



AEROSPACE
TECHNOLOGY, INC.

FAA Approved: *[Signature]*

Date: SEP 01 1999

Page 1 of 4

SERVICE LETTER NO. 59

Date: 8/9/99

SUBJECT: Horizontal Stabilizer Struts, Lower Strut Attach Stub Tubes and Attaching Hardware.

AIRPLANES AFFECTED: All Maule Models M-5 and up.

STATUS: This Service Letter should be considered a caution of a potential safety of flight problem. This field fix is designed to reduce the possibility of corrosion in the affected areas and to eliminate possible defective bolts. Replacement parts may be ordered from Maule Air, Inc.

BACKGROUND: Maule has received a report that the seal on the inside of the lower Strut Attach Stub Tubes can deteriorate with age which could cause corrosion on the interior of the attach tubes, especially on models manufactured before approximately 1985 and floatplane models. Also corrosion in a horizontal stabilizer strut could structurally weaken the strut or lead to corrosion damage either of which could cause failure of a strut. (NOTE: There has never been a reported failure of these struts or their attach tubes and they have been load substantiated to the ultimate load for 3300# gross weight.) Also, there is a possibility that when using corrosion resistant bolts, the bolt threads were not properly lubricated before inserting and the bolts could have been over-torqued.

COMPLIANCE: It is recommended that the stabilizer struts be removed to inspect struts and lower attach stub tubes and stabilizer and strut attaching bolts and nuts at next 100 hr. or annual inspection. If using Corrosion Resistant Nuts and Bolts, it is highly recommended that the removal, inspection and replacement in accordance with this service letter of these nuts and bolts be completed before further flight. CAUTION: Until this is done, visually inspect all horizontal stabilizer attachment points for integrity of the bolts every preflight.

ACTION TO BE TAKEN AND MATERIAL REQUIRED:

- 1) Remove stabilizer struts and inspect struts and lower attach stub tubes and attaching bolts and nuts.

CAUTION: Special attention should be given to the stabilizer strut Lower Attach Stub Tubes that are welded to the lower longerons.

- 2) After strut removal, if there is visible external corrosion around the attach stub tubes, or the internal seal appears loose or cracked, remove the seal, clean the inside of the tube and visually inspect the inside for corrosion.

NOTE: Earlier model Maule airplanes used a hard seal filler material, which may crack or lose adhesion with the tube. Later Models (manufactured after approximately 1985) used silicone rubber as a seal, which is more compliant and durable.

- 3) If corrosion is found, repair in accordance with AC 43.13-1B. After repair, or if no corrosion is found, fill entire tube with silicone rubber to seal tube from moisture.

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- 4) Inspect the stabilizer struts for dents, corrosion, or punctures and replace if necessary. Any paint loss or minor corrosion should be sanded down to bare metal with fine sandpaper and metal primer should be applied. After the primer is dried, a finish coat of the desired color may be added. Powder coating is recommended if complete strut is being refinished.
- 5) Reinstall struts using new hardware. Install new stabilizer attach bolts and nuts if corrosion resistant.

CAUTION: When installing optional Corrosion Resistant Nuts and Bolts, lubricate bolts with LPS-3 (or equivalent) before inserting and take special care that threads are not damaged during insertion. Torque nuts to 20 inch-pounds maximum.

The following parts for Horizontal Stabilizer Strut Inst. are available through Maule, if required:

3158B	2 ea.	Strut – Stabilizer (4130 Steel or Stainless Steel)
AN3-10 <u>or</u>		
AN3C10 (Corrosion Resistant)	8 ea.	Bolt
AN960-10 <u>or</u>		
AN960C10L (Corrosion Resistant)	8 ea.	Washer
AN365-1032 <u>or</u>		
AN365C1032 (Corrosion Resistant)	8 ea.	Nut
Drawing 3172F		Horizontal Stabilizer Installation

The following Double Struts, available through Maule, are recommended for Floatplanes and Banner-towing airplanes: (Reference Drawing 3172F)

Use 3268E Strut when fittings are already welded in stabilizer or if welded in fittings are installed. (aircraft built after approx. 8/97 have fittings already installed at factory).

For 3268E Auxiliary Stabilizer Strut:

3268E	2 ea.	Strut –Horizontal Stabilizer, Aux.
3258A-1	2 ea.	Fitting, Horiz. Stab.
3269B-1	2 ea.	Clip – Aux. Stab. Strut
3269B-2	2 ea.	Clip – Aux. Stab. Strut
XAM-3MT-C3	2 ea.	Rod End
AN3-7A <u>or</u>		
AN3C17A (Corrosion Resistant)	2 ea.	Bolt
AN316-4 <u>or</u>		
AN316C4 (Corrosion Resistant)	2 ea.	Nut, Check

or

Use 1252B Strut when installation without welded fittings in stabilizer is preferred.

For 1252B Auxiliary Stabilizer Strut:

1252B (1L/1R)	2 ea.	Strut –Horizontal Stabilizer, Aux.
3172F-12	2 ea.	Bushing
AN3-14A <u>or</u>		
AN3C14A (Corrosion Resistant)	2 ea.	Bolt

Date: SEP 01 1999

Page 3 of 4

SERVICE LETTER NO. 59

Date: 8/9/99

For 1252B Auxiliary Stabilizer Strut: Cont'd

AN3-15A or

AN3C15A (Corrosion Resistant) 2 ea. Bolt

AN365-1032 or

AN365C1032 (Corrosion Resistant) 4 ea. Nut, Elastic Stop

AN960-10 or

AN960C10 (Corrosion Resistant) 4 ea. Washer

Document in aircraft records.

Note: Page 4 is the Service Letter Compliance Record Sheet and is to be completed and returned to Maule engineering records.

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COMPLIANCE RECORD SHEET

Aircraft Model _____

Aircraft Serial No. _____

Action taken (PLEASE CHECK AS REQUIRED):

- ☐ Accomplished inspection procedure for lower strut attach tubes as outlined in this Service Letter and found them to be in satisfactory condition with no evidence of corrosion.
- ☐ Accomplished inspection procedure for lower strut attach stub tubes as outlined in this Service Letter and found them to be in unsatisfactory condition and repairs have been made. Please give a brief description of the repair. _____

- ☐ Accomplished inspection procedure for corrosion resistant nuts and bolts as outlined in this Service Letter and found them to be in satisfactory condition. Replaced hardware per this Service Letter.
- ☐ Accomplished inspection procedure for corrosion resistant nuts and bolts as outlined in this Service Letter and found them to be in unsatisfactory condition. Replaced hardware per this Service Letter.
- ☐ Accomplished inspection procedures per this Service Letter for possible damaged to stabilizer strut and found that one or both had to be replaced. ☐ Left Side ☐ Right Side

Note: If you no longer own this aircraft, please forward this information to the present owner/ operator and notify the factory of address/ ownership corrections. Include aircraft model, serial number, current owner's name and address. Corrections should be directed to factory address below.

Owner's Name _____

Owner's Address _____

City _____ State _____ Zip _____

Certified by _____ Title _____

Signature

Owner, A & P. IA. Etc.

Date performed _____

Please mail this Compliance Record to: Maule Air, Inc.~Engineering Records~2099 Georgia Highway 133 South~Moultrie, GA 31768 USA

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