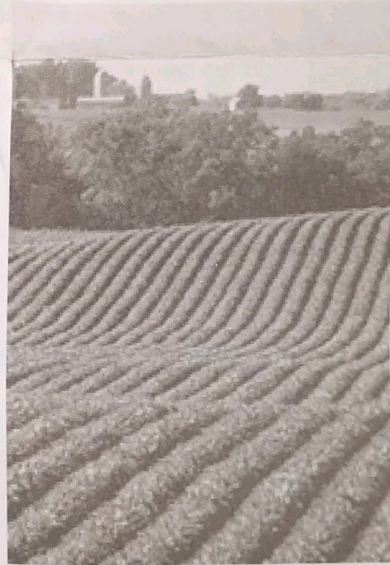




# SHURflo<sup>®</sup>

## Mini-Bulk Chemical Transfer Pump Service Manual



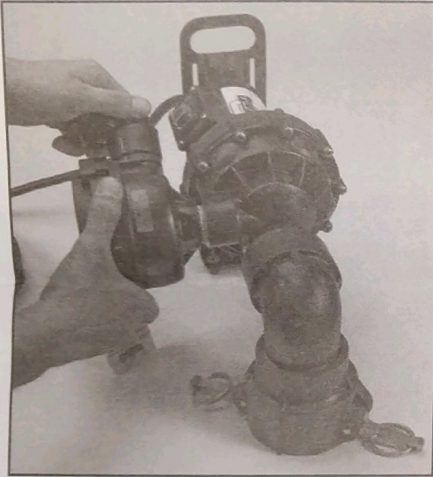
## DISASSEMBLY INSTRUCTIONS:

**WARNING:** To avoid damage to equipment or personnel, unplug pump and ensure NO Power is available to the pump while servicing. The motor can turn even though the Pumphead is disassembled.

**CAUTION:** Pump may contain residual chemicals. Ensure proper measures are taken to prevent damage to equipment or personnel.

### Step 1 - Remove Meter

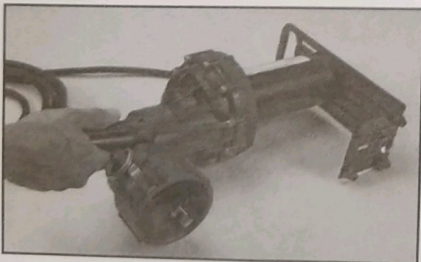
Begin by removing the Meter from the Pumphead / Motor Assembly. Remove Meter by turning counter-clockwise (*while facing meter*) and unthreading the 1-in. NPT threads from the Pumphead.



### Step 2 - Remove Screws

Using a #2 Phillips-head screwdriver with a 6-inch shank (*or longer*), remove all of the screws and washers from the Pumphead.

**NOTE:** If Street Elbow must be removed to disassemble pump, see *Street Elbow Removal Instructions on next page*.

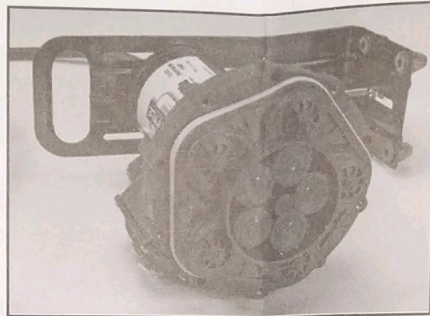


### Step 3 - Remove Pumphead

Remove Pumphead by pulling away from the rest of the assembly. This will expose the Valve Housing Assembly.

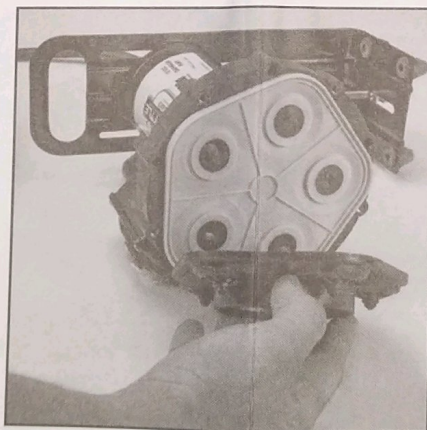


Exposed Valve Housing Assembly (below)

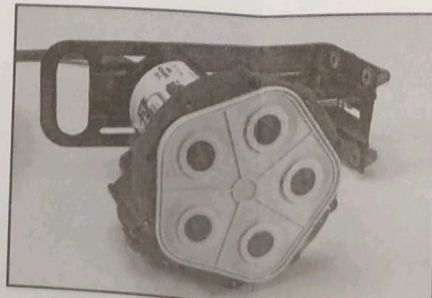


### Step 4 - Remove Valve Assembly

Remove Valve Housing Assembly by pulling away from the rest of the assembly. The Valve Assembly may be held quite tightly by a vacuum seal, but once this seal is broken, the assembly will remove easily. This will expose the Diaphragm/Drive Assembly.



Exposed Diaphragm/Drive Assembly (below)



### Step 5 - Remove Diaphragm / Drive Assembly

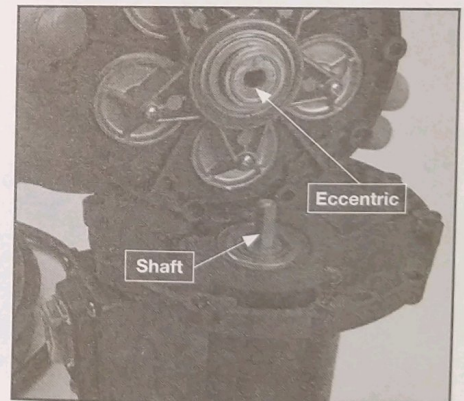
Remove Diaphragm/Drive Assembly by pulling the Assembly straight out from the motor. Diaphragm Assembly may need to be rocked slightly from side-to-side in order to slide the assembly from the motor shaft.



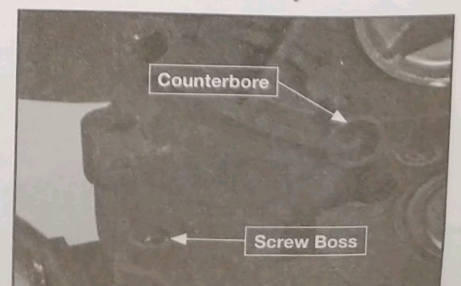
## ASSEMBLY INSTRUCTIONS:

### Step 1 - Add Diaphragm/Drive Assembly to Motor Assembly

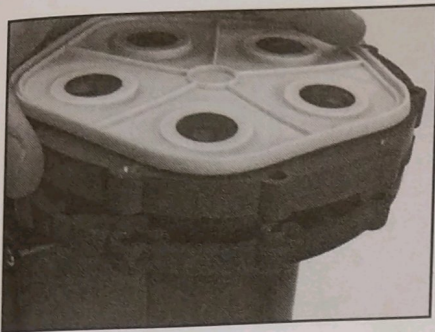
Begin by aligning the "D" shape of the eccentric with the "D" shape of the motor shaft.



Once aligned, the Diaphragm/Drive Assembly will slide over the motor shaft. Align the screw bosses on the end bell with the enlarged counterbores on the Diaphragm/Drive Assembly.

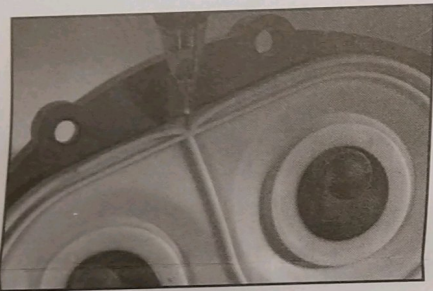


Once aligned, the Diaphragm/Drive Assembly will drop onto the motor end bell.

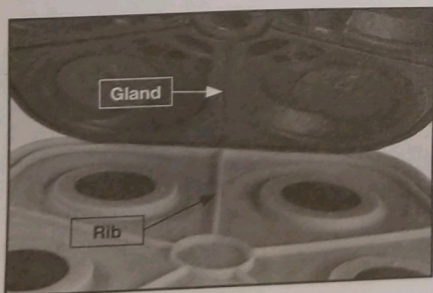


### Step 2 - Add Valve Assembly

**NOTE: DO NOT pinch the diaphragm during assembly. The diaphragm can bend very easily (as shown). If the diaphragm is pinched during assembly, external leaking may occur over time.**



To assemble the Valve Housing Assembly, align the glands on the Valve Housing with the Ribs on the Diaphragm and carefully place Valve Housing over the Diaphragm.



Slight finger pressure back and forth will confirm whether the Valve Housing is assembled properly. If there is no movement, the Valve Housing is seated properly. Visually inspect the exposed diaphragm to ensure no pinching has occurred.

### Step 3 - Add Upper Housing Assembly

Align the Upper Housing Assembly with the Valve Housing and lower into place over the Valve Housing. There will be slight movement if the housing is wiggled back and forth.

**NOTE: DO NOT pinch the diaphragm during the assembly.**



### Step 4 - Add Screws

Place one flat washer and one lock washer onto each of the ten (10) screws and place into the screw holes of the Upper Housing. Tighten the screws in a criss-cross pattern until all screws are snug. **Once screws are snug, tighten to 25-32 in.-lbs. of torque.**

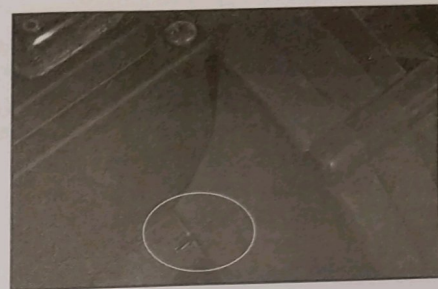


### Step 5 - Add Meter Assembly

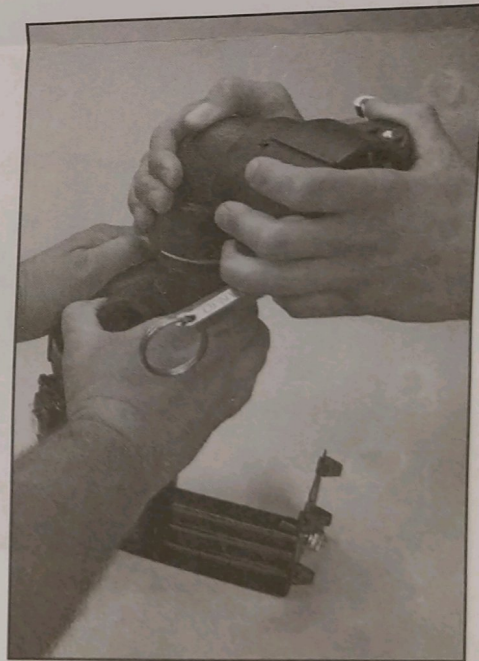
Wrap appropriate amount of sealing tape on male Meter threads. Thread male Meter threads into female port on Pumphead. Meter fitting assembly should face the motor when assembly is complete. See **Disassembly Step 1 photo.**

## STREET ELBOW REMOVAL INSTRUCTIONS:

The 2-inch street elbow can be removed and replaced, but care must be taken to maintain the alignment of the Pumphead to the Motor Housing. The alignment indicators are located next to the switch housing. (as shown below)



When the street elbow is removed or added to the pump assembly, the pump assembly must be prevented from spinning in relation to the motor shell. This is accomplished by supporting the pump assembly while working with the street elbow. (See below)



Another option is to assemble or disassemble the street elbow to the Upper Housing while the Upper Housing is separate from the Pumphead, as pictured in **Assembly Step 3.**

# SF-1100 Dispensing Pump Kits

SF-1100 KITS LIST: (See Figure #1)

ITEM	KIT PARTNO.	DESCRIPTION
(1)	94-718-00	Motor Assembly Kit
(2)	94-719-00	Diaphragm/Lower Housing/Drive Assembly Kit
(3a)	94-720-00	Valve Housing Assembly Kit (EPDM)
(3b)	94-720-05	Valve Housing Assembly Kit (Viton®)
(4)	94-721-00	Upper Housing Assembly Kit

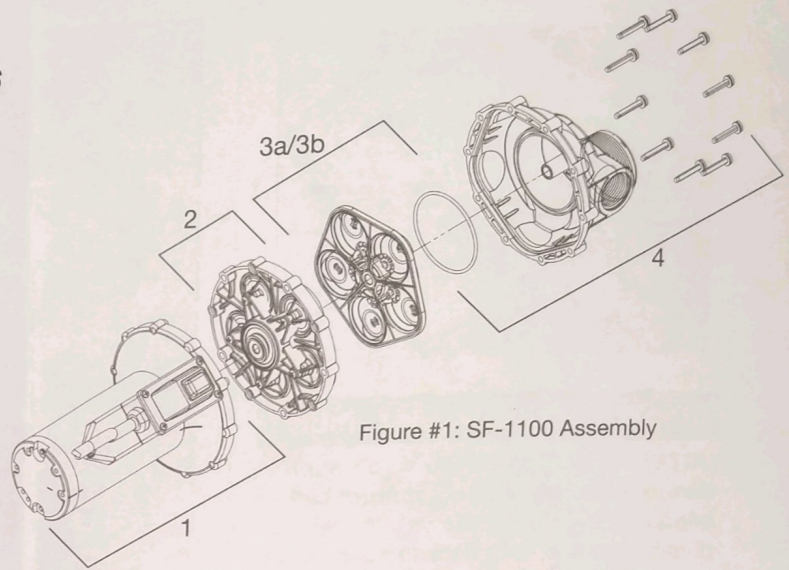


Figure #1: SF-1100 Assembly



**Pentair Water**

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