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## SERVICE LETTER 143

### 2100A, 2350A MAIN LANDING GEAR PROXIMITY SWITCH

<b>By:</b> MAB	<b>Aircraft Makes/Model(s):</b>  N/A	<b>Float Model(s):</b>  2100A 2350A	<b>Note(s):</b>  Mandatory Compliance Service Letter P/N 1005934
<b>Approved:</b> SDW			
<b>Date:</b> 10/17/2019			
<b>Revision:</b> E			

#### LOG OF REVISIONS

Revision	Description	Date
A	Initial Release	5/6/2014
B	Repositioned upper and lower switches to eliminate intermittent illumination	7/30/2014
C	Revised for greater clarity, added reference to service letters 97 and 139	2/20/2018
D	Updated flush rivet on drawing	8/5/2019
E	Updated warranty information	10/17/2019

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

#### EFFECTIVITY:

This service letter applies to aircraft listed above with:

- Wipline 2100 amphibious floats SN 21862 and prior
- Wipline 2350 amphibious floats SN 23150 and prior

**NOTE:** This service letter assumes Wipaire service letter 97 and 139 have already been completed.

#### COMPLIANCE:

Mandatory compliance for all floats with the 1002574 cylinder installed and recommended for earlier models without the 1002574 cylinder installed. If revision B or prior of this service letter has been complied with, no additional modifications are needed.

#### BACKGROUND:

A possible cylinder or coupler failure may still indicate gear actuation.

#### COMPLIANCE METHOD:

Install new parts included in this service letter in accordance with the Work Instruction section of this service letter.

#### APPROXIMATE SHOP HOURS:

This service letter will take approximately 3.5 labor hours to complete.

#### WARRANTY INFORMATION:

No longer applicable. Warranty has expired.

#### TECHNICAL DATA:

Copies of this service letter, associated service kit, float service manual, and float parts manual are available at [www.wipaire.com](http://www.wipaire.com). See photos and figures below for details to aid in performing this modification. See Table 1 below for a list of parts included in the service kit.

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**ITEMS PROVIDED IN SERVICE KIT (ONE KIT PER FLOAT SET)**

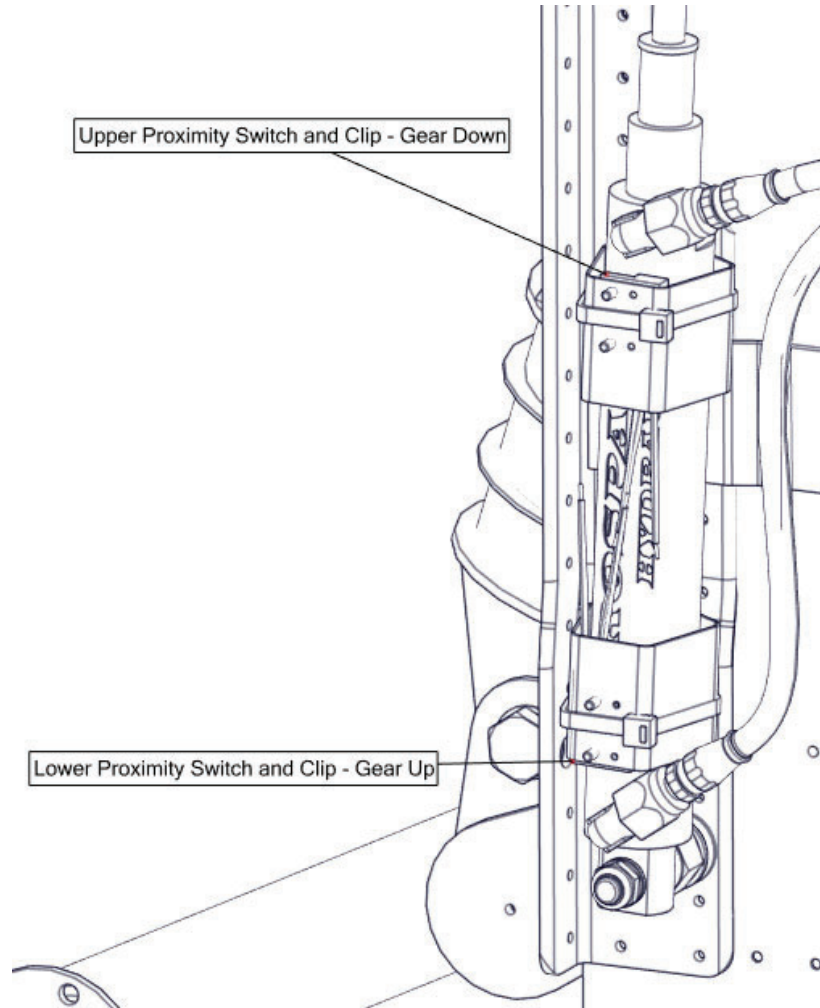
ITEM	QTY	PART NUMBER	DESCRIPTION
-	1	1005934-01	KIT, SERVICE LETTER 143, 2100 MAIN GEAR PROXIMITY SWITCH
1	2	1003343	DOUBLER, PROXIMITY SWITCH
2	2	1005875	ASSEMBLY, PIN, CLEVIS, MAGNET HOLDER
3	1	1005933	TEMPLATE, PROXIMITY SWITCH LOCATION, 2100 MAIN GEAR
4	8	MS21044N04	NUT
5	2	MS24665-283	COTTER PIN
6	8	MS24693-S6	MACHINE SCREW
7	8	NAS1149FN432P	WASHER
8	1	PR-1422-B-2-654 OR EQUIVALENT	6 OZ. MODEL 654 SEMKIT OR EQUIVALENT

**TABLE 1**

## WORK INSTRUCTION

1. Per Wipaire maintenance manual, jack aircraft enough to relieve load on the front and main gear
2. Remove the outboard main gear side access cover
3. Locate and label the upper and lower proximity switches

Showing  
instruction for right  
float installation.  
Mirror instruction  
when installing left  
float components

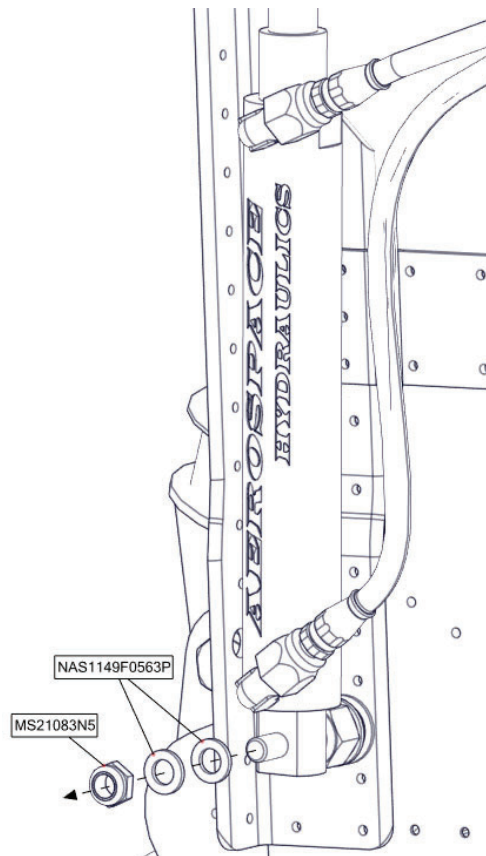


4. Remove the upper and lower proximity switches and discard the clips, zip ties, and screws

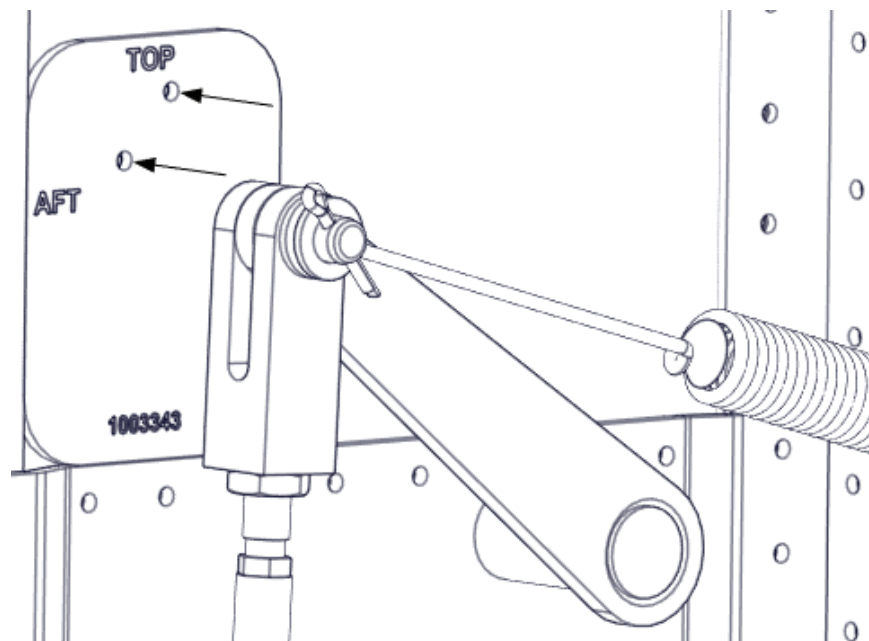
**NOTE:** Do not remove the proximity switch from the wiring harness

5. Remove the MS21083N5 nut and NAS1149F0563P washers from the lower hydraulic actuator and set aside for later use

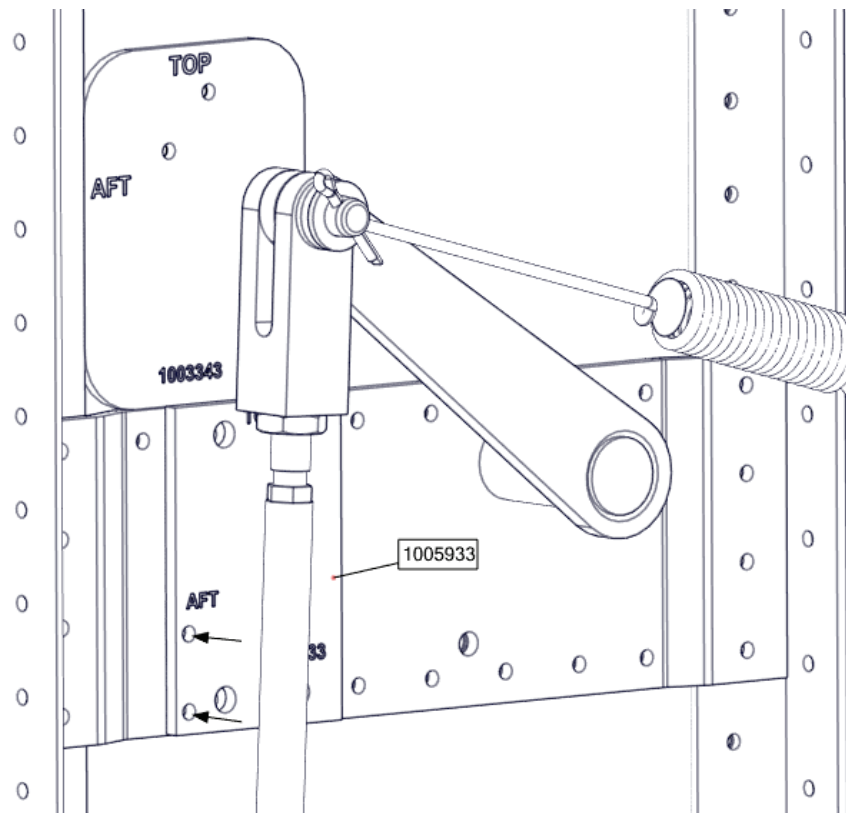
**NOTE:** Do not remove hydraulic actuator



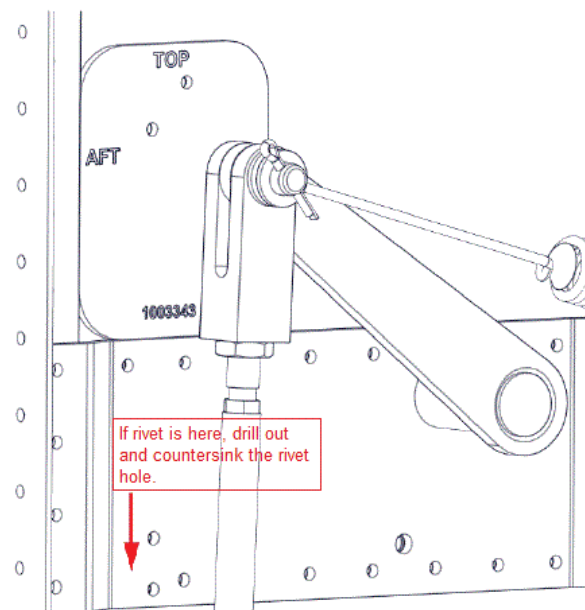
6. Place 1003343 proximity switch doubler where shown and match drill (2) #30 holes into the wheel well side panel



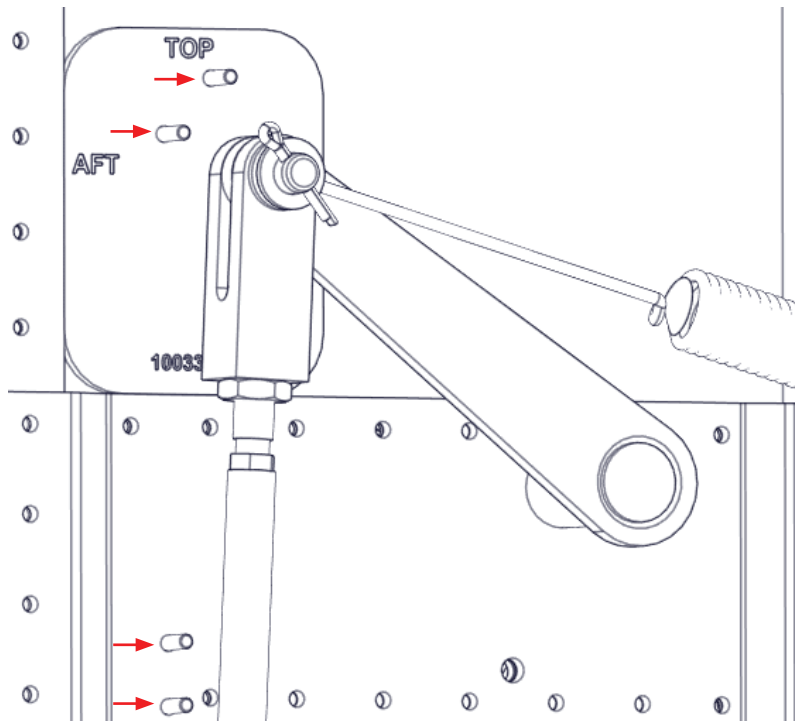
7. Deburr drilled holes and seal 1003343 proximity switch doubler to wheel well side panel using PR-1422-B-2 sealant or equivalent
8. Place 1005933 proximity switch location drill template where shown and match drill (2) #30 holes into the wheel well side panel



9. Remove 1005933 proximity switch location drill template and drill out the rivet shown. Countersink the rivet hole and reinstall rivet so it is flush on both sides



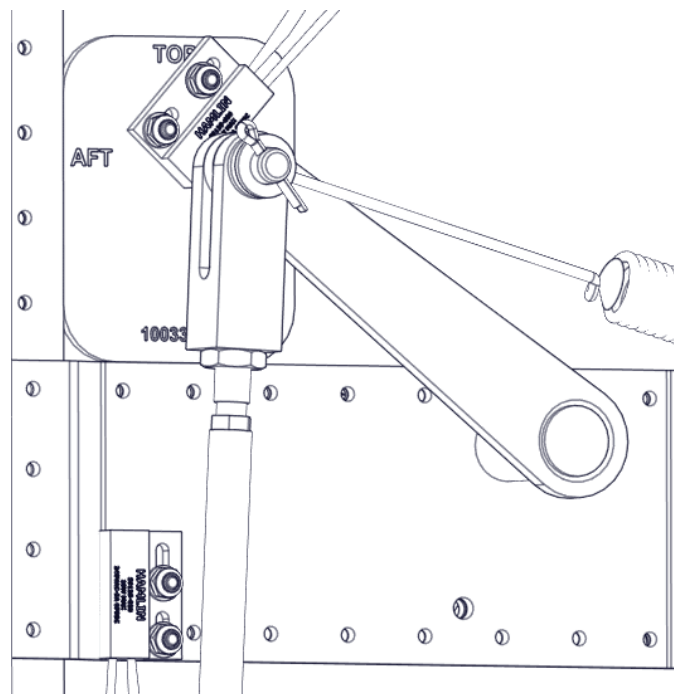
10. Countersink the backside of (4) drilled holes so MS24693-S6 screws will be flush when installed
11. Install MS24693-S6 screws wet as shown with PR-1422-B-2 sealant or equivalent



12. Position upper and lower proximity switches where shown and loosely attach using (4) NAS1149FN432P washers and (4) MS21044N04 nuts

**NOTE:** Verify the upper switch and lower switch were connected to the correct upper and lower wiring harnesses

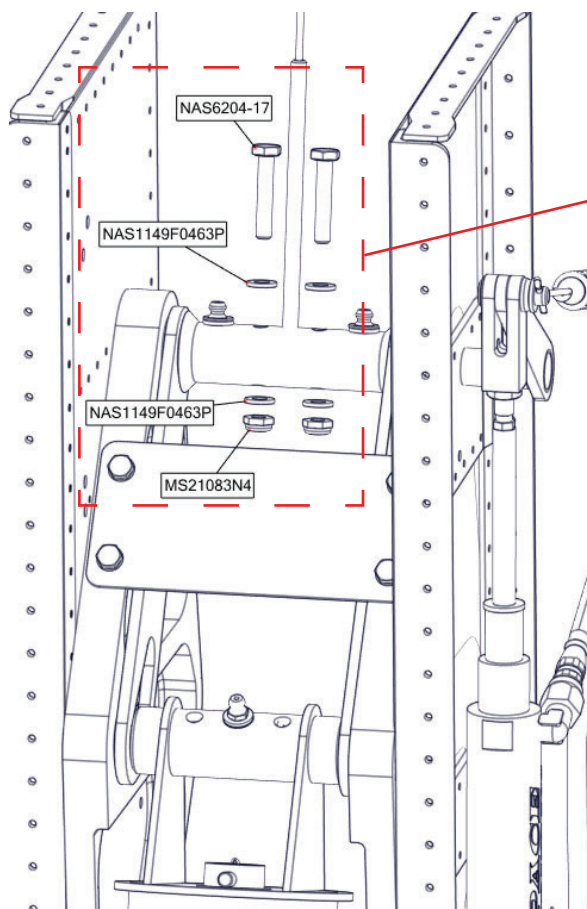
**NOTE:** Verify the wiring harnesses do not interfere with the actuation of the main gear. Zip tie wiring harnesses as needed



13. Remove top access cover shown



14. Remove (2) NAS6204-17 bolts, (4) NAS1149F0463P washers, and (2) MS21083N4 nuts and set aside for later use



Hardware shown on Main Gear Retraction Assembly may vary depending on the date the float was manufactured. Use hardware shown as reference only and use existing installed hardware during reassembly.



15. Remove MS24665-283 cotter pin, MS20392-4C29 clevis pin, NAS1149F0532P and (2) NAS1149F0563P washers. Discard MS20392-4C29 clevis pin and MS24665-283 cotter pin. Retain (3) washers for later use

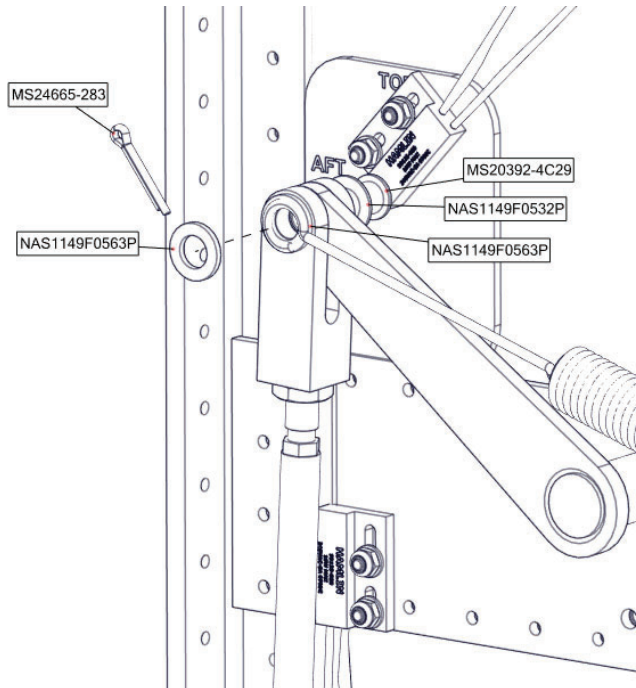
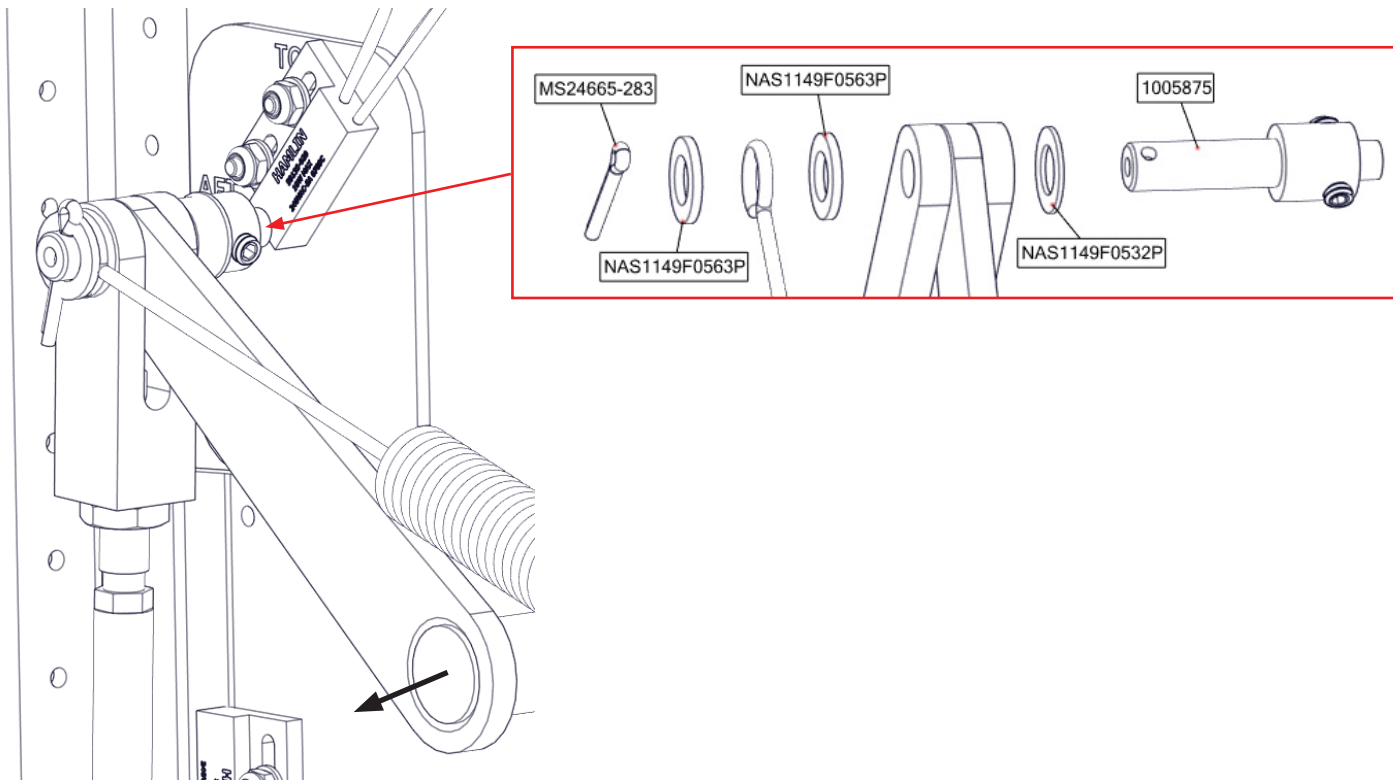


Image depicts previous service letter compliance. See front page Effectivity Note

16. Insert 1005875 magnet holder clevis pin assembly, (2) NAS1149F0532P and (1) NAS1149F0563P washers where shown

**NOTE:** Pull actuator arm in direction shown to allow more space for 1005875 magnet hold clevis pin assembly installation

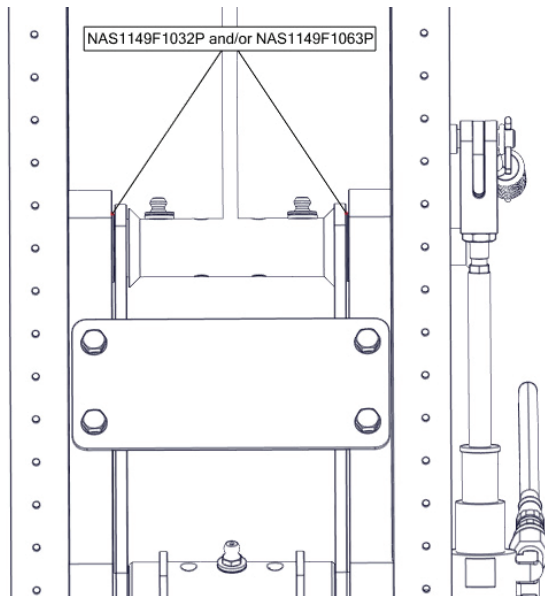




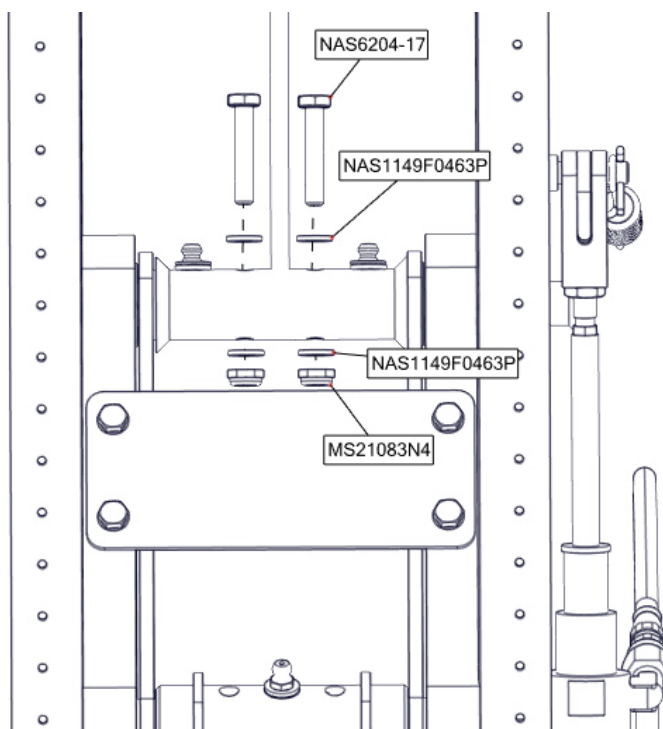
17. Reinsert the actuator arm, using NAS1149F1032P and/or NAS1149F1063P washers as needed where shown to reduce excess free play

**NOTE:** The main gear must still be able to rotate without interference caused from the washers installed above

**NOTE:** To determine if gear has excess free play, pull arm all the way to one side, and on the opposing side measure distance between the main gear track and the arm. Distance should be .020" - .030".

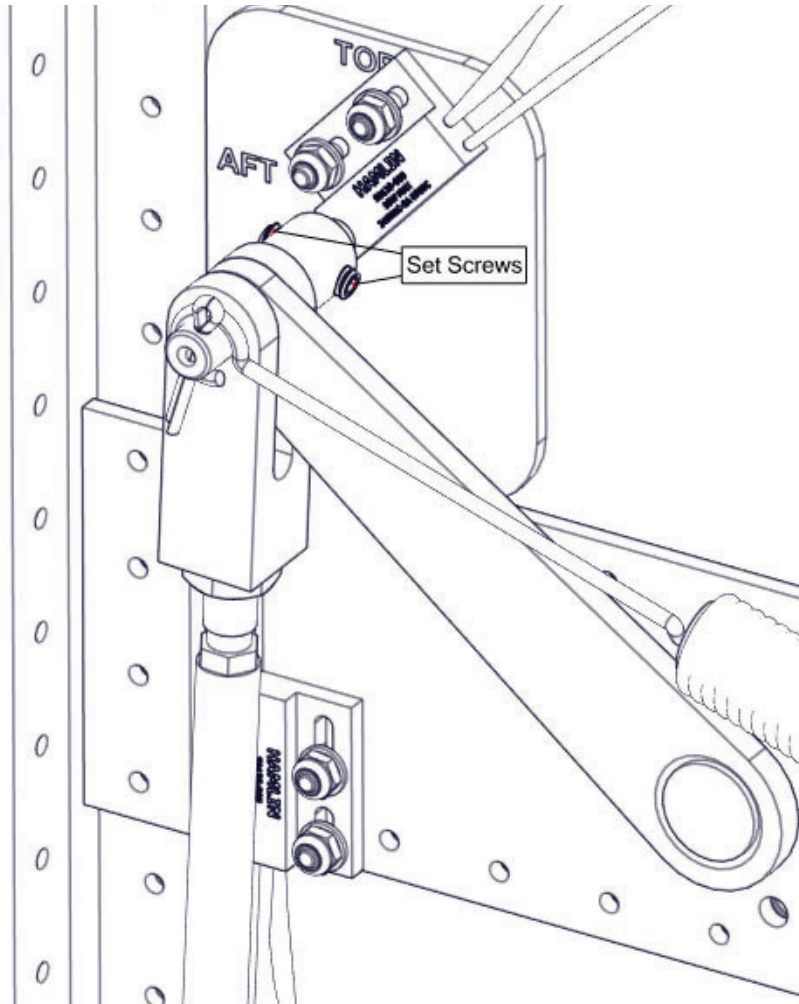


18. Reinstall (2) NAS6204-17 bolts, (4) NAS1149F0463P washers, and (2) MS21083N4 nuts where shown



19. Adjust the distance between the magnet and upper and lower proximity switches and secure using set screws and thread lock or epoxy

**NOTE:** Allow approximately 1/32" of clearance between magnet and switches when actuator arm is pushed toward the switches



20. Confirm upper and lower proximity switches are in the correct position by running the gear, then tighten (4) MS21044N04 nuts
21. Fully cycle the hydraulic gear system up and down to ensure correct operation

**NOTE:** Refer to Wipaire Float Model 2100/2350 Service Manual for further rigging and gear indication instructions

22. Reinstall top and outboard main gear side access covers
23. Remove aircraft jacks

## AIRCRAFT CLOSING AND SERVICE

1. Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 143.