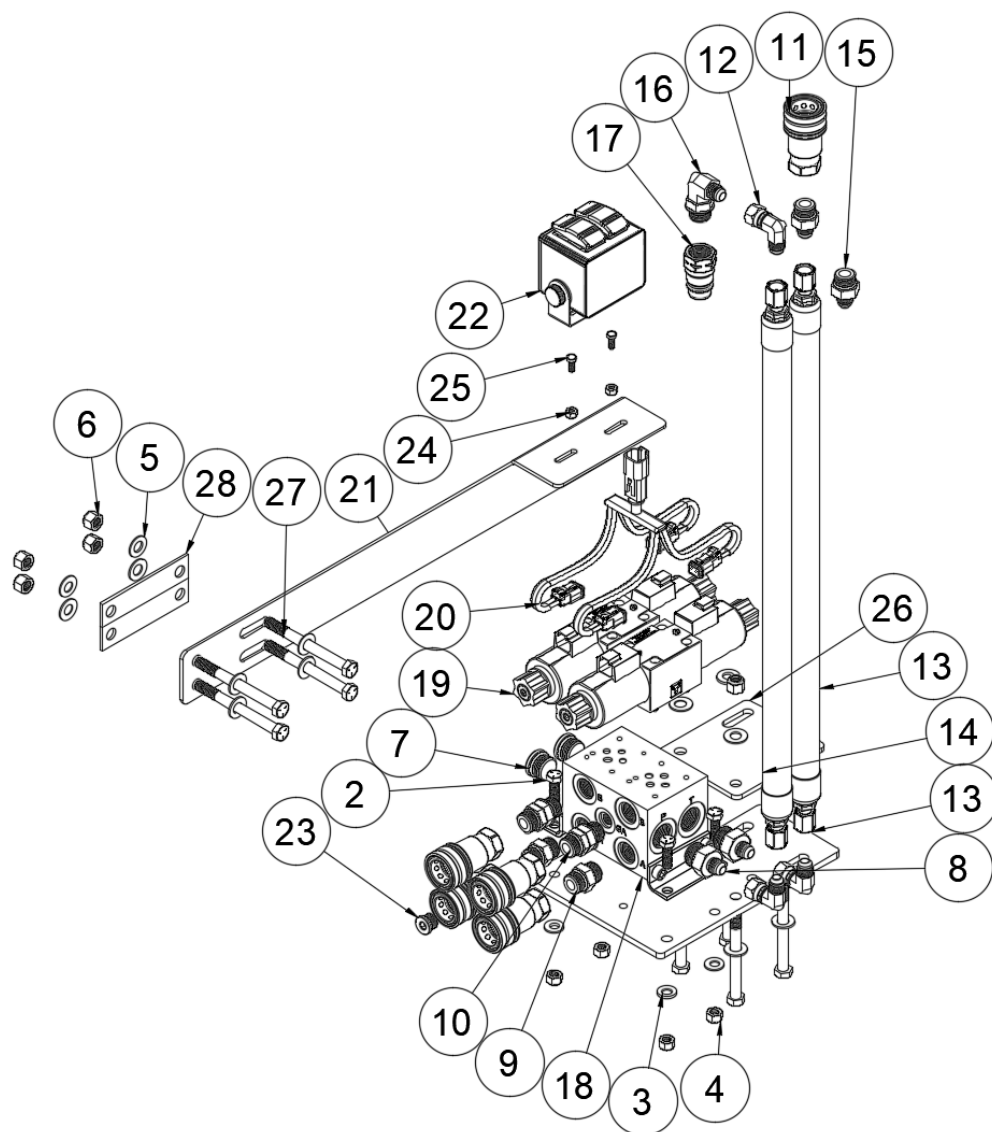


# Electric Rear Remote Valve Kit

## Installation Guide



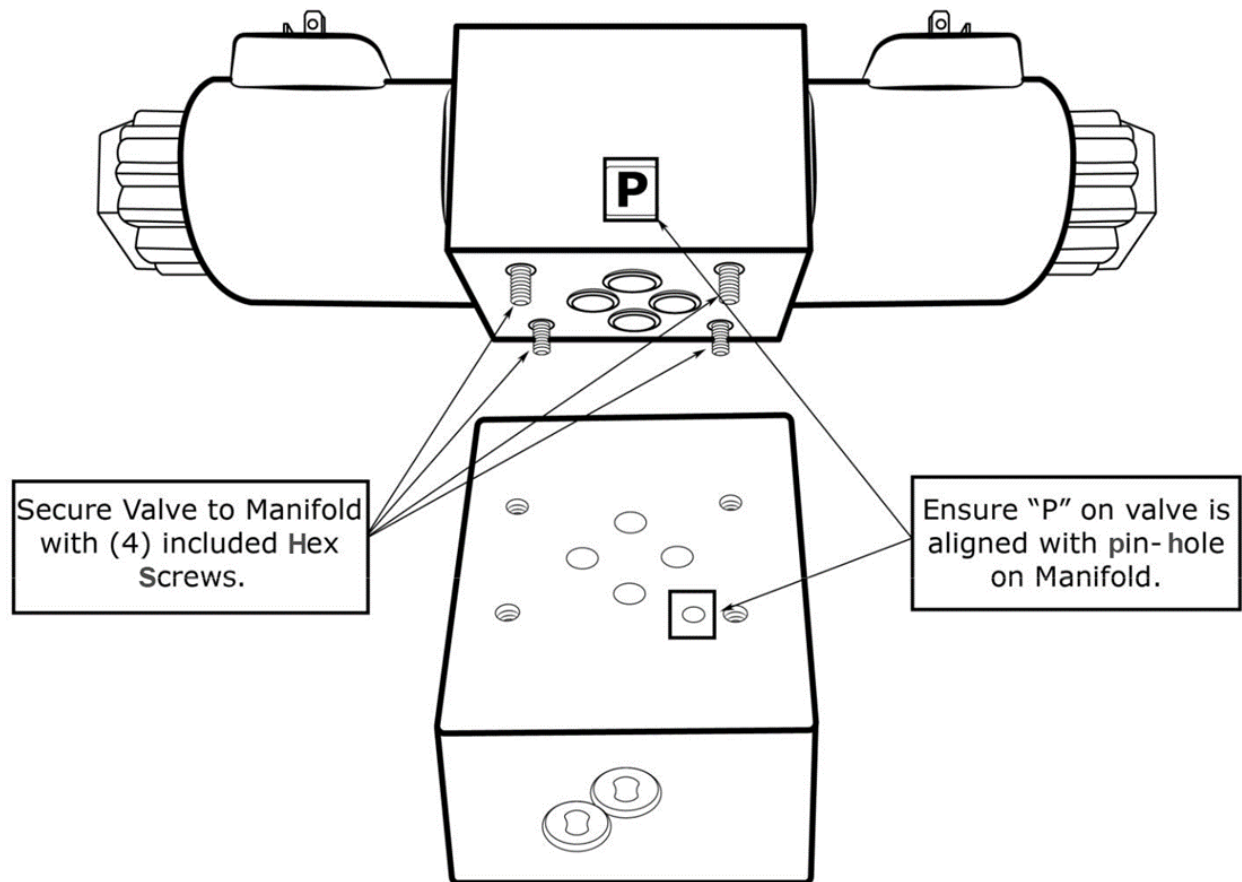
**Fitment:** Universal Fitment (3" ROPS) **Part Number:** EVK2-3



### EVK2-3

PARTS LIST			PARTS LIST			PARTS LIST			PARTS LIST		
ITEM	PART NUMBER	QTY	ITEM	PART NUMBER	QTY	ITEM	PART NUMBER	QTY	ITEM	PART NUMBER	QTY
1	HW077	1	8	6400-06-10-FG	2	15	6400-06-08-FG	2	22	SW-2RM	1
2	HW026	4	9	N08S-08S	2	16	6801-06-08-FG	1	23	6409-06	1
3	HW008	4	10	3474-08-08-FG	2	17	AG12M-08S	1	24	HW075	2
4	HW007	4	11	AG12F-08S	5	18	D03S2-08S	1	25	HW076	2
5	HW011	16	12	6500-06-06-FG	3	19	D03W-2A-12V	2	26	BR006	1
6	HW010	8	13	H06-06FJ-30	1	20	SW-A-13	1	27	HW072	8
7	6409-10	2	14	H06-06FJ-36	1	21	HW068	1	28	HW071	2

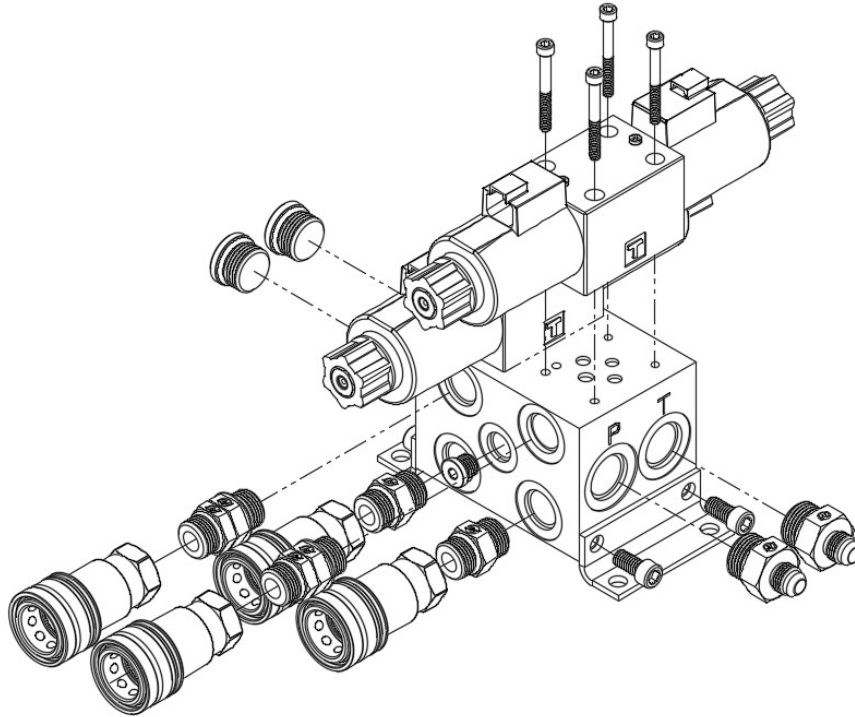
**NOTE:** **Remove and discard** cardboard seal on valve (held in place by 4 yellow plastic inserts) before attaching baseplate as shown below.



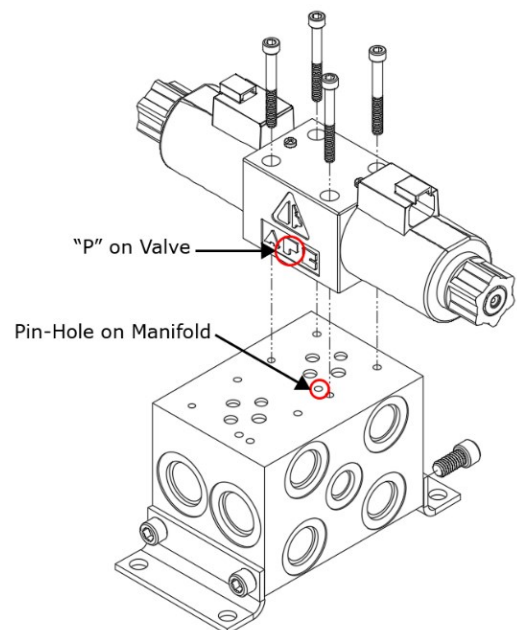
(4) Hex Screws Torque Specs: **10 ft-lbs.**

## Valve Assembly

1. Lubricate all threads and O-Rings with hydraulic fluid before installing fittings into the manifold valve. All ports are SAE/O-Ring Boss Thread. Do not use Teflon tape or pipe dope.  
Suggested torque settings: #6 SAE: 17 to 21 ft-lbs; #8/#10 SAE: 30 to 35 ft-lbs

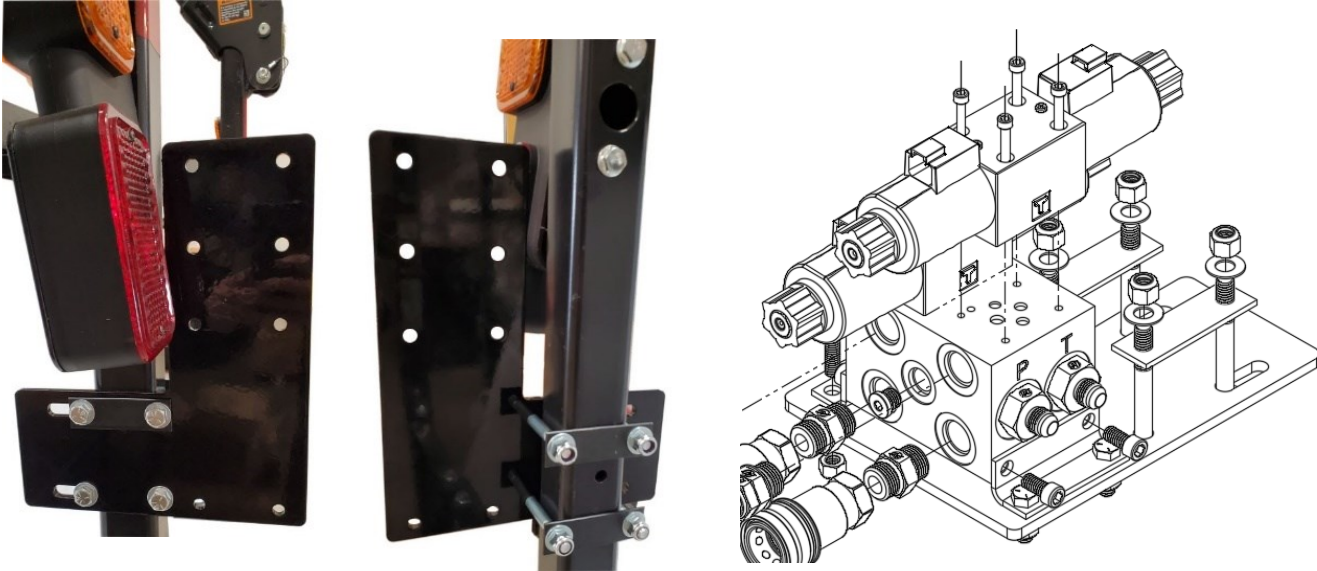


2. Install #10 SAE Plugs (#2) into T & P Ports on manifold
3. Install #6 SAE Plug (#3) in GA Port on manifold
4. Install #8 SAE to SAE short adapters (#4) in the A Ports on manifold
5. Install #8 SAE to SAE long adapters (#5) in the B Ports on manifold. The side with the washer will face the valve. These are used to give clearance for the female quick coupler sleeve and valve solenoid.
6. Install loop of Female Dust Caps on body of Female Quick Couplers (#6) before installing onto SAE adapters
7. Install Female Quick Couplers to SAE short adapters
8. Install Female Quick Couplers to SAE long adapters
9. Install #10 SAE to JIC adapter (#7) to P & T Ports on manifold
10. Install Valves (#8) to Manifold (#1)
  - a) Remove protective cardboard from bottom of each valve
  - b) Ensure O-Rings on bottom of valve do not come loose
  - c) Ensure "P" on valve is aligned with Pin hold on Manifold
  - d) Install 4 bolts on each valve using a 5/32 Allen Head driver



## Valve Mounting

Valve Mounting can be mounted in several orientations and it will not affect functionality. The included bracket will allow mounting for either side of the ROPS bar and is dependent on operators' preference. We recommend installing the Valve on the Left ROPS bar for better visibility.



1. Mount Valve Bracket (#10) to ROPS Bar using 4 Long Hex Bolts, Washers, Locknuts and Bracket Back Plates.
2. Install L-shaped manifold brackets to each end of manifold using included lock washers and Allen head screws (#15).
3. Align mounting holes on Valve Assembly to Valve Mounting bracket and attached with Hex Bolts and Lock Nuts.

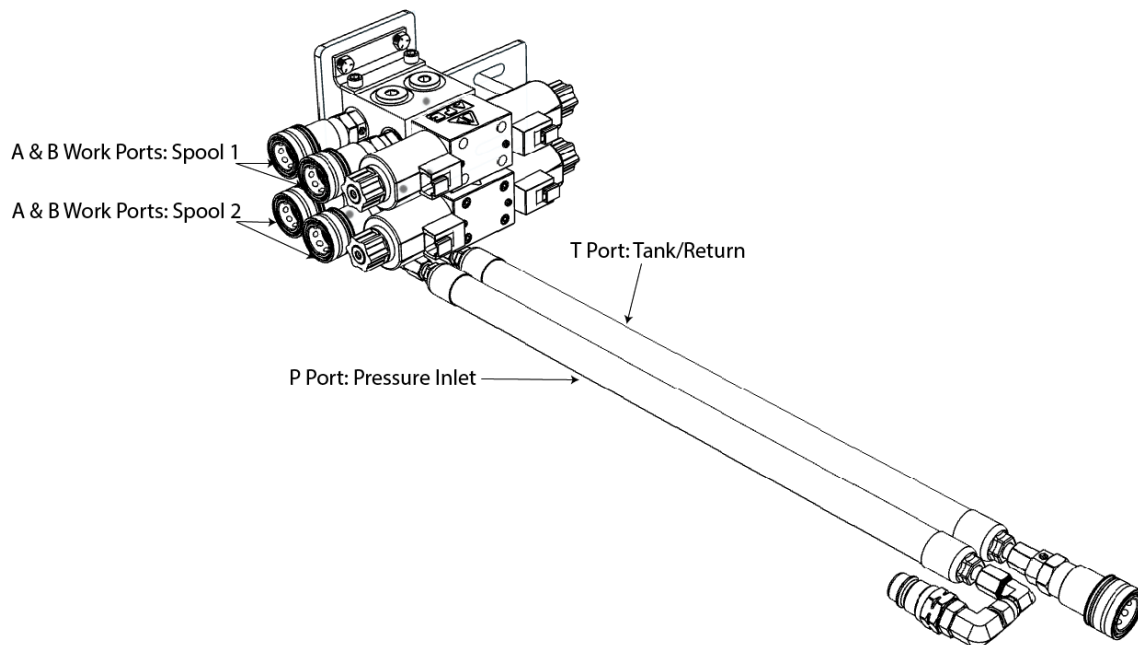
## Hydraulic Connections

1. This valve is designed to be used on an open center hydraulic system with less than 15 GPM of continuous flow.
2. The fittings we have included with this kit will allow you to plumb up the valve to a tractor that has a power beyond loop with ½" ISO 5675 couplers already installed.
3. If you do not have a power beyond loop with couplers installed on your machine, you can still plumb this valve directly to the power beyond on your tractor. However, you may need longer hoses / different size fittings depending on where your power beyond is located and the threads on the Power beyond and Tank/return ports.

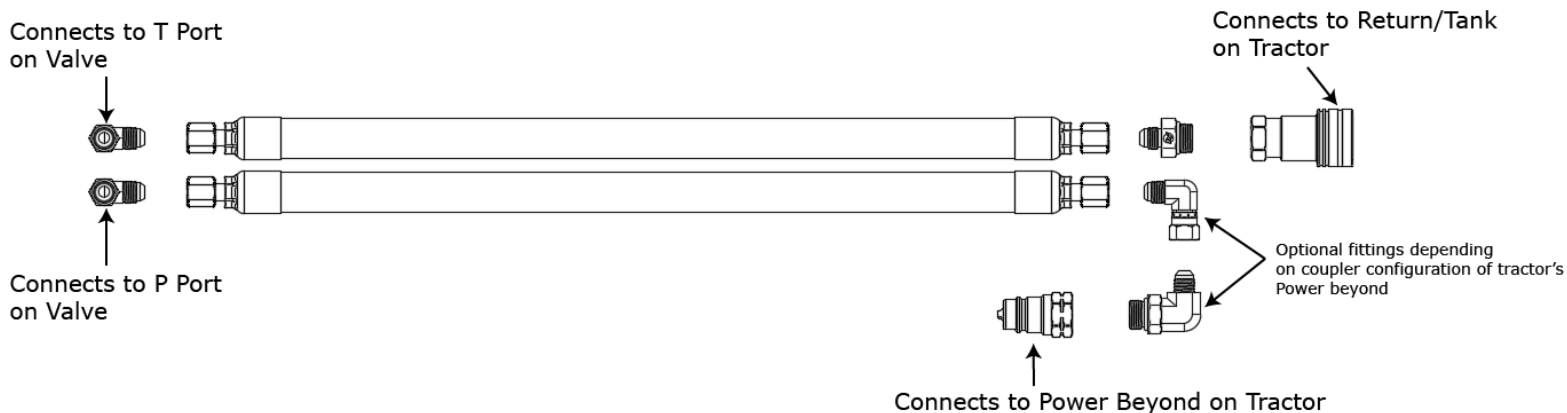
**P Port:** Connects to Inlet Pressure on machine

**T Port:** Connects to Tank/Return on machine

**A & B Work Ports:** Connect to Cylinders



## Hose Assembly



Included are extra adapter fittings to accommodate two different Power Beyond connection setups.

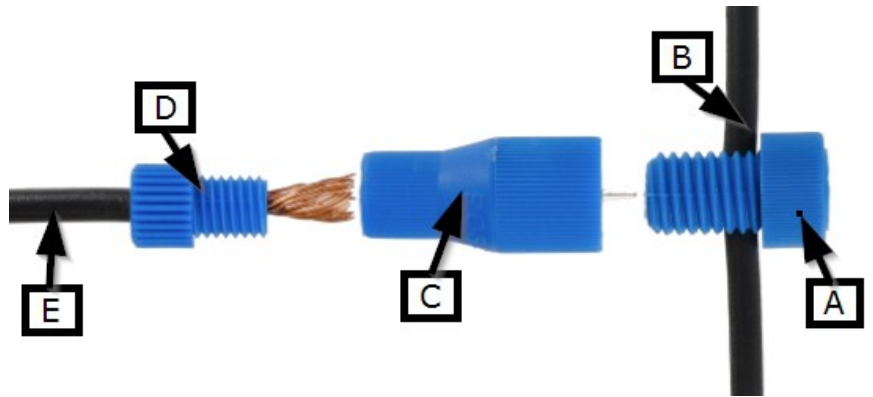
1. If your female Power Beyond coupler faces the ground, use the optional elbow fittings shown in the figure above.
2. If your female power beyond coupler faces the straight out the rear of your machine, use the extra straight #8 SAE to JIC adapter instead of the optional elbow fittings.

## Electrical Installation

1. Mount switch bracket to ROPS in similar fashion to how the valve bracket was mounted.
2. Attach switch to switch bracket using included hardware.
3. Route primary power (RED) and ground wire (BLACK) and cover using included wire loom. Electrical routings are up to your discretion.
  - a. It should be routed under the tractor operator station.
  - b. You may need to remove some covers from the operator station to determine best routing path
  - c. Ensure no wires can come into contact with moving parts. Use included zip ties to secure wires.
4. RED wire should either connect to battery (use included in-line fuse and Ring Terminal) or to fuse panel (use add-a-fuse adapter).
5. BLACK wire should be grounded by attaching to tractors frame using included Ring Terminal Crimp.
6. Route and connect valve harness and connect to valves. The valve harness has different length leads. The leads with the same length connect to each side of a valve.

### Posi-Tap Connectors Detail:

1. Slide the large cap (A) over the wires (B).
2. Carefully thread the large cap (A) onto the Posi-Tap body (C). Ensure the pin is centered on the wire. Keep the Posi-Tap straight, and thread until the wire is tightly tapped.
3. Using a wire stripper. Strip 1/2-inch worth of wires (E).
4. Unscrew the cap (D) from the Posi-Tap body (C).
5. Insert the strand of 1/2-inch stripped wires (E) through the cap. Ensure all of the strands are completely through the wires.
6. Twist the strand of 1/2-inch stripped wires in a rotational motion.
7. Insert the wire strands into one side of the metal core inside of the Posi-Tap body (C).
8. Push and turn the cap (D) until the thread are engaged. Tightly turn by hand until the cap sits flush with the Posi-Tap body (C).



## System Operation

1. In neutral state, fluid will flow in the "P" port and out of the "T" port with full pressure & flow, allowing the power beyond circuit to connect back to the hydraulic pump.
2. When the switch is pressed and held, fluid will flow out of the respective "A" or "B" work port, either extending or retracting that hydraulic cylinder.
3. When the switch is released, that cylinder will stay in the position it was set to until the opposite switch/solenoid is activated, thereby retracting that cylinder.

## Maintenance

As with any pieces of equipment, periodic maintenance will help provide longer life and trouble-free operation of your valve.

1. Periodically inspect those electrical connections which are exposed to the elements for signs of corrosion or other damage.
2. Replace any terminals that look as if they might fail in the field.
3. Inspect the cable connecting the switch to the valve.
4. Normal operation over time can cause a cable to move to a dangerous area. If the cable is in any danger of being crushed or cut, move it to a safer area and secure it.
5. Check the hydraulic hoses connected to the valve.
6. Wipe the body of the valve off and look for leaks. Tighten or replace any fitting you suspect of leaking. Inspect the hydraulic hoses for signs of leaking, cracking, or bulging. Replace any hose that shows these signs of impending failure.

## Troubleshooting

Symptom	Possible Problem	Recommended Action
No Function	Electrical Issue/Solenoid	<ol style="list-style-type: none"><li>1. Touch the large mounting nut on the top of solenoid coil with a screwdriver.</li><li>2. If screwdriver does not stick to top of coil, use a voltmeter to check for voltage (min. 11V) between the coil terminal and mounting nut. If screwdriver sticks, then this not an electrical issue.</li><li>3. If low voltage, check voltage at source where power wire for control was connected.</li><li>4. If no voltage is found, measure the voltage between coil terminal and tractor frame. If voltage is indicated, the valve is not being grounded.</li><li>5. Check the black ground wire. If no voltage is indicated between the coil wire and the ground, first check the fuse and then the hot wire to the control.</li></ol>
No Function: Non-Electrical	No Hydraulic Flow	<ol style="list-style-type: none"><li>1. If multiple valves are connected in-line, then Power Beyond Plug must be used (see section: "if connecting multiple valves in-line:").</li><li>2. Ensure Valve is plumbed in-series and no pressurized lines have tees.</li><li>3. Ensure hoses are each connected to their corresponding cylinder.</li><li>4. Inspect couplers and tips for proper mating.</li><li>5. Ensure that you have an open center hydraulic system; if not, then a Closed Center Plug must be installed.</li></ol>
Slow Actuation	Low Voltage, Low Flow	<ol style="list-style-type: none"><li>1. Check voltage between coil terminal and mounting nut. If less than 11V, check all connections, battery and grounding.</li><li>2. Ensure pump is large enough to allow for enough flow to cylinders.</li></ol>