SUBJECT: **FLIGHT CONTROLS - INSPECTION OF RUDDERVATOR CONTROL PUSH RODS**

SYNOPSIS OF CHANGE: Changed MATERIAL and ACCOMPLISHMENT INSTRUCTIONS to call out push rod tubes (no rod ends) instead of push rod assemblies

EFFECTIVITY: BEECHCRAFT Bonanza 35, A35, B35, C35, D35, E35, F35, G35, H35, J35, K35, M35, N35, P35, S35, V35, V35-TC, V35A, V35A-TC, V35B and V35B-TC, serials D-1 through D-10187, D-15001 and D-15002

All ruddervator/elevator pushrod assemblies in BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers spares stock that are not identified as having been anti-corrosion treated as specified in these Service Instructions

NOTE

Push rod assemblies that have been anti-corrosion treated by the manufacturer are now identified by the words "CORROSION PROOFED" stamped in black ink near the center of the tube

REASON: To inspect ruddervator control push rods for condition and alignment and to provide anti-corrosion treatment

COMPLIANCE: Beech Aircraft Corporation considers this to be a mandatory inspection/modification and, unless previously accomplished per the original issue of these Service Instructions, it should be accomplished within the next 75 service hours, but no later than the next scheduled inspection on all noted airplanes having 1000 hours or more of time in service

APPROVAL: FAA Approved

MANPOWER: The following information is for planning purposes only

Estimate man-hours 6 hours per airplane
Suggested number of men 1 man

MATERIAL: The following push rod tubes, if required, may be ordered through BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers The MIL-C-16173 corrosion preventative compound and identification paint specified herein may be obtained from local sources or may be ordered through BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers

J 1514 J 1581
180 I
R 1181 I

CLASS I

MODEL	PART NUMBER	DESCRIPTION	QUANTITY
35, A35, B35, C35, D35, E35, F35, G35, H35, J35	35-524106-2	Push Rod Tube	2 per airplane
K35, M35, N35, P35, S35, V35, V35-TC, V35A, V35A-TC, V35B, V35B-TC	35-524106-6	Push Rod Tube	2 per airplane

The value of the parts, if 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: AC43 13-1A, FAA Aircraft Inspection and Repair Manual

PUBLICATIONS AFFECTED: None

ACCOMPLISHMENT INSTRUCTIONS: Ruddervator control push rod assemblies may be inspected and corrosion preventative treated as follows

1 Remove the tail cone and access covers as necessary to gain access to the aft fuselage area

2 Remove the ruddervator control push rod assemblies which connect the ruddervator differential assembly to the ruddervator horns

3 Remove the rod ends from the push rod assemblies and thoroughly clean the exterior and interior of the tubes with solvent or equivalent All lubricant should be thoroughly cleaned from the threads of the tubes and the rod ends

NOTE

Before removing the rod ends from the tubes, the rod ends and the tube ends should be identified and the total length of the rod assembly should be measured from center to center of each rod end bolt hole to facilitate reassembly (IT IS VERY IMPORTANT THAT THIS MEASUREMENT BE MADE ACCURATELY AND MAINTAINED ON REASSEMBLY OF THE ROD ENDS TO THE TUBE) Care should be exercised during reinstallation to ensure that each rod assembly is reinstalled on the airplane in the same location from which it was removed (See step 8)

4 Inspect the tubes using dye penetrant procedures as outlined in FAA Aircraft Inspection and Repair Manual AC 43 13-1A, Paragraph 300, for possible cracks, nicks or corrosion

5 If cracks or corrosion are found, replace the tube with the appropriate new tube specified under MATERIAL Use the rod ends which were removed from the old push rod tube

NOTE

Minor nicks, dents or scratches (less than 010-inch deep) may be smoothed and primed with zinc chromate primer

6 Inspect for bows in the tube by laying a straight edge (straight edge must be at least as long as the tube) against the tube (a flat surface plate may be used in lieu of a straight edge), moving it around the circumference of the tube and checking with a feeler gage between the tube and the straight edge Bows up to a maximum of 060 inch are acceptable If 060 inch is exceeded, the tube must be replaced with the appropriate new tube specified under MATERIAL Use the rod ends which were removed from the old push rod tube

7 If the above inspection indicates the tubes are acceptable, proceed as follows

a Blow air through the tube to remove all moisture

b Fill the tube with MIL-C-16173 corrosion preventative compound (such as Cosmoline 1058, E F Houghton & Co , Philadelphia, Pa , 19133) diluted with

naphtha sufficently to allow flowability, and drain off the excess solution

c Lubricate the threads on both rod ends with MIL-C-16173 and reassemble the push rod assembly

CAUTION

Be certain that the threads on the rod ends are visible in the inspection holes in the ends of the push-pull tubes

d Paint a black band (approximately 1/2 inch wide) around the tube (as near the center of the tube as possible) to identify the push rod assembly as having been anti-corrosion treated

8 Reinstall the push rod assemblies in the airplane and adjust to proper rigging position

9 Reinstall the tail cone and access panels which were removed for this modification

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RECORD COMPLIANCE: Upon compeletion of these Service Instructions, make an appropriate maintenance record entry.