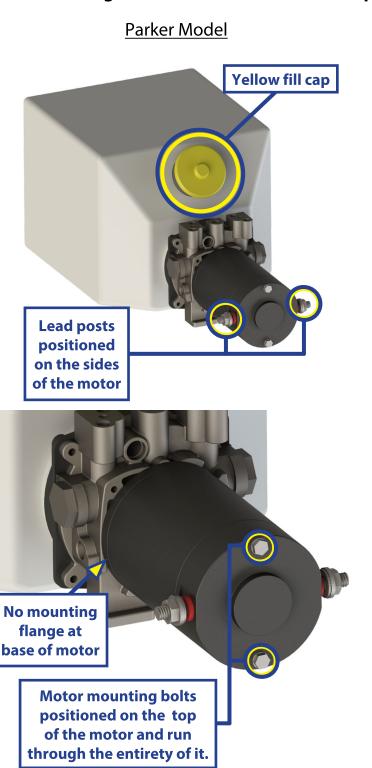
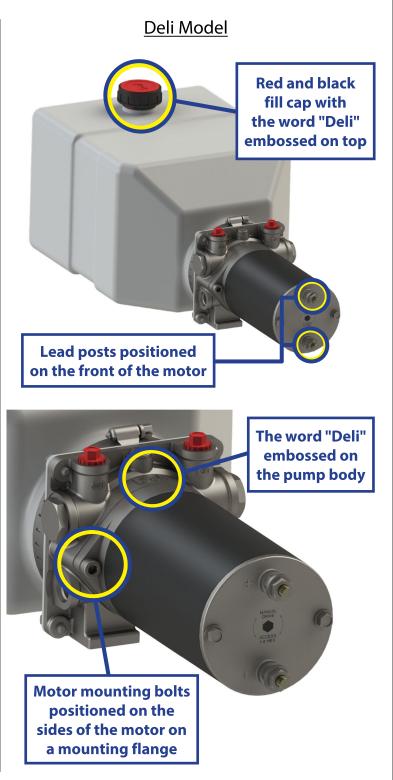
HYDRAULICS

Purpose

This document will assist in differentiating between models of bi-rotational pumps offered by Lippert and detailing the process to remove and replace the electric motors on each.

Differentiating Between Parker and Deli Pump Models







HYDRAULICS

Replacing the Motor on a Parker Model Pump

A CAUTION

Service performed on an active electrical motor can cause an electrical shock or unexpected motor operation, which can result in personal injury and/or product damage.

Remove all electrical power to the motor prior to servicing.

Resources Required

- 1/2" socket or wrench
- 8mm socket or wrench

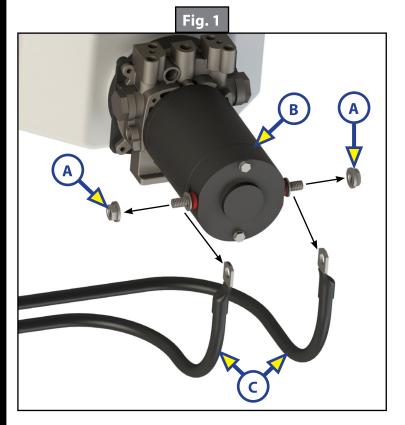
Motor Removal

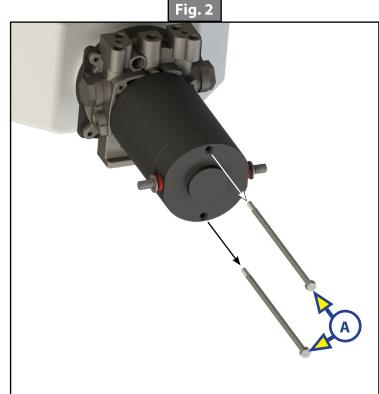
- **1.** Make sure all power to the unit is turned off before beginning procedure, then disconnect the 12V DC lead from unit's battery.
- 2. Using a ½" socket or wrench, remove the nuts from the motor posts (Fig. 1A) on each side of the birotational power unit's motor (Fig. 1B) to disconnect the leads (Fig. 1C) from the dual polarity solenoid.

NOTE: Record which dual polarity solenoid lead is attached to which motor post for re-installation.

3. With a 8mm socket or wrench, remove the motor mounting screws (Fig. 2A) from the motor.

NOTE: The Parker model pump motor is made up of several pieces that are secured together by the motor mounting screws. These screws go through all pieces of the motor and once they are removed, the motor pieces will be free. Make sure to hold motor together securely when removing the motor mounting screws from the assembly.

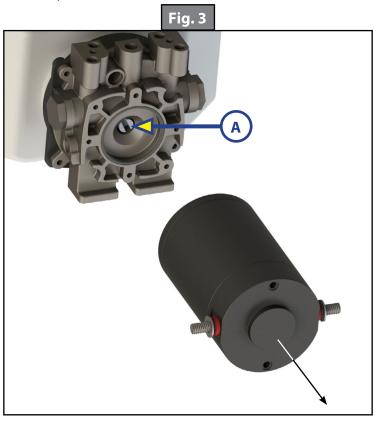






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4. Carefully remove entire motor, making sure to leave the pump coupler (Fig. 3A) inside the center section of the pump assembly.

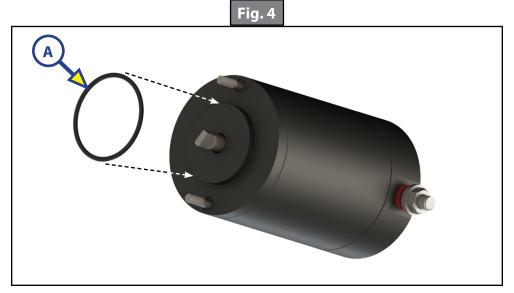


Motor Installation

1. Remove retaining nuts from the replacement motor with a 8mm socket or wrench.

NOTE: The retaining nuts hold the pieces of the motor together from the factory and, once removed, will allow them to be separated and slide off of the motor mounting screws. Make sure to hold motor together securely while performing installation.

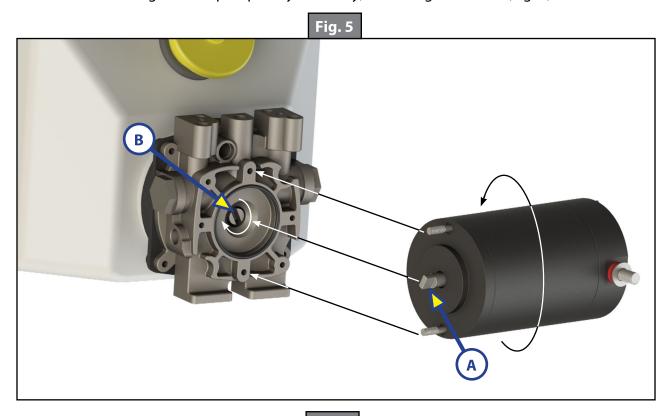
2. Apply the O-Ring (Fig. 4A) to the replacement motor.

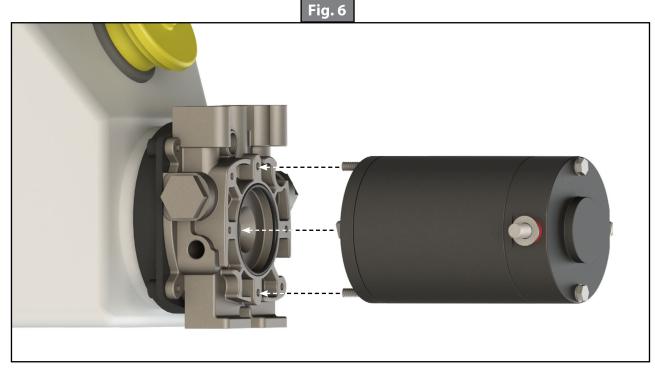




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3. Carefully align the replacement motor to the pump body assembly. Rotate each component as needed so the motor mounting screws line up with their holes in the pump body assembly at the 12 and 6 o'clock positions, and the male tang of the motor shaft (Fig. 5A) lines up to the female inlet of the pump coupler (Fig. 5B). Once all components are properly aligned, insert the pump motor mounting screws and male tang into the pump body assembly, mounting the motor (Fig. 6).

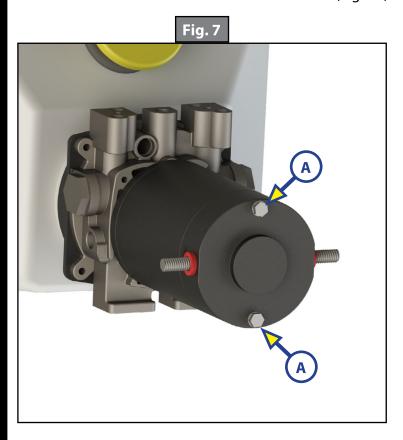


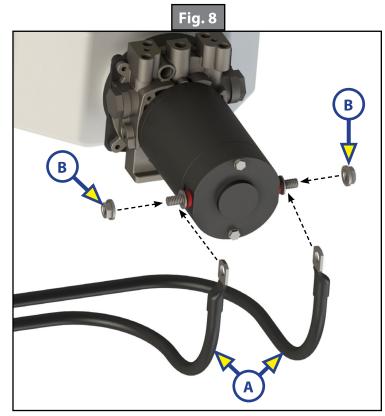




HYDRAULICS

- **4.** Secure the replacement motor to the pump body assembly by tightening the motor mounting bolts with a 8mm socket or wrench (Fig. 7A). Do not overtighten.
- 5. Reconnect the motor leads (Fig. 8A) from the dual polarity solenoid in the same position as prior to removal and secure them with the nuts (Fig. 8B) using a ½" socket or wrench.







HYDRAULICS

Replacing the Motor on a Deli Model Pump

A CAUTION

Service performed on an active electrical motor can cause an electrical shock or unexpected motor operation, which can result in personal injury and/or product damage.

Remove all electrical power to the motor prior to servicing.

Resources Required

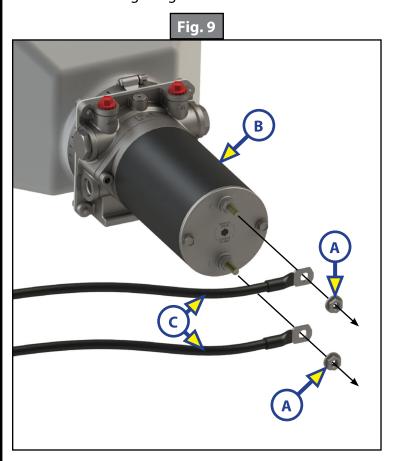
- 5mm hex wrench
- 10mm wrench
- 1/4" hex wrench

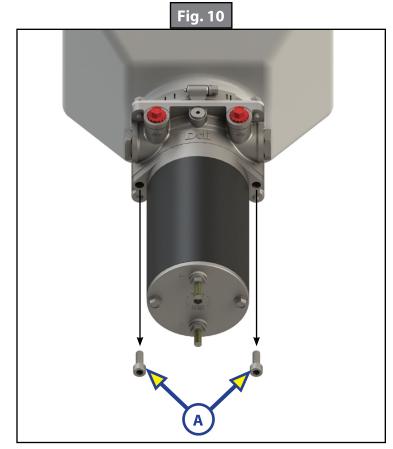
Motor Removal

- **1.** Make sure all power to the unit is turned off before beginning procedure, then disconnect the 12V DC lead from unit's battery.
- 2. Using a 10mm wrench, remove the nuts (Fig. 9A) from the motor posts on the front of the motor (Fig. 9B) to disconnect the leads (Fig. 9C) from the dual polarity solenoid.

NOTE: Record which dual polarity solenoid lead is attached to which motor post for re-installation.

3. Use a 5mm hex wrench to remove the two mounting screws (Fig. 10A) on either side of the motor mounting flange.

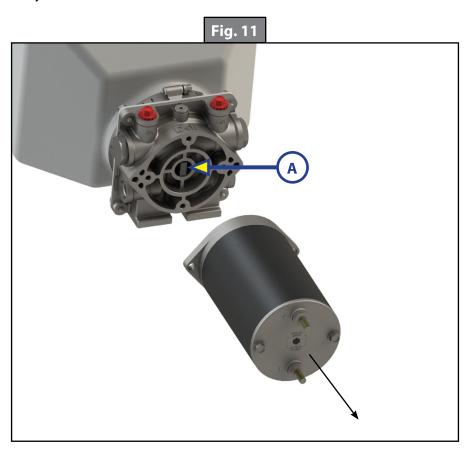






HYDRAULICS

4. Remove the old motor, making sure to leave the pump coupler (Fig. 11A) inside the center section of the pump assembly.



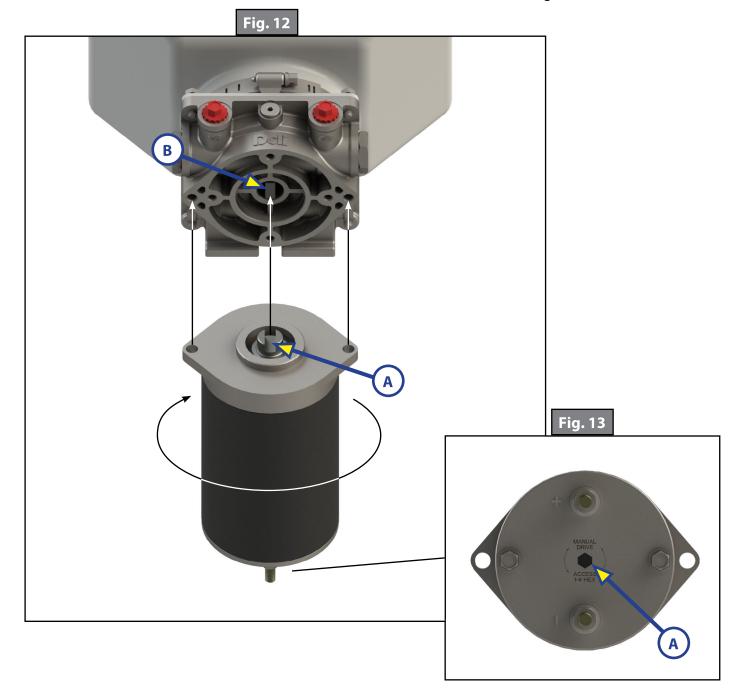


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Motor Installation

1. Carefully align the replacement motor to the pump body assembly. Rotate each component as needed so the motor mounting screw holes in the motor mounting flange line up with their mates in the pump body assembly at the 3 and 9 o'clock positions and the female inlet of the motor shaft (Fig. 12A) lines up to the male tang of the pump coupler (Fig. 12B). Once all components are properly aligned, fit the female slot over the male tang, mounting the motor.

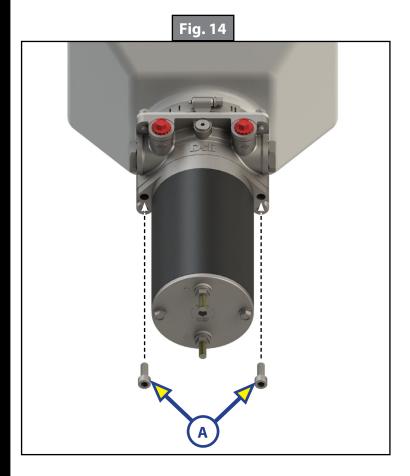
NOTE: To help align the pump and motor coupler shaft, the motor coupler shaft can be turned by using a 1/4" hex wrench inserted into the override on the front side of the motor (Fig. 13A).

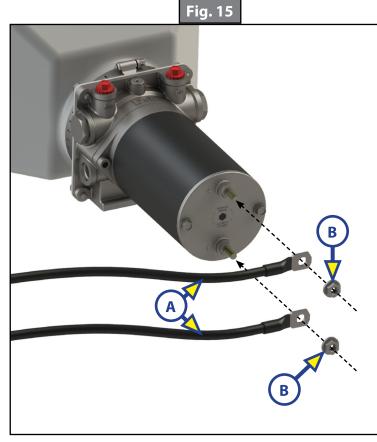




HYDRAULICS

- 2. Secure the replacement motor to the pump body assembly by installing the mounting screws with a 5mm hex wrench (Fig. 14A). Do not overtighten.
- 3. Reconnect the motor leads (Fig. 15A) from the dual polarity solenoid in the same position as prior to removal and secure them with the nuts (Fig. 15B) using a 10mm wrench.





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