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SERVICE LETTER NUMBER 174

3000A/3450A MAIN LANDING GEAR SHAFT REPLACEMENT

By: MAB	Aircraft Makes/Model(s): Cessna 180 (through K model), 185 through E model), A185E, A185F, 182 (P through T model), 206H, T206H, T/U206 (through G model) Maule M6-235, M7-235, M7-260, M7-420, MT7-235, MT7-260, MT7-420, MX7-235	Float Model(s): 3000A 3450A	Note(s): Mandatory Compliance Service Letter P/N 1009195
Approved: SDW			
Date: 10/22/2019			
Rev: B			

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 that have either 3000A model floats (serial numbers **30231A-30240A**) or 3450A model floats (serial numbers **34273A-34284A**) installed per either STC SA01412CH, SA01320CH, SA01156CH, SA01272CH, or SA01185CH.

COMPLIANCE:

Mandatory compliance

BACKGROUND:

Some 3000A and 3450A model main gear assemblies were produced with main landing gear shafts that were not heat treated to proper specifications and need to be replaced.

COMPLIANCE METHOD:

Replace existing main landing gear shafts with new parts provided.

APPROXIMATE SHOP HOURS:

Replacing the main landing gear shaft will take approximately 8 hours per float.

WARRANTY INFORMATION:

Warranty for labor and parts has expired.

TECHNICAL DATA:

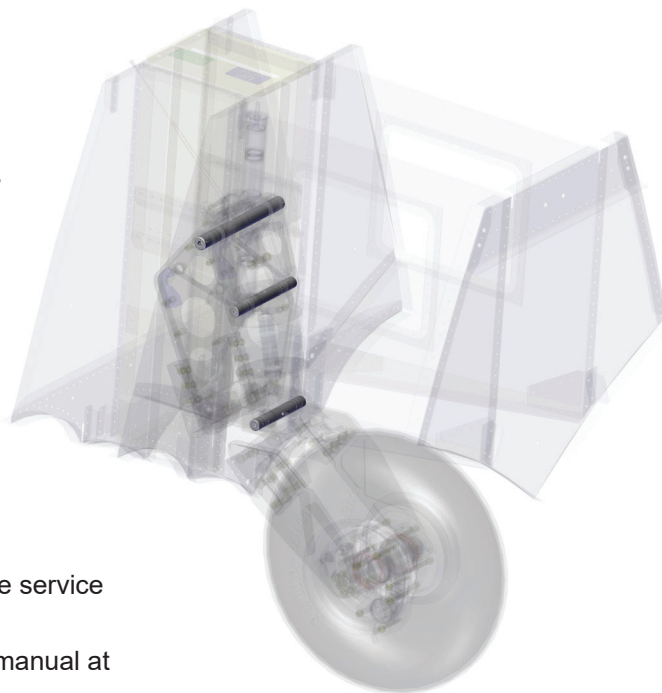
Copies of this service letter, associated service kit, float service manual, and float parts manual are available at www.wipaire.com.

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.

For basic float model maintenance information, see applicable Wipaire service manual at www.wipaire.com.

For basic float model parts information, see applicable Wipaire parts manual at www.wipaire.com.



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ITEMS PROVIDED IN SERVICE KIT 1009195-01 (PER KIT)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	1005733	ASSEMBLY, SHAFT, UPPER SHOCK, MAIN GEAR
2	2	1005750	ASSEMBLY, PIVOT PIN, SHOCK, LOWER, MAIN, 3000, 3450
3	2	1004287	ASSEMBLY, PIVOT PIN, SHOCK, MAIN, 3000, 3450
4	2	MS24665-304	COTTER PIN
5	2	93783A046	SEALING WASHER
6	4	93781A035	SEALING WASHER

TABLE 1

WORK INSTRUCTION

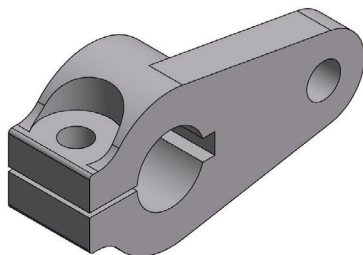
Set aside all removed hardware to use during reinstallation unless noted to discard in the instruction or replace hardware as needed

1. Per Wipaire maintenance manual, jack aircraft to relieve load on the main gear
2. Pull gear pump circuit breakers
3. Relieve hydraulic pressure by moving the emergency gear position selector to the up and down positions
4. Remove brake caliper back plate assemblies by removing the (4) MS bolts and associated washers on each caliper
5. Leaving the brake line still connected, relocate and secure brake line and calipers assembly to float as to not interfere with further disassembly of the main gear
6. Remove the left, right and top main gear access covers on the side skins and the top deck of the float
7. Disconnect the 30A05000-027 gear indicator
8. Remove the 1095K43 grease zerk from the 1005733 upper shock arm
9. Remove the MS21083N6 nut, (3) NAS1149F0663P washers, and the NAS6206-21 bolt¹ that connects the 59915K274 male rod end to the 1005280 gear actuator arm
10. Cut the MS24665-304 cotter pins and remove AN320-14 castle nuts and associated NAS1149D1016 washers and 93783A046 sealing washers from each end of the 1005733 upper pivot shaft and slide 1005733 upper pivot shaft out

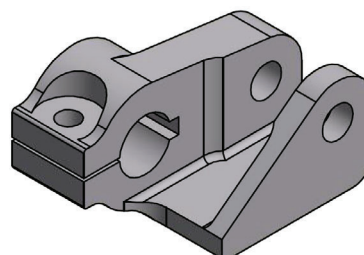
NOTE: Washer shims are located on the inside of each 1004278 upper shock arm. Note the location of the shims so that the gear proximity switches will not require readjustment after the gear is reassembled

11. Remove the MS21044N10 nuts and 1005734 lower drag link pivot bolt and associated NAS1149D1016J washers and 93781A035 sealing washers from each side of the wheel well

¹ 1005280 gear actuator arm could be revision A or B depending on when the floats were manufactured. This work instruction shows revision B. If revision A is installed, use following images for reference only as NAS6206-21 bolt could be an AN bolt and installed from the opposing direction



Revision A



Revision B

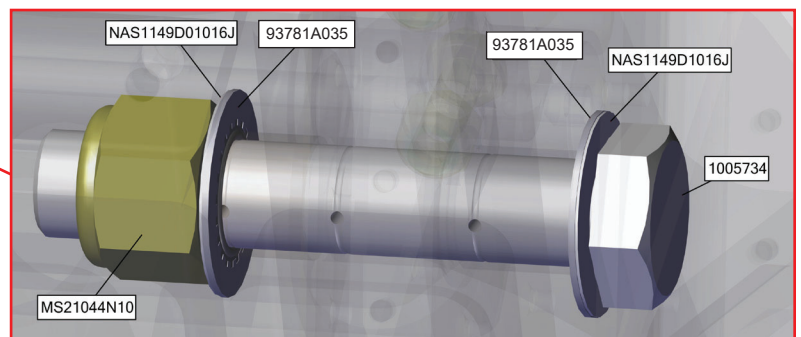
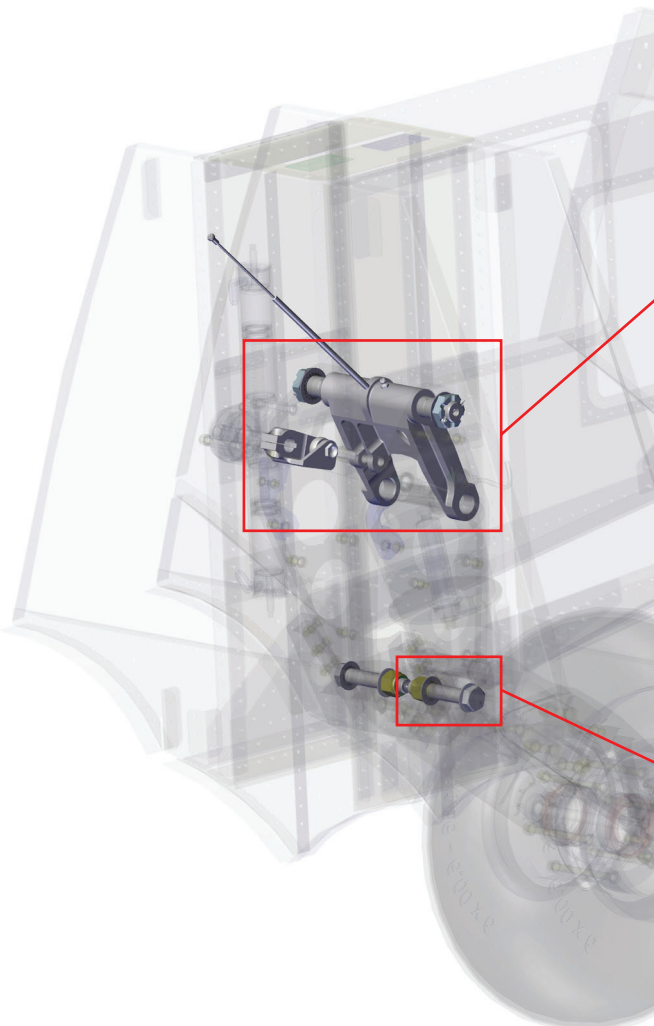
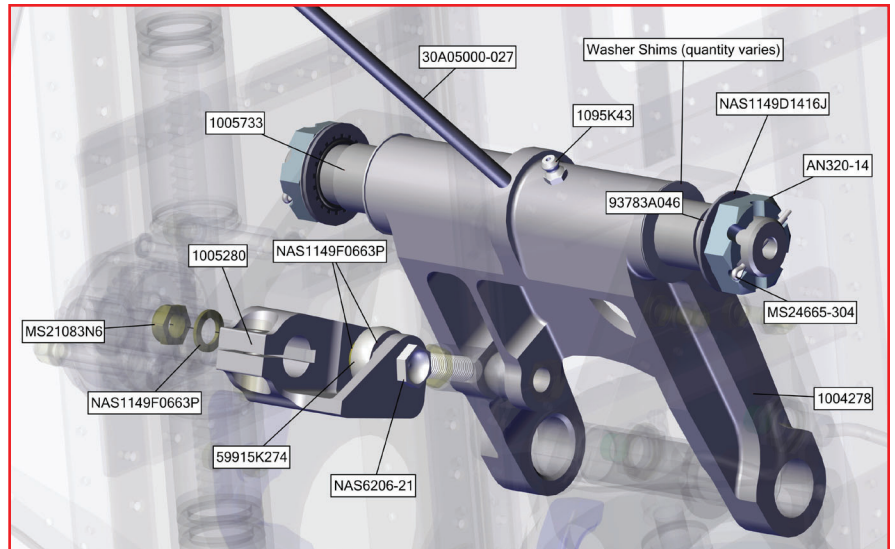


FIGURE 1: DRAG LINK, SHOCK STRUT, AND UPPER SHOCK ARM ASSEMBLY REMOVAL

12. Slide the drag link, shock strut, and upper shock arm assembly out of the main gear wheel well

NOTE: Assembly will need to be maneuvered in order to remove from the wheel well

13. Remove the 1095K42 grease zerk from the 1004287 main upper shock pivot pin assembly and slide out the 1004287 main upper shock pivot pin assembly
14. Remove the 1095K42 grease zerk from the 1005750 main lower shock pivot pin assembly and slide out the 1005750 main upper shock pivot pin assembly

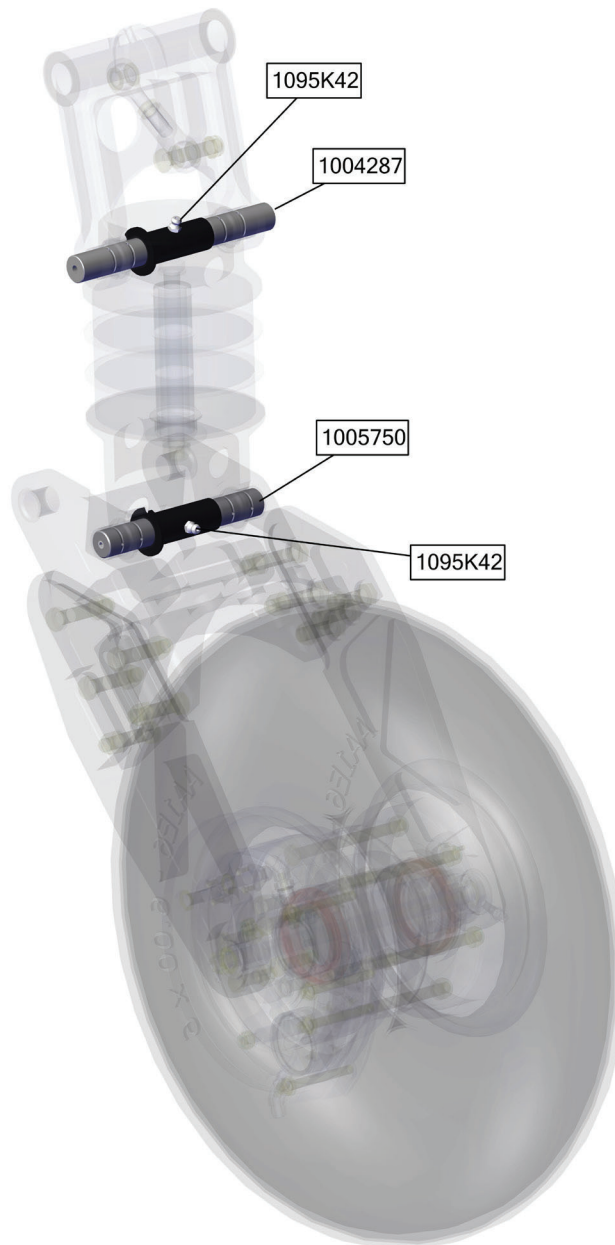


FIGURE 2: UPPER AND LOWER SHOCK PIVOT PIN ASSEMBLIES REMOVAL

15. Install new 1004287 main upper shock pivot pin assembly with 1004263 retainer and 1004286 shock strut assembly in the same position it was removed from
16. Install new 1005750 main lower shock pivot pin assembly with 1004263 retainer and 1004286 shock strut in the same position it was removed from
17. Align 1005750 main lower shock pivot pin assembly and install 10095K42 grease zerk into the new 1005750 main lower shock pivot pin assembly
18. Align 1004287 main upper shock pivot pin assembly and install 10095K42 grease zerk into the new 1004287 main upper shock pivot pin assembly

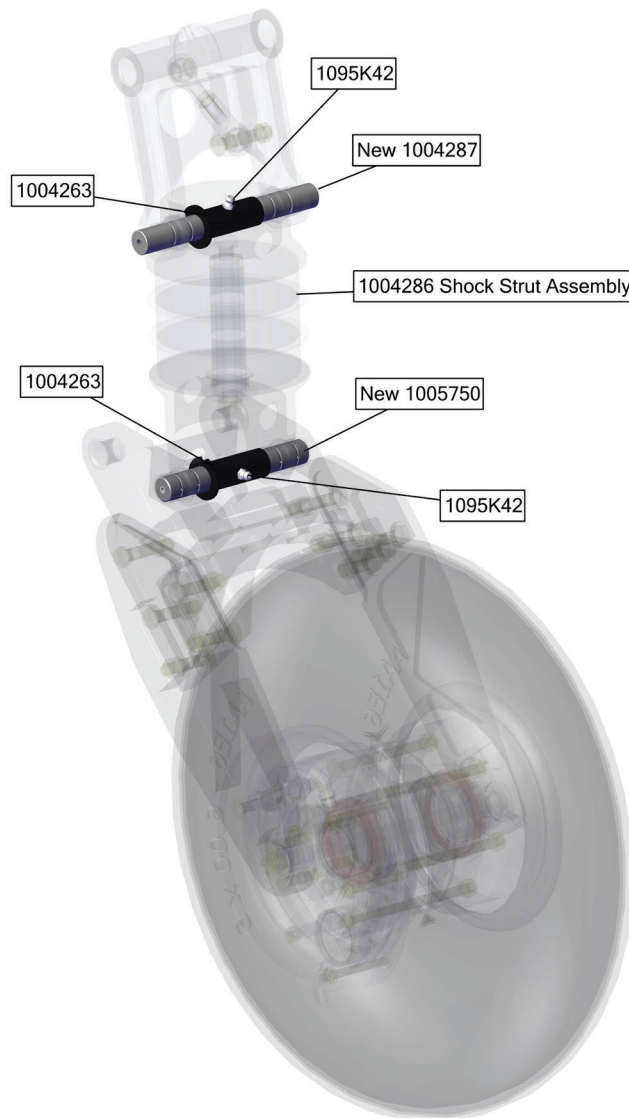


FIGURE 3: UPPER AND LOWER SHOCK PIVOT PIN ASSEMBLIES REASSEMBLY

19. Reposition the drag link, shock strut, and upper shock arm assembly into the wheel well and install the 1005733 upper pivot shaft with the washer shims in the same position they were removed from
20. Align 1005733 upper pivot shaft and install 1095K43 grease zerk into 1005733 upper pivot shaft
21. Install NAS1149D1016 washers, new 93783A046 sealing washers, AN320-14 castle nuts, and new MS24665-304 cotter pins to each end of the 1005733 upper pivot shaft
22. Reinstall the 1005734 lower drag link pivot bolts and associated NAS1149D1016J washers, new 9781A035 sealing washers, and MS21044N10 nuts
23. With main gear in down position only, adjust 59915K274 male rod in half turn increments until bolt can be installed freely

NOTE: There should be no resistance when inserting the NAS6206-21 bolt through the 59915K274 male rod end

24. Position previously removed NAS1149F0663P washers on each side of the 59915K274 male rod end and insert the NAS6206-21 bolt that connects the 59915K274 male rod end to the 1005280 gear actuator arm
25. Reinstall the MS21083N6 nut to the NAS6206-21 bolt
26. Reconnect the 30A05000-027 gear indicator

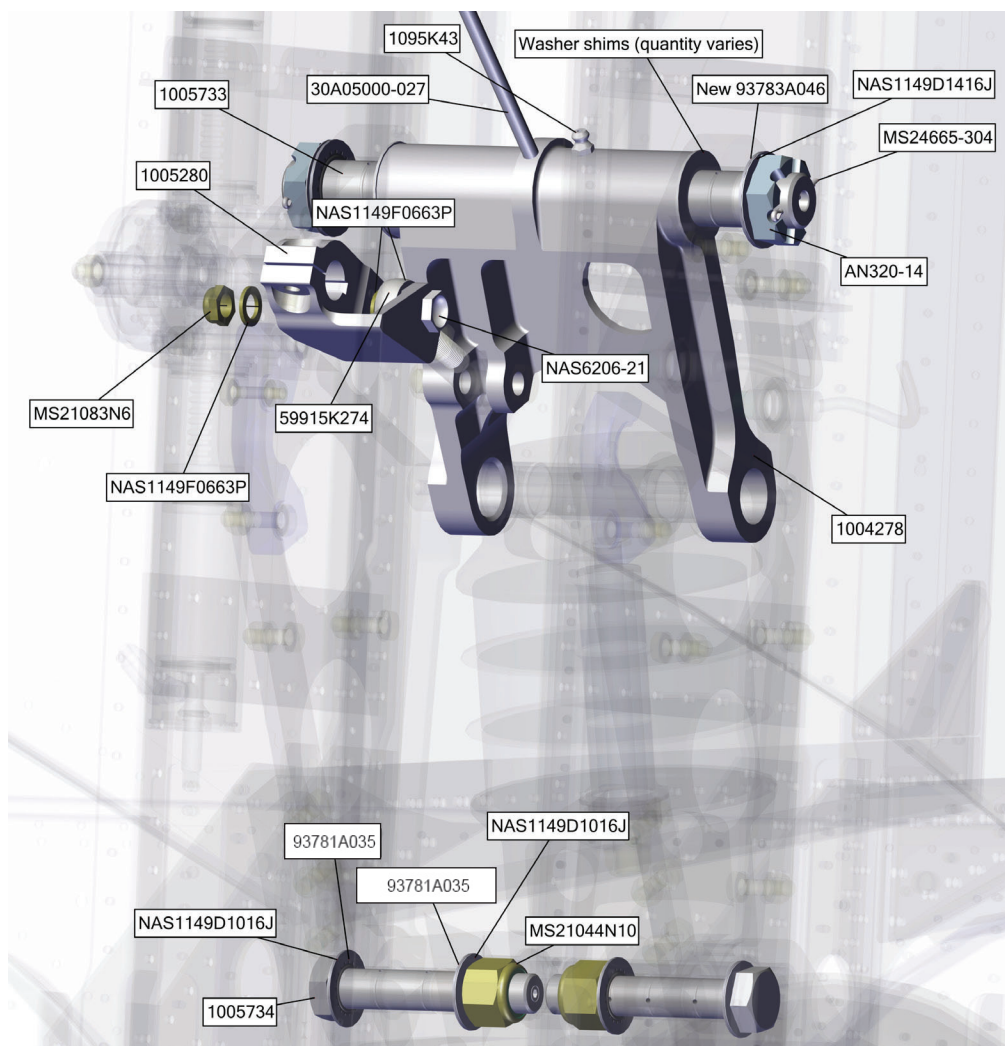


FIGURE 4: DRAG LINK, SHOCK STRUT, AND UPPER SHOCK ARM ASSEMBLY REINSTALLATION



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27. Grease all main gear zerks
28. Verify all pivots operate freely
29. Perform gear retraction test and verify main gear is rigged correctly
30. Remove aircraft jacks and return aircraft to service

NOTE: Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 174.