

76

No. 1238  
ATA Code 27-20

Kit No. 76-4001-1 S

**SUBJECT:** FLIGHT CONTROLS - INSPECTION OF RUDDER TORQUE TUBE LOWER HINGE ADAPTER

**EFFECTIVITY:** BEEHCRAFT Duchess 76, serials ME-1 through ME-394.

**REASON:** To provide improved security of the rudder torque tube to the lower hinge adapter.

**COMPLIANCE:** Beech Aircraft Corporation considers this to be a mandatory modification and it should be accomplished as soon as possible after receipt of these Service Instructions but no later than the next 100 hour/annual inspection.

**APPROVAL:** Engineering data contained in these Service Instructions is FAA approved.

**MANPOWER:** The following information is for planning purposes only:

Estimated man-hours: 2.5 hours.

Suggested number of men: 1 man.

The above is an estimate based on experienced personnel complying with these Service Instructions. Occasionally, after work has started, conditions may be found which could result in additional man-hours.

**MATERIAL:** The parts required to accomplish these Service Instructions are contained in Kit No. 76-4001-1 S. The kit may be ordered through BEEHCRAFT Aero or Aviation Centers and International Distributors and Dealers. The value of the kit required to incorporate these Service Instructions on one airplane is to be advised. Price, when issued, will be subject to change without notice. Beech Aircraft Corporation expressly reserves the right to supersede, cancel, and/or declare obsolete any kits or publications that may be referenced in these Service Instructions without prior notice.

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Beech Aircraft Corporation issues service information for the benefit of owners and fixed base operators in the form of three classes of Service Instructions. CLASS I (Red Border) are changes, inspections, and modifications that could affect safety. The factory considers compliance mandatory. CLASS II (Green Border) covers changes, modifications, improvements or inspections the factory feels will benefit the owner and although highly recommended they are not considered mandatory compliance, unless specified at the time of issuance. Class I and II are mailed to:

(a) BEEHCRAFT Aero or Aviation Centers and International Distributors and Dealers.

(b) Owners of record on the FAA Registration list and the

BEEHCRAFT International Owner Notification Service List  
(c) Those having a publications subscription.

CLASS III (No Border) covers changes which are optional, maintenance aids, product improvement kits and miscellaneous service information. Compliance is at the owner or operator's prerogative. Copies of Class III are distributed per a and c above. Information on Owner Notification Service or Subscriptions can be obtained through any BEEHCRAFT Aero or Aviation Center, International Distributor and Dealer, or the Factory. As Service Instructions are issued, temporary notation in the index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Instructions and in accordance with Beech Warranty Policy.

NOTICE

All BEEHCRAFT kits, unless otherwise designated, are approved for installation on BEEHCRAFT airplanes in original or BEEHCRAFT modified configurations only. BEEHCRAFT kits may not be compatible with airplanes modified by STC installations or modifications other than BEEHCRAFT approved kits.

**WARRANTY:** Warranty credit for parts and labor to the extent noted under MATERIAL and MANPOWER will be allowed on all affected airplanes.

All warranty reimbursements are handled through franchised BEEHCRAFT Aero or Aviation Centers and International Distributors and Dealers. Owners and Operators should arrange with these outlets to perform the work and have them submit the standard Beech Aircraft Corporation warranty claim form through BEEHCRAFT Parts and Equipment Marketing Wholesalers or International Distributors.

**SPECIAL TOOLS:** None.

**WEIGHT AND BALANCE:** None.

**REFERENCES:** BEEHCRAFT Duchess 76 Maintenance Manual P/N 105-590000-7 or subsequent, Chapters 27-20 and 55-40.

**PUBLICATIONS AFFECTED:** None.

**ACCOMPLISHMENT**

**INSTRUCTIONS:** These Service Instructions may be accomplished as follows:

1. Refer to the Maintenance Manual, Chapter 27-20, and remove the rudder.

2. Place an index mark on the torque tube and adapter.

3. Remove the six rivets which secure the lower hinge adapter to the rudder torque tube. As each rivet is removed, drill the holes to a diameter of .190 to .194 inch using a #11 drill bit. Install a cleco in each hole after drilling.

4. After all six holes are drilled, remove the clecos and the hinge adapter from the torque tube.

5. Using a #5 drill bit, ream all holes to .205 to .209 inch. Deburr the holes and clean the mating surfaces of the hinge pin adapter and torque tube with naphtha. Apply P/N EC3911 PT primer/degreaser to the mating surfaces and allow to dry. When dry, remove all traces of white powder with a clean brush or cloth.

6. Mix P/N EA9309 QT adhesive per manufacturer's directions and apply to the

mating surfaces of the hinge pin adapter and torque tube. Immediately insert the hinge pin adapter into the torque tube. Align index marks and install P/N NAS1738B6-4 rivets into each of the six holes. If the grip length of the P/N NAS1738B6-4 rivets is insufficient in any of the six holes, install P/N NAS1738B6-5 rivets into those holes only.

**NOTE**

Save a sample of P/N EA9309 QT adhesive, which was applied to the hinge pin adapter, until complete curing is evident.

7. Allow the assembly to cure completely. (24 hours at room temperature)

8. Refer to the Maintenance Manual, Chapter 55-40 and balance the rudder assembly.

9. Refer to the Maintenance Manual, Chapter 27-20 and reinstall the rudder. Cycle the rudder full travel left and

right and check for binding and/or obstructions.

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**RECORD  
COMPLIANCE:**

Upon completion of these Service Instructions, make an appropriate maintenance record entry specifying the kit identification number and the kit serial number.