

Department	HydroLogic		Doc #	SOP – Inlet Solenoid	
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Standard Operating Procedure (SOP); Inlet Solenoid

1. Purpose

The purpose of this SOP is to aid users in the general disassembly, inspection, and cleaning procedure for the HyperLogic Commercial Series Inlet Solenoid. When properly operating, water should not pass through RO while in 'Standby' or 'Tank Full' modes.

2. Applicable To

This SOP is applicable to all HyperLogic Commercial Series RO systems [1-12 membranes] featuring the ¾" Inlet Solenoid; 220 volts.

3. Prerequisites

Ensure you follow all state & federal guidelines for personal workplace safety prior to disassembly and/or maintenance of your HyperLogic equipment and related consumables.

4. Materials/Reference

Suggested tools/materials required for this operation include, but may not be limited to, the following:

- Philips Screwdriver
- Small, fine bristle brush
- Warm, Fresh water & Bucket
- Small Sockets/Wrenches
- Teflon Tape
- Towels

5. Procedure - Replacement

The HyperLogic RO ¾" Inlet Solenoid (220-volt model) is typically located to the right of the grey sediment prefilter housing under the RO. Refer to 'Figure 1'. General steps for replacement of the HyperLogic RO ¾" Inlet Solenoid (220-volt model) are as follows:

- a. Place RO in 'Standby' or disconnect from power. Shut off feed water source to RO.
 - i. Ensure that all Pressure and Flow Gauges on the RO read '0'.
- b. Disconnect solenoid power connector from solenoid body cover by loosening Philips screw and gently pulling upward on the connector. Refer to 'Figure 2'.
- c. Unthread solenoid assembly, remove remaining Teflon tape, and inspect threads for damage.
 - i. Replace threaded Schedule 80 fittings if damage to the threads is present.
 - ii. If threads are undamaged, re-wrap with Teflon tape.

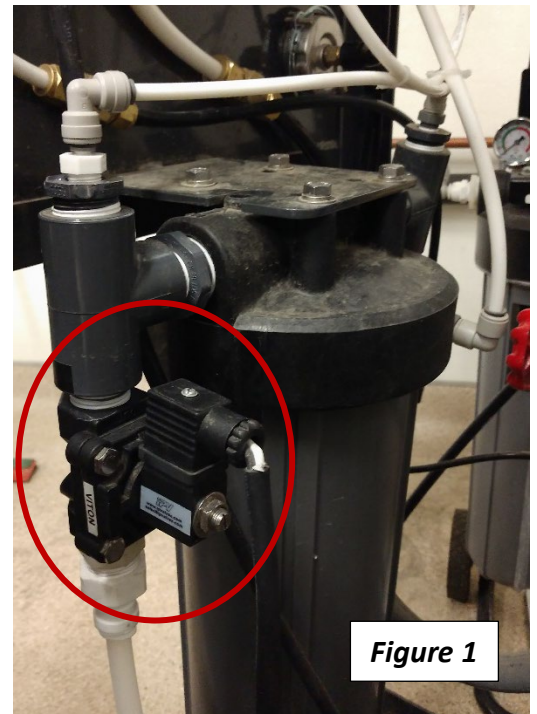
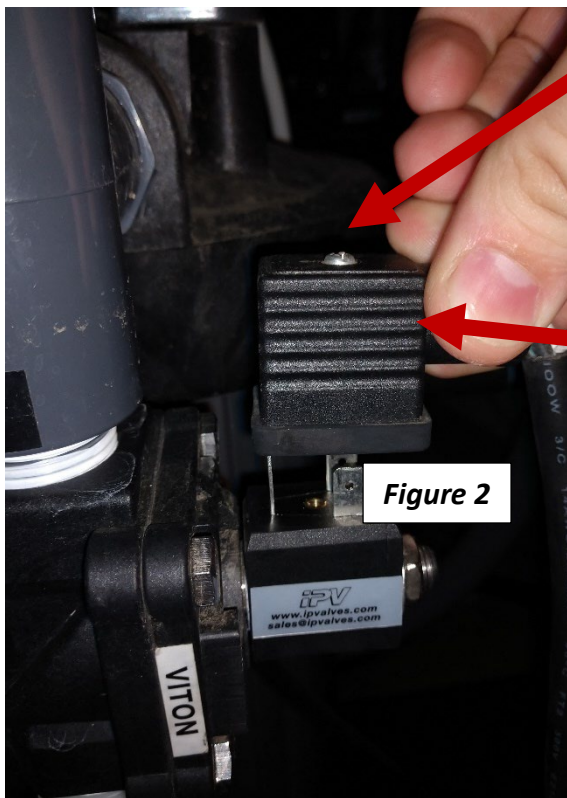


Figure 1

- d. Thread new $\frac{3}{4}$ " Inlet Solenoid into place, noting the direction of flow arrows on the solenoid body.
 - i. Water should flow towards the grey sediment prefilter housing.
- e. Inspect the power connector for signs of corrosion or damage. Additional testing for wiring continuity may be required. Refer to Figures 3 & 4' for additional wiring images within the plug connector. Replace plug and wiring if necessary. Connect the power connector and tighten the Philips screw.
- f. Restore Power and Water to RO. Verify proper solenoid operation.
 - i. With RO in 'Standby,' there should be no water pressure or flow passing the solenoid.
 - ii. With RO in 'Run,' pressure should be visible on the 'Filter In' & 'Filter Out' RO pressure gauges indicating the solenoid has properly opened, allowing incoming source water.
- g. Inspect for leaks and tighten fittings accordingly. Addition of additional Teflon tape to leaking threads may be necessary.



Philips Screw

Solenoid
Connector

Figure 2

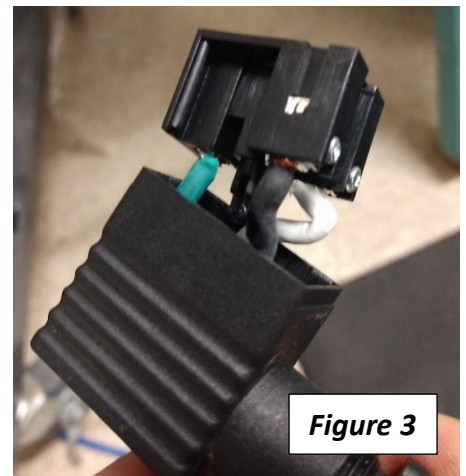


Figure 3

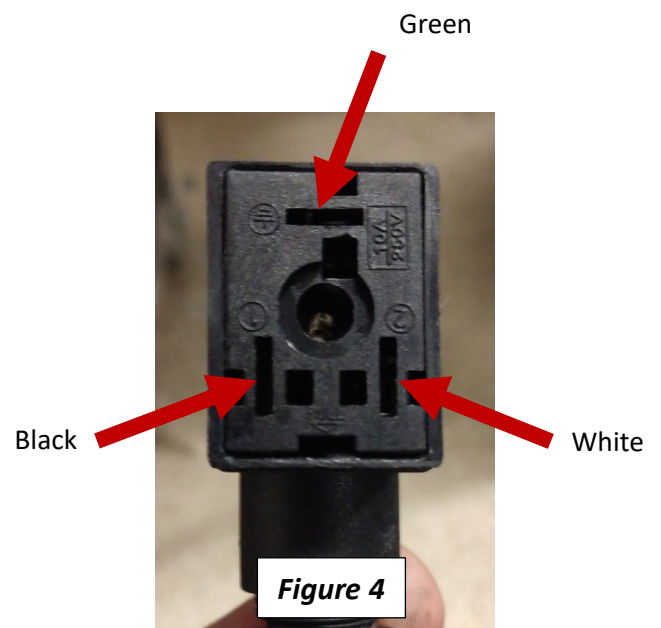
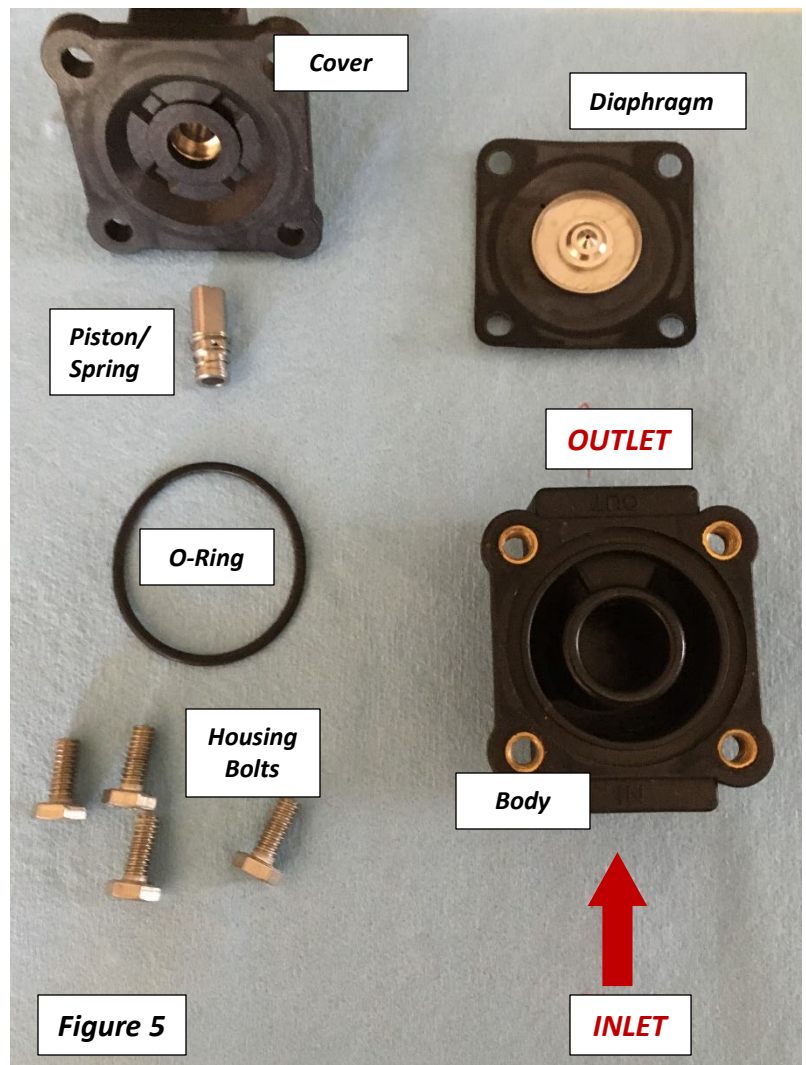


Figure 4

6. Procedure – Cleaning/Inspection

Refer to 'Figure 5'. General steps for disassembly, inspection, and cleaning of the HyperLogic RO ¾" Inlet Solenoid (220-volt model) are as follows:

- a. Place RO in 'Standby' or disconnect from power. Shut off feed water source to RO.
 - i. Ensure that all Pressure and Flow Gauges on the RO read '0'.
- b. Disconnect solenoid power connector from solenoid body cover by loosening Philips screw and gently pulling upward on the connector. Refer to 'Figure 2'.
- c. Remove (4) Bolts securing solenoid cover to solenoid body. Gently separate the cover from the body.
- d. Note direction of diaphragm within solenoid body. The orientation of this will be important during reassembly. Gently remove the diaphragm.
- e. Remove O-ring. Remove piston/spring from cover & note direction of assembly while removing as this will be important during reassembly.
- f. Gently clean all components with warm, clean water. Pay special attention to the bore inside the cover where the piston/spring reside. The piston must be able to slide freely within the bore once cleaned.
- g. Apply a thin coat of food grade silicone grease to the O-ring & reinstall.
- h. Reinstall piston/spring.
- i. Reinstall diaphragm.
- j. Align cover to body and gently tighten all 4 bolts in a crisscross pattern until snug.
- k. Reinstall plug & secure accordingly.
- l. Restore Power and Water to RO. Verify proper solenoid operation. If solenoid is still malfunctioning, refer to the steps above to replace.



END OF SOP DOCUMENT