Beechcraft

CLASS I

SERVICE INSTRUCTIONS

19, 23, 24

No. 0042-031, Rev. II
ATA Code 53-40
Recurring Inspection

SUBJECT: **FUSELAGE - INSPECTION OF FORWARD WING ATTACH POINT**

SYNOPSIS OF CHANGE: Service Instructions rewritten in current format. Deleted requirement to remove the attach bolt for inspection. MATERIAL and ACCOMPLISHMENT INSTRUCTIONS revised to use improved current configuration parts. Closed serial effectivity of these Service Instructions to exclude those airplanes which were manufactured with improved parts. Option is given to retrofit affected airplanes with improved parts.

EFFECTIVITY:

PART I

BEECHCRAFT A23-19 and 19A, serials MB-1 through MB-321;
23, A23, A23A and B23, serials M-1 through M-1095;
A23-24, serials MA-1 through MA-312, except those airplanes on which the new bracket, frame, doubler and spacer as specified under MATERIAL have all been installed.

PART II

BEECHCRAFT 19A, M19A and B19, serials MB-322 through MB-520;
B19 Sport 150, serials MB-521 through MB-708,
B23 and C23, serials M-1096 through M-1361;
C23 Sundowner 180, serials M-1362 through M-1576;
A23-24 and A24, serials MA-313 through MA-368;
A24R, serials MC-2 through MC-95;
A24R and B24R, serials MC-96 through MC-282, except those airplanes on which the new bracket, frame, doubler and spacer as specified under MATERIAL have all been installed.

REASON: To inspect the forward wing attach frames and brackets for possible cracks and to provide a method for repair and replacement of cracked frames and brackets.

COMPLIANCE: Beech Aircraft Corporation considers this to be a mandatory inspection and it should be accomplished as soon as possible after receipt of these Service Instructions, but no later than the next 100 hour, annual or progressive inspection, whichever occurs first; at each 100 hour, annual or progressive inspection thereafter for the visual inspection, and each 500 hours for the dye penetrant inspection after the accumulation of 2000 hours in service. Inspection per these Service Instructions is no longer required on airplanes on which all new parts are installed as specified under MATERIAL.

APPROVAL: FAA Approved - DOA CE-2.

AW-1160
568
R774
R 1179 I

98-34239D

CLASS I

MANPOWER:

The following information is for planning purposes only:

Estimated man-hours for inspection: 4 hours.
Suggested number of men: 1 man.

MATERIAL:

The following parts, if required, may be ordered through BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers. Parts listed under OLD P/N are no longer available.

	NEW P/N	OLD P/N	DESCRIPTION	QUANTITY
LH REPAIR	169-400013-17	169-400013-3	Frame	1 per airplane
	169-400005-837	169-400005-263	Angle	1 per airplane
	169-400013-29	169-400013-5	Bracket	1 per airplane
	169-400013-27	none	Spacer	1 per side
	169-400013-45	169-400013-13	Doubler	1 per airplane
	*NAS1673-08L2	No P/N change	Jo-bolt	5 per side
	*NAS1673-08L3	No P/N change	Jo-bolt	5 per side
	AN6-12A /M/	No P/N change	Bolt	1 per side
	MS20365-624A	No P/N change	Nut	1 per side
	MS20470AD5-6	No P/N change	Rivet	14 per side
	MS20470AD5-12	MS20470AD5-7	Rivet	5 per side
	AN960-616	No P/N change	Washer	2 per side
	100951DD063YN	None	Washer	1 per side
RH REPAIR	169-400013-18	169-400013-4	Frame	1 per airplane
	169-400005-838	169-400005-264	Angle	1 per airplane
	169-400013-30	169-400013-6	Bracket	1 per airplane
	169-400013-27	None	Spacer	1 per side
	169-400013-46	169-400013-14	Doubler	1 per airplane
	*NAS1673-08L2	No P/N change	Jo-bolt	5 per side
	*NAS1673-08L3	No P/N change	Jo-bolt	5 per side
	AN6-12A /M/	No P/N change	Bolt	1 per side
	MS20365-624A	No P/N change	Nut	1 per side
	MS20470AD5-6	No P/N change	Rivet	14 per side
	MS20470AD5-12	MS20470AD5-7	Rivet	5 per side
	AN960-616	No P/N change	Washer	2 per side
	100951DD063YN	None	Washer	1 per side

*MS27039-0808 bolts, MS20364-832 nuts and AN960-8 washers may be used in lieu of the NAS1673-08L2 and NAS1673-08L3 Jo-bolts.

The value of the parts required to incorporate these Service Instructions on one airplane is to be advised. Prices, when issued, will be subject to change without notice.

WARRANTY: None.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: BEECHCRAFT 19, 23 and 24 series Shop Manual, P/N 169-590015F or subsequent. AC43.13-1A, FAA Aircraft Inspection and Repair Manual.

PUBLICATIONS AFFECTED: It is recommended that a note to "See Service Instructions No. 0042-031, Rev. II" be made in the following:

19, 23 and 24 series Shop Manual copies, P/N 169-590015F or subsequent, Section 3;
19, 23 and 24 series Parts Catalog copies, P/N 169-590012I or subsequent, Figure 98.

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

1. On all airplanes listed under Part I and Part II of EFFECTIVITY, accomplish the following:

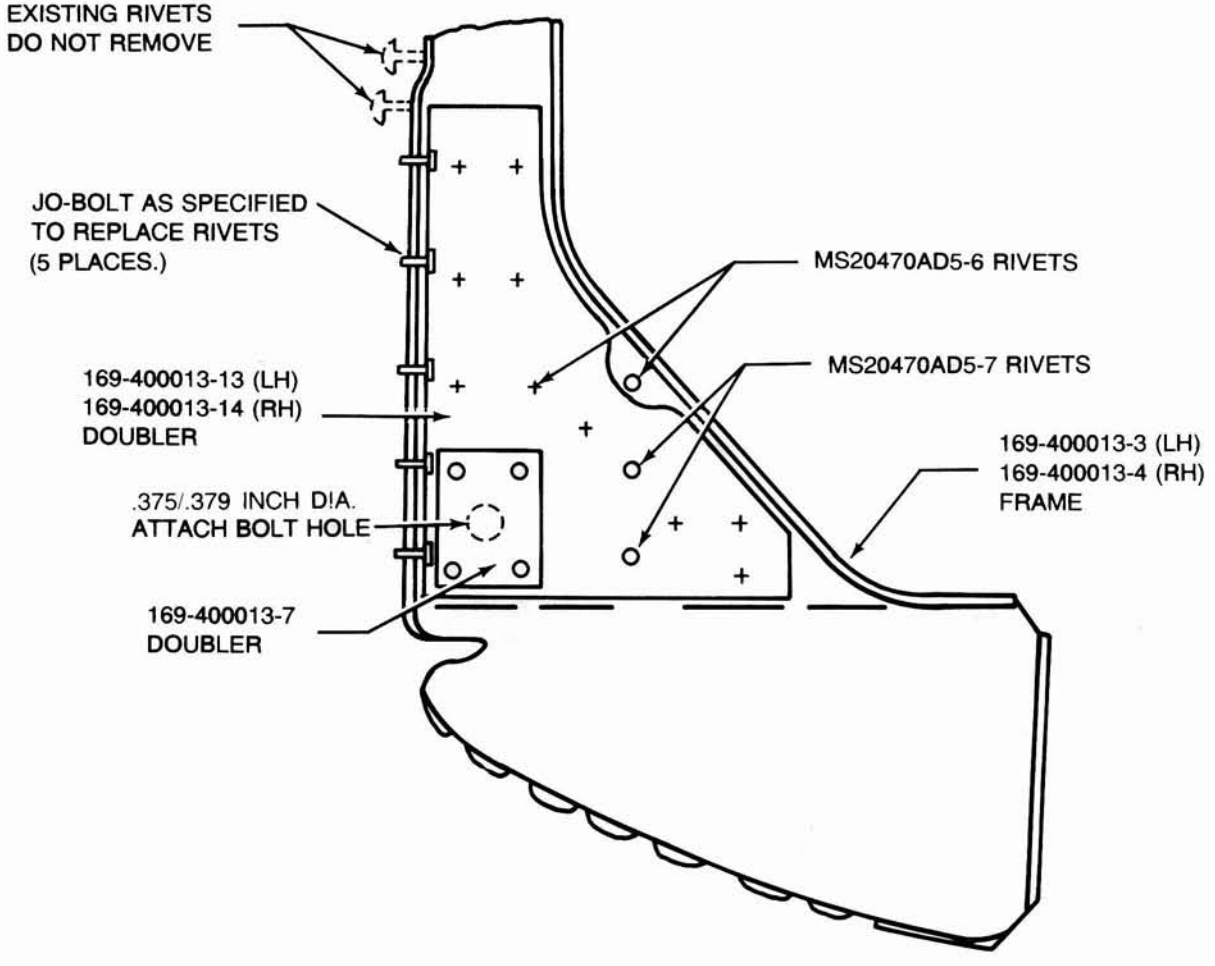


Figure 1.

a. Remove the pilot and copilot seats, forward carpets and upholstery panels below the cabin doors.

b. At each 100 hour, annual or periodic inspection, visually inspect for radial or circumferential cracks around the wing attach bolt head or nut in the following parts: P/N 169-400013-3 (LH) frame, P/N 169-400013-4 (RH) frame, P/N 169-400013-5 (LH) bracket, P/N 169-400013-6 (RH) bracket and the following doublers, if installed: P/N 169-400013-7 (LH and RH), P/N 169-400013-13 (LH), P/N 169-400013-14 (RH), 169-400013-45 (LH) and P/N 169-400013-46 (RH).

Each 500 hours after the accumulation of 2000 hours in service (i.e. at 2000, 2500, 3000 hrs, etc.), this inspection is to be accomplished by loosening the nut on the attach bolt and inspecting for possible cracks in the above parts using dye penetrant procedures as outlined in AC43.13-1A.

If cracks are found, jack the airplane, cradle the fuselage at stations 68 and 181, support the wings under the main spar to remove all stress on the wing attach points, and proceed to step 3.

If no cracks are found, on airplanes noted in Part I of EFFECTIVITY, proceed to step 2. On airplanes noted in Part II of EFFECTIVITY, torque the nut to 100/120 inch-pounds and reinstall the side panels, carpets and seats.

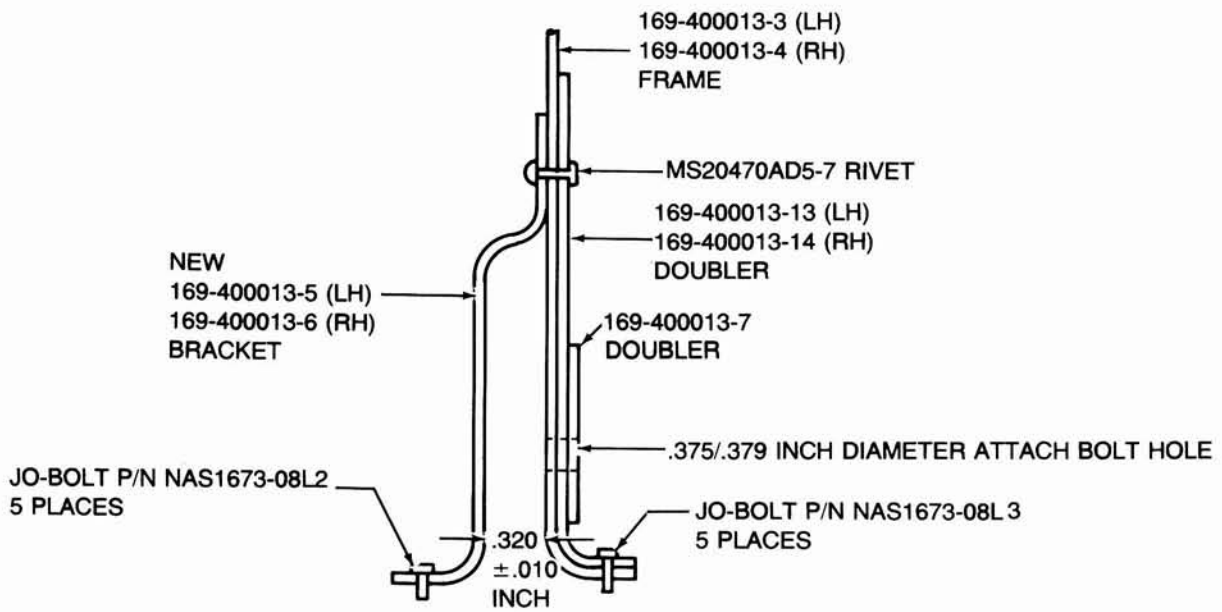
NOTE

It is not necessary nor recommended that the wing attach bolt be removed to accomplish this inspection.

2. On airplanes noted in Part I of EFFECTIVITY only, accomplish the following at the initial inspection or at any time the forward wing attach bolts are removed for any reason.

NOTE

On airplanes which have been previously inspected for proper gap and the attach bolt has not been removed since that inspection, the inspection for proper gap need not be repeated. On airplanes which have had the P/N 169-400013-27 spacer and P/N 169-400013-29 (LH)



169-400013-1 (LH), 169-100013-2 (RH) FRAME ASSEMBLY

Figure 2.

or P/N 169-400013-30 (RH) bracket installed, the inspection for proper gap need not be accomplished.

a. Jack the airplane, cradle the fuselage at stations 68 and 181, and support the wings under the main spar to remove all stress from the wing attach points.

b. Remove the nut on the wing attach bolt and measure the gap between the wing attach frame and the bracket to ensure the gap is .320 ± .010 inch. Do not remove the attach bolt.

c. If the gap is of the proper size, ensure that a P/N AN960-616 washer is installed under the head of the bolt, install a P/N 100951DD063YN aluminum washer, then a P/N AN960-616 washer and install an MS20365-624A nut on the attach bolt and torque the nut to 100/120 inch-pounds.

d. If the gap exceeds .320 ± .010 inch, back the wing attach bolt out just far enough to install P/N AN960-616 and/or AN960-616L washers as required to fill any gap between the lug on the wing and the bracket or frame. If a P/N AN960-616 washer is not installed under the head of the bolt, the bolt must be removed.

e. Ensure a P/N AN960-616 washer is installed under the head of the wing attach bolt and install the bolt. Install a P/N 100951DD063YN washer on the bolt next to the bracket, then a P/N AN960-616 washer, and install an MS20365-624A nut. Torque the nut to 100/120 inch-pounds and reinstall the side panels, carpets and seats.

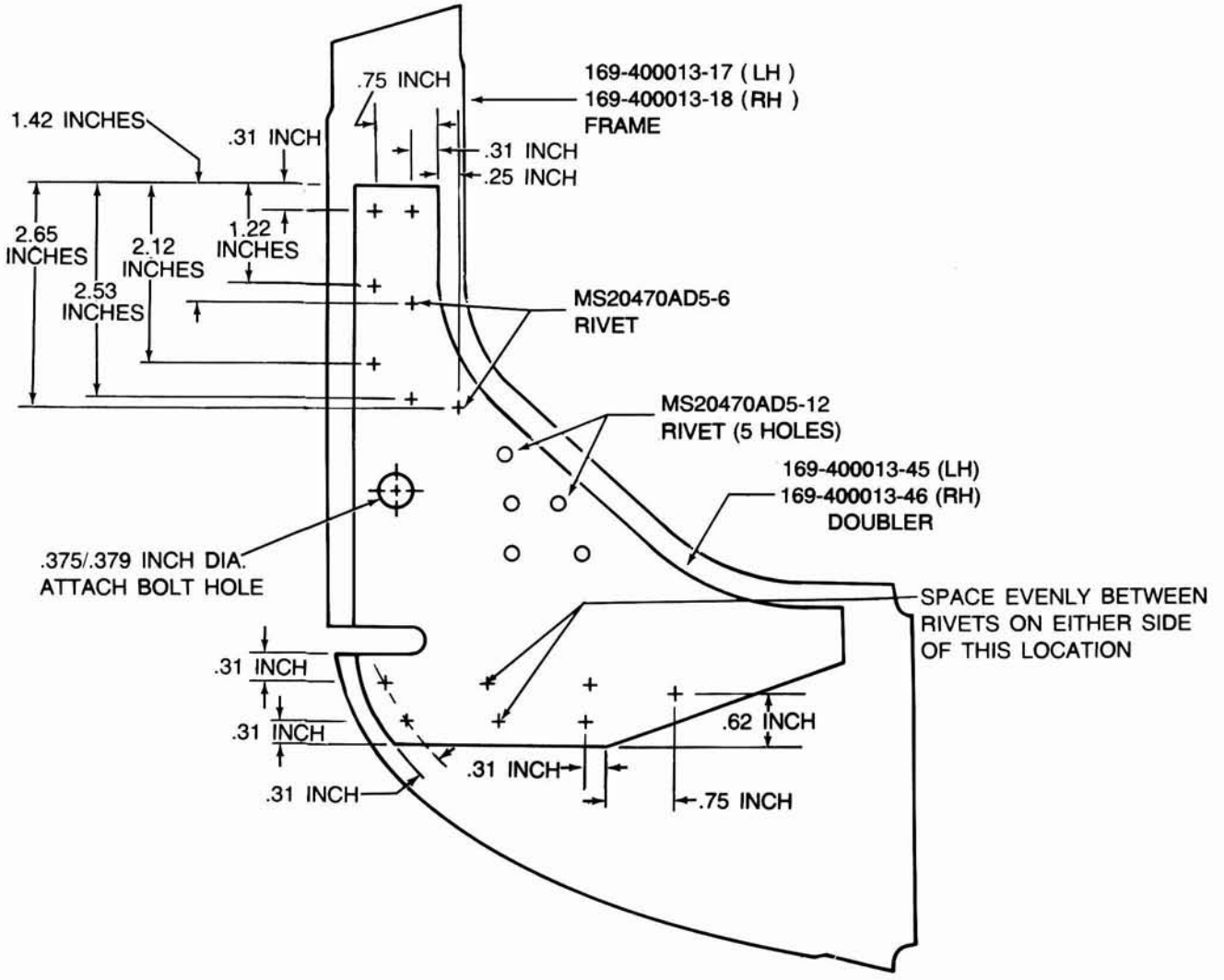


Figure 3.

NOTE

If the frame, doubler, bracket and spacer are all installed as listed under new P/N in MATERIAL, the inspection requirements of this S.I. are no longer applicable, inspections should, however, be accomplished as required by applicable Federal Aviation Regulations and as recommended in the model 19, 23 and 24 shop manual and inspection guides.

The 100 hour repetitive visual inspection is required on all airplanes on which any parts listed under old P/N in the MATERIAL section remain. Dye penetrant inspection is required on those airplanes at accumulation of 2000 hours time in service and each 500 hours thereafter.

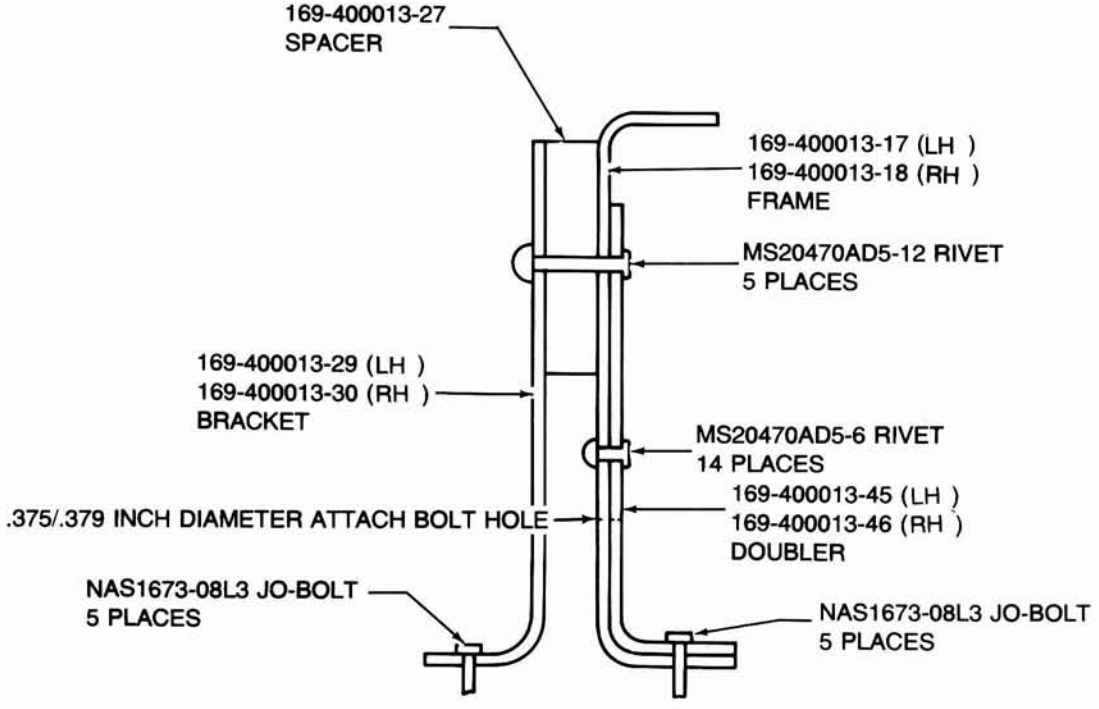
3. Drill out the three rivets through the bracket and frame, and the five rivets through the outboard flange of the bracket and the fuselage skin (See Figures 1 and 2), and discard the bracket.

NOTE

It is recommended that a P/N 169-400013-45 (LH) or P/N 169-400013-46 (RH) doubler be installed on the wing attach point frame whenever the bracket requires replacement.

4. Drill out the rivets attaching the floor skin to the fuselage side skin, F.S. 94 channel crossmember, and the angle P/N 169-400005-263 (LH) or P/N 169-400005-264 (RH) just forward of the wing attach point frame. Roll the floor skin up and inboard against the seat track, being careful not to crease it. Drill out the rivets attaching the angle and any doublers. Starting with the third rivet from the top, working downward, drill out five rivets through the outboard flange of the frame and fuselage side skin.

5. Position a P/N 169-400013-45 (LH) or P/N 169-400013-46 (RH) doubler on the frame



169-400013-15 (L.H.), 169-400013-16 (R.H.) FRAME ASSEMBLY

Figure 4.