

FUSELAGE UPPER LONGERON INSPECTION AND REPAIR

MODELS AFFECTED: Model S2R, S/N 1416R thru 2574R
Model S2R-R1340, S/N 1340-001 thru R1340-010
Model S2R-R3S, S/N R3S-001 thru R3S-010

REASON FOR PUBLICATION: Preclude possible fatigue failure of the upper fuselage longeron.

COMPLIANCE: Part I: Within next 25 hours in service.
Part II: Prior to next flight if cracks are found.

BY WHOM WORK WILL BE ACCOMPLISHED: A & P Mechanic

APPROVAL: FAA Approved

ESTIMATED MAN HOURS: Part I: 15 Minutes
Part II: 50 Man Hours

SPECIAL TOOLS: NONE

ACCOMPLISHMENT INSTRUCTIONS:

Part I:

1. Remove the fuselage side skin located between the wing upper surface and the hopper. This will provide access to the upper longeron from the firewall to the cockpit.
2. Visually inspect the longeron paying particular attention to: (See Figure 1)
 1. Area around the upper engine mount attach points.
 2. Each vertical diagonal tube intersection at the upper longeron.

3. Each hopper attachment bracket.
3. If no cracks are found, fill out and mail Compliance Card noting that no cracks were found. Proceed to Record Compliance and return aircraft to service.
4. If cracks are found, fill out and mail Compliance Card noting that cracks were found, then proceed to Part II.

PART II.

1. If any cracks are found, remove hopper and attaching parts. Weld cracks closed in longerons. Obtain Custom Kit No. CK-AG-19 from Ayres Corporation.
2. Grind off the four 10866-1 Attach Brackets, See Figure 2.
3. Grind or nibble the ends of the sleeve tubes P/N CK-AG-19-1 and -2 to fit snugly within the original weld beads at the forward tube clusters/gussets at the firewall. See Figure 3.
4. Clamp the split sleeves in position and weld as shown in Figure 2.
5. Grind the fiberglass in the hopper saddles as necessary to allow the hopper to be lowered onto the longerons in the original hopper location.
6. Locate and weld the forward attach brackets 2 inches aft of its original location. Locate and weld the aft attach brackets at its original location (plus or minus ½ inch). Use a straight edge resting on the remaining (aft) brackets to obtain lateral alignment of the replacement brackets.
7. Paint the repaired area.
8. Reinstall hopper and attaching parts.

ELECTRICAL LOAD: No Charge

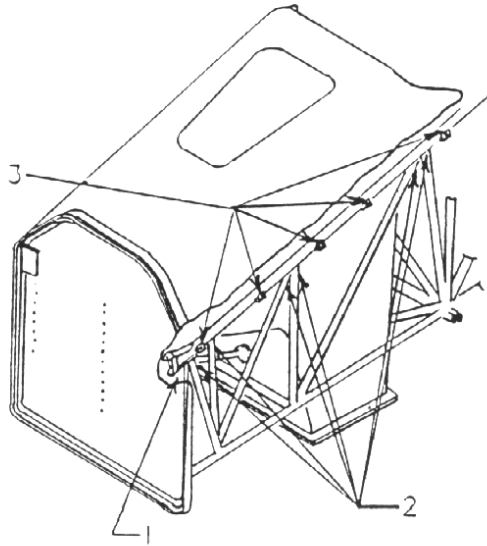
WEIGHT AND BALANCE: No Change

RECORD COMPLIANCE: Make appropriate entry in aircraft records as follows: Service Bulletin No. SB-AG-19 dated January 20, 1987, entitled "Fuselage Upper Longeron Repair," accomplished Part I _____ (date) _____, Part II _____ (date) _____ (if applicable).

PARTS LIST:

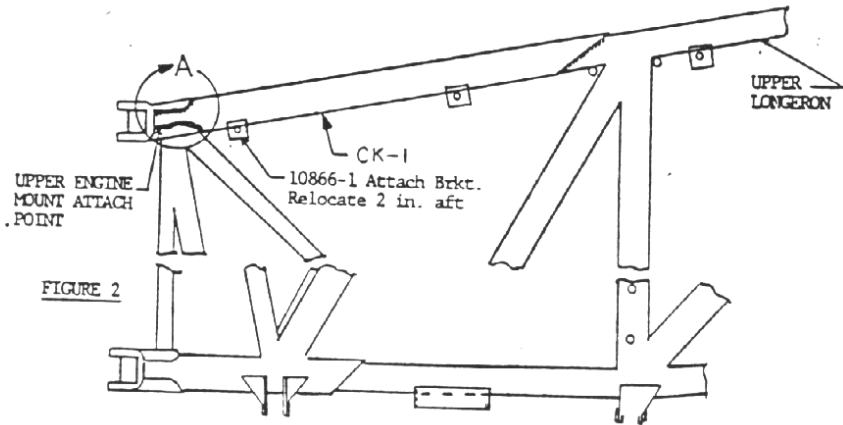
QUANTITY	PART NUMBER	DESCRIPTION
2 EA	CK-AG-19-1	Split Sleeve
2 EA	CK-AG-19-2	Split Sleeve
4 EA	10866-1	Attach Brackets

FIGURE 1



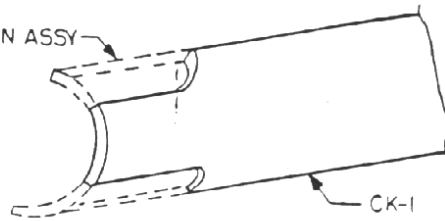
- 1. UPPER ENGINE MOUNT ATTACH POINT
- 2. VERTICAL AND DIAGONAL TUBE INTERSECTION
- 3. HOPPER ATTACHMENT BRACKETS

FIGURE 2



GRIND TO FIT ON ASSY

FIGURE 3



VIEW A