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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0023; Directorate Identifier 2013-CE-048-AD; Amendment 39-17837; AD 2014-09-02]

RIN 2120-AA64

Airworthiness Directives; M7 Aerospace LLC Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain M7 Aerospace LLC Models SA26-T, SA26-AT, SA226-AT, SA226-T, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-TT, SA227-BC (C-26A), SA227-CC, and SA227-DC (C-26B) airplanes. This AD was prompted by reports of jamming of the aileron control cable chain in the pilot and copilot control columns due to inadequate lubrication and maintenance of the chain. This AD requires repetitively replacing and lubricating the aileron chain, sprocket, and bearings in the control columns. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective June 5, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of June 5, 2014.

ADDRESSES: For service information identified in this AD, contact M7 Aerospace LP, 10823 NE Entrance Road, San Antonio, Texas 78216; phone: (210) 824-9421; fax: (210) 804-7766; Internet: <http://www.elbitsystems-us.com>; email: none. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0023; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S.

Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Andrew McAnaul, Aerospace Engineer, FAA, ASW-150 (c/o San Antonio MIDO), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; phone: (210) 308-3365; fax: (210) 308-3370; email: andrew.mcanaul@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain M7 Aerospace LLC Models SA26-T, SA26-AT, SA226-AT, SA226-T, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-TT, SA227-BC (C-26A), SA227-CC, and SA227-DC (C-26B) airplanes. The NPRM published in the Federal Register on January 21, 2014 (79 FR 3336). The NPRM proposed to require repetitively replacing and lubricating the aileron chain, sprocket, and bearings in the control columns.

Comments

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

Request To Withdraw the Proposed AD

Pat Kremer of Ameriflight, LLC stated that the proposed AD is too broad of a stroke across the industry because of a limited number of operators that have not performed maintenance to the level in the proposed AD.

Pat Kremer also stated they replace the aileron chains every 10,000 hours time-in-service (TIS) (the compliance time in the proposed AD), along with the respective cables, on their fleet of 45 Model SA227 airplanes, and they have only occasionally found bearings that are worn. He also stated that they have never found a faulty sprocket.

From these statements, we infer that Pat Kremer wants the proposed AD withdrawn because it is unnecessary and already covered through general maintenance.

We do not agree with the commenter. The flight hour and calendar replacement times in the proposed AD were based on service history showing wear and corrosion in the aileron chains and metal wear to the sprocket teeth. For example, a worn chain that jammed in the control column had only 7,000 total hours TIS and 17 years in service. Another operator found a severely corroded chain that had been installed for 18 years. M7 Aerospace, LLC received two aileron chains replaced by an operator after 10,000 hours TIS and thought to be "good"; however, M7 found those chains had small metal particles within the grease, not from the chain but from worn sprockets. We also mirrored the required replacement times specified in the related service information provided by M7 Aerospace, LLC, the type certificate holder. M7 Aerospace, LLC. Customer Support representatives have a long history with these airplanes and have regularly seen issues over the last 30 years where the chains and bearings need to be replaced. Based on their service history experience, M7 Aerospace, LLC believes and the FAA has determined that including replacement of the sprocket and bearing with the chain replacement more fully addresses the unsafe condition. Although some operators do repetitively replace the aileron chains during cable replacement without finding damage, the original maintenance requirements do not clearly require mandatory periodic replacement of the chain, sprocket, and bearings, as intended by the airplane's manufacturer. We believe the replacement times in the proposed AD are necessary to assure that no unsafe condition develops due to an operator failing to comply with the proposed replacement times and lubrication requirements.

We have not changed the final rule AD action based on this comment.

Request To Incorporate Revised Service Bulletin

M7 Aerospace, LLC requested that we incorporate Revision 3 of SA26 Series Service Bulletin 26-27-001, dated April 8, 2014, into the AD to replace SA26 Series Service Bulletin 26-27-001 R2, dated October 23, 2013.

M7 Aerospace, LLC issued revision 3 to correct the part number of the chain in Steps 1.D.(1)(a) NOTE, 1.D.(4), 2.A.(2), and Table 1. Revision 3 also states that this part number chain must be used with new sprocket per Kit 26K71004-001. The SA26 airplanes were supplied with chain P/N 26-71026-001 and sprocket P/N 26-71010-001 from the factory. This chain and sprocket are a matched set. The new replacement chain P/N 27-71026-003 and sprocket included in kit P/N 27K71004-001 are also a matched set. Do not cross mix and match these chains and sprockets as the sprockets have different teeth pitch to mate with their respective chain. Only install either the chain P/N 27-71026-003 with sprocket kit P/N 27K71004-001 as a matched set or alternatively chain P/N 26-71026-001 with sprocket P/N 26-71010-001 as a matched set.

We agree with the commenter and have changed the final rule AD action based on this comment.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 3336, January 21, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 3336, January 21, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD affects 360 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacing and lubricating the aileron chain, sprocket, and bearings in the control columns	20 work-hours × \$85 per hour = \$1,700	\$1,935	\$3,635	\$1,308,600

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 rulemaking action.

Regulatory Findings

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 DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

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 FAA amends 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 adding the following new airworthiness directive (AD):



2014-09-02 M7 Aerospace LLC: Amendment 39-17837; Docket No. FAA-2014-0023; Directorate Identifier 2013-CE-048-AD.

(a) Effective Date

This AD is effective June 5, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to M7 Aerospace LLC Models SA226-AT, SA226-T, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-TT, SA227-BC (C-26A), SA227-CC, and SA227-DC (C-26B) airplanes, all serial numbers; Model SA26-T airplanes, serial numbers T26-2 through T26-99; and Model SA26-AT airplanes, serial numbers AT26-100 through AT26-180E, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code: 27, Flight Controls.

(e) Unsafe Condition

This AD was prompted by reports of jamming of the aileron control cable chain in the pilot and copilot control columns. We are issuing the AD to prevent jamming of the aileron control cable chain, which could result in loss of control.

(f) Compliance

Comply with this AD by doing the actions specified in paragraph (g) through paragraph (h) of this AD, including all subparagraphs, unless already done.

(g) Initially Replace and Lubricate the Aileron Control Cable Chain, Sprocket, and Bearings

Initially replace and lubricate the aileron control cable chain, sprocket, and bearings, and check the aileron control cable tension based on the conditions and compliance times in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, including all subparagraphs. The corrosion preventative must be removed from the chain (but not the cable) and the required actions must be done following the Accomplishment Instructions in M7 Aerospace LLC SA26 Series Service Bulletin 26-27-001 R3, dated April 8, 2014; M7 Aerospace LLC SA226 Series Service Bulletin 226-27-074 R2, dated October 23, 2013; M7 Aerospace LLC SA227 Series Service Bulletin 227-27-054 R2, dated October 23, 2013; and M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-27-026

R2, dated October 23, 2013, as applicable. Criteria for the term "properly lubricated" is included in paragraphs 5a, 5b, and 5c of the Accomplishment Instructions section of M7 Aerospace LLC SA26 Series Service Bulletin 26-27-001 R3, dated April 8, 2014, and paragraphs 6a, 6b, and 6c of the Accomplishment Instructions section of M7 Aerospace LLC SA226 Series Service Bulletin 226-27-074 R2, dated October 23, 2013; M7 Aerospace LLC SA227 Series Service Bulletin 227-27-054 R2, dated October 23, 2013; and M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-27-026 R2, dated October 23, 2013.

(1) A review of the airplane records positively indicates that the aileron control cable chain in the pilot's and the copilot's control columns have been replaced and properly lubricated: At whichever of the compliance times specified in paragraphs (g)(1)(i) or (g)(1)(ii) of this AD that occurs later.

(i) On or before reaching 10,000 hours time-in-service (TIS) from the time of the last aileron control cable chain replacement or within 13 years from the date of the last aileron control cable chain replacement, whichever occurs first.

(ii) Within the next 24 months from June 5, 2014 (the effective date of this AD).

(2) A review of the airplane records positively indicates that the aileron control cable chain in the pilot's and the copilot's control columns have been replaced within the last 10,000 hours TIS, but proper lubrication cannot be verified: At whichever of the compliance times specified in paragraphs (g)(2)(i) or (g)(2)(ii) of this AD that occurs first.

(i) On or before reaching 10,000 hours TIS since the last replacement or within the next 1,000 hours TIS after June 5, 2014 (the effective date of this AD), whichever occurs later.

(ii) Within the next 24 months from June 5, 2014 (the effective date of this AD).

(3) A review of the airplane records does not positively indicate that the aileron control cable chain in the pilot's and the copilot's control columns have been replaced within the last 10,000 hours TIS: At the compliance times specified in paragraphs (g)(3)(i), (g)(3)(ii), (g)(3)(iii), and (g)(3)(iv) of this AD, as applicable.

(i) For airplanes with less than 10,000 hours TIS: At whichever of the compliance times specified in paragraphs (3)(i)(A) or (3)(i)(B) of this AD that occurs first:

(A) On or before reaching 10,000 hours TIS or within the next 1,000 hours TIS after June 5, 2014 (the effective date of this AD), whichever occurs later.

(B) Within the next 24 months after June 5, 2014 (the effective date of this AD).

(ii) For airplanes with 10,000 hours TIS or more but less than 20,001 hours TIS: Within the next 1,000 hours TIS after June 5, 2014 (the effective date of this AD) or within the next 12 calendar months after June 5, 2014 (the effective date of this AD), whichever occurs first.

(iii) For airplanes with 20,001 hours TIS or more but less than 30,001 hours TIS: Within the next 750 hours TIS after June 5, 2014 (the effective date of this AD) or within the next 6 calendar months after June 5, 2014 (the effective date of this AD), whichever occurs first.

(iv) For airplanes with 30,001 hours TIS or more: Within the next 400 hours TIS after June 5, 2014 (the effective date of this AD) or within the next 3 calendar months after June 5, 2014 (the effective date of this AD), whichever occurs first.

(h) Repetitively Replace and Lubricate the Aileron Control Cable Chain, Sprocket, and Bearings

Replace and lubricate the aileron control cable chain, sprocket, and bearings, and check the aileron control cable tension repetitively thereafter at intervals not to exceed 10,000 hours TIS or 13 years after the date of the last aileron control cable chain replacement, whichever occurs first. The corrosion preventative must be removed from the chain (but not the cable) and the required actions must be done following the Accomplishment Instructions in M7 Aerospace LLC SA26 Series Service Bulletin 26-27-001 R3, dated April 8, 2014; M7 Aerospace LLC SA226 Series Service Bulletin 226-27-074 R2, dated October 23, 2013; M7 Aerospace LLC SA227 Series Service Bulletin 227-27-054 R2, dated October 23, 2013; and M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-27-026 R2, dated October 23, 2013, as applicable.

(i) Credit for Actions Done Following Previous Service Information

This AD allows credit for the actions required in paragraphs (g)(1) through (g)(3) of this AD, including all subparagraphs, if done before June 5, 2014 (the effective date of this AD), following M7 Aerospace LLC SA26 Series Service Bulletin 26-27-001, dated June 6, 2013, or Service Bulletin 26-27-001 R1, dated September 30, 2013; M7 Aerospace LLC SA226 Series Service Bulletin 226-27-074, dated June 6, 2013, or Service Bulletin 226-27-074 R1, dated September 30, 2013; M7 Aerospace LLC SA227 Series Service Bulletin 227-27-054, dated June 6, 2013, or Service Bulletin 227-27-054 R1, dated September 30, 2013; and M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-27-026, dated June 6, 2013, or Service Bulletin CC7-27-026 R1, dated September 30, 2013, as applicable.

(j) Paperwork Reduction Act Burden Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(k) Alternative Methods of Compliance (AMOCs)

(1) 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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

For more information about this AD, contact Andrew McAnaul, Aerospace Engineer, FAA, ASW-150 (c/o San Antonio MIDO), 10100 Reunion Place, Suite 650, San Antonio, Texas 78216; phone: (210) 308-3365; fax: (210) 308-3370; email: andrew.mcanaul@faa.gov.

(m) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) M7 Aerospace LLC SA26 Series Service Bulletin 26-27-001 R3, dated April 8, 2014.

(ii) M7 Aerospace LLC SA226 Series Service Bulletin 226-27-074 R2, dated October 23, 2013.

(iii) M7 Aerospace LLC SA227 Series Service Bulletin 227-27-054 R2, dated October 23, 2013.

(iv) M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-27-026 R2, dated October 23, 2013.

(3) For M7 Aerospace service information identified in this AD, contact M7 Aerospace LP, 10823 NE Entrance Road, San Antonio, Texas 78216; phone: (210) 824-9421; fax: (210) 804-7766; Internet: <http://www.elbitsystems-us.com>; email: none.

(4) You may view this service information at FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

(5) You may view this service information that is incorporated by reference 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>.

Issued in Kansas City, Missouri, on April 18, 2014.

Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.