

# How to Replace the Spool Valve O-Rings

## Disassembly and Inspection

1. Remove the End Caps on the Valve Body.
2. Remove the Spool, check for excessive wear. If the new o-rings slide off the spool when it is held upright, the spool is worn out. HLPS part 1317.
3. Using an angled pick, remove the Spool Valve O-rings. Check for wear, usually the center ones will be the most worn.
4. Clean the spool area and especially the o-ring grooves, with a toothbrush.

## Assembly and Testing

1. Install the new Spool Valve O-Rings using an angled tip tool. See picture of install tool. Do not use a sharp pick to install these o-rings, they will likely be damaged that way.
2. You can use the spool as a support to make it easier to install the o-rings. Insert the spool into the valve body so the top end of the spool is level with the lower edge of the center o-ring groove. This will give you something for the o-ring to push against as you are trying to get it in its groove.
3. Install the Spool and End Caps.
4. Apply water pressure to test the pump.
5. You may have to push on the Buttons on the Valve Body to purge the air out of the pump.



Spool O-Ring removal tool. This is a pick tool available at hardware stores. Never re-use o-rings after they have been picked by this tool, they will fall apart.



Spool O-Ring installation tool. This is a dental tool that has a small spoon shape on it, and the spoon has been bent at a 45° angle. Don't use anything sharp to install o-rings.

The spool end gives a surface to push against so the o-ring can seat in its groove easily.

