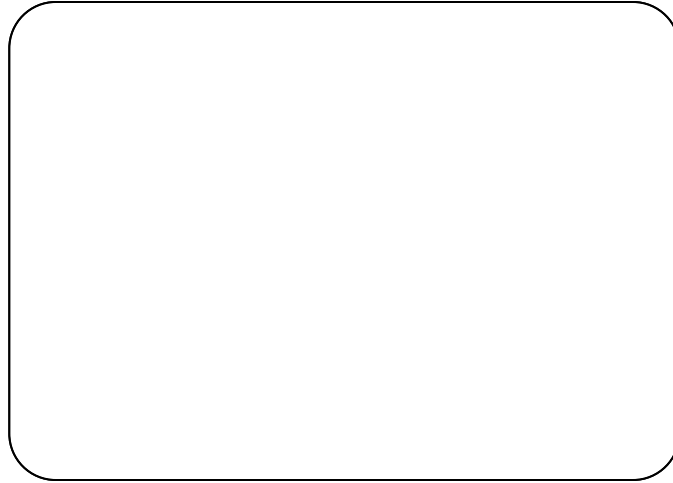
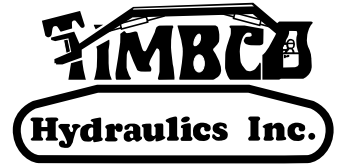
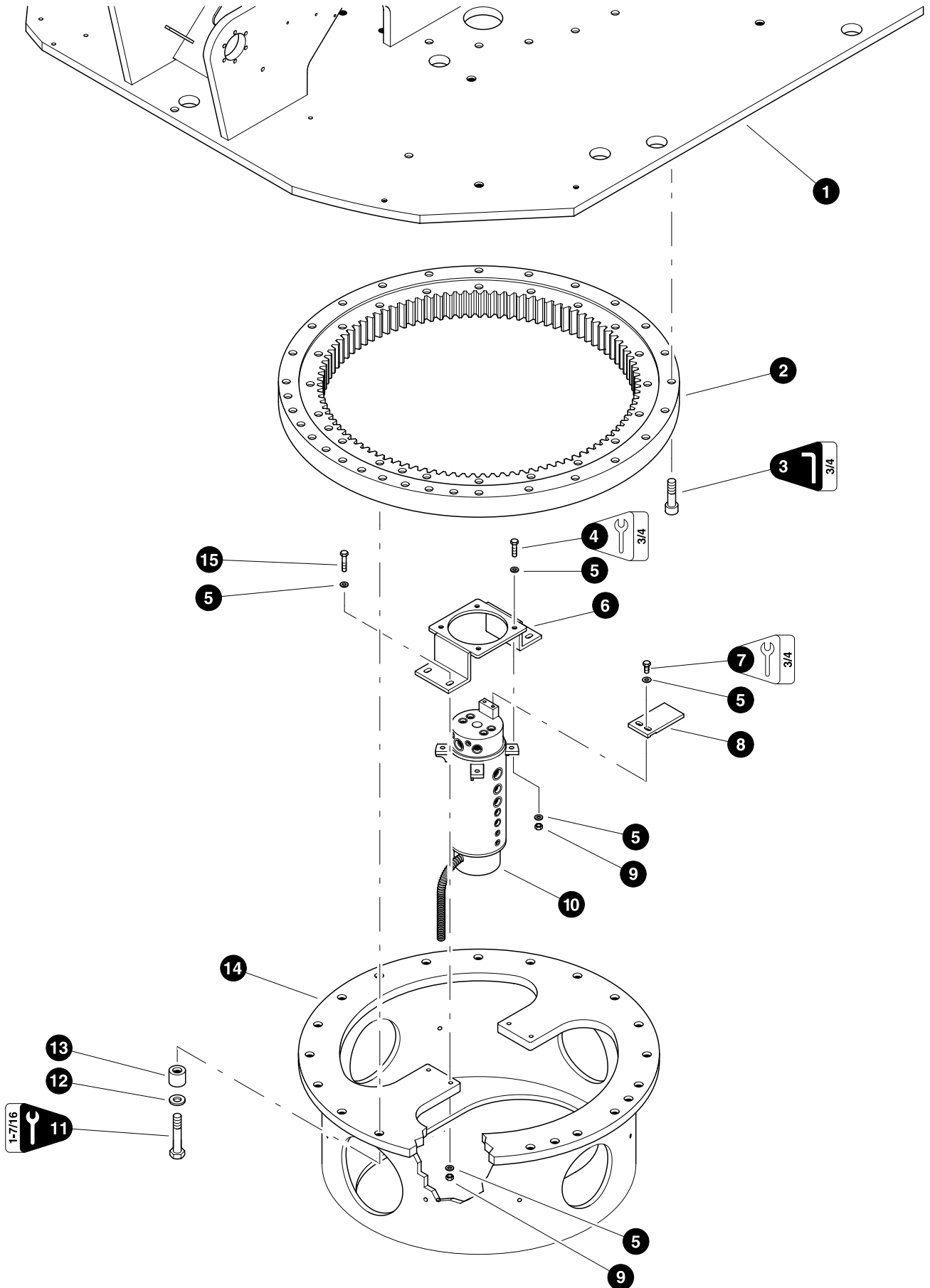


Section UP-1



***Upper Turntable -
Structural***



01834 09/22/2000
9.375

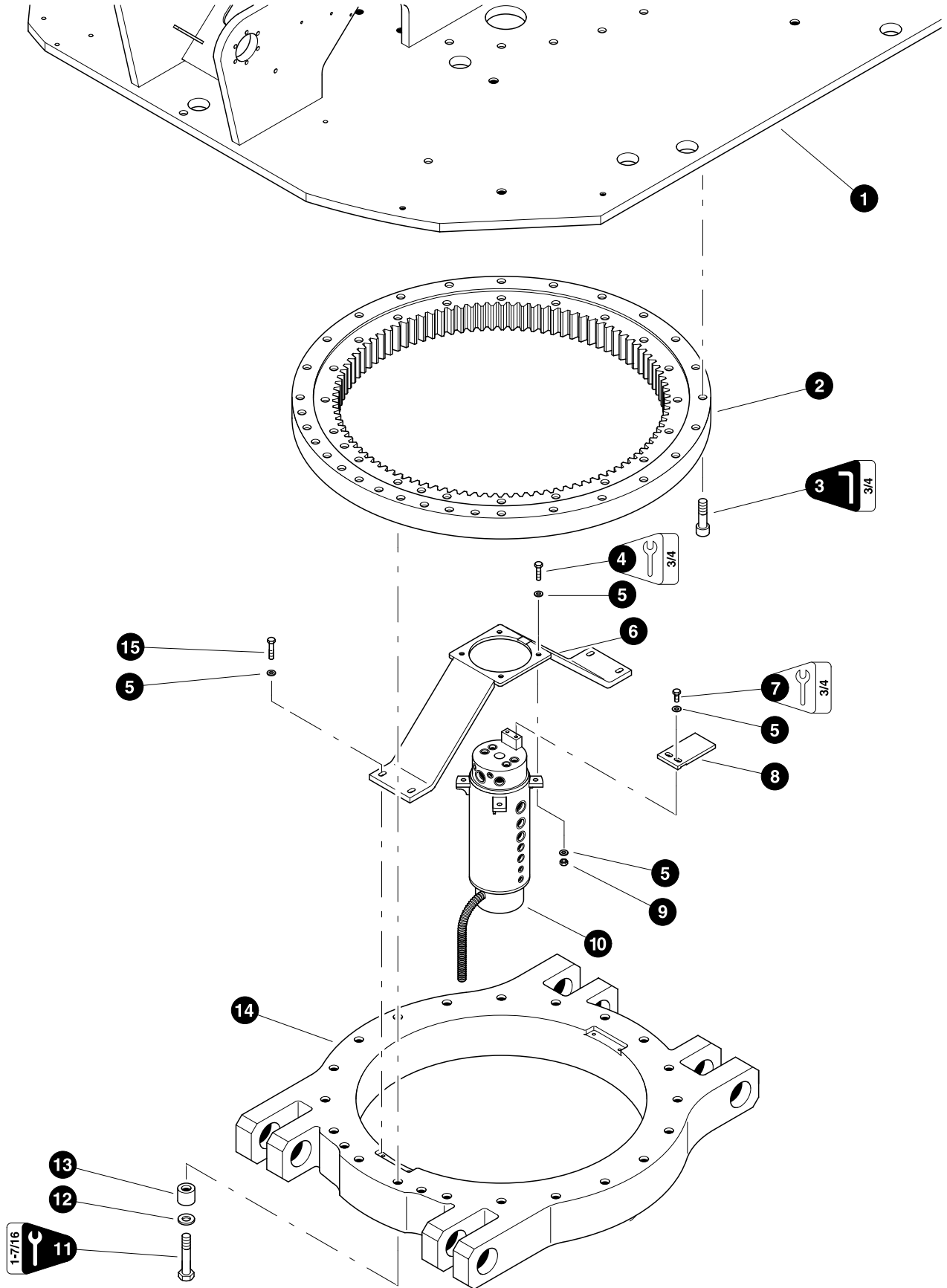
UPPER TURNTABLE INSTALLATION (Non-Leveling Machines)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	14180-UP	1	WELDMENT, upper turntable	
2	19631-UP	1	BEARING, swing	
3	19813-UP	29	BOLT, allen head - 1" x 4-1/4" (Torque to 900 ft.lbs (1200 Nm))	
	19814-UP	1	BOLT, allen head - 1" x 4" (Torque to 900 ft.lbs (1200 Nm))	
4	10736-UP	4	BOLT - 1/2" x 2"	
5	15534-UP	18	WASHER, SAE flat - 1/2"	
6	19443-UP	1	BRACKET, rotary manifold mounting	
7	22463-UP	2	BOLT, special - 1/2" x 1-1/4" (<i>Hole drilled in head for safety wire</i>)(See Note Below)	
	22464-UP	AR	WIRE, safety - 16 gauge	
8	80468-UP	1	BRACKET, swivel lock	
9	10815-UP	8	NUT, lock - 1/2"	
10	REF.	1	✓ ROTARY MANIFOLD	UP.1.6
11	18535-UP	24	BOLT - 1" x 5" (Torque to 1000 ft.lbs (1350 Nm))	
12	18532-UP	24	WASHER, SAE flat - 1" extra thick	
13	12463-UP	24	SPACER, bolt - upper turntable mounting	
14	REF.	1	✓ UPPER TURNTABLE RISER	
15	15565-UP	4	BOLT - 1/2" x 2-1/2"	

✓ See reference page for component or assembly breakdown.

Note:

Use Loctite 271 (*red*) during installation.



01601 09/22/2000
9.375

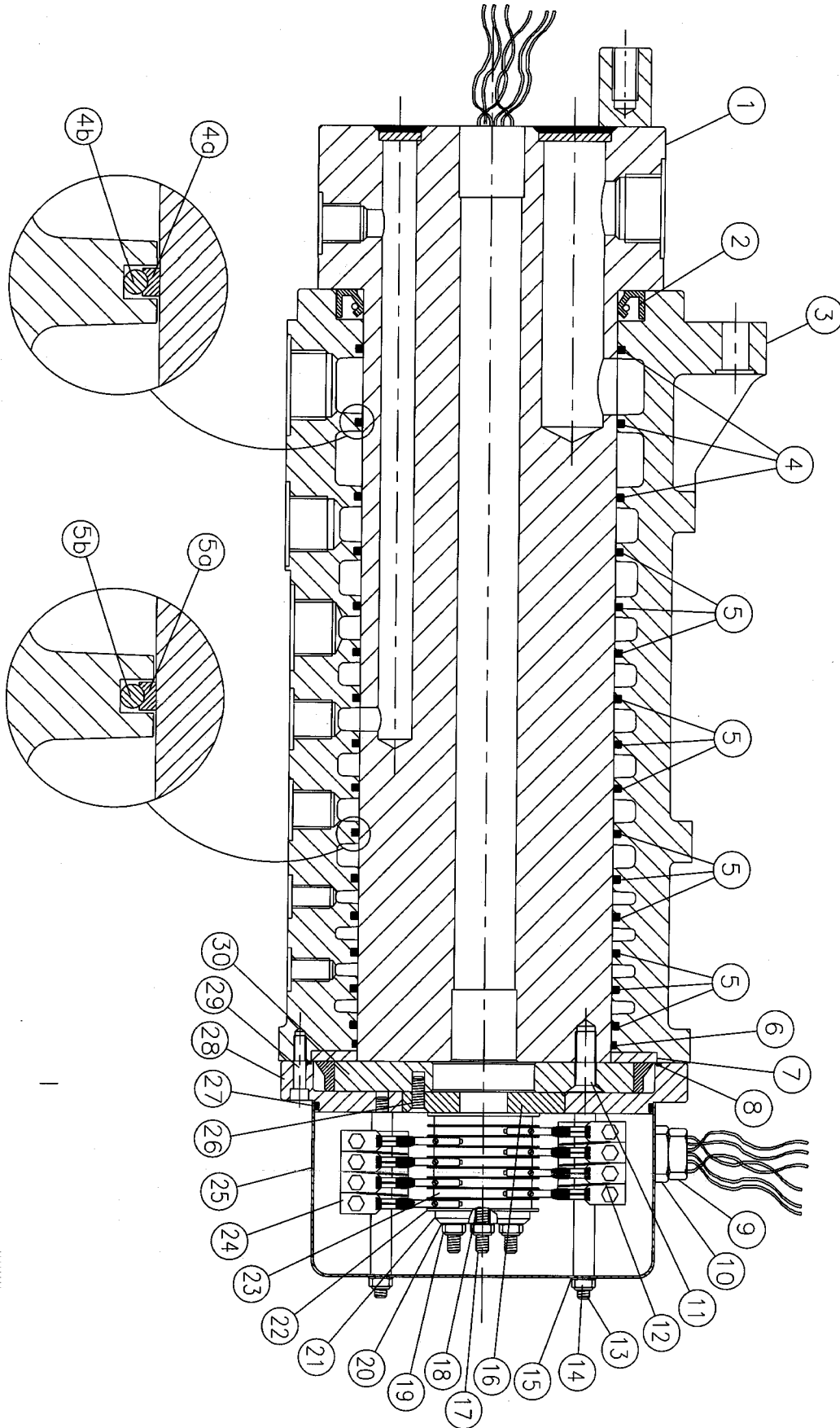
UPPER TURNTABLE INSTALLATION (Leveling Machine)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	14180-UP	1	WELDMENT, upper turntable	
2	19631-UP	1	BEARING, swing	
3	19813-UP	29	BOLT, allen head - 1" x 4-1/4" (Torque to 900 ft.lbs (1200 Nm))	
	19814-UP	1	BOLT, allen head - 1" x 4" (Torque to 900 ft.lbs (1200 Nm))	
4	10736-UP	4	BOLT - 1/2" x 2"	
5	15534-UP	14	WASHER, SAE flat - 1/2"	
6	19443-UP	1	BRACKET, rotary manifold mounting	
7	22463-UP	2	BOLT, special - 1/2" x 1-1/4" (<i>Hole drilled in head for safety wire</i>)(See Note Below)	
	22464-UP	AR	WIRE, safety - 16 gauge	
8	80468-UP	1	BRACKET, swivel lock	
9	10815-UP	4	NUT, lock - 1/2"	
10	REF.	1	✓ ROTARY MANIFOLD	UP-1-6
11	18535-UP	24	BOLT - 1" x 5" (Torque to 1000 ft.lbs (1350 Nm))	
12	18532-UP	24	WASHER, SAE flat - 1" extra thick	
13	12463-UP	24	SPACER, bolt - upper turntable mounting	
14	REF.	1	✓ LOWER TURNTABLE WELDMENT	BF-1-8
15	10739-UP	4	BOLT - 1/2" x 1-1/2"	

✓ See reference page for component or assembly breakdown.

Note:

Use Loctite 271 (*red*) during installation.



ROTARY MANIFOLD

(Used on machines PDN# 134FWD and below)

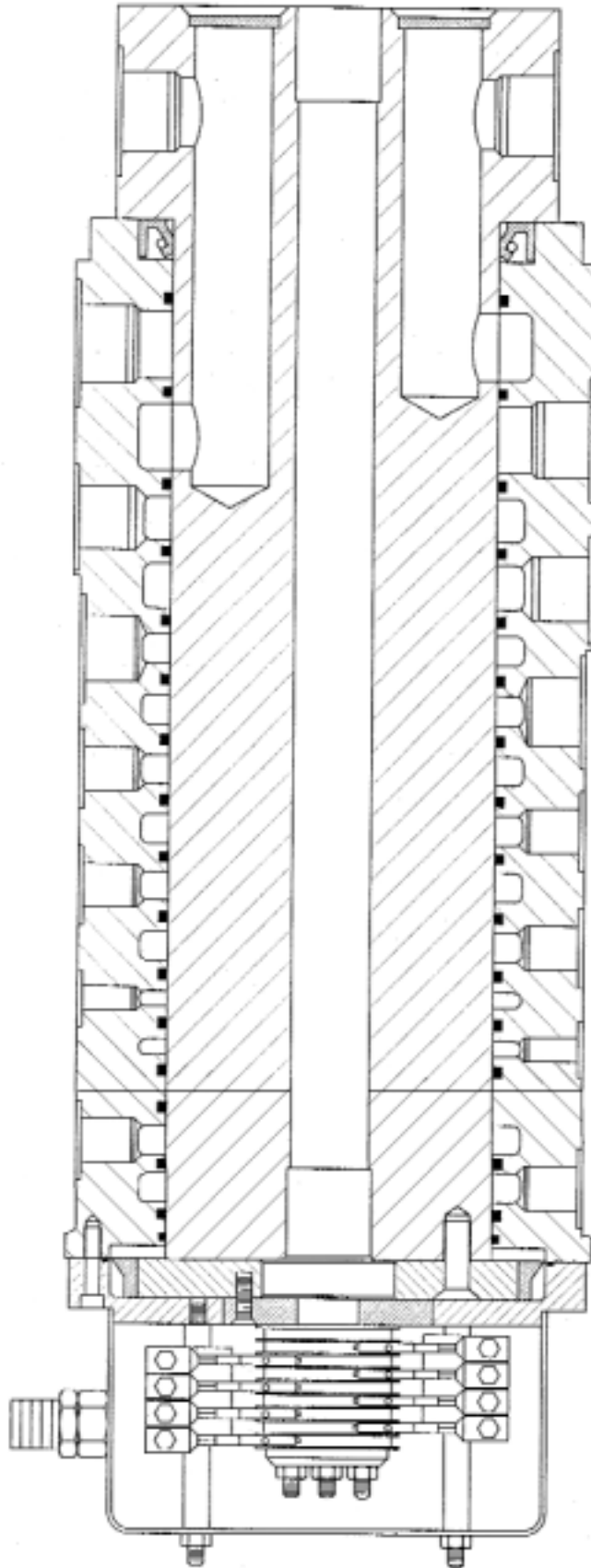
REF	PART #	QTY	DESCRIPTION	SEE PAGE
--	21044-UP	1	☐ MANIFOLD, rotary - 1-1/4" ORB porting	
1	NSS	1	PISTON	
2	20669-UP	1	★ SEAL, rotary manifold	
3	NSS	1	HOUSING	
4a	NSS	3	★ SEAL, lip (<i>high pressure</i>)	
4b	NSS	3	★ O-RING (<i>high pressure</i>)	
5a	NSS	3	★ SEAL, lip	
5b	NSS	3	★ O-RING	
6	NSS	1	★ O-RING	
7	----	1	RING, teflon	
8	20670-UP	1	★ O-RING, electrical section	
9	----	1	NUT, plastic	
10	----	1	NUT, plastic	
11	----	4	BOLT, flat head socket	
12	20671-UP	6	RING, insulator (<i>large diameter</i>)	
13	----	3	POST, brush	
14	----	3	NUT, nylon	
15	----	3	WASHER, nylon	
16	----	1	SUPPORT, armature post	
17	----	3	POST, armature	
18	----	3	POST, insulator	
19	----	3	NUT, nylon	
20	----	3	WASHER, nylon	
21	----	1	COVER, armature post	
22	20672-UP	9	RING, insulator (<i>small diameter</i>)	
23	20673-UP	8	RING, contact	
24	20674-UP	8	BRUSH, contact	
25	----	1	COVER	
26	----	2	STUD, threaded	
27	20675-UP	1	★ O-RING, cover	
28	----	1	POST, contact brush support	
29	----	4	BOLT, allen head	
30	----	1	PLATE, end (<i>w/integral wiper ring</i>)	
-	19633-UP	1	KIT, seal repair - rotary manifold	

- ☐ Kit or Assembly - includes all items indented underneath.
 ★ Included in seal repair kit Part # 19633-UP.

Note:

All rotary manifold components are interchangeable except the piston and housing.

**Component breakdown & Part#s not available
at time of printing. Contact your Timbco dealer
for current information.**



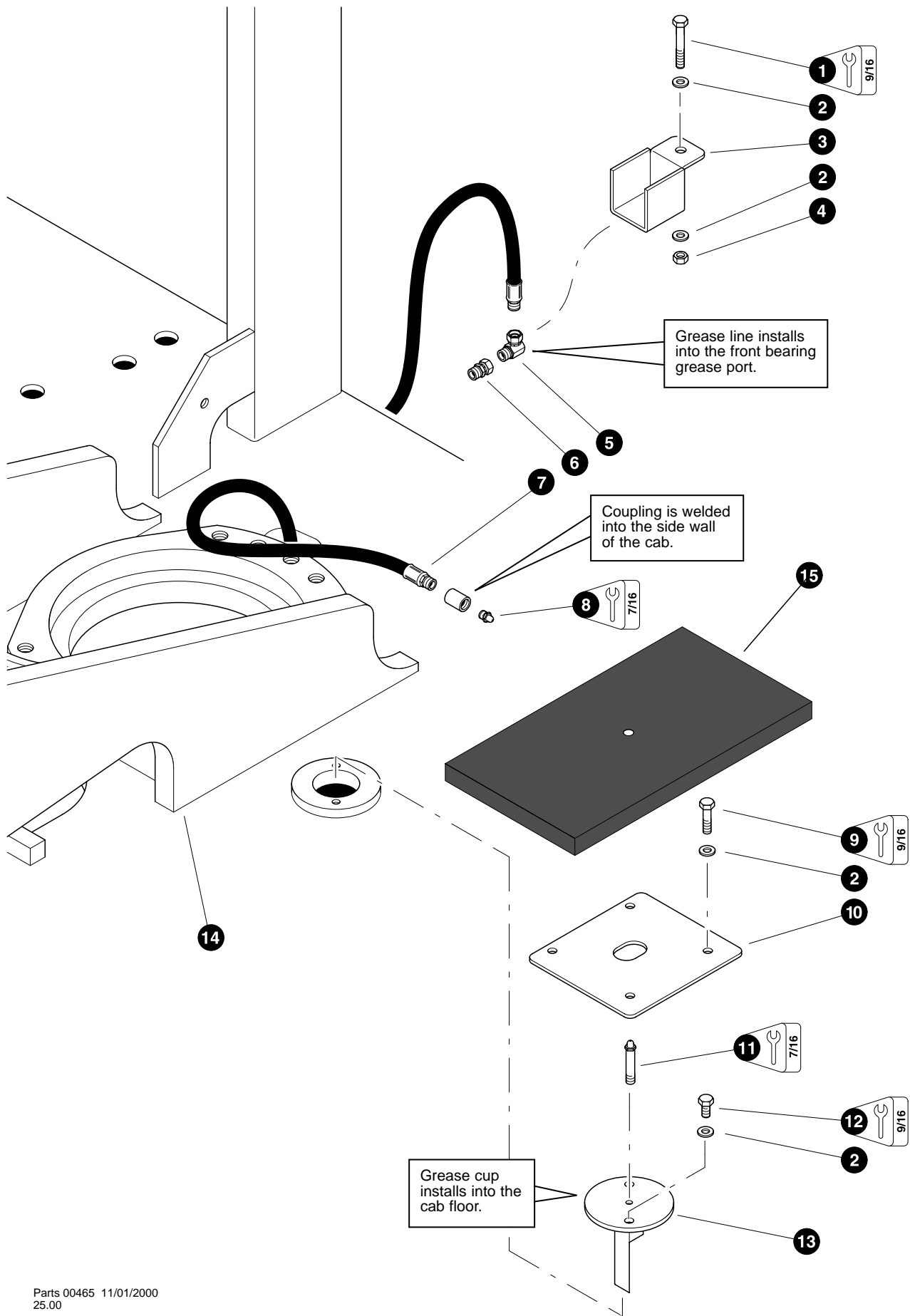
ROTARY MANIFOLD

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
--	22839-UP	1	<input type="checkbox"/> MANIFOLD, rotary - 1-1/4" ORB porting	
-	23625-UP	1	KIT, seal repair - rotary manifold	

- Kit or Assembly - includes all items indented underneath.
- ★ Included in seal repair kit Part # 23625-UP.

**Component breakdown & Part#s not available
at time of printing. Contact your Timbco dealer
for current information.**

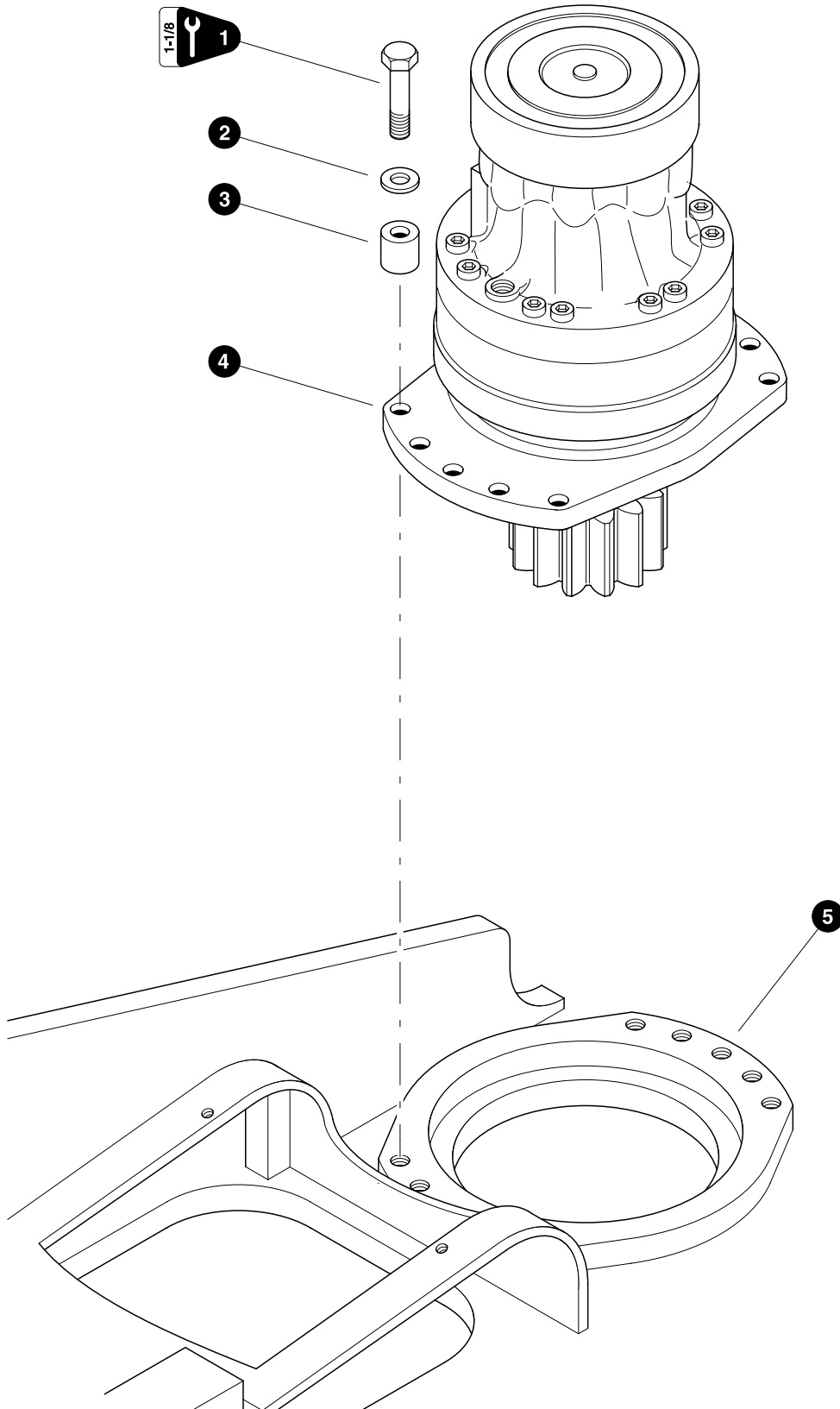


Parts 00465 11/01/2000
25.00

SWING BEARING GREASE LINES

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	15529-UP	1	BOLT - 3/8" x 2"	
2	15528-UP	8	WASHER, SAE flat - 3/8"	
3	19758-UP	1	GUARD, swing bearing grease port	
4	10813-UP	1	NUT, lock - 3/8"	
5	15657-UP	1	ELBOW, 90° swivel - 1501-2-2	
6	15391-UP	1	CONNECTOR, straight swivel - 1404-2-2	
7	20391-UP	1	HOSE ASSEMBLY - 2046-04-02PS-02PS (<i>Swing bearing grease port to cab sidewall coupling</i>)	
8	10704-UP	1	FITTING, straight grease - 1/8" pipe thread	
9	10731-UP	4	BOLT - 3/8" x 1-1/2"	
10	18248-UP	1	COVER, grease cup	
11	15685-UP	1	FITTING, straight long grease - 1/8" pipe thread	
12	15542-UP	2	BOLT - 3/8" x 3/4"	
13	17612-UP	1	CUP, grease	
14	REF.	1	✓ UPPER TURNTABLE WELDMENT	UP-1-2
15	23907-UP	1	FLOORMAT, grease cup - 1"	

✓ See reference page for component or assembly breakdown.

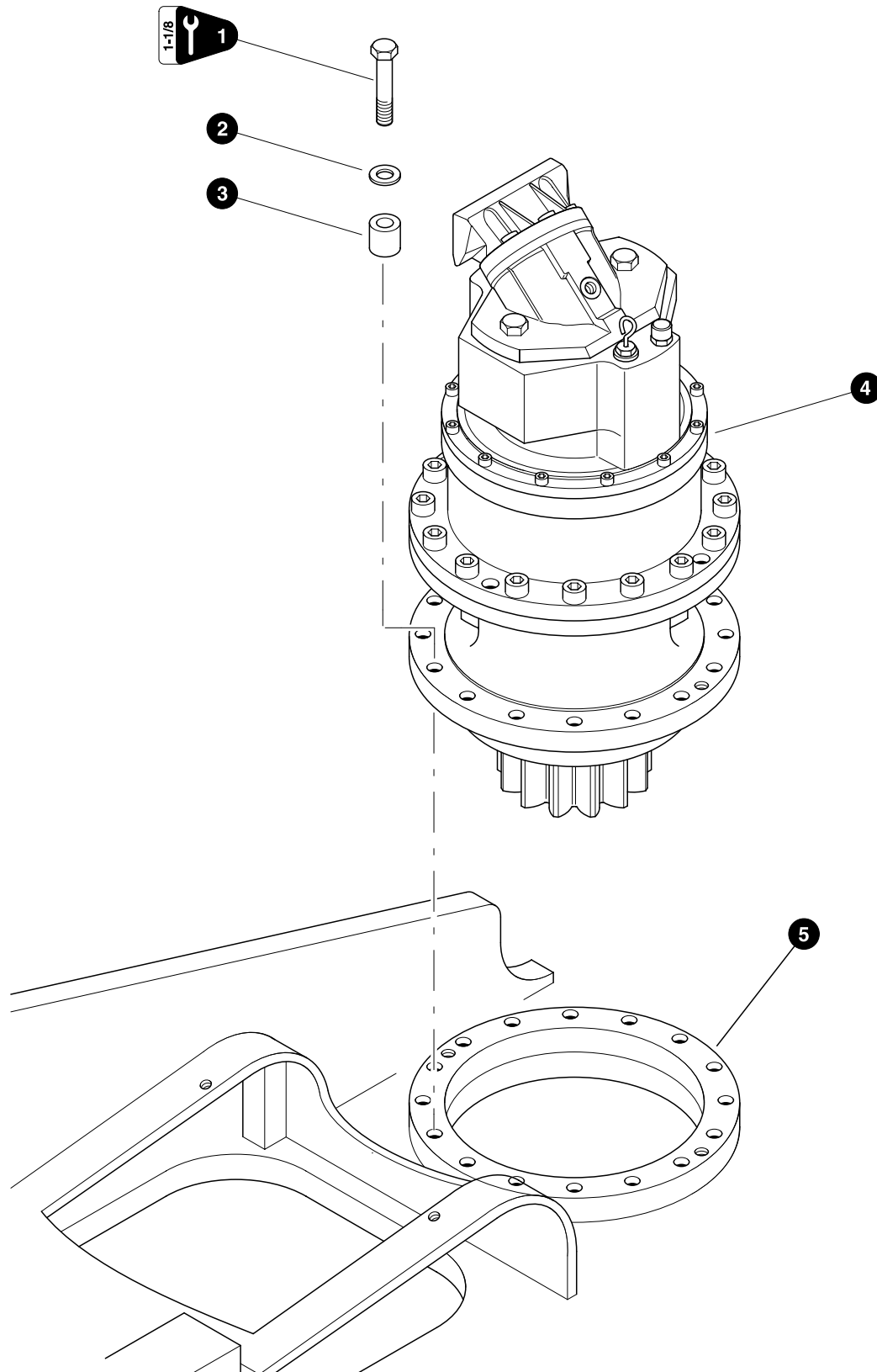


Parts 01835 09/22/2000
25.00

SWING MOTOR INSTALLATION (Poclair)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	10841-UP	10		BOLT - 3/4" x 3-1/2"	
2	15550-UP	10		WASHER, SAE flat - 3/4"	
3	18305-UP	10		SPACER, bolt	
4	REF.	1	✓	SWING MOTOR - Poclair	UP-2-2
5	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2

✓ See reference page for component or assembly breakdown.

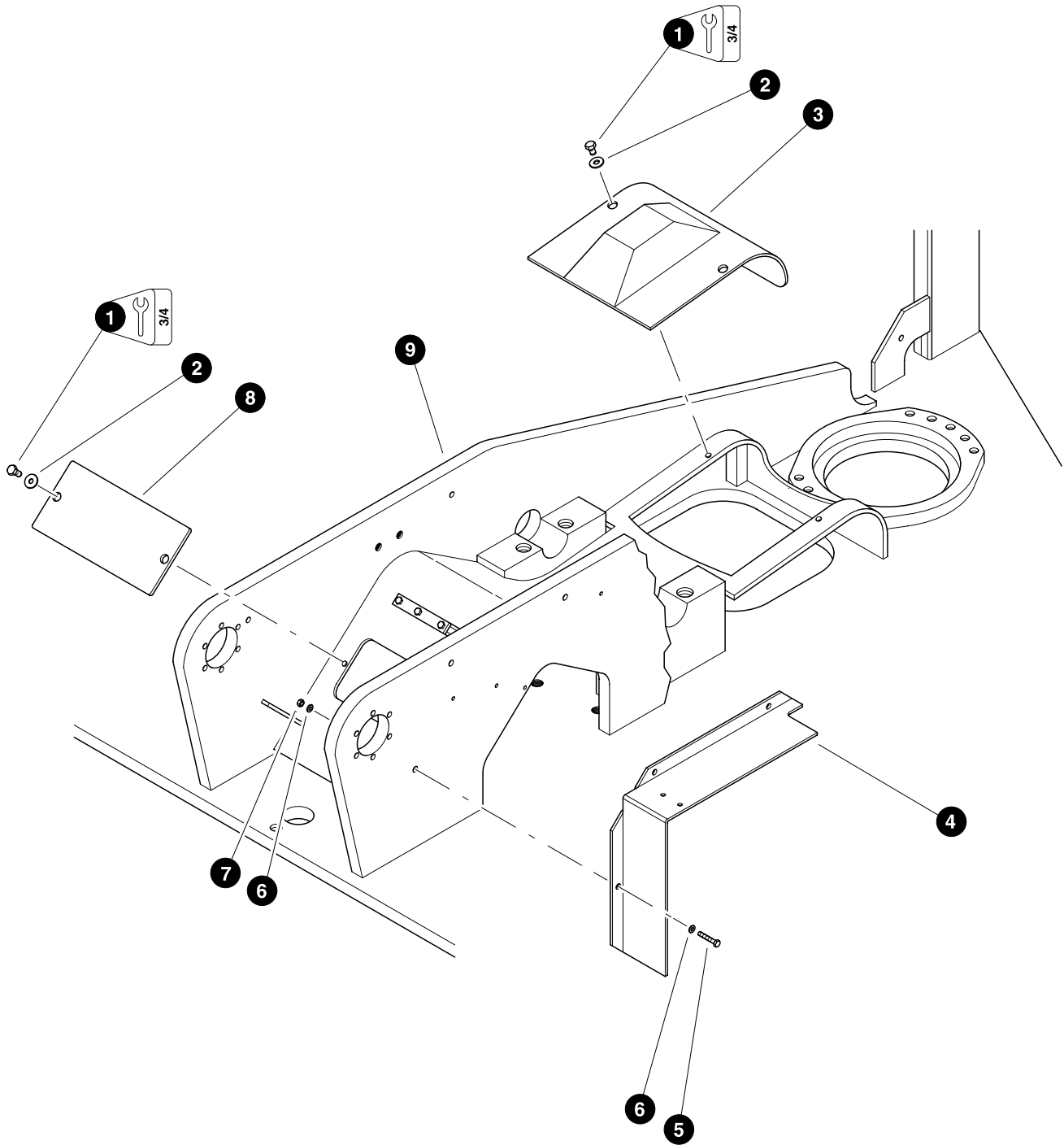


Parts 00621 11/01/200
25.00

SWING MOTOR INSTALLATION (Lohmann/Rexroth)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	10720-UP	16		BOLT - 5/8" x 3"	
2	10771-UP	16		WASHER, SAE flat - 5/8"	
3	19242-UP	16		SPACER, bolt	
4	REF.	1	✓	SWING MOTOR - Lohmann/Rexroth	UP-2-8
5	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2

✓ See reference page for component or assembly breakdown.

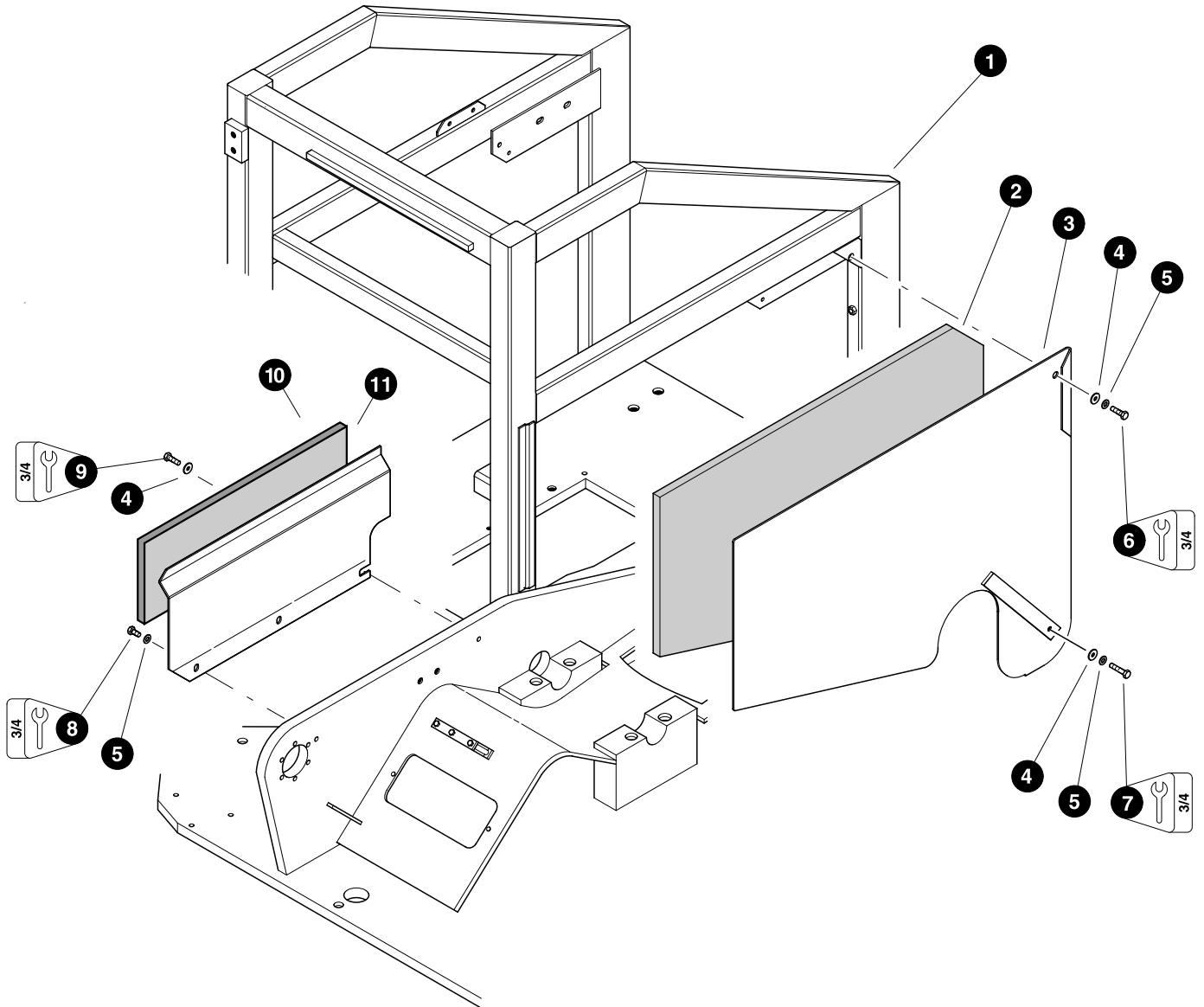


Parts 00099 05/21/96
12.50

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Boom Mounting Area Access Covers)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	10783-UP	4	BOLT - 1/2" x 1"	
2	15534-UP	4	WASHER, SAE flat - 1/2"	
3	14093-UP	1	COVER, swivel access	
4	18490-UP	1	GUARD, pilot pressure valve manifold	
5	15529-UP	3	BOLT - 3/8" x 2"	
6	15528-UP	6	WASHER, SAE flat - 3/8"	
7	10813-UP	3	NUT, lock - 3/8"	
8	18467-UP	1	COVER, foot shuttle valve access	
9	REF.	1	✓ UPPER TURNTABLE WELDMENT	UP-1-2

- ✓ See reference page for component or assembly breakdown.

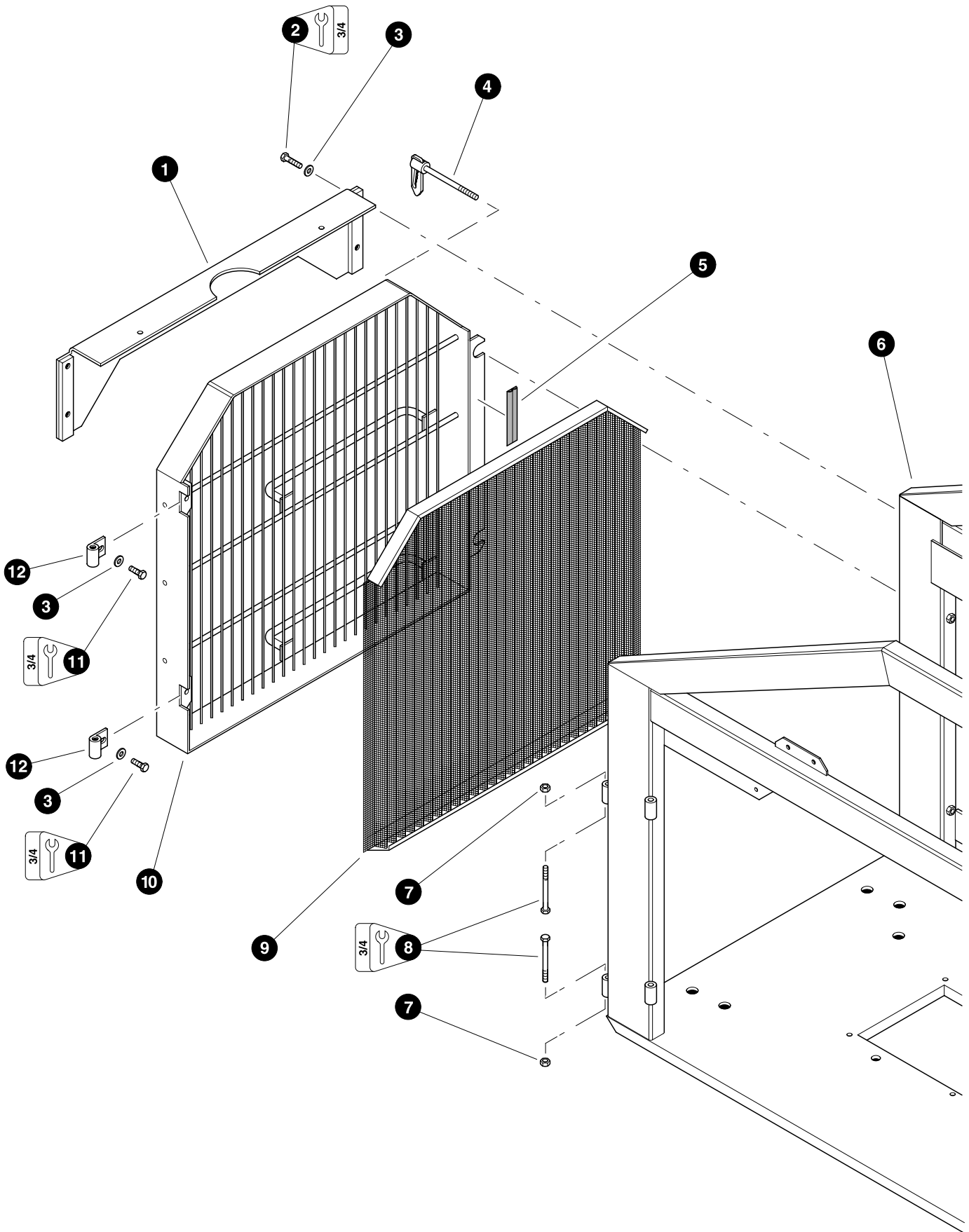


Parts 00311 12/05/97
9.375

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Cab-Side Engine & Pump Compartment Guards)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2
2	17506-UP	1		INSULATION, soundproof - cab-side engine pivot guard	
3	14088-UP	1		GUARD, cab-side engine pivot	
4	10804-UP	3		WASHER, flat - 1/2"	
5	15534-UP	4		WASHER, SAE flat - 1/2"	
6	10736-UP	1		BOLT - 1/2" x 2"	
7	15565-UP	1		BOLT - 1/2" x 2-1/2"	
8	10783-UP	1		BOLT - 1/2" x 1"	
9	10739-UP	1		BOLT - 1/2" x 1-1/2"	
10	17235-UP	1		GUARD, cab-side pump compartment	

✓ See reference page for component or assembly breakdown.

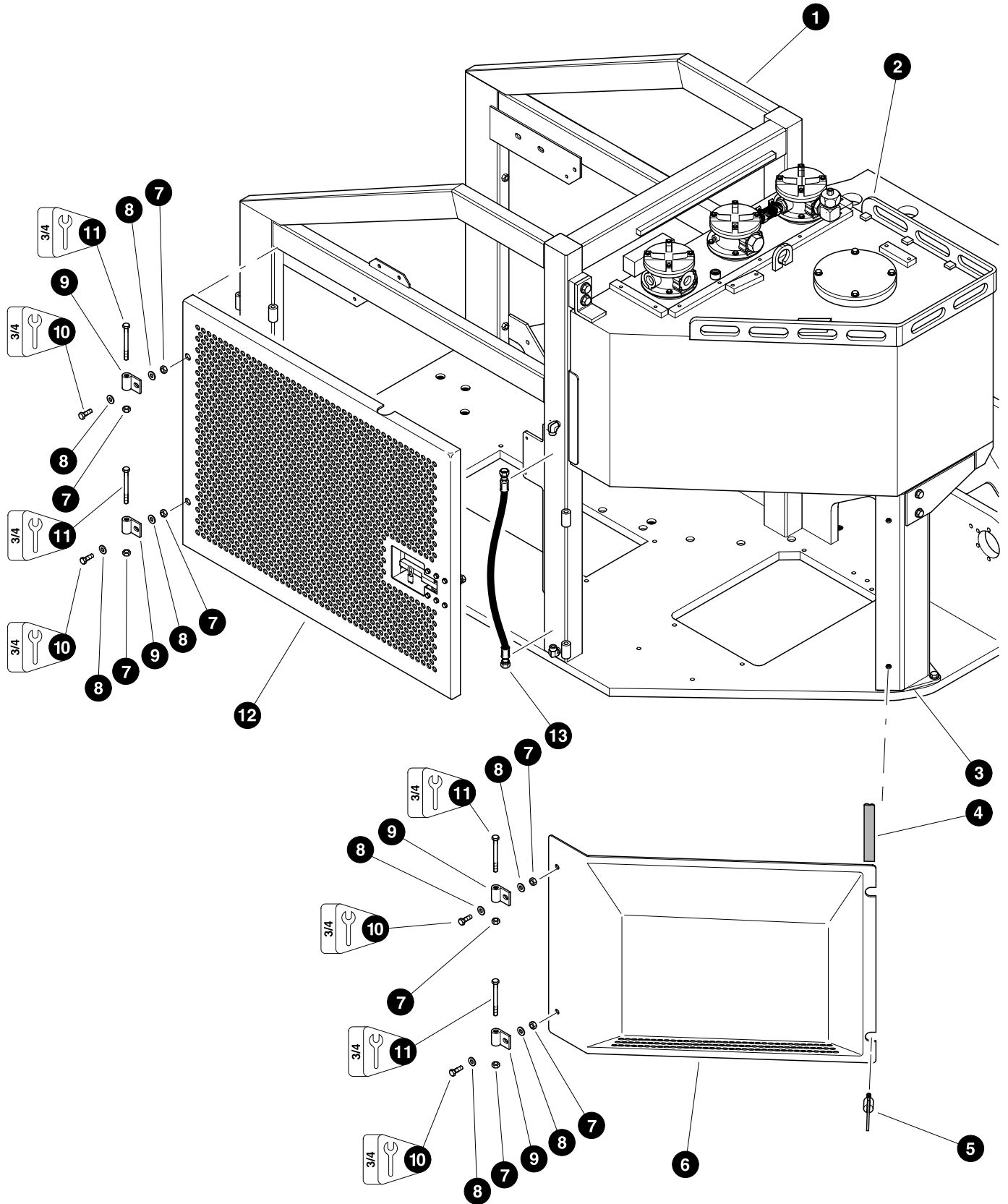


Parts 00312 12/05/97
12.50

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Swing-Out Radiator Guard)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	17820-UP	1		MEMBER, radiator support	
2	10736-UP	4		BOLT - 1/2" x 2"	
3	15534-UP	6		WASHER, SAE flat - 1/2"	
4	19772-UP	2		LATCH, cam - radiator guard	
5	18126-UP	AR	>∞	WEATHERSTRIP	
6	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2
7	10815-UP	2		NUT, lock - 1/2"	
8	10705-UP	2		BOLT - 1/2" x 5"	
9	17630-UP	1		SCREEN, radiator protection	
10	19774-UP	1		GUARD, swing-out radiator	
11	10783-UP	2		BOLT - 1/2" x 1"	
12	16403-UP	2		BRACKET, hinge	

- >∞ Bulk Material - order length required in feet or meters.
 ✓ See reference page for component or assembly breakdown.

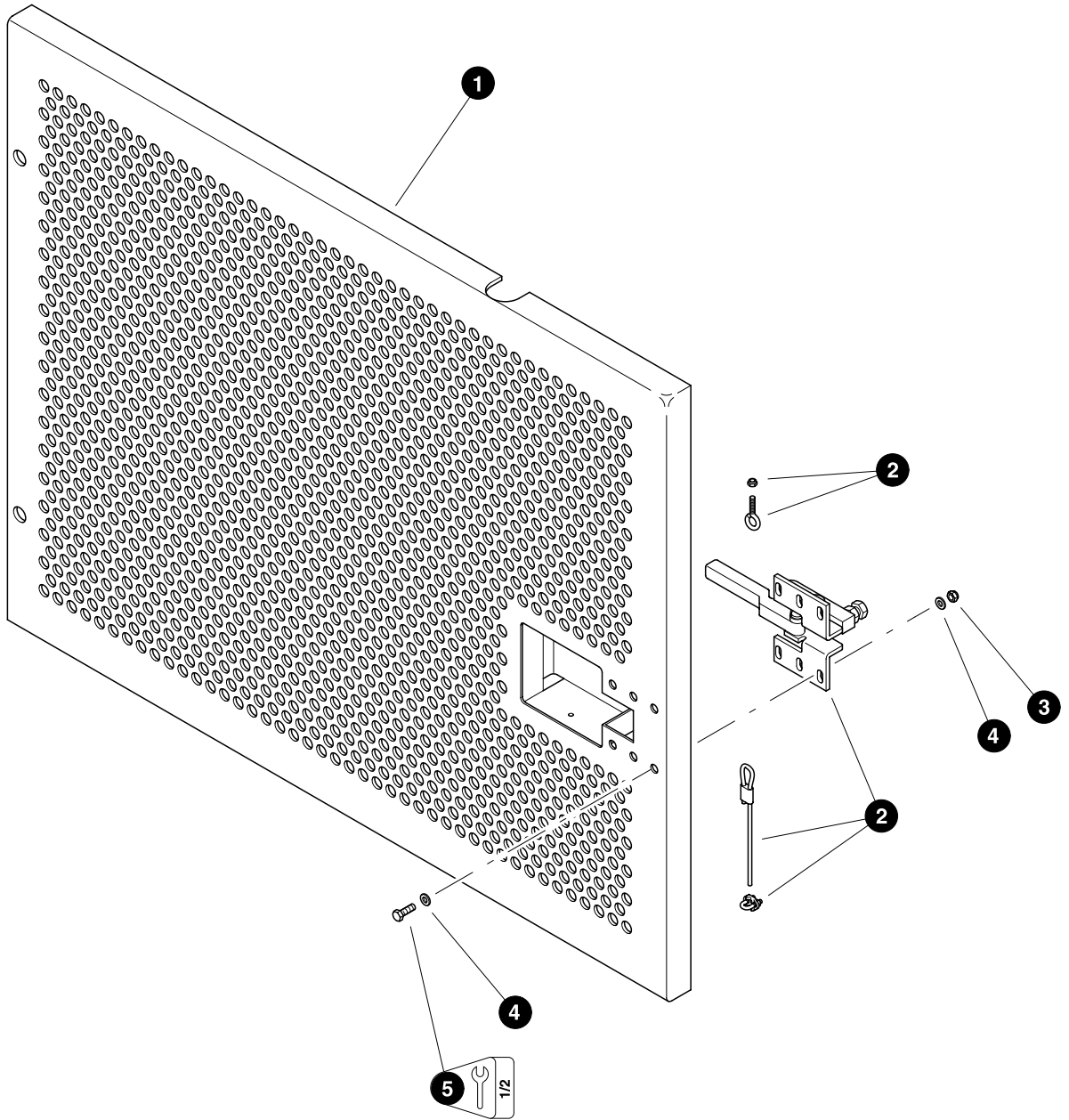


Parts 00313 12/05/97
9.375

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Swing-Out Engine & Pump Compartment Guards)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2
2	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2
3	REF.	1	✓	HYDRAULIC TANK SUPPORT	UP-4-6
4	18126-UP	AR	⊘	WEATHERSTRIP	
5	19771-UP	2		LATCH, cam - swing-out pump guard	
6	19773-UP	1		GUARD, swing-out pump	
7	10815-UP	8		NUT, lock - 1/2"	
8	15534-UP	8		WASHER, SAE flat - 1/2"	
9	16403-UP	4		BRACKET, hinge	
10	10739-UP	4		BOLT - 1/2" x 1-1/2"	
11	10705-UP	4		BOLT - 1/2" x 5"	
12	REF.	1	✓	SWING-OUT ENGINE GUARD ASSEMBLY	UP-1-22
13	17420-UP	1		HOSE ASSEMBLY - 2030-08-08JS-08JS (<i>Used as hand hold</i>)	

- ⊘ Bulk Material - order length required in feet or meters.
 ✓ See reference page for component or assembly breakdown.

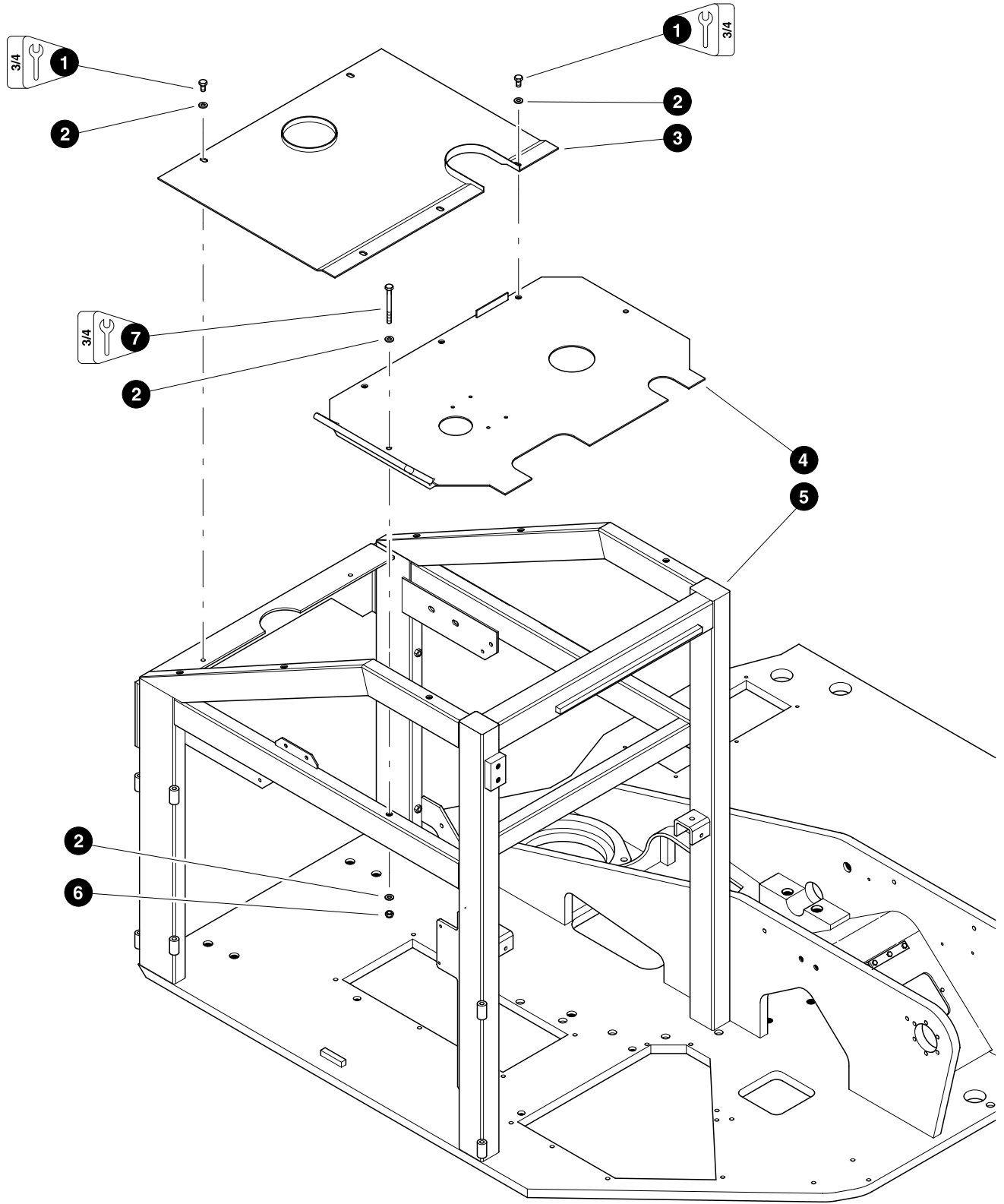


Parts 01651 04/19/2000
18.75

SWING-OUT ENGINE GUARD WITH TOGGLE LATCH

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	19199-UP	1	<input type="checkbox"/> SWING-OUT ENGINE GUARD ASSEMBLY	
1	20072-UP	1	WELDMENT, swing-out engine guard	
2	20078-UP	1	LATCH, toggle	
3	10788-UP	6	NUT, nylock - 5/16"	
4	15559-UP	6	WASHER, SAE flat - 5/16"	
5	15589-UP	6	BOLT - 5/16" x 1"	

- Kit or Assembly - includes all items indented underneath.

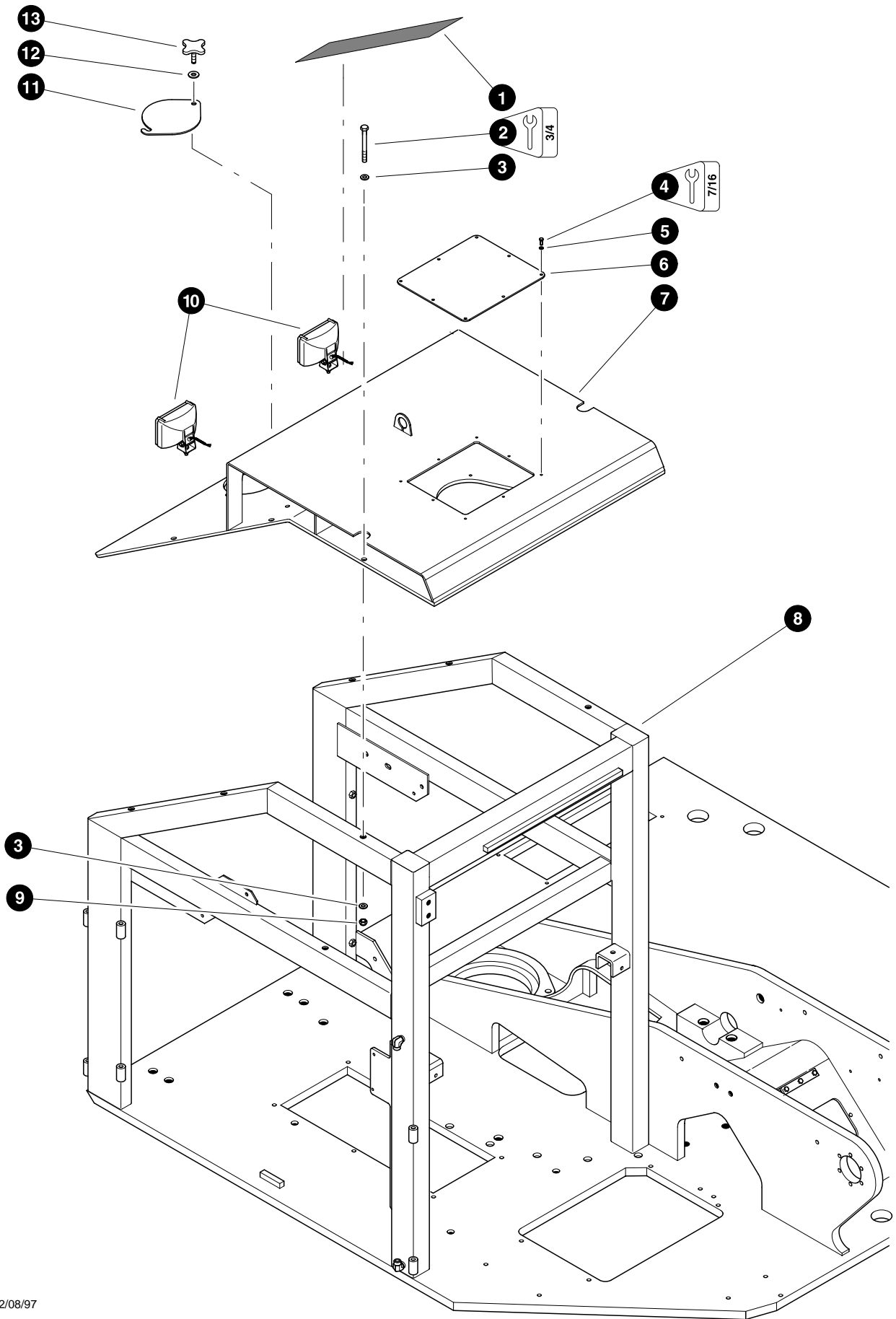


Parts 00104 06/01/96
9.375

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Air Cleaner & Muffler Panels)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	10783-UP	5	BOLT - 1/2" x 1"	
2	15534-UP	9	WASHER, SAE flat - 1/2"	
3	19503-UP	1	PANEL, muffler <i>(Used with Cummins 6C8.3-C engine)</i>	
	17816-UP	1	PANEL, muffler <i>(Used with Deere T6068 engines)</i>	
4	18677-UP	1	PANEL, air cleaner <i>(Used with Cummins 6C8.3-C engine)</i>	
	17815-UP	1	PANEL, air cleaner <i>(Used with Deere T6068TF engines)</i>	
5	REF.	1	✓ UPPER TURNTABLE WELDMENT	UP-1-2
6	10815-UP	2	NUT, lock - 1/2"	
7	10705-UP	2	BOLT - 1/2" x 5"	

- ✓ See reference page for component or assembly breakdown.

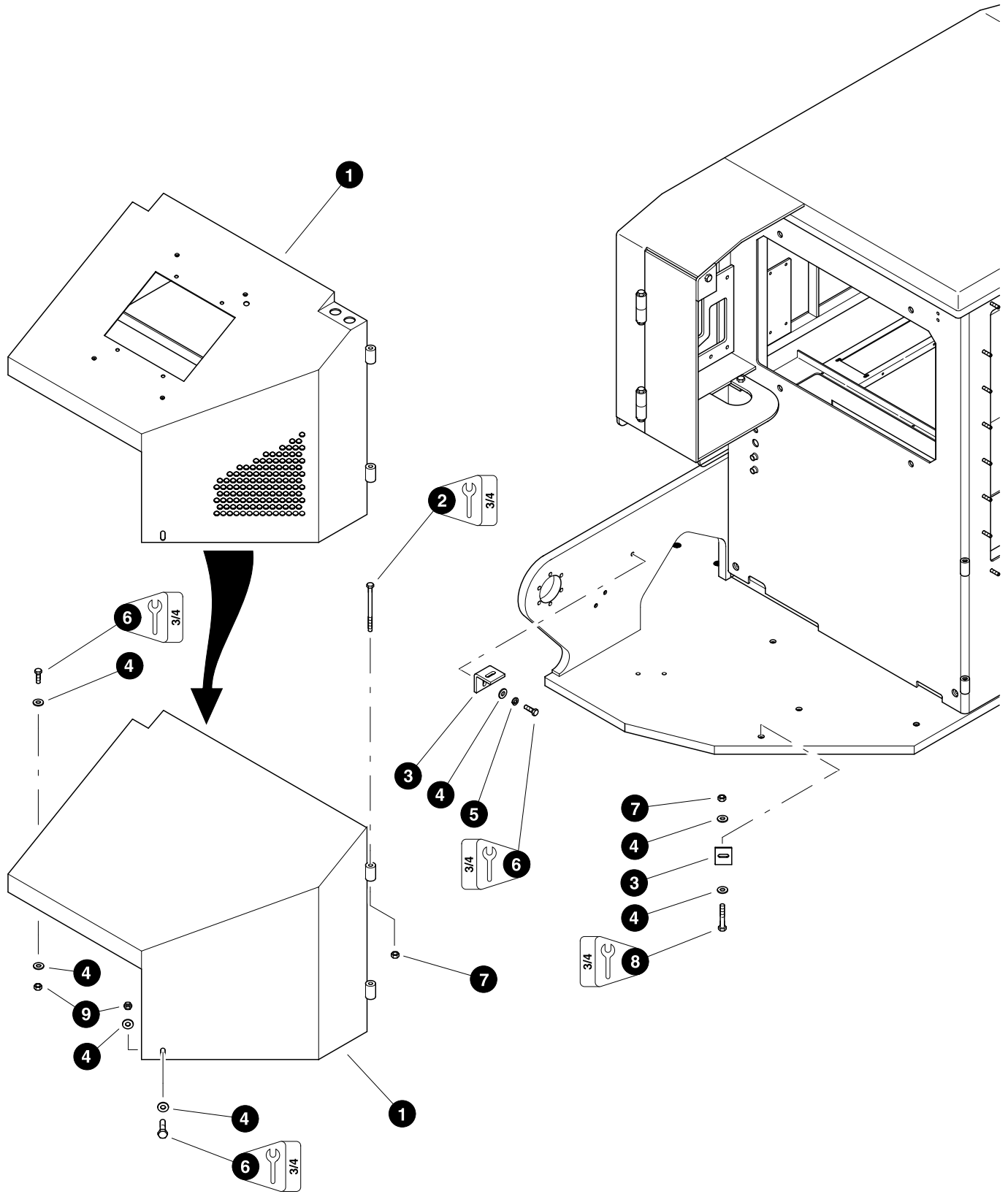


Parts 00317 12/08/97
9.375

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Engine ROPS/FOPS Panel)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	16544-UP	AR	>∞	NON-SKID - 6"	
2	10705-UP	6		BOLT - 1/2" x 5"	
3	15534-UP	12		WASHER, SAE flat - 1/2"	
4	15604-UP	8		BOLT - 1/4" x 3/4"	
5	10757-UP	8		WASHER, SAE flat - 1/4"	
6	19562-UP	6		COVER, access - ROPS panel	
7	19331-UP	1		PANEL, ROPS/FOPS	
8	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2
9	10815-UP	6		NUT, lock - 1/2"	
10	19390-UP	2		LIGHT, rectangular - dual lamp	
11	12150-UP	1		COVER, radiator fill access	
12	10804-UP	2		WASHER, flat - 1/2"	
13	16849-UP	2		KNOB, star - 1-1/2"	

- >∞ Bulk material - order length required in feet or meters.
 ✓ See reference page for component or assembly breakdown.

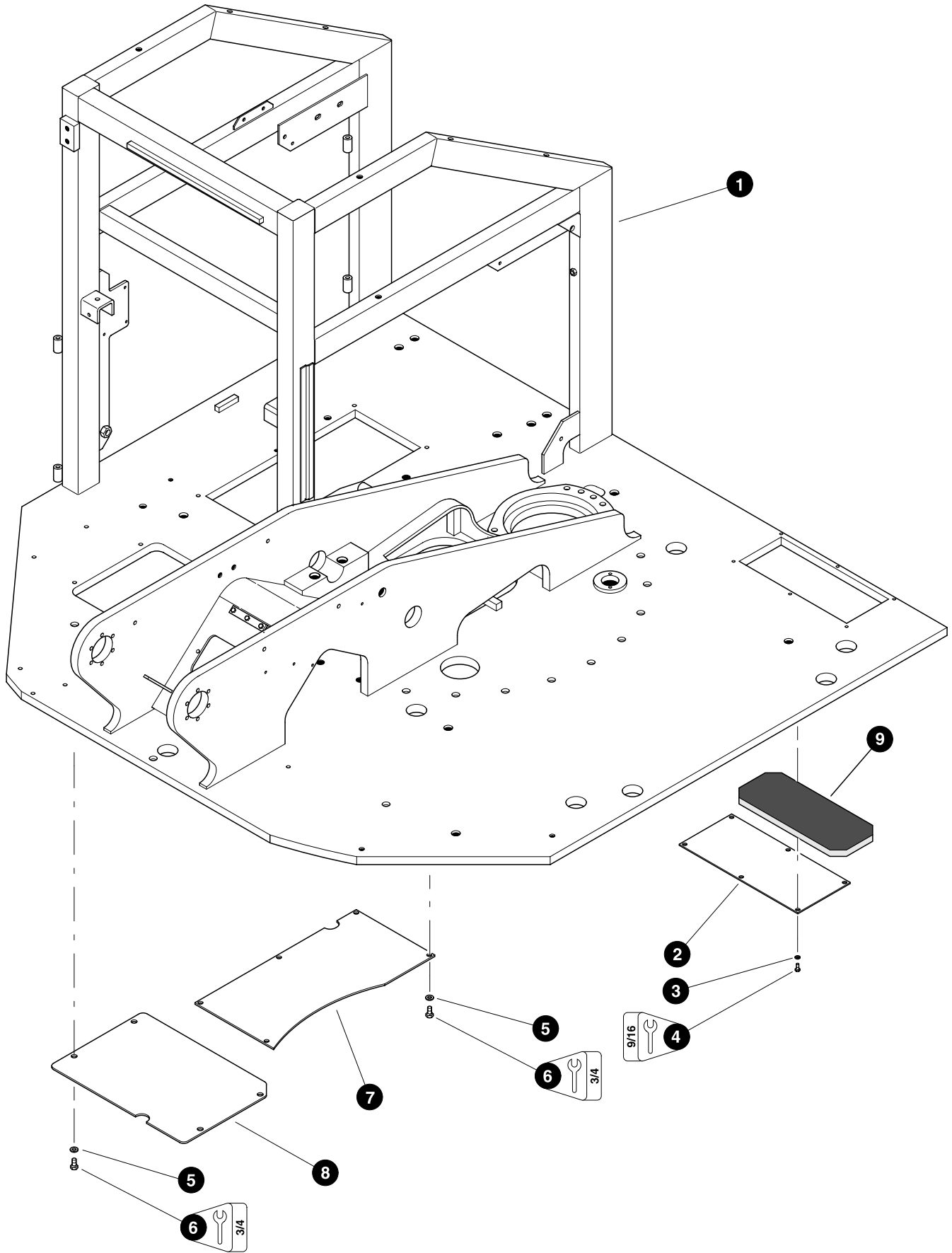


Parts 01617 03/15/2000
9.375

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION (Swing-Out Valve Guard)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	18213-UP	1	GUARD, swing-out valve (<i>Standard</i>)	
	REF.	1	✓ GUARD, swing-out valve (<i>Optional</i>)(Used with auxiliary oil cooler)	UP-3-?
2	10705-UP	2	BOLT - 1/2" x 5"	
3	16404-UP	2	BRACKET, cover mounting	
4	15534-UP	7	WASHER, SAE flat - 1/2"	
5	10710-UP	1	WASHER, lock - 1/2"	
6	10739-UP	3	BOLT - 1/2" x 1-1/2"	
7	10815-UP	3	NUT, lock - 1/2"	
8	15565-UP	1	BOLT - 1/2" x 2-1/2"	
9	15533-UP	2	NUT, nylock - 1/2"	

✓ See reference page for component or assembly breakdown.



Parts 00320 12/08/97
9.375

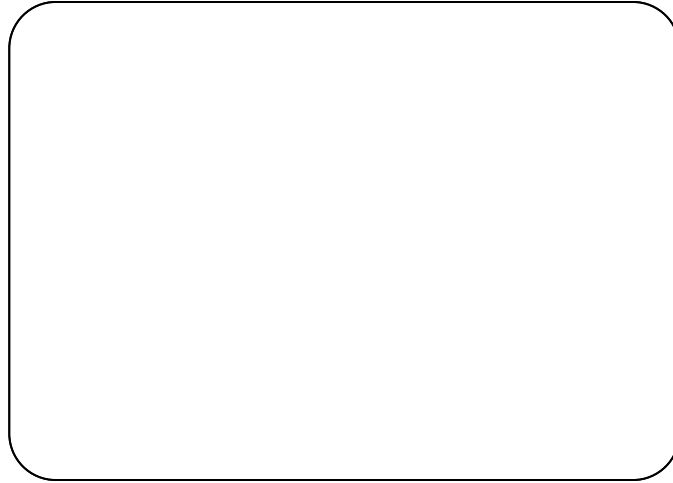
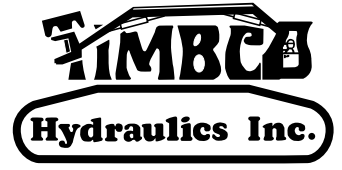
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION

(Access Covers On Underside Of Upper Turntable Plate)

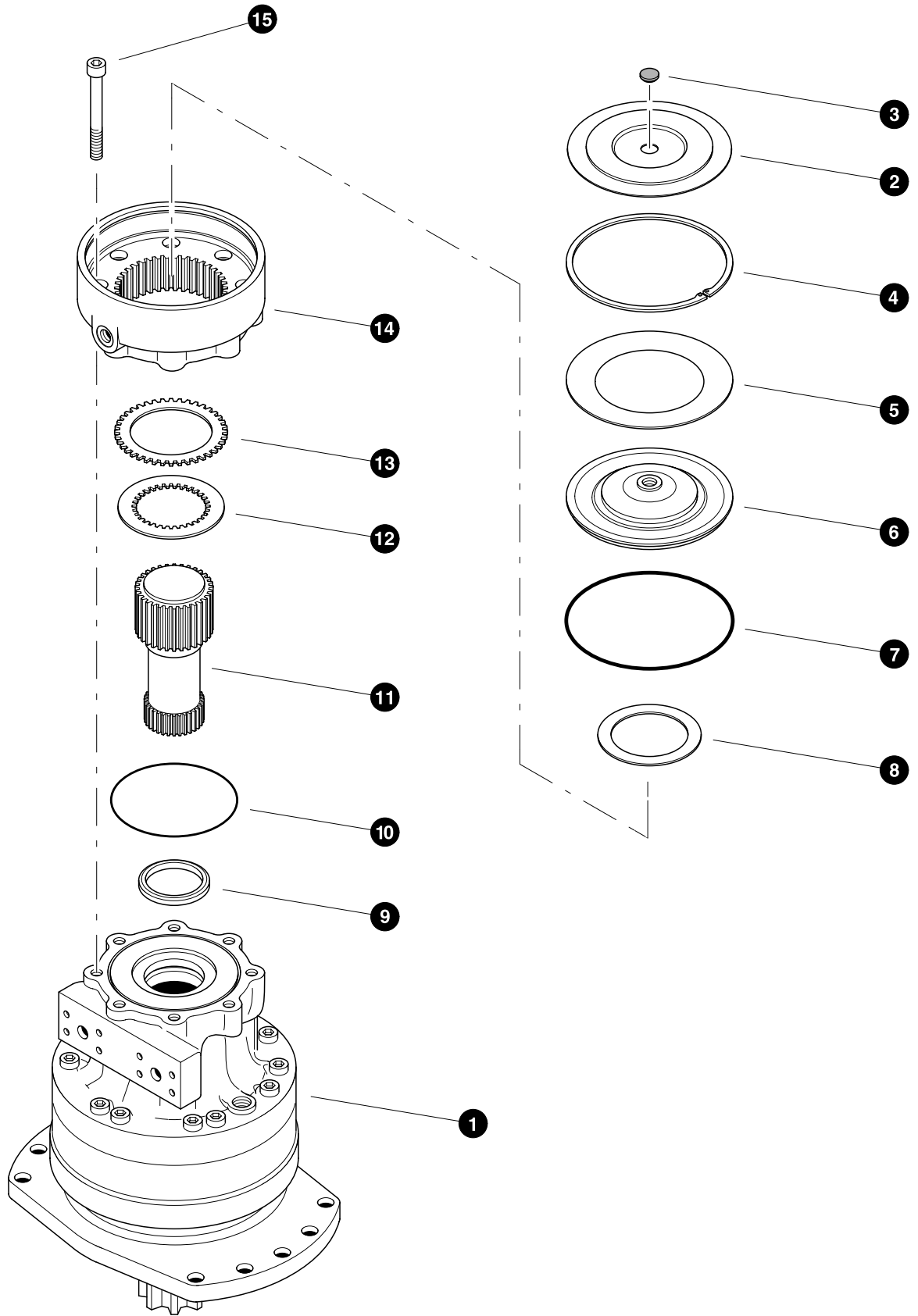
REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2
2	18212-UP	1		COVER, foot pedal access	
3	15528-UP	6		WASHER, SAE flat - 3/8"	
4	15542-UP	6		BOLT - 3/8" x 3/4"	
5	15534-UP	9		WASHER, SAE flat - 1/2"	
6	10783-UP	9		BOLT - 1/2" x 1"	
7	18235-UP	1		COVER, oil sump access	
8	19253-UP	1		COVER, pump access	
9	22550-UP	1		INSULATION, foot pedal access	

- ✓ See reference page for component or assembly breakdown.

Section UP-2



Upper Turntable - Swing Motors



Parts 00480 11/18/98
12.50

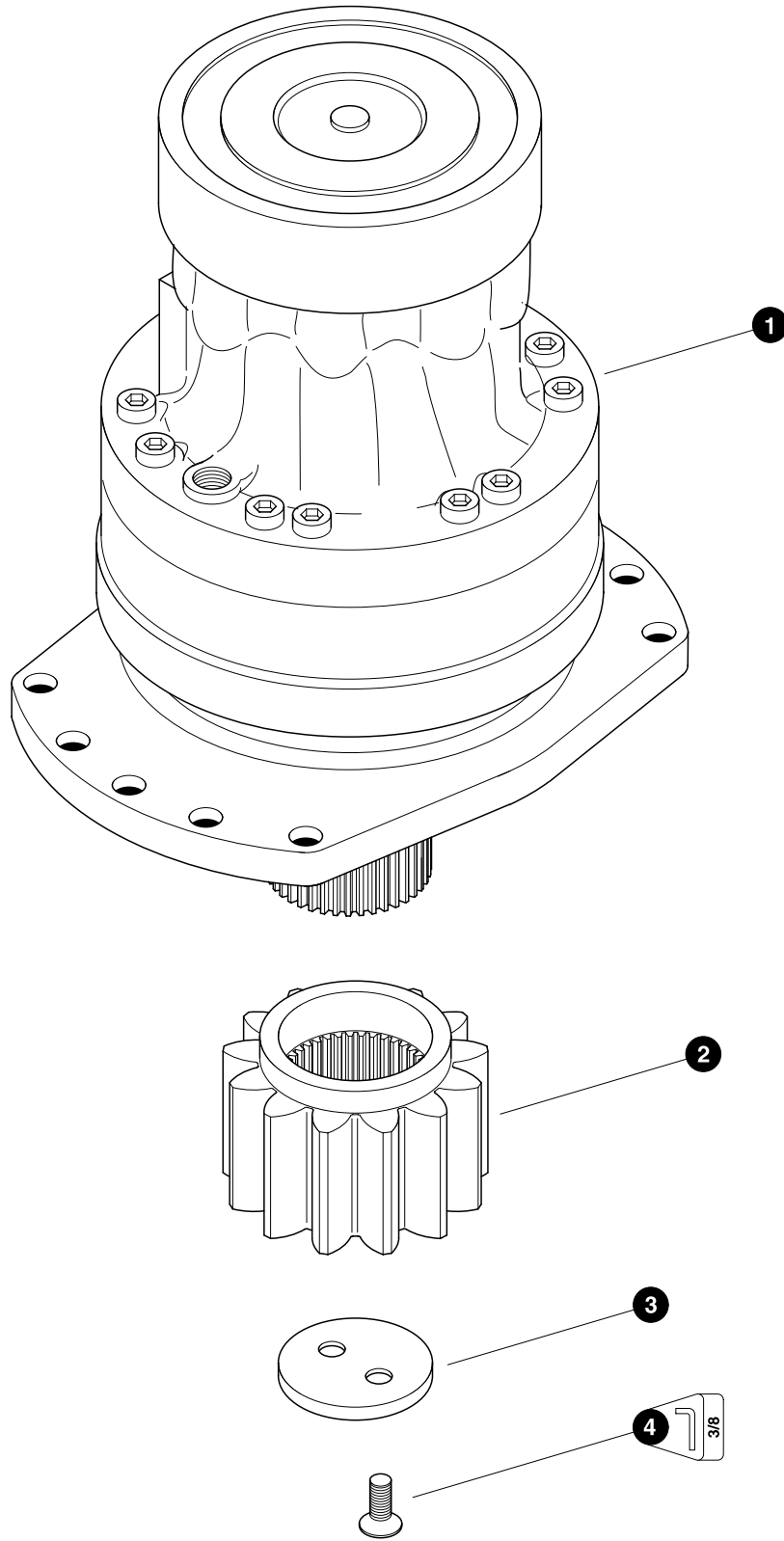
POCLAIN SWING MOTOR w/BRAKE

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	19201-UP	1	☐	MOTOR, swing - Poclain	
2	18557-UP	1		COVER, brake piston	
3	20759-UP	1		GROMMET	
4	20781-UP	1		RING, snap	
5	20782-UP	1		WASHER, bevel	
6	20783-UP	1	℄	PISTON, brake (<i>Requires special tool for removal</i>)	
7	17781-UP	1		O-RING, brake piston	
8	20784-UP	AR		SHIM KIT, brake disc	
9	17780-UP	1		SEAL, shaft	
10	20785-UP	1		O-RING, brake housing	
11	20786-UP	1		SHAFT, brake	
12	NSS	11	★	DISC, brake - internal tooth	
13	NSS	12	★	DISC, brake - external tooth	
14	NSS	1		HOUSING, brake	
15	20787-UP	8		BOLT, allen head	
-	20788-UP	1		KIT, repair - brake disc	

- ☐ Kit or Assembly - includes all items indented underneath.
- ℄ Contact your TIMBCO dealer for additional information.
- ★ Included in disc brake kit PN# 20788-UP.

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.

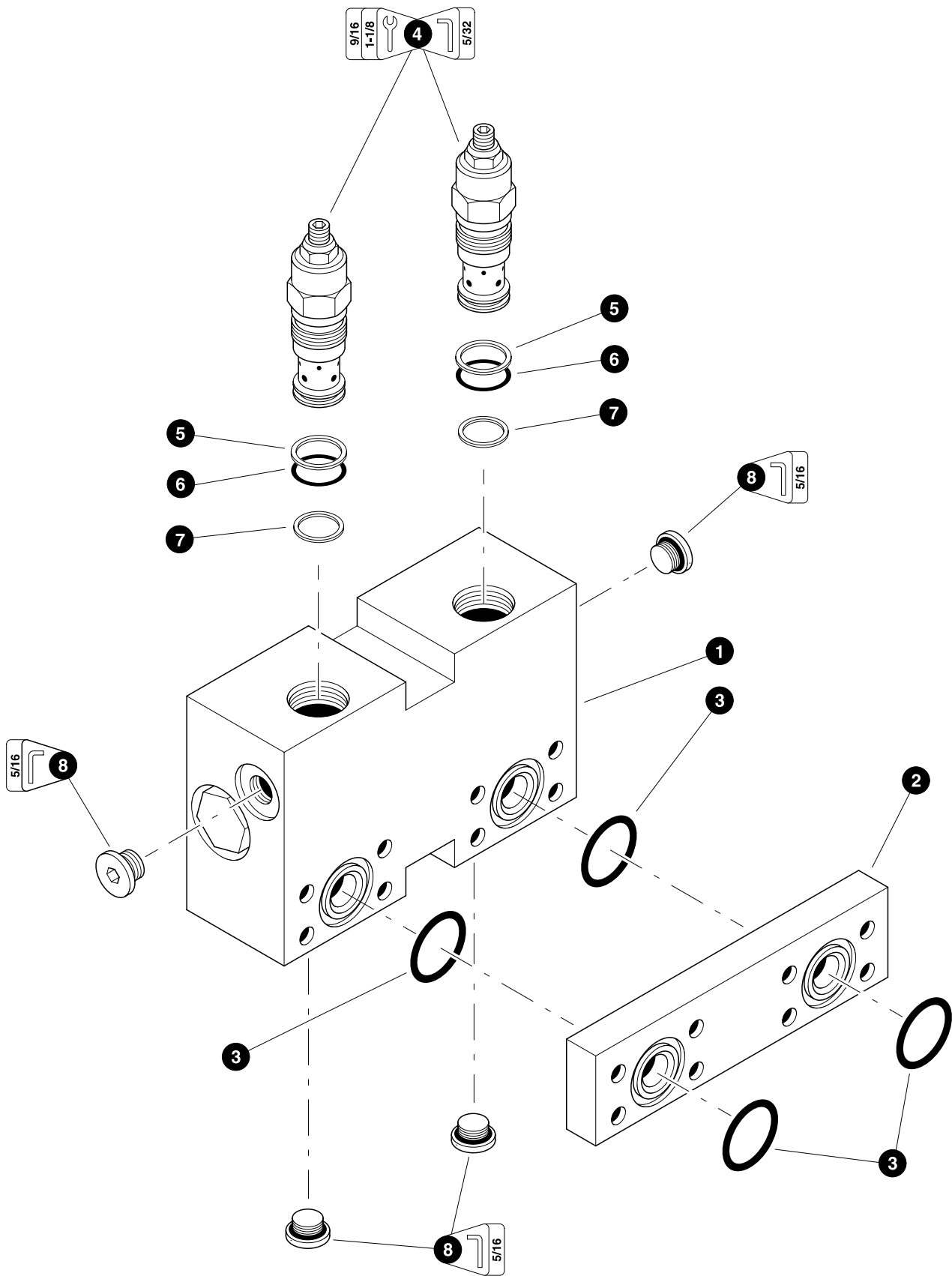


Parts 01836 09/22/2000
37.50

POCLAIN SWING MOTOR PINION INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ SWING MOTOR - Poclain	UP-2-2
2	17499-UP	1	PINION, swing motor	
3	17637-UP	1	WASHER, pinion	
4	17634-UP	2	BOLT, flat head socket - 14mm-2.0P x 30mm	

- ✓ See reference page for component or assembly breakdown.

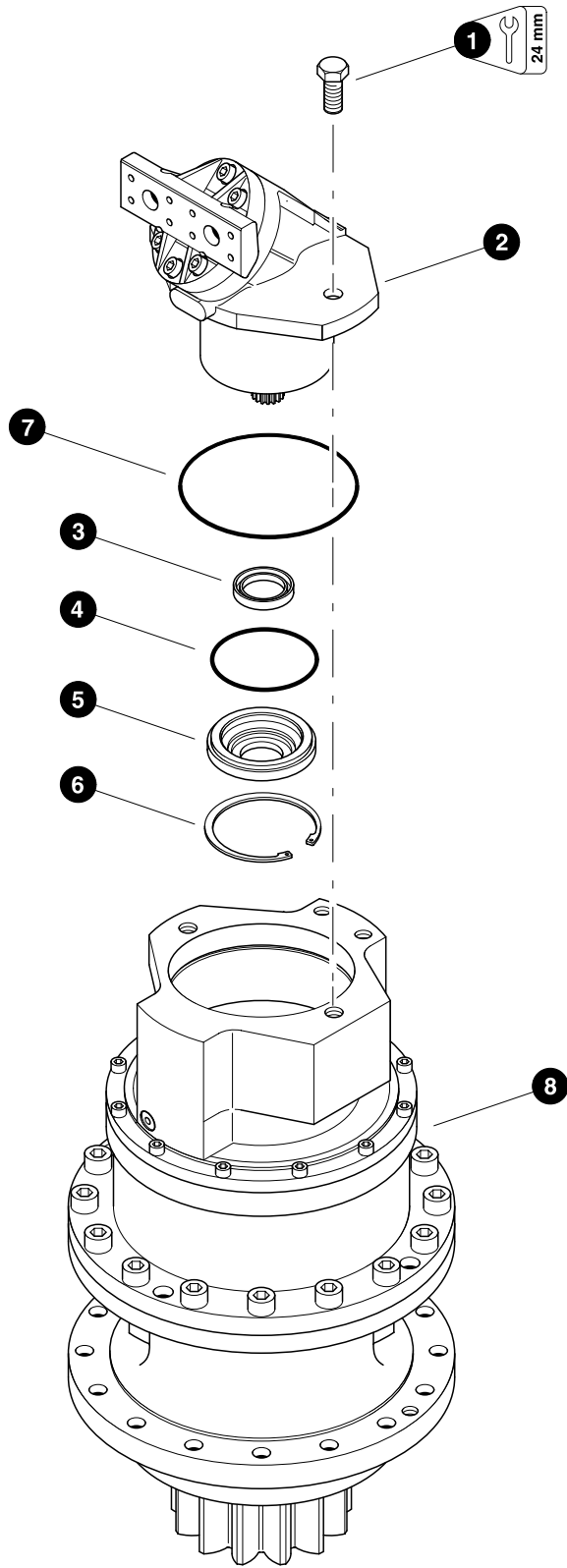


Parts 00156 05/12/96
62.50

POCLAIN SWING MOTOR ANTI-CAVITATION VALVE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	18449-UP	1	☐ VALVE, swing motor anti-cavitation	
1	NSS	1	HOUSING, valve body	
2	NSS	1	SPACER, valve body	
3	16918-UP	4	O-RING - 3/4" (Code 62)	
4	19270-UP	2	CARTRIDGE, anti-cavitation	
5	NSS	1	★ O-RING, body	
6	NSS	1	★ O-RING, chamber	
7	NSS	1	★ RING, back-up - chamber	
8	19271-UP	4	PLUG - 6408-HHP-10	
-	19272-UP	1	KIT, seal repair - anti-cavitation cartridge	

- ☐ Kit or Assembly - includes all items indented underneath.
 ★ Included in seal repair kit Part # 19272.



Parts 00625 08/07/98
25.00

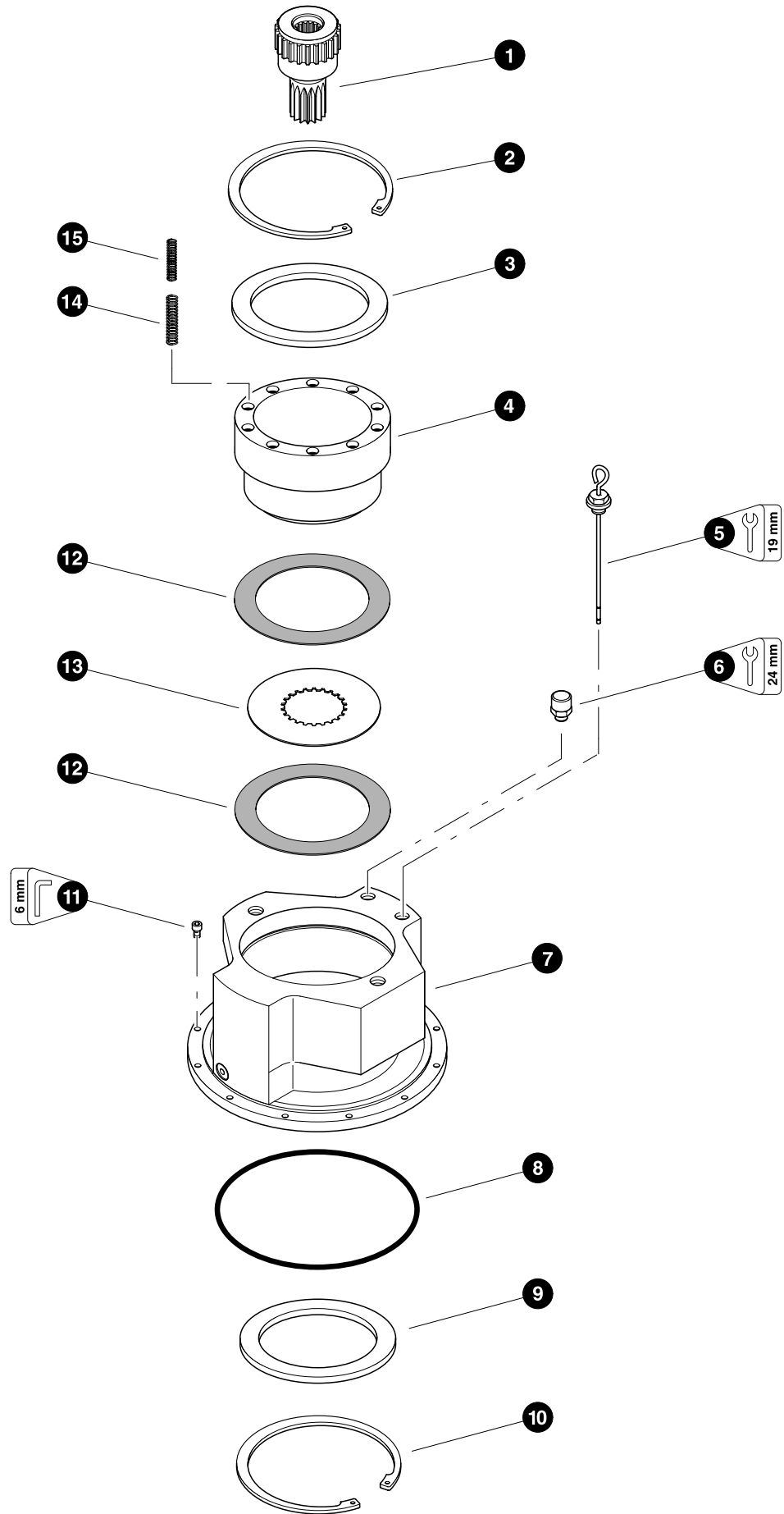
LOHMANN SWING MOTOR/GEARBOX w/BRAKE (Motor Installation)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
--	20070-UP	1	<input type="checkbox"/> MOTOR/GEARBOX, swing - Lohmann	
1	20661-UP	1	BOLT - 16mm-2.0P x 35mm	
2	17312-UP	1	<input type="checkbox"/> MOTOR, hydraulic - Rexroth A2FE45	
3	21576-UP	1	SEAL, shaft	
4	21577-UP	1	O-RING, front cover	
5	21578-UP	1	COVER, front	
6	21579-UP	1	RING, seal retaining	
7	21580-UP	1	O-RING, motor pilot	
8	NSS	1	<input type="checkbox"/> GEARBOX	

- Kit or Assembly - includes all items indented underneath.
- Contact your TIMBCO dealer for additional information.

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 00626 08/07/98
25.00

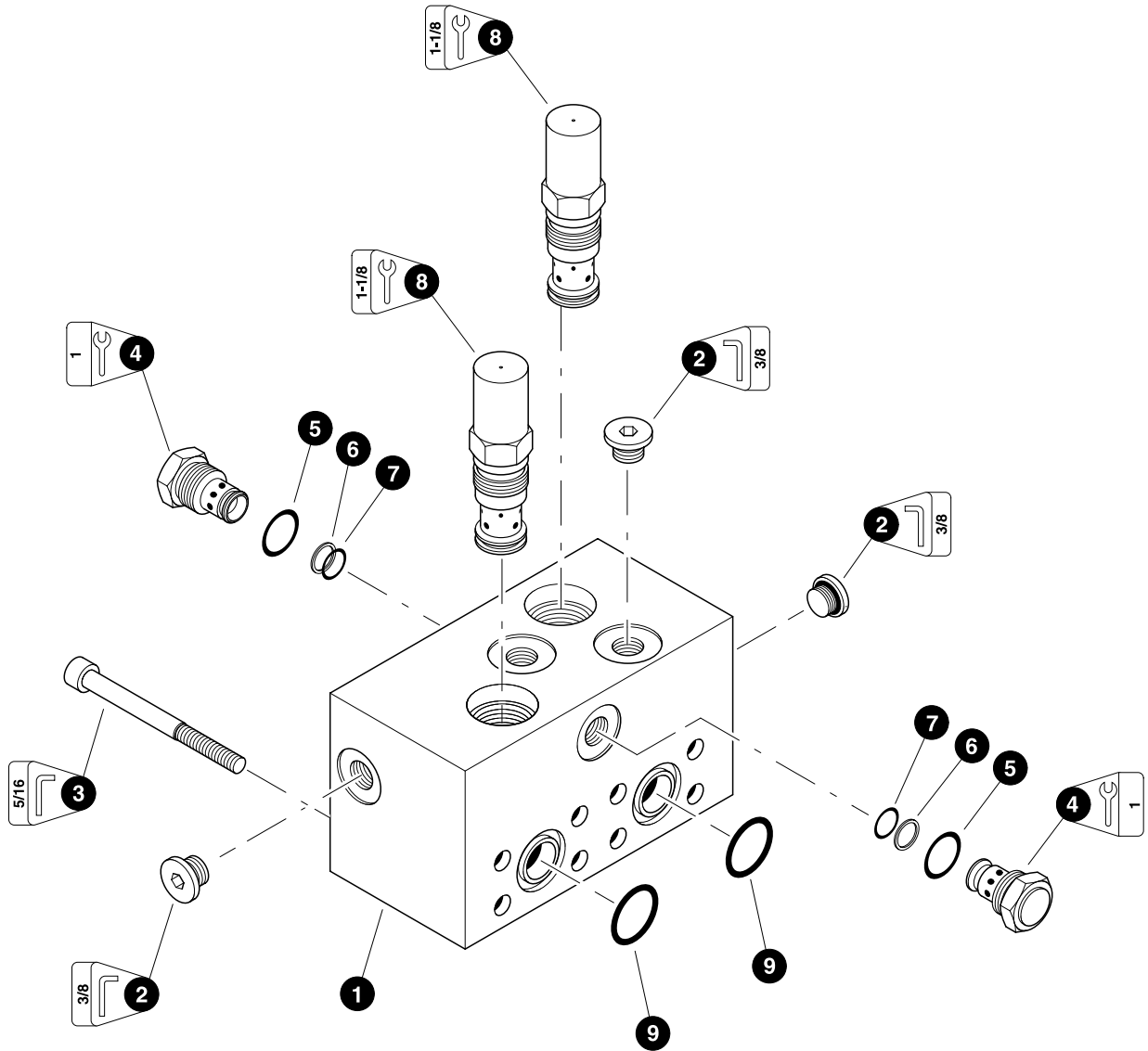
LOHMANN SWING MOTOR BRAKE COMPONENTS (Swing Brake Components)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
--	20070-UP	1	☐	MOTOR/GEARBOX, swing - Lohmann	
1	21565-UP	1		SHAFT, brake	
2	21566-UP	1		RING, snap - upper brake	
3	21567-UP	1		PLATE, back-up - upper brake	
4	21568-UP	1		PISTON, brake	
5	21569-UP	1	☐	DIPSTICK	
	21571-UP	1		RING, seal	
6	21570-UP	1	☐	BREATHER	
	21571-UP	1		RING, seal	
7	NSS	1		HOUSING, brake	
8	21572-UP	1		O-RING, brake housing	
9	21573-UP	1		PLATE, back-up - lower brake	
10	21574-UP	1		RING, snap - lower brake	
11	21575-UP	12		BOLT, allen head - 8mm x 25mm	
12	NSS	5	★	DISC, brake	
13	NSS	4	★	DISC, spacer	
14	NSS	10	★	SPRING, outer	
15	NSS	10	★	SPRING, inner	
--	20788-UP	1		KIT, repair - brake disc	

- ☐ Kit or Assembly - includes all items indented underneath.
 ★ Included in disc brake kit PN# 20788-UP.

Note:

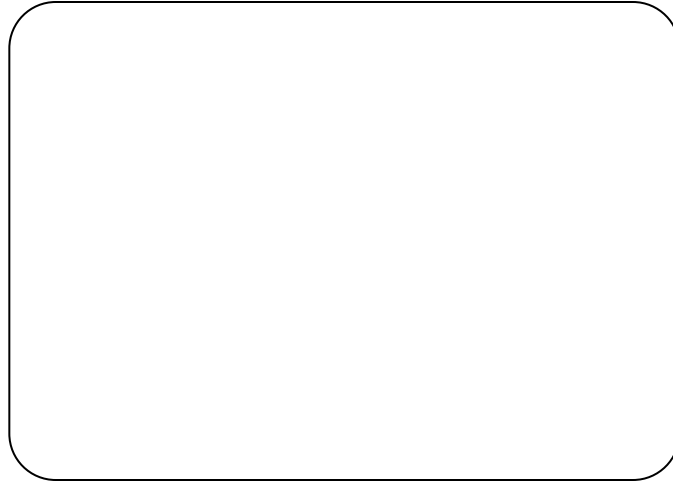
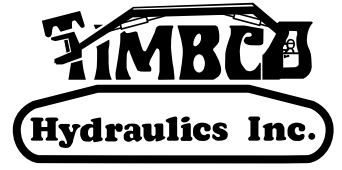
Due to warranty policy restrictions imposed by Timbco's component suppliers, it is not recommended that the component be disassembled further than is shown in the illustration.



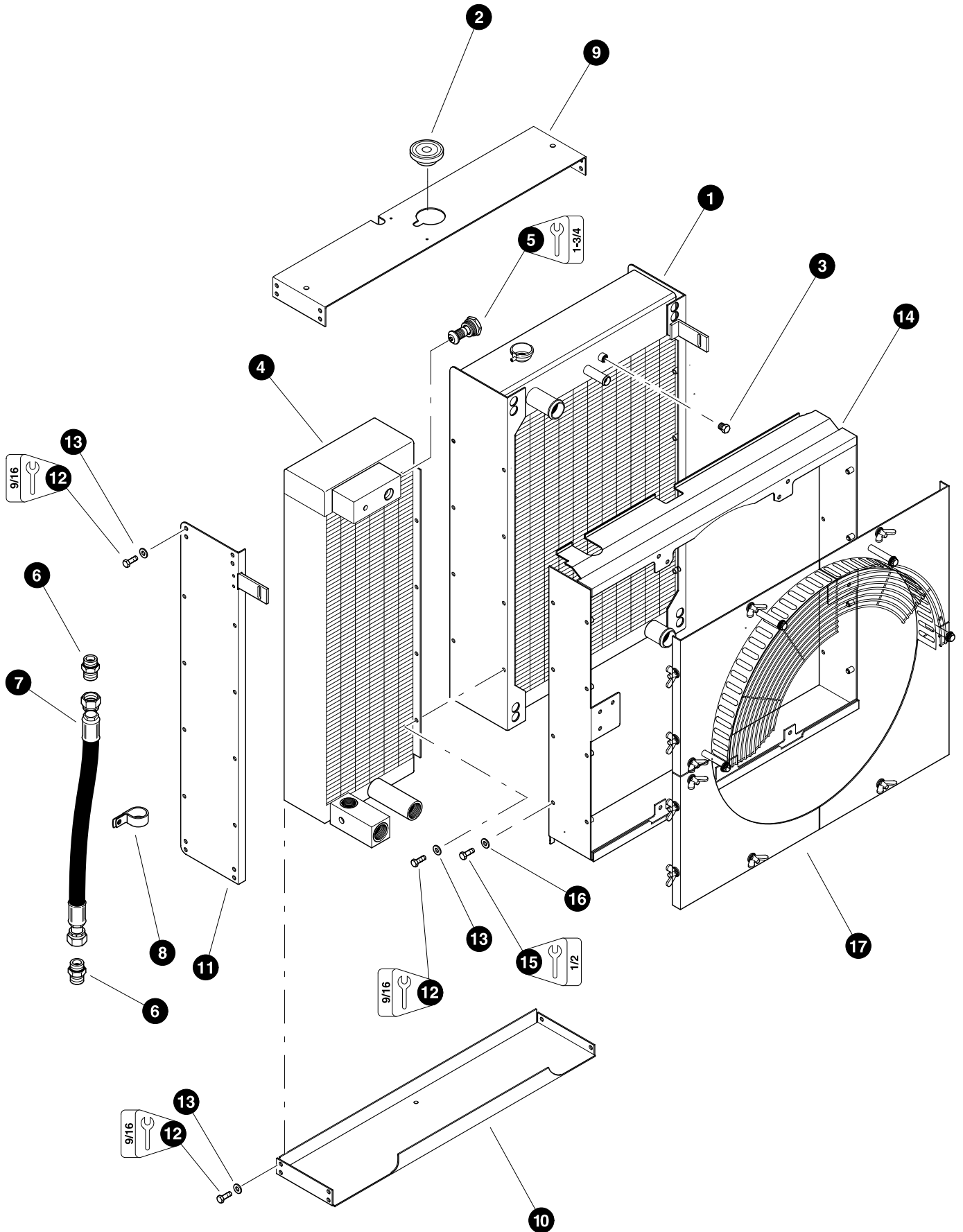
LOHMANN SWING MOTOR ANTI-CAVITATION VALVE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	19703-UP	1	VALVE, anti-cav (<i>With check</i>)	
2	10416-UP	3	PLUG - 6408-10	
3	22884-UP	8	BOLT, allen head - 3/8" x 4"	
4	22883-UP	2	CARTRIDGE, check valve	
5	NSS	2	O-RING	
6	NSS	2	RING, back-up (<i>Chamber</i>)	
7	NSS	2	O-RING (<i>Chamber</i>)	
8	19270-UP	2	CARTRIDGE, anti-cav	
9	16918-UP	2	O-RING - 3/4" SF (<i>code 62</i>)	

Section UP-3



***Upper Turntable -
Radiator/Oil Cooler***

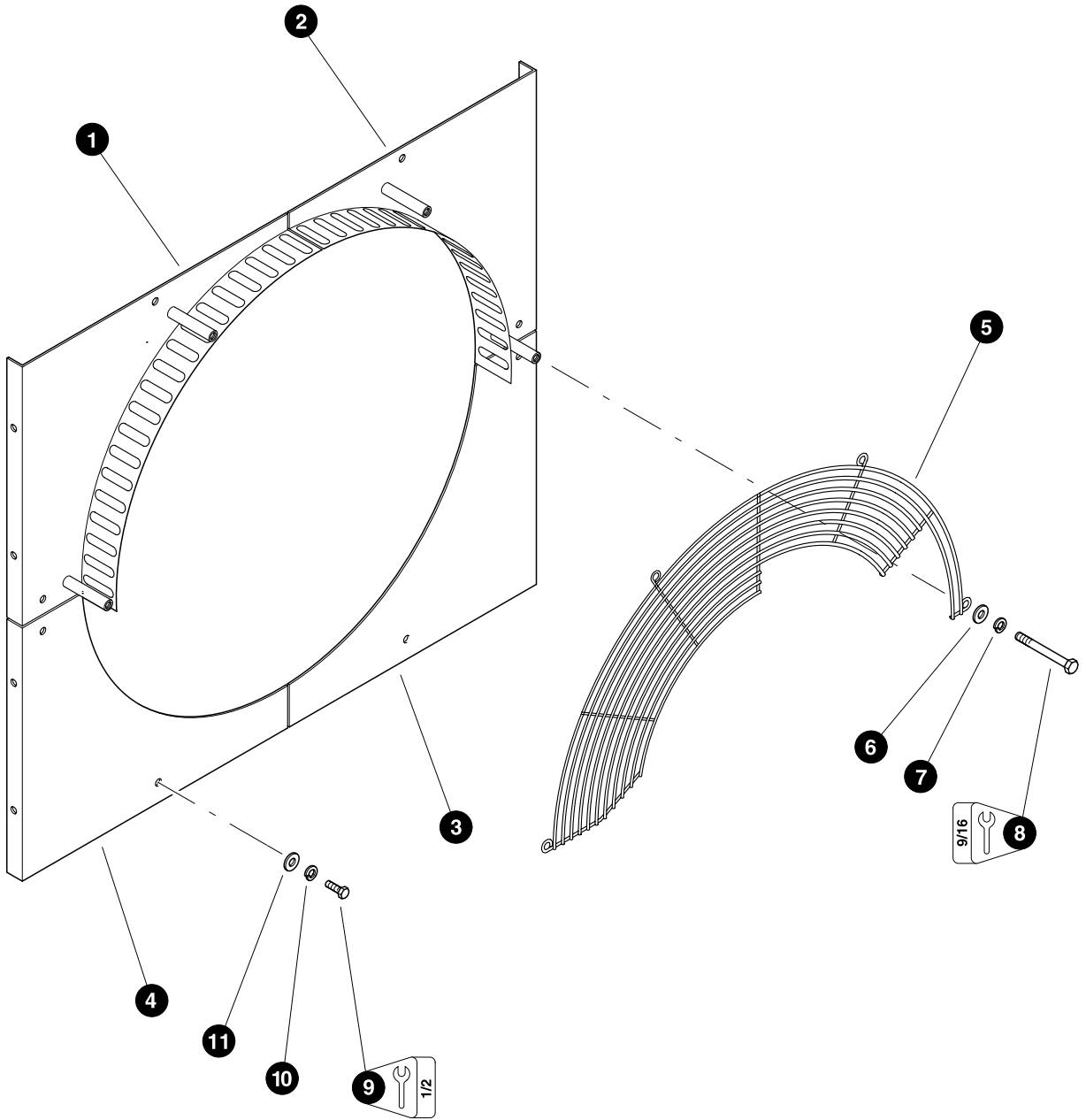


Parts 01095 03/29/99
12.50

RADIATOR/OIL COOLER ASSEMBLY (Thermal Dynamic - 1-1/2" Ports)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	22403-UP	1	<input type="checkbox"/>	RADIATOR/OIL COOLER ASSEMBLY	
1	24057-UP	1	<input type="checkbox"/>	RADIATOR	
2	15897-UP	1		CAP, radiator	
3	15515-UP	3		PLUG - 5406-P-4	
4	22489-UP	1	<input type="checkbox"/>	OIL COOLER	
5	22491-UP	1		VALVE, relief - thermal bypass	
6	22319-UP	2		CONNECTOR, straight - thermal bypass	
7	22320-UP	1		HOSE ASSEMBLY - thermal bypass	
8	17257-UP	1		CLAMP, coated hose - 1-1/2"	
9	22321-UP	1		BRACKET, frame - top	
10	22322-UP	1		BRACKET, frame - bottom	
11	22323-UP	1		BRACKET, frame - side	
12	15542-UP	22		BOLT - 3/8" x 3/4"	
13	10802-UP	22		WASHER, flat - 3/8"	
14	22490-UP	1		EXTENSION, fan box	
15	15605-UP	8		BOLT - 5/16" x 3/4"	
16	10801-UP	8		WASHER, flat - 5/16"	
17	REF.	1	<input checked="" type="checkbox"/>	FAN SHROUD KIT	Varies

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

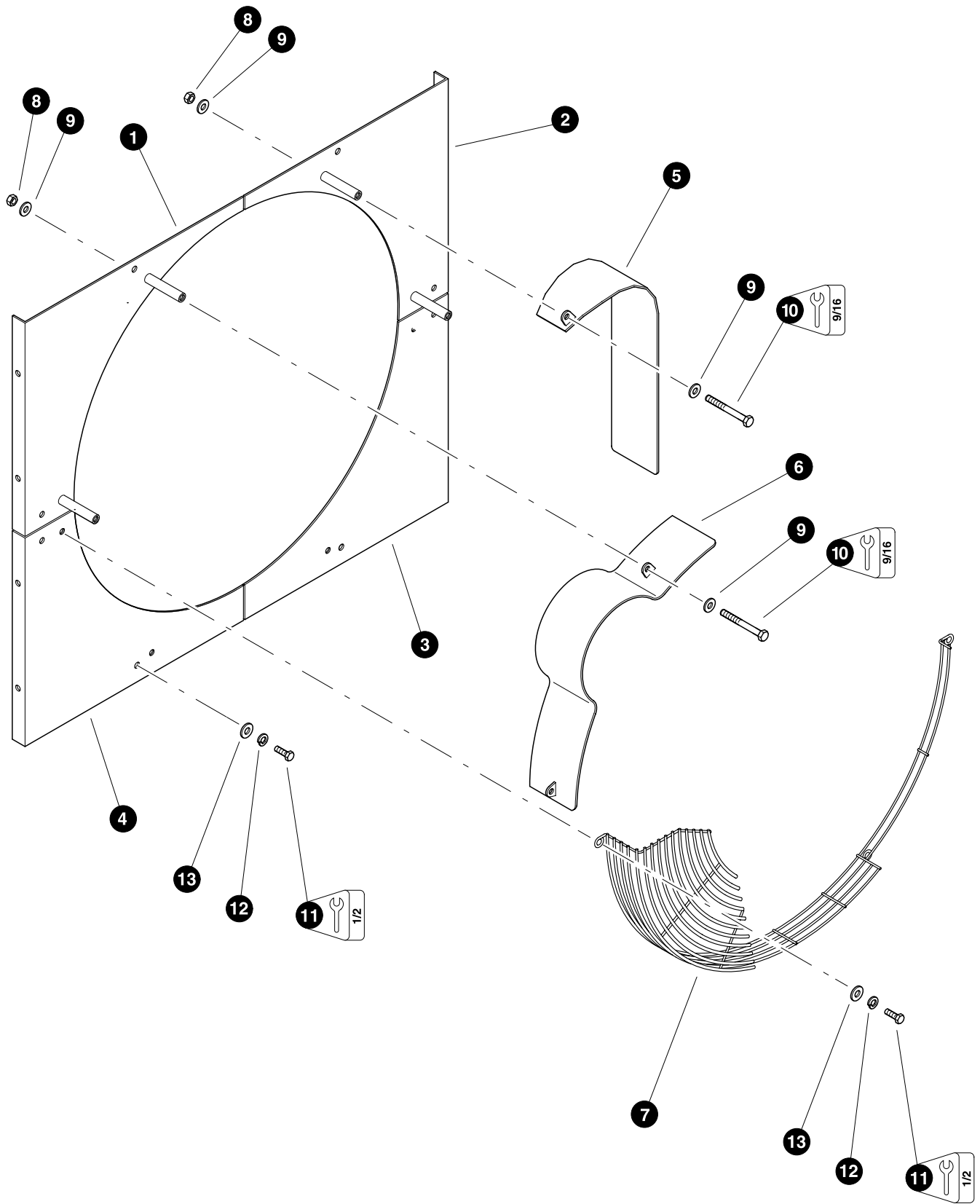


Parts 00780 10/20/98
18.75

FAN SHROUDS (Cummins C8.3-C Engines)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	21199-UP	1	<input type="checkbox"/> FAN SHROUD KIT	
1	21200-UP	1	SHROUD, radiator - LH upper	
2	21201-UP	1	SHROUD, radiator - RH upper	
3	21203-UP	1	SHROUD, radiator - RH lower	
4	21202-UP	1	SHROUD, radiator - LH lower	
5	18262-UP	1	GUARD, fan	
6	15528-UP	4	WASHER, SAE flat - 3/8"	
7	10701-UP	4	WASHER, lock - 3/8"	
8	10713-UP	4	BOLT - 3/8" x 3-1/2"	
9	15589-UP	16	BOLT - 5/16" x 1"	
10	15606-UP	16	WASHER, lock - 5/16"	
11	15559-UP	16	WASHER, SAE flat - 5/16"	

Kit or Assembly - includes all items indented underneath.

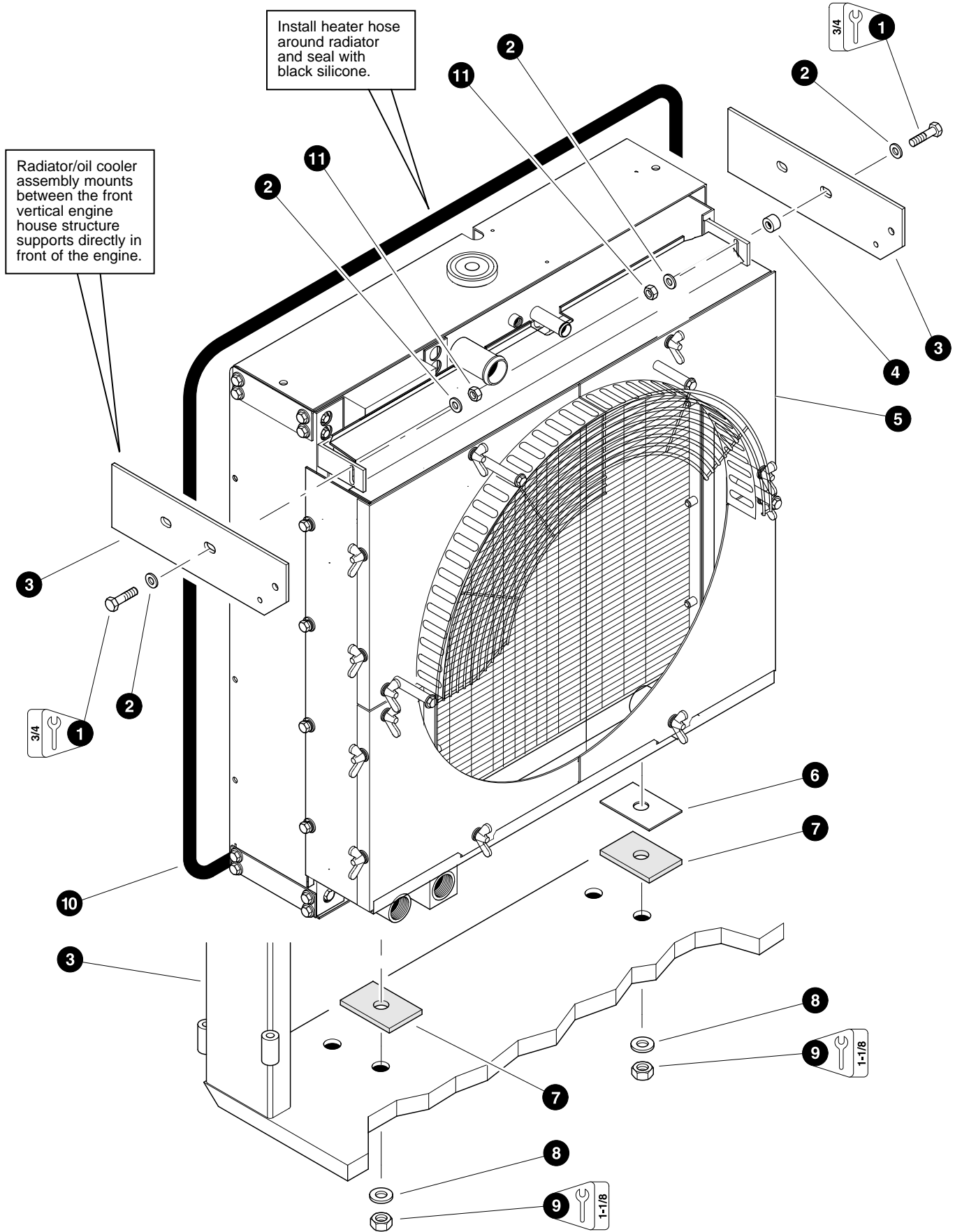


Parts 00781 10/27/98
18.75

FAN SHROUDS (John Deere T6068TF Engines)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	21211-UP	1	<input type="checkbox"/> FAN SHROUD KIT	
1	21212-UP	1	SHROUD, radiator - LH upper	
2	21213-UP	1	SHROUD, radiator - RH upper	
3	22663-UP	1	SHROUD, radiator - RH lower	
4	22662-UP	1	SHROUD, radiator - LH lower	
5	21209-UP	1	GUARD, alternator	
6	21210-UP	1	GUARD, A/C compressor	
7	21215-UP	1	GUARD, fan - lower	
8	10700-UP	4	NUT, hex - 3/8"	
9	15528-UP	8	WASHER, SAE flat - 3/8"	
10	10713-UP	4	BOLT - 3/8" x 3-1/2"	
11	15589-UP	20	BOLT - 5/16" x 1"	
12	15606-UP	20	WASHER, lock - 5/16"	
13	15559-UP	20	WASHER, SAE flat - 5/16"	

Kit or Assembly - includes all items indented underneath.



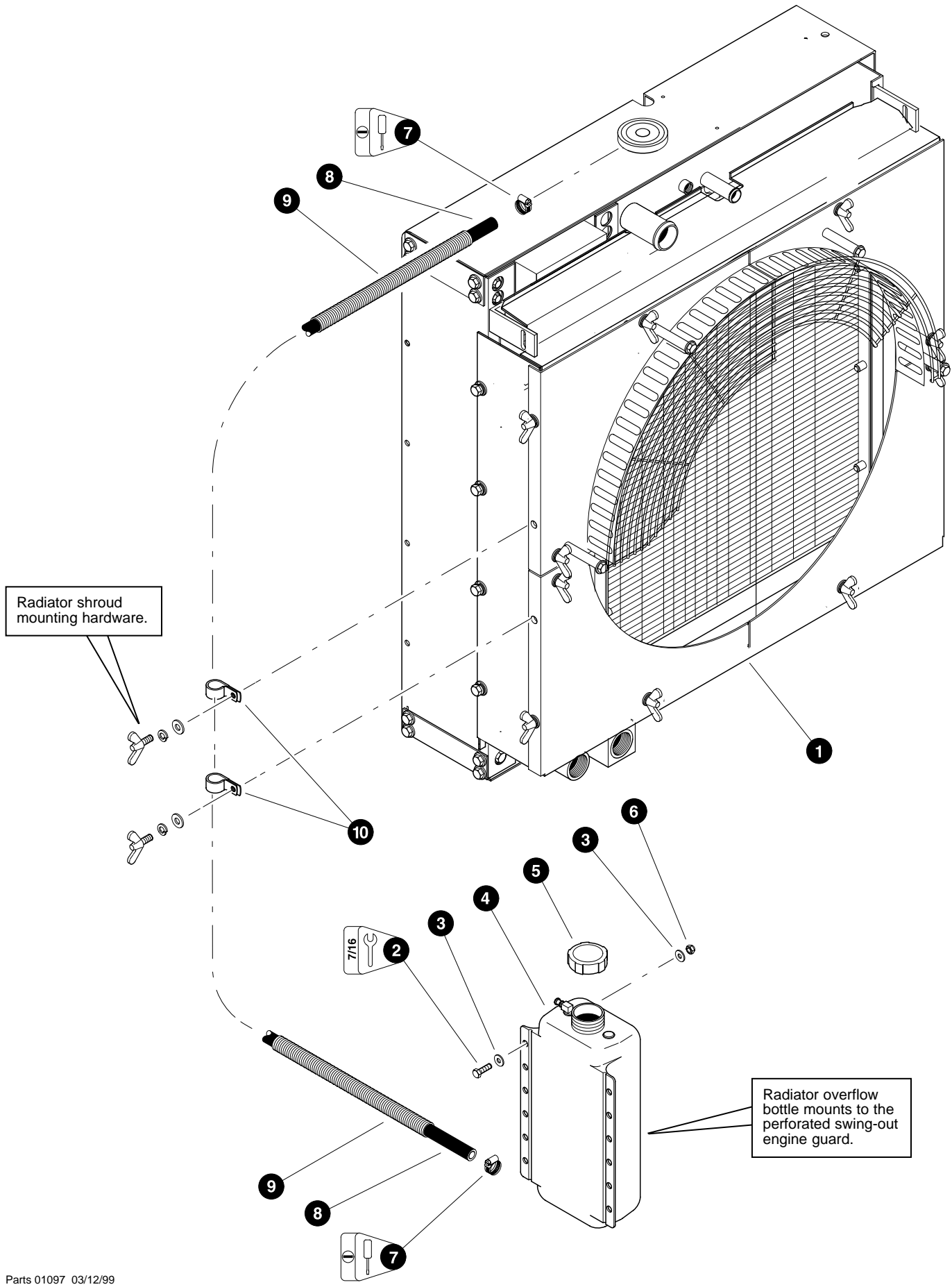
Parts 01096 03/12/99
18.75

RADIATOR/OIL COOLER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	10736-UP	2		BOLT - 1/2" x 2"	
2	15534-UP	4		WASHER, SAE flat - 1/2"	
3	REF.	1	✓	UPPER TURNTABLE WELDMENT	UP-1-2
4	15619-UP	AR		SPACER, radiator - 3/8"	
	19217-UP	AR		SPACER, radiator - 1/2"	
	19218-UP	AR		SPACER, radiator - 5/8"	
	19219-UP	AR		SPACER, radiator - 3/4"	
5	REF.	1	✓	RADIATOR/OIL COOLER ASSEMBLY	UP-3-2
6	18798-UP	AR		SHIM, radiator/oil cooler mount	
7	17776-UP	2		SPACER, rubber radiator/oil cooler mount	
8	15550-UP	2		WASHER, SAE flat - 3/4"	
9	10817-UP	2		NUT, lock - 3/4"	
10	16717-UP	AR	>∞	HOSE, heater - 5/8"	
11	10815-UP	2		NUT, lock - 1/2"	

✓ See referenced page for component or assembly breakdown.

>∞ Bulk material - order length required in feet or meters.



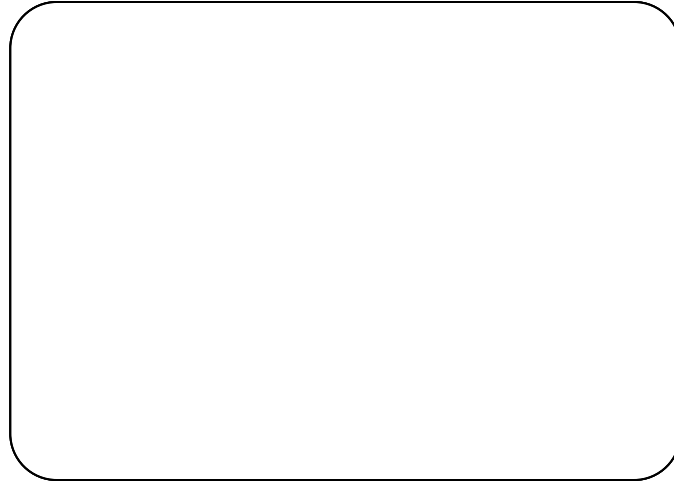
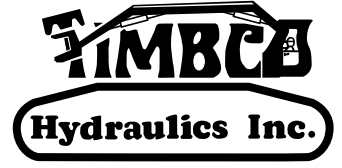
Parts 01097 03/12/99
18.75

RADIATOR OVERFLOW LINE

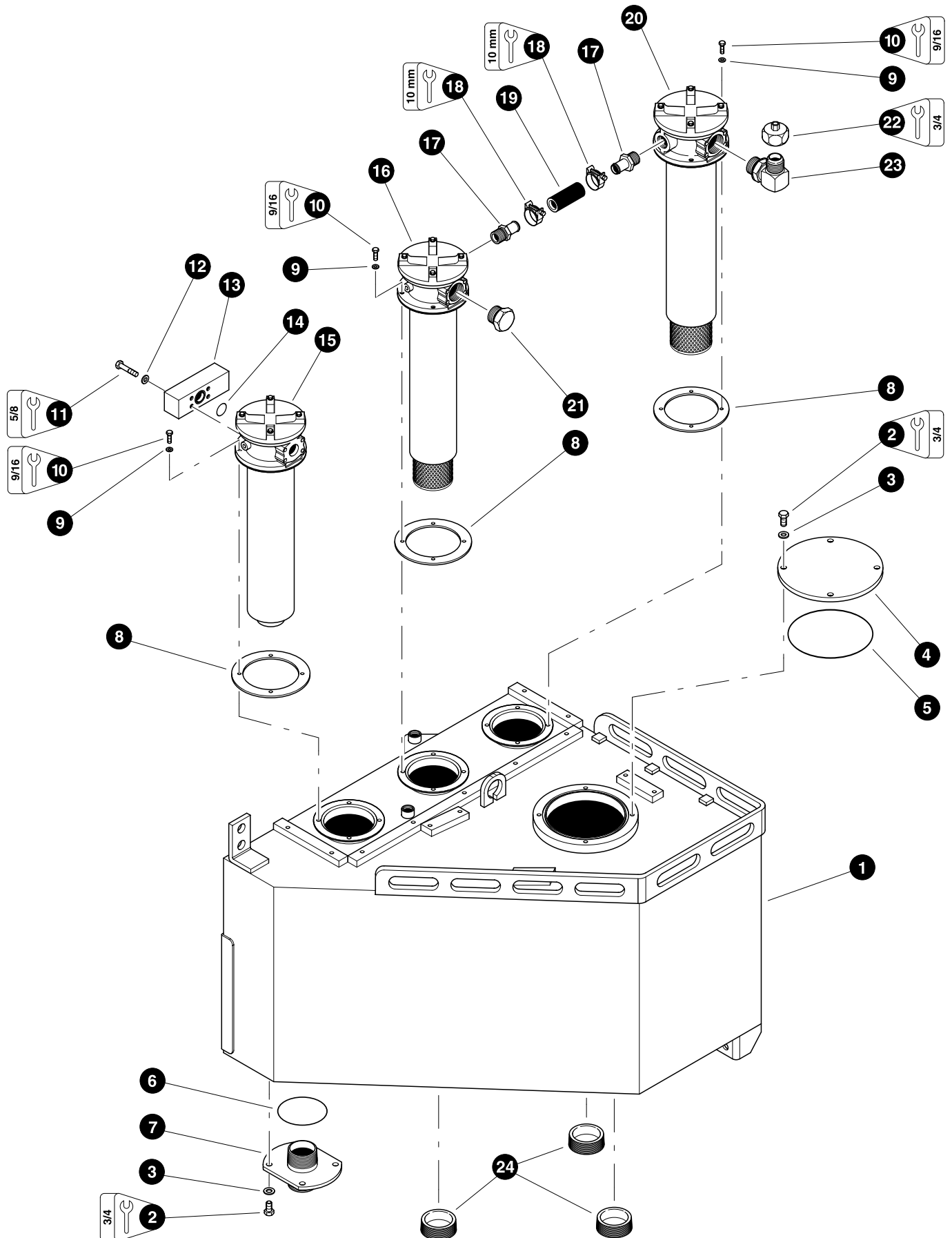
REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	RADIATOR/OIL COOLER ASSEMBLY	UP-3-2
2	15576-UP	4		BOLT - 1/4" x 1"	
3	10800-UP	8		WASHER, flat- 1/4"	
4	16925-UP	1		BOTTLE, radiator overflow	
5	19119-UP	1		CAP, radiator overflow bottle	
6	15509-UP	4		NUT, nylock - 1/4"	
7	16203-UP	2		CLAMP, hose - worm style - 3/8"	
8	16238-UP	AR	>∞	HOSE, fuel line - 5/16"	
9	17449-UP	AR	>∞	LOOM, split - 1/2"	
10	16119-UP	2		CLAMP, hose - coated strap - 1"	

- ✓ See referenced page for component or assembly breakdown.
 >∞ Bulk material - order length required in feet or meters.

Section UP-4



***Upper Turntable -
Hydraulic Tank***

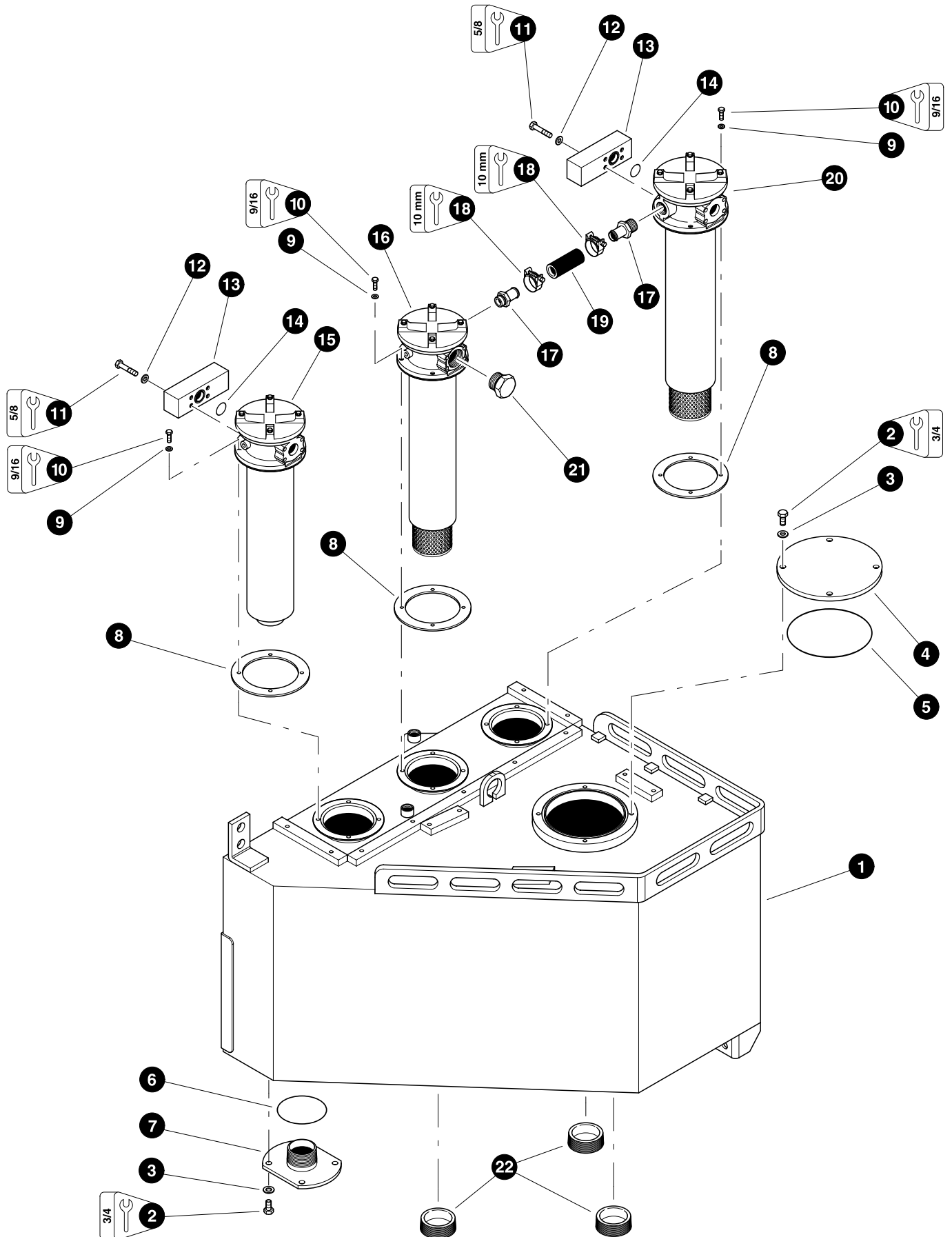


Parts 00304 12/04/97
12.50

HYDRAULIC TANK ASSEMBLY*(Used on machines PDN# 118FWD and below)*

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	12401-UP	1	☐	TANK, hydraulic oil	
2	10783-UP	8		BOLT - 1/2" x 1"	
3	15534-UP	8		WASHER, SAE flat - 1/2"	
4	18635-UP	1		COVER, tank access	
5	15600-UP	1		O-RING, tank access cover	
6	15448-UP	1		O-RING, system pump suction cover	
7	16552-UP	1		COVER, system pump suction	
8	REF.	3	✓	GASKET, rubber return filter mounting	UP-4-4
9	15528-UP	12		WASHER, SAE flat - 3/8"	
10	10402-UP	12		BOLT - 3/8" x 1-1/4"	
11	10883-UP	4		BOLT - 7/16" x 3"	
12	15548-UP	4		WASHER, SAE flat - 7/16"	
13	17667-UP	1		MANIFOLD, case drain	
14	15378-UP	1		O-RING - 1-1/4" SF	
15	REF.	1	✓	RETURN FILTER ASSEMBLY - case drain	UP-4-4
16	REF.	1	✓	RETURN FILTER ASSEMBLY - oil cooler return	UP-4-4
17	16375-UP	2		NIPPLE, straight king - 4404-16-16	
18	15191-UP	2		CLAMP, constant torque - 1-1/2"	
19	18107-UP	1		HOSE, filter connection	
20	REF.	1	✓	RETURN FILTER ASSEMBLY - auxiliary	UP-4-4
21	16727-UP	1		PLUG - 6408-24	
22	16810-UP	1		CAP, fill	
23	16809-UP	1		ELBOW, 90° - 6801-24	
24	16774-UP	3		PLUG - 3"	

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



Parts 01626 03/20/2000
12.50

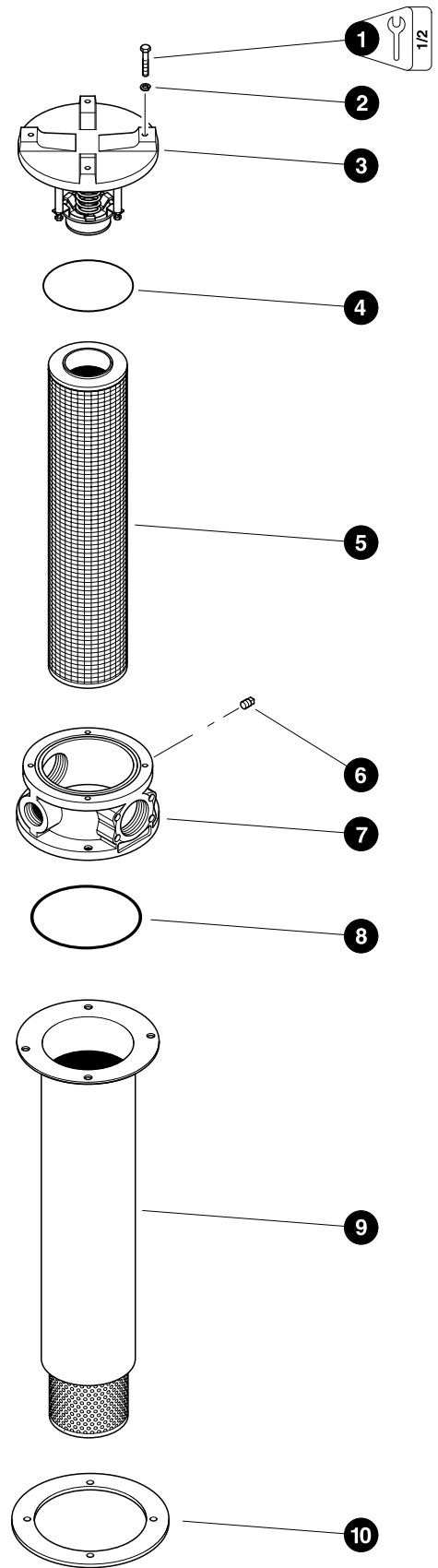
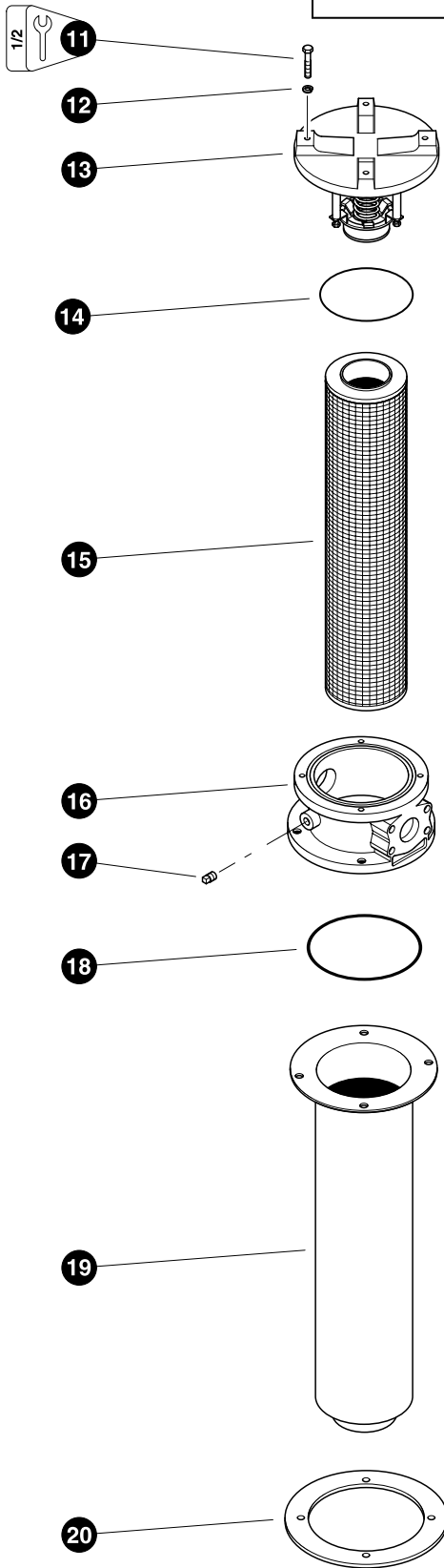
HYDRAULIC TANK ASSEMBLY

(Used on machines PD# 119FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	23093-UP	1	<input type="checkbox"/>	TANK, hydraulic oil	
2	10783-UP	8		BOLT - 1/2" x 1"	
3	15534-UP	8		WASHER, SAE flat - 1/2"	
4	18635-UP	1		COVER, tank access	
5	15600-UP	1		O-RING, tank access cover	
6	15448-UP	1		O-RING, system pump suction cover	
7	22462-UP	1		COVER, system pump suction	
8	REF.	3	<input checked="" type="checkbox"/>	GASKET, rubber return filter mounting	UP-4-4
9	15528-UP	12		WASHER, SAE flat - 3/8"	
10	10402-UP	12		BOLT - 3/8" x 1-1/4"	
11	22888-UP	4		BOLT - 1/2" x 2-3/4"	
12	15534-UP	4		WASHER, SAE flat - 1/2"	
13	22634-UP	1		MANIFOLD, case drain	
14	15378-UP	1		O-RING - 1-1/4" code 61	
15	REF.	1	<input checked="" type="checkbox"/>	RETURN FILTER ASSEMBLY - case drain	UP-4-4
16	REF.	1	<input checked="" type="checkbox"/>	RETURN FILTER ASSEMBLY - oil cooler return	UP-4-4
17	22618-UP	2		NIPPLE, straight king - 4404-16-16	
18	15191-UP	2		CLAMP, constant torque - 1-1/2"	
19	18107-UP	1		HOSE, filter connection	
20	REF.	1	<input checked="" type="checkbox"/>	RETURN FILTER ASSEMBLY - disc saw return	UP-4-4
21	23016-UP	1		PLUG - 6408-24	
22	16774-UP	3		PLUG - 3"	

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

Filter assembly for case drains.



Filter assembly for oil cooler return oil and optional disc saw return oil.

Parts 00091 05/13/96
18.75

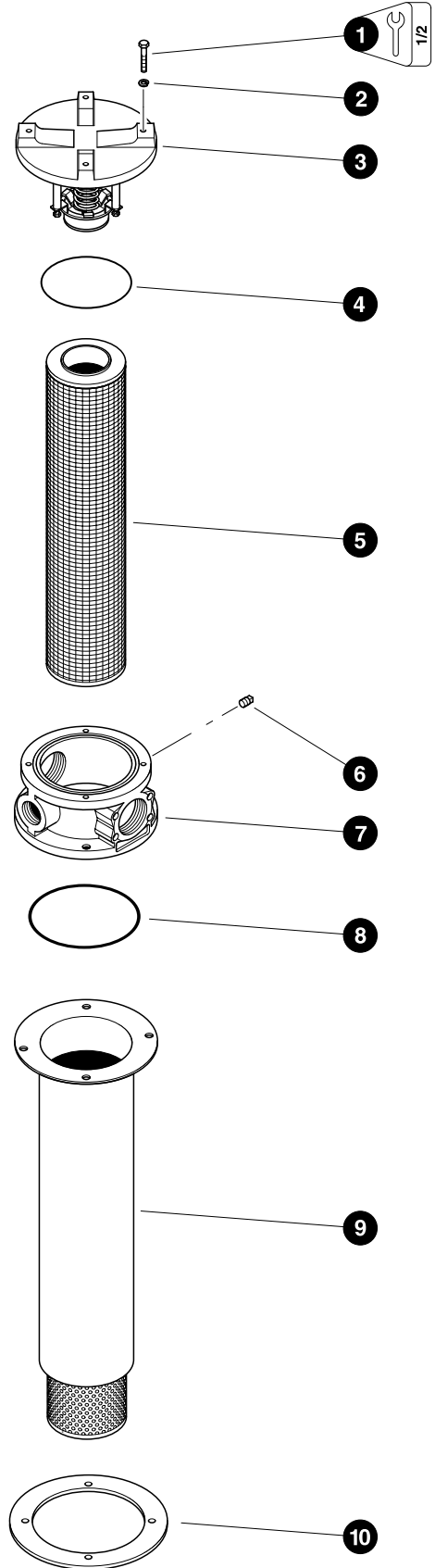
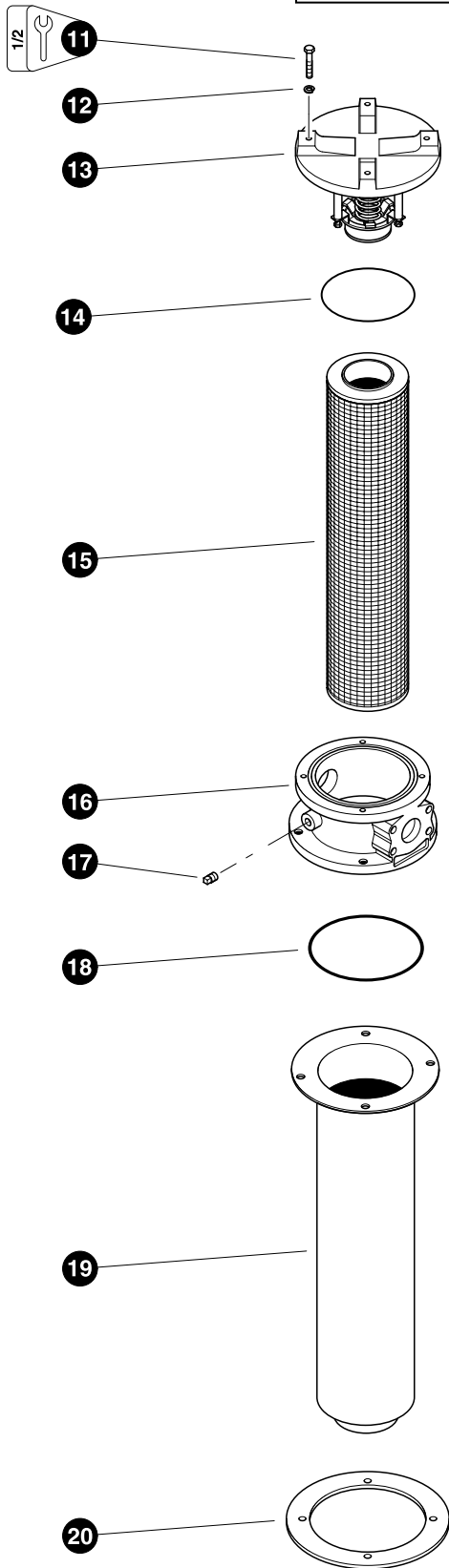
RETURN FILTER ASSEMBLIES

(Used on machines PDN# 118FWD and below)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	16730-UP	2	☐ FILTER, return <i>(System return oil - used in center and cab-side filter positions)</i>	
1	10882-UP	4	BOLT - 5/16" x 3/4"	
2	15559-UP	4	WASHER, SAE flat - 5/16"	
3	16764-UP	1	COVER, filter head	
4	NSS	1	★ O-RING, filter head cover	
5	22647-UP	1	ELEMENT, return filter	
6	11360-UP	1	PLUG - 5406-P-2	
7	16767-UP	1	HEAD, filter	
8	NSS	1	★ O-RING, square - filter head	
9	16769-UP	1	TUBE, diffuser	
10	NSS	1	★ GASKET, rubber filter mounting	
-	17692-UP	1	☐ FILTER, return <i>(Case drain oil)</i>	
11	10882-UP	4	BOLT - 5/16" x 3/4"	
12	15559-UP	4	WASHER, SAE flat - 5/16"	
13	16764-UP	1	COVER, filter head	
14	NSS	1	★ O-RING, filter head cover	
15	22647-UP	1	ELEMENT, return filter	
16	11360-UP	1	PLUG - 5406-P-2	
17	16766-UP	1	HEAD, filter	
18	NSS	1	★ O-RING, square - filter head	
19	18772-UP	1	TUBE, diffuser	
20	NSS	1	★ GASKET, rubber filter mounting	
-	16852-UP	1	KIT, seal repair - return filter	

- ☐ Kit or Assembly - includes all items indented underneath.
 ★ Included in seal repair kit PN# 16852-UP.

Filter assembly for case drains.



Filter assembly for oil cooler return oil and optional disc saw return oil.

Parts 01627 03/20/2000
18.75

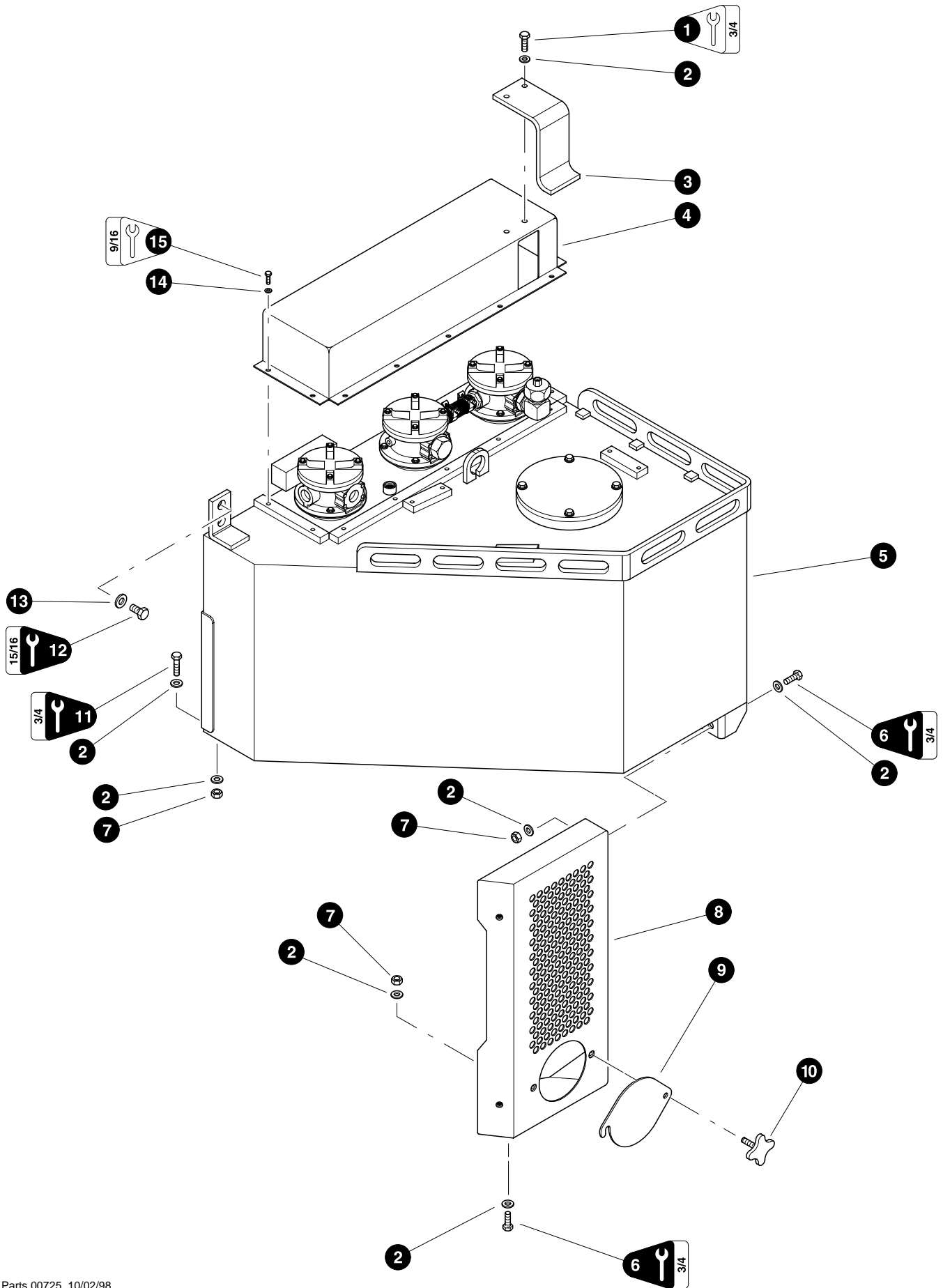
RETURN FILTER ASSEMBLIES

(Used on machines PD# 119FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	22645-UP	1	☐	FILTER, return (System return oil - used in center filter position)	
-	22894-UP	1	☐	FILTER, return (System return oil - used in cab-side filter position)	
1	10882-UP	4		BOLT - 5/16" x 3/4"	
2	15559-UP	4		WASHER, SAE flat - 5/16"	
3	16764-UP	1		COVER, filter head	
4	NSS	1	★	O-RING, filter head cover	
5	22647-UP	1		ELEMENT, return filter	
6	11360-UP	1		PLUG - 5406-P-2	
7	16767-UP	1		HEAD, filter (Used on center filter)	
	23597-UP	1		HEAD, filter (Used on cab-side filter)	
8	NSS	1	★	O-RING, square - filter head	
9	16769-UP	1		TUBE, diffuser	
10	NSS	1	★	GASKET, rubber filter mounting	
-	22646-UP	1	☐	FILTER, return (Used with case drains)	
11	10882-UP	4		BOLT - 5/16" x 3/4"	
12	15559-UP	4		WASHER, SAE flat - 5/16"	
13	16764-UP	1		COVER, filter head	
14	NSS	1	★	O-RING, filter head cover	
15	22647-UP	1		ELEMENT, return filter	
16	11360-UP	1		PLUG - 5406-P-2	
17	16766-UP	1		HEAD, filter	
18	NSS	1	★	O-RING, square - filter head	
19	18772	1		TUBE, diffuser	
20	NSS	1	★	GASKET, rubber filter mounting	
-	16852-UP	1		KIT, seal repair - return filter	

☐ Kit or Assembly - includes all items indented underneath.

★ Included in seal repair kit PN# 16852-UP.

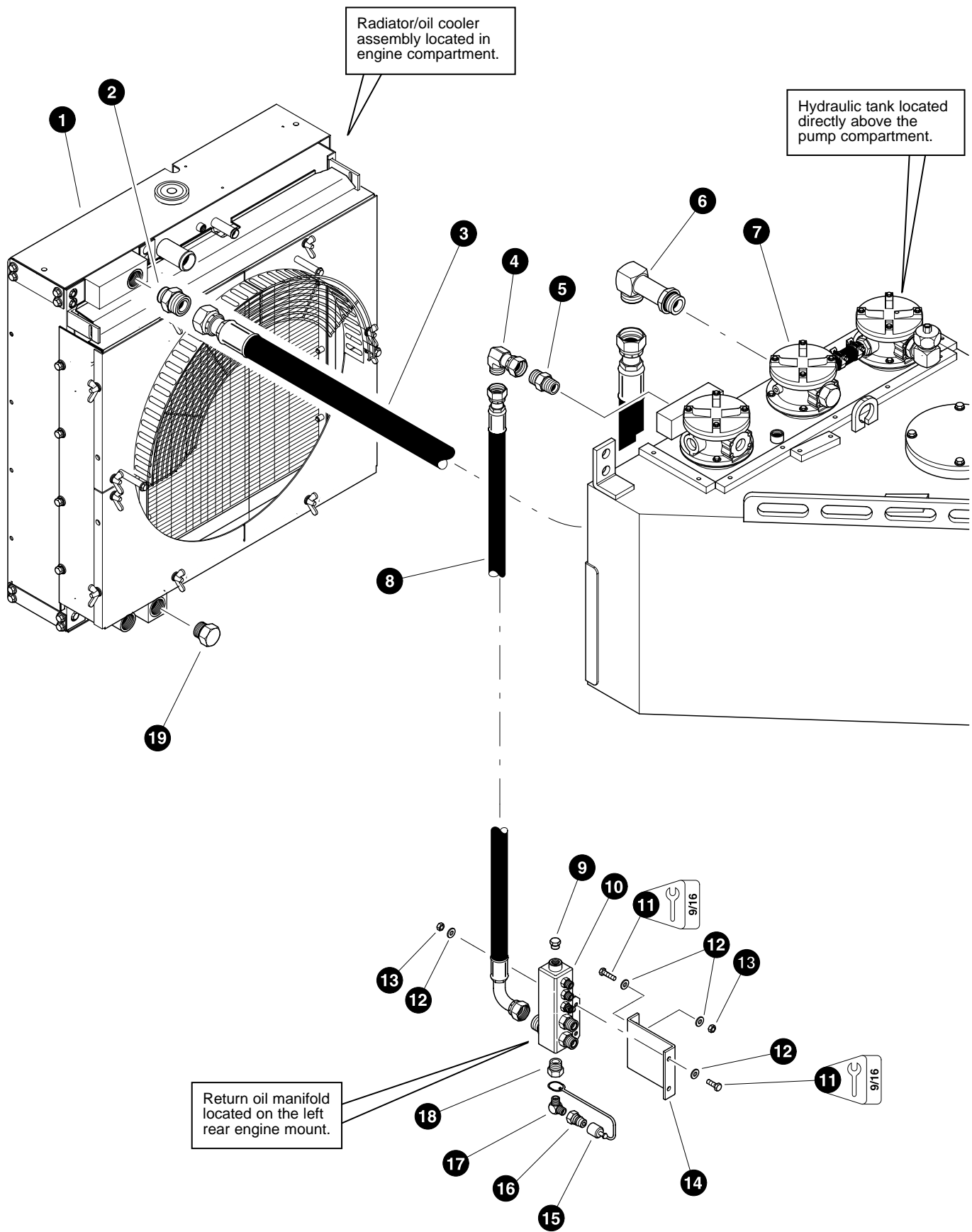


Parts 00725 10/02/98
12.50

HYDRAULIC TANK INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	10783-UP	4	BOLT - 1/2" x 1" (100 ft.lbs. (135 Nm))	
2	15534-UP	14	WASHER, SAE flat - 1/2"	
3	16824-UP	1	GUARD, fill spout <i>(Used on machines PDN# 118FWD and below only)</i>	
4	23598-UP	1	GUARD, return filter <i>(Without fill spout opening)(Used on machines PDN# 119FWD and above)</i>	
	16773-UP	1	GUARD, return filter <i>(With fill spout opening)(Used on machines PDN# 118FWD and below)</i>	
5	REF.	1	✓ HYDRAULIC TANK ASSEMBLY	UP-4-2
6	10739-UP	6	BOLT - 1/2" x 1-1/2" (100 ft.lbs. (135 Nm))	
7	10815-UP	3	NUT, lock - 1/2"	
8	12355-UP	1	SUPPORT, hydraulic tank	
9	12150-UP	1	COVER, access	
10	16849-UP	1	KNOB, star - 1/2 x 1-1/2"	
11	10736-UP	2	BOLT - 1/2" x 2" (100 ft.lbs. (135 Nm))	
12	15502-UP	2	BOLT - 5/8" x 1-1/2" (200 ft.lbs. (265 Nm))	
13	10771-UP	2	WASHER, SAE flat - 5/8"	
14	15528-UP	9	WASHER, SAE flat - 3/8"	
15	15542-UP	9	BOLT - 3/8" x 3/4"	

✓ See referenced page for component or assembly breakdown.



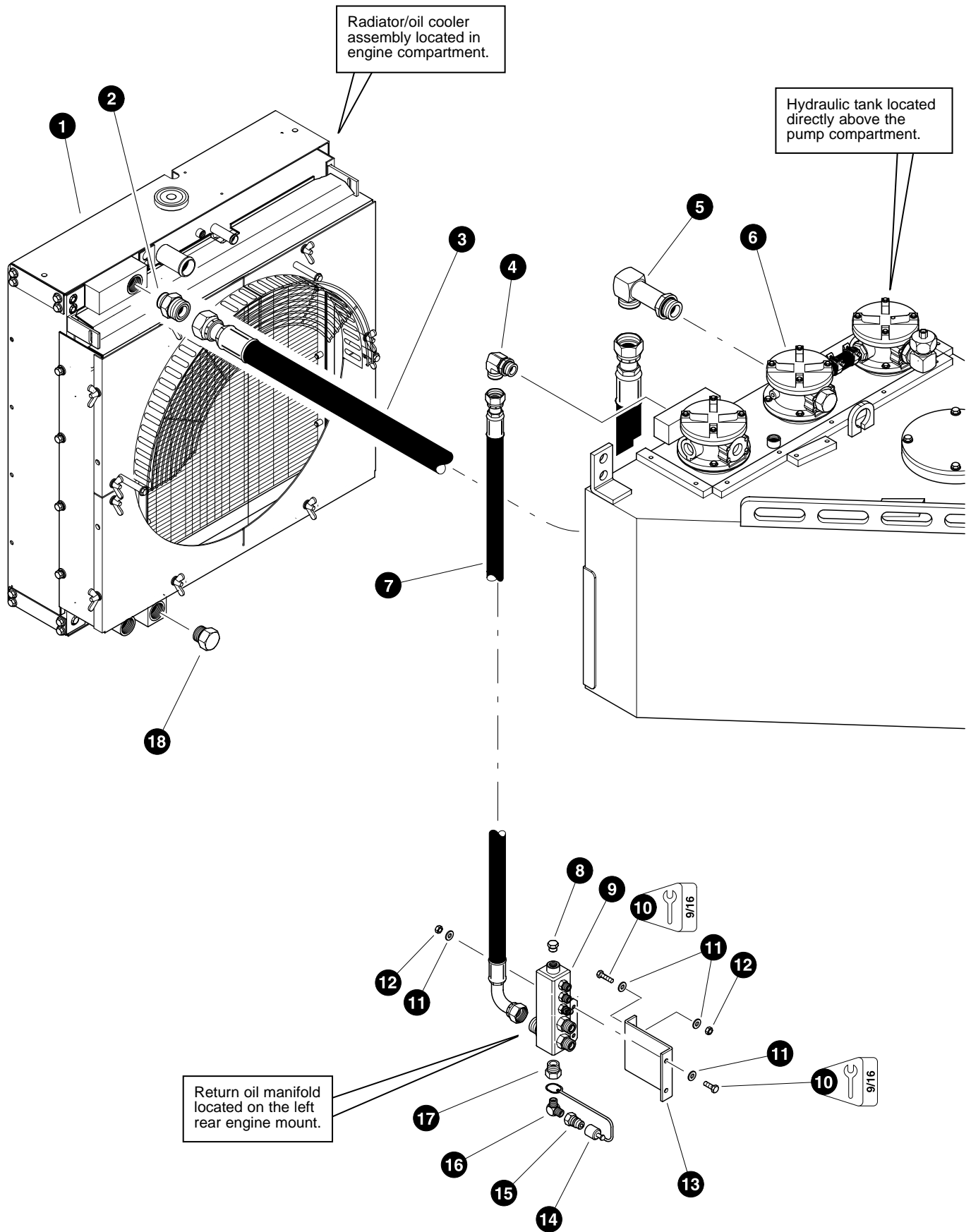
Parts 01253 07/29/99
18.75

RETURN LINES - OIL COOLER & MANIFOLD TO TANK

(Used on machines PDN# 118FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	RADIATOR/OIL COOLER ASSEMBLY	UP-3-2
2	22448-UP	1		CONNECTOR, straight - 848-TTO-24x24	
3	22771-UP	1		HOSE ASSEMBLY - 2066-24-240S-240S (<i>Oil cooler top port to center return filter</i>)	
4	17682-UP	1		ELBOW, 90° swivel - FF2098T-1616S	
5	15179-UP	1		CONNECTOR, straight - FF2031T-1616S	
6	22438-UP	1		ELBOW, 90° - 849L-TTO-24x24	
7	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2
8	20814-UP	1		HOSE ASSEMBLY - 2052-16-160S-1609 (<i>Return oil manifold to case drain return filter manifold</i>)	
9	10751-UP	1		PLUG - 5406-P-8	
10	17547-UP	1		MANIFOLD, return line	
11	10731-UP	4		BOLT - 3/8" x 1-1/2"	
12	15528-UP	8		WASHER, SAE flat - 3/8"	
13	10813-UP	4		NUT, lock - 3/8"	
14	20107-UP	1		BRACKET, return manifold mount	
15	17323M-UP	1		COVER, dust - quick-disconnect (<i>Male</i>)	
16	17307M-UP	1		QUICK-DISCONNECT - 1/2" (<i>Male</i>)	
17	17487-UP	1		ELBOW, 90° - 5500-8	
18	15513-UP	1		BUSHING, reducer - 5406-12-8	
19	16034-UP	1		PLUG - FF9767-16S	

✓ See referenced page for component or assembly breakdown.

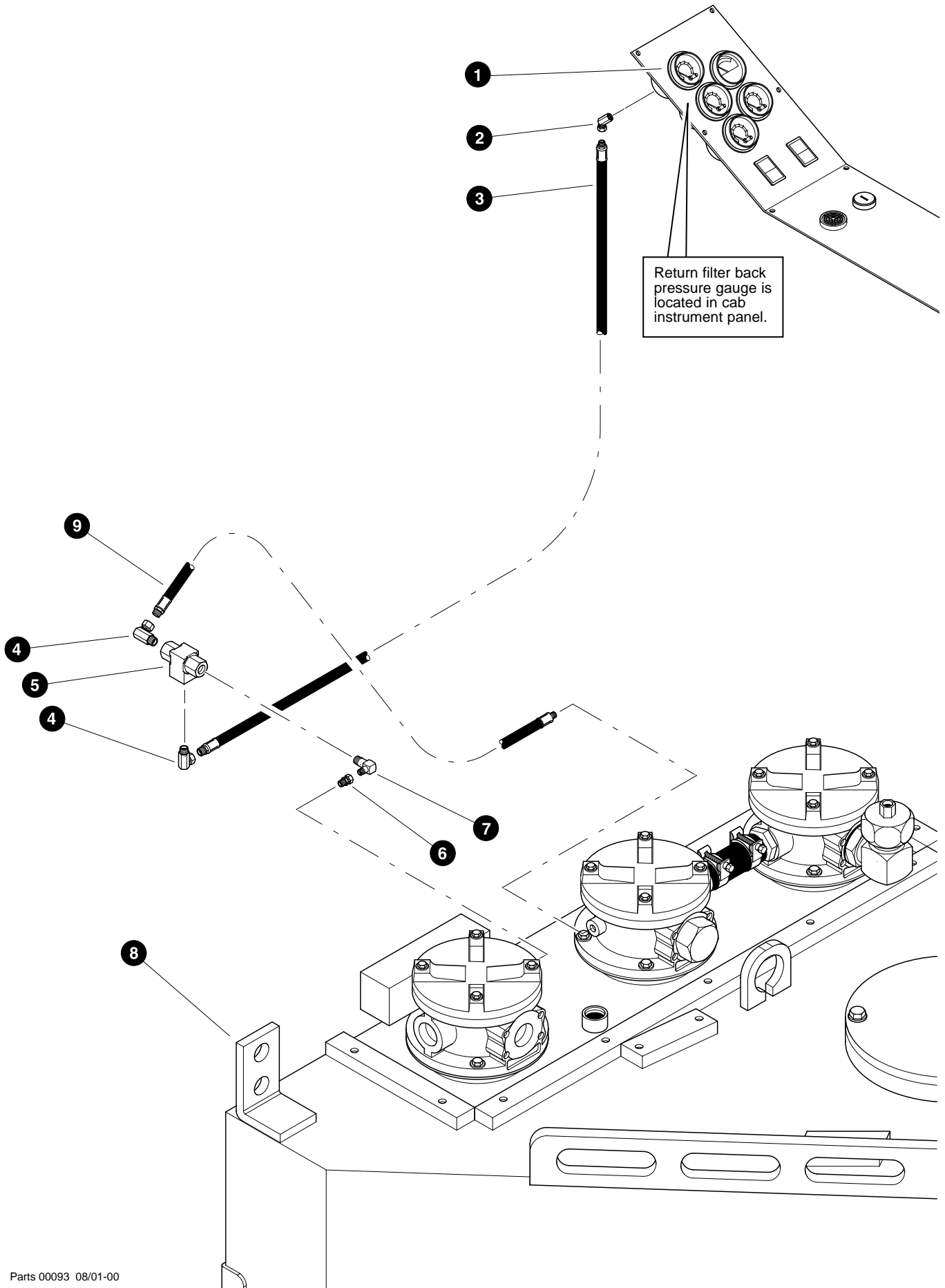


RETURN LINES - OIL COOLER & MANIFOLD TO TANK

(Used on machines PDN# 119FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	RADIATOR/OIL COOLER ASSEMBLY	UP-3-2
2	22448-UP	1		CONNECTOR, straight - 848-TTO-24x24	
3	22771-UP	1		HOSE ASSEMBLY - 2066-24-240S-240S <i>(Oil cooler top port to center return filter)</i>	
4	15228-UP	1		ELBOW, 90° - FF1868T-1616S	
5	22438-UP	1		ELBOW, 90° - 849L-TTO-24x24	
6	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2
7	20814-UP	1		HOSE ASSEMBLY - 2052-16-160S-1609 <i>(Return oil manifold to case drain return filter manifold)</i>	
8	10751-UP	1		PLUG - 5406-P-8	
9	17547-UP	1		MANIFOLD, return line	
10	10731-UP	4		BOLT - 3/8" x 1-1/2"	
11	15528-UP	8		WASHER, SAE flat - 3/8"	
12	10813-UP	4		NUT, lock - 3/8"	
13	20107-UP	1		BRACKET, return manifold mount	
14	17323M-UP	1		COVER, dust - quick-disconnect <i>(Male)</i>	
15	17307M-UP	1		QUICK-DISCONNECT - 1/2" <i>(Male)</i>	
16	17487-UP	1		ELBOW, 90° - 5500-8	
17	15513-UP	1		BUSHING, reducer - 5406-12-8	
18	16034-UP	1		PLUG - FF9767-16S	

✓ See referenced page for component or assembly breakdown.

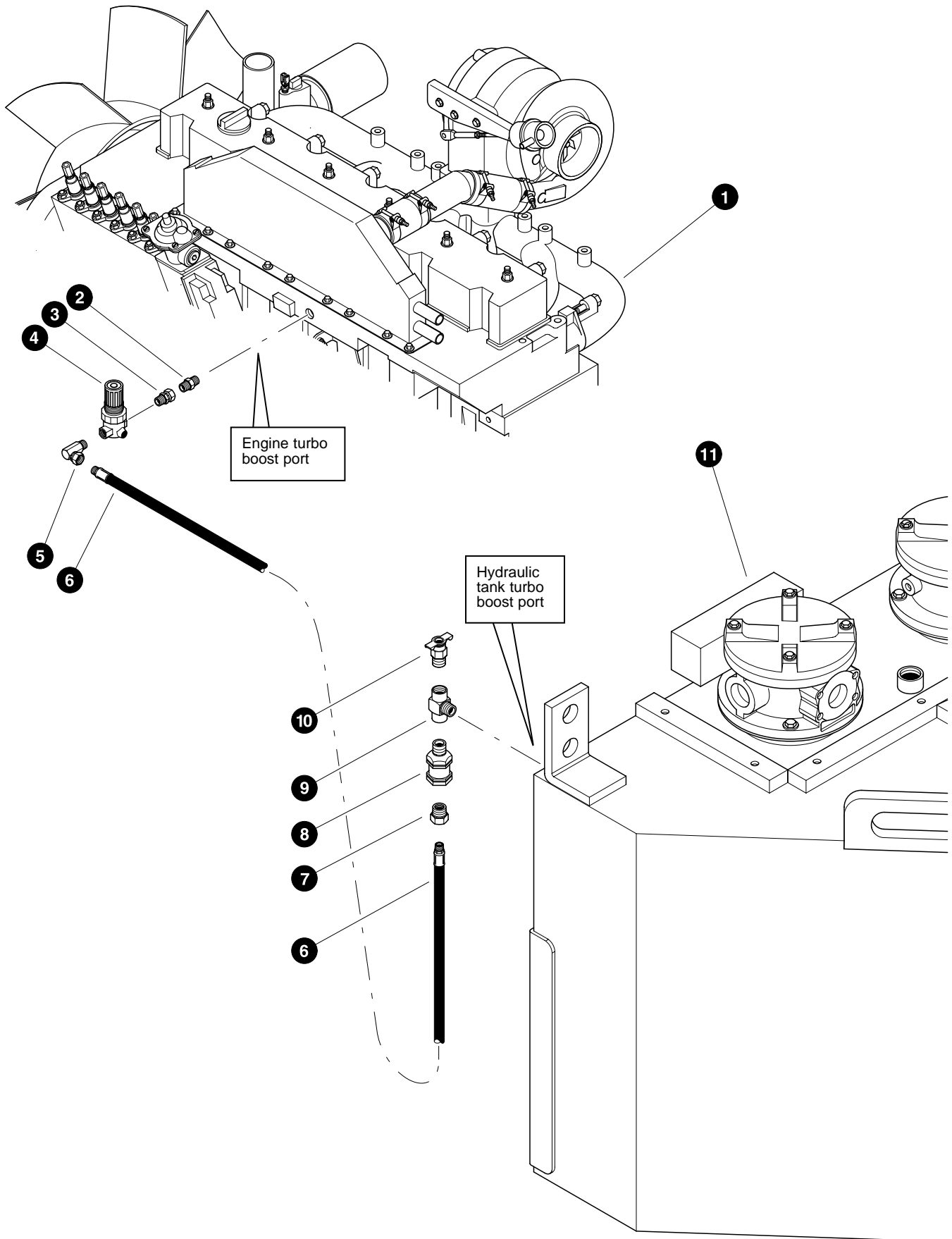


Parts 00093 08/01-00

RETURN FILTER BACK PRESSURE SENSE LINE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	18170-UP	1	GAUGE, return filter back pressure	
2	16263-UP	1	ELBOW, 45° swivel female - 1504-2-2	
3	16006-UP	1	HOSE ASSEMBLY - 2148-04-04PS-02PS (<i>Return filter shuttle valve to return filter back pressure gauge</i>)	
4	10320-UP	2	ELBOW, 90° swivel - 1501-4-4	
5	16802-UP	1	VALVE, shuttle	
6	15391-UP	1	CONNECTOR, straight swivel - 1404-2-2	
7	16791-UP	1	ELBOW, 90° - 5500-4-2	
8	REF.	1	✓ HYDRAULIC TANK ASSEMBLY	UP-4-2
9	16981	1	HOSE ASSEMBLY - 2015-04-04PS-02PS	

✓ See referenced page for component or assembly breakdown.



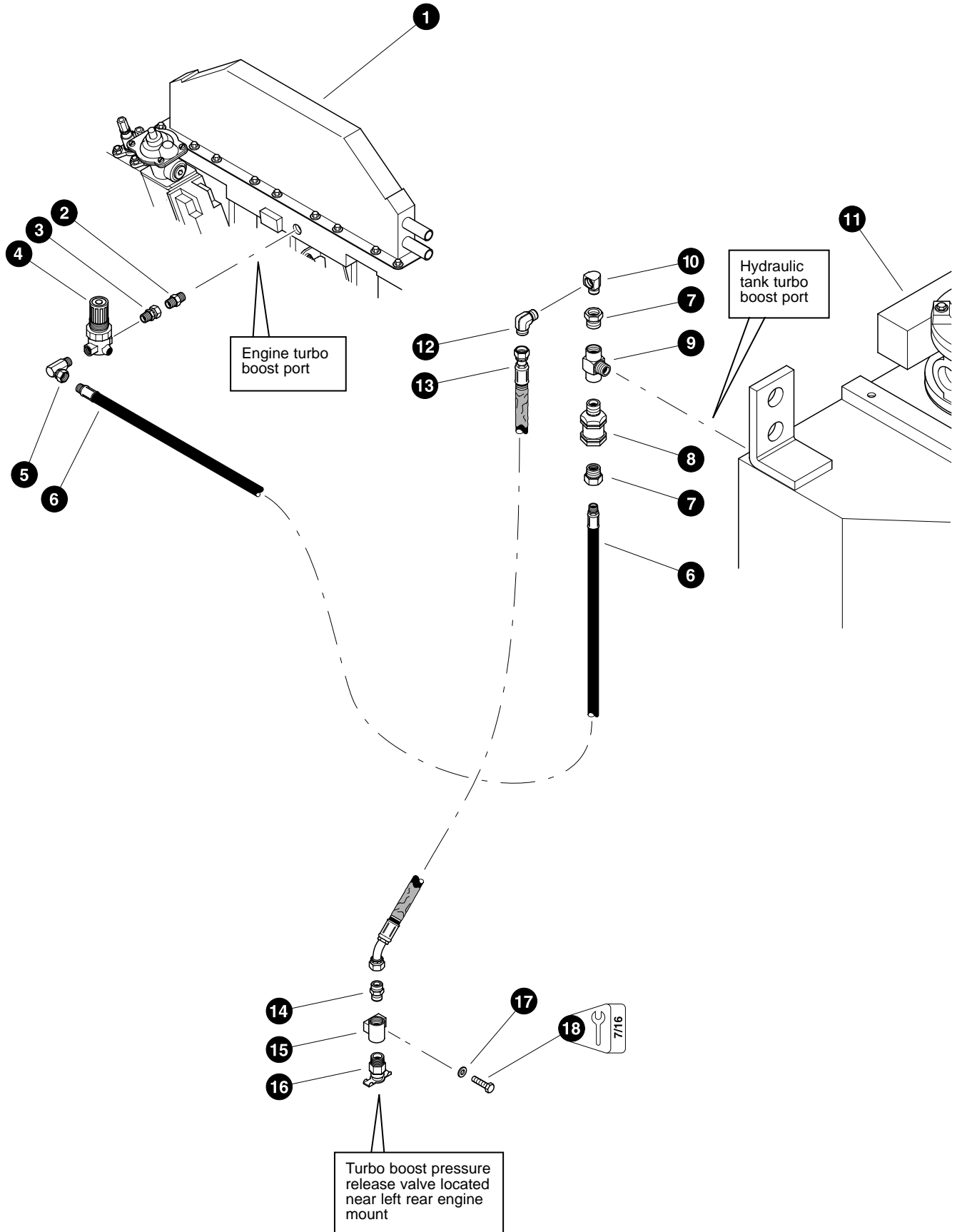
Parts 00452 02/15/98
18.75

TURBO BOOST TANK PRESSURE LINE (Used With Cummins 6C8.3-C Engine)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	ENGINE - Cummins 6C8.3-C	EN-2-2
2	15567-UP	1		CONNECTOR, straight - 5404-4	
3	11331-UP	1		CONNECTOR, straight swivel - 1404-4-4	
4	15649-UP	1		REGULATOR, turbo boost	
5	10320-UP	1		ELBOW, 90° swivel - 1501-4-4	
6	20180-UP	1		HOSE ASSEMBLY - 2037-04-04PS-04PS (<i>Turbo boost regulator to hydraulic tank</i>)	
7	11318-UP	1		BUSHING, reducer - 5406-6-4	
8	15652-UP	1		VALVE, check	
9	15651-UP	1		TEE - 5604-6	
10	15650-UP	1		VALVE, shut-off	
11	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2

✓ See referenced page for component or assembly breakdown.



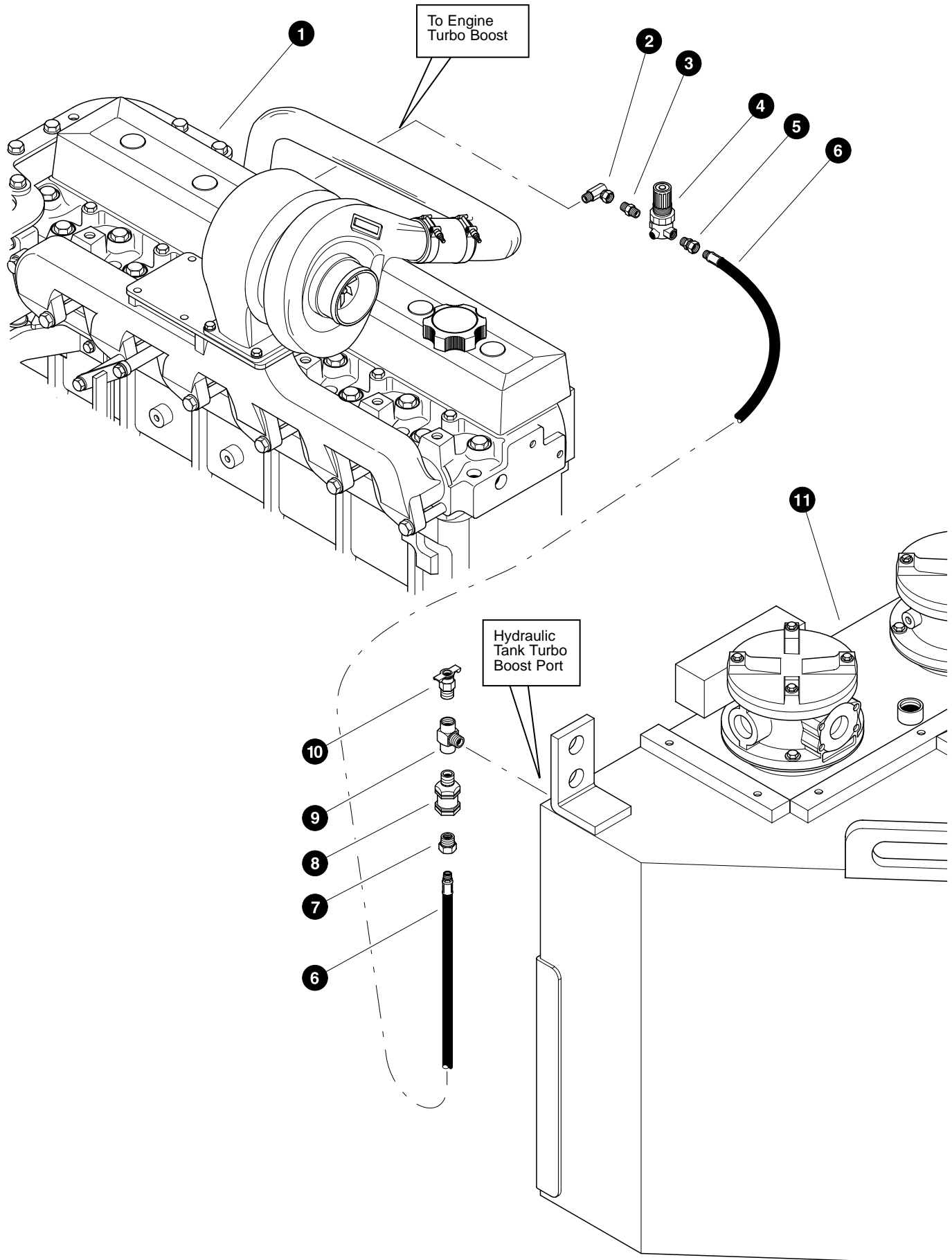
Parts 01958 12/21/2000
25.00

TURBO BOOST TANK PRESSURE LINE (Used With Cummins 6C8.3-C Engine)

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	ENGINE - Cummins 6C8.3-C	EN-2-2
2	15567-UP	1		CONNECTOR, straight - 5404-4	
3	11331-UP	1		CONNECTOR, straight swivel - 1404-4-4	
4	15649-UP	1		REGULATOR, turbo boost	
5	10320-UP	1		ELBOW, 90° swivel - 1501-4-4	
6	20180-UP	1		HOSE ASSEMBLY - 2037-04-04PS-04PS (<i>Turbo boost regulator to hydraulic tank</i>)	
7	11318-UP	2		BUSHING, reducer - 5406-6-4	
8	15652-UP	1		VALVE, check	
9	15651-UP	1		TEE - 5604-6	
10	21147-UP	1		ELBOW, 90° brass - 1/4"	
11	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2
12	15505-UP	1		ELBOW, 90° - FF2032T-0404S	
13	23909-UP	1		HOSE ASSEMBLY - 2051-04-040S-0404-W (<i>Turbo boost port tee to shut-off valve</i>)	
14	15131-UP	1		CONNECTOR, straight - FF2031T-0404S	
15	24063-UP	1		BRACKET, shut-off valve mounting	
16	15650-UP	1		VALVE, shut-off	
17	10757-UP	1		WASHER, SAE flat - 1/4"	
18	15576-UP	1		BOLT - 1/4" x 1"	

✓ See referenced page for component or assembly breakdown.



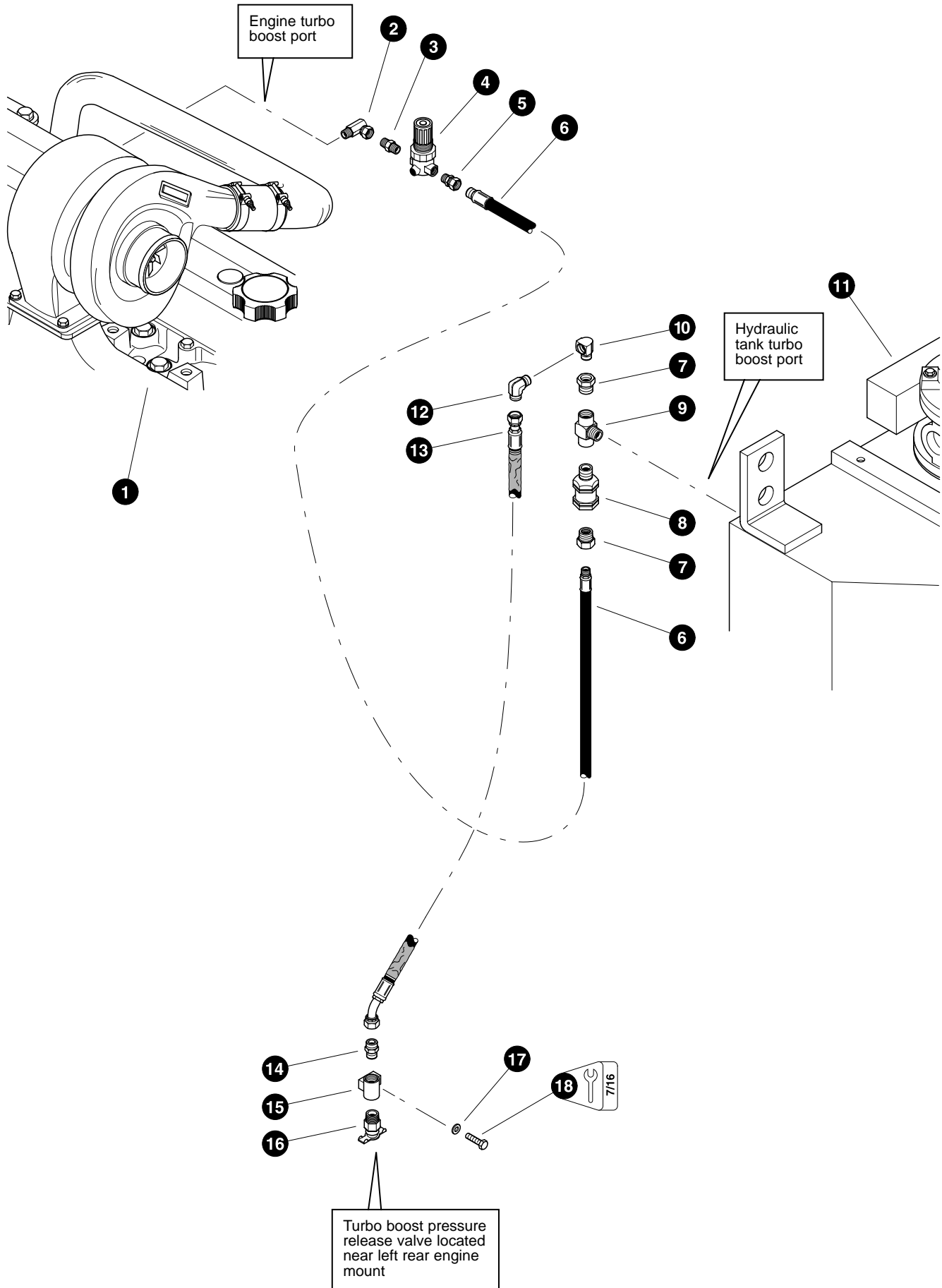
Parts 00728 10/02/98
25.00

TURBO BOOST TANK PRESSURE LINE (John Deere T6068TF Engines)

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	ENGINE	EN-3-2
2	10320-UP	1		ELBOW, 90° swivel - 1501-4-4	
3	15567-UP	1		CONNECTOR, straight - 5404-4	
4	15649-UP	1		REGULATOR, turbo boost	
5	11331-UP	1		CONNECTOR, straight swivel - 1404-4-4	
6	18610-UP	1		HOSE ASSEMBLY - 2035-04-04PS-04PS (<i>Turbo boost regulator to hydraulic tank</i>)	
7	11318-UP	1		BUSHING, reducer - 5406-6-4	
8	15652-UP	1		VALVE, check	
9	15651-UP	1		TEE - 5604-6	
10	15650-UP	1		VALVE, shut-off	
11	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2

✓ See referenced page for component or assembly breakdown.



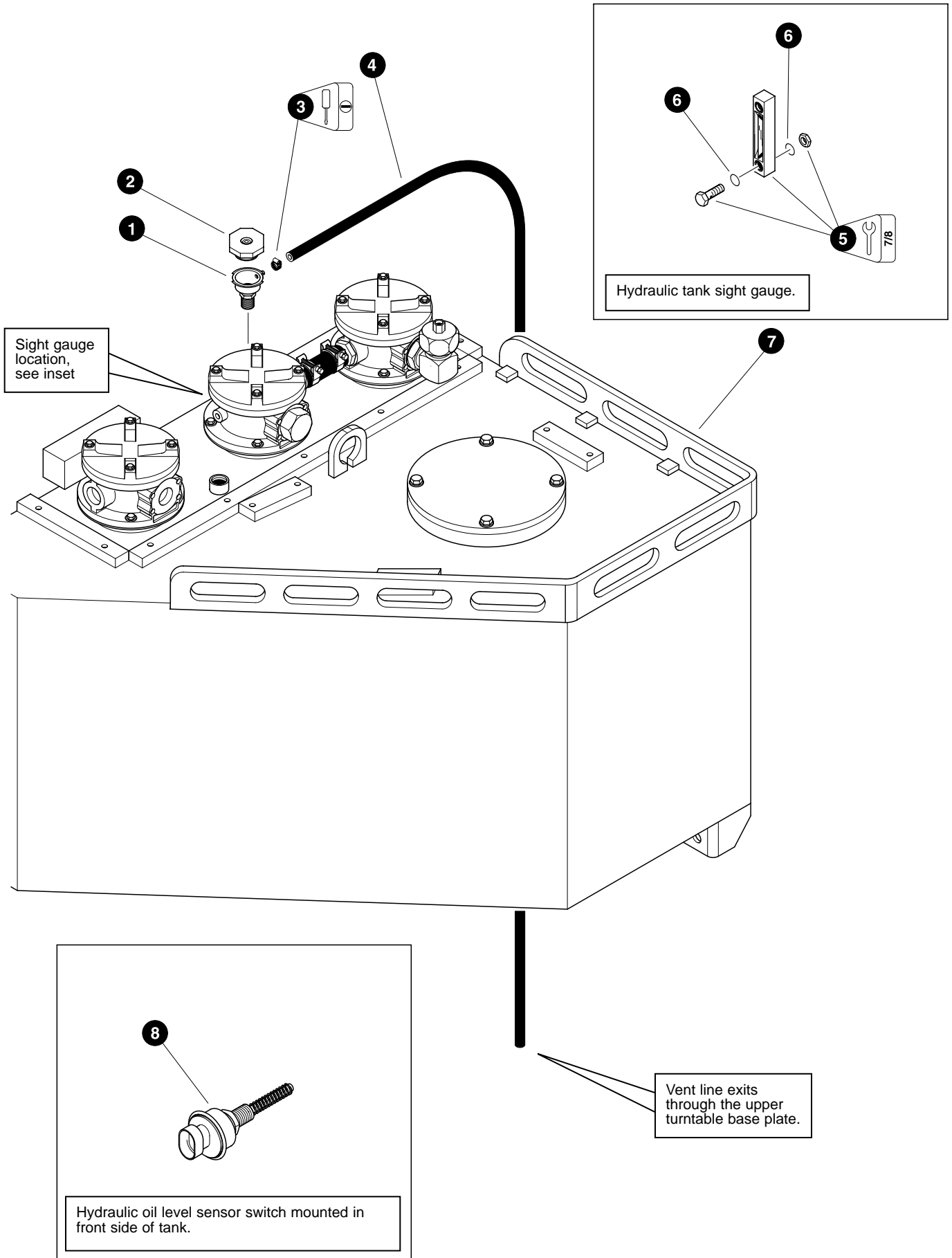
Parts 01959 12/21/2000
25.00

TURBO BOOST TANK PRESSURE LINE (John Deere T6068TF Engines)

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	ENGINE	EN-3-2
2	10320-UP	1		ELBOW, 90° swivel - 1501-4-4	
3	15567-UP	1		CONNECTOR, straight - 5404-4	
4	15649-UP	1		REGULATOR, turbo boost	
5	11331-UP	1		CONNECTOR, straight swivel - 1404-4-4	
6	18610-UP	1		HOSE ASSEMBLY - 2035-04-04PS-04PS (<i>Turbo boost regulator to hydraulic tank</i>)	
7	11318-UP	2		BUSHING, reducer - 5406-6-4	
8	15652-UP	1		VALVE, check	
9	15651-UP	1		TEE - 5604-6	
10	21147-UP	1		ELBOW, 90° brass - 1/4"	
11	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2
12	15505-UP	1		ELBOW, 90° - FF2032T-0404S	
13	23909-UP	1		HOSE ASSEMBLY - 2051-04-040S-0404-W (<i>Turbo boost port tee to shut-off valve</i>)	
14	15131-UP	1		CONNECTOR, straight - FF2031T-0404S	
15	24063-UP	1		BRACKET, shut-off valve mounting	
16	15650-UP	1		VALVE, shut-off	
17	10757-UP	1		WASHER, SAE flat - 1/4"	
18	15576-UP	1		BOLT - 1/4" x 1"	

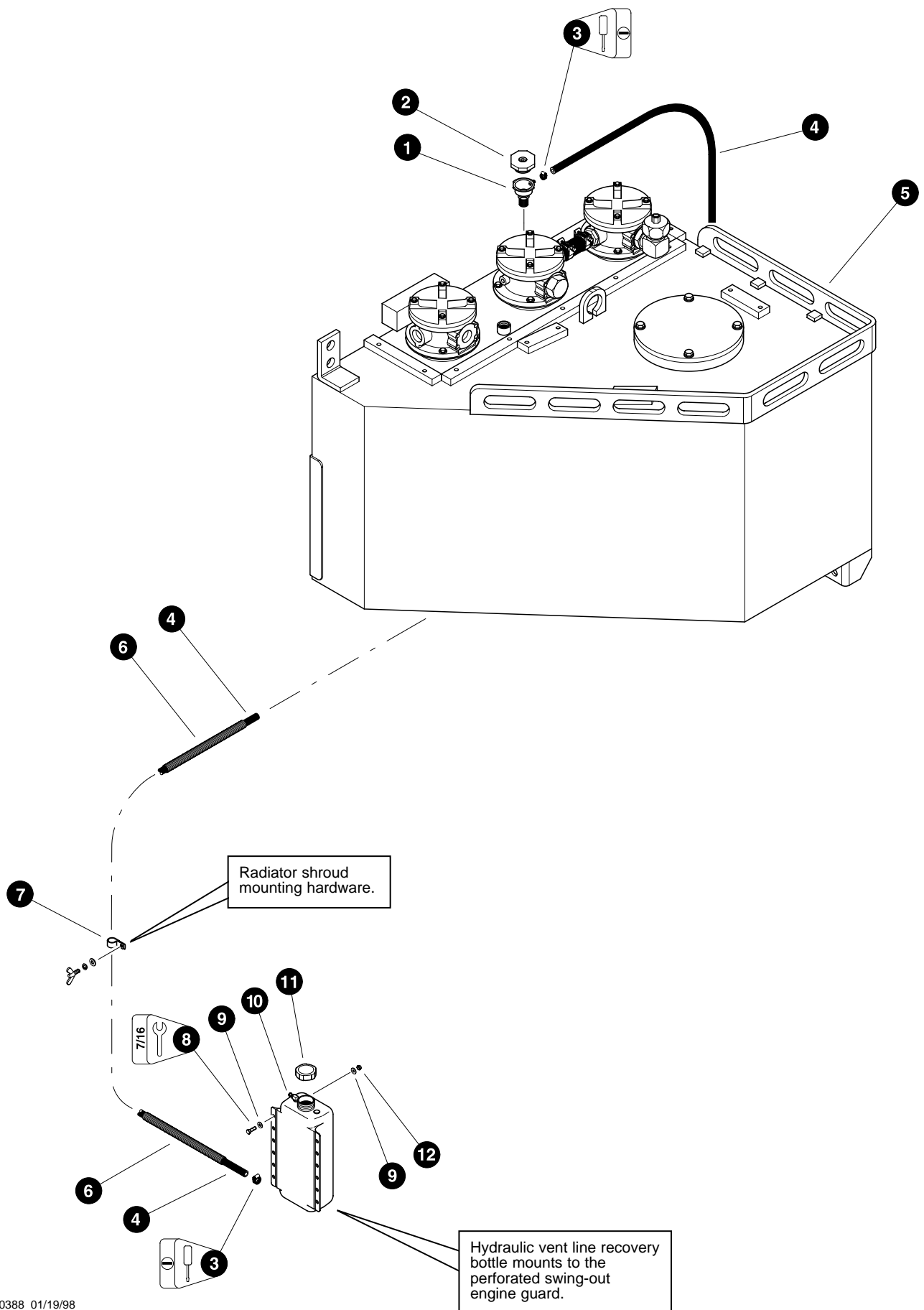
✓ See referenced page for component or assembly breakdown.



HYDRAULIC TANK VENT LINE & SIGHT GAUGE

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	17156-UP	1		STEM, pressure relief cap	
2	18135-UP	1		CAP, pressure relief - 13 psi	
3	16202-UP	1		CLAMP, hose - worm style - 5/8"	
4	16238-UP	AR	>∞	HOSE, rubber - 5/16"	
5	15864-UP	1	☐	GAUGE, hydraulic oil level sight	
6	17541-UP	4		O-RING	
7	REF.	1	✓	HYDRAULIC TANK ASSEMBLY	UP-4-2
8	17118-UP	1		SWITCH, hydraulic oil level	

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

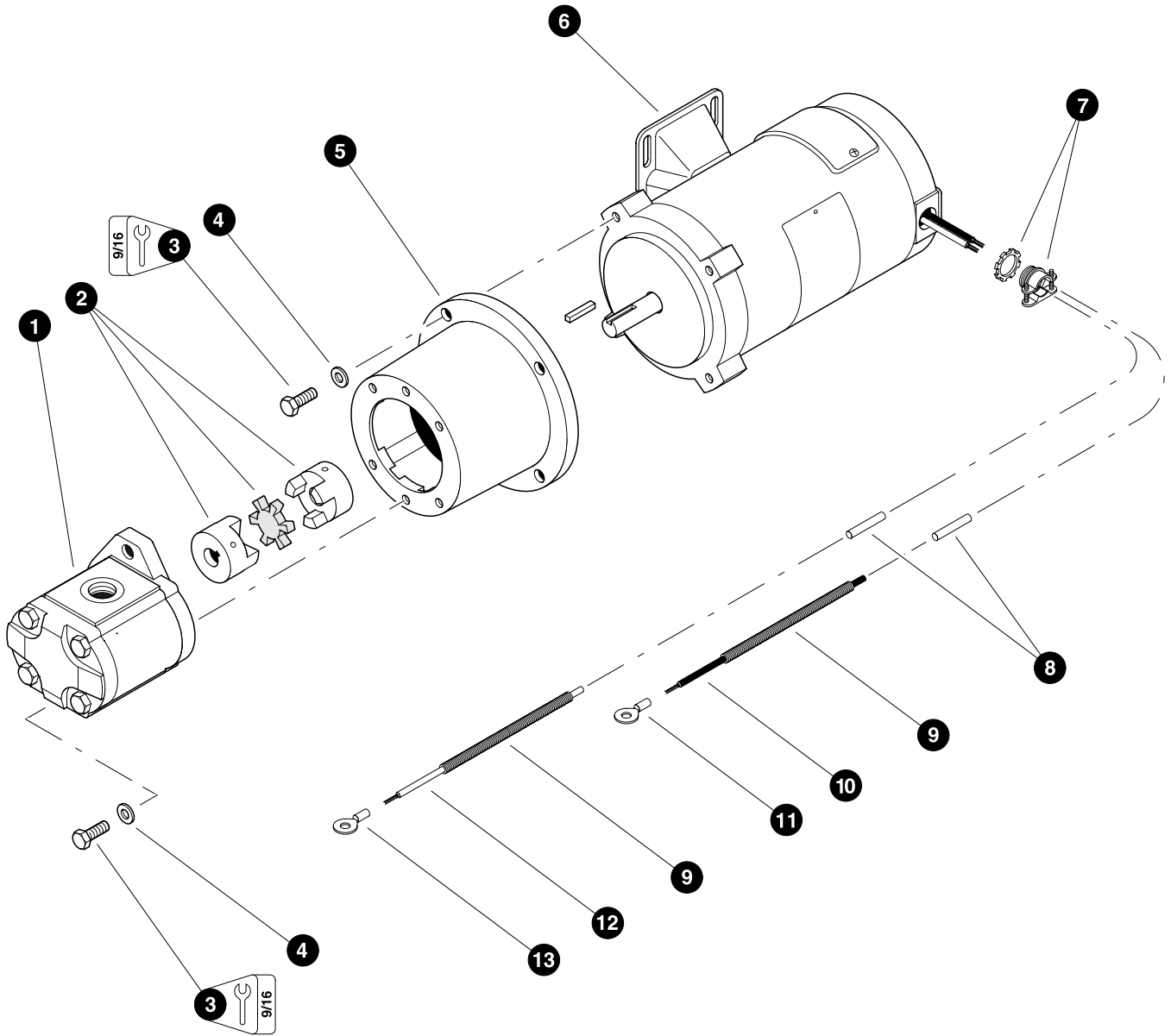


Parts 00388 01/19/98
12.50

OPTIONAL HYDRAULIC TANK VENT LINE RECOVERY BOTTLE

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17156-UP	1	STEM, pressure relief cap	
2	18135-UP	1	CAP, pressure relief - 13 psi	
3	16202-UP	2	CLAMP, hose - worm style - 5/8"	
4	16238-UP	AR	>∞ HOSE, rubber - 5/16"	
5	REF.	1	✓ HYDRAULIC TANK ASSEMBLY	UP-4-2
6	17449-UP	AR	>∞ LOOM, split - 1/2"	
7	16119-UP	1	CLAMP, hose - coated strap - 1"	
8	15576-UP	4	BOLT - 1/4" x 1"	
9	10800-UP	8	WASHER, flat - 1/4"	
10	16925-UP	1	BOTTLE, overflow	
11	19119-UP	1	CAP, overflow bottle	
12	15509-UP	4	NUT, nylock - 1/4"	

- >∞ Bulk material - order length required in feet or meters.
 ✓ See referenced page for component or assembly breakdown.

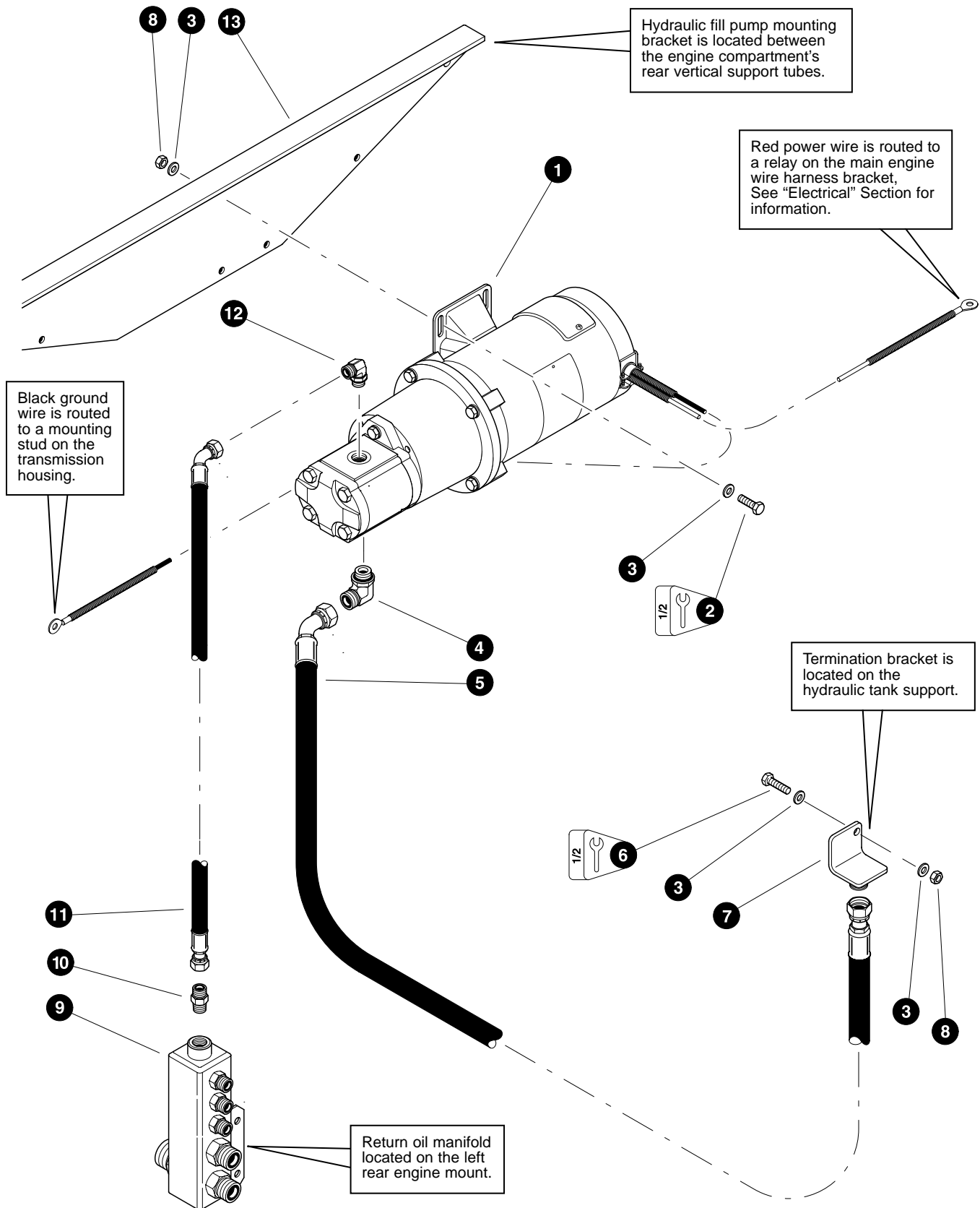


ELECTRIC HYDRAULIC OIL FILL PUMP ASSEMBLY

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	21020-UP	1	☐	HYDRAULIC OIL FILL PUMP ASSEMBLY	
1	16800-UP	1		PUMP, electric hydraulic oil fill	
2	16799-UP	1		COUPLING, motor	
3	11707-UP	6		BOLT - 3/8" x 1"	
4	15528-UP	6		WASHER, SAE flat - 3/8"	
5	16801-UP	1		BRACKET, motor/pump mounting	
6	16798-UP	1		MOTOR, electric hydraulic oil fill	
7	16331-UP	1		RELIEF, strain	
8	17226-UP	2		CONNECTOR, butt	
9	16705-UP	AR	>∞	LOOM, split - 1/4"	
10	15005-UP	AR	>∞	WIRE - 10 gauge (<i>Black</i>)	
11	17218-UP	1		TERMINAL, ring	
12	17208-UP	AR	>∞	WIRE, 8 gauge (<i>Red</i>)	
13	17223-UP	1		TERMINAL, ring	

☐ Kit or Assembly - includes all items indented underneath.

>∞ Bulk material - order length required in feet or meters.

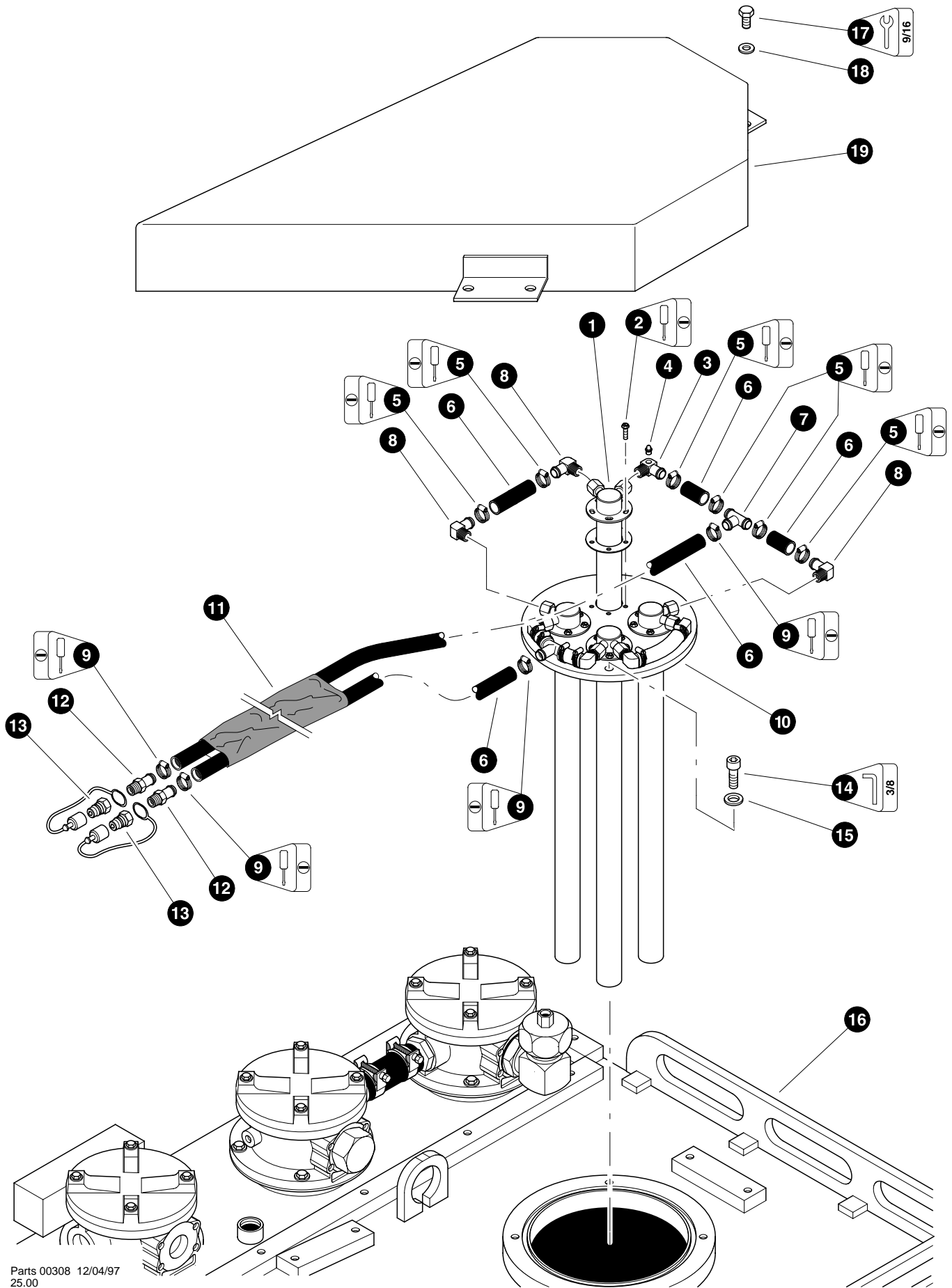


Parts 00144 08/22/96

ELECTRIC HYDRAULIC OIL FILL PUMP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	PUMP/MOTOR ASSEMBLY	UP-4-16
2	15589-UP	4		BOLT - 5/16" x 1	
3	15559-UP	10		WASHER, SAE flat - 5/16"	
4	17688-UP	1		ELBOW, 90° - FF1868T-1212S	
5	20271-UP	1		HOSE ASSEMBLY - 2080-12-120S-1204-W (<i>Electric hydraulic oil fill pump suction line</i>)	
6	10822-UP	1		BOLT - 5/16" x 1-1/4"	
7	18770-UP	1		BRACKET, hydraulic fill termination	
8	10812-UP	5		NUT, lock - 5/16"	
9	REF.	1	✓	RETURN OIL MANIFOLD	UP-4-8
10	15258-UP	1		CONNECTOR, straight - FF2031-T-0808S	
11	20469-UP	1		HOSE ASSEMBLY - 2046.5-08-080S-0804 (<i>Electric hydraulic oil fill pump to return oil manifold</i>)	
12	15154-UP	1		ELBOW, 90° - FF1868T-0810S	
13	18455-UP	1		BRACKET, hydraulic fill pump mounting	

✓ See referenced page for component or assembly breakdown.

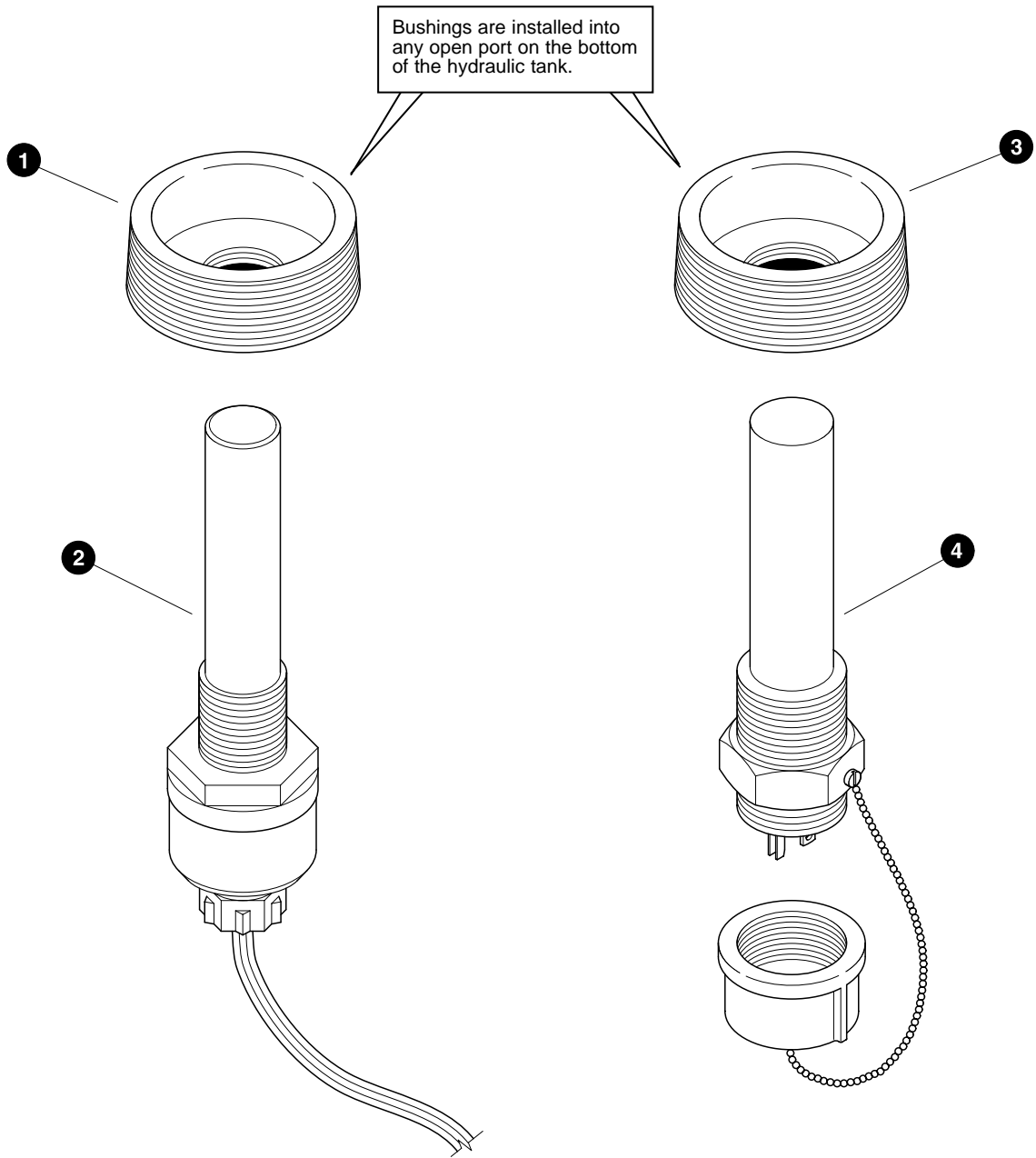


Parts 00308 12/04/97
25.00

OPTIONAL IN-TANK HYDRAULIC OIL HEATER INSTALLATION

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	18300-UP	1	<input type="checkbox"/> IN-TANK HYDRAULIC OIL HEATER ASSEMBLY	
1	17747-UP	4	<input type="checkbox"/> TUBE, heater	
	18277-UP	1	GASKET, heater tube	
2	18298-UP	20	SCREW, slotted hex head - #10-24 x 3/4"	
3	17748-UP	1	SCREW, bleeder	
4	18294-UP	1	ELBOW, 90° brass (<i>Tapped for bleeder screw</i>)	
5	16256-UP	12	CLAMP, hose - worm style - 1"	
6	16717-UP	AR	>∞ HOSE, heater - 5/8"	
7	17750-UP	2	TEE	
8	17749-UP	7	ELBOW, 90° brass	
9	17537-UP	4	CLAMP, hose - worm style - 1-1/8"	
10	18188-UP	1	COVER, access - hydraulic tank heater	
11	17572-UP	AR	>∞ SLEEVE, protective hose	
	16290-UP	3	STRAP, tie	
12	16123-UP	2	NIPPLE, king - 1/2"	
13	17307M-UP	2	COUPLING, quick-disconnect - male - 1/2"	
	17323M-UP	2	COVER, quick-disconnect - male - 1/2"	
14	18295-UP	4	BOLT, allen head - 1/2" x 1"	
15	15534-UP	4	WASHER, SAE flat - 1/2"	
16	REF.	1	✓ HYDRAULIC OIL TANK	UP-4-2
17	15542-UP	6	BOLT - 3/8" x 3/4"	
18	15528-UP	6	WASHER, SAE flat - 3/8"	
19	18076-UP	1	COVER, in-tank hydraulic oil heater	

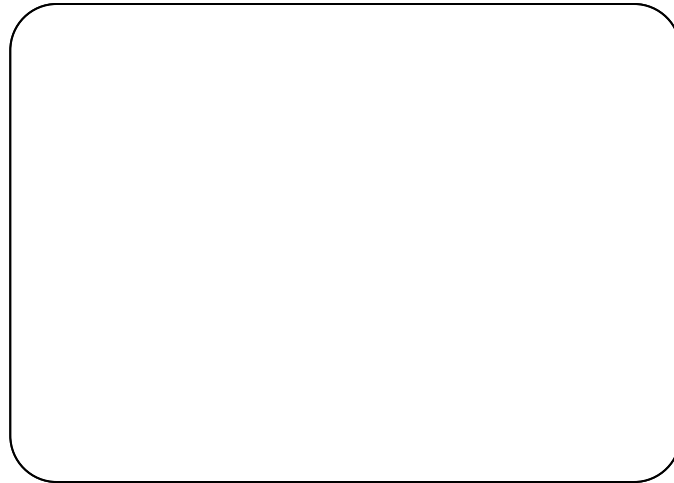
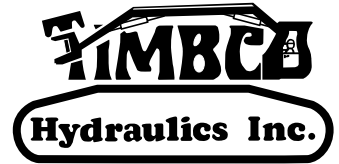
- Kit or assembly - includes all items indented underneath.
- >∞ Bulk material - order length required in feet or meters.
- ✓ See referenced page for component or assembly breakdown.



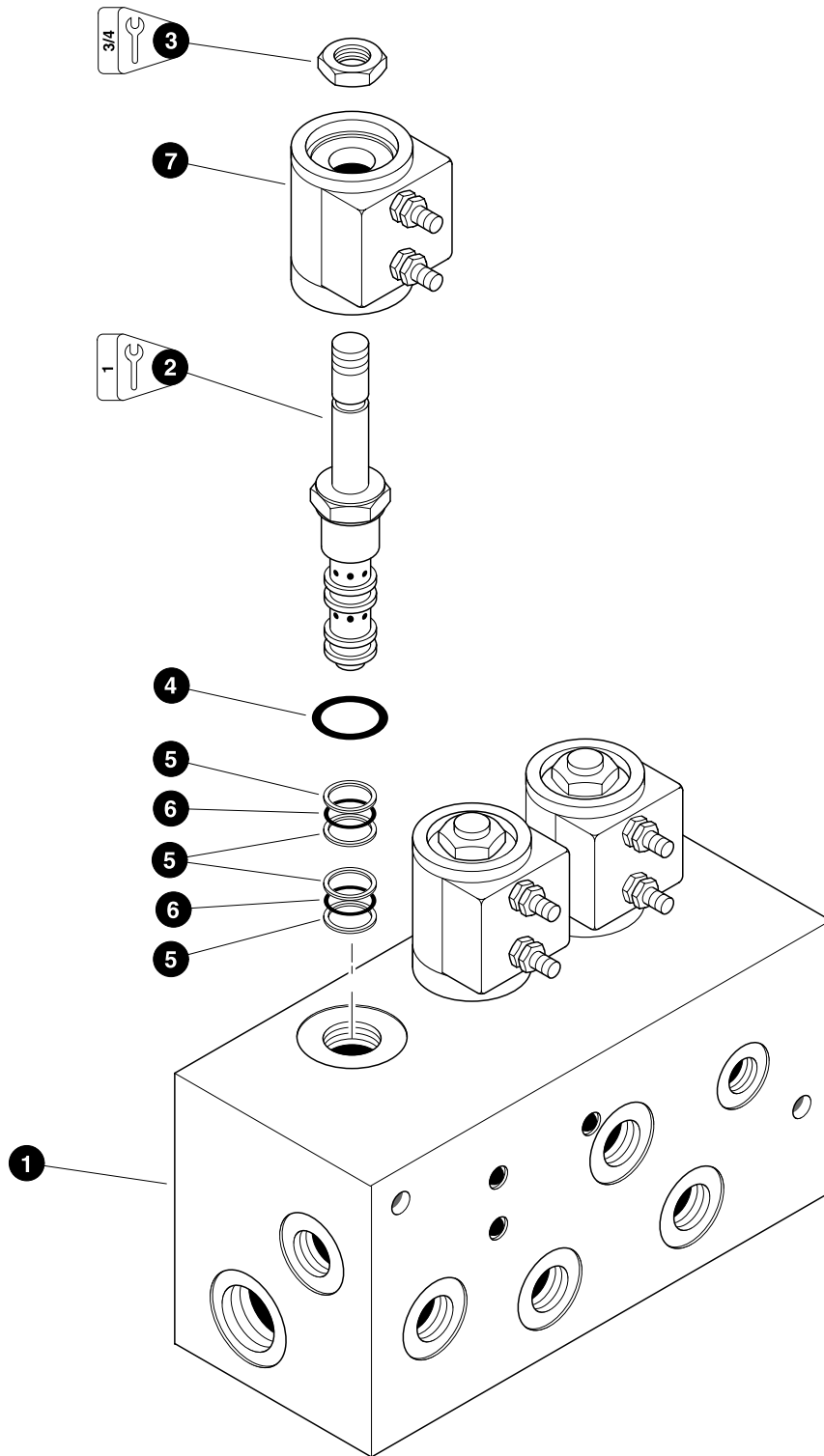
OPTIONAL IN-TANK ELECTRIC HYDRAULIC OIL HEATERS

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	19318-UP	1	BUSHING, black reducer - 3" x 1"	
2	19286-UP	1	HEATER ASSEMBLY (120V / 600W)	
3	20068-UP	1	BUSHING, black reducer - 3" x 1-1/4"	
4	20069-UP	1	HEATER ASSEMBLY (120V / 500W)	

Section UP-5



Upper Turntable - Auxiliary Hydraulic Systems

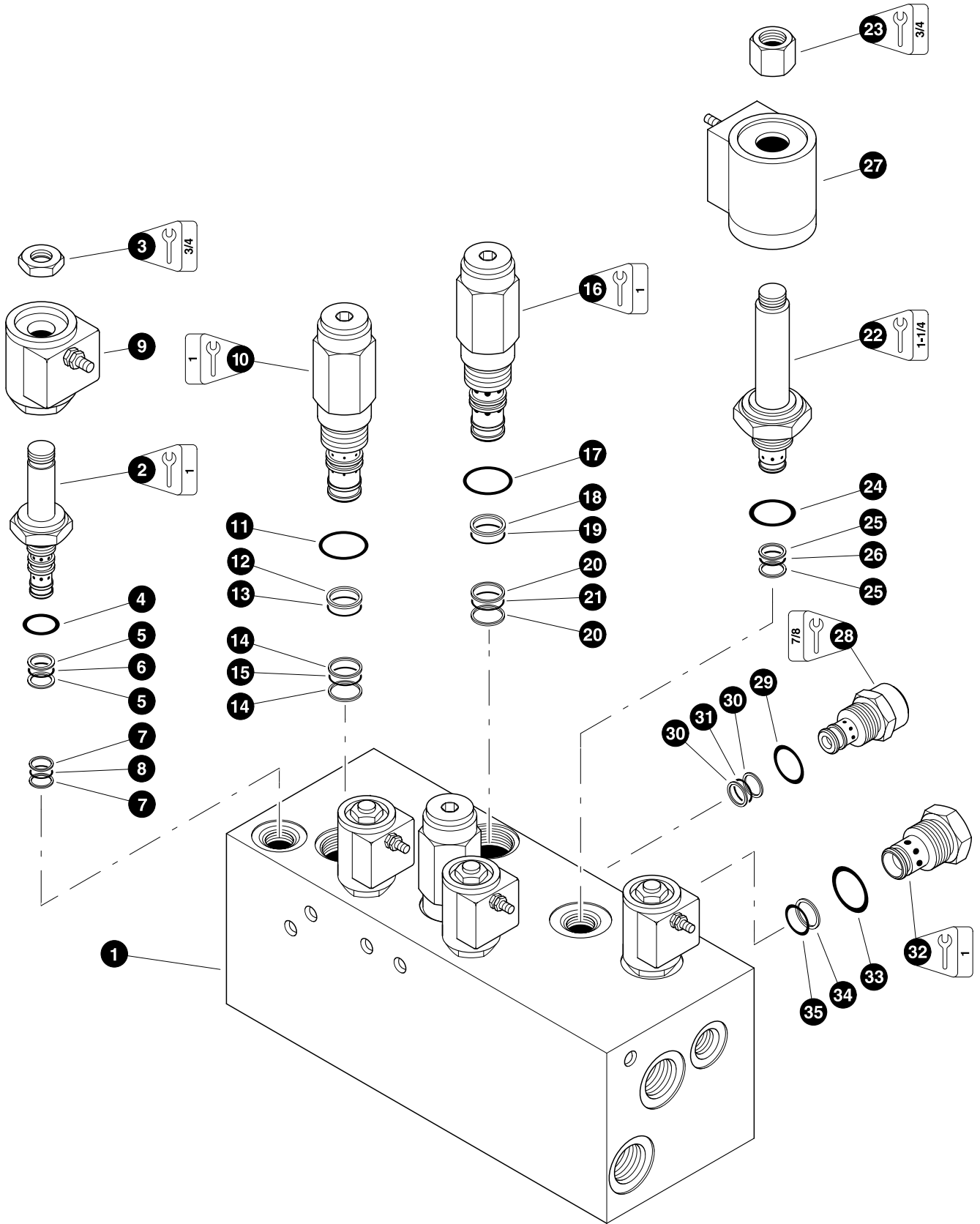


PILOT PRESSURE MANIFOLD

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	17752-UP	1	☐ VALVE, pilot pressure manifold	
1	NSS	1	HOUSING, valve body	
2	17798-UP	3	☐ CARTRIDGE, solenoid valve	
3	NSS	1	NUT	
4	NSS	1	★ O-RING, body	
5	NSS	4	★ RING, back-up - chamber	
6	NSS	2	★ O-RING, chamber	
7	17797-UP	1	COIL, pilot pressure manifold - 12V	
	20022-UP	1	COIL, pilot pressure manifold - 24V	
-	17799-UP	1	KIT, seal repair - relief valve cartridge	

- ☐ Kit or Assembly - includes all items indented underneath.
- ★ Included in seal repair kit Part # 17799-UP.



MONO-BLOCK VALVE

(Used on machines PDN# 134FWD and below)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	19220-UP	1	☐	VALVE, mono-block	
1	NSS	1		HOUSING, valve body	
2	20286-UP	3	☐	CARTRIDGE, solenoid valve (<i>small</i>)(SV07-31-0-N-12DB)	
2	22394-UP	1	☐	CARTRIDGE, solenoid valve (<i>small</i>)(SV08-40-0-N-12DB)	
3	NSS	1		NUT	
4	NSS	1	★	O-RING, body	
5	NSS	2	★	RING, back-up - chamber (<i>upper</i>)	
6	NSS	1	★	O-RING, chamber (<i>upper</i>)	
7	NSS	2	★	RING, back-up - chamber (<i>lower</i>)	
8	NSS	1	★	O-RING, chamber (<i>lower</i>)	
9	20289-UP	1		COIL, mono-block valve - 12V (<i>small</i>)	
	20022-UP	1		COIL, mono-block valve - 24V (<i>small</i>)	
10	20290-UP	2	☐	CARTRIDGE, relief valve (PR10)	
11	NSS	1	☆	O-RING, body	
12	NSS	1	☆	RING, back-up - chamber (<i>upper</i>)	
13	NSS	1	☆	O-RING, chamber (<i>upper</i>)	
14	NSS	2	☆	RING, back-up - chamber (<i>lower</i>)	
15	NSS	1	☆	O-RING, chamber (<i>lower</i>)	
16	20292-UP	1	☐	CARTRIDGE, unloading (UP10)	
17	NSS	1	●	O-RING, body	
18	NSS	1	●	RING, back-up - chamber (<i>upper</i>)	
19	NSS	1	●	O-RING, chamber (<i>upper</i>)	
20	NSS	2	●	RING, back-up - chamber (<i>lower</i>)	
21	NSS	1	●	O-RING, chamber (<i>lower</i>)	
22	20287-UP	1	☐	CARTRIDGE, solenoid valve (<i>large</i>)	
23	NSS	1		NUT	
24	NSS	1	○	O-RING, body	
25	NSS	2	○	RING, back-up - chamber	
26	NSS	1	○	O-RING, chamber	
27	20295-UP	1		COIL, mono-block valve - 12V (<i>large</i>)	
	23620-UP	1		COIL, mono-block valve - 24V (<i>large</i>)	
28	20296-UP	1	☐	CARTRIDGE, orifice (FR08)	
29	NSS	1	■	O-RING, body	
30	NSS	2	■	RING, back-up - chamber	
31	NSS	1	■	O-RING, chamber	
32	20298-UP	1	☐	CARTRIDGE, check valve (CV10)	
33	NSS	1	▲	O-RING, body	
34	NSS	2	▲	RING, back-up - chamber	
35	NSS	1	▲	O-RING, chamber	
-	20288-UP	1		KIT, seal repair - solenoid valve cartridge	
-	20291-UP	1		KIT, seal repair - relief valve cartridge	
-	20293-UP	1		KIT, seal repair - relief valve cartridge	
-	20294-UP	1		KIT, seal repair - solenoid valve cartridge	
-	20297-UP	1		KIT, seal repair - check valve cartridge	
-	20299-UP	1		KIT, seal repair - check valve cartridge	

☐ Kit or Assembly - includes all items indented underneath.

★ Included in seal repair kit Part # 20288-UP.

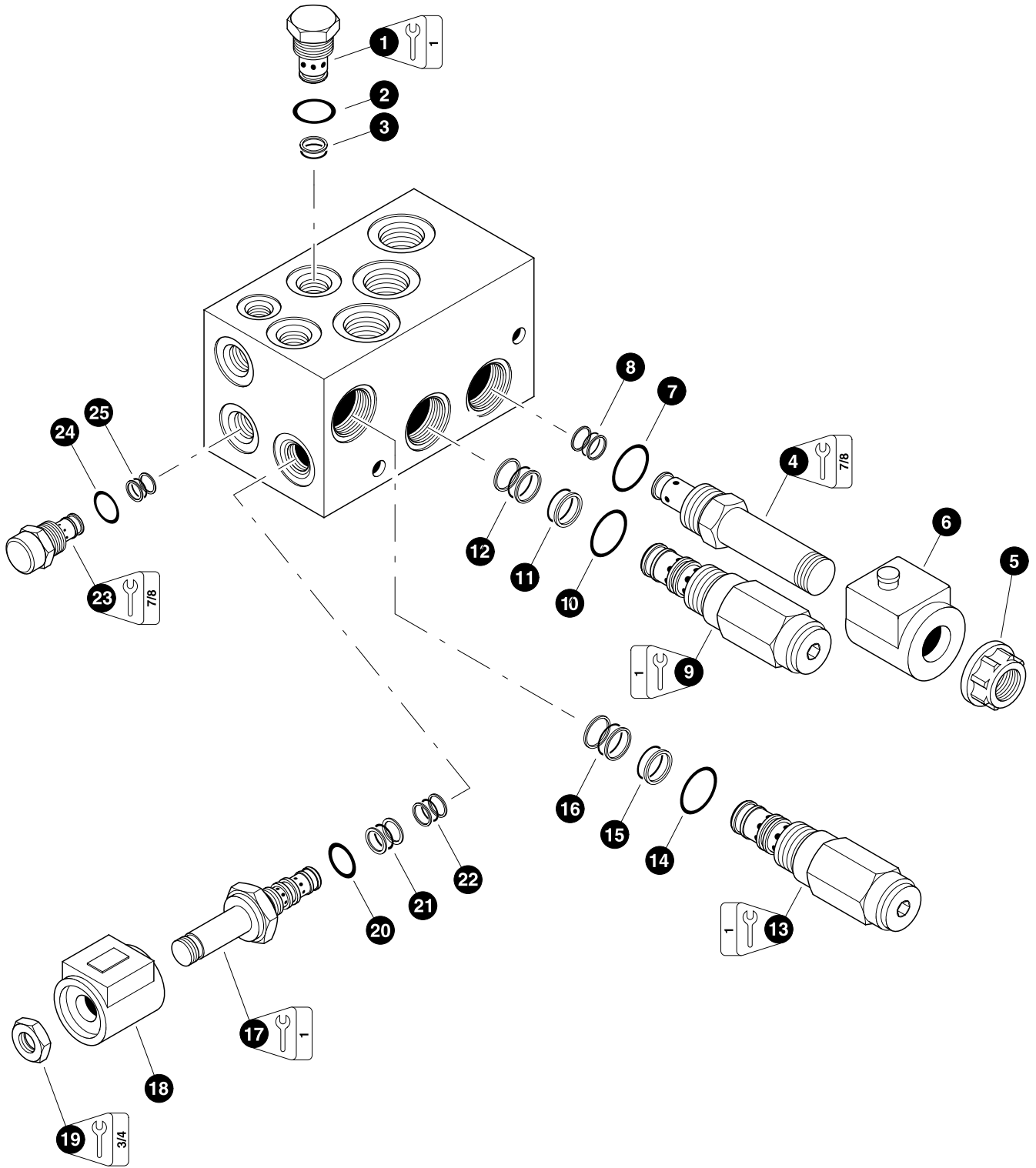
☆ Included in seal repair kit Part # 20291-UP.

● Included in seal repair kit Part # 20293-UP.

○ Included in seal repair kit Part # 20294-UP.

■ Included in seal repair kit Part # 20297-UP.

▲ Included in seal repair kit Part # 20299-UP.



Parts 01928 12/08/2000
62.50

UPPER SOLENOID MANIFOLD

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	23138-UP	1	☐ MANIFOLD, upper solenoid - 12V	
-	23610-UP	1	☐ MANIFOLD, upper solenoid - 24V	
1	24064-UP	1	☐ CARTRIDGE, check valve (CV10-20-0-N-05)	
2	NSS	1	★ O-RING, body	
3	NSS	1	★ SEALS, chamber	
4	24065-UP	1	☐ CARTRIDGE, solenoid valve - 12V (SV58-24-0-P-12DW)	
	24066-UP	1	☐ CARTRIDGE, solenoid valve - 24V (SV58-24-0-P-24DW)	
5	NSS	1	NUT	
6	23623-UP	1	COIL - 12V	
	23624-UP	1	COIL - 24V	
7	NSS	1	☆ O-RING, body	
8	NSS	1	☆ SEALS, chamber	
9	20292-UP	1	☐ CARTRIDGE, unloading (UP10-30H-0-N-90-30/20)	
10	NSS	1	● O-RING, body	
11	NSS	1	● SEALS, chamber (Large)	
12	NSS	1	● SEALS, chamber (Small)	
13	24067-UP	1	☐ CARTRIDGE, relief valve (PR50-36H-0-P-50/21)	
14	NSS	1	○ O-RING, body	
15	NSS	1	○ SEALS, chamber (Large)	
16	NSS	1	○ SEALS, chamber (Small)	
17	24068-UP	1	☐ CARTRIDGE, solenoid valve - 12V (SV08-20-N-12DW)	
	24069-UP	1	☐ CARTRIDGE, solenoid valve - 24V (SV08-20-N-24DW)	
18	23621-UP	1	COIL - 12V (Red harness wires)	
	23622-UP	1	COIL - 24V (Green harness wires)	
19	NSS	1	NUT	
20	NSS	1	■ O-RING, body	
21	NSS	1	■ SEALS, chamber (Large)	
22	NSS	1	■ SEALS, chamber (Small)	
23	20296-UP	1	☐ CARTRIDGE, orifice (FR08-20F-0-N-0.25)	
24	NSS	1	▲ O-RING, body	
25	NSS	1	▲ SEALS, chamber	
-	24078-UP	1	KIT, seal repair - check valve cartridge	
-	24079-UP	1	KIT, seal repair - solenoid valve cartridge (SV58)	
-	24080-UP	1	KIT, seal repair - unloading valve cartridge	
-	24081-UP	1	KIT, seal repair - relief valve cartridge	
-	24082-UP	1	KIT, seal repair - solenoid valve cartridge (SV08)	
-	20299-UP	1	KIT, seal repair - orifice cartridge	

☐ Kit or Assembly - includes all items indented underneath.

★ Included in seal repair kit Part # 24078-UP.

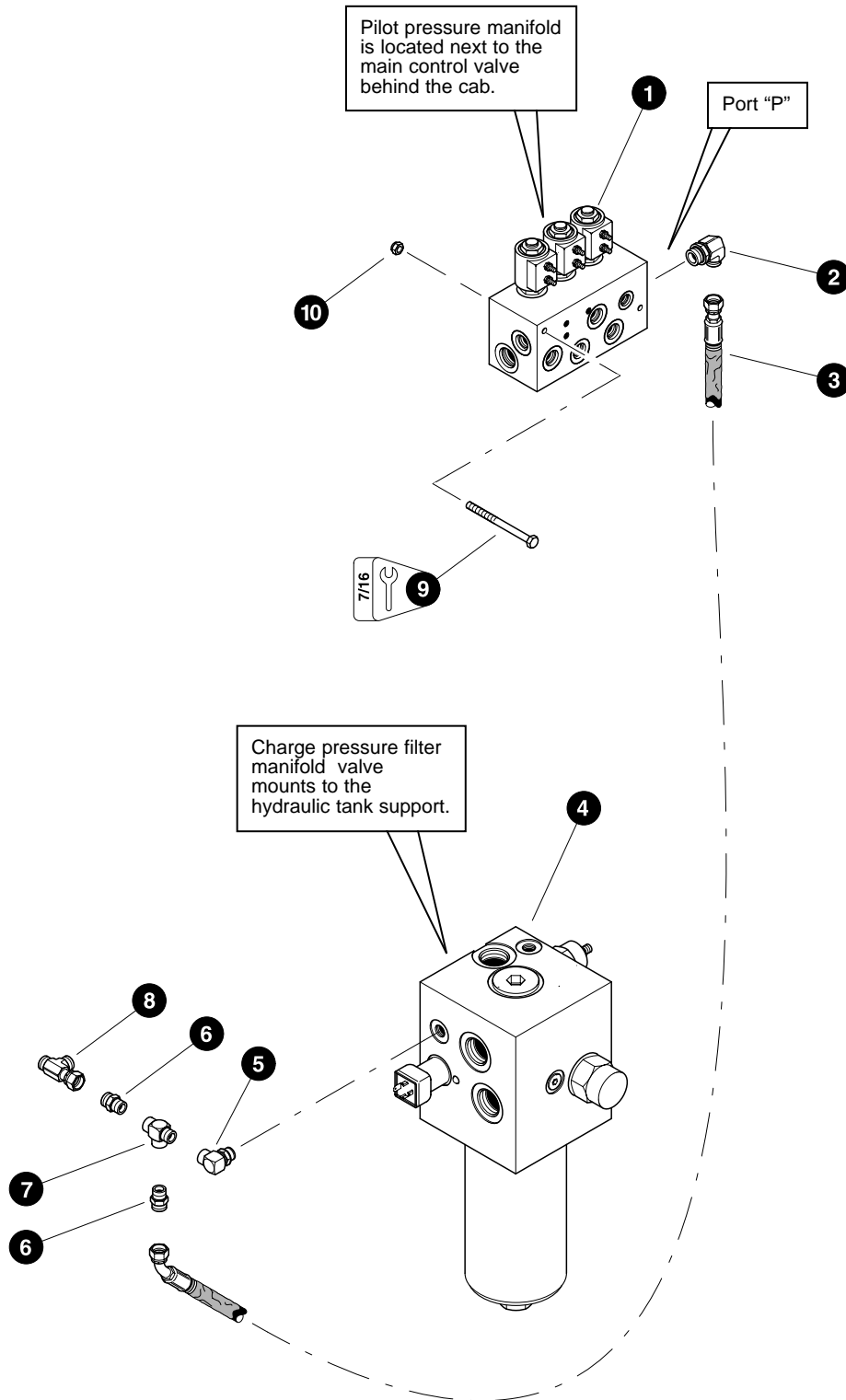
☆ Included in seal repair kit Part # 24079-UP.

● Included in seal repair kit Part # 24080-UP.

○ Included in seal repair kit Part # 24081-UP.

■ Included in seal repair kit Part # 24082-UP.

▲ Included in seal repair kit Part # 20299-UP.

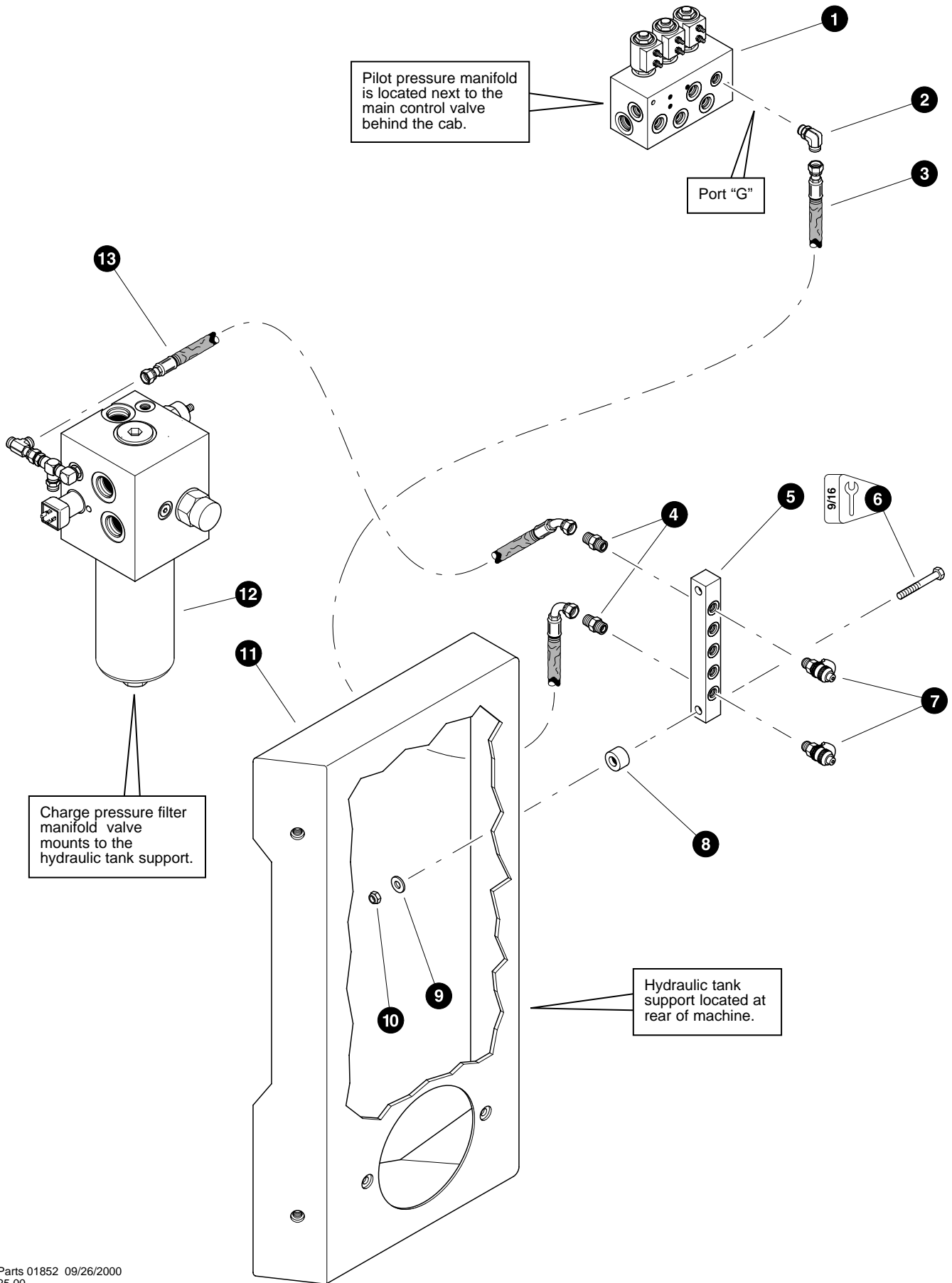


PILOT PRESSURE MANIFOLD PRESSURE LINE

(Used on machines PDN# 134FWD and below only)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	PILOT PRESSURE MANIFOLD	UP-5-2
2	15133-UP	1		ELBOW, 90° - FF1868T-0406S	
3	23027-UP	1		HOSE ASSEMBLY - 2089-04-040S-0404-W (<i>Charge pressure filter manifold to pilot pressure manifold port "P"</i>)	
4	REF.	1	✓	CHARGE PRESSURE FILTER MANIFOLD	WD-3-2
5	16639-UP	1		ELBOW, 90° - 6805-4-4	
6	15131-UP	2		CONNECTOR, straight - FF2031T-0404S	
7	10393-UP	1		TEE - 5602-4	
8	15176-UP	1		TEE - FF2114T-0404S	
9	10819-UP	2		BOLT - 1/4" x 3-1/4"	
10	10811-UP	2		NUT, lock - 1/4"	

✓ See referenced page for component or assembly breakdown.



Parts 01852 09/26/2000
25.00

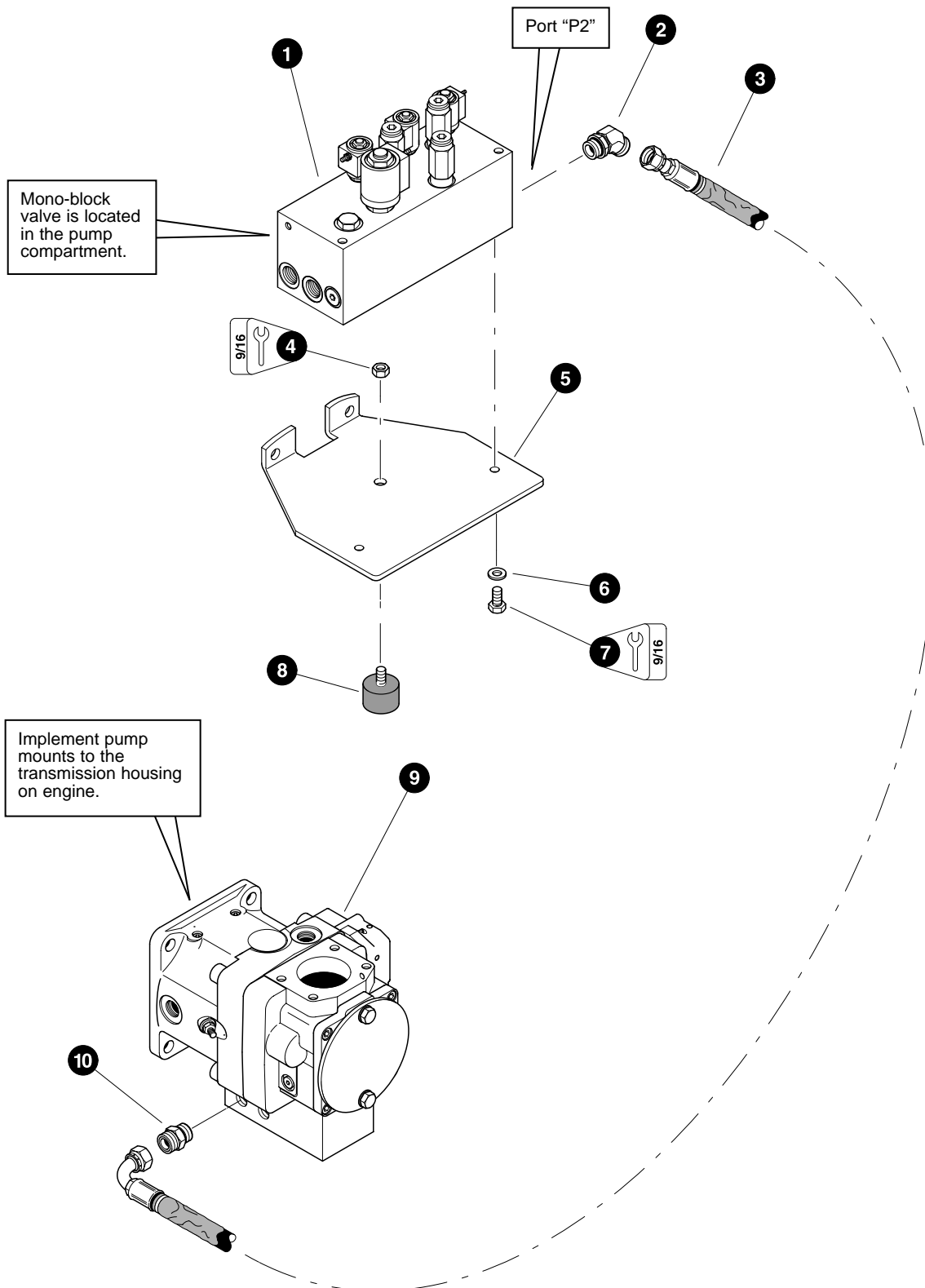
PILOT PRESSURE TEST GAUGE LINES

(Used on machines PDN# 134FWD and below only)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	PILOT PRESSURE MANIFOLD	UP-5-2
2	16540-UP	1		ELBOW, 90° - FF1868T-0404S	
3	23022-UP	1		HOSE ASSEMBLY - 2091-04-040S-0409-W <i>(Pilot pressure manifold port "G" to pressure check manifold)</i>	
4	16541-UP	2		CONNECTOR, straight - FF1852T-0404S	
5	22287-UP	1		MANIFOLD, pressure check	
6	15529-UP	2		BOLT - 3/8" x 2"	
7	16037-UP	2		TAP, gauge port - #4 ORB	
8	19219-UP	2		SPACER, radiator - 3/4"	
9	15528-UP	2		WASHER, SAE flat - 3/8"	
10	10813-UP	2		NUT, lock - 3/8"	
11	REF.	1	✓	SUPPORT, hydraulic tank	UP-4-6
12	REF.	1	✓	CHARGE PRESSURE FILTER MANIFOLD	WD-3-2
13	23023-UP	1		HOSE ASSEMBLY - 2016-04-040S-0404-W <i>(Charge pressure filter manifold tee to pressure check manifold)(See Note Below)</i>	

✓ See referenced page for component or assembly breakdown.

Note: On machines PDN# 135FWD and above, see Section WD-1 for the charge pressure filter manifold pressure line.

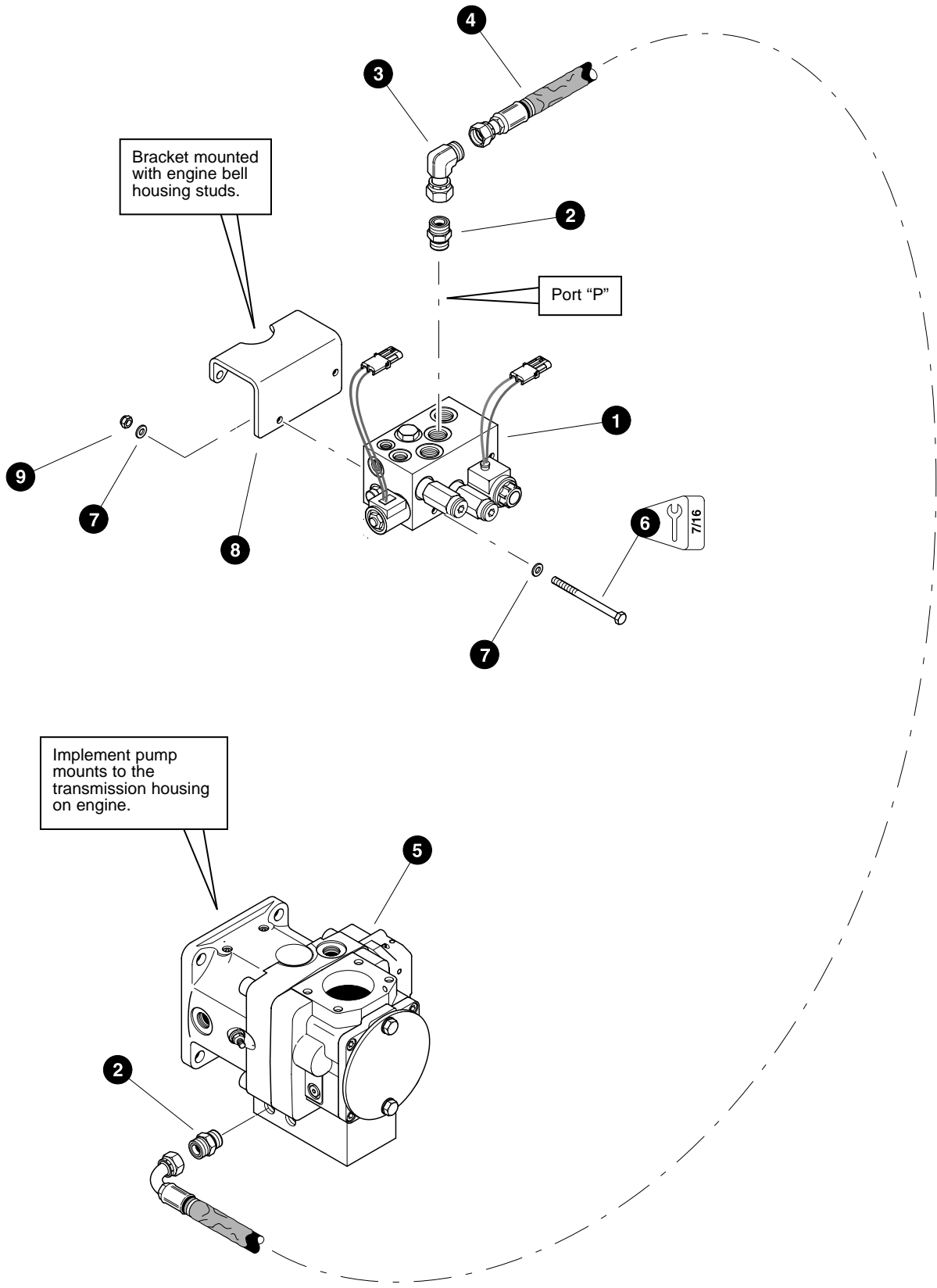


Parts 01694 05/18/2000
25.00

MONO-BLOCK VALVE PRESSURE LINE*(Used on machines PDN# 134FWD and below)*

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	MONO-BLOCK VALVE	UP-5-4
2	19068-UP	1		ELBOW, 45° - FF2068T-0808S	
3	23034-UP	1		HOSE ASSEMBLY - 4060-08-080S-0809-W <i>(Implement pump pressure outlet to mono block valve pressure inlet port "P2")</i>	
4	15507-UP	1		NUT, nylock - 3/8"	
5	80528-UP	1		BRACKET, mono-block manifold valve	
6	15528-UP	2		WASHER, SAE flat - 3/8"	
7	15542-UP	2		BOLT - 3/8" x 3/4"	
8	23097-UP	1		ISOLATOR, sandwich mount	
9	REF.	1	✓	IMPLEMENT PUMP	LH-1-2
10	15117-UP	1		CONNECTOR, straight - FF1852T-0808S	

✓ See referenced page for component or assembly breakdown.



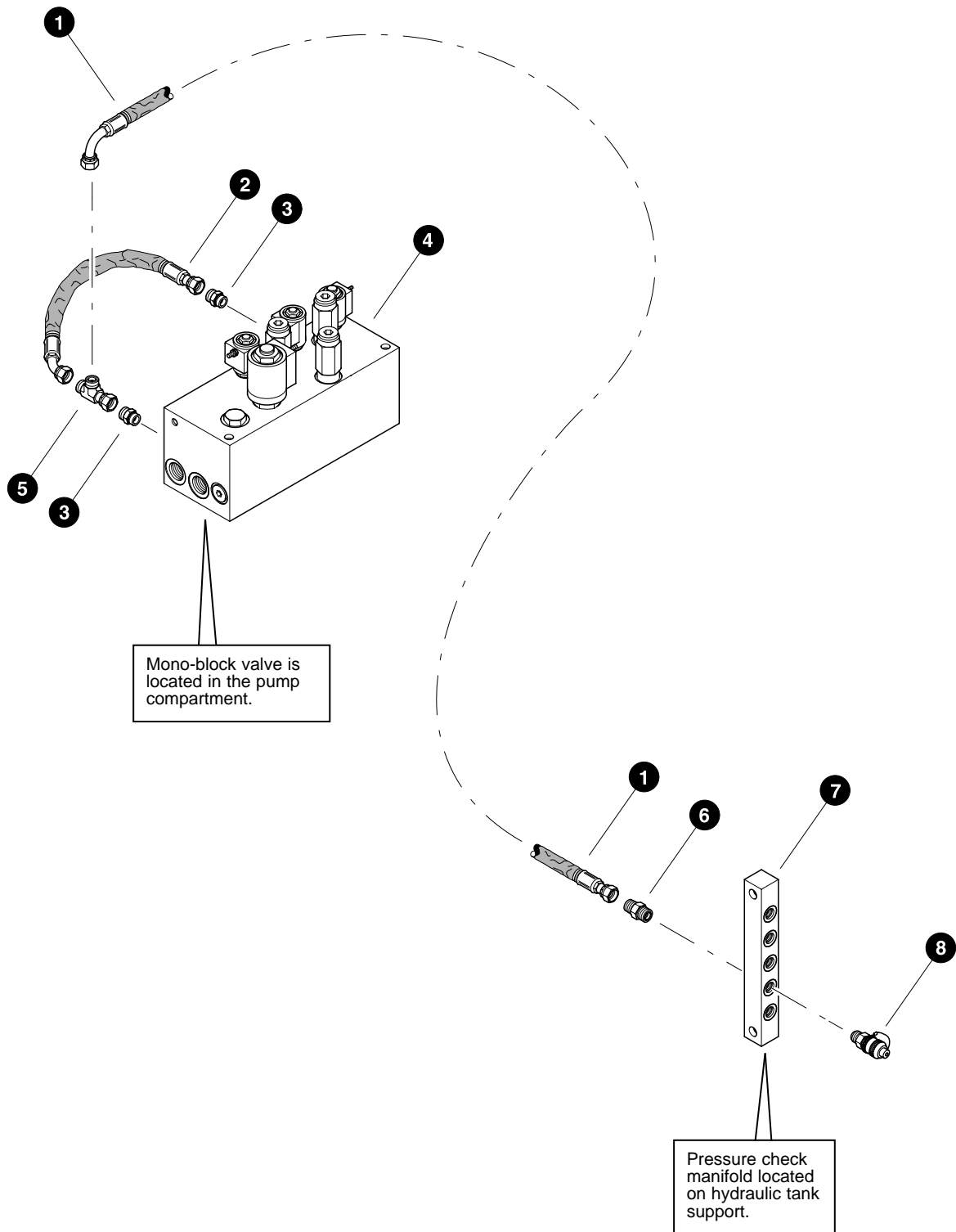
Parts 01960 01/03/2001
25.00

UPPER SOLENOID MANIFOLD PRESSURE LINE

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	UPPER SOLENOID MANIFOLD	UP-5-4
2	15117-UP	2		CONNECTOR, straight - FF1852T-0808S	
3	16297-UP	1		ELBOW, 90° swivel - FF2098T-0808S	
4	23706-UP	1		HOSE ASSEMBLY - 4031-08-080S-0809-W <i>(Implement pump pressure outlet to upper solenoid manifold port "P")</i>	
5	REF.	1	✓	IMPLEMENT PUMP	LH-1-2
6	10754-UP	2		BOLT - 1/4" x 3-1/2"	
7	10757-UP	2		WASHER, SAE flat - 1/4"	
8	23529-UP	1		BRACKET, upper solenoid manifold	
9	10811-UP	1		NUT, lock - 1/4"	

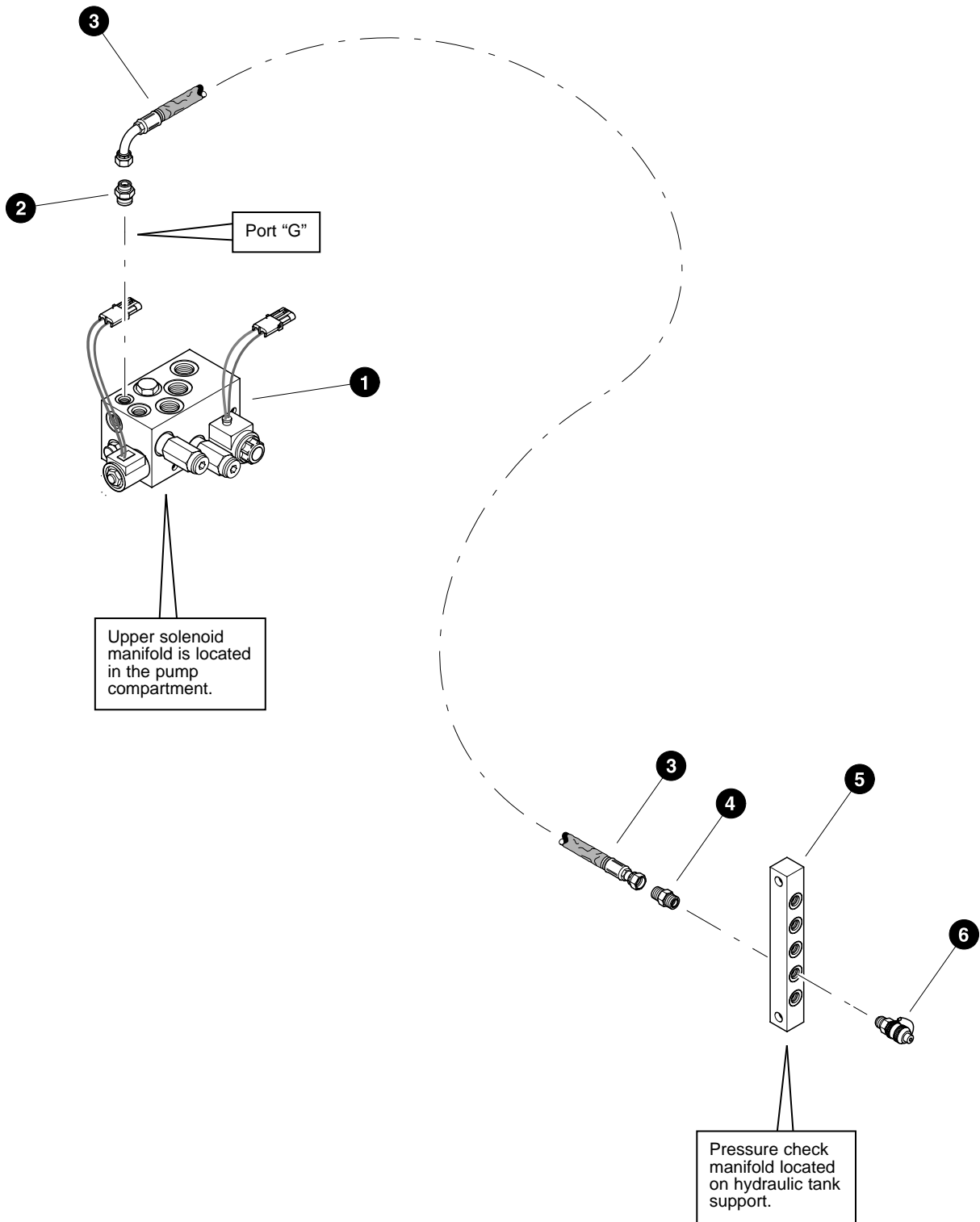
✓ See referenced page for component or assembly breakdown.



MONO-BLOCK VALVE PRESSURE TEST GAUGE LINE*(Used on machines PDN# 134FWD and below)*

-REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	23019-UP	1	HOSE ASSEMBLY - 2045-04-040S-0409-W (<i>Mono block valve to pressure check manifold</i>)	
2	23024-UP	1	HOSE ASSEMBLY - 2018-04-040S-0404-W (<i>Mono-block valve port G1 to port G2 mono-block valve</i>)	
3	15124-UP	2	CONNECTOR, STR - FF1852T-0406S	
4	REF.	1	✓ MONO-BLOCK VALVE	UP-5-4
5	15176-UP	1	TEE - FF2114T-0404S	
6	16541-UP	1	CONNECTOR, straight - FF1852T-0404S	
7	REF.	1	PRESSURE CHECK MANIFOLD	UP-5-8
8	16037-UP	1	TAP, gauge port (<i>1/4" ORB</i>)	

✓ See referenced page for component or assembly breakdown.



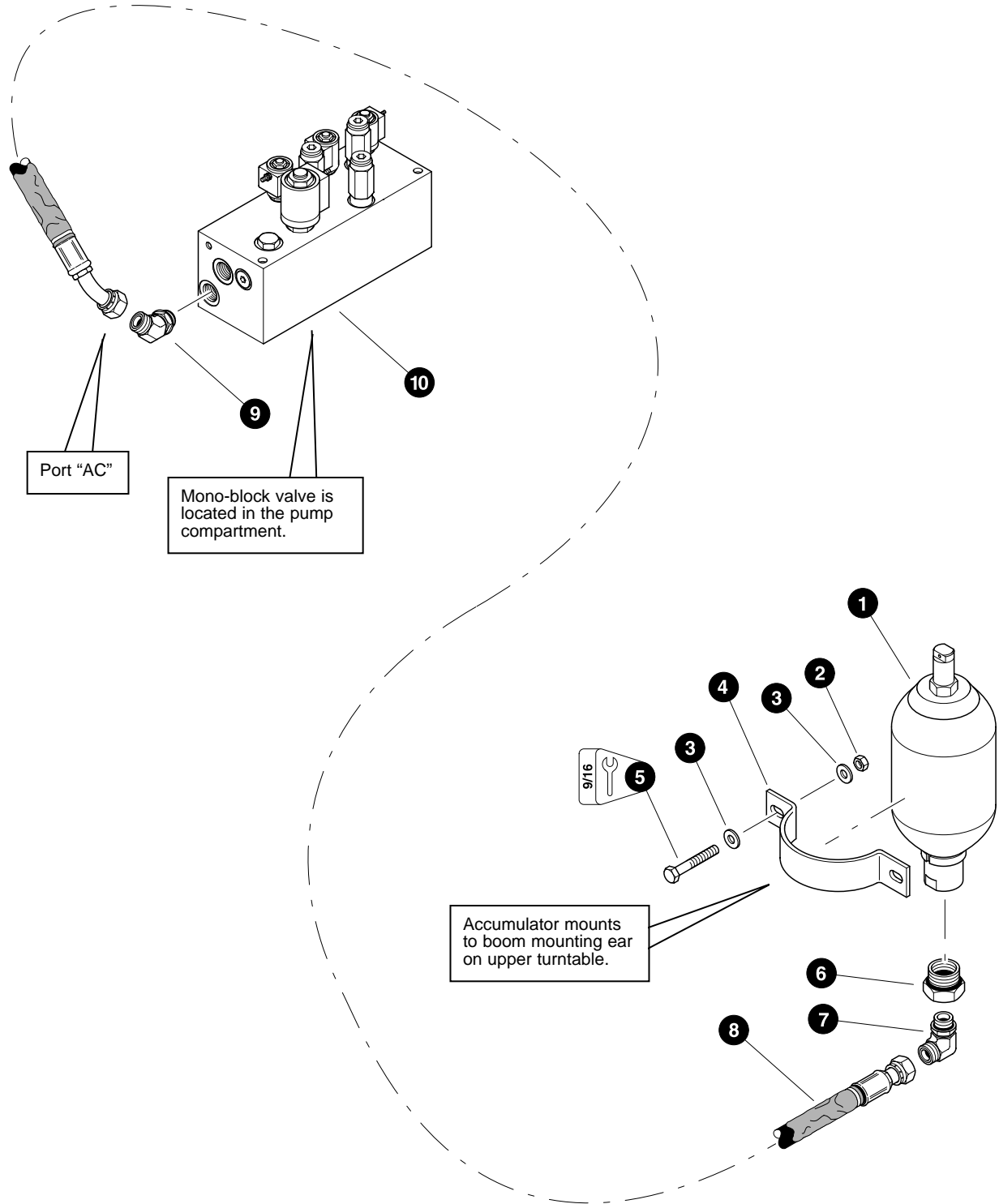
Parts 01961 01/03/2001
25.00

UPPER SOLENOID MANIFOLD PRESSURE TEST GAUGE LINE

(Used on machines PDN# 135FWD and above)

-REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ UPPER SOLENOID MANIFOLD	UP-5-4
2	15124-UP	1	CONNECTOR, STR - FF1852T-0406S	
3	23019-UP	1	HOSE ASSEMBLY - 2045-04-040S-0409-W (<i>Upper solenoid manifold port "G" to pressure check manifold</i>)	
4	16541-UP	1	CONNECTOR, straight - FF1852T-0404S	
5	REF.	1	PRESSURE CHECK MANIFOLD	UP-5-8
6	16037-UP	1	TAP, gauge port (1/4" ORB)	

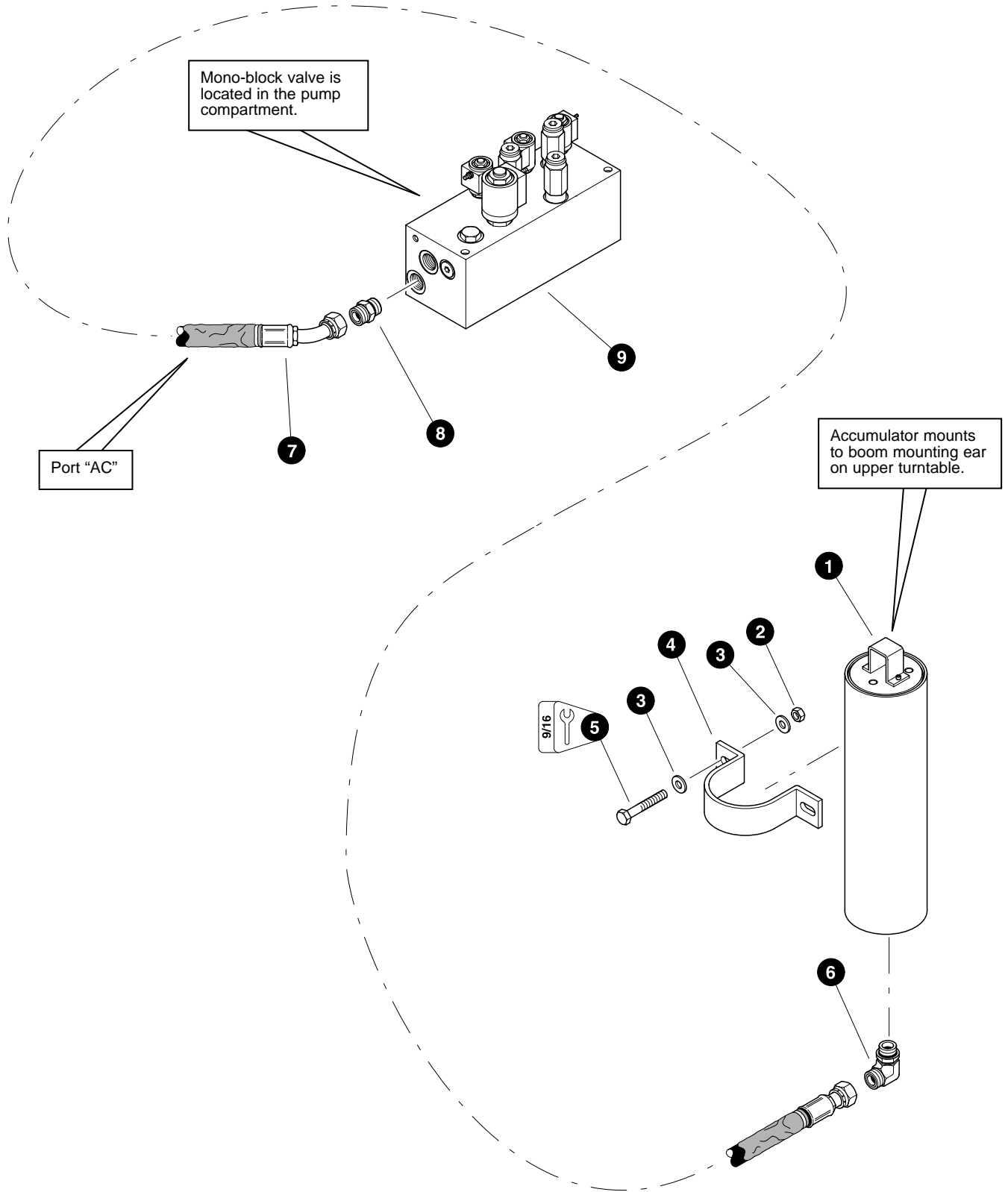
✓ See referenced page for component or assembly breakdown.



ACCUMULATOR CHARGING LINE*(Used on machines PDN# 121FWD and below)*

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	18862-UP	1	ACCUMULATOR (2,000 psi [13 780 k Pa] pre-charge)	
2	10813-UP	1	NUT, lock - 3/8"	
3	10802-UP	2	WASHER, flat - 3/8"	
4	19447-UP	1	CLAMP, accumulator mounting	
5	10702-UP	1	BOLT - 3/8" x 2-1/2"	
6	16719-UP	1	BUSHING, reducer - 6410-16-8	
7	19068-UP	1	ELBOW, 45° - FF2068T-0808S	
8	23030-UP	1	HOSE ASSEMBLY - 2063-08-080S-0804-W (<i>Mono-block valve port "AC" to accumulator</i>)	
9	16360-UP		ELBOW, 90° - FF1868T-0808S	
10	REF.	1	✓ MONO-BLOCK VALVE	UP-5-4

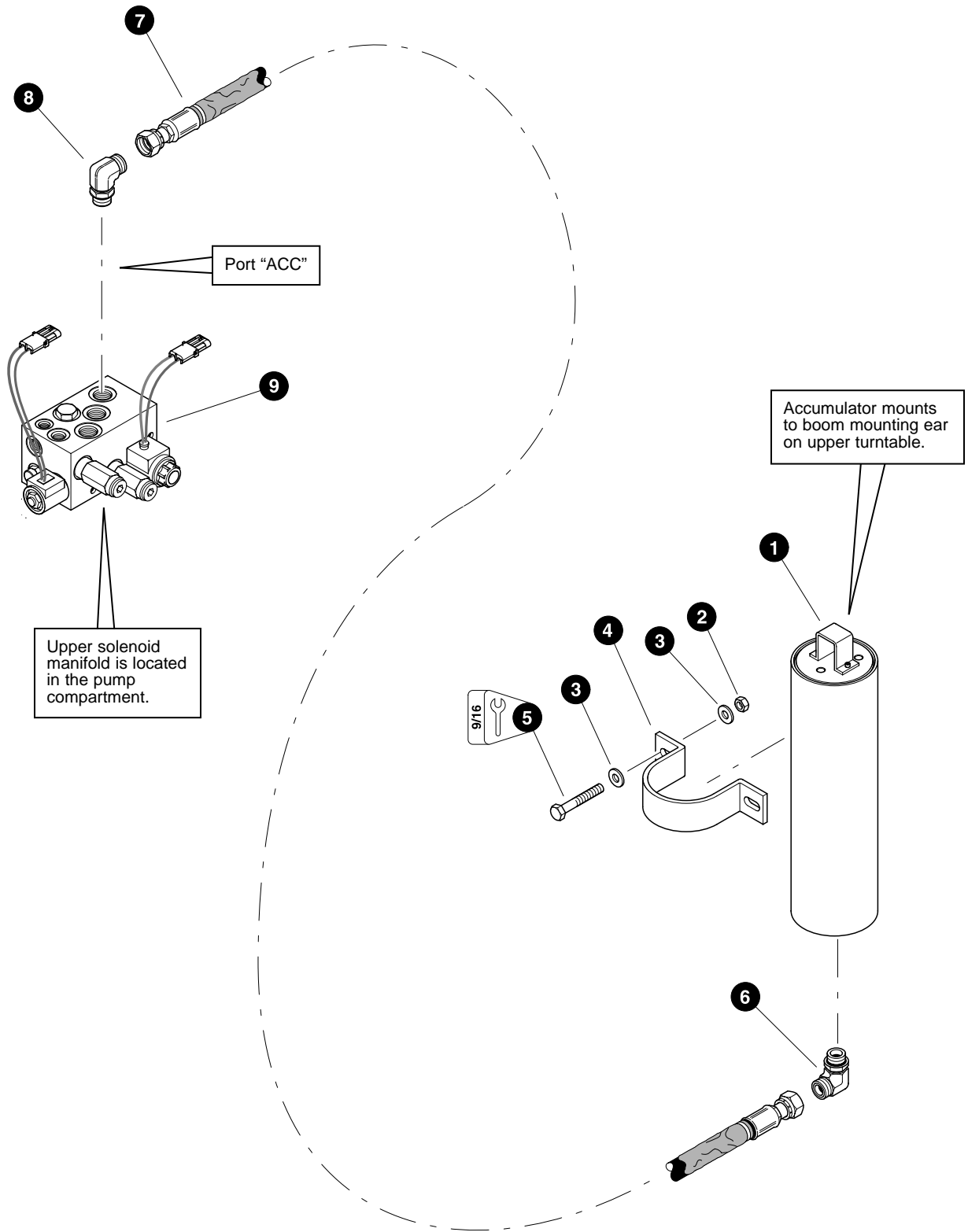
✓ See referenced page for component or assembly breakdown.



ACCUMULATOR CHARGING LINE*(Used on machines PDN# 122FWD thru 134FWD)*

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	23130-UP	1	ACCUMULATOR (2,000 psi [13 780 k Pa] pre-charge)	
2	10813-UP	1	NUT, lock - 3/8"	
3	10802-UP	2	WASHER, flat - 3/8"	
4	22910-UP	1	CLAMP, accumulator mounting	
5	10702-UP	1	BOLT - 3/8" x 2-1/2"	
6	15372-UP		ELBOW, 90° - FF1868T-0812S	
7	23030-UP	1	HOSE ASSEMBLY - 2063-08-080S-0804-W (<i>Mono-block valve port "AC" to accumulator</i>)	
8	15457-UP	1	CONNECTOR, straight - FF1852T-0806S	
9	REF.	1	✓ MONO-BLOCK VALVE	UP-5-4

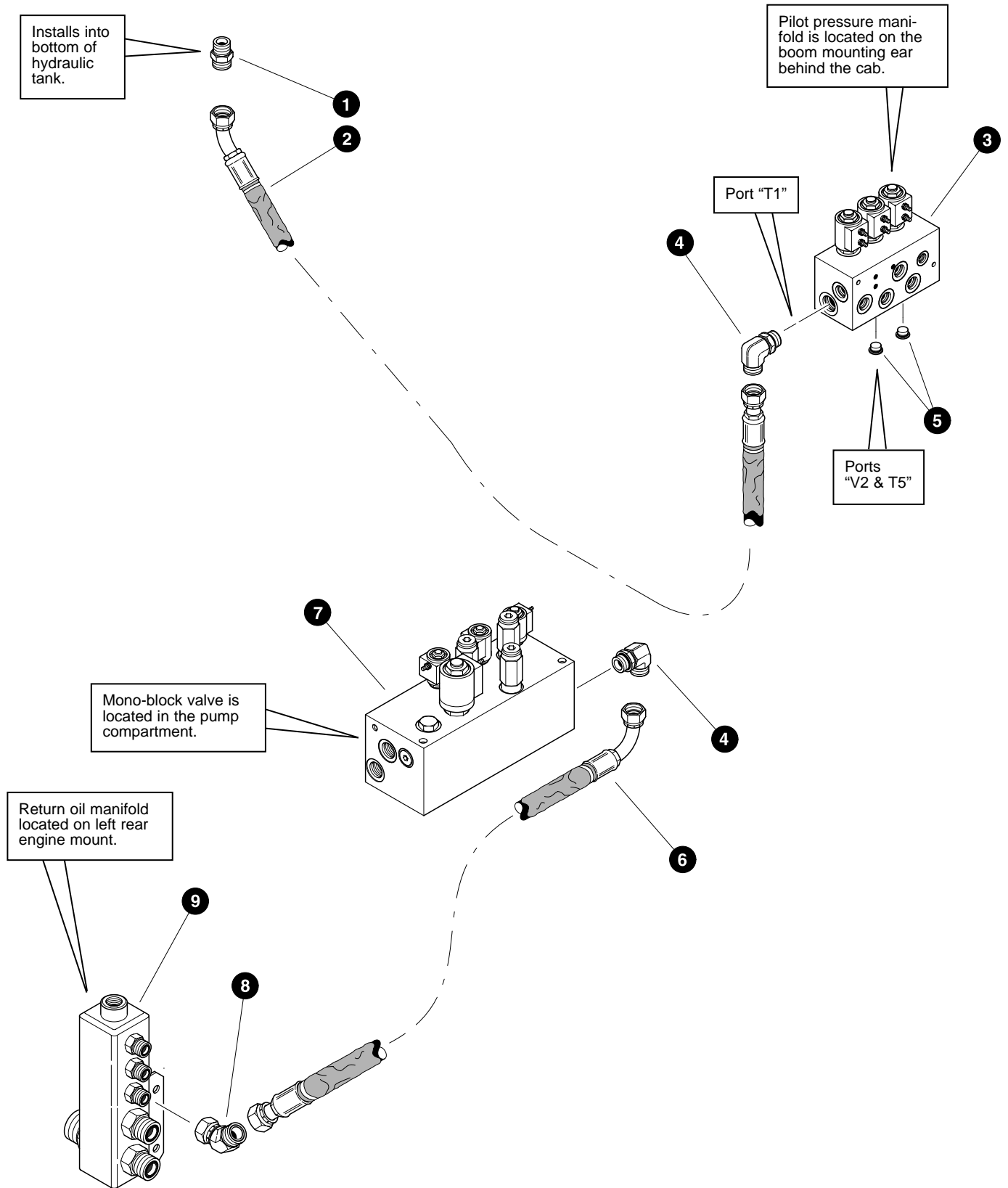
✓ See referenced page for component or assembly breakdown.



ACCUMULATOR CHARGING LINE*(Used on machines PDN# 135FWD and above)*

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	23130-UP	1	ACCUMULATOR (2,000 psi [13 780 k Pa] pre-charge)	
2	10813-UP	1	NUT, lock - 3/8"	
3	10802-UP	2	WASHER, flat - 3/8"	
4	22910-UP	1	CLAMP, accumulator mounting	
5	10702-UP	1	BOLT - 3/8" x 2-1/2"	
6	15372-UP		ELBOW, 90° - FF1868T-0812S	
7	23535-UP	1	HOSE ASSEMBLY - 4038-08-080S-080S-W (<i>Upper solenoid manifold port "ACC" to accumulator</i>)	
8	16360-UP	1	ELBOW, 90° - FF1868T-0808S	
9	REF.	1	✓ UPPER SOLENOID MANIFOLD	UP-5-4

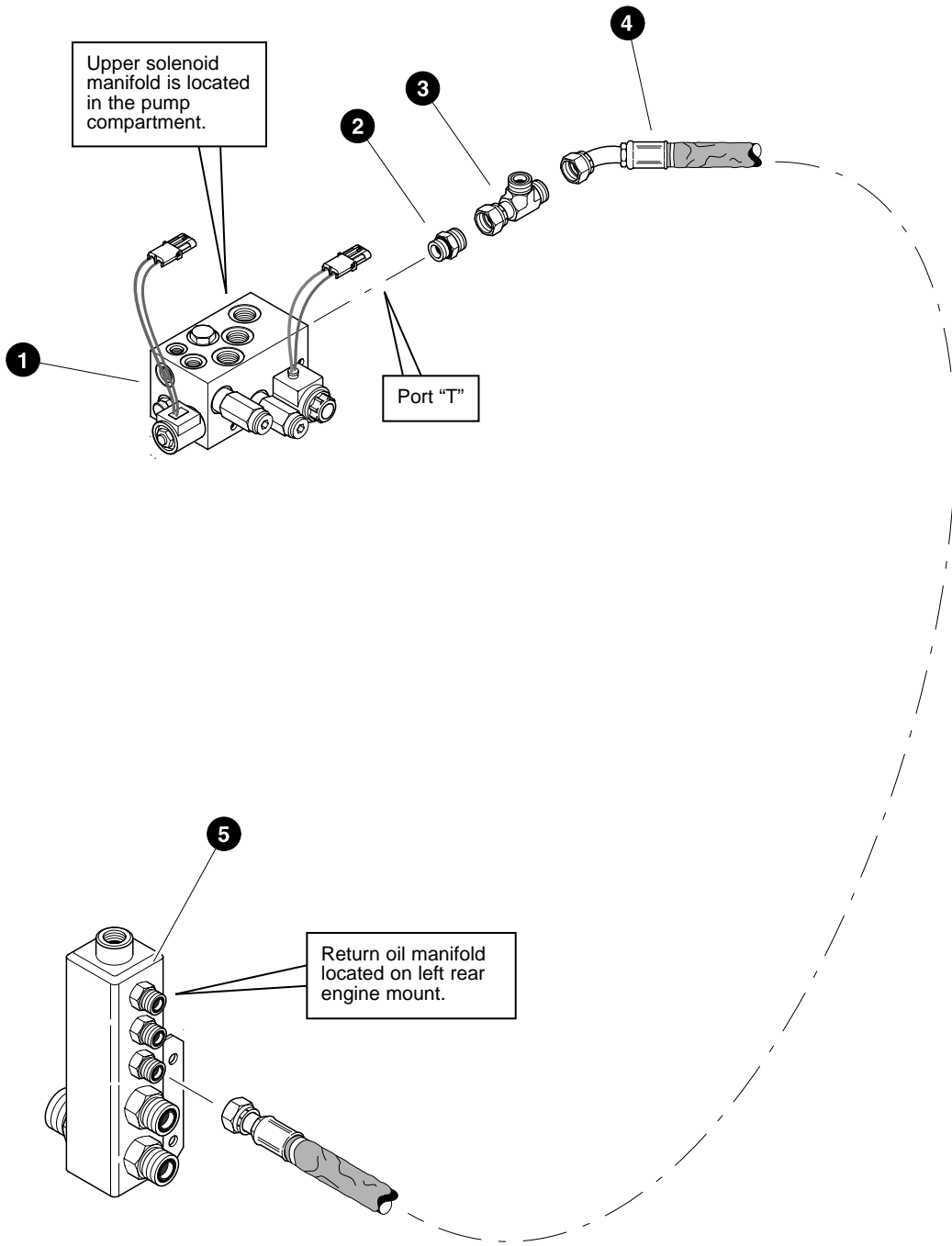
✓ See referenced page for component or assembly breakdown.



MONO-BLOCK VALVE & PILOT PRESSURE MANIFOLD RETURN LINES*(Used on machines PDN# 134FWD and below)*

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	15258-UP	1	CONNECTOR, straight - FF2031T-0808S	
2	22920-UP	1	HOSE ASSEMBLY - 2084-08-080S-0804-W (<i>Pilot pressure manifold port "T1" to bottom of hydraulic tank</i>)	
3	REF.	1	✓ PILOT PRESSURE MANIFOLD	UP-5-2
4	16360-UP	2	ELBOW, 90° - FF1868T-0808S	
5	15412-UP	2	PLUG - 6408-HHP-6	
6	23086-UP	1	HOSE ASSEMBLY - 2029-08-080S-0809-W (<i>Mono-block valve port "T" to return oil manifold</i>)	
7	REF.	1	✓ MONO-BLOCK VALVE	UP-5-4
8	16297-UP	1	ELBOW, 90° swivel - FF2098T-0808S	
9	17547-UP	1	MANIFOLD, return oil	

✓ See referenced page for component or assembly breakdown.

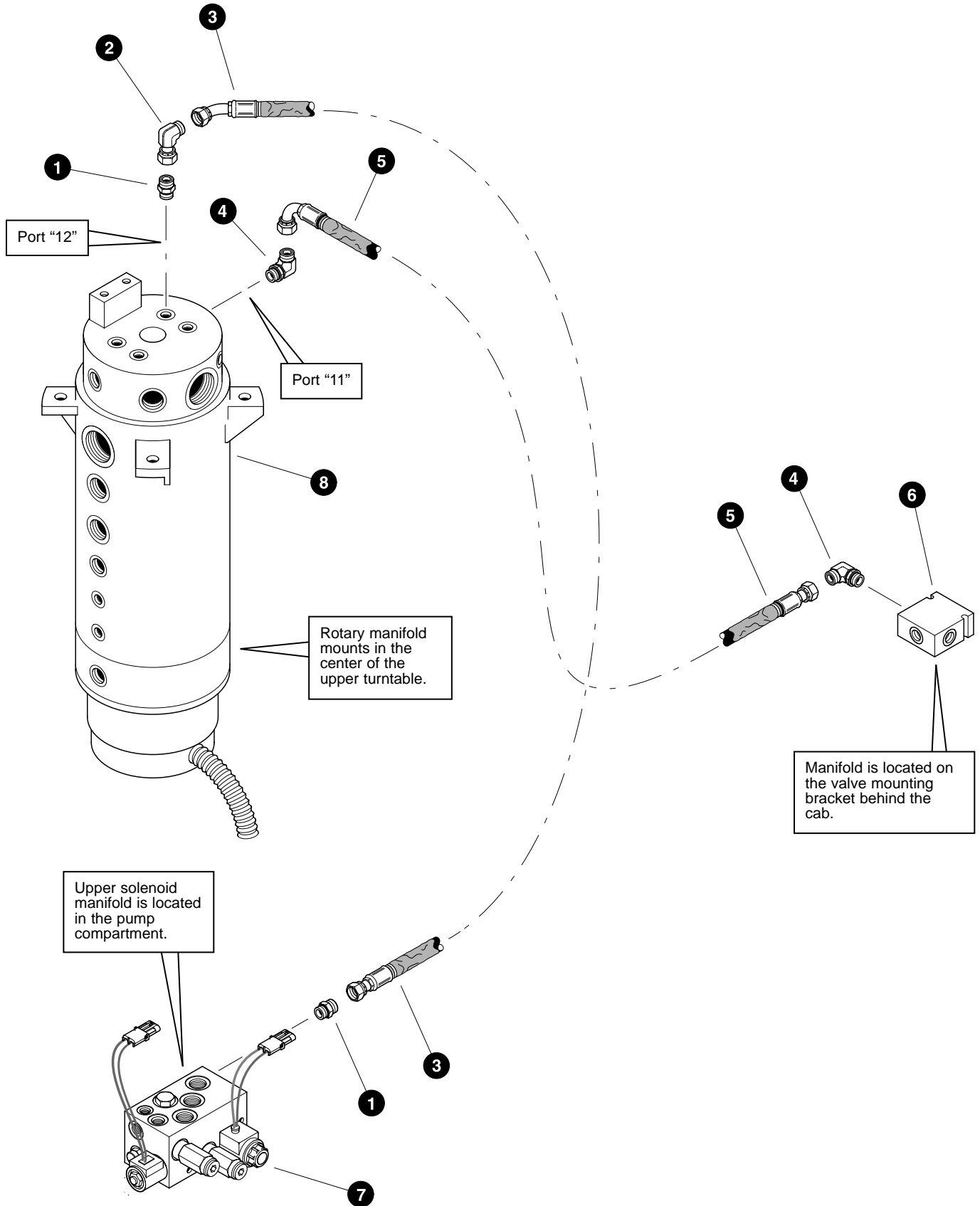


UPPER SOLENOID MANIFOLD RETURN LINE

(Used on machines PDN# 135FWD and above)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	REF.	1	✓ UPPER SOLENOID MANIFOLD	UP-5-4
2	15117-UP	1	CONNECTOR, straight - FF1852T-0808S	
3	15433-UP	1	TEE - FF2114T-0808S	
4	23537-UP	1	HOSE ASSEMBLY - 4070-08-080S-0804-W (<i>Upper solenoid manifold port "T" to return oil manifold</i>)	
5	17547-UP	1	MANIFOLD, return oil	

✓ See referenced page for component or assembly breakdown.

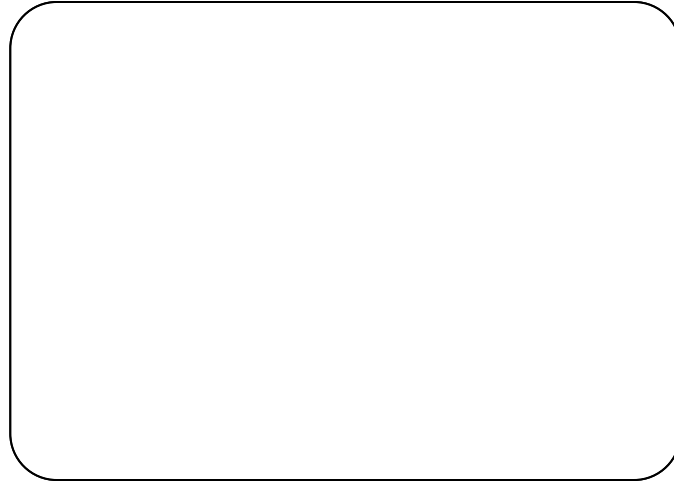
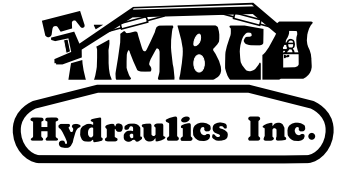


LOWER SOLENOID MANIFOLD PRESSURE & RETURN LINE*(Used on machines PDN# 135FWD and above)*

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	18034-UP	2	CONNECTOR, straight - FF1852T-0606S	
2	20035-UP	1	ELBOW, 90° swivel - FF2098T-0606S	
3	23531-UP	1	HOSE ASSEMBLY - 2062-06-060S-0604-W (<i>Upper solenoid manifold port "P1" to upper rotary manifold port 12</i>)	
4	16296-UP	2	ELBOW, 90° - FF1868T-0606S	
5	23007-UP	1	HOSE ASSEMBLY - 2064-06-060S-0609-W (<i>Upper rotary manifold port 11 to combined tank manifold</i>)	
6	23502-UP	1	MANIFOLD, combined tank	
7	REF.	1	✓ UPPER SOLENOID MANIFOLD	UP-5-4
8	REF.	1	✓ ROTARY MANIFOLD	UP-1-6

✓ See referenced page for component or assembly breakdown.

Section UP-6



Upper Turntable - Decals

1



2

CAUTION

Cold Weather Starting
Piston pumps will only pump oil when a control is activated. Just letting the engine idle will not warm up the hydraulic oil. With the engine at low idle, activate implement functions. As oil warms, increase engine RPM and continue activating implement functions and then travel functions. Only when the return filter back pressure gauge is in the normal operating range (5-15 psi) and the hydraulic oil temperature gauge begins to rise, can the machine be operated at full throttle.

Instrument Panel Gauges
There are 4 gauges on the instrument panel with warning lights and sound that monitor the following:

GAUGE	SIGNALS AT	ACTION
ENGINE OIL PRESSURE	7 PSI (48 kPa)	STOP ENGINE LEVEL CHECK ENGINE OIL LEVEL
WATER TEMPERATURE	210°F (99°C)	STOP ENGINE CHECK COOLANT LEVEL, BELTS, WATER PUMP & DEBRIS IN RADIATOR FINS
HYDRAULIC OIL TEMPERATURE	200-210°F (93°C) 200-190°F (93°C) 200-190°F (93°C) 200-210°F (99°C)	STOP ENGINE CHECK FOR HYDRAULIC SYSTEM PROBLEM OR FOR DEBRIS IN OIL COOLER FINS
RETURN FILTER BACK PRESSURE	23 PSI (176 kPa)	STOP ENGINE CHECK FOR HYDRAULIC SYSTEM PROBLEM OR FOR DEBRIS IN OIL COOLER FINS

Changing Return Filters
When changing return filters, be sure to use the correct filter assembly. If the filter is not installed correctly, it may cause damage to the hydraulic system. Always use the correct filter assembly. Do not use a filter that is not approved by the manufacturer.

Low Hydraulic Oil Level
Very Important! Keep oil level within green zone of the sight gauge. Low oil level may expose suction filters and allow return oil to inject air into the hydraulic system causing **CATASTROPHIC DAMAGE TO PISTON PUMPS.**

3

WARNING

WHEN FUELING, SERVICING OR REPAIRING, SET BOOMS ON GROUND AND SHUT DOWN ENGINE.

WARNING

NEVER OPERATE THE MACHINE WITHOUT DOOR CLOSED AND SEAT BELT FASTENED.

WARNING

QUALIFIED OPERATORS ONLY. STUDY OPERATORS MANUAL. INJURY OR DEATH CAN RESULT FROM UNTRAINED OPERATION.

4

CAUTION

SEVERE STRUCTURAL DAMAGE CAN OCCUR IF TAPERED HUB ASSEMBLIES ARE NOT KEPT TIGHT

DO NOT tighten 1" bolt

Torque Tapered Hub Retaining Bolts to 100 ft-lbs (135 Nm)

THE FOLLOWING BREAK-IN PROCEDURE MUST BE PERFORMED:

- Torque tapered hub retaining bolts after the first 2 hours of operation (5 pivots, 1 pivot if no cab level system).
- Torque tapered hub retaining bolts each day of operation until the tapered hub is seated (the tapered hub is seated when the retaining bolts no longer loosen with operation).
- Torque tapered hub retaining bolts after every 50 hours of operation.
- Visually inspect tapered hub pivots daily.

5

NOTICE

Operating Advice For The TIMBCO TF820 Clam Bunk / Forwarder

- Check wheel lug nut torque after the first 50 hours of operation. A loose wheel can cause extensive damage to the axle planetary and wheel hub. Torque wheel lug nuts to 500 ft-lbs.
- Grease all driveline universal joints every 100 hours of operation. Especially joints to the front axle because of the driveline angle being used. Very wet or muddy conditions require greasing more frequently.
- Check articulation bearing ball torque, swing bearing ball torque, and tapered hub ball torque after the first 50 hours of operation.
- When the rocker switch is in the "TURTLE" position, the two wheel drive meters stay in maximum displacement giving the most power with a top speed of 2.5 mph. In the "HARBOR" position, the wheel drive meter displacement can vary from 80cc to 160cc, depending upon power requirements, giving a top speed of 8.5 mph.
- When going down a slope, do not let the machine reach maximum speed (8.5 mph) then hit the brakes or release the drive pedal sharply which can cause the engine to over-speed. This could cause the wheel drive meters to exceed the maximum RPM or an abrupt braking could cause damage to the drive speed gears.
- Control engine RPM by the drive pedal. The drive pedal is controlling the displacement of the wheel drive pump. At maximum displacement, the machine will have the greatest speed and require the most horsepower. By backing off the drive pedal, pump displacement is reduced resulting in less engine horsepower but still maintaining pressure so the machine will continue to move, although slower. Keep the engine RPM high so it is not always lugging the motor.
- When going back to pick up a load, damp the grapple to the damp bar (Clam Bunk machines) or log bunk (Forwarder machines). Then put the loader in SWING DETENT and REVERSE STEER. This way there is never the need to turn around.
- When loading, do not back the engine to about 1700 RPM. The loader still works fast at this RPM and you will not waste fuel.
- Be conscious of the wheel drive pressure gauge at the top of the instrument panel. This gauge shows the pressure required to move the machine. At 4000 PSI the wheel drive pump goes out of stroke and the machine will not move.
- Only use the differential lock when needed. Release immediately when not needed.
- When going back to pick up a load with the Clam Bunk, keep the dam bunk arms open. When closed, the clamp arm tips could contact the wheels as the axle oscillates over rough ground.
- It is very important to read the Operation & Maintenance manual so that the operation and maintenance of the machine is fully understood. The TIMBCO TF820 is a great product, but it is only as good as the individual who operates and maintains it.

12

MAXIMUM TIRE INFLATION

FIRESTONE 18.4-26	35 PSI (240 kPa)
FIRESTONE 23.1-26	35 PSI (240 kPa)
FIRESTONE 28.1-26	35 PSI (240 kPa)
FIRESTONE 54 x 37	35 PSI (240 kPa)
FIRESTONE 70050-26.5	60 PSI (415 kPa)
NOKIAN 75055-26.5	60 PSI (415 kPa)

Contact your TIMBCO Dealer for correct tire pressure when using wheel tracks

TORQUE WHEEL LUG NUTS
500 ft-lbs (680 Nm)

11

NOTICE

REMOVE RED POSITIVE BATTERY CABLE BEFORE WELDING.

FAILURE TO DO SO MAY RESULT IN DAMAGE TO ELECTRICAL COMPONENTS.

6

NOTICE

ONLY USE CLAM BUNK CONTROLS CONTINUOUS HOLD WHILE TRAVELING WITH A LOAD.



10

CALIFORNIA Proposition 65 Warning

Direct engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

9

WARNING

CHECK OPERATION OF EMERGENCY ESCAPE HATCH EVERY 50 HOURS. LOOSEN THE STAR KNOBS 3/4 TURNS AND PUSH/PULL ON ESCAPE HATCH. THE HATCH SHOULD NOT STICK. IF HATCH STICKS, REMOVE IT COMPLETELY AND APPLY "ANTIGRIZZ" TO RUBBER SEAL. REINSTALL HATCH AND TIGHTEN ALL STAR KNOBS.

8

7

ATTENTION: Diagrams below represent factory original control locations. Alterations to controls become the sole responsibility of the owner.

LEFT

A) Grapple Open
B) Grapple Close

RIGHT

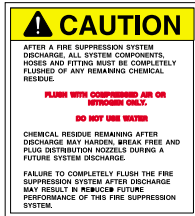
A) Grapple Rotate CCW
B) Grapple Rotate CW

DECALS (Inside Cab)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	19539-UP	3	DECAL, emergency escape (<i>Rear and front escapes</i>)	
2	16063-UP	1	DECAL, gauge cautions (<i>Above dash panel</i>)	
3	16061-UP	1	DECAL, cab warning strip (<i>Upper headliner</i>)	
4	18066-UP	1	DECAL, tapered hub torque (<i>Dash panel side plate</i>)	
5	21679-UP	1	DECAL, cab operating instructions (<i>Inside cab door</i>)	
6	20096-UP	1	DECAL, clam bunk arm control (<i>Above dash</i>)	
7	18660-UP	1	DECAL, control diagram (<i>Above dash</i>)	
8	22230-UP	2	DECAL, emergency escape check (<i>Above rear escape hatch</i>)	
9	18337-UP	1	DECAL, California diesel exhaust warning (<i>Above rear escape hatch</i>)	
10	19540-UP	8	DECAL, emergency escape - 1-1/2" (<i>On all star knobs</i>)	
11	19364-UP	1	DECAL, welding notice (<i>Inside cab door</i>)	
12	19678-UP	1	DECAL, maximum tire inflation (<i>Inside cab door</i>)	

DECALS
(Inside Pump Cover)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	20947-UP	1	DECAL, preventive maintenance	
2	18071-UP	1	DECAL, engine oil selection guide	
3	18066-UP	1	DECAL, tapered hub torque	
4	18069-UP	2	DECAL, hydrostatic bleed caution	
5	18075-UP	1	DECAL, pump/motor case drain	
6	17160-UP	1	DECAL, hydraulic oil selection guide	

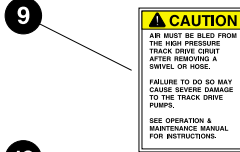


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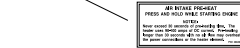
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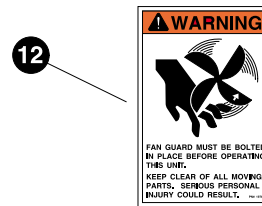
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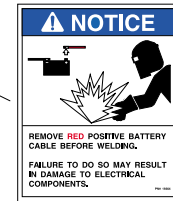
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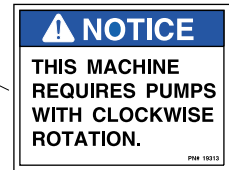


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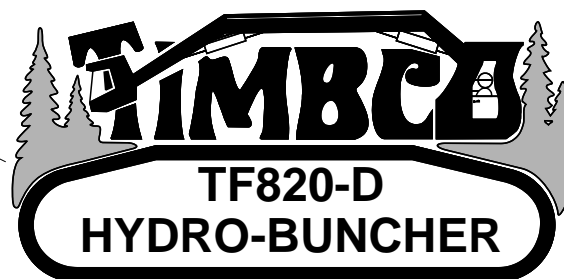
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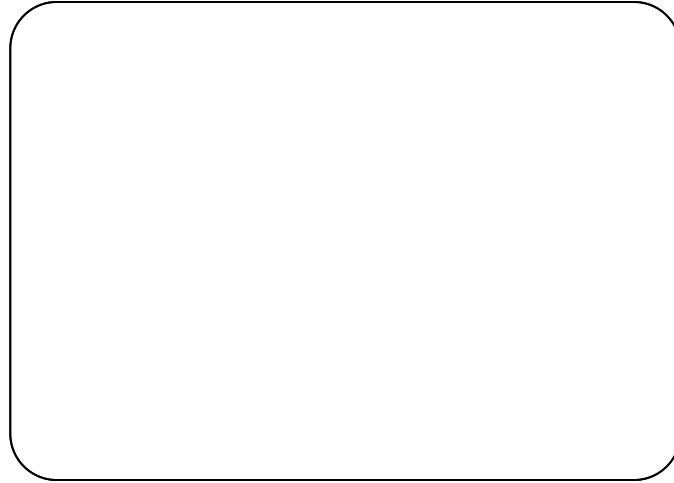
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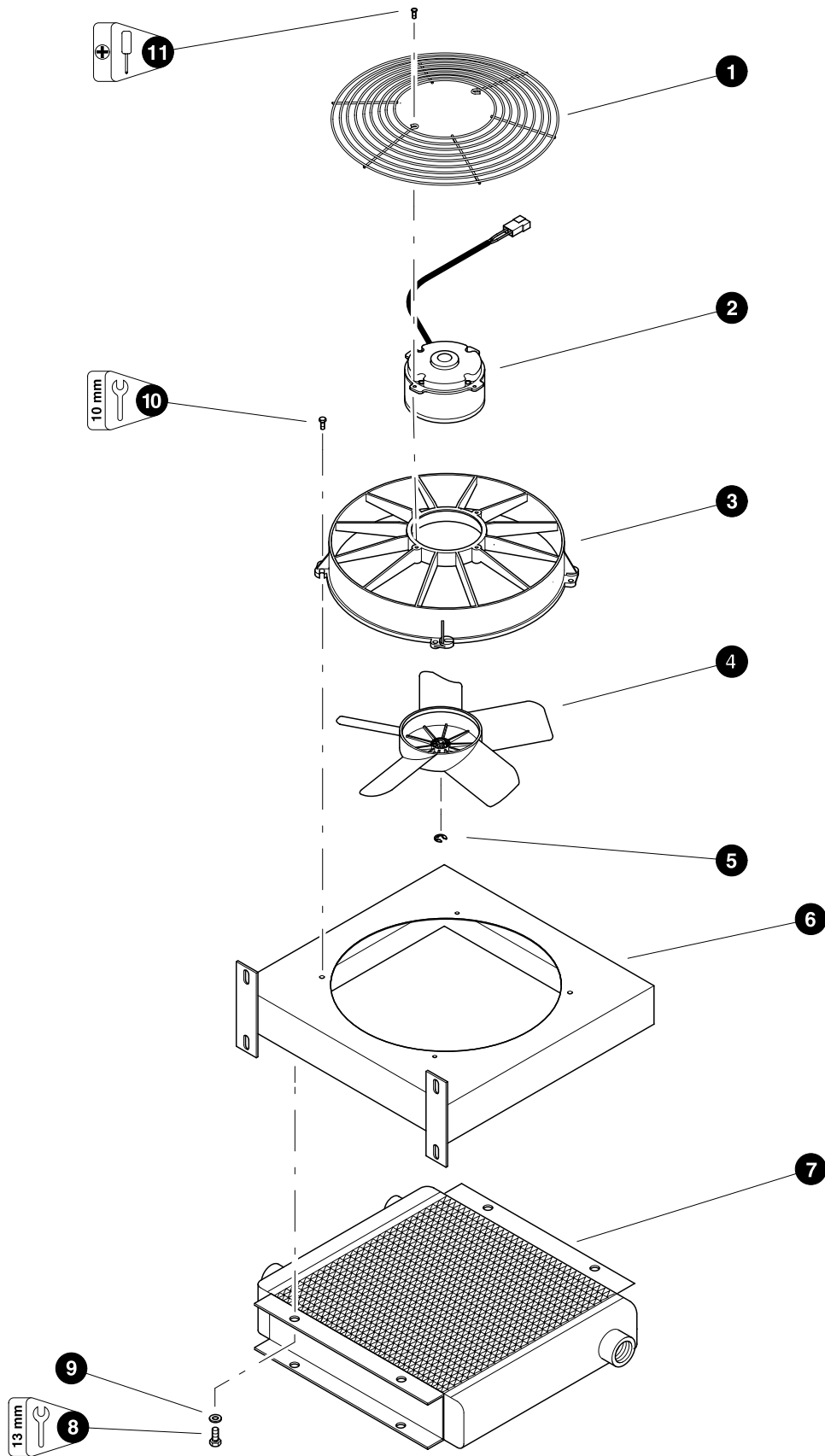
DECALS (Exterior & Misc.)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17575-UP	1	DECAL, fire suppression tank <i>(On dry chemical tank) (Optional)</i>	
2	16916-UP	1	DECAL, master disconnect <i>(On battery box bracket)(Optional)</i>	
3	16415-UP	1	DECAL, hydraulic tank support <i>(Located in boom tunnel)</i>	
4	22388-UP	2	DECAL, fan guard warning <i>(Located in boom tunnel on radiator & located in engine swing out door on radiator)</i>	
5	16607-UP	1	DECAL, pressurized hydraulic tank <i>(On filter cover)</i>	
6	16064-UP	1	DECAL, Timbco logo - 4" x 15" <i>(On ROPS panel over engine)</i>	
7	16059-UP	4	DECAL, keep clear <i>(Main boom and rear hydraulic tank)</i>	
8	21960-UP	2	DECAL, door logo - TF820-D <i>(Outside cab door & on swing out pump)</i>	
9	18069-UP	2	DECAL, hydrostatic bleed caution <i>(Inside pump swing out door & inside track motor housing)</i>	
10	22387-UP	1	DECAL, engine fan rotation <i>(Located in boom tunnel on radiator & located in engine swing out door on radiator)</i>	
11	20840-UP	1	DECAL, cat intake pre-heat	
12	19765-UP	1	DECAL, keep clear of moving parts <i>(Located in boom tunnel on radiator & located in engine swing out door on radiator)</i>	
13	16879-UP	1	DECAL, sight gauge <i>(Next to hydraulic tank sight glass)</i>	
14	16060-UP	5	DECAL, crush zone <i>(Frame sides near axles and left side cab near swing motor)</i>	
15	19364-UP	1	DECAL, welding notice	
16	19313-UP	1	DECAL, pump rotation	
17	19477-UP	1	DECAL, cold start pump de-stroke	

Section UP-7



Upper Turntable - Optional Auxiliary Oil Cooler

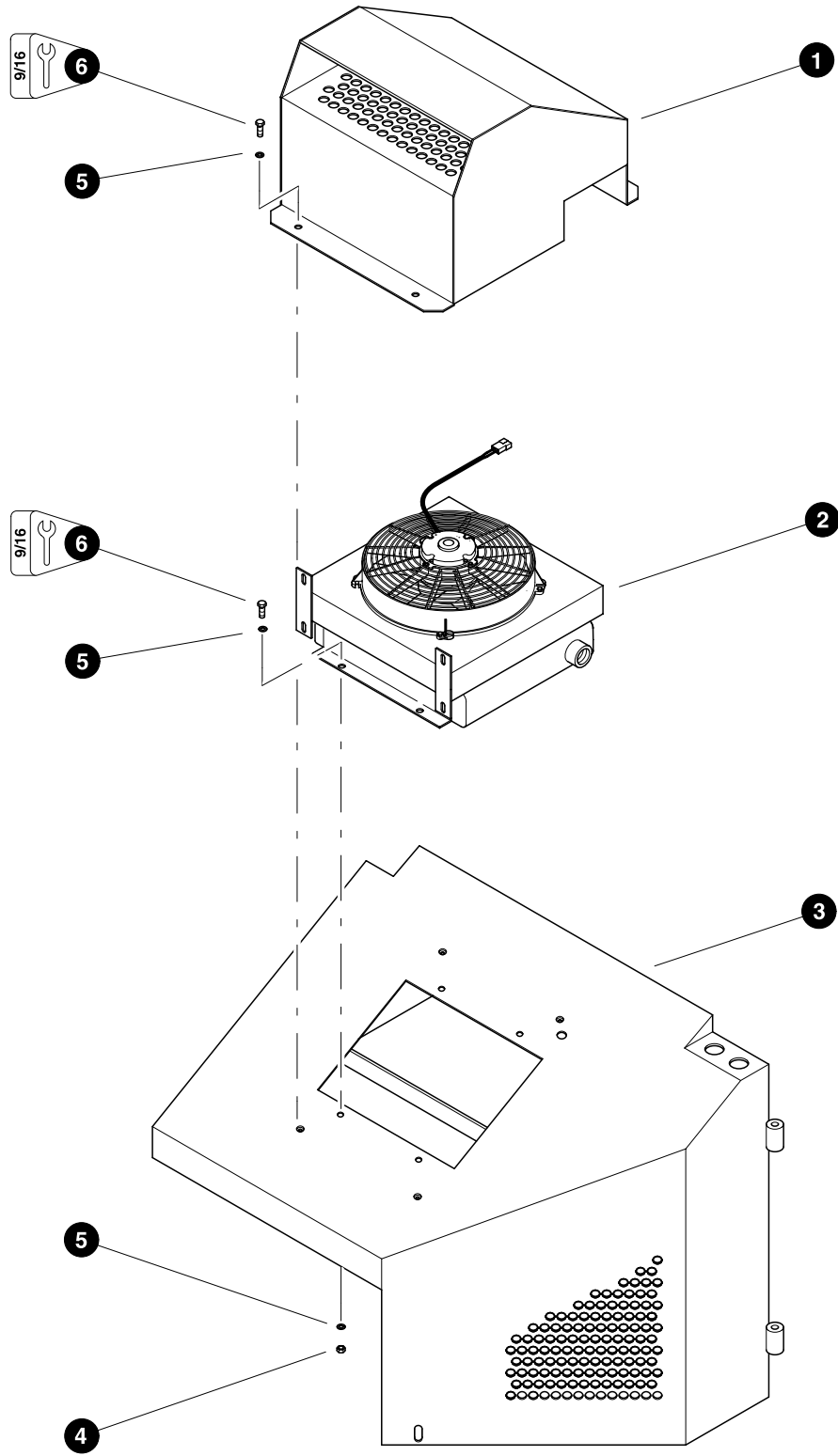


Parts 00576 06/05/98
18.75

AUXILIARY OIL COOLER ASSEMBLY

REF	PART #	QTY	DESCRIPTION	SEE PAGE
--	19085-UP	1	<input type="checkbox"/> AUXILIARY OIL COOLER	
1	21524-UP	1	GUARD, fan	
--	20621-UP	1	<input type="checkbox"/> MOTOR/FAN ASSEMBLY (12V)	
--	23293-UP	1	<input type="checkbox"/> MOTOR/FAN ASSEMBLY (24V)	
2	NSS	1	MOTOR	
3	NSS	1	SHROUD, fan	
4	NSS	1	FAN	
5	NSS	1	E-CLIP	
6	21525-UP	1	SHROUD, oil cooler	
7	21526-UP	1	COOLER, oil	
8	NSS	4	BOLT - 8mm	
9	NSS	4	WASHER, flat - 8mm	
10	NSS	4	BOLT - 6mm	
11	NSS	2	SCREW, machine	

Kit or Assembly - includes all items indented underneath.

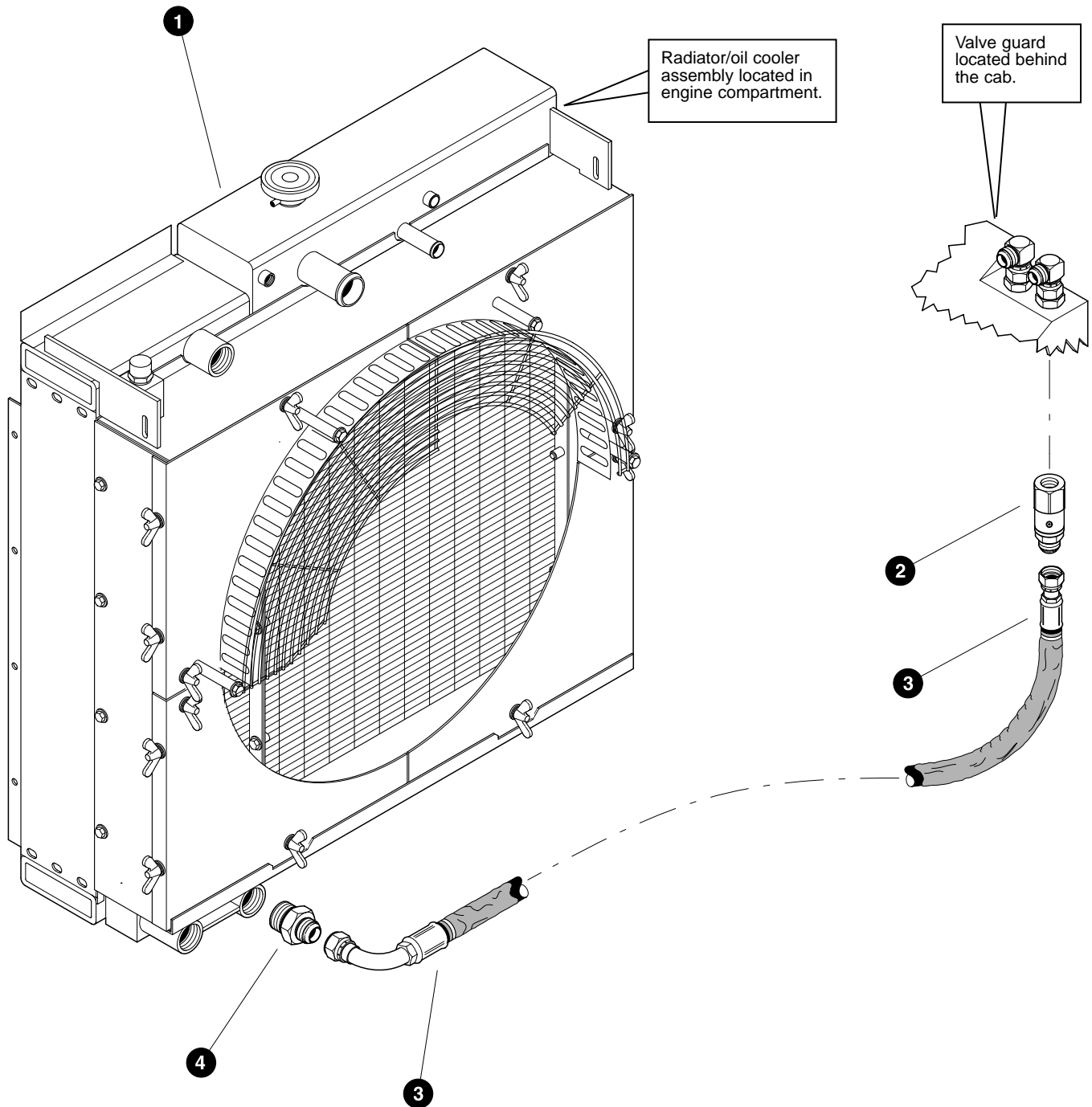


Parts 00577 06/08/98
12.50

AUXILIARY OIL COOLER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	18775-UP	1		GUARD, auxiliary oil cooler	
2	REF.	1	✓	AUXILIARY OIL COOLER ASSEMBLY	UP-7-2
3	18774-UP	1		GUARD, swing-out valve	
4	15507-UP	4		NUT, nylock - 3/8"	
5	15528-UP	12		WASHER, SAE flat - 3/8"	
6	11707-UP	8		BOLT - 3/8" x 1"	

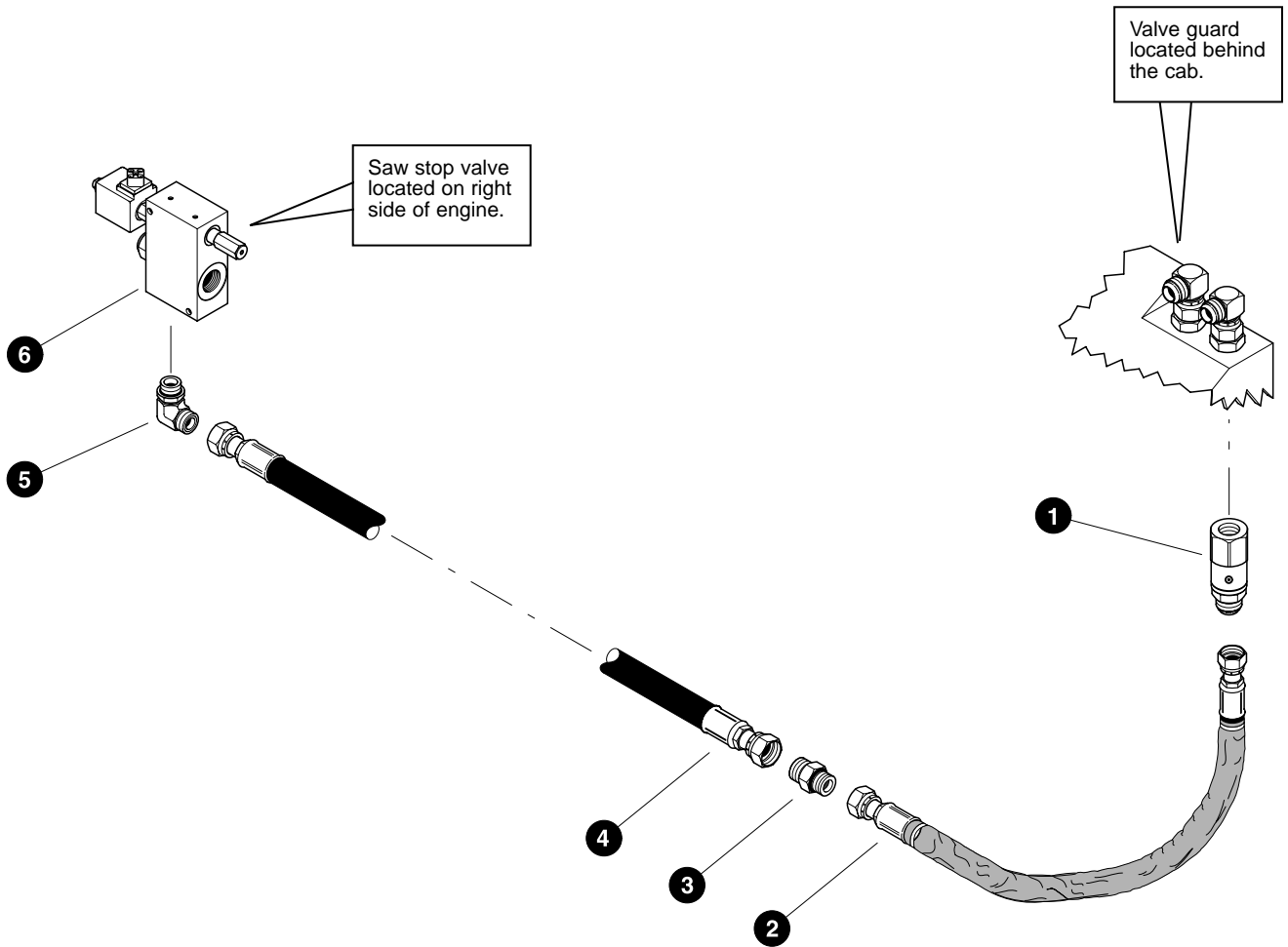
✓ See referenced page for component or assembly breakdown.



AUXILIARY OIL COOLER LINES
(Intake Oil Flow To Bulkhead - Without Disc Saw Attachment)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	✓	RADIATOR/OIL COOLER ASSEMBLY	UP-3-2
2	18782-UP	1		SWIVEL, inline straight LS2406-1212	
3	22898-UP	1		HOSE ASSEMBLY - 2162-12-12JS-1209-W (<i>Oil cooler bottom port to swing-out valve guard bulkhead</i>)	
4	17063-UP	1		CONNECTOR, straight - FF1852T-2016S	

✓ See referenced page for component or assembly breakdown.

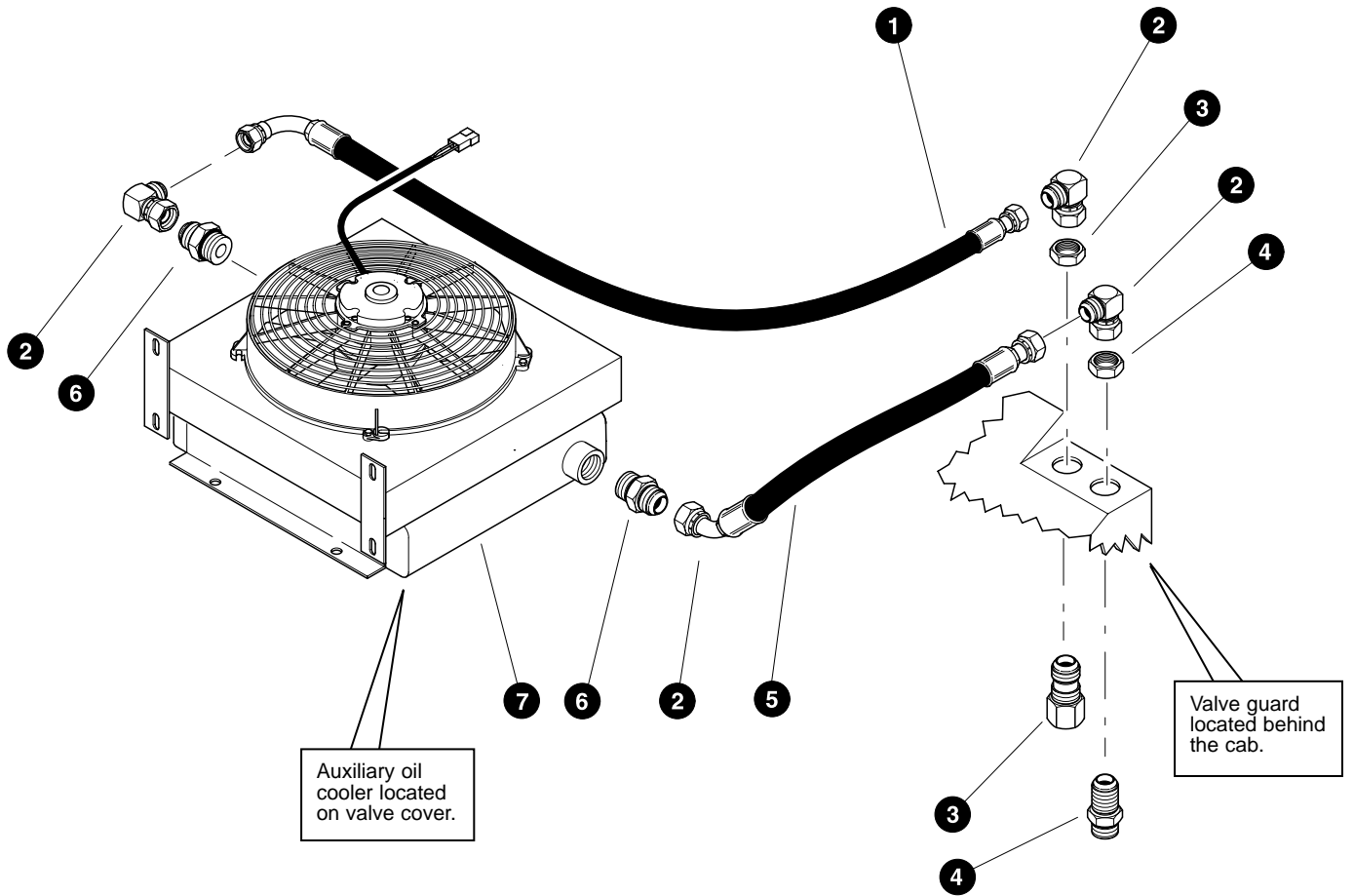


AUXILIARY OIL COOLER LINES

(Intake Oil Flow To Bulkhead - With Disc Saw Attachment)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	18782-UP	1	SWIVEL, inline straight LS2406-1212	
2	21104-UP	1	HOSE ASSEMBLY - 2052-12-120S-12JS-W (<i>Saw stop valve return line reducer connector to swing-out valve guard bulkhead</i>)	
3	19875-UP	1	CONNECTOR, straight - 16-12 HLO-S	
4	15234-UP	1	HOSE ASSEMBLY - 4076-16-160S-160S-W (<i>Saw stop valve to saw stop valve return line reducer connector</i>)	
5	15228-UP	1	ELBOW, 90° - FF1868T-1616S	
6	REF.	1	✓ SAW STOP VALVE	

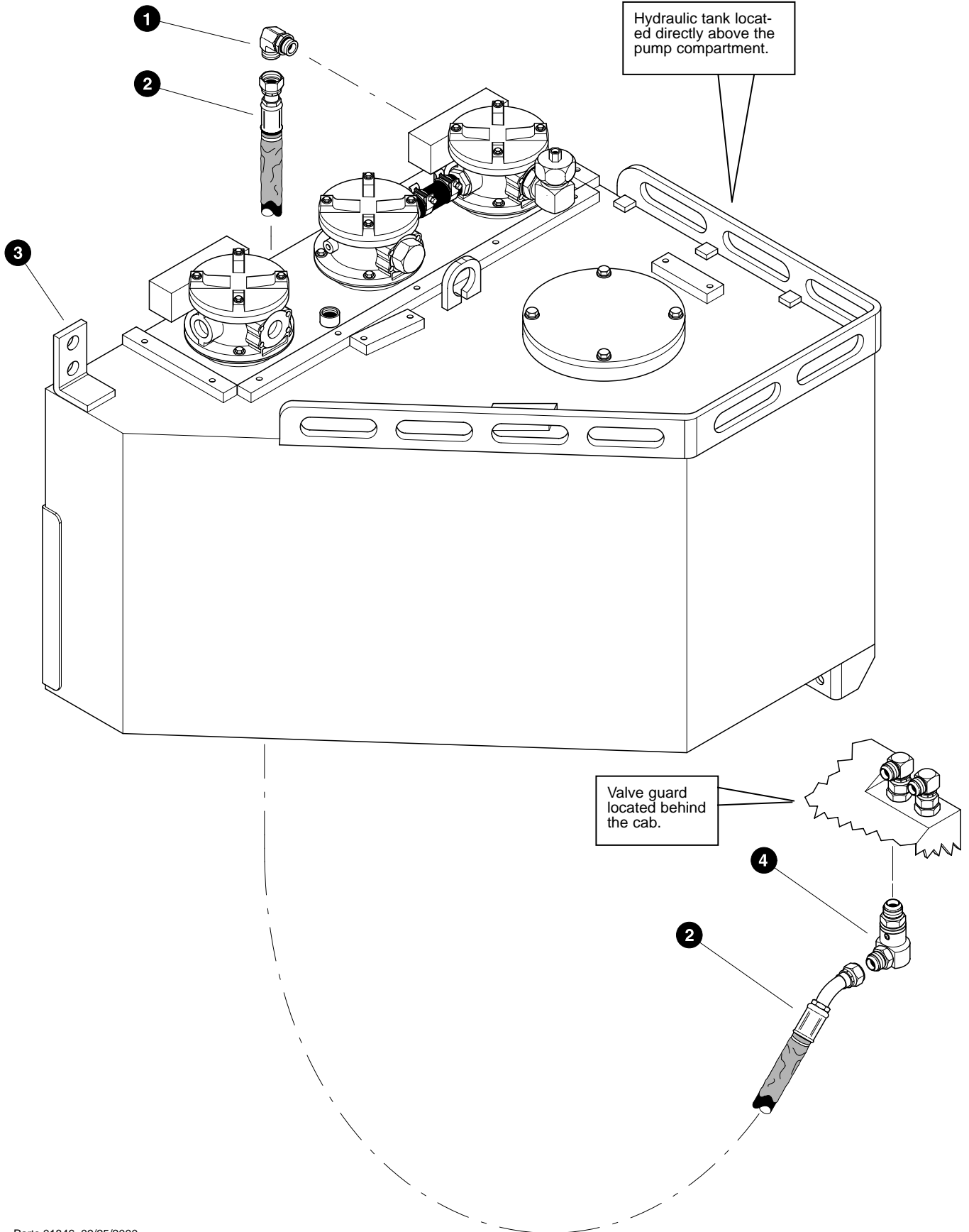
✓ See referenced page for component or assembly breakdown.



AUXILIARY OIL COOLER LINES (Auxiliary Oil Cooler To Bulkhead)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	20279-UP	1	HOSE ASSEMBLY - 2033-12-12JS-12J9 (<i>Auxiliary oil cooler outlet port to swing-out valve guard bulkhead</i>)	
2	15477-UP	3	ELBOW, 90° swivel - 6500-12	
3	18781-UP	1	CONNECTOR, straight bulkhead - 2705-1212	
4	17009-UP	1	CONNECTOR, straight bulkhead - 2700-12	
5	20278-UP	1	HOSE ASSEMBLY - 2014-12-12JS-12J4 (<i>Swing-out valve guard bulkhead to auxiliary oil cooler inlet port</i>)	
6	18780-UP	1	CONNECTOR, straight - 3800-12-16 (<i>Used on machines PDN# 1784 and below</i>)	
	15495-UP	1	CONNECTOR, straight - 6400-12-16 (<i>Used on machines PDN# 1785 and above</i>)	
7	REF.	1	✓ AUXILIARY OIL COOLER	UP-7-2

✓ See referenced page for component or assembly breakdown.



Parts 01846 09/25/2000
18.75

OPTIONAL AUXILIARY OIL COOLER LINES (Exhaust Oil Flow To Hydraulic Tank)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	17688-UP	1	ELBOW, 90° - FF1868T-1212S	
2	20376-UP	1	HOSE ASSEMBLY - 2139-12-120S-12J4-W (<i>Swing-out valve guard bulkhead to hydraulic tank</i>)	
3	REF.	1	✓ HYDRAULIC OIL TANK	UP-7-2
4	18783-UP	1	SWIVEL, inline 90° - LS2501-1212	

✓ See referenced page for component or assembly breakdown.