



# SERVICE BULLETIN

No. 659

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

Modification FAA/DOA EA-1 Approved

July 19, 1979

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Subject:

Rudder and Aileron Trim Tab Attachment  
Inspection

Models Affected:

PA-31P Pressurized Navajo  
PA-31T-Cheyenne/Cheyenne II  
  
PA-31T1 Cheyenne I

Serial Numbers Affected:

31P-1 through 31P-7730012  
31T-7400002 through 31T-7920058 and  
31T-7920060 through 31T-7920063  
31T-7804001 through 31T-7904030 and  
31T-7904032 through 31T-7904035

Compliance Time:

Within the next twenty-five (25) hours of  
operation or at the next scheduled inspection,  
whichever occurs first.

Purpose:

It has been determined that on the above listed airplanes, the hinge bolts which attach the trim tabs to the rudder and to the right aileron may not be properly torqued. An improperly torqued bolt in combination with an excessively worn or faulty anchor nut could result in the bolt backing out of the anchor nut and subsequent detachment of the tab at the hinge.

This Service Release provides instructions for checking the anchor nuts for proper locking action and for torquing the trim tab attachment bolts.

Instructions:

1. Gain access to the rudder and the right aileron trim tab hinges. To gain sufficient working space, it will be necessary to disconnect the trim tab control rod in each case and to deflect the respective tab to its extreme travel.
2. On the rudder tab upper and lower hinges and on the right aileron tab inboard hinge, accomplish the following:
  - a. Back the bolt out of the anchor nut until it can be turned using fingers.
  - b. Turn the bolt back into the anchor nut and determine whether the anchor nut demonstrates positive self-locking action. If the anchor nut does not demonstrate self-locking action, it must be replaced (See Material Required, below.)

(over)

Instructions: (continued)

2. c. Torque the bolts to 38 inch-pounds (includes 18 inch-pounds average friction drag torque).
- d. Use lubrication on bearing surfaces of hinges as required to insure free motion of tab. Lubrication should not be applied to threaded fasteners. Refer to Lube Chart in appropriate Maintenance Manual.
- e. Add torque stripe to bolt head to assist in future inspections.
3. Make appropriate log book entry of compliance with this Service Release.

Material Required:

One (1), Two (2) or Three (3) each per aircraft as required by inspection:

NAS 686 A3 Self Locking Anchor Nut (Piper Part Number 406 829) at a suggested unit list price of \$ .10 C each.

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 make arrangements for compliance with the provisions of this Service Release in accordance with Compliance Time, above. Reimbursement is available for up to one half (.5) hour per aircraft for inspection and re-torquing of bolts, and for material and up to a total of one (1) hour per aircraft for replacement of anchor nuts if required. Comply with the respective Labor/Material credit application procedure of your Piper Field Service Facility.