



CLASS I

# SERVICE INSTRUCTIONS

76

No. 1209  
ATA Code 32-30

Kit No. 76-8004-1 S  
Kit No. 76-8004-3 S

**SUBJECT:** LANDING GEAR - REPLACEMENT OF THE NOSE LANDING GEAR DOOR HINGE PINS AND REPLACEMENT OF BUSHINGS IN THE NOSE LANDING GEAR DOOR ACTUATING LINKAGE.

**EFFECTIVITY:** PART I

BEEHCRAFT Duchess 76, serials ME-1 through ME-418;

PART II

BEEHCRAFT Duchess 76, serials ME-1 through ME-422.

**REASON:** To reduce the possibility of binding on the nose landing gear door hinges or nose landing gear linkage which could prevent nose landing gear extension.

**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 50 service hours.

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

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

PART I

Estimated man-hours for modification: 1.5 hours per airplane.

Suggested number of men: 1 man.

DB-137  
583 I

1 of 5

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- (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.

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98-34239D



CLASS I

## Service Instructions No. 1209

### PART II

Estimated man-hours: 7.0 hours per airplane.

Suggested number of men: 2 men.

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. 76-8004-1 S (serials ME-1 through ME-418) and Kit No 76-8004-3 S (serials ME-419 through ME-422). The kits 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.

### 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 for all claims received prior to December 1, 1983 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, Chapter 7-00 and 32-30.

### PUBLICATIONS AFFECTED:

It is recommended that a note to "See Service Instructions No. 1209" be made in the following:

BEEHCRAFT Duchess 76 Maintenance Manual copies, P/N 105-590000-7 or subsequent, Chapter 12-20 and 32-30;  
BEEHCRAFT Duchess 76 Parts Catalog copies, P/N 105-590000-9C or subsequent, Chapter 32-30.

**ACCOMPLISHMENT**

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

**CAUTION**

In order to prevent inadvertant retraction of the landing gear when the airplane is jacked, the landing gear circuit breaker should be pulled and the emergency landing gear extension valve should be opened to relieve pressure in the hydraulic system.

**PART I****NOTE**

Use care to ensure that the landing gear door linkage is not altered during hinge pin replacement.

1. Gain access to the nose landing gear door hinges by removing the nose cone from the airplane.
2. Disconnect the nose landing gear doors from the landing gear linkage.
3. Remove the hinge pins from the landing gear doors.
4. Coat the inside of each hinge lug with BRAYCO 300 or LPS-3 lubricant.
5. Install new P/N 105774C-ZE04305 hinge pins in the landing gear door lugs.
6. Ensure that both end hinge lugs on each landing gear door hinge are carefully crimped to prevent movement of the hinge pins within the hinge.
7. Reconnect the nose landing gear door linkage and reinstall the nose cone. (On airplanes listed in PART II, EFFECTIVITY, it is recommended that PART II ACCOMPLISHMENT INSTRUCTIONS be accomplished prior to this step).

**PART II**

1. Refer to the Maintenance Manual, Chapter 7-00, and place the airplane on

jacks.

2. Disconnect the nose landing gear doors from the landing gear door linkage.

3. Gain access to the bearing assemblies as follows:

- a. Remove the large nose compartment access door on the upper LH side of the fuselage.

- b. Loosen the clamps attaching the intake pipe and blower hose to the heater blower assembly.

- c. Loosen the heater blower assembly mounting clamps and move the heater blower assembly to one side, disconnecting the intake pipe and the hose.

**CAUTION**

Do not break the seal around the intake pipe where it passes through the access panel in the forward RH floor of the nose compartment floor.

- d. Remove the screws from the rectangular access panel through which the intake pipe passes and, pushing down on the intake pipe, gain access to the RH bushing, leaving the intake pipe sealed to the access panel.

**NOTE**

If the seal is broken between the intake pipe and the access panel, reseal the area with Pro-Seal 890 (obtain locally) prior to reinstalling the heater blower assembly.

- e. Remove the bushings (refer to Figure 1) by removing the bushing retaining bolts, the spring retaining screws and pulling the bushings outboard. The LH bushing will be removed through the forward nose compartment floor.

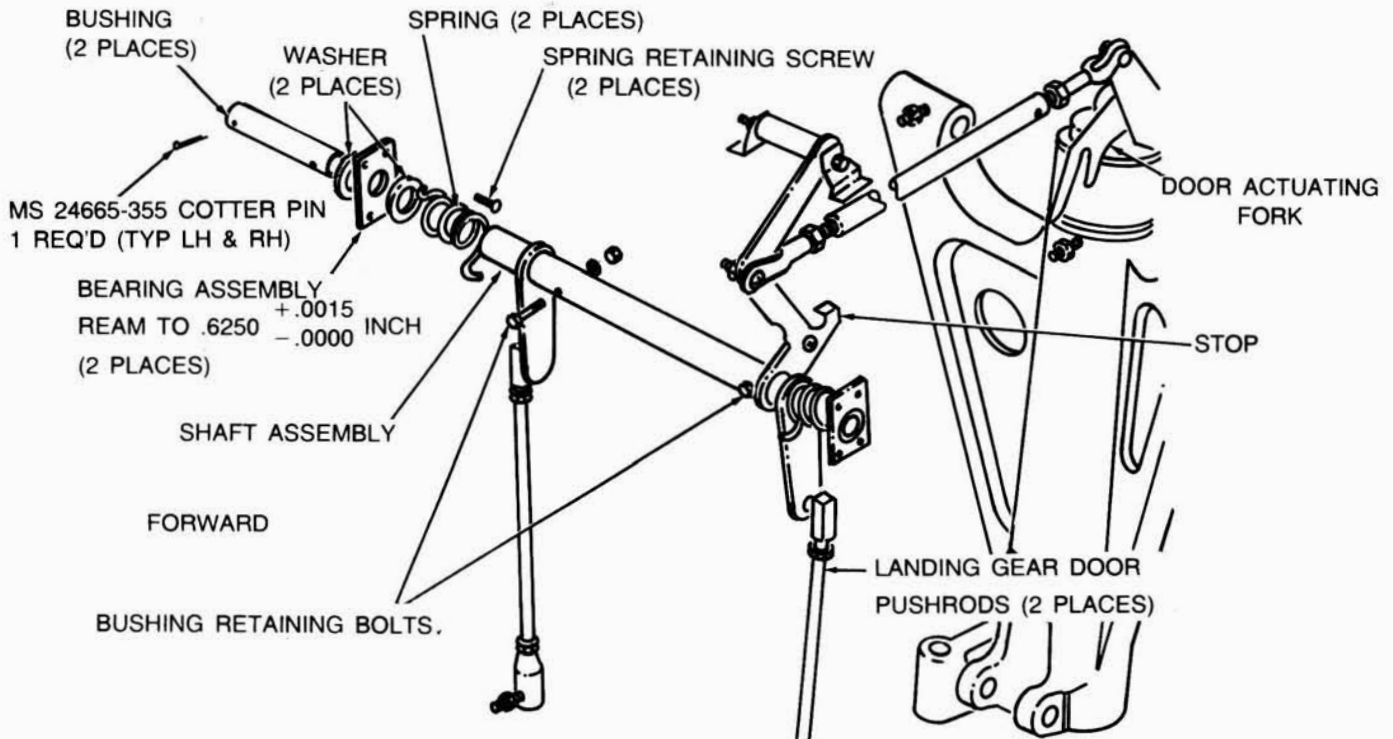


Figure 1

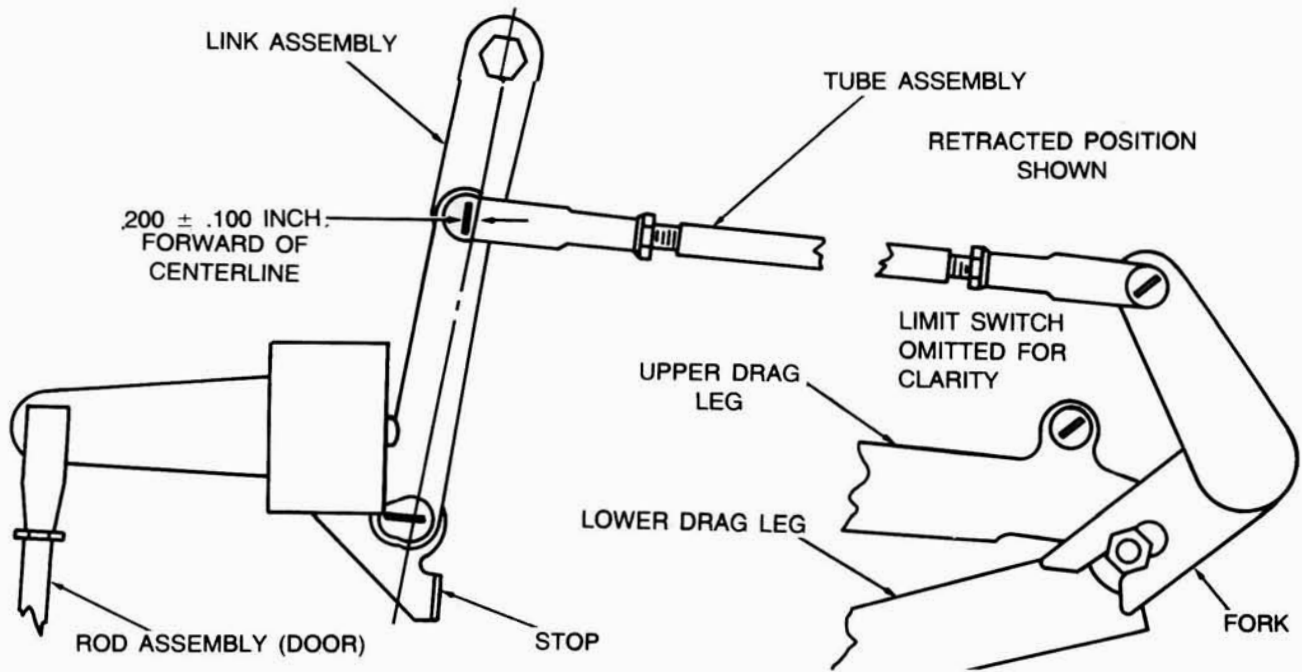


Figure 2

**NOTE**

After the LH bushing is removed, it may be necessary to remove the RH bushing by inserting several short socket extensions, one at a time, through the opening in the LH keel, and pushing the RH bushing out.

4. Ream the P/N 105-410000-21 bearing assemblies to .6250/.6265 inch. Replace the landing gear bushings, following the directions specified in Kit No. 76-8003-1 S. Kit No. 76-8003-1 S is included as part of Kit No. 76-8004-1 S and Kit No. 76-8004-3 S.

**NOTE**

Prior to the accomplishment of Step 4 of the installation instructions in Kit No. 76-8003-1 S, lubricate the bushings with 11305 Aerolubriplate lubricant.

5. Reinstall shaft assembly, springs, spring retaining screws, washers, bushings, bushing retaining bolts, access plate, blower duct and blower motor.

6. With doors disconnected, manually retract the nose landing gear and adjust the fore-and-aft pushrod in the nose landing gear door actuating mechanism (see Figure 2), so the pin on the left side of the drag brace knee engages the door actuating fork SLOT as the landing gear retracts. Hydraulically retract the landing gear and fine adjust so that the forward pivot arms move to within  $.200 \pm$

.100 inch forward of the on-center position. This should allow the pin on the left side of the drag brace knee to properly engage the door actuating fork SLOT. Cycle the landing gear and observe for proper operation.

**WARNING**

Excessive lengthening of the rod causes the pin to engage the fork from below, pulling the forward pivot to an over-center position. If this condition exists, the nose gear doors will prohibit either manual or emergency extension of the nose landing gear. Excessive shortening of the rod results in an over-center position of the nose pivot. If this condition exists, emergency extension of the nose landing gear may be impaired.

7. With the landing gear hydraulically retracted, adjust the nose landing gear door pushrods one at a time so the door attach bolt slides in easily with the door fully closed. Shorten both pushrods an additional two (2) full turns and tighten the jam nuts on the pushrod ends. Extend the landing gear and reconnect the doors to the pushrods.

8. Perform a landing gear retraction test to ensure proper retraction and both normal and emergency extension of the landing gear. Check the heater blower for proper operation.

9. Reinstall the nose cone and remove the airplane from the jacks.

**RECORD****COMPLIANCE:**

Upon completion of these Service Instructions, 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.