EUROPEAN COMMISSION
DG Competition

Case M.10506 - PARKER / MEGGITT

Only the English text is available and authentic.

REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 6(1)(b) in conjunction with Art 6(2)
Date: 11/04/2022

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EUROPEAN COMMISSION

Brussels, 11.4.2022
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PUBLIC VERSION

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 Where possible the information omitted has been replaced by ranges of figures or a general description.

Parker-Hannifin Corporation
6035 Parkland Boulevard
44124 Cleveland, Ohio
United States of America

Subject: **Case M.10506 – PARKER / MEGGITT**
Commission decision pursuant to Article 6(1)(b) in conjunction with Article 6(2) of Council Regulation No 139/2004[1] and Article 57 of the Agreement on the European Economic Area[2]

Dear Sir or Madam,

(1) On 21 February 2022, the European Commission received notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 (the 'Merger Regulation') by which Parker-Hannifin Corporation ('Parker' or the 'Notifying Party', United States) intends to acquire within the meaning of Article 3(1)(b) of the Merger Regulation sole control over the whole of Meggitt PLC ('Meggitt', United Kingdom) by way of purchase of shares (the 'Proposed Transaction').[3] Parker and Meggitt are referred to as the 'Parties' and together as the 'Merged Entity'.

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 ('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 OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

3 Publication in the Official Journal of the European Union No C 102, 2.3.2022, p. 8.

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1. THE PARTIES AND THE OPERATION

(2) **Parker** designs, manufactures and supplies motion and control technologies and systems, and provides precision engineered solutions for a variety of mobile, industrial and aerospace markets at global level. Parker has two business divisions. The Diversified Industrial Segment is an aggregation of several business units which manufacture motion-control and fluid power system components for builders and users of various types of manufacturing, packaging, processing, transportation, agricultural, construction and military vehicles and equipment. The Aerospace Systems Segment produces hydraulic, fuel, pneumatic and electro-mechanical systems and components for the aerospace manufacturing industry, which are typically used on commercial, military and general aviation aircraft, rotorcraft and other related aerospace equipment.

(3) **Meggitt** designs, manufactures and supplies components and sub-systems for aerospace and defence markets, and selected energy applications, at global level. Meggitt is organised into four divisions. The Airframe Systems division provides braking systems for commercial, business and defence aircraft, fire protection and safety systems, power and motion, fuel systems, avionics and sensors and advanced polymer seals for civil and defence aircraft. The Energy Systems* division aggregates the Meggitt offering to aero-engine manufacturers. The division produces advanced engine composites, thermal and safety systems with a broad range of technologies. This division also provides aerospace engine flow control and sensing solutions. The Energy and Equipment division focuses on energy and defence equipment ranging from electronics cooling to ammunition handling systems and heat transfer equipment for off-shore oil and gas facilities and renewable energy applications. The Services and Support division provides a full-service aftermarket offering in respect of Meggitt products, including spares distribution and maintenance for commercial business jet and defence customers.

(4) On 2 August 2021, the boards of directors of Parker and Meggitt formally announced that they have reached agreement on the terms of a recommended cash offer for the entire issued and to be issued ordinary share capital of Meggitt by Parker.[4]

(5) It follows that the Proposed Transaction is a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

2. UNION DIMENSION

(6) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million (in 2021[5], Parker had a world-wide turnover of EUR 12 277 million, in 2020, Meggitt had a world-wide turnover of

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4 See: https://www.parker.com/portal/site/PARKER/menuitem.31c35c58f54e63cb97b11b10237ad1ca/?vgnextoid=881f52d83461b710VgnVCM100000e6651dacRCRD&vgnextchannel=9383fbdc71fd7310VgnVCM100000200c1dacRCRD&vgnextfmt=EN&newsroom=Y, accessed on 5 April 2022, and https://www meggittoffer.com/Documents/Parker_Hannifin/Cooperation_Agreement/Cooperation_Agreement.pdf, accessed on 5 April 2022.

5 Financial year ended 30 June 2021.

* Should read: Engine Systems

EUR 1 894 million). Each of them has a Union-wide turnover in excess of EUR 250 million (in 2021[6], Parker had a Union-wide turnover of EUR […] million, in 2020, Meggitt had a Union-wide turnover of EUR […] million), and they do not achieve more than two-thirds of their aggregate Union-wide turnover within one and the same Member State. The notified operation therefore has a Union dimension pursuant to Article 1(2) of the Merger Regulation.

3. RELEVANT MARKETS

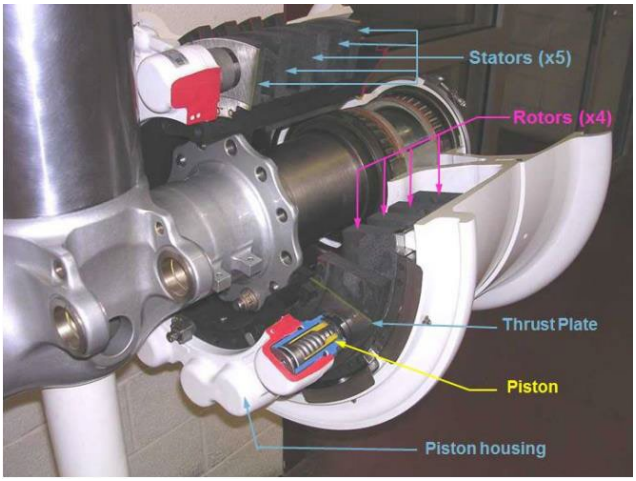
(7) The Parties' activities overlap in aerospace actuation, Aircraft Wheels and Brakes, aerospace pneumatic valves, aerospace sensors, electronics cooling systems, aerospace seals, aerospace hydraulic valves and aerospace fuel valves. The Proposed Transaction gives rise to horizontally affected markets in relation to Aircraft Wheels and Brakes ('AWB') and aerospace pneumatic valves.

3.1. Aircraft Wheels and Brakes

(8) AWB form part of aircraft landing gear. The aircraft main wheels and brakes tend to be designed, manufactured and procured together, as the brake must efficiently utilise the available space within the wheel.[7] AWB do not include tyres, which are generally supplied separately by tyre specialists.[8]

(9) **Brakes** (see Figure 1) can be hydraulic or electric, and be made from carbon or steel. Carbon brakes are lighter than steel brakes of an equivalent size but more expensive upfront. Carbon brakes use thicker but lighter rotors made of carbon. They can also absorb more energy for a given brake size. The wear rate of carbon is less sensitive to landing energy than it is in the case of steel rotors, which means that carbon rotors have a longer lifespan than steel brakes on larger aircraft.[9]

Figure 1 – Example of an aircraft brake



Source: M.8425 Safran / Zodiac (2017), Figure 3, p.18.

6 Financial year ended 30 June 2021.

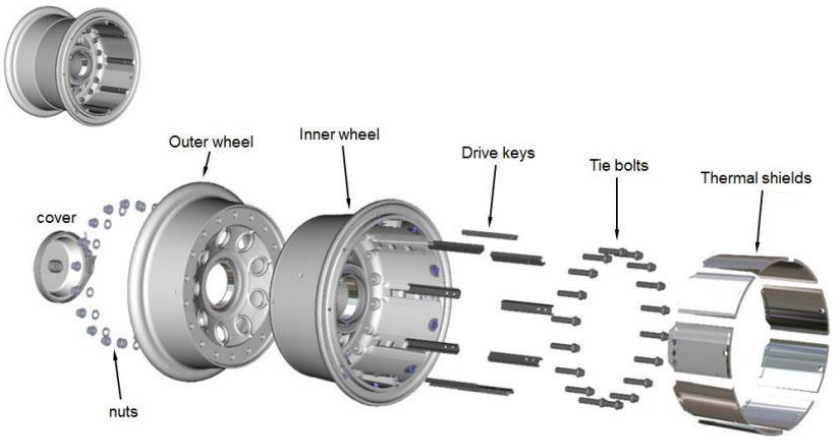
7 See Form CO, paragraph 333, Questionnaire to AWB customers, question 5, and Questionnaire to AWB competitors, question 4.

8 Form CO, paragraph 333.

9 See Form CO, paragraph 543, Minutes of a call with a customer, 13 January 2022.

(10) **Wheels** (see Figure 2) are composed of two-wheel halves: the outer and inner wheel allowing the tyre to be mounted on the wheel. Brake rotors are located in the inner wheel, except on very small aircraft where the brakes are mounted next to the wheel.[10]

Figure 2 – Example of an aircraft wheel structure



Source: M.8425 Safran / Zodiac (2017), Figure 4, p.18.

3.1.1. Overview of the Parties' activities

(11) Both Parties are active globally in the manufacturing and supply of AWB for a range of aircraft types for both civil and military applications.

(12) **Parker** produces AWB in a facility in Ohio, USA. It mainly supplies AWB with steel brakes and for smaller aircraft types.[11] In 2020, Parker achieved a turnover of EUR […] million with AWB.[12] Overall, these original equipment and aftermarket sales related to AWB make up less than […]% of Parker's 2020 global turnover.

(13) **Meggitt** produces AWB in facilities in the UK, USA and Mexico. It mainly supplies AWB with carbon brakes but is also active in the supply of AWB with steel brakes. It supplies AWB mostly for smaller and mid-sized aircraft, but also has some supply for larger and regional jets.[13] In 2020, Meggitt achieved a turnover of EUR […] million with AWB.[14] Overall, these original equipment and aftermarket sales of AWB make up around […]% of Meggitt's 2020 global turnover.

10 Form CO, paragraph 334.
11 Form CO, paragraphs 355 and 365.
12 Form CO, paragraph 340. Original equipment and aftermarket sales.
13 See e.g. Form CO, paragraph 369.
14 Form CO, paragraph 369. Original equipment and aftermarket sales.

3.1.2. Product market definition

3.1.2.1. The Commission's past practice

(14) The Commission previously considered that aircraft wheels and brakes belong to the same relevant product market, primarily because most manufacturers supply them together to customers.[15]

(15) The Commission further considered the possibility of a segmentation according to aircraft types, e.g. because of technical differences of the AWB for different aircraft types and somewhat different sets of suppliers supplying AWB for different aircraft types.[16] In this context, the Commission also noted that the procurement process of brakes and wheels on the different segments differs significantly. Brakes and wheels for large commercial aircraft are typically purchased by the end-customers, i.e. the airlines after the pre-selection of the suppliers by the airframer. Conversely, the customers of brakes and wheels for other aircraft types are the airframers who are charged at the time of supply.[17] The Commission has not considered a further segmentation within aircraft type based on engine type or weight of the aircraft. Ultimately, the exact product market definition was left open.

(16) The Commission has not previously envisaged segmenting the manufacturing and supply of AWB based on material, i.e. between carbon and steel brakes, nor between OEM and aftermarket supply or customer type.

3.1.2.2. The Notifying Party's view

(17) The Notifying Party considers the relevant product market to cover all aircraft wheels and brakes. Further, the Notifying Party does not consider a segmentation between OEM and aftermarket supply, by customer type, by aircraft type or by brake material to be appropriate.[18]

(18) **With respect to a potential segmentation by aircraft size or type**, the Notifying Party submits that '[t]*here are insufficient differences in demand and supply-side dynamics to justify a segmentation of the supply of aircraft wheels and brakes by aircraft size or type*'.[19] From a demand-side perspective, the Notifying Party states that '*while braking energy typically aligns with aircraft size and landing speed, the function that the wheels and brakes must perform is the same irrespective of the aircraft size or type on which they are fitted*'.[20] Nevertheless, '[t]*he size and complexity of brakes generally increases as aircraft landing energy (and therefore required braking performance) increases. Larger braking units may, for example, have more rotors in larger diameters*'.[21]

(19) Further, according to the Notifying Party, '*there is a high degree of supply-side substitution between brakes for different aircraft*'.[22] This is because '*competitors*

15 M.8425 - Safran / Zodiac Aerospace, para. 81.
16 M.8425 - Safran / Zodiac Aerospace, para. 82.
17 M.8425 - Safran / Zodiac Aerospace, para. 83.
18 Form CO, paragraph 398.
19 Form CO, paragraph 462.
20 Form CO, paragraph 462.
21 Form CO, paragraph 464.
22 Form CO, paragraph 463.

generally offer new wheels and brake designs in large tenders tailored to new aircraft, rather than re-using existing wheels and brakes. The new wheels and brakes are developed in parallel with the aircraft. As a result, there is limited competitive advantage for suppliers who already supply wheels and brakes for similar types of aircraft relative to other suppliers in the market'.[23]

(20) **With respect to a potential segmentation by customer type**, the Notifying Party in particular submits that differences between civil and military aircraft do not justify a segmentation. This is because '[t]*here are no material differences in demand and supply-side dynamics that would justify a segmentation of the supply of aircraft wheels and brakes by civil and military aircraft*'.[24]

(21) The Notifying Party submits that '[f]*rom a demand-side perspective, the function that the wheels and brakes must perform is the same irrespective of whether they are fitted on civil and military aircraft*',[25] '[t]*hey must safely stop the aircraft regardless of what the aircraft carries*'.[26] From a supply-side perspective, '*the same competitors supply both military and civil customers and, at least in the case of the Parties, do so interchangeably from the same manufacturing sites within their operational network in accordance with customer demand*'.[27]

(22) **With respect to a potential segmentation between OEM and aftermarket supply of AWB**, the Notifying Party submits that such a segmentation is not necessary or helpful,[28] mainly because the Parties '*do not compete with each other for the supply of AWB replacement parts on any aircraft*'.[29] Generally, '[c]*ompetition for both OEM and aftermarket supply is largely driven by the airframer's selection of the OEM supplier or suppliers for an airframe*',[30] however there is some aftermarket competition in the supply of replacement parts for '*smaller aircraft such as general aviation and helicopters*'.[31]

(23) Therefore, the Notifying Party '*consider*[s] *that a market definition which encompasses OE and aftermarket sales or (in light of the absence of competition between the Parties in the aftermarket) just OE sales, is the most appropriate manner to assess competitive dynamics in AWB*'.[32]

(24) **With respect to a potential segmentation based on the brake material**, the Notifying Party submits '*that the carbon and steel brake types do not warrant subsegmentation of the market for AWB*'.[33] This is because '[d]*espite the performance advantages of carbon brakes, steel brakes remain equipped on some of the current fleets of large / commercial aircraft, midsize / regional aircraft, and larger military aircraft. Only small general aviation aircraft and small military*

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23 Form CO, paragraph 463.
24 Form CO, paragraph 437.
25 Form CO, paragraph 438.
26 Form CO, paragraph 444.
27 Form CO, paragraph 439.
28 Form CO, paragraph 399.
29 Form CO, paragraph 400. However Parker has considered a number of options, but has not yet secured any contracts to supply aftermarket parts for Meggitt OEM AWB (Form CO, paragraph 410).
30 Form CO, paragraph 401.
31 Form CO, paragraph 406.
32 Form CO, paragraph 403.
33 Form CO, paragraph 566.

aircraft typically only use steel, as the advantages of carbon do not outweigh the costs at low braking energies. Other types of aircraft (e.g. business jets, rotorcraft) sometimes equip brakes with carbon rotors instead of steel rotors'.[34]

3.1.2.3. The Commission's assessment

(A) Distinction by type of aircraft

(25) The Commission investigated whether separate markets would exist for the manufacturing and supply of AWB by type of aircraft.

(26) While no universally agreed definition of types of aircraft appears to exist in the industry, the distinction by the types of aircraft presented in Table 1 is generally familiar to market participants.

Table 1 – Presentation by the Notifying Party of aircraft types

Type of aircraft	Description
Commercial / large	Large commercial aircraft equipped with over 100 seats that can travel at least 2,000 nautical miles (3,704 km), excluding aircraft included in 'Military'.
Regional / mid-size	Fixed wing aircraft with: • 20 – 99 passenger seats; • more than 99 passenger seats, but with a range of less than 2,000 nautical miles; or • 19 passenger seats or fewer, but with a MTOW[35] exceeding 19,000 lb (8,618 kg), excluding aircraft included in 'Business jets' or 'Military'.
Business jets	Jet powered fixed wing aircraft with 19 passenger seats or fewer, excluding aircraft included in 'Military'.
General aviation / small	Propeller powered fixed wing aircraft with: • 19 passenger seats or fewer; and • a MTOW of 19,000 lb (8,618 kg) or less, excluding aircraft included in 'Military'.
Helicopters	Any civil rotary wing aircraft of any size, excluding rotorcraft included in 'Military'.
Military (fixed wing & rotary)	All fixed and rotary wing aircraft acquired by militaries globally, including fighter jets, military transports, military tankers, drones[36] and helicopters. This includes purchases of dual use airframes such as the Boeing 737NG (available for military use as the C40 Clipper, Poseidon P8 and E-7A Wedgetail).[37]

Source: Form CO, table 97. Segmentation based on different areas of supply of AWB by aircraft types presented in M.8425 - Safran / Zodiac Aerospace*, para.407 – further amended by the Parties to include general aviation/small and business jets.*

(27) According to the results of the market investigation, most customers consider that AWB for different type of aircraft constitute separate product markets due to limited substitutability in terms of product characteristics, applications, regulations and prices.

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34 Form CO, paragraph 545.

35 MTOW: maximum take-off weight

36 Drones are also known as unmanned aerial vehicles (UAVs). Military fixed-wing UAVs are used for intelligence, surveillance, target acquisition, reconnaissance and strikes.

37 A further type of military fixed-wing aircraft are dedicated trainer aircraft, designed specifically to facilitate flight training of pilots.

(28) **First**, a majority of customer that expressed a view say that there are significant technical differences between AWB for different types of aircraft (i.e. general aviation, business jets, commercial aircraft, helicopters, etc.)[38]. The market investigation supports a finding that those significant technical differences between AWB of different types of aircraft are due to different sizes/weight, landing speeds, brake wear and regulations. One customer explains that '[i]*t will vary considering utilization, landing speed, or other characteristics'*.[39] Another customer further specifies: '*There may be technical differences between different types of aeroplanes, class, preferred technology for the aeroplane and/or customer and obviously budget*'.[40]

(29) When asked to explain the technical differences one customer explains that among others, '*utilization* [and] *landing speed*' are key considerations.[41] Another customer explains that size and certification regulations do play a role in AWB complexity: '*The difference is given with the sizing combined with the certification regulations. For AWB systems there is a difference in the complexibility* (sic*) provided based on the aircraft application (CS25,etc.), the redundancy* (sic*) and the design assurance level to be applied plays a significant role for the technical difference*'.[42]

(30) The size/weight, landing speed, price and regulation, which appear as decisive elements for aircraft wheels and brakes design typically correspond to a different type of aircraft as described by customers. A customer explains: '*The loads and requirements for a smaller, higher speed fighter aircraft will differ from those for a larger cargo aircraft. The loads for a fixed wing aircraft landing at speed are different from those on a helicopter landing vertically*'.[43] Similarly a customer explains with respect to jet engine and turboprop aircraft, that '[t]*he main difference between these two types of aircraft engines is speed. Turboprop propelled aircrafts cannot reach the same speed as those equipped with jet engines*'.[44]

(31) **Second**, the Parties' internal documents further confirm the fact that AWB for different types of aircraft constitute separate product markets as both Parker and Meggitt evaluate internally their competitive position for AWB by type of aircraft.

(32) Parker for example in an internal document titled '[Parker's internal documents]' presents a '*Market Segmentation*' [Parker's market analysis][45] [Parker's market analysis].[46] For each of these markets/segments, Parker considers different customers, addressable market sizes, relevant technologies and investment focuses. This clearly shows that Parker internally considers the manufacture and supply of AWB to be specific to and different between different aircraft types.

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38 Replies to Questionnaire to AWB customers, question 14.1.

39 Reply to Questionnaire to AWB customers, question 14.1.1.

40 Reply to Questionnaire to AWB customers, question 14.1.1. Courtesy translation. The original Italian reads: '*ci possono essere differenze tecniche tra i diversi tipi di velivoli, classe, tecnologia preferita per il velivolo e/o dal cliente e ovviamente budget*'.

41 Reply to Questionnaire to AWB customers, question 14.1.1.

42 Reply to Questionnaire to AWB customers, question 14.1.1.

43 Reply to Questionnaire to AWB customers, question 14.1.1.

44 Minutes of a call with a customer, 13 January 2022.

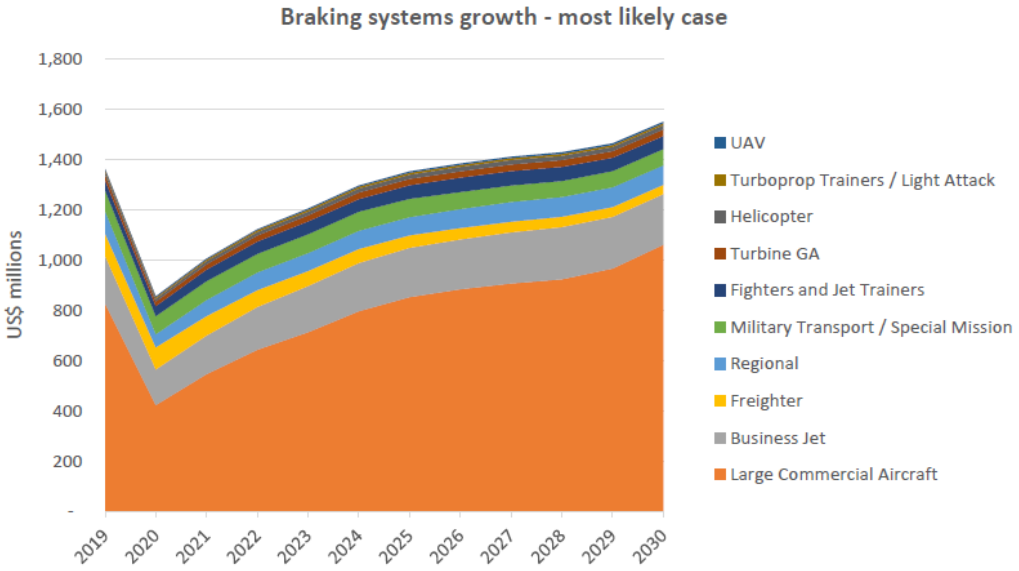
45 eVTOL: electric vertical take-off and landing. eCTOL: electric conventional take-off and landing.

46 Reply to Request for Information 4, Annex EC RFI4-001.

(33) Meggitt, in an internal document presenting its strategic plan for breaking systems[47], distinguishes between [Meggitt's business strategy]. Similarly in Meggitt's portfolio analysis the market is assessed by type of aircraft splitting between '[Meggitt's business strategy].[48]

(34) **Third**, industry reports made by an independent third party also consider the market of AWB based on the type of aircraft. The Counterpoint landing gear report 2021,[49] which the Parties define as '*a reliable third party estimate to assess the relative strength of different competitors*',[50] analyses the market by aircraft type. As illustrated in Figure 3 below, the report considers the AWB market by type of aircraft, including UAV, helicopter, general aviation ('GA'), trainers and business jets.

Figure 3 – Counterpoint braking systems growth



Source: Form CO, Annex 6C-001 – Counterpoint landing gear 2021.

(35) **Fourth**, on the supply-side, certain manufacturers of AWB are not active at all for certain aircraft types, such as Beringer and Parker in large commercial aircraft or military cargos, or Safran and Honeywell in small general aviation. Even if AWBs are not off-the-shelf products and do require the development of a new design for each specific platform, previous know-how and technology developed for AWB for a similar aircraft type may typically limit the sunk costs associated with the development of a new design.[51]

47 Form CO, Annex 5.4.B-028, page 30.

48 Military aircraft is defined in the document as '*Military fighter, special mission, trainer, transport, rotary wing and UAV*'.

49 Form CO, Annex 6C-001.

50 Form CO, paragraph 670.

51 See e.g. Minutes of a call with a competitor, 9 December 2021.

(36) In view of the above, for the purpose of this Decision, considering in particular that (i) market participants confirmed that there are significant technical differences between AWB for different types of aircraft, (ii) the Parties' internal documents highlight differentiated strategies for AWB for the different kinds of aircraft and (iii) third party reports assess the AWB market dynamics based on different types of aircraft, the Commission considers it appropriate to define separate product markets for AWB by aircraft type, namely AWB for each of general aviation, business jets, UAVs, military fixed-wing trainers and helicopters.

(B) Possible distinction by engine type and weight

(37) The investigation also looked into whether any sub-categories could be identified within each type of aircraft, depending on the engine type and the exact weight of the aircraft – as these aspects have a determining influence on the respective required AWB characteristics. The market segmentation by aircraft type already in itself corresponds to certain weight ranges (e.g. general aviation aircraft have a MTOW of 19,000 lb or less) or engine types (e.g. business jets are jet engine powered, whereas general aviation aircraft have piston or turboprop engines). However, within these aircraft types, further relevant sub-segments based on weight or engine characteristics may exist.

(38) Based on the results of the market investigation, overall, competitors[52] were of the view that product characteristics and prices are not differentiated within each aircraft type, while customers[53] had mixed views. As explained below, there nevertheless seems to be a possible distinction within general aviation by engine type and weight, and within business jets by weight.

(39) For general aviation, the market investigation revealed that a potential segmentation based on the type of engine (e.g. turboprop/piston) is plausible, as it directly influences landing speeds. While the Notifying Party submits that '[t]*here is a high degree of overlap between the speeds at which turboprop and piston aircraft land, as landing speed (and stall speed) is primarily determined by aerodynamic characteristics and aircraft weight*',[54] it nevertheless appears that certain turboprop aircraft have higher landing speeds than most piston aircraft.[55]

(40) For example, industry reports made by Counterpoint, an independent third party, also consider turboprop aircraft only, excluding piston aircraft from their analysis. The Counterpoint landing gear report 2021[56] states: '*The scope of this report is turbine aircraft only, so we exclude from our analysis wheels and brakes that are supplied for piston-engine aircraft*'.

(41) The segmentation based on type of engine appears also in the Parties' internal documents, most often singling out 'turboprop' but also, when assessing general aviation, defining segments by type of engine as illustrated in Figure 4 below and distinguishing piston, turboprop and electric engine aircraft with different customers and different investment foci.

52 Replies to Questionnaire to AWB competitors, question 17.
53 Replies to Questionnaire to AWB customers, question 15.
54 Form CO, paragraph 78.
55 See e.g. Form CO, paragraph 77.
56 Form CO, Annex 6C-001.

Figure 4 - General aviation market segmentation

[Parker's market analysis]

Source: Reply to Request for Information 4, Annex EC RFI4-001

(42) An entirely different engine type from traditional piston and turboprop engines are used in the nascent electric segment (as also described in Figure 4 above). As only few aircraft with electric engines are in use today, the exact impact of these new products on the dynamics in the AWB for general aviation market are yet unknown. However, in any case, eVTOL aircraft take off and land vertically, thereby having a very low landing speed. eCTOL take off and land in a similar way to general aviation aircraft with traditional engines – therefore it remains uncertain whether these new types aircraft will have a significant impact on AWB requirements.

(43) The market investigation showed that the weight of the aircraft does impact the specifications and the parts of the aircraft. A customer explains that weight can impact certification and incidentally specifications for the parts of the aircraft: '*Different levels of certification are required depending on number of passengers that an aircraft can carry and of its weight. They indirectly affect the specifications for the parts of the aircraft, since they establish different requirements in terms of testing, documentation, etc.*'[57] Similarly a competitor explained that there can be distinctions based on weight for example distinguishing between 'light' and 'upper class GA' however without a clear threshold between the categories '*Within GA, there are two categories: light experimental aviation […] and upper class GA […] There is not a specific weigh or mass threshold between the two categories; it depends on the model. However, light aviation aircrafts tend to be smaller, generally under 1,500 kg.*'[58]

(44) For business jets, aircraft weight also appears to be a possible differentiated factor with respect to the respective AWB requirements, but there do not appear to be clear dividing lines. The Parties' AWB capabilities appear to be linked to certain aircraft weight ranges. For example, Parker at present can address AWB demand for aircraft with a maximum MTOW of 18,300 lb[59] (yet appears to be working on expanding its capabilities beyond that). This shows that aircraft weight is an important differentiating factor when considering AWB (and in any case is also closely related to the definition of separate AWB markets by aircraft type, as generally business jets tend to be heavier than general aviation aircraft, and most commercial aircraft are heavier than most business jets, etc.)

(45) Further, aircraft weight categories for business jets are sometimes referred to in some internal documents related to AWB (e.g. very light/light/light medium business jets[60]) or with a specific weight threshold such as '<20lbs',[61] but no consistent, specific or standard weight categories can be identified.

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57 Minutes of a call with a customer, 15 December 2021.

58 Minutes of a call with a competitor, 15 December 2021.

59 Form CO, table 127.

60 Reply to Request for Information 4, Annex EC RFI4-001.

61 See e.g. Reply to Request for Information 10, Annex EC RFI10-005 - AWB IRD Think Tank 2017-11-14, page 4.

(46) In view of the above, for the purpose of this Decision, the Commission considers that defining the AWB markets by type of aircraft already generally corresponds to a relevant segmentation by weight and engine type.

(47) A segmentation of AWB markets by engine type could be relevant for general aviation (piston and turboprop) and military fixed-wing trainers (turboprop and jet) and a segmentation by end-use (civil or military) could be relevant for helicopters. The Commission considers that these possible segmentations can be left open, since (i) for helicopters, the Proposed Transaction raises serious doubts as to its compatibility with the internal market for AWB for helicopters overall as well as for civil or military helicopters separately; (ii) for general aviation, the Proposed Transaction raises serious doubts as to its compatibility with the internal market for AWB for general aviation overall as well as for AWB for turboprop general aviation separately; (iii) for military fixed-wing trainers, the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market for both military fixed-wing trainers overall, and turboprop and jet trainers separately.

(48) Finally, in the absence of specific relevant weight ranges within general aviation and business jets, the Commission considers that there is no need to define separate markets. The Commission will nevertheless consider supplies' capabilities in relation to specific aircraft weight (e.g. large general aviation aircraft and small business jets) as part of the competitive assessment of the Proposed Transaction.

(C) Possible distinction by end-use of the aircraft, i.e. between civil and military

(49) The Commission investigated whether the markets for the manufacture and supply of AWB should be segmented depending on whether the aircraft is for civil or military use.

(50) During the market investigation, a majority of customers, when asked whether there is a difference in the AWB they procure for civil and military aircraft, indicates that there are differences in terms of technical characteristics, cost, regulations but also suppliers depending on end use. A customer states that '[t]*he requirements for military and commercial aircraft are not quite the same, as it depends on the operating conditions. At system level, design principles are common, but each programme should cover all the customer and operations regions' needs/requirements. Volumes are not comparable from military and civil, and it is one of the main drivers for the production cost and final product price*'.[62] Other customers provide more specific statements about certifications and regulatory requirements. For example, a customer considers that the differences lie in '[g]*overmental restrictions, architectural differences, certification differences etc*'.[63] Another customer further explains: '*Civil registered aircraft have to be FAA certified and qualified. Military aircraft do not have to meet the FAA requirements, but do have to meet regulatory requirements from the military customers*'.[64]

(51) Nevertheless, when asked whether those differences would apply for similar aircraft type such as a similar helicopter sold both for civil and military uses, customers provided mixed replies. A customer explains that the decision to redesign or not is

62 Reply to Questionnaire to AWB customers, question 19.
63 Reply to Questionnaire to AWB customers, question 19.
64 Reply to Questionnaire to AWB customers, question 19.

made on a case-by-case approach: '*If a military design is intended for civil use (or vice-versa) and wants to be used for military use (or vice-versa), its suitability for fulfilment of the regulatory basis as well as the performance requirements has to be evaluated. In some cases nothing needs to be redesigned, in others a redesign is necessary and in some others some kind of limitations need to be imposed*'.[65] Another customer confirms that any potential redesign requirement would, for example, depend on the weight difference between the military and civil version of an aircraft: '*Different requirements might necessitate a redesign for different usage, e.g military versions. For example different take off and landing weights*'.[66]

(52) In the Parties' internal documents, the distinction between military and civil is mentioned in several documents. For example, in a Parker internal document, '*Military Aircraft*' (and their respective AWB requirements) are considered on a separate slide from general aviation and business jet aircraft (see Figure 5 below). In this particular slide, Parker considers turboprop trainer aircraft (as it is not active in AWB for jet engine trainer aircraft), UAVs, rotorcraft and fighters/bombers. For each of these types of military aircraft, Parker identifies specific (and different) groups of customers, relevant technologies and investment foci. This document therefore not only shows that Parker distinguishes between AWB used for civil and military aircraft, but also considers significant differences between the different types of military aircraft. Similarly, while some competitors consider the AWB supplied for military-fixed wing aircraft overall to be rather homogeneous in terms of product characteristics and prices, another competitor submits that there are relevant differentiations '[d]*epending on request of weight and programme from* [the] *customer*'.[67]

Figure 5 – Parker's view of AWB for different types of military aircraft

[Parker's market analysis]

Source: Reply to Request for Information 4, Annex EC RFI4-001.

(53) Further, an industry report made by Counterpoint, an independent third party, also considers the different types of aircraft as illustrated in Figure 3 above but lists helicopters together without splitting between civil and military.

(54) In view of the above, for the purpose of this Decision, the Commission considers that due to different customer and regulatory requirements, a distinction between AWB for civil and military aircraft is relevant. For helicopters specifically, the Commission considers that whether the market should be segmented between civil use and military use can be left open since the Proposed Transaction raises serious doubts as to its compatibility with the internal market for AWB for helicopters overall as well as for civil or military helicopters separately. Considering military fixed-wing UAVs and military fixed-wing trainers, it has to be noted that these do not tend to be dual-use concepts, but are developed specifically for military applications. The Commission therefore considers that the markets for the manufacture and supply of AWB for military fixed-wing UAVs and military fixed-wing trainers are distinct markets.

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65 Reply to Questionnaire to AWB customers, question 19.2.

66 Reply to Questionnaire to AWB customers, question 19.2.

67 Reply to Questionnaire to AWB competitors, question 17.

(D) Possible distinction between AWB original parts and spare parts

(55) The Commission investigated whether there should be a distinction between the supply of the original AWB parts in an aircraft and the supply of the spare parts and replacement units during its lifetime.

(56) All the customers that expressed a view during the market investigation confirmed that they (or their customers) procure aftermarket supply (i.e. spare parts and replacement units) of AWB from the same AWB supplier from which they sourced the original equipment AWB.[68]

(57) A majority of customers also confirm that spare-part prices are negotiated together with the original equipment contract. One customer explains: '*Usually there are Master Purchase agreement in place which handle Production. Spares and Repair*'.[69] Another customer confirms that: '*Negotiated with the original equipment contract, in the product support agreement*'.[70] Yet another customer confirms that the negotiation is '[s]*et and approved in the original equipment contract between the parties*'.[71] And another more specifically states that the price of the spare part is defined as a multiple of the OE part '*usually spare parts price are set multiplying the OE by a spare factor*'.[72]

(58) In addition IP is usually held by the AWB manufacturer and is needed to produce both the original part and spare parts, as explained by a customer: '*the AWB is qualified as part of the landing gear system and the AWB OEMs hold the IP and other requirements related to manufacture of these products for both production and spare parts*'.[73] This makes switching very difficult for air framers.

(59) Lastly, certification of airworthiness, through which aviation agencies such as the Federal Aviation Administration (FAA) and the European Union Aviation Safety Agency (EASA) grant authorization to operate an aircraft in flight, could be invalidated by any part change, therefore limiting the ability to switch component even for replacement units, as explained by a customer: '*the basis for airworthiness is tied to the data from aircraft level and AWB testing and analysis, using replacement hardware that was not tested or verified to the same extent would invalidate the certification*'.[74]

(60) Nevertheless, for some smaller aircraft of general aviation with simpler AWB designs, the market investigation suggests that alternative replacement hardware could be envisaged. Such a switch however requires detailed analysis and testing to demonstrate interchangeability with the original part and compliance with regulatory requirements. As explained by the Notifying Party: '*AWB OE suppliers tend to focus scarce engineering resources on new OEM opportunities, rather than smaller aftermarket-only opportunities*'.[75] However there are number of aftermarket

68 Replies to Questionnaire to AWB customers, question 21.
69 Reply to Questionnaire to AWB customers, question 22.
70 Reply to Questionnaire to AWB customers, question 22.
71 Reply to Questionnaire to AWB customers, question 22.
72 Reply to Questionnaire to AWB customers, question 22.
73 Reply to Questionnaire to AWB customers, question 21.1.
74 Reply to Questionnaire to AWB customers, question 21.1.
75 Form CO, paragraph 394.

specialists such as Rapco, Grove, Matco and APS that focus on small and general aviation aircraft wheel and brake.[76]

(61) In view of the above, for the purpose of this Decision, considering in particular that (i) the supply of spare parts is usually linked to the original part contract and (ii) significant constraints limit the development of aftermarket spare parts, the Commission is of the view that the product markets for AWB typically include both the original parts and spare parts/replacement units. The only possible exception relates to the manufacture and supply of AWB for general aviation, for which the Commission considers that the question whether the supply of original parts and spare parts are part of the same market can be left open, since the Proposed Transaction raises serious as to its compatibility with the internal market whether AWB for general aviation combines original parts and spare parts or only includes original parts.

(E) Possible distinction by brake material (i.e. steel or carbon)

(62) As to the possible distinction by brake material, the market investigation showed that customers do choose between carbon and steel brakes based on a trade-off between criteria including weight savings, performance, wear out duration, price and technical requirements.[77]

(63) Overall, depending on the type of aircraft, the performance and price requirements, the aircraft manufacturer decides between steel or carbon, as explained by a customer: '*In relation to aircraft wheels and brakes, as a general rule, [customer name]'s larger jets use carbon brakes and its smaller jets, turbo prop and piston aircraft use steel brakes*'.[78] Therefore, the choice of material would typically be driven by customer choice, rather than pure technical barriers. The same customer explains that alternative materials could be offered by the same supplier, and the aircraft manufacturer would consider which offer is the best: '*The OEM usually makes the decision on whether to use carbon or steel brakes as part of its definition of the performance characteristics of the aircraft and taking into consideration the mission profiles and price point for the aircraft. Other factors may also influence the OEM's decision. However, in our experience, the decision on whether to use carbon or steel is a decision of the OEM. The supplier can always suggest an alternative material as part of its bid*'.[79]

(64) Nevertheless, for certain types of aircraft, such as helicopters and business jets, the outcome of that decision-making process appears generally more open than for others. Today, general aviation aircraft commercialised typically have steel brakes, while regional and large commercial aircraft have carbon brakes. For helicopters and business jets, however, the evidence suggests that the two materials competed against each other in the past at least in some specific programs. For helicopters, a customer explains that '*the material is not specified; only the expected performance is specified*'.[80] Another customers states specifically for helicopters that '*I specify the brake material when awarding the tender to the winning supplier (i.e. suppliers*

76 Form CO, paragraph 396.
77 Replies to Questionnaire to AWB customers, question 19.2.
78 Reply to Questionnaire to AWB customers, question 6.
79 Reply to Questionnaire to AWB customers, question 10.1.
80 Reply to Questionnaire to AWB customers, question 10.1.

could participate with either carbon or steel brake proposals in the tender process)'.[81] For business jets, the Parker internal documents show that the supply of AWB for the [Parker tender] involved a carbon offering, as an alternative proposal to steel brakes: '[Parker customer] *requested a primary proposal utilizing a steel brake assembly* [Parker customer] *has shown a strong interest in carbon. Alternate ROM proposal for carbon brake to be provided in addition to primary proposal*'.[82] Similarly, for the [Parker tender] business jet the RFP received from the customer was open to different brake materials[83] and Parker bid and won with steel AWB. The market investigation therefore indicates that at least for some types of aircraft both steel brakes and carbon brakes may be considered by air framers during the design stage and earlier stages of the tendering process. The market investigation also suggested that carbon would become a more viable alternative for general aviation in the future as its costs competitiveness increases. In this respect, one customer clarified that: '*It is likely that, in the future, smaller aircrafts below 17,000lbs (light business jets and GA) start to incorporate carbon brakes on a more regular basis, since it is very attractive in terms of weight saving. As carbon technology becomes more common in this segment/weight range, prices will decrease proportionately, as it normally happens with all technologies as they progressively become more widespread*'.[84]

(65) Similarly, the Parties' internal document do not often track competitive position by materials in AWB strategy documents but rather by type of aircraft.[85] Still, the distinction between carbon and steel is sometimes mentioned, in particular as a way to point to particular strengths or weaknesses of a given player. For example, Parker in an internal document[86] points, within each category of aircraft, to the lack of carbon capabilities or carbon pedigree of some competitors and lists specifically carbon capable players for some categories of aircraft.[87]

(66) In view of the above, for the purpose of this Decision, considering in particular that steel and carbon brakes do compete against each other for certain programmes, the Commission considers that there is no need to define separate AWB markets based on the brake material (i.e. steel and carbon). The Commission will nevertheless consider supplies' capabilities in relation to the brake material as part of the competitive assessment of the Proposed Transaction.

(F) Conclusion

(67) In view of the above, for the purpose of this Decision, the Commission considers it appropriate to define separate product markets for the manufacture and supply of AWB for each aircraft type, namely AWB for each of general aviation, business jets, military fixed-wing UAVs, military fixed-wing trainers and helicopters.

(68) For general aviation, the Commission considers that the questions whether the market should be segmented (i) between the manufacture and supply of AWB

81 Reply to Questionnaire to AWB customers, question 10.1.
82 Reply to Request for Information 2, Annex RFA-0261.
83 Form CO, paragraph 358.
84 Minutes of a call with a customer, 13 January 2022.
85 For Parker: Form CO, Annex 5.4.A 072. For Meggitt: Form CO, Annex 5.4.B 029.
86 Reply to Request for Information 6, Annex EC RFI6-019.
87 Reply to Request for Information 6, Annex EC RFI6-019.

original parts and spare parts; and (ii) between AWB for piston and turboprop aircraft can be left open, since the Proposed Transaction raises serious as to its compatibility with the internal market for AWB for general aviation overall, as well as for AWB original parts separately and AWB for turboprop aircraft separately.

(69) For helicopters, the Commission considers that the question whether the market should be segmented between civil use and military use can be left open since the Proposed Transaction raises serious doubts as to its compatibility with the internal market for AWB for helicopters overall as well as for civil or military helicopters separately.

(70) For military fixed-wing trainers, the Commission considers that the question whether the market should be segmented between AWB for turboprop and jet aircraft can be left open, since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market for AWB for military fixed-wing trainers overall, as well as for military fixed-wing trainers turboprop and jet aircraft separately.

(71) As to the possible segmentations (i) by weight range within each category of aircraft (e.g. general aviation and business jets) and; (iii) based on brake material (steel and carbon) the Commission concludes that there is no need to define separate markets. The Commission will nevertheless consider the suppliers' capabilities in relation to specific weight ranges or brake material as part of the competitive assessment of the Proposed Transaction.

3.1.3. Geographic market definition

3.1.3.1. The Commission's past practice

(72) In its previous decisional practice, the Commission consistently defined the geographic markets for the supply of various commercial aircraft components as worldwide in scope.[88] This was confirmed in *Safran / Zodiac Aerospace*, where the Commission defined the geographic market for the supply of various aerospace systems and components, including aircraft wheels and brakes, as worldwide.[89]

(73) In contrast, for specific military and defence applications, the Commission has, in line with its past decisional practice on military equipment,[90] left open in *Safran / Zodiac Aerospace* the possibility to define markets on an EEA-wide or national basis due to, among other factors, the existence of specific government regulations (such as export restrictions) or national security-related preferences for local suppliers.[91]

3.1.3.2. The Notifying Party's view

(74) The Notifying Party submits that the relevant geographic market for AWB is global. In particular, the Notifying Party considers that both Parker and Meggitt supply wheels and brakes to almost all major airframers globally, including to airframers

88 See e.g: Commission decision in case M.6410 - *UTC/ Goodrich*, paragraph 45.

89 Commission decision in case M.8425 - *Safran / Zodiac Aerospace*, paragraphs 297-298.

90 Commission decision in case COMP/M.4653 – *MBDA / Bayern- Chemie*, paragraphs 21-23; Commission decision in case COMP/M.5032 – *Roxel / Protac*, paragraph 33.

91 Ibid. paragraphs 299-300.

headquartered in Europe, the US, Brazil, China, Japan, Taiwan, South Korea, Canada and Israel. The Notifying Party argues that '*competitors similarly supply wheels and brakes to airframers in a wide range of countries. Aircraft wheel and brake suppliers also supply aftermarket spares directly to aircraft operators who are located in almost every country in the world*'.[92]

(75) In addition, the Notifying Party considers there to be a global market for wheels and brakes for military aircraft as well as civil aircraft since '*military customers do not appear to materially prefer national suppliers so long as the suppliers can fulfil the relevant procurement/regulatory requirements*'.[93] In support of this, the Notifying Party stresses that '*the UK does not currently produce any significant number of military aircraft domestically, relying primarily on US and pan-European platforms*'[94] and explains that '[e]*quipment supplied by Honeywell, Raytheon, Safran, Meggitt and Parker is used extensively on major Western military airframes'*[95] given that they '*all compete in the supply of wheels and brakes for military aircraft manufactured in the US*'.[96]

3.1.3.3. The Commission's assessment

(76) The large majority of respondents to the Commission's market investigation, both customers and competitors, confirmed that the market for the manufacture and supply of AWB should be considered global in scope.[97] One customer explained that it has '*the freedom to procure wherever is available*'[98] while another stressed that the request for proposal is sent to multiple suppliers globally.[99] In addition, several customers reported that they procure AWB in various regions of the world.[100] Similarly, a competitor submitted that it '*supplies customers at the worldwide level'*.[101]

(77) Some market participants pointed to the possibility that, for some military applications and in particular highly sensitive programmes, the market could be narrower than global. In this respect, some customers submitted that (i) very specific military programmes may require that wheels and brakes be procured locally, meaning in the country where the aircraft is being manufactured or those countries participating in the programme,[102] and that (ii) export control measures and regulations such as ITAR, may impose restrictions for non-allied countries.[103] However, the market investigation suggests that those restrictions would not be typical in those markets but rather the exception.[104] In addition, all competitors

92 Form CO, paragraph 652.
93 Form CO, paragraph 653.
94 Ibid.
95 Ibid.
96 Ibid.
97 Replies to Questionnaire to AWB competitors, question 31; Replies to Questionnaire to AWB customers, question 24.
98 Reply to Questionnaire to AWB customers, question 24.1.
99 Reply to Questionnaire to AWB customers, question 24.1.
100 Replies to Questionnaire to AWB customers, question 24.1.
101 Reply to Questionnaire to AWB competitors, question 31.1.
102 Replies to Questionnaire to AWB customers, question 24.1.
103 Reply to Questionnaire to AWB customers, question 24.1.
104 Replies to Questionnaire to AWB customers, replies to question 20.

replying to the market investigation did not consider narrower geographic markets as relevant for the manufacture and supply of wheels and brakes for military aircraft.[105]

(78) Regarding a possible global market excluding some specific countries (i.e. China and Russia, where conditions of supply and demand may differ), a majority of competitors explained that they supply customers in these two countries.[106] One competitor explained that its customers in these two countries are typically Chinese and Russian airlines. Customers unanimously indicated that suppliers in Russia and China would typically not be alternatives.[107] Some customers have also explained that, in any event, there are no AWB suppliers in these countries.[108]

(79) In view of the above, for the purpose of this Decision, the Commission considers that the relevant geographic market for the manufacture and supply of AWB is global in scope. The results of the market investigation do not support the existence of narrower geographic markets even for military applications.

3.2. Aerospace pneumatic valves

(80) Aerospace valves control fluid or air/gas in various aircraft systems. These systems convey liquid or air/gas throughout the aircraft to perform different functions. Examples include the pneumatic systems, hydraulic systems, fuel systems, and water and waste systems.

3.2.1. Overview of the Parties' activities

(81) While Parker is active in the supply of various aerospace valves for both engine and airframe applications, Meggitt is primarily active in the supply of pneumatic valves for engine applications, mainly for military applications.

3.2.2. Product market definition

3.2.2.1. The Commission's past practice

(82) In *GE / Honeywell*, the Commission has examined engine controls, which included different types of valves (bleed valves, control valves, anti-ice valves, solenoid valves) as well as other products such as air turbine starters, coolers, sensors, filters and other miscellaneous components.[109] The Commission concluded that each of those products should be considered to constitute a separate market.[110] Accordingly, all types of valves (e.g. pneumatic, hydraulic, fuel) were assessed within the same product market without segmenting further.[111]

(83) In this previous case, the market investigation showed that it would not be appropriate to identify separate markets for each of the engine control products

[105] Replies to Questionnaire to AWB competitors, question 31.
[106] Replies to Questionnaire to AWB competitors, question 32.
[107] Replies to Questionnaire to AWB customers, question 25.
[108] See replies to Questionnaire to AWB customers, question 25.1.
[109] Commission decision in case M.2220 - *GE / Honeywell*, paragraphs 332-336.
[110] Ibid. paragraph 332.
[111] Ibid.

(including valves) according to the different jet aircraft engines (for large commercial aircraft, regional aircraft, and corporate aircraft).[112]

(84) While the Commission has not previously segmented the market for aircraft valves according to the type of valves, in *Safran / Zodiac* the Commission considered, as part of its competitive assessment, the upstream market for 'air valves' (i.e. pneumatic valves).[113]

3.2.2.2. The Notifying Party's view

(85) The Notifying Party considers the relevant product market to be the supply of aerospace pneumatic valves and that no further segmentation of aerospace pneumatic valves is appropriate.[114]

(86) Regarding a possible segmentation between airframe and engine systems, the Notifying Party considers that aerospace pneumatic valves used for airframe and engine systems form part of the same product market, since the functionality and characteristics of an aerospace pneumatic valve are fundamentally the same regardless of whether the valve is used in the airframe or engine system.[115]

(87) As to a possible segmentation by valve type (e.g. engine control valves, anti-ice valves, bleed-air valves etc.), the Notifying Party considers that there are no material differences in demand- and supply-side dynamics that would justify a segmentation of aerospace pneumatic valves by specific valve type.[116]

3.2.2.3. The Commission's assessment

(88) Aerospace valves are components used to control fluid or air/gas flow in various aircraft systems, including the pneumatic systems, hydraulic systems, fuel systems, and water and waste systems. Aerospace pneumatic valves is the only sub-set of aerospace valves in which the Parties are both active.

(89) As will be further explained below, the Commission considers that the exact product market definition for pneumatic valves can be left open since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market for both pneumatic valves overall as well as for potential narrower pneumatic valve markets distinguishing between (i) airframe and engine systems or (ii) segmented by valve type.

(A) The distinction between pneumatic valves for airframe and engine systems

(90) The Commission's market investigation was not entirely conclusive as to whether pneumatic valves should be segmented between valves for airframe systems and for engine systems. On the one hand, a majority of competitors and customers providing a view consider that pneumatic valves used for airframe system and pneumatic valves used for engine system are not substitutable. Some participants pointed specifically to the different characteristics between pneumatic valves used for

112 Ibid. paragraph 334.
113 Commission decision in case M.8425 - *Safran / Zodiac Aerospace,* paragraph 505.
114 Form CO, paragraph. 923.
115 Ibid. Paragraph 924.
116 Ibid. Paragraph 932.

airframe application and those used for engines, such as vibration, temperature, environmental and operating parameters,[117] On the other hand, several other responses stressed the existence of common characteristics. One competitor explained that *'[i]n general, pneumatic valves used for airframe systems and engine systems contain similar technology, similar materials and similar manufacturing processes.* [The Company] *primarily builds and develops products based on customer specification. Therefore, the technology, material and processing needed for a pneumatic valve in either an airframe system or engine systems is dictated more by the system requirements and less by the distinction between airframe and engine application*'.[118] Another competitor explained that '*a manufacturer of pneumatic valves for airframe systems could begin producing pneumatic valves for engine systems. Much of the technical know-how and manufacturing knowledge is similar*'.[119] Finally, a majority of pneumatic valve suppliers do supply pneumatic valves for both engine and airframe systems.[120]

(91) For the purpose of this Decision, the Commission considers that it is not necessary to conclude as to whether the manufacture and supply of pneumatic valves should be segmented between pneumatic valves for engine and valves for airframe systems since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market irrespective of this distinction.

(B) The distinction between different types of pneumatic valves

(92) The majority of pneumatic valve competitors replying to the market investigation indicated that the different types of pneumatic valves, including engine pneumatic valves (e.g. engine control, anti-ice valves or bleed air valves) are comparable in terms of product characteristics. In this respect, one pneumatic valve supplier explained that '[D]*ifferent types of engine pneumatic valves must operate in similar environments*'.[121] This view was also shared by one customer who has pointed to the importance of supply side substitutability and explained that *'[T]he skills and technology required to design and manufacture them are, however, more common across valve types. In other words there is considerable supply-side substitutability for these products within the pool of suitably-qualified providers'*.[122]

(93) Customers' views were mixed and no majority emerged in favour of any delineation.[123] For instance, the same customer pointing the importance of supply side substitutability between different types of pneumatic valves also reported that '[P]*neumatic valves manufactured for different purposes are not functionally interchangeable because they are designed specifically for each purpose*'.[124]

(94) In view of the above, for the purpose of this Decision, the Commission considers that it is not necessary to conclude as to whether the manufacture and supply of pneumatic valves, including engine pneumatic valves, should segmented by type,

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117 Replies to Questionnaire to pneumatic valve competitors, question 3.1.
118 Reply to Questionnaire to pneumatic valve competitors, question 3.1.
119 Reply to Questionnaire to pneumatic valve competitors, question 3.1.
120 Replies to Questionnaire to pneumatic valve competitors, question 3.1.
121 Reply to Questionnaire to pneumatic valve competitors, question 6.1.
122 Reply to Questionnaire to pneumatic valve customers, question 5.1.
123 Replies to Questionnaire to pneumatic valve customers, question 3.1.
124 Reply to Questionnaire to pneumatic valve customers, question 5.1.

namely engine pneumatic valves for engine control, for bleed air and for anti-ice, since the Proposed Transaction will not raise serious doubts as to its compatibility with the internal market irrespective of this distinction.

3.2.3. Geographic market definition

3.2.3.1. The Commission's past practice

(95) In *GE / Honeywell*, the Commission considered that the relevant geographic market for engine sub-components was worldwide.[125]

(96) Similarly, in *Safran / Zodiac*, the market investigation confirmed that all markets for the supply of commercial aerospace sub-systems and components were global from the perspective of both aircraft manufacturers and suppliers given the global organisation of procurement and supply.[126] For military and defence applications, there were indications that the market could be narrower than global but the Commission ultimately left the market definition open.[127]

3.2.3.2. The Notifying Party's view

(97) The Notifying Party considers the relevant market to be the supply of aerospace pneumatic valves on a global basis due to the fact that these products are sourced globally, there are significant global trade flows, transport costs do not play a significant role and customers generally apply a worldwide purchasing policy.[128]

(98) The Notifying Party further considers that from a supply-side perspective, the manufacturing of aerospace pneumatic vales is also organised on a worldwide scale and suppliers are active across borders. Likewise, prices are quoted on a worldwide basis and do not differ according to geographic regions.[129]

3.2.3.3. The Commission's assessment

(99) The large majority of the respondents to the Commission's market investigation, both customers and competitors, confirmed that the market for the manufacture and supply of pneumatic valves should be considered global in scope. One pneumatic valve customer explained that '[t]*he supply base is located globally*'.[130] A pneumatic valve supplier stressed that its '*customers are all over the world'*.[131] This view was also confirmed by another competitor who explained that '[w]*e supply to customers located on several different continents'.*[132]

(100) In view of the above, for the purpose of this Decision, the Commission considers that the geographic market for aerospace pneumatic valves is likely global in scope.

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125 Commission decision in case M.2220 - *GE / Honeywell*, paragraph 336.
126 Commission decision in case M.8425 - *Safran / Zodiac Aerospace,* paragraph 298.
127 Commission decision in case M.8425 - *Safran / Zodiac Aerospace,* paragraph 299.
128 Form CO, paragraph. 911.
129 Ibid.
130 Reply to Questionnaire to pneumatic valve customers, question 5.
131 Reply to Questionnaire to pneumatic valve competitors, question 10.1.
132 Reply to Questionnaire to pneumatic valve competitors, question 10.1.

4. COMPETITIVE ASSESSMENT

4.1. Legal framework

(101) When the parties to a concentration are actual or potential competitors in one or more of the relevant product markets, the Transaction gives rise to horizontal effects. The Commission Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (the 'Horizontal Merger Guidelines')[133] distinguish between two main ways in which mergers may significantly impede effective competition, namely non-coordinated and coordinated effects. In the present case, non-coordinated effects arise.

(102) Non-coordinated effects may significantly impede effective competition by eliminating important competitive constraints on one or more firms, which consequently would have increased market power. The Horizontal Merger Guidelines consider not only the direct loss of competition between the merging firms, but also the reduction in competitive pressure on non-merging firms in the same market that could be brought about by the merger.[134]

(103) The Horizontal Merger Guidelines list a number of factors which may influence whether or not significant non-coordinated effects are likely to result from a merger, such as the large market shares of the merging firms, the fact that the merging firms are close competitors, the limited possibilities for customers to switch suppliers, or the fact that the merger would eliminate an important competitive force. That list of factors applies equally if a merger would create or strengthen a dominant position, or would otherwise significantly impede effective competition due to non-coordinated effects. Furthermore, not all of those factors need to be present to make significant non-coordinated effects likely and this is not an exhaustive list.[135]

(104) Furthermore, in accordance with the Horizontal Merger Guidelines, a merger with a potential competitor can have horizontal anti-competitive effects in two situations: (i) where the potential competitor constrains the behaviour of firms active in the market, notably when the potential competitor possesses assets that could easily be used to enter the market without incurring significant sunk costs or (ii) where the merging partner is very likely to incur the necessary sunk costs to enter the market in a relatively short period of time after which it would constrain the behaviour of firms currently active in the market.[136]

(105) For the merger with a potential competitor to have significant anti-competitive effects, two basic conditions must be fulfilled. First, the potential competitor must already exert a significant constraining influence or there must be a significant likelihood that it would grow to become an effective competitive force. Evidence that a potential competitor has plans to enter a market in a significant way could help the Commission reach such a conclusion. Second, there must not be a sufficient

[133] OJ C 31, 5.2.2004, p. 5.
[134] Horizontal Merger Guidelines, paragraph 24.
[135] Horizontal Merger Guidelines, paragraph 26.
[136] Horizontal Merger Guidelines, paragraph 59.

number of other potential competitors, which could maintain sufficient competitive pressure after the merger.[137]

4.2. Aircraft Wheels and Brakes

4.2.1. Introduction

(106) The Transaction gives rise to horizontally affected markets in relation to the manufacturing and supply of AWB for certain aircraft types. These markets for the manufacturing and supply of AWB share a number of features, principally related to the procurement process.

(107) Customers in the aerospace manufacturing industry source AWB via tenders, usually for the duration of the aircraft programme in question, which may last several decades. Due to the long lifecycle of aircraft, tenders are infrequent – customers (and in particular airframers) for example explain that in the last ten years they launched five or less procurement processes for AWB.[138] This is why the competitive assessment below relies on historic market shares data beyond three years (i.e. of the last five years) as well as on tender data over the last ten years.

(108) Customers (airframers) may solicit bids from integrators (i.e. vertically integrated landing gear suppliers) and from component suppliers for the same opportunity. Ultimately, most rely on a single supplier for a given aircraft programme,[139] with relationships being largely historical and generally based on trust.

(109) Customers generally organise tenders to solicit bids from AWB suppliers. However, they regularly also engage with AWB suppliers in technical and commercial discussions ahead of issuing a formal tender – the majority of customers expressing their view submits that they formally or informally contact 3 or less AWB manufacturers ahead of the formal tender.[140] Indeed, a majority of customers state that they discuss the topic of price for the first time with AWB suppliers either when engaging in informal pre-tender contacts or when inviting AWB suppliers to submit bids.[141] To a certain extent, price formation therefore already takes place before the formal bidding interaction. Ultimately, a majority of customers expressing their view submit that they receive 3 or less formal bids in their tenders.[142]

(110) Regarding tender data, the Notifying Party provided information on the tenders in which Parker and Meggitt participated during the 2012-2021 period in the overlapping markets, together with which competitors each Party recorded in their internal tender data documents (if any), and specifying whether each Party decided to ultimately bid or not for that opportunity ('the Opportunity Data'). The exercise showed that competitors were only recorded in [30-40]% of the tender documents for AWB tenders in which Meggitt participated and in [10-20]% of the tender documents for AWB tenders in which Parker participated. It also showed that in certain instances, one Party thought that the other might be participating (i.e. was

137 Horizontal Merger Guidelines, paragraph 60.
138 Replies to Questionnaire to AWB customers, question 27.1.
139 Replies to Questionnaire to AWB customers, question 29.
140 Replies to Questionnaire to AWB customers, question 33.
141 Replies to Questionnaire to AWB customers, question 31.
142 Replies to Questionnaire to AWB customers, question 34.

recorded as a competitor for that opportunity) even if the latter in fact did not participate.

(111) Suppliers often sell the original equipment AWB at cost and generate profits in the aftermarket part of the business. Moreover, suppliers seem to focus on their core areas and rarely depart from them due to, among others, the need to incur development costs in order to participate in tenders for other segments where their presence is much smaller.[143]

(112) The markets for the manufacturing and supply of AWB are characterised by high barriers to entry, including in terms of capital investment. Importantly, market participants explained that previous experience with the specific customers as well as the reputation and brand recognition of a supplier are key parameters of competition. In this respect, one competitor stressed that '*brand image is important and appreciated by customers, and that could pose a barrier to entry for market entrants*'.[144] Similarly, one customer explained that '*lacking the technical expertise and experience with the different types of braking systems creates a barrier to enter into the AWB market*'.[145]

(113) These market dynamics also drive the Parties' positions in AWB, where they in part focus on different markets and so far have only engaged to a limited extent head-to-head in formal tenders. This is largely driven by the above market characteristics and does not evidence a lack of competitive constraints. The existence of specific competitive constraints between the Parties is further explained in reference to each of the AWB markets considered below.

4.2.2. Market shares

(114) The Transaction gives rise to a number of affected markets in relation to the manufacture and supply of AWB. The market shares presented below are calculated for AWB by aircraft type in value and include both the manufacture and supply of AWB for original equipment as well as spare parts.[146] The market shares for any potential relevant segmentation of those markets will be presented in the respective corresponding sections below.

(115) With respect to AWB for general aviation, the Parties' combined market shares in the years 2016-2020 range between [40-50]% and [40-50]%. Considering the overall five year period between 2016-2020, the Parties' combined market share is [40-50]%.

143 See e.g. Replies to Questionnaire to AWB customers, question 55.

144 Minutes of a call with a competitor, 15 December 2021.

145 Minutes of a call with a customer, 15 December 2021.

146 AWB market shares in the below tables are rounded with no decimals. Furthermore, the Parties' combined market shares over the period 2016-2020 were computed based on their sales during this period rather than by calculating the average of their combined annual market share over that period.

Table 2 – AWB for general aviation, 2016-2020 market shares

AWB for general aviation – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[40-50]%
Meggitt	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Combined	***[40-50]%***	***[40-50]%***	***[40-50]%***	***[40-50]%***	***[40-50]%***
Beringer	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Raytheon	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Others	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Annex EC RFI 13-001.

(116) With respect to AWB for business jets, the Parties' combined market shares in the years 2016-2020 range between [50-60]% and [60-70]%. Considering the overall five-year period between 2016-2020, the Parties' combined market share is [60-70]%.

Table 3 – AWB for business jets, 2016-2020 market shares

AWB for business jets – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Meggitt	[60-70]%	[60-70]%	[50-60]%	[50-60]%	[60-70]%
Combined	***[60-70]%***	***[60-70]%***	***[50-60]%***	***[60-70]%***	***[60-70]%***
Raytheon	[30-40]%	[30-40]%	[30-40]%	[20-30]%	[20-30]%
Safran	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%
Beringer	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Sources: Annex EC RFI 13-001.

(117) With respect to AWB for helicopters, the Parties' combined market shares in the years 2016-2020 range between [70-80]% and [80-90]%. Considering the overall five-year period between 2016-2020, the Parties' combined market share is [80-90]%.

Table 4 – AWB for helicopters, 2016-2020 market shares

AWB for helicopters – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[40-50]%	[50-60]%	[50-60]%	[60-70]%	[50-60]%
Meggitt	[30-40]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Combined	***[70-80]%***	***[80-90]%***	***[80-90]%***	***[80-90]%***	***[80-90]%***
Safran	[5-10]%	[5-10]%	[10-20]%	[0-5]%	[5-10]%
Honeywell	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%
Others	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Annex EC RFI 13.001. Combination of civil helicopters and military rotorcraft.

(118) With respect to AWB for military fixed-wing UAVs, the Parties' combined market shares in the years 2016-2020 range between [0-5]% and [60-70]%. Considering the overall five-year period between 2016-2020, the Parties' combined market share is [50-60]%.

Table 5 – AWB for military fixed-wing UAVs, 2016-2020 market shares

AWB for military fixed-wing UAVs – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[0-5]%	[30-40]%	[0-5]%	[60-70]%	[60-70]%
Meggitt	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Combined	***[0-5]%***	***[30-40]%***	***[0-5]%***	***[60-70]%***	***[60-70]%***
Raytheon	[90-100]%	[70-80]%	[0-5]%	[40-50]%	[30-40]%
Safran	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	**100%**	**100%**	**0%**	**100%**	**100%**

Source: Annex EC RFI 13-001.

(119) With respect to AWB for military fixed-wing trainers, the Parties' combined market shares in the years 2016-2020 range between [0-5]% and [70-80]%. Considering the overall five-year period between 2016-2020, the Parties' combined market share is [20-30]%.

Table 6 – AWB for military fixed-wing trainers, 2016-2020 market shares

AWB for military fixed-wing trainers – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[20-30]%	[0-5]%	[0-5]%	[0-5]%	[40-50]%
Meggitt	[0-5]%	[0-5]%	[0-5]%	[20-30]%	[20-30]%
Combined	***[20-30]%***	***[0-5]%***	***[0-5]%***	***[20-30]%***	***[70-80]%***
Raytheon	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[10-20]%
Others	[70-80]%	[90-100]%	[90-100]%	[70-80]%	[10-20]%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Annex EC RFI 13-001.

4.2.3. The Notifying Party's view

(120) The Notifying Party submits that the Transaction will not give rise to a significant impediment to effective competition in the supply of AWB, or in any potentially relevant sub-segment for the following reasons[147]:

(a) The Transaction will result in only a very small [0-5]% increment in the Parties' combined market share to [20-30]% in the alleged global market for wheels and brakes.

(b) The competitive landscape is diverse and the Parties will continue to face a range of strong competitors, including Raytheon (via its Collins Aerospace division), Safran, Honeywell, Beringer and a number of other dynamic rivals.

(c) The Transaction will not eliminate a close competitor or significantly reduce competitive pressure in the market since the Parties are not particularly close competitors in the supply of AWB with largely distinct product ranges and a limited history of direct competition in the supply of AWB. Parker focuses primarily on wheels and brakes for smaller aircraft (i.e. small piston and turboprop general aviation aircraft with a MTOW of less than 19,000 lb (8,618 kg)) while Meggitt primarily focuses on high performance brakes for larger and faster aircraft.

(d) The Parties rarely compete in tenders for new aircraft programmes. They only meet from time to time and more frequently find themselves up against other competitors, such as Collins and Safran.

(e) Sophisticated airframers such as Airbus, Boeing and Textron will continue to exercise strong countervailing bargaining power. Such buyer power is maximised by structuring procurement in the form of long term, high value tenders.

(f) Large tenders for new aircraft development programmes will continue to spur competition by providing a significant incentive for a wide range of suppliers to bid. New aircraft programmes generally require AWB suppliers to design

147 Form CO, paragraph 783.

bespoke solutions and by providing sufficient time and scale for successful bidders to develop wheel and brake solutions that meet programme requirements. Any potential advantages of incumbency through supplying a previous programme to the same airframe manufacturer are therefore limited.

(g) Barriers to entry, repositioning and expansion are low and will not be affected by the Transaction.

4.2.4. The Commission's assessment

4.2.4.1. General aviation

(A) The Parties' activities

(121) Parker is the clear market leader in AWB for general aviation (GA) and supplies AWB for a wide range of GA aircrafts. Parker supplies the whole range of GA aircraft from smaller piston aircraft to turboprop and electric aircraft.

(122) Meggitt currently has a small presence in AWB for GA. It supplies AWB for one large in-production turboprop GA aircraft, the Textron / Beechcraft King Air. However, Meggitt is competing for other GA AWB opportunities – generally for larger GA aircraft, and recently won a tender for an electrically powered GA aircraft – the [Meggitt tender].

(B) Market structure

(123) As detailed above in Table 2, the AWB for GA market is highly concentrated. Parker has a 2020 market share of [40-50]%, Meggitt of [0-5]% and the Merged Entity of [40-50]%. Considering the years 2016-2020, the Parties' combined market shares range between [40-50]% and [40-50]%. The average Parties' combined market share for the five year period between 2016-2020, is [40-50]%.

(124) The Tables below provide the market shares of the Parties and their competitors for AWB in value for the overlapping market segments following a distinction by engine type, i.e. turboprop,[148] and following a distinction between the supply of original ('OE') parts and spare parts.

Table 7 – AWB for general aviation, turboprop aircraft, 2016-2020 market shares

AWB for general aviation - turboprop aircraft					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[50-60]%	[60-70]%	[60-70]%	[50-60]%	[60-70]%
Meggitt	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%
Combined	***[60-70]%***	***[60-70]%***	***[60-70]%***	***[60-70]%***	***[60-70]%***
Raytheon	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Others	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*	*[20-30]%*
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 13, Annex EC RFI 13-001.

[148] Meggitt does not manufacture and supply AWB for piston-powered aircraft.

Table 8 – AWB for general aviation, OE only, 2016-2020 market shares

AWB for general aviation - OE only										
	2016		2017		2018		2019		2020	
	Overall	Turboprop	Overall	Turboprop	Overall	Turboprop	Overall	Turboprop	Overall	Turboprop
Parker	[50-60]%	[70-72%	[50-60]%	[70-80]%	[50-60]%	[70-80]%	[40-50]%	[60-70]%	[50-60]%	[70-80]%
Meggitt	[5-10]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%	[5-10]%
Combined	***[50-60]%***	***[80-90]%***	***[50-60]%***	***[80-90]%***	***[50-60]%***	***[80-90]%***	***[50-60]%***	***[70-80]%***	***[50-60]%***	***[70-80]%***
Beringer	[30-40]%	-	[30-40]%	-	[30-40]%	-	[30-40]%	-	[30-40]%	-
Raytheon	[5-10]%	[10-20]%	[5-10]%	[10-20]%	[5-10]%	[10-20]%	[5-10]%	[10-20]%	[5-10]%	[10-20]%
Others	*[0-5]%*	*[0-5]%*	*[5-10]%*	*[0-5]%*	*[5-10]%*	*[5-10]%*	*[10-20]%*	*[5-10]%*	*[5-10]%*	*[5-10]%*
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 13, Annex EC RFI 13-001.

Table 9 – AWB for general aviation, spare parts only, 2016-2020 market shares

AWB for general aviation - spare parts only					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[30-40]%	[30-40]%	[30-40]%	[20-30]%	[30-40]%
Meggitt	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Combined	***[30-40]%***	***[30-40]%***	***[30-40]%***	***[30-40]%***	***[30-40]%***
Beringer	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Raytheon	[5-10]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%
Others	*[40-50]%*	*[40-50]%*	*[40-50]%*	*[40-50]%*	*[40-50]%*
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 13, Annex EC RFI 13-001.

(125) The AWB for turboprop GA segment[149] is even more concentrated than the overall market. Parker has in 2020 a market share of [60-70]%, Meggitt of [0-5]% and the Merged Entity of [60-70]%. Considering the 2016-2020 five-year period, the Merged Entity's combined average share would also be [60-70]%.

(126) With regards electrically powered GA, the Parties where not able to provide market shares stating that '*it is not possible to calculate market shares for AWB for electrically powered aircrafts*'[150] as it is a nascent segment and only marginal numbers of AWB have been supplied to this date as explained by the Parties: '*the market size is de minimis, and has been for each year between 2016 and 2020*'.[151]

(127) The AWB for OE only segment is also even more concentrated than the overall market. Parker has a 2020 market share of [50-60]%, Meggitt of [0-5]% and the Merged Entity of [50-60]%. Considering the 2016-2020 five-year period, the Merged Entity's combined share would be [50-60]%.

149 Meggitt does not manufacture and supply AWB for piston-powered aircraft.
150 Reply to Request for Information 17, question 1.
151 Reply to Request for Information 17, question 1.

(128) The Merged Entity would therefore have a very large market share, significantly in excess of 50% on the AWB for turboprop GA segment and on the AWB for OE only segment. According to the Horizontal Merger Guidelines, *'very large market shares – 50% or more – may in themselves be evidence of the existence of a dominant market position*'.[152] Therefore, while other factors need to be taken into account (e.g. the ability of competitors to effectively constrain the Merged Entity), the Merged Entity's market share of over 50% is an indication for a dominant market position. On the overall AWB for GA market, the parties have a combined market share between 40% and 50%. According to the Horizontal Merger Guidelines, '[t]*he Commission has* […] *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*'.[153] Therefore, the transaction could also lead to a dominant market position on this market.

(129) The AWB for GA market overall, as well as the plausible segments for turboprop GA and for GA OE only, are already highly concentrated pre-Transaction, and would be even more so post-Transaction. On the overall market, the Notifying Party attributes a market share to four active suppliers by name, namely Parker, Meggitt, Raytheon and Beringer – with an additional [20-30]% of the market accounted for by 'Others'. For the OE only segment, the same competitors are identified but the portion of the market accounted for by 'Others' drops to [10-20]%. The turboprop segment is even more concentrated with the Notifying Party attributing a market share to only three active suppliers by name, namely Parker, Meggitt, Raytheon with an additional [20-30]% of the market accounted for by 'Others'. Post-Transaction, the number of players with a discernible market presence would thus be reduced to three: The Merged Entity, Raytheon and Beringer. Depending on the market/segment considered, a varying share would further be accounted for by others.

(130) Given the uncertainty around the supply accounted for by 'Others' an informative calculation of HHI values for the AWB for GA markets is not possible. However when considering as a proxy sub-segments that allow for this calculation, for example OE only AWB for turboprop GA where the 'Others' market shares represent a relatively low [5-10]%[154] the result shows very high HHI values. Based on 2020 market shares, the OE only AWB for turboprop GA sub-segment would have a pre-Transaction HHI value of [5500-6000]. Post-Transaction, this concentration would further increase, expressed in a post-Transaction HHI value of [6000-6500] and a delta of [700-800]. These values are significantly above the thresholds for which the Commission considers that it is unlikely to find competition concerns.[155]

(131) The AWB for GA market, including its segments for turboprop GA and the OE parts, were therefore already concentrated pre-Transaction and would be even more so post-Transaction.

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152 Horizontal Merger Guidelines, paragraph 17.

153 Horizontal Merger Guidelines, paragraph 17.

154 Assumption of 7 competitors with 1% market share each, assuming a hypothetical low concentration among 'Others'.

155 Horizontal Merger Guidelines, paragraph 19-21.

(C) Competitors' ability to constrain the Merged Entity

(132) Post-Merger, competitors to the Parties in the AWB for GA market, and the GA turboprop and OE only segments, are unlikely to be able to effectively constrain the Merged Entity.

(133) The large market share of the Merged Entity post-Transaction, and the highly concentrated AWB for GA market in general and for GA turboprop and OE only in particular (based on the number of identified competitors and the HHI values for the OE only AWB for turboprop GA sub-segment), in themselves suggest that competitors do not have particularly strong market positions and lack the competitive strength to effectively constrain the Merged Entity.

(134) Further, customers' ability to credibly resort to alternative suppliers to the Merged Entity appears to be limited, as some competitors do not offer certain types of GA AWB or are generally not focused on AWB for GA.

(135) **First**, the competitors active at present in the AWB for GA market either have a limited market presence, lack certain capabilities, and/or do not focus on maintaining/expanding their presence in this market.

(136) Beringer has a 2020 market share of [20-30]% for GA overall, and will post-Transaction be the largest competitor to the Merged Entity. Considering the OE AWB for GA only Beringer market share is [30-40]% while for AWB for turboprop segment Beringer's share is not specifically identified by the Notifying Party suggesting a much lower market share. In addition, Beringer's key strength as identified in a Parker internal document is 'experimental and light sport aircraft'[156] which correspond to the smallest GA aircrafts. While Parker in an internal opportunity assessment document considers that Beringer is developing solutions for the larger GA segment ('[Parker´s market analysis]'[157]) they still have a limited technical and commercial pedigree to address all aircraft types and customers. In an opportunity assessment document considering a high-end turboprop aircraft Parker explains '[Parker´s market analysis].'[158] In addition, some customers that have tested Beringer equipment consider that the performance of their product was insufficient as described in a Parker internal document: '[Parker´s market analysis]'.[159] This therefore limits customers' ability to resort to Beringer for all types of AWB for GA (in particular large turboprop engine powered GA aircrafts). Beringer is not even listed by a customer as a potential supplier for AWB GA aircraft: '*Few suppliers are active in offering new steel braking systems and in AWB for smaller general aviation aircraft. Collins is not strongly competing for steel braking systems. Parker and Meggitt are offering new design steel brakes.*'[160]

(137) Raytheon has a 2020 market share of [5-10]% for AWB for GA overall, [5-10]% for OE only AWB for GA and [10-20]% for AWB for turboprop GA. A Parker internal document[161] confirms that Goodrich (Raytheon) has a solid pedigree in larger turboprop powered certified GA aircraft. However, Raytheon's interest for those

156 Annex CMA RFI 5-006.
157 Parker RFA-0274.
158 Parker RFA-0263.
159 Parker RFA-0233.
160 Minutes of a call with a customer, 15 December 2021.
161 Parker RFA-0263.

platforms appears limited as described by Parker in the same document: '[Parker´s market analysis]'[162]. Similarly, in another Parker internal document assessing the competition for a turboprop engine aircraft, Parker explains the diminishing interest of Raytheon for this type of aircrafts: '[Parker´s market analysis]'.[163]

(138) The 'Others' category includes competitors that are targeting lighter GA aircraft or aftermarket sales. As explained by the Parties, these are '*AWB competitors who supply OE for smaller general aviation aircraft such as Grove, Alaskan Bushwheel, Marc Ingegno and Matco* […].'[164] These aftermarket specialists have limited capabilities to compete for full AWB but rather focus on detail components. These components can be linings or discs for example and receive Parts Manufacturer Approval from the FAA to be approved as replacement components. A Parker internal document explains the situation for detailed components: '*New PMA competition replacing pressure plates and other easily manufactured detail components for brake assemblies*'.[165] When assessing competitor technology at a higher level, in an internal strategic positioning document, Parker lists Rapco and APS for steel brakes (but not for wheels) and further explains: '*PMA competitors provide aftermarket wearable components and spares, not assemblies'*.[166]

(139) **Second**, the Parties are viewed by some customers as among the very few credible AWB supplier alternatives for their aircraft. As described by a GA customer, Collins (Raytheon) is not competing strongly and Parker and Meggitt are the only ones offering new design steel brakes: '*Few suppliers are active in offering new steel braking systems and in AWB for smaller general aviation aircraft. Collins is not strongly competing for steel braking systems. Parker and Meggitt are offering new design steel brakes. Honeywell and Safran do not appear to provide AWB for smaller general aviation aircraft'*.[167] The same customer confirms that 'Parker and Meggitt appear to be among very few companies technically capable, experienced and willing to design and supply steel braking systems for general aviation aircraft'.[168]

(140) **Third**, large majorities of customers and competitors expressing their view submit that they are not aware of any market entry in AWB in the past five years and do not expect the entry of viable new AWB players in the next five years. In this context also no market participant refers to any past or future entry with respect to AWB for general aviation specifically.[169] Specifically, Honeywell, which currently supplies AWB for some other product markets, for example explains that it '*typically focuses on twin-*[aisle]*, larger aircraft where it does not compete with the participants to the transaction*'[170] and that therefore '[i]*f there is going to be any effect* [of the

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162 Parker RFA-0263.

163 Parker RFA-0233.

164 Memorandum on AWB for general aviation submitted on 28 January 2022 by the Notifying Party.

165 Annex CMA RFI 5-007.

166 Form CO, Annex 5.4.A.087.

167 Minutes of a call with a customer, 15 December 2021.

168 Minutes of a call with a customer, 15 December 2021.

169 Replies to Questionnaire to AWB customers, questions 49, 49.1, 50, 50.1. Replies to Questionnaire to AWB competitors, question 50, 51, 51.1 – one competitor points to the possibility of new competitors entering to serve the emerging electric (eVTOL) segment.

170 Reply to Questionnaire to AWB customers, question 59.1.

Transaction, it] *would expect it to be on the smaller aircraft space where* [it] *typically does not focus*'.[171]

(D) Competition between the Parties

(141) While Parker is the clear market leader in AWB for GA (including in the turboprop and OE only segments) pre-Transaction, Meggitt only has a small market share. Nevertheless, Meggitt exerts a constraint on Parker in the AWB for GA market, and relevant competition between the Parties would be lost post-Transaction. This is because the Parties overlap in their capabilities which are relevant for the AWB for GA market, and have bid or considered bidding for the same GA programmes. The Parties also internally consider each other as competitors in the AWB for GA market, in particular for turboprop GA and OE only, and market participants regard Parker and Meggitt as two of a limited number of players in the AWB for GA market.

(D.i) Bidding and interactions between the Parties

(142) Pre-Transaction, both Parties compete for AWB tenders for GA and exert significant competitive pressure on each other.

(143) The Parties are engaged in tender-level competition for AWB for GA and through their respective presence in the AWB for GA market, exert a competitive constraint on each other.

(144) **First**, the Opportunity Data submitted by the Notifying Party show that Meggitt has participated in […] opportunities in the 2012-2021 time frame including AWB for [Meggitt bids]. For all these opportunities, Parker also participated in the pre-bid process and for […] of these opportunities ([Parker bids]) both Parties submitted a bid, competing directly in the final tender stages.

(145) **Second**, the Parties consider each other as one of their main competitors for some opportunities. For example in the [Parties´bid] opportunity, both Parties submitted a bid. In its internal opportunity assessment document, Parker lists Meggitt and Goodrich as potential competitors but also specifies that the opportunity '*is more of a core market for Parker vs Meggitt*',[172] confirming that both Parties are well positioned for this kind of opportunity.

(146) For the same aircraft, on Meggitt's side, the internal document assessing the opportunity states that '*Parker will likely be the key competition on [Meggitt bid]*'.[173] These statements confirm that the Parties see each other as direct competitors for this opportunity.

(147) **Third,** the bidding interactions between the Parties might increase in the future with the possible use of carbon brakes for GA in the future and the development of electric-powered GA aircraft.

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171 Reply to Questionnaire to AWB customers, question 61.

172 Parker RFA-0299.

173 Meggitt CCR-0246.

(148) In relation to carbon brakes, with respect to large GA aircraft, the market investigation suggests that carbon would become a more viable alternative for brakes on GA aircraft in the future, as its cost competitiveness increases. In this respect, one customers clarified that: '*It is likely that, in the future, smaller aircrafts below 17,000lbs (light business jets and GA) start to incorporate carbon brakes on a more regular basis, since it is very attractive in terms of weight saving. As carbon technology becomes more common in this segment/weight range, prices will decrease proportionately, as it normally happens with all technologies as they progressively become more widespread*'.[174] Therefore, Meggitt with its recognised carbon capabilities might increase its presence on this segment as the carbon adoption increases.

(149) In relation to electrically powered GA aircraft, a Parker internal document describing Parker's AWB strategic growth plan explains that the company is strategically prioritising AWB for electrically powered aircraft: '[Parker bids]'.[175] On the […] platforms listed by Parker as priorities in the AWB for electric GA segment, the Parties both engaged in pre-bid discussion for […] of them ([Parties bids]). In addition, the Parties bid against each other for […] electric GA aircraft opportunity, the [Parties` bids] platform, in 2020 and Meggitt won this opportunity. This confirms the interest of Meggitt for this type of aircraft and its ability to offer relevant technical solutions to AWB for electric GA customers. New opportunities for electrically powered GA aircraft are likely to increase in the near future. While both Parties are unable to provide an accurate estimate of the share that electrically powered general aviation aircrafts would represent in the next 10-15 years[176], an internal document on advanced air mobility dated November 2021 explains: '*The AAM Markets have progressed significantly in the last 18 months*'[177] and expect significant growth in the coming years as illustrated in Figure 6 below.

Figure 6 – Electrically powered aircraft segment forecast

[Parker's market forecast]

Source: Annex CMA RFI 5-009.

(150) **Fourth**, even for instances where Meggitt did not ultimately bid, Parker does consider Meggitt as a potential competitor, in particular for turboprop aircrafts. For example for an opportunity relating to a '[Parker bids],[178] Parker explains: '*Large size relative to typical part* [Parker bids] *will likely bring Meggitt and Goodrich (UTC)*'.[179]

(151) **Fifth**, the analysis of competitors' mentioned in the AWB GA tender documents[180] and the regular references therein made by Parker's to Meggitt as a competitor for the supply of AWB for GA further confirms the important pre-bid competitive interactions between the Parties. In this respect, Parker cites Meggitt in 5 out of the

174 Minutes of a call with a customer, 13 January 2022.
175 Reply to Request for Information 8, Annex EC RFI 8 A-013.
176 Form CO, paragraphs 621 and 622.
177 Annex CMA RFI 5-009.
178 Parker RFA-0262.
179 Parker RFA-0262.
180 Reply to Request for Information 10, Annex EC RFI10-009.

6 documents (83%) where at least one competitor is mentioned whereas Raytheon is cited 4 times, Beringer 3 times and the other competitors only once each.

(152) In view of the above, the Parties already pre-Transaction are engaged in tender-level competition, and those interactions are likely to continue or even increase with the development of electrically powered aircraft GA or carbon brakes for GA. In addition, each others' presence appears to have a constraining effect on the Parties that is not fully captured in the bidding data.

(D.ii) The Parties internally consider each other as competitors

(153) Aside of tracking their perceived presence in tender events, the Parties also more generally consider themselves and each other as among a limited number of competitors in the AWB for GA market overall, as well as for turboprop and OE parts in particular.

(154) In internal documents, the Parties do see each other as key competitors in GA. In a high level strategic document assessing the different aircraft categories Meggitt lists Parker as one of its '*Top Competitors*' for braking systems, and in that context specifically lists Parkers capabilities in relation to '[b]*usiness jets and GA wheel and brake*'.[181] It is to be noted that in its internal documents often Meggitt combines BJ and GA under 'Business Aviation' however when specifically mentioning GA, a Meggitt internal document defines Parker as having a '[Meggitt´s market analysis]'.[182]

(155) Looking specifically at AWB for turboprop, Figure 7 below shows that Parker considers Meggitt as one of its main competitors, together with Goodrich (Raytheon).

Figure 7 – Parker's view of Meggitt's position in AWB for turboprop GA

[Parker's market analysis]

Source: Reply to Request for Information 4, Annex EC RFI4-001.

(156) A Parker internal document about AWB pricing review further assesses the competitive landscape and confirms that on AWB for larger GA aircraft, Parker sees Meggitt and Goodrich (Raytheon) as its main competitors: '[Parker's market analysis]'.[183]

(157) Similarly, another Parker internal document, analysing the competitive landscape on each market shows that Meggitt is seen by Parker as a '*primary competitor*' in GA. In addition, this document identifies Meggitt as a primary competitor in both steel turboprop GA aircraft and carbon turboprop GA aircraft, confirming that carbon could be adopted by turboprop GA aircraft when the carbon price competitiveness increases as described in paragraph (148) and that Meggitt would be well positioned on this segment.

(158) Therefore, while the Notifying Party submits that in the past there has been limited direct bidding interaction between the Parties (and as also explained above in

[181] From CO, Annex 5.4.B-028, slide 34.
[182] Reply to Request for Information 8, Annex EC RFI 8 B-002.
[183] Annex CMA RFI 5-007.

paragraph (144), this may increase in the future), the Parties recognise each other as competitors in the AWB for GA market overall (including OE and spare parts), as well as for turboprop in particular. In a market with only few active and capable suppliers to which customers can resort to, and a low number of participants in customers' tenders, this awareness of each other's presence in itself constitutes a relevant competitive constraint.

(D.iii) Market participants consider the Parties as alternatives

(159) In addition to the Parties considering each other as relevant competitors in the AWB for GA market, also market participants observe both of the Parties as active in this market.[184]

(160) More specifically a customer explains when asked to qualify the market presence of Parker on the AWB for general aviation market: '*Parker is one of main supplier for small Aircraft*'.[185] Another customer specifies that Meggitt is a capable supplier for larger GA aircrafts: '*Meggitt is a capable supplier of AWB for larger general aviation aircraft.*'[186]

(161) Further, as explained by a customer, the Parties are two of a very limited number of suppliers to have the experience and technical capabilities to design and supply AWB for GA aircraft: '*Parker and Meggitt appear to be among very few companies technically capable, experienced and willing to design and supply steel braking systems for general aviation aircraft.*'[187]

(162) Overall, a number of AWB customers, including GA manufacturers, expect that the Transaction would have a negative impact on their company (e.g. higher prices, worse service, lower availability of products).[188]

(E) Conclusion

(163) As set out in this Section 4.2.4.1, the Transaction would lead to a large combined market share of the Merged Entity ([40-50]% for AWB for GA overall and up to [60-70]% for AWB for turboprop only and [50-60]% for OE parts only) and result in a further increase of concentration in the AWB for GA market overall, as well as for turboprop GA and the supply of original parts in particular. While Meggitt currently only has a small share of supply, it is one of a small number of competitors to market leader Parker in this market and particularly strong on larger GA aircraft.

(164) Therefore, the Commission concludes that the Transaction raises serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of AWB for GA overall, as well as for AWB for turboprop GA and OE AWB for GA in particular.

184 Replies to Questionnaire to AWB customers, question 44.
185 Reply to Questionnaire to AWB customers, question 44.1.
186 Reply to Questionnaire to AWB customers, question 44.1.1.1.
187 Minutes of a call with a customer, 15 December 2021.
188 Replies to Questionnaire to AWB customers, question 59.

4.2.4.2. Business jets

(A) The Parties' activities

(165) Meggitt is the market leader in AWB for business jets and supplies AWB for a wide range of business jets. Meggitt supplies both steel and carbon AWB for business jets, yet considering new programmes, has bid only with carbon brakes in the last decade.[189]

(166) Parker currently has a small presence in AWB for business jets. It supplies AWB for one small business jet, the [Parker tender] – specifically, Parker supplies steel AWB for this programme. However, Parker is competing for other business jet AWB opportunities – generally for smaller business jets.[190]

(B) Market structure

(167) As detailed above in Table 3, the AWB for business jets market is highly concentrated. Parker has a 2020 market share of [0-5]%, Meggitt of [60-70]% and the Merged Entity would have a combined market share of [60-70]%. Considering the 2016-2020 five-year period, the Merged Entity's combined share would be [60-70]%.

(168) The Merged Entity would therefore have a very large market share, significantly in excess of 50%. According to the Horizontal Merger Guidelines, '*very large market shares – [50-60]% or more – may in themselves be evidence of the existence of a dominant market position*'.[191] Therefore, while other factors need to be taken into account (e.g. the ability of competitors to effectively constrain the Merged Entity), the Merged Entity's market share of over [50-60]% is an indication for a dominant market position.

(169) Further, the AWB for business jets market is already highly concentrated pre-Transaction, and would be even more so post-Transaction. The Notifying Party attributes a market share to five active suppliers by name, namely Parker, Meggitt, Raytheon, Safran and Beringer – with an additional [0-5]% of the market accounted for by 'Others'. Post-Transaction, the number of players with a discernible market presence would thus be reduced to four: The Merged Entity, Raytheon, Safran and Beringer.

(170) This high level of concentration is also borne out in the relevant HHI values. Based on 2020 market shares, the AWB for business jets market would have a pre-Transaction HHI value of [4500-5000]. Post-Transaction, this concentration would further increase, expressed in a post-Transaction HHI value of [4500-5000] and a delta of [300-400]. These values are significantly above the thresholds for which the Commission considers that it is unlikely to find competition concerns.[192] The AWB for business jets market was therefore already concentrated pre-Transaction and would be even more so post-Transaction.

189 Form CO, paragraph 374.
190 Form CO, paragraph 357.
191 Horizontal Merger Guidelines, paragraph 17.
192 Horizontal Merger Guidelines, paragraph 19-21.

(C) Competitors' ability to constrain the Merged Entity

(171) Post-Merger, competitors to the Parties in the AWB for business jets market are unlikely to be able to effectively constrain the Merged Entity.

(172) The very large market share of the Merged Entity post-Transaction, and the highly concentrated AWB for business jets market in general (expressed in the HHI values), in themselves suggest that competitors do not have particularly strong market positions and lack the competitive strength to effectively constrain the Merged Entity.

(173) Further, customers' ability to credibly resort to alternative suppliers to the Merged Entity appears to be limited, as some competitors do not offer certain types of business jet AWB (e.g. steel AWB) or are generally not focused on AWB for business jets.

(174) Finally, significant barriers to entry render the emergence of new players capable of effectively constraining the Merged Entity on the AWB for business jets market unlikely.

(175) **First**, the competitors active at present in the AWB for business jets market have a very limited market presence, lack certain capabilities, and/or do not focus on maintaining/expanding their presence in this market.

(176) Raytheon has a 2020 market share of [20-30]% and will post-Transaction be the largest competitor to the Merged Entity. Meggitt and Parker regularly consider Raytheon as a potential competitor in their internal tender documents related to new original equipment AWB for business jets opportunities in the 2012-2021 timeframe[193] However, Raytheon only ascribes an average market strength to itself in the AWB for business jets market (rating its own strength on the market as three out of five).[194] According to a customer, Collins (part of Raytheon) is also no longer offering new steel brakes,[195] therefore limiting customers' ability to resort to Raytheon for all types of AWB for business jets. In addition, it also appears that the Parties themselves do not regard Raytheon as a particularly significant constraint in AWB for business jets. For example, in an internal Parker tender assessment for a business jet programme, it is assessed that '[Parker's market analysis]'.[196] In addition, as Raytheon is vertically integrated and also offers landing gears, customers that are non-vertically integrated landing gear integrators would not turn to it. As one such customer explains, '[a]*s landing gear integrators, we compete with Collins/Raytheon and Safran on landing gear RFPs. It would be ill advised to share technical detail of our landing gear design in an RFP process*'.[197] Raytheon therefore does not appear as a viable alternative for landing gear integrators.

(177) Safran has a 2020 market share of [0-5]%. A customer describes that while Safran is the '*N°1 on large commercial aircrafts*', it '*seems to have difficulties to address the business & regional jet market*'.[198] Meggitt in an internal document assesses that

193 Reply to Request for Information 10, Annex EC RFI10-009.
194 Reply to Questionnaire to AWB competitors, question 44.
195 Minutes of a call with a customer, 15 December 2021.
196 Parker RFA-0261.
197 Reply to Questionnaire to AWB customers, question 48.
198 Reply to Questionnaire to AWB customers, question 47.

with respect to '*Business/GA Braking Equipment*', Safran only has a '[Meggitt's market analysis]'.[199] Meggitt further analyses in a different internal document that none of Safran's weaknesses is its '[Meggitt's market analysis].[200] In addition, Safran does not compete in steel brakes in business jets[201] – customers' ability to resort to Safran for all types of AWB for business jets is therefore limited. Meggitt considers Safran as a competitor in only 1 out of 6 tender documents related to new original equipment AWB for business jets opportunities in the 2012-2021 timeframe in which a competitor is mentioned. Parker, mentions Safran in no such document.[202] Overall, it therefore appears that Safran does not have a particular focus on AWB for business jets and that neither the Parties nor market participants consider Safran to be a particularly strong competitor in this market. In any case, similarly as Raytheon, Safran is vertically integrated and also offers landing gears. Customers that are non-vertically integrated landing gear integrators would thus similarly not be inclined to turn to it.

(178) Beringer has a 2020 market share of [5-10]%. Beringer only competes in AWB with steel brakes,[203] and therefore cannot compete for all types of AWB for business jets. Parker in an internal document does not consider Beringer as one of the relevant competitors in very light and light business jets (regardless of whether considering steel or carbon brakes).[204] Neither Parker, nor Meggitt consider Beringer as a competitor in any of their tender documents related to new original equipment AWB for business jets opportunities in the 2012-2021 timeframe.[205]

(179) It therefore appears that while Raytheon has an established market presence, no competitor to the Merged Entity currently active on the AWB for business jets market has a particular focus on this market or can effectively constrain the Merged Entity across the entire market (in particular in relation to both steel and carbon brakes).

(180) **Second**, market participants confirm that the AWB for business jets market is generally concentrated with few active competitors. For example, a majority of customers expressing a view submit that they typically contact formally or informally four or less AWB manufacturers before issuing an AWB tender for a new aircraft programme,[206] and that three or less AWB manufacturers typically end up submitting a bid.[207] In this context, a manufacturer of business jets states that there are '[f]*ew alternatives for our needs*'.[208]

(181) **Third**, large majorities of customers and competitors expressing their view submit that they are not aware of any market entry in AWB in the past five years and do not expect the entry of viable new AWB players in the next five years. In this context also no market participant refers to any past or future entry with respect to AWB for

199 Reply to Request for Information 8, Annex B-002, slide 11.
200 Form CO, Annex 5.4.B-005, slide 27.
201 Minutes of a call with a competitor, 10 December 2021.
202 Reply to Request for Information 10, Annex EC RFI10-009.
203 Minutes of a call with a competitor, 15 December 2021.
204 Reply to Request for Information 6, Annex 019.
205 Reply to Request for Information 10, Annex EC RFI10-009.
206 Replies to Questionnaire to AWB customers, question 33.
207 Replies to Questionnaire to AWB customers, question 34.
208 Reply to Questionnaire to AWB customers, question 33.1.

business jets specifically.[209] Further, while one customer submits that '[a]*mong the existing suppliers,* [it] *would expect to have more competition on the business jet market and looks forward to an increased competition on this segment*',[210] there does not appear to be imminent entry into AWB for business jets by AWB manufacturers that are at present only active in other AWB markets. Specifically, Honeywell, which currently supplies AWB for some other product markets, for example explains that it '*typically focuses on twin*-[aisle]*, larger aircraft where it does not compete with the participants to the transaction*'[211] and that therefore '[i]*f there is going to be any effect* [of the Transaction, it] *would expect it to be on the smaller aircraft space where* [it] *typically does not focus*'.[212]

(D) Competition between the Parties

(182) While Meggitt is the market leader in AWB for business jets pre-Transaction, Parker only has a small market share. Nevertheless, Parker exerts a constraint on Meggitt in the AWB for business jets market, and relevant competition between the Parties – which would likely further increase absent the Merger – would be lost post-Transaction. This is because the Parties overlap in their capabilities which are relevant for the AWB for business jets market, and have bid or considered bidding for the same business jet programmes. Further, Parker has the ambition to expand its presence in AWB for business jets, thereby becoming a stronger competitor to Meggitt. The Parties also internally consider each other as competitors in the AWB for business jets market, and market participants regard Meggitt and Parker as two of a limited number of players in this market.

(D.i) Bidding and tender interactions between the Parties

(183) Pre-Transaction, both Parties compete for AWB tenders for business jets. Unlike some competitors, both Parties supply AWB for business jets with steel brakes. While Meggitt already supplies carbon brakes for business jets, Parker [Parker's internal business strategy]. Therefore, both Parties are likely to exert a competitive constraint across the two relevant brake materials for AWB for business jets.

(184) **First**, already today the Parties are engaged in tender-level competition for AWB for business jets, and through their respective presence in the AWB for business jets market, exert a competitive constraint on each other.

(185) In the Opportunity Data, the Notifying Party submit that the Parties in the 2012-2021 timeframe both submitted bids for […] overlapping AWB for business jets programme – namely the [Parker tenders].[213]

(186) In the same timeframe Parker overall submitted […] bids for AWB for business jet programmes and records [Parker bids] instance where it did consider bidding but ultimately did not bid. Meggitt overall submitted […] bids for AWB for business jet

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209 Replies to Questionnaire to AWB customers, questions 49, 49.1, 50, 50.1. Replies to Questionnaire to AWB competitors, question 50, 51, 51.1.

210 Replies to Questionnaire to AWB customers, question 51.

211 Replies to Questionnaire to AWB customers, question 59.1.

212 Replies to Questionnaire to AWB customers, question 61.

213 See e.g. EC meeting presentation, 17 February 2022, slide 13.

programmes and records [Meggitt bids] instances where it did consider bidding but ultimately did not bid.[214]

(187) Both Parties were therefore active in competing for new business in the AWB for business jets market. The Parties are also aware of each other's presence in certain tender events. The Parties submit that Parker only for […] tender event ([Parker tenders]) has a tender document in which any competitor at all is mentioned – in this instance nevertheless Meggitt is mentioned by Parker, alongside with one other competitor (Raytheon).[215] According to the Parties, Meggitt recorded competitors in tender documents for only six tender events. In two of these Parker is mentioned.[216]

(188) Specifically in relation to the [Parties´ bid], where both Parties submitted bids, Meggitt notes internally that '[Meggitt's market analysis]' and that '[Meggitt's market analysis]'.[217] This specifically shows that Meggitt adapted its own pricing due to the perceived constraint exerted by Parker. Parker in turn notes in relation to Meggitt and the [Parker´s market analysis]'.[218] This further shows that Parker exerts a constraint on Meggitt. In another tender document for an opportunity in which Parker did not submit a bid, Meggitt assesses with respect to Parker that it '[Meggitt's market analysis]'.[219]

(189) Therefore, the Parties already pre-Transaction are engaged in tender-level competition and each others' presence evidently has a constraining effect.

(190) **Second**, in the future, and absent the Transaction, this competition between the Parties in the AWB for business jets market, including in tenders, would likely increase further.

(191) Parker at present has a small market share in the AWB for business jets market. However, based on the available evidence it appears likely that Parker has a strategy to expand its presence and share in AWB for business jets.

(192) Parker pursues the ambition to increase its presence in the AWB for business jets market. This ambition is followed partly in conjunction with activities aimed at [Parker's business strategy].

(193) In an internal document, captioned in Figure 8, Parker assesses different segments of the business jet market. Overall, it concludes the following: '[Parker's business strategy]'. It further presents different '*investment focus*[es]' [Parker's business strategy]. While the Notifying Party submits that these statements '[Parker's business strategy]',[220] it clearly appears that Parker has ambitions beyond [Parker's business strategy]. In the Light-Medium Jets segment, Parker considers itself currently not to have any customer, yet it nevertheless identifies '[Parker's business strategy]' as an investment focus in order to be able to effectively compete for

214 Reply to Request for Information 10, Annex EC RFI10-002.
215 Reply to Request for Information 10, Annex EC RFI10-009.
216 Reply to Request for Information 10, Annex EC RFI10-009.
217 Meggitt CCR-0235.
218 Parker RFA-0261.
219 Meggitt CCR-0227.
220 Reply to Request for Information 8, question 3.

customers in that segment. The document further shows that Parker can be seen to have a particular focus on lighter business jets.

Figure 8 – Parker's view of the business jet market

[Parker's internal documents]

Source: Reply to Request for Information 4, Annex EC RFI4-001.

(194) Further, another Parker internal document captioned in Figure 9, shows that Parker has ambitions to expand its carbon and business jet activities beyond [Parker's business strategy]. In the document a number of AWB business jet opportunities are listed under the title '[Parker's business strategy]', e.g. the '[Parker's business strategy]'. This shows that Parker is internally tracking AWB business jet opportunities, in particular also in the context of its ambition to expand its [Parker's business strategy] activities.

Figure 9 – Parker carbon opportunity roadmap including business jet opportunities

[Parker's business strategy]

Source: Parker RFA-0269.

(195) With respect to the '[Parker's business strategy]'[221] and '[Parker's business strategy]' opportunities, the Notifying Party submits that '[Parker's business strategy]'.[222] The Commission notes that this constitutes a further expansion of Parker's [Parker's business strategy] business jets activities.

(196) With respect to the [Parker's business strategy], the Notifying Party states that it is a '[Parker's business strategy]'.[223] The Commission notes that the fact that Parker tracks information related to this potential programme internally evidences Parker's interest in expanding its [Parker's business strategy] AWB business jet activities.

(197) In another internal document, Parker formulates the aim to '[Parker's business strategy]'.[224] These developments clearly strengthen Parker's ability to compete for business jet AWB opportunities. In the same document, the business jet market is assessed to be one with a market growth potential.[225]

(198) In yet another internal document, Parker describes its '[Parker's business strategy]'.[226]

(199) Similarly, the Parker internal document captioned in Figure 10 further shows that Parker has a focus on expanding its business jet activities. Specifically, Parker formulates the objective to '[Parker's business strategy]'.[227] This shows that Parker intends to further win opportunities also for the supply of AWB for business jets (either for new programmes or retrofit), as this is the only way to consistently maintain market share. Further, the document lists '[Parker's business strategy]' and

221 PI&R = product improvement and retrofit
222 Reply to Request for Information 8, question 2b.
223 Reply to Request for Information 8, question 2b.
224 Form CO, Annex 5.4.A.072, page 15.
225 Form CO, Annex 5.4.A.072, page 16.
226 Reply to Request for Information 8, Annex EC RFI8 A-017, slide 9.
227 GA = general aviation, BA = business aviation, PI&R = product improvement and retrofit

again lists certain business jet [Parker's business strategy] product improvement and retrofit opportunities.

Figure 10 – Parker AWB growth strategy includes carbon and business jets

[Parker's business strategy]

Source: Reply to Request for Information 8, Annex EC RFI 8 A-010.

(200) Parker's focus on developing its [Parker's business strategy] brake capabilities is further evidenced in the internal document captioned in Figure 11. Parker is described as '[Parker's business strategy]'. The capability visualisation of different AWB suppliers on the captioned slide further shows that next to Meggitt, Goodrich, Honeywell and Safran, it is Parker which is considered to already have certain [Parker's business strategy] brake capabilities.

Figure 11 – Parker view on competitor AWV related capabilities

[Parker's market analysis]

Source: Reply to Request for Information 4, Annex EC RFI4-001, slide 32.

(201) In a 2019 internal document, Parker considered different carbon material options, [Parker's business strategy].[228] The Notifying Party explains that '*Parker has since opted to* [Parker's business strategy]'.[229] Therefore Parker, [Parker's business strategy], is continuing to pursue a strategy of engaging with third parties to develop and offer AWB with carbon brakes.

(202) AWB manufacturers (such as Parker) can be viable competitive constraints for AWB with carbon brakes, even if they do not have in-house carbon production capabilities and rely on third parties for the carbon materials. While one customer states that it considers AWB manufacturers with '[i]*n-house capabilities only*',[230] others also consider AWB manufacturers that source the carbon materials from third parties. For example, one customer states that it '*would consider a supplier that sources carbon from a third party*'.[231] Another customer states that it '*wouldn't be a big factor in the decision, so long that such supply is secure*'[232] and yet another customer states that '[i]*n-house carbon capabilities are not a requirement to be a supplier*'.[233]

(203) In light of these ambitions of Parker to expand its presence in AWB for business jets (including with carbon brakes), it is likely that absent the Transaction, Parker would have become a stronger constraint on the market leader Meggitt. This is in particular the case as most AWB for business jet opportunities are for AWB with carbon brakes – a segment of the market where Meggitt is predominantly active. While Parker has so far not supplied AWB for business jets with carbon brakes, its continued development efforts and tracking of commercial opportunities in this area make it likely that Parker would compete more intensely with Meggitt in the future (in specific carbon AWB for business jet opportunities and overall at the market level, by being perceived as a viable alternative for carbon AWB for business jets by

228 Reply to Request for Information 2, Annex EC RFI2-007.
229 Form CO, paragraph 586.
230 Reply to Questionnaire to AWB customers, question 40.
231 Reply to Questionnaire to AWB customers, question 40.
232 Reply to Questionnaire to AWB customers, question 40.
233 Reply to Questionnaire to AWB customers, question 40.

customers). In a highly concentrated market with few active suppliers a strengthened Parker capable to compete for carbon brake opportunities would significantly increase competition. The Transaction therefore reduces competition by removing Parker's impetus to expand further into AWB for business jets and carbon brakes.

(D.ii) The Parties internally consider each other as competitors

(204) Aside of tracking their perceived presence in certain tender events (e.g. [Parties' tenders]), the Parties also more generally consider themselves and each other as among a limited number of competitors in the AWB for business jets market.

(205) Meggitt clearly assesses itself to be the market leader in AWB for business jets. For example, it considers itself to have a '[Meggitt's market analysis]'.[234] Further, in relation to a 'Business Aviation' market that includes business jets and also certain general aviation aircraft used for business transportation, Meggitt considers itself to have an AWB market share of around [50-60]%.[235]

(206) Meggitt lists Parker as one of its '*Top Competitors*' for braking systems, and in that context specifically lists Parkers capabilities in relation to '[b]*usiness jets and GA wheel and brake*'.[236]

(207) Parker in an internal document (an extract is captioned in Figure 12), describes its market view for very light and light business jets (with both steel and carbon brakes). Considering steel brakes, it considers itself to be the number […] player in the market, considering carbon brakes it considers itself to be number […] or lower. Parker considers this market spaces to be [Parker's market analysis]. Overall this shows that particularly considering lighter business jets with steel brakes, Parker is a considerable competitive constraint on rivals. Considering both steel and carbon brakes, Parker lists Meggitt as one of a small group of *'primary competitors*' in this area of AWB for business jets.

Figure 12 – Parker's view of primary competitors for AWB for business jets

[Parker's market analysis]

Source: Extract from Reply to Request for Information 6, Annex EC RFI6-019.

(208) When describing the presence of a number of AWB suppliers at certain AWB customers in an internal document (captioned in Figure 13), Parker considers Meggitt to be present at a range of customers that focus to a significant extent on business jets (e.g. [Parker's customers]). As discussed above in relation to e.g. Figure 9, Parker itself is tracking certain AWB for business jet opportunities of some of these customers.

Figure 13 – Parker's view of AWB customer alignment

[Parker's customer analysis]

Source: Form CO, Annex 5.4.A-087, slide 13.

234 Form CO, Annex 5.4.B-002A, slide 100.
235 Reply to Request for Information RFI 8, Annex EC RFI 8 B-002, slide 48.
236 From CO, Annex 5.4.B-028, slide 34.

(209) Therefore, while the Notifying Party submits that in the past there has been limited direct bidding interaction between the Parties (and as also explained above, this is likely to increase in the future), the Parties recognise each other as competitors in the AWB for business jets market overall. In a market with only few active and capable suppliers to which customers can resort to, and a low number of participants in customers' tenders, this awareness of each other's presence in itself constitutes a relevant competitive constraint.

(D.iii) Market participants consider the Parties as alternatives

(210) In addition to the Parties considering each other as relevant competitors in the AWB for business jets market, also market participants generally observe both of the Parties as active in this market.

(211) While one customer describes Meggitt as '*N°1 in the world*' and notes that Parker '*has a limited presence on very light/light business jets only on nose wheel*',[237] another customer submits that it considers Meggitt to have an '*important participation*' in the AWB for business jets market, while also considering that Parker is '*present in many platforms*' in this market.[238] Another customer that considers both Meggitt and Parker as present in AWB for business jets describes Parker as having a focus on steel brakes and simple controls in that market.[239] A further customer states that it considers Meggitt to have a 30% market share in AWB for business jets and Parker to have a 10% market share in that market.[240] Further customers describe both Meggitt and Parker as both being active in AWB for business jets without providing further more details.[241]

(212) Related to the capability to compete for AWB for business jets opportunities in the future is the ability to compete for carbon brake opportunities. Here similarly a number of customers ascribe a presence in carbon brakes to both Meggitt and Parker – further one customer also describes Parker as a '*potential supplier*' of carbon brakes.[242]

(213) Both Parties are therefore seen as active suppliers or potential alternatives in the AWB for business jets market. They therefore exert a relevant competitive constraint on each other (as well as on other AWB suppliers), which would be removed by the Transaction.

(214) In light of this, one customer describes the Transaction as '*more problematic regarding AWBs for smaller-sized aircraft with lower duty cycles and aftermarket potential, such as business jets and helicopters below 100,000 lb, as it reduces the limited number of AWB suppliers active in that space*'. This customer further states that '[t]*he Parties have a particularly important position with respect to these products*'.[243]

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237 Reply to Questionnaire to AWB customers, question 44.2.
238 Reply to Questionnaire to AWB customers, question 44.2.
239 Reply to Questionnaire to AWB customers, question 44.2.
240 Reply to Questionnaire to AWB customers, question 44.2.
241 Replies to Questionnaire to AWB customers, question 44.2.
242 Reply to Questionnaire to AWB customers, question 44.2.
243 Minutes of a call with a customer, 14 January 2022.

(215) Another customer, active in business jets submits that while it '*cannot be sure of how the transaction will affect the competition in the AWB market, since there is little visibility of how it will affect the technical side of the business*', the Transaction '*will have a direct impact on the potential options to choose from for* [the Company]*, which would be even more limited after this transaction by removing one credible competitor from the market*'. This customer further explains: '*On the technical side,* [the Company] *considers that competition between Parker and Meggitt has driven better prices and quality for their AWB offer. There are the only two companies now, so after the merger, there would be no alternative*'.[244]

(216) Therefore, overall, a number of customers that manufacture business jets expect that the Transaction would have a negative impact for their company (e.g. higher prices, worse service, lower availability of products).[245]

(E) Conclusion

(217) As set out in this Section 4.2.4.2, the Transaction would lead to a very large combined market share of the Merged Entity in the AWB for business jets market (in excess of 60%) and result in a significant further increase of concentration in this market. While Parker currently only has a small share of supply, it appears particularly strong to address light business jets with brakes made in steel and is one of a small number of competitors to market leader Meggitt in the AWB for business jets market. Absent the Transaction, it appears likely that Parker would further increase its presence in the AWB for business jets market, including with carbon brakes.

(218) Therefore, the Commission concludes that the Transaction raises serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of AWB for business jets.

4.2.4.3. Helicopters

(A) The Parties' activities

(219) Parker is the market leader in AWB for helicopters supplying both carbon[246] and steel AWB for a wide range of helicopters. Parker continues to focus on AWB for helicopters and competes for several new opportunities both civil and military (*e.g.* [Parker bids]).

(220) Meggitt has also an important presence in AWB for helicopters and is the second market player after Parker. Its wheels and brakes are equipped on both civil and military helicopters such as the CH-47 Chinook. It continues to compete for helicopter AWB opportunities both civil and military (*e.g.* [Meggitt bids]).

(B) Market structure

(221) As highlighted in paragraph (117) above, with respect to AWB for helicopters, the Merged Entity would be the market leader with combined market shares in the years

244 Minutes of a call with a customer, 13 January 2022.

245 Replies to Questionnaire to AWB customers, question 59.

246 Parker supplies carbon brakes for Bell-Boeing V-22 Osprey for which carbon fibre reinforced silicon carbide friction materials is procured from Minteq.

2016-2020 ranging between [70-80]% and [80-90]%. Considering the overall five-year period between 2016-2020, the Parties' combined market share is [80-90]%. The market share increment resulting from the Transaction is between [20-30]% and [30-40]% over the same period. The other competitors have significantly lower market shares, with the most important being Safran and Honeywell with a market share of [5-^0]% and [0-5]% respectively.

(222) The Tables below provide the market shares of the Parties and their competitors for AWB in value for civil and military helicopters separately:

Table 10 – AWB for civil helicopters, 2016-2020 market shares

AWB for civil helicopters – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[20-30]%	[20-30]%	[30-40]%	[30-40]%	[20-30]%
Meggitt	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[10-20]%
Combined	***[50-60]%***	***[40-50]%***	***[50-60]%***	***[60-70]%***	***[40-50]%***
Safran	[10-20]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%
Honeywell	[10-20]%	[10-20]%	[5-10]%	[10-20]%	[10-20]%
Others	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 8, Annex EC RFI 13-001.

(223) Post-Transaction, considering civil helicopters only, the merged entity would be the market leader, with market shares in the years 2016-2020 ranging between [40-50]% and [60-70]%. Considering the overall five-year period between 2016-2020, the Parties' combined market share is [50-60]%. The market share increment resulting from the Transaction would be significant and ranges from [10-20]% to [20-30]% over the same period. Again, the main competitors would be Safran and Honeywell, both well behind the Merged Entity, at about [10-20]% and [10-20]% respectively.

Table 11 – AWB for military helicopter, 2016-2020 market shares

AWB for military helicopter – Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[60-70]%	[60-70]%	[70-80]%	[70-80]%	[60-70]%
Meggitt	[30-40]%	[30-40]%	[20-30]%	[20-30]%	[30-40]%
Combined	***[90-100]%***	***[90-100]%***	***[90-100]%***	***[90-100]%***	***[90-100]%***
Safran	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 8, Annex EC RFI 13-001.

(224) Post-Transaction, considering military helicopters only, the Merged Entity would be the market leader, with a near monopoly situation (market shares in the years 2016-2020 ranging between [90-100]% and [90-100]%). Considering the overall

five-year period between 2016-2020, the Parties' combined market share is [90-100]%. The market share increment resulting from the Transaction would be significant and ranges from [20-30]% to [30-40]% over the same period. Safran would likely be the only remaining competitor with a very small market share (approx. [0-5]%).

(225) The Merged Entity would therefore have a very large market share, significantly in excess of [50-60]% over the last five year (and actually close to [90-100]% for military). According to the Horizontal Merger Guidelines, '*very large market shares – 50% or more – may in themselves be evidence of the existence of a dominant market position*'.[247] Therefore, while other factors need to be taken into account (e.g. the ability of competitors to effectively constrain the Merged Entity), the Merged Entity's market share of over [50-60]% is an indication for a dominant market position.

(226) Further, the AWB for helicopters market is already highly concentrated pre-Transaction, and would be even more so post-Transaction. The Notifying Party attributes a market share to only (i) two active suppliers by name for civil helicopters, namely Safran and Honeywell – with an additional up to [20-30]% of the market accounted for by 'Others' and (i) only one active supplier, namely Safran for military helicopters – with only [0-5]% accounted for by 'Others'. Post-Transaction, the number of players with a sizeable market presence would thus be reduced to three: the Merged Entity, Safran and Honeywell, in a market characterized by significant barriers to entry as explained in paragraphs (112) and (237).

(227) This very high level of concentration is also borne out in the relevant HHI values. Based on 2020 market shares, the AWB for helicopters market would have a pre-Transaction HHI value of [3500-4000][248], [1500-2000] for civil helicopters[249] and [5500-6000] for military helicopters. Post-Transaction, this concentration would further increase, expressed in a post-Transaction HHI value of [7000-7500][250] ([2000-2500] for civil[251] and [9500-10000] for military) and a delta of [3000-3500] ([700-800] for civil and [4000-4500] for military). These values are far above the thresholds for which the Commission considers that it is unlikely to find competition concerns. The AWB for the helicopters market, and the civil and military segments, were therefore already concentrated pre-Transaction and would be even more so post-Transaction.

(C) Competitors' ability to constrain the Merged Entity

(228) Post-Merger, the Parties' competitors in the market for AWB for helicopters (civil and military) are unlikely to be able to effectively constrain the Merged Entity.

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247 Horizontal Merger Guidelines, paragraph 17.

248 The pre-Transaction HHI value for AWB for helicopters is based on the most conservative approach allocating the market share of [5-10]% in the others category to 6 different hypothetical competitors.

249 The pre-Transaction HHI value for AWB for civil helicopters is based on the most conservative approach allocating the market share of [20-30]% in the others category to 23 different hypothetical competitors.

250 The post-Transaction HHI value for AWB for helicopters is based on the most conservative approach allocating the market share of [5-10]% in the others category to 6 different hypothetical competitors.

251 The post-Transaction HHI value for AWB for civil helicopters is based on the most conservative approach allocating the market share of [20-30]% in the others category to 23 different hypothetical competitors.

(229) The Merged Entity's very large market share post-Transaction, and the highly concentrated nature of the AWB for helicopters market (and the civil and military segments) in themselves suggest that competitors do not have particularly strong market positions and lack the competitive strength to effectively constrain the Merged Entity.

(230) In addition, customers' ability to credibly resort to alternative suppliers to the Merged Entity appears to be limited, as some competitors do not offer certain types of helicopter AWB (e.g. steel AWB) or are simply not focused on AWB for helicopters.

(231) Finally, significant barriers to entry render the emergence of new players capable of effectively constraining the Merged Entity on the AWB for helicopters unlikely.

(232) **First**, competitors active at present in the AWB for helicopters market have a very limited market presence, lack certain capabilities, and/or do not focus on maintaining/expanding their presence in this market.

(233) Safran, which will be post-Transaction the largest competitor to the Merged Entity has a 2020 market share of [5-10]% ([20-30]% for civil helicopters and [0-5]% for military ones) and its market share does not exceed [10-20]% over the period 2016-2020 ([10-20]% for civil helicopters and [0-5]% for military ones). As acknowledged by the Notifying Party, and confirmed by Safran[252], helicopters (both civil and military) typically use steel brakes.[253] The Notifying Party even expects that the winner of two upcoming helicopter programmes '[Parties' programmes] *competitions will be equipped with steel brakes*'. However, Safran has hardly any steel capabilities and confirmed that it only '*produces very few steel brakes*'.[254] Safran further confirmed that the AWB for helicopters market is '*is of less strategic importance for Safran*'.[255] This hinders customers' ability to resort to Safran for steel AWB helicopters, which represent the material that is predominantly used in this market, since only two in-production helicopters are equipped with carbon brakes – the Bell-Boeing V-22 Osprey (military) and the Airbus H160 (both civil and military).

(234) Honeywell is yet another competitor to the Merged Entity in the market for AWB helicopters where its 2020 market share is small (approx. [0-5]% and [10-20]% in civil only with no market share in military). Honeywell considers itself as a marginal player in AWB helicopters market and explains that it '*typically focuses on twin-*[aisle]*, larger aircraft where it does not compete with the participants to the transaction*'[256] and that therefore '[i]*f there is going to be any effect* [of the Transaction, it] *would expect it to be on the smaller aircraft space where* [it] *typically does not focus*'.[257] The Parties do not regard Honeywell as a particularly significant constraint in the market for AWB for helicopters. In an internal

252 Reply to Questionnaire to AWB competitors, question 45.1.3.
253 Form CO, paragraphs 525, 529 and 530.
254 Minutes of a call with a competitor, 10 December 2021.
255 Ibid.
256 Reply to Questionnaire to AWB customers, question 59.1.
257 Reply to Questionnaire to AWB customers, question 61.

document, Parker refers to Honeywell in only one of the two AWB helicopters segments and simply as a non-primary competitor.[258]

(235) In view of the above, it appears that neither Safran nor Honeywell have a particular focus on AWB for helicopters. Furthermore, none of them was considered by the Parties and market participants to be a particularly strong competitor in this market. Those statements apply to both civil and military helicopters.

(236) **Second**, other potential suppliers of AWB for helicopters were equally seen as having a weak position and therefore unable to sufficiently constrain the Merged Entity. During the market investigation, all wheels and brakes manufacturers but one (Darwin*) consider themselves weak, not strong at all or not active[259] in AWB for helicopters. Upon a closer analysis, even Darwin* seems to have a limited presence in civil and military helicopters. The Notifying Party did not allocate specific market share to Darwin* in their estimates. In addition, in one of Parker's internal documents, Darwin* is perceived as [Parker's market analysis] and customer relations.[260] Similarly, Collins (an aerospace division of Raytheon) explains that it is not *'active in general aviation or in rotorcrafts'*[261] and further states that *'these segments less attractive, since there are neither many new aircrafts nor much development of the industry in general*'.[262]

(237) **Third**, a large majority of customers and competitors expressing their view submit that they are not aware of any market entry in AWB in the past five years and do not expect the entry of viable new AWB players in the next five years. In this context, also no market participant refers to any past or future entry with respect to AWB for helicopters specifically.[263] In particular, there also does not appear to be imminent entry into AWB for helicopters by AWB manufacturers that are at present only active in other AWB markets. Furthermore, new entry in the market for AWB helicopters is unlikely given that potential new entrant have reduced incentives to invest and develop capabilities for a market often qualified as unattractive where only a limited number of new opportunities emerge. In this respect, the Notifying Party explained that '*there are very few future AWB military rotorcraft opportunities (or indeed civil helicopter opportunities). There are essentially only two new military rotorcraft programmes (both for the US military): the FLRAA and the Future Attack Reconnaissance Aircraft (FARA)*'.[264]

(D) Competition between the Parties

(D.i) Bidding and tender interactions between the Parties

(238) Pre-Transaction, both Parties competed for AWB tenders for helicopters. Both Parties supply steel AWB for helicopters. Although the use of carbon brakes is marginal for helicopters, Parker is already equipping a helicopter, the Bell-Boeing

258 Reply to Request for Information 6, Annex RFI 6-019.
259 Reply to Questionnaire to AWB competitors, question 44.
260 Parker RFA-361.
261 Minutes of a call with a competitor, 9 December 2021.
262 Ibid.
263 Replies to Questionnaire to AWB customers, questions 49, 49.1, 50, 50.1. Replies to Questionnaire to AWB competitors, question 50, 51, 51.1.
264 Form CO, paragraph 492 (d) (e).
* Should read: Dawin

V-22 Osprey, with carbon brakes [Parker's knowhow] while Meggitt has already developed in-house carbon capabilities. Therefore, both Parties are likely to exert a competitive constraint across the two relevant brake materials for AWB for helicopters.

(239) **First**, already today the Parties are engaged in tender-level competition for AWB for helicopters (civil and military), and through their respective presence in the AWB for civil and military helicopters market, exert a competitive constraint on each other.

(240) In the Opportunity Data, the Notifying Party submits that the Parties in the 2012-2021 timeframe did not submit bids for any overlapping AWB helicopter programme – whether civil or military.[265]

(241) In the 2012-2021 timeframe, Parker overall submitted […] bids for AWB for helicopter programmes ([…] civil and […] military) and records […] additional instances ([…] civil and […] military) where it did consider bidding but ultimately did not bid. Meggitt overall submitted […] bids for AWB for helicopter programmes and records […] additional instances where it did consider bidding but ultimately did not bid.[266]

(242) Contrary to the Notifying Party's claim, the Parties' competitive interactions are therefore confirmed by their simultaneous presence in […] overlapping opportunities for AWB helicopters ([…] military and […] civil) over the last 10 years. In its discussion of the [Parker's helicopter programme] Helicopter programme (military), Parker listed Meggitt as one of its competitors and explained that the market concerned by that opportunity '[Parker's market analysis]'.[267] Meggitt is further listed in several other internal documents discussing various helicopter programmes such as the [Parker's helicopter programmes][268], [Parker's helicopter programmes][269], [Parker's helicopter programmes][270] and the [Parker's helicopter programmes].[271] Meggitt's internal documents regarding recent helicopter programmes further provide evidences of Parker being closely monitored. In its discussion regarding the [Meggitt's helicopter programmes] programme, Meggitt refers to Parker and explains that '[Meggitt's market analysis]'.[272] Regarding the [Meggitt's helicopter programmes], Meggitt stresses that it is '[Meggitt's market analysis]'.[273]

(243) With respect to the FLRAA (military) programme in particular, the Notifying Party claims that '*the Parties have both explored the possibility of roles on the US Military's Future Long Range Assault Aircraft (FLRAA) programme given its size and prominence, but none of these have given rise to the Parties bidding against each other and the only unresolved opportunity potentially involving both of them is*

265 See e.g. EC meeting presentation, 17 February 2022, slide 13.
266 Reply to Request for Information 10, Annex EC RFI10-002.
267 Parker RFA-0314.
268 Parker RFA-0317.
269 Parker RFA-0345.
270 Parker RFA-0372.
271 Parker RFA-0348.
272 Reply to Request for Information 6, Annex RFI6-006.
273 Reply to Request for Information 6, Annex RFI6-007.

not viewed as a serious prospect'.[274] The Commission notes that Parker and Meggitt both participated and were involved in discussions regarding this programme and as such monitoring each other, which indicates competitive interactions between them at the pre-bid stage regardless of their ultimate bidding decision. The fact that Safran has won the supply of the landing gear for the V-280 (military) and may very well supply the AWB for it itself will not affect the segment for AWB for civil helicopters. It also unlikely to question the Merged Entity's very strong position with respect to AWB for military helicopters given the current significant gap between the Merged Entity and Safran's market shares. Hence, the market for AWB helicopters is and will continue to be concentrated with hardly any competitor capable of meeting the scale and breadth of the Merged Entity activities in the market for AWB for helicopters. In any event, the supply of AWB for the V-280 by Safran remains hypothetical at this stage since the Parties have both been in discussion with Safran regarding the supply the AWB for this programme.

(244) The Notifying Party further contends that '*the supply of AWB for military rotorcraft (or helicopters generally) is not an area of strategic focus for Meggitt*'[275] given that it represents a small portion of Meggitt's overall AWB business and due to the nature of the programmes supplied by Meggitt, its licensing arrangements and bid activity.[276] The Commission considers that Meggitt's interest in the FLRAA programmes, which are among the very few helicopters opportunities, demonstrates, contrary to what the Notifying Party claims, that helicopters are rather an area of interest for the company. This is further confirmed by Meggitt's biding* for other major programmes regarding AWB for helicopter such as [Meggitt's helicopter programmes] as well as responding to an RFI from [Meggitt customer] for the [Meggitt's helicopter programmes]. This is even truer since Meggitt, is among the very few players, who has been historically active in this market designing AWB for helicopters and as such already owns the necessary know-how and technology allowing it to focus, at any time, on this market without incurring prohibitive investments.

(245) Meggitt's interest in helicopters' programmes, in particular military ones, is further evidenced in the internal document captioned in Figure 14, which shows its high position in this segment that is presented as an attractive one. This figure further shows that Meggitt's aim is at the very least to maintain its position in this market.

Figure 14 – Meggitt's positions and segments attractiveness

[Meggitt's market analysis]

Source: Form CO, Annex 5.4.1-029, slide 22.

(246) **Second**, given the confidential nature of tender processes, there may be further opportunities in which both Parties participated on some level while not captured by the tender data provided by the Parties. This is for instance the case for the Bell V-280 Valo** one of the two aircraft competing to win the FLRAA program, for which Safran is the sole supplier of the landing gear. Parker has [Parker tenders and

274 Form CO, paragraph 492 (a) (i).
275 Form CO, paragraph 492 (b).
276 Ibid.
* Should read: bidding
** Should read: Valor

strategy].[277] Parker's tender data does not record the Safran V-280 opportunity (FLRAA) although having [Parker tenders and strategy]. Meggitt explains in a document dated May 2021 related to that opportunity that '[Meggitt's market analysis]' and that it is '[Meggitt's market analysis]'.[278] This further demonstrate possible competitive interactions between the Parties, which are not captured in their tender data.

(247) **Third**, evidence available in the Parties' tender documents further demonstrates that they constraint each other even in the absence of overlapping opportunities. For instance, Meggitt's tender data does not record the [Meggitt's helicopter programmes] opportunity while Parker's tender document still refers, as shown in Figure 15 below, to Meggitt as one of the only two possible competitors for that same opportunity. The same applies to several other AWB helicopters opportunities such as the [Meggitt's helicopter programmes][279], the [Meggitt's helicopter programmes][280] and the [Meggitt's helicopter programmes][281] for which Parker lists, in the corresponding tender documents, Meggitt as a competitor even though the latter did not even record that opportunity in its tender database. This demonstrates that the Parties constraint each other even for opportunities for which only one Party has actually participated to and recorded that opportunity.

Figure 15 – Parker's analysis of competition for one opportunity that was not recorded by Meggitt

[Parker's market analysis]

Source: Parker's internal document. RFA-0317.

(248) **Fourth**, as shown in Figure 15, the analysis of competitors' mentioned in the AWB helicopter tender documents and the regular references therein made by Parker's to Meggitt as a competitor for the supply of AWB for both civil and military helicopters further confirms the important pre-bid competitive interactions between the Parties. In this respect, Parker cites Meggitt in [the majority] out of the […] documents ([…]%) where at least one competitor is mentioned.

(249) In view of the above, the Parties already pre-Transaction are engaged in tender-level competition and each others' presence evidently has a constraining effect that is not fully captured in the bidding data.

(D.ii) The Parties internally consider each other as competitors

(250) The Parties not only track each other as part of their AWB helicopter bidding activity, they also consider themselves as close competitors in their internal documents.

(251) Meggitt lists Parker as one of its '*Top Competitors*' for braking systems, and in that context specifically describes Parkers capabilities in relation to helicopters where it

277 Form CO, paragraph 724.
278 Reply to Request for Information 6, Annex RFI6-007.
279 Parker RFA-0348.
280 Parker RFA-0345.
281 Parker RFA-0314.

is considered as '[Meggitt's market analysis]'[282] and to '[Meggitt's market analysis]'.[283] Those statements appear to relate to both civil and military helicopters.

(252) Parker's internal documents equally refer to Meggitt as a close competitor. In one of its internal documents (an extract is captioned in Figure 16), Parker refers to Meggitt as one its '*primary competitors*' for steel and carbon AWB for helicopters.[284] In the same document, Parker considers itself to be [Parker's market analysis] player in the carbon segment and [Parker's market analysis] player in the steel segment. Again, the document covers both civil and military helicopters.

Figure 16 – Parker's view of primary competitors for AWB for helicopters

[Parker's market analysis]

Source: Extract from Reply to Request for Information 6, Annex EC RFI6-019.

(253) Therefore, the Parties are not only aware of each other's presence in the market for AWB for helicopters (both civil and military) but also mutually recognise each other as an important competitor in this market (and its respective potential segments).

(D.iii) Market participants consider the Parties as alternatives

(254) In addition to the Parties considering each other as relevant competitors in the AWB for helicopters market, also certain market participants observe both of the Parties as active in this market.

(255) A number of customers note both Parker's and Meggitt's presence in AWB for civil and military helicopters.[285] One customer has ranked Parker and Meggitt as the two leaders in a small group of suppliers for both civil and military helicopters.[286] A further customer describes Parker as '*very present*'[287] in AWB for civil helicopter and has a '*moderate presence*'[288] in AWB for military ones. An additional customer stressed that Meggitt has '*long experience*' in among others '*military helicopters'*.[289]

(256) A competitor explained that '*Safran, Meggitt and Parker compete in the supply of brakes for helicopters*'.[290] This competitor further stated that '*Meggitt supplies around 40% of brakes in the helicopters segment (Russian and Chinese helicopters excluded), Parker around 30%*' while it only supplied *'a few*'.[291] Another competitor considers both Meggitt and Parker as present in the market for AWB for helicopters and stresses that '*there are certainly some overlaps between the Parties in the supply of AWB for [(…)] and helicopters*'.[292]

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282 Form CO, 5.4 document, Annex 5.4.B-028.
283 Ibid.
284 Reply to Request for Information 6, Annex RFI 6-019.
285 See e.g. Replies to Questionnaire to AWB customers, question 44.1 and 44.2.
286 Replies to Questionnaire to AWB customers, questions 44.1 and 44.2.
287 Reply to Questionnaire to AWB customers, question 44.1.
288 Ibid.
289 Reply to Questionnaire to AWB customers, question 44.1.1.
290 Minutes of a call with a competitor, 10 December 2021.
291 Ibid.
292 Minutes of a call with a competitor, 15 December 2021.

(257) Both Parties are therefore seen as active suppliers or potential alternatives in the AWB for helicopters market. They therefore exert a relevant competitive constraint on each other (as well as on other AWB suppliers), which would be removed by the Transaction.

(258) Therefore, overall, a number of market participants suggest that the Transaction could have a negative impact on competition for AWB for helicopters, leading to e.g. higher prices, worse service, lower availability of products.

(E) Conclusion

(259) As set out in this Section 4.2.4.3, the Transaction would lead, in the AWB for helicopters market, to a very large combined market share of the Merged Entity (in excess of 80% - [50-60]% for civil and [90-100]% for military) and result in a significant further increase of concentration in that market, for both civil and military helicopters. Based on current market share data, Meggitt is the only sizeable competitor to Parker. Alternative players, Safran, Honeywell and Darwin*, have today a marginal presence in the AWB for helicopters market and are unlikely to sufficiently constrain the Merged Entity's leading position in the future.

(260) Therefore, the Commission concludes that the Transaction raises serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of AWB for helicopters, including both civil and military helicopters.

4.2.4.4. Military fixed-wing UAVs

(A) The Parties' activities

(261) Parker has a significant presence in AWB for military fixed-wing UAVs and is bidding for opportunities with both steel and carbon brake solutions.[293]

(262) Meggitt has a small market presence in AWB for military fixed-wing UAVs, but is also bidding for opportunities with both steel and carbon brake solutions.[294]

(B) Market structure

(263) As detailed above in Table 5, the AWB for military fixed-wing UAVs market is highly concentrated. Parker has a 2020 market share of [60-70]%, Meggitt of [0-5]% and the Merged Entity of [60-70]%. Considering the 2016-2020 five-year period, Parker has a market share of [50-60]%, Meggitt of [0-5]% and the Merged Entity of [50-60]%.

(264) The Merged Entity would therefore have a very large market share, in excess of 50%. According to the Horizontal Merger Guidelines, '*very large market shares – 50% or more – may in themselves be evidence of the existence of a dominant market position*'.[295] Therefore, while other factors need to be taken into account (e.g. the ability of competitors to effectively constrain the Merged Entity), the Merged Entity's market share of over 50% is an indication for a dominant market position.

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[293] Reply to Request for Information 10, Annex EC RFI10-002.

[294] Reply to Request for Information 10, Annex EC RFI10-002.

[295] Horizontal Merger Guidelines, paragraph 17.

* Should read: Dawin

(265) Further, the AWB for military fixed-wing UAVs market is already highly concentrated pre-Transaction, and would be even more so post-Transaction. The Notifying Party attributes a market share to four active suppliers by name, namely Parker, Meggitt, Raytheon and Safran. Post-Transaction, the number of players with a market presence would thus be reduced to only three: The Merged Entity, Raytheon and Safran.

(266) This high level of concentration is also borne out in the relevant HHI values. Based on 2020 market shares, the AWB for military fixed-wing UAVs market would have a pre-Transaction HHI value of [5000-5500]. Post-Transaction, this concentration would further increase, expressed in a post-Transaction HHI value of [5000-5500] and a delta of [300-400]. These values are significantly above the thresholds for which the Commission considers that it is unlikely to find competition concerns.[296] The AWB for military fixed-wing UAVs market was therefore already concentrated pre-Transaction and would be even more so post-Transaction.

(267) Overall, the Merged Entity would therefore have a very large market share in a concentrated market with respect to military fixed-wing UAVs.

(C) Competitors' ability to constrain the Merged Entity

(268) Post-Merger, competitors to the Parties in the AWB for military fixed-wing UAV market are overall unlikely to be able to effectively constrain the Merged Entity.

(269) The very large market share of the Merged Entity post-Transaction, and the highly concentrated AWB for military fixed-wing UAVs market in general (expressed in the HHI values), in themselves suggest that the number of competitors that may have strong market positions and are capable to exert some form of meaningful constraint on the Merged Entity is very limited.

(270) Only two competitors to the Merged Entity are active on the market: Raytheon and Safran.

(271) Raytheon has a 2020 market share of [30-40]% and a 2016-2020 five-year average market share of [40-50]%. It will post-Transaction be the largest competitor to the Merged Entity. It considers itself to be a very strong player in the AWB for military fixed-wing aircraft space overall, which also encompasses military trainers, fighters/bombers and cargo aircraft.[297] Looking at UAVs specifically, Raytheon's market share has been declining over the years, from [90-100]% in 2016 to [30-40]% in 2020, while Parker's market share has been steadily increasing up to [60-70]% in 2020 and Meggitt started generating sales in 2020. While Parker considers Raytheon in both of the tender documents related to new original equipment AWB for military fixed-wing UAV opportunities in the 2012-2021 timeframe in which a competitor is mentioned, Meggitt did not consider Raytheon in the one such document in which a competitor is mentioned.[298] The tendency towards lesser involvement of Raytheon for UAVs specifically appears also evidenced in an internal document of Parker

296 Horizontal Merger Guidelines, paragraph 19-21.
297 Reply to Questionnaire to AWB competitors, question 44.
298 Reply to Request for Information 10, Annex EC RFI10-009.

related to a military fixed-wing UAV tender. In this document, Parker assesses that Goodrich/Collins (part of Raytheon) '[Parker's market analysis]'.[299]

(272) Safran has a 2020 market share of [0-5]% and a 2016-2020 five-year average market share of [0-5]%. It therefore has a very small market presence today. Parker considers Safran in […] of […] of the tender documents related to new original equipment AWB for military fixed-wing UAV opportunities in the 2012-2021 timeframe in which a competitor is mentioned, while Meggitt mentions Safran in the […] such document in which a competitor is mentioned.[300] In an internal document related to a military fixed-wing UAV tender, Parker assesses that Safran '[Parker's market analysis]'.[301]

(273) In any case, both Raytheon and Safran are vertically integrated and also offers landing gears. Customers that are non-vertically integrated landing gear integrators would thus not be inclined to turn to them for AWB supply.

(274) Market participants confirm that the AWB for military fixed-wing UAVs market is generally concentrated with few active competitors. For example, a manufacturer of military fixed-wing UAVs submits that it receives only 2-3 bids in tenders[302] and explains that according to its understanding '*the limited number of AWB suppliers are aware of their competitor's strengths and weaknesses, and make their own bid/no-bid decision based probability of win and their determination of program*'.[303] Further, large majorities of market participants do not expect the entry of viable new AWB players in the next five years.[304]

(275) Overall, therefore, as Safran only has a very small market presence, post-Transaction there would only be two players with a meaningful market presence, the Merged Entity as market leader, followed by Raytheon.

(D) Competition between the Parties

(276) While Parker is the market leader in AWB for military fixed-wing UAVs pre-Transaction, Meggitt only has a small market share. Nevertheless, Meggitt exerts a constraint on Parker in the AWB for military fixed-wing UAVs market, and relevant competition between the Parties – which would likely further increase absent the Merger – would be lost post-Transaction. This is because the Parties overlap in their capabilities which are relevant for the AWB for military fixed-wing UAVs market, and have bid or considered bidding for the same military fixed-wing UAV programmes. The Parties also internally consider each other as competitors in the AWB for military fixed-wing UAVs market, and market participants regard Meggitt and Parker as two of a limited number of players in this market.

299 Form CO, Annex 5.4.A.075, page 10.
300 Reply to Request for Information 10, Annex EC RFI10-009.
301 Form CO, Annex 5.4.A.075, page 10.
302 Replies to Questionnaire to AWB customers, question 34.
303 Reply to Questionnaire to AWB customers, question 34.1.
304 Replies to Questionnaire to AWB customers, questions 49, 49.1, 50, 50.1. Replies to Questionnaire to AWB competitors, question 50, 51, 51.1.

(D.i) Bidding and tender interactions between the Parties

(277) Pre-Transaction, both Parties compete for AWB tenders for military fixed-wing UAVs. Both Parties bid for tenders with both steel and carbon brakes [Parker's business strategy]. Therefore, both Parties are likely to exert a competitive constraint across the two relevant brake materials for AWB for military fixed-wing UAVs.

(278) The Parties are engaged in tender-level competition for AWB for military fixed-wing UAVs, and through their respective presence in the AWB for military fixed-wing UAVs market, exert a competitive constraint on each other.

(279) In the Opportunity Data, the Notifying Party submits that the Parties in the 2012-2021 timeframe both submitted bids for […] overlapping AWB for military fixed-wing UAV opportunities – namely […] opportunities for the [Parties' bid opportunities].[305] Further, in one instance one Party submitted a bid ([…]) while the other Party ([…]) considered bidding but ultimately decided against it ([Parties' bid opportunities]).[306]

(280) In the 2012-2021 timeframe Parker overall submitted […] bids for AWB for military fixed-wing UAV programmes and records […] additional instance where it did consider bidding but ultimately did not bid. Meggitt overall submitted […] bids for AWB for military fixed-wing UAV programmes and records […] additional instances where it did consider bidding but ultimately did not bid.[307]

(281) In the years 2020-2021 Meggitt has submitted […] bid with customer [Meggitt customer] and considered submitted bidding in […]. [Meggitt customer] is by far the most important customer of market leader Parker in AWB for military fixed-wing UAVs (representing […] out of the […] bids submitted by Parker for AWB for military fixed-wing UAV opportunities in the 2012-2021 timeframe).[308] Parker is therefore not only challenged by Meggitt on the overall AWB for military fixed-wing UAV market, but also specifically at what is a very important military fixed-wing UAV customer.

(282) The Parties are also aware that they compete with each other in certain tender events. While Meggitt only has […] tender document in which it records the perceived presence of competitors and does not mention Parker in that document, Parker has […] tender documents in which it records the perceived presence of competitors and it mentions Meggitt in both these documents.[309]

(283) Specifically in relation to the [Parties' bid opportunity], where both Parties submitted bids (to [Parties' customers]), Parker notes in relation to the [Parker customer] bid: '[Parker market analysis]'.[310] Further, Parker only assesses one other competitor for this opportunity, namely Meggitt, and states that '[Parker market analysis].[311] While when evaluating the competitive landscape for the [Parker customer] bid, Parker also considers Raytheon and Safran as competitors in addition

305 See e.g. EC meeting presentation, 17 February 2022, slide 13.
306 See e.g. EC meeting presentation, 17 February 2022, slide 16.
307 Reply to Request for Information 10, Annex EC RFI10-002.
308 Reply to Request for Information 10, Annex EC RFI10-002.
309 Reply to Request for Information 10, Annex EC RFI10-009.
310 Parker RFA-0270, page 3.
311 Parker RFA-0269, slide 11.

to Meggitt, this shows that despite its small present market share, Parker considers Meggitt as a strong competitor for certain military fixed-wing UAV opportunities. Further, it also shows that landing gear integrators such as [Parker customer] which do not have in-house AWB production are reliant essentially on only Parker and Meggitt in this market, as the other alternative suppliers (Raytheon and Safran) are themselves also active as landing gear suppliers.

(D.ii) The Parties internally consider each other as competitors

(284) Aside of tracking their perceived presence in certain tender events (e.g. [Parties' bid opportunity]), the Parties (and in particular Parker) also more generally consider themselves and each other as among a limited number of competitors in the AWB for military fixed-wing UAVs market.

(285) Parker describes UAVs as '[Parker's market analysis]',[312] and considers itself to be [Parker's market analysis] for steel AWB for UAVs and be the number […] market player for carbon AWB for UAVs.[313] In an internal document, Parker considers that when looking at AWB for UAVs and trainer aircraft, only Meggitt, Parker and Raytheon are active in supply.[314] In another internal document, Parker describes Meggitt and Raytheon as '[Parker's market analysis]' in relation to steel AWB for UAVs, and Meggitt and Raytheon as '[Parker's market analysis]' and Safran and Honeywell as other competitors in relation to carbon AWB for UAVs.[315]

(286) Meggitt for example also considers that it has a high position in braking systems for military applications,[316] an area which also includes the AWB for military fixed-wing UAVs.

(D.iii) Market participants consider the Parties as alternatives

(287) In addition to the Parties, and in particular Parker considering each other as relevant competitors in the AWB for military fixed-wing UAVs market, also market participants generally observe both of the Parties as active in this market.

(288) A number of customers note both Parker's and Meggitt's presence in AWB for military-fixed wing aircraft generally, of which military fixed-wing UAVs are a part.[317] A key customer in the AWB for military fixed-wing UAV market notes with respect to Meggitt that it '*is completely capable to have a focus or presence on military UAVs*'.[318] Another customer recognises AWB for military fixed-wing UAVs as part of Meggitt's portfolio, and yet another customer submits that Meggitt '*is a supplier for military UAV/Trainers*'.[319]

(289) A customer of AWB for military fixed-wing UAVs further explains that '*Parker is the principal AWB supplier of* [the Company]. *The other potentially relevant players as far as* [the Company] *is concerned are Meggitt, Honeywell, Safran (formerly*

312 Form CO, Annex 5.4.A.089, page 11.
313 Reply to Request for Information 6, Annex EC RFI6-019.
314 Annex EC RFI4-001, slide 9.
315 Reply to Request for Information 6, Annex EC RFI6-019.
316 Form CO, Annex 5.4.B-028, slide 30.
317 See e.g. Replies to Questionnaire to AWB customers, question 44.1 and 44.2.
318 Reply to Questionnaire to AWB customers, question 44.1.1.2.
319 Reply to Questionnaire to AWB customers, question 44.1.1.2.

Messier/Bugatti) and Collins (Raytheon). [The Company] *does not currently source aircraft brakes from these other suppliers, though it has sourced aircraft nose wheels from Collins.* [The Company] *also sources from some local suppliers (such as Grove Aircraft Landing Gear Systems Inc.) for very light aircraft, mostly for demonstrations, but not for high performance products intended for deployment. Some of the AWB suppliers, such as Safran, tend to focus on larger aircraft. Honeywell has also "no-bid" most recent* [the Company's] *AWB requirements*'.[320]

(E) Conclusion

(290) As set out in this Section 4.2.4.4, the Transaction would lead to a very large combined market share of the Merged Entity (in excess of 50%) and result in a further increase of concentration in the AWB for military fixed-wing UAVs market. While Meggitt currently only has a small share of supply, it is one of a very limited number of competitors to market leader Parker and competing also for Parker's main customer. The Transaction reduces the number of active suppliers from four to three.

(291) Therefore, the Commission concludes that the Transaction raises serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of AWB for military fixed-wing UAVs.

4.2.4.5. Military fixed-wing trainers

(292) Parker has a meaningful presence in the AWB for military fixed-wing trainers market and is bidding for opportunities with steel brake solutions.[321]

(293) Meggitt has a meaningful presence in the AWB for military fixed-wing trainers market, and is bidding for opportunities with both steel and carbon brake solutions.[322]

(294) As detailed above in Table 6, the AWB for military fixed-wing trainers market appears concentrated. Parker has a 2020 market share of [40-50]%, Meggitt of [20-30]% and the Merged Entity of [70-80]%. Considering the 2016-2020 five-year period, Parker has a market share of [10-20]%, Meggitt of [10-20]% and the Merged Entity of [20-30]%.

(295) The Merged Entity would therefore, considering the five-year average market share, have a moderate combined market share. While in individual years like 2020 the Merged Entity's combined market share exceeds 50%, over the entire five-year period, its combined market share is significantly below 50%.

(296) While the Notifying Party ascribes market shares to only three active suppliers by name (Parker, Meggitt and Raytheon), a very large share of supply ([60-70]% over the 2016-2020 five-year average) is given to 'Others'. A significant part of this supply accounted for by 'Others' relates to AWB supply for the KAI/Lockheed T-50 Golden Eagle trainer aircraft. According to the Notifying Party, the supplier '*could be Beringer, Raytheon, Safran, Dawin Friction Materials, Grove, Matco, or any other company with the industrial capacity to produce aircraft brakes (for example,*

320 Minutes of a call with a customer, 6 January 2022.
321 Reply to Request for Information 10, Annex EC RFI10-002.
322 Reply to Request for Information 10, Annex EC RFI10-002.

Hyundai)'.[323] Given the uncertainty around the supply accounted for by 'Others' an informative calculation of HHI values for the AWB for military fixed-wing trainers markets is not possible.

(297) Overall, it appears that post-Transaction, competitors to the Merged Entity will account for the significant majority of supply in the AWB for military fixed-wing trainers market.

(298) According to the data provided by the Notifying Party, competitor Raytheon has a 2020 market share of [10-20]% and a 2016-2020 five-year average market share of [0-5]%. However, the group of 'Others' is ascribed a 2020 market share of [10-20]% and a 2016-2020 average market share of [60-70]%.

(299) Raytheon's market share is set to significantly increase as according to Meggitt's knowledge it will be the AWB supplier for the new Boeing / Saab T-7A trainer aircraft. This '*is expected to be by far the largest jet trainer opportunity for the foreseeable future. Boeing expects to sell 2,700 T-7A aircraft, and has already received an order for 475 from the US Air Force*'. Raytheon's win of the AWB supply for the T-7A is further confirmed in a press release.[324] Therefore, Raytheon will '*capture a very large proportion – likely a significant majority – of "military fixed wing trainer" AWB sales in the future*'.[325] Raytheon considers itself to be a very strong player in the AWB for military fixed-wing aircraft space overall.[326]

(300) Considering the market presence of 'Others', i.e. the share of supply the Notifying Party was not able to attribute to any competitor by name, a large part of this appears to be accounted for by the KAI / Lockheed T-50 Golden Eagle. In some years, this is the only military fixed-wing trainer aircraft for which any AWB deliveries were made.[327]

(301) Given that competitors to the Merged Entity account for the two largest AWB for military fixed-wing trainers programmes (the T-50 and in future the T-7A) and for over 70% of the market share, they exert a significant constraint on the Merged Entity.

(302) The Parties have not submitted bids for the same AWB for military fixed-wing trainer tender opportunity in the 2012-2021 timeframe. There are however […] instances where one of the Parties submitted a bid and the other Party had considered bidding, but ultimately did not submit a bid.[328] This may in part also be driven by the fact that currently Parker only supplies AWB for non-jet engine powered military fixed-wing trainers, while Meggitt only supplies AWB for jet engine powered military fixed-wing trainers.[329]

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323 Reply to Request for Information 12, question 4.

324 See Collins Aerospace press release, https://www.collinsaerospace.com/newsroom/News/2019/01/collins-provide-aces5-ejection-seat-landing-gear-system-boeing-t-x-trainer, accessed on 30 March 2022.

325 Reply to Request for Information 12, question 4.

326 Reply to Questionnaire to AWB competitors, question 44.

327 Reply to Request for Information 12, question 4.

328 See e.g. EC meeting presentation, 17 February 2022, slides 13 and 16.

329 Reply to Request for Information 13, Annex EC RFI 13-001.

(303) Overall, therefore, Parker and Meggitt seem to have different focuses and in any case would only have a moderate combined market share.

(304) Therefore, in light of the considerations in this Section 4.2.4.5, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of AWB for military fixed-wing trainers overall, and turboprop and jet trainers separately (no overlap between the Parties).

4.2.5. Conclusion

(305) In light of the considerations in this Section 4.2, the Commission concludes that with respect to Aircraft Wheels and Brakes, the Transaction raises serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of AWB for general aviation (and the market segments for turboprop general aviation and the manufacture and supply of original AWB for general aviation), business jets, helicopters (both civil and military) and military fixed-wing UAVs.

4.3. Aerospace pneumatic valves

4.3.1. Market shares

(306) The Transaction gives rise to a number of affected markets in relation to the manufacture and supply of aerospace pneumatic valves. Market shares are calculated[330] in value and include both the supply of aerospace pneumatic valves for original equipment as well as spare parts.

(307) With respect to the overall market for pneumatic valves, the Parties' combined market shares in the years 2016-2020 range between [20-30]% and [20-30]%. Considering the overall five year period between 2016-2020, the Parties' combined market share is [20-30]%.Table 12

Table 12 – Pneumatic valves, 2016-2020 market shares

Pneumatic valves - Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[5-10]%	[5-10]%	[5-10]%	[10-20]%	[10-20]%
Meggitt	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Combined	***[20-30]%***	***[20-30]%***	***[20-30]%***	***[20-30]%***	***[20-30]%***
Honeywell	[30-40]%	[30-40]%	[30-40]%	[20-30]%	[20-30]%
Liebherr	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Transdigm	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Woodward	[0-5]%	[5-10]%	[10-20]%	[10-20]%	[10-20]%

[330] Aerospace pneumatic valves market shares in the below tables are rounded with no decimals. Furthermore, the Parties' combined market shares over the period 2016-2020 were computed based on their sales during this period rather than by calculating the average of their combined annual market share over that period.

Pneumatic valves - Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Raytheon	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
GE	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Safran	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 17, Annex EC RFI 17-001.

(308) With respect to the specific segment of aerospace engine pneumatic valves[331], the Parties' combined market shares in the years 2016-2020 range between [20-30]% and [20-30]%. Considering the overall five year period between 2016-2020, the Parties' combined market share is [20-30]%.

Table 13 – Engine pneumatic valves, 2016-2020 market shares

Engine pneumatic valves - Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[5-10]%	[5-10]%	[10-20]%	[10-20]%	[10-20]%
Meggitt	[20-30]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Combined	***[20-30]%***	***[20-30]%***	***[20-30]%***	***[20-30]%***	***[20-30]%***
Honeywell	[30-40]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Woodward	[0-5]%	[5-10]%	[10-20]%	[20-30]%	[10-20]%
Transdigm	[10-20]%	[10-20]%	[10-20]%	[5-10]%	[10-20]%
Liebherr	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[10-20]%
Raytheon	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
GE	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Safran	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 17, Annex EC RFI 17-001.

(309) With respect to the types of engine pneumatic valves, the Transaction gives rise to the following affected markets: (i) engine pneumatic valves for engine controls and (ii) engine pneumatic valves for engine anti-ice.[332] The Parties' combined market shares in the years 2016-2020 range between [20-30]% and [30-40]% for pneumatic valves for engine controls and between [30-40]% and [30-40]% for engine anti-ice. Considering the overall five year period between 2016-2020, the Parties' combined market share is [30-40]% for pneumatic valves for engine controls and [30-40]% for engine anti-ice well.

[331] With respect to airframe pneumatic valves, the Parties' combined market share is largely below 10%, including for all application types of airframe pneumatic valves.

[332] Neither Parker nor Meggitt have made any sales during the last five years in the market for the supply of engine pneumatic valves for bleed air.

Table 14 – Engine pneumatic valves for engine control, 2016-2020 market shares

Engine pneumatic valves for engine control - Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Meggitt	[20-30]%	[20-30]%	[10-20]%	[10-20]%	[10-20]%
Combined	***[30-40]%***	***[30-40]%***	***[30-40]%***	***[20-30]%***	***[20-30]%***
Honeywell	[30-40]%	[30-40]%	[20-30]%	[10-20]%	[10-20]%
Woodward	[5-10]%	[10-20]%	[20-30]%	[30-40]%	[30-40]%
Transdigm	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Safran	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Raytheon	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
GE	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Rollroyce	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 17, Annex EC RFI 17-001.

Table 15 – Engine pneumatic valves for engine anti-ice, 2016-2020 market shares

Engine pneumatic valves for engine anti-ice - - Original equipment and spare parts					
	2016	**2017**	**2018**	**2019**	**2020**
Parker	*[0-5]%*	[5-10]%	[10-20]%	[20-30]%	[20-30]%
Meggitt	[20-30]%	[20-30]%	[10-20]%	[10-20]%	[10-20]%
Combined	***[30-40]%***	*[30-40]%*	*[30-40]%*	*[30-40]%*	*[30-40]%*
Honeywell	[40-50]%	[40-50]%	[40-50]%	[40-50]%	[20-30]%
Transdigm	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Raytheon	[10-20]%	[5-10]%	[5-10]%	[5-10]%	[10-20]%
Liebherr	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Others	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*	*[0-5]%*
Total (OE + Spares)	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Reply to Request for Information 17, Annex EC RFI 17-001.

4.3.2. The Notifying Party's view

(310) The Notifying Party submits that the Transaction does not give rise to any horizontal non-coordinated effects concerns in the supply of aerospace pneumatic valves or any potentially relevant segment thereof for the following reasons:[333]

(a) The Transaction leads to a modest combined share of [20-30]% in the supply of aerospace pneumatic valves. On a sub-segmented basis, the combined share remains modest at [20-30]% in the supply of aerospace engine pneumatic valves.

(b) The supply of aerospace pneumatic valves is highly fragmented, with at least seven other credible alternative suppliers post-Transaction who will continue to constrain the Merged Entity in tender competition globally.

333 Form CO, paragraph 975.

(c) The Parties are not close competitors: their activities are positioned differently, with their respective sales activities having a different customer, platform and technical focus.

(d) Customers of aerospace pneumatic valves include some of the largest and most sophisticated aerospace players such as Rolls-Royce, who enjoy significant countervailing buyer power that will continue to constrain the Merged Entity.

(e) The prevalence of large tenders will continue to spur competitive tension by incentivising many players to compete, including by developing new capabilities.

(f) Barriers to entry and expansion are low for a large universe of suppliers in the aerospace sector, who have existing capabilities, including many established suppliers in other types of aerospace valves such as hydraulic valves.

(g) Aerospace pneumatic valves face increasing competitive pressure from other types of flow control technologies in line with a trend towards increasing electrification of aircraft and focus from end-customers on fuel economy and operational efficiencies.

4.3.3. The Commission's assessment

4.3.3.1. Market structure

(311) The Parties' combined market share the overall market for aerospace pneumatic valves as well as engine pneumatic valves for 2020 is moderate (below [20-30]%). The same holds for the narrower market for engine pneumatic valves for engine control where the Parties' have a 2020 combined market share of [20-30]%, and are behind the market leader Woodward ([30-40]%). In the market for engine pneumatic valves for engine anti-ice, despite having a slightly higher 2020 market share of [30-40]%, the Merged Entity will be closely followed by Honeywell with a market share of [20-30]%. Considering the last five years (2016-2020), the Merged Entity would be the second largest player ([30-40]%) after Honeywell ([30-40]%).

(312) Whether in the overall market for aerospace engine pneumatic valves or the narrowly defined markets for engine pneumatic valves for (i) engine control and (ii) engine anti-ice, the Merged Entity will have a moderate market share in a relatively fragmented environment where other sizeable players will continue to operate.

(313) For the overall engine pneumatic valves market, these include Honeywell with a 2020 market share of [20-30]% as well as Woodward, TransDigm and Liebherr who have a 2020 market share of [10-20]%, [10-20]% and [10-20]% respectively. Additional players such as Raytheon ([5-10]%), GE ([0-5]%) and Safran ([0-5]%) will also continue to be active in this market. Considering the 2016-2020 five-year period, the Merged Entity will only be second with a combined share of [20-30]%. The top competitors over the same period will be Honeywell ([30-40]%), Woodward ([10-20]%), TransDigm ([10-20]%) and Liebherr ([5-10]%).

(314) In the narrow market for engine pneumatic valves for engine control, the Merged Entity will face competition from Woodward, Honeywell and Transdigm who respectively have a 2020 market shares of [30-40]%, [10-20]% and [10-20]%. Considering the 2016-2020 five-year period, the Merged Entity will have a combined share of [30-40]%. The top competitors over the same period will be Honeywell ([20-30]%), Woodward ([20-30]%), TransDigm ([10-20]%).

(315) In the narrow market for engine pneumatic valves for engine anti-ice, the Merged Entity competitors are Honeywell, Transdigm, Raytheon and Liebherr with 2020 market shares of [20-30]%, [10-20]%, [10-20]% and [5-10]% respectively. As explained above, considering the 2016-2020 five-year period, the Merged Entity will only be second with a combined share of [30-40]%. The top competitors over the same period will be Honeywell ([30-40]%), TransDigm ([10-20]%), Raytheon ([10-20]%) and Liebherr ([5-10]%).

(316) The market for engine pneumatic valves (including for engine control and engine anti-ice) is therefore diverse and will remain so post-Transaction.

4.3.3.2. Competitive analysis

(317) Post-Transaction, competitors to the Parties in the market for engine pneumatic valves, including the two sub-segments for engine control and engine anti-ice, are likely to be able to effectively constrain the Merged Entity.

(318) The moderate market share of the Merged Entity post-Transaction, and the fragmented nature of the engine pneumatic valves market, including the narrowly defined markets for engine pneumatic valves for (i) engine control and (ii) engine anti-ice, in themselves suggest that competitors have particularly strong market positions and have the competitive strength to effectively constrain the Merged Entity. This is confirmed both by an assessment of each of the Parties' relative positions in these markets as well as by an assessment of the specific situation of each competitor therein.

(319) **First**, regarding the Parties' positions in the market for engine pneumatic valves, several respondents to the market investigation excluded Parker and/or Meggitt from their list of the top five competitors. For instance, one competitor did not list either Parker or Meggitt as part of the top five pneumatic valve competitors, which rather included '*Eaton, Honeywell, Transdigm, Safran, Collins Aerospace*'.[334] Similarly, a customer excluded both Parker and Meggitt from its list of the top five competitors for pneumatic valves.[335] Another competitor only included Parker in such a list.[336] Importantly, one competitor lists Parker and Meggitt as the fifth and sixth ranking competitors in the pneumatic valve market by explaining that '*the following companies are the strongest competitors in relation to pneumatic valves (in descending order of market share): Honeywell, Collins Aerospace,Liebherr,* TransDigm, Parker, Meggitt*'.[337] The relatively fragmented nature of the engine pneumatic valve market is confirmed by Meggitt's internal description of the flow

334 Reply to Questionnaire to pneumatic valve competitors, question 11.2.
335 Reply to Questionnaire to pneumatic valve customers, question 10.2.
336 Reply to Questionnaire to pneumatic valve competitors, question 11.2.
337 Reply to Questionnaire to pneumatic valve competitors, question 11.2.
* Should read: Collins Aerospace, Liebherr

control market (which comprises pneumatic engine valves) as being '*highly fragmented & multifaceted market*'.[338]

(320) **Second**, an assessment of the specific competitive position of each competitor also confirms that they have the necessary competitive strength to effectively constrain the Merged Entity both in the overall market for engine pneumatic valves and in the narrowly defined markets for engine pneumatic valves for engine control and engine pneumatic valves for engine anti-ice.

(321) Honeywell, will remain post-Transaction the largest player in the overall market for engine pneumatic valves ([30-40]% over the period 2016-2020) and in the narrowly defined market engine pneumatic valves for engine anti-ice ([30-40]% over the same period). Honeywell will also be a close second in the narrower market for engine pneumatic valves for engine control ([20-30]% over the period 2016-2020). Honeywell's leading position is confirmed by the results of the market investigation since most of the participants, both competitors and customers, named Honeywell as one of the top 5 competitors.[339] Honeywell's leading position is also noted in the Parties' internal documents. Parker describes Honeywell as being '[Parker's market analysis]'.[340] Internally, Parker ranks Honeywell as […] in the overall sector for engine air systems & actuation.[341]

(322) Woodward is and will remain post-Transaction a leading supplier with a 2020 share of [10-20]% in the supply of aerospace engine pneumatic ([10-20]% over the over the period 2016-2020). Woodward is the largest player in the narrower market for engine pneumatic valves for engine control ([30-40]% market share in 2020 and [20-30]% over the last five years). It has a broad portfolio of conventionally actuated pneumatic valves and is also […] of the main suppliers of fueldraulically actuated pneumatic valve products which have wide applications in engine controls. Parker ranks Woodward as the number one competitor in engine valves and describes it as being a '[Parker's market analysis]' alongside Honeywell.[342]

(323) TransDigm has a 2020 market share of [10-20]% in the supply of aerospace engine pneumatic valves ([10-20]% over the last five years). TransDigm supplies both engine pneumatic valves for engine control and for anti-ice and where it holds a 2020 market share of [10-20]% (respectively [10-20]% and [10-20]% over the last five years). It supplies aerospace engine pneumatic valves for, among others, the PW127 engine (manufactured by Pratt & Whitney) for the Airbus C-295 military transporter and ATR regional turboprops; the PW300, PW500 and PW600 engines (manufactured by Pratt & Whitney) used on a variety of Dassault, Embraer and Textron business jets, the HF120 engine (manufactured by GE / Honda) for the Honda HA-420 business jet, as well as the FJ44 engine (manufactured by Williams) used on the Embraer business jets.

(324) Liebherr is yet another important engine pneumatic valve supplier that will remain active post-Transaction with a 2020 share of [10-20]% in the supply of aerospace

338 Form CO, Annex 5.4.B-024, slide 4.

339 Replies to Questionnaire to pneumatic valve customers, question 10.2. Replies to Questionnaire to pneumatic valve competitors, question 11.2.

340 Form CO, Annex 5.4.A-078, slide 12.

341 Ibid.

342 Ibid.

engine pneumatic valves ([5-10]% over the last five years). It holds a comparable market share in the market for engine pneumatic valves for engine anti-ice ([5-10]% in 2020 and [5-10]% over the last five years). Liebherr develops and produces a variety of aerospace pneumatic valves, which are mainly used in air management or environmental control systems (ECS), with key aircraft programmes including the Airbus A320 and A330. In particular, Liebherr is strong in bleed-air and anti-ice valves, supplying for example the anti-ice valves for the PW1100G next generation engine for the Airbus A320neo.[343] Meggitt describes Liebherr internally as having made '[Meggitt's market analysis]'[344] while Parker lists Liebherr among the significant competitive threat in aerospace engine pneumatic valves. Parker further describes Liebherr as having '[Parker's market analysis]' and that it is capable of '[Parker's market analysis]'.[345]

(325) **Third**, the Parties' internal documents support the existence of strong alternative players beside the other Party. Meggitt considers the convergence JV between Woodward/GE as a '[Meggitt's market analysis]' on the engine valves segment[346] and lists Parker as part of a pool of […] players explaining that the market for engine pneumatic valve is '[Meggitt's market analysis]'.[347] Parker considers Meggitt as belonging to a […] tier pool of competitors for engine valves and stresses that Honeywell and Woodward are '[Parker's market analysis]'.[348]

(326) In view of the above, post-Transaction, various players, with an established market presence, will remain active in the market for the supply of engine pneumatic valves as well as the narrower markets for engine pneumatic valves for engine control and engine pneumatic valves for engine anti-ice. These competitors also have a broad portfolio and a large focus and can effectively constrain the Merged Entity across the entire market.

4.3.3.3. Conclusion

(327) In view of the above, in particular in light of the moderate combined market share of the Parties both in the overall market for engine pneumatic valves and in the narrowly defined markets for engine pneumatic valves for engine control and engine pneumatic valves for engine anti-ice, and the existence of several other important players that will remain active post-Transaction, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market in relation to the manufacturing and supply of engine pneumatic valves or any sub-segment therein.

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343 Form CO, paragraph 981 (c).

344 Liebherr, '*Liebherr-Aerospace to Supply NORDAM with Anti-ice Valves for Airbus A320neo Next-generation Nacelle*', 12 March 2018, Available at: https://www.liebherr.com/en/gbr/latest-news/news-press-releases/detail/liebherr-aerospace-to-supply-nordam-with-anti-ice-valves-for-airbus-a320neo-next-generation-nacelle html, accessed 5 April 2022.

345 Form CO, Annex 5.4.A-078, slide 12.

346 Form CO, Annex 5.4.B-001, slide 14.

347 Form CO, Annex 5.4.B 001, page 11.

348 Form CO, Annex 5.4.A-078, slide 12.

5. PROPOSED REMEDIES

5.1. Analytical framework

(328) The following principles from the Remedies Notice[349] apply where parties to a merger choose to offer commitments in order to restore effective competition.

(329) Where, as in this case, a notified concentration raises serious doubts as to its compatibility with the internal market, the Parties may modify the notified concentration so as to remove the grounds for the serious doubts identified by the Commission with a view to having it declared compatible with the internal market pursuant to Article 6(1)(b) in conjunction with Article 6(2) of the Merger Regulation.

(330) The Commission only has power to accept commitments that are capable of rendering the concentration compatible with the internal market in that they will prevent a significant impediment to effective competition in all relevant markets where competition concerns were identified.[350] To that end, the commitments have to eliminate the competition concerns entirely[351] and have to be comprehensive and effective from all points of view.[352]

(331) In assessing whether proposed commitments are likely to eliminate its 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.[353] Moreover, commitments must be capable of being implemented effectively within a short period of time.[354]

(332) Where a proposed concentration threatens to significantly impede effective competition, the most effective way to maintain effective competition, apart from prohibition, is to create the conditions for the emergence of a new competitive entity or for the strengthening of existing competitors via divestiture by the merging parties.[355]

(333) Divestiture commitments are generally the best way to eliminate competition concerns resulting from horizontal overlaps.[356]

5.2. Description of the Proposed Remedies

(334) In order to address the serious doubts raised by the Transaction with a view to rendering the concentration compatible with the internal market, Parker has modified

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349 Commission's Notice on Remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 ('Remedies Notice'), OJ C 267, 22.10.2008, p. 1.

350 Remedies Notice, paragraph 9.

351 Case C-202/06 P Cementbouw Handel & Industrie v Commission [2007] ECR 2007 I-12129, paragraph 54.

352 Remedies Notice, paragraphs 9 and 61.

353 Remedies Notice, paragraph 12.

354 Remedies Notice, paragraph 9.

355 Remedies Notice, paragraph 22.

356 Remedies Notice, paragraph 61.

the notified Transaction by entering into the certain commitments, which are annexed to this decision and form an integral part thereof.

(335) On 18 March 2022, Parker submitted the following commitments pursuant to Article 6(2) of the Merger Regulation (the 'Commitments of 18 March 2022').

(336) Parker proposed to divest Parker's AWB division. The tangible assets included in the divestment business include in particular the production site located in Avon, Ohio, USA. They further include all tangible assets used by the divestment business, including all office inventory and office equipment used by the AWB Division at the time of Closing as well as certain assets used by the AWB division which are located at a plant in Guaymas, Mexico which supplies limited basic machining to the AWB division.

(337) The intangible assets part of the divestment business include:

(a) The 'Cleveland Wheels & Brakes' brand. In addition, Parker will provide a non-exclusive, royalty-free licence for the trademarks containing Parker group branding currently used by the AWB division for a transitional period of up to 12 months from Closing solely for the sale of the existing inventory of Parker-branded products currently manufactured by the AWB division, and other transitional purposes, such as re-branding websites and marketing materials, consistent with AWB's usage of the Parker brands prior to Closing; during this period of up to 12 months, Parker will procure that Meggitt will not use the Parker name in relation to the products of Meggitt's AWB business, save that Parker will at all times be permitted to add the Parker name to the corporate names of Meggitt or any affiliated undertakings controlled by Meggitt and to reflect this in relevant publicity or other materials.

(b) Any designs/drawings developed (or co-developed) by the AWB division; patents used by the AWB division; results, contracts and materials related to R&D projects; and trade secrets mostly related to application engineering knowledge.

(338) Further, the divestment business includes certain licences, permits and authorisations, as well as subject to the necessary consent (which Parker will use its best efforts to procure), the transfer of customer, supplier and distributor contracts (as well as related documentation and records).

(339) The divestment business' personnel includes all staff engaged in supporting the divestment business, as well as two to-be-hired engineers and a single employee from Parker Aerospace China working exclusively for AWB marker development in China. Certain key management staff is further identified as key personnel.

(340) Further, the commitments foresee arrangements for the supply of transitional support services for IT, software, logistical and/or other business support services, minor commodity products, and basic machining services for a transitional period, and for the training of, and transfer of skills and knowledge to, certain personnel of the divestment business by Parker.

(341) In relation to AWB contracts existing or being negotiated after award as of the Effective Date with customers represented by Parker group-level key account

managers (with the exception of multi-sourced contracts between Parker and Meggitt), Parker will not compete to take over the divestment business' current supply position on these existing contracts for 12 months after Closing.

(342) The divestment business will explicitly not include certain number of tangible and intangible assets. These include assets located at the premises of Parker's group-level central engineering team (with one exception), personnel with limited interactions with the AWB division (group-level customer support operations personnel, group-level key account managers, group-level central engineering personnel). Similarly, Parker's company brand, its ITAR registration, centrally managed logistics contracts or corporate business support functions supplied at the central level, will also not be transferred to the divestment business. Finally, some machinist work supplied to Parker for the AWB division from a plant in Mexico will also not be transferred.

(343) The Commitments of 18 March 2022 also include a so-called 'upfront buyer' provision, meaning that the Transaction cannot be implemented before Parker or the Divestiture Trustee has entered into a final binding sale and purchase agreement for the sale of the divestment businesses and the Commission has approved the purchaser and the terms of sale.

(344) Finally, the Commitments of 18 March 2022 include certain purchaser criteria. Notably, the purchaser shall be an existing manufacturer of aerospace components.

(345) On 1 April 2022, Parker submitted the following revised commitments, pursuant to Article 6(2) of the Merger Regulation (the 'Final Commitments').

(346) The Final Commitments also propose the divestment of Parker's AWB division and are largely the same as the Commitments of 18 March 2022. The Final Commitments however include the following modifications and improvements compared to the Commitments of 18 March 2022:

(a) Clarification that the tangible assets included in the divestment business also include all equipment, machines and tooling used in design, testing, qualification, certification, production and product support by the AWB division.

(b) Changes to the brand licence and black-out provision. In particular, the divestment business includes the 'Cleveland Wheels & Brakes' brand and in addition, Parker will provide a non-exclusive, royalty-free licence for the trademarks containing Parker group branding currently used by the AWB division for a transitional period of up to 36 months after Closing, provided that after the first 12 months of the licence period the Purchaser's use of the trademarks will be limited to the purpose of identifying the Purchaser as the new owner of the legacy Parker AWB division, in all cases provided that such trademarks are used solely in a manner consistent with the usage of the Parker brands by the AWB division prior to Closing (i.e., the Parker brand may not be used for products other than the AWB products the AWB Division is selling prior to Closing), it being understood that there is no obligation on the Purchaser to re-brand inventory of Parker branded products existing at the time of Closing, even if sold more than 12 months after Closing. For a period of 36 months after Closing, Parker will procure that Meggitt will not use the Parker name in relation to the products of Meggitt's

AWB business, save that Parker will at all times be permitted to add the Parker name to the corporate names of Meggitt or any Affiliated Undertakings controlled by Meggitt and to reflect this in relevant publicity or other materials.

(c) In relation to R&D, the clarification that all know-how, reports, engineering notebooks or copies thereof, design files and test records are transferred to the divestment business.

(d) In relation to contracts, the clarification that, subject to necessary consent from counterparties (which Parker will use its best efforts to procure), all partnership and cooperation agreements related to the AWB division are transferred to the divestment business.

(e) In relation to the training of, and transfer of skills and knowledge to, certain personnel of the divestment business by Parker, the purchaser will have the option to extend the initial 12 month period after Closing, by an additional 12 months.

(f) The period after Closing during which Parker will not compete to take over the divestment business' position on certain existing contracts with customers, is extended from 12 months to 36 months.

(g) A further purchaser criterion is included, namely the purchaser shall have experience in dealing with direct or indirect supplies to military and government customers.

6. ASSESSMENT OF THE PROPOSED REMEDIES

(347) The Commission's market test was launched on 21 March 2022 and focused on the following main topics: (i) whether the Commitments were sufficient to entirely remove the competition concerns caused by the proposed Transaction; (ii) whether the Parker AWB division constitutes a viable business able to compete effectively with the Merged Entity on a lasting basis; (iii) whether there are any specific conditions that a potential purchaser should fulfil; (iv) whether the Divestment Business is sufficiently attractive to find a suitable purchaser.

6.1. Removal of competition concerns

(348) The divestiture of Parker's global AWB business removes the entire overlap in all markets in which serious doubts due to horizontal non-coordinated effects arise (AWB for general aviation, business jets, helicopters and military fixed-wing UAVs). The majority of respondents to the market test that expressed a view consider that the Commitments of 18 March 2022 – subject to certain amendments addressed further below in this Section 6 – are suitable and adequate to effectively remove the competition concerns that may result from the Transaction.[357]

[357] Replies to Questionnaire to customers on commitments offered by Parker, questions 3, 3.1 and 3.2, and Replies to Questionnaire to competitors on commitments offered by Parker, questions 3, 3.1 and 3.2.

(349) The Commission, also in light of the considerations in Section 6.2 below, therefore concludes that the Final Commitments are sufficient to remove entirely the competition concerns identified in the AWB for general aviation, business jets, helicopters and military fixed-wing UAVs markets.

6.2. Viability and competitiveness of the Divestment Business

(350) The Final Commitments include a number of provisions to ensure that the Divestment Business is able to viably and independently compete on the markets for the manufacturing and supply of AWB.

(351) Considering the Commitments of 18 March 2022, respondents to the market test expressing a view generally consider that the scale and scope of the Divestment Business is sufficient to ensure its immediate viability and competitiveness – some respondents however make this view subject to certain improvements to the Commitments of 18 March 2022 (such as the clarification of to-be-transferred tangible assets and the extension of the customer non-solicitation clause).[358]

(352) Similarly, respondents to the market test expressing a view generally consider that the scale and scope of the Divestment Business is sufficient to ensure its independence from the Parties – again some respondents made this conditional on certain improvements to the Commitments of 18 March 2022 (such as ensuring that the Merged Entity will not be able to use any potentially retained information to the disadvantage of the Divestment Business).[359]

(353) Following this feedback, Parker included a number of improvements in the Final Commitments. These are all improvements to the provisions aimed primarily at replicating capabilities of Parker's AWB division which pre-Transaction rely to some extent on assets or inputs from parts of Parker that are not part of the Divestment Business. The provisions relate in particular to: tangible assets, personnel, the brand and certain other intangible assets (in particular connected to R&D).

(354) In relation to tangible assets, the Divestment Business includes the production site of the Parker AWB division in Avon, Ohio, USA. In addition, and as further clarified in the Final Commitments all other tangible assets used by the AWB division, including for example equipment, machines, tooling but also office equipment are to be part of the Divestment Business. Therefore, the Divestment Business will have all tangible assets required to be viable and competitive.

(355) In relation to the personnel, the Divestment Business includes all personnel currently employed by the Parker AWB division. In addition, the Final Commitments include arrangements for the training of, and transfer of skills and knowledge to, certain personnel of the Divestment Business by Parker. This provision is in particular aimed at ensuring that no skills and knowledge related to certain R&D projects and held by Parker personnel that does not transfer to the Divestment Business (as their work is mainly on issues not related to AWB) are lost for the Divestment Business.

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[358] Replies to Questionnaire to customers on commitments offered by Parker, questions 4 and 4.1, and Replies to Questionnaire to competitors on commitments offered by Parker, question 4 and 4.1.

[359] Replies to Questionnaire to customers on commitments offered by Parker, questions 5 and 5.1, and Replies to Questionnaire to competitors on commitments offered by Parker, question 5 and 5.1.

(356) Further in relation to personnel, it has to be noted that certain Parker key account managers that in part work with customers that also source AWB from Parker, will not transfer to the Divestment Business. The market test revealed that AWB customers' primary points of contact are not these key account managers, but personnel of the Parker AWB division, which will transfer to the Divestment Business.[360] Nevertheless, key account managers are seen as important for customer relations for the effective supply of AWB by respondents to the market test.[361] The purchaser criteria (further discussed in Section 6.3) guarantee that the purchaser will be an existing aerospace component supplier with experience in key account management. Further, the Final Commitments foresee that Parker will not compete to take over the Divestment Business' current supply position at customers represented by the Parker key account managers for a period of 36 months after Closing (extended from the 12 months foreseen in the Commitments of 18 March 2022). This ensures that any information that the key account managers may retain cannot be effectively used by the Merged Entity to the disadvantage of the Divestment Business.

(357) In relation to the brand, the Divestment Business includes the 'Cleveland Wheels & Brakes' brand. A majority of the respondents to the market test expressing a view submit that they know the 'Cleveland Wheels & Brakes' brand.[362] In order to address concerns[363] that the time periods foreseen in the Commitments of 18 March 2022 for the licence to the Divestment Business for the use of the Parker brand and for the blackout period for the Merged Entity not to use the Parker brand for a certain time after Closing, were too short, these are extended in the Final Commitments (up to 36 months). The Divestment Business will therefore have access to a brand known in the industry – and beyond that be able to effectively transition its branding due to the Parker brand licence and blackout arrangements.

(358) In relation to other intangible assets, the Divestment Business also includes design rights, patents, trade secrets and R&D projects used or developed by the AWB division. Specifically in relation to the Final Commitments further clarify that also all know-how, reports, engineering notebooks or copies thereof, design files and test records related to the R&D projects will be transferred.

(359) Therefore, overall, the Final Commitments ensure that the Divestment Business will be able to viably and independently compete on the AWB markets. It includes all relevant tangible and intangible assets, and the Final Commitments include provisions that further strengthen its viability (such as the brand arrangements and the customer non-solicitation clause).

(360) Crucially, customers responding to the market test submit that they would invite the Divestment Business to AWB tenders – in fact no AWB customer responding to the

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360 Replies to Questionnaire to customers on commitments offered by Parker, question 11.

361 Replies to Questionnaire to customers on commitments offered by Parker, question 10, and Replies to Questionnaire to competitors on commitments offered by Parker, question 10.

362 Replies to Questionnaire to customers on commitments offered by Parker, question 6, and Replies to Questionnaire to competitors on commitments offered by Parker, question 6.

363 Replies to Questionnaire to customers on commitments offered by Parker, questions 7 and 7.1, and Replies to Questionnaire to competitors on commitments offered by Parker, questions 7 and 7.1.

market test indicates that it would not do so.[364] Further, all customers expressing a view in the market test submit that also would continue purchasing from the Divestment Business for ongoing aircraft programmes.[365]

(361) The Commission therefore considers that the scale and scope of the Divestment Business is sufficient to ensure its viability, competitiveness and independence.

6.3. Purchaser criteria

(362) While the Commitments of 18 March 2022 included the condition that the purchaser of the Divestment Business shall be an existing manufacturer of aerospace components, the Final Commitments include an additional purchaser criterion: the purchaser shall have experience in dealing with direct or indirect supplies to military and government customers.

(363) Majorities of both customers and competitors expressing a view in response to the market test submit that they consider it necessary for the potential purchaser to both be already active in the supply of other aerospace components (other than AWB) and to have experience in dealing with military and government accounts.[366] A potential purchaser in this context explains that '*we would surmise that a potential purchaser with an incumbent knowledge of the aerospace components market would be better equipped to manage a divestment entity*'.[367] Another potential purchaser submits that a '*practical working knowledge of the aerospace market would be necessary to remain competitive versus the Parties on applications which they overlap*'.[368] A competitor also highlights that potential purchasers '*should also have experience dealing with military/government customers. Like all AWB systems, AWB for military/government applications are highly customized and the military/government's procurement processes are distinct from commercial aerospace procurement*'.[369]

(364) The AWB industry, and the aerospace components industry more broadly, is characterised by long-term supply contracts, in which trust and reputation also play a role. Further, military/government related accounts make up a significant part of the Divestment Business' AWB activities. Therefore, the inclusion of these purchaser criteria in the Final Commitments ensure that the Divestment Business can be viably operated by the purchaser.

(365) In addition, Parker also proposed not to implement the proposed Transaction before entering into a binding agreement with a purchaser, which has to be approved by the Commission. This commitment limits the risks of not finding a suitable purchaser, in particular in light of the purchaser criteria included in the Commitments.

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364 Replies to Questionnaire to customers on commitments offered by Parker, questions 15, 15.1, 15.2, 15.3, 15.4 and 15.5.

365 Replies to Questionnaire to customers on commitments offered by Parker, questions 16 and 16.1.

366 Replies to Questionnaire to customers on commitments offered by Parker, question 21, and Replies to Questionnaire to competitors on commitments offered by Parker, question 23.

367 Reply to Questionnaire to competitors on commitments offered by Parker, question 23.1.

368 Reply to Questionnaire to competitors on commitments offered by Parker, question 23.1.

369 Reply to Questionnaire to competitors on commitments offered by Parker, question 23.1.

(366) The Commission therefore considers that the purchaser criteria included in the Final Commitments are sufficient to ensure an effective implementation of the Commitments.

6.4. Attractiveness of the Commitments

(367) The majority of competitors and customers expressing a view in the market test submit that they consider the Divestment Business to be sufficiently interesting to attract suitable purchasers.[370] One respondent highlights that '[b]*ased on the information provided, the Divestment Business appears to have good profitability and good market leadership in the segments it serves*'.[371] Another respondent points out that '*it is a great business with market leading share*'.[372] Yet another respondent states: '*The Divestment Business has a reputable brand, especially in the general aviation industry. Aircraft component manufacturers would find the business a unique opportunity. Further, some of the general aviation OEMs would find the business attractive and could create a vertical integration opportunity*'.[373]

(368) Further, several potential purchasers responding to the market test indicated potential interest in acquiring the Divestment Business.[374] Some of these companies made their interest subject to certain improvements to the Commitments of 18 March 2022, such as a prolongation of the brand licencing period or the extension of the non-solicitation clause for customer contracts. As discussed in Section 6.2, these issues were improved in the Final Commitments.

(369) Therefore, the Commission concludes that the Final Commitments are sufficiently attractive and therefore capable of being implemented effectively in a short period of time.

6.5. Conclusion of the Commitments Assessment

(370) For the reasons outlined above, the commitments entered into by the undertakings concerned are sufficient to entirely eliminate the serious doubts as to the compatibility of the Transaction with the internal market.

7. CONDITIONS AND OBLIGATIONS

(371) Under the first sentence of the second subparagraph of Article 6(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 vis-à-vis the Commission with a view to rendering the concentration compatible with the internal market.

(372) The fulfilment of the measures that give 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, the

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370 Replies to Questionnaire to customers on commitments offered by Parker, question 22, and Replies to Questionnaire to competitors on commitments offered by Parker, question 24.

371 Reply to Questionnaire to competitors on commitments offered by Parker, question 24.1.

372 Reply to Questionnaire to competitors on commitments offered by Parker, question 24.1.

373 Reply to Questionnaire to competitors on commitments offered by Parker, question 24.1.

374 Replies to Questionnaire to competitors on commitments offered by Parker, question 25.

Commission's decision declaring the concentration compatible with the internal market is no longer applicable. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 6(3) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.

(373) In accordance with the basic distinction between conditions and obligations described in the preceding paragraph, this Decision should be made conditional on full compliance by Parker with the commitments set forth in Section B of the Final Commitments (including the Schedule and its annexes 1-3). The other commitments set out in the Annex constitute obligations, as they concern the implementing steps which are necessary to achieve the modifications sought in a manner compatible with the internal market.

8. CONCLUSION

(374) For the above reasons, the Commission has decided not to oppose the notified operation as modified by the Final Commitments and to declare it compatible with the internal market and with the functioning of the EEA Agreement, subject to full compliance with the conditions set out in Section B of the Final Commitments (including the Schedule and its annexes 1-3), as annexed to this decision and with the obligations contained in the other sections of the said Final Commitments. This decision is adopted in application of Article 6(1)(b) in conjunction with Article 6(2) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(Signed)
Margrethe VESTAGER
Executive Vice-President

01/04/2022

Case M.10506 – Parker-Hannifin / Meggitt

COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 6(2) of Council Regulation (EC) No 139/2004 (the "***Merger Regulation***"), Parker-Hannifin Corporation ("***Parker***" or the "***Notifying Party***") hereby enters into the following Commitments (the "***Commitments***") vis-à-vis the European Commission (the "***Commission***") with a view to rendering the acquisition by Parker of Meggitt PLC ("***Meggitt***") (the "***Concentration***") 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 6(1)(b) of the Merger Regulation to declare the Concentration 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 Merger Regulation, 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:

Affiliated Undertakings: undertakings controlled by the Parties and/or by the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation 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 Section B, paragraph 6 (a), (b), (c), (d), (e) and (f) and described more in detail in the Schedule.

AWB Division: Parker's aircraft wheels and brakes division.

Closing: the transfer of the legal title to the Divestment Business to the Purchaser.

Closing Period: the period of […] from the approval of the Purchaser and the terms of sale by the Commission.

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.

Divestment Business: the AWB Division as defined in Section B and in the Schedule which the Notifying Party commits to divest.

Divestiture Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by Parker and who has/have received from Parker the exclusive Trustee Mandate to sell the Divestment Business to the Purchaser at no minimum price.

Effective Date: the date of adoption of the Decision.

First Divestiture Period: the period of […] from the Effective Date.

Hold Separate Manager: the person appointed by Parker for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in the Schedule, including the Hold Separate Manager.

Meggitt: Meggitt PLC, a public limited company registered in England and Wales with registered number 00432989, with its registered office at Pilot Way, Ansty Business Park, Coventry, CV7 9JU, United Kingdom.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by Parker, and who has/have the duty to monitor Parker's compliance with the conditions and obligations attached to the Decision.

Parker: Parker-Hannifin Corporation, a corporation registered in Ohio with registered number 34-0451060, whose registered office is at 6035 Parkland Boulevard, Cleveland, Ohio, 44124-4141, United States of America.

Parties: Parker (i.e. the Notifying Party) and Meggitt (i.e. the undertaking that is the target of the concentration).

Personnel: all staff currently employed by the Divestment Business, including staff seconded to the Divestment Business, shared personnel as well as the additional personnel listed in the Schedule.

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section D.

Purchaser Criteria: the criteria laid down in paragraph 15 of these Commitments that the Purchaser must fulfil in order to be approved by the Commission.

Schedule: the schedule to these Commitments describing more in detail the Divestment Business.

Trustee(s): the Monitoring Trustee and/or the Divestiture Trustee as the case may be.

TSA: a transitional service agreement.

Trustee Divestiture Period: the period of […] from the end of the First Divestiture Period.

Section B. The commitment to divest the Divestment Business

Commitment to divest

2. In order to maintain effective competition, and subject to completion of the Concentration, Parker commits to divest 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 paragraph 16 of these Commitments. To carry out the divestiture, Parker 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 Parker has not entered into such an agreement at the end of the First Divestiture Period, Parker shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 28 in the Trustee Divestiture Period.

3. The Concentration shall not be implemented before Parker or the Divestiture Trustee has entered into a final binding sale and purchase agreement for the sale of the Divestment Businesses and the Commission has approved the purchaser and the terms of sale in accordance with paragraph 16.

4. Parker shall be deemed to have complied with this commitment if:

   (a) by the end of the Trustee Divestiture Period, Parker or the Divestiture Trustee has entered into a final binding sale and purchase agreement and the Commission approves the Purchaser and the terms of sale as being consistent with the Commitments in accordance with the procedure described in paragraph 16; and

   (b) the Closing of the sale of the Divestment Business to the Purchaser takes place within the Closing Period.

5. In order to maintain the structural effect of the Commitments, the Notifying Party shall, for a period of 10 years after 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 the Notifying Party showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph 42 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 Divestment Business is no longer necessary to render the proposed concentration compatible with the internal market.

Structure and definition of the Divestment Business

6. The Divestment Business consists of Parker's AWB Division. The legal and functional structure of the Divestment Business as operated to date is described in the Schedule. The Divestment Business, described in more detail in the Schedule, includes all assets and staff that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business, in particular:

   (a) all tangible and intangible assets (including intellectual property rights);

   (b) all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business;

(c) all contracts, leases, commitments and customer orders of the Divestment Business; all customer, credit and other records of the Divestment Business; and

(d) the Personnel.

Section C. Related commitments

Preservation of viability, marketability and competitiveness

7. From the Effective Date until Closing, the Notifying Party 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 Parker 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), to encourage all Key Personnel to remain with the Divestment Business, and not to solicit or move any Personnel to Parker's remaining business. Where, nevertheless, individual members of the Key Personnel exceptionally leave the Divestment Business, Parker shall provide a reasoned proposal to replace the person or persons concerned to the Commission and the Monitoring Trustee. Parker 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

8. The Notifying Party commits, from the Effective Date until Closing, to keep the Divestment Business separate from the business it is retaining and to ensure that unless explicitly permitted under these Commitments: (i) management and staff of the business retained by Parker have no involvement in the Divestment Business; (ii) the Key Personnel and Personnel of the Divestment Business have no involvement in any business retained by Parker and do not report to any individual outside the Divestment Business.

9. Until Closing, Parker shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the business which Parker is retaining. Immediately after the adoption of the Decision, Parker 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 Parker. 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 7(c) of these Commitments. The Commission may, after having heard Parker, require Parker to replace the Hold Separate Manager.

Ring-fencing

10. Parker 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 Parker before the Effective Date will be eliminated and not be used by Parker. 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. Parker 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 Parker is required by law.

Non-solicitation clause

11. The Parties undertake, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel transferred with the Divestment Business for a period of […] after Closing.

Due diligence

12. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, Parker 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, including a non-confidential version of the Commitments;

    (b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

Reporting

13. Parker 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 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request). Parker 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 days of their receipt.

14. Parker 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.

Section D. The Purchaser

15. 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 the Notifying Party and its Affiliated Undertakings (this being assessed having regard to the situation following the divestiture);

(b) The Purchaser shall have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with the Parties and other competitors;

(c) 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.

(d) The Purchaser shall be an existing manufacturer of aerospace components.

(e) The Purchaser shall have experience in dealing with direct or indirect supplies to military and government customers.

16. 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 Parker 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 week to the Commission and the Monitoring Trustee. Parker 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 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 Commitments including their objective to bring about a lasting structural change in the market. At Parker's request, the Commission may approve the sale of the Divestment Business without one 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 E. Trustee

(I) <u>Appointment procedure</u>

17. Parker shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. The Notifying Party commits not to close the Concentration before the appointment of a Monitoring Trustee.

18. If Parker has not entered into a binding sale and purchase agreement regarding the Divestment Business […] before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by Parker at that time or thereafter, Parker shall appoint a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.

19. The Trustee shall:

(a) at the time of appointment, be independent of the Notifying Party and its Affiliated Undertakings;

(b) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or consultant or auditor; and

(c) neither have nor become exposed to a Conflict of Interest.

20. The Trustee shall be remunerated by the Notifying Party 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.

Proposal by Parker

21. No later than two weeks after the Effective Date, Parker shall submit the name or names of one or more natural or legal persons whom Parker proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than […] before the end of the First Divestiture Period or on request by the Commission, Parker shall submit a list of one or more persons whom Parker 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 19 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

22. 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 name is approved, Parker 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 name is approved, Parker shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by Parker

23. If all the proposed Trustees are rejected, Parker shall submit the names of at least two more natural or legal persons within one week of being informed of the rejection, in accordance with paragraphs 17 and 22 of these Commitments.

Trustee nominated by the Commission

24. If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom Parker shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

(II) Functions of the Trustee

25. 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 Parker, 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

26. The Monitoring Trustee shall:

(a) 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.

(b) 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 Parker with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:

(i) 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 7 and 8 of these Commitments;

(ii) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph 9 of these Commitments;

(iii) with respect to Confidential Information:

- determine all necessary measures to ensure that Parker 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 Parker before the Effective Date is eliminated and will not be used by Parker and

(iv) decide whether such information may be disclosed to or kept by Parker as the disclosure is reasonably necessary to allow Parker to carry out the divestiture or as the disclosure is required by law;

(v) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and Parker or Affiliated Undertakings;

(c) propose to Parker such measures as the Monitoring Trustee considers necessary to ensure Parker's 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;

(d) 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:

(i) 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

(ii) potential purchasers are granted reasonable access to the Personnel;

(e) act as a contact point for any requests by third parties, in particular potential purchasers, in relation to the Commitments;

(f) provide to the Commission, sending Parker a non-confidential copy at the same time, a written report within 15 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 Commitments and the progress of the divestiture process as well as potential purchasers;

(g) promptly report in writing to the Commission, sending Parker a non-confidential copy at the same time, if it concludes on reasonable grounds that Parker is failing to comply with these Commitments;

(h) within one week after receipt of the documented proposal referred to in paragraph 16 of these Commitments, submit to the Commission, sending Parker 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 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;

(i) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.

27. 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.

Duties and obligations of the Divestiture Trustee

28. 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 15 and 16 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 Parker, subject to the Notifying Party's unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.

29. 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 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to the Notifying Party.

(I) Duties and obligations of the Parties

30. Parker 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 Parker's 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 Parker and the Divestment Business shall provide the Trustee upon request with copies of any document. Parker 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.

31. Parker 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. Parker shall 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. Parker 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.

32. Parker shall grant or procure Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale (including ancillary agreements), the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, Parker shall cause the documents required for effecting the sale and the Closing to be duly executed.

33. Parker 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 Parker 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.

34. At the expense of Parker, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to Parker's 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 Parker refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard Parker. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 33 of these Commitments shall apply *mutatis mutandis*. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served Parker during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.

35. Parker agrees that the Commission may share Confidential Information proprietary to Parker with the Trustee. The Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the Merger Regulation apply *mutatis mutandis*.

36. The Notifying Party 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.

37. For a period of 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.

(IV) Replacement, discharge and reappointment of the Trustee

38. 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 Parker, require Parker to replace the Trustee; or

(b) Parker may, with the prior approval of the Commission, replace the Trustee.

39. If the Trustee is removed according to paragraph 38 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 17-24 of these Commitments.

40. Unless removed according to paragraph 38 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 F. The review clause

41. The Commission may extend the time periods foreseen in the Commitments in response to a request from Parker or, in appropriate cases, on its own initiative. Where Parker requests an

extension of a time period, it shall submit a reasoned request to the Commission no later than one 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 the Notifying Party. Only in exceptional circumstances shall Parker be entitled to request an extension within the last month of any period.

42. The Commission may further, in response to a reasoned request from the Notifying Parties 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 the Notifying Party. 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.

Section G. Entry into force

43. The Commitments shall take effect upon the date of adoption of the Decision.

[signed]

duly authorised for and on behalf of

Parker-Hannifin Corporation

SCHEDULE

1. The Divestment Business operates as a discrete standalone business within Parker, with its own production and R&D facility, management and other personnel, with minimal reliance on the rest of Parker for its operations.

2. In accordance with paragraph 6 of these Commitments, the Divestment Business includes, but is not limited to:

   (a) the following main tangible assets:

      (i) all of the land, land improvements, buildings, and leasehold improvements relevant for the Divestment Business, specifically the production site of the AWB Division located at Avon, Ohio, USA; and

      (ii) all tangible assets used by the Divestment Business, including but not limited to all equipment, machines and tooling used in design, testing, qualification, certification, production and product support by the AWB Division as well as all office inventory and office equipment used by the AWB Division at the time of Closing as well as certain assets used by the AWB Division which are located at a plant in Guaymas, Mexico which supplies limited basic machining to the AWB Division.

   All assets referred to above are included in **Annex-001.**

   (b) the following main intangible assets, used by the Divestment Business, including all documentation, and copies of customer records:[1]

      (i) ***Brand:*** The "Cleveland Wheels & Brakes" brand, which is the prominent brand used by the AWB Division. In addition, Parker will provide a non-exclusive, royalty-free licence for the trademarks containing Parker group branding currently used by the AWB Division for a transitional period of up to […] after Closing, provided that after the first […] of the licence period the Purchaser's use of the trademarks will be limited to the purpose of identifying the Purchaser as the new owner of the legacy Parker AWB Division, in all cases provided that such trademarks are used solely in a manner consistent with the usage of the Parker brands by the AWB Division prior to Closing (i.e., the Parker brand may not be used for products other than the AWB products the AWB Division is selling prior to Closing), it being understood that there is no obligation on the Purchaser to re-brand inventory of Parker branded products existing at the time of Closing, even if sold more than […] after Closing. For a period of […] after Closing, Parker will procure that Meggitt will not use the Parker name in relation to the products of Meggitt's AWB business, save that Parker will at all times be permitted to add the Parker name to the corporate names of Meggitt or any Affiliated Undertakings controlled by Meggitt and to reflect this in relevant publicity or other materials;

[1] All of the design rights, patents and other intellectual property used by the AWB Division will be transferred as part of the Divestment Business. The AWB Division does not utilise design rights, patents, or other intellectual property held by other Parker divisions. All design rights and other intellectual property are owned by Parker-Hannifin Corporation, with the exception of the two AWB Patents used by the AWB Division, which are owned by Parker Intangibles, LLC.

(ii) ***Design rights:*** Any designs/drawings developed (or co-developed) by the AWB Division;

(iii) ***Patents*****:** The patents used by the AWB Division, as detailed in **Annex-002** (***AWB Patents***);

(iv) ***R&D*****:** (A) [Parker project], including any construction plans, design specifications, test results, IP and know-how for the [Parker project] and specifications of any components thereof, the AWB Division staff working on this project, and the contracts with the third-party supplier;[2] and (B) the results of the in-house […] "proof of concept" R&D project, which is anticipated to be completed by August 2022, as well as the AWB Division staff working on this R&D project; in both cases this will include but is not limited to the transfer of all know-how, reports, engineering notebooks or copies thereof, design files and test records;

(v) ***Other R&D projects*****:** All other R&D projects currently being pursued by the AWB Division, including projects relating to [Parker R&D project]; this will include but is not limited to the transfer of all know-how, reports, engineering notebooks or copies thereof, design files and test records; and

(vi) ***Trade secrets:*** The majority of the AWB Division's IP consists of trade secrets in the form of technical knowledge. This IP focuses on application engineering knowledge for wheels and brakes such as design limits for [Parker trade secrets].

(c) the following main licences, permits and authorisations:

(i) EASA Part-145 Approval Certificate;

(ii) FAA – Parts Manufacturer Approval;

(iii) FAA – Repair Station Certificate;

(iv) AS 9100 / ISO 9001 certification; and

(v) Export licences for each relevant product / aircraft model issued by the US Department of Commerce.

(d) subject to obtaining any necessary consents from contractual counterparties, which Parker will use its best efforts to procure, the following main contracts:

(i) the transfer of all the customer contracts, leases, commitments and customer orders related to the AWB Division;

(ii) the transfer of all of the contracts with suppliers related to the AWB Division;

(iii) the transfer of all of the contracts with distributors related to the AWB Division, namely the distribution contracts with [Parker customers], which are exclusively related to the AWB Division. **Annex-003** contains a list of Parker's distribution contracts, including revenue and date of renewal; and

[2] The AWB Division does not utilise design rights, patents or other intellectual property held by non-Parker entities.

(iv) the transfer of all partnership and cooperation agreements related to the AWB Division.

(e) the following customer, credit and other records: all documentation and records relating to the AWB Division, and which are necessary to run the Divestment Business.

(f) the following Personnel: all staff engaged in supporting the Divestment Business including:

(i) two engineers to be hired by the AWB Division in Avon, Ohio, for the purposes of supervising and further developing the in-house [Parker project] being handed over by Parker's central engineering team, following training and knowledge transfer; and

(ii) [Parker personnel].

(g) the following Key Personnel:

[…]

(h) arrangements for the supply of transitional support services for IT, software, logistical and/or other business support services, minor commodity products, and basic machining services as referred to in paragraph 3(e) below, by Parker for a short transitional period of up to […] after Closing which can be extended to a maximum of […] upon request by the Purchaser.

(i) arrangements for the training of, and transfer of skills and knowledge to, the Divestment Business and/or the personnel set out at paragraph 2(f)(i) above, by Parker for a period of 12 months after Closing (or, in respect of the personnel set out at paragraph 2(f)(i) above, if later, […] after each is hired), for the purposes of transitioning relevant skills and knowledge held by Parker's central engineering team in relation to the Divestment Business. This period can be extended by an additional […] at the option of the Purchaser.

3. The Divestment Business will not include:

(a) **Assets**: any assets (including laboratory equipment, tools, software etc.) located at the premises of Parker's group-level central engineering team with the exception of all results relating to the […] R&D project as further specified at paragraph 2(b)(iv) above.

(b) **Personnel:** the following Parker group-level personnel, having very limited interactions with the AWB Division:

(i) Group-level Customer Support Operations (CSO) personnel currently supporting the AWB Division to a very limited degree with contract administration services relating to the military aftermarket;

(ii) Group-level Key Account Managers (KAM) who currently provide very limited background support services on few specific customers to the AWB Division;

(iii) Personnel of Parker's group-level central engineering team (Central Engineering) who provide very limited engineering services to the AWB Division.

(c) **Intellectual property:** Parker's company name, general brand name, mark, or logo in any form or deviations thereof, except on a transitional basis as set out in paragraph 2(b)(i) above.

(d) **Non-transferrable licences:** Parker's ITAR registration.

(e) **Basic machinist work**: the machinist work supplied to Parker from a plant in Guaymas, Mexico, which supplies a de minimis amount of basic machining services for the AWB Division, as this facility and its personnel does not form part of the AWB Division, nor is it owned by Parker.

(f) **Logistics contracts:** any logistics contracts that the AWB Division benefits from, but which are managed at a Parker's central level.

(g) **Corporate functions:** any business support functions which are currently supplied at central level including legal support, tax support, IT support, payroll support and benefits.

4. In relation to AWB contracts existing or being negotiated after award as of the Effective Date with customers represented by a KAM (being [Parker customers]), and with the exception of contracts existing or being negotiated after award for programmes which are multi-sourced as between Parker and Meggitt where the customer would otherwise expect competition between the two Parties, Parker will not compete to take over the Divestment Business' current supply position on these existing contracts (or relevant parts of these existing contracts) that are included in the Divestment Business for a period of […] months after Closing.

5. If there is any asset or personnel which is not covered by paragraph 2 of this Schedule but which is both used (exclusively or not) in the Divestment Business and necessary for the continued viability and competitiveness of the Divestment Business, that asset or adequate substitute will be offered to potential purchasers.

Annex 1

[List of assets]

Annex 2

[List of patents]

Annex 3

[List of customers contracts]