THIRD FUNCTION SOLENOID SELECTOR VALVE KIT 4211, 4211SS & 5211 LOADERS

Third function valve kit can be installed using tools ordinarily available. References to right or left, forward or rearward, refer to position of operator sitting in tractor seat facing front of tractor. Reference to 2-7566 is for 4211 and 4211SS loaders and 2-7125 is for 5211 loader.

WARNING: Escaping hydraulic fluid under pressure can penetrate skin causing serious injury.

- *DO NOT use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.*
- *Stop engine and relieve pressure before connecting or disconnecting lines.*
- *Tighten all connections before starting engine or pressurizing lines.*

If any fluid is injected into skin, obtain medical attention immediately or gangrene may result.

INSTALLING THIRD FUNCTION VALVE KIT (Figure 2)

1. Fasten diverter valve (1) to base plate (2) using 5/16 x 2.75 cap screws (5) and 5/16 lock nuts (6). Position diverter valve (1) on base plate (2) so there are no ports to rear and solenoid is to the right.

2. Install adapter fitting 7/8 o-ring x 3/4 JIC (19) into bottom ports of diverter valve (1).

3. Connect 1/2 x 25 hose (33) with 90º fitting to right bottom port of diverter valve. Route hoses to the right. Connect 1/2 x 26 hose (34), to left bottom port of valve. Route 1/2 x 26 hose (34) to rear of 1/2 x 25 hose (33) at diverter valve under base plate. Set this assembly aside.

4. Disconnect bucket cylinder hoses from steel oil lines on right side of loader at boom crossmember. Install 9/16 JIC run tees (26) onto steel oil lines ports where hoses were connected. Point tee on first (front) oil line to left and point tee on second oil line toward the front (See figure 2 inset). Reinstall bucket cylinder hoses to tees making sure hose from bucket cylinder base end is connected to front oil line and hose from bucket cylinder rod end is connected to second oil line (reference bucket cylinder plumbing on left side of loader).

5. Install 90º adapter fitting (21) to second oil line tee and point elbow toward the left.

6. Place valve assembly with hoses to the right on top left side of loader crossmember. Connect hose (33) from lower right valve port to 90º fitting (21) installed in step 5. Connect hose (34) to front oil line tee (26) installed in step 4. Locate valve assembly along crossmember so these hoses route well.

7. Locate base plate mounting holes in crossmember by placing 5/16 x 3/4 cap screws (4) into upper two holes in back of base plate and resting these cap screws on top of back upper edge of crossmember. Place a 3/4" spacer between first (front) steel oil line and bottom surface of base plate. Check for proper clearance between bottom of base plate and top of steel oil lines near relief valve. Space base plate higher in front if necessary. Mark and drill four 9/32" diameter holes into crossmember at location of four lower holes in base plate. Fasten base plate to loader crossmember using four 5/16 x 1.00 self tapping screws (8). Remove spacer and locating cap screws from base plate.

8. Install 7/8 o-ring x 3/4 o-ring fitting (20) into female coupler (23). Install male coupler (22) and female quick coupler (23) into front ports of diverter valve (1).

   NOTE: *To determine which valve port receives which coupler, observe attachment to be mounted on loader. If attachment is a clamping device (i.e. grapple fork, bale clamp, 4 in 1 bucket, etc.) connect attachment hose that is pressurized during clamping to front right port on diverter valve. If this attachment hose has a male coupler, install female coupler in front right port of diverter valve (1) or visa versa.*

9. Install two 1/2 x 114 hoses (32) to top of diverter valve. Route hoses along steel oil lines and secure to oil lines with heavy tie straps (9). Mark for identification the two hoses from loader control valve connected to top two steel oil lines on loader. Disconnect these hoses at top two oil lines and cap steel oil lines with 3/4 JIC caps (18). Connect hose that was installed onto top steel oil line to hose (32) from top left port on diverter valve (1). Connect hose that was connected to second steel oil line to hose (32) from top right port on diverter valve (1).

10. Fasten switch (16) to hydraulic lever controling bucket. Find position on hydraulic lever where activation of switch feels comfortable and tape switch (16) to handle using electrical tape (31) provided.

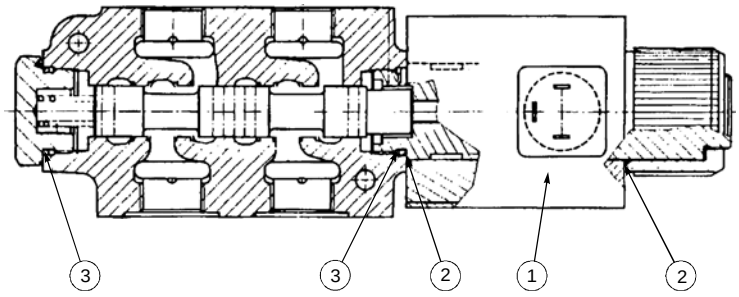
(Continued on page 4)

REPAIR PARTS LIST - SELECTOR VALVE- WALVOIL 48391 (Figure 1)

Item	Part No.	Description	Qty.
1	48615	SOLENOID	1
2	*	O-RING SEAL, 1.176 I.D. x .070	2
3	*	O-RING SEAL, .924 I.D. x .103	2
4	48614	SEAL KIT	1

* Included in seal kit

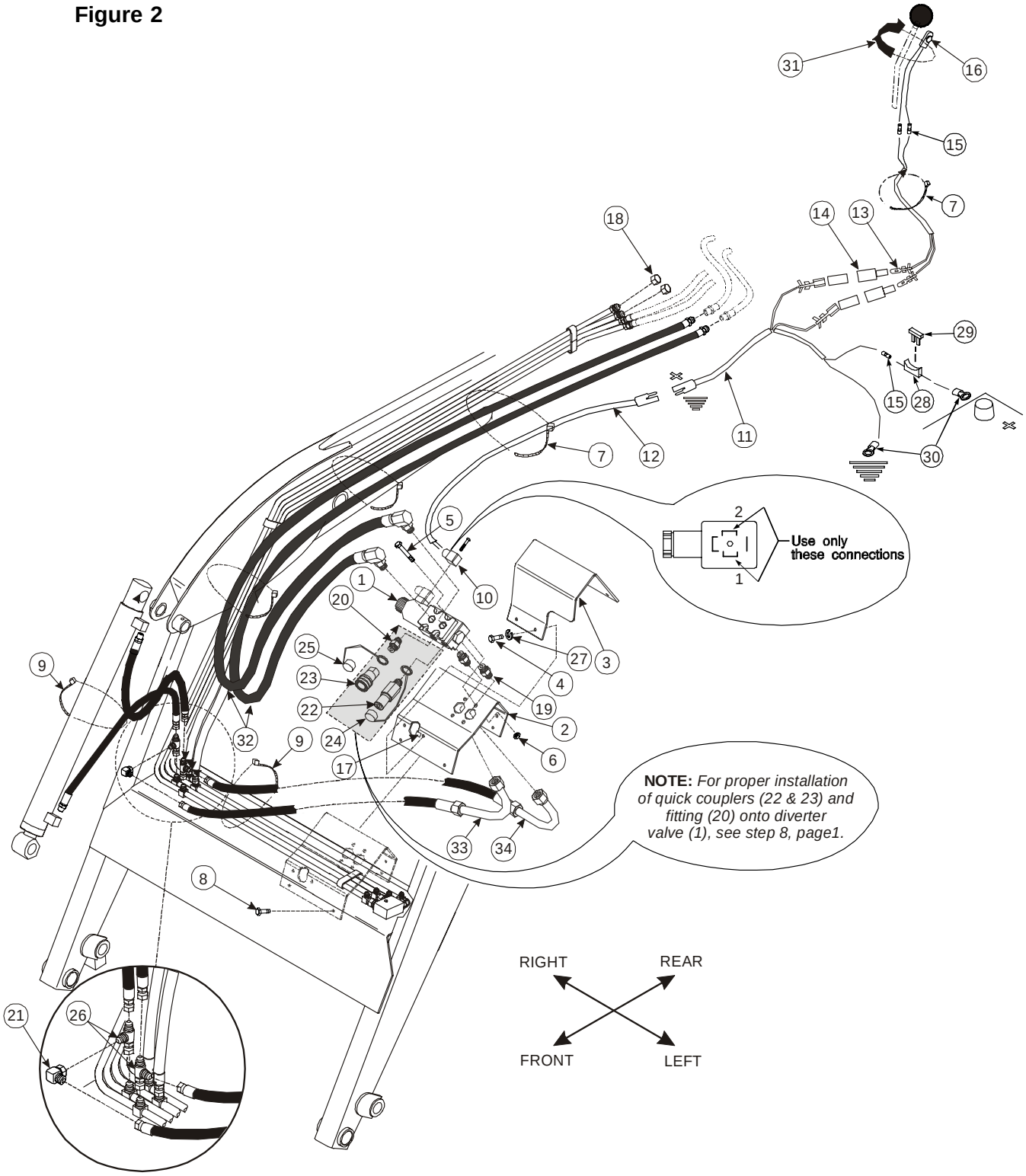
Figure 1 Selector Valve Repair Parts



PARTS LIST - THIRD FUNCTION SOLENOID SELECTOR VALVE KIT (Figure 2)

Item	Part No.	Description	Qty.
1	48391	VALVE, Diverter	1
2	53450	BASE PLATE, (2-7566) (Shown)	1
	50757	BASE PLATE, (2-7125) (Not Shown)	1
3	53451	COVER, Valve, (2-7166) (Shown)	1
	50756	COVER, Valve, (2-7125) (Not Shown)	1
4	41838-26	SCREW, Cap, 5/16-18 x 3/4	4
5	41838-57	SCREW, Cap, 5/16-18 x 2-3/4	4
6	41840-2	NUT, Lock, 5/16-18	6
7	8137-1	STRAP, Adjustable, Plastic, 3/16"	7
8	40253-5	SCREW, Self Tapping, 5/16 x 1"	4
9	8137-6	STRAP, Plastic Adjustable	4
10	41802	CONNECTOR. Two Pole	1
11	50502	WIRING HARNESS, 12' Long	1
12	48404	WIRING HARNESS, 15' Long	1
13	48411	CONNECTION TAB	2
14	48420	PLASTIC COVER, Tab	2
15	22727	BUTT CONNECTOR, Wire	3
16	41801	SWITCH, Push Button	1
17	6067-1	NUT, Speed	2
18	G9403372	FITTING, Cap, 3/4-16 JIC	2
19	32844-7	FITTING, Adapter, 7/8 O-Ring x 3/4-16 JIC	2
20	48415-1	FITTING, Nipple, 7/8 O-Ring x 3/4 O-Ring	1
21	34128-3	FITTING, Elbow, 90°, 9/16 JIC x 9/16 JIC	1
22	48482-1	FITTING, Coupler, Male	1
23	45291-2	FITTING, Coupler, Female	1
24	4838-16	DUST CAP, 1" I.D.	1
25	4838-15	DUST CAP, 1-1/2" I.D.	1
26	37850-3	TEE, Swivel Nut Run 9/16-18 JIC	2
27	G120214	WASHER, Lock, 5/16	2
28	41805	FUZE HOLDER	1
29	41804-1	FUZE, 10 AMP	1
30	24082-5	TERMINAL, Ring, 14-16 GA.	2
31	50503-1	TAPE, Electrical, 3/4" x 60"	2
32	48413-1	HOSE, 1/2 x 114	2
33	48414-1	HOSE, 1/2 x 25	1
34	48414-2	HOSE, 1/2 x 26	1

Figure 2


31
16
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13
18
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28
11
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12
30
2
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Use only
these connections
5
10
1
20
25
23
22
24
17
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32
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27
3
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2
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33
34
8
21
26
NOTE: For proper installation of quick couplers (22 & 23) and fitting (20) onto diverter valve (1), see step 8, page1.
RIGHT
REAR
FRONT
LEFT

INSTALLING THIRD FUNCTION VALVE KIT
(Continued from page 1) (Figure 2)

11. Route wiring harness (11) from loader mountings to a 12 Volt DC power source (eiter to the tractor battery or tractor fuse panel). Cut off excess wire. Attach fuse holder (28) to black wire using butt connectors (15). Attach terminal ends (30) opposite side of fuse holder (28) and white wire on wiring harness (11) and connect black wire to positive side of battery or fuse panel and white wire to ground.

12. Using excess wire that was cut in step 11 above, attach to wire leads comming from switch (16) using butt connectors (15). Cut to length and attach spade terminals (13) onto wires and install plastic tabs (14) over spade terminals. Connect to wiring harness (11).

13. Route wiring harness (12) through tie straps (9) for diverter valve hoses on loader steel oil lines so that end with bare wires is towards diverter valve. Allow enough wire at loader upright for plugging into harness (11) on tractor. Cut off excess length of harness at diverter valve.

14. Disassemble electrical connector (10) by removing center screw and prying out receptacle portion of connector. Also remove compression nut. Slide compression nut onto wiring harness (12) and thread harness into connector housing. Expose about 1" of individual wire and strip about 3/8 of insulation off. Connect black wire to #1 terminal and white wire to #2 terminal of connector receptacle.

15. Install receptacle part of connector into connector housing so terminal 3 is adjacent to wire entrance port in housing. Tightly screw compression nut into connector housing. Reinstall screw and rubber seal onto connector assembly. Plug connector onto diverter valve and tighten screw. NOTE: Adjust solenoid on diverter valve so connector is to the rear as shown in figure 1. Adjust by loosening plastic nut on end of diverter and turn solenoid. Retighten plastic nut.

16. Make sure all hydraulic connections are tight.

17. Install fuse (29) into fuse holder (28). Plug wiring harness (11 & 12) together. Start tractor engine and check operation of joystick. Loader bucket should roll back when joystick is moved to left. Also check operation of attachment. Attachment should clamp when joystick is moved to left and button on joystick switch is depressed. If bucket function is backwards but attachment is correct, switch hoses where diverter valve feeder hoses (32) are connected to original hoses removed from loader steel oil lines. This will mean attachment hoses and diverter valve couplers will have to switched also. If both functions are backwards, only switch hoses where diverter valve feeder hoses (32) are connected to original hoses removed from loader steel oil lines. If just attachment is backwards, switch attachment hoses and couplers at diverter valve.

19. Install speed nuts (17) to front of base plate. Fasten cover (3), to base plate using 5/16 x 3/4 cap screws (4), lock nuts (6) in rear and lock washers (27) in front.

OPERATING THIRD FUNCTION VALVE

After installing third function attachment onto loader, connect hoses to third function valve. Optional accessory will function when button on switch is activated and lever is moved as if to activate bucket cylinders.

NOTE: *To insure proper shifting of selector valve, always bring bucket control lever to neutral before pressing switch button. Selector valve may not shift when 12 GPM or more oil is flowing through it.*

INSTALLATION INSTRUCTIONS