

**MANDATORY**

Approved  
FAA: *Curtis Jackson*  
Date: *Dec 29 1999*

**SERVICE BULLETIN NO. 20**

Page 1 of 3

Date: 12/27/99

**SUBJECT:** Nicopress Sleeves on Control Cables.

**AIRPLANES AFFECTED:** All Maule Models

**STATUS:** This Service Bulletin should be considered a caution of a potential safety problem. This inspection and possible field fix is designed to reduce the possibility of loss of control due to a possible cable slipping out of Nicopress Sleeve.

**BACKGROUND:** Maule has received a report that during a recent landing roll-out, the aft right rudder cable slipped out of its nicopress sleeve. Both the pilot and passenger were not harmed after a minor ground loop. In this incident, a nicopress sleeve was found to be not adequately crimped and sleeve was slightly larger than the gauge dimension. We have determined after checking several airplanes that one crimping tool was not set correctly to specification on the elevator and rudder cables. However, we have load tested several cables with oversize nicopress sleeves crimped by same tool to over 1100 lb., (required by AC 43.13-1B for 1/8 cable) which resulted in the cables failing before the nicopress sleeves. (Maule has manufactured approximately 2200 airplanes in the last 37 years with about 27 nicopress sleeves per airplane (depending on model) which amounts to approximately 60,000 nicopress sleeves with no previous known problem.)

**COMPLIANCE:** It is recommended that this Service Bulletin be complied with before further flight for 1990 and later airplanes. For earlier airplanes it is recommended that this Service Bulletin be complied with at the next 100 Hour or Annual Inspection.

**ACTION TO BE TAKEN AND TOOLS REQUIRED:**

- 1) Inspect all 1/8" cable nicopress terminal ends to determine that they have been compressed the correct amount at all three compression locations per Nicopress gauge: (Note this type of terminal is used on all Elevator, Flap, Rudder, and Aileron control systems.)

The correct size for the 1/8" cable nicopress after compression is 0.345 to 0.355 inch at all three compressions. The use of a "go no-go" gauge (Size M) or a caliper will be required.

Locations of the terminals are as follows:

- A. Flap handle area (3 each on M-4, M-5 and 4 each on M-6 and up)
- B. Control column area (2 each all models)
- C. Rudder pedal area (2 each all models)
- D. Headliner area (12 each on M-4, M-5 and 9 each on M-6 and up)
- E. Tail cone door area (2 each on flap control cable and 1 each on down spring)
- F. Inside rear of fuselage (2 each on elevator bellcrank all models)

**ITS PERFORMANCE THAT COUNTS!**

**2099 Georgia Hwy. 133 South~Moultrie, GA 31768**

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**MAULE AEROSPACE TECHNOLOGY, INC.****MANDATORY**Date: DEC 29 1999**SERVICE BULLETIN NO. 20**

Page 2 of 3

Date: 12/27/99

- G. Rudder (**2 each** all models)  
H. Ailerons (**4 each** all models)
- 2) If all nicopress terminals are compressed satisfactory and are in good general condition, no further action is required (except to return Compliance Record Sheet, Page 3).
- 3) If any nicopress terminal compressions are outside limits, recrimp and then reinspect to Paragraph 1). Replace sleeve if condition is unsatisfactory.

NOTE: Refer to FAA AC 43.13-1B, Section 8, for additional requirements and information on Control Cable Assemblies.

Estimated inspection time to complete this Service Bulletin is 5 Hours.

This Service Bulletin is effective all Models/Serial Numbers except future production as listed below: (will be incorporated into factory manufacturing)

**MXT-7-180** s/n 14096C and up, **MXT-7-420** s/n 16001C and up, **MT-7-235** s/n 18042C, 18043C, 18045C, 18046C, 18048C and up, **MXT-7-160** s/n 17009C and up, **MX-7-160** s/n 19047C and up, **MX-7-180A** s/n 20064C and up, **MXT-7-180A** s/n 21068C, 21069C, 21071C, 21073C - 21075C, 21078C, 21080C, 21082C and up, **MX-7-180B** s/n 22017C and up, **M-7-235B** s/n 23057C, 23060C and up, **M-7-235A** s/n 24002C and up, **M-7-235C** s/n 25038C, 25039C, 25042C, 25043C, 25045C and up, **M-7-260** s/n 26001C, 26008C and up, **MT-7-260** s/n 27002C, 27004C and up, **MX-7-180C** s/n 28012C and up, **M-7-420AC** s/n 29002C and up, **M-7-260C** s/n 30005C, 30006C, 30012C, 30015C and up, **MX-7-160C** s/n 34002C and up.

Note: Page 3 is the Service Bulletin Compliance Record Sheet and is to be completed and returned to Maule engineering records.



Page 3 of 3

**SERVICE BULLETIN NO. 20****COMPLIANCE RECORD SHEET**

Aircraft Model \_\_\_\_\_

Aircraft Serial No. \_\_\_\_\_

Action taken (PLEASE CHECK WHATEVER APPLIES):

- ( ) Inspection of the Nicopress sleeves per Service Bulletin #20 was performed and all were found correct. No further action was required.
- ( ) Inspection of the Nicopress sleeves per Service Bulletin #20 was performed and the following were found incorrect and were recrimped and reinspected per this SB.

Flap handle area 1 2 3 4 (circle)

Control column area 1 2 (circle)

Rudder pedal area 1 2 (circle)

Headliner area 1 2 3 4 5 6 7 8 9 10 11 12 (circle)

Tail cone door area 1 2 (flap control cable) 1 (on down spring) (circle)

Inside rear of fuselage (on elevator bellcrank) 1 2 (circle)

Rudder 1 2 (circle)

Ailerons 1 2 3 4 (circle)

Owner's Name \_\_\_\_\_

Owner's Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Certified by \_\_\_\_\_ Title \_\_\_\_\_

Signature

Owner, A &amp; P. IA. Etc.

Date performed \_\_\_\_\_

If you no longer own this airplane, please fill in new owner's information and return to factory address below:

New Owner's Name \_\_\_\_\_

New Owner's Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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

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