PRINCE 'WVS' MODELS
(WVS21BB5C1 SHOWN)

ITEM: PART NO.: DESCRIPTION:
1 * VALVE BODY
2 612104080 SPOOL, CYLINDER
3 660270009 CARTRIDGE, RELIEF (2200-3200 PSI)
4 660170069 SPRING CENTER KIT, GFN
5 660370003 HANDLE HOUSING KIT, GFN
6 660170066 HANDLE KIT
7 660570005 SEAL KIT (1 THRU 6 SPOOLS)

* - NOT SERVICED SEPARATELY
FOR STANDARD MODELS AVAILABLE & ADDITIONAL INFORMATION GO TO: www.princehyd.com

PRINCE MODEL 'WVS' SPECIFICATIONS:
- MAXIMUM OPERATING PRESSURE: 4000 PSI
- MAXIMUM TANK PRESSURE: 300 PSI
- NOMINAL FLOW RATING: 14 GPM
- MAX. OPERATING TEMPERATURE: 182°F
- FILTRATION RECOMMENDATIONS: ISO 4406 19/11/14
- STD. PORT SIZE (INLET, OUTLET AND WORK PORTS):
  #8 SAE ORB, 3/4-16UNF-28
- 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 'WVS' MODELS. THE STANDARD FACTORY SETTING IS 2500 PSI CRACKING PRESSURE. STANDARD ADJUSTMENT RANGE IS 2200 PSI TO 3200 PSI.

THE RELIEF SETTING IS ADJUSTED BY LOOSENIN 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.

TORKLE NOTES:
RELIEF CARTRIDGE: 15-20 FT-LBS.,
Conv./CARRY-OVER PLUG: 50-60 FT-LBS.,
CAP SCREW, 5mm (GFN): 35-44 IN-LBS.

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### EXAMPLE 'WVS' VALVE HYDRAULIC CIRCUIT, STANDARD OPEN CENTER:

Moving handle towards valve directs flow to the port closest to the spring attachment end of valve. Moving the handle away from valve directs flow to the port closest to the handle.

### EXAMPLE 'WVS' VALVE CIRCUIT USING OPTIONAL POWER BEYOND OPTION:

**Optional Power Beyond Operation:**
Remove & discard conversion plug from upstream valve. Install high pressure carry-over plug assy into conversion port. Connect a hydraulic line from the top power beyond port to a downstream function, and also a line from the carry-over port to tank. With all spools centered, oil flow is directed to the top 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 to tank.

**Optional Closed Center Operation:**
Remove & discard conversion plug. Install high pressure carry-over plug assy into conversion port. Install steel plug into top outlet port. Attach hydraulic line from carry-over port to tank. Relief pressure may need to be adjusted so it is not set lower than the pump setting.

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### ADDITIONAL SERVICE PARTS

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>612100081</td>
<td>SPOOL, MOTOR</td>
</tr>
<tr>
<td>612100082</td>
<td>SPOOL, FLOAT w/ FLOW DETENT KIT</td>
</tr>
<tr>
<td>660370002</td>
<td>CARRY-OVER (POWER BEYOND, C.C.) PLUG ASSY</td>
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<tr>
<td>660270007</td>
<td>CARTRIDGE, RELIEF 750-1100 PSI</td>
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<tr>
<td>660270008</td>
<td>CARTRIDGE, RELIEF 1100-2200 PSI</td>
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<tr>
<td>660270010</td>
<td>CARTRIDGE, RELIEF 3200-4000 PSI</td>
</tr>
<tr>
<td>660170068</td>
<td>3-POSITION DETENT KIT, QFN</td>
</tr>
<tr>
<td>660170067</td>
<td>HANDLE, JOYSTICK w/ KNOB</td>
</tr>
<tr>
<td>660370004</td>
<td>JOYSTICK KIT, LESS HANDLE</td>
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</tbody>
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REF. SCHEMATIC FOR WVS21BB5C1