

TECHNICAL IMPLEMENTATION PROCEDURES
FOR
AIRWORTHINESS AND ENVIRONMENTAL
CERTIFICATION

BETWEEN THE

***FEDERAL AVIATION ADMINISTRATION
OF THE
UNITED STATES OF AMERICA***

AND THE

***EUROPEAN AVIATION SAFETY AGENCY
OF THE
EUROPEAN Union***

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TECHNICAL IMPLEMENTATION PROCEDURES FOR **AIRWORTHINESS AND ENVIRONMENTAL CERTIFICATION**

SECTION I **GENERAL**

- 1.0 Purpose. The purpose of these technical implementation procedures, (hereafter referred to as Implementation Procedures) entered into pursuant to Article 5 and Annex I of the Agreement between the Government of the United States of America and the European Union on Cooperation in the Regulation of Civil Aviation Safety ("the Agreement"), is to define the interface requirements and activities between the Federal Aviation Administration (FAA), the European Aviation Safety Agency (EASA) and European Union (EU) Member State Aviation Authorities (AAs) for the import, export, and continued support of civil aeronautical products.

Note: Appendix D lists all acronyms used in this document.

1.1 Communications.

1.1.1 Changes in Aircraft Certification Systems.

(a) These Implementation Procedures are based upon sufficiently similar aircraft certification systems being in place at the time of signing. Therefore, the FAA and EASA shall keep each other informed of significant changes within those systems, such as changes in:

- (1) statutory responsibilities;
- (2) organizational structure (e.g., key personnel, management structure, technical training, office location);
- (3) airworthiness and environmental standards and procedures;
- (4) production quality control system oversight, including system oversight outside their territory; or
- (5) delegated or contracted functions or the kinds of organizations to which functions have been delegated or contracted.

(b) Revision by the FAA, EASA or an AA to its regulations, airworthiness codes, policies, procedures, organizational structure, production quality control system

oversight, or delegation system may affect the basis and the scope of these Implementation Procedures. Accordingly, upon notice of such changes by FAA or EASA, FAA or EASA may request a meeting to review the need for amendment to these Implementation Procedures.

1.1.2 Communications.

- (a) Data and documents exchanged under these Implementation Procedures between the FAA and EASA, and where applicable the FAA and AAs, shall be in the English language.
- (b) The FAA and EASA will provide the training and oversight needed to support a thorough understanding and consistent application of the principles and procedures described in these Implementation Procedures.
- (c) The FAA and EASA further recognize that direct and routine interaction between FAA and EASA staff within the framework of these Implementation Procedures will serve to enhance the trust and reliance that provides its foundation. FAA and EASA management will therefore promote an environment of regular and open communication between technical and project management staff.

1.1.3 Technical Consultations.

- (a) The FAA and EASA shall notify each other of draft guidance material and consult on new appliance performance standards or proposed changes to these standards.
- (b) The FAA and EASA Certification Directors agree to consult as necessary to provide input when requested on technical issues and resolve technical disagreements. The frequency of these exchanges will depend on the number and significance of the issues to be discussed.

1.1.4 Interpretations and Resolution of Conflicts between FAA and EASA.

- (a) In the case of conflicting interpretations by FAA and EASA of the laws, airworthiness or environmental regulations/standards, requirements, or acceptable means of compliance pertaining to certifications, approvals, or acceptance under these Implementation Procedures, the interpretation of the Technical Agent whose law, regulation/standard, requirement, or acceptable means of compliance is being interpreted shall prevail.

(b) The FAA and EASA agree to resolve issues through consultation or any other mutually agreed-upon means. Every effort should be made to resolve issues at the lowest possible level before elevating the issue to higher management.

(c) To resolve conflicts the FAA and EASA shall use the following processes.

(1) For the FAA, when a project manager (PM) and project certification manager (PCM) cannot agree, the first certification decision point is the local office manager, who shall consult with the EASA Certification Manager.

(1) For EASA, when a PCM and PM cannot agree, the first certification decision point is the EASA Certification Manager, who shall consult with the local FAA office manager.

(2) If resolution cannot be reached, the issue shall be expeditiously raised to the Directorate Manager (or Division Manager where applicable), who shall consult with the EASA Head of Products or Head of Organisations, as applicable.

(2) If resolution cannot be reached, the issue shall be expeditiously raised to the EASA Head of Products, or Head of Organisations where applicable, who shall consult with the FAA Directorate/Division Manager.

(3) If resolution cannot be reached, the Directorate/Division Manager shall consult with the Aircraft Certification Service Director as appropriate.

(3) If resolution cannot be reached, the Head of Products/Organisations shall consult with the EASA Certification Director and/or other Directors or the Internal Safety Committee, as appropriate.

(4) The Aircraft Service Director shall resolve the matter or consult with the EASA Certification Director, per paragraph 1.1.3.

(4) The Certification Director shall resolve the matter or consult with the FAA Aircraft Certification Director, per paragraph 1.1.3.

(d) Issues that cannot be satisfactorily resolved between the FAA and EASA Certification Directors, may be raised to the Certification Oversight Board for further consideration. (See Article 2.2 of Annex 1, *Airworthiness and Environmental Certification* of the Agreement (hereinafter Annex 1 of the Agreement).)

(e) Issues that cannot be resolved by the Certification Oversight Board may be forwarded by either FAA or EASA to the Bilateral Oversight Board for resolution.

1.1.5 Communications Regarding Designees and Approved Organizations.

(a) Compliance findings, conformity inspections, test witnessing, and other certification activities in support of an FAA certification program sometimes take place in the territory of the European Union and conversely similar activities in support of an EASA certification program may take place in the territory of the United States. When resources or schedule do not permit the use of technical assistance (see Section VI), designees or representatives of delegated or approved organizations may need to travel to the other's territory to perform these functions. Unless otherwise agreed for specific projects, the FAA or EASA shall not routinely notify the other of designee or organization activities in advance of designees or representatives of approved organizations traveling to the United States or to the European Union, to make findings of compliance and/or to perform conformity inspections.

(b) FAA and EASA understand that there may be occasional situations where either may interact directly with an individual designee or approved organization of the other. In such cases it is the responsibility of the initiator of the contact to notify the other as soon as possible. Any such direct communication between FAA or EASA and the other's designees or organizational representatives should be limited to information exchange. The FAA and EASA shall always consult with one another on significant validation program decisions.

1.1.6 Projects Involving a Separate State of Design and State of Manufacture.

The FAA and EASA recognize that some projects of their aviation industries may involve products designed under one party's jurisdiction and manufactured under the other party's jurisdiction. In such cases, the FAA, EASA and, as appropriate the AA, shall work together to develop a working arrangement defining their respective responsibilities to ensure that the relevant functions applicable to the State of Design and State of Manufacture under Annex 8 of the 1944 Convention on International Civil Aviation done at Chicago ("Chicago Convention") adopted by the International Civil Aviation Organization (ICAO) are carried out. Such working arrangements shall address the continued airworthiness responsibilities applicable to the State of Design and the State of Manufacture and shall be documented in accordance with Section VII of these Implementation Procedures.

1.2 Reserved.

1.3 Certification Oversight Board Procedures.

1.3.1 Meetings. The Certification Oversight Board under the leadership of the FAA and EASA's Certification Directors shall meet annually to review progress on implementation of these Implementation Procedures. The meetings will rotate between the U.S. and Europe with one meeting hosted by FAA and the next by EASA, unless otherwise agreed. When necessary and by mutual agreement additional meetings may be held and can be face to face, videoconference or by teleconference.

(a) Each annual meeting shall provide an open session for public/industry participation.

(b) Meeting attendees shall include the offices responsible for administration and technical implementation of these Implementation Procedures and additional officials as needed to address the meeting agenda items. At the discretion of the co-chairs, other staff and representatives of appropriate organizations may be invited to participate.

(c) The host is responsible for meeting minutes and action items, which are tracked.

(d) The Certification Oversight Board 1) may report any unresolved issues to the Bilateral Oversight Board, and 2) shall report the status of the implementation of any decisions of the Bilateral Oversight Board, on request.

1.3.2 Taskings/Subgroups. The Certification Oversight Board may charter subteams to address specific technical issues and make recommendations to the Certification Oversight Board.

1.3.3 Cooperation in Quality Assurance and Standardization Activities. In order to promote continued understanding and compatibility in each other's certification systems, FAA and EASA shall consult and share information on quality assurance and standardization-accreditation activities. For this purpose, FAA and EASA focal points shall meet and communicate on a regular basis to agree upon an annual schedule of joint activities including mutual attendance as an observer in each other's future activities, and to discuss significant audit findings and reports as a result of these activities. The record of such meetings and recommendations, with appropriate supporting materials, shall be submitted to the Certification Oversight Board.

1.3.4 Procedures for Adding and Suspending the Acceptance of Findings and Approvals Made by Specific Aviation Authorities.

(a) EASA shall notify the FAA of a proposed addition of the acceptance of production and/or airworthiness findings or approvals made by an AA, as defined

in the Appendix to Annex 1 of the Agreement. EASA and the FAA shall consult on the basis for this proposal. EASA shall provide the opportunity for FAA's participation in its standardization audit or the FAA and EASA shall conduct a joint assessment. In exceptional cases, if a joint assessment is not practical and EASA cannot change its plans to accommodate FAA's participation, the FAA shall conduct its own assessment of the AA, with an EASA observer. The FAA, following the applicable assessment, shall inform EASA of concurrence or non-concurrence with EASA's recommendation. If the FAA concurs with a recommendation to accept production and/or airworthiness findings or approvals, the Certification Oversight Board shall make a recommendation to the Bilateral Oversight Board to revise the Appendix to Annex 1 of the Agreement accordingly, or otherwise report its disagreement.

(b) In the case of the proposed suspension of the acceptance of findings made by an AA, EASA or the FAA shall promptly notify the other and consult. If EASA has made the decision to suspend acceptance of production and/or airworthiness findings or approvals, a recommendation shall be made to the Bilateral Oversight Board to revise the Appendix to Annex 1 of the Agreement. If the FAA makes the proposal to suspend the acceptance of findings or approvals, then a possible joint confidence building activity may be undertaken. If confidence is not restored, through whatever means, the Certification Oversight Board shall notify the Bilateral Oversight Board requesting that the Appendix to Annex 1 of the Agreement be revised accordingly.

1.3.5 Amendments and Points of Contact.

(a) These Implementation Procedures may be amended based on a decision of the Certification Oversight Board. Such amendments shall be made effective by signature of the duly authorized representatives of the FAA and EASA. Administrative/editorial changes to these procedures may be made by the focal points after mutual consultation.

(b) The focal points for the implementation of these Implementation Procedures are listed in Appendix A.

(c) EASA shall maintain and make available to the FAA a list of AA contacts for production and export airworthiness certification.

1.4 Applicable Requirements, Procedures, and Guidance Material.

1.4.1 The U.S. requirements for aircraft airworthiness and environmental certification are contained in the United States Code of Federal Regulations (CFR), Title 14, Parts 21, 23, 25, 26, 27, 29, 31, 33, 34, 35, and 36. Additional requirements are in Parts 43 and 45. The FAA also uses European certification

specification (CS)-22 and CS-VLA for some special class aircraft. Minimum performance standards for appliances are contained in FAA Technical Standard Orders (TSO). Guidance material, policy, and procedures are contained in FAA Advisory Circulars, Orders, Notices, and Policy Memoranda.

1.4.2 The European Union requirements for aircraft airworthiness and environmental certification are contained in the European Union regulation (EC) No 216/2008 of the European Parliament and of the Council of 03 August 2012, Commission Regulation EC 748/2012, (hereafter referred to as EASA Part 21), and EASA Certification Specifications, Acceptable Means of Compliance (AMC), and Guidance Material.

- 1.5 Entry into Force and Termination. These Implementation Procedures shall enter into force upon signature and shall remain in force until terminated by either Technical Agent. Either the FAA or EASA may terminate these Implementation Procedures upon sixty days written notice to the other Technical Agent. Termination shall not affect the validity of activity conducted under these Implementation Procedures prior to termination.
- 1.6. Definitions. For the purpose of these Implementation Procedures, the following definitions apply, in addition to those definitions found in Article 1 of the Agreement.
- (a) “Acoustical Change” means any voluntary change in the type design of an aircraft to be FAA-approved that may increase the noise levels of that aircraft (regardless of its classification of major or minor per 14 CFR 21.93(a)). (Ref. 14 CFR 21.93(b))
 - (b) “Airworthiness Standards” means regulations, airworthiness codes or other certification specifications governing the design and performance of civil aeronautical products, parts, and appliances.
 - (c) “Article” means a material, part, component, process, or appliance.
 - (d) “Appliance” means any instrument, equipment, mechanism, part, apparatus, appurtenance or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, and is installed in or attached to the aircraft.
 - (e) “Approved Manuals” means manuals, or sections of manuals, requiring approval by the FAA or EASA as part of a certification program. These include the approved sections of the Flight Manual, the airworthiness limitation section of the Instructions for Continued Airworthiness (ICA), the structural repair manual, the

engine and propeller installation and operating instruction manuals, and the certification maintenance requirements, where applicable.

(f) “Basic Supplemental Type Certificate (Basic STC)” means a Supplemental Type Certificate whose validation does not require Validating Authority (VA) technical involvement.

(g) “Certificating Authority (CA)” means the FAA for design approvals that are U.S. State of Design; EASA when exercising State of Design functions for design approvals in the EU.

(h) “Compliance Determination” means the determination, by either the CA’s system or the VA’s system, that the applicant has demonstrated compliance with identified, individual airworthiness standards.

(i) “Critical Component” means a part identified as critical by the design approval holder during the product type validation process, or otherwise by the exporting authority. Typically, such components include parts for which a replacement time, inspection interval, or related procedure is specified in the Airworthiness Limitations section or certification maintenance requirements of the manufacturer’s maintenance manual or Instructions for Continued Airworthiness.

(j) “Deviation” is a grant of relief from the requirements of a certification specification when processed through the appropriate regulatory procedure by EASA.

(k) “Emissions Change” means any voluntary change in the type design of an airplane or engine to be FAA-approved that may increase fuel venting or exhaust emissions. (Ref. 14 CFR 21.93(c)).

(l) “Environmental Standards” means regulations or certification specifications governing the certification of designs with regard to noise characteristics and exhaust emissions of civil aeronautical products and appliances.

(m) “Equivalent Level of Safety Finding” means a finding that alternative action taken provides a level of safety equal to that provided by the airworthiness standards for which equivalency is being sought.

(n) “Exemption” means a grant of relief from requirements of a current regulation when processed through the appropriate regulatory procedure by the FAA or the European Commission or AA, as applicable.

(o) “Export” means the process by which a product, part or appliance is released from one regulatory system for subsequent use by another country.

(p) “Exporting Civil Airworthiness Authority” means the organization within the exporting State charged by the laws of the exporting State, to regulate the airworthiness and environmental certification, approval, or acceptance of civil aeronautical products, parts, and appliances. The exporting civil airworthiness authority will be referred to herein as the exporting authority.

For the United States of America, this exporting authority is the FAA.

For the European Union, this is:

- (1) EASA, for:
 - (i) the functions and tasks of the State of Design, Manufacture or Registry when related to design approval; and
 - (ii) the approval of certain production organisations and their export airworthiness approvals.
- (2) the AA, for:
 - (i) the approval of production organisations within its State;
 - (ii) the issuance of corresponding Certificate of Airworthiness; and
 - (iii) export airworthiness approvals.

(q) “Finding” means a final determination of compliance/non-compliance from FAA’s or EASA’s system as a result of a review, investigation, inspection, test, and/or analysis.

(r) “Generic Validation Item” means a certification item identified by the VA for particular scrutiny in all products of a certain class. The VA will publish and periodically update Generic Validation Item lists that will be publicly available.

(s) “Import” means the process by which an exported product, part, or appliance is accepted by a country’s civil airworthiness authority, or EASA on behalf of an EU Member State, for use and is subsequently placed under that authority’s regulatory system.

(t) “Importing Civil Airworthiness Authority” means the organization within the importing State charged by the laws of the importing State with regulating the airworthiness and environmental certification, approval, or acceptance of civil aeronautical products, parts, and appliances. The importing civil airworthiness authority will be referred to herein as the importing authority.

For the United States of America, this importing authority is the FAA.

For the European Union, this is:

- (1) EASA for the functions and tasks related to design approval;
- (2) the AA for all other issues related to the import of a product, part or appliance.

- (u) “Licensing Agreement” means a commercial contract between a Type Certificate (TC) or Supplemental Type Certificate (STC) holder and a production organization approval holder (or applicant) formalizing the rights and duties of both parties to use the design data for the purpose of manufacturing the product or part.
- (v) “Manufacturer” means a person who, by FAA or European Union regulation, is responsible for determining that all products, parts, or appliances produced within their quality control system conform to an FAA or EASA -approved design or established government or industry standard and are in a condition for safe operation. For the European Union this includes a production organisation.
- (w) “New Aircraft” means an aircraft that is still owned by the manufacturer, distributor, or dealer, if there is no intervening private owner, lease, or time-sharing arrangement, and the aircraft has not been used in any pilot school and/or other commercial operation.
- (x) “Non-Basic Supplemental Type Certificate (Non-Basic STC)” means a Supplemental Type Certificate whose validation may require VA technical involvement.
- (y) “Person” means an individual, firm, partnership, corporation, company, association, joint stock association, or governmental entity, and includes a trustee, receiver, assignee, or other similar representative of any of them.
- (z) “Product” means a civil aircraft, aircraft engine, or aircraft propeller.
- (aa) “Production Quality System” means a systematic process which meets the requirements of the exporting authority and ensures that products, parts, and appliances will conform to the approved design and will be in a condition for safe operation.
- (bb) “Project Validation Item” means a certification item that is unique to a particular validation project, for example, unique design, usage, or Method of Compliance (MOC). A Project Validation Item is established solely to address that uniqueness.
- (cc) “Rebuilt Engine” means a U.S. engine that has been disassembled, cleaned, inspected, repaired, as necessary, reassembled, and tested in accordance with 14 CFR Part 43.
- (dd) “Significant Standards Difference (SSD)” means a VA airworthiness standard that has no CA equivalent, which results in a difference that may require type design changes, approved manual changes, additional or different demonstration of compliance, or the imposition of operational limitations to meet

the VA standards. The type design or operation approved by the VA could then differ from the design and/or operation approved by the CA.

(ee) “Special Condition” means

(1) to the FAA: an additional airworthiness standard prescribed by the FAA when the airworthiness standards for the category of product do not contain adequate or appropriate safety requirement due to novel or unusual design features. Special Conditions contain such safety standards as the FAA finds necessary to establish a level of safety equivalent to that established in the applicable regulations.

(2) to EASA: an additional detailed technical specification prescribed by EASA when the airworthiness code for the category of product does not contain adequate or appropriate safety standards due to novel or unusual design features, unconventional use of the product, or experience in service with similar products showing that unsafe conditions may develop. Special Conditions contain such detailed technical specifications as the European Union finds necessary to establish a level of safety equivalent to that intended in the applicable airworthiness code.

(ff) “Standards Equivalencies” means the FAA and EASA airworthiness standards that are determined to be equivalent despite their language differences.

(gg) “Standard Part” means a part that is manufactured in accordance with an established government or industry-accepted specification, which includes design, manufacturing, and uniform identification requirements. The specification must include all information necessary to produce and conform the part, and must be published so that any person or organization may manufacture the part.

(hh) “Supplier” means a person or organization (at any tier) contracted to furnish aviation products, parts, appliances, components, material or services.

(ii) “Used Aircraft” means each aircraft that is not a new aircraft, as defined in paragraph (w) above.

(jj) “Validation” means the importing authority’s approval process of a design certificated by either the FAA or EASA.

(kk) “Validating Authority (VA)” means the FAA for import into the U.S.; EASA for import into the European Union.

(ll) “Validating Authority Certification Basis” means the applicable airworthiness standards identified by the VA plus any exemptions, deviations, special conditions,

and equivalent level of safety findings declared by the VA to establish its design acceptance of an imported product or to certify the design change.

(mm) “Validation Item (VI)” means a certification item or airworthiness standard of particular interest to the VA.

SECTION II **DESIGN APPROVAL PROCEDURES**

2.0 General.

2.0.1 The FAA and EASA shall use these procedures for the initial design approval of each other's products and appliances.

2.0.2 The FAA and EASA shall use the validation process based on the Type Validation Principles, which are defined in Appendix C, when certificating each other's products and issuing STCs.

2.0.3 FAA and EASA shall also use a simplified validation process when issuing an appliance approval. (See paragraph 2.5)

2.0.4 EASA shall use the validation process defined in paragraph 2.8 when accepting FAA-approved critical Parts Manufacturer Approval (PMA) parts.

2.0.5 In accordance with Article 16.C of the Agreement, the FAA and EASA shall continue to recognize and accept design approvals and data certified by FAA, EASA, and AAs, and validated by FAA, EASA or an AA prior to the date of these Implementation Procedures under the bilateral aviation safety agreements and bilateral airworthiness agreements listed in Attachment 1 of the Agreement until such approvals are replaced or cancelled. These design approvals include TCs, amended TCs, STCs, Letters of TSO Design Approval, European Technical Standard Order/Joint Technical Standard Order (ETSO/JTSO) Authorisations or national appliance approvals, and FAA PMA parts.

2.0.6 Assigning Compliance Determinations. The VA's design approval shall be based on the CA system's technical evaluations, tests, inspections, and compliance determinations to the maximum extent practicable. The VA is expected, with only a few exceptions, to assign determinations of compliance to its requirements to the CA system. Nevertheless, the VA must maintain a general awareness and understanding of the CA's compliance activities to be able to exercise its responsibilities as a State of Registry. The VA is able to make findings of compliance, without further showing, based upon the CA's statements of compliance.

2.0.7 Communications During a Validation Project. Validation requires effective communication between the FAA, EASA, and the applicant. Communication should occur authority-to-authority. The expectation is that there will be an early exchange of information and discussion between the certificating and validating authorities. Continued communication between the CA and VA is necessary in order for the VA to adequately understand actions taken by the CA and applicant. See paragraph 1.5, Communication, Appendix C for further information.

2.0.8 Project Prioritization. The FAA does not normally issue a design approval for a product manufactured outside the United States unless it is to be imported, i.e., an aircraft to be U.S.-registered or an engine, propeller, appliance or part to be incorporated into the design of a U.S.-registered aircraft or U.S.-manufactured product. European Union applicants for U.S. design approval should provide the FAA with evidence of import. EASA will adopt a similar project prioritization approach for applications from U.S. applicants under this agreement.

2.0.9 Validation Applications.

2.0.9.1 Applications for FAA or EASA approval are intended for civil aeronautical products and appliances. Products and appliances which are intended only for military, customs, police, search and rescue, firefighting, coastguard or similar activities or services are not eligible for FAA or EASA validation under this agreement unless the CA has accepted to certify the product or appliance and there is 1) a civilian use/application by a civilian customer within the jurisdiction of the importing authority or 2) a contract with the VA for its approval of the product or appliance, i.e. a contract between FAA and the U.S. military or a contract between the U.S. applicant and EASA. In these cases, the FAA and EASA shall consult to determine whether validation is within the scope of the Agreement or requires a Special Arrangement under Section VII.

2.0.9.2 Applications for FAA Design Approval.

(a) All applications for FAA design approval from applicants in the European Union shall follow the following procedure.

(1) The applicant shall:

- (i) Complete the FAA form appropriate to the design approval requested (i.e., FAA Form 8110-12 or via letter) and,
- (ii) Forward the FAA form plus the applicable technical data package (See paragraphs 2.1.1, 2.2.2, and 2.5.1) to EASA.

2.0.9.3 Applications for EASA Design Approval.

(a) All applications for EASA design approval from applicants in the United States shall follow the following procedure.

(1) The applicant shall:

- (i) Complete the EASA form appropriate to the design approval requested (see EASA website) and,
- (ii) Forward the EASA form for each individual design approval to the FAA plus the applicable technical data package (See paragraphs 2.1.2, 2.2.3, and 2.5.2).

(2) EASA shall:

(i) Review the application package to determine if it is within the scope of these Implementation Procedures.

(ii) Forward the application plus the applicable data along with an EASA cover letter to the appropriate FAA office (See Appendix A). Where electronic data is submitted, it must be in a format that is compatible with FAA's information systems and there must be an arrangement between the applicant and the EASA under paragraph 2.10.2.

(2) The FAA shall:

(i) Review the application package to determine if it is within the scope of these Implementation Procedures.

(ii) Forward the application plus the applicable data along with an FAA cover letter to EASA via email. (See Appendix A or EASA website for applicable EASA office). Where electronic data is submitted, it must be in a format that is compatible with EASA's information systems and there must be an arrangement between the applicant and the FAA under paragraph 2.10.1.

(3) Upon receipt of the FAA cover letter and application form, EASA shall:

(i) Notify the applicant of acceptance and identify a technical focal point contact for further communication.

(ii) Notify the applicant of EASA fees.

(4) To proceed with the project, the applicant must:

(i) Comply with the EASA Fees and Charges Regulation.

2.1 Design Approval Procedures for Type Certificates.

2.1.1 Application Package for FAA Type Certification.

(a) An application for an FAA Type Certificate from an applicant in the European Union may be submitted for products with an EASA Type Certificate, or for products where application for type certification has been made to EASA.

(b) EASA should ensure that the applicant's technical data package contains the following information:

(1) Data defined in 14 CFR 21.15;

(2) EASA TC and TC Data Sheet, if available, and a definition of the airworthiness and environmental standards upon which EASA design approval was (or is to be) based, and the amendment level of the U.S. airworthiness and environmental standards that the applicant proposes and EASA believes to be equivalent to its own standards;

(3) Date of application to EASA; and

(4) The applicant's requested date for FAA type certification.

(c) Also, the application should contain the following, if known at

2.1.2 Application Package for EASA Type Certification.

(a) An application for EASA Type Certificate from an applicant in the United States may be submitted for products with an FAA Type Certificate, or for products where application for type certification has been made to the FAA.

(b) FAA should ensure that the applicant's technical data package contains the following information:

(1) Data defined in EASA Part 21A.15;

(2) The FAA TC and TC Data Sheet, if available, and a definition of the airworthiness and environmental standards upon which the FAA design approval was (or is to be) based, and the amendment level of EASA airworthiness and environmental standards that the applicant proposes and the FAA believes to be equivalent to its own standards;

(3) Date of application to the FAA; and

(4) The applicant's requested date for EASA type certification.

(c) Also, the application should contain the following, if known at the time of application:

(1) A description of all novel or

the time of application:

- (1) A description of all novel or unusual design features known to the applicant or EASA at the time of application which might necessitate issuance of FAA special conditions under 14 CFR 21.16, or which might require a special review of acceptable means of compliance; and
 - (2) All known or expected deviations or equivalent level of safety findings relative to EASA's standards for design approval that might affect compliance with the applicable U.S. airworthiness and environmental standards.
 - (3) The information necessary to complete FAA Form 8110-23, 8110-24 or 8110-27, as appropriate in accordance with FAA Order 8110.35, for the Aircraft Noise Certification Historical Database.
 - (4) Available information on U.S. market potential, including specific customers, delivery schedule, and U.S. content (e.g. major components) of the product.
- (d) If the application is incomplete, the FAA shall notify EASA within 10 working days and return the application in 30 days if the necessary information is not provided.
- unusual design features known to the applicant or FAA at the time of application which might necessitate issuance of EASA special conditions under EASA Part 21A.16B, or which might require a special review of acceptable means of compliance; and
 - (2) All known or expected exemptions or equivalent level of safety findings relative to the FAA's national standards for design approval that might affect compliance with the applicable EASA airworthiness and environmental standards.
 - (3) The information necessary to complete the EASA type-certificate data sheet for noise and for the databases of EASA approved noise levels.
 - (4) Available information on specific EU customers, delivery schedule, and EU content (e.g. major components) of the product.
- (d) If the application is incomplete, EASA shall notify the FAA within 10 working days and return the application in 30 days if the necessary information is not provided.

2.1.3 Establishment of the FAA or EASA Type Certification Basis.

2.1.3.1 FAA Type Certification Basis.

(a) The FAA shall develop its type certification basis using the applicable airworthiness standards (14 CFR) in effect on the date application was made to EASA, or where applicable an AA, for its type certificate. (When 14 CFR part 26 applies to a European transport category airplane, the applicable standard is the amendment in effect on the date the FAA type certificate is issued.)

(b) The applicable airworthiness requirements may be supplemented with the following additional requirements:

- (1) Special conditions: The FAA shall review all novel and unusual design features for development of special conditions.
- (2) Technical requirements necessary in the interest of safety: These include requirements to preclude a potential unsafe condition finding for the product under 14 CFR 21.21(b)(2). These may be generated as a result of adverse service history of this product, or other products of a similar nature or design. This includes, but is not limited to, actions taken by EASA to correct unsafe conditions.

2.1.3.2 EASA Type Certification Basis.

(a) EASA shall develop its type certification basis using the applicable airworthiness codes in effect on the date application was made to the FAA for its type certificate. The applicable airworthiness requirements may be supplemented with the following additional requirements:

(1) Special conditions: For the development of special conditions, EASA shall review:

- (i) All novel or unusual design features,
- (ii) The intended use of the product,
- (iii) Its service history, and
- (iv) the experience from other similar products in service or products having similar design features, having shown that unsafe conditions may develop.

(b) Applicants must also comply with the applicable noise, fuel venting, and exhaust emission standards, as defined in EASA Part 21, that are in effect on the date of application for type certification to EASA.

(c) Applicants for U.S. type certificate must also comply with the applicable fuel venting and exhaust emission standards of 14 CFR Part 34 and the noise standards of 14 CFR Part 36 in effect on the date of application to the FAA for type certification.

2.1.4 FAA and EASA Validation Process.

(a) After receipt of an application, the FAA or EASA shall conduct certification activities under the “Type Validation Principles” (See Appendix C). These principles recognize that the VA has sovereign authority over the certification process and compliance findings within its jurisdiction. The principles do not diminish the VA’s responsibilities or future right to type design information; they define how the VA’s rights shall be routinely exercised. In particular, the VA must have ready access to information necessary to carry out its continued airworthiness responsibilities. If there are overwhelming reasons to go outside these defined principles, such reasons shall be technically explained by the VA in every instance.

(b) When the CA, VA and the TC applicant agree to use a joint certification/validation process per Article 3.2.6 of Annex 1 of the Agreement, they shall:

- (1) Document their agreement, including resource commitments.
- (2) Establish a delegation and work sharing program between the CA and VA via a working arrangement (See Section VII) to cover both TC and post-TC activities.

(c) The TC applicant is responsible for communicating with and obtaining the agreement of all suppliers including those under the jurisdiction of the VA.

(d) To implement this validation process, the FAA and EASA shall use Appendix C of these Implementation Procedures as their internal procedures.

2.1.5 Issuance of the Type Certificate.

2.1.5.1 Issuance of U.S. Type Certificate. The FAA

2.1.5.2 Issuance of a European Type Certificate. EASA shall issue a

shall issue a TC for an EU product when:

- (a) The applicant has demonstrated compliance to the U.S. type certification basis, and
- (b) EASA has issued a statement of compliance to the U.S. type certification basis, and
- (c) EASA has issued an EASA TC for the product.

TC (or where applicable a Restricted Type Certificate (RTC)) for a U.S. product when:

- (a) The applicant has demonstrated and declared compliance to the European type certification basis, and
- (b) FAA has issued a statement of compliance to the European type certification basis, and
- (c) FAA has issued an FAA TC for the product.

2.1.6 Design Approval Procedures for Type Certificates that Have Received an EASA Restricted Type Certificate (RTC). For EU aircraft which have been or shall be granted an EASA RTC, the FAA may agree to validate such aircraft designs on a case-by-case basis. In these cases, the FAA and EASA agree to follow the validation procedures in paragraph 2.1 for TCs.

2.2 Design Approval Procedures for Supplemental Type Certificates (STCs).

2.2.1 Scope of STC Application Acceptance.

2.2.1.1 The FAA may accept applications for STCs for:

(a) All STCs (Basic and Non-Basic) issued after 28 September 2003 when the original STC application is made to EASA:

- (1) On U.S. State of Design products,
- (2) On products for which EASA acts on behalf of the State of Design, and
- (3) On third country aircraft

2.2.1.2 EASA may accept applications for STCs for:

(a) All STCs (Basic and Non-Basic) when the original STC application is made to the FAA:

- (1) On products for which EASA acts on behalf of the State of Design,
- (2) On U.S. State of Design products, and
- (3) On third country aircraft which have been type certificated by both

which have been type certificated by both the FAA and EASA.

(b) All STCs (Basic and Non-Basic), issued before 28 September 2003, in accordance with the scope defined in Appendix E, from applicants in France, Germany, Italy, Netherlands, Sweden and the United Kingdom.

EASA and the FAA.

(b) STCs covering more than one TC when:

(1) The STC meets the requirements of paragraph 2.2.1.2(a),

(2) No more than one set of certification specifications is referenced by the STC (e.g., CS-23, CS-27, CS-25), and

Note: For FAA STCs that cover more than one set of airworthiness regulation, multiple applications, one for each certification specification, can be made to EASA.

(3) The FAA confirms that a compliance demonstration has been conducted on each product listed on the STC.

2.2.2 Application Package for a U.S. STC.

(a) As provided above in paragraph 2.2.1, U.S. STCs may be issued under the provisions of 14 CFR 21.117 and §21.29 for approval of EASA-approved major changes to the type design of an aircraft, engine, or propeller if:

(1) The FAA has

2.2.3 Application Package for an EASA STC.

(a) EASA STCs may be issued for approval of FAA-approved major design changes to a type design of an aircraft, aircraft engine, or propeller if:

(1) EASA has certificated/validated the product, and

certificated/validated the product, and

(2) EASA is acting on behalf of the State of Design for the design change, and

(3) EASA has issued an STC.

(b) A European Union applicant for a U.S. STC should send the application to EASA and request that the application and required information be forwarded to the New York Aircraft Certification Office (ACO). (See Appendix A.)

(c) EASA should ensure that each application contains the following information:

(1) A detailed description of the change, together with the make and model of the product;

(2) The classification as Basic or Non Basic STC, as explained in Appendix C, paragraph 6;

Note: The application should identify the criteria in Appendix C, paragraph 6 that led to the classification.

(3) A copy of the EASA STC and EASA certification basis;

(4) A copy of all EASA certification review items (CRIs) raised for the EASA STC project, including those

(2) The FAA is the authority of the State of Design for the design change, and

(3) The FAA or FAA Organization Designation Authorization (ODA) has issued an STC.

(b) In cases where a critical part has been approved under FAA PMA (see paragraph 2.8.2) without a corresponding FAA STC, EASA will also issue an STC.

(c) A U.S. applicant for an EASA STC should send the application to the FAA and request that the application and required information be forwarded to EASA, as listed in Appendix A.

(d) This STC application shall be made in accordance with EASA Part 21.113(a), and include the information to fulfill Part 21.113(b) regarding a link to the TC holder. FAA should ensure that each application contains the following information:

(1) A detailed description of the change, together with the make and model of the product;

(2) The classification as Basic or Non Basic STC, as explained in Appendix C, paragraph 6;

Note: The application should identify the criteria in Appendix C, paragraph 6 that led to the classification.

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|--|---|
| <p>identifying special conditions, deviations, equivalent level of safety findings, or acceptable means of compliance.</p> | <p>(3) A copy of the FAA STC and certification basis;</p> |
| <p>(5) The applicant's requested date for FAA issuance of the STC;</p> | <p>(4) A copy of all FAA Issue Papers (IPs) raised for the FAA STC project, including those identifying special conditions, deviations, equivalent level of safety findings, or acceptable means of compliance.</p> |
| <p>(6) An assessment of FAA significant standards differences for which compliance will need to be demonstrated;</p> | <p>(5) The applicant's requested date for EASA issuance of the STC;</p> |
| <p>(7) Compliance checklist for the EASA STC, including affected noise and emissions standards, if applicable;</p> | <p>(6) An assessment of EASA significant standards differences for which compliance will need to be demonstrated;</p> |
| <p>(8) Airplane/rotorcraft flight manual supplement</p> | <p>(7) Compliance checklist for the FAA STC, including affected noise and emissions standards, if applicable;</p> |
| <p>(9) Master Documentation List/Master Drawing List;</p> | <p>(8) Airplane/rotorcraft flight manual;</p> |
| <p>(10) Manufacturing and Installation Instruction Drawings;</p> | <p>(9) Master Documentation List/Master Drawing List;</p> |
| <p>(11) Weight and Balance data, and;</p> | <p>(10) Manufacturing and Installation Instruction Drawings;</p> |
| <p>(12) Instructions for continued airworthiness, including maintenance/repair manual supplements,</p> | <p>(11) Weight and Balance data, and;</p> |
| <p>(d) In addition, the applicant should provide available information on U.S. market potential, including specific customers and delivery schedule.</p> | <p>(12) Instructions for continued airworthiness , including maintenance/repair manual supplements,</p> |

(e) If the application is incomplete, the FAA shall notify EASA within 10 working days and return the application in 30 days if the necessary information is not provided.

(f) The FAA may accept applications for STC validation, in which case some of the information specified in paragraphs 2.2.2(c) may not be available at the time of application. EASA should provide the justification with the application.

(e) In addition, the applicant should provide available information on EU market potential, including specific customers and delivery schedule.

(f) In cases where the STC applicant has not entered into an arrangement with the TC holder, the FAA shall review and confirm the applicant's justification that an arrangement is not necessary. The applicant's justification and the FAA concurrence statement shall be provided to EASA.

(g) If the application is incomplete, EASA shall notify the FAA within 10 working days and return the application in 30 days if the necessary information is not provided.

(h) EASA may accept applications for STC validation, in which case some of the information specified in paragraphs 2.2.3(d) may not be available at the time of application. The FAA should provide the justification with the application.

2.2.4 Issuance of Basic STCs

For Basic STCs, the VA will verify the classification through review of the data provided in the application package described in 2.2.2(c) and 2.2.3(d). If the VA concurs with the Basic classification, the VA will issue the VA STC following receipt of a CA statement of compliance to the VA certification basis, and following issuance of the CA STC.

(a) If the VA does not concur with the Basic classification, it will notify the CA of the reasons for its non-concurrence.

2.2.5 Validation of Non-Basic STCs. For Non-Basic STCs, the VA will review the application data package and will conduct its subsequent certification activities in accordance with the Type Validation Principles as provided in Appendix C.

(a) The validation process for Non-Basic STC programs will in most cases be greatly simplified when compared to new type certification projects. The extent of the different validation process elements described in Appendix C to be applied will

be determined by the VA by considering the STC complexity. The VA may declare no technical involvement and issue its STC based solely on the certification statement provided by the CA to the VA certification basis.

(b) In establishing the VA certification basis for a Non-Basic STC, the VA will follow the guidance in 2.2.6.

2.2.6 Establishing the FAA or EASA STC Certification Basis.

2.2.6.1 Establishing the FAA STC Certification Basis.

(a) The FAA shall develop the STC certification basis, including the environmental requirements, in accordance with FAA Order 8110.4, *Type Certification*, and 14 CFR 21.115 in a manner that is consistent with the criteria that is used to establish the certification basis for a domestic STC of similar design and service history. Notwithstanding the requirements of 14 CFR 21.101(e), the date of application is the date application is made to EASA, or where applicable under prior Bilateral Aviation Safety Agreements to an AA, for the STC.

(b) In the case of an STC involving an acoustical change, compliance must be shown with the applicable noise requirements of 14 CFR Part 36 in effect on the date of application to the FAA for the STC. In the case of an emissions change, compliance must be shown with the applicable fuel venting and exhaust emissions requirements of 14 CFR Part 34.

2.2.6.2 Establishing the EASA STC Certification Basis.

(a) The EASA shall develop the STC certification basis in accordance with EASA *Internal Working Procedures Supplemental Type Certification (STCP)* and EASA Part 21A.101 in a manner that is consistent with the criteria that is used to establish the certification basis for a domestic STC of similar design and service history. Notwithstanding the requirements of EASA Part 21.A.101(e), the date of application is the date application is made to FAA for the STC.

(b) Applicants must also comply with the applicable noise, fuel venting, and exhaust emissions standards as defined in EASA Part 21, that are in effect on the date of application for STC to the EASA.

2.2.7 Issuance of the Non-Basic STC.

2.2.7.1 The FAA shall issue a Non-Basic STC when it has completed its validation, EASA has made a compliance statement to FAA's certification basis, and EASA has issued its STC.

2.2.7.2 EASA shall issue a Non-Basic STC when it has completed its validation, the applicant has demonstrated and declared compliance to the European type certification basis, the FAA has made a compliance statement to EASA's certification basis, and the FAA or FAA ODA has issued its STC.

2.3 Procedures for Approved Manuals, including Flight Manuals.

(a) Initial Approval: Approved Manuals (see definitions 1.6) including initial STC supplements must be submitted to the VA for review. Following VA notification of completion of its review, the CA shall sign the Approved Manual(s) on behalf of the VA.

(b) Revisions: See 3.2.11

2.4 Evaluation of Operational and Maintenance Aspects.

2.4.1 FAA Evaluation of Aircraft Operational and Maintenance Aspects.

(a) The FAA has established Aircraft Evaluation Groups (AEG), located at the product accountable Directorates. The AEGs are responsible for the operational and maintenance evaluations necessary to support introduction of validated products into the FAA system.

(b) The AEG shall conduct Boards, as appropriate, to review the following items on EU products prior to their entry into U.S. operations: operational configuration; pilot training and licensing requirements; and the formulation and approval of a Master Minimum Equipment List (MMEL). The AEG shall be invited to participate in the familiarization

2.4.2 EASA Evaluation of Aircraft Operational and Maintenance Aspects.

(a) EASA does not yet have implementing rules relating to operational aspects, so Operational Evaluations are carried out using interim procedures under an Operations Evaluation Board (OEB). The EASA Certification Directorate is responsible for managing this process on behalf of EU Member States.

(b) The OEB shall review the following items at the request of the manufacturer: operational suitability; pilot training and licensing requirements; and the review and recommendation for approval by the AAs of a Master Minimum Equipment List (MMEL). The OEB chairman shall identify items for inclusion in Operation Review Item papers as appropriate to the applicant. The formation of a OEB is

meeting by the FAA Project Manager, and shall identify items for inclusion in issue papers as appropriate to the type design. Compliance with AEG requirements is not required at the time of the issuance of the U.S. TC/STC, but to avoid operational suitability problems, applicants are encouraged to complete AEG requirements early in the project.

not required, but it is encouraged to run the process in tandem with the type certification process to avoid operational suitability issues and provide a European standard for the areas covered.

2.4.3 The FAA and EASA shall accept/approve a Maintenance Review Board (MRB) Report when developed jointly. Changes to the MRB report should also be addressed jointly. In the absence of a joint MRB, the FAA AEG and EASA may choose to conduct their own MRB or equivalent process. If methods other than a MRB are used to develop scheduled maintenance interval/tasking requirements, those methods shall be described to the VA. The VA will evaluate the proposed method and decide its involvement.

2.4.4. Acceptance or approval, as appropriate, of instructions for continued airworthiness (ICA), including the Airworthiness Limitations Section (ALS) of the ICA, will be managed by the VA office responsible for the product in accordance with TVP/PTVP (see Appendix C).

2.5 Design Approval Procedures for Technical Standard Order (TSO) and European Technical Standard Order (ETSO) Design Approval.

2.5.1 Design Approval Procedures for FAA Letters of TSO Design Approval.

(a) Application.

(1) A European Union applicant for an FAA Letter of TSO Design Approval shall make application through EASA with a request that the application and required information be forwarded to the FAA Boston Aircraft Certification Office, at the address indicated in Appendix A.

2.5.2 Design Approval Procedures for ETSO Authorisation (except Auxiliary Power Units (APUs)).

(a) Application.

(1) A U.S. applicant for an ETSO Authorisation is required to make an application through the responsible FAA ACO with a request that the application and required information be forwarded to EASA, at the address indicated in Appendix A.

(2) EASA should check to see that the applicant has used the FAA technical policy and procedures related to the latest FAA TSO performance standard. EASA shall not forward applications that have not used the latest standards.

(3) EASA must ensure that the application package includes the following:

- (i) All the required data/documentation as specified in the FAA TSO performance standard;
- (ii) If applicable, request to deviate from the FAA TSO standard (including any EASA-approved equivalencies) and substantiation data for FAA approval, or identification of the deviation and evidence of FAA approval (if request was made in advance of application);
- (iii) Statement of conformance to the FAA TSO performance standard from the applicant;
- (iv) Certifying statement from EASA indicating that the appliance has been examined, tested, and found to meet the applicable FAA TSO or other standards found by the FAA to provide an

Note: A U.S. holder of FAA TSOA under FAA TSO-C148 fasteners, FAA TSO-C149 bearings, and FAA TSO-C150 seals should not apply for ETSO Authorisation. EASA considers such parts to be standard parts.

(2) FAA should check to see that the applicant has used the EASA technical policy and procedures related to the latest ETSO performance standard. FAA shall not forward applications that have not used the latest standards.

(3) FAA must ensure that the application package includes the following:

- (i) EASA Application Form 34, Declaration of Design and Performance (DDP) and all the required data/documentation as specified in the ETSO performance standard.
- (ii) If applicable, request to deviate from the ETSO standard (including any FAA-approved equivalencies) and substantiation data for EASA approval, or identification of the deviation and evidence of EASA approval (if request was made in advance of application);
- (iii) Statement of

equivalent level of safety;
and

(v) Copy of the EASA ETSO Authorisation or equivalent European approval issued by an EU Member State prior to September 2003.

Note: The FAA can issue letters of TSO design approval to multiple TSOs even when EASA has not issued ETSOAs to the reciprocal ETSOs. As long as EASA has issued at least one ETSOA for the appliance, the statements from EASA per 2.5.1(a)(3)(iv) above can be accepted for the FAA to issue the applicable TSO approvals.

(4) If the application is incomplete, the FAA shall notify EASA within 10 working days and return the application in 30 days if the necessary information is not provided.

(5) In a case where there is no ETSO equivalent to the requested FAA TSO for the appliance, but EASA has approved the appliance via a TC, an STC, or ETSOA, the FAA may issue an FAA TSO Letter of TSO Design Approval provided that EASA certifies that:

conformance to the ETSO performance standard from the applicant, using the EASA Form 35;

(iv) Certifying statement from FAA indicating that the appliance has been examined, tested, and found to meet the applicable EASA ETSO or other standards found by EASA to provide an equivalent level of safety; and

(v) Copy of the FAA TSO Authorisation.

Note: EASA can issue ETSOAs to multiple ETSOs even when the FAA has not issued TSOAs to the reciprocal TSOs. As long as the FAA has issued at least one TSOA for the appliance, the statements from the FAA per 2.5.2(a)(3)(iv) above can be accepted for EASA to issue the applicable ETSO approvals.

(4) If the application is incomplete, EASA shall notify the FAA within 10 working days and return the application in 30 days if the necessary information is not provided.

(5) In a case where there is no FAA TSO equivalent to the requested EASA ETSO for the

- (i) the appliance meets the FAA TSO standard, and
- (ii) EASA shall exercise continued operational safety functions for those appliances that do not have an ETSO. EASA shall maintain an internal process to monitor these appliances in the same manner as they would monitor appliances that have an ETSO standard.

Note: The EASA TC/STC/design approval must clearly identify what was approved per the FAA TSO and what, if any, installation approval is included. For FAA approval of the installation, an FAA TC or STC validation is required per paragraph 2.2.2.

(b) Issuance of an FAA Letter of TSO Design Approval.

- (1) In accordance with 14 CFR 21.617, the FAA may issue a Letter of TSO Design Approval after:
 - (i) Receipt of all the items identified in paragraphs 2.5.1(a)(3) and (4), above;
 - (ii) Conducting a review of the data/documentation specified in the FAA TSO

appliance, but the FAA has approved the appliance via a TC, an STC, or TSOA, EASA may issue an ETSO Authorisation provided that FAA certifies that:

- (i) the appliance meets the ETSO standard, and
- (ii) FAA shall exercise continued operational safety functions for those appliances that do not have an FAA TSO.

(b) Issuance of EASA ETSO Authorisation.

- (1) In accordance with Part 21A.606, EASA may issue an ETSO Authorisation after:
 - (i) Receipt of all the items identified in paragraphs 2.5.2(a)(3) and (4), above;
 - (ii) Conducting a review of the data/documentation specified in the ETSO performance standard;
 - (iii) Receipt of other specific technical data, as jointly agreed between the FAA and EASA needed to demonstrate compliance with an ETSO standard; and
 - (iv) Approval of all proposed deviations.
- (2) EASA may issue the ETSO

performance standard;

(iii) Receipt and review of other specific technical data, as jointly agreed between EASA and the FAA, needed to demonstrate compliance with an FAA TSO standard; and

(iv) Approval of all proposed deviations to the FAA TSO Standard in accordance with 14 CFR 21.609.

(2) The FAA may issue a Letter of TSO Design Approval without further investigation when the FAA TSO and ETSO are identical, unless there are deviations to, or it is a first-of-a-kind TSO (paragraphs iii and iv above). The applicant must still submit all the items identified in paragraphs 2.5.1(a)(3) and (4), above.

Note: The FAA has determined that while most ETSOs are technically similar, they are not identical to FAA TSOs due to different data or marking requirements.

Authorisation without further investigation when the ETSO and FAA TSO are identical, unless there are deviations, or it is a first-of-a-kind ETSO (paragraphs iii and iv above). The applicant must still submit all the items identified in paragraphs 2.5.2(a)(3) and (4), above.

Note: EASA has determined that while most FAA TSOs are technically similar, they are not identical to EASA ETSOs due to different data or marking requirements.

2.5.3 Design Approval Procedures for ETSO Authorisation for APUs.

(a) Application.

(1) An application for EASA ETSOA for an APU from an applicant in the United States may be submitted for an APU with an FAA TSOA, or for an APU where application for TSOA has been made to the FAA.

Note: An ETSOA is not required for an APU for which no previous individual European approval has been granted if the APU was grandfathered under EC 748/2012 as a part of the configuration of one aircraft type design or STC and the APU is now proposed for installation on another aircraft type. Such installation can be approved under an EASA STC.

(2) FAA should ensure that the applicant's technical data package contains the following information:

(i) Data defined in EASA Part 21A.15 and 21A.605;

(ii) The FAA TSOA, if available; and

(iii) A description of how the applicant proposes to address any APU standards differences.

(3) Certification basis. EASA will determine the APU's certification basis based on the European certification specifications applicable on the date of application to the FAA for the FAA's TSOA.

(4) Validation of Standards Differences.

(i) Where standards differences exist between the EASA certification basis and the FAA TSOA approval basis of the APU model, the applicant may use relevant service experience in support of an equivalent level of safety finding to specific standard differences where applicable.

(ii) EASA shall determine if there is a need for any additional involvement with compliance findings for the standards differences and notify the FAA.

(b) Issuance of ETSOA. EASA shall issue an ETSO Authorisation for an APU after:

(1) the applicant has demonstrated compliance to the EASA certification basis,

(2) the FAA has issued a TSOA, and

(3) the FAA has provided a certifying statement that the APU complies with the applicable certification specifications.

2.6 Acceptance of Non-TSO Functions.

(a) FAA and EASA shall accept, without further validation, data related to non-TSO functions that are integrated into an existing or proposed TSO appliance when:

(1) the non-TSO functions included in the appliance do not interfere with the appliance's functionality and/or ability to comply with the TSO standard; and

(2) the data provided with the appliance relative to non-TSO functions is valid data as processed by the FAA's or EASA's system in accordance with the applicable VA policy.

(b) If an applicant applies to have such functions included in the Letter of TSO Design Approval/ETSO Authorisation, the functions must be covered under the applicant's quality system.

(c) The acceptance of this additional data does not constitute installation approval.

2.7 Acceptance of Equipment Standards and Aeronautical Databases.

(a) Appendix B defines equivalent RTCA and EUROCAE standards that may be used for issuing approvals under these implementation Procedures.

(b) FAA and EASA have adopted comparable procedures for the acceptance of aeronautical databases used on aircraft. (FAA guidance is found in Advisory

Circular (AC) 20-153, *Acceptance of Data Processes and Associated Navigation Databases*.) FAA shall accept an EASA Letter of Acceptance as evidence that an EU data supplier complies with RTCA/DO-200A (or European Organization for Civil Aviation Electronics (EUROCAE) ED-76). EASA shall accept an FAA Letter of Acceptance as evidence that a U.S. data supplier complies with EUROCAE ED-76 (or RTCA/DO-200A). This acceptance does not constitute operational approval.

2.8 Procedures for Acceptance of Design Approvals for Parts.

2.8.1 Procedures for FAA Acceptance of EASA Parts Approvals.

(a) Direct Acceptance by FAA of Parts Design Approvals. Not applicable.

Note: This provision is not applicable because the European Union system has no stand-alone parts design approval. Replacement or modification parts are approved through design changes or STCs. Thus, the FAA shall directly accept the design of modification and/or replacement parts when FAA has accepted or validated the design change or STC for those parts, as appropriate, without issuing a separate FAA parts design approval.

2.8.2 Procedures for EASA Acceptance of FAA PMA.

(a) Direct Acceptance by EASA of PMA Design Approvals. EASA shall directly accept PMA approvals, without further showing, for modification and/or replacement parts for installation on products certified or validated by EASA in the following cases:

- (1) The PMA part is not a "critical component." (See definition, paragraph 1.6(i); or
- (2) The PMA part conforms to design data obtained under a licensing agreement from the TC or STC holder according to 14 CFR 21.303; or
- (3) The PMA holder is the holder of an EASA STC which incorporates the PMA part.

(b) FAA PMA Parts Requiring Explicit Design Authorization by EASA.

- (1) Applicability. An explicit EASA design authorization is required prior to using PMA parts as modification and/or replacement parts when:

(i) the PMA part has not been produced under a licensing agreement from the TC or STC Holder according to 14 CFR 21.303; and

(ii) the PMA part is a “critical component.” (See definition, paragraph 1.6(i)).

(2) Application. The applicant shall make an application for an STC in writing through the FAA ACO to EASA (see paragraph 2.2.3). This application should contain the following information:

(i) The FAA PMA approval, with all supplements, and in particular the description of the means by which the FAA PMA approval was granted;

(ii) Overview of the technical data transmitted to the FAA for the purpose of approving the critical PMA part;

(iii) Description of the means by which the PMA part user would be made aware of any changes on the PMA part by the PMA holder with a potential impact on safety; and

(iv) Description of the means by which the PMA

part user would be made aware of any changes by the TC holder with a potential safety impact on the PMA part.

(3) Technical validation by EASA. EASA shall issue an STC to validate the FAA PMA in accordance with the Design Approval Procedures for Non-Basic EASA STCs (see paragraph 2.2).

2.9 Environmental Testing and Approval Procedures.

2.9.1 FAA Procedures.

- (a) The FAA is authorized to make findings of compliance to 14 CFR Parts 34 and 36.
- (b) Upon request to EASA, and after mutual agreement, the FAA may authorize environmental findings of compliance to be performed by EASA on behalf of the FAA. For tests conducted prior to a TC or STC application being made to the FAA, FAA may accept EASA-approved noise and emissions certification compliance data, provided the data meets the applicable FAA regulations, guidance, and policy material.

Note: None of the bilateral airworthiness agreements listed in Attachment 1 of the Agreement have within their scope the approval of compliance with environmental standards.

- (c) In the absence of any authorization to EASA, the FAA process for environmental testing and approvals, includes the following:

- (1) Environmental (noise, fuel venting and exhaust emissions) certification compliance demonstration plans must be submitted to the FAA for review, comment, and subsequent approval prior to undertaking certification testing.
- (2) Information and data must

2.9.2 EASA Procedures.

- (a) EASA is required to make findings of compliance to the environmental essential requirements, found in Article 6 of the Basic Regulation, the requirements of Part 21A.18, and in accordance with the procedures as defined in CS34 and CS36
- (b) Upon request to FAA, and after mutual agreement, EASA may delegate environmental findings of compliance to FAA to be performed on behalf of EASA. For tests conducted prior to a TC or STC application being made to EASA, EASA may accept FAA-approved noise and emissions certification compliance data, provided the data meets the applicable EU regulations, and EASA guidance and policy material.
- (c) In the absence of any delegation to FAA, or acceptable previously undertaken environmental testing, the EASA process for environmental testing and approvals, includes the following:
 - (1) Environmental (noise, fuel venting and exhaust emissions) certification compliance demonstration plans must be submitted to EASA for review, comment, and subsequent approval prior to undertaking certification testing.
 - (2) Information and data must be supplied to the EASA in

be supplied to the FAA in order to conduct an evaluation of the measurement and analysis methods and practices, and data correction procedures of the applicant for aircraft noise certification under 14 CFR Part 36, Subpart B and/or Subpart H.

(3) Aircraft noise compliance demonstration test plans and engine exhaust emissions test plans to be used for demonstrating U.S. environmental certification compliance must be submitted to the FAA for review and comment, and subsequent approval not less than 90 days prior to commencing testing.

(4) Proposed equivalent procedures to be used by the applicant during testing, data processing, data reduction, and data analysis must be specifically identified to the FAA and approved in advance by the FAA as part of items (1), (2) and (3) above.

(5) Compliance demonstration tests must be witnessed by FAA personnel or authorized FAA designees. Prior to the start of testing it is necessary to assure the conformity of the test article (aircraft or engine configuration) to that identified in the FAA approved compliance demonstration test plans.

(6) Compliance demonstration reports must be submitted to the

order to conduct an evaluation of the measurement and analysis methods and practices, and data correction procedures of the applicant for aircraft noise certification under CS36.

(3) Aircraft noise compliance demonstration test plans and engine exhaust emissions test plans to be used for demonstrating compliance must be submitted to the EASA for review and comment, and subsequent approval not less than 90 days prior to commencing testing.

(4) Proposed equivalent procedures to be used by the applicant during testing, data processing, data reduction, and data analysis must be specifically identified to the EASA and approved in advance by EASA as part of items (1), (2) and (3) above.

(5) Compliance demonstration tests must be witnessed by EASA personnel or EASA approved delegates. Prior to the start of testing it is necessary to assure the conformity of the test article (aircraft or engine configuration) to that identified in the EASA approved compliance demonstration test plans.

(6) Compliance demonstration reports must be submitted to the EASA for review and/or comment and subsequent

FAA for review and/or comment and subsequent approval prior to type certification approval.

approval prior to type certification approval.

(d) The following actions must be performed by the FAA and are not subject to the delegation process.

(1) In addition to compliance with 14 CFR Part 36, information and data must be supplied to the FAA in order to make a finding in accordance with Title 49 U.S.C. Section 44715 (previously known as the Noise Control Act of 1972). The FAA, before issuing an original type certificate for an aircraft of any category, must assess the extent of noise abatement technology incorporated into the type design and determine whether additional noise reduction is achievable. This examination must be initiated as soon as possible after the application for type certification in each original type certification project and reflect noise reduction potentials that become evident during the design and certification process.

(2) The National Environmental Policy Act of 1969 (NEPA) requires the FAA to publicly assess and analyze potential environmental consequences of its actions. In order to grant an aircraft type certificate (new, amended, or supplemental) in the absence of noise regulations that are applicable and appropriate to a

particular aircraft type, the FAA must prepare an Environmental Assessment, including a decision on whether to prepare a finding of no significant impact or an environmental impact statement. Information and data must be supplied to the FAA in order to prepare the Environmental Assessment.

2.10 Recordkeeping Requirements.

2.10.1 U.S. design approval holders are required to hold relevant design information and to make it available to the FAA upon request in accordance with FAA regulations and policy (14 CFR 21.49 for TC holders; 14 CFR 21.49 and FAA Order 8110.4, *Type Certification*, for STC holders; 14 CFR 21.613 for TSO Authorization holders; and 14 CFR 21.303 and FAA Order 8110.42, *Parts Manufacturer Approval Procedures*, for PMA holders.) This information is available from the design approval holders via the FAA upon request from EASA. (Note: U.S. approval holders using electronic formats must comply with FAA Order 8000.79, *Use of Electronic Technology and Storage of Data*.)

2.10.2 In accordance with EU law and EASA Part 21, approved organizations are required to hold relevant design information and make it available upon request. This information is available from the design approval holders via EASA upon request from the FAA. In cases where an EU approval holder chooses to submit data in electronic format, a written procedure on the use of electronic technology and storage of data shall be established with EASA.

2.10.3 When an applicant in the U.S. or EU complies with FAA's Order 8000.79 or EASA's electronic data policy, as applicable, the applicant is considered to have an arrangement acceptable to both the FAA and EASA for the submission and storage of electronic data so long as the data is in a format that is compatible with the VA's information system.

SECTION III **POST DESIGN APPROVAL PROCEDURES**

3.0 General. This Section consists of procedures for continued airworthiness, design changes including FAA approved or accepted alterations, and approval of design data used in support of repairs.

3.1 Continued Airworthiness.

3.1.1 General.

(a) FAA in carrying out State of Design functions applicable to the United States under Annex 8 of the Chicago Convention, and EASA in carrying out the State of Design functions applicable to European Union Member States, are responsible for resolving in-service safety issues related to design. The FAA and the AA or where applicable, EASA, is responsible for resolving in-service safety issues related to production under their respective regulatory jurisdictions.

(b) FAA or EASA shall provide applicable information which it has found to be necessary for mandatory modifications, required limitations and/or inspections to the importing authority to ensure continued operational safety of the product, part, or appliance. The importing authority shall review and normally accept the corrective actions taken by the authority representing the State of Design, or where applicable the State of Manufacture, in the issuance of its own mandatory corrective actions.

(c) At the request of the importing authority, the exporting authority, carrying out State of Design functions, shall assist the importing authority in determining what importing authority action is considered necessary for the continued operational safety of the product, part, or appliance.

(d) The FAA and EASA shall strive to resolve differences, but the decision as to the final action to be taken with respect to the products, parts, or appliances under the jurisdiction of the importing country lies solely with the importing authority following consultation with the exporting authority as described in paragraph 3.1.4(c).

(e) The FAA and EASA recognize the importance of the routine sharing of Continuing Airworthiness information as a means to assist in the identification and resolution of emerging airworthiness issues.

(f) With regard to post-type validation activities, the FAA or EASA as VA has the right to seek information, including access to design data, to understand and agree on findings of compliance made by the CA to all VA requirements and on any mandatory corrective action or any significant on-going continued

airworthiness topic and its means of resolution, necessary to ensure acceptable continued airworthiness of aircraft registered in the jurisdiction of the VA and engines, propellers, and appliances installed on any such aircraft.

(g) The FAA and EASA shall establish structured processes, including specific focal points, for regular feedback and communication of continued airworthiness issues on products certified by either FAA or EASA and validated by the other. The extent of these processes shall be commensurate with the continued airworthiness activities associated with the product.

3.1.2 Sharing of In-Service Reports and Information on Malfunctions, Failures, or Defects.

(a) The FAA and EASA agree to perform the following functions for the products, appliances, and parts exported to the other's jurisdiction:

- (1) Collecting information on in-service safety events, malfunction/failure/defects, and accident/incidents.
- (2) Evaluating in-service safety events and malfunction/failure/defect reports and accident/incidents.
- (3) Investigating and resolving all suspected unsafe conditions.
- (4) Advising the importing authority of all unsafe conditions and the necessary corrective actions (see paragraph 3.1.4 below).
- (5) Upon request, when concerning matters of safety for products registered in the importing country, providing the importing authority with the following:
 - (i) Reports of malfunctions, failures, or defects and accidents/incidents;
 - (ii) Status of investigations into malfunctions, failures, or defects and accidents/incidents;
 - (iii) Copies of conclusions reached in its investigation into malfunctions or defects; and
 - (iv) Copies of conclusions reached in investigations into accidents/incidents in accordance with ICAO Annex 13.

- (6) Making a reasonable effort to resolve issues raised by the importing authority concerning matters of safety for products registered in the importing country.
- (b) The FAA and EASA agree to perform the following functions:
- (1) Advising each other of malfunctions or defects and accidents/incidents which are believed to be potentially unsafe conditions occurring on the products and appliances which are imported from the country of the exporting authority.
 - (2) Supporting each other in the investigations of unsafe conditions and their occurrences on the imported aircraft and in the resolution of continued airworthiness issues directly related to an accident or incident in the jurisdiction of either the FAA or EASA.
 - (3) Advising each other, if as a result of investigations made by the importing authority into malfunctions or defects and accidents/incidents and consultations with the other, it has determined that it shall make corrective actions mandatory.
- (c) Copies of U.S. SDR/Malfunction or Defect reports are available from the FAA Delegation and Airworthiness Programs Branch, AIR-140. Copies of U.S. SDR and accident/incident reports are also available on the FAA's internet web site at www.faa.gov (<http://av-info.faa.gov/isdr>). Copies of EU malfunction or defect reports are available from the EASA Certification Directorate, Products Department.

3.1.3 Sharing Information on Any Airworthiness Limitation Changes. The FAA and EASA shall share information on any changes that affect operating limitations, life limits, or any other airworthiness limitation, including manual changes and changes to certification maintenance requirements. These changes should be promptly sent to the importing authority in order to ensure the continued operational safety of the aircraft. The FAA and EASA shall treat a reduced life limit as an unsafe condition and shall accordingly issue an Airworthiness Directive (AD) in accordance with their internal procedures. The FAA and EASA may also issue an AD for other limitation changes if they are considered an unsafe condition.

3.1.4 Unsafe Condition and Mandatory Continuing Airworthiness Information.

- (a) The FAA (under 14 CFR Part 39) and EASA (under EASA Part 21), issue mandatory continuing airworthiness information. The FAA and EASA agree to perform the following functions listed below for the products, appliances, parts and design changes for which it is the CA.

(1) Issuing mandatory continuing airworthiness information whenever the responsible authority determines that an unsafe condition exists in a type certificated product or appliance, and is likely to exist or develop on a type certificated product or appliance of the same design. This may include a product that has an engine, propeller, part, or appliance installed on it and the installation causes the unsafe condition. The contents of such mandatory continuing airworthiness information should include, but are not limited to, the following:

- (i) Make, model, and serial numbers of affected aircraft, aircraft engines, propellers, appliances, and parts;
- (ii) Description of the unsafe condition, reasons for the mandatory action, and its impact on the overall aircraft and continued operation;
- (iii) Description of the cause of the unsafe condition (e.g., stress corrosion, fatigue, design problem, quality control, unapproved part);
- (iv) The means by which the unsafe condition was detected and, if resulting from in-service experience, the number of occurrences; and
- (v) Corrective actions and corresponding compliance times, with a list of the relevant manufacturer's service information including reference number, revision number and date.

(2) Ensuring that the following information is provided to the VA as part of the mandatory continuing airworthiness information or directly from the approval holder:

- (i) The number of aircraft worldwide needing corrective action;
- (ii) A statement on the availability of parts; and
- (iii) An estimate of the total number of labor hours and the cost of parts required for the corrective actions. (This total should include all applicable supplier labor hours and costs.)

(3) Issuing a revised or superseding mandatory continuing airworthiness information whenever the responsible authority finds any previously issued mandatory continuing airworthiness information was incomplete or inadequate to fully correct the unsafe condition.

- (4) Notifying the importing authority of the unsafe condition and the necessary corrective actions by electronically submitting a copy of the mandatory continuing airworthiness information at the time of publication to the electronic mail addresses referenced in Appendix A. Additionally, the FAA or EASA shall arrange for copies of all relevant service bulletins referenced in the mandatory action, including any supplier service bulletins, as well as other supporting documentation, to be forwarded to the appropriate focal point in the product-responsible FAA Directorate and EASA Certification Manager, as applicable.
 - (5) Providing advance electronic notice of anticipated emergency ADs (including security-sensitive ADs) or other significant safety events that affect continued airworthiness.
 - (6) Ensuring, in the case of emergency airworthiness action, special handling so that the importing authority is notified prior to adoption of the mandatory continuing airworthiness information.
 - (7) Advising and assisting the importing authority in defining the appropriate actions for the importing authority to take in the issuance of its own mandatory continuing airworthiness information.
 - (8) Maintaining a web-based database of mandatory continuing airworthiness information that can be accessed by the State of Registry.
- (b) The FAA and EASA agree to perform the functions listed in paragraph 3.1.4(a) when an unsafe condition is related to production or maintenance of the products, appliances, and parts covered under the Agreement. For certain cases of unsafe condition related to production or maintenance, EASA may issue an Emergency Conformity Information (ECI) instead of an AD. Both AD and ECI are EASA-issued Mandatory Continuing Airworthiness Information under ICAO Annex 8.
- (c) The FAA and EASA recognize that they may disagree as to the finding of an unsafe condition and propose to issue a unilateral AD. In that case, it is expected that the VA shall consult in a timely manner as follows prior to issuing any AD that substantially deviates or is additional to those issued by the CA.
- (1) The responsible office of the VA shall consult with its counterpart organization.
 - (2) If the CA agrees that the proposed mandatory action is needed, then it shall issue an AD.

(3) If the CA disagrees with the proposed mandatory action, it shall notify the VA with its written justification via email. The VA shall review the justification and determine whether or not to continue its AD action.

(4) If the decision is to continue with a unilateral AD, the VA shall hold a teleconference with appropriate management of both Technical Agents (FAA Directorate Manager and EASA Head of Products) to advise that unilateral AD action shall commence.

(d) The FAA and AA shall similarly consult if they disagree as to the finding of an unsafe condition related to production or maintenance.

(e) In the situation where the FAA or EASA works with a manufacturer to conduct a monitored retrofit/recall of the global fleet of aircraft or parts, the FAA or EASA shall notify each other of this activity.

(f) The FAA and EASA agree to respond quickly to the issuance of a mandatory continuing airworthiness action by the exporting authority in making its own determination of the need for issuing its own similar mandatory continuing airworthiness action that addresses the unsafe condition on the affected product certified, approved or otherwise accepted by the importing authority.

(g) EASA shall immediately notify the FAA of any known immediate safety actions taken by an AA under the provisions of Article 14(1) of Regulation (EC) 216/2008 on products, appliances, parts and design changes for which the FAA carries out the functions of State of Design.

3.1.5 Alternative Means of Compliance (AMOC) to a Mandatory Continuing Airworthiness Action. If an AMOC of general applicability to an existing AD is issued by the CA for its own State of Design products, appliances, or parts, the CA shall electronically notify the VA of the decision.

3.1.5.1 The FAA must approve all AMOCs in accordance with 14 CFR 39.19. When issuing its approval, the FAA will give full consideration to the EASA approved AMOC provided the following conditions apply:

(a) The related EASA AD has been adopted by the FAA, or the FAA issued an AD with no

3.1.5.2 EASA will accept an FAA approved AMOC provided the following conditions apply:

(a) The related FAA AD has been adopted by EASA, or EASA issued an AD with no deviations from the FAA AD; and

(b) The AMOC approval holder is the design approval holder of the product,

deviations from the EASA AD; and

(b) The AMOC approval holder is the design approval holder of the product, or of the design change, or of the appliance or part, as applicable, to which that AD applies.

or of the design change, or of the appliance or part, as applicable, to which that AD applies.

3.1.5.3 At the AMOC holder's request, EASA shall initiate FAA approval of such an AMOC by providing sufficient information to the FAA for its use in making a determination as to the acceptability of the AMOC. Based on this information, the FAA shall write an AMOC approval letter for U.S. operations.

3.1.5.4 FAA AMOCs for U.S. State of Design products of general applicability are automatically considered to be EASA-approved.

3.1.6 Non-mandatory Safety Information. The FAA and EASA shall consult prior to the VA issuing any non-mandatory safety information, such as a Safety Alert Information Bulletin or Service Information Bulletin that substantially deviates or is additional to those issued by the CA.

3.2 Design Changes.

3.2.1 Procedures for Changes to a Type Certificate by the Type Certificate Holder and Changes to a Supplemental Type Certificate by the Supplemental Type Certificate Holder.

(a) Changes to a type design that require a new TC or STC should be done in accordance with paragraphs 2.1 and 2.2, respectively.

(b) All other changes to a type design by the TC holder or STC holder (on their own STC) should be done in accordance with this section and the Post-Type Validation Principles (Appendix C of this document). These types of changes include: amended type certificates (derivative models), amendments to STCs; and those changes necessary for customer unique design features, product improvements and any other design changes, including revisions to approved manuals, made by the TC or STC holder, for whatever reason.

- (c) Irrespective of paragraph 3.2.1(b), any change in type design affecting noise, fuel venting, or exhaust emissions will be evaluated according to the procedures of paragraph 3.2.10.
- (d) Any change to an Approved Manual not associated with a Level 1 Major change shall be evaluated using the procedures of paragraph 3.2.11.
- (e) Where design changes are proposed, they shall be defined relative to the VA's current definition of the approved type design.
- (f) Design changes shall be classified in accordance with Post-Type Validation Principles (see Appendix C).

3.2.2 Level 1 Major Change Application

- (a) An application for a Level 1 Major change to a TC or STC will be submitted to the VA, though the CA.
- (b) The VA should receive the following information to support its technical familiarization with the change:
 - (1) The affected VA TC or STC, as applicable, to which the change applies.
 - (2) A detailed description of the change.
 - (3) The reason(s) for classification as Level 1 Major, by reference to the criteria in the Post-Type Validation Principles (see Appendix C, paragraph 8.6).
 - (4) A copy of the CA certification basis for the design change..
 - (5) A copy of all new or revised IP/CRIs raised for the CA project.
 - (6) The applicant's requested date for VA design change approval.
 - (7) A compliance checklist for the design change, including an assessment of VA standards differences for which compliance will need to be demonstrated, and affected noise and emissions standards.
 - (8) Approved Manual revisions associated with the change.
 - (9) Master Documentation List/Master Drawing List associated with the change.

- (10) Weight and Balance data associated with the change.
- (11) Instructions for continued airworthiness associated with the change.
- (c) The VA may accept applications for Level 1 Major change validation, in which case some of the information specified in paragraph 3.2.2(b) may not be available. The CA should provide the justification with the application.

3.2.3 Establishment of the FAA or EASA Type Certification Basis. For changes to a type design, the FAA shall develop its certification basis in accordance with 14 CFR 21.101, and EASA shall develop its certification basis in accordance with EASA Part 21.101, both using the date of application to the CA as the reference date to be used in establishing the VA certification basis. Notwithstanding the VA's right to establish its own certification basis, the VA may accept, and should consider exceptions established by the CA according to 14 CFR 21.101 or EASA Part 21.101, as applicable.

3.2.3.1 In the case of an acoustical change, for FAA approval compliance must be shown with the applicable noise requirements of 14 CFR Part 36 in effect on the date of application to the FAA for approval of the design change. In the case of an emissions change, for FAA approval compliance must be shown with the applicable fuel venting and exhaust emissions requirements of 14 CFR Part 34.

3.2.3.2 In the case of a change having an effect on noise, fuel venting, or exhaust emissions, for EASA approval applicants must also comply with the applicable noise, fuel venting, and exhaust emissions standards as defined in EASA Part 21, that are in effect on the date of application for design change approval to EASA.

3.2.4 FAA and EASA Validation Process for Level 1 Major Design Changes

The FAA or EASA shall conduct certification activities under the Post-Type Validation Principles (see Appendix C).

3.2.5 Issuance of the FAA or EASA Level 1 Major Design Change Approval

3.2.5.1 The FAA shall issue its Level 1 Major design change approval when it has completed its review, EASA has issued a compliance statement to the FAA's

3.2.5.2 EASA shall issue its Level 1 Major design change approval when it has completed its review, the applicant has provided a compliance declaration, the FAA has issued a compliance

certification basis, and EASA has issued its design change approval.

statement to the EASA certification basis, and the FAA has issued its design change approval

3.2.6 Procedures for Major Changes to a Type Design by Persons Other Than the TC/STC Holder. For major changes to a type design by persons other than the TC/STC holder, the FAA and EASA agree to follow the design approval procedures in paragraph 2.2 for STCs.

3.2.7 Procedures for Minor Changes to a Type Design by Persons Other Than the TC/STC Holder.

3.2.7.1 For the FAA, approval of minor design change data submitted by a person other than the TC/STC holder is accomplished using PMA procedures or through alterations. EASA's acceptance of PMA is addressed in paragraph 2.8 and the acceptance of alterations is addressed in paragraph 3.2.8 below.

3.2.7.2 For EASA, all minor changes to the type design must be approved in accordance with EASA Part 21. Minor changes can be approved by a DOA or EASA in the EU system. These minor changes are considered approved by FAA, except when retained by FAA per paragraph 3.2.10.1(a), following the approval under EASA's system on behalf of the State of Design for the design change.

3.2.8 Procedures for Acceptance of Design Data in Support of FAA Alterations.

3.2.8.1 FAA Acceptance of EASA Alteration Data.

Not applicable.

Note: This provision is not applicable because the European system has no equivalent to FAA's alterations. Alterations are approved through design changes or EASA STCs.

3.2.8.2 EASA Acceptance of FAA Alteration Data.

(a) Except for alterations on critical components, FAA-approved or accepted alterations per 14 CFR Part 43 installed on a used aircraft exported from the U.S., regardless of the State of Design of the aircraft, are considered approved by EASA at the time of import to the European Union. EASA shall accept such FAA alteration data when substantiated via an appropriately executed FAA Form 8110-3, FAA Form 8100-9, FAA Form 337 or logbook entry.

(b) Alterations on critical components must be EASA-approved via STC in accordance with paragraph 2.2.

3.2.9 Procedures for Changes to Appliances by the Design Approval Holder.

3.2.9.1 Procedures for Changes to an FAA Letter of TSO Design Approval.

(a) Major changes to a TSO design require re-substantiation of the new design and issuance of a Letter of TSO Design Approval, and shall be done in accordance with the procedures in paragraph 2.5.1.

(b) FAA shall rely upon an EASA determination of compliance for minor changes that remain within the scope of the Letter of TSO Design Approval. FAA shall not require notification of these minor changes.

3.2.9.2 Procedures for Changes to an EASA ETSO Authorisation.

(a) Major changes to an ETSO design require re-substantiation of the new design and issuance of a new ETSO Authorisation. The procedures in paragraph 2.5.2 apply in this case.

(b) EASA shall rely upon an FAA determination of compliance for minor changes that remain within the scope of the ETSO Authorisation. EASA shall not require notification of these minor changes.

3.2.9.3 Procedures for Changes to an EASA ETSO Authorisation for APUs.

(a) Major changes to an ETSO APU design require re-substantiation of the new design and issuance of a new ETSO Authorisation for APUs. The procedures in paragraph 2.5.3 apply in this case.

(b) Minor changes, including bracket changes approved under 14 CFR 21.605(b), shall be accepted by EASA without further review. The FAA shall review the design change against the EASA certification basis.

(c) The FAA shall notify EASA about any new APU model designation identified through bracket changes following its FAA approval. For all other minor design changes not resulting in a new APU model designation, the FAA shall arrange for the changes to be recorded in the definition of the EASA approved APU configuration. A listing of these changes shall be transmitted to the EASA Certification Manager for Propulsion on a yearly basis and shall also be made available at any time, upon request from EASA.

3.2.10 Procedures for Changes to a Type Design (TC/STC) Affecting Noise and Emissions.

3.2.10.1 FAA Noise and Emissions Requirements for Changes to Type Design.

(a) Any determination of an acoustical or emissions change, regardless if the type design change is

3.2.10.2 EASA Noise and Emissions Requirements for Changes to Type Design. All design changes having an appreciable effect on noise, fuel venting, or exhaust emission are classified as Major under Appendix C paragraph 9.3, and regardless of

major or minor, requires further demonstration of compliance. The FAA will follow the procedures in paragraph 2.9.1 when making findings of acoustical or emissions change under 14 CFR 21.93(b) & (c).

whether the change is classified as Level 1 or Level 2, shall be subject to the EASA procedures for environmental testing and approval described under paragraph 2.9.2.

(b) A technical substantiation must be provided to the FAA to determine whether or not the changes may be considered an acoustic or emissions changes for type design changes that:

(1) have any effect on the performance characteristics of the aircraft, (e.g. drag, weight, lift, power, RPM, etc.);

(2) add or modify any externally radiating noise sources, (e.g. APU operation, fuselage distensions, wing extensions, rigging changes, hollow cavities in landing gear or airframe, etc.); and/or

(3) modify the engine(s), nacelle(s), propeller (s), or rotor system.

(c) Technical substantiation is not required for type design changes that have no possibility of affecting the noise or emissions certification levels, e.g. type design changes involving a component internal to the fuselage.

3.2.11 Procedures for Approval of Changes to Approved Manuals. The FAA and EASA may authorize the review and approval of changes to approved manuals, or approved parts of manuals, on behalf of each other as follows, in order to facilitate their timely approval.

(a) The CA shall forward the application and provide a statement of compliance to the VA requirements to the VA of changes to the existing limitations,

performance, weight and balance, or procedures of Approved Manuals that are applicable to the VA type design. The VA shall review the changes, notify the CA of completion of its review, and may authorize signature on its behalf to the CA. The VA and the CA may agree that notification is not required on certain changes on an individual certificate holder basis.

(b) The CA shall review editorial, administrative, and other minor changes on behalf of the VA, and shall ensure that those changes meet the VA's requirements. Such revisions shall be submitted promptly for the VA's record, but the VA may authorize signature on its behalf to the CA without prior notification.

3.3 Approval of Design Data Used in Support of Repairs.

3.3.1 Design data used in support of repairs must be approved or accepted, as appropriate, by the exporting authority (State of Design). The following describes the process that shall be followed by FAA and EASA so that repair design data can be approved or accepted. Repair designs requiring the production of new parts that would constitute a design change, are not eligible for acceptance under these Implementation Procedures. However, it is permissible to fabricate parts that will be used in the repair of the individual aircraft, engine, propeller, or appliance.

3.3.2 FAA and EASA Repair Design Data Approval Process.

(a) FAA shall approve design data in support of major repairs in accordance with FAA Order 8110.4 *Type Certification*; FAA Order 8110.37, *Designated Engineering Representative Guidance Handbook*; FAA Order 8100.15, *Organization Designation Authorization Procedures*; and FAA Order 8900.1, *Flight Standards Information Management System*. Minor repairs are made in accordance with "acceptable" data, in accordance with 14 CFR Part 43.

(b) EASA shall approve design data in support of repairs in accordance with EASA Part 21 Subpart M-Repairs and EASA's procedure *Type Certificate Change and Repair Approval*. A design approval shall be issued for all repair design data.

3.3.2.1 FAA Acceptance of EASA Repair Design Data.

(a) General.

(1) Except as provided in (b) below, the FAA shall accept EASA approved design data produced under EASA Part 21 Subpart M used in support of

3.3.2.2 EASA Acceptance of FAA Repair Design Data.

(a) Non-Critical Components.

(1) EASA shall accept data used in support of major repairs regardless of the State of Design of the product, part or appliance, if:

major or minor repairs regardless of the State of Design of the product, part, or appliance, if:

(i) the FAA has certificated/validated the product or appliance, and

(ii) EASA is acting on behalf of the State of Design for the repair design data, and

(iii) EASA repair design data approval is substantiated via a repair design approval letter or a repair design approval issued under a DOA. For repair data approved prior to September 28, 2003, in France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom, FAA shall accept either the AA approval document, or equivalent, or a repair design approval issued under a former national DOA as evidence of the approval, and

(iv) the repair is not in an area that is subject to an FAA AD, unless the AD allows for acceptance of an EASA repair design approval.

(2) In these circumstances, repair design data are considered to be approved by

(i) EASA has certificated/validated the product or appliance, and

(ii) the FAA is the authority of the State of Design for the repair design data, and

(iii) the FAA repair design data approval is substantiated via an FAA letter, FAA Form 8110-3, FAA Form 8100-9, FAA Form 337 or a signed cover page of a repair specification.

(2) EASA shall also accept data used in support of minor repairs when:

(i) EASA has certificated/validated the product or appliance, and

(ii) the FAA is the authority of the State of Design for the repair design data, and

(iii) the repair design data has been provided by the U.S. TC, STC, PMA, or TSOA holder, or

(iv) for minor repairs from other than the U.S. TC, STC, PMA, or TSOA holder, the determination that data are acceptable (under 14 CFR Part 43) has been made by a U.S. maintenance organization under FAA's authorized system,

the FAA following its approval under EASA's system. This process does not require application to the FAA or compliance findings to the FAA certification basis.

(b) For major repair design data for critical components by other than the TC/STC holder:

(1) The applicant shall submit an application to EASA with a request that the application and required information be forwarded to the applicable FAA Directorate Standards Staff as listed in Appendix A.

(2) In cases where the applicant has entered into an arrangement with the TC/STC holder, EASA shall confirm this to the FAA. FAA shall issue a letter approving the major repair based on EASA's repair data approval without further technical review.

(3) In cases where the applicant has not entered into an arrangement with the TC/STC holder, EASA shall ensure that each application contains the following:

- (i) drawings, specifications and other data necessary to define the configuration and design features of the repair;
- (ii) a compliance

Note: An EASA approved maintenance organization must use EASA Part 21 for the approval of repair data for use on an EU-registered aircraft, unless the data for a minor repair has been previously used to repair an N-registered aircraft.

(3) In these circumstances, repair design data are considered to be EASA-approved following its approval or acceptance under FAA's system. This process does not require application to EASA or compliance findings to the EASA certification basis.

(b) Critical Components

(1) EASA shall accept any critical component repair design data from a TC/STC holder, regardless of the State of Design of the product, if.

- (i) EASA has certificated/validated the product, and
- (ii) the FAA is the authority of the State of Design for the repair design data.
- (iii) In these circumstances, repair design data are considered to be EASA-approved following its approval under FAA's system. This process does not require application to EASA or compliance findings

summary that identifies the applicable airworthiness standards, methods of compliance, and compliance results;

(iii) substantiation for continued applicability of existing ICAs or supplemental ICAs, if any; and

(iv) an EASA statement that the approved repair brings the product or part back to an airworthy condition.

(4) FAA shall then issue a letter approving the major repair design following issuance of EASA's repair design approval.

to the EASA certification basis.

(2) EASA shall approve critical component repair design data by other than the TC/STC holder, regardless of the State of Design of the product, as follows:

(i) The applicant shall submit an application to the FAA with a request that the application and required information be forwarded to EASA, as listed in Appendix A. The application for approval of the repair design data shall be made to EASA in the manner prescribed on EASA's website.

(ii) In cases where the applicant has entered into an arrangement with the TC/STC holder, the FAA shall confirm this to EASA. EASA shall issue a major repair design approval based on the FAA's letter without further technical review.

(iii) In cases where the applicant has not entered into an arrangement with the TC/STC holder, the FAA shall ensure that each application contains the following:

(a) drawings, specifications and other data necessary to define the configuration

and design features of the repair;

(b) a compliance summary that identifies the applicable airworthiness standards, methods of compliance, and compliance results;

(c) substantiation for continued applicability of existing ICAs or supplemental ICAs, if any;

(d) the applicant's justification that an arrangement is not necessary;

(e) a statement of FAA concurrence to the applicant's justification; and

(f) an FAA statement that the approved repair brings the product or part back to an airworthy condition.

(iv) EASA shall then issue a major repair design approval based on FAA's statement.

3.4 Design Support for Any Production Approval Based on Licensing Agreement.

3.4.1 Product Production Approval Based on a Licensing Agreement. When the FAA or EASA/AA grants a production approval for a product (aircraft, engine or

propeller) in their respective territory based on design data obtained through a licensing agreement with a type design holder in the other's jurisdiction (i.e., licensing the rights to use the design data), FAA or EASA/AA shall have procedures to ensure that all changes to be introduced into the design by the licensee are approved by the FAA or EASA, as applicable. The production approval holder shall be required to submit these design changes to the type design holder who shall obtain approval from its CA using normal procedures. These production approvals based on a licensing agreement shall be addressed on a case-by-case basis via a working arrangement under Section VII of these Implementation Procedures.

3.4.2 Parts Production Approval Based on a Licensing Agreement or Arrangement. When the FAA or EASA/AA grants a production approval/Production Organization Approval for parts production based on design data obtained through a licensing agreement or arrangement with a design approval holder in the other's jurisdiction, the FAA or EASA/AA shall have procedures to ensure that all changes to be introduced into the design by the licensee are approved by the design approval holder. The production approval holder shall submit these design changes to the design approval holder who shall obtain approval from its CA using normal procedures.

SECTION IV ADMINISTRATION OF DESIGN APPROVALS

4.0 General. This section addresses procedures for the transfer of TCs, and STCs, their surrender, revocation or suspension. It also describes procedures for the change of ownership, surrender or withdrawal of TSO/ETSO and PMA approvals.

4.1 Transfer of Type Certificates/Supplemental Type Certificates.

4.1.1 FAA and EASA shall administer the transfer of TCs/STCs only where an applicant agrees to assume responsibility for both an FAA and EASA TC/STC and the affected operating fleet.

4.1.2 Transfer of U.S. Type Certificate/Supplemental Type Certificate to a Person in the European Union.

(a) Upon transfer or an agreed-upon date, EASA in carrying out State of Design functions applicable to an EUMember State shall comply with the requirements of Annex 8 to the Chicago Convention, *Airworthiness of Aircraft*, for affected products. For TCs, EASA shall notify the FAA and all ICAO contracting states of the change in State of Design responsibility, upon completion of the procedures described below.

(b) The FAA shall transfer to EASA the ICAO State of Design responsibilities only for (1) TCs for products within the scope of these Implementation Procedures and (2) STCs within the scope of these Implementation Procedures. EASA shall not assume ICAO State of Design functions for models or design changes that have not been found to meet the EASA certification requirements.

4.1.3 Transfer of EASA Type Certificate/Supplemental Type Certificate to a Person in the United States.

(a) Upon transfer or an agreed-upon date, FAA shall carry out the requirements of Annex 8 to the Chicago Convention, *Airworthiness of Aircraft*, for affected aircraft. For TCs, FAA shall notify EASA and all ICAO contracting states of the change in State of Design responsibility, upon completion of the procedures described below.

(b) EASA shall transfer to the FAA the ICAO State of Design responsibilities only for (1) TCs for products within the scope of these Implementation Procedures, and (2) STCs within the scope of these Implementation Procedures. The FAA shall not assume ICAO State of Design functions for models or design changes that have not been found to meet the FAA certification requirements.

(c) Upon notification of a potential transfer by a European Union TC/STC holder to a person in the United States, EASA shall notify the FAA office responsible for the new holder and

(c) Upon notification of a potential transfer by a U.S. TC/STC holder to a person in the European Union, the FAA office that issued the TC/STC shall notify EASA and establish procedures to transfer the ICAO State of Design functions for the TC/STC to EASA. Each transfer shall be accomplished on a case-by-case basis through a working arrangement which identifies the FAA and EASA's responsibilities in the transfer process and provides for the transfer of appropriate type design data and service difficulty information.

(d) If a corresponding EASA TC/STC exists for the product or design change, the transfer of ICAO State of Design functions shall apply to all models listed on that EASA TC/STC.

(1) For any FAA-certificated model not listed on EASA's TC, the FAA shall, if requested, provide support to establish acceptance of the additional model as showing compliance to the applicable EASA certification requirements. This support would include the FAA's statement of compliance that the model meets the EASA certification requirements. Upon acceptance, EASA shall place the additional model on the EASA TC.

(2) For STCs, if the EASA original STC does not include

establish procedures to transfer the ICAO State of Design functions for the TC/STC to the FAA. Each transfer shall be accomplished on a case-by-case basis through a working arrangement which identifies EASA and FAA's responsibilities in the transfer process and provides for the transfer of appropriate type design data and service difficulty information.

(d) If a corresponding U.S. TC/STC exists for the product or design change, the transfer of ICAO State of Design functions shall apply to all models listed on the U.S. TC/STC.

(1) For any EASA-certificated model not previously listed on the FAA TC, EASA shall, if requested, provide support to establish acceptance of the additional model as showing compliance to the applicable FAA certification requirements. This support would include EASA's statement of compliance that the model meets U.S. certification requirements. Upon acceptance, the FAA shall place the additional model on the FAA TC.

(2) For STCs, if the FAA's original STC does not include a specific EASA-certificated model of the product listed on the EASA STC, the applicability of the new FAA STC shall only include those TCs that have been validated by the FAA.

(e) If the new TC/STC holder applies for an FAA TC/STC, EASA shall provide support to establish acceptance of the

a specific FAA-certificated model of the product listed on the FAA STC, the applicability of the new EASA STC shall only include those TCs that have been validated by EASA.

(e) If the new TC/STC holder applies for an EASA TC/STC, the FAA shall provide support to establish acceptance of the FAA TC/STC as showing compliance to the applicable certification requirements of EASA. This would include the FAA's statement of compliance that the product or design change meets the EASA certification requirements. Upon acceptance, EASA shall issue the EASA TC/STC.

(f) The transfer of the ICAO State of Design functions for the TC/STC to EASA shall be considered complete when EASA confirms that all necessary data have been transferred to the new holder, and the new holder is able to perform the responsibilities required of a TC/STC holder.

(g) The FAA shall reissue a TC in the name of the new holder after the EASA TC issuance.

(h) For STC transfers, the FAA shall only reissue an STC in the name of the new holder after EASA's STC issuance and when the STC is within the scope of these Implementation Procedures.

(i) If the new holder does not have an EASA TC/STC or if its

EASA TC/STC as showing compliance to the applicable certification requirements of the FAA. This would include EASA's statement of compliance that the product or design change meets the FAA's certification requirements. Upon acceptance, the FAA shall issue the FAA TC/STC.

(f) The transfer of the ICAO State of Design functions for the TC/STC to the FAA shall be considered complete when the FAA confirms that all necessary data have been transferred to the new holder, and the new holder is able to perform the responsibilities required of a TC/STC holder.

(g) EASA shall reissue a TC in the name of the transferee after the FAA TC issuance.

(h) For STC transfers, EASA shall only reissue an STC in the name of the new holder after FAA's STC issuance and when the STC is within the scope of these Implementation Procedures.

(i) If the new holder does not have an FAA TC/STC or if its FAA TC/STC covers only some models covered by the EASA TC/STC and the new holder does not apply for an additional approval, EASA shall not transfer ICAO State of Design functions for those applicable models to the FAA. EASA shall continue to carry out ICAO State of Design functions for those models only as long as an undue burden is not placed on EASA.

EASA TC/STC covers only some models covered by the FAA TC/STC and the new holder does not apply for an additional approval, the FAA shall not transfer ICAO State of Design functions for those applicable models to EASA. The FAA shall continue to carry out ICAO State of Design functions for those models only as long as an undue burden is not placed on the FAA.

4.1.4 Transfer of Validated TCs/STCs Within the European Union or the United States.

4.1.4.1 Transfer of a U.S. Type Certificate/Supplemental Type Certificate Within the European Union.

(a) EASA shall notify the FAA when an EASA TC/STC validated by the FAA shall be transferred from one person in the European Union to another person within the European Union.

(b) The FAA shall transfer its TC only when the FAA has been satisfied that the applicant is able to undertake the responsibilities in 14 CFR Part 21 and that the EASA TC has been transferred to the same applicant. The FAA may request EASA to provide technical assistance in making the determination that the new European TC holder will be able to execute the responsibilities of 14 CFR Part 21.

(c) The FAA shall reissue a TC/STC in the name of the new

4.1.4.2 Transfer of an EASA Type Certificate/Supplemental Type Certificate Within the United States.

(a) FAA shall notify EASA of a transfer of an EASA TC/STC held by a person in the United States to another person in the United States.

(b) EASA shall transfer the TC only when EASA has been satisfied that the applicant is able to undertake the responsibilities in EASA Part 21 and that the FAA TC has been transferred to the same applicant. EASA may request the FAA to provide technical assistance in making the determination that the new U.S. TC holder will be able execute the responsibilities of EASA Part 21.

(c) EASA shall reissue a TC/STC in the name of the new holder after the FAA TC/STC issuance.

holder after the EASA TC/STC issuance.

- 4.2 Surrender of a Type Certificate or Supplemental Type Certificate. If a certificate holder elects to surrender a TC or STC issued by either the FAA or EASA, the FAA or EASA shall immediately notify the other in writing. This notification must include information on the known products operating in the U.S. or European Union, as applicable. The FAA or EASA shall continue to exercise their continued airworthiness responsibilities for the surrendered certificate when it is the CA and inform the other of any unsafe condition identified until such time as the FAA or EASA, acting on behalf of a Member State as the State of Design:

- (a) Reissues the TC or STC to a new holder when that new holder demonstrates competence to fulfill the necessary obligations; or
- (b) Revokes the TC or STC. Prior to termination, the CA shall notify the importing authority of the pending revocation.

4.3 Revocation or Suspension of a Type Certificate or Supplemental Type Certificate.

4.3.1 EASA Revocation or Suspension.

(a) In the event EASA revokes or suspends a TC or STC for which EASA, acting on behalf of a Member State as the State of Design, it should immediately inform the FAA product-responsible Directorate. This notification must include information on the known products on the U.S. registry. The FAA, upon notification, shall conduct an investigation to determine if action is required in the United States. If the FAA concurs with EASA's certificate action, the FAA shall initiate revocation of the U.S. TC or STC.

(b) The FAA may decide to continue to support its State of Registry responsibilities if there is sufficient information for it to support the continued operational safety of

4.3.2 FAA Revocation or Suspension.

(a) In the event the FAA revokes a TC or STC for which the FAA is carrying out the State of Design functions, the FAA product-responsible Directorate should immediately inform EASA. This notification must include information on the known products on the registries of EU Member States. EASA, upon notification, shall conduct an investigation to determine if action is required in the European Union. If EASA concurs with the FAA's certificate action, EASA shall initiate revocation of the EASA TC or STC.

(b) EASA may decide to continue to support EU Member States with their State of Registry responsibilities if there is sufficient information for it to support the continued operational safety of the fleet registered and

the fleet registered and operating in the United States at the time of revocation or suspension. In this case, EASA should obtain and provide type design data as requested to the FAA. Final certificate action is at the sole discretion of the FAA. The FAA may revoke the U.S. TC or STC if the continued airworthiness responsibilities would cause an undue burden for the FAA.

operating in the European Union at the time of revocation or suspension. In this case, the FAA should obtain and provide type design data as requested to EASA. Final certificate action is at the sole discretion of EASA.

4.4 Surrender or Withdrawal of a TSO or ETSO Design Approval.

(a) Surrenders. If an FAA TSO Authorization holder, FAA Letter of Design Approval holder, or a ETSO Authorization holder elects to surrender the TSO/ETSO approval issued by the FAA or EASA, the FAA or EASA shall immediately notify the other in writing of the action. The exporting authority shall inform the importing authority when an unsafe condition has been identified, until such time as the TSO/ETSO approval is formally withdrawn by the exporting authority.

(b) Withdrawals. If a TSO/ETSO approval is withdrawn, the FAA or EASA, shall immediately notify the other in writing of the action. The exporting authority shall inform the importing authority when an unsafe condition has been identified. In the event of withdrawal of a TSO/ETSO approval for noncompliance, the exporting authority shall investigate all noncompliances for corrective action and shall notify the importing authority of the corrective action. The exporting authority still has responsibility for the continued airworthiness of those TSO/ETSO appliances manufactured under its authority.

4.5 Change of Ownership of ETSO Authorisation. Upon notification of a change of ownership of the U.S. holder of an ETSO Authorisation, EASA shall be notified by the FAA office that issued the FAA's TSOA. Upon notification, EASA shall agree to the change of ownership, and re-issue the ETSO Authorisation in the name of the new holder.

4.6 Surrender, Withdrawal or Termination of an FAA PMA for a Critical Component.

4.6.1 Surrender.

(a) If an FAA PMA holder for a critical component for which EASA has issued a corresponding STC elects to surrender the PMA and STC approval issued by the

FAA and EASA, the FAA shall immediately notify EASA in writing. The FAA shall inform EASA when an unsafe condition has been identified, until such time as FAA formally terminates the PMA approval.

(b) Upon notification by the FAA, EASA shall revoke its STC according to paragraph 4.3.2.

4.6.2 Withdrawal or Termination.

(a) If an FAA PMA for a critical component for which EASA has issued a corresponding STC is withdrawn or terminated, the FAA shall immediately notify EASA in writing of the action. In the event of withdrawal or termination for noncompliance, the FAA shall investigate all noncompliances for corrective action and shall notify EASA of the corrective action. The FAA shall inform EASA when an unsafe condition has been identified. The FAA still has responsibility for the continued airworthiness of those critical PMA parts manufactured under its authority.

(b) Upon notification by the FAA, EASA shall revoke its STC according to paragraph 4.3.2.

SECTION V **EXPORT AIRWORTHINESS CERTIFICATION**

5.0 General. This section addresses procedures and certifying statements for export for the implementation of paragraph 3.5 in Annex 1 of the Agreement.

5.0.1 For the FAA, an FAA Form 8130-4, *Export Certificate of Airworthiness*, is issued for completed aircraft. An FAA Form 8130-3, *Authorized Release Certificate (Airworthiness Approval Tag)*, is issued for aircraft engines, and propellers, TSO appliances and replacement and modification parts which are manufactured under an FAA production approval.

5.0.2 For the EU, an Export Certificate of Airworthiness, EASA Form 27, is issued by the AAs or by EASA for completed aircraft. AAs may use their own Export Certificate of Airworthiness forms, per the aviation authorities and dates listed in the Appendix to Annex 1 of the Agreement, for aircraft exported to the United States. An Authorised Release Certificate, EASA Form 1, is issued for aircraft engines, propellers, parts and appliances. A JAA Form One is still valid for aircraft engines, propellers, parts and appliances per the aviation authorities and dates listed in the Appendix to Annex 1 of the Agreement.

5.1 Certifying Statements for Export.

5.1.1 New Aircraft Exported to the U.S.

(a) The FAA, when importing new aircraft from the European Union, as identified in the Appendix to Annex 1 of the Agreement, shall accept an EASA Export Certificate of Airworthiness (or an AA Export Certificate of Airworthiness, per the aviation authorities and dates listed in the Appendix to Annex 1 of the Agreement) on those new aircraft only when the AA or EASA certifies that each aircraft:

- (1) Conforms to a type design approved by the FAA, as specified in the FAA's type certificate data sheet, and any additional STCs approved by the FAA;

5.1.2 New Aircraft Exported to the EU.

(a) An AA, when importing new U.S. aircraft, shall accept an FAA Export Certificate of Airworthiness on those new aircraft only when the FAA certifies that each aircraft:

- (1) Conforms to a type design approved or grandfathered by EASA, as specified in the applicable type certificate data sheet, and any additional STCs approved by EASA;
- (2) Is in a condition for safe operation, including compliance with applicable EASA ADs, as notified;
- (3) Is marked in accordance

- (2) Is in a condition for safe operation, including compliance with applicable FAA ADs, as notified;
 - (3) Is marked in accordance with paragraph 5.5.1(a) of these Implementation Procedures; and
 - (4) Meets all additional requirements prescribed by the FAA, as notified.
- (b) Each new aircraft exported to the United States with AA or EASA airworthiness approval shall have an EASA Export Certificate of Airworthiness (or an AA Export Certificate of, per the aviation authorities and dates listed in the Appendix to Annex 1 of the Agreement). The Export Certificate of Airworthiness should contain the following statement: *"The [insert aircraft MODEL] covered by this certificate conforms to the type design approved under U.S. Type Certificate Number [INSERT TYPE CERTIFICATE NUMBER and REVISION LEVEL], and is found to be in a condition for safe operation,"* and/or any other "import requirements" text as specified in the U.S. type certificate data sheet.
- with paragraph 5.5.2(a) of these Implementation Procedures; and
- (4) Meets all additional requirements including the provision of information on aircraft noise and emissions levels prescribed by EASA, and language requirements as per EASA Part 21A.175 as notified.
- (b) Each new aircraft exported to the EU with FAA airworthiness approval shall have an FAA Form 8130-4, *Export Certificate of Airworthiness*. Depending on the EASA type certification basis, the FAA Form 8130-4 should contain one of the following statements:
- (1) If an EASA TC exists, the Exceptions block should contain the following statement as additional information: *"The [INSERT AIRCRAFT MODEL] covered by this certificate conforms to the type design approved under EASA Type Certificate Number [INSERT TYPE CERTIFICATE NUMBER and REVISION LEVEL], and is found to be in a condition for safe operation,"* and/or any other "import requirements" text as specified in the EASA type certificate data sheet.
 - (2) For aircraft grandfathered on the basis of an FAA type certification basis but for which EASA has not yet issued an EASA TC, the FAA shall certify that the aircraft model conforms to the FAA TC and is in a

condition for safe operation. The pre-printed certifying statement on the FAA Form 8130-4 is sufficient, and no other additional information in the Exceptions block is necessary.

Note: Grandfathered aircraft means aircraft with a TC grandfathered under Article 2.3 of Commission Regulation EC 748/2012.

5.1.3 New Aircraft Engines and Propellers.

(a) The FAA, when importing new aircraft engines and propellers from the European Union, as identified in the Appendix to Annex 1 of the Agreement, shall accept an AA or EASA's Authorised Release Certificate on those new aircraft engines and propellers only when the AA or EASA certifies that each engine or propeller:

- (1) Conforms to a type design approved by the FAA, as specified in the FAA's type certificate data sheet;
- (2) Is in a condition for safe operation, including compliance with applicable FAA ADs, as notified;
- (3) Has undergone a final operational check;
- (4) Is marked in accordance with paragraph 5.5.1(a) of these Implementation Procedures; and

5.1.4 New Aircraft Engines and Propellers, and Rebuilt Engines.

(a) An AA, when importing new U.S. aircraft engines and propellers and rebuilt engines, shall accept an FAA Authorized Release Certificate on those new aircraft engines, propellers, and rebuilt engines only when the FAA certifies that each engine or propeller:

- (1) Conforms to a type design approved or grandfathered by EASA, as specified in the applicable type certificate data sheet;
- (2) Is in a condition for safe operation, including compliance with applicable EASA ADs, as notified;
- (3) Has undergone a final operational check;
- (4) Is marked in accordance with paragraph 5.5.2(a) of these Implementation Procedures;
- (5) Meets all additional requirements including the

(5) Meets all additional requirements prescribed by the FAA, as notified.

(b) Each new aircraft engine or propeller exported to the United States with AA or EASA airworthiness approval shall have a JAA or EASA Form 1, Authorised Release Certificate. The JAA or EASA Form 1 should contain the following statement: *“The [INSERT AIRCRAFT ENGINE or PROPELLER MODEL] covered by this certificate conforms to the type design approved under U.S. Type Certificate Number [INSERT TYPE CERTIFICATE NUMBER and REVISION LEVEL], is found to be in a condition for safe operation and has undergone a final operational check,”* and/or any other “import requirements” text as specified in the U.S. type certificate data sheet.

provision of information on emissions levels prescribed by EASA, as notified, and;

(6) For a rebuilt engine, that engine has been rebuilt by the engine’s manufacturer.

(b) Each new aircraft engine or propeller or rebuilt engine exported to the European Union with FAA airworthiness approval shall have an *FAA Authorized Release Certificate*. Depending on the EASA type certification basis, the FAA Form 8130-3 should contain one of the following statements:

(1) If an EASA TC exists, the Remarks block should contain the following statement as additional information: *“The [INSERT AIRCRAFT ENGINE or PROPELLER MODEL] covered by this certificate conforms to the type design approved under EASA Type Certificate Number [INSERT TYPE CERTIFICATE NUMBER and REVISION LEVEL], is found to be in a condition for safe operation and has undergone a final operational check,”* and/or any other “import requirements” text as specified in the EASA Type Certificate Data Sheet.

(2) For aircraft engines and propellers grandfathered on the basis of an FAA type certification basis but for which EASA has not yet issued an EASA TC, the FAA shall certify that the engine or propeller model conforms to the

FAA type certificate and is in a condition for safe operation. The pre-printed certifying statement on the FAA Form 8130-3 is sufficient, and no other statement as additional information is necessary.

Note: Grandfathered aircraft engines or propellers means an aircraft engine or propeller with a TC grandfathered under Article 2.3 of Commission Regulation EC 748/2012.

5.1.5 New Appliances That Have Been Granted an FAA Letter of TSO Design Approval.

(a) The FAA when importing new appliances from the European Union, as identified in the Appendix to Annex 1 of the Agreement, that have been granted an FAA Letter of TSO Design Approval, shall accept an AA or EASA's Authorised Release Certificate on those new appliances only when the AA or EASA certifies, by the issuance of the JAA or EASA Form 1, that each appliance:

- (1) Conforms to the design approved by the FAA, as specified in the FAA Letter of TSO Design Approval, including any accepted non-TSO functions (see paragraph 2.6) as applicable;
- (2) Complies with applicable FAA ADs;
- (3) Is marked in accordance

5.1.6 New TSO Appliances.

(a) New TSO Appliances Including APUs That Have Been Granted an ETSOA, JTSO Authorisation, or Other National Approval.

(1) An AA, when importing new U.S. TSO appliances that have been granted an ETSO Authorisation or another EU approval (JTSO Authorisation or other national approval issued before September 28, 2003) shall accept an FAA Authorized Release Certificate on a new appliance only when the FAA certifies, by the issuance of FAA Form 8130-3, that each appliance:

- (i) Conforms to the design approved or grandfathered by EASA, as specified in the EASA ETSO Authorisation or other approval, including any accepted non-ETSO functions (see paragraph 2.6) as applicable;
- (ii) Complies with applicable

- with paragraph 5.5.1(a) of these Implementation Procedures; and
- (4) Meets all additional requirements prescribed by the FAA, as notified.
- (b) Each new appliance exported to the U.S with an EASA Authorised Release Certificate shall have an EASA Form 1 containing a reference to the FAA Letter of TSO Design Approval in the remarks block.
- EASA ADs;
- (iii) Is marked in accordance with paragraph 5.5.2(a); and
- (iv) Meets all additional requirements prescribed by EASA, as notified.
- (2) Each new appliance exported to the EU with FAA Authorized Release Certificate shall have an FAA Form 8130-3 containing a reference to the ETSO/JTSO Authorisation number in the remarks block.
- (b) New TSO Appliances including APU's that have not been granted an ETSOA, JTSO Authorisation, or other National Approval.
- (1) An AA, when importing new U.S. TSO appliances that have not been granted an ETSOA or another EU approval (JTSO Authorisation or other national approval issued before September 28, 2003) shall accept an FAA Authorized Release Certificate on a new appliance only when the FAA certifies, by the issuance of FAA Form 8130-3, that each appliance:
- (i) Conforms to the design approved by the FAA, as specified in the FAA TSO Authorization, including any accepted non-TSO functions (see paragraph 2.6) as applicable;
- (ii) Complies with applicable FAA and EASA ADs;

(iii) Is marked in accordance with paragraph 5.5.2(a); and

(iv) Meets all additional requirements prescribed by EASA, as notified.

(2) Each new appliance exported to the EU with FAA Authorized Release Certificate shall have an FAA Form 8130-3 containing a reference to the FAA TSO Authorization number in the remarks block.

5.1.7 New Modification, Replacement, and Standard Parts.

(a) The FAA, when importing new modification and replacement parts for the products and appliances from the European Union, as identified in the Appendix to Annex 1 of the Agreement, shall accept an AA or EASA Authorised Release Certificate on those new modification and/or replacement parts only when an AA or EASA certifies, by the issuance of the JAA or EASA Form 1 signed on the left side, that each part:

(1) Is eligible for installation in a product or appliance which has been granted an FAA design approval;

(2) Conforms to FAA-approved design data and is safe for installation;

(3) Is marked in accordance with paragraph 5.5.1(a) of

5.1.8 New Modification, Replacement, and Standard Parts.

(a) An AA, when importing new U.S. modification and replacement parts for products and appliances, shall accept an FAA Authorized Release Certificate on those new modification and/or replacement parts only when the FAA certifies, by the issuance of the FAA Form 8130-3 signed on the left side, that each part:

(1) Is eligible for installation in a product or appliance which has been granted an EASA design approval;

(2) Conforms to design data approved by EASA and is safe for installation;

(3) Is marked in accordance with paragraph 5.5.2(a) of these Implementation Procedures; and

(4) Meets all additional requirements prescribed by

these Implementation Procedures; and

(4) Meets all additional requirements prescribed by the FAA, as notified.

(b) The FAA shall accept standard parts exported from the European Union when accompanied with an JAA or EASA Form 1, Authorised Release Certificate signed on the left side, if the standard part is eligible for a Form 1. All other standard parts shall be accepted when accompanied by a manufacturer's Certificate of Conformity verifying the part's compliance to an established U.S. government, or U.S. industry standard or international specification.

EASA, as notified.

(b) Additional documentation requirements for FAA PMA parts:

(1) For a PMA part that shall be installed on a product which has been certified or validated by EASA, one or more of the following statements should be written in the remarks block of the FAA Form 8130-3, as applicable:

(i) For a PMA part which is not a "critical component" (see definition paragraph 1.6(i)), the following statement should be written in the remarks block of the FAA Form 8130-3: *"This PMA part is not a critical component."*

(ii) If the PMA holder is also the holder of the EASA STC design approval which incorporates the PMA part into an EASA certified or validated product, the following statement should be written in the remarks block of the FAA Form 8130-3: *"Produced by the holder of the EASA STC number [INSERT THE FULL REFERENCE OF THE EASA STC INCORPORATING THE PMA]."*

(iii) For a PMA part conforming to design data obtained under a licensing agreement from the TC or

STC holder according to 14 CFR Part 21, the following statement should be written in The remarks block of the FAA Form 8130-3: *“Produced under licensing agreement from the holder of [INSERT TC or STC NUMBER].”*

(c) The AA shall accept standard parts exported from the U.S. when accompanied by an FAA Form 8130-3 signed on the left side, if the standard part is eligible for the FAA Form 8130-3. All other standard parts shall be accepted when accompanied by a manufacturer's Certificate of Conformity verifying the part's compliance to an officially recognized standard, e.g. a U.S. industry, U.S. government or international specification.

5.1.9 Used Aircraft for Which There Has Been a Design Approval Granted by the FAA.

(a) Acceptance of Used Aircraft Exported by an AA when an EU Member State is the State of Design.

(1) The FAA shall accept an AA's Export Certificate of Airworthiness on used aircraft from the European Union, as identified in the Appendix to Annex 1 of the Agreement, for which an EU Member State is the State of Design, for import into the U.S., only if a TC holder exists to support continued airworthiness of such aircraft and when the AA certifies that

5.1.10 Used Aircraft for Which There Has Been a Design Approval Granted by EASA.

(a) Acceptance of Used Aircraft Exported by the FAA when the U.S. is the State of Design.

(1) The AA shall accept the FAA's Export Certificate of Airworthiness on used U.S. aircraft identified for which the United States is the State of Design, for import into the EU, only if a TC holder exists to support continued airworthiness of such aircraft and when the FAA certifies that each used aircraft:

(i) Conforms to the type

each used aircraft:

- (i) Conforms to the type design approved by the FAA, as specified in the FAA's type certificate data sheet, and any additional STCs approved by the FAA, as notified to EASA;
 - (ii) Is in a condition for safe operation, including compliance with all applicable FAA ADs, as notified;
 - (iii) Is marked in accordance with paragraph 5.5.1(a) of these Implementation Procedures;
 - (iv) Is properly maintained using approved procedures and methods (evidenced by logbooks and maintenance records); and
 - (v) Meets all additional requirements prescribed by the FAA, as notified.
- (2) When a used aircraft produced in an EU Member State is to be imported into the U.S. from a third country, the AA of the EU Member State, or EASA when appropriate, shall, upon request, assist the FAA in obtaining information regarding the configuration of the aircraft at the time it left the manufacturer. EASA shall also

design approved by EASA, as specified in the applicable type certificate data sheet, and any additional STCs approved by EASA, as notified to the FAA;

(ii) Is in a condition for safe operation, including compliance with all applicable EASA ADs, as notified;

(iii) Is marked in accordance with paragraph 5.5.2(a) of these Implementation Procedures;

(iv) Is properly maintained using approved procedures and methods (evidenced by logbooks and maintenance records); and

(v) Meets all additional requirements including the provision of information on aircraft noise and emissions level prescribed by EASA, as notified.

(2) When a used aircraft produced in the United States is to be imported into the EU from a third country, the FAA shall, upon request, assist the importing AA in obtaining information regarding the configuration of the aircraft at the time it left the manufacturer. The FAA shall also provide, upon request, information regarding subsequent installations on the aircraft that have been approved or accepted by the FAA.

provide, upon request, information regarding subsequent installations on the aircraft that have been approved by EASA.

(3) If a used civil aircraft produced in an EU Member State has been used in military service at any time, EASA shall consult with the FAA to determine if the FAA shall accept such an aircraft. Where necessary, EASA shall request the assistance of the AA of the exporting Member State.

(b) Acceptance of Used U.S. Aircraft Being Exported (Returned) to the U.S. when the U.S. Is the State of Design.

(1) The FAA shall accept an AA's Export Certificate of Airworthiness on a used aircraft being exported (returned) to the United States, when the United States is the State of Design for that aircraft, when the conditions of paragraph 5.1.9(a)(1)(i)-(v) have been met.

(2) If the AA is not in a position to assess whether or not the used aircraft satisfies the above conditions, it shall inform the FAA accordingly.

Note: Per FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Product, the AA's Export Certificate of Airworthiness is not required for returned aircraft;

(3) If a used U.S. civil aircraft has been used in military service at any time, FAA shall consult with EASA to discuss the impacts to type design.

(b) Acceptance of Used EU Aircraft Being Exported (Returned) to the EU when an EU Member State is the State of Design.

(1) The AA shall accept the FAA's Export Certificate of Airworthiness on a used aircraft being exported (returned) to the EU, when an EU Member State is the State of Design for that aircraft, when the conditions of paragraph 5.1.10(a)(1)(i)-(v) have been met.

(2) If the FAA is not in a position to assess whether or not the used aircraft satisfies the above conditions, it shall inform the importing AA accordingly.

(c) Acceptance of Used Aircraft for which a Third Country is the State of Design.

(1) The EU shall accept the FAA's Export Certificate of Airworthiness for used aircraft for which a third country is the State of Design, when that third country has a bilateral agreement/arrangement with both the U.S. and the EU covering the same class of product, and the conditions of paragraph 5.1.10(a)(1)(i)-(v) have been met.

however, it will facilitate the airworthiness determination of the aircraft.

(c) Acceptance of Used Aircraft for which a Third Country is the State of Design.

(1) The FAA shall accept an AA's Export Certificate of Airworthiness for used aircraft for which a third country is the State of Design, when that third country has a bilateral agreement/arrangement with both the U.S. and the EU covering the same class of product, and the conditions of paragraph 5.1.9(a)(1)(i)-(v) have been met.

(2) If the AA is not in a position to assess whether or not the used aircraft satisfies the above conditions, it shall inform the FAA accordingly.

(d) Request for Inspection and Maintenance Records. The FAA, as importing authority, may also request inspection and maintenance records which include, but are not limited to:

(1) the original or certified true copy of the Export Certificate of Airworthiness, or equivalent, issued by the AA or EASA as exporting authority;

(2) records which verify that all overhauls, major changes, and major repairs were accomplished in accordance with data approved in

(2) If the FAA is not in a position to assess whether or not the used aircraft satisfies the above conditions, it shall inform the importing AA accordingly.

(d) Request for Inspection and Maintenance Records.

(1) An AA, as importing authority, may also request inspection and maintenance records which include, but are not limited to:

(i) the original or certified true copy of the Export Certificate of Airworthiness, or equivalent, issued by the FAA as exporting authority;

(ii) records which verify that all overhauls, major changes, and major repairs were accomplished in accordance with data approved in accordance with Section III of these Implementation Procedures, and

(iii) maintenance records and logbook entries which substantiate that the used aircraft is properly maintained to the requirements of an approved maintenance program by an authorized person or organization.

(2) If the AA finds that the aircraft records indicate that there have been critical PMA parts installed, an EASA STC may be

accordance with Section III of these Implementation Procedures; and

(3) maintenance records and logbook entries which substantiate that the used aircraft is properly maintained to the requirements of an approved maintenance program by an authorized person or organization.

(4) When major design changes or STCs are embodied in a used aircraft, all necessary data for subsequent maintenance should be provided (e.g., data describing: the installation, the materials and parts used, wiring diagrams for installation (e.g., on avionic and electrical systems), and/or drawings or floor plans for installations in the cabin, fuel or hydraulic systems, structural changes, etc.)

required (see paragraph 2.8.2). If there is evidence of alterations to critical components by other than the TC holder, an EASA STC is required (See paragraph 3.2.8).

(3) When major alterations are embodied in a used aircraft, all necessary data for subsequent maintenance should be provided (e.g., data describing: the installation, the materials and parts used, wiring diagrams for installation (e.g., on avionic and electrical systems), and/or drawings or floor plans for installations in the cabin, fuel or hydraulic systems, structural changes, etc.)

5.2 Information on Aircraft Noise and Engine Emissions Levels.

5.2.1 FAA as Importing Authority.

(a) Noise certification information must be provided upon export of a new or used aircraft to the United States as specified in 14 CFR Part 36, §§36.1581-36.1583, and §36.105 (as applicable).

5.2.2 AA as Importing Authority.

(a) The information necessary to complete an EASA Form 45 (noise certificate) shall be provided upon export of a new or used aircraft to the European Union and any additional information needed to uniquely identify the aircraft acoustic configuration for the purpose of compliance with EASA noise certification requirements.

(b) Information needed to uniquely identify the engine configuration for

which emission characteristics were obtained for the purpose of compliance with EASA emissions certification requirements.

5.3 Coordination of Exceptions on an Export Certificate of Airworthiness.

5.3.1 FAA as Importing Authority.

(a) The AA or EASA, as applicable, shall notify the FAA prior to issuing an Export Certificate of Airworthiness in which a non-compliance to the FAA-approved type design is to be noted under the "Exceptions" section of the Export Certificate of Airworthiness. This notification should help to resolve all issues concerning the aircraft's eligibility for an airworthiness certificate. This notification should be sent to the geographic responsible Manufacturing Inspection Office (MIO). Addresses for all FAA MIOs are listed in Appendix A.

(b) In all cases, FAA shall provide a written acceptance before the issuance of the Export Certificate of Airworthiness. A copy of this written acceptance shall be included with the export documentation.

5.3.2 AA as Importing Authority.

(a) The FAA shall notify the importing AA prior to issuing an FAA Export Certificate of Airworthiness in which a non-compliance to the EASA-approved type design is to be noted under the "Exceptions" section of the Export Certificate of Airworthiness. This notification should help to resolve all issues concerning the aircraft's eligibility for an airworthiness certificate, or the aircraft engine or propeller's installation eligibility. This notification should be sent to the applicable importing AA.

(b) In some cases where an aircraft, aircraft engine, or propeller contains a design non-compliance that requires EASA approval, the AA shall work with EASA to obtain an approval or determine if an FAA Export C of A exception may be accepted to allow the import of the aircraft, aircraft engine, or propeller prior to EASA's approval.

(c) In all cases, the AA shall provide a written acceptance before the issuance of the FAA's Export Certificate of Airworthiness. A copy of this written acceptance shall be included with the export documentation.

5.4 Coordination of Exceptions on an Authorized Release Certificate.

5.4.1 FAA as Importing Authority.

(a) The AA or EASA, as applicable, shall notify the FAA prior to issuing an Authorized Release Certificate in which a non-compliance to an FAA-approved engine, propeller, or appliance design is to be noted in the Remarks block. This notification should help to resolve all issues regarding the engine, propeller, or appliance's installation eligibility. This notification should be to the geographic responsible MIO. Addresses for all FAA MIOs are listed in Appendix A.

(b) In all cases, the FAA shall provide a written acceptance before the issuance of the Authorized Release Certificate for such engines, propellers, and TSO appliances. A copy of this written acceptance shall be included with the export documentation.

5.4.2 AA or EASA as Importing Authority.

(a) The FAA shall notify the importing Competent Authority (AA or EASA, as applicable) prior to issuing an Authorized Release Certificate, FAA Form 8130-3, in which a non-compliance to an EASA-approved engine, propeller, part or appliance design is to be noted in the Remarks block. This notification should help to resolve all issues regarding the appliance's installation eligibility. This notification should be to the applicable importing Competent Authority.

(b) In some cases where an appliance contains a non-compliance that requires EASA approval, the AA shall work with EASA to obtain an approval or determine if the non-compliance may be accepted to allow the import of the appliance prior to EASA approval.

(c) In all cases, a written acceptance from the Competent Authority (EASA or AA, as applicable) is required before the issuance of the FAA's Authorized Release Certificate for such engines, propellers, ETSO parts and appliances. A copy of this written acceptance shall be included with the export documentation.

5.5 Additional Requirements for Imported Products. The following identifies those additional requirements which must be complied with as a condition of acceptance for products imported into the United States or the European Union, or for use on either a U.S. or European Union Member State registered aircraft.

5.5.1 U.S. Requirements.

(a) Identification and Marking.

5.5.2 EASA/AA Requirements.

(a) Identification and Marking.

(1) Aircraft, aircraft engines, and propellers must be identified as required in 14 CFR Part 45.

(2) Each critical component of a product must be identified with a part number (or equivalent) and serial number (or equivalent) in a manner outlined in 14 CFR Part 45.

(3) Each appliance approved by an FAA Letter of TSO Design Approval must be marked in accordance with the requirements in 14 CFR 45.15(b).

(4) Each replacement or modification part must be marked with the part number, serial number if applicable, and a manufacturer's name, trademark or symbol. If the part is too small or it is otherwise impractical to mark a part with this information, a tag attached to the part, or a readily available manual or catalogue, may contain this information. In addition:

(i) For parts produced under a licensing agreement/arrangement for a product for which the United States is the State of Design, the part must be traceable to the Production Organisation Approval (POA) holder in order to ensure continued

(1) Aircraft, aircraft engines, and propellers must be identified as required in EASA Part 21, Subpart Q.

(2) Each critical component of a product must be identified with a part number (or equivalent) and serial number (or equivalent) in a manner outlined in EASA Part 21.

(3) Each part and appliance approved by an ETSO Authorization must be marked "ETSO" in accordance with the requirements in EASA Part 21 A.807 and all additional marking requirements specified in the particular ETSO.

(4) Each part to be used as a replacement or modification part must be marked in accordance with EASA Part 21. If the part is too small or it is otherwise impractical to mark a part with this information, a tag attached to the part, or a readily available manual or catalogue, may contain this information.

(5) Information concerning the manufacturer's name and model designation of the type certificated product for which the part is eligible for installation must be furnished with the part.

Note: FAA PMA parts are exempted from the European Parts Approval marking according to paragraph 3.5.7 of Annex 1 of the Agreement.

airworthiness control.

(ii) For parts produced to U.S. STC design data, the part must be accompanied with information that identifies the applicable U.S. STC. This information may be included on the appropriate airworthiness approval document.

(5) Information related to the manufacturer's name and model designation of the type certificated product on which the part is eligible for installation must be provided with the part.

(b) Instructions for Continued Airworthiness. Instructions for continued airworthiness and maintenance manuals having airworthiness limitation sections must be provided by the certificate holder as prescribed in 14 CFR 21.50.

(c) Aircraft Flight Manual, Operating Placards and Markings, Weight and Balance Report, and Equipment List. Each aircraft must be accompanied by an approved Aircraft Flight Manual, including all applicable supplements. The aircraft must also have the appropriate operating placards and markings, a current weight and balance report, and a list of installed equipment.

(d) Logbooks and Maintenance Records. Each aircraft (including the

(b) Instructions for Continued Airworthiness. Instructions for continued airworthiness and maintenance manuals having airworthiness limitation sections must be provided by the certificate holder as prescribed in EASA Part 21.

(c) Aircraft Flight Manual, Operating Placards and Markings, Weight and Balance Report, and Equipment List. Each aircraft must be accompanied by an approved Aircraft Flight Manual, including all applicable supplements. The aircraft must also have the appropriate operating placards and markings, a current weight and balance report, and a list of installed equipment.

(d) Logbooks and Maintenance Records. Each aircraft (including the aircraft engine, propeller, rotor, or appliance) must be accompanied by logbooks and maintenance records equivalent to those specified in EASA Part 145 and Part M and applicable operations regulations (Joint Aviation Requirements (JAR)-OPS 1.920 (for airplanes) or JAR-OPS 3.920 (for rotorcraft) or its successor EU regulation).

aircraft engine, propeller, rotor, or appliance) must be accompanied by logbooks and maintenance records equivalent to those specified in 14 CFR 91.417. The maintenance records must also show that, for a used aircraft, the aircraft has had a 100-hour inspection, or equivalent, as specified in 14 CFR 21.183(d).

SECTION VI **TECHNICAL ASSISTANCE**

6.0 General. Pursuant to Article 7 of Annex 1 of the Agreement, upon request and after mutual agreement, and as resources permit, the FAA and EASA or an AA shall provide technical assistance to each other when significant activities are conducted in either the United States or the European Union.

6.0.1 Every effort should be made to have these certification tasks performed locally on each other's behalf. Technical assistance activities will help with regulatory surveillance and oversight functions at locations outside of the requestor's territory. These supporting technical assistance activities shall in no way relieve the requestor's responsibilities for regulatory control and environmental and airworthiness certification of products and parts manufactured at facilities located outside of its territory.

6.0.2 The FAA and EASA or an AA shall use its own policies and procedures when providing such technical assistance to the other, unless other working arrangements are agreed upon. Types of assistance may include, but are not limited to, the following:

(a) Certification Support.

- (1) Approving test plans;
- (2) Witnessing tests;
- (3) Performing compliance inspections;
- (4) Reviewing reports;
- (5) Obtaining data;
- (6) Verifying/determining compliance;
- (7) Monitoring the activities and functions of designees or approved organizations; and
- (8) Conducting investigations of service difficulties.

(b) Conformity and Surveillance Support.

- (1) Conformity inspections;

- (2) Monitoring the controls of special processes;
 - (3) Witnessing the first article inspection of parts;
 - (4) Conducting sample inspections on production parts;
 - (5) Monitoring the activities and functions of designees or approved organizations;
 - (6) Conducting investigations of service difficulties; and
 - (7) Auditing production quality systems.
- (c) Airworthiness Certification Support.
- (1) Assistance in the delivery of airworthiness certificates for aircraft; and
 - (2) Determining the original export configuration of a used aircraft.

6.0.3 Request from FAA for EASA Engineering Design Support (Including conformity of test set-ups): EASA has delegated EASA DOAs to provide technical assistance to the FAA. Routine requests for technical assistance shall be sent directly to an EASA DOA. When the EU company holds an EASA DOA, the company may use its DOA procedures to conduct the requested technical assistance on behalf of EASA. No coordination or individual requests to EASA are required once the FAA confirms with EASA that the DOA is authorized for similar activities. EASA retains responsibility for the DOA's performance. Non-routine requests shall use the procedures outlined in paragraphs 6.1 through 6.8.

6.1 Witnessing of Tests During Design Approval.

- (a) The FAA or EASA, as appropriate for the country in which a design approval applicant is located, may request assistance in the witnessing of tests from the other depending on the country in which a design approval applicant's supplier is located.
- (b) Only FAA to EASA or EASA to FAA requests are permissible and neither the FAA nor EASA shall respond to a test witnessing request made directly from the manufacturer or supplier. Witnessing of tests shall be conducted only after consultations between the FAA and EASA on the specific work to be performed and agreement has been obtained from the other. The FAA or EASA, as appropriate for country in which the design approval applicant is located, makes the written request for witnessing of tests.

(c) Unless otherwise delegated, approval of the design approval applicant's test plans, test procedures, test specimens, and hardware configuration remains the responsibility of the FAA or EASA, as appropriate for the country in which the design approval applicant is located. Establishing the conformity of each test article prior to the conduct of the test is the responsibility of the design approval applicant.

(d) Generally, conformity inspections associated with prototype parts in Europe are the responsibility of the AA. However, EASA shall assure that such inspections have been conducted prior to witnessing any tests on behalf of the FAA. In addition, EASA is generally responsible for the conformity of the test set-up.

(e) Test witnessing activities may require the development of a working arrangement based on the complexity and frequency of the requested certifications. At the discretion of the party in receipt of such requests, these activities may be delegated to authorized designees or approved organizations.

(f) Where there is no working arrangement, requests for witnessing of individual tests must be specific enough to provide for identification of the location, timing, and nature of the test to be witnessed. An approved test plan must be provided by the FAA or EASA, as appropriate, at least two weeks prior to each scheduled test.

(g) The EASA or FAA requests for conformity of the test set-up and/or witnessing of tests shall be sent electronically to the EASA office or FAA ACO which has geographic responsibility for the location of the test. FAA and EASA offices are listed in Appendix A. Where prototype part conformity inspection is also involved, the FAA may send a joint notification of the activity to both EASA and the applicable AA. FAA requests for test witnessing may be sent on FAA Form 8120-10, *Request for Conformity*, and described in the Special Instructions section of the form.

(h) Upon completion of test witnessing, the FAA or EASA shall send a report stating that the test was conducted in accordance with approved test plans, including the identification of any variations from those test plans, and confirming the test results, as well as any other documentation as notified in the request

6.2 Compliance Determinations.

(a) The FAA or EASA may also request that specific compliance determinations be made in association with the witnessing of tests or other activities. Such statements of compliance shall be made to the airworthiness or environmental standards of the requesting CA.

(b) The EASA or FAA statements of conformity shall be sent in a formal letter, transmitted electronically, to the requesting EASA office or FAA ACO.

6.3 Conformity Certifications During Design Approval.

(a) The FAA or EASA, depending upon the country in which a supplier is located, may request prototype part conformity certifications, conformity of test set-ups, and conformity of test articles from the other as appropriate.

(b) Only FAA to AA/EASA or EASA/AA to FAA requests are permissible and neither shall respond to a conformity certification request made directly by the manufacturer or supplier. Conformity certifications shall be conducted only after consultations and agreement to perform the work. Requests for conformity certifications should be limited to test specimens or prototype parts that are of such complexity that they cannot be inspected by the manufacturer or its regulatory authority prior to installation in the final product. Conformity certifications may require the development of a working arrangement based on the complexity of the requested certifications. Conformity certifications may be delegated to authorized designees or approved organizations.

(c) AA/EASA requests for conformity certifications shall be sent in writing. FAA requests for conformity certifications shall be sent on FAA Form 8120-10, *Request for Conformity*, and described in the Special Instructions section of the form. AA/EASA requests shall be sent to the FAA Directorate Manufacturing Inspection Office which has geographic responsibility for the location of the part or appliance. FAA requests shall be sent to the appropriate AA office. FAA and EASA offices are listed in Appendix A.

(d) Upon completion of all conformity inspections conducted on each other's behalf, the FAA or EASA/AA shall complete and return all documentation as notified. The FAA or EASA/AA, depending upon the country in which the supplier is located, shall note all deviations from the requirements notified by the FAA or EASA on the conformity certification for the particular part. Any nonconformity described as a deviation should be brought to the attention of the FAA or EASA for evaluation and disposition as to its effect on safety and the validity of the test under consideration. The FAA or EASA should receive a report stating the disposition of each deviation before an FAA Form 8130-3 or EASA Form 1 is issued.

6.4 Surveillance and Other Support. The FAA or EASA, or an AA as appropriate for the country in which a regulated entity is located, may request the other types of technical assistance outlined in paragraph 6.0.2. Each request shall be handled on a case-by-case basis, as resources permit. Each written request shall include sufficient information for the task to be performed and reported back to the requestor. Where the technical assistance is repetitive or long-term, a working arrangement may be needed.

- 6.5 Airworthiness Determination. Neither conformity certification on prototype parts (per paragraph 6.3), nor inspections on production parts (per paragraph 6.4) should be construed as being an export airworthiness approval, since a conformity certification does not constitute an airworthiness determination. Airworthiness determinations remain the responsibility of the design holder and/or manufacturer and the exporting authority.
- 6.6 Airworthiness Certificates. There may be certain programs and conditions that warrant technical assistance for the issuance of standard airworthiness certificates so that aircraft may be placed directly into operation from the site of manufacture. The importing authority may seek assistance from the exporting authority in the final processing and delivery of an airworthiness certificate when the aircraft has completed its manufacturing cycle, has been entered on the importing country's registry, and has subsequently been granted an Export Certificate of Airworthiness by the exporting authority. This will require the development of a working arrangement between the exporting and importing authorities.
- 6.7 Handling of Requests for Proprietary Data and Freedom of Information Act (FOIA)/Public Access to Official Documents Information.
- (a) Protection of Proprietary Data. The FAA and EASA agree that they shall not copy, release, or show data identified as proprietary or otherwise restricted obtained from each other to anyone other than an FAA or EASA employee, without written consent of the design approval holder or other data submitter, unless required by law. The FAA or EASA should obtain this written consent from the design approval holder through its CA. To the extent that EASA shares such data with an AA or accident investigation entity, EASA shall ensure that these persons treat such restricted information in accordance with Article 11.B of the Agreement.
- (b) FOIA Requests. When the FAA receives a FOIA request related to a product, part, or appliance of an FAA approval holder or applicant who is located in an EU member state, the FAA may request EASA's assistance in contacting the FAA approval holder or applicant. Similarly, FAA shall advise EASA of the potential release of any information received from EASA and submitted to the FAA. If EASA, where applicable, or the approval holder or applicant consents to the release of the information, EASA must provide the written consent to the FAA. If EASA, the approval holder, or the applicant objects to the release, a statement of the reasons must be furnished by EASA to the FAA. If there is objection, FAA shall only release the information if it determines that it is required to do so under FOIA.
- (c) Public Access to Official Documents. When EASA receives a request for the release of information that has been submitted by a design approval holder in the U.S. and covered by these Implementation Procedures, EASA shall advise the FAA of any information received from the FAA and submitted to the EASA that

might be released. EASA may also request the FAA's assistance in determining whether the person submitting the information would object to release and which portions of the information received from that person or generated by the FAA might be withheld under the secrecy exceptions, if any. EASA shall apply the relevant EU regulations/directives in making its determination whether or not to release information.

6.8 Accident/Incident and Suspected Unapproved Parts Investigation Information Requests.

(a) When investigating in-service incidents, accidents, or suspected unapproved parts involving a product, part, or appliance imported under these Implementation Procedures, the FAA or EASA may request information from EASA or the FAA product responsible Directorate as applicable (see listing in Appendix A). EASA shall coordinate with the appropriate AA to obtain any necessary support.

(b) In case of a major incident/accident, FAA and EASA shall cooperate to address urgent information needs. Following a major accident/incident, upon receipt of a request for urgent information the FAA or EASA shall provide the requested information. EASA and the FAA shall establish individual focal points to respond to each other's questions and ensure that timely communication occurs. The FAA or EASA may request information directly from a manufacturer because immediate contact with the appropriate focal points cannot be made. In such cases, notification of this action shall be made as soon as possible. Either the FAA or EASA, as applicable, shall assist in ensuring that their manufacturers provide requested information expeditiously.

SECTION VII **FURTHER WORKING ARRANGEMENTS**

- 7.0 It is anticipated that situations will develop which have not been specifically addressed in these Implementation Procedures, but which are within the scope of the Agreement. When such a situation arises, it shall be reviewed by the respective FAA Aircraft Certification Service Director and EASA Certification Director, and a working arrangement shall be developed to address the situation. Such an arrangement shall be concluded by the FAA and EASA, or an AA when appropriate, in a separate document. If it is apparent that the situation is unique, with little possibility of repetition, then the working arrangement shall be of limited duration. However, if the situation has anticipated new technology or management developments, which could lead to further repetitions, these Implementation Procedures should be revised accordingly through the Certification Oversight Board.
- 7.1 It should be noted that, when a unique situation falls within the responsibility of an FAA Directorate Manager, that manager shall be responsible for developing the necessary working arrangement with EASA, or an AA when appropriate.
- 7.2 Any working arrangements shall be kept and controlled by the focal points for these Implementation Procedures listed in Appendix A.

SECTION VIII **AUTHORITY**

The FAA and EASA agree to the provisions of these Implementation Procedures as indicated by the signature of their duly authorized representatives.

FEDERAL AVIATION ADMINISTRATION
DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

EUROPEAN AVIATION SAFETY AGENCY

EUROPEAN UNION

By _____

By _____

Title _____

Title _____

Date _____

Date _____

APPENDIX A

List of Addresses for EASA and FAA

The designated focal point offices for these Implementation Procedures are:

For the FAA:

International Policy Office (AIR-40)
Aircraft Certification Service
Federal Aviation Administration
c/o Wilbur Wright Building, Room 600W
800 Independence Avenue, SW
Washington, DC 20591
U.S.A.

Telephone: 1-202-385-8950
Fax: 1-202-493-5144
Email: 7-AWA-AVS-AIR-040-Coord@faa.gov

For EASA:

International Cooperation Department
Rulemaking Directorate
European Aviation Safety Agency
Postfach 10 12 53
D-50452 Köln
Germany

Telephone: 49-221-89990-5007
Fax: 49-221-89990-5507

EASA Offices

Mailing Address

European Aviation Safety Agency
Postfach 10 12 53
D-50452 Köln
Germany

Physical Location

European Aviation Safety Agency
Ottoplatz, 1
D-50679 Köln
Germany

EASA Contact Point for Applications

E-mail addresses:

- TCs: tc@easa.europa.eu
- STCs: stc@easa.europa.eu
- ETSOAs: etsoa@easa.europa.eu
- Major changes/repair designs: MajorChange-MajorRepair@easa.europa.eu

EASA Contact Point for Airworthiness Directives

- ads@easa.europa.eu

FAA Offices

Key Aircraft Certification Offices for these Implementation Procedures

FAA Contact Point for FAA Airworthiness Directives

Mailing Address:

Engineering Procedures Office
AIR-110
P.O. Box 22082
Oklahoma City, OK 73125

Telephone: 1-405-954-4103
Fax: 1-405-954-2209

E-mail: 9-amc-faa-mcai@faa.gov

Office Address:

Engineering Procedures Office
AIR-110
ARB, Room 304
6500 MacArthur Blvd.
Oklahoma City, OK, 73125

FAA Contact Point for Appliance Approval Applications from the European Union

Boston Aircraft Certification Office

ANE-150
12 New England Executive Park
Burlington, MA 01803

Telephone: 1-781-238-7150
Fax: 1-781-238-7170

FAA Contact Point for STC Applications from the European Union

New York Aircraft Certification Office

ANE-170
1600 Stewart Avenue
Suite 410
Westbury, NY 11590

Telephone: 1-516-228-7300
Fax: 1-516-794-5531
Email: 7-AVS-NYA-ACO@faa.gov

FAA Aircraft Certification Service Directorate Contact Points for TC Applications from the European Union

FAA Aircraft Certification Service Directorates

Engine and Propeller Directorate, ANE-100

(Applications for Engine TCs should be sent to Engine Certification Office; applications for propeller TCs should be sent to the Boston Aircraft Certification Office.)

12 New England Executive Park
Burlington, Massachusetts 01803

Telephone: 1-781-238-7100
Fax: 1-781-238-7199

Regulatory and policy responsibility for all aircraft engines, propellers, and auxiliary power units.

Rotorcraft Directorate, ASW-100

(Applications should be sent to Standards Staff, ASW-110)

2601 Meacham Blvd.
Fort Worth, TX 76137-4298

Telephone: 1-817-222-5100
Fax: 1-817-222-5959

Regulatory and policy responsibility for powered lift, normal and transport category rotorcraft.

Small Airplane Directorate, ACE-100

(Applications should be sent to Project Support Office, ACE-112)

DOT Building

901 Locust

Room 301

Kansas City, MO 64106-2641

Telephone: 1-816-329-4100

Fax: 1-816-329-4106

Regulatory and policy responsibility for:

- 1. Airplanes weighing less than 12,500 pounds and having passenger configurations of 9 seats or less,*
- 2. Commuter airplanes weighing 19,000 pounds or less, with passenger configurations of 19 seats or less, and*
- 3. Gliders, airships, manned free balloons, and VLA.*

Transport Airplane Directorate, ANM-100

(Applications should be sent to International Branch, ANM-116)

1601 Lind Avenue, SW

Renton, WA 98055-4056

Telephone: 1-425-227-2100

Fax: 1-425-227-1100

Regulatory and policy responsibility for all transport category airplanes.

**FAA Headquarters,
FAA Manufacturing Inspection Offices, and FAA Aircraft Certification Offices**

i) FAA Headquarters - Aircraft Certification Service

International Policy Office

AIR-40
800 Independence Avenue, SW
Washington, DC 20591
Telephone: 1-202-385-8950
Fax: 1-202-493-5144
Email: 7-AWA-AVS-AIR-040-Coord@faa.gov

Aircraft Engineering Division

AIR-100
950 L'Enfant Plaza North, SW
Washington, DC 20024
Telephone: 1-202-385-6348
Fax: 1-202-385-6475
Email: 9-AWA-AVS-AIR100-Coord@faa.gov

Production & Airworthiness Division

AIR-200
950 L'Enfant Plaza North, SW
Washington, DC 20024
Telephone: 1-202-385-6346
Fax: 1-202-385-6475
Email: 9-AWA-AVS-AIR200-Coord@faa.gov

FAA Headquarters - Environmental Policy and Regulations

Office of Environment and Energy

AEE-1
800 Independence Avenue, SW
Washington, DC 20591
Telephone: 1-202-267-3576
Fax: 1-202-267-5594

ii) FAA Manufacturing Inspection Offices

Engine and Propeller Directorate Manufacturing Inspection Office

For the States of: Connecticut, Delaware, Maine, Maryland, Massachusetts,
New Hampshire, New Jersey, New York, Pennsylvania,
Rhode Island, Vermont, Virginia, and West Virginia.

ANE-180
12 New England Executive Park
Burlington, Massachusetts 01803

Telephone: 1-781-238-7180
Fax: 1-781-238-7898

Rotorcraft Directorate Manufacturing Inspection Office

For the States of: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

ASW-180
2601 Meacham Blvd.
Fort Worth, TX 76137-4298

Telephone: 1-817-222-5180
Fax: 1-817-222-5136

Small Airplane Directorate Manufacturing Inspection Office

For the States of: Alabama, Alaska, Florida, Georgia, Illinois, Indiana, Iowa, Kansas,
Kentucky, Michigan, Minnesota, Mississippi, Missouri, Nebraska,
North Carolina, North Dakota, Ohio, South Carolina, South Dakota,
Tennessee, and Wisconsin.

ACE-180
DOT Building
901 Locust
Room 301
Kansas City, MO 64106

Telephone: 1-816-329-4180
Fax: 1-816-329-4157

Transport Airplane Directorate Manufacturing Inspection Office

For the States of: Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

ANM-108
1601 Lind Avenue, SW
Renton, WA 98057-3356
Telephone: 1-425-227-2108
Fax: 1-425-227-1100

iii) FAA Aircraft Certification Offices

Anchorage Aircraft Certification Office

ACE-115N
222 West 7th Avenue, Unit 14, Room 128
Anchorage, AK 99513
Telephone: 1-907-271-2669
Fax: 1-907-271-6365

Atlanta Aircraft Certification Office

ACE-115A
107 Charles W. Grant Pkwy., Suite 201
Hapeville, GA 30354
Telephone: 1-404-474-5500
Fax: 1-404-474-5606
Email: 7-AWA-AVS-AIR-040-Coord@faa.gov

Boston Aircraft Certification Office

ANE-150
12 New England Executive Park
Burlington, MA 01803
Telephone: 1-781-238-7150
Fax: 1-781-238-7170

Chicago Aircraft Certification Office

ACE-115C
2300 East Devon Avenue
Room 107
Des Plaines, IL 60018
Telephone: 1-847-294-7357
Fax: 1-847-294-7834

Denver Aircraft Certification Office

ANM-100D
Technical Operations Center (TOC)
26805 E. 68th Avenue, Room 214
Denver, CO 80249
Telephone: 1-303-342-1080
Fax: 1-303-342-1088
Email: 9-ANM-TAD-DACO@faa.gov

Engine Certification Office

ANE-140
12 New England Executive Park
Burlington, MA 01803
Telephone: 1-781-238-7140
Fax: 1-781-238-7199

Fort Worth Airplane Certification Office

ASW-150
2601 Meacham Blvd.
Fort Worth, TX 76137-4298
Telephone: 1-817-222-5150
Fax: 1-817-222-5960
Email: 7-asw-150@faa.gov

Fort Worth Special Certification Office

ASW-190
2601 Meacham Blvd.
Fort Worth, TX 76137-4298
Telephone: 1-817-222-5190
Fax: 1-817-222-5785

New York Aircraft Certification Office

ANE-170
1600 Stewart Avenue, Suite 410
Westbury, NY 11590
Telephone: 1-516-228-7300
Fax: 1-516-794-5531
Email: 7-AVS-NYO-ACO@faa.gov

Wichita Aircraft Certification Office

ACE-115W
1801 Airport Road
Room 100, Mid-Continent Airport
Wichita, KS 67209
Telephone: 1-316-946-4100
Fax: 1-316-946-4107

Gulfstream Aviation Safety Oversight Office

ACE-100G
3960 Paramount Boulevard, Suite 106
Lakewood, CA 90712-4137
Telephone: 1-562-627-6720
Fax: 1-562-627-6730

Fort Worth Rotorcraft Certification Office

ASW-170
2601 Meacham Blvd.
Fort Worth, TX 76137-4298
Telephone: 1-817-222-5170
Fax: 1-817-222-5783

Los Angeles Aircraft Certification Office

ANM-100L
3960 Paramount Blvd. Suite 100
Lakewood, CA 90712-4137
Telephone: 1-562-627-5200
Fax: 1-562-627-5210

Seattle Aircraft Certification Office

ANM-100S
1601 Lind Avenue, SW
Renton, WA 98057-3356
Telephone: 1-425-917-6400
Fax: 1-425-917-6590

Boeing Aviation Safety Oversight Office

ANM-100B
1601 Lind Avenue, SW
Renton, WA 98057-3356
Telephone: 1-425-917-6550
Fax: 1-425-917-6565

APPENDIX B

FAA and EASA Recognized Standards

This appendix includes FAA and EASA recognized airborne systems standards considered to be equivalent for the purpose of issuing approvals under these Implementation Procedures.

FAA	EASA
RTCA/DO-160, <i>Environmental Conditions and Test Procedures for Airborne Equipment</i>	EUROCAE/ ED-14, <i>Environmental Conditions and Test Procedures for Airborne Equipment</i>
RTCA/DO-178, <i>Software Considerations in Airborne Systems and Equipment Certification</i>	EUROCAE/ ED-12, <i>Software Considerations in Airborne Systems and Equipment Certification</i>
RTCA/DO-254, <i>Design Assurance Guidance for Airborne Electronic Hardware</i>	EUROCAE/ ED-80, <i>Design Assurance Guidance for Airborne Electronic Hardware</i>
SAE ARP 4754, <i>Certification Considerations for Highly-Integrated or Complex Aircraft Systems</i>	EUROCAE/ ED-79, <i>Certification Considerations for Highly-Integrated or Complex Aircraft Systems</i>
RTCA/DO-200A, <i>Standards for Processing Aeronautical Data</i>	EUROCAE/ ED-76, <i>Standards for Processing Aeronautical Data</i>
RTCA/DO-201A, <i>User Recommendations for Aeronautical Information Services</i>	EUROCAE/ ED-77, <i>Aeronautical Information</i>
RTCA/DO-236A, <i>Minimum Aviation System Performance Standards: Required Navigation Performance for Area Navigation</i>	EUROCAE/ ED-75A, <i>Minimum Aviation System Performance Specification Required Navigation Performance for Area Navigation</i>
RTCA/DO-260, <i>1090 MHz MOPS for ADS-B (a Joint document with EUROCAE)</i>	EUROCAE/ ED-102, <i>MOPS for 1090 MHz Automatic Dependant Surveillance – Broadcast</i>
RTCA/DO-218B, <i>MOPS for the Mode S Airborne Data Link Processor</i>	EUROCAE/ ED-82A, <i>Minimum Operational Performance Specification for Mode S Aircraft Data Link Processors</i>
RTCA/DO-264, <i>Guidelines for the Approval of the Provision and Use of Air Traffic</i>	EUROCAE/ED-78A, <i>Guidelines for Approval of the Provision and Use of ATS Supported</i>

FAA	EASA
Services Supported by Data Communications	by Data Communications
RTCA/DO-276, User Requirements for Terrain and Obstacle Data	EUROCAE/ED-98A, User Requirements for Terrain and Obstacle Data
RTCA/DO-208, Minimum Operational Performance Standards for Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)	EUROCAE/ ED-72A, MOPS for Airborne GPS Receiving Equipment used for Supplemental Means of Navigation

APPENDIX C

Type Validation Principles/Post Type Validation Principles

FAA/EASA

Type Validation Principles/ Post-Type Validation Principles

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SECTION I **INTRODUCTION**

1. General.

- 1.1 This appendix defines the Type Validation and Post-Type Validation Principles that the FAA and EASA have agreed to apply when certificating and validating each other's products and design changes.
- 1.2 Section II contains the **Type Validation Principles (TVP)**. They define the normal conduct of both the CA and VA for the type validation of aircraft, aircraft engines, and propellers. The TVP apply to all validation programs leading to a type certificate (TC), or supplemental type certificate (STC).
- 1.3 Section III contains the **Post-Type Validation Principles**.
 - 1.3.1 They define the normal conduct of both the CA and VA for design changes after a TC has been issued. They apply to post-type validation activities undertaken by the TC, or STC holder on a validated aircraft, aircraft engine or propeller. They are not intended to address any activities undertaken by any person other than the TC or STC holder.
 - 1.3.2 These post-type validation principles do not apply to design data used in support of repairs. Reciprocal acceptance of design data used in support of repairs will be done in accordance with paragraph 3.3 of these Implementation Procedures.
- 1.4 The vision of all validation activities is:

A simple process based on mutual authority trust, which leads to design acceptance in compliance with the VA's airworthiness standards. This process requires effective communication between all parties on all matters related to the validation process.

 - 1.4.1 The VA should seek to rely on the findings made and actions taken by the CA to the maximum extent possible. Except for a limited number of cases that are identified and justified by the VA, the determinations of compliance with the VA's Certification Basis will be made by the CA. The VA is able to make findings of compliance, without further showing, based upon statements of compliance by the CA.
 - 1.4.2 Although the VA will rely on the CA to make most compliance determinations, the VA must maintain a general awareness and

understanding of the CA's compliance activities to be able to exercise its responsibilities as a State of Registry.

1.5 Communication

- 1.5.1 The expectation is that there will be an early exchange of information and discussion between the CA and the VA. The VA should be responsive to requests to discuss policy and regulatory issues prior to formal applications. These requests should be made to the VA by the CA.
- 1.5.2 Effective communication between the VA, CA and applicant is the key to a successful validation program. Program delays are often the result of poor communication.
- 1.5.3 The VA must work through the CA to achieve compliance. The CA should therefore be copied on all correspondence between the VA and the applicant. Meetings and verbal communication between the VA and applicant should include CA representation. On the occasions when the CA is not able to be involved, details of such communication should be provided to the CA in a timely manner.
- 1.5.4 The CA must understand the VA's position on all the validation items for which the CA has been assigned compliance determination responsibility. Therefore, both the CA and the VA should include each other in communications related to matters that affect these compliance determinations.
- 1.5.5 Each authority will normally seek the other's opinions before significant issues relating to the interests of the VA are resolved.

SECTION II **TYPE VALIDATION PRINCIPLES**

2. Application of the Type Validation Principles.

- 2.1 This section establishes the principles and the general process governing:
 - 2.1.1 How the VA will establish its Certification Basis.
 - 2.1.2 How the VA will establish its involvement in the certification program, including, how and by whom the compliance determinations will be made to the VA Certification Basis.
 - 2.1.3 How the VA will gain familiarity with the product in order to carry out its continued airworthiness responsibilities.
- 2.2 As appropriate, this section will also be used to determine VA involvement in Level 1 Major design changes (see Section III: Post Type Validation Principles).
- 2.3 The TVP permit validation of any product or change to a product, to take place either as a concurrent or sequential certification process.
- 2.4 In a concurrent process, the applicant requests validation of the product by the VA at the same time as certification by the CA. This approach will allow unique VA requirements to be addressed in the design development and compliance demonstration. A common VA/CA type design should be an objective of a concurrent process.
 - 2.4.1 A concurrent certification/validation project provides an opportunity for collaborative development of both CA and VA use of exceptions to the latest airworthiness standards, special conditions, exemptions, equivalent level of safety findings and acceptable MOCs. Additionally, it provides for early identification of areas where jointly agreed solutions are not readily available.
 - 2.4.2 When agreed by the applicant, the CA, and the VA, a concurrent certification/validation project may use any or all of the following optional provisions to supplement the concurrent process.
 - 2.4.2.1 Work sharing: A work sharing program may be used in areas where the VA may make compliance determinations on behalf of both the VA and CA. Work sharing may be advantageous when certification activity is occurring within the geographical area of the VA, or when limited CA

resources make it advantageous to advance the project by using VA resources. Work sharing can be limited to a single issue or may be utilized extensively throughout the project, and, if agreed, may persist through the life of a program into post-type certification activities. Such work sharing arrangements are a form of technical assistance, as described in the TIP Section VI.

2.4.2.2 Common Issue Papers and Certification Review Items: The CA and the VA may jointly develop and approve issue papers or certification review items that are common or identical, as applicable, depending on which authority is the CA, to establish the enveloped FAA and EASA program certification requirements. Common IP/CRI can be limited to a single issue, or may be used extensively throughout the project.

2.4.2.3 Single Certification Basis: The CA and VA may jointly develop a single agreed certification basis that satisfies both US and EU regulatory requirements.

2.5 In a sequential process, the CA has completed its certification, or is well advanced in the certification process, before the applicant requests validation by the VA. In this case, the CA Certification Basis and acceptable MOCs have been established and approved by the CA. Certification flight tests may have been completed. In fact, the CA TC may already have been issued and the product may be in service.

2.5.1 Type design changes, revised operating limitations, or new or revised certification testing or analysis methods may be required in a sequential program to meet the requirements of the VA, since these requirements may not have been considered during the original CA certification.

3. Airworthiness Standards: Equivalencies and Differences.

3.1 Standards Equivalencies.

3.1.1 A literal comparison of the airworthiness standards developed by the FAA and EASA indicates that there are instances where the standards text differs extensively. In some cases, the FAA and EASA airworthiness standards may be determined to be equivalent despite such text differences.

- 3.1.2 The 14 CFR and CS standards must meet both of the following conditions to be equivalent:
- a) They must have the same regulatory objective, and
 - b) They must contain equivalent technical standards such that compliance with one standard would meet compliance with the other.
- 3.1.3 Standards Equivalencies must be approved by the appropriate Directorates within the FAA and EASA.

3.2 Significant Standards Differences.

- 3.2.1 A comparison of the airworthiness standards developed by the FAA and EASA indicates that they sometimes differ. In some cases, the 14 CFR are more stringent than the CS; in other instances the CS are more stringent.
- 3.2.2 An SSD must be identified when the difference may require type design changes, approved manual changes, additional or different demonstration of compliance, or the imposition of operational limitations to meet the minimum standard of the VA relative to that of the CA. This impact determination is accomplished by the VA for each VA standard, by comparison to the corresponding CA standards. Multiple CA standards, taken together may satisfy the objective of a single VA standard - in such cases an SSD need not be identified.
- 3.2.3 SSD are identified independent of any project considerations and are unique to a particular amendment-pair of standards. An amendment-pair is defined as a particular CS/JAR amendment number and a comparable 14 CFR amendment number.
- 3.2.4 Each authority's list of SSDs must be developed and approved by the appropriate Directorates within the FAA and EASA.
- 3.2.5 SSD for the current standards will be updated as the 14 CFR and CS amendments change, or as needed to address project activity. There will be a current set of SSD, as well as other SSD that have been generated for other amendment-pairs in the past.
- 3.2.6 Once a particular set of SSD is generated for a particular amendment-pair, that set of SSD will be published and should be

used for all validation projects where the regulatory bases consist of that amendment-pair.

- 3.2.7 In a particular validation project, especially for derivative products, the amendment-pair that form the CA and VA Certification Bases may not have a set of SSD. In that case, the VA team will consult with the Policy/Regulatory staff during Phase II of the validation project (see paragraph 5.3) to identify the SSD for the amendment-pair that comprise the CA and VA Certification Bases of the product.
- 3.2.8 All interpretive and guidance material associated with the SSD must be identified.
- 3.2.9 Differences in interpretive advisory, or guidance material, may exist even when the standards are identical or equivalent. When appropriate, these differences will be addressed in Generic Validation Items.

4. Validation Items.

- 4.1 Validation Items (VIs) identify aspects of the design or proposed MOC that warrant VA involvement beyond technical familiarization. VIs are normally identified during the familiarization process. The basic principle behind the VI is that the VA will not review compliance determinations by the CA, or be involved in an in-depth review of the MOC except in areas which fall within the scope of the identified VI.

- 4.2 VIs consist of:

- 4.2.1 Applicable SSDs,

NOTE: The accountable FAA and EASA Directorates may choose to identify a subset of the SSD that need not be classified as VI based solely on the difference. Such a determination may be made by the VA for SSD that have an objective difference that is well understood by both the CA and VA, and that have been deemed by the VA as not requiring any further involvement beyond acknowledgement of the difference during the technical familiarization phase.

- 4.2.2 Project VIs, and

- 4.2.3 Applicable Generic VIs that require VA involvement beyond technical familiarization.

- 4.3 All applicable SSDs, Project VIs, and applicable Generic VIs are identified by the VA in issue papers (FAA) or CRIs (EASA).
- 4.4 Project VIs. A validation project may contain unique elements due to the product's design, use, or proposed MOC. The VA may identify these elements for special review and consideration. Project VIs are developed by the VA team solely to address unique project elements. They must meet one of the following criteria:
- 4.4.1 New Technology – This is technology that is new to the VA as a whole, not just new to the VA team members. For instance, if technology used by the applicant were new to the VA team but not the VA itself, it would not be considered a Project VI. It is the VA management's responsibility to make sure the VA team members are properly informed of the earlier use of the technology, VA standards and MOC.
- 4.4.2 Novel Applications of Existing Technology – This is where a particular technology is being used in a manner that causes the precepts of the technology to be questioned. However, it does not mean that existing technology being applied for the first time to a particular product line is automatically novel. Additionally, novel applies to the VA as a whole, not just the VA team members.
- 4.4.3 The Product Use is Unconventional – This is where a product is being used for a purpose for which it was previously not designed.
- 4.4.4 Unsafe Condition – The product contains design features where experience with other products in service has shown an unsafe condition might occur in that product, even though compliance with the standards in the VA Certification Basis can be demonstrated. Unsafe is measured with respect to the overall level of safety intended by the product VA Certification Basis.
- Note:* This principle of “unsafe condition” should only be used to upgrade the level of safety of the product if the VA has mandated, or will immediately mandate, that upgraded level of safety to other products with similar design features.
- 4.4.5 New Standard Interpretations or MOC for the Existing Airworthiness Standards – These are interpretations/MOC applied by the CA that are different from those already agreed to between the CA and the VA. An MOC or standards interpretation would not be considered

“novel” or “new” if it had been applied previously in a similar context by both the FAA and EASA.

- 4.4.6 Deviations/Exemptions – These are subjects identified by the VA or CA as potentially requiring a deviation/exemption from the VA standards.
- 4.4.7 Equivalent Level of Safety Findings – These are subjects identified by the VA or CA as potentially requiring an equivalent level of safety finding to the VA standards.

Note: Project VI may be added to the list of Generic VIs if the associated issue is expected to have a broader applicability to future programs. The VA will make this determination and update the Generic VI list accordingly.

4.5 Generic VIs. These are areas of VA interest for all products of a certain class. Generic VI lists must be developed and approved by the appropriate Directorates within the FAA and EASA. The VA will publish and periodically update a list of Generic VIs for each product class. The VA team will identify applicable generic VIs from this list during its familiarization with the particular validation project. Generic VIs include:

- 4.5.1. New VA standards where there is limited past experience by the VA or CA with their application to a product, they have an important impact on the whole product or a critical feature, and engineering judgment is required to establish compliance,
- 4.5.2. Airworthiness standards where VA and CA interpretive, advisory, MOC, or guidance materials differ or are insufficient,
- 4.5.3. Commonly occurring Project VIs (see Note after Paragraph 4.4.7), and
- 4.5.4. Standards identified for special emphasis by the VA in a data-driven risk assessment analysis for the product class.

5. Validation Process.

5.1 General.

- 5.1.1 The paragraphs that follow (5.2 through 5.5) discuss the four phases of a validation project. The events that begin and end each phase are identified. The concepts discussed are summarized in Table C-1 (page C-20).

- 5.1.2 Before the receipt of an application, the VA should be able to discuss policy and regulatory issues with the CA for the purpose of future timely validation.
- 5.1.3 It is the applicant's responsibility to propose a realistic time-scale throughout the course of the validation program, to seek the CA and VA concurrence and to take appropriate action with the CA and VA to stay as close as possible to the agreed schedule.
- 5.1.4 Certain technical disciplines on a VA team may be at different phases of the validation project, depending on the progress of their efforts. There is no need for any technical discipline to hold up its validation efforts to wait for those that are not as far along.
- 5.1.5 It is essential that relevant CA policy/regulatory staff supports the VA in the four phases of a validation program. It is particularly important that CA policy/regulatory staff support the CA certification team in any discussion with the VA regarding new CA exemptions/deviations, new special conditions and new equivalent level of safety findings.
- 5.1.6 The VA team will seek advice from the VA policy/regulatory staff when considering new exemptions/deviations, new special conditions and new equivalent level of safety findings applicable to the VA Certification Basis.
- 5.1.7. A regular schedule of communications should be established for most validation programs. For simple projects an exchange of emails is normally sufficient. For more complex projects the VA, CA, and where appropriate, the applicant, are encouraged to establish agreed reoccurring meetings via telecom, video conference or face to face.
- 5.1.8. Upon identification of the VI and agreement to the MOC, the CA will make all determinations of compliance on behalf of the VA, except for defined subjects that fall within the scope of the VI, and which meet one or more of the justification criteria described in 5.4.9.
- 5.1.9. When the CA and VA do not agree on the need for the VI (or MOC in a VI) the specialists involved at the working level should meet via teleconference (at a minimum) to attempt to understand each other's position and to resolve the differences if possible, prior to elevating the issue through the Dispute Resolution Process (Reference TIP section 1.1.4).

5.2 Phase I – General Familiarization.

- 5.2.1 Phase I begins when the VA receives the type certification application. In this phase, the applicant proposes an overall validation schedule.
- 5.2.2 A key element of Phase I is the General Familiarization Meeting. At this meeting, the applicant will present an overview of the project to the VA and familiarize the VA with the design, as currently known. The briefing should provide sufficient information for the VA to establish the appropriate technical disciplines, size of the VA team, and guidance for the team. This should maximize the effectiveness of any follow-on meetings. The meeting is expected to last no more than two days. A General Familiarization Meeting may not be required if the VA agrees that changes from previously validated designs do not warrant the briefing.
- 5.2.3 At the General Familiarization Meeting, the VA should provide a copy of the Generic VI List defined in paragraph 4.5. The VA should also provide a copy of the Significant Standards Differences list defined in paragraph 3.2. The lists will be discussed further during Phase II - Technical Familiarization.
- 5.2.4 Phase I ends with the establishment of the VA team.

5.3 Phase II – Technical Familiarization.

- 5.3.1 Phase II has several objectives: technical familiarization with the project by the VA; establishment of the initial VA Certification Basis; and establishment of the initial VIs.
- 5.3.2 These objectives can only be fully satisfied when the applicant has presented a complete description of the design to the VA. The initial VIs are defined based on the applicant's description of the design. Additional VIs may be identified during Phase III and Phase IV if the design, intended use of the product, assumptions used for certification, or compliance methodologies change.
- 5.3.3 Phase II begins with the scheduling of a Technical Familiarization Meeting (or meetings). It is expected that all necessary VA technical disciplines will be represented at technical familiarization meetings.
- 5.3.4 The applicant, with support from the CA as applicable, will present to the VA:

- a) An overview of the proposed design, intended operational use, and, if applicable, relation to previously approved products,
- b) The proposed CA and VA certification bases, including analysis of their differences.
- c) Any novel design features, novel applications of existing technology, or unconventional uses of the product,
- d) Any design features where experience has shown an unsafe condition might occur,
- e) New standard interpretations or MOCs for existing standards, and,
- f) Any design features related to the VAs list of Generic VIs.

5.3.5 For concurrent validation projects, the CA will:

- a) Identify its proposed certification basis, and
- b) Thoroughly brief the VA on all proposed deviations/exemptions, special conditions, and equivalent level of safety findings.
- c) Identify the domains, if any, where delegation may be given to the VA for the compliance determinations to both CA and VA requirements.
 - i. For example, where the VA may have particular expertise or specific resources not available within the CA's system, the VA may be asked to make the compliance determinations.
 - ii. In other cases the work may be located at a supplier in the VA's jurisdiction.

5.3.6 For sequential validation projects, the CA will:

- a) Identify its certification basis and present an overview of any significant compliance findings established during its certification program, and

- b) Thoroughly brief the VA on all deviations/exemptions, special conditions, and equivalent level of safety findings issued by the CA to ensure they are fully understood by the VA.

5.3.7. The VA will use the information listed in the previous paragraphs to establish the VA certification basis, and to establish the initial VIs, including the applicability of items in the generic VI list. To meet these objectives, the VA should ask clarifying questions and have dialogue as necessary to properly understand the material presented. In-depth discussion or debate of the material is to be done, if needed, during Phase III of the project

5.3.8. Of prime importance is the opportunity for the VA to understand the MOCs used or to be used.

- a) In phase II, the VA will confine its evaluation or review to the general, overall methodology to be used by the applicant, including assumptions, boundary conditions and critical parameters of that methodology, in order to determine if a VI is necessary, and to support development of the VA issue paper/CRI used to document that VI. Further details, including review of test plans, test witnessing, or other details of the compliance demonstration should be deferred for review during Phase III, in the context of established VIs.
- b) In sequential validation projects, the CA and the applicant will provide general information to the VA on the MOCs that have been used to support the CA certification. This general information should be sufficiently detailed to allow the VA team to understand if a VI needs to be established to satisfy the unique needs of the VA.

Note: Once the VA has accepted a MOC for a given standard on any program with the CA, the expectation is that the VA will accept that MOC in the future as long as the assumptions made in the MOC are applicable. An exception is where a past MOC has been determined not to be sufficient. This determination must be discussed between the VA and the CA.

5.3.9 The VA will prepare issue papers/CRIIs which identify the certification basis and other items such as unique import requirements, acceptable means of compliance, equivalent level of safety findings, and special conditions.

- a) Issue papers/CRI's released by the VA that meet the VI definitions in 4.2 should be identified as VI.
- b) Other issue papers/CRI's may be released by the VA for administrative purposes.
- c) The CA should make copies of its Issue Papers/CRI's available to the VA. When the CA position is equivalent to what the VA would specify were it to release its own issue paper/CRI, the CA's issue papers/CRI may be used directly by the VA in lieu of a VA issue paper/CRI. Any such CA issue papers/CRI's adopted into the VAs certification program in this manner are generally not considered VI, as described in 4.2.
- d) In a concurrent certification program, the CA position regarding a particular CA issue paper/CRI will likely not be fully established during phase II. In such cases collaboration between the FAA and EASA specialists should be encouraged to promote a harmonized evolution of the CA issue paper/CRI during the program, with the objective of full adoption into the VA certification program at the time of closure.

5.3.10 The VA should identify operational standards with design impacts early in the program so they may be included in the validation program.

5.3.11 VA familiarization flights are a unique aspect of technical familiarization, since, in a concurrent program, they cannot be conducted until late in the project when a flying article is available. Familiarization flights are not to be used to repeat compliance determination evaluations performed by the CA. Rather, they have the following purposes:

- a) Identify to the CA for resolution any potential compliance issues not previously identified by the validation team in the course of technical familiarization;
- b) Provide the VA flight test representatives with sufficient familiarity with the aircraft to develop the MMEL and any special flight characteristics training requirements;

- c) Familiarize the VA with the type design as necessary to support continued operational safety of the VA registered fleet.
- 5.3.12 Familiarization flights should be supported by the CA flight test team to facilitate completion of the objectives described in 5.3.11.
- 5.3.13 Familiarization flights are typically conducted for all new TC programs. Familiarization flights may also be conducted for other design change programs having a significant impact on the operational capabilities or limitations, or pilot/aircraft interface.
- 5.3.14 Phase II ends with the establishment of the initial VA Certification Basis and initial VIs. Initial VIs are those VIs established during the initial technical familiarization.
- 5.4 Phase III – Determining VA Involvement.
 - 5.4.1 The objective of Phase III is for the VA to identify, for each initial VI, which compliance determinations the CA will make on behalf of the VA and identify those determinations that the VA wishes to retain.
 - 5.4.2 Responsibility for compliance determinations that fall outside the scope of the VIs is automatically assigned to the CA.
 - 5.4.3 A retained compliance determination is defined as a determination for which the VA directly verifies test reports or other compliance reports that directly support a determination of compliance.
 - 5.4.4 Phase III begins following establishment of the VA Certification Basis and initial VIs.
 - 5.4.5 The decision regarding which authority is responsible for a compliance determination is typically reached through an exchange of information following release of the associated VI issue paper or CRI. This exchange may take place through additional meetings following technical familiarization, correspondence, or other interactions. This exchange should be documented in the VI issue paper or CRI to an extent needed to document the agreed MOC, as well as justification for any retained items.
 - 5.4.6 In addition, the CA and the VA will agree on compliance determinations that the VA will make on behalf of both the VA and the CA.

5.4.7 The practice of both the CA and VA making determinations of compliance for any one specific standard should be avoided unless there is a justifiable benefit.

5.4.8 CA Determinations.

- a) The VA is responsible for instructing the CA on acceptable MOC. The CA should request assistance from the VA, if the guidance is incomplete or unclear.
- b) The VA is expected to continue to rely on the CA for similar compliance determinations on future programs, once the CA has successfully demonstrated to the VA that it can find compliance to the VA standard.

5.4.9 Determinations retained by the VA. Except where agreed under a work sharing arrangement as described in 2.4.2.1, , the VA will rely, to the maximum extent possible, on the CA to make compliance determinations on behalf of the VA. Justification is required for any compliance determination retained by the VA. Justification normally falls into the following general areas:

- a) New VA airworthiness standards where judgment is required in their initial application,
- b) New or novel features,
- c) Sensitive issues (usually associated with an accident or incident on a product with similar design features), or
- d) New MOCs or novel application of existing MOCs.

5.4.10 The VA may request technical assistance from the CA on a retained compliance determination under the terms of this agreement. For example, the VA may request that the CA witness a test on its behalf.

5.4.11 Phase III ends when the initial VI issue papers/CRIs are closed and a decision has been made by the VA regarding the compliance determinations associated with those VIs. These decisions should be documented in either the issue papers/CRIs, and/or in a Phase III closure document that provides a summary of all such decisions.

5.4.12 Additional VIs may be raised throughout the course of the validation project if the design, intended use of the product, assumptions used for certification, or compliance methodologies change from what was presented during the initial technical familiarization.

5.5 Phase IV – Compliance Determinations.

5.5.1 Phase IV begins immediately after the establishment of compliance responsibility for the initial VIs.

5.5.2 The CA and VA make their compliance determinations during Phase IV.

5.5.3 Approved Manuals must be submitted to the VA for review. Following VA notification of completion of its review, the CA shall sign the Approved Manual(s) on behalf of the VA.

5.5.4 At the end of a concurrent or sequential process, the following statements are to be given:

- a) For VA retained items or compliance determinations made by the VA at the request of the CA, the VA will notify the CA that compliance to the VA and/or CA (as applicable) standards has been demonstrated.
- b) Upon issuance of the CA's TC and completing all determinations not made by the VA, the CA will provide the following statement to the VA at the end of the validation project so that the VA may issue its TC.

“With the determinations of compliance made by the {VA} and summarized in {Letter or document} dated {Date}, the {CA} certifies that the {Specific product type and model} complies with the {VA's } Certification Basis as identified in {Certification Review Item A-1 or Issue Paper G-1} dated {Date}.”

5.5.5 The statements in paragraph 5.5.4 above requires the VA to list all compliance determinations it has made in a letter or report to the CA.

5.5.6 Phase IV ends with the issuance of the VA TC.

6. Supplemental Type Certificates.

- 6.1 These TVP will also be used to determine VA involvement in STC validation programs. To facilitate the application of the TVP, the CA will classify the STC as either a Basic STC or a Non-Basic STC.
- 6.2 Non-Basic STCs will generally be more complex and may require some VA involvement. Criteria for a Non-Basic STC are:
 - 6.2.1. Changes classified as significant, in accordance with 14 CFR 21.101(b) and EASA's Part 21A.101(b).
 - 6.2.2. Changes requiring, or, for concurrent programs, anticipated to require, a special condition, exemption/deviation, equivalent level of safety finding, or acceptable means of compliance identified in a CA issue paper/CRI.
 - 6.2.3. Changes introducing design features or operational capabilities identified on the VA generic VI list (see paragraph 4.5 of this Appendix).
 - 6.2.4. Changes where the STC compliance checklist includes standards included in the VA SSD list (see paragraph 3.2).
 - 6.2.5. Any other design changes categorized as a Non-Basic STC by the CA.
- 6.3 All other STCs are considered Basic STCs.

Table C-1

Summary of Type Validation Phases

Project Phase	Objective	Beginning	Ending
Phase I	General familiarization	Receipt of application by VA	Establishment of VA team
Phase II	Technical familiarization	Familiarization briefing	Establishment of initial VA Certification Basis and initial VI
Phase III	Determining VA Involvement	Completion of Phase II	Initial VIs closed and decisions made regarding initial VI compliance determinations
Phase IV	Compliance determinations	Establishment of initial VI compliance responsibility	Issuance of VA TC

SECTION III **POST-TYPE VALIDATION PRINCIPLES**

7. Application of the Post-Type Validation Principles.

- 7.1 For the purposes of this document, post-type validation activities are:
 - 7.1.1 Approval of changes to the approved type design not resulting in a new TC or STC, and
 - 7.1.2 Approval of airworthiness data included in an applicant's service information.
- 7.2 The Post-Type Validation Principles have the following objectives:
 - 7.2.1 To ensure that the VA is able to discharge its responsibilities for the continued airworthiness of the product, where appropriate.
 - 7.2.2 To ensure that the type design, as amended by post-type certification design changes, complies with the VA Certification Basis and that this is documented to an acceptable standard
 - 7.2.3 To achieve these objectives through the use of efficient and practical processes.

8. Design Change Approval Process.

- 8.1 Changes to the design covered by these procedures include those necessary for customer unique design features, product improvements and any other design changes made by the TC holder, or STC holder on its own STC, for whatever reason. The validation process for any design change will be greatly simplified in most cases when compared to new type certification projects.
- 8.2 Where design changes are proposed, they will be defined relative to the current definition of the approved type design as validated by the VA.
- 8.3 Design changes will be classified as either Major or Minor in accordance with the criteria and procedures of the CA and these design change classifications will be accepted by the VA without further investigation.
- 8.4 Design changes classified as Major will be further categorized in accordance with the CA procedures as Level 1 Major or Level 2 Major as defined below.

- 8.5 In discharging its responsibilities, the VA should seek to rely on the findings made and actions taken by the CA to the maximum extent possible.
- 8.6 Level 1 Major design changes are any of the following:
- 8.6.1 Changes classified as significant, in accordance with 14 CFR 21.101(b) and EASA's Part 21, 21A.101(b).
 - 8.6.2 Changes resulting in a different Certification Basis to that of the product being changed, e.g. new special conditions, exemptions/deviations, or equivalent level of safety findings.
 - 8.6.3 Changes involving new interpretations of the standards, or novel MOC
Note: An MOC or standards interpretation would not be considered “novel” or “new” if it had been applied previously in a similar context by both the FAA and the EASA.
 - 8.6.4 For design changes to approvals issued using TVP:
 - a) the change involves a VI and involves the use of a method of compliance different from those agreed by the CA and VA for use in the basic certification/validation.
 - b) the change involves a VI for which the VA has retained the compliance determination during the type validation program. As experience is gained, the VA may choose to reduce the application of this criterion.
 - 8.6.5 For design changes to approvals issued using a process other than TVP, the change involves areas where the VA exercised the compliance determination during the type validation program. As experience is gained, the VA may choose to reduce the application of this criterion.
 - 8.6.6 Any non-editorial change that affects the actual TC or type certificate data sheet.
 - 8.6.7 .Any other design changes categorized as Level 1 Major by the CA, the TC holder, or the STC holder for changes to its STC.
- 8.7 Level 2 Major design changes are all other major design changes not categorized as Level 1 Major.

- 8.8 Design changes classified as Minor or Level 2 Major will be approved by the CA in accordance with its normal procedures, against the CA and VA Certification Bases, and will be considered approved by the VA. The VA will not receive prior notification of such changes.
- 8.9 The applicant will submit to the VA, through the CA, applications for Level 1 Major design changes for which it is seeking validation. Concurrent application procedures are acceptable if agreed in advance. For design changes not targeted for the VA market, a TC/STC holder may opt to not apply for VA approval. However, the TC/STC holder is encouraged to obtain VA approval for any design changes that could eventually be incorporated into the VA fleet.
- 8.10 New VIs may be created to address features of the design change not included in the original type validation program.
- 8.11 VA involvement in Level 1 Major design changes will be in accordance with the criteria of the Type Validation Principles.
- 8.12 For Level 1 Major design changes the CA will provide the VA with a Statement of Compliance with the VA Certification Basis. The VA will approve all Level 1 Major changes, except in cases defined in paragraph 8.9.
- 8.13 All design changes approved by the CA on behalf of the VA or approved by the VA on the basis of compliance determinations made by the CA will be recorded in the type design/STC definition specifying the VA's current type design or STC and provided to the VA on a periodic basis.
- 8.14 This design change approval process is illustrated in Figure C-1.

9. Approval of Service Information.

- 9.1 Notwithstanding the special handling provisions for emergency actions defined in the TIP paragraph 3.1.4(a)(6), design changes contained in service information intended for applicability to aircraft under the VAs registry should be approved using the procedures in paragraph 8 above, prior to the issuance of the service information

10. Approval of changes to the Instructions for Continued Airworthiness (ICA)

- 10.1 Changes to the Airworthiness Limitations Section (ALS) of the ICA that are linked to a Level 1 Major design change will be evaluated according to the

design change approval procedures of Section 8 of this Appendix. Changes to the ALS that are not linked to a Level 1 Major change will be evaluated according to the Approved Manual change procedures in TIP paragraph 3.2.11.

10.2 Changes to the Maintenance Review Board Report (if applicable) will be evaluated under existing MRB procedures described in TIP paragraph 2.4.3.

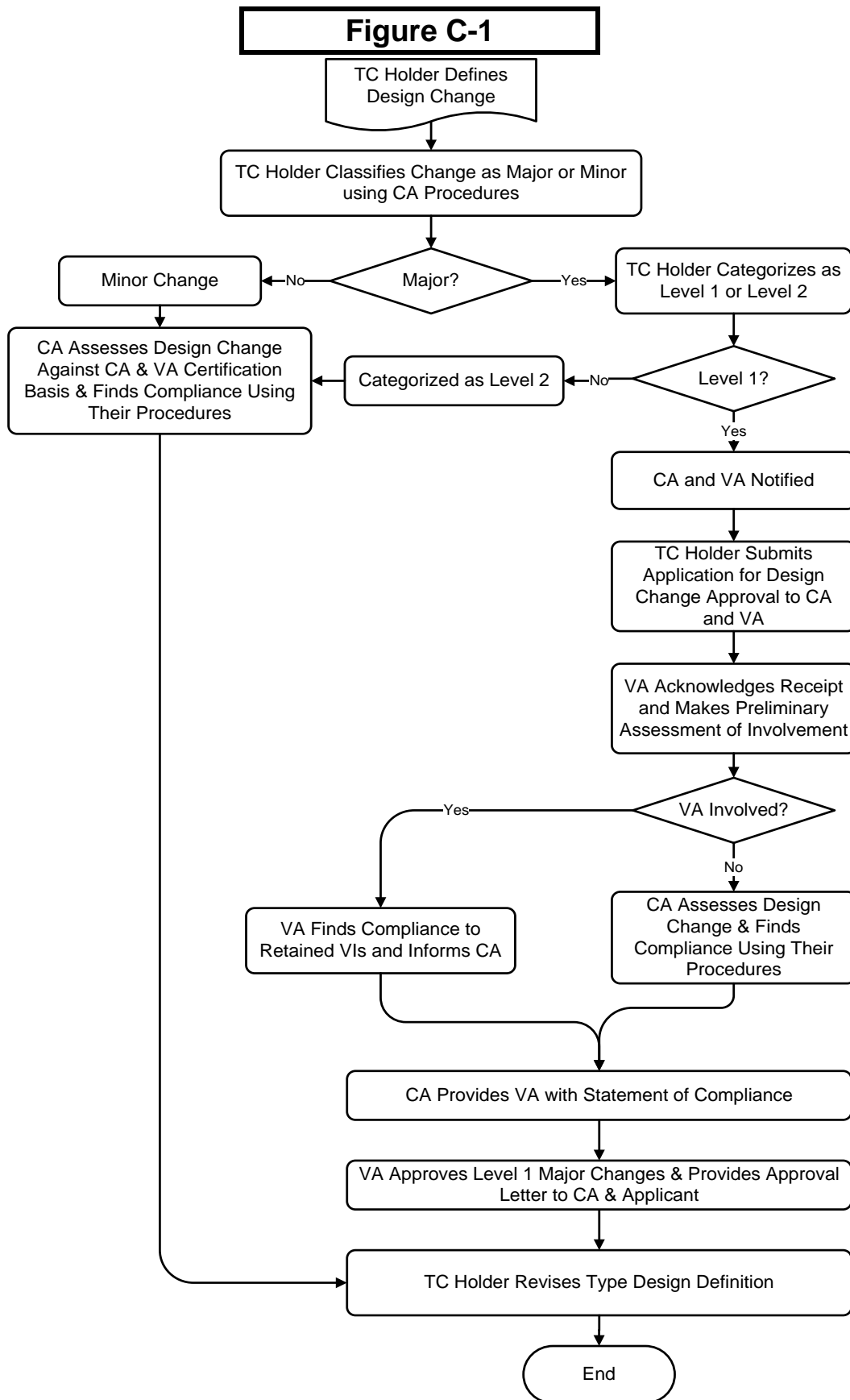
10.3 Changes to all other aspects of the ICA not covered under 10.1 and 10.2 will be:

10.3.1 Accepted by the VA without review for changes linked to Level 2 Major and Minor changes.

10.3.2 Identified to the VA with the Level 1 Major change application required by paragraph 9.10.

11. Updates to the Master Minimum Equipment List (MMEL)

11.1 After type certification, the VA will continue to be involved in updates to the MMEL as described in TIP paragraphs 2.4.1 and 2.4.2.



APPENDIX D

Acronym List

AA	EU Member State Aviation Authority
AC	Advisory Circular
ACO	Aircraft Certification Office
AD	Airworthiness Directive
AEG	Aircraft Evaluation Group
AFM	Aircraft Flight Manual
AMC	Acceptable Means of Compliance
AMOC	Alternative Method of Compliance
APU	Auxiliary Power Unit
Basic STC	Basic Supplemental Type Certificate
CA	Certificating Authority
CFR	Code of Federal Regulations
14 CFR	Title 14, Code of Federal Regulations
C of A	Certificate of Airworthiness
COS	Continued Operational Safety
CRI	Certification Review Item
CS	Certification Specification
DDP	Declaration of Design and Performance
EC	European Community
EU	European Union
EASA	European Aviation Safety Agency
ETSO	European Technical Standard Order

ETSOA	European Technical Standard Order Authorisation
EUROCAE	European Organization for Civil Aviation Electronics
FAA	Federal Aviation Administration
FOIA	Freedom of Information Act
ICA	Instructions for Continued Airworthiness
ICAO	International Civil Aviation Organization
JAA	Joint Aviation Authorities
JAR	Joint Aviation Requirements
MIO	Manufacturing Inspection Office
MMEL	Master Minimum Equipment List
MOC	Method of Compliance
MRB	Maintenance Review Board
NEPA	National Environmental Policy Act of 1969
Non-Basic STC	Non-Basic Supplemental Type Certificate
ODA	Organization Designation Authorization
PCM	Project Certification Manager
PM	Project Manager
PMA	Parts Manufacturer Approval
POA	Production Organisation Approval
RTC	Restricted Type Certificate
RTCA	Radio Technical Commission for Aeronautics
SSD	Significant Standards Difference
STC	Supplemental Type Certificate
TC	Type Certificate
TSO	Technical Standard Order
TSOA	Technical Standard Order Authorization
TVP	Type Validation Principles

U.S.	United States
VA	Validating Authority
VI	Validation Item
VLA	Very Light Aircraft

APPENDIX E

Scope of Acceptance for EU STCs Dated Before September 28, 2003

Previous BASA/IPA scope of US acceptance for STCs from the following member states;

France – STCs for products for which France is the State of Design

Germany - STCs for both German and U.S. products, and for Airbus model aircraft for which Germany is the State of Design for the design change.

Italy – STCs for products which Italy is the State of Design

Netherlands – STCs for Netherlands State of Design Aircraft

Sweden – STCs for products for which Sweden is the State of Design

United Kingdom – STCs for products for which UK is State of Design

APPENDIX F

MANAGEMENT PLAN for CFM International SA
between the
Federal Aviation Administration (FAA) of the United States of America
and the
European Aviation Safety Agency (EASA) of the European Union

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30 September 2011

CHAPTER 1: INTRODUCTION

1.1 PURPOSE AND SCOPE

This Management Plan is a Working Arrangement as defined in Section VII of the *Technical Implementation Procedures for Airworthiness and Environmental Certification* between the Federal Aviation Administration of the United States of America (FAA) and the European Aviation Safety Agency of the European Union (EASA). It will be used for the joint type certification and continuous airworthiness management of the CFM International SA engines with the objective that one program will provide compliance with the airworthiness standards of both the European Union and the United States of America. The FAA and EASA remain completely responsible, however, for the regulatory oversight and management of the type certificates they issue.

This Management Plan covers procedures for certification, design changes including repair designs, and continued airworthiness. It replaces the plan dated June 1999 between the FAA and the DGAC-France related to the CFM56 engine.

1.2 BACKGROUND

CFM International SA (or CFM in this document) is the design approval applicant and type certificate holder, and as such, CFM International SA is the entity responsible for the type certificates for the engines. This company is registered in France. Therefore, in relation to ICAO Annex 8, France is the “State of Design” for the engines. For purposes of this Management Plan, however, the United States is also considered the “State of Design” for design changes and repair data. The FAA and EASA will conduct new type certification approval programs and exercise continued airworthiness activities jointly for all CFM engine designs.

CFM utilizes the staff and facilities of SNECMA in France and GE Aviation (GE) in the USA. In addition, SNECMA and GE produce the engines, modules, parts, and components as licensees of CFM.

Production related-oversight will be conducted in accordance with Annex 1 of the *Agreement between the United States of America and the European Community on Cooperation in the Regulation of Civil Aviation Safety* (hereafter referred to as the Agreement). This oversight will be carried out in the USA by the FAA Vandalia Manufacturing Inspection District Office (MIDO), and in France by the Organisme pour la Sécurité de l'Aviation Civile (OSAC), acting on behalf of the DGAC-France as the qualified entity for the certification of production organizations. Appendix 2 to this Management Plan outlines the major elements of this manufacturing quality assurance activity.

CHAPTER 2: GENERAL

2.1 In carrying out this Management Plan, EASA and the FAA may utilize representatives delegated to function on their behalf, including approved organizations, where applicable.

2.2 As a European Design Organisation Approval (DOA) holder, CFM has certain privileges granted by EASA as outlined in Appendix 3, that will be exercised under this Management Plan. FAA will accept such actions by CFM. EASA will inform the FAA of any change in the CFM DOA terms of approval.

2.3 The FAA and EASA will inform each other of any changes in their respective organizations that may impact any of the procedures outlined in this Management Plan. The offices responsible for this Management Plan are identified in Appendix 1. These offices are responsible for control of the document, including the processing of any amendments.

CHAPTER 3: DESIGN APPROVAL ACTIVITIES

3.1 TYPE CERTIFICATION - GENERAL

The FAA and EASA are responsible for all design approvals. Consistent with the Agreement, they are referred to as the Technical Agents in this Management Plan.

3.1.1 Certification Basis and Special Requirements

EASA and FAA will jointly notify their certification bases in accordance with their respective certification procedures, including any special conditions. In order to achieve as much commonality as possible, each Technical Agent will advise the other prior to proposing special requirements. Similarly, any request from CFM for Equivalent Safety Findings will be reviewed and discussed jointly by FAA and EASA before responding to CFM.

Each CFM engine certification program will cover the envelope of EASA and FAA certification bases. A Compliance Check List, covering the requirements of both certification bases, shall be established by CFM.

3.1.2 Meetings

FAA and EASA will conduct joint type certification board meetings including preliminary and final type certification board meetings. Other interim type certification board meetings or joint technical meetings will be convened with CFM as deemed necessary. These joint technical meetings should include both engineering and manufacturing inspection specialists from the US and Europe, as appropriate.

Records of tele-conferences or summary minutes of any meetings of one Technical Agent with the manufacturer should be furnished to the other Technical Agent.

3.1.3 Certification Tests

Test plans and other substantiation data submitted simultaneously to each Technical Agent for review shall receive joint approval or concurrence, as appropriate, by both Technical Agents. The test(s) will be conducted in accordance with the jointly approved test plan and witnessed according to the procedures of the Technical Agent in whose jurisdiction the test is conducted.

Due to possible unforeseen circumstances that might arise during the actual testing, the witnessing Technical Agent may exercise judgment and permit certain deviations from the test plan, while trying to satisfy the certification requirements of both Technical Agents. In this regard, it is possible that some tests might have to be repeated in order to satisfy the certification requirements of the other Technical Agent. It is, therefore, important that the test plans are well detailed and that proper communication is established between the Technical Agents to alleviate the need for additional testing.

Unique Certification Tests: A unique certification test is defined as a test required by one Technical Agent only. In this case, the test plan will be approved solely by the initiating Technical Agent and provided to the other Technical Agent for information. However,

witnessing of the test may be delegated to the other Technical Agent for tests conducted within the other Technical Agent's jurisdiction.

Test reports and other substantiating data will be jointly approved by both Technical Agents. Such approval will be signified by FAA and EASA in the appropriate manner.

3.1.4 Conformity of Test Set-ups

If the engines, modules, parts, or components which are presented for certification tests in one jurisdiction contain some sub-elements that are coming from the other Technical Agent's jurisdiction, those sub-elements must be accompanied by Authorized Release Certificates (FAA Form 8130-3 or EASA Form 1), including, as required, the disposition of all deviations and non-conformances. Prior to conducting a test, validation of conformance will be documented in accordance with the procedure of the Technical Agent depending on where the test is performed.

3.1.5 Delegations

One Technical Agent may delegate the approval of various documents to the other Technical Agent. For example, such delegation could cover those documents where the 14 Code of Federal Regulations (CFR) Part 33 and Certification Specifications for Engines (JAR-E or CS-E) standards are considered to be equivalent. Documents approved in this manner should be considered to be jointly approved by both Technical Agents.

3.1.6 Units

All documents containing technical data must be submitted with the data in units acceptable to both Technical Agents.

3.1.7 Issuance of Type Certificates

FAA Type Certificates: Upon receipt of a CFM application for a new or amended type certificate, the FAA will conduct a certification program, and at its conclusion, grant to CFM International SA a Type Certificate (14 CFR § 21.21) for engines produced in the USA by GE, and an import Type Certificate (14 CFR § 21.29) for U.S. certification of SNECMA produced engines. The FAA must be satisfied that compliance with the applicable certification basis, as defined under paragraph 3.1.1 of this Management Plan, has been demonstrated.

EASA Type Certificate: Upon receipt of a CFM application for a new or amended type certificate, the EASA will conduct a certification program, and at its conclusion, grant to CFM International SA a Type Certificate. The EASA must be satisfied that compliance with the applicable certification basis, as defined under paragraph 3.1.1 of this Management Plan, has been demonstrated

3.2 CHANGES to TYPE DESIGN

3.2.1 Proposed Changes Requiring a New or Amended Type Certificate

See section 3.1 of this Management Plan for proposed changes requiring an application for a new or amended type certificate (Ref. 14 CFR § 21.19 and Part 21, 21A.19).

3.2.2 Proposed Changes Not Requiring a New or Amended Type Certificate

Proposed changes not considered by the FAA and EASA to be so extensive as to require an application for a new or amended type certificate are to be classified as either a "retained change" or a "non retained change".

Minor and major changes in type design are defined in 14 CFR § 21.93 and Part 21, 21A.91. Classification of changes are to be accomplished according to the procedures of the concerned Technical Agent.

- A “retained change” is any major change that may affect any limit or condition shown on the applicable Type Certificate Data Sheet; introduces new or reduced life limits; may affect any previously issued FAA or EASA Airworthiness Directive (AD); may affect engine installation interchangeability or engine component interchangeability; all changes to engine installation instructions and engine operating instructions; or a change designated as such by the FAA or the EASA. The FAA and the EASA will jointly approve all “retained changes”.
- A “non retained change” is any major change that is not considered to be a “retained change”.
- Minor changes are “non retained changes”.
- A “non retained change” will be processed in the jurisdiction of origin in accordance with existing local procedures and delegations and will be considered approved on behalf of the Technical Agent of the other jurisdiction. That Technical Agent may, however, audit the approval and rescind it if necessary. The approval is made against both FAA and EASA certification bases.

3.3 REPAIRS

Repair data designed by CFM for products for which CFM holds the Type Certificate, will be processed in the jurisdiction of origin of the data in accordance with existing local procedures and delegations.

Repair data will be considered approved on behalf of the Technical Agent of the other jurisdiction. That Technical Agent may, however, audit the approval and rescind it if necessary. The approval or acceptance is made against both FAA and EASA certification bases.

CHAPTER 4: CONTINUED AIRWORTHINESS

The FAA and EASA are jointly responsible for assuring the continued airworthiness of CFM engines.

4.1 UNSAFE CONDITIONS

During the service life of the engines, certain design changes, inspections or corrective actions may be required to correct previously unforeseen unsafe conditions. Such action will be implemented by:

- 1) the FAA by the issuance of an Airworthiness Directive in accordance with the existing procedures of 14 CFR part 39.
- 2) EASA by the issuance of an Airworthiness Directive in accordance with EU Commission Regulation 748/2012 Part 21, 21A.3B.

Both the FAA and EASA will comply with the Annex 8, Part II, Chapter 4.2.1.1(a) to the Convention on International Civil Aviation which requires the State of Design to transmit mandatory continuing airworthiness information to the State of Registry.

4.1.2 Uniformity of Mandatory Actions

Uniformity of mandatory continued airworthiness action is considered highly desirable. It is recognized, however, that FAA responsibilities and procedures under 14 CFR part 39 and similar constraints on EASA under Part 21, 21A.3B may, in some instances, preclude such uniformity. In order to achieve as much commonality as possible, each Technical Agent will advise the other prior to proposing Airworthiness Directive (AD) action.

4.1.3 Notification to States of Registry

For aircraft of registry other than USA or an EU Member State, the Technical Agents will notify the affected States of Registry of the mandatory action required in accordance with existing procedures of ICAO Airworthiness Annex 8.

4.2 FAILURES, MALFUNCTIONS, AND DEFECTS

The FAA and EASA will review failures, malfunctions and defects reported by CFM, and GE and SNECMA as licensees of a type certificate holder. Failures, malfunctions, and defects are reported to the FAA in accordance with 14 CFR § 21.3, and to EASA in accordance with Part 21, 21A.3.

The FAA and EASA will review and provide joint approval or concurrence, as appropriate, for any resulting design changes, inspections, and corrective actions proposed by CFM.

4.3 SERVICE DIFFICULTIES

Rapid and thorough transmission of information pertaining to service difficulties between the Technical Agents is considered of prime importance in order to resolve any airworthiness problem as quickly as possible. It is recognized that such reports will also be received by the

Technical Agents from other sources, such as operators, GE, SNECMA, etc. The Technical Agent receiving such a report will relay it to its counterpart Technical Agent without delay, unless it is known that the other Technical Agent also is being or has been provided with the information.

Initial investigative inquiries from each Technical Agent will be to CFM, as the type certificate holder. Copies of all correspondence related to service problems will be provided to the counterpart Technical Agent contact listed in Appendix 1. To the extent deemed necessary, there will be subsequent formal and/or informal coordination among the FAA, EASA, and CFM. In this regard, FAA and EASA may also communicate with SNECMA or GE, acting as the production organizations for CFM.

4.4 ACCIDENT INVESTIGATION

Either FAA or EASA, when involved in an accident investigation or having knowledge pertaining to an accident involving an aircraft equipped with CFM engines, will provide the other Technical Agent with all available information related to engine performance in a timely manner.

4.5 RESOLUTION OF DESIGN NON-COMPLIANCE ISSUES

Following the issuance of an approval, in the event that a design non-compliance issue is identified, FAA or EASA will send the official notification directly to CFM, with a copy to the other Technical Agent. Subsequent follow-on enforcement activity, if necessary, will be sent to CFM by their cognizant Technical Agent. In order to achieve as much commonality as possible, each Technical Agent will advise the other prior to accepting corrective action proposed by CFM, and closing the design non-compliance issue.

4.6 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA)

FAA: The instructions for continued airworthiness, including the engine maintenance manual and engine overhaul manual, submitted in support of initial certification, will be approved or accepted as applicable by the FAA prior to delivery of the first aircraft with the engine installed, or upon issuance of a standard certificate of airworthiness for the aircraft with the engine installed, whichever occurs later. Subsequent GE responsible changes to the manuals will be approved or accepted as applicable by the FAA or designated representatives. The “Airworthiness Limitation Section” will be approved by the FAA in accordance with applicable policies and procedures.

EASA: Except for the “Airworthiness Limitation Section” which is formally approved by EASA, and except for ICA (Service Bulletin) related to an EASA Airworthiness Directive, changes to the Instructions for Continued Airworthiness (including Service Bulletins) made by CFM after engine certification will be approved under the privileges of CFM International SA DOA.

CHAPTER 5: THIRD COUNTRY VALIDATION of ENGINE TYPE CERTIFICATES

Considering that the FAA and EASA conduct new type certification approval programs and exercise continued airworthiness activities jointly for all CFM engine designs, both the FAA and EASA will support CFM for the validation of the engine type certificates in third countries.

FAA: If CFM choose to get the validation of the FAA engine type certificate, the request for validation support must be made to the FAA according to the applicable FAA procedure.

EASA: If CFM choose to get the validation of the EASA engine type certificate, the request for validation support must be made to the EASA according to the applicable EASA procedure.

APPENDIX 1: FAA / EASA / DGAC-France Points of Contact

Primary Contacts for Certification and Continuing Airworthiness Subjects	
EASA	FAA
<p>EASA – Certification Directorate / Propulsion Postfach 10 12 53 50452 Cologne Germany</p> <p>Mr Pascal Lair Phone +49 221 89990 4061 Fax +49 221 89990 4561 Email: pascal.lair@easa.europa.eu</p> <p>Mr Angus Abrams Phone +49 221 89990 4054 Fax +49 221 89990 4554 Email: angus.abrams@easa.europa.eu</p> <p>Dr Matthew Mercy Phone +49 221 89990 4336 Fax +49 221 89990 4536 Email: matthew.mercy@easa.europa.eu</p> <p>EASA – Approvals & Standardisation Directorate / Organisations Postfach 10 12 53 50452 Cologne Germany</p> <p>Mrs Olga Veisz Phone +49 221 89990 6041 Fax +49 221 89990 4574 Email: olga.veisz@easa.europa.eu</p>	<p>FAA - Engine Certification Office Engine and Propeller Directorate 12 New England Executive Park Burlington, MA 01803 USA</p> <p>Mr Eugene Triozzi Phone +1 781 238 7148 Email: eugene.triozzi@faa.gov</p> <p>Mr Antonio Cancelliere Phone +1 781 238 7751 Email: antonio.cancelliere@faa.gov</p> <p>Mr Carlos Fernandes Phone +1 781.238.7189 Email: carlos.fernandes@faa.gov</p> <p>Fax +1 781 238 7199 (all)</p>

Primary Contacts for Manufacturing Quality Assurance Subjects	
DGAC-France / OSAC	FAA
<p>DGAC - DSAC/NO/AGR 50 rue Henry Farman 75720 Paris Cedex France</p> <p>Mrs Florence Leblond Phone +33 1 5809 3958 Fax +33 1 5809 4319 Email: florence.leblond@aviation-civile.gouv.fr</p> <p>OSAC SAS 1, place de Londres Immeuble Jupiter 95742 Roissy CDG CEDEX France</p> <p>Mrs Fanny Maunand Phone +33 1 4817 0345 Fax +33 1 4863 0016 Email: fanny.maunand@osac.aero</p> <p>Mr Philippe Moulius Phone +33 1 6059 5260 Fax +33 1 6059 5286 Email: philippe.moulius-osac@sncma.fr</p>	<p>FAA - Small Airplane Directorate Vandalia MIDO 303 Corporate Center Drive Suite 312 Vandalia, OH 45377 USA</p> <p>Ms Jane Dorsey, Mr Al Clifton Phone +1 937 898 3991 Fax +1 937 898 8717 Email: jane.dorsey@faa.gov al.clifton@faa.gov</p>

Primary Contacts for CFM International SA Management Plan	
EASA	FAA
<p>EASA - Rulemaking Directorate Postfach 10 12 53 50452 Cologne Germany</p> <p>Mr Thaddée Sulocki, Head of International Co-operation Phone: +49 221 89990 5007 Fax: +49 221 89990 5507 Email: thaddee.sulocki@easa.europa.eu</p>	<p>International Policy Office, AIR-40 Aircraft Certification Service 800 Independence Avenue, SW Washington, DC 20591</p> <p>Mr Chris Carter Phone: +1 202 385 8950 Fax: +1 202 493 5144 Email: chris.carter@faa.gov</p>

APPENDIX 2: MANUFACTURING QUALITY ASSURANCE

The FAA and DGAC-France are responsible for manufacturing quality assurance for GE and SNECMA as production approval holders.

In carrying out this Management Plan, the FAA and DGAC-France may utilize representatives delegated to function on their behalf, including approved organizations, where applicable.

A2.1 DIVISION OF PRODUCTION RESPONSIBILITIES

The production of engines, modules, parts, and components for the CFM engines to be used in commercial revenue service is divided between SNECMA and GE in accordance with their respective production license agreements with CFM. Modules, parts, and components produced by SNECMA and GE will be utilized in the assembly of complete engines by either SNECMA or GE, and used as replacement or modification parts for either GE or SNECMA assembled engines.

A2.2 QUALITY CONTROL SYSTEM

The quality control system utilized by both SNECMA and GE for CFM engine fabrication, assembly, inspection, and test operations shall be acceptable to both the FAA and the DGAC-France.

The DGAC-France and the FAA will insure that records of deviations are available at both production facilities.

A2.3 SURVEILLANCE

The FAA and DGAC-France will maintain continuous communication and exchanges of information for the purpose of performing adequate surveillance of manufacturing of CFM engines. In particular, in order to ensure that both GE and SNECMA's quality assurance systems remain equivalent, information on production system performance will be shared between the authorities as deemed necessary.

FAA: The FAA has regulatory responsibility for surveillance of GE's production approval for the manufacturing of CFM engines, modules, parts, and components under U.S. type certificate. This responsibility includes surveillance of modules, parts and components manufactured by SNECMA and supplied to GE. The FAA will hold GE accountable as a supplier to SNECMA for any modules, parts and components produced by GE for SNECMA assembled engines. However, routine surveillance in France will be delegated by the FAA to the DGAC-France under the provisions of Annex 1 of the Agreement. For components manufactured by GE under its FAA Production Certificate and to be installed on engines manufactured by SNECMA, the FAA will perform routine surveillance on behalf of the DGAC-France.

DGAC-France: The DGAC-France has regulatory responsibility for surveillance of SNECMA's production for the manufacturing of CFM engines, modules, parts, and components under EASA type certificate. This responsibility includes surveillance of modules, parts and components manufactured by GE and supplied to SNECMA. The DGAC-France will hold SNECMA

accountable as a supplier to GE for any modules, parts and components produced by SNECMA for GE assembled engines. However, routine surveillance in the USA will be delegated by the DGAC-France to the FAA per Annex 1 of the Agreement. For components manufactured by SNECMA under its DGAC-France Production Certificate and to be installed on engines manufactured by GE, the DGAC-France will perform routine surveillance on behalf of the FAA.

A2.4 RESOLUTION OF MANUFACTURING NON-COMPLIANCE ISSUES

In the event that a manufacturing non-compliance issue arises, FAA or DGAC-France will send the official notification directly to CFM, with a copy to the other Technical Agent. Subsequent follow-on enforcement activity, if necessary, will be sent to the responsible approval holder by their cognizant Technical Agent. In order to achieve as much commonality as possible, each Technical Agent will advise the other prior to accepting corrective action proposed by CFM, and closing the non-compliance issue.

A2.5 CERTIFICATES OF AIRWORTHINESS FOR EXPORT

- a) The FAA will provide Authorized Release Certificates (Form 8130-3) for export of complete engines from GE facilities and for export of parts and appliances from GE's approved production system, including GE-approved suppliers.
- b) The DGAC-France will provide authorised release certificates (EASA Form 1) for export of complete engines from SNECMA facilities and for export of parts and appliances from SNECMA's approved production system, including approved suppliers.

A2.6 QUALITY ASSURANCE ISSUES

- a) The FAA will inform the DGAC-France in writing of manufacturing quality assurance issues applicable to CFM engines produced under GE's approved production system, including GE-approved suppliers, on a periodic basis.
- b) The DGAC-France will inform the FAA in writing of manufacturing quality assurance issues applicable to CFM engines produced under SNECMA's approved production system, including SNECMA-approved suppliers, on a periodic basis.

The periodicity of this exchange of information will be agreed between the FAA and DGAC-France.

APPENDIX 3: CFM International SA DOA PRIVILEGES

A3.1 CFM INTERNATIONAL SA DESIGN ORGANISATION APPROVAL (DOA) HOLDER PRIVILEGES

On March 25, 2005, CFM International SA was granted an EASA Part 21, Section A, Subpart J Design Organisation Approval (DOA). As a result, it is accorded the privileges outlined in the attached EASA Terms of Approval 21J.086, as of the date of this Management Plan.

APPROVAL CERTIFICATE

EASA.21J.086

Pursuant to Regulations (EC) 1592/2002 and (EC) 1702/2003 and subject to the conditions specified below, the Agency hereby certifies

CFM International S.A.

2, Boulevard du Général Martial Valin
75015 Paris
France

as a DESIGN ORGANISATION

approved according to Part 21, Section A, Subpart J

CONDITIONS :

1. The approval is limited to that specified in the enclosed Terms of Approval, and
2. This approval requires compliance with the procedures specified in the Design Organisation Handbook, ref. CFM OP T-031, in the latest revision, and
3. This approval is valid whilst the approved Design Organisation remains in compliance with Part 21, Section A, Subpart J.
4. Subject to compliance with the foregoing conditions, this approval shall remain valid until surrendered or revoked.

For the European Aviation Safety Agency,

Date of issue: 25 March 2005

Patrick GOUDOU

Executive Director

European Aviation Safety Agency

Terms of Approval

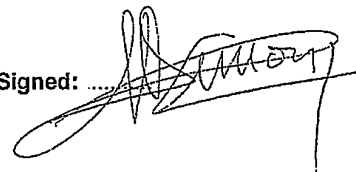
**Design Organisation Approval Certificate
EASA.21J.086**

1. **Scope of approval**
This Design Organisation Approval has been granted for:
 - designing engines, changes and repairs thereto in accordance with the applicable type certification basis and environmental protection requirements
 - showing and verifying the compliance with the applicable type certification basis and environmental protection requirements, and
 - demonstrating to the Agency this compliance.
2. **Categories of products**
Turbine engines
3. **List of products**

CFM56-2/-3	Series	(TC M9)
CFM56-5	Series	(TC M15)
CFM56-5B/-5C	Series	(TC E.003)
CFM56-7B	Series	(TC M21)
4. **Privileges**
 - (a) The holder of this design organisation approval shall be entitled to perform design activities under Part 21 and within its scope of approval.
 - (b) Subject to 21A 257(b), compliance documents submitted by the holder of this design organisation approval for the purpose of obtaining a type certificate or approval of a major change to a type design shall be accepted by the Agency without further verification
 - (c) The holder of this design organisation approval shall be entitled, within its terms of approval and under the relevant procedures of the design assurance system:
 1. to classify changes to type design and repairs as 'major' or 'minor'
 2. to approve minor changes to type design and minor repairs.
 3. to issue information or instructions containing the following statement: "The technical content of this document is approved under the authority of DOA nr. EASA. 21J 086."
 4. to approve the design of major repairs to products for which it holds the type certificate
5. **Limitations**
None.

Date of issue: 25 March 2005

Signed:



APPENDIX G

Record of Revisions

Revision	Revision Date	Paragraph	Change	Reason
1	Oct. 19, 2011	2.1.1(c)(3), 2.1.2(c)(3), 2.2.2(d)(7), 2.2.3(c)(7), 2.2.5(b)(8) 2.9.1(b) note,	Added new paragraphs	These additions support environmental certification processes.
1	Oct. 19, 2011	2.2.1.1(a)	Removed “from applicants in EU Member States as shown in the Appendix to Annex I of this agreement,”	This paragraph limits STC applications with a link to the Appendix of Annex 1. There is no need for this link since the TIP is subordinate to Annex 1.
1	Oct. 19, 2011	2.2.1.2, 2.2.1.3	Deleted paragraphs	These limitations were cleared during the 2010 STC shadow program.
1	Oct. 19, 2011	2.2.4.1(b), 3.2.1(g)	Deleted “in effect on the date of application to the FAA for approval of the design change.”	Part 34 requirements are based on manufacturing date.
1	Oct. 19, 2011	2.9.1(c)(5)	Added “or authorized FAA designees”	This wording allows use of designees to witness testing if appropriate.
1	Oct. 19, 2011	3.2.2.(b)	Added “except when retained by FAA per paragraph 3.2.6.1(a)”	This links to acoustic and emission change paragraph.
1	Oct. 19, 2011	3.2.6.1	Removed “’s Office of Environment and Energy”	It is the current practice for AIR, not AEE, to make those determinations.
1	Oct. 19, 2011	3.3.2(a)	Added FAA Order 8100.15, Organization Designation Authorization Procedures, and changed Order 8300.10, Airworthiness	Order 8100.15 contains procedures for unit members from organization designation authorizations to approve major repair data. Order 8900.1 replaced Order 8300.10.

			Inspector's Handbook, to Order 8900.1, Flight Standards Information Management System.	
1	Oct. 19, 2011	3.3.3(a)(1)(iii)	Added: "in France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom,"	Limited acceptance of pre-2003 data to the 6 BASA-IPA countries. This is in concurrence with the 2007 FAA/EASA exchange of letters.
1	Oct. 19, 2011	3.3.3(b)(3)(iv), 3.3.4(b)(2)(iii)(f)	Changed from "the design back to a pre-damaged condition" to "airworthy condition"	"Pre-damaged condition" is not always achievable by repair
1	Oct. 19, 2011	3.3.4(a)(2)(iv)	Replaced "used on" with "used to repair."	This is intended to prevent abuse of the provisions.
1	Oct. 19, 2011	5.4	Changed "AA" to "Competent Authority"	EASA is also Competent Authority for POA (e.g. Airbus POA)
1	Oct. 19, 2011	6.0.3	Added new paragraph	This paragraph allows direct technical assistances from EASA DOAs as currently provided for in FAA Order 8100.14A.
1	Oct. 19, 2011	Appendix A	Updated AIR-100 and AIR-200 telephone numbers	Office moved.
1	Oct. 19, 2011	Appendix F	Added new appendix	Management plan for CFMI
1	Oct. 19, 2011	Appendix G	Added new appendix	A Record of Revisions will keep historic version of the document available and provide reasons for changes.
2	Oct. 22, 2012	Numerous	Corrected reference to 1702/2012 by new regulation 748/2012	Editorial correction
2	Oct. 22, 2012	Numerous	Added "of the Agreement" to each	This should reduce the confusion about where

			citation of Annex 1.	Annex 1 is located.
2	Oct. 22, 2012	2.2.1.2	Added new paragraph.	This paragraph defines the scope of FAA STC acceptance by FAA, including STCs with Airplane Model Lists.
2	Oct. 22, 2012	2.2.3(a)(3) and 2.2.6.2.	Added ODA.	Clarification that STCs issued by ODAs are also acceptable.
2.	Oct. 22, 2012	2.3(b)	Moved this paragraph to paragraph 3.2.7.	Revisions to approved manuals occur after the originale design approval, and the procedures should be in Section 3 not in Section 2.
2	Oct. 22, 2012	2.4.2(a)	Deleted “The Flight Standards Department in” from the second sentence.	It is sufficient to just identify the Certification Directorate as the responsible organization.
2	Oct. 22, 2012	2.5.1 and 2.5.2	Added Notes and revised 2.5.1(a)(6) and 2.5.2(a)(6)..	In order to establish State of Design (SoD) responsibilities, the authority need only issue one TSOA or one ETSOA. It is not necessary that a one-to-one ETSOA approval to TSOA approval exist. This allows the importing authority to issue more or less TSO approvals then the exporting authority.
2	Oct. 22, 2012	2.9.1	Paragraph (a): Removed requirement for FAA witnessing, test plan approval, and review and approval of all demonstration plans and reports from EASA. Deleted second sentence. Paragraph (b): changed “may authorize	This clarifies that the FAA may accept any EASA environmental findings of compliance, not just limited to test witnessing and test plan approval.

			compliance test witnessing and other functions to” to “may authorize environmental findings of compliance to”.	
2	Oct. 22, 2012	2.9.2	<p>Paragraph (a): Removed requirement for EASA to review and approve all demonstration plans and reports from the FAA.</p> <p>Paragraph (b): changed “may delegate compliance test witnessing and other functions to” to “may delegate environmental findings of compliance to”.</p>	This clarifies that EASA may accept any FAA environmental findings of compliance.
2	Oct. 22, 2012	3.1.3	Revised third sentence.	Previous criteria would have made it not possible to follow FAA MSAD procedures for reduced life limit.
2	Oct. 22, 2012	3.1.6	Added paragraph.	This is intended to require coordination of unilateral Safety Alert Information Bulletins and Service Information Bulletins, similar to the coordination required for unilateral ADs.
2	Oct. 22, 2012	3.2.4.2	Added “used”	This is intended to exclude alterations done on new airplanes just prior to export to the EU.
2	Oct. 22, 2012	3.2.6.1	Added clarification on procedures.	Consistency with procedures on original environmental approvals.
2	Oct. 22, 2012	3.2.7	Moved paragraph from 2.3.	Revisions to approved manuals occur after the initial issuance of the

				design approval certificate, so the procedures should be in Section 3 not in Section 2.
2	Oct. 22, 2012	3.3.1	Revised as follows: “Repair designs requiring the production of new parts, that would constitute a design change, are not eligible for acceptance under these Implementation Procedures”. Added “However, it is permissible to fabricate just the parts that will be used in the repair of the individual aircraft, engine, propeller or article”.	This sentence was originally included in the TIP to prevent import of certain repairs that abused the definition of a repair. Unfortunately, it was also preventing the fabrication of legitimate repair parts. The intent of the provision has been clarified.
2	Oct. 22, 2012	3.3.2(b)	Deleted “Union” from last sentence.	Typographical error
2	Oct. 22, 2012	3.3.2.2(a)(1)(iii)	Deleted “properly executed” just before “FAA Form” and added “signed cover page of a repair specification.”	Quality issues with FAA approvals have been resolved and TIP wording was leading to confusion. Additionally repair specifications were not clearly covered by the TIP as was intended.
2	Oct. 22, 2012	Section V, multiple paragraphs	Changed “Appendix 1” to “the Appendix”	The Appendix to Annex 1 was incorrectly named in this section.
2	Oct. 22, 2012	5.1.4(b)(1)	Changed “Exceptions block” to “Remarks block”	There is no “Exceptions” block on an FAA Form 8130-3.
2	Oct. 22, 2012	5.1.6	Added a new paragraph (b)	It is not mandatory that FAA TSOA-holders also hold an EASA ETSOA to export articles to the EU. New procedures are contained in this paragraph to address import of new TSO

				articles that have not been granted an ETSOA.
2	Oct. 22, 2012	5.1.9(b)	Added Note.	This note explains the use of the AA's Export Certificate of Airworthiness during a return of an aircraft to the U.S.
2	Oct. 22, 2012	5.1.9(e)	Deleted paragraph.	This paragraph had special procedures for UK-CAA and LBA. However during development of the TIP, those procedures were extended to all EU states. The paragraph was mistakenly left in.
2	Oct. 22, 2012	5.5.1(a), 5.5.2(a)	Moved the second sentence of (a)(4) into a new (a)(5).	The previous wording made it unclear what information needed to be marked on the part and what information needed to be provided with the part.
2	Oct. 22, 2012	Appendix A	Revised AIR-100 address and fax number.	Previous information was incorrect.
2	Oct. 22, 2012	Appendix A	Added email addresses, added BASOO and GASOO, corrected Atlanta ACO contact information	The email addresses will improve communication between EU and U.S.
2	Oct. 22, 2012	Appendix C, 9.5.7	Added criteria for Level 1 major design changes to include certain changes to previously approved manuals.	Necessary to give VA notification and consideration for involvement for these types of approved manual changes.
2	Oct. 22, 2012	Appendix D	Added ETSOA	ETSOA used in document but not listed in acronym list.
3	April 23, 2013	The following paragraphs were added, revised or deleted: 1.1.2, previous 1.6(y),	Paragraphs were added, revised or deleted and resulted in extensive renumbering in	All changes to these paragraphs were based on the recommendations of the Validation Implementation Team

		1.6(dd), 1.6(mm), 2.1.4(d), 2.2.2(c) & (f), 2.2.3(d) & (h), 2.2.4, 2.2.5, 2.2.6.1(a), 2.2.6.2(a), 2.2.7.1, 2.2.7.2, 2.3, 2.4.1(a), 2.4.3, 2.4.4, 3.2.1(b), (c), (d) & (f), 3.2.2, 3.2.3, 3.2.4, 3.2.5, 3.2.10.2, 3.2.11(a).	sections 2.2 and 3.2.	(VIT). The changes were made after the VIT was tasked to analyze potential validation difficulties and to further develop the TIP towards a streamlined and effective process.
3	April 23, 2013	5.5.1(a)(3)	Revised.	Corrected to reference TSO Part 45 marking requirements.
3	April 23, 2013	Appendix A	Revised address for FAA Contact Point for FAA Airworthiness Directives.	Previous information was incorrect.
3	April 23, 2013	Appendix A	Revised address for AIR-200.	Previous information was incorrect.
3	April 23, 2013	Appendix A	Revised address for Atlanta ACO.	Previous information was incorrect.
3	April 23, 2013	Appendix A	Added fax number for GASOO.	Previous information was missing.
3	April 23, 2013	Appendix C	Extensively revised.	All changes to Appendix C were based on the recommendations of the VIT. The changes were made after the VIT was tasked to analyze potential validation difficulties and to further develop the TIP towards a streamlined and effective process.
3	April 23, 2013	Appendix D	Removed Non-SSD	Based on VIT change, no longer used.
3	April 23, 2013	Throughout document.	Numerous typographical error, formatting and grammatical corrections.	Previous information was incorrect or improperly formatted.
4	Sept. 22,	2.0.7	Added last sentence.	Link to details for

	2014			communication.
4	Sept. 22, 2014	TIP Revision 3 2.5.1(a)(4), 2.5.2(a)(4)	Deleted. Subsequent paragraphs renumbered.	It was determined this info is not useful to process a TSO or ETSO application.
4	Sept. 22, 2014	3.1.5	Added new 3.1.5.1 and 3.1.5.2. Subsequent paragraphs renumbered.	Clarification on VA acceptance of CA AMOCs related to ADs to increase reliance on CA AMOC.
4	Sept. 22, 2014	3.2.2(b)(3)	Corrected paragraph reference.	Previous information was incorrect.
4	Sept. 22, 2014	3.2.2(b)(7) and (8)	Deleted “if applicable”	It’s expected that the CA will inform the VA when any information in the list is not applicable.
4	Sept. 22, 2014	3.3.2.2(a)(2)(iii) & (iv)	Added “PMA”	Repair design data from PMA holder for their articles is acceptable.
4	Sept. 22, 2014	3.3.2.2(a)(2)(iv) Note	Revised	Previous note was unclear.
4	Sept. 22, 2014	2.0.8, 2.5.3(a)(1), 3.1.4(b), 3.2.7.1, 5.1.9(d)(4), 5.1.10(d)(3)		Minor editorial or formatting revision.
4	Sept. 22, 2014	Appendix F, page F-12	Revised address for Vandalia MIDO.	Incorrect address.