

FILL-RITE®

FR3200 Series Hi Flow DC Pump Service Instructions

Bypass Valve Service Procedure



WARNING! Disconnect electrical power and relieve any pressure in the lines prior to servicing this pump! Failure to do so can result in damage to the equipment and personal injury or death!



IMPORTANT! Removal of the bypass valve in the FR3210 requires special attention; please adhere to the following procedure to minimize the possibility of damaging the pump housing during the removal and reinstallation process.

The bypass valve is located inside the pump housing (Figure 1).

It is accessed through the inlet and outlet openings, and consists of three main components (Figure 2):

- A. Bypass Valve Retainer
- B. Bypass Valve Spring
- C. Bypass Valve

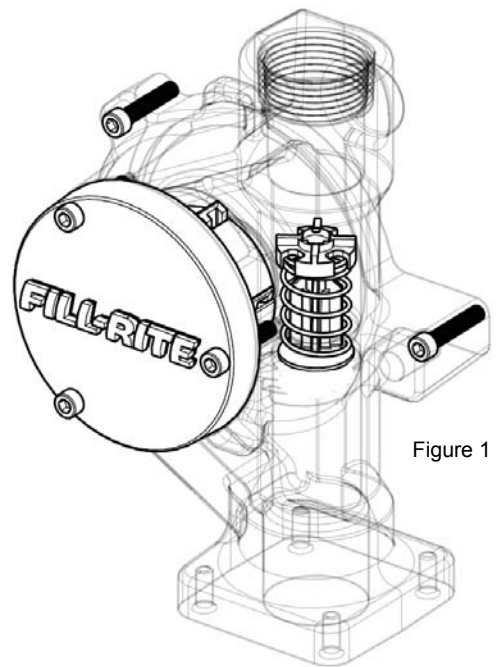


Figure 1

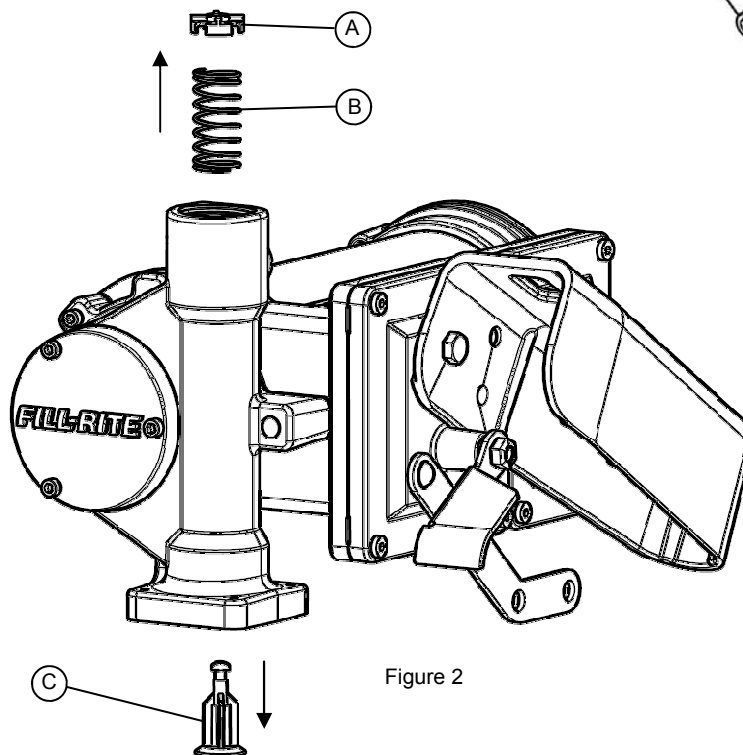


Figure 2

Servicing the Bypass Valve (cont'd)

The bypass valve is located inside the pump housing. It is accessed through the inlet and outlet openings.

The bypass valve consists of three components (Figure 3):

- A. Bypass Valve Retainer
- B. Bypass Valve Spring
- C. Bypass Valve

Replacing the Bypass Valve:

- 1) Disconnect all electrical connections.
- 2) Relieve all pressure and drain fluid from the fittings, hose, and nozzle; remove hose, nozzle, and fittings.
- 3) Unbolt the pump from the bung adapter.
- 4) Using a blunt object approximately 4" long (i.e. a deep well socket on an extension) inserted in the inlet opening, push the bypass valve firmly in place against the seat it seals on (Figure 3).
- 5) While holding the Bypass Valve firmly in place with the socket, insert needle nose pliers (at least 4" long) into the outlet opening and grasp the Bypass Valve Retainer (Figure 3).
- 6) Push the Bypass Valve Retainer down slightly and rotate the retainer 90 degrees counter-clockwise. This will align the slot in the retainer with the key on the valve, allowing you to remove the retainer (Figure 4).

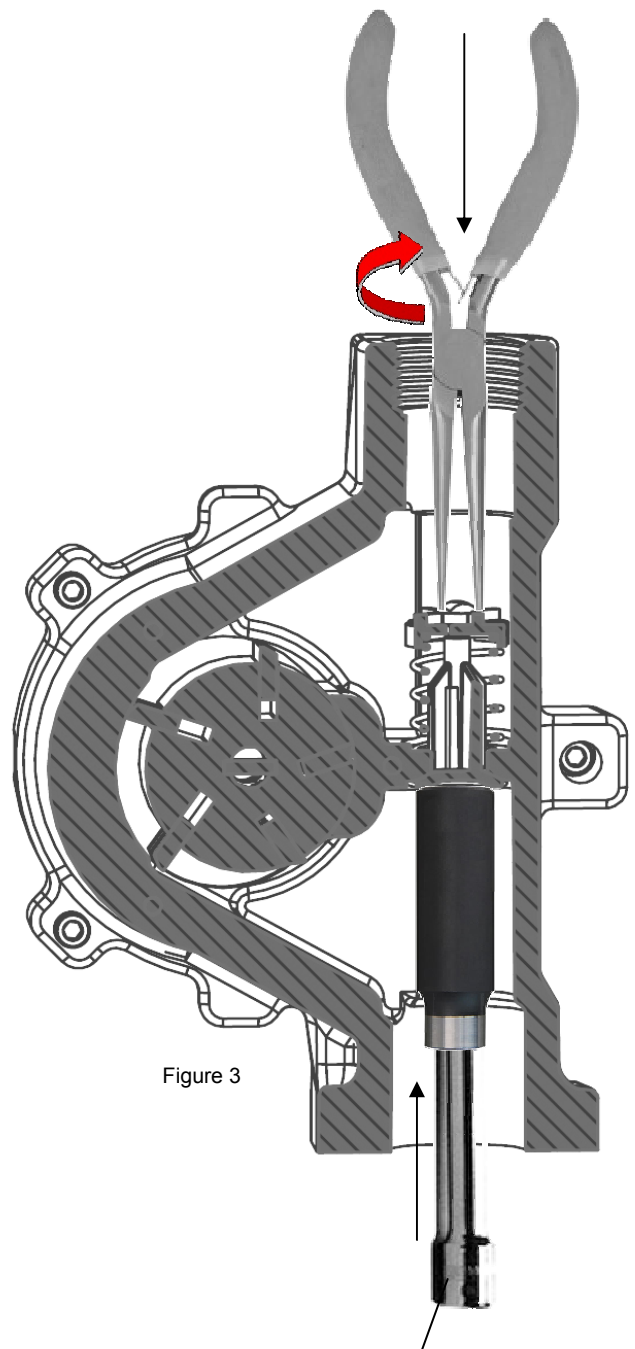


Figure 3

Deep well socket on extension

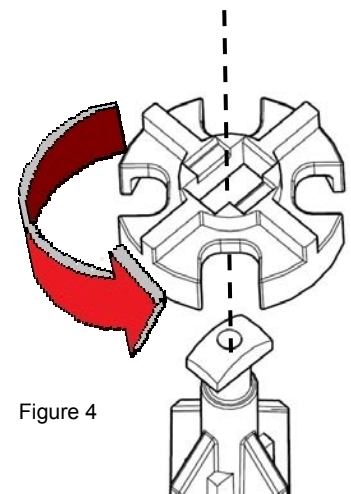


Figure 4

Re-Installation of the Bypass Valve (cont'd)

The Valve Retainer requires a push and turn motion to be installed. Needle nose pliers at least 4" in length are required for this procedure.



IMPORTANT! Use of a small flashlight will help you better see and more easily align the components in this task.



WARNING! Always wear eye protection anytime you look into the Pump Outlet; a miss-positioned or improperly installed Valve Spring Retainer can pop up unexpectedly.

Figure 5

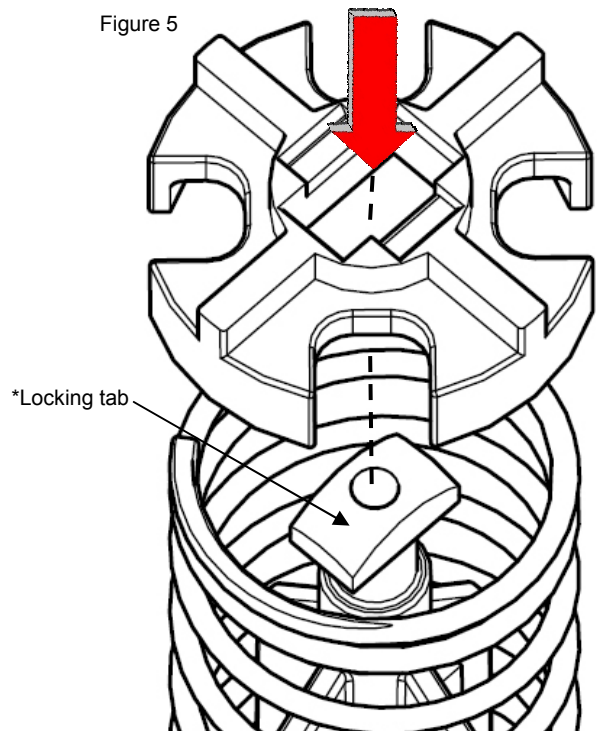
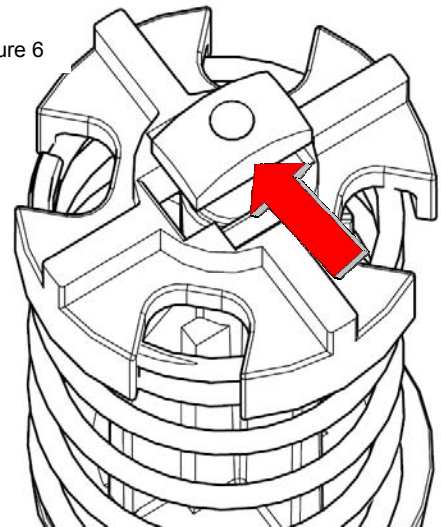


Figure 6



1. Using needle nose pliers, place the Bypass Valve Retainer on top of the Bypass Valve Spring. Carefully align the slot in the top of the Bypass Valve Retainer with the locking tab* on top of the Bypass Valve (Figure 5).
2. Push the Bypass Valve Retainer down over the locking tab on the Bypass Valve. Push the Retainer down (compressing the spring) until it is completely below the locking tab (Figure 6).
3. Rotate the Bypass Valve Retainer 90 degrees clockwise and allow the spring to gently push it back up to contact the locking tab. The locking tab **MUST** be seated in the indentation in the Bypass Valve Retainer (Figure 7).



WARNING! It is critical that the locking tab be seated in the indentation in the Bypass Valve Retainer as illustrated. Failure to do so can cause the Retainer to come off when operating in bypass mode, potentially damaging the pump, or ejecting upward through the pump outlet while servicing.

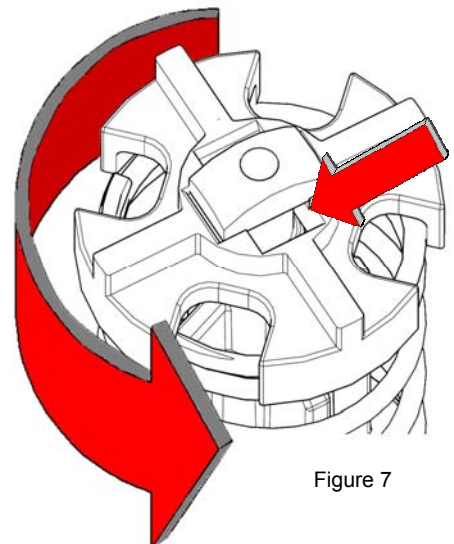


Figure 7