91-181

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 43 and 91

[Docket No. 21071; Amdt. Nos. 43-23, and 91-181]

Operations Review Program: Amendment No. 12: Aircraft Maintenance

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: These amendments to Parts 43 and 91 make them compatible with other rules, consolidate the inspection requirements to make them easier to use and more understandable, specify the conditions under which the terms "rebuilt" and "overhaul" may be used in maintenance records, and allow Canadian Nationals to perform certain aircraft inspections on U.S.-registered aircraft. The amendments are part of the Operations Review Program and are based on a compilation of proposals made at the Operations Review Conference.

EFFECTIVE DATE: October 15, 1982.

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SUPPLEMENTARY INFORMATION:

History

This amendment is issued as part of the Operations Review Program. The following amendments have previously been issued as part of this program:

Title and Federal Register (FR) Citation

Amendment No. 1: Clarifying and Editorial Changes (41 FR 47227; October 28, 1976).

Amendment No. 2: Rotorcraft External-Load Operations (42 FR 24196; May 12, 1977 and 42 FR 32531; June 27, 1977).

Amendment No. 2A: Special Federal Aviation Regulation No. 36, Development of Major Repair Data (43 FR 3084; January 23, 1978).

Amendment No. 3: Airspace, Air Traffic, and General Operating Rules (44 FR 15654; March 15, 1979).

Amendment No. 4: Miscellaneous Amendments (43 FR 22636; May 25, 1978).

Amendment No. 5: Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft (43 FR 22643; May 25, 1978, 43 FR 28403; June 29, 1978, and 44 FR 25201; April 30, 1979).

Amendment No. 6: General Operating and Flight Rules and Related Airworthiness Standards and Crewmember Training (43 FR 46230; October 5, 1978).

Amendment No. 8: Certification and Operations: Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft; Operation of Scheduled Air Carriers with Helicopters; and, Airworthiness Standards for Transport Category Airplanes (45 FR 41586; June 19, 1980).

Amendment No. 9: Operations Review Program: Amendment No. 9 (45 FR 46736; July 10, 1980).

Amendment No. 10: Airworthiness, Equipment, and Operating Rules (44 FR 61323; October 25, 1979).

Amendment No. 11: Operations Review Program: Amendment No. 11 (47 FR 33384; August 2, 1982).

These amendments are based on Notice of Proposed Rulemaking 80-22 published in the Federal Register November 20, 1980 (45 FR 76894). Interested persons have been given an opportunity to participate in the making of these amendments and due consideration has been given to all comments presented. A number of changes of an editorial and clarifying nature have been made to the proposed rules based on relevant comments received and upon further consideration by the FAA. Except for these minor changes, the amendments and the reasons for their adoption are the same as those contained in Notice 80-22. Some comments received made recommendations for changes which are beyond the scope of the notice and cannot be considered without further notice and public consideration.

Discussion of Comments

The following discussions are keyed to the like-numbered proposals contained in Notice 80-22.

Proposal 12-1. This change clarifies the meaning of the terms "rebuilt" and "overhauled" for aircraft owners and operators by adding a new § 43.2 which specifies the conditions under which maintenance personnel may use the terms in maintenance records.

Several commenters object stating that there is no demonstrated need for the definitions. Others suggest that § 43.2 should appear as § 43.8 to be near § 43.9, or be made a part of § 43.9, since it deals with recordkeeping requirements. Aircraft owners and operators need to know what work has been accomplished on their equipment when they see these words in their maintenance records. Moreover, § 43.2 is neither a definition nor a recordkeeping requirement. Instead, the rule specifies the conditions which must be met before the terms "rebuilt" and "overhauled" may be used in required maintenance records.

Other commenters suggest that the phrase "supplemental type certificate" be added to the proposed language of § 43.2 (a)(2) and (b) to clarify the position of supplemental type certificate holders. Since this addition to § 43.2(a)(2) clarifies the regulatory requirement, the phrase has been included in the final rule.

Two commenters state that § 43.2(a) requires cleaning, and is inconsistent with § 43.2(b) which does not. Cleaning is a standard practice in both instances, and the word "cleaning" has been added to § 43.2(b).

One commenter recommends the phrase "specified by the manufacturer holding the type certificate or a material, part, process, or appliance approved under § 21.305 of this chapter" be added following the phrase "tolerances and limits" in § 43.2(b) because "new parts" is not specific. "New parts" is adequate since it is known that the tolerances and limits for new parts are established during original certification by the product or part manufacturer. Accordingly, the suggested phrase has not been included.

Several commenters state the term "completely disassembled" is inappropriate because in numerous instances "complete" disassembly would damage the product beyond further service. The word "complete" is deleted. However, it is intended that disassembly should be to the extent required to make a complete determination of conformity with the product's original qualities.

A commenter states that the word "approved" as used in § 43.2(b) should be clarified to indicate that it means "manufacturer approved." The FAA disagrees since undersize and oversize parts are FAA approved through the product approval procedure.

One commenter suggests a complete rewording of § 43.2. The suggested wording would not achieve the objective of § 43.2 as proposed. Accordingly, § 43.2 is adopted as proposed with the changes discussed above.

Proposal 12-2. This change to § 43.3(a) adds the phrase "and § 43.17" to recognize that mechanical work may be performed on U.S.-registered aircraft in Canada by appropriately certificated Canadian mechanics under § 43.17.

Additionally, § 43.3(d) is amended to prohibit noncertificated persons, working under the supervision of the holder of a mechanic or repairman certificate, from performing any inspections required by Parts 91 and 125.

Section 43.3(h), as amended, permits manufacturers to perform any inspection required by Part 91 or Part 125 in addition to the 100-hour, annual, and progressive inspections previously allowed.

One commenter points out that the language of the proposal is inconsistent with that of SFAR–38 and will introduce confusion when applied to Parts 121, 127, 129, and 135. Clarifying changes have been made to § 43.3(f) which eliminate the need for existing paragraph (g). Similarly, existing paragraph (h) is clarified and redesignated paragraph (g).

A number of commenters object to the proposed use of the phrase "However, this paragraph does not authorize the performance of any inspection required by this chapter" in § 43.3(d), stating that the phrase precludes the use of noncertificated personnel when conducting inspections under § 121.367, and when an airline conducts inspections under § 91.169(e). It was also stated that it would prevent use of noncertificated personnel under § 145.59. The language has been changed by use of the phrase "required by Parts 91 and 125 of this chapter" in lieu of the proposed "required by this chapter."

Proposal 12–3. This change clarifies the difference between the terms "approve for return to service" and "return to service." The term "approve for return to service" is inserted in § 43.5 and "return to service" is inserted in Part 91.

One commenter points out that proposed § 43.5(a) makes reference to entries required by § 43.9 but not to those required by § 43.11 and that without such reference, entries regarding inspection would no longer be required. It was not intended that existing requirements be changed. Rather, as explained in the NPRM, the intent was to relocate the requirements to the maintenance or operations rules most closely associated with the user. Accordingly, the phrase "or § 43.11, as appropriate," has been inserted in § 43.5(a)(2) and makes no change to existing requirements. The rule is otherwise adopted as proposed.

Proposal 12–4. This change to § 43.7 requires persons holding at least a private pilot certificate to approve an aircraft for return to service after performing preventive maintenance under the provisions of § 43.3(g). This will result in more complete maintenance records since present § 43.5(b) does not require pilots to record, or approve for return to service, work accomplished as preventive maintenance. The provision "and in § 43.17" is added to § 43.7(a) to reflect that mechanical work may be performed on U.S.-registered aircraft by Canadian mechanics under § 43.17 as discussed under the explanation for § 43.3 (Proposal 12–2).

A number of commenters suggest that insertion of the phrase "or component part" in § 43.7(a) alone could lead to the interpretation that approval for return to service of component parts would be limited to the Administrator. It is not the intent of the FAA to limit such approvals and, consistent with present industry practice, the phrase is incorporated in all except the last paragraph of § 43.7 to make it clear that items other than a complete airframe, engine, propeller, or appliance may be approved for return to service.

A number of commenters object to proposed § 43.7(g) stating that pilots should not be permitted to approve maintenance for return to service. This is an apparent misunderstanding since the proposal permits a pilot to approve only preventive maintenance that that pilot accomplishes under § 43.3(g). Pilots may do this under the present rule. Another commenter states that the proposed wording would prohibit a student pilot from performing preventive maintenance. This is correct. The restatement clarifies this limitation on student pilots.

One commenter points out the inconsistency between § 43.7(e) and recent changes to Part 121. For explanation, see change to § 43.1 following Proposal 12–24.

Section § 43.7(g) as proposed (redesignated (f)) contained a reference to § 43.3(h). For consistency, changes to § 43.3 require that this reference be changed to § 43.3(g). Changes made to § 43.7(e) eliminate the need for paragraph (f), since commercial operators are included in the term "an operating certificate issued under Part 121, 127, or 135", and accordingly, present § 43.7(f) is deleted.

Proposal 12–5. This change to § 43.9 will, in addition to present requirements, require maintenance record entries to identify the kind of certificate held by the person who approved the aircraft, engine, propeller, appliance, or component for return to service. With this change, all persons, including pilots performing preventive maintenance, are required to record approval for return to service in accordance with § 43.9(a). This change also requires pilots, mechanics, and air agencies, to indicate the kind of certificate under which the actions were taken, that is, repair station, mechanic, private pilot, etc. This information will provide the owners or operators of aircraft with identification of the person who released the aircraft for return to service after maintenance, preventive maintenance, or alterations and should indicate that the person is properly certificated and rated to do so.

In recognition of the fact that maintenance can be performed on component parts, the phrase is added to the list in § 43.9(a).

A provision is added stating that the signature of the person approving the aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service signifies only that the work described has been satisfactorily performed. This change makes it clear that the person making the approval is approving only the maintenance performed

Under Part 135, certain aircraft are maintained under continuous airworthiness maintenance programs that are similar to programs approved under Parts 121 and 127. Section 43.9(b) is revised to allow Part 135 operators to use the recordkeeping procedures required of Part 121 and Part 127 operators.

Finally, § 43.9(c) excepts all aircraft inspections required by Part 91, Part 123, Part 125, and § 135.411(a)(1) from § 43.9, since requirements for these entries are contained in § 43.11.

One commenter suggests that § 43.9 be revised to include a requirement that "time in service" be made a part of the maintenance record and that the rule specify when the record entry must be made. The first suggestion is beyond the scope of this notice. While § 43.9 will not specifically require recording of "time in service" by the person performing the work, § 91.173 already requires the owner to maintain this data. A correlation may be drawn between dated "time in service" entries and dated maintenance entries when the time in service entries are properly kept. The second recommendation, if included, would be redundant since § 43.5 requires the entry be made prior to approval for return to service.

Another commenter states the term "approved for return to service" should be substituted for "has been performed satisfactorily." The signature signifies approval for return to service and the use of the term "has been performed satisfactorily" is an additional certification as to performance in accordance with §§ 43.13 and 43.15. This commenter also suggests that legibility

requirements be included in § 43.9. Since legibility is a practical necessity and entries which are not legible do not satisfy the purpose of § 43.9, such requirements have not been incorporated.

One commenter suggests that § 43.9(a)(4) be broken into two paragraphs to highlight the additional requirements when major repairs or alterations are involved. The suggestion is incorporated.

Another commenter states that the revisions to § 43.9 would prohibit much of the preventive maintenance presently accomplished under Part 121. Preventive maintenance as used in § 43.9 deals only with that maintenance which a pilot may do on an aircraft owned or operated by that pilot. It is not synonymous with the term as used in Part 121 and the change made to § 43.9 will not require changes to procedures used under Part 121.

Proposal 12–6. This change to § 43.11 adds the inspection recording requirements of § 91.217, Part 123, Part 125, and § 135.411(a)(1) to § 43.11. (See last paragraph of explanation for § 43.9, Proposal 12–5.) Additionally, it requires the person approving an item for return to service after inspection, to include the applicable kind of certificate held by that person and provides consistency between the requirements of § 43.11 and § 43.9.

The inclusion of the kind of certificate in maintenance record entries under § 43.11(a)(3) is explained under the explanation for § 43.9 (Proposal 12–5).

The change also requires that a list of discrepancies be provided to the owner or lessee when an aircraft is found unairworthy as a result of any inspection conducted under Part 91, Part 123, Part 125, or § 135.411(a)(1). Owners and lessees, under several inspection systems, are provided lists of discrepancies and use them to analyze previous inspections and recurring discrepancies. Owners and lessees having their aircraft inspected under the 100-hour inspection system should also be given this advantage, and a requirement for such lists in the 100-hour inspection is included.

Inspections required by § 135.419 are excluded since these approved inspection programs specify the means by which the operator will control the repair of defects found during inspections. Except for inclusion of the 100-hour inspections under these provisions, the rule is essentially unchanged.

For an explanation of the addition of "component parts" to the list of items set forth in § 43.11(c), see the explanation for § 43.9 (Proposal 12–5).

One commenter suggests that requirements be added in § 43.11 to include the rating held in all maintenance record entries and to establish legibility standards. The rule as amended contains a requirement for ratings and certificate numbers to be made a part of entries under § 43.11. Entries which are not legible may not be construed as satisfying § 43.11.

Another commenter suggests that the second time the phrase "in accordance with a progressive inspection" appears in § 43.11(a)(6) is redundant. The commenter is correct and the phrase is deleted.

One commenter objects to the disapproval provisions in § 43.11(a) stating that such entries are detrimental to future sales, prevent the owner from getting a second opinion, prevent continued operation of the aircraft if inspections are performed earlier than required, and prevent the pilot from operating with equipment inoperative.

When disapproval entries are made they must be followed by an entry showing correction of the item prior to operation. The FAA does not agree that a record showing discovery and proper correction of a discrepancy would devalue an aircraft. Neither would such entries prevent second opinions. If a second opinion is desired, the aircraft may be operated under a special flight authorization (ferry permit), another mechanic may be called in, or the local FAA inspectors may also be available. Further, any operation subsequent to the discovery of a discrepancy is presently prohibited by § 91.165.

This commenter also objects to reporting discrepancies to the FAA. The FAA's primary use of these discrepancy lists has been to prevent violations by aircraft owners and operators from inadvertent operation of their aircraft prior to correction of the discrepancies. Discrepancy lists have not been submitted to the FAA for the other inspection systems provided by Part 91 or Part 125. The number of violations under these other inspection systems is not significantly greater than experienced with the annual inspection system. Therefore, upon further consideration and in response to comments, the proposed requirement to submit discrepancy lists to the FAA is not incorporated in the rule.

Proposal 12–7. Although § 43.12 presently prohibits fraudulent entries in maintenance records, fraud or proof of fraud is frequently absent. This change to § 43.12 provides a prohibition against intentionally false entries in required maintenance records and reports similar to the prohibitions found in §§ 61.59(a)(1) and 65.20(a)(1) and provides a uniform standard in the application of the regulations. Aircraft owners and operators rely on the accuracy of these records in meeting their airworthiness responsibilities and as a detailed record of maintenance performed on their aircraft. Note that Title 18 U.S.C. Section 1001 provides severe sanctions in the form of a $10,000 fine or imprisonment of not more than 5 years, or both for anyone who knowingly makes such fraudulent or false entries.

Proposal 12–8. The inspection requirements of § 91.217 through § 91.219 are moved to § 91.169, and the additional performance rules for inspections are consolidated in § 43.15. The need for § 43.13(d), which provided performance rules for inspections conducted under § 91.217, no longer exists, and § 43.13(d) is deleted.

Section 43.13(c) is revised to use language consistent with § 43.3 and to make it compatible with the terminology of Parts 121, 127, and 135 introduced by SFAR 38. The changes are not substantive as to requirements or applicability.

Proposal 12–9. This change extends the applicability of §§ 43.15 (a) and (b) to all inspections instead of only 100-hour, annual, and progressive inspections.

It is important that all inspections performed provide a determination that the aircraft inspected meets all applicable airworthiness requirements. It is also important that the rotorcraft systems, defined in §§ 43.15(b) (1) through (4), be inspected in accordance with the maintenance manual of the manufacturer concerned. Rotorcraft inspected in accordance with Part 121 or Part 127 are exempt from the requirements of § 43.15(b). The reference to inspections required by Part 135 is added to § 43.15(a) since § 135.411(a)(1) requires that aircraft type certificated for a passenger seating configuration of nine seats or less, excluding any pilot seat, be maintained under Part 91, Part 43, and certain sections of Part 135.

One commenter states that §43.15(b) could be interpreted to mean that each time any kind of inspection is accomplished on a helicopter the items listed in §§ 43.15(b) (1), (2), (3) and (4) must be inspected and thus, result in redundant inspection. In response to this comment, the language has been clarified. The same commenter states that Part 135 certificate holders operating helicopters for 10 or more passengers should be afforded the same privileges as Part 121 and Part 127 operators. The language change affords such privileges and is consistent with

Part 135 requirements. On further consideration, language has been added to that proposed as § 43.17(a) to make § 43.13(a) consistent with § 43.11(a)(7). The language makes it clear that instructions and procedures contained in inspection programs provided for under Parts 123, 125, 135, and § 91.169(e) must be followed while conducting those inspections.

Proposal 12–10. This amendment to § 43.17 allows certain Canadians, as defined in § 43.17(a), to perform any inspection, except an annual inspection, required by amended § 91.169 of this chapter. The previous rule allowed Canadians to perform only the 100-hour inspection. These changes permit owners and operators of all types of U.S.-registered aircraft the privilege of having work accomplished while the aircraft are in Canada. However, only U.S. certificated mechanics with inspection authorizations who comply with §§ 65.91 through 65.95 may perform annual inspections.

Proposal 12–11. This amendment to Appendix A of Part 43 changes the paragraph or preventive maintenance to explicitly state that preventive maintenance is limited to the work listed, provided it does not involve complex assembly operations. Additional items have also been included.

A number of commenters suggest that the term "small fabric repairs" would be subject to abuse and recommend more specific language. A parenthetical insert is added to the sentence directing the owner/operator to the balloon manufacturer's instructions regarding the specific balloon repair contemplated.

One commenter points out that the word "gondola" is not used in Part 31, which instead employs the term "basket." Accordingly, the term, "basket" has been substituted for gondola in items (9) and (28).

A number of commenters state that the inclusion of burners in item (28) would appropriately recognize what has been standard practice in the ground transport of balloons. Inclusion of burners would not be detrimental and this change is made.

One commenter objects to preventive maintenance being limited to only those items listed under Appendix A of Part 43. The contention is that this will unnecessarily restrict preventive maintenance in the case of Part 121 certificate holders. The term "preventive maintenance," as used in Appendix A, refers to only that maintenance which may be accomplished by a pilot under § 43.3(g). The term "preventive maintenance" as used in Part 121 is unchanged.

One commenter recommends that item (24) be broken into two items, separating replacement of lead acid and nickle cadmium batteries into two categories, and limiting service to lead acid type batteries. The FAA does not agree since there is no demonstrated problem with the present servicing rule. The phrase "checking fluid levels and specific gravity" has been replaced by "servicing" to make the item compatible with all battery types.

Proposal 12–12. This amendment adds a new paragraph (c) to Appendix E of Part 43 which provides a total system integration test requirement which will insure that altitude reporting equipment and ATC transponders perform their intended functions when integrated in an airplane as a system.

The paragraph, as proposed in Notice 80–22, incorporated part of Proposal No. 67 of the Operations Review which was submitted by the Air Transport Association (ATA). It was proposed in part that, in addition to the 23 test points appearing in Table 1 of Appendix E of Part 43, two additional test points, 1,100 feet and 1,800 feet, be added. It was explained that this would insure proper function of the automatic pressure altitude reporting equipment and freedom from latent defects which would otherwise go undetected. The explanation also indicated that this proposal would impose a minimum burden on the users since tests could be conducted simultaneously with existing altimeter tests and using the same personnel and test equipment.

While the ATA supports the proposal as an improvement over the existing regulation, it points out that the proposal does not include their recommendation that the transition points for both the "on" and "off" position for each output bit (channel) be checked in both increasing and decreasing altitude and that, at transition, the displayed pressure altitude be within ±75 feet of the nominal pressure altitude for that transition point.

The ATA also comments that one airline suggests there is no need to test the altimeter and encoder at all of the points specified in Appendix E. The airline suggests that tests of each altitude code segment of the encoder—2300, 2500, 3800, 4300, 4800, 6800, 14800, and 30800 are sufficient to ensure proper operation of each altitude code segment of the encoder.

Another commenter questions requiring a check at 23 points each time an altimeter or transponder is replaced and suggests instead, that a check at 2 or 3 points would provide the necessary accuracy assurance.

A third commenter states that based on their experience the specified check at 23 different altitudes is excessive. The commenter states that they have been using 12 points and consider even that excessive.

In consideration of the comments, the FAA has amended proposed Appendix E, paragraph (c), to require that only a sufficient number of test points be checked to ensure that the altitude reporting equipment and ATC transponder perform their intended functions through their entire range while both ascending and descending.

A number of commenters speak to the correspondence value of 125 feet. This value is based on the requirement of § 91.36(b) and its reasonable achievability when a single source (aneroid) is used to feed the pilot's display and the pressure altitude digitizer. The value represents three elements: a variation of ±50 feet which may exist between the pressure information from the aneroid and the information actually digitized; an uncertainty factor of ±50 feet which can exist because of reporting in 100-foot increments; and, in installations where the altitude reporting equipment has an optional pilot's display, the difference of 25 feet allowed between aneroid output feeding the digitizer and the pilot's display.

The achievement of correspondence is difficult when separate aneroids are used for the pilot's altimeter and the digitizer input. Careful matching of aneroids is necessary to achieve a correspondence value of 125 feet or less.

Proposal 12–13. This amendment makes § 91.161 more specific regarding the continuous airworthiness maintenance programs of Part 135 by reference to § 135.411(a)(2). In addition, even though progressive inspections are moved to § 91.169 from § 91.171, § 91.171 is still referenced since the new § 91.171 deals with altimeters and altitude reporting equipment tests and inspections.

Proposal 12–14. This amendment to § 91.165 removes the reference to aircraft inspected under Subpart D since those inspection requirements are transferred to the presently referenced § 91.169. The provisions of § 91.177, concerning ATC transponder tests and inspections are transferred to § 91.172, and reference to § 91.172 is added as an aircraft inspection procedure. Also, to conform this section to other sections in this chapter, the term "approved for return to service" is substituted for the term "release to service." One

commenter suggests that the words "aircraft and" following "appropriate entries in" in the second sentence be deleted. Deletion of these words would leave the appropriate location of aircraft inspection entries unspecified. This is inappropriate and the suggestion is not incorporated.

Proposal 12–15. This amendment to § 91.167 changes the heading and rule to set forth specific conditions which must be met after maintenance, preventive maintenance, rebuilding, or alterations have been performed, and before the aircraft is operated. The word "repairs" is deleted as redundant since the word "maintenance", by definition, includes repairs. Because § 43.5 is amended to make it clear that "approval for return to service" does not involve operation of the aircraft, § 91.167(a) is changed to prohibit any person from operating an aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless it has been approved for return to service by a person authorized under § 43.7 of this chapter and the maintenance record entries required by § 43.9 or § 43.11 have been made. That is, the aircraft must be approved for return to service prior to any operation, including test flights provided for in § 91.167(b). See Proposal 12–3 for further explanation.

One commenter states that a requirement to log the flight required by § 91.167(b) is of no value unless the results of the operational check are indicated. Although the language is not specific, a requirement that the operational check results be part of the entry is clearly implied. Therefore, the section is unchanged.

One commenter suggests that the language change to § 91.167 would introduce a question as to what part of repairs, alterations etc., would require flight tests. The commenter states that the mere fact that the change was made would raise the question. Sections 91.167(a), (a)(1), and (a) (2) were added for the reasons stated in the second paragraph of this explanation. While § 91.167(b) has the word "maintained" substituted for "repair" because it is a defined term, the FAA does not intend to require reevaluation of existing programs or procedures. Rather, it restates when flight tests are required without change to those requirements.

Proposal 12–16. This amendment to § 91.169 transfers the inspection and maintenance requirements of §§ 91.171, 91.217, and 91.219 to § 91.169, consolidating the inspection requirements of Part 91 in one section. Transferring the inspection requirements of § 91.217 to § 91.169 removes the provisions from the applicability statement of § 91.181, which did not provide for use of a § 91.217 inspection program when a U.S.-registered airplane is leased to a foreign operator engaged in common carriage. In recent years, the FAA has frequently issued exemptions to foreign operators engaged in common carriage to allow use of a § 91.217 inspection program. Transferring the inspection requirements into Subpart C permits the use of the continuous inspection program by these foreign operators and exemptions will no longer be required. These changes do not affect aircraft subject to Part 125. This action is consistent with Executive Order 12291 and the FAA's continuing effort to reduce unnecessary administrative burdens on the public.

Additionally, § 91.172 allows the Administrator to require revision of any inspection program approved under § 91.169(f)(5). This provides a regulatory procedure for requiring changes in programs when needed to ensure an adequate level of safety. See also the discussion of Proposal 12–19.

The reporting requirements of §§ 91.217 (c) and (d) were established in 1972 with adoption of Subpart D of Part 91. These reporting requirements have proven cumbersome and ineffective and are replaced by § 91.169(f) which substitutes a maintenance record entry identifying the inspection option selected under § 91.169 and the name and address of the person responsible for scheduling the required inspections. This is consistent with the FAA's continuing effort to reduce reporting requirements and is in accordance with Executive Order 12291 and the Department of Transportation regulatory policies and procedures to reduce unnecessary administrative burdens on the public.

Section 91.169(h) provides that if an owner or operator changes inspection programs, the time in service, calendar time, or cycles of operation accumulated under the old program must be applied in determining inspection due times under the new program. This prevents operation under one program until the major inspection of an item is due, then changing programs and starting at zero inspection time to delay or avoid a major inspection of the item.

One commenter points out that Part 125 should be included in § 91.169(c)(2) as aircraft not subject to the section. The FAA agrees. Part 125 was not a rule when the proposal for § 91.169 was published in the **Federal Register** and the number 125 is added following "Part 123" in § 91.169(c)(2).

One commenter remarks on the slight change in terminology in the proposal when dealing with "turbojet multi-engine" airplanes and suggests that since no change was intended, identical language be used. In response, the proposed terminology change is not adopted.

Proposal 12–17. This amendment to § 91.170 redesignates it as § 91.171 and requires tests and inspections, within the preceding 24-calendar months, of: pressure altitude reporting equipment; tests and inspections whenever such systems are opened and closed; and data correspondence checks between altitude and reporting transponder each time the altimeter or the encoding function has been subjected to maintenance where data correspondence error could be introduced.

Accurate altitude reporting is essential to safety. Previous regulations required accuracy checks upon initial installation of the system, but there was no provision for checks following maintenance which could affect the integrity of the system. Calibration or maintenance functions on the altimeter or the reporting equipment could lead to improper data correspondence. Therefore, this equipment should be checked for accuracy any time an error could be introduced.

Similarly, the static pressure system could be adversely affected following an opening of the system. Accordingly, this amendment requires test and inspection of the static pressure system after any opening and closing. This amendment also provides that altimeters and transponders approved under Technical Standard Orders are considered to be tested and inspected as of the date of their manufacture. However, even if the altimeter (or transponder) has been manufactured and bench checked within the preceding 24-calendar months, the integrated system would require test and inspection at the time of installation and, thereafter, as specified in § 91.171(a).

A number of commenters point out that the term "any opening" as it appears in § 91.171(a)(2) could be interpreted to require a static system test after opening system drain valves, alternate static source valves, or when a system is opened to attach test equipment. In response to these comments, an exception is included regarding these valves. No exception is made for opening the lines to attach test equipment. It would be illogical to require a system test anytime a system is opened and not require a test when opened to attach test equipment. The same or similar type system fittings are involved in both instances and would, therefore, be equally subject to leakage.

A number of commenters state that compliance with all of Appendix E of Part 43 is not required when a static system is opened or closed and that only paragraph (a) of the appendix should be required. The rule is made specific in this regard.

One commenter suggests that reference to ATC transponder equipment in § 91.171(a)(3) be deleted since a properly maintained transponder will not effect altimeter-encoder correlation and retention of this language would require unnecessary testing. The phrase, "which may effect data correspondence" adequately limits the instances in which transponder maintenance will require system tests. The reference is, therefore, retained. Except for the changes noted, the rule is adopted as proposed.

Proposal 12–18. The progressive inspection requirements of § 91.171 are transferred to § 91.169. (See Proposal 12–16, § 91.169.) This amendment also transfers the ATC transponder tests and inspection requirements of § 91.177 to new § 91.172 in order to consolidate all of the inspection requirements of Part 91 into consecutively numbered sections. This is consistent with Executive Order 12291. The phrase "after January 1, 1976" has been removed from former § 91.177 (now § 91.172(a)), and "must" is substituted for "may" in § 91.172(c).

A number of comments state that Part 135 certificate holders should be granted the same privileges regarding maintenance as Parts 121 and 127 certificate holders. Inasmuch as Part 135 certificate holders are authorized, under certain circumstances, to accomplish maintenance on aircraft, aircraft engines, propellers and appliances, they should be authorized to conduct these tests. Section 91.172(c)(2) is changed to include this privilege. The language is also changed to be consistent with other sections of Parts 91 and 43.

One commenter suggests that § 91.172 be added to the list of sections not applicable to Part 121 operators. This may be desirable, however, it is beyond the scope of Notice No. 80–22 and should be given consideration in a separate action.

Proposal 12–19. Section 91.170(a) establishes a procedure by which the Administrator may require revision of an inspection program approved under § 91.169(f)(5) as operational experience is gained. Inspection programs approved under §§ 91.169(f)(1) through (f)(4) are programs approved under Parts 121, 123, and 135, or recommended by the manufacturer. The FAA's significant experience with these programs does not indicate a need to revise them on an individual basis. They are continually revised by the holders as experience requires. Section 91.169(f)(5), on the other hand, permits the registered owner or operator of an aircraft to have an individual inspection program approved. Neither the owners/operators, nor the FAA has experience with these programs. Accordingly, revision may be necessary as operating experience is gained. This procedure provides for this revision.

Sections 91.170(b), (c), and (d) provide procedures for seeking reconsideration of any notice of required revision by the Administrator to an operator having an aircraft inspection program approved under § 91.169(f)(5). These procedures are consistent with those provided by §§ 121.373 and 135.431.

One commenter states that while the rule provides for an appeal from a notification to change a program, this is not realistic relief since the appeal must be made to the Flight Standards District Office (which is usually the office requesting the change). As the commenter states, the rule requires the petition to be submitted to the office making the request. However, internal directives require that it be forwarded to a higher level for disposition and the fears of the commenter are unfounded.

Proposal 12–20. Previous § 91.173(a) required each registered owner or operator to keep a list of the major alterations made to each airframe, engine, propeller, rotor, and appliance. However, such lists do not contain sufficient details of alterations to provide for continued maintenance and inspection subsequent to the alteration. This amendment requires that copies of the forms prescribed by § 43.9 for major alterations, which contain the necessary details, be made a part of the aircraft records.

One commenter correctly points out that the reference to § 91.177 in proposed § 91.173(a) is in error due to redesignation of § 91.177 and § 91.171. Accordingly, § 91.173 has been editorially amended for consistency with these amendments.

Similarly, another commenter correctly points out that the reference to § 43.9 in proposed § 91.173(b)(3) is in error and this is corrected to read § 43.11.

Proposal 12–21. See the explanation for 12–18 (§ 91.171).

Proposal 12–22. This amendment changes § 91.181(a) to refer to § 91.169 since the requirements of §§ 91.217, 91.219 and 91.169 are consolidated as § 91.169. Part 135 specifies inspection requirements for all aircraft operated thereunder and reference to Part 135 here is redundant and deleted.

This amendment also replaces the word "subpart," in the last sentence of § 91.181(a) with the word "part." When issuing Amendment 91–101 (37 FR 14758; July 25, 1972) the FAA stated "there is no demonstrated need at this time to require small turbopropeller-powered multiengine airplanes to be operated under the rules of Subpart D." The FAA further stated this decision "does not apply to the inspection program requirements which should be required for all turbine-powered multiengine airplanes (turbopropeller and turbojet powered airplanes) as proposed in the notice regardless of whether they are large or small." Section 91.181 of Subpart D provides that small turbopropeller-powered multiengine airplanes do not have to be operated under that subpart. However, the regulation provides that these airplanes are to be inspected in accordance with §§ 91.217 and 91.219 of Subpart D, but qualifies it by adding "when they are operated under this subpart." This qualification is incorrect since, except as otherwise provided in Part 135, they are to be inspected under this subpart whether or not they are operated under it. Therefore, the word "subpart" is changed to "part" to correct the error.

Proposal 12–23. The inspection provisions of § 91.217 have been transferred to § 91.169. See Proposal 12–16 for explanation.

Proposal 12–24. The inspection provisions of § 91.219 are transferred to § 91.169. See Proposal 12–16 for explanation.

Economic Evaluation

The rule changes reviewed above are either relieving, clarifying or they greatly improve the value of maintenance records to aircraft owners or prospective aircraft owners. Each change is covered in the following summary.

Proposal 12–1—Records of Overhaul and Rebuilding. This amendment establishes conditions which must be met before the terms "overhaul" and "rebuilt" may be used in maintenance records. There is no cost associated with this rule, as it sets no new standard or requirement. There is a nonquantifiable benefit—protection of purchasers of aircraft equipment or services by more fully documenting aircraft, engine, propeller or appliance maintenance histories.

Proposal 12–2—Persons Authorized to Perform Maintenance. This amendment makes three changes to § 43.3: one which references other regulations; one which is clearly relieving; and a third which clearly states that only

certificated persons may conduct inspections.

First, a change to § 43.3(a) provides consistency between this rule and § 43.17.

Second, a change to § 43.3(h) extends the privileges of manufacturers by allowing them to perform any inspection required by Part 91 or Part 125, instead of only 100-hour, annual, and progressive inspections. This change is clearly relieving.

Finally, a change to § 43.3(d) prevents noncertificated persons, working under the supervision of the holder of a mechanic or repairman certificate, from conducting any inspection required under Parts 91 and 125. Air carrier and manufacturers' association comments related to this amendment argue an economic need associated with continuing certain work with noncertificated persons. These comments have been basically accommodated by a change in the applicability of the rule. No details as to the economic impact of these few situations were provided by the commenters.

There may be a few instances where inspections covered by regulations have been done by noncertificated persons under the supervision of a certificated mechanic, but the real impact of this change is *de minimis* since in present practice the majority of these inspections are currently conducted by certificated persons.

Proposal 12–3—Return to Service After Maintenance. This amendment clarifies the difference between "approve for return to service" and "return to service." This clarification involves no cost, and sets no new standard.

Proposal 12–4—Persons Authorized to Approve Aircraft etc. for Return to Service. This amendment involves several clarifications to existing § 43.7, plus an added recordkeeping requirement for those persons who wish to perform preventive maintenance on private aircraft they own or operate.

The clarifications involve referring to § 43.17, which concerns mechanical work done by Canadians, and the addition of component parts in the list of items which can be returned to service by the various parties subject to this amendment. These are no-cost clarifications and do not set any new standard.

This amendment requires that records be kept for preventive maintenance, as well as maintenance, rebuilding and alteration. This is dealt with in Proposal 12–5.

Proposal 12–5—Maintenance Records. This amendment adds to maintenance reporting requirements in two ways. First, it requires the person approving maintenance for return to service to indicate, in the maintenance record, the kind of certificate that person holds. Second, it adds preventive maintenance to the types of maintenance requiring formal documentation in the relevant maintenance record.

Both of these changes, while they add to recordkeeping, involve *de minimis* costs which are well outweighed by benefits.

Present § 43.9 specifies that when a person performs maintenance, that person must enter a description of the work performed, the date of completion of the work, the name of the person performing the work, the signature of the person approving for return to service and his or her certificate number. This amendment requires a certificated mechanic to note on the record the type of certificate he or she has. This should take less than 5 seconds and is truly a minor cost.

While there is no current requirement for pilot/owners who do preventive maintenance to enter such maintenance in the maintenance record, most pilot/owners now enter such information in the maintenance record of the aircraft. It will take less than a minute to add an item to the maintenance record, and it is, therefore, a minor cost. While there is not sufficient information to estimate the cost, FAA believes that any moderate cost is balanced by the benefit of a more accurate record of maintenance performed on aircraft. The absence of comments on this aspect of the amendment supports the conclusion that its cost impact is minor.

These changes, and a similar one in Proposal 12–16, involve minor additions to the recordkeeping process which are balanced by general benefits associated with the improved equipment record that results from the minor changes. While the benefits are real, they cannot be directly quantified.

There are identifiable benefits, though they are not quantifiable. In assessing the aircraft's maintenance record, a prospective purchaser cannot always determine that appropriate persons always performed the maintenance. This situation is corrected by the amendment. Also, accidents could be caused by failure to perform preventive maintenance properly, and without a requirement to record preventive maintenance, investigative authorities might not discover the true causes of an accident. Likewise, without a complete record of maintenance including preventive maintenance, the causes of accidents may be improperly placed.

Proposal 12–6—Inspection Recording Requirements. This amendment accomplishes three basic things. First, it acts to clarify the inspection recording requirements of § 43.11. Second, it requires that the person approving an item for return to service indicate in the maintenance record the applicable kind of certificate held by that person. Third, a list of discrepancies must be provided to the owner or lessee when an aircraft is found unairworthy under an inspection required by Part 91.

The change to inspection recording requirements involves the addition of "component part" to the list of items for which entries must be made in the maintenance record after maintenance, etc. This change does not cause any party to incur a new cost, since it only adds one item to a list of items currently required to be entered in the maintenance record.

The requirement to show the type of certificate held by the person approving an item for return to service is the same as the requirement in Proposal 12–5 and involves only a minor cost.

Except for 100-hour inspections, present rules require that the owner or lessee be provided a signed and dated copy of a list of discrepancies, if the aircraft is not approved for return to service. This allows the owner of such an aircraft to "shop around" for the required part or service required to correct the discrepancy, and immediately have the aircraft returned to service after a "sign off" by the person performing the service or installing the required part. The owner whose aircraft fails a 100-hour inspection has no list of discrepancies, and, if he wishes to shop around for the required parts or service, he may have to have the aircraft fully inspected again before it can be returned to service. Therefore, allowing the same system for 100-hour and other inspections provides a consumer protection benefit to owners.

In addition, the final rule eliminates a requirement to provide the Administrator with copies of lists of discrepancies for inspections conducted in accordance with § 91.169. This change is clearly relieving.

Proposal 12–7—Intentionally False Maintenance Entries. This change to § 43.12 changes the legal criteria for prosecution of persons who make false statements in maintenance records.

This amendment provides an unquantifiable benefit to society since it makes engaging in such illegal practices more likely to result in enforcement action, and should, therefore, decrease the frequency of such activity.

Proposal 12-8—Inspection Requirements Moved. This amendment moves certain inspection requirements within the FAR, and deletes a present requirement. The changes are not substantive as to requirements or applicability, and thus is a no-cost modification.

Proposal 12-9—Inspection Required. This amendment involves no new requirements for inspection. The amendment provides references to inspection requirements under Parts 91, 123, 125 and 135. Since there are no new requirements, this amendment is a no-cost clarification of current regulations.

Proposal 12-10—Canadian Inspections. This amendment relaxes regulations concerning who may perform certain aircraft inspections. The amendment involves no new requirements, and, therefore, no costs. It improves competition and relaxes regulation, therefore, providing a positive though unquantifiable benefit.

Proposal 12-11—Preventive Maintenance. This amendment expands the list of items defined as preventive maintenance. In particular, it updates the list to include balloon preventive maintenance, on which previous regulations were silent. The proposal involves no new requirements, and, therefore, no costs.

Proposals 12-12, 12-17, 12-18 Altimeter Systems Tests (Associated deletions 12-21, 12-23, and 12-24). These amendments involve a common aircraft system, the altimeter/encoder/transponder system. The function of these instruments is to determine the altitude at which the aircraft is operating, and to encode this altitude into a radio signal and transmit a signal to the ground properly identifying the aircraft altitude. Proper functioning of the altimeter/transponder system is of critical importance to airspace control and aircraft separation.

There are three major components to the altimeter/transponder system, and several secondary components. The three major components are the altimeter, the digitizer or altitude encoder, and the transponder. The secondary components are the static system, cables connecting altimeters, encoders, transponders, and the antenna which transmits the radio signal with the encoded altitude.

Both the altimeter and the transponder are required to be checked at least each 24 months. The tests required are spelled out in Appendix E and Appendix F of Part 43. The present regulations do not spell out specific standards for tests of the system, and while these proposals specify such a test, this is not really a new requirement.

The original proposal (Notice No. 80-22) would have required full Appendix E and F tests after maintenance or repair of the altimeter or transponder. This requirement was eliminated in response to comments and after review of the proposal in light of Executive Order 12291. The amendment adopted will require only a modified test of the equipment as installed. This is a minimum test which must presently be performed before an aircraft can be returned to service after repair or maintenance of the altimeter or transponder. The test is simply a formalization of the Part 43 requirement that, after maintenance and installation of aircraft systems, the parts must be tested to determine whether they are capable of performing their intended function (§ 43.13(b)). The test also restates an already existing Part 91 regulation relating to tests of installed altimeter transponders (§ 91.36).

Proposal 12-13—Applicability of § 91.161. This amendment involves only internal consistency with the FAR, and clarifies the applicability of certain sections of Part 91 to aircraft maintained in accordance with a continuous airworthiness maintenance program. There is no new requirement, and the proposal is a no-cost editorial clarification of the rule required by other changes.

Proposal 12-14—Maintenance Required. This amendment changes references within the FAR and clarifies the disposition of maintenance for aircraft which are maintained and inspected under provisions of §§ 91.169, 91.171, and 91.172. This is not a new requirement, and the amendment is editorial and involves no cost.

Proposal 12-15—Operation after Maintenance. This amendment changes § 91.167 to prohibit any person from operating an aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless it has been approved for return to service by an authorized person, and the proper maintenance record entries have been made in the aircraft records. There is no substantive change implied by the amendment, and no new costs are incurred.

Proposal 12-16—Inspection and Maintenance Requirements. This amendment involves a consolidation of several inspection and maintenance requirements into one section of Part 91. It also provides relief to foreign operators who operate leased U.S.-registered airplanes by allowing them to use a continuous inspection program without the need for exemptions.

The amendment is clarifying and relieving, and involves no new requirements.

Proposal 12-19—Procedures for Revision of an Inspection Program. This amendment is directly related to Proposal 12-16, which consolidates a number of inspection options for operators in § 91.169. One of those options, § 91.169(f)(5), allows the owner or operator of an aircraft to establish his own individual inspection program, which must be approved by the Administrator.

The FAA has found need to require changes to individually tailored inspection programs as experience is gained, to ensure safety of operations. This amendment gives the Administrator the authority to require any such changes and sets up a procedure by which operators can petition the Administrator for reconsideration of changes required.

Proposal 12-20—Details of Maintenance Records. This amendment modifies § 91.173 in order to correct certain references and in order to require that the maintenance records of an aircraft include certain information for each major alteration to the airframe, engines, rotors, propellers and appliances. This information is already provided to aircraft owners, and most owners incorporate the information into maintenance records. It requires no new work or reporting and is, therefore, a no-cost modification. No substantive comments were received concerning this proposal to modify aircraft records.

Proposal 12-22—Changes to § 91.181. This amendment makes several changes to § 91.181 to correct a number of references to conform to the previously discussed proposals. No substantive change results from adoption of this amendment.

Amendment to § 43.1 and § 43.16

Amendment 121-165, effective October 16, 1980, changed Part 121 (by adding § 121.153) to permit U.S. air carriers to use foreign-registered aircraft, subject to certain conditions and limitations. Similar changes were made to Parts 127 and 135. These changes implemented the International Air Transportation Competition Act of 1979 (Pub. L. 96-192). This amendment makes § 43.1 compatible to new Parts 121, 127, and 135 and other amendments to Parts 43 by extending maintenance privileges and procedures to these foreign-registered aircraft when they are used,under the provisions of Parts 121, 127, and 135. Notice 80-22 did not propose amendment of § 43.16 which became effective September 11, 1980,

subsequent to the notice. However, since the provisions of § 91.217 are now lodged in § 91.169, the reference in § 43.16 to § 91.217(e) is changed to read "§ 91.169(e)."

These amendments are clarifying and editorial in nature and do not impose a burden on the public, notice and public procedure are unnecessary, and this change is adopted as noted.

Paperwork Reduction Act

Information collection requirements contained in this regulation for §§ 43.9 and 43.11 have been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96-511) and have been assigned OMB control number 2120-0020. Information collection requirements for §§ 91.167, 91.169, and 91.173 have been assigned OMB control number 2120-0005.

List of Subjects

14 CFR Part 43

Air carriers, Air transportation, Aircraft, Aviation safety, Safety

14 CFR Part 91

Air carriers, Aviation safety, Safety, Aircraft, Aircraft pilots, Air traffic control, Liquor, Narcotics, Pilots, Airspace, Air transportation, Cargo, Smoking, Airports, Airworthiness directives and standards

Adoption of the Amendments

Accordingly, Parts 43 and 91 of the Federal Aviation Regulations (14 CFR Parts 43 and 91) are amended as follows, effective Oct. 15, 1982.

PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

1. § 43.1 paragraphs (a)(1) and (2) are revised and (a)(3) is added to read as follows:

§ 43.1 Applicability.

(a) * * *

(1) Aircraft having a U.S. airworthiness certificate;

(2) Foreign-registered civil aircraft used in common carriage or carriage of mail under the provisions of Part 121, 127, or 135 of this chapter; and

(3) Airframe, aircraft engines, propellers, appliances, and component parts of such aircraft.

* * * * *

2. (12-1) By adding a new § 43.2 to read as follows:

§ 43.2 Records of overhaul and rebuilding.

(a) No person may describe in any required maintenance entry or form an aircraft, airframe, aircraft engine, propeller, appliance, or component part as being overhauled unless—

(1) Using methods, techniques, and practices acceptable to the Administrator, it has been disassembled, cleaned, inspected, repaired as necessary, and reassembled; and

(2) It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data accepteble to the Administrator, which have been developed and documented by the holder of the type certificate, supplemental type certificate, or a material, part, process, or applicance approval under § 21.305 of this chapter.

(b) No person may describe in any required maintenace entry or form an aircraft, airframe, aircraft engine, propeller, appliance, or component part as being rebuilt unless it has been disassembled, cleaned, inspected, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that either conform to new part tolerances and limits or to approved oversized or undersized dimensions.

3. (12-2) By revising the first sentence of § 43.3(a), and the last sentence of § 43.3(d); by revising § 43.3(f); by deleting § 43.3(g); by revising § 43.3(h) and redesignating it as § 43.3(g); redesignating § 43.3(i) as § 43.3(h); and by revising § 43.3(h)(3), to read as follows:

§ 43.3 Persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations.

(a) Except as provided in this section and § 43.17, no person may maintain, rebuild, alter, or perform preventive maintenance on an aircraft, airframe, aircraft engine, propeller, appliance, or component part to which this part applies: * * *

* * * * *

(d) * * * However, this paragraph does not authorize the performance of any inspection required by Part 91 or Part 125 of this chapter or any inspection performed after a major repair or alteration.

* * * * *

(f) The holder of an air carrier operating certificate or an operating certificate issued under Part 121, 127, or 135, may perform maintenance, preventive maintenance, and alterations as provided in Part 121, 127, or 135.

(g) The holder of a pilot certificate issued under Part 61 may perform preventive maintenance on any aircraft owned or operated by th
not used under Part 121,

(h) A manufacturer ma

* * * * *

(3) Perform any inspec
Part 91 or Part 125 of this
aircraft it manufacturers, ently operating under a producti certificate or under a currently approved production inspection system for such aircraft.

4. (12-3) By amending § 43.5 by inserting the phrase "approve for" before the words "return to service" in § 43.5(a) introductory text; by deleting § 43.5(a)(1); by deleting § 43.5(b); by inserting the phrase "or § 43.11, as appropriate," following "§ 43.9" in § 43.5(a)(2); by redesignating § 43.5(a) as the introductory text of the section; by redesignating § 43.5(a) (2), (3), and (4) as § 43.5 (a), (b), and (c), respectively; and by revising the heading of § 43.5 to read as follows:

§ 43.5 Approval for return to service after maintenance, preventive maintenance, rebuilding, or alteration.

* * * * *

5. (12-4) By revising § 43.7 to read as follows:

§ 43.7 Persons authorized to approve aircraft, airframes, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration.

(a) Except as provided in this section and § 43.17, no person, other than the Administrator, may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service after it has undergone maintenance, preventive maintenance, rebuilding, or alteration.

(b) The holder of a mechanic certificate or an inspection authorization may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service as provided in Part 65 of this chapter.

(c) The holder of a repair station certificate may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service as provided in Part 145 of this chapter.

(d) A manufacturer may approve for return to service any aircraft, airframe, aircraft engine, propeller, appliance, or component part which that manufacturer has worked on under § 43.3(h). However, except for minor alterations, the work must have been done in accordance with technical data approved by the Administrator.

(e) The holder of an air carrier operating certificate or an operating

certificate issued under Part 121, 127, or 135, may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service as provided in Part 121, 127, or 135 of this chapter, as applicable.

(f) A person holding at least a private pilot certificate may approve an aircraft for return to service after performing preventive maintenance under the provisions of § 43.3(g).

6. (12–5) By revising § 43.9 to read as follows:

§ 43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records (except inspections performed in accordance with Part 91, Part 123, Part 125, § 135.411(a)(1), and § 135.419 of this chapter).

(a) *Maintenance record entries.* Except as provided in paragraphs (b) and (c) of this section, each person who maintains, performs preventive maintenance, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that equipment containing the following information:

(1) A description (or reference to data acceptable to the Administrator) of work performed.

(2) The date of completion of the work performed.

(3) The name of the person performing the work if other than the person specified in paragraph (a)(4) of this section.

(4) If the work performed on the aircraft, airframe, aircraft engine, propeller, appliance, or component part has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work. The signature constitutes the approval for return to service only for the work performed.

In addition to the entry required by this paragraph, major repairs and major alterations shall be entered on a form, and the form disposed of, in the manner prescribed in Appendix B, by the person performing the work.

(b) Each holder of an air carrier operating certificate or an operating certificate issued under Part 121, 127, or 135, that is required by its approved operations specifications to provide for a continuous airworthiness maintenance program, shall make a record of the maintenance, preventive maintenance, rebuilding, and alteration, on aircraft, airframes, aircraft engines, propellers, appliances, or component parts which it operates in accordance with the applicable provisions of Part 121, 127, or 135 of this chapter, as appropriate.

(c) This section does not apply to persons performing inspections in accordance with Part 91, 123, 125, § 135.411(a)(1), or § 135.419 of this chapter.

(Approved by the Office of Management and Budget under OMB control number 2120–0020)

7. (12–6) By revising § 43.11 to read as follows:

§ 43.11 Content, form, and disposition of the records for inspections conducted under Parts 91, 123, 125, § 135.411(a)(1), and § 135.419 of this chapter.

(a) *Maintenance record entries.* The person approving or disapproving for return to service an aircraft, airframe, aircraft engine, propeller, appliance, or component part after any inspection performed in accordance with Part 91, 123, 125, § 135.411(a)(1), or § 135.419 shall make an entry in the maintenance record of that equipment containing the following information:

(1) The type of inspection and a brief description of the extent of the inspection.

(2) The date of the inspection and aircraft total time in service.

(3) The signature, the certificate number, and kind of certificate held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof.

(4) Except for progressive inspections, if the aircraft is found to be airworthy and approved for return to service, the following or a similarly worded statement—"I certify that this aircraft has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition."

(5) Except for progressive inspections, if the aircraft is not approved for return to service because of needed maintenance, noncompliance with applicable specifications, airworthiness directives, or other approved data, the following or a similarly worded statement—"I certify that this aircraft has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator."

(6) For progressive inspections, the following or a similarly worded statement—"I certify that in accordance with a progressive inspection program, a routine inspection of (identify whether aircraft or components) and a detailed inspection of (identify components) were performed and the (aircraft or components) are (approved or disapproved) for return to service." If disapproved, the entry will further state "and a list of discrepancies and unairworthy items dated (date) has been provided to the aircraft owner or operator."

(7) If an inspection is conducted under an inspection program provided for in Part 91, 123, 125, or § 135.411(a)(1), the entry must identify the inspection program, that part of the inspection program accomplished, and contain a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(b) *Listing of discrepancies.* If the person performing any inspection required by Part 91, 123, 125, or § 135.411(a)(1) of this chapter finds that the aircraft is unairworthy or does not meet the applicable type certificate data, airworthiness directives, or other approved data upon which its airworthiness depends, that person must give the owner or lessee a signed and dated list of those discrepancies.

(Approved by the Office of Management and Budget under OMB control number 2120–0020)

8. (12–7) By revising § 43.12(a)(1) to read as follows:

§ 43.12 Maintenance records: Falsification, reproduction, or alteration.

(a) * * *

(1) Any fraudulent or intentionally false entry in any record or report that is required to be made, kept, or used to show compliance with any requirement under this part;

* * * * *

9. (12–8) By deleting § 43.13(d) and revising § 43.13(c) to read as follows:

§ 43.13 Performance rules (general).

* * * * *

(c) *Special provisions for holders of air carrier operating certificates and operating certificates issued under the provisions of Part 121, 127, or 135.* Unless otherwise notified by the administrator, the methods, techniques, and practices contained in the maintenance manual or the maintenance part of the manual of the holder of an air carrier operating certificate or an operating certificate under Part 121, 127, or 135 (that is required by its operating specifications to provide a continuous airworthiness maintenance and inspection program) constitute acceptable means of compliance with this section.

10. (12–9) By revising §43.15(a) and the introductory text of (b) to read as follows:

(2) An aircraft inspected in accordance with an approved aircraft inspection program under Part 123, 125, or 135 of this chapter and so identified by the registration number in the operations specifications of the certificate holder having the approved inspection program; or

(3) An aircraft subject to the requirements of paragraph (d) or (e) of this section.

(d) *Progressive inspection.* Each registered owner or operator of an aircraft desiring to use a progressive inspection program must submit a written request to the FAA Flight Standards district office having jurisdiction over the area in which the applicant is located, and shall provide—

(1) A certificated mechanic holding an inspection authorization, a certificated airframe repair station, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;

(2) A current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail—

(i) An explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material;

(ii) An inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en route and for changing an inspection interval because of service experience;

(iii) Sample routine and detailed inspection forms and instructions for their use; and

(iv) Sample reports and records and instructions for their use;

(3) Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and

(4) Appropriate current technical information for the aircraft.

The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12-calendar months and be consistent with the manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged. The progressive inspection schedule must ensure that the aircraft, at all times, will be airworthy and will conform to all applicable FAA aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data. If the progressive inspection is discontinued, the owner or operator shall immediately notify the local FAA Flight Standards district office, in writing, of the discontinuance. After the discontinuance, the first annual inspection under § 91.169(a) is due within 12-calendar months after the last complete inspection of the aircraft under the progressive inspection. The 100-hour inspection under § 91.169(b) is due within 100 hours after that complete inspection. A complete inspection of the aircraft, for the purpose of determining when the annual and 100-hour inspections are due, requires a detailed inspection of the aircraft and all its components in accordance with the progressive inspection. A routine inspection of the aircraft and a detailed inspection of several components is not considered to be a complete inspection.

(e) *Large airplanes (to which Part 125 is not applicable), turbojet multiengine airplanes, and turbopropeller-powered multiengine airplanes.* No person may operate a large airplane, turbojet multiengine airplane, or turbopropeller-powered multiengine airplane unless the replacement times for life-limited parts specified in the aircraft specifications, type data sheets, or other documents approved by the Administrator are complied with and the airplane, including the airframe, engines, propellers, appliances, survival equipment, and emergency equipment, is inspected in accordance with an inspection program selected under the provisions of paragraph (f) of this section.

(f) *Selection of inspection programs under paragraph (e) of this section.* The registered owner or operator of each airplane described in paragraph (e) of this section must select, identify in the aircraft maintenance records, and use one of the following programs for the inspection of that airplane:

(1) A continuous airworthiness inspection program that is part of a continuous airworthiness maintenance program currently in use by a person holding an air carrier operating certificate or an operating certificate issued under Part 121, 127, or 135 of this chapter and operating that make and model airplane under Part 121 or 127 or operating that make and model under Part 135 and maintaining it under § 135.411(a)(2).

(2) An approved aircraft inspection program approved under § 135.419 of this chapter and currently in use by a person holding an operating certificate issued under Part 135.

(3) An approved continuous inspection program currently in use by a person certificated under Part 123 of this chapter.

(4) A current inspection program recommended by the manufacturer.

(5) Any other inspection program established by the registered owner or operator of that airplane and approved by the Administrator under paragraph (g) of this section. However, the Administrator may require revision to this inspection program in accordance with the provisions of § 91.170.

Each operator shall include in the selected program the name and address of the person responsible for scheduling the inspections required by the program and make a copy of that program available to the person performing inspections on the airplane and, upon request, to the Administrator.

(g) *Inspection program approval under paragraph (e) of this section.* Each operator of an airplane desiring to establish or change an approved inspection program under paragraph (f)(5) of this section must submit the program for approval to the local FAA Flight Standards district office having jurisdiction over the area in which the airplane is based. The program must be in writing and include at least the following information:

(1) Instruction and procedures for the conduct of inspections for the particular make and model airplane, including necessary tests and checks. The instructions and procedures must set forth in detail the parts and areas of the airframe, engines, propellers, and appliances, including survival and emergency equipment required to be inspected.

(2) A schedule for performing the inspections that must be performed under the program expressed in terms of the time in service, calendar time, number of system operations, or any combination of these.

(h) *Changes from one inspection program to another.* When an operator changes from one inspection program under paragraph (f) of this section to another, the time in service, calendar times, or cycles of operation accumulated under the previous program must be applied in determining inspection due times under the new program.

(Approved by the Office of Management and Budget under OMB control number 2120-0005)

19. (12–19) By deleting the subject matter of existing § 91.171; by redesignating § 91.170 as § 91.171 and adding a new § 91.170 to read as follows:

§ 91.170 Changes to aircraft inspection programs.

(a) Whenever the Administrator finds that revisions to an approved aircraft inspection program under § 91.169(f)(5) are necessary for the continued adequacy of the program, the owner or operator shall, after notification by the Administrator, make any changes in the program found to be necessary by the Administrator.

(b) The owner or operator may petition the Administrator to reconsider the notice to make any changes in a program in accordance with paragraph (a) of this section.

(c) The petition must be filed with the FAA Flight Standards district office which requested the change to the program within 30 days after the certificate holder receives the notice.

(d) Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Administrator.

20. (12–17) By revising redesignated § 91.171 to read as follows:

§ 91.171 Altimeter system and altitude reporting equipment tests and inspections.

(a) No person may operate an airplane in controlled airspace under IFR unless—

(1) Within the preceding 24 calendar months, each static pressure system, each altimeter instrument, and each automatic pressure altitude reporting system has been tested and inspected and found to comply with Appendices E and F of Part 43 of this chapter;

(2) Except for the use of system drain and alternate static pressure valves, following any opening and closing of the static pressure system, that system has been tested and inspected and found to comply with paragraph (a), Appendix E, of Part 43 of this chapter; and

(3) Following installation or maintenance on the automatic pressure altitude reporting system or the ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), Appendix E, of Part 43 of this chapter.

(b) The tests required by paragraph (a) of this section must be conducted by—

(1) The manufacturer of the airplane on which the tests and inspections are to be performed;

(2) A certificated repair station properly equipped to perform those functions and holding—

(i) An instrument rating, Class I;

(ii) A limited instrument rating appropriate to the make and model of appliance to be tested;

(iii) A limited rating appropriate to the test to be performed;

(iv) An airframe rating appropriate to the airplane to be tested; or

(v) A limited rating for a manufacturer issued for the appliance in accordance with § 145.101(b)(4) of this chapter; or

(3) A certificated mechanic with an airframe rating (static pressure system tests and inspections only).

(c) Altimeter and altitude reporting equipment approved under Technical Standard Orders are considered to be tested and inspected as of the date of their manufacture.

(d) No person may operate an airplane in controlled airspace under IFR at an altitude above the maximum altitude at which all altimeters and the automatic altitude reporting system of that airplane have been tested.

21. (12–18) By adding a new § 91.172 to read as follows:

§ 91.172 ATC transponder tests and inspections.

(a) No person may use an ATC transponder that is specified in Part 125, § 91.24(a), § 121.345(c), § 121.123(b) or § 135.143(c) of this chapter unless, within the preceding 24 calendar months, that ATC transponder has been tested and inspected and found to comply with Appendix F of Part 43 of this chapter; and

(b) Following any installation or maintenance on an ATC transponder where data correspondence error could be introduced, the integrated system has been tested, inspected, and found to comply with paragraph (c), Appendix E, of Part 43 of this chapter.

(c) The tests and inspections specified in this section must be conducted by—

(1) A certificated repair station properly equipped to perform those functions and holding—

(i) A radio rating, Class III;

(ii) A limited radio rating appropriate to the make and model transponder to be tested;

(iii) A limited rating appropriate to the test to be performed;

(iv) A limited rating for a manufacturer issued for the transponder in accordance with § 145.101(b)(4) of this chapter; or

(2) A holder of a continuous airworthiness maintenance program as provided in Part 121, 127, or § 135.411(a)(2) of this chapter; or

(3) The manufacturer of the aircraft on which the transponder to be tested is installed, if the transponder was installed by that manufacturer.

22. (12–20) By deleting the references to § 91.170 and § 91.177 in the introductory text of § 91.173(a) and inserting "§ 91.171" in their place; by deleting the reference to § 43.9 in § 91.173(b)(3) and inserting "§ 43.11" in its place; by revising § 91.173(a)(2)(vi) to read as follows:

§ 91.173 Maintenance records.

(a) * * *

(1) * * *

(2) * * *

(vi) Copies of the forms prescribed by § 43.9(a) of this chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.

* * * * *

(Approved by the Office of Management and Budget under OMB control number 2120–0005)

§ 91.177 [Reserved]

23. (12–21) By deleting § 91.177 and marking it [Reserved].

§ 91.181 [Amended]

24. (12–22) By amending § 91.181 by deleting the phrase "Sections 91.217 and 91.219 prescribe" in § 91.181(a) and substituting the phrase "Section 91.169 prescribes" in its place; by deleting the phrase "and for small turbine-powered multiengine airplanes operated under Part 135 of this chapter" in the last sentence of § 91.181(a); and substituting the word "part" for the word "subpart" in the last sentence of § 91.181(a).

§ 91.217 [Reserved]

25. By deleting § 91.217 and marking it [Reserved].

§ 91.219 [Reserved]

26. By deleting § 91.219 and marking it [Reserved].

(Secs. 313, 314, 601 through 610 Federal Aviation Act of 1958, as amended (49 U.S.C. 1354, 1355, and 1421 through 1430); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)))

Note.—These amendments are generally relieving, clarifying, or editorial in nature and will have minimal impact. Where additional requirements are imposed, their imposition results in increased value of maintenance records for aircraft owners or increased reliability of critical aircraft systems. I certify that the amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. The Federal Aviation Administration has determined that this document involves a regulation which is not a major rule under Executive Order 12291 or a significant regulation under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A copy of the final evaluation prepared for this action is contained in the regulatory docket. A copy of it may be obtained by contacting the person identified under the caption **"FOR FURTHER INFORMATION CONTACT."**

Issued in Washington, D.C., on July 29, 1982.

J. Lynn Helms,

Administrator.

[FR Doc. 82-25471 Filed 9-15-82; 8:45 am]

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§ 43.15 Additional performance rules for inspections.

(a) *General.* Each person performing an inspection required by Part 91, 123, 125, or 135 of this chapter, shall—

(1) Perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and

(2) If the inspection is one provided for in Part 123, 125, 135, or § 91.169(e) of this chapter, perform the inspection in accordance with the instructions and procedures set forth in the inspection program for the aircraft being inspected.

(b) *Rotorcraft.* Each person performing an inspection required by Part 91 on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or Instructions for Continued Airworthiness of the manufacturer concerned:

* * * * *

§ 43.16 [Amended]

11. By amending § 43.16 by deleting the reference to § 91.217(e) and substituting § 91.169(e) in its place.

12. (12–10) By revising § 43.17(a)(2) to read as follows:

§ 43.17 Mechanical work performed on U.S.-registered aircraft by certain Canadian persons.

(a) * * *

(2) Except for an annual inspection, perform any inspection required by § 91.169 of this chapter, if the inspection is done in accordance with § 43.15 and the maintenance record entries are made in accordance with § 43.11.

* * * * *

13. (12–11) By amending Appendix A of Part 43 by revising the introductory text of (c) and (c) (7), (9), (11) and (24); and adding (c) (26), (27), and (28) to read as follows:

Appendix A—Major Alterations, Major Repairs, and Preventive Maintenance

* * * * *

(c) *Preventive maintenance.* Preventive maintenance is limited to the following work, provided it does not involve complex assembly operations:

* * * * *

(7) Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces. In the case of balloons, the making of small fabric repairs to envelopes (as defined in, and in accordance with, the balloon manufacturers' instructions) not requiring load tape repair or replacement.

(8) * * *

(9) Refinishing decorative coating of fuselage, balloon baskets, wings tail group surfaces (excluding balanced control surfaces), fairings, cowlings, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required.

(10) * * *

(11) Repairing upholstery and decorative furnishings of the cabin, cockpit, or balloon basket interior when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect the primary structure of the aircraft.

* * * * *

(24) Replacing and servicing batteries.

(25) * * *

(26) Cleaning of balloon burner pilot and main nozzles in accordance with the balloon manufacturer's instructions.

(27) Replacement or adjustment of nonstructural standard fasteners incidental to operations.

(28) Removing and installing balloon baskets and burners that are specifically designed for quick removal and installations and when such removal and installation can be accomplished by the pilot, provided that baskets are not interchanged except as provided in the type certificate data sheet for that balloon.

14. (12–12) By amending Appendix E of Part 43 by redesignating paragraph (c) as (d) and adding a new (c) to read as follows:

Appendix E—Altimeter System Test and Inspection

* * * * *

(c) Automatic Pressure Altitude Reporting Equipment and ATC Transponder System Integration Test. The test must be conducted by an appropriately rated person under the conditions specified in paragraph (a). Measure the automatic pressure altitude at the output of the installed ATC transponder when interrogated on Mode C at a sufficient number of test points to ensure that the altitude reporting equipment, altimeters, and ATC transponders perform their intended functions as installed in the aircraft. The difference between the automatic reporting output and the altitude displayed at the altimeter shall not exceed 125 feet.

* * * * *

PART 91—GENERAL OPERATING AND FLIGHT RULES

15. (12–13) By revising § 91.161(b) to read as follows:

§ 91.161 Applicability.

(a) * * *

(b) Section 91.165, 91.169, 91.171, 91.173, and 91.174 of this subpart do not apply to an aircraft maintained in accordance with a continuous airworthiness maintenance program as provided in Part 121, 127, or § 135.411(a)(2) of this chapter.

* * * * *

16. (12–14) By revising § 91.165 to read as follows:

§ 91.165 Maintenance required.

Each owner or operator of an aircraft shall have that aircraft inspected as prescribed in §§ 91.169, 91.171, and 91.172 and shall, between required inspections, have discrepancies repaired as prescribed in Part 43 of this chapter. In addition, each owner or operator shall ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating that the aircraft has been approved for return to service.

17. (12–15) By revising § 91.167 to read as follows:

§ 91.167 Operation after maintenance, preventive maintenance, rebuilding, or alteration.

(a) No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless—

(1) It has been approved for return to service by a person authorized under § 43.7 of this chapter; and

(2) The maintenance record entry required by §43.9 or §43.11, as applicable, of this chapter has been made.

(b) No person may carry any person (other than crewmembers) in an aircraft that has been maintained, rebuilt, or altered in a manner that may have appreciably changed its flight characteristics or substantially affected its operation in flight until an appropriately rated pilot with at least a private pilot certificate flies the aircraft, makes an operational check of the maintenance performed or alteration made, and logs the flight in the aircraft records.

(c) The aircraft does not have to be flown as required by paragraph (b) of this section if, prior to flight, ground tests, inspections, or both show conclusively that the maintenance, preventive maintenance, rebuilding, or alteration has not appreciably changed the flight characteristics or substantially affected the flight operation of the aircraft.

(Approved by the Office of Management and Budget under OMB control number 2120–0005)

18. (12–16) By revising § 91.169(c) and by adding new §§ 91.169(d), (e), (f), (g), and (h) to read as follows:

§ 91.169 Inspections.

* * * * *

(c) Paragraphs (a) and (b) of this section do not apply to—

(1) An aircraft that carries a special flight permit, a current experimental certificate, or a provisional airworthiness certificate;