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Power Steering Pump Change

Scope

Worldwide

Models Affected

All Mercury outboards that use power steering.

Situation

Power steering pumps are changing to a new design.


a - Gen B power steering pump

b - Gen C power steering pump

NOTE: Power harness not included.

Kits containing the Gen B pump will become NLA, once all Gen B pump inventory has been consumed. The part description will contain the new Gen C kit part number.

Service Bulletin Contents

- For new installations, refer to **New Part Numbers**.
- For Gen B pump replacement, refer to **Power Steering Pump Back Fit**.

New Part Numbers

Power Steering Pump Kits

One Gen C pump kit replaces three Gen B kits.

Old Kit Part Num	Description	New Kit Part Num
8M0131261	Power steering pump kit with 4 ft leads	8M0148159 (does not include a power harness, refer to Additional Parts Required - Pump Power Harness)
8M0131262	Power steering pump kit with 12 ft leads	
8M0131263	Power steering pump kit with 24 ft leads	

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Power Steering Helm Kits

The new helm kits do not include the power steering pump power or signal harness. These two items need to be purchased separately.

NOTE: Original signal harness lengths (power harness lengths, for tiller kits) are provided for reference only.

Single-Engine

Original Kit			New Kit Part Num
Part Num	Description	Signal Harness Length	
892380K05	40 cc Standard Helm Kit 4 ft pump leads	6.1 m (20 ft)	8M0151555
892380K11	40 cc Standard Helm Kit 12 ft pump leads	6.1 m (20 ft)	
892380K12	40 cc Standard Helm Kit 24 ft pump leads	6.1 m (20 ft)	
8M0138409	40 cc Tilt Helm Kit 4 ft pump leads	6.1 m (20 ft)	8M0151557
8M0138410	40 cc Tilt Helm Kit 12 ft pump leads	6.1 m (20 ft)	
8M0138411	40 cc Tilt Helm Kit 24 ft pump leads	6.1 m (20 ft)	

Dual-Engine

Original Kit			New Kit Part Num
Part Num	Description	Signal Harness Length	
8M0134635	40 cc Standard Helm Kit 4 ft pump leads	6.1 m (20 ft)	8M0151554
8M0134633	40 cc Standard Helm Kit 12 ft pump leads	6.1 m (20 ft)	
8M0134634	40 cc Standard Helm Kit 24 ft pump leads	6.1 m (20 ft)	
8M0134651	40 cc Tilt Helm Kit 4 ft pump leads	6.1 m (20 ft)	8M0151556
8M0134649	40 cc Tilt Helm Kit 12 ft pump leads	6.1 m (20 ft)	
8M0134650	40 cc Tilt Helm Kit 24 ft pump leads	6.1 m (20 ft)	
8M0128967	50 cc Standard Helm Kit 4 ft pump leads	9.1 m (30 ft)	8M0151558
8M0128968	50 cc Standard Helm Kit 12 ft pump leads	9.1 m (30 ft)	
8M0128969	50 cc Standard Helm Kit 24 ft pump leads	9.1 m (30 ft)	
8M0135450	50 cc Tilt Helm Kit 4 ft pump leads	6.1 m (20 ft)	8M0151559
8M0135451	50 cc Tilt Helm Kit 12 ft pump leads	6.1 m (20 ft)	
8M0135452	50 cc Tilt Helm Kit 24 ft pump leads	6.1 m (20 ft)	

Triple-Engine

Original Kit			New Kit Part Num
Part Num	Description	Signal Harness Length	
8M0134644	50 cc Standard Helm Kit 4 ft pump leads	9.1 m (30 ft)	8M0151565
8M0134642	50 cc Standard Helm Kit 12 ft pump leads	9.1 m (30 ft)	
8M0134643	50 cc Standard Helm Kit 24 ft pump leads	9.1 m (30 ft)	
8M0134638	50 cc Tilt Helm Kit 4 ft pump leads	9.1 m (30 ft)	8M0151566
8M0134636	50 cc Tilt Helm Kit 12 ft pump leads	9.1 m (30 ft)	
8M0134637	50 cc Tilt Helm Kit 24 ft pump leads	9.1 m (30 ft)	

Quad-Engine

Original Kit			New Kit Part Num
Part Num	Description	Signal Harness Length	
8M0134641	50 cc Tilt Helm Kit 4 ft pump leads	9.1 m (30 ft)	8M0151563
8M0134639	50 cc Tilt Helm Kit 12 ft pump leads	9.1 m (30 ft)	
8M0134640	50 cc Tilt Helm Kit 24 ft pump leads	9.1 m (30 ft)	

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Tiller Handle Kits with Power Steering

Original Kit			New Kit Part Num
Part Num	Description	Power Harness Length	
8M0134609	DTS Tiller L4 Verado	1.2 m (4 ft)	8M0151560
8M0133492	DTS Tiller V6/V8 CMS 4-stroke	1.2 m (4 ft)	
8M0134607	Mechanical Tiller	1.2 m (4 ft)	8M0151561
8M0133491	Mechanical Tiller V6/V8 4-stroke	1.2 m (4 ft)	
8M0134604	Mechanical Tiller 150 L4 4-stroke	1.2 m (4 ft)	8M0151564

Additional Parts Required - Pump Power Harness

Each new kit requires one new pump power harness.

Part Num	Description	Length
8M0150103	4 ft power harness with fuse	1.2 m (4 ft)
8M0150104	12 ft power harness with fuse	3.7 m (12 ft)
8M0150105	24 ft power harness with fuse	7.3 m (24 ft)



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Pump power harness, fuse not shown

Part Num	Description	Length
8M0150142	4 ft power harness (without fuse)	1.2 m (4 ft)
8M0150143	12 ft power harness (without fuse)	3.7 m (12 ft)
8M0150144	24 ft power harness (without fuse)	7.3 m (24 ft)

80-Amp Cube Fuse

The fuse and fuse holder are not permanently installed in the pump harness. The fuse that is included with the new harnesses is an 80-amp cube fuse assembly. The fuse assembly is installed between the positive cable and the battery or automatic power switch (APS). The service replacement fuse part number is 8M0129535.



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Circuit Breakers

A circuit breaker can be used in place of the 80-amp cube fuse. The following circuit breakers from BlueSea® have been tested and approved for use with the Gen C power steering pump:

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Series	MFG Part Number	Rating	Notes
187 Series panel mount	7043	90-amp	90-amp rating is due to temperature derate for breakers. 1.2 m (4 ft) power lead from pump. 4 AWG OEM wiring from hot studs to ground and circuit protection.
187 Series surface mount	7143		
C Series - toggle	7250	100-amp	Standard pump only. DO NOT use with Racing pump 1.2 m (4 ft) power lead from pump. 4 AWG OEM wiring from hot studs to ground and circuit protection.
C Series - flat rocker	7549		

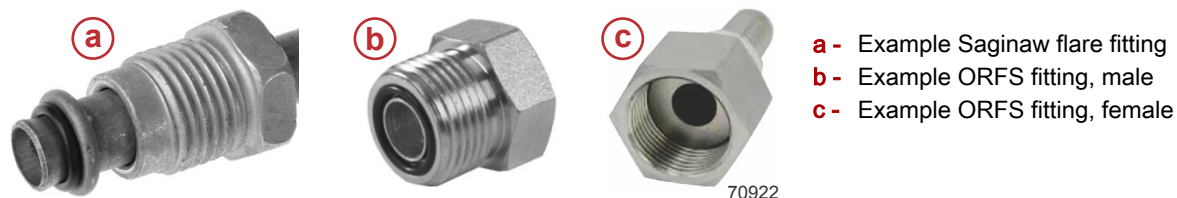
Additional Parts Required - Pump Signal Harness

1. Single-engine configurations require one new signal harness.
2. Dual-engine configurations require two new signal harnesses.
3. Triple-engine configurations require three new signal harnesses.
4. Quad-engine configurations require four new signal harnesses.
5. Tiller handle configurations do not require a new signal harness.

Part Num	Description	Length
8M0138676	10 ft signal harness	3.0 m (10 ft)
8M0138677	20 ft signal harness	6.1 m (20 ft)
8M0138678	30 ft signal harness	9.1 m (30 ft)

New Hose Kits

The pressure hose connection to the pump has changed from a Saginaw flare fitting to a O-ring face seal (ORFS) fitting.



Note that the power steering dampener hose is not needed.

Each power steering pump to helm hose kit includes one pressure hose and one return hose. New kit part numbers are:

Part Num	Description	Hose Length
8M0150604	Pump to Bulkhead/Helm Kit 2 ft	0.6 m (2 ft)
8M0150605	Pump to Bulkhead/Helm Kit 3 ft	0.9 m (3 ft)
8M0150606	Pump to Bulkhead/Helm Kit 4 ft	1.2 m (4 ft)
8M0150607	Pump to Bulkhead/Helm Kit 5 ft	1.5 m (5 ft)
8M0150608	Pump to Bulkhead/Helm Kit 6 ft	1.8 m (6 ft)
8M0150610	Pump to Bulkhead/Helm Kit 7 ft	2.1 m (7 ft)
8M0150612	Pump to Bulkhead/Helm Kit 8 ft	2.4 m (8 ft)
8M0150613	Pump to Bulkhead/Helm Kit 10 ft	3.0 m (10 ft)
8M0150614	Pump to Bulkhead/Helm Kit 12 ft	3.7 m (12 ft)
8M0150615	Pump to Bulkhead/Helm Kit 14 ft	4.3 m (14 ft)
8M0150616	Pump to Bulkhead/Helm Kit 16 ft	4.9 m (16 ft)
8M0150617	Pump to Bulkhead/Helm Kit 18 ft	5.5 m (18 ft)
8M0150618	Pump to Bulkhead/Helm Kit 20 ft	6.1 m (20 ft)
8M0150619	Pump to Bulkhead/Helm Kit 22 ft	6.7 m (22 ft)

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Part Num	Description	Hose Length
8M0150620	Pump to Bulkhead/Helm Kit 24 ft	7.3 m (24 ft)
8M0150621	Pump to Bulkhead/Helm Kit 26 ft	7.9 m (26 ft)
8M0150622	Pump to Bulkhead/Helm Kit 28 ft	8.5 m (28 ft)
8M0150623	Pump to Bulkhead/Helm Kit 30 ft	9.1 m (30 ft)
8M0150624	Pump to Bulkhead/Helm Kit 32 ft	9.8 m (32 ft)

Power Steering Pump Back Fit

The Gen C pump will back fit to replace the Gen B pump for service use. Note the following information, when replacing a Gen B pump with a Gen C pump.

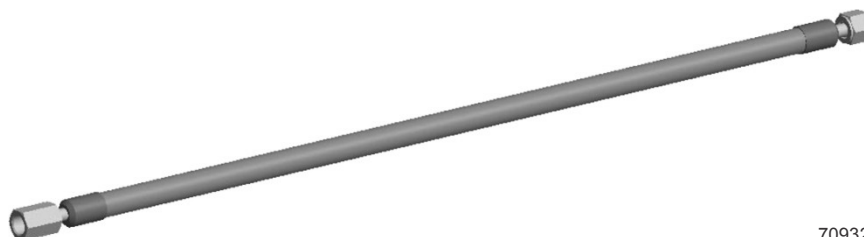
Dampener Hose

When installing a Gen C pump in place of a Gen B pump, the dampener hose between the pressure hose and the pump needs to be removed and discarded.



Do not use the dampener hose with a Gen C pump

Install an adapter hose (8M0152467) in place of the dampener hose. This adapter hose has a Saginaw flare fitting to attach to the existing pressure hose in the boat and a -6 ORFS connection for the pump. The adapter hose is the same length as the dampener hose.



Use the adapter hose in place of the dampener hose

Power Harness

A power harness will need to be ordered as well. These are the same as listed in **New Part Numbers**:

- Power harness with a fuse:
 - 1.2 m (4 ft) - 8M0150103
 - 3.7 m (12 ft) - 8M0150104
 - 7.3 m (24 ft) - 8M0150105
- Power harness without a fuse:

NOTE: The only reason to use a power harness without a fuse in a back fit situation is if the boat has circuit breakers instead of a fused connection. Also, ensure that the circuit breaker meets the specifications outlined in the preceding **Circuit Breaker** section.

- 1.2 m (4 ft) - 8M0150142
- 3.7 m (12 ft) - 8M0150143
- 7.3 m (24 ft) - 8M0150144

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Automatic Power Switch

If the boat is equipped with an automatic power switch (APS), the APS and its power connection to the batteries must be inspected to determine if they can handle the additional current draw of the Gen C power steering pump. The Gen C power steering pump draws a maximum of 80 amps.

Older APSes do not have a current carrying capacity that the Gen C pump requires. The housing of the older APS is identical to the current triple-engine APS (8M0149746). The only way to identify the older APS that requires replacement is by viewing the decals on the side of the APS.

The APS part numbers that need replacement are as follows:

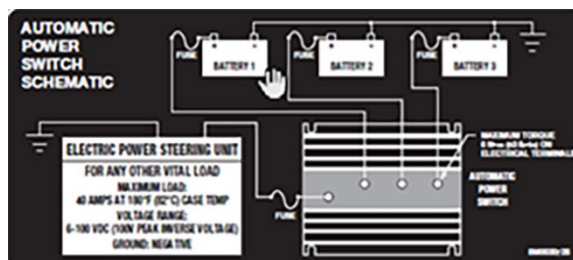
- 895091K01
- 895091K02
- 895091K03
- 8M0133815

The decal will list the part number.



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The schematic decal lists a 40-amp maximum load.



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The triple-engine APS (8M0149746) does NOT need to be replaced. The decals are like the following example.

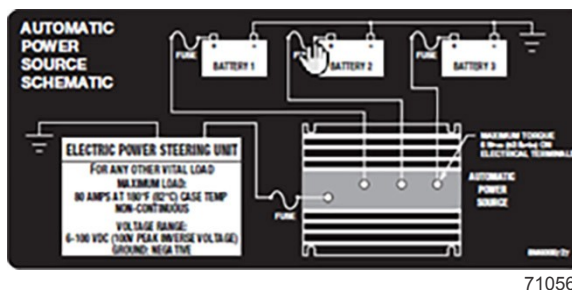


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The schematic decal lists an 80-amp maximum load.



The dual-engine APS (8M0134380) does NOT need to be replaced; it has an 80-amp rating. It can be identified by its blue color and Victron Energy label.



The APS power supply harnesses and fuses must be rated to carry 80 amps. The originals must be replaced with the following harness and fuse assemblies.

- 8M0149024 - 3 ft APS power harness with 80-amp fuse
- 8M0149025 - 6 ft APS power harness with 80-amp fuse
- 8M0149026 - 10 ft APS power harness with 80-amp fuse

NOTE: If the boat is equipped with circuit breakers instead of fuses, ensure that the circuit breaker meets the specifications outlined in the preceding **Circuit Breaker** section.

Automatic Power Switch Connection

Dual-Engine APS (8M0150039)

When using a dual-engine automatic power switch (APS) in a multiple engine application, an additional cable and a hot stud are required. This is because the output stud on the APS has a smaller diameter (1/4 in.) than the fuse connection (3/8 in.).

Required Parts

Order the following parts:

- 8M0150088 - 30.5 cm (12 in.) cable with a 1/4 in. eyelet on one end and a 3/8 in. eyelet on the other
- 8M0150037 – Hot stud kit

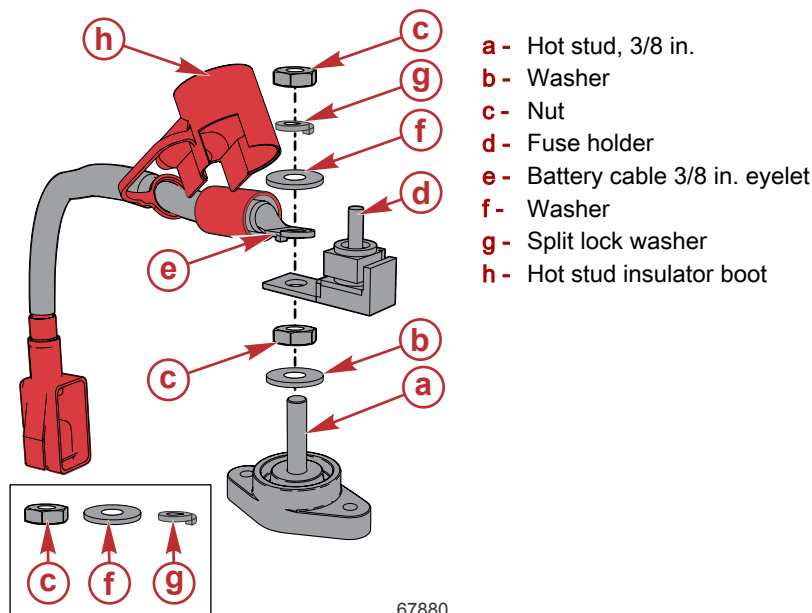
Installation Notes

- Connect the 1/4 in. eyelet of the cable to the output stud of the APS.

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- Install both the 3/8 in. eyelet of the cable and the fuse holder onto the hot stud.
- Detailed instructions are included in the hot stud kit.

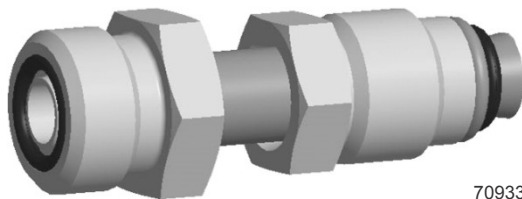


Triple-Engine APS (8M0149746)

When using a triple-engine APS, no additional parts are needed for connection. The output stud is the correct diameter for the fuse holder.

Service Hose Changes

As inventory of the Gen B pump power pack hose kits become NLA, the individual service hoses will also become NLA. The service replacement pressure hose will be the new -6 ORFS style hoses. An adapter will be needed to connect the Gen B Saginaw pump fitting to the -6 ORFS hose. The adapter part number is 8M0147795.



The return hoses will not change.

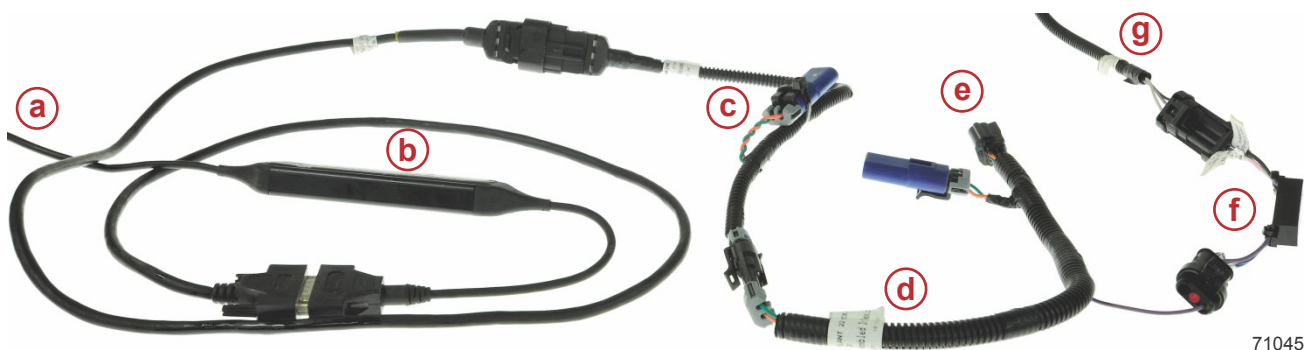
Power Steering Pump Diagnostics for Non-JPO Applications

NOTE: For JPO pump diagnostics refer to **Section 2D in JPO Diagnostic Manual 8M0164522.**

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Use diagnostics harness 8M0156168 to connect the power steering pump to CDS G3.

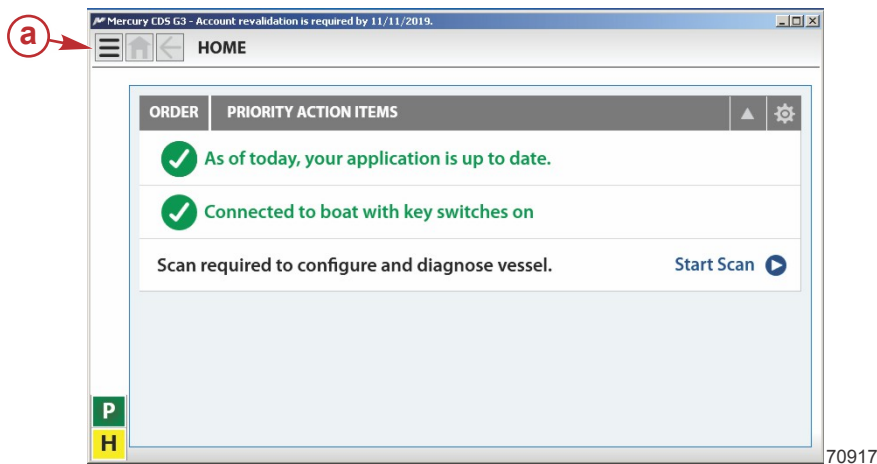


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- a - To CDS G3 computer
- b - Kavaser cable
- c - CDS G3 diagnostic harness
- d - Power steering pump harness
- e - To power steering pump
- f - Signal converter module
- g - Power steering pump signal harness (from engine)

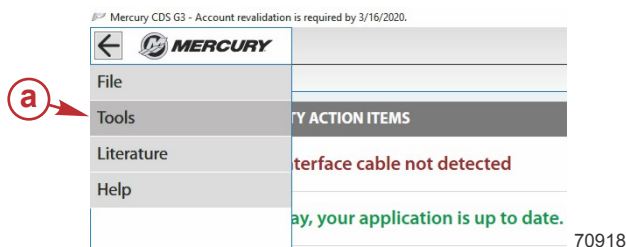
Live Data and Active Faults can be viewed with the following steps:

1. Select the menu icon (three lines).



a - Menu icon

2. Select **Tools**.



a - Tools selection

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3. Select **Pump**.

Tools

Options

Play Data | .bdr, .bdrm

Vessel Personality Viewer

Reflash History Viewer

Pump

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a - Pump selection

4. Select **NEXT**.

Power Steering Pump Description

PURPOSE: Diagnose the power steering pump.

RESULT: Verify pump functionality.

ENGINE STATE: ENGINE RUNNING or Connect the Pump Primer tool(895040K01)
Connect Diagnostic Adapter harness 8M0156168.

✕ EXIT

NEXT ▶

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5. The Live Data screen will be displayed.

View Pump Data to diagnose issues.

LIVE DATA

SENSOR NAME	VALUE
Pump Status	OK
Battery Voltage	14.1 V
Pump Speed	2760
Current Drain	8 A
CalID	MM05r
ProjectID	68698
SerialNumber	

FAULTS

No faults present

◀ BACK

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The Gen C power steering pump fault list can be found in the JPO Diagnostic Manual, 8M0164522, section 2E.



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