SERVICE LETTER 263

208/208B on Floats - Locking Water Rudder Retract Handle Enhancement

Aircraft Makes/Model(s):	Float Model(s):	Compliance: Optional	By: MAS
Textron Aviation 208, 208B	8000 & 8750 Series	Part Number: 1012508	Approved: DRH
		Date: 2/13/2024	Revision: A

LOG OF REVISIONS

Revision	Description	Date
А	Initial release	2/13/2024

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

EFFECTIVITY:

This service letter applies to Textron Aviation models 208 and 208B with Wipline 8000 and 8750 floats installed per STC SA1311GL. Reference the "Determining Applicability and Compliance Method" section for further details.

COMPLIANCE:

Compliance is optional.

BACKGROUND:

Locking-style water rudder retract handles are installed with all 8750 floats and can be retrofit for 8000 floats. Prior locking mechanisms can exhibit excessive wear rates and the sliding portion of the handle can bind if operated in a particular way. This service letter describes an update to the relevant components of all such handles. It also addresses the upgrade from the original over-center handle used in 8000 floats which was previously performed via Service Letter 111 (now obsolete).

COMPLIANCE METHOD:

Install new handle components via the work instructions provided within this service letter.

APPROXIMATE SHOP HOURS:

Performing the work instructions will take approximately 3 labor hours to complete per aircraft.

WEIGHT AND BALANCE CHANGE:

No changes.

WARRANTY INFORMATION:

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

TECHNICAL DATA:

Copies of this service letter, associated service kit (if applicable), float service manual, and float parts manual are available by contacting Wipaire customer service.



Determining Applicability and Compliance Method

Review Figure 1 to determine applicability of this Service Letter and the appropriate Work Instruction Method to follow for retrofit. The 8750S and 8750A assemblies (methods B and C) have been incorporated into new float production during 2023.

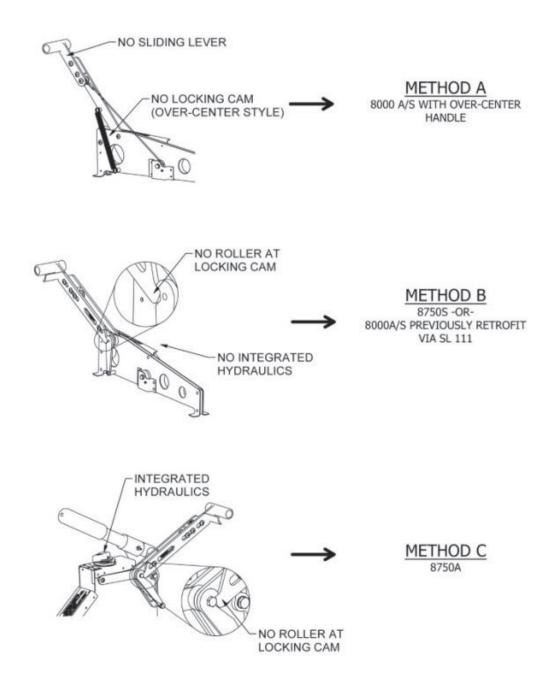


Figure 1 - Compliance Methods



Work Instruction – Method A 8000A/S with Originally Equipped Over-Center Handle

(This Section Supersedes Service Letter 111 And Service Kit 79)

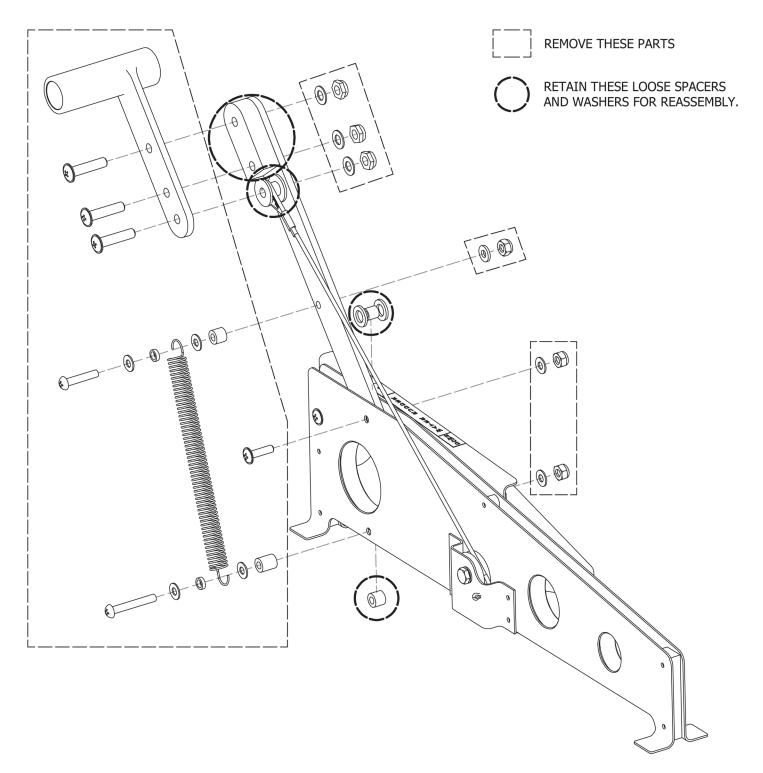


Figure 2 - Disassembly Of Over-Center Retract Handle



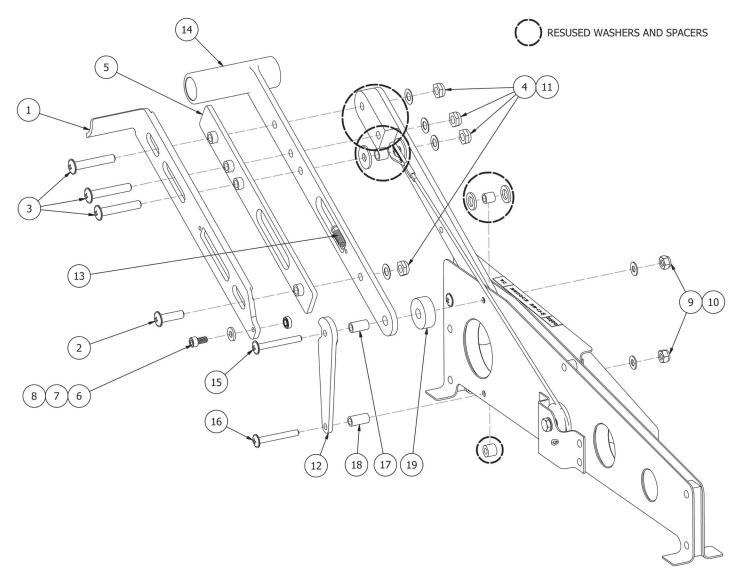


Figure 3 - Retrofit Of Over-Center Retract Handle



	ITEMS PROVIDED IN SERVICE KIT 1012508-01 (1 PER AIRCRAFT)			
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	1012206	LEVER, LOCKING WATER RUDDER RETRACT	
2	1	AN525-416R14	SCREW, WASHER HEAD, 1/4-28, 7/8" LG	
3	3	AN525-416R24	SCREW, WASHER HEAD, 1/4-28, 1-1/2" LG	
4	4	NAS1149F0416P	WASHER, .500 X .265 X .016	
5	1	1012310	GUIDE, LOCKING, WATER RUDDER RETRACT	
6	1	1012385	ROLLER, HANDLE, RUDDER RETRACT	
7	1	MS16997-43	SCREW, CAP, SOCKET HEAD, 10-24, .375" LG	
8	1	NAS1149D0363J	WASHER, .438 X .203 X .063	
9	2	NAS1149F0332P	WASHER, 0.203 ID, 0.032 THK, STEEL	
10	2	MS21044N3	LOCKNUT, NYLON INSERT, #10	
11	4	MS21083N4	LOCKNUT, NYLON INSERT, 1/4", LOW	
12	1	1005047	CAM, LOCKING WASTER RUDDER RETRACT	
13	1	1005045	SPRING, EXTENSION, LOCKING RUDDER RETRACT	
14	1	1005048	LEVER, HANDLE, LOCKING, WATER RUDDER RETRACT	
15	1	AN525-10R26	SCREW, WASHER HEAD, 10-32, 1-5/8" LG	
16	1	AN525-10R24	SCREW, WASHER HEAD, 10-32, 1-1/2" LG	
17	1	NAS43HT3-37	SPACER, 37/64" LG	
18	1	NAS43HT3-40	SPACER, 5/8" LG	
19	1	1005046	SPACER, 1" OD X .33"ID X .36" LG	

1. Position and prepare aircraft for safe maintenance.

Refer to Figure 2 for steps 2-4.

- 2. Position the lever as needed for working clearance, keeping in mind that the following step will release the retract cable.
- 3. Hold end of the retract cable while removing (3 ea) AN525 screws from the upper portion of the retract lever (the T-handle). Secure the free cable end away from the pivoting components.
- 4. Disassemble the remainder of retract handle in accordance with Figure 2 while setting aside the indicated components for reuse.

Refer to Figure 3 for steps 5-9.

- 5. Assemble locking cam (item 12), handle lever (item 14), new spacers (items 17, 18, 19), and retained spacers and washers from disassembly, as depicted. Secure with screws, washers, and locknuts (items 9, 10, 15, 16).
- 6. Connect spring (item 13) to handle lever (item 14), but not locking lever (item 1) at this time.
- 7. Apply Loctite Blue 242, or equivalent, to socket head screw (item 7) then assemble with washer (item 8), locking lever (item 1), and roller (item 6) as shown. Roller will be captured between cam and lever components when this sub-assembly is positioned in the following step.
- 8. Assemble locking components to handle lever:
 - a. Hold guide (item 5) against the locking lever (item 1), then hold the two against the handle lever (item 14). Assure that the roller (item 6) does not clash with cam (item 11).
 - b. Re-position retract cable end along with the spacer and fender washers retained during disassembly. It may be helpful to partially fasten the lever components (see following step) while positioning the small parts.
 - c. Fasten these parts in place using hardware shown (items 2,3,4, and 11). Do not overtighten, as this may deform the boss features on the guide.



- 9. Connect other end of spring (item 13) to locking lever (item 1).
- 10. Test sliding action of locking lever and adjust torque on screws as needed.
- 11. Test functionality of locking mechanism.
- 12. Test full range of retract handle while feeling for binding along the cable routing.
- 13. Check cable tension/rigging per Chapter 6 of Wipaire Service Manual PN 1002554 (8000 floats).

Work Instruction – Method B 8750S or Previously Retrofit 8000A/S (SL 111)

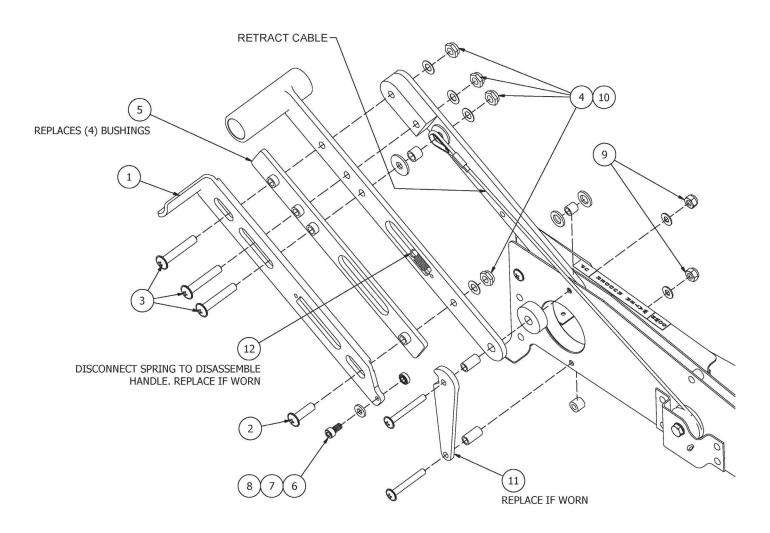


Figure 4 - 8750S Or Previously Updated 8000A/S

(Ballooned items have either been updated or are wear components)



ITEMS PROVIDED IN SERVICE KIT 1012508-02 (1 PER AIRCRAFT)			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1012206	LEVER, LOCKING WATER RUDDER RETRACT
2	1	AN525-416R14	SCREW, WASHER HEAD, 1/4-28, 7/8"LG
3	3	AN525-416R24	SCREW, WASHER HEAD, 1/4-28, 1-1/2"LG
4	4	NAS1149F0416P	WASHER, .500 X .265 X .016
5	1	1012310	GUIDE, LOCKING, WATER RUDDER RETRACT
6	1	1012385	ROLLER, HANDLE, RUDDER RETRACT
7	1	MS16997-43	SCREW, CAP, SOCKET HEAD, 10-24, .375"LG
8	1	NAS1149D0363J	WASHER, .438 X .203 X .063
9	2	MS21044N3	LOCKNUT, NYLON INSERT, #10
10	4	MS21083N4	LOCKNUT, NYLON INSERT, 1/4", LOW
11	1	1005047	CAM, LOCKING WASTER RUDDER RETRACT
12	1	1005045	SPRING, EXTENSION, LOCKING RUDDER RETRACT

1. Position and prepare aircraft for safe maintenance.

Refer to Figure 4 for the following steps. Ballooned items are either updated parts or wear components which may be replaced as needed.

- 2. Disconnect spring (item 12) from locking lever (item 1).
- 3. Note the routing of the retract cable prior to disassembly. Position the lever as needed for working clearance, keeping in mind that the following step will release both the cable and locking mechanism.
- 4. Hold end of the retract cable while removing (4 ea) AN525 screws (to be replaced by items 2 and 3 upon reassembly). Secure the free cable end away from the pivoting components prior to removing locking lever (item 1). For the other hardware associated with these screws:
 - a. Bushing and (2 ea) fender washers at the thimble end of retract cable are to be retained.
 - b. (4 ea) slide bushings with beveled ends may be discarded.
 - c. (4 ea) NAS1149F0432P washers may be discarded. Thinner replacement washers provided in kit (item 4).
 - d. (4 ea) MS21083N4 locknuts may be replaced with like items from kit upon reassembly.
- 5. OPTIONAL: If locking cam (item 11) shows wear, replace with like item from kit:
 - a. Remove the (2 ea) AN525 screws securing cam. While removing screws, it is recommended that a pin (screwdriver, for example) be inserted from the nut side to retain the lever, spacer, and washers that are sandwiched between the handle support brackets.
 - b. Install replacement cam (item 11) using existing hardware and bushings, but with replacement MS21044N3 nuts (item 9).
- 6. Apply Loctite Blue 242, or equivalent, to socket head screw (item 7) then assemble with washer (item 8), locking lever (item 1), and roller (item 6) as shown. Roller will be captured between cam and lever components when this sub-assembly is positioned in step 8.
- 7. If worn or damaged during disassembly, replace spring (item 12) from kit. Connect only to handle lever at this time, not locking lever (item 1).
- 8. Assemble locking components to handle lever:
 - a. Hold guide (item 5) against the locking lever (item 1), then hold the two against the handle lever (T-handle). Assure that the roller (item 6) does not clash with cam (item 11).
 - b. Re-position retract cable end along with the bushing and fender washers addressed in step 4a. It may be helpful to partially fasten the lever components at this time (see following step).
 - c. Fasten these parts in place using hardware shown (items 2,3,4, and 10). Do not overtighten, as this may deform the boss features on the guide.



- 9. Connect other end of spring (item 12) to locking lever (item 1).
- 10. Test sliding action of locking lever and adjust torque on screws as needed.
- 11. Test functionality of locking mechanism.
- 12. Test full range of retract handle while feeling for binding along the cable routing.
- 13. Check cable tension/rigging per Chapter 6 of Wipaire Service Manual PN 1002554 (8000 floats) or PN 1005723 (8750 floats).

Work Instruction – Method C 8750A - Assembly Integrated with Hydraulic Hand Pump

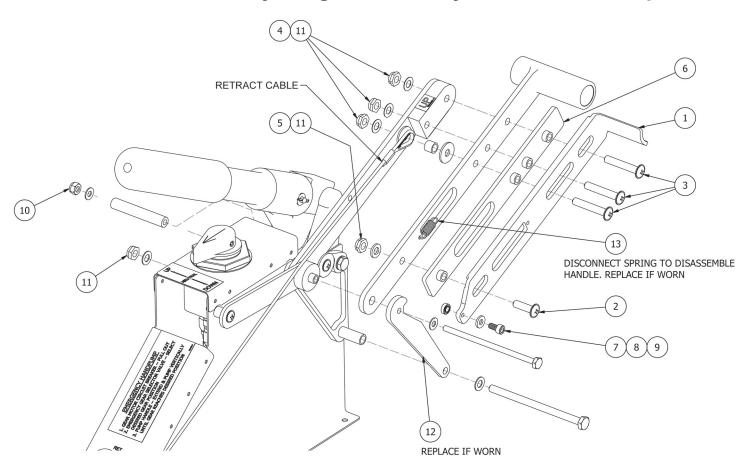


Figure 5 - 8750A Assembly Integrated with Hydraulic Hand Pump

(Ballooned items have either been updated or are wear components)



	ITEMS PROVIDED IN SERVICE KIT 1012508-03 (1 PER AIRCRAFT)			
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	1012207	LEVER, LOCKING WATER RUDDER RETRACT, 8750A	
2	1	AN525-416R14	SCREW, WASHER HEAD, 1/4-28, 7/8"LG	
3	3	AN525-416R24	SCREW, WASHER HEAD, 1/4-28, 1-1/2"LG	
4	3	NAS1149F0416P	WASHER, .500 X .265 X .016	
5	1	NAS1149F0463P	WASHER, .500 X .265 X .063	
6	1	1012310	GUIDE, LOCKING, WATER RUDDER RETRACT	
7	1	1012385	ROLLER, HANDLE, RUDDER RETRACT	
8	1	MS16997-43	SCREW, CAP, SOCKET HEAD, 10-24, .375"LG	
9	1	NAS1149F0363P	WASHER, .438 X .203 X .063	
10	1	MS21044N3	LOCKNUT, NYLON INSERT, #10	
11	5	MS21083N4	LOCKNUT, NYLON INSERT, 1/4", LOW	
12	1	1005711	CAM, LOCKING WATER RUDDER RETRACT, 208	
13	1	1005045	SPRING, EXTENSION, LOCKING RUDDER RETRACT	

1. Position and prepare aircraft for safe maintenance.

Refer to Figure 5 for the following steps. Ballooned items are either updated parts or wear components which may be replaced as needed.

- 2. Disconnect spring (item 13) from locking lever (item 1).
- 3. Note the routing of the retract cable prior to disassembly. Position the lever as needed for working clearance, keeping in mind that the following step will release both the cable and locking mechanism.
- 4. Hold end of the retract cable while removing (4 ea) AN525 screws (to be replaced by items 2 and 3 upon reassembly). Secure the free cable end away from the pivoting components prior to removing locking lever (item 1). For the other hardware associated with these screws:
 - a. Bushing and (2 ea) fender washers at the thimble end of retract cable are to be reused.
 - b. (4 ea) slide bushings with beveled ends may be discarded.
 - c. (4 ea) NAS1149F0432P washers may be discarded. Replacement washers of different thicknesses provided in kit (items 4 and 5).
 - d. (4 ea) MS21083N4 locknuts (item 11) may be replaced with identical parts from kit upon reassembly.
- 5. OPTIONAL: If locking cam (item 12) shows wear, replace it with like item from kit.
 - a. Remove the (2 ea) AN525 screws securing cam. While removing screws, it is recommended that a pin (screwdriver, for example) be inserted into the upper location from the nut side to retain the lever, spacers, and washers that are sandwiched within the assembly.
 - b. Install replacement cam (item 12) using existing hardware and bushings, but with replacement locknuts (items 10 and 11).
- 6. Apply Loctite Blue 242, or equivalent, to socket head screw (item 8) then assemble with washer (item 9), new locking lever (item 1), and roller (item 7) as shown. Roller will be captured between cam and lever components when this sub-assembly is positioned in step 8.
- 7. If worn or damaged during disassembly, replace spring (item 13) from kit. Connect only to handle lever at this time, not locking lever (item 1).
- 8. Assemble locking components to handle lever:
 - a. Hold guide (item 6) against locking lever (item 1), then hold the two against the handle lever. Assure that the roller (item 7) does not clash with cam (item 12).



- b. Re-position retract cable end along with the bushing and fender washers mentioned in step 4a. It may be helpful to partially fasten the lever components at this time (see following step).
- c. Fasten these parts in place using hardware shown (items 2,3,4,5, and 11). Do not overtighten, as this may deform the boss features on the guide.
- 9. Connect other end of spring (item 13) to locking lever (item 1).
- 10. Test sliding action of locking lever and adjust torque on screws as needed.
- 11. Test functionality of locking mechanism.
- 12. Test full range of retract handle while feeling for binding along the cable routing.
- 13. Check cable tension/rigging per Chapter 6 of Wipaire Service Manual PN 1005723 (8750 floats).

Aircraft Closing & Return to Service

1. Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 263.