SOL-1440 Service Instructions

I. Introduction

SOL-1440 is a two stage electro-mechanical pilot operated solenoid valve. The first or pilot stage is direct acting, controlled by energizing or de-energizing the pilots' 12V coil. Opening the pilot stage evacuates the reference cavity on the backside of the second stage or main diaphragm. This then creates a pressure imbalance on the diaphragm causing the second stage to open and allowing air to flow through the valves' main passage way. De-energizing the pilot allows the second stage diaphragm reference cavity to equilibrate pressure across the diaphragm, allowing the diaphragm return spring to shut the valves' main passage, stopping flow.

Providing reasonable care and cleanliness standards are maintained, the valve should provide many years of trouble free operation. Should the need for disassembly and inspection and/or maintenance be required, the following instructions are provided to guide you through the necessary steps.

II. Disassembly

1. Remove the six 5/16 Allen Head Cap Screws that hold the Solenoid Cap the Solenoid Body using a ¼-in Allen wrench.
2. Separate Solenoid Cap from Solenoid Body.
3. Remove Diaphragm Return Spring and Diaphragm/Diaphragm Seal assembly.
4. Remove Nut that retains Solenoid Coil to Solenoid Cap using CAS wrench P/N WR-SOL-1440-1.
5. Remove Solenoid Coil Assembly from Solenoid Cap.
6. Loosen and remove Solenoid Tower from Solenoid Cap using CAS wrench P/N WR-SOL-1440-1. Refer to Figure 1.
7. Clean all components with a mild solvent such as mineral spirits. Dry with compressed air.

Note: Do not attempt to remove Solenoid Tower by grabbing the Towers' shank with pliers. This will damage the tower irreparably.

II. Disassembly Cont'd

Figure 1

III. Inspection

1. Examine Solenoid Plunger face for damage or debris. The face of the Plunger Seal will likely have a small indentation where the Seal rests against the Pilot Seat, this is normal. Refer to Figure 2.

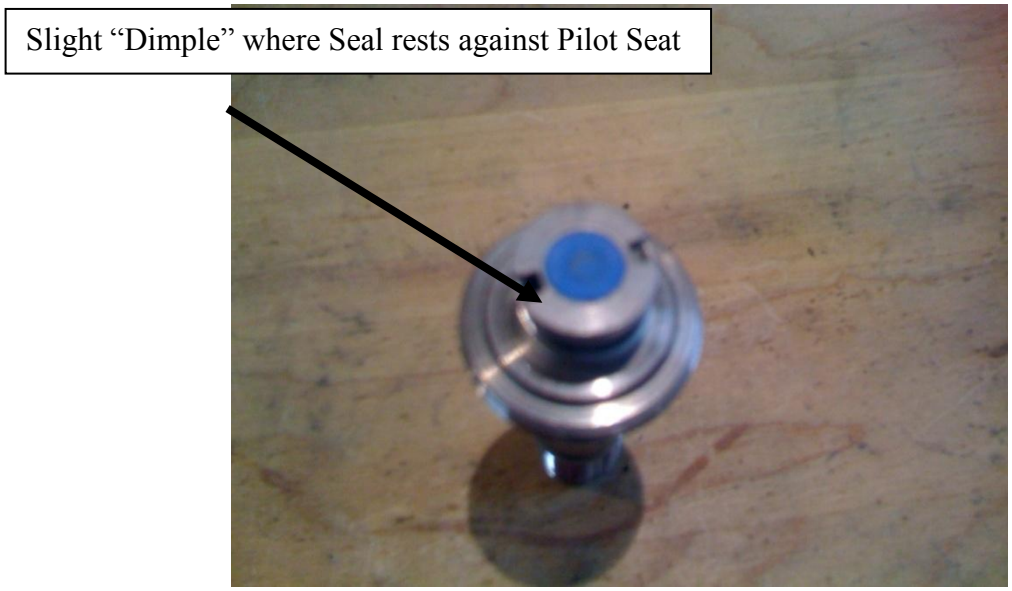


Figure 2

III. Inspection Cont'd

2. Examine Diaphragm for tears, cuts, debris or other damage.
3. Diaphragm Guide should easily slide into and out of the Receiver Bushing in the Solenoid
   Cap. Examine fitment for proper operation
4. Replace damaged or worn components.

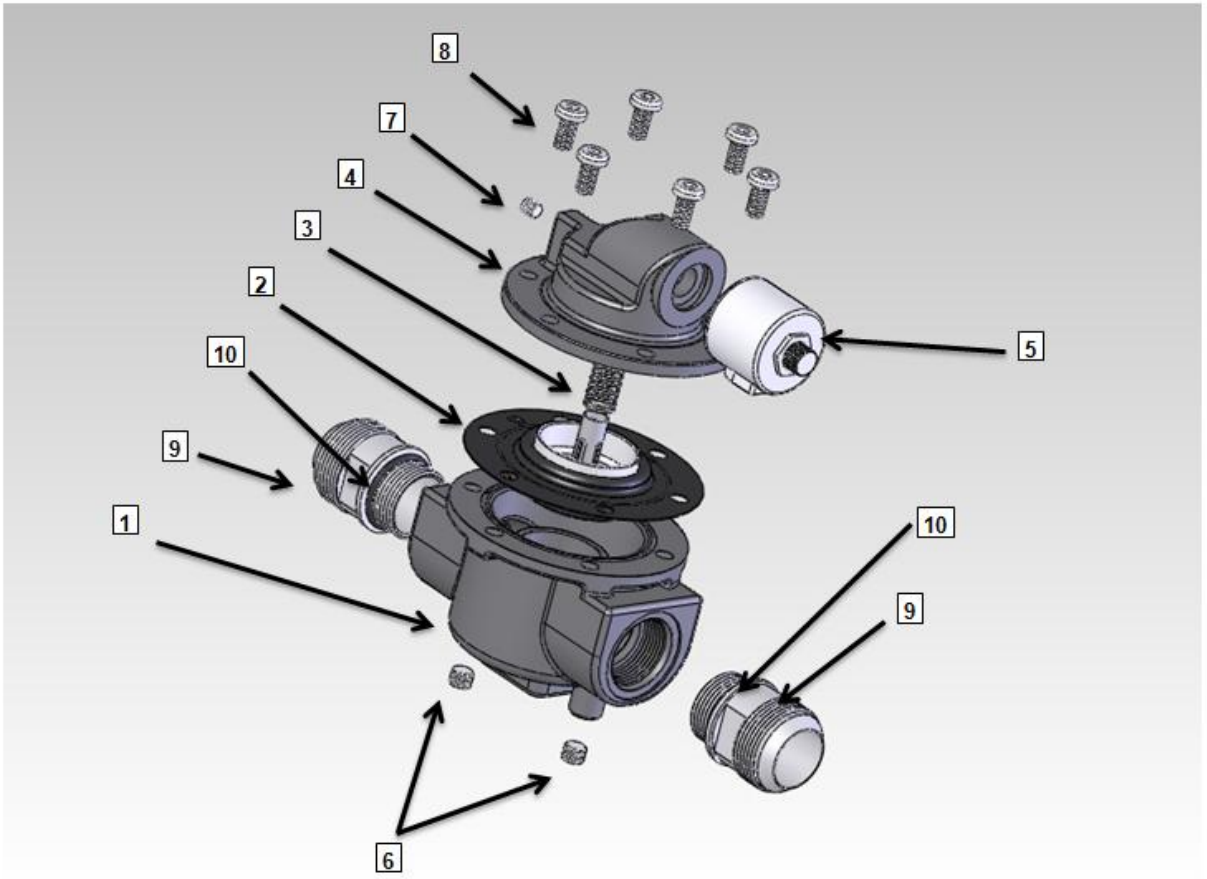
IV. Re-assembly

1. Place Pilot Plunger Tower O-Ring in Solenoid Cap receiver.
2. Place Pilot Plunger Return Spring on Pilot Plunger and insert in Solenoid Tower.
3. Thread Solenoid Tower into Solenoid Cap. Secure using WR-SOL-1440-1.
4. Install Solenoid Coil Assembly on Solenoid Tower/Solenoid Cap assembly.
5. Secure Solenoid Coil with Nut.
6. Insert Diaphragm Assembly in Solenoid Body.

Note: Make sure that molded O-rings on Diaphragm align with receiver grooves in Solenoid Body. Misalignment will result in an inoperable component.

7. Place Diaphragm Return Spring on Diaphragm Guide.
8. Align Solenoid Cap with Solenoid Body and Diaphragm Guide, Slide into place.
9. Install six 5/16-in Cap Screws and Secure Solenoid Cap to Solenoid Body.

Service Documentation
SOL-1440



1	SOL-1440-1M-R Solenoid Body
2	SOL-1440-2-S Diaphragm Assembly
3	SOL-1440-6-R Spring
4	SOL-1440-3-S Solenoid Cap Assembly
5	SOL-1440-4-R Solenoid Coil & Plunger Assembly
6	FST-1-8NPT-PL-R Pipe Plug
7	FST-1-16NPT-PL-R Pipe Plug
8	FST-.31-18-.62BHC-R
9	FIT-16MB-20SAE-R
10	SL-3-916-R O-Ring

DATE	Revision	Description	Comments
2/29/2016	A	Production Release	

Serviceable Components