

**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](mailto:barbara.capron@faa.gov) or [robert.cook@faa.gov](mailto: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](mailto: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.

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**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 effect 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 hour (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).<sup>1</sup>
- 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

<sup>1</sup> 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
	<b>Total Cost Savings .....</b>	<b>88,438,406</b>	<b>126,033,270</b>
	<b>Safety Benefits .....</b>	<b>7,067,034</b>	<b>10,061,867</b>
	<b>Total Benefits of the Rule .....</b>	<b>95,505,440</b>	<b>136,095,137</b>

**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
	<b>Total Costs .....</b>	<b>1,694,560</b>	<b>2,070,898</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 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/](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/](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.

- 21.131 Applicability.
- 21.132 Eligibility.
- 21.133 Application.
- 21.135 Organization.
- 21.137 Quality system.
- 21.138 Quality manual.
- 21.139 Location of or change to manufacturing facilities.
- 21.140 Inspections and tests.
- 21.141 Issuance.
- 21.142 Production limitation record.
- 21.143 Duration.
- 21.144 Transferability.
- 21.145 Privileges.
- 21.146 Responsibility of holder.
- 21.147 Amendment of production certificates.
- 21.150 Changes in quality system.

#### 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.

- 21.301 Applicability.
- 21.303 Application.
- 21.305 Organization.
- 21.307 Quality system.
- 21.308 Quality manual.
- 21.309 Location of or change to manufacturing facilities.
- 21.310 Inspections and tests.
- 21.311 Issuance.
- 21.313 Duration.
- 21.314 Transferability.
- 21.316 Responsibility of holder.
- 21.319 Design changes.
- 21.320 Changes in quality system.

#### 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.

21.321 Applicability.

21.325 Export airworthiness approvals.

21.327 Application.

21.329 Issuance of export certificates of airworthiness.

21.331 Issuance of export airworthiness approvals for aircraft engines, propellers, and articles.

21.335 Responsibilities of exporters.

#### 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.

21.500 Acceptance of aircraft engines and propellers.

21.502 Acceptance of articles.

**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.

21.601 Applicability and definitions.

21.603 Application.

21.605 Organization.

21.607 Quality system.

21.608 Quality manual.

21.609 Location of or change to manufacturing facilities.

21.610 Inspections and tests.

21.611 Issuance.

21.613 Duration.

21.614 Transferability.

21.616 Responsibility of holder.

21.618 Approval for deviation.

21.619 Design changes.

21.620 Changes in quality system.

21.621 Issue of letters of TSO design approval: import articles.

**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.

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**J. Randolph Babbitt,**  
*Administrator.*

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