

STC Validation

Validating an EASA STC

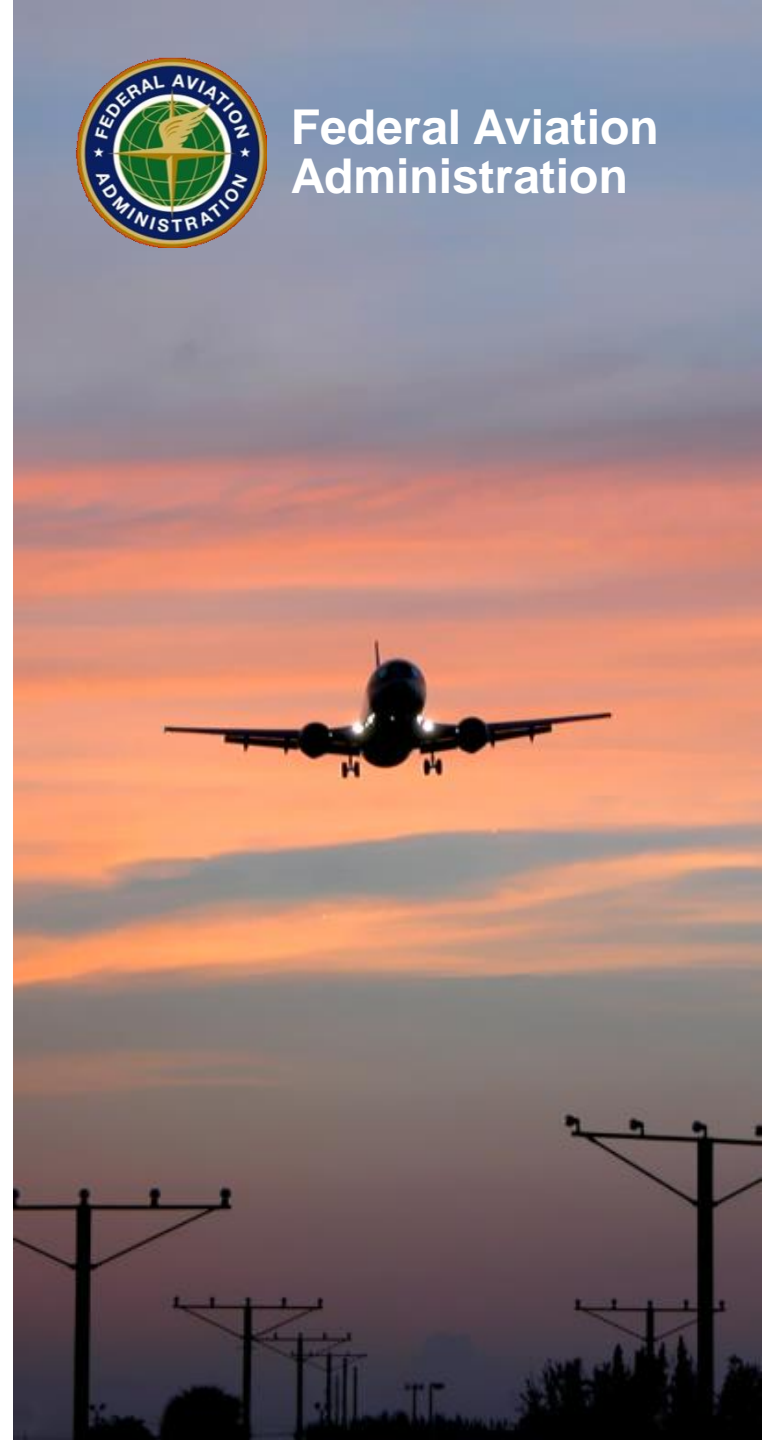
Presented to: EASA STC Workshop

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Federal Aviation
Administration



NYACO Information

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Organization Hierarchy

- **Policy**

- AIR-100 Design, Manufacturing & Airworthiness Division
- AIR-400 International Division

- **Product Airworthiness Standardization**

- ANM-100 Transport Airplane Directorate (Part 25)
- ACE-100 Small Airplane Directorate (Part 23)
- ASW-100 Rotorcraft Directorate (Part 27 & 29)
- ANE-100 Engine and Propeller Directorate (Part 33)
- * *Each Directorate has an associated Aircraft Evaluation Group (AEG)*

Validation Philosophy

- **Leveraging the Knowledge and Experience of the Certifying Authority (CA) on behalf of the Validating Authority (VA) through the Bilateral Agreement.**
 - Equivalent certification systems
 - Harmonized airworthiness requirements facilitate the VA acceptance of the CA compliance findings.
 - Collaborative working partnership

STC Validation - TIP Revision 5

- New STC Validation (No previous VA approval)
 - Concurrent vs Sequential
 - Basic (No Technical Involvement) vs Non-Basic (May require VA involvement)
 - * *There should be no necessity for a Concurrent-Basic*
 - Approved Model List (AML)
 - VI & SSD assessment criteria via VA published lists
- Post Type Validation Procedures (PTVP)
 - Level 1 Major
 - Follows the process in FAA-EASA TIP, Section 2.2
 - Level 2 Major & Minor
 - No VA involvement or activity
 - Notify VA periodically of these changes

New STC Application Requirements

- EASA Request Letter
 - Requires sufficient description to initiate the project
 - Applicant is covered under the Bilateral Agreement
- FAA Form 8110-12
 - Company name & address must match the EASA STC
 - Address on certificate cannot be a PO Box
- Data Requirements [TIP Para 2.2.2(c), (d), and (f)]
 - Document numbers and revision levels should match the EASA STC, otherwise some method of EASA approval is needed.
- Specific FAA Administrative needs:
 - Need for hard copies at project end

Required Data per TIP

Item Missing	Description
	(c)(1) A detailed description of the change, together with the make and model of the product;
	(c)(2) The classification as Basic or Non Basic STC, as explained in Appendix C, paragraph 6;
	Note: The application should identify the 5 criteria listed in Appendix C, paragraph 6 that led to the classification and address each.
	(c)(3) A copy of the EASA STC and EASA certification basis;
	(c)(4) A copy of all EASA certification review items (CRIs) raised for the EASA STC project, including those identifying special conditions, deviations, equivalent level of safety findings, or acceptable means of compliance.
	(c)(5) The applicant's requested date for FAA issuance of the STC;
	(c)(6) An assessment of FAA significant standards differences for which compliance will need to be demonstrated;
	(c)(7) Compliance checklist for the EASA STC, including affected noise and emissions standards, if applicable;
	(c)(8) Airplane/Rotorcraft flight manual supplement
	(c)(9) Master Documentation List/Master Drawing List;
	(c)(10) Manufacturing and Installation Instruction Drawings;
	(c)(11) Weight and Balance data, and;
	(c)(12) Instructions for continued airworthiness(ICA), including maintenance/repair manual supplements,
	(d) In addition, the applicant should provide available information on U.S. market potential, including specific customers and delivery schedule.
	Other:

NYACO Internal Process

- **Review submittal by Program Manager / Aviation Safety Analyst (ASA)***
 - Verify application package has required information
- **Initiate the validation project**
 - Certification Project Notification (CPN)
 - Notify Accountable Directorate, AEG, and Others
 - Collaborate on requests for additional information*
- **Route to Project Manager & Team***
 - Team reviews as required & collaborates with EASA
- **Draft STC and coordinate with the team.***
- **Issue STC**
 - Mail official copy & email scanned copy

Basic vs Non-Basic Assessment

- Significant Changes (21.101)
- CA IPs/CRIs: Exemptions, Special Conditions (SC), Equivalent Level of Safety (ELOS), Acceptable Means of Compliance (**MOC**)
- Validation Items (VA Published Lists)
 - CA follows compliance strategy in approved FAA policy
 - Cover IP accepting EASA CRI
 - FAA IP
 - Stage 4 should address delegation
- Significant Standards Differences (SSDs)
 - SSD /non-SSD lists published by the VA are used to determine classification
 - IP to address compliance differences
- Any other reason required by the CA

Statement of Compliance

- Basic Project (Sequential Validation)
 - Statement of compliance(SoC) must be made at application.
 - Any documentation that had been updated after EASA STC approval which is included in the current validation needs to be identified within the SoC.
 - Based on streamlined process there is no need for a Concurrent-Basic STC Validation.
- Non-Basic Project (Sequential or Concurrent)
 - Statement of compliance is provided after the FAA has made a statement of compliance for any retained item.

Validating Authority Cert Basis

- Validating Authority Certification Basis
 - Harmonized CS/FAR + VA SSDs + Special Conditions/ELOS
- Documenting VA Cert Basis on VA STC
 - The VA STC certification basis lists all affected regulations complied with above the TCDS.
 - Credit for later amendments
- Confirmation of AD evaluation



Prerequisites

- Any modification to the type design that is necessary to install the applicants modification.
- All prerequisites must have been validated prior to issuance of the FAA validated STC.

Configuration Control

- Master Document List (MDL):
 - Top level document that defines the approved type design
- Document No., Revision level, and Dates
- Approved Model Listing (AML)
 - Installation across Multiple TCDS
- Limit separate documents between authority STCs
 - What's good for the CA should be good for the VA.

Approved Manuals

– ICA

- ALS Statement (14 CFR XX.1583)
- EWIS assessment (Part 25 & 26)
 - Impact vs No Impact Statement
 - Should be a section in the ICA
- ICA Checklist
 - FAA Order 8110.54A (Appendix A-G)

– AFMS

- English Units

Transposing EASA STC to FAA STC

- **Defining the modification type design**
 - Top level document that defines the design
 - Defining maintenance and operating requirements (i.e. ICA & AFMS)
 - Configuration control (Doc #, Rev., & Date)
- **Limitations**
 - Listing any prerequisites
 - Listing requirements that must be met
- **Defining the Certification Basis**
 - Identifying the regulatory requirements (CS vs FAR)
 - Providing credit for compliance at a higher amendment level.
 - Capturing exemptions, special conditions, & ELOS

Validation Approval Time

- **Factors Affecting Approval Timing:**
 - Modification Complexity
 - Simple, Straight Forward, Basic
 - Complex Integration, New & Novel, Non-Basic
 - Applicants Responsiveness
 - Cooperative vs Uncooperative
 - Timely Response
 - Design & Documentation Clarity
 - Well Defined
 - Logical

** NYACO is initially targeting Basic STC validations completion within a few weeks of submittal.*

Changes and Process Improvements

- **NYACO is still working to align internal FAA processes to the new TIP.**
- **Collaboration meetings with EASA to discuss potential efficiencies.**
- **Providing information and training on validation.**



Questions?

