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SERVICE LETTER 127

Nose Gear End Cap Cracks

Aircraft Makes/Model(s):	Float Model(s):	Compliance: Mandatory	By: MAS
Multiple	6100A, 7000A, 8000A, 8750A	Part Number: 1005732	Approved: DRH
		Date: 5/15/2024	Revision: C

LOG OF REVISIONS

Revision	Description	Date
A	Initial release	3/14/2012
B	Updated remove and re-install instructions.	12/11/2012
C	Full rewrite to include 6100A and 8750A floats.	5/15/2024

FAA approval has been obtained for technical data in this publication that affects STC or TSO design compliance.

EFFECTIVITY:

- All model 8000 Amphibious Floats up to and including Serial No. 80398
- All model 7000 Amphibious Floats up to and including Serial No. 70030
- All Model 6100 Amphibious Floats up to and including Serial No. 61524
- All model 8750 Amphibious Floats up to and including Serial No. 87008

COMPLIANCE:

Within the next 25 hours of operation, inspect the Nose Gear Box End Cap, part number 8A07201-002 (7000A/8000A/8750A) or 6A07210-001 (6100A) for cracks.

BACKGROUND:

Several Nose Gear Box End Caps have been found to have cracks propagating from around the Cylinder Mounting Flange bolts (4). If these cracks go undetected there is a possibility that the End Cap can break, letting the actuator cylinder move to the selected gear position, and the gear position lights indicate that the selected gear position has been reached when it has not.

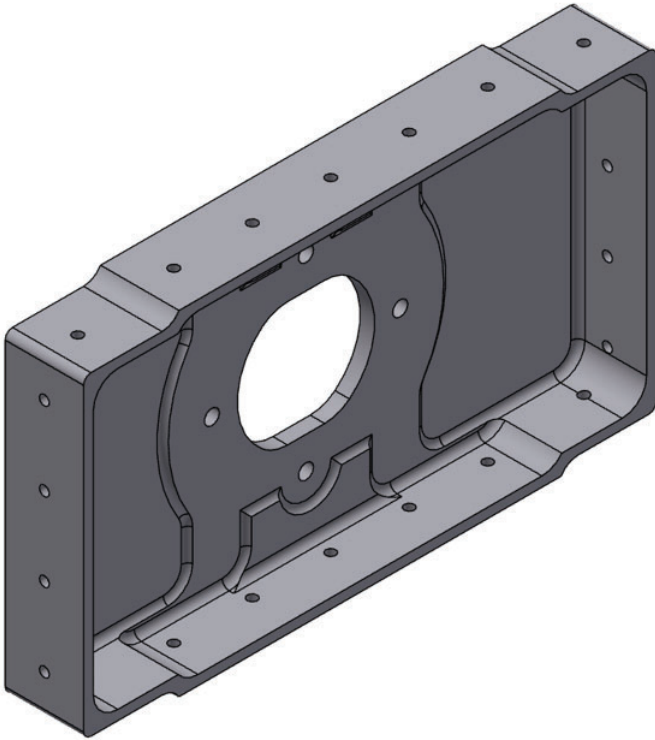
COMPLIANCE METHOD:

A close visual inspection must be accomplished within the next 25 hours of operation, and every 50 hours thereafter. The cracks will be best visible by looking at the forward face of the End Cap, through the forward open end of the Nose Gear Box. It appears that the cracks start just above the top mounting bolt and just below the bottom mounting bolt as shown in Figure 1. If cracks are found, the End Cap Part, #8A07201-002 or part number 6A07210-001, must be replaced. After inspection and/or replacement, re-adjust the gear "down" over-center lock, so that it hits the end of the lock-up track, and has little to no preload pressure on it since the preload pressure would cause extra stress at the Cylinder Mounting Flange and the End Cap. Replacement of the older revision parts with later revision parts will eliminate the requirement for 50 hour internal inspections, but this inspection should still be accomplished at 100 hour intervals thereafter. Later revision parts will be made easily distinguishable by their raised flats to the top and bottom of the fitting at the attachment bolt areas as shown below.

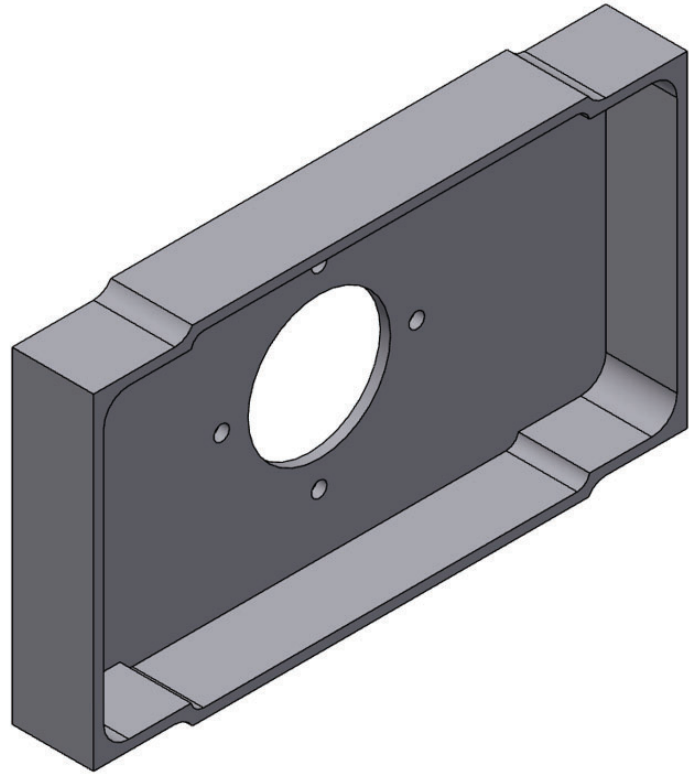
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**LATER REVISION
EXAMPLE WITH RAISED
MACHINE SURFACES**



**EARLY REVISION
EXAMPLE WITH SMOOTH
MACHINE SURFACES**

APPROXIMATE SHOP HOURS:

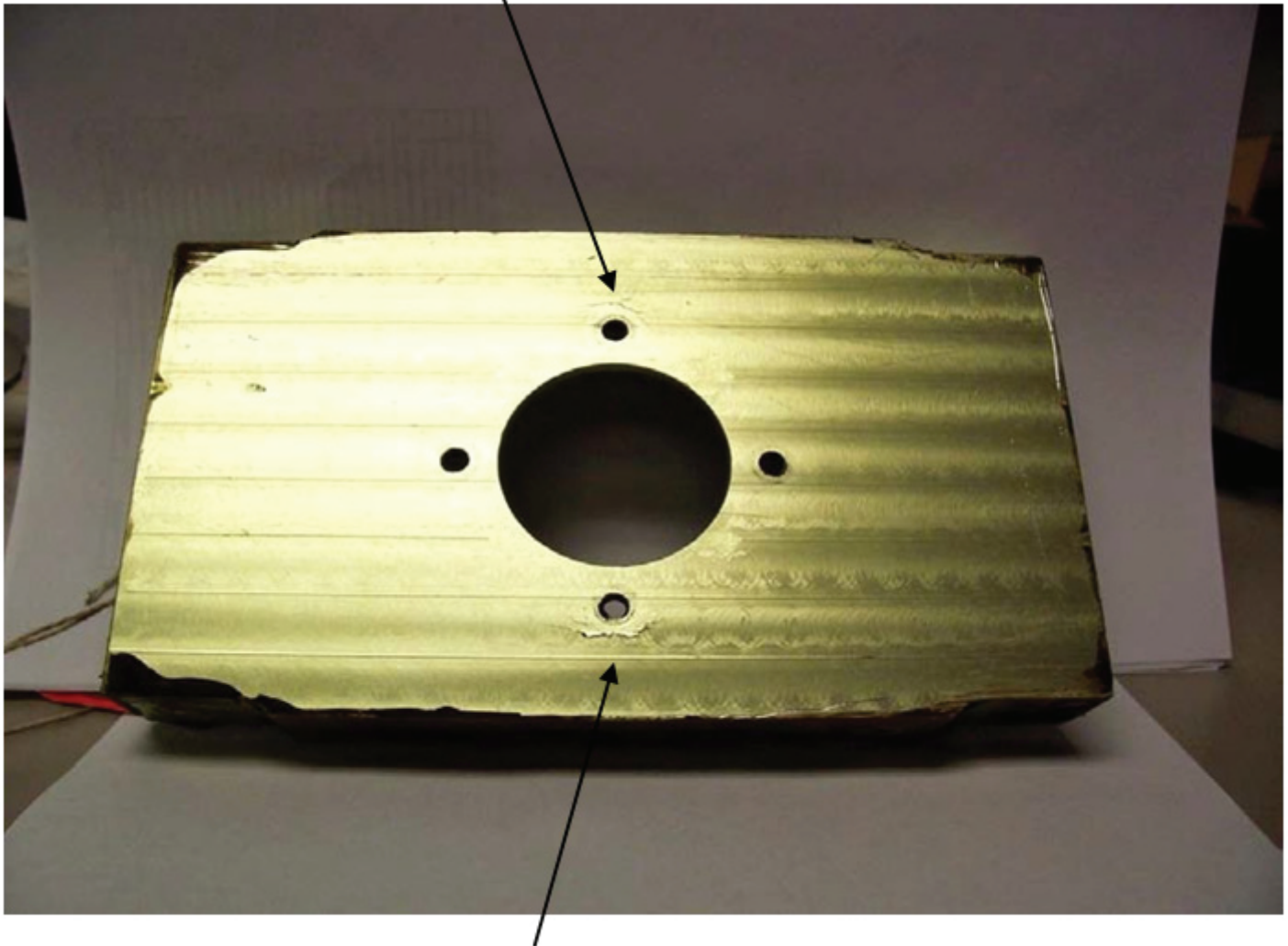
Inspection-1 hour. Replacement of End Caps, right and left floats-20 hrs.

WARRANTY INFORMATION:

This service letter does not include warranty for labor and parts.

Notes: The following (figure 1) shows part that is cracked and (figure 2) item (1) shows its location on the nose box assembly. This is the forward side of the part which can be seen looking into the open (front) end of the nose gear box. No disassembly should be required to examine this area. The area should be thoroughly cleaned before inspecting. Use good lighting. If in doubt, dye penetrant inspection can also be accomplished.

Visible Crack



Visible crack

Figure 1

If evidence of cracking is found in Nose Box End Cap, either by visual or dye penetrant inspection per figure 1, the following instructions will be accomplished to replace damaged Nose Box End Cap:

ITEMS REQUIRED FOR NOSE BOX END CAP REPLACEMENT		
QTY	PART NUMBER	DESCRIPTION
1	8A07201-002	END CAP - NOSE BOX (7000/8000/8750)
1	6A07021-001	END CAP - NOSE BOX (6100A)
4	AN3-17A	BOLT (6000A)
	AN3-20A	BOLT (7000A/8000A/8750A)
A/R	MS20426AD5 or NAS1097AD6	FLUSH HEAD RIVETS
A/R	MS20470AD5 or AD6	UNIVERSAL HEAD RIVETS
A/R	PR-1428-B-2-654	PR2 SEALANT

1. Position aircraft safe for maintenance.
2. Support aircraft on jacks so that there is no weight on float landing gear.
3. Remove forward float deck access cover to access Nose box end cap.
4. Relieve residual Hydraulic pressure by cracking Hyd. Fitting on Nose gear actuator and disconnect.
5. Cap and plug fittings.
6. Remove Nose Gear Box Assembly per Maintenance Manual. Save hardware for reinstallation.
7. Remove bolts (4) and washers (4) from Hyd. actuator cylinder and separate from Nose Box Assembly.

CAUTION:

Hydraulic fluid will drain from the Cylinder.

8. Disconnect and remove Hydraulic Ram from Nose Gear Rod End by rotating. counterclockwise. Count threads showing on Nose Gear Rod End for reinstallation.
9. Remove Bolts (4), washer (4), and Nuts (4) from Cylinder Flange Assembly and save for installation.
10. Remove Cylinder Flange Assembly, Flange Plate, and Flange Cylinder nose gear ram Spacer.
11. Drill out all rivets securing Nose box End Cap and remove.

Note: Proper Surface Cleaning and Preparation must be accomplished prior to installation of Replacement Nose Box End Cap.

12. Install End Cap and back drill, using #30 drill bit, for initial fitment. Remove Nose End Cap and remove any burrs left from back drilling.
13. Apply a thin coat of PR2 Sealant to the End Cap surface that will contact the Nose Box Assembly.
14. Reinstall Nose Cap and Secure top and bottom of nose box with MS20470AD5 or AD6 rivets and sides of nose box with MS20426AD5 or NAS1097AD6.
15. Apply a thin coat of PR2 Sealant to Cylinder Flange Assembly, Flange Plate, and Flange Cylinder nose gear ram Spacer mating surfaces and reinstall Bolts (4), washers (4), and Nuts (4).
16. Torque bolts to spec per Maintenance Manual.
17. Install Hydraulic ram, noting number of threads from step 8 are showing on Nose Gear Rod End.
18. Install Hydraulic Actuator Cylinder, taking care not to pinch packings.
19. Secure with hardware from Step 6.
20. Torque bolts to spec per Maintenance Manual.
21. Reinstall Nose Gear Box Assembly per Maintenance Manual
22. Apply a bead of PR2 Sealant around Nose gear assembly for watertight seal.
23. Connect Hydraulic line to Hyd. Cylinder.
24. Re-adjust the gear "down" over-center lock so that it hits the end of the lock-up track and has little to no preload pressure per Maintenance Manual.
25. Bleed Hydraulic System per Maintenance Manual.
26. Final Gear swing and travel check must be accomplished before jacks are removed.
27. Remove aircraft from jacks.
28. Return aircraft to service.

Nose Gear Actuator Assembly

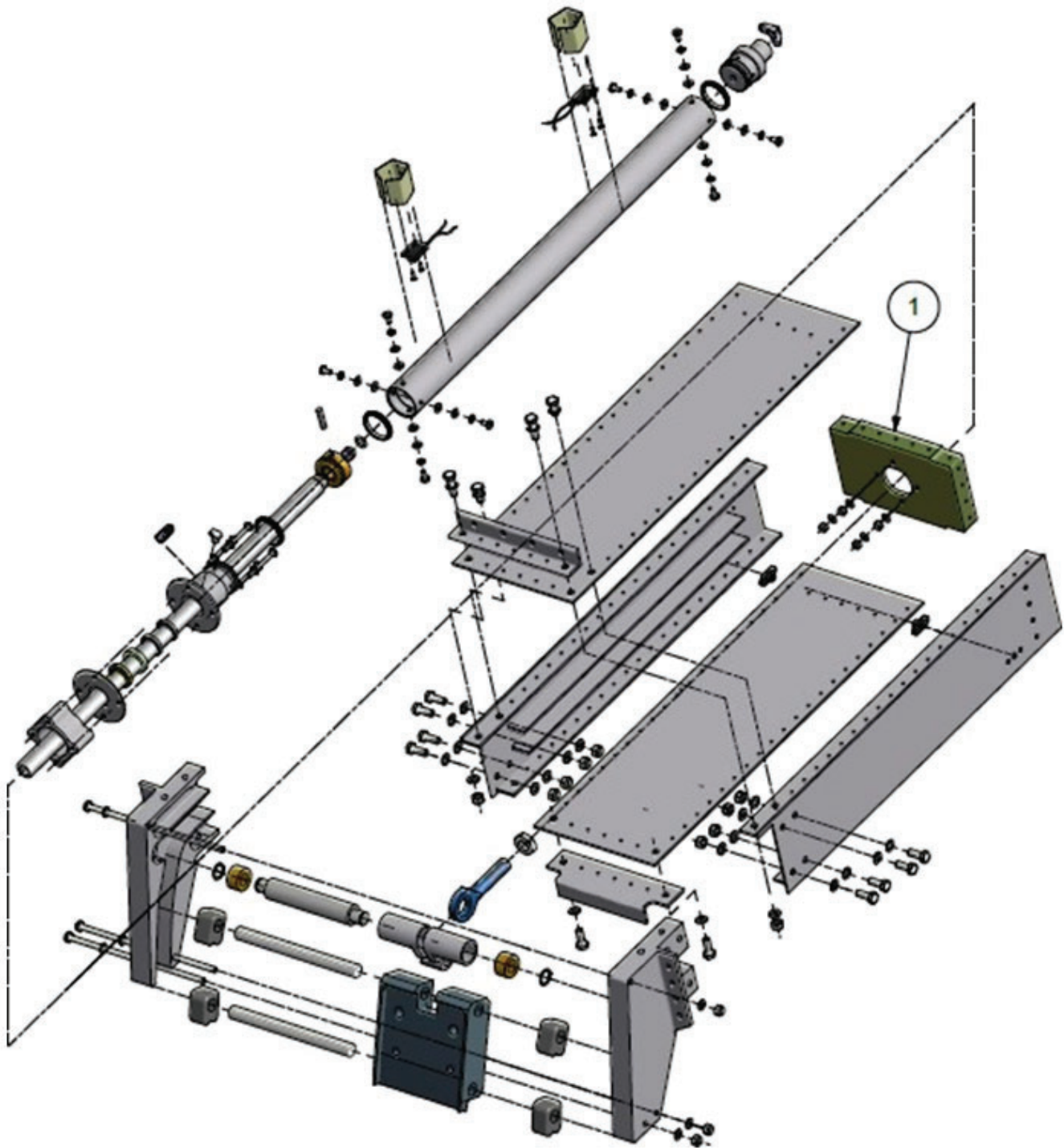


Figure 2

Aircraft Closing & Return to Service

1. Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 127.