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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0313; Directorate Identifier 2007-CE-095-AD; Amendment 39-15560; AD 2008-12-16]

RIN 2120-AA64

Airworthiness Directives; M7 Aerospace LP SA226 and SA227 Series Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain M7 Aerospace LP SA226 and SA227 series airplanes. This AD requires you to inspect electrical wires/components, hydraulic and bleed air tube assemblies at left-hand (LH) and right-hand (RH) inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson. If chafing/arcing is found, this AD requires you to reposition, repair, and/or replace all chafed electrical wires, components, and hydraulic and bleed air tube assemblies, as required. This AD also requires you to reposition the battery lead cables, cover four-gauge wires leaving the battery box with firesleeving and secure with clamps, and protect the battery power cable. This AD results from five reports of chafing between the bleed air tube and the electrical starter cables with one incident resulting in a fire. We are issuing this AD to detect and correct chafing/arcing of electrical wires, components, and bleed air lines. This condition could result in arcing of the exposed wires and burn a hole in the bleed air line or the nearby hydraulic line, and lead to a possible hydraulic fluid leak and fire in the engine nacelle compartment.

DATES: This AD becomes effective on July 23, 2008.

On July 23, 2008, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

ADDRESSES: For service information identified in this AD, contact M7 Aerospace Repair Station, P.O. Box 790490, San Antonio, Texas 78279-0490; telephone: (210) 824-9421; fax: (210) 804-7789.

To view the AD docket, go to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or on the Internet at http://www.regulations.gov. The docket number is FAA-2008-0313; Directorate Identifier 2007-CE-095-AD.

FOR FURTHER INFORMATION CONTACT: Werner Koch, Aerospace Engineer, FAA, Airplane Certification Office, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5133; fax: (817) 222-5960.

SUPPLEMENTARY INFORMATION:

Discussion

On March 7, 2008, we issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to certain M7 Aerospace LP SA226 and SA227 series airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on March 14, 2008 (73 FR 13806). The NPRM proposed to require you to inspect electrical wires/components, hydraulic and bleed air tube assemblies at LH and RH inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson. If chafing/arcing is found, this proposed AD would require you to reposition, repair, and/or replace all chafed electrical wires, components, and hydraulic and bleed air tube assemblies, as required. This proposed AD would also require you to reposition the battery lead cables, cover four-gauge wires leaving the battery box with firesleeving and secure with clamps, and protect the battery power cable.

Comments

We provided the public the opportunity to participate in developing this AD. We received no comments on the proposal or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial corrections. We have determined that these minor corrections:

Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

Costs of Compliance

We estimate that this AD affects 330 airplanes in the U.S. registry.

We estimate the following costs for all Models SA226, SA227, SA227-CC, and SA227-DC airplanes to do the inspection following SA226 Series Service Bulletin No. 226-24-036, SA227 Series Service Bulletin No. 227-24-019, or SA227 Series Commuter Category Service Bulletin No. CC7-24-010:

Labor Cost	Parts Cost	Total Cost Per Airplane	Total Cost on U.S. Operators
4 work-hours X $80 per hour = $320	Not Applicable.	$320	$105,600

We estimate the following costs for certain Models SA226-AT, SA226-T, and SA226-TC airplanes for the repositioning of battery lead cables following SA226 Series Service Bulletin No. SB 24-001:

Labor Cost	Parts Cost	Total Cost Per Airplane	Number of Airplanes Affected	Total Cost on U.S. Operators
4 work-hours X $80 per hour = $320	$6.80	$326.80	2	$653.60

We estimate the following costs for certain Models SA226-AT, SA226-T, SA226-TC, SA227-AC, and SA227-AT airplanes following SA226 Series Service Bulletin No. SB24-019 or SA227 Series Service Bulletin No. SB24-001, for the covering of four-gauge wires leaving battery box with firesleeving and securing with clamp:

Labor Cost	Parts Cost	Total Cost Per Airplane	Number of Airplanes Affected	Total Cost on U.S. Operators
13 work-hours X $80 per hour = $1,040	$6.80	$1,046.80	70	$73,276

We estimate the following costs for certain Models SA226-AT, SA226-TC, SA227-AC, and SA227-AT airplanes following SA226 Series Service Bulletin No. SB24-020 or SA227 Series Service Bulletin No. SB24-002, for the protection of the battery power cable:

Labor Cost	Parts Cost	Total Cost Per Airplane	Number of Airplanes Affected	Total Cost on U.S. Operators
50 work-hours X $80 per hour = $4,000	$3,000	$7,000	60	$420,000

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this AD.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a "significant rule" under the 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.

We prepared a summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket No. FAA-2008-0313; Directorate Identifier 2007-CE-095-AD" in your request.

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, under 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. FAA amends § 39.13 by adding the following new AD:

2008-12-16-M7 Aerospace LP: Amendment 39-15560; Docket No. FAA-2008-0313; Directorate Identifier 2007-CE-095-AD.

Effective Date

(a) This AD becomes effective on July 23, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to the following airplane models and serial numbers (S/N) that are certificated in any category:

(1) Group 1: Model SA226-AT Airplanes, All S/N.
(2) Group 2: Model SA226-T Airplanes, All S/N.
(3) Group 3: Model SA226-TC Airplanes, All S/N.
(4) Group 4: Model SA227-AC Airplanes, All S/N.
(5) Group 5: Model SA227-AT Airplanes, All S/N.
(6) Group 6: Model SA227-CC Airplanes, All S/N.
(7) Group 7: Model SA227-DC Airplanes, All S/N.

Unsafe Condition

(d) This AD results from five reports of chafing between the bleed air tube and the electrical starter cables with one incident resulting in a fire. We are adopting this AD to detect and correct chafing/arcing of electrical wires, components, and bleed air lines. This condition could result in arcing of the exposed wires and burn a hole in the bleed air line or the nearby hydraulic line, and lead to a possible hydraulic fluid leak and fire in the engine nacelle compartment.

Compliance

(e) To address this problem, you must do the following, unless already done:

Table 1.–Actions, Compliance, and Procedures

Actions	Compliance	Procedures
(1) For Group 1, Group 2, and Group 3 Airplanes: (i) Inspect electrical wires/components, hydraulic and bleed air tube assemblies at left-hand (LH)/right-hand (RH) inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson for any evidence of chafing/arcing. Clear, repair, and/or replace all chafed electrical wires and components, hydraulic, and bleed air tube assemblies, and all feed-through locations, as required. (ii) Reposition battery lead cables, protect the battery power cable, and cover four-gauge wires leaving battery box with firesleeving and secure with clamp.	Within 250 hours time-in-service (TIS) after July 23, 2008 (the effective date of this AD). Repetitively thereafter inspect (paragraph (e)(1)(i) of this AD) at intervals not to exceed 12 months.	Follow M7 Aerospace SA226 Series Service Bulletin No. 226-24-036, issued: September 19, 2007; Swearingen Aviation Corporation SA226 Series Service Bulletin No. SB 24-001, issued: May 18, 1971; revised: September 16, 1975; Fairchild Aircraft Corporation SA226 Series Service Bulletin No. SB 24-019, issued: June 2, 1982; revised: May 17, 1983; and Fairchild Aircraft Corporation SA226 Series Service Bulletin No. SB 24-020, issued: January 18, 1983; revised: February 15, 1984.
(2) For Group 4 and Group 5 Airplanes: (i) Inspect electrical wires/components, hydraulic and bleed air tube assemblies at LH/RH inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson for any evidence of chafing/arcing. Clear, repair, and/or replace all chafed electrical wires and components, hydraulic, and bleed air tube assemblies, and all feed-through locations, as required. (ii) Protect the battery power cable and cover four-gauge wires leaving battery box with firesleeving and secure with clamp.	Within 250 hours TIS after July 23, 2008 (the effective date of this AD). Repetitively thereafter inspect (paragraph (e)(2)(i) of this AD) at intervals not to exceed 12 months.	Follow M7 Aerospace SA227 Series Service Bulletin No. 227-24-019, issued: September 19, 2007; Fairchild Aircraft Corporation SA227 Series Service Bulletin No. SB24-001, issued: June 2, 1982; revised: May 17, 1983; and Fairchild Aircraft Corporation SA227 Series Service Bulletin No. SB24-002, issued: January 18, 1983; revised: February 15, 1984.

(3) For Group 6 and Group 7 Airplanes: Inspect electrical wires/components, hydraulic and bleed air tube assemblies at LH/RH inboard wing leading edge/battery box areas, LH/RH wing stations 51.167 to 81.174, and at all feed-through locations into the LH/RH inboard keelson for any evidence of chafing/arcing. Clear, repair, and/or replace all chafed electrical wires and components, hydraulic, and bleed air tube assemblies, and all feed-through locations, as required.	Within 250 hours TIS after July 23, 2008 (the effective date of this AD). Repetitively thereafter inspect at intervals not to exceed 12 months.	Follow M7 Aerospace SA227 Series Commuter Category Service Bulletin No. CC7-24-010, issued: September 19, 2007.

Note: Although not a requirement of this AD, you may incorporate Swearingen Aviation Corporation SA226 Series Service Bulletin No. 57-010, Revised: December 5, 1975, on those airplanes that have not installed the access panel. Installation of the access panel will simplify the incorporation of the service bulletins referenced in this AD and future inspections of the areas of concern.

Alternative Methods of Compliance (AMOCs)

(f) The Manager, Fort Worth Airplane Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Werner Koch, Aerospace Engineer, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5133; fax: (817) 222-5960. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

Material Incorporated by Reference

(g) You must use the service information specified in TABLE 2–
Material Incorporated by Reference of this AD to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact M7 Aerospace Repair Station, P.O. Box 790490, San Antonio, Texas 78279-0490; telephone: (210) 824-9421; fax: (210) 804-7789.

(3) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Table 2.–Material Incorporated by Reference

Service Bulletin No.	Date
(i) M7 Aerospace SA226 Series Service Bulletin No. 226-24-036	Issued: September 19, 2007
(ii) Swearingen Aviation Corporation SA226 Series Service Bulletin No. SB 24-001	Issued: May 18, 1971 Revised: September 16, 1975
(iii) Fairchild Aircraft Corporation SA226 Series Service Bulletin No. SB 24-019	Issued: June 2, 1982 Revised: May 17, 1983
(iv) Fairchild Aircraft Corporation SA226 Series Service Bulletin No. SB 24-020	Issued: January 18, 1983 Revised: February 15, 1984
(v) M7 Aerospace SA227 Series Service Bulletin No. 227-24-019	Issued: September 19, 2007
(vi) Fairchild Aircraft Corporation SA227 Series Service Bulletin No. SB24-001	Issued: June 2, 1982 Revised: May 17, 1983
(vii) Fairchild Aircraft Corporation SA227 Series Service Bulletin No. SB24-002	Issued: January 18, 1983 Revised: February 15, 1984
(viii) M7 Aerospace SA227 Series Commuter Category Service Bulletin No. CC7-24-010	Issued: September 19, 2007

Issued in Kansas City, Missouri, on June 4, 2008.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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