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Julia Khersonsky
Deputy Assistant Secretary for Strategic Trade
Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Ave. NW
Washington, DC 20230

Re: Docket numbers BIS-2025-0027 and XRIN 0694-XC127: Request for Public
Comments on Section 232 National Security Investigation of Imports of Commercial
Aircraft and Jet Engines and Parts for Commercial Aircraft and Jet Engines

Dear Ms. Khersonsky:

The National Association of Manufacturers is the largest manufacturing association in the United States, representing manufacturers of all sizes, in every industrial sector and in all 50 states. Manufacturing drives American prosperity—the industry employs nearly 13 million people, contributes \$2.94 trillion annually to the U.S. economy and accounts for nearly 53% of all private-sector research in the nation.¹

The NAM appreciates the opportunity to comment on the Department of Commerce investigation under Section 232 of the Trade Expansion Act, to determine the effects on national security associated with imports of commercial aircraft and jet engines and parts for commercial aircraft and jet engines.

The U.S. aerospace industry has a longstanding history as a leader in technology and innovation from the first powered flight by the Wright Brothers in Kitty Hawk, North Carolina in 1903. The NAM believes it is vital for global economic leadership and for U.S. national security to further strengthen America's world-class aerospace industry, which plays a large role in the U.S. economy today and is on a growth trajectory.

For manufacturers in the U.S. to sustain our nation's global advantage in the aerospace sector, it is essential to safeguard a stable and reliable aerospace supply chain. Tariffs on imports of aircraft, jet engines and their parts, many of which are sourced from longstanding industrial partners in allied markets, jeopardize well-functioning supply chain networks. Tariffs not only harm our global advantage – they impose significant and preventable costs on domestic producers at all tiers of the supply chain for original equipment manufacturers.

To support more aerospace production in the U.S., the administration should instead undertake domestic reforms – including making the 2017 tax reforms permanent and more competitive, rebalancing federal regulations, and addressing workforce challenges – and should seize trade policy opportunities that build upon the U.S. industry's current advantage in global markets.

¹ National Association of Manufacturers (2025), Press Releases, "Manufacturers to Trump and Congress: Act Now on Comprehensive, Commonsense Manufacturing Strategy as Tariffs Hit Manufacturing Industry," <https://tinyurl.com/4z7aj7c5>

Aviation Manufacturers' Role in the U.S. Economy Is Large and Growing

Aerospace manufacturers in the U.S. run the full range from multinational corporations to small manufacturers that design, develop, manufacture and distribute a wide variety of commercial aircraft and aviation inputs. The American aerospace and defense industry generated \$425 billion in economic value in 2023, contributing 1.6 percent of the 2023 nominal U.S. GDP, supporting more than 2.2 million U.S. workers with high-wage manufacturing jobs in every state.²

The U.S. industry is a dominant global player. Aerospace and defense companies exported \$135.9 billion in goods in 2023, producing a trade surplus of \$114 billion, a year-on-year increase of 21%.³ Leading export markets were Canada, France, Germany, the United Kingdom, and Singapore. Leading import sources were France, Canada, the United Kingdom, and Germany, demonstrating a high degree of integrated and reciprocal two-way trade among U.S. allies.

As the industry works to recover from the lingering effects of the pandemic as well as other challenges, tariffs threaten recovery of the U.S. industry—which is otherwise poised for growth. For example, in the last 5 years, RTX has reinvested \$10 billion in U.S. facility expansion and modernization, with an additional \$2 billion in domestic investment planned in 2025.⁴ Similarly, GE Aerospace is investing \$1 billion in its U.S. factories, doubling investment spending from 2024.⁵ Boeing recently announced a \$1 billion expansion plan in South Carolina,⁶ adding 500 jobs to a current workforce of 7,800 at Boeing's operations in the state.⁷ Textron's subsidiary Bell Textron announced plans to invest more than \$630 million in a new advanced manufacturing plant in Texas, creating 520 full time jobs.⁸ Tariffs, however, threaten to dampen the impact of these investment expansions, particularly harming the thousands of suppliers across the industry.

For U.S. Aerospace, Sourcing and Customer Sales are Global

The aerospace and defense industries are built around highly complex supply chain networks. An average U.S. commercial aerospace original equipment manufacturer (OEM) has more than 200 tier 1 suppliers and 12,000 tier 2 suppliers.⁹

A large percentage of suppliers to major commercial aircraft platforms are U.S.-based, delivering high-value content. For example, a Boeing 737 contains about 2,000 parts from some 700 separate

² Aerospace Industry Association, "2024 Facts & Figures: U.S. Aerospace & Defense," <https://www.aia-aerospace.org/industry-impact/#state-of-the-industry>

³ Ibid.

⁴ Samora, Sara, RTX, GE Aerospace brace for potential multi-million tariff impacts (March 2025), <https://tinyurl.com/mvrezurx>

⁵ GE Aerospace to Invest Nearly \$1bn in U.S. manufacturing in 2025 (March 2025), GE Aerospace, <https://www.geaerospace.com/news/press-releases/ge-aerospace-invest-nearly-1b-us-manufacturing-2025>

⁶ Lacey, Derek (March 2025), Boeing Picks BE&K/HITT for Infrastructure Portion of \$1B South Carolina Expansion, <https://tinyurl.com/yc8tyb52>

⁷ Ibid

⁸ Garcia, Eric, Bell and Ariat plan expansion in Fort Worth with the help of new tax abatements, Fort Worth Report (December 2024), <https://fortworthreport.org/2024/12/10/bell-and-ariat-plan-expansion-in-fort-worth-with-the-help-of-new-tax-abatements/>

⁹ Andrew Carolus, Adam Oakley, and Steve Simon, "Aerospace & Defense sector report, year-end 2023," Mesirow Investment Banking, (October, 2024), <https://tinyurl.com/4fueyd6a>

suppliers.¹⁰ Two-thirds of those suppliers are U.S.-based.¹¹ Similarly, 57% of suppliers for the 777F and the 777X, and 50% of the suppliers for the E2 regional jet, are U.S.-based.¹²

Despite this high concentration of domestic content, aerospace manufacturers rely on global trade for key components and materials. These include raw materials such as titanium, components including engines and avionics, and assemblies, including prefabricated parts and modules. Some components cross international borders several times as they are integrated into larger components such as engines and landing gear produced by tier 1 manufacturers in the U.S.

For example, one NAM member is a small aerospace manufacturer in the Midwest that produces assembled structural aircraft components as well as sheet metal and machined parts. As part of its production, this company imports around \$2 million in “small detail parts,” as well as around \$8.5 million in raw materials such as aluminum, titanium, paints, sealants and adhesives for which alternative sources are difficult to procure.

Thus, tariffs costs will largely be borne first and directly by U.S. suppliers to U.S. OEMs who run the risk that their suppliers may turn elsewhere for global sales. One U.S. company that manufactures, services, repairs and overhauls ozone and ozone/VAC converters in Alabama for a global customer base expects tariffs not only to impact hundreds of millions of dollars in revenue, but also to cause its global customers to bypass them and source outside the U.S. due to tariffs. Increased domestic production costs could also make the finished aircraft less price-competitive in global markets against foreign-produced aircraft that do not incur tariff exposure, threatening the OEM global sales that support thousands of U.S. suppliers.

Sourcing Key Inputs from U.S. Allies is a Feature of Stable, Safe and High-Quality Aerospace Supply Chain Networks

Tariffs Could Jeopardize Safety and Quality

The industry places a premium on aviation safety. As such, manufacturers and their suppliers, including aftermarket suppliers and service providers, must comply with rigorous quality and safety standards that are set by the U.S. Federal Aviation Administration or mutually recognized for equivalence by the FAA and a foreign civil aviation authority. Certification of compliance with these gold standards often take 1.5 to 2 years, costs over \$1 million to obtain, and requires the regulator to dedicate oversight resources to ensure safety compliance.¹³ Secure and consistent availability and access to these key inputs without a cost disadvantage is imperative for manufacturers to competitively produce aircraft in the U.S. that consistently meet high standards.

Many critical aerospace manufacturing inputs are sourced from key allies and trusted partners who are required to adhere to the same strict safety standards and FAA certification requirements as manufacturers in the U.S. Many such parts are also dual use, having been made to U.S. military specifications, including those restricting imports from foreign entities of concern. In 2023, the U.S. imported \$15.3 billion of aircraft parts primarily from the UK, Canada, France, Japan and Mexico, with the fastest growth coming from Japan and our partners in North America, Canada and Mexico.¹⁴

¹⁰ Forbes, “Trump Tariff Impact on Aerospace Could Be Huge and Costly,” February 2025 <https://tinyurl.com/mf78htr7>

¹¹ Flight Plan, “Assessing Trade Barrier Effects on the Commercial Aerospace Supply Chain, Aircraft Manufacturing and Cross-Border Deliveries,” April 2025 <https://tinyurl.com/bdf9trft>

¹² Ibid

¹³ Krause, Heather and Kaczmarek, Sarah, Commercial Aviation Manufacturing, Supply Chain Challenges and Actions to Address Them (March, 2024), U.S. Government Accountability Office, <https://tinyurl.com/2r4tempc>

¹⁴ The Observatory of Economic Complexity (OEC), Aircraft parts in the U.S., <https://tinyurl.com/ybacacya>

The industry has worked for years to develop safeguards against substandard manufacturing practices, inadequate testing, and to prevent unauthorized parts from entering global aviation supply networks. These investments into supply chain integrity and supplier compliance could be disrupted by tariffs on imported inputs. In most cases, only one engine is designed and certified for a specific aircraft. For many of these engines, there is only one supplier, which could be located in an allied trading partner. A U.S. OEM in this case would not be able to quickly switch to a domestic supplier, which may take years to build the capability and acquire certification. If that engine or other critical components sourced from outside the U.S. have a Section 232 tariff imposed, the U.S. OEM is now disadvantaged vis-à-vis its European or Brazilian competitors when selling internationally.

Further upstream, the industry is already facing shortages and delivery delays of raw materials and parts. Global aerospace supply chains and trade with allies helps minimize U.S. exposure to supply shortages or temporary disruptions while ensuring that manufacturers in the U.S. have a stable, reliable and safe supply of inputs.

Both Passenger and Cargo Aircraft Will Face Cost Increases

The industry is concerned that the tariff costs of aircraft production will raise the cost of flying to the American consumer at a time when the air travel industry is rebounding with stronger demand. At the same time, as e-commerce continues to expand, NAM members who maintain cargo fleets seek to accelerate their timelines for replacing older aircraft and retrofitting passenger aircraft to meet customer demand and transport packages across longer distances. These companies are concerned that tariffs will drive up their procurement costs in a segment where sourcing options are fewer than for passenger aircraft, ultimately resulting in higher prices for American customers.

Tariffs Will Induce a Loss of Aircraft Maintenance in the U.S.

NAM members uniformly cite a concern, based on historical experience, that tariffs in the U.S. will induce aircraft operators to perform maintenance, repair and overhaul (MRO) services outside the U.S. to avoid tariffs. The ripple effects of this shift are shortages in parts necessary to maintain safe and continuous operations and a loss of capability over time to perform these critical services.

Tariff Costs are Better Spent on U.S. Aerospace Innovation

The U.S. aerospace sector is renowned for innovation. In an already challenging funding environment for R&D, aerospace manufacturers could be expected to cut costs and investments in R&D to offset the financial impact of tariffs. NAM members have expressed concerns that tariff costs could translate into significant cuts to their R&D budgets. Instead of tariffs, the administration should implement provisions of the FAA Reauthorization legislation that included provisions to support innovation in the aerospace sector including in areas such as unmanned aircraft systems and advanced air mobility.

As the commercial space industry is poised to take off, Section 232 tariffs could suppress production of emerging technologies to support spacecraft, satellites and launch vehicles that have the potential to vastly contribute to U.S. national security. This U.S. industry is competing on agility but also on affordability and reliability of inputs such as critical minerals and precision electronics, which are subject to other Department of Commerce Section 232 investigations and potential tariffs, the costs of which threaten to divert capital away from the R&D and fast iteration necessary for U.S. manufacturers to win today's global space race.

Trade Policy that Drives U.S. Aerospace Competitiveness

U.S. aerospace has long thrived in the global marketplace. U.S. trade policy should focus on ways to build upon the U.S. industry's current advantage in global markets while implementing domestic policies that offer incentives to expand such as competitive tax policies and workforce investments.

The U.S. Should Seek to Expand Membership in the Agreement on Trade in Civil Aircraft

The NAM has consistently [advocated](#) for the administration to negotiate zero-for-zero tariff deals with our top trading partners to retain favorable terms and secure access to markets for competitive U.S. manufacturing exports. In aerospace, U.S. industry has held this advantage now for 45 years through reciprocity with certain key trading partners. In the first 40 years of implementation, U.S. commercial aerospace exports grew more than 2,000%.¹⁵

The 1979 Agreement on Trade in Civil Aircraft secured global market access in key markets for the American commercial aviation industry, enabled export dominance, and provided long-term stable access to trusted, global suppliers. Specifically, the agreement eliminated customs duties and other charges levied on all civil aircraft, all civil aircraft engines and their parts and components, all other parts, components and sub-assemblies of civil aircraft, and all ground flight simulators and their parts and components. It also eliminated duties and charges on repairs of civil aircraft.

Beyond tariffs, the signatories made other commitments to address trade-distorting industrial subsidies in this sector, to prohibit forms of discrimination in procurement and enable purchasers of civil aircraft to select suppliers based on commercial and technological factors where U.S. manufacturers excel. The agreement also focuses on eliminating non-tariff barriers to trade in the form of certification requirements and specifications on operating and maintenance procedures.

The Agreement on Trade in Civil Aircraft has 33 countries as signatories, including the U.S. The administration should seek to build on this platform by expanding membership to including key trading partners like Korea, Brazil and India, among others.

The U.S. Should Pursue Bilateral and Sectoral Commitments that Support Preferential Terms of Trade for U.S. Aerospace

In addition to zero-for-zero tariff terms, the administration should incorporate into bilateral agreements the commitments that underlie the Agreement on Trade in Civil Aircraft, including disciplines on industrial subsidies and non-discrimination in product standards, testing and certification. These commitments would become a strong basis for those countries' accession to the Agreement on Trade in Civil Aircraft if they are not currently signatories. Bilateral deals would also provide an opportunity to improve compliance with key aspects of the Agreement, particularly when it comes to market access to government procurement opportunities.

¹⁵ Aerospace Industries Association, "Reciprocity as a Catalyst for the Production Economy: The Agreement on Trade in Civil Aircraft and 45 Years of American Aerospace Dominance".

Avoid “Stacking” of Tariffs Applied Under Different Tariff Authorities

The NAM is deeply concerned about the impacts of potential tariffs on commercial aircraft or critical inputs to aerospace manufacturing. Manufacturers considering investments require a stable investment environment with predictable input costs as well as competitive advantage for their global exports.

On a national basis, **imported critical inputs are necessary for manufacturers to make things in America**. If operating at full capacity across all manufacturing sectors in the U.S., the industry could produce 84% of the inputs manufacturers need for production. That means that, at an absolute minimum, 16% of manufacturing inputs must be imported. Tariffs on critical manufacturing inputs dramatically increase the cost of these inputs, which include raw materials as well as equipment and machinery on factory floors. Moreover, on average, for every dollar of manufacturing inputs imported, the industry generates \$1.40 of manufacturing output. As described above, this holds true for the aerospace sector.

As the NAM pointed out in its [submission](#) to avoid Section 232 tariffs on critical minerals, critical minerals like antimony, titanium and alloying elements are essential for the U.S. defense industrial base. For example, antimony is critical to produce infrared sensors and precision optics. Titanium is a key component of military and commercial aircraft frames, jet engines, helicopters, missiles, naval vessels, satellites, artillery, tanks and munitions. Titanium sponge is the raw material for titanium metals and alloys, a critical component of military fighter aircraft, submarines, satellites, and many other defense technologies. Aluminum and its alloys are extensively used in aircraft construction due to their lightweight, high strength, corrosion resistance, and ease of fabrication. These properties make aluminum ideal for structural components like fuselages, wings, and landing gear, contributing to fuel efficiency and aircraft safety. The industry is already concerned about strains to availability and added costs of Section 232 tariffs on aluminum and related inputs.

Current uncertainties surrounding future trade policies significantly impact manufacturers' confidence and their willingness to commit to long-term capital investments in the U.S. Much of this uncertainty stems from potentially compounding U.S. tariffs. Depending on the product and source, manufacturers importing aerospace inputs, components and parts likely face tariffs under two forms of IEEPA tariffs and multiple other Section 232 investigations on steel, aluminum, chemicals, critical minerals, and semiconductors. As mentioned previously, given the thousands of suppliers to OEMs, tariffs ricochet and compound throughout the aerospace production network.

As the administration's April 29, 2025, executive order¹⁶ regarding the “unstacking” of automotive-related Section 232 tariffs recognizes, this complexity has negative consequences for manufacturers who cannot predict the level of tariffs on essential imports required for the construction and operation of their facilities in the U.S.

A Comprehensive Manufacturing Strategy Is Necessary to Support the U.S. Aerospace Sector

The administration is right to look for ways to further drive U.S. dominance in domestic aircraft, jet engine and parts production capabilities and ensure sufficient supply of aircraft parts, and manufacturers stand ready to partner with the administration on these important goals. **However, tariffs on aircraft, jet engines and their parts will not help the U.S. achieve those objectives** and instead would lead to negative unintended consequences. The NAM instead encourages a

¹⁶ The White House (April 29, 2025), Executive Order 14289 on Addressing Certain Tariffs on Imported Articles, <https://tinyurl.com/yhec349b>

comprehensive manufacturing strategy that includes strategic trade policy solutions, as discussed above, as well as domestic reforms that support the growth of the aerospace industry in the U.S. Those reforms necessarily include tax reforms, permitting reforms to make it easier for aerospace and other manufacturers to build and expand domestic facilities, and support workforce investments.

Secure Competitive Tax Reforms: Aerospace companies depend on a competitive tax code. Congress and the administration need to move quickly to preserve crucial innovation and investment incentives—including immediate R&D expensing, the FDII deduction, full expensing for capital equipment purchases, and more—and maintain tax reform's reduced corporate rate in order to empower the industry to innovate and grow in the U.S.

Support Workforce Investments: Aerospace innovation and manufacturing requires high-skilled workers. There are roughly 400,000 job openings across the U.S. manufacturing industry today. Over 11,000 jobs are unfilled across the country in aerospace today, a gap that is projected to grow 7.0% over the next five years.¹⁷ The pandemic caused a severe contraction and, like other manufacturing sectors, the aerospace industry needs highly specialized and skilled workers. The administration should focus on workforce training and upskilling solutions to close the skills gap, including through implementation of the FAA Reauthorization Act of 2024, which authorized a program specifically to "support the education and recruitment of aviation manufacturing technical workers and aerospace engineers and the development of the aviation manufacturing workforce."¹⁸

Conclusion

U.S. industry has maintained its global edge in a tariff-free environment for civil aircraft trade for nearly five decades. Introducing broad-based tariffs on imports of aircraft, engines and aircraft parts would undermine the foundation of our global advantage—increasing costs at home, making it difficult for companies to plan, invest, and grow, and create new challenges for an industry that is thriving despite economic headwinds and that maintains a large trade surplus.

The strength of the U.S. aerospace industry – from the jobs it supports to the economic output it produces to the innovation it drives – depends on stable and diversified global supply chain networks. In addition, defense production is critical to national security. A thriving commercial aerospace industry is critical to support defense production.

The NAM appreciates the opportunity to comment and looks forward to engaging BIS on the results of its investigation as we seek to work with the administration to bolster a resilient aerospace supply chain and enhance manufacturing of aviation products in the U.S.

Sincerely,



Andrea Durkin
Vice President, International Policy

¹⁷ Lightcast, "Industry Snapshot: Aerospace Product and Parts Manufacturing," April 2025, lightcast.io

¹⁸ FAA Reauthorization Act of 2024, <https://www.govinfo.gov/content/pkg/BILLS-118hr3935enr/pdf/BILLS-118hr3935enr.pdf>