

19, 23, 24

No. 2198, Rev. I
ATA Code 27-10

Kit No. 23-4013-1 S

SUBJECT: FLIGHT CONTROLS - INSPECTION AND/OR REPLACEMENT OF AILERON PUSH ROD FORWARD ROD END

SYNOPSIS OF CHANGE: Added note to modify inspection hole location on some airplanes.

OPERATIONAL BENEFITS: This Service Bulletin is being issued to reduce the possibility of separation of aileron push rod ends and possible loss of aileron control. This Bulletin provides a kit to facilitate examination and lubrication of aileron push pull forward rod ends during routine inspections.

EFFECTIVITY: BEECHCRAFT A23-19, 19A, M19A and B19, serials MB-1 through MB-520;
B19 Sport 150, serials MB-521 through MB-813, MB-815 and MB-816;
23, A23, A23A, B23 and C23, serials M-1 through M-1361;
C23 Sundowner 180, serials M-1362 through M-1874 and M-1876 through M-1879;
A23-24 and A24, serials MA-1 through MA-368;
A24R, serials MC-2 through MC-95;
A24R and B24R Sierra 200, serials MC-96 through MC-310, MC-312 through MC-448, MC-450 and MC-451.

COMPLIANCE: Beech Aircraft Corporation considers this to be a mandatory modification and it should be accomplished as soon as possible after receipt of this Service Bulletin, but no later than the next scheduled inspection.

An Airworthiness Directive has been requested on this matter.

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 inspection access doors: 6 hours.

Estimated man-hours for replacement of one rod end: .5 hour.

Suggested number of men: 1 man.

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

AW-1087 M

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Beech Aircraft Corporation issues service information for the benefit of owners and fixed base operators in the form of two classes of Service Bulletins. Mandatory (Red Border) Service Bulletins are changes, inspections and modifications that could affect safety. The factory considers compliance with these Service Bulletins mandatory. OPTIONAL (No Border) Service Bulletins cover changes, modifications, improvements or inspections the factory feels will benefit the owner and although highly recommended, they are not considered mandatory compliance at the time of issuance, unless so stated in the publication. Due to the wide range of information covered by the OPTIONAL Service Bulletin, each owner/operator is responsible for conducting a thorough review of each Optional Service Bulletin and determine if compliance is required based on the applicability of the OPTIONAL Service Bulletin to his particular set of operating conditions. Both classes are mailed to:

- (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.

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MATERIAL:

The parts required for this modification are contained in Kit No. 23-4013-1 S. This kit may be ordered through a BEECHCRAFT Authorized Outlet. 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.

WARRANTY CREDIT: None.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: No change.

REFERENCES: BEECHCRAFT 19, 23 and 24 Series Shop Manual, P/N 169-590015G or subsequent, Section 2;

PUBLICATIONS

AFFECTED:

It is recommended that a note "See Service Bulletin No. 2198, Rev. I" be made in the following:

BEECHCRAFT 19, 23 and 24 Series Shop Manual, P/N 169-590015G or subsequent, Section 2;

BEECHCRAFT 19, 23, and 24 Parts Catalog, P/N 169-590012J or subsequent, Figure 32.

ACCOMPLISHMENT

INSTRUCTIONS:

This Service Bulletin may be accomplished as follows:

NOTE

Some airplanes may have an existing 1-3/8 inch diameter hole in the area where the new 5 inch diameter hole is to be cut. If the hole already exists, determine whether the new hole will encompass the existing hole. If so, proceed to Step 2.

1. If it is not possible to include the existing hole in the new hole, locate the center point of the new inspection hole 4.75 inches outboard from the outboard edge of the wing skin, instead of the 3.0 inches shown in Figure 1. (All other dimensions shown in Figure 1 will still be applicable.)

2. Locate a point on the underside of the L.H. wing 3.62 inches from the forward edge of the wing skin and 3.0 inches from the outboard edge of the wing skin as shown in Figure 1. Using this as a center point, lay out a hole 5 inches in diameter.

3. Cut the inspection hole in the skin which was laid out in Step 2.

4. Lay out and drill 12 equally spaced .128 inch (#30) holes in the doubler and skin for attaching rivets.

5. Scuff the areas of contact between the doubler and skin to provide a good adhesion surface.

6. Prepare both the airplane skin and doubler surfaces for bonding by cleaning with Methyl Ethyl Ketone.

7. Insert doubler through hole in wing skin by rolling the doubler slightly. Straighten doubler if necessary.

8. Apply P/N EA9309 Adhesive (P/N of Dexter Hysol, Pittsburg, California or equivalent) (Obtain locally) to the affected areas and install the doubler with P/N MS20470AD4-4 Rivets

9. Install MS21047L08K nutplates on the doubler, using MS20426AD3-3 rivets.

10. Remove the bolt which secures the aileron push rod assembly to the aileron.

11. Inspect both rod ends for corrosion and freedom of movement in all directions. Restriction of movement is an indication of rod end corrosion.

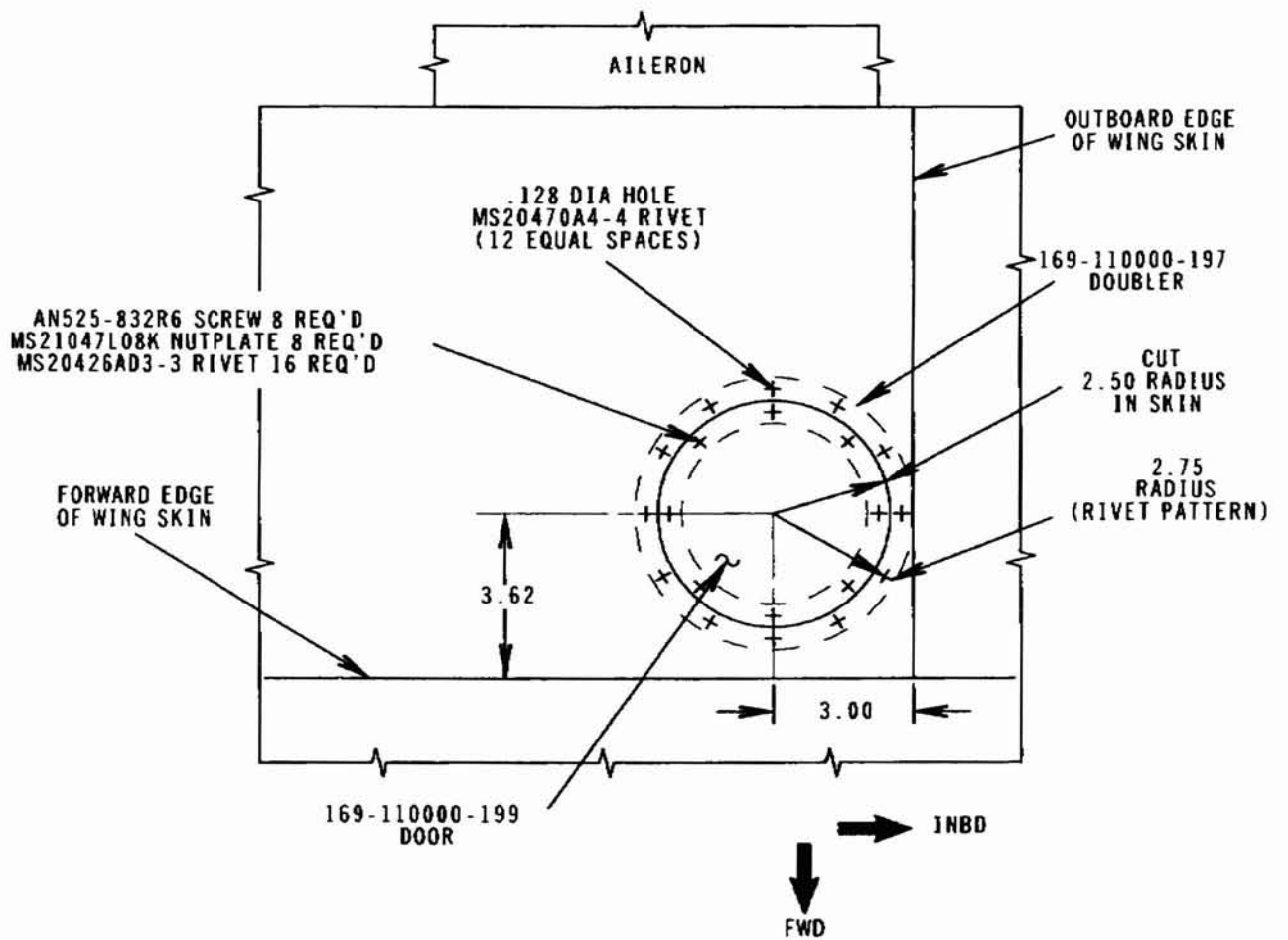
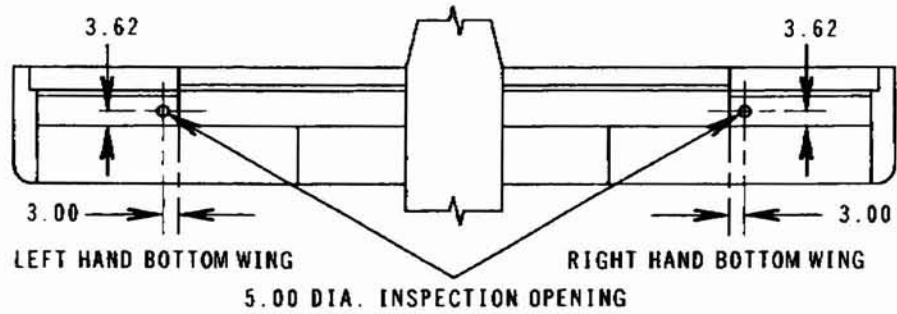
12. Lubricate rod end bearings using SAE No. 10W30 oil. Refer to the appropriate Shop Manual for proper lubrication intervals.

13. If corrosion is evident, replace the affected rod end with a new P/N 169-380082-3 rod end. Removal of the forward rod end from the aileron bellcrank may be accomplished as follows:

a. Remove the aileron from the wing.

b. Remove the ground strap from the closure strip.

c. Remove the cotter pin, nut and bolt which secures the push rod to the aileron bell crank.



VIEW LOOKING FROM BELOW AT LH WING
Figure 1

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d. Measure and note the dimension between the attach bolt holes of the rod ends to avoid rerigging the aileron.

e. Remove and replace the rod ends with new P/N 169-380082-3 rod ends. Adjust and lock to the dimension noted in the previous step.

f. Reinstall the push rod assembly and the ground strap.

g. Reinstall the aileron on the airplane and determine proper operation. Control wheel to the left deflects the left aileron upward. Check for full travel of the aileron.

14. Install the P/N 169-110000-199 access door with P/N AN525-832R6 screws.

15. Repeat steps 1 through 14 for right wing. ■

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.

NOTE

If you are no longer in possession of this airplane, please forward this information to the present owner.