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*Case No COMP/M.2892 -  
GOODRICH / TRW  
AERONAUTICAL  
SYSTEMS GROUP*

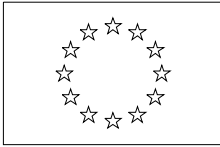
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REGULATION (EEC) No 4064/89  
MERGER PROCEDURE

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**Article 6(1)(b) NON-OPPOSITION**  
**Date: 23/08/2002**

*Also available in the CELEX database  
Document No 302M2892*



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 23/8/2002

SG (2002) D/231372

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PUBLIC VERSION

MERGER PROCEDURE  
ARTICLE 6(1)(b) DECISION

**To the notifying parties**

Dear Sir/Madam,

**Subject: Case No COMP/M.2892 – Goodrich / TRW Aeronautical Systems Group**

**I. THE PARTIES TO THE OPERATION**

1. Goodrich Corporation (“Goodrich”) is a US-based company active in the aerospace markets including aerostructures, aviation technical services, engine systems, electronic systems and landing systems.
2. TRW is a US-based corporation active in the Aerospace markets, Defence related markets and the Automotive component markets. TRW has taken the strategic decision to sell off its aerospace components activities, grouped under TRW Aeronautical Systems Group (“TRW ASG”).

## II. THE OPERATION

3. Goodrich will acquire sole control of TRW ASG by way of the acquisition of assets and share transfers. Upon completion, TRW ASG will become a wholly-owned business division of Goodrich. Therefore the proposed operation constitutes a concentration within the meaning of Article 3 (1) (b) of the Merger Regulation.
4. The worldwide turnover of Goodrich in the financial year 2001 was €4,6 billion and the worldwide turnover of TRW ASG for the year 2001 was [...]. As such, the combined worldwide turnover of the parties is well in excess of € 5,000 million. In addition, the two undertakings have each a EU turnover in excess of € 250 millions: Goodrich has a EU turnover of [...] and TRW ASG a EU turnover of [...]. Moreover, neither Goodrich nor TRW ASG have more than 2/3rds of their EU turnover in one and the same member state. The concentration therefore has a Community dimension pursuant to the Article 1(2) of the Merger Regulation.

## III. COMPETITIVE ASSESSMENT

### *Relevant Market Definition*

5. The parties' combined activities show horizontal or vertical overlaps<sup>1</sup> for a range of aerospace components and engine accessories, which can be broken down into Engine Controls (which can be further split into Electronic engine controls, Fuel controls and Fuel pumps), Flight control actuators (which can be further split into primary and secondary Flight control actuators), Missile actuation, Thrust reversers and Thrust Reverser Actuators.
6. Electronic engine controls check the behaviour of an aircraft engine. Fuel pumps provide the engine combustors with fuel, the required amount of which is regulated by the Fuel controls. Flight control actuators move various surfaces of an aircraft in order to change direction (primary flight control actuators), takeoff and land (secondary flight control actuators). Missile actuation systems control the adjustable surfaces of a missile to determine its flight path. Thrust reversers help aircraft slow down on the ground by adjusting the air flow through the engine. In order to accomplish this adjustment, thrust reverser actuators move surfaces in the engine sleeve.
7. The Commission has analysed a number of aerospace component markets in previous Decisions<sup>2</sup> and the market investigation has confirmed that each of the above aerospace components is a market in itself. Indeed, any of these components performs a distinct and vital function in the operation of the engines and aircraft types they are used for, and are engine and airframe specific (i.e. custom engineered). Therefore, the potential for demand side substitution is limited. The market investigation has not convincingly demonstrated that the above markets can be further delineated according to the aerospace application they serve (such as large commercial aircraft/engines, regional commercial aviation, helicopters,

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<sup>1</sup> TRW ASG's product range includes a number of products, such as power systems, cargo systems, Hoists and winches for which there are no horizontal or vertical overlaps with Goodrich's activities. In addition, these products cannot be considered as neighbouring markets to Goodrich's range of products. On services, both Goodrich and TRW ASG's Maintenance, Repair and Overhaul ("MRO") activities are primarily directed to servicing their own products.

<sup>2</sup> See inter alia Case No COMP/M.2220, GE/Honeywell and Case No COMP/M.2738, GEES/Unison.

general aviation, etc.). Although there is limited demand substitutability, there is a certain degree of supply substitutability on the basis of the functionality of the products and the suppliers' capabilities across the applications. In any event, with regard to this, the precise market definition can be left open as such would not materially affect the assessment of the notified concentration. In line with previous aerospace decisions<sup>3</sup>, the above markets for civil aerospace applications are world-wide in scope.

8. With regard to missile actuation and the use of the above products on military engines or aircraft, the relevant geographic market can, in line with previous decisions<sup>4</sup>, be considered to be national or EEA-wide. The precise scope of the geographical market for these products can in any event be left open as, regardless of how the geographic market is defined, there is no overlap between the parties for supplies to European customers.

### *Competition effects*

#### 2.1. Market Positions

9. In all markets concerned, the competitive overlap is limited and the merged entity's combined market share remains below 25%, such as for electronic engine controls ([15% - 25%]), fuel controls ([15% - 25%]), fuel pumps ([15% - 25%]), primary flight control actuators ([15% - 25%]) and secondary flight control actuators ([15% - 25%]). For all these products, the combined firm will continue to face several<sup>5</sup> strong, effective competitors with significant market shares.
10. For missile control actuators the parties' combined market share on the world wide market is [10% - 20%]. On the basis of a more narrow geographical market definition there are no competitive overlaps as Goodrich has never competed in Europe on military applications due to US technology export restrictions.

#### 2.2. Vertical integration

11. The transaction does not give rise to horizontal overlaps for thrust reversers or thrust reverser actuators. However, the merger leads to a vertical relationship as Goodrich buys thrust reverser actuators from TRW ASG (the latter is market leader in this upstream market with a [30% - 40%] market share) to incorporate them into thrust reversers. Goodrich holds a share of [10% - 20%] in this downstream market (civil applications only).
12. From a demand-side point of view, the results of the Commission's investigation have pointed to the contestable character of the up-stream market for thrust reverser actuators

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<sup>3</sup> See inter alia Case No IV/M. 697 – Lockheed Martin/Loral Corporation, COMP/M.2220, GE/Honeywell, Case No COMP/M.2738, GEES/Unison.

<sup>4</sup> See inter alia Case No IV/M. 1198 – BAe/SAAB, Case COMP/M. 2308 – Northrop Grumman/Litton Industries

<sup>5</sup> In the worst case (for electronic engine controls overall and engine fuel controls), the transaction would reduce the number of competitors from six to five.

where TRW ASG faces a number of credible suppliers, such as Honeywell ([10% - 20%]), Smiths ([10% - 20%]) and Parker ([10% - 20%]). These competitors are capable of neutralising any foreclosure attempt by Goodrich. In addition, the products in question are, relative to the other aerospace markets, of a moderate technological value. As a result, barriers to entry or to expansion can be considered as relatively low. Finally, the Commission's investigation has indicated that the merged entity would have little scope for raising competing thrust reverser manufacturer's costs, for instance by increasing the price of TRW ASG's products as thrust reverser actuators make up only around 15% of the overall cost of thrust reversers. Goodrich faces competition for thrust reversers from strong aerospace companies such as Boeing ([30% - 40%]), Hurel/Hispano ([20% - 30%]), General Electric ([10% - 20%]) and Bombardier ([5% - 10%]). These competitors are also important customers for other products that Goodrich has on offer which will reduce the latter's incentive to foreclose its stronger competitors from the supply of thrust reverser actuators.

13. From a supply-side point of view, Goodrich sources less than 25% of TRW ASG's thrust reverser actuators output for incorporation in thrust reversers. Goodrich holds a declining share of [10% - 20%] in this downstream market, facing three competitors with higher or comparable market shares. It is therefore unlikely that the integration of Goodrich as a buyer and TRW ASG as a seller will preclude the latter's rivals from supplying their products down-stream.
14. Thrust reversers (incorporating the thrust reverser actuator) are part of the engine nacelles which consist of inlet cowls, fan cowls, and engine build-up. Goodrich is market leader for these nacelle components with respective market shares of [30% - 40%], [40% - 50%] and [20% - 30%]. The market investigation has indicated that the transaction will not reinforce Goodrich's leading position on either the nacelles components markets or as a nacelles integrator as the nacelle manufacturer selects neither the thrust reverser nor the thrust reverser actuator to be incorporated into the nacelles.
15. Goodrich is a leading supplier of landing gear ([40% - 50%] market share). TRW ASG only produces actuator components for landing gear actuation. The transaction will not reinforce Goodrich's leading position for landing gear as TRW ASG's presence for landing gear actuation products is minimal (<[0% - 5%])% of total landing gear actuator sales) and products are sold directly to airframe manufacturers. This is demonstrated by the fact that there is no existing supply relationship between Goodrich and TRW ASG for landing gear actuation products. The market investigation has also indicated that alternative landing gear actuator suppliers such as Smiths, Liebherr, Parker and Moog have comparable expertise and capabilities.
16. TRW ASG does however hold a 40% minority participation in CESA, a landing gear component supplier that is a subcontractor to Messier Dowty, Goodrich's main landing gear competitor ([40% - 50%] market share), on Airbus platforms. The market investigation indicated that the transaction will not reinforce Goodrich's leading position for landing gear as CESA is not a significant supplier for landing gear components. In addition, TRW ASG does not exercise any control over CESA. In fact, CESA is controlled by EADS, the majority shareholder in Airbus. Goodrich would therefore have little ability to influence the existing co-operation between CESA and Messier Dowty for Airbus platforms.

### 2.3. Conglomerate effects

17. The transaction will increase the range of Goodrich's product offering. However, the new entity will continue to face competition from rivals with a significantly more extended range of products (such as Honeywell and UTC) or a higher amount of revenues derived from the aerospace industry (such as GE, Honeywell, Boeing, UTC and BAe). In addition, the review of the parties' bid history shows that both companies mainly focus on different customers and applications. TRW ASG is predominantly focused on large commercial aircraft and large turbofan engines, whilst Goodrich's equivalent products are mainly used in helicopters, general aviation (very small civil aircraft) and turboprop engines.

#### IV. **CONCLUSION**

18. In light of the above, the Commission has concluded that the proposed transaction is not likely to create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the EEA or any substantial part of that area.
19. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EEC) No 4064/89.

For the Commission

David Byrne  
Member of the Commission