

MAULE AIR, INC.

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Moultrie, GA 31768

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FAA APPROVED *[Signature]*

DATE: NOV 02 1995

SERVICE BULLETIN NO. 11

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Date: 10/30/95

SUBJECT: Wing Lift Strut Assembly Inspection/Replacement.

STATUS: Mandatory.

AUTHORITY: The technical contents of this Service Bulletin have been approved by the FAA.



PART I

AIRCRAFT AFFECTED: All Maule Models

COMPLIANCE: Before next flight and each twenty-four (24) month period thereafter.

NOTE:

If the aircraft is new with the original lift struts installed, the repetitive inspection begins when the aircraft is twenty-four (24) months old. Or, if the wing lift struts are new and were installed within the last twenty-four (24) months, inspection is required no later than twenty-four (24) months after new lift strut installation.

PURPOSE: The intended objective of this inspection program for the wing strut assemblies is to detect internal lift strut tube corrosion, most likely to occur on the bottom surface at the lower end (near the fuselage attachment). Since lift struts are closed tubular structures, internal corrosion in most cases may not be readily apparent until corrosion has advanced completely through the tube wall. This corrosion if allowed to progress, may lead to failure of the wing lift strut, and the possibility of loss of wing structure integrity. This service bulletin provides an inspection procedure to detect evidence of wing lift strut tube internal corrosion.

INSTRUCTIONS:

1. Remove wing lift struts and accomplish the inspection per inspection procedures on Sketch "A": Caution: Take extra care in inspection for external corrosion in the areas covered by the cuffs.
 - a. Remove lower and upper wing strut fairings (6 each).
 - b. Remove nuts from wing strut bolts (8 each).
 - c. Remove rear struts, right and left and accomplish inspection and treat (corrosion impediment) per instructions below. Upon successful completion of the inspection procedure and treatment reinstall rear lift struts on aircraft.

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NOTE: For minimal effect on rigging, do not remove or adjust forks. If forks are changed, install the new forks as close as possible to the same extension as the old forks. Do not interchange left and right struts.

- d. Remove front struts, right and left and accomplish inspection and treat (corrosion impediment) per instructions below. Upon successful completion of the inspection procedure and treatment reinstall front lift struts on aircraft.
2. Inspect forks for condition and replace as necessary. All attaching hardware should be replaced.
3. After completion of the inspection procedure, but prior to the corrosion impediment procedure of the wing lift struts, turn each wing lift strut upside down and tap gently. This procedure is necessary to remove any water, debris, or corrosion particles which may have accumulated.
4. Lift strut tubes indicating presence of internal corrosion and which fail the inspection procedure must be replaced with new wing lift struts called for in PART II of this Service Bulletin. Note: Should corrosion be apparent from the outside, (rust pin holes or large rust stains) strut must be replaced even if strut passes the inspection procedure. Note: If it is recorded in aircraft logbook or you have knowledge of a strut being installed from one side to the other side, strut must be replaced as top and bottom walls at lower end may both be weakened by corrosion.
5. Treat (corrosion impediment) each wing lift strut per the instruction procedure Note on Sketch "A". Treatment must coincide with each inspection as outlined in the compliance time above.
6. Upon successful completion of the inspection procedure and treatment, reinstall lift struts on aircraft.
7. Check aircraft rigging and adjust as necessary, use rigging procedures in Maintenance Manual.
8. Make an appropriate logbook entry of compliance with this Service Bulletin.

PART II

MODELS AFFECTED: All Maule Models

COMPLIANCE: To coincide with the next regularly scheduled inspection event or at next replacement of the wing lift strut, but not to exceed twenty-four (24) months from the initial inspection as called for in PART I of this Service Bulletin.

PURPOSE: PART II of this Service Bulletin announces the availability of new sealed wing lift struts which, when installed, will relieve inspection requirements of PART I of this Service Bulletin.

INSTRUCTIONS:

1. Remove old rear wing lift struts.
2. Prepare, prime and paint new sealed wing lift struts to match aircraft before installation.
3. Inspect attach fittings and fairings for condition and replace as necessary. All attaching hardware should be replaced.
4. Install new Sealed rear wing lift strut assemblies, Maule Part Number 2200E on each wing.
5. Remove old front wing lift struts.
6. Install new Sealed front wing lift strut assemblies, Maule Part Number 2201E on each wing.

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NOTE: For minimal effect on rigging, adjust new struts to same length as old struts prior to installation.

7. Check aircraft rigging and adjust as necessary. Use Maule Maintenance Manual as required to accomplish the proper rigging.
8. Upon successful completion of PART II of this Service Bulletin, make an appropriate logbook entry of compliance and return the completed Compliance Record Sheet, page 5 to Maule Air, Inc.

MATERIAL REQUIRED: As required by inspection for PART I or as required by PART II, two (2) each Front Wing Strut Assemblies, Maule Part Number 2201E, two (2) each Rear Wing Strut Assemblies, Maule Part Number 2200E, and four (4) each 2001B Strut Fork.

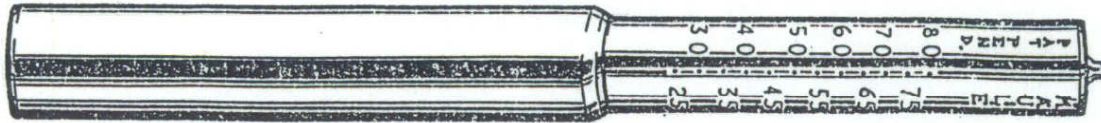
AVAILABILITY OF PARTS: The following parts are available and may be purchased from Parts Department of Maule Air, Inc.:

<u>Quan.</u>	<u>Part No.</u>	<u>Item</u>
2	2200E	Wing Strut - Rear (Sealed)
2	2201E	Wing Strut - Front (Sealed)
4	2001B	Fork - Lower Strut
4	AN315/316-8	Check Nut
4	AN320-6	Nut
4	AN380-3-3	Cotter Pin
4	AN960-516	Washer
4	AN365-524	Nut
4	AN5-23A	Bolt
4	NAS464P-6-10	Bolt
qt.	*Randolph #315	Clear Tube Oil

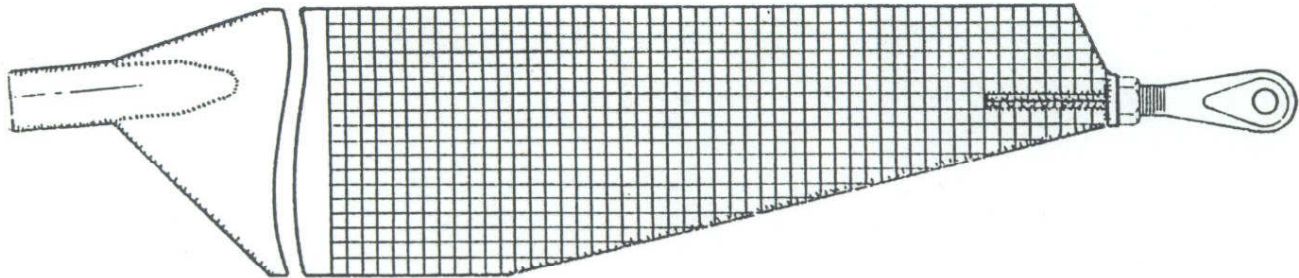
*Maule stocks. Tubeseal (Lineoil), Valoil, Lionoil Multi-purpose L-1, Paralketone, LPS-3, any other corrosion preventative liquid meeting Federal Specification TT-S-176D, Mil-L-21260, Mil-C-6708, Type I or Mil-C-81309E, Type II may be used.

**New low price in effect for next four (4) months beginning 12/4/95.

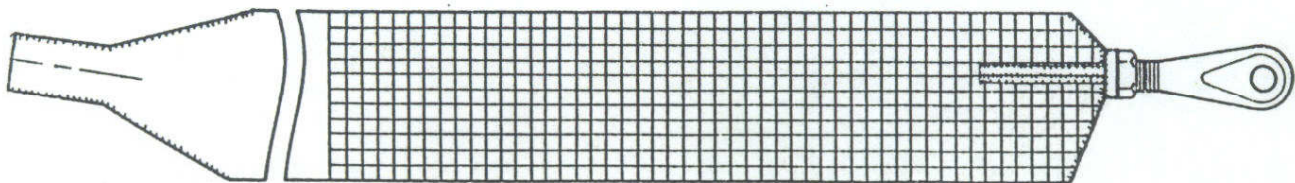
SKETCH "A"



VIEW OF MAULE FABRIC TESTER



BOTTOM VIEW OF FRONT LIFT STRUT



BOTTOM VIEW OF REAR LIFT STRUT

INSPECTION PROCEDURE

1. Securely tape a sheet of thin 1/4 inch grid graph paper to the lower 12 inches of the top and bottom surfaces on all wing lift struts.
2. Using a Maule "Fabric Tester" and holding tool normal to strut contour, apply pressure at a scale reading of 80 in each of the grid blocks.
3. Remove the paper and inspect the lift strut tubes. A perceptible dent will appear if internal corrosion is present. If any dents are found, be certain the dents are in the metal by carefully removing the paint.
 - a. Lift strut tubes indicating the presence of any perceptible dent in the metal must be replaced with new lift strut assembly before further flight.
 - b. If no dents appear in the metal, the lift struts may be considered airworthy.

NOTE

Before reinstalling strut, treat (corrosion impediment) each strut per the following procedure: (See page 3 for additional preservatives)

- a. Inject one quart of Valoil or Lionoil Multi-purpose L-1, Linseed Oil, Paralketone or any alternate preservative conforming to Federal Specification TT-S-176D, into the bolt hole at the top of the strut.
 - b. Plug the bolt holes and slosh oil until interior of strut is thoroughly coated.
 - c. Drain oil from strut (through bolt holes).
 - d. Reinstall strut to aircraft and check rigging.
 4. Record lift strut inspection and corrosion treatment in Aircraft Logbook and return the completed Compliance Record Sheet, page 5 to Maule Air, Inc.
- *Many Repair Stations have a Maule Fabric Tester or it may be purchased from Maule.

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INITIAL COMPLIANCE RECORD

Aircraft Model _____

Aircraft Serial No. _____

Aircraft Registration No. _____

Action taken (check one):

- () Struts were removed, inspected in accordance with PART I (and found airworthy) and procedure for oil-coating inside of struts per Note in Sketch "A" has been accomplished.
- () Accomplished Inspection procedure for lift struts as outlined in PART I of this SB and found that one or more had to be replaced. Strut(s) was/were replaced as follows: Please check.
() Left Front () Left Rear () Right Front () Right Rear
- () PART II complied with - please check:
() Left Front () Left Rear () Right Front () Right Rear

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 _____

Signature

Title _____

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

IT'S PERFORMANCE THAT COUNTS