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SERVICE LETTER 231

Cessna 182 Hydraulic Pump Replacement on 3000A Floats

Aircraft Makes/Model(s):	Float Model(s):	Compliance: Optional	By: MAB
Textron Aviation 182 Series	3000A	Part Number: 1011882	Approved: SDW
		Date: 6/10/2021	Revision: A

LOG OF REVISIONS

Revision	Description	Date
A	Initial release	6/10/2021

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 model 182 series with Wipline 3000 Amphibian Floats installed per STC SA01156CH.

COMPLIANCE:

Optional compliance

BACKGROUND:

Textron Aviation (Cessna) 182 Hydraulic Pumps p/n 21A09000-239 and 21A09000-283 for the firewall mount and the aft fuselage mount have both been discontinued. This service letter provides the option to replace them with pumps p/n 1011849 for the 12 VDC or 1011850 for the 24 VDC firewall mount or 1011878 for the 12 VDC or 1011879 for the 24 VDC aft fuselage mount.

COMPLIANCE METHOD:

Install provided parts as shown in the Work Instruction section of this service letter.

APPROXIMATE SHOP HOURS:

The work instruction for this service letter will take approximately 8 labor hours.

WEIGHT AND BALANCE CHANGE:

Firewall +4.2 LBS, F.S. 7.80

Aft Fuselage +4.0 LBS, F.S. 106.80

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 at www.wipaire.com.

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Firewall Mount Only Kits

ITEMS PROVIDED IN SERVICE KIT 1011882-01 (12 VDC HYDRAULIC PUMP ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011849	ASSEMBLY, HYDRAULIC POWER PACK, 12V
2	1	1011851	SPACER, INSTALLATION, HYDRAULIC POWER PACK
3	2	AN4-6A	BOLT, 1/4-28, 0.313 GRIP, UNDRILLED, STEEL
4	4	NAS1149F0432P	WASHER, 0.265 ID, 0.032 THK, STEEL
5	2	MS21044N4	NUT, REGULAR HEIGHT, 1/4-28 UNF

ITEMS PROVIDED IN SERVICE KIT 1011882-02 (24 VDC HYDRAULIC PUMP ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011850	ASSEMBLY, HYDRAULIC POWER PACK, 24V
2	1	1011851	SPACER, INSTALLATION, HYDRAULIC POWER PACK
3	2	AN4-6A	BOLT, 1/4-28, 0.313 GRIP, UNDRILLED, STEEL
4	4	NAS1149F0432P	WASHER, 0.265 ID, 0.032 THK, STEEL
5	2	MS21044N4	NUT, REGULAR HEIGHT, 1/4-28 UNF

Aft Fuselage Mount Only Kits

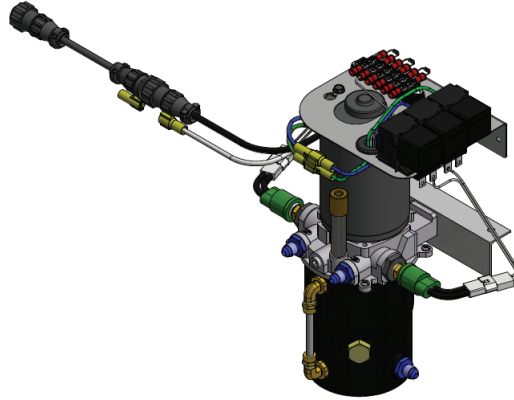
ITEMS PROVIDED IN SERVICE KIT 1011882-03 (12 VDC HYDRAULIC PUMP ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011878	ASSEMBLY, HYDRAULIC POWER PACK, 12V
2	2	AN4-5A	BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL
3	2	NAS1149F0432P	WASHER, 0.265 ID, 0.032 THK, STEEL
4	2	AN3-4A	BOLT, 10-32, 0.125 GRIP, UNDRILLED, STEEL
5	2	NAS1149F0332P	WASHER, 0.203 ID, 0.032 THK, STEEL

ITEMS PROVIDED IN SERVICE KIT 1011882-04 (24 VDC HYDRAULIC PUMP ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011879	ASSEMBLY, HYDRAULIC POWER PACK, 24V
2	2	AN4-5A	BOLT, 1/4-28, 0.1875 GRIP, UNDRILLED, STEEL
3	2	NAS1149F0432P	WASHER, 0.265 ID, 0.032 THK, STEEL
4	2	AN3-4A	BOLT, 10-32, 0.125 GRIP, UNDRILLED, STEEL
5	2	NAS1149F0332P	WASHER, 0.203 ID, 0.032 THK, STEEL

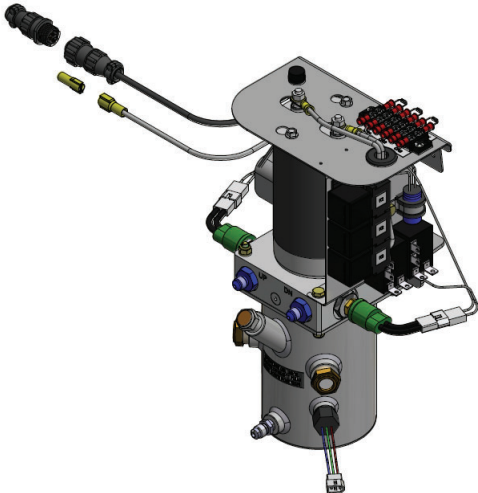
DISCONTINUED HYDRAULIC PUMPS



21A09000-239 - 12VDC

21A09000-283 - 24VDC

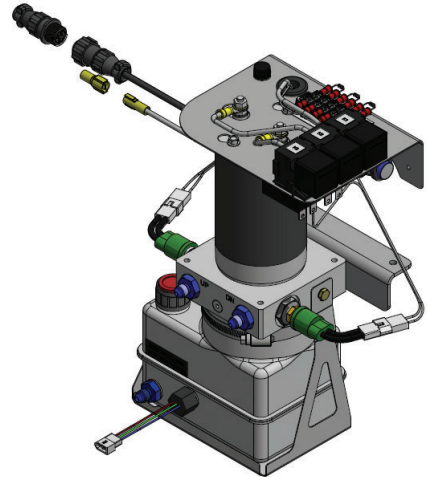
NEW FIREWALL MOUNT HYDRAULIC PUMPS



1011849 - 12VDC

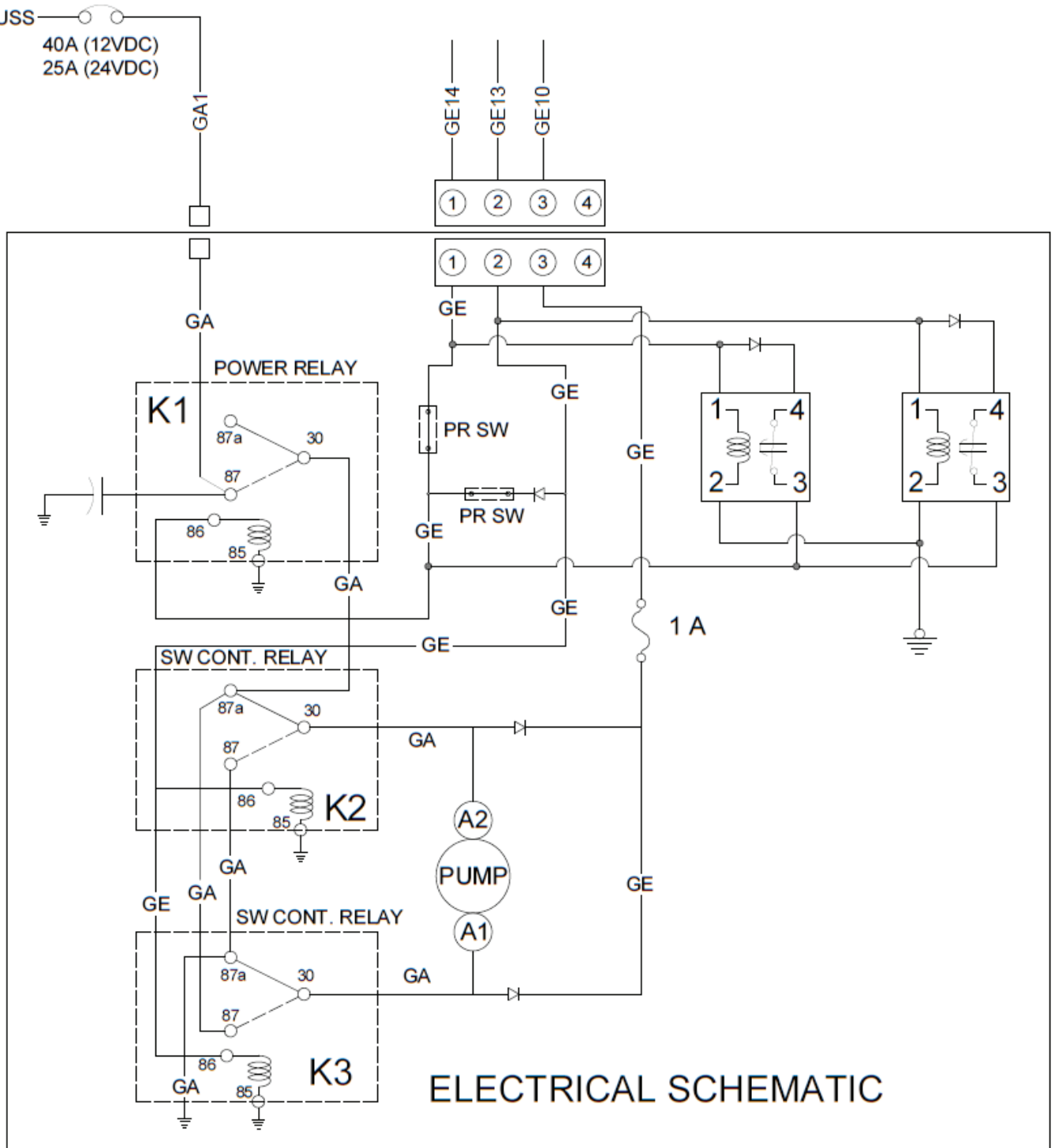
1011850 - 24VDC

NEW AFT FUSELAGE MOUNT HYDRAULIC PUMPS



1011878 - 12VDC

1011879 - 24VDC



Work Instructions

Firewall Mounted Hydraulic Pump Installation:

1. Disconnect aircraft battery.
2. Disconnect single pin Molex connector for GA1 wire.
3. Disconnect 4 pin CPC connector from hydraulic power pack assembly.
4. If aircraft has a hydraulic low level warning system, disconnect wire harness from sensor in reservoir.
5. Drain hydraulic fluid from hydraulic power pack reservoir.
6. Disconnect and cap 21A09000-203 hydraulic line from reservoir fitting.
7. Disconnect and cap 21A09000-202 hydraulic line from pump up and dn ports.
8. Unbolt and remove hydraulic power pack from firewall.
9. Install new hydraulic power pack onto existing angle 21A09348-020 with spacer 1011851 between pump and angle. Use supplied hardware to mount pump to angle. Use existing hardware to mount upper plate through firewall.
10. Re-install hydraulic lines 21A09000-202 onto pump manifold up and dn ports.
11. Re-install hydraulic line 21A09000-203 to pump reservoir fitting.
12. If aircraft has a hydraulic low level warning system, reconnect wire harness to sensor in new reservoir.
13. Re-install 4 pin CPC connector. See electrical schematic.
14. Cut single pin Molex connector from GA1 wire. Install 73F-250-32NL connector onto GA1 wire. Connect GA1 wire to power wire on hydraulic pump assembly. Run ground wire from hydraulic pump to ground on aircraft. See electrical schematic.
15. Reconnect aircraft battery, service pump reservoir with MIL-H-5606 hydraulic fluid and perform a retraction/extension test to make sure system is functioning correctly. Watch the system for leaks and add MIL-H-5606 hydraulic fluid as needed.

Aft Fuselage Mounted Hydraulic Pump Installation:

1. Disconnect aircraft battery.
2. Disconnect single pin Molex connector for GA1 wire.
3. Disconnect 4 pin CPC connector from hydraulic power pack assembly.
4. If aircraft has a hydraulic low level warning system, disconnect wire harness from sensor in reservoir.
5. Drain hydraulic fluid from hydraulic power pack reservoir.
6. Disconnect and cap 34A09000-257 hydraulic line from reservoir fitting.
7. Disconnect and cap 34A09000-256 hydraulic lines from pump up and dn ports.
8. Unbolt and remove hydraulic power pack from hydraulic pump mount assembly.
9. Install new hydraulic power pack onto hydraulic pump mount assembly using supplied hardware.
10. Re-install hydraulic lines 34A09000-256 onto pump manifold up and dn ports.
11. Re-install hydraulic line 34A09000-257 to pump reservoir fitting.
12. If aircraft has a hydraulic low level warning system, reconnect wire harness to sensor in new reservoir.
13. Re-install 4 pin CPC connector. See electrical schematic.
14. Cut single pin Molex connector from GA1 wire. Install 73F-250-32NL connector onto GA1 wire. Connect GA1 wire to power wire on hydraulic pump assembly. Run ground wire from hydraulic pump to ground on aircraft. See electrical schematic.

15. Reconnect aircraft battery, service pump reservoir with MIL-H-5606 hydraulic fluid and perform a retraction/extension test to make sure system is functioning correctly. Watch the system for leaks and add MIL-H-5606 hydraulic fluid as needed.

Aircraft Closing & Return to Service

1. Upon completion of inspection, enter information in Aircraft Logbook for completion of Wipaire Service Letter 231.