Beechcraft SERVICE BULLETIN

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SUBJECT: INSPECTION OF THE FUSELAGE STRUCTURE AT THE AFT BULKHEAD.

AIRCRAFT AFFECTED: BEECHCRAFT Musketeer Model 23 Airplanes, Export and Domestic, that:

1. Were not included in the up-dating and modification program performed at the factory.
2. Have not installed Kit 23-10SR (export) or Kit 23-11SR (domestic).

REASON FOR CHANGE: To inspect and/or add structural reinforcement to the aft fuselage section and aft bulkhead.

ACCOMPLISHMENT: At the next 100 hour inspection and at each 100 hour inspection thereafter until the modification work is accomplished.

DESCRIPTION: This bulletin is issued to inform owners of BEECHCRAFT Musketeers who were unable to participate in the Musketeer Model 23 factory up-dating and modification program, or who have not installed Kit 23-10SR or Kit 23-11SR, of an inspection and/or modification repair of the aft fuselage structure at the aft bulkhead. This repair is recommended to prevent the possibility of the development of cracks in the aft bulkhead flange, where the five rivets attaching the stabilator hinges are installed (see illustration).

It was determined at the factory that a nose shimmy dampener in bad repair would set up abnormal shimmy at the nose wheel and transfer additional stress to the aft fuselage structure. It is recommended, even though a nose shimmy dampener in good repair is installed on the airplane, that the structural reinforcement of the aft fuselage bulkhead of your airplane be performed at your earliest convenience.

To perform the inspection remove the two access panels, one on each side of the aft fuselage, just forward of the stabilator and check for cracks progressing outward from the five (5) rivet butts in the aft bulkhead flange at the stabilator hinge bracket tie-in. If cracks are found in the bulkhead flange at the rivet butt it is recommended that a repair be made in accordance with Manual CAM 18 for in-field repair.

NOTE

Repair of bulkhead cracks shall not interfere with the installation of the structural reinforcement parts. If interference exists the aft bulkhead should be replaced.

The structural repair of the aft fuselage bulkhead should be performed as follows:

1. Remove the access panels on each side of the aft fuselage, just forward of the stabilator.

2. Disconnect the stabilator control cable from the control arm, near the balance weight. Disconnect the stabilator tab control at the tab by removing the existing pin, bolt, nut and washer.

3. Remove the tail cone from the aft end of the fuselage. Remove the stabilator retaining bolts at the hinge point (both sides) and remove the stabilator from the airplane.

4. Remove the existing support angles and spacers installed at the aft end of the formed stiffeners at skin laps (use caution when removing existing rivets so as not to enlarge or elongate the rivet holes).

5. Locate the new angles and spacers (upper and lower both sides) on the existing formed stiffeners at the skin laps. Remove the "clip nuts" from the access door in the area where the new angles are located. Pilot drill the angles and spacers to match the existing fastener locations and temporarily fasten in place.

6. Locate the new angles on the aft bulkhead. Drill the angle to match the two existing rivet locations on the bulkhead. Drill through the bulkhead flange, hinge and fuselage skin five places to match the angle. Drill the remaining locations as required to match the locations in the angle. Drill all holes as required to full size and rivet the angles and spacers with rivets as noted. (Use shims under angle tabs if required.)

NOTE

Due to different aircraft configurations, various rivet lengths may be required. Rivets in various lengths to be used as required are included in the parts list. No oversized rivets are included.

7. Install the stabilator on the airplane and connect the stabilator control using existing fasteners.

8. Install the fairing on the aft fuselage with the existing fasteners. Connect the tab travel controls and adjust the actuator rod to provide tab travel of 2°± 1° up and 15°+ 2°- 1° down with the elevator in neutral position. This adjustment may be accomplished in most cases by turning the actuator rod one full 360° turn to the right, moving the rod end forward. After corrected tab travel has been verified, connect the actuator rod and elevator tab with AN23-11 bolt, AN960-10 washer, AN320-3 nut and MS24665-134 pin; one each required. (Refer to the BEECHCRAFT Musketeer Service Instruction Manual, to obtain the stabilator neutral position.)

9. Install the existing "clip nuts" at the fastener locations for the access panels and install the panel doors with the existing fasteners.

GENERAL NOTES

● a. Drill #19 (. 165 to . 174) inch diameter holes for the 5/32 inch diameter MS20470AD5 rivet. Use rivet length as required (see illustration).

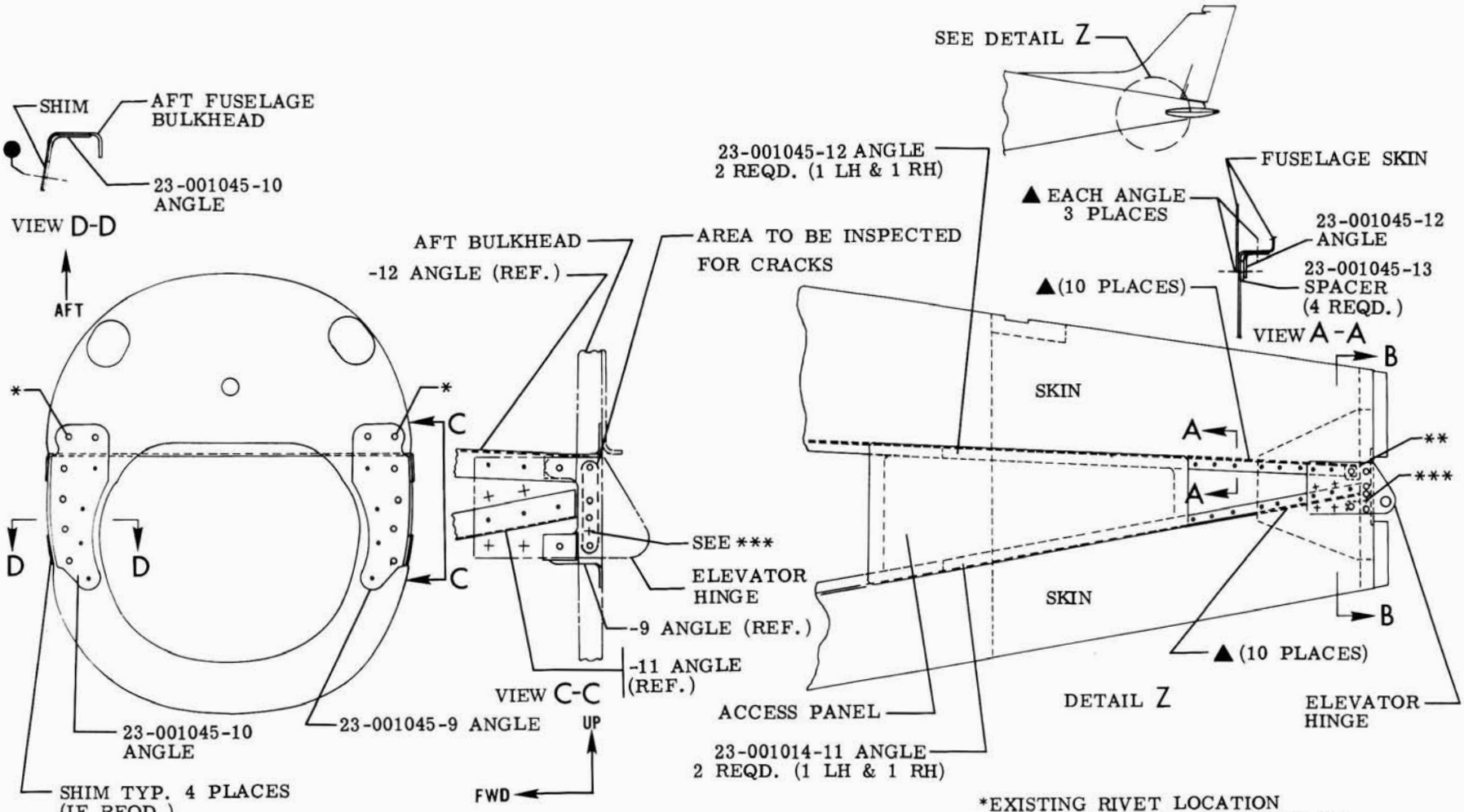
▲ b. Drill #30 (. 128 to . 137) inch diameter holes for 1/8 inch diameter MS20470AD4 rivet. Use rivet length as required (see illustration).

c. If rivet holes are enlarged during removal of existing parts, it is permissible to use one size larger diameter rivet than noted.

The following parts are required to complete this modification:

PART NUMBER	NOMENCLATURE	QUANTITY
23-001045-9	Angle	1
23-001045-10	Angle	1
23-001045-11	Angle	2
23-001045-12	Angle	2
23-001045-13	Spacer	4
23-001045-15	Shim	4
MS20470AD4-3	Rivet	8
MS20470AD4-4	Rivet	4
MS20470AD4-5	Rivet	20
MS20470AD4-6	Rivet	15
MS20470AD4-10	Rivet	8
MS20470AD5-6	Rivet	6
MS20470AD5-7	Rivet	10
MS20470AD5-8	Rivet	5
MS20470AD5-11	Rivet	6
MS20470AD5-12	Rivet	5

Upon completion of the inspection and/or repair, enter a compliance statement in the Aircraft Log Book.



VIEW B-B
LOOKING AFT AT FUSELAGE AFT BULKHEAD

*EXISTING RIVET LOCATION
**TRIM FLANGE OF -12 ANGLE TO CLEAR -9 & -10 ANGLE
***REMOVE EXISTING RIVET THIS LOCATION & ADD A FLUSH RIVET THRU HINGE, SKIN & BULKHEAD. THIS RIVET DOES NOT FASTEN THE 23-001045-9 OR 23-001045-10 ANGLE.

●SEE GENERAL NOTES
▲SEE GENERAL NOTES