



SERVICE BULLETIN

No. 715A

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

Modification FAA Approved

April 25, 1983 M

(Service Bulletin No. 715A supersedes and voids Service Bulletin No. 715, dated July 15, 1981)

<u>Subject:</u>	Elevator Control Tube Inspection
<u>Reason for Revision:</u>	Add Affected Aircraft; revise Purpose; revise Instructions; add PART II; add Sketch.
<u>Models Affected:</u>	<u>Serial Numbers Affected:</u>
PA-31T Cheyenne/Cheyenne II	31T-7400002 through 31T-8120070
PA-31T 1 Cheyenne I	31T-7804001 through 31T-8104073
PA-31T 2 Cheyenne II XL	31T-8166001 through 31T-8166059, 31T-8166061 and 31T-8166062

NOTE: Refer to each PART, below to determine applicable Instructions for specific aircraft.

Compliance Time:

Within the next one hundred (100) hours of operation, or at the next scheduled maintenance event, whichever occurs first.

Purpose:

A field report has been received of the failure of an Elevator Control Tube Assembly induced by external damage to the tube. The tube was broken circumferentially at the approximate mid-point of its length. Should the elevator control tube break and separate, loss of elevator control would result.

PART I of this Service Release provides Instructions for inspection of the elevator control tube for surface flaws or damage and for the installation of protective moulding on the surfaces of the openings through which the tube passes. PART I applies only to aircraft which have not previously complied with Service Bulletin No. 715.

Following compliance with Service Bulletin No. 715, dated July 15, 1981, several reports were received indicating that when the aircraft were in cruise configuration, there could be a slight rubbing of the elevator control tube against the trim strip installed at Fuselage Station 332.0 bulkhead.

PART II of this Service Release provides Instructions for inspection of the elevator control tube in the area where it approaches the trim strip at Fuselage Station 332.0 bulkhead, and for modification of the bulkhead passage to insure adequate clearance. PARTII applies to aircraft which have previously complied with Service Bulletin No. 715.

ATA: 2730

(over)

PART I

Models Affected:

PA-31T Cheyenne/Cheyenne II
PA-31T 1 Cheyenne I

Serial Numbers Affected:

31T-7400002 through 31T-8120050
31T-7801001 through 31T-8104041
and 31T-8104043 through 31T-8104057

IMPORTANT: PART I affects only those aircraft listed which HAVE NOT previously complied with Service Bulletin No. 715, dated July 15, 1981. Aircraft which HAVE previously complied with Service Bulletin No. 715, refer to PART II.

Instructions:

1. Remove the tail cone assembly.
2. Remove the access panels from both sides of the fuselage aft of fuselage station 317.75.
3. Being careful not to allow the elevator control tube to drop onto any bulkheads through which it passes, remove hardware connecting the tube to the elevator bellcrank assembly and elevator torque tube horn, and remove the tube. (Retain hardware and bolt stops for reinstallation of control tube.)
4. Strip primer coat from the tube using solvent, and inspect the entire length of the tube for sharp nicks or dents.
5. Perform a dye penetrant inspection of the elevator control tube.
6. Replace the elevator control tube prior to further flight if it is found to be cracked, nicked, or deeply scratched.
7. Before reinstalling the control tube, install pinch moulding (Piper Part No. 189 379) on the lower edge of the lightening hole in the bulkhead at Fuselage Station 352.0. Make sure each strip of moulding is installed securely. Do not stretch moulding to fit.
8. Reprime the elevator control tube.
9. At the bottom of the throughway in the Station 332.0 bulkhead, position the fairlead support, and file the fairlead bracket as shown in attached Sketch, Section A-A, to assure at least .125 inch clearance from the elevator control tube to the fairlead bracket after the protective moulding is installed.
10. With fairlead support as shown in Sketch, place a piece of rubber moulding, Piper Part No. 187 537, across the bracket.
11. Using existing hardware and bolt stops, reinstall the elevator control tube. While moving the elevator through its full travel, determine that the clearance between the control tube and the protective moulding does not decrease to less than .125 inch.
12. Using 3M EC847 adhesive or equivalent, glue the rubber moulding in place as shown in Sketch.
13. Check elevator controls for proper system operation and rigging. (Refer to Service Manual, Section V).
14. Reinstall all access panels and tailcone assembly.
15. Make appropriate logbook entry of compliance with PART I of this Service Release.

Material Required:

1. One (1) each per aircraft if required by inspection, Elevator Control Tube Assembly, Piper Part Number 40847-07.
2. Approximately four (4) feet per aircraft Extrusion (Moulding) Piper Part No. 189 379.
3. Approximately six (6) inches per aircraft Rubber Moulding, Piper Part No. 187 537.

PART II

Models Affected:Serial Numbers Affected:

PA-31T Cheyenne/Cheyenne II

31T-8120051 through 31T-8120070 (and 31T-7400002 through 31T-8120050 if they HAVE previously complied with Service Bulletin No. 715).

PA-31T 1 Cheyenne I

31T-8104042 and 31T-8104058 through 31T-8104073 (and 31T-7801001 through 31T-8104057 if they HAVE previously complied with Service Bulletin No. 715).

PA-31T 2 Cheyenne II XL

31T-8166001 through 31T-8166059, 31T-8166061 and 31T-8166062

Instructions:

1. Remove the tail cone assembly and the access panels from both sides of the fuselage aft of Fuselage Station 317.75.
2. Position the elevator in its midrange travel, and measure the clearance between the elevator control tube and the trim strip on the fairlead bracket at Fuselage Station 332.0. If clearance is greater than .125 inch, proceed to Instruction 10, below. If clearance is less than .125 inch, proceed to Instruction 3, below.
3. If clearance is less than .125 inch, carefully remove the elevator control tube, and using solvent, remove the primer coat from the tube in the area where it approached the trim strip at Station 332.0.
4. Perform a dye penetrant inspection of the area stripped of primer. Replace the elevator control tube prior to further flight if it is found to be cracked, nicked or deeply scratched.
5. Reprime the elevator control tube.
6. At the bottom of the throughway in the Station 332.0 bulkhead, position the fairlead support and file the fairlead bracket as shown in the attached Sketch, Section A-A, to assure at least .125 inch clearance from the elevator control tube to the fairlead support bracket after the protective moulding is installed.
7. With fairlead support as shown in Sketch, place a piece of rubber moulding, Piper Part No. 187 537, across the bracket. Reinstall the control tube and insure that the clearance between the tube and the protective moulding does not decrease to less than .125 inch at any point in elevator travel.
8. Using 3M EC 847 adhesive or equivalent, glue the rubber moulding in place as shown in sketch.
9. Check elevator controls for proper system operation and rigging. (refer to Service Manual, Section V.)
10. Reinstall all access panels and tailcone assembly.
11. Make appropriate logbook entry of compliance with PART II of this Service Release

Material Required: If required by inspection only:

1. One (1) each per aircraft, if required, Elevator Control Tube, Piper Part No. 40847-07.
2. Approximately six (6) inches per aircraft, Rubber Moulding, Piper Part No. 187 537.

NOTE: The Cheyenne Continuous Inspection procedures are being revised (Reference Event #1 EMPENNAGE DETAILED Item 15) indicating the need to visually reinspect the elevator control tube assembly for cracks, sharp dents or nicks each time it is removed or reinstalled in the aircraft.

Availability of Parts:

Your Piper Field Service Facility.

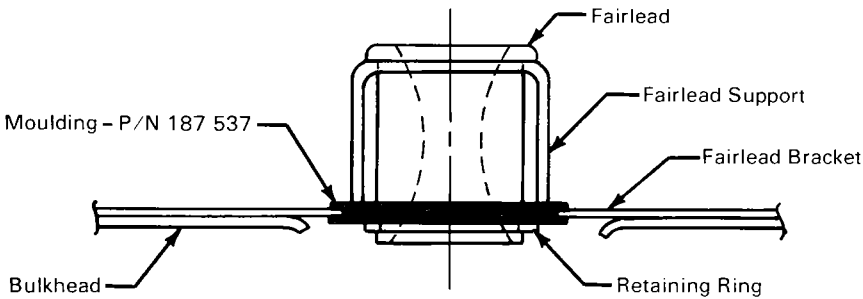
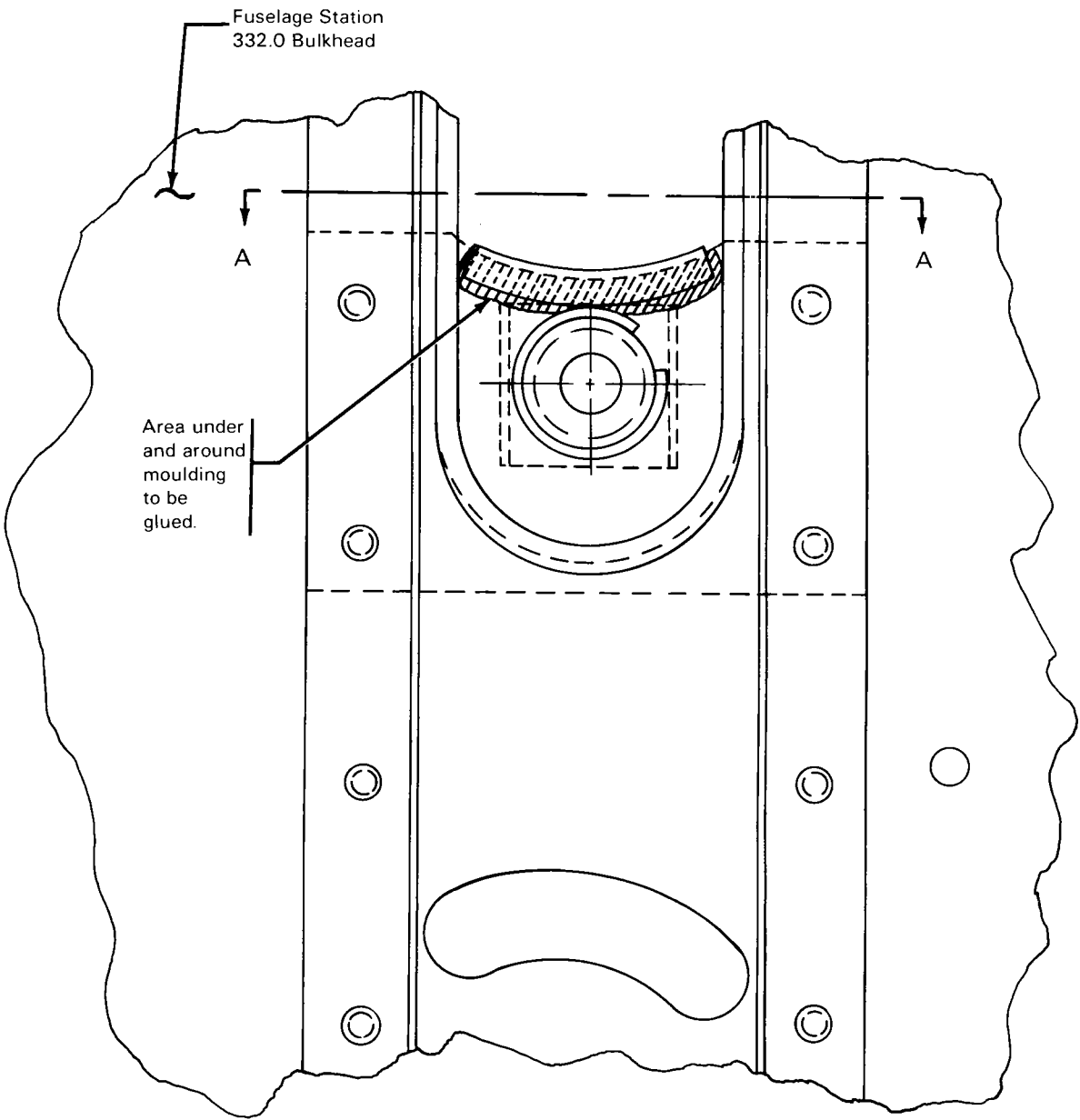
Effectivity Date:

This Service Release is effective upon receipt.

Summary:

Please contact your Piper Field Service Facility to arrange for compliance with this Service Release in accordance with Compliance Time, above.

Any factory participation applicable to this Service Release remains in effect for a period of time not to exceed 180 days from the date of this Service Release.



SECTION A-A
SKETCH: BRACKET INSTALLATION