



U.S. Department
of Transportation

**Federal Aviation
Administration**

Airworthiness Concern Sheet

Date: February 28, 2022

<p>Reply to: Name: Fred Caplan Title: ASE – Aerospace Engineer Office: Atlanta ACO Department: FAA Street Address: 1701 Columbia Ave City, State, ZIP: Atlanta, GA, 30337 Telephone: (404) 474-5507 Email: frederick.n.caplan@faa.gov</p>	<p>Make: Thrush Aircraft, Inc.</p> <p><u>Models / Serial Numbers Affected (same as AD 2009-26-11):</u></p> <p>S-2R S/N affected: 1380R, 1416R through 2592R, 3000R, 3002R, and 5000R through 5100R</p> <p>S2R-G1 S/N affected: G1-101 through G1-115</p> <p>S2R-R1820 S/N affected: R1820-001 through R1820-036</p> <p>S2R-T15 or S2R-T17 S/N affected: T15-001 through T15-040</p> <p>S2R-T34 or S2R-T36 or S2R-T41 or S2R-T42 S/N affected: 6000R through 6049R, T34-001 through T34-181, T34-189 through T34-234, and T34-236 through T34-270</p> <p>S2R-G10 S/N affected: G10-101 through G10-165</p> <p>S2R-G5 S/N affected: G5-101 through G5-105</p> <p>S2R-G6 S/N affected: G6-101 through G6-155</p> <p>S2RHG-T65 S/N affected: T65-002 through T65-018</p> <p>S2R-T45 S/N affected: T45-001 through T45-015</p> <p>S2R-T65 S/N affected: T65-001 through T65-018</p> <p>600 S2D S/N affected: 600-1311D through all serial numbers</p>
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S2R-R1340

S/N affected: R1340-001 through R1340-035

S2R-R3S

S/N affected: R3S-001 through R3S-011

S2R-T11

S/N affected: T11-001 through T11-005

S2RHG-T34

S/N affected: T34HG-102

Reason for Airworthiness Concern: AD 97-13-11 was issued to address an unsafe condition and accident caused by fatigue cracks occurring in the lower spar caps. AD 97-13-11 was superseded by AD 97-17-03, AD 2000-11-16, AD 2003-07-01, AD 2006-07-15, and AD 2009-26-11.

AD 2009-26-11 requires repetitive inspection of the 1/4-inch and 5/16-inch bolt hole areas on the wing front lower spar caps for fatigue cracking, repair or replacement of any wing front lower spar cap where fatigue cracks are found, and replacement of the wing front lower spar caps when a life limit is reached.

Prior to or after wing front lower spar cap replacement, if replacement via Avenger STC SA03654AT is not chosen, options are provided for the required repetitive inspections based on the various available methods for replacement. The FAA is concerned these options, as provided by Table 3, Table 4, and Table 5 of the AD, could be misinterpreted.

For the maximum inspection interval (Table 5) to be used, which is every 900 or 1,250 hours time-in-service (TIS) based on the inspection method utilized, Thrush Custom Kit CK-AG-41 Rev A must be followed in its entirety. No deviations from the instructions of CK-AG-41 Rev A are allowed in order to be eligible for the maximum inspection interval. This includes all parts contained within the kit, and any additional parts noted as required due to different aircraft or wing configurations.

If CK-AG-41 Rev A is not followed in its entirety, but the “big butterfly” plates and lower splice plates of the custom kit are installed as part of the wing front lower spar cap replacement, then this will allow for the inspection interval prescribed in Table 4 of the AD, which is every 450 or 625 hours TIS, again depending on the inspection method utilized.

The minimum inspection interval of 250 or 350 hours TIS (Table 3), must be followed if only the affected or both wing front lower spar caps are replaced, with no additional structure.

For all replacement options, no parts are to be reused if replacements are provided as part of CK-AG-41 Rev A.

The FAA is seeking more information regarding how this AD and its required repetitive inspection options are being followed based on the work completed and any options installed the aircraft or wing.

Federal Aviation Administration (FAA) Description of Airworthiness Concern

Request for Information

The FAA is requesting the following information from owners and operators of the listed models and serial numbers of Thrush Aircraft listed in the effectivity of this Airworthiness Concern Sheet (ACS). The below information may be determined by reviewing the aircraft logbook or inspecting the aircraft installation.

- 1) Have you accomplished the wing front lower spar cap replacement prescribed in Thrush Custom Kit CK-AG-41 Rev A?

If the answer to question 1 was 'Yes':

- a. Was Thrush Custom Kit CK-AG-41 Rev A followed in its entirety?
- b. Were the "big butterfly" plates and lower splice plate installed?
- c. If the aircraft has wing extensions installed, were the upper spar cap strap and splice ordered and installed?
- d. Were any additional parts installed?
- e. What inspection interval is being followed based on the above installation?

- 2) Have you accomplished the wing front lower spar cap replacement via Avenger STC SA03654AT?

- 3) Have you accomplished the wing front lower spar cap replacement of the affected or both wing front lower spar caps via a method not listed above?

If the answer to question 3 was 'Yes':

- a. What inspection interval is being followed based on the above installation?

- 4) Please reply to the FAA contact listed in the ACS with your answer to the inquiry and provide the model and serial number of your airplane, and date(s) of accomplishment.

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owners/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve Airworthiness Directive (AD) action or a Special Airworthiness Information Bulletin (SAIB), or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

Attachments:	Transmittal:	Response Requested By:
<input type="checkbox"/> Service Difficulty Report	<input checked="" type="checkbox"/> Federal Aviation Administration (FSDO)	<input type="checkbox"/> Emergency (10 days)
<input type="checkbox"/> Accident/Incident Data System	<input checked="" type="checkbox"/> Airplane Owners and Pilots Association	<input type="checkbox"/> Alert (30 days)
<input type="checkbox"/> Service Letter / Bulletin	<input checked="" type="checkbox"/> Experimental Aircraft Association	<input checked="" type="checkbox"/> Information (90 days)
<input type="checkbox"/> Special Airworthiness Information Bulletin	<input type="checkbox"/> Type Club	
<input type="checkbox"/> Federal Aviation Administration or National Transportation Safety Board Safety Recommendation	<input type="checkbox"/> Type Certificate Holder	
<input checked="" type="checkbox"/> Airworthiness Directive	<input checked="" type="checkbox"/> Other: National Agricultural Aviation Association	
<input type="checkbox"/> Alternate Means of Compliance		
<input type="checkbox"/> Risk Analysis		
<input checked="" type="checkbox"/> Other: Custom Kit CK-AG-41 Rev A		