Change Order #1124

Lee Solenoid Valve Installation Guide

Unlimited Distribution:
Unlimited distribution.

CAGE CODE 92555

Revision Status

Sheet	Revision	Date	By	Approved	Description
1 - 3	A	1/12/06	M. Faust	B. Brelig	Initial Release.
1 - 8	B	6/25/07	M. Faust	B. Brelig	Complete update.
1 – 8	C	12/13/11	A. Henry	B. Brelig	Steps 1 & 4, Photos Text & Torque Values
1 - 8	D	5/22/17	T. Dumas	B. Brelig	Figures 1-3 added, No retainer instructions added
1 - 5, 7	E	6/27/17	T. Cleveland	B. Brelig	Updated steps 1, 2, and 4.
1 - 9	F	10/28/19	D. McCulley	B. Brelig	Updated step 2 with retainer nut instructions and photos. Added flange mount photos. Reformatted document

Lee Solenoid Valve Installation Guide

Step 1: Orient the MultiSeal so you can see the control port hole through an opening in the side of the seal, but not the return port (if solenoid valve is a Standard 3-way). The annulus MultiSeal only shows a small amount of the lower return port upon installation. The MultiSeal should be free to slide on the valve body and not expanded onto the taper of the valve body at this time. Some valve bodies have slots that accept the MultiSeal in the correct orientation.

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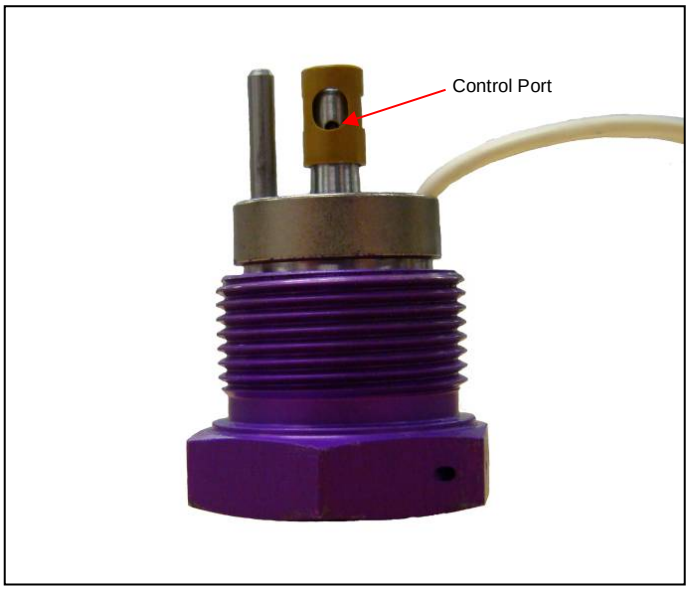


Standard 3-way. Notice C-port partially covered. R-port on reverse side hidden.

2-way High Flow. Notice large C-port shown, small vent-port partially covered.

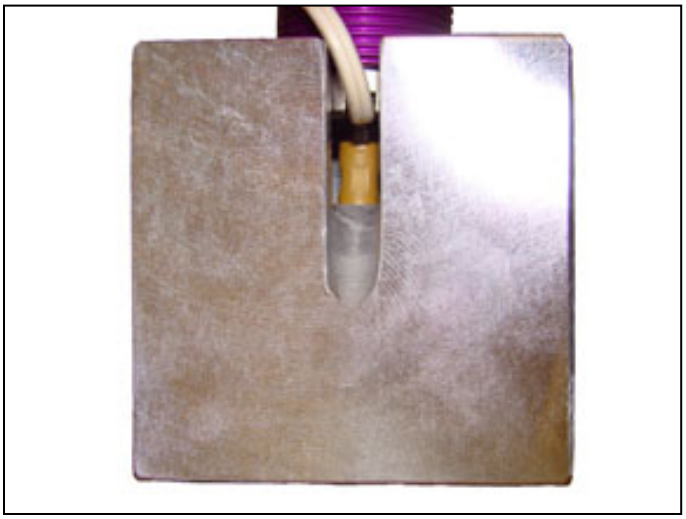
Annulus Seal. Notice only a small portion the R-port can be seen. The C-port covered and between the two openings the seal.

3-way High Flow. C-port shown. R-p on reverse side covered by the MultiSe

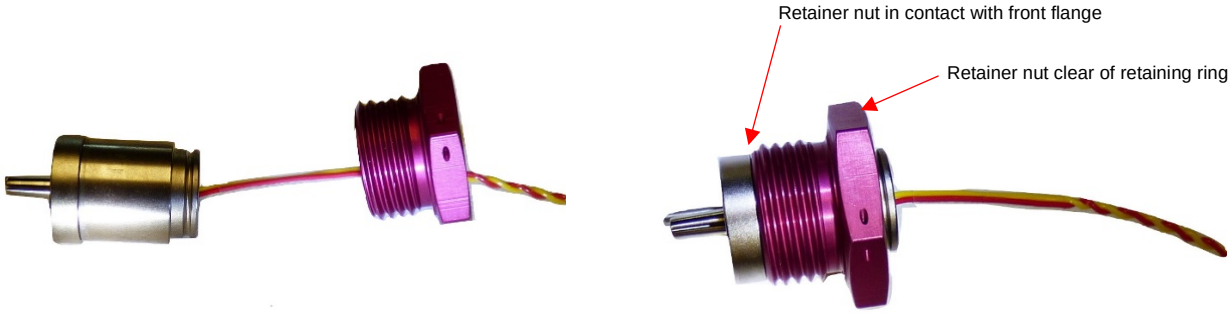
Many Lee MultiSeals are made with a hygroscopic material. When left exposed, these MultiSeals will absorb moisture. Moisture absorption can cause the MultiSeal and the solenoid valve to be difficult to install. Care should be taken to install the solenoid valve within 8 hours after its removal from the packaging. Anytime the solenoid valve is uninstalled, the MultiSeal should be stored in a sealed container with desiccants until it is ready for use.

Step 2: Install the solenoid valve into an installation hole free of contamination. The installation hole should be dimensionally correct to Sheet 2 of The Lee Company drawing for the appropriate valve. Be sure the locating pin is aligned with its hole.

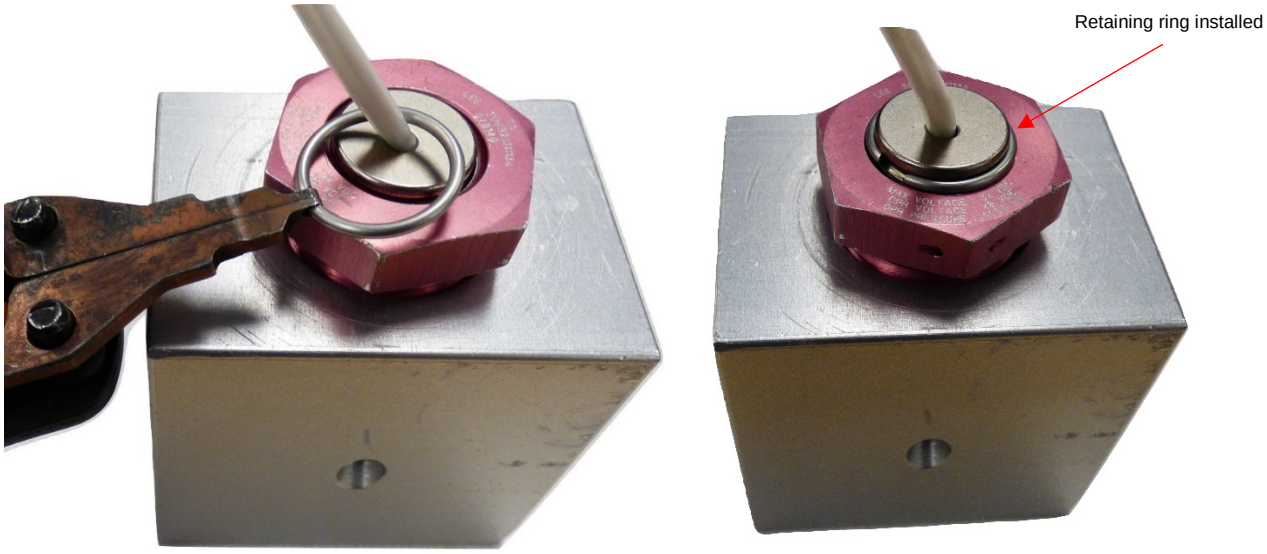
The MultiSeal should not be forced into the installation hole at this time. Notice the cutaway view showing the MultiSeal not fully engaged in its hole. The MultiSeal will become installed during the tightening of the retainer.



While not required for proper installation, the MultiSeal and installation hole may be lubricated with the system fluid as an aid to installation.

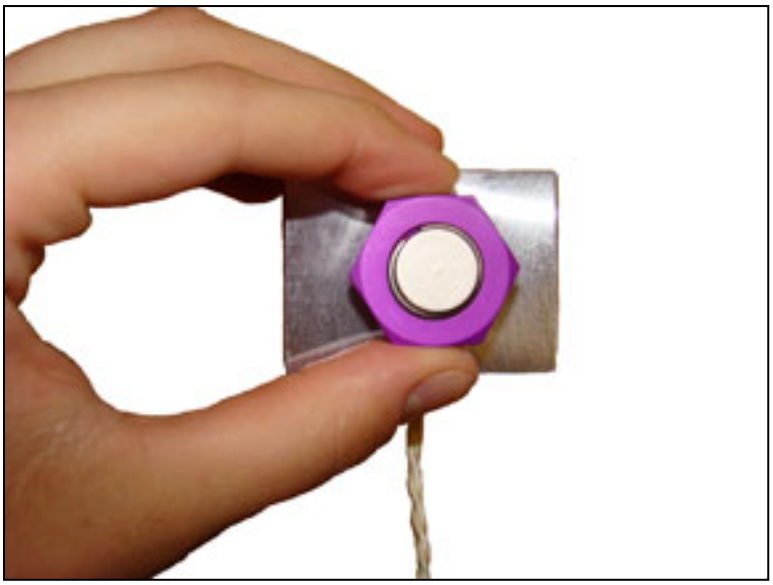


If the solenoid valve has an uninstalled retainer nut included, it should be installed now. If the lead wires exit the rear flange, thread the wires through the retainer nut. Slide the retainer nut onto the solenoid valve until it is firmly seated against the front flange and has cleared the retaining ring groove. The images above show the SOV removed from the installation hole for clarity.

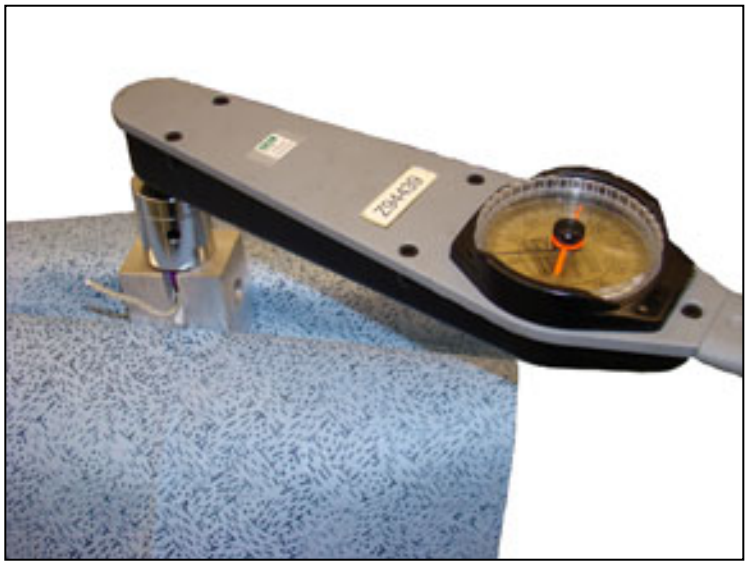


Install the retaining ring using lock ring pliers to secure the retainer nut in place. The retainer nut should be able to rotate freely.

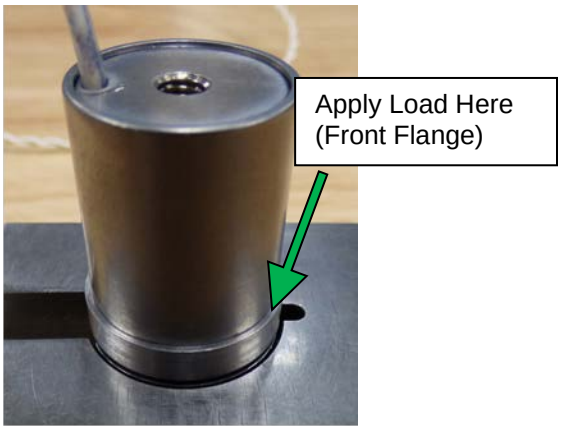
Step 3: Hand tighten the retainer as much as possible to engage the threads of the retainer with the threads of the installation hole. Be sure that the threads of the retainer are not cross threaded. If no retainer is present, proceed to Step 4.

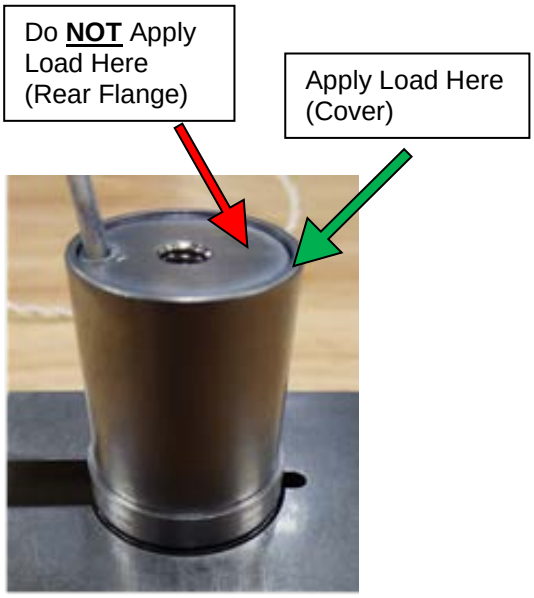


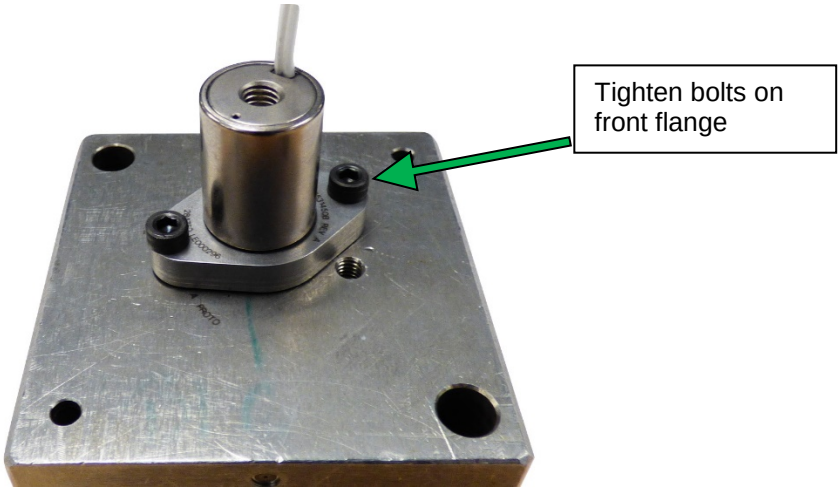
Step 4: Torque the retainer to the specification listed on Sheet 3 of The Lee Company drawing (typically 25-35 ft-lbs) as shown below. Tolerance for the torque value listed on Sheet 3 is -0 ft-lbs, +5 ft-lbs.



If no retainer is present, apply 1000 lbf. (-0 lbf, +100 lbf) axially to the front flange. See below. If this is not possible, apply force to rear of cover, but do not press on rear flange. See below. Tighten bolts on flange to retain the force on the solenoid valve.







Step 5: Lockwire may be used to secure the retainer to the installation hole. Valve installation is complete. Notice the face of the hex on the retainer is not in contact with the manifold.

Note: As an option and where applicable, an O-ring can be added to the groove above the threads on the retaining nut. The purpose of this O-ring is to protect the threads from the environment and is NOT meant as a secondary hydraulic seal. The correct O-ring for the application is noted on the part drawing.