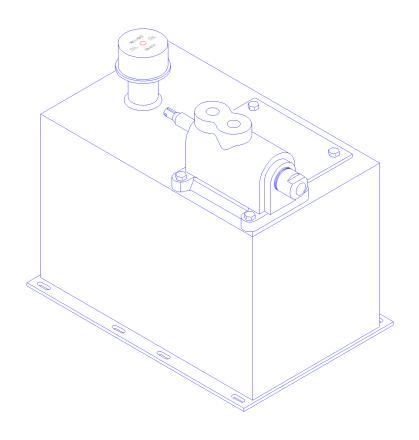


HIGHWAY 421 SOUTH
P.O. BOX 1147
DUNN, N.C. 28334
1-800-892-0181
PHONE (910) 892-0141 FAX (910) 892-7402

# 8C CONTROL VALVE OPERATION & INSTALLATION MANUAL





## 8C CONTROL VALVE OPERATION & INSTALLATION MANUAL

#### **TABLE OF CONTENTS**

Page 4	Operational Safety Information
Page 5	Operation Information
Page 6	8C Valve Porting
Page 7-9	8C Control Cable Installation Instructions
Page 10	8C Control Valve Removal Instructions
Page 11	8C Control Valve Parts Breakdown
Page 12	8C Control Valve Installation/Replacement Instructions



### **Operational Safety**

Do not operate this equipment without fully reading and understanding this manual.

Do not allow unauthorized personnel to operate this equipment.

Do not go underneath a loaded raised bed under ANY circumstances.



Do not go underneath an unloaded raised bed unless the safety props are properly





Do not go underneath a truck with engine running.



Do not allow controls and area around them to become cluttered with tools, cans, etc.

Do not use hands or other body parts to check for hydraulic leaks.

Do not leave truck unattended with bed raised.

Do not allow personnel to ride in or on the bed.

Do not load the equipment beyond the GVW rating of the vehicle or the hoist rating.

Do not operate the hoist on an unlevel or soft surface.

Do not operate the hoist UNDER POWER LINES!!

Do not raise the hoist when vehicle is in motion.

Do not move a vehicle with a raised hoist.

#### **OPERATIONS**

**To Raise:** Properly engage PTO so that the pump is operating. Press the red inner button on the control knob and pull up on the knob. The bed can be stopped at anytime by pushing in the knob until it latches in to hold (center) position. When fully raised push the knob to center to prevent pressure spike in the hydraulics.

**To Lower:** Preferably with engine running and PTO engaged, press the red inner button on the knob and press the knob down. The lowering speed can be metered by pressing more or less to increase or decrease lowering speed. When the bed is fully lowered, continue to hold down the knob until you hear a hiss, squeal, or engine slow down. Pull the knob to the center, locked position. Disengage the PTO. The bed is now locked down.

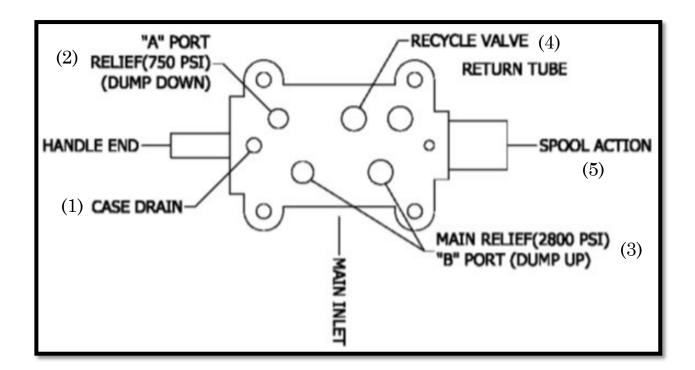
#### PERTINENT INFORMATION FOR TANK/VALVE:

- For single cylinder conversion hoist the pump should be sized to produce 8GPM @ 300PSI. For dual cylinder units it should produce  $12\ GPM @ 3000PSI$ .
- Port marked "B" is body up port and is set at 2800PSI internally.
- Port marked "A" is body down port and is set at 750PSI internally.
- You must install the supplied cable due to it having the neutral safety latch.
- Recommended hydraulic oil is Texaco Rando 32, Exxon Nuto 32, or comparable.

#### **8C VALVE PORTING**

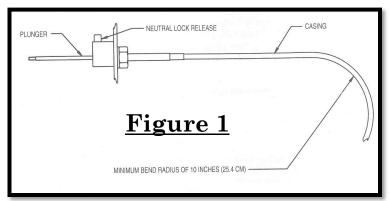
Starting from the handle end, the ports under the valve are as follows:

- 1. Small 6" steel tube is a case drain for the valve body.
- 2. The trailer single hex relief cartridge is the body down or "A" port relief (750PSI).
- 3. The short hex relief cartridge is the "main relief" for the pump and bed up, or "B" port. (It takes 2 of these)(2800PSI)
- 4. The tube with the hex relief is the "recycle valve" that forces oil to the top of the cylinder when the hoist is being lowered thus preventing cavitation or aeration of the circuit.
- 5. The 8" long tub is the return or power beyond port to the second valve if requested.

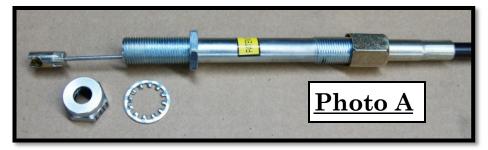


#### 8C CONTROL CABLE INSTALLATION INSTRUCTIONS

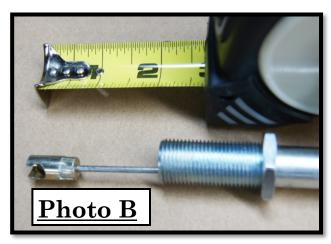
1. Look for suitable in-cab location to mount the cable. Be sure to look underneath cab of selected location for obstructions and make sure the installed cable will have no bends smaller than a 10" radius. The location should be substantial enough to withstand the push-pull operation of the cable, usually through floorboard. Start by drilling a 1/2" hole at selected location (See Figure 1)



2. Remove the top nut of the cable on the knob end and thread the lower nut down to pass the cable housing through the hole from underneath. Install top nut hand tight only, and securely tighten cable housing with the bottom nut. (See Photo A)

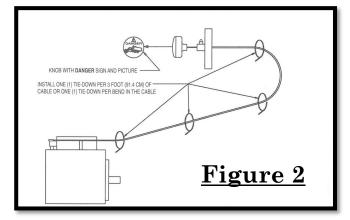


3. Pull the knob stem out to expose the cable wire approx. 2". (See Photo B)



#### 8C CONTROL CABLE INSTALLATION INSTRUCTIONS

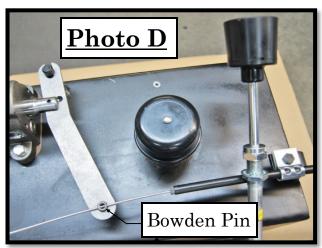
4. Route cable along chassis frame to the valve. Utilize cable ties every 3 feet and keep cable away from exhaust and moving parts such as drive shafts. Do not bend the cable in less than a 10" radius for smooth operation. (See Figure 2).



5. Using the supplied cable kit attach the outer cable jacket. Using a bolt cutter or hacksaw shorten the cable by cutting it 5" from the housing clamps. (See Photo C)



6. Inside the cab, push the cable stem in until the knob latches to the neutral position exposing the cable wire at the valve. (See Photo D)



#### 8C CONTROL CABLE INSTALLATION INSTRUCTIONS

- 7. Pass the Bowden pin through the hole in the valve handle and pass the cable wire through it. Be sure the valve handle is centered or in the "hold" position and tighten the bolt in the Bowden pin securely attaching the cable wire. (See Photo D)
- 8. Test for prop function and centering/latching. (See Figure 3)

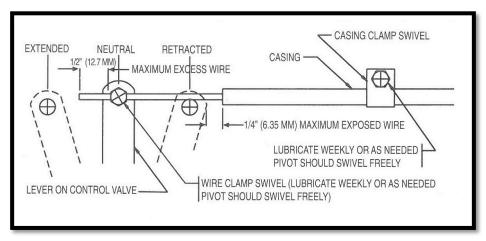


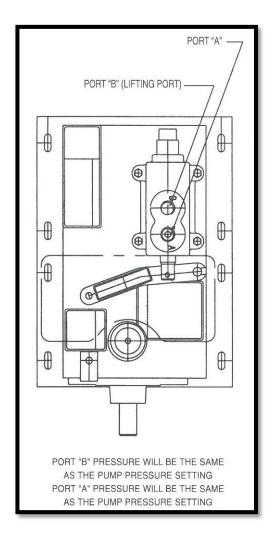
Figure 3

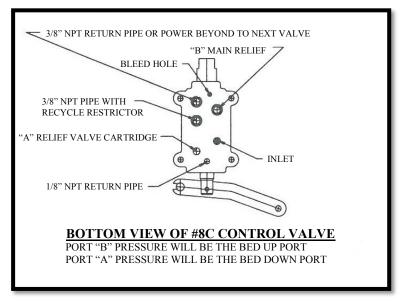
9. Cut off any extra cable wire and install the cover with the two self-tapping screws provided. (See Photo E)



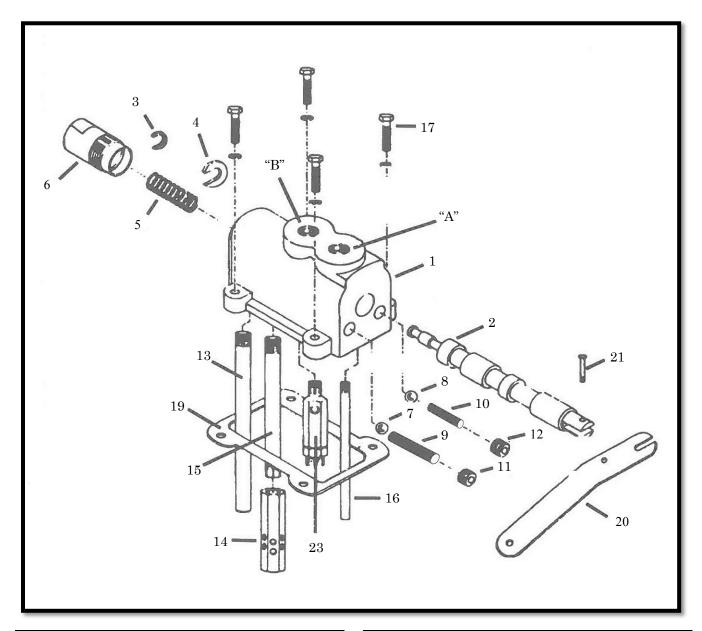
## 8C CONTROL VALVE REMOVAL INSTRUCTIONS (4-BOLT MOUNT VALVE)

- 1. Remove the two washer head screws from the valve lever guard and remove the guard to gain access to the valve control lever.
- 2. Disconnect the control cable from the valve lever to allow removal of the control valve.
- 3. Using a drip pan under the PTO unit, disconnect the hoses from the control valve and cap the hoses to keep the dirt from getting in the hydraulic hoses.
- 4. Remove the four 5/16" hex head cap screws holding the control valve to the reservoir. Pull the control valve up and remove the valve control lever, then disconnect the pressure hose from the control valve that comes from the pump in the reservoir.





### #8 RE-CYCLE CONTROL VALVE



DWG.#	PART#	PART DESCRIPTION	# REQ.
A		Low Pressure Port	
В		High Pressure Port	
1	2153	Casting (Not Sold Separately)	1
2	1210	Spool (Not Sold Separately)	1
3	1020	Key, Spool Stop 3/4"	
4	1213	Key, Spool Stop 7/8"	1
5	1021	Centering Spring	1
6	1212	Spool Cap	1
7	1217	Load Check Ball	1
8	1217	Re-cycle Check Ball	1
9	3082	Load Check Spacer	1
10	3083	Re-cycle Check Spacer	1

DWG.#	PART#	PART DESCRIPTION	# REQ.
11	2387	Load Check Plug	
12	2387	Re-cycle Check Plug	1
13	1105	Oil Return Pipe	1
14	2308	Variable Restrictor Assembly	1
15	1230	Pipe Nipple	1
16	1228	1/8 NPT x 6" Flo-By Pipe	1
17	1035	Cap Screw	4
18	1030	Washer	4
19	1214	Gasket	1
20	1219	Lever	1
21	1182	Lever Pin	1
22	2663	Relief Cartridge ('C")	

# 8C CONTROL VALVE INSTALLATION/REPLACMENT INSTRUCTIONS (4-BOLT MOUNT VALVE)

- 1. Before remounting the control valve on the reservoir, be sure that the valve gasket area is free of foreign matter.
- 2. Lay a new valve gasket on the valve mounting area and reconnect the pressure hose from the pump to the bottom of the control valve and tighten. Lower the control valve back down on the valve mounting surface. Mount the control valve to the reservoir using four new 5/16" hex head cap screws and four new aluminum washers, torque the bolts evenly. Reinstall the valve control lever.
- 3. Reconnect the control cable per cable connection instructions and reinstall the valve lever guard.
- 4. Reconnect the hose from the base of the cylinder to port "B" on the control valve and the remaining hose to port "A" on the control valve.

