

Specifications:

Operating Pressure: 500-3500 psi
(34 - 240 bar)
S.P.D.T. Limit Switch, 1/2" NPSM - 120 VAC
Inlet size: 3/8" NPT
Outlet size (2 places): 3/8" NPT
Return line size: 1/2" NPT
Operating Temp.: -15°F (-26°C) to +165°F (+75°C)
Seal material: Fluorocarbon (Viton)

Description:

The LHR-3000 Reversing Valve is a four way directional valve for use in two line lubrication systems. It incorporates a pressure sensing mechanism that causes it to alternately pressurize or relieve the flow of lubricant from one line to the other as the system cycles. Reversing action is automatic, actuated by pressure from the lubricant supply pump. The line which is not under pressure is vented back to the reservoir.

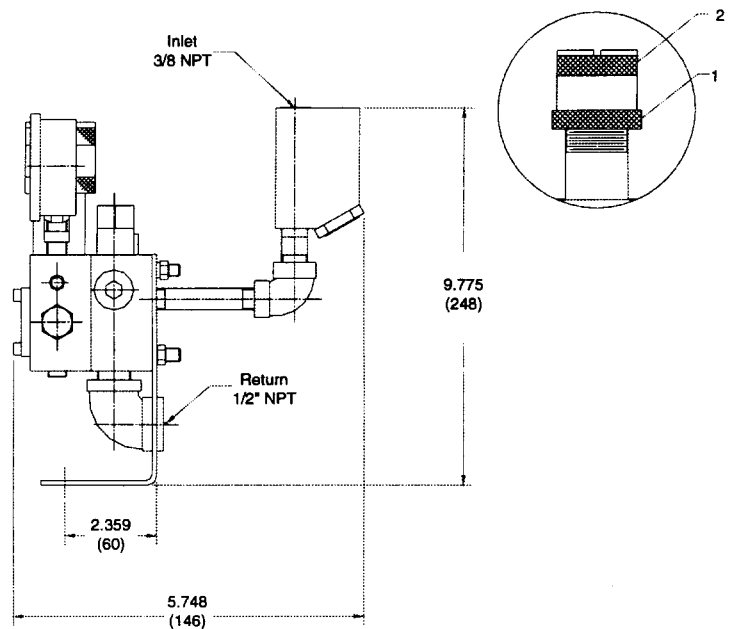
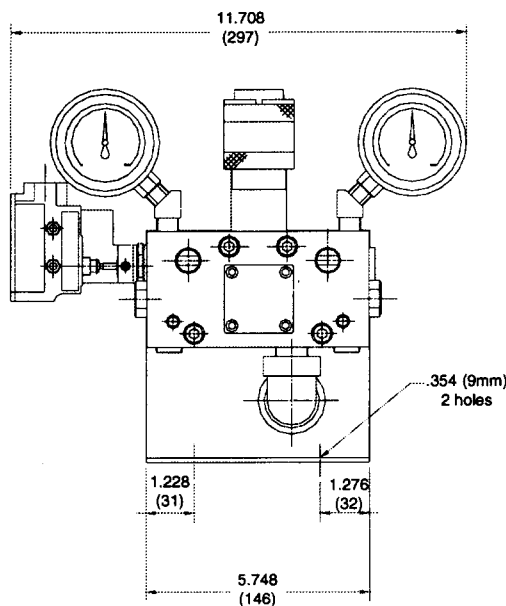
When the valve switches, a provided electrical switch changes state to signal the lubrication system controller.

The Reversing Valve can be used in "return" (loop) or "non-return" two line systems for oil or grease.

To adjust the pressure control mechanism:

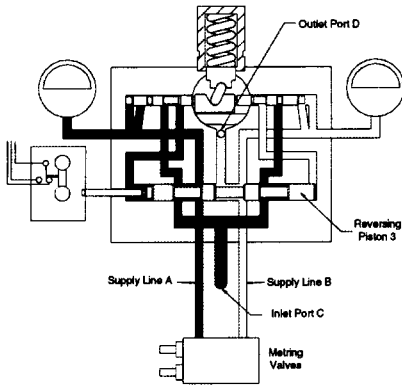
- Loosen lock nut (1)
- Turn adjusting nut (2):
Turn the adjusting nut clockwise to increase the pressure at which the valve changes direction.
- After adjusting to the desired changeover pressure, tighten lock nut (1) against the adjusting nut to maintain this setting.

Note: Factory valve setting is 1,500 psi.



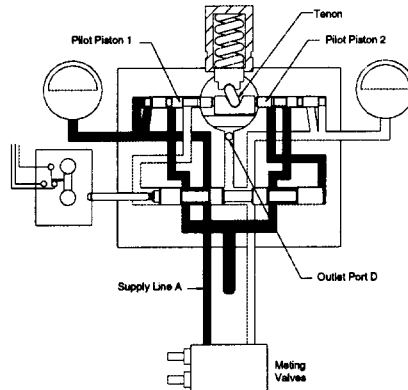
Operation

In a non-return system:



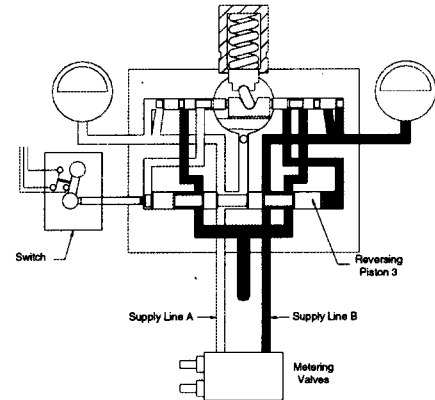
Stage 1

Lubricant enters the valve through inlet port C. The reversing piston directs the lubricant from the inlet port to supply line A. Supply line B is relieved to the reservoir through outlet port D. Pressure from the supply pump causes all measuring valves to discharge lubricant to bearings.



Stage 2

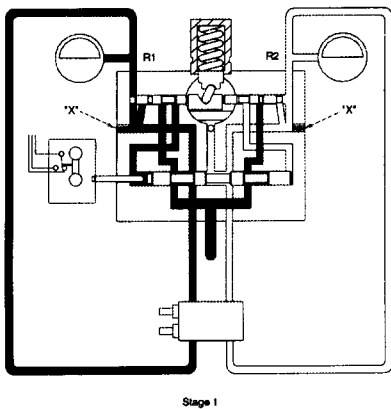
Pressure in supply line A continues to rise forcing pilot piston 1 to overcome the spring force applied at the tenon. At a preset pressure (adjustable between 500 - 3,500 psig) the pilot piston 1, tenon and pilot piston 2 are shifted, opening lube flow to the right end of the reversing piston 3.



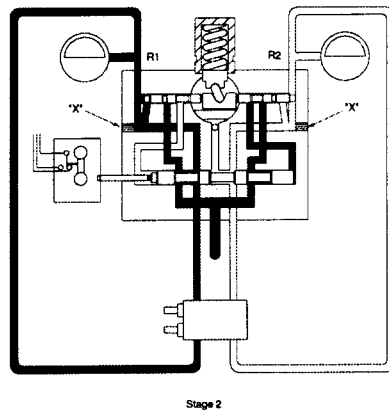
Stage 3

Reversing piston 3 shifts tripping the switch to stop the pump and relieve lubricant pressure in supply line A. When the timer starts the next half cycle, supply line B will be pressurized and supply line A relieved.

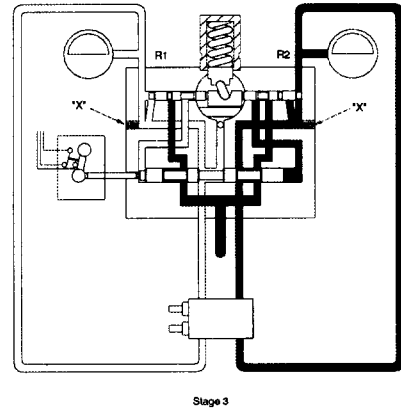
In a "return" (loop) system:



Stage 1



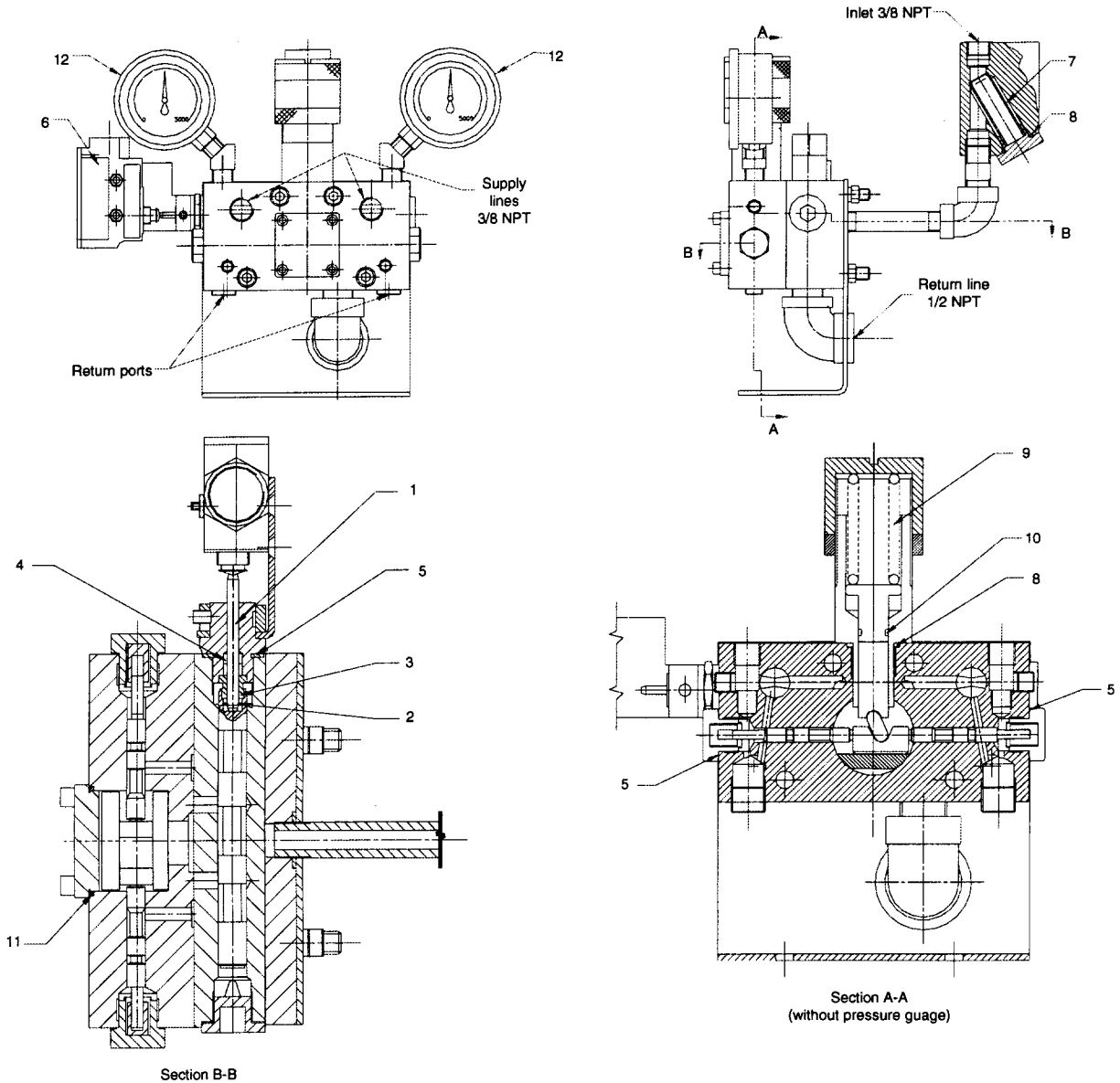
Stage 2



Stage 3

- Install two 1/8" pipe plugs at position "X".
- Remove pipe plugs in the return ports R1 and R2 and make the return connections to either the return ports on the front face, or the two return ports located on the bottom of the valve. After conversion, two lines then make a complete loop to operate the pilot piston. Valve operation is otherwise the same as the above description for non-return system.

Service Parts



Caution: Always relieve pressure before servicing or disassembling the valve.

Note: If pistons are removed from the reversing valve they must be assembled in the same location and position as they were before disassembly.

Service Parts

Item No.	Description	Part No.	Qty	Item No.	Description	Part No.	Qty
1	Indicator pin	301173514	1	7	Strainer	251064	1
2	Spring ring	211141003	1	8	O-ring	251336	2
3	Holding screw	420223501	1	9	Compression spring	251065	1
4	U-cup sealing ring	220137352	1	10	O-ring	251337	1
5	Copper washer	251335	3	11	O-ring	251338	1
6	Limit switch	251327	1	12	Pressure Gauge	251339	2

Tools Required:

Allen wrenches: 3mm, 5mm, 6mm, 8mm, 10mm

Combination wrenches: 13mm, 17mm, 18mm, 19mm, 28mm, 30mm, and 32mm

Pipe wrench: 10 inch

Screwdriver (small slot head screws)

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number and Series Letter.
LINCOLN provides a Distributor Network that stocks equipment and replacement parts.