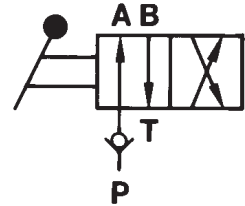
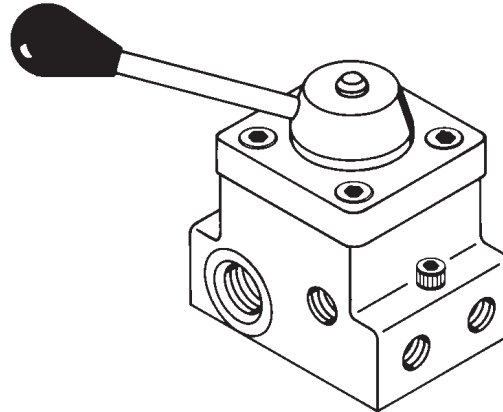


**Operating Instructions
for:****9503****CONTROL VALVE****2 POSITION, 4-WAY MANUAL — REMOTE MOUNTED****Max. Capacity: 10,000 PSI**

SPECIFICATIONS	
MAX. WORKING PRESSURE	10,000 PSI
MAX. FLOW RATING	5 GPM
MAX. VALVE CASE (RETURN LINE) PRESSURE	500 PSI
PORT SIZES	1 $\frac{1}{4}$ NPTF



Position "A": Pressure to Port "A"
(Reverse flow checked)
Port "B" to tank

Position "B": Pressure Port "B"
(Reverse flow checked)
Port "A" to tank

Read and carefully follow these instructions. Most problems with new equipment are caused by improper operation or installation.

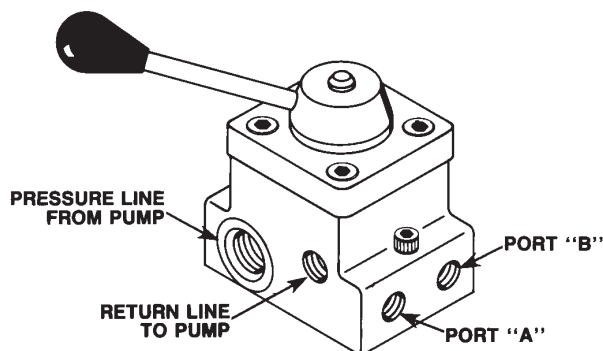
SAFETY PRECAUTIONS

All WARNING statements must be carefully observed to prevent personal injury.

**WARNING: To help prevent personal injury,
Hydraulic Hoses**

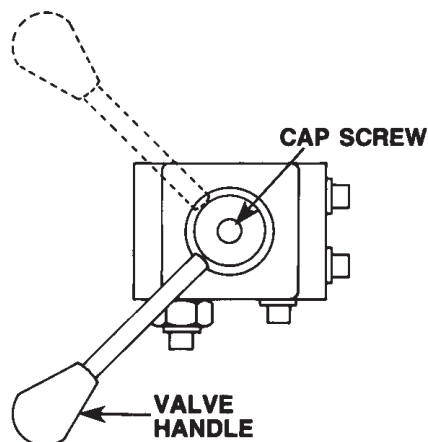
- Before operating the pump, all hose connections must be tightened with the proper tools. Do NOT overtighten. Connections need only be secure and leak-free. Overtightening may cause premature thread failure, or may cause high pressure fittings to split at pressures lower than their rated capacities.
- Before breaking any connection in the system, turn the pump motor OFF and shift the flow control valve two times to release all system pressure.
- If a hydraulic hose ever ruptures, bursts, or needs to be disconnected, immediately shut off the pump. NEVER attempt to grasp a leaking hose under pressure with your hands. The force of escaping hydraulic fluid could cause serious injury.
- Do not subject the hose to potential hazard such as fire, extreme heat or cold, sharp surfaces, or heavy impact. Do not allow the hose to kink, twist, curl, or bend so tightly that the oil flow within the hose is blocked or reduced. Periodically inspect the hose for wear because any of these conditions can damage the hose and possibly result in personal injury.
- Do not use the hose to move attached equipment. Stress may damage the hose and cause personal injury.
- Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive materials, such as creosote-impregnated objects, and some paints. Consult the manufacturer before painting a hose. NEVER paint the couplers. Hose deterioration due to corrosive materials may result in personal injury.

OPERATING PROCEDURES



NOTE:

- This valve has a low torque design for use with double-acting or single-acting cylinders.
- If valve is to be used as a 3-way with single-acting cylinder(s), either Port "A" or "B" must remain plugged.



NOTE:

- The valve handle may be moved to any position by loosening the cap screw and rotating the handle in increments of $22\frac{1}{2}^\circ$ to position desired. Torque cap screw 60/80 in. lbs.

FIGURE 1

This control valve may be used in a number of different ways. Follow the instructions completely and carefully to insure an efficient and trouble-free system.

1. Remove the port plugs from the pump, valve(s), and cylinders.

2. Apply thread sealant or teflon tape to the external threads of any hydraulic components to be attached.

IMPORTANT: Seal all external pipe connections with a high-quality, nonhardening thread sealant, such as Power Team HTS6. Teflon tape can be used to seal hydraulic connections if only one layer of tape is used. Apply the tape carefully, two threads back, to prevent it from being pinched by the coupler and broken off inside the system. Any loose pieces of tape could travel through the system and obstruct the flow of oil or cause jamming of precision-fit parts.

3. It is recommended that a gauge mounted to a tee adapter be temporarily installed directly into the oil return port of the valve. Return line pressure should not exceed 500 PSI. See Figure 2.

WARNING

Do not install quick couplers in the oil return line between the pump and the remote mounted valve. Any condition that causes back pressure in a return line has the potential to damage the valve or cause a malfunction in the hydraulic system, possibly resulting in personal injury.

4. Install all hydraulic hoses from the pump and the cylinders into the remote valve(s). See Figure 1 for valve porting information.

5. Slowly advance and retract the cylinders (free of any load) several times while observing the pressure gauge in the return line. If back pressure exceeds 500 PSI, switch to a larger diameter return line, or eliminate any bends or restrictions.

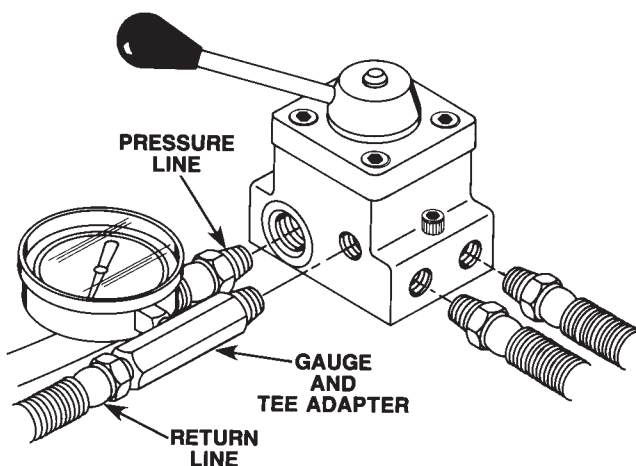


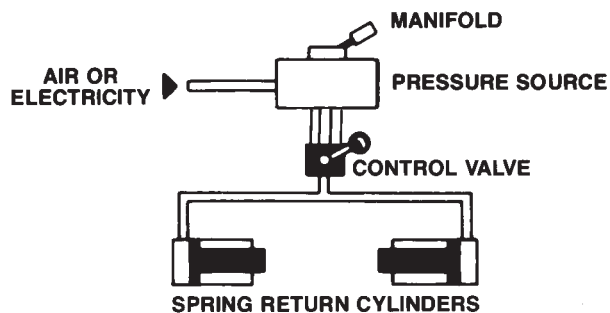
FIGURE 2

TYPICAL APPLICATIONS

Each application shown below represents a typical work holding system using either spring return (single-acting) or double-acting cylinders.

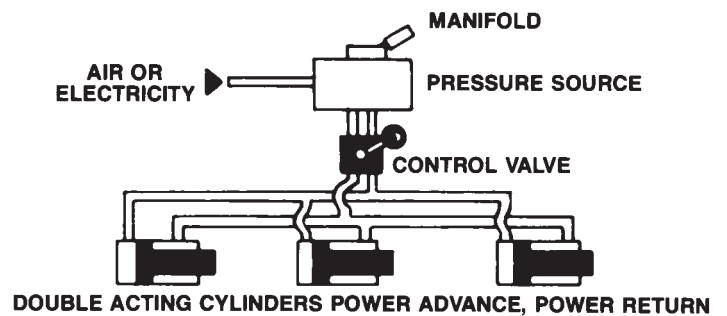
APPLICATION "A"

In-line, multiple cylinder installation with simultaneously operated, spring return cylinders.



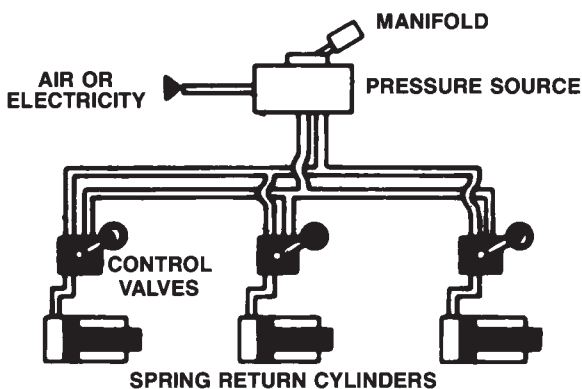
APPLICATION "B"

In-line, multiple cylinder installation with simultaneously operated double-acting cylinders.



APPLICATION "C"

In-line, multiple cylinder installation with cylinders operated independently while holding constant pressure to other spring return cylinders.



APPLICATION "D"

In-line, multiple cylinder installation with cylinders operated independently while holding constant pressure to other double-acting cylinders.

