

PLEASE NOTE:  
BEFORE REMOVING VALVE SPOOL OR SPOOL SLEEVE REMOVE DETENT ADJUSTING  
CART., DETENT PISTON & BALL, REGEN PLUG, REGEN SPRING & BALL. INSTALL  
SPOOL AND SPOOL SLEEVE BEFORE REINSTALLING STEEL BALLS.

**PRESSURE RELEASE DETENT**  
This feature provides a pressure release detent for the spool 'in' position. When the spool is manually placed in the detent position oil is directed to the 'A' work port (the port closest to the handle). When the pressure in the 'A' port reaches a preset level the detent will release and the spool will center. The factory setting is 1400 psi. The detent release pressure is adjustable by loosening the jam nut and turning the adjusting screw. Turning the adjusting screw clockwise will increase the detent release pressure and counterclockwise will decrease the detent release pressure. NOTE: if the detent release pressure is set too high the spool will not center, if the pressure is too low the detent will not hold. If cap screw item 6 becomes loose detent will not function properly.

**REGEN CIRCUIT**  
This feature provides for rapid extend of a cylinder. When the spool is manually held in the full spool 'out' (beyond the initial soft stop) position inlet oil is directed to the 'B' work port while return oil from the 'A' work port is redirected to the 'B' work port. The cylinder will extend rapidly but with reduced force.

**RELIEF VALVE**  
An adjustable ball spring relief valve is standard on all LSR-3000 valves. The standard factory setting is 2250 psi @ 3 gpm and 120°F. Other settings can be specified. The relief pressure is adjusted by removing acorn nut, and turning the adjusting screw. Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure (a pressure gauge must be installed in the inlet line whenever the relief pressure is adjusted). Do not back adjusting screw out to the point it falls out.



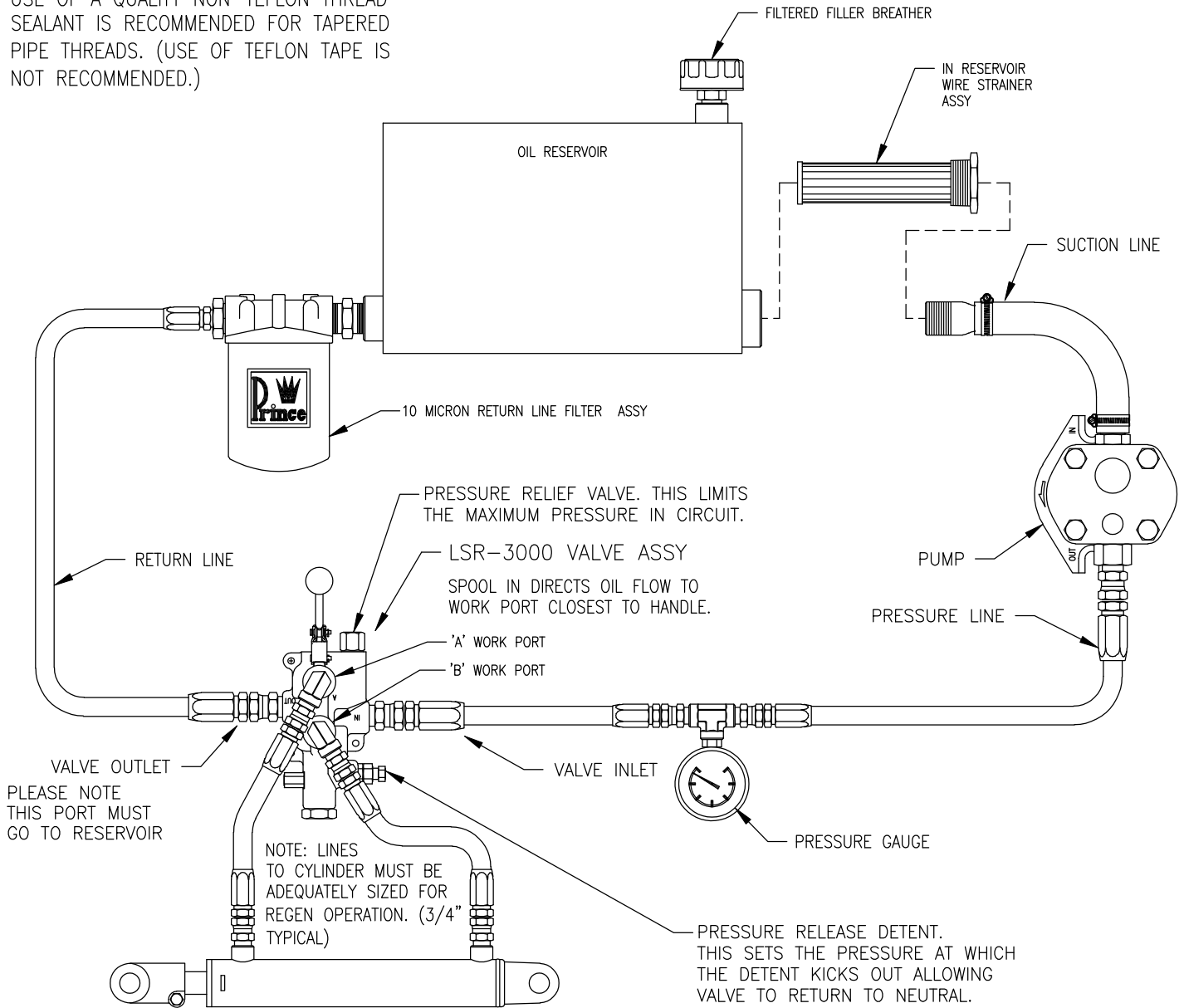
**WARNING: OVERPRESSURE MAY CAUSE SUDDEN AND UNEXPECTED FAILURE OF A COMPONENT IN THE HYDRAULIC SYSTEM RESULTING IN SERIOUS PERSONAL INJURY. ALWAYS USE A GAUGE WHEN ADJUSTING A RELIEF VALVE.**

## LSR-3000 KITS AND CARTRIDGES

ITEM	QTY	PART NO.	DESCRIPTION
1	1	670700100	DETENT SLEEVE
2	1	670500127	WASHER
3	1	670300111	SPRING
4	1	671400294	STOP CUP
5	1	670500026	WASHER
6	1	170003019	CAP SCREW
7	1	671600136	PLUG, HEX
8	1	671100012	PISTON SLEEVE
9	1	230009009	STEEL BALL
10	1	240019013	BACK-UP WASHER
11	1	240000013	O-RING
12	1	240000014	O-RING
13	1	240019014	BACK-UP WASHER
14	1	671100011	PISTON
15	1	240019007	BACK-UP WASHER
16	1	240016067	O-RING
17	1	240016068	O-RING
18	1	240019008	BACK-UP WASHER
19	1	660330002	DETENT ADJUSTING CARTRIDGE
20	1	660125004	RELIEF KIT
21	1	240016086	U-CUP
22	1	240000210	O-RING
23	1	671600137	HEX PLUG, DETENT
24	1	670300023	SPRING, DETENT
25	1	230009009	STEEL BALL
		660530001	LS/LSR-3000 SEAL KIT
		660125004	RELIEF KIT
		660330002	DETENT ADJUSTING CARTRIDGE
		660130007	PRESSURE RELEASE DETENT KIT
		660130001	COMPLETE HANDLE KIT (NOT SHOWN)

# EXAMPLE LSR-3000 HYDRAULIC CIRCUIT

NOTE: THREAD SEALANT—  
USE OF A QUALITY NON-TEFLON THREAD  
SEALANT IS RECOMMENDED FOR TAPERED  
PIPE THREADS. (USE OF TEFLON TAPE IS  
NOT RECOMMENDED.)



## LSR-3000 SPECIFICATIONS

MAXIMUM OPERATING PRESSURE..... 3500 PSI  
 MAXIMUM TANK PRESSURE..... 500 PSI  
 MAXIMUM OPERATING TEMP..... 180°F  
 RECOMMENDED SYSTEM FILTRATION..... 10 MICRON  
 FLOW RATING..... 5 GPM INLET FLOW  
 WEIGHT..... 10 LBS

