



# Jandy Pro Series FloPro™ (FHP) Series Pump Parts Replacement Kit Instructions

## WARNING

**FOR YOUR SAFETY:** This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed where such state or local requirements exist. The maintainer must be a professional with sufficient experience in pool equipment installation and maintenance so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation will void the warranty.

These instructions are to be used with the following Jandy Replacement Kits:

- R0479601-05-- Impeller Replacement Kit (FHP)
- R0479701-02-- Diffuser Replacement Kit (FHP)
- R0480400-- Impeller / Diffuser Hardware Replacement Kit (FHP)
- R0479500-- Backplate Replacement Kit (FHP)
- R0479400-- Mechanical Seal (1 Set) Replacement Kit (MHPM, PHPF/PHPM, SHPF/SHPM, and FHP)
- R0480300-- Backplate O-ring Replacement Kit (FHP)
- R0480500-- Backplate Hardware Replacement Kit (FHP)
- R0479301-14-- Up-rated Motor Replacement Kit (SHP, PHP, MHP, and FHP)
- R0446700-- Motor Hardware Replacement Kit (MHPM, PHPF/PHPM, SHPF/SHPM, and FHP)
- R0479900-- Motor Mounting Foot Replacement Kit (FHP)
- R0446000-- Drain Plug Assembly Replacement Kit (MHPM, PHPF/PHPM, SHPF/SHPM, and FHP)
- R0480000-- Lid with Locking Ring Replacement Kit (FHP)
- R0480100-- Pump Debris Trap Basket Replacement Kit (FHP)
- R0480200-- Lid O-ring Replacement Kit (FHP)

## WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, serious personal injury, and/or loss of life.

## 1. Introduction

This document gives instructions for replacing the motor, backplate, impeller, diffuser, mechanical seal, drain plugs, o-rings, hardware, mounting foot, lid with locking ring, lid o-ring, and pump debris trap basket on Jandy Pro Series FloPro (FHP) Pumps.

These instructions were written with safety as the priority and **must be followed exactly**. Not following the written procedure or taking short cuts may increase the risk of personal injury. Read through the instructions completely before starting to disassemble the pump or install a replacement kit.

Before starting the procedures, look at the parts lists in the relevant sections and at the back of the instructions to identify the parts in your kit(s). If any parts are missing, please call your local Jandy distributor for assistance. For technical help, please contact the Zodiac Technical Service Department at 800.822.7933.

**NOTE:** If you are **only** replacing the drain plugs and/or motor mounting foot, skip to *Section 7, Drain Plugs and Motor Mounting Foot Replacement*.

If you are **only** replacing the lid with locking ring, debris trap basket, and/or lid o-ring, skip to *Section 8, Lid with Locking Ring, Pump Debris Trap Basket, and Lid O-ring Replacement*. For all other replacements, continue with *Section 2, Pump Disassembly*.

## 2. Pump Disassembly

### WARNING

Before servicing the pump, switch off the circuit breaker to the pump's power supply. Failure to do so could result in property damage, severe personal injury, and/or death.

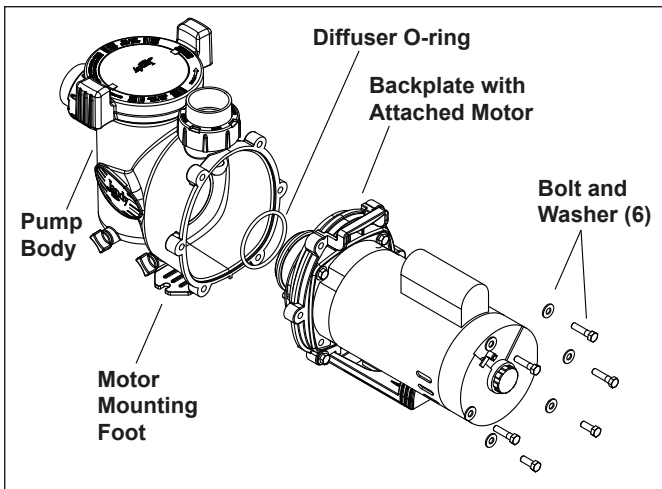
1. Turn off the pump. Switch off the circuit breaker to the pump motor.
2. If you are **not** replacing the motor, do not disconnect the electrical wiring. If you **are** replacing the motor, have a qualified service technician or electrician disconnect the electrical wiring at the pump motor.

**⚠ WARNING**

Due to the potential risk of fire, electric shock, or injuries to persons, Jandy Pro Series Pumps must be installed in accordance with the National Electrical Code® (NEC®), all local electrical and safety codes, and the Occupational Safety and Health Act (OSHA). Copies of the NEC may be ordered from the National Fire Protection Association, 470 Atlantic Ave., Boston, MA 02210, or obtained from your local government inspection agency.

In Canada, Jandy Pro Series Pumps must be installed in accordance with the Canadian Electrical Code (CEC®).

3. Close all necessary valves to prevent pool water from reaching the pump. Loosen the union nuts or remove the drain plugs and o-rings to drain the water from the pump.
4. Use a 9/16" wrench to loosen the six (6) bolts securing the motor with attached backplate to the body pump. See Figure 1.

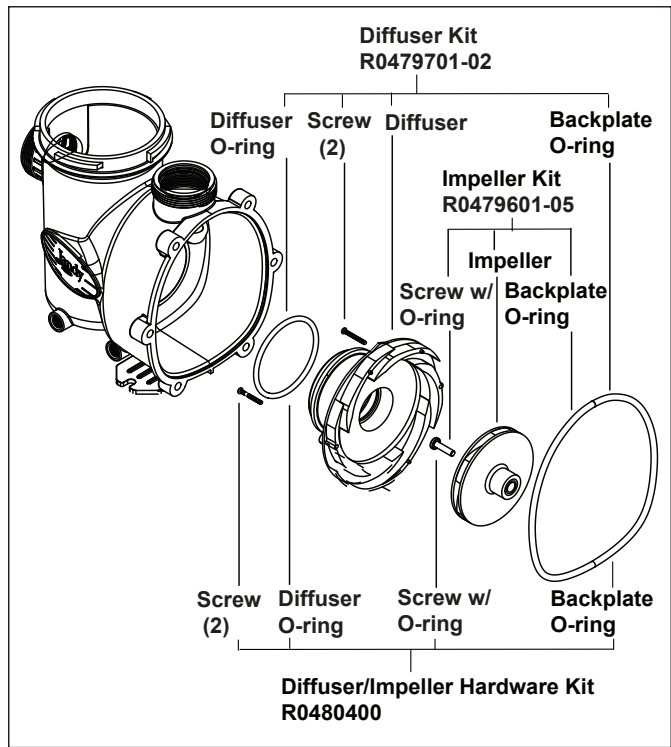


**Figure 1. Removal of Backplate with Motor**

5. Pull the motor with attached backplate out of the pump body. Remove the diffuser o-ring from the pump body, as shown in Figure 1.
6. Continue with the section(s) for the kit(s) you are installing.
  - a. *Section 3, Impeller/Diffuser and Hardware Replacement*, to replace the impeller/diffuser and diffuser o-ring.
  - b. *Section 4, Backplate, Hardware and Mechanical Seal Replacement*, to replace the backplate, backplate o-ring, and mechanical seal.
  - c. *Section 5, Motor and Attaching Hardware Replacement*, to replace the motor.

**3. Impeller/Diffuser and Hardware Replacement**

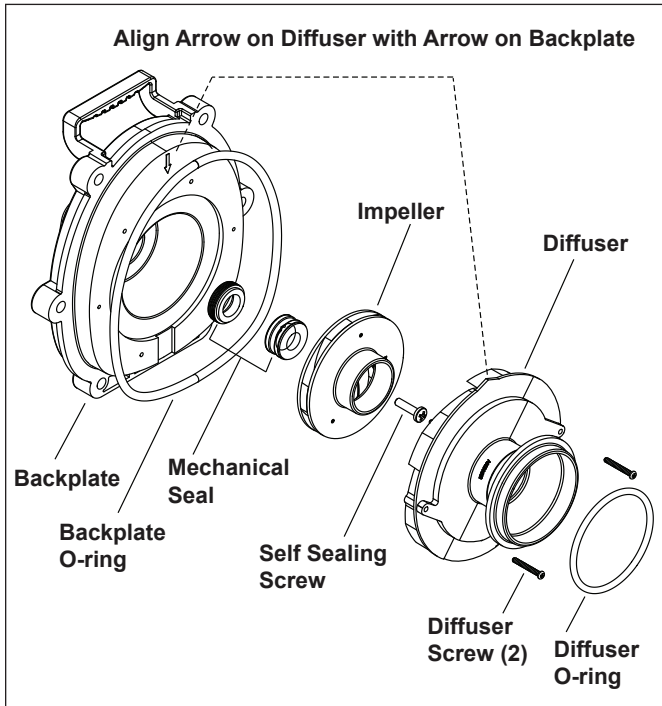
1. Refer to Figure 2 and the associated parts list to identify the parts included in each replacement kit.



**Figure 2. Impeller and Diffuser Replacement Kits**

Impeller/Diffuser and Hardware Kits Parts List			
Description			
	R0479601-05	R0479701-02	R0480400
Impeller (FHP)	1	--	--
Screw w/O-ring, ¼ -20 Self-sealing, Left Hand	1	--	1
Diffuser	--	1	--
Backplate O-ring	1	1	1
Screw, 4-40 X 1.375	--	2	2
Diffuser O-ring, 2-340	--	1	1
Instructions	1	1	1

2. Using a No. 1 Phillips screwdriver, remove the two (2) screws attaching the diffuser to the backplate. Carefully remove the diffuser from the backplate. See Figure 3.
3. Remove any debris from the inlet and outlet of the impeller.
4. Remove the motor shaft cover on the back of the motor by twisting the hex-head screw with an adjustable wrench. The motor shaft will be exposed.

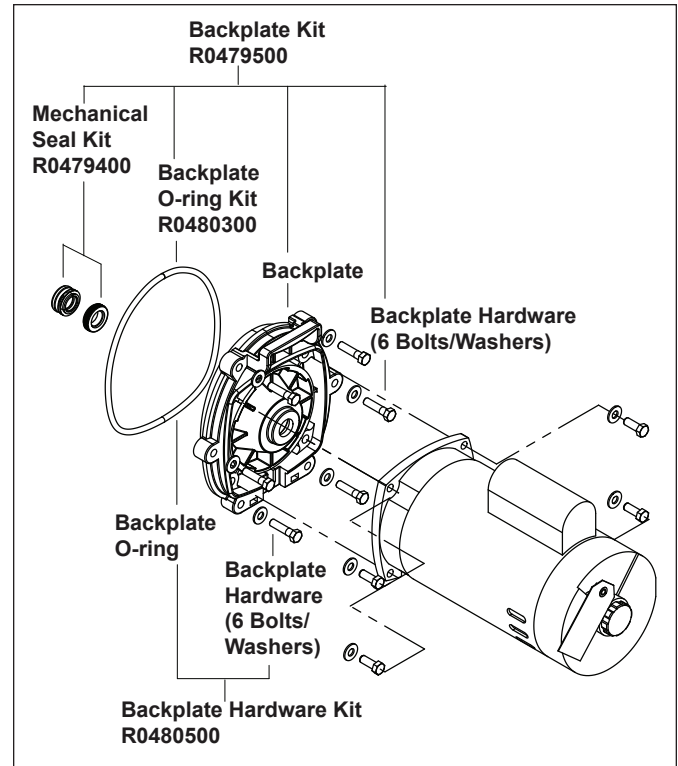


**Figure 3. Impeller and Diffuser Assembly Kits**

5. Hold the exposed motor shaft with a ½" wrench while removing the impeller center screw. Use a No. 2 Phillips screwdriver. Turn the left-hand-threaded screw clockwise to loosen it.
6. While holding the motor shaft with a ½" wrench, thread the new impeller onto the motor shaft. Hand-tighten the impeller until it is secure.
7. Using a No. 2 Phillips screwdriver, tighten the impeller's center screw into the center of the impeller. Turn the left-hand-threaded screw counter-clockwise to tighten it. **Do not overtighten.**
8. Replace the motor shaft cover by inserting the cover tabs into the slots and rotating the cover 90° clockwise.
9. Install the new diffuser over the impeller. Make sure you insert the alignment pins into the correct holes. The molded-in arrow must align with the molded-in arrow on the backplate. See Figure 3.
10. Install the two (2) Phillips-head screws. Tighten the screws to draw the diffuser against the backplate.
11. To avoid a leak, make sure the diffuser o-rings, o-ring grooves, and o-ring seal area are clean and free of debris. If grease is used to retain the o-rings, it must be silicone based. **Do not use petroleum-based grease, because it will destroy the o-rings.**
12. If you are not installing another replacement kit, skip to *Section 6, Pump Assembly*.

## 4. Backplate, Hardware, and Mechanical Seal Replacement

Refer to Figure 4 and the associated parts list to identify the parts included in each replacement kit.



**Figure 4. Backplate, Hardware, and Mechanical Seal Kits**

### Backplate, Hardware and Mechanical Seal Kits Parts List

Description	R0479500	R0479400	R0480300	R0480500
Washer, ⅜	6	--	--	6
Backplate	1	--	--	--
Mechanical Seal, Carbon	1	1	--	--
Mechanical Seal, Ceramic	1	1	--	--
Backplate O-ring, 2-375	1	--	1	1
Bolt, ⅜ -16 X 2.25	6	--	--	6
Instructions	1	1	1	1

### 4.1 Disassemble Backplate and Impeller

1. Use a No. 1 Phillips screwdriver to remove the two (2) screws attaching the diffuser to the backplate. Carefully remove the diffuser from the backplate.
2. Remove any debris from the inlet and outlet of the impeller.

3. Remove the motor shaft cover on the back of the motor by twisting the hex-head screw with a 90° crescent wrench. The motor shaft will be exposed.
4. Hold the exposed motor shaft with a ½" wrench while removing the impeller center screw using a No. 2 Phillips screwdriver. Turn the screw, which is left-hand threaded, clockwise to loosen it.
5. Hold the motor shaft with a ½" wrench while unscrewing the impeller from the motor shaft with your hand. Turn the right-hand-threaded impeller counter-clockwise to unscrew it.
6. Remove the impeller from the backplate and motor shaft.

## 4.2 Replace Mechanical Seal

The mechanical seal consists of two (2) parts: the carbon/spring face seal (installed on the impeller motor shaft) and the ceramic face seal (installed on the backplate). See Figure 5.

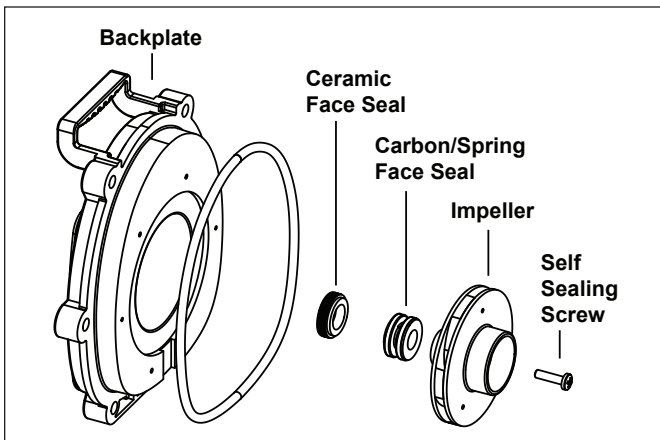


Figure 5. Mechanical Seal Assembly with Impeller

### ⚠ CAUTION

To help prevent leaks in the system, do not damage the ceramic or carbon surfaces of the seals.

1. Replace the carbon face from the mechanical seal on the impeller. See Figure 5.
  - a. Remove the carbon face seal half from the motor shaft. This is a spring-loaded seal.
  - b. Grasp the portion of the seal closest to the impeller body and pull the seal off using a twisting motion.
  - c. Make sure the seal and mating parts are clean.
  - d. Press the new carbon face seal half on the motor shaft using a twisting motion. Make sure the carbon surface is facing toward the ceramic ring in the backplate.

**NOTE** To assist assembly, use **only** water or a soap solution as a lubricant. Any other lubricant will destroy the seal after a short period of time.

### ⚠ CAUTION

**Very Important!** To prevent damage to the spring, grasp the lower portion of the seal (opposite the carbon face) when installing the seal.

2. Replace the ceramic seal on the backplate.
  - a. Remove the motor from the backplate, as described in *Section 5, Motor and Attaching Hardware Replacement*.
  - b. Place the backplate ceramic side down and force the ceramic seal out using a screwdriver or drift.
  - c. Turn the backplate over and insert the new ceramic seal into the backplate. Use great care to press the seal in square with your fingers. The ceramic is easily damaged and must be pressed in using only your fingers or soft tools. Use only water or slightly soapy water as a lubricant.
3. Continue with *Section 5, Motor and Attaching Hardware Replacement*, to replace the backplate and the backplate o-ring and install the motor onto the backplate.

## 5. Motor and Attaching Hardware Replacement

### ⚠ WARNING

To ensure continued safety and reliable operation, Zodiac Pool Systems, Inc. requires that you replace the motor with a motor that has the identical HP rating and service factor (Zodiac Pool Systems, Inc. approved only).

1. Refer to Figure 6 and the associated parts list to identify the parts included in each replacement kit.

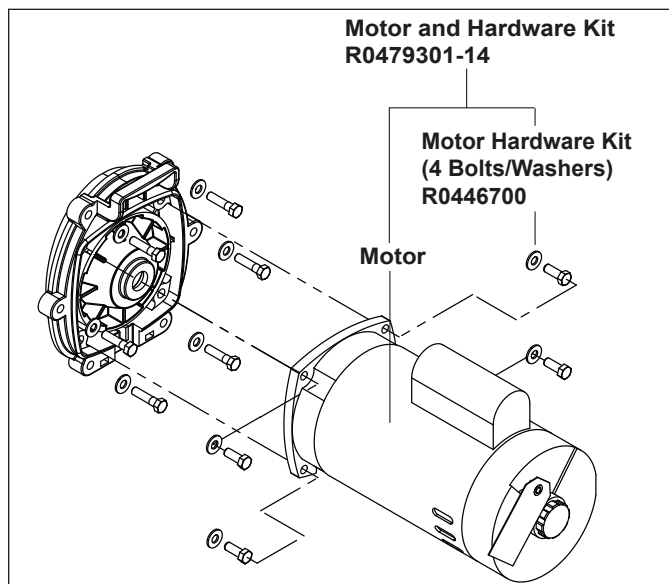


Figure 6. Motor and Attaching Hardware Kits

Motor and Attaching Hardware Parts List		
Description	R0479301-14	R0446700
Motor	1	-
Bolt, $\frac{3}{8}$ -16 x 1"	4	4
Washer, $\frac{3}{8}$	4	4
Instructions	1	1

- Have a qualified service technician or electrician properly disconnect the electrical wiring at the pump motor.
- Note the alignment of the backplate to the motor. (See Figure 6.) Place the backplate motor assembly o-ring side down, unscrew the four (4) 9/16" screws, and remove the motor.
- Remove the protective plastic cap from the motor shaft.
- Place the motor on the backplate so that the shaft is inserted into the hole in the center of the backplate. The starting capacitor on the motor should point toward the backplate handle.
- Secure the motor to the backplate with the four (4) bolts and washers. (See Figure 6.) Tighten the screws to 15 ft-lbs of torque.
- If installing a new backplate o-ring, remove the existing o-ring from the backplate.
- Check for debris around the o-ring and mating surface on the backplate, as debris may cause water leaks in the system. Make sure the seal and mating parts are clean.
- Carefully install the new o-ring into the groove of the backplate. Use silicone lubricant, as required, to retain the o-ring in the groove during the assembly process.
- Have a qualified service technician or electrician properly connect the electrical wiring at the pump motor and then continue with *Section 6, Pump Assembly*, to complete assembly of the pump.

## 6. Pump Assembly

- Slide the motor with the attached backplate into the pump body.
- Slide the diffuser into the inside centric hole of the pump body. While supporting the motor, start two (2) screws on opposite sides. (This will hold the motor in position while you start the other four (4) screws.)

- Tighten the screws lightly in a crossing "X" pattern using a 9/16" wrench. Start with the inner (middle) two (2) and then work on the outer (top and bottom) four (4) to draw the backplate to the body evenly. Once all the screws are snug, tighten in the same order to 10 ft-lbs of torque.
- If the pump is located above the water level of the pool, remove the lid and fill the basket with water before starting the pump.
- Remove any debris around the lid o-ring seat to avoid leaks in the system.

### WARNING

Trapped air in the system can cause the filter lid to be blown off, which can result in death, serious personal injury, and/or property damage. Be sure all air is out of the system before operating.

- Hand-tighten** the lid to make an air tight seal. **Do not use any tools to tighten the lid.**
  - Open the filter pressure release valve to bleed air from the system.
  - Switch on the circuit breaker to the pump motor.
  - Turn on the pump and check the system for normal operation.
  - Once all the air has left the filter, close the pressure release valve.
- ## 7. Drain Plugs and Motor Mounting Foot Replacement
- Refer to Figure 7 and the associated parts list to identify the parts in each replacement kit.

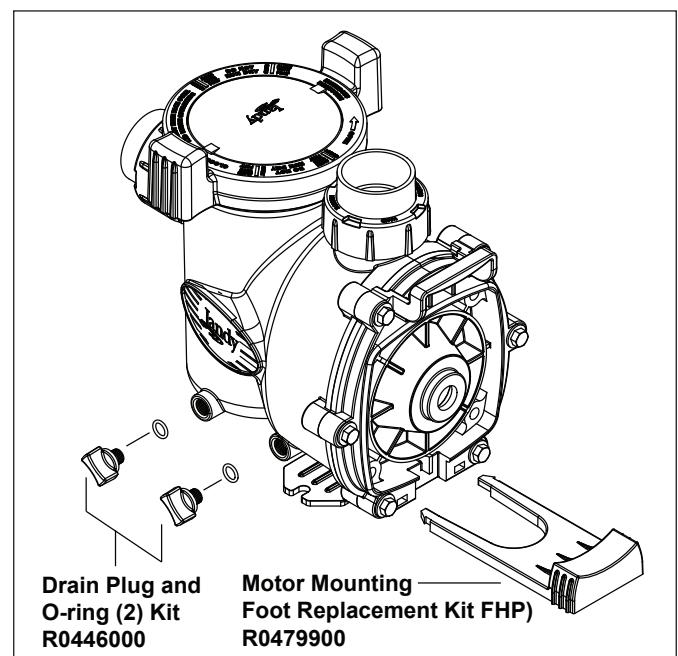


Figure 7. Drain Plug and Motor Mounting Foot Kit

Motor Mounting Foot and Drain Plugs Kits Parts List		
Description	R0479900	R0446000
Motor Mounting Foot	1	--
Drain Plug	--	2
Drain Plug O-ring	--	2
Instructions	1	1

2. To replace the drain plugs and o-rings only:
  - a. Comply with warnings and follow Steps 1 -3 in Section 2, Pump Disassembly.
  - b. Discard old drain plugs and o-rings. Replace them with the new drain plugs and o-rings.
  - c. Switch on the circuit breaker to the pump motor. Turn on the pump and check the system for normal operation.
3. To replace the motor mounting foot only:
  - a. Turn off the pump. Switch off the circuit breaker to the pump motor.
  - b. Unsnap the mounting foot and pull it straight out from the pump body assembly.
  - c. Attach the new motor mounting foot to the pump body assembly by snapping the mounting foot on the pump body assembly.
  - d. Secure mounting foot using two (2) mounting screws. Do not exceed 25 in-lbs of torque.
  - e. Switch on the circuit breaker to the pump motor. Turn on the pump and check the system for normal operation.

## 8. Lid with Locking Ring, Lid O-ring, and Basket

1. Refer to Figure 8 and the associated parts list to identify the parts included in each replacement kit.

Lid with Locking Ring, Lid O-ring, and Basket Parts List			
Description	R0480000	R0480100	R0480200
Lid with Locking Ring	1	--	--
Lid O-ring	1	--	1
Pump Debris Trap Basket	--	1	--
Instructions	1	1	1

2. Comply with the warnings and follow Steps 1-3 in Section 2, Pump Disassembly.
3. Turn the lid's locking ring counter-clockwise until 'START' aligns with the ports. Carefully remove the lid and lid o-ring.
4. To avoid air leaks in the system, remove debris on the lid o-ring seat, lid o-ring groove, and sealing surface on the pump trap.

### WARNING

Trapped air in the system can cause the filter lid to be blown off, which can result in death, serious personal injury, and/or property damage. Be sure all air is out of the system before operating.

5. To replace lid with locking ring (R0480000) and lid o-ring (R0480200) only:
  - a. Clean the lid o-ring and place it in the lid groove.
  - b. Continue with Step 6 to replace debris basket or Step 7 to complete this procedure.

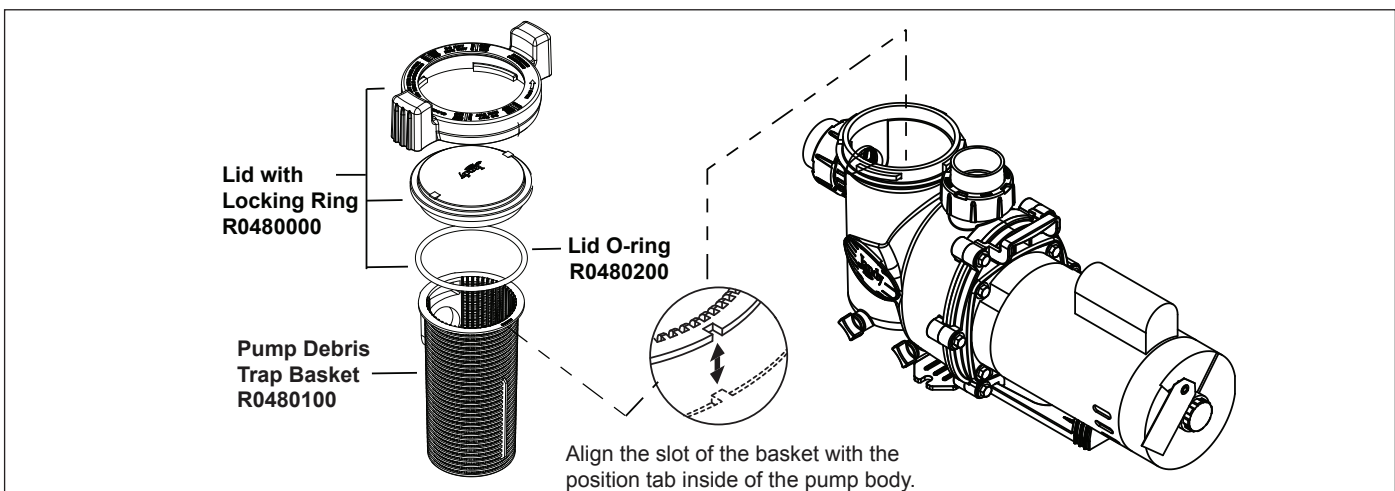
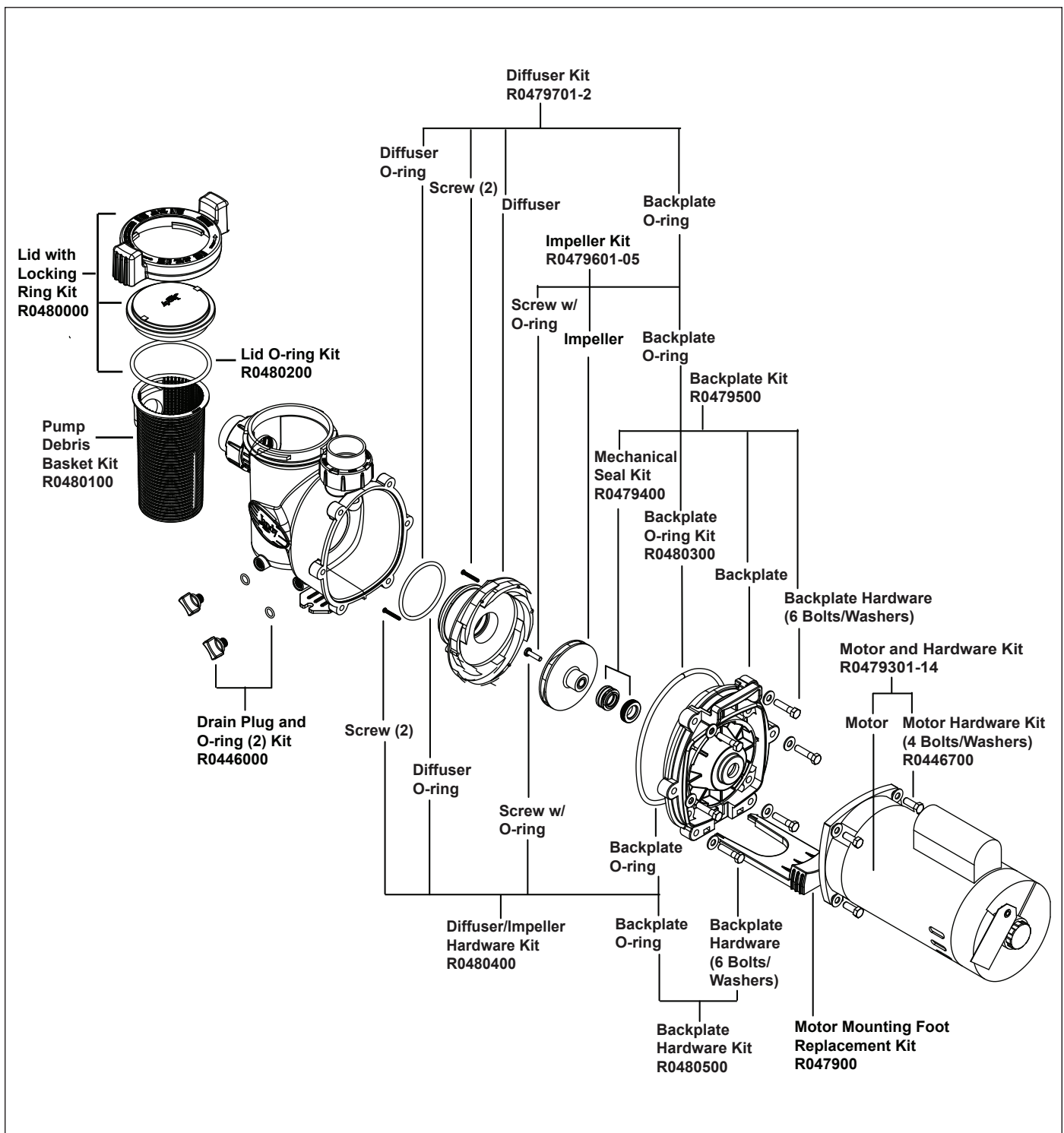


Figure 8. Lid with Locking Ring, O-ring, and Pump Debris Tray Basket





**Figure 9. FHP Pump Parts Replacement Kits**

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