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***Case No COMP/M.6172 -  
DAIMLER / ROLLS-  
ROYCE / TOGNUM /  
BERGEN***

Only the English text is available and authentic.

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

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Article 6(1)(b) NON-OPPOSITION  
Date: 25/07/2011

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## EUROPEAN COMMISSION

Brussels, 25.7.2011  
C(2011) 5466 final

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE

### To the Notifying parties

Dear Sir/Madam,

**Subject: Case No COMP/M.6172 – Daimler/ Rolls-Royce/ Tognum/ Bergen  
Commission decision pursuant to Article 6(1)(b) of Council Regulation  
No 139/2004<sup>1</sup>**

1. On 17 June 2011, the European Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004<sup>2</sup> by which Daimler AG ("Daimler", Germany) and Rolls-Royce Group plc ("Rolls-Royce", United Kingdom), via Engine Holding GmbH ("Engine Holding", Germany), acquire within the meaning of Article 3(1)(b) of the Merger Regulation joint indirect control over Tognum AG ("Tognum", Germany) and over Rolls-Royce's Bergen business ("Bergen", Norway), by way of a purchase of shares.

#### **I. THE PARTIES AND THE OPERATION**

2. **Daimler** is active in the manufacturing and sales of premium cars and commercial vehicles, as well as the provision of automotive financial services including financing, leasing insurance and fleet management.
3. **Rolls-Royce** is primarily involved in the development and manufacture of civil aircraft engines and power systems for aerospace, marine and energy applications. Rolls-Royce also operates a marine business which designs ships and produces marine equipment such

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<sup>1</sup> 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 ("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.

<sup>2</sup> OJ L 24, 29.1.2004, p. 1 (the "Merger Regulation").

as ship propulsion systems, deck machinery and steering gear. Through Bergen, Rolls-Royce is also active in the development, manufacture and sale of diesel and gas reciprocating engines and generator sets for off-highway applications (such as power generation and marine applications).

4. **Engine Holding** is a special purpose acquisition vehicle whose sole purpose was to launch the takeover offer for all outstanding shares of Tognum and, subsequently, to hold and manage the shareholdings in Tognum and in Bergen-Company.
5. **Tognum** is active in the development, manufacture and sale of diesel and gas reciprocating engines and generator sets for off-highway applications (such as industrial applications, power generation applications and marine applications).
6. The proposed Transaction is designed so that Rolls-Royce and Daimler jointly acquire indirect control of Tognum and combine it with Bergen. Rolls-Royce and Daimler have established a jointly held special purpose bid vehicle, Engine Holding (NewCo), which has launched a public takeover offer for Tognum. Once the offer is completed and NewCo has acquired the shares in Tognum, Rolls-Royce is obliged, pursuant to the Investment Agreement, to contribute Bergen to NewCo before 31 December 2011.
7. In view of the interdependency of the contribution of Bergen to the public bid for Tognum, the Transactions described above, the acquisition of more than 50% of the shares in Tognum by NewCo and the transfer of all the shares in Bergen to NewCo by Rolls-Royce, constitute one single concentration.
8. Daimler and Rolls-Royce will [...]. The Shareholders Agreement requires NewCo's management [...]. The Shareholders Agreement also provides that [...].
9. The parties submit that the rights granted to NewCo, Rolls-Royce and Daimler over Bergen and over Tognum imply that the quality of control over Bergen will change from sole control by Rolls-Royce to joint control by Daimler and Rolls-Royce and the quality of control over Tognum will change from no control to joint control by Daimler and Rolls-Royce. In particular, Daimler and Rolls-Royce will have veto rights over the business plan, budget, management, annual accounts and key agreements of NewCo.
10. Based on the above, the proposed Transaction will result in the indirect acquisition of joint control by Daimler and Rolls-Royce over Tognum and Bergen.
11. It follows that the proposed Transaction is a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

## **II. EU DIMENSION**

12. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million for the year 2010 (Daimler: EUR 97 761 million; Rolls-Royce: EUR 12 442; Tognum: EUR 2 563 million; Bergen: EUR [...]). The aggregate EU turnover of at least two of them exceeds EUR 250 million (Daimler: EUR [...]; Rolls-Royce: EUR [...]; Tognum: EUR [...]; Bergen: EUR [...]), without achieving more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension pursuant to Article 1(2) of the Merger Regulation.

## **III. COMPETITIVE ASSESSMENT**

13. The proposed Transaction primarily involves the markets for the manufacture and sale of diesel and gas reciprocating engines with a power output above 350 KW for off-highway applications<sup>3</sup> as well as the manufacture and sale of diesel and gas generator sets. Neither Rolls-Royce nor Daimler is present in these markets and therefore the proposed Transaction will lead to horizontally affected markets only between Tognum and Bergen.
14. Other relevant vertically related/affected markets concerned by the proposed Transaction are diesel fuel injection systems (produced by Tognum) (upstream) and diesel reciprocating engines for marine applications (downstream).

## **A. Relevant product markets**

### *a) Diesel reciprocating engines*

15. Reciprocating engines, also known as piston engines, are heat engines that use one or more reciprocating pistons to convert pressure into a rotating motion. This rotary motion can be coupled to chive another device (e.g., a compressor, propeller or generator) for use in a variety of end-applications including mechanical drive/gas compression, transportation (marine and locomotive) and power generation applications.
16. The Parties submit that generally there are four main parameters by which the reciprocating engines market can be segmented, namely (i) fuel used to run the reciprocating engine; (ii) application, i.e. the intended use of the reciprocating engine; (iii) engine speed, which can be segmented into low (<300 rpm), medium (300-1,000 rpm) and high (>1,000 rpm) speed engines; and (iv) power output, *i.e.* the power that can be generated with a reciprocating engine. Other selection criteria that will influence the choice of one or another reciprocating engine for an intended use include the economics (consisting in three elements: acquisition costs, fuel type and fuel efficiency and maintenance costs) its size, weight and noise, *inter alia*.

#### *i) By fuel type*

17. In previous decisions, the Commission has considered liquid fuel (*i.e.* diesel and heavy fuel oil) and gas reciprocating engines<sup>4</sup> as distinct product markets, but ultimately left the market definition open<sup>5</sup>.
18. On the supply side, reciprocating diesel engine designs can be adapted relatively easily to run on heavy fuel oil and vice versa. Whilst liquid fuel engines can also be re-

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<sup>3</sup> Off-highway means the business of designing, developing, modifying, manufacturing, distributing and servicing engines (including accessories, parts and components) for a range of applications such as agricultural applications, industrial applications, railway applications, power generation applications, marine propulsion applications, marine auxiliary applications.

<sup>4</sup> A small number of reciprocating engines are “dual fuel”, that is, they can operate on gas and diesel/heavy fuel oil. Typically, dual fuel engines are optimised to work on gas but with the possibility of running on diesel as a backup (e.g., in the event of a gas supply interruption). Neither Tognum nor Bergen produces dual fuel engines.

<sup>5</sup> IV/M.1015 – *Cummins/Wärtsilä*, 17 November 1997; IV/M.1094 – *Caterpillar/Perkins Engines*, 23 February 1998; COMP/M.3113 – *GE/Jenbacher*, 14 April 2003; COMP/M.4336 – *MAN/Scania*, 20 December 2006; COMP/M.6039 – *GE/Dresser*, 4 January 2011.

designed to run on gas, the conversion is more complex as different fuel injection and ignition systems are required. Generally, it is much harder to modify an engine designed for gaseous fuels to run on liquids. Accordingly, the vast majority of reciprocating engines are fuelled by either liquid hydrocarbons or gas<sup>6</sup>. Key ancillary systems such as fuel injection hardware, ignition systems and control systems will also vary with fuel type. The manufacturers have tended to specialise in either gas or liquid engines therefore indicating that technology constraints do not enable easy transfer of technologies between the two fuel types.

19. From a demand perspective, customers usually seek either a gas or liquid fuelled engine and will not compare the two types against one another for selection.
20. As regards liquid fuelled reciprocating engines, the Parties submit that basic structure, parts and functions of a liquid fuelled engine are very similar<sup>7</sup> irrespective of the type of liquid fuel on which it runs but its design and settings can be optimised for different liquid fuels. As a result, there is significant supply-side substitutability between the different types of liquid fuel reciprocating engines. The Parties submit that diesel and heavy fuel oil reciprocating engines should be considered to form part of the same market.
21. The market investigation seems to confirm that diesel reciprocating engines and HFO reciprocating engines are similar in terms of technical characteristics and performance, and could therefore be substitutable from the supply side. However, this would not be the case from the demand side, as other elements, such as fuel availability and gas exhaustion regulations, as well as the economics of the engine's use (including the intended utilization pattern of the engine, the fuel cost and the engine's necessary additional equipment to run on diesel and HFO), will influence customers' choice between a diesel and a HFO reciprocating engine<sup>8</sup>.
22. In any event, the product market definition by fuel type can be left open, since the Transaction would not lead to any competition concerns under any product market definition.

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<sup>6</sup> Liquid fuels (principally heavy fuel oil and diesel) are available worldwide and can be transported to remote sites with relative ease. Natural gas is cleaner and more efficient than liquid fuels but land based gas applications are typically fed by mains supplies and as such only available where the relevant infrastructure is available. In marine applications, the availability of gas refuelling at ports is still not widespread therefore making ship refuelling difficult.

<sup>7</sup> The main differences between heavy fuel oil and pure diesel are a result of their chemical characteristics.

<sup>8</sup> See responses to questions 7 and 8 of the Phase I Q2 Questionnaire to Customers.

*ii) By application*

23. The Parties submit, in line with the Commission precedents, that diesel reciprocating engines can be grouped into the following end-application segments<sup>9</sup>: (i) diesel reciprocating engines for industrial applications, including agricultural, construction, and other industrial applications; (ii) diesel reciprocating engines for railway applications (*i.e.* diesel reciprocating engines used to power locomotives or rail cars<sup>10</sup>); (iii) diesel reciprocating engines for power generation (*i.e.* for generator sets); (iv) diesel reciprocating engines for marine applications including marine propulsion<sup>11</sup> and marine auxiliary<sup>12</sup>. In turn, marine propulsion and marine auxiliary could be segmented between civil and military applications. In addition, the Parties note that reciprocating engines' efficiency rates differ depending on their final application.
24. The Parties further submit that diesel engines for both power generation and mechanical drive/gas compression applications share the same fundamental technology but do have some differences<sup>13</sup>.
25. The results of the market investigation show that developing an engine for an application departing from one being used in another application is costly, complex and may not be successful. Despite being essentially based on the same technical principles, reciprocating engines are designed and manufactured differently depending on the applications' needs they have to fulfil.
26. Regarding marine applications, the market investigation has not been conclusive in this regard. Competitors broadly agree that the intended use of diesel reciprocating engines for marine propulsion and for marine auxiliary applications is different, as well as their technical characteristics and prices of the engines (influenced by the utilization rates and maintenance costs). On the other hand, customers consider that such a distinction within the marine application reciprocating engines cannot be sustained, stressing that the requirements to be fulfilled are almost equal and providing examples of purchases of the same engine for both marine propulsion and marine auxiliary applications.
27. Finally, another possible segmentation has been raised during the market investigation between marine military and marine civil applications. As regards this distinction in the marine propulsion reciprocating engines segment, the market investigation revealed that military applications would require large reciprocating engines for heavy duty

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<sup>9</sup> This segmentation is similar to that used by the Commission in Case IV/M.1094 – *Caterpillar/Perkins Engines*, 23 February 1998, para. 14.

<sup>10</sup> COMP/M.2127 – *DaimlerChrysler/Detroit Diesel*, 9 October 2000, para. 20.

<sup>11</sup> Marine propulsion is the mechanism or system used to move a ship or boat across water.

<sup>12</sup> Auxiliary engines are any engines that are not main propulsion engines. They are used for generators, water pumps, air compressors, winches etc.

<sup>13</sup> Engines for power generation run at a constant speed, whereas engines for mechanical drive applications are designed to run at variable speeds. Developing an engine for mechanical drive applications from an engine for power generation, and vice versa, is complex, can take several years, and may not be successful.

applications. In the marine auxiliary reciprocating engines segment in particular, those intended for military use would require the utilization of non-magnetic components, a requirement that would not be necessary for marine auxiliary civil applications.

28. In any event, the product market definition by application can be left open, since the proposed transaction would not give rise to any competition concerns under any alternative product market definition.

*(iii) Engine speed*

29. A significant criteria applied by customers in engine selection is engine speed. The speed of an engine depends on the bore and stroke length of the engine cylinders, but all the parameters may be adjusted by the engine designer in order to optimise a design for a particular application. For a given size of cylinder, increasing the engine speed will increase the power of the engine<sup>14</sup>. Additionally, as cylinder sizes increase, more time is required per piston stroke to ensure complete combustion occurs. The efficiency losses associated with incomplete combustion will also limit the degree to which engine speed can be increased.
30. The costs of making these design changes are substantial and Bergen has not been successful at making high speed engines while Tognum has not been successful at making lower speed engines<sup>15</sup>. As a result, Tognum manufactures high speed engines whereas Bergen manufactures medium-speed engines.
31. The Parties submit that if the diesel engines market were to be segmented by engine speed, the most appropriate segmentation would be as follows: (i) **Low (<300 rpm)**; (ii) **Medium (300-1000 rpm)**; (iii) **High (>1000 rpm)**. Low-speed engines tend to be primarily focused on those applications which require the engine to run at a constant rate over long periods of time such as large marine propulsion applications<sup>16</sup>. Medium engines<sup>17</sup> and high-speed engines tend to be appropriate for a wider range of

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<sup>14</sup> However the motion of the piston up and down the cylinder generates friction which produces heat which must be dissipated and will increase wear and tear in the cylinder. Larger bore pistons generate a greater amount of friction and the engine speed must therefore be reduced to ensure adequate heat dissipation.

<sup>15</sup> Adjustments of the engine speed involve increasing the length of the piston stroke by re-designing the crankshaft to increase the volumetric displacement between full compression and full extension of the combustion chamber. Increasing the stroke length will increase the power of the engine. Small increases in bore size can be achieved by machining out the cylinder block to increase the diameter of each cylinder and installing a piston with a larger head. Increasing the bore size in this way is relatively inexpensive but will increase the long term maintenance burden as the engine will suffer from increased wear and tear. Large changes of bore size will require a completely new engine block.

<sup>16</sup> Low-speed engines have a much lower power to weight ratio than medium-speed and high-speed engines and therefore tend to be suitable only for applications where engine weight and size are not an important consideration. They are also not suitable for use in applications with varying power requirements, but when operated at their design point offer better fuel efficiency and are able to run on cheaper fuels than higher speed engines.

<sup>17</sup> Medium-speed engines are unable to match the power to weight ratio of high-speed engines, and can therefore not compete effectively in applications where a high power to weight ratio is an important customer requirement. Typically these will be in mobile applications such as off-highway vehicles and small or fast marine vessel applications, but also any other application where available space is at a premium.

applications where power requirements are lower and there is a need for greater variation in the power output: (i) *high-speed engine applications include*: agricultural machinery, yachts, fast ferries, naval vessels, small compressors and pumps, and small electrical generators; (ii) *medium-speed engine applications include*: large electrical generators, mid-sized merchant vessels, offshore marine vessels, and mechanical drive applications such as large compressors or pumps<sup>18</sup>.

32. The Parties submit that within the power generation segment, assuming there are no space constraints, the customer will firstly pick an engine that can produce the right amount of power. Where, in light of the power output requirement, the customer has a choice of more than one engine speed for the required power, the customer will tend to choose the higher speed engine if the engine is only going to be run intermittently or used as emergency back up<sup>19</sup>. In continuous duty applications<sup>20</sup> the lower speed engine will tend to win out as it will typically have better fuel efficiency and the potential fuel saving over the engines operational life will more than outweigh the higher initial purchase price of the engine. High-speed engines will also tend to be favoured in quick start standby applications<sup>21</sup> as they can be run up to full output power more quickly than medium-speed engines.
33. It is very unusual to find a low-speed engine (<300rpm) used in a power generation application; almost all engines used for power generation will be either medium- or high-speed. Medium- and high-speed engines are both present in the 2-5MW power range but this does not mean that high- and medium-speed engines compete effectively in this segment. The exact choice of engine speed still depends on the level of flexibility required in the power output. Generally a customer with no space constraints will opt for the medium-speed engine as this will result in increased fuel efficiency. However if the power demand is extremely volatile then it may not be possible to achieve the required profile with a medium-speed engine in which case a high-speed engine will have to be chosen.
34. According to the Parties, segmentation by engine speed is consistent with both DGTW and IESG market surveys. Competitors of Tognum and Bergen equally differentiate the market according to engine speed. Caterpillar distinguishes between its medium and high-speed engines, Wärtsilä and MAN both distinguish between their low and medium-speed engines.

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<sup>18</sup> As engine speed increases the engine is better able to respond to fluctuating power demands and the power-to-weight ratio increases. However, this increase in speed is usually at the expense of fuel efficiency which tends to decrease as engine speed increases.

<sup>19</sup> This is because the high-speed engine will normally be cheaper to purchase due to higher production volumes as well as to less material involved in construction. The lower fuel efficiency over the operational life of the engine will not outweigh the acquisition cost savings.

<sup>20</sup> Typical continuous duty applications (usually medium-speed if power requirements are sufficiently high) are: (i) electricity utilities generating power for the grid; (ii) manufacturing facilities that either do not have a reliable grid supply, or are able to benefit in some way from generating power, and often heat, on site (for example from having a captive use for waste heat – e.g., greenhouses, breweries, paper mills); and (iii) facilities in remote or unmanned locations, i.e. oil drilling rigs, mining operations.

<sup>21</sup> Typical quick start back up applications (i.e., usually high-speed) are: (i) airports; (ii) hospitals; (iii) commercial buildings, even domestic homes; (iii) nuclear utilities.



35. For the purpose of the present transaction, the product market definition can be left open, since the proposed transaction would not lead to any competition concerns regardless of the product market definition considered.

(iv) *Output ranges*

36. To a certain extent, diesel reciprocating engines with different power outputs are used for different applications. In previous cases, the Commission held that whilst there are instances where diesel reciprocating engines with different power outputs would be considered for one and the same application, often diesel reciprocating engines with different output ranges do not compete for the same applications due to considerations such as cost of the engine(s), installation, cost of fuel, availability of space, redundancy (in case of accident or emergency) and the customer's need for flexibility<sup>22</sup>. It was, however, not necessary for the Commission to consider a power output-based segmentation to be appropriate in *GE/Dresser*<sup>23</sup>.

37. The Parties submit that, if the diesel engine market were to be segmented by power output, the most appropriate segmentation would be as follows: **350kW-1MW, 1-2MW, 2-5MW**, and above **5MW**. According to the Parties, within the segments listed above there is a reasonable amount of homogeneity between market and/or product characteristics.

38. The Parties also point out that the segmentation of diesel reciprocating engines for marine propulsion on the basis of IESG power output bands is highly artificial and narrow<sup>24</sup>. For example, the total 2.0-2.5MW, 2.5-5.0MW and 5.0-10.0MW marine propulsion segments represent approximately below 1%, below 2% and below 1% respectively of all diesel engines produced above 350KW. The notifying parties believe that the narrowest possible segmentation of the market is, thus: 350kW-1MW, 1-2MW, 2-5MW, and 5MW.

39. The Parties also consider that such segmentation may not be appropriate for the definition of relevant diesel reciprocating engine product markets. Nonetheless, as such segmentation was referred to in *GE/Dresser*,<sup>25</sup> the notifying parties provided data on this basis.

40. In *GE/Dresser*, the market investigation showed that there is a certain degree of substitutability between gas engines of different outputs, especially in light of the fact that customers take into account several factors in order to choose an engine that best suits their needs. It also appears that boundaries between different output ranges and speeds tend to change over time as technology and efficiency improve.

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<sup>22</sup> See IV/M.1015 – *Cummins/Wärtsilä*, 17 November 1997, para. 16; COMP/M.6039 – *GE/Dresser*, 4 January 2011, paras. 17-18 (regarding gas engines).

<sup>23</sup> COMP/M.6039 – *GE/Dresser*, 4 January 2011, para. 16.

<sup>24</sup> According to the IESG definition, the following power output bands can be distinguished: 0.35MW-0.5MW, 0.5MW-0.75MW, 0.75MW-1.0MW, 1.0MW-1.5MW, 1.5MW-2.0MW, 2.0MW-2.5MW, 2.5MW-5.0MW, 5.0MW-10.0MW, above 10.0.

<sup>25</sup> COMP/M.6039 – *GE/Dresser*, 4 January 2011, para. 16.

41. Concerning the market for diesel reciprocating engines for marine applications, the market investigation was not conclusive on the appropriate segmentation by power output. The majority of the customers either considered the segmentation by power output not necessary or agreed with the segmentation proposed by the Parties. Some of the customers also indicated that power output depends more on the size of the vessel rather than on the size of the engine. Most of the competitors considered it appropriate to segment the market for diesel reciprocating engines for marine applications by power output. However, there was no consensus on the correct segmentation. One competitor stated that the Parties' proposal was too narrow, whereas other believed the segmentation was too wide. Few also underlined that alternative segmentation or methods could be used. Therefore different segmentations could be regarded. Nevertheless, a delineation by IESG bands appears to be overly narrow, whereas alternative but similar market sub-segmentations as those proposed by the Parties seem more appropriate in this case.
42. For the purpose of the present decision, the Commission can ultimately leave the product market definition open, since the Transaction would not raise competition concerns under any alternative product market definition.

*b) Diesel and Gas Gensets*

43. A genset is a package that combines a reciprocating engine with various ancillary equipment, such as a generator, a switching gear and other equipment at the customer's option. Two main types of gensets exist: gas and liquid-fuelled gensets. In its previous decisions, the Commission has considered both gensets by fuel type to constitute separate product markets but did not reach a definitive conclusion in this respect<sup>26</sup>.

*i) Diesel Gensets*

44. In its previous decisions, the Commission confirmed that the ranges usually identified in the industry for diesel Gensets are as follows: (i) 7-150 kW; (ii) 150-1000 kW; (iii) 1,001-2500 kW; and (iv) >2,500 kW<sup>27</sup>. The different ranges are broadly speaking used for different operating modes such as standby and prime power applications. The Parties do not seem to contemplate any possible segmentation by output of the diesel gensets market. However, another potential segmentation would include the definition provided by IESG report, which will be considered in the assessment of the present decision.
45. For the purposes of the present assessment the precise scope of the relevant product market for diesel gensets can be left open, since in all alternative market definitions no competition concerns could arise.

*ii) Gas Gensets*

46. The Commission has previously considered a separate market for gas gensets, but ultimately left the market definition open<sup>28</sup>.

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<sup>26</sup> COMP/M.6039 – *GE/Dresser*, 4 January 2011, paragraph. 24.

<sup>27</sup> See IV/M.1094 – *Caterpillar/Perkins Engines*, paragraph. 16.

<sup>28</sup> COMP/M.6039 – *GE/Dresser*, 4 January 2011.

47. The Parties have provided a possible segmentation by power output for gas reciprocating engines that could be transposed or applied to gas gensets (the latter are powered by the former). The ranges proposed include: (i) 0-1000 kW; (ii) 1000-2000 kW; (iii) 2000-5000 kW; and (iv) over 5000 kW. However, another potential segmentation would include the definition provided by IESG report, which will be considered in the assessment of the present decision.

48. However, for the purposes of the present assessment the precise scope of the relevant product market for gas gensets can be left open, since under any alternative market definition, the Transaction will not lead to any competition concerns.

c) *Diesel fuel injection systems*

49. A fuel injection system is used in many types of engine (of which diesel reciprocating engines form a relatively small subset). An injection system mixes fuel with air and comprises a fuel injector (nozzle and valve), high pressure line and fuel injection pump, and is designed and calibrated specifically for the type of fuel it will handle.<sup>29</sup>

50. The Commission has previously found that diesel fuel injection systems are not substitutable for gasoline (petrol) fuel injection systems due to the fundamental differences between diesel and gasoline (petrol) engines. The Commission has also considered whether diesel fuel injection equipment for different types of engines (light duty, medium duty, heavy duty, heavy industrial-applications) constitute separate product markets, but ultimately left the question open<sup>30</sup>.

51. The parties submit that through its wholly-owned subsidiary L'Orange, Tognum produces diesel fuel and dual fuel injection systems. These are used as an input in the production of medium and high-speed diesel engines, mainly used in heavy industrial applications. The Parties claim that diesel fuel injection systems can be used in the full range of diesel reciprocating engines from 1 MW to 40 MW.

52. The Parties note that the product market can be segmented into fuel injections systems for engines of different speed (such as low, medium und high) and engines used for different applications (such as industrial and non-industrial).

53. However, they claim that further segmentation of the market for diesel fuel injectors would not be appropriate, given the commonality of technology, inputs and production techniques across diesel fuel injectors designed for the various engine speeds.

54. In any event, there is no need to conclude on the product market definition, since the Transaction would not give rise to any competition concerns regardless of the product market definition considered.

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<sup>29</sup> Gas injection is distinct from diesel as the fuel does not need to be vaporised. Gas also requires spark ignition as ignition is not triggered by compression. Diesel and gas injection systems are not substitutable.

<sup>30</sup> COMP/M.1784 - *Delphi Automotive Systems/Lucas Diesel*, 5 January 2000, paragraph. 6; IV/M.768 *Lucas/Varity*, 11 July 1996, paragraph. 9.

## **B. Relevant geographic markets**

### *d) Diesel reciprocating engines for marine applications*

55. In previous decisions, the Commission has indicated that the reciprocating engine markets are at least EEA wide<sup>31</sup>. However, the geographic market definition for the diesel reciprocating engines for marine applications has not been previously considered by the Commission. The Parties submit that the scope of the markets for diesel reciprocating engines is worldwide.
56. The market investigation confirmed to a certain extent the Parties' view as regards the market for marine applications (both propulsion and auxiliary). According to most of the competitors, customers source both marine auxiliary and marine propulsion diesel engines worldwide. However, several customers indicated that they source diesel reciprocating engines for marine applications from EEA players. Imports from non EEA countries play a major role in satisfying the overall demand for diesel engines. Further, transport costs only amount to a minor percentage of the price of the final applications (2-3%). Finally, the majority of the respondents considered the reciprocating market to be worldwide.
57. In any event, the geographic market definition can be left open, since the proposed transaction would not give rise to any competition concerns under both EEA-wide or worldwide markets.

### *e) Diesel Gensets*

58. The Commission has in previous decisions considered that the relevant geographic market for diesel Gensets is at least EEA-wide, but it could not be excluded that the market is global<sup>32</sup>. In line with the approach to reciprocating engines, the Parties submit that the relevant geographic market for diesel Gensets is worldwide.
59. For the purpose of the present case, there is no need to conclude on the geographic scope of the diesel engine market, as no competition concerns would arise regardless of the geographic delimitation retained.

### *f) Gas Gensets*

60. The Commission has in previous decisions considered that the relevant geographic market for gas Gensets is at least EEA-wide, given that conditions of competition are generally homogeneous across regions<sup>33</sup>. The Parties submit that the relevant geographic market for gas Gensets is worldwide. The Parties submit that the geographic scope of the market for gas gensets is worldwide.

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<sup>31</sup> See IVIM.1015 - Cummins/Wartsila; COMPIM.6039 - GE/Dresser.

<sup>32</sup> See IV/M.1015 - Cummins/Wärtsilä; IV/M.1094 – Caterpillar/Perkins Engines.

<sup>33</sup> See COMP/M.3113 – GE/Jenbacher, para. 11; COMP/M.6039 – GE/Dresser paragraphs. 26 to 28.

61. For the purpose of the present case, the exact delineation of the geographic scope of the diesel engine market can be left open, since the proposed Transaction does not raise competition concerns under any geographic market definition.

g) *Diesel fuel injection systems*

62. The Commission has in previous decisions considered that the relevant geographic market for diesel fuel injection systems is at least EEA-wide, but ultimately left the question open<sup>34</sup>.

63. However, for the purpose of the present case the exact determination of the geographic scope of the diesel fuel injection systems market can be left open, since even under the narrowest geographic scope (*i.e.* EEA) no competition concerns would raise from the proposed transaction.

### **C. Competitive Assessment**

64. The proposed Transaction gives rise to the following horizontally affected markets: (i) diesel reciprocating engines for marine applications (*i.e.* marine propulsion and marine auxiliary), (ii) gas gensets for power generation and (iii) diesel gensets for power generation. Additionally, a vertical relationship arises from the proposed transaction between diesel fuel injection systems (upstream) and diesel reciprocating engine for marine applications (downstream).

#### **a) Marine propulsion diesel reciprocating engines for civil applications**

##### **1. EEA MARKET SHARES FOR MARINE PROPULSION DIESEL RECIPROCATING ENGINES FOR CIVIL APPLICATIONS BY POWER BAND:**

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<sup>34</sup> See COMP/M.1784 – *Delphi Automotive Systems/Lucas Diesel*, paragraph. 7.

Data	Producer	0.35-0.5	0.5 - 0.75	0.75 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 5.0	5.0 - 10.0	> 10.0	Total	
Marine Propulsion EEA 2005-2009 Average	Other	[30-40]%	[30-40]%	[20-30]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%	[5-10]%	0%	[10-20]%	
	Caterpillar	[30-40]%	[40-50]%	[40-50]%	[60-70]%	[50-60]%	[40-50]%	[40-50]%	[20-30]%	0%	[40-50]%	
	Cummins	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%
	GE	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%
	MAN	[5-10]%	[10-20]%	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[20-30]%	0%	[5-10]%
	Volvo	[10-20]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[5-10]%
	TOGNUM	[0-5]%	[0-5]%	[10-20]%	[20-30]%	[30-40]%	[20-30]%	[30-40]%	[20-30]%	[20-30]%	0%	[10-20]%
	Mitsubishi	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%
	BERGEN	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	0%	[0-5]%
	Weifang	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%
	Total		100%	100%	100%	100%	100%	100%	100%	100%	0%	100%

Source: Parties' estimates

65. As shown in the table, there would be no overlap between the Parties in most of the relevant power bands, as Bergen is a small player in the market for marine propulsion and is only active in three power bands. According to 2005-2009 average market shares of Tognum and Bergen, the Parties would overlap in the following power bands: (i) the 2-2.5MW power band in which the combined share would be [30-40] (with an increment of [10-20]%), (ii) 2.5-5.0MW power band in which the combined share would be [40-50] (with an increment of [10-20]%) and (iii) 5-10MW power band in which the merged entity's share would be [30-40] ([10-20] increment).<sup>35</sup> Thus, only in one power band the Parties' combined market shares would exceed 40%.
66. As regards the 2.0-2.5MW power band, Bergen made no sales in 2010 and, thus, there would be no material overlap between the Parties based on 2010 figures. Moreover, the merged entity will continue facing a number of competitors, and in particular, Caterpillar ([40-50]%), which has higher market shares in the neighbouring power bands than those of the Parties.
67. In the power band from 2.5 to 5.0MW, the Parties' overlap would be the highest ([40-50]%) for the period 2005-2009 but substantially lower ([20-30]%) in 2010. The increment would remain moderate and the merged entity would be competing with well-resourced players such as Caterpillar, GE, MAN and Weifang.
68. Concerning the power band 5-10MW, the combined figures would be [30-40] for the period 2005-2009, and substantially lower in 2010. The respective market shares of Tognum and Bergen in this segment in 2010 were [10-20] and [5-10] ([10-20] combined). In addition, the Parties would compete with stronger players, such as MAN and Caterpillar, with [20-30] and [20-30]%, respectively.

<sup>35</sup> There is no overlap for marine propulsion diesel reciprocating engines for military applications.

69. It should also be underlined that the market investigation pointed towards a wider product market definition. In particular, the market investigation confirmed that the segmentation proposed by the Parties, *inter alia*, could be appropriate. Under these alternative delineations, the combined shares of the Parties would be below 25% for the period 2005-2010 in all relevant markets.
70. Moreover, in the overall market for marine propulsion diesel reciprocating engines for civil applications, the merged entity's market share would be even lower ([10-20]%). Caterpillar would be the clear market leader ([40-50]%) in the EEA, followed by other competitors such as MAN, Volvo, Mitsubishi, Weifang, Wärtsilä, Mitsubishi, General Electric and Cummins. In addition, there are a significant number of small players which represent ca. [20-30]% of the total market.
71. If the heavy fuel oil reciprocating engines were to be included, the Parties' combined market shares would be similar ([10-20]% Tognum and [0-5]% Bergen). Other significant players would also be present in this market: Caterpillar ([20-30]%), MAN ([5-10]%), Wärtsilä ([5-10]%) and Volvo ([0-5]%), *inter alia*.
72. Furthermore, if separate markets for high, medium and low speed would be taken into account, the Parties would not overlap in any relevant market, as Tognum produces medium speed engines, whereas Bergen manufactures high speed engines.
73. The Parties further argue that Bergen's and Tognum's marine propulsion engines do not compete closely with each other. Their respective engine offerings have very different features and are focused on different marine propulsion applications. Tognum's engines are mainly light, small, high speed and have a high power-to-weight ratio whereas Bergen's are heavier, larger, medium speed and have a lower power-to-weight ratio.
74. According to the Parties, medium-speed engines are unable to match the power-to-weight ratio of high speed engines. This means that whilst certain medium-speed and high-speed engines may be capable of producing equivalent power outputs, the high-speed engines will typically be twice, or even three times, smaller than their medium-speed equivalents. The power-to-weight ratio is therefore particularly important in certain marine applications where space is constrained and weight is also an important factor. As a consequence, Bergen engines will not be considered for selection by marine customers with small, fast and easily manoeuvrable vessels, such as fishing, inland waterway, motor yacht, light tug and fast ferry vessels, where full output power is required quickly. Such customers will instead look to engine suppliers like Tognum, Cummins and Caterpillar.
75. On the contrary, in larger and slower vessels, with more constant speed requirements, medium-speed engines will be selected because of their better fuel-efficiency and lower life-cycle costs. In these circumstances, customers will look to engine suppliers like Bergen, Wärtsilä and Caterpillar.
76. In addition to the variation in engines used for different vessel types noted above, there is significant differentiation in the engine speeds employed by vessels of different sizes. Vessels above 20,000 tonnes dead weight use low-speed engines almost exclusively. The 10,000 to 20,000 tonnes dead weight range is split almost evenly between medium- and low-speed engines, which engine a customer chooses will be based on the ship's desired use. In ships below 10,000 tonnes dead weight medium speed engines are predominant in the 1,000 to 10,000 tonnes range, while ships below 1,000 tonnes

typically employ high-speed engines. Therefore, Tognum's and Bergen's marine propulsion engines are suitable for different customer applications.

77. The market investigation endorsed the Parties' arguments. Naval vessels, inland waterway vessels, yachts, fast ferries and tug boats typically require high power to weight ratio engines and high speed engines. Medium speed engines tend to be too heavy for those applications. Also vessels requiring full output power quickly (i.e., crew vessels, yachts or fast ferries) tend to use lightweight, high speed engines. Further, if the vessels are small (<35m) mostly high speed main engines will be installed, since medium speed engines are to be too heavy. Finally, in case vessels are larger, the vessel may be equipped with medium speed, as it could be the case for large fast ferries and large tug boats.
78. In turn, none of the respondents to the market investigation expressed any significant concern as regards the horizontal overlap between the parties. The vast majority of respondents consider that the Transaction will have limited or no impact on the market for propulsion marine diesel reciprocating engines for civil applications.
79. It appears from the above that the proposed Transaction will not meaningfully strengthen the position of either Tognum or Bergen in any of the above mentioned bands due to the following reasons: (i) the increment of Bergen based is moderate regardless of the market definition retained. (ii) Bergen's and Tognum's marine propulsion engines do not compete closely with each other. (iii) Bergen and Tognum do not overlap in the production of high, medium and low diesel reciprocating engines, and (iv) there are strong competitors active in the marine propulsion power bands, such as Caterpillar, General Electric, MAN, Volvo, Mitsubishi, Weifang, Wärtsilä, Mitsubishi, General Electric and Cummins.



**2. WORLDWIDE SHARES FOR MARINE PROPULSION DIESEL RECIPROCATING ENGINES FOR CIVIL APPLICATIONS BY POWER BAND:**

Data	Producer	0.35-0.5	0.5 - 0.75	0.75 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 5.0	5.0 - 10.0	> 10.0	Total	
Marine Propulsion Worldwide	2005-2009 Average	Other	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[0-5]%	[5-10]%	[10-20]%	[10-20]%	[...]%
	Caterpillar	[30-40]%	[40-50]%	[40-50]%	[60-70]%	[60-70]%	[40-50]%	[40-50]%	[20-30]%	[0-5]%	[...]%	
	Cummins	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[...]%	
	GE	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[...]%	
	MAN	[5-10]%	[10-20]%	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[20-30]%	[0-5]%	[...]%	
	Volvo	[10-20]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[...]%	
	TOGNUM	[0-5]%	[0-5]%	[5-10]%	[10-20]%	[20-30]%	[40-50]%	[20-30]%	[20-30]%	[0-5]%	[...]%	
	Mitsubishi	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[...]%	
	BERGEN	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[...]%	
	Wärtsilä	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[90-100]%	[...]%	
	Weifang	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[...]%	
	Total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Parties' estimates

80. As shown in the table, the combined 2005-2009 average market share of Tognum and Bergen on a worldwide level would be below 25% in any power range, with the exceptions of the following power bands: 2-2.5MW, 2.5-5.0MW and 5.0-10.0MW.
81. Concerning the power band 2.0-2.5MW, the merged entity would have a combined market share of [40-50]%, with a moderate increment of [5-10]% in 2005-2009. In 2010, however, there would not be any overlap among the Parties, as Bergen did not produce any [...]. Furthermore, there is a significant player in the market, i.e. Caterpillar, with [40-50]% of the market share and with a stronger presence in the neighbouring power bands ([60-70]% in the power band 1.5-to 2-0 and [40-50]% in the power band 2.5-5.0).
82. In the power band from 2.5MW to 5MW, the Parties also overlap in 2005-2009 and in 2010, although the combined share was moderate, [30-40]% ([20-30]% Tognum and [5-10]% Bergen) and [30-40]% ([20-30]% Tognum and [5-10]% Bergen). The merged entity will continue facing a number of competitors, and in particular, Caterpillar which had ca. [50-60]% of the market. Also, the Parties' combined shares in 2010 were similar to those of the previous years (Tognum and Bergen were [20-30]% and [5-10]% worldwide in 2010, respectively).
83. As regards the power band 5.0-10MW, the Parties would have a combined share of [30-40]%, with an increment of [5-10]%. Other strong competitors were active in the

market, such as MAN and Caterpillar, with [20-30]% and [20-30]%, respectively. In 2010, the overlap between Tognum and Bergen was even lower ([20-30]% Tognum and [0-5]% Bergen). Thus, the increment brought about by the proposed Transaction based on 2010 figures would be negligible.

84. However, as mentioned above, the market investigation pointed towards a wider product market definition. Under these alternatives product market, the Parties' combined shares would be below 25% for the period 2005-2010.
85. Also, in the overall market for marine propulsion diesel reciprocating engines for civil applications, the merged entity market share would be fairly low [10-20]% ([10-20]%). Additionally, there are well-resourced and strong competitors present in the marine propulsion market, such as Caterpillar, MAN, Wärtsilä and Mitsubishi, as well as other players such GE, Cummins and Weifang.
86. Moreover, if the heavy fuel oil reciprocating engines were to be included, the Parties' combined market shares would be even lower and the increment due to the Transaction insignificant ([5-10]% Tognum and [0-5]% Bergen, both from 2005 to 2009 and for 2010 figures). Other significant players would also be present in this market: Caterpillar ([30-40]%), MAN ([5-10]%), Wärtsilä ([5-10]%), Volvo ([0-5]%), *inter alia*.
87. The Parties note that Bergen produces medium-speed engines, whilst Tognum only produces high-speed engines. Neither Tognum nor Bergen manufactures any low-speed diesel reciprocating engines. Consequently, if the markets by engine speed were to be considered, Bergen and Tognum would not overlap in any relevant market.
88. The Parties further submit that, within marine applications, high-speed and medium-speed engines are typically used for different vessel types. High-speed engines are most frequently used for small fishing boats, inland waterway vessels, tug boats, yachts, fast ferries and certain naval vessels. In contrast, medium-speed engines are typically used in small/medium sized merchant vessels such as cargo ships, tankers and bulk carriers and off-shore supply and service vessels. Low-speed engines are used in large ships such as ocean-going tankers and container ships.
89. In addition, there is significant differentiation in the engine speeds employed by vessels of different sizes. Accordingly, Bergen's and Tognum's marine propulsion engines do not compete closely with each other. Tognum's engines are mainly light, small, high speed and have a high power-to-weight ratio whereas Bergen's are heavier, larger, medium-speed and have a lower power-to-weight ratio. Moreover, their customer base is different.
90. As mentioned before, the market investigation corroborated the Parties' arguments. Naval vessels, inland waterway vessels, yachts, fast ferries, tug boats and small vessels usually require high power to weight ratio engines and high speed engines. Medium speed engines tend to be too heavy for those applications. Whereas large vessels large may be equipped with medium speed.
91. As well, virtually no respondent expressed any significant concern as regards the horizontal overlap between the parties. The majority considers that the Transaction will have limited or no impact on the market for propulsion marine diesel reciprocating engines for civil applications.

92. It light of the above, it is unlikely that the Transaction will significantly strengthen the position of either Tognum or Bergen in any of the above mentioned bands due to the following reasons: (i) Bergen is a small player in the marine propulsion market and, thus, the increment due to the Transaction is moderate regardless of the market definition retained. (ii) Bergen's and Tognum's marine propulsion engines do not compete closely with each other. (iii) Bergen and Tognum do not overlap in the production of high, medium and low diesel reciprocating engines, and (iv) there are strong competitors active in the marine propulsion power bands (i.e. Caterpillar, General Electric, MAN, Volvo, Mitsubishi, Weifang, Wärtsilä, Mitsubishi, General Electric and Cummins, *inter alia*).
93. The Commission therefore considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the market for marine propulsion diesel reciprocating engines for civil applications and its ulterior segmentations.

**b) Diesel reciprocating engines for marine auxiliary**

94. As in the case of marine propulsion for civil application, if the markets for high, medium and low speed were to be considered, the Parties' activities would not overlap at worldwide level and in the EEA. Moreover, on a worldwide level the Parties' combined shares would be lower than in the EEA under any plausible market definition.

**1. EEA SHARES FOR MARINE AUXILIARY DIESEL RECIPROCATING ENGINES FOR CIVIL APPLICATIONS BY POWER BAND**

Data	Producer	0.35-0.5	0.5 - 0.75	0.75 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 5.0	5.0 - 10.0	> 10.0	Total	
Marine Auxiliary EEA 2005-2009 Average	Other	[20-30]%	[50-60]%	[50-60]%	[70-80]%	[60-70]%	[10-20]%	[30-40]%	[30-40]%	0%	[40-50]%	
	Caterpillar	[40-50]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[60-70]%	[60-70]%	[0-5]%	0%	[20-30]%	
	Cummins	[0-5]%	[10-20]%	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%	
	MAN	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[50-60]%	0%	[5-10]%
	Volvo	[10-20]%	[20-30]%	[20-30]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[5-10]%
	<b>TOGNUM</b>	<b>[0-5]%</b>	<b>[5-10]%</b>	<b>[5-10]%</b>	<b>[5-10]%</b>	<b>[5-10]%</b>	<b>[20-30]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>0%</b>	<b>[0-5]%</b>	
	Mitsubishi	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%	
	<b>BERGEN</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[5-10]%</b>	<b>[5-10]%</b>	<b>0%</b>	<b>[0-5]%</b>	
	Wärtsilä	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%	
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%

Source: Parties' estimates

95. As per the EEA, the combined entity's share is 25% or less across all of the power bands, for the period 2005-2009. In 2010, the shares of Tognum and Bergen in this segment are estimated to amount to [30-40]% and [0-5]% respectively. However,

Bergen produced only 5 units in this segment (for the Dutch Navy) amounting to[...] MW[...] for a military application and therefore if discounted there is no overlap between the parties' activities in this power band. In addition, there remain many other strong competitors such as Caterpillar, Wärtsilä, Cummins and Mitsubishi.

**2. WORLDWIDE SHARES FOR MARINE AUXILIARY DIESEL RECIPROCATING ENGINES FOR CIVIL APPLICATIONS BY POWER BAND**

Data	Producer	0.35-0.5	0.5 - 0.75	0.75 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 5.0	5.0 - 10.0	> 10.0	Total
Marine Auxiliary Worldwide 2005-2009 Average	Other	[20-30]%	[50-60]%	[50-60]%	[50-60]%	[50-60]%	[30-40]%	[20-30]%	[30-40]%	0%	[40-50]%
	Caterpillar	[40-50]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[60-70]%	[60-70]%	[0-5]%	0%	[20-30]%
	Cummins	[0-5]%	[10-20]%	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[5-10]%
	MAN	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[50-60]%	0%	[5-10]%
	Volvo	[10-20]%	[20-30]%	[20-30]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[5-10]%
	<b>TOGNUM</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[10-20]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>0%</b>	<b>[0-5]%</b>
	Mitsubishi	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%
	<b>BERGEN</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[0-5]%</b>	<b>[5-10]%</b>	<b>[5-10]%</b>	<b>0%</b>	<b>[0-5]%</b>
	Wärtsilä	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	0%	[0-5]%
	Total	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%

Source: Parties' estimates

96. At worldwide level, the combined entity's share is 15% or less across all of the power bands for the period 2005-2009. In 2010, in the 2-2.5MW power band, Tognum and Bergen's share are [20-30]% and [0-5]% respectively. All the competitors present in the EEA are also active worldwide.

97. When considering marine auxiliary diesel reciprocating engines for military applications for the year 2010, Tognum's share for high speed engines is estimated to be [20-30]% worldwide and [20-30]% in the EEA. Bergen has [...] produced [...] units for military marine applications (for the Dutch Navy) in the last [...] years amounting to[...] MW in 2010 and all in the EEA.

98. The Parties have been unable to estimate the medium-speed segment of this market in which Bergen is active. However, even when adding Bergen output in 2010 to the high-speed segment in which Tognum is active, their combined market share would be lower than 40%, namely [20-30]% worldwide and [30-40]% in the EEA. The Parties expect the combined share of Tognum and Bergen in an overall market of auxiliary diesel engines for military marine applications to be significantly below [40-50]% in the EEA<sup>36</sup>. There will remain a number of other producers in marine auxiliary engines such as Caterpillar, MAN, Cummins, Mitsubishi, and Wärtsilä.

<sup>36</sup> As Bergen produced [...] of [...] units in the last [...] years so that in all previous years there was no overlap.

99. Given the low combined market shares of the parties and that the market investigation did not express any significant objections against the present transaction, the Commission considers that the proposed transaction will have no effect in the market for marine auxiliary diesel reciprocating engines for civil and military applications.

**c) Gas gensets for power generation**

100. Both Bergen and Tognum manufacture reciprocating engines for power generation applications which are the main input into gensets. However, the proposed Transaction will give rise to a moderate overlap in the markets for gas gensets (less than 20% in the EEA for 2005-2009).<sup>37</sup> In addition, if the market for gas gensets were to be segmented by power band or engine speed, the Parties would not overlap. Tognum is only active in the segments below 2.5 MW, whilst Bergen is only active in the segments from 2.5 MW upwards. The Parties also submit that Tognum did not sell any gas gensets containing gas engines which had been upgraded to have a power output in excess of 2.5MW and, at the same time, Bergen did not produce any gas gensets containing gas engines which had been downgraded to have a power output of less than 2.5MW.

101. According to the Parties all engine manufacturers have the ability to package reciprocating engines into gensets such as Wärtsilä, GE, MAN and Caterpillar (the Parties' major competitors in the upstream markets for diesel and gas reciprocating engines) which are the main EEA and global competitors for Bergen and Tognum. Moreover, there are numerous non-integrated packagers, which will purchase engines from original equipment manufacturers and package those engines into gensets for local customers. Examples of such non-integrated packagers include: SDMO/Kohler (France), Koehler & Ziegler Anlagentechnik GmbH (Germany), 2G Bio-Energetechnik AG (Germany), TEDOM (Czech Republic), Kohler (USA), Stemac (Brazil), Sterling (Singapore) and Aggretech (Germany).

102. Given the above, the Commission considers that the proposed Transaction does not raise serious doubts as to its compatibility with the internal market as regards the market for gas gensets for power generation.

**d) Diesel gensets for power generation**

103. The proposed Transaction will also give rise to a horizontal overlap in the markets diesel gensets (less than [20-30]% in the EEA for 2005-2009). However, the Parties did not overlap in 2010, as Bergen did not have any production [...]. In turn, if the market for diesel gensets were to be segmented by power band or engine speed, the Parties would not overlap. Tognum is only active in the segments below 2.5 MW, whilst Bergen is only active in the segments from 2.5 MW upwards.

104. The Parties also claim that all engine manufacturers have the ability to package reciprocating engines into gensets such as Wärtsilä, GE, MAN and Caterpillar. Also, there are numerous non-integrated packagers active in this market: K&W Drive Systems (Austria), MCV (Egypt, Cuba), Meksan Engineering (South Korea), Inland Power Group (USA), Waterous Power Systems (USA), Western Branch (USA), Motor Va Turbine Uranus (Iran).

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<sup>37</sup> As a result of the large number of non-integrated packagers and distributors the Parties have no more detailed market share information for diesel or gas gensets.

105. Given the limited overlap and the existence of numerous players in the market, the Commission considers that the proposed Transaction does not raise serious doubts as to its compatibility with the internal market as regards the market for diesel gensets for power generation.

**e) Diesel fuel injection systems (upstream) – Diesel reciprocating engine for marine applications (downstream)**

106. Through its L'Orange, Tognum produces diesel fuel injection systems, which are used as an input in the production of diesel engines.

107. L'Orange, a wholly-owned subsidiary of Tognum, produces diesel fuel injection systems for medium and high-speed engines, which are mainly used in heavy industrial applications. These systems can be used in the full range of diesel reciprocating engines from 1MW to 40MW. Tognum estimates L'Orange's 2010 worldwide market share for diesel fuel injection systems for all off-highway diesel reciprocating engines to be between [5-10]% and [5-10]%. Tognum is not able to provide market share figures for the EEA.

108. With regard to fuel injection systems for medium and high-speed engines for heavy industrial applications (those engines for which L'Orange's injectors are used), L'Orange would have an estimated market share of [10-20]%. In this respect, the Parties submit that it is not appropriate to segment the market for diesel fuel injectors further given the commonality of technology, inputs and production techniques across diesel fuel injectors designed for the various engines.

109. In the downstream market for diesel reciprocating engines, the proposed Transaction would lead to a vertical link with respect to the following power bands for marine propulsion in civil application for the period 2005-2009<sup>38</sup> and in 2010.

110. At EEA level: (i) the 2-2.5MW power band in which the combined share is [30-40]% (increment of [10-20]%), (ii) 2.5-5.0MW power band in which the combined share is [40-50]% (increment of [10-20]%), and (iii) 5-10MW power band in which the merged entity's share is [30-40]% (increment of [10-20]%). In 2010, the Parties' activities overlap only in the 5-10MW power band with a combined market shares [10-20]% (increment of [5-10]%) in the EEA.

111. At worldwide level: (i) the 2-2.5MW power band in which the combined share is [40-50]% (increment of [5-10]%), (ii) the 2.5-5.0MW power band in which the combined share is [30-40]% (increment of [5-10]%) and (iii) 5-10MW power band with a combined market share of [30-40]% (increment of [5-10]%). In 2010, the Parties' activities overlap only in the 5-10MW power band with a combined market share of [30-40]% (increment [0-5]%).

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<sup>38</sup> As per marine propulsion diesel reciprocating engine for military applications, Tognum's share is approximately [30-40]% worldwide and [30-40]% in the EEA whereas Berger has made no sales in the last five years and therefore there is no overlap between the parties' activities in this segment.

112. There would also be a vertical link between diesel fuel injection systems and marine auxiliary diesel reciprocating engines between 2.0 and 2.5M for civil application in which in 2010 the market shares of Tognum and Bergen in this power band are estimated to amount to [30-40]% and [0-5]% respectively. However, in 2010, Bergen produced only one unit in this segment (for the Dutch Navy), amounting to [...] for a military application and therefore if discounted there is no overlap between the parties' activities in this power band.
113. When considering marine auxiliary diesel reciprocating engines for military applications, for the year 2010, Tognum's share for high speed engines is estimated to be [20-30]% worldwide and [20-30]% in the EEA. Bergen has only produced 5 units for military marine applications (for the Dutch Navy) in the last five years amounting to[...] MW in 2010 and all in the EEA. Therefore, there is no overlap in the period 2005-2009.
114. During the market investigation one competitor expressed concern with respect to possible vertical effects as a result of the proposed Transaction.
115. In particular, the competitor claims that as a result of the vertical link described above, L'Orange/Rolls-Royce would engage in input foreclosure by (i) limiting the supplies of fuel injection systems, (ii) degrading the quality of the products supplied and (iii) increasing prices and imposing unfavourable contractual terms.
116. The Commission analysed the impact of the potential vertical effects on competition as a result of the proposed Transaction and concluded that it does not give rise to any serious doubts specific to the proposed Transaction for the following reasons.
117. First, L'Orange currently supplies diesel fuel injection systems to a wide range of diesel engine manufacturers, including Tognum, Bergen, Wärtsilä, MAN and MaK (Caterpillar). L'Orange operates on arm's length terms with Tognum, essentially as an independent subsidiary. Daimler and Rolls-Royce do not intend to alter this approach post-merger and L'Orange will continue to operate in the same way as prior to the merger.
118. Second, according to the Non-horizontal Merger Guidelines, in order to be able to foreclose competitors, a firm must have a significant degree of market power in at least one of the relevant markets<sup>39</sup>. In the present case, L'Orange, Tognum and Bergen market share in their respective markets (as indicated in paragraphs 64-70, 79-85, 94-97 and 106-107) is not indicative of a significant degree of market power and in any event not at a level that could give rise to foreclosure concerns<sup>40</sup>.

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<sup>39</sup> See Commission's 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), paragraphs 23, 95 and 99.

<sup>40</sup> In the upstream market for diesel fuel injection systems, L'Orange market share in 2010 is less than [5-10]% worldwide and [10-20]% for medium and high-speed engines for heavy industrial applications (those engines for which L'Orange's injectors are used). In the downstream market for diesel reciprocating engine for marine applications, Tognum and Bergen's share is less than [40-50]% worldwide and in the EEA under any alternative product market definition.



119. Even if, post-merger, Rolls-Royce and Daimler were to restrict L'Orange's sales of diesel fuel injection systems and supply only to Tognum and Bergen, there would remain a significant number of other sources of supply such as independent suppliers of diesel fuel injection systems, including Bosch and Standyne as well as many manufacturers of diesel engines also produce diesel fuel injection systems for both internal use and for sale to third parties, including Cummins and Caterpillar.
120. Given the lack of market power of the merged entity in any potentially relevant product market, it is unlikely that the merged entity will have the ability and/or the incentive to engage in input foreclosure strategy post-merger.
121. Finally, L'Orange is currently supplying Bergen with [a significant proportion] of its requirements for diesel fuel injection systems. Therefore, the proposed Transaction will not change the structure of the market post-merger.

*Conclusion*

122. Against this background, it can be concluded that the concentration does not raise any serious doubts with regards to its possible non-horizontal dimension.

**IV. CONCLUSION**

123. For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation.

*For the Commission*

*(Signed)*

*Maria DAMANAKI*

*Member of the Commission*