22147-1
22150-1

Fisher Engineering

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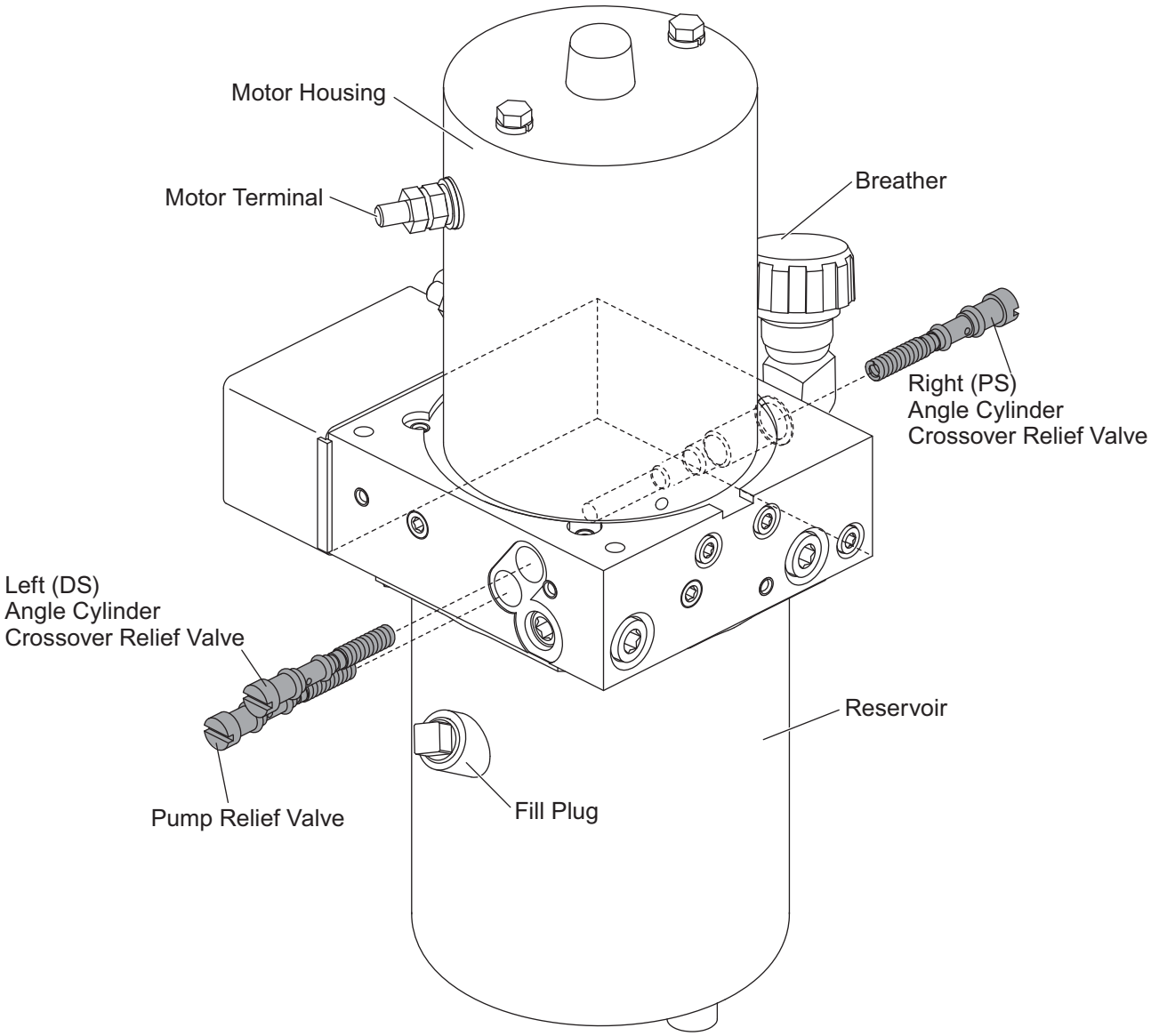
Valve Manifold Assembly Instructions



Crossover Relief Adjustment

1. The crossover relief settings of this valve manifold are adjusted for use on LD, SD and Compact Series and Commercial and MC Series snowplows.

2. If this manifold assembly is to be used on a RD or HD Series snowplow, the crossover relief valves need to be adjusted.

3. To adjust the relief valves for use with a RD or HD snowplow turn the crossover relief valves clockwise until they are fully seated. *Do not use excessive force.*

4. Back off the valve counterclockwise 1-1/2 turns.

Installing SAE O-Ring Fittings

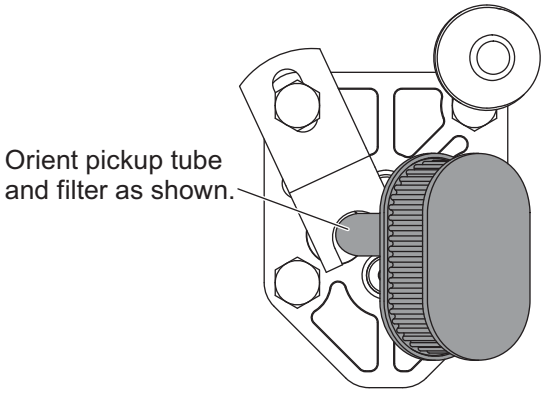
1. Turn jam nut on fitting as far back as possible.

2. Lubricate O-ring with clean hydraulic fluid.

3. Screw fitting into port by hand until the washer contacts port face and shoulder of the jam nut threads.

4. Unscrew fitting to proper position—no more than one full turn.

5. Using two wrenches, hold fitting body in position and tighten jam nut until the washer again contacts port face, then tighten an additional 1/8–1/4 turn to lock fitting in place.



Manifold Assembly

1. Install the steel return tube by inserting the flared end into the manifold. Tap the tube gently with a hammer until the end of the flare is flush with the surface of the manifold.

2. Use pliers to install the return screen assembly.

For 22150-1 Valve Manifold Assembly:

3. Thread the hydraulic cartridges in to the proper hole and tighten to a torque of 115–125 in-lb.

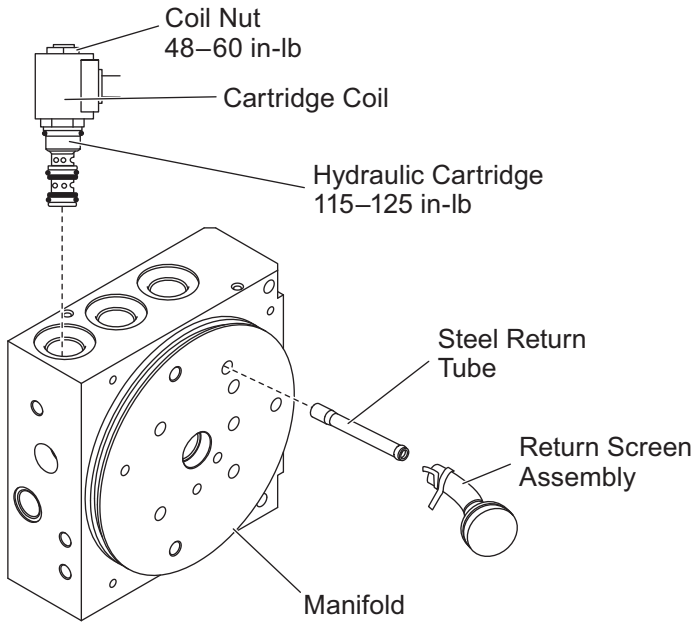
All Kits:

4. Install the Cartridge Coil and Coil Nuts. Torque the coil nut to 48–60 in-lb.

5. Install the new pump O-ring and bolt the pump to the manifold as shown. Use existing fasteners and tighten to 150–160 in-lb.

6. Install the new reservoir O-ring and reservoir. Tighten reservoir screws to 30–35 in-lb.

7. Fill the unit to the specified level with FISHER® Hydraulic Fluid.

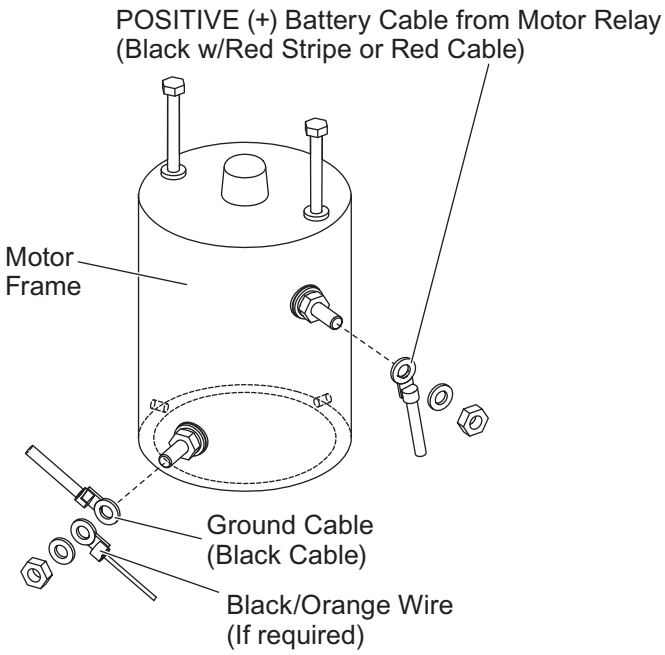


Replacement Motor Installation

1. Assemble armature and washers into the motor frame as shown in illustration below. Do not allow armature to slip out of motor frame. Washer placement is critical.

2. Fasten motor to manifold and tighten to 55–65 in-lb.

3. Connect all cables as shown in illustration at right and secure to 50–60 in-lb.

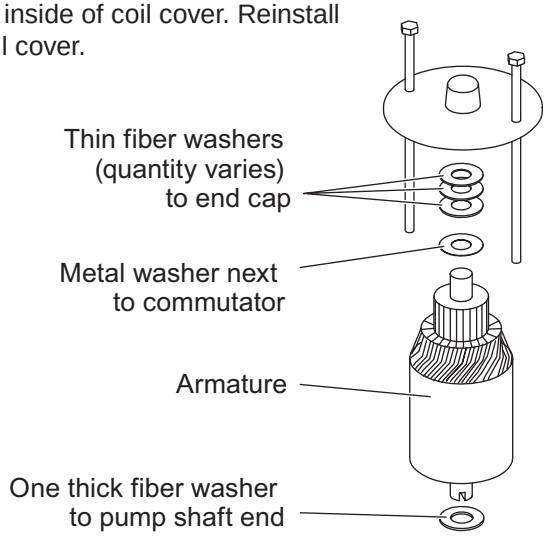


⚠ CAUTION

Operating the unit without fluid in the reservoir will damage the pump. Ensure that reservoir is filled before testing operation.

4. Ensure that the hydraulic reservoir is filled before actuating motor.

5. Reattach coil wires per diagram on inside of coil cover. Reinstall coil cover.



Fastener Torque Chart		
Fastener	**Size**	**Torque (in-lb)**
Pump Cap Screws	5/16"-18 x 2-1/2" **with** Flat Washer **or** 5/16"-18 x 2-1/4" **without** Flat Washer	150–160
Motor Terminals	5/16"-24 Nut	50–60
Motor to Manifold Cap Screws	1/4"-20 x 6-1/4"	55–65
Reservoir Screws	#10-24 x 5/16"	30–35
Hydraulic Cartridges	7/8" Hex	115–125
Coil Nuts	3/4" Hex Jam Nut	48–60
Cartridge/Coil Cover Screws	#8-32 x 1/2"	15–20
Manifold Mount Bolts	1/4"-20 x 3"	105–115

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