

Keep With Loader Operator's Manual

VALVE AND PLUMBING KIT INSTRUCTIONS NEW HOLLAND TRACTORS WITH TANDEM GEAR PUMP HYDRAULIC SYSTEM

MODEL	2WD	4WD	LESS CAB	WITH CAB
5640, 6640, 7740	X	X	X	
7840, 8240 & 8340	X	X	X	

Valve and plumbing kit can be installed using tools ordinarily available. Valve control handle has been factory preassembled for ease of installation. Shut off engine and engage brakes during installation.

NOTE: Apply sealant only to all tapered threads unless coupled with swivel adapters. When using teflon tape, wrap tape clockwise (as viewed from end) and wrap only twice. Keep sealant away from first two threads of tapered end to prevent contamination of hydraulic fluid. Do not use sealant on o-ring or flare adapter threads.

INSTALLING VALVE TO TRACTOR (Figure 1)

1. Install mounting plate (10) to valve using 8MM x 30MM cap screws (7) and 5/16 lock washers (2).

NOTE: Flat deck tractors use top set of holes and straddle deck tractors use bottom set of holes.

2. Mount valve assembly to clutch housing using 3/4 x 2-3/4 cap screws (15), 3/4 lock washers (16) and spacer plates (8). Tractors with loader use one spacer plate and tractors without loader use two spacer plates.

NOTE: Hand railing on right side may have to be modified to fit around valve box assembly.

NOTE: Check clearance between tractor control levers and valve handle. Handle location can be adjusted slightly by adjusting mounting plate (10) or adjusting support flat (16)(Figure 10) on valve box.

3. Route hoses under platform and back to rear of tractor. Be sure hoses do not interfere with draft control or foot pedal linkages.

INSTALLING NEW PRESSURE LINE (Figures 2, 3, 4, 5 & 6)

1. STRADDLE DECK TRACTORS - Remove seat assembly by removing four socket head screws from seat slides to allow access to priority pack on top of

hydraulic lift cover. Drill 3/8 hole for tube clamp bolt in platform (Figure 5). Disconnect pressure line from rearmost elbow on top of remote valve. Disconnect pressure line from rear of priority pack. Disconnect other two oil lines from priority pack and remove pack from top of lift cover by removing four 7/16 x 1 cap screws to allow room to swing pressure line out from under platform. Remove pressure line from tractor.

FLAT DECK TRACTORS - Disconnect pressure line from rear port of remote valve and rear port of priority pack under platform. Remove pressure line from tractor. Drill 3/8 holes for tube clamp bracket in platform (Figure 6).

2. Disconnect small load sense line from front of right tractor rear remote valve (this location is common to all tractors with two or four rear remote valves). If this small load sense line is short (less than 16 inches) disconnect other end of this line and discard. If this line is more than 16 inches long slightly bend line aside.
3. Disconnect right rear remote valve control cables from valve spools and remove cable bracket from studs on front of remote valve. Remove studs from remote valve. This will allow room to install new steel oil line (25).
4. Install new pressure oil line (25) in place. (Route line up and over right upper hydraulic lift arm and rotate into position. It may be necessary to move pin in upper arm clevis to allow clearance for line). Reinstall priority pack, oil lines and seat (straddle deck tractors only).

NOTE: It will be easier to connect pressure line (25) to rear port of priority pack before pack is reinstalled on top of hydraulic lift cover.

5. Reinstall control cables to remote valve.

INSTALLING LOAD SENSING LINES (Figures 2-4)

NOTE: To identify pressure, load sense and tank hoses, refer to Figure 10.

1. Remove o-ring adapter fitting from front of tractor remote valve where small load sense line was connected. Screw shuttle valve (12) directly into port vacated. Make sure male tip with o-ring goes into tractor valve. Leave shuttle valve (12) loose at this time until best position is determined.
2. Screw 7/16 x 9/16 x 90 elbow (13) into female port of shuttle valve. Position this elbow so:
 - A. If short load sense line is removed, 1/4 x 16 hose (14)(Figures 3 & 4) can be connected from 7/16 x 9/16 x 90° elbow (13) to fitting where other end of load sense line was removed. Connect 1/4 x 16 hose (14) and tighten all fittings and shuttle valve.

OR:

B. If steel load sense line is longer than 16 inches, it can be rerouted directly to 7/16 x 9/16 x 90 elbow (13). Connect this load sense line to 7/16 x 9/16 x 90 elbow (13) and tighten fittings and shuttle valve. Discard 1/4 x 16 hose (14) since it will not be used.

3. **FLAT DECK TRACTORS** - Connect 1/4 x 92 load sense hose to male 7/16-20 flare end of shuttle valve (12). This completes the load sense circuit.

STRADDLE DECK TRACTORS - Use 7/16 elbow fitting (6) between shuttle valve and 1/4 x 92 hose. Route hoses to clear back panel of operator's platform. This completes the load sense circuit.

PLUMBING VALVE TO TRACTOR (Figures 2- 4)

NOTE: To identify pressure, load sense and tank hoses, refer to Figure 10.

1. Remove flow bolt at base of transmission filler tube at rear of tractor and replace it with return port fitting (9).

NOTE: Use existing gasket from original flow bolt.

Install 7/8 JIC adapter fitting (23) and 7/8 x 7/8 x 90° elbow (5) into return port (9). Connect 1/2 x 108 tank hose to elbow fitting (5). Figures 2, 3 & 4 show proper hose routing for flat deck and straddle deck tractors.

2. Connect pressure line (25) to elbow in rearmost port on top of control valve.

NOTE: If tractor has two sets of remote valves remove rearmost elbow from right remote valve.

3. Install 1 x 1 x 1 tee (11) on right remote valve. Connect pressure line (25) to side port of tee (11) and

connect 45° elbow end of 5/8 x 20 hose (27) onto top port of tee (11). Remove rearmost elbow from left remote valve and connect other end of hose to straight fitting in valve.

4. Connect 3/4 x 80 pressure hose to 1-1/16 fitting on branch tee of pressure line (25).

STRADDLE DECK TRACTORS - Install clamp (26) onto pressure line (25)(Figure 5). Attach clamp (26) to platform using 5/16 x 1 cap screw (3), 5/16 nut (1) and 5/16 washers (4 & 2) as needed.

FLAT DECK TRACTORS - Install clamp (26) onto pressure line (25)(Figure 6). Attach clamp bracket (24) to deck. Attach clamp (26) to clamp bracket (24) using 5/16 cap screw (3) 5/16 nut (1) and 5/16 washers (4 & 2) as needed.

5. Use small plastic tie straps (21)(not shown) to hold inlet, outlet and load sensing hoses from rubbing against rotating 3-point lift arms, brake levers, shift levers, etc., on tractor to avoid hose wear.

PLUMBING LOADER TO CONTROL VALVE (Figure 1)

NOTE: For a simplified view of Plumbing Loader to Control Valve and Self Leveling Valve see Figures 7 & 8. Refer to Figure 9 for location of rubber straps (19) on a typical loader installation.

1. Install 1/2 x 120 hoses (18) onto boom oil line tubes. Install and tighten hose fittings one at a time from bottom up. Loosening closest oil line clamp will ease installation.
2. Install male quick couplers (17). Do not over tighten male couplers.
3. Connect hoses as shown in Figure 1. Install colored rings (22) onto free ends of hoses to match rings on female couplers.
4. After all plumbing has been completed and all parts have been tightened, start engine and slowly cycle lift and bucket cylinders several times to purge air out of system, then retract cylinders and shut off tractor engine. Add additional tractor hydraulic fluid as specified in tractor owners manual to bring level of hydraulic fluid up to full.

NOTE: When cycling loader, operate loader according to operation decal (37)(Figure 10). If direction of control lever is wrong, or loader will not lower, recheck connections shown.



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

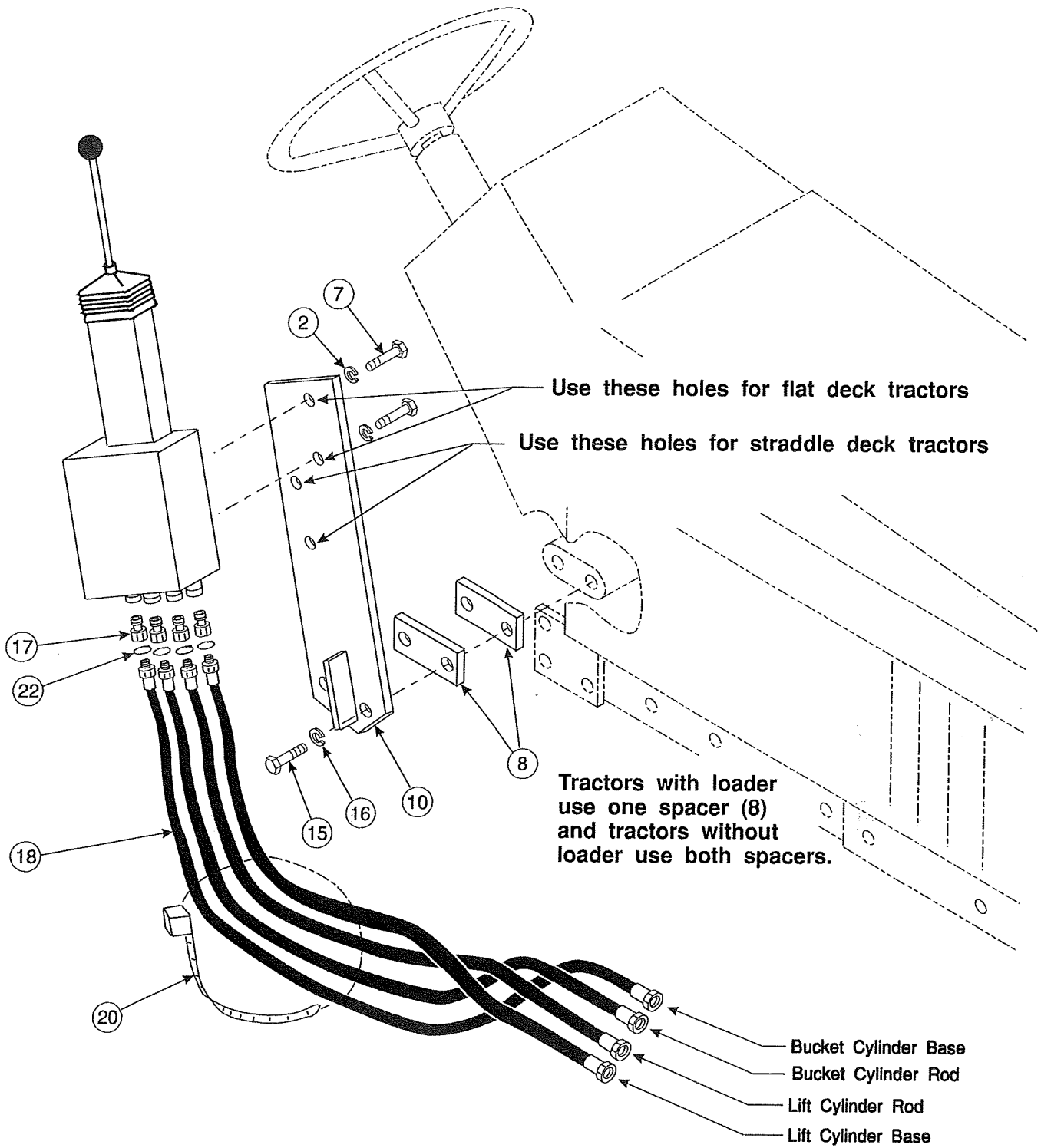
- DO NOT use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.
- Stop engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting engine or pressurizing lines.

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

PARTS LIST - VALVE AND PLUMBING KIT

ITEM	SMC NO.	NH NO.	DESCRIPTION	QTY.
1	G120376	09635082	NUT, Hex, 5/16-18	3
2	G120214	00080681	WASHER, Lock, 5/16	5
3	G122017	09635884	SCREW, Cap, 5/16-18 x 1	3
4	G120393	00080664	WASHER, Flat, 5/16	5
5	34128-1	00182977	FITTING, Elbow, 7/8-14 JIC Swivel x 7/8-14 JIC x 90°	1
6	34128-4	86512933	FITTING, Elbow, 7/16-20 x 7/16-20 Flare x 90	1
7	6090-46	00043128	SCREW, Cap, 8MM-1.25 x 30MM Gr. 8.8	2
8	40824	SML40824	SPACER, Flat	2
9	40639	SML40639	FITTING, Tank Port, Rear Axle	1
10	45227	SML45227	PLATE, Mounting	1
11	40655-1	SML406551	FITTING, Run Tee, 1-14 x 1-14 x 1-14 Face Seal	1
12	40777	SML40777	SHUTTLE VALVE Assembly	1
13	40654-1	SML406541	ELBOW, 7/16-20 O-Ring x 9/16-18 Face Seal	1
14	40776-1	SML407761	HOSE, 1/4 x 16	1
15	G271774	00280173	SCREW, Cap, 3/4-10 x 2-3/4	2
16	G131046	00087340	WASHER, Lock, 3/4	2
17	6137-6	SML61376	COUPLER, Male Quick, 1/2-14	4
18	36845-5	SML368455	HOSE, 1/2 x 120	4
19	7438-1	SML74381	STRAP, Rubber	2
20	8137-3	SML81373	STRAP, Reusable Tie, 1/2 x 20	1
21	8137-1	SML81371	STRAP, Reusable Tie, 3/16 x 11	4
22	36240-9thru12	SML36240	BAND, Spiral Identification, 1 inch, Blue, Red, Yellow, Green	1ea.
23	32844-3	00325059	FITTING Adapter, 7/8-14 x 7/8-14	1
24	41320	SML41320	CLAMP BRACKET	1
25	41315	SML41315	TUBE Assembly	1
26	8222-6	SML82226	TUBE CLAMP	1
27	41303-1	SML413031	HOSE, 5/8 x 20	1

Figure 1
Installing Valve Assembly



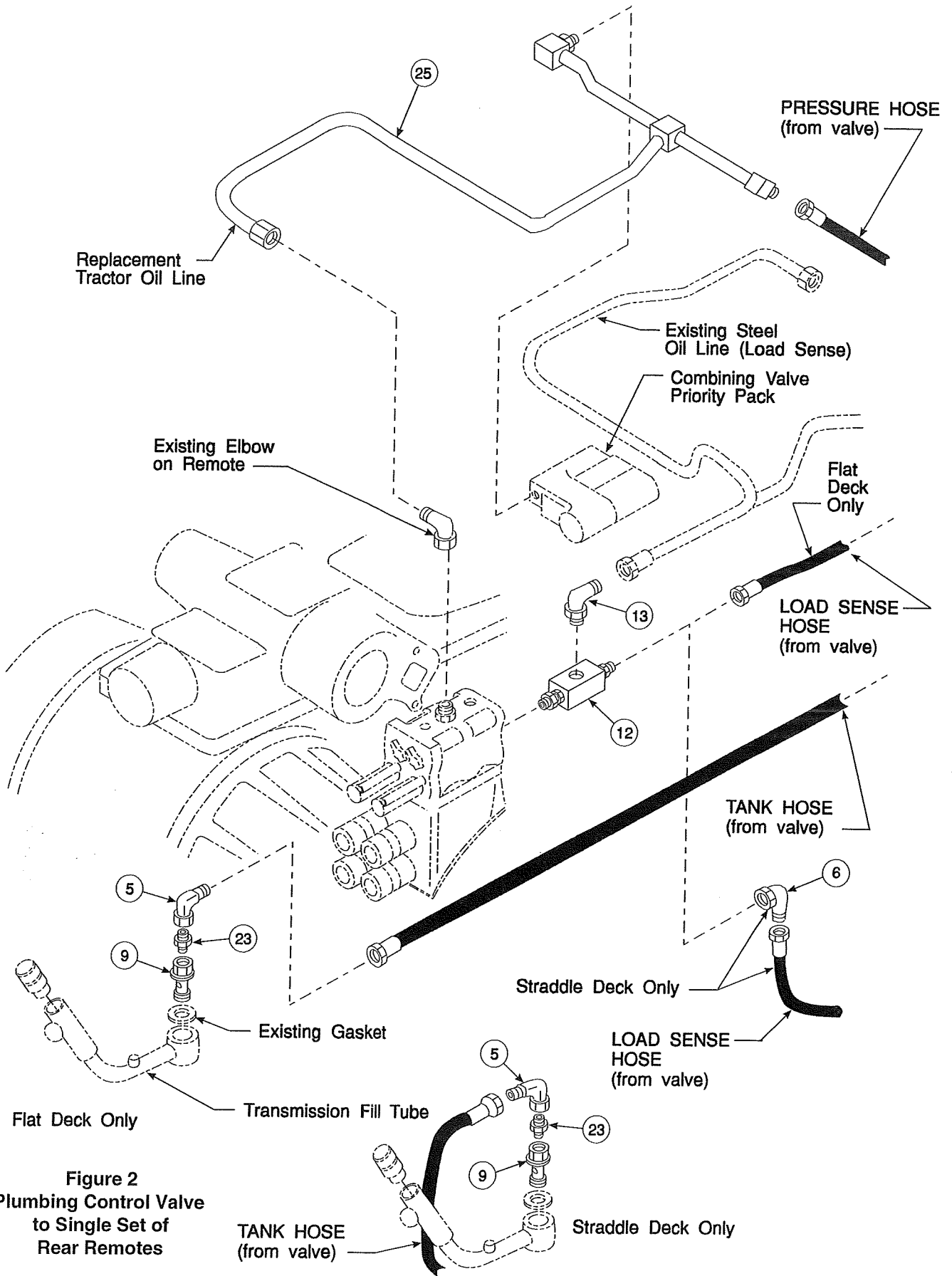


Figure 2
Plumbing Control Valve
to Single Set of
Rear Remotes

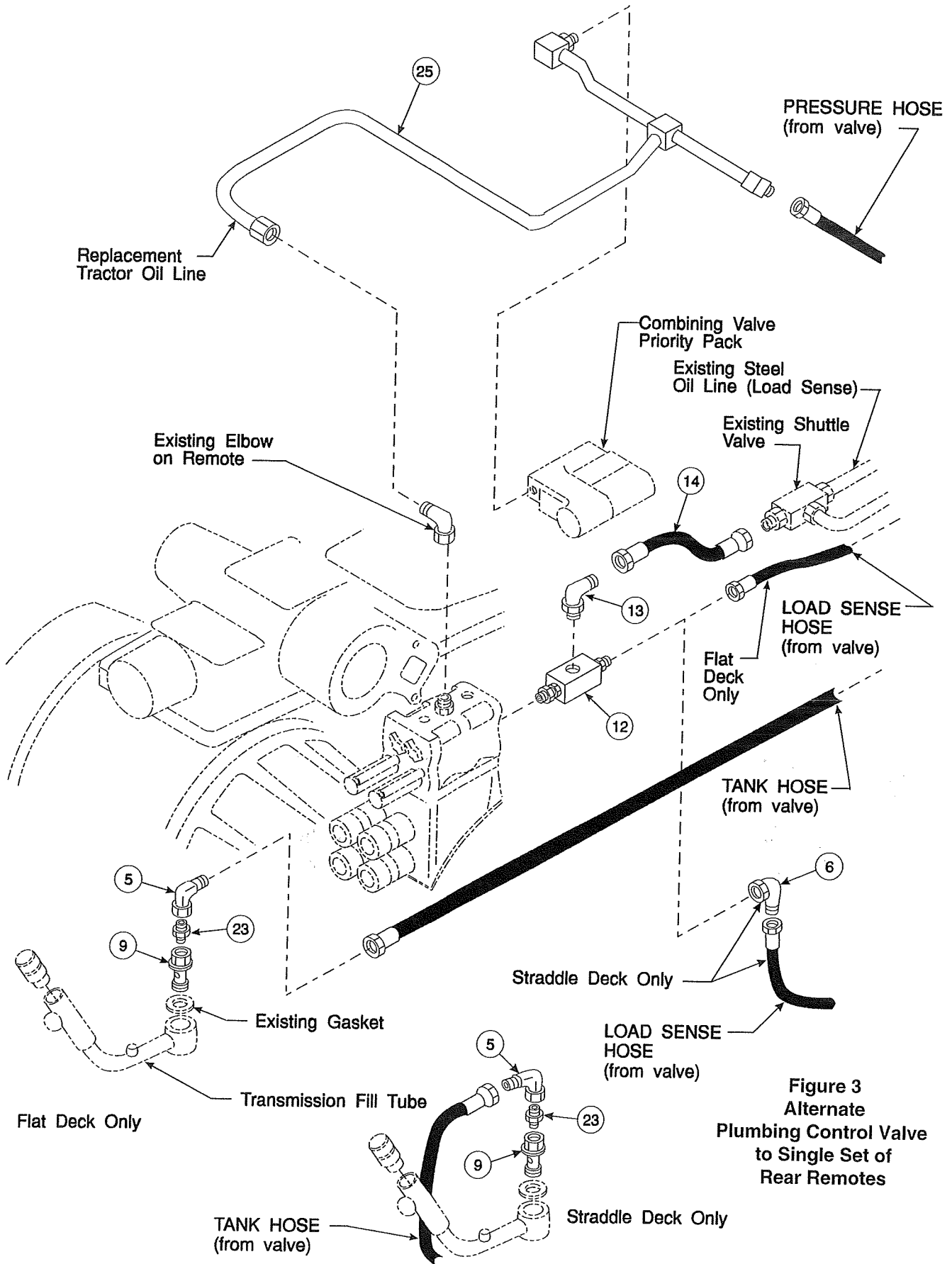


Figure 3
Alternate
Plumbing Control Valve
to Single Set of
Rear Remotes

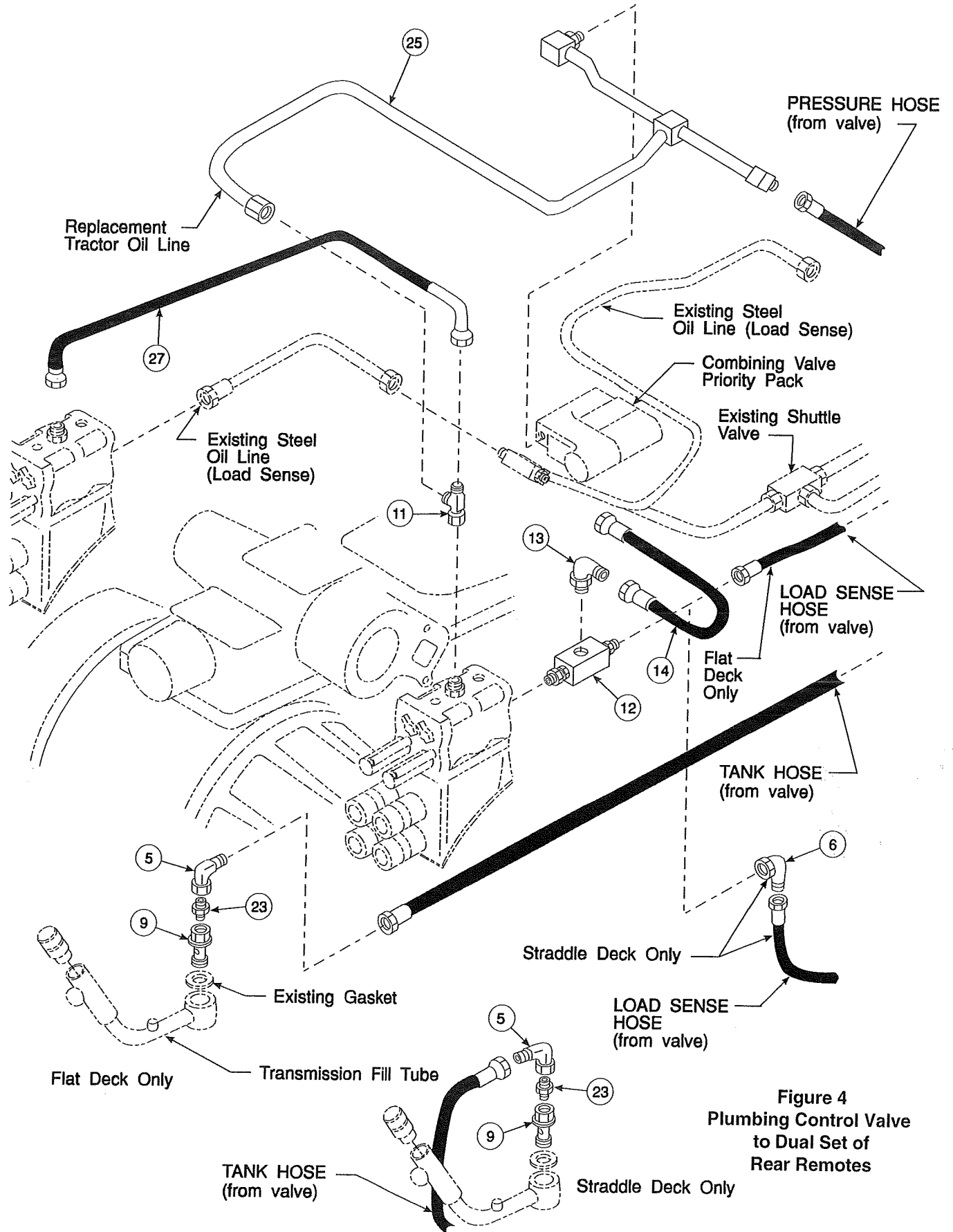


Figure 4
Plumbing Control Valve
to Dual Set of
Rear Remotes

DRILL 11/32 DIA. HOLE

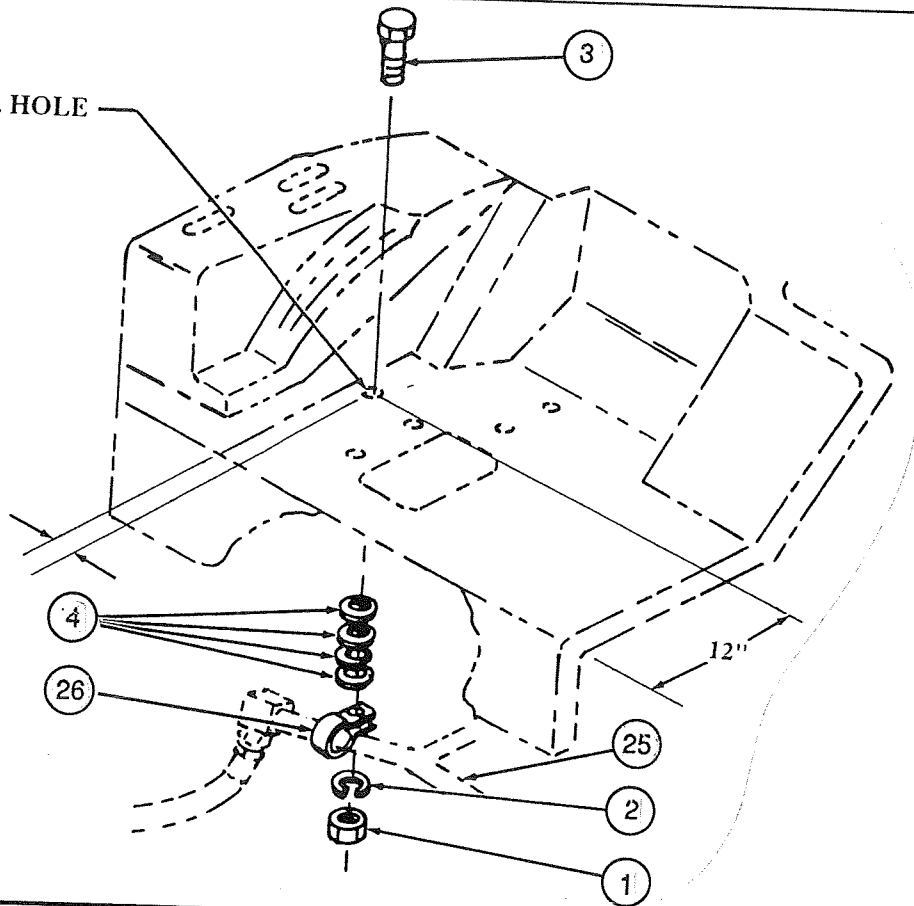


Figure 5
Clamping Pressure Line
to Straddle Deck Tractors

DRILL (2) .38 DIA. HOLES

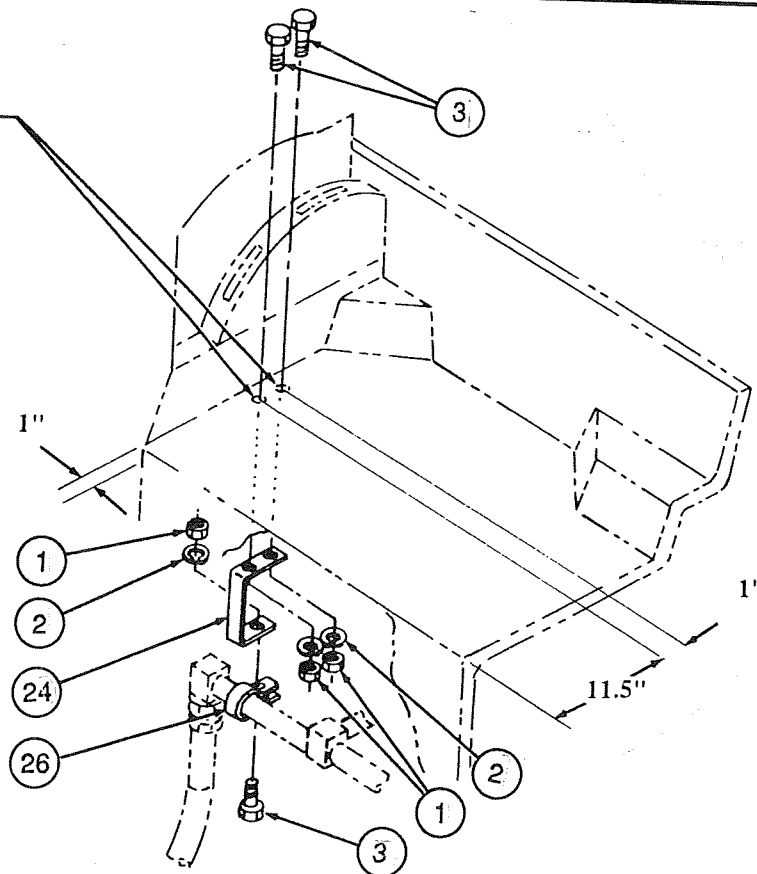


Figure 6
Clamping Pressure Line
to Flat Deck Tractors

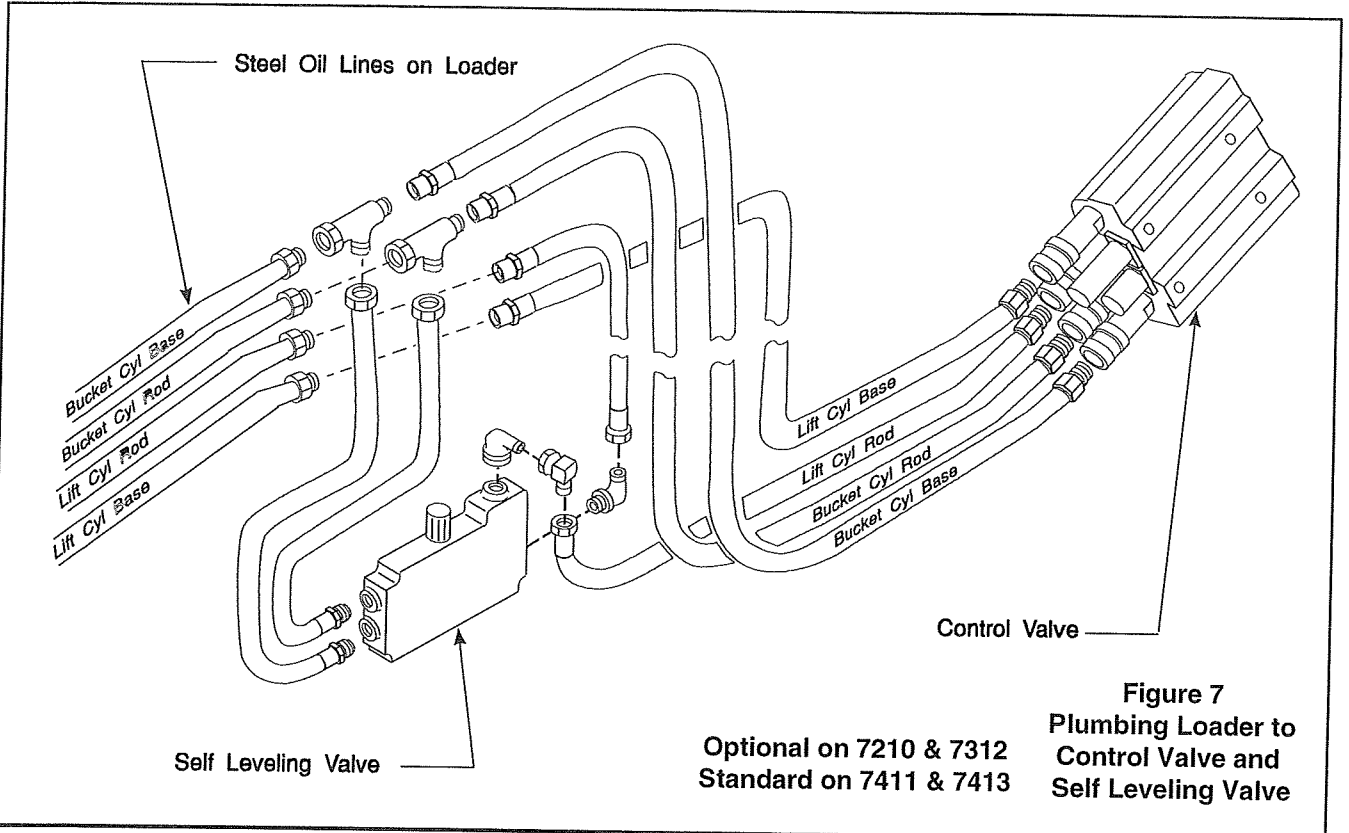


Figure 7
Plumbing Loader to
Control Valve and
Self Leveling Valve
 Optional on 7210 & 7312
 Standard on 7411 & 7413

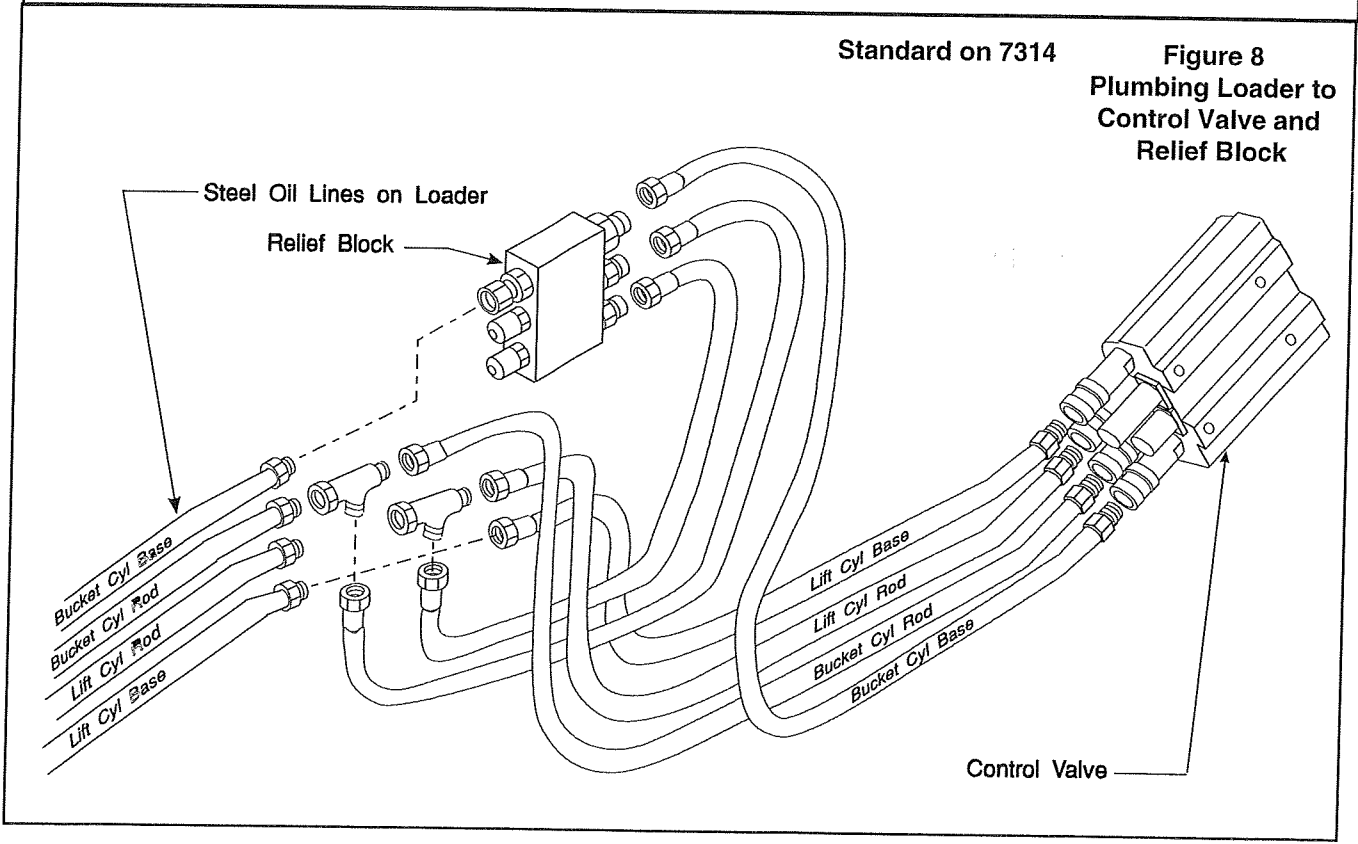
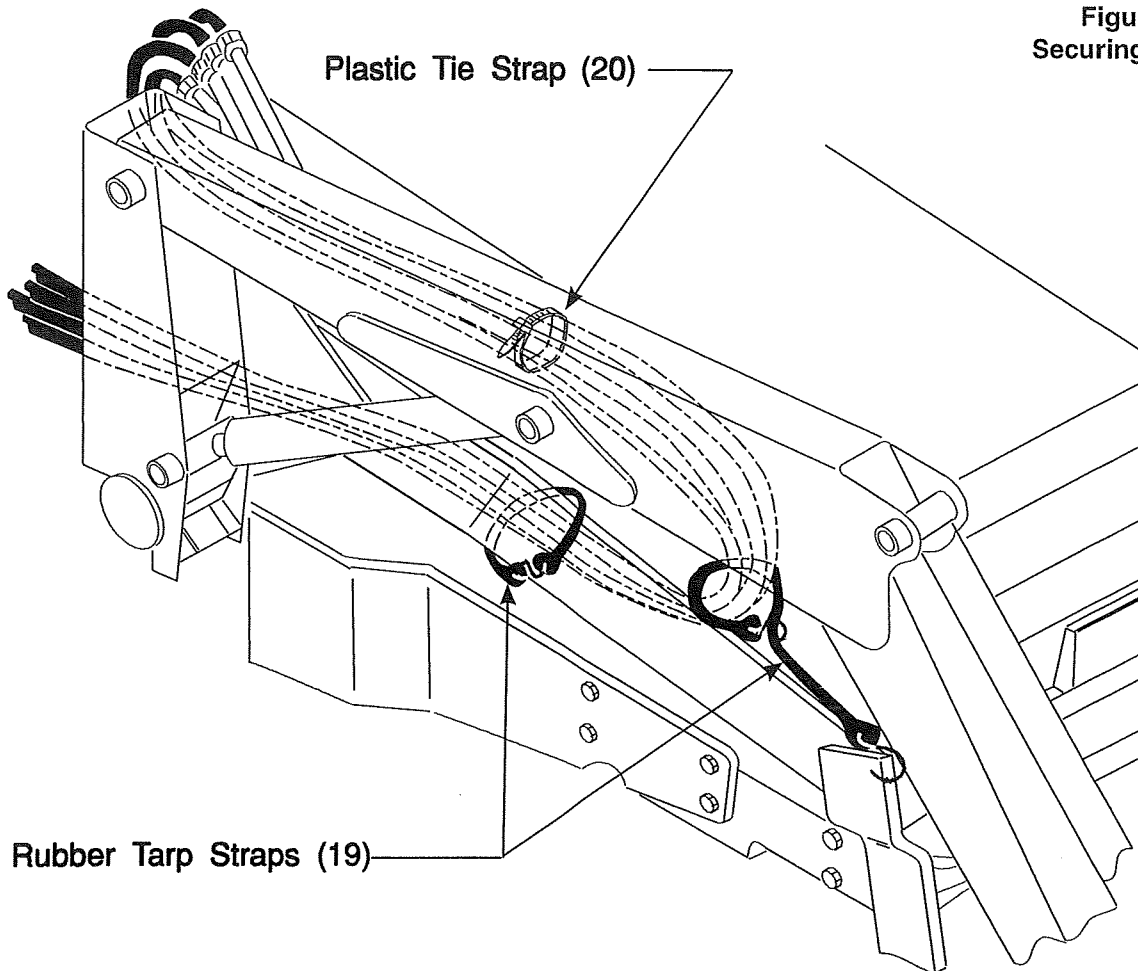


Figure 8
Plumbing Loader to
Control Valve and
Relief Block
 Standard on 7314

Figure 9
Securing Hoses



SECURING HOSES USING RUBBER TARP STRAPS (Figure 9)

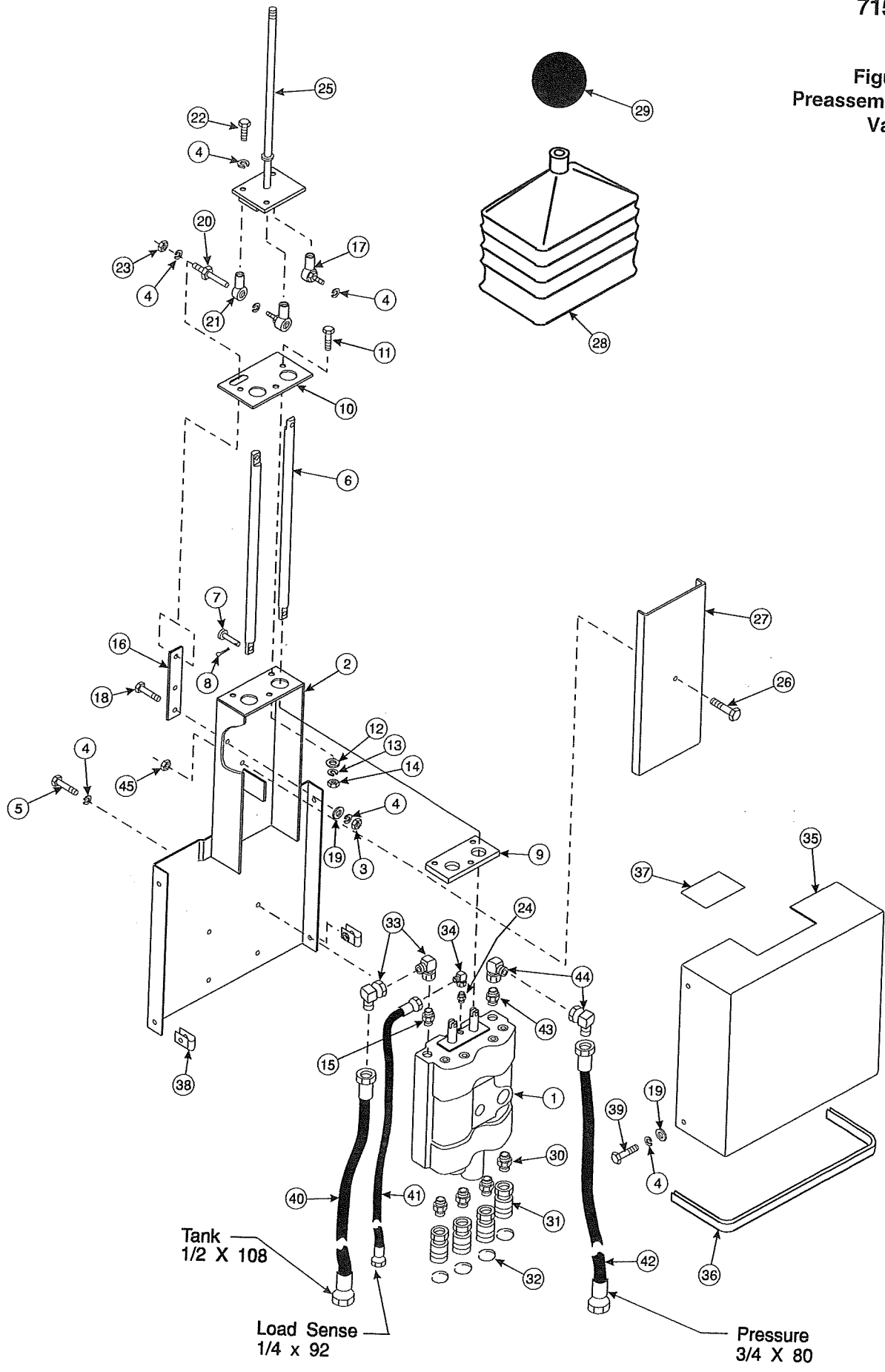
Install loader onto tractor according to instructions included with mounting kit. Use larger plastic tie strap (20) to bundle 1/2 x 120 hoses together. Loop one

rubber strap (19) around hoses onto itself, and secure other end near front mounting. Wrap remaining rubber strap around bundled hoses and loader side frame. Make sure rubber straps secure hoses away from tractor axle, wheel or moving loader parts.

VALVE ASSEMBLY - PREASSEMBLED

ITEM	SMC NO.	NH NO.	DESCRIPTION	QTY.
1	44753	SML44753	VALVE, Walvoil	1
2	45222	SML45222	BRACKET, Valve Mounting	1
3	G120376	09635082	NUT, Hex, 5/16-18	2
4	G120214	00080681	WASHER, Lock, 5/16	14
5	6090-30	00120104	SCREW, Cap, 8MM-1.25 x 20MM Gr. 8.8	2
6	45218	SML45218	ROD, Spool Extension	2
7	6021-16	SML602116	PIN, Clevis, 5/16 x 1	2
8	G121222	SMLG121222	PIN, Cotter, 3/32 x 3/4	2
9	40811	SML40811	GUIDE, Extension Rod, Plastic	1
10	40828	SML40828	PLATE, Bellows Mounting	1
11	G180022	00088146	SCREW, Cap, 1/4-20 x 1	3
12	G120392	00087361	WASHER, Flat, 1/4	3
13	G120380	00080682	WASHER, Lock, 1/4	3
14	G120375	00007770	NUT, Hex, 1/4-20	3
15	32844-9	86507102	FITTING, Adapter, 1-1/16 O-ring x 7/8-14 JIC	1
16	40817	SML40817	FLAT, Support	1
17	26009-4	SML260094	ROD END	2
18	G122017	09635884	SCREW, Cap, 5/16-18 x 1	2
19	G120393	00080664	WASHER, Flat, 5/16	6
20	38904-2	SML389042	STUD, Ball Joint, 5/16-24	1
21	38900-4	SML389004	BALL JOINT	1
22	G181608	00280483	SCREW, Cap, 5/16-24 x 1	3
23	G120368	00012628	NUT, Hex, 5/16-24	1
24	32844-12	00139398	FITTING, Adapter, 9/16-18 O-ring x 7/16-20 JIC	1
25	45219	SML45219	HANDLE ASSEMBLY	1
26	G180048	00087405	SCREW, Cap, 1/4-20 x 2-1/2	1
27	40822	SML40822	COVER, Rod Enclosure	1
28	36077	SML36077	BOOT	1
29	38902	SML38902	KNOB, Valve Handle	1
30	39280-10	SML3928010	FITTING, Straight, 7/8-14 O-Ring x 1/2-14 NPTF	4
31	6147-8	SML61478	COUPLER, Female Quick, 1/2-14	4
32	36240-9thru12	SML36240	BAND, Spiral Identification, 1 inch, Blue, Red, Yellow, Green	1ea.
33	34128-1	00182977	FITTING, Elbow, 7/8-14 JIC Swivel x 7/8-14 JIC x 90°	2
34	34128-4	86512933	FITTING, Elbow, 7/16-20 x 7/16-20 Flare x 90	1
35	45220	SML45220	COVER, Weldment	1
36	24765-3	SML247653	TRIM, Plastic, 15 inches	1
37	38929	SML38929	DECAL, Valve Operation	1
38	6067-1	09626645	NUT, Speed Clip, 5/16-18	4
39	G180077	00087872	SCREW, Cap, 5/16-18 x 3/4	4
40	36698-12	SML3669812	HOSE, 1/2 x 108 (Tank)	1
41	40656-3	SML406563	HOSE, 1/4 x 92 (Load Sense)	1
42	41304-4	SML413044	HOSE, 3/4 x 80 (Pressure)	1
43	32844-15	00322896	FITTING, Adapter	1
44	34128-5	SML341285	FITTING, 1-1/16-12 JIC x 1-1/16-12 JIC, 90°	2
45	G9424215	00280129	NUT, Lock, 1/4-20	1

Figure 10
Preassembled Control Valve



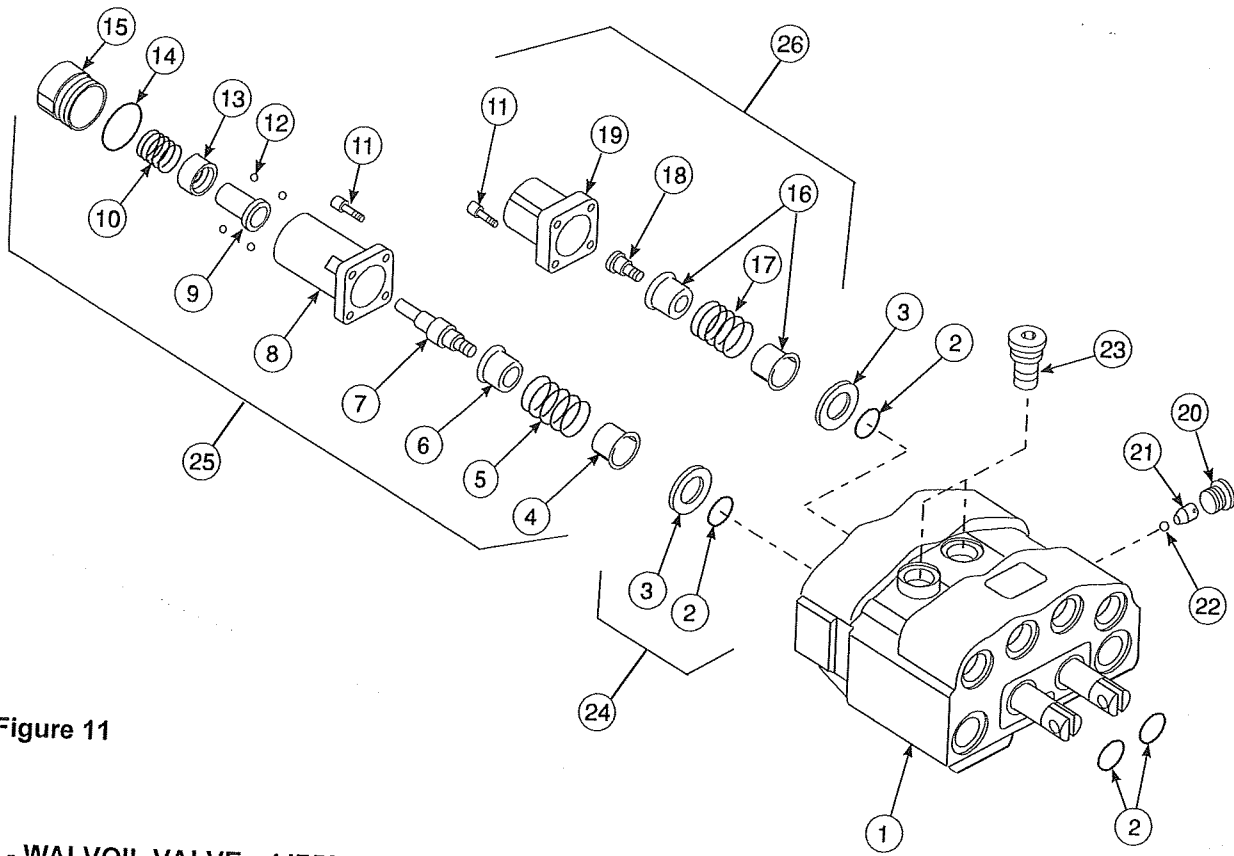


Figure 11

PARTS LIST - WALVOIL VALVE - 44753

ITEM	SMC NO.	NH NO.	DESCRIPTION	QTY.
1	*		VALVE BODY (Includes spools)	1
2	*		SEAL, O-Ring	4
3	*		WASHER, 18MM x 34MM x 4MM	2
4	45024	SML45024	BUSHING	1
5	45025	SML45025	SPRING	1
6	45026	SML45026	BUSHING	1
7	45027	SML45027	PIN, Spool Anchor	1
8	*		COVER	1
9	45029	SML45029	BUSHING, Carrier	1
10	45030	SML45030	SPRING	1
11	45028	SML45028	SCREW, Cap, Socket Head, 5MM x 16MM	1
12	45032	SML45032	BALL BEARING	8
13	45033	SML45033	RING, Thrust	4
14	45031	SML45031	O-Ring	1
15	*		END CAP	1
16	45034	SML45034	BUSHING	1
17	45035	SML45035	SPRING	2
18	45036	SML45036	SCREW, Spool Control	1
19	*		ENDCAP	1
20	45041	SML45041	PLUG,	1
21	45042	SML45042	PLUG, with seat	1
22	45043	SML45043	BALL BEARING	1
23	45023	SML45023	LOAD CHECK PLUG, VR10	1
24	45020	SML45020	SEAL KIT, Body [item #2 (Qty. 4) and item #3 (Qty. 2)]	2
25	45021	SML45021	REPAIR KIT [items 4, 5, 6, 7, 9, 10, 11 (Qty. 4), 12 (Qty. 4), 13, 14 & 15]	1
26	45022	SML45022	REPAIR KIT [items 11 (Qty. 4), 16 (Qty. 2), 17, 18 & 19]	1

* Not available as repair part. Order appropriate repair kit or complete valve (44753).

NOTES

INSTALLATION INSTRUCTIONS