

SUBJECT: LANDING GEAR HYDRAULIC SYSTEM, MODIFICATION OF PLUMBING AT MAIN GEAR ACTUATOR CYLINDER AND UPLOCK CYLINDER.

AIRCRAFT AFFECTED: BEECHCRAFT Musketeer A24R, serials MC-2 through MC-70, except MC-22, MC-23, MC-39, MC-42, MC-43, MC-63, and MC-64.

REASON FOR CHANGE: To preclude possible loss of hydraulic fluid in flight, resulting in an unscheduled extension of the landing gear.

ACCOMPLISHMENT: As soon as practical after receipt of these Service Instructions, but no later than the next scheduled inspection period.

DESCRIPTION: On the BEECHCRAFT Musketeer A24R, serials noted above, it is recommended that the landing gear hydraulic system plumbing to each main gear actuator cylinder and to each main gear uplock cylinder be modified as described in the following procedure.

1. Ascertain that the battery master switch is OFF.
2. Place the airplane on jacks.
3. On the bottom of the left hand wing, remove the long rectangular access door aft of the main landing gear installation.
4. Locate the AN824-4D tee at the inboard end of each of the two landing gear hydraulic system hose assemblies. (See Figure 1.) Make certain that the hose assembly connected to the inboard-most AN824-4D tee can be identified later, then remove and discard the two AN824-4D tees.

NOTE

There is a possibility that a few airplanes will have two crosses in place of the two AN824-4D tees mentioned above, in which case the crosses should be removed and replaced with AN821-4D elbows as described in these instructions.

5. With two AN821-4D elbows, join the two pairs of tube assemblies which were formerly connected to the AN824-4D tees. (See Figure 2.)
6. Disconnect the other end of the hose assembly which was disconnected from the inboard-most AN824-4D tee in Step 4 and discard the hose assembly. (See Figure 1.)
7. Locate and remove the two AN832-4D bulkhead unions (Figure 1) in the wing spar web and replace with

two AN804-4D bulkhead tees (Figure 2). Position each tee so that two fittings are on the aft side of the spar web. On the forward fitting of each tee, install an AN960-716L washer on the aft side of the spar web, and install two AN924-4D nuts on the forward side of the spar web. Connect the two pairs of tube assemblies, formerly joined by the two AN832-4D bulkhead unions, to the forward and aft fittings of the two AN804-4D bulkhead tees.

8. Connect the free end of the remaining hose assembly to the outboard-most AN804-4D bulkhead tee.

9. Connect a new MS28741-4-0100 hose assembly to the other AN804-4D bulkhead tee (Figure 2), and to the fitting in the inboard end of the actuator cylinder.

10. Remove the access door on the bottom of the right hand wing and perform Steps 4 through 9 on the right hand side of the airplane.

11. Bleed the system as follows:

- a. Apply pressure to the pitot head to maintain an indicated airspeed of 72 mph or more.
- b. Check the fluid level of the landing gear hydraulic system reservoir.

NOTE

Check the reservoir for adequate fluid between each bleeding operation described below.

- c. Turn on the battery master switch and loosen the nut on the outboard (extend) line at one main landing gear uplock cylinder. Break the gear from overcenter (the gear down limit switch will be activated and the hydraulic system pump will operate) and hold until all air is expelled from the extend line, then tighten the extend line nut.
- d. Place the landing gear switch in the UP

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

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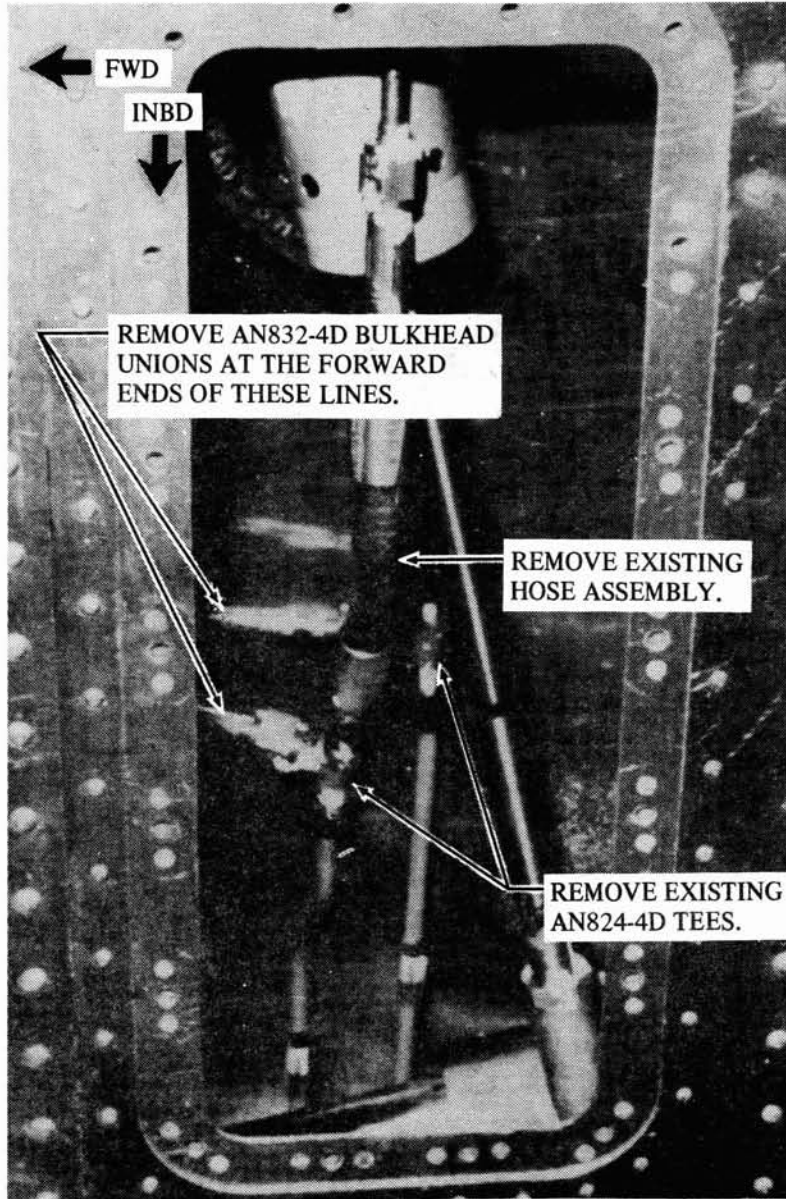


Figure 1. View Looking up at Bottom of Left Hand Wing before Rework

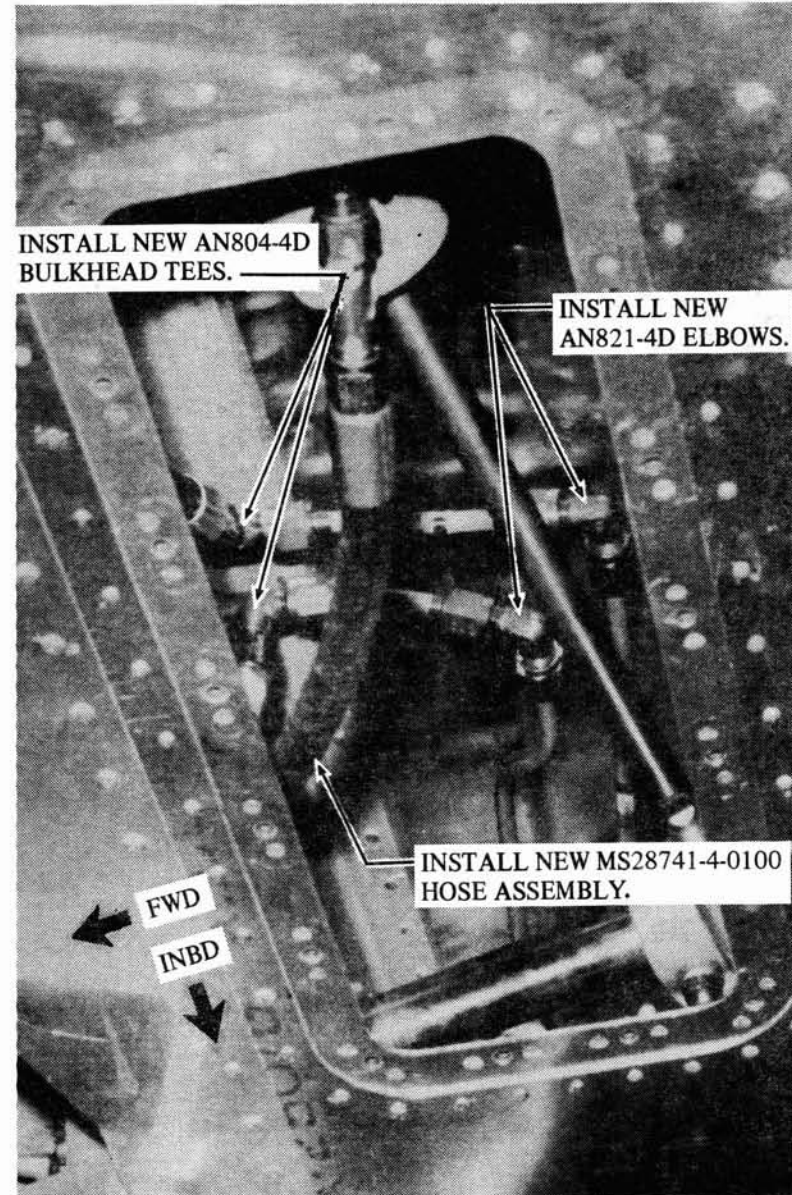


Figure 2. View Looking up at Bottom of Left Hand Wing after Rework

position, and with the gear in the half retracted position, turn off the battery master switch and loosen the nut on the inboard (retract) line at the uplock cylinder. The weight of the gear will force hydraulic fluid and air from the retract line at the loosened nut.

CAUTION

Make certain that the area beneath the gear is clear of equipment and personnel, as the gear may drop rapidly when the retract line nut is loosened.

e. Continue to raise and lower the gear as described in the preceding step until all air is expelled from the retract line, then tighten the retract line nut and place

PART NUMBER	DESCRIPTION	QUANTITY	PRICE*
AN821-4D	Elbow	4	\$.65 A
AN804-4D	Tee	4	\$1.05 A
AN960-716L	Washer	4	\$1.00 A**
AN924-4D	Nut	8	\$8.50 A†
MS28741-4-0100	Hose Assembly	2	\$15.70 Z

*Prices shown are for planning purposes only, and may change without notice.

**Price for a minimum buy quantity of 100.

†Price for a minimum buy quantity of 50.

Upon completion of the modification, enter an appropriate statement in the aircraft log book, and return a completed compliance card to Beech Aircraft Corporation. It is suggested that a note be placed in the parts catalog until the new part numbers have been incorporated into a revision to the parts catalog.

COMPLIANCE CARD RETURN REQUIRED

the landing gear switch in the DOWN position.

f. Perform Steps b. through e. on the opposite side of the airplane.

g. Cycle the gear several times in the normal manner, operate the emergency system twice, then cycle the gear three additional times.

h. Remove the pressure being applied to the pitot head.

12. Inspect the landing gear hydraulic system for leaks.

13. Reinstall the wing access doors and remove the jacks.

The following parts are required for this modification. They are available through the Beech Aircraft Corporation Dealer Organization.

PLANNING INFORMATION

In addition to the prices listed above, the following information is supplied for planning purposes only:

Estimated man-hours: 4 hours.

Suggested number of men: 1 man.