SPX HYTEC®

SPX Corporation
5885 11th Street
Rockford, IL 61109-3699 USA

Tech. Services: (800) 477-8326
Fax: (800) 765-8326
Order Entry: (800) 541-1418
Fax: (800) 288-7031

Internet Address:
http://www.hytec.com

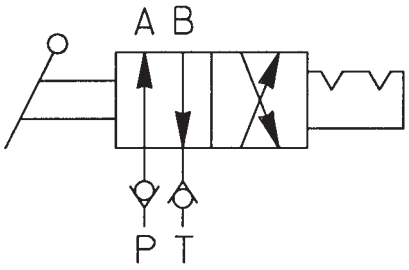
Form No. 102635

Operating Instructions for:

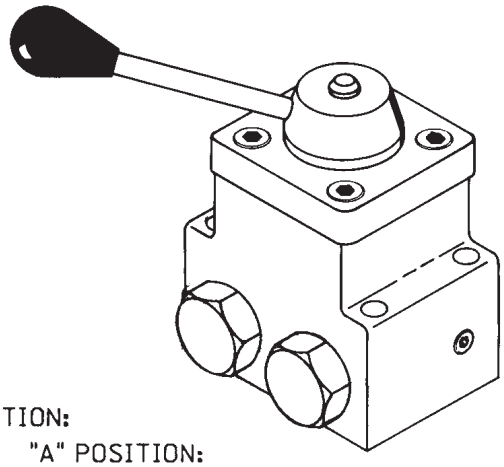
100154

TWO-POSITION, 4-WAY MANUAL, REMOTE MOUNTED
CONTROL VALVE
Max. Capacity: 5,000 PSI

Specifications	
Max. Working Pressure	5,000 PSI
Max. Flow Rating	5 GPM
Max. Valve Case Pressure (Return Tank Line)	500 PSI



Hydraulic Schematic



FUNCTION:
"A" POSITION:
PRESSURE TO "A" PORT
"B" PORT TO TANK

"B" POSITION:
PRESSURE TO "B" PORT
"A" PORT TO TANK

NOTE: THE PRESSURE LINE IS CHECKED FROM REVERSE FLOW. ALL PORTS OPEN TO TANK DURING TRANSITION BETWEEN VALVE POSITIONS.

SAFETY PRECAUTIONS

⚠ WARNING: To help prevent personal injury,

- **All hose connections must be tightened with the proper tools before operating the pump. Do not overtighten. Connections should only be tightened securely and leak-free. Overtightening can cause premature thread failure or high pressure fittings to split at pressures lower than their rated capacities.**
- **Should a hydraulic hose ever rupture, burst or need to be disconnected, immediately shut off the pump and shift the control valve twice to release all pressure. Never attempt to grasp a leaking pressurized hose with your hands. The force of escaping hydraulic fluid could cause serious injury.**
- **Do not subject the hose to potential hazards such as fire, heavy impact, sharp surfaces, or extreme heat or cold. 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 can damage the hose and possibly 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 can result in personal injury.**

Issue Date: Rev. 11-15-91

Litho in USA

INSTALLATION

Refer to Parts List #100838.

NOTE:

- **This valve has a low torque design for use with double-acting or single-acting acuators.**
- **If valve is to be used as a 3-way with single-acting cylinder(s), replace bushing (#21094) with plugged bushing (#250290) in either port "A" or "B".**
- **To move the valve handle to any position loosen the cap screw and rotating the stem in increments of 22 1/2° to the postion desired. Torque the cap screw 60/80 in. lbs. See Figure 1.**

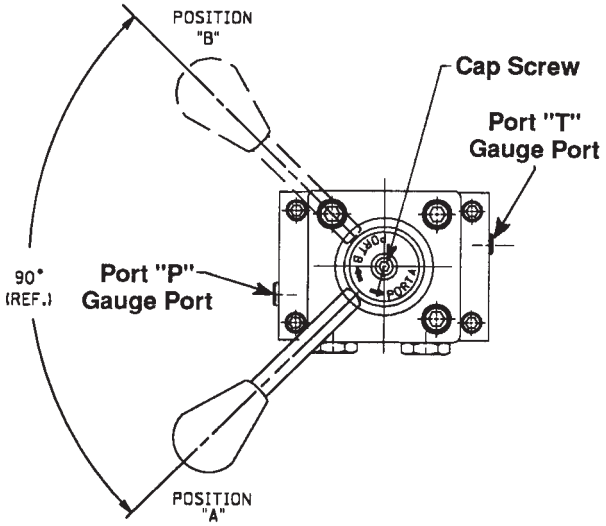


FIGURE 1

1. Mount the valve by machining passages into the manifold or fixture base as shown, installing the appropriate connector bushings and secure with mounting screws.

2. Refer to Figure 2 for mating hole pattern and valve function.
   When valve is in position "A", port A is pressurized and port B is open to tank (T).
   When valve is in position "B", port B is pressurized and port A is open to tank (T).
   NOTE: The pressure line is checked from reverse flow. All ports open to tank during transition between valve positions.

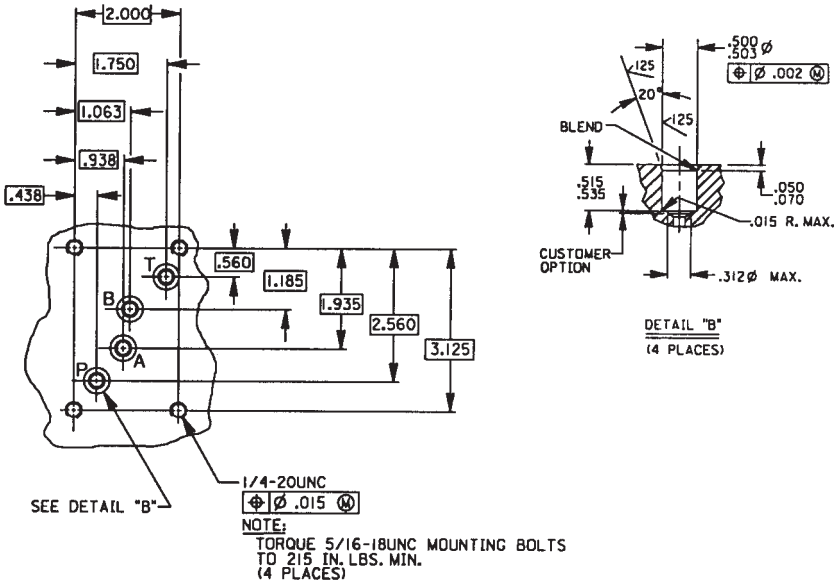


FIGURE 2

3. Upon initial start-up it is recommended that a gauge be temporarily installed in the Port "T" gauge port shown in Figures 1 and 3. Return line pressure should not exceed 500 PSI. See Figure 3.

WARNING: To help avoid personal injury, 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. Advance and retract the actuator(s) (both with and without workpiece or 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, enlarge manifold passages, or eliminate any bends or restrictions.

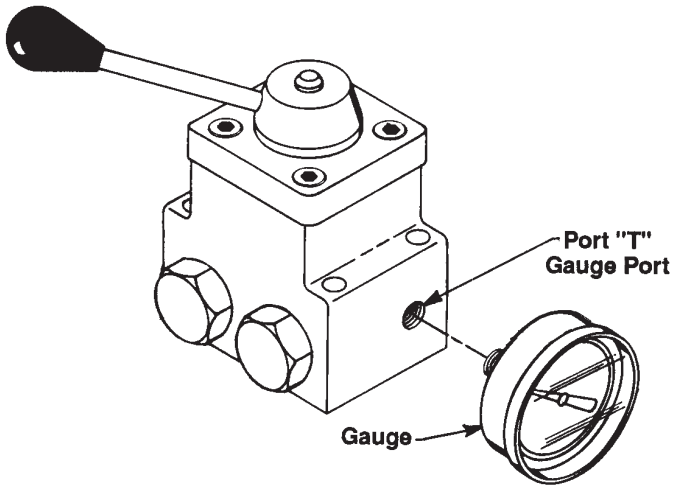


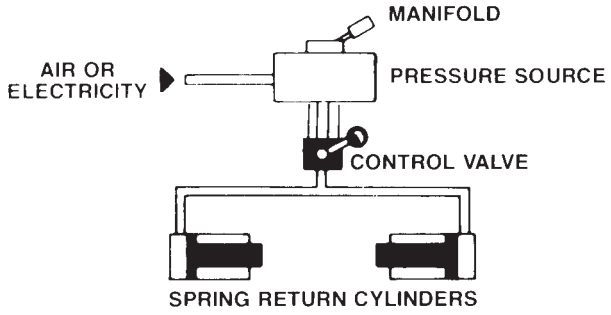
FIGURE 3

TYPICAL APPLICATIONS

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

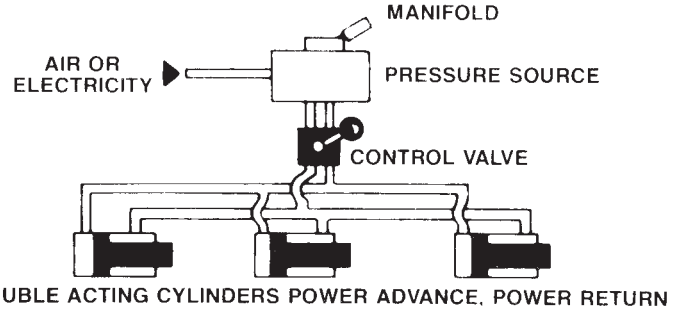
APPLICATION "A"

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



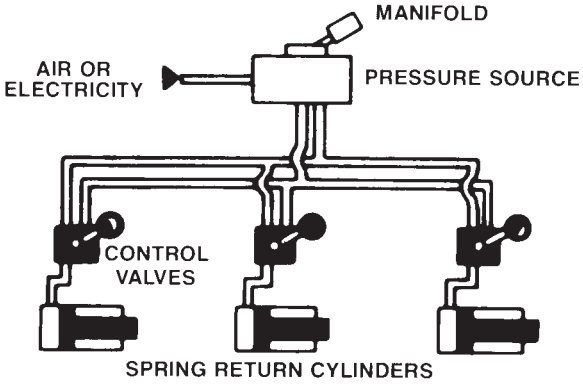
APPLICATION "B"

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.