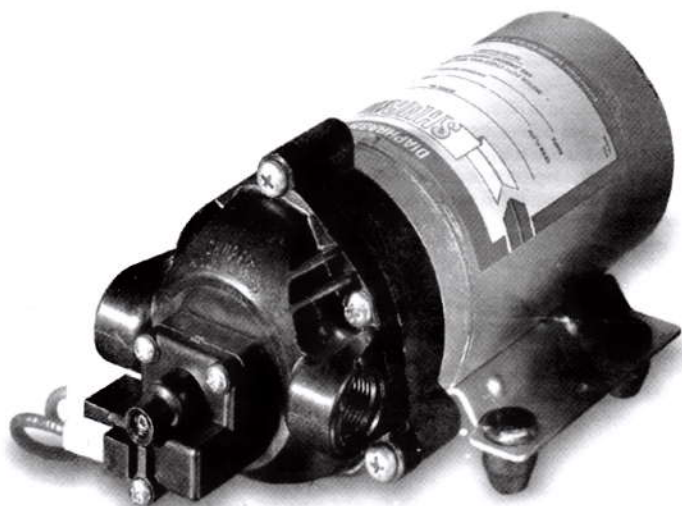




SHURFLO® 80XX SERIES PARTS KIT MANUAL



DESCRIPTION

Procedures outlined by this manual are applicable to all SHURFLO 80XX pump configurations. Illustrations may not show a particular model's configuration in regards to pump head ports, check valve, or electrical connections. Please take note of differences prior to and during disassembly. If unsure of the acceptability of a kit with a particular pump model, please contact SHURFLO for assistance. Use of the kit on models other than those recommended by SHURflo is the sole responsibility of the installer.

For operating criteria, thermal limits, flow curve, chemical compatibility, and related technical information consult the pump's Product Data Sheet, or call SHURFLO for assistance.

CAUTIONS

- To prevent electrical shock, disconnect power before initiating any work. In the case of pump failure, the motor housing and/or pumped fluid may carry high voltage to components normally considered safe.
- Various pump models are equipped with integral thermal breakers to interrupt operation due to excessive heat. Once the temperature of the motor is within proper limits it will automatically reset, and the pump **will start operation without warning.**

PRESSURE SWITCH/BYPASS

Never exceed the pressure setting (pressure switch/bypass) indicated on the motor label. Improper pressure settings may cause severe overload and motor failure. Always check pressure setting as outlined on last page after making repairs.

Pumps equipped with a pressure switch (w/o bypass) may exhibit rapid cycling (on/off within 2 sec.) when the flow rate is too restrictive for the pumps output (gpm@psi / Lpm@bar). If the pump is subjected to rapid cycling during normal operation or for infrequent periods, damage may occur. Applications that exhibit rapid cycling should consider one or more of the following; minimize outlet restrictions, properly size pump output to the flow rate, pump with bypass, or install a SHURFLO accumulator in the output side of the system.

PUMP HEAD DISASSEMBLY

Relieve outlet pressure and drain inlet/outlet tubing of fluid. It is recommended that the pump be flushed in a responsible manner prior to disassembly. Take necessary precautions when fluid is harmful, caustic or hazardous to prevent personal injury or equipment damage.

Reference **CAUTIONS** on prior to initiating any repairs. For replacement or repairs to either the pressure switch or check valve when not making upper housing or other internal component repairs, refer to Pressure Switch Replacement Procedures .

1. With electrical power turned off, disconnect lead wires from the pressure switch (if equip). Make certain to note the position of wire terminals to the switch contacts.

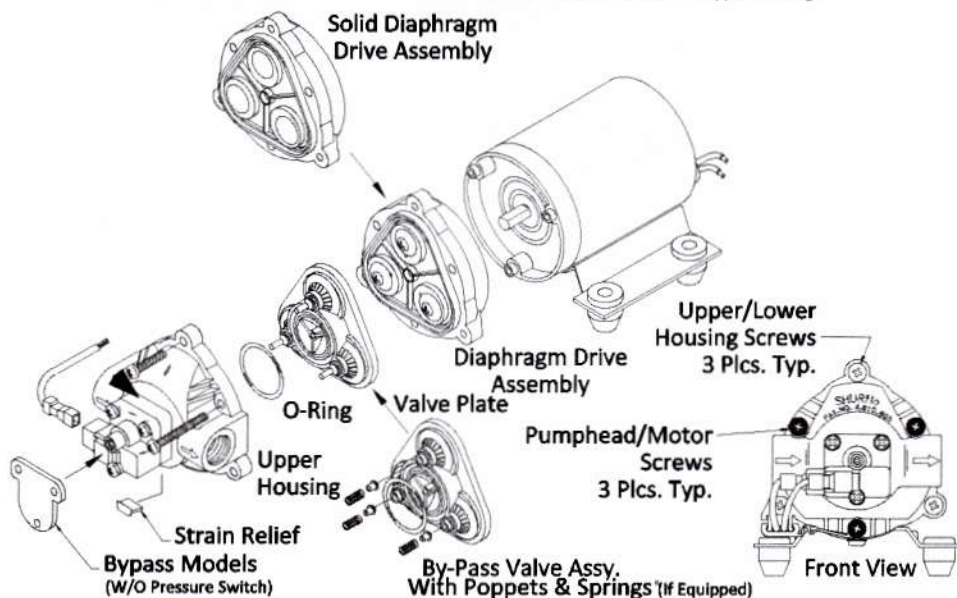
Pumps have two versions of strain relief's depending on model and date of manufacture.

A. To remove insert: Working from the backside (motor side) carefully pry the insert to compress the wires then push the insert out.

B. To release the integral clip design (View A-A): Carefully pry on both clips.

2. If **only** replacing complete assemblies for either the pump head or motor remove the three machine screws as indicated in View A-A. For all other internal repairs remove all six screws. 3. 3. Mark or take notice of the orientation of the lower housing/drive assembly in relation to the motor. Various pump models have small slots, which are normally at the bottom of the pump so liquid can drain in the event of a leak.

4. Use care separating the upper housing and valve plate so bypass spring location can be verified (if equip). Spring orientation and type can be crucial to operation. Locate the valve plate o-ring which may be retained in its groove or stuck to the inside of the upper housing.



- Remove lower housing/drive assembly from "D" shaft of motor. If the assembly does not pull off, use two flat screwdrivers between the drive bearing and motor to pry assembly off.
- Inspect all assemblies for signs of wear, damage, ruptures, corrosion, foreign matter, and fluid incompatibility. If the motor bearings or internal components have been inundated with fluid, the motor assembly should be replaced.
- For specific assembly repair instructions refer to the following sections:

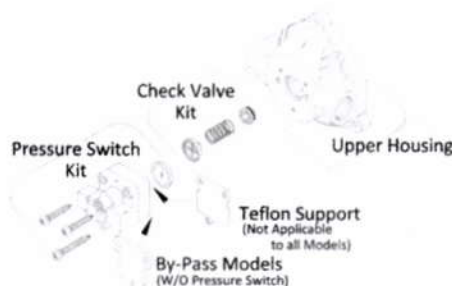
PRESSURE SWITCH, UPPER HOUSING, OR CHECK VALVE REPLACEMENT PROCEDURES

Relieve outlet pressure and drain inlet/outlet tubing of fluid. It is recommended that the pump be flushed in a responsible manner prior to disassembly. Take necessary precautions when fluid is harmful, caustic or hazardous to prevent personal injury or equipment damage. The hex head set screw for pressure adjustment should not be removed or turned unless performing pressure switch adjustment on last page. Never pry apart the pressure switch housings, internal clips holding the housing will break.

Various pump models may not be equipped with the check valve/spring or Teflon support. If unsure of a particular models configuration, please contact SHURflo.

- With electrical power turned off, disconnect lead wires from the pressure switch (if equip). Make certain to note the position of wire terminals to the switch contacts.
- Remove three screws holding the switch assembly or bypass cover plate to the upper housing. Take note of the different screw lengths and position used with the switch.
- Remove the switch diaphragm and check valve components. If the check valve components are stuck in the housing, press out from the back side of housing.
- Clean and inspect check valve and seating surface of the housing for debris or other problems that may inhibit proper sealing.
- Reinstall check valve components as shown.
- Install switch diaphragm concave (cupped) side down flush with the housing.
- Align (new) pressure switch or bypass plate (Teflon support if equip.) over the two protrusions and holes.
- Install the three screws and **hand-tighten only until snug**. Maximum torque 10-13 in/lb. [1.1-1.5 N-m] for Nylon.
- Reconnect motor and power connectors to the proper switch terminal positions.
- For reassembly of upper housing/switch to pump/motor, refer to Disassembly (page 2) working in reverse order.

- To insure proper pump performance and longevity SHURflo recommends checking the pressure switch adjustment whenever the switch has been removed and reinstalled, or a new assembly installed. Follow the procedure outlined on the last page.



DIAPHRAGM / LOWER DRIVE ASSEMBLY

Pumps equipped with the "solid diaphragm" are assembled as an integral unit at the factory. Diaphragm/drive configurations of this type can only be replaced as a complete assembly.

Remove the three screws and piston caps. Take notice of the orientation of piston caps within diaphragm locating dimples. Install new components.

Screw torque 20-25 in-lb. [2.3-2.8 N-m]



BYPASS VALVE PLATE

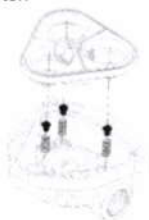
Bypass spring length must not be altered. If bypass pressure exceeds that indicated on the motor label, overload and motor failure may occur.

ASSEMBLY TIPS

- Place upper housing so interior is facing up.
- Place springs in their appropriate cavities as noted upon disassembly. Set the poppet into each spring.
- Set the valve plate into the upper housing making sure the poppets are visible through the hole in each inlet valve.
- Properly orientate the diaphragm/drive (not shown) assembly to the upper housing. Carefully press the two assemblies together making sure the diaphragm isn't pinched.

--Continued on Back

5. Hold the assembly together firmly. Reinstall the three screws that hold the two assemblies together before installing to the motor.

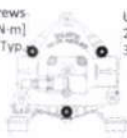


SCREW TORQUES

Pump models with composite thermo-plastic lower housings require lower torque and gun speed when using power drivers. The three upper/lower housing screws should be torqued to 22-24 in/Lb. [2.4-2.7n.m] with gun speed of 500-600 R.P.M. Consult Service Bulletin #1067 for complete details.

NOTE: Draw all screws down evenly in a crisscross pattern before final torque.

Pumphead/Motor Screws
18-25 in-lb [2.0-2.8 N-m]
3 Plcs. Typ.



Upper/Lower Housing Screws
25-32 in-lb [2.8-3.6 N-m]
3 Plcs. Typ.

PRESSURE SWITCH / BYPASS TEST

Verify pressure switch (P/S) adjustment and/or bypass operation whenever components are removed or replaced. The P/S must only be adjusted for the "shut-off" pressure setting indicated on the motor label. The P/S differential (turn-on) is a pre-determined internal function of the P/S and is not adjustable.

Never exceed the pressure setting(s) indicate on the motor label for the P/S and bypass. Improper pressure settings may cause overload and motor failure.

P/S is only adjustable within its appropriate range.

Normally the set screw will not be recessed or protrude more than 2-3 threads. Incorrect screw placement may be an indication that the P/S is not within the range necessary for that pump. Contact SHURflo for assistance and/or Product Data Sheet if unable to adjust within specification.

PRESSURE SWITCH ADJUSTMENT

1. Connect an appropriate gauge (psi/bar) and valve to the output side of the pump. Clamp/secure tubing for pressurized operation. Insert inlet tubing into water.
2. With the valve open apply proper electrical power (fused) and purge pump of air.
3. Slowly close valve until the pump begins to cycle (on/off within 2 sec.). Adjust clockwise (raise) or counterclockwise (lower) the 5/64" allen set screw until the "shut-off" pressure is within 2 psi. [1.3 bar] of that indicated on the motor label.
4. Open the valve and repeat step 3 several times to verify P/S adjustment.
5. Turn off pump by closing valve. Open the valve slowly and allow pressure to gradually bleed off. Once enough pressure has been released the pump should start, most models typically range between 15-20 psi. [1-1.3 bar]. If the differential is not within range, recheck the "shut-off" pressure adjustment.

BYPASS & BYPASS W/PRESSURE SWITCH OPERATION

Pumps with bypass only; follow steps 1 & 2 above. With the pump operating turn the valve OFF and verify bypass pressure as indicated on the pump label.

Bypass with P/S; are intended to bypass at pressures just before "shut-off". Due to this fact, follow the steps above except during step 3 turn the valve OFF slowly, as the pump cannot be made to cycle. The pump should bypass for a moment prior to achieving "shut-off". Verify bypass pressure again by opening the valve so an extremely low flow is released.

RETURN POLICY

80XX parts kits are non-warranted items. Kits are only returnable when the original factory packaging has not been opened, and not more than one year has elapsed since its date of manufacture. Standard restocking charges may be applied to returns.



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