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United Technologies

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Regulatory Policy Division
Bureau of Industry and Security
Room 2099B
U.S. Department of Commerce
14th St and Pennsylvania Ave., NW
Washington, D.C. 20230

Attn: RIN 0694-AF36

Re: Revisions to the Export Administration Regulations (EAR): Control of Aircraft and Related Items the President Determines No Longer Warrant Control under the United States Munitions List (76 Fed. Reg. 68675, November 7, 2011)

Dear Mr. Christiansen:

United Technologies Corporation ("UTC")[1] appreciates the opportunity to submit these comments on the Bureau of Industry and Security's ("BIS") proposed rule on revisions to the Export Administration Regulations ("EAR") regarding the control of aircraft and related items the President determines no longer warrant control under the U.S. Munitions List ("USML").[2] The notice seeks input on the changes to the EAR to address the movement of items currently controlled under USML Category VIII-Aircraft and Associated Equipment to the Commerce Control List ("CCL") in new ECCNs 9A610, 9B610, 9C610, 9D610, and 9E610. In addition, the proposed rule would control certain military aircraft and related items now falling under ECCNs 9A018, 9D018 and 9E018 under the five new ECCNs noted above. The proposed rule also defines the availability of certain license exceptions for the newly created ECCNs.

UTC strongly endorses the Administration's Export Control Reform Initiative, and its stated goal of strengthening national security and the competitiveness of key U.S. manufacturing and technology sectors by focusing on current threats and the changing technological landscape. Of paramount importance in achieving this goal is reforming both the USML and the CCL, and aligning associated export licensing policies, to achieve a more

[1] UTC is a global, diversified corporation based in Hartford, Connecticut, supplying a broad range of high technology products and services to the aerospace, power generation, security, transportation, and building systems industries. UTC's companies are industry leaders, among them Hamilton Sundstrand aerospace and industrial systems; Pratt & Whitney aircraft engines, space propulsion systems and industrial turbines; Sikorsky helicopters; Carrier heating, air conditioning and refrigeration systems; Otis elevators and escalators; UTC Fire & Security electronic security and fire safety systems; and UTC Power fuel cell and power systems.

[2] UTC is submitting comments on the U.S. Department of State's parallel proposed rule to amend the ITAR to revise USML Category VIII (Aircraft and Related Articles).

positive, transparent and predictable structure that concentrates munitions and dual-use export controls on the most sensitive items. The reform and alignment of the control lists, and the transfer of militarily less significant items to CCL control, will facilitate UTC's ability to compete more effectively in the international marketplace while maintaining and enhancing U.S. national security and foreign policy objectives.

As BIS recognized in its July 15, 2011 proposed rule, which set forth the "600 series" framework for controlling items that would be moved from the USML to the CCL, the current USML jurisdictional structure is exceedingly broad, imposing controls on countless parts, components, assemblies, attachments and accessories of military products and their associated technologies that have little or no military significance and are indistinguishable from commercial counterparts that are widely available globally. The over-control of a vast array of parts and components under the USML puts enormous pressure on the defense trade licensing and compliance systems, requiring exporters and their global suppliers, partners and customers to manage life-cycle controls under the rigorous requirements of the International Traffic in Arms Regulations ("ITAR"). Managing these requirements demands significant licensing and compliance resources, and hinders the speed, efficiency and effectiveness of international programs with NATO allies and multilateral regime partners. As such, the present system imposes excessive costs on U.S. exporters and recipients of controlled goods and services, constrains competiveness of the U.S. industrial base, and impedes collaboration with U.S. friends and allies with no commensurate benefit from the standpoint of protecting U.S. national security interests.

For UTC companies, the large majority of defense trade licensing activity relates to defense articles and defense services falling under USML Category VIII. UTC's products span a broad spectrum of aerospace products from helicopters and associated equipment, aircraft engines and engine controls, and a wide range of rotor and fixed wing aircraft systems including auxiliary power units, propeller systems, electric power, actuation, air management, fire protection and detection, among others. In calendar year 2011 through mid-December, approximately 85 percent of our nearly 1000 ITAR license applications included items falling under Category VIII. Of that volume, roughly 78 percent involved defense articles – parts, components, accessories, attachments and associated equipment – currently captured in subcategory VIII(h). Given the widespread significance of Category VIII to UTC and the aerospace industry as a whole, we encourage prompt consideration of the public comments and subsequent steps to finalize and implement these reform proposals for aircraft and related articles.

I. COMMENTS ON PART 740, SUPPLEMENT NO. 4 AND PART 772.1

The proposed rule adds a new Supplement No. 4 to Part 740 to identify certain parts and components classified under ECCN 9A610.x for purposes of limiting applicability of license exceptions GOV and STA for the export of most development and production software and technology related to these items. "Build-to-print" technology, however, is not subject to the limitations of Supplement No. 4. The proposed definition of "build-to-print" in section 772.1 is different than the existing definitions in the ITAR (see §125.4 and §126.5), which could lead to confusion and inconsistent application of this important term among

exporters. Further, the proposed definition continues to use subjective terms such as "minimum necessary", which can lead to varying interpretations by industry.

The State and Commerce Department should coordinate a consistent approach to the definition of build-to-print. We recommend the following proposed revision:

> "Build-to-Print Technology" is "production" "technology" that is sufficient for an inherently capable end user to produce or repair a commodity from engineering documentation (*e.g.*, drawings, specifications, computer models, and quality acceptance, test, and inspection criteria). Supplemental information regarding the following is not within the scope of "build-to-print technology":
>
> (i) "development" "technology," such as design methodology, engineering analysis, detailed manufacturing or process know-how;
> (ii) the production engineering or process improvement aspect of the "technology;" or
> (iii) assistance from the provider of the technology to produce or repair the commodity, beyond providing clarification or interpretation of the information provided.

The term 'engineering drawings' in the original version does not reflect either the range of data or the different media in use today. The phrase 'minimum necessary' is replaced with an inclusive listing of allowed technology.

II. COMMENTS ON ECCN 9x610

As noted above, UTC strongly supports the broad movement of militarily less significant end-items, parts and components, including but not limited to so-called "generic" parts and components, from the USML to the EAR. However, controls on items moved to EAR jurisdiction under existing ECCNs or proposed "600 series" ECCNS should be carefully calibrated to the significance of the items and applied so as to maximize eligibility for license exceptions to U.S. friends, allies and regime partners. Certain modifications to the proposed rule are needed to fully realize these objectives.

A. ECCN 9A610.a

Note 1 to ECCN 9A610.a lists types of "military aircraft" that are controlled to the extent they are "specially designed" for military use and are not enumerated in USML Category VIII(a). Those types of aircraft include trainer and cargo aircraft, utility fixed wing aircraft, military helicopters, observation aircraft, military non-expansive balloons and other lighter than air aircraft, and unarmed military aircraft, regardless of origin or designation, manufactured before 1956 and unmodified since manufacture, except for safety of flight features. The note should clearly denote that the limitation on pre-1956 manufacture is applicable only to the last type of aircraft described, "unarmed military aircraft", and not to the other types of military aircraft described in the note, as follows:

> **"Note 1**: For purposes of paragraph a. the term "military aircraft" includes the following types of aircraft to the extent they were "specially designed" for a military use and are not enumerated in USML paragraph VIII(a): trainer aircraft; cargo aircraft; utility fixed wing aircraft; military helicopters; observation aircraft; military non-expansive balloons and other lighter than air aircraft. Other unarmed military aircraft, regardless of origin or designation, manufactured before 1956 and unmodified since manufacture are also included in the term "military aircraft". Aircraft with modifications made to incorporate safety of flight features or other FAA or NTSB modifications such as transponders and air data recorders are "unmodified" for the purposes of this paragraph .a.

B. ECCN 9A610.y.

1. Parts with Little or No Military Significance. In the Supplemental Information section of the proposed rule under the discussion entitled "Scope of this Proposed Rule" section, BIS indicates that "[p]aragraph y. would consist of 25 specific types of commodities that, if specially designed for a commodity subject to control in this 9A610 or a defense article in USML Category VIII, warrant less strict controls because they have little or no military significance." UTC submits that there are more than 25 specific types of aircraft parts and components potentially falling within the proposed EAR definition of "specially designed" and yet have little or no military significance that warrant the imposition of NS or RS controls under the CCL. In addition to making much needed changes to the definition of specially designed, as discussed below, we urge the agencies to carefully and exhaustively populate the list of parts and components in the .y paragraph.

UTC recommends that the following types of part, components, and associated aircraft equipment be added to the items delineated in 9A610.y:

- Air vents and outlets
- Cabin doors and door seals
- Crew and cabin seats
- Cargo rings
- Drain lines
- Fire extinguishers[3]
- Flame and smoke/CO2 detectors
- Heating, air conditioning and air management equipment[4]

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[3] Fire detection and prevention equipments is functionally indistinguishable between military and civil aircraft (as well as land vehicles and marine vessels). The functions are performed by components such as temperature sensors, smoke/CO2 detectors, protective materials and related electronics for the interaction of the components and subsystem. The design and construction of these components and the detection/prevention subsystems only vary by form and fit for the particular aircraft, sized and packaged to fit that aircraft and its fire prevention and detection needs. These components have no military significance.

[4] Environmental systems provide pressurization for the cabin and cockpit, along with movement, control and conditioning of that environment. The main functions are performed by fans, bleed valves, electronics, heat exchangers and associated components. The design and construction of these components only vary by form and fit for the particular aircraft, sized and packaged to fit that aircraft and its environmental control needs. These components have no military significance.

- Helicopter control mixers
- Junction boxes
- Lithium-ion batteries and battery cells
- Map cases
- Ram air turbines[5]
- Reservoirs
- Steps for crew and passenger entry and exit
- Windows and window seals

We also request clarification that 9A610.y.10 includes metal hydraulic, fuel, oil and air lines that are straight, bent, flexible, braided or varying internal cross sectional area.

Even with a more exhaustive identification in paragraph .y of additional specific types of parts and components, we recognize that it is not necessarily practical to affirmatively identify every item (or type of item) on those aircraft that may be considered to be "specially designed" for a commodity covered under 9A610 or a defense article in USML Category VIII yet have little or no military significance. As discussed below, we recommend changes to the definition of "specially designed", and particularly the parts and components exclusions, to avoid overly broad control of a large and diverse array of minor, militarily insignificant items used on military aircraft. UTC believes that control of such items, to the extent they qualify as "specially designed," under 9A610.y is appropriate. Accordingly, we suggest adding the following entry to 9A610.y:

> "Minor parts of the following type: threaded fasteners (e.g., screws, bolts, nuts, nut plates, studs, inserts), other fasteners (e.g., clips, rivets, pins), common type hardware (e.g., washers, spacers, insulators, connectors, diodes, resistors, grommets, bushings), springs, wire, seals, packings, blankets, insulation, decals, and name/information plates."

2. Ground Support Equipment. ECCN 9A610.f controls ground support equipment that is "specially designed" for items in 9A610 or Category VIII. There are different types of ground support equipment "specially designed" for military aircraft, some of which do not warrant NS and RS controls but should be controlled at a lower level than paragraph f. We recommend that the beginning of paragraph y. be revised to read as follows:

> "Specific "parts", "components", "accessories and attachments" *and associated ground support equipment* "specially designed" for a commodity subject to this ECCN or a defense article in USML Category VIII…"

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[5] Ram air turbines were developed for civil aircraft applications to provide minimal emergency power in the event the aircraft's engines failed. The main function is to provide enough control of the airplane's primary actuation surfaces to affect a survivable landing. This is accomplished without connection to the aircraft's fuel system by dropping a small turbine into the airstream and a 'backdrive' hydraulic and electric power device. RAT's have subsequently been incorporated into military transport aircraft with no change in function and only minor form and fit changes needed to accommodate the particular configuration and size of the aircraft. The basic design elements (turbines, gears, pumps, generators, stow/release system) are indistinguishable between civil and military aircraft, and have no military significance.

In relation to the above, the list of items in subparagraph y. should be expanded to include:

- Blade positioning poles
- Dollies and carts
- Hand Tools
- Inlet and other covers
- Jacks
- Tow bars
- Tie down straps, lines, rings and related hardware

C. ECCN 9B610

ECCN 9B610 lists "equipment" "specially designed" for the test, inspection, and production of items controlled under ECCN 9A610 or USML Category VIII. All of the entries in 9B610 (a) through (y) all list the limitation "specially designed" with the exception of (b) (environmental test facilities), where such facilities need only be 'designed' for the specified purpose. Because military and commercial aircraft operate in much of the same conditions, it is reasonable for an environmental test facility to be suitable for both military and commercial purposes, and utilize the same technology. To avoid over-controlling otherwise EAR99 items and to align with the wording of ML18(b), ECCN 9B610(b) should be revised to add "specially designed" prior to environmental test facilities.

III. OTHER COMMENTS

A. Definition of "Specially Designed"

The proposed definition of "specially designed" in EAR § 772.1 plays a fundamental role in determining the structure and scope of the revised CCL, including proposed ECCNs 9A610, 9B610, 9C610, 9D610 and 9E610. The clear aim is to eliminate, to the greatest extent possible, the need to divine the designer's intent or apply other subjective concepts to determine jurisdiction and classification. Further, the definition must reduce over-control and unnecessary licensing or other authorization requirements for the broad universe of parts and components transferred to the CLL that have little or no military significance. As proposed, however, the definition is confusing, difficult to administer, and may result in overly broad control of benign parts and components contrary to the objectives of the list reform effort.

The proposed definition breaks items down into two groups: (1) *items other than parts or components*, i.e., end-items, materials, accessories and attachments, software and technology; and (2) *parts and components*. Each group has its own set of tests.

1. <u>Items other than parts and components (subparagraph (a))</u>. To qualify as a "specially designed" item, the item must be enumerated on the CCL and, as a result of "development", have properties peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions of the controlled item. This construction is a welcome move away from subjective intent criteria, but it does not

completely eliminate ambiguity and interpretational questions surrounding the phrase "peculiarly responsible", *i.e.*, the significance of an item's properties to the stated performance characteristics or functions. This phrase can be viewed to mean the properties are both necessary and sufficient to achieve or exceed the stated performance parameters. As it did for the definition of "required" technology and software in Part 772.1, Commerce should include adequate examples of the application of this concept to specific items.

2. Parts and components (subparagraph (b)). The limiting language of subparagraph (a) is not used in the proposed definition of specially designed parts and components. Read literally, it captures practically every part and component of every military item enumerated on the CCL or USML, unless they are themselves enumerated in a parts and components category on the CCL or USML or fall within one of the four limited exclusions under subparagraph (d).

Our experience is that an inordinate amount of time and resources is consumed trying to determine the jurisdiction and classification of minor, military insignificant parts. Many are purchased from distributors and it is often difficult, if not impossible, to determine design intent, predominant usage in the market place, or even the range of present actual applications. The applicability of the 17(c) note to USML Category VIII(h) is also sometimes impossible to establish, as it may not be know if a particular part or component is used on a FAA certified aircraft. In relation to this situation, the suggested revision to 9A610.y identified earlier concerning minor parts would be beneficial as it would cover minor parts used on a commodity subject to control under 9A610 or USML Category VIII, when use on multiple types of civil items cannot be confirmed.

B. Impact of Movement of Items to CCL

UTC believes that the transfer of items of lesser military significance from the USML to the CCL will result in reduced cost and improved business flexibility. However, the transition of potentially tens of thousands of parts and components, each with a multiplicity of associated technical documents, will require a very substantial effort requiring a transition period to train staff, determine new jurisdictions and classifications, adjust ERP systems and other automated tools, change document markings, and coordinate with suppliers, distributors and customers. The philosophy of the phase-in should be to avoid unnecessary costs and schedule delays. To ease concern and possible confusion over this transition, the rule should explicitly address the phase-in of changes, as follows:

- Permit a phase-in of changes through interim and final rules. The EAR underwent a similar change in 1996, and the transition was implemented with an interim rule effective April 24, 1996, with compliance not compelled until November 1 of the same year. A similar extended implementation time frame would allow companies to change computer systems, update marking procedures, and start the process of reviewing the jurisdiction and classification of a large number of items. Due to the size and complexity of the effort, we recommend a nine month phase-in period.

- Permit 'grandfathering' of existing item jurisdiction and classification. This essentially makes the transition of items from the USML to CCL optional. Items would be re-categorized when there is a business case to transition eligible items.

- Permit 'grandfathering' of existing and in-process licenses and agreements. There may be cases where amending a Department of State authorization may be faster than applying for a new BIS license. In this case, the item(s) would necessarily retain the jurisdiction stated in the authorization. Continuing to license an item under the original jurisdiction should not preclude transitioning the item to the CCL without agency agreement.

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For additional information, please contact the undersigned at (202) 336-7467 or, with regard to technical proposals, Ari Novis at Pratt & Whitney at (860) 557-2353.

Sincerely,

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