

Service Bulletin No. SB-AG-32
12 February 1993
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FIN FRONT SPAR ATTACHMENT TO HORIZONTAL STABILIZER

MODELS AFFECTED:	<u>MODEL</u>	<u>SERIAL NUMBERS</u>
	S2R	5000-5099, 1380R, 1416R thru 2583R
	S2R-R1340	R1340-001 thru R1340-030*
	S2R-R3S	R3S-001 thru R3S-011*
	S2R-R1820	R1820-001 thru R1820-035*
	S2R-T11	T11-001 thru T11-005*
	S2R-T15	T15/27-001 thru T15/27-029; and T15-031*
	S2R-T34	6000-6049, T34 (or T41 or T36) 001 thru T34-180 and T34-190 thru 192*
	S2R-T45	T45-001 thru 003*
	S2R-T65	T65-001*
	S2RHG-T65	T65-002 thru 010*
	S2RG6	G6-101 thru G6-112
	S2R-G10	G10-101

* with or without DC suffix

NOTE: This bulletin only affects aircraft listed above that are equipped with the Ayres Metal Horizontal Stabilizer Assembly Number 40087T001 (which has a 40301T001 (steel) fitting installed therein).

REASON FOR PUBLICATION:

Fatigue cracks have been found in P/N 40301T001, as illustrated in Figure 1. This bulletin has been written to require the replacement of P/N 40301T001 with P/N 40301T007. Part No. 40301T007 is machined out of aluminum. It is designed to reduce the stress level that occurs in the attached lugs of P/N 40301T001.

COMPLIANCE: Repair is required within the next 100 hours of services, provided that P/N 40301T001 is inspected and found to be free of cracks immediately after receipt of this bulletin.

Then inspect every 25 hours of service until repair is completed.

BY WHOM WORK WILL BE ACCOMPLISHED: A & P mechanic or equivalent

MAN HOURS: Twelve

APPROVAL: Technical content is FAA approved.

ACCOMPLISHMENT INSTRUCTIONS:

I. Inspection

The P/N 40301T001 bracket is bolted to the front face of the front spar of the horizontal stabilizer at the midship centerline. The cracks will occur in line with the small close out plate that is riveted to the upper skin of the stabilizer. This plate must be removed and the sealing compound thoroughly cleaned off. The vertical fin should be removed in order to drill off the close out plate and properly inspect the fitting. Look for cracks in the fitting as shown in Figure 1.

During this inspection, inspect the hole in the mating fitting on the vertical stabilizer front spar (P/N 40303T004) for elongation and wear damage. If elongation (egging out) of this hole has occurred beyond .004 inch. Replace this fitting with an (aluminum) P/N 40303T007 fitting and a new bottom leading edge rib P/N 40276T003.

If no damage is found as a result of the inspection and the airplane is to be operated prior to repair, it can be flown without the close out plate in order to facilitate reinspection every 25 hours.

II. Repair

If the inspection reveals cracks in the P/N 40301T001, remove it and install a P/N 40301T007 (aluminum) bracket and a new P/N 40309T003 close out plate.

Although it is possible for a man with small hands to do this on ship, the removal of the horizontal stabilizer is recommended in order to allow the work to be done on a table or on saw horses.

Attach the P/N 40301T007 bracket to the front spar of the horizontal stabilizer with:

For the Center Two Holes

(2ea) NAS 1103-5 bolts
(2ea) AN 960-10 washers under the bolt heads
(2ea) MS 21042-3 shear nuts

For the Corner Four Holes

(4ea) NAS 1103-6 bolts
(4ea) AN 960-10L washers under the bolt heads
(4ea) MS 21042-3 shear nuts

Torque 3/16 shear nuts to 12-15 inch pounds.

Reattach the fin with one NAS 1105-68 bolt using an MS 20002C-5 (chamfered) washer under the bolt head and an MS 21042-5 shear nut, plus AN 960-516 washers as required. Standard torque for 5/16 shear nuts is 60 – 85 inch pounds.

RECORD COMPLIANCE: Make an entry in aircraft records as follows.

Service Bulletin No. SB-AG-32 dated 12 February 1993, entitles
"Fin Front Spar Attachment to Horizontal Stabilizer" accomplished
_____ (Date) _____ by _____.

Parts are available through your area dealer.

Parts list

2 ea	NAS 1103-5
2 ea	AN 960-10
4 ea	NAS 1103-6
4 ea	AN 960-10L
1 ea	NAS 1105-68
1 ea	MS 20002C-5
2 ea	AN 960-516
6 ea	MS 21042-3
1 ea	MS 21043-5
1 ea	40301T007 Bracket
1 ea	40309T003 Close Out Plate

FIGURE 1

