

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 8037 2/17/2000]

[Docket No. 99-CE-59-AD; Amendment 39-11576; AD 2000-03-17]

RIN 2120-AA64

Airworthiness Directives; Fairchild Aircraft, Inc. SA226 and SA227 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes Airworthiness Directive (AD) 97-23-01, which currently requires the following on Fairchild Aircraft, Inc. (Fairchild Aircraft) SA226 and SA227 series airplanes that are equipped with a certain Simmonds-Precision pitch trim actuator or a certain Barber-Colman pitch trim actuator: repetitively measuring the freeplay of the pitch trim actuator and repetitively inspecting the actuator for rod slippage; immediately replacing any actuator if certain freeplay limitations are exceeded or rod slippage is evident; and eventually replacing the actuator regardless of the inspection results. This AD retains the actions of AD 97-23-01, and adds these requirements on airplanes with different design pitch trim actuators installed. This AD is the result of the manufacturer developing different design pitch trim actuators and the Federal Aviation Administration (FAA) determining that these actuators should be subject to the actions of AD 97-23-01. The actions specified by this AD are intended to detect excessive freeplay or rod slippage in the pitch trim actuator, which, if not detected and corrected, could result in pitch trim actuator failure and possible loss of control of the airplane.

DATES: Effective April 10, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of April 10, 2000.

ADDRESSES: Service information that applies to this AD may be obtained from Field Support Engineering, Fairchild Aircraft, Inc., P.O. Box 790490, San Antonio, Texas 78279-0490; telephone: (210) 824-9421; facsimile: (210) 820-8609. This information may also be examined at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-CE-59-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Werner Koch, Aerospace Engineer, FAA, Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone: (817) 222-5133; facsimile: (817) 222-5960.

SUPPLEMENTARY INFORMATION:

Events Leading to the Issuance of This AD

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to Fairchild Aircraft SA226 and SA227 series airplanes that are equipped with a certain Simmonds-Precision pitch trim actuator or Barber-Colman pitch trim actuator was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on October 6, 1999 (64 FR 54242). The NPRM proposed to supersede AD 97-23-01, Amendment 39-10188 (62 FR 59277, November 3, 1997). AD 97-23-01 currently requires the following on Fairchild Aircraft SA226 and SA227 series airplanes that are equipped with a certain Simmonds-Precision pitch trim actuator:

- repetitively measuring the freeplay of the pitch trim actuator and repetitively inspecting the actuator for rod slippage;
- immediately replacing any actuator if certain freeplay limitations are exceeded or rod slippage is evident; and
- eventually replacing the actuator regardless of the inspection results.

In addition, AD 98-19-15 R1, Amendment 39-11507 (65 FR 1540, January 11, 2000), currently requires incorporating the following information into the applicable Airplane Flight Manual (AFM) on Fairchild SA226 and SA227 airplanes that are equipped with Barber-Colman pitch trim actuators, P/N 27-19008-001/-004 or P/N 27-19008-002/-005 (these pitch trim actuators are affected by AD 97-23-01):

- "Limit the maximum indicated airspeed to maneuvering airspeed (V_a) as shown in the appropriate airplane flight manual (AFM)." and
- "The minimum crew required is two pilots."

The NPRM proposed to retain the requirements of AD 97-23-01, but would add these requirements on airplanes with the improved design pitch trim actuators installed.

The NPRM was the result of the manufacturer developing different design pitch trim actuators and the Federal Aviation Administration (FAA) determining that these actuators should be subject to the actions of AD 97-23-01.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposed rule or the FAA's determination of the cost to the public.

The FAA's Determination

After careful review of all available information related to the subject presented above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. The FAA has determined that these minor

corrections will not change the meaning of the AD and will not add any additional burden upon the public than was already proposed.

Cost Impact

The FAA estimates that 508 airplanes in the U.S. registry will be affected by this AD. The only cost impact that this AD imposes upon the public over that already required by AD 97-23-01 is that incurred through the addition of the requirements on airplanes with the improved design pitch trim actuators installed. The costs of this AD on those airplanes that have these improved design pitch trim actuators incorporated will be less than that already required by AD 97-23-01 on airplanes with other pitch trim actuators installed.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

2. Section 39.13 is amended by removing Airworthiness Directive (AD) 97-23-01, Amendment 39-10188 (62 FR 5922, November 3, 1997), and by adding a new AD to read as follows:

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION

P.O. BOX 26460

OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation

**Federal Aviation
Administration**

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

2000-03-17 FAIRCHILD AIRCRAFT, INC.: Amendment 39-11576; Docket No. 99-CE-59-AD, Supersedes AD 97-23-01, Amendment 39-10188; which superseded AD 93-15-02 R2, Amendment 39-9689; which revised AD 93-15-02 R1, Amendment 39-9180; which revised AD 93-15-02, Amendment 39-8648.

Applicability: All SA226 and SA227 series airplanes (all models and serial numbers), certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To detect excessive freeplay or rod slippage in the pitch trim actuator, which, if not detected and corrected, could result in pitch trim actuator failure and possible loss of control of the airplane, accomplish the following:

NOTE 2: The paragraph structure of this AD is as follows:

Level 1: (a), (b), (c), etc.

Level 2: (1), (2), (3), etc.

Level 3: (i), (ii), (iii), etc.

Level 2 and Level 3 structures are designations of the Level 1 paragraph they immediately follow.

(a) Accomplish the following at the times specified in the chart in paragraph (b) of this AD:

(1) Initial and repetitive inspections:

(i) For airplanes equipped with a Simmonds-Precision actuator, P/N DL5040M5, P/N DL5040M6, or P/N DL5040M8, measure the freeplay (inspection) of the pitch trim actuator and inspect the actuator for rod slippage in accordance with the INSTRUCTIONS section of Fairchild Aircraft SA226 Series Service Letter (SL) 226-SL-005, or Fairchild Aircraft SA227 Series SL 227-SL-011, both Revised: August 3, 1999; or Fairchild Aircraft SA227 Series Service Letter CC7-SL-028, Issued: August 12, 1999, as applicable.

(ii) For airplanes equipped with Barber-Colman actuators, P/N 27-19008-00-001, P/N 27-19008-002, P/N 27-19008-00-004, or P/N 27-19008-005, conduct a functional inspection of the actuator in accordance with the INSTRUCTIONS section of Fairchild Aircraft SA226 Series SL 226-SL-014, Revised: February 1, 1999, Fairchild Aircraft SA227 Series SL 227-SL-031, Revised: February 1, 1999, or Fairchild Aircraft SA227 Series SL CC7-SL-021, Revised: February 1, 1999, whichever is applicable.

NOTE 3: The actions in this AD are the same as the actions in AD 97-23-01, except for the actions added to the airplanes equipped with improved design pitch trim actuators.

(2) Initial and repetitive replacements: Replace the pitch trim actuator with any of the pitch trim actuators presented in the Chart in paragraph (b) of this AD, as applicable, at the time specified in the Repetitive Replacement column of this chart. However, if certain freeplay limitations that are specified in the service letters are exceeded or if rod slippage is found, prior to further flight, replace the pitch trim actuator.

(b) The following chart presents the pitch trim actuator that could be installed and the initial and repetitive inspection and replacement compliance times of this AD:

| Condition | Initial Inspection | Repetitive Inspection | Repetitive Replacement |
|---|---|--|---|
| For all affected airplane models, except for the Models SA227-CC and SA227-DC, with an original Simmonds-Precision actuator, P/N DL5040M5, installed. | Upon accumulating 3,000 hours TIS on a Simmonds-Precision P/N DL5040M5 actuator or within 50 hours TIS after April 17, 1995 (the effective date of AD 93-15-02 R1), whichever occurs later. | Every 250 hours TIS after the initial inspection until accumulating 5,000 hours TIS on the actuator or 500 hours TIS after the last inspection required by AD 93-15-02 R1, whichever occurs later. | Initially upon accumulating 5,000 hours TIS on the actuator or 500 hours TIS after the initial inspection, whichever occurs later, and thereafter as indicated below. |
| For all affected airplane models, except for the Models SA227-CC and SA227-DC, with a replacement Simmonds-Precision actuator, P/N DL5040M5, installed. | Initially upon accumulating 5,000 hours TIS on the new actuator or within 50 hours TIS after April 17, 1995 (the effective date of AD 93-15-02 R1), whichever occurs later. | Every 300 hours TIS after the initial inspection until accumulating 6,500 hours TIS on the actuator. | Upon accumulating 6,500 hours TIS on the actuator. |

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| For all affected airplane models, except for the Models SA227-CC and SA227-DC, with a replacement Simmonds-Precision actuator, P/N DL5040M6, installed. This part can be new, modified from a P/N DL5040M5 actuator, or overhauled and zero-timed. | Initially upon accumulating 7,500 hours TIS on the new or modified actuator or within 50 hours TIS after April 17, 1995 (the effective date of AD 93-15-02 R1), whichever occurs later. | Every 300 hours TIS after the initial inspection until accumulating 9,900 Hours TIS on the actuator. | Upon accumulating 9,900 hours TIS on the actuator. |
| For all affected airplane models, except for the Models SA227-CC and SA227-DC, with a replacement Simmonds-Precision actuator, P/N DL5040M5, installed that was overhauled and zero-timed where both nut assemblies, P/N AA56142, were replaced with new assemblies during overhaul. | Initially upon accumulating 5,000 hours TIS on the overhauled actuator or within 50 hours TIS after April 17, 1995 (the effective date of AD 93-15-02 R1), whichever occurs later. | Every 300 hours TIS after the initial inspection until Accumulating 6,500 hours TIS on the actuator. | Upon accumulating 6,500 hours TIS on the actuator. |
| For all affected airplane models, except for the Models SA227-CC and SA227-DC, with a replacement P/N DL5040M5 actuator installed that was overhauled and zero-timed where both nut assemblies, P/N AA56142, were not replaced with new assemblies during overhaul. | Initially upon accumulating 3,000 hours TIS on the overhauled actuator or within 50 hours TIS after April 17, 1995 (the effective date of AD 93-15-02 R1), whichever occurs later. | Every 250 hours TIS after the initial inspection until accumulating 5,000 hours TIS on the actuator. | Upon accumulating 5,000 hours TIS on the actuator. |
| For all affected airplane models with a newly fabricated or overhauled and zero-timed Barber-Colman actuator, P/N 27-19008-001/-004 or P/N 27-19008-002/-005. | Upon accumulating 500 hours total TIS on the newly fabricated or overhauled and zero-timed actuator or within 50 hours TIS after the effective date of AD 97-23-01, whichever occurs later. | Every 300 hours TIS after the initial inspection. | None. |

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|---|--|--|--|
| For the Models SA227-CC and SA227-DC only, with a Simmonds-Precision pitch trim actuator, P/N DL5040M5 or P/N DL5040M6, installed | None. | None. | Upon accumulating 1,500 hours TIS on the actuator. |
| For all affected airplanes with a Barber-Colman P/N 27-19008-006 or 27-19008-007 actuator installed. | Must be overhauled upon the accumulation of 2,000 hours TIS on the actuator | Must be overhauled at intervals not to exceed 2,000 hours TIS. | No replacement requirements. |
| For all affected airplanes with a Simmonds-Precision pitch trim actuator, P/N DL5040M8, installed | Upon accumulating 7,500 hours TIS on the actuator or within the next 50 hours TIS after the effective date of this AD, whichever occurs later. | Every 600 hours TIS after the initial inspection until accumulating 9,900 hours TIS. | Upon accumulating 9,900 hours TIS on the actuator. |

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(d) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Airplane Certification Office (ACO), FAA, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150.

(1) The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Fort Worth Airplane Certification Office.

(2) Alternative methods of compliance that were approved in accordance with AD 97-23-01 are considered to be approved as alternative methods of compliance with this AD.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Fort Worth Airplane Certification Office.

(e) (1) The inspections required by this AD shall be done in accordance with the following:

(i) Fairchild Aircraft SA226 Series SL 226-SL-005, Revised: August 3, 1999; or

(ii) Fairchild Aircraft SA227 Series SL 227-SL-011; Revised: August 3, 1999; or

- (iii) Fairchild Aircraft SA227 Series SL CC7-SL-028, Issued: August 12, 1999; and
- (iv) Fairchild Aircraft SA226 Series SL 226-SL-014, Revised: February 1, 1999; or
- (v) Fairchild Aircraft SA227 Series SL 227-SL-031, Revised: February 1, 1999; or
- (vi) Fairchild Aircraft SA227 Series SL CC7-SL-021, Revised: February 1, 1999.

(2) This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Field Support Engineering, Fairchild Aircraft Inc., P.O. Box 790490, San Antonio, Texas 78279-0490. Copies may be inspected at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 301, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(f) This amendment supersedes 97-23-01, Amendment 39-10188; which superseded AD 93-15-02 R2, Amendment 39-9689; which revised AD 93-15-02 R1, Amendment 39-9180; which revised AD 93-15-02, Amendment 39-8648.

(g) This amendment becomes effective on April 10, 2000.

FOR FURTHER INFORMATION CONTACT: Mr. Werner Koch, Aerospace Engineer, FAA, Airplane Certification Office, 2601 Meacham Boulevard, Fort Worth, Texas 76193-0150; telephone: (817) 222-5133; facsimile: (817) 222-5960.

Issued in Kansas City, Missouri, on February 9, 2000.

Michael K. Dahl, Acting Manager, Small Airplane Directorate, Aircraft Certification Service.