

FAA-UK CAA Implementation Procedures for Airworthiness (IPA) Revision 1 Outreach Workshop

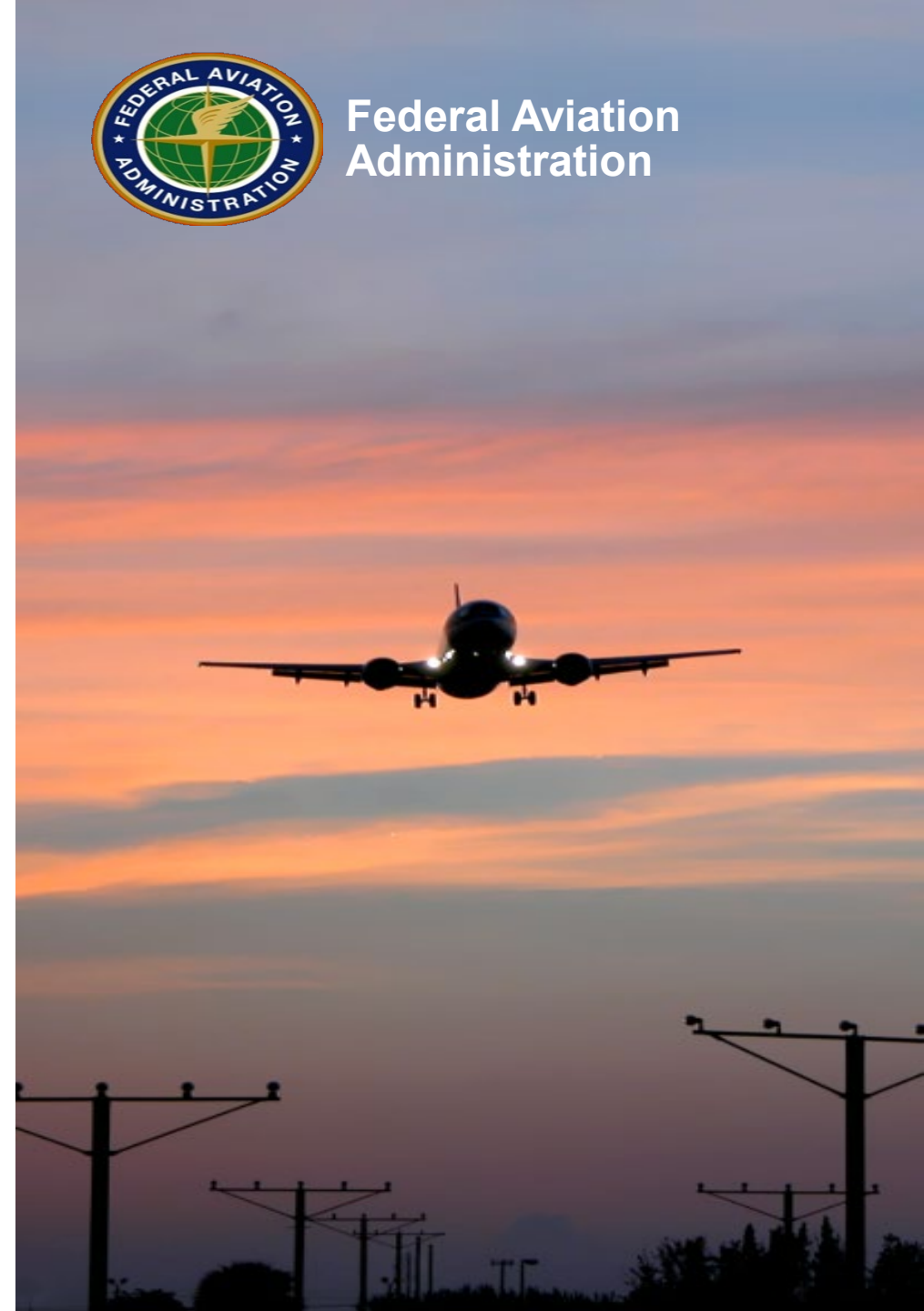
Presented to: U.S. Industry

By: AIR-40

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Federal Aviation
Administration



Revision 1 - Outreach Schedule

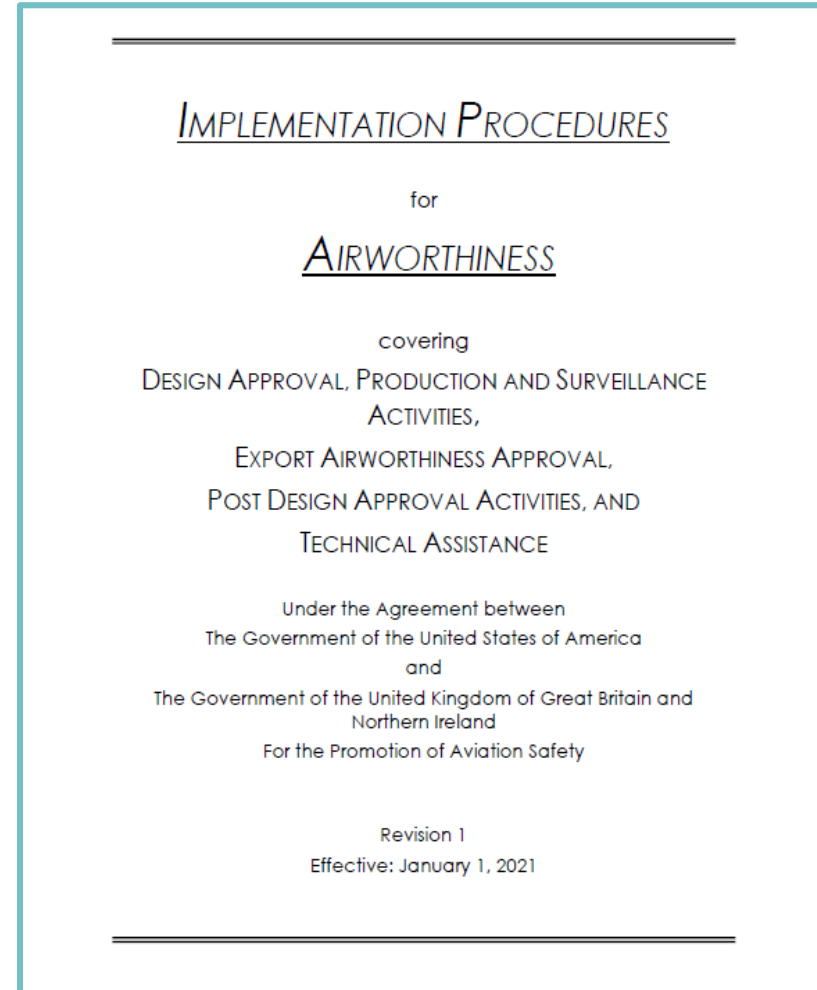
Joint outreach efforts between FAA and UK CAA

➤ UK CAA Schedule

- CAA AIR Session
 - November 12, 2020
- Industry Design & Certification Session
 - November 18, 2020
- Industry Maintenance Session
 - November 19, 2020

➤ FAA Schedule

- Internal AIR Session
 - December 1, 2020
- External Industry Session
 - December 2, 2020



Overview

➤ **IPA Background & Timeline**

- What drove the IPA change
- Revision 1 – Key Objectives

➤ **What is validation**

➤ **IPA layout**

- Detailed review of each Section

➤ **Questions**



IPA Background & Timeline

- **May 23, 2002** – Original United Kingdom (UK) IPA Signed
- **June 23, 2016** – National referendum held to determine if UK will leave *or* remain in the European Union (EU)
- **March 29, 2017** – The UK invokes Article 50 of the Lisbon Treaty giving EU and UK two years to agree to terms of exit
- **November 2017** – The FAA and UK CAA begin to revise the 2002 IPA. They develop 2 IPA options contingent upon the UK's Brexit decision
- **March 2019** – FAA and UK CAA sign IPA (Option 2)
- **January 31, 2020** – The UK officially withdrew from the EU and subsequently entered a transition period that runs until December 31, 2020
 - The UK will continue to be covered under the US-EU agreements through the transition period
- **Jan – Oct 2020** – FAA/UK CAA fine-tuning IPA procedures for Revision 1
- **November 17, 2020** – IPA Revision 1 signed
- **Jan. 1, 2021** – Revision 1 – entry into force



IPA Rev. 1 Layout: Sections 1-10

Section I	General
Section II	Scope of the IPA
Section III	Validation Procedures
Section IV	Continued Airworthiness
Section V	Administration of Design Approvals
Section VI	Production and Surveillance Activities
Section VII	Export Airworthiness Approval Procedures
Section VIII	Technical Support between Authorities
Section IX	Special Arrangements and Management Plans
Section X	Authority



IPA Rev. 1 Layout: Appendices

Appendix A	Addresses
Appendix B	List of Special Arrangements
Appendix C	Cross-Reference of Standards
Appendix D	List of Acronyms
Appendix E	Safety Emphasis Items (SEI) List



Section I - General

➤ Governance (1.5)

- The FAA and the UK CAA will meet, through management meetings, as necessary, to review these Implementation Procedures and ensure their continued validity.
- The frequency of these meetings will be determined by both Authorities, via the focal points identified in Appendix A, and will depend on the number and significance of the issues to be discussed between the Authorities.



Section I - General

➤ Continued Maintenance of Confidence (1.6)

– This oversight model will cover at least the following elements:

- A desktop sampling audit process to verify approvals and findings post-validation.
- Sharing of relevant information on standardization and quality management activities.
- The FAA and the UK CAA will track metrics related to the milestones outlined in 3.5.2 as well as the time from application to VA approval of all approval types covered under the scope of these Implementation Procedures.
- The FAA and the UK CAA will establish a sampling audit process of production systems in accordance with 1.6.2.
- Findings resulting from the sampling audit process performed by one Authority will be shared with the other. Resolution and follow-up of these findings will be confirmed between the FAA and the UK CAA.



Section I - General

➤ Interpretations and Resolution of Conflicts (1.8)

- The FAA and the UK CAA will resolve issues in a timely manner through consultation. Every effort should be made to resolve issues at the working staff level before elevating issues through the responsible management hierarchy. To resolve issues, the FAA and the UK CAA will use the following process.
 - When a Project Certification Manager and Project Validation Manager cannot resolve an issue, the first certification decision point is between the FAA local office manager and the UK CAA Manager responsible for Aircraft Certification.
 - If resolution cannot be reached, the issue will be expeditiously escalated to the FAA Aircraft Certification Service (AIR) Division Director and the UK CAA Head of Airworthiness.
 - If resolution cannot be reached, the FAA Aircraft Certification Service Executive Director and the UK CAA Group Director for Safety and Airspace (SARG) shall resolve the matter.

Section I - General

➤ **Cooperation on Investigation or Enforcement Action (1.10)**

- Both the FAA and the UK CAA will cooperate and assist in the investigation of any alleged or suspected violations of the FAA or the UK CAA laws or regulations.
- Both Authorities will cooperate in sharing information needed for any investigation or enforcement action, including its closure.
- The sharing of information will be subject to the respective laws and regulations of the U.S. and the UK that govern the disclosure or sharing of the requested information.



Section I - General

➤ Definitions (1.12)

- Expanded and updated to align with the AIR-40 standard IPA template
 - These align closely with Order 8110.52B for applicable definitions
- Different definitions, same word
 - Article



Section II-Scope of the IPA

➤ Design Approvals and Airworthiness Certifications (2.2)

- These Implementation Procedures cover the products and articles identified below, their approvals, and the provisions set forth in subsequent sections.
 - **Type Certificates (TCs)** and **amended TCs (ATCs)** for products listed in Table 1 for which the U.S. is the SoD, and TCs and ATCs listed in Table 2 for which the UK is the SoD;
 - **Supplemental Type Certificates (STCs)** and **amended STCs** for Products listed in Table 1, and STCs and amended STCs for products listed in Table 2 that have been issued both an FAA and a CAA type design approval, regardless of SoD;
 - CA approved design data used in the support of repairs, as identified in paragraph 3.3.5, for products and articles for which both the FAA and the CAA have issued a type design approval for the product;
 - **TSO and PMA approvals** as listed in Table 1 and Table 2 (see paragraph 2.2.3.4);
 - **Any other design change approved under the CA's system.**



Section II – Scope of the IPA

Summary of U.S. State of Design Products, Articles, and their Associated FAA Approvals by the UK CAA

Note 1: Aircraft certified in the restricted category for purposes of agricultural, forest and wildlife conservation, aerial surveying, patrolling, weather control, aerial advertising, aerial dispensing of liquids, and other special purpose operations, on a case by case basis, as determined by the Authorities.

Note 2: A TSO article approval originally granted by FAA shall be automatically accepted by the CAA as being equivalent to having granted and issued its own approval.

Note 3: Including other FAA approved changes to the TC and STC such as minor modifications, repairs and changes to the approved manuals.

Table 1

PRODUCT	FAA Type Certificates & Amendments (see Note 3)	FAA Supplemental Type Certificates & Amendments (see Note 3)	FAA Technical Standard Order Authorizations (see Note 2)	Parts Manufacturer Approvals
Airplanes in the following categories:				
Normal	✓	✓	N/A	N/A
Utility	✓	✓	N/A	N/A
Acrobatic	✓	✓	N/A	N/A
Commuter	✓	✓	N/A	N/A
Transport	✓	✓	N/A	N/A
Rotorcraft in the following categories:				
Normal	✓	✓	N/A	N/A
Transport	✓	✓	N/A	N/A
Manned Free Balloons	✓	✓	N/A	N/A
Aircraft Engines	✓	✓	N/A	N/A
Propellers	✓	✓	N/A	N/A
Aircraft in Special Classes:				
Airships	✓	✓	N/A	N/A
VLA	✓	✓	N/A	N/A
Gliders	✓	✓	N/A	N/A
Powered Lift	✓	✓	N/A	N/A
Aircraft type certified in the restricted category	(see Note 1)	(see Note 1)	N/A	N/A
TSO Articles	N/A	N/A	✓	N/A
PARTS:				
Replacement or Modification Parts for the above airplanes, rotorcraft, balloons, aircraft engines, propellers, special class aircraft, and Articles.	✓	✓	✓	✓



Section II –Scope of the IPA

Summary of UK State of Design Products, Articles, and their Associated CAA Approvals Eligible for Approval by the FAA.

Note 1: Aircraft certified in the restricted category for purposes of agricultural, forest and wildlife conservation, aerial surveying, patrolling, weather control, aerial advertising, aerial dispensing of liquids, and other special purpose operations, on a case by case basis, as determined by the Authorities.

Note 2: A TSO article approval originally granted by EASA prior to the date of the UK’s exit from the EU shall be automatically accepted by the FAA as being equivalent to having granted and issued its own approval.

Note 3: Including other CAA approved changes to the TC and STC such as minor modifications, repairs and changes to the approved manuals.

Table 2

PRODUCT	CAA Type Certificates & Amendments (see Note 3)	CAA Supplemental Type Certificates & Amendments (see Note 3)	UK Technical Standard Order Authorizations (see Note 2)	Parts Manufacturer Approvals
Airplanes in the following categories:				
Normal	✓	✓	N/A	N/A
Utility	✓	✓	N/A	N/A
Aerobatic	✓	✓	N/A	N/A
Commuter	✓	✓	N/A	N/A
Transport	✓	✓	N/A	N/A
Rotorcraft in the following categories:				
Normal	✓	✓	N/A	N/A
Transport	✓	✓	N/A	N/A
Manned Free Balloons	✓	✓	N/A	N/A
Aircraft Engines	✓	✓	N/A	N/A
Propellers	✓	✓	N/A	N/A
Aircraft in Special Classes:				
Airships	✓	✓	N/A	N/A
VLA	✓	✓	N/A	N/A
Gliders	✓	✓	N/A	N/A
Powered Lift	✓	✓	N/A	N/A
Aircraft type certificated in the restricted category	(see Note 1)	(see Note 1)	N/A	N/A
TSO Articles	N/A	N/A	✓	N/A
PARTS:				
Replacement or Modification Parts for the above airplanes, rotorcraft, balloons, aircraft engines, propellers, special class aircraft, and articles.	✓	✓	✓	N/A

Section III-Validation Procedures

➤ Validation Procedures – Overview

- Classification of design changes/approvals
 - Acceptance versus Validation
 - Streamlined validation (SV)
 - Limited technical validation (LTV)
 - Full technical validation (FTV)
- Management of FAA level of review
 - Application Package
 - Safety Elements
 - Work Plan
- Other Considerations
 - Environmental Compliance
 - TSOA/PMA



Section III-Validation Procedures

➤ Classification of Design Changes / Approvals:

- Certificates and design approvals are accepted or approved by the validating Authority (VA) using one of the following three procedures:
 - Acceptance
 - No application required: The VA will accept the CA approvals without issuance of its own approval.
 - **Streamlined Validation (Basic in TIP6)**
 - An approval by the VA with minimal level of technical involvement, with the issuance of a VA-approved document.
 - Design change approvals not impacted by the Safety Elements found in 3.5.3 are eligible

Section III-Validation Procedures

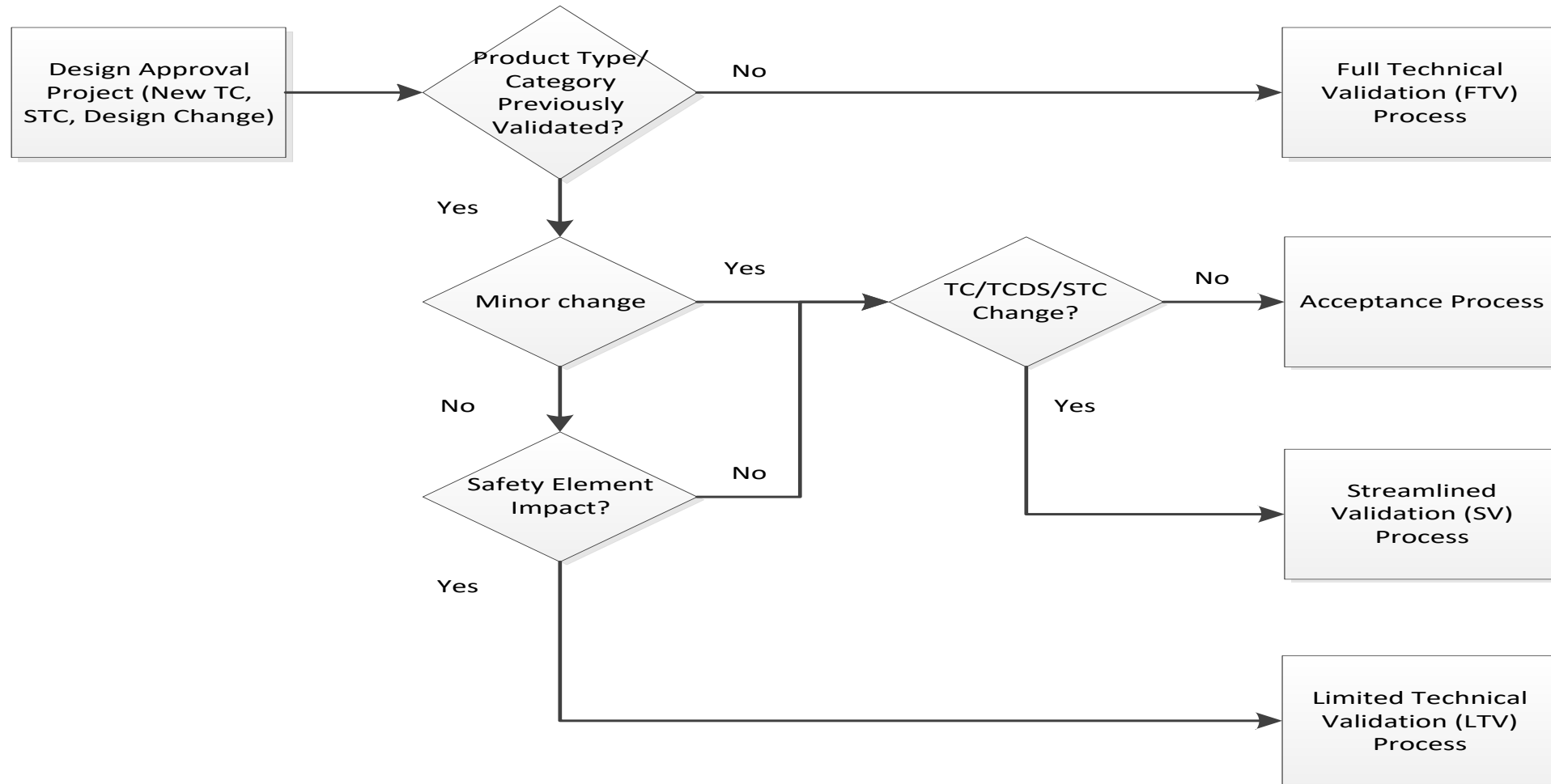
➤ **Technical Validation (Non-Basic in TIP6)**

- Technical Validation of the certificate or change is performed by the VA using risk-based criteria to define its level of involvement. The VA will issue an approval document.
 - **Full Technical Validation (FTV)**
 - Objectives are to evaluate compliance with applicable standards, and identify areas for AFTCB
 - Ideal for concurrent validations
 - **Limited Technical Validation (LTV)**
 - Validation will be performed by the VA using Safety Elements to define level of involvement



Section III-Validation Procedures

➤ Design change classification



Section III-Validation Procedures

➤ Acceptance (3.2)

- Any design change that does not require the CA to physically issue a new or revised TC, TCDS, Type Certificate Data Sheet for Noise (TCDSN) or STC;
- All design changes classified as **minor**
- **TSO/UKTSO Articles** (see paragraph 3.3.3);
- **PMA articles** under the conditions of paragraph 3.3.4;
- Design data for a **repair** (approved in accordance with paragraph 3.3.5); and
- Design data for an **alteration** except for critical components (see paragraph 3.3.6).



Section III-Validation Procedures

➤ Acceptance Procedures

– TSO/UKTSO Articles 3.3.3

- Acceptance will be applicable to all current and future TSOAs and UKTSOAs issued by the FAA or the CAA, except for UKTSOAs for Auxiliary Power Units (APU).
- The TSOA or UKTSOA is an approved article within the respective FAA or CAA system, but does not imply installation approval.
- Procedures for Changes to Articles by the DAH
 - The FAA and the CAA shall accept, without further validation, data related to unapproved non-TSO functions that are integrated into a TSO or UKTSO article and accepted in accordance with the procedures of the EA.

Section III-Validation Procedures

➤ Acceptance Procedures

- Parts Manufacturer Approval (PMA) Articles 3.3.4
 - The CAA shall directly accept all FAA PMA approvals, without further showing, for modification and/or replacement articles for installation on products certified or validated by the CAA in the following cases:
 - **The exception being if the PMA part is a “critical component”** (see definition)
 - » The PMA part conforms to design data obtained under a **licensing agreement** from the TC or STC holder according to 14 CFR section 21.303 and the TC or STC has been **validated** by the CAA.
- Design Data for Repairs and Alterations
 - Approved design data from each other provided that the approval was granted under the CA’s **repair** design approval procedures
 - FAA-approved or accepted **alterations** per 14 CFR part 43 installed on an individual used aircraft exported from the U.S., regardless of the SoD of the aircraft, are considered approved by the CAA at the time of import to the UK **except for alterations on critical components**. The CAA 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.

Section III-Validation Procedures

➤ Validation Process

- Application (applies to SV, LTV, and FTV)
 - Upon receipt of an application for validation from an applicant, the CA will send it to the VA after it has verified:
 - The product or design change is within scope (per 2.8)
 - The product or design change has been issued a TC, TA, or STC by the CA, or an application has been made to the CA, and
 - The application is not eligible for Acceptance



Section III-Validation Procedures

➤ Validation Process

– Application Packages

- The CA confirms the application contains the following information (all known data) and forwards to the appropriate VA office as listed in Appendix A:
 - Cover letter from the CA identifying the following:
 - Requested timeline
 - Concurrent or Sequential Validation
 - SV, LTV, or FTV classification
- Completed VA application form;
- Copy of CA's TC/TA and data sheet, or STC or amended TC/TA, that identifies the certification basis. If no data sheet, the document that defines the cert basis;
- The date of the application to the CA;
- Description of change;
- The CA will list applicable ADs and provide assessment that changes to correct the unsafe condition have been incorporated into the design;
- Compliance Checklist, including reference to known applicable VA additional technical conditions, and MOCs;



Section III-Validation Procedures

➤ Validation Process

- Application Packages, cont.
 - Approved Manuals or changes to Approved Manuals (3.5.5.8)
 - Master Drawing List;
 - Maintenance/Repair Supplements;
 - Weight and Balance data;
 - Instruction for Continued Airworthiness
 - Description of the criteria that led to the FTV, LTV, or SV project categorization;
 - Issue Papers/CRI's raised during the CA's cert activities related to the Safety Elements;
 - Environmental definition, or acoustical or emissions change
 - A detailed description of the areas impacted by the applicable Safety Elements 3.5.3;
 - Information on VA market interest and proposed delivery schedules;
 - CA certifying statement 3.8.



Section III-Validation Procedures

➤ Validation Process

- Acknowledgement of Application (applies to FTV, LTV, and SV)
 - VA will notify the CA with **10 working days** of receipt of application;
 - The VA will review the application, confirm the classification, and request the CA to send any missing information required for the application within **30 working days** of receipt of application;
 - The VA will advise the applicant of any fees within **15 working days** of receipt of a complete application package;
 - Upon receipt of payment and applicable fees, the VA will begin work.

Section III-Validation Procedures

- **Safety Elements Review** (applies to LTV and SV projects only)
 - If one or more of the Safety Elements is applicable, the VA will conduct a LTV.
 - If none are applicable, the VA will conduct a SV.
 - The VA will establish the scope of its technical review based upon the applicability of the following safety elements.

- **Safety Elements:**
 - **Safety Emphasis Items** – Areas of VA interest for all products of a certain class. These include where acceptable MOCs, at an industry level, continue to evolve, there is subjectivity in their application, and VA awareness is necessary. Each authority will publish, for public consumption, and periodically update, a list of generic certification issues for each product class. In the absence of such a published list, this criterion will not be invoked;
 - **Significant Changes** –The design change is classified by the CA as significant under their applicable requirements (i.e., either 14 CFR section 21.101 or (UK) Part 21.A.101 as applicable);
 - **New Technology**-New technology is technology that is new to the VA as a whole, not just new to the VA team members.

Section III-Validation Procedures

➤ Safety Elements, cont.

- **Novel Application of Existing Technology**-A known technology being used in a manner different from previous experience of the CA or VA;
- **Product Use is Unconventional**-A product being used for a purpose for which is was previously not designed
- **Potential Unsafe Condition**-A potential unsafe condition identified by either Authority that warrants issuing mandatory continuing airworthiness information (MCAI) for this product or a similar product. A potential unsafe condition may also be one in which the product contains design features pursuant to 14 CFR section 21.21(b)(2) or (UK) Part 21.A.3B 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's VA certification basis. Additionally, continued airworthiness concerns occur when the VA is aware of an issue for similar products already in service and may be actively taking steps to address the concern.

Section III-Validation Procedures

➤ Safety Elements, cont.

- **New Standard Interpretations or new MOCs for the Existing Airworthiness Standards** - Interpretations/MOC applied by the CA that are different from those already accepted between the CA and the VA. An interpretation of a method of compliance or standard would not be considered “new” if it had been applied in a similar context by both the VA and the CA.
- **New VA Standards** – When new VA airworthiness standards are adopted and the following apply:
 - Limited past experience by the CA or VA with their application to a CA product; or
 - They have an important impact on the whole product or a product’s critical feature; or
 - Engineering judgment is required to establish compliance

Section III-Validation Procedures

➤ Safety Elements, cont.

- The CA or VA Certification Basis includes or is anticipated to include a new or amended:
 - FAA exemption or UK CAA deviation
 - Special Condition; or
 - Equivalent Level of Safety (ELOS)
- **Significant Standards Difference (SSD)**-Airworthiness standards differences where the standards are substantively different and may result in type design changes (including approved manuals) to meet the airworthiness standards of the VA. SSDs will be identified by the VA based on a comparison of applicable VA and CA standards. If no specific SSD listing is available, this safety element may not be applied.

Section III-Validation Procedures

➤ Safety Elements, cont.

- **Acoustical or Emissions Change** – A change classified as an acoustical or emissions change per 14 CFR section 21.93 (b) or (c) or ((UK) Part 21.A.91; or
- **Areas for Further Technical Confidence Building (AFTCB)**
 - Consist of specific airworthiness standards, design features, or technologies identified by the VA.
 - Based on either a lack of validation experience or objective evidence gathered from past validation and/or operational experience with similar CA products, where that experience supports a need for further confidence building.
 - Areas for further confidence building are documented and shared between the Authorities. These initial lists will be provided by each Authority within 60 calendar days after signing this IPA. Absent such a list, this Safety Element will not be applied by the VA.
 - The number of technical areas that require further confidence building is expected to decrease as the VA gains validation and/or operational experience with CA
 - However, if persistent gaps in compliance determinations are discovered by the VA during validation projects or operation of an article and/or product of the same type, the number of technical areas requiring further confidence building can increase. However, the VA must shall document and submit objective evidence to the CA.

Section III-Validation Procedures

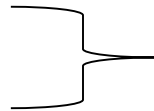
➤ Safety Elements

- The Safety Elements in 3.5.3.3 of the IPA are generally similar to the Non-Basic criteria of the TIP6, except:
 - The terminology used to consider potential unsafe conditions (rather than unilateral AD)
 - Definition of non-simple substantiation acoustical or emissions changes not used
 - Appreciable effect on OSD not considered separately
 - SSD added
 - Provision for ‘any other change’ not included
 - Concept of AFTCB added

Section III-Validation Procedures

➤ Safety Elements

- FAA SEI list
- FAA SSD list
- FAA AFTCB list



Provided by FAA and UK CAA

- FAA and UK CAA Lists: – currently identical to the SEI Lists from the FAA/EASA Technical Implementation Procedures (TIP).
- **Links found in Appendix E**
- FAA has an AFTCB list; UK CAA has none at this time

Section III-Validation Procedures

➤ Streamlined Validation (3.5.4)

- The SV process is limited to only the administrative actions required for the VA to issue its design approval
- SV projects are sequential validation projects
- The VA shall issue its design approval based on the CA's certifying statement to the VA's certification basis and rely on the data provided by the CA, including acceptance of any CA approved manuals provided as part of the application package.
- Once the data requirements for the SV process have been met, the admin review is completed, the design approval documentation has been prepared, the VA will then issue the design approval within thirty-five (35) working days after acknowledging a complete application.



Section III-Validation Procedures

➤ **Technical Validation (3.5.5) (FTV and LTV only)**

- The VA will familiarize itself with type design, with emphasis on identification of applicable Safety Elements and ATCs;
- The VA will develop and use a Work Plan that maximizes reliance on the CA's findings and compliance determinations;
- Issue its own design approval based on the CA's design approval, any VA additional technical conditions and a certifying statement from the CA that the type design complies with the VA's certification basis
- Used to refine and finalize the Work Plan
- Establish the VA cert basis, including noise, fuel venting, and emissions requirements and any other ATCs relative to the CA's cert basis;
- Establish VA scope and depth of review, limited to applicable Safety Elements for an LTV project
- The CA will arrange all meetings between the VA, CA, and applicant
- The VA will establish a project validation team (if required)

Section III-Validation Procedures

➤ Technical Familiarization

- Used to refine and finalize the Work Plan
- Establish the VA cert basis, including noise, fuel venting, and emissions requirements and any other ATCs relative to the CA's cert basis;
- Establish VA scope and depth of review, limited to applicable Safety Elements for an LTV project
- The CA will arrange all meetings between the VA, CA, and applicant
- The VA will establish a project validation team (if required)
- **Familiarization Flights** are part of Tech Fam
 - Identify to the CA any compliance issues not previously identified by the validation team
 - Familiarize the VA with the type design to support operational introduction and COS of the VA registered fleet;
- VA requests for fam flights must be identified in the Work Plan
- Fam flights should be supported by the CA flight test team to support the above objectives
- Typically conducted for all new TC programs; other programs with significant impact on operational capabilities or limitations, or pilot/aircraft interface



Section III-Validation Procedures

➤ Development of the VA's Work Plan (3.5.5.4)

- Identifies VA involvement; both scope and depth
- LTV projects, scope is based on review of the Safety Elements in 3.5.3
- FTV projects, VA not constrained by Safety Elements
- The Work Plan outlines the project, documents the VA cert basis, identifies and ATCs the VA will apply, & meetings and assistance from the CA
- VA may identify the preferred MOC for applicable Safety Elements
- Must be approved by VA management and communicated to the CA prior to start of validation
- Changes to the Work Plan require both justification and VA management approval

Section III-Validation Procedures

➤ Work Plan Contents

- Identification of CA and applicant
- Date of CA application on behalf of applicant
- VA's office ID and assigned PM
- Familiarization requirements
- CA cert basis
- VA cert basis
- Applicable Safety Elements
- Milestones for development of a joint schedule
- Operational considerations; review of COS plan and ICA, if applicable
- Listing of all CA Issue Papers related to Safety Elements; will also document acceptance
- Proposed compliance showings subject to VA verification
- Technical support requests



Section III-Validation Procedures

➤ Using & Maintaining the Work Plan (3.5.5.6)

- VA develops initial Work Plan based on application package (LTV and FTV projects)
- VA shall provide its Work Plan to the CA and applicant following **management approval**
- The Work Plan will be revised by the VA if it determines a need to revise the scope of depth of review and shared with CA/applicant; additions must be justified against Safety Element criteria
- **VA will limit its level of review to what is specified in the Work Plan!**



Section III-Validation Procedures

➤ Use of Issue Papers (3.5.5.7)

- VA should avoid duplication of an IP on a subject already addressed by the CA with which the VA concurs
- IPs will be coordinated through the CA to the DAH to expedite resolution. VA will incorporate the CA's and applicant's position in all IPs originated by the VA
- VA's intention to raise IPs must be documented in Work Plan and approved by management

Section III-Validation Procedures

➤ **Approved Manuals (3.5.5.8)**

- CA approves all manuals unless the VA specifies it will do so in the Work Plan
- If the VA requires changes to the manuals during the validation, the VA will communicate to the CA changes needed, with the approval of the manual performed by the CA
- Changes to manuals required by the VA must be directly related to Work Plan items
- Changes not related to physical design changes are dealt with as any other design change accordance to validation procedures

Section III-Validation Procedures

➤ Evaluation of Operational and Maintenance Aspects (3.6)

- The CAA system includes, under the type certification process, an approval of data that are considered necessary for the safe operation of an aircraft, called the Operational Suitability Data (OSD)
- The FAA has established Aircraft Evaluation Groups (AEG) that are responsible for the operational and maintenance evaluations necessary to support introduction of products into the FAA system.
- AEG will be invited to fam mtg by FAA PM and will generate IPs as appropriate
- Compliance with AEG not required at time of FAA issuance of validated TC, but must be demonstrated before issuance of first U.S. airworthiness certificate

Section III-Validation Procedures

➤ **FAA Environmental Compliance** (3.6)

- FAA makes findings of compliance with 14 CFR parts 34 and 36 based on FAA approved data
- UK CAA finds compliance to the environmental essential requirements found in Article 9(2) of regulation 2018/1139, the requirements of (UK) Part 21.A.18, and in accordance with the procedures as defined in CS34 and CS36
- Upon request to the CAA, and after mutual agreement, the FAA may authorize environmental findings of compliance to be performed by the CAA on behalf of the FAA. For tests conducted prior to a TC or STC application being made to the FAA, FAA may accept CAA approved noise and emissions certification compliance data, provided the data meets the applicable FAA regulations, guidance, and policy material.



Section III-Validation Procedures

➤ FAA Environmental Approval Process

- Environmental cert compliance demonstration plans must be submitted to VA for review **90 days** prior to cert testing;
- Applicant information and data must be supplied to the FAA under procedures for environmental cert under 14 CFR parts 34 and 36;
- Compliance tests may be witnessed by FAA personnel or authorized designees or delegates. Conformity of the test article is required.
- Proposed equivalent procedures to be used by applicant must be identified and approved by the FAA in advance
- Compliance demonstration reports must be approved prior to type certification approval

Section III-Validation Procedures

➤ Issuance of the Design Approval (3.8)

- Once the VA is satisfied with:
 - Technical Validation process is complete;
 - Work Plan activities are concluded;
 - Compliance to VA's cert basis has been demonstrated; and
 - Confirmation of payment of any applicable fees (*only applicable to UK CAA*)
- The VA will notify the CA that it is ready to receive the certification statement:
 - *“The CA certifies that the {specific product type, model, or STC} complies with the {VA's} certification basis as identified in {Work Plan, Issue Paper, STC, TCDS, etc., as applicable to the project} dated {date}”*
- Upon receipt the VA shall issue its design approval

Section IV - Continued Airworthiness

➤ General (4.1)

- SoD is responsible for resolving in-service safety issues related to design or production. The CA, as the Authority of the SoD, shall provide applicable information to ensure continued operational safety of the product or article.
- Once the design is validated, the CA shall provide any mandatory continuing airworthiness information (MCAI) necessary to ensure continuing airworthiness of the product registered in the jurisdiction of the importing State.
- VA has discretionary authority to seek information from the CA, which includes, but is not limited to, design data and findings of compliance, when such requests are needed to support resolution of COS concerns.

Section IV - Continued Airworthiness

➤ Failures, Malfunctions and Defects (FM&D) and Service Difficulty Reports (SDR) (4.2)

– The FAA and the CAA shall perform the following functions for the products and articles when either one is the **CA**:

- Tracking & Evaluating of FM&D reports/SDR and accident/incidents;
- Investigating and resolving all suspected unsafe conditions;
- Advising the other Authority of all known unsafe conditions and the necessary corrective actions;
- Upon request, providing the other Authority with the following: Reports, Status, and Summary of FM&D/SDR investigation findings and conclusions



Section IV - Continued Airworthiness

- **Failures, Malfunctions and Defects (FM&D) and Service Difficulty Reports (SDR) (4.2), cont.**
 - The FAA and the CAA, as Authorities for the **SoR**, shall perform the following functions:
 - Advising the CA of FM&D/SDR and accidents/incidents which are believed to be potentially unsafe conditions;
 - Supporting the CA in investigations of unsafe conditions and their occurrences; and
 - Advising the CA, if as the result of investigations made by the VA into FM&D/SDR and accidents/incidents, it has determined that it will make corrective actions mandatory.
 - For COS issues, the Authority for the SoR can directly request information from the design approval holder after informing the CA of the investigation.



Section IV - Continued Airworthiness

➤ Unsafe Condition and Mandatory Continuing Airworthiness Information (MCAI) (4.3)

- The FAA (under 14 CFR part 39) and the CAA (under (UK) Part 21) shall perform the following functions for the products, articles, and design changes for which they are the CA:
 - Issue an MCAI (e.g., Airworthiness Directive (AD)) whenever the Authority determines that an unsafe condition exists in a type certificated product or article, and is likely to exist or develop in a type certificated product or article.
 - The CA is to ensure the other authority receives the necessary service information, part availability, and labor hours and costs to perform the corrective actions.
 - Issue a revised or superseding AD when determined that any previously issued AD was incomplete or inadequate to fully correct the unsafe condition;
 - Advise and assist the VA in defining the appropriate actions to take in the issuance of its own AD
 - The VA should consult with the CA prior to issuing a unilateral AD.
 - The CA shall share information on any changes that affect operating limitations, life limits, or any other airworthiness limitation, to include manual changes and changes to certification maintenance requirements.



Section IV - Continued Airworthiness

- **Alternative Methods/Mean of Compliance (AMOC) to an AD) (4.4)**
 - If the CA issues an AMOC of general applicability to an existing AD for its own SoD products, the CA shall notify the VA of the decision.
 - Upon request, the CA shall provide sufficient information to the VA for its use in making a determination as to the acceptability of the AMOC. Based on this information, **the VA is responsible for issuing an AMOC approval letter for the operators in their State.**



Section V - Administration of Design Approvals

➤ Transfer of TCs and STCs (5.2)

- The regulatory requirements for certificate transfers are equivalent in the U.S. and the UK.
- The transfer of the SoD responsibilities as per Annex 8 of the Chicago Convention must be agreed upon by both Authorities.
- The transferring Authority shall transfer to the receiving Authority the ICAO SoD responsibilities for TCs and STCs within the scope of these Implementation Procedures



Section V - Administration of Design Approvals

➤ Transfer of TCs and STCs with no change in SoD (5.2.3)

- The CA shall notify the VA when a TC/STC validated by the VA is successfully transferred to a new design approval holder within the country of the CA.
- The CA shall provide the VA with a statement confirming the ability of the new holder to fulfill the regulatory responsibilities assigned to a design approval holder.
- The VA, upon completion of its review, shall issue a TC/STC in the name of the new design approval holder, and notify the CA accordingly.
- When a TC or STC is to be **transferred to a third State**, the CA shall notify the VA prior to the transfer and provide any necessary technical support to the VA as needed.

Section V - Administration of Design Approvals

➤ Surrender of TCs or STCs (5.3)

- If a certificate holder elects to surrender a TC or STC issued by the FAA or the CAA, the FAA or the CAA shall immediately notify the other Authority in writing of the action at the address listed in Appendix A.
- The FAA or the CAA, whoever is the CA, shall accomplish all actions necessary to ensure continued airworthiness of the product.
- The VA, upon completion of its review, shall issue a TC/STC in the name of the new design approval holder, and notify the CA accordingly.
- When a TC or STC is to be **transferred to a third State**, the CA shall notify the VA prior to the transfer and provide any necessary technical support to the VA as needed.



Section V - Administration of Design Approvals

➤ **Revocation or Suspension (5.4)**

- In the event that either Authority revokes or suspends a TC or STC of a product manufactured for which it is the CA, that Authority shall immediately inform the other. The VA, upon notification, shall conduct an investigation to determine if action is required.

➤ **Termination (5.5)**

- In the event that one Authority terminates a design approval, the information will be communicated between the FAA and the CAA on a case by case basis.

Section V - Administration of Design Approvals

➤ Surrender or Withdrawal of a TSO Design Approval (5.6)

- If an FAA TSOA holder, FAA LODA holder or CAA TSOA holder elects to **surrender** their LODA or TSOA approval issued by the FAA or the CAA respectively, the FAA or the CAA shall immediately notify the other in writing of the action. The CA shall inform the VA when an unsafe condition has been identified, until such time as the approval is formally withdrawn by the CA.
- If a FAA TSO/UKTSO approval is **withdrawn**, the FAA or the CAA shall immediately notify the other in writing of the action. The CA shall inform the VA when an unsafe condition has been identified. In the event of withdrawal of a TSO approval for non-compliance, the CA shall investigate all non-compliances for corrective action and notify the VA of the corrective action. **The CA still has the responsibility for the continuing airworthiness of those TSO articles manufactured under its authority.**

Section VI - Production and Surveillance Activities

➤ Extensions of Production Approvals (6.2)

- As the Authority of the SoM, the FAA and the UK CAA may authorize production approval extensions, to include manufacturing sites and facilities in each other's countries or in a third State. The Authority for the SoM remains responsible for the surveillance and oversight of these manufacturing sites and facilities.



Section VI - Production and Surveillance Activities

➤ Production Approvals Based on Licensing Agreement (6.3)

- The Authorities recognize that some business relationships may result in the licensing of data for products or articles designed under one Authority's approval and manufactured under the other Authority's approval. In such cases, the Authorities shall work together to develop an arrangement defining their regulatory responsibilities to ensure accountability under ICAO Annex 8. Such arrangements will address the responsibilities of the SoD and the SoM and will be documented in accordance with Section IX of these Implementation Procedures.
- Production approvals based on a licensing agreement covered under the scope of these Implementation Procedures will require a Management Plan. **For those not covered under the scope of these Implementation Procedures, a Special Arrangement and Management Plan may be required, in accordance with Section IX, Special Arrangements and Management Plans.**

Section VI - Production and Surveillance Activities

➤ Production Approvals Based on Licensing Agreement (6.3)

- For any TC/PC split, the FAA and UK CAA will follow the following steps:
 - Applicant to notify both Authorities
 - Both Authorities shall communicate and agree on the request
 - SoM to issue the PC
 - CA shall update TCDS and VA to update TCDS by adding new production approval; and
 - Both Authorities shall formulate a Management Plan



Section VI - Production and Surveillance Activities

- **Supplier Surveillance – Outside the State of Manufacture (SoM) (6.4)**
 - Either Authority may request that the other Authority conduct regulatory surveillance on its behalf for facilities located within the other Authority's country. The assisting Authority may either use its own policies, practices and procedures or those of the requesting Authority. Details of this assistance will be documented in a Management Plan.

Section VII - Export Airworthiness Approval Procedures

- **New or Used Aircraft Exported for which a Design Approval Has Been Granted (7.2)**
 - The IA shall accept an Export Certificate of Airworthiness on new aircraft and on used aircraft (including the case of those products that are designed or manufactured in a third State when that country has a bilateral agreement/arrangement with both the FAA and the UK CAA covering the same product),
 - Only if a TC holder exists to support continuing airworthiness of such aircraft, identified in 2.2.2. when the EA certifies that each aircraft conforms to the conditions listed in 7.2.



Section VII – Export Airworthiness Approval Procedures

- **New or Used Aircraft Exported for which a Design Approval Has Been Granted (7.2)**
 - Acceptance of Used Aircraft Being Exported (Returned) to the original SoD
 - Either Authority shall accept an Export Certificate of Airworthiness on a used aircraft being exported (returned) to the original SoD for the aircraft, when the conditions of 7.2.1 have been met.
 - If the EA is not in a position to assess whether or not the used aircraft satisfies the above conditions, it shall inform the IA accordingly.
 - Acceptance of Used Aircraft for which a Third State is the SoD
 - The IA shall accept Export Certificates of Airworthiness from the EA for used aircraft for which a third State is the SoD.
 - For used aircraft being imported from the UK to the U.S., or from the U.S. to the UK, the conditions of 7.2.1 must be met.
 - If the EA is not in a position to assess whether or not the used aircraft satisfies the above conditions, it shall inform the IA accordingly.



Section VII - Export Airworthiness Approval Procedures

- **Coordination of Exceptions on an Authorized Release Certificate (7.8)**
 - The EA shall notify the IA prior to the issuance of an Authorized Release Certificate for an aircraft engine, propeller, or TSO or PMA article when non-compliance with the IA approved design is noted in the “Remarks” block of the Authorized Release Certificate. This notification should ensure non compliance is addressed regarding the aircraft engine, propeller, or TSO or PMA article’s installation eligibility.
 - This notification is sent to the appropriate FAA and UK CAA offices, as detailed in Appendix A, as applicable.



Section VIII - Technical Support Between Authorities

➤ General (8.1)

- Types of support may include, but are not limited to, the following:
- Design Certification Support
 - Approving test plans;
 - Witnessing tests;
 - Performing conformity inspections;
 - Reviewing reports;
 - Obtaining data;
 - Verifying/determining compliance;
 - Monitoring the activities and functions of designees or approved organizations; and
 - Conducting investigations of service difficulties.



Section VIII - Technical Support Between Authorities

➤ General (8.1), cont.

- Production Certification and Surveillance Support
 - Witnessing conformity inspections;
 - Witnessing the first article inspection of parts;
 - Monitoring the controls on special processes;
 - Conducting sample inspections on production parts;
 - Monitoring production certificate extensions;
 - Monitoring the activities and functions of designees or approved organizations;
 - Conducting investigations of service difficulties; and
 - Evaluating or conducting surveillance of production quality systems including assistance in determining that a supplier complies with purchase order and quality requirements at locations in the U.S. or the UK
- Airworthiness Certification Support
 - Support in the delivery of airworthiness certificates for aircraft; and
 - Determining the original export configuration of a used aircraft.



Section VIII - Technical Support Between Authorities

➤ **Witnessing of Tests During Design Approval (8.2)**

- Test witnessing activities may require the development of a Management Plan based on the complexity and frequency of the requested certifications.
- At the discretion of the Authority receiving such requests, these activities may be delegated to authorized designees or delegated organizations, as applicable.

➤ **Compliance Determinations (8.3)**

- The FAA or the UK CAA may also request that specific compliance determinations be made associated with the witnessing of tests or other activities. Such statements of compliance will be made to the airworthiness or environmental standards of the requesting Authority.
- The FAA's or the UK CAA's statements of compliance will be sent in a formal letter, (electronic transmission is permitted), to the requesting FAA or UK CAA office.

Section VIII - Technical Support Between Authorities

➤ **Conformity Certifications during Design Approvals (8.4)**

- Conformity inspection can be requested to verify that the part is conformed to the type design via drawings, to verify certain types of equipment is installed, or to ascertain certain information on the test setup before the test begin. Any deviation to the type design, test set up, etc. needs to be recorded.

➤ **Other Requests for Support (8.5)**

- The FAA or the UK CAA may request other types of technical support. Each request will be handled on a case-by-case basis, as resources permit. Each written request will 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 Special Arrangement may be needed.

Section VIII - Technical Support Between Authorities

➤ Airworthiness Certificates (8.6)

- There may be certain programs and conditions that warrant technical support for issuance of standard airworthiness certificates so that aircraft may be placed directly into operation from site of manufacture.
- IA may seek support from the EA in final processing and delivery of an airworthiness certificate when aircraft has been manufactured, granted an Export Certificate of Airworthiness by EA, and entered on importing State's registry.
- This will require development of a Management Plan between EA and IA.



IPA Section IX, X, and XI

- **Section IX – Special Arrangements & Management Plans**
 - Revision reduces the need for future SA's no longer needed
 - MPs typically needed for:
 - Split TC/PC
 - PC extensions
 - Shared Surveillance

- **Section X – Entry into Force and Termination**
 - This IPA Revision 1 will enter into force January 1, 2021

- **Section XI - Authority**
 - Documents authorized signatures from the FAA and UK CAA



Questions?



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FAA Links

https://www.faa.gov/aircraft/air_cert/international/

The screenshot shows the FAA website's navigation structure. At the top, there's a search bar and a navigation menu with links like 'FAA Home', 'Jobs', 'News', 'About FAA', and 'A-Z Index'. Below this is a secondary menu with 'Aircraft', 'Airports', 'Air Traffic', etc. The 'Aircraft' menu is expanded, showing a list of sub-topics. A red arrow points to the 'International' link in this list. The main content area is titled 'International Aircraft Certification' and contains several sections: 'International' (with a list of links like 'Bilateral Agreements', 'Working Procedures', etc.), 'Export' (with links for 'Approvals', 'Cancel U.S. Registration', etc.), and 'Import' (with links for 'Approvals', 'Aircraft Registration'). On the right side, there's a 'Top Tasks' section with links like 'Get Form 337, Major Repair and Alteration' and 'Register an aircraft'. At the bottom right, there's a banner for 'FAA CONTINUED OPERATIONAL SAFETY'.

