹²
- (402) The finding that delivery times may to some degree and tariffs and transport costs to a lesser degree affect the competitiveness of suppliers from other regions into the EEA is supported by findings in internal documents of the Parties. For instance, an internal documents of Danfoss notes [business strategy] (see Figure 31 below). Further, the internal documents of the Parties confirmed that warehouses are a relevant factor for mitigating delivery delays and/or tariff burdens. For instance, [content of internal documents]^{313 314}

Figure 31 – Tariffs affecting European customers

[...]

- (403) **Second, as regards *tariffs and transport costs*** the Commission preliminarily finds that there appear to be significant trade barriers for supplying HSUs, ESVs, orbital motors and pumps from the EEA to regions with more price competition and low labour costs, such as Asia. HSUs, ESVs, orbital motors and pumps produced in regions with higher labour costs (such as the US and EEA) and with additional shipping costs and added tariff surcharges are not competitive against comparable HSUs, ESVs, orbital motors and pumps produced with lower labour costs and without transport cost and tariff surcharges. However, the Commission finds that tariffs and transport costs are significantly less relevant for supplies of HSUs, ESVs, orbital motors and pumps into the EEA from outside the EEA. The reason for this is that in the EEA there is more value than price competition. European customers put more emphasis on quality than price as compared to Asian customers, as discussed in Section 7.4.2 above. Thus, tariffs and transport costs do not appear to have a significant impact on premium products such as those of Parker and Eaton. The Commission notes that there are some indications that tariffs and transport costs

³¹⁰ Replies to question 60.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 93.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to question 62.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³¹¹ Replies to question 46 of Q13 – Questionnaire to orbital motors OEMs, DocID1963.

³¹² Similar also another large OEM: “*The barriers can be overcome, but they include logistics, inventory burdens, supply inflexibility, potential delays in development, etc.*”; reply to question 60.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³¹³ Danfoss internal document, DocID1054-43226, RFI 2 - M9820-1 - M.9820-RFI020029098.

³¹⁴ 3PL stands for third party logistics. A bonded warehouse, or bond, is a building or other secured area in which dutiable goods may be stored, manipulated, or undergo manufacturing operations without payment of duty.

appear to be a bit more relevant for products falling into the medium to lower end of the quality/price spectrum as opposed to the higher end of HSUs, ESVs, orbital motors and pumps respectively. In this regard, some more price-oriented OEMs indicated in the market investigation that delivery costs and tariffs along with delivery times are their primary reason for not sourcing from Chinese suppliers.³¹⁵ However, overall, the Commission considers that tariffs and transport costs do not appear to affect most of the supplies of HSUs, ESVs, orbital motors and pumps from outside the EEA into the EEA, in particular as regards premium quality products.

- (404) **Third and consequently**, in light of the above findings, the Parties' internal documents³¹⁶ show some efforts of the Parties [content of internal documents], see Figure 33, Figure 34 and Figure 35. This is in line with the Notifying Party's view who states that having local production can offer a competitive advantage in light of lead times and delivery reliability.³¹⁷ Figure 35 shows that [content of internal documents]. In light of the trade barriers which tariffs and transport costs constitute in particular when supplying from the EEA into more price competitive regions such as Asia, the internal documents of the Parties show significant efforts of localising production in price competitive regions with lower labour costs. In this regard, minutes of a Danfoss strategic meeting [content of internal documents]³¹⁸.

Figure 32 – Local supply to local demand

[...]

Source: Danfoss Internal Document, DocID1059-24474, RFI 2 - M9820-6 - M.9820 - RFI020248639, slide 4. [emphasis added by the Commission]

Figure 33 – Localisation and tariff mitigation

[...]

Source: Danfoss Internal Document, « Localization Update – PSLT June 2019 », DocID 1062-13632, RFI 2 - M9820-9 - M.9820-RFI020361903, slide 2.

Figure 34 – Localise capacity and capability in three regions

[...]

Source: Danfoss Internal Document, « Orbital X Review », DocID 1059-34133, RFI 2 - M9820-6 - M.9820 – RFI020254892, slide 12.

³¹⁵ Some replies to question 61.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³¹⁶ See, for instance, for orbital motors: Danfoss Internal Document, « Orbital X Review », DocID 1059-34133, RFI 2 - M9820-6 - M.9820 - RFI020254892, or Danfoss Internal Document, [...], DocID1054-32710, RFI 2- M9820-1- M.9820-RFI020000917. See for steering, for instance: Danfoss Internal Document, [...], June 2019 Update, DocID 1056-23793, RFI2-M9820-3-M9820-RFI020125870, slide 10. See for pumps: DocID 1062-13632, RFI 2 - M9820-9 - M.9820-RFI020361903.

³¹⁷ Form CO, paragraph 110.

³¹⁸ Danfoss internal document, [...], DocID,1056-35251, RFI2 - M9820-3 - M.9820-RFI020134279, page 18.

Figure 35 – Danfoss' localisation of the orbital motor X supply chain

[...]

Source: Danfoss Internal Document, « Orbital X Review », DocID 1059-34133, RFI 2 - M9820-6 - M.9820 – RFI020254892, slide 13. [emphases added by the Commission]

- (405) Similarly, also Eaton, who are already having a sales force in the EEA and a warehouse in the UK, still see some room to localise production. For instance, a Danfoss internal document takes note of Eaton's localisation strategy in Europe in order to gain even more market share, see Figure 36 below.

Figure 36 – Eaton strategy to localise production in Europe to gain market share

[...]

- (406) **In conclusion**, the Commission finds that the factors discussed in this section may affect presence of competitors in the EEA as compared to other regions and together with regional preferences and regulatory requirements discussed in Sections 7.4.2 and 7.4.4 above explains different prevailing conditions of competition in the EEA as compared to outside the EEA.

7.4.5. *Need for regional access*

- (407) Beyond the findings in Section 7.4.4, the Commission found that a geographic footprint and regional access with a regional customer base, regional sales system and regional customer and technical (aftermarket) support are of significance for the supply of HSUs, ESVs, orbital motors, pumps and any plausible sub-segment thereof.
- (408) First, the Commission found that a regional footprint/regional access is of high relevance for suppliers. In fact, the Parties' internal documents show that gaining regional access through acquisitions is a common strategy and frequently one of the key rationales of an acquisition. For instance, an Eaton internal document notes as a key strategic rationale of a [business strategy - content of internal documents].

Figure 37 – [...]

[...]

Source: Source: Eaton internal document, "Project Rose", 14 September 2018, DocId1042-91075, RFI 3 - HDD_Part02_of_03 - EAT-126876, slide 5 [emphasis added by the Commission].

- (409) Moreover, a Danfoss internal document shows that [business strategy - content of internal documents]. [...], a competitor mentioned as a relevant point when assessing the Transaction that "Post-Transaction, [...] Eaton's distribution network in the US will be closed off to [us], while Danfoss will gain this competitive advantage".³¹⁹

³¹⁹ Minutes of a call with a competitor, 12.12.2020, DocID2217.

Figure 38 – Danfoss - regional access as strategic rationale I

[...]

Figure 39 – Danfoss - Regional access as strategic rationale II

[...]

- (410) **Second**, the Commission found that such a regional footprint/access relates to several factors such as a regional customer base, a regional distribution/sales system/channels to market and a regional customer and technical (aftermarket) support. All of these are significant competitive advantages. This was confirmed both by the results of the market investigation as well as by internal documents of the Parties.
- (411) A manufacturer explains as a reason why Chinese manufacturers sell limited quantities of steering units outside of China: ‘[...] Moreover, at this point, these manufacturers do not have marketing and sales [and distribution] in EU and US.’³²⁰ Another manufacturer explains: “[Among other factors] sales&service network [is] crucial for the suc[c]ess in the market”.³²¹
- (412) In the same way, the internal documents of the Parties name a regional sales/distribution system and customer/technical support as important needs for European customers of HSUs, ESVs, orbital motors and pumps. For instance, in a Danfoss internal document, see Figure 31 above, “sales support” is identified as one of the four most relevant needs of European motor customers.
- (413) Further, the internal documents of the Parties show that a lack of such regional access can have a negative effect on market shares and sales. For instance, in an internal Danfoss document, a consultancy analysing the Transaction notes that [content of internal documents]³²² [content of internal documents].

Figure 40 – [...]

[...]

Source: Danfoss internal document, McKinsey & Company, “Project Bourbon – Pre-phase material”, Doc Id1056-41706, RFI 2 - M9820-3 - M.9820-RFI020106924, slide 16 [emphases added by the Commission].

7.4.6. Market positions of suppliers in the EEA as compared to other regions

- (414) Further pointing at different conditions of competition between regions, the Commission found that the market positions of suppliers vary significantly between regions.

³²⁰ Minutes of a call with a competitor on 05.06.2020, DocID0504.

³²¹ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

³²² Danfoss internal document, [...], Doc Id1056-41706, RFI 2 - M9820-3 - M.9820-RFI020106924.

- (415) For instance, in orbital motors, Figure 41 below shows that both the market shares and expected growth of Danfoss significantly vary in different regions. For example, Danfoss expects [content of internal documents].

Figure 41 – [...]

[...]

Source: Danfoss Internal Document, DocID1059-24474, RFI 2 - M9820-6 - M.9820 - RFI020248639, slide 4. [emphasis added by the Commission]

- (416) In line with this, the Notifying Party's estimates of market shares for orbital motors in 2018 for several regions in Figure 42 below show significantly different market positions of the Parties and their competitors. It shows that [content of internal documents].

Figure 42 – Danfoss - Orbital motors market positions by region (2018)

[...]

- (417) Further, the Parties' competitor M+S Hydraulic has a clear EEA footprint, both as regards manufacturing and distribution, and, consequently, most of its sales in this geography, while being less present in other regions, see, for instance, Figure 43 below in relation to orbital motors.

Figure 43 – Eaton - M+S Hydraulic geographic footprint

[...]

Source: Eaton internal document, "Project Rose", 14 September 2018, DocId1042-91075, RFI 3 - HDD_Part02_of_03 - EAT-126876, slide 4.

- (418) Similarly for HSUs, internal documents of the Parties show [content of internal documents].

Figure 44 – [...]

[...]

Figure 45 – [...]

[...]

- (419) The very limited presence of Chinese companies is confirmed by their limited turnover in the EEA. According to the data provided by the Notifying Party, as regards HSUs, Zhenjiang had a yearly turnover in the EEA throughout 2017 to 2019 of EUR [...], which represents a market share of [0-5]%. Other Asian producers like

Ju Ning Li Ke, Sinjin Precision and ziHYD/THOTH had no sales in the EEA.³²³ As regards ESVs, the Parties did not indicate any sales of Asian suppliers in the EEA throughout 2017 to 2019 at all.³²⁴ In fact, the Commission could not find any activity of Asian suppliers in the supply of ESVs at present, which is in line with the Notifying Party's claim that Chinese suppliers generally do not offer ESVs at present. In relation to orbital motors, Zhenjiang and Zihyd/thoth have sales in the EEA of, respectively, EUR [...] million and EUR [...], which taken together represent a market share of [0-5]%.³²⁵

- (420) In line with the market shares, during the market investigation, one manufacturer of steering units active in the EEA explained that it considers Chinese manufacturers almost not active outside China and it explains the main reasons: *'[c]onsidering potential suppliers of orbital motors or steering unites in Asia, there are two main manufacturers, which are Zhenjiang and Ningbo. Zhenjiang is much larger than Ningbo. Zhenjiang produces steering units and orbital motors. Ningbo supplies orbital motors, but not steering units. Both these companies are smaller from a global perspective and virtually not active outside of Asia. They are not present in Europe and almost non-existent in the US with a less than 1% market share'*.³²⁶
- (421) Similarly, for pumps, the market positions of the Parties in different world regions vary significantly. In the EEA, Bosch Rexroth has a strong market position in mobile pumps with a market share estimate of approximately [50-60]% in 2019, while on a global level they have a strong but considerably smaller market share, estimated to be [30-40]% in 2019.³²⁷
- (422) The Commission considers that these different market positions are indicative of different market dynamics and demand patterns in relation to HSUs, ESVs, orbital motors and pumps, since competitors seem to be better able to address demand and to compete more successfully in the EEA as compared to other regions.

7.4.7. Pricing in the EEA as compared to other regions

- (423) Moreover, the market investigation showed that there are significant price differences between regions, which are indicative of significantly different competitive conditions in different regions.
- (424) **First**, price differences were observed by a large majority of market participants who took a view in the Commission's Phase II market investigation.³²⁸ One distributor explained that this was due to a number of reasons including varying technical and commercial abilities of competitors: *"Answer is based on small and medium sized OEMs. Based on our decades of business in various countries, products are been [sic] priced differently. This comes from: OEMs volumes, OEMs technical competence, additional value generated during specification process and competitors competences (in tech and commercial). (...)"*³²⁹

³²³ Form CO Sections 6 to 9 for steering, Tables 10 to 15.

³²⁴ Form CO Sections 6 to 9 for steering, Tables 18 to 23.

³²⁵ Form CO Section 6 to 9 for motors, Table 45.

³²⁶ Minutes of a call with a competitor on 05.06.2020, DocID0504.

³²⁷ Form CO, Section 6 for pumps, Table 8.

³²⁸ Replies to question 91 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to question 58 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 60 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³²⁹ Reply to question 15.1 of Q3 – Phase I Questionnaire to distributors, DocID1958.

- (425) **Second**, this was supported by findings in internal documents of the Parties which illustrate that there are significant price differences between regions. For instance, a Danfoss internal document [...].

Figure 46 – Orbital motors competitive landscape by region (2018)

[...]

- (426) Similarly, the Commission found that [...].

Figure 47 – Relative pricing of orbital motors to one another in different regions

[...]

Source: Danfoss internal document, “EMEA Distribution Workshop WP-WR», 12 March 2019, DocID 1055-40760, RFI 2 - M9820-2 - M.9820-RFI020086540, slide 7. [Highlight added by the Commission]

- (427) The Commission considers that these price differences reflect different competitive conditions in the EEA as compared to other regions.

7.4.8. *Potential cross-regional competition from Chinese suppliers in the foreseeable future*

- (428) Relating to potential more global competition in the near future, the market investigation showed that genuine Chinese suppliers (as opposed to Western suppliers producing in China) are unlikely to become relevant players in the supply of HSUs, ESVs, orbital motors and pumps in the EEA in the foreseeable future.

- (429) In light of some comments in the Phase I market investigation indicating that competition from Chinese suppliers might be increasing in the future, the Commission investigated to what extent cross-regional competition between European and Chinese suppliers will increase in the foreseeable future. For instance, asked whether they expected a market entry into the supply of HSUs in the next five years, an OEM noted: *“the market is concentrate [sic] in few suppliers and the demands [sic] is important, I expect there are the basis to attract [sic] some BCC supplier to penetrate the European mkt.”*³³⁰ and *“(...) considering mkt evolution and the technology demand growing also the current BCC countries we could forecast new opportunities in the future for several components.”*³³¹

- (430) The Commission found that Chinese HSUs, ESVs, orbital motors and pumps do not cross-regionally compete (see Section 7.4.8.1), that an impact of China’s Industrial Policy on the markets for the supply of HSUs, ESVs, orbital motors and pumps is possible but vague and does not seem to concern the Parties’ (see Section 7.4.8.2), that it cannot be excluded that fast internal growth and improvements in quality will make Chinese products appeal more to EEA customers sometime in the future but in light of the necessary certifications, testing periods and validations processes relevant cross-regional competition is still unlikely in the foreseeable future (see Section 7.4.8.3) and that potential mergers and acquisitions by Chinese manufacturers do not change this assessment (see Section 7.4.8.4).

³³⁰ Reply to question 26.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³³¹ Reply to question 26.5 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

7.4.8.1. Cross-regional sales from Chinese HSUs, ESVs, orbital motors and pumps into the EEA at present

- (431) While cost related barriers to cross-regional trade such as tariffs and transport costs, as discussed in Section 7.4.4 above, might be offset by the lower prices of Chinese HSUs, ESVs, orbital motors and pumps, the Commission finds that Chinese HSUs, ESVs, orbital motors and pumps do not compete for sales in the EEA to a relevant degree, as they are incompatible with EEA safety and warranty regulations as well as EEA customer demands such as brand recognition, maturity, quality and performance.
- (432) ***In the first place***, as shown in Section 7.4.6 above, sales of HSUs, orbital motors and pumps in the EEA by Chinese suppliers are marginal and non-existent for ESVs. In line with this, an overwhelming majority of OEMs who responded in the market investigation said that they had never sourced HSUs, ESVs or closed-loop pumps from Chinese suppliers.³³² Similarly, an overwhelming majority of distributors said they had never or only in single instances sourced these HPS components from Chinese suppliers.³³³
- (433) ***In the second place***, market participants indicated a significant difference in quality and performance in relation to mobile hydraulic components manufactured by Chinese suppliers. Asked about the quality of HSUs, ESVs and closed-loop pumps of Chinese suppliers, an overwhelming majority of distributors and OEMs said that they considered Chinese products to be low or very low in quality and would almost never consider them or only consider them in few instances.³³⁴ One distributor noted in this regard: *“Chinese products normally have other quality standards than western products. They can look the same but mechanical and volumetric efficiency are worse, normal[l]y also expected life are shorter due to lower precision and worse material.”*³³⁵ A distributor commented: *“Chinese products normally have other quality standards than western products. They can look the same but mechanical and volumetric efficiency are worse, normal[l]y also expected life are shorter due to lower precision and worse material.”*³³⁶ A manufacturer explains the reason for which it considers that Chinese manufacturers sell limited quantities of steering units outside China: *‘[...] These manufacturers tried to copy the products used in Europe but the lack of expertise in metallurgical properties lead to a highly reduced lifetime. (...)’*³³⁷
- (434) The significantly inferior quality/performance/value of Chinese HSUs, orbital motors and pumps was confirmed by internal documents of the Parties, which place Chinese suppliers [...] clearly in the [...]³³⁸ or [...] category; see for instance Figure 48 below.

³³² Replies to question 61 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³³³ Replies to question 63 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³³⁴ Replies to question 62 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 64 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³³⁵ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³³⁶ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³³⁷ Minutes of a call with a competitor on 05.06.2020, DocID0504.

³³⁸ See in this regard the finding of a differentiated product market, recitals (153) and (159).

Figure 48 – Eaton - "Good enough" performance space

[...]

- (435) *In the third place and consequently*, many of the OEMs who indicated that they had not sourced HSUs from Chinese suppliers said the reasons for this were inferior quality and/or inferior technical solutions/performance.

7.4.8.2. Impact of China's Industrial Policy

- (436) Some market participants raised in the market investigation that funding from the Chinese government might accelerate the speed in which Chinese manufacturers become competitive and will enter the EEA markets for the supply of inter alia HSUs, ESVs, orbital motors and pumps. One OEM noted: "*Chinese government encourage suppliers to succeed.*"³³⁹ Another direct OEM explained further: "*Hydraulic business is capital intensive, so Chinese Suppliers have access to important government [sic] funds and in case of the internal demands will evolve to highest technical level they will have the interest to raise their product offering and become more aggressive even for export and capable to compete with top players. [...]*"³⁴⁰ Based on these comments, the Commission investigated whether and in how far China's Industrial Policy might affect competition for the supply of HSUs, ESVs, orbital motors and pumps.
- (437) **First**, the Commission found that it cannot be excluded that China's Industrial Policy might affect competition in relation to the supply of HSUs, ESVs, orbital motors and pumps, amongst others, financial support of internal growth of Chinese suppliers through R&D and production scaling as well as external growth through acquisitions. A large consultancy identified the **Made in China 2025 imitative (MIC 2025)** of the Chinese government as a relevant trend for the hydraulics market in China. This initiative "*[...] aims to upgrade Chinese manufacturing sector into an innovative, high-tech sector*".³⁴¹ [...]³⁴² [...]³⁴³ [...]³⁴⁴
- (438) The ten priority sectors of MIC 2025 are listed in Figure 49 from the same presentation below.

Figure 49 – [...]

[...]

- (439) The Commission considers that, in particular, the priority sectors "agricultural machinery" and "new-energy vehicles and equipment" could allow for support of mobile hydraulic components through MIC 2025. However, the Commission did not find any specific evidence of any such government support in relation to HSUs, ESVs, orbital motors and pumps in its investigation. Further, the Commission did not

³³⁹ Reply to questions 30.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³⁴⁰ Reply to questions 30.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³⁴¹ Danfoss internal document, [...], slide 16, Doc Id1056-41706, RFI 2 - M9820-3 - M.9820-RFI020106924.

³⁴² [...].

³⁴³ [...], 2018, slide 7, DocID155-34736, RFI020067031.

³⁴⁴ [...], 2018, slide 7, DocID155-34736, RFI020067031.

find any concerns of the Parties' in their internal documents relating to China's industrial policy, the MIC 2025 or other Chinese government funding. In light of this, the Commission finds that the impact of China's Industrial Policy and related initiatives remain vague in relation to the product markets discussed in Section 6.

7.4.8.3. Relevant cross-regional sales in the foreseeable future through internal growth

- (440) As regards the quality and performance of HSUs, ESVs, orbital motors, and pumps, the Commission notes that a majority of direct OEMs who responded in the Phase I market investigation said in relation to HSUs, ESVs and pumps that in the next three to five years, certain Chinese suppliers will be at par or superior to the Parties, and majority of these OEMs indicated this in relation to orbital motors.³⁴⁵ One direct OEM explained further: "*Dev[e]lopment in China is quite fast. Therefore, we think China could catch up even for new designed products.*"³⁴⁶ Similarly, another direct OEM noted: "*they have a very quick grow rate, mostly because we go there and teach them ...*".³⁴⁷ Another direct OEM stated: "*There is already a diverse supply base in China. It can be generally assumed where more competition will grow in this region and market.*"³⁴⁸
- (441) In light of these comments, the Commission investigated, how long it would take Chinese suppliers to become competitive in terms of quality and performance through internal growth (whereas external growth is discussed below in Section 7.4.8.4).
- (442) **First**, the Commission found that it cannot be excluded that HSUs, ESVs and orbital motors of some Chinese supplier might become competitive against the Parties' products in the future. Even in relation to ESVs, which are not yet offered by Chinese suppliers on any regional market, not even in their Chinese home market, the Commission considers the Notifying Party claim³⁴⁹, that one Chinese supplier is already developing an electrohydraulic steering solution, to be plausible in light of its market investigation and Chinese growth and ambitions. In any case, the Commission did not find any conflicting evidence in relation to this claim.
- (443) **In the first place**, Commission found that the quality/performance to price ratio for HPS components including HSUs, orbital motors and pumps on a continuum³⁵⁰ is generally segmented by the Parties³⁵¹ and market participants into a "low end" (also referred to as "China AG" or "Knock off", "Copycat" or "Tier 3") category, a medium (or "mid-price" or "Good enough" or "Just enough" or "Tier 2") category and a "high end" (or "premium" or "Tier 1") category.³⁵² The Commission found that the low cost/quality/performance "Tier 3" category is generally not accepted by EEA customers and almost exclusively produced by Asian suppliers to Asian customers. However, the Commission found in the internal documents of the Parties as well as in responses to the market investigation, that there is a certain degree of customer acceptance for HSUs, orbital motors and pumps with a medium price/value offering in the EEA.³⁵³ For instance, the Parties' frequently refer to this mid-

³⁴⁵ Replies to questions 30 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³⁴⁶ Reply to questions 30.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³⁴⁷ Reply to questions 30.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³⁴⁸ Reply to questions 30.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

³⁴⁹ Form CO Section 6 to 9 on steering, paragraph 269.

³⁵⁰ As shown above in Section 7.4.2, [business strategy].

³⁵¹ See for instance, Figure 27, Figure 28 and Figure 48.

³⁵² See in this regard the finding of a differentiated product market, recitals (153) and (159).

³⁵³ See, for instance, Parties' to RFI 4 [Annex B.5_3], DocID245-2, slide 23.

value/price segment, when discussing strategies of introducing “Tier 2” or budget/entry level products into their portfolios for more price and less quality conscious EEA customers.³⁵⁴ Therefore, the Commission finds that should Chinese suppliers achieve a medium level of quality and performance of HSUs, orbital motors and pumps sometime in the future, their products would be more acceptable for EEA customers and more compatible with safety and warranty requirements as compared to HSUs, orbital motors and pumps offered by Chinese suppliers today, thereby making them more competitive in terms of quality and performance for sales to EEA customers. Similarly, the Commission expects EEA customers of ESVs to be more accepting of an equivalent medium quality of ESV, once they are offered on the market.

- (444) ***In the second place***, the Commission found indications that brand recognition might not be as relevant in the medium and more price competitive segment of the market as compared to the more premium end of the market. A large competitor reported: *“Brand recognition and previous references are import to our customers and represent important barriers to entry. Nevertheless, entering companies’ e.g. Chinese companies manage to enter the hydraulic component market over a period of several years based on low cost basis where brand recognition is not too important.”*³⁵⁵
- (445) ***In the third place***, there are indicators that China might have the know-how and expertise to produce HPS components including HSUs, orbital motors and pumps with a quality and performance level accepted by a relevant number of EEA customers and at competitive costs in the future.
- (446) In terms of quality and technical performance, as well as technical know-how and expertise to achieve these, the Commission found that Chinese HPS component manufacturers such as Jiangsu Hengli Hydraulic, Shandong Zhongchuan Hydraulic, AVIC Liyuan Hydraulic, Taiyuan Heavy Machinery Group Yuci Hydraulics, have intensified research and development (hereinafter: “R&D”) and production and have seemingly made breakthroughs in the field of excavators. The Commission does not consider it unlikely that similar R&D efforts will be undertaken in relation to HSUs, ESVs, orbital motors and pumps by Chinese suppliers, even though the Commission considers it more likely that R&D efforts and investments will be put into electric solutions such as eSteering, which would fall under the MID 2025 priority “new-energy vehicles and equipment”, see Figure 49 above. While the Commission is not aware of any specific R&D projects and know-how acquisitions in relation to HSUs, ESVs, orbital motors and pumps, the Commission considers that a speedy growth and improvement of the Chinese products cannot be excluded in light of this.
- (447) In terms of production scale allowing for cost competitive products, the Chinese market makes up around 25% of the global hydraulic market (more than RMB 63 000 million in 2019 equalling around EUR 8 000 million) and demand for mobile hydraulic components for, in particular, construction machinery such as excavators and loaders has significantly grown since 2017, with expected sustain growth momentum. While the present Chinese suppliers of HSUs, orbital motors, and pumps are relatively small and there are no Chinese suppliers of ESVs, the Commission

³⁵⁴ See for instance Eaton internal document on the positioning [business strategy - content of internal documents], DocID1057-25070, RFI 2 - M9820-4 - M.9820-RFI020139880, in particular slides 7 and 12 to 16.

³⁵⁵ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

cannot exclude that Chinese suppliers might ramp up production to produce at even lower cost, potentially outgrowing Western suppliers even before targeting customers in the EEA. However, at present, it appears more that the lower labour costs are the main factor in making Chinese HSUs and orbital motors low cost products, rather than their scale.

- (448) **However, second**, the Commission found that this organic growth of Chinese suppliers is not likely to lead to relevant cross-regional competition between the EEA and Asia in the foreseeable future.
- (449) **In the first place**, the Commission finds that the regulatory certification/homologation processes as well as testing and validation processes by OEMs, let alone the additional delay for a frequently necessary redesign of a machine to fit the HPS component of a new supplier, take several years (see Section 7.4.3 above, and detailed in Sections 8.3.3.7 (B.) and 8.4.3.7 (B) and 8.5.3.6 below) and would hinder relevant cross-regional competition within the foreseeable future. Several market participants reported that the testing process for a new HSU, ESVs, orbital motors, and closed-loop pumps alone would take about 18 months to several years. One large European OEM commented: “[...] *(E)ngineering resources, validation testing, cost associated and time required consequently. This can be from 18 Month to 5 years overall depending on the complexity of what needs to be tested.*”³⁵⁶ Another European OEM stated: “[...] *validation time often lasts between 1 and 3 years.*”³⁵⁷ A further European OEM noted: “*the approval process for new hydraulic manufactures is very long (years)*”³⁵⁸ and “[...] *normally years are needed to introduce a new hydraulic components manufacturer.*”³⁵⁹ For more details see Sections 8.3.3.7 (B.), 8.4.3.7 (B.) and 8.5.3.6 below.
- (450) **In the second place**, Chinese suppliers being able to produce competitive products by itself does not change several of the findings in Sections 7.4.1 to 7.4.7 above, which argue in favour of regional markets. For instance, increased quality of Chinese products does not necessarily change customer preferences in the regions and does not necessarily mean that the same products will be produced for all regions, nor does improved quality and performance affect the competitive advantages of localisation, warehouses and regional access in form of a sales force, distribution network and technical support discussed in Section 7.4.2 to 7.4.5 above. A competitor noted in this regard: “[*Besides the lower quality/performance*], *at this point, these manufacturers do not have marketing and sales in EU and US. Asia is growing at such a pace that they are focused on that geographic market. Even with large investments in sales, marketing and distribution it will be very difficult for these suppliers to enter the European or North American markets as their brand recognition is missing*’.³⁶⁰
- (451) **In the third place**, the findings in recitals (449) and (450) were broadly confirmed by views and expectations of competitors and distributors expressed in the

³⁵⁶ Reply to question 47.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁵⁷ Reply to question 47.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁵⁸ Reply to question 49.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁵⁹ Reply to question 49.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁶⁰ Minutes of a call with a competitor on 05.06.2020, DocID0504.

Commission's market investigation. The results of the market investigation indicate that EEA competitors and distributors do not expect Chinese suppliers to offer the required quality within the next five years. Of those OEMs and distributors who had purchased from Chinese suppliers a large majority said they would not purchase from them again.³⁶¹ Those market participants who provided a reason for this said they had issues with quality and performance/efficiency of the components.³⁶² Further, a large majority of distributors who took a view said that they will not consider Chinese suppliers within the next three years.³⁶³ One distributor commented in this regard: "*We deal with medium to premium products and chinese products are not medium yet. They will come there within 5-7 years.*"³⁶⁴

- (452) **In conclusion**, the Commission considers that Chinese suppliers are not unlikely to attempt more and more to compete in the EEA, especially in the mid-quality/price segment for the supply of HSUs, orbital motors and pumps, where they are already active in the low cost segment. The Commission also cannot exclude that such growth into the medium quality/price segment might happen relatively quickly. The Chinese market is huge and Chinese companies can grow to a significant size even without trading outside of China. However, the long certification, testing and validation processes needed to enter the markets for the supply of HPS components including HSUs, ESVs, orbital motors and pumps in the EEA alone make it unlikely that Chinese products will compete cross-regionally for sales to EEA customers in the foreseeable future.

7.4.8.4. Relevant cross-regional sales in the foreseeable future through external growth

- (453) In the market investigation, a competitor noted that the necessary know how to produce HSUs, ESVs, orbital motors and pumps with a medium quality level sufficient for EEA customers might have already been acquired through acquisitions: "*Chinese [sic] companies already have knowledge and products by acquisition of western companies.*"³⁶⁵ Based on this comment, the Commission further investigated whether Chinese suppliers might "jump-start" cross-regional competition through external growth by means of acquisitions of other companies or IP.
- (454) The Commission found that Chinese hydraulic manufacturers have in the past speeded up their acquisition of know-how, patents and regional access through external growth in form of acquisitions and setting up factories overseas. For instance, Weichai Power acquired Linde Hydraulics, and, in 2016, Jiangsu Hengli Hydraulic took over the hydraulic piston pump business of HAWE In-Line. Discussing a threat of Chinese competition in Europe, the Middle East and Africa, an Eaton employee notes in an internal discussion: [content of internal documents].³⁶⁶
- (455) The Commission therefore considers that it cannot be excluded that this might be a viable strategy for Chinese manufacturers in relation to HSUs, ESVs, orbital motors and pumps. There are further general indicators in this regard in internal documents of the Parties. For instance, a Danfoss internal document [content of internal documents] (see Figure 50 below) [...].

³⁶¹ Replies to question 61.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 63.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³⁶² Replies to question 61.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

³⁶³ Replies to question 63.3 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³⁶⁴ Reply to question 63.3.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

³⁶⁵ Reply to question 37.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

³⁶⁶ Eaton internal document, e-mail exchange, January 2020, DocID1041-14767, EAT-266469.

Figure 50 – [...]

[...]

Figure 51 – [...]

[...]

(456) **However**, the Commission notes that the MID 2025 is vague in this regard and it is difficult to identify which kind of acquisitions were government funded and which private. Further, the Commission does not have any specific indication that Chinese manufacturers might try to speed up and grow cross-regional trade by this means. In any case, even if Chinese manufacturers tried to jump-start production of competitive products through acquisitions and gain regional access, this would not change several of the findings in Sections 7.4.1 to 7.4.7 above, which argue in favour of regional markets. For instance, increased quality of Chinese products does not necessarily change customer preferences in the regions and does not necessarily mean that the same products will be produced for all regions, nor does improved quality and performance affect the competitive advantages of localisation, regional access and warehouses discussed in Section 7.4.2 to 7.4.5 above.

7.4.8.5. Conclusion on increasing cross-regional competition from China

(457) In light of the findings in Section 7.4.8 above, the Commission finds that potential cross-regional trade from Chinese suppliers within the foreseeable future is unlikely and does not argue in favour of a broader than EEA-wide delineation of the product markets discussed in Section 6 above. A potential entry of Chinese manufacturers into the EEA markets for the supply of HSUs, ESVs, orbital motors, and pumps as opposed to potential cross-regional trade assessed here, is further discussed in Sections 8.3.3.7 (J), 8.4.3.7 (K) and 8.5.3.7 below.

7.4.9. *Conclusion on the geographic market definition for the supply of HSUs, ESVs and orbital motors*

(458) In light of the above findings in Sections 7.4.1 to 7.4.8, the Commission finds that the markets for the supply of HSUs, ESVs, orbital motors and pumps and any plausible sub-segment thereof, are each EEA-wide in geographic scope.

8. COMPETITIVE ASSESSMENT

8.1. Legal framework for the Commission's assessment

(459) Under Article 2(2) and (3) of the Merger Regulation, the Commission must assess whether a proposed concentration would significantly impede effective competition in the internal market or in a substantial part of it, in particular through the creation or strengthening of a dominant position.³⁶⁷

(460) In this respect, a merger can entail horizontal and/or non-horizontal effects.

³⁶⁷ With regard to the application of the Merger Regulation in the EEA, see Annex XIV to the EEA Agreement.

- (461) Horizontal effects are those deriving from a concentration where the undertakings concerned are actual or potential competitors of each other in one or more of the relevant markets concerned. The Commission appraises horizontal effects in accordance with the Horizontal Merger Guidelines.³⁶⁸
- (462) According to paragraph 25 of the Horizontal Merger Guidelines, a merger giving rise to non-coordinated effects would significantly impede effective competition by creating or strengthening the dominant position of a single firm, one which, typically, would have an appreciably larger market share than the next competitor post-merger.
- (463) Paragraph 17 of the Horizontal Merger Guidelines further explains that *‘according to well-established case law, very large market shares — 50 % or more — may in themselves be evidence of the existence of a dominant market position. However, smaller competitors may act as a sufficient constraining influence if, for example, they have the ability and incentive to increase their supplies’*.
- (464) Paragraph 26 of the Horizontal Merger Guidelines adds that *‘[a] number of factors, which taken separately are not necessarily decisive, may influence whether significant non-coordinated effects are likely to result from a merger’*. In addition to market shares that, according to paragraph 27, are normally *‘important factors in the assessment’* and first indicators of market power and increases in market power, a non-exhaustive list of other relevant factors that might lead to a significant impediment to effective competitions are explained in recitals 28-38.
- (465) These factors, which taken separately are not necessarily decisive, may influence whether significant non-coordinated effects are likely to result from a merger, in particular whether merging firms have large market shares, merging firms are close competitors, customers have limited possibilities of switching supplier, competitors are unlikely to increase supply if prices increase, the merged entity would be able to hinder expansion by competitors, and the merger eliminates an important competitive force.³⁶⁹
- (466) Accordingly, Sections 8.3, 8.4, 8.5 and 8.6 of this decision assess, for each of the four relevant markets market shares and HHI, closeness of competition between the Parties, customers’ ability to switch suppliers, the ability of the Parties’ competitors to counteract a potential price increase, competitive pressure from other technologies, countervailing buyer power and barriers to entry and expand. Based on all these factors considered together, conclusions on horizontal non-coordinated effects are drawn for each of Sections 8.3, 8.4 and 8.5.

8.2. Introduction to the Commission’s competitive assessment

8.2.1. Demand characteristics and market power

- (467) As an introduction to Sections 8.3 to 8.5 below that present the Commission’s competitive assessment for the four affected markets where competition concerns have been identified to be stemming from the Transaction, namely the EEA markets for HSUs, ESVs orbital motors and medium-pressure pumps for the distributor sales channel, this section discusses the overarching concepts of market power, market concentration and related metrics.

³⁶⁸ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (‘Horizontal Merger Guidelines’), OJ C 31, 5.2.2014.

³⁶⁹ Horizontal Merger Guidelines, paragraph 24.

- (468) The Commission recalls that “*Effective competition brings benefits to consumers, such as low prices, high quality products, a wide selection of goods and services, and innovation*”³⁷⁰ and that “*Through its control of mergers, the Commission prevents mergers that would be likely to deprive customers of these benefits by significantly increasing the market power of firms.*”³⁷¹ In this context, “*By "increased market power" is meant the ability of one or more firms to profitably increase prices, reduce output, choice or quality of goods and services, diminish innovation, or otherwise influence parameters of competition.*”³⁷² In economics, market power is commonly identified through a firm’s ability to set prices above marginal costs.³⁷³
- (469) The Commission further recalls that “*Market shares and concentration levels provide useful first indications of the market structure and of the competitive importance of both the merging parties and their competitors*”³⁷⁴ and “*In order to measure concentration levels, the Commission often applies the Herfindahl-Hirschman Index (HHI). The HHI is calculated by summing the squares of the individual market shares of all the firms in the market*”.³⁷⁵ Moreover, “*According to well-established case law, very large market shares - 50 % or more - may in themselves be evidence of the existence of a dominant market position. However, smaller competitors may act as a sufficient constraining influence if, for example, they have the ability and incentive to increase their supplies. A merger involving a firm whose market share will remain below 50 % after the merger may also raise competition concerns in view of other factors such as the strength and number of competitors, the presence of capacity constraints or the extent to which the products of the merging parties are close substitutes. The Commission has thus in several cases considered mergers resulting in firms holding market shares between 40 % and 50 %, and in some cases below 40 %, to lead to the creation or the strengthening of a dominant position.*”³⁷⁶
- (470) On this matter, the Notifying Party submits that the Parties’ high combined market shares in some of the overlap markets at hand are not in fact indicative of the existence (and corresponding strengthening) of market power, on account, *inter alia*, of these markets being bidding markets. According to the Notifying Party high market shares are a poor proxy of market power in bidding markets.³⁷⁷
- (471) The Commission notes that, the circumstances which may make market shares an inadequate proxy of entrenched market power are not met in this case.
- (472) Market shares, in particular, have in some cases been held to be a proxy not necessarily indicative of market power in instances in which demand is fulfilled via procurement processes organised as winner-take-all tenders, where demand is lumpy, past successes convey no incumbency advantages and there are no or low barriers to entry to such processes.³⁷⁸ Under these conditions, winning a winner-take-all contract “for the market” may convey a market participant a 100% market share in

³⁷⁰ Horizontal Merger Guidelines, paragraph 8.

³⁷¹ Horizontal Merger Guidelines, paragraph 8.

³⁷² Horizontal Merger Guidelines, paragraph 8.

³⁷³ See for example, De Loecker, J., Eeckhout, J., and Unger, G., “The Rise of Market Power and the Macroeconomic Implications”, *The Quarterly Journal of Economics* (2020), 561–644, doi:10.1093/qje/qjz041, and references therein.

³⁷⁴ Horizontal Merger Guidelines, paragraph 14.

³⁷⁵ Horizontal Merger Guidelines, paragraph 16.

³⁷⁶ Horizontal Merger Guidelines, paragraph 17.

³⁷⁷ See the Reply to the Article 6(1)(c) Decision, paragraph 20.

³⁷⁸ See for example, *M.8677 Siemens/Alstom*.

one period, that may well go down to 0% if the same market participant fails to win again next time the same “for the market” contract is up for tender.

- (473) However, in the present case, the landscape of the procurement processes in the markets under consideration cannot be characterised as described in the previous recital, and market shares are instead an adequate proxy of market power. This is for the following reasons:
- (474) **First**, procurement events tend to be mixed and comprise both bidding events and bilateral negotiations with existing suppliers.
- (475) As the Notifying Party explains for both steering products (which include both HSU and ESV) and orbital motors,³⁷⁹ prices are typically composed of a ‘price list’ element, which is fixed for a given HPS component and region (e.g. for a certain orbital motor in the EEA), minus a discount which is negotiated on a case-by-case basis, and therefore ‘*the final price to the customer is subject to individual negotiation*’.³⁸⁰ The Notifying Party also explains that discounts to its customers might depend, in addition to the specific regions where sales occur, on the volume sold to a specific customer.
- (476) Taking as an example ESV, the Notifying Party explained that after an OEM has provided potential suppliers with its technical needs, these potential suppliers would typically engage in bilateral discussions with the OEM and present their respective different solutions. A formal request for information is typically issued after these bilateral discussions are concluded.³⁸¹ This indicates that the choice of an OEM would typically be based not only on the offers received in reply to an RFQ, but rather on a process that includes both bilateral discussions and formal offers.
- (477) **Second**, OEMs’ replies to the market investigation indicate that there is a certain correlation between a supplier’s market share and how frequently a supplier receives requests for quotations from OEMs. For example, with reference to orbital motors, a large majority of the OEMs indicated that in the last five years they sent requests for quotations to both Danfoss and Eaton, whereas, far less OEMs indicated that they sent their requests for quotations to suppliers with smaller market shares, as for example, Parker Hannifin or Dana Brevini.³⁸²
- (478) This indicates that those companies that have large market shares have more probabilities of receiving RFQs, and therefore acquire new businesses, compared to companies with smaller market shares. In this respect, market shares not only are an indication of current market power, but they are also an indication of how likely a company might expand its business in the near future.
- (479) **Third**, when asked to describe the process of selling and supplying products to OEMs, the Parties’ competitors suggested that there are different procurement mechanisms which can at times retain elements typical of a bidding process and

³⁷⁹ Form CO Sections 6 to 9 for steering, paragraphs 307-311; Form CO Sections 6 to 9 for motors, paragraphs 413-417.

³⁸⁰ Form CO Sections 6 to 9 for steering, paragraph 307; Form CO Sections 6 to 9 for motors, paragraph 413.

³⁸¹ Reply to post-notification request for information RFI 9, question 5.

³⁸² Replies to question 34 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

other times take place based on conditions similar to those of bilateral negotiations.³⁸³

- (480) For example, while a large majority of the Parties' competitors consider that the sales process of HPS components is usually structured as a bilateral negotiation between a supplier and a purchaser and that establishing a commercial relationship with an OEM is important and increases the likelihood of future contracts, there is no large majority indicating if certain characteristics of bidding markets apply in this case.³⁸⁴ These characteristics include, for example, OEMs sending standardized RFQs to a number of potential suppliers to invite them to submit formal bids in one or more rounds, that when an auction takes place bidding is vigorous and there are multiple rounds during which bids move significantly, that the supplier offering the lowest price is typically the one selected by the OEM.
- (481) **Fourth**, the barriers to switching and to entry described in the competitive assessment (see Sections 8.3.3.2, 8.3.3.7, 8.4.3.2., 8.4.3.7., 8.5.3.3, 8.5.3.7), indicate that OEMs have certain restrictions in changing their suppliers for a new machine, due to, for example, past experience with certain suppliers, lack of confidence in certain suppliers and of their products, and the preference of carrying over HPS systems, or certain components thereof, from a previously designed machine to a newly designed one.
- (482) These barriers to switching suppliers reduce competition among the suppliers replying to an OEM's request for quotation because certain suppliers might have a competitive advantage over their competitors, due to their previous business relationships with that OEM.
- (483) **Fifth**, market shares data show that shares in these markets tend to be stable over time, and, importantly, do not present the 'lumpy' features that would be expected in a situation where every one or more years a large part of the demand is supplied by different suppliers.
- (484) Table 1 shows the Notifying Party's estimates of market shares in value for orbital motors, ESV and HSU in the EEA for the period 2015-2019. These data clearly show that in the last five years there was no marked change of shares from year to another, but rather stable values, or, as in the case of the Parties' ESV market shares, a steady increment from one year to another.

³⁸³ Replies to question 25 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961; Replies to question 20 of Q12 – Phase II Questionnaire to competitors (steering and other products), DocID1962.

³⁸⁴ Replies to question 25 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961; Replies to question 20 of Q12 – Phase II Questionnaire to competitors (steering and other products), DocID1962.

Table 1 – EEA market shares in value for orbital motors, HSU, and ESV for the years 2015-2019

Year	Orbital Motors (%)					Electrohydraulic Steering (%)					Hydraulic Steering (%)				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Danfoss	[50-60]	[50-60]	[50-60]	[50-60]	[50-60]	[20-30]	[20-30]	[20-30]	[30-40]	[30-40]	[40-50]	[40-50]	[40-50]	[40-50]	[40-50]
Eaton	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]	[5-10]	[0-5]	[5-10]	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]
Combined	[60-70]	[60-70]	[60-70]	[60-70]	[60-70]	[30-40]	[40-50]	[30-40]	[30-40]	[40-50]	[50-60]	[50-60]	[50-60]	[60-70]	[50-60]
Bosch	-	-	-	-	-	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	-	-	-	-	-
Brevini	[5-10]	[5-10]	[5-10]	[0-5]	[5-10]	-	-	-	-	-	-	-	-	-	-
FEMA	-	-	-	-	-	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]	-	-	-	-	-
Hydac	-	-	-	-	-	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	-	-	-	-	-
Hydraforce	-	-	-	-	-	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	-	-	-	-	-
M+S Hydraulic	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]	-	-	-	-	-	[5-10]	[5-10]	[5-10]	[5-10]	[10-20]
Mobil Elektronik	-	-	-	-	-	[10-20]	[10-20]	[10-20]	[10-20]	[10-20]	-	-	-	-	-
Ognibene	-	-	-	-	-	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	[20-30]	[20-30]	[20-30]	[20-30]	[20-30]
Parker	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	-	-	-	-	-	-	-	-	-	-
Zhenjiang	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	-	-	-	-	-	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]
ziHYD / THOTH (Zhongyi)	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	-	-	-	-	-	-	-	-	-	-
Others	[0-5]	[0-5]	[0-5]	[0-5]	[0-5]	[5-10]	[5-10]	[5-10]	[5-10]	[5-10]	[0-5]	[0-5]	[0-5]	[0-5]	[5-10]
Total*	100	100	100	100	100	[80-90]	[80-90]	[80-90]	[80-90]	[80-90]	100	100	100	100	100

* For ESV, the individual market shares do not sum-up to 100% because the Notifying Party also included captive production of OEMs, which are excluded from this table.

Source: Commission, based on the Reply to post-notification RFI 18, Annex 1_1

- (485) Therefore, irrespective of the characterisation of the markets under consideration as bidding markets, standard economic theory still applies. Market shares can therefore not be ruled out as uninformative of market power.³⁸⁵
- (486) Furthermore, as a matter of principle, the general mechanism through which mergers in bidding markets can influence competitive outcomes is similar to the ones that are at work in mergers in ordinary differentiated product industries, where firms also compete on price. That is, a merger internalises the competitive pressure that two firms exercised on each other prior to the merger, and can lead each firm to bid less aggressively post-merger (that is, submit higher bids). The precise mechanism through which a merger can influence bids and the indicia of potential unilateral effects, depend on how the tendering process is set up and on the information available to bidders.³⁸⁶
- (487) In a typical auction, the customer selects the firm that provides it with the highest surplus, defined as the difference between the value of the product offered by each firm and its bid. Firms face uncertainty on the conditions offered by competing bidders (including the quality of competing products, and the bids at which they are offered), and on how the buyer will evaluate different characteristics of each bid. Under these circumstances, the pricing incentives of competing firms closely resemble those at work in ordinary markets with differentiated products. If there is uncertainty on the required level of the winning bid, each firm will face a trade-off between the probability of winning the tender and the margin earned in case of winning the tender. A higher bid will reduce the probability of winning the tender but will increase the margin if the bid is successful. This trade-off is equivalent to the standard trade-off between quantity sold and price in an ordinary differentiated goods market, with the difference being that in the case of a tender it is the expected quantity sold (i.e. the probability of winning the auction) rather than actual quantity sold which enters the trade-off. Each bidder therefore chooses its optimal bid in order to optimise the trade-off between expected sales and price and thereby maximises its expected profits. Pricing incentives and the related incentives to exploit market power are therefore analogous to those at work in standard pricing of differentiated products.³⁸⁷

8.2.2. *The Commission's market reconstruction*

- (488) From the previous section, it follows that the standard indicia of market power, the ability to achieve and maintain high market shares and to set prices significantly above marginal costs, remain relevant in the markets at hand, even if these markets were to be considered as so-called bidding markets.

³⁸⁵ As noted by P. Klemperer, “using the term *bidding market*, as it is now widely used, to mean either “*Bertrand market*” [...] or “*contestable market*” (if the easy entry assumption is added), seems at best unnecessary, since the terms “*Bertrand markets* and “*contestable market*” are perfectly adequate. [...] auctions and bidding processes are beset by the same range of competitive problems as ordinary markets.” (P. Klemperer (2005), “Bidding Markets”, Competition Commission discussion paper, page 9).

³⁸⁶ For a detailed discussion see M.7278 – *General Electric/Alstom* and Annex I.

³⁸⁷ For a detailed discussion see also, P. Klemperer (2005), “Bidding Markets”, Competition Commission discussion paper; C. Shapiro (2010), “The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years”, *Antitrust Law Journal*, Vol. 77; G. Werden and L. Froeb (2008), “Unilateral Competitive Effects of Horizontal Mergers”, in L. Buccirossi (ed.), *Handbook of Antitrust Economics*, Cambridge, MA, MIT Press; and OFT (2007), “Markets with Bidding Processes”, Economics discussion paper, May.

- (489) Because the market shares provided by the Notifying Party constitute estimates that are based on numerous unverifiable assumptions,³⁸⁸ the Commission has carried out a market reconstruction exercise reaching out to the key competitors identified by the Notifying Party and requesting information on their sales.³⁸⁹ For those competitors that were unresponsive to the Commission’s requests, the market reconstruction exercise adopted the sales estimates provided by the Notifying Party in the Form CO.³⁹⁰ The Commission similarly included in the calculations an aggregate residual group of “others” with the sales volumes attributed to it in the Form CO. The results of this exercise are discussed below in the competitive assessment of respective product market.
- (490) In any event, the Commission has also analysed the Parties’ Opportunity Data similarly to how a true bidding market would be assessed, to the extent possible. Some examples of the metrics that one would typically consider in that case are market shares, winning rates (share of contestable tenders won by each player), participation rates (share of contestable tenders in which each player has participated), meeting rates (proportion of contestable tenders in which the Parties met, compared to the proportion of contestable tenders in which the Parties met other rivals), and conditional participation and winning rates (participation and winning rates when limited to the subset of tenders in which one or the other Party participated). Such metrics are particularly informative in winner-take-all markets with infrequent tenders where market shares might well indicate limited or no overlap between the Parties despite significant competitive interaction at the tender stage. That is, under a specific set of circumstances that do not apply in the markets under consideration, market share metrics have the potential of underestimating the competitive interaction between competitors.
- (491) The Commission’s analysis of this Opportunity Data is described in detail in Annex I. Due to the limitations of this data (only partial coverage of the relevant markets due to the fragmented nature of demand; limited information on competitive interactions, focusing only on recording respective Party’s assessment of the identity of one main competitor) the analysis focuses on meeting rates of main competitors for the sub-sample of opportunities where this information is recorded. This analysis is a complement rather than a substitute to the rest of the competitive assessment based on standard market power indices. In any event, the results of both analyses are largely aligned.

8.3. Horizontal overlap for HSUs

- (492) Both Danfoss and Eaton develop, manufacture, and sell HSUs for mobile applications. Danfoss only produces HSUs for off-road mobile applications³⁹¹. On this basis the Commission will focus its assessment on the market for ‘HSUs for off-road vehicles’ (hereinafter referred to as the market for ‘HSUs’), and not the on-road vehicles with work functions segment, given the overlap of the Parties is limited to off-road vehicles.

³⁸⁸ Reply to pre-notification request of information RFI 2, Annex D 36 2.

³⁸⁹ This data collection exercise focused on the set of main competitors. For smaller competitors that the Notifying Party grouped under the heading “others” or were not responsive to the Commission’s data request, the market reconstruction exercise used the estimates provided by the Notifying Party.

³⁹⁰ These were Sinjin, Like Jining, Zihyd/Thoth and Zhenjiang (see Form CO, Annex Steering VI 2 and Form CO, Annex Motor IV 4).

³⁹¹ See recital (2) above.

(493) The present section first presents the market shares and HHI of the market for HSUs (Section 8.3.1), then it will present the Notifying Party’s arguments (Section 8.3.2) before presenting the Commission’s assessment (Section 8.3.3).

8.3.1. *Market structure and market shares suggests the Transaction will lead to the creation or strengthening of a dominant position*

(494) The Notifying Party submitted value market shares as part of the Form CO which suggested that Danfoss has a share of [40-50]% and Eaton a [10-20]% share, leading to a combined market share as high as of [50-60]%. As indicated in Section 8.2 above, the Commission performed a market reconstruction due to lack of verifiability of the competitor market share estimates provided by the Parties. The Commission’s market reconstruction suggests that the Transaction would lead to even higher combined market shares for the supply of HSUs. As Table 2 shows, Danfoss’ market share in value in 2019 is [60-70]% in the EEA and Eaton’s market share in value is [10-20]% in the EEA, leading to a very high combined market share in value of [70-80]% in the EEA. Moreover, Table 3 demonstrates that the market shares in volume are similar: Danfoss and Eaton have market shares of [60-70]% and [10-20]% respectively and the Parties have a combined share of [70-80]%.

Table 2 – EEA market shares in value for HSUs in 2017-2019

	2017		2018		2019	
	Sales ('000s)	Market Share	Sales ('000s)	Market Share	Sales ('000s)	Market Share
Danfoss	[...]	[60-70]%	[...]	[60-70]%	[...]	[60-70]%
Eaton	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Combined	[...]	[70-80]%	[...]	[70-80]%	[...]	[70-80]%
Ognibene	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
M+S Hydraulic	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Zhenjiang	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Others	[...]	[5-10]%	[...]	[5-10]%	[...]	[5-10]%
Total	[...]	100,0%	[...]	100,0%	[...]	100,0%

Source: the Commission’s market reconstruction

Table 3 – EEA market shares in volume for HSUs in 2017-2019

	2017		2018		2019	
	Sales	Market Share	Sales	Market Share	Sales	Market Share
Danfoss	[...]	[60-70]%	[...]	[60-70]%	[...]	[60-70]%
Eaton	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Combined	[...]	[70-80]%	[...]	[70-80]%	[...]	[70-80]%
Ognibene	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
M+S Hydraulic	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Zhenjiang	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Others	[...]	[5-10]%	[...]	[5-10]%	[...]	[5-10]%
Total	[...]	100,0%	[...]	100,0%	[...]	100,0%

Source: the Commission’s market reconstruction

- (495) In regard to competition from other suppliers in the EEA, the merged entity would be more than four times as big (in terms of sales revenues) as its next competitor, i.e. Ognibene, which has a 2019 value market share of [10-20]%, and over ten times than M+S Hydraulic, which has a 2019 value market share of [0-5]%. After the Transaction, the merged entity and these two competitors would cover over 90% of the EEA market demand. The market shares in volume convey a similar situation with variations of less than 5% between competitors' value and volume shares.
- (496) Market shares have been stable throughout the period 2017-2019 which can be seen from Tables 2 and 3. Variations for any market participant did not exceed the range of [0-5]%. As explained in Section 8.2.1 this suggests that the market is not a 'bidding market' as has been alleged by the Parties (see section 8.2.1). Indeed in line with Section 8.2.1 market shares appear to be a good proxy for determining who the credible market participants are in the HSU market.
- (497) For the avoidance of doubt, EEA-based OEMs do not produce HSUs for captive use; therefore, it is not necessary to consider the role of in-house production in terms of the presentation of market shares.

8.3.1.1. HHI levels

- (498) Based on its market reconstruction, the Commission considers that the Transaction would also lead to HHIs well above the value of 2000 and to an HHI-increment well higher than 150, or above any other threshold values defined in the Horizontal Merger Guidelines and for which the Commission is likely to not find competition concerns as can be seen from Table 4 below.

Table 4 – EEA HHIs in volume and value for HSUs in 2019

	HHI Value	HHI Volume
Pre-Transaction	[4000-5000]	[4000-5000]
Post-Transaction	[6000-7000]	[5000-6000]
Delta	[1000-2000]	[1000-2000]

Source: the Commission's market reconstruction

- (499) More specifically, pre-Transaction, the HHI in value for the overall market for the supply of HSUs in the EEA is already at [4000-5000]. The increment of the Transaction would be [1000-2000], leading to an HHI in value of [6000-7000] post-Transaction.

8.3.1.2. Conclusion on market shares and HHI levels

- (500) According to the Horizontal Merger Guidelines, very large market shares – 50% or more – may in themselves be evidence of a dominant position.³⁹² As such, Danfoss potentially has already held a dominant position pre-Transaction with its considerable market share of [60-70]% in value and [60-70]% in volume. The Transaction leads to a sizeable increment of [10-20]% in value and [10-20]% in volume, which will bring the Parties' combined shares near [70-80]% in volume and [80-90]% in value. Therefore the Transaction may lead at least to the creation of a dominant position, if not the strengthening of Danfoss' previously existing dominant

³⁹² Horizontal Merger Guidelines, paragraph 17.

position. The remaining effective competitors, whose number has already been limited pre-Transaction, are further reduced to two at most (M+S Hydraulic and Ognibene), if not one (Ognibene), with market shares considerably smaller than the merged entity.

- (501) In terms of market concentration, the Transaction would lead to HHI above the threshold of 2000 and delta of 150, i.e., considerably above the thresholds for which the Commission is normally unlikely to find competition concerns. Indeed the HHI values suggest that the market has already been very concentrated pre-Transaction and will become considerably more concentrated post-Transaction.

8.3.2. *The Notifying Party's arguments*

- (502) Notwithstanding the large combined market shares of the Parties, the Notifying Party indicated in the Form CO that the Transaction would not raise competition concerns in relation to HSUs because: (i) in the bidding market for HSUs, intensity of competition is driven by the number of credible bidders, rather than by their market shares; (ii) Eaton is not a significant constraint on Danfoss because its market shares in the EEA are relatively small; (iii) competition from existing suppliers of HSUs, from OEMs' capability to manufacture HSUs, as well as from other technologies (e.g. electric steering) exert a significant competitive constraint on the Parties; (iv) customers can easily switch suppliers; (v) there are a number of potential competitors because barriers to entry are low; and (vi) customers have a high degree of countervailing buyer power.³⁹³ In addition, in the Reply to the Article 6(1)(c) Decision the Notifying Party argued that (i) the Parties' market shares do not raise concerns on the distribution channel whereas direct channel OEMs have significant buyer power; (ii) there is significant competition pressure on HSUs from electric steering for smaller machines and from electrohydraulic steering and pure steer-by-wire for larger machines.³⁹⁴ Moreover, in the Steering Advocacy Paper it is suggested that there are existing overcapacities for HSUs in the EEA which will prevent the Parties from exercising market power post-Transaction, and that these overcapacities will further increase as demand moves towards steer-by-wire and electric steering.³⁹⁵

8.3.3. *The Commission's assessment*

8.3.3.1. Danfoss and Eaton are close competitors

- (503) According to the Horizontal Merger Guidelines, closeness of competition may be one of many factors when assessing non-coordinated effects in a differentiated market.³⁹⁶ However it should be noted that the Commission is not required to show that the Parties are the closest competitors in order to find a significant impediment to effective competition. As outlined in Section 6.3.3.4 there are elements which suggest that the market for HSUs is differentiated. Within this differentiated product market it appears that Eaton and Danfoss compete closely on certain parameters. Indeed, the results of the in-depth market investigation indicate that Danfoss on the one hand and Eaton on the other hand are close, if not each other's closest competitors in the production and supply of HSUs in the EEA.

³⁹³ Form CO Sections 6 to 9 for steering, paragraphs 156-230.

³⁹⁴ Reply to the Article 6(1)(c) Decision, paragraph 5.

³⁹⁵ Steering Advocacy Paper, paragraphs 69-73.

³⁹⁶ Horizontal Merger Guidelines, paragraph 28.

- (504) **First**, the Parties’ product offerings are very similar technically – both in terms of design and size. Originally they are based on the same patents.³⁹⁷ The Parties’ internal documents suggest that their products are similar and target the same segments. In one Danfoss document, the [content of internal documents].³⁹⁸ [Content of internal documents].

Figure 52 – Danfoss internal document – product positioning

[...]

Source: RFI 9, Annex 8.A.4

- (505) Another document shows that Danfoss considers [content of internal documents].³⁹⁹
- (506) **Second**, the Parties’ product offerings can be distinguished from those of their competitors. While M+S Hydraulic and Ognibene’s HSUs have technical similarities with those of Danfoss and Eaton, what differentiates Danfoss and Eaton from these two other players is the range of their hydraulic product portfolio, and a better performance quality of their HSUs. In one Eaton internal document it describes Danfoss and Eaton as being both a [content of internal documents].⁴⁰⁰
- (507) While Danfoss and Eaton can offer a full hydraulic package, Ognibene who is a niche player is only active in steering⁴⁰¹. One competitor noted that: Ognibene was a “*small manufacturer specialised in steering.*”⁴⁰²
- (508) Equally M+S Hydraulic is not able to offer an entire hydraulic solution⁴⁰³; and M+S Hydraulic is mainly focused on the steering after market⁴⁰⁴ and its products are not perceived to be of the same quality as Danfoss and Eaton;⁴⁰⁵ One distributor noted that: “*M+S and Ognibene products*” are “*cheaper HSUs used as a replacement for older machines.*”⁴⁰⁶
- (509) Danfoss and Eaton can also be distinguished from Ognibene from the scale of their operations: they are large players with a global presence whereas Ognibene and M+S Hydraulic are smaller and more geographically focused players.⁴⁰⁷
- (510) **Third**, the Parties target the same customers. Danfoss and Eaton both target direct OEM customers, but are also active on the market via distributors. Ognibene mainly targets direct OEM customers; in contrast, M+S Hydraulic does not have many direct OEM contracts and is more present via distributors. M+S Hydraulic stronger

³⁹⁷ Minutes of a call with a competitor 11.06.2020, Doc1987.

³⁹⁸ Danfoss internal document, “*Steering and eSteering Bourbon assessment*”, slide 5. DocID1053-1187, RFI020388834.

³⁹⁹ Danfoss internal document – ‘Steering OSPS launch strategy’, ID001055-035251, RFI020058479, slide 15.

⁴⁰⁰ Eaton internal document, Reply to RFI PN 4 – Annex_B.5_3, slide 23.

⁴⁰¹ Minutes of call with a competitor, 11.6.2020, DocID1987.

⁴⁰² Minutes of call with a competitor, 5.6.2020, DocID0504.

⁴⁰³ Reply to question 47 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁰⁴ Minutes of call with a competitor, 11.6.2020, DocID1987.

⁴⁰⁵ Minutes of call with a competitor, 11.6.2020, DocID1987.

⁴⁰⁶ Minutes of call with a distributor, 11.11.2020, DocID2220.

⁴⁰⁷ Minutes of call with a competitor, 11.6.2020, DocID1987.

presence via distributors can also be explained by its greater presence on the after-market.⁴⁰⁸

(511) **Fourth**, the assessment performed by the Commission of the Parties' Opportunity Data⁴⁰⁹ indicates that Eaton is the competitor that is most frequently identified as the main competitor that Danfoss meets in tender processes for HSUs from 2017 to 2019.⁴¹⁰ An analysis of the Danfoss dataset suggests that over [...]% of its opportunities overlapped with those of Eaton. An assessment of the Eaton opportunity dataset, makes the overlap between the Parties appear even more significant.⁴¹¹ Indeed in the Eaton dataset Danfoss is logged as the main competitor for opportunities corresponding to approximately [...]% of the value of all opportunities Eaton participated in (and also registered as a main competitor) in the EEA.⁴¹²

(512) **Fifth**, the Parties' internal documents suggest they perceive each other as their respective main competitors for HSUs. An example of this can be seen in the below Danfoss internal document in Figure 55, [...].

Figure 53 – Danfoss internal document - "Good points of having Bourbon"

[...]

Source: Danfoss internal document, Danfoss internal document, "Steering and eSteering Bourbon assessment", slide 5. DocID1053-1187, RFI020388834.

(513) Figure 53 clearly indicates [business strategy - content of internal documents]. The latter point, as well as the reference to Eaton having [business strategy] suggests that Danfoss was concerned about Eaton requiring Danfoss to [content of internal documents] in order to compete more effectively with Eaton. In sum, the document suggests that the Parties compete very closely on price and innovation and that Danfoss wants to acquire Eaton's HSU business for eliminating its competitive constraint.

(514) Similarly, an Eaton internal document provided as an example at Figure 55 below describes Danfoss as [content of internal documents]. The document also suggests that apart from Danfoss, [content of internal documents].

Figure 54 – Eaton internal document - "Steering - Competitors"

[...]

Source: Eaton internal document, Reply to RFI PN 4 – Annex_B.5_3, slide 24.

(515) **Sixth**, the results of the market investigation indicate that OEMs, distributors and competitors perceive the Parties as competing closely. From a customer perspective, a majority of OEM and distributor respondents considered Danfoss and Eaton to have somewhat similar products or very similar products.⁴¹³ A majority of competitor respondents consider that Danfoss' and Eaton's products are very similar

⁴⁰⁸ Minutes of call with a competitor, 11.6.2020, DocID1987.

⁴⁰⁹ Repositories where the Parties record past, ongoing and future business opportunities.

⁴¹⁰ See Annex I.

⁴¹¹ Annex I, Table 15.

⁴¹² Annex I, Table 17.

⁴¹³ Replies to question 20 of Q1 – Phase I Questionnaire to OEMs, DocID1956 and replies to question 18 of Q3 – Phase I Questionnaire to Distributors, DocID1958.

for hydraulic components overall as well as for hydraulic steering units.⁴¹⁴ A competitor respondent indicated that “[o]n the steering systems...there high level of similarity as nearly identical products.”⁴¹⁵

- (516) Meanwhile a majority of OEM respondents indicated that they often consider both Danfoss and Eaton when selecting a supplier for HSUs.⁴¹⁶ One OEM respondent noted in regard to Danfoss and Eaton that: “the range of products is quite similar and no other suppliers propose steering units system”.⁴¹⁷ A majority of distributor respondents indicated that their customers often or sometimes consider Danfoss and Eaton as suppliers for HSUs.⁴¹⁸ One distributor indicated (in relation to HPS components generally) that “Both companies are well known in industry with good brand image & quality products.”⁴¹⁹ Another distributor stated that: “A lot of Eaton and Danfoss products are very similar and generally interchangeable.”⁴²⁰ Another competitor summarises as follows: “Danfoss and Eaton dominate the hydraulic steering units market (they were both originally licensed the same patent)”.⁴²¹
- (517) As a result, it appears that the Parties are competing closely in the market for HSUs and may be each other’s closest competitors.

8.3.3.2. OEMs face important impediments in switching

- (518) OEMs face difficulties in switching suppliers.
- (519) **First**, from a non-technical point of view, the limited number of HSUs suppliers is by itself a decisive limiting factor for OEMs to switch suppliers. As explained in Section 8.3.1 for example, in the EEA, the number of suppliers alternative to the Parties is in practice limited to 2, and at global level only one competitor to the Parties has a market share above 10%. In this respect, OEMs face very limited opportunities for switching suppliers of HSUs. This difficulty is explained by one large OEM: “[p]articularly for orbital motors and steering units, switching suppliers might not be easy for technical and non-technical reasons. [...]. From a non-technical point of view, switching supplier is limited by the limited number of alternatives on the market”.⁴²²
- (520) **Second**, there are also technical and practical limitations to switching. In this respect, there is a distinction between switching during production phase or during design phase of a machine. As explained in the following, while switching is generally more difficult during production phase, barriers to switching suppliers exist also during the design phase.
- (521) During the production phase, HSUs (and more broadly HPS components) suppliers that are selected at the design stage are typically not changed for the entire production phase of the machine concerned (i.e. when the machine is under production). Therefore, once a machine is in production, OEMs seem to be reluctant to switch suppliers. This is because HPS components (and therefore HSUs) are rarely available off-the-shelf and a certain degree of customisation is often required.

⁴¹⁴ Replies to question 19 of Q4 – Phase I Questionnaire to Competitors, DocID1959.

⁴¹⁵ Reply to question 19 of Q4 – Phase I Questionnaire to Competitors, DocID1959.

⁴¹⁶ Replies to question 21 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴¹⁷ Reply to question 21 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴¹⁸ Replies to question 19 of Q3 – Phase I Questionnaire to Distributors DocID1958.

⁴¹⁹ Reply to question 19 of Q3 – Phase I Questionnaire to Distributors DocID1958.

⁴²⁰ Reply to question 65 of Q15 – Phase II Questionnaire to Distributors DocID1965.

⁴²¹ Minutes of a call with a competitor on 12.10.20, DocID2183.

⁴²² Minutes of a call with a customer on 2.6.20, DocID0680.

Therefore, once this customisation is made for a certain component supplied by a certain manufacturer, it is desirable not to switch to another supplier. Switching supplier during the production phase of a machine involves extensive redesign and a new homologation process. This requires substantial engineering work and testing capabilities. In addition, it entails significant costs and time delays.

- (522) This view is shared by a large majority of the OEMs that replied to the market investigation.⁴²³
- (523) Several OEMs stressed the extent of the necessary redesign: *“there is a significant barrier to switch suppliers during production phase because it would require extensive engineering work to adapt a different brand component into the actual application. There are seldom any “plug-and-play” components available as they have to be adapted into the complex hydraulic systems in order to get the required function.”*⁴²⁴ According to another large OEM *“generally interchangeable [sic] components do not exist in hydraulic. So in case of machine already in production is very demanding in term or timing and cost to switch supplier and it is pursued only in case of production discontinuity. In any case, based on type of parts, it will require at least 24-36months because it will be necessary to redesign the hydraulic circuit and the installation to let the alternative component to fit in the machine . then component needs to be fully tested and homologated”*.⁴²⁵
- (524) A majority of OEMs also mentioned the burdensome homologation procedure: *“[f]or hydraulic components in general, it is always difficult to change the supplier, as it has to be validated in advance”*.⁴²⁶ Another OEM cited three main factors limiting the ability to switch suppliers during design phase: *“Lead time for validation new options[,] Engineering resources availability[,] Validation costs”*.⁴²⁷
- (525) Two OEMs confirm the Commission’s assessment and summarise the main factors as follows: *It is costly to design and qualify a substitute. Material lead time disruption will also occur.*⁴²⁸ and *“[...] very difficult to change during the production phase and we do it only for significant problems”*.⁴²⁹
- (526) In addition, a large majority of the OEMs that replied to the market investigation indicated that for a machine in production they do not typically multi-source components from more than one supplier.⁴³⁰ A large majority of the OEMs that replied to the market investigation indicated that they typically have only one homologated supplier for each component of a certain machine in production.⁴³¹ Therefore, in order to start supplying from a different supplier, a new supplier would need to be homologated.
- (527) OEMs explained that it would be too expensive to homologate additional suppliers for the same component of a machine.⁴³² In particular, one of the largest customers of the Parties explained that *“it is possible to evaluate two alternatives suppliers*

⁴²³ Replies to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴²⁴ Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴²⁵ Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴²⁶ Replies to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴²⁷ Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴²⁸ Replies to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴²⁹ Replies to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³⁰ Replies to question 35 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³¹ Replies to question 34 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³² Replies to question 34.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

*(and technical solution) that can be homologated, but only one will go in production on the same machine”.*⁴³³ Other customer further explains that *“It is complicated to have several suppliers who are 100% interchangeable with each other in terms of design and performance.”*⁴³⁴ and *“due to high number of test homologation of several suppliers is usually too expensive. It is done case by case for each machine we develop.”*⁴³⁵

- (528) The above view is also shared by a large majority of distributors which have indicated that switching during the production phase only rarely happens.⁴³⁶ An overwhelming majority of distributors have indicated that there are typically barriers for customers to switch a supplier after they started producing a product as compared to the design stage.⁴³⁷
- (529) During the design phase, OEMs can also face important impediments to switching.
- (530) Indeed, OEMs seem to have a preference for continuing sourcing HSUs, and, more generally HSP components, from the same suppliers when they manufacture a new machine. There seem to be two main reasons for this. One reason is the high costs and time required for homologating new suppliers for certain components. Another reason is the fact that HPS are rarely re-designed from scratch, but rather derived from previous machine models.⁴³⁸ Therefore, in this respect, there is a tendency for OEMs to carry-over HPS, and therefore each of their components, to new machine models.
- (531) As explained by one OEM *“In any kind of products and solutions within the field of hydraulics it is highly difficult to enter new markets. The markets resp. customers are very conservative and it needs a lot of time and ressources [sic] to switch the customer from supplier/competitor A to supplier B.”*⁴³⁹
- (532) One OEM also highlighted safety aspects as an important barrier to switch supplier, which ultimately results in a preference to source HPS components, and in particular HSUs, from the same supplier also for new machines: *“[...] switching suppliers might also be difficult due to safety standards and certifications. Although steering unit suppliers provide their products with the related safety certifications, the OEM is ultimately responsible for the safety of the machine. In this respect, an OEM needs to follow a number of safety design standards and processes for the entire hydraulic system and needs to ultimately obtain the TÜV certification. Switching an hydraulic component might require additional work for the TÜV certification”.*⁴⁴⁰
- (533) When asked any particular barrier to switch suppliers during the design phase customers explain that⁴⁴¹ it is *“conceivable in theory, but in practice the effort for a parallel homologation and testing is too high”.*⁴⁴² Another OEM further explains: *“During the design phase, a supplier is selected and validated. A change to a*

⁴³³ Reply to question 36.2 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³⁴ Reply to question 21.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³⁵ Replies to question 21.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³⁶ Replies to question 48 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁴³⁷ Replies to question 49 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁴³⁸ Replies to question 36.2 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴³⁹ Reply to question 28.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁴⁴⁰ Minutes of a call with a customer 4.06.2020, DocID1985.

⁴⁴¹ Replies to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴⁴² Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

supplier late in the design phase is expensive and costly to the launch of the machine into production.”⁴⁴³

- (534) **Finally**, the Notifying Party contends that OEMs regularly switch suppliers of HSUs.⁴⁴⁴ To support this statement, the Notifying Party submits examples of OEMs having switched supplier in the design or production phase in the past.⁴⁴⁵
- (535) In this regard, the Commission notes that the Notifying Party only submitted four examples of such switching, one of which dated back to 2011 (as a matter of comparison, the Commission reached out to more than 150 OEMs in the course of its investigation). Moreover, neither one of the four examples provided by the Parties occurred in the EU.
- (536) The Commission moreover finds that although switching can happen, as reported by OEMs in the context of the market investigation,⁴⁴⁶ this largely appears to be driven by the fact that OEMs had to do this due to unforeseen circumstances, and particularly technical issues.
- (537) As explained by one OEM: *“During development it was made aware the selected supplier was not fully capable of the needed requirements.”* The OEM further explains, about the process of selecting an alternative supplier *“Timing is always critical, as well as increased expenses. This takes an exceptional amount of effort to complete.”*⁴⁴⁷
- (538) Other OEMs also mention *“quality and design problem”, “technical problem”, “performance”, “technical problems during the prototype phase”*⁴⁴⁸ and the fact that the *“part did not meet the technical requirements of the application.”* Or *“the original component didn’t fit into the intended space.”* as reasons why they switched supplier during the production or design phase.⁴⁴⁹
- (539) Moreover, when asked about the difficulty of switching supplier for HSUs at the design phase or at the production phase, a large majority of OEMs either indicated that switching is possible with some costs and/or timely setback that switching is difficult with considerable financial and/or timely setback or that switching is not possible at all.⁴⁵⁰

8.3.3.3. Competitors are not a sufficient constraint to the Parties’ dominant position post-Transaction

- (540) The in-depth market investigation suggests that competitors will not be a sufficient constraint on the Parties’ dominant position post-Transaction.
- (541) **First**, contrary to the Notifying Party’s claims, the results of the market investigation do not suggest that there are other credible competitors to the Parties apart from

⁴⁴³ Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁴⁴⁴ Replies to the Article 6(1)(c) Decision, paragraph 147.

⁴⁴⁵ Replies to the Article 6(1)(c) Decision, paragraph 151.

⁴⁴⁶ Replies to questions 45 and 46 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁴⁷ Reply to question 45.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁴⁸ Courtesy translation from French of *« problèmes techniques rencontrés en phase prototype »*, Reply to question 45.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁴⁹ Replies to questions 45.1 and 46.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁵⁰ Replies to question 48.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

Ognibene, and potentially M+S Hydraulic, in the EEA. Therefore, there will only be one or at most two real competitors to the combined entity post-Transaction. This is indicated by the market shares produced by the Commission’s market reconstruction exercise as detailed in Section 8.3.1; where only Ognibene (with a [5-10]% share in value and [10-20]% share in volume) has a comparable market share to Eaton’s [10-20]% share in value and [10-20]% in volume. The next – smaller – player, M+S Hydraulic has a minimal share of [0-5]% in both value and volume according to the market reconstruction exercise therefore its market strength is questionable. Furthermore, the responses to the market investigation indicate that the number of suppliers is insufficient post-Transaction to prevent the combined entity from exercising market power

- (542) A large majority of OEM respondents indicated they had not sourced HSUs from any other supplier apart from Danfoss, Eaton, Ognibene or M+S Hydraulic in the past five years.⁴⁵¹ Of those who expressed a view, a majority of OEM respondents also indicated that they do not expect to purchase HSUs from other suppliers, apart from those cited above in the next five years.⁴⁵² Competitor respondents also did not cite any other players as having established a presence in the EEA in the past five years.⁴⁵³ One competitor described the market situation as follows: *“The largest companies in hydraulic steering in the EEA have been Danfoss, M+S, Eaton, and Ognibene. M+S and Ognibene are smaller companies that only offer a limited product change. They have focused on their specialised expertise to win business. Danfoss and Eaton can sell a full system approach, so they have done that. Danfoss and Eaton are the largest in the steering market in the EEA with 80% combined market share in Hydraulic steering.”*⁴⁵⁴
- (543) The Parties’ internal documents also indicate that there are no other real competitors.⁴⁵⁵ Figure 56 above suggests that Eaton [content of internal documents].⁴⁵⁶ A similar picture is conveyed by Danfoss’ internal documents, such as by Figure 55 below, which suggests that Danfoss, [content of internal documents].

Figure 55 – Danfoss internal document - BU Steering journey 2023 - Global competitor landscape

[...]

Source: M.9820 – RFI PN 1 – Annex C.2_1

- (544) **Second**, Ognibene and M+S Hydraulic are insufficient by themselves to constrain the merged entity post-Transaction and the Chinese suppliers are not a competitive constraint either.

⁴⁵¹ Replies to question 22 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁵² Replies to question 22 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁵³ Replies to question 47 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁵⁴ Reply to question 47 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁵⁵ See for example, Danfoss internal document – ‘*Steering OSPS launch strategy*’, ID001055-035251, RFI020058479, Eaton internal document, Reply to RFI PN 4 – Annex_B.5_3, and Danfoss internal document, ‘*Steering and eSteering Bourbon assessment*’, DocID1053-1187, RFI020388834.

⁴⁵⁶ Eaton internal document, Reply to RFI PN 4 – Annex_B.5_3.

- (545) The Notifying Party has argued that Ognibene and M+S Hydraulic will be able to expand their output in response to any attempted price increase by the combined entity post-Transaction.⁴⁵⁷ However the argument does not appear to have merits for a number of reasons.
- (546) From the outset, capacity itself is not a sufficient indicator of constraint in differentiated product markets.⁴⁵⁸ As outlined in Section 6.3.3.4 the product market for HSUs has elements of differentiation, *inter alia*, brand positioning, product quality, product portfolio, geographic focus, as well as different sales channels (direct OEMs and distributor customers). It appears therefore that an examination of capacity only is not suitable.
- (547) However, if capacity is to be taken into account, it is not clear that these competitors have excess capacity as suggested by the Notifying Party. One competitor notes that: “*High production demand is difficult to achieve by small manufacturers, due to capacity constraints. Small suppliers....can compete effectively in terms of product quality and innovation, they would need more capacity to be more competitive for OEM larger contracts.*”⁴⁵⁹ Another suggests that “*capacity*” is one of the reasons that smaller players are unlikely to win business from larger players in HSUs; moreover the fact that market shares in HSUs have remained stable in the EEA in the last three years is also in view of the competitor “*because of capacity and reference, it is a product, which is not easy to take decision to change*”.⁴⁶⁰
- (548) Even if these competitors are not capacity constrained, as the Notifying Party suggests, the differentiated nature of the product market means that these competitors are still unlikely to restrain the combined entity from exercising market power post-Transaction.
- (549) As indicated in section 8.3.3.1, the in-depth market investigation suggests that there are distinctions in the product offerings and the sales strategies between Danfoss and Eaton on the one hand and Ognibene and M+S Hydraulic on the other hand; moreover Danfoss and Eaton appear to be competing more closely with each other than with the other two market participants. The differentiation between the market players and closeness of competition between Danfoss and Eaton makes it unlikely that all of the extra demand becomes contestable in the event of a price increase by the combined entity. This is for a number of reasons:
- (a) Some OEMs prefer to have a supplier which offers the complete hydraulics packages. Danfoss and Eaton can offer a full hydraulic package. Ognibene and M+S Hydraulic cannot offer the entire hydraulic solution.
 - (b) M+S Hydraulic products are perceived as being of lower quality as compared to Danfoss and Eaton, and are not acceptable for many OEMs.
 - (c) Post-Transaction, Danfoss and Eaton will also hold important patents which are not available to other players. Danfoss has already acquired a number of patents through its acquisition of HNF, and this will be amplified by the

⁴⁵⁷ Form CO, Sections 6 to 9 on Steering, paragraphs 182-184; Steering Advocacy Paper, paragraph 69 et seqq.

⁴⁵⁸ The Horizontal Merger Guidelines note that capacity constraints are more likely to be important when goods are relatively homogenous.

⁴⁵⁹ Reply to question 45.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁶⁰ Reply to question 45 and 49 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

Transaction.⁴⁶¹ Any competitor, engaging in product development in relation to HSUs post-Transaction, may risk infringing Danfoss' patents.

(550) The results of the market investigation are also clear that the products of Chinese suppliers are not perceived to be of the same quality, in terms of performance, as Danfoss or Eaton's products; which is also demonstrated by the lack of market presence of companies like Zhenjiang and Sinjin Precision in the EEA to date. A majority of OEM respondents to the market investigation who expressed a view indicated that the HSUs of Chinese suppliers were generally inferior in terms of product quality and suitability to meet their needs.⁴⁶²

(551) The Commission's conclusion is therefore that competitors would not offer a sufficient competitive constraint on the exercise of market power by the combined entity post-Transaction.

8.3.3.4. Competitive pressure from other steering solutions, such as electric steering, is limited

(552) The Notifying Party argues that even if they are not considered part of the same market as HSUs, new technologies, such as electric steering and electrohydraulic steering exert competitive pressure on producers of HSUs, since HSUs are becoming an 'outdated' technology and as such OEMs expect lower prices for this older technology, given their ability to switch to the newer technologies.⁴⁶³

(553) In respect to electric steering, for the reasons enumerated in Section 6.3.3.2 the Commission does not consider electric steering to be part of the market for HSU, *inter alia*, due to the price differences between full electric and hydraulic steering, the difficulties associated with switching at the design and the production phase to this technology, and the technical limitations which mean that electrification is not possible in the short term, nor perhaps even in the long-term, for all machinery.

(554) For similar reasons the Commission finds, contrary to what is alleged by the Notifying Party, that there is little competitive pressure arising on HSU producers as a result of electric steering solutions, which could be considered to amount to a competitive constraint.

(555) **First**, as can be recalled from Section 6.3.3.2., a large majority of the OEMs that responded to the market investigation indicated that substitution of a hydraulic steering system with a fully electric steering system is not a cost-effective option.⁴⁶⁴ In addition, a number of OEMs explained that electric steering systems have technical, economical and customer acceptance limitations when compared with hydraulic steering systems.⁴⁶⁵

(556) **Second**, as has been explained in Section 6.3.3.2, although there is a market trend towards electrification, this is not seen as a trend that will materialise for all machinery in the near future and may not even be available for all applications in the long-term. One OEM customer explained that: "*Electrification in particular could potentially lead to replace some traditional hydraulic components with electric ones. However, for agriculture and construction machines, it is not expected that in the*

⁴⁶¹ Reply to question 36 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁶² Replies to question 29 of Q1 – Phase I Questionnaire to Direct OEMs, DocID1956.

⁴⁶³ Steering Advocacy Paper, paragraphs 69 et seqq.

⁴⁶⁴ Replies to question 10 of Q1 – Questionnaire to direct sale OEMs, DocID1956.

⁴⁶⁵ Replies to question 10.1 of Q1 – Questionnaire to direct sale OEMs, DocID1956.

near future fully electric machines will be widely commercialised.”⁴⁶⁶ A competitor expected that it would be at least 10 years before “battery technology is sufficiently developed to be implemented in an efficient and cost competitive way.”⁴⁶⁷ Another OEM stated that: “In terms of the economic viability of electric machines, the Company feels that it is too early to comment because Electrification is evolving on Construction machines industry and definitely it will take few more years to produce them in high volumes and therefore it will take some years for the electric machines to be commercially competitive in the market”.⁴⁶⁸

- (557) **Third**, the applications for which conversion to electric technology is currently happening are limited. The market investigation does suggest that electric steering can be a cost effective alternative for certain light-weight, small machines or machines which require less speed⁴⁶⁹. One competitor cited: “*Small fork lifts, minidumpers or small trucks*”⁴⁷⁰ as examples; another cited “*Machines which require less than < 5 hp (with current tractors)*”. However, as set out in Section 6.3.3.2, at least in terms of current conversion to electric technology, the transition is limited to very few machines, which form a minimal part of the overall scope of applications.
- (558) **Fourth**, HSU suppliers are not losing sales to electric steering. The absence of large scale transition to electric technology is confirmed by a lack of impact on HSU sales in the market. The market investigation suggests that current HSU producers are not losing sales due to OEMs switching to electric steering. Indeed, when asked to cite instances of loss of sales due to customers switching to electric steering, no competitor indicated this was the case.⁴⁷¹ One competitor noted: “*In the past, we had not lost any steering unit sales to customers because they decided to switch to electric steering. Most of the market is still using manually operated steering valves. Some of the OEMs have talked about going to electrohydraulic steering, but have not implemented it.*”⁴⁷²
- (559) **Fifth**, data provided by the Parties also suggest that the transition to electric steering has occurred for a minority of applications so far and is not expected to increase dramatically in the next five years. Figure 56 below shows that sales of electric steering are only expected to increase by [...] % globally between 2020 and 2025.

Figure 56 – Steering Technologies Used in Off-Road Application 2006-2030, Global (Relative Share)

[...]

Source: Steering Advocacy Paper, paragraph 18.

- (560) In respect to electrohydraulic steering, as set out in in Section 6.3.3.1, the Commission considers that ESVs form a separate market from HSUs and explains that HSU is required in a traditional electrohydraulic steering system. For the

⁴⁶⁶ Minutes of call with a customer, 2.6.2020, DocID0680.

⁴⁶⁷ Minutes of call with a customer, 5.6.2020, DocID0504.

⁴⁶⁸ Minutes of call with a call with a customer, 12.11.2020, DocID2207.

⁴⁶⁹ Reply to question 41 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁷⁰ Reply to question 41 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁷¹ Replies to question 43 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁷² Reply to question 43 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

following reason, the Commission considers that electrohydraulic steering (being it traditional i.e. embedding both an HSU and an ESV, or Steer-by-wire i.e. not comprising HSUs) is a competitive constraint on HSU.

- (561) **First**, the majority of electrohydraulic steering to date still requires an HSU component. This can be seen from Figure 56 above where electrohydraulic steering with an HSU, termed as “Traditional Electrohydraulic Steering”, makes up [...] of all steering technologies in 2020. The Figure 56 also shows that although HSU growth is expected to decrease, it will still be the main technology globally [...], followed by “Tradition Electrohydraulic Steering” which also requires an HSU. It therefore appears that HSUs will continue to be in demand in the foreseeable future even with the advent of electrohydraulic steering.
- (562) Second, the alternative electrohydraulic technology, Steer-by-Wire, which does not require an HSU, has had limited market penetration so far. This can also be deduced from Figure 56 above, where Steer-by-Wire only accounts for [...] of overall technologies and it is suggested that it will continue to be the minority technology going forward. One competitor notes that: “*steer by wire applications will gradually migrate into the market, replacing traditional steering systems. It expects this to happen in a time frame of more than five years*”.⁴⁷³
- (563) It appears therefore that pressure from other technologies is limited and unlikely to exert a constraint on the merged entity post-Transaction to prevent price increases in HSUs post-Transaction.

8.3.3.5. Countervailing buyer power would not offset a price increase

The downstream market where OEMs operate is fragmented whereas the market for HSU is highly concentrated

- (564) In terms of market structure, the market investigation indicated that, while the Parties operate in a highly concentrated market with a limited number of competitors, their customers’ number appears to be relatively large and widely fragmented. Pursuant to the Horizontal Merger Guidelines, it is more likely that large and sophisticated customers will possess countervailing buyer power than smaller firms in a fragmented industry.⁴⁷⁴
- (565) As explained in Section 6.5.3.2, according to the estimates of the Notifying Party, in the EEA there are about 600 OEMs active in agriculture machines and about 800 OEMs active in construction machines.⁴⁷⁵
- (566) In contrast to this large number of customers, Section 8.3.1 shows that the market for HSUs in the EEA has a limited number of suppliers already pre-Transaction and that the already high degree of market concentration would further increase after the Transaction. This market structure would likely confer suppliers of HSUs a privileged position vis-à-vis their customers, due to the limited number of suppliers in competition with each other.

OEMs’ buyer power is limited, particularly for small and medium OEMs

- (567) The Notifying Party provided a number of elements that, in its view, would allegedly confer buyer power to OEMs. These include: being large and sophisticated companies capable to organise sophisticated bidding purchasing processes, having

⁴⁷³ Minutes of a call with a competitor, 12.11.2020, DocID2217.

⁴⁷⁴ Horizontal Merger Guidelines, paragraph 65.

⁴⁷⁵ Form CO Sections 6 to 9 Steering, Table 53.

important financial strength, having good knowledge of prices and costs, using “black lists” to exert competitive pressure on its suppliers, and, for small and medium OEMs, being protected by distributors acting as “gatekeepers”.⁴⁷⁶ The Commission conversely considers that while countervailing buyer power is overall limited and therefore will not be able to countervail a price increase after the Transaction, small and medium OEMs have an even lower market power.

- (568) **First**, customers of HSUs are not all large OEMs, but also smaller and medium OEMs, typically serviced through distributors. As a matter of example, the Parties’ own sales data indicate that at least some of Danfoss’ sales of HSUs are through distributors, which typically service medium and small OEMs.⁴⁷⁷ Although this does not by all means signify that all OEMs served directly by Danfoss are large and sophisticated OEMs, it nonetheless indicates that at least a portion of Danfoss’ customer base are rather small and medium OEMs.
- (569) **Second**, contrarily to what the Notifying Party claims distributors do not act as “gatekeepers” *vis-à-vis* the OEMs they service.⁴⁷⁸ Rather, they act as partners to the suppliers.
- (570) Internal documents of the Parties demonstrate that distributors through which manufacturers service smaller OEMs act as partners to the suppliers rather than acting as “gatekeepers” for the smaller OEMs. As shown in Figure 57 below, distributors are [content of internal document about role of distributors according to Danfoss].

Figure 57 – Role of distributors according to Danfoss

[...]

Source: Reply to pre-notification request for information RFI PN 5, Annex E.16_5 [emphasis added by the Commission]

- (571) This is confirmed by distributors themselves, which often referred to suppliers as “partners” in their interactions with the Commission.⁴⁷⁹ One distributor explained that it “has a product portfolio with strategic supplying partners”, and that “[w]hen we promote products and systems we always choose the best fit for the customers application. This selection considers first of all our strategic partner”, even though it would take into account a request by an OEM to select a specific product from a specific manufacturer.⁴⁸⁰ This is also the assessment of an external advisor of the Transaction, [content of internal document].

Figure 58 – Distribution channel assessment of an external advisor of Danfoss

[...]

Source: Reply to pre-notification request for information RFI PN 4, Annex B.6_1 [emphasis added by the Commission]

⁴⁷⁶ Reply to the Article 6(1)(c) Decision, paragraphs 89 to 95, and 153 to 158.

⁴⁷⁷ Form CO Section 6 to 9 For steering, Table 50.

⁴⁷⁸ Reply to the Article 6(1)(c) Decision, paragraphs 89 to 95.

⁴⁷⁹ Minutes of a call with a customer on 1.7.2020, DocID0296.

⁴⁸⁰ Reply to question 8.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

(572) **Third**, with respect to HPS components in general, although a majority of OEMs have indicated that they maintain “black lists” (or similar) of manufacturers that performed in a non-acceptable manner including unjustified attempts to increase prices, some OEMs which replied to the market investigation have also indicated that they do not keep such a list, which suggests that this is not a practice shared by the entire customer base.⁴⁸¹ A majority of distributors have also indicated that they do not maintain such “black lists”.⁴⁸²

(573) In addition, a majority of competitor respondents indicated that the possibility to being “black-listed” by a small- or medium-size OEM or by a distributor, contrary to large OEMs, is not a deterrent to increase prices.⁴⁸³

OEMs cannot offset a price increase by threatening to switch supplier

(574) OEMs cannot offset a potential price increase by threatening to switch supplier. Indeed, as explained in Section 8.3.3.2, switching supplier is very difficult and very costly for an OEM if its machine is in production phase, while for machines in the design phase, important technical and non-technical restrictions to switching exist. Therefore, the threat of switching supplier has a limited effect in attempting to offset a price increase. For the avoidance of repetition, reference is made in this regard to Section 8.3.3.2.

Past behaviour of the Parties indicates that OEMs are not able to prevent a price increase

(575) The evidence on the file indicates that already pre-Transaction, Eaton was able to increase prices in a wide array of HPS components, to the extent that OEMs cannot prevent it.

(576) Indeed, internal documents of Eaton indicate that it is capable to request and obtain price increase from customers. In July 2019 the US government introduced import tariffs from China, which impacted a wide array of HPS components including steering components.⁴⁸⁴

(577) As Figure 59 shows, while Eaton’s steering products have standard margins in excess of [...], Eaton decided to ask its customer for a price increase between [...] and [...]. Such a price increase would have generated revenues for USD [...].

Figure 59 – Eaton’s planned price increase due to US import tariffs

[...]

Source: Reply to request for information RFI 6, Annex A.1.a.3, slide 3 [emphasis added by the Commission]

(578) While the Notifying Party explained that Eaton did not manage to obtain the requested price increase with all its OEMs, Table 5 shows that to some extent all the OEMs agreed to the price increase, and that [information about the implementation of the proposed price increases].

⁴⁸¹ Replies to question 44 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁴⁸² Replies to question 42 of Q3 – Phase I Questionnaire to distributors, DocID1958.

⁴⁸³ Replies to question 43 of Q4 – Phase I Questionnaire to competitors, question 43, DocID1959.

⁴⁸⁴ Reply to post-notification request for information RFI 6 [Annex A.1.a.3, slide 2].

Table 5 – Overview of Eaton price increase request and obtained

[...]

Source: Reply to request for information RFI 9, question 12, Table 4.

- (579) An additional example of Danfoss being able to impose price increases to OEMs, related in particular to orbital motors and other components, is also provided at Section 8.5.3.8.
- (580) The Commission’s conclusion is therefore that buyer power is limited and insufficient to offset combined entity market power post-Transaction.
- 8.3.3.6. OEMs’ alleged capabilities of manufacturing HSUs is not a competitive constraint on the Parties
- (581) Based on the evidence gathered in the course of its investigation, the Commission considers that in-house production by OEMs does not constraint the Parties.
- (582) **First**, the fact that the (actual or potential) in-house production of HSUs by OEMs cannot constrain the Parties is demonstrated by the fact that such in-house production is currently close to non-existent, and is unlikely to become a prominent feature of the market.
- (583) As further explained in Section 6.2.3, in-house production of HSUs is, at the most, very marginal. All but one OEMs contacted during the market investigation indicated that they currently produce HSUs in-house.⁴⁸⁵ In addition, in-house production of HSUs is unlikely to become a prominent feature of the market, as an overwhelming majority of OEMs indicated that they do not have enough ability (e.g. know-how, technical skills, IP, etc) and incentives to start the production in-house in case of a price increase of 5-10%⁴⁸⁶.
- (584) In this respect, and for the avoidance of repetition, reference is made to Section 6.2.3.
- (585) **Second**, market participants have confirmed that such threats are typically not raised by OEMs during commercial negotiations. Indeed, when asked whether OEMs tended to raise the prospect of actual or potential in-house production in the context of commercial negotiations, a majority of competitor respondents to the market investigation replied that they did not.⁴⁸⁷ One competitor stated: *“Competition is brought up during commercial negotiations, I have not observed an OEM use vertical integration as a negotiation tactic”*; another competitor remarked: *“I have been in this market for more than 25 years. I have never had any OEMS say that they were thinking about developing and manufacturing hydraulic steering units”*.⁴⁸⁸
- (586) Based on the above evidence, the Commission concludes that in-house production by OEMs cannot be considered as acting as a competitive constraint on the merged entity post-Transaction.

⁴⁸⁵ Replies to question 9 of Q14 – Phase II Questionnaire to OEMs – Steering and other products, DocID1964.

⁴⁸⁶ Replies to question 10 of Q14 – Phase II Questionnaire to OEMs – Steering and other products; Replies to question 6 of Q1 – Phase I Questionnaire to direct sales OEMs, DocID1956.

⁴⁸⁷ Replies to question 7 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁴⁸⁸ Replies to question 7 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

8.3.3.7. Barriers to entry are high and potentially expanding smaller suppliers, as well as new market entrants, will not be a significant constraint to the merged entity

(587) The present section demonstrates that: it takes a long time and is very challenging to enter the market for the supply of HSUs in the EEA as there are high barriers both in terms of required technical know-how, expertise and R&D (A.) and in terms of certification processes by authorities and validation and testing processes of OEMs (B.). Moreover, there are further barriers to entry in relation to (C.) the economies of scale as well as in relation to (D.) the breadth of portfolio and variety of configuration, and (E.) the sales and support system expected by customers. Further (F.) strong brand recognition and preference for mature products are significant barriers to enter the market for the supply of HSUs. Additionally, (G.) there are barriers to entry resulting from the market being very mature. (H.) Overall, all of the barriers identified before also lead to a significant entry barrier in terms of financial investments and resources required. In line with this, (I.) the Commission did neither identify recent market entries in the past five years nor foreseeable market entries in the foreseeable future. Finally, (J.) Chinese manufacturers do not appear to be a significant future constraint to the Parties in the foreseeable future.

(A.) Barriers to entry resulting from required technical know-how and expertise

(588) The Commission finds that it takes a long time and is extremely difficult and challenging for a supplier to bring HSUs onto the market as there are high barriers in terms of the required development, know-how, expertise and R&D.

(589) The market investigation clearly showed that the manufacturing of HSUs, requires very advanced skills and technical capabilities (e.g. industrial know-how and IP), which are difficult to acquire and make it very challenging to enter the markets for HSUs both in terms of time and investment into R&D and acquiring know-how for the production. This was confirmed by a large majority of the Parties' competitors and a majority of direct OEMs.⁴⁸⁹ When asked to what extent a new entrant in HSUs could recoup its initial investment a majority of competitors that expressed a view considered that the investment would not be recouped within a reasonable amount of time.⁴⁹⁰ One competitor commented: "*In general it is difficult to enter the hydraulics market as a new player. It is a complex technolog[y] and also from the manufacturing know how it is challenging for new players to enter the market.*"⁴⁹¹ An OEM mentioned that "*in general, it is very complicated to enter the hydraulic market because the knowledge and skills are very specific and are generally well kept by the manufacturers. (...)*"⁴⁹² Another competitor stated: "*[HSUs, electro-hydraulic steering units and steer-by-wire solutions and electric steering units] require big knowledge on both design and production.*"⁴⁹³ Asked what are the most competitive strengths of a manufacturer of HSU for successfully entering the hydraulic component market, similarly, many OEMs mentioned technical know-how, experience and competence as a key factor.⁴⁹⁴

⁴⁸⁹ Replies to questions 28 of Q4 – Phase I Questionnaire to competitors, DocID1959; replies to question 22 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁴⁹⁰ Replies to question 30 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁴⁹¹ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁴⁹² Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁴⁹³ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁴⁹⁴ Replies to question 55.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

- (590) Consequently, a large majority of market participants who expressed a clear view said that for a manufacturer of another HPS component it would take about three to five years or more than five years to start producing HSUs.⁴⁹⁵ By way of example, a manufacturer explains in relation to Chinese steering unit manufacturers: ‘(...) *These manufacturers tried to copy the products used in Europe but the lack of expertise in metallurgical properties lead to a highly reduced lifetime. Machines produced with such components target the Asian market with very limited warranty (usually 1 to 2 years) and failure is expected from customers. (...)*’⁴⁹⁶

(B.) Barriers to entry resulting from certification and validation processes

- (591) The Commission finds that it takes a long time and extremely difficult and challenging for a supplier to bring HSUs onto the market as there are high barriers in terms of certification processes by authorities and in terms of validation and testing processes of OEMs.
- (592) **First**, several market participants reported that for HSUs safety standard related certification/homologation processes constitute an additional barrier to entry and would further delay market entry.⁴⁹⁷ This is supported by several market participants reported that for HSUs safety standard related certification/homologation processes constitute an additional barrier to entry and would further delay market entry.⁴⁹⁸ An OEM noted with regard to HSUs: “*There are many regions, including the EU in particular, which require certain certifications and/or homologations as a requisite for entry into those markets. These are also burdens on the supplier and OEM for entry.*”⁴⁹⁹ OEMs have to certify their machines. As discussed in Section 7.4.3 above, these processes relate to safety requirements and standards, inter alia set out in EU regulations and directives, such as the Machine Directive. The Machine Directive applies to all vehicles built in or shipped to Europe. OEMs must perform and document a hazard and risk analysis for all vehicle functions according to, for example, ISO 13849 or ISO 25119. The outcome of the analysis is the AgPLr (Required Agricultural Performance Level) rating, which is used to identify the minimum safety requirements for each vehicle function. The Commission finds the time and cost needed for this certification/homologation time to be significant. An OEM noted that: “*For manufacturers of steering systems, certification is a complex process.*”⁵⁰⁰ One competitor noted in this regard: “*OEM has to homologate the vehicle for public road and for field application. Homologation takes very longtime (average 2 years) and it’s expensive.*”⁵⁰¹ As this overlaps with further timely and costly processes on the side of OEMs, the costs and time delay caused by certification/homologation are further included and discussed in the following recitals.

⁴⁹⁵ Replies to question 53 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁹⁶ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁴⁹⁷ Replies to questions 54.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁹⁸ Replies to questions 54.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁴⁹⁹ Reply to question 54.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰⁰ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵⁰¹ Reply to question 53.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962;

- (593) **Second**, the certification/homologation processes described and discussed above in recital (592) overlap with the overall redesigning, validation and testing processes needed on the side of the OEMs. These relate to regulatory certification as well as company related design, testing and validation alike. The Commission finds that the testing and validation processes on the side of the OEMs are costly and take time, thereby, significantly delaying market entry for the supply of an HSU and making OEMs more reluctant to switch to a new HSU on the market. In addition, in case the HPS component is not fully substitutable - as frequently is the case – the OEM needs to re-design the machine, which leads to further significant costs for OEMs, making switching even more unlikely, as well as further delaying the market entry:
- (594) **In the first place**, market participants confirm that the re-design of machines, in case switching is not possible, as well as validation and testing processes of OEMs to approve a new HSU are costly and take several years. Among several further similar comments, OEMs mentioned the following barriers to approving a new HSU: “*long testing and implementation (construction phase*”, “*the re-design of the system and all the consequences (validation, test,..)*”; “*R&D costs and lead time for new design*” and “*Regarding Steering components a new approval is necessary (time, Costs)*”.⁵⁰² Several market participants reported that the testing process for a new HSU alone would take about 18 months to several years. One large European OEM commented in this regard that barriers to approving a new supplier are: “[...] *(E)ngineering resources, validation testing, cost associated and time required consequently. This can be from 18 Month to 5 years overall depending on the complexity of what needs to be tested.*”⁵⁰³ Another European OEM stated: “[...] *validation time often lasts between 1 and 3 years.*”⁵⁰⁴ A further European OEM noted: “*the approval process for new hydraulic manufactures is very long (years)*”⁵⁰⁵ and “[...] *normally years are needed to introduce a new hydraulic components manufacturer.*”⁵⁰⁶
- (595) **In the second place, consequently**, a non-negligible number of OEMs who responded in the market investigation said that they were reluctant to source HPS components from new suppliers because of these timely and financial efforts for the required tests and validation processes and, as the case may be, re-design of the relevant machines.⁵⁰⁷ A large majority of OEMs who expressed a view in the market investigation said that this is a relevant factor that makes market entry more difficult.⁵⁰⁸

(C.) Barriers to entry in relations to economies of scale

- (596) Moreover, the market investigation showed that economies of scale constitute a relevant barrier to entry to supply HSUs. The Commission found that in order to

⁵⁰² Replies to question 47 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰³ Reply to question 47.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰⁴ Reply to question 47.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰⁵ Reply to question 49.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰⁶ Reply to question 49.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰⁷ Replies to questions 49 and 49.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁰⁸ Replies to question 49.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

successfully compete with the Parties, comparable economies of scale are an important factor for successfully competing with the Parties in the supply of HSUs. Asked what are the most competitive strengths of a manufacturer of HSU for successfully entering the hydraulic component market, besides quality, the competitive strengths most often mentioned by OEMs was a competitive price/cheap production costs.⁵⁰⁹ The relevance of economies of scale in particular in relation to HSUs is highlighted by a European OEM: “*Cost is key for this "entry level component"*”⁵¹⁰.

- (597) One competitor noted: “*(...) cost effective production can only be realised for high quantities. So it will be difficult for newcomers.*”⁵¹¹ Another competitor stated: “*Volumes are very important for sustaining investments while it is very difficult getting those volumes from OEMs.*”⁵¹² Further, an OEM explains “*Quite mature hydraulic products produced in large scale and with high demands on production setup and know how on control - electric/digital and hydraulic makes steering valves quite complicated for a new starter.*”⁵¹³
- (598) Supporting this, cheap production costs are among the frequently mentioned competitive strengths of Danfoss and Eaton mentioned by OEMs in the market investigation.⁵¹⁴

(D.) Barriers to entry in relation to product portfolios

- (599) Further, the market investigation showed that a need for a certain breadth of portfolio and variety of configurations constitute a relevant barrier to entry to supply HSUs. The Commission finds that the established strong players in the markets for the supply of HSUs have a broad product portfolio and offer a variety of configurations and customisation, which many customers demand and which make it very difficult to successfully compete with them.
- (600) First, a wide product range is one of the most frequently mentioned competitive strengths of Danfoss and Eaton mentioned by competitors and OEMs alike in the market investigation, when asked which strengths these Parties had, which allowed them to be successful on the EEA market.⁵¹⁵ Second, the internal documents of the Parties confirm, that a broad portfolio is significant, see for instance Figure 60 below, which [...].

Figure 60 – Limited portfolio and weak reputation as weaknesses

[...]

⁵⁰⁹ Replies to question 55.1 and 55.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵¹⁰ Reply to question 55.1 and 55.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵¹¹ Replies to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵¹² Replies to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵¹³ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵¹⁴ Replies to questions 89.1 and 90 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to questions 55.1 and 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵¹⁵ Replies to question 89.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to questions 55.1 and 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

(E.) Barriers to entry related to a local footprint in sales and distribution as well as in technical and customer support

- (601) Further, a market participant indicated that a certain size of customer support network is important to compete with the Parties in particular as regards larger OEMs. It reported that companies like Danfoss or Rexroth have one or more employees who will work only on the relationship with a single larger OEM like, for instance JCB, in order to “*make them happy*”. Smaller suppliers were just not able to offer this kind of customer support expected by larger OEMs.⁵¹⁶
- (602) This is supported by the responses of market participants in the market investigation in relation to HSUs. Technical and customer support and service and the sales network are one of the competitive strengths of Danfoss and Eaton more frequently mentioned by OEMs.⁵¹⁷ Moreover, a manufacturer stressed: “[*Among other factors*] sales&service network [*is*] crucial for the suc[*c*]ess in the market”.⁵¹⁸ Another manufacturer explains the reason for which it considers that Chinese manufacturers sell limited quantities of steering units outside China: “*Moreover, at this point, these manufacturers do not have marketing and sales in EU and US. (...)*”⁵¹⁹
- (603) Further, this is confirmed by several internal documents of the Parties, for whom a regional footprint/regional access are of key importance, often being one of the key strategic rationales in acquisitions (see above, Section 7.4.5). As shown in Section 7.4.5, illustrated by example of [confidential market data], a lack of local footprint/regional access negatively affect market shares and sales.

(F.) Barriers to entry relating to brand recognition

- (604) Further, the market investigation showed that, as is typical for non-commodity markets, brand recognition and past references are important and represent significant barriers to entry for all HPS components and particularly for HSUs.
- (605) The high significance of branding for the supply of HPS components such as HSUs was confirmed by several of the Parties’ internal documents, see for instance Figure 61 above, which [business strategy].
- (606) This finding was supported by the results of the Commission’s market investigation. When asked, assuming that a certain new manufacturer is capable of producing HSUs at the required technical and quality level required by its customers, to what extent brand recognition and previous references might represent a barrier to entry, a large majority of competitors that expressed a view considered that brand recognition and previous references are important to their customers and represent important barriers to entry in relation to HSUs.⁵²⁰ One competitor stated: “*In any kind of products and solutions within the field of hydraulics it is highly difficult to enter new markets. The markets resp. customers are very conservative and it needs a lot of time and ressources [sic] to switch the customer from supplier/competitor A to supplier*

⁵¹⁶ Minutes of a call with a customer, 11.12.2020, DocID2220. This comment was made in a discussion about pumps but the description of the customer support network was a general one, not specific to pumps and relevant for all HPS components.

⁵¹⁷ Replies to question 55.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵¹⁸ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵¹⁹ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁵²⁰ Replies to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

B."⁵²¹ One competitor links the difficulties of a potential market entrant in recouping the initial investment for manufacturing HPS components with brand recognition: “[t]he reason that a [sic] it would be difficult to recoup within a reasonable amount of time is that it will take a long time until a new entrant in the market has a reputation and customer relationships [sic] that are necessary to be commercially suc[c]essful. The market is very traditional and the established [sic] companies all have a reputation and experience in manufacturing [sic] and marketing of hydraulic [sic] products”⁵²². The same competitor further explains: “[t]he hydraulics market is a very traditional [sic] as the reliability and the lifetime of the hydraulic components are crucial for the performance of most machines. Experience in design and manufacturing is very important as the power density of hydraulics units is high. Own manufacturing expertise as well as an experience supply base are crucial for suc[c]ess. for a new player in the market it will be extremely difficult for a newcomer to be suc[c]essful in this market. Brand recognition is important to the customers as reliability as well as sales&service network are crucial for the suc[c]ess in the market”.⁵²³ Another competitor explains: ‘(...) Even with large investments in sales, marketing and distribution it will be very difficult for [Chinese] suppliers to enter the European or North American markets as their brand recognition is missing’.⁵²⁴

- (607) In line with this, competitors identified “branding”, “brand strength”, a “good reputation”, “customer acceptance”, being “well established and well known hydraulic supplier”, having a “very strong and historic european brand” and a “long tradition in production” most frequently competitive strengths of both Danfoss, which has allowed it to become such a strong player in the EEA, as well as of Eaton, which has allowed it to successfully enter the EEA.⁵²⁵
- (608) However, the Commission notes that one large competitor indicated that brand recognition is not as relevant in the medium value/price segment⁵²⁶ of the HPS component markets, where there is more price competition (described by market participants and the Parties alternatively as “Tier 2” or “Good enough” or “Just right”, see for instance Figure 61 below) compared to the higher priced end of the market (alternatively described as “Tier 1” or “Premium” category by market participants). The competitor explains: “Brand recognition and previous references are import [sic] to our customers and represent important barriers to entry. Nevertheless, entering companies’ e.g. Chinese companies manage to enter the hydraulic component market over a period of several years based on low cost basis where brand recognition is not too important.”⁵²⁷

Figure 61 – Steering – Tier 1 and Tier 2

[...]

⁵²¹ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵²² Reply to question 30.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵²³ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵²⁴ Minutes of a call with a competitor on 05.06.2020, DocID0504.

⁵²⁵ Replies to questions 89.1 and 90 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁵²⁶ See in this regard the finding of a differentiated product market, recitals (153) and (159).

⁵²⁷ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

- (609) Further, the finding that branding is a relevant entry barrier to the supply of HSUs in the EEA is supported by OEMs' responses to the market investigation. One OEM stated in this regard: "*OEM usually trust in experienced suppliers more than in new ones.*"⁵²⁸ Consequently, branding, "*well known*" components and the "*long experience in the market*" are one of the more frequently mentioned competitive strengths of Danfoss by OEMs, which have made it such a strong player in the EEA.⁵²⁹

(G.) Barriers to entry related to financial investments and resources

- (610) The Commission finds that all of the barriers to entry identified above lead to another significant barrier in terms of the financial investments required. Acquiring expertise and R&D, setting up production in terms of machines and personnel, which is large enough to achieve the necessary economies of scale, offering a large enough product portfolio and variety of configurations as well as establishing the necessary customer and technical support all require huge investments.
- (611) In this regard, a competitor noted that HSUs are "*expensive to manufacture*"⁵³⁰ and another competitor reported that "*Pure hydraulic business is very capital intensive and requires years of development before starting a production*"⁵³¹. Another competitor stated: "*(...) Machinery is expensive.(...)*"⁵³². An OEM explained: "*investments are generally very important in human resources and machines and the ROI is low.*"⁵³³
- (612) Asked to provide an estimate of the investment and time required for setting-up a manufacturing for HSUs, while estimates varied, most OEMs who provided numbers expected significant investment costs of more than EUR 10 million and 3 to five years to set-up the manufacturing.⁵³⁴ One competitor assessed: "*many years (>5 years), many millions of EUR, depending on the width of the product portfolio*".⁵³⁵ Another competitor added: "*investment for a manufacturing volume of 100.000 Steering units (minimum size to justify a manufacturing footprint) is estim[a]ted in the range of 40 mio €*".⁵³⁶ Similarly, another competitor estimates: "*We estimate the approximate time about 5 years and several million EUR investment (depending on product portfolio) required for a company to establish a manufacturing facility and enter the market. (...)*".⁵³⁷ Another competitor assumes: "*Euro 10 millions, 3 to 4 years.*"⁵³⁸, whereas another competitor estimates: "*3-4 years, \$15 million.*"⁵³⁹

(H.) Barriers to entry resulting from the maturity of the market

- (613) The Commission finds that the maturity of the markets for the supply of HSUs with few very strong or even dominant manufacturers with very mature products who have overcome the above identified barriers to entry such as economies of scale and

⁵²⁸ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵²⁹ Replies to question 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵³⁰ Reply to question 33 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵³¹ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵³² Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵³³ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵³⁴ Replies to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵³⁵ Reply to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵³⁶ Reply to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵³⁷ Reply to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵³⁸ Reply to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵³⁹ Reply to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

breadth of portfolio and who fiercely defend their market position, constitutes in itself another barrier to entry.

- (614) In relation to pumps, a market participant expressed the view that the already existing smaller EEA based competitors of the Parties do not have an incentive to expand and grow their portfolio and production. They indicated that it was more attractive for the existing smaller suppliers to concentrate on their respective niche, as the market was already very mature. Trying to compete with the dominant players would put them in a position to be “squashed”.⁵⁴⁰ The Commission considers that, similarly, smaller suppliers of HSUs might not have the incentive but, even if they had, it is tremendously challenging to compete with the small number of very strong and established players. It is very challenging for smaller suppliers to compete against these strong players defending their market positions. In this regard a large competitor of the Parties’ in HSUs mentioned in relation to HSUs that the market was “occupied”⁵⁴¹ and a competitor explained in relation to HSUs present on the market: “(...) *the products are mature and are competitive*”.⁵⁴² In this regard, a couple of market of market participants, when being asked what attributes/competitive strengths have made Danfoss such a strong player in the EEA market cited strengths such as “*oligopoly with Bosch-Rexroth in the mobile machinery market*”⁵⁴³ or “*market share*”.⁵⁴⁴

(I.) No recent or foreseeable relevant market entries

- (615) In line with the above findings of several significant barriers to entering the EEA markets for the supply of HSUs, the Commission found that there were neither relevant market entries in the recent past, nor are market entries likely in the foreseeable future. A potential entry of Chinese suppliers is discussed in more detail below in Section 8.3.3.7 (J.).
- (616) **First**, the Commission did not find that in recent years there were any relevant market entries in the markets for the supply of HSUs. No direct or indirect OEM reported a single market entry into the supply of HSUs in the EEA in the last five years.⁵⁴⁵ One OEM noted: “*The last decades has no new manufacturers entered the EU market as far as we know. On the contrary has a consolidation/mergers of manufacturers occurred.*”⁵⁴⁶ Similarly all but one competitor said that they had not observed an entry into the EEA markets for the supply of HSUs in the past five years.⁵⁴⁷ One competitor mentioned Zhenjiang as a recent entry in relation to HSUs. However, the Commission notes that Zhenjiang currently has a very limited turnover in the EEA with market shares of [0-5]% throughout 2017 to 2019,⁵⁴⁸ which does not yet allow to qualify it as a relevant market entry for HSUs in the EEA.

⁵⁴⁰ Minutes of a call with a customer, 11.12.2020, DocID2220. This comment was made in a discussion about pumps but the description of the competitive market dynamics was a general one, not specific to pumps and relevant for all HPS components.

⁵⁴¹ Reply to questions 33 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁴² Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁴³ Reply to question 89.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁵⁴⁴ Reply to question 89.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁵⁴⁵ Replies to questions 25.1 and 25.2 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; replies to questions 25.1 and 25.2 of Q3 – Phase I Questionnaire to distributors, DocID1958.

⁵⁴⁶ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵⁴⁷ Replies to question 34.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁴⁸ Form CO Sections 6 to 9, [Tables 10 to 15].

(617) **Second**, all but one competitor and all but one direct OEM who expressed a view in the Phase I market investigation said, they did not expect a new market entry as regards the supply of HSUs in the EEA in the next five years.⁵⁴⁹ Only the disagreeing OEM explained its view: *“the market is concentrate [sic] in few suppliers and the demands is important, I expect there are the basis to attract some BCC supplier to penetrate the European mkt.”*⁵⁵⁰

(618) Further supporting the view that no market entry should be expected in the next five years, a large majority of OEMs for steering who responded to the Phase II market investigation said that they were not aware of expansion attempts of at least one company into the manufacturing of amongst others HSUs.⁵⁵¹ Only one OEM said that they were aware of some expansion plans by existing suppliers of steering units, valves and pumps.⁵⁵²

(J.) Competitive constraints from Chinese producers at present and in the foreseeable future

(619) Relating to potential competition from Chinese suppliers in the EEA in the near future, the market investigation showed that genuine Chinese suppliers (as opposed to Western suppliers producing in China) are unlikely to become relevant players in the supply of HSUs in the EEA in the foreseeable future.

(620) In light of some comments in the Phase I market investigation indicating that competition from Chinese suppliers might be increasing in the future, the Commission investigated to what extent competition between European and Chinese suppliers for sales of HSUs in the EEA will increase in the foreseeable future. For instance, asked whether they expected a market entry into the supply of HSUs in the next five years, an OEM noted: *“(…) considering mkt evolution and the technology demand growing also the current BCC [= Best Cost Countries] countries we could forecast new opportunities in the future for several components.”*⁵⁵³

(621) The Commission found that (a.) Chinese HSUs are no constraint on the merged entity at present (b.) that an impact of China’s Industrial Policy on the markets for the supply of HSUs is possible but vague and does not seem to concern the Parties (c.) that it cannot be excluded that fast internal growth and improvements in quality might make Chinese products competitive for the EEA markets in the future, however, light of the necessary certifications, testing periods and validations processes they are unlikely to become a relevant constraint on the merged entity in the foreseeable future, (d.) that a “jump-start” through acquisitions cannot be excluded but the Commission did not find any specific indications in this direction.

(a.) Chinese suppliers of HSUs are at present no constraint on the merged entity

(622) As already discussed above in Sections 7.4.6 and 7.4.8.1 in detail, there is no relevant competition from Chinese suppliers for the sales of HSUs in the EEA at present, which appears to mainly relate to their inferior quality and technical performance.

⁵⁴⁹ Replies to question 35.1 of Q4 – Phase I Questionnaire to competitors, DocID1959; replies to question 26.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵⁵⁰ Reply to question 26.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁵⁵¹ Replies to question 50 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁵² Reply to question 50.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁵³ Reply to question 26.5 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

- (623) **First**, the limited presence is particularly clear from the limited turnover in the EEA. According to the data provided by the Notifying Party, as regards HSUs, Zhenjiang had a yearly turnover in the EEA throughout 2017 to 2019 of EUR [...], which represents a market share of [0-5]%. Other Asian producers like Ju Ning Li Ke, Sinjin Precision and ziHYD/THOTH had no sales in the EEA.⁵⁵⁴ As regards ESVs, the Parties did not indicate any sales of Asian suppliers in the EEA throughout 2017 to 2019 at all.⁵⁵⁵
- (624) **Second**, market participants indicated a significant difference in quality and performance in relation to mobile hydraulic components manufactured by Chinese suppliers. Asked about the quality of HSUs of Chinese suppliers, an overwhelming majority of distributors and OEMs said that they considered Chinese products to be low or very low in quality and would almost never consider them or only consider them in few instances.⁵⁵⁶ One distributor noted in this regard: *“Chinese products normally have other quality standards than western products. They can look the same but mechanical and volumetric efficiency are worse, normal[l]y also expected life are shorter due to lower precision and worse material.”*⁵⁵⁷ A manufacturer explains the reason for which it considers that Chinese manufacturers sell limited quantities of steering units outside China: *“[...] These manufacturers tried to copy the products used in Europe but the lack of expertise in metallurgical properties lead to a highly reduced lifetime. (...)”*⁵⁵⁸ Similarly, a distributor commented: *“Chinese products normally have other quality standards than western products. They can look the same but mechanical and volumetric efficiency are worse, normal[l]y also expected life are shorter due to lower precision and worse material.”*⁵⁵⁹
- (625) The significantly inferior quality/performance/value of Chinese products was confirmed by internal documents of the Parties, which [content of internal documents]⁵⁶⁰ [content of internal documents].
- (626) **Third and consistently**, an overwhelming majority of OEMs⁵⁶¹ and distributors⁵⁶² that replied to the market investigation stated that they have never or no more than in single instances purchased HSUs from Chinese suppliers.
- (b.) Impact of China’s Industrial Policy on supply of HSUs*
- (627) A potential impact of China’s Industrial Policy on the supply of HSUs has been discussed in Section 7.4.8.2 above. The Commission considers that, in particular, the priority sectors “agricultural machinery” could allow for support of mobile hydraulic components through the MIC 2025 initiative. However, the Commission did not find any specific evidence of any such government support in relation to HSUs in its investigation. Further, the Commission did not find any evidence in the Parties’ internal documents of concerns relating to China’s industrial policy, the MIC 2025 or other Chinese government funding in relation to the supply of HSUs in the EEA.

⁵⁵⁴ Form CO Sections 6 to 9 on steering [Tables 10 to 15].

⁵⁵⁵ Form CO Sections 6 to 9 on steering [Tables 18 to 23].

⁵⁵⁶ Replies to question 62 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 64 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁵⁵⁷ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁵⁵⁸ Minutes of a call with a competitor on 05.06.2020, DocID0504.

⁵⁵⁹ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁵⁶⁰ See in this regard the finding of a differentiated product market, recitals (153) and (159).

⁵⁶¹ Replies to question 61 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁶² Replies to question 63 of Q15 – Phase II Questionnaire to distributors, DocID1965.

(c.) *Relevant constraint in the foreseeable future through internal growth*

- (628) The Commission found in Section 7.4.8.3 above, that it cannot be excluded that some Chinese suppliers, in particular those already offering lower cost/quality/performance HSUs, might relatively quickly be able to achieve a level of product quality and technical performance, which could allow them to enter the EEA market with medium quality (“good enough”) HSUs at a competitive price level. Further, as discussed in the Section 7.4.8.3, there are indications that brand recognition might not be as high a barrier in the medium quality segment as it is in relation to the premium “Tier 1” products.
- (629) However, based on the arguments put forward in Section 7.4.8.3, the Commission finds that even if Chinese suppliers start producing competitive products which are compatible with EEA preferences in the foreseeable future and would attempt to enter the EEA market (which is not a given, considering the growth opportunities for Chinese suppliers in China and neighbouring Asian countries), in any case, they would not become a competitive constraint on the merged entity in the foreseeable future in light of the long certification/homologation, redesigning, testing and validation processes all of which delay market entry (see Sections 7.4.8.3 and 8.3.3.7 (B.)). As explained in Section 8.3.3.7 (B.), new entrants, and, therefore, also new entrants established in China, would face important barriers to entry with the results that, at best, it would take several years until their sales to the EEA can reach a level to be considered a competitive constraint to the Parties.
- (630) Furthermore, and in addition to market entrants located in the EEA, Chinese manufacturers might face additional difficulties related to their distance from the EEA. For example, several customers and distributors, when asked for barriers to market entry, responded that delivery times are relevant barriers. These disadvantages can be offset by good logistics and warehouses in the EEA, but this would require additional investments into supply chain and inventory management (see above Section 7.4.4).
- (631) These findings are broadly supported by views and expectations of competitors and distributors expressed in the Commission’s market investigation. The results of the market investigation indicate that EEA competitors and distributors do not expect Chinese suppliers to offer the required quality within the next five years. As regards HSUs, a majority of competitors who expressed a view in the market investigation considers that in the next three to five years, Chinese suppliers will generally be inferior to the Parties. As regards the ESVs, even a large majority considers that Chinese suppliers will be inferior to the Parties in the next three to five years.⁵⁶³ Of those OEMs and distributors who had purchased from Chinese suppliers a large majority said they would not purchase from them again.⁵⁶⁴ Those market participants who provided a reason for this said they had issues with quality and performance/efficiency of the components.⁵⁶⁵ Further, a large majority of distributors who took a view said that they will not consider Chinese suppliers within the next three years.⁵⁶⁶ One distributor commented in this regard: “*We deal with medium to*

⁵⁶³ Replies to question 37 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁶⁴ Replies to question 61.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 63.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁵⁶⁵ Replies to question 61.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁶⁶ Replies to question 63.3 of Q15 – Phase II Questionnaire to distributors, DocID1965.

*premium products and chinese products are not medium yet. They will come there within 5-7 years.*⁵⁶⁷

(d.) Relevant constraint in the foreseeable future through external growth

- (632) As discussed in detail in Section 7.4.8.4 above, the Commission cannot exclude that Chinese companies might try to enter the EEA market for the supply of inter alia HSUs in the foreseeable future through acquisitions. There are several past examples in neighbouring HPS component markets of this happening. The Commission therefore considers that there is a certain likelihood that this might be a viable strategy for Chinese manufacturers in relation to HSUs. However, the Commission does not have any specific indication that Chinese manufacturers might try to enter the markets for HSUs in the EEA through acquisitions of an established competitor active in this field, which would give the Chinese company a jump-start not just in relation to knowhow and expertise, but also regional access and brand recognition. Further, funding of any such foreign acquisition scenario by the Chinese Government, while it cannot be excluded, appears rather vague. In light of the fact that the vehicle related priority is focussed on “new-energy vehicles and equipment” (see Section 7.4.8.2 above), a Chinese government funded acquisition appears more likely in relation to electronic solutions. Overall, the Commission considers that this scenario, while it cannot be excluded, is too vague as to conclude that a Chinese company or companies are likely to become a constraint on the merged entity in the foreseeable future in relation to the supply of HSUs in the EEA.

(e.) Conclusion on constraints from Chinese suppliers

- (633) Overall, the Commission considers that, while it cannot be completely excluded, in light of the results of the market investigation and other evidence, Chinese companies are unlikely to become relevant constraints on the merged entity in relation to the supply of HSUs in the EEA in the foreseeable future.

(K.) Conclusion on barriers to entry for HSUs

- (634) In line with the above findings, HSUs are among the HPS components most often identified by competitors as being among the top three HPS components with the highest barriers to entry for a new manufacturer.⁵⁶⁸
- (635) In light of the findings in Section 8.3.3.7 (A.) to (J) above, the Commission concludes that there are several exceptionally high barriers to entry to supply HSUs, which prevent new entrants, or potentially expanding suppliers, from being able to constrain the merged entity post-Transaction.

8.3.3.8. The transaction is likely to result in higher prices and affect other parameters of competition

- (636) Based on the Commission’s assessment of the horizontal overlap for HSUs and the feedback received from market participants, the Transaction will likely lead to an increase in prices for HSUs in the EEA and reduce the number of alternative suppliers for OEMs. It is likely that it would also impact other parameters of competition such as quality and innovation competition.
- (637) **First**, due to combined entity’s dominant market position and the concentrated structure of the market for orbital motors, the Transaction is likely to result in higher

⁵⁶⁷ Reply to question 63.3.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁵⁶⁸ Replies to 33 of Q4 – Phase I Questionnaire to competitors, DocID1959.

prices and reduced number of alternative suppliers. The Transaction would lead to the combination of two close competitors for HSUs in the EEA with a very high combined market share well above [50-60]% (in value above [70-80]%). The market for HSUs is highly concentrated and the Parties would be left with at most two meaningful competitor post-Transaction. It can be assumed that this position, market structure and lack of competitive constraints will allow the merged entity to impose or generate significant price increases for HSUs in the EEA.

- (638) **Second**, already pre-Transaction Danfoss enjoys a leading, possibly dominant position and significant pricing power, which will only increase as a result of the Transaction. As explained in Section 8.3.1, Danfoss is already the market leader in the EEA, being the largest producer of HSUs in the EEA in terms of sales in value and volume. It describes itself in one document as: [content of internal documents].⁵⁶⁹ This position allows Danfoss to charge comparatively high prices for its HSUs and to generate average contribution margins for HSUs in excess of [...]%.⁵⁷⁰ By adding Eaton, a close and important competitor, Danfoss would face even less competitive restraints and expand its pricing power further.
- (639) **Third**, a number of market participants indicated their specific concern about the impact of the Transaction on the HSUs market. Market participants express the view that the Transaction may lead to (i) a reduction of price, quality and innovation competition, and (ii) the ability of Danfoss to operate independently on the market due to its dominant position.
- (640) A majority of OEM customer and competitor respondents who expressed a view indicated that they expect the Transaction to lead to price increases in HSUs.⁵⁷¹ A number of respondents refer to the combined entity's dominance or even 'monopoly position' post-transaction. One OEM indicated that: "*The CONCERN we foresee is that this acquisition will give opportunity to Danfoss to enjoy a dominant position in the STEERING UNITS market because the other suppliers in the market are small and are in the verge of developing themselves to capture/enhance market share.*"⁵⁷² The same OEM also stated: "*Being customers they worry about the impact that Danfoss may increase prices after acquiring Eaton.*"⁵⁷³ Another OEM stated that: "*Eaton and Danfoss are the two largest providers of HMUs for our company, and we are not aware of a competitive alternate supplier to replace them both.*"⁵⁷⁴ Another OEM respondent conveyed that "[t] he merger between Danfoss and Eaton must be stopped. As a result, there is almost a monopoly in the steering sector. As a vehicle manufacturer, you have almost no choice when it comes to high-quality steering. The use of Chinese products is out of the question for us."⁵⁷⁵ A competitor stated that:

⁵⁶⁹ Danfoss internal document, "*BU Steering at a glance*", DocID1057-03207, RFI020064229, slide 2.

⁵⁷⁰ See Danfoss internal document, "*BU Portfolio Review*", DocID001071-00044, RFI 9, Annex_A,8_4, slide 8.

⁵⁷¹ Replies to question 27 of Q14 – Phase II Questionnaire to OEMS – Steering and other products, DocID1964.

⁵⁷² Reply to question 63 of Q14 – Phase II Questionnaire to OEMS – Steering and other products, DocID1964.

⁵⁷³ Minutes of a call with an OEM, 12.11.2020, DocID2207.

⁵⁷⁴ Reply to question 63 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁷⁵ Reply to question 63 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964. Courtesy translation from German: "*Der Zusammenschluß von Danfos und Eaton muss unbedingt unterbunden werden. Auf dem Lenkungssektor gibt es dadurch fast schon ein Monopol. Als Fahrzeughersteller hat man bei qualitativ hochwertigen Lenkungen fast keine Auswahl mehr. Bei uns kommt der Einsatz von Chinesischen Produkten nicht in Frage.*"

*“Danfoss is gradually acquiring a near monopoly position in the field of...steering units, mostly in North America, but also in Europe....Thus, the Company is concerned that after the transaction Danfoss will become even more dominant in the field of steering systems.”*⁵⁷⁶

- (641) A number of respondents also expressed concerns about the impact of the Transaction on quality/innovation competition. An OEM stated that *“It can be assumed Danfoss will try to market its own products and reduce the portfolio, as it was done with the acquisition of HNF.”*⁵⁷⁷ A competitor also mentioned the example of the HNF acquisition as a precursor to what may happen to innovation competition post-Transaction. The company indicated that *“innovation will be affected as result of the transaction because of the reduction of players competing on product development”* and that *“the disappearance of HNF after its acquisition by Danfoss as an example of this. HNF had previously been a threat to Danfoss due to its innovative products.”*⁵⁷⁸

8.3.3.9. Conclusion on the competitive assessment for HSUs.

(642) **In conclusion**, the Commission finds that:

- (a) the HSU market is characterised by high concentration with a very limited number of players, including an already potentially dominant player in Danfoss – this situation would be further exacerbated by the Transaction given the further increase in concentration levels and the Parties’ very high post-Transaction combined market share which would near [80-90]% in value;
- (b) Danfoss and Eaton are particularly close competitors, if not each other’s closest competitors, on the market for HSUs and can be differentiated from the other players competing on the market;
- (c) switching suppliers is very difficult for OEMS, and therefore seems to occur to limited extent in practice;
- (d) the two remaining players on the market post-Transaction will be unable to be a sufficient constraint on the merged entity, potentially due to capacity constraints, but also because not all demand will be contestable due to the differentiated nature of the market;
- (e) new technologies, such as electric and electrohydraulic steering systems cannot be considered a constraint since the competitive pressure they create is limited, at least in the short to medium term;
- (f) the ability of customers to exercise countervailing buyer power appears to be very limited and would not be sufficient to off-set a price increase;
- (g) in-house production of HSUs by OEMs cannot be considered as a constraint to the merged entity post-Transaction; and
- (h) barriers to entry are very high from a technical and economical perspective, and new entrants will not be a source of competitive constraint in the near future.

⁵⁷⁶ Minutes of a call with a competitor, 12.11.2020, DocID2217.

⁵⁷⁷ Reply to question 63 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁵⁷⁸ Minutes of a call with a competitor, 12.10.2020, DocID2183.

- (643) In addition, the Commission concludes that the Transaction is likely to lead to price increases and may impact other parameters of competition. Many market participants have raised specific concerns regarding the perceived negative impact the Transaction could have on the market for HSUs in terms of price, quality and innovation competition.
- (644) Based on the above, Commission considers that the Transaction leads to a significant impediment of effective competition on the EEA market for HSUs, in particular by the creation or strengthening of a dominant position.

8.4. Horizontal overlap for ESVs

- (645) Both Danfoss and Eaton develop, manufacture, and sell ESVs for off-road mobile applications. On this basis the Commission will focus its assessment on the market for ‘ESVs for off-road vehicles’ (hereinafter referred to as the market for ‘ESVs’), and not the on-road vehicles with work functions segment, given the overlap of the Parties is limited to off-road vehicles.
- (646) After presenting the market structure and market shares (Section 8.4.1), the Commission will present the Notifying Party’s arguments (Section 8.4.2) before presenting the Commission’s assessment (Section 8.4.3).

8.4.1. Market structure and market shares

- (647) The Notifying Party provided market share for ESVs estimates for the years 2017-2019.⁵⁷⁹ According to these estimates, in 2019, Danfoss’ market share in value was [40-50]%, and the respective Eaton’s market share was [5-10]%. In terms of combined market shares, the merged entity in 2019 would have [40-50]% in value.
- (648) As already explained in Section 8.2, the Commission has enquired sales data to the Parties and to their competitors and estimated market shares accordingly.
- (649) Table 6 shows the results of the Commission’s market reconstruction for the EEA market shares in value for the years 2017-2019, and Table 7 shows the respective market shares in volume. By comparing the Notifying Party’s estimates with the Commission’s market reconstruction, it appears that the Notifying Party underestimated the Parties’ market shares in value.

⁵⁷⁹ Form CO Section 6 to 9 for Steering, paragraph (235) tables 21 to 23.

Table 6 – EEA market share in value of ESVs for the years 2017-2019

	2017		2018		2019	
	Sales (EUR thousand)	Market Share	Sales (EUR thousand)	Market Share	Sales (EUR thousand)	Market Share
Danfoss	[...]	[40-50]	[...]	[50-60]	[...]	[50-60]
Eaton	[...]	[10-20]	[...]	[5-10]	[...]	[5-10]
Combined	[...]	[60-70]	[...]	[60-70]	[...]	[60-70]
Competitors	[...]	[30-40]	[...]	[30-40]	[...]	[30-40]
Fema	[...]	[10-20]	[...]	[10-20]	[...]	[10-20]
Hydac	[...]	[0-5]	[...]	[0-5]	[...]	[0-5]
Mobil Elektronik	[...]	[10-20]	[...]	[10-20]	[...]	[10-20]
Others	[...]	[5-10]	[...]	[5-10]	[...]	[5-10]
Total	[...]	100.0	[...]	100.0	[...]	100.0

Source: Commission's market reconstruction

Table 7 – EEA market share in volume of ESVs for the years 2017-2019

	2017		2018		2019	
	Sales	Market Share	Sales	Market Share	Sales	Market Share
Danfoss	[...]	[30-40]	[...]	[40-50]	[...]	[40-50]
Eaton	[...]	[10-20]	[...]	[5-10]	[...]	[5-10]
Combined	[...]	[50-60]	[...]	[50-60]	[...]	[50-60]
Competitors	[...]	[40-50]	[...]	[40-50]	[...]	[40-50]
Fema	[...]	[20-30]	[...]	[20-30]	[...]	[20-30]
Hydac	[...]	[0-5]	[...]	[0-5]	[...]	[0-5]
Mobil Elektronik	[...]	[5-10]	[...]	[5-10]	[...]	[5-10]
Others	[...]	[10-20]	[...]	[10-20]	[...]	[10-20]
Total	[...]	100.0	[...]	100.0	[...]	100.0

Source: Commission's market reconstruction

- (650) Table 6 and Table 7 indicate that the Transaction would lead to combined market shares well above [50-60]% for both market shares in value and in volumes. Referring to 2019, the merged entity market share in value would be [60-70]% and the market share in volume would be [50-60]%. As explained in Section 8.2, market shares of such level are a clear indicator for the creation of a dominant position.
- (651) After the Transaction, the merged entity's competitors would have market shares well below those of the merged entity. With respect to the year 2019, market shares in value of the merged entity's competitors would be under 20%. With only two competitors namely Fema and Mobil Elektronik having a market share over 10%. In volume, only Fema has a market shares over 10%.
- (652) This means that after the Transaction, between [70-80]% and [80-90]% of the EEA demand for ESV in value (and between [70-80]% and [80-90]% in volume) would be satisfied by the merged entity plus Fema.
- (653) Table 6 and Table 7 also show that in the last three years market shares have been relatively stable, with only minor changes from one year to another.

8.4.1.1. HHI levels

Table 8 – HHI referred to EEA market shares in value and in volume for the year 2019

	HHI Value	HHI Volume
Pre-Transaction	[3000-4000]	[2000-3000]
Post-Transaction	[4000-5000]	[3000-4000]
Delta	[0-1000]	[0-1000]

Source: Commission's market reconstruction

- (654) In terms of market concentration, as Table 8 indicates, after the Transaction, the already high HHI (which pre-Transaction is [3000-4000] if market shares in value are considered, and [2000-3000] if market shares in volume are considered) would have an increment of [0-1000] referring to market shares in value and of [0-1000] referring to market shares in volume.
- (655) These increments would lead to post-Transaction HHI of [3000-4000] if market shares in value are considered and of [2000-3000] if market shares in volume are considered.
- (656) These values are well above the HHI levels defined in the Horizontal Merger Guidelines under which the Commission is normally unlikely to identify horizontal competition concerns (i.e. a delta below 150 with a post-merger HHI above 2 000).⁵⁸⁰

8.4.2. *The Notifying Party's arguments*

- (657) Notwithstanding the large combined market shares of the Parties, the Notifying Party considers that the Transaction would not raise competition concerns because:⁵⁸¹ (i) in the bidding market for ESVs, intensity of competition is driven by the number of credible bidders, rather than by their market shares; (ii) Eaton is not a significant constraint on Danfoss because its market shares in the EEA are relatively small; (iii) competition from existing suppliers of ESVs, from OEMs' captive production of ESVs, as well as from other technologies (e.g. Ognibene DPS) exert a significant competitive constraint on the Parties; (iv) customers can easily switch suppliers; (v) there are a number of potential competitors because barriers to entry are low; and (vi) customers have a high degree of countervailing buyer power.

8.4.3. *The Commission's assessment*

8.4.3.1. Danfoss and Eaton are particularly close competitors

- (658) **First**, the Commission performed an analysis of the Opportunity Data provided by the Notifying Party. The results are qualitatively similar to those for HSUs with Eaton the most frequent main competitor to Danfoss both in terms of value and volume. One difference is that the overlap is this time more significant for volume rather than value in the EEA, but the gap between Eaton and the next most frequently identified main competitor is also much larger than it was in HSUs.
- (659) The results of the participation analysis in ESVs are in line with what one would expect from the high combined market shares of the Parties in this market as

⁵⁸⁰ Horizontal Merger Guidelines, paragraph 20.

⁵⁸¹ Form CO Section 6 to 9 for steering, paragraphs 238-271.

explained in Annex I and show that the Parties are close competitors to each other and exert significant competitive pressure on each other as further explained in Section 8.4.3.4.

- (660) In the Reply to the SO, the Notifying Party argues that NERA has conducted a thorough analysis of the opportunity data for electrohydraulic steering, isolating a set of opportunities and concluding that *“The updated opportunity data analysis thus corroborates that Eaton Hydraulics is not a particularly close competitor of Danfoss.”*⁵⁸². The Notifying Party also argues that Eaton [...].⁵⁸³
- (661) The set of opportunities considered in the analysis put forward by the Notifying Party in Section 3.1. of Annex C.1_1 of the Reply to the SO corresponds to 6 customers out of which 3 replied to the Q1 questionnaire to OEMs. These three customers are Kubota, CNH and AGCO. These three customers expressed a view when asked to list the main suppliers active in the supply of ESVs.
- (662) Kubota lists Danfoss, Eaton and Hydac as the main ESV suppliers and confirms that both Eaton and Danfoss are perceived by this customer as competitors on the market for ESVs. In addition, when asked about the impact of the Transaction, Kubota replies that the Transaction will have a negative impact on the company and on the market for hydraulic components. It further substantiates that *“Only one supplier will be able to provide Hydraulic and Electro-hydraulic steering valve Due to high invest [sic] from Danfoss costs needs to be reduced and margin increased. This may lead to price increase.”*
- (663) When asked to list the main suppliers active in the supply of ESV, CNH lists Danfoss and Ognibene. However, CNH explains that, while Danfoss has a particularly strong position on the market for ESVs, Eaton is also a competitor on this market although with a less advanced product: *“For high-end machines, which allow for an autonomous or for a semi-autonomous driving, Danfoss appears to be much stronger than Eaton and Ognibene”*. In particular, Ognibene is offering a technology that is substantially different from that offered by the Parties. Ognibene is focusing on motorized steering columns (Intelligence embedded on a “master” electric motor mounted on the steering column giving “autoguidance” capability to the vehicle while the “slave” steering unit remains purely hydraulic. Eaton’s products seem to be less advanced, compared to Danfoss’. Historically, prior to 2018, Hydraulic Nord Fluidtechnik was also an important competitor in this segment.”
- (664) AGCO only lists Danfoss and Eaton as suppliers when asked to list the main suppliers active in the supply of ESVs.
- (665) This shows that not only Eaton was most frequently identified by Danfoss as its main competitor in ESVs in the opportunity data but that even for the narrower dataset considered in the Reply to the SO the corresponding customers that expressed a view in the market investigation do consider Danfoss and Eaton as being part of the main competitors of ESVs.
- (666) Further analysis of the quantitative findings of Section 3.1. of Annex C.1_1 of the Reply to the SO is provided in Annex I to this decision.
- (667) **Second**, the Parties are the only competitors able to simultaneously offer an HSU and an ESV which is a competitive advantage for a supplier of ESV for the segment

⁵⁸² Reply to the SO, paragraph 47.

⁵⁸³ Reply to the SO, paragraph 43.

of traditional electrohydraulic steering solution. As further explained in Section 6.4.3.1, the market for ESVs is differentiated by end use as ESVs can be used either in a steering system that relies on only ESVs called steer-by-wire or in a traditional electrohydraulic steering system that consists of both an ESV and an HSU. The Notifying Party explains that to the Parties' knowledge, their competitors do not offer traditional electrohydraulic steering systems which is confirmed by the market shares data for HSUs as developed in Section 8.3.1. However steer-by-wire represent a limited portion of the market as explained by the Notifying Party: [content of internal documents]⁵⁸⁴. Therefore, around [...] of the ESVs are sold in conjunction with an HSU.

- (668) The Notifying Party explains that "*Bosch Rexroth, FEMA, Hydac, MOBIL ELEKTRONIC, and Hydraforce, offer electrohydraulic steering valves. To the Parties' knowledge, they do not offer "conventional" hydraulic steering units.*"⁵⁸⁵
- (669) This is confirmed by the market investigation, for example a competitor explains that following the acquisition by Danfoss of Hydraulic Nord Fluidtechnik (which was the only alternative competitor providing both HSU and ESV) only the Parties will be able to offer a solution combining an ESV and an HSU: "*Since Danfoss acquired Hydraulik Nord Fluidtechnik GmbH & Co.KG there's only Eaton Hydraulics that offered a combined electrohydraulic steering valve with hydraulic steering unit as one unit.*"⁵⁸⁶
- (670) While the Notifying Party explains that an ESV can be combined with an HSU from another manufacturer to offer a traditional electrohydraulic steering solution "*The electrohydraulic steering valves offered by these suppliers can, and are, however, be combined with a hydraulic steering unit manufactured by a different supplier (e.g., Danfoss, Eaton Hydraulics, or others). [Confidential market intelligence].* Market participants explain that there are advantages to supply both the HSU and the ESV in an electrohydraulic system. When asked if with respect to a steering system design by an OEM that features both an ESV and an HSU the manufacturer of the HSU gets an advantage to be awarded the supply of the ESV, a competitor replies "*Yes, this is absolutely the case. The OEM will most likely not use different suppliers for the hydraulic steering unit and the electro-hydraulics steering valve. For system responsibility reason the cases where the OEM split the system up into different suppliers, will most likely be the exception [sic]*"⁵⁸⁷ Another competitor further explains: "*Yes, the supplier will have an advantage to supply both units. This is an competitive advantage for reduction incost [sic], space, leakpoints, failure modes.*"⁵⁸⁸
- (671) As the only players able to offer both the HSU and the ESV, Danfoss and Eaton are able to offer "plug and play" solutions as explained in the e-mail from Eaton in Figure 62 below. These solutions enable OEMs to avoid having to develop algorithms, for which some customers do not have the resources to do internally (as illustrated in Figure 62 below). Eaton can offer a solution based on an ESV (SBX) and an HSU (Xcel45) and provide a plug and play solution through a programmable safety controller (SFX) and a sensor. [Content of internal documents] (Ognibene solution is further assessed in recital (684)).

⁵⁸⁴ Reply to pre-notification request for information RFI 6.

⁵⁸⁵ Reply to pre-notification request for information RFI 6.

⁵⁸⁶ Reply to question 24.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁸⁷ Replies to question 25 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁸⁸ Replies to question 25 of Q4 – Phase I Questionnaire to competitors, DocID1959.

Figure 62 – Ability to offer plug and play electrohydraulic solution

[...]

Source: DocID 1043-1113 (Filename EAT-215324.msg)

- (672) Internal documents of the Notifying Party also demonstrate that Danfoss and Eaton are particularly close competitors as they are the only players to supply both the HSU and the ESV. As illustrated in the Danfoss internal document reported in Figure 63: [content of internal documents].

Figure 63 – Integrated electrohydraulic solutions.

[...]

Source: DocId 1054-1733 (Filename: M.9820-RFI020020007.pptx)

- (673) When asked if, for an OEM, there is any advantage of using integrated electrohydraulic systems which combines an ESV and an HSU, a competitor explains “*There are many applications in which the integrated solution is better suited than a combination of separate components.*”⁵⁸⁹ Another competitor explains “*Probably yes, since this would reduce size, tubing, cabling, assembly time and costs, possible leakage points etc.*”⁵⁹⁰. Ultimately a third competitor explains “*Yes, reduction in size, leak points, responsibility, .etc. This is a very distinct advantage.*”⁵⁹¹
- (674) While the Parties have a clear advantage by supplying both ESVs and HSUs for traditional electrohydraulic steering, the Notifying Party argues that “*simply looking at market shares for ESVs does not accurately reflect the competitive dynamics resulting from the current trend towards Pure Steer-by-Wire*”⁵⁹². The Notifying Party also explains that currently steer-by-wire has a very limited market penetration [confidential market intelligence]⁵⁹³. When considering future trends the Notifying Party’s estimates show that [confidential market intelligence]⁵⁹⁴. Moreover, in the smaller segment of steer-by-wire both Danfoss and Eaton have developed steer-by-wire products to compete through EHD for Danfoss and SBX for Eaton⁵⁹⁵.
- (675) **Third**, internal documents from the Parties show that they consider each other as close competitors. For example, when assessing competition for its ESV (SBX) Eaton’s internal documents confirm that, when assessing competition for its ESV (SBX)⁵⁹⁶, Eaton considers that for the ‘EH valve package’ which include an ESV (SBX) and a HSU (SCU), Danfoss is the main competitor and [confidential market intelligence]. For its Steer-by-Wire solution also based on an ESV (SBX) Eaton identifies two competitors, Danfoss and [confidential market intelligence].

⁵⁸⁹ Reply to question 27 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁹⁰ Reply to question 27 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁹¹ Reply to question 27 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁹² M.9820_Phase II Advocacy Steering Paper paragraph 45

⁵⁹³ Reply to pre-notification request for information RFI 6.

⁵⁹⁴ M.9820_Phase II Advocacy Steering Paper figure 7.

⁵⁹⁵ M.9820_Phase II Advocacy Steering Paper paragraph 44

⁵⁹⁶ [...]

- (676) Similarly, in an Eaton internal document targeted at getting capital to fund a testing machine⁵⁹⁷ for ESVs, Eaton [...] considers Danfoss when assessing the market: [content of internal documents].
- (677) In addition, in a Danfoss document assessing its competitors in electrohydraulic steering solutions, Danfoss specifically compares its product range with Eaton's product range in an individual slide as shown in Figure 64 below. In this slide Eaton appears to have a range closely competing with Danfoss' range for each solution with relatively similar price to performance characteristics.

Figure 64 – Comparison of Danfoss and Eaton range of electrohydraulic steering solutions.

[...]

Source: DocID 1059-19924 (Filename M.9820-RFI020236608.pptx)

- (678) As a result, it appears that the Parties are competing closely in the market for ESVs and may be each other's closest competitors.

8.4.3.2. OEMs face important impediments in switching

- (679) **First**, the ability to switch suppliers of hydraulic components in general is limited. In this respect, and for the avoidance of repetition, reference is made to Section 8.3.3.2, which applies to all HPS components without distinction.
- (680) **Second**, there is further evidence concerning ESVs, in particular which demonstrates that OEMs face important impediments in switching ESV suppliers.
- (681) Market participants also confirm the difficulty specifically for ESVs. For example a competitor explains that "*EH [electrohydraulic] components within steering and valving are customized solutions for OEM's. Specifications define what will not work, but they do not define what will work. Steering, valving, pumps and motors are competitive and highly customized to individual customers requirements for preference, safety, failure modes, regulations, ..etc. They require in many instances years of development work to establish the appropriate parameters to meet the end users specifications and once in production / use are typically not replaced until a wholesale platform change or system redesign.*"⁵⁹⁸
- (682) In addition, an Eaton internal document⁵⁹⁹ specifically confirms the difficulty to switch ESV suppliers due [content of internal documents] and to [content of internal documents] "[content of internal documents]."
- (683) The cost of switching is specifically assessed in an internal document produced in its ordinary course of business, [content of internal documents].

Figure 65: Danfoss' internal email showing that OEMs' [...]

[...]

Source: Reply to RFI 2, DocID 1058-42093, "M.9820-RFI020181794.msg"

⁵⁹⁷ DocID1042-43130 (Filename : EAT-097260.doc)

⁵⁹⁸ Reply to question 7 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁵⁹⁹ DocID1042-43130 (Filename : EAT-097260.doc)

- (684) The Commission therefore concludes that customers face important impediments in switching ESV suppliers to offset the combined entity market power post-Transaction.
- 8.4.3.3. Competitive pressure from other electrohydraulic steering technologies regards a limited part of the market for electrohydraulic steering and its intensity is limited
- (685) Ognibene developed an alternative solution to provide somewhat similar functionalities to the electrohydraulic steering solution based on an ESV with a solution based on a motor. The fact that Ognibene’s solution entails a different design due to different components being used might have in impact on the adoption of the solution by customers. As Ognibene explains, replacing a design based on an ESV with a design based on its proprietary solution is not simple and has some implications for current projects in terms of implementation and design costs.⁶⁰⁰
- (686) As further developed in Section 6.4.3.3, the Commission considers that the type of electrohydraulic solution offered by Ognibene is not part of the product market for ESV as due to the design differences this system does not include an ESV.
- (687) **First**, it has to be noted that Ognibene’s so-called Digital Power Steering (‘DPS’) solution was developed differently not because of a technological advantage provided by the solution, but rather because of the high barriers to entry in the ESV market due to patents owned by Danfoss in the ESV market. This is explained by Ognibene *“Given the numerous patents own by Danfoss in steering, the company had to develop an alternative design to achieve the same function in a different way. Eaton developed an electro-hydraulic steering conceptually closer to Danfoss approach but also still different to avoid Danfoss patents.”*⁶⁰¹
- (688) This solution provides somewhat similar functions for end use by allowing GPS guidance and providing a smoother steering experience. However, it constitutes a limited external constraint for the electrohydraulic steering solution for a number of reasons.
- (689) **Second**, while the Notifying Party did not provide an estimate of the market shares for the DPS and other potential similar solutions, it nevertheless estimated the market share to be very low.. *“The Parties estimate that electrohydraulic steering solutions that use electric motors currently account for a relatively small portion of the overall market for electrohydraulic steering, in any case not greater than [5-10]%.”*⁶⁰² Considering the high combined market share of the Parties this would in any case constitute a limited external constraint.
- (690) **Third**, as explained by one competitor: *“The electrohydraulic steering valves can be integrated with other technologies (like Ognibene is doing) but they cannot be substituted by now.”*⁶⁰³ As explained above, ESVs are not directly substitutable by the DPS solution which entails an alternative design and might not compete for OEMs having a component by component approach and considering to switch ESV supplier in an overall designed system.
- (691) In the Reply to the SO, the Notifying Party argues that Ognibene DPS solution *“belongs to the same product market as all other electrohydraulic steering*

⁶⁰⁰ Minutes of a call with a competitor on 24.11.2020, DocID1987.

⁶⁰¹ Minutes of a call with a competitor on 11.06.2020, DocID1987.

⁶⁰² Reply to pre-notification request for information RFI 6.

⁶⁰³ Reply to question 38.1 in Q12 – Questionnaire to competitors – steering and other technologies, DocID1962.

solutions”⁶⁰⁴, however the parties did not include Ognibene’s solution in their market share, the Parties explained that “*This approach was taken in order to provide a consistent market share estimate that comprises only similar components*”⁶⁰⁵. Ultimately, while the Commission acknowledges that DPS system other motor-based solutions could be considered as an external competitive constraint for certain specific sourcing scenarios, the very low estimated market share of less than [0-5]% confirms that it does not constitute a significant competitive constraint for the Parties.

(692) The conclusion of the Commission is therefore that that pressure from other technologies is limited and unlikely to exert a constraint on the merged entity post-Transaction to prevent price increases in ESVs post-Transaction.

8.4.3.4. Competitors are not a sufficient constraint on the Parties’ market power/dominant position

(693) **First**, as explained in recitals (659) to 0 above, competitors for the supply of ESVs have a limited ability to compete with the Parties for RFQs, where a complete electrohydraulic steering solution is requested by the customer, as they do not produce HSUs internally. Therefore, a part of the demand can only be served by the Parties (and to a certain extent by Ognibene which is further developed in Section 8.4.3.3).

(694) **Second**, there is a limited number of credible competitors, with only two competitors having a market share over 10% in value and only one having a market share in volume over 20% as presented in Section 8.4.1

(695) The limited number of alternative suppliers for ESVs is confirmed by the market investigation. When asked about the number of credible ESV suppliers that would be available for meeting their needs in the EEA, a majority of customers that expressed a view said that the number of credible suppliers is limited.⁶⁰⁶

(696) **Third**, FEMA and Mobil Elektronik exert limited competitive pressure on the Parties. While FEMA is the largest player after the combined entity, FEMA’s market share is almost solely based and highly dependent on sales to one specific OEM, namely John Deere. The Commission found that this market share could be jeopardized by the fact that FEMA is not able to provide integrated solutions, as explained in Section 8.4.3.1, and unable to use the IP rights and patents of the merged entity, as explained in recitals (721) to (724) above. The fact that FEMA’s position in the market is almost solely the result and highly dependent on its specific relationship with John Deere, is confirmed by the Notifying Party. According to the Notifying Party’s information, FEMA “*primarily supplies its products to the OEM John Deere*”⁶⁰⁷. This is further illustrated by internal documents from Danfoss, which show that FEMA’s market share is identified as “*FEMA (John Deere)*”⁶⁰⁸. This also explains the fact that, when considering all the customers in the Opportunity Data, despite a higher market share than Eaton, FEMA does not seem to have a relevant participation overlap with Danfoss. [Content of internal

⁶⁰⁴ Reply to the SO, paragraph 47.

⁶⁰⁵ Reply to pre-notification request for information RFI 6.

⁶⁰⁶ Replies to question 38 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶⁰⁷ Form CO Section 6-9 Steering, paragraph (141).

⁶⁰⁸ DocID 1056-16465 (Filename M.9820-RFI020126901.pdf)

documents]⁶⁰⁹, [content of internal documents]. This is made possible by Danfoss' ability to produce both HSUs and ESVs.

Figure 66 – [...]

[...]

Source: DocID1062-4476 (Filename M.9820-RFI020390884.pdf)

- (697) While FEMA already only exerts a limited competitive pressure on the Parties' supply of ESVs, FEMA explains that post-Transaction the merged entity will be the only credible supplier of ESVs and other suppliers of ESVs do not offer a comparably mature systems: *"Primary space that FEMA occupies with Danfoss is in the EH steering valve space. We directly compete with each other with our OEM's and keep a close watch on the others technology and developments. In the EH space for steering, we consider them our only competition at this point with the acquisition and we are unable as of yet to supply a full EH system. Parker, HydraForce and others may offer systems but these are immature and do not have the field history or the prestige of the Danfoss units."*⁶¹⁰
- (698) In addition, Mobil Elektronik also appears to exert limited competitive pressure due to the company's strategy to focus on different end uses as explained by a competitor: *"the [competitor] stressed that Mobil Elektronik focuses on autonomous steering by wire for vehicles, not in the mainstream agriculture industry. Mobil Elektronik normally focuses on small volumes of high-end products. It pointed out that despite Mobil Elektronik having the technology, they never developed integrated steer-by-wire because they have a different business focus."*⁶¹¹ This different focus is confirmed by the Parties' Opportunity Data analysed in Annex I, [confidential market intelligence].
- (699) **Fourth**, internal documents of the Parties suggest that they offer technically superior products in terms of performance over their competitors' ESVs. In an internal document Eaton estimates that the Parties' electrohydraulic steering systems offer the best performance score based on a performance assessment of a set of the weighted characteristics and functionalities of electrohydraulic steering systems. The weighted score shows the performance of each solution and concludes that the best performing solutions are Danfoss and Eaton products.

Figure 67 – Eaton scoring of the electrohydraulic solutions

[...]

Source: DocID 1042-6184 (Filename EAT-094896.doc)

- (700) In another internal document, Eaton estimates that by already being a large hydraulic steering player compared to steer-by-wire only competitors, it has an advantage due to its history and reputation in steering [content of internal documents].⁶¹²

⁶⁰⁹ Tractors are by far the first type of machines in terms of sales for agricultural applications as explained in recital 0.

⁶¹⁰ Reply to question 22.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶¹¹ Minutes of a call with a competitor on 24.11.2020 DocID2255.

⁶¹² [...] - DocId 1042-80046 (Filename EAT-064276.doc)

- (701) **Fifth**, patents and IP limit the ability of competitors to develop new products and compete with the merged entity. When asked about Danfoss’ steering strategy, a competitor reports: *“Danfoss patented a lot of different steering solutions and steering systems. Danfoss acquired Hydraulik Nord F. for their IP assets thus creating an IP matrix (pyramid) that has had the effect of creating a patent gridlock which renders very complex for a steering unit suppliers to develop new products. This is because there is always the concrete risks of being sued for patent infringement, and this irrespective of the validity (novelty) of any such patent. OEMs in fact want legal certainty and, accordingly, they would never embark on a long-term project if there is the risk of patent infringement of a component that may affect the commerciality of the OEM’s veichle [sic] (however good one’s legal arguments are and remote such risk may be). The solution is to obtain a license from the patent holder, but this is not always possible, or the cost may become prohibitive. An alternative would be litigation, which however is costly and lengthy, and that however not would be practical if such IP matrix strategies are carried out on an ongoing basis. The next effect of this is the existence of strong entry barriers.”*⁶¹³
- (702) Therefore, the Commission concludes that competitors would not be a sufficient constraint on the exercise of market power by the combined entity post-Transaction.
- 8.4.3.5. Countervailing buyer power would not offset a price increase
- 8.4.3.6. Past behaviour of the Parties indicates that OEMs are not able to prevent a price increase. While ESVs are targeted at the most sophisticated OEMs the Parties’ past behaviour demonstrates that they were successfully imposing price increases even to the largest OEMs. In this respect, and for the avoidance of repetition, reference is made to Section 8.3.3.5, which applies to all HPS components without distinction. OEMs’ alleged capabilities of manufacturing ESVs is not a competitive constraint on the Parties
- (703) As explained in Section 6.2.3.3(i) an overwhelming majority of OEMs do not produce ESVs in-house (ii) a majority of OEMs do not have the ability to develop ESVs in house in case of a price increase (iii) it is not the OEMs’ strategy to develop in house production of ESVs and (iv) competitors do not see in-house production by OEMs as becoming a more prominent feature of the market in the next three to five years.
- (704) **From a supply side perspective**, an overwhelming majority of competitors do not take into account in-house production by OEMs, whether actual or potential, when setting up their strategies/prices for ESVs.⁶¹⁴
- (705) **From a demand side perspective**, when asked if actual or potential in-house production is sometimes brought up by OEMs in the context of commercial negotiations, a large majority of competitors said that this was not the case.⁶¹⁵ A competitor explains that *“Competition is brought up during commercial negotiations, I have not observed an OEM use vertical integration as a negotiation tactic.”* Another *“I have been in this market for more than 2five years. I have never had any*

⁶¹³ Reply to question 58 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁶¹⁴ Replies to question 7 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁶¹⁵ Replies to question 9 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

*OEM say that they were thinking about developing and manufacturing hydraulic steering units or integrated transmissions.”*⁶¹⁶

(706) In light of the above, in-house production does not exert a significant competitive constraint on supply of ESVs in the EEA, in particular on influencing the price of ESVs in the EEA.

8.4.3.7. Barriers to entry are high and potentially expanding smaller suppliers, as well as new market entrants, will not be a significant constraint to the merged entity

(707) In the Reply to the SO,⁶¹⁷ the Notifying Party argues that electrohydraulic steering is a significantly growing market and therefore: *“This means that there will be new electrohydraulic steering opportunities in the future, for which current and new market entrants can compete.”*

(708) The present section demonstrates that: it takes a long time and is very challenging to enter the markets for the supply of ESVs in the EEA as there are high barriers in terms of required technical know-how, expertise and R&D (A.); and in terms of certification processes by authorities and validation and testing processes of OEMs (B.) there are barriers to entry resulting from certification and validation processes (C.) the Commission identified entry barriers in relation to patents. Moreover, there are further barriers to entry in relation to (D.) the economies of scale as well as in relation to (E.) the breadth of portfolio and variety of configuration, and (F.) the local footprint in sales and support systems expected by customers. Further (G.) strong brand recognition and preference for mature products are significant barriers to enter the markets for the supply of ESV. Additionally, (H.) there are barriers to entry resulting from the market in part being very mature. (I.) Overall, all of the barriers identified before also lead to a significant entry barrier in terms of financial investments and resources required. Moreover, (J.) even if OEMs sponsored an entry into the supplies of ESVs in the EEA, this would not lead to a significant constraint on the merged entity in the foreseeable future. Finally, (K.) Chinese manufacturers do not appear to be a significant constraint to the Parties in the foreseeable future.

(A.) Barriers to entry resulting from required technical know-how and expertise

(709) The Commission finds that it takes a long time and it is very difficult and challenging to get ESVs onto the market for a new supplier as there are high barriers in terms of the required development, know-how, expertise and R&D.

(710) The market investigation clearly showed that the manufacturing of ESVs – even more than compared to HSUs - requires very advanced skills and technical capabilities (e.g. industrial know-how and IP), which are difficult to acquire and make it very challenging to enter the markets for ESVs both in terms of time and investment into R&D and acquiring know-how for the production. This was confirmed by a large majority of the Parties’ competitors and a majority of direct OEMs.⁶¹⁸ Further, an OEM explains: *“Quite mature hydraulic products produced in large scale and with high demands on production setup and know how on control - electric/digital and hydraulic makes steering valves quite complicated for a new*

⁶¹⁶ Reply to question 9.1 of Q12 – Phase II Questionnaire to competitors – steering and other products, DocID1962.

⁶¹⁷ Reply to the SO, paragraph 102.

⁶¹⁸ Replies to question 28 of Q4 – Phase I Questionnaire to competitors, DocID1959; replies to question 22 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

starter.”⁶¹⁹ When asked to what extent a new entrant in ESVs could recoup its initial investment a majority of competitors that expressed a view considered that the investment would not be recouped within a reasonable amount of time.⁶²⁰ One competitor commented: *“In general it is difficult to enter the hydraulics market as a new player. It is a complex technolog[y] and also from the manufacturing know how it is challenging for new players to enter the market.”*⁶²¹ An OEM mentioned that *“in general, it is very complicated to enter the hydraulic market because the knowledge and skills are very specific and are generally well kept by the manufacturers. (...)”*⁶²² Another competitor added in relation to ESVs: *“Each discipline within hydraulics is somehow a speciality. From hydraulic steering to electro-hydarulic [sic] steering is already a significant step in know how and understanding of developing and producing the products. It takes a lot of time for hydraulics companies to develop similar products.”*⁶²³ Another competitor stated: *“[HSUs, electro-hydraulic steering units and steer-by-wire solutions and electric steering units] require big knowledge on both design and production.”*⁶²⁴ Asked what are the most competitive strengths of a manufacturer of ESV for successfully entering the hydraulic component market, similarly, many OEMs mentioned technical know-how, experience and competence as a key factor.⁶²⁵

- (711) Consequently, a large majority of market participants who expressed a clear view said that for a manufacturer of another HPS component it would take about three to five years or more than five years to start producing ESVs.⁶²⁶ By way of example, a manufacturer explains in relation to Chinese steering unit manufacturers: *“(...) These manufacturers tried to copy the products used in Europe but the lack of expertise in metallurgical properties lead to a highly reduced lifetime. Machines produced with such components target the Asian market with very limited warranty (usually 1 to 2 years) and failure is expected from customers. (...)”*⁶²⁷

(B.) Barriers to entry resulting from certification and validation processes

- (712) Further, the Commission finds that it takes a long time and it is very difficult and challenging to get ESVs onto the market for a new supplier as there are high barriers in terms of certification processes by authorities and validation and testing processes of OEMs.
- (713) **First**, the Commission finds that certification/homologation processes are costly and delay market entry. This is supported by several market participants reported that for ESVs safety standard related certification/homologation processes constitute an additional barrier to entry and would further delay market entry.⁶²⁸

⁶¹⁹ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶²⁰ Replies to question 30 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶²¹ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶²² Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶²³ Reply to question 8.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶²⁴ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶²⁵ Replies to question 55.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶²⁶ Replies to question 53 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶²⁷ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁶²⁸ Replies to questions 54.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

- (714) The Commission found that two kinds of certifications have to be differentiated in relation to ESVs.
- (715) ***In the first place***, on the side of the OEM, the machine in which the ESV is used, has to be certified. An OEM noted with regard to ESVs: *“There are many regions, including the EU in particular, which require certain certifications and/or homologations as a requisite for entry into those markets. These are also burdens on the supplier and OEM for entry.”*⁶²⁹ OEMs have to certify their machines. As discussed in Section 7.4.3 above, these processes relate to safety requirements and standards, inter alia set out in EU regulations and directives, such as the Machine Directive. The Machine Directive applies to all vehicles built in or shipped to Europe. OEMs must perform and document a hazard and risk analysis for all vehicle functions according to, for example, ISO 13849 or ISO 25119. The outcome of the analysis is the AgPLr, or SIL (Safety Integrity Level) rating, which is used to identify the minimum safety requirements for each vehicle function. The Commission found the time and cost needed for this certification/homologation time appear to be significant. One competitor noted in this regard: *“OEM has to homologate the vehicle for public road and for field application. Homologation takes very longtime (average 2 years) and it’s expensive.”*⁶³⁰ An OEM noted that: *“For manufacturers of steering systems, certification is a complex process.”*⁶³¹ As this overlaps with further timely and costly processes on the side of OEMs, the costs and time delay caused by certification/homologation are further included and discussed in recitals (670) to (672) below.
- (716) ***In the second place***, on the side of the supplier, ESVs have to be certified as being compatible for use in a machine with a certain AgPLr or SIL rating. For instance, Danfoss OSPE steering valve is offered as *“Compliant with all current legislation and safety standards – SIL 2, AgPLd, Cat 3.”*⁶³² Because of their electronic components, the Commission found that for ESVs SIL certifications for level sensors which relate to functional safety of electrical, electronic and programmable safety related systems are particularly important. ESVs generally require SIL levels SIL2 (Low statistical risk of failure) or SIL 3 (Redundant measurement capability) certification. Internal documents of the Parties show that SIL certification is conducted in several steps (e.g. concept assessment, main assessment, testing, and certification). Internal documents as well as public sources show that these certifications are commissioned, agreed and issued for the respective supplier.⁶³³ Findings in these internal documents of the Parties indicate that the costs for such certification are relatively low ([...]) but will take at least several months.
- (717) **Second**, the certification/homologation processes described and discussed above in recital (715) overlap with the overall re-designing, validation and testing processes needed on the side of the OEMs. These relate to regulatory certification as well as internal company standards. The Commission finds that the testing and validation

⁶²⁹ Reply to question 54.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶³⁰ Reply to question 53.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁶³¹ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶³² See Danfoss Website, <https://www.danfoss.com/en/products/steering/dps/steering-components-and-systems/electrohydraulic-steering/ospe/#tab-overview> (last checked on 3.12.2020).

⁶³³ For instance, Eaton internal documents, email exchanges asking for quotes for SIL2 certification from [...], DocID 1041-29652, EAT-002785 and DocID1042-84156, EAT-094946; as well as a quote, DocID1042-63622, EAT-096760.

processes are costly and take time, thereby, significantly delaying market entry for the supply of an ESV and making OEMs more reluctant to switch to a new ESV on the market. In addition, the HPS component is often not fully substitutable, which requires the OEM to re-design the machine, which leads to further significant costs for OEMs for re-designing as well as increased testing and validating, making switching even more unlikely, as well as further delaying the market entry:

- (718) ***In the first place***, market participants confirm that the re-design of machines, in case switching is not possible, as well as that validation and testing processes of OEMs to approve a new ESV are costly and take several years. Among several further similar comments, OEMs mentioned the following barriers to approving a new ESV: “*long testing and implementation (construction phase*”, “*the re-design of the system and all the consequences (validation, test,..)*”; “*R&D costs and lead time for new design*” and “*Regarding Steering components a new approval is necessary (time, Costs)*”.⁶³⁴ Several market participants reported that just the testing process for incorporating a new ESV in a machine would take about 18 months to several years. One large European OEM commented in this regard that barriers to approving a new supplier are: “[...] *(E)ngineering resources, validation testing, cost associated and time required consequently. This can be from 18 Month to 5 years overall depending on the complexity of what needs to be tested.*”⁶³⁵ Another European OEM stated: “[...] *validation time often lasts between 1 and 3 years.*”⁶³⁶ A further European OEM noted: “*the approval process for new hydraulic manufactures is very long (years)*”⁶³⁷ and “[...] *normally years are needed to introduce a new hydraulic components manufacturer.*”⁶³⁸
- (719) ***In the second place, consequently***, a non-negligible number of OEMs who responded in the market investigation said that they were reluctant to source HPS components from new suppliers because of these timely and financial efforts for the required tests and validation processes and, as the case may be, re-design of the relevant machines.⁶³⁹ A large majority of OEMs who expressed a view in the market investigation said that this is a relevant factor that makes market entry more difficult.⁶⁴⁰

(C.) Barriers to entry in relation to patents

- (720) In addition the market investigation shows that there are high barriers linked to patents for new entrants in ESVs.

⁶³⁴ Replies to question 47 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶³⁵ Reply to question 47.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶³⁶ Reply to question 47.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶³⁷ Reply to question 49.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶³⁸ Reply to question 49.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶³⁹ Replies to questions 49 and 49.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁴⁰ Replies to question 49.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

- (721) IP and patents constitute a very strong barrier to entry in ESVs and Danfoss previous acquisition of HNF illustrate this situation. [Content of internal documents]⁶⁴¹ [content of internal documents].

Figure 68 – HNF acquisition rationale

[...]

Source: DocID 1054-33250 (Filename M.9820-RFI020034065.pptx)

- (722) The same document further explains that in eSteering the value of the acquisition for Danfoss relies on the [content of internal documents].⁶⁴²

Figure 69 – HNF acquisition : value to Danfoss

[...]

Source: DocID 1054-33250 (Filename M.9820-RFI020034065.pptx)

- (723) Therefore, by combining Eaton and Danfoss patents the merged entity could establish even higher barriers for new entrants by leveraging a combination of patents to deter OEMs from taking the risk of using a new entrant product as explained by a competitor “After the Transaction, the combined IP of Danfoss, HNF, Eaton will result in an IP pyramid (or fence) which may seal off such technology and therefore slow down or block segments of the market. Through such pyramid (or fence) the entity will protect all potential uses and similar ideas for the same scope. As mentioned, that has had the effect of creating a patent gridlock which renders very complex for a steering unit suppliers to develop new products. This is because there are always the concrete risks of being sued for patent infringement, and this irrespective of the validity (novelty) of any such patent. OEMs in fact want legal certainty and, accordingly, they would never embark on a long-term project if there is the risk of patent infringement of a component that may affect the commerciality of the OEM’s vehicle (however good one’s legal arguments are and remote such risk may be). The solution is to obtain a license from the patent holder, but this is not always possible, or the cost may become prohibitive, and in any case one’s investment plans would be tied up to the intentions of its main competitor. An alternative would be litigation, however this option is costly and lengthy, and that would not be practical if such IP matrix strategies are carried out on an ongoing basis”

- (724) To conclude the same competitor explains: “We believe that the post-merged entity will make use of its the very strong IP assets post-Transaction, and thus we expect the newco to leverage the electrohydraulic steering segment.”⁶⁴³

(D.) Barriers to entry in relations to economies of scale

- (725) Moreover, the market investigation showed that economies of scale constitute a relevant barrier to entry to supply ESVs. The Commission found that comparable economies of scale are an important factor for being able to successfully compete with the Parties in the supply of ESVs. Asked what are the most competitive

⁶⁴¹ DocID 1054-33250 (Filename M.9820-RFI020034065.pptx)

⁶⁴² DocID 1054-33250 (Filename M.9820-RFI020034065.pptx)

⁶⁴³ Reply to question 62.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

strengths of a manufacturer of ESV for successfully entering the hydraulic component market, besides quality, the competitive strengths most often mentioned by OEMs was a competitive price/cheap production costs.⁶⁴⁴

- (726) One competitor noted: “(...) *cost effective production can only be realised for high quantities. So it will be difficult for newcomers.*”⁶⁴⁵ Another competitor stated: “*Volumes are very important for sustaining investments while it is very difficult getting those volumes from OEMs.*”⁶⁴⁶ A large competitor of the Parties’ in ESVs mentioned in relation to electro-hydraulic steering a need “(...) *to scale the business and allow competitive a cost basis (...)*”⁶⁴⁷. Further, an OEM explains “*Quite mature hydraulic products produced in large scale and with high demands on production setup and know how on control - electric/digital and hydraulic makes steering valves quite complicated for a new starter.*”⁶⁴⁸
- (727) Supporting this, cheap production costs are among the frequently mentioned competitive strengths of Danfoss and Eaton mentioned by OEMs in the market investigation.⁶⁴⁹

(E.) Barriers to entry in relation to product portfolios

- (728) Further, the market investigation showed that a need for a certain breadth of portfolio and variety of configurations constitute a relevant barrier to entry to supply ESVs. The Commission finds that the established strong players in the markets for the supply of ESVs have a broad product portfolio and offer a variety of configurations and customisation, which many customers demand and which make it very difficult to successfully compete with them.
- (729) **First**, a wide product range is one of the most frequently mentioned competitive strengths of Danfoss and Eaton mentioned by competitors and OEMs alike in the market investigation, when asked which strengths these Parties had, which allowed them to be successful on the EEA market.⁶⁵⁰ **Second**, the internal documents of the Parties confirm, that a broad portfolio is significant, see for instance Figure 70 below, [content of internal documents].

Figure 70 – Limited portfolio and weak reputation as weaknesses

[...]

⁶⁴⁴ Replies to question 55.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁴⁵ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁴⁶ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁴⁷ Reply to question 8.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁴⁸ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶⁴⁹ Replies to questions 89.1 and 90 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to questions 55.1 and 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁵⁰ Replies to question 89.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962; replies to questions 55.1 and 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

(F.) Barriers to entry related to a local footprint in sales and distribution as well as in technical and customer support

- (730) Further, a market participant indicated that a certain size of customer support network is important to compete with the Parties in particular as regards larger OEMs. He reported that companies like Danfoss or Rexroth have one or more employees who will work only on the relationship with a single larger OEM like, for instance JCB, in order to “make them happy”. Smaller suppliers were just not able to offer this kind of customer support expected by larger OEMs.⁶⁵¹
- (731) This is supported by the responses of market participants in the market investigation in relation to ESVs. Technical and customer support and service and the sales network are one of the competitive strengths of Danfoss and Eaton more frequently mentioned by OEMs.⁶⁵² Moreover, a manufacturer stressed: “[Among other factors] sales&service network [is] crucial for the suc[c]ess in the market”.⁶⁵³ Another manufacturer explains the reason for which it considers that Chinese manufacturers sell limited quantities and steering units outside China: ‘Moreover, at this point, these manufacturers do not have marketing and sales in EU and US. (...)’⁶⁵⁴
- (732) This is further confirmed by several internal documents of the Parties, for whom a regional footprint/regional access are of key importance, often being one of the key strategic rationales in acquisitions (see above, Section 7.4.5). As shown in Section 7.4.5., illustrated by example of [...], a lack of local footprint/regional access negatively affect market shares and sales.

(G.) Barriers to entry relating to brand recognition

- (733) Further, the market investigation showed that, as is typical for non-commodity markets, brand recognition and past references are important and represent significant barriers to entry for all HPS components, but particularly for ESVs.
- (734) The high significance of branding for the supply of HPS components such as ESVs was confirmed by several of the Parties’ internal documents, see for instance Figure 70 above, [content of internal documents].
- (735) This finding was supported by the results of the Commission’s market investigation. When asked, assuming that a certain new manufacturer is capable of producing ESVs at the required technical and quality level required by its customers, to what extent brand recognition and previous references might represent a barrier to entry, a large majority of competitors that expressed a view considered that brand recognition and previous references are important to their customers and represent important barriers to entry in relation to ESVs.⁶⁵⁵ One competitor stated: “In any kind of products and solutions within the field of hydraulics it is highly difficult to enter new markets. The markets resp. customers are very conservative and it needs a lot of time and ressources to switch the customer from supplier/competitor A to supplier B.”⁶⁵⁶ One competitor links the difficulties of a potential market entrant in recouping the initial

⁶⁵¹ Minutes of a call with a customer, 11.11.2020, DocID2220. This comment was made in a discussion about pumps but the description of the customer support network was a general one, not specific to pumps and relevant for all HPS components.

⁶⁵² Replies to question 55.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁵³ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁵⁴ Reply to question 63.2 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁶⁵⁵ Replies to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁵⁶ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

investment for manufacturing HPS components with brand recognition: “[t]he reason that a [sic] it would be difficult to recoup within a reasonable amount of time is that it will take a long time until a new entrant in the market has a reputation and customer relationships [sic] that are necessary to be commercially suc[c]essful. The market is very traditional and the established [sic] companies all have a reputation and experience in manufacturing [sic] and marketing of hydraulic [sic] products”⁶⁵⁷. The same competitor further explains: “[t]he hydraulics market is a very traditional [sic] as the reliability and the lifetime of the hydraulic components are crucial for the performance of most machines. Experience in design and manufacturing is very important as the power density of hydraulics units is high. Own manufacturing expertise as well as an experience supply base are crucial for suc[c]ess. for a new player in the market it will be extremely difficult for a newcomer to be suc[c]essful in this market. Brand recognition is important to the customers as reliability as well as sales&service network are crucial for the suc[c]ess in the market”⁶⁵⁸. Another competitor explains: ‘(...) Even with large investments in sales, marketing and distribution it will be very difficult for [Chinese] suppliers to enter the European or North American markets as their brand recognition is missing’⁶⁵⁹.

- (736) In line with this, competitors identified “branding”, “brand strength”, a “good reputation”, “customer acceptance”, being “well established and well known hydraulic supplier”, having a “very strong and historic european brand” and a “long tradition in production” most frequently competitive strengths of both Danfoss, which has allowed it to become such a strong player in the EEA, as well as of Eaton, which has allowed it to successfully enter the EEA.⁶⁶⁰
- (737) However, the Commission notes that one competitor indicated that brand recognition is not as relevant in the medium price “Tier 2” segment of the HPS component markets, where there is more price competition compared to the higher priced premium “Tier 1” end of the market. The competitor explains: “Brand recognition and previous references are import to our customers and represent important barriers to entry. Nevertheless, entering companies’ e.g. Chinese companies manage to enter the hydraulic component market over a period of several years based on low cost basis where brand recognition is not too important.”⁶⁶¹
- (738) Further, the finding that branding is a relevant entry barrier to the supply of ESVs in the EEA is supported by OEMs’ responses to the market investigation. One OEM stated in this regard: “OEM usually trust in experienced suppliers more than in new ones.”⁶⁶² Consequently, branding, “well known” components and the “long experience in the market” are one of the more frequently mentioned competitive strengths of Danfoss by OEMs, which have made it such a strong player in the EEA.⁶⁶³

⁶⁵⁷ Reply to question 30.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁵⁸ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁵⁹ Minutes of a call with a competitor on 05.06.2020, DocID0504.

⁶⁶⁰ Replies to questions 89.1 and 90 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁶⁶¹ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁶² Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶⁶³ Replies to question 56.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

(H.) Barriers to entry related to financial investments and resources

- (739) The Commission finds that all of the barriers to entry identified above lead to another significant barrier in terms of the financial investments required. Acquiring expertise and R&D, setting up production in terms of machines and personnel, which is large enough to achieve the necessary economies of scale, offering a large enough product portfolio and variety of configurations as well as establishing the necessary customer and technical support all require huge investments.
- (740) In this regard, a competitor reported that “*Pure hydraulic business is very capital intensive and requires years of development before starting a production*”. Another competitor stated: “*(...) Machinery is expensive.(...)*”.⁶⁶⁴ An OEM explained: “*investments are generally very important in human resources and machines and the ROI is low.*”⁶⁶⁵ Another OEM mentioned: “*Electro-Hydraulic steering products require significant investment and validation, [...]*”.⁶⁶⁶ One competitor explained with regard to electrohydraulic steering: “[...] *Important point is that the majority of the market is today at a. [electro-hydraulic active consisting of an HSU and ESV] with a technical tendency to b. [full steer by wire solutions consisting of one or two ESVs]. Therefore, the total market is only attractive to suppliers offering both solutions to scale the business and allow competitive a cost basis. When market a.) is occupied, market b.) alone is not attractive enough to invest in necessary R&D. For new entrants and smaller suppliers all of these aspects constitute barriers to entry that require large investments in terms of time and cost to overcome.*”⁶⁶⁷
- (741) Asked to provide an estimate of the investment and time required for setting-up a manufacturing for ESVs, while estimates varied, most OEMs who provided numbers expected significant investment costs of more than EUR 10 million and three to five years to set-up the manufacturing.⁶⁶⁸ One competitor assessed: “*many years (>5 years), many millions of EUR, depending on the width of the product portfolio*”. Another competitor added: “*investment for a manufacturing volume of 100.000 electro – hydraulic Steering units (estimated minimum size to justify a manufacturing footprint) is estim[a]ted in the range of 40 mio €*”. Similarly, another competitor estimates: “*We estimate the approximate time about 5 years and several million EUR investment (depending on product portfolio) required for a company to establish a manufacturing facility and enter the market. (...)*” Another competitor assumes: “*Euro 15 millions, 7 years.*” And another competitor: “*2-3years, \$10 million.*”⁶⁶⁹

(I.) Barriers to entry resulting from the maturity of the market, in particular for traditional electrohydraulic steering

- (742) The Commission finds that the maturity of the market for the supply of ESVs in relation to traditional electro-hydraulic steering systems (consisting of an HSU an ESV) is demonstrated by few very strong or even dominant manufacturers with mature products who have overcome the above identified barriers to entry such as economies of scale and breadth of portfolio and who defend their market position, constitutes in itself another barrier to entry.

⁶⁶⁴ Reply to question 8.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁶⁵ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶⁶⁶ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁶⁶⁷ Reply to question 8.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁶⁸ Replies to question 29.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁶⁹ For all quotes from individual replies to question 29.2 of Q4 – Phase I Questionnaire to competitors, DocID1959.

(743) It is very challenging for smaller suppliers to compete against these strong players defending their market positions. In this regard, a large competitor of the Parties' in ESVs mentioned in relation to electro-hydraulic steering that the market for traditional electro hydraulic steering systems with HSUs and ESVs was "occupied", explaining "Therefore, the total [electro-hydraulic steering] market is only attractive to suppliers offering both solutions to scale the business and allow competitive a cost basis. When market [for traditional electro-hydraulic steering with HSUs and ESVs] is occupied, market [for steer-by-wire solutions] alone is not attractive enough to invest in necessary R&D."⁶⁷⁰

(J.) No constraint from potentially OEM sponsored market entries in the foreseeable future

(744) While Sections 8.4.3.7 (A.) to (I.) demonstrate, that market entrance for a new manufacturer of steering units is difficult due to technical, economical and reasons related to purchasing behaviours of OEMs, the present section demonstrates that OEMs are unlikely to become a constraint on the merged entity in the EEA in the foreseeable future with the help OEM sponsoring, for example by awarding a first large contract or by working together on developing products.

(745) **First**, the possibility that a new manufacturer of ESVs successfully enters the market, as for example, following an OEM sponsoring its market entrance, appears limited. The Commission found that, while this happens in single instances, it is not happening frequently. An overwhelming majority of OEMs that replied to the market investigation said that in the past five years they have not sponsored the entrance of a new manufacturer of electrohydraulic steering. Only a single OEM said that they had facilitated such an entry in the past five years.⁶⁷¹ Further, an overwhelming majority of OEMs said that they had no intention to sponsor the entrance of an electrohydraulic steering manufacturer in the next five years. Less than a handful of OEMs indicated that they expected to sponsor such an entry in the next five years,⁶⁷² with only one specifying: "Maybe a Global Sourcing [sic] supplier from asia".⁶⁷³

(746) **Second, and more importantly**, even if an OEM sponsored the market entrance of a new manufacturer, as explained in Section 8.4.3.7 (B.) above, it would take several years for this manufacturer to develop, test and qualify its product, first with the OEM that sponsored its market entry, and then with other OEMs and eventually exert pressure on the merged entity.

(K.) Competitive constraints from Chinese producers nowadays and in the foreseeable future

(747) Relating to potential competition from Chinese suppliers in the EEA in the near future, the market investigation showed that genuine Chinese suppliers (as opposed to Western suppliers producing in China) are unlikely to become relevant players in the supply of ESVs in the EEA in the foreseeable future.

(748) In light of some comments in the Phase I market investigation indicating that competition from Chinese suppliers might be increasing in the future, the

⁶⁷⁰ Reply to questions 8.1 and 33 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁷¹ Replies to question 24 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁷² Replies to question 25 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁷³ Reply to question 25.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

Commission investigated to what extent competition between European and Chinese suppliers for sales of ESVs in the EEA will increase in the foreseeable future.

- (749) The Commission found that (a.) Chinese ESVs are no constraint on the merged entity at present (b.) that an impact of China’s Industrial Policy on the markets for the supply of ESVs is possible but vague and does not seem to concern the Parties’ (c.) that it cannot be excluded that fast internal growth and improvements in quality might make some Chinese products competitive in the foreseeable future but in light of the necessary certifications, testing periods and validations processes they are unlikely to become a relevant constraint on the merged entity in the foreseeable future and (d.) that a “jump-start” through acquisitions cannot be excluded but the Commission did not find any specific indications in this direction.

(a.) Chinese suppliers of ESVs are no constraint on the merged entity at present

- (750) As already discussed above in Sections 7.4.6 and 7.4.8.1 in detail, there is no competition from Chinese suppliers for the sales of ESVs in the EEA at present. As regards ESVs, the Parties did not indicate any sales of Asian suppliers in the EEA throughout 2017 to 2019 at all.⁶⁷⁴ In fact, the Commission could not find any activity of Asian suppliers in the supply of ESVs today at all. This is in line with the Notifying Party’s claim⁶⁷⁵ that they generally do not offer this.

- (751) **Consistently**, an overwhelming majority of OEMs⁶⁷⁶ and distributors⁶⁷⁷ that replied to the market investigation stated that they have never or no more than in single instances purchased ESVs from Chinese suppliers.

(b.) Impact of China’s Industrial Policy on supply of ESVs in the EEA

- (752) A potential impact of China’s Industrial Policy on the supply of ESVs has been discussed in Section 7.4.8.2 above. The Commission considers that, in particular, the priority sectors “agricultural machinery” could allow for support of mobile hydraulic components through the MIC 2025 initiative. However, the Commission did not find any specific evidence of any such government support in relation to ESVs in its investigation. Further, the Commission did not find any concerns of the Parties’ in their internal documents relating to China’s industrial policy, the MIC 2025 or other Chinese government funding in relation to the supply of ESVs in the EEA.

(c.) Relevant constraint in the foreseeable future through internal growth

- (753) It appears even more challenging for Chinese suppliers to gain expertise and knowledge in relation to ESVs compared to HSUs (see Section 8.3.3.7(J)(c.) above), since ESVs are a considerably more difficult product technically and Chinese suppliers do not even appear to offer ESVs at all on any regional market at present. Nevertheless, the Commission found in Section 7.4.8.3 above that it cannot be excluded that Chinese suppliers relatively quickly achieve expertise and know how as well as a level of product quality and technical performance, which will allow it or them to start entering the supply of ESVs overall as well as the EEA market with medium quality ESVs with competitive prices. The Notifying Party claims, that one Chinese supplier is, in fact, already developing an electrohydraulic steering

⁶⁷⁴ Form CO Sections 6 to 9 [Tables 18 to 23].

⁶⁷⁵ Form CO Section 6 to 9, paragraph 269.

⁶⁷⁶ Replies to question 61 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁷⁷ Replies to question 63 of Q15 – Phase II Questionnaire to distributors, DocID1965.

solution.⁶⁷⁸ The Commission did not find conflicting evidence to this and considers it plausible in light of the overall growth and improvement and ambitions of Chinese manufacturers. As discussed in the Section 7.4.8.3, moreover, there are indications that brand recognition might not be as high a barrier in the medium quality segment as it is in relation to the premium “Tier 1” products.

- (754) **However**, based on the arguments put forward in Section 7.4.8.3, the Commission finds that even if Chinese suppliers started producing competitive products which are compatible with EEA preferences within the foreseeable future and would attempt to enter the EEA market (which is not a given, considering the growth opportunities in their Chinese home market and neighbouring Asian countries), in any case, they would not become a competitive constraint on the merged entity in the foreseeable future in light of the long certification/homologation, redesigning, testing and validation processes all of which delay market entry (see Section 7.4.8.3 and 8.4.3.7 (B.)). As explained in Section 8.4.3.7, new entrants, and, therefore, also new entrants established in China, would face important barriers to entry with the results that, at best, it would take several years until their sales to the EEA can reach a level to be considered a competitive constraint to the Parties.
- (755) Furthermore, and in addition to market entrants located in the EEA, Chinese manufacturers might face additional difficulties related to their distance from the EEA. For example, several customers and distributors, when asked for barriers to market entry, responded that delivery times are relevant barriers. These disadvantages can be offset by good logistics and warehouses in the EEA and/or a good sales force and distribution network in the EEA, but this would require additional investments into supply chain and inventory management, which would likewise cause delays in market entry (see above Section 7.4.4).
- (756) This finding is broadly supported by views and expectations of competitors and distributors expressed in the Commission’s market investigation. The results of the market investigation indicate that EEA competitors and distributors do not expect Chinese suppliers to offer the required quality within the next five years. As regards the ESVs, a large majority considers that Chinese suppliers will be inferior to the Parties in the next three to five years.⁶⁷⁹ Further, of those OEMs and distributors who had purchased from Chinese suppliers a large majority said they would not purchase from them again.⁶⁸⁰ Those market participants who provided a reason for this said they had issues with quality and performance/efficiency of the components.⁶⁸¹ While this was not in relation to ESVs, which are not yet offered by Chinese manufactures on any regional market, the overall impression OEM’s have of Chinese HPS components is likely to also affect EEA OEMs’ sourcing of ESVs from Chinese manufacturers in the future. Further, a large majority of distributors who took a view said that they will not consider Chinese suppliers within the next three years.⁶⁸² One distributor commented in this regard: “*We deal with medium to premium products and chinese products are not medium yet. They will come there within 5-7 years.*”⁶⁸³

⁶⁷⁸ Form CO Section 6 to 9 on steering, paragraph 269.

⁶⁷⁹ Replies to question 37 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁸⁰ Replies to question 61.1 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964; replies to question 63.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁶⁸¹ Replies to question 61.2 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁸² Replies to question 63.3 of Q15 – Phase II Questionnaire to distributors, DocID1965.

⁶⁸³ Reply to question 63.3.1 of Q15 – Phase II Questionnaire to distributors, DocID1965.

(d.) Relevant constraint in the foreseeable future through external growth

- (757) As discussed in detail in Section 7.4.8.4 above, the Commission cannot exclude that Chinese companies might try to enter the EEA market for the supply of inter alia ESVs through acquisitions of other companies or IP in the foreseeable future. There are several past examples in neighbouring HPS component markets of this happening. The Commission therefore considers that there is a certain likelihood that this might be a viable strategy for Chinese manufacturers in relation to ESVs. However, the Commission does not have any specific indication that Chinese manufacturers might try to enter the markets for ESVs in the EEA through acquisitions of an established competitor active in this field, which would give the Chinese company a jump-start not just in relation to knowhow and expertise, but also regional access and brand recognition. Further, funding of any such foreign acquisition scenario by the Chinese Government, while it cannot be excluded, appears rather vague. In light of the fact that the vehicle related priority is focussed on “new-energy vehicles and equipment” (see Section 7.4.8.2 above), a Chinese government funded acquisition appears more likely in relation to pure electronic solutions. Overall, the Commission considers that this scenario, while it cannot be excluded, is too vague as to conclude that a Chinese company or companies are likely to become a constraint on the merged entity in relation to the supply of ESVs in the EEA in the foreseeable future.

Conclusion on constraints from Chinese suppliers

- (758) Overall, the Commission considers that, while it cannot be completely excluded, in light of the results of the market investigation and other evidence, Chinese companies are unlikely to become relevant constraints on the merged entity in relation to the supply of ESVs in the EEA in the foreseeable future.

(L.) Conclusion on barriers to entry for ESVs

- (759) In line with the above findings, ESVs are among the HPS components most often identified by competitors as being among the top three HPS components with the highest barriers to entry for a new manufacturer.⁶⁸⁴
- (760) In light of the findings in Section 8.4.3.7 (A.) to (K) above, the Commission preliminarily concludes that there are several exceptionally high barriers to entry to supply ESVs, which prevent new entrants, or potentially expanding suppliers, from being able to constrain the merged entity post-Transaction.

8.4.3.8. The Transaction is likely to result in higher prices and affect other parameters of competition

- (761) Based on the Commission’s assessment of the horizontal overlap for ESVs and the feedback received from market participants, the Transaction will likely lead to an increase in prices for ESVs in the EEA and reduce the number of alternative suppliers for OEMs.
- (762) **First**, due to the merged entity’s dominant market position and the concentrated structure of the market for ESVs, the Transaction is likely to result in higher prices and reduced number of alternative suppliers. The Transaction would lead to the combination of two close competitors for ESVs in the EEA with a very high combined market share well above [50-60]% (in value above [60-70]%). The market for ESVs is highly concentrated and many customers regard Danfoss and Eaton as

⁶⁸⁴ Replies to 33 of Q4 – Phase I Questionnaire to competitors, DocID1959.

the only direct competitors for ESVs based traditional steering solutions where the Parties would be left with no or no meaningful competition post-Transaction. It can be assumed that this position, market structure and lack of competitive constraints will allow the Parties to impose or generate significant price increases for ESVs in the EEA.⁶⁸⁵

- (763) **Second**, market participants confirmed the view that the Transaction would have negative effects on competition and in particular on prices for ESVs.
- (764) When asked “*What will be the impact of the Transaction on prices for electrohydraulic steering*”, a majority of customers⁶⁸⁶ and competitors⁶⁸⁷ that expressed a view considered that the impact will be a price increase.
- (765) Several market participants expressed concerns about the impact of the Transaction for ESV market. For example, a competitor explains: “*Very high risk of monopoly in electric steering units and respectively this could bring to possibility to "control" the prices of all the hydraulic components*”⁶⁸⁸. Another competitor explain that the negative impact of the transaction is due to the already limited level of competition for ESVs in the EEA “*Negative impact for hydraulic and electrohydraulic [sic] steering systems, because of little competition in the EEA.*”⁶⁸⁹
- (766) **Third**, the merged entity might leverage its patents/IP portfolio to phase out older products and offer higher priced IP-protected products. As explained by a competitor “*In the industry, only Danfoss (including the acquired HNF Hydraulik Nord Fluidtechnik), Eaton and Ognibene have invested in the electro-hydraulic steering. After the transaction, the combined IP of Danfoss, HNF, Eaton will result in a IP pyramid (or fence) which sealed off such technology and therefore slowing down or blocking segments of the market. Through such pyramid (or fence) the entity will protect all potential uses and similar ideas for the same scope.*

As the concentration will essentially result in a merger to monopoly in relation to a portion of demand, it will make possible to exploit such IP rights with a phase-out of old products and offer of newer, IP-protected, high-priced products.”⁶⁹⁰

8.4.3.9. Conclusion on the competitive assessment for ESVs

- (767) Based on the above, the view of the Commission is that the Transaction could lead to a significant impediment of effective competition on the EEA market for ESVs, in particular by the creation of a dominant position. The Transaction would lead to the combination of two close competitors for ESVs in the EEA with combined market shares well above [50-60]% and very limited competitive constraints from competitors, other electrohydraulic steering technologies, potential new market entrants or customers.

8.5. Horizontal overlap for orbital motors

- (768) Both Danfoss and Eaton develop, manufacture and sell orbital motors for mobile applications.

⁶⁸⁵ See also Horizontal Merger Guidelines, paragraph 28.

⁶⁸⁶ Replies to question 61 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁶⁸⁷ Replies to question 28 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁶⁸⁸ Reply to question 45.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁸⁹ Reply to question 45.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁶⁹⁰ Reply to question 45.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

(769) In this section, the Commission will present the market structure and market shares (Section 8.5.1) the Notifying Party's arguments (Section 8.5.2) and finally, the Commission's assessment (Section 8.5.3).

8.5.1. *Market shares and HHI indicate that the Transaction would lead to the creation of a dominant position in the market for orbital motors in the EEA*

(770) According to the market shares and HHI values, already pre-Transaction Danfoss has a very strong, possibly dominant, position in a highly concentrated market for orbital motors in the EEA. By adding Eaton, Danfoss' market position would become even stronger and lead not only to a dominant position of the Parties, but also result in an even higher concentration of an already highly concentrated market.

8.5.1.1. Relevance of market shares in the market for orbital motors

(771) For the reasons explained in Section 8.2, the Commission does not agree with the Notifying Party's claim that market shares are not indicative of market power.⁶⁹¹

(772) Particularly for orbital motors, as explained in Section 8.2.1, market shares in the last five years appear to be relatively stable (see also Section 8.5.1.2 below for market shares of the last 3 years according to the Commission's market reconstruction), thus indicating that the market is not characterised by lump and large bids which could individually change market shares from year to another.

(773) Furthermore, as explained in Section 8.2.1, the Parties' competitors in orbital motors indicated that the market characteristics appear to have elements that are typical of both bidding markets and bilateral negotiations.

(774) Therefore, consistently with the Horizontal Merger Guidelines, for the sake of the assessment of the market for orbital motors in the EEA, the Commission considers that "[...] *very large market shares - 50 % or more - may in themselves be evidence of the existence of a dominant market position*".⁶⁹²

8.5.1.2. Market shares

(775) The Notifying Party provided estimates market shares for the years 2017-2019.⁶⁹³ According to these estimates, in 2019, Danfoss' market share in value and in volume were, respectively [50-60]% and [40-50]%, and the respective Eaton's market shares were [10-20]% in value and [5-10]% in volume. In terms of combined market shares, the merged entity in 2019 would have [60-70]% in value and [50-60]% in volume.

(776) The Notifying Party explained that, due to the lack of knowledge of its competitors' sales, its estimations of these sales are subject to a number of assumptions and approximations. For example, sales of its competitors are computed by estimating demand of orbital motors of each manufacturing plant of the most-known OEMs.⁶⁹⁴

(777) Therefore, the Commission enquired sales data from the Parties and from their competitors and reconstructed market shares accordingly.

(778) Table 9 shows the results of the Commission's market reconstruction for the EEA market shares in value for the years 2017-2019, and Table 10 shows the respective

⁶⁹¹ Form CO Sections 6 to 9 For motors, paragraphs 300-304; Reply to 6(1)(c) Decision, paragraphs 20-21, and 60; Reply to the SO, section D.I.

⁶⁹² Horizontal Merger Guidelines, paragraph 17.

⁶⁹³ Reply to pre-notification request for information RFI PN 2, Annex D.36_1.

⁶⁹⁴ Form CO, Annex Motors_VI_1, 'NERA Summary of methodology for calculation of market sizes and shares'.

market shares in volume. By comparing the Notifying Party's estimates with the Commission's market reconstruction, it appears that the Notifying Party overestimated the Parties' market shares in value, whereas it underestimated those in volume.

Table 9 – EEA market share in value of orbital motors for the years 2017-2019

	2017		2018		2019	
	Sales ('000s EUR)	Market Share	Sales ('000s EUR)	Market Share	Sales ('000s EUR)	Market Share
Danfoss	[...]	[40-50]%	[...]	[40-50]%	[...]	[40-50]%
Eaton	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Combined	[...]	[60-70]%	[...]	[60-70]%	[...]	[60-70]%
Dana Brevini	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Hesper	[...]	[0-5]%	[...]	[0-5]%	[...]	0.00%
M+S Hydraulic	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Parker	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Zhenjiang	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Zihyd/thoth	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Others	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Total	[...]	100.0%	[...]	100.00%	[...]	100.0%

Source: Commission's market reconstruction

Table 10 – EEA market share in volume of orbital motors for the years 2017-2019

	2017		2018		2019	
	Sales	Market Share	Sales	Market Share	Sales	Market Share
Danfoss	[...]	[40-50]%	[...]	[40-50]%	[...]	[40-50]%
Eaton	[...]	[5-10]%	[...]	[5-10]%	[...]	[5-10]%
Combined	[...]	[50-60]%	[...]	[50-60]%	[...]	[50-60]%
Dana Brevini	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Hesper	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
M+S Hydraulic	[...]	[20-30]%	[...]	[20-30]%	[...]	[20-30]%
Parker	[...]	[5-10]%	[...]	[5-10]%	[...]	[5-10]%
Zhenjiang	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Zihyd/thoth	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Others	[...]	[5-10]%	[...]	[5-10]%	[...]	[5-10]%
Total	[...]	100.0%	[...]	100.0%	[...]	100.0%

Source: Commission's market reconstruction

(779) Table 9 and Table 10 indicate that the Transaction would lead to combined market shares well above [50-60]% for both market shares in value and in volume. Referring

to 2019, the merged entity market share in value would be [60-70]% and the market share in volume would be [50-60]%. As explained in Sections 8.2 and 8.5.1.1, market shares of such level are a clear indicator for the creation of a dominant position.

- (780) After the Transaction, the merged entity’s competitors would have market shares well below those of the merged entity. With respect to the year 2019, all but two (i.e. Parker Hannifin and M+S Hydraulic) of the merged entity’s competitors would have market shares (both in value and in volume) below 5%. Both Parker Hannifin’s and M+S’ market share in value in 2019 are [10-20]%, whereas for market shares in volume, Parker Hannifin has a market share of [5-10]% and M+S Hydraulic has [20-30]%.
 (781) This means that after the Transaction, the Parties’ next competitor, namely M+S Hydraulic, would have market shares in value and in volume that are more than 3 to 6 times lower than those of the Parties. Furthermore, after the Transaction, between [70-80]% and [80-90]% of the EEA demand for orbital motors in value (and between [70-80]% and [80-90]% in volume) would be satisfied by the Parties plus M+S Hydraulic.
 (782) Table 9 and Table 10 also show that in the last 3 years market shares have been relatively stable, with only minor changes from one year to another.
 (783) If the individual market shares of Danfoss are assessed, it appears that in the years 2017-2019, Danfoss has been enjoying consistently high market shares both in value and in volume, which are above or slightly below [50-60]%. This suggests that pre-Transaction, Danfoss had a leading, if not dominant position in the EEA market for orbital motors.

8.5.1.3. HHI levels

- (784) In terms of market concentration, as Table 11 indicates, after the Transaction, the already high HHI (which pre-Transaction is [3000-4000] if market shares in value are considered, and [2000-3000] if market shares in volume are considered) would have an increment of [1000-2000] referring to market shares in value and of [0-1000] referring to market shares in volume.
 (785) These increments would lead to post-Transaction HHI of [4000-5000] if market shares in value are considered and of [4000-5000] if market shares in volume are considered.
 (786) These values are well above the HHI levels defined in the Horizontal Merger Guidelines under which the Commission is normally unlikely to identify horizontal competition concerns (i.e. a delta below 150 with a post-merger HHI above 2 000).⁶⁹⁵

Table 11 – HHI referred to EEA market shares in value and in volume for the year 2019

	HHI Value	HHI Volume
Pre-Transaction	[3000-4000]	[2000-3000]
Post-Transaction	[4000-5000]	[3000-4000]
Delta	[1000-2000]	[0-1000]

Source: Commission’s market reconstruction

⁶⁹⁵ Horizontal Merger Guidelines, paragraph 20.

8.5.1.4. Conclusions on market shares and HHI

- (787) Based on market shares and HHI values, the Transaction would result in the creation of a dominant position and an even higher concentration of an already highly concentrated market.
- (788) According to the Horizontal Merger Guidelines, very large market shares – 50% or more – may in themselves be evidence of a dominant position.⁶⁹⁶ As such, the Transaction will lead to the creation of a dominant position with combined market shares of [60-70]% in value and [50-60]% in volume. The increment in market shares is sizeable with [10-20]% in value and [5-10]% in volume.
- (789) In terms of market concentration, the Transaction would lead to HHI well above the threshold of 2000 and delta of 150, i.e., considerably above the thresholds for which the Commission is normally unlikely to find competition concerns. Indeed the HHI values suggest that the market is very concentrated pre-Transaction and it will become considerably more concentrated post-Transaction.

8.5.2. *The Notifying Party's arguments*

- (790) Notwithstanding the large combined market shares of the Parties and the highly concentrated nature of the market for orbital motors, the Notifying Party indicated that the Transaction would not raise competition concerns in relation to orbital motors mainly because:⁶⁹⁷ (i) in the bidding market for orbital motors, intensity of competition is driven by the number of credible bidders, rather than by their market shares; (ii) in differentiated markets, market shares are poor indicators of market power; (iii) Eaton is not a significant constraint on Danfoss because its market shares in the EEA are relatively small; (iv) competition from existing suppliers of orbital motors, from OEMs' capability to manufacture orbital motors, as well as from other motor types exerts a significant competitive constraint on the Parties; (v) customers can easily switch suppliers; (vi) there are a number of potential competitors because barriers to entry are low; and (vii) customers have a high degree of countervailing buyer power.
- (791) The Notifying Party argues that the Transaction does not raise competition concern in any narrower part of the market for orbital motors because, if a distinction by sales channels is made, the Parties' combined market share is smaller for sales through distributors (which are claimed to have sufficient countervailing buyer power),⁶⁹⁸ whereas for direct sales to (large) OEMs (for which the combined market share is larger) any attempt to price increase would be offset by the buyer power of these OEMs.⁶⁹⁹ The Notifying Party also argues that the differentiated market for orbital motors should be assessed at market segment level (as for example, at the level of motors of swing functions of excavators, or orbital motors sold through distributors, etc) and considers that elements such as overlaps, closeness of competition, countervailing buyer power, etc should be assessed for each segment, as opposed for the overall market.⁷⁰⁰
- (792) In the Orbital Motors Advocacy Paper, based on analyses of product data (focusing on the speed and torque of motors of different technologies and manufacturers), the

⁶⁹⁶ Horizontal Merger Guidelines, paragraph 17.

⁶⁹⁷ Form CO Section 6 to 9 for orbital motors, paragraphs 299-374; Reply to SO, paragraphs 113-119.

⁶⁹⁸ Reply to the SO, paragraphs 182-183.

⁶⁹⁹ Reply to 6(1)(c) Decision, paragraphs 47-49; Reply to the SO, paragraphs 163-179.

⁷⁰⁰ Reply to the SO, paragraphs 116-184.

Parties' Opportunity Data, additional economic evidence and a price comparison, the Notifying Party further argues that significant across-technology competition for orbital motors exists and that the Parties do not compete closely.

8.5.3. *The Commission's assessment*

8.5.3.1. Competitive assessment for the differentiated market at hand

(793) In the Reply to the SO,⁷⁰¹ the Notifying Party argues that in the differentiated market for orbital motors “[...] a distinct competitive analysis for each of the sub-segments of swing and track drive orbital motors, medium power orbital motors, low power orbital motors, orbital motors directly sold to OEMs, and orbital motors sold to distributors is required. In contrast, any analysis that directly jumps at means of evidence relating to the situation in the overall market is uninformative because it is not capable of reflecting the actual competitive forces in the differentiated market for orbital motors”. More generally, the entire Section D of the Reply to the SO considers that the assessment that the Commission performed in the SO for the overall market for orbital motors, which include calculation of market shares, analysis of opportunity data and the effect of competition from other motor technologies, should have been performed for each individual market sub-segment only and not for the overall market for orbital motors.

(794) The Commission maintains that in a differentiated market it is appropriate to first conduct an assessment of the overall relevant market, and, only as a second step, to deep-dive into specific parts of the markets. Such a second step is required because for certain parts of the markets competition concerns might be more pronounced due to their specific conditions of competitions. This approach is consistent with the Horizontal Merger Guidelines⁷⁰² and it has been previously applied by the Commission in cases where a significant impediment to effective competition was identified,⁷⁰³ as well in cases where no competition concern was found.⁷⁰⁴

(795) Furthermore, in cases like the case at hand which involve a highly concentrated market with combined market shares in excess of [50-60]% (volume) and [60-70]% (value) – see Section 8.5.1, competition concerns cannot be removed by simply selecting certain segments of the market and highlighting alleged mitigating factors such as across-technology competition or countervailing buyer power in these segments. Looking at segments of a differentiated market has one main purpose – that is to determine the degree of substitutability between the merging firms' products. It is neither required nor meaningful to assess each market segment as an own market.

8.5.3.2. The Parties are close competitors

(796) The Commission finds that the Parties compete closely in the already highly concentrated market of orbital motors in the EEA. Both Parties offer a large portfolio of different orbital motors for a wide and to a great extent overlapping range of application areas. OEMs view the Parties as the two strongest suppliers of orbital

⁷⁰¹ Reply to the SO, paragraph 115.

⁷⁰² Horizontal Merger Guidelines, paragraph 28.

⁷⁰³ See for example, M.8900 - Wieland/ARP/Schwermetall and M.8084 - Bayer/ Monsanto.

⁷⁰⁴ See for example M.8909 KME/MKM.

motors in terms of quality, reliability, brand reputation and breadth of portfolio.⁷⁰⁵ These findings are based on the Commission’s market investigation and the Commission’s economic analysis.

- (797) Contrary to what the Notifying Party appears to claim,⁷⁰⁶ in the case at hand the Commission is not required to show that the Parties are the closest competitors in order to find a significant impediment to effective competition. Recent decisions discussing the required degree of closeness of competition related to cases which did not result in a dominant position based on market shares (so called “gap cases”).⁷⁰⁷ This Transaction is not a “gap case” as it would result in the creation or strengthening of a dominant position based, *inter-alia*, on the Parties’ market shares (see Section 8.5.1.2). According to the Horizontal Merger Guidelines, closeness of competition may be one of many factors when assessing non-coordinated effects in a differentiated market.⁷⁰⁸ In the case at hand, closeness of competition is only discussed because orbital motors could be viewed as differentiated products.
- (798) Closeness of competition depends on the substitutability between the merging firms’ products. The higher the degree of substitutability, the more likely it is that the merging firms will raise prices significantly. For example, a merger between two producers offering products which a substantial number of customers regard as their first and second choices could generate a significant price increase. Thus, the fact that rivalry between the merging firms has been an important source of competition on the market may be a central factor in the analysis for both differentiated and homogeneous products.⁷⁰⁹

Danfoss is a market leader in orbital motors covering all application areas

- (799) According to its own website Danfoss is “*offering [...] the most comprehensive orbital motor portfolio on the market*” with an “*expansive*” product line “*meeting the needs of virtually any application*”.⁷¹⁰ Danfoss offers various orbital motor models, which vary in characteristics such as displacement, speed, torque, and power. Based on market intelligence provided by the Notifying Party, Danfoss sells orbital motors for [...] out of [...] identified applications (machine types) within the application groups making up 80% of the overall value of the EEA market for orbital motors.⁷¹¹ Danfoss’ orbital motor portfolio consists of modular platforms which can be adapted a various applications and may be categorized as follows:
- (a) Orbital X: orbital motors for light- to medium-duty applications such as sweepers and scrubbers, harvesters, mowers and forklift trucks. These motors are meant to replace certain existing Danfoss’ orbital motor portfolio. Currently, Orbital X includes OMP X and OMR X, which replace OMP and OMR orbital motors, which are part of the O-series.

⁷⁰⁵ Replies to questions 7, 29, 30, 57 and 58 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁰⁶ Orbital Motors Advocacy Paper, paragraph 54.

⁷⁰⁷ For instance, EGC, T-399/16 – *CK Telecoms*.

⁷⁰⁸ Horizontal Merger Guidelines, paragraph 28.

⁷⁰⁹ Horizontal Merger Guidelines, paragraph 28.

⁷¹⁰ DocID3101, website <https://www.danfoss.com/en/products/motors/dps/orbital-motors/>.

⁷¹¹ See Section 6.5.3.2 and reply to post-notification request for information RFI 9, [Annex B.9_2, Excel file “orbital MS by machine”].

- (b) O-series: orbital motors for small to large, medium to heavy-duty applications, e.g., forklift trucks, turf care machinery, aerial lifts, winches, harvesting and planting equipment, sweepers and spreaders.
 - (c) T-series: orbital motors for propel and work functions, e.g., skid steer loaders, trench compactors, forestry harvester heads and beet harvesters.
 - (d) W-series: orbital motors for low to medium-duty cycle applications
 - (e) R-series: orbital motors low flow high pressure applications, e.g., aerial work platform, turf care mower and propulsion.
- (800) In the EEA, Danfoss sells by far more orbital motors than any of its competitors with market shares of around [50-60]% (see Section 8.5.1.2). Danfoss’ market leading position for orbital motors was confirmed by the Commission’s market investigation. A large majority of the responding OEMs regarded Danfoss as a very strong or strong supplier of orbital motors.⁷¹² A large majority of the respondents stated that they purchased a large share of their orbital motors in the EEA from Danfoss in the past five years.⁷¹³ A large majority of the respondents said they would purchase a large share of their orbital motors in the EEA in the coming three to five years from Danfoss.⁷¹⁴
- (801) Danfoss’ market leading position extends beyond sales data to the portfolio breadth, reputation and quality of its orbital motors. One OEM “*considers Danfoss for orbital motor as the best world producer for quality, technical competency and motor efficiency*”.⁷¹⁵ Another European OEM stated “*Danfoss portfolio is quite extended and, in most cases, has defined some standard. Quality and durability are among the best in the market especially [sic] compared to Asian supplier that often are referring their product to the equivalent Danfoss product family.*”⁷¹⁶ Overall, many OEMs highlight Danfoss’ “*extensive orbital motor portfolio*” and “*range of offers*”.⁷¹⁷

Eaton is an important supplier of orbital motors

- (802) Eaton is a market leader for orbital motors in the United States and an important supplier of orbital motors in the EEA. Eaton sells orbital motors for [...] out of [...] identified applications (machine types) within the application groups making up 80% of the overall value of the market for orbital motors in the EEA.⁷¹⁸ Eaton’s orbital motor portfolio consists of the following two product lines:
- (a) Eaton’s “standard line” Xcel products are low speed high torque motors used for lower to medium duty functions. Eaton advertises the ideal applications of its Xcel motors as aerial work platforms, augers, conveyors, food processing, harvesters, machine tools, spreaders, turf care equipment and winches as well as salt and sand spinners, street cleaner brushes, car washes, combine reel drives, feed-grinding augers, auger swing drives, stake-down motors, post-hole drives.

⁷¹² Replies to question 5 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
⁷¹³ Replies to question 32 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
⁷¹⁴ Replies to question 33 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
⁷¹⁵ Reply to question 4 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
⁷¹⁶ Reply to question 4 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
⁷¹⁷ Replies to question 4 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.
⁷¹⁸ See Section 6.5.3.2 and reply to post-notification request for information RFI 9, [Annex B.9_2, Excel file “orbital MS by machine”].

- (b) Eaton’s “premium line” Char-Lynn products are offered for low, medium and high pressure applications and include a wide variety of available displacements customisable specifically for application needs.
- (803) In the Commission’s market investigation half of the respondents described Eaton as a very strong or strong supplier of orbital motors, whereas the other half of the respondents described Eaton as an average supplier of orbital motors.⁷¹⁹ A European OEM considers Eaton a “*premium brand*” for orbital motors and a “*forerunner in manufacture of the orbital motor*”.⁷²⁰ An OEM with a significant market presence in the EEA describes Eaton as a “*market leader*” for orbital motors.⁷²¹ Another European OEM considers Eaton a “*well known player*” on the market for orbital motors.⁷²²

The Parties compete closely in the EEA market for orbital motors

- (804) In addition to the Parties’ high market shares, their strong market position and the highly concentrated nature of the market for orbital motors, there are number of reasons, which show that the Parties’ compete closely, namely:
- (a) according to their Opportunity Data the Parties compete for a large number of orbital motors ‘opportunities’;
 - (b) market participants view the Parties’ orbital motors as largely substitutable;
 - (c) when differentiating the market along parameters such as application, power level and sales channel, the Parties overlap and compete closely for many segments of the market, often even closer compared to the overall market for orbital motors;
 - (d) the Parties are the top two suppliers of orbital motors in terms of portfolio breadth, quality and brand reputation with a similar price level and therefore compete particularly closely in the ‘high-end’ segment of the market;
 - (e) the Parties’ implied market shares, which are based on the Parties’ diversion ratios and can be regarded as a proxy for the Parties’ shares in the product space in which they currently compete and also account for out-of-market constraints, show that Danfoss and Eaton compete closely on the market for orbital motors; and
 - (f) internal documents of the Parties provide ample evidence that Danfoss and Eaton often compete for supplying orbital motors to the largest OEMs in the EEA.
- (805) These factors are explained in detail below and indicate that post-Transaction the Parties’ position in certain segments of the market will be even stronger than the market shares stated in Section 8.5.1.2 suggest.
- (806) **First**, the Commission’s analysis of the Opportunity Data provided by the Notifying Party indicates that Danfoss and Eaton are close competitors.⁷²³ According to this analysis, Eaton is the second most frequently identified main competitor to Danfoss behind M+S Hydraulic for orbital motors in the EEA. Specifically, for [...] % of the

⁷¹⁹ Replies to question 8 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²⁰ Reply to question 32 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²¹ Reply to question 7 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²² Reply to question 7 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²³ See Annex I.

orbital motor opportunities in value won by Danfoss in 2019 in the EEA, Eaton was Danfoss' main competitor. On a global level, Eaton was Danfoss' most frequently identified main competitor, namely for [...] % of the orbital motor opportunities won by Danfoss in value. Taking wins by Eaton as a reference, Danfoss was Eaton's most frequently identified main competitor for [...] % of the EEA orbital motor opportunities in value (third most frequently identified main competitor) and [...] % of the global opportunities in value (second most frequently identified main competitor).

- (807) The analysis of the Opportunity Data shows that while Eaton and Danfoss are not necessarily each other's absolute closest competitors (at least in the EEA), they are nevertheless competing closely in large segments of a differentiated market.
- (808) **Second**, feedback received from the market investigation suggests that the Parties' products are largely substitutable and seen as in competition with each other. A majority of customer respondents suggested that the Parties' products were similar and could be substituted to a certain extent; while a majority suggested they were very similar.⁷²⁴ An OEM stated that Eaton has a "*similar [orbital motor] offering compared to Danfoss*".⁷²⁵
- (809) In addition, a large majority of the OEMs confirmed that in the past five years they considered both Danfoss and Eaton as potential suppliers of orbital motors.⁷²⁶ One OEM stated: "*We normally buy only from Danfoss and Eaton*".⁷²⁷ Another customer described Danfoss and Eaton as "*the unavoidable suppliers for orbitals motors*".⁷²⁸ For another respondent Danfoss and Eaton are "*the only two fully-approved supplier [sic] for most of our applications*".⁷²⁹
- (810) Meanwhile, a large majority of competitors responded that the Parties' products were very similar and compete closely with one another.⁷³⁰ One respondent explained: "*On the steering systems and orbital [sic] motors there high level of similarity as nearly identical products. Also on the valve side there is a high level of similarity*".⁷³¹
- (811) **Third**, when differentiating the market for orbital motors along parameters such as application, speed level or sales channel, the Parties compete closely for many of these segments, often even closer compared to the overall market for orbital motors. One way of assessing closeness of competition in a differentiated market is by looking at the overlaps of the Parties' activities in narrower segments of the market where potentially a higher degree of substitutability persists compared to the overall market. As explained in Section 6.5.3 there are no indications that any of these segments can be considered as separate product markets. The only purpose of this segmentation is therefore to show that the Parties' activities overlap particularly within narrower segments of the market, which in turn is an indication for closeness of competition.

⁷²⁴ Replies to question 20 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID 1956.

⁷²⁵ Reply to question 7 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²⁶ Replies to question 29 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²⁷ Reply to question 29 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷²⁸ Reply to question 29.1 of Q13 – Questionnaire to orbital motors OEMs, DocID1963. Courtesy translation of the original text in French: "*des acteurs incontournables des Orbitols*".

⁷²⁹ Reply to question 13 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷³⁰ Replies to question 19 of Q4 – Phase I Questionnaire to competitors, DocID 1959.

⁷³¹ Reply to question 19.1 of Q4 – Phase I Questionnaire to competitors, DocID 1959.

- (812) *Differentiation by application:* When differentiating the market for orbital motors by application (i.e. the machine the orbital motor is used for), the Parties’ activities overlap for most of them. This indicates that the Parties focus and compete for the same, or at least very similar, applications.
- (813) As explained in Section 6.5.3.3, the Commission finds that the market for orbital motors may be differentiated by application, i.e. the machine the orbital motor is used for. Within the most important orbital motor application groups making up 80% of the overall value of the EEA market for orbital motors (as described in Section 6.5.3.2 and shown in Figure 16, in the following referred to as the “Main Market”), Danfoss sells orbital motors for [...] different applications.⁷³² Eaton sells orbital motors for [...] different applications within the Main Market, which all overlap with the applications where Danfoss is active. When comparing the value of these overlap applications to the overall size of the Main Market, the activities of Danfoss and Eaton would overlap on [...]% of the Main Market. Based on allMID data, Danfoss’ internal market intelligence, the overlap applications make up [...]% of Danfoss’ overall orbital motor sales on the Main Market and all of Eaton’s orbital motor sales on the Main Market. The “next close” competitor, M+S Hydraulic, overlaps with Danfoss on [...]% of the Main Market ([...] applications with less volume).⁷³³

Figure 71 – Overlaps of activities on the main application areas for orbital motors in the EEA

[...]

Source: Commission, based on reply to post-notification request for information RFI 9, Annex_B.9_2.

- (814) The overlap applications of Eaton and Danfoss include some of the largest and most important applications for orbital motors, for example, ‘Screening & Crushing’, ‘Sweeper & Scrubber’ and ‘Aerial Lift-Boom’. For most of the overlap applications, for example, ‘Screening & Crushing’, ‘Sweeper & Scrubber’, ‘Aerial Lift-Boom’, ‘Paver-Asphalt’ and four ‘Harvester’ applications, there would only exist one credible supplier as an alternative to the merged parties in the EEA after the Transaction, thereby reducing the number of competitors from three to two. This very limited competition for each of the application groups is further detailed in Section 8.5.3.4 below.
- (815) The Notifying Party argues that the Parties are not closely competing for so-called swing and track drive orbital motors. These motors are mainly used for excavators, which have been included as an overlap application in Figure 71. The Notifying Party [confidential market data].⁷³⁴ Responses in the Commission’s market investigation to this end were inconclusive. One competitor described the market position of Danfoss’ orbital motors for swing and track applications as “*strong*”, according to another competitor “*Eaton and Danfoss together have a dominate share (>60%) of the mini excavator market for swing and track*”.⁷³⁵ Another competitor is, however, not aware of Danfoss selling orbital motors for excavators (i.e. the main

⁷³² I.e., records any sales.

⁷³³ Reply to post-notification request for information RFI 9, Annex B.9_2, Excel file “orbital MS by machine”.

⁷³⁴ Orbital Motors Advocacy Paper, Section III.1., Reply to the SO, Section D.II.1.

⁷³⁵ Replies to question 21 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

application of swing and track drive orbital motors).⁷³⁶ Similarly mixed responses were given by Danfoss' competitors when asked about Danfoss' ability to penetrate the swing and track market. Whereas one competitor saw no difficulty, another one described obstacles due to Danfoss' lack of application knowledge and experience in the excavator market.⁷³⁷ Even if one were to exclude the entire 'Excavator' application area, which might well include other orbital motors than swing and track drive orbital motors, from the overlap analysis in Figure 71, the application overlap of Eaton and Danfoss would still make up [...] % of the Main Market.

- (816) *Differentiation by application-function:* In the Orbital Motors Advocacy Paper⁷³⁸ as well as the Reply to the SO⁷³⁹, the Notifying Party submits that the orbital motor sales of the Parties overlap only to a limited extent in terms of the application-functions they serve. For this analysis, the Notifying Party sub-segments the market for orbital motors not only into different applications, but each application further into application-functions (for example: orbital motors for propelling an excavator, or an orbital motor for swinging the excavator main body). According to the data provided by the Notifying Party, [...] % of Danfoss' volume-based orbital motor sales in the EEA in 2019 and [...] % of Eaton's are made on application-functions that overlap.
- (817) In the Reply to the SO,⁷⁴⁰ the Notifying Party argues that the application-function sub-segmentation of the market for orbital motors is meaningful and warranted and in particular, more appropriate than the more aggregate segmentation at the level of application used in the analysis shown in Figure 71. As explained in Section 8.5.3, the segmentation of a differentiated market only serves as a proxy to assess to closeness of competition between two Parties. Whilst the sub-segmentation by application-function could reflect certain market dynamics, the Commission has identified a number of facts set out below, which indicate that the segmentation by application-function is it too narrow to adequately reflect closeness of competition.
- (818) In the first place, approximately 80% of all orbital motors sold serve the same function, namely to power and steer the working function of a vehicle.⁷⁴¹ Other functions, in particular moving and propelling the vehicle, are less significant for orbital motors. In the second place, both Parties sell orbital motors for working and propel functions. Neither of the Parties seems to have a particular focus on orbital motors for a certain function. In the third place, it seems unlikely that orbital motors for one and the same machine are procured from different suppliers. The market investigation indicates that OEMs typically choose to work with a limited number of orbital motor suppliers.⁷⁴² This indicates that OEMs procure orbital motors for different functions usually together and a sub-segmentation along functions would artificially split the market on a near-product level.
- (819) However, more important than the level of segmentation of a differentiated market are the actual analysis and conclusions drawn from it. The Notifying Party's analysis based on the segmentation by application-function has significant limitations, which

⁷³⁶ Reply to question 21 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

⁷³⁷ Replies to question 22 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

⁷³⁸ Orbital Motors Advocacy Paper, Annex 9, section 2.

⁷³⁹ Reply to the SO, Annex D.2_1, section 4.

⁷⁴⁰ Reply to the SO, Annex D.2_1, section 4.

⁷⁴¹ Orbital Motors Advocacy Paper, Annex 9, page 4.

⁷⁴² See, for instance, replies to questions 37 and 38 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

are explained in detail in Annex II, Section 3.3.2. In particular, the Commission finds that the Parties' overlaps need to be assessed against the market size (as shown in Figure 71) rather than each Parties' overall orbital motor sales. Only such comparison against the overall market size shows adequately for how much of the market the Parties compete and therefore overlap.

- (820) Most importantly, even if the Commission were to follow the Notifying Party's argumentation, in particular the arguments brought forward for a segmentation by application-function in the Reply to the SO, it can by no means be concluded that the Parties are not close competitors just because "only" a majority, but not all, of the sales of the Parties are realised in overlap application-functions.
- (821) *Differentiation by power level:* Both Parties offer medium and low power orbital motors and compete closely in both segments. Danfoss and Eaton have a particularly strong market position in the segment of medium power orbital motors.
- (822) As explained in Section 6.5.3.3 and argued by the Notifying Party in the Orbital Motors Advocacy Paper⁷⁴³ the differentiation of orbital motors by power level has certain limitations especially due to the lack of an industry-wide standard for categorising motors into power levels. However, the power level or pressure rating is one of the main technical characteristics of an orbital motor and certain applications or customers require a specific power level or pressure rating. The Commission therefore finds that different power levels of orbital motors cannot be disregarded when comparing the Parties' product portfolio and the respective closeness of competition.
- (823) Medium power orbital motors: The Parties compete closely for orbital motors of medium power level (i.e. medium pressure orbital motors). [...], in 2019 the Parties appear to be the only suppliers to the EEA (100% combined market share) for medium power orbital motors. In previous years, the combined market shares of the Parties for medium power orbital motors were above [90-100]%.⁷⁴⁴ One competitor of the Parties explained that for medium power orbital motors few suppliers exist in the EEA, two of them being the Parties.⁷⁴⁵
- (824) In the Orbital Motors Advocacy Paper and the Reply to the SO, the Notifying Party argues that the allMID market shares for medium power orbital motors, i.e. Danfoss' own market intelligence, are of limited relevance and that the Parties' medium power orbital motors are exposed to competition from other orbital motors. According to the Notifying Party, it is necessary to look not only at the pressure ratings, which are the basis for the allMID categorisation and the calculation of market shares, but also at torque and speed. According to the Notifying Party, two other suppliers offer orbital motors with torque and speed characteristics similar to those of the Parties' medium power level orbital motors, some also with similar pressure ratings.⁷⁴⁶
- (825) The Commission acknowledges that torque and speed may constitute important characteristics when assessing the technical substitutability of different orbital motor models. However, pressure ratings play a crucial role, too, and customers or applications often ask for, or depend on, a certain pressure rating. In addition, the segmentation by pressure rating is used for the allMID classification and therefore

⁷⁴³ Orbital Motors Advocacy Paper, paragraphs 62-64.

⁷⁴⁴ Form CO Section 6 to 9 for motors, table 59.

⁷⁴⁵ Minutes of a call with a competitor on 06.11.2020, DocID2214.

⁷⁴⁶ Orbital Motors Advocacy Paper, paragraphs 91-96.

seems to play an important role for the Notifying Party’s own assessment of the market dynamics and the competitive landscape. Whilst the Orbital Motors Advocacy Paper and Reply to the SO list certain other suppliers who offer orbital motors with torque, speed and pressure ratings similar to those of the Parties’ orbital motors, the Notifying Party fails to provide specific data or information on the sales, market position or segment shares of these suppliers. Even under the assumption that other orbital motors compete with the Parties’ medium power orbital motors based on similar torque and speed characteristics, this would not contradict the conclusion that both Parties have a particularly strong position on a market segment characterised by a medium pressure rating and compete closely for this segment of the market.

- (826) In the Reply to the SO, the Notifying Party argues that Danfoss’ and Eaton’s medium power orbital motors are used in different application-functions and thereby do not overlap.⁷⁴⁷ This alleged lack of overlap of Danfoss’ and Eaton’s medium power orbital motors is contradicted by the Notifying Party’s own opportunity data analysis reproduced in Table 12 below. This analysis shows that Eaton is Danfoss’ number one competitor for medium power orbital motors, appearing in [...] % of all opportunities in which Danfoss participated in the EEA between 2017 and 2019. If Danfoss’ and Eaton’s medium power orbital motors would focus on different application-functions, the Parties would hardly participate in such a large portion of the opportunities for medium power orbital motors. Instead, this analysis shows that the Parties compete closely for medium power orbital motors in the EEA.

Table 12 - Presence of Eaton in Danfoss’ EEA opportunities (2017-2019)

Product Segment	Eaton Share	Eaton Rank
Medium power – <i>all sales channels</i>	[...]	1
Medium power – <i>direct OEM sales</i>	[...]	1
Medium power – <i>distribution channel</i>	[...]	5

Source: Orbital Motors Advocacy Paper, Table 1.1

- (827) Low power orbital motors: Danfoss’ and Eaton’s low power orbital motors, for example for compact or light duty applications, a large segment of the market for orbital motors, are similar and often substitutable. In the Commission’s market investigation, one OEM stated: “*Exactly the same product offer from EATON and DANFOSS on small machines (1.7t) the only difference is that EATON integrates a parking brake in its swing motor and DANFOSS not. [...] All the market turn around EATON and DANFOSS on orbital motors for compact machines.*”⁷⁴⁸

⁷⁴⁷ Annex D.2_2, Section 2 of the Reply to the SO.

⁷⁴⁸ Replies to questions 4 and 5.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (828) Internal documents of Danfoss corroborate the view that Danfoss’ and Eaton’s low power orbital motors are often substitutable and compete against each other. [Content of internal documents].⁷⁴⁹ Although this specific strategy applies to the US and not the European market, it shows that two of the major orbital motor product lines of the Parties are technically and commercially substitutable with each other, address the same customers and therefore compete closely with each other.
- (829) *Differentiation by sales channel:* When differentiating the market by sales channel and looking at direct OEM sales, the Parties compete even closer compared to the overall market for orbital motors. According to the [...] data provided by the Notifying Party,⁷⁵⁰ the value based market shares of both, Danfoss and Eaton, are between [0-5] and [0-5] percentage points higher for direct OEM sales in the EEA compared to the overall market for orbital motors in the EEA. This indicates that both, Danfoss and Eaton, have a somewhat stronger focus on the direct OEM sales channel and customer group of large OEMs. By comparison, the value based market shares of M+S Hydraulic, one of the Parties’ main competitors, are around [5-10] percentage points lower for direct OEM sales compared to the overall market for orbital motors. Direct OEM sales make up more than 60% of the overall value of the market for orbital motors in the EEA and are particularly important for large OEMs who typically do not procure via distributors. Therefore, the Parties appear to compete even closer for the very important customer group of large OEMs.
- (830) In the Reply to the SO, the Notifying Party acknowledges that the Parties “*may compete somewhat closer in the direct sales channel*”⁷⁵¹. The Notifying Party goes on to argue that direct OEM sales need to be further segmented into swing and track drive orbital motors, medium power orbital motors and low power orbital motors. The Notifying Parties does not explain what this sub-segmentation by sales channel and power level would actually mean as to the closeness of competition between the Parties. In fact, in some of such sub-segments competition between the Parties would be even closer. For example, as shown in Table 12 above Eaton appeared in [...]% of all medium power orbital motor opportunities in the direct OEM sales channel in which Danfoss participated in the EEA between 2017 and 2019 – as compared to [...]% of all medium power orbital motor opportunities.
- (831) **Fourth**, the Parties are the top two suppliers of orbital motors in terms of portfolio breadth, quality and brand reputation with a similar price level, which means that Danfoss’ and Eaton’s orbital motors compete particularly closely in the ‘high-end’ segment of the market. Therefore, Danfoss’ and Eaton’s orbital motors on the one side and products of other competitors on the other side are clearly distinguishable and not necessarily substitutable from a demand side perspective.
- (832) In the Commission’s market investigation, customers ranked Danfoss and Eaton as the two most attractive suppliers of orbital motors in terms of, for example, price, quality, reliability and lead time of their products. A large majority of the respondents described Danfoss’ orbital motor portfolio as very attractive and around half of the respondents said the same about Eaton’s orbital motors. To the contrary,

⁷⁴⁹ DocID1059-39265 (The Notifying Party’s reply to the Commission’s post-notification request for information RFI 2, [...], slide 15).

⁷⁵⁰ Reply to post-notification request for information RFI 5, Annex B.7.1, Excel file “All market shares by sales chan”.

⁷⁵¹ Reply to the SO, paragraph 137.

only a small minority of respondents rated the Parties' competitors Dana Brevini, M+S Hydraulic, Parker Hannifin and Zhenjiang as very attractive.⁷⁵²

- (833) When asked more generally about the supplier's reputation, e.g. the overall confidence in their products, brand and past experiences, the responses of the OEMs were similar. A large majority of the responding customers rated Danfoss as 'very good' and half of the respondents Eaton rated as 'very good'. Again, each of the Parties' competitors were described by only a minority of the respondents as 'very good'.⁷⁵³
- (834) More specifically, one OEM described Danfoss and Eaton as the "two main competitors for premium quality products" as well as "the two most well recognised premium brands" for orbital motors.⁷⁵⁴ Another very large OEM labelled Danfoss and Eaton as "two major competing brands" for orbital motors.⁷⁵⁵ According to other customers Danfoss and Eaton are the "first and second best motor producer[s] in terms of Quality, Service, Efficiency"⁷⁵⁶ and offer the "most performing [sic] orbital motors"⁷⁵⁷ in the market. Some OEMs described the quality of Danfoss' and Eaton's orbital motors as "equivalent", some ranked Eaton as second to Danfoss in terms of quality, one OEM stated that Eaton's orbital motors "outperform" Danfoss' products.⁷⁵⁸ No customer indicated that the orbital motors of any of the Parties' competitors, e.g. Dana Brevini, M+S Hydraulic, Parker, have a similar or better quality than those of the Parties.
- (835) This market perception is well reflected and summarised in an internal presentation of Eaton reproduced in Figure 72. [Content of internal documents].

Figure 72 – Comparison of the top competitors for orbital motors (geroler motors) by Eaton

[...]

Source: Reply to post-notification request for information RFI 3, Annex A.4.9, Slide 47.

- (836) **Fifth**, the Parties' implied market shares show that Danfoss and Eaton compete closely on the market for orbital motors. These implied market shares are based on the Parties' diversion ratios and can be regarded as a proxy for the Parties' shares in the product space in which they currently compete and also account for potential out-of-market constraints since the diversion ratio estimates that are based on the opportunity data also account for diversion to competitors that the Notifying Party has identified as only offering alternative technologies instead of orbital motors.
- (837) The opportunity data analysed in Annex I provide sensible estimates of the diversion ratios between the Parties when one focuses on the opportunities won by respective Party and the frequency with which the other Party has been identified as the main competitor in the particular opportunity, or in other words, has been identified as the consumer's apparent second choice. Taking into account all opportunities in which one of the Parties participated - as suggested by the Notifying Party in its Reply to the Letter of Facts - would result in a weaker estimate of the diversion ratios between

⁷⁵² Replies to question 30 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁵³ Replies to question 31 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁵⁴ Reply to questions 29.1 and 30.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁵⁵ Reply to question 58.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁵⁶ Reply to question 57.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁵⁷ Reply to question 5.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁵⁸ Replies to question 7 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

the Parties since closeness of competition is more accurately measured by focusing on the frequency with which the other Party was the second best option in those instances that the first Party actually won the corresponding contract. In any event, the difference between the two approaches is not of a magnitude capable of leading to different conclusions with respect to the degree of closeness of competition between the Parties.

- (838) Based on the diversion ratio estimates, it is possible to calculate corresponding implied market shares. Implied market shares state how large the merging parties' market shares S_1 and S_2 would need to be to accurately reflect the observed diversion ratios between them. Concretely, suppose diversion ratios D_{12} and D_{21} were proportional to market shares.⁷⁵⁹ In that case $D_{12} = S_2/(1 - S_1)$ and $D_{21} = S_1/(1 - S_2)$. Solving this pair of equations for S_1 and S_2 then yields the hypothetical market shares that would be consistent with the observed diversion:

$$S_1 = \frac{D_{21}(1 - D_{12})}{1 - D_{12}D_{21}}$$

- (839) Table 13 below shows the respective diversion ratios between the Parties and the Parties' implied market shares. In the EEA, Danfoss' and Eaton's combined implied market share for orbital motors is [40-50]%. Whilst this figure is somewhat below the Parties' combined share on the market for orbital motors, it lies well above [40-50]% and demonstrates that the Parties have significant market power also within the narrower market segments in which they are currently active. It can therefore not be argued that the Parties are distant competitors who are active on different segments of the market.

Table 13: Implied market shares for orbital motors based on diversion ratios

Market	$D_{D \rightarrow E}$	$D_{E \rightarrow D}$	S_D	S_E	Combined market share ($S_D + S_E$)
Orbital Motors _{EEA}	[20-30]%	[30-40]%	[30-40]%	[10-20]%	[40-50]%

- (840) **Sixth**, internal documents of the Parties provide ample evidence that Danfoss and Eaton often compete for supplying orbital motors to the largest OEMs in the EEA. For example, the Parties competed for the annual purchase of orbital motors for the largest OEM in the EEA in terms of orbital motor purchases.⁷⁶⁰ According to the

⁷⁵⁹ Specifically, the diversion ratio D_{12} from product 1 to product 2 is equal to the fraction of the sales lost by product 1 following a price increase that is captured by product 2. That is, $D_{12} = -(\partial Q_2 / \partial p_1) / (\partial Q_1 / p_1)$, where Q_i and p_i denote the demand function and price of product i , respectively.

⁷⁶⁰ For Eaton, see for instance DocID 1042-081312 (Eaton's reply to the Commission's request for information RFI 3, EAT-133520, email titled [...]). For Danfoss, see for instance DocID 1058-013482 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI020203212, email titled [...]).

Parties' internal documents Danfoss and Eaton also seemed to have competed for the same orbital motor sales opportunities for a number of large OEMs in the EEA.⁷⁶¹

- (841) **In conclusion**, the Commission's economic analysis and market investigation clearly suggest that the Parties compete closely in the market for orbital motors. In certain market segments, competition between Danfoss and Eaton is particularly close. Therefore, the merged entity's dominant position in some market segments will likely be even stronger than indicated by the market shares in Section 8.5.1.2.

8.5.3.3. OEMs face important impediments in switching

- (842) There are a number of limitations that OEMs face when it comes to switching suppliers for orbital motors. In this regard, the assessment conducted in Section 8.3.3.2 above with respect to ability for customers to switch suppliers applies to all HPS components, i.e. also to orbital motors. For the purpose of avoiding repetitions, reference is made to previous remarks in the context of HSUs and HPS components in general in Section 8.3.3.2, and the following focuses on orbital motors in particular.

- (843) **First**, similarly to HSU, OEMs have a limited choice of orbital motors suppliers. A large majority of OEMs have indicated that after the Transaction, there would be a limited number of credible orbital motors suppliers available for meeting their needs in the EEA.⁷⁶² The limited number of orbital motors suppliers is by itself a decisive limiting factor for OEMs to switch suppliers. In this respect, OEMs face very limited opportunities for switching suppliers of HSUs. This difficulty is explained by one large OEM: “[p]articularly for orbital motors and steering units, switching suppliers might not be easy for technical and non-technical reasons. [...]. From a non-technical point of view, switching supplier is limited by the limited number of alternatives on the market”.⁷⁶³

- (844) Moreover, as explained in Section 6.5.3.3, the market for orbital motors is differentiated. As a result, not all available suppliers are able to serve a give customer's needs. As a matter of example, a competitor of the Parties' explained that it has capabilities for manufacturing only 1-speed motors, and not 2-speed motors, and also that is not capable of manufacturing large orbital motors.⁷⁶⁴ Therefore, this company is not able to supply orbital motors for those machines requiring a 2-speed

⁷⁶¹ For example, DocID 1055-17379 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI020073594, email titled “FW: Visiting customers”); DocID 1054-31742 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI02001410, email titled “FW: [...] / Delivery Performance / request for written statement”); DocID 1062-5459 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI020359134, email titled “RE: Neuer Rahmenvertrag mit [...] – HM P9009.HM.”); DocID 1055-3843 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI020053165, email titled “FW: [...] (3500-5000 off) / test feedback from [...] holding torque not enough”); DocID 1055-9957 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI020058773, email titled “[...] business at risk / market feedback on increased leakage vs past on Danfoss Motors”); DocID 1041-5232 (Eaton's reply to the Commission's request for information RFI 3, EAT-006684, email titled “RE: [EXTERNAL] [...]”); DocID 1061-5685 (the Notifying Party's reply to the Commission's request for information RFI 2, RFI020318212, email titled “AW: [...] Business at Risk”).

⁷⁶² Replies to question 42 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁶³ Minutes of a call with a customer on 02.06.2020, DocID0680.

⁷⁶⁴ Minutes of a call with a competitor on 06.11. 2020, DocID 2214.

orbital motor (e.g. excavators),⁷⁶⁵ or those requiring a large orbital motor (e.g. skid steer loaders).

- (845) **Second**, there are also technical and practical limitations to switching, both in the design and in the production phase.
- (846) During the design phase, OEMs seem to have a preference for continuing sourcing orbital motors from the same suppliers when they manufacture a new machine due to the high costs and time required for homologating new suppliers for certain components, and to the fact that HPS are rarely re-designed from scratch, but rather derived from previous machine models.⁷⁶⁶ Therefore, in this respect, there is a tendency for OEMs to carry-over orbital motors to new machine models.
- (847) In an internal document produced in its ordinary course of business and reproduced in Figure 73, [content of internal documents].

Figure 73 Danfoss' internal email showing that [...]

[...]

Source: Reply to RFI 2, DocID 1058-42093, "M.9820-RFI020181794.msg"

- (848) Safety aspects are also an important barrier to switching supplier during the design phase, which ultimately results in a preference to source HPS components, and in particular HSUs, from the same supplier also for new machines: "[...] *switching suppliers might also be difficult due to safety standards and certifications. Although steering unit suppliers provide their products with the related safety certifications, the OEM is ultimately responsible for the safety of the machine. In this respect, an OEM needs to follow a number of safety design standards and processes for the entire hydraulic system and needs to ultimately obtain the TÜV certification. Switching an [sic] hydraulic component might require additional work for the TÜV certification*".⁷⁶⁷ According to one orbital motor OEM: "*It is more cost efficient [sic] to carry over well performing hydraulic systems into new machines.*"⁷⁶⁸
- (849) When asked any particular barrier to switch suppliers during the design phase customers explain that it is "[c]onceivable in theory, but in practice the effort for a parallel homologation and testing is too high".⁷⁶⁹ Another OEM further explains: "*During the design phase, a supplier is selected and validated. A change to a supplier late in the design phase is expensive and costly to the launch of the machine into production.*"⁷⁷⁰
- (850) Moreover, a very large majority of orbital motors OEMs have confirmed that when designing a new machine, the hydraulic power system is either partially based on new features, and partially it is derived from previous machines, or has some new features, but a large part of it (if not most of it) is derived from previous machines.⁷⁷¹

⁷⁶⁵ Minutes of a call with a competitor on 06.11.2020, DocID2214 and reply to questions 16 and 16.1 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.

⁷⁶⁶ Replies to question 36.2 of Q1 – Phase I Questionnaire to OEMs, DocID1956.

⁷⁶⁷ Minutes of a call with a customer, 04.06.2020, DocID1985.

⁷⁶⁸ Reply to question 40.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁶⁹ Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID 1956.

⁷⁷⁰ Reply to question 36.1 of Q1 – Phase I Questionnaire to OEMs, DocID 1956.

⁷⁷¹ Replies to question 40 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID 1963.

- (851) Once a machine is in the production phase, OEMs seem to be even more reluctant to switch suppliers of orbital motors.
- (852) A large majority of OEMs buying orbital motors have indicated that they typically homologate only one supplier for a given orbital motor of a given machine,⁷⁷² and only have one active supplier.⁷⁷³ One customer of orbital motors explains: “*the effort to design and release a machine with more than one homologated supplier is considered too high*”, and “*we change supplier only in case of significant problems*”.⁷⁷⁴
- (853) A majority of orbital motors OEMs also stressed that the costs associated with homologation is a high fixed cost which impact is important.⁷⁷⁵ One OEM explains: “*The orbital motor is a key component of the steering system which is a safety critical system of the machine. There are a lot of [...] resources spent through the design and validation testing to ensure all safety, design and [c]ustomer requirements are met when approving such component to be used for [p]roduction of our machines.*”⁷⁷⁶
- (854) One of the reasons why switching in the production phase is difficult is related to the cost and timing of redesigning the remaining part of the HPS and possibly of the machine. As explained by a large OEM “[f]rom a technical point of view, switching suppliers might entail a redesign of the entire system, which is an undesired situation, particular for machines in production phase. This limitation is particularly important for motors”.⁷⁷⁷
- (855) In conclusion, OEMs face important impediments in switching suppliers for orbital motors, mainly due to the limited number of appropriate suppliers available to them as well as technical and practical limitations.

8.5.3.4. Competitors are not a sufficient constraint to the Parties’ market power

- (856) The Commission finds that competitors of the Parties will not present sufficient constraint to the Parties’ market power post-Transaction.
- (857) **First**, the low market shares of the Parties’ competitors on the market for orbital motors in the EEA indicate their limited ability to exert any form of sufficient constraint to the Parties’ market power. For example, the Parties’ next largest competitor, namely M+S Hydraulic, would have market shares in value and in volume that are more than 3 to 6 times lower than those of the merged entity (see Section 8.5.1.2).
- (858) **Second**, the when looking more granularly at the market shares for the top 80% application groups of orbital motors (see Section 6.5.3.2 and Figure 16), it becomes apparent that the Parties would dominate 9 of these 11 application groups with a combined market share of more than [80-90]% and face competition from more than one meaningful competitor in only one of the 11 application groups. Each of the Parties’ competitors is only active in a few of the application groups thereby offering a more specialised product portfolio that will not be able to compete effectively with the Parties’ combined comprehensive portfolio covering all of the application groups.

⁷⁷² Replies to question 37 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID 1963.

⁷⁷³ Replies to question 38 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID 1963.

⁷⁷⁴ Reply to question 37.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID 1963.

⁷⁷⁵ Replies to question 38 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID 1963.

⁷⁷⁶ Reply to question 39.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID 1963.

⁷⁷⁷ Minutes of a call with a customer on 2.6.20, paragraph 33, DocID 0680.

Table 14 – EEA market shares for orbital motors by application group (in value)

Application Group	EEA Market Shares 2019 (value)							
	Danfoss	Eaton	Combined	M+S Hydraulic	Parker	Dana Brevini	Zhenjiang	Others
Screening & Crushing	[90-100]%	[0-5]%	[90-100]%	[0-5]%	[0-5]%	-	[0-5]%	[0-5]%
Other Specialty	[70-80]%	[5-10]%	[80-90]%	[10-20]%	-	[5-10]%	[0-5]%	[0-5]%
Excavator	[5-10]%	[40-50]%	[50-60]%	-	-	-	-	[40-50]%
Harvester - Special AG	[80-90]%	[5-10]%	[80-90]%	[0-5]%	[10-20]%	-	-	[0-5]%
Crane (Mobile & Crawler)	[90-100]%	-	[90-100]%	-	-	[0-5]%	-	[0-5]%
Other Agriculture	[80-90]%	[0-5]%	[90-100]%	[5-10]%	[0-5]%	-	-	-
Aerial Lifts	[60-70]%	[10-20]%	[80-90]%	[5-10]%	-	-	[10-20]%	-
Forestry	[90-100]%	-	[90-100]%	[0-5]%	[0-5]%	[0-5]%	-	-
Harvester - Combine/Rice/Forage	[80-90]%	[0-5]%	[80-90]%	-	[10-20]%	-	-	-
Paver	[70-80]%	[5-10]%	[80-90]%	[10-20]%	-	-	-	-
Wheel Loader	[10-20]%	[0-5]%	[10-20]%	[30-40]%	[30-40]%	-	-	[20-30]%

Source: Reply to post-notification request for information RFI 9, Annex_B.9_2

- (859) In 3 of the 11 identified application groups, including the by far largest application group ‘Screening & Crushing’, Danfoss and Eaton would have a combined market share of more than [90-100]% and not face any meaningful competition, because no competitor has market shares of more than [0-5]%.
- (860) In 4 of the 11 application groups the Parties would have market shares of above [80-90]% and face competition from only one other meaningful supplier with significantly smaller market shares. For ‘Other Agriculture’ and ‘Paver’ the only remaining meaningful competitor would be M+S Hydraulic, for ‘Harvester-Combine/Rice/Forage’ and ‘Harvester-Special AG’ the only remaining meaningful competitor would be Parker. The application group ‘Excavator’ would be dominated by the merged entity with market shares in excess of 50% with, again, only one further meaningful supplier remaining.
- (861) In only 3 of the 11 application groups, namely ‘Other Speciality’, ‘Aerial Lifts’ and ‘Wheel Loader’, Danfoss and Eaton combined would face competition from more than one supplier. In ‘Other Speciality’ and ‘Aerial Lifts’ the Parties would have a combined market share of above [80-90]%, any constraint exerted by competitors would therefore be extremely limited. This leaves ‘Wheel Loader’, the smallest application group by volume out of the top 80% application groups, as the only segment which would not be dominated by the Parties and where more than one supplier would meaningfully compete with the Parties post-Transaction.
- (862) **Third**, none of the Parties’ competitors appears to be able to match Danfoss’ and Eaton’s orbital motors in terms of portfolio breadth as well as perceived quality and reliability.
- (863) **M+S Hydraulic** offers a more limited portfolio of orbital motors compared to Danfoss as shown in Table 14 above, its products are less known by customers and

perceived to be cheaper compared to those of Danfoss and Eaton.⁷⁷⁸ In the Commission’s market investigation a majority of responding OEMs stated that they do not know the orbital motors of M+S Hydraulic, whereas all of the respondents stated that they know Danfoss’ orbital motors and only a minority did not know Eaton’s orbital motors.⁷⁷⁹ Furthermore, a large majority of the responding OEMs said that they have never purchased orbital motors in the EEA from M+S Hydraulic.⁷⁸⁰ One OEM stated that M+S Hydraulic offers “*specific motors which are not proposed by Danfoss*”.⁷⁸¹

- (864) An internal document of Danfoss produced in its ordinary course of business and reproduced in Figure 74 shows that Danfoss intends to [content of internal documents]. This clearly implied that [information about Danfoss view of M+S Hydraulic as competitor]. [Content of internal documents].

Figure 74 – Danfoss’ assessment of M+S Hydraulic in Europe

[...]

- (865) **Parker** only sells orbital motors for [...] out of the [...] application groups identified in Table 14 indicating again a limited product portfolio. In the Commission’s market investigation, a majority of the responding OEMs rated Parker’s orbital motors as not attractive at all, whereas none of the respondents said the same about Danfoss’ or Eaton’s orbital motors.⁷⁸² Two OEMs indicated that Parker’s products are expensive.⁷⁸³ Furthermore, a majority of the responding OEMs said that they have never purchased orbital motors in the EEA from Parker.⁷⁸⁴ The Notifying Parties argues in its Reply to the SO, that this lack of actual purchases is uninformative as to the intensity of competition as Parker might have pitched nonetheless (albeit without success).⁷⁸⁵ The Commission maintains that the fact that most customers have never purchased from a certain company, gives an indication as to the market presence and market position of that company. In a way, this view is similar to the assessment of market shares, which represent actual sales and won opportunities and not unsuccessful pitches.
- (866) **Dana Brevini** offers a limited portfolio of orbital motors focusing on small and light duty applications and does not compete with the entire orbital motor portfolio of Danfoss or Eaton according to its own statements and assessment.⁷⁸⁶ Although a majority of OEMs responding to the Commission’s market investigation rated Dana Brevini’s orbital motors as very or somewhat attractive, a nearly half of the respondents stated that they either do not know Dana Brevini’s orbital motors or rated them as not attractive at all. One OEM described Dana Brevini’s orbital motors

⁷⁷⁸ Replies to question 4 and 30.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁷⁹ Replies to question 30 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸⁰ Replies to question 32 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸¹ Reply to question 30.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸² Replies to question 30 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸³ Replies to question 30 and 31.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸⁴ Replies to question 32 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸⁵ Reply to the SO, Section 2.3.a)bb).

⁷⁸⁶ Minutes of a call with a competitor on 06.11. 2020, DocID 2214.

as “*not reliable*”.⁷⁸⁷ A large majority the responding OEMs said that they have never purchased orbital motors in the EEA from Dana Brevini.⁷⁸⁸

- (867) **Zhenjiang** offers orbital motors for a limited set of applications and is relatively unknown to European customers. In the Commission’s market investigation a majority of responding OEMs stated that they do not know the orbital motors of Zhenjiang. One OEM described Zhenjiang’s orbital motors as “*not reliable*”.⁷⁸⁹ A large majority the responding OEMs said that they have never purchased orbital motors in the EEA from Zhenjiang.⁷⁹⁰ Eaton itself [content of internal documents].
- (868) Generally and as described in detail in Section (427), OEMs expressed a hesitation towards orbital motor suppliers from China and especially the quality and reliability of their orbital motors. For example, one customer noted the “*non consistent quality*” and “*lacking technical understanding*” of Chinese orbital motor suppliers.⁷⁹¹ However, the market investigation did not indicate that the currently applicable import duty into the EEA for hydraulic motors affects the ability of Chinese suppliers to be competitive in the EEA market for orbital motors.⁷⁹²
- (869) **Fourth**, the fact that already prior to the Transaction, Danfoss and Eaton are able to generate relatively high margins on their orbital motor sales indicates limited constraints from other competitors and reflects the concentrated nature of the market for orbital motors in the EEA. According to paragraph 28 of the Horizontal Merger Guidelines, high pre-merger margins can indicate a limited degree of substitutability between the products of the merging parties and those of their competitors and make significant price increases by the merged entity more likely.
- (870) Danfoss earns on average a contribution margin of [...] % in orbital motor sales based on its own statistics.⁷⁹³ Eaton’s orbital motors have standard margins in excess of [...] %.⁷⁹⁴ These [...] pre-Transaction margins of Danfoss and Eaton underline the limited degree of substitutability between the orbital motor portfolios of the Parties and their competitors as well as an overall very limited constraint of competitors on the Parties’ market position and power. This constraint would likely decrease even further after the Transaction.
- 8.5.3.5. Competition from other motor technologies affects a limited part of the market for orbital motors and its intensity is limited
- (871) The Notifying Party claims that orbital motors face important competitive constraints from motors of different technologies. In particular, the Notifying Party considers that (i) large orbital motors (e.g. Danfoss’ T-series orbital motors and Eaton’s HP series and VIS series orbital motors) represent a significant part of the Parties’ sales and are in direct competition with motors based on other technologies and in particular from radial piston cam-lobe motors;⁷⁹⁵ and (ii) the orbital motors for which there is no competition from radial piston cam-lobe (which are identified as Danfoss’

⁷⁸⁷ Reply to question 30.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸⁸ Replies to question 32 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁸⁹ Reply to question 30.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁹⁰ Replies to question 32 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁹¹ Reply to question 56.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁹² Replies to question 54 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁷⁹³ Orbital Motors Advocacy Paper, Annex 9, Table 5-3.

⁷⁹⁴ See Figure 92.

⁷⁹⁵ Reply to the Article 6(1)(c) Decision, paragraphs 24.ii and Orbital Motors Advocacy Paper, paragraphs 65-101; Reply to the SO, paragraphs 141- 151.

O-series, W-series and R-series and Eaton's H series, 2K series and T-series) are subject to cross-technology competition from other technologies, particularly from electric motors.⁷⁹⁶

- (872) The present section demonstrates that, contrary to what the Notifying Party claims, competition from other motor technologies regards a limited part of the market for orbital motors and its intensity is limited. The Commission will demonstrate that: (i) switching from one motor technology to another is a burden to OEMs, which reduces competitive constraints on orbital motors; (ii) radial piston cam-lobe motors represent a limited constraint on a limited part of the market for orbital motors; (iii) gear motors represent a limited or no competitive constraint at all on the market for orbital motors; and (iv) electric motor adoption is limited to certain machines and its impact on the market for orbital motors is expected to be limited in the foreseeable future.
- (873) **First**, switching from one motor technology to another, and in particular from an orbital motor to a motor of a different technology is a burden to OEMs in terms of time and cost. This reduces the competitive constraints of other motor technologies on orbital motors. As demonstrated in Section 6.5.3.2, in those limited cases where switching from one motor technology to another is technically feasible, OEMs face important limiting factors in switching, including costs of switching, confidence in a new technology, past experience, etc. While most of these factors can in principle be overcome by OEMs, taken together they represent an additional impediment for OEMs to switch motor technology.

Radial piston cam-lobe motors represent a limited constraint on a limited part of the market for orbital motors

- (874) **Second**, the machines for which both cam-lobe motors and orbital motors can be employed represent a relative small part of the market for orbital motors.
- (875) Section 6.5.3.2 demonstrated that only a small part of the market for orbital motors is affected by a certain level of competition from motors of different technologies. As it will be demonstrated in recitals (876)-(918) below, the same applies if only radial piston cam-lobe motors are considered, that is to say that radial piston cam-lobe motors can be employed and therefore they could in principle replace orbital motors only for a limited part of the market for orbital motors.
- (876) Figure 75 shows a Danfoss' internal document produced in its ordinary course of business where it identifies sales of the radial piston cam-lobe motors by manufactures, regions and machines. The sales break-down by machines shows that the sales for Skid Steer Loaders ('SSL'), Compact Track Loaders ('CTL'), and Wheel Loaders taken together account for more than [...]% of the total radial piston cam-lobe sales. The same document shows that, for this reason, [content of internal documents].

⁷⁹⁶ Reply to the Article 6(1)(c) Decision, paragraphs 24.iii; Reply to the SO, paragraph 159; in the Orbital Motors Advocacy Paper, paragraphs 102-154, the Notifying Party distinguishes between low power orbital motors sold for "swing and track" applications in excavators, for which it considers that there is no competition between the Parties, and the remaining low power orbital motors, for which there is competition from motors of different technologies, and in particular electric motors.

Figure 75 – Break-down of radial piston cam-lobe motor sales according to manufacturers, regions and machines

[...]

Source: Reply to post-notification request for information RFI 6, Annex B.6.c_2, slide 9.

- (877) However, concerning orbital motors, sales for SSL, CTL and Wheel loaders represent a very small fraction of the overall EEA sales. Data provided by the Notifying Party indicate that orbital motors sold for these machines taken together, represent only about [...] % of the total orbital motor sales in the EEA.⁷⁹⁷
- (878) The situation would be substantially similar if one considers all the machines for which radial piston cam-lobe motors are sold, and quantifies the sales of orbital motors for these machines. Figure 75 shows that radial piston cam-lobe motors are sold for SSL, CTL, Wheel loaders, road rollers, sprayers and forestry. Orbital motor sales for all these machines together represent about [...] % of the overall orbital motor sales in the EEA,⁷⁹⁸ which is a rather limited part of the overall orbital motor sales. To put it differently, the machines for which both orbital motors and radial piston cam-lobe represent only about [...] % of the overall orbital motors sales. In addition, this simple analysis does not consider that for the same machine there are cases in which orbital motors and radial piston cam-lobe provide different functions (as for example, the orbital motor would provide the propel function and the radial piston cam-lobe motor would provide the work function) and therefore there would be no competition for the same machine. This indicates that the percentage of orbital motor sales for which also radial piston cam-lobe motors can be employed is below [...] %.
- (879) [Business strategy].
- (880) Regarding SSL machines, Figure 76, which was produced by Danfoss in its ordinary course of business, indicates that the large majority of these machines make use of radial piston cam-lobe motors and only about [...] % of these machines use orbital motors.

Figure 76 – Danfoss' assessment of motors for SSL machines

Source: Reply to post-notification request for information RFI 6, Annex B.6.c_2, slide 10 [emphasis added by the Commission]

- (881) Further, regarding SSL and CTL machines, it appears that competition between orbital motors and radial piston cam-lobe motors is even less important than Figure 76 might suggest because there are clear segments of SSL and CTL machines that prefer the use of radial piston cam-lobe motors. Therefore, only a limited number of SSL and CTL machines would typically use either an orbital motor or a radial piston cam-lobe motor.
- (882) An internal document of Danfoss reproduced in Figure 77 [content of internal documents].

⁷⁹⁷ Reply to pre-notification request for information PN 2 [Annex D.30_1, excel file "Cleaned allMID"].
⁷⁹⁸ Reply to pre-notification request for information PN 2, [Annex D.30_1, excel file "Cleaned allMID"].

Figure 77 – Danfoss’ assessment of SSL and CTL power ranges

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex A.7_7, slide 7.

- (883) **Third**, the share of the Parties’ sales of orbital motors that can potentially face competition from radial piston cam-lobe motors is small, compared to their overall orbital motor sales in the EEA.
- (884) According to the Notifying Party,⁷⁹⁹ Danfoss’ orbital motors affected by competition with radial piston cam-lobe are the T-series models. This claim appears to be consistent with Danfoss’ internal documents produced in its ordinary course of business.⁸⁰⁰
- (885) Table 15 shows that in 2019 Danfoss sold in the EEA [...] T-series motors, for a total value of nearly EUR [...] million. Compared to Danfoss’ EEA sales of orbital motors, which in 2019 amounted to EUR [...] million (Table 9 in Section 8.5.1.2), these sales represents only about [...] % of Danfoss’ sales.

Table 15 – Danfoss’ sales of orbital motors and of the T-series models in the EEA in 2019

Series	Model	Code	Sales in EUR	Sales (units)
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 400	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 315	[...]	[...]
T-Series	TMTHW	TMTHW 500	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 500	[...]	[...]
T-Series	TMK TMKW TMK FL	TMK200	[...]	[...]
T-Series	TMTHW	TMTHW 315	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 250	[...]	[...]
T-Series	TMTHW	TMTHW 400	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 470	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 630	[...]	[...]
T-Series	TMVW	TMVW 500	[...]	[...]
T-Series	TMVW	TMVW 800	[...]	[...]
T-Series	TMV	TMV 800	[...]	[...]
T-Series	TMVW	TMVW 630	[...]	[...]
T-Series	TMK TMKW TMK FL	TMK470	[...]	[...]
T-Series	TMTHW	TMTHW 630	[...]	[...]
T-Series	TMK TMKW TMK FL	TMK315	[...]	[...]
T-Series	TMK TMKW TMK FL	TMK250	[...]	[...]

⁷⁹⁹ Reply to the Article 6(1)(c) Decision, paragraphs 24.iii; Orbital Motors Advocacy Paper, table 1.

⁸⁰⁰ See for instance, reply to post-notification request for information RFI 6, DocID 001061-047465-M.9820-RFI020339367, slide 2.

Series	Model	Code	Sales in EUR	Sales (units)
T-Series	TMTHW	TMTHW 800	[...]	[...]
T-Series	TMK TMKW TMK FL	TMK400	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMTHS 500	[...]	[...]
T-Series	TMV	TMV 630	[...]	[...]
T-Series	TMK TMKW TMK FL	TMK160	[...]	[...]
T-Series	TMVW	TMVW 400	[...]	[...]
T-Series	TMT, TMTU, TMTW, TMT FL, TMTW FL	TMT 200	[...]	[...]
T-Series	TMV	TMV 500	[...]	[...]
Total sales of T-series			[...]	[...]

Source: Commission calculation based on Reply to post-notification request for information RFI 6, Annex B.4_1, tab 'question 4c'

- (886) With respect to Eaton's sales of HP and VIS orbital motors (which are the motors that to some extent can face competition from radial piston cam-lobe motors), as Figure 78 shows, these have been historically a small part of the overall sales of orbital motors. Specifically, while HP and VIS motors' sales amount to about [...], the sales of spool and disc orbital motors taken together exceed [...], which means that HP/VIS sales represent about [...]% of the overall orbital motor sales.

Figure 78 – Eaton's sales of orbital motors in the period 2010-2016

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex A.4.10, slide 51 [emphasis added by the Commission]

- (887) A similar result is obtained for Eaton's sales in the EEA in 2019.⁸⁰¹
- (888) **Fourth**, Danfoss' internal documents produced in its ordinary course of business indicate that it considers radial piston cam-lobe motors as complementary to, as opposed to competing with, orbital motors.
- (889) In a document presented to Danfoss' CEO and CFO for [business strategy - content of internal documents].

Figure 79 – [...]

[...]

Source: Reply to post-notification request for information RFI 2, DocID001061-026765 M.9820-RFI020327398, slide 4 [emphasis added by the Commission].

- (890) Another internal document of Danfoss explains in more detail why orbital motors and radial piston cam-lobe are complementary (Figure 80). The document cites particularly that (i) the fluid pressure in radial piston cam-lobe motors can be much higher than in orbital motors, as for example compared to Danfoss' TMT motors

⁸⁰¹ Reply to post-notification request for information RFI 6, Annex B.1_2, tab 'question 4c'.

which can operate only at a maximum pressure of 300 bar; (ii) radial piston cam-lobe motors have a much better starting torque compared to orbital motors, which makes them attractive for propel functions and convey working functions; and (iii) radial piston cam-lobe motors have torque at low speed, which, together with the better starting torque make this motors “*ideal for propel applications*”.

Figure 80 – Complementarity of orbital motors and radial piston cam-lobe motors according to Danfoss

[...]

Source: Reply to post-notification request for information RFI 2, DocID 001061-026765-M.9820-RFI020327398, slide 38.

- (891) Another internal document of Danfoss explains that radial piston cam-lobe motors, not only are complementary to orbital motors, but also to other motor technologies which are in Danfoss’ portfolio, as for example, gear motors and electric motors (Figure 81).

Figure 81 – [...]

[...]

Source: Reply to post-notification request for information RFI 2, DocID 001061-026765-M.9820-RFI020327398, slide 5 [emphasis added by the Commission].

- (892) Furthermore, Danfoss calculated [business strategy - content of internal documents].
- (893) [Business strategy - content of internal documents].⁸⁰² [Business strategy - content of internal documents].

Figure 82 – [...]

[...]

Source: Reply to post-notification request for information RFI 2, DocID001061-026765 M.9820-RFI020327398, slides 18 [emphasis added by the Commission].

- (894) **Fifth**, when evaluating the competitive landscape of certain hydraulic motors, the Parties do not typically consider manufacturers of motors of different technologies.
- (895) Sections 6.5.3 and 7.4 show that both the Parties, when evaluating market shares of their competitors, typically consider only manufacturers of orbital motors and do not include in their market share market share estimates motors of different technologies.
- (896) Furthermore, when Danfoss evaluates potential competitors in radial piston cam-lobe motors, for which it is developing certain products, it considers ‘*only two competitors*’ Bosch-Rexroth and Poclairn (which are manufacturers of radial piston cam-lobe motors) as the competing manufacturers. Manufacturers of orbital motors as for example Eaton, M+S Hydraulic or Dana Brevini are not considered (see for example, Figure 83).

⁸⁰² Reply to post-notification request for information RFI 2, [DocID001061-026765 M.9820-RFI020327398].

Figure 83 – Danfoss’ strategic assessment of radial piston cam-lobe motors

[...]

Source: Reply to post-notification request for information RFI 2, DocID001061-026765 M.9820-RFI020327398, slide 22 [emphasis added by the Commission]

- (897) Danfoss’ perception that there is a lack of competition between orbital motors and radial piston cam-lobe motors can also be deduced from the fact that, as shown in Figure 84, it considers that there is a lack of “*fierce competition*” in the market for radial piston cam-lobe motors.

Figure 84 – [...]

[...]

Source: Reply to post-notification request for information RFI 2, DocID001061-026765-M.9820-RFI020327398, slide 26 [emphasis added by the Commission]

Danfoss’ portfolio of gear motors and piston motors do not seem to be competing with its orbital motor portfolio

- (898) **Sixth**, as explained in Annex II, gear motors have very limited or no technical overlap with orbital motors, and therefore OEMs can rarely technically substitute an orbital motor with a gear motor. The lack of technical similarities between gear motors and orbital motors also explains to some extent why Danfoss has in its portfolio both gear motors and orbital motors and from a review of their internal documents it appears that it typically does not discuss potential cannibalisation of orbital motor sales by gear motor sales or vice-versa.⁸⁰³

Electric motor adoption is limited to certain machines and its impact on the market for orbital motors is expected to be limited in the foreseeable future

- (899) **Seventh**, as explained in Section 6.5.3.2, OEMs consider that for the majority of the machines they manufacture (and particularly for those that cannot be regarded as small machines), electric systems are not cost-competitive with HPS, and therefore electric motors do not exert important competitive constraints on orbital motors and are not expected to do so in the foreseeable future.
- (900) As explained in Section 6.5.3.2, electric motors are being adopted in small machines that have small power and autonomy requirements. This appears to be the case because the cost of battery appears to be still relevant, and therefore not cost-competitive for larger machines which would require large battery packs. Section 6.5.3.2 also explains that this situation is not expected to change in the foreseeable future.
- (901) **Eight**, the Parties and their competitors do not appear to be particularly constrained by electric motors in defining their strategies and particularly prices of their orbital motors.
- (902) As shown in Figure 18 in Section 6.5.3.2, Danfoss appears to be aware that the electrification trend, which consists in replacing fossil fuels with electricity as a

⁸⁰³ See for example Form CO Annex _Sections 1-5_V_5.4_1.

vector of energy, concerns mainly stationary applications,⁸⁰⁴ the automobile sector, and to a limit extent, aerospace.

(903) Another internal document of Danfoss, [content of internal documents].

Figure 85 – Danfoss’ assessment of the electrification trend

[...]

(904) As explained in Section 6.5.3.2, and particularly regarding Figure 17, [business strategy - content of internal documents].

Figure 86 – [...]

[...]

Source: Reply to post-notification request for information RFI 3, DocID001042-048590-EAT-109237, slide 6 [emphasis added by the Commission]

(905) Eaton appears to be well aware of the disadvantages of electric systems versus HPS, and therefore of the limited competitive constraint that electric motors exert on orbital motors and HPS in general. [Business strategy - content of internal documents].

Figure 87 – [...]

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex A.4_8, slide 34.

(906) In another internal document, Eaton analysed in its ordinary course of business the four competitive forces of electric system versus HPS. [Business strategy - content of internal documents].

(907) The same document also [business strategy - content of internal documents].

Figure 88 – [...]

[...]

Source: Reply to pre-notification request for information RFI PN 4, Annex B.5_1, slide 6 [emphasis added by the Commission].

(908) The market investigation indicated that the Parties’ competitors in orbital motors as well as in other HPS components, also consider that electric motor adoption is limited to certain machines and the impact on the market for orbital motors is expected to be limited in the foreseeable future.

(909) In the first place, a large majority of the Parties’ competitors in HPS consider that HPS and fully electric systems compete with each other only for certain machines.⁸⁰⁵ When asked to explain for which machines competition takes place, the replies appear to consistently indicate that competition concerns machines with a reduced

⁸⁰⁴ Danfoss considers that the hydraulic motors currently used for orienting solar panels and wind turbines could be replaced by electric motors.

⁸⁰⁵ Replies to question 13 of Q4 – Phase I Questionnaire to competitors, DocID1959.

power, for which batteries appear to be better developed and to some extent cost-effective.

- (910) For example, one of the Parties' competitors in HPS components explained that competition "[...] depends from the size of the machine. The smaller a machines the easier to use electric systems instead of hydraulics. But the costs are significantly higher and from this point of view not competitive to hydraulic solutions".⁸⁰⁶
- (911) Another manufacturer provided more precise indication of the size of the machines for which it considers that HPS and electric systems can compete with each other: "based on the availability of electric components today they are competing in machines up to 100kW power".⁸⁰⁷
- (912) One manufacturer explained that "in Heavy duty applications pure electric drives are technically not feasible [sic] as power density is requiring big electric units. Also the battery technology is not developed this far that a full working cycle over the day can be fueled by current batteries".⁸⁰⁸
- (913) Another manufacturer relates the desired machine power and mass with the difficulties in using electric systems: "[i]t depends by the mass and the power requested. Higher is one of them more difficult is to substitute the hydraulic system with electrical one".⁸⁰⁹
- (914) In their replies, certain manufacturers cited also power density, compactness and robustness as limiting factors of electric systems.⁸¹⁰
- (915) In the second place, when asked for which types of machine fully electric systems will be able to compete effectively in the market with HPS in the next five years, a number of manufacturers indicated machines that appear to be relatively small in size.⁸¹¹
- (916) In the third place, during the market investigation, orbital motor manufacturers were asked for which machine (out of the 10 types of machines for which demand of orbital motors accounts for about 80% of the total EEA demand, see Section 6.5.3.2) in the last five years, they lost sales of orbital motors because certain OEMs decided to switch to electric motors.
- (917) The replies indicate that the Parties' competitors in orbital motors that replied to the market investigation did not lose orbital motor sales in favour of electric motors in the last five years, for any of the machines types indicated in the question but one, that is Aerial lifts.⁸¹²
- (918) In the fourth place, a large majority of the Parties' competitors in orbital motors explained that the market price of electric motors does not influence their price of orbital motors.⁸¹³ One manufacturer explained: "If the price of electric motors reduces, it would make it more attractive for customers to go to them. We would have to adjust our prices to compete with our orbital motors. On the other hand, the cost of batteries, generators, and controllers will also need to be reduced significantly.

⁸⁰⁶ Reply to question 13.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁰⁷ Reply to question 13.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁰⁸ Reply to question 13.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁰⁹ Reply to question 13.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸¹⁰ Replies to question 13.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸¹¹ Replies to question 14 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸¹² Replies to question 5 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1956.

⁸¹³ Replies to question 6 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1956.

Electric motors have several physical challenges that make them unattractive to engineers. The first challenge is a low power density, so for the same amount of power, the electric motor is much larger and weighs more than the comparable orbital motor. The second challenge is that electric motors have poor starting torque at low speeds. To overcome that challenge, an engineer will need to add a gear box, which adds cost, space, weight, and complexity. Orbital motors have superior torque at low speeds and thrive there without a gear box. The third challenge is that electric motors are a risk in explosive environments (oil & gas or saw mills) and wet environments (food processing wash down, salt and sand spreaders, under water applications)".⁸¹⁴ The same market participant also stated that it "[...] expect at least 10 years before battery technology is sufficiently developed to be implemented in an efficient and cost competitive way",⁸¹⁵ and, referring specifically to orbital motors, it explained that "[t]here is no cost efficient alternative to orbital motors to achieve the same function, moreover there is also a size constraint. Alternative components would be much larger and much heavier and weight and space is critical in mobile applications. A long-term potential substitution could be electrification but it will take years to develop".⁸¹⁶

- (919) In conclusion, the Commission finds that only limited parts of the market for orbital motors face competition from other motor technologies and that such competition is limited in intensity.

8.5.3.6. Countervailing buyer power would not offset a price increase

- (920) OEMs do not have sufficient buyer power to prevent a price increase of the Parties for orbital motors. This is mainly due to the structure of the market, OEMs lack of ability to manufacture orbital motors in-house and examples of price increases in the past.

The downstream market where OEMs operate is fragmented whereas the market for orbital motors is highly concentrated

- (921) In terms of market structure, the market investigation indicated that, while the Parties operate in a highly concentrated market with a limited number of competitors, their customers' number appears to be relatively large and widely fragmented.
- (922) In this respect, and for the avoidance of repetition, reference is made to recitals (564) to (566), which apply to all HPS components without distinction. Similarly to HSUs, the market for orbital motors is characterised by a highly concentrated upstream market and a very fragmented downstream market.
- (923) In relation to orbital motors in particular, Danfoss [content of internal documents].

Figure 89 – [...]

[...]

Source: Reply to pre-notification request for information RFI PN 3, Annex A.4_6, slide 5 [emphasis added by the Commission]

- (924) This slide [business strategy - content of internal documents].

⁸¹⁴ Reply to question 6 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1956.

⁸¹⁵ Minutes of a call with a competitor on 07.06.2020, DocID0504.

⁸¹⁶ Minutes of a call with a competitor on 07.06.2020, DocID0504.

- (925) In the Reply to the SO, the Notifying Party distinguishes between OEMs that purchase orbital motors directly from the Parties and those that purchase through distributors and concludes that the number of OEMs purchasing directly from the Parties are limited in number and therefore they operate in a concentrated market.⁸¹⁷ However, as explained in Section 8.5.3.1, the Commission considers that competition concerns cannot be removed by simply selecting certain segments of the market (that are, in this case, segments by channel) and highlighting alleged mitigating factors such as countervailing buyer power in these segments. Furthermore, and specifically for the alleged countervailing buyer power, recitals (949)-(956) demonstrates that also a large OEM such as Terex has limited countervailing buyer power and in the past it was subject to price increase from Danfoss.
- (926) With respect to small and medium OEMs, which typically do not purchase directly from the Parties, but instead through distributors, the following section demonstrates that their buyer power is even more limited than the one of larger OEMs.
- OEMs' buyer power is limited, particularly for small and medium OEMs
- (927) While countervailing buyer power is overall limited and therefore will not be able to countervail a price increase after the Transaction, small and medium OEMs have an even lower market power.
- (928) In this respect, and for the avoidance of repetition, reference is made to, *mutatis-mutandis*, Section 8.3.3.5, which applies to all HPS components without distinction.
- (929) This seems to be particularly relevant for orbital motors, where medium and smaller OEMs appear to be a significant part of the customer base. The sales made directly to OEMs, and those made through distributors are a good proxy of the sales made to large OEMs versus those made to small and medium OEMs. According to the data provided by the Notifying Party,⁸¹⁸ in 2019, about [...]% of Danfoss' sales to orbital motors customers were made through distributors, which indicates that a large part of its customers is made up of small and medium OEMs.
- (930) Furthermore, the Notifying Party argues that the large majority of Danfoss' and Eatons' orbital motor customers purchase also other components from them. This would allegedly confer these customers buyer power because they could threaten the merged entity of redirecting their purchases of other components to other suppliers.⁸¹⁹
- (931) However, in the case of orbital motors, as explained in Annex II, the Parties have also customers that purchase only orbital motors from them. Therefore, these customers cannot exert any competitive pressure on the Parties by threatening them to switch suppliers of other HPS components.
- (932) In this respect, the Commission recalls that '*countervailing buyer power cannot be found to sufficiently off-set potential adverse effects of a merger if it only ensures that a particular segment of customers, with particular bargaining strength, is shielded from significantly higher prices or deteriorated conditions after the merger*'.⁸²⁰

⁸¹⁷ Reply to the SO, paragraph 166.

⁸¹⁸ Form CO, Section 6 to 9 for Motors, Table 109.

⁸¹⁹ Orbital Motors Advocacy Paper, paragraphs 217-221.

⁸²⁰ Horizontal Merger Guidelines, paragraph 67.

(933) In addition, as explained in recitals (945)-0 below, there is evidence of past price increases of Danfoss’ orbital motors for a large OEM purchasing a large amount of HPS components, in addition to orbital motors.

OEMs’ alleged capabilities of manufacturing orbital motors is not a competitive constraint on the Parties

(934) According to the Notifying Party, while in the EEA OEMs do not manufacture orbital motors in-house, they have the ability and the incentive to do so if the price of orbital motors does not meet their expectations.⁸²¹ The results of the market investigation do not corroborate the Notifying Party’s claim.

(935) **First**, a large majority of the OEMs that replied to the market investigation consider that they do not have enough ability (e.g. know-how, technical skills, IP, etc) and incentives to start the production in-house in case of a price increase of 5-10%.⁸²² One Company that, instead, considers to have enough ability and incentives to start this production, further explained *‘[b]ut this possibility is not realist due to time to market considerations , investment too high for our volumes, and requires extensive use of critical resources need for other areas of work within the company’*.⁸²³

(936) The remaining OEMs that provided explanations to their replies, indicated as the reasons for not having ability and incentive to start manufacturing orbital motors, the lack of know-how (including intellectual property and manufacturing capabilities), the fact that manufacturing motors is outside their core business, and the lack of a proper business case in terms of potential return of investment.⁸²⁴

(937) For example, one OEM explained *‘I do not have enough ability e.g. know-how, technical skills, IP and equipment to start in-house production’*,⁸²⁵ while another OEM stated: *‘our core business is not the in-house production for orbital motors and in general hydraulic components, we want and we need to buy them’*.⁸²⁶ Another OEM also highlighted the lack of know-how and capabilities: *‘it is a profession to produce hydraulic components and it is not part of the core business of our company to manufacture hydraulic components’*.⁸²⁷

(938) Other OEMs explained that manufacturing orbital motors is outside their business scope. For example, one OEM stated: *“We are not a manufacturer of motors“*,⁸²⁸ while another explained *“this is not the know-how of our business“*.⁸²⁹ Similarly, another OEM stated *“we are not a manufacturer of orbital motors. We use these motors in our machines“*.⁸³⁰ Similarly, another OEM stated *“We do not produce - just assemble“*.⁸³¹

⁸²¹ Reply to the Article 6(1)(c) Decision, paragraphs 74-75.

⁸²² Replies to question 24 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²³ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²⁴ Replies to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²⁵ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²⁶ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²⁷ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²⁸ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸²⁹ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963. Courtesy translation from the original text in French: *‘Ce n’est pas notre savoir faire ni notre business’*

⁸³⁰ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963. Courtesy translation from the original text in German: *‘Wir sind keine Hersteller von Orbitalmotoren. Wir nutzen diese Motoren für unsere Maschinen’*.

⁸³¹ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (939) Two OEMs explained why there would be no business case for them to start producing orbital motors. One remarked the high investment and the fact that orbital motors are one of the several components in their machines and the investment for starting manufacturing them would be too high,⁸³² while another pointed at the lack of a return of investment: *“We manufacture mobile equipment. The design and manufacturing processes are outside Terex’s core competency. The ROI to develop the internal capability to produce our own orbital motors is not practical. We would find other solutions first. I am not aware of any equipment manufacturer that vertically integrates an orbital motor”*.⁸³³
- (940) **Second**, the alleged possibility that OEMs start manufacturing orbital motors in-house does not appear to be a competitive constraint to the Parties’ competitors.
- (941) The Parties’ competitors active in orbital motors do not appear to be aware of any actual or potential in-house manufacturing of orbital motors by OEMs and *‘do not believe OEMs have the capability and incentive to produce orbital motors in-house in a cost effective way’*.⁸³⁴
- (942) One manufacturer explained that *“[i]t is not economical effect to set production of orbital motor only for use of one OEM”*.⁸³⁵ Another manufacturer provided for a more elaborated explanation: *“[n]o OEMs have the designs or capability to produce orbital motors. The barriers to entry are extremely high. First, capital spending of several million dollars is required to produce the motors. The types of equipment are broaching machines, OD and ID grinding machines for gerotor shapes, & flat part grinding machines. Second, there is a very high cost of engineering to develop the orbital motors. The high cost of engineering is due to the complicated nature of the designs. These complicated devices have an orbiting shaft and valving with timing, rigorous drivetrain designs, fixed clearance with different metals, & high pressure shaft seal designs that are leak free”*.⁸³⁶
- (943) Furthermore, the Parties’ competitors that replied during the market investigation do not appear to take into account in-house production by OEMs, whether actual or potential, when setting up their strategies and prices for orbital motors,⁸³⁷ and indicated that OEMs rarely or never leverage on their in-house manufacturing capabilities for obtaining better contractual terms for orbital motors.⁸³⁸ One manufacturer explained its answer by stating: *“I have been in this market for more than 25 years. I have never had any OEM say that they were thinking about developing and manufacturing orbital motors”*.⁸³⁹
- (944) Looking forward, manufacturers do not seem to consider the situation will change in the near future because they consider that in-house production of orbital motors by OEMs is not going to become a more prominent feature of the market in the next 3 to 5 years.⁸⁴⁰

⁸³² Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸³³ Reply to question 24.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸³⁴ Replies to question 37 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁸³⁵ Reply to question 37.1 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁸³⁶ Reply to question 37.1 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁸³⁷ Replies to question 39 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁸³⁸ Replies to question 40 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁸³⁹ Reply to question 40.1 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁸⁴⁰ Replies to question 41 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

Past behaviour of the Parties indicates that OEMs are not able to prevent a price increase

- (945) The evidence on the file indicates that already pre-Transaction the Parties are capable of increasing price in orbital motors, to the extent that OEMs cannot prevent it.
- (946) **First**, Danfoss appears to be capable of increasing its prices of orbital motors and therefore maintaining good profitability.
- (947) Danfoss' margins in orbital motors in the last few years appear to be consistently at relatively high level. Based on statistics presented by the Notifying Party, it earns on average a contribution margin of [...] % in its orbital motor sales.⁸⁴¹ This suggests that, over the years, Danfoss managed to cover the input increased costs (e.g. on input materials, inflation, etc) by increasing price to its customers, rather than decreasing its profit margins.
- (948) An OEM, which is a customer of Danfoss, corroborated what margins suggest and, referring to Danfoss it stated that “[t]heir market pricing policy is “firm” with annual price increases in order to maintain their profitability“.⁸⁴²
- (949) **Second**, the market investigation indicated that there are past occurrences in which OEMs were not able to prevent a price increase from the Parties.
- (950) Danfoss recently acquired a company active in orbital motors called Propulsys, which was part of White Group.⁸⁴³ [Business strategy].
- (951) For example, Figure 90 reproduces an email exchange [information about Danfoss' pricing strategy]. While the figure refers to the supply of orbital motors to [...] in the US and in China, it is a clear example of the lack of countervailing buyer power of large OEMs (in this case [...]).

Figure 90 – E-mail exchange between [...]

[...]

*Source: Reply to request for information RFI 2 DocID001059-025980 - M.9820-RFI020239146
[emphasis added by the Commission]*

- (952) Figure 90 shows that, while [...] already agreed with a price increase in a number of other HPS components, it did not want to agree with a price increase in [...] products, which includes two types of orbital motors. For these, Danfoss requested a price increase of [...] % for certain orbital motors and as high as [...] % in other orbital motors.
- (953) While Danfoss considers that stopping supplying is typically something to avoid, it also considers that this is the [content of internal documents] which indicates that it is well aware that its customers' dependency on its products confers Danfoss important market power.
- (954) The Notifying Party claims that OEMs' threat of switching suppliers, not only for orbital motors, but also for other HPS components would confer them with buyer

⁸⁴¹ Orbital Motors Advocacy Paper, Annex 9, Table 5-3.

⁸⁴² Reply to question 4 of Q13 – Phase II Questionnaire to orbital motors OEMs , DocID1963.

⁸⁴³ See for instance, reply to request for information RFI 10, Annex D.7_1.

power.⁸⁴⁴ However, Figure 90 shows that this is not the case because [content of internal documents].

- (955) In a call with the Commission an OEM explained that, while Danfoss relies on large customers, often these customers equally, or even more, rely on Danfoss as a supplier: *“in this particular industry changing suppliers is not only about number of competitors, but also about other different factors, such as: time involvement, testing costs, etc. Suppliers often have increased market power over original equipment manufacturers due to these additional hurdles required for changing such types of components. The Company states that switching costs for them are high and that big suppliers such as Danfoss are aware of this.”*⁸⁴⁵ and *“Suppliers in this particular industry are often able to obtain a lock-in effect over original equipment manufacturers, making switching suppliers more difficult than with other types of products, particularly because: (i) there are limited manufacturers capable of global supply and support coverage, which is required by companies that operate globally; and (ii) if companies manufacture structural modular products (i.e. a certain module is present in more than one machine), like the Company does, if a component of one model is changed, it needs to be tested and customized for all the products where the module is used and any change in one of the machine components could thus take weeks or months to be adapted to the remaining ones.”*⁸⁴⁶
- (956) The Notifying Party claims that the price increase requested from [...] was motivated by the fact that certain sales to [...] were unprofitable and that it had lost a significant portion of the [...] business.⁸⁴⁷ However, such motivation does not dispel the fact that Danfoss was capable to request and to obtain a price increase with [...], and no fear of retaliation persuaded Danfoss to do so.
- (957) Internal documents of Eaton also indicate that it is capable to request and obtain a price increase from customers. In July 2019 the US government introduced import tariffs from China, which impacted, among other HPS components, orbital motors manufactured by Eaton in its Chinese plant and exported to OEMs in the US.⁸⁴⁸
- (958) As Figure 91 shows, while Eaton’s orbital motors (indicated as G/G motors) have standard margins in excess of [...]%, Eaton decided to ask its customer for a price increase between [...]% and [...]%. Such a price increase would have generated revenues for USD [...] which exceeds the costs of the additional export cost (USD [...]).

Figure 91 – Eaton’s planned price increase due to US import tariffs

[...]

Source: Reply to request for information RFI 6, Annex A.1.a.3, slide 3 [emphasis added by the Commission]

- (959) While the Notifying Party explained that Eaton did not manage to obtain the requested price increase with all its OEMs, Table 16 shows that to some extent all

⁸⁴⁴ Orbital Motors Advocacy Paper, paragraphs 217-221.

⁸⁴⁵ Minutes of a call with a customer, 12.11.2020, DocID2268.

⁸⁴⁶ Minutes of a call with a customer, 12.11.2020, DocID2268.

⁸⁴⁷ Reply to the SO, paragraph 171.

⁸⁴⁸ Reply to post-notification request for information RFI 6, Annex A.1.a.3, slide 2.

the OEMs agreed to the price increase, and that small OEMs as for example [...], [...] and [...] had to accept the full price increase that was requested.

Table 16 – Overview of Eaton price increase request and obtained

Customer Name	Full Ask (%)	Final Increase (%)	Final Adjustment Date	Internal documents
[...]	[...]	[...]	[...]	M.9820_RFI9_Annex_D.12_1
[...]	[...]	[...]	[...]	M.9820_RFI9_Annex_D.12_2
[...]	[...]	[...]	[...]	M.9820_RFI9_Annex_D.12_3
[...]	[...]	[...]	[...]	M.9820_RFI9_Annex_D.12_4
[...]	[...]	[...]	[...]	M.9820_RFI9_Annex_D.12_5
[...]	[...]	[...]	[...]	M.9820_RFI9_Annex_D.12_6

Source:: Reply to request for information RFI 9, question 12, table 4

(960) Based on the evidence available at this stage of the market investigation, the Commission finds that countervailing buyer power of OEMs would not prevent a price increase for orbital motors.

8.5.3.7. Barriers to entry are high and potentially expanding smaller suppliers, as well as new market entrants, will not be a significant constraint to the merged entity

(961) The Notifying Party considers that barriers to entry the market for orbital motors are low because: (i) the technology is mature and is not protected by any IP right any more; (ii) entering the market requires a low level of investment and reduced amount of time; (iii) Chinese suppliers are increasingly entering the EEA market; (iv) OEMs can strategically sponsor entry of new suppliers.⁸⁴⁹

(962) However, the Commission has found that barriers to entry for orbital motors are very high and may hinder new entrants from challenging the merged entity for the foreseeable future. Economies of scale, OEM purchasing practices as well as the required manufacturing know-how and expertise make market entry difficult. In addition, the Commission’s market investigation showed that a new market entrant would most likely not be a significant constraint to the Parties.

(A.) Potential new entrants would not be able to achieve economies of scales comparable to those of the Parties

(963) The present section demonstrates that: (i) economies of scales are an important factor for manufacturing orbital motors; (ii) the Parties have important manufacturing economies of scale; and (iii) new entrants would not enjoy economies of scales comparable to those of the Parties.

(964) **First**, during the market investigation several customers and competitors indicated that economies of scale are an important factor for manufacturing orbital motors in a cost-competitive manner.

⁸⁴⁹ Reply to the SO, paragraph 152 (aa)-(dd).

- (965) For example, one manufacturer of orbital motors stated: *'[i]f you don't have economies of scale, then you will not be competitive with making orbital motors due to the high capital costs of entry. If you don't have large volumes, then a manufacturer would have to buy all the parts from suppliers and struggle to be competitive'*.⁸⁵⁰
- (966) The same manufacturer provided more details in terms of CAPEX requirements, and indicated that only for manufacturing the gerotor, *'[t]he machines for broaching and ID/OD grinder cost around €5M new and a supplier may need 10 of these machines to achieve sufficient scale'*.⁸⁵¹
- (967) Another manufacturer considers that economies of scale are very important for being successful in the market for orbital motors,⁸⁵² and explained that *'[o]rbital motors are low price high volume products and often viewed as commodity items'*, which suggests that orbital motors are cost-competitive only if manufactured on a large scale.
- (968) Certain OEMs also consider that economies of scale represent a barrier to enter the market for orbital motors in the EEA.
- (969) One large customer of the Parties explained that *'[it] considers that an important barrier to entry for new suppliers is production volume. In this market, and in particular for orbital motors and steering units, a new entrant would likely not have enough sales for achieving acceptable economies of scales and therefore could not be cost competitive with incumbent suppliers like the Parties'*.⁸⁵³
- (970) The importance of economies of scale in manufacturing orbital motors appears also in internal documents of the Parties. For example, Figure 92 shows that for Danfoss a keyword for winning in small orbital motors [business strategy - content of internal documents] .

Figure 92 – Danfoss' strategy in orbital motors and steering

[...]

Source: Reply to post-notification request for information RFI 6, Annex B.2_1, slide 58 [emphasis added by the Commission]

- (971) Economies of scale for orbital motors (but also for other HPS components), appear to be so relevant that in a summary slide prepared for its board of directors, Danfoss [content of internal documents] (Figure 93).

Figure 93 – [...]

[...]

Source: Reply to post-notification request for information RFI 2, DocID 1059-16689 "Transformational M&A, Project Bourbon, Board meeting December 2019", slide 7 [emphasis added by the Commission]

⁸⁵⁰ Reply to question 48.1 of Q11 – Questionnaire to orbital motors competitors, DocID1961.

⁸⁵¹ Minutes of a call with a competitor on 07.06.2020, DocID0504.

⁸⁵² Reply to question 48 of Q11 – Questionnaire to orbital motors competitors, DocID1961.

⁸⁵³ Minutes of a call with a customer on 02.06.2020, DocID0608.

- (972) **Second**, the Parties rely on economies of scale in manufacturing their orbital motors.
- (973) The Notifying Party provided data regarding the Parties’ manufacturing facilities, which include sales to EEA and overall production (meaning sales to the EEA plus to other regions).⁸⁵⁴ Table 17 shows for each of the Parties’ plant serving the EEA, production, sales to the EEA and the ratio between EEA sales and production.
- (974) The table shows that for both the Parties, but particularly for Eaton, most of the plants sell to the EEA only a part (a small fraction in the case of Eaton) of the orbital motors they produce. This suggests that, in centralising manufacturing in certain plants which serve multiple regions, the Parties are able to produce large volume, which result in reduced manufacturing costs of each unit.

Table 17 – Sales and production of the Parties’ manufacturing plants serving the EEA market

	Manufacturing Plant	Sales to EEA (000 units)	Production (000 units)	Share of sales to EEA versus production
Danfoss	Hopkinsville (US)	[...]	[...]	[...]
	Nordborg (Denmark)	[...]	[...]	[...]
	Wroclaw (Poland)	[...]	[...]	[...]
	Zhenjiang (China)	[...]	[...]	[...]
	Overall Danfoss	[...]	[...]	[...]
Eaton	Eden Prairie (USA)	[...]	[...]	[...]
	Havant (UK)	[...]	[...]	[...]
	Jining (China)	[...]	[...]	[...]
	Kameoka (Japan)	[...]	[...]	[...]
	Shawnee (USA)	[...]	[...]	[...]
	Overall Eaton H.	[...]	[...]	[...]

Source: Commission based on Reply to pre-notification request for information RFI 3, Annex A.14_1; Reply to pre-notification request for information RFI 3, Annex A.14_2.

- (975) In addition, an analysis of the market shares of the Parties and of their competitors in the EEA and globally suggests that the economies of scale that the merged entity would be able to achieve cannot be matched by their competitors. According to the Notifying Party’s estimates of market shares, the merged entity would have the largest market share in the EEA and globally,⁸⁵⁵ which suggests that none of the

⁸⁵⁴ Reply to pre-notification request for information RFI 3, Annex A.14_1; reply to pre-notification request for information RFI 3, Annex A.14_2.
⁸⁵⁵ Form CO, Sections 6 to 9 for motors, Table 48.

Parties' competitors has economies of scale higher than of even matching those of the merged entity.

- (976) **Third**, manufacturing economies of scale represent a barrier for potential new entrants to the EEA market for orbital motors because a potential market entrant could not achieve economies of scale similar to those of the Parties.
- (977) According to the data provided by the Notifying Party displayed in Table 18, the demand for orbital motors in the EEA had a relatively modest growth in the years 2015-2019 [confidential market data].

Table 18 – Size of the EEA market for orbital motors for the period 2015-2019

	1,000 Units	EUR Million	Annual growth (%)
2015	[...]	[...]	-
2016	[...]	[...]	[...]
2017	[...]	[...]	[...]
2018	[...]	[...]	[...]
2019	[...]	[...]	[...]

Source: Commission based on Reply to post-notification request for information RFI 18, Annex 1_1.

- (978) Under these market conditions, in which modest growth rate is expected and the merged entity has a market share in volume of, referring to the year 2019, [50-60]% (see Table 10), it is very difficult, if not impossible, for a new entrant to achieve economies of scale similar to those of the merged entity because it is very unlikely, if not impossible for a new entrant to have market shares in the EEA similar to that of the merged entity.
- (979) Certain market participants noticed that a new entrant that is in a position to sell important quantities outside the EEA would in principle be able to have the required economies of scale, without the need to have very large market shares in the EEA.⁸⁵⁶ This could potentially be the case for Chinese manufacturers, provided that they could sell the same products to both the Chinese and to the EEA market for orbital motors. However, as explained in Section 7.4, in particular Sections 7.4.2 and 7.4.3, it appears that there are different requirements of OEMs based in China and in the EEA, and the orbital motors that are typically sold in China appear to be different from those sold to the EEA market.
- (980) In its Reply to the SO, the Notifying Party argues that certain OEMs that replied to the market investigation indicated that they could possibly purchase orbital motors from Chinese suppliers in the next five years.⁸⁵⁷ However, these OEMs only alluded to a hypothetical possibility of procuring orbital motors from China, whereas none of the replying OEMs indicated that this was likely.⁸⁵⁸

⁸⁵⁶ See for instance, minutes of a call with a customer on 04.06.2020, DocID1985.

⁸⁵⁷ Reply to the SO, paragraph 152 (dd).

⁸⁵⁸ Replies to question 56 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (981) Furthermore, economies of scale are a necessary, but not a sufficient factor for entering the EEA market for orbital motors. As explained in Section 7.4.8, the Commission considers that one of the main reasons for which Chinese manufacturers are not expected to establish an important presence in the EEA in the foreseeable future is that the quality of their products do not meet the quality level required by European OEMs. This barrier to entry for Chinese manufacturers appears to be independent of the price at which they can sell orbital motors, and therefore if they can achieve economies of scale or not.
- (982) As another piece of evidence that economies of scale represent a barrier to a potential new entrant, a large majority of the Parties' competitors that replied during the market investigation indicated that a new entrant would not recoup its initial investment within a reasonable amount of time.⁸⁵⁹ One of these competitors explained that several HPS components, including orbital motors, *'[...] require big knowledge on both design and production. Cost effective production can only be realised for high quantities. So it will be difficult for newcomers'*.⁸⁶⁰
- (983) A large OEM which purchases important quantities of orbital motors explained that it *"[...] considers that an important barrier to entry for new suppliers is production volume. In this market, and in particular for orbital motors and steering units, a new entrant would likely not have enough sales for achieving acceptable economies of scales and therefore could not be cost competitive with incumbent suppliers like the Parties"*.⁸⁶¹
- (984) In conclusion, based on all the evidence available from the market investigation, the Commission concludes that barriers to entry and expand prevent new entrants to challenge the merged entity in the foreseeable future.

(B.) Manufacturing know-how and expertise are important barriers to entry

- (985) During the market investigation, a number of market participants explained that manufacturing orbital motors requires specific skills and capabilities, which are difficult to acquire for a new manufacturer.
- (986) A large majority of the HPS manufacturers that replied during the market investigation consider that from the point of view of acquiring technical capabilities (e.g. industrial know-how, IP, etc), it is very difficult and very challenging for a new manufacturer to enter the market for orbital motors.⁸⁶²
- (987) A manufacturer of several HPS components explained that *"[i]n general it is difficult to enter the hydraulics market as a new player. It is a complex technology and also from the manufacturing know how it is challenging for new players to enter the market"*.⁸⁶³ Another manufacturer describes orbital motors as an *"[o]ccupied market, relatively difficult and expensive to manufacture"*.⁸⁶⁴
- (988) A manufacturer of orbital motors provided detailed explanations as to why it considers that manufacturing orbital motors requires important know-how and expertise which represent a barrier to entry for a potential new entrant: *"[t]he main patents for orbital motors expired a long time ago as the first orbital motor was*

⁸⁵⁹ Replies to question 30 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁶⁰ Reply to question 30.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁶¹ Minutes of a call with a customer on 02.06.2020, DocID0680.

⁸⁶² Replies to question 28 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁶³ Reply to question 28.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁶⁴ Reply to question 33 of Q4 – Phase I Questionnaire to competitors, DocID1959.

produced in the 1950's however there are still significant barriers to entry. CAPEX requirement is very high as the machine to make the shape is very expensive and the rotors have a very specific rounded star profile and also require inside diameter (ID) and outside diameter (OD) grinding. The grinding process is very difficult to achieve and machines are sometimes pushed over their specifications to achieve the right quality. The engineering is complicated (design and lining up) as the shaft wobbling is critical for the life of the motor and its performance. There are fixed clearances and the engineering has to be very precise because depending on the temperature the metals react differently. It has to have very tight tolerances for the rotor set side clearance to minimize leakage to obtain the performance required. (This is a part where players in emerging market struggle to achieve similar performance and quality). Also, most of these motors are designed to operate in very harsh conditions and climates, therefore minimal rotor set leakage must be ensured at any climate and conditions. This can be very challenging, considering that pressure of up to 250 bar might be required. The machines for broaching and ID/OD grinder cost around €5M new and a supplier may need 10 of these machines to achieve sufficient scale. However, having the machine is not sufficient. Technical expertise and know-how are key to start producing this component, and constitute an even higher barrier for new entrance. Moreover, in order to have a reasonable market share, it is important to offer a wider product range than just orbital motors".⁸⁶⁵

- (989) Another manufacturer of several HPS components, but not of orbital motors, considers that the Parties managed to leverage on the good quality of their products for scaling-up production and gaining market shares: “[t]he basic technology in steering units and orbital motors is similar. One of the reasons for the Parties to be strong in steering is also their historical presence in orbital motors. Thanks to their historical presence and therefore good quality of their products, both the Parties have been able to scale the business for high quantity. This allowed them to dominate pricing, making it difficult for others to compete”.⁸⁶⁶ This suggests that in this market quality is an important and key factor for increasing sales.

(C.) OEMs purchasing practices make market entrance difficult and often delay market entry

- (990) The results of the market investigation indicates that a new manufacturer of orbital motors would face important difficulties in entering the EEA market due to the purchasing behaviour of OEMs, which, at best, would delay market entry.
- (991) **First**, OEMs appear to value past experience of their suppliers and would be cautious, if not reluctant, to purchase orbital motors from a manufacturer with limited previous references. Therefore, a supplier with limited or no reputation of their products on the market would face difficulties in selling its orbital motors in the EEA.
- (992) A large majority of the OEMs that replied to the market investigation indicated that in case a new manufacturer enters the market for orbital motors, they would unlikely consider to qualifying their products, or that they would consider to do so, but a number of other factors might ultimately prevent this to happen.⁸⁶⁷

⁸⁶⁵ Minutes of a call with a competitor on 05.06.2020, DocID0504.

⁸⁶⁶ Minutes of a call with a competitor on 08.06.2020, DocID0291.

⁸⁶⁷ Replies to question 48 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (993) One OEM explained that it “[...] *would wait to see how the products perform in the market before approving any new source*”,⁸⁶⁸ and another OEM explained that factors that might prevent to qualify a new entrant is that “[r]eputation and references are missing”.⁸⁶⁹
- (994) Among the OEMs that indicated that they would not qualify a new entrant, one explained that “[v]alidation cost/time too expensive/long compare to potential benefits”,⁸⁷⁰ and another one explained that its “[...] *strategy is to buy from already well established manufacturers*”.⁸⁷¹
- (995) Furthermore, referring to several HPS components, including orbital motors, a number of market participants explained that OEMs value trust in past experience with their suppliers, which makes it difficult for a new entrant to be commercially successful in the market for orbital motors.
- (996) An OEM active in agriculture machines explained that, HPS components “[...] *are designed to be in use for 10 to 12 years, therefore quality is an important factor, and only capable manufacturer can supply components of good quality. Reliability is another important factor when selecting a supplier because there are important safety requirements for the machines manufactured by the Company. In this respect, past experience with suppliers is very important, and this might be an initial barrier for new suppliers. The Company needs to be sure that the machines it produces are safe for its final customers*”.⁸⁷²
- (997) A large majority of the Parties’ competitors that expressed a view during the market investigation considers that, assuming a hypothetical situation in which a certain new manufacturer of orbital motors is capable of producing at the quality level required by its customers, this manufacturer would still face important barriers to entry because of its lack of brand recognition and of previous references, which appear to be import to OEMs.⁸⁷³
- (998) A manufacturer of orbital motors explained that “*new "players" are very negative [sic] accepted*”.⁸⁷⁴
- (999) One manufacturer considers that the main reason for which a new entrant would not be able to recoup its initial investment within a reasonable amount of time is that “[...] *it will take a long time until a new entrant in the market has a reputation and customer relationships [sic] that are necessary to be commercially successful [sic]. The market is very traditional and the established [sic] companies all have a reputation and experience in manufacturing [sic] and marketing of hydraulic [sic] products*”.⁸⁷⁵
- (1000) One of these manufacturers, which is not active in orbital motors but is active in a number of other HPS components, explained that “[b]rand recognition resp.

⁸⁶⁸ Reply to question 48.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁶⁹ Reply to question 48.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁷⁰ Reply to question 48.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁷¹ Reply to question 48.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁷² Minutes of a call with a customer on 10.06.2020, DocID1988.

⁸⁷³ Replies to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁷⁴ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁷⁵ Reply to question 30.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

*references from other customers are of highest importance. The market / customers are very conservative”.*⁸⁷⁶

- (1001) Another explained that “[t]he hydraulics market is a very traditinal [sic] as the reliability and the lifetime of the hydraulic components are crucial for the performance of most machines. Experience in design and manufacturing is very important as the power density of hydraulics units is high. Own manufacturing expertize [sic] as well as an experience supply base are crucialfor suces [sic]. for a new player in the market it will be extremely difficult for a newcomer to be sucessful [sic] in this market. Brand recognition is important to the customers as reliability as well as sales&service network are crucial for the suces [sic] in the market”.⁸⁷⁷
- (1002) **Second**, as explained in Section 8.5.3.3, OEMs’ sourcing practice, and in particular the costs and time required for an OEM to switch suppliers represents a barrier to switch suppliers, including switching to a new market entrant, which would therefore face difficulties in winning business from the incumbent suppliers.
- (1003) As explained in Section 8.5.3.3, OEMs would switch suppliers during production phase of a machine only in exceptional circumstances. Instead, when and if a change of supplier occurs, this would typically occur when a new machine is being designed.
- (1004) Consequently, the market for orbital motors that a new entrant can address is limited to the machines that are being designed, and would exclude machines that are in series production. In other words, a market entrant would be able to win from the market incumbents only sales originated from new machines, whereas the supply of orbital motors for machines that are already in production would remain uncontested for the new entrant.
- (1005) It is to be noted that, contrarily to what the Notifying Party claims, the fact that OEMs typically request quotations to various suppliers when designing a new machine is not indicative of low barriers to entry. On the contrary, while often OEMs requests quotations to various suppliers and in certain instances they switch suppliers, for the reasons explained in recitals (991)-(1004) above, as well as due to their past experience, and the time and cost required for switching suppliers remain important barriers to the switching to occur (which, by itself and as a matter of reasoning, does not mean that switching does not occur at all).
- (1006) In terms of time required to enter the market for a new manufacturer, market participants explained that typically, before an OEM grants a new contract for the supply of orbital motors, it is very common (and it occurs almost every time) that a prototype is built and tested as a common effort between the OEM and the potential suppliers.⁸⁷⁸ Overall, when time for testing and other homologation processes are considered together, a large majority of the OEMs that expressed a view in the market investigation considers that for a new entrant this might require up to 3 years, although for certain OEMs time might be as long as five years or longer.⁸⁷⁹
- (1007) **Third**, a document produced by Eaton in its ordinary course of business (Figure 94), and referring to HPS in general, shows that it considers the [content of internal documents].

⁸⁷⁶ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁷⁷ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁷⁸ Replies to question 26 of Q11 – Phase II Questionnaire to orbital motors competitors, DocID1961.
Replies to question 47 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁷⁹ Replies to question 49 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

Figure 94 – Eaton’s assessment of competitive forces

[...]

Source: Reply to pre-notification request for information 4, Annex B.5_1, slide 6 [emphasis added by the Commission]

(D.) Barriers to entry relating to brand recognition

- (1008) The market investigation showed that, as it typically occurs for non-commodity products, brand recognition and past references are important and represent significant barriers to entry for all HPS components, but in particular orbital motors.
- (1009) The high significance of branding for the supply of HPS components such as orbital motors was confirmed by several of the Parties’ internal documents. For instance, the Danfoss internal document in Figure 95 below identifies “*branding*” as [content of internal documents].

Figure 95 – [...]

[...]

- (1010) This finding was supported by the results of the Commission’s market investigation. When asked, to what extent brand recognition and previous references might represent a barrier to entry (assuming that a certain new manufacturer is capable of producing orbital motors at the required technical and quality level required by its customers), a large majority of competitors that expressed a view considered that brand recognition and previous references are important to their customers and represent important barriers to entry in relation to orbital motors.⁸⁸⁰
- (1011) One competitor stated: “*In any kind of products and solutions within the field of hydraulics it is highly difficult to enter new markets. The markets resp. customers are very conservative and it needs a lot of time and ressources [sic] to switch the customer from supplier/competitor A to supplier B.*”⁸⁸¹ One competitor links the difficulties of a potential market entrant in recouping the initial investment for manufacturing HPS components with brand recognition: “[t]he reason that a [sic] it would be difficult to recoup within a reasonable amount of time is that it will take a long time until a new entrant in the market has a reputation and customer relationships [sic] that are necessary to be commercially suc[c]essful. The market is very traditional and the established [sic] companies all have a reputation and experience in manufacturing [sic] and marketing of hydraulic [sic] products”⁸⁸². The same competitor further explains: “[t]he hydraulics market is a very traditional [sic] as the reliability and the lifetime of the hydraulic components are crucial for the performance of most machines. Experience in design and manufacturing is very important as the power density of hydraulics units is high. Own manufacturing expertize as well as an experience supply base are crucial for suc[c]ess. for a new player in the market it will be extremely difficult for a newcomer to be suc[c]essful in this market. Brand recognition is important to the customers as reliability as well as

⁸⁸⁰ Replies to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁸¹ Reply to question 31 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁸² Reply to question 30.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

*sales&service network are crucial for the suc[c]ess in the market”.*⁸⁸³ Another competitor explains: “[...] *Even with large investments in sales, marketing and distribution it will be very difficult for [Chinese] suppliers to enter the European or North American markets as their brand recognition is missing”.*⁸⁸⁴

- (1012) Further, the finding that branding is a relevant entry barrier to the supply of orbital motors in the EEA is supported by OEMs that purchase orbital motors and replied during the market investigation. One OEM stated in this regard: “*OEM usually trust in experienced suppliers more than in new ones.*”⁸⁸⁵ Consequently, reputation, a long tradition and being well-known is one of the reasons mentioned a couple of times for why Danfoss and Eaton are considered as strong supplier of orbital motors and why they have become such strong players.⁸⁸⁶

(E.) Potential new entrants would not be a constraint to the merged entity

- (1013) While Sections 8.5.3.7 (A.) to (D.) demonstrate that market entrance for a new manufacturer of orbital motors is difficult due to technical, economical and reasons related to purchasing behaviours of OEMs, the present section demonstrates that the potential entrance of a new manufacturer would not be a constraint on the merged entity.
- (1014) **First**, a large majority of the market participants that responded to the market investigation did not identify any new entrant for the past three years and do not expect further entry in the next three to five years.⁸⁸⁷ As an example, one OEM, which is a large customer of the Parties, explained that “[t]here have not been any new global suppliers of orbital motors in 20+ years, only consolidation”.⁸⁸⁸
- (1015) Potential market entrants from China appear to be a special case, because, while the market investigation indicates that new entrance neither recently occurred in the EEA nor is expected in the foreseeable future, a limited number of market participants indicated that certain Chinese manufactures recently entered the market,⁸⁸⁹ as also claimed by the Notifying Party.⁸⁹⁰ Market entrance from China and the competitive constraints that Chinese manufacturers would allegedly exert on the merged entity is assessed in recitals (992)-(1036) of the next section.
- (1016) **Second**, the possibility that a new manufacture of orbital motors enters the market, as for example, following an OEM sponsoring its market entrance, would not be a competitive constraint on the merged entity.
- (1017) A large majority of the OEMs that replied to the market investigation indicated that in the past they have never sponsored (for example, by awarding a first large contract, or by working together for developing products, etc) the entrance of a new

⁸⁸³ Reply to question 31.1 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁸⁴ Minutes of a call with a competitor on 05.06.2020, DocID0504.

⁸⁸⁵ Reply to question 22.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁸⁸⁶ Replies to questions 5.1, 6, 8.1 and 9 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁸⁷ Replies to questions 25.3 and 26.3 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956; Replies to question 24.3 of Q3 – Phase I Questionnaire to distributors, DocID1958; Replies to questions 34.3 and 35.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁸⁸ Reply to question 13 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁸⁹ Replies to questions 25.3 and 26.3 of Q1 – Phase I Questionnaire to direct sale OEMs, Doc ID1956; replies to question 24.3 of Q3 – Phase I Questionnaire to distributors, DocID1958; replies to questions 34.3 and 35.3 of Q4 – Phase I Questionnaire to competitors, DocID1959.

⁸⁹⁰ Reply to the Article 6(1)(c) Decision, paragraph 87.

manufacturer of orbital motors.⁸⁹¹ However, while certain OEMs explained that they have no intention to sponsor the entrance of orbital motors manufacturers, a limited number of these OEMs did not exclude that this might occur in the next five years.⁸⁹²

(1018) Nevertheless, should an OEM sponsor the market entrance of new manufacturer, as explained in recitals (1002)-(1006) of the previous section, it would take several years for this manufacturer to develop, test and qualify its product, first with the OEM that sponsored its market entry, and then with other OEMs and eventually exert pressure on the merged entity.

(1019) This seems to be corroborated by the fact that, as shown in Figure 94, [content of internal documents].

(F.) Chinese manufacturers do not appear to be a significant constraint to the Parties and are not expected to increase their presence in the EEA in the foreseeable future

(1020) As explained in recital (1015), while a majority of the market participants did not observe in the last five years the entrance of a new manufacturer in the market for orbital motors in the EEA, a limited number of market participants indicated that they observed the entrance of Chinese companies.

(1021) On this basis, the Commission investigated to what extent Chinese companies exert or are expected to exert competitive constraints to the Parties in the foreseeable future.

(1022) **First**, Chinese companies have currently a limited sales to the EEA. According to the data provided by the Notifying Party, Zhenjiang and Zihyd/thoth have sales of, respectively, EUR [...] million and EUR [...], which taken together represent a market share of [0-5]%.⁸⁹³

(1023) During the market investigation, one manufacturer of orbital motors active in the EEA explained that it considers Chinese manufacturers almost not active outside China and it explains the main reasons: “[c]onsidering potential suppliers of orbital motors or steering unites in Asia, there are two main manufacturers, which are Zhenjiang and Ningbo. Zhenjiang is much larger than Ningbo. Zhenjiang produces steering units and orbital motors. Ningbo supplies orbital motors, but not steering units. Both these companies are smaller from a global perspective and virtually not active outside of Asia. They are not present in Europe and almost non-existent in the US with a less than 1% market share”.⁸⁹⁴

(1024) The same manufacturer continues and explains the reason for which it considers that Chinese manufacturers sell limited quantities of orbital motors (and of HSU) outside China: “[t]here are different technical and safety standards in Asia, therefore products manufactured in Asia are for the Asian market. These manufacturers tried to copy the products used in Europe but the lack of expertise in metallurgical properties lead to a highly reduced lifetime. Machines produced with such components target the Asian market with very limited warranty (usually 1 to 2 years) and failure is expected from customers. One more reason why these products are not suitable for the European and American markets is that customers in the US or the EU expect very low failing rate even after the warranty period. Moreover, at this

⁸⁹¹ Replies to question 50 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁹² Replies to questions 50.1, 51 and 51.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁹³ Form CO Section 6 to 9 on motors, Table 45.

⁸⁹⁴ Minutes of a call with a competitor on 05.06.2020, DocID0504.

*point, these manufacturers do not have marketing and sales in EU and US. Asia is growing at such a pace that they are focused on that geographic market. Even with large investments in sales, marketing and distribution it will be very difficult for these suppliers to enter the European or North American markets as their brand recognition is missing”.*⁸⁹⁵

- (1025) Consistently with the view of this manufacturer, a large majority of the OEMs that replied to the market investigation stated that they did not purchase orbital motors from Chinese manufacturers for any of the machines designed in the last five years.⁸⁹⁶ Furthermore, a majority of these OEMs did not even request quotations from Chinese manufacturers for any of the machines they designed in the last five years.⁸⁹⁷
- (1026) Furthermore, market shares in different regions support that, while EEA-based manufacturers are capable of selling their products to both EEA-based and China-based OEMs, China-based manufacturers sell their products primarily in China and their sales outside China are very limited.
- (1027) Figure 96 shows the Notifying Party’s estimates of market shares for orbital motors in 2018 for four regions (Americas, Asia and Pacific APAC, China, and Europa) and globally. In China a large part of the orbital motors demand is addressed by two Chinese manufacturers, namely Zhenjiang and Zhongyi, which together have [30-40]% market share. However, these companies have very limited sales in, for example, Europe and Americas (i.e. well less than [0-5]%). On the contrary, EEA-based manufacturers have large market shares in Europe, Americas and also China. With respect to China, for example, the Parties have combined market share of [30-40]%. This suggests that, while the Parties are capable of addressing the needs of and therefore selling their orbital motor products to both EEA-based and Chinese-based OEMs, Chinese manufacturers are only capable to address China-based OEMs and only to a small extent OEMs based outside China.

Figure 96 – Orbital motors market shares in different regions (2018)

[...]

Source: Form CO, Annex_Sections 1-5_V_5.4_6, slide 64 [emphasis added by the Commission].

- (1028) **Second**, while it cannot be excluded that additional Chinese companies will attempt to enter the EEA market for orbital motors, it is very likely that these would not exert a competitive constrain to the merged entity in the foreseeable future. As explained in recitals (963)-(1019), new entrants, and therefore also new entrants established in China, would face important barriers to entry with the results that, at best, it would take several years until their sales to the EEA can reach a level to be considered a competitive constraint to the Parties.
- (1029) Even in case the Chinese government was to heavily support Chinese suppliers in a market entry as regards the supply of orbital motors in the EEA, equivalent to what was discussed in relation to HSUs and ESVs in Sections 8.3.3.7 (J) and 8.4.3.7 (K), they would still not be a constraint on the merged entity in the EEA in the

⁸⁹⁵ Minutes of a call with a competitor on 05.06.2020, DocID0504.

⁸⁹⁶ Replies to question 52 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁹⁷ Replies to question 53 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

foreseeable future in light of the delays to market entry caused by certification, possibly redesigning, testing and validation times.

- (1030) Likewise, a potential speedier market entry of Chinese suppliers into the supply of orbital motors in the EEA by means of an acquisition of another company, while it cannot be excluded, is a scenario too vague as to conclude that a Chinese company or companies are likely to become a constraint on the merged entity in the foreseeable future in relation to the supply of orbital motors in the EEA. The discussions in Sections 8.3.3.7 (J) and 8.4.3.7 (K) relation to HSUs and ESVs in this regard, apply equivalently to the supply of orbital motors.
- (1031) Furthermore, and in addition to market entrants located in the EEA, Chinese manufacturers might face additional difficulties related to their distance from the EEA. For example, a majority of the OEMs that replied to the market investigation consider that, while manufacturing facilities in the EEA are not necessarily needed for supplying the EEA market,⁸⁹⁸ one or more warehouses in the EEA are necessary for serving the EEA orbital motor.⁸⁹⁹
- (1032) **Third**, contrarily to what the Notifying Party claims,⁹⁰⁰ and despite the fact that certain OEMs do not exclude that in the future they might purchase orbital motors from Chinese suppliers,⁹⁰¹ Chinese companies with a presence in the EEA (as for example Zhangjing and Zihyd/thoth) would likely not be able to gain market shares to the extent that they would exert a competitive constraint to the merged entity.
- (1033) **In the first place**, a large majority of the OEMs that replied to the market investigation indicated that in the last five years they have not built any prototype with orbital motors from Chinese manufacturers.⁹⁰² This suggests that OEMs based in the EEA are not actively working with Chinese manufacturers for qualifying their products. Due to the time required for qualifying and eventually employing products of a new supplier in an OEM machine, this also indicates that the presence of Chinese manufacturers in the EEA is not expected to increase in the foreseeable future.
- (1034) In addition, it is to be noted that one of the OEMs that indicated that it built and tested a prototype with orbital motors manufactured by a Chinese supplier explained that after testing the prototype, it did not source these orbital motors: “[w]e ordered motors from Chinese supplier “Vincke” (through european distributor) for testing on one of our product for economical opportunity. “Vincke” is not a current supplier of our panel”.⁹⁰³
- (1035) **In the second place**, OEMs do not appear to be confident enough for purchasing orbital motors from Chinese manufacturers in large quantities. For example, one OEM explained that their “[e]xpectation is to see Chinese suppliers equivalent to European suppliers for the hydraulic market (maybe also orbital motors). Nevertheless, looking my company strategy, I do not see Chinese suppliers ready in 3-five years to supply [my company], because we want to have only well established manufacturers”.⁹⁰⁴

⁸⁹⁸ Replies to question 45 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁸⁹⁹ Replies to question 46 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹⁰⁰ Form CO, Sections 6 to 9 For motors, paragraph 336; reply to 6(1)(c) Decision, paragraph 85.

⁹⁰¹ Replies to question 56 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹⁰² Replies to question 55 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹⁰³ Reply to question 55.2 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹⁰⁴ Reply to question 56.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

- (1036) Another OEM explained that the reason for which it considers unlikely that it will purchase orbital motors from Chinese manufacturers in the next five years is that “*Chinese manufacturers can manufacture different products but the quality is not consistent. The Chinese manufacturers are also lacking technical understanding in order to make their products work (good function) in our product applications and to provide continuous [sic] product support for our product applications*”.⁹⁰⁵
- 8.5.3.8. The transaction is likely to result in higher prices and affect other parameters of competition
- (1037) Based on the Commission’s assessment of the horizontal overlap for orbital motors and the feedback received from market participants, the Transaction will likely lead to an increase in prices for orbital motors in the EEA and reduce the number of alternative suppliers for OEMs.
- (1038) **First**, due to combined entity’s dominant market position and the concentrated structure of the market for orbital motors, the Transaction is likely to result in higher prices and reduced number of alternative suppliers. The Transaction would lead to the combination of two close competitors for orbital motors in the EEA with a very high combined market share in volume well above [50-60]% (and in value above [60-70]%). The market for orbital motors is highly concentrated and many customers regard Danfoss and Eaton as their first and second choices when purchasing orbital motors. In many segments of the market, concentration is even higher and the Parties would be left with no or no meaningful competitor post-Transaction. It can be assumed that this position, market structure and lack of competitive constraints will allow the merged entity to impose or generate significant price increases for orbital motors in the EEA.⁹⁰⁶
- (1039) **Second**, already pre-Transaction Danfoss enjoys a leading, possibly dominant position and significant pricing power, which will only increase as a result of the Transaction. As explained in Section 8.5.3.1, Danfoss is the pre-eminent supplier of orbital motors in the EEA in terms of sales volume, breadth of portfolio and market reputation. This position allows Danfoss to charge comparatively high prices for its orbital motors and to generate average contribution margins for orbital motors in excess of [...]%.⁹⁰⁷
- (1040) In its own internal documents, such as the ones reproduced in Figure 24 and Figure 25 above, Danfoss describes itself [content of internal documents] and explicitly states that [content of internal documents]. In another internal document, reproduced in Figure 26, Danfoss explains that suppliers of orbital motors and Danfoss in particular have [content of internal documents]. By adding Eaton as a close and important competitor, Danfoss would face even less competitive restraints and expand its pricing power further.
- (1041) **Third**, market participants confirmed the view that the Transaction would have negative effects on competition and in particular on prices for orbital motors.
- (1042) Generally, OEMs voiced concerns about the Parties’ dominant position and the lack of competition for the supply of orbital motors in the EEA after the Transaction. In the Commission’s market investigation a majority of responding customers said that the Transaction would have a negative impact on their business in the EEA with

⁹⁰⁵ Reply to question 56.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹⁰⁶ See also Horizontal Merger Guidelines, paragraph 28.

⁹⁰⁷ Orbital Motors Advocacy Paper, Annex 9, Table 5-3.

regards to orbital motors.⁹⁰⁸ One OEM described the effects of the Transaction on the market for orbital motors as follows: “*Danfoss will have acquired all the premium manufacturers of motors and this will give them a dominant position in this market sector.*”⁹⁰⁹

- (1043) OEMs were particularly concerned about price increases for orbital motors following the Transaction. A large majority of customers responding to the Commission’s market investigation stated that the Transaction would lead to an increase in prices for orbital motors in the EEA.⁹¹⁰ One customer responded: “[t]his transaction will probably reduce the competition and in future Danfoss will try to impose components where prices will increase (orbital motors and Motors that are not orbital)”.⁹¹¹ Another OEM stated that “*there is a risk that this transaction creates also negative influences on the total market (price increase)*”.⁹¹²
- (1044) OEMs also noted the lack of alternative suppliers for orbital motors post-Transaction. One customer stated: “*The consolidation poses a risk to the number of viable options if product portfolio consolidation and/or price increases come from the acquisition.*”⁹¹³ Another OEM noted: “*Coming from a dual source strategy, we only have 1 supplier left.*”⁹¹⁴ According to one OEM there are “*few credible players*” for orbital motors.⁹¹⁵ Another customer noted that there are “*some specific family of products supplied by few suppliers so there is no possibility to get state of the art parts from multiple source. this is mainly valid for orbital motor and steering units.*”⁹¹⁶
- (1045) Competitors of the Parties expressed similar concerns about the Transaction, in particular with regard to price increases. One competitor referred to the Parties’ “[p]ossibility to “play” with prices of orbital motors”.⁹¹⁷ Another competitor stated the merged entity would have the “*supplier power to raise their prices*” for orbital motors.⁹¹⁸

8.5.3.9. Conclusion on the competitive assessment for orbital motors

- (1046) Based on the above, the Commission concludes that the Transaction would lead to a significant impediment of effective competition on the EEA market for orbital motors, in particular by the creation or strengthening of a dominant position. The Transaction would lead to the combination of two close competitors for orbital motors in the EEA with combined market shares, both in volume and value, above [50-60]% in a highly concentrated market. Moreover, the merged entity would face very limited constraints from competitors, other motor technologies, potential new market entrants or customers.

⁹⁰⁸ Replies to question 58 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹⁰⁹ Reply to question 57.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹⁰ Replies to question 57 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹¹ Reply to question 47.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹² Reply to question 57.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹³ Reply to question 58.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹⁴ Reply to question 60 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹⁵ Reply to question 58.1 of Q13 – Phase II Questionnaire to orbital motors OEMs, DocID1963.

⁹¹⁶ Reply to question 5 of Q1 – Questionnaire to direct sale OEMs.

⁹¹⁷ Reply to question 50.1 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

⁹¹⁸ Reply to question 49.1 of Q11 – Phase II Questionnaire to orbital motors OEMs, DocID1961.

8.6. Horizontal overlap for pumps

8.6.1. Market structure and market shares

- (1047) The activities of the Parties overlap in the manufacturing of pumps for the mobile sector. Danfoss develops, manufactures and sells various pumps for the mobile sector, while Eaton sells to both the mobile and industrial segments. Their product offerings overlap only with regard to mobile pumps. The Parties do not offer or market pumps products to customers for on-road applications (i.e. conventional trucks and buses).⁹¹⁹ Both Parties manufacture low, medium and high pressure pumps. Both manufacture pumps for open and closed-loop hydraulic systems. Both manufacture gear and piston pumps.⁹²⁰
- (1048) However, according to the market share estimates provided by the Notifying Party, there is only one plausible sub-segment of the overall mobile pumps market, which is affected, e.g. where the combined market share of the Parties is higher than 20%, namely approximately [20-30]% (Danfoss [10-20]% and Eaton [10-20]%) in 2019 in a plausible market for medium-pressure mobile pumps in the EEA sold through distributors.⁹²¹ In this plausible product market, competitor Bosch Rexroth has a market position of approximately [50-60]% and Parker [5-10]%.
- (1049) None of the other horizontal overlaps leads to an affected market in relation to mobile pumps in the EEA under any plausible market definition.⁹²² This is due to Eaton's relatively small market position in the EEA. The market share information provided by the Parties is based on calculations carried out by the economists of NERA.⁹²³ Taking into account data found in internal documents⁹²⁴ and turnover data provided by competitors, the Commission considers the market share estimates provided by the Notifying Party to be credible.
- (1050) For instance, according to the Notifying Party, the combined market share of the Parties in the overall mobile pumps market in the EEA in 2019 was [10-20]%. The market for mobile pumps for closed-loop systems excluding in-house production in the EEA in 2019 was [10-20]%.⁹²⁵ The highest combined market share estimate reported by the Notifying Party is [10-20]% for high pressure piston pumps for closed-loop systems in the EEA in 2019 (both excluding and including in-house production and with an increment of [0-5]%).⁹²⁶
- (1051) Further, the Transaction will only result in minor market share additions and therefore low HHI deltas, as Eaton Hydraulics is active only to a limited degree in the EEA in any plausible segment of the mobile pumps market. For instance, Eaton had a market share of approximately [0-5]% in the overall market for mobile pumps

⁹¹⁹ Form CO, Section 6 for pumps, paragraphs 132 et seq.

⁹²⁰ Form CO, Section 6 for pumps, paragraph 135, table 4.

⁹²¹ Notifying Party's Phase I Advocacy Paper on Mobile Pumps and Motors date 15 September 2020 [Table 1].

⁹²² Form CO, Section 6 for pumps, paragraphs 151 et seq, and Tables 4 et seq and 14 et seq.; Notifying Party's response to post-notification RFI 17, dated 18 November 2020.

⁹²³ Form CO, Section 6 for pumps, paragraph 152.

⁹²⁴ Reply to pre-notification request for information PN 2 [Annex D.30_1, excel file "Cleaned allMID"].

⁹²⁵ Form CO, Section 6 for pumps, Table 5.

⁹²⁶ Form CO, Section 6 for pumps, Tables 14 and 15;

in the EEA in 2019 and a market share of approximately [0-5]% in the overall market for mobile pumps for closed-loop hydraulic systems in the EEA in 2019.⁹²⁷

- (1052) As regards market positions of competitors, the Parties' biggest competitor Bosch Rexroth has the strongest market position, with a market share of approximately [50-60]% in the overall mobile pumps market in the EEA in 2019. Further, Parker has market shares around 10% across all plausible segments of the mobile pumps EEA market. Smaller competitors below 5% market share across all plausible segments of the mobile pumps EEA market include Linde Hydraulics, Cassapa and Kawasaki.⁹²⁸
- (1053) The Commission notes, that the market position of the Parties is stronger at a global level, with market shares above the 20% threshold in particular in several plausible markets for medium-pressure mobile pumps and piston pumps. The stronger global position is due to Eaton's higher market shares in particular in the US, in particular in the plausible sub-segments for medium-pressure and closed-loop mobile pumps.⁹²⁹

8.6.2. *The Notifying Party's arguments*

- (1054) The Notifying Party submits that the Transaction will not lead to any potentially affected markets in regard to the market for pumps, nor any further sub-segment thereof in the EEA with the exception of the plausible sub-segment for medium-pressure pumps sold through distributors in the EEA. With regard to all other plausible sub-segments, the Transaction did not give rise to competitive concerns. Further, the Notifying Party submits that Eaton does not act as a significant competitive constraint on Danfoss in the EEA in light of its small market shares in every segment of the mobile pumps market in the EEA. Overall but also in relation to the affected plausible market, the Notifying Party submits that in the EEA Bosch Rexroth is the dominant market player with the highest sales and strongest market presence.⁹³⁰
- (1055) Further, the Notifying Party submits a bidding data analysis by NERA⁹³¹ based on the opportunity data set provided to the Commission, arguing that this analysis demonstrates that the Parties are not close competitors, including for medium-pressure mobile pumps in the distributor channel.

8.6.3. *The Commission's assessment*

- (1056) A few market participants voiced concerns in relation to different plausible mobile pumps product markets during the Commission's market investigation. Individual complaints were raised in relation to the overall Transaction and mobile pumps⁹³², heavy-duty closed-loop pumps⁹³³, pumps for closed-loop systems⁹³⁴, medium

⁹²⁷ Form CO, Section 6 for pumps, Table 16. Notifying Party's Phase I Advocacy Paper on Mobile Pumps and Motors date 15 September 2020, paragraphs 5 et seq.

⁹²⁸ Form CO, Section 6 for pumps, Table 8 et seq.

⁹²⁹ Form CO, Section 6 for pumps, Table 5 et seq.

⁹³⁰ Form CO, Section 6 for pumps, paragraphs 161 et seq.

⁹³¹ Annex to Notifying Party's Phase I Advocacy Paper on Mobile Pumps and Motors date 15 September 2020, paragraphs 5 et seq.

⁹³² Reply to question 42.1 of Q15 – Phase II Questionnaire to distributors, DocID1965; two individual replies to question 46.1 of Q1 – Phase I Questionnaire to direct sale OEMs, DocID1956.

⁹³³ Non-confidential minutes of a call with a competitor dated 12.11.2020, DocID2217.

⁹³⁴ Non-confidential minutes of a call with a distributor dated 11.11.2020, DocID2220.

pressure pumps for closed-loop systems⁹³⁵, closed-loop pumps with manual flow displacement⁹³⁶ and double loop/path closed-loop axial piston pumps with variable flow displacement⁹³⁷, which are used for skid steer loaders or lawn mowers.

- (1057) The Commission investigated all of these plausible markets and found that these markets are not affected in the EEA. It found that several of these concerns related to the Parties' higher combined market shares in other world regions, in particular in North America, rather than to the plausible EEA markets.
- (1058) In relation to the only affected market, namely the plausible market for medium-pressure mobile pumps for the distributor sales channel, the Commission notes that no market participant raised concern with specific regard to the distributor sales channel. Further, Bosch Rexroth has a very strong, potentially even dominant position, in any event significantly stronger than the Parties' combined market share. The opportunity data provided by the Notifying Party further shows that [...]. The opportunity data demonstrates that Eaton is not a significant constraint on Danfoss, even in the affected market for medium-pressure pumps in the distributor sales channel.

8.6.4. *Conclusion on the competitive assessment for pumps*

- (1059) In light of the above, the Commission clears the Transaction in relation to pumps for mobile applications and any plausible sub-segment thereof.

8.7. Conglomerate effects

8.7.1. *Legal framework*

- (1060) Pursuant to the Non-Horizontal Merger Guidelines,⁹³⁸ conglomerate effects may arise in mergers between companies that are active in closely related markets, and in most circumstances, conglomerate mergers do not lead to any competition problems.
- (1061) However, foreclosure effects may arise when the combination of products in related markets may confer on the merged entity the ability and incentive to leverage a strong market position from one market to another closely related market by means of tying or bundling or other exclusionary practices.
- (1062) The Non-Horizontal Merger Guidelines distinguish between bundling, which usually refers to the way products are offered and priced by the merged entity and tying, usually referring to situations where customers that purchase one good (the tying good) are required to also purchase another good from the producer (the tied good). Tying can take place on a technical or contractual basis. For instance, technical tying occurs when the tying product is designed in such a way that it only works with the tied product (and not with the alternatives offered by competitors).
- (1063) While tying and bundling have often no anticompetitive consequences, in certain circumstances such practices may lead to a reduction in actual or potential competitors' ability or incentive to compete. This may reduce the competitive pressure on the merged entity allowing it to increase prices.

⁹³⁵ Reply to question 71 and 71.1 of Q12 – Phase II Questionnaire to Competitors – steering and other products, DocID1962.

⁹³⁶ Non-confidential version of minutes of call with a customer on 9 June 2020, DocID1986.

⁹³⁷ Non-confidential minutes of a call with a customer dated 12.11.2020, DocID2268.

⁹³⁸ Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, p. 6–25 (the 'Non-Horizontal Merger Guidelines').

(1064) In assessing the likelihood of such a scenario, the Commission examines, first, whether the merged firm would have the ability to foreclose its rivals, second, whether it would have the economic incentive to do so and, third, whether a foreclosure strategy would have a significant detrimental effect on competition, thus causing harm to consumers. In practice, these factors are often examined together as they are closely intertwined.

8.7.2. *The Commission's assessment*

(1065) As explained in Section 6.2.1 above, an HPS typically consists of several key components, all of which are necessary to customers in order to install a complete system. Components making up an HPS are therefore complementary or at least closely related within the meaning of paragraph 91 of the Non-Horizontal Guidelines.

(1066) During the course of the investigation, a few market participants have raised concerns that the merged entity would be in a position to (i) leverage its market power to force the OEMs to purchase more components from it; or (ii) manufacture its steering units in such a way that they can only be integrated with the merged entity's products.

(1067) According to one competitor, *"the merged entity will be in a position to force the customers to buy the rest of the components from them either through commercial negotiation or technical specification and design of the products"*.⁹³⁹ Another expressed concerns that *"...the strong position of the merged entity in steering and, to some extent in orbital motors, will allow to bundle other hydraulic components with them and offer some sort of packages to its customers."*⁹⁴⁰ Another market participant also expressed concerns that the merged entity's *"...acquired market power in pumps and motors, Danfoss might be able to bundle its pumps to other hydraulic components with the result of increasing its market presence in the market for other components."*⁹⁴¹

(1068) The Commission therefore examined whether the merged entity would have the ability and incentive to engage in (i) the leveraging of the merged entity's newly acquired market power in key hydraulic components to increase sales of other hydraulic components and (ii) the technical tying of the merged entity's products.

8.7.2.1. Ability of the merged entity

(1069) The Commission considers, based on the evidence available to it, that the merged entity is unlikely to have the ability to engage in bundling or technical tying.

(1070) **First**, and as further explained in section 6.2.1 above, the market for HPS components is predominantly a components-based market. Although some customers in some instances may choose to procure more than one component from the same supplier, or may prefer to purchase integrated systems of two or more components in some instances, customers have a tendency to buy components separately, which makes it difficult for suppliers to successfully engage in any kind of bundling strategies, whether pure or mixed. For the avoidance of repetition, reference is made in this regard to recitals (55) and (56) above. In fact, the Commission notes that even one of the competitors which raised conglomerate effects concerns confirmed that

⁹³⁹ Non-confidential minutes of a call with a competitor, paragraph 10, DocID0502.

⁹⁴⁰ Non-confidential minutes of call with a competitor, paragraph 37, DocID0291.

⁹⁴¹ Non-confidential minutes of call with a customer on 9 June 2020, paragraph 21, DocID1986.

only “15 to 20% of customers are buying the complete system today, as customers usually buy components individually”.⁹⁴²

- (1071) **Second**, although competitors have indicated that being able to offer many components, such as the merged entity post-Transaction, represents an advantage when it comes to offering several components together, the Commission considers based on the evidence gathered during its investigation that the merged entity would nonetheless be unlikely to have the ability to engage in bundling or technical tying.
- (1072) With regard to bundling strategies, the overall results of the market investigation have indicated that it is unlikely that a strong position in HSUs, ESVs or orbital motors, i.e. the markets where the merged entity will gain market power post-Transaction, would place it in a position to engage in such strategies. Indeed, neither HSUs, ESVs nor orbital motors appear to have a particularly significant importance in the HPS system, or a particular value to customers, which would make it likely that the merged entity would have the ability to successfully bundle their sale with that of any other HPS components.
- (1073) This has been confirmed by a large number of competitors during the course of the market investigation, which have indicated that the steering unit did not have a more significant value, in terms of technical importance, price or margin, than other components in the system.⁹⁴³ This has also been confirmed by customers, a large majority of which also indicated that the purchase of the steering unit or of the orbital motors was not more important than that of other components in the system.⁹⁴⁴ With regard to steering products one customer explained that “[a] steering unit is just one part of a bigger system. It is important for sure, but not typically more important than other components.”⁹⁴⁵
- (1074) In addition, although competitors have indicated that they consider it could be an advantage to be a strong competitive force in steering and orbital motors for the sale of other components,⁹⁴⁶ customers are much more sceptical. Out of the minority of customers which indicated that they do consider steering products or orbital motors to be of particular importance in the system, only a minority have indicated that they consider that a manufacturer with a strong competitive presence in those markets would be in a better position to sell other products to OEMs.⁹⁴⁷
- (1075) The results of the market investigation therefore indicate that it is unlikely that the merged entity would have the ability to successfully bundle HSUs, ESVs or orbital motors with other HPS components post-Transaction.
- (1076) As for pumps, and as further explained in section 8.6 above, the Transaction does not give rise to any affected markets except for a sub-segment of the overall market for mobile pumps, i.e. the plausible market for medium-pressure mobile pumps for the distributor sales channel, in which the combined market shares of the merged entity

⁹⁴² Non-confidential minutes of a call with a competitor, paragraph 10, DocID0502.

⁹⁴³ Replies to question 23 of Q12 – Phase II questionnaire to competitors – steering and other products, DocID1966.

⁹⁴⁴ Replies to questions 11 and 12 of Q15 – Phase II questionnaire to distributors, DocID1965; Replies to questions 13 and 14 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964.

⁹⁴⁵ Reply to question 11.1 of q15 – Phase II questionnaire to distributors, DocID1965.

⁹⁴⁶ Replies to question 24 of Q12 – Phase II questionnaire to competitors – steering and other products, DocID1966.

⁹⁴⁷ Replies to questions 13.2 and 14.2 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964; Replies to question 11.2 and 12.2 of Q15 – Phase II questionnaire to distributors

post Transaction remains limited, below [20-30]%. Post-Transaction, the merged entity would therefore have limited market power to leverage its position in pumps to push the sale of other HPS components.

- (1077) With regard to technical tying, the Commission considers that the significant costs required make it unlikely that the merged entity would engage in such a strategy post-Transaction.
- (1078) Indeed, degrading interoperability with components of other suppliers would require the entire redesign of all relevant components, and would also likely require a new homologation process for each re-designed product. Those processes are costly and lengthy, and for the avoidance of repetition, reference is made in this regard to Sections 8.3.3.2, 8.4.3.2, and 8.5.3.3 above. As a result, it appears unlikely that the merged entity would be able to engage in such a strategy.
- (1079) The costliness and difficulty of implementing any kind of technical tying strategy have also been confirmed by market participants in the course of the investigation. Although competitors have indicated that, in theory, engaging in technical tying could be advantageous for suppliers, they have also explained that it would involve significant investments in IP rights and patents, as well as design costs. One competitor explains: “*cost of re-designing, IP rights, compatibility with control instruments will be extremely high and without possibility to control*”.⁹⁴⁸

8.7.2.2. Incentive of the merged entity

- (1080) The Commission considers, based on the evidence available to it, that the merged entity is also unlikely to have the incentive to engage in bundling or technical tying.
- (1081) **First**, with regard to bundling, the customers’ willingness to remain able to buy components separately and from different suppliers, as further detailed in recital (1070) above, will remain a market feature in the next few years, such that the merged entity will likely lack the incentive to engage in mixed bundling strategy without risking to jeopardize its attractiveness to customers.
- (1082) Indeed, a very large number of OEMs replied that they did not expect to buy fully integrated hydraulic systems or component bundles in the next three to five years.⁹⁴⁹
- (1083) In addition, only a small minority of OEMs contacted during the market investigation have indicated that the move towards autonomous driving will increase their incentive to buy several or all components from the same supplier in the next three to five years.⁹⁵⁰ As explained by one OEM “*we will continue to inquire all components on the market and evaluate them with regard to cost, quality and technology*”.⁹⁵¹ Another OEM stresses that “*[its] policy is to have the system design on [its] side*”.⁹⁵²

⁹⁴⁸ Reply to question 26 of Q12 – Phase II questionnaire to competitors – steering and other products, DocID1966.

⁹⁴⁹ Replies to question 12 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964; Replies to question 10 of Q15 – Phase II questionnaire to distributors, DocID1965.

⁹⁵⁰ Replies to question 15 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964.

⁹⁵¹ Reply to question 15.1 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964.

⁹⁵² Reply to question 15.1 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964.

- (1084) Distributors also confirmed this purchasing behaviour, as only a minority indicated that they expected to source fully integrated hydraulic systems or components bundles in the next three to five years.⁹⁵³
- (1085) **Second**, with regard to technical tying, the market investigation has also shown, as further detailed in paragraph (1086) below, that customers also value interoperability between components of different manufacturers, such that similarly, the merged entity would lack the incentive to engage in any kind of technical tying strategy without jeopardizing its attractiveness to customers.
- (1086) Indeed, in the course of the market investigation, a large majority of customers have indicated that they consider interoperability between components of different suppliers to be very important.⁹⁵⁴ As explained by one OEM: “*An efficient and easy interoperability between the different components allows the manufacturer to simplify the development and integration process and limit the risk of failures.*” Distributors further explain that “*It makes possibility to select most suitable components together from different manufacturers.*”, and that “*Generally in a system there are always components of different manufacturers which have to interact in the way that the machine build by the OEM should provide a satisfying performance.*”⁹⁵⁵
- (1087) The costliness of the redesign which would be involved, as explained in recitals (1077) to (1079), would in any event make it commercially unprofitable to engage in any technical tying strategy.

8.7.2.3. Conclusion on the competitive assessment for conglomerate effects

- (1088) Based on the information available to it, and the results of the market investigation, the Commission therefore considers that it is unlikely that the Transaction would have a high probability of having significant anticompetitive conglomerate effects.
- (1089) In any event, and as further explained in section 10 below, the Final Commitments address the Commission’s concerns in relation to the markets for HSUs, ESVs and orbital motors, and would therefore render even more unlikely that the Transaction would result in any merger-specific conglomerate effects resulting from the merged entity’s increased market power in those markets.
- (1090) Therefore, in light of the evidence available to it, the Commission considers that the Transaction would not significantly impede effective competition in relation to conglomerate effects.

9. CONCLUSION ON COMPETITIVE ASSESSMENT

- (1091) The Commission concludes that the Transaction would significantly impede effective competition in a substantial part of the internal market, in particular as a result of the creation or strengthening of a dominant position, within the meaning of Article 2(3) of the Merger Regulation.
- (1092) Therefore, the Commission has come to the conclusion that the notified concentration is incompatible with the internal market and the functioning of the EEA Agreement

⁹⁵³ Replies to question 10 of Q15 – Phase II questionnaire to distributors, DocID1965.

⁹⁵⁴ Replies to question 14 of Q15 – Phase II questionnaire to distributors, DocID1965; Replies to question 16 of Q14 – Phase II questionnaire to OEMs – steering and other products, DocID1964.

⁹⁵⁵ Replies to question 14 of Q15 – Phase II questionnaire to distributors, DocID1965.

10. COMMITMENTS

- (1093) The Notifying Party did not submit commitments during the Phase I investigation.
- (1094) In order to render the Transaction compatible with the internal market in relation to the markets for HSUs, ESVs and orbital motors in the EEA, the Parties submitted the Commitments of 28 January 2021, pursuant to Article 8(2) of the Merger Regulation.
- (1095) Subsequently, the Commission decided to seek the feedback from market participants and third parties on the Commitments of 28 January 2021.
- (1096) Following the market test and in a number of iterations, the Commission provided feedback to the Parties.
- (1097) The Notifying Party submitted the revised Final Commitments on 15 February 2021.

10.1. Analytical framework

- (1098) The following principles from the Merger Regulation and the Commission's Notice on Remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 ('Remedies Notice')⁹⁵⁶ apply where parties to a concentration offer commitments with a view of rendering a concentration compatible with the internal market.
- (1099) Where a concentration raises competition concerns in that it could significantly impede effective competition, in particular as a result of the creation or strengthening of a dominant position, the parties may seek to modify the concentration in order to resolve the competition concerns and thereby gain clearance of their concentration.⁹⁵⁷
- (1100) The Commission is supposed to accept only commitments that are capable of rendering the concentration compatible with the internal market so that they will prevent a significant impediment to effective competition in all relevant markets where competition concerns were identified.⁹⁵⁸
- (1101) To that end, the commitments have to eliminate the competition concerns entirely and have to be comprehensive and effective from all points of view.⁹⁵⁹ In assessing whether proposed commitments are likely to eliminate all competition concerns, the Commission considers all relevant factors including inter alia the type, scale and scope of the commitments, judged by reference to the structure and particular characteristics of the market in which those concerns arise, including the position of the parties and other participants on the market.⁹⁶⁰
- (1102) Moreover, commitments must be capable of being implemented effectively within a short period of time.⁹⁶¹ In case of implementation risks and implementation uncertainties for instance related to third party consents, it is incumbent on the parties to remove such uncertainties.⁹⁶²
- (1103) Where a proposed concentration threatens to significantly impede effective competition, the most effective way to maintain effective competition, apart from prohibition of the concentration, is to create the conditions for the emergence of a

⁹⁵⁶ OJ C 267, 22.10.2008, p.1.

⁹⁵⁷ Remedies Notice, paragraph 5.

⁹⁵⁸ Remedies Notice, paragraph 9.

⁹⁵⁹ Remedies Notice, paragraph 9.

⁹⁶⁰ Remedies Notice, paragraph 12.

⁹⁶¹ Remedies Notice, paragraph 9.

⁹⁶² Remedies Notice, paragraph 11.

new competitive entity or for the strengthening of existing competitors via divestitures by the merging parties.⁹⁶³

- (1104) The divested activities must consist of a viable business that, if operated by a suitable purchaser, can compete effectively with the merged entity on a lasting basis and that is divested as a going concern. The business must include all the assets which contribute to its current operation or which are necessary to ensure its viability and competitiveness and all personnel which are currently employed or which are necessary to ensure the business' viability and competitiveness.⁹⁶⁴
- (1105) Personnel and assets which are currently shared between the business to be divested and other businesses of the parties, but which contribute to the operation of the business or which are necessary to ensure its viability and competitiveness, must also be included. Otherwise, the viability and competitiveness of the business to be divested would be endangered.⁹⁶⁵
- (1106) Normally, a viable business is a business than can operate on a stand-alone basis, which means independently of the merging parties as regards the production and supply of input materials or other forms of cooperation other than during a transitory period.⁹⁶⁶ The business to be divested has to be viable as such. Therefore, the resources of a possible or even presumed future purchaser are not taken into account by the Commission at the stage of assessing the remedy.⁹⁶⁷
- (1107) The intended effect of the divestiture will only be achieved if and once the business is transferred to a suitable purchaser in whose hands it will become an active competitive force in the market. The potential of a business to attract a suitable purchaser is an important element of the Commission's assessment of the appropriateness of the proposed commitment.⁹⁶⁸

10.2. The Commitments of 28 January 2021

10.2.1. Description of the Commitments of 28 January 2021

- (1108) The Commitments of 28 January 2021 consist of the divestiture of parts of Danfoss' Business Unit Motors and parts of Danfoss' HSU and ESV business. This includes, but is not limited to, the divestiture of Danfoss' entire manufacturing plants in Wroclaw (Poland), Parchim (Germany) and Hopkinsville (US). The commitments also include certain Eaton assets. The resulting business entity is referred to as the "Divestment Business of 28 January 2021".

10.2.1.1. Commitments regarding orbital motors

- (1109) The Notifying Party commits to divest Danfoss' Business Unit Motors as far as it is located at, run out of, and includes the plants located in Wroclaw, Parchim and Hopkinsville. The Divestment Business of 28 January does not include Danfoss' plant in Nordborg (Denmark) and facilities that do not concern the EEA market. The Divestment Business includes all tangible assets as well as intangible assets (including patents and other know-how), orbital motors products, customer contracts, credit and other records, functions and personnel, which are part of Danfoss' Business Unit Motors in Wroclaw, Parchim and Hopkinsville today.

⁹⁶³ Remedies Notice, paragraph 22.

⁹⁶⁴ Remedies Notice, paragraphs 23-25.

⁹⁶⁵ Remedies Notice, paragraph 26.

⁹⁶⁶ Remedies Notice, paragraph 32.

⁹⁶⁷ Remedies Notice, paragraph 30.

⁹⁶⁸ Remedies Notice, paragraph 47.

(1110) The Commitments of 28 January 2021 also include the commitment to divest Eaton's HP and VIS medium power orbital motor product lines. This includes, but is not limited to production lines needed to manufacture the said products (hard machining, soft machining, assembly lines and test lines), patents and other know-how. The tangible assets are currently located at Eaton's manufacturing plants in Shawnee (US) and are to be transferred to the site in Hopkinsville (US), which is part of the Divestment Business of 28 January 2021.

10.2.1.2. Commitments regarding HSUs and ESVs

(1111) The Notifying Party commits to divest Danfoss' HSU, ESV, and priority valve business⁹⁶⁹ as far as it is located at, run out of, and includes the plants located in Parchim and Wroclaw. This includes all tangible and intangible assets, customer contracts, customer, credit and other records, functions, and personnel.

(1112) The Commitments of 28 January 2021 include additional tangible and intangible assets necessary for the manufacture of Eaton's HSU and ESV products, namely the Series 10, ASV/SBX, and other ESVs tailored for certain customers.

(1113) The Commitments of 28 January 2021 also include Eaton's Series 10 HSUs. This includes, but is not limited to production lines needed to manufacture the said products (hard machining, soft machining, assembly lines and test lines), patents and other know-how. The tangible assets are currently located at Eaton's manufacturing plants in Eden Prairie (US) and are to be transferred to the site in Hopkinsville (US), which is part of the Divestment Business of 28 January 2021.

10.2.1.3. Other provisions

(1114) The Commitments of 28 January 2021 include a number of further provisions to safeguard the viability of the Divestment Business of 28 January 2021 in light of the proposed transfer of the Eaton assets and exclusion of Danfoss' Nordborg site.

(1115) The Notifying Party commits to transfer all Eaton assets required for the production of HP and VIS medium power orbital motors to the site in Hopkinsville in such way that the Divestment Business of 28 January 2021 will be able to produce the HP and VIS motors within [...] after the closing of the sale of the Divestment Business of 28 January 2021. If this will not be achieved within the stipulated time period of [...], Danfoss commits to late payments ([...]) to be used by the Divestment Business of 28 January 2021 for making investments in its medium power orbital motor business and to ensure the Divestment Business of 28 January 2021 has the capabilities it would have if the product lines had been transferred on time. If the transferred HP and VIS medium power orbital motor production assets will not be operational after a further [...] of late payments, the Notifying Party commits to divest [...].

(1116) Furthermore, the Notifying Party commits that the Divestment Business of 28 January 2021 will not be dependent on any plant that Danfoss will retain. In particular, the production at each of the plants in Wroclaw, Parchim and Hopkinsville will be fully self-sustained post-divestiture. Currently, Danfoss' plant in

⁹⁶⁹ As explained in Form CO, Sections 6 to 9 for Steering, paragraph 10, a priority valve is used in a so-called load sensing system where the oil is directed from one pump to both a steering and a work circuit. The priority valve controls the flow of fluid to the various circuits and provides an important safety feature in that it ensures that the steering function always takes priority over other hydraulic systems. According to the data provided by the Notifying Party in Form CO, Sections 6 to 9 for Steering, Table 24, the Parties combined market shares in EEA in 2019 was below 20% and therefore a hypothetical market for priority valves would not be affected by the Transaction.

Nordborg carries out a limited number of production steps for a select number of orbital motor and HSU product lines manufactured in Wroclaw and Parchim. In order to preserve the viability of the Divestment Business in the short-term (i.e. until the Divestment Business of 28 January 2021 will be able to procure or to produce in-house similar products or services), Danfoss will supply transitional services at cost for the production steps currently carried out in Nordborg via Transitional Service Agreements ('TSAs'). To support the purchaser in replacing these TSAs in the longer term, Danfoss commits to establishing an escrow with a funding of EUR [...].

- (1117) The Notifying Party commits to selling the Divestment Business of 28 January 2021 to a purchaser that has sufficient experience of and capability to manufacture and sell products that are marketed in the mobile hydraulics sector.
- (1118) The Notifying Party commits that the proposed concentration shall not be implemented before the Parties or the divestiture trustee have entered into a final binding sale and purchase agreement for the sale of the Divestment Business of 28 January 2021 and the Commission has approved the purchaser and the terms of sale.

10.2.2. The Notifying Party's Arguments

- (1119) According to the Notifying Party,⁹⁷⁰ the Commitments of 28 January 2021 resolve any competition concerns on the EEA markets for HSUs, ESVs and orbital motors, because the Divestment Business of 28 January 2021 will have a highly competitive product portfolio and command a market share for HSUs, ESVs and orbital motors in the EEA that is significantly higher than the shares of Eaton in either market today.
- (1120) The Notifying Party submits that Divestment Business of 28 January 2021 will have a strong orbital motor and steering footprint in both the EEA and the US, making it a stronger competitor to the merged entity than Eaton is to Danfoss in the EEA (and in the US) today.
- (1121) The Notifying Party further argues⁹⁷¹ that the Divestment Business of 28 January 2021 will be standalone, viable and competitive, because its products have a long track record of success characterised by high brand recognition and its manufacturing sites are modern and cost efficient with growth potential. According to the Notifying Party, the three divested Danfoss plants are long established, operational, and largely self-sustaining. The addition of the Eaton's Series 10 HSUs and Eaton's HP and VIS orbital motors will further increase the competitiveness of the Divestment Business of 28 January and increase revenues in the US.

10.2.3. The Commission's Assessment of the Commitments of 28 January 2021

- (1122) The present section is organised as follows: Section 10.2.3.1 will describe the Commission's assessment of the Commitments of 28 January 2021 as a whole, which is to say in terms of overall structure and to what extent these are in principle suitable to remove the concerns identified in Section 8. In Sections 10.2.3.2-10.2.3.4; the Commission will then assess in details the Commitments of 28 January 2021 with respect to the markets for HSUs, ESVs and orbital motors. Section 10.2.3.5 will assess those provisions that the Parties included in the Commitments of 28 January 2021 for mitigating possible implementation risks. Finally, Section 10.2.3.6 will provide a summary of the assessment and of the shortcomings that needed to be further addressed in the Final Commitments.

⁹⁷⁰ Form RM of 28 January 2021, paragraphs 10-27.

⁹⁷¹ Form RM of 28 January 2021, paragraphs 10-27.

- (1123) For the assessment of the Commitments of 28 January 2021, the Commission contacted a number of market participants in the form of telephone interviews and requests for information and gathered their opinion on the Commitments of 28 January 2021 in a market test. The Commission asked market participants' opinion regarding: (i) the suitability of the Commitments of 28 January 2021 in addressing the competition concerns explained in Section 8; (ii) the viability and competitiveness of the Divestment Business of 28 January; (iii) potential implementation risks of the Commitments of 28 January 2021.
- (1124) The Commission further investigated the various market participants' opinions and concerns by means of requests for information to the Notifying Party and review of the Parties' internal documents.

10.2.3.1. General aspects of the Commitments of 28 January 2021

- (1125) As explained in the Remedies Notice,⁹⁷² “[...] *commitments which are structural in nature, such as the commitment to sell a business unit, are, as a rule, preferable from the point of view of the Merger Regulation's objective, inasmuch as such commitments prevent, durably, the competition concerns which would be raised by the merger as notified, and do not, moreover, require medium or long-term monitoring measures*”.
- (1126) The Commitments of 28 January 2021 are structural in nature. They entail the divestment of large parts of Danfoss' HSU, ESV and orbital motors business units consisting of three manufacturing plants with a significant footprint in the EEA and US. Furthermore, as explained in Sections 10.2.3.2-10.2.3.4, for each of the three concerned markets (i.e. HSU, ESV and orbital motors), the Divestment Business of 28 January 2021 commands sales in the EEA that exceed the sales of Eaton pre-Transaction. As a result, the Commitments of 28 January 2021 will remove (and exceed) the entire overlap brought about by the Transaction in these products.
- (1127) Due to the differentiated nature of the markets for HSUs, for ESVs and for orbital motors (see, respectively, Sections 6.3.3.4, 6.4.3.5 and 6.5.3.3), any adequate commitments would also need to cover a wide range of products sold by the Parties in the EEA.⁹⁷³ To achieve this, the Commitments of 28 January 2021 provide for the addition of Eaton's HP and VIS orbital motors. The addition of the Eaton Series 10 to the HSU portfolio is designed to further increase the competitiveness of the divestment business.

10.2.3.2. HSUs

- (1128) From the outset, the Commitments of 28 January 2021 appeared to successfully remove the competition concerns identified by the Commission in HSUs: the overlap between Danfoss and Eaton would be entirely removed, indeed post-Transaction the market share of the divestment business would be larger than that of Eaton today in the EEA, as can be seen from Table 19 below.

⁹⁷² Remedies Notice, paragraph 15.

⁹⁷³ Remedies Notice, paragraph 12 explains that “[i]n assessing the second condition, whether the proposed commitment will likely eliminate the competition concerns identified, the Commission will consider all relevant factors relating to the proposed remedy itself, including, inter alia, the type, scale and scope of the remedy proposed, judged by reference to the structure and particular characteristics of the market in which the competition concerns arise [...]”.

Table 19 – EEA market shares of the Parties and of the Divestment Business before and after the Transaction (based on 2019 sales in value)

	Pre-Transaction		Post-Transaction	
	Sales (million EUR)	Market Share	Sales (million EUR)	Market Share
Danfoss	[...]	[60-70]%	-	-
Eaton	[...]	[10-20]%	-	-
Combined	[...]	[70-80]%	[...]	[50-60]%
Divestment Business	-	-	[...]	[20-30]%
Total market size	[...]	100%	[...]	100%

Source: Commission's market reconstruction and Form RM of 28 January 2021, table 1.

- (1129) In terms of portfolio, it appeared the Divestment Business of 28 January 2021 would have products catering to the complete application spectrum, from small to larger machines.
- (1130) In the market test, a majority of customers considered that the package solved the competition concerns and that the Divestment Business of 28 January 2021 would be viable and competitive.⁹⁷⁴ Most, although not all, customers were satisfied with the range of the HSU portfolio and did not have concerns over the Danfoss and Eaton products the Divestment Business of 28 January 2021 would acquire.⁹⁷⁵
- (1131) Competitors were, however, generally less positive in the market test. Indeed a majority of competitors indicated that the proposed package would not eliminate the competition concerns. The views of competitors were evenly split as to whether the divestment business would be viable.
- (1132) The key concern of competitors was the scope of the portfolio HSUs, and the technology included. A majority of competitors considered the portfolio was not of sufficient range to allow the Divestment Business to be viable and competitive.⁹⁷⁶ Concerns over the Danfoss and Eaton products included was also expressed by a majority of competitors.⁹⁷⁷
- (1133) Concerns were particularly raised about the Danfoss products included in the package. As regards the LAG product lines produced at the Parchim plant (acquired by Danfoss from former competitor, HNF, in 2019), some market participants indicated that the products were outdated.⁹⁷⁸ Comments were also made by market participants that the LAG product range was being phased out and Danfoss was transitioning LAG customers to other Danfoss products. [Content of internal documents].⁹⁷⁹ One OEM customer had previously informed the Commission, in the context of the in-depth investigation, that Danfoss has rationalised the HNF portfolio post-acquisition of that company, and saw this as a precursor as to what may happen post the present Transaction: *"It can be assumed Danfoss will try to market its own*

⁹⁷⁴ Replies to questions 1 and 2 of MT2 – Market Test Questionnaire to customers, DocID3210.

⁹⁷⁵ Replies to question 11 of MT2 – Market Test Questionnaire to customers, DocID3210.

⁹⁷⁶ Replies to question 14.1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁷⁷ Replies to question 14.2 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁷⁸ Replies to question 2 of MT1 – Market Test Questionnaire to competitors, DocID3209; Minutes of a call with a customer on 09.02.2021.

⁹⁷⁹ See for example Danfoss internal documents, [...] RFI020259776, and [...], RFI020234971.

*products and reduce the portfolio, as it was done with the acquisition of HNF.*⁹⁸⁰ This was then echoed in comments received in the market test of the Commitments of 28 January 2021. A competitor stated that in regard to the LAG product line that: *“...it was known in the market that it was announced to customers that Danfoss was to phase out this product line within 18 months...”* nevertheless the competitor considers *“...the LAG products portfolio to still be attractive.”*⁹⁸¹ Indeed the same competitor stated that these products are thus: *“...suitable to be added to the package”*.⁹⁸²

- (1134) Some concerns were also raised about the Danfoss OSPM and OSPP products. In respect to the OSPP the concern was that the product would be phased out since it was customised⁹⁸³ and only has one customer.⁹⁸⁴ In respect to the OSPM product, the concern was that it was for small machines only and may not be competitive.⁹⁸⁵
- (1135) In relation to the Eaton Series 10, one competitor noted that while seen as a good product, it is not seen as a product that is in particular demand due to its high pressurised features: *“...[the] product is good, but customers do not demand it”*. The same competitor suggested that the LAG product range was more suitable than the Series 10 for the divestment business; however the Series 10 could become more attractive if it was offered in conjunction with other Eaton products: *“...the Company explained that despite the Series 10 having the same functionalities of LAG for Europe, the LAG portfolio is more attractive than the Series 10 (but does not necessarily compare to other Eaton products which are good and popular products).”*⁹⁸⁶
- (1136) In conclusion, the Commission finds that while the HSU commitments of 28 January 2021 entirely remove the overlap between the Parties and include a portfolio that caters to a variety of applications, the Commission’s assessment and the feedback of the market test is that amendments would be required to ensure the HSU portfolio is sufficiently competitive in the long-term. In particular, the portfolio would need to be expanded to ensure the Divestment Business has (i) modern technology which will enable it to compete on a future long-term basis and (ii) cost-effective, popular products which cover the breadth of the HSU portfolio.

10.2.3.3.ESVs

- (1137) From the outset, the Commitments of 28 January 2021 appear to successfully remove the competition concerns identified by the Commission in ESVs as the overlap between Danfoss and Eaton would be entirely removed. Post-Transaction the divestment business would not only include Eaton products (ASV/SBX and legacy ESV) but also include a Danfoss product (LAGE 250), which was part of the former HNF portfolio and is complementary to the divested HSU portfolio.

⁹⁸⁰ Reply to question 63 of Q14 – Phase II Questionnaire to OEMs – steering and other products, DocID1964.

⁹⁸¹ Minutes of a call with a competitor on 05.02.2021, DocID3197.

⁹⁸² Minutes of a call with a competitor on 05.02.2021, DocID3197.

⁹⁸³ Replies to question 2 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁸⁴ Minutes of a call with a competitor on 05.02.2021, DocID3197.

⁹⁸⁵ Replies to question 1 of MT1 – Market Test Questionnaire to competitors, DocID3209; minutes of a call with a competitor on 05.02.2021, DocID3197.

⁹⁸⁶ Minutes of a call with a competitor on 05.02.2021, DocID3197.

- (1138) In the market test, a large majority of customers considered that the package solved the competition concerns and that the Divestment Business of 28 January 2021 would be viable and competitive.⁹⁸⁷
- (1139) In addition, a majority of customers were satisfied with the licensing of key ESV specific IP to third parties considering that licensing the IP to 3 additional competitors was sufficient. It is to be noted that with regards to the addition to the remedy of the licensing of key IP specific to ESV to third parties 4 competitors expressed interest in acquiring a licence.⁹⁸⁸ This suggests that at least 4 competitors are interested in further developing these products and increased competition in this market, should IP be available for licensing.
- (1140) However, competitors were generally less positive about the viability and effectiveness of the remedy. A majority of competitors indicated that the proposed package would not eliminate the competition concerns⁹⁸⁹. The views of competitors were mixed as to whether the divestment business would be viable⁹⁹⁰. Two concerns were more specifically raised by competitors.
- (1141) First, the fact that Danfoss has already been retaining a strong position pre-Transaction was not addressed by the commitments. For example, a competitor mentioned “*OSPE/EHi (ESV), there is no option on the market able to guarantee similar performance at the same costs*”⁹⁹¹ another specified “*High-end valves will be kept by Danfoss (OSPE, EHi, EHPS)*”⁹⁹². These concerns however are not directly linked to the Transaction and relate to Danfoss position on the market pre-Transaction.
- (1142) Second, some competitors raised the fact that some IP not directly linked to Eaton product but relating to future ESV product development were not included in the package.⁹⁹³
- (1143) The Commission finds that with regard to ESVs, the Commitments of 28 January 2021 entirely remove the overlap between the Parties. While, concerns raised by competitors with regards the strength of Danfoss portfolio and IP pre-Transaction are not linked to the Transaction, there are legitimate concerns with regards additional IP from Eaton identified by the market participants as missing from the remedy package. Therefore the Commission finds that Eaton patents linked to the potential development of the Divestment Business of 28 January 2021 but not currently used for specific Eaton products should be added to the package to ensure the product development ability and long term competitiveness of the Divestment Business
- (1144) In conclusion, while the market test and the Commission’s assessment confirmed that Commitments of 28 January 2021 solve the competition concerns identified for ESVs to a large extent and that the Divestment Business of 28 January 2021 would be viable and competitive, the exclusion of certain IP rights related to electrohydraulic steering solutions could hamper the possibility of the Divestment Business of 28 January 2021 to develop all its products and to remain competitive in the long run.

⁹⁸⁷ Replies to questions 1 and 2 of MT2 – Market Test Questionnaire to customers, DocID3210.

⁹⁸⁸ Replies to question 15 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁸⁹ Replies to question 1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁹⁰ Replies to question 2 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁹¹ Reply to question 1.1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁹² Reply to question 1.1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁹³ Replies to questions 15.1 and 22.1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

10.2.3.4. Orbital motors

- (1145) The results of the market test and the Commission's assessment indicate that with respect to orbital motors, the Divestment Business of 28 January 2021 would: (i) remove competition concerns; and (ii) be viable and competitive, provided that certain improvements are made to the Commitments of 28 January 2021.
- (1146) First, the Divestment Business of 28 January 2021 would remove the entire overlap brought about by the Transaction and fully address the competition concerns in the market for orbital motors.
- (1147) Post-divestiture, the Divestment Business of 28 January 2021 will have market shares lower than Danfoss' market shares pre-Transaction and higher than the merged entity, as indicated in Table 20.

Table 20 – EEA market shares of the Parties and of the Divestment Business before and after the Transaction (based on 2019)

	Pre-Transaction		Post-Transaction	
	Sales (million EUR)	Market share	Sales (million EUR)	Market share
Danfoss	[...]	[40-50]%	-	-
Eaton	[...]	[10-20]%	-	-
Combined	[...]	[60-70]%	[...]	[20-30]%
Divestment Business	-	-	[...]	[30-40]%
Total market size	[...]	100%	[...]	100%

Source: Commission's market reconstruction and Form RM of 28 January 2021, table 2.

- (1148) In terms product portfolio, the Commitments of 28 January 2021 include all types of products that are used for the most common applications of orbital motors and cover all the various product differentiations identified in Section 6.5.3.3.⁹⁹⁴
- (1149) A large majority of market participants that expressed a view in market test confirmed that the Commitments of 28 January 2021 solve the competition concerns for orbital motors identified by the Commission in its Statement of Objections.⁹⁹⁵
- (1150) Second, the Divestment Business of 28 January 2021 appears to be overall viable and competitive (subject to certain required improvements identified in recitals (1154)-(1163)).
- (1151) The orbital motors of the Divestment Business of 28 January 2021 cover a wide range of applications and therefore can be sold to a variety of OEMs active in different types of machines.⁹⁹⁶ These orbital motors include in particular Eaton's medium power HP ad VIS motors, as well as Danfoss' [confidential market data] orbital motors for reduced power, OMP X.⁹⁹⁷

⁹⁹⁴ Form RM of 28 January 2021, Annexes 1_1 and 2_1.

⁹⁹⁵ Replies to questions 1 of MT2 – Market Test Questionnaire to customers, DocID3210; replies to question 1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

⁹⁹⁶ Form RM of 28 January 2021, Annex 2_1.

⁹⁹⁷ Reply to pre-notification request for information PN 2, Annex D.30_1, excel file "Cleaned allMID.

- (1152) Data submitted by the Notifying Party⁹⁹⁸ and internal documents of the Parties indicate that the orbital motors of the Divestment Business of 28 January 2021 are highly profitable.⁹⁹⁹ Furthermore, it appears that in recent years Danfoss made significant investments into the plant of Wroclaw, which is the main plant of the Divestment Business of 28 January 2021 where orbital motors are manufactured, for further improving its productivity and profitability.¹⁰⁰⁰
- (1153) A large majority of the respondents to the market investigation confirmed that the Divestment Business of 28 January 2021 would be viable and competitive.¹⁰⁰¹
- (1154) Third, while the Divestment Business of 28 January 2021 would be overall viable and competitive, both the market test and the Commission's assessment indicate that certain improvements are required to the Commitments of 28 January 2021. These are explained below.
- (1155) In the first place, post-Transaction certain orbital motor models (the models sold under the names "RC", "RE" and "CE") would be manufactured by both the Divestment Business of 28 January 2021 and by the merged entity in its plant in Zhenjiang (China). Due to the cost advantage of the Zhenjiang plant, compared to the Wroclaw plant, the merged entity would have a cost advantage on the Divestment Business of 28 January 2021 and therefore the latter's competitiveness would be at risk.
- (1156) The sales data submitted by the Parties indicated that the sales of the RE, RC and CE orbital motors in the EEA represent a relatively small amount of the overall EEA sales of the Divestment Business of 28 January 2021 (about [...]).¹⁰⁰² Therefore, while an improvement of the Commitments of 28 January 2021 is required for addressing this issues, it should be noticed that this regards only a relatively small part of the sales and therefore potential risks in terms of competitiveness regard only a relatively small part of the Divestment Business of 28 January 2021.
- (1157) Furthermore, Danfoss' internal documents produced in its ordinary course of business indicate a strategy of producing orbital motors in the same region where they are manufactured.¹⁰⁰³ Therefore, it cannot be concluded that Danfoss planned to manufacture orbital motors in its Zhenjiang facility for the EEA market at large.
- (1158) Several market participants that replied to the market test echoed this concern. In this respect it should be noticed that while the claims of these market participants are rather generic and refer to all the Divestment Business' orbital motors, as explained in the previous recital, this regards only the RE, RC and CE orbital motors.
- (1159) In the second place, Eaton's HP and VIS orbital motors, which are part of the Divestment Business of 28 January 2021, are currently sold under the brand name "Char-Lynn". As during the market investigation it appeared in several instances that the Char-Lynn brand enjoys a good reputation in the market for orbital motors, the Commission asked market participants to what extent this brand would be relevant for the commercial success of these motors.

⁹⁹⁸ Form RM of 28 January 2021, tables 33, 35 and 36.

⁹⁹⁹ See for example Reply to pre-notification request for information PN 3, Annex B.15_1, slide 118; Reply to post-notification request for information 6, Annex B.2_3, slides 3 and 8.

¹⁰⁰⁰ Reply to post-notification request for information 24, question 1.

¹⁰⁰¹ Replies to questions 2 and 2.1 of MT1 – Market Test Questionnaire to competitors, DocID3209; replies to questions 2 and 2.1 of MT2 – Market Test Questionnaire to customers, DocID3210.

¹⁰⁰² Form RM of 28 January 2021, Tables 7 and 9.

¹⁰⁰³ See for example, DoCID001056-019185, M.9820-RFI020127249, [...], slide 11.

- (1160) A majority of the market participants that expressed a view in the market test indicated that the Char-Lynn brand, which is not included in the Commitments of January 28 2021, is necessary for the commercial success of HP and VIS motors.¹⁰⁰⁴
- (1161) In the third place, and as explained in Section 10.2.3.5 below, while relocating manufacturing lines appear to occur often in the market for orbital motors, and that this occurs without causing major supply disruptions, certain risks may nonetheless be present.
- (1162) The results of the market test indicate that, while market participants agree with the Notifying Party's view that relocating production facilities occurs often in this industry, they also expressed concerns in terms of reliability of supply during the production line relocation, particularly in case of unplanned events (e.g. delays, quality issues, etc). Furthermore, as explained in Section 10.2.3.5, a number of market participants expressed general concerns on the capability of the remedy purchaser to integrate the orbital motor business in a wider business for hydraulic components.
- (1163) The market participants' view is confirmed by the Parties' internal documents. For example, internal documents of Danfoss indicate that recently, in making changes to its orbital motors manufacturing process, Danfoss experienced delays versus its original plans.¹⁰⁰⁵ Therefore, in order to mitigate these risks, additional safeguards measures are required.
- (1164) In conclusion, while the market test and the Commission's assessment confirmed that, to a large extent, the Commitments of 28 January 2021 solve the competition concerns identified for orbital motors and that the Divestment Business of 28 January 2021 would be viable and competitive, certain areas of concerns remain. These areas in particular include: (i) the orbital motors RC, RE and CE which would be manufactured by both the Divestment Business of 28 January (in the Wroclaw plant) and by the merged entity (in the Zhenjiang plant); (ii) the Char-Lynn brand for Eaton's HP and VIS orbital motors; and (iii) risks associated with changes in the manufacturing process.

10.2.3.5. Risks related to the viability of the Divestment Business of 28 January 2021

- (1165) The Commission identified and investigated a number of risks that pertain to the viability of the Divestment Business of 28 January 2021, namely (i) the transfer of customer contracts, (ii) the transfer of production lines and (iii) TSAs and their replacement to replicate certain production steps.
- (1166) First, the Commitments of 28 January 2021 stipulate that all existing customer and distributor contracts and records for the divested products shall transfer to the Divestment Business of 28 January 2021, fully or partly to the extent legally transferrable. Since many of the Parties' customers and distributors currently purchase a whole range of products, some of the contracts will need to be split up. Splitting contract carries an inherent risk as it could easily lead to the loss of customers.
- (1167) The Commission's market test and investigation did not reveal any substantial evidence suggesting that current customers of Danfoss or of Eaton would not transfer

¹⁰⁰⁴ Replies to question 25 of MT1 – Market Test Questionnaire to competitors, DocID3209; replies to question 20 of MT2 – Market Test Questionnaire to customers, DocID3210.

¹⁰⁰⁵ See for example Reply to post-notification request for information 24, Annex A_2_1; Reply to post-notification request for information 24, figures 2 and 3.

their contracts or orders to the Divestment Business of 28 January 2021. In the market test, a majority of customers responded that they would be willing to transfer their current contracts or orders to the Divestment Business of 28 January 2021.¹⁰⁰⁶ Some respondents suggested that such transfer would depend on the expertise and reputation of the purchaser of the Divestment Business of 28 January 2021. Distributors responded similarly, one distributor pointing out that “[t]he end user is following the product not the manufacturer of it”.¹⁰⁰⁷

- (1168) In addition, the Commitments of 28 January 2021¹⁰⁰⁸ include a number of provisions, which further reduce any risks of customers and distributors not transferring to the Divestment Business of 28 January 2021.
- (a) In the first place, the Parties commit to transfer and to use their best efforts to obtain customers’ consent for the transfer of contracts or orders to the Divestment Business of 28 January 2021.
 - (b) In the second place, if a customer objects to transfer a contract or order, the Parties commit to purchase the respective products from the Divestment Business of 28 January 2021 [...].
 - (c) In the third place, the Parties commit to not actively solicit customers of the divested products for [...].
 - (d) In the fourth place and with regard to distributor contracts, Danfoss commits to waive any exclusivity in existing distributor contracts so distributors may sell the products of the Divestment Business of 28 January 2021.
- (1169) The Commission finds that the safeguards included in the Commitments of 28 January 2021 are sufficient to mitigate the risk of losing customers as a result of the transfer of contracts. In particular, the non-solicitation and [...] obligations will ensure the ability of the Divestment Business of 28 January 2021 to sell the divested products to its current customers to a similar extent as the Parties do today. It also has to be noted that the Commission has considered similar safeguards as sufficient in comparable cases.¹⁰⁰⁹
- (1170) Second, the planned transfer of the production lines for the HP/VIS orbital motors and Series 10 HSUs from Eaton’s plants in Shawnee and in Eden Prairie to the plant in Hopkinsville carries operational risks for the Divestment Business of 28 January 2021 and its customers, in particular delays and disruption of supply.
- (1171) In the market test, a majority of competitors acknowledged that production lines can be moved and are sometimes moved in the mobile hydraulics industry,¹⁰¹⁰ but customers cautioned that such a transfer carries risks, in particular delays and cost increases.¹⁰¹¹
- (1172) To this end, the Commitments of 28 January 2021 provide for the following safeguards:

¹⁰⁰⁶ Replies to question 15.1 of MT2 – Market Test Questionnaire to customers, DocID3210.

¹⁰⁰⁷ Reply to question 15.1 of MT2 – Market Test Questionnaire to customers, DocID3210.

¹⁰⁰⁸ Commitments of 28 January 2021, Schedule 1, paragraphs 3(f), 4(d), 5(d) and 6(d).

¹⁰⁰⁹ See for example, M.8286 – *RHI / Magnesita Refratarios*, para. 255 et seqq.

¹⁰¹⁰ Replies to question 10 of MT1 – Market Test Questionnaire to competitors, DocID3209.

¹⁰¹¹ Replies to question 10 of MT2 – Market Test Questionnaire to customers, DocID3210.

- (a) In the first place, the Parties commit to support the set-up of the HP/VIS and Series 10 production lines and manufacture buffer stock to ensure continuity of supply during the transfer of the HP/VIS and Series 10 production lines.¹⁰¹²
- (b) In the second place, the Commitment of 28 January 2021 provide for significant incentives for the Parties to ensure the timely transfer and set-up of the HP/VIS production lines at the Hopkinsville plant of the Divestment Business of 28 January 2021. In a two-step mechanism, the Notifying Party commits to first paying [...] late payments¹⁰¹³ and second divesting [...].¹⁰¹⁴
- (1173) The Commission finds that the transfer of the production lines for the HP/VIS orbital motors and Series 10 HSUs is feasible and similar relocations have been extensively done by the Parties or by their competitors in the past. It is however important that any risks associated with such a relocation are mitigated and, to the extent possible, be borne by the Parties. The safeguards foreseen in the Commitments of 28 January 2021 provide for both: the production of buffer stock mitigates the risk of supply disruptions and the two-step penalty mechanism extends the risk of a delayed completion of the transfer of production lines to a significant extent to the Notifying Party.
- (1174) Third, whilst the scope of the TSAs foreseen in the Commitments of 28 January 2021 seems to be adequate, the provisions and in particular the CAPEX funding of EUR [...] million for the replacement of the TSAs is not sufficient.
- (1175) A majority of customers and competitors consider the scope of the specific TSAs sufficient in order to replace those productions steps, which are currently carried out in Danfoss' plant in Nordborg for orbital motors and HSUs manufactured in Wroclaw and in Parchim.¹⁰¹⁵
- (1176) However, the Commission finds that a CAPEX funding of EUR [...] million is not sufficient to replace the TSAs. The Notifying Parties' calculations of the required investments are based on outsourcing of certain production steps and utilising existing facilities. The Commission maintains that in a carve out scenario such as the one proposed by the Parties in their Commitments of 28 January 2021 the divestment business must be able to fully replicate the production steps it loses due to the carve out without relying on outsourcing options or the utilisation of existing facilities. Outsourcing of production steps might be source of additional risk because the resulting products or semi-finished products might not be of acceptable quality to the customers and therefore negatively affect the divestment business' competitiveness. Furthermore, utilising the divestment business facilities for processes that are currently undertaken in other plants (and which are not part of the Commitments of 28 January 2021) would inevitably increase the utilisation of these plants. The result of this increased utilisation could have significant implications on the divestment business' opportunities to grow as well as on its ability to peak up production for compensating, for example, unforeseen interruption of productions.
- (1177) For example, the Notifying Party suggests to [...].
- (1178) Such a move would however [...] ¹⁰¹⁶, [...] ¹⁰¹⁷.

¹⁰¹² Commitments of 28 January 2021, paragraph 7.

¹⁰¹³ Commitments of 28 January 2021, paragraph 5.

¹⁰¹⁴ Commitments of 28 January 2021, paragraph 5.

¹⁰¹⁵ Replies to question 14.1 of MT1 – Market Test Questionnaire to competitors, DocID3209.

¹⁰¹⁶ Notifying Party's response to RFI 25, Annex 1.2.

- (1179) To put this into perspective, a majority of customers and competitors consider a utilisation of hard machining facilities for HSU components of less than 75% to constitute a good trade-off between ability to grow a business and cost-effectiveness.¹⁰¹⁸
- (1180) When asked about the investment required for the construction of a hard machining manufacturing line for approximately 20,000 to 30,000 HSU gear sets ([...]), a large majority of competitors replied that such investment would exceed EUR 3 million.¹⁰¹⁹ It should be noted that this amount covers only the hard machining for HSU gear set, whereas a number of other machines are required.
- (1181) Furthermore, the Commission finds that the overall CAPEX funding will also need to take into consideration risks typically associated with the installation of new production lines such as unforeseen cost increases or delays.
- (1182) In conclusion, the Commission finds that the CAPEX funding foreseen in the Commitments of 28 January 2021 is not sufficient and for the purchaser to replicate all the production steps it loses due to the carve out without relying on outsourcing options or the utilisation of existing facilities.

10.2.3.6. Summary of assessment and identified shortcomings

- (1183) The Commission finds that the Commitments of 28 January 2021 entirely remove the overlap between the Parties for all three concerned products markets, namely HSUs, ESVs and orbital motors. Furthermore, the portfolio of products included for HSUs and orbital motors cater to a variety of applications; whereas the ESV offering consists of attractive and competitive products.
- (1184) Based on the market test and its assessment, the Commission concludes that the Divestment Business of 28 January 2021 would also be viable and able to compete effectively on all three product markets – however subject to the following improvements:
- (1185) For HSUs, the product portfolio of the divestment business would need to be complemented by more modern technology and certain cost-effective popular products in order to ensure long-term competitiveness.
- (1186) For ESVs, additional Eaton IP should be included to allow the divestment business to develop the next generation of electrohydraulic steering solutions.
- (1187) For orbital motors, it needs to be ensured that (i) Danfoss cannot undercut the divestment business' ability to sell the RE, RC and CE motors by selling the same motors produced in China and (ii) the “Char-Lynn” brand is available to the divestment business to market its HP and VIS motors effectively.
- (1188) To ensure the viability of the divestment business, the CAPEX foreseen for investments to replicate the TSAs should be of such an amount that will enable the purchaser to replicate the relevant production processes without relying on outsourcing options or the utilisation of existing facilities.

¹⁰¹⁷ The Notifying Party distinguishes between „Base Capacity“, which is a plant capacity based on its current productivity and working shifts, and “Maximum Capacity” which is a plant capacity that could in principle be achieved if productivity is improved and if working shifts are increased.

¹⁰¹⁸ Replies to question 7 of MT1 – Market Test Questionnaire to competitors, DocID3209; replies to question 7 of MT2 – Market Test Questionnaire to customers, DocID3210.

¹⁰¹⁹ Replies to question 12 of MT1 – Market Test Questionnaire to competitors, DocID3209.

10.3. The Final Commitments

- (1189) Based on the Commission’s feedback, the Notifying Party submitted revised commitments on 15 February 2021 (hereinafter referred to as “Final Commitments” and the resulting business entity as the “Divestment Business”). The Final Commitments include the same tangible and intangible assets, as well as licences, patents, supply and customer contracts and safeguards as the Commitments of 28 January 2021. In addition, the Final Commitments include the following improvements, which address the Commission’s concerns towards the Commitments of 28 January 2021 (as described in Section 10.2.3).
- (1190) With respect to HSU, the Notifying Party commits to enhance the HSU portfolio with the inclusion of the following: (i) the divestment of the Danfoss S70 HSU product, including all tangible and intangible assets as well as the accompanying “PV160 priority valve”; and (ii) a technology transfer of the technology related to Eaton’s Series 20 HSU, including all intangible assets related to that technology and necessary to manufacture the Series 20 HSU.
- (1191) The S70 is a new product from Danfoss which is yet to be launched. It includes modern technology and is designed to be a cost competitive offering. The Eaton Series 20 is a very well established and popular product which is seen to be part of Eaton’s premium, ‘tier 1’ range. The technology transfer and the associated commitments will enable the purchaser of the Divestment Business to market, sell, establish production and develop the Series 20; whereas the Notifying Party commits to phase out the production and marketing of the same product.
- (1192) The additions of the S70 and Series 20 technology will bolster the Divestment Business HSU portfolio with products which provide a combination of new technology, breadth of range and cost-effectiveness, complementing well the products which were already foreseen as part of the Commitments of 28 January 2021.
- (1193) The Final Commitments would therefore appear sufficient to resolve the competition concerns in HSUs raised in Section 8.3.3.9 and allow the Divestment Business to compete on a viable long-term basis in the market.
- (1194) With respect to ESVs, the Notifying Party commits in the Final Commitments to enhance the ESV IP with the inclusion of Eaton patents related to ESVs not currently used in identified products but which could allow for the development of future products by the Divestment Business namely patents [...] addressing the Transaction-specific concerns raised in Section 10.2.3.3.
- (1195) With respect to orbital motors, the Final Commitments address all the concerns outlined in Section 10.2.3.4 for the following reasons.
- (1196) In the first place and regarding the RE, RC and CE orbital motors, while, as explained in Section 10.2.3.4, these motors represent a relatively small fraction of the Divestment Business’ sales, the Parties commit not to sell for a [...] after the closing of the sale of the Divestment Business any orbital motor currently manufactured in Zhenjiang to customers located in the EEA (or to customers located outside of the EEA if [...]). This non-solicitation provision ensures that post-Transaction Danfoss cannot undercut the Divestment Business’ ability to compete effectively in the EEA by offering the same motors as the Divestment Business in the EEA.

- (1197) In the second place, the Final Commitments include a fully paid-up and royalty-free license to market the HP and VIS orbital motors under the trademark “Char-Lynn”.¹⁰²⁰ This will allow the Divestment Business to continue marketing the HP and VIS orbital motors under their existing branding, which market participants considered important.
- (1198) With respect to the provisions designed to mitigate risk and more specifically the replacement of TSAs, the Notifying Party commits to provide a CAPEX funding of EUR [...] million for future investments in the plants of the Divestment Business. In addition, the Notifying Party commits to transfer the title [...] and to cover the costs of their move and installation at the plant of the Divestment Business up to EUR [...] million. The Commission finds that such CAPEX funding together with a number of further assistance commitments will enable the divestment business to replicate all production steps required for the divested products without having to rely on outsourcing options or the utilisation of existing facilities

10.4. Conclusion on Commitments

- (1199) For those reasons, the Commission considers that the Final Commitments are suitable and sufficient to eliminate the significant impediment to effective competition to which the Transaction would give rise and the Final Commitments therefore render it compatible with the internal market and the functioning of the EEA Agreement.

11. CONDITIONS AND OBLIGATIONS

- (1200) Pursuant to the second subparagraph of Article 8(2) of the Merger Regulation, the Commission may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with the internal market.
- (1201) The fulfilment of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the parties. Where a condition is not fulfilled, e.g. a business is not divested in the time frame foreseen in the commitments or afterwards re-acquired), the Commission’s decision declaring the concentration compatible with the internal market is no longer applicable.¹⁰²¹ In such circumstances, the Commission may, first, take interim measures appropriate to maintain conditions of effective competition pursuant to Article 8(5)(b) of the Merger Regulation. Second, it may, if the conditions of Article 8(4)(b) of the Merger Regulation are met, order any appropriate measure to ensure that the undertakings concerned dissolve the concentration or take other restorative measures. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6) of the Merger Regulation.¹⁰²² The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.
- (1202) In accordance with the basic distinction described in Recital (1200) regarding conditions and obligations, this Decision should be made conditional on the full

¹⁰²⁰ Final Commitments, paragraph 4(b)(i).

¹⁰²¹ Recital 31 of the Merger Regulation; Remedies Notice, paragraph 20.

¹⁰²² Ibid.

compliance by Danfoss with Sections B and C (including Schedules 1 to 3) of the Final Commitments and all other Sections should be obligations within the meaning of Article 8(2) of the Merger Regulation. The full text of the Final Commitments is attached as Annex III to this Decision and forms an integral part thereof.

HAS ADOPTED THIS DECISION:

Article 1

The notified concentration whereby Danfoss A/S acquires sole control of Eaton Hydraulics within the meaning of Article 3(1)(b) of the Merger Regulation is hereby declared compatible with the internal market and the functioning of the EEA Agreement.

Article 2

Article 1 is subject to compliance with the conditions set out in Sections B and C of Annex III.

Article 3

Danfoss A/S shall comply with the obligations set out in the Sections of Annex III not referred to in Article 2.

Article 4

This Decision is addressed to:

Danfoss A/S

Nordborgvej 81, DK-6430 Nordborg, Denmark

Done at Brussels, 18.3.2021

For the Commission

(Signed)

Margrethe VESTAGER

Executive Vice-President

ANNEX I

The Commission's analysis of the Parties' opportunity data

1. INTRODUCTION

- (1) This Annex presents the results of a participation analysis carried out by the Commission and based on the Parties' opportunity data as submitted on 03 July 2020 and covering the years 2017-2019.
- (2) The main purpose of this exercise is to address two of the main arguments of the Parties (i) that the markets discussed in this Statement of Objections, in which the Parties' activities overlap, are bidding markets and therefore the observed high combined market shares of the Parties are not indicative of market power since a sufficient number of credible competitors exist and (ii) that, in any event, Eaton is not a particularly close competitor to Danfoss.¹
- (3) In this context, the Commission notes that, first, as discussed in Section 8.2 of the Decision, the procurement landscape in the markets under consideration is mixed and cannot be reduced as characterised as bidding markets, and as described in Section 8.2 of the Decision, even if the markets under consideration were pure bidding markets, it would not immediately follow that standard economic theory ceases to apply and that standard market power indicia are automatically rendered meaningless. In any event, to the extent possible, the Commission has also analysed the Parties' opportunity data similarly to how one would analyse a true bidding market, an analysis presented herein. This analysis is a complement rather than a substitute to the competitive assessment based on standard market power indices and, as discussed below, the results of both analyses are largely aligned.
- (4) The rest of this Annex is organised as follows. Section 2 briefly discusses and describes the data used in this analysis and presents some descriptive statistics on the nature of competition in these markets as captured in this data. Section 3 discusses the methodology applied. Section 4 presents the results. Section 5 discusses a similar exercise that was carried out by the Notifying Party. Section 6 concludes with a discussion on the relevance of this exercise in the case at hand and on the conclusions that can be drawn.

2. DATA AND DESCRIPTIVE STATISTICS

- (5) This annex analyses the Parties' opportunity data submitted to the Commission on 3 July 2020.
- (6) The Parties were assisted in collecting and cleaning this data by the economic consultancy NERA Economic Consulting ("**NERA**"). For more details on the data gathering and cleaning process see also the accompanying Memo submitted by the Notifying Party titled "*2020.07.03 NERA Accompanying Note on Opportunity Data*" (the "**Memo**"). A brief, high-level description follows below.
- (7) The Notifying Party documents and monitors business opportunities using a customer relations management ("**CRM**") tool developed by Salesforce ("**Salesforce Data**"). Similarly, Eaton records business opportunities in its internal Oracle-based Customer Relationship Management database ("**CRM Data**"). In the

¹ See Section 8.4.2 of the Decision.

submission from 25 June 2020, the Parties provided spreadsheets containing the raw Salesforce Data and the raw CRM Data. The spreadsheets include Danfoss' (Power Solutions division) and Eaton's (Power and Motion Controls division) global opportunities that were created or closed in the years 2017-2019.²

- (8) Each observation in the two datasets relates to a distinct product or product group within a given opportunity (some but not all opportunities cover several different products / product groups). Each observation also includes qualitative and quantitative information on the opportunity, the customer account and the product / product group in question. Importantly, this opportunity data includes, for a subsample of opportunities, respective Party's sales team's assessment as to the identity of the main competitor they met in the specific opportunity.
- (9) Before proceeding with the main analysis, this section presents descriptive statistics on two sets of variables that provide some further insight as to the nature of competition in these markets. These are variables "o_Type" and "o_Reason_Won_Lost__c" in the Salesforce Data and "OpportunityCategory" and "OutcomeReason" in the CRM Data, that contain information on the nature of the opportunity (whether it concerns new business or otherwise) and on respective Party's assessment as to the main reason an opportunity was lost or won.

2.1.1. *Nature of opportunity*

- (10) Table 1 to Table 7 below present simple frequency statistics of the variables "o_Type" and "OpportunityCategory" of the Salesforce Data and CRM Data respectively, which describe the nature of the opportunity. To be noted, that Danfoss' Salesforce Data contains considerably more detail on this account. Tables Table 1 and Table 2 present aggregate statistics for the entire sample, whereas Tables Table 3 to Table 7 present the same statistic broken down per product market.
- (11) Focusing on Danfoss' Salesforce Data, [...], the picture that emerges, both from the aggregate statistics as well as from the breakdown per product market, is that only approximately [...] of all opportunities are new opportunities whereas approximately [...] of all opportunities fall under the categories of Replacement Business, Existing Business or Maintenance. The Commission notes that it is highly unlikely that for the opportunities that fall under the latter group incumbency advantages are non-existent, further undermining the Notifying Party's argument that "*current market shares do not accurately represent the intensity of future competition*"³ and are therefore uninformative as to the degree of market power that the merged entity will wield in these markets due to the markets under investigation being so-called bidding markets. However, the Notifying Party's argument cannot be sustained due to the highly fragmented nature of demand, due to the fact that incumbency advantages appear to be quite significant for a significant part of demand but mainly due to the fact that the markets under consideration do not exhibit the characteristics of a bidding market. Worth stressing in any event that similarly to past demand, future demand would similarly exhibit incumbency advantages since there is no indication that these incumbency advantages will somehow dissipate following the Transaction.

² As explained in the Reply to RFI 5, question 9 and 11, the Parties, in order to comply with the time period set in the original data request, used the variables `op_CreatedDate` and `o_CloseDate` in the Salesforce Data and `CreatedDate` and `OpportunityClosedDate` in the CRM Data.

³ See Form CO, paragraph 159. See also Reply to the SO, Annex C.1_1., Section 1.

Table 1 All markets⁴ - Opportunity type in Danfoss opportunity dataset

[...]

Table 2 All markets - Opportunity type in Eaton opportunity dataset

[...]

Table 3 Hydraulic Steering Units - Opportunity type in Danfoss opportunity dataset

[...]

Table 4 Electrohydraulic steering valves - Opportunity type in Danfoss opportunity dataset

[...]

Table 5 Orbital Motors - Opportunity type in Danfoss opportunity dataset

[...]

Table 6 Hydraulic Steering Units - Opportunity type in Eaton opportunity dataset

[...]

Table 7 Orbital Motors - Opportunity type in Eaton opportunity dataset

[...]

2.1.2. Reason for opportunity outcome

(12) Tables Table 8 to Table 14 below present simple frequency statistics of the variables “o_Reason_Won_Lost__c” and “OutcomeReason” of the Salesforce Data and CRM Data respectively, which record respective sales team’s assessment as to the main reason for the outcome of each opportunity. Tables Table 8 and Table 9 present aggregate statistics for the entire sample, whereas Tables Table 10 to Table 14 present the same statistic broken down per product market.

Table 8 All markets - Reason of opportunity outcome in Danfoss opportunity dataset

[...]

Table 9 All markets - Reason of opportunity outcome in Eaton opportunity dataset

[...]

⁴ All markets refer to the three market of interest in this Annex, (i) Hydraulics Steering, (ii) Electrohydraulic steering valves and (iii) Orbital Motors. In the case of Eaton, all markets refer to (i) Hydraulics Steering and (ii) Orbital Motors [...].

Table 10 Hydraulic Steering Units - Reason of opportunity outcome in Danfoss opportunity dataset

[...]

Table 11 Electrohydraulic steering valves - Reason of opportunity outcome in Danfoss opportunity dataset

[...]

Table 12 Orbital Motors - Reason of opportunity outcome in Danfoss opportunity dataset

[...]

Table 13 Hydraulic Steering Units - Reason of opportunity outcome in Eaton opportunity dataset

[...]

Table 14 Orbital Motors - Reason of opportunity outcome in Eaton opportunity dataset

[...]

- (13) A number of observation can be made with respect to these descriptive statistics. First, the competitive landscape is a complex one where a number of different competitive parameters can prove decisive in determining the outcome of each opportunity. Second, the relationship between the Parties and the customers appear consistently as one of the most common determinants of an opportunity's outcome. Third, various quality parameters ([...]), together with [...], appear to be identified as the reason determining the outcome of the opportunity a lot more frequently than "*Price*".
- (14) These findings are in line with and reinforce the description of the demand side characteristics in Section 8.2.1. of the Decision.
- (15) With respect to these observations the Notifying Party submits that it is not clear why the opportunity data should be more or less informative if the more frequently mentioned parameters of competition do not relate to the price of a product and that even if the recorded reason for an outcome relates to a factor other than Price, this does not imply that the price did not play role in the outcome as well and that should prices change, a different choice would likely be made.⁵
- (16) The Commission reiterates that, as discussed in Section 8.2.1. of the Decision, in a typical auction, the customer selects the firm that provides it with the highest surplus, defined as the difference between the value of the product offered by each firm and its bid. Parameters like "*Technology*", "*Function*" and/or "*Quality*" can indeed be considered as part of respective value proposition. However, the fact that established relationships, that are also a form of entrenched incumbency advantage,

⁵ Reply to the SO, Annex C.1_1., page 4.

in line with those discussed in Section 2.1.1 above, appear to play a determining role more frequently than any objective valuation parameter, even if pricing still played some role, further supports the Commission’s conclusion that the markets under consideration cannot be classified simply as bidding markets and the Notifying Party’s argument that past market shares are a poor proxy for future market power must similarly be put aside.

3. METHODOLOGY

- (17) By way of introduction to the main body of the analysis of the opportunity data, the Commission notes that some examples of the metrics that one would typically consider in analysing procurement markets are market shares, winning rates (share of contestable tenders won by each player), participation rates (share of contestable tenders in which each player has participated), meeting rates (proportion of contestable tenders in which the Parties met, compared to the proportion of contestable tenders in which the Parties met other rivals), and conditional participation and winning rates (participation and winning rates when limited to the subset of tenders in which one or the other Party participated). Such metrics are particularly informative in winner-take-all markets with infrequent tenders where market shares might well indicate limited or no overlap between the Parties despite significant competitive interaction at the tender stage. That is, under a specific set of circumstances that do not apply in the markets under consideration, market share metrics have the potential of underestimating the competitive interaction between competitors.
- (18) Due to the limitations of the Parties’ opportunity data (only partial coverage of the relevant markets due to the fragmented nature of demand; limited information on competitive interactions, focusing only on recording respective Party’s assessment of the identity of one main competitor) the analysis focuses on meeting rates of main competitors for the sub-sample of opportunities where this information is recorded.⁶
- (19) The sample sizes of opportunities where the data includes the Parties’ assessment as to who the main competitor in the particular opportunity was are as follows. For the Danfoss dataset the analysis is carried out on [...] out of [...] observations ([...] % sample) for HSUs, on [...] out of [...] observation ([...] % sample) for ESVs, and on [...] out of [...] observations ([...] sample) for orbital motors. For the Eaton dataset the analysis is carried out on [...] observations ([...] % sample) for HSUs, and on [...] observations ([...] % sample) for orbital motors.
- (20) The present analysis uses four main pieces of information found in this opportunity data. First, the classification of each opportunity in different product categories corresponding to the relevant markets discussed in the Decision.⁷ Second, the identity of the respective Party’s assessment as to their main competitor in the

⁶ Considering winning rates would further reduce the relevant sample while participation rates cannot meaningfully be identified since not being identified as a “main competitor” does not rule out the possibility that a competitor still participated in a specific opportunity.

⁷ Each dataset includes a number of classification variables (of varying degrees of aggregation) describing the product category to which each opportunity relates to, as per the classifications used internally in respective company. As part of the data cleaning process described in the Memo, the Notifying Party, has matched each opportunity to the product markets described in the Form CO. The current analysis is based on this latter classification based on the variable “NERA_Technology_Shares_1”.

opportunity in question.⁸ Third, information on the location of the customer in question.⁹ Fourth, information on the size of the opportunity measured in terms of both volume (number of units) and value (EUR) in the case of the Danfoss dataset, and measured only in terms of value (USD) in the case of the Eaton dataset.¹⁰

- (21) The analysis considers, for each Party and each relevant market, first, the total value (and volume) of the sum of all opportunities in the Parties' dataset where a main competitor is identified. Second, the analysis considers for which of those cases (in terms of aggregate value and volume) each competitor was identified as the main competitor. Through this process, a ranking can be produced of which competitor was identified as the main competitor in an opportunity most or least frequently (in terms of value and volume of opportunities). This ranking can be expressed either in terms of total value (or volume) of the opportunities for which each competitor was the main competitor, or in terms of a share of the total value (or volume) of the opportunities that the Party in question participated in. The relative frequency with which respective Party is identified as the other Party's main competitor, and therefore second-choice alternative for the customer in question, provides an estimate of the so-called diversion ratio between the Parties.¹¹ This exercise can be refined by focusing on particular product segments (e.g. based on the power range of a motor or pump) or on a particular type of opportunity (e.g. won vs lost).
- (22) This analysis is carried out only with respect to those opportunities where the data includes the Parties' assessment as to who the main competitor in the particular opportunity was. Opportunities where this information is missing are excluded from the analysis.¹² In essence, this means that the analysis is carried out on a sample of the opportunity data rather than the full population of all opportunities the Parties participated in. Assuming that no competitor is more likely to be identifiable as the main competitor than any other competitor, and there is no reason to believe that that is the case, then focusing on opportunities with identifiable competitors is equivalent to carrying out the analysis on a random sample of the population data, making the results representative, on average, of the full population.¹³
- (23) The Notifying Party itself has on several occasions¹⁴ questioned the reliability and validity of the variable identifying the main competitors in this opportunity data. The Commission notes that the Notifying Party's critique is undermined by the fact that the Notifying Party appears to use this information in its own internal

⁸ As recorded in the variable "NERA_Compervisor".

⁹ As recorded in the variable "NERA_Region_Shipping".

¹⁰ In the Danfoss dataset this information is recorded in the variables "NERA_TotalPrice_EUR" and "op_Quantity". In the Eaton dataset this information is recorded in the variable "TotalDetailRevenueUSD".

¹¹ The diversion ratio D_{12} from product 1 to product 2 is equal to the fraction of the sales lost by product 1 following a price increase that is captured by product 2 and is a commonly used metric of closeness of competition. That is, $D_{12} = -(\partial Q_2 / \partial p_1) / (\partial Q_1 / p_1)$, where Q_i and p_i denote the demand function and price of product i , respectively.

¹² In practice, the analysis excludes those opportunities in the Danfoss dataset where the variable "NERA_Compervisor" takes the value "Missing Competitor" and those opportunities in the Eaton dataset where the variable "NERA_Compervisor" takes the value "UNKNOWN".

¹³ The analysis also excludes observations in the Eaton dataset where the variable "OpportunityCategory" takes the value "Attrition" and the variable "TotalDetailRevenueUSD" is smaller or equal to zero, in order to avoid double counting of some observations as per the explanation provided in footnote 13 of the Memo.

¹⁴ See for example, Limitations of Danfoss' and Eaton's opportunity data, doc ID 154.

assessments of the competitive assessment of the markets in question that inform its own market conduct.¹⁵

(24) The results of this analysis are presented in the following section.

4. RESULTS

(25) The results are presented separately for each product market, namely, HSUs, ESVs and orbital motors.

4.1. Hydraulic steering units

(26) All results in this annex are presented in the same format. The point of reference is the sum of all opportunities in the product market and geography in question that Danfoss or Eaton (depending on whose dataset is used in the particular case) has participated in and a main competitor was identified in the opportunity dataset. The first column of each table lists the main competitors that are identified in respective Party's dataset as having also participated some of these opportunities as a main competitor. This list includes only competitors of meaningful size with smaller fringe competitors bundled together under the label "Other Supplier". The list might not include all competitors active in the market since it only includes competitors that were identified in the Parties' opportunity datasets as a main competitor in at least some opportunities. The second and third columns present the sum of the total volume and value of the opportunities being analysed in each case (which is constant across competitors).¹⁶ The fourth and fifth columns present the total value and volume of opportunities for which the competitor in question (the competitor in each row) was identified by respective Party as the main competitor (which varies along the rows of the table as each row corresponds to a different competitor). The sixth and seventh columns simply translate this overlap between a Party and its main competitors in an opportunity in terms of share of the total volume and value of the opportunities in question.

(27) Table 15 and Table 16 present the competitive overlaps in **HSUs** in the EEA and the world respectively from the point of view of all opportunities Danfoss participated in and a main competitor was registered in the opportunity data between 2017 and 2019. This corresponds to opportunities amounting, in aggregate, to [...] units and approximately [...] in the EEA; and [...] units and approximately [...] in the whole world. In both instances Eaton is the competitor that is most frequently identified as the main competitor that Danfoss met in these opportunities; Ognibene is the only competitor that comes close. To be noted that the difference in competitive overlaps between Danfoss and Eaton and Danfoss and Ognibene is more significant in terms of value than in volume. The competitive overlap is significant in both geographic areas but larger in the world market compared to when considering only the EEA.

¹⁵ See for example, Danfoss APR Strategy doc ID 1058-40285, Danfoss Market/Competitive Intelligence for DPS doc Id 1057-24201, Danfoss Market Brief strategic Planning Process 2019-2023 doc Id 1055-9783, Harrow EEA Opportunities 20014-2018 doc Id:1054-9725

¹⁶ [...].

Table 15 – Hydraulic Steering Units – Participation overlap, taking Danfoss as a reference, in the EEA , 2017-2019

[...]

Table 16 - Hydraulic Steering Units - Participation overlap worldwide, taking Danfoss as a reference, 2017-2019

[...]

- (28) A similar exercise from the point of view of Eaton is carried out and presented in Table 17 and Table 18 but only in terms of value. What is striking is that in the Eaton dataset Danfoss is registered as the main competitor for opportunities corresponding to approximately [...] of all opportunities Eaton participated in (and also registered a main competitor) in the EEA. The only other competitor identified is Ognibene at a competitive overlap of just above [...]. The difference is just marginally less striking in the world market where the corresponding figures are [...] and [...].

Table 17 - Hydraulic Steering Units – Participation overlap in the EEA, taking Eaton as a reference, 2017-2019

[...]

Table 18 - Hydraulic Steering Units – Participation overlap worldwide, taking Eaton as a reference, 2017-2019

[...]

- (29) In short, the competitive overlap between Danfoss and Eaton is very significant in hydraulic steering units, especially from the point of view of the Eaton opportunity dataset, as one would expect based on the Parties’ combined market shares.

4.2. Electrohydraulic steering valves

- (30) In the case of **ESVs** the results of the analysis are presented only for the Danfoss dataset since the Eaton dataset [...]. The results are qualitatively similar to those for HSUs with Eaton the most frequent main competitor to Danfoss both in terms of value and volume. Again the competitive overlap is more significant in the world compared to just the EEA. One difference is that the overlap is this time [...] but the gap between Eaton and the next most frequently identified main competitor is also much larger than it was in HSUs.

Table 19 - Electrohydraulic steering valves - Participation overlap in the EEA, taking Danfoss as a reference, 2017-2019

[...]

Table 20 - Electrohydraulic steering valves - Participation overlap worldwide, taking Danfoss as a reference, 2017-2019

[...]

- (31) Similarly to hydraulic steering units, the results of the analysis in ESVs is in line with what one would expect from the high combined market shares of the Parties in this market.

4.3. Orbital motors

- (32) **Orbital motors** is the only one out of the three markets analysed where the Parties don't consistently feature as each other's most frequently identified main competitor. Considering first the analysis of the Danfoss data, Eaton is the second most frequently identified main competitor to Danfoss behind M+S in the EEA. To be noted that [...]. However, when considering the broader world market, this ranking is reversed with Eaton becoming the first most frequent main competitor to Danfoss, ahead of M+S by a considerable degree, indicative of the narrow geographic footprint of M+S.

Table 21 - Orbital motors - Participation overlap in the EEA, taking Danfoss as a reference, 2017-2019

[...]

Table 22 - Orbital motors - Participation overlap worldwide, taking Danfoss as a reference, 2017-2019

[...]

- (33) Turning next to the Eaton dataset, Danfoss ranks as only the third most frequent main competitor to Eaton in the EEA but as the second most frequent main competitor in the world.

Table 23 - Orbital motors - Participation overlap in the EEA, taking Eaton as a reference, 2017-2019

[...]

Table 24 - Orbital motors - Participation overlap worldwide, taking Eaton as a reference, 2017-2019

[...]

- (34) Even though these results for orbital motors may suggest that Danfoss and Eaton are not (at least in the EEA) competing as closely as in the case for HSUs and ESVs, they certainly do not provide any support for the argument that the two are not competing closely.

- (35) Despite the prominence of [...] in Danfoss' data and [...] in Eaton's data, the diversion ratios between the Parties remain quite significant in absolute terms at [...] and [...] respectively. Moreover, the Commission notes that [...].¹⁷ [...].

5. THE NOTIFYING PARTY'S ANALYSIS OF THE PARTIES' OPPORTUNITY DATA

5.1. Orbital motors

- (36) The Notifying Party has carried out a similar exercise focusing on orbital motors, including also an analysis of the overall motors market,¹⁸ presented in "M.9820_Phase II Advocacy Motors_Annex_8" submitted by the Notifying Party on 21 October 2020. The Notifying Party applies the same methodology as the one employed herein but expands upon this analysis by (i) also considering the overall motors market, (ii) considering the distinction between sales channels (direct vs via distributors), (iii) considering the distinction between different power levels (low, medium, high),¹⁹ and (iv) focusing in particular only on swing & track drive orbital motors.²⁰
- (37) The Notifying Party interprets the results of this analysis as showing that (i) the Parties perceive exposure to somewhat different competitive constraints, on account of different sets of competitors having prominence in respective Party's opportunity data; (ii) in several of the market segmentations considered the Parties' are not each other's closest competitor in the EEA; (iii) orbital motors are exposed to competition from other technologies as evidenced by the presence of competitors such as Poclairn that does not manufacture orbital motors (but rather cam lobe motors) in Eaton's opportunity data; and that (iv) Danfoss is not a relevant competitor in Eaton's swing & track drive orbital motor opportunities in the EEA .
- (38) The Commission notes that these findings in the Notifying Party's analysis are in line with the results of the Commission's analysis presented herein. As such, the Notifying Party's analysis does not in any way undermine the analysis and conclusions of this Annex.
- (39) First, the analysis of the Notifying Party shows that the overlap between the Parties differs somewhat across the various market segments considered in its analysis and is particularly weak in the sub-segment of medium powered orbital motor sales to distributors and Eaton's swing & track drive orbital motor but also particularly strong in the sub-segment of medium powered orbital motors sales direct to OEMs. The Notifying Party's analysis further shows that if one defines a wider market including all motor technologies the overlap between the Parties is relatively weaker compared to just orbitals.
- (40) The Commission notes that it is not surprising that if one were to investigate the overlap between the Parties in a market defined more broadly than the one of orbital motors, the relevant product market under consideration, the competitive overlap between the Parties would appear to weaken. However, focusing on the

¹⁷ Opportunities 1-4ZXTOWJ, 1-HN21-784, 1-858OZJV, 1-3QGKSWX, 1-55LJQ1T and 1-39PW0V8 for [...], and opportunities 1-BC2JGFL, 1-BC2JGKU, 1-BC2JGJ3, 1-BC2JGHA, 1-AOEQC0F, 1-7QL2UQ9 and 1-BC2JGMB for [...].

¹⁸ The Notifying Party has maintained throughout this process that orbital motors do not constitute a distinct relevant product market but rather are part of the broader overall motors market.

¹⁹ The analysis of the Notifying Party introduces also a number of adjustments, namely, (i), opportunities that were abandoned by the company or the customer, (ii), opportunities that were maintenance opportunities

²⁰ Reply to the SO, Annex C.1_1, Section 3.2.

portion of the Notifying Party's analysis that considers orbital motors alone, the diversion ratios between the Parties remain quite significant in absolute level terms, with the sole exception of medium powered orbital motor sales to distributors.

- (41) Second, the Notifying Party, argues that the fact that the set of competitors that appear more frequently in respective Party's opportunity data differs is indicative of the difference in focus of respective Party's product portfolio. The Notifying Party submits that this is evidence of the Parties not being close competitors.
- (42) The Commission notes that in a differentiated product space, the fact that other than each other the Parties appear to compete with a heterogeneous set of competitors does not have a bearing on how close the Parties themselves compete, as evidenced by the absolute levels of the diversion ratios between them.
- (43) In summary, the analysis carried out by the Notifying Party produces results largely in line with those presented herein.

5.2. Electrohydraulic steering valves

- (44) The Notifying Party has also submitted an analysis of the Parties' opportunity data, presented in Section 3.1. of Annex C.1_1 of the Reply to the SO, that purportedly shows that for the most significant ESV opportunities in which Danfoss participated during the period under observation, Eaton was only mistakenly identified as the main competitor but did not in fact participate in these opportunities. The Notifying Party later complemented this analysis of false positives with one of false negatives.²¹ The Notifying Party concludes from these analyses that the Parties hardly ever competed directly with each other in the ESV market during the period under observation. Relatedly, the Notifying Party also argues, that this finding may suggest that the result of the analysis of the opportunity data concerning the competitive overlap between the Parties in the orbital motors market may similarly be overstated and thus biased to the disfavour of the Parties.
- (45) The Commission notes that the results of this matching exercise carried out by the Notifying Party appear to be potentially driven by the inability of the algorithmic matching employed by the Notifying Party to identify the correspondence that exists between the Danfoss and Eaton opportunity datasets. As such, it is incapable of undermining the analysis in Sections 4.2 and 4.3, whose conclusions remain valid.
- (46) More specifically, the results presented in Section 3.1. of Annex C.1_1 of the Reply to the SO, investigating the occurrence of false positives, seem potentially incorrect and driven by the fact [...].²² [...]. The Notifying Party itself has been highly critical of the feasibility and reliability of an algorithmic matching between the two opportunity datasets.²³ After a manual check of the [...] opportunities in the Danfoss dataset that the Notifying Party based its analysis on, the Commission was able to identify a potential corresponding match in the Eaton opportunity dataset for the two largest (in terms of value) opportunities.
- (47) First, the opportunity in Table 3.1 of Annex C.1_1 of the Reply to the SO identified in the Danfoss dataset with the id number [...] appears to correspond to the

²¹ See Reply to the Letter of Facts, Annex A.1.

²² The methodology employed in this exercise by the Notifying Party is described in Annex C.1_1 of the Reply to the SO, page 7.

²³ See Response to RFI 4 question 5.

opportunity identified in the Eaton dataset with the id number [...]. Both opportunities refer to a solution purchased by customer [...] in 2017 for incorporating in an [...] and have a very similar valuation of EUR [...] on the Danfoss side and USD [...] on the Eaton side (the opportunity was ultimately won by Danfoss). Not only Danfoss identified Eaton as its main competitor but also Eaton identified Danfoss at its main competitor in the corresponding opportunity in the Eaton dataset. The Notifying Party argues that Eaton's account managers confirmed that Eaton did not participate in any eSteering opportunity relating to [...]. However, this contention does not follow from information that is available in the opportunity data and has therefore low evidentiary value since ultimately it is a mere unsubstantiated assertion for which no supporting documentary evidence exists. The Commission is not in a position to either confirm or disprove this assertion.

- (48) Second, the opportunity in Table 3.1 of Annex C.1_1 of the Reply to the SO identified in the Danfoss dataset with the id number [...] appears to correspond to the opportunity identified in the Eaton dataset with the id number [...]. Both opportunities relate to customer [...]. Not only Danfoss identified Eaton as its main competitor but also Eaton identified Danfoss at its main competitor in the corresponding opportunity in the Eaton dataset. The Notifying Party argues that the two opportunities therefore do not relate to the same machine. However, this contention does not follow from information that is available in the opportunity data and has therefore low evidentiary value since ultimately it is a mere unsubstantiated assertion for which no supporting documentary evidence exists. The Commission is not in a position to either confirm or disprove this assertion.
- (49) The Commission further notes that a third sizeable opportunity in Table 3.1 of Annex C.1_1 of the SO Reply identified in the Danfoss dataset with the id number [...], and related to the customer [...], contains a very general description on the Danfoss side and could potentially correspond to several different opportunities contained in the Eaton dataset without the possibility to achieve an algorithmic matching. The Notifying Party argues that Eaton confirmed that it did not participate in any direct or indirect opportunity relating to [...] underground drill rigs with electrohydraulic steering products. However, this contention does not follow from information that is available in the opportunity data and has therefore low evidentiary value since ultimately it is a mere unsubstantiated assertion for which no supporting documentary evidence exists. The Commission is not in a position to either confirm or disprove this assertion.
- (50) The algorithmic matching exercise failed to capture these potential matches. Along with the one match uncovered by the Notifying Party, these opportunities correspond to approx. [...]% of the total value of the [...] opportunities analysed in Section 3.1. of Annex C.1_1 of the Reply to the SO, a finding that is capable of reversing the conclusion drawn by the Notifying Party that there is an almost complete absence of competitive interaction between the Parties. It cannot be excluded that the algorithmic matching similarly failed to capture the correspondence between the two datasets for the rest of the opportunities analysed as well.
- (51) In any event, and irrespective of how accurately Danfoss identified the instances in which it competed with Eaton, the Commission notes that imperfect information is something that characterises many markets including, apparently, the market of ESVs. An ex-post analysis of whether Danfoss was correct in assuming it was competing head to head with Eaton in a specific opportunity is less relevant for past competitive outcomes than the belief that Danfoss held at the time that it did.

This belief was not an irrational one but rather one that appears to have been grounded on the facts that Eaton held a significant market position in the ESV market (as indicated by its significant market share), had competing products in its portfolio, had established relationships with the customers in question and had in the past supplied similar and/or related products to these customers. Accordingly, Danfoss would be expected to have adjusted its offer accordingly in its efforts to win the specific opportunity.

6. CONCLUSIONS

- (52) As mentioned in the introduction, the Notifying Party makes two distinct claims. First, that the markets in question are bidding markets and therefore market shares do not necessarily indicate the existence of market power going forward. Second, that Eaton is not a close competitor to Danfoss.
- (53) The Commission has carefully analysed the procurement landscape in the markets under scrutiny and found that the picture is considerably more mixed than alluded to by the Notifying Party. This has been further evidenced by simple descriptive statistics presented in Section 2 on the nature of the opportunities that the Parties engage in and the reasons behind winning or losing an opportunity. Moreover, the demand is relatively fragmented with no single opportunity having a major impact on a supplier's market share and the Parties' market shares are relatively stable over the observed time period.
- (54) Furthermore, even if one were to assume that the markets under consideration are pure bidding markets, it does not immediately follow that standard economic theory ceases to apply and that standard market power indicia are automatically rendered meaningless. In any event, to the extent possible, the Commission analysed the Parties' opportunity data similarly to how one would analyse a true bidding market, an analysis presented herein. The analysis focuses on meeting rates of main competitors for the sub-sample of opportunities where this information is recorded, a statistic that in this context can be seen as an estimate of the diversion ratio between respective Party and the observed competitors.
- (55) The results clearly show that the Parties are particularly close competitors in all three product markets under consideration, as one would presume from the observed combined market shares of the Parties. This result is particularly pronounced in the HSUs and ESVs markets where the diversion ratios between the Parties are both significantly high but also the highest among respective sets of competitors under observation. But even in the orbital motors markets where the diversion ratios to some third parties are in some instances higher than the diversion ratios between the Parties, the diversion ratios between the Parties are still high in absolute terms and do not in any sense contradict the presumption of significant concentration of market power stemming from observing the merged entity's combined market shares.
- (56) The analyses put forward by the Notifying Party do not present any findings capable of undermining these conclusions.

ANNEX II

The Commission's assessment of the Notifying Party's advocacy paper on orbital motors

1. INTRODUCTION

- (1) On 21 October 2020, the Notifying Party submitted a document entitled “*CASE NO. COMP/M.9820 - DANFOSS / EATON HYDRAULICS PHASE II ADVOCACY: MOTORS*” (the ‘Advocacy paper on motors’), accompanied by 10 Annexes, setting out a number of arguments on why, in its view, the Transaction does not raise competition concerns in the orbital motors market or in any sub-segmentations of that market based on power level (low or medium power) or sales channel (to distributors or direct to OEMs).
- (2) This Annex discusses the arguments raised in this paper and presents the Commission's assessment of their accuracy and relevance.
- (3) The Notifying Party mainly argues that there exists significant across-technology competition (or in other words, out of market competition, which translates into highly elastic market demand) and that the Parties do not compete closely. Their specific arguments can be summarised as follows. First, a product data analysis that focuses on the speed and torque of motors of different technologies and manufacturers shows significant overlaps between orbital motors and other technologies with respect to these two product characteristics. This suggests that different technologies are interchangeable, at least from a technical point of view. Second, an analysis of the Parties' opportunity data confirms that there is across-technology substitution. Third, as described in an annex to the submission,¹ there exists further economic evidence of competition across technologies which implies that the Parties do not compete closely with respect to application-functions, a segmentation of the product space proposed by the Notifying Party. Fourth, a price comparison shows that selected motors of the Parties are offered at similar price points as competing models of alternative technologies.
- (4) Besides these main points, the Notifying Party also reiterates that in addition to across-technology competition and a lack of closeness of competition between the Parties, there are several additional factors which demonstrate that the Transaction will not significantly impede effective competition. These include, in particular, the bidding nature of the market, the ease of switching, low entry barriers, and buyer power of both OEMs and distributors which also constrain the Parties' market power. The validity and relevance of these arguments is addressed in the main body of the Decision, in Sections 8.2.1 , and 8.2.2 and is not discussed further in this Annex.
- (5) This annex is structured as follows. Section 2 below first describes in some more detail the evidence upon which the four main arguments of the Notifying Party rely. Section 3 then addresses each of the arguments, one at a time. Section 4 sets out the Commission's assessment and conclusion.

¹ *Case No. COMP/M.9820 Danfoss / Eaton Hydraulics: Observations on competition in orbital motors for mobile applications* (“Annex 9”).

2. THE VIEWS OF THE NOTIFYING PARTY

- (6) This section sets out in some more detail the evidence on which the Notifying Party relies for its four main arguments. Section 2.1 considers the product data analysis which purports to show substitutability of orbital motors with other technologies. Section 2.2 concerns the opportunity data analysis which allegedly confirms such across-technology competition. Section 2.3 describes the further economic evidence on across-technology competition relied on by the Notifying Party. Finally, Section 2.4 summarises the price comparison which purportedly indicates that orbital motors intensely compete with other technologies.

2.1. Product data analysis

- (7) The Notifying Party collected and compared data on the torque and speed of 2,500 motors sold by the Parties and by their competitors.² According to the Notifying Party, the results of this comparison allegedly show (i) that medium power orbital motors are exposed to competition from radial piston motors with cam lobe design, and (ii) that low power orbital motors are exposed to competition from electric motors and, to some extent, from radial piston motors with cam lobe design and axial piston motors combined equipped with gearboxes.³

2.2. Analysis of the Parties' opportunity data

- (8) The Notifying Party's analysis of the Parties' opportunities data is described in detail in the document "*M.9820_Phase II Advocacy Motors_Annex_8*". This analysis is in turn discussed in detail in Annex I of the Decision and will therefore not be addressed further in this annex. In short, the results presented by the Notifying Party are in line with those of the Commission and do not undermine in any meaningful way the Commission's conclusions with respect to the combined market power of the merged entity and the closeness of competition between the Parties.

2.3. Further economic evidence of across technology competition

- (9) In addition to the arguments described in the previous subsections, Annex 9 also presents a number of additional arguments and claims with respect to across-technology substitution. Not all of these arguments are properly raised in the Advocacy paper on orbital motors itself. This section discusses all arguments raised by the Notifying Party, including those that are only discussed in Annex 9 and not in the main body of the advocacy submission.
- (10) At the core of the analysis presented in Annex 9 is a classification proposed by the Notifying Party that allocates the Parties' orbital motor sales to a number of categories. These are defined by a combination of the application (e.g., potato harvester, rice harvester, mini excavator, etc.)⁴ and function (working or propel) of the end use of the machine the orbital motor is question is installed in. For example, the Notifying Party defines a potato harvester's working function as a different application-function from a grape harvester's or a beet harvester's working function. The Notifying Party defends this approach on the grounds that

² Advocacy paper on motors, Section A., paragraph 1.

³ Advocacy paper on motors, paragraphs 11-32.

⁴ For the full list see Response to RFI 14 Annex D.7 1

the Parties use this separation during their ordinary course of business. Moreover, different application and different function combinations may require different technical characteristics. The Commission notes that this approach does not always uniquely identify different orbital motor models since the same model can realise sales in several different application-function combinations.

- (11) As a next step, the Notifying Party classifies these application-functions as either single or multi-technology. The Notifying Party submits that the application-functions that it has classified as multi-technology are application-functions where orbital motors are exposed to competition from other motor technologies. Most of the analysis in Annex 9 is based on this classification between single and multi-technology application-functions.
- (12) On this basis, Annex 9 then makes the following arguments. First, the orbital motor sales of the Parties overlap only to a limited extent in terms of the application-functions they serve. More specifically, [...]% of Danfoss' volume-based orbital motor sales in the EEA in 2019 and [...]% of Eaton's are made on applications that do not overlap. Second, a significant part of the Parties' orbital motor sales are in application-functions where, at least in principle, an alternative technology may be used instead. More specifically, about [...]% of Danfoss' orbital motor sales and about [...]% of Eaton's are purportedly exposed to competition from alternative motor technologies. Third, defining the relevant market as all machines used in application-functions that are also served by orbital motors, including machines that use alternative technologies, then Danfoss' and Eaton's combined sales shares decrease from [...]% ([...] % for Danfoss plus [...] % for Eaton) to [...]% ([...] % for Danfoss plus [...] % for Eaton). Fourth, a regression analysis indicates that prices of orbital motors are [...] % lower in multi-technology applications than in single-technology applications. Similarly, the profit margin on products that are primarily multi-technology tends to be [...] percentage points lower than the margin on products that are primarily single-technology. Finally, the merged entity's customers could threaten to redirect their purchases of other products to other suppliers if it attempted to raise its prices on orbital motors, thereby eliminating the merged entity's incentive to raise prices in the first place.
- (13) Section 3.4 below addresses each of these arguments separately.

2.4. Price comparison

- (14) Finally, in its analysis of different power levels (low vs medium power orbital motors), the Notifying Party presents price comparison tables that purportedly show that the price of competing technologies does not differ significantly from that of orbital motors (see Tables 2 and 4 of the Advocacy paper).⁵

⁵ For a detailed discussion on how those price statistics were produced see Reply to RFI 16, Q2.

3. THE COMMISSION'S ASSESSMENT

3.1. Product data analysis

3.1.1. Introduction to the analysis

- (15) In the Advocacy paper on motors, the Notifying Party is compiling and comparing different motors' maximum torque and speed.⁶ Based on this comparison, it claims that both hydraulic and electric motors have the capabilities to run at higher speed and/or at higher torque compared to orbital motors.⁷ Therefore, OEMs can in theory operate them at reduced speed or torque, thus potentially substituting orbital motors in a number of applications.
- (16) Such a claim, however, is not corroborated by the market investigation, because a large majority of the OEMs indicated that they would not purchase a motor capable of delivering substantially more performance than what is needed for their machines, unless there is no better option on the market (see SO, Section 6.5.3.2). This suggests that OEMs would operate motors at reduced conditions only in rare and very particular situations.
- (17) Therefore, in the present analysis, the Commission conducts a comparison between orbital motors and motors of other technologies only for their maximum torque and speed (that is, for the conditions for which they are typically sold for). Conversely, the Commission does not consider the implausible situation in which an OEM would purchase an over-specified motor at substantially higher cost and operate it at reduced operating conditions.
- (18) With respect to electric motors, it should further be noted that a mere comparison between torque and speed is less significant than in cases where orbital motors are compared with other hydraulic motors (e.g., gear motors, and piston motors). As explained in the SO, Section 6.5.3.2, the adoption of an electric motor instead of a hydraulic one would entail a profound change of the entire machine, including the removal of the internal combustion engine,⁸ the addition of battery banks, of battery charging systems, the design of complementary electric systems, and the complete re-design of the control system.
- (19) Therefore, while this Annex compares the torque and speed of electric motors and orbital motors, it should be noted that this comparison has a limited significance with respect to the existence of competitive constraints that these motors allegedly exert on orbital motors. An OEM's decision to re-design its machine from fossil-fuel-powered to fully electric or hybrid is driven by a number of factors, including customer demand, environmental concerns, etc. Therefore, the theoretical availability of an electric motor capable of providing the required torque and rotational speed is only a necessary, but certainly not asufficient or determining condition for an OEM to decide moving from a hydraulic system to an electric system.

⁶ In the Advocacy paper on motors, paragraph 13, the Notifying Party explains that 'suppliers typically publish maximum intermittent toque and speed values of their motor products.'

⁷ Hydraulic motors comprise, in particular, gear motors, axial piston motors and radial piston motors.

⁸ In some cases, OEMs might opt for a hybrid configuration, where the internal combustion engine would remain present, but substantially down-sized and subject to different working conditions.

- (20) For example, as explained in Section 6.5.3.2 of the SO, in view of the cost of the entire electric system (including batteries), it is that it may make economic sense for OEMs to design electric machines only in the case of small machines. This is the case, for example, for certain Aerial Work Platforms, for which, as explained in Section 6.5.3.2 of the SO, certain OEMs are developing or already developed fully electric or hybrid machines. However, also in these cases, the adoption of electric motors relates to only a limited number of the machines in OEMs' portfolios. And even within these machines, in certain cases only the propel function of the machine (and not the work function) is realised with an electric motor.
- (21) In the following, the technical characteristics of (i) gear motors, (ii) radial piston cam-lobe motors, (iii) axial piston motors, and (iv) electric motors are compared to those of orbital motors. This analysis demonstrates that only a limited number of orbital motors present technical characteristics that are similar to those of other motor technologies. Substitution can therefore occur only at the margin.

3.1.2. Comparison between gear motors and orbital motors

- (22) We start with the analysis of gear motors. Contrary to its approach for other motor technologies, the Notifying Party did not report the speed and torque specifications of gear motors in the Advocacy paper on motors (and therefore did not compare it with orbital motors).
- (23) According to the Notifying Party, gear motors generally have a higher maximum speed and lower maximum torque capabilities than orbital motors. Nevertheless, , according to the Notifying Party, certain gear motors might have similar torque and speed of certain orbital motors, if they are operated at lower speed than they were sold for, or if a gearbox is added to the gear motor.⁹ This claim is allegedly supported by [confidential market data] where an OEM switched from an orbital motor to a gear motor, and two examples where OEMs switched from gear motors to orbital motors. Considering the large number of OEMs in the EEA and the large number of machines models that have been released in [confidential market data], these few examples have to be considered as rare exceptions that likely occurred for specific reasons rather than reflecting a more general competitive constraint that gear motors might exercise on orbital motors.
- (24) As explained in the SO, Section 8.5.3.4, although the Notifying Party is active in both orbital motors and gear motors, it was unable to identify any concrete examples where its gear motors were in competition with its orbital motors for a certain customer. Neither it was able to identify specific gear motors in its portfolio that were in direct competition with specific orbital motor models.
- (25) The lack of competition between the two types of motors is also confirmed by a manufacturer of gear motors, who is not active in orbital motors and explained that *'despite there may be some limited overlaps, competition between gear and orbital motor is not usual. This is because these motors typically address different technical requirements. Gear and piston operate more in the range of high speed, whereas orbital motors typically function on low speed and high torque. This means that applications where high torque is needed at low speed cannot typically*

⁹ Advocacy paper on motors, paragraph 30.

*be addressed by either piston or gear motors.*¹⁰ The same company also explains that, while there might be limited examples of machines that can operate at reduced speed and although in theory both orbital motors and gear motors could be used, in its daily business it does not face any competition from orbital motors.

- (26) Therefore, considering the evidence available at this stage of the market investigation, the Commission preliminary considers that the alleged competition between gear motors and orbital motors appear to be, if at all, theoretical and not of any practical relevance for OEMs on a regular basis.

3.1.3. *Comparison between radial piston cam-lobe motors and orbital motors*

- (27) Next, we turn to radial piston cam-lobe motors. Figure 1 shows the dataset provided by the Notifying Party concerning orbital motors and radial piston cam-lobe motors. Each dot in the figure represents the combination of torque and speed of a given motor. The red dots represent radial piston cam-lobe motors and black dots represent orbital motors.

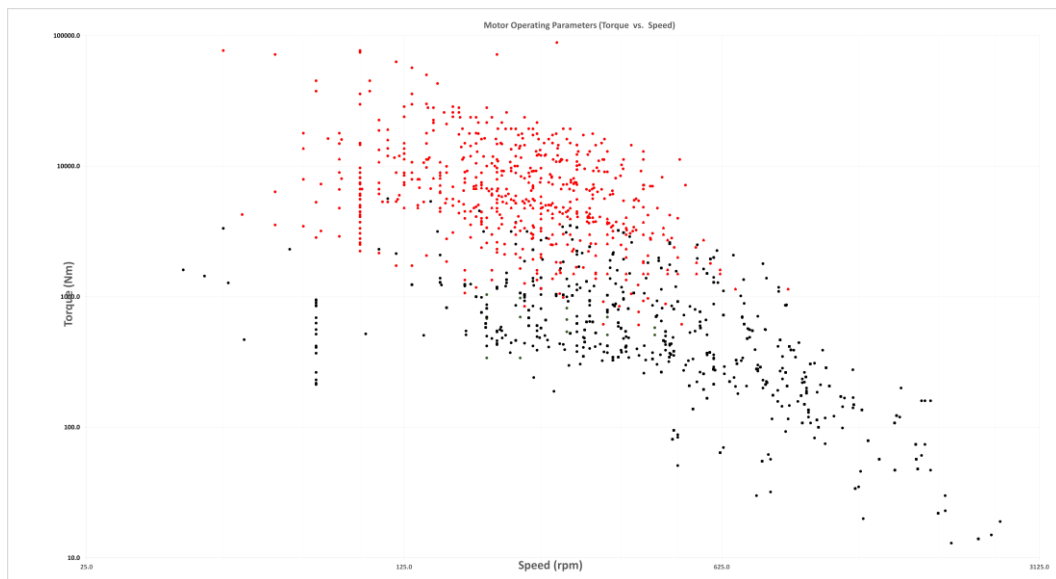
- (28) The figure clearly shows that there are large areas of the graph where only black dots are present which means that for machines requiring these technical requirements, only orbital motors (and not radial piston cam-lobe motors) are available. The figure also shows that the area of technical overlap between radial piston cam-lobe and orbital motors concerns orbital motors with high torque, which typically constitute what the Notifying Party refers to as medium power orbital motors.¹¹

- (29) There is therefore some (limited) overlap of technical characteristics between large orbital motors and radial piston cam-lobe motors. To the extent of competition between these two technologies resulting from this overlap is analysed in details in Section 6.5.3.2 and Section 8.5.3.4 of the SO.

¹⁰ Non-confidential minutes of a call with a competitor on 5 November 2020, DocID 2021

¹¹ Advocacy paper on motors, section II.

Figure 1 Comparison between speed and torque of radial piston cam-lobe motors and orbital motors

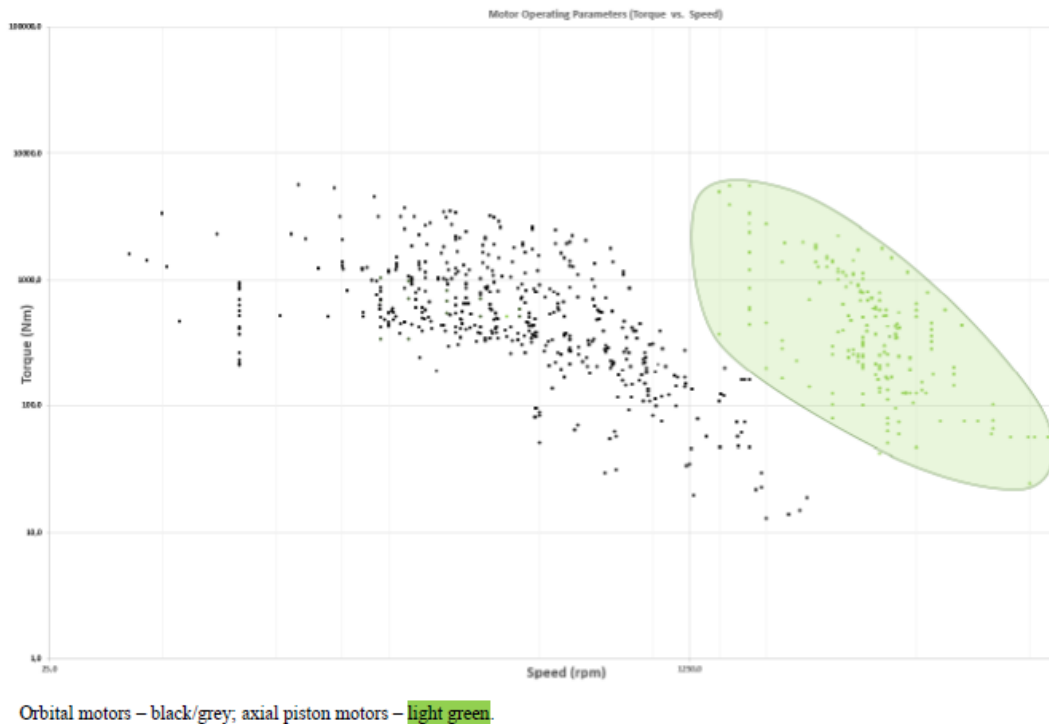


Source: Commission based on data reported in Advocacy paper on motors, Annex 4.

3.1.4. Comparison between axial piston motors and orbital motors

(30) Next, we turn to axial piston motors. Figure 2 reports the Notifying Party's comparison between the torque and speed of axial piston motors and orbital motors. In the figure, the black dots represent the combination of speed and torque of the various orbital motors, whereas axial piston motors are represented by the light green dots. As the figure shows, there are practically no instances for which an axial piston motor has a speed and torque comparable to those of an orbital motor. In the figure, this lack of overlap is highlighted by the contour area of the light green dots.

Figure 2 Speed and torque comparison of axial piston motors and orbital motors



Source: Advocacy paper on motors, Figure 7.

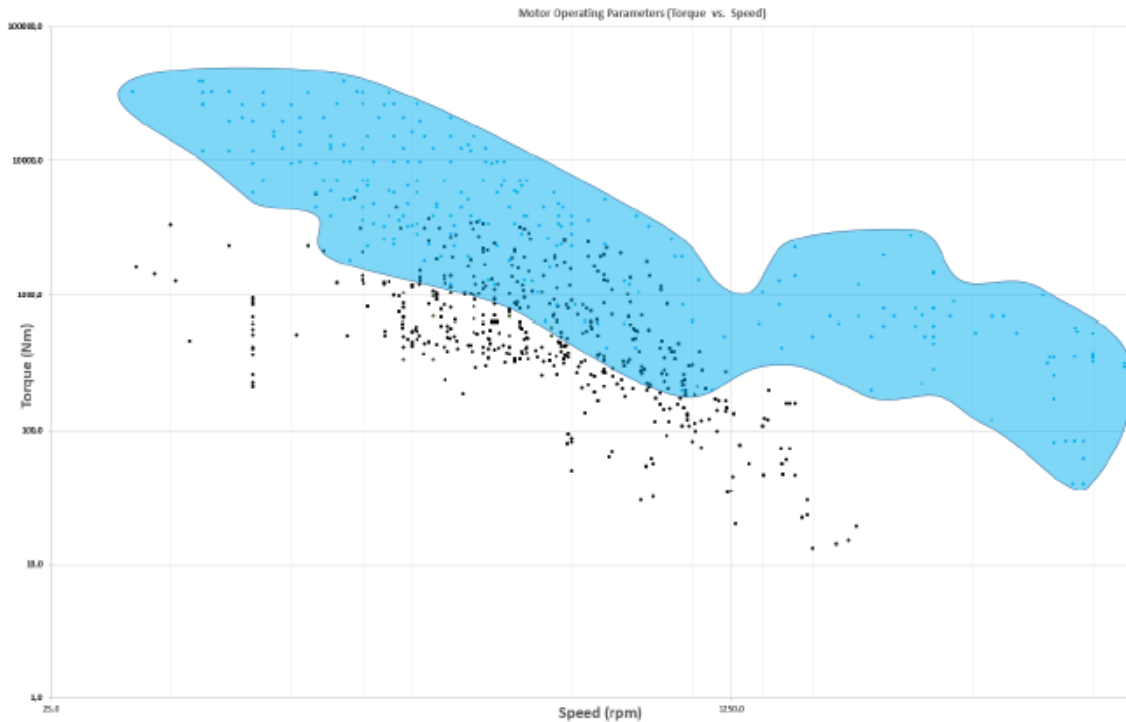
- (31) According to the Notifying Party, the lack of axial piston motors with speed and torque similar orbital motors does not stop OEMs to adopt axial motors as a replacement for orbital motors. In particular, the Notifying Party argues that OEMs can add a gearbox to axial piston motors, with the ultimate effect of changing speed and torque to the needs of the various machines.¹²
- (32) However, in a large number of cases, the need to add an additional component (a gearbox) to an axial piston motor prevents substitutability with orbital motors. As explained in the SO, Section 6.5.3.2, gearboxes add space requirements, costs and complexity, and are chosen by OEMs only in particular cases, e.g., when space limitations are not a constraint and when advantages of the axial piston technology for specific use cases in terms of increased efficiency would pay back the increased costs. For this reason, substitutability is typically limited.

3.1.5. *Comparison between electric motors and orbital motors*

- (33) Next, we turn to electric motors. As explained in Sections 6.5.3.2 and 8.5.3.4 of the SO, the competitive constraint that electric motors exert on orbital motors is rather limited for a number of reasons, including higher costs and the need to completely redesign the machine in object. In addition to these shortcomings, the cases in which speed and torque of electric motors are comparable to orbital motors are limited and regard only orbital motors with high torque, as illustrated in Figure 3.

¹² Advocacy paper on motors, paragraphs 19-24.

Figure 3 Speed and torque comparison of electric motors and orbital motors



Orbital motors – black; electric motors – light blue

Source: Advocacy paper on motors, Figure 9.

3.1.6. Conclusion on orbital motors

- (34) In summary, the comparison of torque and speed between orbital motors and motors of different technologies shows that a large proportion of orbital motors cannot be technically substituted with motors of different technologies because no equivalent combination of speed and torque can be found in motors of other technologies.
- (35) Furthermore, the Notifying Party's claim that OEMs would operate gear motors or electric motors at reduced speed and/or reduced torque to match those of orbital motors does not seem to be economically viable, as indicated by most OEMs that replied to the market investigation.
- (36) With respect to the alleged use of a gearbox in conjunction with an axial piston motor or with a gear motor, it appears that this theoretical possibility arises only in very limited circumstances in practice, where the cost of a gearbox is more than compensated by specific benefits of employing an axial radial motor or a gear motor, instead of an orbital motor.

3.2. Analysis of the Parties' opportunity data

- (37) As discussed in Section 2.2., the Notifying Party's arguments with respect to the opportunity data are addressed in Annex I of the Decision. In short, the results presented by the Notifying Party are in line with those of the Commission's own analysis presented in Annex I of the Decision, Section 4, and do not undermine in any meaningful way the Commission's conclusions with respect to the combined market power of the merged entity and the closeness of competition between the Parties.

3.3. Further economic evidence of across-technology competition

- (38) Next, we turn to the additional evidence presented by the Notifying Party on alleged substitution across technologies. Section 3.3.1 will first discuss problems of a general nature with the Notifying Party's analysis. In particular, the Notifying Party bases its analysis on an artificial segmentation of the product space of orbital motors and employs a methodology that greatly exaggerates the competitive interaction between orbital motors and alternative technologies.
- (39) The following subsections then turn to more specific shortcomings of the arguments raised. As argued in Section 3.3.2, the fact that 'only' the majority, but not all, of the Parties' sales are realised in overlap application-functions, does not undermine the Commission's conclusion that the Parties compete closely with each other. As noted in Section 3.3.3, the Notifying Party's analysis in fact shows that [...] % of Danfoss' orbital motor sales are not exposed to any competition from alternative technologies at all, even when the measure of across-technology competition employed greatly exaggerates such constraints. Section 3.3.4 discusses that while artificially broadening the product market may reduce market shares, it does not reduce the likely anti-competitive effects that are indicated by high diversion ratios (i.e., closeness of competition) and margins (i.e., pre-merger market power) for orbital motors. Section 3.3.5 shows that the Notifying Party's regression analysis is technically flawed and in any event does not indicate that orbital motors face significant competition from other technologies. Finally, Section 3.3.6 discusses how the Notifying Party's argument with respect to buyer power are not compatible with observable market outcomes.

3.3.1. *Introductory remarks on the fundamentals of the Notifying Party's analysis*

- (40) First and foremost, the Commission notes that the Notifying Party's analysis in Annex 9 depends crucially on an artificial segmentation of the product space into application-functions, that does not always uniquely identify products (meaning that the same product can have sales in several different application-functions, thus defined), and categorise these application-functions as either single or multi-technology. Moreover the distinction between single and multi-technology application-functions, which is at the core of most of the results presented, seems to have been constructed specifically for the purpose of this analysis. Indeed, little to no supporting evidence exists for this distinction, suggesting that the Notifying Party does not rely on it in its regular course of business.
- (41) The Notifying Party submitted the backup files (raw data and code) behind the results presented in the Advocacy paper and Annex 9 on October 23, 2020 in a submission titled "Backup NERA advocacy paper on orbital motors.". The list of so-called multi-technology application-functions (28 in total) is presented in the file *Marginal_Application.xlsx* contained in that submission, which is purportedly based on Danfoss 'market intelligence', and lies at the heart of all corresponding analyses.
- (42) The Commission requested in RFI 14, Question E.10, that the Notifying Party explain 'the nature of the Danfoss market intelligence, on which the production of the file *Marginal_Applications.xlsx* is based upon' and submit 'representative internal documents, indicative of such market intelligence, in support of the conclusions summarised in *Marginal_Applications.xlsx*.'
- (43) In response to RFI 14, Question E.10, the Notifying Party submitted a new excel file named *M.9820_RFI_14_Annex_E.10_1.xlsx* that, similarly to

Marginal_Application.xlsx, was prepared for the purpose of replying to the Commission's requests for information rather than referencing any original sources from the ordinary course of business.¹³ In this file, the Notifying Party provides information for each of the application-functions that it has branded as multi-technology on (i) the general motor characteristics/requirements of the particular application-function, (ii) which technologies compete with orbital motors in this space, (iii) which technologies do not compete with orbital motors in this space and why, (iv) indicative pricing of competing technologies (including of competing orbital motor models), (v) examples of such competing technologies, by reference to competing manufacturers, (vi) the functionality served by the orbital motor in the particular application-function, (vii) whether the different technical solutions are 1:1 compatible (e.g., concerning the ability to handle the same machine size), and (viii) the main competitors per alternative technology.

- (44) In terms of representative internal documents supporting the conclusions on across-technology competition summarised in the documents *Marginal_Applications.xlsx* and *M.9820_RFI_14_Annex_E.10_1.xlsx*, the Notifying Party submitted "M.9820_RFI 14_Annex_E.10_2" ([content of internal document - confidential market data]) and also referenced previously submitted annex "M.9820_RFI PN 3_Annex_A.4_3" ([content of internal document - confidential market data]), "M.9820_Phase II Advocacy Motors_Annex_10" (presentation [content of internal document - confidential market data]) and M.9820_RFI PN 3_Annex_A.4_7 ([content of internal document - confidential market data]).
- (45) The Commission's assessment of these documents, developed in detail below, shows that (i) the Notifying Party has provided very limited evidence in support of the manner in which it segments the orbital motors space between single and multi-technology application-functions, and that (ii) the limited evidence that has been provided, that covers a very small part of the product space, is suggestive of only marginal substitutability between competing technologies for only a small part of the sales in a particular application-function, which the methodology employed by the Notifying Party translates into total substitutability across all sales in the particular application-function.
- (46) *First*, the Commission notes that the file *M.9820_RFI_14_Annex_E.10_1.xlsx* contains information for only [...] out of the [...] application functions listed in *Marginal_Applications.xlsx*.¹⁴ From the outset, the Notifying Party therefore does not submit any justification for branding as multi-technology [...] out of [...] application functions.
- (47) *Second*, in terms of actual evidence, the Notifying Party submitted internal documents supporting its specific claims of across-technology

¹³ The Notifying Party submits that 'As part of the ordinary course of business on strategy planning for orbital motors, Danfoss regularly assesses the development of competition from alternative technologies in key applications. For the purpose of the advocacy work on orbital motors, Danfoss compiled a comprehensive overview of the exposure of orbital motors to alternative technologies across applications, thus summarising their market intelligence on this topic in a single document.'

¹⁴ *M.9820_RFI_14_Annex_E.10_1.xlsx* contains no entries for the application-functions [content of internal document - confidential market data]. Moreover, while it contains entries for the application-functions [content of internal document - confidential market data], those entries contain no meaningful information.

substitution/competition that clearly relate to only two ([content of internal document - confidential market data]) out of [...] application-functions. A third document discussing cam lobes mentions the two applications [content of internal document - confidential market data] without specifying the function in which cam lobes purportedly compete with orbital motors. This paucity of evidence is itself a strong indication that the competitive interaction with other technologies is only marginal.

- (48) The Notifying Party claims that the document “M.9820_RFI PN 3_Annex_A.4_7” ([content of internal document - confidential market data]) describes the competitive interactions between orbital motors and cam-lobe technology across a number of applications functions, such as, e.g., skid steer loader and compact track loader applications. However, as shown in the rest of this section, for at least two of the three sets of documents submitted by the Notifying Party, the purported across-technology substitutability appears to be at best marginal.
- (49) In support of its claim that orbital motors are exposed to competition from axial pistons and cam lobes in the application-function “Wheel loader – Transmission” the Notifying Party references slide 29 of document “M.9820_RFI_14_Annex_E.10_.pdf”. This slide describes [content of internal document - confidential market data]. However, the Notifying Party [content of internal document - confidential market data].
- (50) In support of its claim that orbital motors are exposed to competition from piston motors and electric motors in the application-function [content of internal document - confidential market data] the Notifying Party references slides 30 and 31 of the submitted document “M.9820_RFI PN 3_Annex_A.4_3”. However, [content of internal document - confidential market data].
- (51) In support of its claim that orbital motors are exposed to competition from cam lobes across a number of application-functions, the Notifying Party references document “M.9820_RFI PN 3_Annex_A.4_7.pdf”. However, a closer inspection of this document reveals that while slides 6 to 9 discuss the use of cam lobe technology in several broad application categories (namely [content of internal document - confidential market data]), it is only on side 7 of the same document and only with respect to [content of internal document - confidential market data] that some form of substitutability between orbital motors and cam lobe technology is discussed. Once again, the Notifying Party’s methodology extends a limited potential substitutability on specific applications to a broader set of applications, thereby greatly exaggerating the seeming competitive constraint exercised by cam lobes on orbital motors.
- (52) *Finally*, the Commission notes that, based on the information provided by the Notifying Party in the document “M.9820_RFI_14_Annex_E.10_1.xlsx”, for most of the so-called multi-technology application-functions, the price of the allegedly competing technologies is several times higher than the price of comparable orbital motors. Significant examples include excavators, where the orbital motor price is [...] while axial piston price is [...], or rollers, where the orbital motor price is [...] while the axial piston price is [...] and the cam lobe price is [...].
- (53) Considering next the pricing in the application-functions for which the Notifying Party has submitted internal documents that purportedly support its claim of across-technology competition, in case of the application-function [...], the price of an orbital motor is [...], whereas the price of a cam lobe solution is [...] (approximately [...] higher); in case of the application-function [...], the price of an

orbital motor is [...], whereas the price of an axial piston solution is [...] (approximately [...] higher); in the case of the application-function [...], the price of an orbital motor is [...], whereas the price of a cam lobe solution is [...] (approximately [...] higher).

- (54) It is also noteworthy that almost no part of the information summarised in the document “*M.9820 RFI 14 Annex E.10 .pdf*” appears in the internal documents submitted as indicative of the source material of those summaries. As such, the source, relevance and accuracy of that information remains unclear.
- (55) In short, the analysis contained in Annex 9 depends on an artificial segmentation of the product space of orbital motors and a methodology that greatly exaggerates the competitive interaction between orbital motors and alternative technologies. In fact, the available evidence suggests that competition between orbital motors and other technologies is modest, not general and where it occurs, limited to particular sub-segments of specific use-cases. This conclusion is further supported by the considerable price differences between orbital motor solutions and allegedly competing technologies.
- (56) The Notifying Party argues that the application-function segmentation of the orbital motors product space is meaningful and warranted¹⁵ and in particular, more appropriate than the more aggregate segmentation at the level of application discussed in the Statement of Objections, that, according to the Notifying Party, exaggerates the competitive overlap between the Parties.¹⁶
- (57) The Commission notes that the relevance for the competitive assessment of considering a segmentation of the orbital motor product space based on applications on the one hand and application-functions on the other hand is discussed in some detail in Section 8.5.3.2 of the Decision. The main problem of the approach adopted by the Notifying Party in Annex 9 is not the manner in which it segments the product space based on application-functions but rather the manner in which it then endeavours to measure across-technology competition which takes place at the level of just specific models rather than at the more aggregate level of application-functions. As discussed above, this approach greatly exaggerates the degree to which orbital motors are exposed to competing technologies.
- (58) The Notifying Party further argues that the identification of orbital motor sales that are exposed to alternative technologies is as precise as possible since the application-function segmentation is the most granular segmentation at which exposure to alternative technologies can be identified on a comprehensive basis. According to the Notifying Party, adopting a segmentation at the more aggregate level of the application, would result in more, not less, orbital motor sales being exposed to alternative technologies.¹⁷
- (59) The Commission does not agree that the methodology employed by the Notifying Party is as the most precise available simply because a more aggregate segmentation of the product space would be even more unsuitable for this task. As just discussed, based on the evidence put forward by the Notifying Party, across-

¹⁵ Reply to the SO, Annex D.2_1, Section 2.

¹⁶ Reply to the SO, Annex D.2_1, paragraphs 14 and 15.

¹⁷ Reply to the SO, Annex D.2_1, paragraph 17.

technology competition only takes place at the margin and only for specific motor models. Therefore, no aggregation of the product space should have been employed at all and, following the Notifying Party's argument, the analysis would only have been meaningful if it had been carried out at the level of each individual motor model, data that the Notifying Party certainly had at its disposal.

- (60) For these reasons, the Commission considers that the results presented in Annex 9 and the conclusions drawn there lack probative value.
- (61) Even so, the Commission will analyse these arguments in more detail in the following sections. These sections will discuss further specific issues with the analyses carried out by the Notifying Party that undermine the conclusion that orbital motors face strong cross-technology competition. Even the aggregate approach employed by the Notifying Party, that greatly exaggerates across-technology competition, only provides weak evidence of very marginal competition from other motor technologies.

3.3.2. *Limited sales overlap in application-functions*

- (62) The Notifying Party submits that the orbital motor sales of the Parties overlap only to a limited extent in terms of the application-functions they serve (more specifically, that [...] % of Danfoss' volume-based orbital motor sales in the EEA in 2019 and [...] % of Eaton's are made on applications that do not overlap). The claim is that the overlap between Danfoss and Eaton, as indicated by the Parties' market shares, occurs at the aggregate level of all sales of orbital motors and that the particular analysis demonstrate that only about [...] of Danfoss' and Eaton's orbital motor sales are made in applications and functions where the other merging party is also active. According to the Notifying Party, this finding shows that a significant fraction of the combined orbital motor sales by Danfoss and Eaton takes place in applications and functions that are currently served by only one of the Parties.
- (63) The Commission recalls that, while it acknowledges that to a certain extent conditions of competition are not homogeneous across different machines for which orbital motors are used (and therefore this is an element of differentiation of the market for orbital motors, see Section 6.5.3.3 of the Decision), application-functions should not be considered as separate product markets. In any event, even taken at face value, the statistics produced by the Notifying Party show that the majority of the Parties' sales ([...] % of Danfoss' volume-based orbital motor sales in the EEA in 2019 and [...] % of Eaton Hydraulics') are made on application-functions that do overlap, in line with the significant diversion ratios between the Parties observed in the Parties' opportunity data and discussed in Annex I in detail.
- (64) Moreover, it has to be noted that the application-function segmentation used by the Notifying Party in this analysis has certain limitations. In the Commission's market investigation, some OEMs replied that an orbital motor sold for a certain application (e.g. agriculture, mining, construction etc.) is always interchangeable with, and therefore can also be sold for, a different application (i.e. it is always interchangeable between applications), other OEMs indicated that this is only sometimes the case.¹⁸ This suggests that the segmentation by application does sometimes, but not always uniquely identify a certain orbital motor model. The

¹⁸ Replies to question 7 of Q4 – Phase I Questionnaire to competitors, DocID1959.

Notifying Party seems to acknowledge this by replying that it cannot “... rule out, however, that the demand- and supply-conditions that are faced by an application-function may also be meaningfully homogeneous with the demand- and supply-side conditions faced by another application-function” and that although “It is by segmenting the motors market by the combination of applications and functions that the Parties ensure that, within an application, homogeneous working functions are isolated”, at the same time “It could or could not be the case that the motors carrying out the functions in sub-segments defined in this way differ from the motors used in other sub-segments defined in the same way.”¹⁹

(65) In summary and most importantly, the fact that only the majority, but not all, of the sales of the Parties are realised in overlap application-functions does not in any sense undermine the conclusion that the Parties compete closely with each other.

3.3.3. *Competition from alternative technologies in multi-technology application-functions*

(66) The Notifying Party submits that a significant part of the Parties’ orbital motor sales are in application-functions where an alternative technology may be used instead (more specifically, that about [...]% of Danfoss’ orbital motor sales and about [...]% of Eaton Hydraulics’ are exposed to alternative motor technologies).

(67) As discussed in some detail in Section 3.3.1, the Notifying Party’s conclusions are based on a flawed methodology that greatly exaggerates the degree to which orbital motors are exposed to alternative technologies.

(68) It is still noteworthy that despite this methodological shortcoming, the Notifying Party’s analysis still shows that as much as [...]% of Danfoss’ orbital motor sales are not exposed to alternative technologies.

3.3.4. *Lower market shares when defining the market more broadly*

(69) The Notifying Party submits that if one defines the relevant market as comprising all machines produced in application-functions served by orbital motors, but including also machines that fall under the same application-function but use alternative technologies, then Danfoss’ and Eaton’s combined sales shares go down from [...]% ([...]% for Danfoss and [...]% for Eaton), before accounting for alternative technologies, to [...]% ([...]% for Danfoss and [...]% for Eaton), after accounting for them.

(70) The Commission first recalls that, as explained in paragraph (51), defining a market based on the application-function classification introduced by the Notifying Party for the purpose of the analyses in Annex 9 appears unwarranted.

(71) Furthermore, the Commission notes that there is nothing unusual with the fact that the Parties’ market shares are diluted when defining an overly broad product market. However, even if one were to accept that for some end-uses an orbital motor may be substituted by a motor of an alternative technology (something for which there is limited evidence), it has not been shown, or even argued by the Notifying Party, that one can similarly substitute motors of alternative technologies (that as a rule tend to have superior functionality to that of orbital motors) with an orbital motor.

¹⁹ Reply to RFI 14. Question D.5.

(72) The exercise suggested by the Notifying Party in Section 4 of Annex 9 is therefore not only unwarranted and misconceived but also uninformative. The Commission further notes, that the particular statistic presented by the Notifying Party, does not undermine either the finding that the Parties compete closely in the orbital motors space, as indicated by the significant diversion ratios between them discussed in Annex I of the Decision, or the finding that the Parties wield considerable market power in the orbital motors space, as indicated by the Notifying Party's profit margins discussed in Section 6.5.3.2 of the Decision.

3.3.5. *Lower prices and margins in sales exposed to competing technologies*

(73) The Notifying Party submits that if alternative motor technologies exert a competitive constraint on orbital motors, one should expect to see lower prices and lower margins on sales for the application-functions that are exposed to the alternative technologies. To test this hypothesis, the Notifying Party carries out an econometric exercise based on two sets of regression, one on prices and one on profit margins. The Notifying Party claims that this analysis shows that prices of orbital motors are lower in multi-technology applications than in single-technology applications, by an amount ranging between [...] % and [...] %, and that the margin on primarily multi-technology products tends to be lower by between [...] and [...] percentage points than the margin on primarily single-technology products.²⁰

(74) The Commission notes that in both sets of regressions the key variable used is the classification of application-functions (and related sales) as either single or multi-technology sales that, as discussed in Section 3.3.1, is based on a methodology that greatly exaggerates the degree to which the Parties' orbital motor sales are exposed to competition from alternative technologies. For that reason alone, the results of this econometric exercise cannot safely be relied upon. The Notifying Party's regressions each also suffers from further technical shortcomings discussed below.

(75) The Notifying Party's price regression fails to produce robust results, even if one ignores the fundamental problem of exaggerating cross-technology competition.

(76) The Commission recalls that the Danfoss data used by the Notifying Party to carry out the price regressions includes Danfoss' assessment as to the main reason Danfoss was competitive in a particular transaction. A closer look at the data reveals that [confidential market data].

Table 1 Statistics on reason of competitiveness

[confidential market data]

(77) [Confidential market data]. The results of this robustness check, where the Notifying Party's analysis is repeated on a sub-sample of the data, are presented in Table 2 below. The result is to render the effect of the Multi-technology dummy insignificant on most specifications.

²⁰ See Annex 9, Section 5.

Table 2 Regression results with only observation where price is the main reason for competitiveness

[confidential market data]

- (78) The Notifying Party further argues that (i) assuming that the treatment group (the set of orbital motor sales that are exposed to alternative technologies) were to contain orbital motor sales that are in fact not exposed to alternative technologies, the effects that the Notifying Party estimates would be an attenuation of the true effects; (ii) a restriction of the estimation sample based on the “Reason of Competitiveness” field may not be meaningful mainly because that information is not universally available and constrains the data sample significantly; and (iii) in any even the results of Table 2 largely corroborate the results of the regression analysis of the Notifying Party because the co-efficient estimates on the Multi-technology dummy variable are still negative, even if insignificant.²¹
- (79) The Commission notes that none of these arguments is convincing. First, with respect to the difference between a treatment and control group, the “Multi-technology” dummy variable, that lies at the core of the Notifying Party’s analysis, takes the value one for transactions that relate to application-functions that the Notifying Party classifies as exposed to alternative technologies, the so-called treatment group. The “Multi-technology” dummy variable takes the value zero for all other transactions, that according to the Notifying Party relate to application-functions that the Notifying Party classifies as not being exposed to alternative technologies, the so-called control group. This dummy variable in essence splits the transactions in the data sample under investigation in two groups, the treatment group that is purportedly exposed to alternative technologies and the control group that purportedly isn’t. However, as discussed in Section 3.3.1, the methodology employed by the Notifying Party, greatly exaggerates the degree to which orbital motors in any particular application-function are exposed to alternative technologies. It is therefore not the case, as the Notifying Party submits, that the treatment group might also include some transactions that are not exposed to alternative technologies, but rather that the treatment group mainly includes transactions that are not in fact exposed to alternative technologies. The control and treatment groups, as defined by the Notifying Party, are therefore mostly indistinguishable from each other with respect to their respective exposure to alternative technologies (which is either zero or marginal in both cases). It is therefore unclear what the regression analysis carried out by the Notifying Party is supposed to capture.
- (80) Second, even though constraining the sample under observation only to those transactions where price was the key determinant of the outcome, naturally diminishes the number of observations considered, the number of observations is still significant and sufficient for producing statistically significant results, especially since the effect of price ought to be particularly pronounced in this sub-sample.
- (81) Third, a co-efficient estimate that is not statistically significant should, for all intents and purposes, be considered as equal to zero. Any economic interpretation

²¹ Reply to the SO, Annex D.2_1, paragraphs 41 – 45.

of the size and sign of an estimate that is not statistically significantly different from zero, lacks any meaning.

- (82) With respect to the Notifying Party's margin regressions the Commission notes that besides their dependence on a metric that has been shown to greatly exaggerate the degree of exposure to competing technologies, the Notifying Party's results likely also suffer from omitted variable bias.
- (83) Whereas the Notifying Party's price regressions considered price differences within products and at least contained product and region fixed effects, thus controlling for large part of the variance in observed prices (as indicated by the high R^2 values of between [...]) the Notifying Party's margin regressions consider margin differences across products without however controlling for any of the other differences between products that might explain the different margins. This approach is susceptible to the so-called Omitted Variable Bias ("OVB"), whereas by leaving out of the econometric model one or more variables that would help explain the differences in margins between different orbital motor models, one risks attributing the effect of the missing variables to the ones that were included. Since the Notifying Party's margin regressions include only a single explanatory variable (and control only for the inclusion of one more, volume) there is a high probability that the effect attributed to the Multi-technology dummy variable (that as discussed, exaggerates by design the exposure to alternative technologies) is entirely due to the OVB problem. The relatively low R^2 of the Notifying Party's margin regressions (between [...]) similarly suggests that the model specification used captures only a small part of the variance in margins observed in the dataset and that OVB is indeed highly likely to be present.
- (84) To address the OVB problem of the margin regressions, the Notifying Party submitted a second set of margin regressions including further control variables, namely, region and customer fixed effects.²² The Notifying Party interprets these results as showing that Multi-technology products have contribution margins that are [...] percentage points, EBIT margins that are [...] percentage points and gross profit margins that are lower by [...] percentage points.
- (85) The Commission considers that the Notifying Party's interpretation of this second set of regression results is incorrect. First, the Commission notes that this second set of regressions confirms that OVB is present in the margin regressions put forward by the Notifying Party. Across all three sets of margin regressions, by adding further controls the explanatory power of the model grows, as indicated by the corresponding increase in respective R^2 value, while the effect of the "Multi-technology" dummy variable decreases. This trend clearly indicates that in the original set of regressions, as well as in the regressions with few control variables, the explanatory power of the omitted variables was subsumed and attributed to the "Multi-technology" dummy variable. While this confirms the existence of the OVB problem, it is not possible to determine from these results whether OVB has been fully addressed in these regressions. It cannot be excluded that by including further sets of controls (e.g. related to the technical characteristics of the orbital motors in question), and achieving even higher R^2 value, which means that the model fits the

²² See Reply to the SO, Annex D.2_1, Tables 6-2 to 6-4.

data even better, the size and statistical significance of the coefficient estimate of the “Multi-technology” dummy variable would decrease even further to the point of potentially becoming indistinguishable from zero. The only conclusion that can be drawn from these results is that, ignoring the fact that across-technology competition is measured in a manner that greatly exaggerates such competition, the effect on orbital motor margins from competition from other technologies is, on average, [...]. In short, this is at best a marginal effect.

- (86) In summary, the Notifying Party’s regression analyses are based on a metric that greatly exaggerates the exposure of orbital motors to competing technologies but also suffer from a number of other technical shortcomings.
- (87) Nonetheless, the Commission also notes the absolute levels of the margins produced by this analysis. Even taken at face value, ignoring the questionable methodology employed and the technical shortcomings, the results of the margin regressions presented by the Notifying Party still show that what competition might be exerted by alternative technologies is still marginal. This is evident from the result that the Notifying Party achieves a contribution margin of approximately [...] % in products that are mostly sold to so-called multi-technology application-functions compared to a contribution margin of approximately [...] % in products sold in so-called single-technology application functions. The corresponding EBIT margins, that also take into consideration fixed costs, are approximately [...] % and [...] % respectively. These margins suggest that the Notifying Party wields significant market power both in product mostly sold to multi-technology and products mostly sold to single-technology application functions. Based on these figures, what out-of-market competitive constraints the Notifying Party argues are exercised on a subset of the orbital motors is, at best, of a truly marginal nature.

3.3.6. *Buyer power and threat of retaliation in neighbouring markets*

- (88) As an alleged economic evidence of countervailing buyer power, the Notifying Party argues that the vast majority of Danfoss’ and Eatons’ orbital motor customers also purchase other components from them. Hence, according to the Notifying Party, if the merged entity were to raise its orbital motor prices, these customers could threaten it with redirecting their purchases of other components to other supplier, exercising in that manner considerable buyer power. This alleged buyer power would eliminate incentives to raise the prices of orbital motors.²³
- (89) The Commission notes that looking at the data submitted, the argument of orbital motors’ customers buying other components from the Parties holds just for a part of customers. Figure 6-1 of Annex 9 reports the Notifying Party’s results for Danfoss about the proportion of OEMs and distributors that buy just orbital motors or that buy both orbital motors and other products. As the figure shows, just [...] % of OEMs and [...] % of distributors ([...] % and [...] % respectively in value sales) buy other products from Danfoss in addition to orbital motors. The Commission recalls that as per paragraph 67 of the Guidelines on the Assessment of Horizontal Mergers, “*countervailing buyer power cannot be found to sufficiently off-set potential adverse effects of a merger if it only ensures that a particular segment of customers, with particular bargaining strength, is shielded from significantly higher prices or deteriorated conditions after the merger. Furthermore, it is not*

²³ Advocacy paper on motors, paragraphs 217-221.

sufficient that buyer power exists prior to the merger, it must also exist and remain effective following the merger. This is because a merger of two suppliers may reduce buyer power if it thereby removes a credible alternative.”

- (90) Furthermore, Figure 6-1 of Annex 9 reports just an aggregate measure, without considering the amount of each customer’s purchases of orbital motors and other products. Figure 4 instead, exhibits the data submitted by the Notifying Parties in their answer to RFI 14, showing the ratio between the value of orbital motors purchased by each customer and the total value of “other products” purchased by Danfoss’ orbital motor customers.
- (91) The Commission notes that for [...]% of OEMs and [...]% of distributor considered, orbital motors represent [...]% or less of purchases of other products (and for [...]% of OEMs and [...]% of distributors they represent less than respectively [...]% and [...]% of purchases of other products). The low value of purchases on orbital motors products with respect to other products will hence make the strategy of relocating purchases to alternative suppliers in case of orbital motors’ price increase costly for these customers and unlikely to be used.
- (92) On the other hand, Figure 4 below,²⁴ also clearly shows that for [...]% of Danfoss’ OEMs and distributors considered, orbital motors constitutes a big portion of purchases: respectively [...]% and [...]% of total purchases. Hence in case of a price increase on orbital motors by the merged entity these customers will have few other products to relocate and so a limited countervailing buyer power to exert.

Figure 4 Ratio of orbital motors sales to sales of other products

[...]

- (93) Moreover, For Eaton, a similar reasoning applies. Indeed, Figure 6-3 of Annex 9 shows that [...].
- (94) Finally, the Commission recalls the significant market power that the Notifying Party wields in the orbital motors market already pre-Transaction as indicated by the ability to set prices at a level corresponding to variable profit margins in excess of [...]% and EBIT margins in excess of [...]%. Market power of that magnitude, that basically represent the market outcome of the interaction between sellers and buyers, is not compatible with the existence or exercise of significant countervailing buyer power. Post-Transaction, in view of the closeness of competition between the Parties, as indicated by the significant diversion ratios between the Parties discussed in Annex I of the SO, customers’ bargaining position will be weakened even further. The purchasing pattern statistics presented and discussed by the Notifying Party are not capable to undermine these fundamental economic principles and observable market outcomes.

²⁴ Answer to RFI 14 Table 8.1

3.4. Price comparison

- (95) In its analysis of the different power levels (low vs medium power orbital motors) the Notifying Party presents price comparison tables that purportedly show that the price of competing technologies does not differ significantly from that of orbital motors (see Tables 2 and 4 of the Advocacy paper on orbital motors).
- (96) The Commission notes that, first, even taken at face value, the prices presented in these tables do not unambiguously support the Notifying Party's thesis that competing technologies are priced at a level comparable to that of orbital motors. A pairwise comparison of the prices in Tables 2 and 4 of the Advocacy paper on orbital motors, reveals that despite some exceptions to the rule (usually confined to the Parties' models with limited sales) the Parties' orbital motors tend to be (on average) significantly cheaper than the purportedly competing technologies. For example, Eaton's best-selling motor listed in Table 2 of the Advocacy paper on orbital motors ([confidential market data and intelligence]) has an average price of [...], almost half the price of [confidential market data and intelligence].
- (97) Second, given the marginal technical overlap among alternate technologies (discussed in detail in Section 3.1) the Notifying Party's approach of carrying out a price comparison at the series level appears wholly inappropriate since it extends marginal technical specification overlaps limited to particular models to entire series that include a wide range of technical specifications and, correspondingly, a wide range of price points.²⁵ The closest thing to a like-for-like comparison of price points of orbital motors and purportedly alternative technologies among the material submitted to the file by the Notifying Party is contained in the answer to RFI 14 Annex E.10.1, which, as discussed in Section 3.3.1, shows that alternative technologies are several times more expensive than orbital motors.
- (98) The Notifying Party has also put forward a comparison of the total variable cost of two motor models, one orbital motor and one cam lobe motor. The Notifying Party argues that since those [confidential market data and intelligence].
- (99) The Commission notes that a comparison between the cost structures of a single orbital motor model to a single cam lobe alternative is not in any way superior to the price comparison available in RFI 14 Annex E.10.1 that remains the closest proxy available on file of a like for like price comparison of technologies that, according to the Notifying Party, can technically replace an orbital motor and according to which alternative technologies [confidential market data and intelligence].

4. CONCLUSION

- (100) The Commission has carefully analysed the arguments of the Notifying Party presented in the Advocacy paper on orbital motors and accompanying Annexes. These arguments mainly sought to support the claim that there exists significant cross-technology competition and that the Parties do not compete closely.
- (101) Upon close inspection, the Notifying Party's arguments do not hold to careful scrutiny and must therefore be dismissed.

²⁵ See Reply to RFI 16, question A 2 and Reply to RFI 16 Annex A.2.1 .

ACQUISITION OF SOLE CONTROL BY

DANFOSS A/S

The logo for Danfoss, featuring the word "Danfoss" in a red, cursive script font with a horizontal line underneath.

OVER

EATON'S HYDRAULIC BUSINESS

The logo for Eaton Hydraulics, featuring the word "EATON" in a bold, blue, sans-serif font with a horizontal line underneath, and the word "Hydraulics" in a blue, sans-serif font below it.

CASE No. COMP/M.9820 - DANFOSS / EATON HYDRAULICS

COMMITMENTS TO THE EUROPEAN COMMISSION

15 FEBRUARY 2021

CASE M.9820

Pursuant to Article 8(2) of Council Regulation (EC) No 139/2004 (the "**EUMR**"), Danfoss A/S ("**Danfoss**") hereby enters into the following Commitments (the "**Commitments**") vis-à-vis the European Commission (the "**Commission**") with a view to rendering the acquisition by Danfoss from Eaton Corporation plc ("**Eaton**") of certain entities and assets belonging to Eaton's hydraulics business ("**Eaton Hydraulics**") (the "**Transaction**") compatible with the internal market and the functioning of the EEA Agreement.

This text shall be interpreted in light of the Commission's decision pursuant to Article 8(2) of the EUMR to declare the Transaction compatible with the internal market and the functioning of the EEA Agreement (the "**Decision**"), in the general framework of European Union law, in particular in light of the EUMR, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the "**Remedies Notice**").

Section A. – Definitions

- (1) For the purpose of the Commitments, the following terms shall have the following meaning:

Additional Divestment Business: the entire [...] plant [...] including, but not limited to, all tangible and intangible assets, products, customer contracts, customer, credit and other records, functions, and personnel, [...].

Additional Divestment Business Closing: the transfer of the Additional Divestment Business to a purchaser and based on sale and purchase agreement approved by the Commission in accordance with paragraphs (30) and (31) of these Commitments.

Additional Divestment Business Closing Period: a period of [...] from the approval of the purchaser for, and the terms of sale of, the Additional Divestment Business by the Commission.

Additional Divestment Business Commitment: the divestment commitment as defined in paragraph (16) of these Commitments.

Additional Divestment Business Hold Separate Manager: the person appointed by Danfoss for the Additional Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

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Additional Divestment Business Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Additional Divestment Business, as listed in Schedule 3.

Additional Divestiture Period: a period of [...] from Extended HP/VIS Machining Assets Transfer Completion Date.

Additional Divestment Business Personnel: all staff currently employed by the Additional Divestment Business.

Additional Trustee Divestiture Period: the period of [...] from the end of the Additional Divestiture Period.

Affiliated Undertakings: any undertakings controlled by the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the EUMR and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the "**Consolidated Jurisdictional Notice**").

Assets: the assets that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business as indicated in paragraph (10) and described in more detail in the Schedule 1.

Commitments: the Divestment Commitments and the ESV Patents Access Commitments.

Confidential Information: any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain.

Conflict of Interest: any conflict of interest that impairs the Trustee's objectivity and independence in discharging its duties under the Commitments.

Danfoss: Danfoss A/S, incorporated under the laws of Denmark, with its registered office at Nordborgvej 81, 6430 Nordborg, Denmark and registered with the Commercial/Company Register under number CVR 20 16 57 15.

Danfoss Divestment Products: the Danfoss Orbital Motor Divestment Products as identified in Annex_1 of the Schedule 1 and the Danfoss Steering Divestment Products as

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identified in Annex_15 of the Schedule 1, which the Divestment Business will be able to develop, manufacture, and sell.

Decision: decision by the Commission clearing the Transaction compatible with the common market under Article 8(2) of the EUMR.

Divestment Business: the business as defined in Section B.I. and in the Schedule 1 that Danfoss commits to divest.

Divestment Business Closing: the transfer of the Divestment Business to the Purchaser, except the HP/VIS Machining Assets Transfer and the Series 10 Production Line Assets Transfer; for the avoidance of doubt, the Divestment Business Closing shall include the transfer of legal title to the assets that are part of the HP/VIS Machining Assets Transfer and the Series 10 Production Line Assets Transfer.

Divestment Business Closing Period: the period of [...] from the approval of the Purchaser and the terms of sale by the Commission.

Divestment Commitments: the commitments set out in Sections B., D., and E.

Divestment Products: the Danfoss Divestment Products and the Eaton Divestment Products.

Divestiture Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by Danfoss and who has/have received from Danfoss the exclusive Trustee Mandate to sell the Divestment Business to a Purchaser at no minimum price.

Eaton: Eaton Corporation plc, incorporated under the laws of the Republic of Ireland, with its registered office at 30 Pembroke Road, Ballsbridge, Dublin 4, Ireland and registered with the Commercial/Company Register under number 512978.

Eaton Divestment Products: the Eaton Orbital Motor Divestment Products as identified in Annex_9 of the Schedule 1 and the Eaton Steering Divestment Products identified in Annex_20 of the Schedule 1, which the Divestment Business will be able to develop, manufacture, and sell.

Eaton Hydraulics: the legal entities and assets Danfoss intends to acquire from Eaton as part to the Transaction.

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Eaton Steering Technology Transfer: the transfer to technology related to Eaton's "Series 20" HSU, as defined in paragraph (7) of the Schedule 1.

Effective Date: the date of adoption of the Decision.

ESV: electrohydraulic steering valve, a component used for hydraulic steering systems for off-road vehicles and other machinery.

ESV Patents: the patents pertaining to Danfoss' ESV technology as identified in the Schedule 2.

Extended HP/VIS Machining Assets Transfer Completion Date: a period of [...] from the HP/VIS Machining Assets Transfer Completion Date.

ESV Patents Access Commitments: the commitments set out in Sections C., D., and E.

First Divestiture Period: the period of [...] from the Effective Date.

Hold Separate Manager: the person appointed by Danfoss for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

HP/VIS Machining Assets Transfer: the physical transfer of machining assets (it being understood that whenever the Commitments refer to a physical transfer or physical move of assets, the assembly and installation (if any) is to be included) pertaining to the production line used for the Eaton Orbital Motor Divestment Products and currently located at Eaton's plant in Shawnee to the Divestment Business' plant in [...], and best efforts of Danfoss to assist the Purchaser [...], such that, together with the other tangible and intangible assets, licenses, permits and authorizations, contracts, agreements, leases, commitments and understandings, customer, credit and other records and personnel which make up the Eaton Orbital Motors Divestment Business, as defined in paragraph (4) of Schedule 1, the Purchaser is able to manufacture the Eaton Orbital Motor Divestment Products [...] at a quality that is comparable to the quality at which Eaton is manufacturing the Eaton Orbital Motor Divestment Products at its plant in Shawnee at the time of the Effective Date and reasonably acceptable to customers.

HP/VIS Machining Assets Transfer Completion Date: a period of [...] after the Divestment Business Closing until when the HP/VIS Machining Assets Transfer shall be completed.

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HSU: hydraulic steering unit, a component used for hydraulic steering systems for off-road vehicles and other machinery.

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in Annex_8 of the Schedule 1, including the Hold Separate Manager.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by Danfoss, and who has/have the duty to monitor Danfoss' compliance with the conditions and obligations attached to the Decision.

Parties: Danfoss and Eaton.

Personnel: all staff currently employed by the Divestment Business, including in particular the Wroclaw Personnel as listed in the Annex_6 of the Schedule 1, the Hopkinsville Personnel as listed in Annex_7 of the Schedule 1, the Parchim Personnel as listed in Annex_19 of the Schedule 1, the Eaton Orbital Motor Personnel as listed in Annex_14 of the Schedule 1, and the Eaton Steering Personnel as listed in Annex_25 of the Schedule 1.

Priority Valve: a component used for hydraulic steering systems for off-road vehicles and other machinery.

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section B.III.

Purchaser Criteria: the criteria laid down in paragraph (30) of these Commitments that the Purchaser of the Divestment Business must fulfil in order to be approved by the Commission.

Orbital Motors: a type of hydraulic motor, a component used for hydraulic systems that perform various work and propel functions for off-road vehicles and other machinery.

Schedule: the Schedules 1 and 2 to these Commitments describing more in detail the Divestment Business and the ESV Patents.

Series 10 Production Line Assets Transfer: the physical move of one (1) production line used for certain Eaton Steering Divestment Products, namely the "Series 10", and currently located at Eaton's plant in Eden Prairie to the Divestment Business' plant [...],

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and best efforts of Danfoss to assist the Purchaser [...], such that, together with the other tangible and intangible assets, licenses, permits and authorizations, contracts, agreements, leases, commitments and understandings, customer, credit and other records and personnel which make up the Eaton Steering Divestment Business, as defined in paragraph (6) of Schedule 1 (to the extent related to the "Series 10"), the Purchaser is able to manufacture the "Series 10" [...] at a quality that is comparable to the quality at which Eaton is manufacturing the "Series 10" at its plant in Eden Prairie at the time of the Effective Date and reasonably acceptable to customers.

Series 10 Production Line Assets Transfer Completion Date: a period of [...] after the Divestment Business Closing until when the Series 10 Production Line Assets Transfer shall be completed, provided that the period shall be [...] after the Divestment Business Closing if Danfoss has not completed the Series 10 Production Line Assets Transfer within [...] after the Divestment Business Closing for reasons that were objectively beyond its control.

Transaction: the proposed acquisition of Eaton Hydraulics by Danfoss from Eaton.

Transaction Closing: the completion of the Transaction.

Transitional Services Replacement Plan: the plan defined in paragraph (11) of these Commitments.

Trustee(s): the Monitoring Trustee and/or the Divestiture Trustee as the case may be.

Trustee Divestiture Period: the period of [...] from the end of the First Divestiture Period.

Working Day: means Mondays to Fridays excluding any public holidays for the institutions of the European Union as published in the Official Journal of the European Union.

CASE M.9820**Section B. – The Divestment Commitments****Section B.I. – The commitment to divest and the Divestment Business**Commitment to divest

- (2) In order to maintain effective competition, Danfoss commits to divest, or procure the divestiture of, the Divestment Business by the end of the Trustee Divestiture Period as a going concern to a Purchaser and on terms of sale approved by the Commission in accordance with the procedure described in Section B.III. of these Commitments. To carry out the divestiture, Danfoss commits to find a Purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If Danfoss has not entered into such an agreement at the end of the First Divestiture Period, Danfoss shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph (43) in the Trustee Divestiture Period.
- (3) The Transaction shall not be implemented before Danfoss or the Divestiture Trustee has entered into a final binding sale and purchase agreement for the sale of the Divestment Business and the Commission has approved the Purchaser and the terms of sale in accordance with Section B.III. .
- (4) Danfoss shall be deemed to have complied with this commitment if:
 - (a) by the end of the Trustee Divestiture Period, Danfoss or the Divestiture Trustee has entered into a final binding sale and purchase agreement and the Commission approves the proposed Purchaser and the terms of sale as being consistent with the Commitments in accordance with the procedure described in Section B.III.;
 - (b) the Divestment Business Closing takes place within the Divestment Business Closing Period;
 - (c) the HP/VIS Machining Assets Transfer takes place no later than the Extended HP/VIS Machining Assets Transfer Completion Date and the Monitoring Trustee has certified in writing that (i) the Purchaser is capable of manufacturing the Eaton Orbital Motors Divestment Products at a quality that is comparable to the quality at which Eaton is manufacturing the Eaton Orbital Motor Divestment Products at its plant in Shawnee at the time of the Effective Date and reasonably acceptable to customers and (ii) and Danfoss has used best efforts to assist the

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Purchaser [...]; for the avoidance of doubt, (a) the HP/VIS Machining Assets Transfer does not include assets pertaining to painting process; [...], and (b) as far as heat treatment/manganese is concerned, the HP/VIS Machining Assets Transfer will entail the transfer of legal title to all assets located at the Shawnee Plant that are currently being used to conduct heat treatment/manganese services in respect of the Eaton Orbital Motor Divestment Products; Danfoss commits to physically move these assets, or assist the Purchaser in such move, to any other location reasonable requested by the Purchaser, the completion of such move however not being part of the HP/VIS Machining Assets Transfer; and

- (d) the Series 10 Production Line Assets Transfer takes place no later than the Series 10 Production Line Assets Transfer Completion Date and the Monitoring Trustee has certified in writing that (i) the Purchaser is capable of manufacturing the "Series 10" at a quality that is comparable to the quality at which Eaton is manufacturing the "Series 10" at its plant in Eden Prairie at the time of the Effective Date and reasonably acceptable to customers and (ii) and Danfoss has used best efforts to assist the Purchaser [...]; for the avoidance of doubt, the Series 10 Production Line Asset Transfer does not include assets pertaining to the manufacturing steps (i) heat treatment/manganese and (ii) painting.
- (5) Danfoss shall establish an account at a recognized bank or other financial institution (the "**Late Payment Escrow Account**"), which shall be held in trust by the Monitoring Trustee. Danfoss shall into the Late Payment Escrow Account
 - (a) a lump sum payment of [...] if Danfoss does not complete the HP/VIS Machining Assets Transfer by the HP/VIS Machining Assets Transfer Completion Date; and
 - (b) an additional periodic payment of [...] Euro per month for each individual full month after the HP/VIS Machining Assets Transfer Completion Date, and/or a pro rata amount for each day of a commenced but not completed month, until the HP/VIS Machining Assets Transfer has been completed or, if and to the extent that the assets are destroyed or otherwise can no longer be transferred and made operational, these assets have, at Danfoss' cost, been re-ordered and rebuilt by the Purchaser (the late payments under (a) and (b) the "**Late Payment Escrow Deposit**").
- (6) Danfoss and the Monitoring Trustee will enter into an escrow agreement, which shall entitle the Monitoring Trustee to disburse the Late Payment Escrow Deposit to the Purchaser, subject to a reasoned request by the Purchaser in writing within [...] from the

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completion of the HP/VIS Machining Assets Transfer, for the sole purpose of making investments into the Purchasers' medium power Orbital Motor business, regardless of production location, including, but not limited to, shared assets and shared facilities. If, [...] from the HP/VIS Machining Assets Transfer Completion Date, not the entire amounts paid into the Late Payment Escrow Deposit has been disbursed to the Purchaser, the procedure laid out in paragraphs (85) and (86) shall apply.

- (7) Danfoss commits to make best efforts to ensure that neither the HP/VIS Machining Assets Transfer nor the Series 10 Production Line Assets Transfer affects the Divestment Business' ability to serve its customers. In particular, Danfoss commits to manufacture, to procure the manufacture, or assist in the manufacture of any buffer product (i.e. pre-produced products that cover the period in which the assets are not operable due to the transfer of the assets and the related tasks, such as disassembly and reassembly) volumes (as the case may be) that are required to implement the HP/VIS Machining Assets Transfer, the Series 10 Production Line Assets Transfer, and the move of any other assets that the transfer of the HP/VIS and the Series 10 production to [...] entails. Danfoss furthermore commits to provide all assistance free of charge and all services, components, and manufacturing processes at cost necessary for the Purchaser to continue to supply its existing and future customers while the HP/VIS Machining Assets Transfer and the Series 10 Production Line Assets Transfer respectively is ongoing and until they are completed. [...]. Danfoss will provide to the Monitoring Trustee, within two (2) weeks from the appointment of the Monitoring Trustee, a detailed plan for the HP/VIS Machining Assets Transfer and the Series 10 Production Line Assets Transfer, which plan shall include, in particular, Danfoss' strategy how to mitigate any risks that the HP/VIS Machining Assets Transfer and the Series 10 Production Line Assets Transfer might entail.
- (8) Danfoss will provide status reports on a monthly basis to the Monitoring Trustee, the Commission, and the Purchaser regarding the progress being made with respect to the HP/VIS Machining Assets Transfer and the Series 10 Production Line Assets Transfer.
- (9) In order to maintain the structural effect of the Divestment Commitments, Danfoss shall, for a period of ten (10) years after the Divestment Business Closing, not acquire, whether directly or indirectly, the possibility of exercising influence (as defined in paragraph 43 of the Remedies Notice, footnote 3) over the whole or part of the Divestment Business, unless, following the submission of a reasoned request from Danfoss showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph (86) of these Commitments), the Commission finds that the structure of the market has

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changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the Transaction compatible with the internal market.

Structure and definition of the Divestment Business

- (10) The legal and functional structure of the Divestment Business as operated to date is described in Schedule 1. The Divestment Business, described in more detail in Schedule 1, includes assets and staff that contribute to the development, manufacture, and sale of Orbital Motor, HSU, ESV, and Priority Valve products, namely the Divestment Products as identified in Annex_1, Annex_9, Annex_15, and Annex_20 of the Schedule 1, and the technology related to Eaton's "Series 20" HSU, and are necessary to ensure the viability and competitiveness of the Divestment Business, including, but not limited to:
- (a) the Danfoss Business Unit Motors (the "**BU Motors**"), comprising Danfoss' global business relating to the development, manufacture, and sale of Orbital Motors, including all tangible assets (including, but not limited to, two (2) entire state-of-the-art manufacturing sites located in Wroclaw (Poland) and Hopkinsville (USA)), intangible assets (including patents, and other know-how), Orbital Motor products, customer contracts, credit and other records, functions, and personnel, which are part of the BU Motors, as operated today, **except** for the Danfoss Orbital Motor Retained Business, as detailed in paragraph (3) of the Schedule 1;
 - (b) additional tangible assets (including, but not limited to, one (1) production lines) and intangible assets (including, but not limited to, patents, and other know-how) necessary for the manufacture and sale of Eaton Hydraulics Orbital Motor products, namely the Eaton Orbital Motors Divestment Products as identified in Annex_9 of the Schedule 1;
 - (c) Danfoss' entire HSU, ESV, and Priority Valve business located at, run out of, and including the plants located in Parchim (Germany) and Wroclaw (Poland), including all tangible and intangible assets, customer contracts, customer, credit and other records, functions, and personnel, necessary for the manufacture and sale of the Danfoss Steering Divestment Products as identified in Annex_15 of the Schedule 1;
 - (d) additional tangible and intangible assets, currently located in Zhenjiang (China) and necessary and predominantly used for the manufacture of Danfoss' "S70" HSU and the "PV160" Priority Valve;

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- (e) additional tangible assets (including, but not limited to, one (1) production line) and intangible assets (including, but not limited to, patents, and other know-how) necessary for the manufacture and sale of Eaton Hydraulics HSU and ESV products, namely the Eaton Steering Divestment Products as identified in Annex_20 of the Schedule 1;
 - (f) the technology related to Eaton's "Series 20" HSU, including all intangible assets related to that technology and necessary to manufacture the "Series 20" HSU;
 - (g) trademark rights and internet domain names, in particular relating to the *whitedriveproducts* brand;
 - (h) transfer of or, if not legally possible, access to all licences, permits, and authorisations issued by any governmental organisation necessary to develop, manufacture, and sell the Divestment Products;
 - (i) all customer contracts to the extent they pertain to the Divestment Products;
 - (j) all customer, credit, and other records of the Divestment Business (including a list of existing customers and copies of customer records);
 - (k) the Key Personnel as identified in Annex_8 of the Schedule 1;
 - (l) the Personnel as identified in Annex_6, Annex_7, Annex_14, Annex_19, and Annex_25 of the Schedule 1.
- (11) In order to support the Purchaser to replace the transitional services to be provided by Danfoss pursuant to paragraph (9)(a)-(d) of the Schedule 1, Danfoss commits to make available to the Purchaser significant CAPEX funding for future investments in the Wroclaw Plant, Hopkinsville Plant, Parchim Plant, and/or any other plant owned by the Purchaser. To this effect, Danfoss shall establish an account at a recognized bank or other financial institution (the "**CAPEX Funding Escrow Account**"), which shall, prior to or at the Divestment Business Closing, be funded with an amount of EUR [...] (the "**CAPEX Funding Escrow Deposit**"). The CAPEX Funding Escrow Account shall be held in trust by the Monitoring Trustee. Danfoss and the Monitoring Trustee will, prior to or at the Divestment Business Closing, enter into an escrow agreement, which shall entitle the Monitoring Trustee to disburse the CAPEX Funding Escrow Deposit to the Purchaser for the sole purpose of making investments in machining, tooling, and/or other

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equipment for the manufacture of [...]. Should the Purchaser wish to implement any measures covered by (i)-(iv) above, the Purchaser shall be entitled to obtain a full or partial disbursement for such measures to be paid out of the CAPEX Funding Escrow Deposit of these Commitments from the Monitoring Trustee within [...] after the termination of all transitional service agreements pursuant to paragraph (9)(a)-(d) of the Schedule 1 or [...], whichever is earlier (the "**TSA Investment Period**"). After the TSA Investment Period, the Monitoring Trustee will pay the amount that has not been disbursed to the Purchaser and that does not concern investments pursuant to (i)-(iv) above which have already been commenced and, at that time, remains deposited in the Escrow Account, to Danfoss in accordance with Danfoss' instructions. The Purchaser may once request an extension of the TSA Investment Period by [...] by a reasoned application to the Monitoring Trustee. The Monitoring Trustee will extend the TSA Investment Period if the Purchaser can substantiate why the decisions about the divestments covered by (i)-(iv) above could not have been made during the initial TSA Investment Period.

- (12) In order to further support the Purchaser with the replacement of the transitional services, Danfoss commits to conduct the following actions (together the "**Transitional Services Replacement Plan**"):
- (a) for the replacement of the transitional services to be provided by Danfoss pursuant to paragraph (9)(a) of the Schedule 1, upon request of the Purchaser, either to make best efforts [...] and to make any and all other necessary arrangements in order to enable the Purchaser, at its own discretion, to commence [...]. In order to ensure the continuation [...] by the Purchaser, Danfoss commits, independent from the CAPEX Funding Escrow Account", to cover the expenses of the Purchaser up to a total amount of EUR [...]
 - (i) [...]
 - (ii) [...]
 - (b) for the replacement of the transitional services to be provided by Danfoss pursuant to paragraph (9)(b) of the Schedule 1:
 - (i) to make all necessary investments in the [...] to ensure that the existing [...] can be used for the production of the [...] product line;

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- (ii) upon request of the Purchaser, either to make best efforts to support the Purchaser or to enter into an agreement with one or more third party suppliers for the benefit of the Divestment Business, with a term of at least [...] and in line with market conditions, pursuant to which the third party supplier will provide [...] to the Divestment Business for the production of the [...];
 - (iii) upon request of the Purchaser, either to make best efforts to support the Purchaser or to enter into an agreement with one or more third party suppliers for the benefit of the Divestment Business, with a term of at least [...] and in line with market conditions, pursuant to which the third party supplier will provide [...] to the Divestment Business for the production of the [...];
- (c) for the replacement of the transitional agreement under paragraph (9)(c) of the Schedule 1,
 - (i) to make all necessary investments in the [...] to ensure that the existing [...] can be used for the production of [...];
 - (ii) to make all necessary investments in the [...] to ensure that the existing [...] can be used for the production of [...];
 - (iii) upon request of the Purchaser, either to make best efforts to support the Purchaser or to enter into an agreement with one or more third party suppliers for the benefit of the Divestment Business, with a term of at least [...] and in line with market conditions, pursuant to which the third party supplier will provide [...] to the Divestment Business for the [...];
 - (iv) upon request of the Purchaser, either to make best efforts to support the Purchaser or to enter into an agreement with one or more third party suppliers for the benefit of the Divestment Business, with a term of at least [...] and in line with market conditions, pursuant to which the third party supplier will provide [...] to the Divestment Business for the production [...];
- (d) for the replacement of the transitional agreement under paragraph (9)(d) of the Schedule 1,

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- (i) to make all necessary investments in the [...] that the existing [...] can be used for the production [...];
 - (ii) upon request of the Purchaser, either to make best efforts to support the Purchaser or to enter into an agreement with one or more third party suppliers for the benefit of the Divestment Business, with a term of at least [...] and in line with market conditions, pursuant to which the third party supplier will provide [...] to the Divestment Business for the production [...].
- (13) Danfoss will conclude all third party agreements and place legally binding orders for any and all materials related to the investments foreseen under the Transitional Services Replacement Plan prior to the Divestment Business Closing for the benefit of the Divestment Business. Danfoss undertakes to support the Purchaser, also on-site, with the implementation of the Transitional Services Replacement Plan. [...].
- (14) Danfoss will provide the Purchaser with a detailed capacity planning underlying the Transitional Services Replacement Plan. For the avoidance of doubt, unless the obligation has become objectively impossible or in case of *force majeure*, the Purchaser's option to use the CAPEX Funding Escrow Deposit does not relieve Danfoss from its obligations pursuant to paragraph (12) of these Commitments.
- (15) In addition, the Divestment Business includes the benefit, for a transitional period, and at cost basis, of all current arrangements under which Danfoss or its Affiliated Undertakings supply products or services to the Divestment Business, as detailed in paragraph (9) of the Schedule 1, unless otherwise agreed with the Purchaser. Strict firewall procedures will be adopted so as to ensure that any competitively sensitive information related to, or arising from such supply arrangements (for example, product roadmaps) will not be shared with, or passed on to, anyone outside the relevant business unit/division providing the relevant product/service operations.

Additional Divestment ("Crown Jewel Obligation")

- (16) Danfoss commits to divest, or procure the divestiture of, if Danfoss does not complete the HP/VIS Machining Assets Transfer by the Extended HP/VIS Machining Assets Transfer Completion Date, the Additional Divestment Business by the end of the Additional Trustee Divestiture Period as a going concern to a purchaser and on terms of sale approved by the Commission in accordance with Section B.III. of these Commitments, which shall apply *mutatis mutandis* to the Additional Divestment Business Commitment.

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To carry out the divestiture, Danfoss commits to find a purchaser and to enter into a final binding sale and purchase agreement for the sale of the Additional Divestment Business within the Additional Divestiture Period. If Danfoss has not entered into such an agreement at the end of the Additional Divestiture Period, Danfoss shall grant the Divestiture Trustee an exclusive mandate to sell the Additional Divestment Business in accordance with the procedure described in Section B.IV in the Additional Trustee Divestiture Period.

- (17) Danfoss shall be deemed to have complied with the Additional Divestment Business Commitment if,
- (a) by the end of the Additional Trustee Divestiture Period, Danfoss or the Divestiture Trustee has entered into a final binding sale and purchase agreement with respect to the Additional Divestment Business and the Commission approves the proposed purchaser and the terms of sale as being consistent with the Commitments in accordance with the procedure described in paragraphs (30) and (31) of these Commitments, which shall apply *mutatis mutandis* to the Additional Divestment Commitment;
 - (b) the Additional Divestment Business Closing takes place within the Additional Divestment Business Closing Period.
- (18) Danfoss commits, from the Effective Date and until Danfoss has complied with the divestment commitment in respect of paragraphs (4)(a)-(c) of these Commitments, (i) to preserve the viability, marketability and competitiveness of the Additional Divestment Business in accordance with paragraph (22) of these Commitments, (ii) not to, and procure that its Affiliated Undertakings do not, [...], and (iii) [...] to ensure that Danfoss does not, [...], obtain any Confidential Information relating to the Additional Divestment Business, in either case except (a) reasonably necessary for purposes of continuing to operate the Additional Divestment Business in a manner that is consistent with past practice, in particular with respect existing interdependencies with other plants of, and business functions and services provided to the Additional Divestment Business [...], (b) to preserve the viability, marketability and competitiveness of the Additional Divestment Business in accordance with paragraph (22) of these Commitments (c) for measures that are beneficial to the Divestment Business, including, but not limited to, plant advancements, productivity management or joint procurement [...], (d) reasonably necessary to implement these Commitments, and (e) as required for Danfoss to comply with financial reporting and other binding legal obligations. In furtherance hereof, Danfoss commits not to, and to procure that its Affiliated Undertakings do not, from the

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Effective Date and until Danfoss has complied with the divestment commitment in respect of paragraphs (4)(a)-(c) of these Commitments, in each case unless the Additional Divestment Business Hold Separate Manager, with the consent of the Monitoring Trustee, concludes that such action is in the best interest of and necessary to preserve the viability, marketability and competitiveness of the Additional Divestment Business:

- (a) to move the development, manufacture or sale of any product that the Additional Divestment Business develops, manufactures or sells at the Effective Date [...]; this shall include the move of any and all tangible and intangible assets that are used by the Additional Divestment Business in the development, manufacture or sale of such products;
- (b) to discontinue the development, manufacture or sale of any product that the Additional Divestment Business develops, manufactures or sells at the Effective Date; this shall include the discontinuation, scrapping or sale of any and all tangible and intangible assets that are used by the Additional Divestment Business in the development, manufacture or sale of such products;
- (c) to discontinue any investments into the Additional Divestment Business that are ongoing or have been resolved at the Effective Date;
- (d) to pre-empt, undermine, limit or otherwise hinder any investments into the Additional Divestment Business that the Additional Divestment Business Hold Separate Manager intends to make in the best interest of or to preserve the viability, marketability and competitiveness of the Additional Divestment Business;
- (e) to move, or solicit the move of, customers of Additional Divestment Business and/or which are served from the location of the Additional Divestment Business to other parts [...];
- (f) to take any organizational measures including, but not limited to, lay-offs and the moving or discontinuation of functions currently performed within the perimeter of the Additional Divestment Business, which could reasonably be expected to endanger viability, marketability and competitiveness, and to pre-empt, undermine, limit or otherwise hinder any organizational measures which the Additional Divestment Business Hold Separate Manager intends to make in the best interest of or to preserve the viability, marketability and competitiveness of the Additional Divestment Business;

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(g) [...];

(h) to undertake any other measures which have effects similar to paragraphs (a)-(g) above.

For the avoidance of doubt, the obligations in paragraph (22)(c) of these Commitments shall apply to the Additional Divestment Business Personnel and the Additional Divestment Business Key Personnel.

- (19) Immediately after the adoption of the Decision, Danfoss shall appoint an Additional Divestment Business Hold Separate Manager. The Additional Divestment Business Hold Separate Manager, who shall be part of the Additional Divestment Business Key Personnel, shall manage the Additional Divestment Business independently and in the best interest of the Additional Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness in accordance with paragraph (22) of these Commitments. The Additional Divestment Business Hold Separate Manager shall closely cooperate with and report to the Monitoring Trustee. Any replacement of the Additional Divestment Business Hold Separate Manager shall be subject to the procedure laid down in paragraph (22)(c) of these Commitments. The Commission may, after having heard Danfoss, require Danfoss to replace the Additional Divestment Business Hold Separate Manager.
- (20) If Danfoss has not completed the HP/VIS Machining Asset Transfer by the Extended HP/VIS Machining Asset Transfer Completion Date, paragraphs (22)-(29) of these Commitments shall apply in their entirety to the Additional Divestment Business from the Extended HP/VIS Machining Asset Transfer Completion Date. In order to maintain the structural effect of the Additional Divestment Business Commitment, Danfoss shall, for a period of ten (10) years after the Additional Divestment Business Closing, not acquire, whether directly or indirectly, the possibility of exercising influence (as defined in paragraph 43 of the Remedies Notice, footnote 3) over the whole or part of the Additional Divestment Business, unless, following the submission of a reasoned request from Danfoss showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph (86) of these Commitments), the Commission finds that the structure of the market has changed to such an extent that the absence of influence over the Additional Divestment Business is no longer necessary to render the Transaction compatible with the internal market.
- (21) The provisions relating to the Monitoring Trustee set out in Section B.IV. of these Commitments shall apply *mutatis mutandis* to the Additional Divestment Commitment.

CASE M.9820**Section B.II. – Related commitments**Preservation of viability, marketability and competitiveness

- (22) From the Effective Date until the Divestment Business Closing, Danfoss shall preserve, or procure the preservation of, the economic viability, marketability and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular, Danfoss undertakes:
- (a) not to carry out any action that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;
 - (b) to make available, or procure to make available, sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans;
 - (c) to take all reasonable steps, or procure that all reasonable steps are being taken, including appropriate incentive schemes (based on industry practice), [...], and (ii) to encourage all Key Personnel to remain with and not to solicit or move any Personnel to Danfoss' remaining businesses. Where, nevertheless, individual members of the Key Personnel exceptionally leave the Divestment Business, Danfoss shall provide a reasoned proposal to replace the person or persons concerned to the Commission and the Monitoring Trustee. Danfoss must be able to demonstrate to the Commission that the replacement is well suited to carry out the functions exercised by those individual members of the Key Personnel. The replacement shall take place under the supervision of the Monitoring Trustee, who shall report to the Commission.

Hold-separate obligations

- (23) Danfoss commits, from the Effective Date until the Divestment Business Closing, to procure that the Divestment Business is kept separate from the businesses that Danfoss will be retaining and, after the Transaction Closing, to keep the Divestment Business separate from the business that Danfoss is retaining, and to ensure that unless explicitly permitted under these Commitments: (i) management and staff of the business(es) retained by Danfoss have no involvement in the Divestment Business; (ii) the Key

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Personnel and Personnel of the Divestment Business have no involvement in any business retained by Danfoss and do not report to any individual outside the Divestment Business.

- (24) Until the Divestment Business Closing, Danfoss shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the business(es) which Danfoss is retaining. Immediately after the adoption of the Decision, Danfoss shall appoint a Hold Separate Manager. The Hold Separate Manager, who shall be part of the Key Personnel, shall manage the Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the businesses retained by Danfoss. The Hold Separate Manager shall closely cooperate with and report to the Monitoring Trustee and, if applicable, the Divestiture Trustee. Any replacement of the Hold Separate Manager shall be subject to the procedure laid down in paragraph (22)(c) of these Commitments. The Commission may, after having heard Danfoss, require Danfoss to replace the Hold Separate Manager.

Ring-fencing

- (25) Danfoss shall implement, or procure to implement, all necessary measures to ensure that it does not, after the Effective Date, obtain any Confidential Information relating to the Divestment Business and that any such Confidential Information obtained by Danfoss before the Effective Date will be eliminated and not be used by Danfoss. In particular, the participation of the Divestment Business in any central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. Danfoss may obtain or keep information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business or the disclosure of which to Danfoss is required by law.

Non-solicitation clause

- (26) Danfoss undertakes, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel made available to the Purchaser with the Divestment Business for a period of ten (10) years after Divestment Business Closing.

CASE M.9820Due Diligence

- (27) In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, Danfoss shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:
- (a) provide to potential purchasers sufficient information as regards the Divestment Business;
 - (b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

Reporting

- (28) Danfoss shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than ten (10) Working Days after the end of every month following the Effective Date (or otherwise at the Commission's request). Danfoss shall submit a list of all potential purchasers having expressed interest in acquiring the Divestment Business to the Commission at each and every stage of the divestiture process, as well as a copy of all the offers made by potential purchasers within five (5) Working Days of their receipt.
- (29) Danfoss shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of any information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers.

CASE M.9820**B.III. – The Purchaser**

- (30) In order to be approved by the Commission, the Purchaser must fulfil the following criteria:
- (a) The Purchaser shall be independent of and unconnected to Danfoss and its Affiliated Undertakings (this being assessed having regard to the situation following the divestiture).
 - (b) The Purchaser shall have sufficient experience of and capability to manufacture and sell products that are marketed in the mobile hydraulics sector in the EEA such as, by way of example and not limited to, an existing customer base in the EEA, or access to distribution in the EEA, or a manufacturing footprint in the EEA.
 - (c) The Purchaser shall have the financial resources, R&D capabilities, proven expertise, and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with Danfoss and other competitors.
 - (d) The acquisition of the Divestment Business by the Purchaser must neither be likely to create, in light of the information available to the Commission, *prima facie* competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed. In particular, the Purchaser must reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business.
- (31) The final binding sale and purchase agreement (as well as ancillary agreements) relating to the divestment of the Divestment Business shall be conditional on the Commission's approval. When Danfoss has reached an agreement with a Purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), within one (1) week to the Commission and the Monitoring Trustee. Danfoss must be able to demonstrate to the Commission that the Purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commission's Decision and the Divestment Commitments. For the approval, the Commission shall verify that the Purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Divestment Commitments including their objective to bring about a lasting structural change in the market. The Commission may approve the sale of the Divestment Business without one

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or more Assets or parts of the Personnel, or by substituting one or more Assets or parts of the Personnel with one or more different assets or different personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed Purchaser.

Section B.IV. – Trustee**Section B.IV.1. – Appointment procedure**

- (32) Danfoss shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. Danfoss commits not to close the Transaction before the appointment of a Monitoring Trustee.
- (33) If Danfoss has not entered into a binding sale and purchase agreement regarding the Divestment Business one (1) month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by Danfoss at that time or thereafter, Danfoss shall appoint a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.
- (34) The Trustee shall:
- (i) at the time of appointment, be independent of Danfoss and its Affiliated Undertakings;
 - (ii) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or consultant or auditor; and
 - (iii) neither have nor become exposed to a Conflict of Interest.
- (35) The Trustee shall be remunerated by Danfoss in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success premium linked to the final sale value of the Divestment Business, such success premium may only be earned if the divestiture takes place within the Trustee Divestiture Period.

CASE M.9820Proposal by Danfoss

- (36) No later than two (2) weeks after the Effective Date, Danfoss shall submit the name or names of one (1) or more natural or legal persons whom Danfoss proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than one (1) month before the end of the First Divestiture Period or on request by the Commission, Danfoss shall submit a list of one (1) or more persons whom Danfoss proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the person or persons proposed as Trustee fulfil the requirements set out in paragraph (34) and shall include:
- (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;
 - (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;
 - (c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

Approval or rejection by the Commission

- (37) The Commission shall have the discretion to approve or reject the proposed Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one (1) name is approved, Danfoss shall appoint or cause to be appointed the person or persons concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one (1) name is approved, Danfoss shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one (1) week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by Danfoss

- (38) If all the proposed Trustees are rejected, Danfoss shall submit the names of at least two (2) more natural or legal persons within one (1) week of being informed of the rejection, in accordance with paragraphs (32) and (37) of these Commitments.

CASE M.9820Trustee nominated by the Commission

- (39) If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom Danfoss shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

Section B.IV.2. – Functions of the Trustee

- (40) The Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or Danfoss, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

- (41) The Monitoring Trustee shall:
- (i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision.
 - (ii) oversee, in close co-operation with the Hold Separate Manager, the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability, and competitiveness and monitor compliance by Danfoss with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:
 - (a) monitor the preservation of the economic viability, marketability, and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the business retained by the Parties, in accordance with paragraphs (22) and (23) of these Commitments;
 - (b) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph (24) of these Commitments;
 - (c) with respect to Confidential Information:

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- determine all necessary measures to ensure that Danfoss does not after the Effective Date obtain any Confidential Information relating to the Divestment Business,
 - in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business,
 - make sure that any Confidential Information relating to the Divestment Business obtained by Danfoss before the Effective Date is eliminated and will not be used by Danfoss and
 - decide whether such information may be disclosed to or kept by Danfoss as the disclosure is reasonably necessary to allow Danfoss to carry out the divestiture or as the disclosure is required by law;
- (d) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and Danfoss or Affiliated Undertakings;
- (iii) propose to Danfoss such measures as the Monitoring Trustee considers necessary to ensure Danfoss' compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;
- (iv) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process:
- (a) potential purchasers receive sufficient and correct information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and
 - (b) potential purchasers are granted reasonable access to the Personnel;
- (v) act as a contact point for any requests by third parties, in particular potential purchasers, in relation to the Commitments;

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- (vi) provide to the Commission, sending Danfoss a non-confidential copy at the same time, a written report within 15 Working Days after the end of every month that shall cover the operation and management of the Divestment Business as well as the splitting of assets and the allocation of Personnel so that the Commission can assess whether the business is held in a manner consistent with the Divestment Commitments and the progress of the divestiture process as well as potential purchasers;
 - (vii) promptly report in writing to the Commission, sending Danfoss a non-confidential copy at the same time, if it concludes on reasonable grounds that Danfoss is failing to comply with these Commitments;
 - (viii) within one (1) week after receipt of the documented proposal referred to in paragraph (31) of these Commitments, submit to the Commission, sending Danfoss a non-confidential copy at the same time, a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of the Divestment Business after the Sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the Sale of the Divestment Business without one (1) or more Assets or not all of the Personnel affects the viability of the Divestment Business after the sale, taking account of the proposed purchaser;
 - (ix) assume the specific functions assigned to the Monitoring Trustee set out in paragraphs (5) et seqq. of these Commitments;
 - (x) assume the specific functions assigned to the Monitoring Trustee in relation to the Capex Funding Escrow Account, in accordance with paragraph (11) of these Commitments;
 - (xi) assume the specific functions assigned to the Monitoring Trustee in relation to the ESV Patents Access Commitments, in accordance with paragraphs (59) et seqq. of these Commitments;
 - (xii) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.
- (42) If the Monitoring and Divestiture Trustee are not the same legal or natural persons, the Monitoring Trustee and the Divestiture Trustee shall cooperate closely with each other during and for the purpose of the preparation of the Trustee Divestiture Period in order to facilitate each other's tasks.

CASE M.9820Duties and obligations of the Divestiture Trustee

- (43) Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to a purchaser, provided that the Commission has approved both the purchaser and the final binding sale and purchase agreement (and ancillary agreements) as in line with the Commission's Decision and the Commitments in accordance with paragraphs (30) and (31) of these Commitments. The Divestiture Trustee shall include in the sale and purchase agreement (as well as in any ancillary agreements) such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of Danfoss, subject to Danfoss' unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.
- (44) In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly report written in English on the progress of the divestiture process. Such reports shall be submitted within 15 Working Days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to Danfoss.

Section B.IV.3. – Duties and obligations of the Parties

- (45) Danfoss shall provide and shall cause its advisors to provide the Trustee with all such co-operation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of Danfoss' or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and Danfoss and the Divestment Business shall provide the Trustee upon request with copies of any document. Danfoss and the Divestment Business shall make available to the Trustee one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.
- (46) Danfoss shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level. Danfoss shall

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- provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. Danfoss shall inform the Monitoring Trustee on possible purchasers, submit lists of potential purchasers at each stage of the selection process, including the offers made by potential purchasers at those stages, and keep the Monitoring Trustee informed of all developments in the divestiture process.
- (47) Danfoss shall grant or procure its Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale (including ancillary agreements), the Divestment Business Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Divestment Business Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, Danfoss shall cause the documents required for effecting the sale and the Divestment Business Closing to be duly executed.
- (48) Danfoss shall indemnify the Trustee and its employees and agents (each an "**Indemnified Party**") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to Danfoss for, any liabilities arising out of the performance of the Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee, its employees, agents or advisors.
- (49) At the expense of Danfoss, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to Danfoss' approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Trustee are reasonable. Should Danfoss refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard Danfoss. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph (48) of these Commitments shall apply *mutatis mutandis*. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served Danfoss during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.
- (50) Danfoss agrees that the Commission may share Confidential Information proprietary to Danfoss with the Trustee. The Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the EUMR apply *mutatis mutandis*.

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- (51) Danfoss agrees that the contact details of the Monitoring Trustee are published on the website of the Commission's Directorate-General for Competition and they shall inform interested third parties, in particular any potential purchasers, of the identity and the tasks of the Monitoring Trustee.
- (52) For a period of ten (10) years from the Effective Date the Commission may request all information from the Parties that is reasonably necessary to monitor the effective implementation of these Commitments.

Section B.IV.4. – Replacement, discharge and reappointment of the Trustee

- (53) If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a Conflict of Interest:
- (a) the Commission may, after hearing the Trustee and Danfoss, require Danfoss to replace the Trustee; or
 - (b) Danfoss may, with the prior approval of the Commission, replace the Trustee.
- (54) If the Trustee is removed according to paragraph (53) of these Commitments, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs (32) - (39) of these Commitments.
- (55) Unless removed according to paragraph (53) of these Commitments, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

Section C. – The ESV Patents Access Commitments**Section C.I. – The commitment to grant access to the ESV Patents**

- (56) In addition to and independently of the Divestment Commitments, Danfoss undertakes to offer perpetual, non-exclusive, non-transferable, and non-assignable licensing agreements regarding the ESV Patents as specified in Schedule 2 to interested third parties, under

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fair, reasonable, and non-discriminatory terms (the "**ESV Patents License Agreement**").

- (57) An interested third party shall only be considered for an ESV Patents License Agreement if it meets the following criteria (a "**Eligible Third Party**"):
- (a) The Eligible Third Party shall be independent of and unconnected to Danfoss and its Affiliated Undertakings.
 - (b) The Eligible Third Party shall have sufficient experience of and capability to develop, manufacture, and sell products that are marketed in the mobile hydraulics sector.
 - (c) The Eligible Third Party is not active in, or, directly or indirectly, solely or jointly, controlled by a company that is active in the development, manufacture, and sale of off-road vehicles or other machinery that use or potentially use components that are manufactured based on the ESV Patents. [...].
- (58) Danfoss commits to offer an ESV Patents License Agreement to up to three (3) Eligible Third Parties, provided they have declared in writing their interest in an ESV Patents License Agreement vis-à-vis Danfoss and/or the Monitoring Trustee.

Section C.II. – Reporting obligations

- (59) Danfoss will report to the Monitoring Trustee without delay on any requests received by it from third parties to enter into ESV Patent License Agreements, the progress of negotiations with them, the grant of any ESV Patents license and any arbitration proceedings commenced and their outcome. It shall also provide without delay to the Monitoring Trustee copies of any ESV Patents License Agreements that it enters into and copies of any arbitration awards made in compliance with the ESV Patents Access Commitments.

Section C.III. – Fast track dispute resolution system

- (60) In order to ensure the effective implementation and to facilitate the monitoring of the ESV Patents Access Commitments, Danfoss commits to implement a fast track dispute resolution system. Such fast track dispute resolution system will be an additional option to the benefit of interested third parties and not an obligation for them. Indeed, Danfoss commits that for any dispute in relation to the compliance with the ESV Patents Access Commitments, the interested third party will have a discretionary right, but no obligation

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to solve it through this fast track dispute resolution system. Thus, any dispute arising in relation to the compliance with the ESV Patents Access Commitments, if the interested third party wishes so, will be finally and exclusively resolved by the fast track dispute resolution procedure as described herein, in order to ensure the effective implementation and to facilitate the monitoring of the ESV Patents Access Commitments.

Section C.IV.1. – Request for arbitration

- (61) Should a third party wish to avail itself of the fast track dispute resolution procedure (a "**Requesting Party**"), it shall send a written request to Danfoss (with a copy to the Monitoring Trustee) setting out in detail the reasons leading it to believe that Danfoss is failing to comply with the requirements of the ESV Patents Access Commitments. The Requesting Party and Danfoss will use their commercially reasonable efforts to resolve all differences of opinion and to settle all disputes that may arise through co-operation and consultation within a reasonable period of time not exceeding fifteen (15) Working Days after receipt of the request.
- (62) The Monitoring Trustee shall present its own proposal (the "**Trustee Proposal**") for resolving the dispute within eight (8) Working Days, specifying in writing the action, if any, to be taken by Danfoss in order to ensure compliance with the ESV Patents Access Commitments vis-à-vis the Requesting Party and be prepared, if requested, to facilitate the settlement of the dispute. To the extent that Danfoss and the Requesting Party have settled a dispute on the basis of the Trustee Proposal and Danfoss complies with such settlement, Danfoss shall be deemed not to be in breach of the ESV Patents Access Commitments.
- (63) Should the Requesting Party and Danfoss (together the "**Parties to the Arbitration**") fail to resolve their differences of opinion in the consultation phase described above, the Requesting Party may, within twenty (20) Working Days of such failure, serve a notice (the "**Notice**"), in the sense of a request for arbitration, to the International Chamber of Commerce (hereinafter the "**Arbitral Institution**"), with a copy of such Notice to Danfoss and to the Monitoring Trustee.
- (64) The Notice shall set out in detail the dispute, difference or claim (the "**Dispute**") and shall contain, *inter alia*, all issues of both fact and law, including any suggestions as to the procedure, and all documents relied upon shall be attached, e.g., documents, agreements, expert reports, and witness statements. The Notice shall also contain a detailed description of the action to be undertaken by Danfoss and the Trustee Proposal, including a comment as to its appropriateness.

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- (65) Danfoss shall, within ten (10) Working Days from receipt of the Notice, submit its answer (the "**Answer**"), which shall provide detailed reasons for its conduct and set out, *inter alia*, all issues of both fact and law, including any suggestions as to the procedure, and all documents relied upon, e.g., documents, agreements, expert reports, and witness statements. The Answer shall, if appropriate, contain a detailed description of the action which Danfoss proposes to undertake vis-à-vis the Requesting Party and the Trustee Proposal (if not already submitted), including a comment as to its appropriateness.

Section C.IV.2. – Appointment of the Arbitrators

- (66) The arbitral tribunal shall consist of three (3) persons. The Requesting Party shall nominate its arbitrator in the Notice; Danfoss shall nominate its arbitrator in the Answer. The arbitrator nominated by the Requesting Party and by Danfoss shall, within five (5) Working Days of the nomination of the latter, nominate the chairman, making such nomination known to the Parties to the Arbitration and the Arbitral Institution which shall forthwith confirm the appointment of all three (3) arbitrators.
- (67) Should the Requesting Party wish to have the Dispute decided by a sole arbitrator it shall indicate this in the Notice. In this case, the Requesting Party and Danfoss shall agree on the nomination of a sole arbitrator within five (5) Working Days from the communication of the Answer, communicating this to the Arbitral Institution which shall forthwith confirm the appointment of the arbitrator.
- (68) Should Danfoss fail to nominate an arbitrator, or if the two (2) arbitrators fail to agree on the chairman, or should the Parties to the Arbitration fail to agree on a sole arbitrator, the default appointment(s) shall be made by the Arbitral Institution.
- (69) The three-person arbitral tribunal or, as the case may be, the sole arbitrator, are herein referred to as the "**Arbitral Tribunal**".

Section C.IV.3. – Arbitration Procedure

- (70) The Dispute shall be finally resolved by arbitration under the Rules of the Arbitration Court of the International Chamber of Commerce, with such modifications or adaptations as foreseen herein or necessary under the circumstances (the "**Rules**"). The arbitration shall be conducted in Copenhagen, Denmark (or, at the option of the Requesting Party, Frankfurt a.M., Germany) in the English language.
- (71) The procedure shall be a fast track procedure. For this purpose, the Arbitral Tribunal shall shorten all applicable procedural time-limits under the Rules as far as admissible and

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appropriate in the circumstances. The Parties to the Arbitration shall consent to the use of e-mail for the exchange of documents.

- (72) The Arbitral Tribunal shall, as soon as practical after the confirmation of the Arbitral Tribunal, hold an organisational conference to discuss any procedural issues with the Parties to the Arbitration. Terms of Reference shall be drawn up and signed by the Parties to the Arbitration and the Arbitration Tribunal at the organisational meeting or thereafter and a procedural time-table shall be established by the Arbitral Tribunal. An oral hearing shall, as a rule, be established within two (2) months of the confirmation of the Arbitral Tribunal.
- (73) In order to enable the Arbitral Tribunal to reach a decision, it shall be entitled to request any relevant information from the Parties to the Arbitration, to appoint experts and to examine them at the hearing, and to establish the facts by all appropriate means. The Arbitral Tribunal is also entitled to ask for assistance by the Monitoring Trustee in all stages of the procedure if the Parties to the Arbitration agree.
- (74) The Arbitral Tribunal shall not disclose Confidential Information and apply the standards attributable to confidential information under the EUMR. The Arbitral Tribunal may take the measures necessary for protecting Confidential Information in particular by restricting access to Confidential Information to the Arbitral Tribunal, the Monitoring Trustee, and outside counsel and experts of the opposing party.
- (75) The burden of proof in any Dispute under the Rules shall be borne as follows: (i) the Requesting Party must produce evidence of a *prima facie* case; and (ii) if the Requesting Party produces evidence of a *prima facie* case, the Arbitral Tribunal must find in favour of the Requesting Party unless Danfoss can produce evidence to the contrary.

Section C.IV.4. – Involvement of the Commission

- (76) The Commission shall be allowed and enabled to participate in all stages of the procedure by:
- (a) Receiving all written submissions (including documents and reports, etc.) made by the Parties to the Arbitration;
 - (b) Receiving all orders, interim and final awards and other documents exchanged by the Arbitral Tribunal with the Parties to the Arbitration (including Terms of Reference and procedural timetable);

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- (c) Having the opportunity to file *amicus curiae* briefs; and
 - (d) Being present at the hearings and being allowed to ask questions to parties, witnesses and experts.
- (77) The Arbitral Tribunal shall forward, or shall order the Parties to the Arbitration to forward, the documents mentioned to the Commission without delay.
- (78) In the event of disagreement between the Parties to the Arbitration regarding the interpretation of the ESV Patents Access Commitments, the Arbitral Tribunal may seek the Commission's interpretation of the ESV Patents Access Commitments before finding in favour of any Party to the Arbitration and shall be bound by the interpretation.

Section C.IV.5. – Decisions of the Arbitral Tribunal

- (79) The Arbitral Tribunal shall decide the Dispute on the basis of the ESV Patents Access Commitments and the Decision. Issues not covered by the ESV Patents Access Commitments and the Decision shall be decided (in the order as stated) by reference to the EUMR, European Union law, and general principles of law common to the legal orders of the Member States without a requirement to apply a particular national system. The Arbitral Tribunal shall take all decisions by majority vote.
- (80) Upon request of the Requesting Party, the Arbitral Tribunal may make a preliminary ruling on the Dispute. The preliminary ruling shall be rendered within one (1) month after the confirmation of the Arbitral Tribunal, shall be applicable immediately and, as a rule, remain in force until a final decision is rendered.
- (81) The Arbitral Tribunal shall, in the preliminary ruling as well as in the final award, specify the action, if any, to be taken by Danfoss in order to comply with the ESV Patents Access Commitments vis-à-vis the Requesting Party. The final award shall be final and binding on the Parties to the Arbitration and shall resolve the Dispute and determine any and all claims, motions, or requests submitted to the Arbitral Tribunal. The arbitral award shall also determine the reimbursement of the costs of the successful party and the allocation of the arbitration costs. In case of granting a preliminary ruling or if otherwise appropriate, the Arbitral Tribunal shall specify that terms and conditions determined in the final award apply retroactively.

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- (82) The final award shall, as a rule, be rendered within six (6) months after the confirmation of the Arbitral Tribunal. The time-frame shall, in any case, be extended by the time the Commission takes to submit an interpretation of the ESV Patents Access Commitments if asked by the Arbitral Tribunal.
- (83) The Parties to the Arbitration shall prepare a non-confidential version of the final award, without business secrets. The Commission may publish the non-confidential version of the award. The Parties to the Arbitration, the Arbitral Tribunal, all other persons participating in the proceedings and all further persons involved, i.e., in the administration of the arbitral proceedings, shall maintain confidentiality towards all persons regarding the conduct of arbitral proceedings. All proceedings will be held in private and remain confidential.
- (84) Nothing in the arbitration procedure shall affect the power to the Commission to take decisions in relation to the Commitments in accordance with its powers under the EUMR.

Section D. – The review clause

- (85) The Commission may extend the time periods foreseen in the Commitments in response to a request from Danfoss or, in appropriate cases, on its own initiative. Where Danfoss requests an extension of a time period, it shall submit a reasoned request to the Commission no later than one (1) month before the expiry of that period, showing good cause. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to Danfoss. Only in exceptional circumstances shall Danfoss be entitled to request an extension within the last month of any period.
- (86) The Commission may further, in response to a reasoned request from Danfoss showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to Danfoss. The request shall not have the effect of suspending the application of the undertaking and, in particular, of suspending the expiry of any time period in which the undertaking has to be complied with.

CASE M.9820**Section E. – Entry into force**

(87) The Commitments shall take effect upon the Effective Date.

[Signed]

Duly authorised for and on behalf of Danfoss

CASE M.9820**Section E. – Entry into force**

(88) The Commitments shall take effect upon the Effective Date.

[Signed]

Duly authorised for and on behalf of Eaton

CASE M.9820**SCHEDULE 1**

- (1) The Divestment Business, as detailed in paragraphs (2) et seqq. below, is part of the Parties' overall businesses relating to the development, manufacture, and commercialization of Orbital Motors, HSUs, ESVs, and Priority Valves, together with all essential assets and functions, which are necessary to ensure the viability and competitiveness of the Divestment Business.

The Danfoss Orbital Motor Divestment Business

- (2) The Divestment Business includes the Danfoss Business Unit Motors (the "**BU Motors**"), comprising Danfoss' global business relating to the development, manufacture, and sale of Orbital Motors, including all tangible and intangible assets, Orbital Motor products, customer contracts, customer, credit and other records, functions, and personnel, which are part of the BU Motors, as operated today, **except** for the Danfoss Orbital Motor Retained Business, as detailed in paragraph (3) below (the "**Danfoss Orbital Motor Divestment Business**").
- (3) The Danfoss Orbital Motor Divestment Business **shall not include** (these excluded tangible and intangible assets, Orbital Motor products, etc. collectively the "**Danfoss Orbital Motor Retained Business**"):
 - (a) any and all Orbital Motors (the "**Retained Danfoss Orbital Motor Products**")
 - (i) marketed under the "OMT", "OMV", "TMT", "TMTH", "TMK", "TMV", "WP", "WG", "WD", "WR", "WM", and "WZ" product families (including all variants and models within these product families);
 - (ii) marketed under the "CE", "RE", "RC" and "WS" product families (including all variants and models within these product families) to the extent that they are manufactured in Danfoss' manufacturing site located in Zhenjiang, 1-8 NING ZHEN RD, ZHENJIANG JIANGSU 212021, China (the "**Zhenjiang Plant**") and not sold to customers located in the U.S. or the EEA;
 - (iii) marketed under the "OMEWF" model name, to the extent manufactured in Danfoss' manufacturing site located in Nordborg, Nordborgvej 81, 6430 Nordborg, Denmark (the "**Nordborg Plant**") to supply spare parts to customers (approx. 50 pieces p.a.) until the end of 2021.

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For the avoidance of doubt, the Divestment Business shall include, subject to paragraphs (i) through (iii) above, all Orbital Motors products identified in **Annex_1** (the "**Danfoss Orbital Motor Divestment Products**");

- (b) any and all products manufactured at, or third party products sold by, the Zhenjiang Plant and/or Nordborg Plant that are not Orbital Motors.
- (c) the following **tangible assets**:
 - (i) the Nordborg Plant and the Zhenjiang Plant, along with any and all its associated assets (including, without limitation, real property, lease agreements, raw materials, stock, semi-finished and finished goods, prototypes and by-products inventory, equipment, and permits). For the avoidance of doubt, the Divestment Business does include Danfoss' two (2) entire state-of-the-art manufacturing plants located at ul. Logistyczna 1, 55-040 Kobierzyce, Wroclaw (Poland) (the "**Wroclaw Plant**"), [...], and Bill Bryan Blvd, KY 42240, Hopkinsville (USA) (the "**Hopkinsville Plant**") (including, without limitation, real property, lease agreements, raw materials, stock, semi-finished and finished goods, prototypes and by-products inventory, equipment, and permits);
 - (ii) any and all advertising, marketing, and promotional materials that are not exclusively used for the Danfoss Orbital Motor Divestment Products;
 - (iii) any and all relevant R&D results and know-how (drawings, designs, prototypes, etc.) regarding all pipeline projects that are not relating to the Danfoss Orbital Motor Divestment Products. For the avoidance of doubt, the Divestment Business shall include the "[...]" pipeline project, which is related to the Danfoss Orbital Motor Divestment Products.
 - (iv) any and all goodwill related to the business and tangible assets retained pursuant to paragraphs (i) through (iii) above;
 - (v) any and all rights, claims, credits, demands, rights of set-off, and causes of action related to the business and tangible assets retained pursuant to paragraphs (i) through (iii) above;
- (d) the following **intangible assets**:

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- (i) any and all trademark rights, brands and internet domain names not exclusively used in connection with Danfoss Orbital Motor Divestment Products, in particular, but not limited to, trademark rights pertaining to the "Danfoss" brand. For the avoidance of doubt, the Danfoss Orbital Motor Divestment Business shall include all trademark rights and internet domain names identified in **Annex_2**, including in particular trademark rights and internet domain names owned by Danfoss and its Affiliated Undertakings relating to the "whitedriveproducts"



- brand used by White Drive Products, Inc. for the marketing of hydraulic motors until the recent acquisition by Danfoss in 2016. Danfoss also undertakes to take reasonable steps to make publicly known that the *whitedriveproducts* brand has been divested to the Purchaser;
- (ii) the right to market Orbital Motors under model names currently used to market Retained Danfoss Orbital Motor Products. For the avoidance of doubt, the Danfoss Orbital Motors Divestment Business shall include the right to market and sell the Danfoss Orbital Motor Divestment Products under their current model names (such as, e.g. "OMS"), irrespective of whether or not these are legally protected by IP rights;
- (iii) any and all patents or other intellectual property rights other than patents or other intellectual property rights, which are neither solely nor predominantly used for the Danfoss Orbital Motor Divestment Products. For the avoidance of doubt, a non-exhaustive list of patents to be transferred to the Purchaser is provided in **Annex_3**; Danfoss will receive a fully paid-up and royalty-free, non-exclusive license back to any and all patents or other intellectual property rights that are solely or predominantly used for the Danfoss Orbital Motor Divestment Products and will be transferred to the Purchaser, to the extent necessary for further product development, manufacturing, and sale in relation to the Danfoss Orbital Motor Retained Business or any other product that is not part of the Danfoss Orbital Motor Divestment Products (a non-exhaustive list of patents to be licensed back to Danfoss is provided in **Annex_4**); provided that Danfoss shall not use the back-license to manufacture mere copies

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([...]) of the Danfoss Orbital Divestment Products or other Orbital Motors which the Purchaser has developed or will develop using the transferred patents;

- (iv) any and all technical and manufacturing know-how (including designs, drawings, plans and the like), which is not subject to the provisions of paragraphs (3)(d)(iii) above and is not necessary for the manufacture and sale of the Danfoss Orbital Motor Divestment Products, and therefore does not contribute to the current operation of or are necessary to ensure the viability and competitiveness of the Danfoss Orbital Motor Divestment Business;
- (e) any and all **licenses, permits, and authorizations** held by Danfoss, to the extent necessary to operate the Danfoss Orbital Motor Retained Business and/or the Zhenjiang Plant and/or the Nordborg Plant and/or to manufacture and/or sell the Retained Danfoss Orbital Motor Divestment Products;
- (f) any and all **customer contracts** (including customer orders) relating to the Danfoss Orbital Motor Retained Business. For the avoidance of doubt, Danfoss in particular commits
 - (i) to fully or partly transfer to the Purchaser all customer contracts and customer orders (irrespective of whether they relate to serial/ mass production, prototype, or other business), to the extent legally transferrable and to the extent they relate to the Danfoss Orbital Motor Divestment Products as well as to provide assistance to the transition of the customer relationship, and, where third-party consent is required for customer contracts to be transferred, to make best efforts to obtain such consents (a non-exhaustive list of main customers of the Divestment Business with respect to Danfoss Orbital Motor Divestment Products is provided in **Annex_5**);
 - (ii) to the extent the customer contracts and customer orders are neither fully nor partly legally transferable, to make best efforts to ensure that current customers will continue to source the Danfoss Orbital Motor Divestment Products from the Danfoss Orbital Motor Divestment Business;
 - (iii) to waive any exclusivity arrangement in any of Danfoss' and its Affiliated Undertakings' existing customer contracts to the extent that they relate to

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the Danfoss Orbital Motor Divestment Business and undertake not to enter into exclusivity arrangements, or arrangements that have an effect equivalent to an exclusivity arrangement, with any existing or future customer for a period of [...] in respect to the Danfoss Orbital Motor Divestment Business. Danfoss and its Affiliated Undertakings will communicate to their existing customers for mobile hydraulic components the waiver of any existing exclusivity arrangement;

- (iv) not to actively solicit, and to procure that its Affiliated Undertakings will not actively solicit, for a period of [...] after the Divestment Business Closing, any Orbital Motor business from customers which have sourced Danfoss Orbital Motor Divestment Products within [...] prior to the Divestment Business Closing, provided that Danfoss and/or its Affiliated Undertakings may continue to supply Orbital Motors under contracts that exist at the time of the Divestment Business Closing and are not subject to paragraphs (3)(f)(i)-(ii) (irrespective of whether such contract can be transferred or not in accordance with paragraphs (3)(f)(i)-(ii)), and may solicit, actively or otherwise, new Orbital Motor orders for replacement business (including, but not limited to, in case of facelifts and successor platforms);
- (v) in relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraph (3)(f)(i)-(ii) above, Danfoss commits, subject to the Purchaser's consent, [...];
- (vi) to enter into a purchase agreement with the Divestment Business, under which Danfoss agrees to purchase and the Divestment Business agrees to supply, [...] (including all variants and models within these product families) orbital motors (which are Retained Danfoss Orbital Motor Products); the purchase agreement can be extended or renewed if Danfoss and the Purchaser mutually agree, on terms to be negotiated between Danfoss and the Purchaser;
- (vii) to enter into a purchase agreement with the Divestment Business, under which Danfoss agrees to purchase and the Divestment Business agrees to supply, [...] (which is not used for Danfoss Orbital Motor Divestment Products); the purchase agreement can be extended or renewed if Danfoss and the Purchaser mutually agree, on terms to be negotiated between Danfoss and the Purchaser;

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- (g) any and all **supply contracts** relating to the Danfoss Orbital Motor Retained Business. For the avoidance of doubt, Danfoss in particular commits
 - (i) to fully or partly transfer to the Purchaser all supply contracts (for the avoidance of doubt, including agreement pertaining to the development and supply of software), to the extent legally transferable and to the extent they pertain exclusively to raw materials and/or semi-finished components used for the Danfoss Orbital Motor Divestment Products as well as to provide assistance to the transition of the supplier relationship, and, where third-party consent is required for supply contracts to be transferred, to make best efforts to obtain such consents; to the extent supply contracts pertain to raw materials and/or semi-finished components used, although not exclusively, for the Danfoss Orbital Motor Divestment Products, Danfoss shall use best efforts to obtain the respective suppliers' consent to supply the Divestment Business with such raw materials and/or semi-finished components based on the same terms and conditions that apply to Danfoss or its Affiliated Undertakings at the time of the Divestment Business Closing; and
 - (ii) to the extent that suppliers do not consent to the steps set out under paragraph (3)(g)(i) above, Danfoss will, to the extent possible, commit to source raw materials and/or semi-finished components under the respective supply contracts for the account of, and supply them to, the Danfoss Orbital Motor Divestment Products on the terms and conditions of the current supply contracts until the end of the contract period applicable at the time of the Divestment Business Closing or, until the Purchaser has entered into a new supply agreement (whichever is earlier);
- (h) any and all **customer, credit, and other records** relating to the Danfoss Orbital Motor Retained Business. For the avoidance of doubt, Danfoss in particular commits to transfer to the Danfoss Orbital Motor Divestment Business:
 - (i) a list of existing customers of the Danfoss Orbital Motor Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such customer list to the extent it does not relate to the Danfoss Orbital Motor Divestment Products and provided further that any parts of such customer list that do not relate to the Danfoss Orbital Motor

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Divestment Products may be redacted from the customer list delivered to the Purchaser;

- (ii) customer credit and other customer records relating to the Danfoss Orbital Motor Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Danfoss Orbital Motor Divestment Products and provided further that any parts of such records that do not relate to the Danfoss Orbital Motor Divestment Products may be redacted from the records delivered to the Purchaser. To the extent that Danfoss and its Affiliated Undertakings are obligated to retain copies of such documents in support of legal obligations, Danfoss shall be entitled to do so;
 - (iii) copies of business records to the extent that they relate to the Danfoss Orbital Motor Divestment Business, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Danfoss Orbital Motor Divestment Products and provided further that any parts of such records that do not relate to the Danfoss Orbital Motor Divestment Products may be redacted from the records delivered to the Purchaser;
- (i) any and all **personnel**
- (i) employed at the Nordborg Plant;
 - (ii) employed at the Zhenjiang Plant;
 - (iii) otherwise not employed at the Wroclaw Plant or the Hopkinsville Plant.

For the avoidance of doubt, the **Wroclaw Personnel** identified in **Annex_6**, the **Hopkinsville Personnel** identified in **Annex_7**, as well as the **Key Personnel** identified in **Annex_8** shall be part of the Divestment Business. In relation to the Key Personnel, Danfoss undertakes to take all reasonable steps, or procure that all reasonable steps are being taken, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business, and not to solicit or move any Key Personnel to the business retained by Danfoss.

CASE M.9820**The Eaton Orbital Motors Divestment Business**

- (4) In order to further assist the Purchaser with respect to the production of the Eaton Hydraulics Orbital Motor products identified in **Annex_9** (the "**Eaton Orbital Motor Divestment Products**"), Danfoss further commits to divest (the "**Eaton Orbital Motor Divestment Business**"):
- (a) the following main **tangible assets**:
 - (i) to install, at its own expense and without delay, [...], one (1) production lines currently located at the Eaton plant in 8701 N Harrison St, OK 74804, Shawnee (USA) and used for the production of the Eaton Orbital Motor Divestment Products, along with all raw materials, stock, semi-finished, finished goods including prototypes and by-products related to the Eaton Orbital Motor Divestment Products (the "**Eaton Orbital Motor Production Lines**");
 - (ii) all advertising, marketing, and promotional materials that are exclusively used for the Eaton Orbital Motor Divestment Products, subject to reprinting with the Purchaser's name;
 - (iii) all relevant R&D results and know-how (drawing, designs, prototypes, etc.) regarding all pipeline projects in relation to the Eaton Orbital Motor Divestment Products;
 - (iv) any goodwill of the Eaton Orbital Motor Divestment Business;
 - (v) any rights, claims, credits, demands, rights of set-off, and causes of action related to the Eaton Orbital Motor Divestment Business;
 - (b) the following main **intangible assets**:
 - (i) the right to market and sell the Eaton Orbital Motor Divestment Products under their current model names (such as, e.g., "VIS 40"), irrespective of whether or not these are legally protected by IP rights, and a fully paid-up and royalty-free, non-exclusive, and non-transferable license to market the Eaton Orbital Motor Divestment Products under the trademark "Char Lynn", provided that the Purchaser, whenever using the trademark "Char Lynn", shall take appropriate measures to avoid any impression of the

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Eaton Orbital Motor Divestment Products having been manufactured by Danfoss or its Affiliated Undertakings or any confusion with the "Char Lynn" products marketed by Danfoss; for the avoidance of doubt, Danfoss and/or its Affiliated Undertakings will retain ownership of the trademark "Char Lynn";

- (ii) all active patents or other intellectual property rights, which are solely or predominantly used for the Eaton Orbital Motor Divestment Products and are owned by the Parties (a non-exhaustive list of which is provided in **Annex_10**), subject to a non-exclusive license back to Danfoss in relation to patents, which is necessary for the further product development, manufacture and sale of products other than Eaton Orbital Motor Divestment Products (a non-exhaustive list of patents to be licensed back to Danfoss is provided in **Annex_11**) provided that Danfoss shall not use the back-license to manufacture mere copies ([...]) of the Eaton Orbital Divestment Products or other Orbital Motors which the Purchaser has developed or will develop using the transferred patents;
 - (iii) a fully paid-up and royalty-free, non-exclusive license for the sole purpose of manufacturing and sale of the Eaton Orbital Motor Divestment Products to any patents or other intellectual property rights that are not solely or predominantly used for the Eaton Orbital Motors Divestment Products, but which are necessary for the manufacturing and sale of the Eaton Orbital Motors Divestment Products and are owned by the Parties (a non-exhaustive list of patents to be licensed to the Purchaser is provided in **Annex_12**), provided that the Purchaser shall not use the license to manufacture mere copies ([...]) of Orbital Motor products which are not transferred to the Divestment Business or which Danfoss has developed or will develop using the patents licensed under this paragraph;
 - (iv) all of the technical and manufacturing know-how (including designs, drawings, plans and the like) relating to the Eaton Orbital Motor Divestment Products, which contribute to the current operation of or are necessary to ensure the viability and competitiveness of the Divestment Business and are not subject to the provisions of paragraph (4)(b)(ii) above;
- (c) the transfer of or, if not legally possible, access to all the **licenses, permits, and authorizations** held by the Parties, to the extent necessary to operate the Eaton

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Orbital Motor Production Lines and manufacture and sell the Eaton Orbital Motor Divestment Products, and, where necessary, reasonable assistance (which shall not require Danfoss to pay for any trial or study) related to the transfer to the Purchaser of such licenses, permits, and authorizations held by the Parties, if necessary, to make any regulatory filings and obtain any authorizations that are necessary to operate the Eaton Orbital Motor Production Lines and manufacture and sell the Eaton Orbital Motor Divestment Products;

- (d) the following main **contracts, agreements, leases, commitments, and understandings**:
- (i) in relation to **customer contracts** (for the avoidance of doubt, including contracts with OEMs and distributors), Danfoss undertakes
- a. to fully or partly transfer to the Purchaser all customer contracts and customer orders (irrespective of whether they relate to serial/mass production, prototype, or other business), to the extent legally transferrable and to the extent they relate to the Eaton Orbital Motor Divestment Products as well as to provide assistance to the transition of the customer relationship, and, where third-party consent is required for customer contracts to be transferred, to make best efforts to obtain such consents (a non-exhaustive list of main customers of the Divestment Business with respect to Eaton Orbital Motor Divestment Products is provided in **Annex 13**);
 - b. to the extent the customer contracts and customer orders are not either fully or partly legally transferable, to make best efforts to ensure that current customers of the Divestment Business will continue to source the Eaton Orbital Motor Divestment Products from the Divestment Business;
 - c. to waive any exclusivity arrangement in any of Danfoss' and its Affiliated Undertakings' existing customer contracts to the extent that they relate to the Eaton Orbital Motor Divestment Products and undertake not to enter into exclusivity arrangements, or arrangements that have an effect equivalent to an exclusivity arrangement, with any existing or future customer for a period of [...] in respect to the Divestment Business. Danfoss and its Affiliated Undertakings will communicate to their existing

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customers for mobile hydraulic components the waiver of any existing exclusivity arrangement;

- d. not to actively solicit, and to procure that its Affiliated Undertakings will not actively solicit, for a period of [...] after the Divestment Business Closing, any Orbital Motor business from customers which have sourced Eaton Orbital Motor Divestment Products within [...] prior to the Divestment Business Closing, provided that Danfoss and/or its Affiliated Undertakings may continue to supply Orbital Motors under contracts that exist at the time of the Divestment Business Closing and are not subject to paragraphs (4)(d)(i)a.-b. (irrespective of whether such contract can be transferred or not in accordance with paragraphs (4)(d)(i)a.-b.), and may solicit, actively or otherwise, new Orbital Motor orders for replacement business (including, but not limited to, in case of facelifts and successor platforms);
 - e. in relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraph (4)(i)a.-b. above, Danfoss commits, subject to the Purchaser's consent, [...];
- (ii) in relation to **supply contracts**, Danfoss undertakes:
- a. to fully or partly transfer to the Purchaser all supply contracts, to the extent legally transferable and to the extent they pertain exclusively to raw materials and/or semi-finished components used for the Eaton Orbital Motor Divestment Products as well as to provide assistance to the transition of the supplier relationship, and, where third-party consent is required for supply contracts to be transferred, to make best efforts to obtain such consents; to the extent supply contracts pertain to raw materials and/or semi-finished components used, although not exclusively, for the Eaton Orbital Motor Divestment Products, Danfoss shall use best efforts to obtain the respective suppliers' consent to supply the Divestment Business with such raw materials and/or semi-finished components based on the same terms and conditions that apply to Danfoss or its Affiliated Undertakings at the time of the Divestment Business Closing; and

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- b. to the extent that suppliers do not consent to the steps set out under paragraph (4)(d)(ii)a. above, Danfoss will, to the extent possible, commit to source raw materials and/or semi-finished components under the respective supply contracts for the account of, and supply them to, the Eaton Orbital Motor Divestment Products on the terms and conditions of the current supply contracts until the end of the contract period applicable at the time of the Divestment Business Closing or, until the Purchaser has entered into a new supply agreement (whichever is earlier);
- (e) the following **customer, credit, and other records**:
- (i) a list of existing customers of the Eaton Orbital Motor Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such customer list to the extent it does not relate to the Eaton Orbital Motor Divestment Products and provided further that any parts of such customer list that do not relate to the Eaton Orbital Motor Divestment Products may be redacted from the customer list delivered to the Purchaser;
 - (ii) customer credit and other customer records relating to the Eaton Orbital Motor Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Eaton Orbital Motor Divestment Products and provided further that any parts of such records that do not relate to the Eaton Orbital Motor Divestment Products may be redacted from the records delivered to the Purchaser. To the extent that Danfoss and its Affiliated Undertakings are obligated to retain copies of such documents in support of legal obligations, Danfoss shall be entitled to do so;
 - (iii) copies of business records to the extent that they relate to the Eaton Orbital Motor Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Eaton Orbital Motor Divestment Products and provided further that any parts of such records that do not relate to the Eaton Orbital Motor Divestment Products may be redacted from the records delivered to the Purchaser;
- (f) The **Eaton Orbital Motor Personnel** as identified in **Annex_14**.

CASE M.9820**The Danfoss Steering Divestment Business**

- (5) The Divestment Business includes Danfoss' entire HSU, ESV, and Priority Valve business located at, and run out of, the Parchim Plant (as defined below) and at the Wroclaw Plant, including all tangible and intangible assets, HSU, ESV, and Priority Valve products, customer contracts, customer, credit and other records, functions, and personnel, as operated today, and additional tangible assets and intangible assets, currently located at the Zhenjiang Plant and necessary and predominantly used for the manufacture of Danfoss' "S70" HSU and the "PV160" Priority Valve (the "**Danfoss Steering Divestment Business**"). For the avoidance of doubt, the Divestment Business shall comprise, in particular, the following, enabling the Purchaser to develop, manufacture, and sell all Danfoss HSU, ESV, and Priority Valve products identified in **Annex_15** (the "**Danfoss Steering Divestment Products**"):
- (a) the following main **tangible assets**:
- (i) Danfoss' entire state-of-the-art manufacturing plant located at Ludwigsluster Chaussee 5, 19370, Parchim (Germany) together with the rental agreement for all buildings as well as all fixtures, structures, facilities, machinery, equipment, furniture, furnishings, inventory, and other tangible assets, to the extent necessary to manufacture and sell the Danfoss Steering Divestment Products (the "**Parchim Plant**");
 - (ii) all tangible assets related to the production of HSUs at the Wroclaw Plant, which, in its entirety, is already included in the Danfoss Orbital Motor Divestment Business as set out in paragraphs (2) and (3) above;
 - (iii) all tangible assets, currently located at the Zhenjiang Plant and necessary and predominantly for the manufacture of Danfoss' "S70" HSU and the "PV160" Priority Valve, which Danfoss commits to transfer, at its own costs, [...] on or before the Divestment Business Closing;
 - (iv) all raw materials, stock, semi-finished, finished goods including prototypes and by-products related to the Danfoss Steering Divestment Products and held at the Parchim Plant, the Wroclaw Plant or the Zhenjiang Plant at the time of the Divestment Business Closing;

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- (v) all advertising, marketing, and promotional materials that are solely or predominantly used for the Danfoss Steering Divestment Products, subject to reprinting with the Purchaser's name;
 - (vi) all relevant R&D results and know-how (drawing, designs, prototypes, etc.) regarding all pipeline projects in relation to the Danfoss Steering Divestment Products, particularly including the "[...]" pipeline project;
 - (vii) any goodwill of the Danfoss Steering Divestment Business;
 - (viii) any rights, claims, credits, demands, rights of set-off, and causes of action related to the Danfoss Steering Divestment Business;
- (b) the following main **intangible assets**:
- (i) the right to market and sell the Danfoss Steering Divestment Products under their current model names (such as, e.g., "LAGU", "OSPM" and "S70"), irrespective of whether or not these are legally protected by IP rights, provided that the trademark "Danfoss" shall not be transferred to the Divestment Business;
 - (ii) all active patents or other intellectual property rights, which are solely or predominantly used for the Danfoss Steering Divestment Products and are owned by the Parties (a non-exhaustive list of which is provided in **Annex_16**); subject to a non-exclusive license back to Danfoss in relation to patents, which is necessary for the further product development, manufacture and sale of products other than Danfoss Steering Divestment Products (a non-exhaustive list of patents to be licensed back to Danfoss is provided in **Annex_16a**), provided that Danfoss shall not use the back-license to manufacture mere copies ([...]) of the Danfoss Steering Divestment Products or other HSUs or ESVs which the Purchaser has developed or will develop using the transferred patents;
 - (iii) a fully paid-up and royalty-free, non-exclusive license for the sole purpose of manufacturing and sale of the Danfoss Steering Divestment Products to any patents or other intellectual property rights that are not solely or predominantly used for the Danfoss Steering Divestment Products, but which are necessary for the manufacturing and sale of the Danfoss Steering Divestment Products and are owned by the Parties (a non-

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exhaustive list of patents to be licensed to the Purchaser is provided in **Annex_17**); provided that the Purchaser shall not use the license to manufacture mere copies ([...]) of HSUs or ESVs which are not transferred to the Divestment Business or which Danfoss has developed or will develop using the patents licensed under this paragraph;

- (iv) all of the technical and manufacturing know-how (including designs, drawings, plans and the like) relating to the Danfoss Steering Divestment Products, which contribute to the current operation of or are necessary to ensure the viability and competitiveness of the Divestment Business and are not subject to the provisions of paragraphs (5)(b)(ii)-(iii) above;
- (c) the transfer of or, if not legally possible, access to all the **licenses, permits, and authorizations** held by the Parties, to the extent necessary to operate the Parchim Plant and Wroclaw Plant and manufacture and sell the Danfoss Steering Divestment Products, and, where necessary, reasonable assistance (which shall not require Danfoss to pay for any trial or study) related to the transfer to the Purchaser of such licenses, permits, and authorizations held by the Parties, if necessary, to make any regulatory filings and obtain any authorizations that are necessary to operate the Parchim Plant and Wroclaw Plant and manufacture and sell the Danfoss Steering Divestment Products;
- (d) the following main **contracts, agreements, leases, commitments, and understandings**:
 - (i) in relation to **customer contracts** (for the avoidance of doubt, including contracts with OEMs and distributors), Danfoss undertakes
 - a. to fully or partly transfer to the Purchaser all customer contracts and customer orders (irrespective of whether they relate to serial/mass production, prototype, or other business), to the extent legally transferrable and to the extent they relate to the Danfoss Steering Divestment Products as well as to provide assistance to the transition of the customer relationship, and, where third-party consent is required for customer contracts to be transferred, to make best efforts to obtain such consents (a non-exhaustive list of main customers of the Divestment Business with respect to Danfoss Steering Divestment Products is provided in **Annex_18**);

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- b. to the extent the customer contracts and customer orders are not either fully or partly legally transferable, to make best efforts to ensure that current customers of the Danfoss Steering Divestment Products will continue to source the Danfoss Steering Divestment Products from the Divestment Business;
 - c. to waive any exclusivity arrangement in any of Danfoss' and its Affiliated Undertakings' existing customer contracts to the extent that they relate to the Danfoss Steering Divestment Products and undertake not to enter into exclusivity arrangements, or arrangements that have an effect equivalent to exclusivity arrangements, with any existing or future customer for a period of [...] in respect to the Divestment Business. Danfoss and its Affiliated Undertakings will communicate to their existing customers for mobile hydraulic components the waiver of any existing exclusivity arrangement;
 - d. not to actively solicit, and to procure that its Affiliated Undertakings will not actively solicit, for a period of [...] after the Divestment Business Closing, any HSU and ESV business from customers which have sourced Danfoss Steering Divestment Products within [...] prior to the Divestment Business Closing, provided that Danfoss and/or its Affiliated Undertakings may continue to supply HSUs and ESVs under contracts that exist at the time of the Divestment Business Closing and are not subject to paragraphs (5)(d)(i)a.-b. (irrespective of whether such contract can be transferred or not in accordance with paragraphs (5)(d)(i)a.-b., and may solicit, actively or otherwise, new HSU and ESV orders for replacement business (including, but not limited to, in case of facelifts and successor platforms);
 - e. in relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraph (5)(d)(i)a.-b. above, Danfoss commits, subject to the Purchaser's consent, [...];
- (ii) in relation to **supply contracts**, Danfoss undertakes:

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- a. to fully or partly transfer to the Purchaser all supply contracts (for the avoidance of doubt, including agreement pertaining to the development and supply of software), to the extent legally transferable and to the extent they pertain exclusively to raw materials and/or semi-finished components used for the Danfoss Steering Divestment Products as well as to provide assistance to the transition of the supplier relationship, and, where third-party consent is required for supply contracts to be transferred, to make best efforts to obtain such consents; to the extent supply contracts pertain to raw materials and/or semi-finished components used, although not exclusively, for the Danfoss Steering Divestment Products, Danfoss shall use best efforts to obtain the respective suppliers' consent to supply the Divestment Business with such raw materials and/or semi-finished components based on the same terms and conditions that apply to Danfoss or its Affiliated Undertakings at the time of the Divestment Business Closing; and
 - b. to the extent that suppliers do not consent to the steps set out under paragraph (5)(d)(ii)a. above, Danfoss will, to the extent possible, commit to source raw materials and/or semi-finished components under the respective supply contracts for the account of, and supply them to, the Danfoss Steering Divestment Products on the terms and conditions of the current supply contracts until the end of the contract period applicable at the time of the Divestment Business Closing or, until the Divestment Business has entered into a new supply agreement (whichever is earlier).
- (e) the following **customer, credit, and other records**:
- (i) a **list of existing customers** of the Danfoss Steering Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such customer list to the extent it does not relate to the Danfoss Steering Divestment Products and provided further that any parts of such customer list that do not relate to the Danfoss Steering Divestment Products may be redacted from the customer list delivered to the Purchaser;
 - (ii) **customer credit and other customer records** relating to the Danfoss Steering Divestment Products, provided, however, that Danfoss and its

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Affiliated Undertakings may continue to use such records to the extent they do not relate to the Danfoss Steering Divestment Products and provided further that any parts of such records that do not relate to the Danfoss Steering Divestment Products may be redacted from the records delivered to the Purchaser. To the extent that Danfoss and its Affiliated Undertakings are obligated to retain copies of such documents in support of legal obligations, Danfoss shall be entitled to do so;

- (iii) **copies of business records** to the extent that they relate to the Danfoss Steering Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Danfoss Steering Divestment Products and provided further that any parts of such records that do not relate to the Danfoss Steering Divestment Products may be redacted from the records delivered to the Purchaser.
- (f) All personnel employed (i) at the Parchim Plant, particularly the **Parchim Personnel** as identified in **Annex_19** and the **Key Personnel** as identified in **Annex_9**, and (ii) at the Wroclaw Plant; for the avoidance of doubt, to the extent that personnel employed at the Wroclaw Plant is not assigned to work in relation to Danfoss Steering Divestment Products, it is already part of the Danfoss Orbital Motor Divestment Business pursuant to paragraph (2)(3)(h) above.

The Eaton Steering Divestment Business

- (6) In order to further assist the Purchaser with respect to the production of the Eaton HSU and ESV products identified in **Annex_20** (the "**Eaton Steering Divestment Products**"), Danfoss further commits to divest (the "**Eaton Steering Divestment Business**"):
 - (a) the following main **tangible assets**:
 - (i) to install, at its own expense and without delay, [...] (or any other manufacturing site owned by the Purchaser as reasonably requested by the Purchaser), one (1) production line currently located at the Eaton plant in 14900 Technology Dr., MN55344, Eden Prairie (USA) and used for the production of Eaton Divestment Products, namely the HSU model "Series 10", along with all raw materials, stock, semi-finished, finished goods including prototypes and by-products related to the HSU model "Series 10";

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- (ii) all manufacturing equipment located at the Eaton plant in 400 Lincoln Ave, Searcy, AR, 72143, Searcy (USA) and used to manufacture the ESV model "ASV/SBX", including [...], and tools, along with all raw materials, stock, semi-finished, finished goods including prototypes and by-products related to the ESV model "ASV/SBX";
 - (iii) all advertising, marketing, and promotional materials that are solely or predominantly used for the Eaton Steering Divestment Products, subject to reprinting with the Purchaser's name;
 - (iv) all relevant R&D results and know-how (drawing, designs, prototypes, etc.) regarding all pipeline projects in relation to the Eaton Steering Divestment Products;
 - (v) any goodwill of the Eaton Steering Divestment Business;
 - (vi) any rights, claims, credits, demands, rights of set-off, and causes of action related to the Eaton Steering Divestment Business;
- (b) the following main **intangible assets**:
- (i) the right to market and sell the Eaton Steering Divestment Products under their current model names ("Series 10"), irrespective of whether or not these are legally protected by IP rights;
 - (ii) all active patents or other intellectual property rights, which are solely or predominantly used for the Eaton Steering Divestment Products and are owned by the Parties (a non-exhaustive list of which is provided in **Annex_21**), subject to a non-exclusive license back to Danfoss in relation to patents, which is necessary for the further product development, manufacture and sale of products other than Eaton Steering Divestment Products (a non-exhaustive list of patents to be licensed back to Danfoss is provided in **Annex_22**), provided that Danfoss shall not use the back-license to manufacture mere copies (no own genuine development elements) of the Eaton Steering Divestment Products or other HSUs or ESVs which the Purchaser has developed or will develop using the transferred patents;

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- (iii) a fully paid-up and royalty-free, non-exclusive license for the sole purpose of manufacturing and sale of the Eaton Steering Divestment Products to any patents or other intellectual property rights that are not solely or predominantly used for the Eaton Steering Divestment Products, but which are necessary for the manufacturing and sale of the Eaton Orbital Motors Divestment Products and are owned by the Parties (a non-exhaustive list of patents to be licensed to the Purchaser is provided in **Annex_23**); provided that the Purchaser shall not use the license to manufacture mere copies ([...]) of HSUs or ESVs which are not transferred to the Divestment Business or which Danfoss has developed or will develop using the patents licensed under this paragraph;
- (iv) all of the technical and manufacturing know-how (including designs, drawings, plans and the like) relating to the Eaton Steering Divestment Products, which contribute to the current operation of or are necessary to ensure the viability and competitiveness of the Divestment Business and are not subject to the provisions of paragraph (6)(b)(ii) above;
- (c) the transfer of or, if not legally possible, access to all the **licenses, permits, and authorizations** held by the Parties, to the extent necessary to manufacture and sell the Eaton Steering Divestment Products, and, where necessary, reasonable assistance (which shall not require Danfoss to pay for any trial or study) related to the transfer to the Purchaser of such licenses, permits, and authorizations held by the Parties, if necessary, to make any regulatory filings and obtain any authorizations that are necessary to manufacture and sell the Eaton Steering Divestment Products;
- (d) the following main **contracts, agreements, leases, commitments, and understandings**:
 - (i) in relation to **customer contracts** (for the avoidance of doubt, including contracts with OEMs and distributors), Danfoss undertakes
 - a. to fully or partly transfer to the Purchaser all customer contracts and customer orders (irrespective of whether they relate to serial/mass production, prototype, or other business), to the extent legally transferrable and to the extent they relate to the Eaton Steering Divestment Products as well as to provide assistance to the transition of the customer relationship, and, where third-party

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consent is required for customer contracts to be transferred, to make best efforts to obtain such consents (a non-exhaustive list of main customers of the Divestment Business with respect to Eaton Steering Divestment Products is provided in **Annex_24**);

- b. to the extent the customer contracts and customer orders are not either fully or partly legally transferable, to make best efforts to ensure that current customers of the Eaton Steering Divestment Products will continue to source the Eaton Steering Divestment Products from the Divestment Business;
- c. to waive any exclusivity arrangement in any of Danfoss' and its Affiliated Undertakings' existing customer contracts to the extent that they relate to the Eaton Steering Divestment Products and undertake not to enter into exclusivity arrangements, or arrangements that have an effect equivalent to an exclusivity arrangement, with any existing or future customer for a period of [...] in respect to the Divestment Business. Danfoss and its Affiliated Undertakings will communicate to their existing customers for mobile hydraulic components the waiver of any existing exclusivity arrangement;
- d. not to actively solicit, and to procure that its Affiliated Undertakings will not actively solicit, for a period of [...] after the Divestment Business Closing, any HSU and ESV business from which have sourced Eaton Steering Divestment Products within [...] prior to the Divestment Business Closing, provided that Danfoss and/or its Affiliated Undertakings may continue to supply HSUs and ESVs under contracts that exist at the time of the Divestment Business Closing and are not subject to paragraphs (6)(d)(i)a.-b. (irrespective of whether such contract can be transferred or not in accordance with paragraphs (6)(d)(i)a.-b.), and may solicit, actively or otherwise, new HSU and ESV orders for replacement business (including, but not limited to, in case of facelifts and successor platforms);
- e. in relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraph (6)(d)(i)a.-b. above, Danfoss commits, subject to the Purchaser's consent, [...];

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- (ii) in relation to **supply contracts**, Danfoss undertakes:
 - a. to fully or partly transfer to the Purchaser all supply contracts (for the avoidance of doubt, including agreement pertaining to the development and supply of software), to the extent legally transferable and to the extent they pertain exclusively to raw materials and/or semi-finished components used for the Eaton Steering Divestment Products as well as to provide assistance to the transition of the supplier relationship, and, where third-party consent is required for supply contracts to be transferred, to make best efforts to obtain such consents; to the extent supply contracts pertain to raw materials and/or semi-finished components used, although not exclusively, for the Eaton Steering Divestment Products, Danfoss shall use best efforts to obtain the respective suppliers' consent to supply the Divestment Business with such raw materials and/or semi-finished components based on the same terms and conditions that apply to Danfoss or its Affiliated Undertakings at the time of the Divestment Business Closing; and
 - b. to the extent that suppliers do not consent to the steps set out under paragraph (5)(d)(ii)a. above, Danfoss will, to the extent possible, commit to source raw materials and/or semi-finished components under the respective supply contracts for the account of, and supply them to, the Eaton Steering Divestment Products on the terms and conditions of the current supply contracts until the end of the contract period applicable at the time of the Divestment Business Closing or, until the Purchaser has entered into a new supply agreement (whichever is earlier);
- (e) the following **customer, credit, and other records**:
 - (i) a **list of existing customers** of the Eaton Steering Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such customer list to the extent it does not relate to the Eaton Steering Divestment Products and provided further that any parts of such customer list that do not relate to the Eaton Steering Divestment Products may be redacted from the customer list delivered to the Purchaser;

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- (ii) **customer credit and other customer records** relating to the Eaton Steering Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Eaton Steering Divestment Products and provided further that any parts of such records that do not relate to the Eaton Steering Divestment Products may be redacted from the records delivered to the Purchaser. To the extent that Danfoss and its Affiliated Undertakings are obligated to retain copies of such documents in support of legal obligations, Danfoss shall be entitled to do so;
 - (iii) **copies of business records** to the extent that they relate to the Eaton Steering Divestment Products, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the Eaton Steering Divestment Products and provided further that any parts of such records that do not relate to the Eaton Steering Divestment Products may be redacted from the records delivered to the Purchaser.
 - (f) The **Eaton Steering Personnel** as identified in **Annex_25**.
- (7) Danfoss further commits to transfer to the Purchaser the technology related to Eaton's "Series 20" HSU, including all intangible assets related to that technology and necessary to manufacture the "Series 20" HSU (the "**Eaton Steering Technology Transfer**"). In particular, Danfoss commits:
- (a) with respect to **intangible assets**:
 - (i) to transfer the technology, the right to market, to sell, and to develop the "Series 20" HSU under its current model name, provided that the Purchaser shall take appropriate and necessary measures to avoid any impression that a "Series 20" HSU manufactured by the Purchaser has been manufactured by Danfoss or its Affiliated Undertakings;
 - (ii) to transfer all patents or other intellectual property rights, which are solely or predominantly used for the "Series 20" HSU and are owned by the Parties, subject to a non-exclusive license back to Danfoss in relation to patents, which are necessary for the further product development,

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manufacture and sale of products other than the "Series 20" HSU, other products which are part of the Divestment Business;

- (iii) to grant a fully paid-up and royalty-free, non-exclusive and non-assignable license to any patents or other intellectual property rights which are used for the "Series 20" HSU and are owned by the Parties (a non-exhaustive list of patents to be licensed to the Purchaser is provided in **Annex 26**); provided that the Purchaser shall not use the license to manufacture mere copies ([...]) of HSUs or ESVs which are not transferred to the Divestment Business or which Danfoss has developed or will develop using the patents licensed under this paragraph; for the avoidance of doubt, the Purchaser may use the license to develop, sale or market new HSUs;
- (iv) to transfer all of the technical and manufacturing know-how (including designs, drawings, plans and the like) relating to the "Series 20" HSU, provided that Danfoss may keep copies of, and continue to use, such technical and manufacturing know-how to manufacture the "Series 20" HSU, subject to paragraph (d) below, and to the extent it relates also to products which are not part of the Divestment Business.
- (v) not to use the back-license pursuant to paragraph (ii) above or any patents or other intellectual property rights licensed to the Divestment Business pursuant to paragraph (iii) above to manufacture mere copies ([...]) of the "Series 20" HSU or of other HSUs or ESVs which the Purchaser has developed or will develop using patents or other intellectual property rights transferred pursuant to paragraph (ii) above or licensed pursuant to paragraph (iii) above;
- (vi) not to undermine the value or goodwill of the patents or other intellectual property rights licensed pursuant to paragraph (iii) by way of cancelling or waiving the rights and protection arising out of, or licensing to third parties after signing of the final Commitments, such patents or other intellectual property rights;
- (vii) until [...] not to undertake any measures that could undermine the value or goodwill of the "Series 20" business.

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- (b) to use best efforts to transfer any additional knowledge, expertise, know-how and do-how relating to the "Series 20" HSU; in particular, until the Phase-out Commencement Date (as defined below), to the extent necessary, shall make engineers employed by Danfoss or its affiliated Undertaking and knowledgeable about the "Series 20" HSU reasonably available for **training sessions** with the Personnel;
- (c) to use best efforts to assist and support the Purchaser to develop the capability to manufacture, and **establish the actual production** of, the "Series 20" HSU at a quality that is comparable to the quality at which Eaton is manufacturing the "Series 20" HSU at its plant in Eden Prairie at the time of the Effective Date and that is reasonably acceptable to the customer, which shall be certified in writing by the Monitoring Trustee; the date on which the Monitoring Trustee has provided such written certification to Danfoss or [...], whichever is earlier, shall be referred to as the "**Phase-out Commencement Date**"; for the avoidance of doubt, Danfoss' best efforts obligation shall not include the transfer of any tangible assets (such as, e.g, production assets) and any investments required to establish the production of the "Series 20" HSU shall be borne by the Purchaser;
- (d) On the Phase-out Commencement Date:
 - (i) to fully transfer to the Purchaser all **customer contracts** and customer orders (irrespective of whether they relate to serial/ mass production, prototype, or other business), or partly as applicable, to the extent legally transferrable and to the extent they relate to the "Series 20" HSU as well as to provide assistance to the transition of the customer relationship, and, where third-party consent is required for customer contracts to be transferred, to make best efforts to obtain such consents;
 - (ii) to the extent the customer contracts and customer orders are not either fully or partly legally transferable, to make best efforts to ensure that current customers of the "Series 20" HSU will source the "Series 20" HSU from the Divestment Business;
 - (iii) in relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraphs (i),(ii) above, [...];
 - (iv) for a duration of [...] from the Phase-out Commencement Date, upon request of the Divestment Business, to supply [...] such volumes of the

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"Series 20" HSU to the Divestment Business as reasonably requested by the Divestment Business to meet the demand of the customers transferred pursuant to paragraphs (i),(ii) above;

- (v) not to actively solicit, and to procure that its Affiliated Undertakings do not actively solicit, new business for the "Series 20" HSU;
- (vi) to transfer the following **customer, credit, and other records**:
 - a. a list of existing customers of the "Series 20" HSU, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such customer list to the extent it does not relate to the "Series 20" HSU and provided further that any parts of such customer list that do not relate to the "Series 20" HSU may be redacted from the customer list delivered to the Purchaser;
 - b. customer credit and other customer records relating to the "Series 20" HSU, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the "Series 20" HSU and provided further that any parts of such records that do not relate to the "Series 20" HSU may be redacted from the records delivered to the Purchaser. To the extent that Danfoss and its Affiliated Undertakings are obligated to retain copies of such documents in support of legal obligations, Danfoss shall be entitled to do so;
 - c. copies of business records to the extent that they relate to the "Series 20" HSU, provided, however, that Danfoss and its Affiliated Undertakings may continue to use such records to the extent they do not relate to the "Series 20" HSU and provided further that any parts of such records that do not relate to the "Series 20" HSU may be redacted from the records delivered to the Purchaser.
- (e) The Commission may approve arrangements deviating from this paragraph (7) but more beneficial to the Purchaser pursuant to Section B.III of the Commitments.
- (8) The Eaton Steering Divestment Business **shall not include** Eaton Hydraulic's cartridge valves and industrial valves, including to the extent that they are used in the production of

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the Eaton Divestment Products (particularly the ASV/SBX, [...] ESV and [...] ESV) (the "**Retained Cartridge Valves / Industrial Valves Business**"); for the avoidance of doubt, the Retained Cartridge Valves / Industrial Valves Business comprises all tangible and intangible assets related to the production of Eaton Hydraulic's cartridge valves and industrial valves, including, but not limited to, all production assets, IP rights, and know-how.

Transitional Service Agreements

- (9) Danfoss commits to offer **transitional services** to replicate relevant business functions in place at the Divestment Business Closing in order to ensure the viability of the Divestment Business. In particular, where required by the Purchaser, Danfoss undertakes:
- (a) to supply, on a cost basis, [...] services for certain components of the Danfoss Orbital Motor Divestment Products and Danfoss Steering Divestment Products manufactured at the [...], up until the Divestment Business will be able to conduct similar [...] procedures. The Purchaser shall have the option to terminate the transitional agreement with Danfoss earlier if the Purchaser no longer requires the transitional agreement, in particular in the event that the Purchaser decided to conclude an agreement with a third-party provider for such [...] procedures;
 - (b) to supply, on a cost basis, [...] product line manufactured in [...], up until the Divestment Business will be able to produce similar products. The Purchaser shall have the option to terminate the transitional agreement with Danfoss earlier if the Purchaser no longer requires the transitional agreement, in particular in the event that the Purchaser decided to conclude an agreement with a third-party provider for the supply of similar products;
 - (c) to supply, on a cost basis, [...] sets for the "[...]" product line in [...], up until the Divestment Business will be able to produce similar products. The Purchaser shall have the option to terminate the transitional agreement with Danfoss earlier if the Purchaser no longer requires the transitional agreement, in particular in the event that the Purchaser decided to conclude an agreement with a third-party provider for the supply of similar products;
 - (d) to supply, on a cost basis, [...] for the "[...]" product line in [...], up until the Divestment Business will be able to produce similar products. The Purchaser shall have the option to terminate the transitional agreement with Danfoss earlier if the Purchaser no longer requires the transitional agreement, in particular in the event

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that the Purchaser decided to conclude an agreement with a third-party provider for the supply of similar products;

- (e) to supply, on a cost basis, the current IT/systems support for a period [...], but limited to a maximum period of [...] from the Divestment Business Closing, which can be extended by [...] if such extension is necessary to ensure the viability of the Divestment Business and subject to the Monitoring Trustee's consent;
- (f) to supply, on a cost basis, the current financial and payroll accounting for a period determined by the Purchaser, but limited to a maximum period of [...] from the Divestment Business Closing, which can be extended by [...] if such extension is necessary to ensure the viability of the Divestment Business and subject to the Monitoring Trustee's consent;
- (g) to provide, at its own expense, training with respect to the Eaton Orbital Motor Divestment Products and Eaton Steering Divestment Products to the Hopkinsville Personnel (or to Personnel at any other plant to which the Eaton Steering Divestment Products and/or Eaton Orbital Motor Divestment Products will be transferred, as reasonably requested by the Purchaser);
- (h) to supply to the Purchaser under an offtake agreement, on a cost basis, for a period of up to [...] the [...] ESV and [...] ESV, to the extent the Purchaser requires these specific products to serve customers for electrohydraulic steering applications.

Miscellaneous

- (10) If there is any asset or personnel which is not covered by paragraphs (2) to (7) of this Schedule 1 but which is used both (exclusively or not) in the Divestment Business and necessary for the continued viability and competitiveness of the Divestment Business, that assets or adequate substitute will be offered to the potential Purchaser. If Danfoss and the Purchaser are unable to agree, the issue will be submitted to the Monitoring Trustee who will discuss those matters with both sides and report to the Commission.
- (11) In order to maintain the structural effects of the Divestment Business Commitments, Danfoss and its Affiliated Undertakings shall for a period of ten (10) years after the Divestment Business Closing, not acquire, whether directly or indirectly, the possibility of exercising influence over the whole or part of the Divestment Business, unless, following a reasoned request from Danfoss showing good cause and accompanied by a

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report from the Monitoring Trustee, the Commission finds that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the Transaction compatible with the internal market.

- (12) Danfoss and its Affiliated Undertakings undertake, for [...] after the Divestment Business Closing, not to sell any Retained Danfoss Orbital Motor Products currently manufactured in Zhenjiang and retained pursuant to paragraph (3)(a)(ii) above (i) to customer located in the EEA or (ii) to customers located outside of the EEA [...].
- (13) In accordance with paragraph (3) of the Commitments, the Transaction shall not be completed before Danfoss has entered into a final and binding agreement with the Purchaser for the Divestment Business and the Commission has approved the Purchaser and the terms of the sale.
- (14) For the avoidance of doubt, in case of conflicts between this Schedule 1 and the Annexes to this Schedule 1, Schedule 1 shall prevail.

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ANNEXES TO SCHEDULE 1

Annex 1	The Danfoss Orbital Motor Divestment Products
Annex 2	Trademarks and Internet Domain Names
Annex 3	Transfer of Patents regarding Danfoss Orbital Motor Divestment Products
Annex_4	Patent License back to Danfoss regarding Danfoss Orbital Motor Divestment Products
Annex 5	List of top 10 EEA customers of Danfoss Orbital Motor Divestment Products
Annex 6	The Wroclaw Personnel
Annex 7	The Hopkinsville Personnel
Annex 8	The Key Personnel
Annex 9	The Eaton Orbital Motor Divestment Products
Annex 10	Transfer of Patents regarding Eaton Orbital Motor Divestment Products
Annex_11	Patent License back to Danfoss regarding Eaton Orbital Motor Divestment Products
Annex 12	License of Patents regarding Eaton Orbital Motor Divestment Products
Annex 13	List of top 10 EEA customers of Eaton Orbital Motor Divestment Products
Annex 14	The Eaton Orbital Motor Personnel
Annex 15	The Danfoss Steering Divestment Products
Annex 16	Transfer of Patents regarding Danfoss Steering Divestment Products
Annex_16a	Patent License back to Danfoss regarding the Danfoss Steering Divestment Products
Annex 17	License of Patents regarding Danfoss Steering Divestment Products
Annex 18	List of top 10 EEA customers of Danfoss Steering Divestment Products
Annex 19	The Parchim Personnel
Annex 20	The Eaton Steering Divestment Products
Annex 21	Transfer of Patents regarding Eaton Steering Divestment Products
Annex_22	Patent License back to Danfoss regarding Eaton Orbital Motor Divestment Products
Annex 23	License of Patents regarding Eaton Steering Divestment Products
Annex 24	List of top 10 EEA customers of Eaton Steering Divestment Products
Annex 25	The Eaton Steering Personnel
Annex 26	License of Patents regarding the "Series 20"

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Annex 1**The Danfoss Orbital Motor Divestment Products**

The Divestment Business comprises all assets necessary to develop, manufacture, and sell the Danfoss Orbital Motor product series as identified in the table below, including all models and variants within each product series. The table below also identifies at which manufacturing site each Danfoss Orbital Motor Divestment Product is currently being produced:

Product Series	Product Category	[...]	[...]
OMP X	Orbital Motor	[...]	[...]
OMR X	Orbital Motor	[...]	[...]
OMEW	Orbital Motor	[...]	[...]
OMH	Orbital Motor	[...]	[...]
OMS	Orbital Motor	[...]	[...]
OMM	Orbital Motor	[...]	[...]
OML	Orbital Motor	[...]	[...]
CE	Orbital Motor	[...]	[...]
RE	Orbital Motor	[...]	[...]
RC	Orbital Motor	[...]	[...]
RS	Orbital Motor	[...]	[...]
DH	Orbital Motor	[...]	[...]
DS	Orbital Motor	[...]	[...]
DT	Orbital Motor	[...]	[...]
DR	Orbital Motor	[...]	[...]
D9	Orbital Motor	[...]	[...]
HB	Orbital Motor	[...]	[...]
HK	Orbital Motor	[...]	[...]
WS	Orbital Motor	[...]	[...]

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Annex 2**Trademarks and Internet Domain Names**

The Divestment Business will have access to all trademarks necessary to develop, manufacture and sell the Danfoss Orbital Motor Divestment Products. The trademarks as identified in the table below will be transferred to the Purchaser:

[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]

(1) [...]

[...].

CASE M.9820**Annex_5****List of top 10 EEA customers of Danfoss Orbital Motor Divestment Products**

The list below identifies Divestment Business' top ten EEA customers with respect to Danfoss Orbital Motor Divestment Products:

[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]

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Annex_6

The Wroclaw Personnel

[...]	[...]	
	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]

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Annex_7

The Hopkinsville Personnel

[...]	[...]	
	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]

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Annex_8

The Key Personnel

[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]

(1) [...].

CASE M.9820**Annex 9****The Eaton Orbital Motor Divestment Products**

The Divestment Business comprises all assets necessary to develop, manufacture, and sell the Eaton Hydraulics Orbital Motor product series as identified in the table below, including all models and variants within each product series. The table below also identifies at which plant, which will be retained by Danfoss, each Eaton Orbital Motor Divestment Product is currently being produced.

Product Series	Product Category	Shawnee Plant
HP 30	Orbital Motor	√
VIS 30	Orbital Motor	√
VIS 40	Orbital Motor	√
VIS 45	Orbital Motor	√

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Annex_10

Transfer of Patents regarding Eaton Orbital Motor Divestment Products

The Divestment Business will have access to all patents necessary to develop, manufacture, and sell the Eaton Orbital Motor Divestment Products. Patents solely or predominantly used for the Eaton Orbital Motor Divestment Products and are owned by the Parties will be transferred to the Purchaser, a non-exclusive list of those patents is provided by the table below:

[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]

(1) [...].

Annex_11

Patent License back to Danfoss regarding Eaton Orbital Motor Divestment Products

The Divestment Business will have access to all patents necessary to develop, manufacture, and sell the Eaton Orbital Motor Divestment Products. To the extent patents regarding Eaton Orbital Motor Divestment Products will be transferred to the Purchaser, the Purchaser will grant a license back to Danfoss for patents as identified in the table below:

[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]	[...]

(1) [...].

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Annex_12

License of Patents regarding Eaton Orbital Motor Divestment Products

The Divestment Business will have access to all patents necessary to develop, manufacture, and sell the Eaton Orbital Motor Divestment Products. A fully paid-up and royalty-free, non-exclusive, and non-transferable license will be granted for the patents not solely or predominantly used for the Eaton Orbital Motor Divestment Products and owned by the Parties; a non-exclusive list of those patents is provided by the table below:

[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]

(1) [...]

CASE M.9820**Annex_13****List of top 10 EEA customers of Eaton Orbital Motor Divestment Products**

The list below identifies Divestment Business' top ten EEA customers with respect to Eaton Orbital Motor Divestment Products:

[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]

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Annex_14

The Eaton Orbital Motor Personnel

Employees from Eaton Hydraulics (Shawnee)	
Function	Number of Employees
	Fulltime
Assembly / testing	[...]

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Annex_15

The Danfoss Steering Divestment Products

The Divestment Business comprises all assets necessary to develop, manufacture, and sell the Danfoss HSU, ESV, and Priority Valve product series as identified in the table below, including all models and variants within each product series. The table below also identifies at which manufacturing site each Danfoss Steering Divestment Product is currently being produced:

Product Series	Product Category	[...]	[...]	[...]
OSPM	HSU	[...]	[...]	[...]
OSPP	HSU	[...]	[...]	[...]
LAGB	HSU	[...]	[...]	[...]
LAGU	HSU	[...]	[...]	[...]
LAGS	HSU	[...]	[...]	[...]
LAGC	HSU	[...]	[...]	[...]
LAGL	HSU	[...]	[...]	[...]
LAGZ	HSU	[...]	[...]	[...]
LAGE 250	ESV	[...]	[...]	[...]
LSR	Priority Valve	[...]	[...]	[...]
LPD	Priority Valve	[...]	[...]	[...]
LPS	Priority Valve	[...]	[...]	[...]
S70	HSU	[...]	[...]	[...]
PV160	Priority Valve	[...]	[...]	[...]

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[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]

- (1) "Pending" means that the patent application process is still on-going. The respective patent will be transferred to the Purchaser provided it has been granted prior to the Divestment Business Closing. If the patent application process is still on-going at the Divestment Business Closing, Danfoss will make available to the Purchaser all relevant filing documentation and, where necessary, provide assistance to continue the patent application process.

CASE M.9820**Annex_18****List of top 10 EEA customers of Danfoss Steering Divestment Products**

The list below identifies Divestment Business' top ten EEA customers with respect to Danfoss Steering Divestment Products:

[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]

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Annex_19

The Parchim Personnel

[...]	[...]	
	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]
[...]	[...]	[...]

CASE M.9820**Annex_20****The Eaton Steering Divestment Products**

The Divestment Business comprises all assets necessary to develop, manufacture, and sell the Eaton Hydraulics HSU and ESV product series as identified in the table below, including all models and variants within each product series. The table below also identifies at which plant, which will be retained by Danfoss, each Eaton Steering Divestment Product is currently being produced.

Product Series	Product Category	Eden Prairie Plant	Other
Series 10	HSU	[...]	[...]
ASV/SBX	ESV	[...]	[...]
[...] ESV ⁽¹⁾	ESV	[...]	[...]
[...] ESV ⁽²⁾	ESV	[...]	[...]

(1) [...].1

(2) [...].2

1 [...].

2 [...].

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Annex_23

License of Patents regarding Eaton Steering Divestment Products

The Divestment Business will have access to all patents necessary to develop, manufacture, and sell the Eaton Steering Divestment Products. A fully paid-up and royalty-free, non-exclusive, and non-transferable license will be granted for the patents not solely or predominantly used for the Eaton Steering Divestment Products and owned by Eaton Hydraulics, a non-exclusive list of those patents is provided by the table below:

[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]

(1) [...].

CASE M.9820**Annex_24****List of top 10 EEA customers of Eaton Steering Divestment Products**

The list below identifies Divestment Business' top ten customers with respect to Eaton Steering Divestment Products:

[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]
[...]	[...]

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Annex_25

The Eaton Steering Personnel

Employees from Eaton Hydraulics (Eden Prairie)	
Function	Number of Employees
	Fulltime
Assembly / testing	[...]

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Annex_26

License of Patents regarding the "Series 20"

The Divestment Business will have access to all patents necessary to develop, manufacture, and sell the "Series 20". A fully paid-up and royalty-free, non-exclusive, and non-transferable license will be granted for the patents not solely or predominantly used for the Eaton Steering Divestment Products and owned by Eaton Hydraulics, a non-exclusive list of those patents is provided by the table below. [...].

Patent No	Title	Country	Grant Date	Divestment Products the Patent is Used for	Status ⁽¹⁾
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]
[...]	[...]	[...]	[...]	[...]	[...]

(1) [...].

CASE M.9820**SCHEDULE 2**

Danfoss undertakes to offer perpetual, non-exclusive, non-transferable, and non-assignable licensing agreements regarding the ESV Patents as specified in table below, in accordance with paragraph (56) of the Commitments.

Patent No	Title	Country	Grant Date	Status
EP 1 910 151	Electrohydraulic Steering System with Cut-Off Valve and Sensor	Denmark	06 October 2010	Active
EP 1 910 151	Electrohydraulic Steering System with Cut-Off Valve and Sensor	France	06 October 2010	Active
EP 1 910 151	Electrohydraulic Steering System with Cut-Off Valve and Sensor	Germany	06 October 2010	Active
EP 1 910 151	Electrohydraulic Steering System with Cut-Off Valve and Sensor	Great Britain	06 October 2010	Active
EP 1 910 151	Electrohydraulic Steering System with Cut-Off Valve and Sensor	Italy	06 October 2010	Active
CN 101233040	Electrohydraulic Steering System with Cut-Off Valve and Sensor	China	12 October 2011	Active
US 7,677,351	Electrohydraulic Steering System with Cut-Off Valve and Sensor	USA	16 March 2010	Active

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SCHEDULE 3**Additional Divestment Business Key Personnel**

Name	Function
[...]	[...]

* * *