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SERVICE LETTER 225

Piper PA-12 & PA-18 Hydraulic Pump Replacement on 2100A Floats

Aircraft Makes/Model(s):	Float Model(s):	Compliance: Optional	By: MAB
Piper PA-12 & PA-18	2100A	Part Number: 1011838	Approved: SDW
		Date: 5/7/2021	Revision: A

LOG OF REVISIONS

Revision	Description	Date
A	Initial release	5/7/2021

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

EFFECTIVITY:

This service letter applies to Piper models PA-12 Super Cruiser and PA-18 Cub with Wipline 2100 Amphibian Floats installed per STC SA00901CH or STC SA00997CH.

COMPLIANCE:

Optional compliance

BACKGROUND:

PA-12 Hydraulic Pump Assembly p/n 21A09000-233 and PA-18 Hydraulic Pump Assembly 21A09000-210 have both been discontinued. This service letter provides the option to replace them with pumps p/n 1011830 for the PA-12 or 1011805 for the PA-18 with Standard Baggage or 1011830 for the PA-18 with Extended Baggage.

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:

PA-12: (+) 4 LBS, F.S. 33.62

PA-18 (Standard Baggage): + 4 LBS, F.S. 93.62

PA-18 (Extended Baggage): - 18.80 lbs, F.S. 93.62 (old location), + 22.80 LBS, F.S. 33.62 (new location)

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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ITEMS PROVIDED IN SERVICE KIT 1011838-01 (PA-12 ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011830	ASSEMBLY, HYDRAULIC POWER PACK

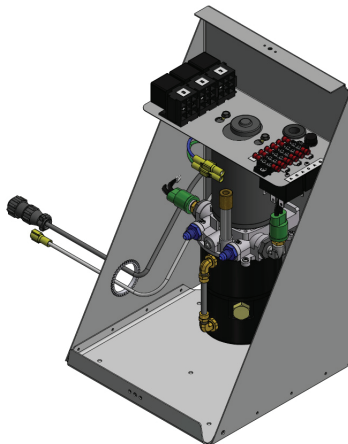
ITEMS PROVIDED IN SERVICE KIT 1011838-02 (PA-18 STANDARD BAGGAGE ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011805	ASSEMBLY, HYDRAULIC POWER PACK
2	6	1011799	SPACER
3	6	AN3-17A	BOLT, 10-32, 1.5 GRIP, UNDRILLED
4	3	AN742D10	CLAMP, PLAIN, ALUMINUM, TO FIT 5/8" DIA
5	3	AN742D12	CLAMP, PLAIN, ALUMINUM, TO FIT 3/4" DIA
6	6	MS21044N3	NUT, REGULAR HEIGHT, 10-32 UNF
7	3	NAS1149F0332P	WASHER, .203 ID, .032 THK, STEEL
8	9	NAS1149F0363P	WASHER, .203 ID, .063 THK, STEEL

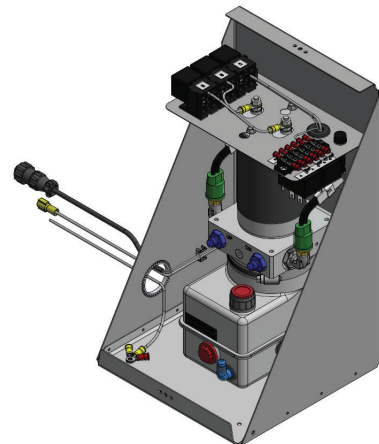
ITEMS PROVIDED IN SERVICE KIT 1011838-03 (PA-18 EXTENDED BAGGAGE ONLY)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1011830	ASSEMBLY, HYDRAULIC POWER PACK
2	3	190772-4	HYDRAULIC HOSE FITTING, 90 DEGREE

PA-12 ONLY

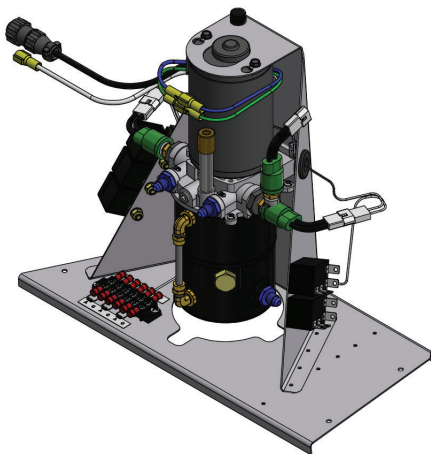


PA-12 DISCONTINUED
HYDRAULIC PUMP 21A09000-233

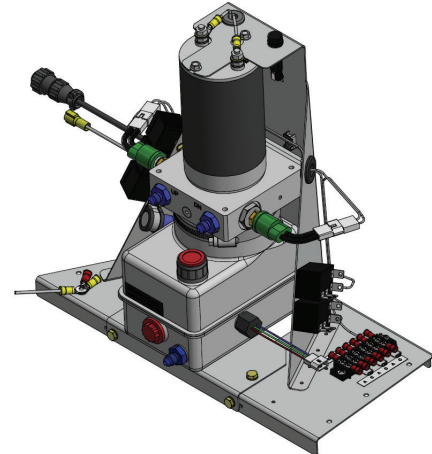


PA-12 NEW
HYDRAULIC PUMP 1011830

PA-18 STANDARD BAGGAGE ONLY

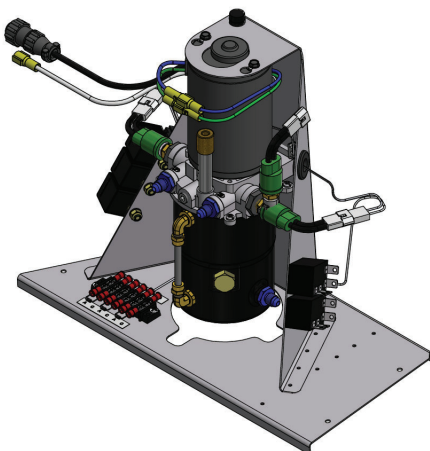


PA-18 DISCONTINUED
HYDRAULIC PUMP 21A09000-210

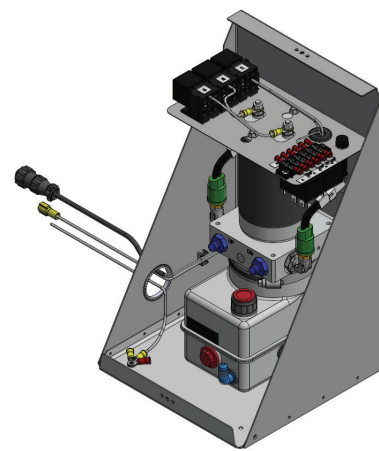


PA-18 NEW
HYDRAULIC PUMP 1011805

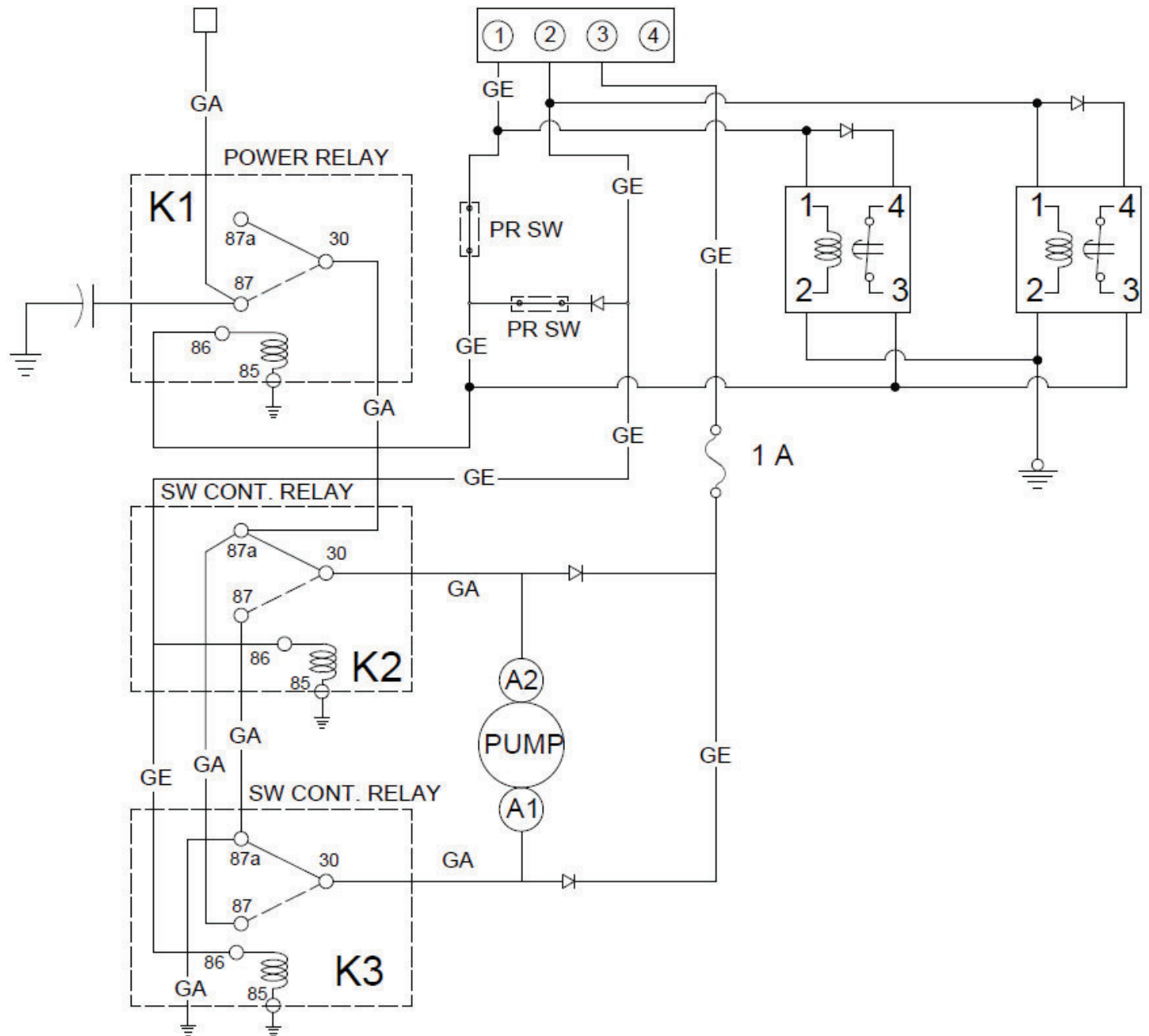
PA-18 EXTENDED BAGGAGE ONLY



PA-18 DISCONTINUED
HYDRAULIC PUMP 21A09000-210



PA-18 NEW
HYDRAULIC PUMP 1011830



Electrical Schematic All Models

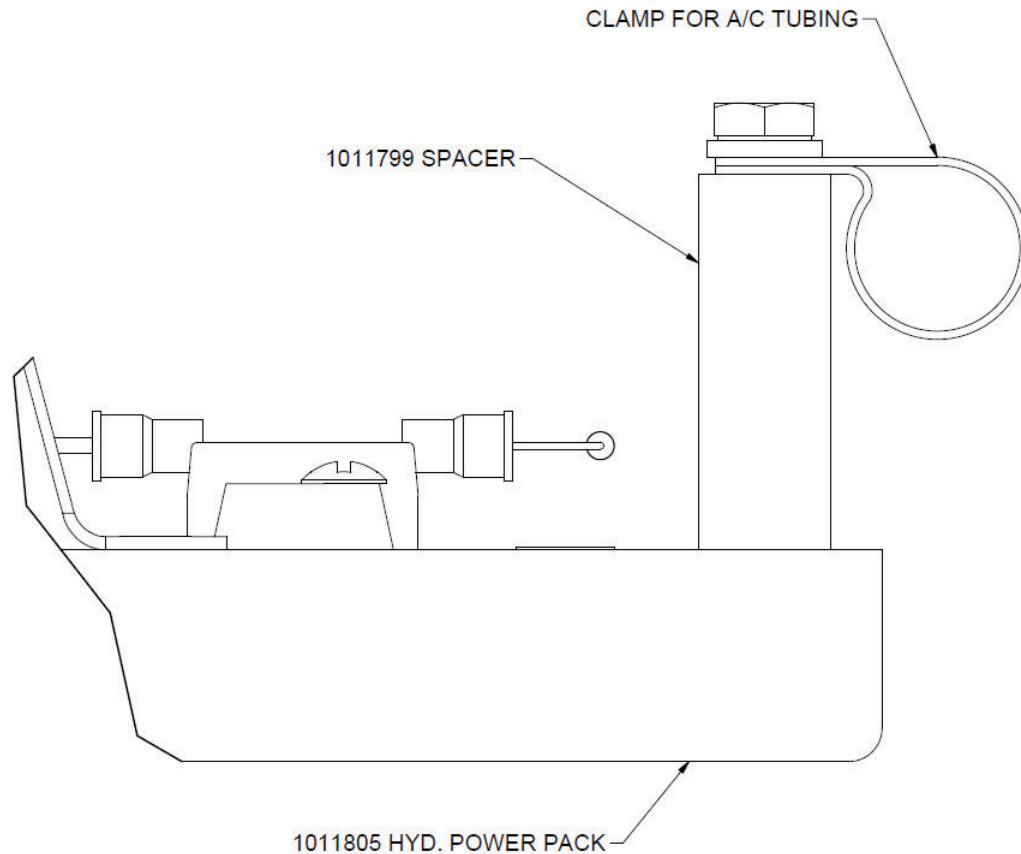
Work Instructions

PA-12 Only

1. Disconnect aircraft battery.
2. Disconnect single pin Molex connector for GA1 wire.
3. Disconnect 4 pin CPC connector from hydraulic power pack assembly 21A09000-233.
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 21A09000-208 hydraulic line from reservoir to emergency hand pump.
7. Disconnect and cap 21A09000-204 hydraulic lines from pump up and dn ports to cross fitting.
8. Unbolt and remove hydraulic power pack 21A09000-233 from baggage floor.
9. Install new hydraulic power pack 1011830 onto baggage floor using existing hardware.
10. Re-install hydraulic lines 21A09000-204 to pump manifold up and dn ports
11. Re-install hydraulic line 21A09000-208 to hydraulic power pack 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 power pack. 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.

PA-18 Standard Baggage Only

1. Disconnect aircraft battery.
2. Disconnect single pin Molex connector for GA1 wire.
3. Disconnect 4 pin CPC connector from hydraulic power pack assembly 21A09000-210.
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 21A09000-208 hydraulic line from reservoir to emergency hand pump.
7. Disconnect and cap 21A09000-204 hydraulic lines from pump up and dn ports to cross fitting.
8. Unbolt and remove hydraulic power pack 21A09000-210 and clamps on aircraft tubing.
9. Install new hydraulic power pack in same location as 21A09000-210 power pack. See image for mounting detail.



PA-18 (STANDARD BAGGAGE) HYDRAULIC PUMP MOUNTING

10. Re-install hydraulic lines 21A09000-204 to pump manifold up and dn ports.
11. Re-install hydraulic line 21A09000-208 to hydraulic power pack 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 power pack. 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.

PA-18 Extended Baggage Only

1. Disconnect aircraft battery.
2. Disconnect single pin Molex connector for GA1 wire.
3. Disconnect 4 pin CPC connector from hydraulic power pack assembly 21A09000-210.
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 21A09000-208 hydraulic line from reservoir to emergency hand pump.
7. Disconnect and cap 21A09000-204 hydraulic lines from pump up and dn ports to cross fitting.
8. Unbolt and remove hydraulic power pack 21A09000-210 and clamps on aircraft tubing.
9. Do to the overall dimensions of the new pump, it will not fit in same location as 21A09000-210 hydraulic pump with the extended baggage. Locate 1011830 in baggage compartment at station 34.0. Do to the wide verity of floor thickness, use appropriate sized AN3 bolts to secure hydraulic power pack to baggage floor.
10. Re-route hydraulic lines 21A09000-204 and 21A09000-208 to new hydraulic power pack location. Cut hydraulic lines to fit and install 190772-4 fitting to all three hydraulic lines.
11. Install hydraulic lines 21A09000-204 to pump manifold up and dn ports.
12. Install hydraulic line 21A09000-208 to pump reservoir fitting.
13. If aircraft has a hydraulic low level warning system, re-route and connect wire harness to sensor in new reservoir.
14. Re-route and install 4 pin CPC connector. See electrical schematic.
15. Cut single pin Molex connector from GA1 wire. Re-route wire to new hydraulic power pack and install 73F-250-32NL connector onto GA1 wire. Connect GA1 wire to power wire on hydraulic power pack. See electrical schematic.
16. 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 225.