



# SERVICE BULLETIN

No. 323

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

"FAA DOA EA-1 Approved"

September 21, 1970 M

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Subject: Modification of the Rudder and Elevator Spar Assemblies

Models Affected: PA-31 and PA-31-300 Navajo

Serial Numbers Affected: 31-2 to 31-694 incl.

Compliance Time: Prior to but not later than the next 100 hours of operation (100 hour inspection period) from bulletin date the inspection provision of this bulletin is to be accomplished and each 100 hours of operation thereafter until full compliance with this bulletin has been completed. Subsequent thereto Piper's recommended inspection procedure is to be followed.

Purpose:

- I. To inspect the following areas for possible cracks:
  - a. Rudder and Elevator Spars;
  - b. Elevator Butt Ribs (in the elevator torque tube attachment area).
- II. To provide material and instructions for modifying the rudder and elevator spar assemblies by installing new rudder and elevator spar hinges.

Instructions:

1. Reference attached sketch denoting rudder and elevator spars and elevator butt rib areas to be inspected per Purpose No. I, above.
  - a. The rudder and elevators must be removed in order to thoroughly inspect the rudder and elevator spars and the elevator butt ribs.
2. The rudder spar, elevator spars and elevator butt ribs must be replaced if cracks are detected during the inspection referenced in Purpose I, above prior to further flight.
3. As stated in Purpose II, above, new rudder and elevator spar hinges must be installed on all affected aircraft specified in Serial Numbers Affected, above; detailed installation instructions are contained in Elevator and Rudder Hinge Installation Kit No. 760 463.

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Material Required:

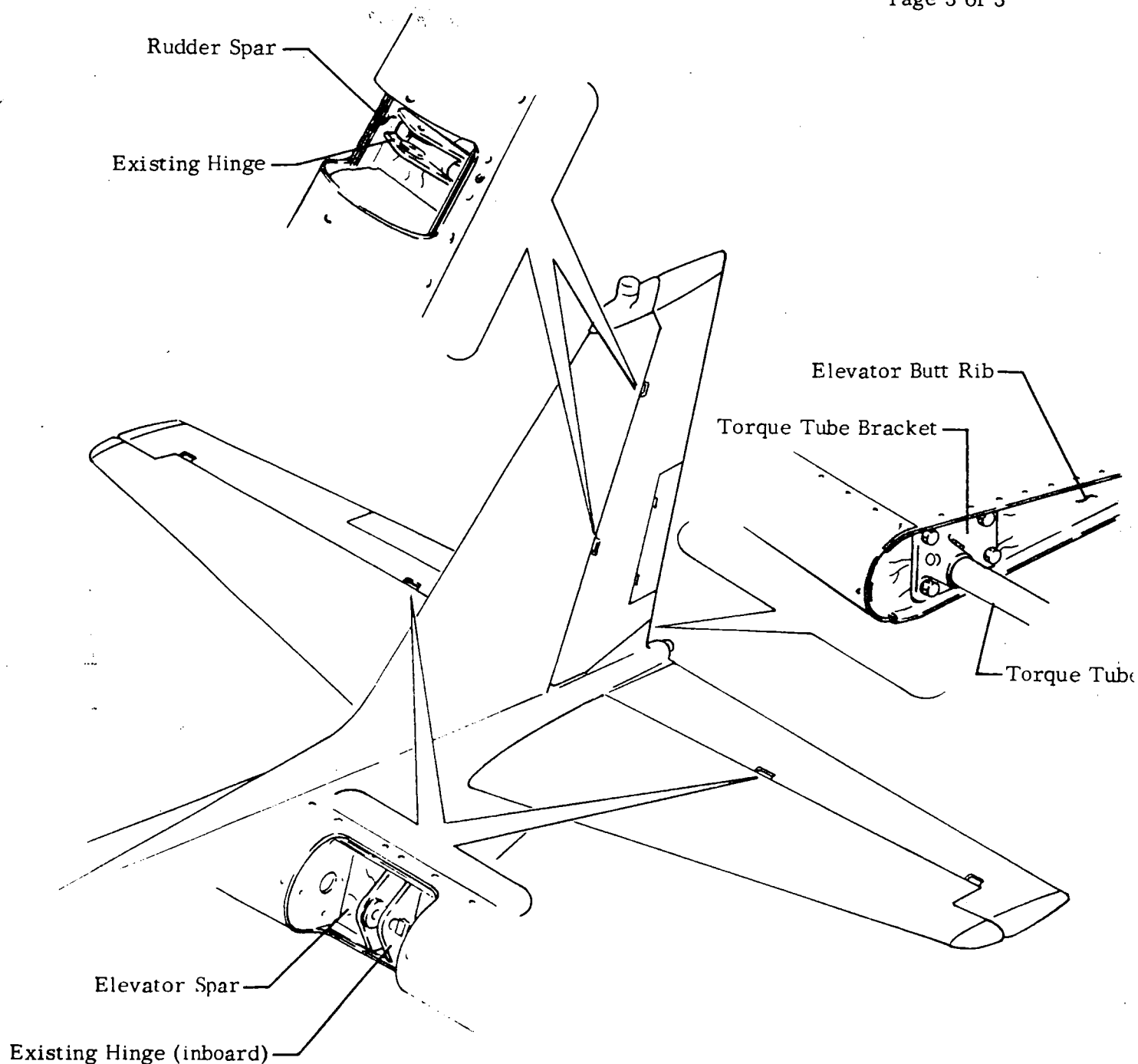
1. One (1) each Elevator and Rudder Hinge Installation Kit No. 760 465;
2. The following listed material is to be installed on affected aircraft only when material replacement is required per Instructions No. 2, above:
  - a. One (1) each (per aircraft) Rudder Spar Assembly part number 40068-05;
  - b. One (1) each (per aircraft) Elevator Leading Edge Spar Assembly (LH) part number 40075-02 (31-2 to 31-150 incl.);
  - c. One (1) each (per aircraft) Elevator Leading Edge Spar Assembly (LH) part number 40075-09 (31-151 and up);
  - d. One (1) each (per aircraft) Elevator Leading Edge Spar Assembly (RH) part number 40075-03 (31-2 to 31-150 incl.);
  - e. One (1) each (per aircraft) Elevator Leading Edge Spar Assembly (RH) part number 40075-11 (31-151 and up);
  - f. Two (2) each (per aircraft) Elevator Butt Rib Assembly part number 40090-00.

Availability of Parts:

Your Piper Dealer.

Summary:

The requirements of this bulletin are completed when Instructions 1, 2 and 3 contained herein have been fully complied with.



#### INSPECTION INSTRUCTIONS

Inspect the area adjacent to the hinge mounting surface on the spars for possible cracks. If cracks are evident, the affected spar must be replaced.

With elevator torque tube brackets removed, inspect the elevator butt ribs for possible cracks. If cracks are evident, the affected butt rib must be replaced.

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