Federal Aviation Administration
Aviation Rulemaking Advisory Committee

Aircraft Certification Procedures Issue Area
Production Certification Working Group

Task 1 – Production Approval Holders

Task Assignment

Aviation Rulemaking Advisory Committee; Production Certification Working Group

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of establishment of the production certification working group.

SUMMARY: Notice is given of the establishment of the Production Certification Working Group of the Aviation Rulemaking Advisory Committee (ARAC). This notice informs the public of the activities of the ARAC on aircraft certification procedures issues.

FOR FURTHER INFORMATION CONTACT: Mr. William J. (Joe) Sullivan, Assistant Executive Director, Aviation Rulemaking Advisory Committee, Aircraft Certification Service (AIR-3), 800 Independence Avenue SW., Washington, DC 20591, Telephone: (202) 267-9554; FAX (202) 267-5364.

SUPPLEMENTARY INFORMATION: The Federal Aviation Administration (FAA) has established the Aviation Rulemaking Advisory Committee (ARAC) (56 FR 2190, January 22, 1991; and 58 FR 9230; February 19, 1993). One area of the ARAC deals with is aircraft certification procedures (57 FR 39267; August 28, 1992). These issues involve the procedures for aircraft certification found in parts 21, 39, and 183 of the Federal Aviation Regulations (FAR), and Special Federal Aviation Regulation No. 36 (SFAR 36), which are the responsibility of the FAA Director of Aircraft Certification.

The FAA has established four kinds of production approvals: Production Certificates, Approved Production Inspection Systems, Technical Standard Order Authorizations, and Parts Manufacturer Approvals. The regulations governing each kind of production approval evolved separately over the years, so each has different quality assurance and procedural requirements. As a result, persons producing the same aviation product or part to the same airworthiness design standards may meet different production requirements depending on the kind of production approval held. These inconsistencies result in different levels of surveillance of the products and parts produced. The differences also create standardization and interpretation problems for both the commercial aviation manufacturing industry and the FAA in administering the production approval system. This has resulted in longstanding industry and FAA concerns with the regulatory structure for the production of aircraft products and parts. A need exists for a single production approval with a single set of cost-effective quality assurance requirements. This production approval regulatory structure needs to adjust to the size and complexity of the manufacturing activity the approval holder engages in, and to respond to the most modern and up-to-date manufacturing practices.

The FAA has also received recommendations concerning the establishment of internal audit systems by the production approval holders. Many production approval holders maintain an internal audit system. There is no regulatory requirement to maintain one, however, and there are no regulatory standards to assure their effectiveness. The wisdom of such internal audit systems was demonstrated to the FAA in Operation Snapshot, a nationwide review of existing quality assurance systems of aviation product and parts manufacturers. The Production Certification Working Group is established to address these issues.

Specifically, the Production Certification Working Group's task is the following:

Task: The Production Certification Working Group is charged with making recommendations to the ARAC concerning the modernization of requirements applicable to production approval holders in subparts F, G, H, J, K and O of FAR Part 21. These recommendations involve streamlining the rules to establish a more modern, standardized set of production approval requirements more responsive to current industry production practices. The Production Certification Working Group will submit recommendations to the ARAC, which will determine whether to forward them to the FAA.

Reports

A. Recommend time line(s) for completion of the task, including rationale, for consideration at the ARAC meeting held to consider aircraft certification procedures issues following publication of this notice.

B. Give a detailed conceptual presentation on the proposed recommendations to the ARAC before proceeding with the work stated in Item C, below.

C. Develop a Notice of Proposed Rulemaking (NPRM) proposing the new standards for production approval holders, supporting economic and other required analysis, advisory and guidance material, and any other collateral documents the Working Group determines to be needed. Present these recommendations to the ARAC for further consideration and disposition.

D. Give a status report on the task at each meeting of the ARAC held to consider aircraft certification procedures issues.

The Production Certification Working Group will be comprised of experts from those organizations having an interest in the task assigned to it. A Working Group member need not be a representative of one of the member organizations of the ARAC. An individual who has expertise in the subject matter and wishes to become a member of the Working Group should write the person listed under "FOR FURTHER INFORMATION CONTACT" expressing that desire, describing his or her interest in the task, and the expertise he or she would bring to the Working Group. The request will be reviewed with Chairs of the Issue Group and the Production Certification Working Group; and the individual will be advised whether or not the request can be accommodated.

The Secretary of Transportation has determined that the information and use of the ARAC is necessary in the public interest in connection with the performance of duties imposed on the FAA by law. Meetings of the ARAC will be open to the public, except as authorized by section 10(d) of the Federal Advisory Committee Act. Meetings of the Production Certification Working Group will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of Working Group meetings will be made.

Issued in Washington, DC, on March 19, 1993.

William J. Sullivan,

Assistant Executive Director for Aircraft Certification Procedures Issues, Aviation Rulemaking Advisory Committee.

[FR Doc. 93-7087 Filed 3-26-93; 8:45 am]

BILLING CODE 4910-13-M

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

800 Independence Ave., S.W.
Washington, D.C. 20591

JUN 27 1994

Mr. James E. Dougherty
Assistant Chair, Aviation Rulemaking Advisory
Committee on Aircraft Certification Procedures
1400 K Street, NW., Suite 801
Washington, DC 20005-2485

Dear Mr. Dougherty:

This is in response to your May 19 letter in which you requested an amendment to the task statement for the Production Certification Working Group. I find the request appropriate, and have revised the task to include: (1) Subparts A and B of 14 CFR Part 45 as they pertain to the marking of parts, and (2) Subpart L of 14 CFR Part 21.

The amended task now reads: The Production Certification Working Group is charged with making recommendations to the Aviation Rulemaking Advisory Committee (ARAC) concerning the modernization of requirements applicable to production approval holders in Subparts F, G, H, J, K, L, and O of 14 CFR Part 21 and Subparts A and B of 14 CFR Part 45.

Thank you for your continued dedication to ARAC.

Sincerely,

Anthony J. Broderick
Associate Administrator for Regulation
and Certification

DATES: The meeting will be held on December 7, 1994 at noon.

ADDRESSES: The meeting will be held at the Regional Airline Association, 1200 19th Street NW., Washington, DC, third floor conference room.

FOR FURTHER INFORMATION CONTACT: Ms. Judi Citrenbaum, Office of Rulemaking, (ARM-100) 800 Independence Avenue, SW., Washington, DC 20591. Telephone: (202) 267-9689

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92-463; 5 U.S.C. App. II), notice is hereby given of a meeting of the Aviation Rulemaking Advisory Committee (ARAC) to discuss training and qualifications issues. This meeting will be held on December 7, 1994, at noon, at the Regional Airline Association in Washington, DC. The agenda for this meeting will include a progress report from the Aircraft Dispatcher Working Group. In addition, the FAA will present a new task in which ARAC will be asked to review and recommend an appropriate course of action for the comments received on the Operator Flight Attendant English Language Advance Notice of Proposed Rulemaking, published in the **Federal Register** on April 18, 1994 (59 FR 18456). The FAA will also provide an informational briefing on the economic analysis process.

Attendance is open to the interested public but may be limited to the space available. The public must make arrangements in advance to present oral statements at the meeting or may present statements to the committee at any time. In addition, sign and oral interpretation can be made available at the meeting, as well as an assistive listening device, if requested 10 calendar days before the meeting. Arrangements may be made by contacting the person listed under the heading **FOR FURTHER INFORMATION CONTACT**.

Issued in Washington, DC, on November 14, 1994.

Thomas Toula,

Assistant Executive Director for Training and Qualifications, Aviation Rulemaking Advisory Committee.

[FR Doc. 94-28727 Filed 11-21-94; 8:45 am]

BILLING CODE 4910-13-M

Aviation Rulemaking Advisory Committee; Production Certification Working Group

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of task amendment for the Production Certification Working Group.

SUMMARY: This notice informs the public of an amendment to the original task assigned to the Production Certification Working Group of the Aviation Rulemaking Advisory Committee.

FOR FURTHER INFORMATION CONTACT: Mr. Daniel P. Salvano, Aircraft Certification Service (AIR-3), 800 Independence avenue S.W., Washington, D.C. 20591, Telephone: (202) 267-9554; FAX (202) 267-5364.

SUPPLEMENTARY INFORMATION: The Federal Aviation Administration (FAA) has established the Aviation Rulemaking Advisory Committee (ARAC) (56 FR 2190; January 22, 1991, and 58 FR 9230; February 19, 1993). One issue being addressed by ARAC is aircraft certification procedures. This issue involves the procedures for aircraft certification found in parts 21, 39, and 183 of the Federal Aviation Regulations (FAR), and Special Federal Aviation Regulation No. 36 (SFAR 36), which are the responsibility of the FAA Director, Aircraft Certification Service.

On March 19, 1993, the Production Certification Working Group was established, and notice of establishment was published in the **Federal Register** on March 29, 1993 (58 FR 16574). This Working Group was charged with making recommendations to the ARAC concerning the modernization of requirements applicable to production approval holders in subparts, F, G, H, J, K, and O of FAR Part 21.

After the task was assigned, it became apparent that subpart L of FAR Part 21 and subparts A and B of FAR Part 45 should have been included in the review; therefore, the Production Certification Working Group task statement is amended to include subpart L of FAR Part 21 and subparts A and B of FAR Part 45.

Task: The task statement assigned to the Production Certification Working Group is, therefore, amended to read as follows: The Production Certification Working Group is charged with making recommendations to the ARAC concerning the modernization of requirements applicable to production approval holders in subparts F, G, H, J, K, L, and O of FAR Part 21 and subparts A and B of Part 45. These recommendations involve streamlining the rules to establish a more modern, standardized set of production approval requirements more responsive to current industry production practices. The Production Certification Working Group will submit recommendations to the ARAC, which will determine whether to forward them to the FAA.

Issued in Washington, DC, on October 21, 1994.

Daniel P. Salvano,

Assistant Executive Director ARAC on Aircraft Certification Procedures.

[FR Doc. 94-28726 Filed 11-21-94; 8:45 am]

BILLING CODE 4910-13-M

[Special Committee 159]

RTCA, Inc.; Thirty-Second Meeting; Minimum Operational Performance Standards for Airborne Navigation Equipment Using Global Positioning System (GPS)

Pursuant to section 10(a) (2) of the Federal Advisory Committee Act (P.L. 92-463, 5 U.S.C., Appendix I), notice is hereby given for Special Committee 159 meeting to be held December 5-9, 1994, starting at 9:00 a.m. The meeting will be held at the RTCA Conference Room, 1140 Connecticut Avenue, NW, Suite 1020, Washington, DC 20036.

Specific Working Groups Sessions

December 5
- Working Group 1, GPS/GLONASS
- Working Group 5, Fault Detection and Isolation
- Ad Hoc Working Group, Interference Issues

December 6
- Working Group 2, GPS/GIC/WADGNSS

December 16
- Working Group 3, GPS/Other Navigation Systems

December 8
- Working Group 4, Precision Landing Guidance and Airport Surface Surveillance

December 9

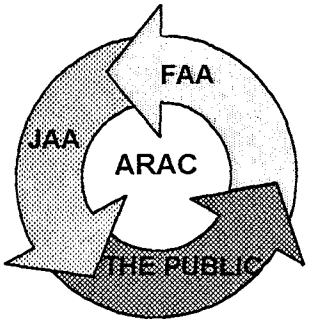
Agenda—Plenary Session:

Agenda will be as follows: (1) Chairman's introductory remarks; (2) Approval of summary of the thirty-first meeting held on October 7, 1994; (3) Review Working Group (WG) progress and identify issues for resolution (a) GPS/GLONASS (WG-1) (b) GPS/GIC/WADGNSS (WG-2) (c) GPS/Other Navigation Systems (WG-3) (d) GPS/Precision Landing Guidance and Airport Surface Surveillance (WG-4) (e) Fault Detection and Isolation (WG-5) (f) Interference Issues (Ad Hoc); (5) Review of EUROCAE activities; (6) Assignment/Review of Future Work; (7) Other business; (8) Date and place of next meeting.

Attendance is open to the interested public but limited to space availability. With the approval of the Chairman, members of the public may present oral

Recommendation Letter

AVIATION
RULEMAKING
ADVISORY
COMMITTEE



March 26, 2002

Mr. Nicholas A. Sabatini
Associate Administrator for Regulations and Certification
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, DC 20591

Subject: Transmittal of Documents in Support of ARAC 21 Production Certification and Parts Approval Tasking

Dear Mr. Sabatini:

This forwards the following documents, which have been prepared in support of the ARAC 21 Production Certification and Parts Approval tasking:

- Means of Compliance with Proposed Quality System Requirements; 2-20-02
- PAH Transition to New Quality System Requirements; 2-20-02
- Quality System Guidance; 11-26-01
- Proposed AC on Standard and Commercial Parts; 3-21-02
- ODAR; 3-21-02
- PDA Document; 11-26-01

This is the culmination of a long effort to enhance the safety of the production certification system for aeronautical products and those parts needed for continued operational safety.

FAA first began this effort in 1986. In 1993, FAA tasked ARAC 21 to develop recommendations for proposed regulations and guidance materials that would accomplish this safety objective. The preponderance of ARAC 21 recommendations on this tasking were submitted to FAA in 1999 and

would have enabled the FAA to proceed with the development of an Notice of Proposed Rulemaking. However, since an NPRM has not yet been developed, the ARAC 21, in anticipation that an NPRM would be forthcoming, continues to support the FAA with the development of additional recommended guidance for important aspects of this safety effort.

The industry and ARAC 21 respectfully request the FAA consider assigning a higher priority to this safety rulemaking effort.

Very truly yours,

W. H. Schultz
Assistant ARAC Chair
ARAC 21 Issues

Attachments

Copies:
John Hickey, AIR-1
Frank Paskiewicz, AIR-200

Acknowledgement Letter

JUN - 5 2002

Received

Aircraft Cert. Procedures
Production Cert. WG
AIR-93-769-A
59 FR 60185
Duplicate

Mr. Bill Schultz
Assistant Chair, Aircraft Certification
Procedures Issues
1400 K Street NW.
Washington, DC 20005

Dear Mr. Schultz:

This letter acknowledges receipt of your March 26 letter and email message transmitting guidance recommendations from the Aircraft Certification Procedures issues area under the Aviation Rulemaking Advisory Committee (ARAC). The recommendations included:

- Means of Compliance with Proposed Quality System Requirements (2-20-02);
- Production Approval Holder Transition to New Quality System Requirements (2-20-02);
- Quality System Guidance (11-26-01);
- Proposed Advisory Circular on Standard and Commercial Parts (3-21-02);
- Organizational Designated Airworthiness Representative (3-21-02); and
- Part Design Approval Document (11-26-01)

As indicated in a letter to you earlier this year, rulemaking in this area is important for several reasons. Most important are enhancements in safety and system efficiencies for industry and Federal Aviation Administration. Our Rulemaking Council has asked the program office to define the issues that should be in this rulemaking effort and present a plan to the Council for approval and assignment of resources. The Council will address this action at its next meeting.

I would like to thank the aviation community for its commitment to ARAC and, in particular, the Production Certification and Parts Approval Working Groups for their expenditure of resources to develop the working documents. The groups are commended for their extensive deliberations on this difficult task.

dw 8/3

Sincerely,
Original Signed By
Margaret Gilligan

Nicholas A. Sabatini
Associate Administrator for
Regulation and Certification

CONCURRENCES		
ROUTING SYMBOL	INITIALS/SIGNATURE	DATE
AIR-205	MMueller	5/31/02
[illegible]	Courtney	5/31/02
[illegible]	TF	5/31/02
[illegible]		

cc: ARM-205:MMullen:fs:05/20/02:DOCS #8423 v5a
Edits per ARM-200:mm:05/31/02
ARM-1/25/200/205; AVR-1, AIR-110 (Brian Yanez/Nancy Lane/Mary Hoff)
CONTROL NO. 20021348-0
File #AIR-93-768-A (and AIR-93-769-A)

Recommendation

WORKING GROUP GUIDANCE MATERIAL RECOMMENDATIONS APPROVAL HOLDER QUALITY SYSTEM REQUIREMENTS

1. PURPOSE. This document provides information on the quality system requirements for all Production Approval Holders (Production Certificate, Parts Manufacturer Approval and Technical Standard Order Authorization).

2. DEFINITIONS AND ABBREVIATIONS. As used herein, the following definitions and abbreviations apply:

a. Product. An aircraft, aircraft engine, propeller, or any appliance that has been designated by the administrator as type certificated.

b. Part. Any item not identified as a product including but not limited to: an article for which the FAA has issued a Technical Standard Order; Accessory; appliance that has not been designated by the Administrator as type certificated; airborne software and firmware; and components and parts of a product or part.

c. Supplier. Any person who furnishes services to a holder of a production approval which affects a type certificated product, or who supplies parts for installation on a type certificated product, including parts which were not designed or manufactured by the type certificate holder.

d. Regional Office. The Branch of the Federal Aviation Administration region having jurisdiction over the geographical area in which the manufacturer is located.

e. District Office. The FAA District Office (CMO / MIDO) responsible for evaluation and inspection of the manufacturer's facilities.

f. PC. Production Certificate (Ref. FAR 21, Subpart G).

g. PMA. Parts Manufacturer Approval.

h. TSOA. Technical Standard Order Authorization.

h. PAH. Production Approval Holder – the holder of a PC, PMA or TSOA.

3. DISCUSSION. This circular covers only those sections of FAR 21, Subpart G, where further discussion, information, and examples would be helpful. The heading of each of the following main paragraphs refers to the applicable section of Subpart G.

4. FAR 21.139 – PRIVILEGES.

a. While a PAH is proceeding with a design approval of a new product or part of the same type that is on its Production Limitation Record, it may produce those products or parts under its approved quality system, so that the PAH may be ready to release them for service as soon as the design of the new product or part is approved by the FAA. The quantity of products or parts produced in this manner should be limited and reasonable in relationship to planned requirements. The PAH must have a system to positively identify and disposition products and parts produced in this manner that do not conform to the design approved by the FAA.[1]

b. If a production certificate holder produces products and related parts prior to design approval per paragraph 5.a., the production certificate holder may also ship those products and parts prior to design approval if there is a positive recall system in case the design is not approved. An FAA airworthiness approval may be issued for such products and parts as long as it is clear on the airworthiness approval that the parts were released in this manner.[2]

5. FAR 21.141 – RESPONSIBILITY OF THE PRODUCTION APPROVAL HOLDER.

a. The PAH shall immediately notify the FAA in writing of any change to the location of a manufacturing facility or any change to the quality system that could affect the inspection, conformity, or airworthiness of the product or part. Notification in writing would include electronic communication.

b. The PAH shall determine that each completed product or part conforms to the approved design and is in condition for safe operation prior to its release. The holder of a production certificate has a basic responsibility for controlling the manufacture of completed products and spare articles in conformity with his FAA-approved quality control data and design requirements.

(1) Although this responsibility never changes, he may be relieved of some of the burden of inspection and testing duties when he:

(a) Uses other type certificated product or products manufactured under another person's production certificate, or which bear an FAA Airworthiness Approval Tag, FAA Form 8130-3.

(b) Uses articles produced under an FAA TSO authorization.

(c) Installs used parts that conform to the type design.

(d) Uses parts fabricated under an FAA Parts Manufacturer Approval.

(e) Delegates specific inspection and testing duties to suppliers.

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[1] The inclusion of this item in the NPRM should be verified by the FAA.

[2] This paragraph need not be included if AC 21-32 remains active.

(2) The production approval holder remains responsible for controlling the design, physical configuration, and operating condition of the parts or products furnished by a supplier. However, the holder of a production approval may be relieved of some of the burden of inspection and testing when these functions are delegated to a supplier. All changes made by a supplier, to the design or the physical product or part, must be submitted to the holder of the production approval for evaluation and approval as applicable under FAR 21, Subpart D. Thus, the holder of a production approval is responsible for obtaining FAA approval of major materials review actions or other design changes including those made to supplier furnished articles which were not designed or manufactured by him and would also result in a change to his design data or to his products or parts.

c. In those instances where the PAH is not the design approval holder, the PAH is required to report to the design approval holder the following items necessary for analysis and possible reporting under § 21.3. This will ensure that the persons responsible for the original design and who hold the design approval are kept informed of these items, so they may determine if there is any impact on the airworthiness of the product.

(1) All deviations from the quality system which could have an impact on the airworthiness of the product or part.

(2) All undocumented nonconforming products or parts which could have left the quality system. These parts are typically referred to as "escapes", and do not include parts which were dispositioned as acceptable by the Material Review Board.

d. The PAH shall maintain a complete and current technical data file consisting of all the approved data and manufacturing processes for each product or part manufactured under the production approval. The file shall be retained for the period of manufacture of the part or product or as agreed upon with the Administrator.

e. The PAH shall maintain complete quality records for 2 years for manufactured products or parts and 10 years for critical components as defined under 14 CFR 45.14.

f. The PAH shall obtain an airworthiness approval, in accordance with Order 8130.21, for each shipment of completed products and/or parts. This requirement does not apply to shipments within the PAH's quality system. This provides a standardized "birth certificate" for each part or batch of parts.

g. The PAH shall mark products in accordance with 14 CFR Part 45. This provides uniform marking requirements for all parts sold as spares to assure that all individuals can readily determine whether a part is eligible for installation on a product for which a type certificate has been issued.

h. The PAH shall allow the Administrator to make inspections, tests, and investigations at its facilities or any supplier facilities necessary to determine compliance with applicable regulations. Following the issuance of the production approval, the FAA will maintain periodic surveillance of the production facilities and quality control system, through

management by a Principal Aviation Safety Inspector and by the use of periodic inspection team audits. If the FAA determines that any part of the data or system which was originally approved does not fully meet the applicable requirements, the FAA will request changes to the quality control system or data as may be required.

NOTE: The FAA considers any evidence of inspection approval placed on inspection records, test reports, or physical articles as documentation that the article, process, or manufacturing operation has been accepted by the holder of a production approval.

(i) The PAH shall have accessible the approval and ratings in the manufacturing facility. The holder of a production approval may make copies of the production approval for use in associate facilities.

6. FAR 21.143 – AMENDMENT, TRANSFERABILITY, AND DURATION OF A PRODUCTION APPROVAL. A PAH may request an amendment to the approval through its District Office. This may include a request to move the location of the PAH's manufacturing facility.

a. Application to amend a production approval is made in the same form and manner as the original issue, except that only changes to the existing quality control data need be submitted, when production of the new product involves changes in the quality control system. If no changes in the quality control data are required, or if the applicant is adding a product / part of the same type as currently covered under the existing production approval, the situation should be documented by letter to the district office.

b. Since a production approval may be amended for several different purposes, the following paragraphs provide examples as to methods applicable in differing circumstances:

(1) The holder of a production approval may make application to move the manufacturing facility. Upon evaluation and approval of the application of the quality control data in the new manufacturing facility, as applicable, the FAA will modify the production approval showing the new address.

(2) When production of completed products as well as spare articles has ceased, the holder of a production approval should request deletion of the applicable products/parts from his production limitation record by a letter to the regional office. A revised production limitation record will be issued, and the superseded production limitation record would be cancelled.

(3) If the holder of a production certificate ceases to manufacture complete products, but continues to manufacture spare articles, his production limitation record does not require an amendment.

7. FAR 21.145 – QUALITY SYSTEM. A total quality control system meeting the requirements of FAR 21.145 would provide control over all phases of manufacture, including control over the manufacture of all supplier-furnished articles. The control exercised by the manufacturer over articles furnished to the manufacturer by a supplier that holds his own FAA approval for the article may be limited to the approval of the supplier's material review systems, design changes, and to the manufacturer's usual incoming quality control procedures employed after articles are received from an outside source. The FAA has reviewed the aviation industry's quality standard AS9100 published by SAE, and has made a determination that it meets the requirements of this section. This should facilitate the FAA approval of an applicant's system that is in accordance with AS9100.

8. FAR 21.147 – QUALITY SYSTEM DOCUMENTATION

a. The data required to be submitted for approval under this regulation should be submitted to the district office at the same time the application for a production approval is submitted.

b. In general, the quality system requirements are self-explanatory, and the following paragraphs provide an example of acceptable compliance:

(1) The manufacturer's organizational structure required by FAR 21.149 would ensure that any decisions with regard to workmanship, quality, conformity, safety, materials review, and corrective action are not influenced by other considerations. This can be achieved by having the quality control organization report directly to top management.

(2) An effective quality control system utilizes well-qualified personnel in sufficient number to ensure that all articles, processes, procedures, and the completed products are inspected for conformity to data, specifications, and procedures specified in the approved design.

(3) The quality control data would be arranged in manual form (either in hardcopy or electronic version), with a suitable index, and should cover each portion of the quality system requirements.

(4) When references to other company documents or data are utilized, the manual would briefly summarize the procedure, method, or system which is referenced. Any such referenced material becomes part of the data approved by the FAA.

(5) In providing the documentation required by FAR 21.147, the inclusion of, or reference to, supplementary data such as the following is considered helpful in showing acceptable compliance:

(a) Copies of all inspection and acceptance forms and checklists for articles and completed products, together with a brief outline of instructions for their use.

(b) Imprints of the various inspection and process stamps, and their meaning.

(c) A typical schedule of inspection and calibration intervals for production jigs and fixtures, precision inspection tools, testing equipment, including gauges and recording equipment used in controlling processes.

(d) A listing of manufacturing processes which are relied upon to assure quality, conformity, and safety of the completed product.

c. An acceptable means of compliance with FAR 21.155 would be to provide in the quality control data a description of the system used to evaluate, monitor, and control all suppliers to whom the holder of a production approval has delegated inspection duties for controlling conformity and quality. Such a description would include an up-to-date listing, either in the manual or in a referenced company document, of all such suppliers by name, address, general nomenclature of articles or services, and any other pertinent information, such as:

(1) Reference to the manufacturer's quality control manual by title and date.

(2) Delegation of Material Review Board (MRB) authority.

(3) Name and title of the manufacturer's or supplier's quality representative(s) who will make available purchase orders, drawings, and other applicable data.

9. FAR 21.149 through FAR 21.165 – QUALITY SYSTEM FUNCTIONS.

a. A totally integrated quality control system would include the following major functions listed in FAR 21.149 through 21.165. A cross-reference of those functions with the applicable AS9100 functions is given. The FAA has found the AS9100 document (issued 1999-11) to be a comprehensive quality standard containing the basic quality control elements required by the current Code of Federal Regulations (CFR) Title 14, Part 21. The organizational system that meets the elements of AS9100, if effectively employed, should also meet the FAA's expectations for a manufacturing quality control system and are shown here for reference purposes

CFR Title 14, Part 21	**AS 9100 (issued 1999-11)**
§ 21.149 Management Responsibility	§ 4.1 Management Responsibility
§ 21.151 Design and Data Control	§ 4.4 Design Control § 4.5 Document and Data Control
§ 21.153 Document Control	§ 4.5 Document and Data Control
§ 21.155 Supplier Control	§ 4.6 Purchasing
§ 21.156 Process Control	§ 4.9 Process Control
§ 21.157 Inspection and Testing	§ 4.10 Inspection and Testing
§ 21.158 Inspection, Measuring, and Test Equipment Control	§ 4.11 Control of Inspection, Measuring, and Test Equipment

CFR Title 14, Part 21	AS 9100 (issued 1999-11)
§ 21.159 Inspection and Test Status	§ 4.12 Inspection and Test Status
§ 21.160 Nonconforming Products, Parts, Materials, and Services Control	§ 4.13 Control of Nonconforming Product
§ 21.161 Corrective and Preventive Action	§4.14 Corrective and Preventive Action
§ 21.162 Handling, Storage, Packaging, Preservation, and Delivery	§ 4.15 Handling, Storage, Packaging, Preservation, and Delivery
§ 21.163 Control of Quality Records	§ 4.16 Control of Quality Records
§ 21.164 Internal Quality Audits	§ 4.17 Internal Quality Audits
§ 21.165 Final Release of Product or Part	§ 4.12 Inspection and Test Status

b. When establishing the Quality System, the following must be considered:

(1) Articles obtained from foreign suppliers are under the same degree of control that is exercised over domestic suppliers. In general, an undue burden may exist whenever the production approval holder performs, or he has suppliers perform, any of his regulated functions outside the United States. Under such circumstances, the evaluation and approval of design changes and the evaluation, approval and subsequent surveillance of manufacturers, including the supervision of designees performing outside the United States may create a burden on the FAA in administering the FARs. In accordance with FARs 21.43 and 21.137, the determination of whether or not an undue burden exists must be made by the FAA in each case. FAA surveillance of materials, parts, and appliances is not considered to be an undue burden when:

(a) The manufacturer completely inspects such articles for conformity and condition upon receipt in the United States; or

(b) An agreement is negotiated between FAA, the foreign civil aviation authorities and the U.S./foreign manufacturers where-by the foreign civil aviation authority agrees to perform inspections and surveillance on behalf of the FAA, and certifies to the FAA that each article conforms to the FAA-approved design and is in a condition for safe operation; or

Deleted: air

Deleted: air

(c) The foreign civil aviation authority at the country of manufacture certifies that the article meets U.S. requirements in accordance with FAR 21.502.

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(2) Ensure the submittal of all material review actions, which result in a major change in the design data, to the FAA and obtain FAA engineering approval prior to final acceptance or delivery of affected products or parts. The materials review system is a method acceptable to the Administration for the approval of minor changes in design in lieu of submitting to the Administrator any substantiating or descriptive data (Ref. FAR 21.95) including manufacturing errors.

(3) There must be a record of all inspections and tests required to be conducted during manufacture of the products or parts. Those significant records attesting to the conformity and safety of the completed product or part must be retained for a period of at least

two years for most parts and ten years for life limited and life assessed parts, and other parts serialized as required by Section 45.14.

(4) There must be a system to control the packing, preservation, and condition of parts that incorporates procedures which ensure that:

(a) Parts conform to applicable design data and have not exceeded their shelf-life limits.

(b) Prior to shipment of parts, all required modifications are accomplished in accordance with applicable design changes.

(c) Parts are lubricated, preserved, and packed in a manner to preclude corrosion or damage in shipment, especially internal damage not readily detectable by inspection for condition upon receipt.

(5) Service Difficulties. A totally integrated quality control system would include the means of recording, investigating cause, and assuring corrective action on all known or reported failures, malfunctions, and defects, including procedures, as applicable to each particular manufacturer, to ensure that:

(a) Service problems are investigated and prompt corrective action is taken on all affected products as appropriate.

(b) Users of the product are informed of service difficulties and resultant FAA-approved changes to the type design in accordance with FAR 21.99 requirements.

(c) Feedback on service problems is received from users of the products to the extent practicable.

(d) Requirements of FAR 21.3 relative to the reporting of certain malfunctions and defects are satisfied.

APPENDIX 1 – Additional Production Certificate Information

Application

An application for a production certificate is made on FAA Form 8110-12, (OMB-04-R0078) Application for Type Certificate, Production Approval, or Supplemental Type Certificate, which is submitted to the regional office.

Evaluation and Issuance

Upon receipt of a properly executed FAA Form 8110-12, and following a district office preliminary survey and evaluation of the applicant's quality control data and system, the FAA will convene a production certification board (consisting of one or more persons) at the applicant's facilities to make the final determination for issuance of a production certificate. The applicant will be formally advised as to the extent of his assistance needed in the production certification board activities, and of the findings and recommendations of the district office and the production board. Where the facilities, equipment, data, procedures, and personnel of the applicant are found to meet the applicable requirements of FAR 21, Subpart G, a Production Certificate will be issued.

Production System Limitations

If the production approval board finds that the applicant's facilities, equipment, data, procedures, and personnel do not meet all sections of FAR 21, Subpart G, the FAA may issue a production approval with specific limitations and / or special requirements to compensate for the lack of compliance to those sections. These limitations / special requirements may include the specific testing requirements applied to products produced under "TC Only" under the previous FAR 21 Subpart F regulations. These consist of:

(1) Tests: aircraft

(a) An approved production flight test procedure and flight check-off form, and in accordance with that form, a flight test each aircraft produced.

(b) Each production flight test procedure must include the following:

1 An operational check of the trim, controllability, or other flight characteristics to establish that the production aircraft has the same range and degree of control as the prototype aircraft.

2 An operational check of each part or system operated by the crew while in flight to establish that, during flight, instrument readings are within normal range.

3 A determination that all instruments are properly marked, and that all placards and required flight manuals are installed after flight test.

4 A check of the operational characteristics of the aircraft on the ground.

5 A check on any other items peculiar to the aircraft being tested that can best be done during the ground or flight operation of the aircraft.

(2) Tests: aircraft engines

(a) Each engine (except rocket engines for which the manufacturer must establish a sampling technique) shall be subject to an acceptable test run that includes the following:

1 Break-in runs that include a determination of fuel and oil consumption and a determination of power characteristics at rated maximum continuous power or thrust and, if applicable, at rated takeoff power or thrust.

2 At least five hours of operation at rated maximum continuous power or thrust. For engines having a rated takeoff power or thrust higher than rated maximum continuous power or thrust, the five-hour run must include 30 minutes at rated takeoff power or thrust.

(b) The test runs required by paragraph (a) of this section may be made with the engine appropriately mounted and using current types of power and thrust measuring equipment.

(3) Tests: propellers. Each variable pitch propeller shall be given an acceptable functional test to determine if it operates properly throughout the normal range of operation.

Assembly and Test Considerations for Completed Products

The effectiveness of the control exercised throughout the manufacturing cycle to ensure that quality objectives have been met is ultimately determined by the final assembly and test inspections. An acceptable quality control system would, therefore, incorporate final assembly and test procedures to ensure that:

(1) Each completed product is subjected to a final inspection for completeness, adjustments, safety calibration, markings, and placards in accordance with the applicable configuration of the approved design data for the product and model involved. Also, that each product is inspected for freedom from damage, contamination, and for safe operating condition.

Deleted: , etc.,

(2) The means provided for leveling an aircraft are accurately installed, and that the empty weight and center of gravity of each completed aircraft are accurately determined. The

holder of a production certificate may submit, for FAA consideration, a proposal based on a reliable statistical plan and evidence of product uniformity, if he desires to utilize an average empty weight and center of gravity, in lieu of weighing each aircraft.

(3) The aircraft equipment list and, when applicable, loading charts and instructions are accurate.

(4) Functional tests of each completed product are conducted to determine whether the operating characteristics meet the approved design provisions. Examples of the type of tests generally found to be acceptable are as follows:

(a) Each completed aircraft would be subjected to a flight test in accordance with flight test procedures and checkoff lists developed from operation characteristics and data which were found to comply with the applicable airworthiness regulations during the type test evaluation program, and approved as a part of the quality control data.

(b) Except as noted in subparagraph 4 below, each completed engine would be subjected to a test run, including:

1 Break-in to determine that engine operating parameters are as specified in the type design data.

2 Internal inspection is necessary to determine that the engine is in condition for safe operation. The degree of such inspection may be based on a statistical sampling plan, evidence of product uniformity, a satisfactory history of previous internal inspections, and service experience.

3 Determination of test instrumentation and power/thrust absorption devices, tolerances and correction to ensure that no production engine can be delivered with less than its type certificated rated power/thrust.

4 Test firing of a sufficient number of rocket engines, selected from production lots in accordance with statistical sampling plans included in the manufacturer's quality control data, which, together with the close control of materials and processes, would ensure that each engine in the lot functions properly and developed its rated thrust for the time specified in the approved type design data.

5 Each completed variable pitch propeller would be functionally tested to determine that it operates freely and smoothly throughout the normal range of operation, with maximum and minimum operating forces alternately applied, according to design and installation requirements.

Airworthiness Certification of Completed Products

(1) Major assemblies and components, comprising a complete aircraft, manufactured under a production certificate may be exported prior to final assembly, inspection, and flight test in accordance with FAR 21.325(b), providing the holder of the production certificate has established FAA-approved assembly and flight test procedures; and the extent of disassembly is the same as an aircraft which has been disassembled for shipment purposes.

(2) Completed products are considered to be submitted for airworthiness certification or approval when an engine or propeller is released for shipment, or in the case of an aircraft, when any one of the following documents as applicable, is completed, dated, signed, and submitted to an FAA representative.

(a) Application for Airworthiness Certificate, FAA Form 8130-6.

(b) Conformity Certificate - Military Aircraft, FAA Form 8130-2.

(c) Application for Export Certificate of Airworthiness, FAA Form 8130-1.

ARAC Working Group ADVISORY CIRCULAR Proposal

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Subject: Handling Standard Parts and Commercial Parts

1. Purpose: This advisory circular provides guidance for a design approval holder to declare parts, included in the type design, which it wishes to define as either Standard Parts or Commercial Parts in accordance with the recently published definitions in Part 1 of the Federal Aviation Regulations. The new definitions are intended to help identify parts that do not require manufacture by an FAA production approval holder. The implementation of these definitions shall not take away the ability for an installer to make a determination of installation eligibility under FAR 43.13 of appropriate parts.

2. Related Federal Aviation Regulations, Advisory Circulars and Reference Material:
   a.) Part 1 Extended Definition of Standard Part
   b.) Part 1 Definition of Commercial Part

3. Discussion: Many parts which are incorporated into the type design of aeronautical products which are of relatively simple design and which in most instances are no more critical to the product airworthiness than AN, MS, etc., nuts and bolts, have for many years required Parts Manufacturer Approval (PMA) for regulatory approval. This has placed a burden on the FAA out of proportion to the parts criticality. Similarly, many parts included in the type design of aeronautical products are commercial off-the-shelf parts such as light bulbs, fire axes, batteries, etc., which have for many years had no formal regulatory basis of approval and for which there has been little or no prospect of the manufacturers of such parts ever making application to the FAA for Parts Manufacturer Approval (PMA).

   In the future the design approval holder will be permitted to declare these parts as either Standard Parts or Commercial Parts in accordance with the definitions for each category released in Part 1 of the Federal Aviation Regulations, and approved by the FAA through the type design approval process. Whether or not the design approval holder has declared parts as standard / commercial, the installer continues to have the ability to install parts that meet the performance standards of Part 43, even if the parts are not produced by a production approval holder.

4. Definitions[1]:
   4.1 Industry Standard Part: a part which meets one of the following criteria

   (a) A part manufactured to a specification prepared by a standards setting organization, which includes the engineering data, the manufacturing process data and uniform identification requirements. The specification must include all information necessary to produce and conform the part. The specification must be published so that any party may manufacture the part. Examples include but are not limited to National Aerospace Standards (NAS), Air Force – Navy Aeronautical Standard (AS), Military Standard (MS).

   (b) A part manufactured to a specification established by a FAA design approval holder that is included in the type design and meets the following criteria:
      (1) The specification contains design, manufacturing, test and acceptance criteria and uniform marking requirements.
      (2) The specification is available to any person so that anyone may manufacture the part.

[1] The final NPRM wording should replace the definitions below, if different. If these definitions change, the rest of this draft should be reviewed for consistency with the new definitions.

(3) The part is not subject to special quality assurance oversight by the PAH.

(c) A part manufactured to a specification that the Administrator finds will result in a part that may be conformed (airworthiness established) solely on the basis of meeting performance criteria and uniform marking requirements.

(d) A part manufactured to a specification for a non-programmable electrical or electronic part produced in conformance with a specification published and maintained by a consensus standards organization, a government agency or a holder of a design approval; or in conformance with the manufacturers internal specifications or standards. The internal specifications or standards must include manufacturing controls, quality and reliability test methods and identification requirements. They may include acceptance test criteria. With the exception of parts manufactured to U.S. Military specifications, design of which are controlled by the Defense Supply Center, Columbus (DSCC), the specifications or standards do not include electrical parameters and data, these are obtained from the suppliers data sheet. The part is used within the manufacturer's published operating and environmental ranges.

4.2 Commercial Part

A detail part or a subcomponent included in the type design that is designated by the design approval holder based on the following criteria:

(1) The part is not necessarily designed for application in commercial aviation and.....

(2) The part is manufactured to a specification or catalog description and marked under the identification scheme of the manufacturer.

5. Procedure: The procedure for a design approval holder to designate and receive regulatory approval for either an industry standard part, 4.1.(b) above or a commercial part 4.2 above, is the same in both cases.

5.1 Step One: The design approval holder prepares two lists, one for standard parts and one for commercial parts. The lists shall include manufacturers name and address of parts included in the type design that it wishes to declare as a commercial part.

5.2 Step Two: The design approval holder submits the two individual and separate lists to the local Aircraft Certification Office (ACO) for approval.

5.3 Step Three: The FAA ACO by comparison with the type design reviews the lists submitted and approves these as appropriate.

5.4 Step Four: The approved lists are published by the design approval holder (e.g., in Instructions for Continued Airworthiness, Illustrated Parts Catalog, listing of manufacturer's standard parts, etc.).

6. Revisions: The design approval holder may make revisions to the standard and commercial parts lists (e.g., adding a new manufacturer) under a system approved by the FAA.

March 21, 2002

Recommendations for Consistent Application of ODAR processes for PAH Shipments

Background

With the proposed NPRM requirement to issue airworthiness approvals for all shipments, AIR-200 had proposed that the Parts and Production ARAC Working Group take an action item to make "recommendations on ODAR personnel qualification requirements who issue these approvals". I have been working on this and have some recommendations to propose for your review and comments.

Proposed changes are to FAA Order 8100.8A "Designee Management Handbook", I confirmed with Mary Hoff (FAA) that all the requirements for the creation and operation of the ODAR are contained in this Order. I also coordinated this with Dale Gordon, Rolls-Royce Corp., who was doing a similar project for AIA.

Summary of Proposed Changes

Current production approval holders (PAHs) already have the responsibility per CFR 14 part 21 to assure parts meet approved design and are airworthy/safe (if it is a PC, PMA or TSO holder the part 21 the wording is a little different for each). The only difference in the new NPRM requirement is that the people who issue the airworthiness approvals under the ODAR must know the FAA requirements for issuance of FAA form 8130-3's. FAA Order 8100.8A is very clear in paragraph 401 (Table II) under Regulatory Appointment Criteria, that "it is the ORGANIZATION that must meet all DAR qualifications for authorized functions identified... The ODAR is responsible for ensuring the individual authorized representatives...COLLECTIVELY meet the overall qualification criteria... not each individual...".

To alleviate the impact on PAH and FAA resources for airworthiness approval functions in the new NRPM requirements, the FAA should shift some responsibilities to the ODAR focal points in the PAHs. Below is a summary of the proposed changes:

- PAH's ODAR focal point could be approved to provide equivalent training to the authorized representatives. The training could be included in the PAH's ODAR Procedure Manual that is approved by the FAA. It would be kept up to date by requiring the ODAR focal point to attend the FAA Standardization Training at least every two years.

- The ODAR focal point could be given the authority to appoint new ODAR authorized representatives for airworthiness approval functions. As they are added to the ODAR Procedure Manual the FAA would do a post review approval.

- The ODAR focal point would have the authority to assign/reassign authorized functions to the ODAR authorized representatives as long as they are authorized

functions already approved for the ODAR. After the functions are assigned the FAA would do a post review approval.

Supporting Paragraphs already contained in FAA Order 8100.8A

Throughout the Order reference is made to the applicant or designee. In the case of an ODAR, the organization is the applicant and the designee.

Paragraph 203. APPOINTING OFFICE MANAGER.

f. Sign or coordinate on all designee appointments or candidacies after the EP decision has been reached.

In the above paragraph the designee in question is the ODAR and any subsequent appointments within the ODAR can be "coordinated". The "EP (Evaluation Panel) decision" again is for the ODAR and subsequent reviews of candidate qualifications are part of the ODAR procedures manual (Reference paragraph 405.a.(4)).

and

Paragraph 902.b. Oversight Considerations Unique to ODAR's. It is the ODAR's responsibility to comply with all provisions of their organizational designation. The ODAR will perform and document self assessments activities to ensure only qualified authorized functions are performed in accordance with the pertinent regulations, related policies, and procedures. The Advisor will provide direct supervision by interfacing with the organization's focal point and monitoring these self assessment activities. The managing office will review and provide written approval of all changes to the ODAR's FAA-approved procedures manual. This shall include any additions or removals of individual authorized representatives who perform authorized function(s). At the appointing/managing office's discretion, changes may be approved before or after implementation by the ODAR.

Specific Changes Proposed for Order 8100.8A

Para. 405. ODAR APPLICATIONS. Add new para. 405.a.(6) to say:

(6) Defines the training requirements for individual authorized representatives.

Para. 405.b. ODAR Focal Point. Revise paragraph to say:

The application for an ODAR must be signed by the proposed focal point. The proposed focal point is a management official within the applicant's quality organization who will have sufficient authority to effect change within the ODAR. The ODAR focal point will

be responsible for management and oversight of the ODAR, including; authorization of representatives, assignment / reassignment of representatives and equivalent standardization training as permitted by the ODAR manual. The management representative will serve as the FAA focal point for ODAR activities. Any changes in an ODAR focal point shall be reported to the FAA Managing Office.

Para. 802. SEMINAR ATTENDANCE. Add the following to the end of 802.b. NOTE to say:

Authorized ODAR representatives, that only perform airworthiness approvals at a PAH (Class II/III product airworthiness approvals) can obtain equivalent training through the ODAR. The PAH's ODAR can provide equivalent training to authorized representatives. The training program would be included in the PAH's ODAR Procedures Manual that is approved by the FAA. The training program would be kept up to date by requiring the ODAR focal point to attend the FAA Standardization Training at least every two years and update the program accordingly.

Para. 902. MANUFACTURING DMIR/DAR/ODAR OVERSIGHT (SUPERVISION, MONITORING, AND TRACKING).

Modify paragraph 902.a.(1)(c) to say:

(c) Verify that the designee's attendance at the appropriate standardization seminar is in accordance with this order. Verify attendance at the appropriate standardization seminar or equivalent training by each representative performing an authorized function(s) under an organizational designation in accordance with this order.

Add a NOTE to paragraph. 902.b. to say:

NOTE: For airworthiness approval functions (Class II/III product airworthiness approvals) at a PAH, the ODAR focal point can provide equivalent standardization training, appoint new authorized representatives, and assign/reassign these functions to authorized representatives as provided in the ODAR Procedures Manual. The FAA managing office would review and approve the ODAR Procedure Manual changes at its next opportunity.

REPLACEMENT AND MODIFICATION PART DESIGN APPROVAL PROCEDURES

February 2001
(ARAC Draft)

A-W(IR)-3; A-X(CD)-3; AIR-110
A-FAC-0(ALL); AEU-100;
A-FAC-3(ALL); FDR-2;
AMA-220 (25 copies);
FS-600 (3 copies)

ARAC FAR 21/45/1
P. Gallimore, Chairman
ORIGINAL DRAFT 4-4-00

FOREWORD

This document developed through the ARAC (Aviation Rulemaking Advisory Committee) contains guidelines for both FAA personnel and applicants for acquiring and maintaining Parts Design Approval (PDA) for replacement and modification parts. A PDA may be obtained for a part replacing or modifying all previously approved part designs. The major change is the uniform requirement for all parts to have a design approval and a production approval (PDA and PPA, respectively) to the same design and production standards as applicable to TC and PC holder. Standard parts and commercial parts are specifically excluded from requiring FAA parts design and production approvals. They are defined herein. Owner- operator parts also are excluded, but new Owner Produced(OP) Parts identification requirements are described.

A separate document (AC 21-1C) will describe the quality system changes required to go from a current PMA Fabrication Inspection System (FIS) to the new Parts Production Approval (PPA) Part 21 Subpart G production approval requirements. There is a two-year phase-in period for these changes to be implemented. At the time a PMA holder receives its PPA, the design approvals of all former PMA's held will continue to be approved designs. Parts previously approved by the FAA under a PMA will remain approved.

This Order is applicable to all FAA engineering and manufacturing personnel, and to all parts design and production approvals.

James C. Jones
Manager, Aircraft Engineering Division
Aircraft Certification Service

1. **PURPOSE.** This Order [or Advisory Circular] prescribes the responsibilities and procedures for Federal Aviation Administration (FAA) aircraft certification personnel responsible for the approval process required by the Federal Aviation Regulations (FAR) for design approval of replacement or modification parts for installation on a type certificated product. It also serves as an advisory to all applicants. Although this document represents comprehensive instructions and guidance, compliance with all applicable elements of FARs is required.

2. **DISTRIBUTION.** This Order is distributed to the Washington Headquarters branch levels of the Aircraft Certification Service, to the branch level of the Regional Aircraft Certification Directorates, to all Aircraft Certification Offices (ACO), the Brussels Aircraft Certification Staff, to all Manufacturing Inspection District Offices (MIDO), to all Manufacturing Inspection Satellite Offices (MISO), and to all Designated Engineering Representatives (DER). This Order is available to all applicants, and it is also available on the Internet.

3. **CANCELLATION.** FAA Order 8110.42A, Parts Manufacturer Approval Procedures, dated March 31, 1999, is cancelled two years after the date of this order. **[NOTE: date to be revisited by the FAA depending upon the date of release of this Order versus the date of the Final Rule]**

4. **EFFECTIVE CHANGES.**

a. **Parts Design Approvals (PDAs).** All approvals issued or applications submitted before the date of this Order will remain in effect. Design applications submitted after six months from this date must be processed in accordance with this Order.

b. **Part Production Approvals (PPAs).** All production approvals issued or applications submitted before the date of this Order will remain in effect. PPA applications submitted after this date shall be processed in accordance with AC 21-1C [or Order – we must be consistent with this document and the PPA document]. This phase into the Subpart G System results in a single standard quality system for all product and part manufacturers.

c. **Identification of Parts.** The new identification requirements are effective as part of new design and production approval. The marking changes are considered minor changes. Critical components must be identified per 45.14, including a serial number. Part numbers obliterated by assembly need not be re-identified. TSO part identification requirements do not change.

5. **GENERAL.** This Order describes the procedures and guidance for FAA and applicant personnel to follow when issuing a Parts Design Approval (PDA) in accordance with Code of Federal Regulations Title 14 (14 CFR) part 21 Subpart K . New guidance is provided on making compliance findings by what was formerly called "identicality" and by "test and computations." While the term "identical design" is no longer a specific regulation, this Order recognizes the

approach of utilizing data of a previously approved design (PAD) either wholly or in part through written authorization from the design approval holder, tests and computations, or other methods as described herein.

6. **INFORMATION CURRENCY.** Any deficiencies found, clarifications needed, or improvements to be suggested regarding the content of this order should be forwarded to the Aircraft Certification Service, Automated Systems Branch, AIR-520, Attention: Directives Management Officer, for consideration. Your assistance is welcome. FAA Form 1320-19, Directive Feedback Information, is located on the last page of this order for your convenience. If an interpretation is urgently needed, you may contact the Aircraft Engineering Division, Certification and Procedures Branch (AIR-110) for guidance, however, you should use the FAA Form 1320-19 as a follow-up to a verbal conversation.

7. **DEFINITIONS AND TERMS.** For the purpose of this order the following definitions and terms apply:

a. **Aircraft Certification Office (ACO)** is the field element of the FAA Aircraft Certification Service with geographic responsibility for making a finding that the part design complies with applicable airworthiness standards. The ACO administers and secures compliance with agency regulations, programs, standards, and procedures governing the design approval of replacement and modification parts. The location, addresses, and geographic areas of responsibility of the individual ACO are in Appendix 1, List of FAA Aircraft Certification/Field Offices.

b. **Certificating ACO** is the ACO that has issued and has oversight of the original design approval for the product/appliance on which the PDA applicant's part is eligible for installation.

c. **Commercial part is defined in FAR 1.**

d. **Critical** is a term applicable to parts, appliances, characteristics, processes, maintenance procedures, or inspections when if failed, omitted, or non-conforming, may cause significantly degraded airworthiness of the aircraft during takeoff, flight, or landing. **[NOTE TO FAA: Should this be changed to "priority parts"?]**

e. **Design** consists of all drawings and specifications, which may be summarized on a master drawing list. These are necessary to show the configuration of the part and all information on dimensions, tolerances, materials, processes, and procedures necessary to define all characteristics of a part, as well as the Airworthiness Limitations Section of the Instructions for Continued Airworthiness (ICA).

f. **Eligibility** identifies the type certificated products on which a part designed under Parts Design Approval (PDA) may be installed.

g. Life-limited Part is any part which has an established replacement time, inspection interval, or related procedure specified in the Airworthiness Limitations section under 14 CFR part 21 §§ 21.50, 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4, and 35.4 or mandatory replacement and/or inspections noted or referenced on the product Type Certificate Data Sheet (TCDS), for products certified before airworthiness limitations were added to 14 CFR. Mandatory replacement and/or inspections would also be noted or referenced on a letter of Technical Standard Order approval (PDA and PPA required).

h. Life Management Program is a FAA approved program established by the applicant to assure the continued airworthiness of a life-limited part.

i. Manufacturing Inspection District Office (MIDO) is the field element of the FAA Aircraft Certification Service with responsibility for management of production approvals in the geographic area in which the applicant's fabrication inspection system (or later, Production System) is located. In some areas, a Manufacturing Inspection Satellite Office (MISO) will perform these functions. The location, addresses, and geographic areas of responsibility of the individual MIDO/MISO are in Appendix 2, List of FAA Manufacturing Inspection District/Satellite Offices.

j. Parts Design Approval (PDA). The FAA's approval of the design of a part for which application was made as a replacement or modification part.

k. Parts Production Approval (PPA). The FAA's approval of a documented quality system demonstrated as capable of producing conforming parts.

l. Production Limitation Record (PLR). A FAA document that lists products or parts that the production approval holder is authorized to manufacture under the terms of the production approval.

m. Product is an aircraft, aircraft engine, or propeller and type-certificated appliances(part 21 § 21.1(b)).

n. Standard Part is defined in FAR 1.

8. APPLICABILITY.

a. General. This document provides information to obtain part design approval (PDA) for replacement or modification parts.

b. Falsification of Applications, Reports or Records. No person shall make or cause to be made any fraudulent or intentionally false statement or material omission of fact.

c. Denial of Application. The administrator may deny an application for design approval if any of the conditions in FAR 21.7 exist.

9. PARTS DESIGN APPROVAL. The ACO administers and secures compliance with agency regulations, programs, standards, and procedures and issues parts design approvals. The MIDO/MISO ensures conformity to design requirements. Approval of an application for PDA and PPA requires an approval of the design by the ACO and a quality system approval by the MIDO/MISO (see process flow chart in Appendix 3).

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a. Airworthiness. The applicant for PDA must show that the design meets the applicable airworthiness standards. There are two basic ways that an applicant may show compliance:

(1) Previously Approved Design. The applicant shows that the design of the part is the same as a previously approved design through a written authorization from the design approval holder or as provided in paragraph 10.a.(3)(b).

(2) Tests and computations. The applicant shows through tests and computations, using a comparative or general analysis, as necessary based on the criticality and complexity of the part, to show that the design of the part meets the airworthiness requirements applicable to the product on which the part is installed.

b. Special Considerations: Older Products. In evaluating applications for design approval for parts on older TC products, FAA personnel should consider potential problems facing the applicant. For example, type design information may be difficult to obtain, the product may no longer be in production, or the TC holder may no longer exist or may no longer be producing parts. In all such cases, the applicant must still submit sufficient information to support a determination that the replacement or modification part is equal to or better than the original part. Accordingly, FAA engineering personnel will need to exercise sound and reasonable judgment in considering means of demonstrating compliance.

10. APPLICANT RESPONSIBILITIES.

a. PDA Application. The applicant must submit a letter of application (see Appendix 4, Sample FAA-PDA Letters of Application) to the ACO in the geographical area in which the design organization of the applicant is located. The application should include the following information:

(1) Applicant identification. The name and address of the applicant, and

(2) Part identification. The identity of the part for which PDA application is being made, including:

(a) Product identification. The previously approved product identified by make, model, series, and if appropriate, serial number, on which the part is to be installed.

(b) Part replaced identification. The part number that the proposed part would replace.

(c) PLR. Include a draft PLR as shown in appendix.

(3) Method. A brief description of the method by which design approval will be sought:

(a) Same design with authorization. The applicant shows that the design of the part is the same as a previously approved design through a written authorization from the design approval holder of the previously approved design. The applicant should submit an appropriate document from the design approval holder authorizing use of the submitted data package. The evidence of a written authorization is used by the applicant to show that the data submitted is FAA approved and therefore identical. For FAA purposes, the written authorization, in whatever form it takes (such as an "assist letter"), need only authorize the applicant to use the design data specified (see appendix 5, Sample Design Approval Holder's Assist Letter).

(b) Same design without authorization. The applicant may show that the, design is the same as a previously approved design. This method may, under appropriate circumstances, be utilized for showing compliance. In these types of parts, a showing of identical design may not in-and-of-itself be sufficient to assure that parts will meet the airworthiness requirements. The applicant can be issued a PDA based solely on a design comparison if the applicant can substantiate that the nature of the part, taking into account its criticality and complexity, does not warrant any further showing. As stated, this process would be a viable method for showing the design meets the airworthiness requirements as long as the applicant and the FAA exercise the proper considerations. The applicant would substantiate this method by providing the FAA with necessary data based on the complexity and criticality of the part. This method would also be used in conjunction with other methods to show the design meets the airworthiness requirements. For instance, it could be combined with test reports and computation methods where testing may or may not be required depending on the criticality and complexity of the part. Those additional tests and analyses found necessary to make a finding of "same design without authorization" do not change the basis of PDA approval to "Test and Computation". If the results of these additional tests and analyses are such that the ACO finds that the produced PDA part is not the same as the previously approved part, the ACO must reject the PDA application.

NOTE: FOR CRITICAL PARTS TO BE APPROVED IN THIS MANNER, NO DEVIATION IN PART DESIGN OR MANUFACTURING PROCESSES IS ALLOWED. HENCE, UNDER THE PPA FOR THESE PARTS, THE PLR SHALL SPECIFY THAT NO DEVIATION IN PART DESIGN OR MANUFACTURING PROCESS IS ALLOWED.

Aircraft that no longer have an active design approval holder from which data can be obtained to support the design of parts need special consideration in order to continue flying. These aircraft are primarily and almost exclusively involved with personal or sport flying and are not being used for carriage of passengers for hire. In these instances where data is not available or where

the needed part is not critical to safety, more consideration should be given to the use of this method, or a "form, fit, and function" analysis.

(c) Test and computations. The applicant shows through tests and computations that the design of the part meets the airworthiness requirements applicable to the product on which the part is installed. This method requires all design, materials, processes, test specifications, system compatibility, and interchangeability are supported by the appropriate substantiation data and tests, as necessary depending on the complexity and criticality of the design, for FAA review and approval. The applicant must assure that no detrimental interference with mating or adjacent hardware occurs and that the part performs its intended function.

COMPARATIVE ANALYSIS: The applicant may show by comparative analysis and general analysis that the part is equal to or better in functional design than the design of the type certificated or PDA part that would be replaced. The applicant would thoroughly analyze the type-certificated part and compare it with the proposed PDA part, report all differences and provide sound technical justification for these differences. If testing is required, a new (zero time since new) FAA approved part tested under the same procedures and conditions as the applicant's part shall be used as a test standard.

GENERAL ANALYSIS: The applicant may demonstrate by general analysis that the functional design of the part otherwise meets the requirements of all applicable airworthiness standards. This analysis should discuss how the part meets applicable Federal Aviation Regulations and address material composition and condition, fabrication, configuration, and interface with other parts. Functional testing as necessary would be related to the criticality and complexity of the part.

b. Data package. Regardless of the basis upon which PDA is sought, the application must include information that the part meets the requirements of Part 21 and the airworthiness requirements of the Federal Aviation Regulations (or their predecessors) applicable to the product on which the part is to be installed. The complexity of the data package necessary to meet these requirements will vary depending upon the critical nature of the part as it relates to the product on which it is proposed to be installed. The information required may extend to the manufacturing controls, fabrication processes, assembly techniques, and the performance, endurance, and test requirements if they are necessary to establish the airworthiness of the part in accordance with applicable regulations. The data package may include, but is not necessarily limited to, the following:

(1) Design. One copy of the applicant's drawings and specifications necessary to show the configuration of the part. Drawings and specifications should address dimensions and tolerances, materials, and processes necessary to define the structural strength and all design characteristics of the part. The required information for some parts (e.g., those determined to be critical and/or life-limited) may include routing sheets, tooling requirements, process sheets, material handling/storage, and/or inspection requirements as deemed necessary by the FAA.

(2) Inspection and test procedures. For parts determined to be critical and/or life-limited, the FAA may require demonstration of the manufacturing process, inspection and test procedures (including process controls, and finished product performance) in order to obtain design approval. This data should include, but not be limited to, all elements of the manufacturing cycle (e.g., raw material purchase, material chemistry and grain, structure evaluation, fabrication, melt forging, machining, surface treatments, other material properties, required inspections, etc.) and any other data required to show that the applicant's part meets the approved design. If the application is based upon test and computation both design and manufacturing substantiation should be provided if necessary, considering the complexity of the part. If the application is based upon being the same as a previously approved design, necessary manufacturing procedures should be submitted to demonstrate the above.

(3) Test results. For parts determined to be critical and/or life-limited, the FAA may require the applicant to perform inspections, tests, and provide the test results necessary to show the airworthiness of parts produced are in conformity with the proposed design in order to obtain design approval. Where premature component failure would have affected the result of type certification tests addressing overall product safety, durability and performance, the part must be subjected to necessary testing to demonstrate it meets the airworthiness requirements regarding safety, durability and performance.

If the application is based upon a previously approved design, the applicant should submit test results necessary to demonstrate that the airworthiness of the part is not altered by the manufacturing methods and processes as performed by the applicant.

(4) Airworthiness limitations. For life-limited parts identified in Type Certificate Data Sheets or airworthiness limitations section, the method necessary to accurately assess fatigue life must be established and will include the appropriate elements. This shall be performed for the replacement or modification part and/or any life limited mating parts. For example, if the PDA part is a turbine blade, an assessment must be made on the life impact of the life limited disk on which it is installed.

NOTE: FOR NON-LIFE-LIMITED CRITICAL PARTS, IT IS THE RESPONSIBILITY OF THE ACO TO ASCERTAIN WHETHER OR NOT THE APPROVED PART'S DESIGN WAS LIFE-ASSESSED BY THE TYPE CERTIFICATE HOLDER. IF THE APPROVED PARTS DESIGN WAS LIFE-ASSESSED, THEN EVALUATION OF THE LIFE OF THE PDA PART IS REQUIRED. THE COMPLAINCE PLAN FOR A LIFE ASSESSED CRITICAL PDA PART MUST INCLUDE A PROPOSED FATIGUE LIFING METHODOLOGY AND TEST VALIDATION PLAN TO BE USED FOR THE ESTABLISHMENT OR VERIFICATION OF THE INITIAL PART LIFE AND IN SUPPORT OF A CONTINUED AIRWORTHINESS LIFE MANAGEMENT PROGRAM.

(5) Emissions and noise. If the design of the replacement or modification part will change the emissions or noise profile of the aircraft, those changes must be addressed in accordance with 14 CFR parts 34 and 36.

(6) Life Management Program. If the replacement or modification part has a life limit, the applicant must also provide for FAA approval an appropriate Life Management Program. The program should provide for detailed records of all aspects of the manufacturing cycle maintained for the entire life of the part and should provide details of how to segregate an affected population, if necessary. In-service part usage must be continually monitored and design assumptions continually reviewed against the in-service experience. If a failure condition is identified, the applicant must have procedures to identify the problem, develop the corrective action(s), and implement action(s) into the field in an appropriate time frame.

(7) Part marking. Part marking information necessary to insure that compliance with 14 CFR part 45 (including critical components marked in accordance with part 45 § 45.14) will not interfere with airworthiness considerations.

(8) Installation eligibility. Detailed information sufficient to demonstrate understanding of products or parts on which the replacement or modification part may be installed (make, model, series, and if appropriate serial number), how it relates to the next higher assembly of which it is a part, and the consequences for the next higher assembly and the product if the part should fail.

(9) ADs and SDRs. The applicant should identify all airworthiness directives or unresolved service difficulties involving the part being replaced.

(10) Installation eligibility or Instructions for Continued Airworthiness / Maintenance Instructions. The applicant must furnish the installation eligibility of the replacement or modification part. The applicant must also furnish information sufficient for the FAA to determine that the Instructions for Continued Airworthiness (IFCA)/Maintenance Instructions for the original part will continue to be valid for the product with the PDA part installed. If the original IFCA/Maintenance Instructions are not valid with the PDA part installed, the applicant must furnish supplementary IFCA/Maintenance Instructions. The applicant's IFCA/Maintenance Instructions will be reviewed and approved (if appropriate) by the ACO and Flight Standards Aircraft Evaluation Group.

c. Special Requirements - Test and Computation Applications. Applications submitted on the basis of test and computation should specifically address the following:

(1) Airworthiness. Applications based upon test and computation must show that the design of the part meets the airworthiness requirements applicable to the product on which the part is installed. Airworthiness standards are found in the following Federal Aviation Regulations (14 CFR, Chapter I) or their predecessors:

(a) Part 23, Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Category Airplanes.

(b) Part 25, Airworthiness Standards: Transport Category Airplanes.

(c) Part 27, Airworthiness Standards: Normal Category Rotorcraft.

(d) **Part 29,** Airworthiness Standards: Transport Category Rotorcraft.

(e) **Part 31,** Airworthiness Standards: Manned Free Balloons.

(f) **Part 33,** Airworthiness Standards: Aircraft Engines.

(g) **Part 34,** Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes.

(h) **Part 35,** Airworthiness Standards: Propellers.

(i) **Part 36,** Noise Standards: Aircraft Type and Airworthiness Certification.

(2) **Substantiation.** To show compliance with the applicable airworthiness requirements under test and computation, the applicant must provide either a comparative and/or a general analysis. If appropriate and necessary, the analysis should be supported by an FAA approved test plan and test results. The analysis must be supported by the engineering assessment of the consequences to the next higher assembly and the product, should the part fail to perform its intended function.

(a) **Analysis.** There are two acceptable methods of analysis: comparative and general.

1 **Comparative analysis.** The applicant may demonstrate by comparative analysis that the part is equal to or better in functional design than the approved design of the part that would be replaced. The applicant shall thoroughly analyze the approved part and compare it with the proposed PDA part, report any differences and provide sound technical justification for these differences.

2 **General analysis.** The applicant may demonstrate by general analysis that the functional design of the part meets the requirements of all applicable airworthiness requirements. This analysis should discuss how the part meets applicable Federal Aviation Regulations of the previously approved design and address material composition and condition, fabrication, configuration, and interface with other parts. For example, a revised TSO specification may be "grandfathered."

(b) **Testing.** Functional testing may or may not be required of the applicant's part. Testing should be related to the criticality and complexity of the part. The component testing and/or ground/flight testing, if required, shall be designed to test the performance and durability of the part to the extent required to show airworthiness. The applicant should identify the number of test units, unit identification, test conditions and duration, test criteria, test safety control, and control of test procedures. To accomplish this, the applicant shall submit a test plan, including a request for part conformity, for FAA approval. Following FAA approval and part conformity, the applicant shall conduct the test(s) and post

test inspections, both of which may be witnessed by a representative of the FAA. Following the post test inspection, the applicant shall submit a test report. This report shall include an analytical evaluation of the test results and post-test inspection results and a comparison of these results to the test standard. The following should be used as a test standard against which the adequacy of the PDA part will be measured:

1 **Approved part.** A new (zero time since new) previously approved design part tested under the same procedures and conditions as the PDA applicant's part.

2 **Verification.** Verification that the part meets applicable airworthiness requirements.

3 **Other.** Other tests deemed acceptable by the Administrator.

d. Part Marking Requirements. Parts must be marked in accordance with FAR 45. The identifying marks should be included on the design data and reviewed as part of the FAA engineering approval of the design, in part, to establish that the location and process of identification does not degrade airworthiness compliance. Parts with a PMA design approval may continue to be marked in accordance with the approved design.

(1) Part Numbering Requirements. The applicant's part should be numbered such that it is distinguishable from the specific part number it replaces. The FAA-PDA document will show the original approved part number with which the applicant's part is interchangeable.

(a) Supplier. For a supplier to a PAH in which the supplier's part number is used by the PAH, the PDA holder may use the same part number as the design approval holder, provided the PDA holder also meets the requirements of part 45.

(b) Written authorization. Part Design Approval Obtained Through Written Authorization. When the PDA is issued by showing evidence of a written authorization, the part number may be identical to that of the previously approved design, provided the applicant also meets the requirements of part 45.

e. Part Eligibility. Part eligibility will be listed by the PDA holder in a document or catalog readily available to the installer. If there are no special instructions for continued airworthiness (IFCA) for the PDA parts compared to the original parts, this listing will satisfy the requirements of FAR 21.303(e).

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f. Post PDA Activities.

(1) Reporting of Failures, Malfunctions, and Defects under part 21 § 21.3. The PDA holder should establish a procedure to report to the FAA any failure, malfunction, or defect of a part that could result in, or has resulted in, one of the occurrences listed in FAR 21.3.

(2) **Additional Part Installation Eligibility Approvals.** A PDA holder may apply for additional installation approvals for the part. The applicant should submit the information required by paragraph 10.b.(8) of this order, to the extent that it applies, to obtain approval of the additional installation(s). If the FAA finds that the applicable IFCA/Maintenance Instructions for the product (or PDA part) is valid with the replacement or modification part installed, the part will be approved as eligible for installation on that product or products.

(3) **Design Changes.**

(a) **Minor/Major PDA.** The PDA holder shall submit minor changes to existing approvals in accordance with procedures agreed to by the FAA. Major changes must be substantiated and approved prior to implementation in the same manner as that for the original PDA.

(b) **Major/TSO.** If the installation of a replacement or modification part would constitute a major design change to a TSO article, then the applicant must obtain a new TSODA.

(c) **Product relationships.** To introduce a design change, the PDA holder should have an understanding of the relationship of that change to the type-certificated product.

11. **ACO RESPONSIBILITIES.** The cognizant ACO has the following responsibilities with respect to applications for PDA.

a. **The ACO** in the geographical area in which the applicant is located should accept the application for PDA (sample provided in Appendix 4, Sample Letters of Application).

b. **The ACO** should review the applicant's engineering design to determine whether the design meets applicable airworthiness requirements. In performing this review, the ACO should:

(1) **Data.** Consider all substantiating data submitted by the applicant to show compliance with applicable airworthiness requirements.

(2) **Airworthiness.** Determine whether the application for PDA establishes that the part meets the airworthiness requirements applicable to the type certificated product on which the part is to be installed, and verify the eligibility for installation on the type certificated product. The ACO should consider the following in evaluating each potential basis for design approval.

(a) **General considerations**. Applicants may combine the method of showing compliance. However, irrespective of the method by which an applicant chooses to

show compliance, prior to issuance of design approval, each application must be carefully reviewed in coordination with MIDO as appropriate and necessary (i.e., issue requests for conformity inspections) to determine whether the applicant can ensure:

1 **Airworthiness.** Compliance with the applicable airworthiness requirements.

2 **Materials.** That materials conform to the specifications in the design.

3 **Design.** That the part conforms to the drawings in the design.

4 **Processes.** That the applicant has demonstrated that the manufacturing processes, construction, and assembly conform to those specified in the applicant's design.

5 **Reporting.** The applicant has established reporting procedures under part 21 § 21.3, for the part and the product upon which the part is installed.

(b) Eligibility. Verification of installation eligibility – lacking documentation from the holder of the previously approved design, the ACO should consider all evidence submitted by the applicant and may check other documents including the type design Master Drawing List in making its finding. The Manufacturers' Illustrated Parts Catalog (IPC), while it does provide information that pertains directly to installation eligibility, is usually not FAA-approved. The IPCs should be used in conjunction with other data (examples include: purchase orders from the PAH, service bulletins, maintenance manuals, technical publications index, and/or master drawing list). In certain instances, where safety is not impacted by the installation (such as interior trim pieces), the IPC may be used as the sole means of verifying installation eligibility. When the IPCs are used as the sole means of verification the authenticity of the IPCs should be verified. The IPC shall not be used to make any engineering finding leading to approval of the applicant's design data, nor to determine part conformity.

(c) Service history. Service history considerations. Depending on the criticality of the part, the ACO may perform an in-depth review of the service history of the part. For all parts the ACO will verify that the part is not the subject of an airworthiness directive (AD), other continued airworthiness problem(s), or subject to an incident or accident investigation where the part may be suspect. If the part is subject to one of the above, and the design is identical or substantially identical in a material way to the problem, then the following guidelines should be used:

1 **Remove from service.** If there is an AD that removes the previously approved part from service, immediately or in the future, the PDA application shall be examined for relevance.

2 **Under consideration.** If the FAA is currently developing or considering development of an AD to remove the previously approved part from service, the ACO should examine the PDA application for relevance.

3 **In investigation.** If the FAA is investigating an incident or accident where the previously approved part may be suspect, the ACO should delay the processing of the PDA application until the part is cleared.

4 **Inspection.** If an AD calls for repetitive inspections but prescribes no terminating corrective action (e.g., modification or replacement of the part) and if the repetitive inspections are intended to catch failures that may occur before the part reaches the published service life, the FAA should examine the PDA application for relevance.

5 **New design.** For a part that is not identical or substantially identical to the previously approved part, the ACO should determine whether installation of the applicant's part would create an unsafe condition.

6 **Service Bulletin removal.** The fact that the design approval holder issues a Service Bulletin to remove a part from service does not in and of itself exclude issuance of a PDA, however its relevance should be fully examined.

7 **Current service difficulties.** If the part is experiencing service difficulties and the FAA is ACTIVELY pursuing corrective action with the design approval holder, the application for PDA should be examined for relevance, and if appropriate, delayed pending outcome of the corrective action.

(d) Life-limited parts. Irrespective of the method under which an applicant seeks a PDA, a life-limited part must be substantiated in accordance with paragraph 10c(2). The substantiation must establish the life limits and airworthiness of that part. The required substantiating data must include tests on components produced by the applicant.

(e) Special considerations - Evidence of a written agreement. The evidence of written agreement from a design approval holder must include written permission for the applicant to use the design data to apply for PDA. A "PDA assist letter" (see appendix 5, Sample design approval Holder's Assist Letter) or similar evidence authorized by the design approval holder is sufficient for showing evidence of a written agreement. The applicant must meet all the requirements of part 21. The "PDA assist letter" should include the following information, as appropriate:

1 **Identification.** Product model, name, and design approval identification.

2 **Authorization.** A statement that the PDA applicant is authorized to use the design data, identified by part name and drawing number and revision level

3 **Part numbers.** Information on the authority of the PDA applicant to use the design approval holder's part number and other part marking information as appropriate including authority to use a new part number.

4 **Life limits.** Information that establishes the life limits and/or the airworthiness limitations of the part and the next higher assembly, as appropriate.

5 **Eligibility.** Information on the parts eligibility for installation (product make, series, model and if appropriate the serial number).

6 **Design changes.** A statement as to whether design changes to the part and disposition of non-conforming parts will be controlled through the original design holder's quality assurance process, and how design change information will be related to the applicant and subsequently to the FAA.

(f) Special considerations for design approval based on applicant's design being the same as a previously approved design.

1 **Approval requirements.** Engineering approval of the design can be accomplished when the applicant shows and the FAA finds that the design of the part for which PDA is requested has the same dimensions, tolerances, materials, processes, and specifications to the design of the part covered under a previously approved design.

2 **Critical parts.** For critical and life-limited parts, coordination with the certificating ACO is required.

3 **Exceptions.** Some part designs may contain features, such as color, that have nothing to do with form, fit, or function or being airworthy. It may not be necessary that these features be the same as the previously approved part's features.

4 **Processes.** Many parts rely on specific manufacturing processes to provide the necessary material properties. If detailed knowledge of these processes is not available to the applicant for incorporation into the applicant's design, any request for approval by showing that the PDA part meets the previously approved design will require substantiation of the applicant's part durability and strength in the operating environment.

5 **Drawing Notes.** The ACO must establish that the applicant's data provides the ability to produce conforming parts, before issuing engineering approval. The ACO should pay particular attention when the design approval holder's drawings or specifications used to make a finding based on previously approved designs have notes stating:

(aa) "Parts supplied to this drawing shall be in strict accordance with samples (first articles) approved by *(name of applicant)* engineering department unless prior written approval is given to subsequent change."

(bb) "Source approval is required for raw stock through total fabrication or vendor substantiation required."

(cc) "This drawing represents a critical item and must successfully complete substantiation tests and be approved by engineering." or

(dd) Other similar statements implying special source selection criteria.

NOTE: The ACO will evaluate each applicant's capabilities to produce the part on a case-by-case basis. If the applicant is unable to provide this information, the test and computation method should be used.

6 **Rejection.** When the design data submitted (including the manufacturing processes) does not show that the PDA part is the same as the previously approved design, the application should be returned to the applicant with a notification that it does not show the applicant's part to meet the requirements under this section (see appendix 9, Sample FAA Parts Design Approval Rejection Letter).

7 **Minor design change authority and Material Review Board authority.** Minor design change (and MRB authority in conjunction with a PPA) may be exercised under PDA granted under this section when the applicant submits a license agreement or other evidence that he has been granted such authority by the design approval holder, or by written authorization from the FAA for specific non-critical parts.

(g) Special considerations--Test and Computation for new designs.

8 **Critical parts.** For critical and life limited parts, program coordination with the certificating ACO is required.

2 **Review.** The ACO shall carefully review the showing of compliance through the test and computation method, in coordination with the applicant and, as appropriate, the responsible MIDO/MISO/CMO, to assure adequate substantiation. The responsible engineer in the ACO shall evaluate and approve the test plan , if one is necessary, and if appropriate consult with the certificating ACO, to determine the adequacy of the plan considering the criticality of the part.

(h) Instructions for Continued Airworthiness (IFCA)/Maintenance Instructions. If the applicant is proposing to utilize the IFCA/Maintenance Instructions of the previously approved part, the ACO should determine that the original IFCA/Maintenance Instructions are valid with the PDA part installed. The ACO must also make a determination that the PDA applicant has a procedure to review later revisions to those IFCA's to determine whether they will continue to be valid for the product with the PPA part installed. If the applicant is providing supplemental IFCA / Maintenance Instructions it should be reviewed by the ACO and if necessary coordinated with the appropriate Aircraft Evaluation Group (AEG) of Flight Standards Service.

(i) **Data package.** Evaluating the data package. All applications should include the detailed design criteria including: drawings, technical data necessary to establish structural strength, part marking information, and process specifications necessary to define the configuration, and other data necessary to establish the pertinent characteristics of the part. The applicant's detail drawings must be identified as their own. In evaluating any data package, consideration should be given the following areas:

1 **Processes.** Manufacturing and Process Specifications. Manufacturing procedures and process specifications may affect the airworthiness of the part. If the applicant's detail drawings reference the previously approved design holder's process specifications, those specifications must be submitted. As the data package is reviewed, coordination with the certificating ACO or MIDO may be necessary to determine what effect these specifications may have on the airworthiness of the design. **For critical and life-limited parts, coordination with the certificating ACO is required.**

2 **Source Control Drawings.** Source control drawings must be carefully evaluated to determine whether the applicant has appropriate control over the configuration of the part. The applicant must submit all applicable detail drawings and specifications for evaluation of the sources listed on source control drawings.

3 **Conformity.** Coordinate requests for conformity inspections with the appropriate MIDO/MISO/CMO to ensure that the manufacturing process produces replacement and modification parts according to the approved design.

(j) **Applicant Resources.** It is the responsibility of the applicant to secure the necessary technical expertise to sufficiently support the design, manufacturing, and continued airworthiness efforts required for critical PDA parts. It is essential that these resources are validated.

d. Design approval. When the ACO has found that the applicant has shown compliance with the applicable airworthiness requirements, the ACO should do the following:

(1) Retain the submitted application and approval for its files.

(2) Send the applicant the Part Design Approval document.

e. Non-Compliance. If the ACO cannot make a finding of compliance they should send the applicant a rejection letter (see appendix 9, Sample FAA Design Approval Rejection Letter) and return the applicant's data package in its entirety.

Rules and Regulations

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 21 and 45

[Docket No.: FAA–2013–0933; Amdt. Nos. 21–98, 45–29]

RIN 2120–AK20

Changes to Production Certificates and Approvals

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is amending certification procedures and marking requirements for aeronautical products and articles. The amendment requires production approval holders to identify an accountable manager who is responsible for, and has authority over, their production operations and serves as the primary contact with the FAA; allows production approval holders to issue authorized release documents for aircraft engines, propellers, and articles; permits production certificate holders to manufacture and install interface components; requires production approval holders to ensure that each supplier-provided product, article, or service conforms to the production approval holder's requirements and establish a supplier-reporting process for products, articles, or services that have been released from or provided by the supplier and subsequently found not to conform to the production approval holder's requirements; removes the requirement that fixed-pitch wooden propellers be marked using an approved fireproof method; and changes the title of part 21 of title 14 of the Code of Federal Regulations. This amendment updates FAA regulations to reflect the current global aeronautical manufacturing environment, thereby promoting aviation safety.

DATES: Effective March 29, 2016.

ADDRESSES: For information on where to obtain copies of rulemaking documents and other information related to this final rule, see How To Obtain Additional Information in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this action, contact Priscilla Steward or Robert Cook, Aircraft Certification Service, Production Certification Section, AIR–112, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267–1656; email: *priscilla.steward@faa.gov* or telephone: (202) 267–1590; email: *robert.cook@faa.gov.*

For legal questions concerning this action, contact Benjamin Jacobs, Office of the Chief Counsel, Regulations Division, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: (202) 267–7240; email: *benjamin.jacobs@faa.gov.*

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The Department of Transportation (DOT) is responsible for developing transportation policies and programs that contribute to providing fast, safe, efficient, and convenient transportation under § 101 of Title 49, United States Code (49 U.S.C.). The Federal Aviation Administration (FAA, we, us, or our) is an agency of DOT. The FAA has general authority to issue rules regarding aviation safety, including minimum standards for articles and for the design, material, construction, quality of work, and performance of aircraft, aircraft engines, and propellers under 49 U.S.C. 106(g), 44104, and 44701.

The FAA is amending its regulations governing certification procedures for products and articles, and its requirements for identification and registration marking. These changes improve the quality standards applicable to manufacturers and help to ensure that products and articles are produced as designed and safe to operate. For those reasons, these amendments are a reasonable and necessary exercise of our rulemaking authority and obligations.

I. Executive Summary

A. Purpose of the Regulatory Action

This final rule changes certification and marking requirements for products and articles. In particular, this final rule:

- Requires applicants for a production approval and production approval holders (PAHs) to identify an accountable manager;
- Allows a production certificate (PC) holder to manufacture and install interface components (IC) under certain conditions and limitations;
- Clarifies that a PAH must ensure that each supplier-provided product, article, or service conforms to the PAH's requirements;
- Requires a PAH to establish a supplier-reporting process for products, articles, or services released from or provided by a supplier and subsequently found not to conform to the PAH's requirements;
- Allows a PAH that establishes an FAA-approved process in its quality system to issue authorized release documents (using FAA Form 8130–3) for new and used aircraft engines, propellers, and articles produced by that PAH; and
- Excludes fixed-pitch wooden propellers from the requirement that a propeller, propeller blade, or propeller hub be marked using an approved fireproof method.

Regulations pertaining to certification requirements for products and articles are in part 21 of Title 14 of Code of Federal Regulations (14 CFR). Marking requirements are in 14 CFR part 45.

This final rule requires applicants for a production approval and production approval holders (PAHs) to identify an accountable manager who is responsible for, and has authority over, a PAH's operations. This individual would also serve as a PAH's primary contact with the FAA. Additionally, this amendment requires PAHs to amend, where applicable, the documents required by §§ 21.135, 21.305, and 21.605 to reflect the appointment of an accountable manager.

This final rule allows a production certificate [1] (PC) holder to manufacture

[1] Section 21.1(b)(6) defines production approval as a document issued by the FAA to a person that allows the production of a product or article in accordance with its approved design and approved quality system, and can take the form of a production certificate, a PMA, or a TSO authorization.

and install interface components (IC) under certain conditions and limitations. This final rule defines an IC as an article that serves as a functional interface between an aircraft and an aircraft engine, between an aircraft engine and a propeller, or between an aircraft and a propeller. Under this rule, an IC is designated as such by the type certificate (TC) or the supplemental type certificate (STC) holder who controls the approved design data for that article.

This final rule clarifies that a PAH must ensure that each supplier-provided product, article, or service conforms to the PAH's requirements. This final rule also requires a PAH to establish a supplier-reporting process for products, articles, or services released from or provided by a supplier and subsequently found not to conform to the PAH's requirements. A PAH's reporting system may require suppliers to report nonconformances to the PAH directly, or to other suppliers in the supply chain.

This final rule allows a PAH that establishes an FAA-approved process in its quality system to issue authorized release documents (using FAA Form 8130–3) for new and used aircraft engines, propellers, and articles produced by that PAH. This provision allows PAHs privileges similar to those afforded European- and Canadian-approved manufacturers.

This final rule amends part 45 to exclude fixed-pitch wooden propellers from the requirement that a propeller, propeller blade, or propeller hub be marked using an approved fireproof method. This exclusion allows manufacturers to mark their products in a practical manner that takes account of the inherent nature of wooden propellers.

This final rule amends the title of part 21 to include articles. The title is now ''Certification Procedures for Products and Articles.''

B. Summary of Costs and Benefits

The provisions of this final rule (1) are minimal cost, (2) impose no additional costs because the provisions clarify only, or are current practice, or (3) are voluntary and therefore inherently cost-beneficial. Our analysis described in the notice of proposed rulemaking (NPRM) regulatory evaluation has not changed. The FAA received no comments to the docket on the NPRM regulatory evaluation.

II. Background

Part 21 of 14 CFR contains the FAA's regulations concerning certification procedures for products, articles, and parts. Since the FAA codified part 21 in 1964, it has been amended numerous times. Additionally, the origins of many part 21 regulations can be traced to the Civil Air Regulations codified in 1937.

When part 21 was first codified, most manufacturers of aviation products and articles had a small, local supplier base. Production certificate holders oversaw the manufacture of replacement parts, and the international market for aviation products was relatively small. As a result, for many years the U.S. had few bilateral agreements with other countries for the export and import of aviation products, and these agreements were limited in scope.

Today, aviation products are manufactured world-wide. The number of suppliers has increased dramatically, and these suppliers manufacture an increasing percentage of a given product or article. Furthermore, due to the global nature of manufacturing, forming business partnerships and agreements across large geographic areas is now a common strategy to lower costs, share risks, and expand markets. Manufacturers collaborate globally to reduce duplicate requirements for shared suppliers. Accordingly, the international market for aviation products and the production of replacement parts under parts manufacturer approvals (PMAs) have increased dramatically.

In recognition of these and other related considerations, the FAA published an NPRM, *Changes to Production Certificates and Approvals,* on February 27, 2014, 79 FR 11012. The NPRM proposed numerous rule changes to part 21, primarily to subparts A (General) and G (Production Certificates). For greater detail on the FAA's initial proposal, including additional background information and a more complete statement of the problem, refer to the NPRM.

III. Discussion of Public Comments and Final Rule

In response to the FAA's NPRM, we received comments from 19 commenters, raising 32 issues. Commenters included aviation manufacturers and equipment manufacturers, such as Boeing, Garmin, General Electric, HEICO, Textron, Timken, and Williams International; industry groups and associations, such as Aerospace Industry Association (AIA), Aviation Suppliers Association (ASA), and Modification and Replacement Parts Association (MARPA); and numerous individuals. The comments covered five main topics and a range of various responses to the rulemaking proposal, which are discussed in more detail below.

A. Supplier Control

This final rule makes two amendments to § 21.137(c)(1) & (2). First, as proposed, § 21.137(c)(1), which previously required a PAH to develop procedures to ensure that a supplier-provided product or article conforms to its approved design, now also requires those procedures to account for supplier-provided services. Second, as proposed, the standard for supplier control is revised in both § 21.137(c)(1) & (2) to require suppliers to furnish products, articles, or services that conform to the PAH's requirements. Prior to this final rule, supplier-provided goods and services had to conform to FAA-approved design data.

HEICO recommended amending the proposed § 21.137(c)(1) to include services provided to a design approval holder. The commenter noted that many design approval holders outsource portions of the overall design process and these 'services' must also be properly controlled. The commenter's recommendation is outside the scope of this rulemaking, which focuses on production approvals and PAH activities, and not on design approval certification activities. PAHs are not responsible, under § 21.137, for design approval holder activities.

ASA and MARPA recommended that, in addition to requiring a PAH to require suppliers to provide products, articles, or services to meet the PAH requirements, the FAA should also continue to allow a PAH to accept products, articles, or services that conform to the PAH's approved design. The commenters' rationale was that this final rule creates two separate rules with respect to conformity of products and articles; one standard for when a company is acting as a supplier, and another standard when it is acting as a distributor. The commenters claimed that an entity functioning as a supplier to a PAH would be required to ensure that the product or article conformed to the PAH's requirements. However, if that same entity, operating as a distributor, were to sell their products in the aftermarket as replacement parts, for instance to a repair station or an air carrier, they would still be required to ensure that the product or article conforms to its approved design. Both commenters suggested that this situation could result in confusion and unintended harm to suppliers, and recommended revising proposed § 21.137(c)(1) to allow products, articles, or services to conform to either the PAH's requirements *or* the approved design.

The FAA disagrees with the recommendation. With respect to the commenters' claim that this final rule creates two separate rules for suppliers and distributors in the aftermarket, we presume that the commenters used the term ''aftermarket distributor'' to mean that the distributor is acting as a supplier to an entity other than a PAH. Regardless, this provision does not create two separate standards. All suppliers to any purchaser continue to be bound by contract to the terms of any relevant purchase order. In the case of suppliers to a PAH, the final rule removes the requirement to report deliveries that conform to the purchase order but do not conform to the PAH's final approved design. Aftermarket distributors who are not suppliers, on the other hand, are outside of the scope of part 21. The FAA does not regulate aftermarket distributers under these regulations.

The commenters also suggested that, under this final rule, a supplier providing the same part with different specifications to both a PAH and an aftermarket customer, such as a maintenance provider, could be at risk of inadvertently sending design-conforming parts (intended for the aftermarket customer) to a PAH, instead of parts that met the PAH's unique specifications. The commenters suggested that the supplier in that situation should not be punished for providing an article that conforms to its approved design.

The FAA disagrees with the comment that this change will punish any supplier who provides nonconforming products, articles, or services. This provision is not intended as a means to punish suppliers. The FAA does not directly regulate suppliers; instead, this final rule requires that a PAH's quality system include a supplier-reporting system. Under this final rule, a PAH must establish procedures for supplier reporting of supplier-provided products, articles, or services that deviate from the requirements of the PAH's purchase order. This gives a PAH flexibility to determine the appropriate level of reporting because it is the PAH and only the PAH who knows what is needed, and in what condition, for the production process. To clarify, this final rule does not require a PAH to report to the FAA those supplier nonconformances that remain within the PAH's quality system.

Relatedly, ASA and MARPA stated that the proposed rule could indirectly require a supplier to report nonconformance higher up the supply chain, even when the supplier provided a product or article that conformed to its approved design. The commenters again recommended that the final rule allow suppliers to provide products or articles that conform to either the PAH's requirements *or* the approved design.

The FAA disagrees with the recommendation. This final rule replaces the existing requirement that a supplier-provided product, article, or service conform to the PAH's approved design with a requirement that it conform to the PAH's requirements. The purpose of this amendment is to tailor the regulation to its original intent. For example, a PAH may issue a purchase order for sheet metal parts, and state on the purchase order that the rivet holes are to be drilled to less than the finished dimensions of the approved design. The PAH may request pilot drilling by the supplier because the PAH will itself drill the holes to the finished size upon assembly. If the supplier provides the items with the holes drilled to the finished dimension, the sheet metal parts would not conform to the PAH's requirements. The supplier would be supplying nonconforming material even though it would conform to the approved design. Under this final rule, therefore, a supplier may not deviate from the requirements of the PAH. It is the PAH, and only the PAH, that knows what is needed, and in what condition, for the production process.

An individual commenter stated that the NPRM changes the definition of ''quality escape,'' as the phrase is used in § 21.137(n), from nonconforming products or articles which escaped a PAH's quality system to products or articles which do not conform to their approved design but are contained within the quality system. The commenter recommended that we distinguish between nonconforming products or articles still within the PAH's quality system, and nonconforming products or articles that escape a PAH's quality control system.

Section 21.137(n), which is not revised by this rule, addresses quality escapes by requiring a PAH to have procedures for, among other things, identifying and taking corrective action whenever a PAH releases a nonconforming product or article from its quality system. In our NPRM, we stated that this proposal would require a PAH to establish a supplier reporting process for products, articles, or services that have been released from a supplier and subsequently found not to conform (hereafter referred to as a quality escape) to the PAH's requirements. We believe the commenter's confusion derives from our use of the term ''quality escape'' to describe the transfer of nonconforming items or services between tiers in the supply chain, instead of its traditional meaning of nonconforming products or articles that leave a PAH's quality system. We acknowledge that our preamble discussion in the NPRM used the term in a confusing manner. However, we determine that no change to the terms of § 21.137, as originally proposed, are necessary. The reporting requirements of § 21.137(c) apply when a supplier to a PAH determines that it has released or provided a product, article, or service subsequently found not to conform to the PAH's requirements, and do not include the phrase ''quality escape.''

Boeing recommended that the FAA require PAHs to communicate design change notifications throughout the supply chain, and adopt the industry's SAE [2] AS9016 standard for standardization of design change notifications, because it believes this will address the single most common reason for quality escapes from the supply chain.

The FAA disagrees with the recommendation to regulate PAHs' use of SAE AS9016 because we believe this subject is adequately addressed by our current regulation, § 21.137(a), *design data control,* which requires that only current, correct, and approved data is used. In addition, we do not believe that we should mandate, by rule, the use of an industry standard over which we have no control. This final rule requires a PAH to ensure that any product, article, or service it receives conforms to its requirements. If a PAH chooses, it may, as part of a purchase order, require its supply-chain to adhere to the AS9016 standard.

Williams International stated that it is unnecessary to require a PAH to report supplier nonconformances that remain contained within the PAH quality system. Williams International further stated that the proposed requirement for reporting of released nonconformances is already required by a PAH. FAA Advisory Circular (AC) 00–58, *Voluntary Disclosure Reporting Program,* further provides a means for a voluntary disclosure of such releases.

Although the commenter did not provide a recommendation, the FAA disagrees with the commenter's premise. Before this final rule, a PAH's supplier-reporting process required each supplier, at any tier, to report to the PAH any product, article, or service that did not conform to the PAH's FAA-approved design. The FAA recognizes that this requirement had the potential to impose significant burdens on a PAH

[2] Formerly known as the Society of Automotive Engineers.

and that, in many cases (such as suppliers of standard parts), a supplier may not have known the ultimate customer. This final rule amends § 21.137(c) to provide every PAH greater flexibility to determine which nonconformances its suppliers should report, and to whom.

An individual commenter suggested that all tiers in the supply chain should report to a PAH any nonconforming products, articles, or services that have been released from or provided by that supplier and subsequently found not to conform to the PAH's requirements. More specifically, the commenter suggested that the FAA require each supplier, in some instances, to report a nonconformance to each level up the supply chain, and ultimately to the PAH and the PAH's customer. Another individual recommended the FAA keep the current regulation which requires suppliers to report quality escapes to the PAH, and provided no further rationale.

The FAA disagrees with the commenters' recommendations. In the past, a PAH's supplier-reporting system required every manufacturing supplier and affected downstream suppliers to report to the PAH all products or articles which did not meet the PAH's approved design, even if those products or articles met the PAH's actual requirements. The FAA recognizes that this past requirement could have imposed a significant burden on PAHs, and this final rule is intended to maintain safety while also providing PAHs with the flexibility to determine which suppliers should report, and to whom.

B. Accountable Manager

As the FAA proposed in the NPRM, this final rules amends §§ 21.135, 21.305, and 21.605 to require a PAH to provide the FAA with a document identifying the organization's accountable manager. The accountable manager is responsible for, and has authority over, all part 21 production activities. It is not the FAA's intent that this provision dictates who is responsible for PAH production operations. It is also not the FAA's intent that this provision imposes personal liability for production operations on the accountable manager. The FAA is simply requiring each PAH to identify for the FAA the individual or individuals within the PAH's organization who the PAH considers responsible for all production operations.

Boeing, MARPA, and Timken Aerospace recommended that an accountable manager have the ability to identify and delegate functions to alternate points of contact. These commenters noted that the person responsible for accountability may be a company president or chief executive who cannot reasonably be available at all times. Allowing delegation increases the FAA's access to the PAH and provides redundancy in the event of personnel turnover, in accordance with the intent of this final rule.

The FAA agrees with the commenters with respect to delegation, but determines that no change to the proposed rule language is necessary. To clarify, the accountable manager may delegate functions and identify alternate points of contact. These actions should be noted in the PAH's organization document. Additional guidance may be found in FAA AC 21–43, *Issuance of Production Approvals Under Subparts G, K, & O.*

Boeing and an individual commenter requested that we revise the rule to require two accountable managers—one for production activities and one for design activities. These commenters claimed that two such accountable managers would better reflect the various responsibilities of PAH personnel, including those responsible for coordinating with FAA manufacturing inspection district offices (MIDOs) and aircraft certification offices (ACOs).

The FAA disagrees with the commenters' recommendation. The commenters are describing design-related activities and responsibilities. Because the public was not provided an opportunity to comment on an FAA requirement for an accountable manager for design activities, the FAA considers the recommendation to be outside the scope of this rulemaking. To clarify, the accountable manager described in this rule is required only to have responsibility for production operations, not design activities.

Garmin International and Williams International stated that there is no need for an accountable manager, and recommended instead a requirement that the PAH identify an FAA point of contact. In addition, Garmin stated that a better means to improve the FAA's access would be to require a PAH to clearly indicate how its organization will communicate. Williams recommended that if the FAA has difficulty communicating with a particular PAH, that PAH should be required to clarify its own existing procedures.

The FAA disagrees with the commenters' recommendations. An accountable manager is not simply a point of contact. When issuing an approval or performing certificate management, the FAA must know who from the PAH has the authority to speak for the PAH and ensure compliance with all applicable regulatory requirements. Requiring a PAH to identify such an individual, one who is knowledgeable of and accountable for maintaining the PAH's FAA production approval, will improve communication between the PAH and the FAA offices responsible for certificate management of their production approval. A simple point of contact would not create the same benefits.

Universal Avionics Systems Corporation (UASC), Textron, and an individual commenter suggested identifying the accountable manager as the ''Quality Manager.'' Textron stated that the rule could be misinterpreted as describing the PAH official in charge of production operations, instead of the person who runs the quality system. UASC and the individual commenter both observed that the FAA already requires accountable managers for repair stations. The individual commenter further stated that organizational differences between a typical PAH and a typical repair station make identifying a general manager as an accountable manager less appropriate for a PAH than for a repair station. Finally, UASC recommended incorporating the definition of ''directly in charge'' from part 145 (Repair Stations) into part 21, to better explain the role of ''accountable manager.'' UASC stated that it believes the Accountable Manager is intended to be a quality person whom may not have responsibility for and authority over production operations.

The FAA disagrees with the commenters' recommendations. Although the FAA requires the establishment of a quality system as a prerequisite to obtaining a production approval, nowhere do we require a PAH to create an organizational position responsible solely for the PAH's quality system. Moreover, under this rule, the accountable manager must be at a sufficient level within the organization to have responsibility over all production operations, not just the quality system. For example, the accountable manager should have responsibility for, among other things, formally applying to add a new product or article to the PAH's production approval; formally requesting FAA approval for a change in location; amending the PAH's organization document and submitting that document to the FAA; ensuring support for design approval holders, as required by § 21.137(m); and formally submitting

changes to the PAH's approved quality system.

We also disagree with the commenters' comparisons of part 21 and part 145 accountable managers. A PAH's accountable manager has different duties and responsibilities from the accountable manager of a repair station. Furthermore, the ''directly in charge'' definition from part 145 does not apply to a PAH's accountable manager. We are not requiring a PAH accountable manager to be ''directly in charge'' of the work performed by the production organization.

C. Authorized Release Documents

This final rule creates § 21.137(o), which permits a PAH to issue authorized release documents for new aircraft engines, propellers, and articles manufactured by that PAH, and for used aircraft engines, propellers, and articles rebuilt or altered in accordance with § 43.3(j), provided the PAH establishes and adheres to certain quality assurance procedures as part of its quality system. This final rule marks a slight change from what the FAA initially proposed: In response to comments, we explicitly restrict each PAH to issuing authorized release documents for products and articles manufactured by the PAH itself.

Boeing recommended that the FAA consider requiring PAH personnel selected to issue authorized release documents to receive FAA training equivalent to what is currently required for designees. The FAA disagrees with the recommendation. Under this final rule, a PAH that chooses to issue authorized release documents must establish a training process for individuals the PAH selects to issue those documents. The PAH may choose to send its personnel to FAA designee training (if available), establish its own in-house training, or meet the requirement in some other manner. The rule establishes minimum requirements and permits the PAH to establish FAA-approved procedures to meet those requirements.

ASA stated that the rule does not give a PAH authority to issue FAA Form 8130–3 because the term ''authorized release document'' is not defined. The commenter also suggested changing the definition of airworthiness approval to add Airworthiness approval means a document issued by the FAA, *or a person authorized by the FAA.*

The FAA disagrees with ASA's recommendations. As stated in § 21.1(b)(1), an airworthiness approval is a document that must be issued by the FAA. By this final rule, however, the FAA will now permit an authorized PAH to issue authorized release documents, using an FAA Form 8130–3, for new aircraft engines, propellers, and articles, and for used aircraft engines, propellers, and articles when rebuilt or altered in accordance with § 43.3(j). PAHs that intend to issue these documents must detail the appropriate procedures in their quality manual. To be clear, FAA regulations and policy distinguish between a document issued by the FAA (an airworthiness approval) and one issued by the PAH (an authorized release document). In addition, the latest version of FAA AC 21–43, released concurrently with this final rule, clearly states that a PAH should use FAA Form 8130–3 when issuing an authorized release document.

ASA recommended extending the privilege of issuing an authorized release document beyond PAHs, to include distributors accredited in accordance with FAA AC 00–56, *Voluntary Industry Distributor Accreditation Program.* The commenter suggested that not doing so would create a significant competitive disadvantage for certain American businesses. More specifically, the commenter argued that failing to allow non-manufacturing distributors to issue authorized release documents would put those distributors at a competitive disadvantage.

The FAA disagrees with the recommendation. The FAA cannot extend this privilege to non-manufacturer distributors because they are not recognized PAHs and, therefore, lack FAA-approved quality systems. Quality systems are necessary to ensure that products and articles conform to their approved design and are in a condition for safe operation. The intent of this provision is to maintain the high level of safety achieved under the prior rules, while allowing FAA-approved PAHs to engage in a practice that is permitted by other authorities, such as the European Union and Canada, for their PAHs.

One individual commenter suggested that the FAA limit a PAH's authority so that the PAH could only issue authorized release documents for new or used aircraft engines, propellers, and articles that the PAH itself manufactured under part 21.

The FAA agrees with the commenter's proposal. Where a PAH was not involved in manufacturing a product or article, the PAH may not have the ability to make the appropriate conformity determination. Accordingly, this final rule limits a PAH's authority to issue authorized release documents to only those products and articles that particular PAH has manufactured.

Two individual commenters stated that allowing a PAH to issue Form 8130–3 as an authorized release document will reduce or be detrimental to aviation safety. One of these commenters pointed out that, prior to this final rule, FAA designees assigned to complete Form 8130–3 would occasionally turn back parts and articles due to issues discovered during the FAA conformity inspections. For that reason, the commenters claimed that eliminating designees' continued, objective inspections would reduce safety. Both commenters suggested keeping the current system.

The FAA disagrees with the commenters' characterization of how FAA Form 8130–3 has been used previously, as well as their recommendations. With respect to products and articles produced under a production approval, issuance of an FAA Form 8130–3 indicates that that the product or article conforms to its type design and is in a condition for safe operation, unless otherwise specified. Even prior to this rulemaking, FAA Form 8130–3 did not (and does not now) indicate that a particular product or article has been inspected by the FAA or its designee.

Additionally, allowing a PAH, as opposed to an FAA employee or designee, to issue FAA Form 8130–3 will not cause a decrease in safety. Currently, Designated Manufacturing Inspection Representatives (DMIRs) or Organization Designation Authorization (ODA) unit members issue the vast majority of FAA Form 8130–3s. These designees are employed by the PAH and authorized by the FAA, and the FAA requires them to possess at least certain minimum qualifications and training, such as those described in FAA Orders 8100.8, 8000.95 and 8100.15. Similarly, under this final rule, any PAH seeking authority to issue FAA Form 8130–3 must first get FAA approval. As described in FAA AC 21–43, the FAA will not approve a PAH to issue FAA Form 8130–3 unless the PAH demonstrates that its authorized personnel possess the same qualifications and receive training equivalent to what is required by FAA Orders 8100.8, 8000.95 and 8100.15 for FAA designees.

Timken Aerospace suggested that allowing PAHs to issue authorized release documents would add complexity to the existing process and increase the FAA's workload. The commenter recommended instead developing a system to assist PAHs in obtaining additional DMIRs.

The FAA disagrees with the recommendation. The FAA anticipates that permitting PAHs to issue authorized release documents will

reduce the workload of both the FAA and PAHs. Our intent is to recognize a practice permitted by other authorities by giving FAA-approved PAHs the same flexibility available to their European and Canadian counterparts, who already issue authorized release documents. For PAHs with an approved system for issuing authorized release documents, the FAA will no longer authorize DMIRs or ODA unit members to issue airworthiness approvals.

Textron Aviation recommended that the FAA remove the regulatory language in our 2014 NPRM proposing to allow the use of authorized release documents for work performed under § 43.3(j). The commenter stated that this type of rebuilding work, and related use of FAA Form 8130–3, is already performed by PAH manufacturers.

The FAA disagrees with the recommendation. The commenter is correct that FAA Order 8130.21 allows certain entities to use FAA Form 8130–3 when returning to service rebuilt or altered engines, propellers, or articles in accordance with § 43.3(j). However, the FAA's final rule codifies our authorization of that practice and extends the same privilege to PAHs producing new aircraft engines, propellers, and articles.

Textron Aviation also claimed that FAA Order 8130.21 requires authorized persons to document inspection activity on an FAA Form 8100–1 when required by the managing office, and recommended revising either § 21.137 or FAA Order 8130.21 to indicate that a PAH is not required to use FAA Form 8100–1 when issuing authorized release documents.

The FAA disagrees with both the commenter's claim and recommendation. Neither our prior rules, nor this final rule, requires a PAH to comply with the internal guidance in FAA Order 8130.21. More specifically, § 21.137(o) does not require any PAH to use FAA Form 8100–1 when issuing an FAA Form 8130–3. Furthermore, FAA Order 8130.21 does not require the use of FAA Form 8100–1, but an FAA managing office may determine that a conformity inspection report is necessary to substantiate an FAA-issued FAA Form 8130–3.

One individual commenter stated that allowing a PAH to develop its own procedures for signing authorized release documents will reduce or eliminate the standardization that exists among designees. The commenter recommended that requiring PAH personnel to take FAA training would facilitate greater standardization.

The FAA disagrees with the recommendation. When a PAH signs an authorized release document, the PAH is not signing that document on behalf of the FAA Administrator. The FAA requires any PAH that chooses to issue authorized release documents to establish minimum procedures, including training the employees responsible for issuing those documents. These procedures will be reviewed and, if acceptable, approved by the FAA, which will be conducive to standardization. Ultimately, however, the current proposal gives each PAH the flexibility to choose to send its personnel to FAA designee training (if available), establish their own in-house training, or meet the requirement in some other manner.

D. Definitions

This final rule revises one definition and adds two new definitions to § 21.1. The definition of ''airworthiness approval,'' in § 21.1(b)(1), is expanded to account for the issuance of an airworthiness approval in instances where an aircraft, aircraft engine, propeller, or article does not conform to its approved design or may not be in a condition for safe operation at the time the airworthiness approval is generated and that nonconformity or condition is specified on the airworthiness approval document. In response to comments, we revised the definition proposed in our NPRM to account for the fact that an airworthiness approval may in some cases be issued for products or articles that are not in a condition for safe operation, such as when those products or articles are packed for shipment.

As proposed, § 21.1(b)(5) defines an ''interface component'' as a functional interface between an aircraft and an aircraft engine, an aircraft engine and a propeller, or an aircraft and a propeller. Furthermore, 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. This definition is necessary because this final rule also promulgates § 21.147(c), which permits a PAH to apply to the FAA to amend its production certificate to allow the PAH to manufacture and install interface components. No change was made to the definition in this final rule from the NPRM.

Finally, as proposed, § 21.1(b)(10) defines a ''supplier'' as any 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. This definition is necessary to clarify existing FAA requirements. No change was made to the definition in this final rule from the NPRM.

Timken Aerospace and one individual commenter recommended we revise our proposed airworthiness approval definition by moving ''unless otherwise specified'' to be the final clause. In other words, these commenters recommended changing the definition to a document 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. The commenters noted, for example, that an engine is not shipped from a factory in a complete and final condition, since it is prepped for shipping, and is therefore not in a condition for safe operation.

The FAA agrees with the commenters' recommendation. There are many instances in which the FAA issues an airworthiness approval but, at the time of issuance, the product or article neither fully conforms to its approved design, nor is it in a condition for safe operation. For example, the FAA may issue an airworthiness approval for an aircraft that has been disassembled for shipping, for an engine that has preservation fluids installed prior to shipping, or for used aircraft engines and propellers that are not in a condition for safe operation (see § 21.331, Issuance of export airworthiness approvals for aircraft engines, propellers, and articles). We therefore revise the definition of airworthiness approval to 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.

Also with respect to the airworthiness approval definition, Timken Aerospace recommended we use the phrase ''except for deviations noted'' instead of ''unless otherwise specified,'' to be more consistent with FAA Form 8130–9, *Statement of Conformity.*

The FAA disagrees with the recommendation. The concept of airworthiness is generally composed of two factors: Conformity with an approved design and being in a condition for safe operation. In this context, the term ''deviation'' would indicate a variation from an approved design or quality system, but would not necessarily convey the fact that a product is not in a condition for safe operation. Accordingly, we determine that the phrase ''unless otherwise specified'' more accurately reflects the intent of our proposal.

Two individual commenters expressed concern that adding ''unless otherwise specified'' to the definition of airworthiness approval would change a fundamental premise of airworthiness approvals, that a product or article must conform to its design. The commenters recommended that the definition not be changed.

The FAA disagrees with the commenters. The issuance of an airworthiness approval, such as an export certificate of airworthiness, does not necessarily mean that a product is airworthy. FAA regulations, such as § 21.331, allow FAA personnel and designees to issue an airworthiness approval for a product or article that does not conform to its approved design, as long as the nonconforming condition is stated on the approval document and, in the case of export, the receiving authority agrees to accept the product or article as described. This final rule, therefore, simply brings the definition of Airworthiness Approval in line with current FAA practice and with part 21, subpart L. Contrary to the commenters' suggestion, we are not changing the fundamental concept of airworthiness. Under current practices, an airworthiness approval is a means to show that the product or article conforms to its approved design and is in a condition for safe operation, unless otherwise specified.

One individual commenter stated that the definition of ''supplier'' is overbroad because it includes distributors of commercial off the shelf parts or parts not originally manufactured for aviation use. The same commenter also stated that the addition of the term ''at any tier'' will cause inconsistent and disparate interpretation within the FAA and undue burden to industry. The commenter did not provide any recommendations.

The FAA recognizes that by including the term ''at any tier,'' the proposed definition of ''supplier'' applies to all suppliers throughout the supply chain. Contrary to the commenter's statement, the FAA believes including suppliers ''at any tier'' will reduce inconsistencies by confirming that the FAA definition of ''supplier'' applies to all suppliers, regardless of their position within the supply chain. Furthermore, the FAA does not believe this definition will unduly burden industry. To the extent that a supplier has only a tenuous connection to a PAH, perhaps because the supplier produces parts that are not specifically designed for use in aviation, it may be appropriate for the PAH to account for that attenuation when designing its supplier-reporting protocols. A PAH has always been responsible for assuring that its products and articles conform and are in a condition for safe operation. The inclusion of all suppliers within the regulatory definition of supplier should therefore impose no additional burden on either the PAH or its suppliers.

The same individual commenter also stated that there is no guidance for the suppliers of off-the-shelf parts, described above, who may not anticipate that their parts will be used or installed on type certificated aircraft and approved.

The FAA agrees with the commenter's observation that there is no guidance provided specifically for distributors of parts not originally manufactured for aviation use or installation on type certificated aircraft and approved under § 21.8(c). The FAA provides guidance to PAHs, repair stations, and other FAA-regulated entities. The FAA does not provide guidance for entities that fall outside the scope of FAA regulations.

E. Interface Components

As proposed, § 21.147(c) now permits a PAH to apply to the FAA for an amendment to the PAH's production limitation record (PLR), authorizing the PAH to manufacture and install interface components. If granted, the FAA will amend the PAH's PLR to add the interface components (IC). ICs are defined in the new § 21.1(b)(5). The FAA had previously granted exemptions to engine manufacturers, allowing them to manufacture and install airframe components that interface between the engine and the airframe, provided the engine manufacturer owned or licensed the ICs design and installation data.

Boeing and General Electric supported the rule change. Boeing also suggested the FAA allow engine manufacturers to install and certify airplane manufacturers' ICs during the engine type certification process.

The FAA disagrees with this recommendation as it is outside the scope of this rulemaking. Allowing engine manufacturers to install and certify airplane manufacturers' ICs during the engine TC process is a design issue, not a production issue. Our 2014 NPRM and this final rule focus on amendments to the production approval provisions in subpart G.

Williams International recommended that our final rule distinguish between all potential ICs versus those that are licensed to be both manufactured and installed by a PAH. The commenter suggested that defining ICs more narrowly would enable the FAA to include fewer items on the PAH's PLR, and as a result would require fewer PLR updates and impose less of a burden on the FAA.

The FAA agrees with the concerns raised byWilliams International, but we have determined that the rule as drafted adequately addresses these concerns. Under §§ 21.1(b)(5) and 21.147(c), a component must meet certain criteria before it is considered an ''interface component'' eligible for the PAH's PLR. For example, § 21.1(b)(5) requires, among other things, that an IC be designated as such by the TC or STC holder. The rule requires only those ICs the PAH intends to produce be listed on the PLR and not all possible ICs, so the PLR should not be an exhaustive list or a burden on the FAA.

F. Miscellaneous Issues

HEICO requested that the FAA define authorized release documents, to establish who is issuing the document. The FAA disagrees with the recommendation. The FAA does not believe it is necessary to provide a definition in the text of the rule. The FAA provides additional guidance on authorized release documents in the revised AC 21.43, Appendix B, which is applicable to any PAH.

One individual commenter stated that the title of the NPRM did not reflect recent changes from parts to articles in our 2009 final rule, *Production and Airworthiness Approvals, Part Marking, and Miscellaneous Amendments,* 74 FR 53384 (Oct. 16, 2009). The commenter recommended changing the title of part 21 to ''Certification Procedures for Products, Articles, and Parts.'' The FAA partially agrees with the recommendation and this final rule changes the title of part 21 to ''Certification Procedures for Products and Articles.''

HEICO requested that we revise FAA Form 8130–3 attached as Appendix A, Figure A–1 to FAA Order 8130.21 to explicitly indicate who, including a PAH, is allowed to issue the document. The FAA disagrees with HEICO's recommendation to revise the form. Instead, we have revised FAA Order 8130.21 and ACs 21–43 and 21–44 to reflect the rule change allowing a properly authorized PAH to issue an authorized release document. In the ACs we also provide guidance to on how to complete FAA Form 8130–3.

Textron Aviation recommended that the FAA remove the requirement for the issuance of export airworthiness approvals for articles, believing that this change would better align FAA regulations with those of foreign authorities. The recommendation is outside the scope of this rulemaking. The FAA notes that the requirements for

the issuance of export airworthiness approvals for articles are contained in subpart L. Although the FAA proposed allowing PAHs to issue authorized release documents in § 21.137, the proposal did not change the conditions specified in subpart L.

IV. Regulatory Notices and Analyses

A. Regulatory Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Orders 12866 and 13563 direct that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354), as codified in 5 U.S.C. 603 *et seq.,* requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, the Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4), as codified in 2 U.S.C. 1532, requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this final rule.

Department of Transportation Order DOT 2100.5 prescribes policies and procedures for simplification, analysis, and review of regulations. If the expected cost impact is so minimal that a proposed or final rule does not warrant a full evaluation, this order permits that a statement to that effect and the basis for it be included in the preamble if a full regulatory evaluation of the costs and benefits is not prepared. Such a determination has been made for this final rule. The reasoning for this determination follows.

As summarized in the table below, the provisions of this final rule (1) are minimal cost, (2) will impose no additional costs because the provisions will clarify only, or are current practice, or (3) are voluntary and therefore inherently cost-beneficial. Our determination has not changed from that made in the NPRM regulatory evaluation. The FAA received no comments to the docket on the NPRM regulatory evaluation. More detailed explanations follow the table.

Provision	Costs/Benefits
Require Identification of Accountable Manager	Minimal cost—Requires identification of an existing manager, who is responsible for and has authority over a Production Approval Holder (PAH)'s operations, as a PAH's primary contact with the FAA.
Allow PC Holders to Manufacture and Install Interface Components.	Codifying the practice, previously allowed by exemption, will reduce regulatory compliance costs.
Modify Supplier Control Requirements	No additional cost—Clarifies existing requirement that PAHs are responsible for conformity throughout their supply chains and gives PAHs flexibility in establishing a supplier-reporting process for nonconforming releases.
Allow PAHs to Issue Authorized Release Documents for Aircraft Engines, Propellers and Articles.	Voluntary, so expected benefits will exceed expected costs.
Exclude Fixed-Pitch Wooden Propellers from Fireproof Marking Requirements.	The FAA found the exemption provides an equivalent level of safety. Codifying the practice, previously allowed by exemption, will reduce regulatory compliance costs.

1. Require Identification of an Accountable Manager

Under this provision, the FAA will require each applicant for, or holder of, a Production Certificate (PC), Parts Manufacturer Approval (PMA), or Technical Standard Order (TSO) authorization to identify an accountable manager, who is responsible for, and has authority over, a PAH's operations, as a PAH's primary contact with the FAA. This provision is not intended to require the PAH to create a new position within its organization and will not mandate that an individual in a specific position be identified as the accountable manager. Consequently, the costs, if any, associated with this requirement are minimal.

2. Allow Production Certificate Holders To Manufacture and Install Interface Components

PC holders previously could not install interface components (ICs) on their type-certificated products without an exemption. Previous regulations governing the production limitation record and the amendment of PCs restricted the PC holder to the manufacture of products only (aircraft, aircraft engines, or propellers) and did not authorize installation.[3] The FAA has granted exemptions to engine manufacturers, allowing them to manufacture and install airframe components that interface between the engine and the airframe provided they own or are licensed to use the IC type design and installation data. In granting these exemptions, the FAA found that allowing engine manufacturers to produce and install ICs improved safety and efficiency by eliminating disassembly, reassembly and retesting, as well as related scoring of fatigue sensitive parts; damage to critical parts; and air/fuel/oil leaks.[4] This provision will codify the practice, previously allowed by exemption, of allowing PC holders to manufacture and install ICs, and will apply to any articles designated by the TC holder that interface between products. Therefore, this provision applies to the interface between propeller and aircraft engine and between propeller and aircraft, as well as between aircraft engine and aircraft.

Codifying the previous practice of allowing PC holders to manufacture and install ICs implies no change in safety

[3] Before 2010, §§ 21.142 (production limitation record) and 21.147 (amendment of production certificates) were codified at §§ 21.151 and 21.153, respectively.

[4] The production and installation of ICs by engine manufacturers also increase efficiency by allowing delivery of quick-change replacement engines to end users such as air carriers and charter operators. Some piece parts (or kits), such as the engine buildup unit (EBU), rather than being installed by the PC holder, may be shipped separately to an aircraft manufacturer for the purpose of just-in-time manufacturing operations, or to an airline that may want kits on hand for routine maintenance operations or to replace hardware damaged during operations.

benefits. Codifying the practice, however, will reduce regulatory costs since paperwork requirements involved in periodic application for and granting of exemptions will be eliminated.

3. Modification of Supply Control

With this provision, the FAA intends to clarify existing requirements that the PAH is responsible for (1) conformity throughout the supply chain and (2) establishing a supplier reporting process for nonconforming releases. As there was no definition of supplier in the previous regulations, the final rule defines supplier as a person that provides a product, article, or service at any tier in the supply chain that is used or consumed in the design or manufacture of, or installed on, a product or article.

The final rule changes the language to § 21.137(c) as shown in the following table:

Previous rule language	Final rule language
Supply Control—Procedures that (1) Ensure that each supplier-furnished product or article conforms to its approved design; and	Supply Control—Procedures that (1) Ensure that each supplier-provided product, article, or service conforms to the product approval holder's requirements; and
(2) Require each supplier to report to the production approval holder if a product or article has been released from that supplier and subsequently found not to conform to the applicable design data.	(2) Establish a supplier reporting process 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.

As provision (1) clarifies the FAA's intent and current practice and provision (2) gives PAHs greater flexibility, there will be no additional cost resulting from these provisions.

4. Allow Production Approval Holders To Issue Authorized Release Documents for Aircraft Engines, Propellers, and Articles

Previously, only the FAA was allowed to document that an aircraft engine, propeller, or article conforms to its approved design and is in condition for safe operation. The FAA provides documentation with an airworthiness approval, using FAA Form 8130–3, ''Authorized Release Certificate, Airworthiness Approval Tag.'' This provision allows, but does not require, qualified PAHs to issue authorized release documents, using FAA Form 8130–3, for aircraft engines, propellers, and articles for which the PAH has a production approval. We refer to the issuance of Form 8130–3 by a PAH as an ''authorized release document'' because, as defined by 14 CFR 21.1(b)(1), only the FAA is allowed to issue an airworthiness approval. PAHs choosing not to issue these authorized release documents may continue to obtain approvals from the FAA.

Although such airworthiness documentation is required only when requested by a foreign civil aviation authority, it has become increasingly valued in the aviation industry. Several U.S. manufacturers have requested the privilege to issue such documentation, which is already enjoyed by their European and Canadian counterparts. As it is voluntary, this provision is inherently cost beneficial.[5]

5. Marking of Fixed-Pitch Wooden Propellers

As noted in the preamble above, the FAA granted an exemption to Sensenich Wood Propeller Company from the regulations requiring that a propeller, propeller blade, or propeller hub be marked using an approved fireproof method. In granting the exemption, the FAA found that stamping the hub of the propeller with the identification markers will achieve an equivalent level of safety to the rule. The FAA maintains that finding in this final rule and, in any case, codifying the practice, previously allowed by exemption, implies no change in safety benefits.[6] Codifying the practice, however, will reduce regulatory costs since the costs of paperwork requirements involved in periodic application for and granting of the exemptions will be eliminated.

The FAA made this minimal cost determination for the proposed rule. As no comments were received, the FAA concludes the expected cost is minimal.

B. Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration. The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

The provisions of this final rule (1) are minimal cost, (2) would impose no additional costs because the provisions would clarify only, or are current practice, or (3) are voluntary. We received no comments regarding our determination that there was no significant impact on a substantial number of small entities in the NPRM.

Therefore, as provided in section 605(b), the head of the FAA certifies that this final rule will not have a significant economic impact on a substantial number of small entities.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the

[5] For aircraft, an export airworthiness approval will continue to be issued only by the FAA, using Form 8130–4, ''Export Certificate of Airworthiness.''

[6] Variable-pitch wooden propellers do not require exception from the fireproof marking requirement since they have metal hubs.

establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety, and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

The FAA has assessed the potential effect of this final rule and determined that the rule's provision allowing PAHs to issue authorized release documents for purposes of export would be in accordance with the Trade Agreements Act as this provision uses European standards as the basis for United States regulation. The remaining provisions have a minimal domestic impact only and therefore no effect on international trade.

D. Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Public Law 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (in 1995 dollars) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a ''significant regulatory action.'' The FAA currently uses an inflation-adjusted value of $155 million in lieu of $100 million. This final rule does not contain such a mandate; therefore, the requirements of Title II of the Act do not apply.

E. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. The FAA has determined that there is no new requirement for information collection associated with this final rule.

F. International Compatibility and Cooperation

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA reviewed the corresponding ICAO Standards and Recommended Practices and identified no differences with these regulations.

Executive Order 13609, Promoting International Regulatory Cooperation, promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and to reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA analyzed this action under the policies and agency responsibilities of Executive Order 13609, and determined that this action has no significant effect on international regulatory cooperation. To the extent that this final rule may conflict with the implementing protocols of any FAA bilateral aviation safety agreements, the FAA will amend those protocols in coordination with our international partners.

G. Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 312f and involves no extraordinary circumstances.

V. Executive Order Determinations

A. Executive Order 13132, Federalism

The FAA has analyzed this final rule under the principles and criteria of Executive Order 13132, Federalism. The agency determined that this action will not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, does not have Federalism implications.

B. Executive Order 13211, Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA analyzed this final rule under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). The agency has determined that it is not a ''significant energy action'' under the executive order and it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

VI. How To Obtain Additional Information

A. Rulemaking Documents

An electronic copy of a rulemaking document may be obtained by using the Internet by—

1. Search the Federal eRulemaking Portal (*http://www.regulations.gov*);
2. Visit the FAA's Regulations and Policies Web page at *http://www.faa.gov/regulations_policies/* or
3. Access the Government Printing Office's Web page at *http://www.gpo.gov/fdsys/*.

Copies may also be obtained by sending a request (identified by notice, amendment, or docket number of this rulemaking) to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267–9680.

B. Comments Submitted to the Docket

Comments received may be viewed by going to *http://www.regulations.gov* and following the online instructions to search the docket number for this action. Anyone is able to search the electronic form of all comments received into any of the FAA's dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.).

C. Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. A small entity with questions regarding this document, may contact its local FAA official, or the person listed under the **FOR FURTHER INFORMATION CONTACT** heading at the beginning of the preamble. To find out more about SBREFA on the Internet, visit *http://www.faa.gov/regulations_policies/rulemaking/sbre_act/*.

List of Subjects

14 CFR Part 21

Aircraft, Aviation safety, Exports, Imports, Reporting and recordkeeping requirements.

14 CFR Part 45

Aircraft, Exports, Signs and symbols.

The Amendment

In consideration of the foregoing, and under the authority of 49 U.S.C. 106(f) and 44701(a)(5), the Federal Aviation Administration proposes to amend

chapter I of title 14, Code of Federal Regulations as follows:

PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS AND ARTICLES

■ 1. The authority citation for part 21 continues to read as follows:

Authority: 42 U.S.C. 7572; 49 U.S.C. 106(g), 40105, 40113, 44701–44702, 44704, 44707, 44709, 44711, 44713, 44715, 45303.

■ 2. The heading for part 21 is revised to read as set forth above.

■ 3. Amend § 21.1 by revising paragraph (b)(1), redesignating paragraphs (b)(5) through (b)(8) as (b)(6) through (b)(9), and adding new paragraphs (b)(5) and (b)(10) to read as follows:

§ 21.1 Applicability and definitions.

* * * * *

(b) * * *

(1) *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;

* * * * *

(5) *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;

* * * * *

(10) *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.

■ 4. Revise § 21.135 to read as follows:

§ 21.135 Organization.

(a) Each applicant for or holder of a production certificate must provide the FAA with a document—

(1) Describing how its organization will ensure compliance with the provisions of this subpart;

(2) Describing assigned responsibilities, delegated authorities, and the functional relationship of those responsible for quality to management and other organizational components; and

(3) Identifying an accountable manager.

(b) The accountable manager specified in paragraph (a) of this section must be responsible within the applicant's or production approval holder's organization for, and have authority over, all production operations conducted under this part. The accountable manager must confirm that the procedures described in the quality manual required by § 21.138 are in place and that the production approval holder satisfies the requirements of the applicable regulations of subchapter C, Aircraft. The accountable manager must serve as the primary contact with the FAA.

■ 5. Amend § 21.137 by revising paragraphs (c)(1) and (2) and adding paragraph (o) to read as follows:

§ 21.137 Quality system.

* * * * *

(c) * * *

(1) Ensure that each supplier-provided product, article, or service conforms to the production approval holder's requirements; and

(2) Establish a supplier-reporting process for products, articles, or services that have been released from or provided by the supplier and subsequently found not to conform to the production approval holder's requirements.

* * * * *

(o) *Issuing authorized release documents.* Procedures for issuing authorized release documents for aircraft engines, propellers, and articles if the production approval holder intends to issue those documents. These procedures must provide for the selection, appointment, training, management, and removal of individuals authorized by the production approval holder to issue authorized release documents. Authorized release documents may be issued for new aircraft engines, propellers, and articles manufactured by the production approval holder; and for used aircraft engines, propellers, and articles when rebuilt, or altered, in accordance with § 43.3(j) of this chapter. When a production approval holder issues an authorized release document for the purpose of export, the production approval holder must comply with the procedures applicable to the export of new and used aircraft engines, propellers, and articles specified in § 21.331 and the responsibilities of exporters specified in § 21.335.

■ 6. Revise § 21.142 to read as follows:

§ 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.

■ 7. Revise § 21.147 to read as follows:

§ 21.147 Amendment of production certificates.

(a) A holder of a production certificate must apply for an amendment to a production certificate in a form and manner prescribed by the FAA.

(b) An applicant for an amendment to a production certificate to add a type certificate or model, or both, must comply with §§ 21.137, 21.138, and 21.150.

(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.

■ 8. Revise § 21.305 to read as follows:

§ 21.305 Organization.

(a) Each applicant for or holder of a PMA must provide the FAA with a document—

(1) Describing how its organization will ensure compliance with the provisions of this subpart;

(2) Describing assigned responsibilities, delegated authorities, and the functional relationship of those responsible for quality to management and other organizational components; and

(3) Identifying an accountable manager.

(b) The accountable manager specified in paragraph (a) of this section must be responsible within the applicant's or production approval holder's organization for, and have authority over, all production operations conducted under this part. The accountable manager must confirm that the procedures described in the quality manual required by § 21.308 are in place and that the production approval holder

satisfies the requirements of the applicable regulations of subchapter C, Aircraft. The accountable manager must serve as the primary contact with the FAA.

■ 9. Revise § 21.605 to read as follows:

§ 21.605 Organization.

(a) Each applicant for or holder of a TSO authorization must provide the FAA with a document—

(1) Describing how its organization will ensure compliance with the provisions of this subpart;

(2) Describing assigned responsibilities, delegated authorities, and the functional relationship of those responsible for quality to management and other organizational components; and

(3) Identifying an accountable manager.

(b) The accountable manager specified in paragraph (a) of this section must be responsible within the applicant's or production approval holder's organization for, and have authority over, all production operations conducted under this part. The accountable manager must confirm that the procedures described in the quality manual required by § 21.608 are in place and that the production approval holder satisfies the requirements of the applicable regulations of subchapter C, Aircraft. The accountable manager must serve as the primary contact with the FAA.

PART 45—IDENTIFICATION AND REGISTRATION MARKING

■ 10. The authority citation for part 45 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113–40114, 44101–44105, 44107–44111, 44504, 44701, 44708–44709, 44711–44713, 44725, 45302–45303, 46104, 46304, 46306, 47122.

■ 11. Revise § 45.11(c) introductory text to read as follows:

§ 45.11 Marking of products.

* * * * *

(c) *Propellers and propeller blades and hubs.* 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—

* * * * *

Issued under authority provided by 49 U.S.C. 106(f), 44701(a), and 44703 in Washington, DC, on September 25, 2015.

Michael P. Huerta,

Administrator.

[FR Doc. 2015–24950 Filed 9–30–15; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2015–3981; Directorate Identifier 2015–NM–126–AD; Amendment 39–18280; AD 2015–20–02]

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: We are superseding Airworthiness Directive (AD) 2013–02–10 for all Airbus Model A330–200 Freighter series airplanes; Model A330–200 and –300 series airplanes; and Model A340–200 and –300 series airplanes. AD 2013–02–10 required an inspection of the rods to determine the manufacturer; and for affected parts, an inspection for any cracking of the rods, and related investigative and corrective actions if necessary. This AD revises the affected airplanes of a certain paragraph of AD 2013–02–10 due to the discovery of an error. We are issuing this AD to detect and correct cracking of the rods, which could result in rupture of rods that attach the belly fairing to the airframe, leading to separation of the belly fairing from the airframe, and consequent damage to airplane structure and airplane systems.

DATES: This AD becomes effective October 16, 2015.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of March 8, 2013 (78 FR 7257, February 1, 2013).

We must receive comments on this AD by November 16, 2015.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 45 80; email: *airworthiness.A330-A340@airbus.com;* Internet *http://www.airbus.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221. It is also available on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–3981.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–3981; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone: 800–647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone: 425–227–1138; fax: 425–227–1149.

SUPPLEMENTARY INFORMATION:

Discussion

On January 16, 2013, we issued AD 2013–02–10, Amendment 39–17331 (78 FR 7257, February 1, 2013), which applied to all Airbus Model A330–200 Freighter series airplanes; Model A330–200 and –300 series airplanes; and Model A340–200 and –300 series airplanes. AD 2013–02–10 was prompted by a report of a manufacturing defect in certain rods installed in the belly fairing, which could lead to cracks at the crimped end of the rod. AD 2013–02–10 required an inspection of the rods to determine the manufacturer; and for

Federal Register

Friday,
October 16, 2009

Part III

Department of Transportation

Federal Aviation Administration

14 CFR Parts 1, 21, 43, et al.

Production and Airworthiness Approvals, Part Marking, and Miscellaneous Amendments; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 1, 21, 43, and 45

[Docket No. FAA–2006–25877; Amendment Nos. 1–64, 21–92, 43–43, and 45–26]

RIN 2120–AJ44

Production and Airworthiness Approvals, Part Marking, and Miscellaneous Amendments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is amending its certification procedures and identification requirements for aeronautical products and articles. The amendments will update and standardize those requirements for production approval holders (PAHs), revise export airworthiness approval requirements to facilitate global manufacturing, move all part marking requirements from part 21 to part 45, and amend the identification requirements for products and articles. The intent of these changes is 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 construction. As a result of this action, the FAA's regulations now better reflect the current global aircraft and aircraft products and articles manufacturing environment.

DATES: This rule is effective April 14, 2010.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this rule, contact Barbara Capron and/or Robert Cook, Production Certification Branch, AIR–220, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 385–6360 or (202) 385–6358; e-mail: *barbara.capron@faa.gov* or *robert.cook@faa.gov*. For legal questions concerning this rule, contact Angela Washington, AGC–210, Office of the Chief Counsel, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267–7556; e-mail: *angela.washington@faa.gov*.

SUPPLEMENTARY INFORMATION:

Authority for this Rulemaking

Under the laws of the United States, the Department of Transportation has the responsibility to develop transportation policies and programs that contribute to providing fast, safe, efficient, and convenient transportation (49 United States Code, Subtitle 1, § 101). The Federal Aviation Administration (FAA or ''we/us/our'') is an agency of the Department. The FAA has general authority to issue rules regarding aviation safety, including minimum standards for articles and for the design, material, construction, quality of work, and performance of aircraft, aircraft engines, and propellers (49 U.S.C. 106(g) and 44701). We may also prescribe regulations in the interest of safety for registering and identifying an aircraft engine, propeller, or article (49 U.S.C. 44104).

The FAA is amending its regulations governing the certification procedures for products and articles and its requirements for identification and registration marking. These changes will improve the quality standards applicable to manufacturers, which help ensure that products and articles are produced as designed and are safe to operate. We are also relocating and standardizing our requirements for marking articles intended for use in aviation. These changes will make it easier to determine whether the correct articles are installed, which will contribute to a greater degree of safety. For these reasons, this rule will be a reasonable and necessary exercise of our rulemaking authority and obligations.

Table of Contents

I. Background

Over the last several decades, the aircraft manufacturing industry has evolved significantly. Years ago, most transport category aircraft were manufactured in the United States. A typical business model consisted of a production certificate (PC) holder with a relatively small number of suppliers. Today, the number of aircraft manufacturing suppliers has increased dramatically. Conversely, through the years, the aircraft industry has seen a steady decline in the number of U.S.-based transport category aircraft manufacturers. Those manufacturers, who once predominantly oversaw the production of replacement articles for their aircraft, now witness the ever increasing production of replacement and modification articles by independent parts manufacturers. Suppliers, including parts manufacturers, were located mainly in the United States decades ago; now, they are located all over the world. Suppliers are manufacturing greater percentages of aircraft products and articles. As a result, aircraft are now manufactured in an increasingly global environment.

The FAA did not envision such an expansion in aircraft manufacturing when the certification rules were first promulgated in 1964. The industry has been the subject of burgeoning internationalization in the last several decades. Evidence of this fact is that now, more than ever before, the United States has more bilateral agreements with foreign civil airworthiness authorities addressing the production, import, and export of aircraft. The old certification rules are too restrictive to accommodate today's manufacturing paradigm. Removing some of those restrictions will greatly improve our regulatory efficiency. This final rule is the FAA's response to the changing dynamics of the aircraft manufacturing industry, and this final rule contains requirements that reflect the current global environment.

The evolution of the manufacturing industry prompted the FAA to publish in the **Federal Register** a notice of proposed rulemaking (NPRM) on ''Production and Airworthiness Approvals, Parts Marking, and Miscellaneous Proposals'' (71 FR 58914, October 5, 2006). In that notice, we proposed comprehensive changes to certification procedures and identification requirements for aeronautical products and articles. In general, we proposed to: (1) Standardize quality system requirements for all Production Approval Holders (PAH); (2) require PAHs, including those producing under Type Certificate, to mark all articles, including sub-assemblies and components; (3) require PAHs to issue airworthiness approvals for aircraft engines, propellers, and other aviation articles; (4) require PAHs to create a certifying staff to issue those approvals; and (5) revise export airworthiness approval requirements to facilitate global manufacturing. The NPRM contains the background and rationale for this final rule, and except where we have made revisions to the proposal in this document, you should refer to the NPRM for that information.

Commenters to the NPRM represented aircraft and parts manufacturers; repair stations; the U.S. Small Business Administration, Office of Advocacy (SBA's Office of Advocacy); industry groups; and other civil aviation authorities and individuals. While there was much support for the general intent

of the proposed rule changes, the largest percentage of the commenters opposed the following four specific proposals:

1. Identification Requirements for Parts, Appliances, and Technical Standard Order Articles

The NPRM proposed to require manufacturers to mark each component of an aircraft engine or propeller, each part and component thereof, and each appliance and component thereof. Until now, the FAA has only required marking of the part; not the individual components of the part. Over forty commenters rejected the proposal, stating that the requirement to mark each component would be cost prohibitive. Also, the proposal would necessitate a change in all associated drawings and design data to reflect the marking requirement.

2. Mandatory Issuance of Airworthiness Approvals for Each Aircraft Engine, Propeller, and Article

The NPRM contained a proposal that would have required PAHs to issue an airworthiness approval for each aircraft engine, propeller, or article produced under the production approval that conforms to its approved design and is in a condition for safe operation. Currently, and under the old rules, an airworthiness approval is mandatory for products and articles only when those products and articles are being exported. The FAA has never required that airworthiness approvals be issued domestically. Commenters stated that because a disproportionately larger number of aircraft engines, propellers, and articles are shipped domestically than are exported, mandatory issuance of airworthiness approvals would impose a substantial cost burden on manufacturers.

3. Creation of Certifying Staff To Issue Airworthiness Approvals

We proposed in the NPRM to require PAHs to develop procedures for establishing and maintaining certifying staff that would be responsible for issuing airworthiness approvals for aircraft engines, propellers, and articles, including the issuance of export airworthiness approvals. Presently, only the FAA or its designees issue airworthiness approvals. Commenters opposed this requirement, arguing that it would necessitate additional staff training and implementation of new procedures for manufacturers, thus unnecessarily escalating the cost of manufacturing.

4. Standardized Quality System Requirements

In the NPRM, we proposed to standardize quality system requirements for PAHs so that all PAHs comply with the same set of quality system requirements, regardless of the product or article produced. We received over 65 comments (including those from the SBA's Office of Advocacy; industry groups representing manufacturers, airlines, and pilots; and aircraft, aircraft engine, and aircraft parts manufacturers). An overriding concern of the commenters was that the quality system requirements, if adopted, would be burdensome to implement, particularly for small businesses. Commenters asserted that the requirements would impose substantial additional costs on industry with no measurable increase in safety.

In addition to the commenters noted above, there were commenters on other proposals in the NPRM. We received over 100 comment letters (with over 500 comments) in response to the NPRM. After evaluating all comments received, we proceeded with this rulemaking action.

II. Discussion of Final Rule

A. Summary of Amendments

1. Identification Requirements

In response to the concerns and issues raised, the FAA has reconsidered some of its proposals and made several substantive changes to the proposed regulatory text. Our most significant change pertains to the proposal to require marking of all component parts and appliances. Fifty-two commenters (including SBA's Office of Advocacy; industry groups representing manufacturers, airlines, and pilots; and aircraft, aircraft engine, and aircraft parts manufacturers) asserted the proposed requirement to mark detail parts would be cost prohibitive and would provide no verifiable safety benefit. Commenters pointed out some products or articles consist of hundreds or sometimes thousands of detail parts, arguing that the costs associated with changing the drawings and design data could cost small businesses over one billion dollars to implement.

When we performed our initial regulatory flexibility assessment (IRFA) for the NPRM, we did not recognize the extent to which design data would have to be changed in order to accommodate the proposed marking of detail parts. Given that each product or article consists of hundreds or thousands of sub-tiered drawings, all of which would have to be changed, we agree with the commenters that we put forth a cost-prohibitive proposal. Accordingly, the final rule does not contain this requirement.

As a result of the many comments in opposition to our marking proposal, we revised the proposed rule to provide for methods of identification more flexible than marking. PAHs must mark the product or article that they have been granted a certificate or approval for in accordance with part 45. However, the sub-assemblies and component parts of that product or article do not have to be marked or identified unless they leave the PAH's facility as a separate article (*e.g.,* replacement or modification part). Sub-assemblies, component parts, or replacement articles that leave the PAH's facility as FAA-approved must include the manufacturer's part number and name, trademark, symbol, or other FAA-approved PAH identification (*e.g.,* the production approval number, cage code, or Federal supply code for manufacturers (FSCM)). A manufacturer or person producing under subparts F, G, K, or O may choose any method to meet this requirement. Methods include, but are not limited to, marking the article, attaching a tag to the article, placing the article in a container, or providing a document with the article with the information previously mentioned. This identification requirement codifies current industry practice and is less stringent than the proposed requirement.

This identification requirement is not driven by a history of aviation accidents where inadequate marking or identification was necessarily found to be a primary cause; rather, it is part of a systemic approach to safety. Accident investigations and safety management system analyses show that accidents are rarely caused by one event. Accidents are the result of a chain of events. If any of the events had not occurred, an accident may have been prevented. This requirement assists in the traceability of articles and helps reduce the installation of incorrect articles, thereby preventing accidents.

Because identification of articles is simply a byproduct of the marking proposal, the FAA has determined that it is within the scope of this rulemaking. The economic effects of this requirement have been evaluated and determined to be cost-neutral (*i.e.,* having no economic impact).

In the NPRM, we proposed to revise § 45.15 to specify particular marking requirements for parts manufacturer approval (PMA) and technical standard order (TSO) articles. In doing so, we removed the former requirements for producers of PMA articles to mark those

articles with the designation ''FAA–PMA'' and information stating the installation eligibility of the article. As proposed, the rule would have required PMA holders to mark articles with the PMA holder's name, trademark, symbol, or other FAA-approved identification.

Several commenters (including Airline Transport Association (ATA), Aerospace Industries Association (AIA), General Electric Company (GE), the Boeing Company, and Snecma) questioned the proposal. They stated the current requirement to mark PMA articles with the letters ''FAA–PMA'' increases traceability and allows installers and maintenance providers to easily identify the article being installed. The European Aviation Safety Agency (EASA) stated it had recently introduced a requirement for the marking of parts not produced under the control of a TC or supplementary type certificate (STC). The marking clearly distinguishes those parts from parts produced by a TC or STC holder. EASA suggested the FAA and EASA coordinate their efforts in developing a coherent, consistent, and comprehensive part marking policy.

The FAA does not espouse an opinion regarding the premise that marking PMA articles as ''FAA–PMA'' increases traceability. However, having a marking requirement consistent with the requirement of other aviation authorities is advantageous and enhances harmonization efforts. Furthermore, as we reviewed the proposal, we realized the removal of ''FAA–PMA'' would result in additional costs to the PMA holder. Much like the proposal to mark detail parts, the removal of ''FAA–PMA'' would require a manufacturer to revise all of its design drawings, making it a cost-prohibitive change. Accordingly, this final rule retains the current ''FAA–PMA'' marking requirements.

Unless otherwise specified in the applicable TSO, § 45.15 now requires manufacturers of TSO articles to permanently and legibly mark the article with the TSO number and letter of designation, all markings specifically required by the applicable TSO, and the serial number or the date of manufacture of the article, or both. Likewise, each person who manufactures a part or component for which a replacement time, inspection interval, or related procedure is specified in the Airworthiness Limitations section of a manufacturer's maintenance manual or Instructions for Continued Airworthiness must permanently and legibly mark that part or component with a serial number (or equivalent).

An individual commenter expressed concern that requiring a manufacturer to permanently mark an article may result in masking the age of a product. The commenter argued that a manufacturer could modify an existing appliance and issue it a new serial number and date of manufacture. The commenter recommended the proposal be revised to prohibit such activity. We understand the commenter's concern; however, the original serial number and date of manufacture must be maintained throughout the TSO article's life-cycle. We think the regulation is sufficiently clear that markings must be permanent. Additional markings must not obscure, remove, or obliterate the original markings.

GE and Pratt & Whitney stated that the phrase ''or equivalent,'' when used to refer to an alternative to marking a part or component with a serial number, is confusing and should not be in the final rule. We disagree. Use of the phrase ''or equivalent'' offers flexibility in compliance with the marking requirement and provides an assessable standard for FAA enforcement of the requirement. Therefore, we retained the phrase in the final rule.

Section 45.11 now provides relief to aircraft owners and operators for data plate location requirements for gliders and certain types of aircraft. This rule allows the data plate to be secured in an accessible location near the aircraft entrance. The former rule required the data plate be secured to the aircraft fuselage exterior, such that it was legible to a person on the ground. However, the old requirements were impractical. Over the last several years, the FAA has issued numerous exemptions from § 45.11 for relief from the requirements for data plate location. This rule relieves the burden on the public and the FAA in regards to processing these types of exemptions in the future.

AIA and GE stated that the proposed requirement to mark engine modules was unclear. They questioned whether the module marking should reflect the engine's information or the module's information. Also, GE stated that an additional identification plate should be added to a module when an STC has been incorporated. We have determined that the requirement to mark engine modules is unnecessary. The rule language has been changed to remove this requirement. We do not agree that additional marking is required when an STC is incorporated. While an STC is used for the approval of a major change in the type design, it does not approve the production of parts used in the modification. The data plate placed on a TC product is based on the manufacturer of the product, rather than the TC design approval holder (DAH). Requiring additional markings for STC incorporation would confuse the STC holder with the actual manufacturer of the STC modification part. It also would not provide any safety benefit. STC incorporation is marked in aircraft logbooks and flight manuals and has been shown effective.

A repair station expressed concern about changes to articles driven by service bulletins. Articles for which service bulletins have been issued often require a new or revised marking. Since many of these articles are in service, the maintenance provider, not the producer, makes the required changes. Therefore, the commenter requested that the FAA create a regulatory provision permitting maintenance providers to act as the manufacturer's agent for the purpose of remarking the article.

Changes to articles pursuant to service bulletins are governed by the provisions of part 43. Those changes, including the marking of the articles, are considered maintenance activity and are more appropriately accomplished pursuant to the maintenance provisions of part 43.

If the FAA finds a part or component is too small or otherwise impractical to mark with any of the information required by this part, the manufacturer is required to attach that information to the part or component, or its container. Aircraft Owners and Pilots Association (AOPA) commented that an enormous workload is imposed on the FAA because it must determine whether an article is too small or is otherwise impractical to mark. AOPA recommended that the manufacturer be allowed to make that determination.

The FAA is ultimately responsible for determining compliance with regulatory requirements, and we must ensure consistency in application of the standard. Therefore, we will not abdicate our responsibility for determining whether articles are too small or otherwise impractical to mark.

Marking requirements for all PAHs are now consolidated in part 45. These requirements apply to all PAHs, as well as to persons who produce the products or articles for export to the United States under the provisions of an agreement between the United States and another country or jurisdiction. The required markings constitute a representation that the product or article conforms to its approved design. Only the person authorized to produce the product or article may make this representation. However, this rule does not preclude an approved supplier to a PAH from applying markings in accordance with requirements imposed by the PAH;

neither does it preclude applying in-process markings throughout the manufacturing process.

AIA, ATA, GE, and Pratt & Whitney stated the FAA should permit marking by owner operators, certificated repair stations, or appropriately certificated mechanics performing maintenance under part 43. However, part 43 already allows owner/operators, certificated repair stations, and certificated mechanics performing maintenance to mark articles, and addressing it in this rulemaking would be duplicative and unnecessary.

A parts manufacturer and an individual questioned whether using barcodes would be an acceptable means of complying with the rule, particularly in the case of small articles. Barcode identification may be used in conjunction with, but not in lieu of, the marking requirements. Provisions for marking small or delicate articles are specified in § 45.15(d).

2. Mandatory Issuance of Airworthiness Approvals and Certifying Staff

Forty-six commenters (including SBA's Office of Advocacy, industry groups, aircraft manufacturers, engine manufacturers, parts manufacturers, and individuals) stated that FAA's proposal to require the issuance of airworthiness approvals for each aircraft engine, propeller, or article would be cost prohibitive. Commenters stated that because a disproportionately larger number of aircraft engines, propellers, and articles are shipped domestically than are exported, mandatory issuance of airworthiness approvals would impose a substantial cost burden on manufacturers.

We have further reviewed the potential impact of the proposal and have determined that the costs would disproportionately affect small manufacturers. Many small manufacturers do not ship their products or articles outside the United States, nor do they currently issue airworthiness approvals. In addition, airworthiness approvals are often separated from the product or article when it is received by the end user, nullifying the safety aspect of increased traceability. Because we have determined that the mandatory issuance of airworthiness approvals will not increase safety, and there is a high cost associated with its implementation, that proposal is not included in this final rule.

We also have determined that mandating PAHs to establish and maintain a certifying staff to issue airworthiness approvals would necessitate costly staff training, and implementation of new procedures would be too burdensome for manufacturers. Because we have not included the proposed requirement for mandatory issuance of airworthiness approvals for each aircraft engine, propeller, and article, the requirement for a PAH to establish and maintain a certifying staff to issue the approvals is therefore not included in this rule.

3. Quality System Requirements

This final rule prescribes a PAH's requirements for controlling the quality of the product or article it manufactures. The FAA has imposed in this final rule certain additional PAH quality system requirements designed to achieve overall improvement of the PAH's quality system. The quality system consists of fourteen specific quality system requirements. As described below, it is important to note that those fourteen quality system requirements are scalable, depending on the size and complexity of the PAH and of the product or article produced. Some of these requirements were already mandatory prior to this rulemaking and have been retained. The remaining requirements also have already been incorporated by industry for years and used voluntarily as ''best practices.''

Prior to this rulemaking, holders of different production approvals complied with, and were audited to, differing sets of requirements. For instance, if a manufacturer produced a PMA part and a TSO article, the manufacturer was subject to different quality and marking standards for each part it produced. Today's requirements are now applicable to PC and PMA holders and TSO authorizations alike. This final rule relieves PAHs from having to maintain, and the FAA from having to oversee, multiple PAH systems and procedures. Hence, this final rule will increase regulatory efficiency.

We received over 65 comments (including those from the SBA's Office of Advocacy; industry groups representing manufacturers, airlines, and pilots; and aircraft, aircraft engine, and parts manufacturers). A general consensus of the commenters was that the proposed quality system requirements would be too restrictive, burdensome, and costly, especially on small businesses.

SBA's Office of Advocacy believed the FAA's approach was more appropriate for large companies, rather than for smaller companies. That commenter suggested the FAA consider exempting small businesses from the quality system requirements or adopt a tiered approach based on the size and volume of the business. In addition, SBA's Office of Advocacy suggested that if the FAA does not intend to require an International Organization for Standardization (ISO)- or SAE-equivalent regime, then it should delete the references to those standards in the preamble. In the NPRM, we likened our quality system requirements to those international quality standards and suggested that there is a global trend toward implementing them. SBA's Office of Advocacy argued the FAA should not impose ISO- or AS-based requirements of advocacy, maintaining that such a requirement would be duplicative because many PAHs have already achieved ISO or AS certification.

The FAA derived its quality system requirements from a number of sources, including previous requirements in subparts G and K, as well as industry best practices, ISO standards, and other aviation authorities' requirements (*e.g.*, Joint Aviation Authorities (JAA), European Aviation Safety Agency (EASA), and Transport Canada). These requirements do not introduce significantly different standards for PAHs, small businesses included. Because many PAHs currently employ these standards as best practices, the FAA has determined that compliance will not be costly. We have determined that the quality system requirements, as proposed, are appropriate for all manufacturers.

In response to the SBA's Office of Advocacy's comment suggesting the FAA adopt a tiered approach for small businesses, the FAA maintains that even small businesses have many of these practices in place, just on a smaller scale than larger aircraft manufacturers. We are simply codifying those practices. Our requirements are consistent for all manufacturers, but they will be scalable and commensurate to the size of the company and the complexity of the product or article produced. For example, we would expect a large aircraft manufacturer to have a well-developed, complex quality system. In contrast, a small parts manufacturer producing a non-complex article could have a less complex quality system.

However, that system could still comply with FAA quality system regulations and reflect the needs of the PAH without imposing an undue burden. The FAA will provide additional information on the Internet site *http://www.faa.gov* on how a PAH may construct a scalable quality system, to include examples.

In addition to industry best practices, these amended quality system requirements are now consistent with

requirements of other aviation authorities. As a result, these quality system requirements will encourage greater international acceptance of products and articles and facilitate the import and export of those products and articles.

This rule also requires that a manufacturer's quality system include procedures for controlling the use of design data and subsequent changes to ensure that only current, correct, and approved data are used. Earlier, we had proposed that the system include procedures for controlling design data, rather than the use of the data. However, GE correctly commented that the TC holder, not the PAH, controls the design data. Accordingly, we revised the rule language to accommodate that fact. We now require PAHs to have access to design data necessary to determine conformity and airworthiness for each product and article produced under the PC. In the case of a PAH who obtained approval by test and computation, the PAH controls the data. However, a PAH who obtained approval by licensing agreement might only have access to the data through the type design holder.

This rule now requires manufacturers to establish procedures to control conformity of each supplier-furnished product or article to its approved design before release for installation. The PAH must establish a quality system that ensures the products or articles produced are conforming and in a condition for safe operation. In that regard, we have identified Supplier Control as one of the processes for which the PAH must establish procedures. The PAH is responsible for determining the type and scope of controls and the frequency of oversight necessary to ensure the conformity of the products or services provided by its supply chain, along with its compliance to contract requirements.

We further require that the quality system include procedures for inspections and tests to ensure that a product or article conforms to its approved design. This revision clarifies that the purpose of inspections and tests is to verify that each product and article conforms to its approved design and is in a condition for safe operation. In addition, the inspection and test procedures must include a flight test of each aircraft produced, unless that aircraft will be exported as an unassembled aircraft, and a functional test of each aircraft engine and each propeller must be performed. Embraer questioned the benefit of performing a functional test on a fixed pitch propeller because it has no control system. For that reason, Embraer proposed we create an exception to exclude fixed pitch propellers from functional testing; however, we disagree. Inspections and tests, including functional tests, must be performed on fixed pitch propellers. These tests are used to validate whether performance characteristics and the structural integrity meet the design requirements.

The quality system must include procedures to ensure that all inspection, measuring, and test equipment used to determine conformity of products and articles is calibrated and controlled. Each calibration standard must be traceable to a standard acceptable to the FAA. Boeing suggested we require calibration of inspection, measuring, and test equipment only when calibration is specified by the type design. However, calibration of inspection, measuring, and test equipment is a function of the quality system; it is not addressed in the type design. Proper calibration of all equipment helps ensure the integrity of the manufacturing process.

This rule now requires that a quality system include procedures to ensure that discarded articles are rendered unusable. This revision helps ensure that discarded articles are not erroneously placed into service on aircraft. AIA, GE, and Boeing proposed that the FAA allow PAHs to identify articles as ''scrap,'' rather than the PAH rendering discarded articles as ''unusable''. The commenters further recommended that we define the term ''scrap'' in the rule.

The term ''scrap'' is an acceptable industry term that may be used at the PAH's discretion, but many times, PAH's may use ''scrapped'' items in a new capacity. The term ''scrap'' does not clearly convey that the item may not be reused in a type-certificated product. For the purposes of this rule, we have decided that the term ''unusable'' clearly reflects our intent to ensure that an article that has been discarded cannot be used.

In addition, this rule requires that the quality system include procedures to prevent damage or deterioration of products and articles during handling, storage, preservation, packaging, and delivery. AIA, GE, and Pratt & Whitney argued that the PAH cannot ensure the condition of articles after they have left the PAH's facility, and they recommended that we remove the term ''delivery'' from the proposed rule language. We agree and have revised the regulatory text accordingly.

Pratt & Whitney also recommended revising the rule language to reflect that the quality system include procedures ''intended'' to prevent damage and deterioration of products and articles, as opposed to procedures that will prevent damage and deterioration. However, the FAA is responsible for imposing a standard that is measurable. We have determined that the standard imposed will better prevent damage or deterioration. Thus, we have retained the rule language as proposed.

The FAA now requires the quality system to include procedures for identifying, storing, protecting, retrieving, and retaining quality records. Quality system records include inspection and test records, material review board records, and work orders. Both production approval applicants and PAHs must retain these records for at least five years for the products and articles manufactured under the approval and at least ten years for those articles that are identified as critical components under § 45.15(c) of this chapter.

GE recommended we increase the record retention time to 40 years. An individual commenter stated that the former record retention requirements were adequate. However, the new record retention requirements are the result of a recommendation from the Aviation Rulemaking Advisory Committee (ARAC). The ARAC stated that it is possible for a product or article to remain in production in excess of two years before it is released from production. Furthermore, that product or article would spend some length of time in service before any airworthiness directives (ADs) were possibly issued against it. Therefore, by the time a nonconformance or unairworthy condition is identified, the 2-year record retention period could have passed, making it difficult to identify a root cause for the condition. We have determined that a 5-year record retention for products and articles and a 10-year record retention for critical parts are necessary to facilitate the tracking of nonconformances. However, a PAH may maintain records longer if it chooses.

Boeing suggested that we require record retention periods for products and articles only. We disagree. Records are objective evidence that a PAH has complied with all applicable regulatory requirements. Records are part of the quality system and are used to validate conformity to type design. Therefore, we have determined that these records are necessary, and the retention period is appropriate.

We now require that the quality system include procedures for planning, conducting, and documenting internal audits to ensure compliance with the approved quality. A parts manufacturer

suggested the meaning of the term ''internal'' is relative to a PAH's quality system; therefore, audits of suppliers would fall within the scope of internal audits because a supplier is under the PAH's quality system. The commenter requested a clarification of the definition of ''internal audits'' as it pertains to suppliers.

The concept of what constitutes ''internal'' for the purposes of an audit is relative to the PAH's quality system. We think the regulation is sufficiently clear. Suppliers are controlled through the PAH's quality system, and procedures for suppliers' audits are dictated in § 21.137(c), Supplier control. Conversely, § 21.137(l) denotes procedures for the conduct of internal audits of the effectiveness of the PAH's Supplier Control System.

4. Replacement and Modification Articles

Former §§ 21.303(a) and (b) addressed production requirements for replacement and modification parts to ensure that only articles that conform to their approved design and are in condition for safe operation are installed in type-certificated aircraft. With certain exceptions, the former rule prohibited the production of such parts for sale for installation on a type-certificated product, unless those parts were produced pursuant to a PMA. Exempted from this requirement were parts produced under a TC or PC, parts produced by an owner or operator for maintaining or altering his own product, parts produced under an FAA TSO, and standard parts. This final rule consolidates those former requirements in newly established § 21.9(a), with some revisions. Under today's rule, the FAA will now prohibit the production of a replacement or modification article if the producer knows, or should know, that the part is reasonably likely to be installed on a type-certificated product unless the article part is:

- Produced under a TC;
- Produced under an FAA production approval;
- A standard part;
- A commercial part, as defined in § 21.1;
- Produced by an owner or operator for maintaining or altering that owner or operator's product; or
- Fabricated by an appropriately rated certificate holder with a quality system and consumed in the repair or alteration of a product in accordance with part 43.

The provisions of § 21.9 apply to the producer of any part that may be used as a replacement or modification article, not just parts that were produced specifically as replacement or modification articles. In determining whether a violation has occurred, one factor the FAA will consider is whether the article was represented as suitable for installation on a type-certificated product. Producers of replacement or modification articles who represent those articles as suitable for installation on a type-certificated product may be in violation of § 21.9 unless the articles were produced under one of the above exceptions.

Representation may include, but is not limited to, a producer advertising its parts in aviation magazines; representing the part with statements such as ''aviation quality'' or ''as previously installed on''; issuing aviation parts catalogs; or marketing at aviation trade shows and conferences. Owners, operators, producers, and maintenance providers rely on these representations to determine the airworthiness of an aircraft, or the acceptability of products and articles for a given application. Therefore, these representations must be truthful. Assessing representation of a part is just one means of determining whether a violation of § 21.9(a) has occurred. Absent any such representation, the FAA may still find a violation has occurred if evidence can be established that the producer knows or should know that the part is reasonably likely to be installed on a type-certificated product.

Finally, newly established § 21.9(c) would allow a person to represent an article as suitable for installation on a type-certificated aircraft if the article was declared surplus by the U.S. Armed Forces and was intended for use on that model of U.S. Armed Forces aircraft.

We received thirty-seven comments on this section. SBA's Office of Advocacy requested additional clarification on how the provisions of this section of the rule would apply. In addition, two individuals stated the rule language ''if a person knows, or should know, that the part is reasonably likely to be installed on a type-certificated product'' is very subjective, and it will be difficult to properly and consistently enforce. It believed distributors, owner/operators, and manufacturers could be subject to legal action due to misunderstandings of the rule. The expected misunderstandings would arise from the likelihood of this final rule affecting parts manufacturers not subject to FAA regulation before its issuance. However, we believe the new rule is clearly stated, objective, and enforceable. As we apply the standard, we will examine all relevant facts and circumstances to determine whether a person knew or should have known that a part he produced was reasonably likely to be installed on a type-certificated product.

Numerous commenters (including Aircraft Electronics Association (AEA), Aviation Suppliers Association (ASA), and repair stations) stated our proposed rule no longer contained language prohibiting the production of parts ''for sale for installation on a type-certificated product.'' In addition, the SBA's Office of Advocacy asked the FAA to clarify and confirm that the existing ability of a repair shop to produce a part during maintenance activities remains in place. Since the NPRM proposed to remove that language, several repair stations asked us to clarify whether they will still be able to produce articles that will be consumed in the course of a repair without violating § 21.9(a).

It is not our intent to preclude that activity. To address that concern and clarify our intent, we established an exception in § 21.9(a)(6). This exception, which was not proposed in the NPRM, allows for the production of articles without benefit of a production approval when articles are fabricated by an appropriately rated certificate holder with a quality system and consumed in the repair or alteration of a product or article in accordance with part 43. Maintenance providers who do not have a quality system may continue to fabricate owner-produced articles for installation on type-certificated aircraft using the guidelines set forth in Policy Memorandum, Definition of ''Owner Produced Part,'' Section 21.303(b)(2), August 5, 1993.

SBA's Office of Advocacy asked the FAA to clarify how the rule would impact the distribution of parts and existing inventories based on small business concerns that the proposed rules will forbid anyone from selling civil aircraft parts unless they are the manufacturer of the part, essentially forcing current parts distributors out of business. This phrase was used in former § 21.303(a). We disagree. Section 21.9 governs the production, not the sale, of articles and does not prohibit distributors from selling articles.

SBA's Office of Advocacy was also concerned that the regulation does not contain express provisions concerning inventories of existing articles. That commenter recommended we clarify that any new production requirements on articles or products apply only to articles manufactured after a certain date and that the requirements do not render current articles or products in inventory unusable. Like the Office of Advocacy, ASA believed the rule would

prohibit the sale of existing inventories, and thus, they would lose value. The commenters' concerns are unfounded. The requirements of this rule apply to products or articles as they are manufactured. The provisions of this rule do not apply to existing inventories.

Lastly, an individual commenter stated modification articles should be exempted from a PMA if those articles could be installed: (1) As a minor alteration with a simple logbook entry without approved data, or (2) under a field approval with data approved by a Flight Standards District Office (FSDO) airworthiness inspector or Designated Engineering Representative (DER). We disagree. Both exceptions would serve to weaken our regulatory intent to ensure that only articles for which a suitability determination has been made are installed in type-certificated aircraft. An article is not approved unless the article is: Produced under a TC; produced under an FAA production approval; a standard part; a commercial part, administered in a manner acceptable to the FAA; or produced by an owner or operator for maintaining or altering that owner or operator's product.

5. Definition of ''Commercial Parts''

In the NPRM, we proposed to establish a definition of commercial parts and create a replacement parts classification that would facilitate the use of parts during maintenance. This rulemaking established that classification and allows for the production of commercial parts, as defined by this rulemaking, as replacement or modification articles without benefit of a production approval. Over ten commenters (including SBA's Office of Advocacy, the Regional Airline Association (RAA), ASA, and Snecma) stated the proposed definition of ''commercial parts'' was confusing. SBA's Office of Advocacy asked the FAA to further explain how the new provisions would impact current practices and the industry's ability to use parts that commonly have been referred to as commercial prior to this rulemaking. The commenters were concerned that only those parts designated by the DAH and approved by the FAA as commercial would be considered as such. They concluded the proposal would unduly restrict the use of commercial parts on in-service aircraft, which is common industry practice today.

In response to these comments, we modified the definition of ''commercial parts,'' as it was proposed in the NPRM, to better clarify the meaning of the term. A commercial part means an article that is listed on an FAA-approved Commercial Parts List included in the DAH's Instructions for Continued Airworthiness (ICAs). By creating a ''commercial parts'' classification, the FAA has constructed a new mechanism by which commercial parts may be approved for use on type-certificated products as replacement or modification articles. The FAA has not removed any of the processes used prior to this rule change for approving articles for installation on type-certificated products as replacement or modification articles. Those processes include purchasing the article from the PAH or manufacturer producing under a TC approved to produce the article; produced and installed under the provisions of an STC; or produced and installed in accordance with the provisions of part 43.

For the purposes of this rulemaking, in order for a part to be considered commercial, the DAH must submit to the FAA a list of parts it has designated as commercial pursuant to the provisions of § 21.50(c). A part is designated as commercial when the DAH: (1) Provides data to the FAA showing that the failure of the commercial part, as installed in the product, would not degrade the level of safety of the product; (2) shows the part is produced only under the commercial part manufacturer's specification and marked with only the commercial part manufacturer's markings, and (3) provides any other data the FAA requires to approve the Commercial Parts List.

As discussed in the NPRM preamble, the data requirement concerning the failure of the part is necessary to ensure that commercial parts, which are not subject to the rigorous quality control requirements for PAHs, cannot jeopardize flight safety if they fail. The part marking requirement is necessary to ensure that other similar parts, whose safety has not been demonstrated, cannot be substituted for the part identified as commercial. Because this is a new regulatory classification of parts, we cannot anticipate all the issues that may arise as applicants submit proposals. We therefore need the third ''catch-all'' provision to obtain information necessary to verify our intent in creating this new classification is fulfilled and to ensure there is no adverse effect on safety. The DAH must include the Commercial Parts List in the Instructions for Continued Airworthiness. The FAA approves the commercial parts list, and the parts on it are then eligible for use on a type certificated product as replacement or modification articles.

SBA's Office of Advocacy was equally concerned that as a result of this new commercial parts classification, non-PAH commercial parts manufacturers would be held liable for a violation of § 21.9 regarding production of parts if a part they manufacture is used on a type-certificated aircraft without being declared a commercial part. It stated the FAA should be aware that a strict reading of the proposed rule seems to suggest that once a manufacturer knows or has reason to know that a repair or maintenance facility is installing its product on an aircraft, that manufacturer would have a legal obligation to obtain the approval of either the design holder or the FAA (through a PMA or TSO) for that part. This would extend the reach of the FAA's rule to a vast universe of manufacturers, none of whom are included in the FAA's economic analysis.

SBA's Office of Advocacy is correct in its understanding of the proposed rule, in that if non-PAH producers know or should know that their articles are reasonably likely to be installed on a type-certificated product, they cannot produce those articles unless they meet one of the four exemptions noted in § 21.9. Non-PAH parts producers that know their parts are being installed on type-certificated products may apply for a production approval for the production of those parts, or the DAH of the product or article on which those commercial parts will be installed may designate them as commercial. Our intent is to create an enforceable standard that helps ensure that parts that are used on type-certificated products are produced under an approved quality system or otherwise approved for use on that product.

Several repair stations were unclear on whether repair or maintenance facilities would still be able to utilize the maintenance provisions in § 43.13 to install commercial parts on aircraft. Commercial parts as defined in this rulemaking do not require a production approval, and repair stations may continue to utilize the provisions of § 43.13 to install parts. Those parts that are generally recognized by industry as commercial, but have not been designated on a Commercial Parts List, must be approved for installation in accordance with part 43.

Two individuals stated that the use of commercial parts should be approved only in applications where their function or failure would not degrade safety. The FAA agrees with that statement, and as we do with other parts

approved as part of the type design, we will also evaluate commercial parts during the type design approval process to determine their affect on the safety of the product. In order for a DAH to designate a part as commercial, the DAH must show that failure of the commercial part would not degrade the safety of the product.

Snecma and an individual commenter recommended that advisory material would be helpful in determining when or how commercial parts can be used as part of a type design, including guidance on what a DAH must do to obtain approval of its commercial parts. A repair station also commented that we should provide advisory material on when and how commercial parts may be used by operators and maintenance personnel. The FAA will issue advisory material providing guidance on the above concerns and on substitution of commercial parts during maintenance.

Lastly, an individual commenter noted that the marking requirements for commercial parts are not consistent with the marking requirements in part 45. We agree. However, the marking requirements in part 45 pertain only to those articles manufactured under an approved type design or in accordance with the provisions of a bilateral agreement between the United States and another country or jurisdiction for the acceptance of products and articles. Accordingly, the part 45 marking requirements are not applicable.

6. Location of or Change to Manufacturing Facilities

The FAA is requiring all PAHs to obtain FAA approval before making any changes in location or physical changes to its manufacturing facilities. Additionally, PAHs must immediately notify us of any changes that may affect the inspection, conformity, or airworthiness of its products or articles. This requirement applies to all PAHs and persons producing under a TC only.

One commenter noted that § 21.122(a) appears to allow for production under a TC outside the United States. The commenter is correct. We considered amending subpart F to prohibit manufacturing under a TC in a foreign country. However, we decided to allow manufacturing under a TC in a foreign country, as long as it causes ''no undue burden'' for the FAA.

7. Issuance of Export Airworthiness Approvals for Aircraft Engines, Propellers, and Articles

Section 21.331 permits a person to obtain, from the FAA, an export airworthiness approval for a new or used aircraft engine, propeller, or article manufactured under this part if it conforms to its approved design and is in a condition for safe operation. Also, used aircraft, engines, and propellers are no longer required to be newly overhauled. Finally, prior to issuance of an export airworthiness approval for an aircraft engine, propeller, or article, the special requirements of importing countries or jurisdictions must be met.

AIA, GE, and Pratt & Whitney suggested the FAA amend the rule to reflect that some products require disassembly for shipping purposes after the product has been certificated that it is ''in a condition for safe operation.'' Airworthiness is determined at the time the product is submitted to the FAA in an assembled state. We allow for disassembly of a product for the purpose of shipping to the end-user, but the importing authority will require an airworthiness determination after reassembly and prior to installation on the aircraft.

AIA, Boeing, and GE also suggested we revise the rule language to allow a PAH to obtain letters of acceptance directly from the importing country when required for nonconforming products ready for export. A fundamental principle of our bilateral agreements is that letters of acceptance are transmitted between authorities, and we are not planning to institute a change to that policy. Because bilateral agreements supersede our regulatory requirements, the FAA will continue to receive and process letters of acceptance from importing authorities.

AIA, Boeing, and GE further stated it would be beneficial for us to define the term ''used'' as it appears in § 21.331. They also suggested that we revise § 21.331 to allow the issuance of export airworthiness approvals for used products that do not meet an approved type design, as service time and wear prevent conformity to new article dimensions. We agree that there should be a consistent application of the term ''used'' as it relates to aircraft products; however, a regulatory definition would not be appropriate at this time because the term has different meanings in its application in a certification context versus a maintenance context. As to the comment regarding nonconforming products, § 21.331 already allows for the issuance of an export airworthiness approval for used products that do not meet an approved type design.

An individual commenter thought it unnecessary to obtain letters of acceptance from an importing country when shipping nonconforming products or articles. We disagree. An importing authority has complete discretion on whether it will accept nonconforming products or articles, and this issue is addressed between authorities in bilateral agreements and is not dictated via domestic regulations. Another individual commenter suggested that an importing country, rather than the FAA, should authorize deviations from the regulatory requirements of subpart L for products exported. Importing countries have no regulatory jurisdiction in the United States, and therefore, they have no authority to grant a deviation from our requirements. We maintain sole authority to grant deviations from our regulations.

An individual commenter suggested that the rule accommodate the movement of articles whose airworthiness status is unknown. Again, we disagree. The rule is intended to accommodate only the export of products and articles determined to be airworthy. The issuance of an airworthiness approval for products and articles whose status is unknown would be contrary to the fundamental airworthiness principles and obligations of our bilateral airworthiness agreements with other countries and/or jurisdictions.

Section 21.335(a) requires exporters to forward to the importing country or jurisdiction all documents specified by that country or jurisdiction. Paragraph (b) requires the exporter to preserve and package products and articles as necessary to protect them against corrosion and damage during transit or storage and to state the duration of effectiveness of such preservation and packaging. AIA, GE, aircraft parts manufacturers, and individuals assert that because it is difficult, or sometimes impossible, to predict how long an article may need to be preserved, it may be equally difficult to comply with the packaging and preservation requirements.

This rule requires that products and articles be properly preserved and packaged as necessary at the time of export. Exporters must state the duration of effectiveness, but they are not required, as the commenters suggest, to exercise control over the end use or storage of the parts exported. If a product or article does not require any preservation or protective packaging in order to prevent damage, this rule does not apply.

AIA and GE were concerned that U.S. exporters may be required to obtain an export airworthiness approval as part of the documents specified for export. They believed that import and export requirements should be the same. The commenters are correct. Based on the content of our agreement with a country, additional documentation,

including an export airworthiness approval from the importing country or jurisdiction, may be required.

AIA mentioned that § 21.335(a), or the preamble, should clearly state the documentation requirements for export, as there is often a variation in requirements. The FAA has numerous bilateral agreements with countries addressing the type, format, and content of documentation required for imported and exported products and articles. It would be impractical to delineate all those requirements in our regulations, as they are subject to change by the importing country. The FAA does request the importing authorities to periodically update and review its special import requirements, and we maintain that information in AC 21–2, Appendix 2, which is available on our Web site.

8. Definition of ''Standard Parts''

We proposed in the NPRM to expand the definition of ''standard parts'' that appeared in former § 21.303(b)(4). The proposed definition of ''standard parts'' included a part that conforms to a specification established by a foreign government agency or a consensus standards organization. However, due to conflicts between our proposed definition with other authorities' definitions of ''standard parts,'' the FAA has decided against revising the definition of ''standard parts'' at this time. Instead, we are maintaining the original use of the term, which now appears in § 21.9(a)(3).

9. Definitions

FAA has expanded the part 1 definition of ''approved,'' as it relates to the approval of products and articles, to include approvals issued under the provisions of a bilateral agreement between the United States and a foreign country or jurisdiction. This amendment clarifies that data approved by a foreign civil aviation authority under a bilateral agreement does not require further FAA approval. Furthermore, the term ''jurisdiction,'' as it appears in the definition, applies to entities that are not countries (*e.g.*, the European Union (EU)).

Section 21.1(a)(1) prescribes procedural requirements for issuing and changing design approvals, production approvals, airworthiness certificates, and airworthiness approvals. Paragraphs (b)(1) through (b)(8) define the terms airworthiness approval, article, commercial part, design approval, product, production approval, State of Design, and State of Manufacture.

We received forty-eight comments on this section. National Civil Aviation Agency—Brazil (ANAC) asked that we define the term ''airworthiness certificates.'' An airworthiness certificate is a form issued by the FAA or its designee to document whether a product meets its type design and is in a condition for safe operation. The usage of this form in this manner has been commonly accepted, and we have determined that the term ''airworthiness certificate'' is widely understood and requires no further definition.

ANAC stated that the term ''jurisdiction,'' as it appeared in the proposed definition of ''State of Design,'' should be defined because an airworthiness jurisdiction is sometimes different than the company's legal location jurisdiction. We have revised the definition of ''State of Design'' to clarify that it means an entity that has regulatory authority over an organization responsible for the design and continued airworthiness of a civil aeronautical product or article. The concept of ''airworthiness jurisdiction'' is addressed by the reference to regulatory authority.

ANAC further stated that we should better clarify the term ''State of Manufacture'' because a product or article could have more than one State of Manufacture. Accordingly, we have revised the definition of ''State of Manufacture'' to clarify that it means the country or jurisdiction with regulatory authority over the organization responsible for the production and airworthiness of a civil aeronautical product or article.

An individual commenter mentioned the definition of ''airworthiness approval'' should include a reference to FAA Forms 8130–3 and 8130–4. The commenter also stated that an FAA Form 8130–3 should be required for standard and commercial parts when sold to an owner/operator for installation. We disagree with both comments. The FAA reserves discretion to change or use different FAA forms for various functions. Therefore, we rarely use form numbers in the regulations. The required form and manner of regulatory compliance is usually stated in policy and guidance material. Also, as stated, an airworthiness approval is used to document the airworthiness status of products and articles. Because standard and commercial parts are not produced pursuant to an approved type design, it would be inappropriate to issue an airworthiness certificate for those parts. While the FAA does not issue airworthiness approvals for these parts, they have been subjected to evaluation by both the type design holder and the FAA to ensure their suitability of use in the design.

Boeing and two individual commenters stated that the term ''article'' should be used throughout Title 14. We have determined that the part 21 definition of ''article'' may be inappropriate for use in applications of the term in other parts of the regulations. Universal application of the definition could likely result in unintended consequences. However, the definition of ''article'' is appropriate for use in this part.

GE and two individual commenters contended that the definition of ''article'' should not include ''processes'' because generally, there are no processes that can be considered stand-alone articles. Prior to this rulemaking, we have traditionally defined ''article'' to include processes, particularly in reference to TSO parts. We are retaining that usage in this rule. We have determined that this definition is appropriate because there are, in fact, instances when a stand-alone process, such as software, is considered an article. When making a determination of whether a process is an article, the FAA must consider whether that process is a deliverable, stand-alone end item.

AIA, Boeing, and GE stated that we should define the term ''supplier''. In general, the term ''supplier'' is understood to mean any person or organization contracted to furnish products, articles, or related services at any tier. However, the term ''supplier'' is well-understood, and there is no need to define the term in this rulemaking action.

We have removed from subpart L the definitions of Class I, Class II, and Class III products and the definition of ''newly overhauled''. We now use the terms product and article consistently throughout part 21. In addition, we no longer require a definition of ''newly overhauled'' since all occurrences of the term and any associated requirements related to it have been removed from the regulations.

B. Miscellaneous Requirements

The following discussion addresses miscellaneous amendments made to part 21, many of which are primarily procedural or administrative in nature and do not constitute major departures from the pre-existing part 21 rules. In addition, we have made administrative changes to the regulatory text to use terms consistently and for plain language purposes.

1. Application for Parts Manufacturer Approval

Section 21.303 requires an article to conform to its ''approved design,'' rather than conforming to ''drawings in the

design,'' as was required by its predecessor rule. We have replaced the term ''fabrication processes,'' appearing in the former rule, with ''manufacturing processes'' to reflect that PMA holders will no longer have a fabrication inspection system. PMA holders must now comply with the same quality system requirements as all other PAHs, consistent with the size of the PAH and the complexity of the product or article produced. PMA applicants must also provide a statement certifying that the applicant has complied with the airworthiness requirements of this subchapter.

We received eleven comments on this section. AIA and GE recommended that we clarify in the rule the meaning of ''approved design''. The commenters noted that design data, such as process specifications, are more than likely referenced on a drawing and may, along with the drawing, comprise the complete type design data package. Specifications and design documents may include material properties, inspection criteria, non-destructive inspection criteria, design practices, design parameters, or documents that include operational limits.

We do not agree that a detailed definition of ''approved design'' is appropriate in this regulation. In our experience, it is widely understood among applicants and approval holders that an ''approved design'' means a complete design data package containing substantiating data (*e.g.,* processes, material specification, design parameters, and limitations). Our intent is to clarify that the approved design may consist of more than referenced drawings.

2. Production under Type Certificate (TC)

This rule revises the introductory text of § 21.123 to clarify that a TC holder is authorized to manufacture articles, not just products, for its type-certificated products. Paragraph (b) requires the TC holder to make each product and article available to the FAA for inspection. Paragraph (c) requires each manufacturer of a product, or article thereof, under a TC to maintain completed inspection and test records for specified periods of time. This rule also increases the record retention requirements for all PAHs and for persons producing under a TC from 2 years to at least 5 years. For critical components identified under § 45.15(c) of this chapter, the record retention requirement is at least 10 years. Paragraph (d) requires each manufacturer of a product, or article thereof, manufactured under a TC to allow the FAA to make any inspection or test (including any inspection or test at a supplier facility) necessary to determine compliance with this subchapter.

Industry groups, aircraft, aircraft engine, and parts manufacturers expressed four main concerns. AIA, GE, and Pratt & Whitney were concerned with the applicability of this section to existing TC or PC holders. The commenters suggested that subpart F should only apply to first-time applicants. If a person holds a current TC and PC for various product models, then that person is producing articles for any new models under an existing quality system. Commenters assert that the TC or PC holder should not be required to obtain a PC six months after the issuance of the new model TC, as required by § 21.123, because the person already has a PC. We partially agree. If the PC holder chooses to manufacture a more complex product, the FAA must review the quality system to determine whether it is adequate to produce products or articles that conform to the type design and is in a condition for safe operation.

A part manufacturer asked whether a TSO article that is incorporated into a TC is considered to have been manufactured in accordance with the type design for the TC. While the TSO article is part of the type design, it has its own approval process. A TSO article is produced using minimum performance specifications; those specifications constitute the design for the TSO article. That design data is submitted to the FAA for approval with the manufacturer's quality manual. A joint design/production approval is then granted under subpart O.

3. Falsification of Applications, Reports, or Records

Section 21.2 prohibits persons from making misleading statements on applications for certificates or approvals or in any record or report that is kept, made, or used to show compliance with any requirement of this part. For the purposes of this rule, a misleading statement requires a material representation or omission that is likely to mislead a person when that person is acting with reasonable diligence under the circumstances. The scope of § 21.2 is now expanded to prohibit fraudulent, intentionally false, or misleading statements on any record that is kept, made, or used to show compliance with any requirement of part 21. Also, a violation of this rule may be used as the basis for denying an approval issued under part 21, in addition to suspending or revoking an approval.

We received eight comments on this proposed rule. AIA, Boeing, GE, Pratt & Whitney, Embraer, and an individual commenter were concerned that some persons might unknowingly make misleading statements and be subject to an FAA violation. They stated that we should recognize, and the rule should reflect, that honest mistakes happen and that those mistakes should be given due consideration.

The FAA recognizes that honest mistakes happen, and to that end, we will collect and evaluate any available evidence regarding incorrect representations and examine the overall impression created by that representation. We must reserve the right to take action, as appropriate, to address material inaccuracies in the related application or records, whether or not the inaccuracies are intentional.

Experimental Aircraft Association (EAA) requested that we revise the preamble language to reflect that phrases such as ''direct replacement'' and ''ready to use in your aircraft'' are acceptable, as they have been used for years in both certificated and experimental aircraft industries. However, the FAA will not endorse the use of the phrases ''direct replacement'' and ''ready to use in your aircraft'' to suggest that an article is approved for installation on a type-certificated aircraft unless the statements are supported by objective evidence of such an approval.

An individual commenter stated that we should clarify that § 21.2 applies to noncertificated persons, commercial parts producers, standard parts producers, and surplus suppliers. Part 21 governs the certification of products or articles, and persons seeking such certification would be subject to its provisions.

4. Design Changes

Section 21.319 governs the classification and approval of PMA design changes. Prior to this rulemaking, part 21 did not formally address PMA design changes. Changes were accomplished using the design change process used for TCs.

Seven commenters, representing industry groups, aircraft manufacturers, and engine manufacturers, expressed two main concerns. The first concern was with the proposed definition of ''minor change''. In general, AIA, Boeing, and GE believe that limiting the applicability of design changes to an isolated view of ''parts-only'' could impact safety. For example, under § 21.319(a)(1), a change to the design of an article may be classified as minor; however, if the change was evaluated

with consideration of the complete aircraft or engine, the classification of the change might not be minor.

We disagree with the commenters and have determined that safety will not be adversely affected by classifying changes to PMA parts as ''minor''. The classification of a change to a PMA article as minor under § 21.319 does not waive the installer of the requirements of compliance to part 21, subpart D for the TC holder. This is due to the installation of the changed PMA article, or the requirements of § 21.113 for any person altering a type product with a major change in type design. For example, if the installation of the changed PMA article causes a major change to the type product, § 21.113 requires an STC for installation approval.

To clarify that the PMA change classification is only to apply at the article level, we modified the definition of minor change. Section 21.319(a)(1) has been changed to read, ''A 'minor change' to the design of an article produced under a PMA is one that has no appreciable effect on the approval basis.''

Boeing recommended that we review the EASA regulation and associated guidance and provide a discussion in the rule language to differentiate how design changes are approved under differing methods of obtaining a PMA. The issue of design change classifications encompasses individuals other than just PMA holders who obtained their approvals with licensing agreement data. TC holders can license their design data to any third person, including to PAHs who have no intention of seeking a PMA. The PMA holder can only evaluate the change to its own design approval for its own article. If the PMA holder is making a design change that affects the product on which the article is installed, it requires an STC for the product.

Furthermore, a comparison of our proposed regulation regarding design changes with EASA regulations and guidance is beyond the scope of this rulemaking.

5. Changes in Quality System

Section 21.150 specifies requirements regarding changes in the quality system. Previously, we required the PC holder to notify the FAA of any change that might affect the inspection, conformity, or airworthiness of the product. This rule amends that requirement to now apply to ''articles,'' as well as products. Accordingly, we have incorporated this requirement in subparts K and O, which are applicable to PMA holders and TSO authorizations, respectively. Again, this rule standardizes requirements for all PAHs.

6. Transferability of a Type Certificate

Today's rule requires a TC holder to notify the FAA before the transfer, execution, or termination of a licensing agreement. Such notification allows us time to coordinate with our affected offices and to inform the prospective licensees of their responsibilities. We also now require a grantor to notify the FAA of TC transfer when the State of Design is changing before the transfer occurs. Transferring a TC when the State of Design is changing requires FAA coordination with the aviation authority of the prospective State of Design to identify requirements in support of the transfer and to reduce the FAA's burden in managing the certificate.

Embraer suggested the FAA place limits on how much advance notice is required before transferring a certificate. We have determined that it is more efficient to coordinate the transfer of a TC before the transfer, rather than after it has occurred. Depending on the scope of the transferred TC (complex aircraft or engine, *etc.*), the length of transfer time may vary. Therefore, predetermined time limits could restrict the process.

ANAC suggested we require an agreement between States for licensing agreements in which the licensee or the licensor is in another country. ANAC believes such an agreement would make the oversight process more efficient. We agree. However, bilateral agreements between authorities already address licensing agreements between States, and we need not make this a regulatory requirement. We exercise oversight responsibilities for licensors in the United States. We have no oversight responsibility over licensees located in other States.

An individual commenter stated that the rule language regarding the anticipated date of the agreement in § 21.47(d) requires further explanation. That commenter also questioned whether the licensing agreement should be sent to the Manufacturing Inspection District Office (MIDO), rather than the Aircraft Certification Office (ACO), as any manufacturing activity based on the licensing agreement must be approved by the MIDO. The ''anticipated date of the transfer'' is a projection and may be speculative at times on the part of the licensor. Furthermore, § 21.47(d) applies to TC holders. A production approval applicant must work with both the ACO and its cognizant MIDO.

7. Special Flight Permits

Section 21.197(c)(1) allows the issuance of special flight permits by part 119 certificate holders that have an approved program for continuing flight authorization. It also allows the issuance of special flight permits by management specification holders authorized to conduct operations under part 91 for aircraft they operate and maintain under a continuous maintenance program prescribed by § 91.1411.

The flight permits include conditions and limitations for flight and may be issued for aircraft that do not meet applicable airworthiness standards. Formerly, the FAA allowed the issuance of special flight permits only by operators that maintain their aircraft under a continuous airworthiness maintenance program (CAMP). This rule provides relief to operators who do not have a CAMP but periodically require the issuance of special flight permits. The operator must have the necessary quality system and infrastructure to support this authorization.

8. TC Applicant—Compliance with Applicable Requirements

We established § 21.20(a) to require an applicant for a TC, including an amended TC or STC, to show compliance with all applicable requirements and to provide the FAA the means by which such compliance has been shown. It also requires an applicant for a TC, including an amended TC or STC, to provide a statement certifying that the applicant has complied with the applicable requirements.

We received four comments on this section. Embraer, a repair station, and two individual commenters stated that it would be difficult for an applicant to determine if all of the requirements had been met prior to applying for a TC. Therefore, further guidance might be required. The type certification process requires the applicant and the ACO to work closely together through the entire certification process. The ACO will advise applicants of the requirements prior to receipt of the certifying statement. This rule is intended to expedite the type certification approval process by ensuring that an applicant's submission package is complete prior to the FAA making the compliance determination.

9. Issuance of Standard Airworthiness Certificates

We revised § 21.183(c) to allow a person to obtain a standard airworthiness certificate for an aircraft

that is imported to the U.S. via an export certificate of airworthiness, provided the aircraft is type certificated under § 21.21 or § 21.29, manufactured under the authority of another State of Manufacture, and there is no undue burden on the FAA. The State of Manufacture must certify (in accordance with the provisions of an agreement with the United States for import and export of that aircraft), and the FAA would have to determine that the aircraft conforms to its type design and is in a condition for safe operation.

An individual commenter stated that § 21.183(c) should be revised to apply the standards to new aircraft only. However, it would be inappropriate to apply the rule for new aircraft only because there are instances when used aircraft may be eligible for a standard airworthiness certificate, such as when a used aircraft is imported into the United States. If an airworthiness determination can also be made for these aircraft, we have determined that used aircraft should be eligible for a standard airworthiness certificate.

That commenter also asserted the 100-hour inspection requirements of § 21.183(d)(2) should not be relaxed. The commenter believed the only exception should be when: (1) An aircraft is imported from a country with which the United States has a bilateral agreement that addresses maintenance, and (2) the aircraft is currently certificated and operating under an acceptable inspection/maintenance program. Section 21.183(d)(2) does not relax the 100-hour inspection requirement. Section 21.183(d)(2) merely provides an alternative means of determining whether a product is acceptable.

The commenter further asserted that the U.S. should only accept a used aircraft from a country or jurisdiction that is not the State of Manufacture when we have a bilateral agreement for maintenance with that country or jurisdiction. Finally, the commenter stated that the U.S. should not accept an aircraft for an airworthiness certification in a category that requires a TC, unless the State of Manufacture for that aircraft provides a certification of its status at manufacture.

The intent of § 21.183(d)(2) is to provide the ability to accept equivalent inspection standards and the corresponding airworthiness determinations from those countries and jurisdictions with which the U.S. has a bilateral agreement. This rule incorporates current policy, is consistent with bilateral practices, and may reduce the cost of importing a used aircraft when duplicate inspection requirements are eliminated.

10. Approval of Major Changes in Type Design

The FAA now requires an applicant for approval of a major change in type design to show that the changed product complies with the applicable requirements. The applicant must provide the FAA the means by which such compliance has been shown and a statement certifying that the applicant has complied with the applicable requirements.

11. Quality Manual

Section 21.138 requires each PC applicant to provide a quality manual describing its quality system to the FAA for approval. This requirement also applies to PMA and TSO approval holders. The quality manual must address the quality system requirements of the subpart under which the applicant seeks production approval. The quality manual should also address changes to the quality system, revisions to the manual, and a means of tracking revisions to the manual. These changes must be acceptable to the FAA. In addition, this rule requires that the quality manual be in the English language and retrievable in a form acceptable to us so that regardless of the media used, the quality manual is easily available to the PAH and FAA personnel.

12. Production Limitation Record

Section 21.142 clarifies that the PC holder, not a PC applicant, is authorized to manufacture the products listed on the production limitation record (PLR). A PLR is issued once an applicant obtains a PC, allowing the PC holder to manufacture the products listed on the PLR.

13. Persons Authorized to Perform Maintenance, Preventive Maintenance, Rebuilding, and Alterations

The FAA has amended § 43.3(j)(3) by removing all references to an aircraft production inspection system (APIS). This change is consistent with the amendments to part 21, subpart F. This change also allows a manufacturer to perform any inspection required by parts 91 or 125 on aircraft it manufactured under a TC only or currently manufactures under a PC.

Transport Canada stated that § 43.3(j) should be revised to eliminate the special maintenance privileges afforded to manufacturers so that all persons or organizations are subject to the same requirements.

We recognize that this section needs clarification to address the performance of maintenance and oversight of those manufacturers who exercise the privileges of § 43.3(j). FAA is currently working to address this and other maintenance/manufacturing issues.

14. Statement of Conformity

The proposed rule requires a TC applicant to provide a statement of conformity for each aircraft engine or propeller presented for TC. This rule also removes the flight and operational check requirements that were previously in § 21.130. Those requirements were redundant with the requirements in §§ 21.127(a), 21.128, and 21.129. We have removed from the regulations prescriptive details related to particular FAA forms, form content, and form. This information is more appropriately located in policy documents that are more easily amended to reflect future changes in procedures.

Previously, § 21.130(c) exempted TC holders from providing a statement of conformity for products manufactured for the Armed Forces if they had accepted the product. We have removed that exception. Now, TC holders must issue an FAA Form 8130–2, Conformity Certificate—Military Aircraft, for products manufactured for the Armed Forces. This amendment facilitates a future applicant's ability to obtain a special airworthiness certificate under § 21.183(d) for surplus military aircraft.

A parts manufacturer questioned the additional benefit associated with obtaining an FAA Form 8130–2, in addition to Form 8130–3, that would have been required under our original proposal. Because we are no longer mandating the issuance of an airworthiness approval, the commenter's concern about issuance of a Form 8130–3 approval is no longer at issue. However, a Form 8130–2 is still required for military aircraft used in civil applications. The FAA (or the DAR) relies on the statement of conformity issued by the manufacturer as objective evidence that the product or article for which the TC was issued conforms to its approved type design and is in a condition for safe operation.

15. Privileges

We have revised § 21.119(c) to clarify that the STC holder may obtain a PC for the change in the type design approved by the STC if the STC holder meets the requirements of subpart G, pertaining to the issuance of PCs.

16. Issuance of Airworthiness Certificates for Restricted Category Aircraft

We have revised § 21.185(c) to allow, under certain conditions, the issuance of a special airworthiness certificate for restricted category aircraft that are imported into the U.S. with an export certificate of airworthiness. That aircraft must be type certificated under §§ 21.25 or 21.29 and be manufactured under the authority of another State of Manufacture. The State of Manufacture must certify that the aircraft conforms to its type design and is in condition for safe operation at the time of export. Again, the FAA must find that the aircraft conforms to its type design and is in condition for safe operation.

17. Acceptance of Articles

We have revised § 21.502 by replacing the word ''approval'' with ''acceptance'' to clarify that subpart N governs only the import or acceptance of articles into the U.S.; not the original design or production approvals of articles. This revision also requires that an article (including an article produced under a letter of TSO design approval) be marked in accordance with part 45 of this chapter to meet the requirements for FAA acceptance.

C. Compliance Dates

This rule is effective 180 days after publication in the **Federal Register**. The compliance date for part 1; part 21, subparts H, I, L, and N; and part 45, subpart B, §§ 45.11 and 45.13 is 180 days after publication in the **Federal Register**. The rule changes in these subparts are either cost relieving or have no economic impact on industry. The changes do not affect, and are not affected by, other changes to the rule. Therefore, the compliance date is the same as the effective date. All other portions of the final rule either promulgate new requirements or are tied to other requirements that have an extended compliance date. These rule provisions have a compliance date of 18 months after the rule's publication in the **Federal Register**.

Prior to the effective compliance dates of this final rule, compliance with any portion of this rule that conflicts with an existing rule is not allowed. However, it is possible to comply with the former part 21 requirements and the requirements of this rule concurrently.

III. Regulatory Notices and Analyses

Paperwork Reduction Act

This rule contains new information collection requirements. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA submitted the information requirements associated with this rule to the Office of Management and Budget (OMB) for review and approval. An agency may not collect or sponsor the collection of information, nor impose an information collection requirement, unless it displays a currently valid OMB control number.

As required by the Act, we submitted a copy of the new information requirements to OMB for its review when we published the NPRM. Additionally, in the NPRM, we solicited comments from the public on the proposed new information collection requirements. Affected parties, however, do not have to comply with the information collection requirements of this rule until OMB approves the FAA's request for this information collection requirement. The FAA will publish a separate document notifying you of the OMB Control Number and the compliance date(s) for the information collection requirements of this rule.

The NPRM (71 FR 58914, October 5, 2006) summarized the FAA's analysis of the economic impacts of this rule. The FAA expected private entities would incur reporting and recordkeeping costs when applying for and operating under this rule and solicited comments on minimizing the cost and burden of the collection.

Based on comments to the docket that costs were prohibitive and benefits small, the FAA withdrew proposals that required airworthiness approvals for all (domestic and overseas) shipments of aircraft engines, propellers, and articles; certifying staff to issue the approvals; and marking requirements for all aircraft products and articles. These changes removed $327.1 million or 99.2 percent of the original undiscounted (gross) cost, and $187.6 million or 99.1 percent of the original present value total cost.

We also removed the provision in § 21.331 to allow PAHs to issue their own export airworthiness approvals. The issuance of an export airworthiness approval by the manufacturer would violate the terms of our bilateral agreements with other countries and jurisdictions. A fundamental premise of all bilaterals is that exported parts must be accompanied by an airworthiness approval issued by the relevant authority or its authorized designee. We estimated undiscounted cost savings of $95.5 million over 10 years, and present value cost savings of $54.8 million from this rule change in the NPRM. The net cost relief from changes to the NPRM to the rule amount to $231.6 million in undiscounted costs and $132.8 million in present value costs.

The average total annual cost burden and average total annual hour burden discussed in the NPRM do not take into consideration that section 3, Quality System manual and section 4, Organization, have costs that are front-loaded at a ratio of 80 percent in the first two years. Adjustments have been made to account for that front-loading.

Estimates of the Hour Burden of the Collection Information

The requirements for hour burden of the information collection associated with this rule fall into the following categories:

- Reporting of Failures, Malfunctions, and Defects;
- Commercial Parts;
- PC Quality System (internal audits);
- PC Quality System (in-service feedback);
- PMA Application (statement of compliance);
- PMA Quality System;
- PMA Quality Manual;
- TSO Organization.

The total annual hour burden for this rule is estimated to be approximately 2,589 hours.

Benefits of this Rulemaking

- The rule becomes effective in 2009. However, the FAA does not propose to make this information collection effective until approximately 12 months after the rule's effective date.
- The costs savings a private entity will attain under this rule will exceed the costs imposed by this rule.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has reviewed the corresponding ICAO Standards and Recommended Practices and has enhanced two ICAO definitions in these regulations.

Regulatory Evaluation, Regulatory Flexibility Determination, International Trade Impact Assessment, and Unfunded Mandates Assessment

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354) requires agencies to analyze the economic impact of regulatory changes on small

entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation with base year of 1995).

In conducting these analyses, the FAA has determined this final rule has benefits that justify its costs, and it is a ''significant regulatory action'' as defined in section 3(f) of Executive Order 12866 because it raises novel policy issues contemplated under that executive order. Accordingly, OMB has reviewed this rule. The rule is also ''significant'' as defined in DOT's Regulatory Policies and Procedures. The final rule, if adopted, will not have a significant economic impact on a substantial number of small entities, will not create unnecessary obstacles to international trade and will not impose an unfunded mandate on state, local, or tribal governments, or on the private sector. These analyses, available in the final regulatory evaluation supporting this rule, are summarized below.

Regulatory Evaluation Summary

For more information, we suggest readers go to the full regulatory evaluation. A copy is in the docket for this rulemaking.

This portion of the preamble summarizes the FAA's analysis of the economic impact of this rule. It also includes summaries of the final regulatory flexibility analysis, international trade impact assessment, and the unfunded mandate assessment. For more information, we suggest readers go to the full regulatory evaluation, a copy of which we have placed in the docket for this rulemaking.

Total Benefits and Costs of this Rule

We find the modest costs of this rule to be overwhelmed by very large cost savings and some safety benefits. We estimate the undiscounted 10-year costs of this rule to be about $2.1 million, the undiscounted 10-year cost savings to be about $126 million, and the undiscounted 10-year safety benefits to be about $10.1 million. We estimate the present value (2009 dollars) costs of this rule to be about $1.7 million, the present value cost savings to be about $88.4 million, and the present value safety benefits to be about $7.1 million. Consequently, we estimate this rule to be highly cost-beneficial with undiscounted 10-year net benefits of about $134 million and present value net benefits of about $93.8 million.

Persons Potentially Affected by this Rule

This rule primarily directly affects all type certificate (TC) and production approval holders (PAHs), including holders of PCs, TSOs, and PMAs. Regional air cargo carriers and exporters of used aircraft and used engines, propellers, and other articles (primarily distributors and individuals) are also directly affected by this rule.

Assumptions and Sources of Information

- As the rule mandates procedural changes with small front-loaded costs, we use a 10-year period of analysis, 2009 through 2018.
- This rule will become a final rule in 2009. The FAA intends to make cost-neutral or cost-relieving subparts and sections of this rule that are stand-alone changes effective 180 days after publication in the **Federal Register**. For purposes of our cost-benefit analysis, we assume safety benefits and benefits of cost-relieving changes will begin in 2009. The remaining portions of the rule (with positive costs) will be effective 12 months after the rule's effective date. We assume one-time costs will occur in 2010 and continuing costs will begin in 2010.
- The discount rate is 7 percent (Office of Management & Budget, Circular A–94, ''Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs'', October 29, 1992, p. 8).
- We obtained the number of PAHs by PAH type from the FAA's Certificate Management Information System (CMIS) database.
- PAHs are defined as ''small'' or ''large'' using U.S. Small Business Administration (SBA) size standards. (See table of Small Business Size Standards Matched to North American Industry Classification System Codes, July 21, 2006.)
- We estimated the number of small (and large) PAHs using a 45 percent sample of all PAH data from the FAA's Small Airplane and Rotorcraft Directorates.
- The fully burdened wage rate for engineers and quality system professionals is $80 an hour.
- The fully burdened wage rate for pilots in the regional air cargo industry is $55 an our (RACCA).
- We obtained data on aircraft and aircraft engine exports from the Trade Policy Information System (TPIS) database (International Trade Administration, Department of Commerce).
- Importing countries accept large transport category airplanes based on a bridge inspection document (Industry expert from the Aeronautical Repair Station Association (ARSA)).
- Exporters of used aircraft and used engines compete away 90 percent of the cost savings to overseas buyers.
- Forty percent of U.S. engine exports are used engines (based on the percentage of used aircraft exports shown by TPIS database).
- Aircraft engine overhauls occur every five years (FAA expert from the Office of Aviation Safety, Flight Standards Service (AFS)).
- Eighty percent of importing countries accept used large jet engines without a complete overhaul (ARSA industry expert).
- We obtained information on aircraft accidents caused by inadequate quality control from the National Transportation Safety Board (NTSB) accident reports and the FAA's Aviation Safety Information Analysis and Sharing (ASIAS) database for air claims.
- The value of a statistical fatality averted is $3 million *(Economic Values for FAA Investment and Regulator Decisions, a Guide,* p. 2–2, Aviation Specialist Group, Inc., for Office of Aviation Policy and Plans, FAA, Washington, DC, December 31, 2004).[1]
- The legal and medical costs for fatalities and injuries are obtained from *Economic Values for FAA Investment and Regulator Decisions,* pp. 2–2 to 2–4.
- This rule will prevent 50 percent of future accidents caused by inadequate quality control.
- Data on costs of compliance with this rule were obtained from FAA data and industry representatives.

Changes From the NPRM to the Final Rule

Based on comments to the docket that costs were prohibitive and benefits small, the FAA has withdrawn major proposals requiring airworthiness approvals for all (domestic and overseas) shipments of aircraft engines, propellers, and articles; certifying staff to issue these approvals; and marking

[1] The current value of the equivalent life saved is $5.8 million, and under that value, benefits would be even higher.

requirements for all aircraft products and articles. These changes remove $327.1 million or 99.2 percent of the original undiscounted (gross) cost, and $187.6 million or 99.1 percent of the original present value total cost.

We have also, however, removed the provision in § 21.331 that would have allowed PAHs to issue their own export airworthiness approvals. The issuance of an export airworthiness approval by the manufacturer would violate the terms of our bilateral agreements with other countries and jurisdictions. A fundamental premise of all bilaterals is that exported parts must be accompanied by an airworthiness approval issued by the relevant authority or its authorized designee. In the NPRM, we estimated undiscounted cost savings of $95.5 million and present value cost savings of $54.8 million from this rule change. Consequently, the net cost relief from changes to the NPRM amount to $231.6 million in undiscounted costs and $132.8 million in present value costs.

Benefits of this Rulemaking

The benefits of the rule include estimated cost savings from three rule changes that relieve regulatory burden and estimated safety benefits. As the table shows, we estimate the undiscounted 10-year cost savings from these rule changes to be about $126.0 million and the present value cost savings to be about $88.4 million. Safety benefits from this rule will arise to the extent that it prevents accidents caused by inadequate quality control. As the table shows, we estimate the undiscounted 10-year safety benefits of this to be about $10.1 million and the present value (2009 dollars) safety benefits to be about $7.1 million. As the table shows, summing the cost savings and the safety benefits yields undiscounted total 10-year benefits of about $95.5 million and total present value (2009$) benefits of about $95.5 million.

TABLE 1—SUMMARY TABLE OF BENEFITS BY RULE SECTION

Section No.	Section description	Present value cost savings/benefits	Undiscounted cost savings/benefits
§ 21.197	Special flight permits	$4,596,668	$6,661,500
§ 21.329(c) deleted	Annual type inspection no longer required for used A/C to receive export airworthiness certificate.	6,719,695	9,567,330
§ 21.331 (§ 21.329(e) deleted)	New overhaul no longer required for used engine to receive export airworthiness approval.	77,122,043	109,804,440
	Total Cost Savings	88,438,406	126,033,270
	Safety Benefits	7,067,034	10,061,867
	Total Benefits of the Rule	95,505,440	136,095,137

Costs of This Rulemaking

The Final Regulatory Evaluation for this rule examines the impact of an FAA final rule that will make extensive changes to its part 21 certification procedures and identification requirements for aeronautical products and articles. These changes will:

- Standardize several requirements for PAHs, including requirements for a quality system and quality manual to reflect industry best practices;
- Revise export airworthiness approval requirements to facilitate global manufacturing and trade;
- Move all part marking requirements from part 21, Certification Procedures for Products and Parts, to part 45, Identification and Registration Marking; and
- Add a new classification of parts called ''commercial parts.''

The intent of these changes is to promote safety by ensuring that, whether manufactured locally or abroad, aircraft products and articles meet applicable standards. These changes will update the regulations to reflect the current global environment for the manufacture and trade of aircraft products and articles and, more generally, to improve regulatory efficiency.

Most of these changes standardize, clarify, or simplify rule language, while other rule changes are already industry practice. Consequently, they impose no new costs and possibly have qualitative positive benefits by increasing the efficiency of the regulatory process. Of the dozens of rule changes, only eight have net positive costs, not including probable qualitative benefits. Our estimates are shown in the table. As the table shows, we estimate undiscounted 10-year costs to be about $2.1 million and present value (2009 dollars) costs to be about $1.7 million.

TABLE 2—SUMMARY TABLE OF COSTS BY RULE SECTION

Section No.	Section description	Present value costs	Undiscounted costs
§ 21.3(f)	Reporting of failures, malfunctions, and defects	$4,614	$6,942
§ 21.9(a)(4)	Commercial parts	499,890	790,596
§ 21.137(l)	PC Quality system (internal audits)	11,813	12,640
§ 21.137(m)	PC Quality system (in-service feedback)	39,626	42,400
§ 21.303(a)(5)	PMA Application (statement of compliance)	276,262	295,600
§ 21.307	PMA Quality system	415,551	444,640
§ 21.308	PMA Quality manual	424,374	454,080
§ 21.605	TSO Organization	22,430	24,000
Total Costs		1,694,560	2,070,898

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.'' The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA. However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

The Initial Regulatory Flexibility Analysis of this rule, published in the **Federal Register** (72 FR 6968, February 14, 2007), found a significant economic impact on a substantial number of small entities. We received numerous comments to the docket that the costs of the rule were prohibitive, and particularly so for small firms. The greatest concern was with our requirements for (1) airworthiness approvals for all (domestic and overseas) shipments of aircraft engines, propellers, and articles and (2) marking requirements for all aircraft products and articles. In response to these comments, the FAA has withdrawn these major proposals. These changes remove $187.6 million, or 99.1 percent of the original present value (gross) cost. As a consequence, for all firms in our sample of small firms affected by the rule, the annualized cost of the rule relative to estimated average annual revenues is less than 0.1 percent.

Several comments to the docket argued that we have greatly underestimated the cost for PMA holders—especially small holders—to comply with the requirement for a quality system (§ 21.307) and quality manual (§ 21.308), particularly the internal audit provision. According to these comments, additional staff will be required at a cost, in the case of a one-person shop, of up to $60,000 a year. Our reference to ISO standards and other preamble language may have misled these commenters. We intend that the requirements be scalable relative to firm size and product complexity. The complexity of the quality system and the size of the quality manual depend on the size of the PAH and the complexity of the product or articles manufactured. A small PMA producing a simple article requires only a simple quality system—Some of the quality system requirements might even be ''not applicable.'' In the case of a one-person shop producing a simple article, the internal audit provision might be not applicable or, if deemed applicable, might be satisfied with an audit every four years. The corresponding quality manual might consist of only three or four pages.

Therefore, as the FAA Administrator, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such the protection of safety, and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this proposed rule and determined that it would have only a domestic impact and therefore would not create unnecessary obstacles to the foreign commerce of the United States. We have assessed the potential effect of this rule and determined it complies with the Trade Agreements Act, as it will promote international trade by:

• Revising export airworthiness certificate and approval requirements to no longer require used aircraft to undergo an annual type inspections and to no longer require used engines and propellers to be newly overhauled; and

• Changing language in order to harmonize with bilateral agreements and European Union (EU) regulations.

Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (adjusted annually for inflation with the base year 1995) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a ''significant regulatory action.'' The FAA currently uses an inflation-adjusted value of $136.1 million. This rule does not contain such a mandate. The requirements of Title II do not apply.

Executive Order 13132, Federalism

The FAA has analyzed this rule under the principles and criteria of Executive Order 13132, Federalism. We determined that this action will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, does not have federalism implications.

Regulations Affecting Intrastate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the FAA, when modifying its regulations in a manner affecting intrastate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish appropriate regulatory distinctions. In the NPRM, we requested comments on whether the proposed rule should apply differently to intrastate operations in Alaska. We did not receive any comments, and we have determined, based on the administrative record of this rulemaking, that there is no need to make any regulatory distinctions applicable to intrastate aviation in Alaska.

Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this

rulemaking action qualifies for the categorical exclusion identified in paragraph 308(b) and involves no extraordinary circumstances.

Regulations that Significantly Affect Energy Supply, Distribution, or Use

The FAA has analyzed this NPRM under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). We have determined that it is not a ''significant energy action'' under the executive order because while it is a ''significant regulatory action,'' it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. If you are a small entity and you have a question regarding this document, you may contact your local FAA official, or the person listed under the **FOR FURTHER INFORMATION CONTACT** heading at the beginning of the preamble. You can find out more about SBREFA on the Internet at *http://www.faa.gov/regulations_policies/rulemaking/sbre_act/*.

Availability of Rulemaking Documents

You can get an electronic copy of rulemaking documents using the Internet by—

1. Searching the Federal eRulemaking Portal (*http://www.regulations.gov*);
2. Visiting the FAA's Regulations and Policies Web page at *http://www.faa.gov/regulations_policies/;* or
3. Accessing the Government Printing Office's Web page at *http://www.gpoaccess.gov/fr/index.html*.

You can also get a copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9680. Make sure to identify the amendment number or docket number of this rulemaking.

You may access all documents the FAA considered in developing this final rule, including economic analyses and technical reports, from the Internet through the Federal eRulemaking Portal referenced in paragraph (1).

List of Subjects

14 CFR Part 1

Air transportation.

14 CFR Part 21

Aircraft, Aviation safety, Exports, Imports, Reporting and recordkeeping requirements.

14 CFR Part 43

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

14 CFR Part 45

Aircraft, Exports, Signs and symbols.

The Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends Chapter I of Title 14, Code of Federal Regulations parts 1, 21, 43, and 45 as follows:

PART 1—DEFINITIONS AND ABBREVIATIONS

■ 1. The authority citation for part 1 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

■ 2. Amend § 1.1 by revising the definition of ''Approved'' to read as follows:

§ 1.1 General definitions.

* * * * *

Approved, unless used with reference to another person, means approved by the FAA or any person to whom the FAA has delegated its authority in the matter concerned, or approved under the provisions of a bilateral agreement between the United States and a foreign country or jurisdiction.

* * * * *

■ 3. Amend § 1.2 by adding the abbreviations *PMA* and *TSO* in alphabetical order to read as follows:

§ 1.2 Abbreviations and symbols.

* * * * *

PMA means parts manufacturer approval.

* * * * *

TSO means technical standard order.

* * * * *

PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS, ARTICLES, AND PARTS

■ 4. The authority citation for part 21 continues to read as follows:

Authority: 42 U.S.C. 7572; 49 U.S.C. 106(g), 40105, 40113, 44701–44702, 44704, 44707, 44709, 44711, 44713, 44715, 45303.

PART 21 [AMENDED]

■ 5. Amend part 21 by:

■ a. Removing the word ''Administrator'' and adding in its place the word ''FAA'' wherever it appears;

■ b. Removing the word ''shall'' and adding in its place the word ''must'' wherever it appears; and

■ c. Removing the phrase ''type certificate only'' and adding in its place the phrase ''type certificate'' wherever it appears.

■ 6. Revise § 21.1 to read as follows:

§ 21.1 Applicability and definitions.

(a) This part prescribes—

(1) Procedural requirements for issuing and changing—

(i) Design approvals;

(ii) Production approvals;

(iii) Airworthiness certificates; and

(iv) Airworthiness approvals;

(2) Rules governing applicants for, and holders of, any approval or certificate specified in paragraph (a)(1) of this section; and

(3) Procedural requirements for the approval of articles.

(b) For the purposes of this part—

(1) *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;

(2) *Article* means a material, part, component, process, or appliance;

(3) *Commercial part* means an article that is listed on an FAA-approved Commercial Parts List included in a design approval holder's Instructions for Continued Airworthiness required by § 21.50;

(4) *Design approval* means a type certificate (including amended and supplemental type certificates) or the approved design under a PMA, TSO authorization, letter of TSO design approval, or other approved design;

(5) *Product* means an aircraft, aircraft engine, or propeller;

(6) *Production approval* means a document issued by the FAA to a person that allows the production of a product or article in accordance with its approved design and approved quality system, and can take the form of a production certificate, a PMA, or a TSO authorization;

(7) *State of Design* means the country or jurisdiction having regulatory authority over the organization responsible for the design and continued airworthiness of a civil aeronautical product or article;

(8) *State of Manufacture* means the country or jurisdiction having regulatory authority over the organization responsible for the production and airworthiness of a civil aeronautical product or article.

■ 7. Amend § 21.2 by revising paragraphs (a) introductory text, (a)(1), (a)(2), and (b) to read as follows:

§ 21.2 Falsification of applications, reports, or records.

(a) A person may not make or cause to be made—

(1) Any fraudulent, intentionally false, or misleading statement on any application for a certificate or approval under this part;

(2) Any fraudulent, intentionally false, or misleading statement in any record or report that is kept, made, or used to show compliance with any requirement of this part;

* * * * *

(b) The commission by any person of an act prohibited under paragraph (a) of this section is a basis for—

(1) Denying issuance of any certificate or approval under this part; and

(2) Suspending or revoking any certificate or approval issued under this part and held by that person.

■ 8. Amend § 21.3 by revising paragraphs (a), (b), (d)(1), (d)(2), (e)(3), and (f) to read as follows:

§ 21.3 Reporting of failures, malfunctions, and defects.

(a) The holder of a type certificate (including amended or supplemental type certificates), a PMA, or a TSO authorization, or the licensee of a type certificate must report any failure, malfunction, or defect in any product or article manufactured by it that it determines has resulted in any of the occurrences listed in paragraph (c) of this section.

(b) The holder of a type certificate (including amended or supplemental type certificates), a PMA, or a TSO authorization, or the licensee of a type certificate must report any defect in any product or article manufactured by it that has left its quality system and that it determines could result in any of the occurrences listed in paragraph (c) of this section.

* * * * *

(d) * * *

(1) Failures, malfunctions, or defects that the holder of a type certificate (including amended or supplemental type certificates), PMA, TSO authorization, or the licensee of a type certificate determines—

(i) Were caused by improper maintenance or use;

(ii) Were reported to the FAA by another person under this chapter; or

(iii) Were reported under the accident reporting provisions of 49 CFR part 830 of the regulations of the National Transportation Safety Board.

(2) Failures, malfunctions, or defects in products or articles—

(i) Manufactured by a foreign manufacturer under a U.S. type certificate issued under § 21.29 or under an approval issued under § 21.621; or

(ii) Exported to the United States under § 21.502.

(e) * * *

(3) Must include as much of the following information as is available and applicable:

(i) The applicable product and article identification information required by part 45 of this chapter;

(ii) Identification of the system involved; and

(iii) Nature of the failure, malfunction, or defect.

(f) If an accident investigation or service difficulty report shows that a product or article manufactured under this part is unsafe because of a manufacturing or design data defect, the holder of the production approval for that product or article must, upon request of the FAA, report to the FAA the results of its investigation and any action taken or proposed by the holder of that production approval to correct that defect. If action is required to correct the defect in an existing product or article, the holder of that production approval must send the data necessary for issuing an appropriate airworthiness directive to the appropriate aircraft certification office.

■ 9. Amend § 21.5 by revising paragraph (a) to read as follows:

§ 21.5 Airplane or Rotorcraft Flight Manual.

(a) With each airplane or rotorcraft not type certificated with an Airplane or Rotorcraft Flight Manual and having no flight time before March 1, 1979, the holder of a type certificate (including amended or supplemental type certificates) or the licensee of a type certificate must make available to the owner at the time of delivery of the aircraft a current approved Airplane or Rotorcraft Flight Manual.

* * * * *

■ 10. Amend subpart A by adding § 21.8 to read as follows:

§ 21.8 Approval of articles.

If an article is required to be approved under this chapter, it may be approved—

(a) Under a PMA;

(b) Under a TSO;

(c) In conjunction with type certification procedures for a product; or

(d) In any other manner approved by the FAA.

■ 11. Amend subpart A by adding § 21.9 to read as follows:

§ 21.9 Replacement and modification articles.

(a) If a person knows, or should know, that a replacement or modification article is reasonably likely to be installed on a type-certificated product, the person may not produce that article unless it is—

(1) Produced under a type certificate;

(2) Produced under an FAA production approval;

(3) A standard part (such as a nut or bolt) manufactured in compliance with a government or established industry specification;

(4) A commercial part as defined in § 21.1 of this part;

(5) Produced by an owner or operator for maintaining or altering that owner or operator's product; or

(6) Fabricated by an appropriately rated certificate holder with a quality system, and consumed in the repair or alteration of a product or article in accordance with part 43 of this chapter.

(b) Except as provided in paragraphs (a)(1) through (a)(4) of this section, a person who produces a replacement or modification article for sale may not represent that part as suitable for installation on a type-certificated product.

(c) Except as provided in paragraphs (a)(1) through (a)(4) of this section, a person may not sell or represent an article as suitable for installation on an aircraft type-certificated under §§ 21.25(a)(2) or 21.27 unless that article—

(1) Was declared surplus by the U.S. Armed Forces, and

(2) Was intended for use on that aircraft model by the U.S. Armed Forces.

§ 21.15 [Amended]

■ 12. Amend § 21.15 by removing the words ''Aircraft Certification Office'' in paragraph (a) and adding, in their place, the words ''aircraft certification office''.

■ 13. Amend subpart B by adding § 21.20 to read as follows:

§ 21.20 Compliance with applicable requirements.

The applicant for a type certificate, including an amended or supplemental type certificate, must—

(a) Show compliance with all applicable requirements and must provide the FAA the means by which such compliance has been shown; and

(b) Provide a statement certifying that the applicant has complied with the applicable requirements.

§ 21.21 [Amended]

■ 14. Amend § 21.21 by removing the words ''the Federal Aviation Regulations'' and add in their place the words ''this subchapter'' wherever they appear.

§ 21.27 [Amended]

■ 15. Amend § 21.27 as follows:

■ a. Remove the words ''the Federal Aviation Regulations'' in paragraph (c) and add, in their place, the words ''this subchapter''; and

■ b. Remove the word ''FAR'' from each place it appears in the table in paragraph (f) and add in its place the words ''14 CFR''.

■ 16. Revise § 21.29 to read as follows:

§ 21.29 Issue of type certificate: import products.

(a) The FAA may issue a type certificate for a product that is manufactured in a foreign country or jurisdiction with which the United States has an agreement for the acceptance of these products for export and import and that is to be imported into the United States if—

(1) The applicable State of Design certifies that the product has been examined, tested, and found to meet—

(i) The applicable aircraft noise, fuel venting, and exhaust emissions requirements of this subchapter as designated in § 21.17, or the applicable aircraft noise, fuel venting, and exhaust emissions requirements of the State of Design, and any other requirements the FAA may prescribe to provide noise, fuel venting, and exhaust emission levels no greater than those provided by the applicable aircraft noise, fuel venting, and exhaust emission requirements of this subchapter as designated in § 21.17; and

(ii) The applicable airworthiness requirements of this subchapter as designated in § 21.17, or the applicable airworthiness requirements of the State of Design and any other requirements the FAA may prescribe to provide a level of safety equivalent to that provided by the applicable airworthiness requirements of this subchapter as designated in § 21.17;

(2) The applicant has provided technical data to show the product meets the requirements of paragraph (a)(1) of this section; and

(3) The manuals, placards, listings, and instrument markings required by the applicable airworthiness (and noise, where applicable) requirements are presented in the English language.

(b) A product type certificated under this section is considered to be type certificated under the noise standards of part 36 of this subchapter and the fuel venting and exhaust emission standards of part 34 of this subchapter. Compliance with parts 36 and 34 of this subchapter is certified under paragraph (a)(1)(i) of this section, and the applicable airworthiness standards of this subchapter, or an equivalent level of safety, with which compliance is certified under paragraph (a)(1)(ii) of this section.

§ 21.33 [Amended]

■ 17. Amend § 21.33(a) introductory text by removing the words ''the Federal Aviation Regulations'' and adding, in their place, the words ''this subchapter''.

§ 21.45 [Amended]

■ 18. Amend § 21.45 as follows:

■ a. Remove the words ''or certified'' from paragraph (b) and add in their place the words ''on certificated''; and

■ b. Remove the reference ''§§ 21.133 through 21.163'' from paragraph (c) and add in its place the words ''subpart G of this part''.

■ 19. Revise § 21.47 to read as follows:

§ 21.47 Transferability.

(a) A holder of a type certificate may transfer it or make it available to other persons by licensing agreements.

(b) For a type certificate transfer in which the State of Design will remain the same, each transferor must, before such a transfer, notify in writing the appropriate aircraft certification office. This notification must include the applicable type certificate number, the name and address of the transferee, and the anticipated date of the transfer.

(c) For a type certificate transfer in which the State of Design is changing, a type certificate may only be transferred to or from a person subject to the authority of another State of Design if the United States has an agreement with that State of Design for the acceptance of the affected product for export and import. Each transferor must notify the appropriate aircraft certification office before such a transfer in a form and manner acceptable to the FAA. This notification must include the applicable type certificate number; the name, address, and country of residence of the transferee; and the anticipated date of the transfer.

(d) Before executing or terminating a licensing agreement that makes a type certificate available to another person, the type certificate holder must notify in writing the appropriate aircraft certification office. This notification must include the type certificate number addressed by the licensing agreement, the name and address of the licensee, the extent of authority granted the licensee, and the anticipated date of the agreement.

■ 20. Amend § 21.50 by revising paragraph (b) and adding paragraph (c) to read as follows:

§ 21.50 Instructions for continued airworthiness and manufacturer's maintenance manuals having airworthiness limitations sections.

* * * * *

(b) The holder of a design approval, including either the type certificate or supplemental type certificate for an aircraft, aircraft engine, or propeller for which application was made after January 28, 1981, must furnish at least one set of complete Instructions for Continued Airworthiness to the owner of each type aircraft, aircraft engine, or propeller upon its delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later. The Instructions must be prepared in accordance with §§ 23.1529, 25.1529, 25.1729, 27.1529, 29.1529, 31.82, 33.4, 35.4, or part 26 of this subchapter, or as specified in the applicable airworthiness criteria for special classes of aircraft defined in § 21.17(b), as applicable. If the holder of a design approval chooses to designate parts as commercial, it must include in the Instructions for Continued Airworthiness a list of commercial parts submitted in accordance with the provisions of paragraph (c) of this section. Thereafter, the holder of a design approval must make those instructions available to any other person required by this chapter to comply with any of the terms of those instructions. In addition, changes to the Instructions for Continued Airworthiness shall be made available to any person required by this chapter to comply with any of those instructions.

(c) To designate commercial parts, the holder of a design approval, in a manner acceptable to the FAA, must submit:

(1) A Commercial Parts List;

(2) Data for each part on the List showing that:

(i) The failure of the commercial part, as installed in the product, would not degrade the level of safety of the product; and

(ii) The part is produced only under the commercial part manufacturer's specification and marked only with the commercial part manufacturer's markings; and

(3) Any other data necessary for the FAA to approve the List.

■ 21. Revise § 21.53(a) to read as follows:

§ 21.53 Statement of conformity.

(a) Each applicant must provide, in a form and manner acceptable to the FAA, a statement that each aircraft engine or

propeller presented for type certification conforms to its type design.

* * * * *

§ 21.73 [Amended]

■ 22. Amend § 21.73(b) by removing the words ''Any manufacturer of aircraft manufactured in a foreign country with which the United States has an agreement'' and adding in their place the words ''Any manufacturer of aircraft in a State of Manufacture subject to the provisions of an agreement with the United States''.

■ 23. Revise § 21.75 to read as follows:

§ 21.75 Application.

Each applicant for a provisional type certificate, for an amendment thereto, or for a provisional amendment to a type certificate must apply to the appropriate aircraft certification office and provide the information required by this subpart.

■ 24. Revise § 21.97(a) to read as follows:

§ 21.97 Approval of major changes in type design.

(a) An applicant for approval of a major change in type design must—

(1) Provide substantiating data and necessary descriptive data for inclusion in the type design;

(2) Show that the changed product complies with the applicable requirements of this subchapter, and provide the FAA the means by which such compliance has been shown; and

(3) Provide a statement certifying that the applicant has complied with the applicable requirements.

* * * * *

■ 25. Revise § 21.113 to read as follows:

§ 21.113 Requirement for supplemental type certificate.

(a) If a person holds the TC for a product and alters that product by introducing a major change in type design that does not require an application for a new TC under § 21.19, that person must either apply to the appropriate aircraft certification office for an STC or apply to amend the original type certificate under subpart D of this part.

(b) If a person does not hold the TC for a product and alters that product by introducing a major change in type design that does not require an application for a new TC under § 21.19, that person must apply to the appropriate aircraft certification office for an STC.

(c) The application for an STC must be made in the form and manner prescribed by the FAA.

§ 21.117 [Amended]

■ 26. Amend § 21.117 by removing the words ''if he'' from paragraph (a) and adding in their place the words ''if the FAA finds that the applicant''.

■ 27. Revise § 21.119(c) to read as follows:

§ 21.119 Privileges.

* * * * *

(c) Obtain a production certificate in accordance with the requirements of subpart G of this part for the change in the type design approved by the supplemental type certificate.

■ 28. Amend subpart F by adding § 21.122 to read as follows:

§ 21.122 Location of or change to manufacturing facilities.

(a) An applicant may obtain a production certificate for manufacturing facilities located outside of the United States if the FAA finds no undue burden in administering the applicable requirements of Title 49 U.S.C. and this subchapter.

(b) The type certificate holder must obtain FAA approval before making any changes to the location of any of its manufacturing facilities.

(c) The type certificate holder must immediately notify the FAA, in writing, of any change to the manufacturing facilities that may affect the inspection, conformity, or airworthiness of its product or article.

■ 29. Revise § 21.123 to read as follows:

§ 21.123 Production under type certificate.

Each manufacturer of a product being manufactured under a type certificate must—

(a) Maintain at the place of manufacture all information and data specified in §§ 21.31 and 21.41;

(b) Make each product and article thereof available for inspection by the FAA;

(c) Maintain records of the completion of all inspections and tests required by §§ 21.127, 21.128, and 21.129 for at least 5 years for the products and articles thereof manufactured under the approval and at least 10 years for critical components identified under § 45.15(c) of this chapter;

(d) Allow the FAA to make any inspection or test, including any inspection or test at a supplier facility, necessary to determine compliance with this subchapter;

(e) Mark the product in accordance with part 45 of this chapter, including any critical parts;

(f) Identify any portion of that product (*e.g.,* sub-assemblies, component parts, or replacement articles) that leave the manufacturer's facility as FAA approved with the manufacturer's part number and name, trademark, symbol, or other FAA-approved manufacturer's identification; and

(g) Except as otherwise authorized by the FAA, obtain a production certificate for that product in accordance with subpart G of this part within 6 months after the date of issuance of the type certificate.

§ 21.125 [Removed and Reserved]

■ 30. Remove and reserve § 21.125.

■ 31. Revise § 21.130 to read as follows:

§ 21.130 Statement of Conformity.

Each holder or licensee of a type certificate who manufactures a product under this subpart must provide, in a form and manner acceptable to the FAA, a statement that the product for which the type certificate has been issued conforms to its type certificate and is in a condition for safe operation.

■ 32. Revise subpart G to read as follows:

Subpart G—Production Certificates

Sec.

Subpart G—Production Certificates

§ 21.131 Applicability.

This subpart prescribes—

(a) Procedural requirements for issuing production certificates; and

(b) Rules governing holders of those certificates.

§ 21.132 Eligibility.

Any person may apply for a production certificate if that person holds, for the product concerned—

(a) A current type certificate,

(b) A supplemental type certificate, or

(c) Rights to the benefits of that type certificate or supplemental type certificate under a licensing agreement.

§ 21.133 Application.

Each applicant must apply for a production certificate in a form and manner prescribed by the FAA.

§ 21.135 Organization.

Each applicant for or holder of a production certificate must provide the FAA with a document describing how its organization will ensure compliance with the provisions of this subpart. At a minimum, the document must describe assigned responsibilities and delegated authority, and the functional relationship of those responsible for quality to management and other organizational components.

§ 21.137 Quality system.

Each applicant for or holder of a production certificate must establish and describe in writing a quality system that ensures that each product and article conforms to its approved design and is in a condition for safe operation. This quality system must include:

(a) *Design data control.* Procedures for controlling design data and subsequent changes to ensure that only current, correct, and approved data is used.

(b) *Document control.* Procedures for controlling quality system documents and data and subsequent changes to ensure that only current, correct, and approved documents and data are used.

(c) *Supplier control.* Procedures that—

(1) Ensure that each supplier-furnished product or article conforms to its approved design; and

(2) Require each supplier to report to the production approval holder if a product or article has been released from that supplier and subsequently found not to conform to the applicable design data.

(d) *Manufacturing process control.* Procedures for controlling manufacturing processes to ensure that each product and article conforms to its approved design.

(e) *Inspecting and testing.* Procedures for inspections and tests used to ensure that each product and article conforms to its approved design. These procedures must include the following, as applicable:

(1) A flight test of each aircraft produced unless that aircraft will be exported as an unassembled aircraft.

(2) A functional test of each aircraft engine and each propeller produced.

(f) *Inspection, measuring, and test equipment control.* Procedures to ensure calibration and control of all inspection, measuring, and test equipment used in determining conformity of each product and article to its approved design. Each calibration standard must be traceable to a standard acceptable to the FAA.

(g) *Inspection and test status.* Procedures for documenting the inspection and test status of products and articles supplied or manufactured to the approved design.

(h) *Nonconforming product and article control.* (1) Procedures to ensure that only products or articles that conform to their approved design are installed on a type-certificated product. These procedures must provide for the identification, documentation, evaluation, segregation, and disposition of nonconforming products and articles. Only authorized individuals may make disposition determinations.

(2) Procedures to ensure that discarded articles are rendered unusable.

(i) *Corrective and preventive actions.* Procedures for implementing corrective and preventive actions to eliminate the causes of an actual or potential nonconformity to the approved design or noncompliance with the approved quality system.

(j) *Handling and storage.* Procedures to prevent damage and deterioration of each product and article during handling, storage, preservation, and packaging.

(k) *Control of quality records.* Procedures for identifying, storing, protecting, retrieving, and retaining quality records. A production approval holder must retain these records for at least 5 years for the products and articles manufactured under the approval and at least 10 years for critical components identified under § 45.15(c) of this chapter.

(l) *Internal audits.* Procedures for planning, conducting, and documenting internal audits to ensure compliance with the approved quality system. The procedures must include reporting results of internal audits to the manager responsible for implementing corrective and preventive actions.

(m) *In-service feedback.* Procedures for receiving and processing feedback on in-service failures, malfunctions, and defects. These procedures must include a process for assisting the design approval holder to—

(1) Address any in-service problem involving design changes; and

(2) Determine if any changes to the Instructions for Continued Airworthiness are necessary.

(n) *Quality escapes.* Procedures for identifying, analyzing, and initiating appropriate corrective action for products or articles that have been released from the quality system and that do not conform to the applicable design data or quality system requirements.

§ 21.138 Quality manual.

Each applicant for or holder of a production certificate must provide a manual describing its quality system to the FAA for approval. The manual must be in the English language and retrievable in a form acceptable to the FAA.

§ 21.139 Location of or change to manufacturing facilities.

(a) An applicant may obtain a production certificate for manufacturing facilities located outside of the United States if the FAA finds no undue burden in administering the applicable requirements of Title 49 U.S.C. and this subchapter.

(b) The production certificate holder must obtain FAA approval before making any changes to the location of any of its manufacturing facilities.

(c) The production certificate holder must immediately notify the FAA, in writing, of any change to the manufacturing facilities that may affect the inspection, conformity, or airworthiness of its product or article.

§ 21.140 Inspections and tests.

Each applicant for or holder of a production certificate must allow the FAA to inspect its quality system, facilities, technical data, and any manufactured products or articles and witness any tests, including any inspections or tests at a supplier facility, necessary to determine compliance with this subchapter.

§ 21.141 Issuance.

The FAA issues a production certificate after finding that the applicant complies with the requirements of this subpart.

§ 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 the model of every product that the production certificate holder is authorized to manufacture.

§ 21.143 Duration.

A production certificate is effective until surrendered, suspended, revoked, or the FAA otherwise establishes a termination date.

§ 21.144 Transferability.

The holder of a production certificate may not transfer the production certificate.

§ 21.145 Privileges.

(a) The holder of a production certificate may—

(1) Obtain an aircraft airworthiness certificate without further showing, except that the FAA may inspect the aircraft for conformity with the type design; or

(2) In the case of other products, obtain approval from the FAA for installation on type-certificated aircraft.

(b) Notwithstanding the provisions of § 147.3 of this chapter, the holder of a production certificate for a primary category aircraft, or for a normal, utility, or acrobatic category aircraft of a type design that is eligible for a special airworthiness certificate in the primary category under § 21.184(c), may—

(1) Conduct training for persons in the performance of a special inspection and preventive maintenance program approved as a part of the aircraft's type design under § 21.24(b), provided a person holding a mechanic certificate with appropriate airframe and powerplant ratings issued under part 65 of this chapter gives the training; and

(2) Issue a certificate of competency to persons successfully completing the approved training program, provided the certificate specifies the aircraft make and model to which the certificate applies.

§ 21.146 Responsibility of holder.

The holder of a production certificate must—

(a) Amend the document required by § 21.135 as necessary to reflect changes in the organization and provide these amendments to the FAA.

(b) Maintain the quality system in compliance with the data and procedures approved for the production certificate;

(c) Ensure that each completed product or article for which a production certificate has been issued, including primary category aircraft assembled under a production certificate by another person from a kit provided by the holder of the production certificate, presented for airworthiness certification or approval conforms to its approved design and is in a condition for safe operation;

(d) Mark the product or article for which a certificate or approval has been issued. Marking must be in accordance with part 45 of this chapter, including any critical parts;

(e) Identify any portion of the product or article (e.g., sub-assemblies, component parts, or replacement articles) that leave the manufacturer's facility as FAA approved with the manufacturer's part number and name, trademark, symbol, or other FAA approved manufacturer's identification;

(f) Have access to type design data necessary to determine conformity and airworthiness for each product and article produced under the production certificate;

(g) Retain its production certificate and make it available to the FAA upon request; and

(h) Make available to the FAA information regarding all delegation of authority to suppliers.

§ 21.147 Amendment of production certificates.

The holder of a production certificate must apply for an amendment to a production certificate in a form and manner prescribed by the FAA. The applicant for an amendment to a production certificate to add a type certificate or model, or both, must comply with the applicable requirements of §§ 21.137, 21.138, and 21.150.

§ 21.150 Changes in quality system.

After the issuance of a production certificate—

(a) Each change to the quality system is subject to review by the FAA; and

(b) The holder of a production certificate must immediately notify the FAA, in writing, of any change that may affect the inspection, conformity, or airworthiness of its product or article.

■ 33. Amend § 21.183 by revising paragraphs (c), (d)(1), (d)(2) introductory text, and (d)(3) to read as follows:

§ 21.183 Issue of standard airworthiness certificates for normal, utility, acrobatic, commuter, and transport category aircraft; manned free balloons; and special classes of aircraft.

* * * * *

(c) *Import aircraft.* An applicant for a standard airworthiness certificate for an import aircraft is entitled to that certificate if—

(1) The aircraft is type certificated in accordance with § 21.21 or § 21.29 and produced under the authority of another State of Manufacture;

(2) The State of Manufacture certifies, in accordance with the export provisions of an agreement with the United States for import of that aircraft, that the aircraft conforms to the type design and is in condition for safe operation; and

(3) The FAA finds that the aircraft conforms to the type design and is in condition for safe operation.

(d) * * *

(1) The applicant presents evidence to the FAA that the aircraft conforms to a type design approved under a type certificate or a supplemental type certificate and to applicable Airworthiness Directives;

(2) The aircraft (except an experimentally certificated aircraft that previously had been issued a different airworthiness certificate under this section) has been inspected in accordance with the performance rules for 100-hour inspections set forth in § 43.15 of this chapter, or an equivalent performance standard acceptable to the FAA, and found airworthy by—

* * * * *

(3) The FAA finds after inspection, that the aircraft conforms to the type design, and is in condition for safe operation.

* * * * *

■ 34. Revise § 21.185(c) to read as follows:

§ 21.185 Issue of airworthiness certificates for restricted category aircraft.

* * * * *

(c) *Import aircraft.* An applicant for the original issue of a special airworthiness certificate for a restricted category import aircraft is entitled to that certificate if—

(1) The aircraft is type-certificated in accordance with § 21.25 or § 21.29 and produced under the authority of another State of Manufacture;

(2) The State of Manufacture certifies, in accordance with the export provisions of an agreement with the United States for import of that aircraft that the aircraft conforms to the type design and is in condition for safe operation; and

(3) The FAA finds that the aircraft conforms to the type design and is in condition for safe operation.

* * * * *

■ 35. Revise § 21.195(d)(2) to read as follows:

§ 21.195 Experimental certificates: Aircraft to be used for market surveys, sales demonstrations, and customer crew training.

* * * * *

(d) * * *

(2) The applicant shows that the aircraft has been flown for at least 50 hours, or for at least 5 hours if it is a type certificated aircraft which has been modified. The FAA may reduce these operational requirements if the applicant provides adequate justification.

■ 36. Revise § 21.197(c) to read as follows:

§ 21.197 Special flight permits.

* * * * *

(c) Upon application, as prescribed in §§ 91.1017 or 119.51 of this chapter, a special flight permit with a continuing authorization may be issued for aircraft that may not meet applicable airworthiness requirements, but are capable of safe flight for the purpose of flying aircraft to a base where maintenance or alterations are to be

performed. The permit issued under this paragraph is an authorization, including conditions and limitations for flight, which is set forth in the certificate holder's operations specifications. The permit issued under this paragraph may be issued to—

(1) Certificate holders authorized to conduct operations under part 119 of this chapter, that have an approved program for continuing flight authorization; or

(2) Management specification holders authorized to conduct operations under part 91, subpart K of this chapter for those aircraft they operate and maintain under a continuous airworthiness maintenance program prescribed by § 91.1411 of this chapter.

§ 21.223 [Amended]

■ 37. Amend § 21.223 by removing the word ''control'' from paragraph (c).

§ 21.225 [Amended]

■ 38. Amend § 21.225 by removing the word ''control'' from paragraph (b).

§ 21.231 [Amended]

■ 39. Amend § 21.231(a)(6) by removing the words ''paragraph (a)(4)'' and adding in their place the words ''paragraph (a)(5)''.

§ 21.251 [Amended]

■ 40. Amend § 21.251(b)(4)(iii) and (b)(4)(iv) as follows:

a. Remove the words ''(FAA Form 8130–3)'' in both paragraphs; and

b. Remove the words ''Airworthiness approval tags'' and add in their place the words ''Airworthiness approvals'' in both paragraphs.

§ 21.253 [Amended]

■ 41. Amend § 21.253 by removing the words ''(FAA Form 312)'' from paragraph (a)(1).

■ 42. Revise § 21.267(d) to read as follows:

§ 21.267 Production certificates.

* * * * *

(d) After placing the manufacturing and quality system data required by § 21.137 with the data required by § 21.293(a)(1)(ii), a statement certifying that this has been done.

§ 21.271 [Amended]

■ 43. Amend § 21.271(a) by removing the words ''(FAA Form 8130–3)''.

■ 44. Revise § 21.293(a)(2) introductory text to read as follows:

§ 21.293 Current records.

(a) * * *

(2) For 5 years—

* * * * *

■ 45. Revise subpart K to read as follows:

Subpart K—Parts Manufacturer Approvals

Sec.

Subpart K—Parts Manufacturer Approvals

§ 21.301 Applicability.

This subpart prescribes—

(a) Procedural requirements for issuing PMAs; and

(b) Rules governing holders of PMAs.

§ 21.303 Application.

(a) The applicant for a PMA must apply in a form and manner prescribed by the FAA, and include the following:

(1) The identity of the product on which the article is to be installed.

(2) The name and address of the manufacturing facilities at which these articles are to be manufactured.

(3) The design of the article, which consists of—

(i) Drawings and specifications necessary to show the configuration of the article; and

(ii) Information on dimensions, materials, and processes necessary to define the structural strength of the article.

(4) Test reports and computations necessary to show that the design of the article meets the airworthiness requirements of this subchapter. The test reports and computations must be applicable to the product on which the article is to be installed, unless the applicant shows that the design of the article is identical to the design of a article that is covered under a type certificate. If the design of the article was obtained by a licensing agreement, the applicant must provide evidence of that agreement.

(5) An applicant for a PMA based on test reports and computations must provide a statement certifying that the applicant has complied with the airworthiness requirements of this subchapter.

(b) Each applicant for a PMA must make all inspections and tests necessary to determine—

(1) Compliance with the applicable airworthiness requirements;

(2) That materials conform to the specifications in the design;

(3) That the article conforms to its approved design; and

(4) That the manufacturing processes, construction, and assembly conform to those specified in the design.

§ 21.305 Organization.

Each applicant for or holder of a PMA must provide the FAA with a document describing how its organization will ensure compliance with the provisions of this subpart. At a minimum, the document must describe assigned responsibilities and delegated authority, and the functional relationship of those responsible for quality to management and other organizational components.

§ 21.307 Quality system.

Each applicant for or holder of a PMA must establish a quality system that meets the requirements of § 21.137.

§ 21.308 Quality manual.

Each applicant for or holder of a PMA must provide a manual describing its quality system to the FAA for approval. The manual must be in the English language and retrievable in a form acceptable to the FAA.

§ 21.309 Location of or change to manufacturing facilities.

(a) An applicant may obtain a PMA for manufacturing facilities located outside of the United States if the FAA finds no undue burden in administering the applicable requirements of Title 49 U.S.C. and this subchapter.

(b) The PMA holder must obtain FAA approval before making any changes to the location of any of its manufacturing facilities.

(c) The PMA holder must immediately notify the FAA, in writing, of any change to the manufacturing facilities that may affect the inspection, conformity, or airworthiness of its PMA article.

§ 21.310 Inspections and tests.

(a) Each applicant for or holder of a PMA must allow the FAA to inspect its quality system, facilities, technical data, and any manufactured articles and witness any tests, including any inspections or tests at a supplier facility, necessary to determine compliance with this subchapter.

(b) Unless otherwise authorized by the FAA, the applicant or holder—

(1) May not present any article to the FAA for an inspection or test unless compliance with § 21.303(b)(2) through (4) has been shown for that article; and

(2) May not make any change to an article between the time that compliance with § 21.303(b)(2) through

(4) is shown for that article and the time that the article is presented to the FAA for the inspection or test.

§ 21.311 Issuance.

The FAA issues a PMA after finding that the applicant complies with the requirements of this subpart and the design complies with the requirements of this chapter applicable to the product on which the article is to be installed.

§ 21.313 Duration.

A PMA is effective until surrendered, withdrawn, or the FAA otherwise terminates it.

§ 21.314 Transferability.

The holder of a PMA may not transfer the PMA.

§ 21.316 Responsibility of holder.

Each holder of a PMA must—

(a) Amend the document required by § 21.305 as necessary to reflect changes in the organization and provide these amendments to the FAA;

(b) Maintain the quality system in compliance with the data and procedures approved for the PMA;

(c) Ensure that each PMA article conforms to its approved design and is in a condition for safe operation;

(d) Mark the PMA article for which an approval has been issued. Marking must be in accordance with part 45 of this chapter, including any critical parts;

(e) Identify any portion of the PMA article (*e.g.,* sub-assemblies, component parts, or replacement articles) that leave the manufacturer's facility as FAA approved with the manufacturer's part number and name, trademark, symbol, or other FAA approved manufacturer's identification;

(f) Have access to design data necessary to determine conformity and airworthiness for each article produced under the PMA;

(g) Retain each document granting PMA and make it available to the FAA upon request; and

(h) Make available to the FAA information regarding all delegation of authority to suppliers.

§ 21.319 Design changes.

(a) *Classification of design changes.* (1) A ''minor change'' to the design of an article produced under a PMA is one that has no appreciable effect on the approval basis.

(2) A ''major change'' to the design of an article produced under a PMA is any change that is not minor.

(b) *Approval of design changes.* (1) Minor changes to the basic design of a PMA may be approved using a method acceptable to the FAA.

(2) The PMA holder must obtain FAA approval of any major change before including it in the design of an article produced under a PMA.

§ 21.320 Changes in quality system.

After the issuance of a PMA—

(a) Each change to the quality system is subject to review by the FAA; and

(b) The holder of the PMA must immediately notify the FAA, in writing, of any change that may affect the inspection, conformity, or airworthiness of its article.

■ 46. Revise subpart L to read as follows:

Subpart L—Export Airworthiness Approvals

Sec.

Subpart L—Export Airworthiness Approvals

§ 21.321 Applicability.

This subpart prescribes—

(a) Procedural requirements for issuing export airworthiness approvals; and

(b) Rules governing the holders of those approvals.

§ 21.325 Export airworthiness approvals.

(a) An export airworthiness approval for an aircraft is issued in the form of an export certificate of airworthiness. This certificate does not authorize operation of that aircraft.

(b) The FAA prescribes the form and manner in which an export airworthiness approval for an aircraft engine, propeller, or article is issued.

(c) If the FAA finds no undue burden in administering the applicable requirements of Title 49 U.S.C. and this subchapter, an export airworthiness approval may be issued for a product or article located outside of the United States.

§ 21.327 Application.

Any person may apply for an export airworthiness approval. Each applicant must apply in a form and manner prescribed by the FAA.

§ 21.329 Issuance of export certificates of airworthiness.

(a) A person may obtain from the FAA an export certificate of airworthiness for an aircraft if—

(1) A new or used aircraft manufactured under subpart F or G of this part meets the airworthiness requirements under subpart H of this part for a—

(i) Standard airworthiness certificate; or

(ii) Special airworthiness certificate in either the ''primary'' or the ''restricted'' category; or

(2) A new or used aircraft not manufactured under subpart F or G of this part has a valid—

(i) Standard airworthiness certificate; or

(ii) Special airworthiness certificate in either the ''primary'' or the ''restricted'' category.

(b) An aircraft need not meet a requirement specified in paragraph (a) of this section, as applicable, if—

(1) The importing country or jurisdiction accepts, in a form and manner acceptable to the FAA, a deviation from that requirement; and

(2) The export certificate of airworthiness lists as an exception any difference between the aircraft to be exported and its type design.

§ 21.331 Issuance of export airworthiness approvals for aircraft engines, propellers, and articles.

(a) A person may obtain from the FAA an export airworthiness approval to export a new aircraft engine, propeller, or article that is manufactured under this part if it conforms to its approved design and is in a condition for safe operation.

(b) A new aircraft engine, propeller, or article need not meet a requirement of paragraph (a) of this section if—

(1) The importing country or jurisdiction accepts, in a form and manner acceptable to the FAA, a deviation from that requirement; and

(2) The export airworthiness approval lists as an exception any difference between the aircraft engine, propeller, or article to be exported and its approved design.

(c) A person may obtain from the FAA an export airworthiness approval to export a used aircraft engine, propeller, or article if it conforms to its approved design and is in a condition for safe operation.

(d) A used aircraft engine or propeller need not meet a requirement of paragraph (c) of this section if—

(1) The importing country or jurisdiction accepts, in a form and manner acceptable to the FAA, a deviation from that requirement; and

(2) The export airworthiness approval lists as an exception any difference between the used aircraft engine or propeller to be exported and its approved design.

§ 21.335 Responsibilities of exporters.

Unless otherwise agreed to by the importing country or jurisdiction, each exporter must—

(a) Forward to the importing country or jurisdiction all documents specified by that country or jurisdiction;

(b) Preserve and package products and articles as necessary to protect them against corrosion and damage during transit or storage and state the duration of effectiveness of such preservation and packaging;

(c) Remove or cause to be removed any temporary installation incorporated on an aircraft for the purpose of export delivery and restore the aircraft to the approved configuration upon completion of the delivery flight;

(d) Secure all proper foreign entry clearances from all the countries or jurisdictions involved when conducting sales demonstrations or delivery flights; and

(e) When title to an aircraft passes or has passed to a foreign purchaser—

(1) Request cancellation of the U.S. registration and airworthiness certificates from the FAA, giving the date of transfer of title, and the name and address of the foreign owner;

(2) Return the Registration and Airworthiness Certificates to the FAA; and

(3) Provide a statement to the FAA certifying that the U.S. identification and registration numbers have been removed from the aircraft in compliance with § 45.33.

■ 47. Revise subpart N to read as follows:

Subpart N—Acceptance of Aircraft Engines, Propellers, and Articles for Import

Sec.

Subpart N—Acceptance of Aircraft Engines, Propellers, and Articles for Import

§ 21.500 Acceptance of aircraft engines and propellers.

An aircraft engine or propeller manufactured in a foreign country or jurisdiction meets the requirements for acceptance under this subchapter if—

(a) That country or jurisdiction is subject to the provisions of an agreement with the United States for the acceptance of that product;

(b) That product is marked in accordance with part 45 of this chapter; and

(c) The holder or licensee of a U.S. type certificate for that product furnishes with each such aircraft engine or propeller imported into the United States, an export airworthiness approval issued in accordance with the provisions of that agreement certifying that the individual aircraft engine or propeller—

(1) Conforms to its U.S. type certificate and is in condition for safe operation; and

(2) Has been subjected by the manufacturer to a final operational check.

§ 21.502 Acceptance of articles.

An article (including an article produced under a letter of TSO design approval) manufactured in a foreign country or jurisdiction meets the requirements for acceptance under this subchapter if—

(a) That country or jurisdiction is subject to the provisions of an agreement with the United States for the acceptance of that article;

(b) That article is marked in accordance with part 45 of this chapter; and

(c) An export airworthiness approval has been issued in accordance with the provisions of that agreement for that article for import into the United States.

■ 48. Revise subpart O to read as follows:

Subpart O—Technical Standard Order Approvals

Sec.

Subpart O—Technical Standard Order Approvals

§ 21.601 Applicability and definitions.

(a) This subpart prescribes—

(1) Procedural requirements for issuing TSO authorizations;

(2) Rules governing the holders of TSO authorizations; and

(3) Procedural requirements for issuing letters of TSO design approval.

(b) For the purposes of this subpart—

(1) A TSO issued by the FAA is a minimum performance standard for specified articles used on civil aircraft;

(2) A TSO authorization is an FAA design and production approval issued to the manufacturer of an article that has been found to meet a specific TSO;

(3) A letter of TSO design approval is an FAA design approval for an article that has been found to meet a specific TSO in accordance with the procedures of § 21.621;

(4) An article manufactured under a TSO authorization, an FAA letter of acceptance as described in § 21.613(b), or an article manufactured under a letter of TSO design approval described in § 21.621 is an approved article for the purpose of meeting the regulations of this chapter that require the article to be approved; and

(5) An article manufacturer is the person who controls the design and quality of the article produced (or to be produced, in the case of an application), including any related parts, processes, or services procured from an outside source.

§ 21.603 Application.

(a) An applicant for a TSO authorization must apply to the appropriate aircraft certification office in the form and manner prescribed by the FAA. The applicant must include the following documents in the application:

(1) A statement of conformance certifying that the applicant has met the requirements of this subpart and that the article concerned meets the applicable TSO that is effective on the date of application for that article.

(2) One copy of the technical data required in the applicable TSO.

(b) If the applicant anticipates a series of minor changes in accordance with § 21.619, the applicant may set forth in its application the basic model number of the article and the part number of the components with open brackets after it to denote that suffix change letters or numbers (or combinations of them) will be added from time to time.

(c) If the application is deficient, the applicant must, when requested by the FAA, provide any additional information necessary to show compliance with this part. If the applicant fails to provide the additional information within 30 days after the FAA's request, the FAA denies the application and notifies the applicant.

§ 21.605 Organization.

Each applicant for or holder of a TSO authorization must provide the FAA with a document describing how the applicant's organization will ensure compliance with the provisions of this subpart. At a minimum, the document must describe assigned responsibilities and delegated authority, and the functional relationship of those responsible for quality to management and other organizational components.

§ 21.607 Quality system.

Each applicant for or holder of a TSO authorization must establish a quality system that meets the requirements of § 21.137.

§ 21.608 Quality manual.

Each applicant for or holder of a TSO authorization must provide a manual describing its quality system to the FAA for approval. The manual must be in the English language and retrievable in a form acceptable to the FAA.

§ 21.609 Location of or change to manufacturing facilities.

(a) An applicant may obtain a TSO authorization for manufacturing facilities located outside of the United States if the FAA finds no undue burden in administering the applicable requirements of Title 49 U.S.C. and this subchapter.

(b) The TSO authorization holder must obtain FAA approval before making any changes to the location of any of its manufacturing facilities.

(c) The TSO authorization holder must immediately notify the FAA, in writing, of any change to the manufacturing facilities that may affect the inspection, conformity, or airworthiness of its product or article.

§ 21.610 Inspections and tests.

Each applicant for or holder of a TSO authorization must allow the FAA to inspect its quality system, facilities, technical data, and any manufactured articles and witness any tests, including any inspections or tests at a supplier facility, necessary to determine compliance with this subchapter.

§ 21.611 Issuance.

If the FAA finds that the applicant complies with the requirements of this subchapter, the FAA issues a TSO authorization to the applicant (including all TSO deviations granted to the applicant).

§ 21.613 Duration.

(a) A TSO authorization or letter of TSO design approval is effective until surrendered, withdrawn, or otherwise terminated by the FAA.

(b) If a TSO is revised or canceled, the holder of an affected FAA letter of acceptance of a statement of conformance, TSO authorization, or letter of TSO design approval may continue to manufacture articles that meet the original TSO without obtaining a new acceptance, authorization, or approval but must comply with the requirements of this chapter.

§ 21.614 Transferability.

The holder of a TSO authorization or letter of TSO design approval may not transfer the TSO authorization or letter of TSO design approval.

§ 21.616 Responsibility of holder.

Each holder of a TSO authorization must—

(a) Amend the document required by § 21.605 as necessary to reflect changes in the organization and provide these amendments to the FAA.

(b) Maintain a quality system in compliance with the data and procedures approved for the TSO authorization;

(c) Ensure that each manufactured article conforms to its approved design, is in a condition for safe operation, and meets the applicable TSO;

(d) Mark the TSO article for which an approval has been issued. Marking must be in accordance with part 45 of this chapter, including any critical parts;

(e) Identify any portion of the TSO article (e.g., sub-assemblies, component parts, or replacement articles) that leave the manufacturer's facility as FAA approved with the manufacturer's part number and name, trademark, symbol, or other FAA approved manufacturer's identification;

(f) Have access to design data necessary to determine conformity and airworthiness for each article produced under the TSO authorization. The manufacturer must retain this data until it no longer manufactures the article. At that time, copies of the data must be sent to the FAA;

(g) Retain its TSO authorization and make it available to the FAA upon request; and

(h) Make available to the FAA information regarding all delegation of authority to suppliers.

§ 21.618 Approval for deviation.

(a) Each manufacturer who requests approval to deviate from any performance standard of a TSO must show that factors or design features providing an equivalent level of safety compensate for the standards from which a deviation is requested.

(b) The manufacturer must send requests for approval to deviate, together with all pertinent data, to the appropriate aircraft certification office. If the article is manufactured under the authority of a foreign country or jurisdiction, the manufacturer must send requests for approval to deviate, together with all pertinent data, through the civil aviation authority of that country or jurisdiction to the FAA.

§ 21.619 Design changes.

(a) *Minor changes by the manufacturer holding a TSO authorization.* The manufacturer of an article under an authorization issued under this part may make minor design changes (any change other than a major change) without further approval by the FAA. In this case, the changed article keeps the original model number (part numbers may be used to identify minor changes) and the manufacturer must forward to the appropriate aircraft certification office, any revised data that are necessary for compliance with § 21.603(b).

(b) *Major changes by the manufacturer holding a TSO authorization.* Any design change by the manufacturer extensive enough to require a substantially complete investigation to determine compliance with a TSO is a major change. Before making a major change, the manufacturer must assign a new type or model designation to the article and apply for an authorization under § 21.603.

(c) *Changes by persons other than the manufacturer.* No design change by any person (other than the manufacturer who provided the statement of conformance for the article) is eligible for approval under this part unless the person seeking the approval is a manufacturer and applies under § 21.603(a) for a separate TSO authorization. Persons other than a manufacturer may obtain approval for design changes under part 43 or under the applicable airworthiness regulations of this chapter.

§ 21.620 Changes in quality system.

After the issuance of a TSO authorization—

(a) Each change to the quality system is subject to review by the FAA; and

(b) The holder of the TSO authorization must immediately notify the FAA, in writing, of any change that may affect the inspection, conformity, or airworthiness of its article.

§ 21.621 Issuance of letters of TSO design approval: import articles.

(a) The FAA may issue a letter of TSO design approval for an article—

(1) Designed and manufactured in a foreign country or jurisdiction subject to the export provisions of an agreement with the United States for the acceptance of these articles for import; and

(2) For import into the United States if—

(i) The State of Design certifies that the article has been examined, tested, and found to meet the applicable TSO

or the applicable performance standards of the State of Design and any other performance standards the FAA may prescribe to provide a level of safety equivalent to that provided by the TSO; and

(ii) The manufacturer has provided to the FAA one copy of the technical data required in the applicable performance standard through its State of Design.

(b) The FAA issues the letter of TSO design approval that lists any deviation granted under § 21.618.

PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

■ 49. The authority citation for part 43 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44703, 44705, 44707, 44711, 44713, 44717, 44725.

§ 43.2 [Amended]

■ 50. Amend § 43.2(a)(2) by removing the reference to ''§ 21.305 of this chapter'' and adding in its place ''part 21 of this chapter''.

■ 51. Revise § 43.3(j)(3) to read as follows:

§ 43.3 Persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations.

* * * * *

(j) * * *

(3) Perform any inspection required by part 91 or part 125 of this chapter on aircraft it manufactured under a type certificate, or currently manufactures under a production certificate.

PART 45—IDENTIFICATION AND REGISTRATION MARKING

■ 52. Revise the authority citation for part 45 to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113–40114, 44101–44105, 44107–44111, 44504, 44701, 44708–44709, 44711–44713, 44725, 45302–45303, 46104, 46304, 46306, 47122.

PART 45—[AMENDED]

■ 53. Amend part 45 by:

■ a. Removing the word ''Administrator'' and the words ''Administrator of the FAA'' and adding in their place the word ''FAA'' wherever they appear; and

■ b. Removing the word ''shall'' and adding in its place the word ''must'' wherever it appears.

■ 54. Amend § 45.1 by revising paragraphs (a) and (b) and removing paragraph (c) to read as follows:

§ 45.1 Applicability.

* * * * *

(a) Marking products and articles manufactured under—

(1) A type certificate;

(2) A production approval as defined under part 21 of this chapter; and

(3) The provisions of an agreement between the United States and another country or jurisdiction for the acceptance of products and articles; and

(b) Nationality and registration marking of U.S. registered aircraft.

Subpart B—Marking of Products and Articles

■ 55. Revise the heading of subpart B to read as set forth above.

■ 56. Amend subpart B by adding § 45.10 to read as follows:

§ 45.10 Marking.

No person may mark a product or article in accordance with this subpart unless—

(a) That person produced the product or article —

(1) Under part 21, subpart F, G, K, or O of this chapter; or

(2) For export to the United States under the provisions of an agreement between the United States and another country or jurisdiction for the acceptance of products and articles; and

(b) That product or article conforms to its approved design, and is in a condition for safe operation; and, for a TSO article; that TSO article meets the applicable performance standards.

■ 57. Revise § 45.11 to read as follows:

§ 45.11 Marking of products.

(a) *Aircraft.* A manufacturer of aircraft covered under § 21.182 of this chapter must mark each aircraft by attaching a fireproof identification plate that—

(1) Includes the information specified in § 45.13 using an approved method of fireproof marking;

(2) Must be secured in such a manner that it will not likely be defaced or removed during normal service, or lost or destroyed in an accident; and

(3) Except as provided in paragraphs (d) through (h) of this section, must be secured to the aircraft fuselage exterior so that it is legible to a person on the ground, and must be either adjacent to and aft of the rear-most entrance door or on the fuselage surface near the tail surfaces.

(b) *Aircraft engines.* A manufacturer of an aircraft engine produced under a type certificate or production certificate must mark each engine by attaching a fireproof identification plate. Such plate—

(1) Must include the information specified in § 45.13 using an approved method of fireproof marking;

(2) Must be affixed to the engine at an accessible location; and

(3) Must be secured in such a manner that it will not likely be defaced or removed during normal service, or lost or destroyed in an accident.

(c) *Propellers and propeller blades and hubs.* Each person who produces a propeller, propeller blade, or propeller hub under a type certificate or production certificate must mark each product or part using an approved fireproof method. The marking must—

(1) Be placed on a non-critical surface;

(2) Contain the information specified in § 45.13;

(3) Not likely be defaced or removed during normal service; and

(4) Not likely be lost or destroyed in an accident.

(d) *Manned free balloons.* A manufacturer of manned free balloons must mark each balloon by attaching the identification plate described in paragraph (a) of this section. The plate must be secured to the balloon envelope and must be located, if practicable, where it is legible to the operator when the balloon is inflated. In addition, the basket and heater assembly must be permanently and legibly marked with the manufacturer's name, part number (or equivalent), and serial number (or equivalent).

(e) *Aircraft manufactured before March 7, 1988.* The owner or operator of an aircraft manufactured before March 7, 1988 must mark the aircraft by attaching the identification plate required by paragraph (a) of this section. The plate must be secured at an accessible exterior or interior location near an entrance, if the model designation and builder's serial number are also displayed on the exterior of the aircraft fuselage. The model designation and builder's serial number must be—

(1) Legible to a person on the ground,

(2) Located either adjacent to and aft of the rear-most entrance door or on the fuselage near the tail surfaces, and

(3) Displayed in such a manner that they are not likely to be defaced or removed during normal service.

(f) For powered parachutes and weight-shift-control aircraft, the identification plate required by paragraph (a) of this section must be secured to the exterior of the aircraft fuselage so that it is legible to a person on the ground.

(g) The identification plate described in paragraph (a) of this section may be secured to the aircraft at an accessible location near an entrance for—

(1) Aircraft produced for—

(i) Operations under part 121 of this chapter,

(ii) Commuter operations (as defined in § 119.3 of this chapter), or

(iii) Export.

(2) Aircraft operating under part 121 of this chapter and under an FAA-approved continuous airworthiness maintenance program; or

(3) Aircraft operating in commuter air carrier operations (as defined in § 119.3 of this chapter) under an FAA-approved continuous airworthiness maintenance program.

(h) *Gliders.* Paragraphs (a)(3) and (e) of this section do not apply to gliders.

§ 45.13 [Amended]

■ 58. Amend § 45.13 by removing the text ''and (b)'' from paragraph (a) introductory text and adding in their place the text ''through (c)'' and by removing the words ''of this part'' from paragraph (c).

§ 45.14 [Removed]

■ 59. Remove § 45.14.

■ 60. Revise § 45.15 to read as follows:

§ 45.15 Marking requirements for PMA articles, TSO articles, and Critical parts.

(a) *PMA articles.* The manufacturer of a PMA article must permanently and legibly mark—

(1) Each PMA article, with the PMA holder's name, trademark, symbol, or other FAA approved identification and part number; and

(2) The letters ''FAA–PMA''.

(b) *TSO articles.* The manufacturer of a TSO article must permanently and legibly mark —

(1) Each TSO article with the TSO holder's name, trademark, symbol, or other FAA approved identification and part number; and

(2) Each TSO article, unless otherwise specified in the applicable TSO, with the TSO number and letter of designation, all markings specifically required by the applicable TSO, and the serial number or the date of manufacture of the article or both.

(c) *Critical parts.* Each person who manufactures a part for which a replacement time, inspection interval, or related procedure is specified in the Airworthiness Limitations section of a manufacturer's maintenance manual or Instructions for Continued Airworthiness must permanently and legibly mark that part with a serial number (or equivalent) unique to that part in addition to the other applicable requirements of this section.

(d) If the FAA finds a part or article is too small or otherwise impractical to mark with any of the information required by this part, the manufacturer must attach that information to the part or its container.

§ 45.16 [Amended]

■ 61. Amend § 45.16 by removing the last sentence of the section.

Issued in Washington, DC, on October 6, 2009.

J. Randolph Babbitt,

Administrator.

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