

SERVICE BULLETIN No. 9

SUBJECT: Elevator Control Cable Attachments.

FAA APPROVED: *C. [Signature]*

REFERENCE: Service Letter No. 55

DATE: JUN 11 1992

AIRCRAFT AFFECTED: All Maule Models.

COMPLIANCE: At option of Owner.

STATUS: Service Letter No. 55, attached for reference, is a mandatory requirement for inspection of elevator cable attachments. This Bulletin covers parts replacement to relieve the inspection requirements of Service Letter No. 55 and is particularly recommended for floatplanes and any other Maules operating in a potentially corrosive environment.

AUTHORITY: This Service Bulletin is FAA approved.

BACKGROUND: See attached Service Letter No. 55 regarding the reported failure of an elevator cable turnbuckle.

ACTION TO BE TAKEN: Remove existing elevator cable turnbuckles and attachments. Install new turnbuckles and attachments per Page 2 or 3 of this bulletin. Note that the turnbuckles are the next larger size. Fasteners and other attachment details have been changed to corrosion resistant steel.

AVAILABILITY OF PARTS: The following parts required to perform this Service Bulletin can be procured from Maule Air, Inc.:

<u>Quan.</u>	<u>Part No.</u>	<u>Item</u>	
1	3262B-1	Fitting - Elevator Cable	
1	3263B-1	Shackle - Elevator Cable	
1	3264B-1	Bushing - Elevator Cable	
2	BM21255-C5RS	Eye End - Turnbuckle	
4	MS21256-1	Clip	
2	MS21251-B5S	Body, Turnbuckle	(CRES = Corrosion Resistant Steel)
2	BM21252-C5LS	Clevis End - Turnbuckle	
2	AN100C-4	Thimble-Wire Cable, CRES	
2	18-3-M	Nicopress Oval Sleeve	
3	AN960C10L	Washer, Flat (#10) Light, CRES	
6	AN960C10	Washer, Flat (#10) CRES	
1	AN310C3	Nut, Castellated (#10) CRES	
3	MS24665-151	Pin, Cotter (or AN381-2-2) CRES	
2	AN4C7	Bolt, (1/4). CRES	
2	AN960C416	Washer, Flat (1/4), CRES	
2	AN960C416L	Washer, Flat (1/4), Light, CRES	
2	AN310C4	Nut, Castellated (1/4), CRES	
2	AN3C5A	Bolt (#10), Corr. Res.	
2	AN365C1032	Nut, Elastic Stop (#10), CRES	
1	AN3C5	Bolt (#10), Corr. Res.	
Dwg.	3097F	Elevator Control System (M-4)	
Dwg.	3174F	Elevator Control System (M-5 & up)	

MAULE AEROSPACE TECHNOLOGY, INC.

LAKE MAULE -- RT. 5, BOX 318 -- MOULTRIE, GA. 31768 -- PHONE (912) 985-2045 -- FAX: (912) 890-2402

SERVICE BULLETIN #9

COMPLIANCE RECORD SHEET

Airplane Serial Number _____

Airplane Registration Number _____

The following action was taken with respect to this Service Letter:

- New Elevator Cable Turnbuckles and Attachments **have been installed** in accordance with this Service Bulletin No. 9.
- Please send parts required** to perform this Service bulletin No. 9 to owner's address listed below. (Cost: \$157.00. Available approximately June 1.)

Not considered necessary.

I **no longer own** this aircraft. It was **sold to:**

Name _____

Address _____

City _____ State _____ Zip _____

Certified By (Signature) _____

(Print Name) _____

Title (Owner, A & E, IA, etc.) _____

Date _____

In our effort to keep our mailing list current, please fill in the following:

Owner's Name _____

Owner's Address _____

City _____ State _____ Zip _____

Please return this Compliance Record to: Maule Aerospace Technology, Inc./
Engineering Records/ R#5 Box 318/Moultrie, GA 31768

IT'S PERFORMANCE THAT COUNTS!

MAULE AEROSPACE TECHNOLOGY, INC.

LAKE MAULE -- RT. 5, BOX 318 -- MOULTRIE, GA. 31768 -- PHONE (912) 985-2045

SERVICE LETTER #55

Page 1 of 2
May 1991

SUBJECT: Elevator Control Cable System Turnbuckles.

AIRPLANES AFFECTED: All Model Maules.

- 1) Occurrence is most likely - Floatplanes operating on saltwater.
- 2) Occurrence is next likely - Floatplanes on brackish or fresh water.
- 3) Occurrence is possible - Landplanes located near saltwater.
- 4) Occurrence is least likely - Landplanes located in dryer, less corrosive environments.

COMPLIANCE: Mandatory for (1) - (3) above, and highly recommended for (4).

STATUS: This Service Letter should be considered an early warning of a potential safety of flight problem. Further bulletins with recommended parts replacement for those airplanes operating in severe conditions will be issued as soon as possible. The new parts will be designed to reduce the possibility of corrosion in the affected area.

AUTHORITY: Maule Air, Inc.

BACKGROUND: Maule has received a report that the upper elevator cable turnbuckle failed adjacent to the elevator bellcrank on a floatplane in a tropical salt-water environment. The airplane had just landed and was on the water at the time of the failure.

ACTION TO BE TAKEN AND MATERIAL REQUIRED:

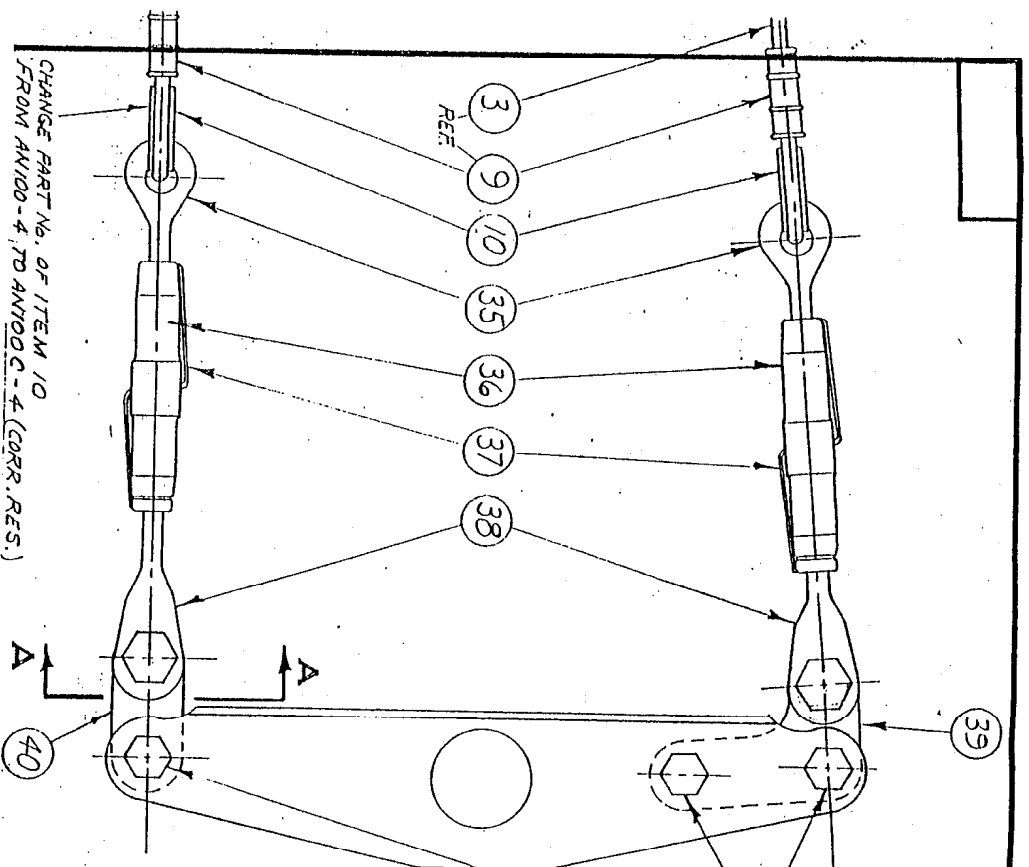
All operators of Maule airplanes are requested to remove the fuselage inspection covers above and below the elevators and visually check the pivoting action at the control cable attachment points over the **FULL** range of elevator travel. This action should be such that there are no bending loads imparted to the turnbuckles (which are designed for straight tension load only). Any binding which causes bending of the turnbuckles should be removed. Any cable attachment parts which display appreciable corrosion must be replaced before further flight. Pivot points must be cleaned and lubricated with any lightweight lubricating oil. Following lubrication, the cable attachments, including the turnbuckles, must be heavily coated with a good preservative such as:

(Preferred)	LPS 3
Black Bear Paralketone	Heavy Duty Rust Inhibitor
Black Bear Company	LPS Laboratories, Inc.
Long Island City, New York	Tucker, Georgia

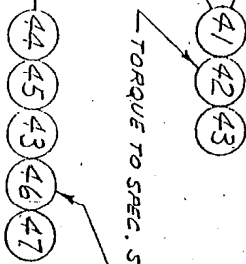
FREQUENCY:

- A) For airplanes in category 1 under "AIRPLANES AFFECTED", the foregoing action must be accomplished before further flight and no more than every 30 days thereafter.
- B) For airplanes in category 2 and 3, the foregoing action must be accomplished before the next 10 hours of flight and no more than every 60 days thereafter.
- C) For airplanes in category 4, action is at the discretion of the operator, but no later than the first annual or 100 hour inspection and every annual or 100 hour inspection thereafter.

Return of the **Compliance Record** is requested for all aircraft operating in categories 1, 2, and 3 so that we can provide follow-up.



CHANGE PART No. OF ITEM 10 FROM AN100-4 TO AN100C-4 (CORR. RES.)



TORQUE TO SPEC. S-18

NOTES:
 1) INSTALL BOLTS, NUTS, AND WASHERS AS SHOWN.
 2) NO SUBSTITUTION FOR CORROSION RESISTANT PARTS.
 3) COAT ALL CABLE ATTACHMENT PARTS AND LINKS WITH PARAL-KETONE, LPS 3, OR EQUIVALENT.

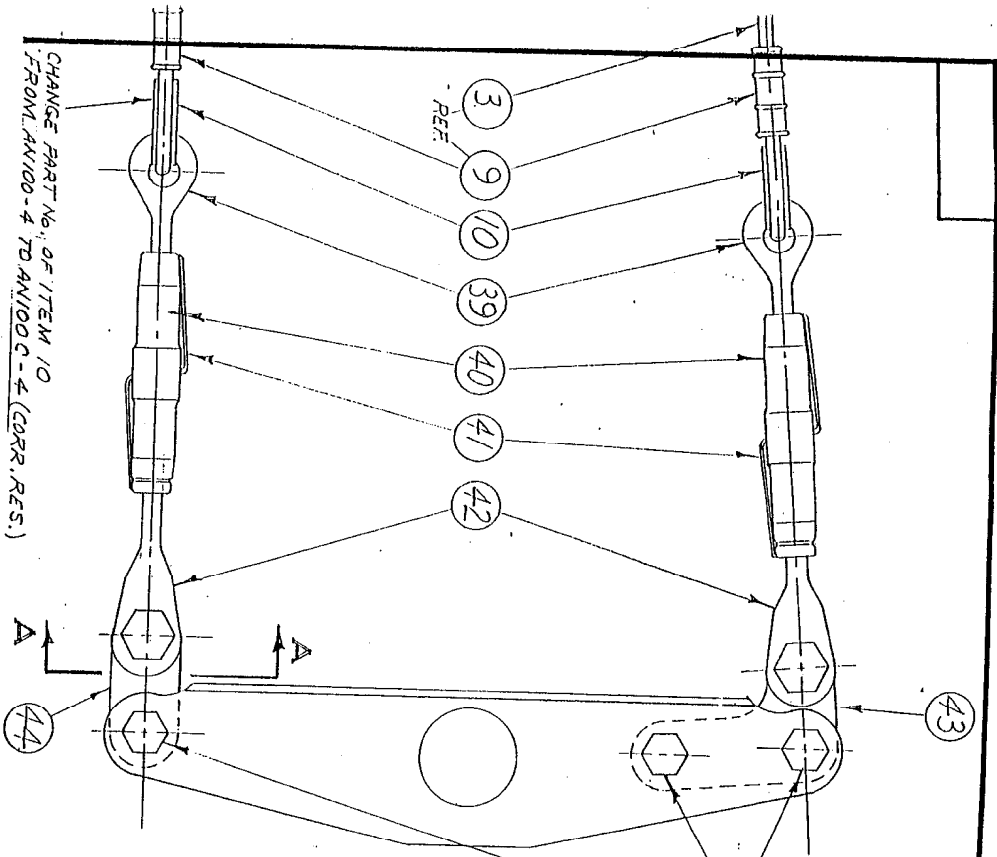
TIGHTEN FINGERTIGHT THEN BACK OFF ONE OR TWO COTTER PIN SLOTS AND INSTALL COTTER PIN. JOINT MUST ROTATE FREELY.

REF. ELEVATOR CONTROL SYSTEM DRAWING NO. 3097E

REF. NO.	PART NO.	RECD	DESCRIPTION	FINISH	MATL & SPEC.	STOCK
35	BM21255-CRS	2	EYE END, TURNBUCKLE (BELL-MEMPHIS) (REF. MS 21255-SRS)			
36	MS21255-BSS	2	BODY, TURNBUCKLE (BARSS)			
37	MS21256-1	4	CLIP LOCKING, TURNBUCKLE			
38	BM21258-CRS	2	CLEVIS END, TURNBUCKLE (BELL-MEMPHIS) (REF. MS 21252-SRS)			
39	3262B-1	1	FITTING - ELEVATOR CABLE			
40	3263B-1	1	SHACKLE - ELEVATOR CONTROL			
41	AN3CS4	2	BOLT (No. 10) - CORR. RES.			
42	AN365C1032	2	NUT ELAS. STOP (No. 10) - CORR. RES.			
43	AN36DC104	3	WASHER, FLAT (No. 10) - CORR. RES.			
44	AN3CS1	1	BUSHING - ELEV. SHACKLE			
45	3264B-1	1	BUSHING (No. 10) - CORR. RES.			
46	AN310C3	1	NUT CASTELLATED (No. 10) - CORR. RES.			
47	MS2465-151	3	PIN COTTER CORR. RES. (ALT. AN391-2-2)			
48	AN4C7	2	BOLT (1/4) - CORR. RES.			
49	AN360C416L	2	WASHER, FLAT (1/4) LIGHT CORR. RES.			
50	AN360C416	2	WASHER, FLAT (1/4) REG. CORR. RES.			
51	AN310C4	2	NUT CASTELLATED (1/4) - CORR. RES.			

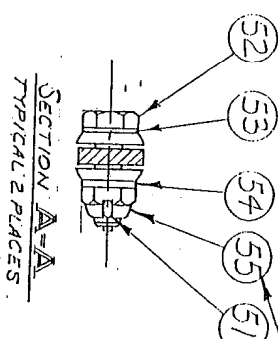
F.A.A. APPROVED
 ATLANTA AIRPORT CERTIFICATION
 OFFICE CENTRAL REGION
 BY: *C. Shaver*
 Date: JUN 1 1962

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 AEROSPACE TECHNOLOGY, INC.
 GEORGIA
 SERVICE BULLETIN No. 9, Pg. 2 of 3



FAA.
APPROVED
ATLANTA AIRPORT CERTIFICATION
OFFICE CENTRAL REGION
By: *Robert*
Date: JUN 11 1982

TORQUE TO SPEC. 5-18
48 49 47 50 51



NOTES:
1) INSTALL BOLTS, NUTS, AND WASHERS AS SHOWN.
2) NO SUBSTITUTION FOR CORROSION RESISTANT PARTS.
3) COAT ALL CABLE ATTACHMENT PARTS AND LINKS WITH PARAL-KETONE, LPS 3, OR EQUIVALENT.

TIGHTEN FINGERTIGHT, THEN BACK OFF ONE OR TWO COTTER PIN SLOTS AND INSTALL COTTER PIN. JOINT MUST ROTATE FREELY.

REF. ELEVATOR CONTROL SYSTEM DRAWING No. 3174F

REF. NO.	PART NO.	REQ'D	DESCRIPTION	FINISH	MAT'L & SPEC.	STOCK
53	AN310C 4	2	NUT, CASTELLATED (1/4) - CORR. RES.			
54	AN360C 416	2	WASHER, FLAT (1/4) REG., CORR. RES.			
53	AN360C 416 L	2	WASHER, FLAT (1/4) LIGHT CORR. RES.			
52	AN4C 7	2	BOLT (1/2) - CORR. RES.			
51	MS2465-157	3	PIN, COTTER, CORR. RES. (ALT. AN 361-2-2)			
50	AN310C 3	1	NUT, CASTELLATED (No. 10) - CORR. RES.			
49	32G 4B-1	1	BUSHING - ELEV. SHACKLE			
48	AN3C 5	1	BOLT (No. 10) - CORR. RES.			
47	AN360C 10 L	3	WASHER, FLAT (1/4) - CORR. RES.			
46	AN365C 103 2	2	NUT, ELAS. STOP (No. 10) - CORR. RES.			
45	AN3C 5 A	2	BOLT (No. 10) - CORR. RES.			
44	32L 5 B-1	1	SHACKLE - ELEVATOR CONTROL			
43	32G 2 B-1	1	FITTING - ELEVATOR CABLE			
42	BM21252-C5T	2	CLEVIS END TURNBUCKLE (BELL-MEMPHIS) (REF. MS 212 5 2 - 52 S) (CORR.)			
41	MS 212 5 6-1	4	CLIP, LOCKING, TURNBUCKLE			
40	MS 212 5 1 - B55	2	BODY, TURNBUCKLE (BRASS)			
39	BM 212 5 5 - C5R	2	EYE END, TURNBUCKLE (BELL-MEMPHIS) (REF. MS 212 5 5 - 52 S) (CORR.)			

MAULE AEROSPACE TECHNOLOGY INC.
MOULTRIE GEORGIA
SERVICE BULLETIN No. 9, Pg. 3 of 3