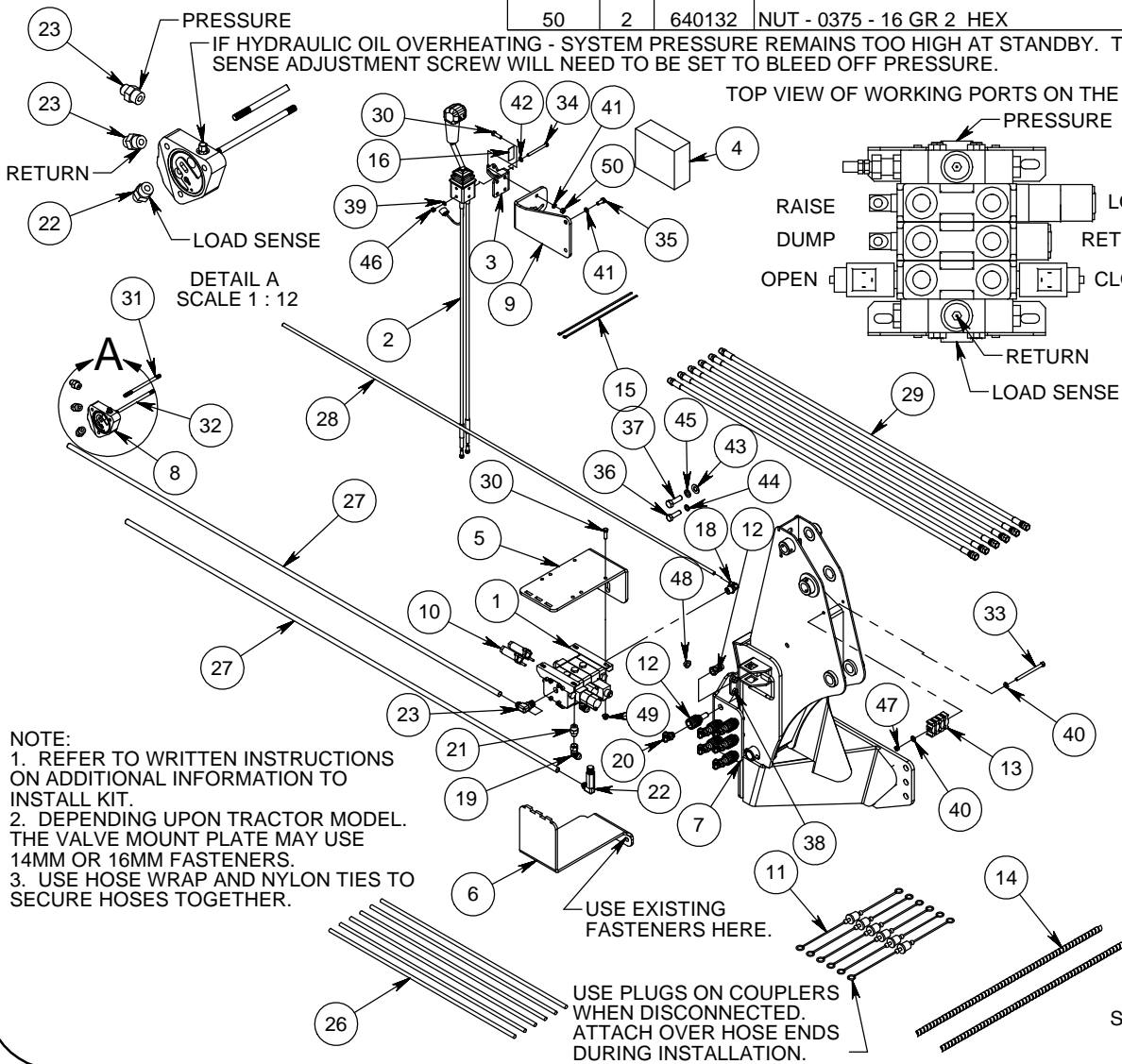


3 FUNCTION PLUMBING KIT FOR JOHN DEERE 6110-6120-6200-6210-6215-6220-6300-6310-6320-6400-6405-6410-6415-6420



ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
41	4	640153	WASHER - SPRING LOCK .375	1	1	668963	3 SPOOL LOAD SENSING VALVE
42	2	640152	WASHER - 5/16" FLAT	2	1	683151	KIT-JOYSTICK BENT 36" 3 SP
43	2	652048	WASHER - 5/8" FLAT N-SERIES	3	1	684725	JOYSTICK HANDLE PLATE
44	2	651717	WASHER - 14MM SPRING LOCK	4	1	683162	WIRING HARNESS
45	2	640159	WASHER - 5/8" SPRING LOCK	5	1	676424	VALVE PLATE
46	2	652360	NUT - .313-18 GR 2 HEX	6	1	676467	PLATE-COVER GAURD
47	1	700560	NUT - 0375 - 16 GR 2 HEX CENTER LOCK	7	1	690288	COUPLER PLATE
48	2	683932	NUT - .50 X 13 FLANGE	8	1	693699	POWER BEYOND BLOCK ASSEMBLY
49	4	682413	NUT - .375 X 16 FLANGE	9	1	676434	JOYSTICK HANDLE PLATE
50	2	640132	NUT - 0375 - 16 GR 2 HEX	10	2	669298	CABLE CONNECTOR KIT
				11	1	673957	COLORLED PLUG SET - 3SP
				12	6	673740	QUICK COUPLER BULKHEAD SET
				13	4	672503	OIL LINE CLAMP TWIN .500
				14	2	669686	36" HOSE WRAP
				15	2	652393	14.25 NYLON CABLE TIE
				16	1	663708	OPERATIONAL JOYSTICK DECAL
				17	1	674250	DIME DISK
				18	1	6801-6-10	FITTING-HYD 90 ELB 6 MJX - 10
				19	6	6500-8-8	FITTING-HYD 90 ELB 8MJX - 8 FJX
				20	6	6801-8-8	FITTING-HYD 90 ELB 8 MJX - 8 ORM
				21	6	6400-8-10	FITTING - HYD ADA 8MJX - 10ORM
				22	1	6801-10-10 XL	FITTING - HYD ELB 90 10MJX-10ORM XL
				23	1	6801-10-10	FITTING - HYD ELB 90 10MJX-10ORM
				24	1	6MJIC-14MM1.5	FITTING - HYD ADA 6MJX-14MM-1.5P O-RING
				25	2	10MJIC-22MM1.5	FITTING - HYD ADA 10MJX-22MM-1.5P
				26	6	678346	HYD HOSE .50-36 8FJX-8FJX90S
				27	2	676921	HYD HOSE .625-84 10FJX-10FJX45
				28	1	676922	HYD HOSE .375-84 6FJX-6FJX45
				29	6	683399	HOSE - .375-60 8MJX-8FJX
				30	6	640032	SCREW-.375-16 X 1.25 GR 5 HHC
				31	3	676901	SCREW-M10-1.0 X 175MM STUD
				32	3	676902	SCREW-M10-1.0 X 225MM STUD
				33	1	750412	SCREW - .375-16 X 5.00 GR 5 HHC
				34	2	669618	SCREW-.3125-18 X 3.50 GR 5 HHC
				35	2	652378	SCREW - 10MM - 1.50 X 25 GR 8.8 HHC
				36	2	640114	SCREW - 14MM - 2.0 X 45 GR 8.8 HHC
				37	2	656016	SCREW - 16MM - 2.0 X 50 GR 10.9 HHC
				38	2	640058	SCREW-.50-13 X 1.25 GR 5 HHT
				39	2	640151	WASHER - SPRING LOCK .3125
				40	3	640154	WASHER - 3/8" FLAT



3 SPOOL PLUMBING KIT FOR 640 LOADER W/ HYD POWER BEYOND BLOCK #690603

**JOHN DEERE 6110-6120-6200-6210-6215-6220-6300
6310-6320-6400-6405-6410-6415-6420**

INSTALLATION INSTRUCTIONS:

1. Mount kit should be installed before proceeding to ensure that there is no interference.
2. First, attach spacer block kit (Part #8) using (#676901 or #676902) to tractor. **See in Fig. 1-1.** If your tractor has two remotes valves, you will use the short studs (Part #676901) (Part #31) and for three remotes use the long studs (Part #676902) (Part #32). Make sure that you add the “dime” disk (Part #17) to the left hand side of the block.
3. Once that has been done attach the valve plate (Part# 5) onto the RH side of the tractor behind the rear mount. Secure with two 14mm – 2.0 P x 45mm HH cap screws and lock washers (Part #36 & 44) or for some tractors secure with two 16mm – 2.0 P x 50mm HH cap screws and lock washers (Part #37 & 45). **See in Fig. 1-2.**
4. Install nine adapters (Part #18, 21 and 23) into the pressure, return, load sense and all the working ports on the top of the valve. **TIGHTEN ALL THE CONNECTIONS SECURELY!**
5. Install the valve (Part 1) onto the valve plate with four 3/8” x 1 1/4” HH cap screws and flange nuts (Part #30 & 49).
6. Next the joystick handle bracket (Part #3) must be attached to the joystick cable control kit (Part #2) with two 5/16” x 3 1/2” HH cap screws, lockwashers, hexnuts and one flatwasher (Part #34, 39, 42 & 46). **Note:** the locking tab on the joystick base **MUST** face to the rear of the tractor, if joystick needs a ¼ turn remove two sleeves for the bolts from joystick and reinsert them at a ¼ turn. Then attach this assembly to the handle bracket adapter plate (Part #9) with two 3/8” x 1 1/4” HH cap screws, lockwashers, one flat washer and nuts (Part #30, 41, 40 & 50). **Note:** Attach all fasteners loosely to allow for desired adjustment later.
7. Then custom fit the handle bracket adapter plate (Part #9) onto the front right corner post just ahead of the side counsel in the cab of the tractor. Attach with two 10MM – 1.50 x 25MM HH cap screws and lock washers (Part #35 & 39). You need to cut a hole thru the cab floor to route the

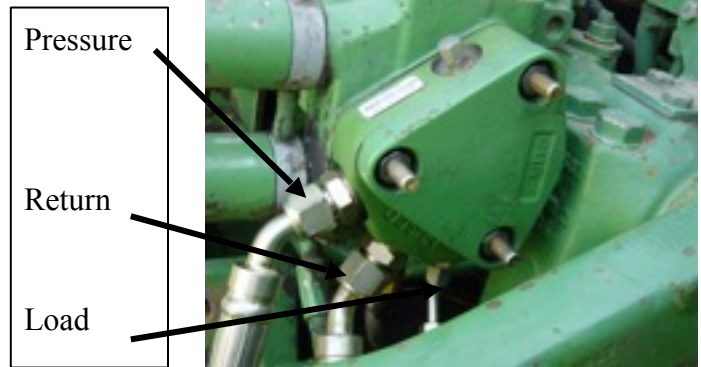


Fig 1-1



Fig 1-2



Fig 1-3

cable ends down through the hole in the cab floor just ahead of the side counsel. Adjust the according brackets to acquire the most desirable position for the joystick handle. **See in Fig. 1-3 and Fig 1-4.**

8. When this has been done attach the cable ends to the valve body with the connector kits (Part #10). **Note: Make sure the joystick is in the locked position.** (Center the joystick and push the joystick knob in (located on the side of joystick) to lock joystick.) First screw the nut on to the cable then put the small o-ring on the cable past the threads. Slide large o-ring on the connector, and thread the cable connector and slide the valve controller on the cable. Now thread the small nut and the pin connector onto the cable and tighten.



Fig 1-4

Make sure the end of the cable does not hit the valve push rod. Now push pin connector onto the valve push rod and slide the pin through the holes. Thread the cable connector to the valve by hand. **Note: Only hand tighten the valve connector, if over tightened the joystick will not be centered.** Now push large o-ring to the valve into the groove of cable connector. Then slide the valve connector to the valve and bolt together with given Allen head bolts. Slide the small o-ring to cable connector groove on the end and thread the large nut to cable connector and tighten. **Note: Make sure the cable connector does not turn. See in Fig. 1-5.**

9. Next, attach the wiring harness (Part #4) onto the valve, and route up to the joystick handle. Connect the harnesses together. You will have to supply 12-volt electrical power to the wiring harness via the tractor. Note; Make sure the power source for the valve is wired thru the key switch so the electric 3rd function cannot operate with the key switch in the “off” position.



Fig 1-5

10. Route the 84” hoses (Part #27 & 28) underneath the tractor cab and attach to the proper ports on the manifold block already installed on the back of the tractor. **See Figure 1-1.** See instruction sheet for proper connections.
11. Next, put the bulkhead adapters with the female half of coupler (Part #12) on the mid-mount couple plate (Part #7). Note: At this point, install the male half of the colored plugs (Part #11) along with the couplers.
12. Now attach the mid-mount couple plate (Part #7) with two 1/2” x 1 1/4” HH cap screws, and flange nuts (Part #38 & 48) to the mount. **See in Fig. 1-6.**
13. Run the 36” hydraulic hoses (Part #26) from valve to mid-mount coupler and after that you install the guard (Part #6) in place for valve with two existing 12MM – 1.75 x 45MM HH cap screws and lock washers.

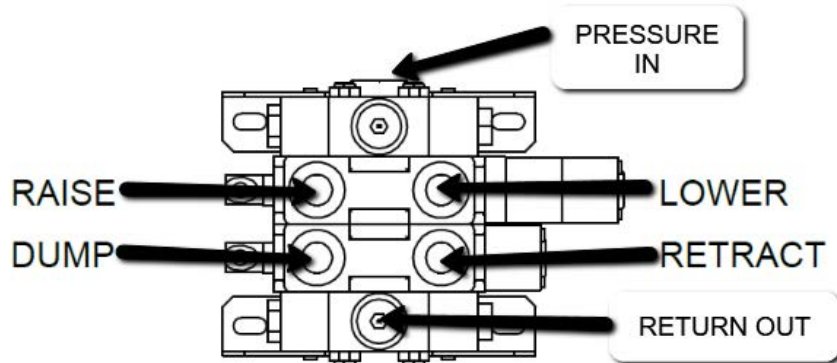


14. Attach the male half of the quick coupler (Part #12) onto the 60” hoses (Part #29). **Note:** At this point, install the female half of the colored plugs (Part #11). Attach the other end of the hoses to the steel oil lines on the loader frame. Then couple the hoses together. Refer to the top view of the working port diagram and the loader manual to determine the function of the port.
15. Secure loader hoses with four plastic oil line clamps (Part# 13) stacked on one another and held together with one 3/8” x 5” HH capscrew, flat washers and a locknut (Part# 33, 40 and 47).
16. Secure remaining hoses together with the 36” of hose wrap and nylon ties to make sure they do not interfere with any tractor function.
17. Finally start the tractor, actuate the loader to charge the hydraulic system with oil and add hydraulic fluid to the tractor as required using the recommended fluid for your tractor. Refer to the hydraulic section of the tractor owner’s manual for the specific details regarding hydraulic fluid levels.

Fig 1-6

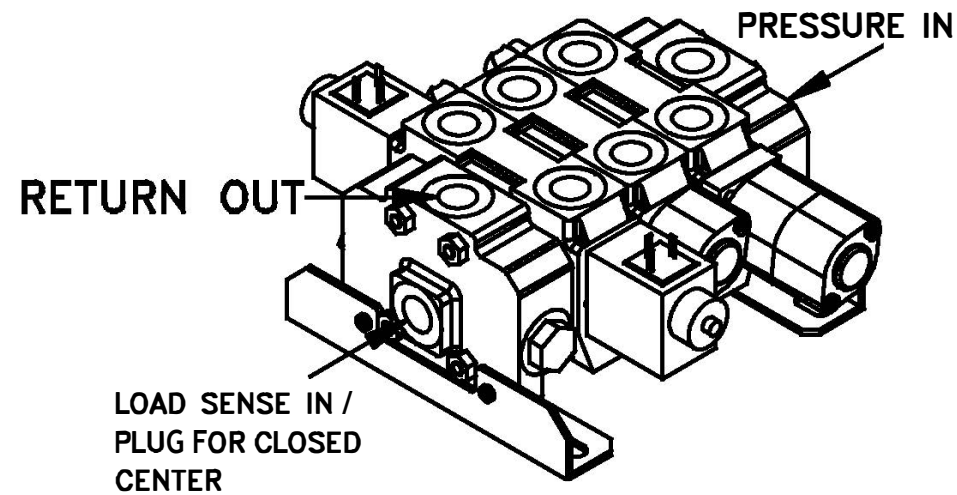
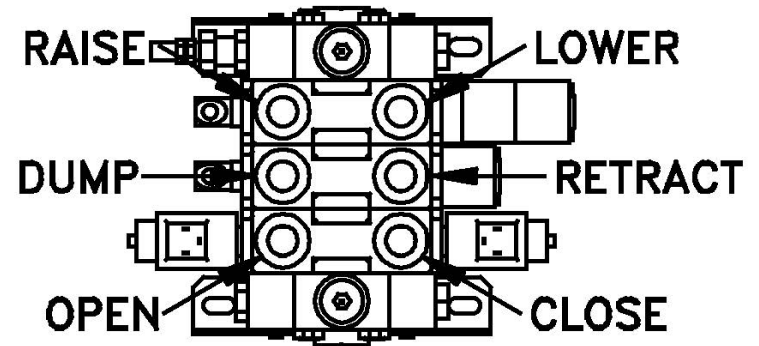


2 SPOOL LOAD SENSING/CLOSED CENTER VALVE
PORTS LABELED



LOAD SENSE IN /
PLUG FOR CLOSED
CENTER

3 SPOOL LOAD SENSING/CLOSED CENTER
VALVE PORTS LABELED



VALVE IS SHIPPED LOAD SENSE CLOSED CENTER.

VIDEOS:

CONNECTING CABLES TO VALVE:

<https://youtu.be/AOKy1CnuU4o>



CONNECTING CABLES TO JOYSTICK:

<https://youtu.be/vbcYCtpPtaw>



COMPLETE JOYSTICK KIT INSTALLED ON

JD 6400:

<https://youtu.be/XRi56twf6cA>

