

FILED

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

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CLERK US DISTRICT COURT
ALEXANDRIA, VIRGINIA

ORBITAL SCIENCES CORPORATION,
45101 Warp Dr.
Dulles, VA 20166

Plaintiff,

v.

UNITED LAUNCH ALLIANCE, LLC
1300 Wilson Blvd.
Arlington, VA 22209

and

RD AMROSS, LLC
1600 N. Atlantic Ave.
Cocoa Beach, FL 32931

Defendants.

Civ. Action No.

1:13cv753-LMB/JFA

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff Orbital Sciences Corporation ("Orbital"), for its Complaint against Defendants United Launch Alliance, LLC and RD AMROSS, LLC, alleges as follows:

NATURE OF THE CLAIM

1. This action results from the unlawful combination and agreement in restraint of trade between Defendants United Launch Alliance, LLC ("ULA") and RD AMROSS, LLC ("RD AMROSS") relating to the sale and purchase of the RD-180 liquid propulsion rocket engine, as well as ULA's monopolization of, attempted monopolization of, and Defendants' conspiracy to monopolize, the market for launch systems and services used for medium-class payload missions, all in violation of Section 1 and Section 2 of the Sherman Act, 15 U.S.C. §§ 1, 2.

2. ULA's and RD AMROSS's unlawful conduct has harmed competition and caused actual damages to Orbital of at least \$515 million, such damages to be trebled to more than \$1.5 billion pursuant to Section 4 of the Clayton Act, 15 U.S.C. § 15.

THE PARTIES

3. Plaintiff Orbital is a corporation incorporated under the laws of Delaware with a principal place of business at 45101 Warp Drive, Dulles, VA 20166. Orbital is a provider of small- and medium-class rocket and space launch systems and services in the United States and internationally.

4. Defendant ULA is a Delaware limited liability company with a principal place of business at 1300 Wilson Blvd., Arlington, VA 22209. ULA is a 50-50 joint venture owned and controlled by Lockheed Martin Corporation and The Boeing Company and is the dominant provider of space launch systems and services in the United States.

5. Defendant RD AMROSS is a Delaware limited liability company with a place of business at 1600 N. Atlantic Avenue, Cocoa Beach, FL 32931. RD AMROSS is the exclusive agent for the sale of the RD-180 liquid propulsion rocket engine in the United States. RD AMROSS was formed as a joint venture between Pratt & Whitney Rocketdyne and NPO Energomash of Khimki, Russia. On information and belief, Pratt & Whitney Rocketdyne no longer has an ownership interest in RD AMROSS. On information and belief, Pratt & Whitney Rocketdyne's former corporate parent, United Technologies Corporation, presently has a direct or indirect ownership interest in RD AMROSS, together with NPO Energomash.

JURISDICTION AND VENUE

6. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. § 1331 and 28 U.S.C. § 1337 because this action arises under the antitrust laws of the United States.

7. Personal jurisdiction may be exercised over ULA and RD AMROSS based on, *inter alia*, their presence and activities in this district and the United States, including activities relating to the claims alleged herein. Venue is proper in this district pursuant to 15 U.S.C. § 15, 15 U.S.C. § 22 and/or 28 U.S.C. § 1391. ULA and RD AMROSS are residents of this district or deemed to be residents of this district for purposes of determining venue, transact business in this district, and a substantial part of the events giving rise to the alleged claims occurred in this district.

BACKGROUND AND FACTS

Orbital's Business

8. Orbital is a leading supplier of small- and medium-class rockets and space launch systems and services. Its diverse set of space-related products include geosynchronous Earth orbit (GEO) satellites for communications and broadcasting, low Earth orbit (LEO) spacecraft for remote sensing and scientific research, spacecraft used for national security missions, deep space probes and planetary exploration, interceptor and target launch systems used for national defense, and space launch vehicles that launch payloads into orbit. Since 1982, Orbital has built or now has under contract over 1,000 satellites, launch vehicles, and other space-related systems for U.S. and international commercial, civil, and government customers. Orbital also provides engineering, production, technical, and support services for government agencies such as the

National Aeronautics and Space Administration (“NASA”) and the United States Department of Defense as well as for commercial customers and university space programs.

9. Orbital designs, manufactures and operates small- and medium-class space launch vehicles in the United States. Since the late 1980s, Orbital has developed, built and launched, or now has in production for upcoming launches, over 70 small-class space launch vehicles, including its Pegasus, Taurus, and Minotaur rockets. These vehicles have launched over 100 satellites into orbit for NASA, the Department of Defense, and commercial and international customers over the last 25 years.

10. In 2008, Orbital was selected by NASA to design, build, and demonstrate a new space transportation system to deliver supplies to the International Space Station (ISS) under NASA’s Commercial Orbital Transportation Services (COTS) program. The system includes an advanced maneuvering spacecraft, called Cygnus, launched on a new medium-class Antares launch vehicle that has been developed by Orbital. Orbital already successfully launched Antares on one of its demonstration flights in connection with the COTS program in April 2013 and a second demonstration launch will occur later this year. Also in 2008, NASA awarded Orbital a Commercial Resupply Services (“CRS”) contract to provide cargo transportation services to the International Space Station using Orbital’s new Antares launch vehicle and the Cygnus spacecraft. Under the CRS program, Orbital obtained a contract that includes eight cargo delivery missions to be launched on Antares vehicles for NASA. The missions are scheduled to be conducted between 2013 and 2016.

11. Orbital’s Antares launch vehicle, which successfully flew for the first time in April 2013, is a medium-class space launch vehicle capable of delivering a 4,000 kilogram

payload to a 600 kilometer altitude low Earth orbit. Orbital has invested approximately \$390 million in the Antares program since 2007.

12. For the demonstration missions on the COTS program and its under-contract launches on the CRS program, Orbital incorporates the NK-33/AJ26 (“AJ26”) liquid propulsion rocket engine into the first stage of the Antares launch vehicle. The AJ26 is based on the Russian-built NK-33, which has been modified and is sold in the U.S. by Aerojet Corporation. However, the Aerojet AJ26 engine is out of production and has been out of production for decades, and only a limited number of these aged engines exist in inventory in the United States. While there are sufficient AJ26 engines for Orbital to meet its launch requirements under the COTS and CRS programs (and possibly a limited number of future launch opportunities), the AJ26 engine never has been a viable solution for permanent, long-term use on Antares. To compete for such future opportunities, Orbital must have access to the RD-180 engine sold in the United States by Defendant RD AMROSS. Other than the AJ26 engine, the RD-180 engine is the only existing liquid propulsion engine available in the United States that is suitable for use by medium-class space launch vehicle providers. Not only is this engine in production and available in the United States, but incorporating the engine into the Antares first stage would improve the capabilities of the Antares launch vehicle compared to the current Antares/AJ26 configuration.

ULA’s Launch Services

13. ULA, a joint venture formed in December 2006 that is owned and controlled by Lockheed Martin Corporation (“Lockheed Martin”) and The Boeing Company (“Boeing”), provides launch systems and services to numerous agencies of the U.S. government. ULA’s customers include the Department of Defense, NASA, the National Reconnaissance Office, and

other governmental organizations. ULA's launch service offerings include three families of launch vehicles, the Delta II (based on a limited remaining inventory only), the Atlas V, and the Delta IV.

14. Prior to the creation of ULA, Boeing and Lockheed Martin individually were the two largest suppliers of launch systems and services in the U.S. market. By combining the offerings of these two behemoths in the industry into a single joint venture, ULA has secured a dominant position in the provision of medium-, intermediate- and heavy-class space launch systems and services in the United States. In fact, ULA has at least an 80% share in these classes. As a result of its monopoly of these classes, ULA's pricing of launch vehicles has increased dramatically over the last 10 years. For instance, according to public reports, in 2012, the Pentagon determined that the Evolved Expendable Launch Vehicle ("EELV") program, which presently is serviced solely by ULA's Delta and Atlas launch vehicles, experienced massive cost overruns, triggering a review under the Nunn-McCurdy oversight program. Based on data released by GAO in April 2013, the ULA EELV program appears to have exceeded its original projected per-unit cost by as much as 286%. Orbital expects the Department of Defense to move away from aggregation and these extremely expensive EELV launches in the future and utilize smaller, significantly less expensive medium-class vehicles, such as Antares. There are only two other U.S. launch systems and services providers – Orbital with its focus on small- and medium-class space launchers, and Space Exploration Technologies Corp. ("SpaceX"), which provides intermediate and heavy-class launch systems.

The Relevant Market

15. The relevant geographic market for all claims in this action is the United States.

16. The relevant product market is the market for space launch systems and services that can be used for medium-class missions (the “Medium-Class Space Launch Systems and Services Market”).

17. Launch systems and services in the United States generally are broken down into four industry-accepted mission classes or categories: the small-class; the medium-class; the intermediate-class; and the heavy-class.

18. The class designations are based on the launch vehicle’s capability to deliver a particular level of performance defined by a combination of satellite payload mass and orbit altitude. Space launch systems in the “small” class are capable of performance equivalent to delivering payloads of up to about 1,500 kilograms to a low-Earth orbit at an altitude of 600 kilometers. Space launch systems in the “medium” class are capable of performance equivalent to delivering payloads of up to approximately 4,000 kilograms to such orbit. “Intermediate” class space launch systems have the performance capability equivalent to delivering payloads of up to about 7,000 kilograms to a 600 kilometer orbit. Space launch systems in the “heavy” class have performance capability equivalent to delivering 8,000 kilogram or greater payloads to 600 kilometers.

19. Historical mission data support these classifications of launch systems with a significant number of payload launches having occurred in each class, including the medium-class.

20. The differing space launch classes are based on a principle of mission optimization. In terms of satellite payload and launcher capacity, the launch systems of each larger class vehicle are technically capable of performing missions of all smaller classes. For example, a medium-class space launch vehicle is technically capable of performing a mission

that could be serviced by a small-class system. Similarly, an intermediate-class space launch vehicle is technically capable of performing the mission of a small- or medium-class vehicle. However, using an inappropriately sized vehicle is neither technically optimal nor cost-effective because the vehicle cost increases substantially as one moves up in space launch vehicle class. Using an intermediate-class space launch system capable of delivering a 7,000 kilogram payload to launch a 3,500 kilogram payload results in the customer significantly overpaying for unused capacity and unnecessary launcher capability. Because of the limited availability of medium-class space launch solutions, customers have recently been forced to utilize intermediate and heavy-class vehicles to service their medium-class missions.¹

21. Presently, there are only two medium-class launch vehicles in the Medium-Class Space Launch Systems and Services Market — ULA's Delta II rocket and Orbital's Antares system. The Delta II can deliver a maximum payload of 3,300 kilograms to a 600 kilometer orbit. ULA has discontinued production of Delta II, although a few Delta II rockets remain in inventory which are expected to be flown over the next three years. Currently, ULA uses its Delta IV and Atlas V intermediate-class space launch systems to provide medium-size payload services in addition to the Delta II. After the existing Delta II inventory is exhausted, ULA will only offer customers its intermediate-class space launch systems to satisfy medium-size payload services. This is not an optimal solution for customers but is highly profitable for ULA. Unless customers have long-term medium-class alternatives, they will be forced to use higher-priced intermediate or heavy-class space launch systems to service their medium-class missions.

¹ Customers have attempted to address this problem through mission aggregation, *i.e.*, launching several different payloads on a single launch vehicle. However, mission aggregation poses its own set of technical and logistical problems. Just by way of one example, a schedule delay in the development or production of one payload (*e.g.* a complex satellite) would result in a corresponding delay in the launch of all other aggregated payloads.

Orbital's Efforts to Procure the RD-180 for Antares

22. Seeing an opportunity to develop a competitive alternative to ULA's offerings for serving the Medium-Class Space Launch Systems and Services Market, Orbital embarked on the Antares (then called Taurus II) program in 2007. In 2008 and 2009, Orbital investigated and evaluated several propulsion system alternatives for Antares. Orbital determined that liquid propulsion engines were the only viable, competitive option for a medium-class space launch delivery system. (ULA's Delta II also employs a liquid propulsion engine, but it is out of production.) At the time, there were only two suitable liquid rocket engines available for sale in the United States — RD AMROSS's RD-180 engine and Aerojet's AJ26 engine.

23. The RD-180 engine is a two-thrust-chamber liquid propulsion rocket engine. The engine is a high performance, self-contained propulsion unit capable of integration into launch vehicle first stage systems. The RD-180 is a derivative of the RD-170 rocket engine. The RD-170 was designed and developed by NPO Energomash of Khimki, Russia. On information and belief, the RD-180 engine was designed and developed in the mid-1990s by Defendant RD AMROSS and/or Pratt & Whitney Rocketdyne. The RD-180 engine is today manufactured and produced by NPO Energomash in Russia. RD AMROSS is the exclusive sales agent for the RD-180 engine in the United States. RD AMROSS is the only entity with regulatory approval to sell the RD-180 engines in the United States. The RD-180 provides the main thrust on ULA's intermediate-class Atlas V space launch vehicle that is also used to serve the Medium-Class Systems and Services Market.

24. The only existing alternative liquid propulsion engine to the RD-180 is the AJ26. The AJ26 also is a Russian engine which Aerojet procured in limited numbers in the 1990s and obtained the rights to modify and sell to U.S. launch service providers. The AJ26 engines are no

longer in production and have been out of production for decades, but Aerojet has a limited inventory of aged engines located in the United States (in addition to those already purchased by Orbital for its COTS and CRS launches).

25. In its evaluation of Antares propulsion options, Orbital strongly preferred the RD-180 over the AJ26 for Antares for several reasons. The RD-180 had a reliable track record on numerous successful U.S. Government launches. Unlike the AJ26, the RD-180 was in active production, so Orbital had no long-term supply concerns with this engine. And because ULA also procured the engine for its Atlas V rocket, there was an opportunity for economies of scale in production that could have a favorable effect on cost and pricing for everyone involved.

26. In 2009, Orbital evaluated both of these engine alternatives as well as a third propulsion option for Antares. This third option involved not simply procuring engines for Antares but rather procuring and adapting the entire first stage of ULA's existing Atlas V intermediate-class rocket (which itself incorporates the RD-180 engine) for use on Antares. Under this plan, in order for Orbital to gain access to the RD-180 engine, Orbital in essence would be required to procure ULA's first-stage booster and utilize other aspects of ULA's launch services. Orbital investigated and evaluated this alternative in discussions with ULA, but concluded that it was not a viable business solution.

27. Contemporaneously with its 2009 discussions with ULA regarding the use of the RD-180 with the Atlas first-stage booster, Orbital began discussions with Pratt & Whitney Rocketdyne and RD AMROSS for the direct procurement of RD-180 engines for the Antares launch vehicle. During these discussions, Pratt & Whitney Rocketdyne and RD AMROSS informed Orbital that RD AMROSS had previously entered into an exclusive supply

arrangement with Lockheed Martin in 1996,² which Lockheed Martin purportedly contributed to ULA when the joint venture with Boeing was formed. However, Pratt & Whitney Rocketdyne and RD AMROSS assured Orbital that the Exclusivity Agreement had expired in 2006. Pratt & Whitney Rocketdyne and RD AMROSS were enthusiastic about the potential supply deal with Orbital and, from early 2009 through June 2009, they consistently indicated that they were ready, willing, and able to sell RD-180 engines to Orbital.

28. Discussions between the parties were extensive. By the spring of 2009, the parties were exchanging technical data and analyzing logistics issues, such as export licensing. Orbital understood that Pratt & Whitney Rocketdyne and RD AMROSS planned to take the proposal to sell the RD-180 engine to Orbital to the RD AMROSS Board of Directors for approval in mid-2009.

The Extension of the ULA-RD AMROSS Exclusivity Agreement

29. In fact, the representations by Pratt & Whitney Rocketdyne and RD AMROSS to Orbital that the Exclusivity Agreement had expired were accurate and correct. On August 30, 1996, Lockheed Martin had entered into an exclusive supply contract with RD AMROSS in connection with the RD-180 engine for a period of 10 years. By its terms, the agreement expired in August 2006, and it was not then renewed or extended. Orbital's discussions with RD AMROSS regarding the direct purchase of RD-180 engines occurred in the spring of 2009, more than two and one-half years **after** the original Exclusivity Agreement between ULA and RD AMROSS had expired by its terms.

30. On June 24, 2009, Leonard Dest, the President and CEO of RD AMROSS, sent Orbital a letter stating as follows:

² This agreement with all of its extensions and purported extensions is referred to hereinafter as the "Exclusivity Agreement."

As you know, our companies have been discussing the possibility of RD AMROSS marketing the RD-180 rocket engine to Orbital Sciences (OSC) for the Taurus II [now Antares] program.

RD AMROSS has decided that it is in our best interest to offer this engine through United Launch Alliance (ULA), a strategic partner and an existing distributor of the RD-180 engine. RD AMROSS believes that the ULA Atlas booster offering represents the best solution for the OSC Taurus II Program and has decided to pursue this opportunity through ULA at this time.

RD AMROSS trusts that OSC will see the value in the ULA Atlas booster offering . . .

31. In fact, the ULA first-stage booster offering was not an economically viable solution for, and as a result had no value to, Orbital. Moreover, this path would force Orbital to rely on its competitor as its engine supply source. The ULA first-stage booster offering only had value to ULA, as it effectively precluded Orbital from becoming an independent viable competitor in the Medium-Class Space Launch Systems and Services Market.

32. Nor was it in RD AMROSS's best interest to offer Orbital access to the RD-180 engine only on terms dictated by ULA. RD AMROSS's economic interest was to sell as many RD-180 engines to as many buyers as possible. Absent interference from ULA, RD AMROSS had no incentive to refuse direct sales of the RD-180 engine to Orbital.

33. Orbital learned that the telephonic meeting of the RD AMROSS Board of Directors to consider the direct sale of the RD-180 engine to Orbital was attended by ULA's chief executive officer, Michael Gass (who seemingly had no valid reason for participating in an RD AMROSS Board of Directors meeting). It was after that meeting that RD AMROSS decided to terminate its discussions with Orbital regarding the direct sale of RD-180 engines to Orbital without ULA's first-stage booster. In the absence of any other liquid propulsion engine

alternatives, Orbital purchased 20 AJ26 engines from Aerojet for the Antares launch vehicle for the COTS and CRS programs.

34. Orbital subsequently learned that shortly before Mr. Dest sent his June 24, 2009 letter, ULA had asserted to RD AMROSS that direct sales to Orbital of the RD-180 engine would constitute a violation of the parties' Exclusivity Agreement. Orbital questioned how ULA could take this position when the Exclusivity Agreement had already expired. ULA responded that a so-called "protocol" commitment between the two RD AMROSS joint venture partners and ULA purportedly caused the period of exclusivity to continue after the Exclusivity Agreement's expiration.

35. Subsequently, in 2010, ULA and RD AMROSS executed an extension of the expired Exclusivity Agreement (the "2010 Extension"), which extended the term of the Exclusivity Agreement through July 31, 2016.

36. On October 25, 2012, Orbital renewed its request to procure RD-180 engines directly from RD AMROSS by requesting in writing firm proposals for the supply of as many as 20 RD-180 engines to be delivered beginning in mid-2016, **after** expiration of the renewed exclusivity period set by the 2010 Extension. On November 30, 2012, RD AMROSS formally declined to provide such a proposal. Upon information and belief, ULA and RD AMROSS subsequently extended the Exclusivity Agreement yet again through 2018. RD AMROSS remains precluded from selling RD-180 engines directly to Orbital through at least that date, a staggering 22 years from the time the original Exclusivity Agreement between Lockheed and RD AMROSS went into effect.

37. The pattern is clear. Every time Orbital threatens to compete with ULA in the Medium-Class Space Launch Systems and Services Market, ULA extends the period of the

Exclusivity Agreement to foreclose Orbital's access to the RD-180, the only viable long-term liquid propulsion engine available for sale in the United States.

The Exclusivity Agreement Is Anticompetitive and Unlawful

38. The Exclusivity Agreement between RD-AMROSS and ULA is anticompetitive and unlawful. The sole purpose of the Exclusive Agreement is to foreclose competition from Orbital's Antares launch system and to enable ULA to maintain the monopoly it presently enjoys in the Medium-Class Space Launch Systems and Services Market.

39. ULA's Delta II launch vehicle, a medium-class vehicle, has long been the dominant provider of space launch systems and services for medium-class missions. However, since the Delta II launch vehicle is no longer in production and is soon scheduled for retirement, ULA services the Medium-Class Space Launch Systems and Services Market with Atlas V and the Delta IV intermediate-class space launch systems that have payload capabilities and prices that far exceed those that customers for medium-class missions desire or require. However, in the absence of alternatives such as Antares, customers like NASA and the Department of Defense are forced to accept ULA's mission-inappropriate and substantially higher cost offerings.

40. There is no valid business justification for ULA and RD AMROSS to maintain and extend their Exclusivity Agreement. Rather, the sole purpose of the agreement is to foreclose Orbital as a competitor and to allow ULA to maintain its monopoly position through a restrictive agreement rather than through fair and open competition on the merits. The RD-180 engine is nearly two decades old. To the extent Lockheed Martin contributed anything to the development of the engine, the initial 10-year period of exclusivity was more than sufficient to

protect that investment. This fact is established by the parties' express agreement to limit the duration of the Exclusivity Agreement to 10 years.

41. Moreover, the Exclusivity Agreement had lapsed by its own terms in August 2006 and had remained expired for several years. If there were a legitimate business interest to extend exclusivity past this initial 10-year period, Lockheed Martin and ULA surely would not have allowed the agreement to lapse and remain expired for nearly two and one-half years. Instead, it was only after Orbital entered into discussions to procure the RD-180 engine for Antares, a launch vehicle that would compete with ULA's offerings, did ULA attempt to revive its exclusivity rights to the RD-180 engine in the United States.

42. With the 2010 Extension, the total exclusivity period reaches a purposefully anticompetitive and facially unreasonable term of 20 years (1996-2016). The further extension of the Exclusivity Agreement through at least 2018 (for a total term of at least 22 years) likewise is facially unreasonable and anticompetitive in design.

43. Nor was the Exclusivity Agreement intended to ensure that ULA has a sufficient supply of RD-180 engines for its Atlas V rockets. The Exclusivity Agreement permits RD AMROSS to sell the RD-180 engine, without restriction, to any party for use in any project for which ULA does not compete. Even if the Exclusivity Agreement was intended to ensure that ULA had an adequate supply of the RD-180 engine, such purpose could be achieved with a less restrictive requirements contract without any need to preclude RD AMROSS from selling RD-180 engines to others, including Orbital, even if RD AMROSS can also satisfy ULA's engine needs. Moreover, at no time during Orbital's discussions with Pratt & Whitney Rocketdyne — which were extensive — did Pratt & Whitney Rocketdyne suggest that RD AMROSS did not have the production capacity to satisfy the requirements of both ULA and Orbital.

44. There are no pro-competitive benefits that would justify the exclusivity agreement that ULA and RD AMROSS have maintained here.

45. There is little doubt that the Exclusivity Agreement is unlawful considering, among other things:

- ULA's willingness to allow the Exclusivity Agreement to lapse for several years;
- The timing of the 2010 Extension to coincide with the advent of Antares, ULA's first real prospect of competition for space launch services used in medium-class missions;
- The representations of ULA officials that ULA had the power to unilaterally extend the exclusivity period indefinitely;
- The absence of any valid business justification for, or pro-competitive benefit from, the Exclusivity Agreement; and
- The additional extension of at least two years (for a total of at least 22 years) in response to Orbital's request for proposals for firm engine orders after the 2010 Extension expired.

46. The sole purpose of the Exclusivity Agreement is to prevent Orbital from competing with ULA in the Medium-Class Space Launch Systems and Services Market so that ULA can maintain its monopoly position. The agreement is anticompetitive and unlawful.

The Injury to Competition

47. The existence, maintenance, and enforcement of the Exclusivity Agreement by ULA and RD AMROSS cause precisely the type of harm to competition that the antitrust laws seek to prevent. As a result of the loss of competition in the market for space launch systems and

services used in medium-class missions, end-customers such as NASA, the Department of Defense, and others will suffer higher prices and enjoy less innovation. Ultimately, U.S. taxpayers will pay billions of dollars more than necessary for space launch services over the next 25 years.

48. End-customers are already being injured by the anticompetitive effects of the Exclusivity Agreement. The Antares is significantly less expensive than ULA's Delta II rocket, showing that entry of Antares into the market has already reduced prices for medium-class space launch vehicles. Moreover, ULA has discontinued production of its Delta II system, ULA's only offering optimized for medium-class missions. Instead, ULA now offers the Atlas V and Delta IV intermediate-class space launch systems for medium-class missions, which are at least twice as expensive as Antares. These intermediate-class space launch systems have payload capacities double or more than those of medium-class systems and are unnecessarily costly for the customer, although highly profitable for ULA. The Exclusivity Agreement forecloses Orbital's ability to compete in the Medium-Class Space Launch Systems and Services Market lessening competition and providing customers with little choice but to procure more expensive and inappropriate intermediate-class space launch systems for medium-class payload missions. According to a July 2012 GAO report, the Department of Defense and the National Reconnaissance Office plan to spend approximately \$19 billion to acquire Atlas V and Delta IV EELV launches between 2013 and 2017. Including additional purchases by NASA, NOAA and other customers, the U.S. Government presently is spending approximately \$4 billion per year with ULA. Furthermore, according to a report published in 2011 by the NASA Inspector General, "if NASA uses the intermediate-class Atlas V instead of a medium-class space launch vehicle, the Agency estimates that its costs will increase by an additional \$100 million to \$300

million per launch.” It is therefore not surprising that between 2008 and 2012, ULA profits before taxes totaled over \$1 billion.

49. The fact that there is only one long-term liquid propulsion engine alternative that is available in the United States, the RD-180, does not mean that companies that utilize that input cannot vigorously compete with one another. Competition for the provision of launch services occurs at many levels. Once an engine is acquired, a launch service provider must integrate the engine with other components of the launch vehicle such as one or more upper stages, the avionics systems, control systems, and airframe and structural systems, among others. The launch services provider must also supply the customer with technical and support services such as mission assurance, vehicle testing, and ground support services, among others. These are all significant cost and innovation points that both independently and collectively serve as a basis for competition between ULA and Orbital. Absent the Exclusivity Agreement, RD AMROSS would find it difficult or impossible to eliminate competition over all those other components by simply raising the price of its RD-180 engines. The Exclusivity Agreement, therefore, eliminates the prospect of such competition and innovation because it denies Orbital access to a critical input for which there is no reasonable alternative. And end-users such as NASA and the Department of Defense will have fewer choices, face higher prices, and enjoy less innovation in each of these areas.

50. In fact, the Department of Defense has expressly recognized the need to foster competition with ULA. On November 27, 2012, the Under Secretary of Defense for Acquisition, Technology and Logistics issued a directive instructing the Air Force to take specific action to engender competition with ULA in connection with the Air Force’s Evolved Expendable Launch Vehicle (“EELV”) program. The Under Secretary wrote:

I authorize the Air Force to negotiate with United Launch Alliance (ULA) based on an acquisition strategy that plans to procure up to 36 EELV cores across 5 years (FY 2013-FY2017) from ULA I direct the Air Force to aggressively introduce a competitive procurement environment in the EELV program by competing up to 14 cores with initial contract awards as early as FY 2015 for missions that can be flown as early as FY 2017.

51. The letter further directed the Secretary of the Air Force to “[t]ake action to compete missions in such a way as to start awarding them as soon as possible after a new entrant is certified for the EELV program.” The Under Secretary concluded by noting that the intent of “this decision is to maintain required mission assurance, obtain the positive effects of competition as quickly as possible and also reduce the cost of the launch services we must procure from ULA.” The Department of Defense desires competition for ULA, and the EELV directive is just a first step toward achieving that end.

The Injury to Orbital

52. With its past experience building and launching over 70 small-class space launch vehicles, NASA’s award of the COTS and CRS contracts to Orbital, and Orbital’s successful Antares first launch in April 2013, Orbital has demonstrated that it has the technical resources and the industrial capability to provide customers with a competitive alternative to ULA’s offerings for serving the Medium-Class Space Launch Systems and Services Market. However, the AJ26 engine presently employed on the Antares has never been a permanent, long-term solution for the launch vehicle. There are only a limited number of AJ26 engines that are available beyond those needed for Orbital’s existing COTS and CRS launches. In addition, the age and condition of the remaining AJ26 inventory call into question how many of the remaining engines can be successfully configured for flight.

53. There is no reasonable alternative engine available to Orbital. Orbital has evaluated and continues to evaluate whether there may be potential engine alternatives to the

RD-180. No other potential solution has proven feasible for a combination of cost, risk, technical, performance, logistics, industrialization, timing, regulatory and/or commercial reasons.

54. Accordingly, in order to be a viable long-term competitor in the Medium-Class Space Launch Systems and Services Market, Orbital's access to the RD-180 engine is critical. The illegal Exclusivity Agreement between ULA and RD AMROSS has denied, and continues to deny, Orbital access to the engine and forecloses Orbital from continued competition with ULA in the Medium-Class Space Launch Systems and Services Market.

55. Orbital has invested approximately \$390 million and hundreds of thousands of man hours to enter the Medium-Class Space Launch Systems and Services Market to compete with ULA. The illegal Exclusivity Agreement between ULA and RD AMROSS has damaged Orbital, and its continuation will cause Orbital to lose the value of this investment.

56. Furthermore, ULA's and RD AMROSS's maintenance of the unlawful Exclusivity Agreement will cause Orbital to lose hundreds of millions of dollars of profits on future Antares sales over the next 25 years. Orbital already has been awarded NASA's CRS contract. NASA currently is in the planning phase for an immediate follow-on CRS contract with a draft Request For Proposals expected this year. NASA planning shows six CRS missions per year starting in 2017 through 2020 and a likely second follow-on contract for six missions per year from 2021 through 2025.

57. Orbital and SpaceX are both incumbent CRS providers for NASA. Orbital reasonably expects a follow-on CRS contract for additional CRS launches based on current contract performance, NASA and contractor investments, incumbent competitive positions, and demonstrated success. Additionally, Orbital expects that Antares would win a material portion of future Department of Defense ("DoD") launches as DoD inevitably moves away from

aggregation and extremely expensive EELV launches, particularly in light of the DoD's recent directive to the Air Force to foster competition with ULA.

58. NASA and the Department of Defense also procure the full spectrum of launch services (*i.e.*, small-, medium- and intermediate-class services) through various NASA Launch Services ("NLS") and Air Force Orbital/Suborbital Program ("OSP") contracts. These missions are typically sized for small- and medium-class space launch vehicles. Orbital believes it would capture NLS and OSP missions going forward with Antares.

59. Orbital's lost profits resulting from ULA's and RD AMROSS's maintenance of the illegal Exclusivity Agreement total at least \$375 million. This calculation is based on conservative assumptions regarding mission requirements and is based on the industry-standard 25 year life cycle of similar launch systems.

60. Orbital's inability to procure RD-180 engines as a result of the illegal Exclusivity Agreement also has caused damages to Orbital in the form of excess engineering, development, and logistics costs that Orbital would not have had to incur on the Antares program had the RD-180 engines been made available in 2009. Technical issues associated with the AJ26 engine and resulting delays have caused Orbital to incur many millions of dollars in additional engineering, test-related, and other costs which Orbital would not have incurred had the RD-180 engines originally been made available. In addition, because the AJ26 engine has less thrust capacity than the RD-180, in order to meet the cargo delivery requirements under the CRS contract, Orbital is investing many millions of dollars more to reduce mass and improve performance of the Cygnus spacecraft and Antares launch vehicle. Orbital's damages in these areas total at least \$140 million.

FIRST CAUSE OF ACTION: COMBINATION IN RESTRAINT OF TRADE
IN VIOLATION OF SECTION 1 OF THE SHERMAN ACT
(Against All Defendants)

61. Orbital repeats and re-alleges the allegations in paragraphs 1-60 as if set forth fully herein.

62. By entering into, maintaining and/or extending the Exclusivity Agreement, ULA and RD AMROSS have entered into a contract, conspiracy or combination that unreasonably restrains trade in violation of Section 1 of the Sherman Act, 15 U.S.C. § 1.

63. The Exclusivity Agreement has no legitimate business justification or pro-competitive benefits.

64. The Exclusivity Agreement unlawfully prevents Orbital from competing long-term to provide products and services in the Medium-Class Space Launch Systems and Services Market, and injures competition.

65. Defendants' violation of Section 1 of the Sherman Act has caused, and will cause, damages to Orbital of at least \$515 million, such damages to be trebled in accordance with Section 4 of the Clayton Act, 15 U.S.C. § 15.

66. Defendants' unlawful conduct is ongoing, harms the public interest and, unless restrained will continue. Orbital has no adequate remedy at law.

**SECOND CAUSE OF ACTION: MONOPOLIZATION IN
VIOLATION OF SECTION 2 OF THE SHERMAN ACT**
(Against Defendant ULA)

67. Orbital repeats and re-alleges the allegations in paragraphs 1-66 as if set forth fully herein.

68. Defendant ULA has monopoly power over the Medium-Class Space Launch Systems and Services Market in the United States. By entering into, maintaining and/or extending the Exclusivity Agreement, ULA is using its control over access to the RD-180 engine in the United States to maintain its monopoly position in that market and to unlawfully limit competition in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

69. The sole purpose of the Exclusivity Agreement is to enable ULA to maintain its monopoly position in providing systems and services in the Medium-Class Space Launch Systems and Services Market.

70. ULA's acts of monopolization unlawfully prevent Orbital from competing long-term to provide products and services in the Medium-Class Space Launch Systems and Services Market and otherwise injure competition in the market by reducing choice, inflating prices, and lessening innovation.

71. ULA's violation of Section 2 of the Sherman Act has caused, and will cause, damages to Orbital of at least \$515 million, such damages to be trebled in accordance with Section 4 of the Clayton Act, 15 U.S.C. § 15.

72. ULA's unlawful conduct is ongoing, harms the public interest and, unless restrained will continue. Orbital has no adequate remedy at law.

**THIRD CAUSE OF ACTION: ATTEMPTED MONOPOLIZATION IN
VIOLATION OF SECTION 2 OF THE SHERMAN ACT**
(Against Defendant ULA)

73. Orbital repeats and re-alleges the allegations in paragraphs 1-72 as if set forth fully herein.

74. By entering into, maintaining and/or extending the Exclusivity Agreement, ULA has engaged in predatory and anticompetitive conduct with the specific purpose and intent of monopolizing the Medium-Class Space Launch Systems and Services Market in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

75. The sole purpose of the Exclusivity Agreement is to enable ULA to gain if not maintain a monopoly position in the Medium-Class Space Launch Systems and Services Market.

76. A dangerous probability exists that, if not restrained, ULA will succeed in monopolizing the market if it has not done so already.

77. ULA's acts of attempted monopolization unlawfully prevent Orbital from competing long-term to provide products and services in the Medium-Class Space Launch Systems and Services Market and otherwise injure competition in the market by reducing choice, inflating prices, and lessening innovation.

78. ULA's violation of Section 2 of the Sherman Act has caused, and will cause, damages to Orbital of at least \$515 million, such damages to be trebled in accordance with Section 4 of the Clayton Act, 15 U.S.C. § 15.

79. ULA's unlawful conduct is ongoing, harms the public interest and, unless restrained will continue. Orbital has no adequate remedy at law.

FOURTH CAUSE OF ACTION: CONSPIRACY TO MONOPOLIZE
IN VIOLATION OF SECTION 2 OF THE SHERMAN ACT
(Against All Defendants)

80. Orbital repeats and re-alleges the allegations in paragraphs 1-79 as if set forth fully herein.

81. By entering into, maintaining and/or extending the Exclusivity Agreement, ULA and RD AMROSS have entered into a combination and conspiracy with the specific purpose and intent of monopolizing the Medium-Class Space Launch Systems and Services Market in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

82. The sole purpose of this combination and conspiracy is to enable ULA to gain or maintain a monopoly position in the Medium-Class Space Launch Systems and Services Market.

83. Defendants have engaged in at least one overt act in furtherance of their conspiracy by enforcing the illegal Exclusivity Agreement against Orbital and by refusing to sell RD-180 engines directly to Orbital.

84. Defendants' conspiracy to monopolize unlawfully prevents Orbital from competing long-term to provide products and services in the Medium-Class Space Launch Systems and Services Market and otherwise injures competition in the market by reducing choice, inflating prices and lessening innovation.

85. Defendants' violation of Section 2 of the Sherman Act has caused damages to Orbital of at least \$515 million, such damages to be trebled in accordance with Section 4 of the Clayton Act, 15 U.S.C. § 15.

86. ULA's unlawful conduct is ongoing, harms the public interest and, unless restrained will continue. Orbital has no adequate remedy at law.

JURY TRIAL DEMAND

87. Orbital hereby demands a trial by jury on all of its claims and causes of action.

PRAYER FOR RELIEF

WHEREFORE, Orbital prays for a judgment entered against Defendants and in favor of Orbital:

- (A) DECLARING that Defendants' Exclusivity Agreement is an unlawful combination in restraint of trade in violation of Section 1 of the Sherman Act;
- (B) DECLARING that Defendant ULA's acts of monopolization in the Medium-Class Space Launch Systems and Services Market violate Section 2 of the Sherman Act;
- (C) DECLARING that Defendant ULA's attempt to monopolize the Medium-Class Space Launch Systems and Services Market violates Section 2 of the Sherman Act;
- (D) DECLARING that Defendants' conspiracy to monopolize the Medium-Class Space Launch Systems and Services Market, and their acts in furtherance of such conspiracy, violate Section 2 of the Sherman Act;
- (E) PERMANENTLY ENJOINING Defendants from enforcing, maintaining or otherwise observing their illegal Exclusivity Agreement or any similar formal or informal agreement;
- (F) PERMANENTLY ENJOINING Defendants from engaging in further anticompetitive conduct in violation of Section 1 of the Sherman Act;
- (G) PERMANENTLY ENJOINING Defendants from engaging in further anticompetitive conduct in violation of Section 2 of the Sherman Act;

- (H) AWARDING Orbital damages in an amount to be proved at trial but no less than \$515 million, such damages to be trebled pursuant to Section 4 of the Clayton Act, 15 U.S.C. § 15.
- (I) AWARDING Orbital its costs, expenses and attorneys' fees incurred in connection with this action;
- (J) AWARDING Orbital interest to the maximum extent permitted by law; and
- (K) GRANTING Orbital such other and further relief as this Court deems just and proper.

Dated: June 20, 2013

Respectfully submitted,

FRIED, FRANK, HARRIS, SHRIVER
& JACOBSON LLP

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