



Innovation in Mobility

**INSTALLATION INSTRUCTIONS
PUMP MOTOR BRUSH SET
KIT # V2-SH-115B**

- Be certain that these supplemental instructions are read and understood completely before installation is attempted. You should also refer to the Service/Owner Manual for additional installation instructions and safety precautions.
- Check contents of this documentation package and notify Ricon immediately of any missing items. Claims for damages that have occurred during shipping must be made to the shipper.

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I. INTRODUCTION

The following pages contain installation instructions for removing and replacing the pump motor brush set. Please follow these instructions carefully and do not cut any corners, eliminate any steps, or modify the equipment. Call our service department if you need assistance.

II. TOOLS REQUIRED

Description	Part Number
Installation-Motor Brush Assembly	V2-SH-115T

III. INSTALLATION

A. PUMP MOTOR REMOVAL:

1. Disable electric power to the lift.
2. Disconnect pump electrical connectors.
3. Remove pump motor from the hydraulic pump by removing the two bolts that pass down through the top of the pump motor to the pump unit refer **FIGURE [1]**. Use caution when removing the pump motor, as the bolts that fasten the motor to the pump also fasten the end caps to the motor housing.

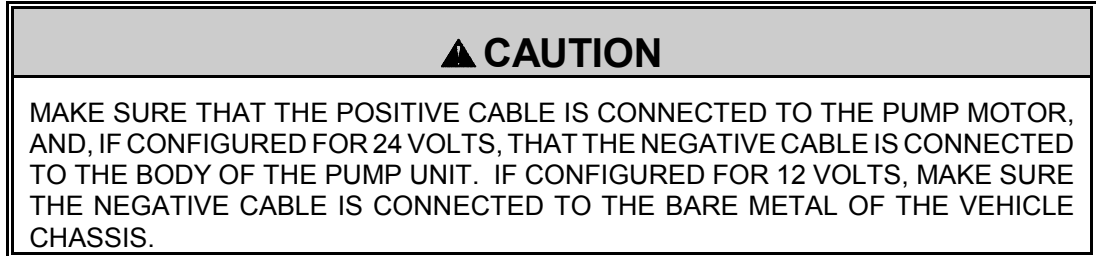
B. PUMP MOTOR OVERHAUL:

1. Remove the end caps from the motor, being careful not to damage the gasket. Lightly tapping the side of the end caps with a soft hammer may ease removal of the caps refer **FIGURE [1]**.
2. Remove the armature from the motor housing, making note of the orientation of the armature relative to the housing before disassembly, i.e., which end of the armature goes toward which end of the housing refer **FIGURE [1]**.
3. Remove old graphite dust from shaft, body, armature, and end caps using a solvent such as varsol.
4. Remove two hex screws fastening the negative brushes to the brush holder. These brushes are independently fastened.
5. Remove the negative brush set from the brush holder, making note of the position of the negative brushes within the brush holder refer **FIGURE [1]**.
6. Remove the motor terminal stud attaching the remaining two brushes to the brush holder, making note of the position of the insulation washers on the terminal stud.
7. Remove the positive brush set from the brush holder, making note of the position of the positive brushes within the brush holder refer **FIGURE [1]**.
8. Lubricate the bearings in both end caps very lightly. There should be no free oil after lubrication, as the oil can interfere with the operation of the armature.
9. Reassemble the brush set with the new brushes by placing the springs into the cavities, and placing the new brushes on top of the springs. Make sure that the positive and negative brushes are placed in the correct cavities.
10. Replace the terminal stud, insulation washer, and two hex screws fastening the brush sets to the brush holder. Make sure the insulation washers are in the same position on the terminal stud as they were before disassembly.
11. Insert the armature into the motor housing, making sure the armature is oriented properly (as noted during disassembly).
12. Place the brush holding tool (Ricon Part #V2-SH-115T) over the brushes and slowly press brushes into the brush holder cavities refer **FIGURE [1]**. Hold brushes in place using tool with thumb and forefinger.

13. Reassemble the end caps onto the motor housing while maintaining alignment as indicated by the alignment marks. Make sure that the thrust washer is correctly located on the motor output shaft, and the gaskets are located between the end caps and the motor housing.
14. Orient the motor in a vertical position, with the brush end of the motor towards the top refer **FIGURE [1]**.
15. Push down on the end cap containing the brushes, and slowly remove the brush holding tool.
16. Insert the two bolts through the motor housing refer **FIGURE [1]**.
17. Install the motor on the pump unit (see next section), being careful to hold the end caps onto the motor housing.

C. PUMP MOTOR INSTALLATION:

1. Place the pump motor onto the pump body while holding the motor assembly together.
2. Align holes in the end caps, motor body, and pump body; then insert the two (2) attaching bolts through holes refer **FIGURE [1]**.
3. Screw bolts into the top end cap until the motor assembly is held together without tightening the bolts.
4. Connect the electrical connectors to the pump unit.



5. Enable electric power to the lift.
6. Apply power so that the armature can spin and find its own turning axis within the motor body.
7. As the motor spins, carefully tighten attaching bolts while holding the top end cap. Do not over tighten bolts.

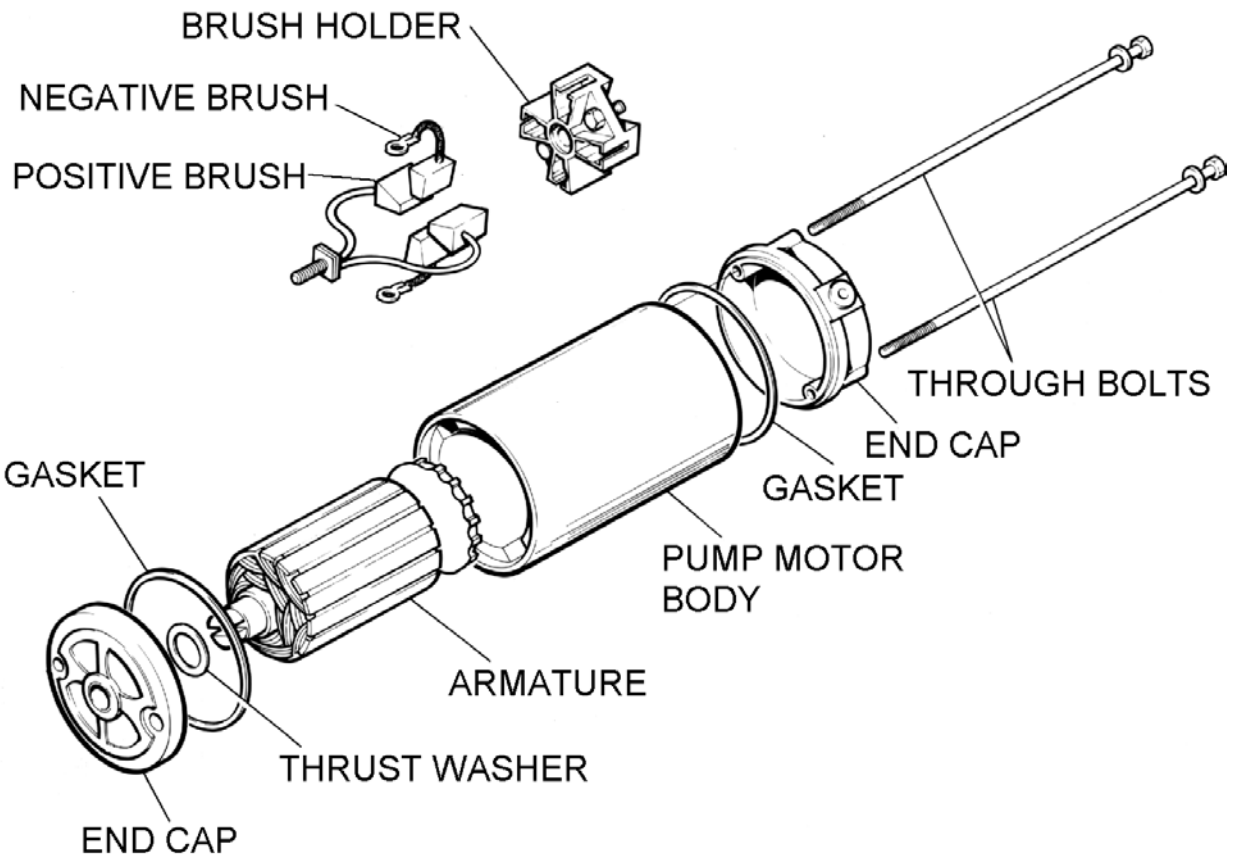


FIGURE [1]: PUMP MOTOR ASSEMBLY