



# SERVICE BULLETIN

No. 222A

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

August 10, 1964 M

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(Supersedes Service Bulletin No. 222)

- SUBJECT:** Removal of Restriction to Air Speed Limits  
(Replacement of Stabilator Torque Tube)
- MODELS AFFECTED:** PA-30 Twin Comanches, Serials 30-1 to 30-482 incl., 30-484 to 30-491 incl., 30-493, 30-494, 30-496 to 30-502 incl., 30-504, 30-505, 30-507 to 30-565 incl.
- NOTE:** Serial Numbers 30-483, 30-492, 30-495, 30-503 and 30-506 have been modified at the factory and require only removal of placard and temporary supplement to flight manual for compliance.
- COMPLIANCE DATE:** Prior to but not later than 10 hours of operation after receipt of stabilator torque tube.

Owners and operators of the subject aircraft were advised recently that because vibration at approximately the red line not-to-exceed limit had been observed, it was necessary to restrict the air speed.

It has been determined that a stabilator torque tube, part number 22655-07, of heavier wall thickness will eliminate this vibration.

A new stabilator torque tube of heavier wall thickness will be provided to the owners of these aircraft as a replacement on a no charge basis.

Instructions for installing this stabilator torque tube and a sketch are enclosed with this bulletin.

Compliance with this service bulletin will eliminate Service Letter No. 428 and cancel that portion of the F.A.A. telegraphic A.D. Note, dated July 2, 1964, referring to stabilator vibration and restriction of air speed to 205 m.p.h. I.A.S. The placard restricting the air speed should be removed and the temporary supplement to the flight manual, Piper Report 1269, should be destroyed. An entry in the aircraft log book must be made to indicate compliance with the F.A.A. telegraphic A.D. Note.

(Over)

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NOTE TO DISTRIBUTORS

Replacement stabilator torque tube Kit 756 827 will not be available in sufficient quantities to fill all orders immediately. Distributors should estimate requirements for compliance and submit their orders. Shipment will follow as promptly as possible.

A warranty and credit claim may be submitted for Kit 756 827 and four (4) hours labor.

IMPORTANT

THE ORIGINAL STABILATOR TORQUE TUBE MUST BE SCRAPPED TO AVOID INADVERTENT REINSTALLATION IN PA-30 AIRCRAFT.

## INSTRUCTIONS FOR REPLACEMENT OF TORQUE TUBE ASSEMBLY

PA-30 Twin Comanche

(Kit 756 827)

1. Remove fuselage access cover plate.
2. Disconnect stabilator control cables on balance weight arm. Item A.
3. Remove bolt from stabilator trim tab born. Item B.
4. Remove bolt from stabilator rear spar. Item C.
5. Remove four bolts attaching stabilator to stabilator torque tube and remove stabilators. Item D.
6. Remove top and bottom fuselage tail fairings.
7. Remove stabilator bearing block reinforcement channels. Item E.
8. Remove two bolts holding stabilator tab control bellcrank assembly to stabilator bearing blocks. (It is not necessary to further disassemble this unit.) Item F.
9. Remove the bolts from the right stabilator bearing block and the bottom bolt in the left bearing block. DO NOT REMOVE the top bolt in the left bearing block. Item G. (Caution - Mark top for proper reassembly.)
10. By pulling rearward and rotating the right end of the stabilator torque tube downward to pass the rudder arm, the entire torque tube and counterbalance assembly can be removed from the aircraft. The top left bearing block bolt should stay in place.
11. During disassembly of the torque tube assembly note the position of parts so that it can be properly reassembled.
12. Remove left bearing block by tapping with a soft mallet. Note shims, part number 81262-72, if installed. Item H.
13. Remove stop assembly. Item J.
14. Remove counterbalance arm assembly. Item K.
15. Remove right bearing block assembly. Note shims (81262-72) if installed. Item L.
16. Install counterbalance arm assembly on new stabilator torque tube, part number 22655-07. Note position in View B. Item M.

Holes drilled in the torque tube assembly are undersize and will be line-reamed on assembly. Since the holes in counterbalance arm assembly and stabilator fittings have already been

reamed, a special locating pin, part number 25034-00 is included with each torque tube to insure proper fit of these assemblies. Item N.

NOTE: Pin part no. 25034-00, Item N is larger in diameter than pin 25034-02, Item P.

When counterbalance arm is in position, insert locating pin, part number 25034-00 in one hole until the shoulder bottoms on the torque tube.

Ream the other hole in the tube to .3120 to .3130. Insert bolt in reamed hole before removing locating pin to ream the second hole.

17. Install stop assembly referring to Item J.

Holes drilled in the torque tube assembly are undersize and will be line reamed on assembly. Since the holes in stop assembly have already been reamed, a special locating pin, part no. 25034-02, is included with each torque tube to insure proper fit of these assemblies. Item P.

When stop is in position, insert locating pin, part no. 25034-02, in one hole until the shoulder bottoms on the torque tube.

Ream the other hole in the tube to .2465 to .2475. Insert bolt in reamed hole before removing locating pin to ream the second hole.

18. Install left bearing block, Item H, right bearing block, Item L.

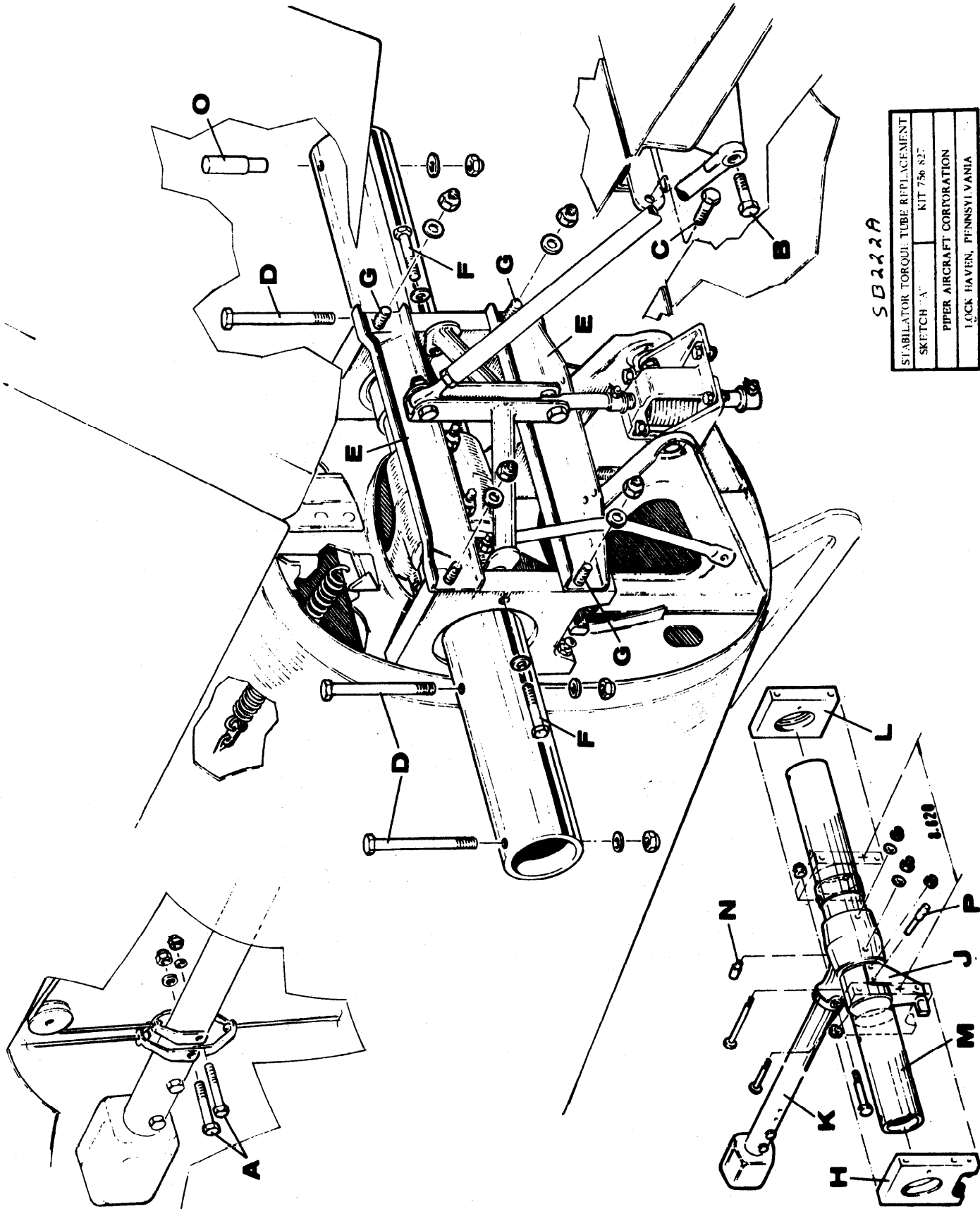
Shims, part no. 81262-72, should be installed with bearing blocks in same position as when removed to maintain a dimension of 8.620 shown in View C.

19. Reinstall torque tube assembly on aircraft in reverse order of disassembly.
20. Install stabilators and bolt the rear spar. Insert locating pin in same manner as previously used in one hole on either stabilator. Ream the other hole to .3120 to .3130 and install bolt. Item O.

Remove locating pin and ream the second hole.

Repeat above process on the other stabilator.

21. Connect control cables and complete reassembly of fairings. Item A.



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STABILATOR TORQUE TUBE REPLACEMENT	
SKETCH "A"	KIT 756 827
PIPER AIRCRAFT CORPORATION	
LOCK HAVEN, PENNSYLVANIA	