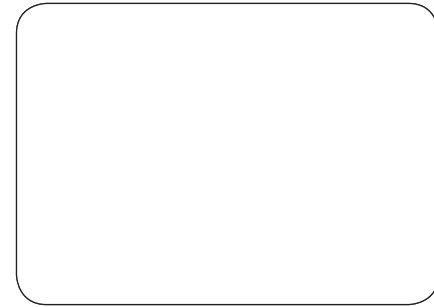
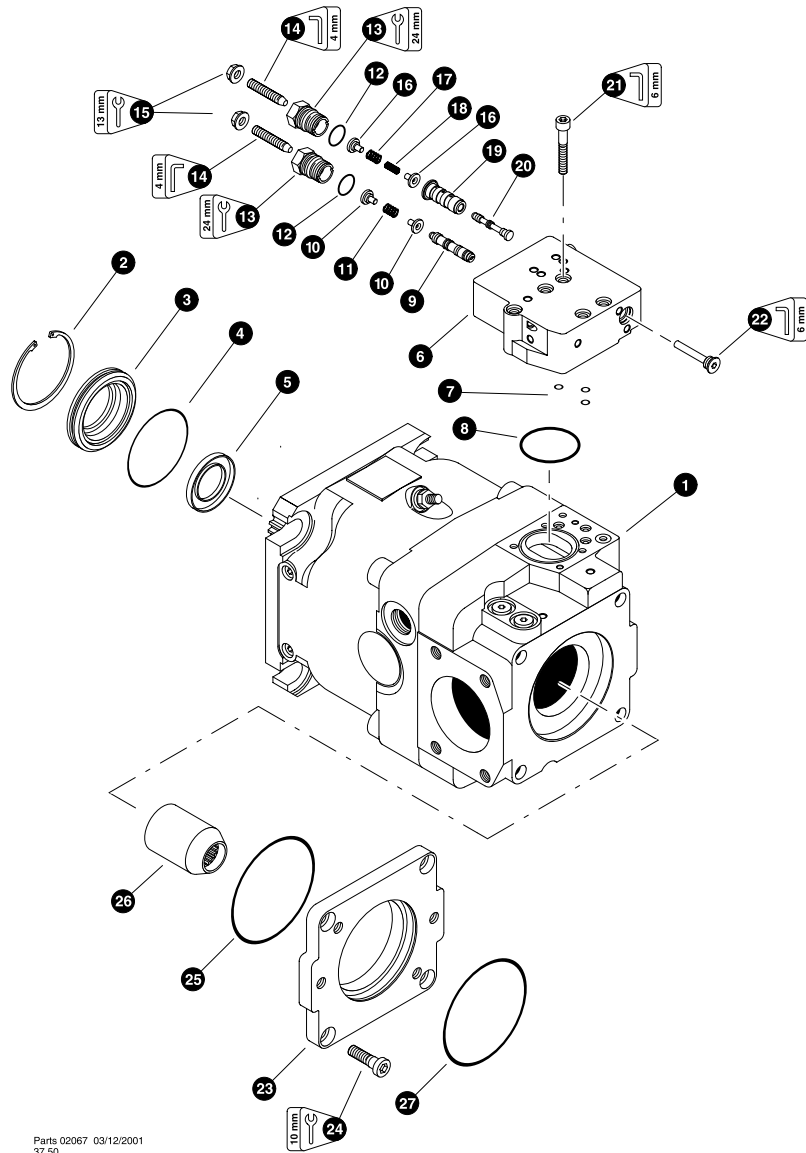


## ***Section HH-1***

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***Harvester Hydraulics (K220/L90LS Valve) -  
Implement Pumps***



Parts 02067 03/12/2001  
37,50

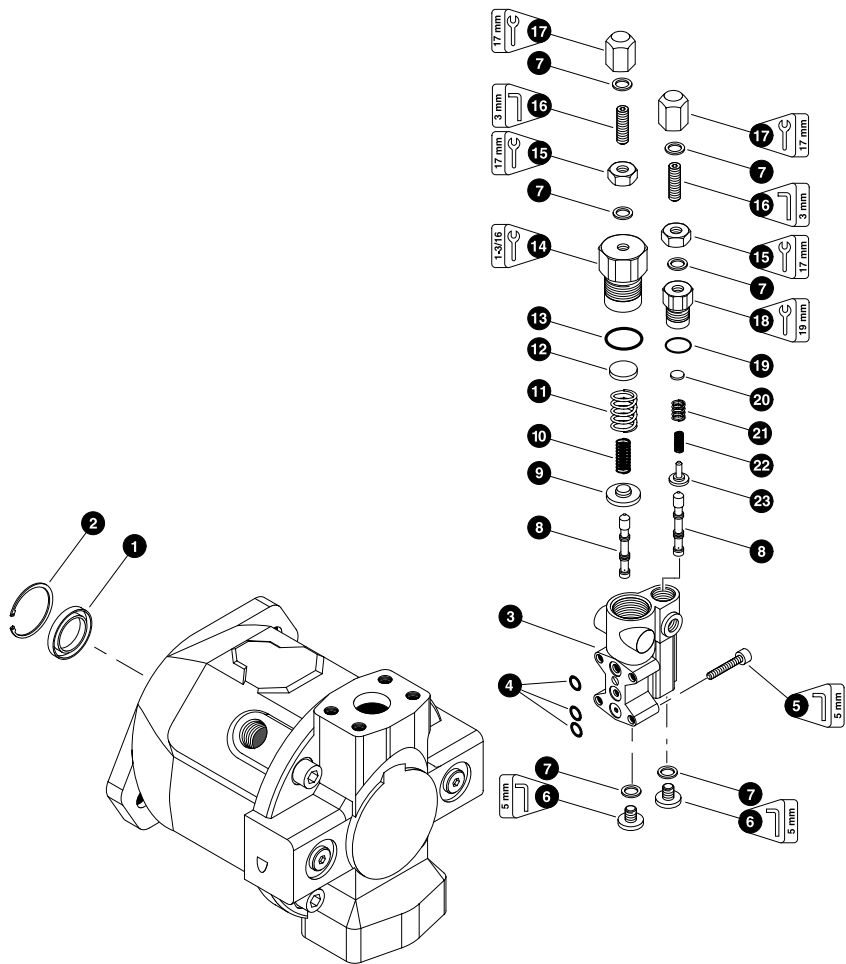
**IMPLEMENT PUMP  
(Rexroth 145cc)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	24505-HH	1	<input type="checkbox"/> PUMP, implement - Rexroth 145cc	
2	21546-HH	1	RING, seal retaining	
3	21547-HH	1	COVER, front	
4	21548-HH	1	<input type="checkbox"/> O-RING, front cover	
5	18687-HH	1	<input type="checkbox"/> SEAL, shaft	
6	18681-HH	1	<input type="checkbox"/> COMPENSATOR	
7	20809-HH	3	<input type="checkbox"/> O-RING, quad	
8	20808-HH	1	<input type="checkbox"/> O-RING, compensator	
9	NSS	1	SPOOL, POR pressure	
10	21551-HH	2	RETAINER, spring	
11	21552-HH	1	SPRING	
12	21553-HH	2	<input type="checkbox"/> O-RING, compensator cap	
13	21554-HH	2	CAP, compensator	
14	20358-HH	2	<input type="checkbox"/> NUT, seal	
15	21555-HH	2	SCREW, adjusting	
16	21558-HH	2	RETAINER, spring	
17	21556-HH	1	SPRING	
18	21557-HH	1	SPRING	
19	NSS	1	SLEEVE, spool	
20	NSS	1	SPOOL, stand-by pressure	
21	21559-HH	5	BOLT, allen head - 8mm x 50mm	
22	NSS	1	PLUG	
23	24424-HH	1	<input type="checkbox"/> KIT, FLANGE, thru drive v/o	
24	17608-HH	4	BOLT, allen head - 12mm-1.75P x 30mm	
25	17744-HH	1	<input type="checkbox"/> O-RING, thru drive flange	
26	18843-HH	1	COUPLING, thru drive	
27	18844-HH	1	O-RING, thru drive cover	
--	18799-HH	1	KIT, seal repair ( <i>Complete pump</i> )	

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

**Note:**

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

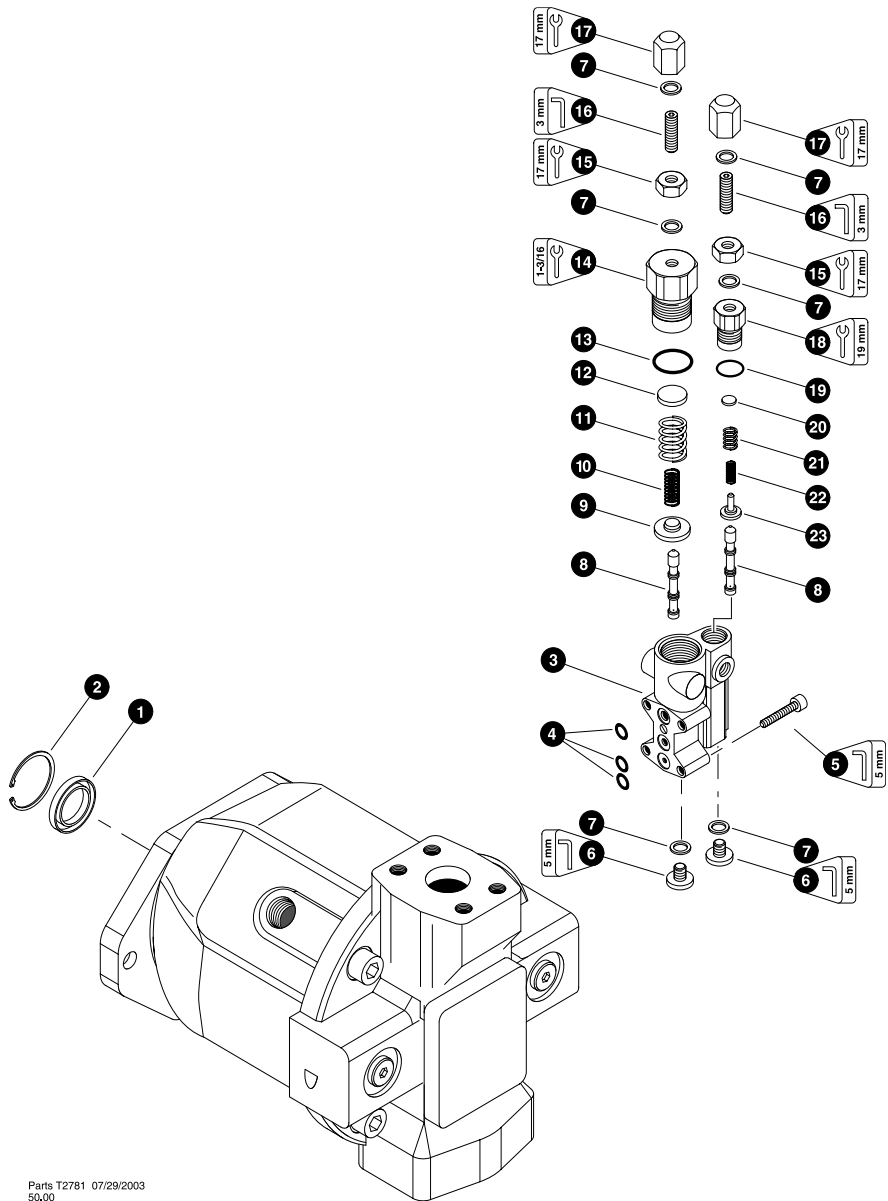


Parts 00867 01/01/2001  
50.00

**AUX - DISC SAW PUMP  
(45 cc)**

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	15317-OD	1	☐	PUMP, disc saw (45 CC)	
1	15890-OD	1	⊗	SEAL, shaft	
2	21581-OD	1		RING, seal retaining	
--	15891-OD	1	☐	COMPENSATOR, pump control	
3	NSS	1		HOUSING ASSEMBLY	
4	16856-OD	3	⊗	O-RING	
5	21582-OD	4		BOLT, compensator mounting	
6	20339-OD	2		PLUG	
7	16855-OD	6	⊗	SEAL, ring	
8	NSS	2		SPOOL	
9	NSS	1		RETAINER, spring	
10	NSS	1		SPRING	
11	NSS	1		SPRING	
12	NSS	1		RETAINER, spring	
13	NSS	1	⊗	O-RING	
14	NSS	1		CAP, compensator	
15	17458-OD	2		NUT, jam - 8mm	
16	17459-OD	2		SCREW, adjustment - 8mm	
17	17697-OD	2		NUT, acom	
18	NSS	1		CAP, compensator	
19	NSS	1	⊗	O-RING	
20	NSS	1		RETAINER, spring	
21	NSS	1		SPRING	
22	NSS	1		SPRING	
23	NSS	1		RETAINER, spring	
-	19757-OD	1		KIT, seal repair - disc saw pump	

☐ Kit or Assembly - includes all items indented underneath.  
⊗ Included in seal repair kit Part # 16712-OD.

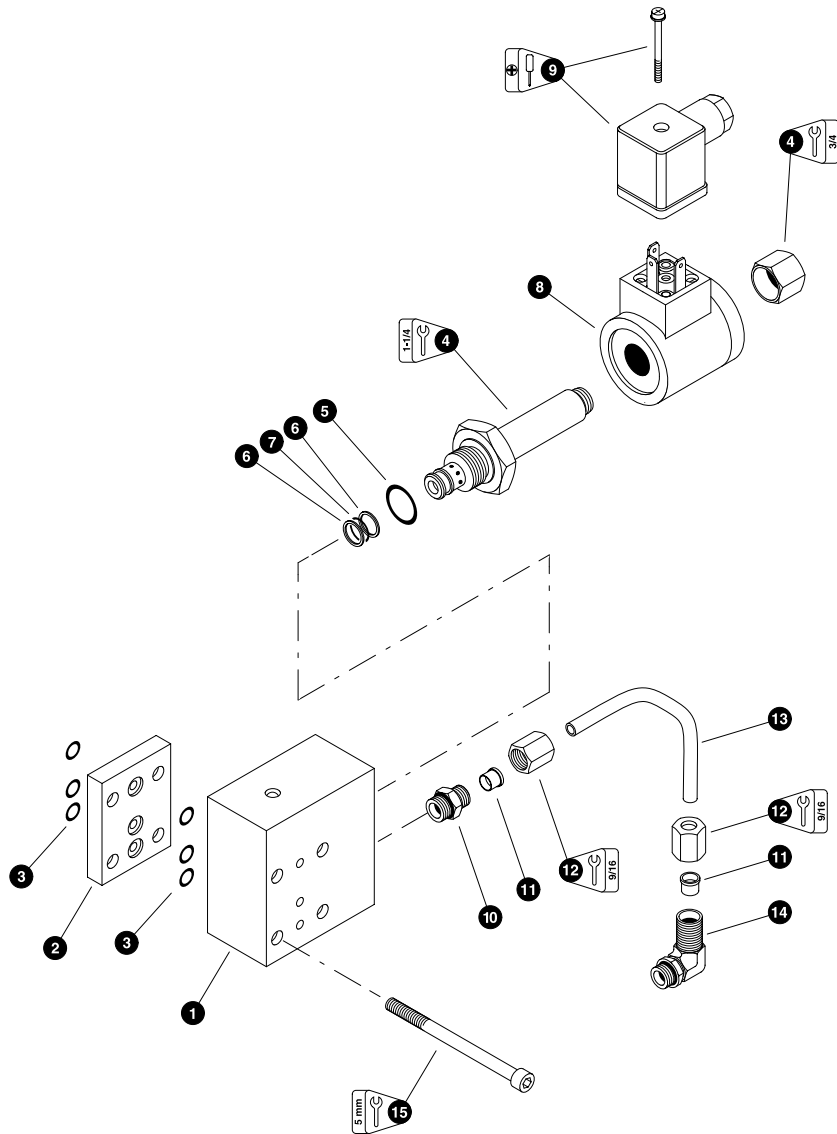


Parts T2781 07/29/2003  
50.00

### AUX - BRUSH PUMP (71 cc)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
--	19509-OD	1	<input type="checkbox"/> PUMP, AUX - Brush cutter 71cc	
1	22881-OD	1	SEAL, shaft	
2	22882-OD	1	RING, seal retaining	
--	15891-OD	1	<input type="checkbox"/> COMPENSATOR, pump control	
3	NSS	1	HOUSING ASSEMBLY	
4	16856-OD	3	% O-RING	
5	21582-OD	4	BOLT, compensator mounting	
6	20339-OD	2	PLUG	
7	16855-OD	6	% SEAL, ring	
8	NSS	2	SPOOL	
9	NSS	1	RETAINER, spring	
10	NSS	1	SPRING	
11	NSS	1	SPRING	
12	NSS	1	RETAINER, spring	
13	NSS	1	% O-RING	
14	NSS	1	CAP, compensator	
15	17458-OD	2	NUT, jam - 8mm	
16	17459-OD	2	SCREW, adjustment - 8mm	
17	17697-OD	2	NUT, acom	
18	NSS	1	CAP, compensator	
19	NSS	1	% O-RING	
20	NSS	1	RETAINER, spring	
21	NSS	1	SPRING	
22	NSS	1	SPRING	
23	NSS	1	RETAINER, spring	
-	19757-OD	1	KIT, seal repair - disc saw pump	

Kit or Assembly - includes all items indented underneath.  
 % Included in seal repair kit Part # 16712-OD.



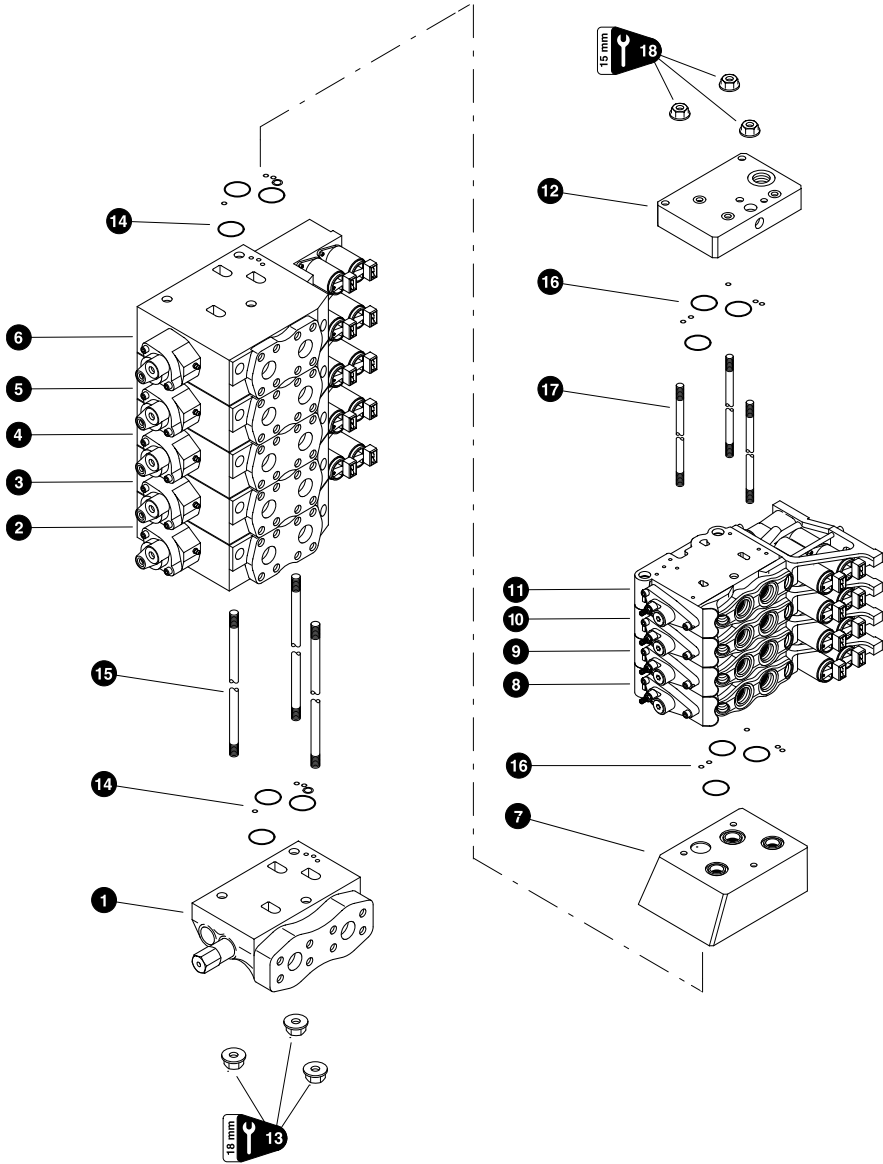
Parts 01325 01/01/2001  
75.00

**ELECTRIC COMPENSATOR CONTROL**  
(Used With Disc Saw or Brush Pump)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
-	19240-OD	1	□ CONTROL, electric compensator	
1	22595-OD	1	BLOCK	
2	22596-OD	1	PLATE, block	
3	21604-OD	6	O-RING	
4	22597-OD	1	□ CARTRIDGE, solenoid (Includes nut)	
5	NSS	1	⊗ O-RING, body	
6	NSS	2	⊗ RING, back-up - chamber	
7	NSS	1	⊗ O-RING, chamber	
8	22445-OD	1	COIL, solenoid - 24V	
9	17145-OD	1	CONNECTOR, electrical - Hirschmann (Includes hardware)	
10	22599-OD	1	CONNECTOR, tube	
11	22600-OD	2	FERRULE	
12	22601-OD	2	NUT, tube	
13	22602-OD	1	TUBE, hydraulic	
14	22604-OD	1	ELBOW, 90° tube	
15	22603-OD	4	BOLT, allen head	
-	22598-OD	1	KIT, seal repair - solenoid cartridge	

- Kit or Assembly - includes all items indented underneath.
- ⊗ Included in seal repair kit Part # 22598-OD.



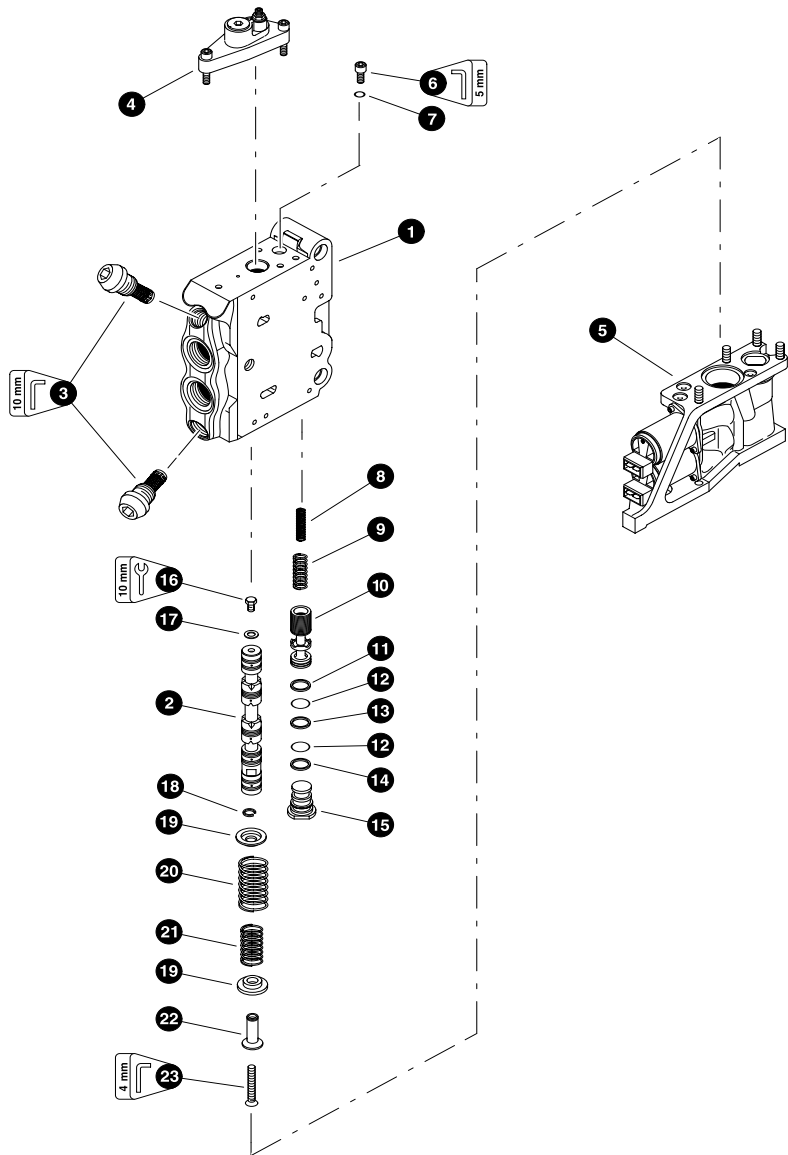


Parts T2764 07/18/2003  
25,00

**MAIN CONTROL VALVE**  
**(Voac K220/L90LS / 9 - Sections)**  
**(machines built after 11/01/02 )**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
-	50553-HH	1	<input type="checkbox"/> VALVE, MAIN CONTROL 9 - section 24volt	
1	REF.	1	<input type="checkbox"/> IN-LET/OUTLET SECTION . . . . .	HH-2
2	REF.	1	<input type="checkbox"/> VALVE SECTION - main boom function . . . . .	HH-2
3	REF.	1	<input type="checkbox"/> VALVE SECTION - clamp function . . . . .	HH-2
4	REF.	1	<input type="checkbox"/> VALVE SECTION - saw/shear function . . . . .	HH-2
5	REF.	1	<input type="checkbox"/> VALVE SECTION - stick boom function . . . . .	HH-2
6	REF.	1	<input type="checkbox"/> VALVE SECTION - tool/squirt function . . . . .	HH-2
7	---	1	ADAPTER PLATE, (9120092315)	
8	REF.	1	<input type="checkbox"/> VALVE SECTION - rotate function . . . . .	HH-2
9	REF.	1	<input type="checkbox"/> VALVE SECTION - steer function . . . . .	HH-2
10	REF.	1	<input type="checkbox"/> VALVE SECTION - swing function . . . . .	HH-2
11	REF.	1	<input type="checkbox"/> VALVE SECTION - level function . . . . .	HH-2
12	---	1	END CAP	
13	25131-HH	3	NUT, flange - 12mm ( <i>Torque to 55 ft.lbs. (75 Nm)</i> )	
14	25132-HH	6	KIT, seal repair - K220 face seals	
15	25134-HH	3	ROD, tie - K220 ( <i>5-Section span</i> )	
16	23404-HH	5	KIT, seal repair - L90LS face seals	
17	25133-HH	3	ROD, tie - L90LS ( <i>4-Section span</i> )	
18	23913-HH	3	NUT, flange - 10mm ( <i>Torque to 33 ft.lbs. (45 Nm)</i> )	

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



**L90LS VALVE SECTION**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
-	24778-HH	1	<input type="checkbox"/> VALVE SECTION, L90LS - LEVEL	
-	23407-HH	1	<input type="checkbox"/> VALVE SECTION, L90LS- ROTATE	
-	23321-HH	1	<input type="checkbox"/> VALVE SECTION, L90LS - STEER	
-	23411-HH	1	<input type="checkbox"/> VALVE SECTION, L90LS - SWING	
1	NSS	1	BODY, valve section	
2	-----	1	SPOOL, level MUX (393000S594)	
2	-----	1	SPOOL, head rotate MBX (393000S218)	
2	-----	1	SPOOL, steer/shear RDX (393000S230)	
2	-----	1	SPOOL, swing RCD (393000S223)	
3	-----	2	CARTRIDGE, port relief (280 Bar) (393000K571) LEVEL, ROTATE	
3	-----	2	CARTRIDGE, port relief (300 Bar) (393000K572) SWING, STEER	
4	REF.	1	<input type="checkbox"/> SECTION END CAP ASSEMBLY - "A" port side	HH-2
5	REF.	1	<input type="checkbox"/> SECTION END CAP ASSEMBLY - "B" port side	HH-2
-	-----	1	<input type="checkbox"/> KIT, compensator - "KX" (Swing, Steer)(see note #1)	
-	-----	1	<input type="checkbox"/> KIT, compensator - "K" (Rotate & Level only)(see note #1)	
6	-----	1	SCREW, throttling - 6mm-1.0P x 10mm	
7	-----	1	RING, seal	
8	-----	1	SPRING, small (KX only)	
9	-----	1	SPRING, compensator	
10	-----	1	SPOOL, compensator	
-	-----	1	<input type="checkbox"/> KIT, compensator plug w/seals (393000K171)	
-	-----	1	<input type="checkbox"/> KIT, seals only - compensator plug (393000K811)	
11	-----	2	RING, back-up	
12	-----	1	O-RING	
13	-----	1	O-RING	
14	-----	1	RING, back-up	
15	-----	1	BOLT, spool - 6mm-1.0P x 8mm (0147124203)	
16	-----	1	WASHER, seal (91256300)	
-	23423-HH	1	<input type="checkbox"/> KIT, spool centering spring	
17	NSS	1	RING, lock	
18	NSS	2	RETAINER, spring	
19	NSS	1	SPRING	
20	NSS	1	SPRING	
21	NSS	1	SLEEVE	
22	NSS	1	SCREW, spring assembly	

Kit or Assembly - includes all items indented underneath.

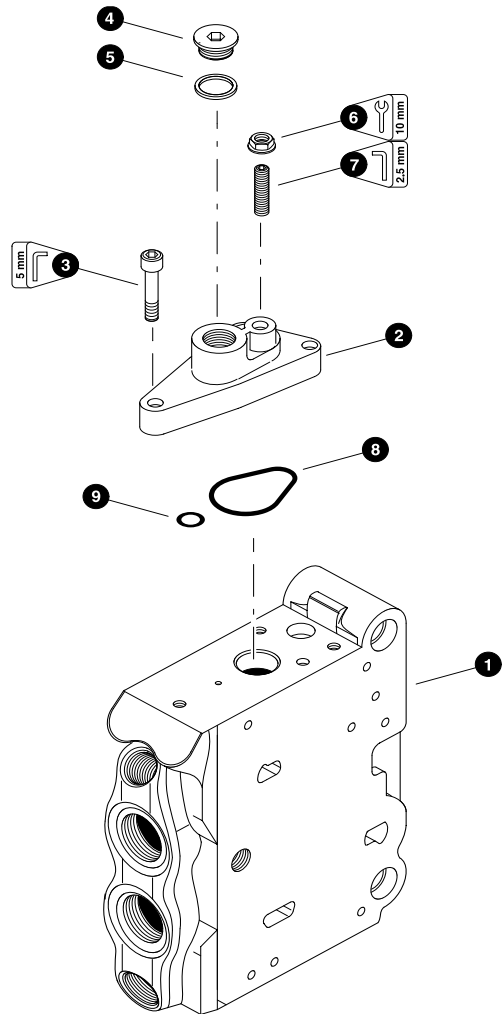
See referenced page for component or assembly breakdown.

**NOTE #1**

Each section is color coded for proper fit. A color mark can be found on the "B" port side of the valve section under the end cap labeled #5.

KX - blue (393000K616)	K - blue (393000K169)
green (393000K617)	green (393000K469)
red (393000K618)	red (393000K669)

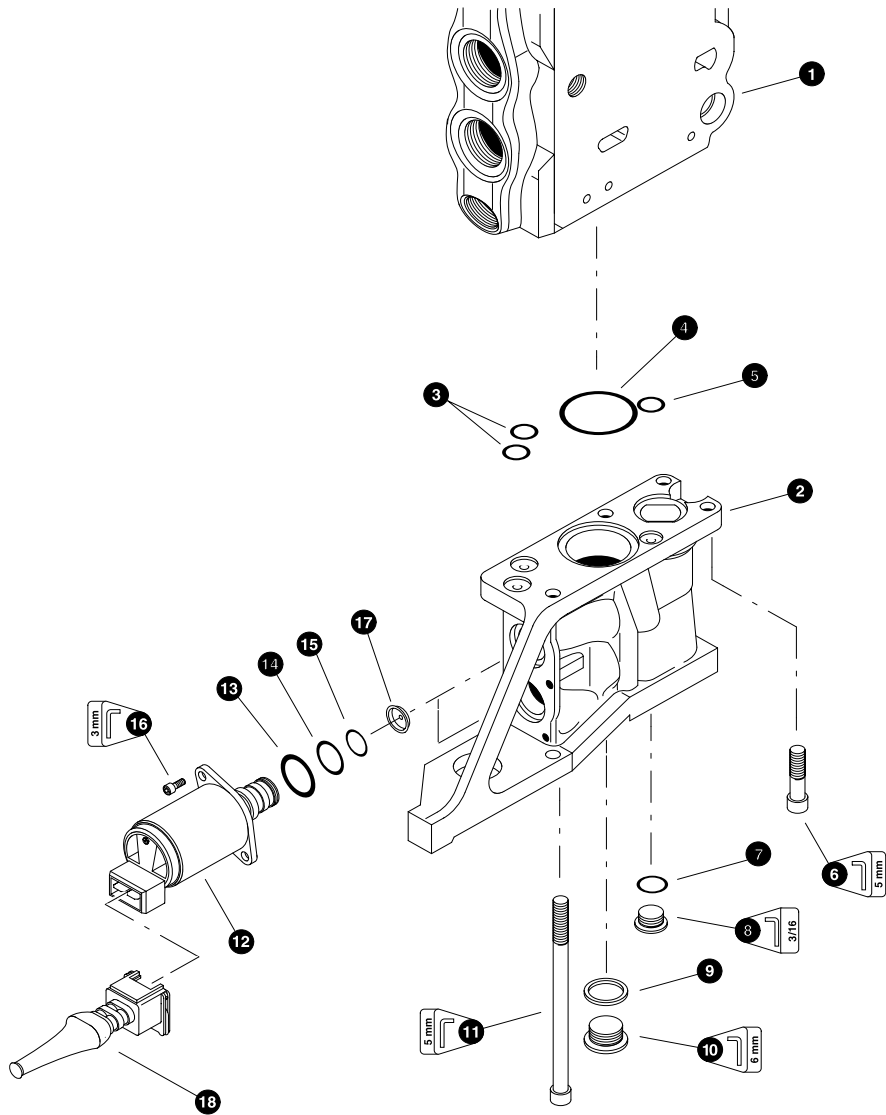




### L90LS VALVE END CAP

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	NSS	1		VALVE SECTION BODY	
-	23414-HH	1	☐	KIT, end cap - "A" port side	
2	NSS	1		CAP, end	
3	-----	3		BOLT, allen head - 6mm-1.0P x 20mm (0211124703)	
4	15412-HH	1		PLUG - 6408-HHP-6	
5	-----	1	⊗	RING, seal (3-906)	
6	-----	1	⊗	NUT, seal - 6mm (3763131)	
7	-----	1		SCREW, adjustment (3764640)	
-	23415-HH	1	☐	KIT, seal repair - "A" port side end cap	
8	-----	1	⊗	O-RING (Large) (0663210509)	
9	-----	1	⊗	O-RING (Small) (06632114)	

- ☐ 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 02/21/2003  
75.00

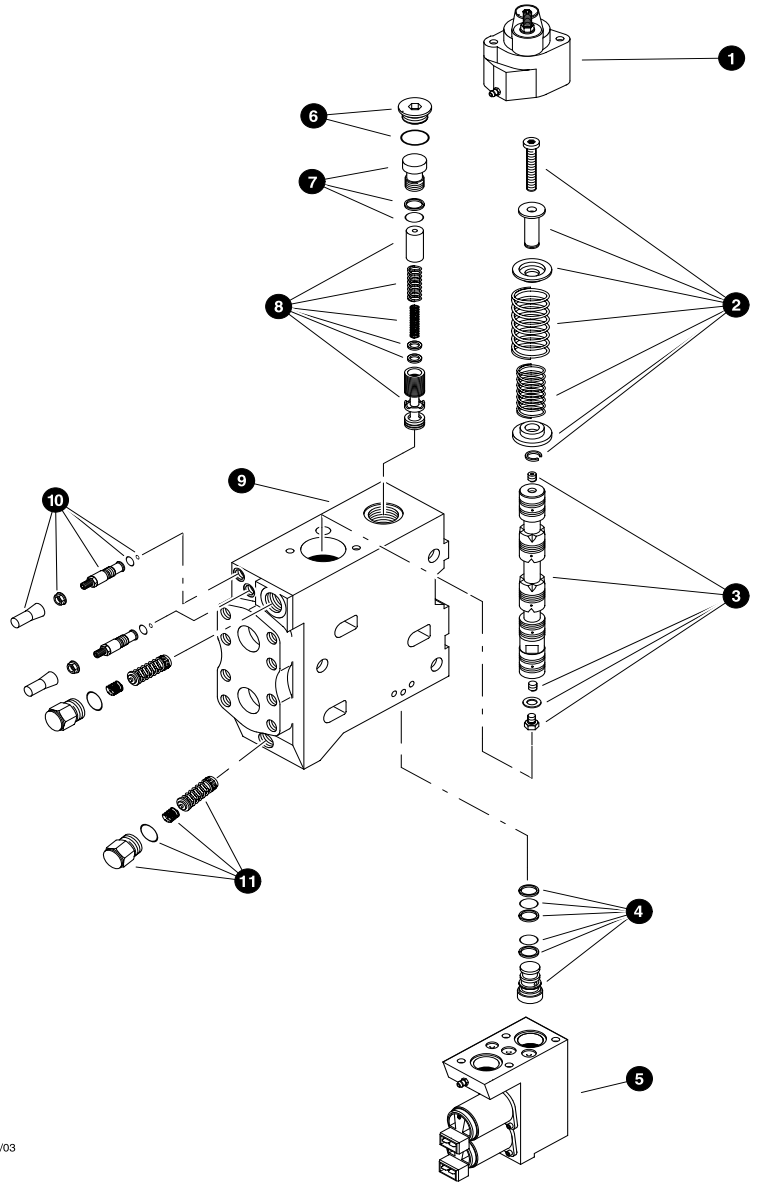
**L90LS VALVE CONTROL CAP**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	NSS	1	VALVE SECTION BODY	
-	23416-HH	1	□ KIT, end cap - "B" port side	
2	-----	1	CAP, end	
3	-----	2	⊗ O-RING (Small)	
4	-----	1	⊗ O-RING (Large)	
5	-----	1	⊗ O-RING (Small)	
6	-----	2	BOLT, allen head - 6mm-1.0P x 20mm (0211124703)	
7	-----	1	⊗ O-RING	
8	11383-HH	1	PLUG - 6408-HHP-4	
9	-----	1	⊗ RING, seal	
10	-----	1	PLUG (0686644203)	
11	-----	2	SCREW, allen head - 6mm-1.0P x 100mm (0211126403)	
12	20976-HH	2	SOLENOID - 24V	
13	-----	2	◆ O-RING (Large)	
14	-----	2	◆ O-RING (Medium)	
15	-----	2	◆ O-RING (Small)	
16	-----	4	SCREW, allen head - 4mm-.75P x 12mm (0211117103)	
17	-----	2	DAMPER, pilot restrictor orifice (voac solenoid)(see note #1 below)	
18	19179-HH	2	CONNECTOR, (kit) voac controll valve	
-	23417-HH	1	KIT, seal repair - "B" port side end cap	
-	23418-HH	1	KIT, seal repair - solenoid	

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

**NOTE #1:**

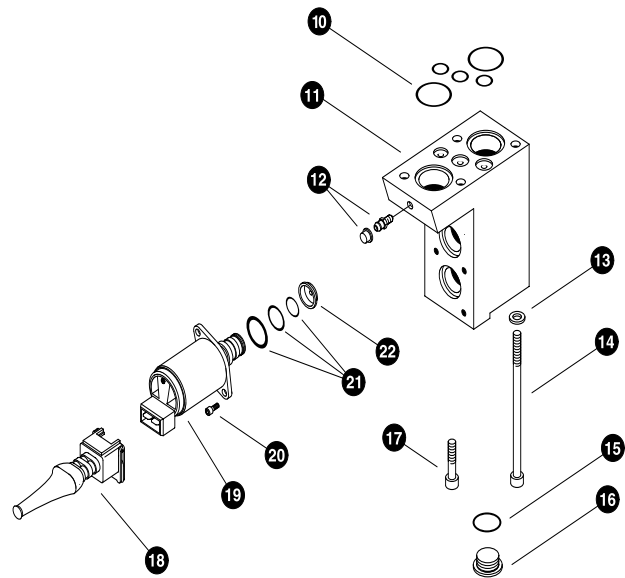
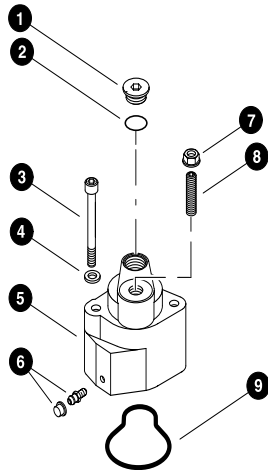
Orifice sizes vary depending upon function.  
 #3762396 0.6 mm  
 #3762397 0.8 mm  
 #3762398 1.0 mm



**VOAC K220 VALVE SECTION**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
-	24645-HH	1	<input type="checkbox"/> VALVE SECTION, K220 - SAW	
-	24646-HH	1	<input type="checkbox"/> VALVE SECTION, K220 - CLAMP	
-	24648-HH	1	<input type="checkbox"/> VALVE SECTION, K220 - TOOL/SQUIRT	
-	24643-HH	1	<input type="checkbox"/> VALVE SECTION, K220 - STICK	
-	24647-HH	1	<input type="checkbox"/> VALVE SECTION, K220 - MAIN	
1	REF.	1	<input type="checkbox"/> CAP, "B" port. . . . .	HH-2
2	----	1	KIT, SPOOL SPRING - (9120092015)	
3	----	1	SPOOL, SAW - RKX (9120092112)	
3	----	1	SPOOL, CLAMP - RKX (9120092112)	
3	----	1	SPOOL, TOOL/SQUIRT - YRX (9120092088)	
3	----	1	SPOOL, STICK - YXX (9120092361)	
3	----	1	SPOOL, MAIN - YXX (9120092361)	
4	----	1	<input type="checkbox"/> KIT, PLUG 3 (3764731)	
-	----	1	SEAL KIT, plug 3 (9120092355)	
5	----	1	<input type="checkbox"/> CONTROL CAP ASSEMBLY - "A" port side . . . . .	HH-2
6	----	1	<input type="checkbox"/> KIT, PLUG 1 (9126244419)	
-	----	1	O-RING, plug 1 (0663910401)	
7	----	1	<input type="checkbox"/> KIT, PLUG 2 (3764750)	
-	----	1	O-RING, plug 2 (06632124)	
-	----	1	RING, back up - plug 2 (06611516)	
8	----	1	KIT, COMPENSATOR K1 (9120092054) CLAMP	
8	----	1	KIT, COMPENSATOR K2 (9120092055) SAW, TOOL, STICK, MAIN	
9	NSS	1	BODY, K220 VALVE	
10	----	2	<input type="checkbox"/> KIT, FEED REDUCER (3763680)	
-	----	1	O-RING, feed reducer (91256182)	
-	----	1	O-RING, feed reducer (06639050)	
-	----	1	NUT, sealing (91267108)	
11	----	2	VALVE, PORT RELIEF - 300 bar (9120029517)	
11	----	2	VALVE, PORT RELIEF - 280 bar ( )	
-	----	1	O-RING, PORT RELIEF (91256889)	

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



Parts T2762 07/15/03  
50.00

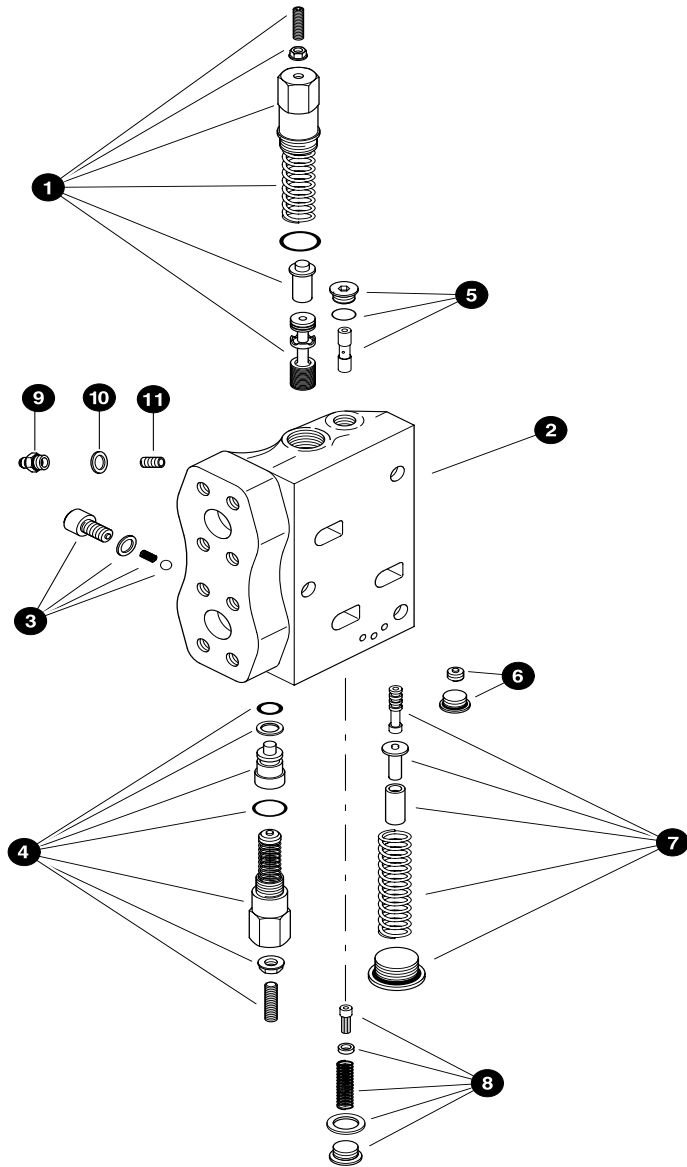
**VOAC K220 VALVE END CAPS**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
-	---	1	☐ KIT, CAP "B port side" K220	
1	---	1	PLUG	
2	---	1	⊗ O-RING	
3	---	2	BOLT, M6 X 35mm (3764640)	
4	---	2	WASHER, M6	
5	---	1	CAP	
6	---	1	BLEEDER	
7	---	1	⊗ NUT, seal M6 (91267109)	
8	---	1	SCREW	
9	---	1	⊗ O-RING	
-	---	1	☐ KIT, CONTROL "A port side" K220	
10	---	1	◆ KIT, O-RING	
11	---	1	CAP	
12	---	1	BLEEDER	
13	---	4	WASHER, M6	
14	---	2	BOLT, M6 X 110mm (0211126603)	
15	---	1	◆ O-RING	
16	---	1	PLUG	
17	---	2	BOLT, M6 X 22mm (0211124803)	
18	19179-HH	2	KIT, CONNECTOR -VOAC solenoid	
-	20976-HH	2	KIT, SOLENOID VALVE 24V	
19	---	1	SOLENOID VALVE 24V	
20	---	2	SCREW, 4mm x 12mm (0211117103)	
21	---	1	KIT, SEAL -SOLENOID VALVE (393000K813)	
22	---	1	DAMPER, pilot restrictor orifice 0.8 mm (3762397)	

☐ Kit or Assembly - includes all items indented underneath.

⊗ Included in seal repair kit PN# - (9120092284)

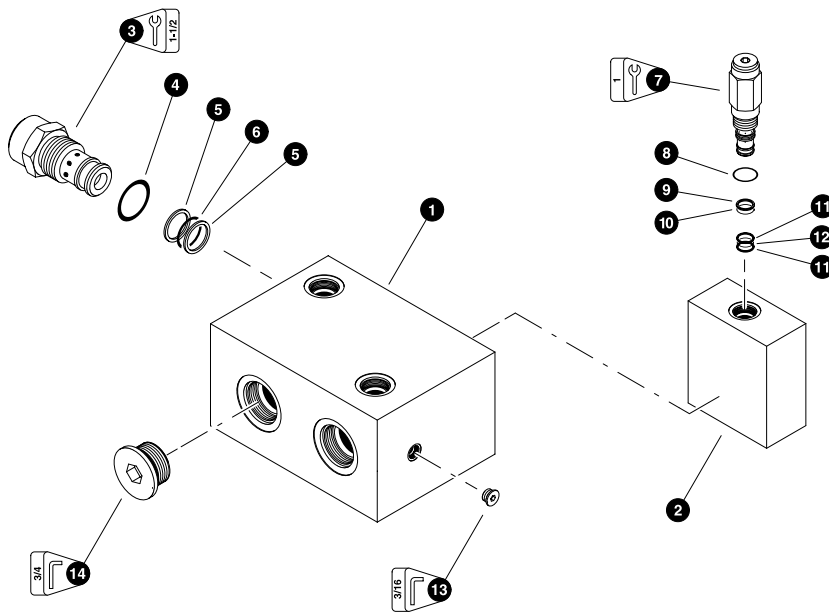
◆ Included in seal repair kit PN# - (9120092284)



**VOAC K220 VALVE INLET SECTION**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
-	24644-HH	1	<input type="checkbox"/> VALVE SECTION, INLET K220	
1	-----	1	<input type="checkbox"/> KIT, RELIEF PRESSURE DIFFENTIAL (9120092268)	
-	-----	1	O-RING (91256889)	
-	-----	1	NUT, sealing (91267108)	
2	NSS	1	BODY	
3	-----	1	<input type="checkbox"/> KIT, PILOT SUPPLY REDUCER (9120092001)	
-	-----	1	PLUG (9126244413)	
-	-----	1	O-RING (0663909901)	
-	-----	1	SEAL WASHER (06611005)	
-	-----	1	BOLT (9127320022)	
4	-----	1	<input type="checkbox"/> VALVE, MAIN RELIEF	
-	-----	1	SCREW, ADJUSTING (91267109)	
-	-----	1	O-RING, LARGE (06632122)	
-	-----	1	RING, BACKUP (3763213)	
-	-----	1	O-RING, SMALL (0663611801)	
5	-----	1	<input type="checkbox"/> KIT, COPY SPOOL	
-	-----	1	PLUG, (9120100052)	
-	-----	1	O-RING (0663210074)	
6	-----	1	<input type="checkbox"/> KIT, AS	
-	-----	1	PLUG, SAE 6	
-	-----	1	PLUG, M8 (91257240)	
-	-----	1	O-RING, (3-906)	
7	-----	1	<input type="checkbox"/> KIT, PILOT SUPPLY FILTER	
-	-----	1	PLUG, (9127320020)	
-	-----	1	SEAL WASHER (06611020)	
8	-----	1		
9	22856-HH	1	CONNECTOR - STR metric 04 x 10mm	
10	-----	1	RING, SEAL-BONDED DS-MM-10 (METRIC)	
11	23993-HH	1	SCREW, SET - 8mm x 1.25 x 8mm	

Kit or Assembly - includes all items indented underneath.



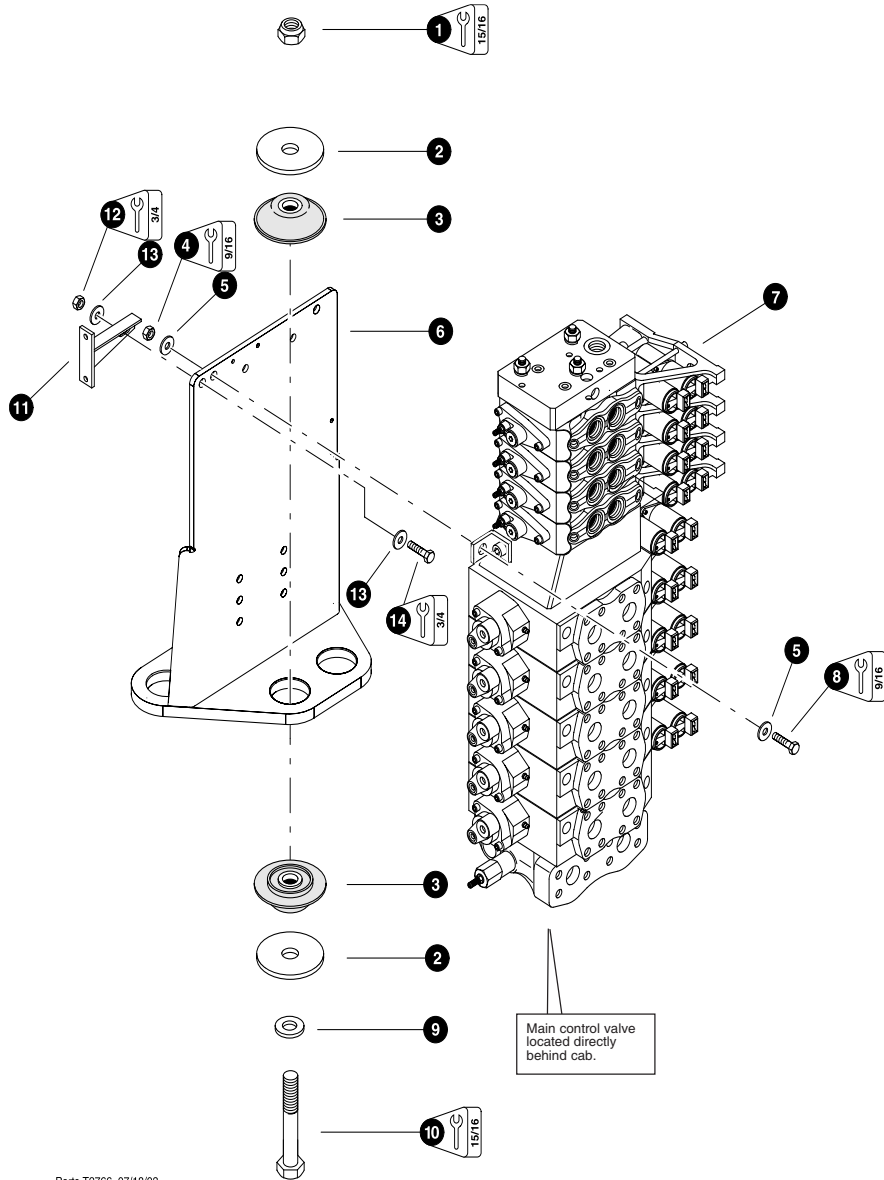
Parts 02029 01/29/2002  
37.50

**LOGIC RETURN VALVE**  
(Used on Machine with K220/L90LS VOAC Valves)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
--	22842-HH	1	□ RETURN LINE MANIFOLD	
1	NSS	1	BODY, valve (Manifold)	
2	NSS	1	BODY, valve (Logic)	
3	24783-HH	1	□ CARTRIDGE, check valve	
4	NSS	1	⊗ O-RING (Body)	
5	NSS	2	⊗ RING, back-up (Chamber)	
6	NSS	1	⊗ O-RING (Chamber)	
7	24784-HH	1	□ CARTRIDGE relief valve	
8	NSS	1	◆ O-RING (Body)	
9	NSS	1	◆ RING, back-up (Chamber)	
10	NSS	1	◆ O-RING (Chamber)	
11	NSS	2	◆ RING, back-up (Chamber)	
12	NSS	1	◆ O-RING (Chamber)	
13	11383-HH	AR	PLUG - 6408-HHP-4	
14	18950-HH	1	PLUG - 6408-HHP-20	
--	24785-HH	1	KIT, seal repair - check valve	
--	24786-HH	1	KIT, seal repair - relief valve	

- Kit or Assembly - includes all items indented underneath.
- ⊗ Included in Seal Repair Kit, PN# 24785-HH.
- ◆ Included in Seal Repair Kit, PN# 24786-HH.





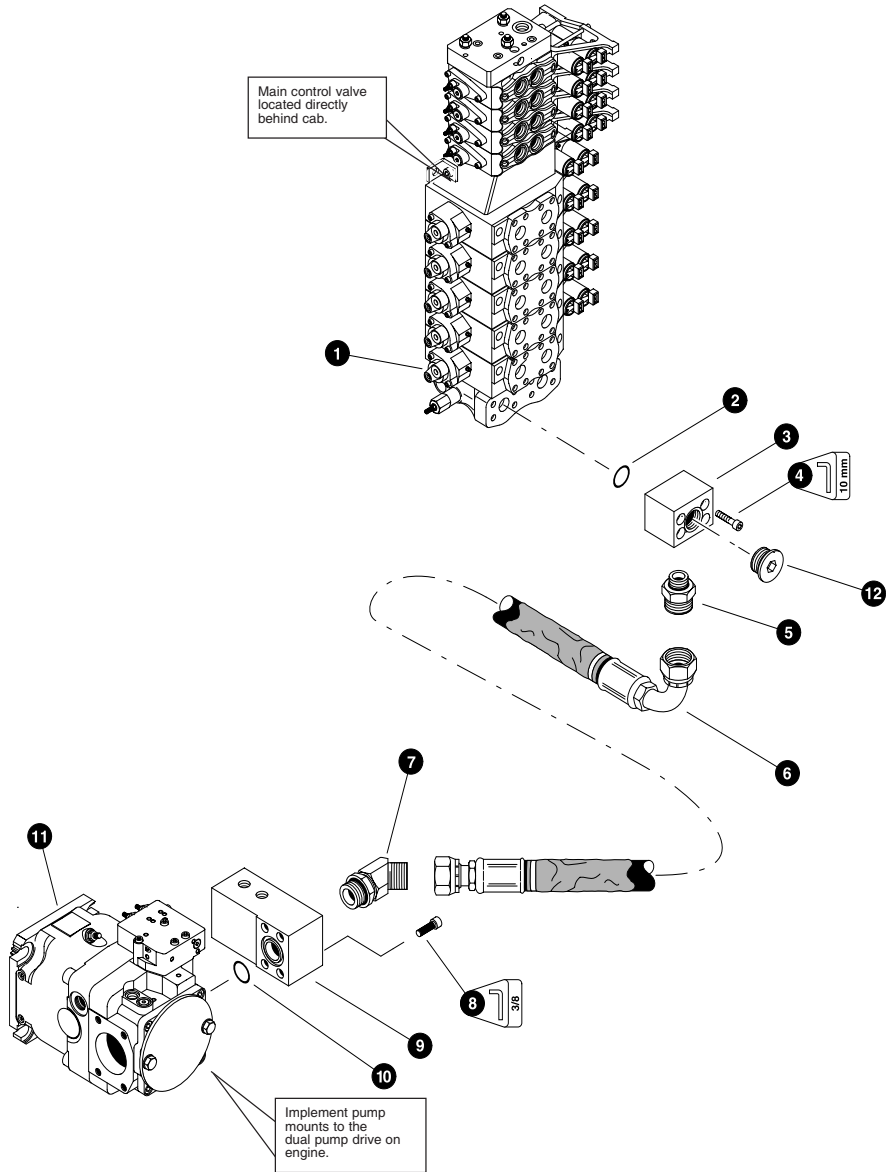
Parts T2766 07/18/03  
25,00

### MAIN CONTROL VALVE MOUNTING (VOAC) (machines built after 01/01/03)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	10817-HH	4	NUT, lock 3/4"	
2	17918-HH	8	WASHER, isolator .875 x 3.5	
3	17904-HH	4	ISOLATOR, engine mount	
4	10813-HH	4	NUT, lock 3/8"	
5	10802-HH	8	WASHER, flat 3/8"	
6	50900-HH	1	BRACKET, vertical valve mount	
7	REF	1	MAIN CONTROL VALVE. . . . .	HH-2
8	15507-HH	4	BOLT, 3/8 X 1 1/4"	
9	15528-HH	1	WASHER, SAE 3/4"	
10	10844-HH	4	BOLT, 3/4 X 5"	
11	51347-HH	1	BRACKET, VERTICAL VALVE STAB.	
12	10815-HH	1	NUT, LOCK - .5"	
13	10804-HH	2	WASHER, FLAT - .5"	
14	10739-HH	1	BOLT - .5" X 1.5"	

See referenced page for component or assembly breakdown.



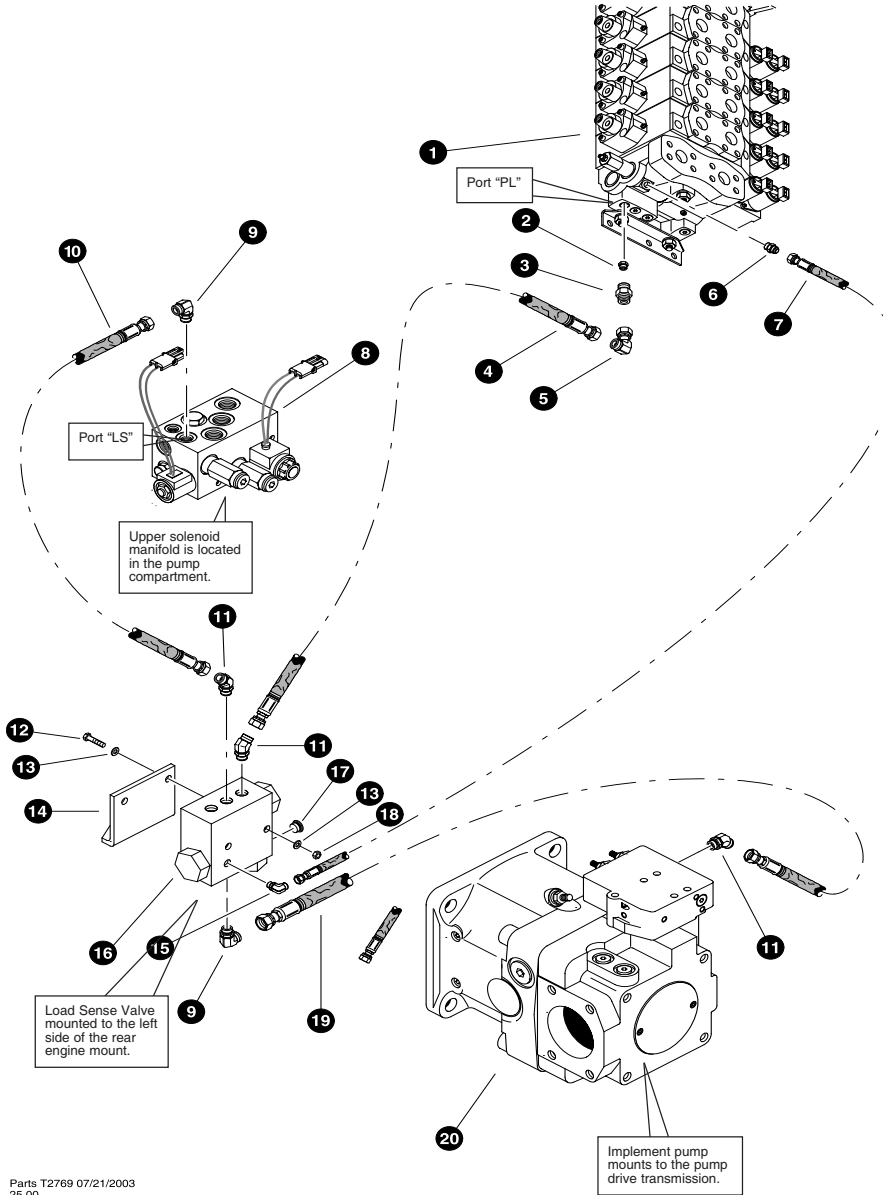


Parts T2767 07/18/03  
18.75

**IMPLEMENT PUMP PRESSURE LINE TO MAIN CONTROL VALVE  
(Rexroth 145cc Pump)  
(machines built after 01/01/03 )**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE. . . . .	HH-2
2	15378-HH	1	O-RING - 1" SF	
3	42113-HH	1	BLOCK, k220 pressure flange - (Code 62)	
4	18988-HH	4	BOLT, allen M12 x 45mm	
5	17063-HH	1	CONNECTOR, STR - FF1852T-2016S	
6	50347-HH	1	HOSE ASSEMBLY - 4045-20-200S-2009 (Pressure hose from implement pump to main control valve "P" port)	
7	17056-HH	1	ELBOW, 45 FF2068T-2020S	
8	18918-HH	4	BOLT, allen 1/2 X 2.5	
9	22792-HH	1	MANIFOLD, pressure rex 145	
10	15378-HH	1	O-RING - 1-1/4" SF	
11	REF.	1	IMPLEMENT PUMP - Rexroth 145cc . . . . .	HH-1
12	19847-HH	1	PLUG - 6408-HHP-16	

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

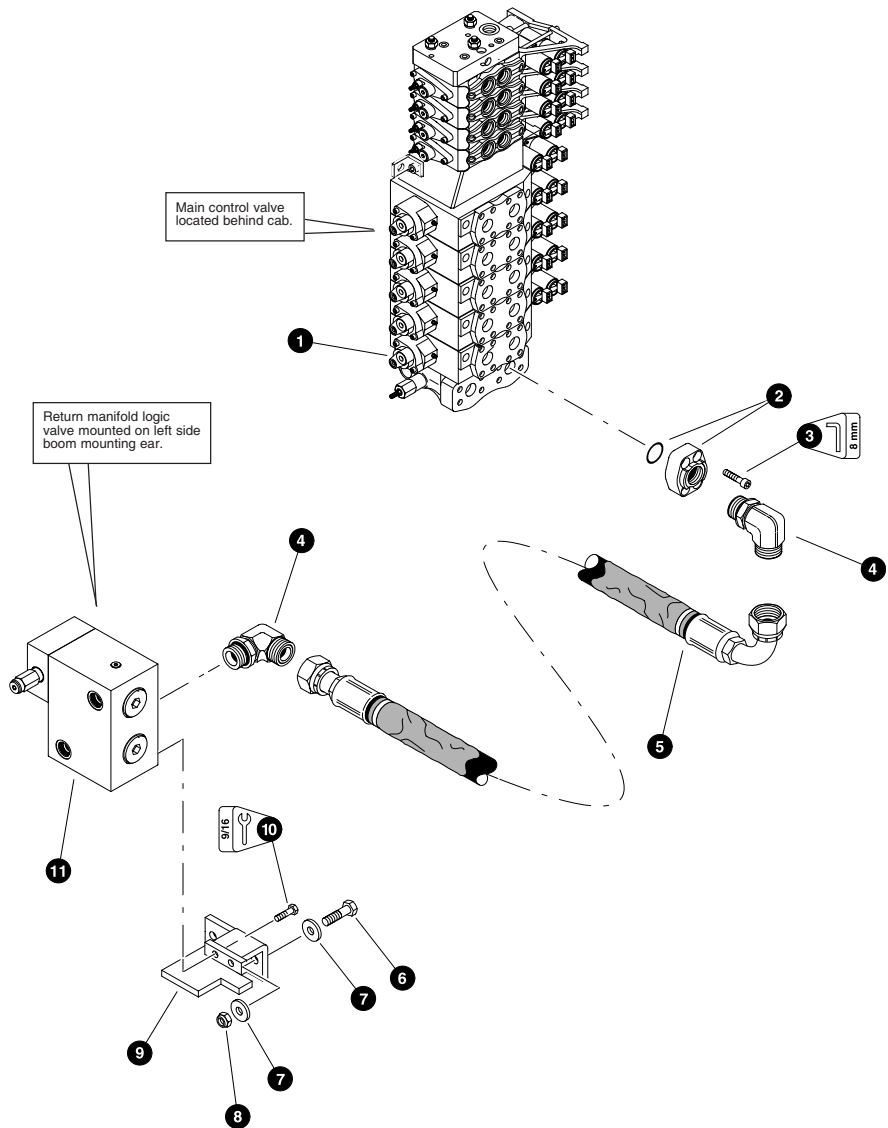


Parts T2769 07/21/2003  
25,00

**MAIN CONTROL VALVE LOAD SENSE LINES**  
(Rexroth 145cc Pump)  
(machines built after 01/01/03)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	24091-HH	1	ORIFICE - .024"	
3	18034-HH	1	CONNECTOR, straight - FF1852T-0606S ( <i>Tapped for .024" orifice</i> )	
4	50650-HH	1	HOSE ASSEMBLY - 2090-06-060S-060S ( <i>Load sense shuttle to load sense valve port, hose is looped to provide shock absorber effect on signal</i> )	
5	20035-HH	1	ELBOW, 90 swivel 06	
6	22856-HH	1	CONNECTOR, STR metric 04 x 10mm (plug #23993 needs to be in place before installation of fitting see section HH-2)	
7	50988-HH	1	HOSE ASSEMBLY - 2068 04-04JS-04O4	
8	REF.	1	UPPER SOLENOID MANIFOLD.....	UP-4
9	16296-HH	1	ELBOW, 90° - FF1868T-0606S	
10	50990-HH	1	HOSE ASSEMBLY - 2030-06-060S-0609 ( <i>Upper solenoid port "LS" to load sense valve port, load sense valve</i> )	
11	23015-HH	1	ELBOW, 45° - V50LOS - 06	
12	10818-HH	2	BOLT, 1/4 X 3	
13	10800-HH	4	WASHER, 1/4	
14	40878-HH	1	BRACKET, load sense valve	
15	16540-HH	1	ELBOW, 90° - FF2068T - 04X04	
16	50690-HH	1	VALVE, load sense shuttle	
17	15412-HH	1	PLUG, 06	
18	10811-HH	2	NUT, lock 1/4	
19	50989-hh	1	HOSE ASSEMBLY, - 2030-060S-060S ( <i>loadsense valve to the implement pump</i> )	
20	REF.	1	IMPLEMENT PUMP.....	HH-1

See referenced page for component or assembly breakdown.



Parts T2768 07/21/2003  
18,75

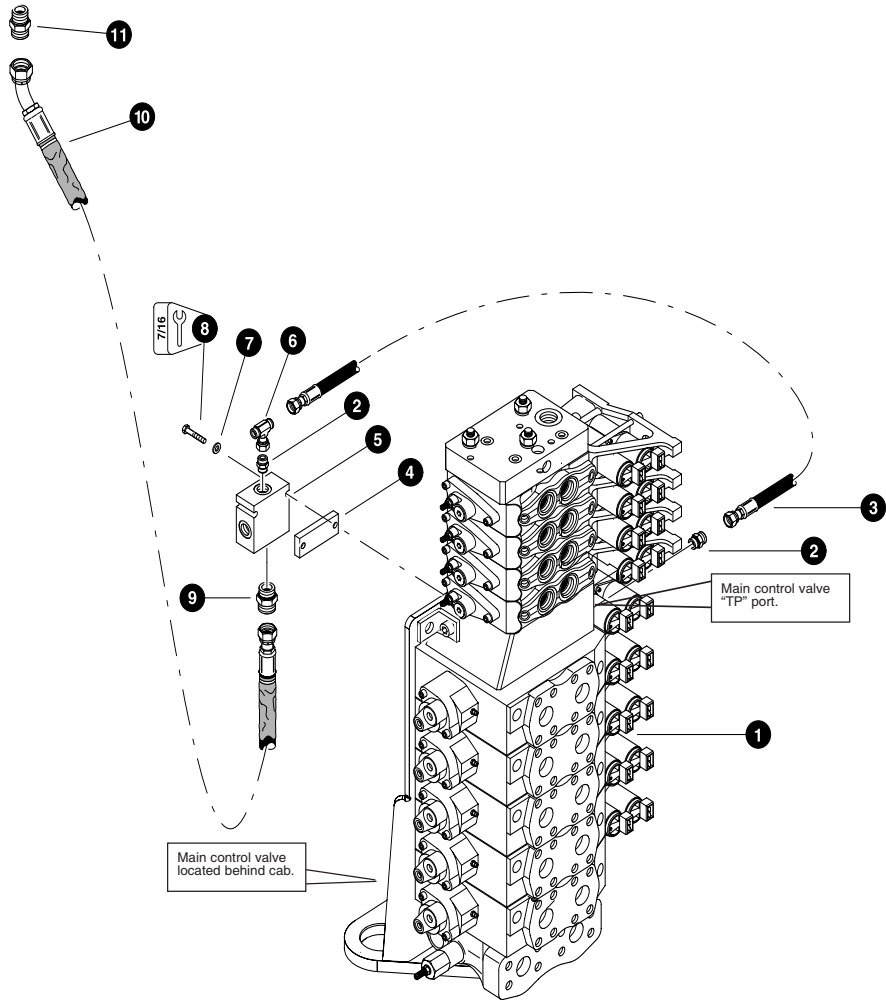
**MAIN CONTROL VALVE RETURN LINE**  
(Main Control Valve To Return Manifold Logic Valve)  
(machines built after 01/01/03)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.	HH-2
2	17909-HH	1	CONNECTOR, flange pad - W46K-20-20 (Code 61)	
	15389-HH	1	O-RING - 1-1/2" SF	
3	18979-HH	4	BOLT, allen M10 x 45mm	
4	17055-HH	2	ELBOW, 90° - FF1868T-2020S	
5	50348-HH	1	HOSE ASSEMBLY - 2057-20-200S-2009 (Main control valve return outlet to return logic block port "X8")	
6	10893-HH	2	BOLT - 1/2" x 3"	
7	15534-HH	4	WASHER, SAE - flat - 1/2"	
8	10815-HH	2	NUT, lock - 1/2"	
9	14320-HH	1	BRACKET, return logic valve	
10	10402-HH	2	BOLT - 3/8" x 1.25" (See Note Below)	
11	REF.	1	RETURN LINE W-150 PSI LOGIC MANIFOLD	HH-2

See referenced page for component or assembly breakdown.

**Note:**

Use Loctite 242 during installation

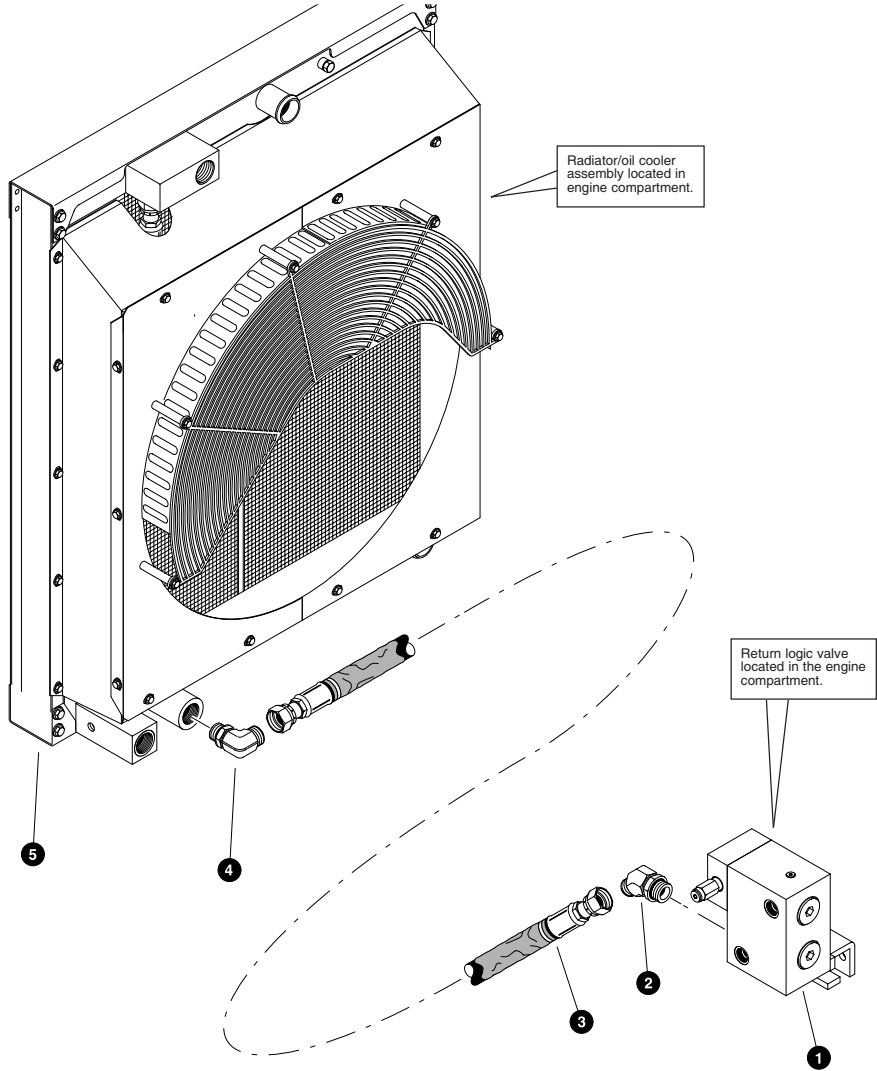


Parts T2770 07/21/03  
25.00

**MAIN CONTROL VALVE DRAIN LINE**  
**(Main Control Valve To Drain Manifold)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15124-HH	1	CONNECTOR, STR. FF1852T 0406S	
3	50637-HH	1	HOSE ASSEMBLY - 2017-04-040S-040S (Main control valve "tp" port to drain manifold)	
4	22326-HH	1	SPACER, drain manifold	
5	23502-HH	1	MANIFOLD, combined tank	
6	15133-HH	1	ELBOW, 90 0406	
7	10800-HH	2	WASHER, 1/4	
8	15508-HH	2	BOLT, 1/4 X 2.5	
9	15115-HH	1	CONNECTOR, STR. FF1852T 0810S	
10	50656-HH	1	HOSE ASSEMBLY - 2075-08-080S-0804 (drain manifold to bottom of the hydraulic tank)	
11	15258-HH	1	CONNECTOR, STR. FF2031T 0808S	

See referenced page for component or assembly breakdown.

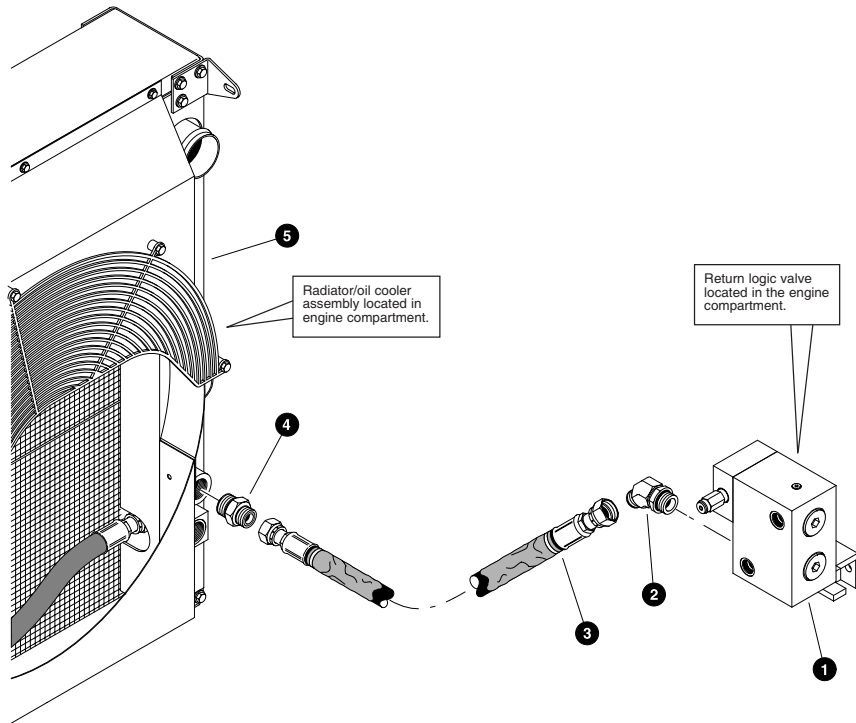


Parts 02396 09/07/2001  
18.75

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

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	RETURN LINE W-150 PSI LOGIC MANIFOLD .....	HH-2
2	17056-HH	1	ELBOW, 45 - FF2068T-2020S	
3	50796-HH	1	HOSE ASSEMBLY - 2070-20-200S-200S-W (Return logic valve block outlet to oil cooler bottom port)	
4	17055-HH	1	ELBOW, 90 - FF1868T-2020S	
5	REF.	1	RADIATOR/OIL COOLER ASSEMBLY.....	EN-1

See referenced page for component or assembly breakdown.



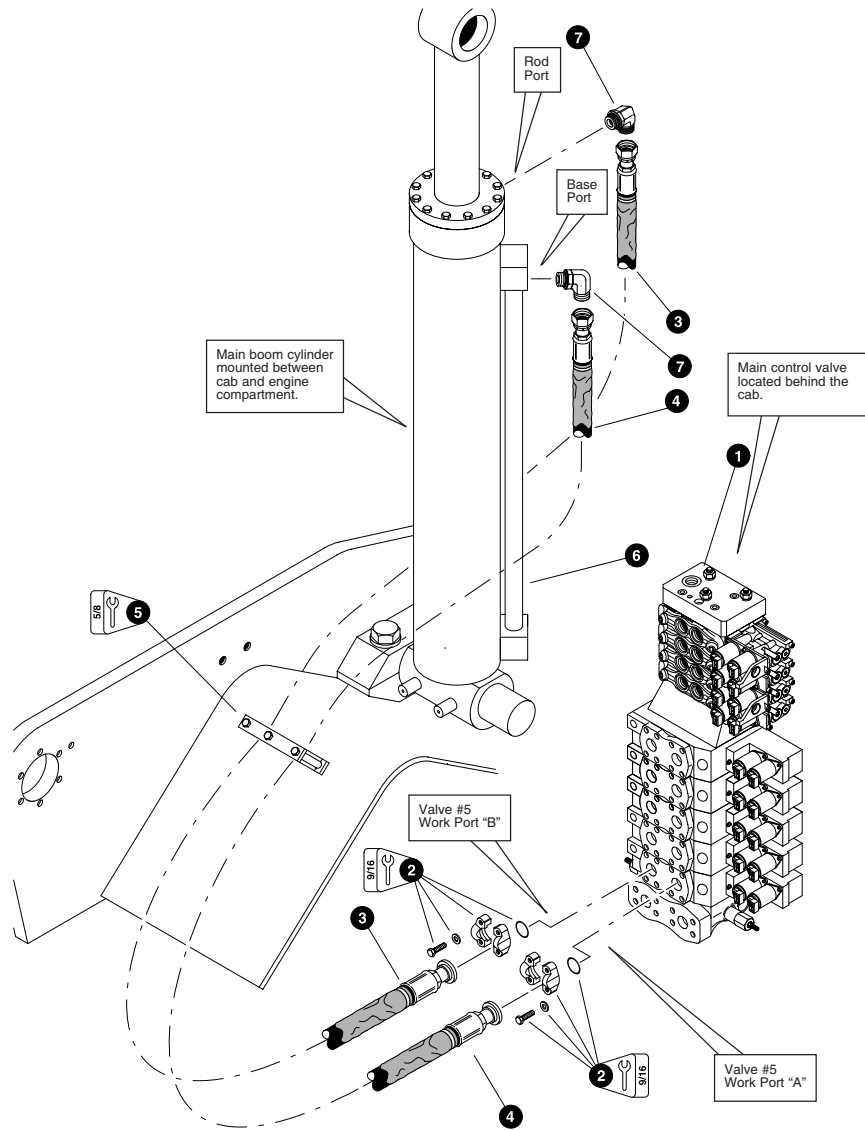
Parts 02397 09/07/2001  
18.75

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

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	RETURN LINE W-150 PSI LOGIC MANIFOLD .....	HH-2
2	17056-HH	1	ELBOW, 45 - FF2068T-2020S	
3	50596-HH	1	HOSE ASSEMBLY - 2050-20-200S-200S-W (Return logic valve block outlet to oil cooler bottom port)	
4	17344-HH	1	CONNECTOR, straight - FF1852T-2020S	
5	REF.	1	RADIATOR/OIL COOLER ASSEMBLY.....	EE-1

See referenced page for component or assembly breakdown.





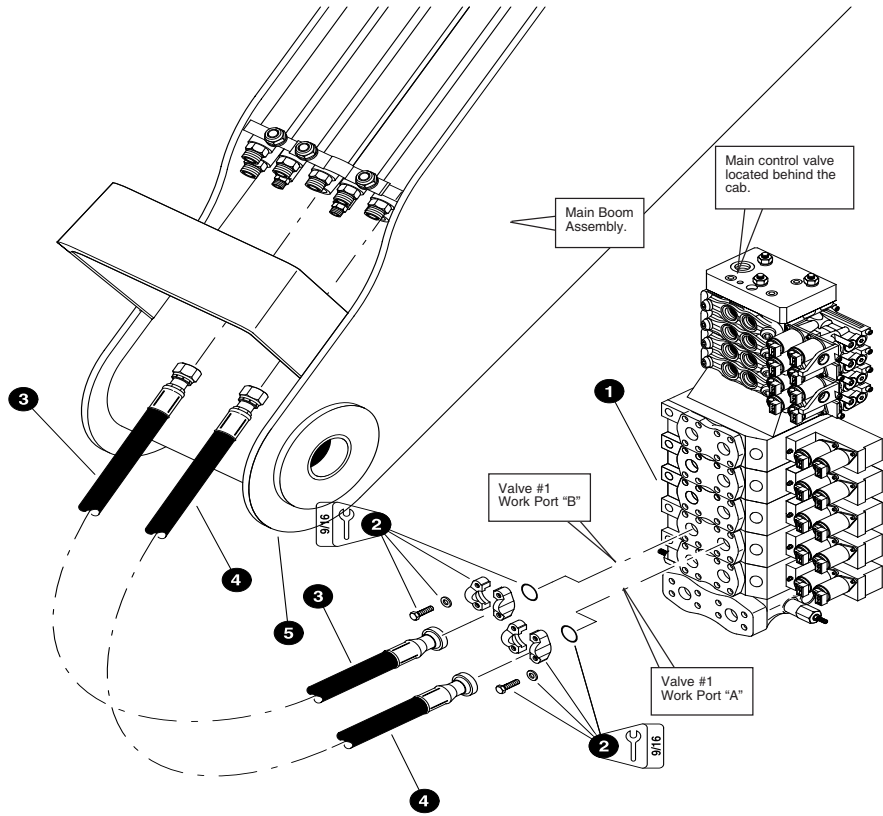
Parts T2776 07/28/2003  
18,75

**SECTION #1 - MAIN BOOM FUNCTION**  
**(Main Control Valve To Main Boom (Hoist) Cylinder)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

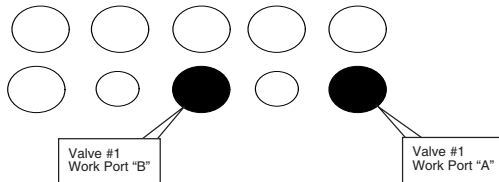
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	50346-HH	1	HOSE ASSEMBLY - 4136-16-160S-16C1 (Main boom valve section #5 work port "B" to main boom cylinder base port)	
4	50680-HH	1	HOSE ASSEMBLY - 4132-16-160S-16C1 (Main boom valve section #5 work port "A" to main boom cylinder rod port)	
5	12270-HH	1	CLAMP, vermatic - 1-1/2" x 1-1/2"	
6	REF.	1	MAIN BOOM (HOIST) CYLINDER .....	HB-5
7	15228-HH	2	ELBOW, 90° - FF1868T-1616S	

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





Main boom tubeline connections as viewed from rear of machine.



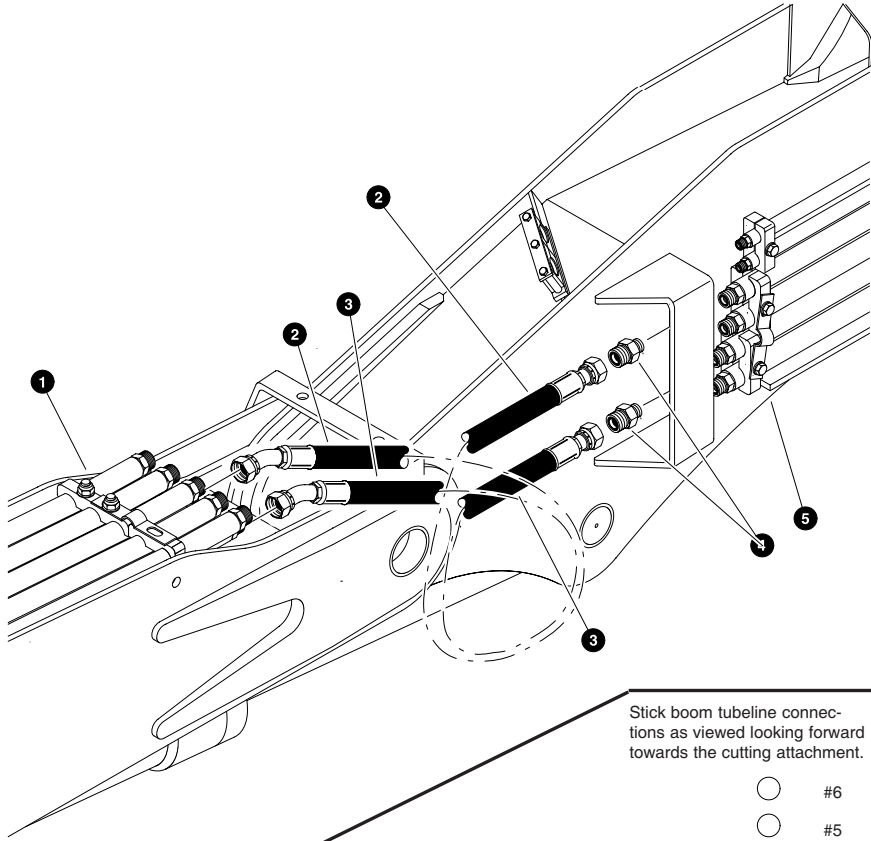
HH-4-3

**SECTION #2 - CLAMP - 1"**  
**(Main Control Valve To Main Boom Tubelines)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

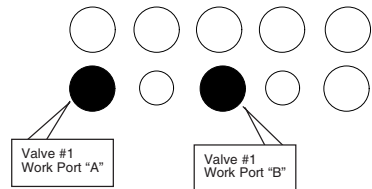
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	40777-HH	1	HOSE ASSEMBLY - 4066- 12- 12OS- 16C1 (Clamp valve section #1 work port "B" to main boom upper outer cab-side tubeline)	
4	40776-HH	1	HOSE ASSEMBLY - 4063- 12- 12OS- 16C1 (Clamp valve section #1 work port "A" to main boom upper inner cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

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

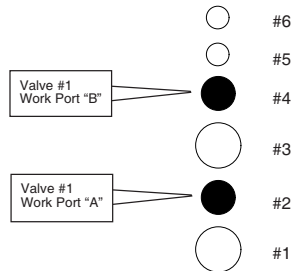
HH-4-4



Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.



Stick boom tubeline connections as viewed looking forward towards the cutting attachment.

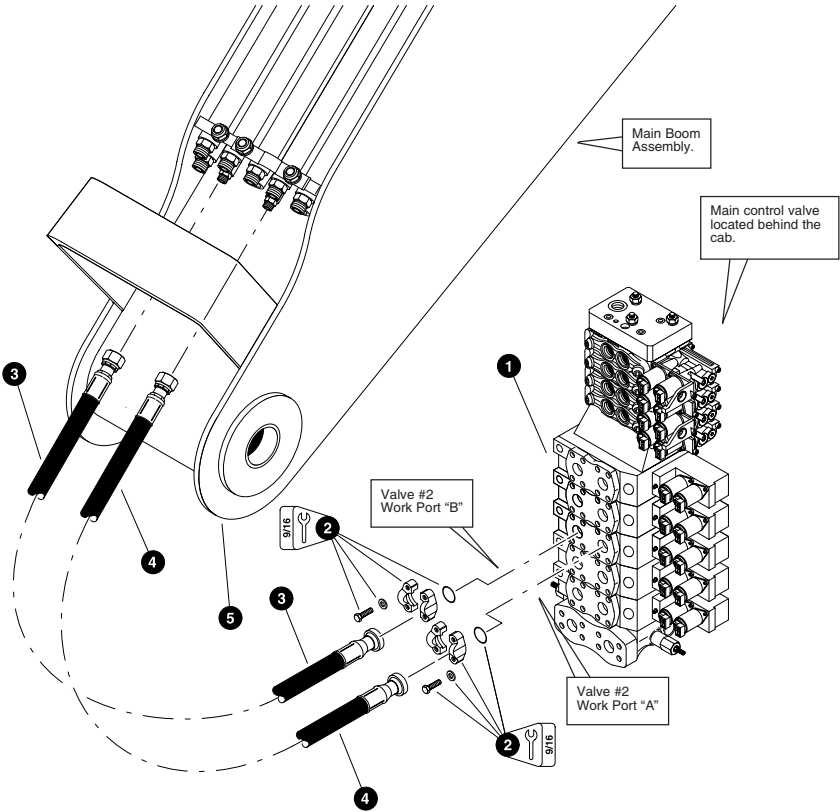


Parts 01059 11/02/99  
18 75

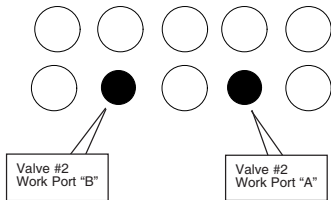
**SECTION #2 - CLAMP - 1"**  
**(Main Boom Tubelines To Stick Boom Tubelines)**  
**(Typical Disc saw / Bar saw setup)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50354-HH	1	HOSE ASSEMBLY - 4069-12-120S-1204 (Main boom upper inner engine-side tubeline to stick boom #3 tubeline)	
3	50354-HH	1	HOSE ASSEMBLY - 4069-12-120S-1204 (Main boom upper center tubeline to stick boom #1 tubeline)	
4	15152-HH	2	CONNECTOR, STR - FF1852T-1212S	
5	REF.	1	STICK BOOM ASSEMBLY	HB-2

See referenced page for component or assembly breakdown.



Main boom tubeline connections  
as viewed from rear of machine.

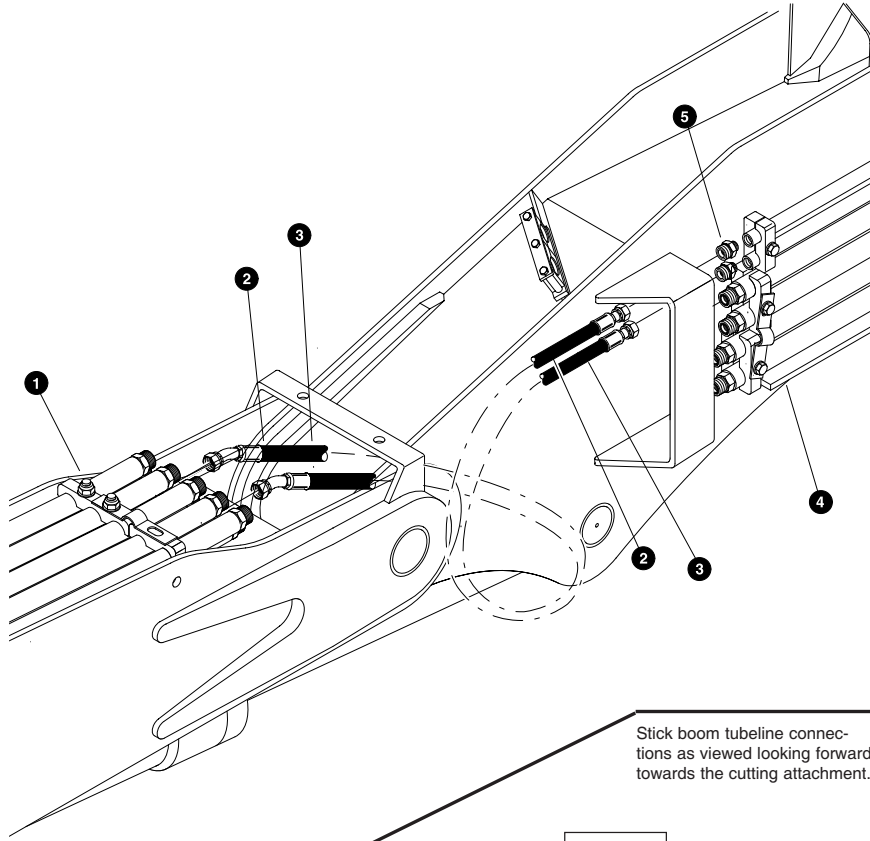


Parts T2773 07/28/2003  
18,75

**SECTION #3 - ACCUMULATOR FUNCTION**  
**(Main Control Valve To Main Boom Tubelines)**  
**(Disc Saw Setup)**  
**(machines built after 01/01/03)**

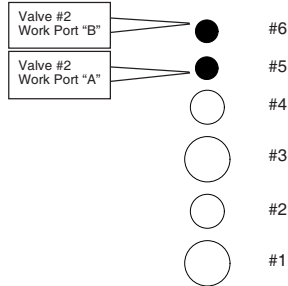
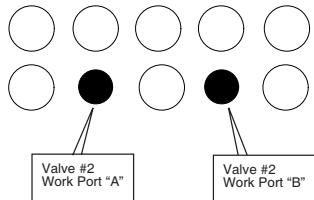
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	50726-HH	1	HOSE ASSEMBLY - 4071-12-120S-16C1 (Accumulator valve section #2 work port "B" to main boom upper inner cab-side tubeline)	
4	50727-HH	1	HOSE ASSEMBLY - 4073-12-120S-16C1 (Accumulator valve section #2 work port "A" to main boom upper outer cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

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



Stick boom tubeline connections as viewed looking forward towards the cutting attachment.

Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.

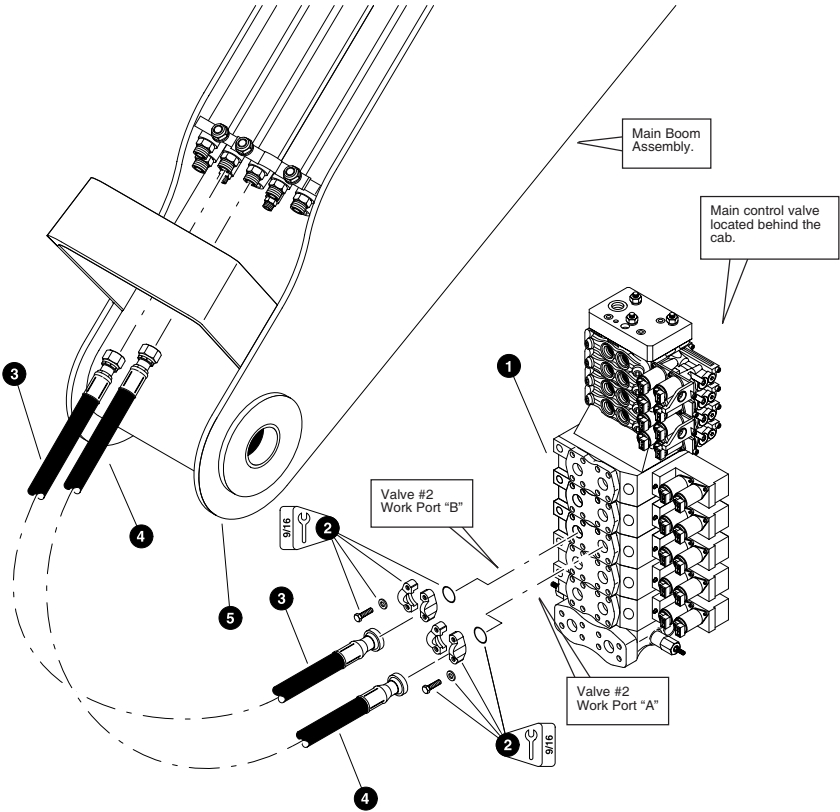


Parts 01392 10/18/99  
18,75

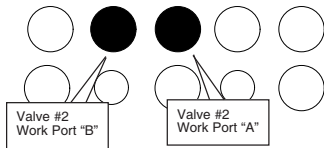
**SECTION #3 - ACCUMULATOR FUNCTION**  
**(Main Boom Tubelines To Stick Boom Tubelines)**  
**(Disc Saw)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50461-HH	1	HOSE ASSEMBLY - 4073-12-12OS-12O4 (Main boom upper inner cab-side tubeline to stick boom #5 tubeline)	
3	50460-HH	1	HOSE ASSEMBLY - 4069-12-12OS-12O4 (Main boom upper inner engine side tubeline to stick boom #6 tubeline)	
4	REF.	1	STICK BOOM ASSEMBLY	HB-2
5	16913-HH	2	CONNECTOR, STR - 848-TTO 1208S	

See referenced page for component or assembly breakdown.



Main boom tubeline connections  
as viewed from rear of machine.

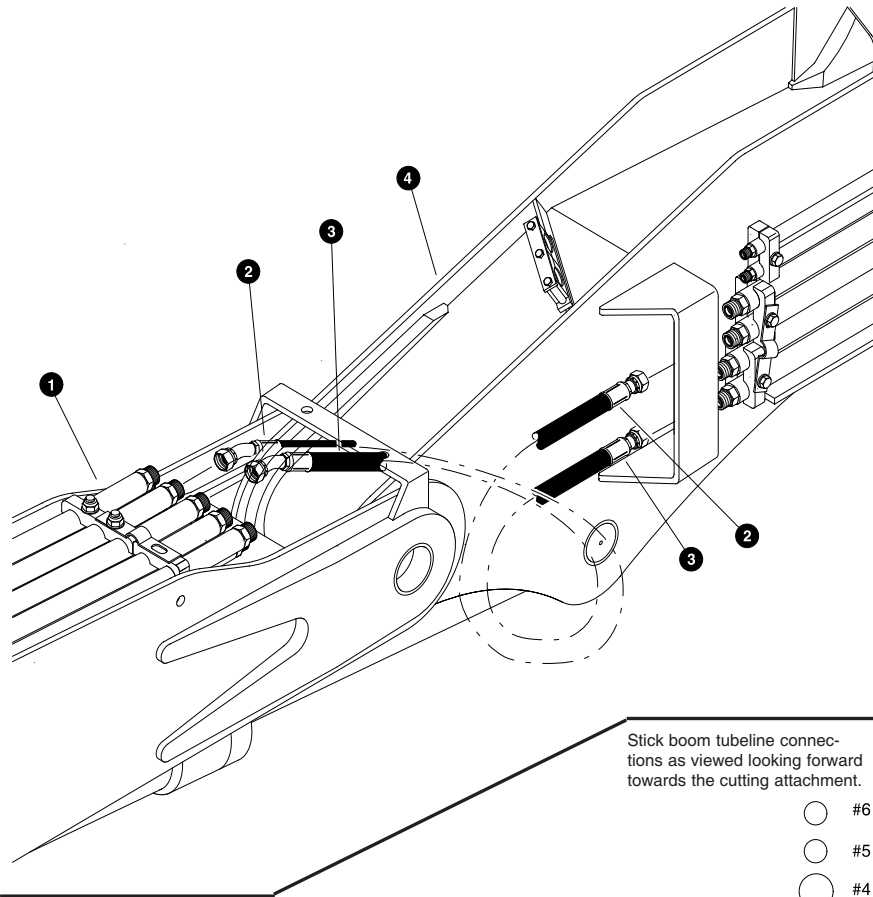


Parts T3015 06/10/2004  
18,75

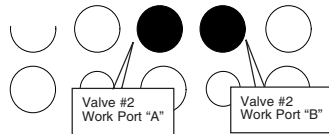
**SECTION #3 - SAW FUNCTION**  
**(Main Control Valve To Main Boom Tubelines)**  
**(Bar Saw Setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	51025-HH	1	HOSE ASSEMBLY - 4070-16-160S-16C1 (Accumulator valve section #2 work port "B" to main boom upper inner cab-side tubeline)	
4	51026-HH	1	HOSE ASSEMBLY - 4068-16-160S-16C1 (Accumulator valve section #2 work port "A" to main boom upper outer cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

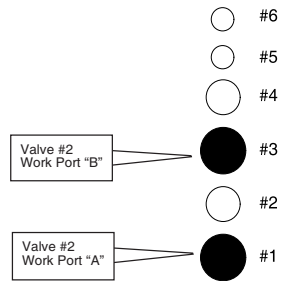
- See referenced page for component or assembly breakdown.
- Kit or Assembly - includes all items indented underneath.



Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.



Stick boom tubeline connections as viewed looking forward towards the cutting attachment.

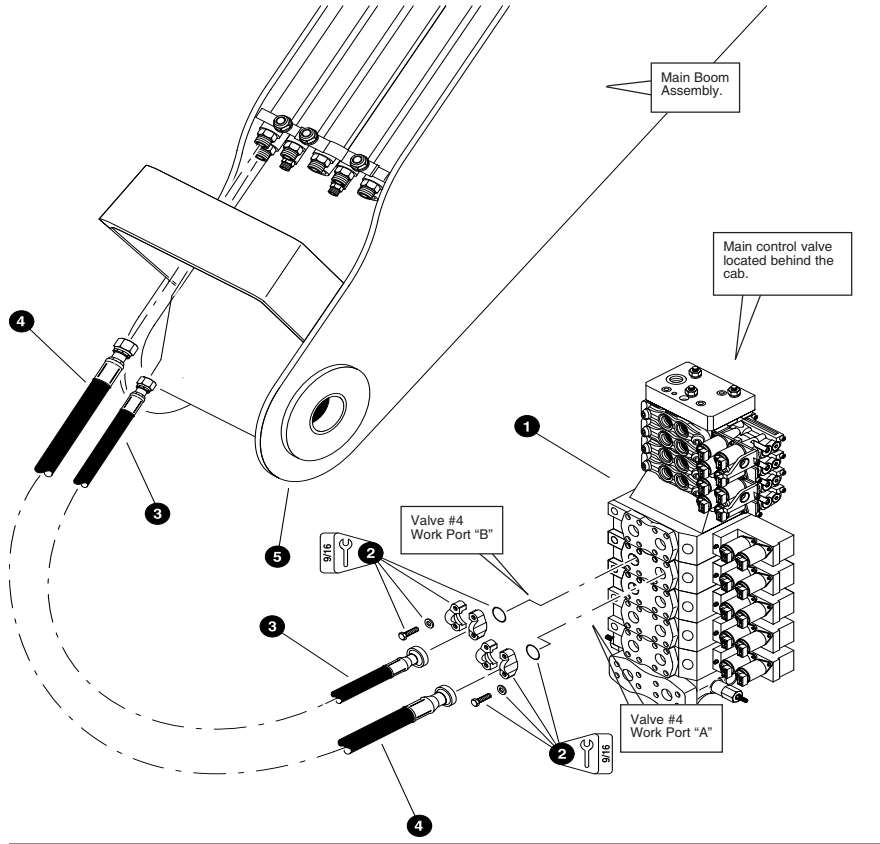


Parts 02355 09/16/2001  
18.75

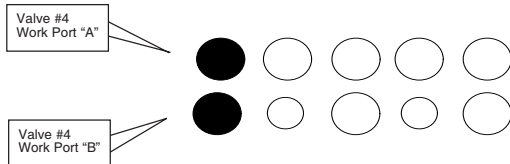
**SECTION #3 - SAW FUNCTION**  
**(Main Boom Tubelines To Stick Boom Tubelines)**  
**(Bar Saw)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50352-HH	1	HOSE ASSEMBLY - 4071-16-160s-1604 (Main boom upper inner cab-side tubeline to stick boom #5 tubeline)	
3	50352-HH	1	HOSE ASSEMBLY - 4071-16-160s-1604 (Main boom upper inner engine side tubeline to stick boom #6 tubeline)	
4	REF.	1	STICK BOOM ASSEMBLY	HB-2
5	16913-HH	2	CONNECTOR, STR - 848-TTO 1208S	

See referenced page for component or assembly breakdown.



Main boom tubeline connections as viewed from rear of machine.

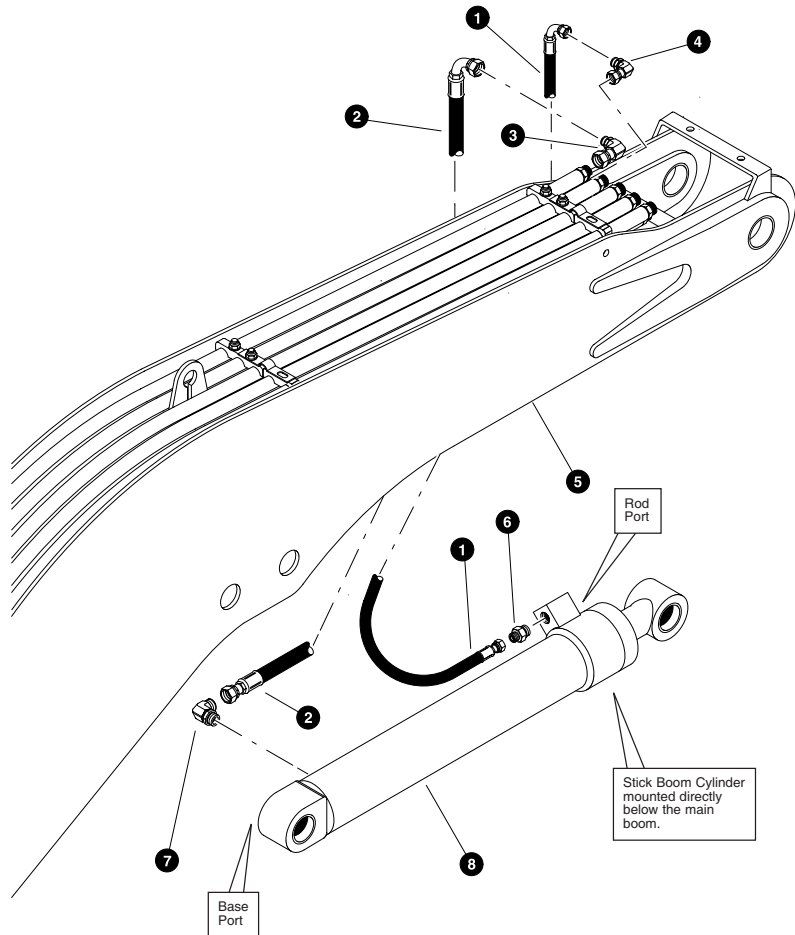


Parts T2775 07/28/03  
18.75

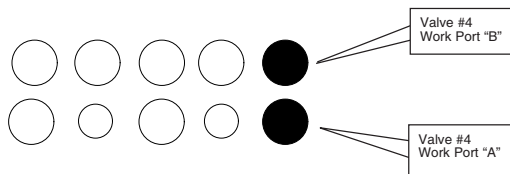
**SECTION #4 - STICK BOOM FUNCTION**  
**(Main Control Valve To Main Boom Tubelines)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	50456-HH	1	HOSE ASSEMBLY - 4079-12-120S-16C1 (Stick boom valve section #4 work port "B" to main boom lower outer engine-side tubeline)	
4	50457-HH	1	HOSE ASSEMBLY - 4078-16-160S-16C1 (Stick boom valve section #4 work port "A" to main boom upper outer engine-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

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



Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.



Parts 01065 03/02/99  
12.5

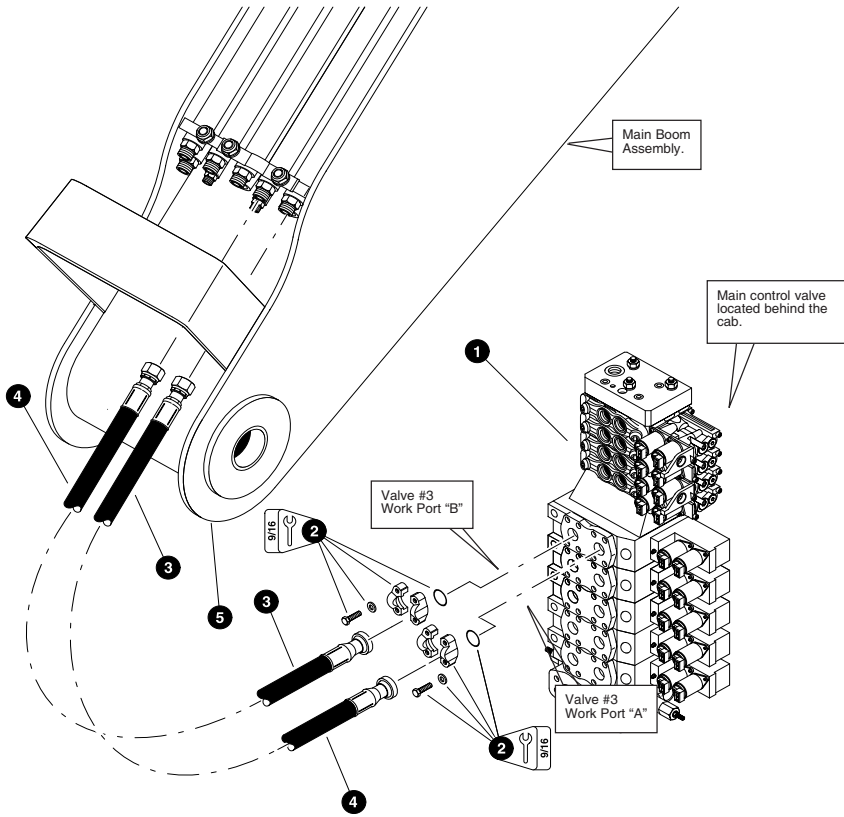
**SECTION #4 - STICK BOOM FUNCTION**  
(Main Boom Tubelines To Stick Boom (Jib) Cylinder)

(Typical Disc saw / Bar saw setup)

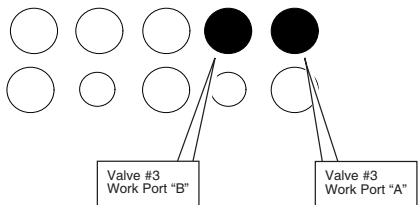
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	50677-HH	1	HOSE ASSEMBLY - 4064-12-120S-1209 (Main boom lower outer engine-side tubeline to stick cylinder rod port)	
2	50679-HH	1	HOSE ASSEMBLY - 4064-16-160S-1609 (Main boom upper outer engine-side tubeline to stick cylinder base port)	
3	17682-HH	1	ELBOW, 90° swivel - FF2098T-1616S	
4	17670-HH	1	ELBOW, 90° swivel - FF2098T-1212S	
5	REF.	1	MAIN BOOM ASSEMBLY	HB-1
6	15152-HH	1	CONNECTOR, straight - FF1852T-1212S	
7	15228-HH	1	ELBOW, 90° - FF1868T-1616S	
8	REF.	1	STICK BOOM (JIB) CYLINDER	HB-5

See referenced page for component or assembly breakdown.





Main boom tubeline connections  
as viewed from rear of machine.

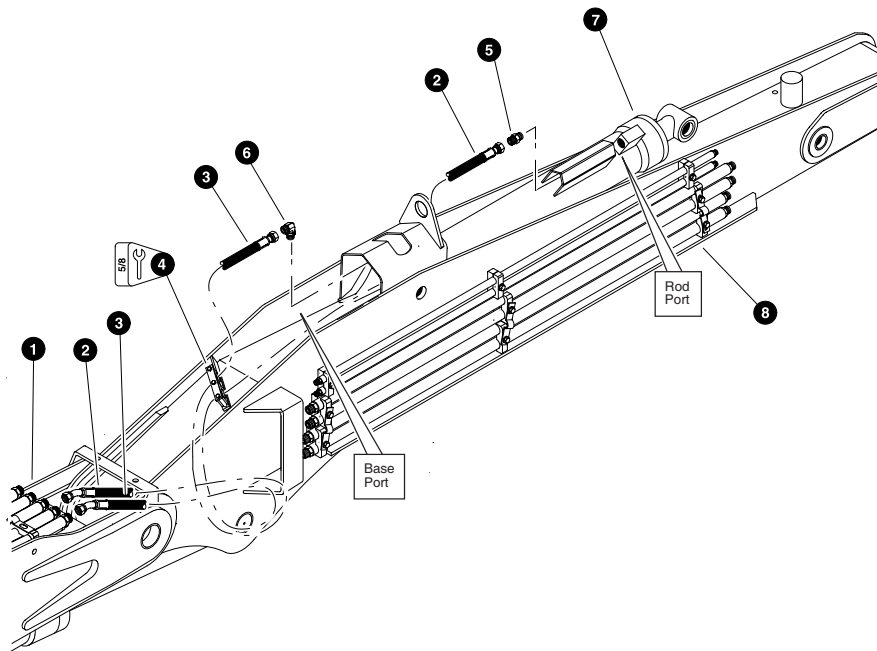


Parts T2774 07/28/03  
18,75

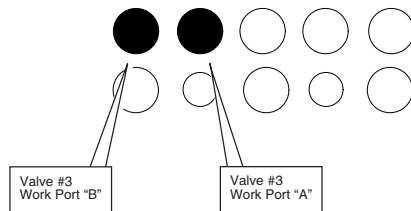
**SECTION #5 - TOOL TILT FUNCTION**  
**(Main Control Valve To Main Boom Tubelines)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	40776-HH	1	HOSE ASSEMBLY - 4063-16-160S-16C1 (Tool / Squirt valve section #3 work port "B" to main boom upper inner cab-side tubeline)	
4	40777-HH	1	HOSE ASSEMBLY - 4066-16-160S-16C1 (Tool / Squirt valve section #3 work port "A" to main boom upper outer cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

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



Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.



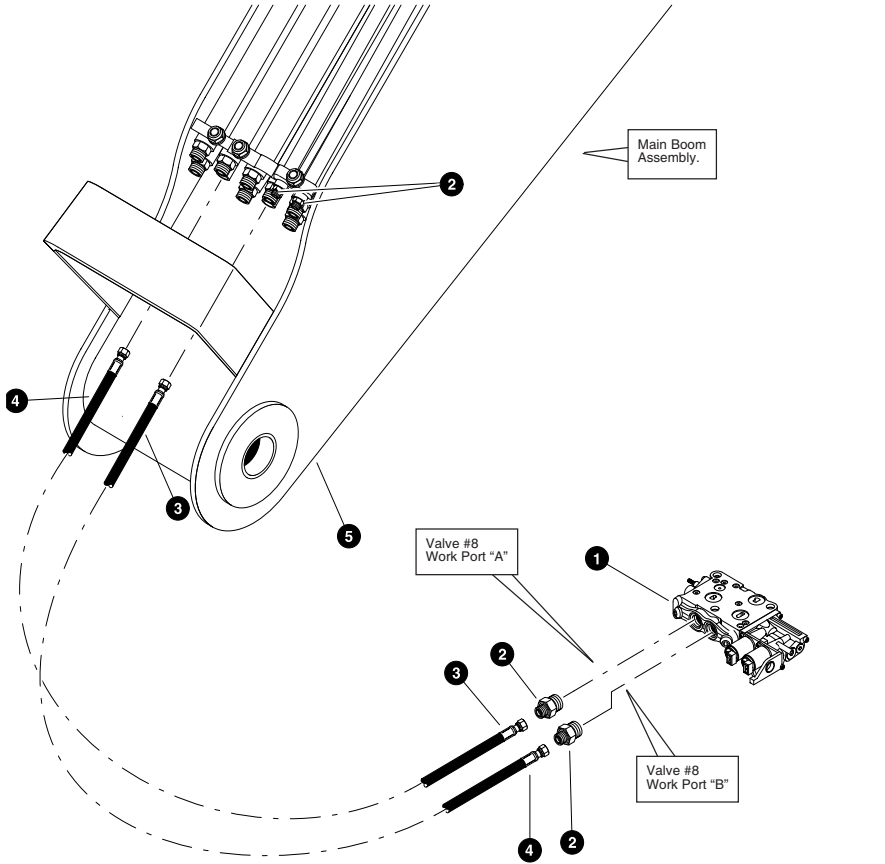
Parts 01063 03/02/99  
9.375

**SECTION #5 - TOOL TILT FUNCTION**  
(Main Boom Tubelines To 4-Bar Link Tool Tilt Cylinder)

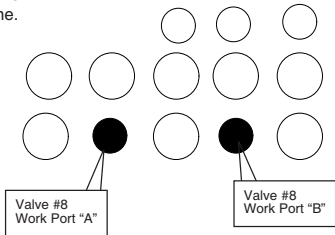
(Typical Disc saw / Bar saw setup)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50356-HH	1	HOSE ASSEMBLY - 4148-16-160S-1604 (Main boom upper inner cab-side tubeline to tool cylinder rod port)	
3	50355-HH	1	HOSE ASSEMBLY - 4108-16-160S-1604 (Main boom upper outer cab-side tubeline to tool tilt cylinder base port)	
4	12270-HH	1	CLAMP, vermatic - 1-1/2" x 1-1/2"	
5	15228-HH	1	ELBOW, 90° - FF1868T-1616S	
6	15225-HH	1	CONNECTOR, straight - FF1852T-1616S	
7	REF.	1	TOOL TILT CYLINDER	HB-5
8	REF.	1	STICK BOOM ASSEMBLY	HB-2

☞ See referenced page for component or assembly breakdown.



Main boom tubeline connections as viewed from rear of machine.



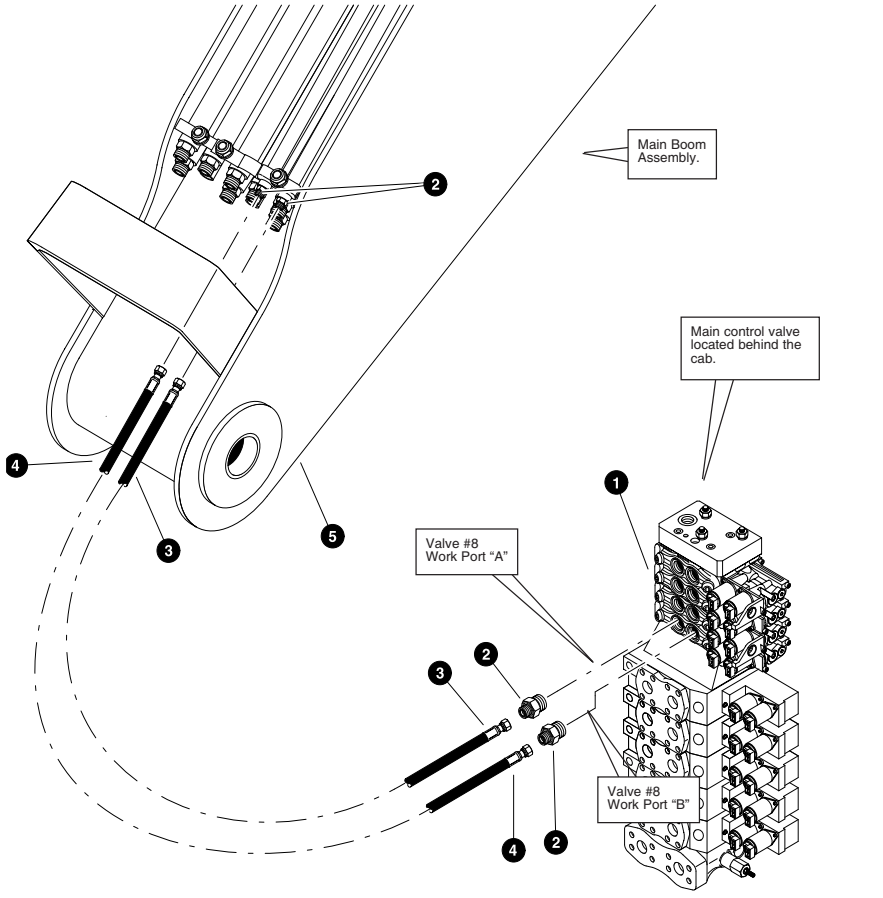
Parts T3016 06/10/2004  
18,75

**(Optional Section) - ACCUMULATOR FUNCTION**

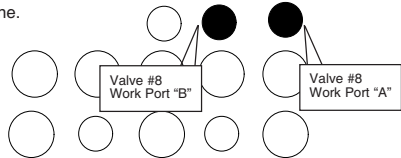
**(Bar saw setup)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE	HH-2
2	15115-HH	4	CONNECTOR, straight - FF1852T-0810S	
3	50815-HH	1	HOSE ASSEMBLY - 4075-08-080S-080S (Lateral valve section #8 work port "A" to main boom lower outer cab-side tubeline)	
4	40775-HH	1	HOSE ASSEMBLY - 4073-08-080S-080S (Lateral valve section #8 work port "B" to main boom lower inner cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY	HB-1

See referenced page for component or assembly breakdown.



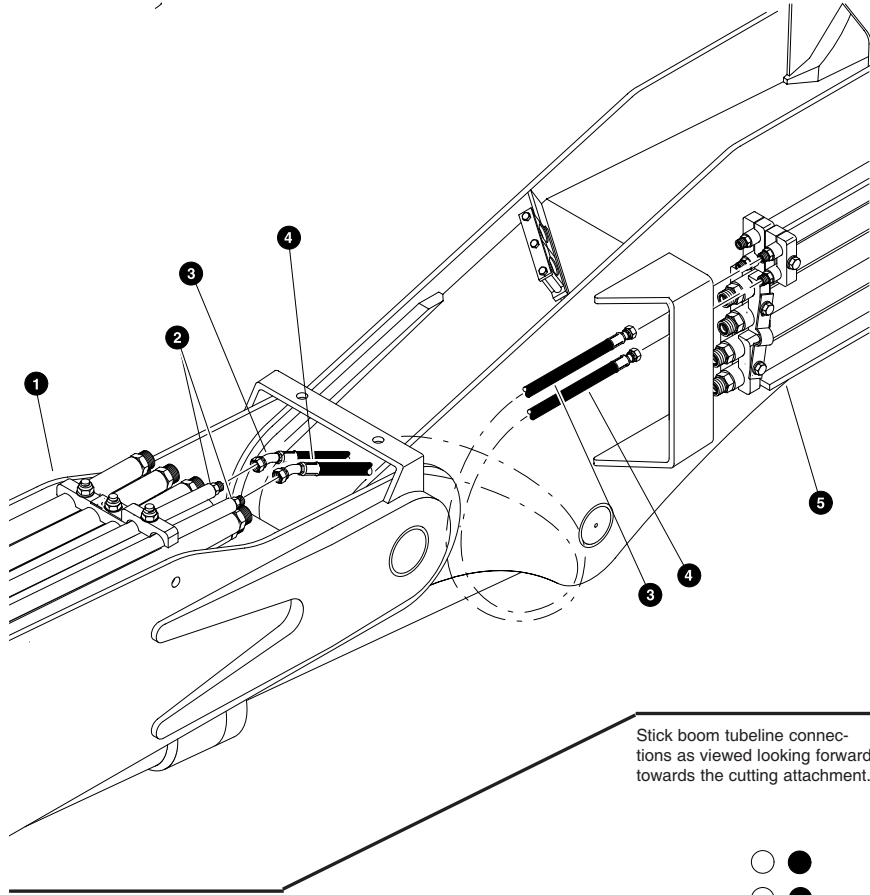
Main boom tubeline connections as viewed from rear of machine.



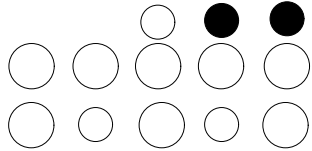
**SECTION #6 - LATERAL FUNCTION**  
**(Main Control Valve Section #8 To Main Boom Tubelines)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15115-HH	4	CONNECTOR, straight - FF1852T-0810S	
3	40775-HH	1	HOSE ASSEMBLY - 4073-08-08OS-08OS (Lateral valve section #8 work port "A" to main boom lower outer cab-side tubeline)	
4	50815-HH	1	HOSE ASSEMBLY - 4075-08-08OS-08OS (Lateral valve section #8 work port "B" to main boom lower inner cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

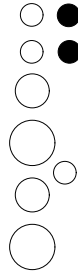
See referenced page for component or assembly breakdown.



Stick boom tubeline connections as viewed looking forward towards the cutting attachment.



Main boom tubeline connections as viewed from the rear of the main boom.



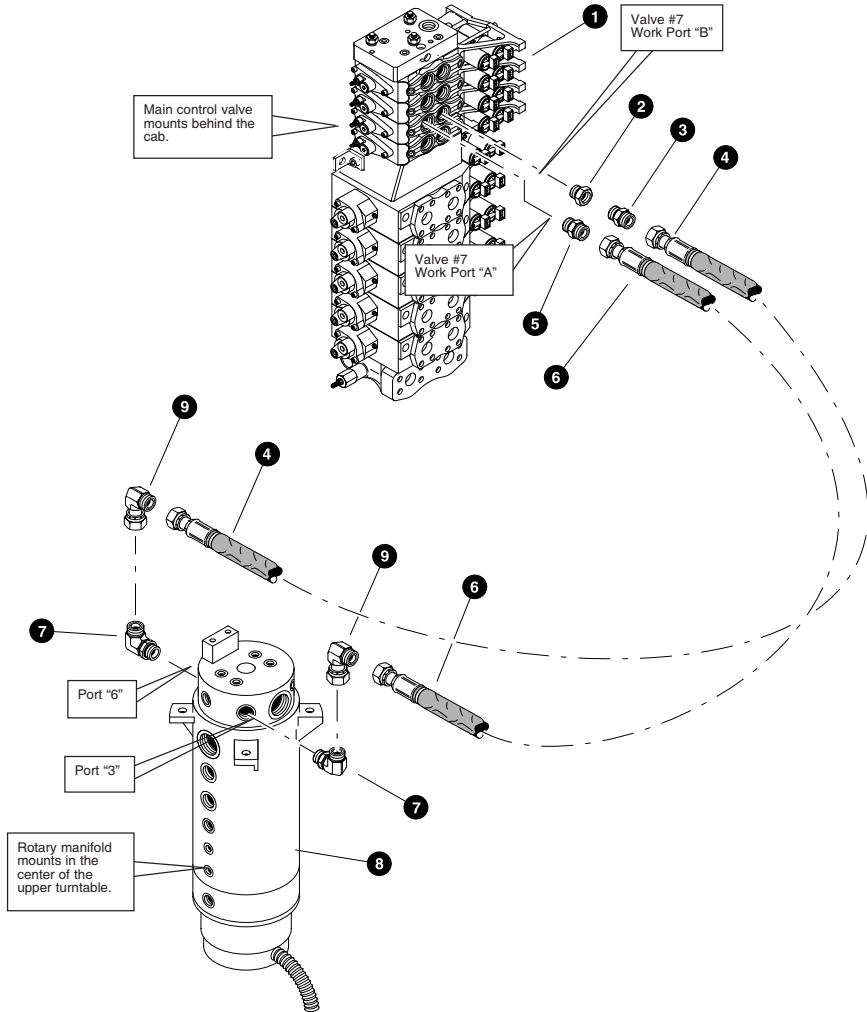
Parts 01067 05/25/99  
18.75

**SECTION #6 - LATERAL FUNCTION**  
**(Main Boom Tubelines To Stick Boom Tubelines)**

(Typical Disc saw / Bar saw setup)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HH-2
2	15238-HH	2	CONNECTOR, straight - FF1852T-0812S	
3	51048-HH	1	HOSE ASSEMBLY - 4072-08-080S-0804 (Main boom top inner cab-side tubeline to stick boom)	
4	51046-HH	1	HOSE ASSEMBLY - 4071-08-080S-0804 (Main boom top outer cab-side tubeline to stick boom)	
5	REF.	1	STICK BOOM ASSEMBLY	HB-2

See referenced page for component or assembly breakdown.

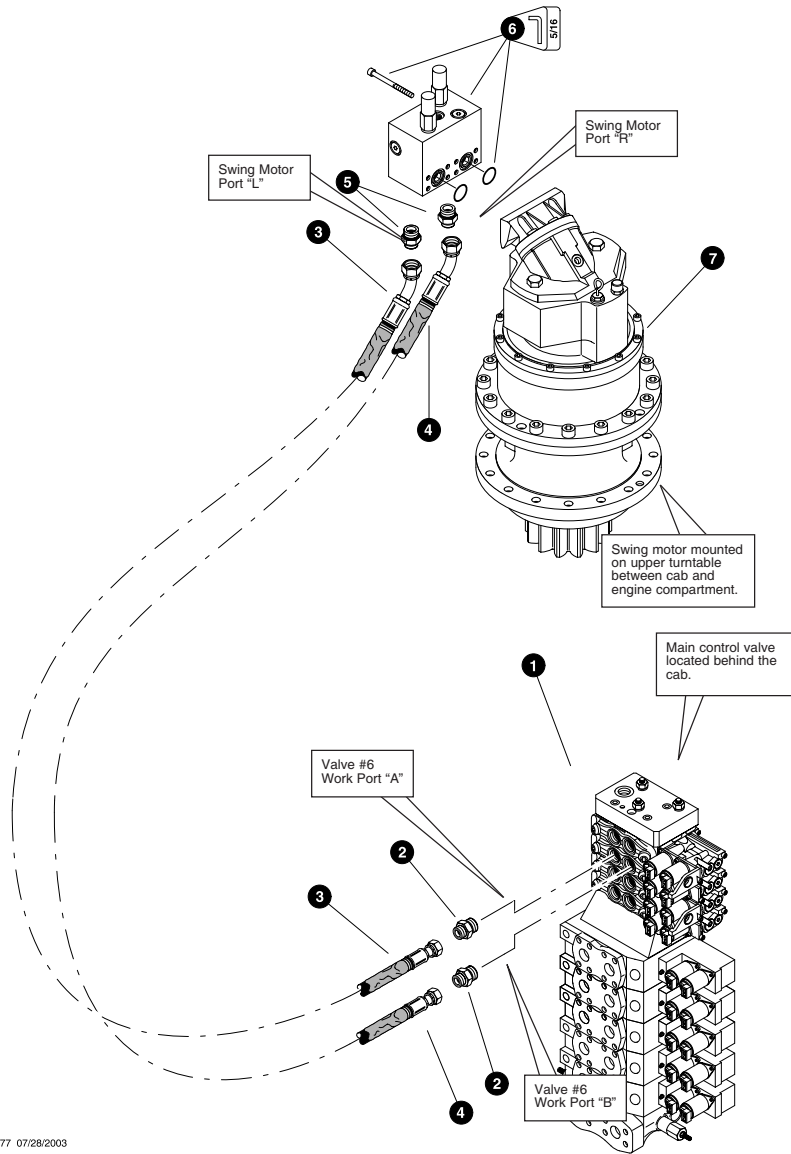


Parts T2778 07/28/2003  
18.75

**SECTION #7 - STEER FUNCTION LINES**  
**(Main Control Valve To Upper Rotary Manifold Ports)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE . . . . .	HH-2
2	19289-HH	2	BUSHING, reducer - 6410-10-12	
3	15152-HH	1	CONNECTOR, straight long - FF1852T-1212S	
4	50344-HH	1	HOSE ASSEMBLY - 4096-12-120S-120S (Steer valve section #5 work port "B" to upper rotary manifold port #6)	
5	16851-HH	1	CONNECTOR, straight - FF1852T-1210S	
6	50675-HH	1	HOSE ASSEMBLY - 4087-12-120S-120S (Steer valve section #5 work port "A" to upper rotary manifold port #3)	
7	REF.	1	ROTARY MANIFOLD . . . . .	UP-1
8	17688-HH	1	ELBOW, 90° - FF1868T-1212S	
9	17670-HH	1	ELBOW, 90° swivel - FF2098T-1212S	

See referenced page for component or assembly breakdown.

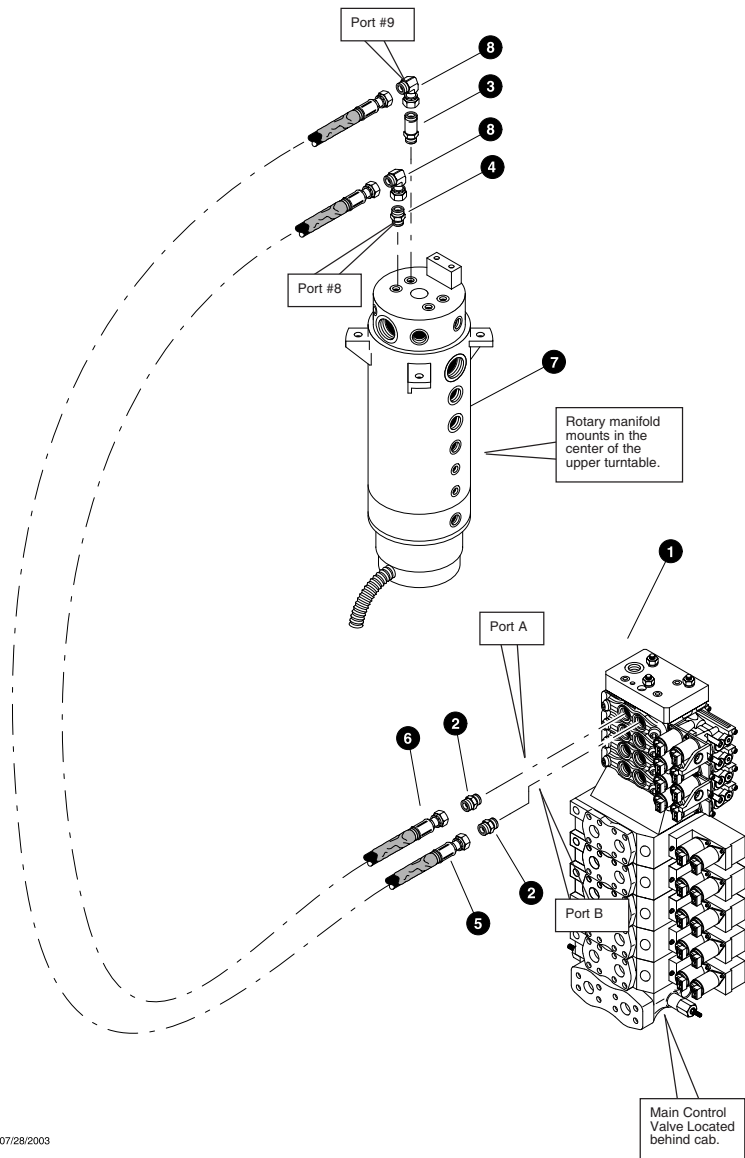


Parts T2777 07/28/2003  
18,75

**SECTION #8 - SWING FUNCTION**  
**(Main Control Valve To Lohmann Swing Motor)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15115-HH	2	CONNECTOR, straight - FF1852T-0810S	
3	51274-HH	1	HOSE ASSEMBLY - 4125-08-08OS-08O4 (Swing valve section #6 work port "A" to swing motor)	
4	51275-HH	1	HOSE ASSEMBLY - 4122-08-08OS-08O4 (Swing valve section #6 work port "B" to swing motor)	
5	15238-HH	2	CONNECTOR, straight - FF1852T-0812S	
6	REF.	1	ANTI-CAVITATION VALVE.....	UP-2
	16918-HH	2	O-RING - 3/4" SF	
	-----	4	BOLT - 10mm x 100mm	
7	REF.	1	SWING MOTOR.....	UP-2

See referenced page for component or assembly breakdown.



Parts T2780 07/28/2003  
18,75

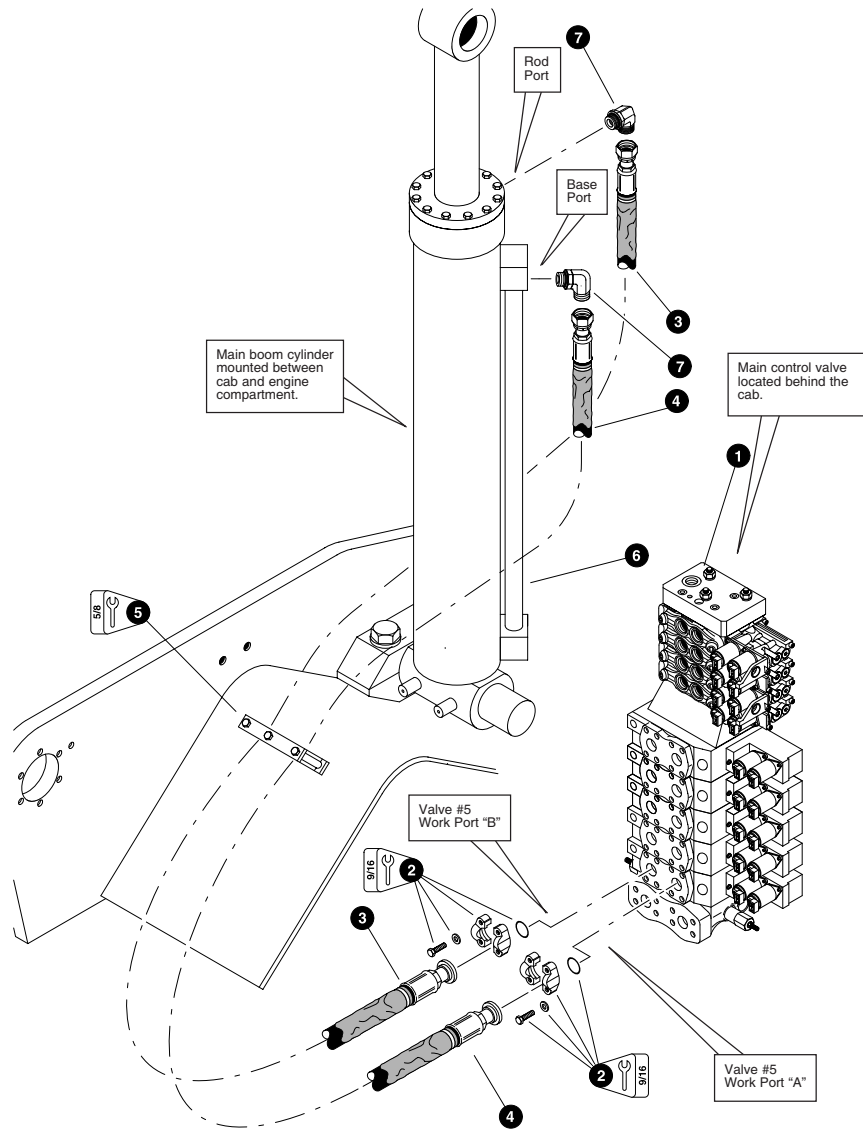
**SECTION #9 - LEVELING FUNCTION**  
**(Main Control Valve to Rotary Manifold)**  
**(Typical Disc saw / Bar saw setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	VOAC VALVE	HH-2
2	19290-HH	2	BUSHING, reducer - 6405-12-8	
3	19091-HH	2	CONNECTOR, long straight - FF1852T-0808S	
4	15117-HH	2	CONNECTOR, straight - FF1852T-0808S	
5	50692-HH	1	HOSE ASSEMBLY - 4084-08-080S-080S (From voac valve port "A" to rotary manifold port #9)	
6	50693-HH	1	HOSE ASSEMBLY - 4087-08-080S-080S (From voac valve port "B" to rotary manifold port #8)	
7	REF.	1	ROTARY MANIFOLD	UP-1
8	10395-HH	2	ELBOW, 90 swivel - 1501-8-8	

See referenced page for component or assembly breakdown.





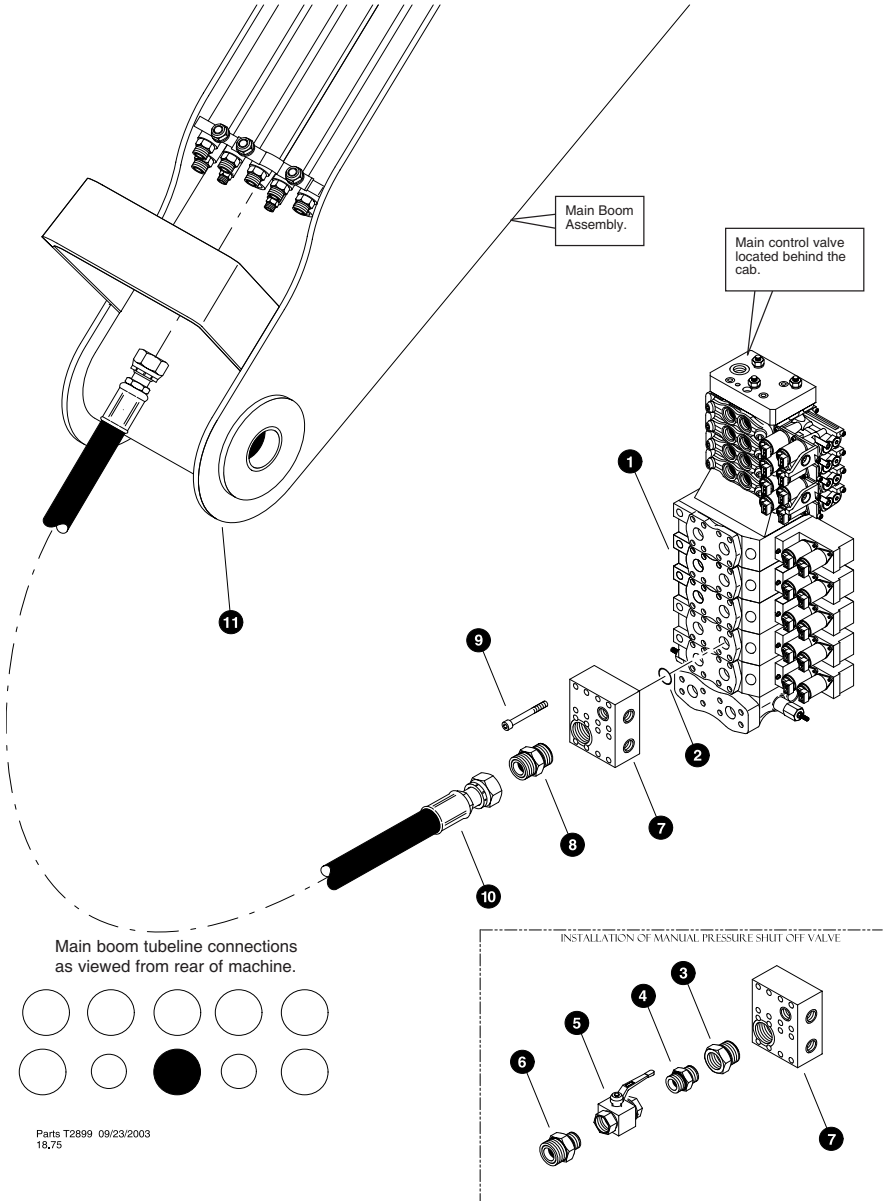


Parts T2776 07/28/2003  
18,75

**SECTION #1 - MAIN BOOM FUNCTION**  
**(Main Control Valve To Main Boom (Hoist) Cylinder)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	50346-HH	1	HOSE ASSEMBLY - 4136-16-160S-16C1 (Main boom valve section #5 work port "B" to main boom cylinder base port)	
4	50680-HH	1	HOSE ASSEMBLY - 4132-16-160S-16C1 (Main boom valve section #5 work port "A" to main boom cylinder rod port)	
5	12270-HH	1	CLAMP, vermatic - 1-1/2" x 1-1/2"	
6	REF.	1	MAIN BOOM (HOIST) CYLINDER .....	HB-5
7	15228-HH	2	ELBOW, 90° - FF1868T-1616S	

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



Parts T2899 09/23/2003  
18,75

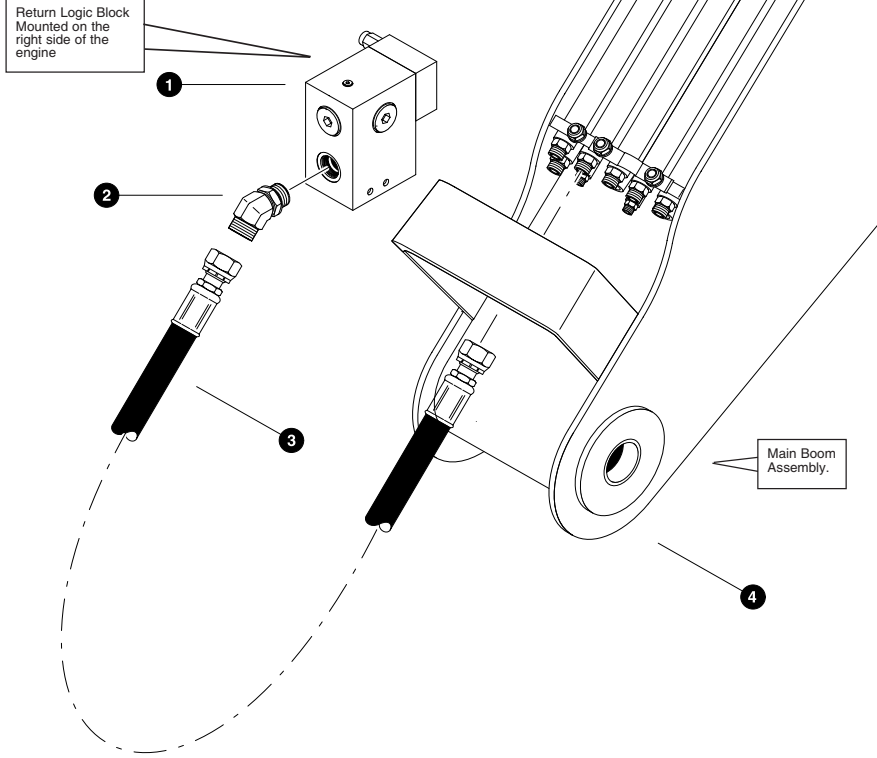
**SECTION #2&3 - COMBINED FLOW PRESSURE LINE 1 1/4"**  
**(Combined Flow Block To Main Boom Tubeline)**  
**(Typical Dangle Harvester setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	<input type="checkbox"/> MAIN CONTROL VALVE . . . . .	HH-2
2	15377-HH	4	<input type="checkbox"/> O-RING - 1" SF	
3	17015-HH	1	<input type="checkbox"/> BUSHING, REDUCER - 6410-20-16	
4	19473-HH	1	<input type="checkbox"/> CONNECTOR, STR - 6403-16	
5	51344-HH	1	<input type="checkbox"/> VALVE, BALL - 1" HIGH PRESSURE (6000)	
6	19450-HH	1	<input type="checkbox"/> CONNECTOR, STR - 16-20 F5OLO-S	
7	51263-HH	1	<input type="checkbox"/> MANIFOLD, COMBINED FLOW - VOAC (FLOW/LIMIT)	
8	17344-HH	1	<input type="checkbox"/> CONNECTOR, STR - 20 X 20	
9	50177-HH	8	<input type="checkbox"/> BOLT, allen M10 X 75MM	
10	51121-HH	1	<input type="checkbox"/> HOSE ASSEMBLY - 4061- 20- 20OS- 20OS (Combined flow bock to Main Boom)	
11	REF.	1	<input type="checkbox"/> MAIN BOOM ASSEMBLY . . . . .	HB-1

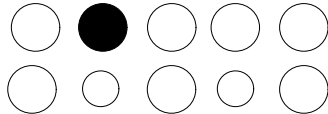
See referenced page for component or assembly breakdown.  
 Kit or Assembly - includes all items indented underneath.

Last Updated - 06/01/2004

Harvester Hydraulics - Hydraulic Circuits



Main boom tubeline connections as viewed from rear of machine.



Parts T2900 09/23/2003  
18,75

TF 820 & TB 620 Parts Module HH-51037

HH-5-5

Harvester Hydraulics - Hydraulic Circuits

Last Updated - 06/01/2004

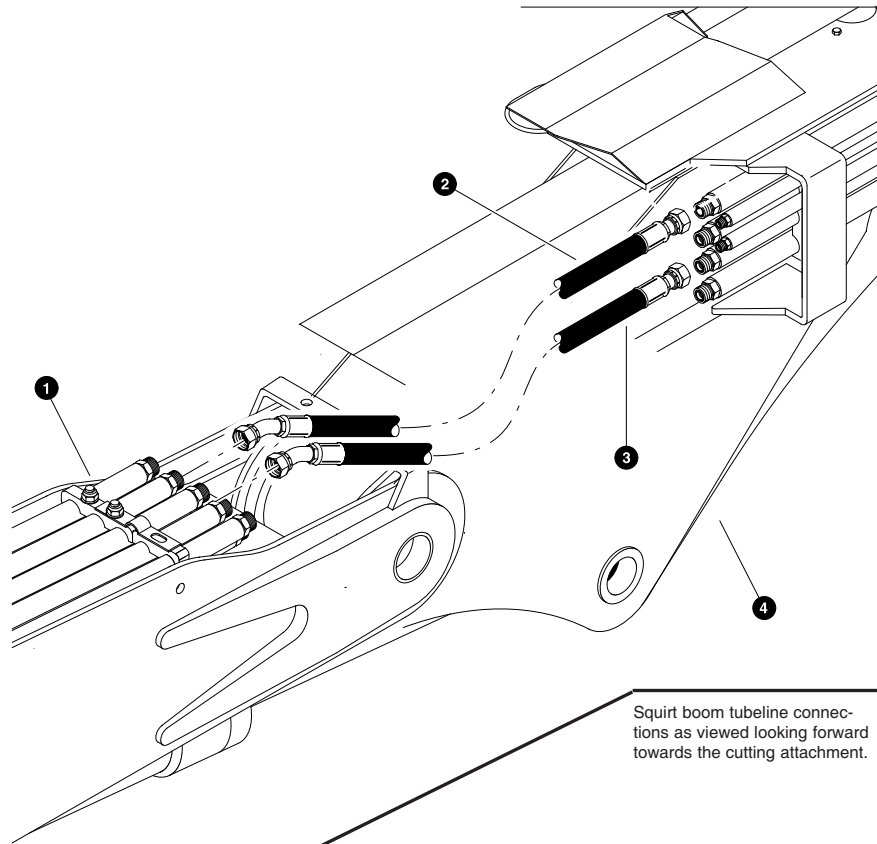
**ATTACHMENT RETURN LINE 1 1/4"**  
**(Return logic Block To Main Boom Tubeline)**  
**(Typical Dangle Harvester setup)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	RETURN LOGIC VALVE.....	HH-2
2	17056-HH	1	ELBOW, 45 - 2020	
3	51120-HH	1	HOSE ASSEMBLY - 4075- 20- 200S- 200S <i>(Return logic block to main boom)</i>	
4	REF.	1	MAIN BOOM ASSEMBLY .....	HB-1

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

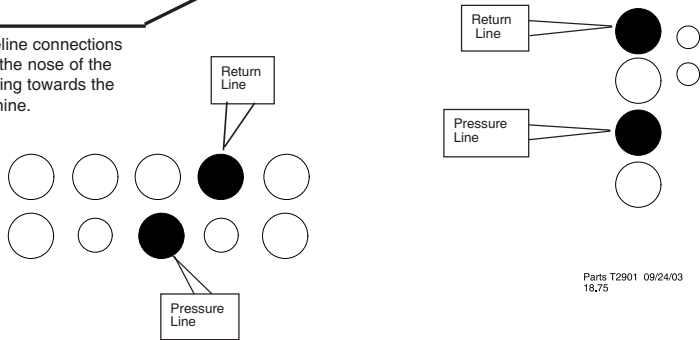
HH-5-6

TF 820 & TB 620 Parts Module HH-51037



Squirt boom tubeline connections as viewed looking forward towards the cutting attachment.

Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.

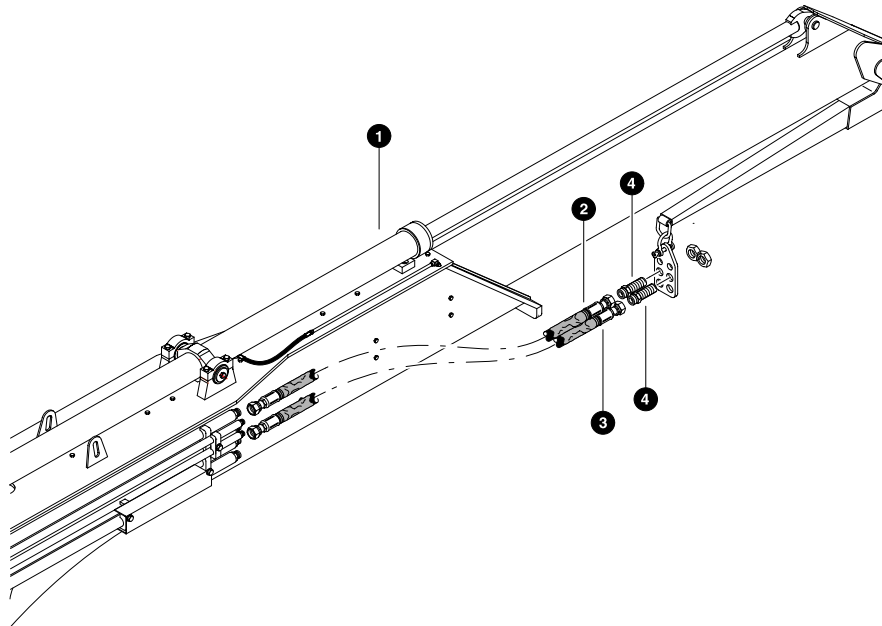


Parts T2901 09/24/03  
18,75

**Pressure and Tank Lines**  
**(Main Boom Tubelines To Squirt Boom Tubelines)**  
**(Typical Dangle Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50352-HH	1	HOSE ASSEMBLY - 4071-16-160S-1604 (Main boom pressure line to squirt boom)	
3	50352-HH	1	HOSE ASSEMBLY - 4071-16-160S-1604 (Main boom return line to squirt boom)	
4	REF.	1	SQUIRT BOOM ASSEMBLY	HB-3

See referenced page for component or assembly breakdown.

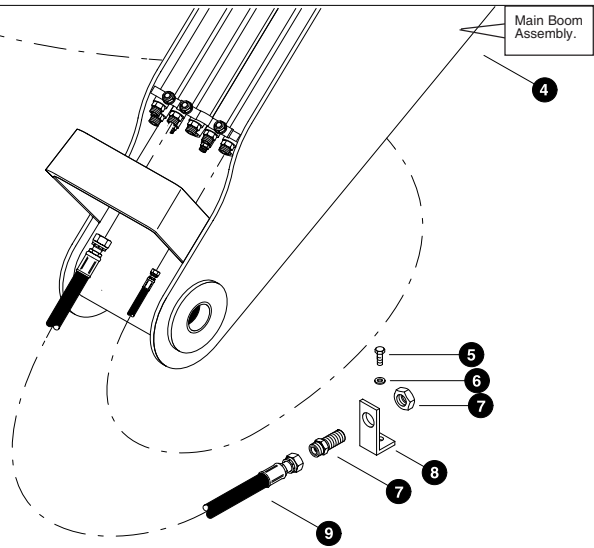
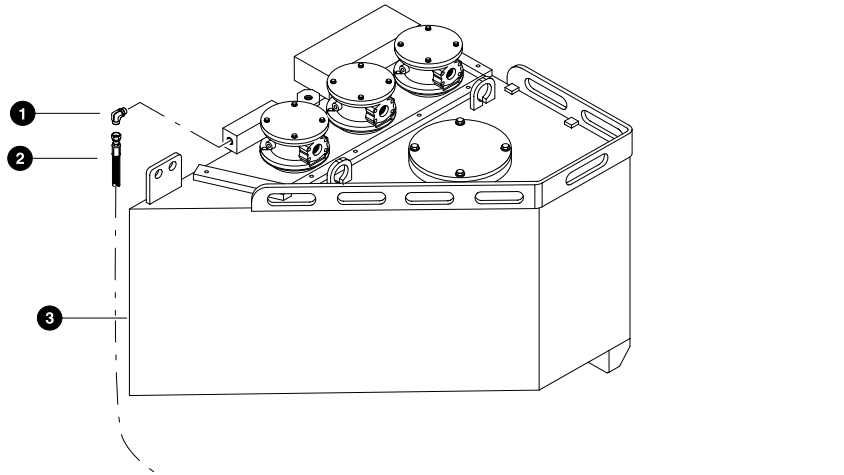


Parts T2906 09/24/03  
18.75

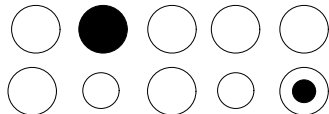
**Pressure and Tank Lines**  
**(OPTIONAL - Squirt Boom Tubelines to Bulkhead Plate)**  
**(Typical Dangle Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	SQUIRT BOOM ASSEMBLY.....	HB-3
2	50380-HH	1	HOSE ASSEMBLY - 4115-16-160S-160S ( <i>Squirt boom to bulkhead plate</i> )	
2	50380-HH	1	HOSE ASSEMBLY - 4115-16-160S-160S ( <i>Squirt boom to bulkhead plate</i> )	
4	20033-HH	2	CONNECTOR, straight bulkhead - 16	
-	20457-HH		PROTECTOR WRAP, plastic spiral wrap 3.5"	

- See referenced page for component or assembly breakdown.
- Bulk item please specify length needed when ordering.



Main boom tubeline connections  
as viewed from rear of machine.

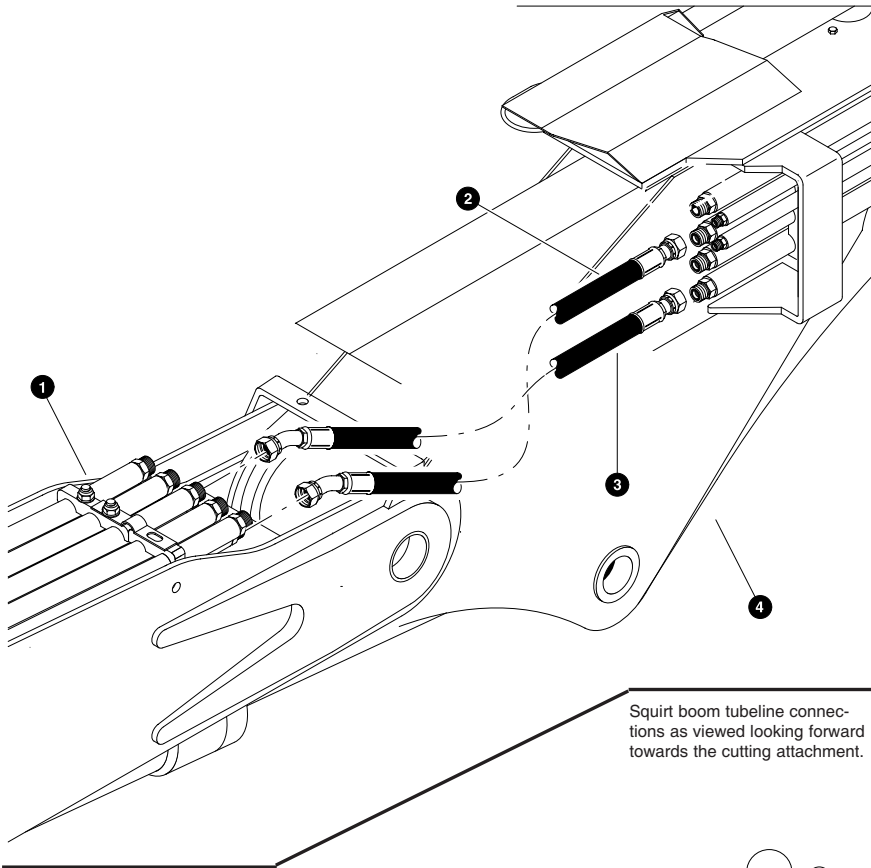


Parts T2908 09/23/2003  
12.5

**Case Drain and Electrical**  
**(Return Filter To Main Boom Tubeline)**  
**(Typical Dangle Harvester setup)**  
**(machines built after 01/01/03)**

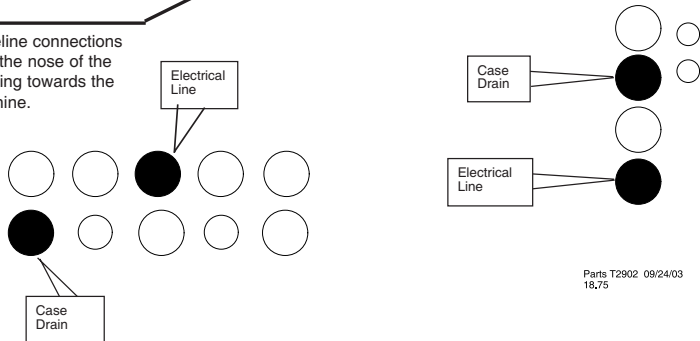
REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	15481-HH	1	ELBOW, 90 - 6801 - 08	
2	50724-HH	1	HOSE ASSEMBLY - 2137- 08- 08OS- 08OS (Case Drain Filter to Main Boom)	
3	REF.	1	HYDRAULIC TANK ASSEMBLY.....	UP 3
4	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1
5	10739-HH	1	BOLT, - 1/2 X 1 1/2"	
6	15534-HH	1	WASHER, flat sae 1/2	
7	20033-HH	2	CONNECTOR, straight bulkhead - 16	
8	51197-HH	1	BRACKET, electrical hose	
9	51196-HH	1	HOSE ASSEMBLY - 2060 - 16 -16OS-16OS (electrical wire hose bracket to main boom)	

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



Squirt boom tubeline connections as viewed looking forward towards the cutting attachment.

Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.



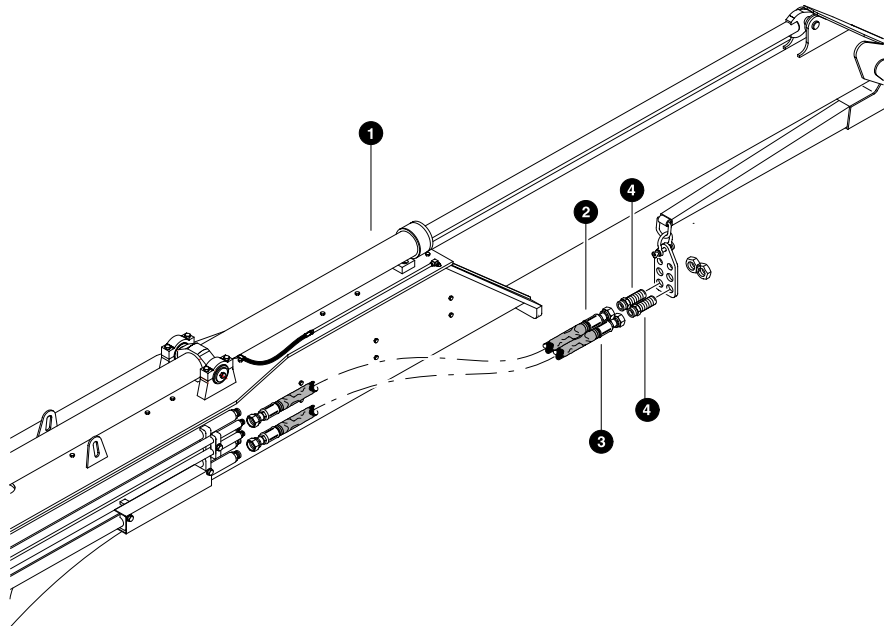
Parts T2902 09/24/03  
18,75

**Case Drain and Electrical  
(Main Boom Tubelines To Squirt Boom Tubelines)  
(Typical Dangle Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50352-HH	1	HOSE ASSEMBLY - 4071-16-160S-1604 (Main boom case drain line to squirt boom)	
3	50352-HH	1	HOSE ASSEMBLY - 4071-16-160S-1604 (Main boom electrical line to squirt boom)	
4	REF.	1	SQUIRT BOOM ASSEMBLY	HB-3

See referenced page for component or assembly breakdown.



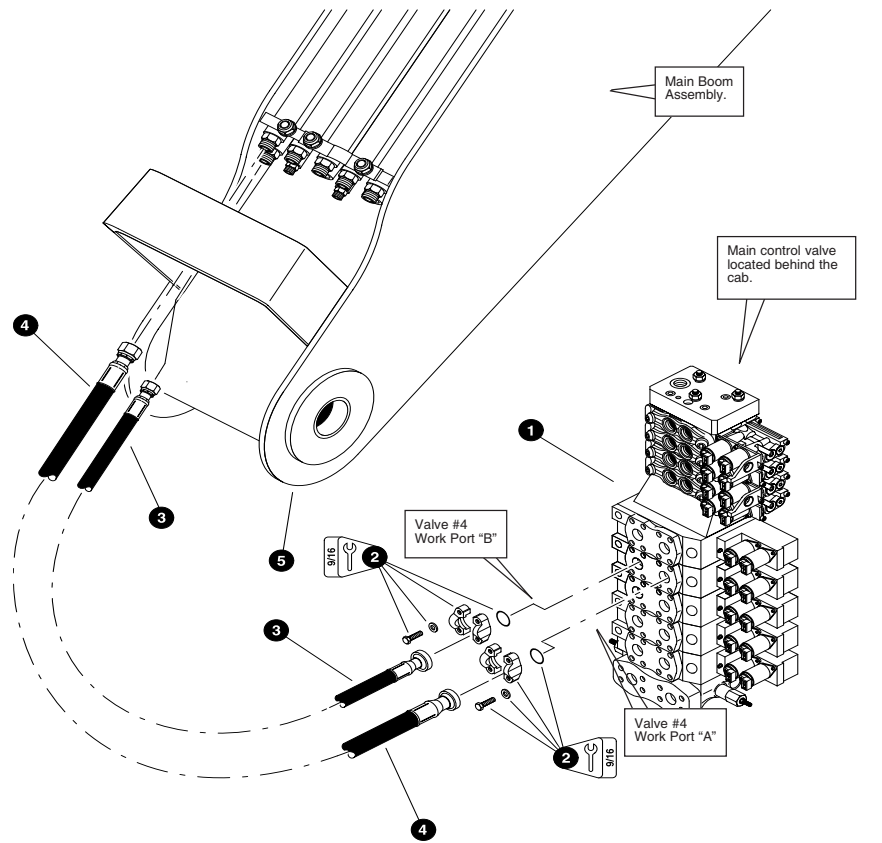


Parts T2905 09/24/03  
18.75

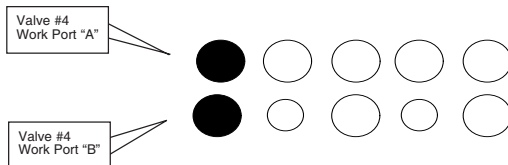
**Case Drain and Electrical**  
**(Squirt Boom Tubelines to Bulkhead Plate)**  
**(Typical Dangle Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	SQUIRT BOOM ASSEMBLY.....	HB-3
2	50380-HH	1	HOSE ASSEMBLY - 4115-16-160S-160S ( <i>Squirt boom to bulkhead plate</i> )	
2	50380-HH	1	HOSE ASSEMBLY - 4115-16-160S-160S ( <i>Squirt boom to bulkhead plate</i> )	
4	20033-HH	2	CONNECTOR, straight bulkhead - 16	
-	20457-HH		PROTECTOR WRAP, plastic spiral wrap 3.5"	

See referenced page for component or assembly breakdown.  
 Bulk item please specify length needed when ordering.



Main boom tubeline connections as viewed from rear of machine.

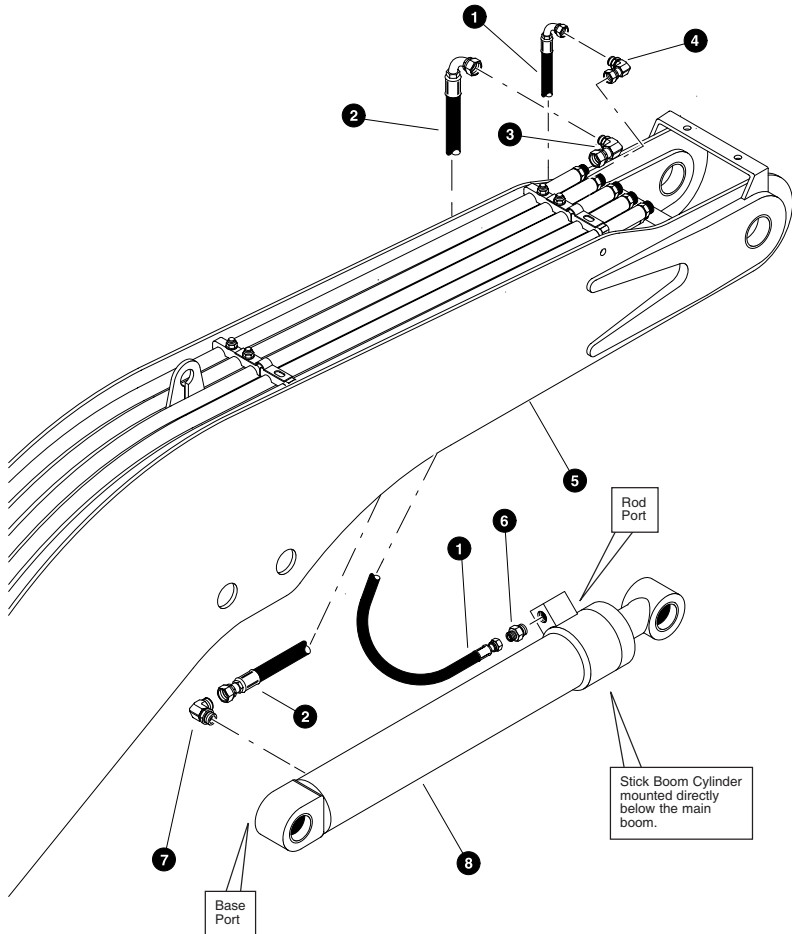


Parts T2775 07/28/03  
18.75

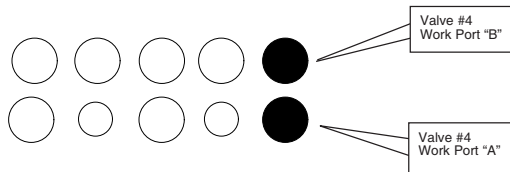
**SECTION #4 - STICK BOOM FUNCTION**  
**(Main Control Valve To Main Boom Tubelines)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	50456-HH	1	HOSE ASSEMBLY - 4079-12-120S-16C1 (Stick boom valve section #4 work port "B" to main boom lower outer engine-side tubeline)	
4	50457-HH	1	HOSE ASSEMBLY - 4078-16-160S-16C1 (Stick boom valve section #4 work port "A" to main boom upper outer engine-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

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



Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.

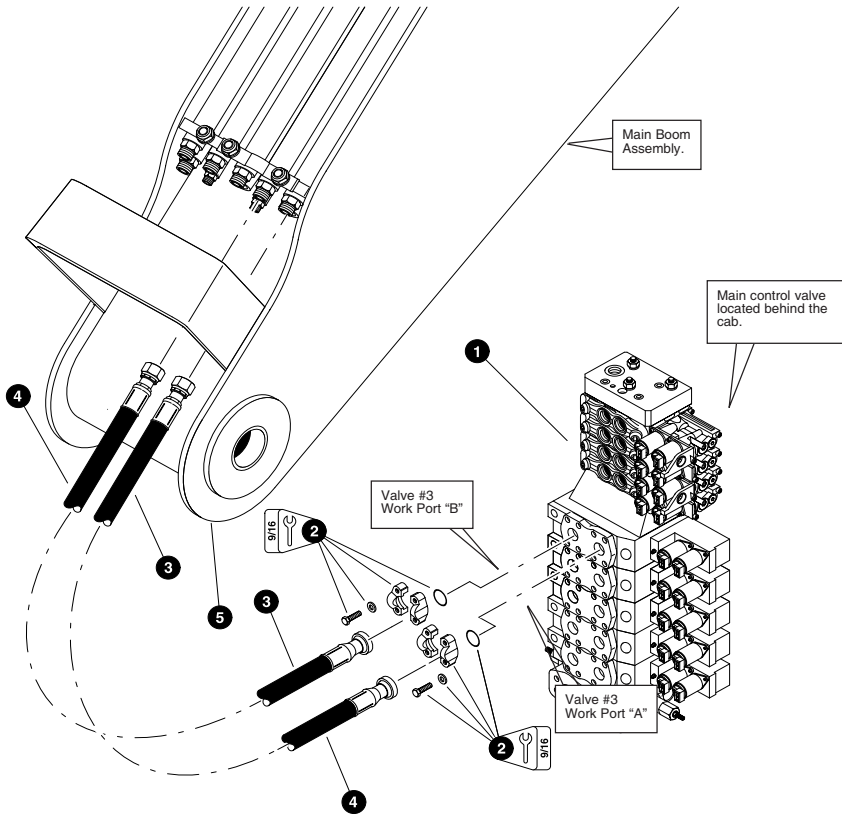


Parts 01065 03/02/99  
12.5

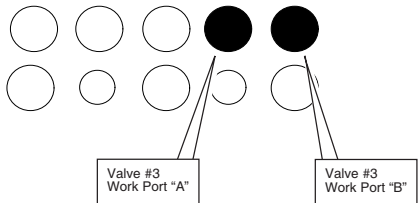
**STICK BOOM FUNCTION**  
(Main Boom Tubelines To Stick Boom (Jib) Cylinder)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	50677-HH	1	HOSE ASSEMBLY - 4064-12-120S-1209 (Main boom lower outer engine-side tubeline to stick cylinder rod port)	
2	50679-HH	1	HOSE ASSEMBLY - 4064-16-160S-1609 (Main boom upper outer engine-side tubeline to stick cylinder base port)	
3	17682-HH	1	ELBOW, 90° swivel - FF2098T-1616S	
4	17670-HH	1	ELBOW, 90° swivel - FF2098T-1212S	
5	REF.	1	MAIN BOOM ASSEMBLY	HB-1
6	15152-HH	1	CONNECTOR, straight - FF1852T-1212S	
7	15228-HH	1	ELBOW, 90° - FF1868T-1616S	
8	REF.	1	STICK BOOM (JIB) CYLINDER	HB-5

See referenced page for component or assembly breakdown.



Main boom tubeline connections  
as viewed from rear of machine.

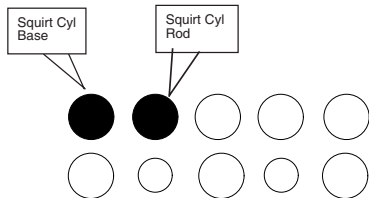
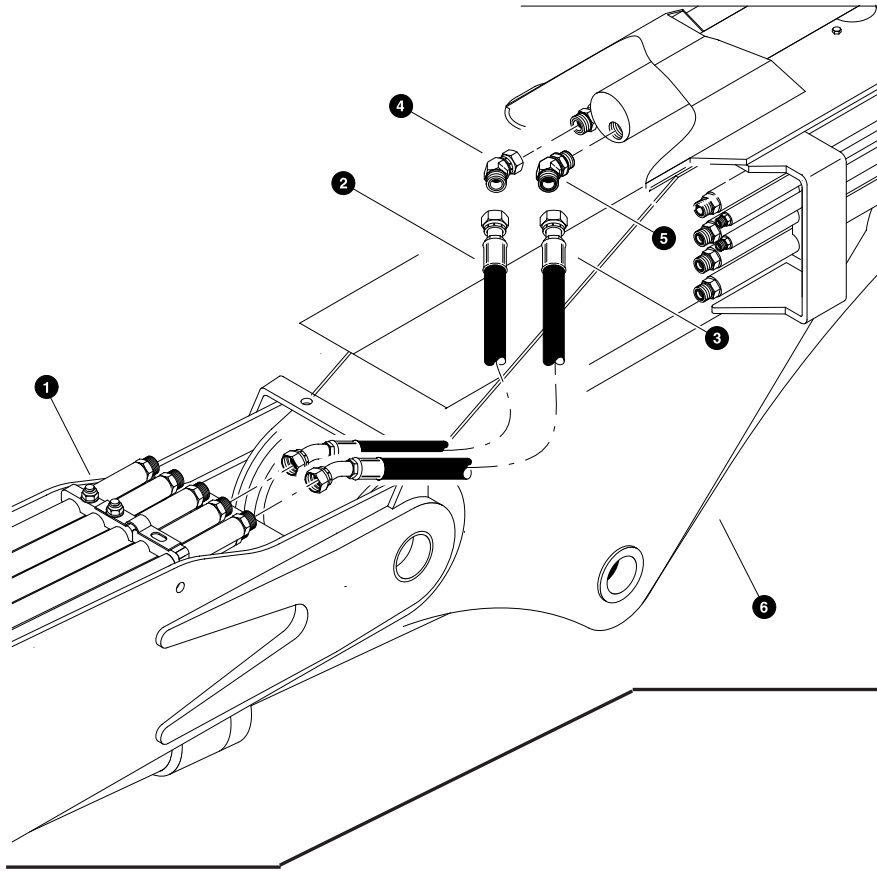


Parts T2774 07/28/03  
18,75

**SECTION # 5 - SQUIRT \ TOOL CYLINDER FUNCTION**  
**(Main Control Valve To Main Boom Tubelines)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE.....	HH-2
2	15111-HH	2	KIT, split flange - 1" SF (Code 61)	
	15377-HH	1	O-RING - 1" SF	
	18979-HH	4	BOLT, allen M10 X 45MM	
3	40776-HH	1	HOSE ASSEMBLY - 4063-16-160S-16C1 (Tool / Squirt valve section #3 work port "B" to main boom upper inner cab-side tubeline)	
4	40777-HH	1	HOSE ASSEMBLY - 4066-16-160S-16C1 (Tool / Squirt valve section #3 work port "A" to main boom upper outer cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY.....	HB-1

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



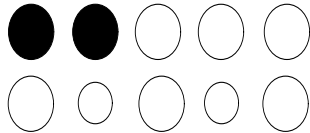
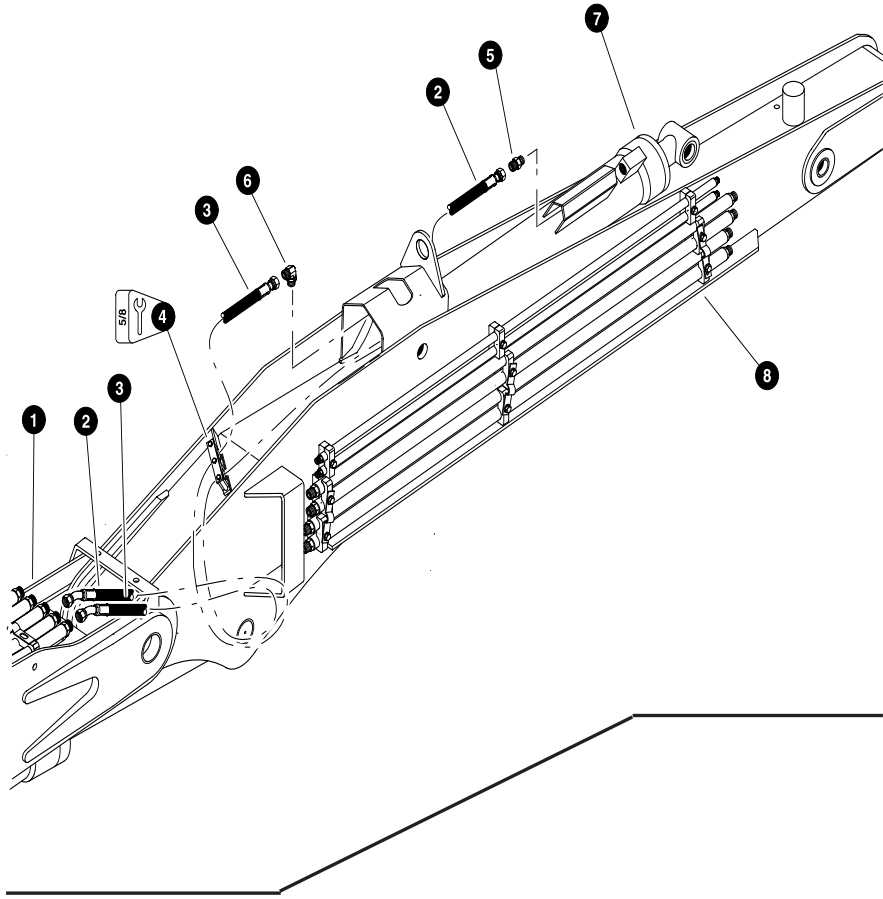
Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.

Parts T2909 09/24/03  
18,75

**SQUIRT BOOM CYLINDER FUNCTION**  
(Main Boom Tubelines To Squirt Boom Cylinder)  
(Typical Dangle Harvester)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY	HB-1
2	50352-HH	1	HOSE ASSEMBLY - 4071-16-160S-1604 (Main boom to squirt boom cylinder rod - jumper hose)	
3	50352-HH	1	HOSE ASSEMBLY - 4071-16-160S-1604 (Main boom to squirt boom cylinder base)	
4	16460-HH	1	ELBOW, 45 - 16	
5		1	ELBOW, SWIVEL 45 - 16	
6	REF.	1	SQUIRT BOOM ASSEMBLY	HB-3

See referenced page for component or assembly breakdown.



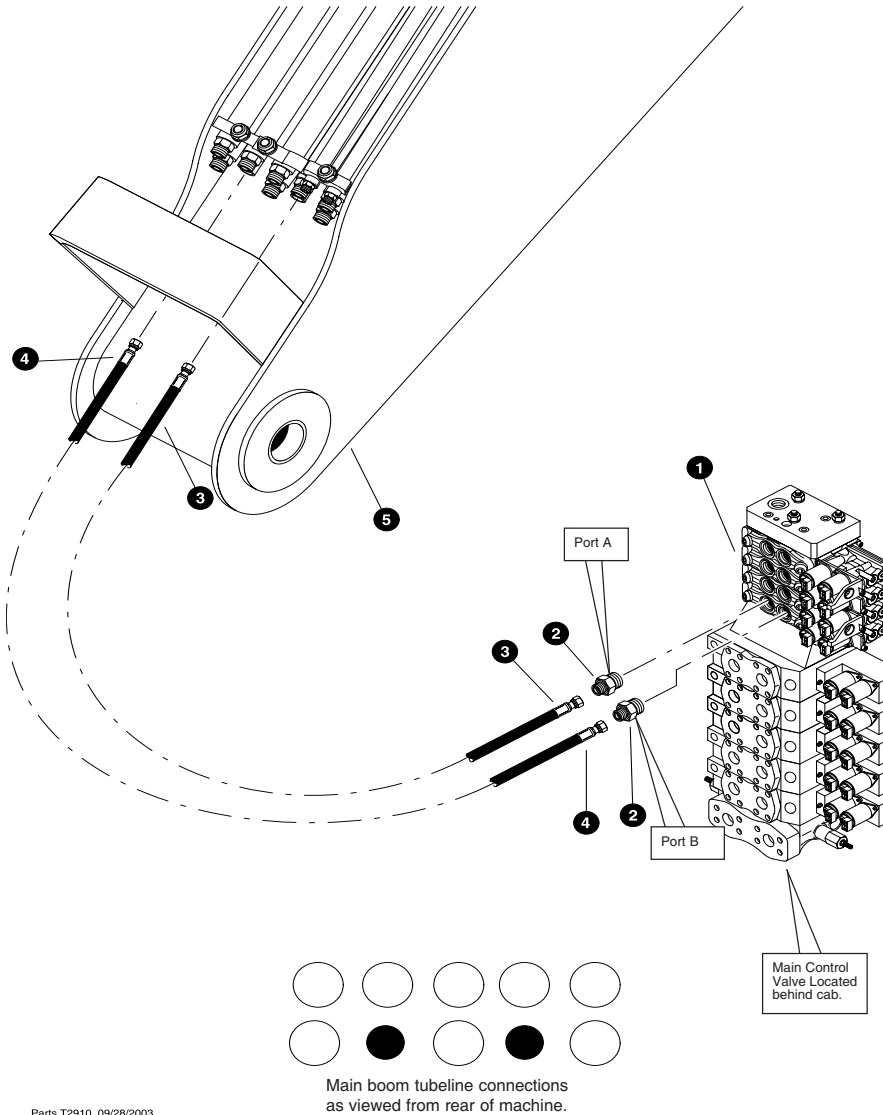
Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.

Parts 01063 03/02/99  
9.375

**TOOL CYLINDER FUNCTION**  
**(Main Boom Tubelines To Tool Cylinder)**  
**(Fixed Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY .....	HB-1
2	50356-HH	1	HOSE ASSEMBLY - 4148-16-160S-1604 (Main boom upper inner cab-side tubeline to tool cylinder rod port)	
3	50355-HH	1	HOSE ASSEMBLY - 4108-16-160S-1604 (Main boom upper outer cab-side tubeline to tool tilt cylinder base port)	
4	12270-HH	1	CLAMP, vermatic - 1-1/2" x 1-1/2"	
5	15228-HH	1	ELBOW, 90° - FF1868T-1616S	
6	15225-HH	1	CONNECTOR, straight - FF1852T-1616S	
7	REF.	1	TOOL TILT CYLINDER .....	HB-5
8	REF.	1	STICK BOOM ASSEMBLY .....	HB-2

☞ See referenced page for component or assembly breakdown.

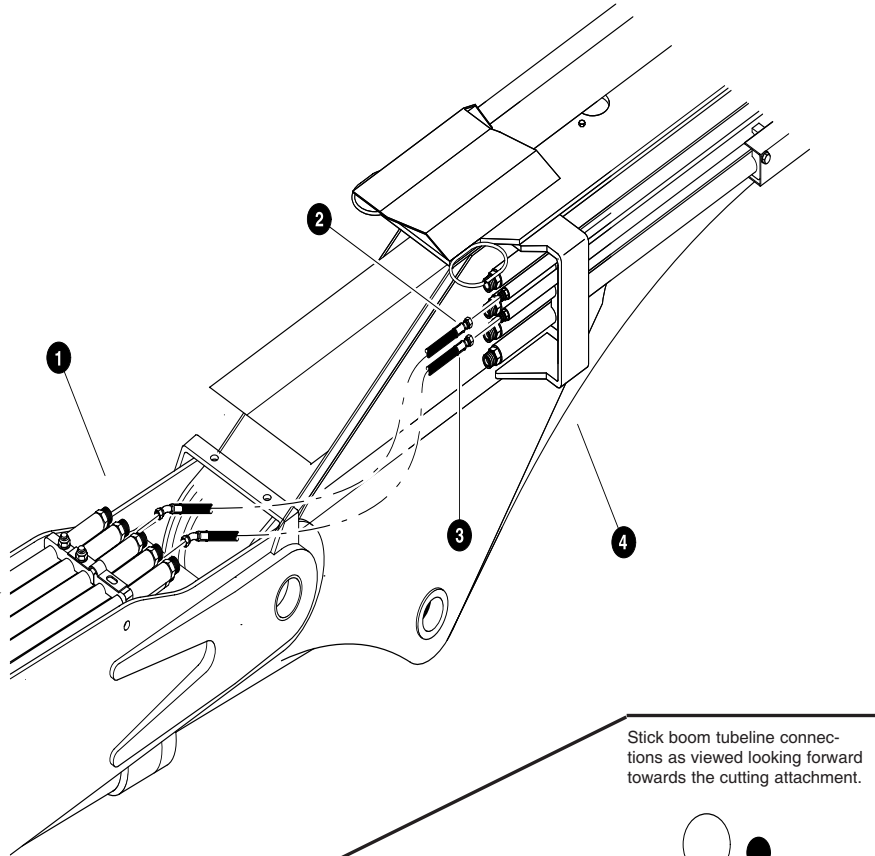


Parts T2910 09/28/2003  
18.75

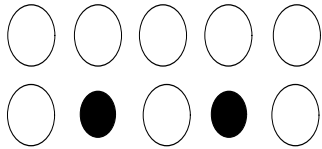
**SECTION #6 - HEAD ROTATE FUNCTION**  
**(Main Control Valve to Main Boom)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE	HH-2
2	15115-HH	4	CONNECTOR, straight - FF1852T-0810S	
3	40775-HH	1	HOSE ASSEMBLY - 4073-08-080S-080S (Lateral valve section #8 work port "A" to main boom lower outer cab-side tubeline)	
4	50815-HH	1	HOSE ASSEMBLY - 4075-08-080S-080S (Lateral valve section #8 work port "B" to main boom lower inner cab-side tubeline)	
5	REF.	1	MAIN BOOM ASSEMBLY	HB-1

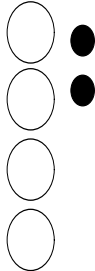
See referenced page for component or assembly breakdown.



Main boom tubeline connections as viewed from the nose of the main boom looking towards the rear of the machine.



Stick boom tubeline connections as viewed looking forward towards the cutting attachment.



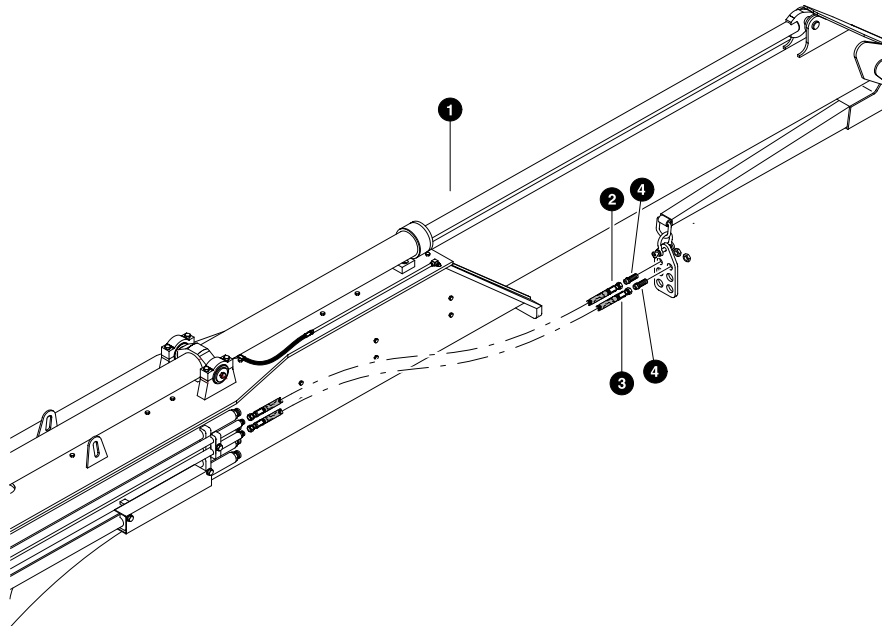
Parts T2904 09/24/03  
18.75

**HEAD ROTATE FUNCTION**  
**(Main Boom Tubelines To Squirt Boom Tubelines)**  
**(Typical Dangle Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN BOOM ASSEMBLY .....	HB-1
2	50734-HH	1	HOSE ASSEMBLY - 4073-08-08OS-08O4 (Main boom lower inner engine-side tubeline to squirt boom top tubeline)	
3	50921-HH	1	HOSE ASSEMBLY - 4070-08-08OS-08O4 (Main boom lower inner cab side tubeline to squirt boom bottom tubeline)	
4	REF.	1	SQUIRT BOOM ASSEMBLY .....	HB-3

See referenced page for component or assembly breakdown.



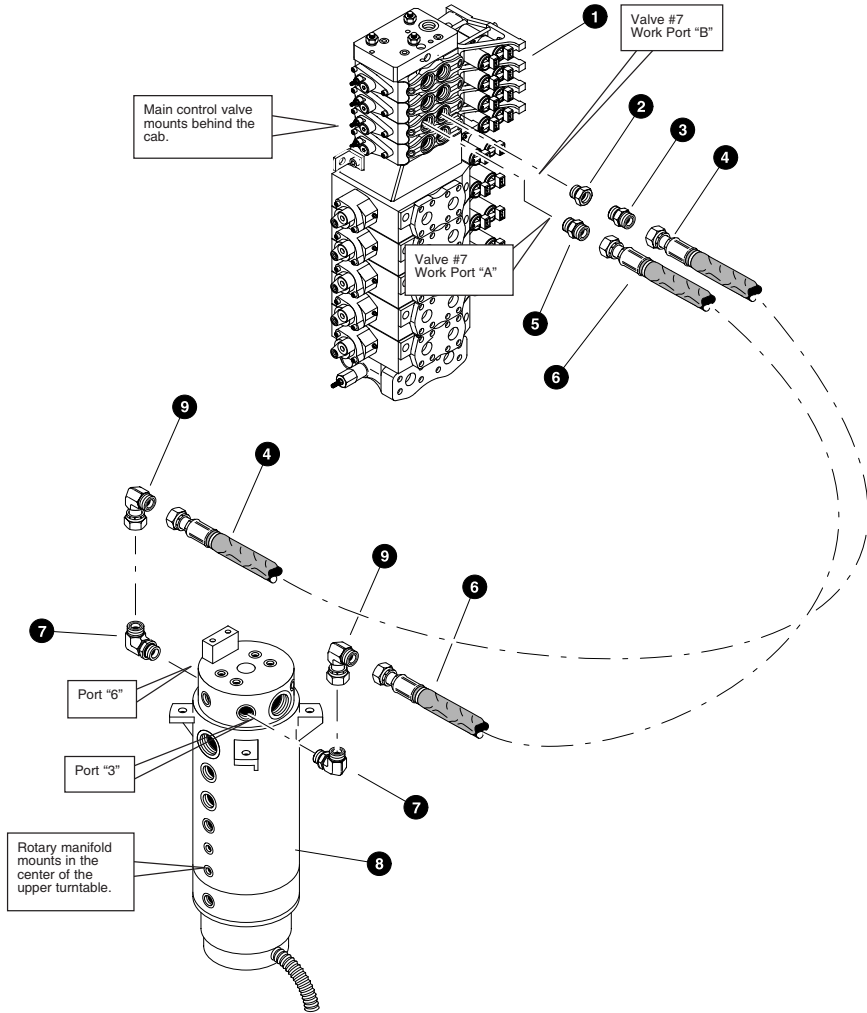


Parts T2907 09/24/03  
18.75

**HEAD ROTATE FUNCTION**  
**(Squirt Boom Tubelines to Bulkhead Plate)**  
**(Typical Dangle Harvester)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	SQUIRT BOOM ASSEMBLY.....	HB-3
2	50379-HH	1	HOSE ASSEMBLY - 4115-08-080S-080S ( <i>Squirt boom to bulkhead plate</i> )	
2	50379-HH	1	HOSE ASSEMBLY - 4115-16-080S-080S ( <i>Squirt boom to bulkhead plate</i> )	
4	20196-HH	2	CONNECTOR, straight bulkhead - 08	
-	20457-HH		PROTECTOR WRAP, plastic spiral wrap 3.5"	

- See referenced page for component or assembly breakdown.
- Bulk item please specify length needed when ordering.

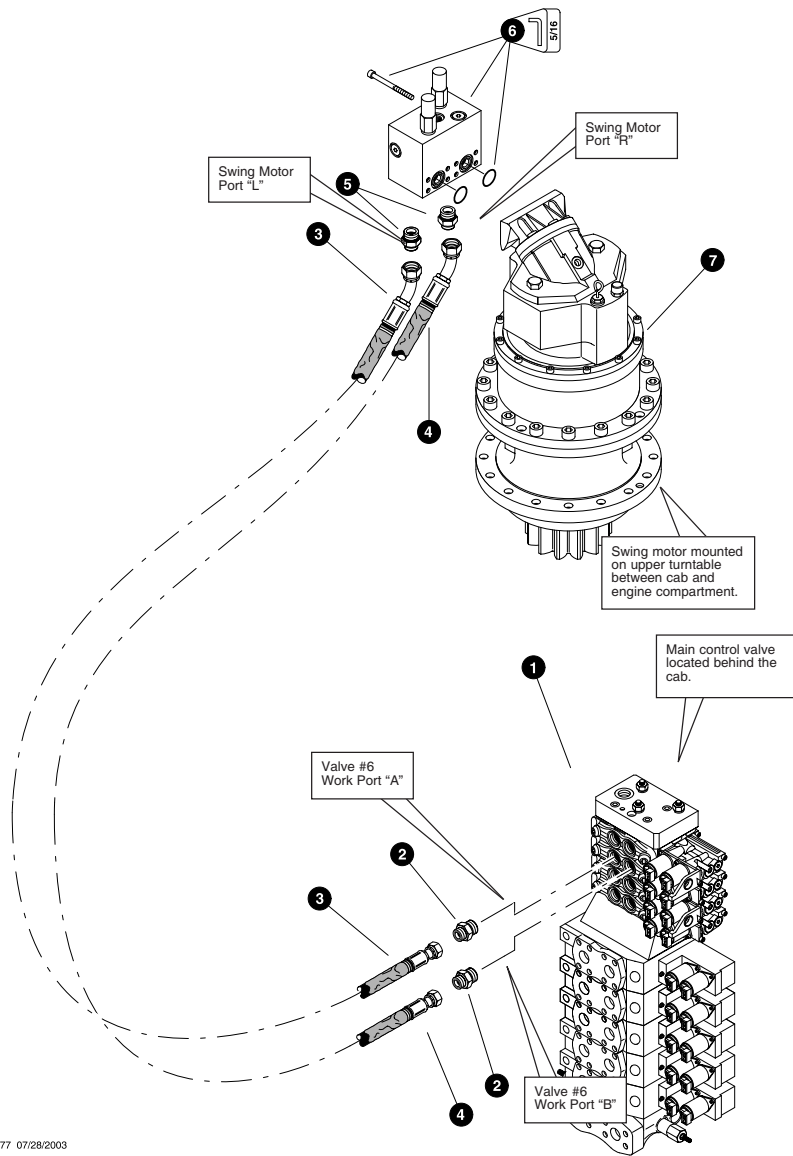


Parts T2778 07/28/2003  
18.75

**SECTION #7 - STEER FUNCTION LINES**  
(Main Control Valve To Upper Rotary Manifold Ports)  
(machines built after 01/01/03)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE	HH-2
2	19289-HH	2	BUSHING, reducer - 6410-10-12	
3	15152-HH	1	CONNECTOR, straight long - FF1852T-1212S	
4	50344-HH	1	HOSE ASSEMBLY - 4096-12-120S-120S #5 work port "B" to upper rotary manifold port #6	
5	16851-HH	1	CONNECTOR, straight - FF1852T-1210S	
6	50675-HH	1	HOSE ASSEMBLY - 4087-12-120S-120S #5 work port "A" to upper rotary manifold port #3	
7	17688-HH	1	ELBOW, 90° - FF1868T-1212S	
8	REF.	1	ROTARY MANIFOLD	UP-1
9	17670-HH	1	ELBOW, 90° swivel - FF2098T-1212S	

See referenced page for component or assembly breakdown.

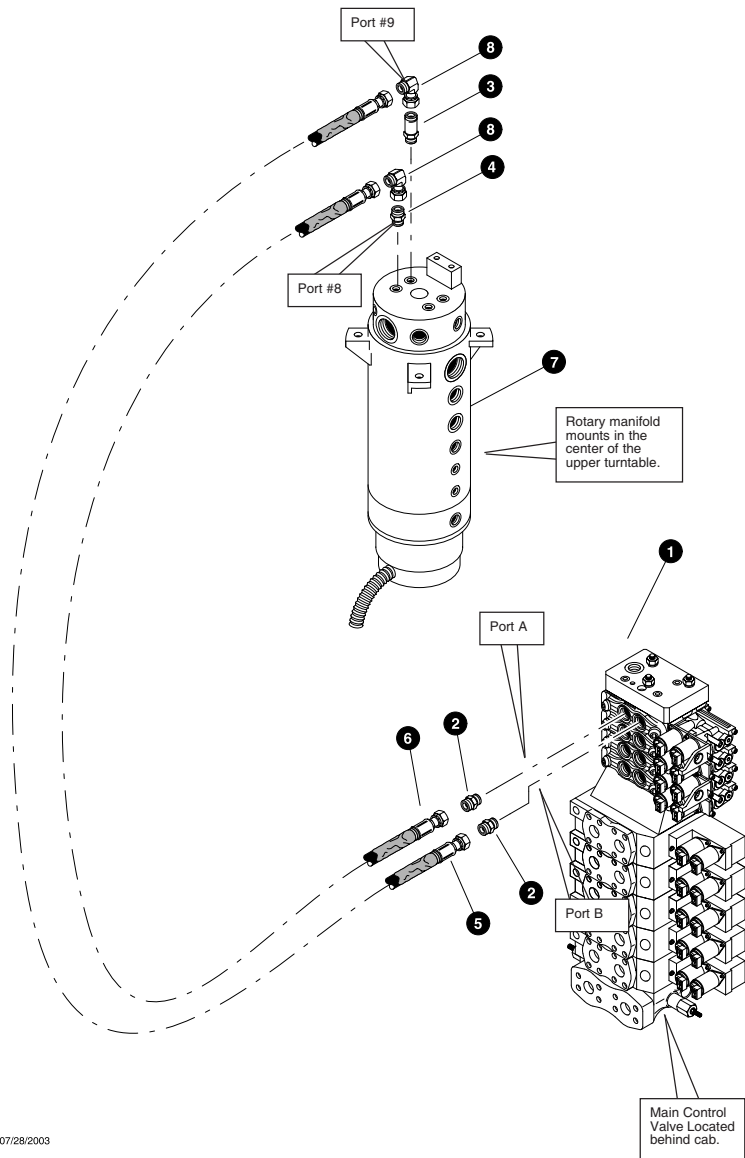


Parts T2777 07/28/2003  
18,75

**SECTION #8 - SWING FUNCTION**  
**(Main Control Valve To Lohmann Swing Motor)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	MAIN CONTROL VALVE	HH-2
2	15115-HH	2	CONNECTOR, straight - FF1852T-0810S	
3	51274-HH	1	HOSE ASSEMBLY - 4125-08-08OS-08O4 (Swing valve section #6 work port "A" to swing motor)	
4	51275-HH	1	HOSE ASSEMBLY - 4122-08-08OS-08O4 (Swing valve section #6 work port "B" to swing motor)	
5	15238-HH	2	CONNECTOR, straight - FF1852T-0812S	
6	REF.	1	ANTI-CAVITATION VALVE	UP-2
	16918-HH	2	O-RING - 3/4" SF	
	-----	4	BOLT - 10mm x 100mm	
7	REF.	1	SWING MOTOR	UP-2

See referenced page for component or assembly breakdown.



Parts T2780 07/28/2003  
18,75

**SECTION #9 - LEVELING FUNCTION**  
**(Main Control Valve to Rotary Manifold)**  
**(machines built after 01/01/03)**

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	REF.	1	VOAC VALVE	HH-2
2	19290-HH	2	BUSHING, reducer - 6405-12-8	
3	19091-HH	2	CONNECTOR, long straight - FF1852T-0808S	
4	15117-HH	2	CONNECTOR, straight - FF1852T-0808S	
5	50692-HH	1	HOSE ASSEMBLY - 4084-08-080S-080S (From voac valve port "A" to rotary manifold port #9)	
6	50693-HH	1	HOSE ASSEMBLY - 4087-08-080S-080S (From voac valve port "B" to rotary manifold port #8)	
7	REF.	1	ROTARY MANIFOLD	UP-1
8	10395-HH	2	ELBOW, 90 swivel - 1501-8-8	

See referenced page for component or assembly breakdown.

