

Title 14—AERONAUTICS AND SPACE

Chapter I—Federal Aviation Administration, Department of Transportation

[Docket No. 10658, Amdts. 43-16; 91-102; 121-94; 127-28]

AIRCRAFT MAINTENANCE AND RELATED RECORDS

The purpose of these amendments to Parts 43, 91, 121, and 127 of the Federal Aviation Regulations is to revise the maintenance and related recordkeeping requirements for aircraft and aircraft components.

These amendments are based on a notice of proposed rule making (Notice 70-43) published in the FEDERAL REGISTER on October 29, 1970 (35 F.R. 16740). A number of comments were received in response to the notice and, except for those indicating agreement with the proposal or merely repeating issues discussed and disposed of in the notice, the FAA's disposition of the comments is set forth hereinafter.

Several commentators were concerned that proposed § 91.173 would require more recordkeeping than is now required by the present rule thereby increasing the burden on owners and operators. However, the comments did not cite specific examples to support their concern in this respect. In this connection, both the present and the proposed rules require a complete record of maintenance and alteration of each aircraft and engine. The proposal is clarifying, however, in specifically requiring that records of maintenance and alteration be kept also for propellers, rotors, and appliances. Moreover, whereas the present rule requires total time in service records for aircraft and certain engines, the proposal

requires such records only for the airframe and as necessary for showing the current status of life-limited parts, applicable airworthiness directives, and aircraft inspections. A primary objective of the amendments is to produce more useful records and while it is not possible to say in any given case that recordkeeping will not be increased, it is possible that in some instances, there may be a reduction.

In further connection with the recordkeeping under proposed § 91.173, one commentator was concerned that the proposal did not give assurance that work already performed would not be subject to record verification back to the time of construction of the basic airplane or component. However, the commentator's suggestion, that a date be established after which the data specified in the proposal would be required, would permit all records of work performed prior to that date to be destroyed. The purpose of the proposal was to ease the record retention requirement of the present regulations which make no provision for the disposal of superseded or obsolete records that are now part of the "permanent" records and accordingly required to be retained for the life of the article. Proposed § 91.173 effectively makes provision for retaining specific records only for the period of time they are useful, after which they may be discarded. This applies to existing as well as future records. To the extent that the commentator is concerned that the data required to be retained under the present regulations may be set forth in a number of documents and that those documents may also contain data that can be disposed of under the proposal, it should be noted that the owner or operator has the option of retaining those documents or establishing a new record containing only the required data.

Pointing out that proposed § 91.173

does not make specific provision for logging repairs or alterations by reference to FAA Form ACA-337, one commentator asked if that procedure were being deleted. The proposal makes the language of § 91.173(a)(1)(i) consistent with that of § 43.9(a)(1). Accordingly, where maintenance or alteration is recorded by reference to Form ACA-337 in compliance with § 43.9(a)(1), the owner or operator receives from the person who maintains or alters the aircraft an entry to that effect in the aircraft maintenance record. That entry meets the requirement of § 91.173(a)(1)(i) since it references data acceptable to the Administrator and any further description of the work would be superfluous. For this reason, it is unnecessary to include a provision that repairs or alterations may be logged by making specific reference to Form ACA-337 even though, as indicated above, such a recording procedure may continue to be utilized in an appropriate situation.

Three commentators requested clarification of the intent or meaning of the phrase "current status of life-limited parts" used in proposed §§ 91.173(a)(2)(ii) and 91.174(b)(4). Two other commentators questioned whether "life-limited" referred to manufacturers' recommendations or to limitations included in the aircraft type certificates issued by the FAA. The intent of the proposal is to assure that records are kept from which the "current status" of life-limited parts can be determined. The term "life-limited parts" refers to parts or components for which retirement times, service life limitations, parts retirement limitations, retirement life limitations, or life limitations exist. By whatever term they are called, such limitations on life-limited parts are those that are "required" by the Administrator under the provisions of the Federal Aviation Regulations. "Required" life limits may be

2079e

established during the type certification of a product and set forth in the type certificate data sheet (or product specification that is a part of the type certificate). They may also be established in an airworthiness directive, in an operator's operations specifications, in an FAA-approved maintenance program, including an inspection program, or in the limitations section of an Airplane Flight Manual or other manual required by an operating rule. Similarly, the phrase "required to be overhauled on a specified time basis", as used in proposed §§ 91.173(a)(2)(iii) and 91.174(b)(5), means "required" by the Administrator under the provisions of the Federal Aviation Regulations and refers to those items which must be overhauled on a specified or "hard" time inservice basis established by one of the same procedures mentioned above in connection with life-limited parts.

Indicating its belief that proposed § 91.173 does not go far enough in setting forth recording requirements, one commentator suggested that the amendment should also require a record of maintenance that had been scheduled but not performed as, for example, work written up by technicians and inspectors or included in a service bulletin but not accomplished prior to return to service because it had been deferred or deemed to be a "noncompliance" item. The situation presented by this commentator relates to air carrier operations and is, therefore, not properly cognizable under § 91.173. However, to the extent that it applies to maintenance in general, the FAA does not agree with this concept of recordkeeping. The FAA believes that a proper maintenance record is a record of the work actually done and of the identification of the persons approving the work. Moreover, contrary to a further recommendation, the FAA does not believe there is any necessity that work performed be recorded both by description and by reference to data acceptable to the Administrator since a proper description of the work may be given without reference to bulletins, manuals, or engineering data.

With reference to the disposition of records, one commentator suggested that at the time of the annual inspection, the required data on time-in-service alterations, and airworthiness directives be submitted to the FAA for retention. Another commentator in a similar vein wanted records of all work, including nondestructive test records, kept for 1 year, whether or not the work was repeated or superseded, and then micro-filmed and submitted to the FAA. The FAA disagrees with these comments. Obsolete and redundant records do not aid in determining the current condition of an aircraft, and the FAA does not have facilities to be the repository of such records. Current records, as provided in the amendment to § 91.173, are to be retained by the owner or operator.

One commentator recommended that maintenance records should be required for any time period that an aircraft may have been a public aircraft. However,

under the Federal Aviation Act of 1958 public aircraft are not subject to the certification and maintenance requirements of the Federal Aviation Regulations. Therefore, a prospective purchaser of a public aircraft must assess the records of such an aircraft against the recordkeeping requirements of § 91.173 to assure their adequacy for civil aircraft purposes. Finally, it should be noted in connection with proposed § 91.173, that clarification of the term "approved," as requested by another commentator, is unnecessary in view of the definition of that term in Part 1 of the Federal Aviation Regulations. However, § 91.173(a)(1) has been revised to make it clear that it includes records of other required inspections as well as of other approved inspections. In addition, for further clarification and consistency, § 91.173(a)(2) has been revised to list, as records required to be kept, all the information listed for transfer in § 91.174(b) of the proposal.

With regard to proposed § 91.174(b)(1), one commentator reported seeing logbook entries that recorded compliance with airworthiness directives without including a description of compliance and recommended that a "grandfather" provision be provided or the regulation be made more specific as to recording the method of compliance. Contrary to the commentator's understanding, proposed § 91.174(b)(1) merely continues the present requirement that the method of compliance must be recorded. It should be noted that airworthiness directives generally refer to a manufacturer's service bulletin for one acceptable method of compliance, and if the service bulletin is followed, the record of the method of compliance may be made by referencing the service bulletin.

The present regulations require that the entire maintenance record be given to the transferee upon disposition of an aircraft. Notice 70-43, on the other hand, proposed that the mandatory transfer of maintenance records include only summary information in the form of various status and time lists. One commentator requested clarification of the proposed record transfer requirement since it appeared that the transfer of the other maintenance records should be the subject of agreement between seller and purchaser. In this connection, the proposal continued the requirement that all maintenance records required to be kept be made available for inspection by the FAA and the National Transportation Safety Board (NTSB). Therefore, to insure the availability of necessary records, notwithstanding an intervening sale, the transfer requirements of new §§ 91.174, 121.380a, and 127.142, make provision for all maintenance records required to be kept. Following the suggestion of the commentator, maintenance records, other than the status and time summaries, may either be transferred to the purchaser or, upon agreement of seller and purchaser, remain in the physical custody of the seller. In the latter event, however, the purchaser as the new owner,

or operator, is not relieved of his responsibility to make the records available for inspection by the FAA and the NTSB.

One commentator objected to continuation of the requirement stated in proposed § 121.380(b) for retention of the record of the last complete overhaul of certain items. The commentator contends that for many such items used by air carriers, complete overhaul has been effectively superseded by the application of various maintenance control programs such as condition-monitoring and fault-isolation techniques. The FAA does not agree, however, that all provisions for overhaul record retention should be deleted. The proposal takes into account the realistic needs of the air carriers and investigative agencies in relation to the present state-of-the-art of data collection, recording, and storage. Notwithstanding the availability of various maintenance control program techniques, overhaul remains a part of maintenance even though the number of items overhauled may vary from operator to operator. Where a maintenance program for an item of aircraft equipment does not require overhaul, of course, there will be no overhaul records requiring retention under this provision. The FAA does agree that there should be a provision for the disposal of overhaul records when the work is superseded by other work. The intent of the Notice was that overhaul records not be subject to the one year rule but that they be retained until the work is superseded by work of equivalent scope and detail, and the proposal has been changed accordingly.

With reference to a query regarding the airworthiness release form, it should be noted that the form itself is not a maintenance record covered by the retention requirements of § 121.380, notwithstanding certain requirements for records relative to it as stated in that section. Retention of the airworthiness release form continues to be governed by § 121.709.

Another comment questioned the different retention times for certain records by air carriers and by repair stations and manufacturers doing work for the carriers and further alleged that the proposal requires a duplication of certain records. However, the FAA does not believe there is any inconsistency. The recording and retention requirements for the carriers on the one hand and repair stations and manufacturers on the other are necessarily governed by the needs of each and are not duplicative. A person performing maintenance for an air carrier must perform and record that work in accordance with the carrier's manual but the manual need not be identical with recording requirements for repair stations or manufacturers.

Anticipating a situation in which records required to be transferred with an aircraft might not be available, one commentator recommended the retention of the provisions of present § 121.699(c) under which an aircraft component, aircraft engine, propeller, or appliance could be placed in service without complete records if certain conditions are met.

However, since the comment was specifically directed at the airframe, the provisions of the section that is being deleted would be inapplicable in any event under the conditions stated in present § 121.699 (c). Moreover, as the commentator recognized, it would be rare not to have the aircraft history and total time records available, and such cases should be dealt with on an individual basis.

Proposed § 91.173 deletes the present reference to "permanent" maintenance records. Similarly, proposed §§ 121.380 and 127.141 delete the provisions contained in the present section which, in part, require a record of "all" maintenance. For internal consistency, the related provisions of Part 43—Maintenance, Preventive Maintenance, Rebuilding, and Alteration, should also be changed. Accordingly, this amendment includes editorial changes to §§ 43.9 and 43.11 which delete the word "permanent" in connection with maintenance record entries, and the word "all" with reference to the recording of air carrier or commercial operator maintenance, rebuilding, and alteration.

Finally, the proposal has been editorially revised and minor clarifying changes have been made in the wording of the regulations proposed in Notice 70-43. However, these changes are nonsubstantive in nature. In this connection § 91.161 (b) is being amended to exempt aircraft maintained in accordance with a continuous airworthiness maintenance program as provided in Part 121, or 127, or 135 from the requirements of § 91.174 and the same requirements are being made applicable to those certificate holders in new §§ 121.380a and 127.142. This revision is consistent with the current exemption for these aircraft from the requirements of § 91.173.

Interested persons have been afforded an opportunity to participate in the making of these amendments, and due consideration has been given to all matter presented.

In consideration of the foregoing, Parts 43, 91, 121, and 127 of the Federal Aviation Regulations are amended as follows, effective September 8, 1972:

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

§ 43.9 [Amended]

1. The lead-in sentence of paragraph (a) of § 43.9 is amended by striking out the word "permanent."

2. Paragraph (b) of § 43.9 is amended by striking out the word "all" and substituting the word "the" in place thereof.

§ 43.11 [Amended]

3. The lead-in sentence of paragraph (a) of § 43.11 is amended by striking out the word "permanent."

PART 91—GENERAL OPERATING AND FLIGHT RULES

4. Section 91.161(b) is amended to read as follows:

§ 91.161 Applicability.

(b) Sections 91.165, 91.169, 91.170, 91.171, 91.173, and 91.174 do not apply to an aircraft maintained in accordance with a continuous airworthiness maintenance program as provided in Part 121, 127, or 135 of this chapter.

5. Section 91.173 is amended to read as follows:

§ 91.173 Maintenance records.

(a) Except for work performed in accordance with § 91.170, each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

(1) Records of the maintenance and alteration, and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include—

(i) A description (or reference to data acceptable to the Administrator) of the work performed;

(ii) The date of completion of the work performed; and

(iii) The signature and certificate number of the person approving the aircraft for return to service.

(2) Records containing the following information:

(i) The total time in service of the airframe.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The identification of the current inspection status of the aircraft, including the times since the last inspections required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives, including the method of compliance.

(vi) A list of current major alterations to each airframe engine, propeller, rotor, and appliance.

(b) The owner or operator shall retain the records required to be kept by this section for the following periods:

(1) The records specified in paragraph (a) (1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records specified in paragraph (a) (2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(c) The owner or operator shall make all maintenance records required to be kept by this section available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

6. Part 91 is amended by adding a new § 91.174 following § 91.173, to read as follows:

§ 91.174 Transfer of maintenance records.

Any owner or operator who sells a U.S. registered aircraft shall transfer to the purchaser, at the time of sale, the following records of that aircraft, in plain language form or in coded form at the election of the purchaser, if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Administrator:

(a) The records specified in § 91.173 (a) (2).

(b) The records specified in § 91.173 (a) (1) which are not included in the records covered by paragraph (a) of this section, except that the purchaser may permit the seller to keep physical custody of such records. However, custody of records in the seller does not relieve the purchaser of his responsibility under § 91.173 (c), to make the records available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC, FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT

7. Section 121.369 is amended by adding a new paragraph (c) to read as follows:

§ 121.369 Manual requirements.

(c) The certificate holder must set forth in its manual a suitable system (which may include a coded system) that provides for preservation and retrieval of information in a manner acceptable to the Administrator and that provides—

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

(2) The name of the person performing the work if the work is performed by a person outside the organization of the certificate holder; and

(3) The name or other positive identification of the individual approving the work.

8. Section 121.380 is amended to read as follows:

§ 121.380 Maintenance recording requirements.

(a) Each certificate holder shall keep (using the system specified in the manual required in § 121.369) the following records for the periods specified in paragraph (b) of this section:

(1) All the records necessary to show that all requirements for the issuance of an airworthiness release under § 121.709 have been met.

(2) Records containing the following information:

(i) The total time in service of the airframe.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The identification of the current inspection status of the aircraft, including the times since the last inspections required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives, including the method of compliance.

(vi) A list of current major alterations to each airframe, engine, propeller, rotor, and appliance.

(b) Each certificate holder shall retain the records required to be kept by this section for the following periods:

(1) Except for the records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance, the records specified in paragraph (a) (1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance shall be retained until the work is superseded by work of equivalent scope and detail.

(3) The records specified in paragraph (a) (2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(c) The certificate holder shall make all maintenance records required to be kept by this section available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

9. Part 121 is amended by adding a new § 121.380a following § 121.380 in Subpart L, to read as follows:

§ 121.380a Transfer of maintenance records.

Each certificate holder who sells a U.S. registered aircraft shall transfer to the purchaser, at the time of sale, the following records of that aircraft, in plain language form or in coded form at the election of the purchaser, if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Administrator:

(a) The record specified in § 121.380 (a) (2).

(a) The records specified in § 121.380 (a) (1) which are not included in the records covered by paragraph (a) of this section, except that the purchaser may permit the seller to keep physical custody of such records. However, custody of records in the seller does not relieve the purchaser of his responsibility under § 121.380(c) to make the records available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

§ 121.698 [Reserved]

10. The section heading and substance of § 121.698 are deleted and the section is marked "reserved".

§ 121.699 [Reserved]

11. The section heading and substance of § 121.699 are deleted and the section is marked "reserved".

PART 127—CERTIFICATION AND OPERATIONS OF SCHEDULED AIR CARRIERS WITH HELICOPTERS

12. Section 127.134 is amended by adding a new paragraph (c) to read as follows:

§ 127.134 Manual requirements.

* * * * *

(c) The certificate holder must set forth in its manual a suitable system (which may include a coded system), that provides for preservation and retrieval of information in a manner acceptable to the Administrator and that provides—

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

(2) The name of the person performing the work if the work is performed by a person outside the organization of the certificate holder; and

(3) The name or other positive identification of the individual approving the work.

13. Section 127.141 is amended to read as follows:

§ 127.141 Maintenance recording requirements.

(a) Each certificate holder shall keep (using the system specified in the manual required in § 127.134) the following records for the periods specified in paragraph (b) of this section:

(1) All the records necessary to show that all the requirements for the issuance of an airworthiness release under § 127.319 have been met.

(2) Records containing the following information:

(i) The total time in service of the airframe.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The identification of the current inspection status of the aircraft, including the times since the last inspections required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives, including the method of compliance.

(vi) A list of current major alterations to each airframe, engine, propeller, rotor, and appliance.

(b) Each certificate holder shall retain the records required to be kept by this section for the following periods:

(1) Except for the records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance, the records specified in paragraph (a) (1) of this section shall be retained until the work is repeated or superseded by other

work or for 1 year after the work is performed.

(2) The records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance shall be retained until the work is superseded by work of equivalent scope and detail.

(3) The records specified in paragraph (a) (2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(c) The certificate holder shall make all maintenance records required to be kept by this section available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

14. Part 127 is amended by adding a new § 127.142 following § 127.141 in Subpart I, to read as follows:

§ 127.142 Transfer of maintenance records.

Each certificate holder who sells a U.S. registered aircraft shall transfer to the purchaser, at the time of sale, the following records of that aircraft, in plain language form or in coded form at the election of the purchaser, if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Administrator:

(a) The records specified in § 127.141 (a) (2).

(b) The records specified in § 127.141 (a) (1) which are not included in the records covered by paragraph (a) of this section, except that the purchaser may permit the seller to keep physical custody of such records. However, custody of records in the seller does not relieve the purchaser of his responsibility under § 127.141(c) to make the records available for inspection by the Administrator or any authorized representative of the National Transportation Safety Board (NTSB).

§ 127.308 [Reserved]

15. The section heading and substance of § 127.308 are deleted and the section is marked "reserved".

§ 127.309 [Reserved]

16. The section heading and substance of § 127.309 are deleted and the section is marked "reserved".

(Secs. 313(a), 601, 605, Federal Aviation Act of 1958, 49 U.S.C. 1354(a), 1421, 1425; sec. 6 (c), Department of Transportation Act, 49 U.S.C. 1655(c))

Issued in Washington, D.C., on August 1, 1972.

J. H. SHAFFER,
Administrator.