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SERVICE LETTER 253

Horizontal Stabilizer Spar Cracking At Finlets

Aircraft Makes/Model(s):	Float Model(s):	Compliance: Mandatory	By: DRH
Air Tractor AT-802 & AT-802A	10000A	Part Number: 1012347	Approved: DRR
		Date: 7/27/2023	Revision: B

LOG OF REVISIONS

Revision	Description	Date
A	Initial release	4/5/2023
B	Changes made in conjunction per request from FAA. Added finlet configuration basis for initial inspection and adjusted compliance windows. Adjusted recurring inspection interval. Reworded background and compliance method. Added Figure 1 and renumbered following figures. Made LH inspection mandatory regardless of findings on RH (step 9). Added reporting step to Aircraft Closing and Return to Service section.	7/27/2023

EFFECTIVITY:

This service letter applies to Air Tractor models AT-802 and AT-802A with Wipline 10000 Amphibian Floats installed per STC SA01795CH, as well as previously floated aircraft that have been converted to landplane configuration under the same STC.

COMPLIANCE:

Compliance is mandatory with initial inspection window based on finlet configuration. Refer to Figure 1 / Wipaire drawing 7D1-4399.

- For STC configuration 7D1-4399-01: Within 3 days or 24 hours time-in-service (TIS) or before the accumulation of 200 hours TIS since the installation of the STC, whichever occurs later.
- For STC configuration 7D1-4399-02: Within 5 days or 24 hours TIS or before the accumulation of 300 hours TIS since the installation of the STC, whichever occurs later.
- For STC configuration 7D1-4399-03: Within 15 days or 24 hours TIS, whichever happens later, or before the accumulation of 600 hours TIS since the installation of the STC, whichever occurs later.
- Previously floated aircraft in landplane configuration per Wipaire drawings 1003406 (AT-802) or 7D1-4405 (AT-802A); inspect according to limits associated with configuration 7D1-4399-01, as provided above.

Prior compliance with revision A of this letter satisfies the initial inspection requirements for the right hand stabilizer (inspection of the left hand stabilizer is required if not previously accomplished). Replacement of the spar due to cracking associated with this letter also satisfies the initial inspection requirement for that side of the stabilizer.

In all cases, re-accomplish this inspection at 200 hours TIS intervals from the initial action.

BACKGROUND:

Instances of cracked horizontal stabilizer spars have been observed, primarily on the forward spars near both the lower and upper finlet mounting locations, at/near the spar bend radii.

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COMPLIANCE METHOD:

Inspect the finlet mount areas as outlined in work instructions. Photos of characteristic cracks are included in this Service Letter. Any cracks discovered in this area of the horizontal stabilizer spar necessitate replacement or repair of spar. Contact local Air Tractor dealer for replacement parts and any relevant/available service documents.

APPROXIMATE SHOP HOURS:

Performing the work instructions will take approximately 10 labor hours to complete per aircraft, excluding replacement/repair of the spar itself.

WARRANTY INFORMATION:

Parts and labor warranty is not included.

TECHNICAL DATA:

Copies of this service letter, associated service kit (if applicable), float service manual, and float parts manual are available at www.wipaire.com or by contacting Wipaire customer service at customerservice@wipaire.com.

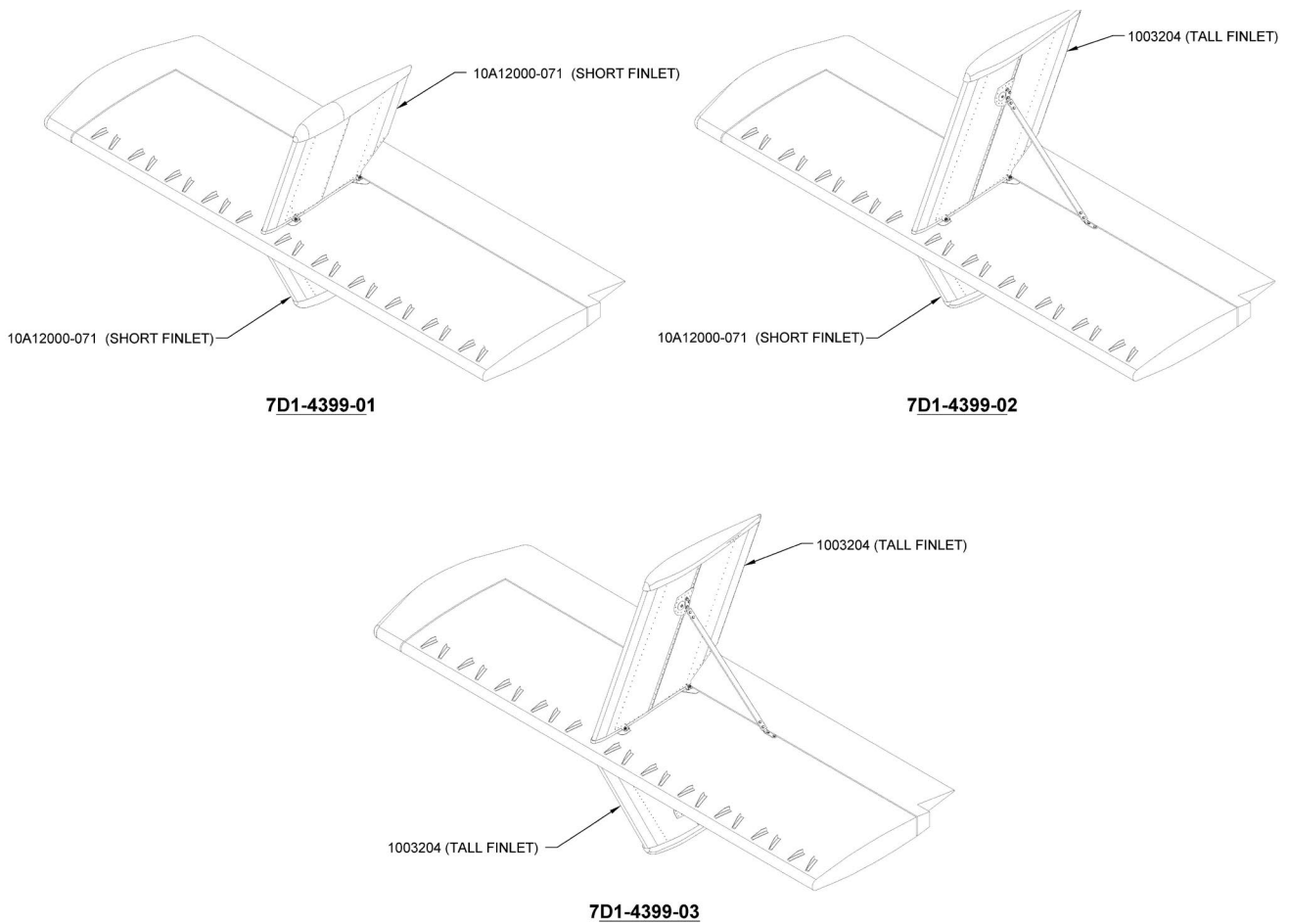


Figure 1

Finlet configurations (RH stabilizer shown)

Work Instructions

1. Position and prepare aircraft for safe maintenance.
Refer to Figure 2 and Wipaire drawing 7D1-4399 for steps 2 and 3.
2. Remove upper and lower finlets from the right horizontal stabilizer.

3. Remove the inspection access cover from the bottom of the right horizontal stabilizer.

Note: Finlet sizes/configurations and the presence of the finlet stabilizing struts will vary with the model and horsepower of the aircraft.

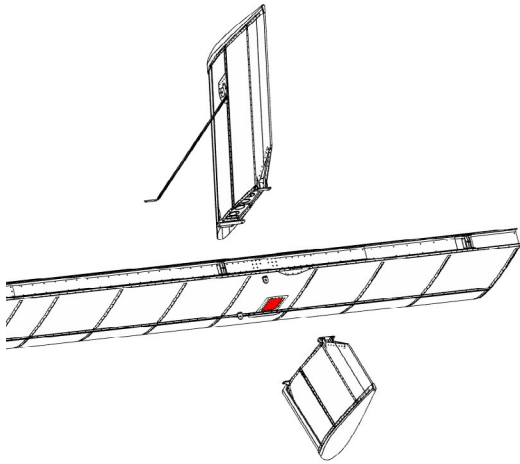


Figure 2

Inspection access locations

4. Remove the upper and lower spar strap (10A12001-074) from the forward horizontal stabilizer spar by drilling out the rivets holding it in place. See the parts highlighted in red in Figure 3.

Note: Rivet quantity and type may vary.

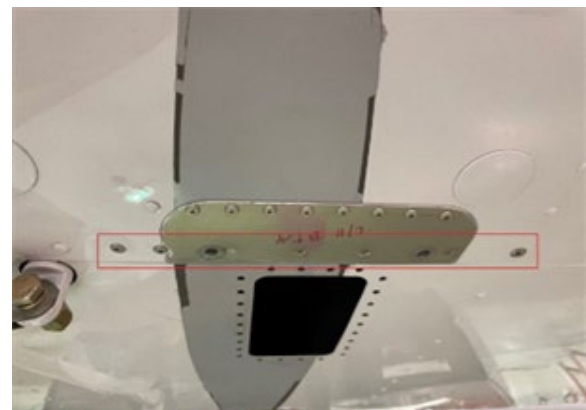
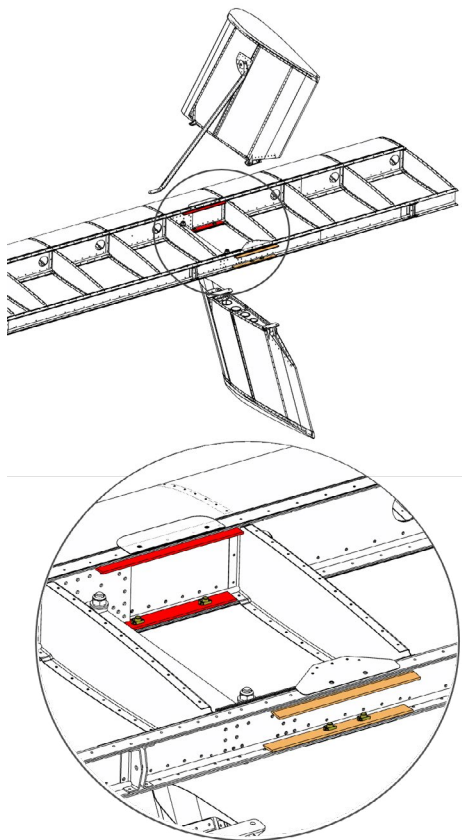


Figure 3

Stabilizer forward spar strap locations (LH stabilizer shown)

5. Clean the area that is to be inspected.
6. Visually inspect for cracks on the forward horizontal stabilizer spar, including both upper and lower flanges and the web area between. Two primary varieties of cracks have been observed. These are described below to aid inspection, but the entire area is to be thoroughly examined:
 - a. A crack originating in the spar web above the forward, outboard mount bolt of the lower finlet. See Figures 4 and 5.
 - b. A crack near the forward, inboard mount bolt, typically within the radius of the spar, and perhaps centered at the corner of the strut brace shim plates. See Figure 6.

Note: Non-destructive testing such as dye penetrant or eddy current may be required to confirm or rule-out the presence of cracks, at inspector's discretion.



Figure 4

Crack above lower finlet forward, outboard mount bolt location (spar strap removed)



Figure 5

Early-stage crack above lower finlet forward, outboard mount bolt location (shown with spar strap in place)

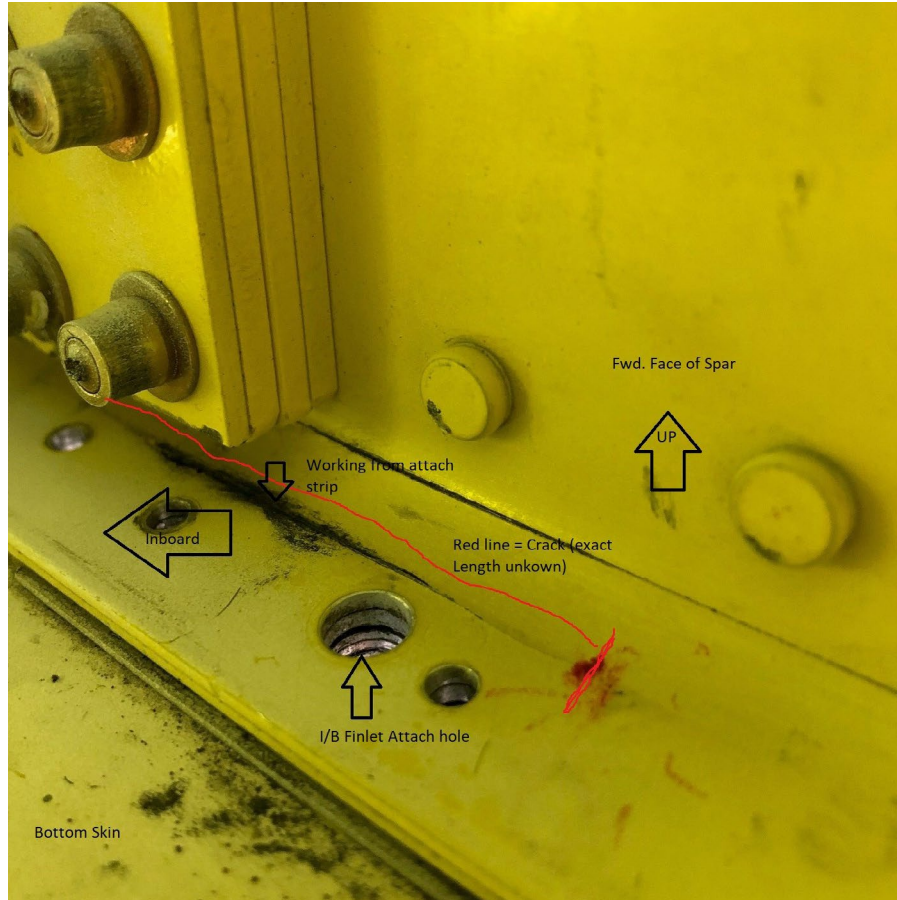


Figure 6

Crack at lower finlet forward, inboard mount bolt location (spar strap removed)

7. If no cracks are present continue to the next step, otherwise:

Any cracks discovered in this area of the horizontal stabilizer spar necessitate replacement or repair of spar; the procedure for replacing or repairing the spar is beyond the scope of Service Letter 253.

If finlet spar strap(s) require replacement, refer to Wipaire drawing 7D1-4399 for fitment of the new strap. Contact Wipaire Customer Service to request the most current revision at: customerservice@wipaire.com and/or technicalsupport@firebossllc.com.

8. Install the following (Ref Wipaire drawing 7D1-4399):

- a. Spar straps
- b. Lower horizontal stabilizer access cover
- c. Upper and lower finlets:
 - i. Apply Loctite 242 or equivalent thread locker (medium strength) to the bolt when installing
 - ii. Torque the attach bolts 50 in-lbs. to 70 in-lbs
 - iii. Apply torque stripe to the bolt head

9. REPEAT THIS INSPECTION FOR LEFT HORIZONTAL STABILIZER.

Aircraft Closing & Return to Service

1. Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 253 rev. B, and note observations.
2. Report ALL inspections to Wipaire regardless of whether or not cracks were revealed. Include the following information:
 - Hours since initial modifications associated with STC SA01735CH occurred
 - Model/engine configuration (with HP limits)
 - Propeller type
 - Finlet configuration (7D1-4399-1, 7D1-4399-2, 7D1-4399-3, landplane)
 - Crack location(s), if applicable (RH/LH, upper/lower spar flange, inboard/outboard finlet mount hole, etc.)
 - Crack size(s), if applicable
 - Photos of crack(s), if found
 - Registration number
 - Serial number
 - Total hours on airframe
 - Operator comments