



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
National Policy

ORDER
8110.52A

Effective Date:
12/2/2014

SUBJ: Type Validation and Post-type Validation Procedures

This order describes the procedures for evaluating an application for the importing or exporting of products (aircraft, aircraft engines, or propellers). These procedures apply to engineering personnel at Aircraft Certification Offices (ACO) and the Directorate staff offices in the Federal Aviation Administration (FAA) who are responsible for evaluating and processing applications either as the validation authority (VA) or the certification authority (CA). This revision removes references and procedures that only apply to the European Aviation Safety Agency (EASA). Those procedures have been captured in the Technical Implementation Procedures (TIP) for Airworthiness and Environmental Certification, Revision 3, April 23, 2013.

A handwritten signature in black ink, appearing to read "D. D. Baker", is positioned above the printed name and title.

Dorenda D. Baker
Director, Aircraft Certification Service

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Chapter 1. General

1-1. Purpose. In this order we, the Federal Aviation Administration (FAA), define the policy and procedures for type certification and post-type certification of imported and exported products (aircraft, aircraft engines, or propellers).

a. We define the expectations, roles, and responsibilities of the importing authority (the validating authority, or VA), the exporting authority (the certificating authority, or CA), and the applicant.

b. Adherence to this order and individual bilateral agreements ensures that an imported product meets the same level of safety as a comparable product designed, manufactured, and certified within the VA's jurisdiction.

1-2. Audience. All FAA personnel who are involved in type certification and post-type certification activities for imported and exported products.

1-3. Cancellation. FAA Order 8110.52, *Type Validation and Post-Type Validation Procedures*, dated April 29, 2005, is canceled.

1-4. Where to Find This Order. You can find this order at MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices, and on the Regulatory and Guidance Library (RGL) website at <http://rgl.faa.gov>.

1-5. Distribution. Distribute this order to the Washington headquarters branch levels in the Aircraft Certification Service, Flight Standards Service, and Office of Environment and Energy; the branch levels of the regional aircraft certification directorates and regional Flight Standards Divisions; all aircraft certification field offices; all Aircraft Evaluation Groups (AEG).

1-6. Explanation of Policy Changes. This order was rewritten to include only general directive material for all type validation and post-type validation activities. Specific procedures for working with the European Aviation Safety Agency (EASA) have been removed. EASA and potentially other specific country procedures will be developed as work instructions or job aids.

1-7. Scope. The guidance in this order applies to certification and validation programs with all bilateral partner authorities. FAA certification personnel must consult the appropriate bilateral airworthiness agreements (BAA) or bilateral aviation safety agreement implementation procedures for airworthiness (BASA IPA) in order to determine specific expectations for an individual bilateral partner and the FAA.

a. Do not develop extra certification procedures without first contacting the International Policy Office, AIR-40, and the Engineering Procedures Office, AIR-110. If you are on a validation team, however, your team may set up project-specific documents on administrative details such as team members, responsibilities, and schedule commitments. These administrative details must be consistent with chapter 2 of this order and the applicable bilateral agreement.

b. You may obtain an up-to-date list of countries with which the United States (U.S.) has a bilateral agreement from AIR-40, or directly from their website at http://www.faa.gov/aircraft/air_cert/international/bilateral_agreements/baa_basa_listing/.

Chapter 2. Type Certification, Type Validation, and Post-Type Validation

Section 1. Overview

2-1. General Information. All aircraft, engines, and propellers must meet and maintain minimum standards for design, material, construction, quality of work and performance before they can be produced and operated.

a. The International Civil Aviation Organization (ICAO) requires each contracting state to adopt airworthiness standards for the design and performance of aeronautical products. States must ensure that aircraft, including components (engines and propellers), meet these airworthiness standards. ICAO allows states to accept a product approved by another ICAO contracting state without further showing, or to validate another country's determination that a product meets airworthiness standards.

(1) Two ways of determining a product is airworthy, depending on its origin, are type certification and type validation.

(2) Section 2 defines the general process we follow when carrying out validation programs. This involves both validating the certification activities of a bilateral partner, and supporting a U.S. design approval holder in obtaining an approval from a bilateral partner.

b. The responsibilities of the CA or exporting authority and VA or importing authority do not end once an aircraft, engine, or propeller is certificated or validated. Under ICAO Annex 8, the state of registry is responsible for the safety of any aircraft on their national register. This means that the VA becomes accountable for the continued airworthiness of imported products operated under their registry. The CA, as state of design, must send mandatory continuing airworthiness information to the state of registry.

(1) We refer to these collectively as "post-type validation activities." Like type validation, they require the close cooperation of both the CA and VA.

(2) Section 3 below defines the process we follow when performing post-type validation functions.

Section 2. Type Certification and Type Validation

2-2. Type Certification. Type certification is the process by which an aviation authority determines compliance of a product to applicable standards, such as noise, environmental, procedural, and airworthiness. Aviation authorities use this process to establish compliance of a domestically manufactured product to their national airworthiness standards. We, for example, establish compliance to Title 14 of the Code of Federal Regulations (14 CFR) for products designed and manufactured in the U.S. Certification requires direct involvement with an applicant to ensure that compliance is shown.

a. Certifying Authority.

(1) The CA is responsible for the original type certificate (TC). For example, the FAA is the CA for applicants and certificate holders in the U.S. The CA issues the final design approval or compliance finding for products designed in its country. The CA may document its approval by issuing a TC or supplemental type certificate (STC).

(2) When a product is exported to another country, the CA supports their acceptance by the importing country. To minimize duplicate certifications, the CA acts for the importing authority. The CA, therefore, makes compliance findings to their own airworthiness standards and, when agreed in a bilateral agreement, makes compliance determinations to the VA's airworthiness standards. Note, however, that bilateral agreements are not required for exporting a product. The U.S. can export a product to a foreign country even though we do not have a bilateral agreement with that country. Applications to non-bilateral countries for their design approvals or import acceptance are still transmitted from the FAA to the other aviation authority.

b. Regulatory Basis for CA Activities. When we are the CA, we use procedures based on 14 CFR part 21, subpart B, for new TCs; subpart D for changes to TCs; and subpart E for STCs. Among other things, the following regulations establish certification basis for a product:

(1) The applicable noise, fuel venting, exhaust emissions, and airworthiness standards (§ 21.17/§ 21.115);

(2) Equivalent level of safety findings (§ 21.21);

(3) Special conditions (§ 21.16); and

(4) Exemptions.

c. FAA Certification Procedures. FAA Order 8110.4, *Type Certification Process*, defines the procedures used by personnel certifying products designed and manufactured in the U.S.

2-3. Type Validation.

a. Aircraft, engines, and propellers are often designed and manufactured in one country and then exported to another.

b. Validation is the process most commonly used to establish the compliance of an imported product to the importing state's applicable airworthiness standards. Validation is, in other words, a special form of certification.

c. Validating Authority. The VA is responsible for validating the CA TC or STC. We are the VA for applicants and approval holders outside the U.S.

d. Validations require trust, communication, and cooperation among the authorities and the applicant.

e. Once compliance is established, the VA may issue a TC for the product to show that the aircraft, engine, or propeller complies with their airworthiness standards. This TC is sometimes called an import TC or a validated TC.

f. Validation is not universally applied. Some aviation authorities have adopted alternate approaches for imported aviation products. Australia, for example, does not issue a TC for products with an FAA or EASA TC. This is commonly known as type acceptance. Australian authorities familiarize themselves with the type design so they can capably oversee the aircraft when it is added to the registry. Other authorities have adopted similar approaches.

g. FAA certification personnel must consult the bilateral agreement with a foreign country to identify our responsibilities when a U.S. product is exported there.

2-4. Conducting an FAA Validation. We conduct validations of foreign products only under bilateral agreements. FAA certification personnel must consult the correct BAA or BASA IPA to find specific expectations for the individual bilateral partner and us.

a. Bilateral agreements are concluded when we are fully confident in a partner aviation authority and when there is a certification system that produces equivalent results to the U.S. system. Therefore, first, we assume that all compliance determinations within the scope of the bilateral agreement can be assigned to the CA. Then, we decide which determinations to reserve for ourselves due to the design's complexity or unique features.

b. We do not unnecessarily duplicate work done by the CA. For example, if we are the VA, we use issue papers mainly to address differences between FAA and CA airworthiness standards and interpretations. When the CA and FAA airworthiness standards and interpretations are identical, we rely on the CA to the maximum extent possible. This reliance includes accepting the CA's issue paper or equivalent in place of an FAA issue paper. Any such acceptance will be based on our validation team's technical familiarization of the product, and is supported by the product accountable directorate. In certain cases, even when FAA and CA airworthiness standards and interpretations are identical, we will still write our own issue paper. For example, we will write issue papers for equivalent safety findings per § 21.21(b)(1). We will also write issue papers on certification basis and other unique import requirements.

2-5. FAA Validation Process. The procedures we use as VA are based on § 21.29, Issue of type certificate: import product.

a. When we are the VA, the process begins when an application is submitted to us through the CA. The applicant gives us a familiarization briefing. We establish the certification basis. Technical information is exchanged in the form of data, specialist meetings, technical compliance, or the development of issue papers. Finally, we issue the design approval. Process steps are summarized as:

- (1) Applicant submits application to the FAA through the CA;

(2) Applicant and CA familiarize the FAA with the details of the design, CA certification basis, and the methods of compliance (MOC);

(3) FAA establishes the VA certification basis (see 2-6 below);

(4) FAA defines areas of special interest in issue papers;

(5) FAA determines our involvement and assigns compliance determinations to the CA;

(6) CA makes compliance determinations to the elements assigned them by the FAA;

(7) FAA makes compliance determinations to any elements of the FAA certification basis that we retained and notifies the CA;

(8) CA issues a final statement of compliance to the FAA's certification basis; and

(9) FAA issues the TC.

b. Our validation program does not duplicate the CA certification program. It is not an opportunity to audit the CA's competence, or to scrutinize their work.

c. Sometimes the TC application is for a product in a category not previously certificated, or the product is more complex than previously certificated by the CA. We may then increase the scope of the validation program.

d. Compliance Determinations. Compliance determinations are the decisions that establish that the applicant has satisfied a specific airworthiness standard. Determinations of compliance to FAA airworthiness standards may be made either by the CA or us. It is our prerogative to determine our involvement in establishing compliance to our airworthiness standards. We may retain the compliance determination, or assign it to the CA. We must specifically identify any retained compliance determinations in an issue paper, preferably early in the program.

Note: We may still request technical help from the CA on a retained compliance determination under the terms of a bilateral agreement. For example, we may ask the CA to witness a test for us.

(1) We maximize assigning compliance determinations to the CA. We may entrust all compliance determinations to the CA, and rely solely on their compliance statements. If we retain any compliance determination, we must justify it within its issue paper.

(2) Once we decide to assign a compliance determination to the CA, we must ensure that they understand any unique FAA requirements for compliance. We coach the CA on acceptable MOC and provide them with all publications and documents that affect the determinations for the assigned items.

(3) We accept CA compliance determinations as if we made them ourselves. We limit our compliance determination activities to specific, formally identified areas, and do not review compliance determinations that we assigned to the CA since communication throughout the project ensures that we understand what has been accomplished.

(4) We gain enough product knowledge during validation so that we can carry out our continued airworthiness responsibilities. Product knowledge includes continued operational safety (COS) issues. When justified, we may request compliance documents, including those related to determinations that were assigned to the CA.

e. Compliance Findings. Based on the compliance statement from the CA and the summary of compliance determinations, we make a final compliance finding and issue a TC.

2-6. Validation Authority Certification Basis. The VA certification basis is the sum of applicable airworthiness standards identified by the VA, plus exemptions, special conditions, and equivalent level of safety findings declared by the VA. It establishes VA design acceptance of an imported product or certification of the design change.

a. Compliance with the VA certification basis for the product is based on compliance with the CA certification basis plus:

(1) The standards differences for the particular amendment pair of standards, and any exemptions, special conditions, and equivalent level of safety findings issued by the VA; or

(2) Any exemptions, special conditions, and additional airworthiness standards issued by the VA that provide an equivalent level of safety.

b. For the FAA, these two methods of demonstrating compliance with the VA certification basis are based on the requirements defined in § 21.29 (a) (1) (ii).

(1) The first method corresponds to the first provision in (ii). This method demonstrates compliance with the applicable airworthiness requirements in § 21.17. Compliance with CA standards ensures compliance with FAA requirements when CA standards are equal or more stringent than FAA requirements. Demonstrating compliance to the standards differences accounts for the remaining requirements.

(2) The second method corresponds to the second provision in (ii). Here, we prescribe additional airworthiness requirements to provide a level of safety equivalent to the level defined by requirements in § 21.17.

c. Establishing the VA Certification Basis. The VA certification basis is defined early in a validation program if the program is to be conducted efficiently. Once established, the VA certification basis does not change except when:

(1) Unsafe conditions arise;

- (2) Design changes affect the certification basis;
- (3) The VA learns of design features that require special conditions or exemptions;, or
- (4) The applicant elects to comply with later amendments.

d. Operational Requirements. Operational requirements, such as 14 CFR parts 91, 121, 125, or 135, may prescribe equipment requirements that affect the aircraft, engine, or propeller design. The VA identifies these requirements early in the program so they may be included in the validation program (if the applicant asks). Coordination is required with the appropriate FAA flight standards aircraft evaluation group (AEG) operational group.

2-7. Communications. Communication is critical to success. Our experience with validation programs shows that effective communication between the VA, CA, and applicant is vital. Program delays are often the result of miscommunication.

a. Communicating with the Applicant.

(1) When acting as the VA, we work through the CA to achieve airworthiness standards compliance. Communications flow through the CA to the applicant. On the rare occasion when the CA cannot be involved, we are responsible for giving them details of any communication with a foreign applicant.

(2) The CA, FAA and applicant will have frequent, regularly scheduled telephone conferences to review the program status, discuss open validation issues, and areas of VA interest.

(3) We may ask the applicant to clarify things during a project. Feedback from FAA to CA and applicant is necessary to confirm if the clarification and explanations are adequate.

b. Communications between Authorities.

(1) Since the CA needs to understand the FAA position on all the items for which the CA will make determinations of compliance, each authority includes the other in communications throughout the validation program.

(2) We expect there will be an early exchange of information between the CA and the FAA. This exchange will include: proposed use of exceptions (§ 21.101(b)) to the latest CA airworthiness standards, special conditions, exemptions, equivalent safety findings, and MOCs. This exchange will ease the process and help the applicant reach timely validation. Even before the formal application, we respond to applicant requests to discuss issues. The applicant makes those requests through the CA.

(3) Each authority will normally seek the other's opinions before resolving significant issues. They may even postpone meeting with the applicant until the other authority is adequately represented.

(4) Similarly, authorities will coordinate and circulate all correspondence. We must send the CAA copies of all correspondence between us and applicant.

2-8. STCs. We must review the applicable BASA IPA to determine which, if any, STC provisions are included in the agreement.

Note: BAAs, as opposed to BASA IPAs, do not permit U.S. acceptance of STCs from the other country.

a. We apply a certification procedure similar to paragraphs 2-4 and 2-5 and adjust it for the size and complexity of the design change.

b. The key elements to this approach, as outlined in paragraph 2-5a, apply to STC validation programs. Specifically, when serving as VA for an STC, we must:

- (1) Maximize delegation of compliance determinations to the CA;
- (2) Instruct the CA in acceptable MOCs for assigned items; and
- (3) Accept CA compliance determinations as if we made them ourselves.

c. Although we may decide to retain a compliance determination, we must justify it.

2-9. thru 2-20. Reserved

Section 3. Post-Type Validation

2-21. Post-Type Validation Activities. When the validation program is concluded, the VA and CA sets up regular feedback and continued communication (including specific focal points) on service difficulties, trends, and general experiences with the product. CA or VA post-type validation activities are defined as:

- a.** Approving changes to the approved type design by the TC holder (including revisions of manuals) not requiring a new or amended TC;
- b.** Approving airworthiness data, including in-service information; and
- c.** Continued airworthiness activities including the issuance of airworthiness directives (AD).

2-22. VA Responsibilities during Post-Type Validation.

a. The approach to validation in paragraphs 2-4 and 2-5 also applies to approving changes in type design. The FAA, as VA, must ensure that the type design, as amended by post-type certification design changes, continues to comply with its FAA certification basis and is documented in an acceptable manner. As VA, we must also ensure the continued airworthiness of the product, since we are responsible for the safety of all products on our registry.

b. The FAA, as the VA, has the right to inquire into any post-type validation activities to ensure acceptable continued airworthiness of aircraft registered in the U.S., and any products fitted to such aircraft.

c. The FAA, as the VA, has the right to seek information so that we can understand and agree on:

- (1) Findings of compliance made by the CA to all FAA airworthiness standards;
- (2) Any mandatory corrective action; or
- (3) Any significant ongoing continued airworthiness issue and how it is resolved.

d. We, as the VA, become involved with the CA to resolve COS issues directly related to an accident or incident in the U.S. Again, we assign maximum responsibility for resolving those issues to the CA.

2-23. CA Responsibilities during Post-Type Validation.

a. We, as the CA, may be called upon to ensure that the type design, as amended by post-type certification design changes, continues to comply with the VA's certification basis. As the CA, we must support an applicant's request for approval of design changes by any bilateral partner in accordance with the particular bilateral agreement.

b. When we are the CA, we will monitor the continued airworthiness of the type certificated product worldwide and issue ADs when necessary. We will inform the VA immediately of all such mandatory actions, including those resulting from reports under 14 CFR 21.3 on aircraft under VA jurisdiction and products fitted on such aircraft.

c. We, along with the certificate holder, will help the VA investigate significant airworthiness issues about aircraft under VA jurisdiction and products fitted on such aircraft. This support includes giving the VA:

- (1) Status of any FAA airworthiness investigations;
- (2) Status of FAA plans for AD actions within ex parte requirements; and
- (3) Timely access to related design data and other certification documents as they request.

Note: Bilateral agreements commit the FAA to provide timely information to a bilateral partner authority. Similarly, protection of proprietary data protection is an obligation under our BASA IPAs. We cannot withhold access to data based on the issue of its being proprietary.

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2-24. thru 2-99. Reserved.

APPENDIX A. DEFINITIONS OF TERMS USED IN THIS ORDER

- A-1. **Certifying Authority (CA):** Aviation authority responsible for the original type certificate or supplemental type certificate. Certifying authority means the FAA for applicants/certificate holders located in the United States, and EASA for applicants/certificate holders located in the European Community and in JAA member states, for products under JAA procedures. The certifying authority may also be referred to as the exporting authority.
- A-2. **Compliance Determination:** Determination, by either the CA or the VA, that the applicant has demonstrated compliance with identified, individual airworthiness standards.
- A-3. **Compliance Finding:** Official act by which the responsible authority makes a legal finding that the applicant has demonstrated compliance with all identified applicable airworthiness standards.
- A-4. **Post-Type Validation:** Process leading to approval of post-type certification design changes, data used in repairs, and airworthiness data including service information. Continued airworthiness activities are also post-type validation activities.
- A-5. **Type Certification:** Process used by an aviation authority to establish compliance of a product to a set of noise, environmental, procedural, airworthiness and other standards.
- A-6. **Type Validation:** For this document, type validation is type certification of an imported product to the importing country's applicable requirements or airworthiness standards. Process leads to issuance of new and amended type certificates when FAA is the VA. When EASA is VA, type validation leads to issuance of an EASA type certificate valid in all EASA member states. When an NAA of a non-EU JAA member state is VA, type validation leads to a letter of recommendation for type certificate from the JAA to the NAAs. Term also describes the general principles adopted by FAA and EASA/JAA for determining appropriate VA involvement in validations, whether they are new or amended type certifications, or major level 1 design changes.
- A-7. **Validating Authority (VA):** Aviation authority responsible for validating the CA type certificate or supplemental type certificate. Validating authority means EASA for applicants/approval holders located in the United States, and FAA for applicants/approval holders in the European Community and JAA member states. Validating authority may also be called the importing authority.
- A-8. **Validation Authority Certification Basis:** Applicable airworthiness standards identified by the VA plus any exemptions, special conditions, and equivalent level of safety findings declared by VA to establish design acceptance of an imported product or to certify the design change.

APPENDIX B. ACRONYMS

ACJ	Advisory Circular Joint (JAA)
ACO	Aircraft Certification Office
AEG	Aircraft Evaluation Group
AMJ	Advisory Material Joint (JAA)
BAA	Bilateral Airworthiness Agreement
BASA	Bilateral Aviation Safety Agreement
CA	Certificating Authority
CAA	Civil Aviation Authority
CFR	Code of Federal Regulations
CRI	Certification Review Item (JAA)
EASA	European Aviation Safety Agency
FAR	Federal Aviation Regulations
FOEB	Flight Operations Evaluation Board
FSB	Flight Standardization Board
IP	Issue Paper (FAA)
IPA	Implementation Procedures for Airworthiness
IR	Implementing Rules
JAA	Joint Aviation Authorities
JAR	Joint Aviation Requirements
MMEL	Master Minimum Equipment List
MOC	Methods of Compliance
MRB	Maintenance Review Board
Non-SSD	Non-Significant Standards Difference
PCM	Project Certification Manager
SSD	Significant Standards Difference
STC	Supplemental Type Certificate
TC	Type Certificate
TGM	Temporary Guidance Material (EASA)
VA	Validating Authority
VI	Validation Item

APPENDIX C. ADMINISTRATIVE INFORMATION

- C-1. **Authority to Change This Order.** The issuance, revision, or cancellation of the material in this order is the responsibility of the Aircraft Certification Service, International Policy Office (AIR-40).
- C-2. **Suggestions for Improvement.** If you find deficiencies, need clarification or want to suggest improvements to this order, send FAA form 1320-19, Directive feedback Information, (written or electronically) to the Aircraft Certification Service, Administrative Services Branch, AIR-510, Attention Directives Management Officer or you can fill out the form online through the FAA Directive feedback system at <http://avsdfs.avs.faa.gov/>. If you urgently need an interpretation, contact AIR-40 at 202-267-0908. Always use Form 1320-19, in Appendix D, to follow up each verbal conversation.
- C-3. **Records Management.** Refer to FAA Orders 0000.1, *FAA Standard Subject Classification System*; 1350.14, *Records Management*; or your office records management officer or directives management officer for guidance regarding retention or disposition of records.

APPENDIX D. FAA FORM 1320-19, DIRECTIVE FEEDBACK INFORMATION

U.S. Department
of Transportation
**Federal Aviation
Administration**

Directive Feedback Information

Please submit any written comments or recommendations for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: FAA Order 8000.93C

To: Directives Management Officer, 9-AWA-AVS-AIR-DMO@faa.gov

(Please check all appropriate line items)

- ☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.
☐ Recommend paragraph _____ on page _____ be changed as follows:
(attach separate sheet if necessary)
☐ In a future change to this directive, please include coverage on the following subject
(briefly describe what you want added):
☐ Other comments:
☐ I would like to discuss the above. Please contact me.

Submitted by: _____ Date: _____

Telephone Number: _____ Routing Symbol: _____

FAA Form 1320-19 (10-98)