

## HYDRAULIC KICK OFF CONTROL VALVE INSTRUCTION MANUAL

### SAFETY

#### Pressure Release Detent (Kick out mechanism)

This feature provides a pressure release detent for the handle "out" 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 700psi. The detent release pressure is non-adjustable.

#### Relief Valve

An adjustable ball spring relief valve is standard on all Detent Control valves. The standard factory setting is 2,800PSI @ 4 gpm and 120°F. Other setting can be specified. The relief pressure is adjusted by removing Hex Plug (Part No. 17), and turning the Adjusting Screw (Part No. 15). Turning the Adjusting Screw clockwise will increase the pressure and counter-clockwise will decrease the pressure (a pressure gauge must be installed in the inlet line whenever the relief pressure is adjusted). Adjustable pressure range is 700psi to 3000psi. Do not backout adjusting screw to the point it falls out.

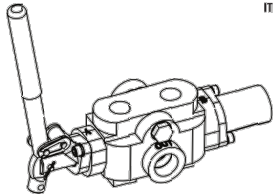
**IMPROPER MOUNTING:** Always use the proper size fittings. Hook up "in" & "out" as noted on the valve body. Do not over torque pipe fittings. Use liquid pipe sealant only! Mounting surfaces should be flat and care should be taken when tightening mounting bolts. Over-tightened bolts can cause spool bend and casting breakage.

### WARNING:

- DO NOT hold the valve handle in the return position. This position is held firm by the detent mechanism until the cylinder retracts and kicks out to neutral position by hydraulic pressure. Holding the valve lever puts undue stress on all components and could cause serious injury.
- DO NOT change or adjust hydraulic system components while under pressure. Serious injury could result.
- DO NOT remove any internal parts from this valve assembly in an attempt to modify its function.
- DO NOT Use Teflon Tape, use Liquid Pipe Sealant only
- Make sure all bolts are tightened and torqued to the recommended specification. Bent or broken parts should not be used. Replace immediately. Always use exact replacements. Always protect valve spool from paint overspray.
- Faulty quick disconnects can cause high back pressures and sticking spools. Check quick disconnects periodically to make sure they are functioning properly. If valve spool does not center or appears to stick, do not use!
- Cracked ports are not covered under warranty.

## HYDRAULIC KICK OFF CONTROL VALVE INSTRUCTION MANUAL

ITEM# WLS-800

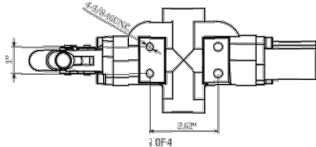


### SPECIFICATIONS

MAXIMUM TANK PRESSURE	.....	500 PSI
MAXIMUM OPERATING PRESSURE	.....	3200 PSI
MAXIMUM OPERATING TEMPERATURE	.....	150°F
MAXIMUM FLOW RATING	.....	30 GPM
RECOMMENDED SYSTEM FILTRATION	.....	10 MICRON

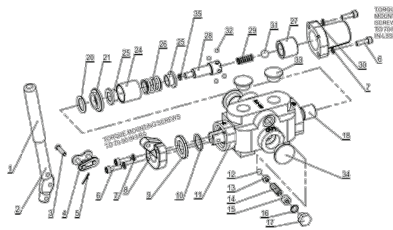
- Inlet/Outlet Ports: 3/4" NPT
- Working Ports: 1/2" NPT
- Relief valve adjustable to 3,025 PSI, preset at 2,250 PSIH @ 4 GPM and 120°F
- Detent release pressure preset at 700 PSI
- Automatically kicks back to neutral when cylinder completes stroke
- Seal for leg splitter building

### INSTALLATION DIMENSION



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## HYDRAULIC KICK OFF CONTROL VALVE INSTRUCTION MANUAL

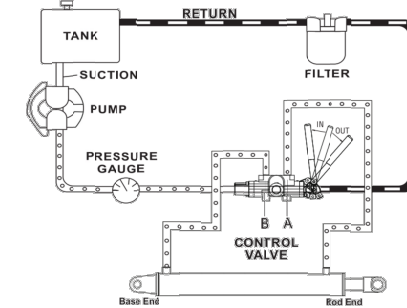


Part No.	QTY	Description	Part No.	QTY	Description
11	1	Control Valve Body	1	1	Grip (Back)
18	1	Valve Spool	2	1	Control Lever
10	1	O-Ring	3	1	Chain Link
16	1	O-Ring	4	1	Chain Link
35	1	Seal	5	1	Center Pin
39	1	O-Ring	6	2	Screw
21	1	Seal Retainer	7	2	Washer
24	1	Machinery Bushing	8	1	Handle Bracket
25	2	Spring Sleeve	9	1	Seal Retainer
36	1	Spring Sleeve Spool	33	2	Working Port Plug
37	1	Detent Sleeve	34	2	In/Out Port Plug
32	4	Steel Ball			
28	1	Detent Ball Washer			
29	1	Spring Compression			
31	1	Steel Ball			
7	2	Washer			
6	2	Screw			
30	1	Spring Cover			
12	1	Steel Ball			
13	1	Adapter			
14	1	Spring			
15	1	Adjusting Screw			
17	1	Hex Plug			

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## HYDRAULIC KICK OFF CONTROL VALVE INSTRUCTION MANUAL

### HYDRAULIC CIRCUIT



### INSTALLATIONS

The valve is mounted so the handle is on the cylinder rod end as shown. Push handle in, cylinder extends to split log. Pull handle out, cylinder retracts. When the cylinder retracts completely, handle kick back to neutral automatically. The kick-out pressure is non-adjustable preset at 700psi.

- DO NOT connect hoses to cylinder opposite from the diagram or the valve will stay in power extend (splitting) position and could cause serious injury. This includes connecting the input flow to the out port or connecting the "A" port to the base end of the cylinder.

THE OIL FLOW WHICH STROKES THE CYLINDER IN THE LOGSPLITTING DIRECTION MUST COME FROM THE VALVE PORT AWAY FROM THE HANDLE-"B" PORT. "B" port should always be plumbed to the base end of the cylinder. Oil is supplied to the valve handle IN as noted in the above installations.

- DO NOT connect a return line (low pressure) filter directly to the outlet of the log splitter valve. Decompression of the cylinder could blow off the filter cartridge, causing an oil spill and possible spraying of operators or bystanders with hot hydraulic oil.

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INSTRUCTION MANUAL FOR LOG SPLITTER VALVE (MODELS WLS-800)  
INSTRUCTION MANUAL TO BE PROVIDED BY VALVE SUPPLIER.  
ONE MANUAL IS TO BE INCLUDED INSIDE THE BOX OF EACH VALVE SHIPPED.

SYM.	REVISION
NC	--

DRAWN BY:	WP	DATE:7/19/12
CHECKED BY:	MO	DATE:7/20/12
APPROVED BY:	MO	DATE:7/20/12
TOLERANCES:	ANGLES ±1°	
FRACTION	±1/32 [± 0.79]	
DD	±0.010 [±0.25]	
000	±0.005 [± 0.13]	
WELD CALLOUTS:	+0.06/-0.00 [+1.52/0.00]	
DEBURR & BREAK ALL EDGES	DO NOT SCALE DRAWING	
DIMENSIONS ARE IN INCHES OR [MILLIMETERS]	UNLESS OTHERWISE SPECIFIED	



**PRINCE MANUFACTURING CORPORATION**  
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North Sioux City, South Dakota 57049-7000  
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# INSTRUCTION SHEET

SIZE	NEXT ASSY	QTY.
B	WLS-800	672100056

SCALE: N/A MATERIAL: SHT: 1 OF 1

PARTS REPAIR KITS CROSS-REFERENCE:			
ITEM:	PMC P/N:	VENDOR P/N:	DESCRIPTION:
1	660170077	C353446-DK	DETENT ATTACHMENT KIT
2	660170078	C353446-RK	RELIEF KIT
3	660170079	C353446-HK	HANDLE KIT
4	660170080	C353446-SK	SEAL KIT

NOTE: SPOOL AND VALVE BODY ARE NOT AVAILABLE AS REPAIR PARTS.