

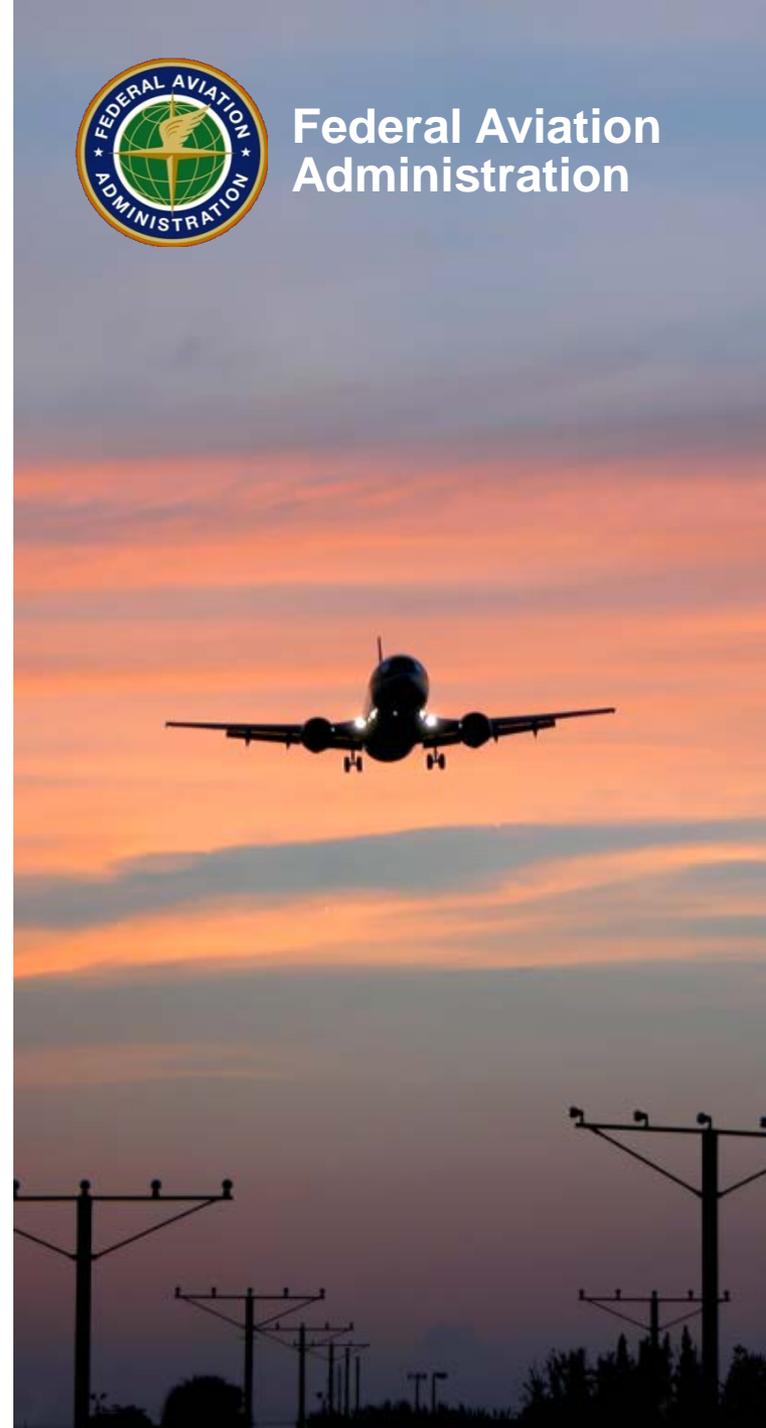
Changes to Production Certificates and Approvals

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Federal Aviation
Administration



Agenda

- **Background**
- **Overview of Part 21 & 45 Rule Changes**
 - Five Major changes
 - Accountable Manager,
 - Interface Components,
 - Issuance of FAA Form 8130-3 by a Production Approval Holder (PAH),
 - Supplier Control, and
 - Marking of fixed-pitch wooden propellers.
 - Miscellaneous changes
- **Publication, Effective, & Compliance Dates**
- **Affected Documents**
- **Resources**
- **Questions**

Background

- In 2009, the FAA published a final rule that updated and standardized requirements for PAHs, revised export airworthiness approval requirements to facilitate global manufacturing, moved all part-marking requirements from part 21 to part 45, and amended the identification requirements for products and articles
- The intent of those changes was to continue to promote safety by ensuring that aircraft and products and articles designed specifically for use in aircraft, wherever manufactured, meet appropriate minimum standards for design and production
- This rule change revises current regulations to reflect the modern, global manufacturing environment and to reinforce the PAH's responsibility while complementing the 2009 final rule



Overview of the Rule Change

Sections 21.135, 305, and 605, Organization

- Removed the term “At a minimum” from the beginning of the second sentence and reformatted section into sub-paragraphs
- Accountable Manager - Added requirement to identify an accountable manager and describe their minimum duties
 - Responsible within the applicant’s or PAH’s organization for, and have authority over, all production operations conducted under this part.
 - Confirms that the procedures described in the quality manual are in place and that the production approval holder satisfies the requirements of the applicable regulations of subchapter C, Aircraft.
 - Serves as the primary contact with the FAA.



Rationale for Change

Sections 21.135, 305, and 605, Organization

Rationale:

- Not having a primary contact often results in schedule delays and uncertainty when conducting certificate management
- An accountable manager is currently required in part 145 for certificated repair stations
- This proposal would harmonize the CFR with EASA regulations



Overview of the Rule Change

Section 21.137(c) Supplier Control

Current Language	Final Rule Language
<p>Supply Control—Procedures that:</p> <p>(1) Ensure that each supplier-furnished product or article <i>conforms to its approved design</i>; and</p> <p>(2) <i>Require each supplier to report to the production approval holder</i> if a product or article has been released from that supplier and subsequently found not to conform to the applicable design data.</p>	<p>Supply Control—Procedures that</p> <p>1) Ensure that each supplier-provided product, article, <i>or service conforms to the product approval holder’s requirements</i>; and</p> <p>2) <i>Establish a supplier reporting process</i> for products, articles or services that have been released from the supplier and subsequently found not to conform to the production approval holder’s requirements.</p>

- Changed conforms to “approved design” to “PAH requirements.”
 - (I.e. pilot holes, only primed not finish paint, annealed not hardened.)
- Added “or service” to products and articles
- Changed supplier reporting requirement to PAH established process

Rationale for Change

Section 21.137(c) Supplier Control

Rationale:

- In many cases suppliers provide articles that at the time of receipt do not meet an approved design. The PAH is ultimately responsible for ensuring all products or articles conform to their approved design.
- Reporting of supplier escapes may not always need to be reported to the PAH. When a supplier escape occurs at a lower level supplier the reporting should be to the supplier at the next level up and maybe also to the PAH. This rule change make it the responsibility of the PAH to determine who has to report and to whom they report.

Overview of the Rule Change

Section 21.137(o) Issuing authorized release documents

- Allows PAHs, with FAA approved procedures within its QS, to issue an FAA Form 8130-3 for its product or article.
- When issued by a PAH the 8130-3 is referred to as an authorized release document (ARD).
- The procedure must provide for the selection, appointment, training, management, and removal of authorized individuals

Note: The expectation is for authorized individuals meet the requirements that are equivalent to Order 8000.95 and procedures for filling out the form that are equivalent to 8130.21

- ARDs may be issued for new products and articles manufactured by the production approval holder; and for products and articles when rebuilt, or altered, in accordance with § 43.3(j).

Note: An ARD may be raised for export with deviations to the importing country's requirements if the importing country or jurisdiction accepts, in a form and manner acceptable to the FAA, a deviation from that requirement. This type of ARD must be coordinated through the FAA.

Rationale for Change

Section 21.137(o) Issuing authorized release documents

Rationale:

- Currently, European and Canadian approved manufacturers can issue their equivalent to our FAA Form 8130-3
- FAA believes there should be no difference in the process for domestic versus foreign approvals
- This proposal would harmonize the CFR with EASA regulations and those of other foreign authorities

Overview of the Rule Change

Section 21.147 Amendment of production certificates

- Restructured & added paragraph (c) on Interface Components (IC)
- (c) An applicant may apply to amend its production limitation record to allow the manufacture and installation of an interface component, provided—
 - (1) The applicant owns or has a license to use the design and installation data for the interface component and makes that data available to the FAA upon request;
 - (2) The applicant manufactures the interface component;
 - (3) The applicant's product conforms to its approved type design and the interface component conforms to its approved type design;
 - (4) The assembled product with the installed interface component is in a condition for safe operation; and
 - (5) The applicant complies with any other conditions and limitations the FAA considers necessary.

Rationale for Change

Section 21.147 Amendment of production certificates

Rationale:

- Prevents redundant disassembly, handling damage, and retesting after the engine ships.
- Makes engine installation more efficient.
- Enables airline customers to accomplish faster engine changes.
- FAA has issued exemptions to General Electric, Pratt & Whitney, and International Aero Engines, allowing them to deliver engines with ICs installed.

Overview of the Rule Change

Section 45.11(c) Propellers and propeller blades and hubs

Marking of Wooden Propellers

The current regulation requires wooden propellers to be marked with a fireproof marking, which is normally accomplished through the use of a metal tag

Section 45.11(c) Propellers and propeller blades and hubs, revised to read:

Each person who produces a propeller, propeller blade, or propeller hub under a type certificate or production certificate must mark each product or part. ***Except for a fixed-pitch wooden propeller***, the marking must be accomplished using an approved fireproof method. The marking must—

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Rationale for Change

Section 45.11(c) Propellers and propeller blades and hubs

Rationale:

- Wood is inherently flammable, and the installation of a fireproof marking is detrimental to the structural integrity of the propeller
- Stamping has been industry's standard procedure for marking wooden propellers
- FAA has issued exemptions to Sensenich Wood Propeller Company, Inc., to permit the stamping of wooden propellers

Overview of the Rule Change

Miscellaneous

- Revised title of Part 21 to *Certification Procedures for Products and Articles*. (removed “Parts”)
- Revised § 21.142 Production limitation record.

The FAA issues a production limitation record as part of a production certificate. The record lists the type certificate number and model of every product that the production certificate holder is authorized to manufacture, and identifies every interface component that the production certificate holder is authorized to manufacture and install under this part

Overview of the Rule Change

Miscellaneous continued

- Added three definitions
 - ***Airworthiness approval*** means a document, issued by the FAA for an aircraft, aircraft engine, propeller, or article, which certifies that the aircraft, aircraft engine, propeller, or article conforms to its approved design and is in a condition for safe operation, unless otherwise specified;
 - ***Interface component*** means an article that serves as a functional interface between an aircraft and an aircraft engine, an aircraft engine and a propeller, or an aircraft and a propeller. An interface component is designated by the holder of the type certificate or the supplemental type certificate who controls the approved design data for that article; and
 - ***Supplier*** means a person at any tier in the supply chain who provides a product, article, or service that is used or consumed in the design or manufacture of, or installed on, a product or article.

Rationale for Change

Miscellaneous

Rationale:

- Changed title of Part 21 to remove “Parts” because parts are included in the definition of an article.
- Revised § 21.142 to allow the identification of ICs on a PC holders Production Limitation Record (PLR). This change was required because the change to 21.147 allows for both the production and the installation of ICs. Prior to this change the PLR listed only those products or articles the PC holder was authorized to produce ... not install.

Rationale for Change

Miscellaneous continued

Rationale:

- Revised the definition of “airworthiness approval” by adding the qualifier “unless otherwise specified” at the end of the definition . This was necessary because there are occasions when the product or article may not be in a condition for safe operation (aircraft engine with caps over hydraulic lines and/or preservation fluid installed for shipping) or conforming to its approved design (an aircraft disassembled for shipping) at the time the airworthiness approval is generated.
- Added the definition for an IC to enhance PC holder’s understanding of the production and installation approval process associated with these articles.
- Added the definition of Supplier to clarify who is a supplier and that suppliers exist at any tier in the supply chain

Publication & Effective Dates

- **Publication date was October 1, 2015**
- **Effective Date is March 31, 2016**



Effected Documents

- **ACs:**

- 21-43, Production Under 14 CFR Part 21, Subparts F, G, K, and O
- 21-44, Issuance of Export Airworthiness Approvals Under 14 CFR Part 21 Subpart L
- 45-2, Identification and Registration Marking

Orders:

- 8100.15, Organization Designation Authorization Procedures
- 8120.22, Production Approval Procedures
- 8120.23, Certificate Management of Production Approval Holders
- 8130.2, Airworthiness Certification of Aircraft and Related Products
- 8130.21, Procedures for Completion and Use of the Authorized Release Certificate, FAA Form 8130-3, Airworthiness Tag

Resources

- Resources
 - Advisory Circulars, Orders, NPRM, and Final Rule can be found at: <http://rgl.faa.gov/>
- Copies of the following can be found at: http://www.faa.gov/aircraft/air_cert/production_approvals/14cfr_amendments_2015/
 - NPRM,
 - Final Rule (when published),
 - Orders and ACs with changes highlighted,
 - Informational presentations, and
 - Q&A sheet

Questions

