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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0119; Directorate Identifier 2008-CE-068-AD; Amendment 39-15916; AD 2009-11-06]

RIN 2120-AA64

Airworthiness Directives; M7 Aerospace LP Models SA226-AT, SA226-T, SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, and SA227-DC (C-26B) Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) to supersede AD 2008-12-16, which applies to certain M7 Aerospace LP SA226 and SA227 series airplanes. AD 2008-12-16 currently requires you to inspect wires and tube assemblies for chafing, arcing, or insufficient clearance between components. If chafing, arcing, or insufficient clearance between components is found, AD 2008-12-16 requires you to clear, repair, and/or replace all chafed wires, components, and tube assemblies. AD 2008-12-16 also requires you to cover the four-gauge wires leaving the battery box with firesleeving and secure them with a clamp. Since we issued AD 2008-12-16, M7 Aerospace LP has notified us that Model SA227-BC (C-26A) was inadvertently left out of the Applicability section of the AD, and they updated some of the service information due to parts availability. Operators have also identified issues with model applicability that needed clarification. Consequently, this AD retains the actions of AD 2008-12-16, adds Model SA227-BC (C-26A) to the Applicability section, and regroups the models for clarification. We are issuing this AD to detect and correct chafing of electrical wires, components, and tube assemblies. This condition could result in arcing of exposed wires with consequent burning of a hole in a hydraulic line or the bleed air line. This failure could lead to a hydraulic fluid leak and a possible fire in the engine nacelle compartment.

DATES: This AD becomes effective on July 2, 2009.

On July 2, 2009, the Director of the Federal Register approved the incorporation by reference of certain publications listed in Table 2 of this AD.

As of July 23, 2008 (73 FR 34615, June 18, 2008), the Director of the Federal Register approved the incorporation by reference of certain publications listed in Table 3 of this AD.

ADDRESSES: For service information identified in this AD, contact M7 Aerospace Repair Station, 10823 NE Entrance Road, San Antonio, Texas 78216; telephone: (210) 824-9421; fax: (210) 804-7766; Internet: <http://www.m7aerospace.com>.

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-2009-0119; Directorate Identifier 2008-CE-068-AD.

FOR FURTHER INFORMATION CONTACT: Werner Koch, Aerospace Engineer, ASW-150, Fort Worth Airplane Certification Office, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5133; fax: (817) 222-5960.

SUPPLEMENTARY INFORMATION:

Discussion

On February 6, 2009, 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 February 12, 2009 (74 FR 7006). The NPRM proposed to supersede AD 2008-12-16 with a new AD that would retain the actions of AD 2008-12-16, add the Model SA227-BC (C-26A) to the Applicability section, and regroup the models for clarification.

Comments

We provided the public the opportunity to participate in developing this AD. The following presents the comment received on the proposal and FAA's response:

Comment Issue: Inspection Applicability

George L. Smith commented that it was unclear if paragraph (e)(3) of the AD applied to airplanes with batteries mounted in the nose of the airplane or if the AD only applied to airplanes with the battery located in the wing leading edge.

As specified in the Applicability section, this AD applies to all serial numbers regardless of where the battery is located. Therefore the actions required in paragraph (e)(3) of this AD apply to all airplanes listed in the Applicability section regardless of where the battery is located. For added clarity we are adding the applicable serial numbers to the paragraph.

We are changing the final rule AD by adding the applicable serial numbers to each action based on this comment.

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 the change previously discussed and 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 268 airplanes in the U.S. registry.

We estimate the following costs to do the inspection:

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	\$85,760

We estimate the following costs to do any necessary modifications for certain Models SA226-AT, SA226-T, SA226-TC, SA227-AC, and SA227-AT airplanes referenced in M7 Aerospace SA226 Series Service Bulletin 226-24-019, revised: November 21, 2008; or M7 Aerospace SA227 Series Service Bulletin 227-24-001, revised: November 21, 2008. We estimate 88 airplanes may need this modification:

Labor Cost	Parts Cost	Total Cost Per Airplane	Total Cost on U.S. Operators
13 work-hours X \$80 per hour = \$1,040	\$7	\$1,047	\$92,136

We estimate the following costs to do any necessary repairs for certain Models SA226-AT, SA226-TC, SA227-AC, and SA227-AT referenced in M7 Aerospace SA226 Series Service Bulletin 226-24-020, revised: August 4, 2008; or M7 Aerospace SA227 Series Service Bulletin 227-24-002, revised: November 21, 2008. We have no way of determining the number of airplanes that may need this repair:

Labor Cost	Parts Cost	Total Cost Per Airplane
50 work-hours X \$80 per hour = \$4,000	\$3,000	\$7,000

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-2009-0119; Directorate Identifier 2008-CE-068-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. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2008-12-16, Amendment 39-15560 (73 FR 34615, June 18, 2008), and adding the following new AD:



2009-11-06 M7 Aerospace LP: Amendment 39-15916; Docket No. FAA-2009-0119; Directorate Identifier 2008-CE-068-AD.

Effective Date

- (a) This AD becomes effective on July 2, 2009.

Affected ADs

- (b) This AD supersedes AD 2008-12-16, Amendment 39-15560.

Applicability

(c) This AD applies to Models SA226-AT, SA226-T, SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, and SA227-DC (C-26B) airplanes, all serial numbers, that are certificated in any category.

Unsafe Condition

(d) This AD results from five reports of chafing between the bleed air tube assembly and the electrical starter cables on M7 Aerospace LP SA226 and SA227 series airplanes with one incident resulting in a fire. We are issuing this AD to detect and correct chafing of electrical wires and components, hydraulic tube assemblies, and bleed air tube assemblies. This condition could result in arcing of the exposed wires with consequent burning of a hole in a hydraulic line or the bleed air line. This failure could 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
<p>(1) For the following model and serial number (S/N) airplanes, inspect the main battery leads running forward from the battery compartment for deterioration, cover the four-gauge wires leaving the battery box with firesleeving, and secure them with a clamp:</p> <p>(i) SA226-AT, S/N AT-001 through AT-419;</p> <p>(ii) SA226-T, S/N T-201 through T-248;</p> <p>(iii) SA226-TC, S/N TC-201 through TC-419;</p> <p>(iv) SA227-AC (C-26A), S/N AC-420 through AC-539, AC-541, AC-543, AC-544, AC-547 through AC-551; and</p> <p>(v) SA227-AT, S/N AT-423 through AT-551.</p>	<p>Within 250 hours time-in-service (TIS) after July 23, 2008 (the effective date of AD 2008-12-16).</p>	<p>Use the following service information as applicable:</p> <p>(A) For Models SA226-AT, SA226-T, and SA226-TC airplanes: Follow M7 Aerospace SA226 Series Service Bulletin No. 226-24-019, revised: November 21, 2008; or Fairchild Aircraft Corporation SA226 Series Service Bulletin No. SB 24-019, revised: May 17, 1983; or</p> <p>(B) For Models SA227-AC (C-26A) and SA227-AT airplanes: Follow M7 Aerospace SA227 Series Service Bulletin No. 227-24-001, revised: November 21, 2008; or Fairchild Aircraft Corporation SA227 Series Service Bulletin No. SB24-001, revised: May 17, 1983.</p>
<p>(2) For the following model and S/N airplanes, reroute the hydraulic tube assemblies in the right wing leading edge, reroute the battery cables and 22-gauge wire bundle, and install a new access panel forward of the battery box:</p> <p>(i) SA226-AT, S/N AT-001 through AT-074;</p> <p>(ii) SA226-TC, S/N TC-201 through TC-419;</p> <p>(iii) SA227-AC (C-26A), S/N AC-420 through AC-539, AC-541, AC-543, AC-544, AC-547 through AC-550; and</p> <p>(iv) SA227-AT, S/N AT-423 through AT-551.</p>	<p>Before further flight after the modification required in paragraph (e)(1) of this AD and you were not able to obtain a minimum 0.50-inch clearance between the bleed air line and the tubing on the battery cables.</p>	<p>Use the following service information as applicable:</p> <p>(A) For Models SA226-AT, and SA226-TC airplanes: Follow M7 Aerospace SA226 Series Service Bulletin No. 226-24-020, revised: August 4, 2008; or Fairchild Aircraft Corporation SA226 Series Service Bulletin No. SB 24-020, revised: February 15, 1984; or</p> <p>(B) For Models SA227-AC (C-26A) and SA227-AT, airplanes: Follow M7 Aerospace SA227 Series Service Bulletin No. 227-24-002, revised: November 21, 2008; or Fairchild Aircraft Corporation SA227 Series Service Bulletin No. SB24-002, revised: February 15, 1984.</p>

<p>(3) For model SA226-AT, SA226-T, SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-CC, and SA227-DC (C-26B) airplanes, all S/N: Inspect electrical wires and components, hydraulic tube assemblies, and bleed air tube assemblies at the left hand and right hand (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 or arcing.</p>	<p>Within 250 hours TIS after July 23, 2008 (the effective date of AD 2008-12-16). Repetitively thereafter inspect at intervals not to exceed 12 months.</p>	<p>Use the following service information as applicable:</p> <p>(i) For Models SA226-AT, SA226-T, and SA226-TC airplanes: Follow M7 Aerospace SA226 Series Service Bulletin No. 226-24-036, revised November 21, 2008; or M7 Aerospace SA226 Series Service Bulletin No. 226-24-036, issued: September 19, 2007;</p> <p>(ii) For Models SA227-AC (C-26A) and SA227-AT, airplanes: Follow M7 Aerospace SA227 Series Service Bulletin No. 227-24-019, revised: November 21, 2008; or M7 Aerospace SA227 Series Service Bulletin No. 227-24-019, issued: September 19, 2007; or</p> <p>(iii) For Models SA227-CC and SA227-DC (C-26B) airplanes: Follow SA227 Series Commuter Category Service Bulletin No. CC7-24-010, revised November 21, 2008; or SA227 Series Commuter Category Service Bulletin No. CC7-24-010, issued September 19, 2007.</p>
<p>(4) For model SA227-BC (C-26A) airplanes, all S/N: Inspect the main battery leads running forward from the battery compartment for any evidence of insulation deterioration.</p>	<p>Within 250 hours TIS after July 2, 2009 (the effective date of this AD).</p>	<p>Follow M7 Aerospace SA227 Series Service Bulletin No. 227-24-001, revised: November 21, 2008.</p>
<p>(5) For model SA227-BC (C-26A) airplanes, all S/N: Inspect electrical wires and components, hydraulic tube assemblies, 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 insulation deterioration, chafing, or arcing.</p>	<p>Within 250 hours TIS after July 2, 2009 (the effective date of this AD). Repetitively thereafter inspect at intervals not to exceed 12 months.</p>	<p>Follow M7 Aerospace SA227 Series Service Bulletin No. 227-24-019, revised: November 21, 2008.</p>

(6) For all model and S/N airplanes: Clear, repair, and/or replace all electrical wires and components, hydraulic tube assemblies, and bleed air tube assemblies, in the inspection area and feed-through locations that show any sign of insulation deterioration, chafing, or arcing, as required.	Before further flight after any inspection required in paragraphs (e)(1), (e)(3), (e)(4), and (e)(5) of this AD where any evidence of insulation deterioration, chafing, or arcing was found.	Use the service information from paragraphs (e)(1), (e)(3), (e)(4), and (e)(5) of this AD, as applicable.
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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, ASW-150, Fort Worth Airplane Certification Office, 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 or Table 3 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 the service information listed in Table 2 of this AD under 5 U.S.C. 552(a) and 1 CFR part 51.

Table 2–Material Incorporated by Reference

Service Bulletin No.	Date
(i) M7 Aerospace SA226 Series Service Bulletin No. 226-24-019	Revised: November 21, 2008
(ii) M7 Aerospace SA226 Series Service Bulletin No. 226-24-020	Revised: August 4, 2008
(iii) M7 Aerospace SA226 Series Service Bulletin No. 226-24-036	Revised: November 21, 2008
(iv) M7 Aerospace SA227 Series Service Bulletin No. 227-24-001	Revised: November 21, 2008
(v) M7 Aerospace SA227 Series Service Bulletin No. 227-24-002	Revised: November 21, 2008
(vi) M7 Aerospace SA227 Series Service Bulletin No. 227-24-019	Revised: November 21, 2008
(vii) M7 Aerospace SA227 Series Commuter Category Service Bulletin No. CC7-24-010	Revised: November 21, 2008

(2) On July 23, 2008 (73 FR 34615, June 18, 2008), the Director of the Federal Register approved the incorporation by reference of the service information listed in Table 3 of this AD.

Table 3—Previous Material Incorporated by Reference

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

(3) For service information identified in this AD, contact M7 Aerospace Repair Station, 10823 NE Entrance Road, San Antonio, Texas 78216; telephone: (210) 824-9421; fax: (210) 804-7766; Internet: <http://www.m7aerospace.com>.

(4) You may review copies of the service information incorporated by reference for this AD at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the Central Region, call (816) 329-3768.

(5) You may also review copies of the service information incorporated by reference for this AD 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/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on May 18, 2009.

Kim Smith,
Manager, Small Airplane Directorate,
Aircraft Certification Service.