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SERVICE BULLETIN No. SB-AG-47

AUGUST 10, 2005

UPPER LONGERON INSPECTION

A report was received from the field of an aircraft with both upper fuselage longerons broken completely through just forward of the cockpit. Thrush was not able to have the broken tubes analyzed for failure cause, so we are asking operators to do a one-time inspection and report their findings.

MODELS AFFECTED:

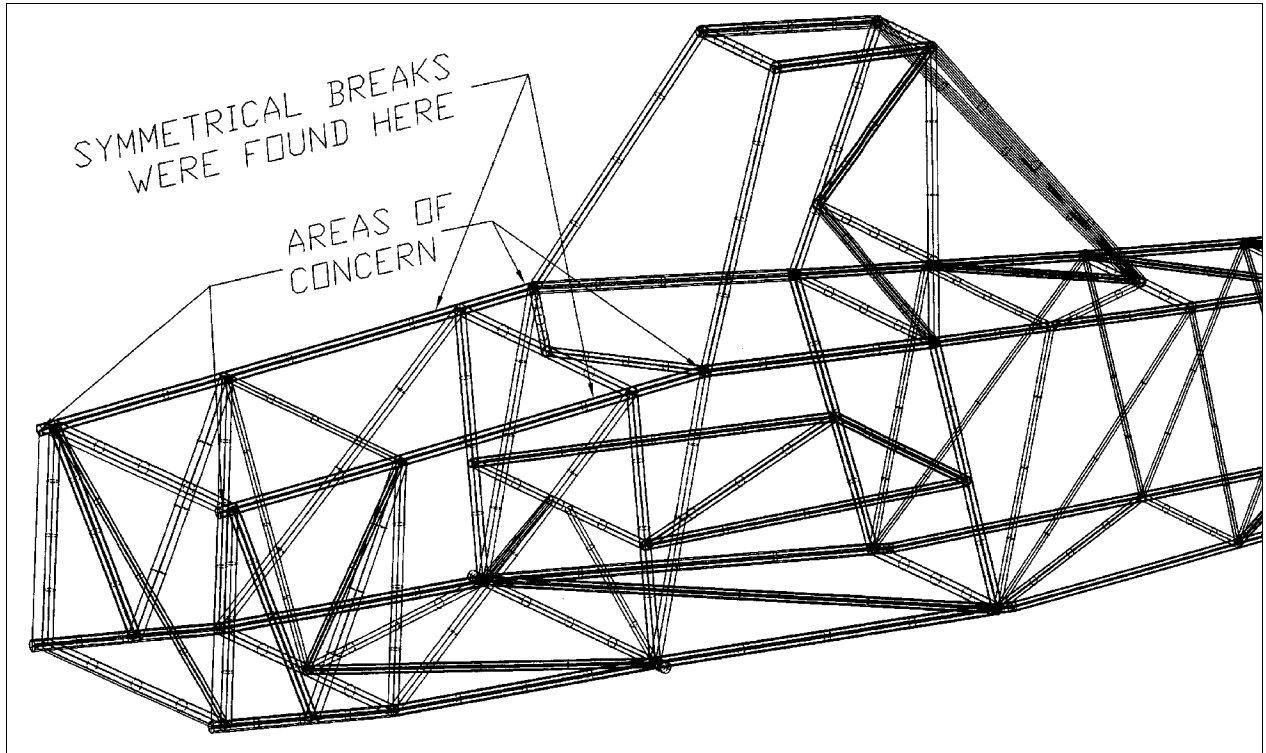
Aircraft of the following models and serial numbers with over 2,500 airframe hours must be inspected per this Service Bulletin.

<u>MODEL</u>	<u>SERIAL NUMBERS</u>
600 S2D	600-1311 and subsequent
S2R	1380R, 1416R through 1499R, 1526 through 3002 & 5000 through 5100
S2R-T34	6000 through 6049 and T34-001 through -272, T41-090DC through -225DC and T42-209DC
S2R-T15	T15-001 through -044
S2R-T11	T11-001 through -005
S2R-R3S	R3S-001 through -011, -009 DC & -010DC
S2R-R1340	R1340-001DC through -010DC, -011 through -035
S2R-R1820	R1820-001DC through -032DC, -033 through -036
S2R-T65	T65-001DC, -010DC through -018DC
S2RHG-T65	T65-002 DC through -009DC
S2R-T45	T45-001DC -014DC, -008 through -015
S2R-G6	G6-101 through -155, 116DC through 151DC
S2R-G10	G10-101 through 168, 106DC through 165DC
S2R-G5	G5-101 through 105
S2R-G1	G1-101 through 115
S2RHG-T34	T34HG-101DC and 102DC

REASON FOR PUBLICATION:

The longerons forward of the cockpit support the hopper, and previous problems have usually been associated with corrosion resulting from moisture trapped between the hopper and the longeron. The reported symmetrical failure of both longerons occurred where the aft hopper mount bracket is welded to the longeron. Simultaneous and symmetrical failures from corrosion are unheard of.

Not knowing the cause of the failures, we strongly urge you to complete the inspection results card that can be quickly completed and mailed, faxed or e-mailed back to us. Statistical analysis of the responses will tell us if we have a potentially repetitive problem.



FRAME INSPECTION AREA

COMPLIANCE:

Compliance is required within 10 flight hours or one week of receipt of this bulletin, whichever comes first.

BY WHOM WORK WILL BE ACCOMPLISHED:

FAA licensed Airframe or A & P mechanic or equivalent.

APPROVAL:

This Service Bulletin is FAA approved.

MAN HOURS:

The inspection should take a mechanic one half hour to complete, with another 15 minutes for paperwork.

SPECIAL TOOLS:

High intensity flashlight

INSPECTION:

The required inspection is a careful visual inspection of the fuselage upper longerons for cracks, from immediately in front of the cockpit to the front of the frame. A flashlight with a strong, well focused beam should be used. The lower half of the longerons can be seen easily from below, although excess Cab-O-Sil filled resin used to hold the hopper may need to be removed in some areas. Any areas of corrosion must be stripped of paint and cleaned with a wire brush and/or abrasive cloth down to bright metal.

Inspection of the upper half of the longerons is more difficult because of the hopper. These areas must be inspected from inside the hopper, through the translucent hopper walls. The longerons are factory finished a light grey, so inspection through the hopper walls will focus on the uniformity of color. Any evidence of discoloration of the longeron surface is indicative of corrosion and possible cracking.

Cracks found on the lower half of the longeron, or discoloration, indicating corrosion, on the upper half of the longerons, requires removal of the hopper. Cracks will require welding repairs per AC 43.13, latest revision, and any corrosion must be fully removed and the bright metal longeron surface inspected for cracks. After corrosion or crack repairs, the tubes must be refinished with polyurethane primer to protect them from future corrosion.

REPAIR:

Any repairs found necessary by the inspection should be accomplished in accordance with AC 43.13, latest revision, and good industry practice.

RECORD OF COMPLIANCE:

Make appropriate entry in aircraft records as follows:

“Service bulletin SB-AG-47, Upper Longeron Inspection, dated 8/10/05, was complied with by: _____ on _____.
_____ name certificate #
date. Discrepancies found and repairs made were as follows:”

PARTS LIST (Parts are available through your area dealer).

As Required by inspection results.

RESPONSE CARD

The final step in compliance with this Service Bulletin is completion and return of the response card on the next page, by mail, Fax or e-mail.

Service Bulletin SB-AG-47 Inspection Results

Aircraft S/N: _____ Aircraft Owner: _____
Aircraft Registration # _____ Address of Owner: _____
Airframe total time: _____ City & State: _____
Engine total time: _____ Physical location: _____
Date of Compliance _____
Complied with by: _____ Certificate #: _____
Signature: _____

Results of Inspection:

No cracks or corrosion found.....	<input type="checkbox"/>
Corrosion found and repaired; no cracks	<input type="checkbox"/>
Minor cracks found and repaired, but no corrosion .	<input type="checkbox"/>
Corrosion and minor cracks found and repaired	<input type="checkbox"/>
Significant cracks found.....	<input type="checkbox"/>

Note:

Photographs of significant cracks would be greatly appreciated.

This response card may be mailed, Faxed to (229) 436-4856, attention Ed Rusk, or scanned and e-mailed to erusk@thrushaircraft.com. Digital photos can be sent as attachments to the e-mail.

fold, tape & mail (Do Not Staple)

Return Address

Place first
class postage
here

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