

77

No. 2003
ATA Code 32-10
Recurring Inspection

Kit No. 77-8003-1 S

SUBJECT: LANDING GEAR - INSPECTION AND/OR MODIFICATION OF COMPONENTS ON THE MAIN LANDING GEAR STRUT ASSEMBLIES

EFFECTIVITY: BEECHCRAFT Skipper 77, serials WA-1 through WA-312.

REASON: To provide a retainer for the elliptical bushings on the main landing gear strut assemblies.

COMPLIANCE: At the owner's/operator's discretion, however, Beech Aircraft Corporation recommends that this modification be accomplished within the next 100 service hours, but no later than the next scheduled inspection. The recurring inspection to assure proper clearance between the retainer and support fitting as specified in step 13 should be repeated every 100 service hours thereafter.

APPROVAL: Engineering data contained in this Service Bulletin is FAA approved.

MANPOWER: The following information is for planning purposes only:

Estimated man-hours for installation of each elliptical bushing: 5 hours.

Estimated man-hours for each collar requiring rebonding: 2 hours.

Suggested number of men: 1 man.

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

MATERIAL: The parts required to accomplish this Service Bulletin are contained in Kit No. 77-8003-1 S. The kit may be ordered through BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers. The value of the kit required to incorporate this Service Bulletin 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 this Service Bulletin without prior notice.

NOTICE

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

DJ-100 O

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1 of 4

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- (a) BEECHCRAFT Authorized Outlets.
- (b) Owners of record on the FAA Aircraft Registration Branch List and the BEECHCRAFT International Owner Notification Service List.

- (c) Those having a publications subscription.

Information on Owner Notification Service or Subscriptions can be obtained through any BEECHCRAFT Authorized Outlet. As Service Bulletins are issued, temporary notification in the Service Bulletin Master Index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Bulletin and in accordance with the Beech Aircraft Corporation Warranty Policy.

Unless otherwise designated, Beech Aircraft Corporation Service Bulletins as well as BEECHCRAFT kits are approved for installation on BEECHCRAFT airplanes in original or BEECHCRAFT modified configurations only. BEECHCRAFT Service Bulletins and Kits may not be compatible with airplanes modified by STC installations or modifications other than BEECHCRAFT Approved kits.

98-39072D

Service Bulletin No. 2003

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 Skipper 77 Maintenance Manual, P/N 108-590000-7 or subsequent, Chapter 32-10.

PUBLICATIONS AFFECTED: It is recommended that a note to "See Service Bulletin No. 2003" be made in the following:
BEEHCRAFT Skipper 77 Maintenance Manual copies, P/N 108-590000-7 or subsequent, chapter 32-10;
BEEHCRAFT Skipper 77 Parts Catalog copies, P/N 108-590000-9B or subsequent, Chapter 32-10.

ACCOMPLISHMENT INSTRUCTIONS: This Service Bulletin may be accomplished as follows:

1. Refer to the Skipper 77 Maintenance Manual, Chapter 32-10 and remove the main landing gear fairings and struts.

2. Inspect the main landing gear strut for security of the steel collar to the strut (see Figure 1). If the distance between the steel collar and the end of the strut is greater than $11.72 \pm .010$ inches as shown in Figure 1, the collar has separated. If the collar has separated, remove the collar and thoroughly clean the strut at the collar location. Remove all traces of bonding agent with 200 grit sandpaper (obtain locally). If the collar is secure, proceed to step 7.

CAUTION

Do not mar or scratch the strut.

3. Clean the steel collar completely, removing all traces of bonding material from the inner recessed area of the collar using 200 grit sandpaper. Use care not to remove any metal from the edge of the collar.

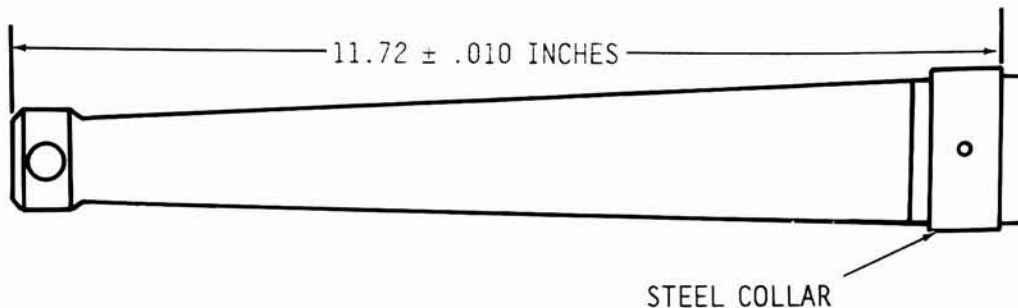


Figure 1.

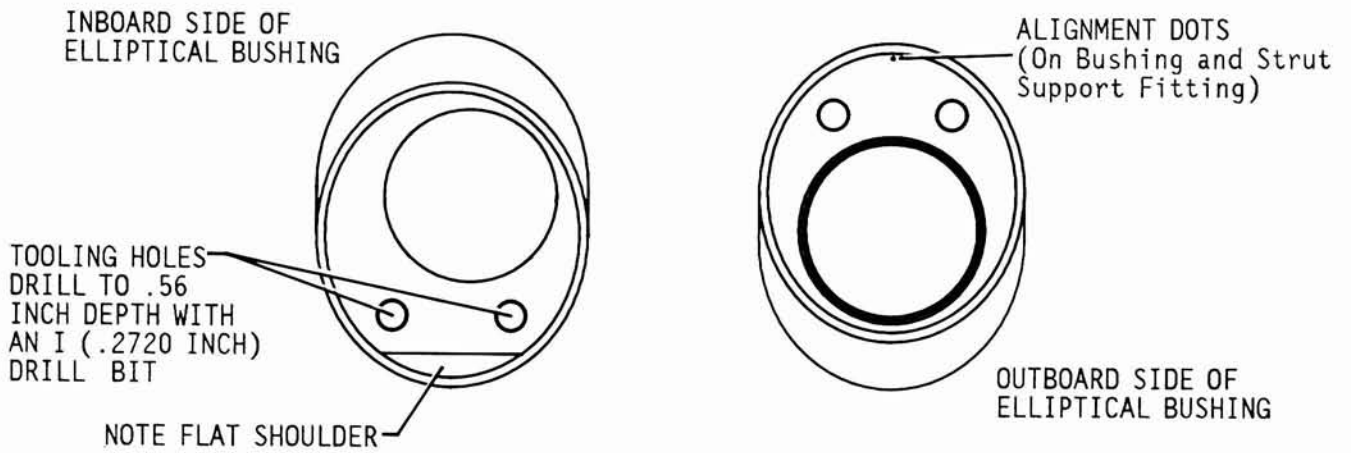


Figure 2.

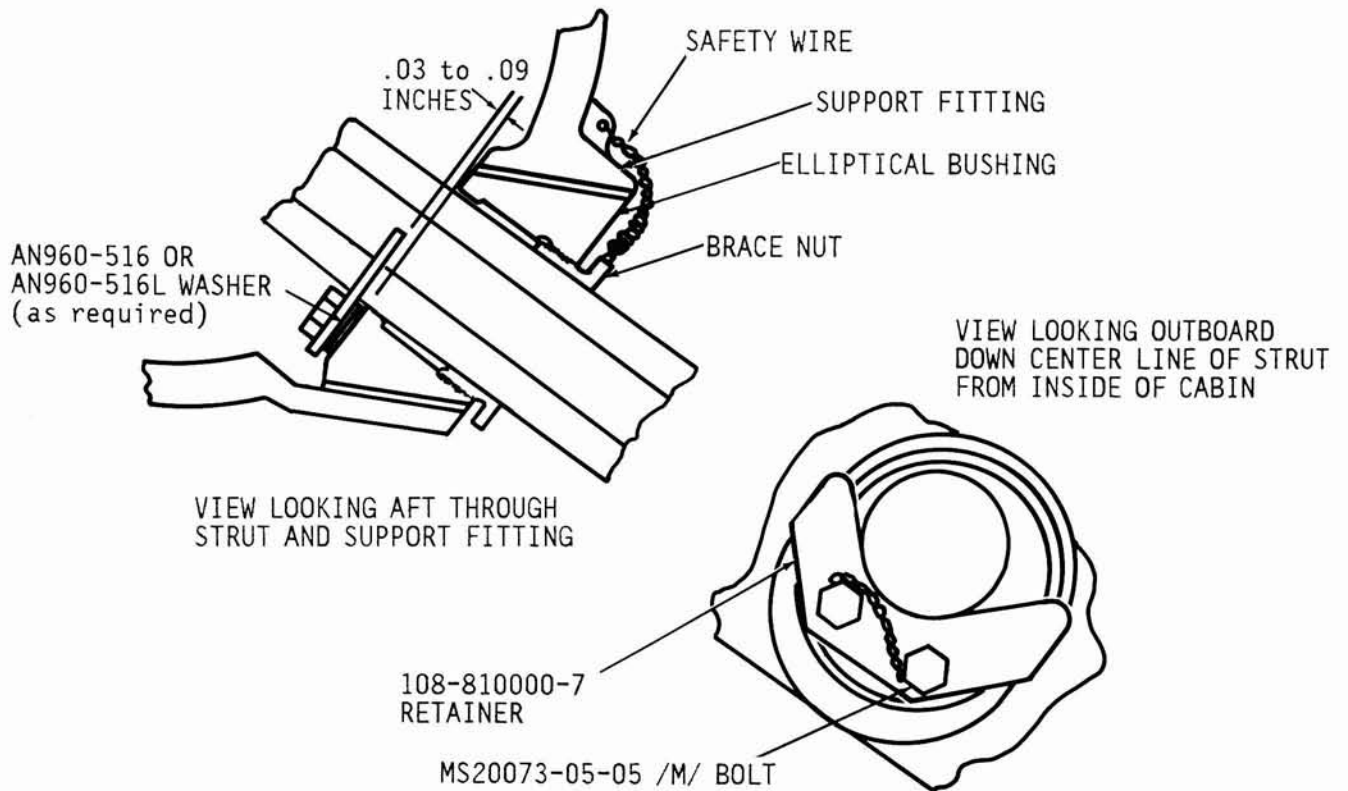


Figure 3.

Service Bulletin No. 2003

4. Return the collar to its correct position on the strut and check fit the collar to the strut with a feeler gage. If the clearance between the collar inner diameter measured at the edge, and the strut outer diameter is greater than .010 inch, contact the Service Department, Beech Aircraft Corporation, Liberal Division, P.O. Box 300, Liberal, KS. 67201 Phone: (316) 624-1613, TWX: 910-740-1501.

5. Prepare the strut and the collar for bonding using P/N EC3911 PT degreasing primer. Allow the degreaser to dry. Then remove excess degreaser completely with a clean dry cloth before applying adhesive.

NOTE

The use of clean cloth gloves is recommended for handling parts. Contamination of prepared surfaces may reduce bonding strength.

6. With the strut supported on a bench, locate the collar on the strut in accordance with Figure 1 using care not to contaminate prepared surfaces. Inject P/N EA9309 QT adhesive (mix per manufacturers instructions) into the hole in the collar using a disposable 3 c.c. syringe (obtain locally). Carefully rotate the collar, maintaining the correct collar location, and inject adhesive into the collar a second time. **REPEAT THE PROCEDURE UNTIL CERTAIN THAT NO AIR POCKETS REMAIN INSIDE THE COLLAR.** Re-check the measurements in accordance with Figure 1, and tape the collar in place with masking tape. Allow adhesive to cure 24 hours at room temperature before installing the strut. The use of a heat lamp approximately 12-15 inches from strut is recommended. After curing, remove all excess adhesive from the strut and collar using scotch-brite or equivalent (obtain locally).

7. Locate the two tooling holes in the inboard side of the elliptical bushing. Drill the holes to a depth of .56 inch with an I (.2720 inch) drill bit. Tap the holes to 5/16-24 thread starting with a tapered tap and finishing with a bottoming tap (refer to Figure 2).

NOTE

Inspect the condition of the Urethane coating on the elliptical bushing. If the coating is damaged, a new bushing will be required.

8. Repeat steps 2 through 7 on the opposite strut.

9. Reinstall the landing gear strut after the bonding adhesive (if required in Step 4) has cured. Make certain the alignment dots on the elliptical bushing and strut support fitting (see Figure 2) are aligned exactly. Torque the brace nut (see Figure 3) to 125-150 inch pounds with a spanner wrench while holding the bushing in place. The alignment dots **MUST** align after the brace nut is torqued. Safety wire the brace nut, using P/N MS20995C32 safety wire (obtain locally).

NOTE

In some cases, the brace nut may contact the strut support fitting prior to reaching full torque. It is permissible to remove sufficient material from the edge of the strut support fitting to permit torquing the brace nut.

10. Install a P/N 108-810000-7 retainer as shown in Figure 3, using two P/N MS20073-05-05 /M/ bolts. Place P/N AN960-516 or P/N AN960-516L washers between the bushing and retainer as required to maintain a spacing of .03 to .09 inch between the retainer and support fitting (refer to Figure 3). Torque the bolts to 56-78 inch-pounds and safety wire.

11. Reinstall the fairings, and the interior and exterior panels removed in Step 1.

12. Inspect the retainer and support fitting for proper bonding after 100 service hours.

13. The recurring inspection should be repeated each 100 service hours thereafter to assure .03 to .09 inch clearance between the retainer and support fitting.

RECORD

COMPLIANCE:

Upon completion of this Service Bulletin, make an appropriate maintenance record entry specifying the kit identification number and the kit serial number. It is recommended that the parts list contained in the kit be filed for future reference until the listing of parts has been incorporated into the Parts Catalog.