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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0892; Directorate Identifier 2008-CE-049-AD; Amendment 39-15742; AD 2008-24-02]

RIN 2120-AA64

Airworthiness Directives; Maule Aerospace Technology, Inc. M-4, M-5, M-6, and M-7 Series and Model M-8-235 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA adopts a new airworthiness directive (AD) for certain Maule Aerospace Technology, Inc. M-4, M-5, M-6, and M-7 series and Model M-8-235 airplanes. This AD requires you to paint the top of the rear elevator control horn, the elevator control cable end attached to the top of the rear control horn, the bottom of the forward elevator control horn, and the elevator control cable end attached to the bottom of the forward control horn. This AD also requires you to insert a supplement into your maintenance program (maintenance manual). This AD results from two reports of accidents where reversed elevator control rigging was a factor. We are issuing this AD to reduce the likelihood of a mechanic rigging the elevator controls backwards, which could result in elevator movement in the opposite direction from control input. This condition could lead to loss of control.

DATES: This AD becomes effective on December 30, 2008.

On December 30, 2008, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

ADDRESSES: To get the service information identified in this AD, contact Maule Aerospace Technology, Inc., 2099 Georgia Highway 133 South, Moultrie, Georgia 31788; telephone: (229) 985-2045; fax: (229) 985-2048; e-mail: engineering@mauleairinc.com; Internet: http://www.mauleairinc.com/service_bulletins.htm.

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-2008-0892; Directorate Identifier 2008-CE-049-AD.

FOR FURTHER INFORMATION CONTACT: Cindy Lorenzen, Aerospace Engineer, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6078; fax: (770) 703-6097; e-mail: cindy.lorenzen@faa.gov; or

Gerald Avella, Aerospace Engineer, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6066; fax: (770) 703-6097; e-mail: gerald.avella@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On August 12, 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 Maule Aerospace Technology, Inc. M-4, M-5, M-6, and M-7 series and Model M-8-235 airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on August 19, 2008 (73 FR 48314). The NPRM proposed to require you to paint the top of the rear elevator control horn, the elevator control cable end attached to the top of the rear control horn, the bottom of the forward elevator control horn, and the elevator control cable end attached to the bottom of the forward control horn. The NPRM also proposed to require you to insert a supplement into your maintenance program (maintenance manual).

Comments

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

Comment Issue No. 1: The AD Should Not Be Issued

An anonymous commenter suggests that the AD is unnecessary because mechanics should already know to always check the rigging of the flight controls anytime the cables have been disconnected and re-connected. The commenter requests that we not issue the AD.

While we agree mechanics should always check the rigging of the control cables for proper operation anytime the cables have been re-connected to the airplane, there have been instances where this has not happened and it has led to accidents. To minimize the possibility of incorrect flight control system assembly, this AD requires color coding the cables and control horns, which will provide a visual aid to the mechanic during reassembly.

We are not changing the AD as a result of this comment.

Comment Issue No. 2: Removal of the Word "Horn" From Paragraph (e)(1)(iii)

Mr. Geoffrey Sharp comments that the word "horn" does not make sense in the painting instruction requiring painting of "the bottom of the forward elevator control horn." We infer that he is requesting that we remove the word "horn" from paragraph (e)(1)(iii) of the AD.

We do not agree with the comment. The instructions to paint the elevator control horn are correct. The horn is the connecting piece for the control cables. However, upon review we noticed that the word horn was omitted from paragraph (e)(1)(iv) of the proposed AD.

We are changing paragraph (e)(1)(iv) of this AD by adding the word "horn" to the end of the sentence. We have also made this change in the Summary and Discussion sections of this AD.

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 changes 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 1,765 airplanes in the U.S. registry.

We estimate the following costs to do the modification:

Labor Cost	Parts Cost	Total Cost Per Airplane	Total Cost on U.S. Operators
1 work-hour X \$80 per hour = \$80	\$20	\$ 100	\$176,500

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-2008-0892; Directorate Identifier 2008-CE-049-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 a new AD to read as follows:



AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/ www.gpoaccess.gov/fr/advanced.html

2008-24-02 Maule Aerospace Technology, Inc.: Amendment 39-15742; Docket No. FAA-2008-0892; Directorate Identifier 2008-CE-049-AD.

Effective Date

(a) This AD becomes effective on December 30, 2008.

Affected ADs

(b) None.

Applicability

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

Model	Serial Numbers
Bee Dee M-4	All serial numbers
M-4	All serial numbers
M-4-180C	All serial numbers
M-4-180V	47001T through 47014T
M-4-210	All serial numbers
M-4-210C	All serial numbers
M-4-210S	All serial numbers
M-4-220C	All serial numbers
M-4-220S	All serial numbers
M-4C	All serial numbers
M-4S	All serial numbers
M-4T	All serial numbers
M-5-180C	All serial numbers
M-5-200	All serial numbers
M-5-210C	All serial numbers
M-5-210TC	All serial numbers
M-5-220C	All serial numbers
M-5-235C	All serial numbers
M-6-180	8020C, 8043C, 8065C through 8067C
M-6-235	7249C, 7356C, 7379C through 7444C, 7446C through 7450C, 7452C
	through 7459C, 7461C through 7466C, 7468C, 7469C, 7471C
	through 7475C, 7488C through 7514C, 7516C through 7522C
M-7-235	4001C through 4132C, 12001C, 12002C
M-7-235A	24001C
M-7-235B	23001C through 23105C
M-7-235C	25001C through 25106C

M-7-260 26001C through 26021C M-7-260C 30001C through 30040C M-7-420A 35001C M-7-420AC 29001C, 29003C through 29007C M-8-235 15001C through 15006C MT-7-235 18001C through 18097C, 18099C, 18100C MT-7-260 27001C through 27014C MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C		
M-7-420A 35001C M-7-420AC 29001C, 29003C through 29007C M-8-235 15001C through 15006C MT-7-235 18001C through 18097C, 18099C, 18100C MT-7-260 27001C through 27014C MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-180C 34001C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	M-7-260	26001C through 26021C
M-7-420AC 29001C, 29003C through 29007C M-8-235 15001C through 15006C MT-7-235 18001C through 18097C, 18099C, 18100C MT-7-260 27001C through 27014C MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-180C 34001C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	M-7-260C	30001C through 30040C
M-8-235 15001C through 15006C MT-7-235 18001C through 18097C, 18099C, 18100C MT-7-260 27001C through 27014C MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-180C 34001C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 33010C MX-7-180C 28001C through 28027C	M-7-420A	35001C
MT-7-235 18001C through 18097C, 18099C, 18100C MT-7-260 27001C through 27014C MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-180C 34001C MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	M-7-420AC	29001C, 29003C through 29007C
MT-7-260 27001C through 27014C MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-160C 34001C MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 33010C MX-7-180C 28001C through 28027C	M-8-235	15001C through 15006C
MT-7-420 51001C, 51002C MX-7-160 19001C through 19046C MX-7-160C 34001C MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180B 22001C through 33010C MX-7-180C 28001C through 28027C	MT-7-235	18001C through 18097C, 18099C, 18100C
MX-7-160 19001C through 19046C MX-7-160C 34001C MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180AC 33001C through 33010C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	MT-7-260	27001C through 27014C
MX-7-160C 34001C MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180AC 33001C through 33010C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	MT-7-420	51001C, 51002C
MX-7-180 11001C through 11097C MX-7-180A 20001C through 20064C MX-7-180AC 33001C through 33010C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	MX-7-160	19001C through 19046C
MX-7-180A 20001C through 20064C MX-7-180AC 33001C through 33010C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	MX-7-160C	34001C
MX-7-180AC 33001C through 33010C MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	MX-7-180	11001C through 11097C
MX-7-180B 22001C through 22025C, 22027C MX-7-180C 28001C through 28027C	MX-7-180A	20001C through 20064C
MX-7-180C 28001C through 28027C	MX-7-180AC	33001C through 33010C
<u>~</u>	MX-7-180B	22001C through 22025C, 22027C
	MX-7-180C	28001C through 28027C
MX-7-235 10001C through 10122C	MX-7-235	10001C through 10122C
MX-7-420 13001C through 13003C	MX-7-420	13001C through 13003C
MXT-7-160 17001C through 17008C	MXT-7-160	17001C through 17008C
MXT-7-180 14000C through 14125C	MXT-7-180	14000C through 14125C
MXT-7-180A 21001C through 21096C	MXT-7-180A	21001C through 21096C

Unsafe Condition

(d) This AD results from two reports of accidents where reversed elevator control rigging was a factor. We are issuing this AD to reduce the likelihood of a mechanic rigging the elevator controls backwards, which could result in elevator movement in the opposite direction from control input. This failure could lead to loss of control.

Compliance

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

Actions	Compliance	Procedures
(1) Using yellow enamel paint, color code the following:	Before the next time the elevator control	Follow Maule Aerospace Technology, Inc. Mandatory
(i) the top of the rear elevator control horn;	cable is disconnected for any reason or within the next 12	Service Bulletin No. 30, dated March 4, 2008.
(ii) the elevator control cable end attached to the top of the rear control horn;	calendar months after December 30, 2008 (the effective	
(iii) the bottom of the forward elevator control horn; and	date of this AD), whichever occurs first.	
(iv) the elevator control cable end attached to the bottom of the forward control horn.	1115t.	

(2) Insert the following text into the rigging procedure section of your FAA-approved maintenance program (e.g. maintenance manual):

"CAUTION – BEFORE FLIGHT WHENEVER ELEVATOR CABLES ARE RECONNECTED OR NEW CABLES INSTALLED: Always check operation of elevators after a cable reconnect by pulling back on the control and ascertain that the elevators are in the UP position." Before the next time the elevator control cable is disconnected for any reason or within the next 12 calendar months after December 30, 2008 (the effective date of this AD), whichever occurs first. Follow Maule Aerospace
Technology, Inc. Mandatory
Service Bulletin No. 30, dated
March 4, 2008. You may insert a
copy of this AD or you may
insert the text located on the
bottom of page 3 of Maule
Aerospace Technology, Inc.
Mandatory Service Bulletin No.
30, dated March 4, 2008, into the
FAA-approved maintenance
program (e.g. maintenance
manual).

Alternative Methods of Compliance (AMOCs)

(f) The Manager, Atlanta Aircraft Certification Office (ACO), 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: Gerald Avella, Aerospace Engineer, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6066; fax: (770) 703-6097; e-mail: gerald.avella@faa.gov. 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 Maule Aerospace Technology, Inc. Mandatory Service Bulletin No. 30, dated March 4, 2008, 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 Maule Aerospace Technology, Inc., 2099 Georgia Highway 133 South, Moultrie, Georgia 31788; telephone: (229) 985-2045; fax: (229) 985-2048; e-mail: engineering@mauleairinc.com; Internet: http://www.mauleairinc.com.
- (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/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on November 10, 2008. James E. Jackson, Acting Manager, Small Airplane Directorate, Aircraft Certification Service.