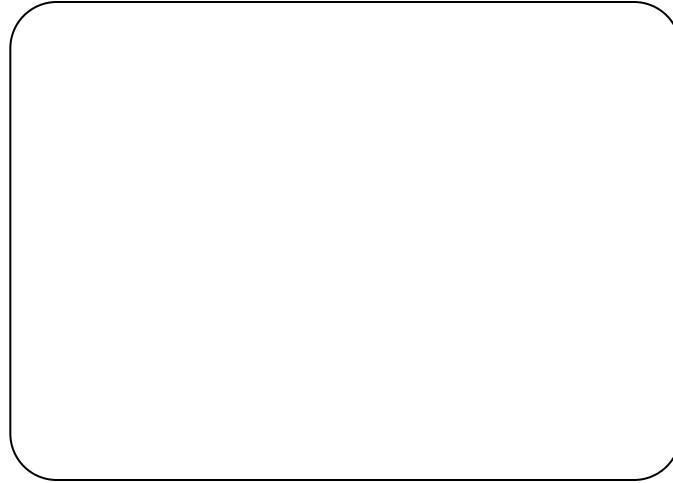
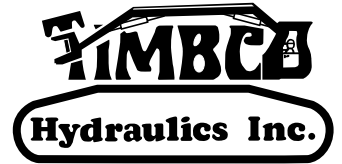
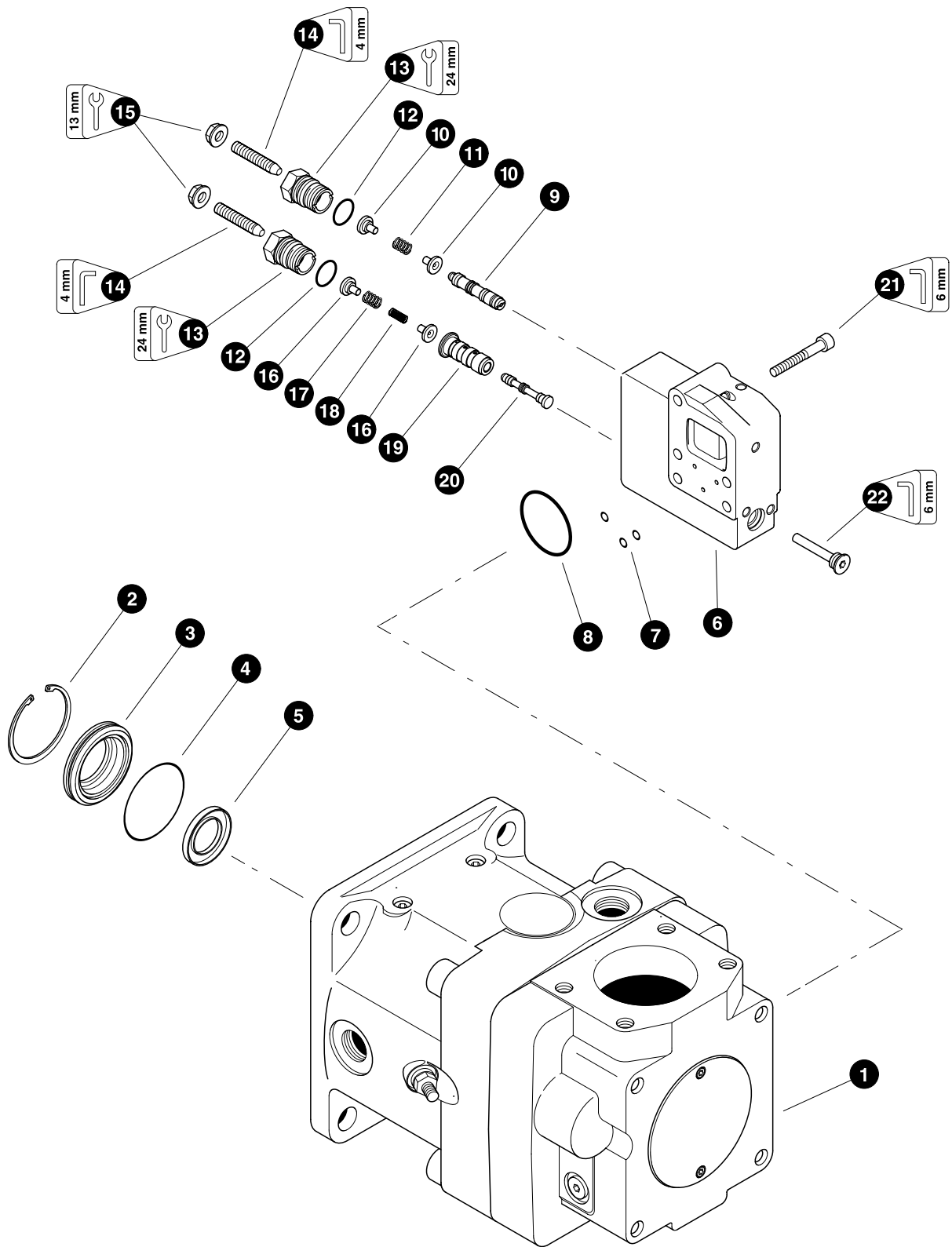


Section LH-1



Loader Implements (L90LS Valve) - Loader Pumps



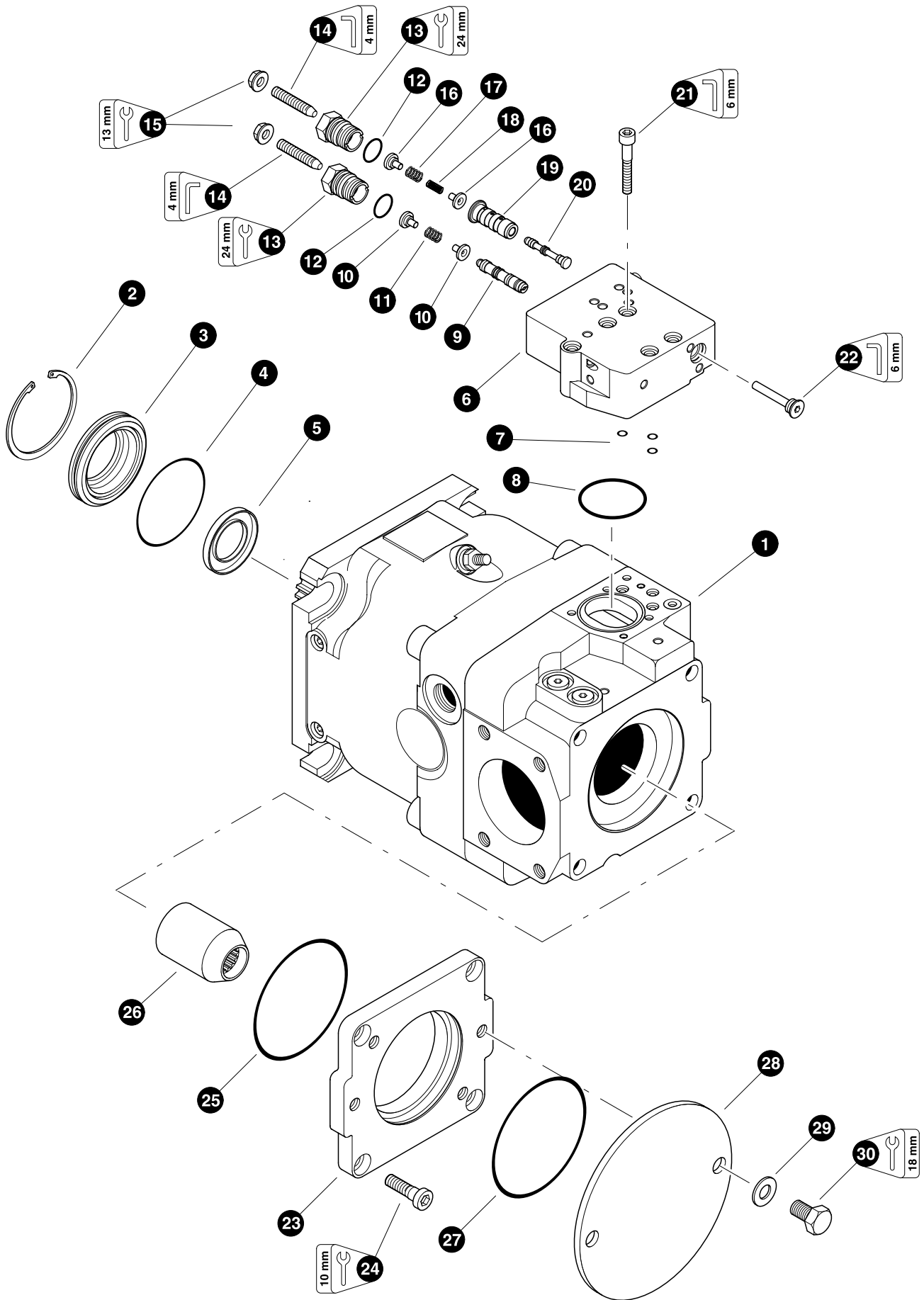
LOADER IMPLEMENT PUMP (Rexroth 95cc)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	22707-LH	1	☐	PUMP, implement - Rexroth 95cc	
2	23676-LH	1		RING, seal retaining	
3	23677-LH	1		COVER, front	
4	23678-LH	1	★	O-RING, front cover	
5	23675-LH	1	★	SEAL, shaft	
6	18681-LH	1	☐	COMPENSATOR	
7	20809-LH	3	★	O-RING, quad	
8	20808-LH	1	★	O-RING, compensator	
9	NSS	1		SPOOL, POR pressure	
10	21551-LH	2		RETAINER, spring	
11	21552-LH	1		SPRING	
12	21553-LH	2	★	O-RING, compensator cap	
13	21554-LH	2		CAP, compensator	
14	20358-LH	2	★	NUT, seal	
15	21555-LH	2		SCREW, adjusting	
16	21558-LH	2		RETAINER, spring	
17	21556-LH	1		SPRING	
18	21557-LH	1		SPRING	
19	NSS	1		SLEEVE, spool	
20	NSS	1		SPOOL, stand-by pressure	
21	21559-LH	5		BOLT, allen head - 8mm x 50mm	
22	NSS	1		PLUG	
23	21550-LH	1		FLANGE, thru drive	
24	17608-LH	4		BOLT, allen head - 12mm-1.75P x 30mm	
25	17744-LH	1	★	O-RING, thru drive flange	
26	18843-LH	1		COUPLING, thru drive	
27	18844-LH	1		O-RING, thru drive cover	
28	18414-LH	1		COVER, thru drive	
29	18735-LH	2		WASHER, flat - 12mm	
30	15556-LH	2		BOLT - 12mm-1.75P x 20mm	
--	23679-LH	1		KIT, seal repair (<i>Complete pump</i>)	

- ☐ Kit or Assembly - includes all items indented underneath.
- ★ Included in seal repair kit, PN# 23679-LH.

Note:

Due to warranty policy restrictions imposed by Timbco's component suppliers, it is not recommended that the component be disassembled further than is shown in the illustration.



Parts 00865 11/17/98
37.50

LOADER IMPLEMENT PUMP (Rexroth 130cc)

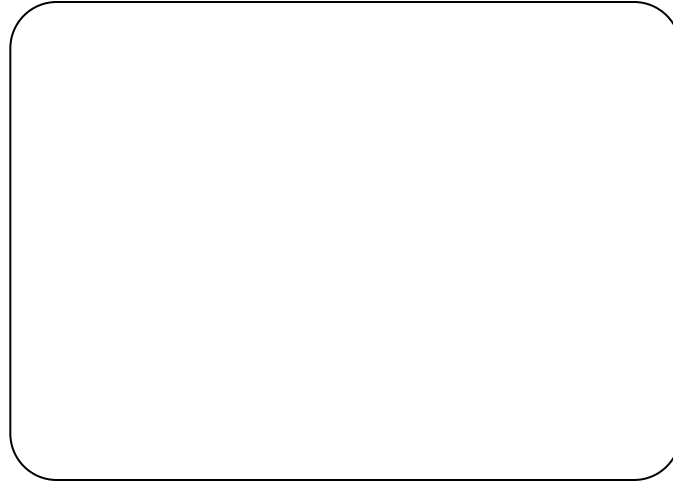
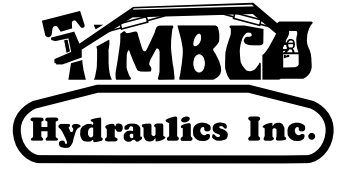
REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	22706-LH	1	☐	PUMP, implement - Rexroth 130cc	
2	21546-LH	1		RING, seal retaining	
3	21547-LH	1		COVER, front	
4	21548-LH	1	★	O-RING, front cover	
5	18687-LH	1	★	SEAL, shaft	
6	18681-LH	1	☐	COMPENSATOR	
7	20809-LH	3	★	O-RING, quad	
8	20808-LH	1	★	O-RING, compensator	
9	NSS	1		SPOOL. POR pressure	
10	21551-LH	2		RETAINER, spring	
11	21552-LH	1		SPRING	
12	21553-LH	2	★	O-RING, compensator cap	
13	21554-LH	2		CAP, compensator	
14	20358-LH	2	★	NUT, seal	
15	21555-LH	2		SCREW, adjusting	
16	21558-LH	2		RETAINER, spring	
17	21556-LH	1		SPRING	
18	21557-LH	1		SPRING	
19	NSS	1		SLEEVE, spool	
20	NSS	1		SPOOL, stand-by pressure	
21	21559-LH	5		BOLT, allen head - 8mm x 50mm	
22	NSS	1		PLUG	
23	21550-LH	1		FLANGE, thru drive	
24	17608-LH	4		BOLT, allen head - 12mm-1.75P x 30mm	
25	17744-LH	1	★	O-RING, thru drive flange	
26	18843-LH	1		COUPLING, thru drive	
27	18844-LH	1		O-RING, thru drive cover	
28	18414-LH	1		COVER, thru drive	
29	18735-LH	2		WASHER, flat - 12mm	
30	15556-LH	2		BOLT - 12mm-1.75P x 20mm	
--	18799-LH	1		KIT, seal repair (<i>Complete pump</i>)	

- ☐ Kit or Assembly - includes all items indented underneath.
- ★ Included in seal repair kit, PN# 18799-LH.

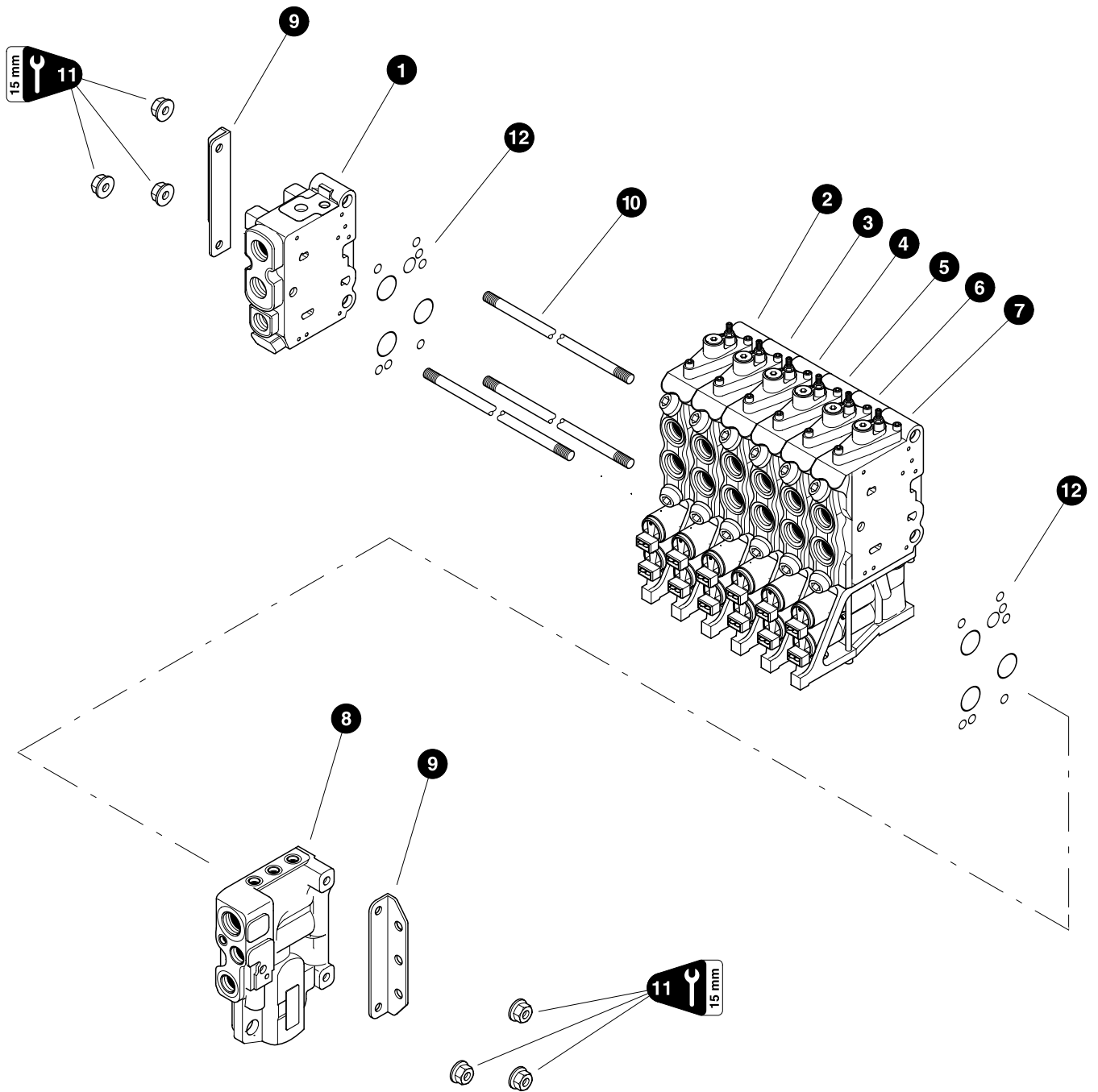
Note:

Due to warranty policy restrictions imposed by Timbco's component suppliers, it is not recommended that the component be disassembled further than is shown in the illustration.

Section LH-2



Loader Implements (L90LS Valve) - Main Control Valve



Parts 01317 09/15/99
25.00

MAIN CONTROL VALVE (VOAC L90LS)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	19178-LH	1	<input type="checkbox"/> MAIN CONTROL VALVE ASSEMBLY(See Note #1 Below)	
1	REF	1	<input checked="" type="checkbox"/> VALVE SECTION - outlet	LH-2-10
2	REF.	1	<input checked="" type="checkbox"/> VALVE SECTION - swing function	LH-2-4
3	REF.	1	<input checked="" type="checkbox"/> VALVE SECTION - steer function	LH-2-4
4	REF.	1	<input checked="" type="checkbox"/> VALVE SECTION - grapple open/close function	LH-2-4
5	REF.	1	<input checked="" type="checkbox"/> VALVE SECTION - main boom function	LH-2-4
6	REF.	1	<input checked="" type="checkbox"/> VALVE SECTION - grapple rotate function	LH-2-4
7	REF.	1	<input checked="" type="checkbox"/> VALVE SECTION - stick boom function	LH-2-4
8	REF	1	<input checked="" type="checkbox"/> VALVE SECTION - inlet	LH-2-12
-	23402-LH	1	<input type="checkbox"/> KIT, mounting brackets	
9	-----	2	BRACKET, valve mounting	
-	23403-LH	1	<input type="checkbox"/> KIT, tie rod (6 section)	
10	23912-LH	3	ROD, tie	
11	23913-LH	6	NUT (Special torque procedure)(See Note #2 Below)	
12	23404-LH	7	KIT, seal repair - L90LS face seals	

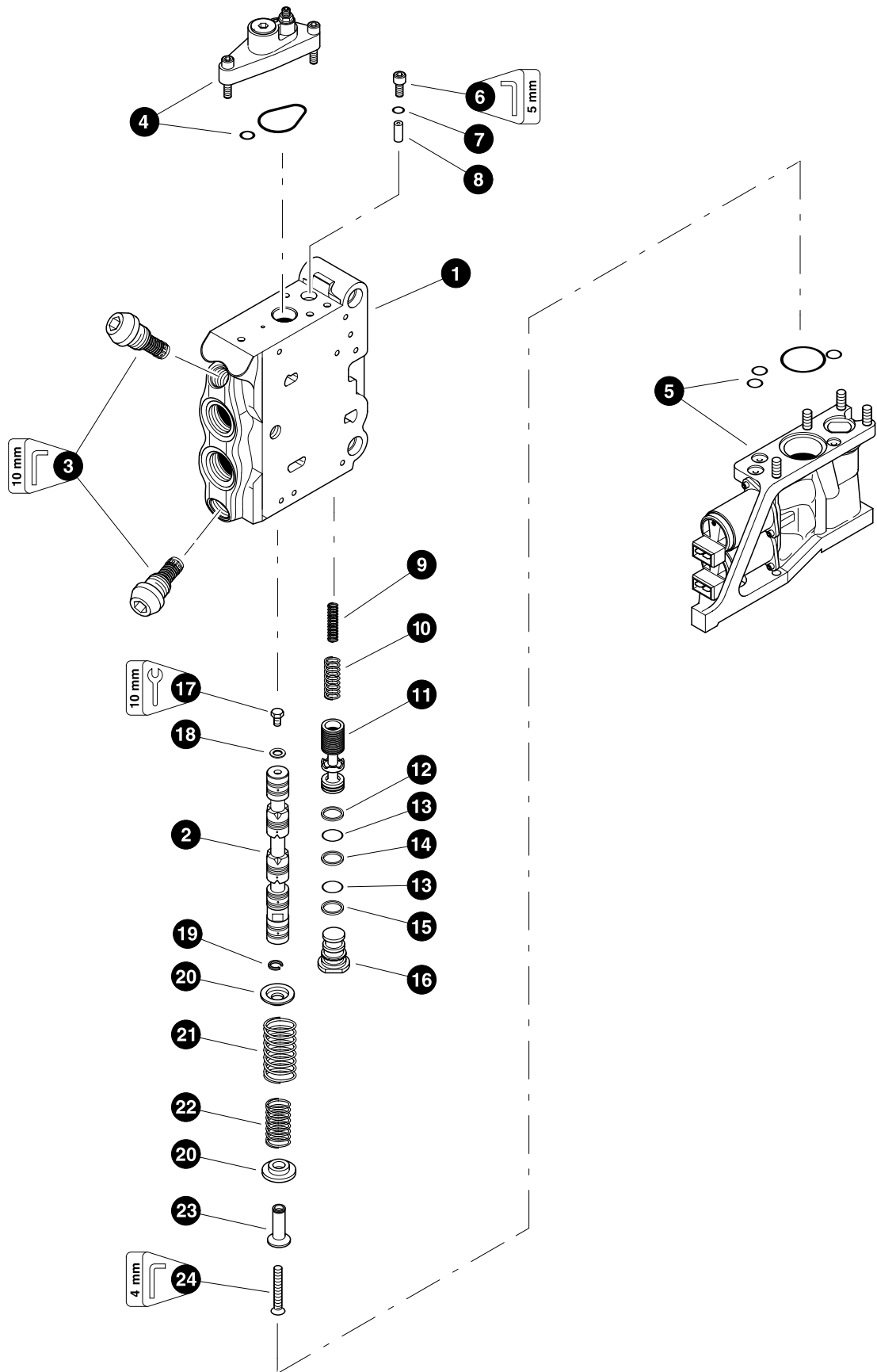
- Kit or Assembly - includes all items indented underneath.
- See referenced page for component or assembly breakdown.

Note #1:

Illustration and parts list reflects a standard valve configuration used for a TF or TS Forwarder, Clambunk or arch grapple. Contact your Timbco dealer if your valve or machine configuration differs.

Note #2:

Tie rod nuts should be torqued in a clockwise pattern in three steps, 7.5 ft.lbs. (10 Nm), 22.5 ft.lbs. (30 Nm) and 33.5 ft.lbs. (45 Nm).

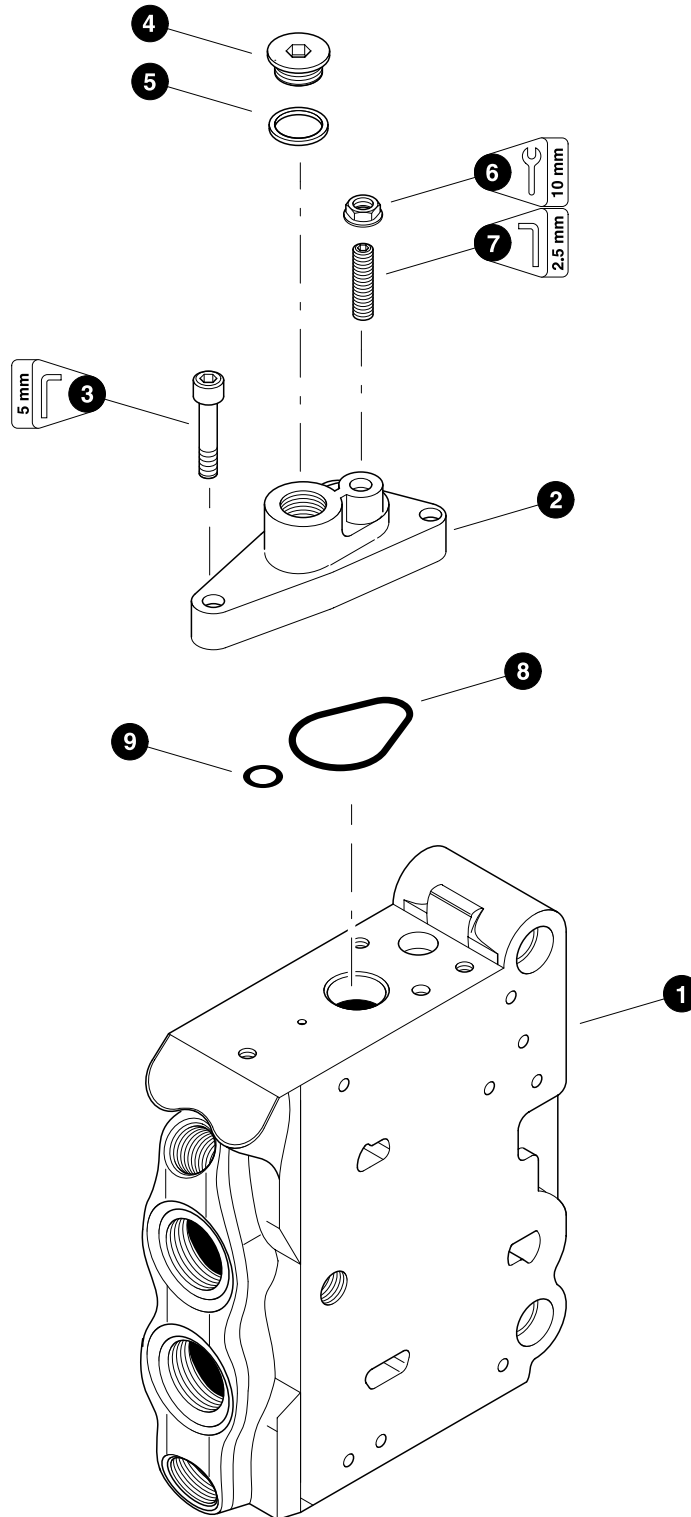


Parts 01318 09/15/99
37.50

WORK VALVE SECTION (VOAC L90LS)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	23406-LH	1	<input type="checkbox"/> VALVE SECTION, stick boom/tool tilt	
-	23407-LH	1	<input type="checkbox"/> VALVE SECTION, rotate	
-	23408-LH	1	<input type="checkbox"/> VALVE SECTION, main boom	
-	23409-LH	1	<input type="checkbox"/> VALVE SECTION, grapple/accumulator	
-	23410-LH	1	<input type="checkbox"/> VALVE SECTION, steer/shear	
-	23411-LH	1	<input type="checkbox"/> VALVE SECTION, swing	
1	NSS	1	BODY, valve section	
2	NSS	1	SPOOL	
3	23413-LH	2	CARTRIDGE, port relief (250 Bar)	
4	REF.	1	<input checked="" type="checkbox"/> SECTION END CAP ASSEMBLY - "A" port side	LH-2-6
5	REF.	1	<input checked="" type="checkbox"/> SECTION END CAP ASSEMBLY - "B" port side	LH-2-8
-	23419-LH	1	<input type="checkbox"/> KIT, compensator - "KX" (Blue)	
-	23424-LH	1	<input type="checkbox"/> KIT, compensator - "K" (Blue)(Rotate & grapple only)	
6	-----	1	SCREW, throttling - 6mm-1.0P x 10mm	
7	-----	1	RING, seal	
8	-----	1	ORIFICE	
9	-----	1	SPRING, compensator	
10	-----	1	SPRING, compensator	
11	-----	1	SPOOL, compensator	
12	-----	2	RING, back-up	
13	-----	1	O-RING	
14	-----	1	O-RING	
15	-----	1	RING, back-up	
16	-----	1	PLUG, compensator	
17	-----	1	BOLT, spool - 6mm-1.0P x 8mm	
18	-----	1	WASHER	
-	23423-LH	1	<input type="checkbox"/> KIT, spool centering spring	
19	-----	1	RING, lock	
20	-----	2	RETAINER, spring	
21	-----	1	SPRING	
22	-----	1	SPRING	
23	-----	1	SLEEVE	
24	-----	1	SCREW, spring assembly	

- Kit or Assembly - includes all items indented underneath.
- See referenced page for component or assembly breakdown.

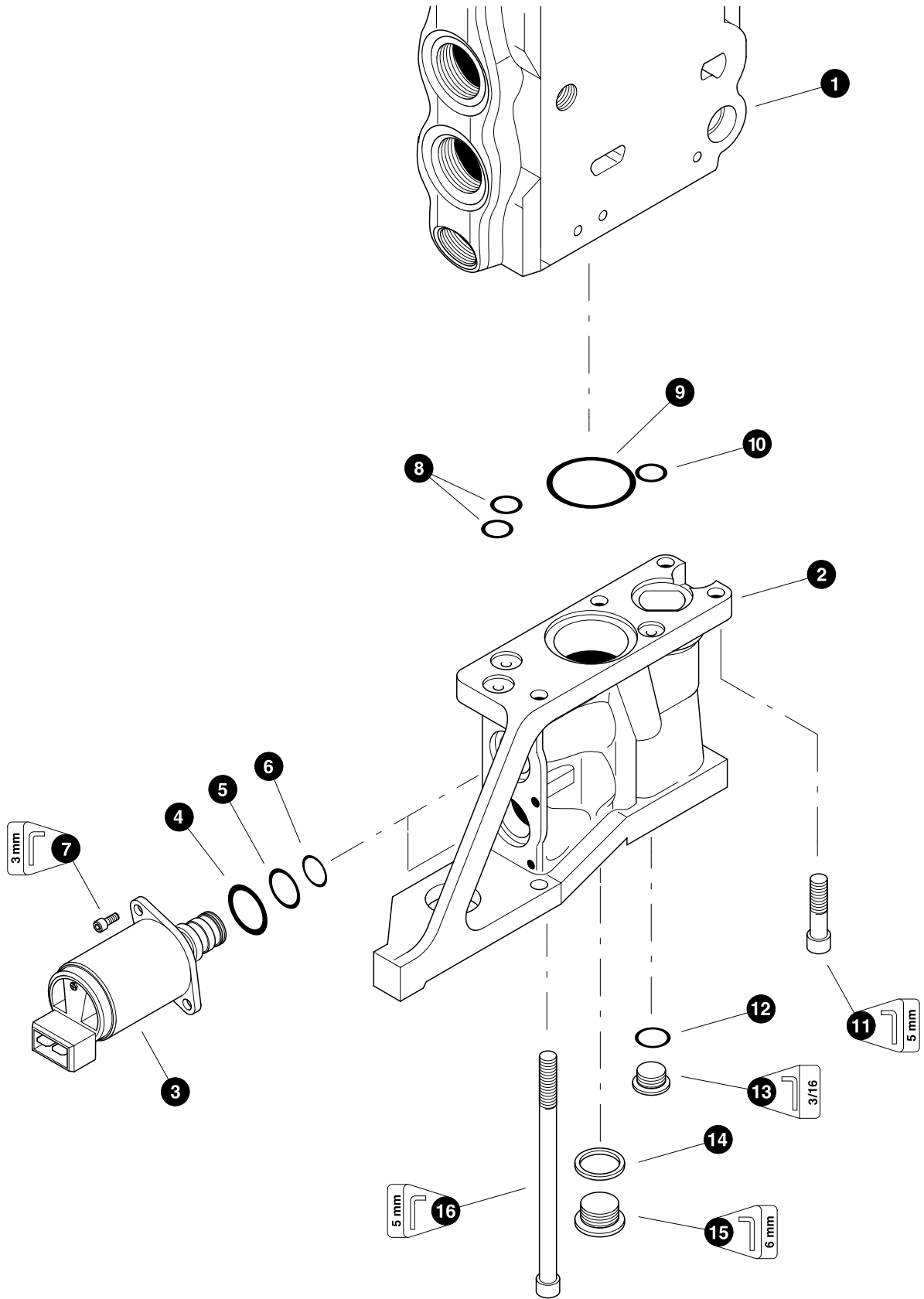


Parts 01734 08/08/2000
75.00

**“A” SECTION END CAP ASSEMBLY
(VOAC L90LS)**

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	NSS	1	✓	VALVE SECTION BODY	LH-2-4
-	23414-LH	1	☐	KIT, end cap - “A” port side	
2	-----	1		CAP, end	
3	-----	3		BOLT, allen head - 6mm-1.0P x 20mm	
4	15412-LH	1		PLUG - 6408-HHP-6	
5	-----	1	★	RING, seal	
6	-----	1	★	NUT, seal - 6mm	
7	-----	1		SCREW, adjustment	
8	-----	1	★	O-RING (<i>Large</i>)	
9	-----	1	★	O-RING (<i>Small</i>)	
-	23415-LH	1		KIT, seal repair - “A” port side end cap	

- ✓ See referenced page for component or assembly breakdown.
- ☐ Kit or Assembly - includes all items indented underneath.
- ★ Included in seal repair kit PN# 23415-LH.

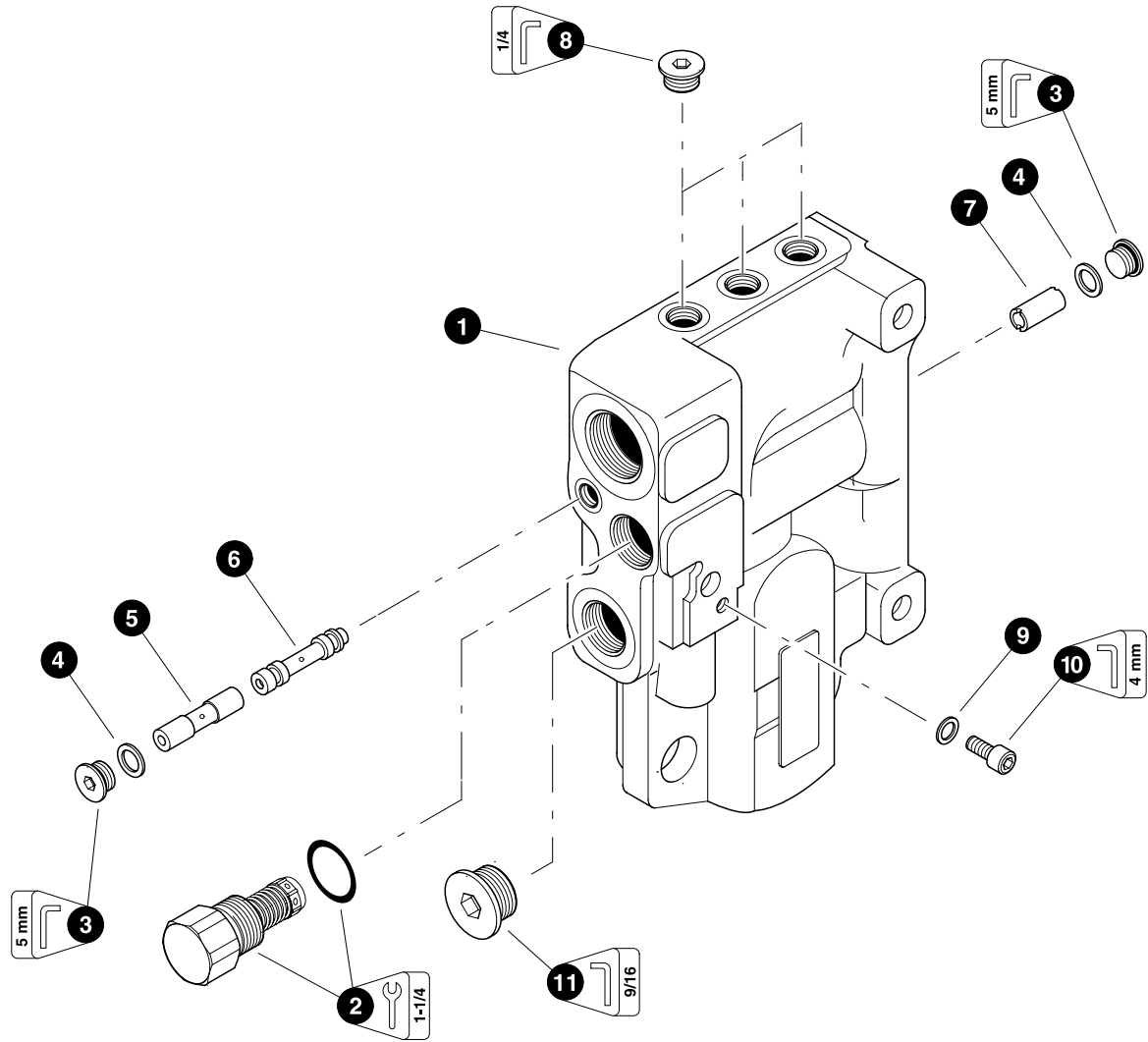


Parts 01735 08/08/2000
75.00

**“B” SECTION END CAP ASSEMBLY
(VOAC L90LS)**

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	NSS	1	✓	VALVE SECTION BODY	LH-2-4
-	23416-LH	1	☐	KIT, end cap - “B” port side	
2	-----	1		CAP, end	
3	20976-LH	2		SOLENOID - 24V	
	19436-LH	2		SOLENOID - 12V	
4	-----	2	★	O-RING (<i>Large</i>)	
5	-----	2	★	O-RING (<i>Medium</i>)	
6	-----	2	★	O-RING (<i>Small</i>)	
7	-----	4		SCREW, allen head - 4mm-.75P x 12mm	
8	-----	2	☆	O-RING (<i>Small</i>)	
9	-----	1	☆	O-RING (<i>Large</i>)	
10	-----	1	☆	O-RING (<i>Small</i>)	
11	-----	2		BOLT, allen head - 6mm-1.0P x 20mm	
12	-----	1	☆	O-RING	
13	11383-LH	1		PLUG - 6408-HHP-4	
14	-----	1	☆	RING, seal	
15	-----	1		PLUG	
16	-----	2		SCREW, allen head - 6mm-1.0P x 100mm	
-	23418-LH	1		KIT, seal repair - solenoid	
-	23417-LH	1		KIT, seal repair - “B” port side end cap	

- ✓ See referenced page for component or assembly breakdown.
- ☐ Kit or Assembly - includes all items indented underneath.
- ★ Included in seal repair kit PN# 23418-LH.
- ☆ Included in seal repair kit PN# 23417-LH.

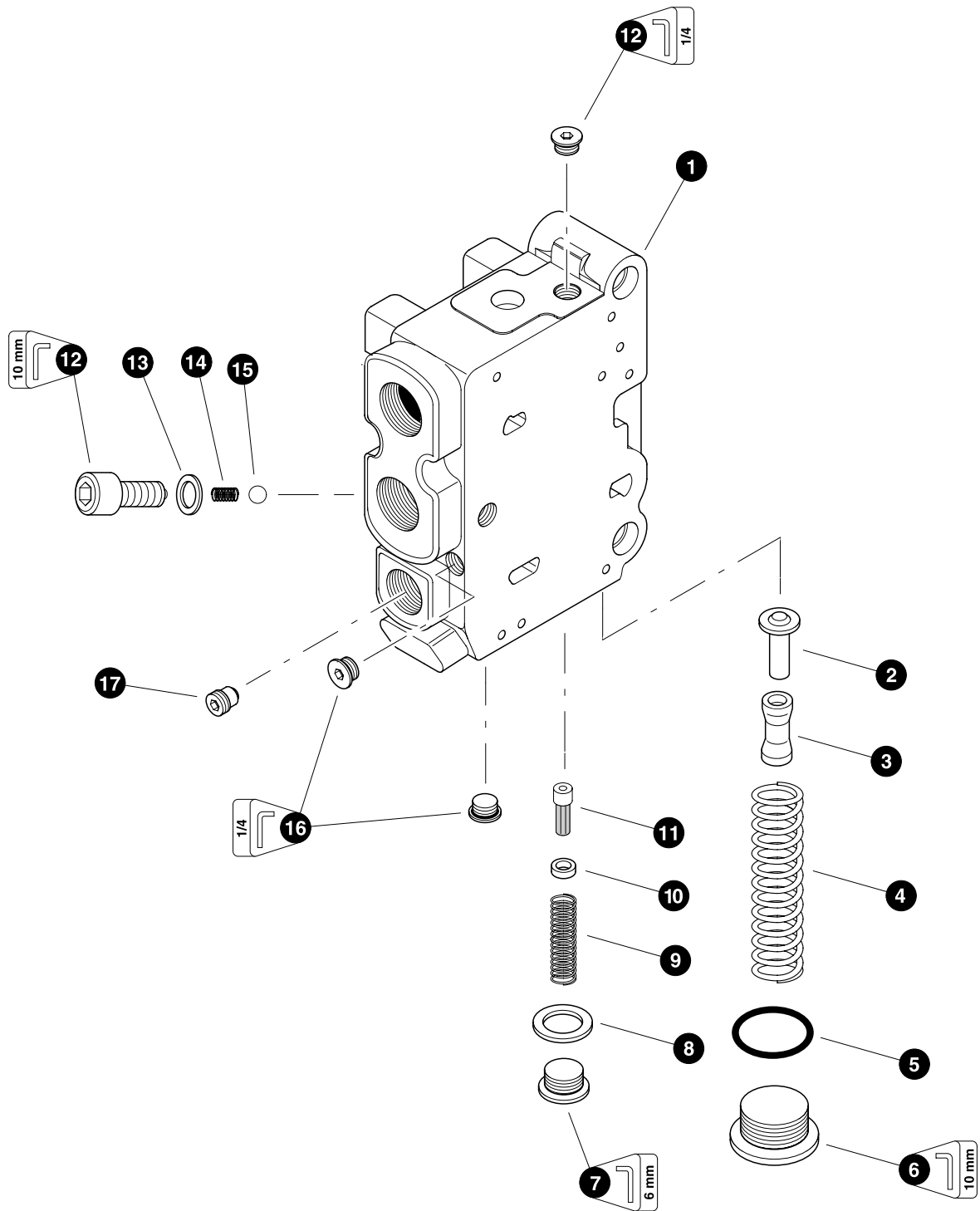


Parts 01316 09/15/99
62.00

INLET VALVE SECTION (VOAC L90LS)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	23405-LH	1	<input type="checkbox"/> VALVE SECTION, inlet	
1	NSS	1	BODY, valve section	
2	23428-LH	1	<input type="checkbox"/> RELIEF (250 bar)	
-	23429-LH	1	KIT, load sense copy spool (Green)	
	23430-LH	1	KIT, load sense copy spool (Red)	
3	-----	2	PLUG	
4	-----	2	RING, seal	
5	-----	1	SPACER	
6	-----	1	SPOOL	
7	-----	1	SPACER	
8	15412-LH	3	PLUG - 6408-HHP-6	
9	-----	1	BOLT, allen head - 6mm-1.0P x 12mm	
10	-----	1	RING, seal	
11	15584-LH	1	PLUG - 6408-HHP-12	

Kit or Assembly - includes all items indented underneath.



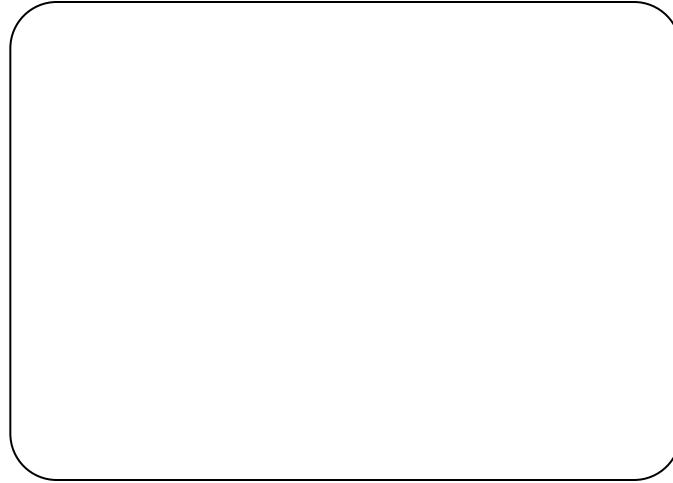
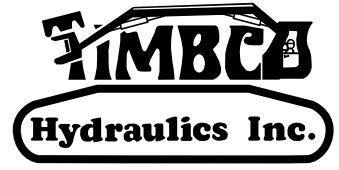
Parts 01319 09/16/99
62.00

OUTLET VALVE SECTION (VOAC L90LS)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	23412-LH	1	<input type="checkbox"/> VALVE SECTION, outlet	
1	NSS	1	BODY, valve section	
-	23431-LH	1	KIT, pilot supply reducer <i>(Green)</i> (35 bar)	
	23432-LH	1	KIT, pilot supply reducer <i>(Red)</i> (35 bar)	
2	-----	1	RETAINER, spring	
3	-----	1	SPACER, spring	
4	-----	1	SPRING	
5	-----	1	O-RING	
6	-----	1	PLUG	
-	23433-LH	1	KIT, pilot supply strainer	
7	-----	1	PLUG	
8	-----	1	RING, seal	
9	-----	1	SPRING	
10	-----	1	SPACER	
11	-----	1	STRAINER	
12	-----	1	PLUG	
13	-----	1	RING, seal	
14	-----	1	SPRING	
15	-----	1	BALL, check	
16	15412	3	PLUG - 6408-HHP-6	
17	-----	1	PLUG, TP	

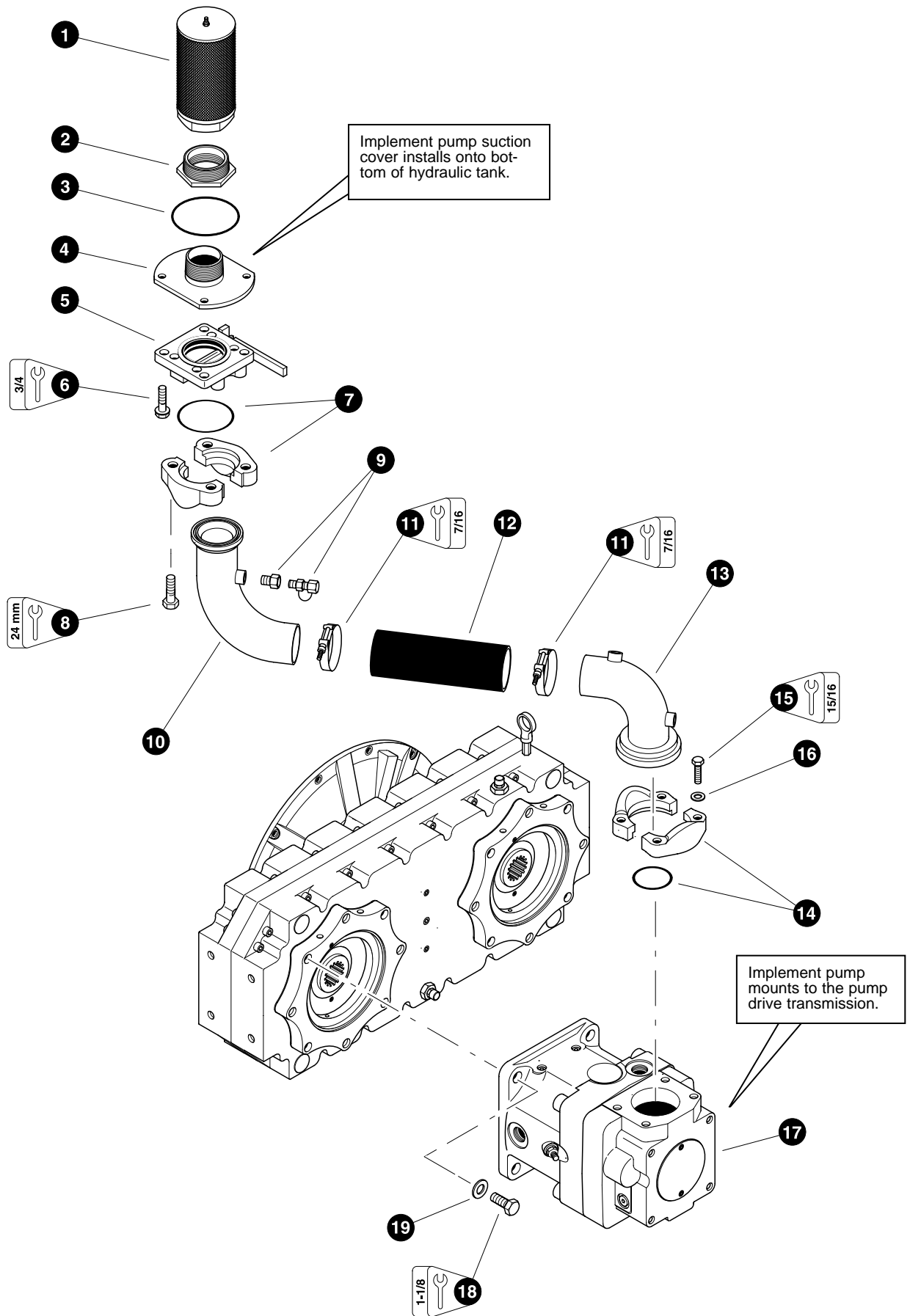
Kit or Assembly - includes all items indented underneath.

Section LH-3



Loader Implements (L90LS Valve) - Upper Hydraulic Circuits

NOTE: See Section LB-3 for hydraulic circuits from the main control valve to the boom and boom hoses.

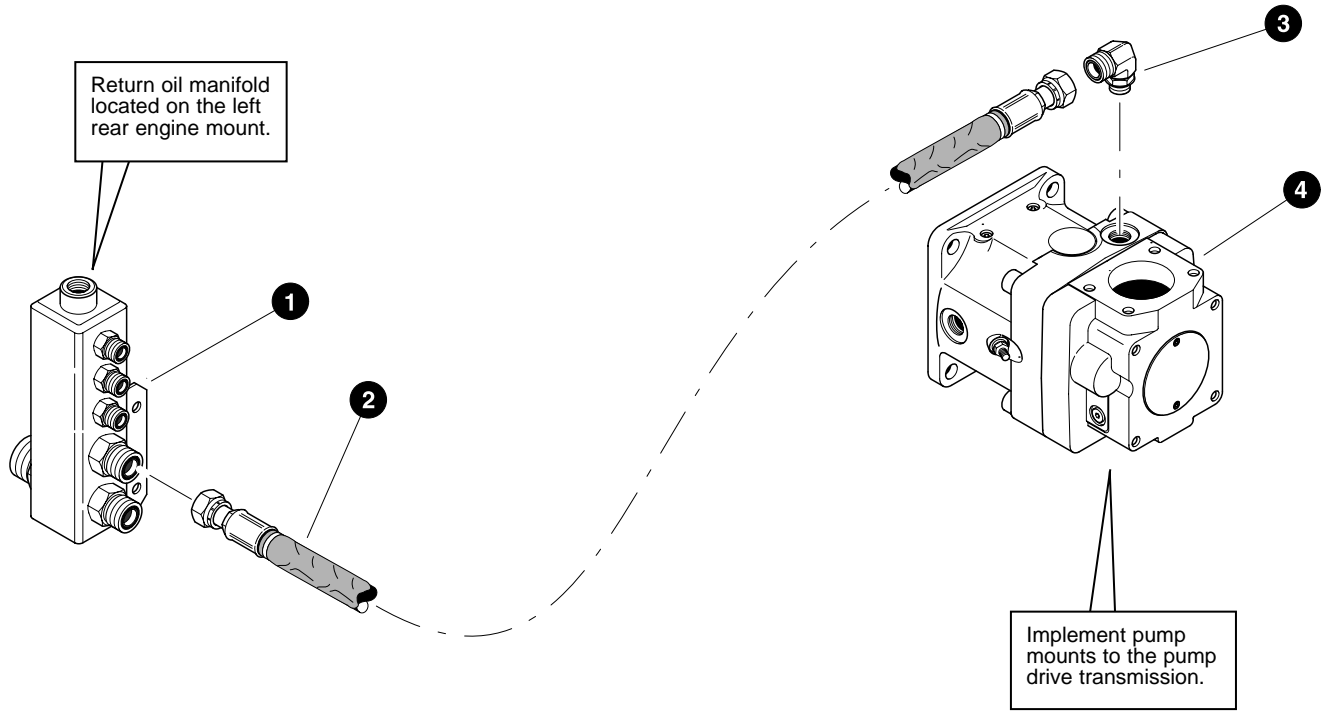


Parts 01677 05/15/2000
18.75

IMPLEMENT PUMP SUCTION LINE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	15842-LH	1	FILTER, screen - implement suction	
2	16327-LH	1	BUSHING, black reducer - 3" x 2-1/2"	
3	15448-LH	1	O-RING	
4	REF.	1	✓ IMPLEMENT FILTER COVER (<i>Installed from bottom</i>)	UP-4-2
5	22441-LH	1	VALVE, shut-off - 3" butterfly	
6	22560-LH	4	BOLT, flange - 1/2" x 2"	
7	18306-LH	1	☐ KIT, split flange - 3" (<i>Code 61</i>)	
	18695-LH	1	O-RING - 3" SF	
8	22561-LH	4	BOLT - 16mm x 40mm	
9	15574-LH	1	BUSHING, reducer - 5406-4-2	
	22302-LH	1	VALVE, probalyser (<i>Used to take oil samples</i>)	
10	22613-LH	1	TUBE, tank suction 90°	
11	15190-LH	2	CLAMP, strap band - 3-1/8"	
12	23050-LH	AR	>∞ HOSE, suction - 2-1/2"	
13	22857-LH	1	TUBE, suction 90°	
14	18306-LH	1	☐ KIT, split flange - 3" (<i>Code 61</i>)	
	18695-LH	1	O-RING - 3" SF	
15	15502-LH	1	BOLT - 5/8" x 1-1/2"	
16	10771-LH	4	WASHER, SAE flat - 5/8"	
17	REF.	1	✓ IMPLEMENT PUMP	LH-1-2
18	10739-LH	4	BOLT - 1/2" x 1-1/2"	
19	15534-LH	4	WASHER, SAE flat - 1/2"	

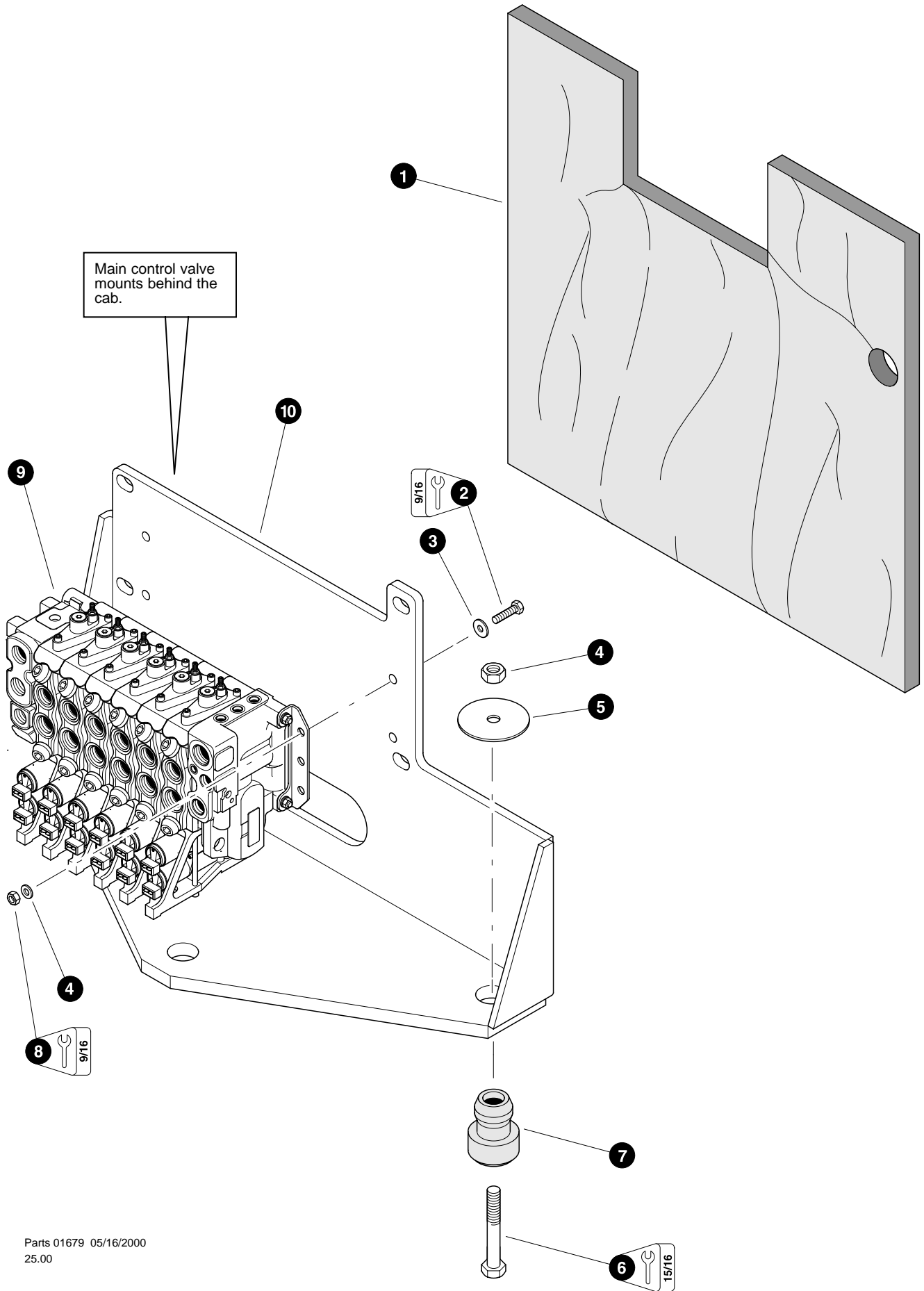
- ✓ See referenced page for component or assembly breakdown.
- >∞ Bulk material - order length required in feet or meters.
- ☐ Kit or Assembly - includes all items indented underneath.



IMPLEMENT PUMP CASE DRAIN LINE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17547-LH	1	MANIFOLD, return oil	
2	23038-LH	1	HOSE ASSEMBLY - 2026-12-120S-120S-W <i>(Implement pump case drain port to return oil manifold)</i>	
3	16422-LH	1	ELBOW, 90° - FF1868T-1210S <i>(Used with 95cc pump)</i>	
	17688-LH	1	ELBOW, 90° - FF1868T-1212S <i>(Used with 130cc pump)</i>	
4	REF.	1	✓ IMPLEMENT PUMP	LH-1-2

✓ See referenced page for component or assembly breakdown.

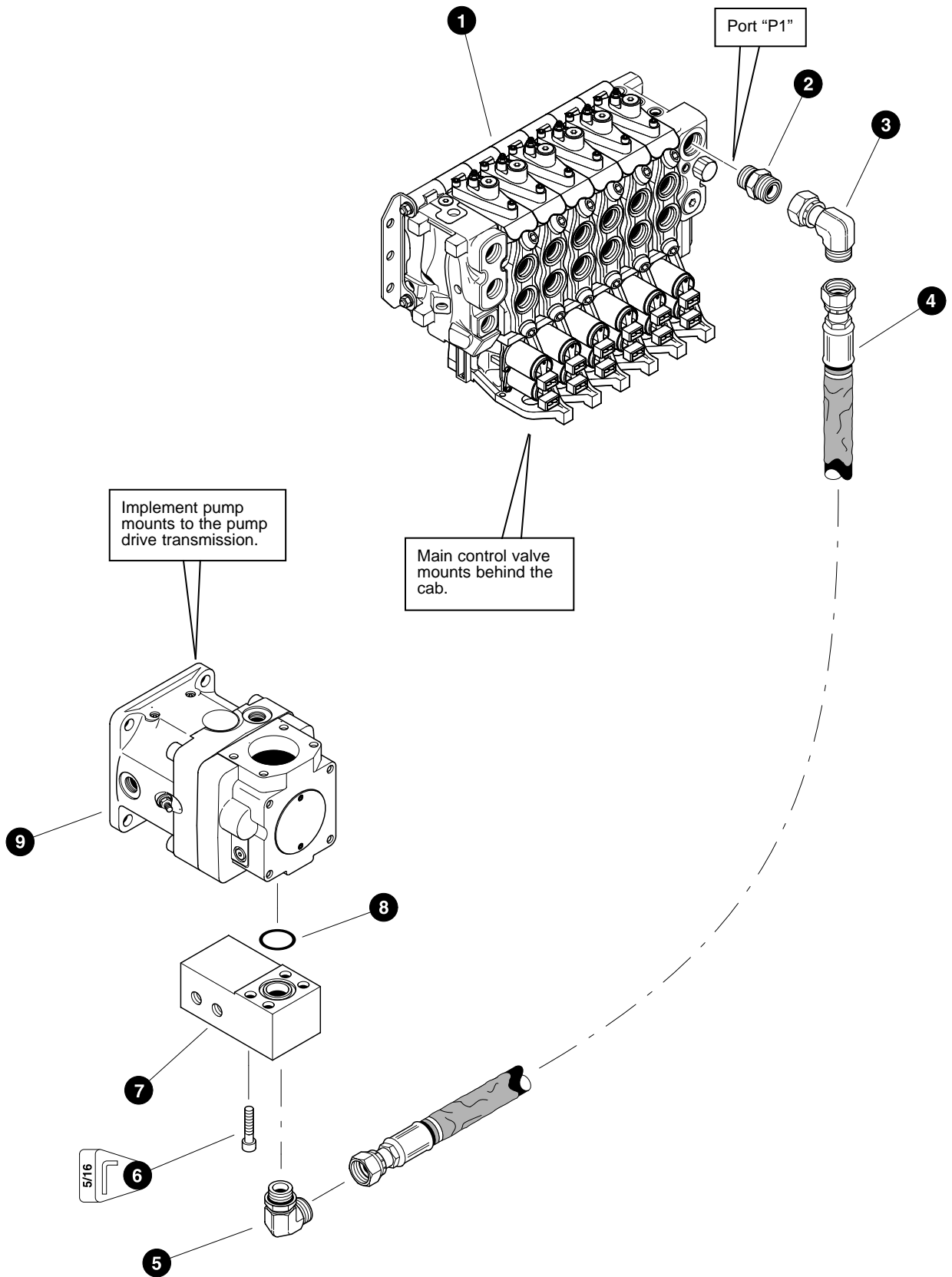


Parts 01679 05/16/2000
25.00

MAIN CONTROL VALVE MOUNTING

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	18483-LH	1	INSULATION, soundproof	
2	10402-LH	4	BOLT - 3/8" x 1-1/4"	
3	15528-LH	8	WASHER, SAE flat - 3/8"	
4	10816-LH	3	NUT, lock - 5/8"	
5	15524-LH	3	WASHER, isolator mount	
6	10723-LH	3	BOLT - 5/8" x 4-1/2"	
7	15525-LH	3	ISOLATOR, valve mount	
8	15507-LH	4	NUT, nylock - 3/8"	
9	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
10	14260-LH	1	BRACKET, main control valve mounting	

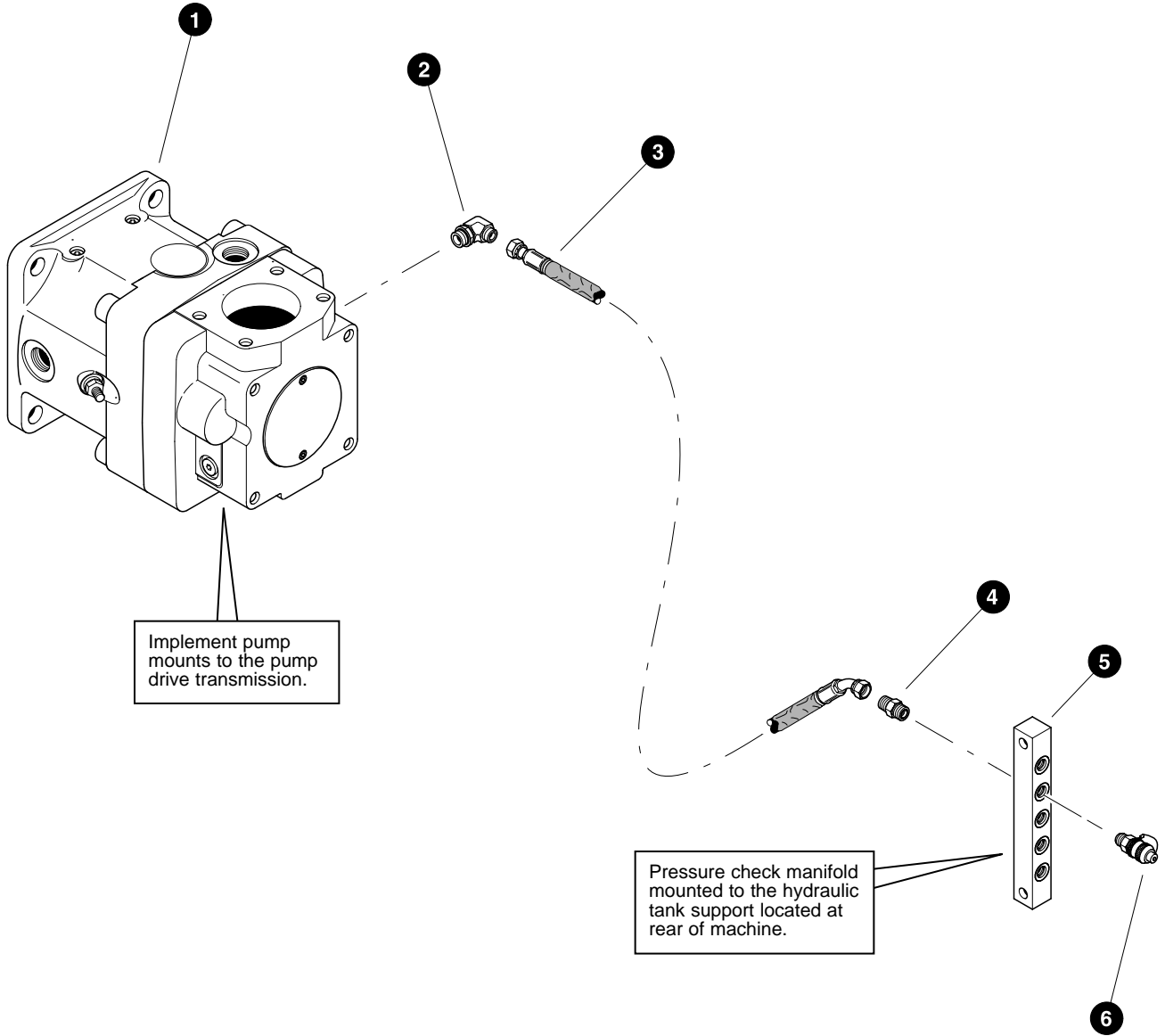
✓ See referenced page for component or assembly breakdown.



IMPLEMENT PUMP PRESSURE LINE TO MAIN CONTROL VALVE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
2	15152-LH	1	CONNECTOR, straight - FF1852T-1212S	
3	10359-LH	1	ELBOW, 90° swivel - 1501-12-12	
4	23088-LH	1	HOSE ASSEMBLY - 4083-12-120S-120S-W (<i>Implement pump pressure outlet to main control valve pressure inlet port "P1"</i>)	
5	17688-LH	1	ELBOW, 90° - FF1868T-1212S	
6	22729-LH	4	BOLT, allen head - 7/16" x 2-1/2" (<i>Used with 95cc pump</i>)	
	18918-LH	4	BOLT, allen head - 1/2" x 2-1/2" (<i>Used with 130cc pump</i>)	
7	22704-LH	1	MANIFOLD, valve/clam pressure (<i>Used with 95cc pump</i>)	
	22792-LH	1	MANIFOLD, valve/clam pressure (<i>Used with 130cc pump</i>)	
8	15377-LH	1	O-RING - 1" SF (<i>Used with 95cc pump</i>)	
	15378-LH	1	O-RING - 1-1/4" SF (<i>Used with 130cc pump</i>)	
9	REF.	1	✓ IMPLEMENT PUMP	LH-1-2

✓ See referenced page for component or assembly breakdown.

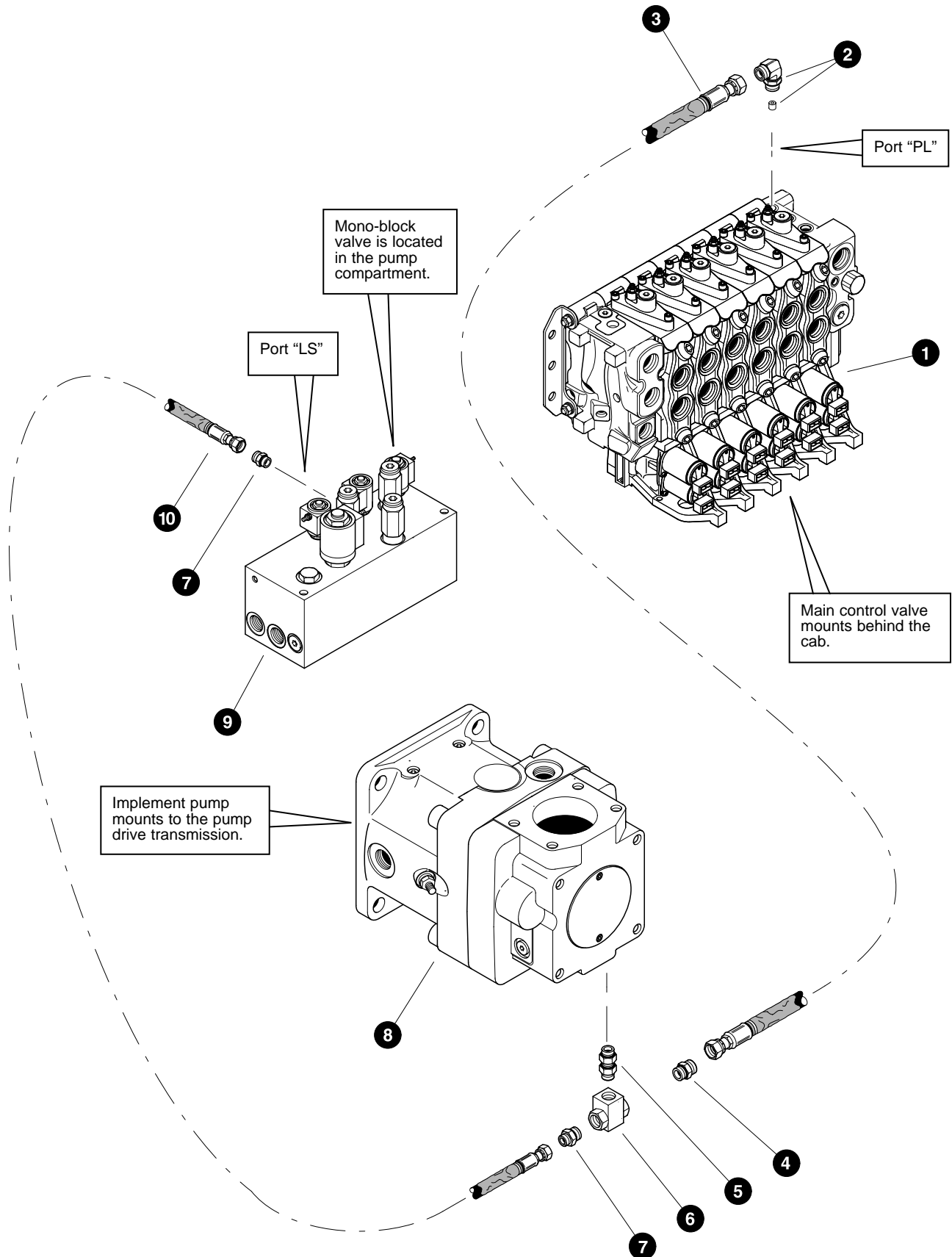


IMPLEMENT PUMP TEST GAUGE LINE
(Implement Pump To Pressure Check Manifold)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	IMPLEMENT PUMP	LH-1-2
3	15133-LH	1		ELBOW, 90° - FF1868T-0406S	
4	23026-LH	1		HOSE ASSEMBLY - 2050-04-040S-0404-W <i>(Implement pump to pressure check manifold)</i>	
5	16541-LH	1		CONNECTOR, straight - FF1852T-0404S	
6	22287-LH	1		MANIFOLD, pressure check	
7	16037-LH	1		TAP, gauge port (1/4" ORB)	

✓ See referenced page for component or assembly breakdown.



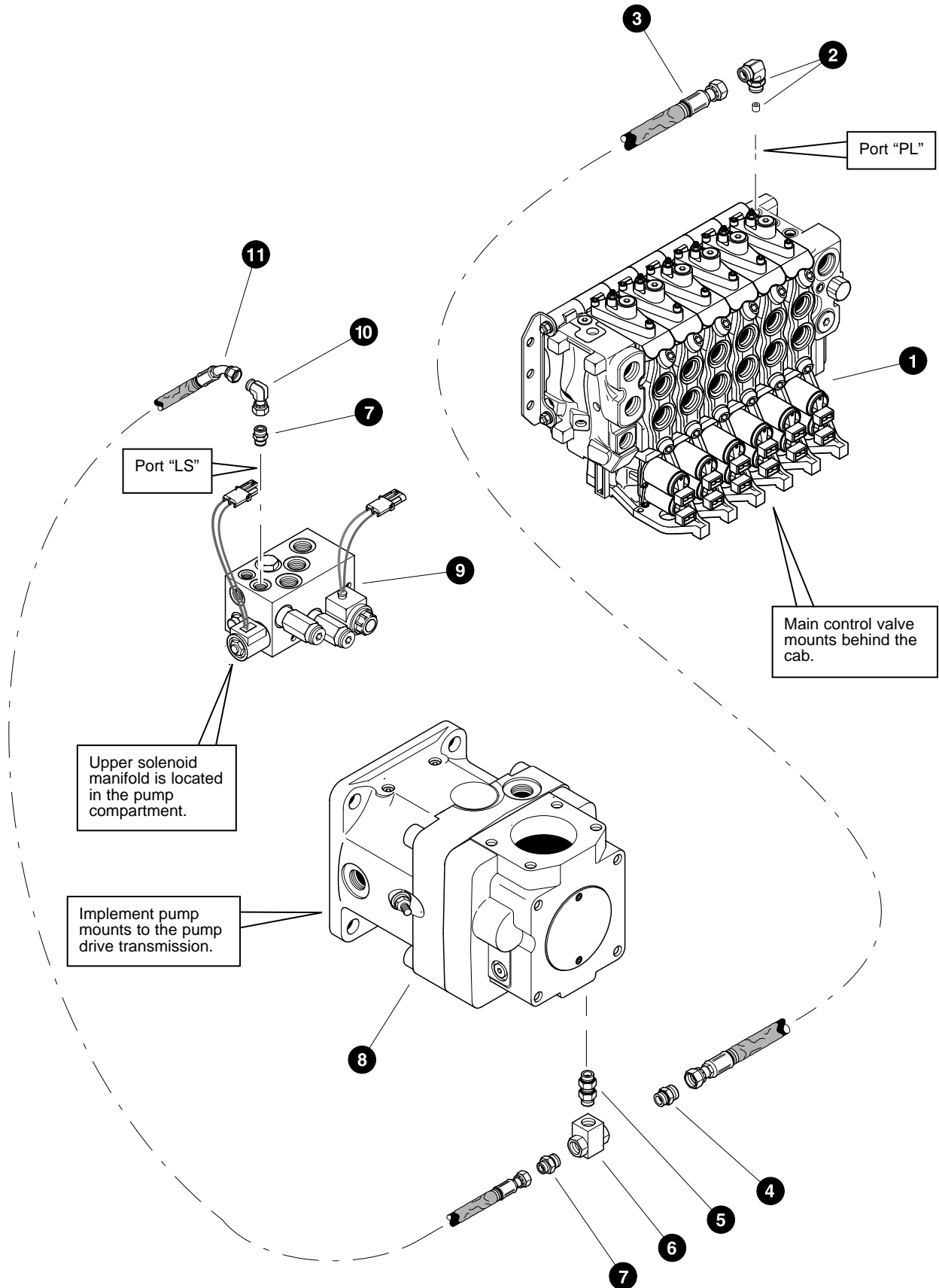
Parts 01683 07/27/2000
25.00

MAIN CONTROL VALVE LOAD SENSE LINES (Without Optional Clam Bunk Installed)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
2	24093-LH	1	ELBOW, 90° - FF1868T-0606 <i>(With 0.024" orifice)</i>	
	24091-LH	1	ORIFICE - 0.024"	
3	23009-LH	1	HOSE ASSEMBLY - 2089-06-060S-060S-W <i>(Load sense shuttle to implement pump compensator port, hose is looped to provide shock absorber effect on signal)</i>	
4	18034-LH	1	CONNECTOR, straight - FF1852T-0606S	
5	19366-LH	1	CONNECTOR, straight - 6403-NWO-6	
6	20265-LH	1	VALVE, shuttle - load sense signal	
7	15124-LH	2	CONNECTOR, straight - FF1852T-0406S	
8	REF.	1	✓ IMPLEMENT PUMP	LH-1-2
9	REF.	1	✓ MONO-BLOCK VALVE	UP-5-4
10	23025-LH	1	HOSE ASSEMBLY - 4040-04-040S-0404-W <i>(Mono-block port "PL" to implement pump compensator port, load sense shuttle)</i>	

✓ See referenced page for component or assembly breakdown.

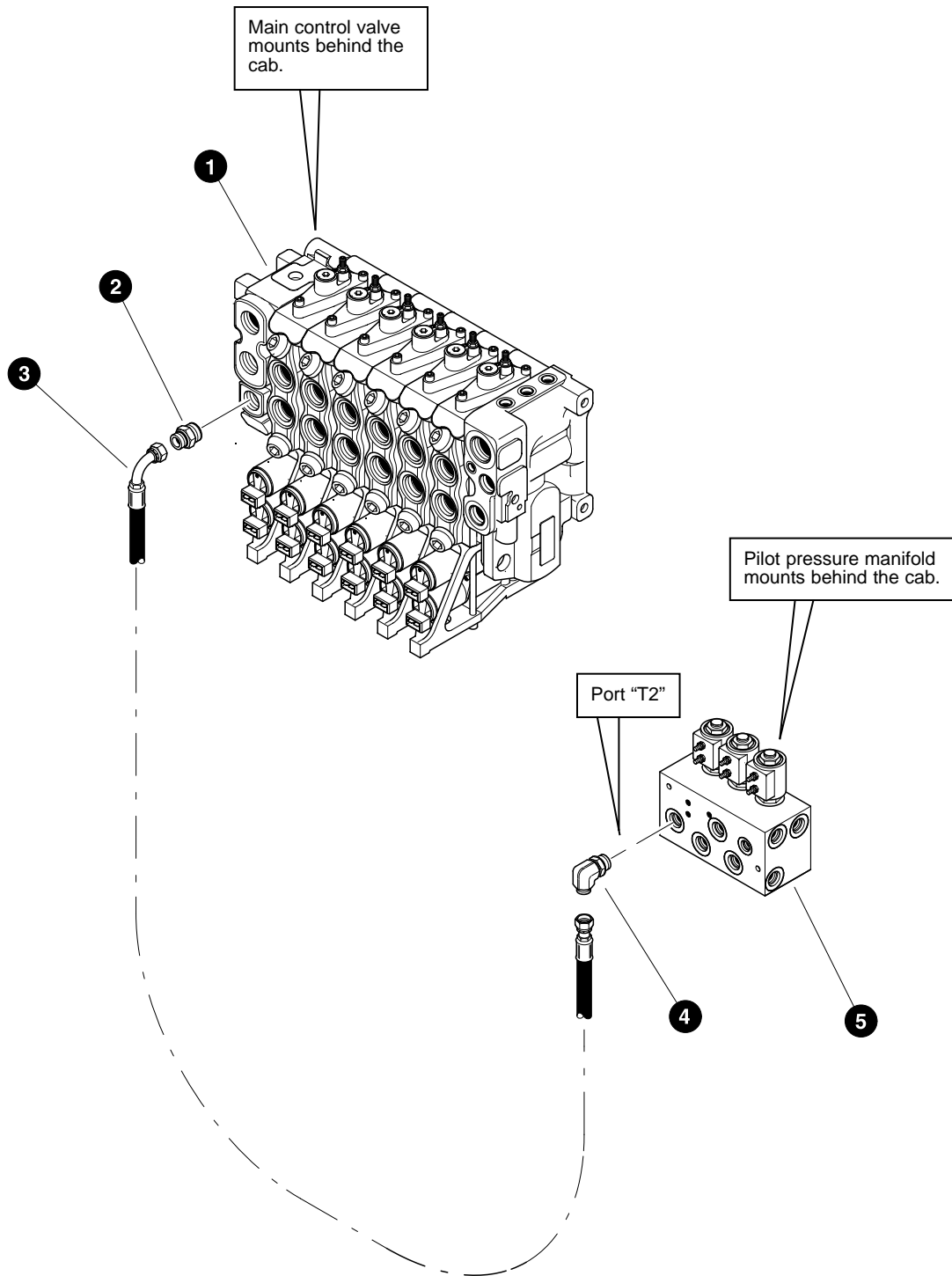


MAIN CONTROL VALVE LOAD SENSE LINES (Without Optional Clam Bunk Installed)

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
2	24093-LH	1	ELBOW, 90° - FF1868T-0606 <i>(With 0.024" orifice)</i>	
	24091-LH	1	ORIFICE - 0.024"	
3	23009-LH	1	HOSE ASSEMBLY - 2089-06-060S-060S-W <i>(Load sense shuttle to implement pump compensator port, hose is looped to provide shock absorber effect on signal)</i>	
4	18034-LH	1	CONNECTOR, straight - FF1852T-0606S	
5	19366-LH	1	CONNECTOR, straight - 6403-NWO-6	
6	20265-LH	1	VALVE, shuttle - load sense signal	
7	15124-LH	2	CONNECTOR, straight - FF1852T-0406S	
8	REF.	1	✓ IMPLEMENT PUMP	LH-1-2
9	REF.	1	✓ UPPER SOLENOID MANIFOLD	UP-5-4
10	15145-LH	1	ELBOW, 90° swivel - FF2098T-0404S	
11	23025-LH	1	HOSE ASSEMBLY - 2040-06-060S-0404-W <i>(Upper solenoid port "PL" to implement pump compensator port, load sense shuttle)</i>	

✓ See referenced page for component or assembly breakdown.

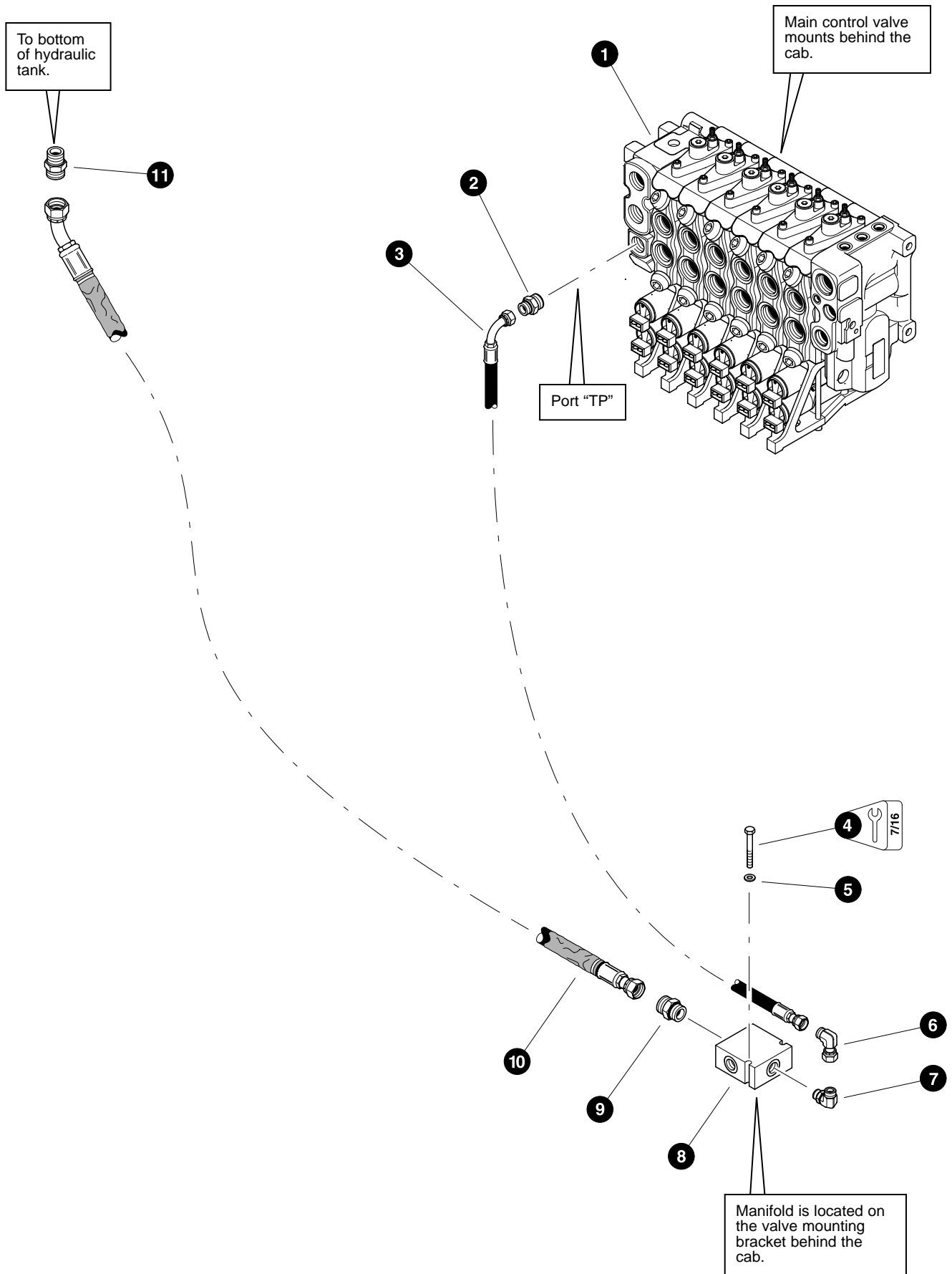


MAIN CONTROL VALVE LOAD SENSE DRAIN LINE

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY	✓	DESCRIPTION	SEE PAGE
1	REF.	1	✓	MAIN CONTROL VALVE	LH-2-2
2	15504-LH	1		CONNECTOR, straight - FF1852T-0408S	
3	20103-LH	1		HOSE ASSEMBLY - 2028-04-040S-040S <i>(Main control valve port "TP" to pilot pressure manifold port "T2")</i>	
4	15133-LH	1		ELBOW, 90° - FF1868T-0406S	
5	REF.	1	✓	PILOT PRESSURE MANIFOLD	UP-5-2

✓ See referenced page for component or assembly breakdown.



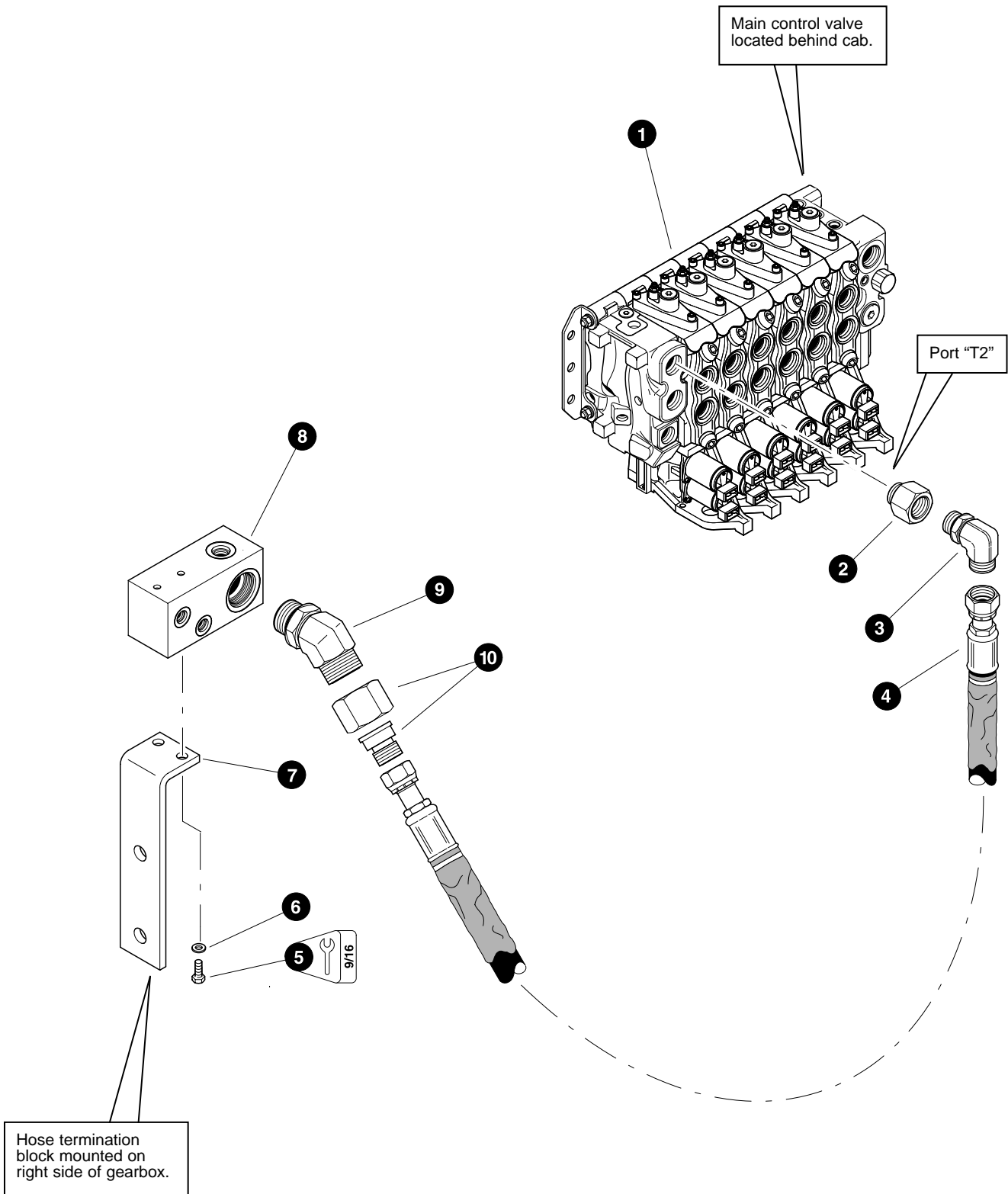
Parts 01981 01/08/2001
25.00

MAIN CONTROL VALVE LOAD SENSE DRAIN LINE

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
2	15504-LH	1	CONNECTOR, straight - FF1852T-0408S	
3	20103-LH	1	HOSE ASSEMBLY - 2028-04-040S-049S <i>(Main control valve port "TP" to combined tank manifold)</i>	
4	15568-LH	2	BOLT - 1/4" x 2"	
5	10757-LH	2	WASHER, SAE flat - 1/4"	
6	15145-LH	1	ELBOW, 90° swivel - FF2098T-0404S	
7	15133-LH	1	ELBOW, 90° - FF1868T-0406S	
8	23502-LH	1	MANIFOLD, combined tank	
9	15115-LH	1	CONNECTOR, straight - FF1852T-0810S	
10	22920-LH	1	HOSE ASSEMBLY - 2084-08-080S-0804-W <i>(Combined tank manifold to bottom of hydraulic tank)</i>	
11	15258-LH	1	CONNECTOR, straight - FF2031T-0808S	

✓ See referenced page for component or assembly breakdown.



Parts 01681 07/27/2000
25.00

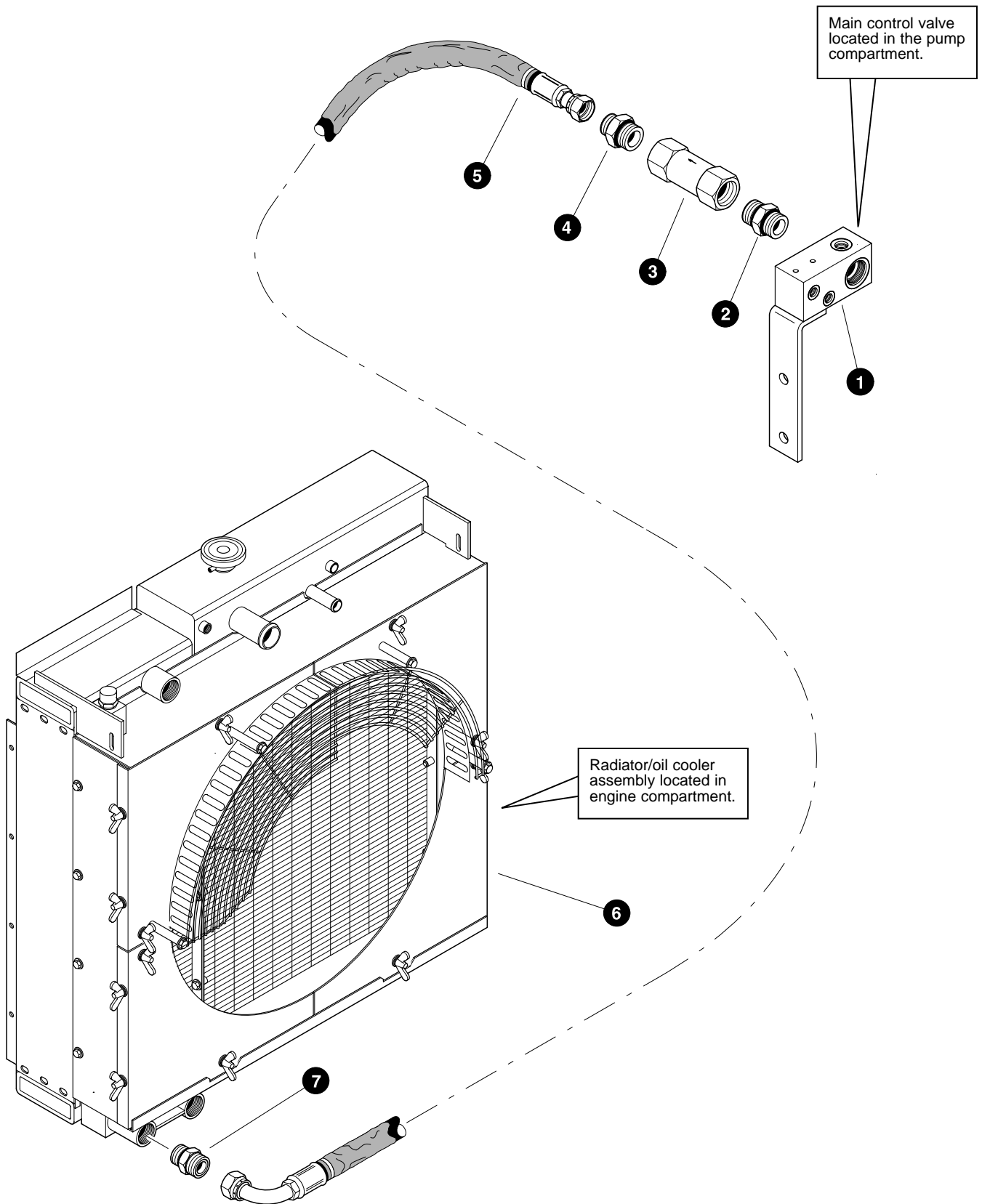
**MAIN CONTROL VALVE RETURN LINE
(Main Control Valve To Hose Termination Block)**

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	MAIN CONTROL VALVE	LH-2-2
2	22461-LH	1		BUSHING, reducer - 6410-20-16	
3	17688-LH	1		ELBOW, 90° - FF1868T-1616S	
4	23003-LH	1		HOSE ASSEMBLY - 2050-16-160S-160S-W (<i>Main control valve port T2 to hose termination block</i>)	
5	11707-LH	2		BOLT - 3/8" x 1" (<i>See Note Below</i>)	
6	15528-LH	2		WASHER, 3/8"	
7	22911-LH	1		BRACKET, hose termination block	
8	20025-LH	1		BLOCK, hose termination	
9	17056-LH	1		ELBOW, 45° - FF1868T-2020S	
10	20455-LH	1		CONNECTOR, reducer - ORS FF2281T-1620S	

✓ See referenced page for component or assembly breakdown.

Note:

Use Loctite 242 during installation

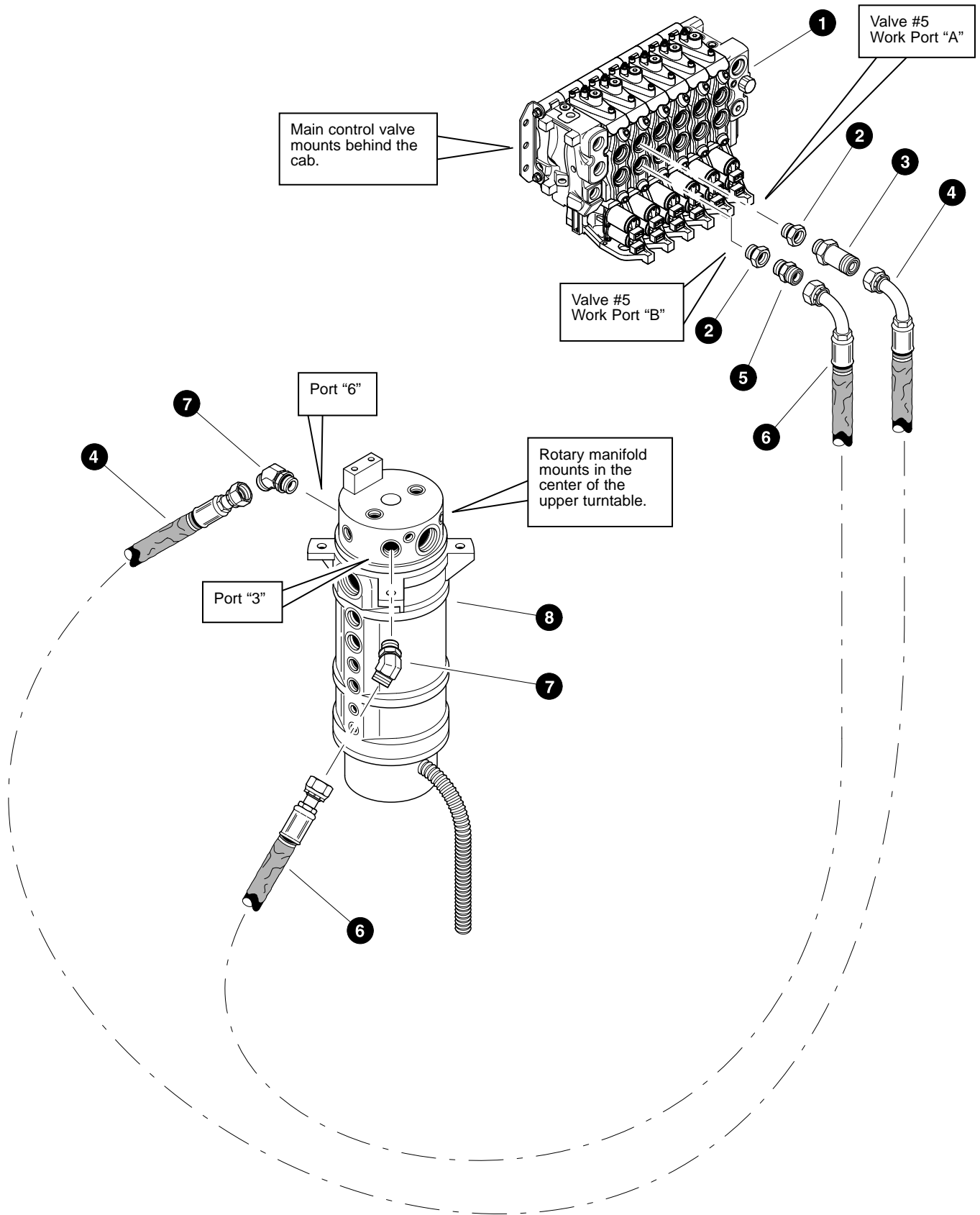


Parts 01685 05/17/2000
18.75

**MAIN CONTROL VALVE RETURN LINE
(Hose Termination Block To Oil Cooler)**

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	HOSE TERMINATION BLOCK	LH-3-16
2	21541-LH	1		CONNECTOR, straight - 6403-20	
3	21145-LH	1		VALVE, check - 150 psi	
4	19450-LH	1		CONNECTOR, straight - 16-20 F50L0-S	
5	23087-LH	1		HOSE ASSEMBLY - 2066-16-160S-1609-W (<i>Hose termination block outlet check valve to oil cooler bottom port</i>)	
6	REF.	1	✓	RADIATOR/OIL COOLER ASSEMBLY	UP-3-2
7	15225-LH	1		CONNECTOR, straight - FF1852T-1616S	

✓ See referenced page for component or assembly breakdown.



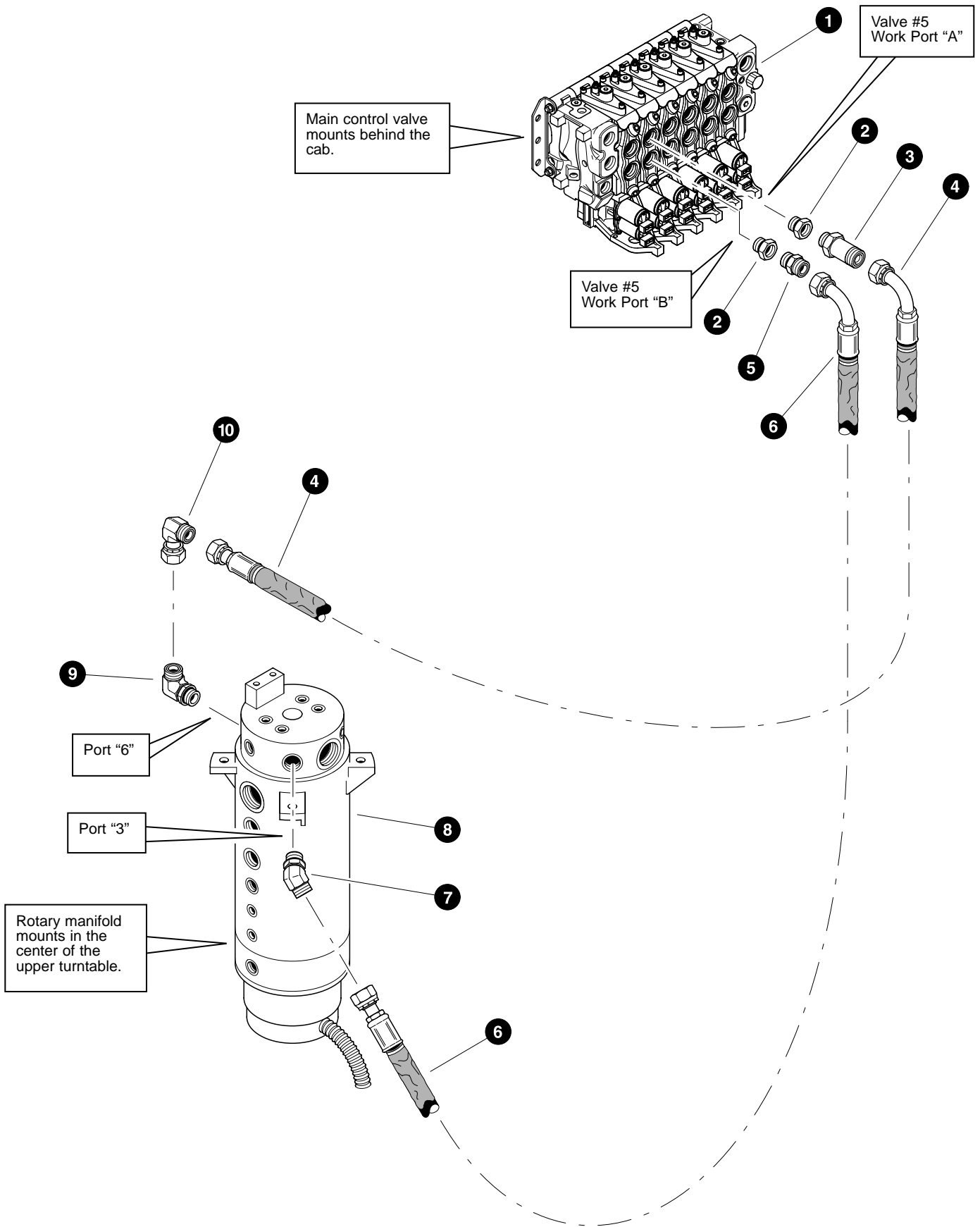
Parts 01686 07/27/2000
18.75

STEER FUNCTION LINES
(Main Control Valve To Upper Rotary Manifold Ports)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	MAIN CONTROL VALVE	LH-2-2
2	19289-LH	2		BUSHING, reducer - 6410-10-12	
3	19092-LH	1		CONNECTOR, straight long - FF1854T-1212S	
4	23048-LH	1		HOSE ASSEMBLY - 4063-12-120S-1209-W <i>(Steer valve section #5 work port "A" to upper rotary manifold port #6)</i>	
5	15152-LH	1		CONNECTOR, straight - FF1852T-1212S	
6	23047-LH	1		HOSE ASSEMBLY - 4062-12-120S-1209-W <i>(Steer valve section #5 work port "B" to upper rotary manifold port #3)</i>	
7	19127-LH	2		ELBOW, 45° - FF2068T-1212S	
8	REF.	1	✓	ROTARY MANIFOLD	UP-1-6

✓ See referenced page for component or assembly breakdown.



Parts 01982 01/08/2001
18.75

STEER FUNCTION LINES (Main Control Valve To Upper Rotary Manifold Ports)

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
2	19289-LH	2	BUSHING, reducer - 6410-10-12	
3	19092-LH	1	CONNECTOR, straight long - FF1854T-1212S	
4	23048-LH	1	HOSE ASSEMBLY - 4063-12-120S-1209-W <i>(Steer valve section #5 work port "A" to upper rotary manifold port #6)</i>	
5	15152-LH	1	CONNECTOR, straight - FF1852T-1212S	
6	23146-LH	1	HOSE ASSEMBLY - 4054-12-120S-1209-W <i>(Steer valve section #5 work port "B" to upper rotary manifold port #3)</i>	
7	19127-LH	1	ELBOW, 45° - FF2068T-1212S	
8	REF.	1	✓ ROTARY MANIFOLD	UP-1-6
9	17688-LH	1	ELBOW, 90° - FF1868T-1212S	
10	17670-LH	1	ELBOW, 90° swivel - FF2098T-1212S	

✓ See referenced page for component or assembly breakdown.

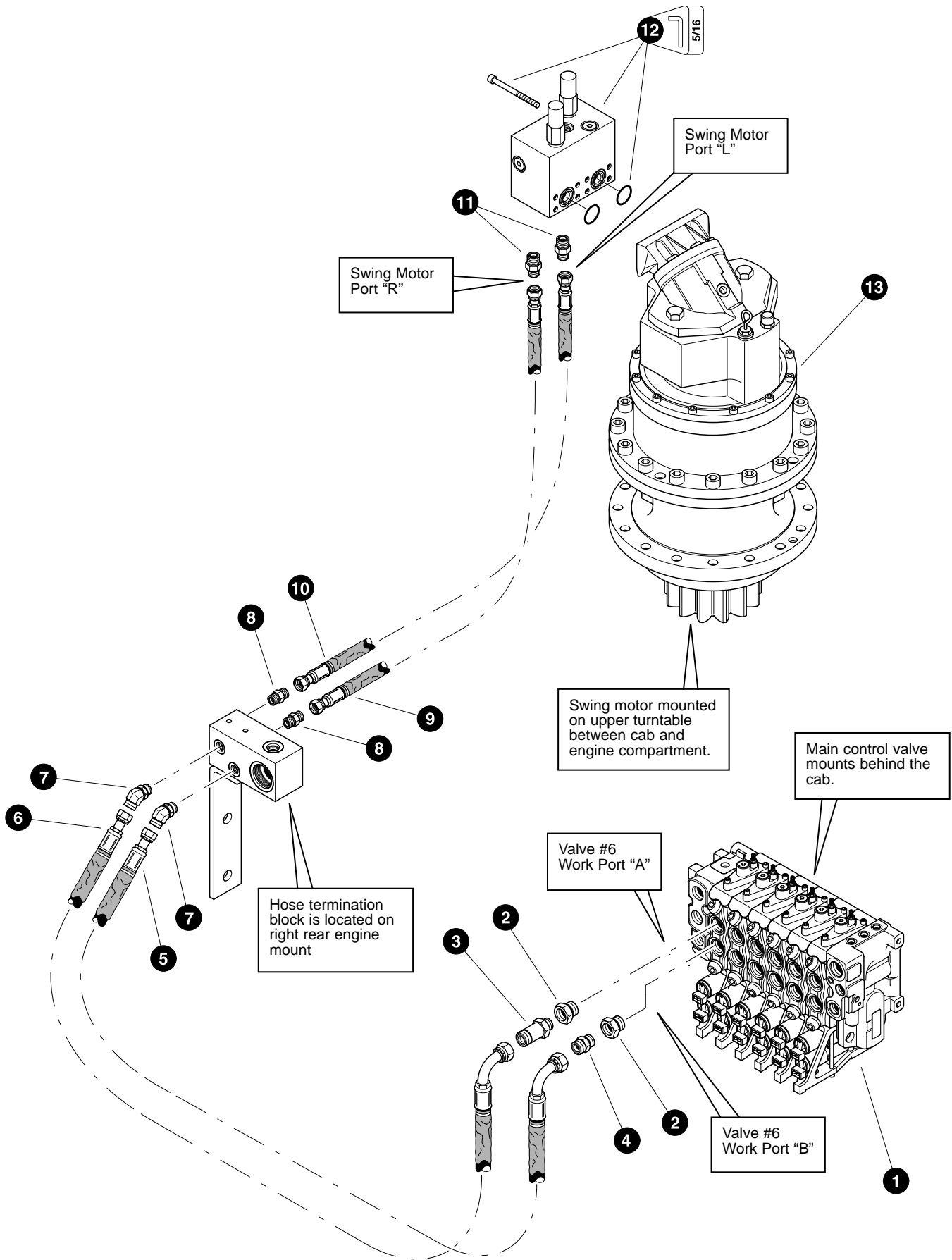
SWING FUNCTION LINES (Main Control Valve To Swing Motor)(Poclairn)

(Used on machines PDN# 145FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	MAIN CONTROL VALVE	LH-2-2
2	16016-LH	2		BUSHING, reducer - 2405-10-08	
3	19091-LH	1		CONNECTOR, straight long - FF1854T-0808S	
4	15117-LH	1		CONNECTOR, straight - FF1852T-0808S	
5	23033-LH	1		HOSE ASSEMBLY - 4057-08-080S-0809-W <i>(Swing valve section #6 work port "B" to hose termination block swing motor port "R")</i>	
6	23035-LH	1		HOSE ASSEMBLY - 4061-08-080S-0809-W <i>(Swing valve section #6 work port "A" to hose termination block swing motor port "L")</i>	
7	19126-LH	2		ELBOW, 45° - FF2068T-0808S	
8	15115-LH	2		CONNECTOR, straight FF1852T-0808S	
9	20937-LH	1		HOSE ASSEMBLY - 4041-08-080S-0804 <i>(Swing valve section #6 work port "B" to swing motor port "R")</i>	
10	20198-LH	1		HOSE ASSEMBLY - 4045-08-080S-0804 <i>(Swing valve section #6 work port "A" to swing motor port "L")</i>	
11	18581-LH	2		CONNECTOR, reducer - FF2281T-0812S	
12	17457-LH	2		ADAPTER, 45° flange - 3/4" <i>(Code 62)</i>	
13	REF.	1	☐	ANTI-CAVITATION VALVE	UP-2-6
14	16918-LH	4		O-RING - 3/4" SF	
15	19196-LH	8		BOLT - 10mm x 120mm	
16	16660-LH	4	☐	KIT, split flange - 3/4" <i>(Code 62)</i>	
	16918-LH	1		O-RING - 3/4" SF	
17	REF.	1	✓	SWING MOTOR	UP-2-2

✓ See referenced page for component or assembly breakdown.

☐ Kit or Assembly - includes all items indented underneath.



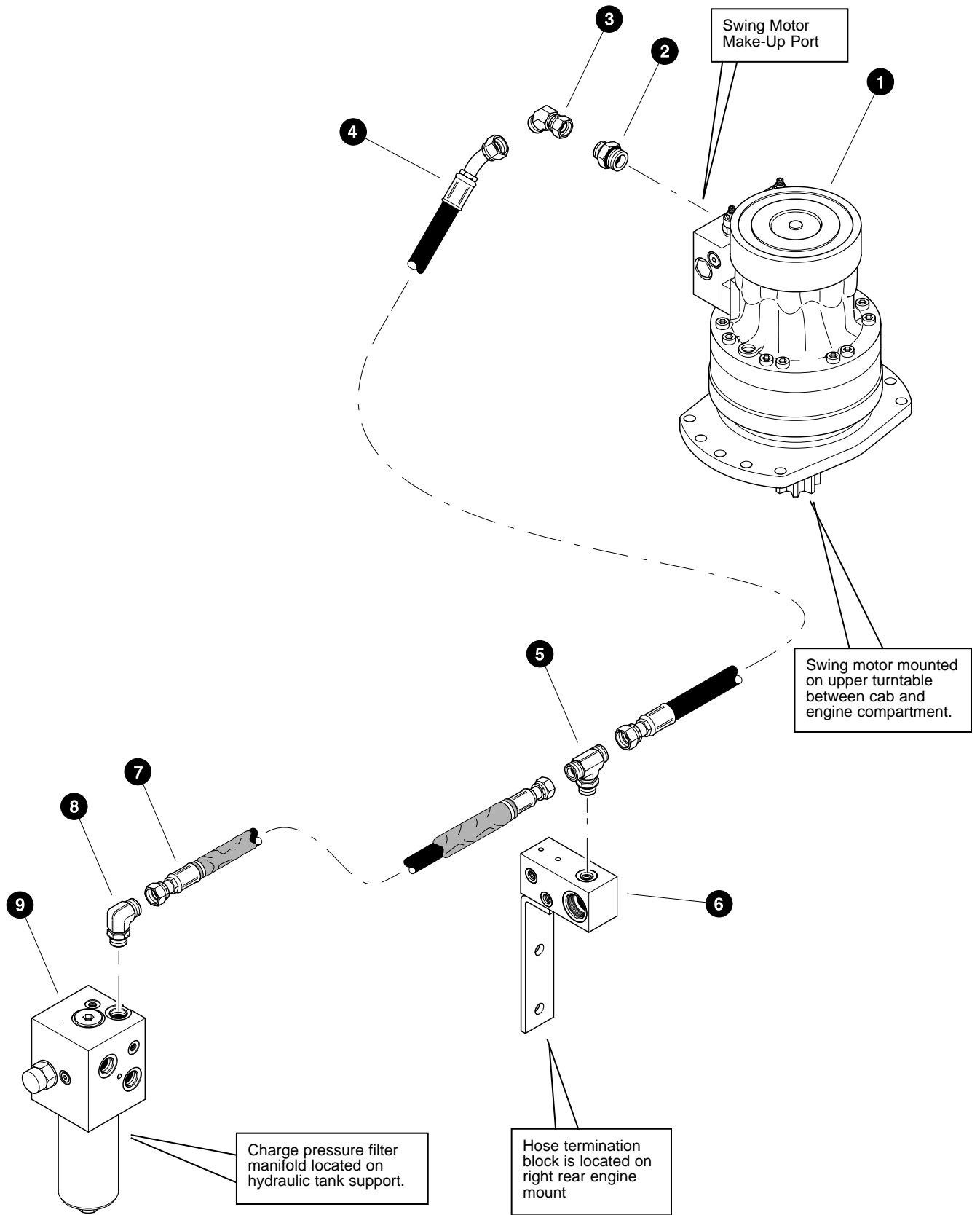
Parts 01973 01/05/2001
18.75

SWING FUNCTION LINES (Main Control Valve To Swing Motor)(Lohmann)

(Used on machines PDN# 146FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ MAIN CONTROL VALVE	LH-2-2
2	16016-LH	2	BUSHING, reducer - 2405-10-08	
3	19091-LH	1	CONNECTOR, straight long - FF1854T-0808S	
4	15117-LH	1	CONNECTOR, straight - FF1852T-0808S	
5	23033-LH	1	HOSE ASSEMBLY - 4057-08-080S-0809-W <i>(Swing valve section #6 work port "B" to hose termination block swing motor port "R")</i>	
6	23035-LH	1	HOSE ASSEMBLY - 4061-08-080S-0809-W <i>(Swing valve section #6 work port "A" to hose termination block swing motor port "L")</i>	
7	19126-LH	2	ELBOW, 45° - FF2068T-0808S	
8	15115-LH	2	CONNECTOR, straight FF1852T-0808S	
9	24094-LH	1	HOSE ASSEMBLY - 4046-08-080S-080S-W <i>(Swing valve section #6 work port "B" to swing motor port "R")</i>	
10	24096-LH	1	HOSE ASSEMBLY - 4050-08-080S-080S-W <i>(Swing valve section #6 work port "A" to swing motor port "L")</i>	
11	15238-LH	2	CONNECTOR, straight - FF1852T-0812S	
12	REF.	1	☐ ANTI-CAVITATION VALVE	UP-2-12
13	REF.	1	✓ SWING MOTOR	UP-2-8

- ✓ See referenced page for component or assembly breakdown.
- ☐ Kit or Assembly - includes all items indented underneath.

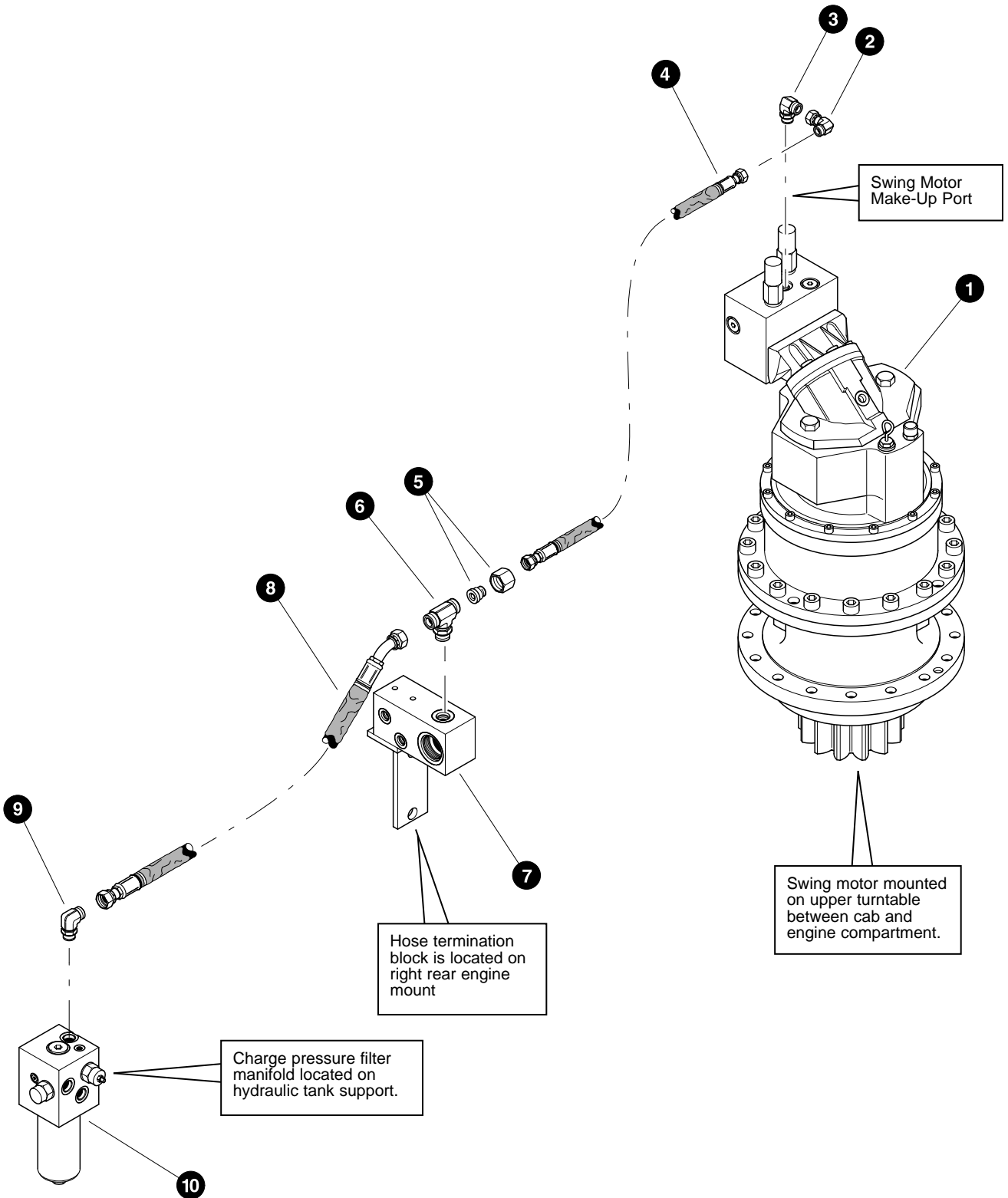


SWING MOTOR MAKE-UP LINE
(Charge Pressure Filter Manifold To Swing Motor Anti-Cavitation Valve)(Poclair)

(Used on machines PDN# 145FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-2
2	15152-LH	1		CONNECTOR, straight - FF1852T-1212S	
3	19592-LH	1		ELBOW, 45° swivel - FF2133T-1212S	
4	23092-LH	1		HOSE ASSEMBLY - 2041-12-120S-1204 <i>(Hose termination block to swing motor make-up oil port)</i>	
5	20027-LH	1		TEE - FF1861T-1212S	
6	REF.	1	✓	HOSE TERMINATION BLOCK	LH-3-16
7	23114-LH	1		HOSE ASSEMBLY - 2026-12-120S-1204-W <i>(Wheel drive charge filter swing motor make-up oil port to tee swing hose termination block)</i>	
8	17688-LH	2		ELBOW, 90° - FF1868T-1212S	
9	REF.	1	✓	WHEEL DRIVE CHARGE FILTER ASSEMBLY	WD-3-2

✓ See referenced page for component or assembly breakdown.



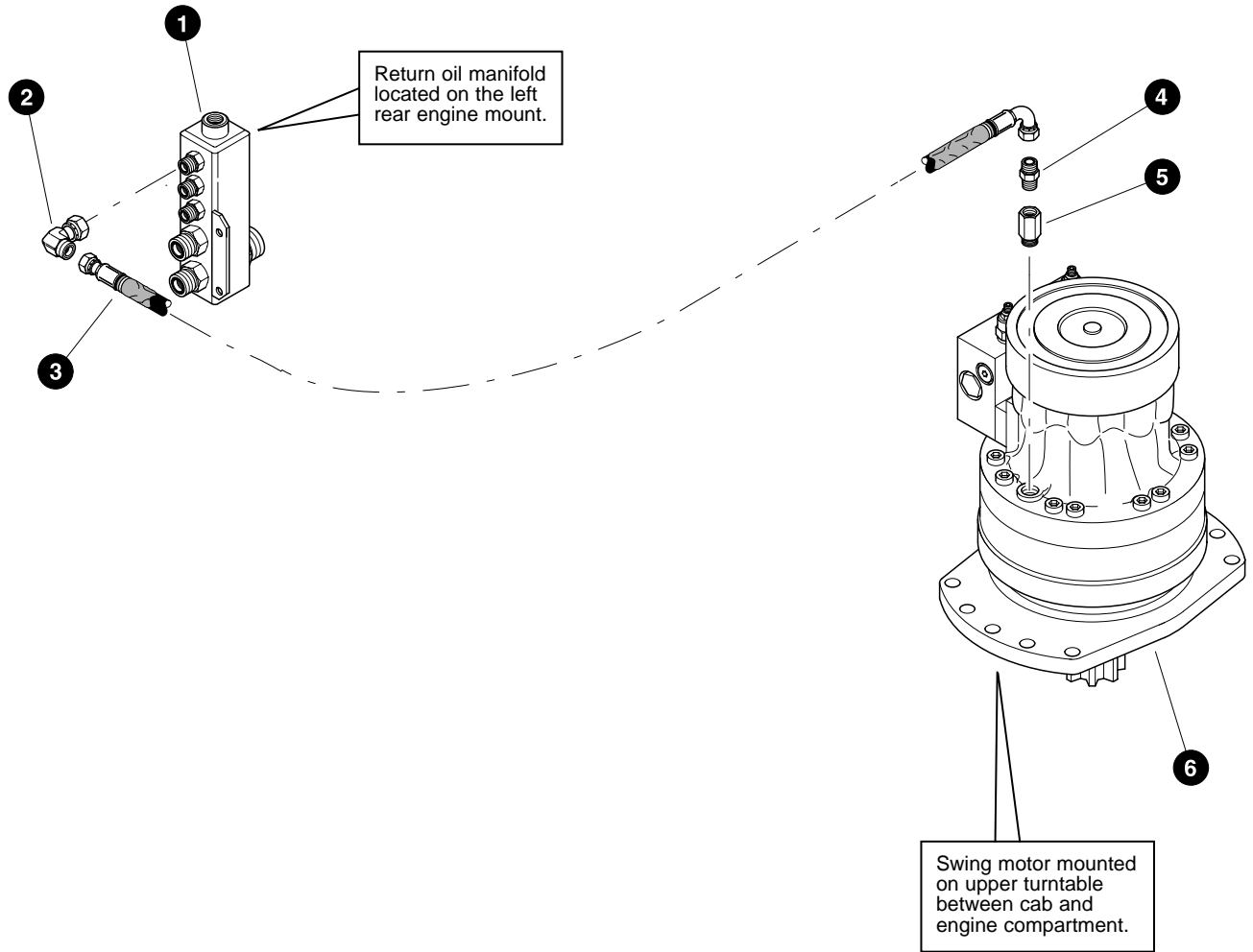
SWING MOTOR MAKE-UP LINE

(Charge Pressure Filter Manifold To Swing Motor Anti-Cavitation Valve)(Lohmann)

(Used on machines PDN# 146FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-8
2	16297-LH	1		ELBOW, 90° swivel - FF2098T-0808S	
3	16360-LH	1		ELBOW, 90° - FF1868T-0808S	
4	24095-LH	1		HOSE ASSEMBLY - 2058-08-080S-080S-W (<i>Hose termination block to swing motor make-up oil port</i>)	
5	18581-LH	2		CONNECTOR, reducer - FF2281T-0812S	
6	20027-LH	1		TEE - FF1861T-1212S	
7	REF.	1	✓	HOSE TERMINATION BLOCK	LH-3-16
8	23114-LH	1		HOSE ASSEMBLY - 2026-12-120S-1204-W (<i>Wheel drive charge filter swing motor make-up oil port to tee swing hose termination block</i>)	
9	17688-LH	2		ELBOW, 90° - FF1868T-1212S	
10	REF.	1	✓	WHEEL DRIVE CHARGE FILTER ASSEMBLY	WD-3-2

✓ See referenced page for component or assembly breakdown.

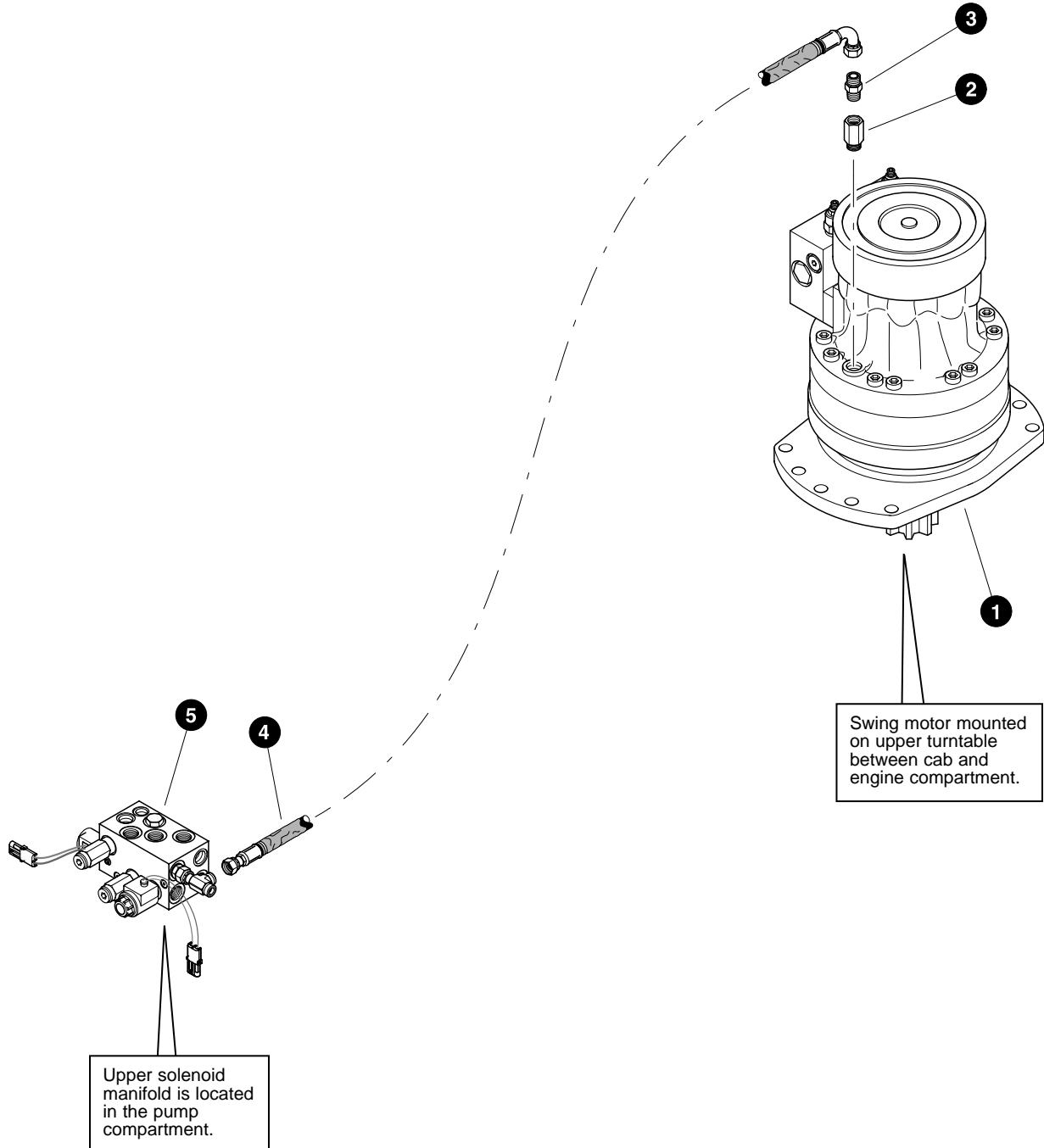


**SWING MOTOR CASE DRAIN LINE
(Swing Motor To Return Oil Manifold)(Poclain)**

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17547-LH	1	MANIFOLD, return oil	
2	16360-LH	1	ELBOW, 90° - FF1868T-0808S	
3	22921-LH	1	HOSE ASSEMBLY - 2083-08-080S-0809-W <i>(Swing motor case drain port to return oil manifold)</i>	
4	15258-LH	1	CONNECTOR, straight - FF2031T-0808S	
5	17584-LH	1	BUSHING, reducer - 7455-8-22mm	
6	REF.	1	✓ SWING MOTOR	UP-2-2

✓ See referenced page for component or assembly breakdown.

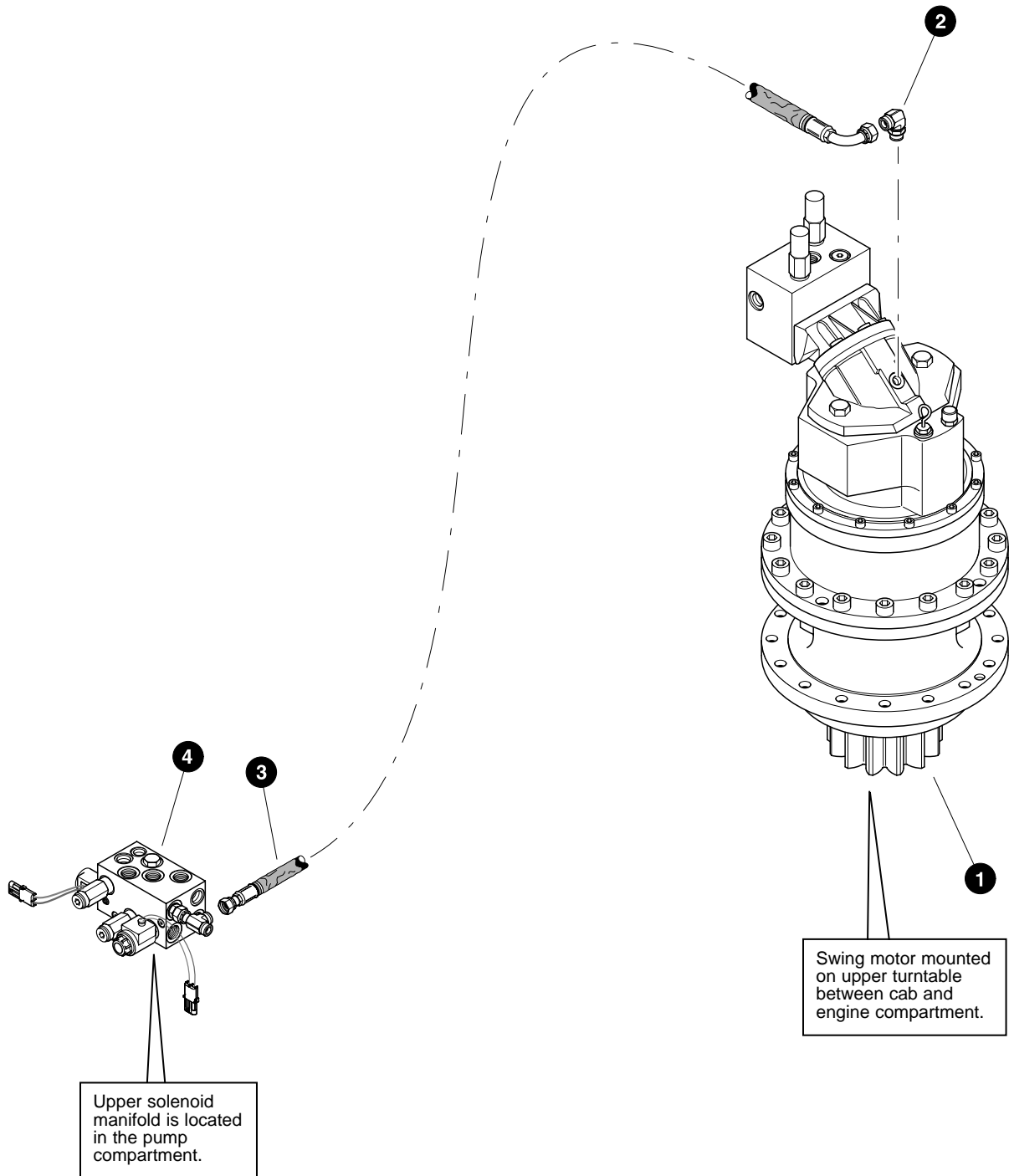


SWING MOTOR CASE DRAIN LINE
(Swing Motor To Return Oil Manifold)(Lohmann)

(Used on machines PDN# 135FWD thru 145FWD)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-2
2	17584-LH	1		BUSHING, reducer - 7455-8-22mm	
3	15258-LH	1		CONNECTOR, straight - FF2031T-0808S	
4	22921-LH	1		HOSE ASSEMBLY - 2083-08-080S-0809-W <i>(Swing motor case drain port to upper solenoid manifold port "T" tee)</i>	
5	REF.	1	✓	UPPER SOLENOID MANIFOLD	UP-5-4

✓ See referenced page for component or assembly breakdown.

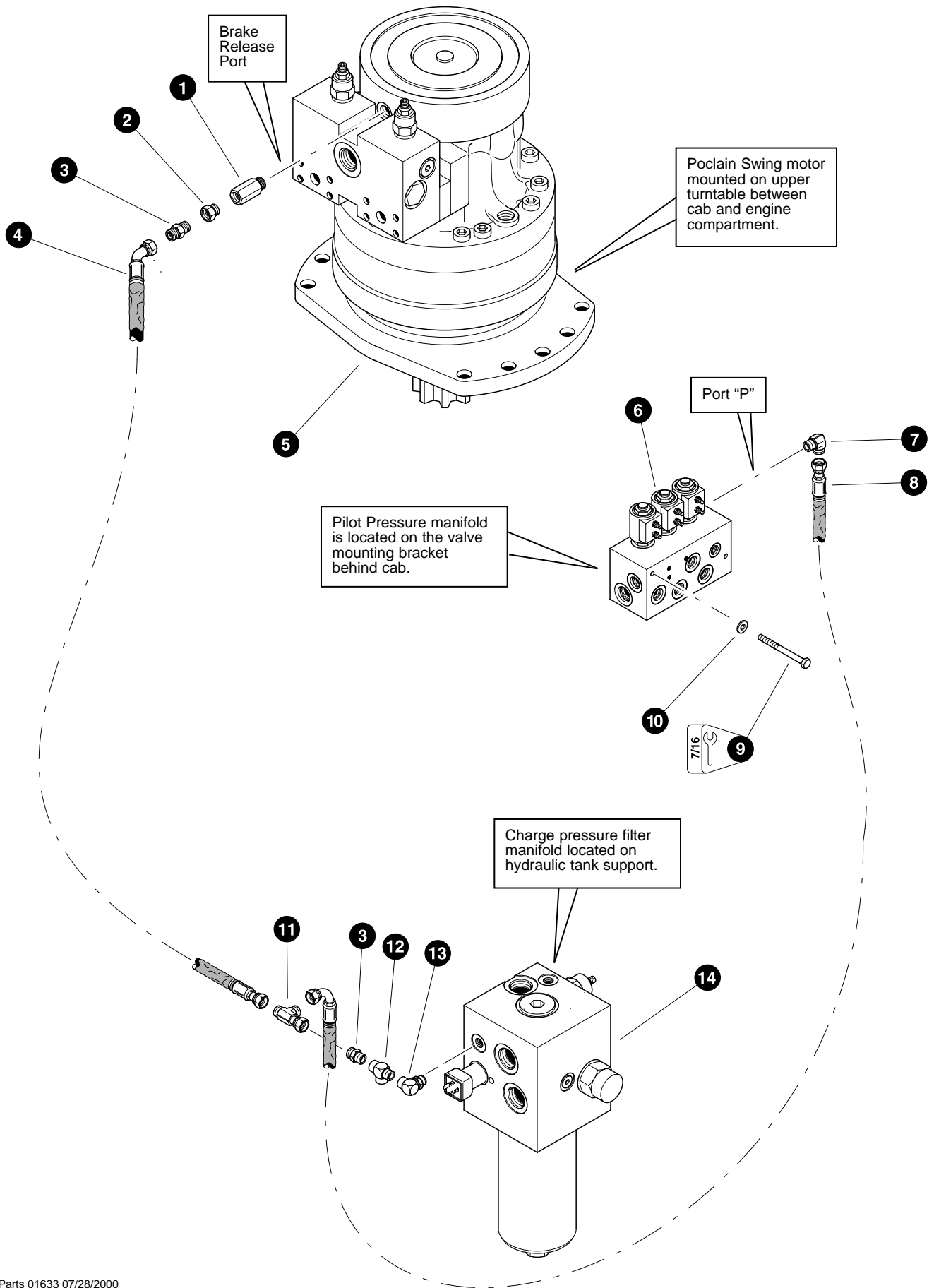


SWING MOTOR CASE DRAIN LINE
(Swing Motor To Return Oil Manifold)(Lohmann)

(Used on machines PDN# 146FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-8
2	19809	1		ELBOW, 90° - 8M18C8OMLO-S	
3	22921-LH	1		HOSE ASSEMBLY - 2083-08-080S-0809-W <i>(Swing motor case drain port to upper solenoid manifold port "T" tee)</i>	
4	REF.	1	✓	UPPER SOLENOID MANIFOLD	UP-5-4

✓ See referenced page for component or assembly breakdown.



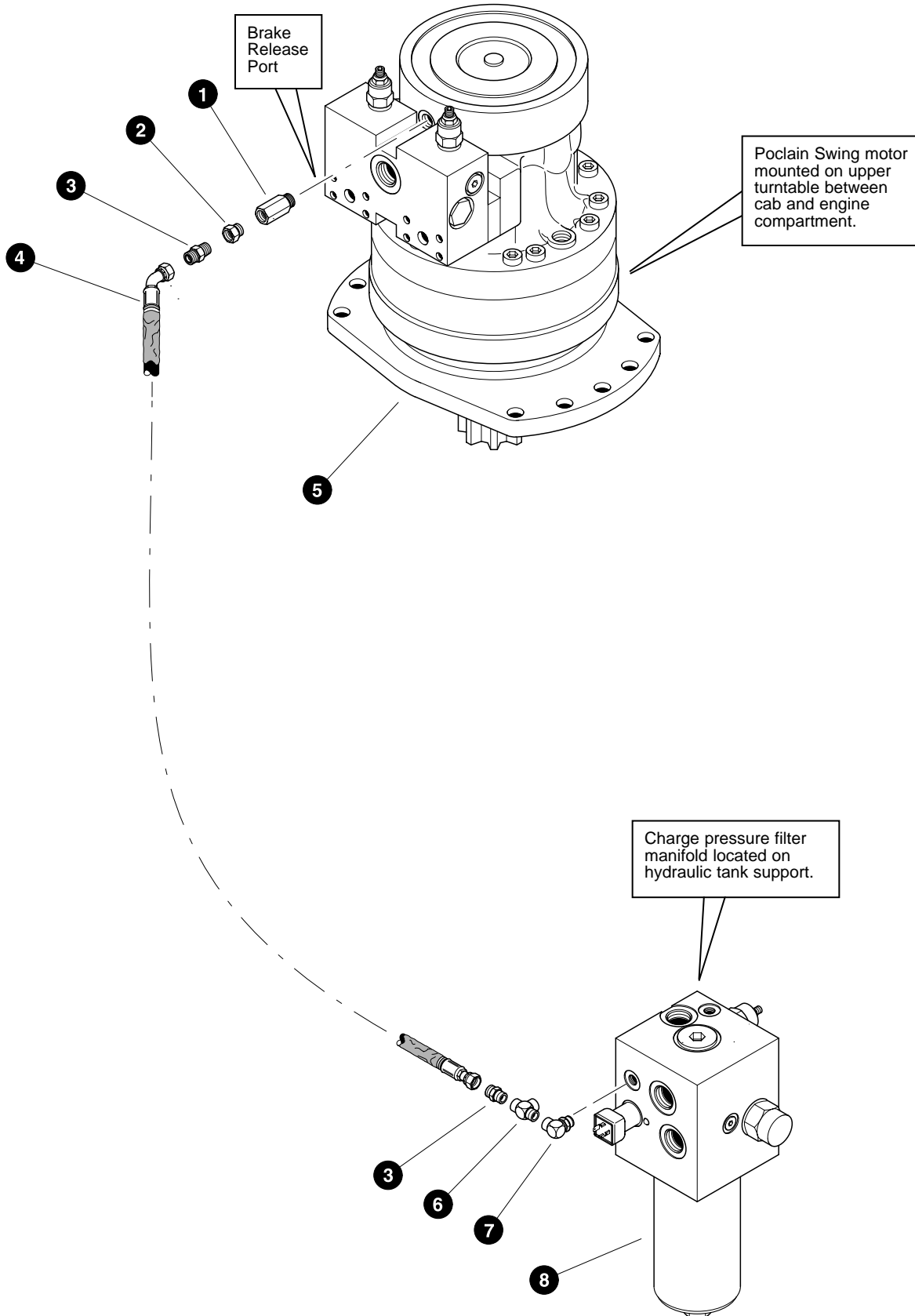
Parts 01633 07/28/2000
25.00

SWING MOTOR BRAKE RELEASE LINE (Poclairn)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17585-LH	1	BUSHING, reducer - 7455-6-16mm	
2	11318-LH	1	BUSHING, reducer - 5406-6-4	
3	15131-LH	1	CONNECTER, straight - FF2031T-0404S	
4	23027-LH	1	HOSE ASSEMBLY - 2089-04-040S-0404-W (<i>Wheel drive charge pressure filter manifold tee to swing motor brake release port</i>)	
5	REF.	1	✓ SWING MOTOR	UP-2-2
6	REF.	1	✓ PILOT PRESSURE MANIFOLD BLOCK	UP-5-2
7	15133-LH	1	ELBOW, 90° - FF2032T-0406S	
8	23112-LH	1	HOSE ASSEMBLY - 2066-04-040S-0409-W (<i>Wheel drive charge pressure filter manifold tee to pilot pressure manifold port "P"</i>)	
9	10818-LH	2	BOLT - 1/4" x 3"	
10	10757-LH	2	WASHER, SAE flat - 1/4"	
11	15176-LH	1	TEE - FF2114T-0404S	
12	10393-LH	1	TEE - 5602-4	
13	16639-LH	1	ELBOW, 90° - 6805-4-4	
14	REF.	1	✓ WHEEL DRIVE CHARGE FILTER MANIFOLD	WD-3-2

✓ See referenced page for component or assembly breakdown.



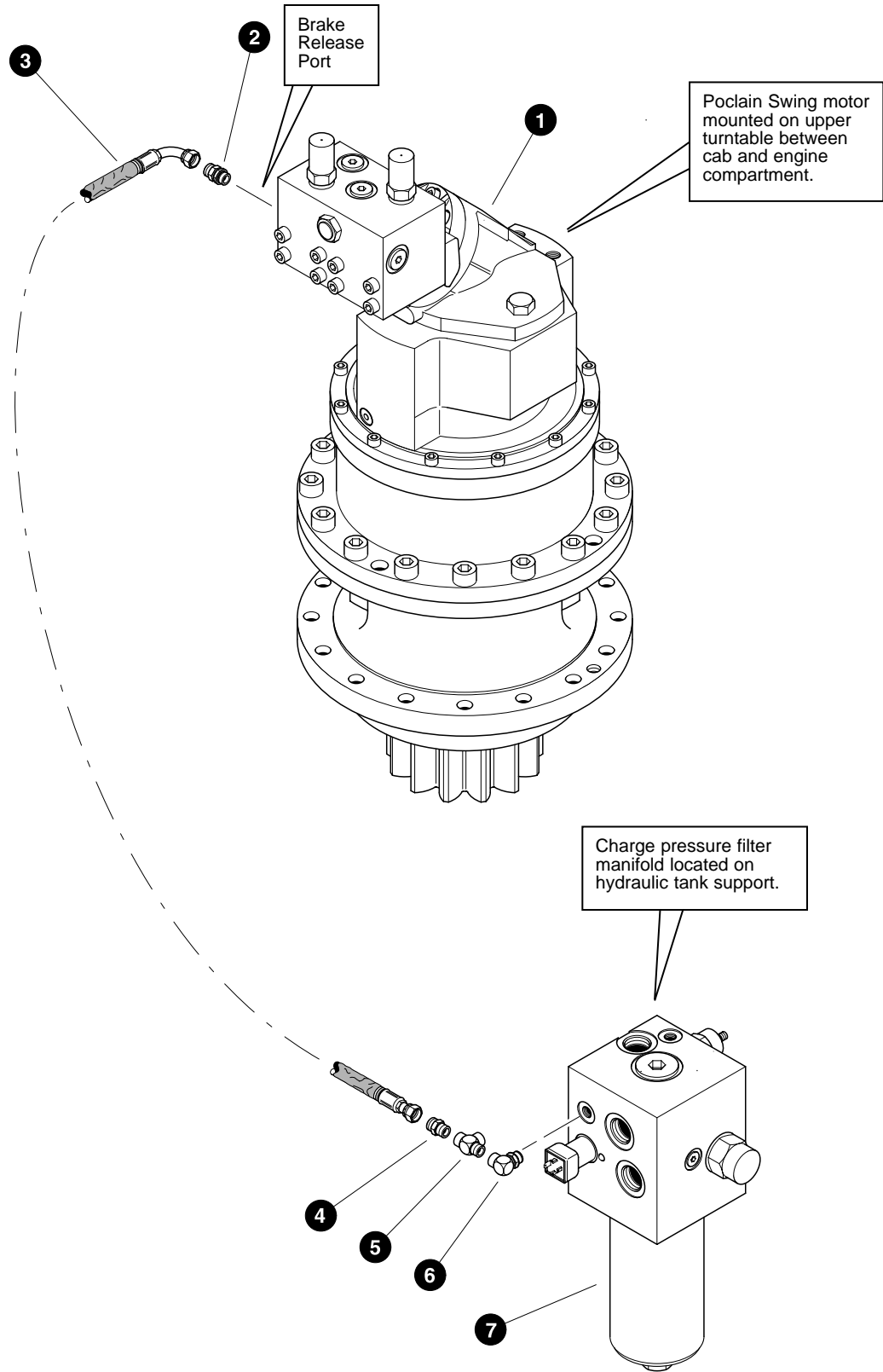
Parts 01968 01/04/2001
25.00

SWING MOTOR BRAKE RELEASE LINE (Poclain)

(Used on machines PDN# 135FWD thru 145FWD)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17585-LH	1	BUSHING, reducer - 7455-6-16mm	
2	11318-LH	1	BUSHING, reducer - 5406-6-4	
3	15131-LH	2	CONNECTER, straight - FF2031T-0404S	
4	23027-LH	1	HOSE ASSEMBLY - 2089-04-040S-0404-W <i>(Wheel drive charge pressure filter manifold tee to swing motor brake release port)</i>	
5	REF.	1	✓ SWING MOTOR	UP-2-2
6	10393-LH	1	TEE - 5602-4	
7	16639-LH	1	ELBOW, 90° - 6805-4-4	
8	REF.	1	✓ WHEEL DRIVE CHARGE FILTER MANIFOLD	WD-3-2

✓ See referenced page for component or assembly breakdown.

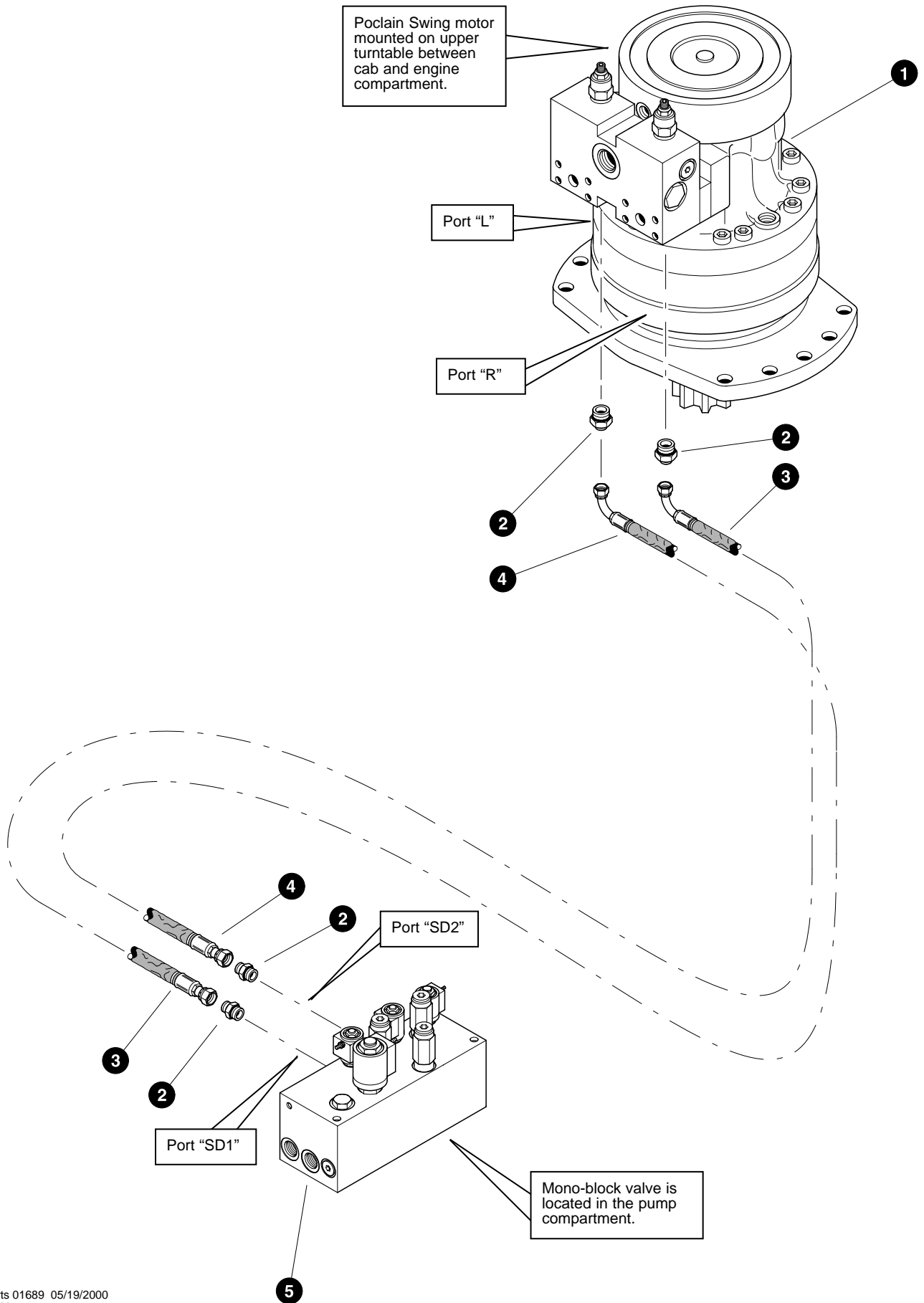


SWING MOTOR BRAKE RELEASE LINE (Lohmann)

(Used on machines PDN# 146FWD above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ SWING MOTOR	UP-2-8
2	19469	1	CONNECTOR, straight metric - 4M12F82EDMLO-S	
3	23980-LH	1	HOSE ASSEMBLY - 2085-04-040S-0409-W <i>(Wheel drive charge pressure filter manifold tee to swing motor brake release port)</i>	
4	15131-LH	2	CONNECTER, straight - FF2031T-0404S	
5	10393-LH	1	TEE - 5602-4	
6	16639-LH	1	ELBOW, 90° - 6805-4-4	
7	REF.	1	✓ WHEEL DRIVE CHARGE FILTER MANIFOLD	WD-3-2

✓ See referenced page for component or assembly breakdown.



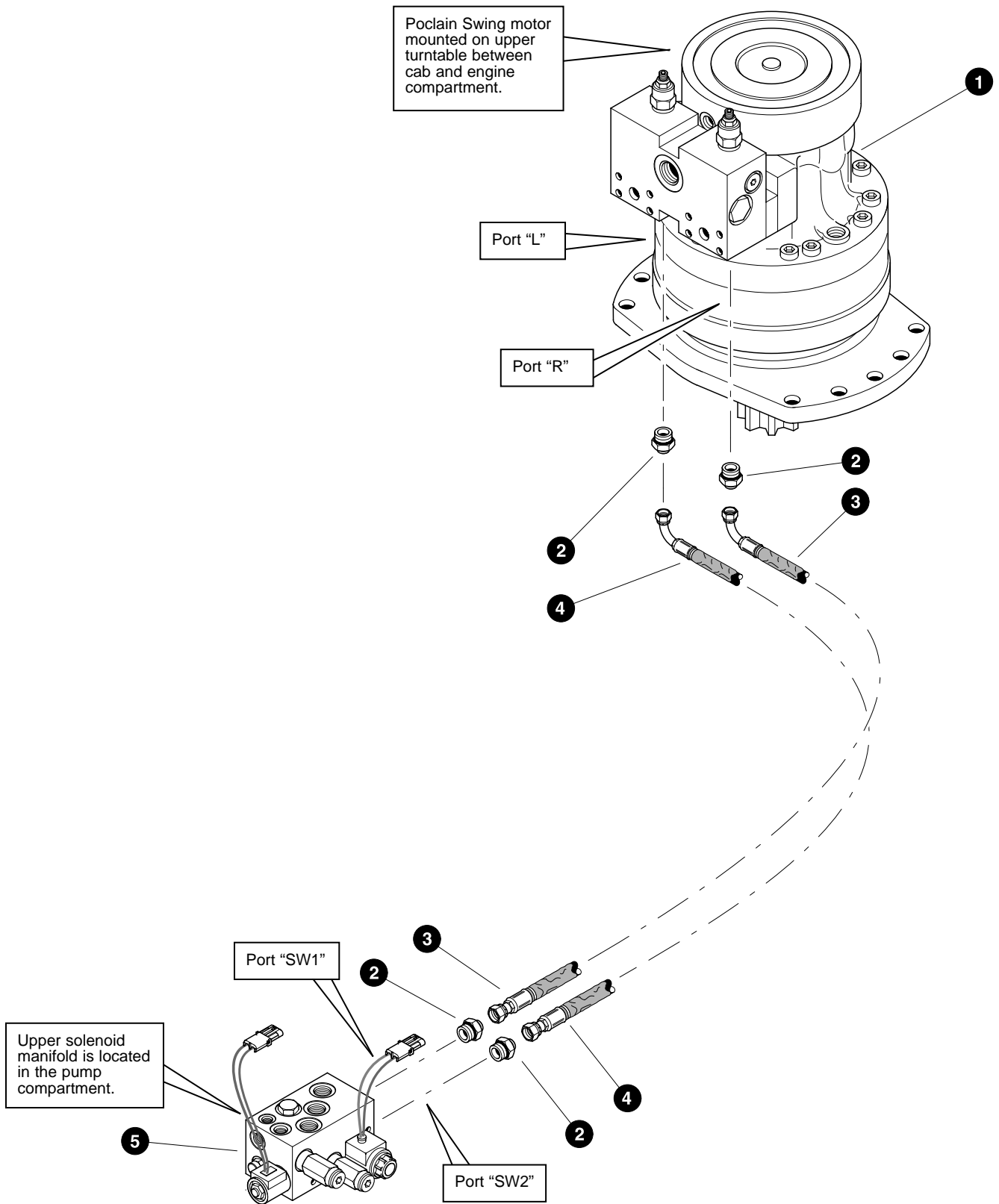
Parts 01689 05/19/2000
25.00

SWING FUNCTION DETENT LINES
(From Mono-Block Valve To Swing Motor Counterbalance Valve)(Poclairn)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-2
2	15504-LH	4		CONNECTOR, straight - FF1852T-0408S	
3	23020-LH	1		HOSE ASSEMBLY - 2076-04-040S-0409-W <i>(Mono-block port "SD1"</i> <i>to swing motor detent port "R")</i>	
4	23021-LH	1		HOSE ASSEMBLY - 2082-04-040S-0409-W <i>(Mono-block port "SD2"</i> <i>to swing motor detent port "L")</i>	
5	REF.	1	✓	MONO-BLOCK VALVE	UP-5-4

✓ See referenced page for component or assembly breakdown.

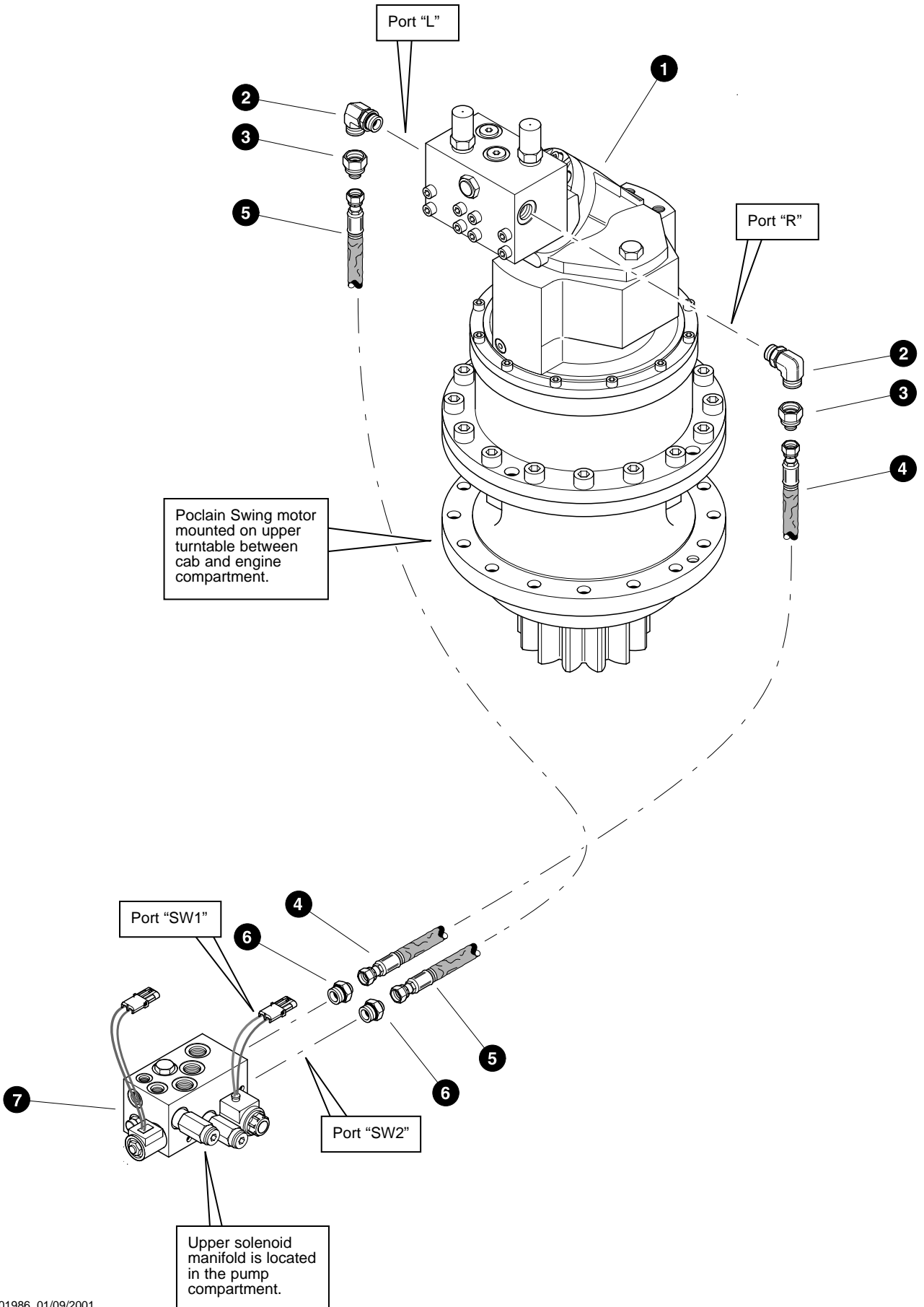


SWING FUNCTION DETENT LINES
(From Mono-Block Valve To Swing Motor Counterbalance Valve)(Poclairn)

(Used on machines PDN# 135FWD thru 145FWD)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-2
2	15504-LH	4		CONNECTOR, straight - FF1852T-0408S	
3	23173-LH	1		HOSE ASSEMBLY - 2064-04-040S-0409-W <i>(Upper solenoid manifold port "SW1" to swing motor detent port "R")</i>	
4	23530-LH	1		HOSE ASSEMBLY - 2066-04-040S-0409-W <i>(Upper solenoid manifold port "SW2" to swing motor detent port "L")</i>	
5	REF.	1	✓	UPPER SOLENOID MANIFOLD	UP-5-4

✓ See referenced page for component or assembly breakdown.



Parts 01986 01/09/2001
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SWING FUNCTION DETENT LINES
(From Mono-Block Valve To Swing Motor Counterbalance Valve)(Lohmann)

(Used on machines PDN# 146FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	SWING MOTOR	UP-2-8
2	16360-LH	2		ELBOW, 90° - FF1868T-0808S	
3	19221-LH	2		CONNECTOR, reducer - FF2281T-0408S	
4	23111-LH	1		HOSE ASSEMBLY - 2064-04-040S-040S-W (<i>Upper solenoid manifold port "SW1" to swing motor detent port "R"</i>)	
5	23061-LH	1		HOSE ASSEMBLY - 2066-04-040S-040S-W (<i>Upper solenoid manifold port "SW2" to swing motor detent port "L"</i>)	
6	15504-LH	4		CONNECTOR, straight - FF1852T-0408S	
7	REF.	1	✓	UPPER SOLENOID MANIFOLD	UP-5-4

✓ See referenced page for component or assembly breakdown.