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SERVICE LETTER NUMBER 120			
TITLE: Bushing repair for forward, lower center fuselage bow tie mounting plate			
BY: KMT	ACFT MAKE/MODEL(S):	FLOAT MODEL(S):	NOTE(S):
APP: KMT	Viking DHC6 -100, -200	13000	Optional compliance
DATE: 12-Apr-11	and -300		for repair purposes.
REV: A			

FAA APPROVAL HAS BEEN OBTAINED FOR TECHNICAL DATA IN THIS PUBLICATION THAT AFFECTS STC OR TSO DESIGN COMPLIANCE

EFFECTIVITY:

All Manufacturers Serial Number (MSN) Viking DHC-6-100, -200, and -300 equipped with Wipaire, Inc. model 13000 seaplane or amphibian twin floats.

SERVCE LETTER P/N: 1005290 for ECN 10076

COMPLIANCE: Optional, for repair purposes

BACKGROUND:

Certain Viking DHC-6-100, -200, and -300 aircraft have exhibited slight bearing wear on part number (P/N) 13A02078-002, bow tie mounting plate. This plate is riveted to the fuselage skin at the center lower forward jury strut mount. The center hole in this part receives the boss on P/N 13A02469-01. This boss is used to carry shear loads and may be slightly deformed or worn for high-time float equipped airframes.

COMPLIANCE METHOD:

Compliance is achieved through completion of the instructions in the Technical Data section of this service letter.

APPROX. SHOP HOURS:

The functions outlined by this service bulletin will take approximately 6 hr. to accomplish.

WARRANTY INFORMATION:

This service letter does not include any warranty parts or labor. This service letter is intended to support operators' repair activity only.

FOLLOW UP ACTIONS:

After completion of procedures in the Technical Data section:

1. Make an aircraft logbook entry in accordance with 14 CFR Part 43, or in accordance with your local Civil Aviation regulations, referencing accomplishment of the repair procedures in this service letter.

NOTES: (none)

TECHNICAL DATA:

Complete the following tasks:

- 1. Gather necessary technical data:
 - a. Installation drawing number 7D1-3008, revision E or later.
 - b. Installation, fuselage reinforcements, bulkhead 111, drawing number 7D1-3010, revision A or later.
 - c. Latest copy of this SL 120, available on www.wipaire.com.
 - d. Service manual for DHC-6 on 13000 floats, available on www.wipaire.com

2. Inspect aircraft:

- a. Support aircraft forward fuselage by hoisting at least the forward fuselage, or sling lift the entire aircraft.
- Remove the forward center strut and fuselage eyebolt fitting, see drawing 7D1-3008, detail A.
- c. Remove the two forward flying wires.
- d. Remove bow tie fitting P/N 13A02469-001. This will provide complete access to the fitting attachment plate.
- e. Inspect the center 1.0 inch diameter hole lower forward center bow tie attachment plate P/N 13A02078-002. See drawing 7D1-3010, view A.
- f. Determine, using a caliper, the roundness condition of the hole in the attachment plate.

- g. The maximum out of round that can be repaired with this SL is a 0.20 inch diameter out of round. I.e. the maximum diameter measured may be 1.20 inches.
- 3. Fabricate a repair bushing part as follows:
 - a. Material 2024-T3 aluminum per AMS QQ-A-250/4 or AMS 4037
 - b. Outside diameter 1.250 +.002 -.000 inches
 - c. Inside diameter ID 1.000 +.002 -.001
 - d. Thickness 0.25 to 0.27 inches
 - e. Break sharp edges to R0.015
 - f. Finish: bare part will be assembled wet
 - g. Dimensional tolerances are tight for the bushing interference fit. Slowly grind bushing to proper dimensions to ensure a good fit.
- 4. Remove P/N 13A02078-002 from the aircraft belly skin by drilling the attaching rivets.

 Note: this repair cannot be accomplished while the attachment plate is installed on the aircraft, because it would not be possible to ream the attachment plate hole without potentially damaging the aircraft belly skin and interior fitting.
- 5. Ream the D1.0 inch hole on P/N 13A02078-002 to D1.250 +.000 -.001. Ensure the hole is reamed on center with the existing hole.
- 6. With the hole reamed, new bushing manufactured, and all dimensions double checked: press fit (at room temperature) the replacement bushing into the reamed hole. The bushing should be press fit wet with Mastinox or zinc chromate or epoxy primer for corrosion protection and sealing.

<u>Note</u>: it is also acceptable to finish (prime or Mastinox) the bushing and reamed hole before assembly, then assemble wet with an appropriate PR-type sealant.

- 7. Allow primer (or sealant) to cure completely.
- 8. Reinstall the repaired attachment plate onto the aircraft fuselage in a reverse manner from which it was removed, as shown on drawing 7D1-3010.
- 9. Reinstall the forward center strut and flying wires and all attaching hardware.
- 10. Ensure all tools are removed from aircraft and clean any aluminum shavings from the interior fuselage belly skin.
- 11. Double check all installed hardware, and then remove the forward fuselage hoist or lifting rig.
- 12. Tension forward flying wires with aircraft either sitting on water or landing gear (for amphibian).
- 13. Accomplish the FOLLOW UP ACTIONS listed previously in this service letter.

Figures are shown on the following page.

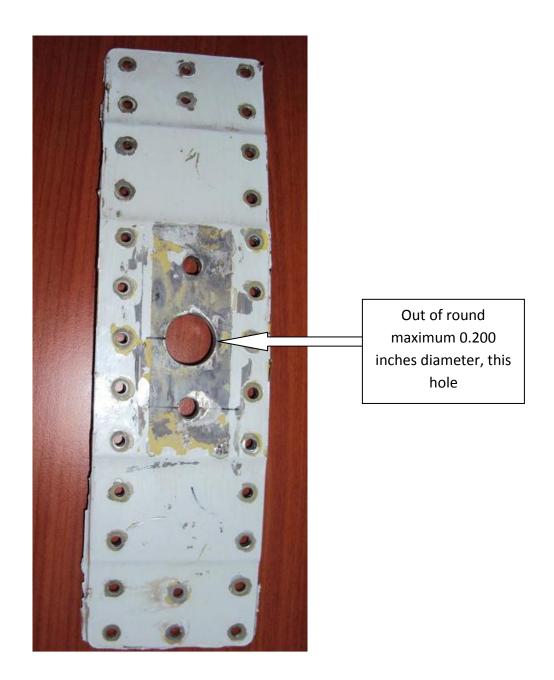


Fig. 1 – P/N 13A02078-002, bow tie attachment plate, as removed from aircraft

END