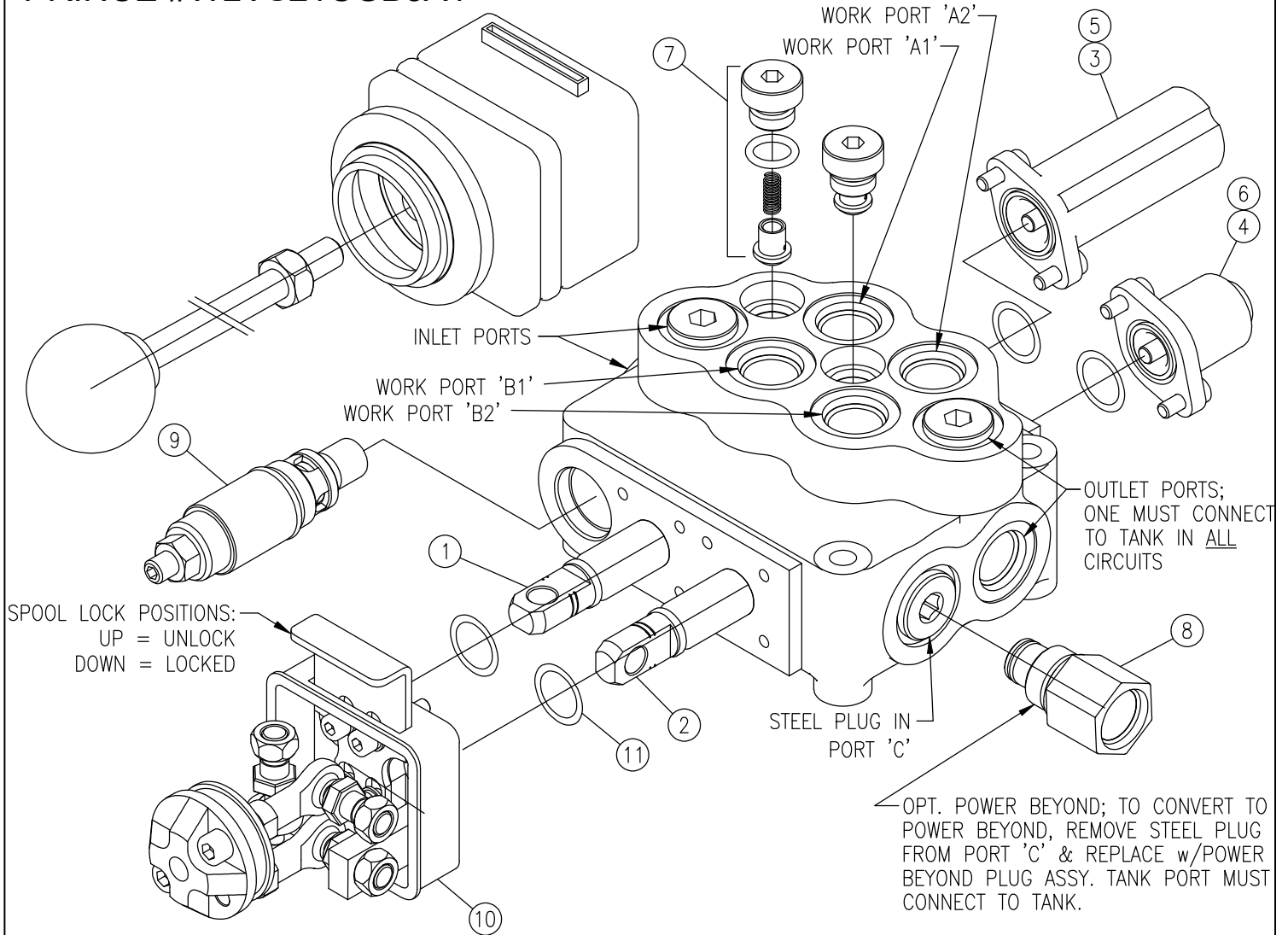


PRINCE #WLVS21CGB5A1



TORQUE NOTES:
 RELIEF CARTRIDGE: 15-20 FT-LB.
 POWER BEYOND CONV PLUG: 25 FT-LB.

**FOR STANDARD MODELS AVAILABLE
 & ADDITIONAL INFORMATION GO TO:
www.princehyd.com**

PRINCE WOLVERINE MODEL WLVS21CGB5A1 SPECIFICATIONS:

SERIES CIRCUIT DESIGN

MAX. OPERATING PRESSURE: 3625 PSI
 MAXIMUM TANK PRESSURE: 290 PSI
 NOMINAL FLOW RATING: 12 GPM
 FILTRATION RECOMMENDATIONS: ISO 4406 19/17/14
 STANDARD PORT SIZE (INLET, OUTLET, WORK PORTS, POWER BEYOND PLUG):
 #8 SAE ORB, 3/4-16UNF-2B
 RECOMMENDED FLUID: HIGH QUALITY MINERAL BASED HYDRAULIC FLUID
 WITH VISCOSITY FROM 12 cSt TO 400 cSt.

REPAIR PARTS LIST

ITEM:	PMC P/N:	DESCRIPTION:
1	612104092	SPOOL, FLOAT (A1/B1)
2	612104093	SPOOL, TANDEM CENTER (A2/B2)
3	660170103	SPRING CENTER W/FLOAT KIT
4	660170104	SPRING CENTER KIT
5	660170108	END CAP W/ BOLTS, FLOAT
6	660170109	END CAP W/ BOLTS, SPR CNTR
7	660170105	LOAD CHECK KIT
8	660170106	POWER BEYOND PLUG ASSY
9	660270014	RELIEF CARTRIDGE ASSY
10	660170107	COMPLETE JOYSTICK/HANDLE KIT
11	660570008	SEAL KIT

RELIEF VALVE: AN ADJUSTABLE RELIEF VALVE CARTRIDGE IS STANDARD ON WLVS21CGB5A1 MODELS. THE STANDARD FACTORY SETTING IS 2500 PSI @ 10 GPM. STANDARD ADJUSTMENT RANGE IS 2000-3500 PSI. THE RELIEF SETTING IS ADJUSTED BY LOOSENING THE JAM NUT, AND TURNING THE ADJUSTING SCREW. TURNING THE ADJUSTING SCREW CLOCKWISE INCREASES RELIEF PRESSURE AND COUNTERCLOCKWISE DECREASES RELIEF PRESSURE (A PRESSURE GAUGE MUST BE INSTALLED IN THE INLET LINE OR PORT WHENEVER THE RELIEF PRESSURE IS ADJUSTED).

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.

NOT TO BE USED WITH CLOSED CENTER SYSTEMS

EXAMPLE WLVS21CGB5A1 VALVE CIRCUIT USING OPTIONAL POWER BEYOND PORT:

OPTIONAL POWER BEYOND OPERATION:

A POWER BEYOND PLUG ASSY IS INCLUDED WITH VALVE, BUT IS SHIPPED UNINSTALLED.

REMOVE & DISCARD STEEL PLUG FROM PORT 'C' OF UPSTREAM VALVE. INSTALL POWER BEYOND PLUG ASSY INTO PORT 'C'.

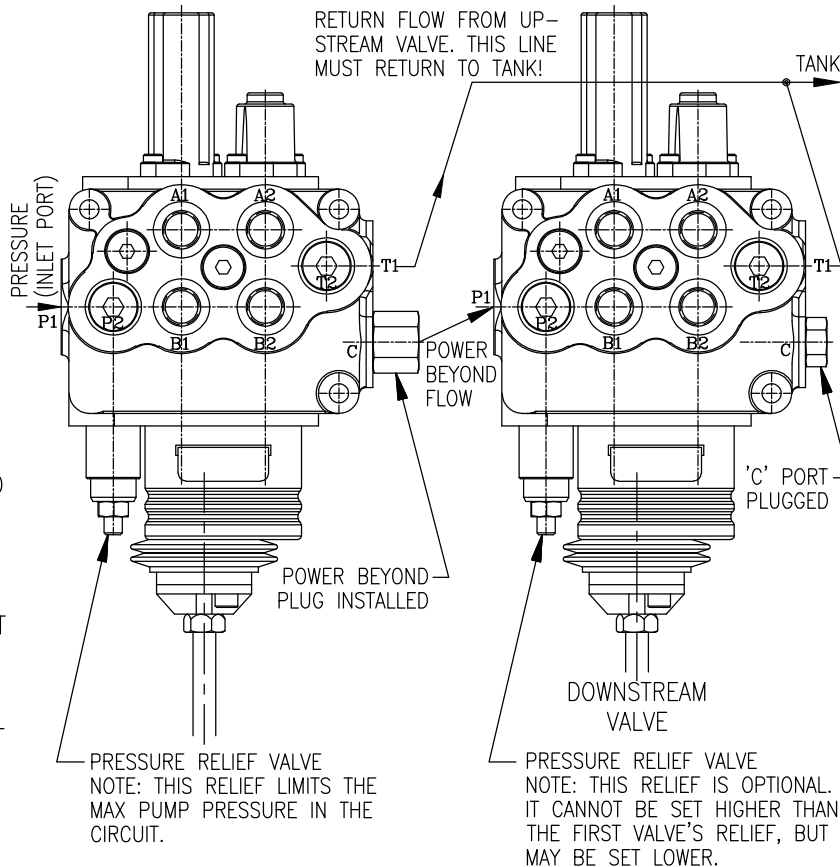
CONNECT A HYDRAULIC LINE FROM THE POWER BEYOND PORT TO A DOWN STREAM FUNCTION, AND ALSO A LINE FROM THE TANK PORT 'T' TO TANK.

WITH ALL SPOOLS CENTERED, OIL FLOW IS DIRECTED TO THE POWER BEYOND PORT FOR USE BY THE DOWNSTREAM FUNCTION.

WHEN A SPOOL IS SHIFTED, OIL WILL BE DIRECTED TO A WORK PORT AND THE RETURN FLOW GOES TO TANK.

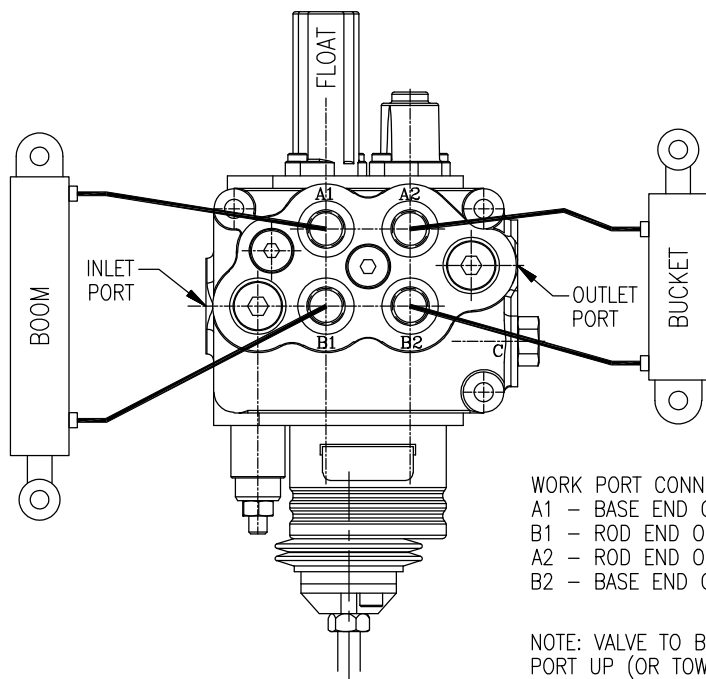
SERIES CIRCUIT DESIGN:

A SERIES CIRCUIT VALVE IS MOST COMMONLY USED TO CONTROL MORE THAN ONE HYDRAULIC COMPONENT SIMULTANEOUSLY. THE ENTIRE CIRCUIT FLOW IS AVAILABLE TO EACH SPOOL THAT IS ACTUATED. WITH BOTH SPOOLS ACTUATED, OIL FLOW IS FROM INLET TO THE FIRST SPOOL A1/B1. RETURN FLOW OF THE FIRST SPOOL IS DIRECTED TO THE OPEN CENTER CORE OF THE SECOND SPOOL A2/B2. (IN A PARALLEL VALVE THE RETURN OIL FROM THE WORK PORT IS DIRECTED TO THE TANK CORE.) OIL THEN FLOWS TO WORK PORT A2/B2, WITH THE RETURN OIL FLOW GOING TO THE OUTLET. IN A SERIES CIRCUIT VALVE, THE SUMMATION OF THE PRESSURES REQUIRED FOR EACH SPOOL WILL EQUAL THE TOTAL PRESSURE REQUIRED FOR THE CIRCUIT. THE TOTAL PRESSURE REQUIRED MUST NOT EXCEED THE SYSTEM RELIEF SETTING FOR THE PUMP PRESSURE RATING.



NOTE: NOT FOR USE WITH CLOSED CENTER SYSTEMS!

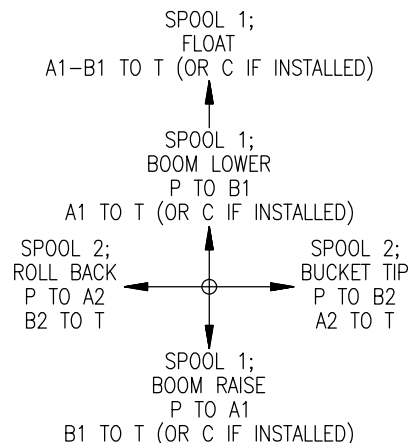
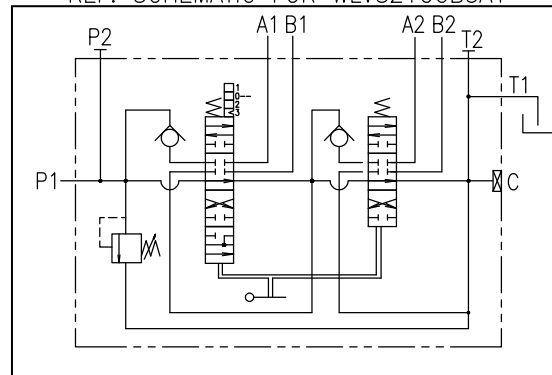
EXAMPLE WLVS21CGB5A1 LOADER VALVE HYDRAULIC CIRCUIT (OPEN CENTER):



WORK PORT CONNECTIONS:
 A1 - BASE END OF BOOM CYLINDER
 B1 - ROD END OF BOOM CYLINDER
 A2 - ROD END OF BUCKET CYLINDER
 B2 - BASE END OF BUCKET CYLINDER

NOTE: VALVE TO BE ORIENTED WITH INLET PORT UP (OR TOWARDS FRONT), AND WORK PORTS TOWARDS OPERATOR'S RIGHT TO ACHIEVE THIS HANDLE SHIFT PATTERN.

REF. SCHEMATIC FOR WLVS21CGB5A1



FOR STANDARD MODELS AVAILABLE & ADDITIONAL INFORMATION GO TO: www.princehyd.com