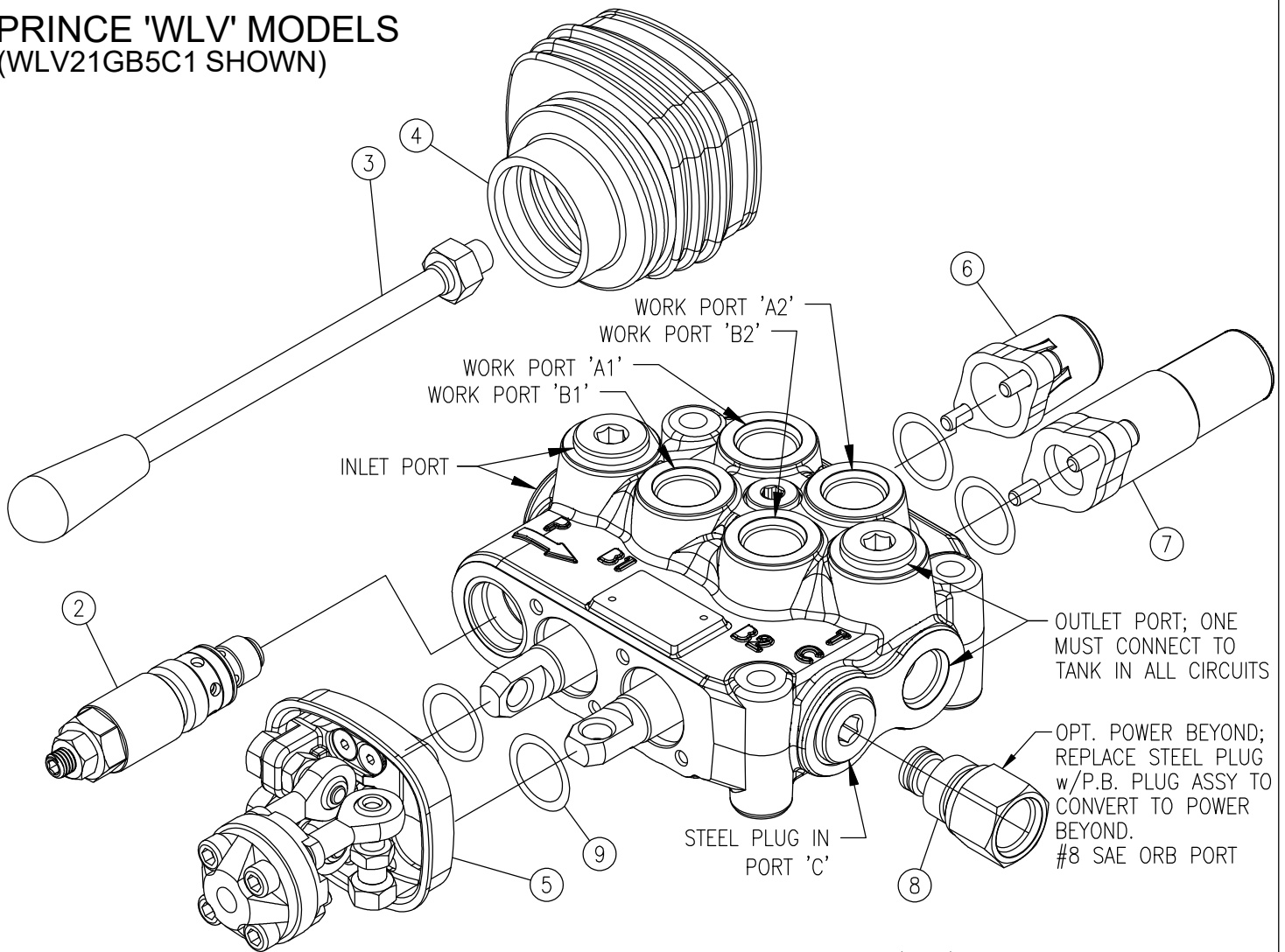


**PRINCE 'WLV' MODELS
(WLV21GB5C1 SHOWN)**



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 'WLV' SPECIFICATIONS:

SERIES CIRCUIT DESIGN

OPERATING PRESSURE: 4300 PSI

MAXIMUM PRESSURE: 5000 PSI

MAXIMUM TANK PRESSURE: 725 PSI

NOMINAL FLOW RATING: 12 GPM

MAXIMUM FLOW RATING: 16 GPM

FILTRATION RECOMMENDATIONS: ISO 4406 19/17/14

STANDARD PORT SIZE (INLET, OUTLET AND WORK PORTS):

#8 SAE ORB, 3/4-16UNF-2B

RECOMMENDED FLUID: HIGH QUALITY MINERAL BASED HYDRAULIC FLUID
WITH VISCOSITY FROM 12 cSt TO 400 cSt.

RELIEF VALVE: AN ADJUSTABLE RELIEF VALVE CARTRIDGE IS STANDARD ON ALL 'WLV' MODELS. THE STANDARD FACTORY SETTING IS 2600 PSI @ 10 GPM.

STANDARD ADJUSTMENT RANGE IS 1500 PSI TO 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

ITEM:	PART NO.:	DESCRIPTION:
1	*	VALVE BODY & SPOOLS
2	660270013	CARTRIDGE, RELIEF (1500-3500 PSI)
3	660170096	HANDLE KIT -**
4	671300102	BOOT, JOYSTICK -**
5	660170095	COMPLETE JOYSTICK KIT
6	660170097	SPRING CENTER KIT
7	660170098	SPRING CENTER FLOAT DETENT KIT
8	660170100	POWER BEYOND CONV PLUG ASSY
9	660170099	SEAL KIT FOR WLV VALVE ASSY
		* - NOT SERVICED SEPARATELY
		** - INCL IN COMPLETE JOYSTICK KIT

EXAMPLE 'WLV' VALVE CIRCUIT USING OPTIONAL POWER BEYOND OPTION:

OPTIONAL POWER BEYOND OPERATION:

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

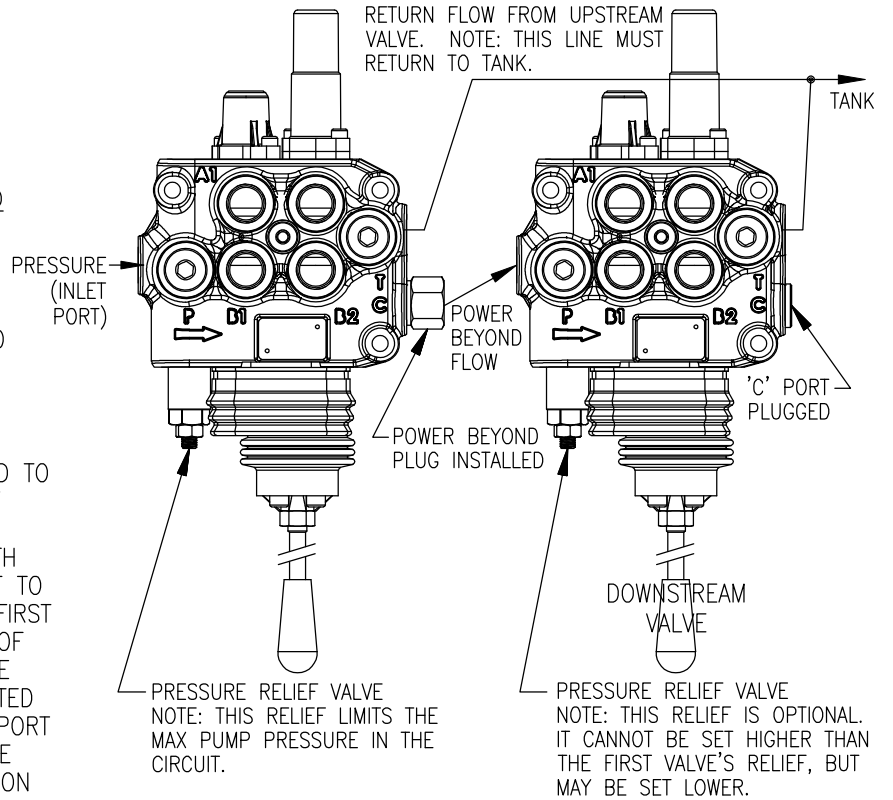
REMOVE & DISCARD STEEL PLUG FROM PORT 'C' OF UPSTREAM VALVE. INSTALL POWER BEYOND PLUG ASSY INTO PORT 'C'.

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.

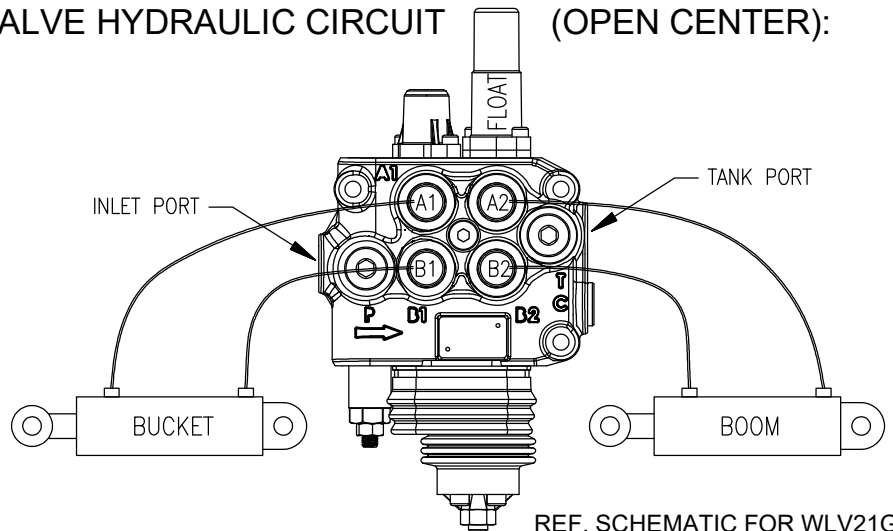
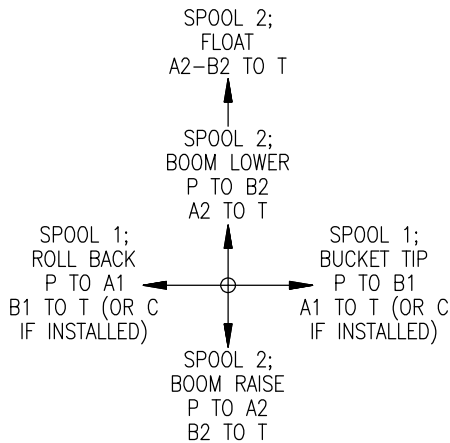
SERIES CIRCUIT DESIGN:

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 'WLV' LOADER VALVE HYDRAULIC CIRCUIT (OPEN CENTER):

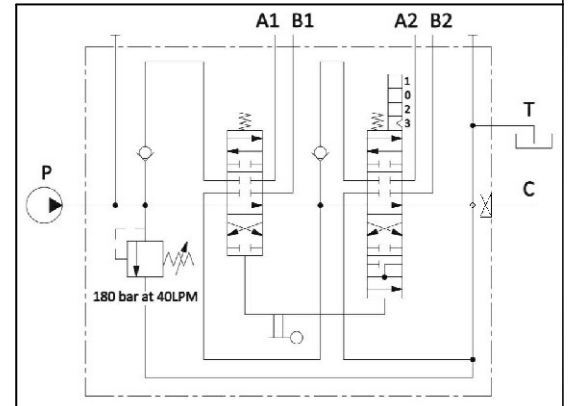


NOTE: VALVE TO BE ORIENTED WITH INLET PORT DOWN (OR TOWARDS REAR), AND WORK PORTS TOWARDS OPERATOR'S LEFT TO ACHIEVE THIS HANDLE SHIFT PATTERN.

PORT CONNECTIONS:

A1 - BASE END OF BUCKET CYLINDER
 B1 - ROD END OF BUCKET CYLINDER
 A2 - ROD END OF BOOM CYLINDER
 B2 - BASE END OF BOOM CYLINDER

REF. SCHEMATIC FOR WLV21GB5C1



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