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Parts Manual

TF 830 & 840

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Brake Cylinder Assembly AX-1-22

Section AX-2: Tandem Axles (Heavy Duty - Tim 18) - TF 840

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Differential Breakdown AX-2-4
Bogie Housing Breakdown AX-2-10
Wheel End Breakdown (Planetary) AX-2-12
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Section AX-3: Single Axles (Tim 12 & Tim 14)

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Axel Beam Assembly (Tim 14) AX-3-4
Axel Beam Assembly continued (Tim 14) AX-3-6
Differntial (Tim 14) AX-3-8
Differntial continued (Tim 14) AX-3-10
Differntial Pivot components (Tim 14) AX-3-12
Planetary (Tim 14) AX-3-14
Brake Piston AX-3-16

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Single Axel (Tim 12) AX-3-18
Differential Assembly (Tim 12). AX-3-20
Axel Beam Assembly (Tim 12) AX-3-26
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Brake Piston AX-3-30

Section AX-4: Gear Boxes (Transfer Cases)

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NAF (2-Speed) (Tim 15) AX-4-4
NAF (2-Speed) (Tim 15) contiued AX-4-6
NAF Shift Cylinder (2-Speed) (Tim 15) AX-4-8
NAF (2-Speed) (Tim 16) AX-4-10
NAF (2-Speed) (Tim 16) contiued AX-4-12
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Section AX-5: Wheel Assemblies

Wheel Assemblies:

Nokian Tires AX-5-2
Primex Tires AX-5-4
Firestone Tires AX-5-6
Dual Configurations AX-5-8

Group FB Floating Bunk, Log Stakes & Log Rack

Section FB-1: Structural

Floating Bunk Installation FB-1-2
Log Bunk & Stake Installation (Rear Frame) FB-1-4
Log Bunk & Stake Installation (Floating Bunk) FB-1-6
Headache (Log) Rack Breakdown & Installation FB-1-8

Group CB Clam Bunk

Section CB-1: Structural

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Clam Bunk Arm Installation CB-1-6
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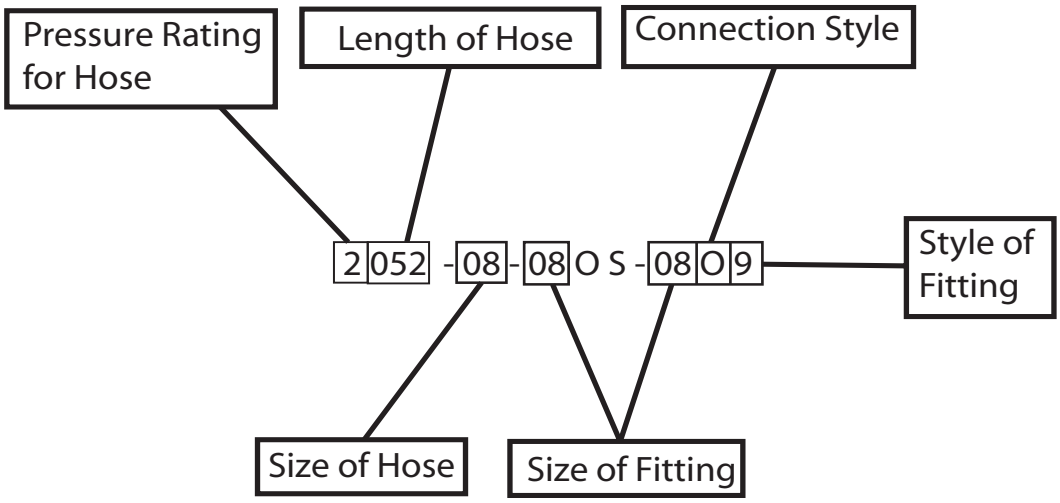
Left Arm Cylinder Hoses CB-2-2
Right Arm Cylinder Hoses CB-2-4
Clam Bunk Cylinder Breakdown CB-2-6
Clam Bunk Valve Breakdown CB-2-8



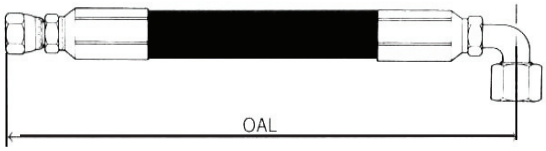
Explanation of Hose Assemblies

Pressure Rating for Hoses

The Number representing the hose pressure rating is actualy the number of wires in the hoses makup. Since pressure ratings and wire content can vary between manufactures and styles of hoses. It is recomended that the replacement hose matches the pressure rating of the hose it is replacing.

Length of Hose

This is the actual length of the hose measured in a straight line including the fittings.



Size of Hose

The number representing the size of the hose is as follows.

04 = .25”	06 = .3875”
08 = .5”	10 = .625”
12 = .75”	16 = 1”
20 = 1.25”	24 = 1.5”

Size of the Fitting

The size of the fitting is the same code as the sizing used for hose listed above.

Connection Style

The Connection Style of fitting is coded as follows.

“J” = Jic “O” = O-ring Face Seal “P” = Pipe

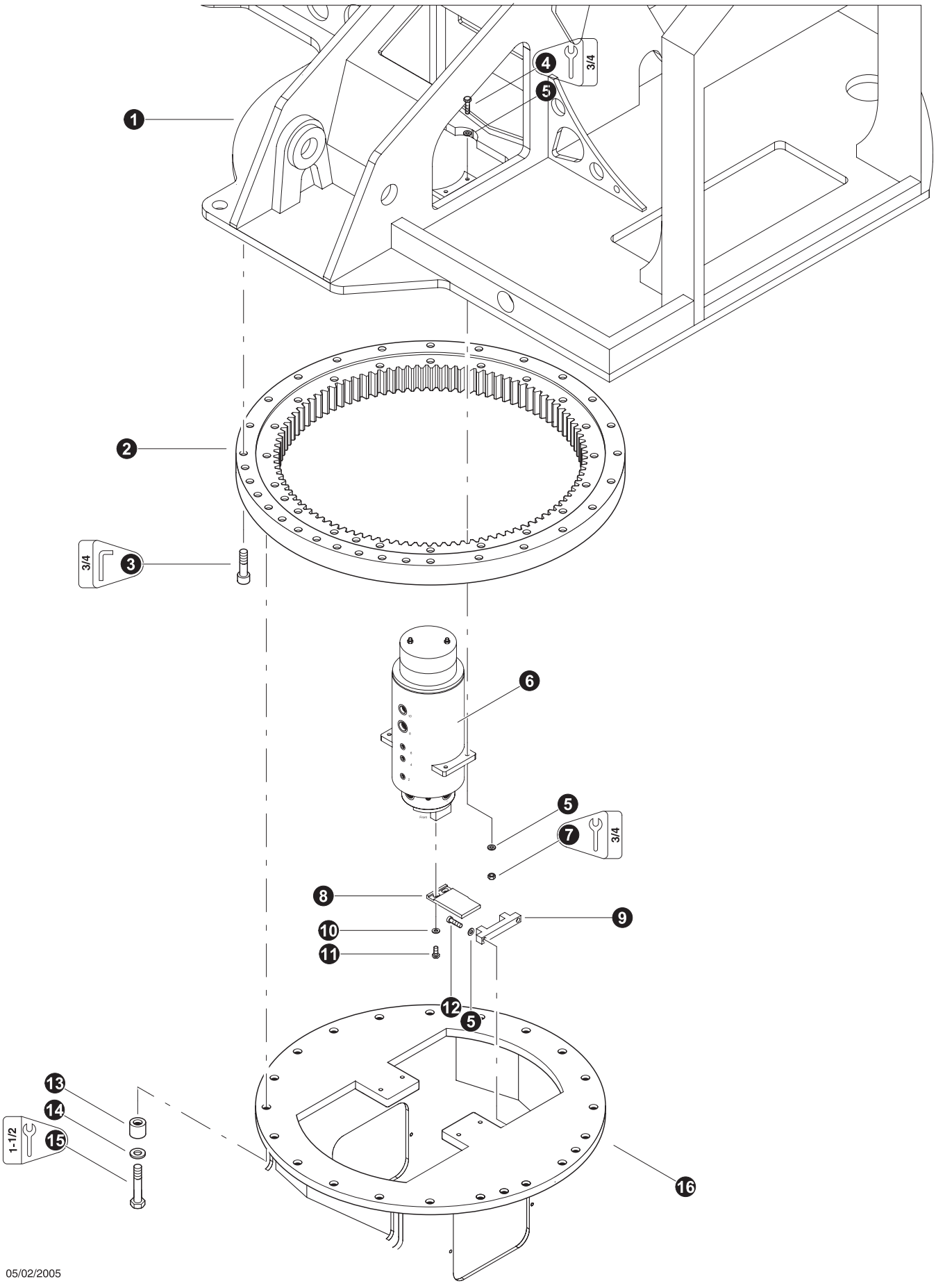
Style of Fitting

The Style of Fitting is coded as follows.

“S” = Strait “4” = 45 degree “9” = 90 degree

Section UP-1

Upper Turntable -
Structural Components, Doors, and Covers



T3088 05/02/2005
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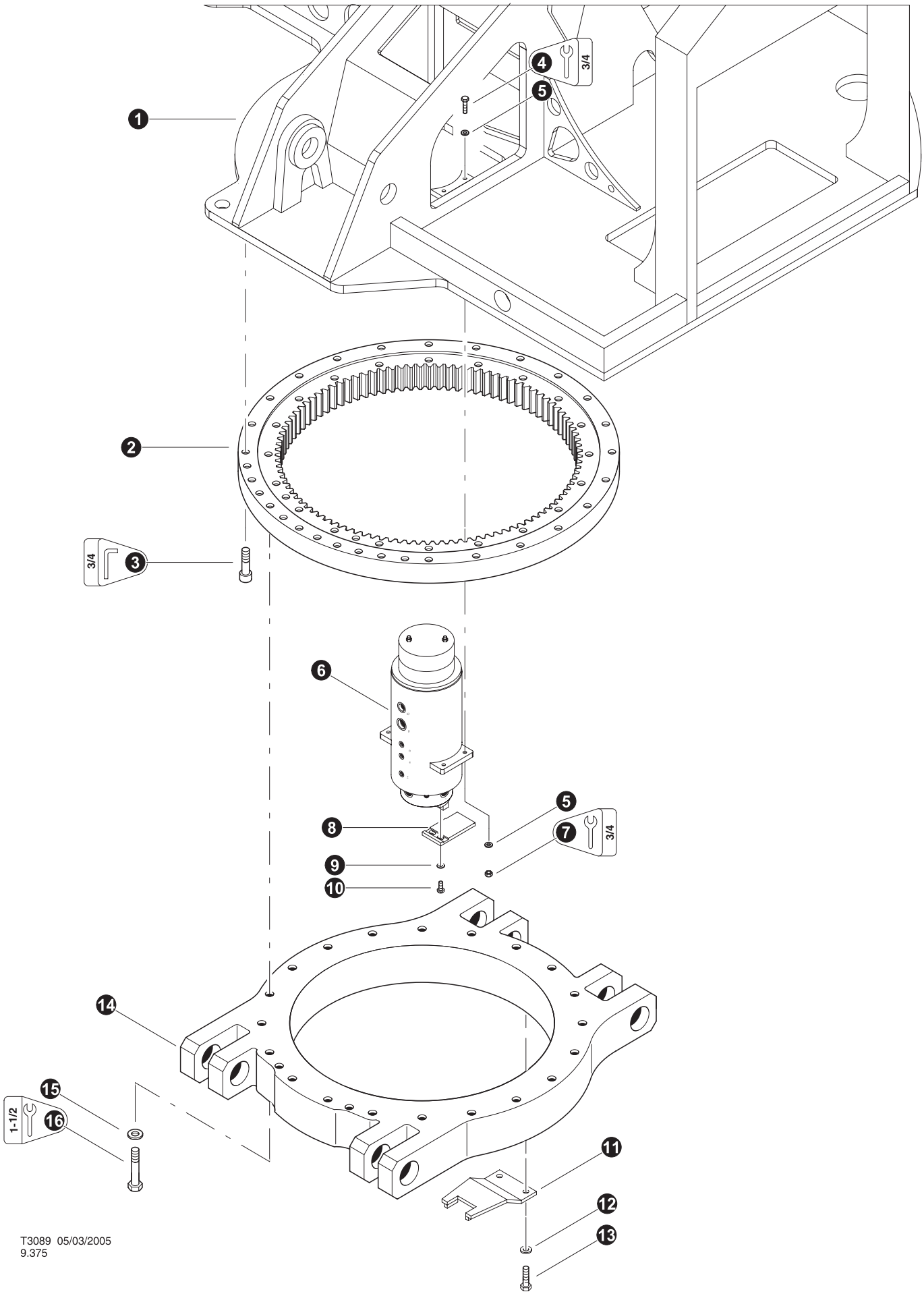
UPPER TURNTABLE INSTALLATION
(Non-Leveling Machines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51605-UP	1		WELDMENT, UPPER T.T. - 830 COMPLETE	
2	19631-UP	1		BEARING, swing	
3	51690-UP	30		BOLT, ALLEN HEAD - 1” X 4.5” (Torque to 1000 ft.lbs (1355 Nm))	
4	15565-UP	4		BOLT - 1/2” x 2-1/2”	
5	15534-UP	10		WASHER, SAE flat - 1/2”	
6	REF.	1	🕮	ROTARY MANIFOLD	UP-1
7	10815-UP	4		NUT, lock - 1/2”	
8	80468-UP	1		BRACKET, swivel lock	
9	42664-UP	1		BRACKET, swivel lock mate Non-Level	
10	22666-UP	2		WASHER, SAE FLAT - .5” (EXTRA THICK)	
11	22463-UP	2		BOLT, special - 1/2” x 1-1/4” (Hole drilled in head for safety wire)(See Note 1 Below)	
	22464-UP	10”		WIRE, safety - 16 gauge	
12	-UP	2		BOLT, allen head - 1/2” x 1.75” (See Note 1 Below)	
13	12463-UP	24		SPACER, bolt - upper turntable mounting	
14	15579-UP	24		WASHER, SAE FLAT - 1”	
15	18535-UP	24		BOLT - 1” x 5” (Torque to 1000 ft.lbs (1350 Nm))	
16	REF.	1	🕮	FRONT FRAME BEARING MOUNT	FF-1 / HN-1

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

Note: 1

Use Loctite 272 (blue) during installation.



T3089 05/03/2005
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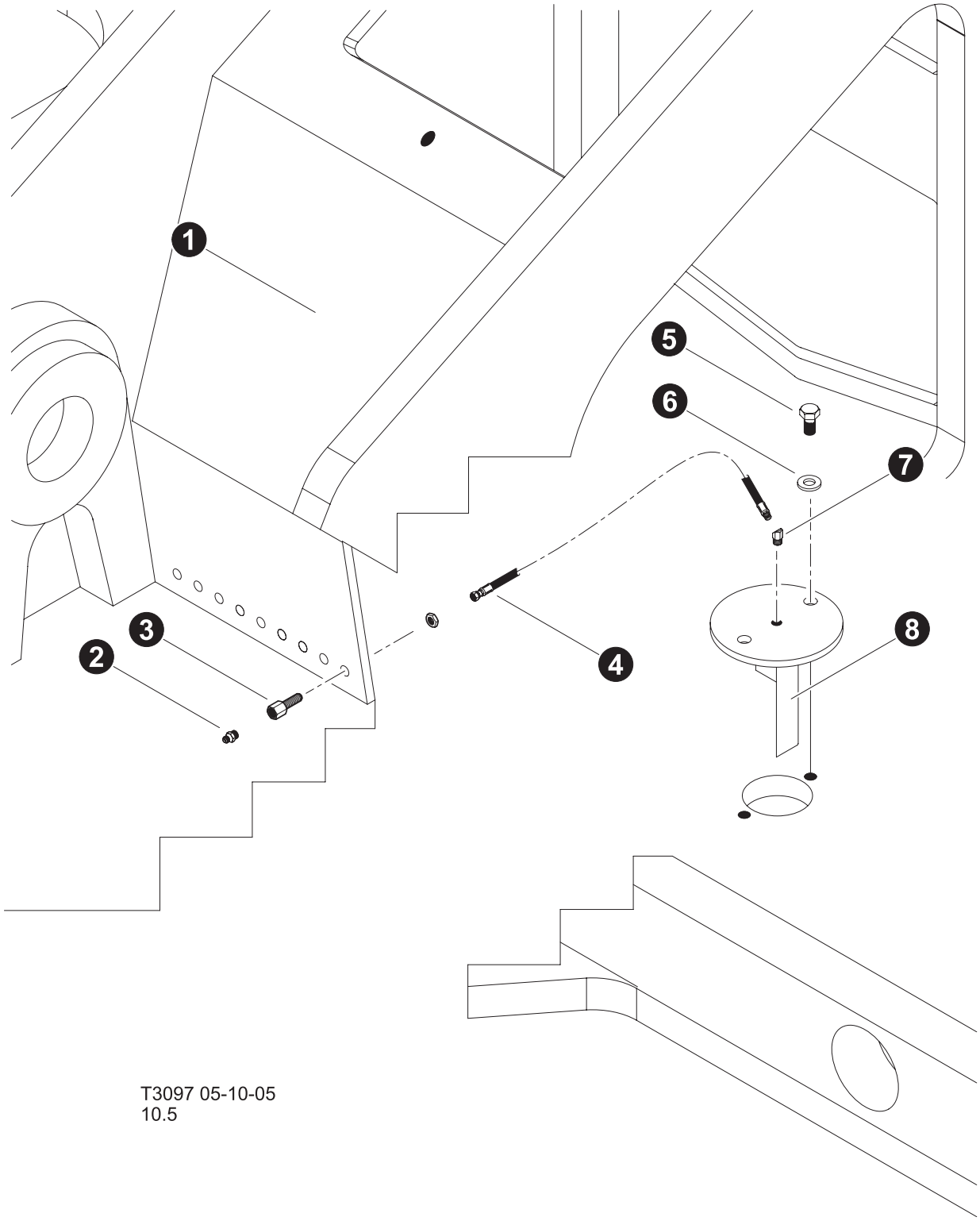
UPPER TURNTABLE INSTALLATION
(Leveling Machine)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51605-UP	1		WELDMENT, UPPER T.T. - 830 COMPLETE	
2	19631-UP	1		BEARING, swing	
3	51690-UP	30		BOLT, ALLEN HEAD - 1” X 4.5” (Torque to 1000 ft.lbs (1355 Nm))	
4	15565-UP	4		BOLT - 1/2” x 2-1/2”	
5	15534-UP	8		WASHER, SAE flat - 1/2”	
6	REF.	1	🕮	ROTARY MANIFOLD	UP-1
7	10815-UP	4		NUT, lock - 1/2”	
8	80468-UP	1		BRACKET, swivel lock	
9	22666-UP	2		WASHER, SAE FLAT - .5” (EXTRA THICK)	
10	22463-UP	2		BOLT, special - 1/2” x 1-1/4” (Hole drilled in head for safety wire)(See Note 1 Below)	
	22464-UP	10”		WIRE, safety - 16 gauge	
11	51913-UP	1		BRACKET, SWIVEL LOCK - LEVELING 630/830	
12	15550-UP	2		WASHER, SAE FLAT - .75”	
13	15549-UP	2		BOLT - .75” X 2.0 (See Note 1 Below)	
14	REF.	1	🕮	LOWER TURNTABLE - LEVELING FRAME	BF-1 / HL-1
15	15579-UP	24		WASHER, SAE FLAT - 1”	
16	18535-UP	24		BOLT - 1” x 5” (Torque to 1000 ft.lbs (1350 Nm))	

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

Note: 1

Use Loctite 272 (blue) during installation.



T3097 05-10-05
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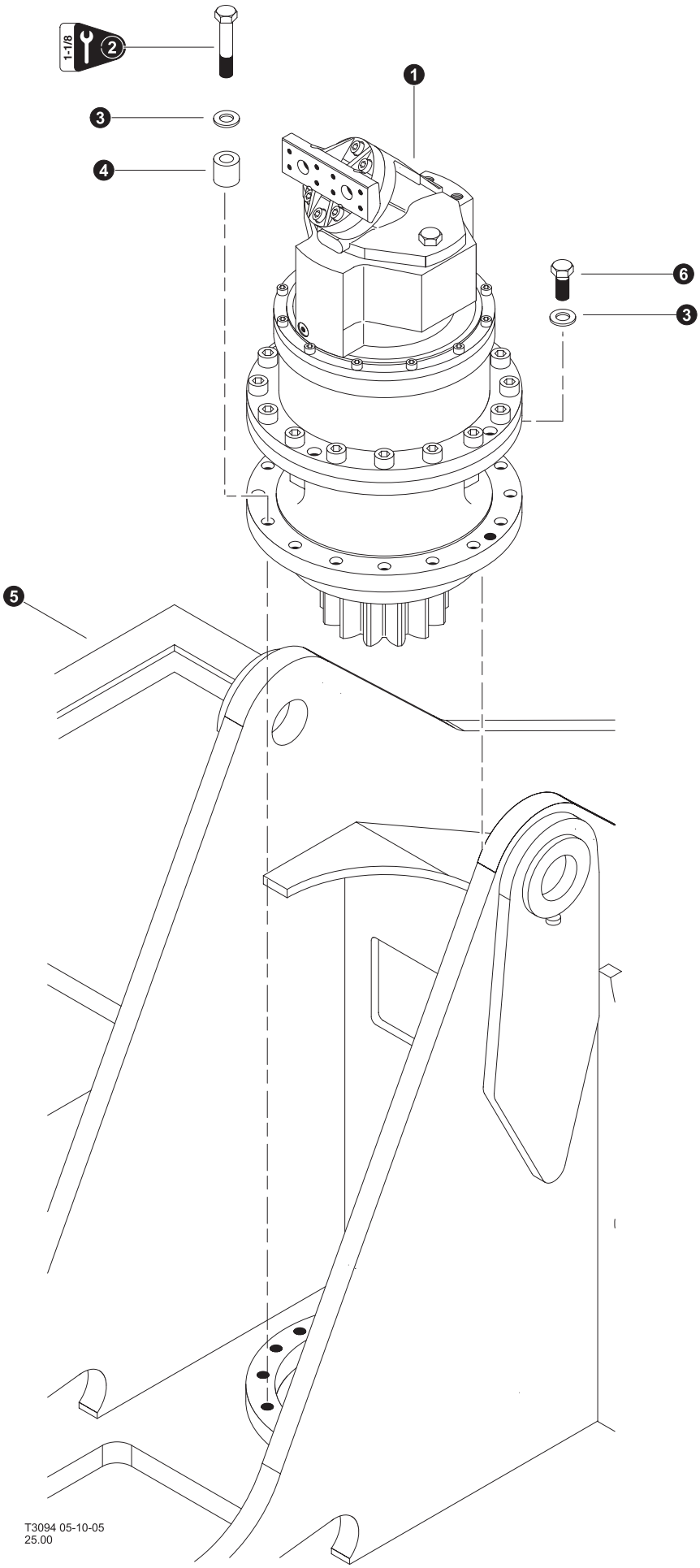
UPPER TURNTABLE INSTALLATION
(Swing Bearing Grease Line)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
2	10704-UP	1		FITTING, GREASE - .125 NPT - STR	
3	15658-UP	1		CONNECTOR, STR BULKHEAD - 2239-2-4S	
4		1		HOSE ASSEMBLY - 1021-02-02MS-04JS	
5	15542-UP	2		BOLT - .375” X .75”	
6	15528-UP	2		WASHER, SAE FLAT - .375”	
7	21671-UP	1		ELBOW, 45 - 5546134	
8	17612-UP	1		CUP, BULL GEAR GREASE - WIDE GEAR	

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

Note: 1

Use Loctite 272 (blue) during installation.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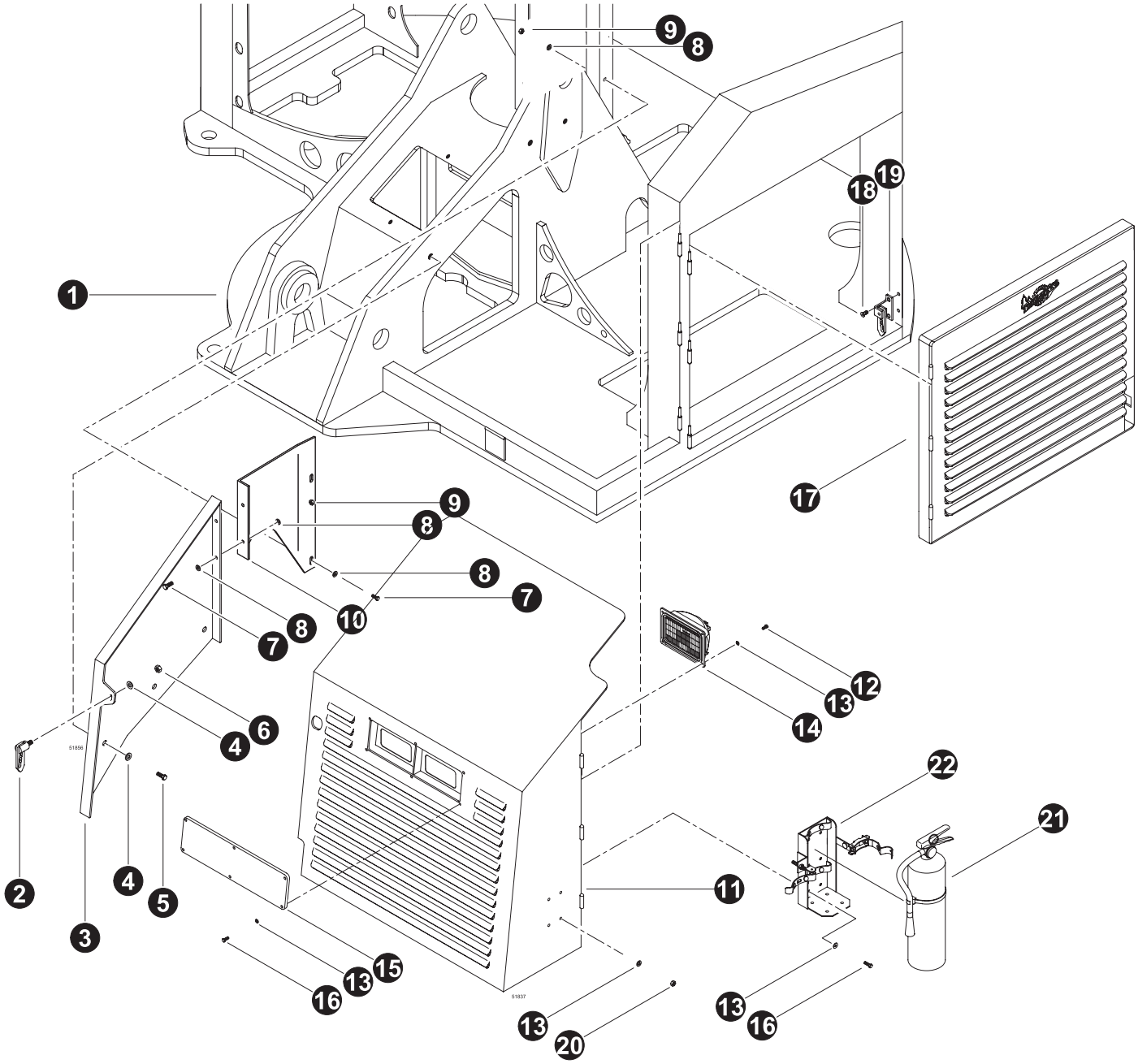
SWING MOTOR INSTALLATION
(Lohmann/Rexroth)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	SWING MOTOR - Lohmann/Rexroth	LH,HH,CH
2	10720-UP	15		BOLT - 5/8” x 3” (Torque to 230 ft.lbs (310 Nm)) (see note 1)	
3	10771-UP	16		WASHER, SAE flat - 5/8”	
4	19242-UP	15		SPACER, bolt	
5	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
6	15502-UP	1		BOLT - .625” X 1.5” (See Note 1 Below)	

🕮 See reference page for component or assembly breakdown.

Note: 1

Use Loctite 272 (blue) during installation.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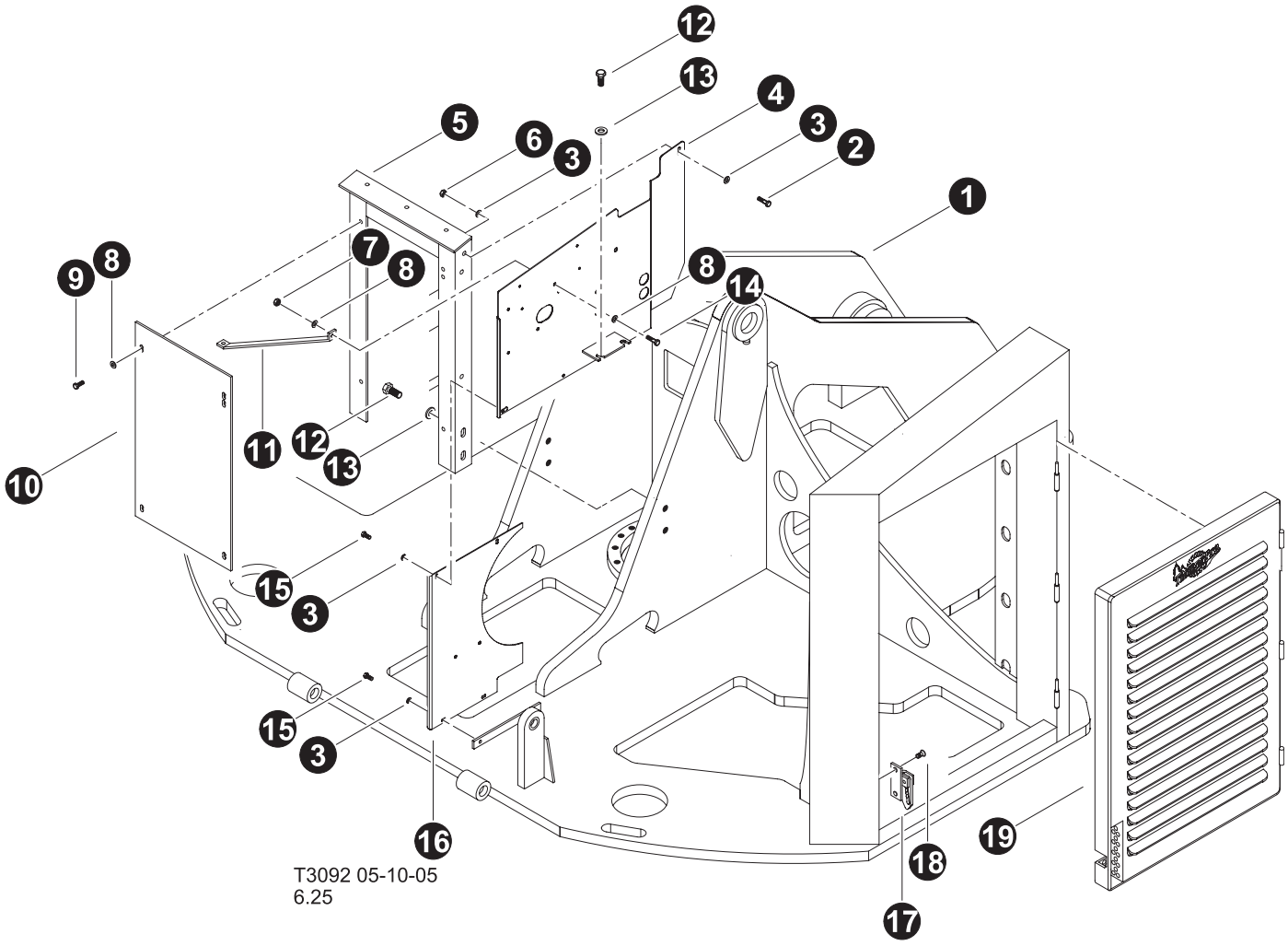
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Front Door and Side Radiator Door Install)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
2	51883-UP	1		LATCH, CAM - 1.5” FRONT DOOR 630/830	
3	51856-UP	1		COVER, INSIDE FRONT DOOR	
4	10804-UP	3		WASHER, flat - 1/2”	
5	10783-UP	1		BOLT - 1/2” x 1”	
6	10815-UP	1		NUT, LOCK - .5”	
7	11707-UP	3		BOLT - .375” X 1”	
8	15528-UP	6		WASHER, SAE FLAT - .375”	
9	10813-UP	3		NUT, LOCK - .375”	
10	51877-UP	1		COVER, TOP FRT DOOR	
11	50837-UP	1		DOOR, FRONT SWING OUT	
12	15604-UP	8		BOLT - .25” X .75”	
13	10757-UP	6		WASHER, SAE FLAT - .25”	
14	REF	2		LIGHT	ES
15	51693-UP	1		LEXAN, LIGHT COVER SWING OUT FRONT DOOR	
16	15576-UP	6		BOLT - .25” X 1”	
17	51659-UP	1		DOOR, - RADIATOR	
18	51850-UP	2		BOLT, CAM LATCH - FHSCS 3/8 - 16 X 1 ZB	
19	51657-UP	1		LATCH, CAM - DOOR R.H. (RADIATOR-GULLW)	
20	15509-UP	4		NUT, nylock - 1/4”	
21	16222-UP	1		FIRE EXTINGUISHER W/BRACKET - 10 LBS	
-	51740-UP	1		FIRE EXTINGUISHER W/BRACKET - 2.5 GAL (WATER) - OPTIONAL	
22	NSS	1		BRACKET, fire extinguisher	

🕮 See reference page for component or assembly breakdown.



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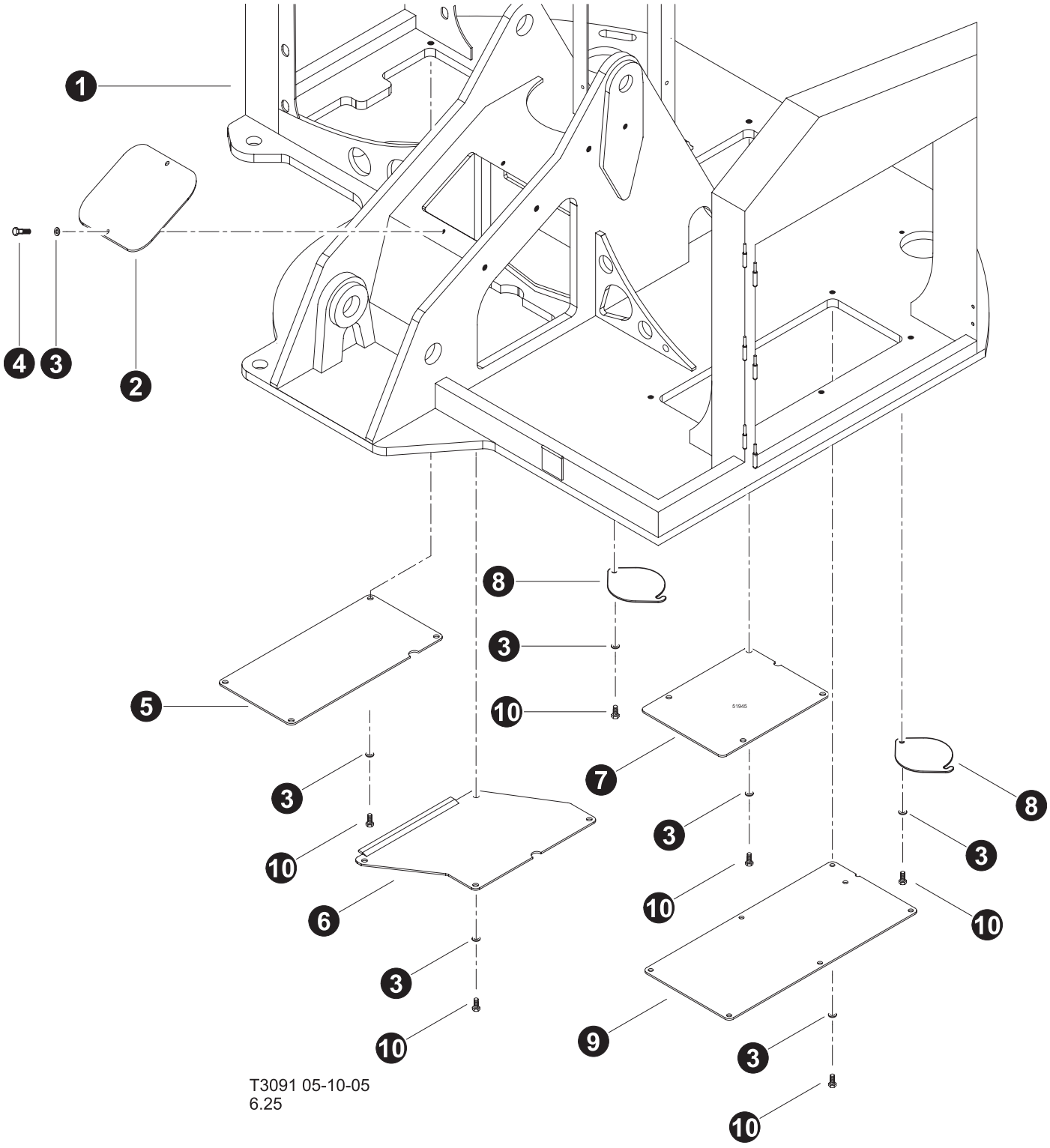
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Rear Panels and Oil Cooler Door Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
2	15589-UP	1		BOLT - .3125” X 1”	
3	15559-UP	6		WASHER, SAE FLAT - .3125”	
4	51822-UP	1		BARRIER, UPPER	
5	51609-UP	1		BRACKET, GULLWING STOP	
6	10812-UP	1		NUT, LOCK - .3125”	
7	10813-UP	1		NUT, LOCK - .375”	
8	15528-UP	6		WASHER, SAE FLAT - .375”	
9	15542-UP	4		BOLT - .375” X .75”	
10	42660-UP	1		COVER, GULLWING STOP	
11	42661-UP	1		BRACE, BARRIER	
12	15502-UP	6		BOLT - .625” X 1.5”	
13	10771-UP	6		WASHER, SAE FLAT - .625”	
14	11707-UP	1		BOLT - .375” X 1”	
15	15605-UP	4		BOLT - .3125” X .75”	
16	51823-UP	1		BARRIER, LOWER	
17	51658-UP	1		LATCH, CAM - DOOR L.H. (OIL COOLER)	
18	51850-UP	2		BOLT, CAM LATCH - FHSCS 3/8 - 16 X 1 ZB	
19	51660-UP	1		DOOR, OIL COOLER	

🕮 See reference page for component or assembly breakdown.



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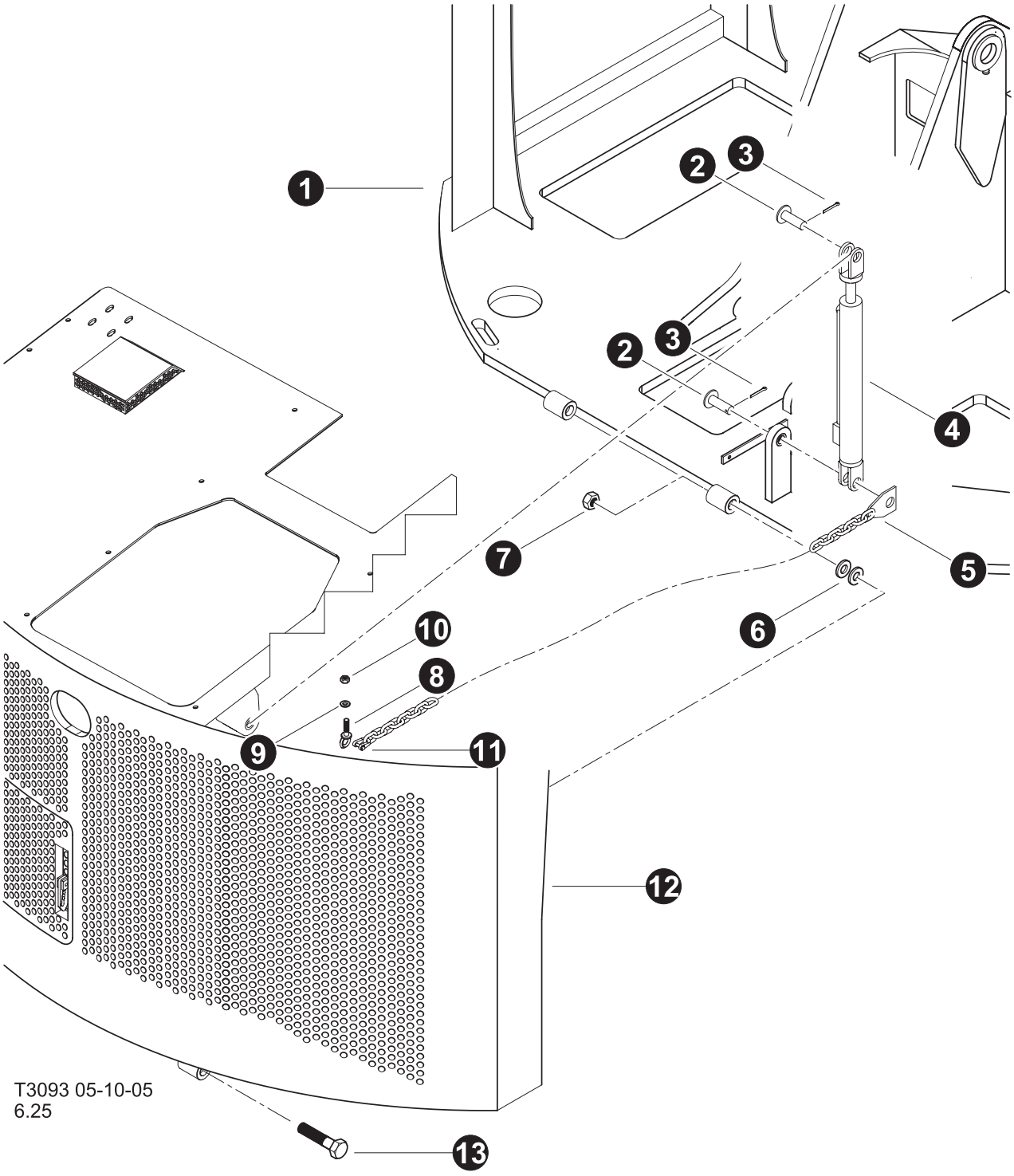
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(COVER INSTALLATIONS)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
2	40894-UP	1		COVER, RISER	
3	15534-UP	24		WASHER, SAE flat - 1/2”	
4	10739-UP	2		BOLT - 1/2” x 1-1/2”	
5	51943-UP	1		COVER, OIL COOLER OUTSIDE - BOTTOM	
6	51944-UP	1		COVER, OIL COOLER INSIDE BOTTOM	
7	51945-UP	1		COVER, REAR BOOM BOTTOM	
8	12150-UP	2		COVER, ACCESS - RAD FILL / STEER CYL	
9	51946-UP	1		COVER, RADIATOR BOTTOM	
10	10783-UP	22		BOLT - .5” X 1”	

🕮 See reference page for component or assembly breakdown.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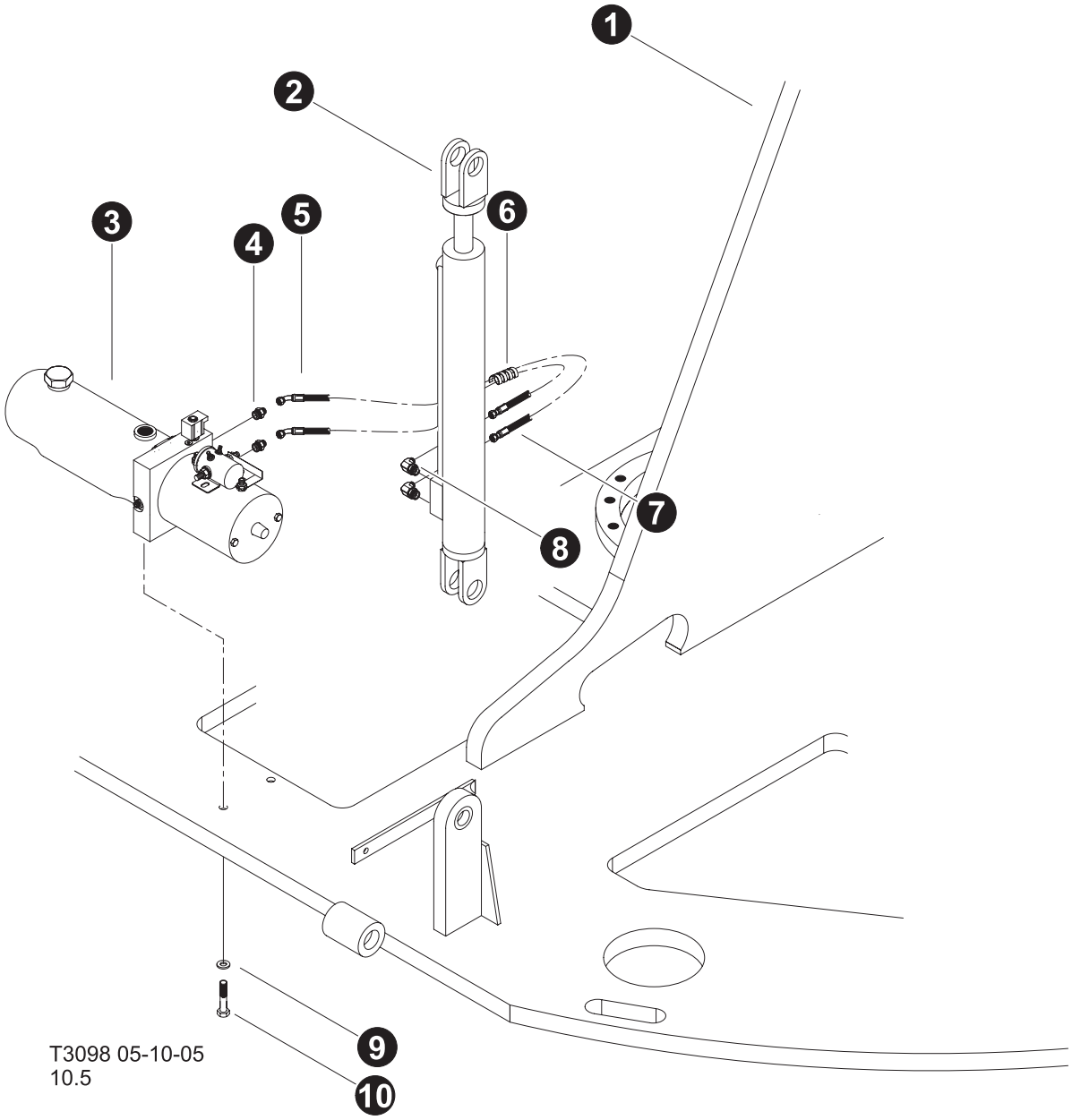
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Gull Wing Door Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
2	51862-UP	2		PIN, GULLWING - 1.25” X 3.0”	
3	20249-UP	2		PIN, COTTER - .25” X 2”	
4	REF.	1	🕮	GULL WING CYLINDER	UP-1
5	51958-UP	1		CHAIN, GULLWING STOP (ASSEMBLY)	
6	15579-UP	4		WASHER, SAE FLAT - 1”	
7	18253-UP	2		NUT, LOCK - 1”	
8	51935-UP	1		BOLT, EYE - LIFT .5” - GULLWING	
9	15534-UP	1		WASHER, SAE FLAT - .5”	
10	10711-UP	1		NUT, HEX - .5”	
11	51936-UP	1		CLEVIS, 3/8” - GULLWING	
12	REF	1	🕮	DOOR, GULLWING - ASSEMBLY	UP-1
13	18529-UP	2		BOLT - 1” X 9” (Cut down to 7.5”)	

🕮 See reference page for component or assembly breakdown.



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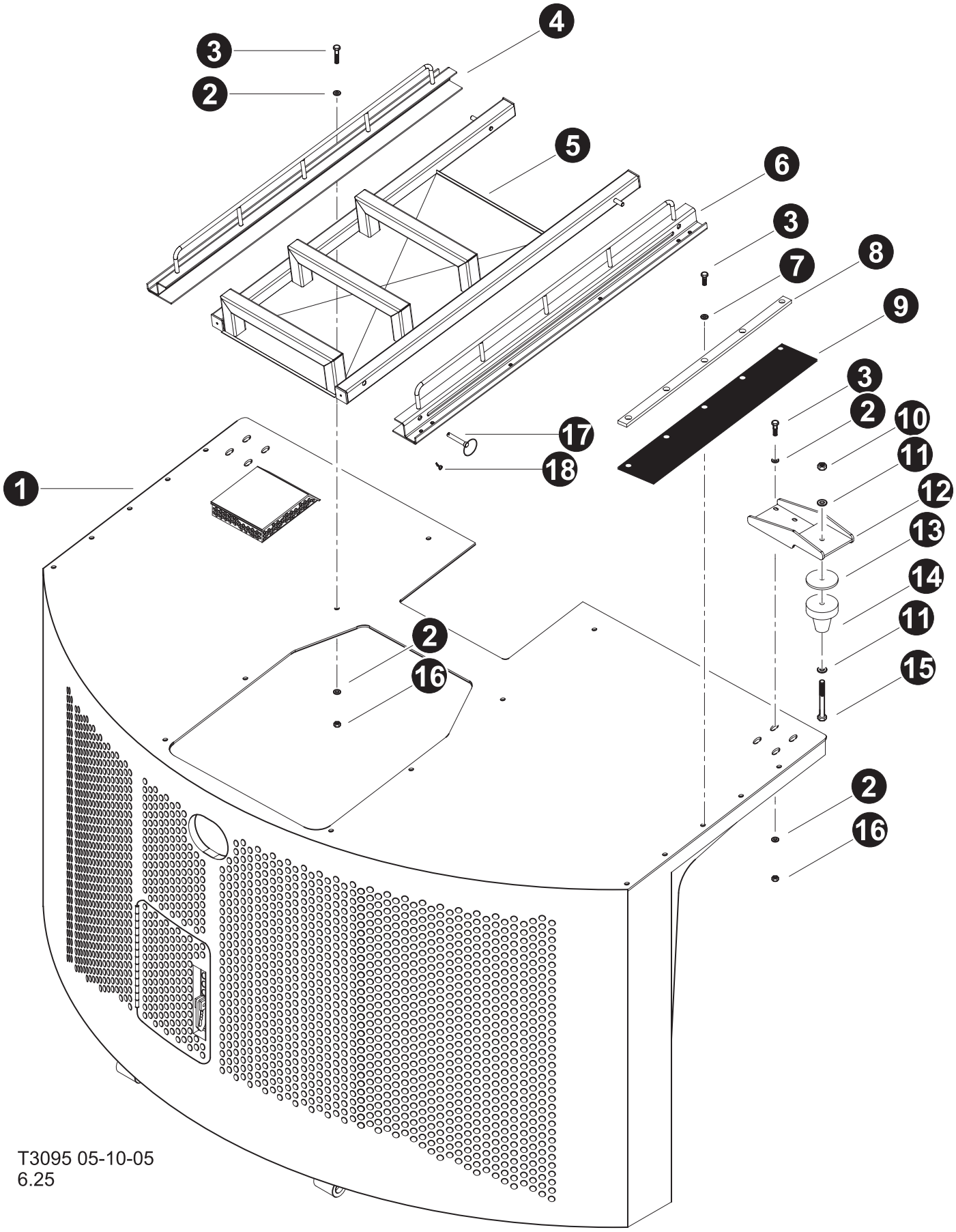
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Gull Wing Lift Pump Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1
2	REF.	1	🕮	GULL WING CYLINDER	UP-1
3	51577-UP	1		PUMP, POWER UNIT - GULL WING	
4	15124-UP	2		CONNECTOR, STR - FF1852T-0406S	
5	50606-UP	1		HOSE ASSEMBLY - 2043-04OS-0404	
6	20843-UP	3ft	✂	PROTECTOR, HOSE - SPRIAL (.78”)(BULK)	
7	50606-UP	1		HOSE ASSEMBLY - 2043-04OS-0404	
8	15133-UP	2		ELBOW, 90 - FF1868T-0406S	
9	15528-UP	2		WASHER, SAE FLAT - .375”	
10	15529-UP	2		BOLT - .375” X 2”	

🕮 See reference page for component or assembly breakdown.
✂ Item sold in bulk (per foot). Please specify on order amount needed.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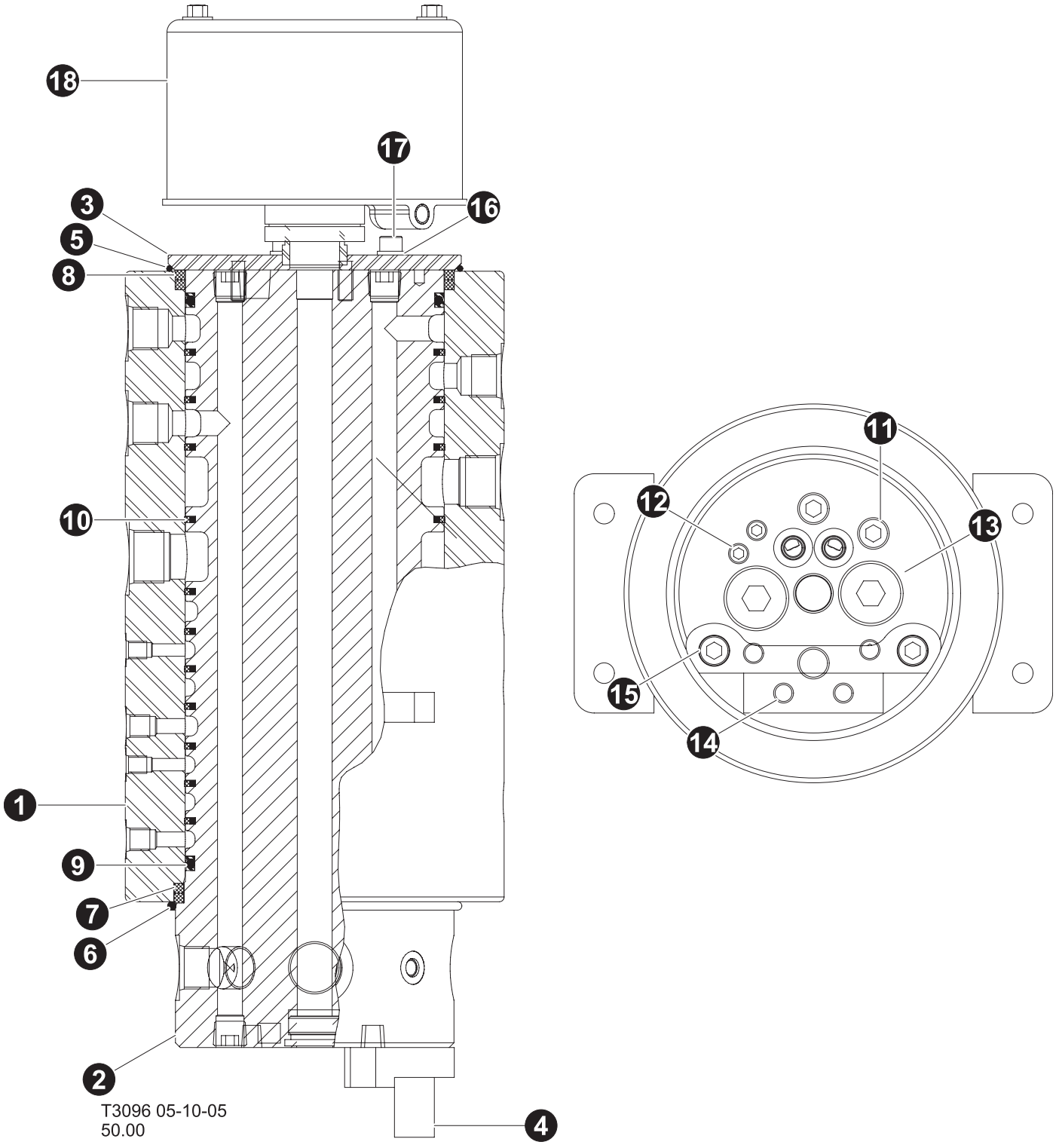
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Gull WIng Door Assembly)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51661-UP	1		DOOR, GULLWING	
2	10802-UP	32		WASHER, FLAT - .375”	
3	10402-UP	26		BOLT - .375” X 1.25”	
4	51864-UP	1		SLIDE, GULLWING LADDER DOOR (RH/LH)	
5	51865-UP	1		DOOR, LADDER for GULLWING	
6	51864-UP	1		SLIDE, GULLWING LADDER DOOR (RH/LH)	
7	15528-UP	10		WASHER, SAE FLAT - .375”	
8	42645-UP	2		BAR, GULLWING RUBBER STIFFENER	
9	42646-UP	2		RUBBER, SEAL - GULLWING UPPER SEAM	
10	10815-UP	2		NUT, LOCK - .5”	
11	15534-UP	4		WASHER, SAE FLAT - .5”	
12	51776-UP	2		MOUNT, GULLWING TOP	
13	15524-UP	2		WASHER, ISOLATOR MOUNT - .625” X 3.5”	
14	51702-UP	2		ISOLATOR, GULLWING MOUNTING	
15	10835-UP	2		BOLT - .5” X 4.5”	
16	10813-UP	1		NUT, LOCK - .375”	
17	51863-UP	1	❑	PIN, D-RING - GULLWING DOOR 1/2” X 4 3/4	
18		1		HAIRPIN CLIP, GULLWING D-RING PIN	

🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.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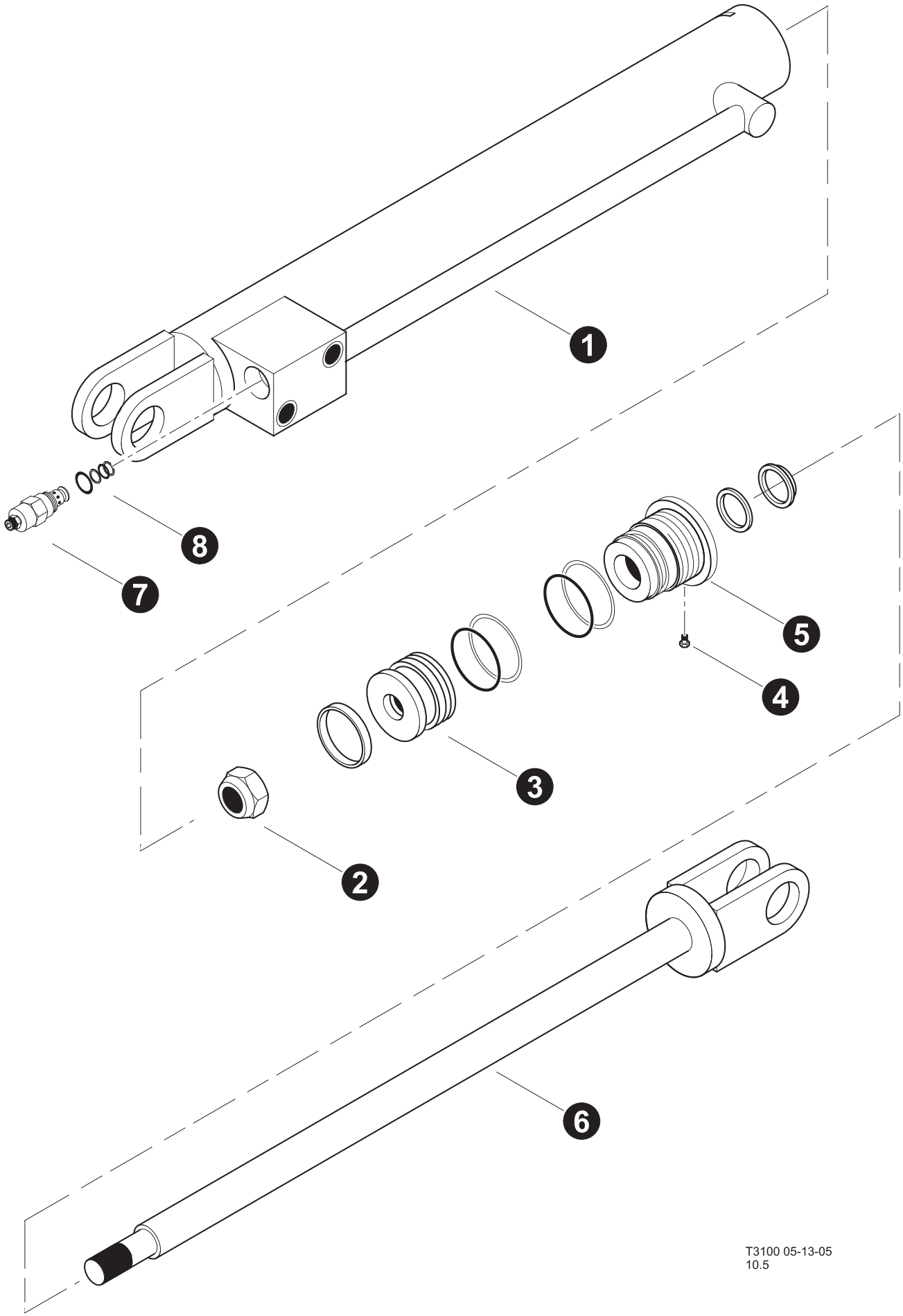
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(ROTORY MANIFOLD BREAKDOWN)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51582-UP	1	❑	MANIFOLD, ROTARY - W/CANBUS WIPERS (11 PORTS)	
1		1		HOUSING ASSEMBLY - 11 PORTS (8133-001)	
2		1		SPOOL - 11 PORTS (8133-002)	
3		1		KEEPER PLATE (8133-003)	
4		1		TORQUE ARM ASSEMBLY (8073-0005)	
5		1		O-RING SEAL (0000-3260)	
6		1		O-RING SEAL (0000-3363)	
7		2		WEAR RING (0000-5062)	
8		2		WEAR RING (0000-5063)	
9		2		CROWN SEAL (0004-5437)	
10		11		SEAL KIT (0000-9125)	
11	17488-UP	6		1/2 - 14 NPT PLUG - 5406-HHP-8	
12	18106-UP	4		1/4 - 18 NPT PLUG - 5406-HHP-4	
13	19847-UP	2		#16 SAE PLUG - 6408-HHP-16	
14		2		3/8 SPIRAL ROLL PIN (0000-6707)	
15		2		SOCKET HEAD CAP SCREW (0000-2022)	
16		4		3/8 LOCK WASHER (0000-2603)	
17		4		SOCKET HEAD CAP SCREW (0000-2019)	
18	52007-UP	1		7 - CIRCUIT SLIP RING ASSEMBLY	
19	-UP	1		12 - CIRCUIT SLIP RING ASSEMBLY (HYDROMOTION)	
-	52008-UP	1		SEAL KIT (LOWRENCE ROTARY MANIFOLD 11 PORT)	

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

Please contact TimberPro Dealer or Factory before attempting to disassemble or repair rotary manifold. Rotary manifolds need to be serviced by authorized TimberPro service technicians only.



T3100 05-13-05
10.5

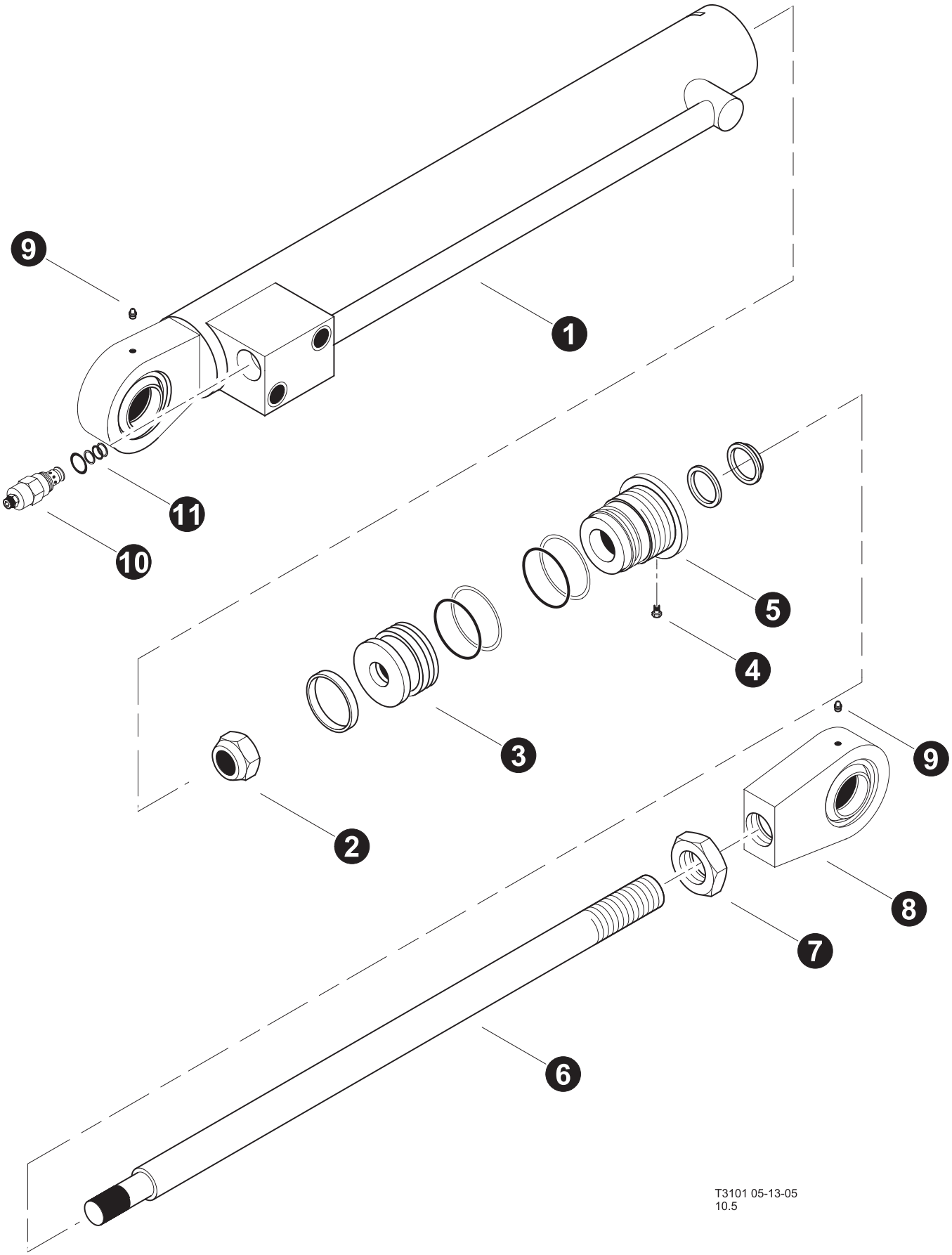
UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Gull Wing Lift Cylinder Breakdown)

S/N - 104 AND BELOW

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	26602-UP	1	❑	CYLINDER, GULLWING LIFT - 830/630	
1		1		BARREL ASSEMBLY (203026B)	
2		1		NUT (712065A)	
3		1		PISTON ASSEMBLY (400221B)	
4		1		SCREW (711127A)	
5		1		ROD BEARING ASSEMBLY (500736B)	
6		1		ROD ASSEMBLY (301692B)	
7		1		VALVE CARTRIDGE (725047A)	
8		1		SEAL KIT - CARTRIDGE (SKV-1021)	
-	52011-UP	1		KIT, SEAL REPAIR - GULL WING CYL	

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

Please contact TimberPro Dealer or Factory before attempting to disassemble or repair rotary manifold. Rotary manifolds need to be serviced by authorized TimberPro service technicians only.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T3101 05-13-05
10.5

UPPER TURNTABLE GUARDS, PANELS & COVERS INSTALLATION
(Gull Wing Lift Cylinder Breakdown)

S/N - 105 AND ABOVE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51870-UP	1	❑	CYLINDER, GULLWING LIFT - 830/630	
1		1		BARREL ASSEMBLY (203026B)	
2		1		NUT (712065A)	
3		1		PISTON ASSEMBLY (400221B)	
4		1		SCREW (711127A)	
5		1		ROD BEARING ASSEMBLY (500736B)	
6		1		ROD ASSEMBLY (301692B)	
7		1		NUT - JAM (712117A)	
8		1		ROD EYE ASSEMBLY (660794B)	
9		2		GREASE FITTING (717000A)	
10		1		VALVE CARTRIDGE (725047A)	
11		1		SEAL KIT - CARTRIDGE (SKV-1021)	
-	52011-UP	1		KIT, SEAL REPAIR - GULL WING CYL	

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

Please contact TimberPro Dealer or Factory before attempting to disassemble or repair rotary manifold. Rotary manifolds need to be serviced by authorized TimberPro service technicians only.

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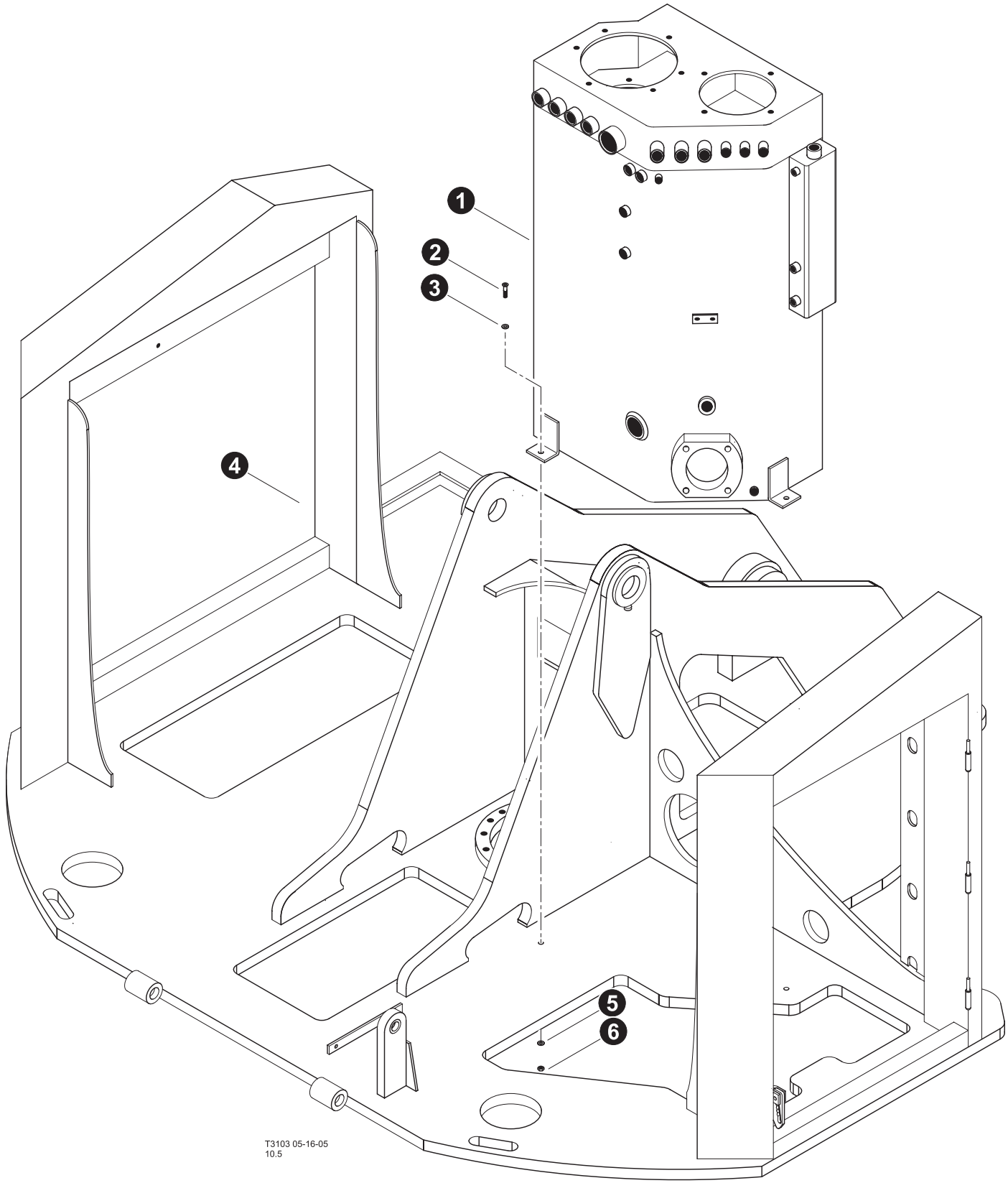
Section UP-2

Upper Turntable - Hydraulic Tank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T3103 05-16-05
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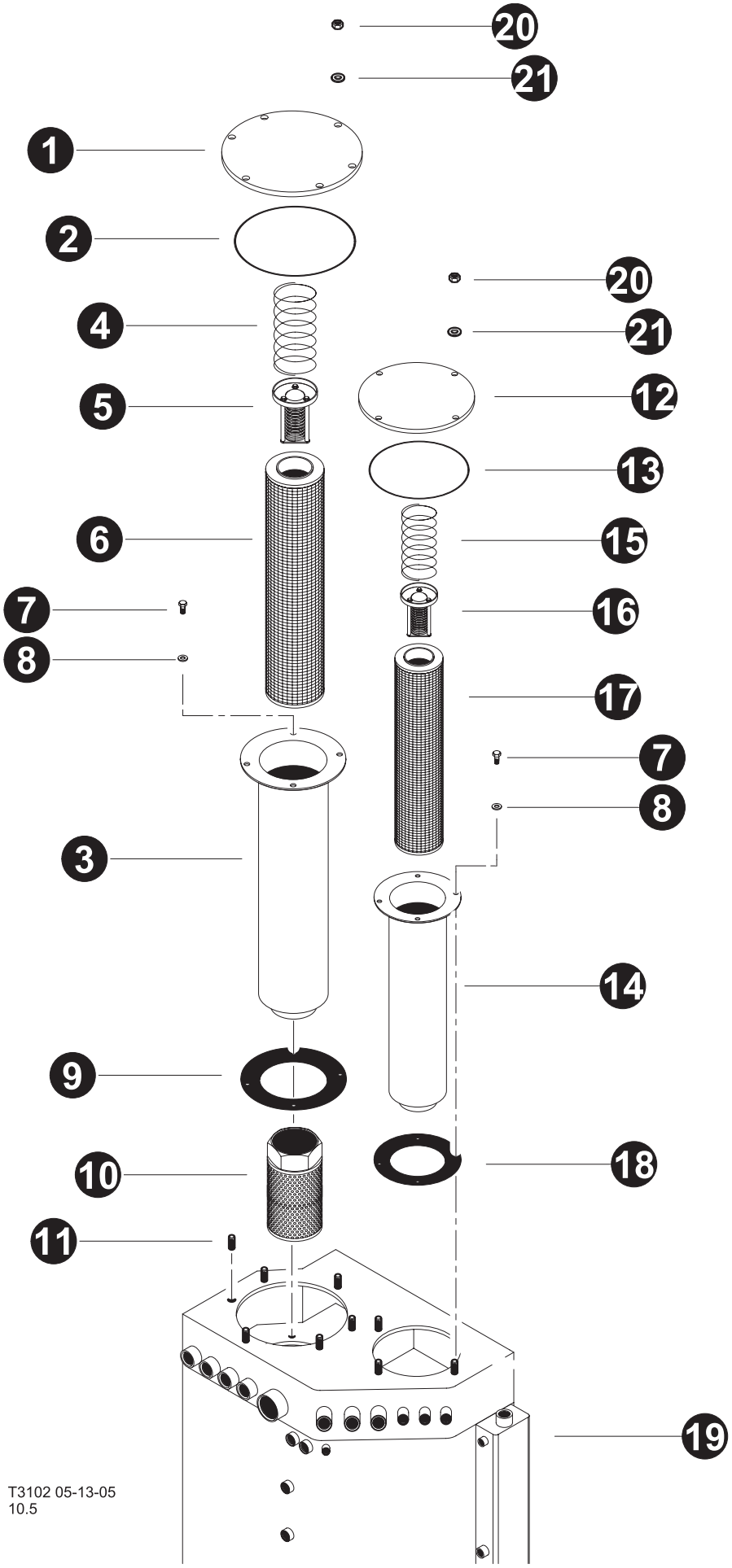
HYDRAULIC TANK
INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51583-UP	1		TANK, HYDRAULIC OIL (830,840 & 630)	
2	51854-UP	2		BOLT, FLAT HEADED PLOW - 1/2” X 2 1/2”	
3	15534-UP	2		WASHER, SAE FLAT - .5”	
4	REF	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1
5	15534-UP	2		WASHER, SAE FLAT - .5”	
6	10815-UP	2		NUT, LOCK - .5”	

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

Please contact TimberPro Dealer or Factory before attempting to disassemble or repair rotary manifold. Rotary manifolds need to be serviced by authorized TimberPro service technicians only.



T3102 05-13-05
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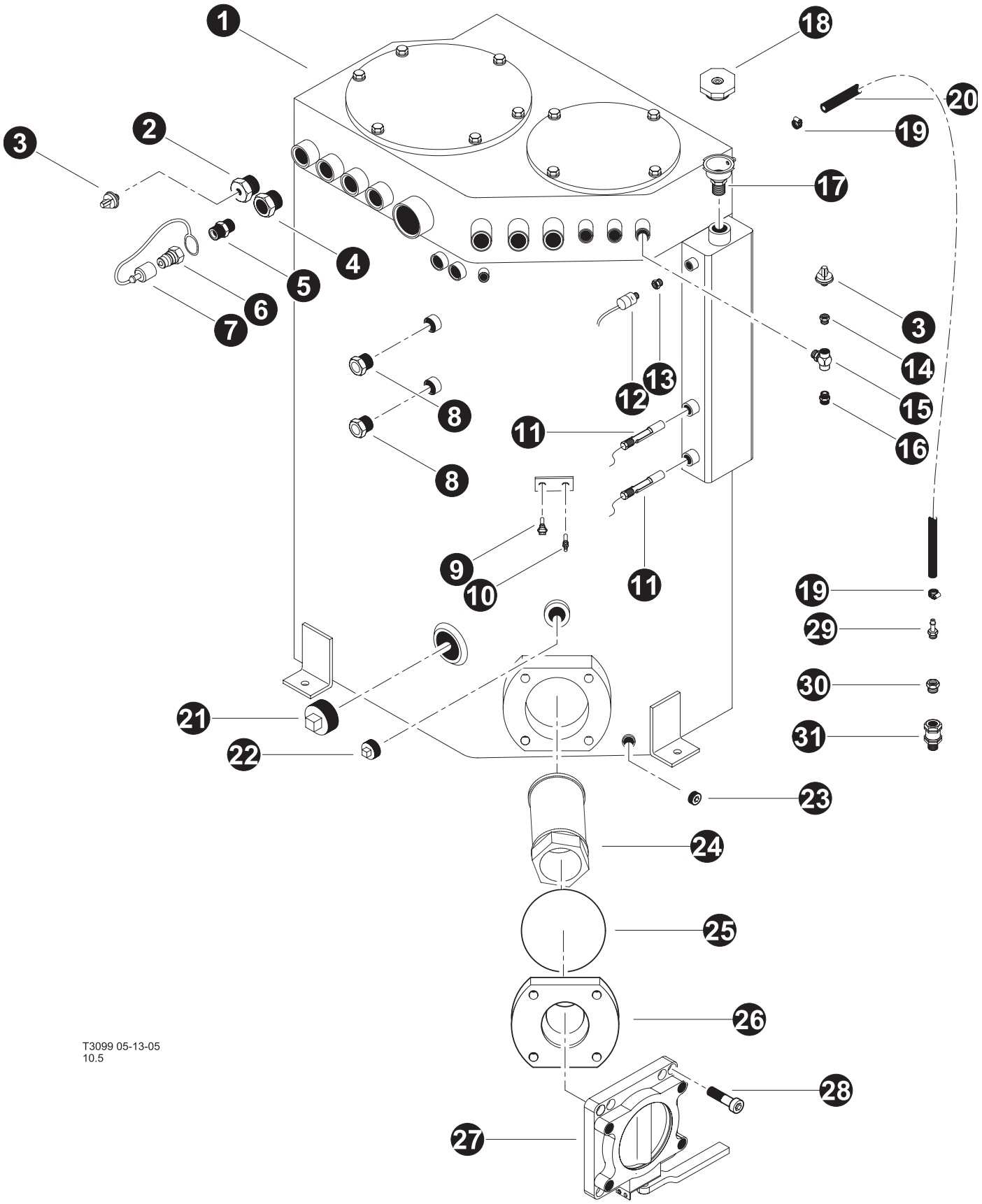
HYDRAULIC TANK
FILTER ASSEMBLES

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1		1		COVER - RETURN FILTER	
2	42310-UP	1		O-RING	
3	51620-UP	1	❑	FILTER KIT, HYD. TANK MAIN RETURN - TF830	
4		1		SPRING, RETURN FILTER	
5		1		BYPASS CHECK, RETURN FILTER	
6	51622-UP	1		ELEMENT, MAIN RETURN HYD TANK	
7	15542-UP	8		BOLT - .375” X .75”	
8	15528-UP	8		WASHER, SAE FLAT - .375”	
9		1	⌘	SEAL, Gasket (BFT-3)	
10	51624-UP	1		DIFFUSER, FILTER - MAIN RETURN HYD TANK	
11	42393-UP	1		STUD - .5”-13NC X .5”-20NF X 2.0LG”	
12		1		COVER - CASE DRAIN	
13	15600-UP	1		O-RING - 8” DIA. -369	
14	51621-UP	1	❑	FILTER KIT, HYD. TANK MAIN RETURN - TF830	
15		1		SPRING, CASE DRAIN FILTER	
16		1		BYPASS CHECK, CASE DRAIN FILTER	
17	22647-UP	1		ELEMENT, RETURN FILTER (Case Drain)	
18		1	❖	SEAL, Gasket (LFT-642)	
19	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
20	42394-UP	10		NUT, HEX .5-20NF	
21	15534-UP	10		WASHER, SAE FLAT - .5”	

🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
⌘ Part of Seal Repair Kit #52126
❖ Part of Seal Repair Kit #16852

Please contact TimberPro Dealer or Factory before attempting to disassemble or repair rotary manifold. Rotary manifolds need to be serviced by authorized TimberPro service technicians only.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T3099 05-13-05
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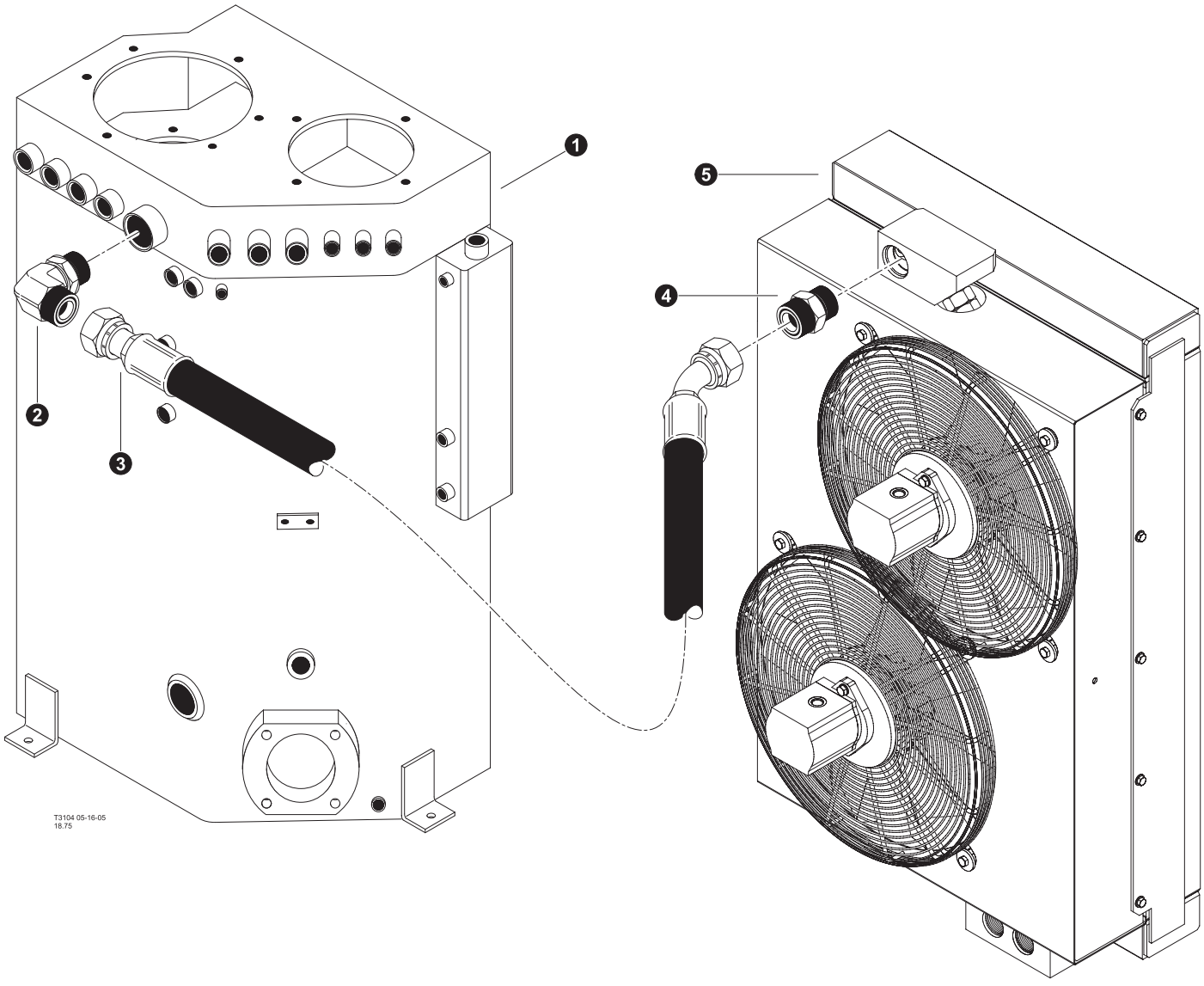
HYDRAULIC TANK

Hydraulic Tank Components installation

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	11385-UP	1		PLUG - 6408-12 (DRILLED AND TAPPED TO 1/8” NPT)	
3	51764-UP	2		SWITCH, PRESSURE - SCHROEDER (830/630)	
4	16805-UP	1		BUSHING, REDUCER - 6405-12-8	
5	11302-UP	1		CONNECTOR, STR - 5404-8	
6	17307M-UP	1		QUICK DISCONNECT - .5” (MALE)	
7	17323F-UP	1		COVER, DUST - QUICK DISCONNECT (FEMALE)	
8	24308-UP	2		SIGHT GLASS	
9	24531-UP	1		TRANSDUCER, HYD TEMP (IQAN SYSTEM)	
10	50195-UP	1		SENDER, TEMPERATURE - (HYDRAULIC OIL TEMP)	
11	51379-UP	2		SWITCH, HYD. OIL LEVEL .50 NPT GEMS	
12	51737-UP	1		SWITCH, PRESSURE - VACUUM PUMP SHUTOFF (OPTIONAL)	
13	11318-UP	1		BUSHING, REDUCER - 5406-6-4	
14	52013-UP	1		BUSHING, REDUCER - 8 - 1/4 F50G	
15	22229-UP	1		TEE - 8-G5G5JAO-S	
16	15117-UP	1		CONNECTOR, STR - FF1852T-0808S	
17	17156-UP	1		STEM, HYDRAULIC TANK RELIEF CAP	
18	18135-UP	1		CAP, HYD. RESERVOIR RELIEF - 13 PSI	
19	16202-UP	1		CLAMP, HOSE - WORM STYLE - .625”	
20	16238-UP	5 ft	✂	HOSE, FUEL LINE (BULK ROLL) - .3125”	
21	42392-UP	1		PLUG, BLACK PIPE - 2.0” HYD. TANK 830/630	
22	15603-UP	1		PLUG, BLACK PIPE - 1.25” HYD TANK 830/630	
23	10751-UP	1		PLUG - 5406-P-8	
24	15842-UP	1		FILTER, SCREEN - IMPLEMENT	
25	51726-UP	1		O-RING, HDYRAULIC TANK - 830/630	
26	42306-UP	1		PLATE, INTER.-SUCTION PORT 100mm VALVE	
27	51619-UP	1		VALVE, SHUT OFF - BUTTERFLY (4”)	
28	18918-UP	4		BOLT, ALLEN HEAD - .5” X 2.5”	
29	16990-UP	1	🗎	CONNECTOR, STR HOSE BARB - 4244-5-4	
30	11318-UP	1	🗎	BUSHING, REDUCER - 5406-6-4	
31	15652-UP	1	🗎	VALVE, CHECK - HYDRAULIC/FUEL TANK	

🗎 Only used when Vacuum Pump System Installed
🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
✂ Sold in bulk per foot - Please specify length when ordering.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T3104 05-16-05
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HYDRAULIC TANK

Hydraulic Tank Return Line to Oil Cooler

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	22438-UP	1		ELBOW, 90 - 849L-TTO-24X24 (HYD TANK)	
2		1		HOSE ASSEMBLY - 2023-24OS-2404 (Hydraulic tank return side to Oil Cooler Outlet)	
4	22448-UP	1		CONNECTOR, STR - 848-TTO-24X24	
5	REF	1	🕮	HYDRAULIC OIL COOLER ASSEMBLY	UP-3

🕮 See reference page for component or assembly breakdown.
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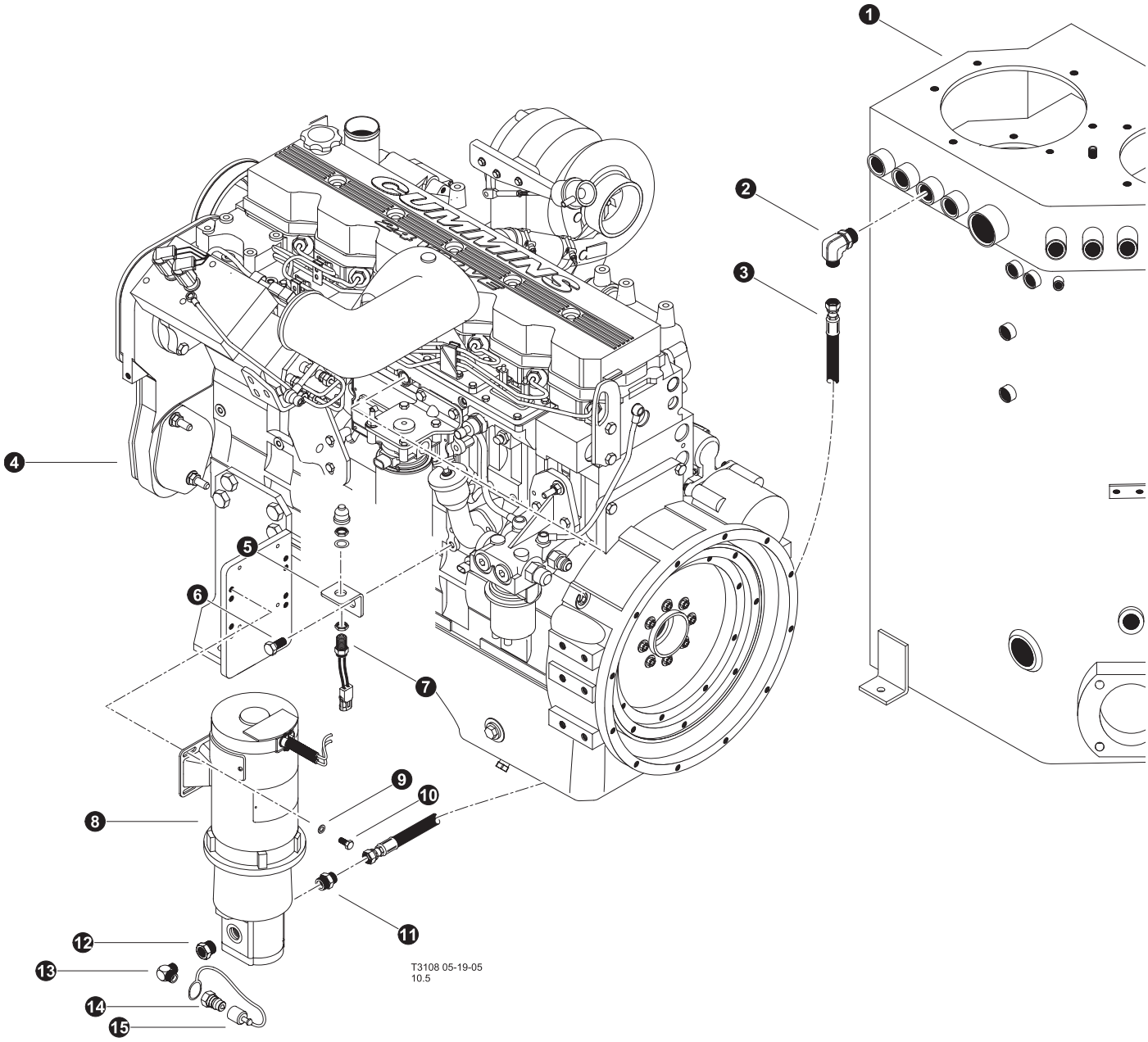
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T3108 05-19-05
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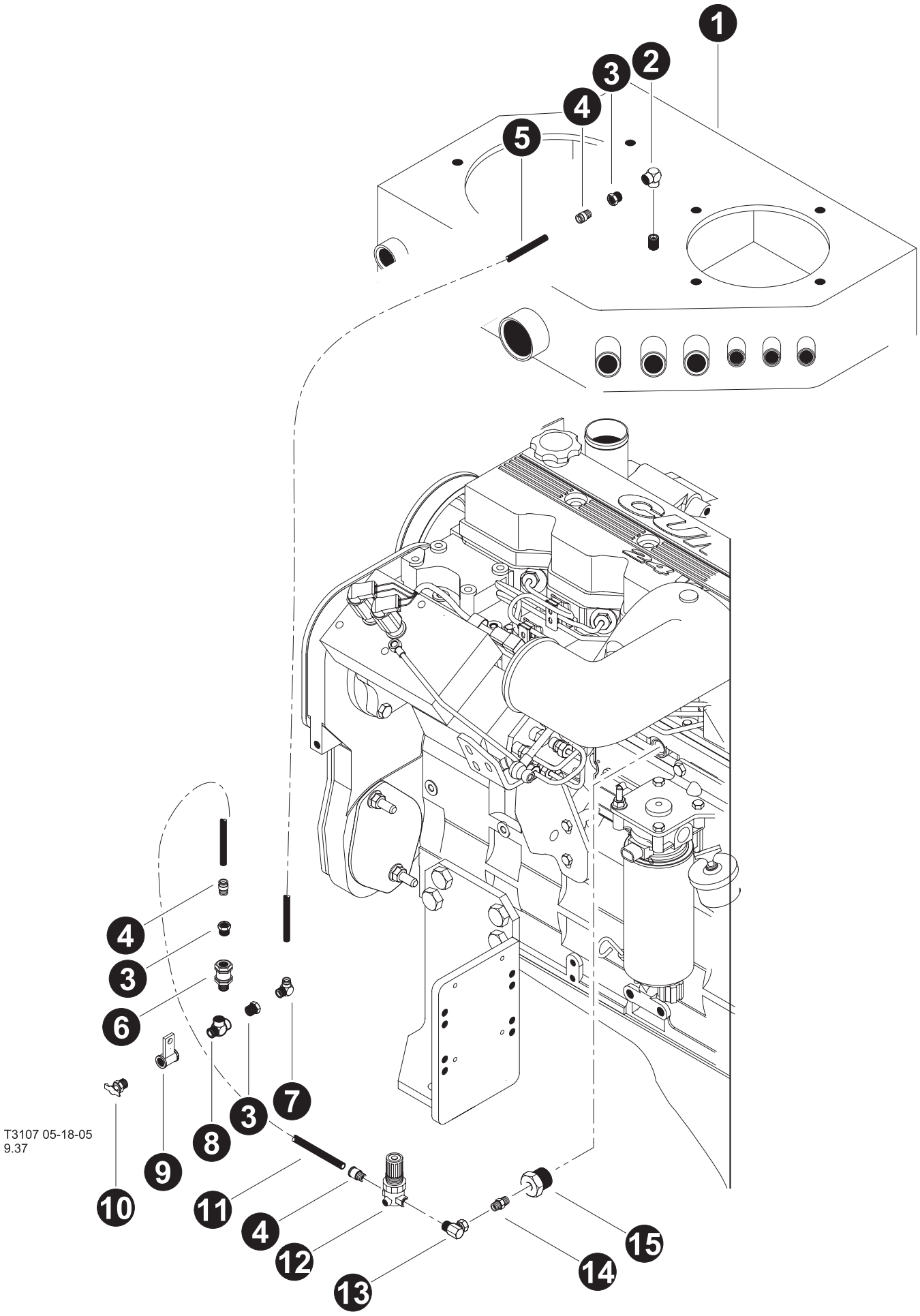
HYDRAULIC TANK
(Standard Hydraulic Tank Fill Pump System)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
2	15372-UP	1		ELBOW, 90 - FF1868T-0812S	
3		1		HOSE ASSEMBLY - 2084-08OS-08OS	
4	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	EE,JD
5	16499-UP	1		BRACKET, FILL PUMP SWITCH	
6	15556-UP	1		BOLT - 12MM-1.75P X 20MM	
7	16505-UP	1		SWITCH, LIMIT - DOOR / FILL PUMP	
8	REF	1		FILL PUMP ASSEMBLY	UP-2
9	15528-UP	4		WASHER, SAE FLAT - .375”	
10	15542-UP	4		BOLT - .375” X .75”	
11	15115-UP	1		CONNECTOR, STR - 848-TTO-08X10	
12	16805-UP	1		BUSHING, REDUCER - 6405-12-8	
13	17487-UP	1		ELBOW, 90 - 5500-8	
14	17307M-UP	1		QUICK DISCONNECT - .5” (MALE)	
15	17323F-UP	1		COVER, DUST - QUICK DISCONNECT (FEMALE)	

🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
✂ Sold in bulk per foot - Please specify length when ordering.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T3107 05-18-05
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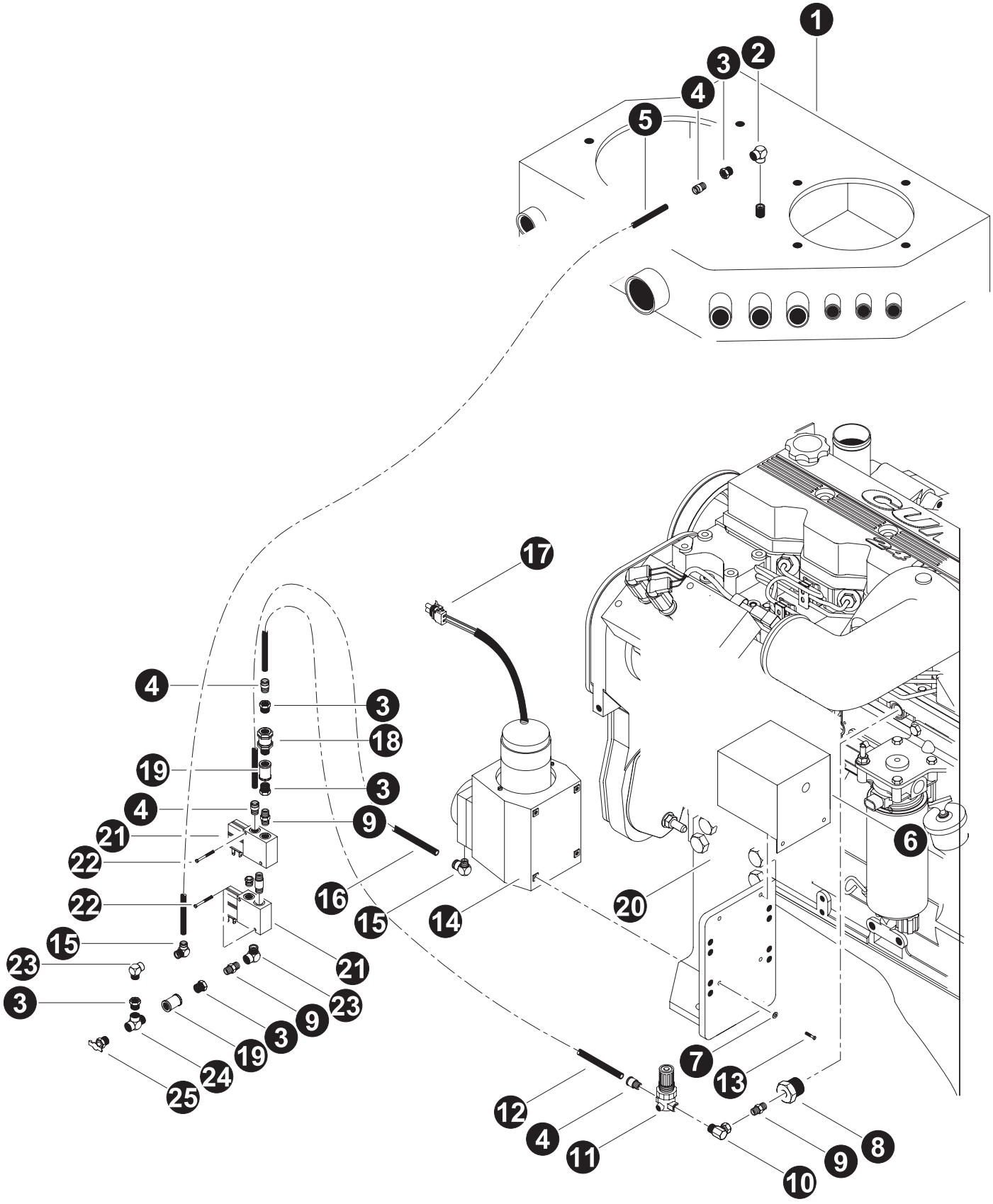
HYDRAULIC TANK
(Standard Hydraulic Tank Vent System)

No Vacuum Pump

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	24287-UP	1		ELBOW, 90 STREET .375” NPT - BRASS	
3	11318-UP	1		BUSHING, REDUCER - 5406-6-4	
4	51735-UP	1		CONNECTOR, STR - PUSH HOSE 3/8 (VACUUM)	
5	51738-UP	ft	✂	HOSE, 3/8” PUSH ON - VACUUM PUMP	
6	15652-UP	1		VALVE, CHECK - HYDRAULIC/FUEL TANK	
7	51739-UP	1		CONNECTOR, ELBOW -PUSH ON (VACUUM)	
8	51576-UP	1		TEE - 012T-6-6 RUN	
9	50723-UP	1		BRACKET, VENT MOUNT	
10	15650-UP	1		VALVE, TANK VENT - DC602-6	
11	51738-UP	ft	✂	HOSE, 3/8” PUSH ON - VACUUM PUMP	
12	15649-UP	1		REGULATOR, TURBO BOOST	
13	10320-UP	1		ELBOW, 90 SWIVEL - 1501-4-4	
14	15567-UP	1		CONNECTOR, STR - 5404-4	
15	24290-UP	1		BUSHING, REDUCER - 5406-12-4	

🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
✂ Sold in bulk per foot - Please specify length when ordering.



T3106 05-18-05
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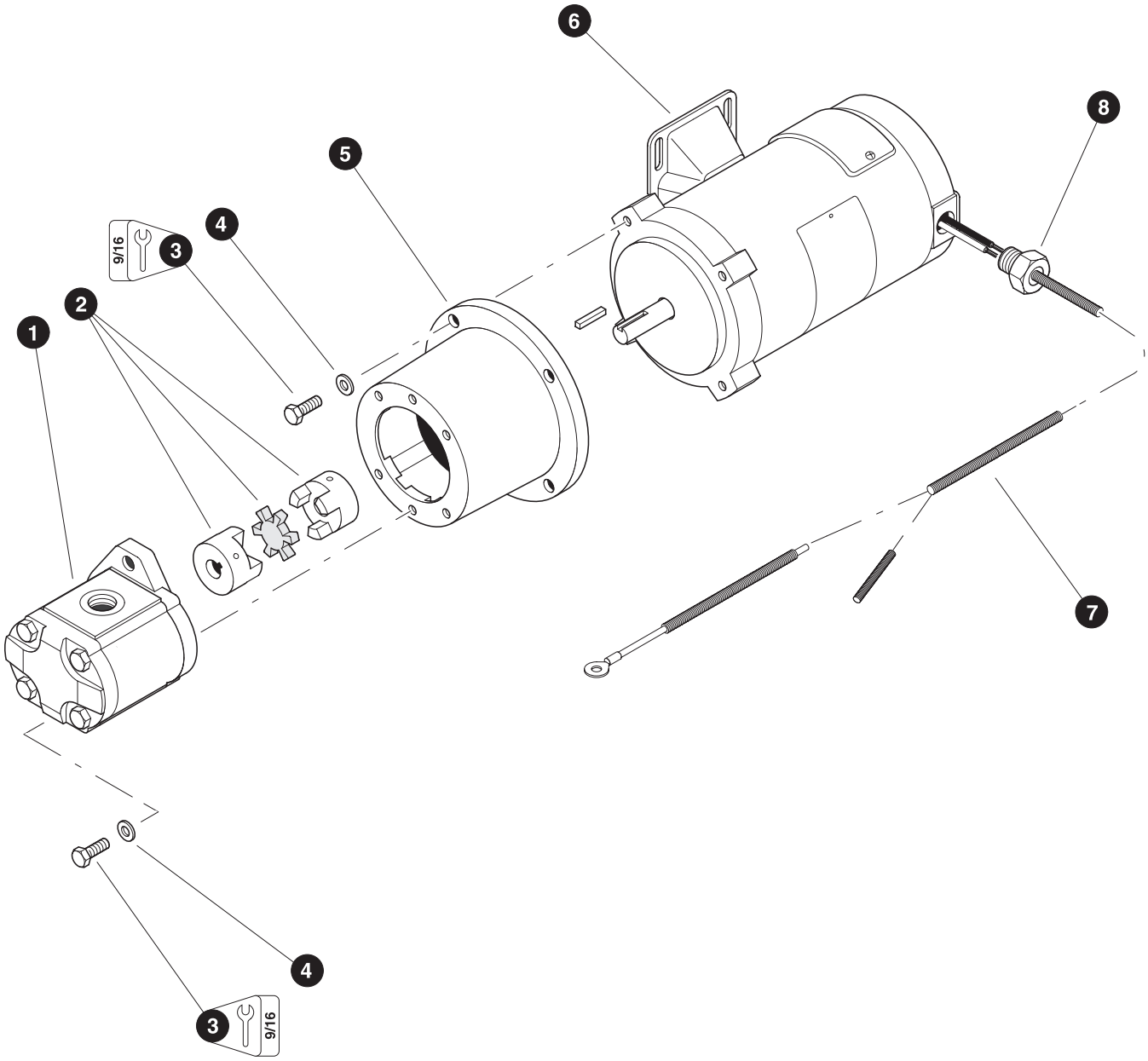
HYDRAULIC TANK
(Optional Hydraulic Tank Vent / Vacuum System)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	24287-UP	1		ELBOW, 90 STREET .375” NPT - BRASS	
3	11318-UP	1		BUSHING, REDUCER - 5406-6-4	
4	51735-UP	1		CONNECTOR, STR - PUSH HOSE 3/8 (VACUUM)	
5	51738-UP	ft	✂	HOSE, 3/8” PUSH ON - VACUUM PUMP	
6	51922-UP	1		COVER, VACUUM PUMP	
7	16208-UP	6		WASHER, FLAT - #10	
8	24290-UP	1		BUSHING, REDUCER - 5406-12-4	
9	15567-UP	1		CONNECTOR, STR - 5404-4	
10	10320-UP	1		ELBOW, 90 SWIVEL - 1501-4-4	
11	15649-UP	1		REGULATOR, TURBO BOOST	
12	51738-UP	ft	✂	HOSE, 3/8” PUSH ON - VACUUM PUMP	
13	16127-UP	4		SCREW, MACHINE - #10-24 X 1.25”	
14	51615-UP	1		PUMP, VACUUM - HYD TANK	
15	51739-UP	1		CONNECTOR, ELBOW -PUSH ON (VACUUM)	
16	51738-UP	ft	✂	HOSE, 3/8” PUSH ON - VACUUM PUMP	
17		1		KIT, 2 position waytek connector (Male)	
18	15652-UP	1		VALVE, CHECK - HYDRAULIC/FUEL TANK	
19	16319-UP	1		COUPLING, PIPE - .375”	
20	REF	1	🕮	ENGINE MOUNT	EE/JD
21	51616-UP	1		VALVE, VACUUM PUMP - HYD TANK	
22	20622-UP	2		SCREW, MACHINE - #10-24 X 2”	
23	16251-UP	1		ELBOW, 90 STREET - 5502-4	
24	51576-UP	1		TEE - 012T-6-6 RUN	
25	15650-UP	1		VALVE, TANK VENT - DC602-6	

🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
✂ Sold in bulk per foot - Please specify length when ordering.



Parts T3109 05/19/05

HYDRAULIC TANK
(Optional Hydraulic Tank Vent / Vacuum System)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	23270-UP	1	❑	ASSEMBLY, HYDRAULIC OIL FILL PUMP - 24 VOLT	
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	51503-UP	1		MOTOR, electric hydraulic oil fill - 24v	
7	51748-UP	1	❑	CABLE, FILL PUMP & DOOR PUMP (w/strain relief)	
8	-UP	1		STRAIN RELIEF - fill pump motor	

🕮 See reference page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
✂ Sold in bulk per foot - Please specify length when ordering.

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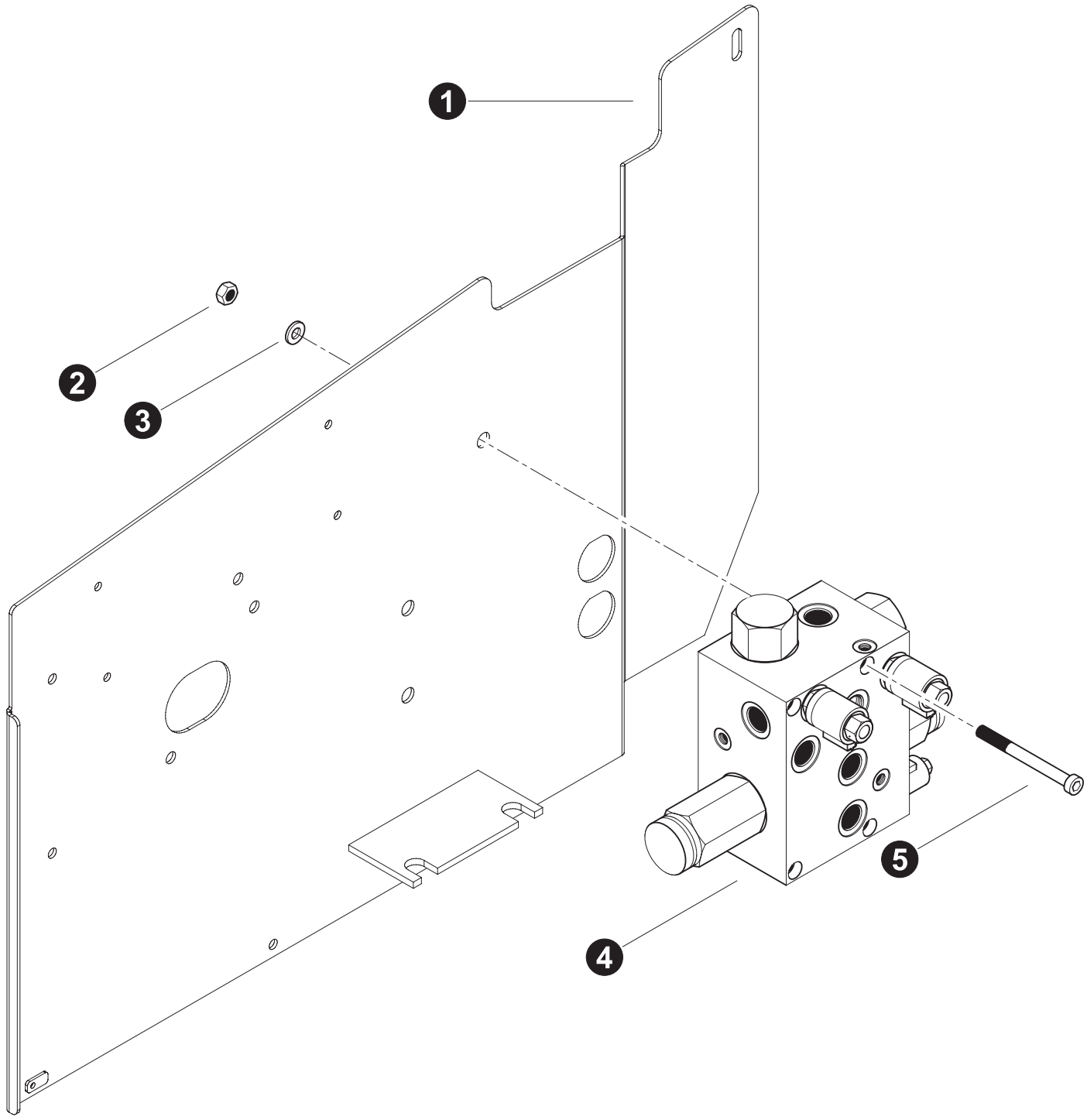
Section UP-3

Upper Turntable -
Radiator and Oil Cooler Fan Drive System



Parts T3112 05/19/05
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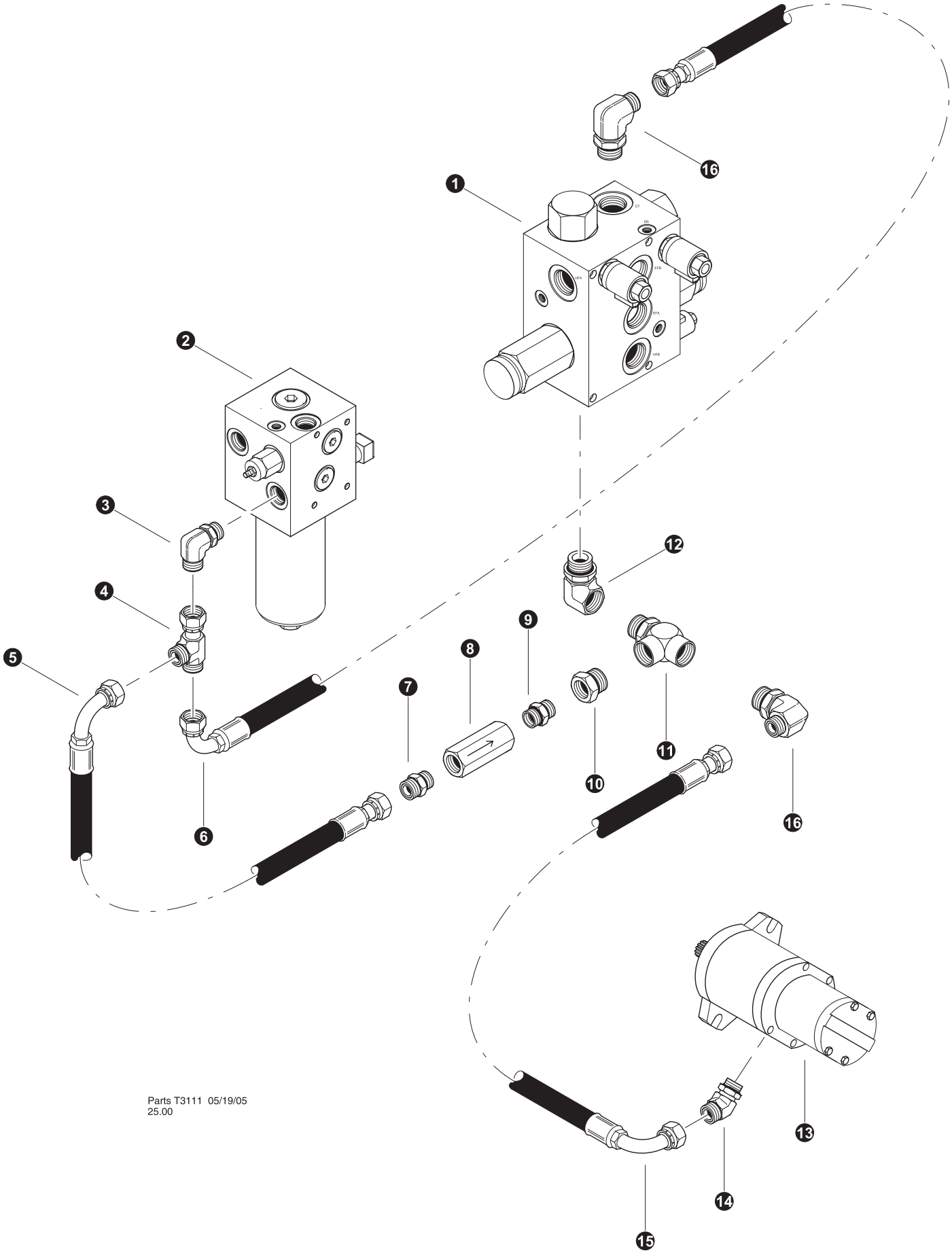
RADIATOR AND COOLER FAN CIRCUIT

Fan Drive Maniflold installation

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		BARRIER, UPPER	UP-1
2	10813-UP	2		NUT, LOCK - .375”	
3	15528-UP	2		WASHER, SAE FLAT - .375”	
4	REF	1		VALVE, FAN CONTROL	UP-3
5	51852-UP	2		BOLT, ALLEN HEAD - .375 X 5.5” FAN MOUNT	

📖 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.



Parts T3111 05/19/05
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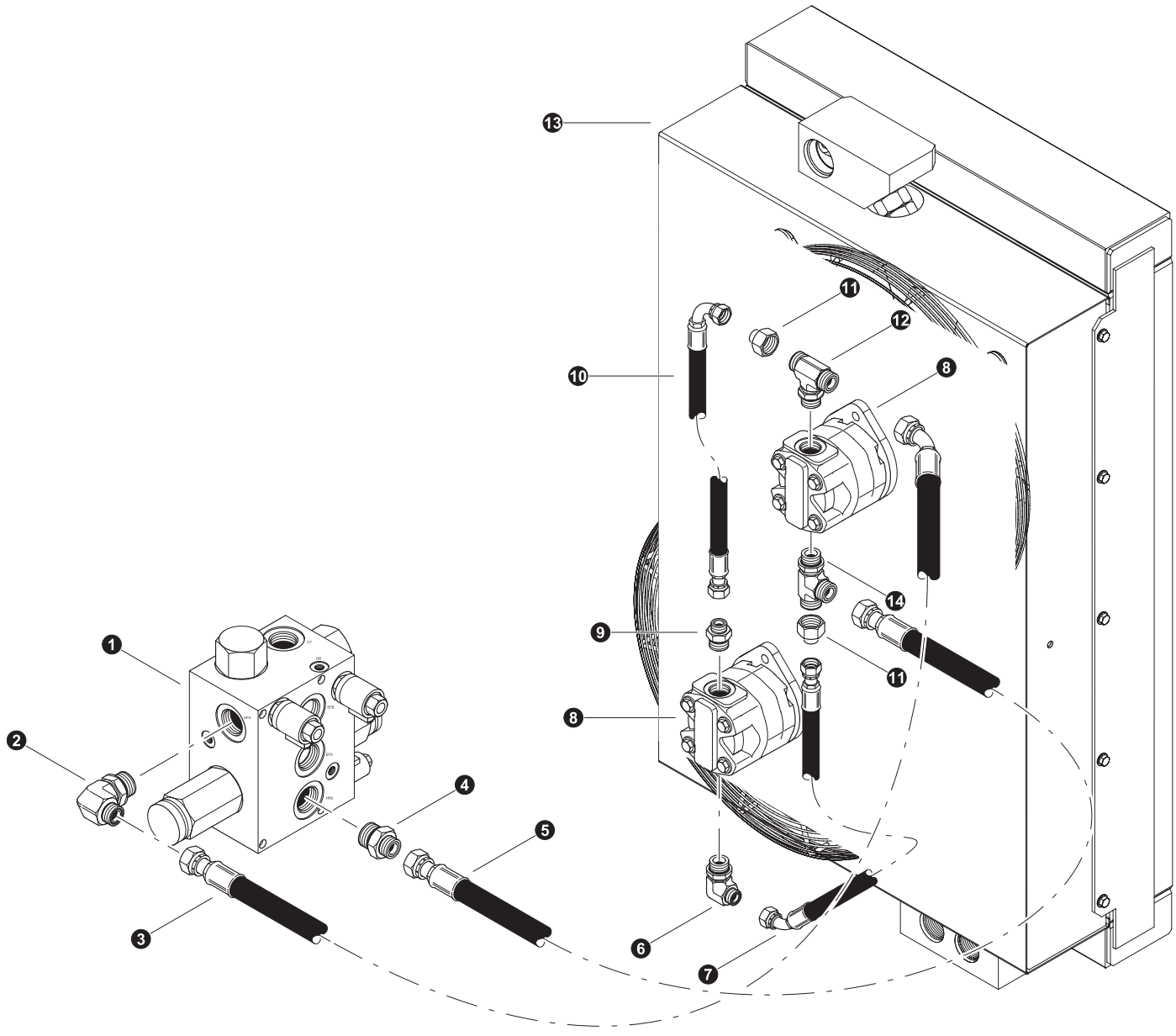
RADIATOR AND COOLER FAN CIRCUIT

Fan Drive Pressure and Tank Connections

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		FAN CONTROL MANIFOLD	UP-3
2	REF	1		CHARGE PRESSURE MANIFOLD	WD
3	17688-UP	1		ELBOW, 90 - FF1868T-1212S	
4	17687-UP	1		TEE - FF2114T-1212S	
5	-UP	1		HOSE ASSEMBLY 2026.5 12OS 1209 (CP port check valve on fan control valve to charge manifold “P” port tee)	
6	-UP	1		HOSE ASSEMBLY 2046 12OS 1209 (CT port on fan control valve to charge manifold “P” port tee)	
7	16913-UP	1		CONNECTOR, STR - FF1852T-1208S	
8	51928-UP	1		VALVE, CHECK - 7 PSI (#8 SAE)	
9	51932-UP	1		CONNECTOR, STR - 6403-08	
10	16719-UP	1		BUSHING, REDUCER - 6410-16-8	
11	21856-UP	1		TEE - 16 AOG5JG5-S RUN	
12	51832-UP	1		ELBOW, 90 - 1” ORS X 1” SAE FEMALE	
13	REF	1		WHEEL DRIVE CHARGE PUMP	WD
14	19127-UP	1		ELBOW, 45 - FF2068T-1212S	
15	-UP	1		HOSE ASSEMBLY 2041 12OS 1209 (CP port check valve on fan control valve to charge pump “P” port)	
16	19128-UP	1		ELBOW, 90 - FF1868T-1216S	

📖 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.



Parts T3113 05/19/05
25.00

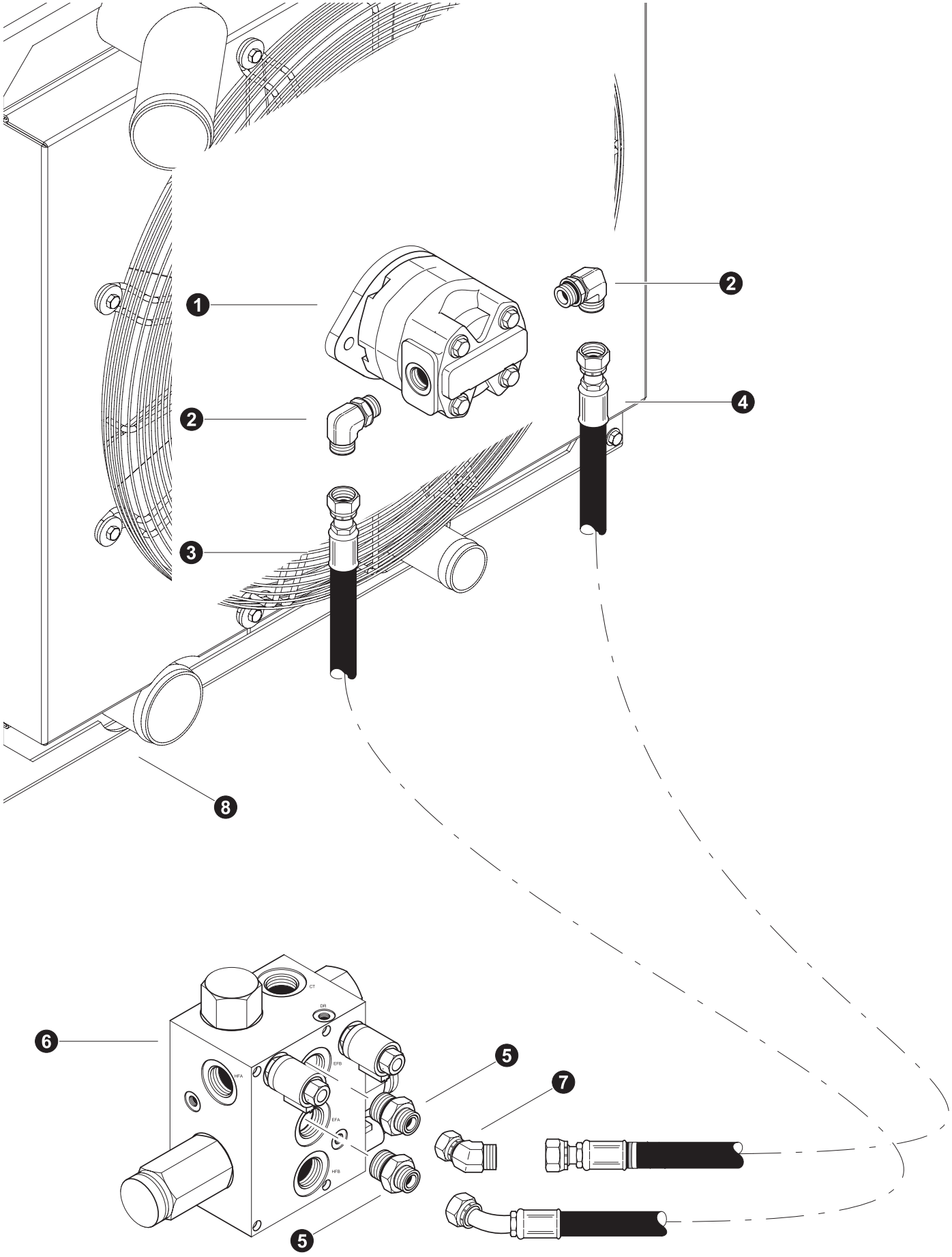
RADIATOR AND COOLER FAN CIRCUIT

Oil Cooler Fan Motor Pressure and Tank

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		FAN CONTROL MANIFOLD.	UP-3
2	19128-UP	1		ELBOW, 90 - FF1868T-1216S	
3	-UP	1		HOSE ASSEMBLY 20 12 12OS 1204 (HFA port on Fan Manifold to Motor Tee)	
4	15495-UP	1		CONNECTOR, STR - 6400-12-16	
5	-UP	1		HOSE ASSEMBLY 2026.5 12 12OS 120S (HFB port on fan Manifold to Motor Tee)	
6	15372-UP	1		ELBOW, 90 - FF1868T-0812S	
7	-UP	1		HOSE ASSEMBLY 2019.5 08 08OS 0804 (Motor to Motor Jumper)	
8	REF	2		FAN DRIVE MOTOR	UP-3
9	15238-UP	1		CONNECTOR, STR - FF1852T-0812S	
10	-UP	1		HOSE ASSEMBLY 2021 08 08OS 0809 (Motor to Motor Jumper)	
11	18531-UP	2		CONNECTOR, REDUCER - ORS FF2281T-0812S	
12	20027-UP	1		TEE - FF1861T-1212	
13	REF	1		OIL COOLER ASSEMBLY	UP-3
14	51969-UP	1		TEE, RUN - 12 R50LO-S	

📖 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.



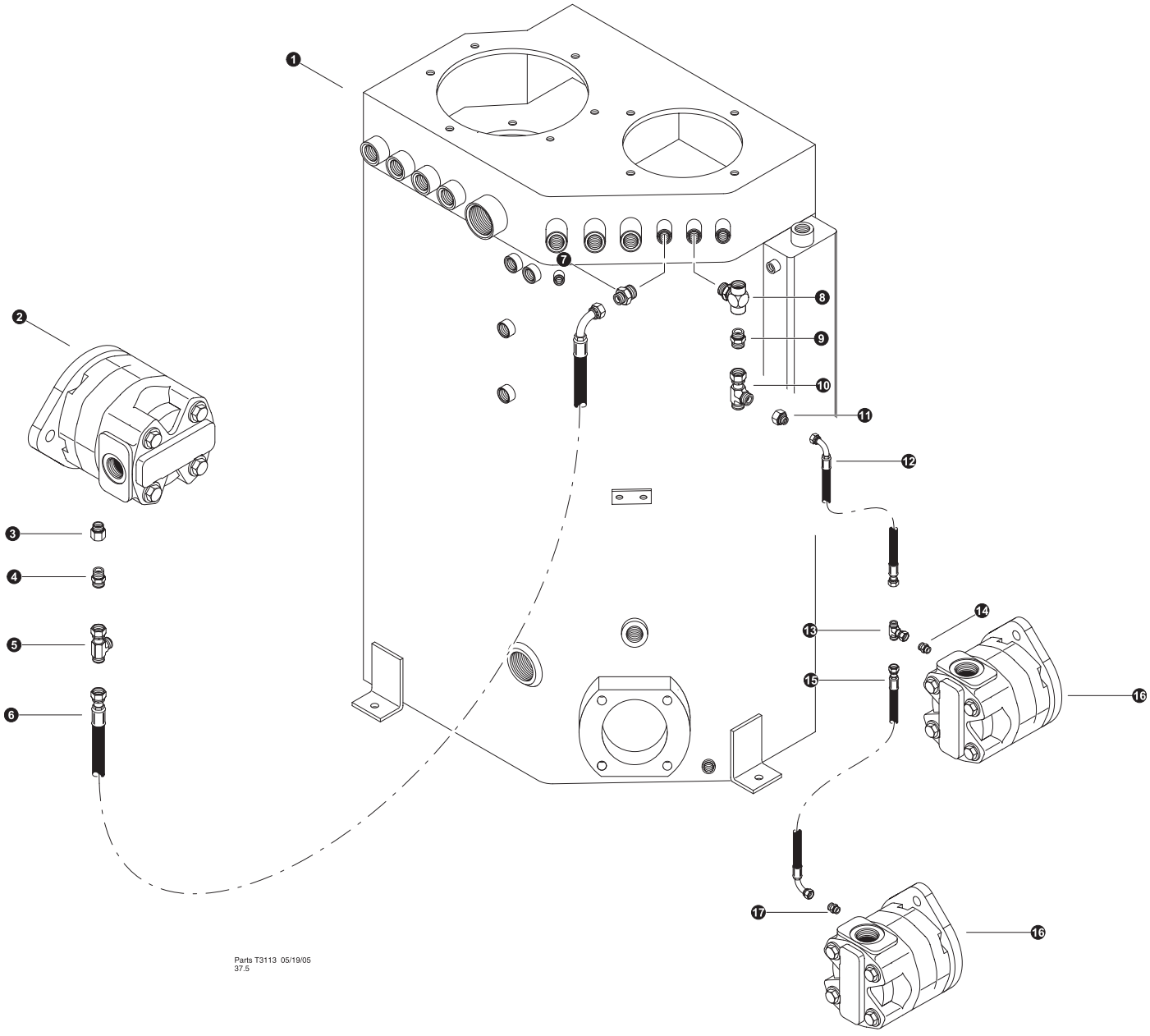
Parts T3114 05/19/05
25.00

RADIATOR AND COOLER FAN CIRCUIT

Radiator Fan Motor Pressure and Tank

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	2		FAN DRIVE MOTOR	UP-3
2	17688-UP	2		ELBOW, 90 - FF1868T-1212S	
3	-UP	1		HOSE ASSEMBLY 2104 12 12OS 1204 W (EFA port to radiator fan motor)	
4	-UP	1		HOSE ASSEMBLY 2107 12 12OS 120S W (EFB port to radiator fan motor)	
5	15495-UP	2		CONNECTOR, STR - 6400-12-16	
6	REF	1		FAN CONTROL MANIFOLD.	UP-3
7	19592-UP	1		ELBOW, 45 SWIVEL - FF2133T-1212S	
8	REF	1		RADIATOR	UP-3

📖 See referenced page for component or assembly breakdown.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Parts T3113 05/19/05
37.5

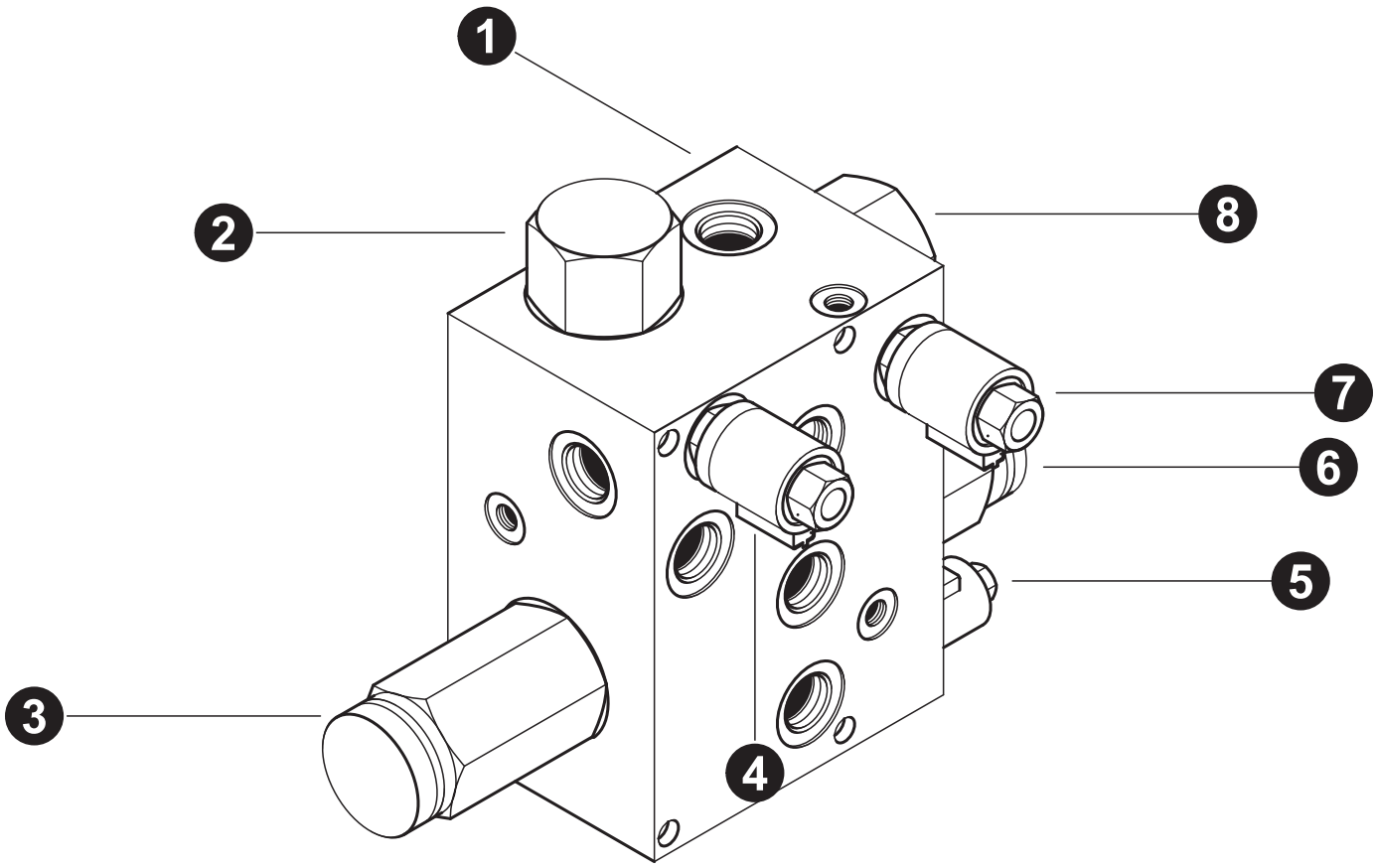
RADIATOR AND COOLER FAN CIRCUIT

Fan Motor Case Drains

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		HYDRAULIC TANK BREAKDOWN	UP-2
2	REF	2		FAN DRIVE MOTOR	UP-3
3	51413-UP	1		BUSHING, REDUCER - 4 - 1/4 F50G	
4	16295-UP	1		CONNECTOR, STR - FF2031T-0604S	
5	22730-UP	1		TEE - 6 R6LO-S	
6	-UP	1		HOSE ASSEMBLY 2112 06 06OS 0609 (fan motor case drain to tank)	
7	22901-UP	1		CONNECTOR, STR - 6-8 F5OLO-S	
8	22229-UP	1		TEE - 8-G5G5JAO-S	
9	15117-UP	1		CONNECTOR, STR - FF1852T-0808S	
10	15433-UP	1		TEE - FF2114T-0808S	
11	19221-UP	1		CONNECTOR, REDUCER - ORS FF2281T-0408S	
12	-UP	1		HOSE ASSEMBLY 2009 040S 04OS 0409 (Cooler Fan Motor Case Drain to tank)	
13	23541-UP	1		TEE - 4 S6LO-S	
14	16541-UP	1		CONNECTOR, STR - FF1852T-0404S	
15	-UP	1		HOSE ASSEMBLY 2021 04 04OS 0409 (Cooler Fan Case Jumper)	
16	REF	2		FAN DRIVE MOTOR	UP-3
17	16541-UP	1		CONNECTOR, STR - FF1852T-0404S	

📖 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.



Parts T3110 05/19/05
25.00

RADIATOR AND COOLER FAN CIRCUIT

Fan Drive Maniflold Breakdown

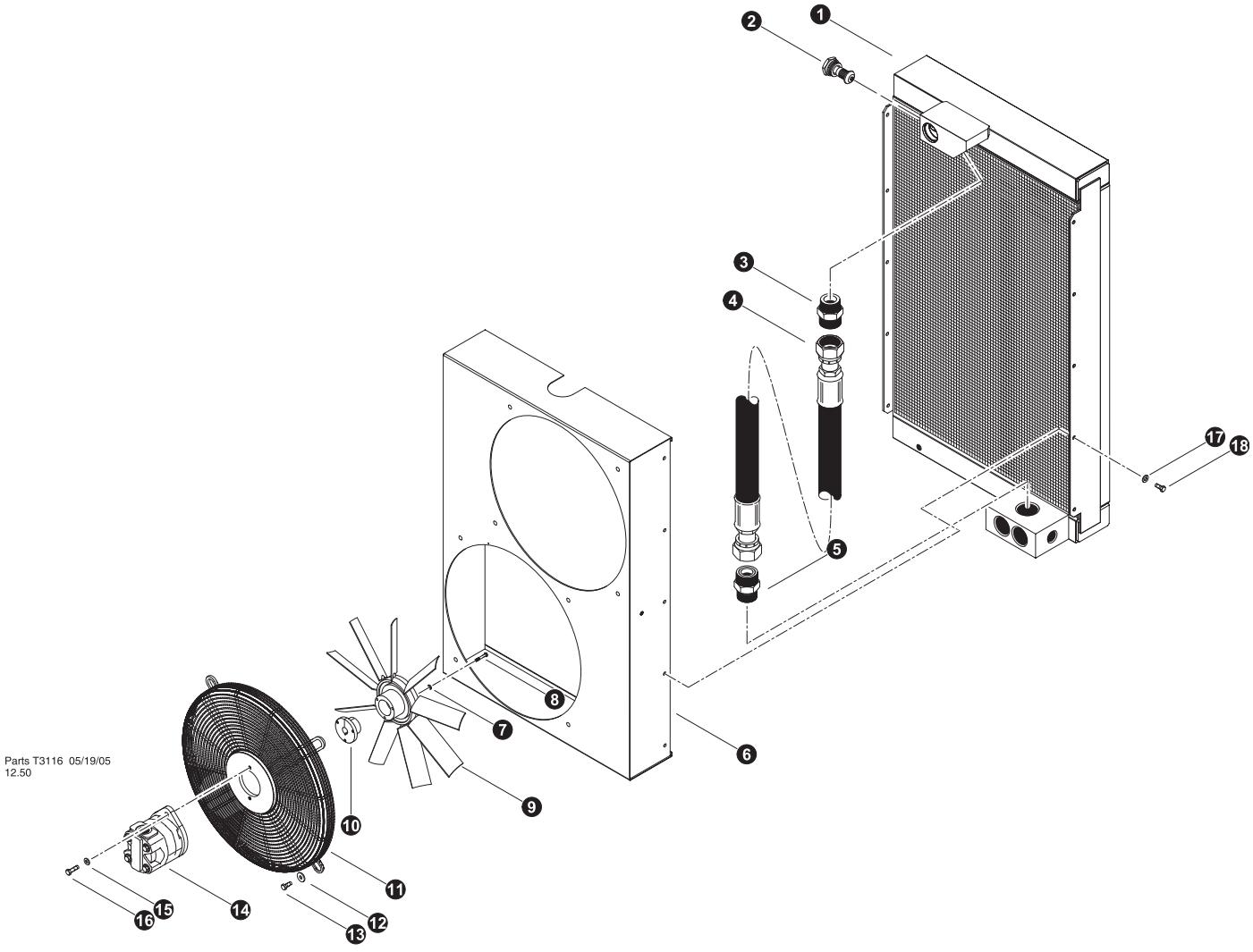
(Used on Serial Number 0128 and Down)

(Use Breakdown in Section WD-3 for SN 0129 and Up)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51627-UP	1	❑	VALVE, FAN CONTROL - HYD DRIVE (24 v)	
2			❑	CARTRIDGE, HYDRAFORCE - EV20-S34	
-				KIT, SEAL (SK20-3X-MM)	
3			❑	CARTRIDGE, HYDRAFORCE -PD42-M40	
-				KIT, SEAL (SK42-4X-MMM)	
4			❑	CARTRIDGE, HYDRAFORCE -TS38-20	
-				KIT, SEAL (SKO8-2X-B)	
5			❑	CARTRIDGE, HYDRAFORCE -SV08-30	
-				KIT, SEAL (SKO8-3X-MM)	
6			❑	CARTRIDGE, HYDRAFORCE -PD42-M40	
-				KIT, SEAL (SK42-4X-MMM)	
7			❑	CARTRIDGE, HYDRAFORCE -TS38-20	
-				KIT, SEAL (SKO8-2X-B)	
8			❑	CARTRIDGE, HYDRAFORCE -EV20-S34	
-				KIT, SEAL (SK20-3X-MM)	

🕮 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.


Parts T3116 05/19/05
12.50

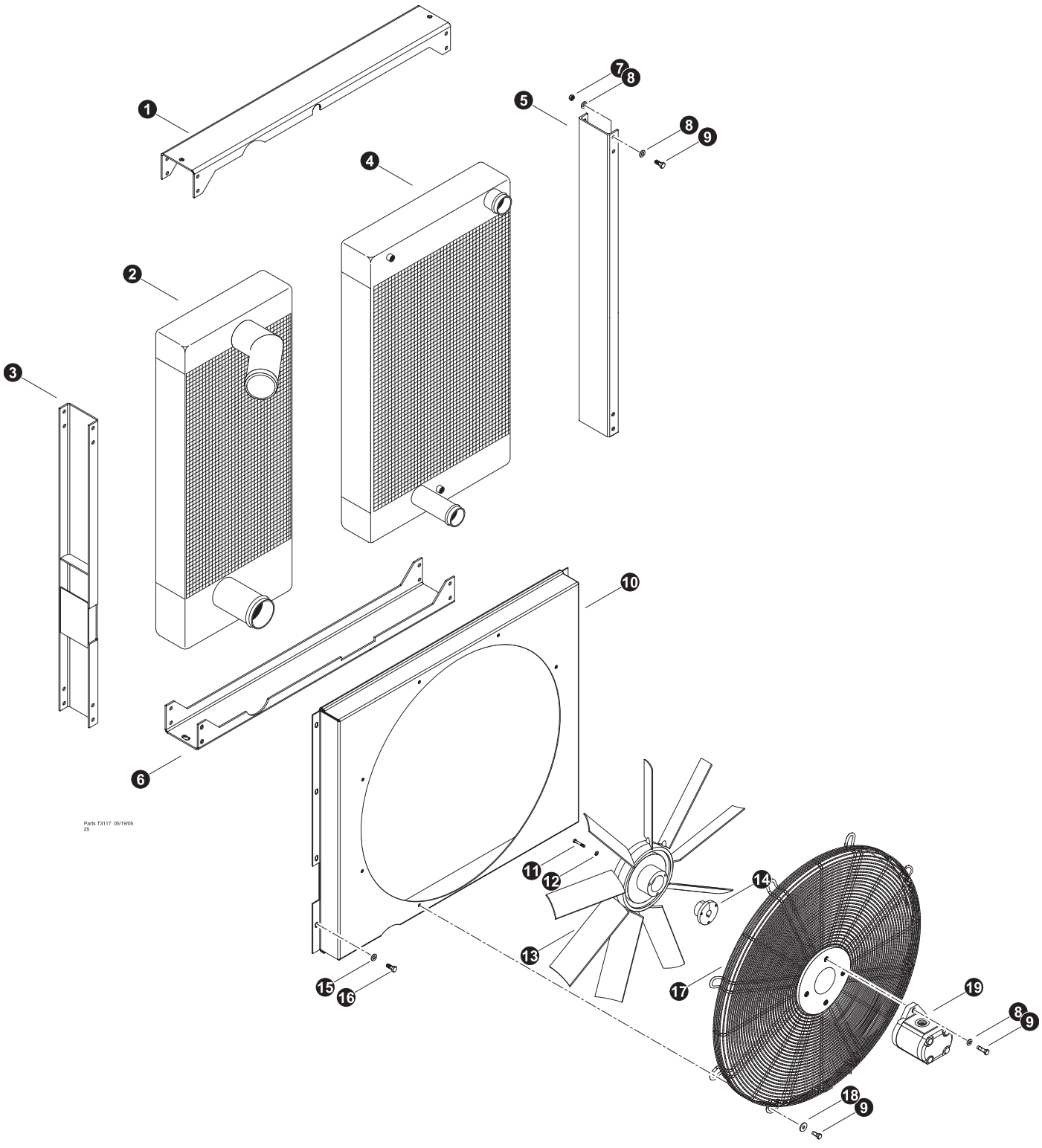
RADIATOR AND COOLER FAN CIRCUIT

Oil Cooler Breakdown

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51569-UP	1	❑	COOLER, OIL - HYD REMOTE MOUNT (complete)	
1	52018-UP	1		OIL COOLER, CORE (830)	
2	22491-UP	1		VALVE, RELIEF - 1.5” BYPASS (GT)	
3	22319-UP	1		CONNECTOR, STR - THERMAL BYPASS (GT)	
4		1		HOSE ASSEMBLY -	
5	22319-UP	1		CONNECTOR, STR - THERMAL BYPASS (GT)	
6	52017-UP	1	❑	SHROUD, OIL COOLER	
7	10818-UP	6		BOLT - .25” X 3”	
8	10756-UP	6		WASHER, LOCK - .25”	
9	52020-UP	2		FAN, OIL COOLER 19” (830)	
10	52034-UP	1		HUB, FAN MOUNT (830)	
11	52019-UP	2		GUARD, FAN (830 OIL COOLER)	
12		8		WASHER, .375” (FENDER WASHER)	
13	11707-UP	8		BOLT - .375” X 1”	
14	REF	2	🕮	MOTOR, HYDRAULIC OIL COOLER FAN.	UP-3
15	10701-UP	4		WASHER, LOCK - .375”	
16	11707-UP	4		BOLT - .375” X 1”	
17	15559-UP	10		WASHER, SAE FLAT - .3125”	
18	15605-UP	10		BOLT - .3125” X .75”	

🕮 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.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Parts T3117 05/19/05
25

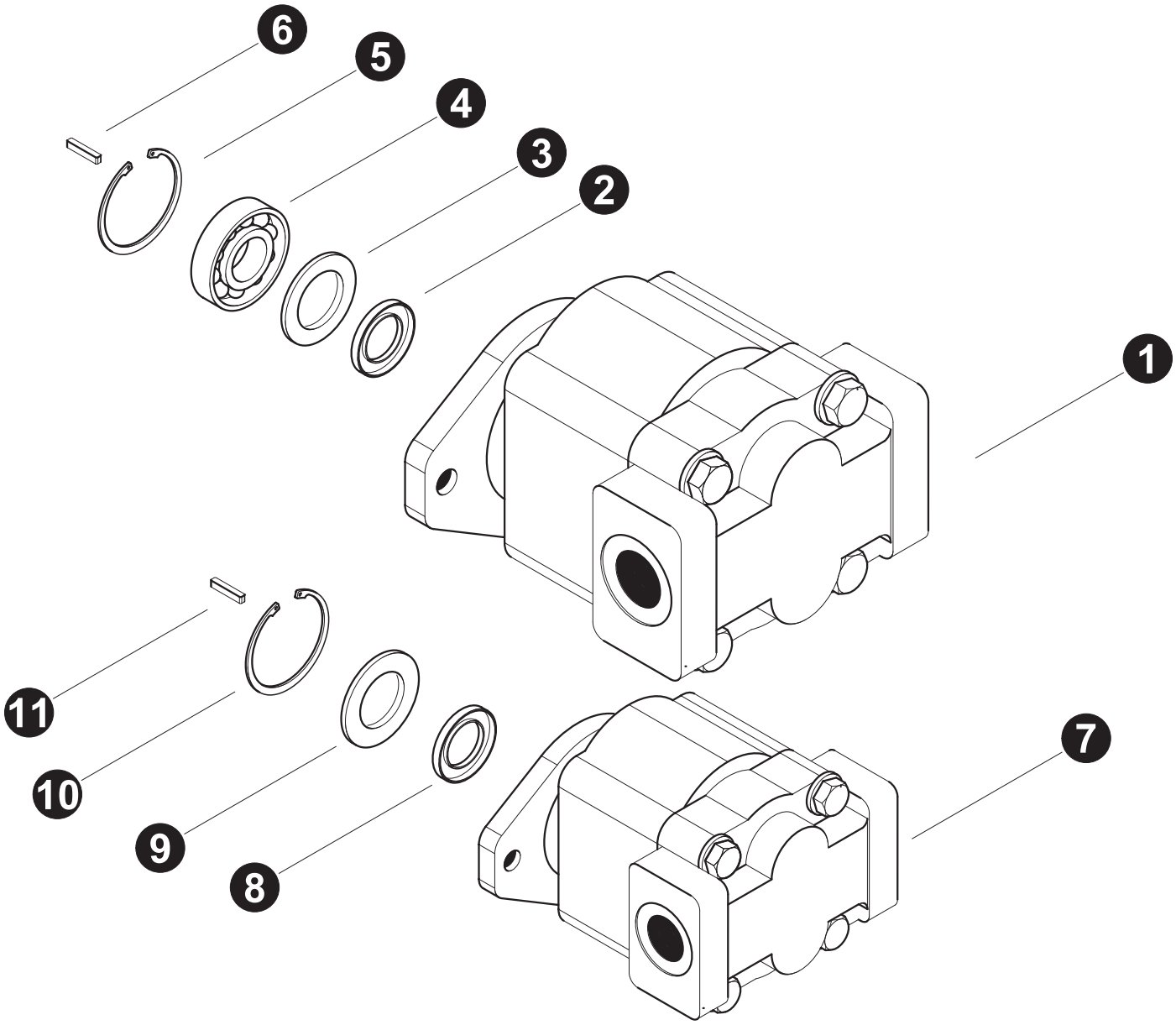
RADIATOR AND COOLER FAN CIRCUIT

Radiator Breakdown

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51568-UP	1	❑	RADIATOR/ CHRAGE AIR COOLER	
1		1		TOP CHANNEL ASSEMBLY	
2	52030-UP	1		AIR COOLER - CHARGE AIR COOLER (830)	
3		1		SIDE CHANNEL ASSEMBLY	
4	52029-UP	1		RADIATOR - CORE (830)	
5				SIDE CHANNEL ASSEMBLY	
6				BOTTOM CHANNEL ASSEMBLY	
7	15507-UP	16		NUT, NYLOCK - .375”	
8	15528-UP	32		WASHER, SAE FLAT - .375”	
9	11707-UP	16		BOLT - .375” X 1”	
10	52028-UP	1	❑	SHROUD, RADIATOR/AIR TO AIR	
11	10818-UP	3		BOLT - .25” X 3”	
12	10756-UP	3		WASHER, LOCK - .25”	
13	52031-UP	1		FAN, RADIATOR 29” (830)	
14	52034-UP	1		HUB, FAN MOUNT (830)	
15	15559-UP	9		WASHER, SAE FLAT - .3125”	
16	15605-UP	9		BOLT - .3125” X .75”	
17	52032-UP	1		GUARD, FAN (830 RADIATOR)	
18		8		WASHER, .375” (FENDER WASHER)	
19	REF	2	🕮	MOTOR, HYDRAULIC OIL COOLER FAN.	UP-3

🕮 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.



Parts T3118 05/19/05
25

RADIATOR AND COOLER FAN CIRCUIT

Fan Drive Motors

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51921-UP	1	❑	MOTOR, FAN DRIVE - RADIATOR	
2		1		SEAL, LIP - (391 2883 126 PARKER)	
3		1		RETAINER, SEAL - (391 3381 040 PARKER)	
4		1		BEARING - (391 0381 040 PARKER)	
5		1		RING, SNAP - (391 2686 063 PARKER)	
6		1		KEY - (391 1781 082 PARKER)	
7	51962-UP	1	❑	MOTOR, FAN DRIVE - OIL COOLER	
8		1		SEAL, LIP - (391 2883 156 PARKER)	
9		1		RETAINER, SEAL - (391 3384 313 PARKER)	
10		1		RING, SNAP - (391 2686 016 PARKER)	
11		1		KEY - (391 1781 085 PARKER)	

🕮 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.

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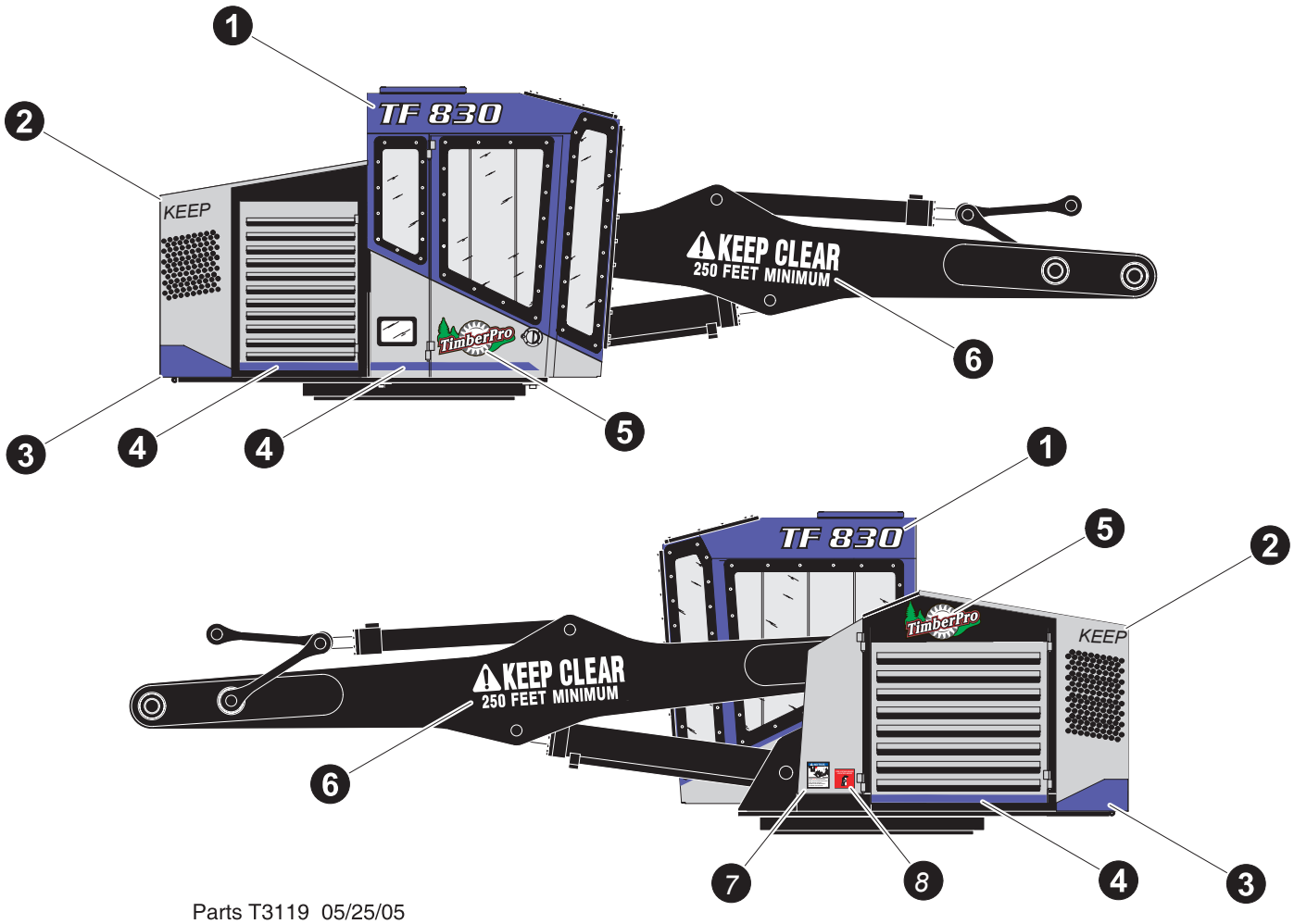
Section UP-4

Upper Turntable - Decals

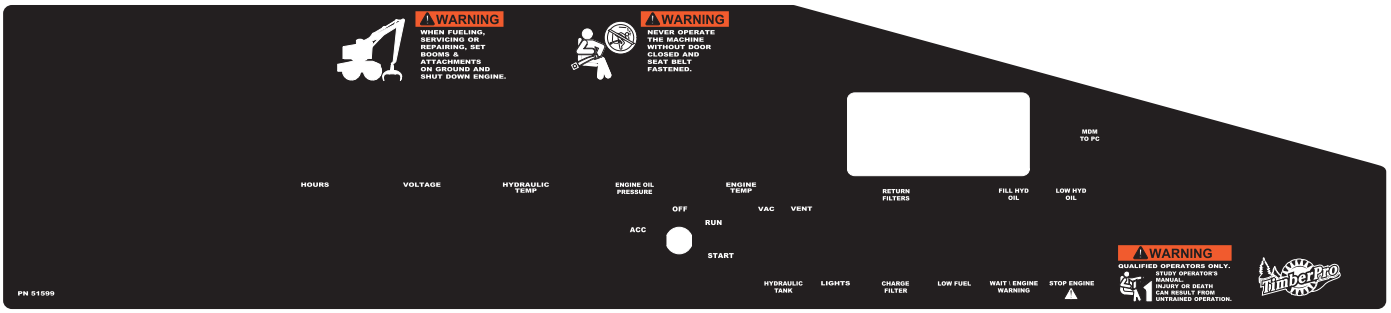


Parts T3119 05/25/05

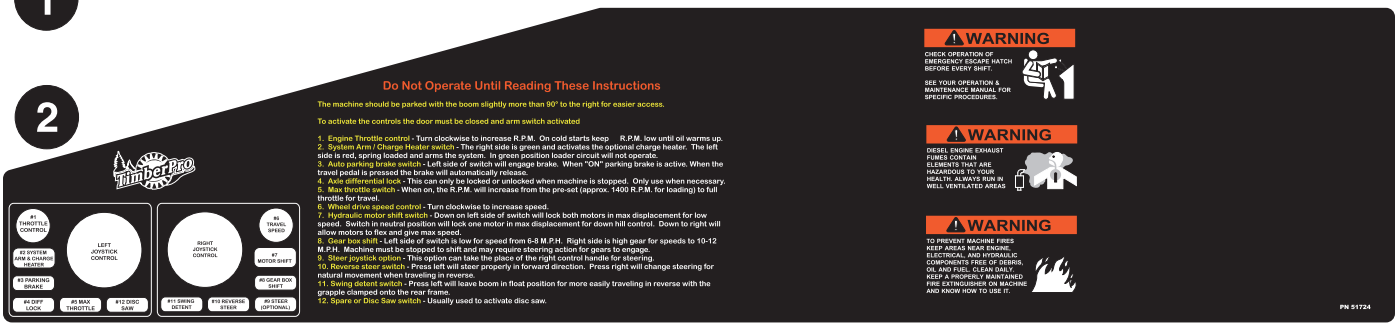
UPPER TURNTABLE DECALS

TF 830, 840, AND 630 UPPER DECALS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51924-UP	2		DECAL, MODEL# - TF 830	
	51925-UP	2		DECAL, MODEL# - TF 840	
	51926-UP	2		DECAL, MODEL# - TB 630	
2	51917-UP	1		DECAL, KEEP CLEAR 250 FEET - GULLWING	
3	51914-UP	1		DECAL, GULLWING STRIP - RED	
	51915-UP	1		DECAL, GULLWING STRIP - GREEN	
	51916-UP	1		DECAL, GULLWING STRIP - BLUE	
4	51918-UP	10 ft		DECAL, ACCENT STRIP - 2 INCH WIDTH (RED)	
	51919-UP	10 ft		DECAL, ACCENT STRIP - 2 INCH WIDTH (GREEN)	
	51920-UP	10 ft		DECAL, ACCENT STRIP - 2 INCH WIDTH (BLUE)	
5	50695-UP	2		DECAL, TIMBERPRO LOGO - 18” WHEEL	
6	16059-UP	2		DECAL, KEEP CLEAR (WHT LETTERS)	
7	24286-UP	1		DECAL, WELDING NOTICE	
8	51820-UP	1		DECAL, Fire Extinguisher inside	


WARNING
WHEN FUELING, SERVICING OR REPAIRING, SET BOOMS & ATTACHMENTS ON GROUND AND SHUT DOWN ENGINE.
WARNING
NEVER OPERATE THE MACHINE WITHOUT DOOR CLOSED AND SEAT BELT FASTENED.
MDM TO PC
HOURS
VOLTAGE
HYDRAULIC TEMP
ENGINE OIL PRESSURE
ENGINE TEMP
RETURN FILTERS
FILL HYD OIL
LOW HYD OIL
OFF
VAC
VENT
ACC
RUN
START
HYDRAULIC TANK
LIGHTS
CHARGE FILTER
LOW FUEL
WAIT ! ENGINE WARNING
STOP ENGINE
WARNING
QUALIFIED OPERATORS ONLY. STUDY OPERATOR'S MANUAL. INJURY OR DEATH CAN RESULT FROM UNTRAINED OPERATION.
PN 51599

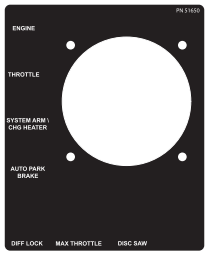
1


Do Not Operate Until Reading These Instructions
The machine should be parked with the boom slightly more than 90° to the right for easier access.
To activate the controls the door must be closed and arm switch activated
1. Engine Throttle control - Turn clockwise to increase R.P.M. On cold starts keep R.P.M. low until oil warms up.
2. System Arm / Charge Heater switch - The right side is green and activates the optional charge heater. The left side is red, spring loaded and arms the system. In green position loader circuit will not operate.
3. Auto parking brake switch - Left side of switch will engage brake. When "ON" parking brake is active. When the travel pedal is pressed the brake will automatically release.
4. Axle differential lock - This can only be locked or unlocked when machine is stopped. Only use when necessary.
5. Max throttle switch - When on, the R.P.M. will increase from the pre-set (approx. 1400 R.P.M. for loading) to full throttle for travel.
6. Wheel drive speed control - Turn clockwise to increase speed.
7. Hydraulic motor shift switch - Down on left side of switch will lock both motors in max displacement for low speed. Switch in neutral position will lock one motor in max displacement for down hill control. Down to right will allow motors to flex and give max speed.
8. Gear box shift - Left side of switch is low for speed from 6-8 M.P.H. Right side is high gear for speeds to 10-12 M.P.H. Machine must be stopped to shift and may require steering action for gears to engage.
9. Steer joystick option - This option can take the place of the right control handle for steering.
10. Reverse steer switch - Press left will steer properly in forward direction. Press right will change steering for natural movement when traveling in reverse.
11. Swing detent switch - Press left will leave boom in float position for more easily traveling in reverse with the grapple clamped onto the rear frame.
12. Spare or Disc Saw switch - Usually used to activate disc saw.
#1 THROTTLE CONTROL
#2 SYSTEM ARM & CHARGE HEATER
#3 PARKING BRAKE
#4 DIFF LOCK
#5 MAX THROTTLE
#12 DISC SAW
LEFT JOYSTICK CONTROL
RIGHT JOYSTICK CONTROL
#6 TRAVEL SPEED
#7 MOTOR SHIFT
#8 GEAR BOX SHIFT
#11 SWING DETENT
#10 REVERSE STEER
#9 STEER (OPTIONAL)
WARNING
CHECK OPERATION OF EMERGENCY ESCAPE HATCH BEFORE EVERY SHIFT.
SEE YOUR OPERATION & MAINTENANCE MANUAL FOR SPECIFIC PROCEDURES.
WARNING
DIESEL ENGINE EXHAUST FUMES CONTAIN ELEMENTS THAT ARE HAZARDOUS TO YOUR HEALTH. ALWAYS RUN IN WELL VENTILATED AREAS
WARNING
TO PREVENT MACHINE FIRES KEEP AREAS NEAR ENGINE, ELECTRICAL, AND HYDRAULIC COMPONENTS FREE OF DEBRIS, OIL AND FUEL. CLEAN DAILY. KEEP A PROPERLY MAINTAINED FIRE EXTINGUISHER ON MACHINE AND KNOW HOW TO USE IT.
PN 51724

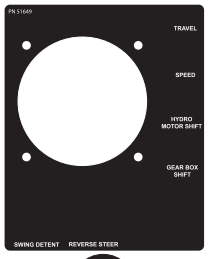
2

TimberPro

3


PN 51650
ENGINE
THROTTLE
SYSTEM ARM \ CHG HEATER
AUTO PARK BRAKE
DIFF LOCK
MAX THROTTLE
DISC SAW

4


PN 51649
TRAVEL
SPEED
HYDRO MOTOR SHIFT
GEAR BOX SHIFT
SWING DETENT
REVERSE STEER

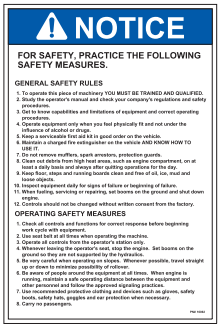
5

WARNING
HOLD VENT SWITCH "ON" FOR 40 SECONDS BEFORE ENGINE START-UP (TO MAKE SURE THE HYDRAULIC TANK IS FULLY VENTED) AFTER USING HYDRAULIC TANK VACUUM SYSTEM. FAILURE TO DO SO WILL RESULT IN MAJOR HYDRAULIC SYSTEM DAMAGE.

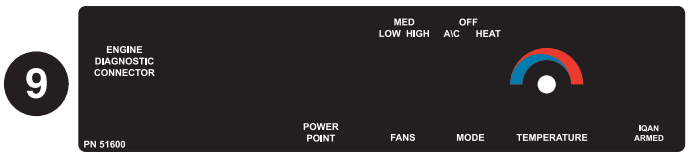
6

NOTICE
ALWAYS REPLACE FUSE WITH THE ONE THAT IS SPECIFIED. THIS MACHINE IS EQUIPPED WITH A 24 VDC ELECTRICAL SYSTEM

7


NOTICE
FOR SAFETY, PRACTICE THE FOLLOWING SAFETY MEASURES.
GENERAL SAFETY RULES
1. To operate this piece of machinery YOU MUST BE TRAINED AND QUALIFIED.
2. Study the operator's manual and check your company's regulations and safety procedures.
3. Get to know capabilities and limitations of equipment and correct operating procedures.
4. Operate equipment only when you feel physically fit and not under the influence of alcohol or drugs.
5. Maintain serviceable first aid kit in good order on the vehicle.
6. Maintain a charged fire extinguisher on the vehicle AND KNOW HOW TO USE IT.
7. Do not remove mufflers, spark arresters, protective guards.
8. Clean out debris from high heat areas, such as engine compartment, on at least a daily basis and always after quitting operations for the day.
9. Keep floor, steps and running boards clean and free of oil, ice, mud and loose objects.
10. Inspect equipment daily for signs of failure or beginning of failure.
11. When fueling, servicing or repairing, set booms on the ground and shut down engine.
12. Controls should not be changed without written consent from the factory.
OPERATING SAFETY MEASURES
1. Check all controls and functions for correct response before beginning work cycle with equipment.
2. Use seat belt at all times when operating the machine.
3. Operate all controls from the operator's station only.
4. Keep booms on the ground when not in use. Set booms on the ground so they are not supported by the hydraulics.
5. Be very careful when operating on slopes. Whenever possible, travel straight up or down to minimize possibility of rollover.
6. Be aware of people around the equipment at all times. When engine is running, maintain a safe operating distance between the equipment and other personnel and follow the approved signaling practices.
7. Use recommended protective clothing and devices such as gloves, safety boots, safety hats, goggles and ear protection when necessary.
8. Carry no passengers.

8

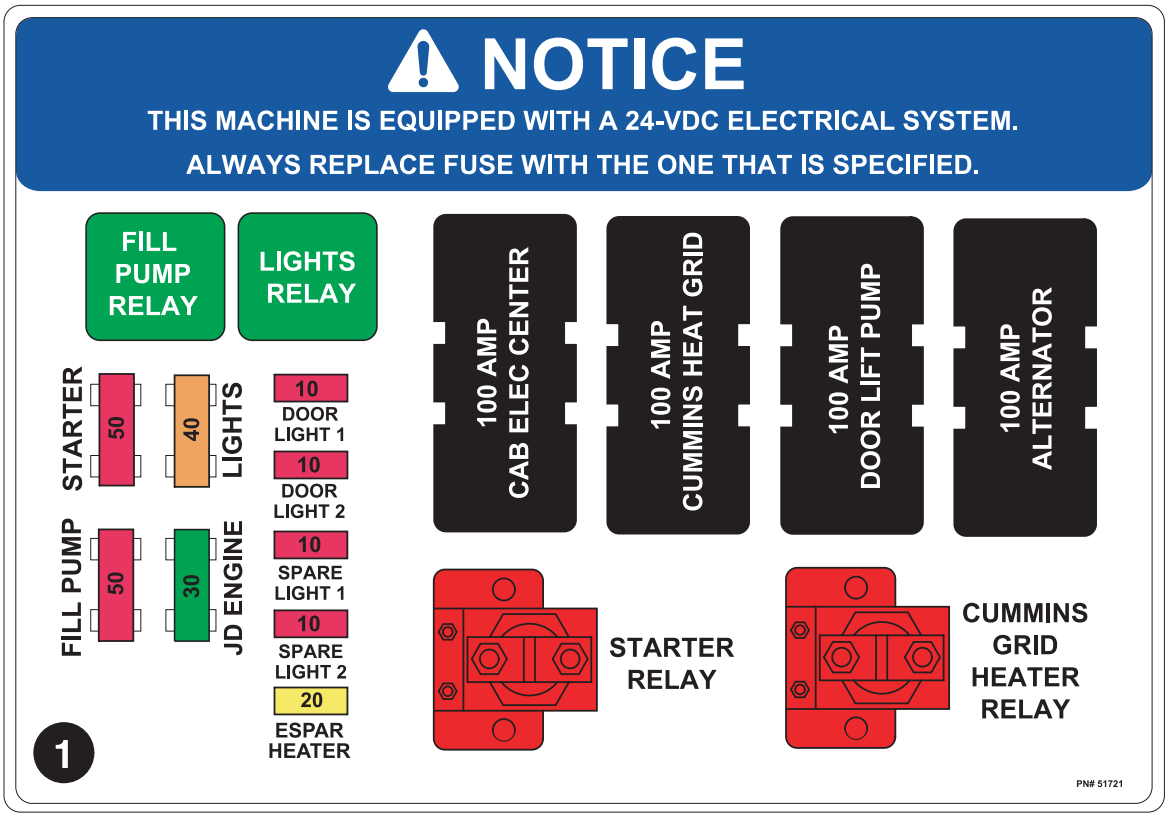

MED
LOW HIGH
OFF
A\C HEAT
ENGINE DIAGNOSTIC CONNECTOR
POWER POINT
FANS
MODE
TEMPERATURE
IQAN ARMED
PN 51600

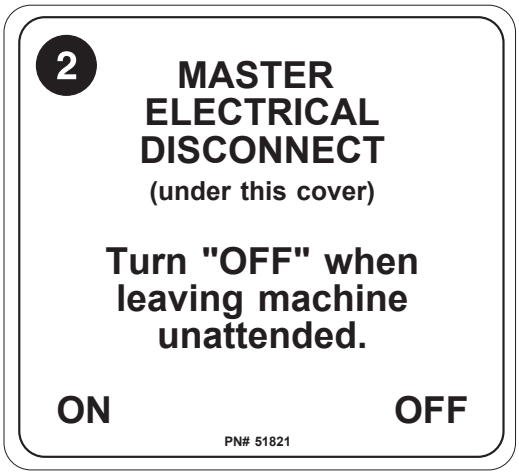
9

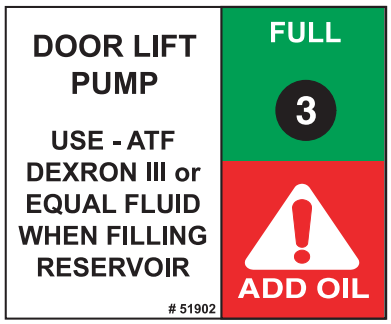
UPPER TURNTABLE DECALS

TF 830, 840, AND 630 INNER CAB DECALS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51599-UP	1		DECAL, CAB Upper Left Dash 830	
2	51724-UP	1		DECAL, CAB Upper Right Dash 830	
3	50694-UP	1		DECAL, TIMBERPRO LOGO - 10” WHEEL	
4	51650-UP	1		DECAL, hand control \ joystick Left	
5	51649-UP	1		DECAL, hand control \ joystick Right	
6	51873-UP	1		DECAL, Vacuum Switch Warning	
7	51720-UP	1		DECAL, electrical center warning	
8	16062-UP	1		DECAL, CAB OPS INSTRUCTION	


NOTICE
THIS MACHINE IS EQUIPPED WITH A 24-VDC ELECTRICAL SYSTEM.
ALWAYS REPLACE FUSE WITH THE ONE THAT IS SPECIFIED.
FILL PUMP RELAY
LIGHTS RELAY
100 AMP CAB ELEC CENTER
100 AMP CUMMINS HEAT GRID
100 AMP DOOR LIFT PUMP
100 AMP ALTERNATOR
STARTER
50
40
LIGHTS
FILL PUMP
50
30
JD ENGINE
10 DOOR LIGHT 1
10 DOOR LIGHT 2
10 SPARE LIGHT 1
10 SPARE LIGHT 2
20 ESPAR HEATER
STARTER RELAY
CUMMINS GRID HEATER RELAY
1
PN# 51721


2
MASTER ELECTRICAL DISCONNECT
(under this cover)
Turn "OFF" when leaving machine unattended.
ON
OFF
PN# 51821

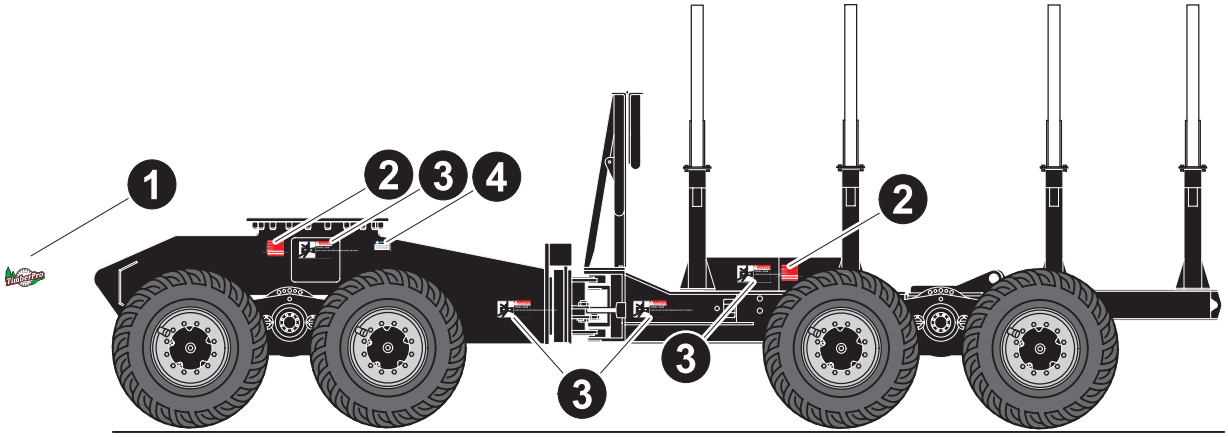

DOOR LIFT PUMP
USE - ATF DEXRON III or EQUAL FLUID WHEN FILLING RESERVOIR
51902
FULL
3
ADD OIL

4
FIRE SUPPRESSION MANUAL OVERRIDE ACTUATOR LOCATED INSIDE THIS COVER.
PN# 51820

UPPER TURNTABLE DECALS

TF 830, 840, AND 630 ENGINE COMPARTMENT DECALS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51721-UP	1		DECAL, engine electrical center	
2	51821-UP	1		DECAL, Master Disconnect Cover	
3	51902-UP	1		DECAL, Door Lift Pump Oil	
4	51820-UP	1		DECAL, Fire Extinguisher inside	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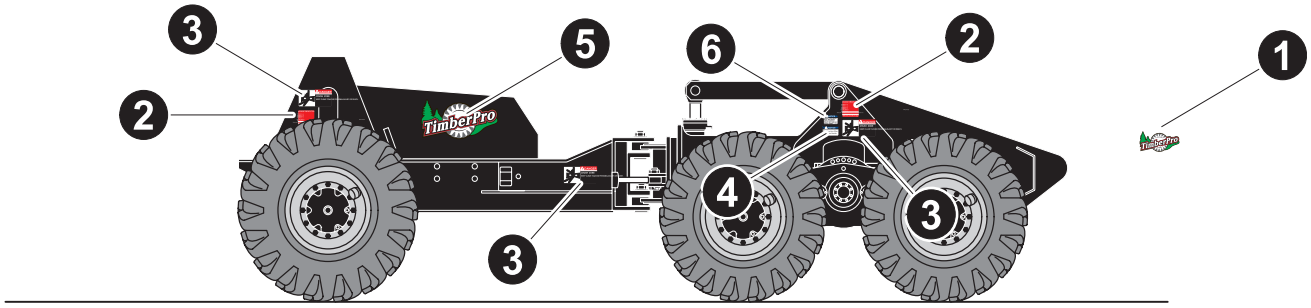
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UPPER TURNTABLE DECALS

TF 830, 840, AND 630 LOWER FRAME DECALS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50964-UP	2		DECAL, TIMBERPRO LOGO - 10” WHEEL	
2	19678-UP	4		DECAL, TIRE PRESSURE	
3	16060-UP	8		DECAL, DANGER CRUSH ZONE	
4	51261-UP	1		DECAL, Fuel Suction Filter location	
5	50695-UP	2		DECAL, TIMBERPRO LOGO - 18” WHEEL	
6	50424-UP	2		DECAL, TORQUE 2” NUT NOTICE	

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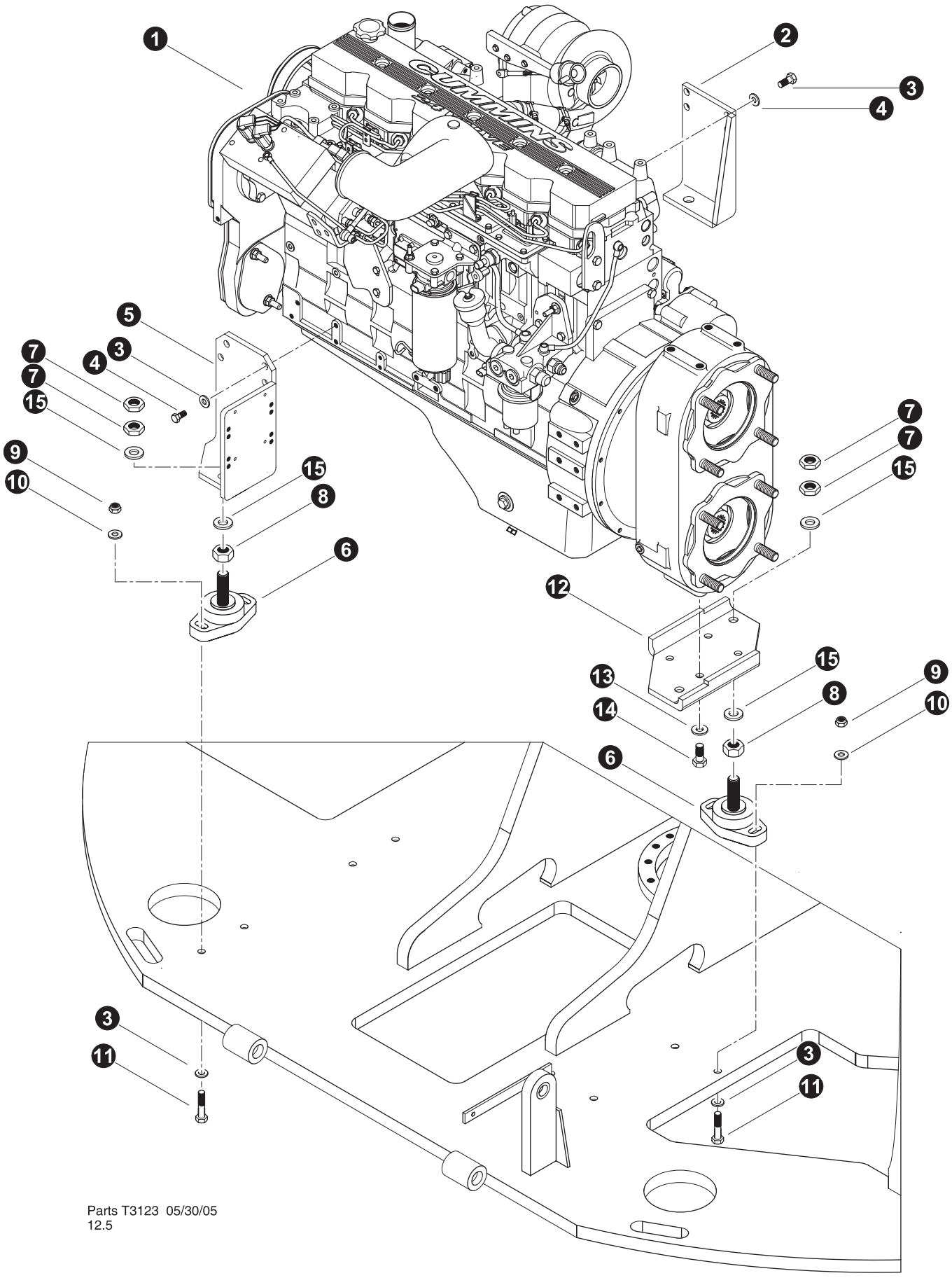
Section EE-1

Cummins QSC Engine - Installation and Parts

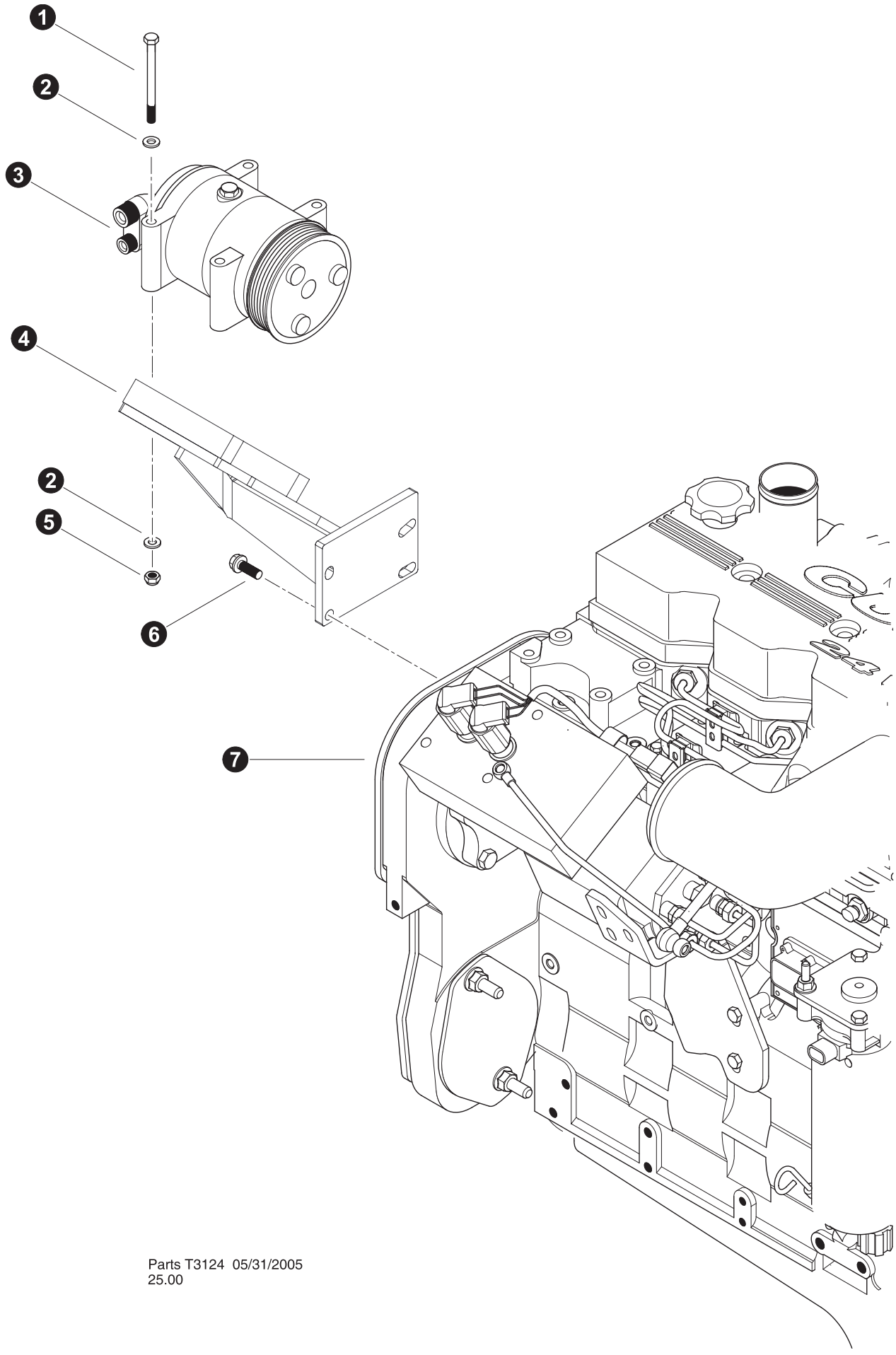


Parts T3123 05/30/05
12.5

ENGINE INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50125-EE	1		ENGINE, Cummins - QSC8.3-C 260HP *(Optional)*	
	50126-EE	1		ENGINE, Cummins - QSC8.3-C 300HP *(Optional)*	
2	51602-EE	1		MOUNT, ENGINE - C8.3 (RF-300)	
3	15534-EE	14		WASHER, SAE FLAT - .5”	
4	15551-EE	8		BOLT - 12mm-1.75P x 40mm ***(Torque to 92 ft.lbs. (122 Nm))***	
5	51601-EE	1		MOUNT, ENGINE - C8.3 (LF-300)	
6	51678-EE	4	❑	ISOLATOR, ENGINE MOUNT - MARINE STYLE	
7	-EE	8		NUT, JAM - .75”	
8	10776-EE	4		NUT, HEX - .75”	
9	10815-EE	8		NUT, LOCK - .5”	
10	10804-EE	8		WASHER, FLAT - .5”	
11	15567-EE	8		BOLT - .5” X 2.5”	
12	51647-EE	1		MOUNT, ENGINE REAR 830/630	
13	10771-EE	4		WASHER, SAE flat - 5/8	
14	15526-EE	4		BOLT - 5/8” x 2” ***(Torque to 92 ft.lbs. (122 Nm))***	

❑ Kit or Assembly - includes all items indented underneath.

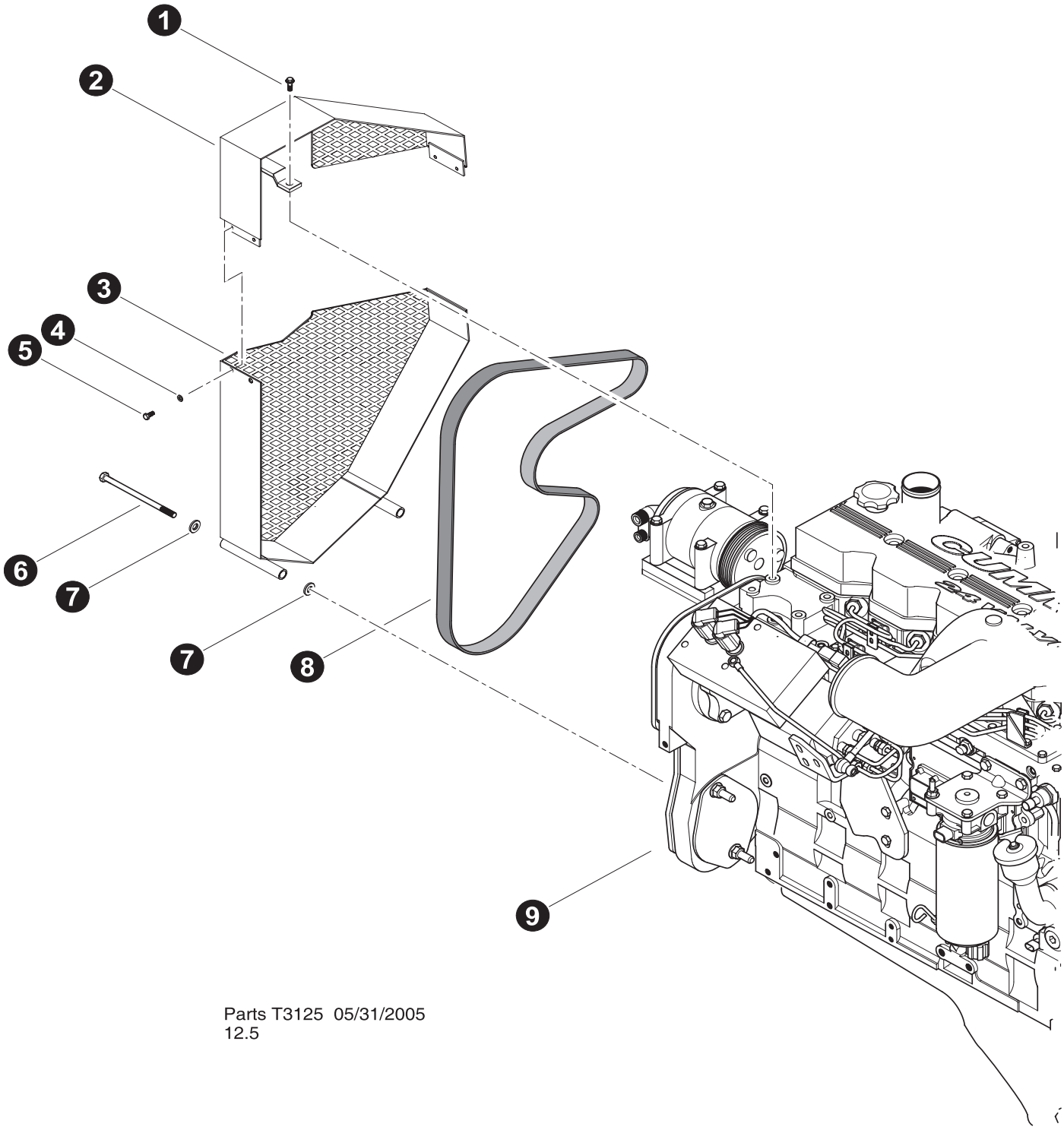


Parts T3124 05/31/2005
25.00

AIR CONDITIONER COMPRESSOR INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	19251-EE	4		BOLT - .3125” X 5”	
2	15559-EE	8		WASHER, SAE FLAT - .3125”	
3		1		COMPRESSOR, AC (flange mount / rear discharge)	
4	51712-EE	1		MOUNT, FREON COMPRESSOR - 630/830	
5	10812-EE	4		NUT, LOCK - .3125”	
6	24605-EE	4		BOLT - 10mm-1.5P x 30mm *(Flange Head)*	
7	REF.	1	🕮	ENGINE - Cummins QSC8.3-C	EE-3

🕮 See referenced page for component or assembly breakdown.

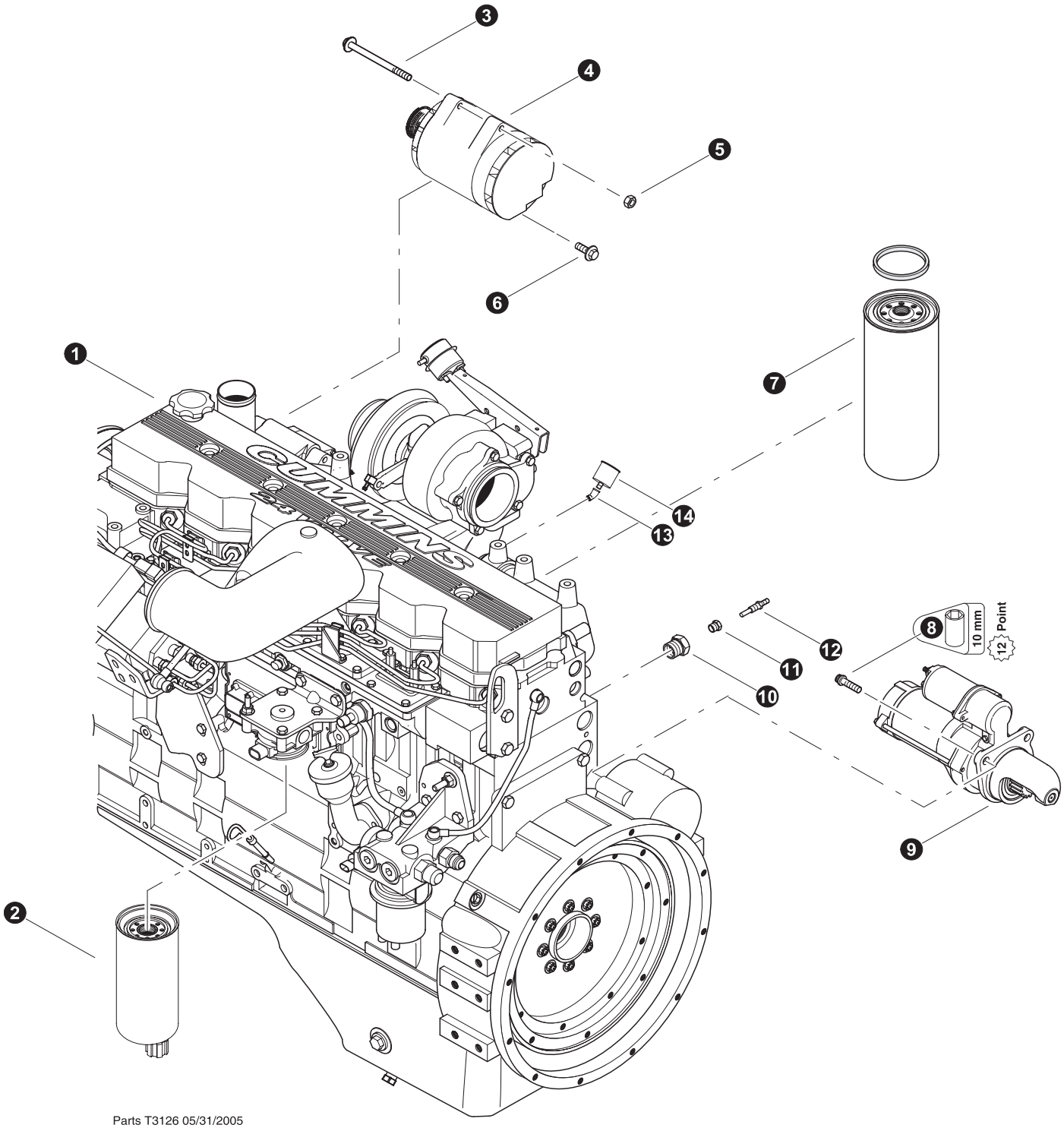


Parts T3125 05/31/2005
12.5

ENGINE BELT AND SHROUDS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	24605-EE	1		BOLT - 10mm-1.5P x 30mm *(Flange Head)*	
-	51607-EE	1	❑	SHROUD, BELT CUMMINS (top and bottom - 830)	
2		1		SHROUD, TOP	
3		1		SHROUD, BOTTOM	
4	10757-EE	4		WASHER, SAE FLAT - .25”	
5	15604-EE	4		BOLT - .25” X .75”	
6	51772-EE	1		BOLT - 12MM X 180MM FAN GUARD (830/630)	
7	15534-EE	4		WASHER, SAE FLAT - .5”	
8	51777-EE	1		BELT, FAN - CUMMINS CHARGE AIR (830/630)	
9	REF.	1	🕮	ENGINE - Cummins QSC8.3-C	EE-1

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

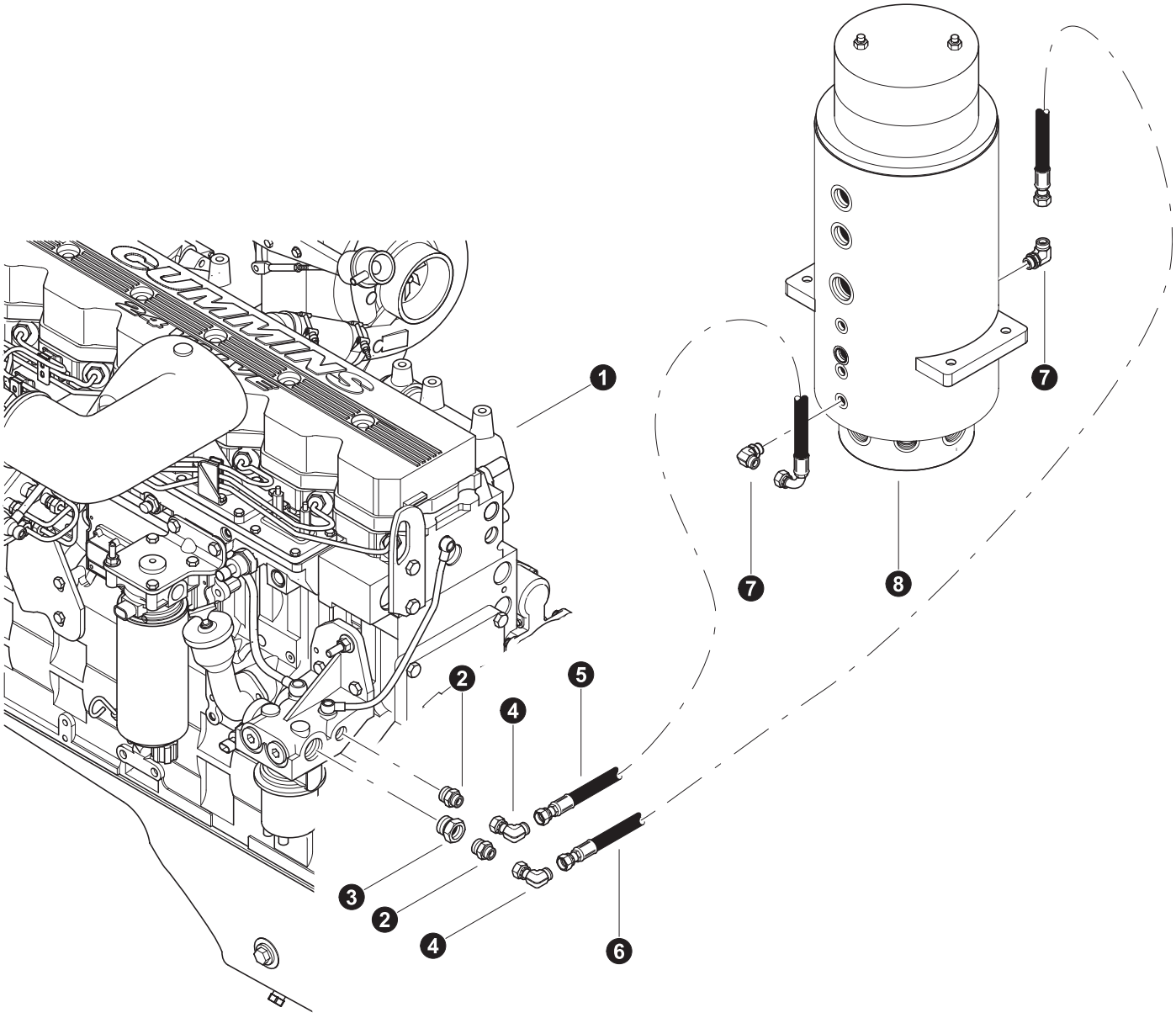


Parts T3126 05/31/2005
18.75

ALTERNATOR, STARTER & MISC. COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE - Cummins QSC8.3-C.	EE-1
2	24062-EE	1		FILTER, FUEL (CUMMINS QSC - ELECTRONIC)	
3	--	2		BOLT, flange head - 12mm x 150 mm	
4	24669-EE	1		ALTERNATOR - 24V (75 AMP)(BRUSHLESS)	
5	--	1		NUT, flange - 12mm	
6	50149-EE	1		BOLT - 12mm x 25mm	
7	16070-EE	1		FILTER, engine oil	
8		3		BOLT, 12 point cap - 10mm x 35 mm	
9	24671-EE	1		STARTER - C8.3C/QSC (24V)	
10	24290-EE	1		BUSHING, REDUCER - 5406-12-4	
11	15574-EE	1		BUSHING, REDUCER - 5406-4-2	
12	50195-EE	1		SENDER, TEMPERATURE - ELECTRONIC (830)	
13	51884-EE	1		ELBOW, 45 - (4 V50X-S)	
14	50545-EE	1		SENDER, OIL PRESSURE GAUGE (830)	

🕮 See referenced page for component or assembly breakdown.

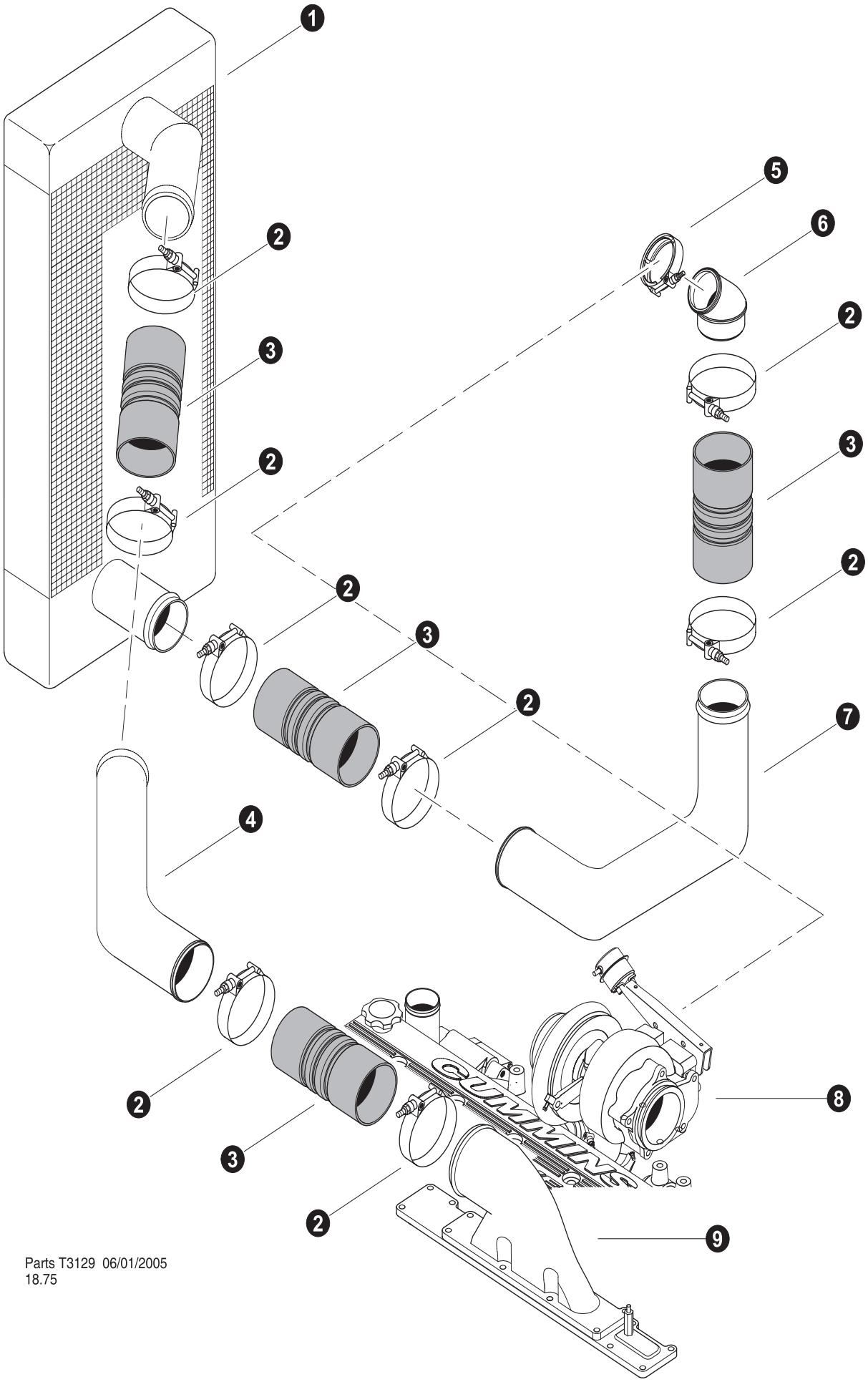


Parts T3131 06/03/2005
18.75

FUEL LINES
(Supply & Return To Engine)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE - Cummins QSC8.3-C.	EE-1
2	15457-EE	2		CONNECTOR, STR - FF1852T-0806S	
3	19290-EE	1		BUSHING, REDUCER - 6410-10-8	
4	16661-EE	2		ELBOW, 90 SWIVEL - 6500-6	
5	-EE	1		HOSE ASSEMBLY - 2062-06-060S-0609-W *(Fuel Return from rotary manifold port #1 to return port on engine)*	
6	-EE	1		HOSE ASSEMBLY - 2075-06-060S-060S-W *(Fuel supply from rotary manifold port #2 to fuel pump on engine)*	
7	15480-EE	1		ELBOW, 90 - 6801-6	
8	REF	1	🕮	ROTARY MANIFOLD ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.

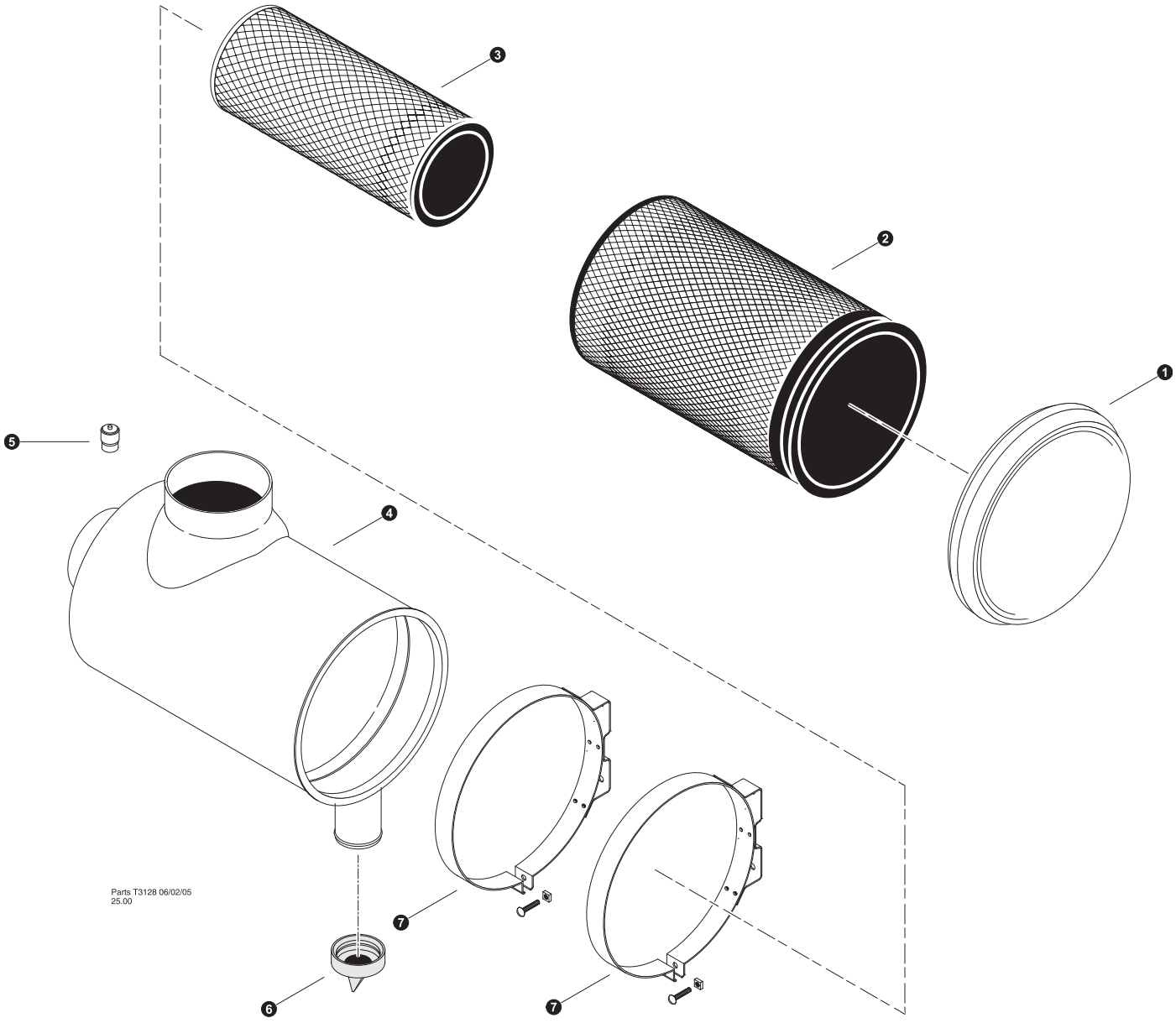


Parts T3129 06/01/2005
18.75

CHARGE AIR
(Air To Air Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	RADIATOR / AIR COOLER ASSEMBLY	EE-3
2	16337-EE	8		CLAMP, strap band - 4”	
3	24686-EE	4		CONNECTOR, rubber	
4	51733-EE	1		TUBE, AIR/AIR TOP CUMMINS 630/830	
5	16979-EE	1		CLAMP, muffler band - 2-1/2”	
6	- - -	1		ELBOW, 45° - turbo output tube	
7	51734-EE	1		TUBE, AIR/AIR BOTTOM CUMMINS 630/830	
8	- - -	1		TURBO, CUMMINS QSC	
9	52054-EE	1	🕮	MANIFOLD, CHARGE AIR INTAKE (QSC / 830)	

🕮 See referenced page for component or assembly breakdown.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Parts T3128 06/02/05
25.00
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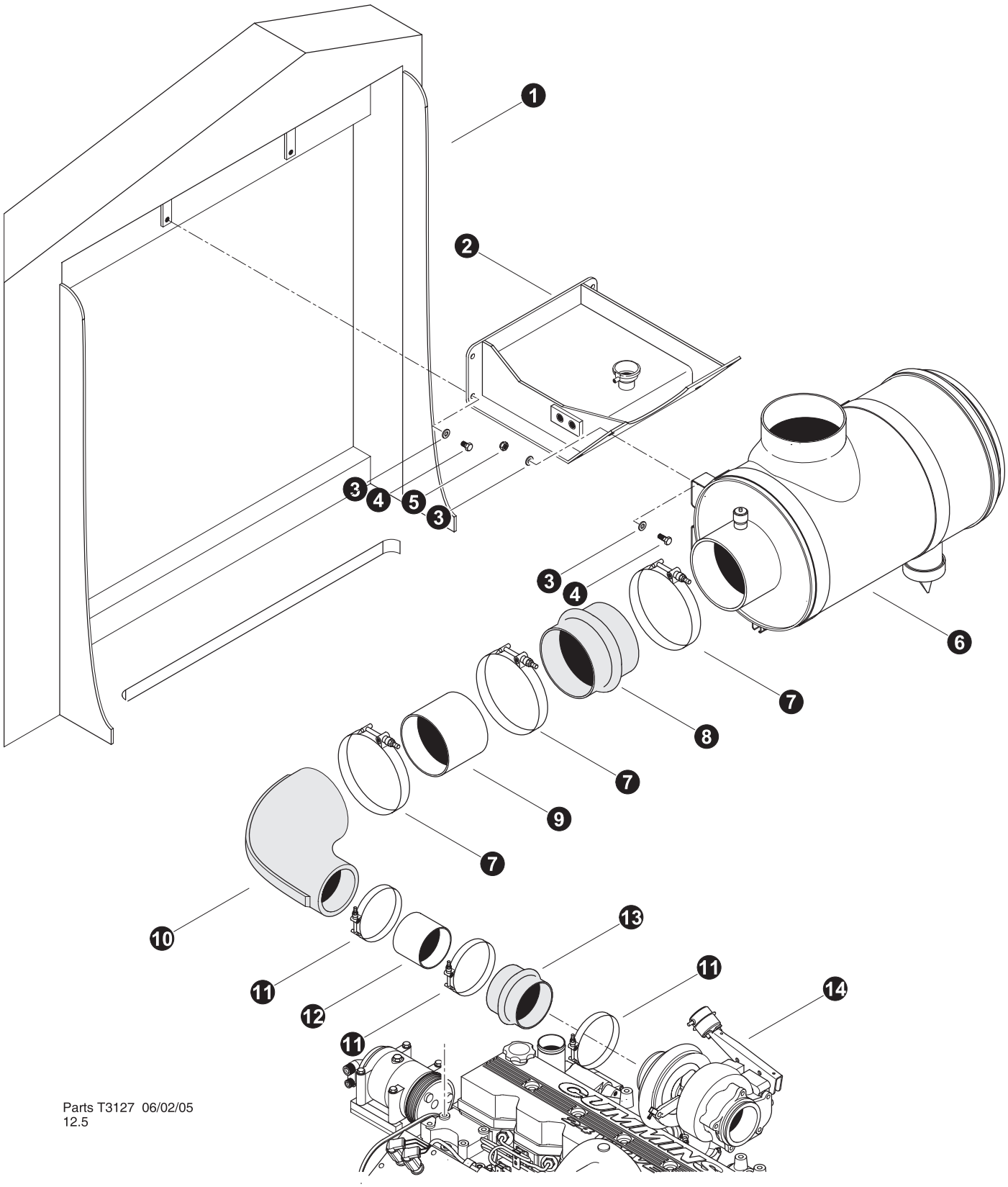
7

AIR CLEANER ASSEMBLY

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51729-EE	1	❑	AIR CLEANER ASSEMBLY - 830/630	
1	---	1		COVER - AIR CLEANER	
2	51756-EE	1		FILTER, air cleaner - primary	
3	51757-EE	1		FILTER, air cleaner - secondary	
4	---	1		CANISTER, air cleaner	
5	16114-EE	1		INDICATOR, air cleaner filter service	
6	52053-EE	1		BOOT, Air Cleaner Dust	
7	20450-EE	2	❑	CLAMP, air cleaner band	
-	15591-EE	1		BOLT - 5/16” x 1-1/2”	
-	10788-EE	1		NUT, nylock - 5/16”	

❑ Kit or Assembly - includes all items indented underneath.

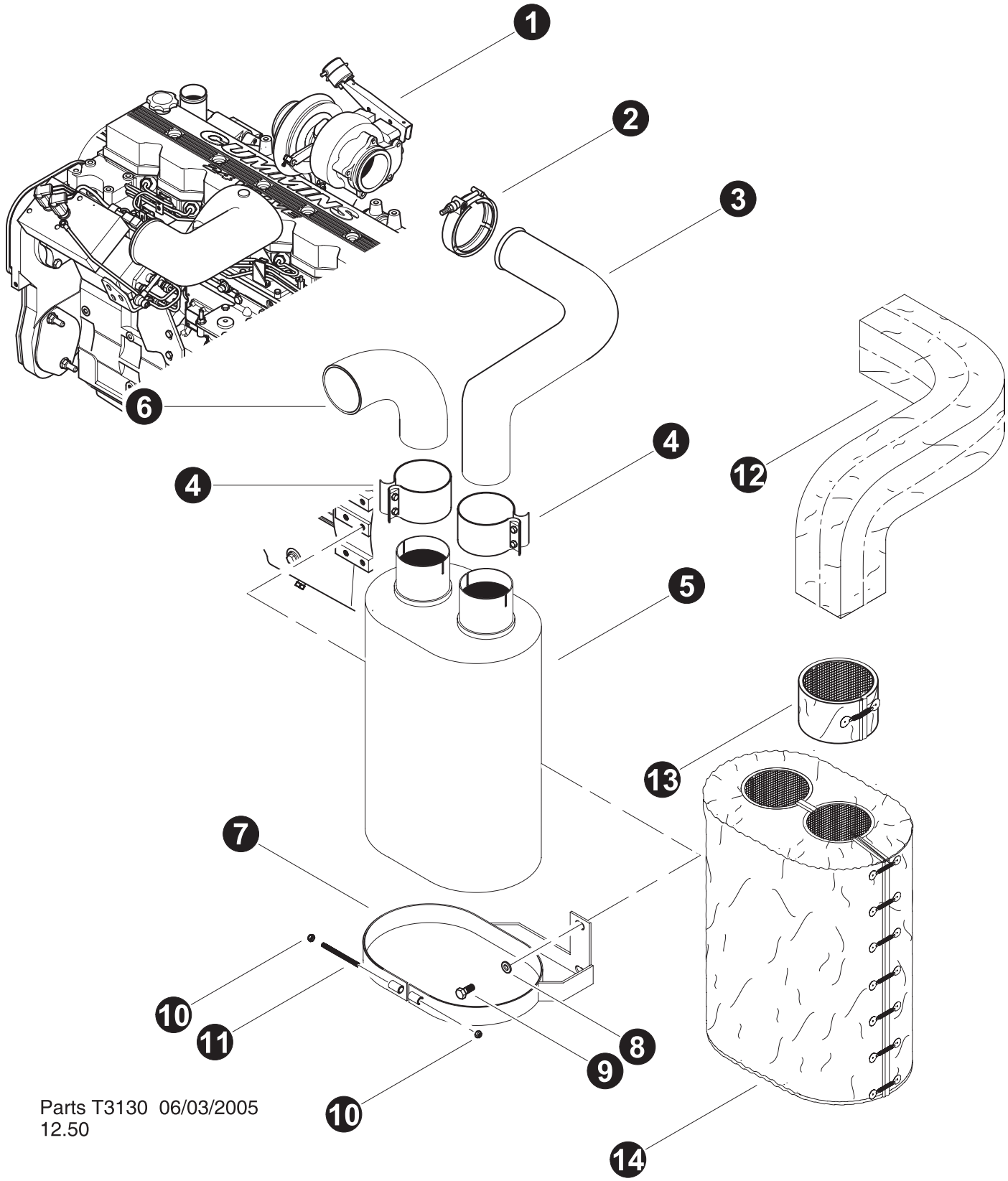


Parts T3127 06/02/05
12.5

AIR CLEANER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE	UP-1
2	REF.	1	🕮	TANK, EXPANSION	EE-3
3	15528-EE	12		WASHER, SAE FLAT - .375”	
4	11707-EE	4		BOLT - .375” X 1”	
5	10813-EE	4		NUT, LOCK - .375”	
6	REF.	1	🕮	AIR CLEANER ASSEMBLY	EE-1
7	16249-EE	2		CLAMP, strap band - 5-1/2”	
8	52055-EE	1		HOSE, HUMP AIR CLEANER (5” X 5”) CUMMINS	
9	51827-EE	1		TUBE, AIR CLEANER (5” DIA X 3”) CUMMINS	
10	15831-EE	1		ELBOW, 90° rubber *(Ribbed)*	
11	15697-EE	1		CLAMP, strap band - 4-1/2”	
12	51828-EE	1		TUBE, AIR CLEANER (4” DIA X 2.5”) CUMMIN	
13	51829-EE	1		HOSE, HUMP AIR CLEANER (4” X 4”) CUMMINS	
15	REF.	1	🕮	ENGINE - Cummins C8.3-C	EE-1

🕮 See referenced page for component or assembly breakdown.



Parts T3130 06/03/2005
12.50

MUFFLER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE - Cummins C8.3-C	EE-1
2	20452-EE	1		CLAMP, turbo exhaust	
3	51613-EE	1		PIPE, EXHAUST - CUMMINS C - 830 MACH	
4	51871-EE	2		CLAMP, MUFFLER - 830/630 - 4” EASY SEAL	
5	51656-EE	1		MUFFLER, CUMMINS / JD (TF830)	
6	51956-EE	1		ELBOW, EXHAUST - CUMMINS (830/630)	
7	51677-EE	2		MOUNT, MUFFLER - CUMMINS - 830	
8	15534-EE	14		WASHER, SAE FLAT - .5”	
9	18415-EE	2		BOLT - 12MM-1.75P X 30MM	
10	10812-E	2		NUT, LOCK - .3125”	
11	-EE			ROD, THREADED - .3125”	
12	51716-EE	1		INSULATION, EXHAUST TUBE (CUMMINS 830)	
13	50072-EE	1		WRAP, MUFFLER - 21” X 3”	
14	51715-EE	1		INSULATION, MUFFLER - 830	

🕮 See referenced page for component or assembly breakdown.

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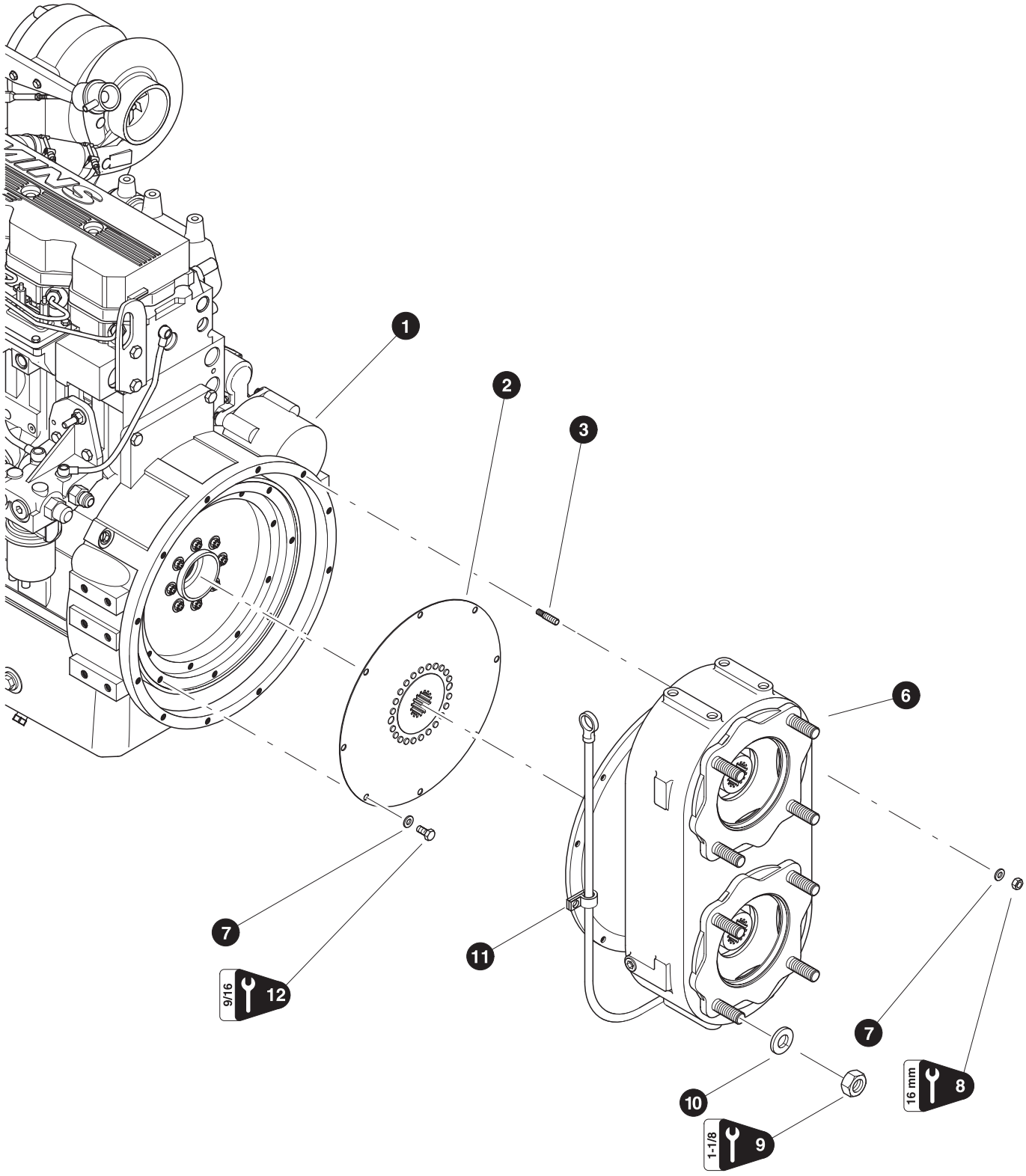
Section EE-2

Cummins QSC8.3 Engine - Pump Drive Transmission



Parts T2721 06/11/2003
18.75

PUMP DRIVE TRANSMISSION INSTALLATION
(Funk)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE - Cummins QSC8.3.	EE-3
2	REF.	1	🕮	DRIVE PLATE	EE-2
3	15531-EE	12		STUD, threaded - 10mm x 45mm *(See Note #1 below)*	
4	23557-EE	1		BREATHER	
5	16808-EE	1		BUSHING, reducer - 5406-8-2	
6	REF.	1	🕮	PUMP DRIVE TRANSMISSION	EE-2
7	15528-EE	20		WASHER, SAE flat - 3/8”	
8	15530-EE	12		NUT, hex - 10mm *(See Note #2 below)* ***(Torque to 40 ft.lbs. (53 Nm))***	
9	10776-EE	8		NUT, HEX 3/4	
10	15550-EE	8		WASHER, SAE 3/4	
11	16203-EE	1		CLAMP, coated 3/8	
12	15542-EE	8		BOLT - 3/8” x 3/4” *(See Note #1 below)* ***(Torque to 40 ft.lbs. (53 Nm))***	

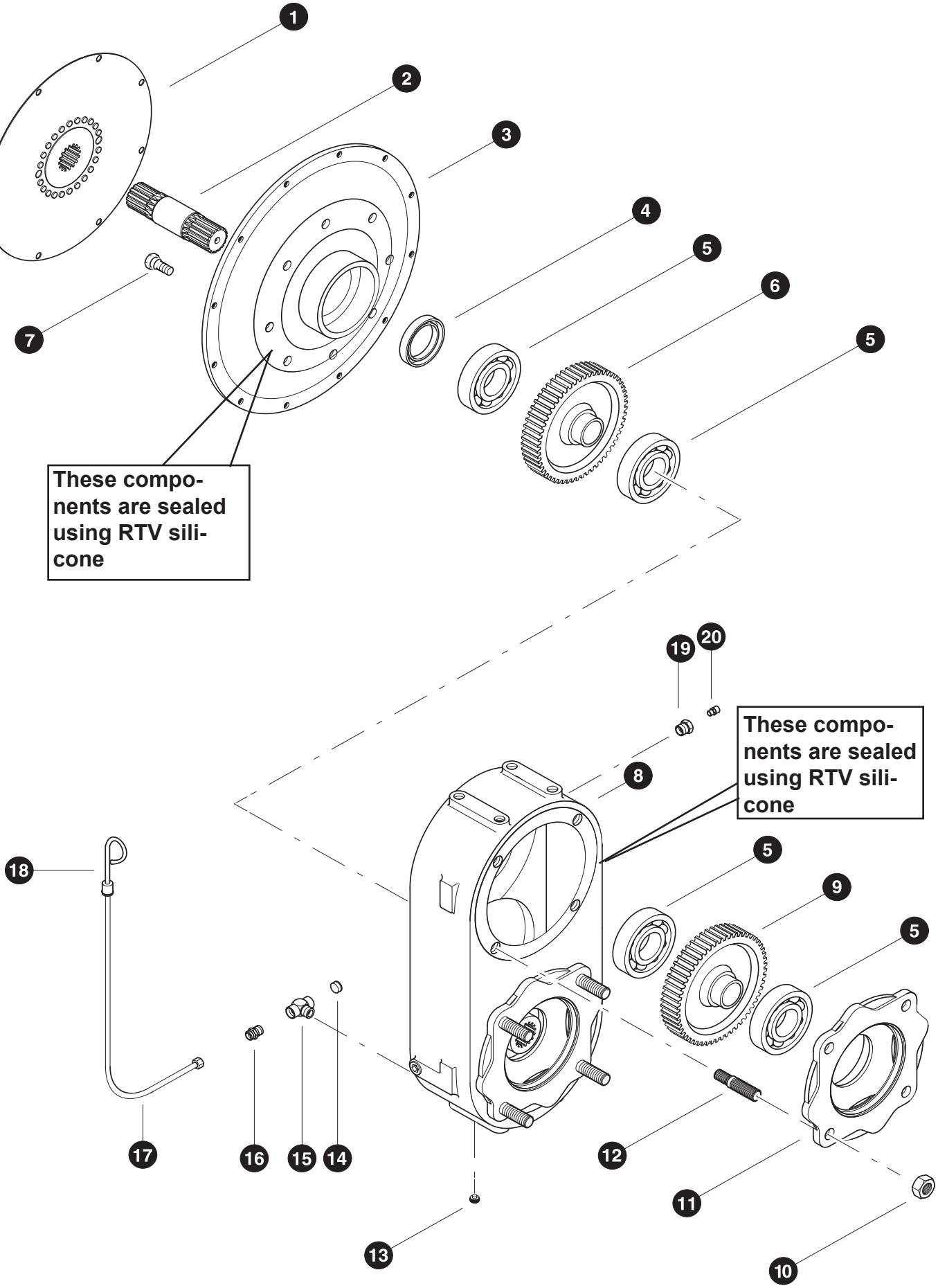
🕮 See referenced page for component or assembly breakdown.

Note #1:

Use Loctite 271 *(red)* during installation.

Note #2:

Use Loctite 272 *(blue)* during installation.



Parts T2722 06/12/03
18.75

PUMP DRIVE TRANSMISSION BREAKDOWN
(Funk)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51404-EE	1	❑	TRANSMISSION, pump drive (funk .787:1 inc) (after 04/01/04)	
1	16258-EE	1		DRIVE PLATE, funk	
2	----	1		DRIVE SHAFT, funk pump drive (4028060)	
3	----	1		HOUSING, flywheel mounting (4028011)	
4	----	1		SEAL, shaft (F65006)	
5	----	6		BEARING, funk pump drive (F40211)	
6	----	1		GEAR, input (4059007) (.647:1)	
6	51408-EE	1		GEAR, input (.787:1)	
7	----	8		BOLT, flywheel housing addapter (4003685) (see note #1)	
8	----	1		HOUSING, 2 - pump (YZ102177)	
9	----	2		GEAR, output (4028042) (.647:1)	
9	51409-EE	2		GEAR, output (.787:1)	
10	----	8		NUT, hex 3/4	
11	----	2		PLATE, pump adapter (4028007)	
12	----	8		STUD, adapter (40281351) (see note #2)	
13	----	1		PLUG, pipe, magnetic 1/4 (444-691-00-00-08)	
14	15585	1		PLUG, pipe 1/2	
15	----	1		TEE, pipe branch 1/2 (Z12T-8-8)	
16	----	1		FITTING, 3/8 compression x 1/2 pipe (18-190)	
17	----	1		TUBE, dipstick (NE 10000)	
18	----	1		DIPSTICK, funk (RE69243)	
19	16019-JD	1		BUSHING, REDUCER - 6405-8-4	
20	----	1		BREATHER, (0-PSI) funk (F68103)	

❑ Kit or Assembly - includes all items indented underneath.

NOTE #1

Use loctite 262 when installing bolts

NOTE #2

Apply loctite 271 to housing side before install

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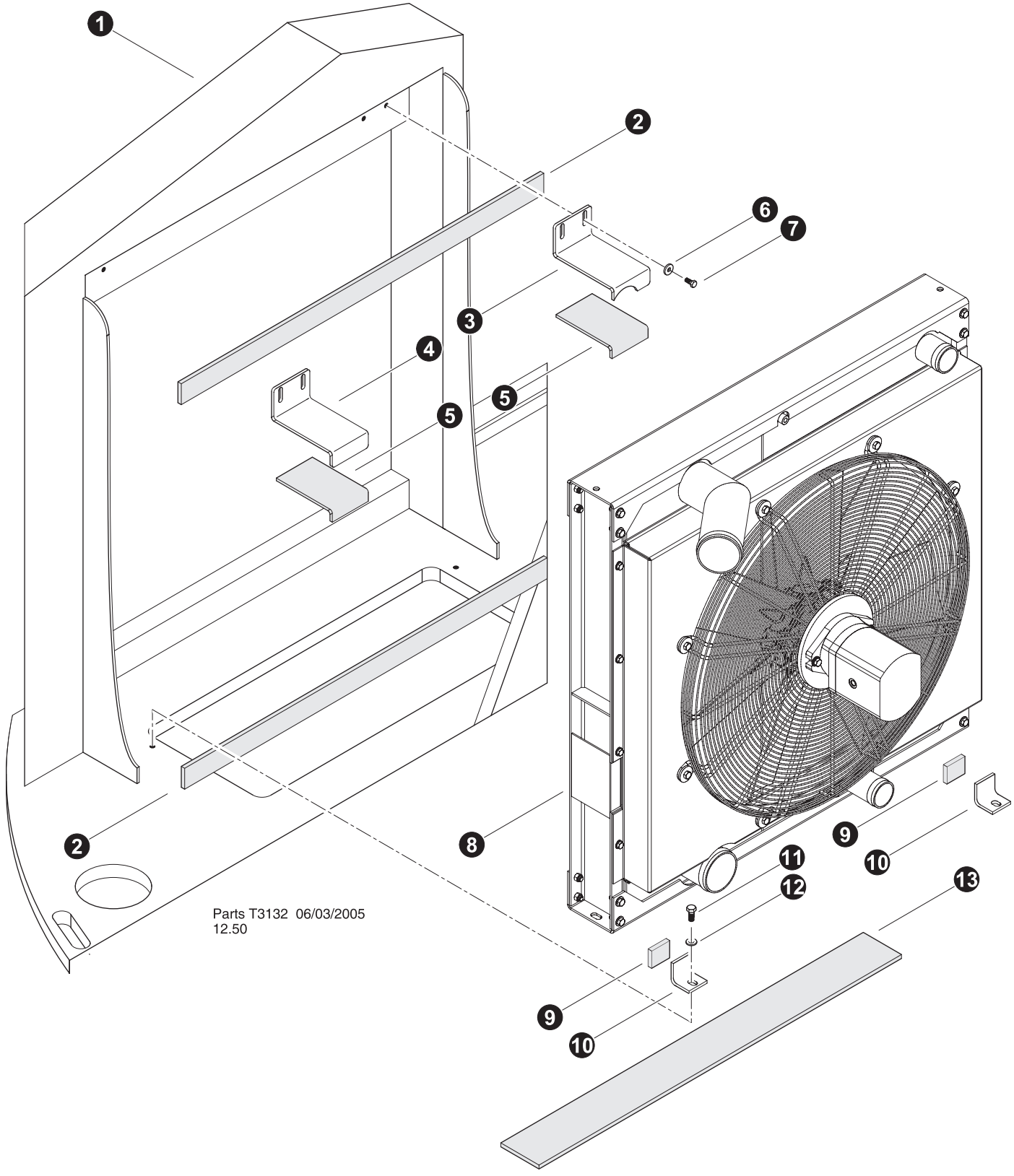
Section EE-3

Cummins QSC8.3 Engine - Cooling System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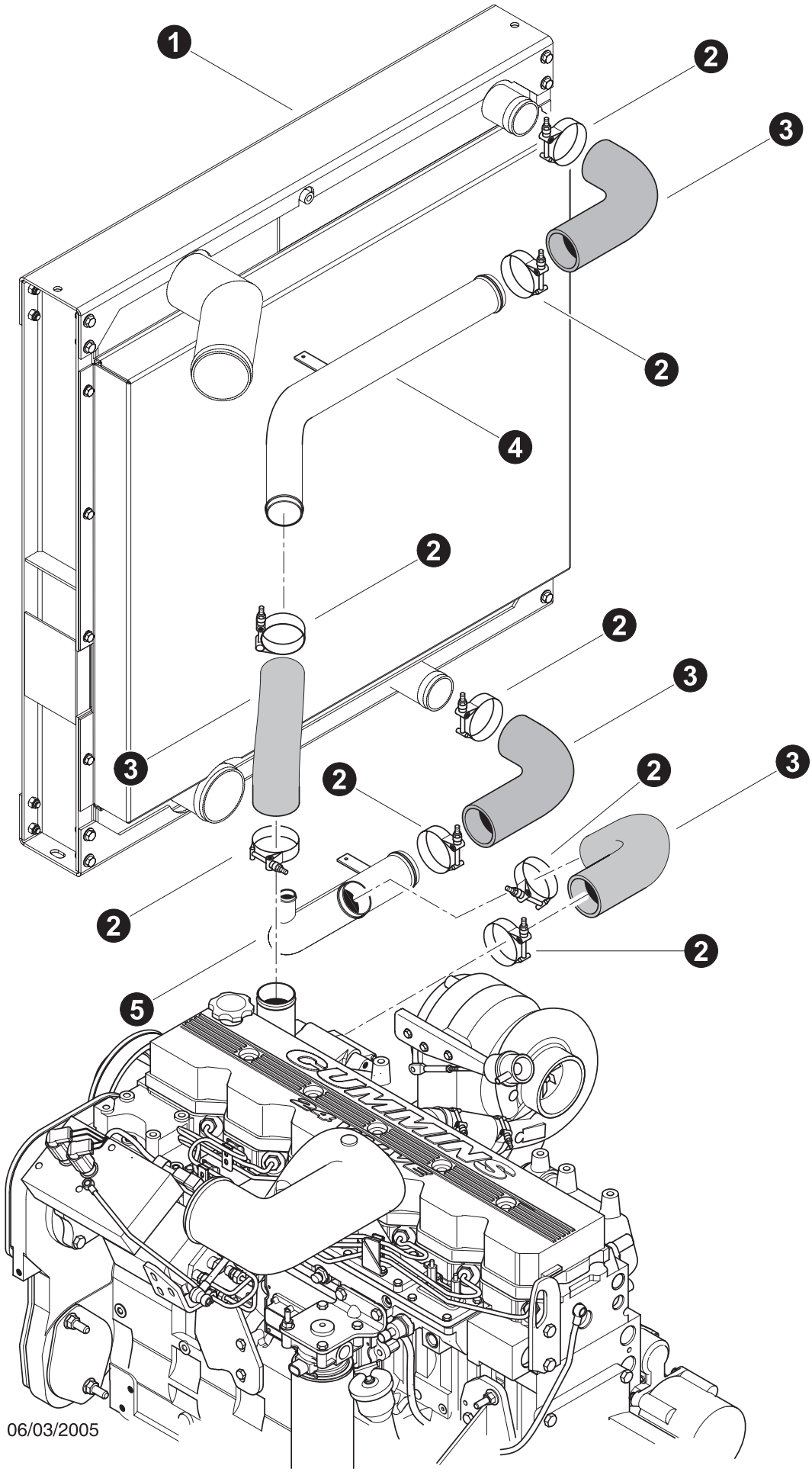
Parts T3132 06/03/2005
12.50

RADIATOR/OIL & COOLER INSTALATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1
2	51825-EE	2		RUBBER, ISOLATOR - RAD (2”X39”X1/4”)	
3	42553-EE	1		BRACKET, RADIATOR UPPER	
4	42553-EE	1		BRACKET, RADIATOR UPPER	
5	-EE	2		RUBBER, ISOLATOR - UPPER RAD BRACKETS	
6	10802-EE	4		WASHER, FLAT - .375”	
7	15542-EE	4		BOLT - .375” X .75”	
8	REF	1	🕮	RADIATOR / CHARGE AIR ASSEMBLY	UP-3
9	-EE	2		RUBBER, ISOLATOR - LOWER RAD BRACKETS	
10	42554-EE	2		BRACKET, RADIATOR LOWER	
11	10783-EE	2		BOLT - .5” X 1”	
12	15534-EE	2		WASHER, SAE FLAT - .5”	
13	51826-EE	1		RUBBER, ISOLATOR - RAD (6”X39”X1/4”)	

🕮 See referenced page for component or assembly breakdown.

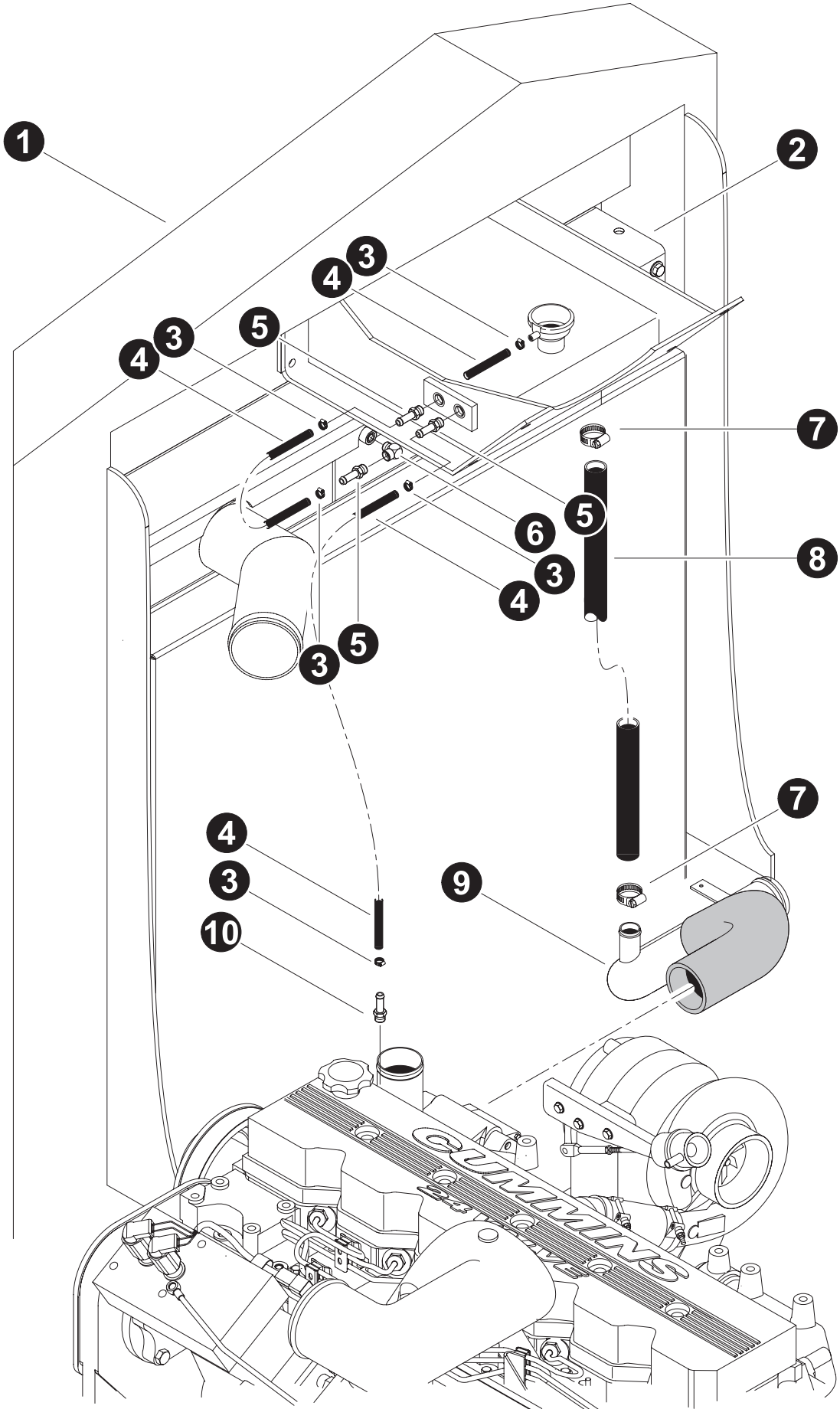


Parts T3133 06/03/2005
12.5

RADIATOR TO ENGINE CONNECTIONS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	RADIATOR / CHARGE AIR ASSEMBLY	UP-3
2	18103-EE	8		CLAMP, CONSTANT TORQUE - #40	
3	15617-EE	4		HOSE, 90 DEG. RADIATOR - 2.5”	
4	51762-EE	1		TUBE, RADIATOR UPPER - CUMMINS W/GTI RAD	
5	51763-EE	2		TUBE, RADIATOR LOWER - CUMMINS W/GTI RAD	

🕮 See referenced page for component or assembly breakdown.

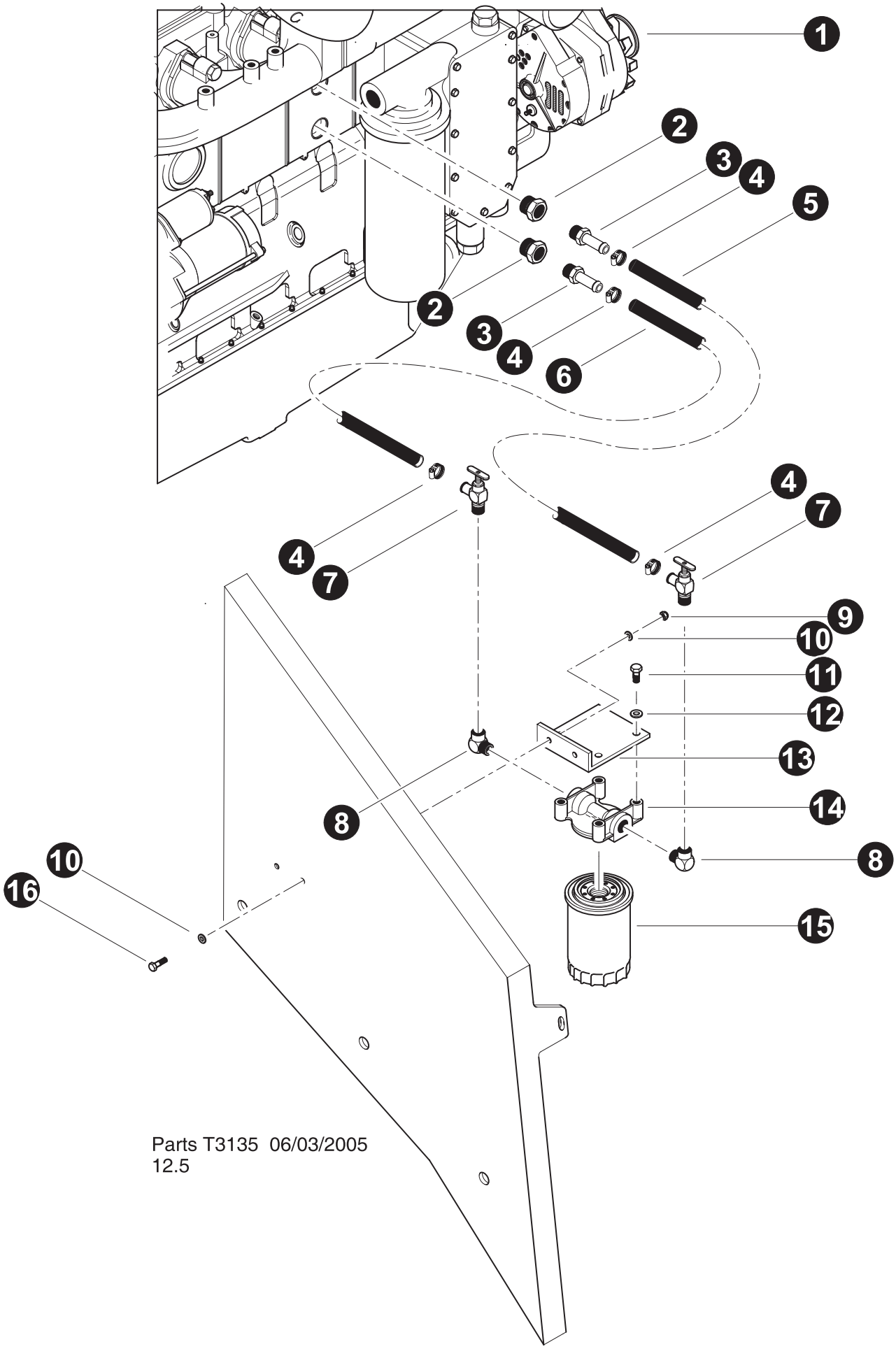


Parts T3134 06/03/2005
12.5

OVER FLOW TANK CONNECTIONS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1
2	REF	1	🕮	RADIATOR / CHARGE AIR ASSEMBLY	UP-3
3	16202-EE	5		CLAMP, HOSE - WORM STYLE - .625”	
4	16283-EE	-		HOSE, FUEL LINE (BULK ROLL) - .3125”	
5	16989-EE	3		CONNECTOR, STR HOSE BARB - 4245-5-2	
6	16251-EE	1		ELBOW, 90 STREET - 5502-4	
7	16256-EE	2		CLAMP, HOSE - WORM STYLE - 1”	
8	15677-EE	-		HOSE, HEATER - (BULK ROLL) 1” X 50’	
9	REF	1	🕮	LOWER RADIATOR TUBE ASSEMBLY	EE-3
10		1		CONNECTOR, STR HOSE BARB (cummins with coolant orfice)	

🕮 See referenced page for component or assembly breakdown.



Parts T3135 06/03/2005
12.5

COOLANT FILTER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	CUMMINS QSC ENGINE	EE-1
2	24288-EE	2		BUSHING, BRASS - .375 X .75	
3	24289-EE	5		CONNECTOR, STR HOSE BARB - BRASS	
4	16256-EE	4		CLAMP, HOSE - WORM STYLE - 1”	
5	25124-EE			HOSE, FUEL LINE (BULK ROLL) - .375”	
6	25124-EE			HOSE, FUEL LINE (BULK ROLL) - .375”	
7	52057-EE	2		VALVE, SHUT OFF (Cummins Coolant Filter)	
8	24287-EE	2		ELBOW, 90 STREET .375” NPT - BRASS	
9	10811-EE	2		NUT, LOCK - .25”	
10	10757-EE	4		WASHER, SAE FLAT - .25”	
11	11707-EE	2		BOLT - .375” X 1”	
12	15528-EE	2		WASHER, SAE FLAT - .375”	
13	51939-EE	1		BRACKET, COOLANT FILTER	
14	16574-EE	1		MOUNT, FILTER HEAD ASSEMBLY	
15	20445-EE	1		FILTER, COOLANT - CUMMINS C SERIES	
16	15576-EE	2		BOLT - .25” X 1”	

🕮 See referenced page for component or assembly breakdown.

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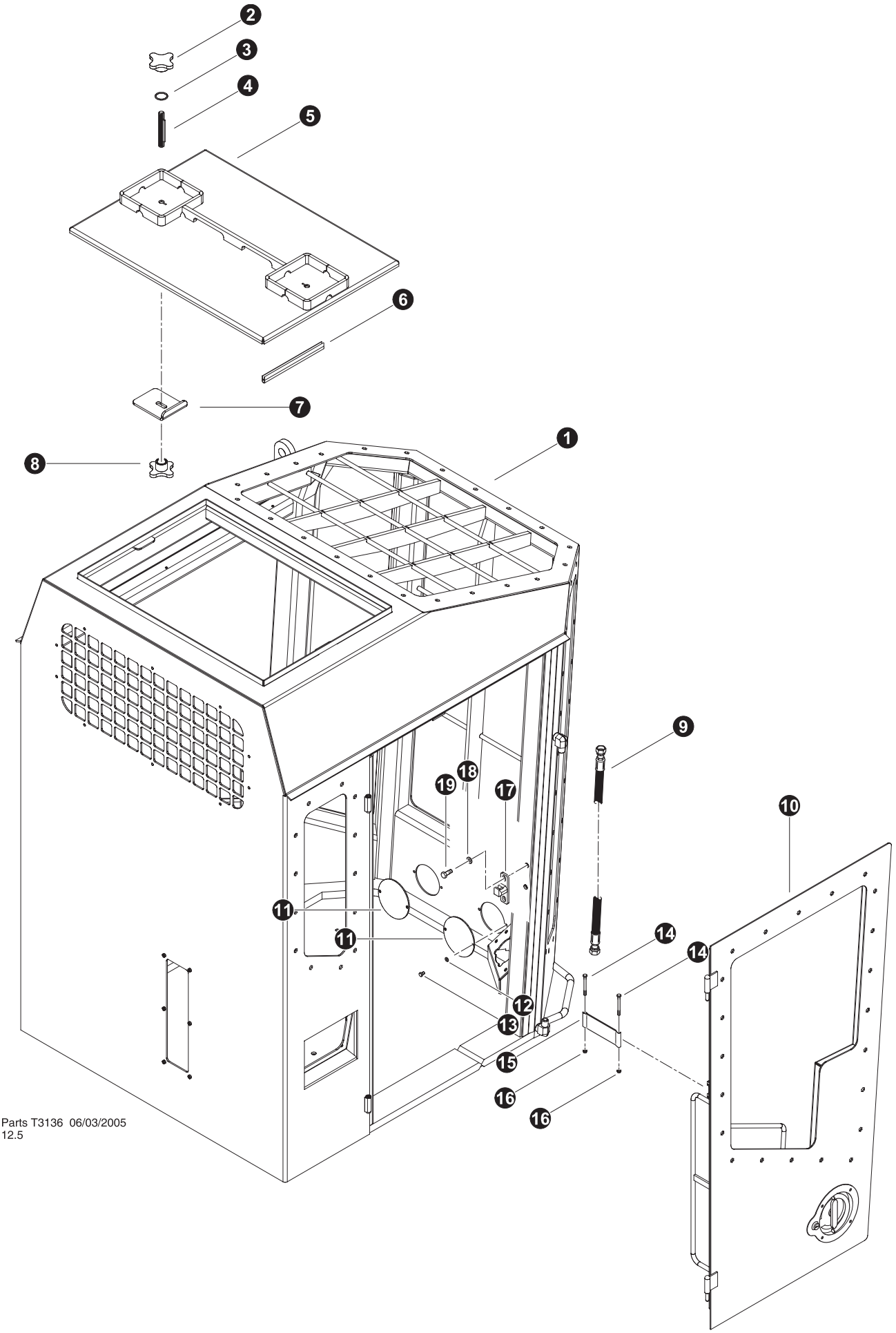
OC-1

Operator's Cab - Cab Weldment and Installation

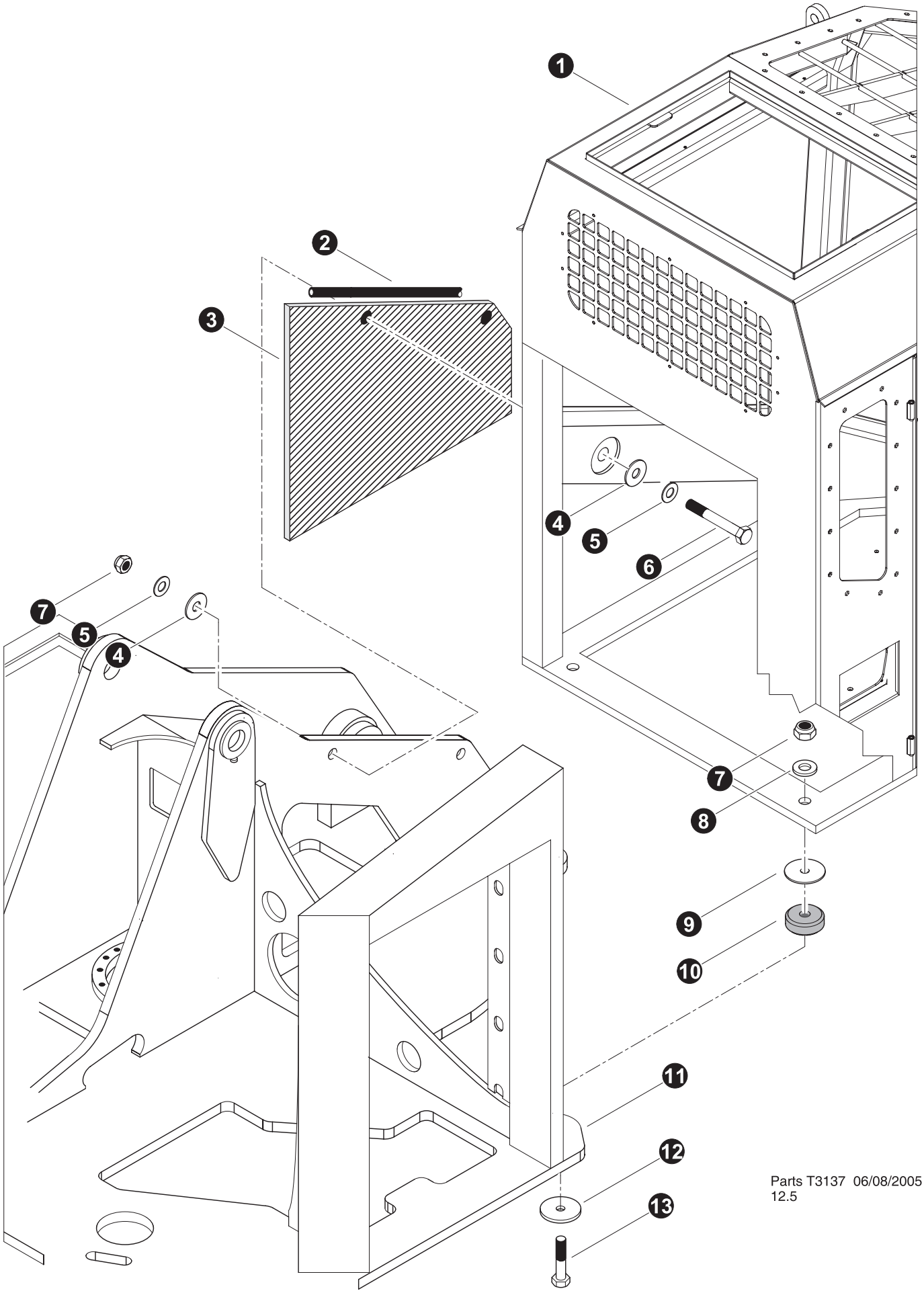


Parts T3136 06/03/2005
12.5

CAB WELDMENT ASSEMBLY

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51572-OC	1	❑	WELDMENT, CAB - NEW MACH	
2	52060-OC	2		KNOB, STAR - EMERGENCY ESCAPE (O-RING SEAL)	
3	52066-OC	2		O-RING, EMERGENCY ESCAPE	
4	16538-OC	2		STUD, 2-WAY - .5" X 3.5"	
5	52059-OC	1		HATCH, ESCAPE - ROOF 830-630	
6	15694-OC	10 ft	✂	WEATHERSTRIPPING - .25" X 1"	
7	52062-OC	2		BRACKET, EMERGENCY ESCAPE 830	
8	52061-OC	1		KNOB, STAR - EMERGENCY ESCAPE	
9	52033-OC	1		HOSE, CAB HANDLE - 4037.5-08-10JS-10JS	
10	REF	1		CAB DOOR ASSEMBLY.	OC-1
11	52064-OC	1		COVER, FRONT LIGHT - 830	
12	10757-OC	4		WASHER, SAE FLAT - .25"	
13	15604-OC	4		BOLT - .25" X .75"	
14	10818-OC	2		BOLT - .25" X 3"	
15	51981-OC	1		STRAP, DOOR STOP - 830/630	
16	10811-OC	2		NUT, LOCK - .25"	
17	17896-OC	1		STRIKER, DOOR LATCH	
18	15528-OC	2		WASHER, SAE FLAT - .375"	
19	15542-OC	2		BOLT - .375" X .75"	

❑ Kit or Assembly - includes all items indented underneath.
✂ Bulk material - order length required in feet or meters.



Parts T3137 06/08/2005
12.5

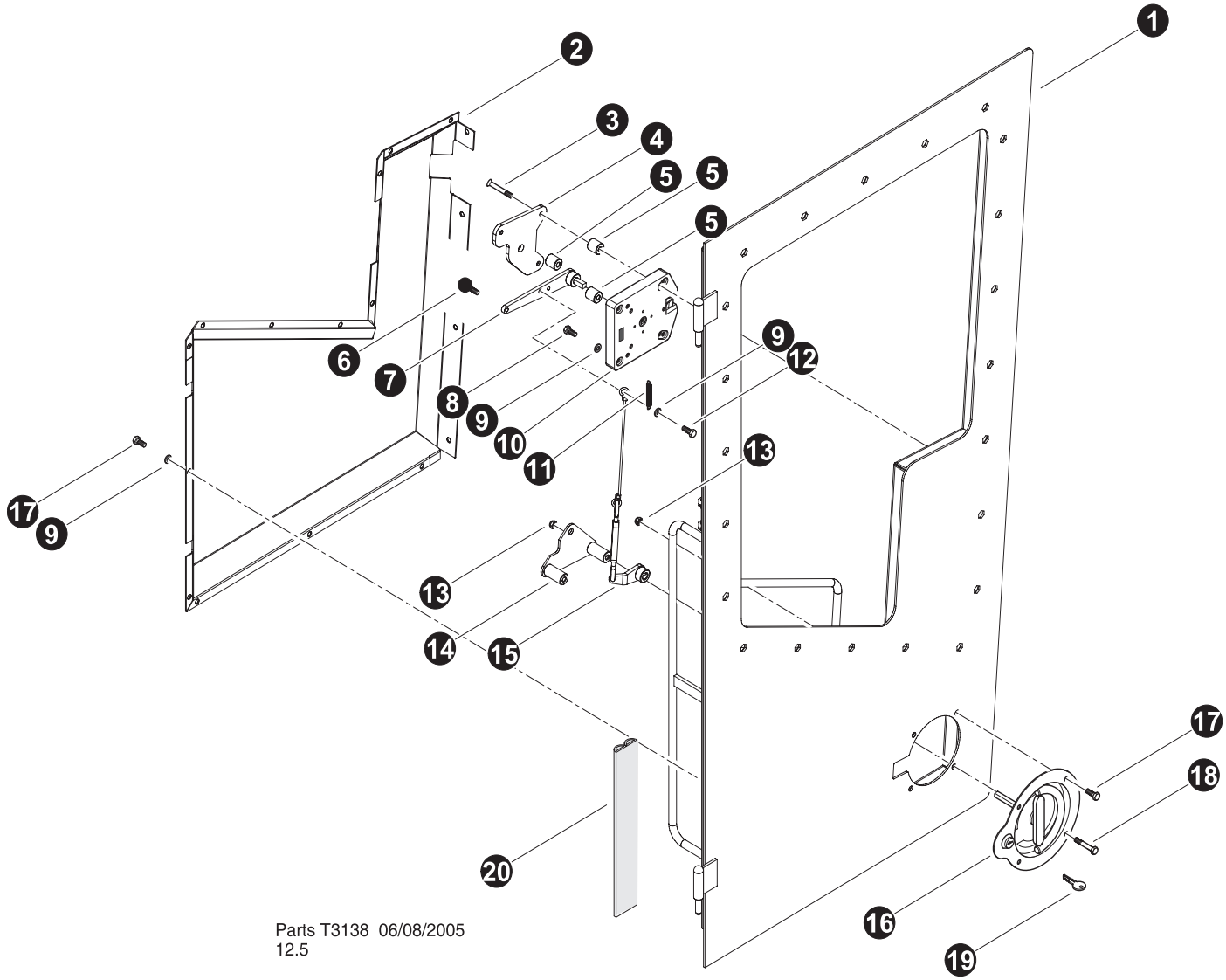
CAB INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CAB WELDMENT	OC-1
2	16717-OC	8 ft		HOSE, HEATER - (BULK ROLL) .625" X 250'	
3	42739-OC	1		INSULATION, SOUNDPROOF - CAB	
4	17065-OC	3		WASHER, rubber	
5	10808-OC	4		WASHER, FLAT - 1"	
6	18672-OC	2		BOLT - 1" X 7.5"	
7	18253-OC	5		NUT, LOCK - 1"	
8	15579-OC	3		WASHER, SAE FLAT - 1"	
9	50061-OC	3		WASHER, cab mount isolator	
10	19295-OC	3		ISOLATOR, CAB MOUNTING - FWD	
11	REF.	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1
12	19369-OC	3		WASHER, cab mount isolator - (.5 thick)	
13	18535-OC	3		BOLT, 1" x 5" (see note 1 below)	

🕮 See referenced page for component or assembly breakdown.

Note 1

Use loctite 271 (red) on treads during installation.



Parts T3138 06/08/2005
12.5

DOOR LATCH INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52063-OC	1	❑	DOOR, CAB - 830	
2	52067-OC	1		COVER, DOOR - 830	
3	52068-OC	1		BOLT, COUNTERSUNK	
4	10811-OC	4		PLATE, DOOR LATCH	
5	52069-OC	3		SPACER, DOOR LATCH	
6	52070-OC	1		KNOB, DOOR LATCH	
7	52071-OC	1		LEVER, DOOR LATCH - 830	
8	18273-OC	4		BOLT - 1/4" x 2-3/4"	
9	10757-OC	20		WASHER, SAE FLAT - .25"	
10	17895-OC	1		LATCH, DOOR	
11	52072-OC	1		SPRING, DOOR LATCH	
12	15604-OC	1		BOLT - .25" X .75"	
13	10811-OC	4		NUT, LOCK - .25"	
14	10402-OC	2		BOLT - 3/8" x 1-1/4"	
15	52073-OC	1		CABLE ASSEMBLY - DOOR LATCH	
16	19248-OC	1		HANDLE, outside door	
17	15604-OC	16		BOLT - .25" X .75"	
18	15508-OC	2		BOLT - .25" X 2.5"	
19	16940-OC	1		KEY, door *(Key code CH1250)*	
20	18126-OC	AR	✂	WEATHERSTRIP, door	

❑ Kit or Assembly - includes all items indented underneath.
✂ Bulk material - order length required in feet or meters.

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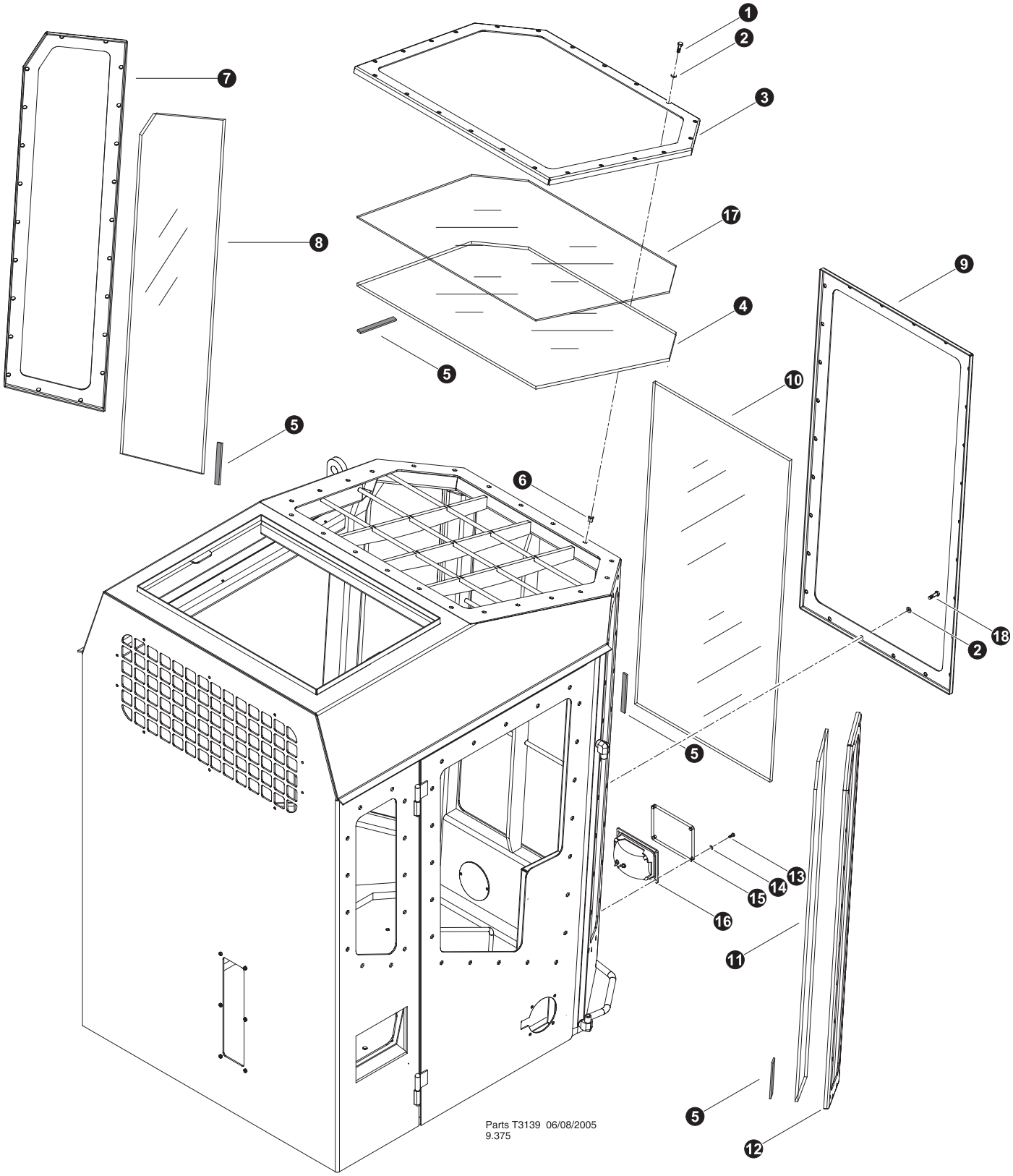
Section OC-2

Operator's Cab - Window Installation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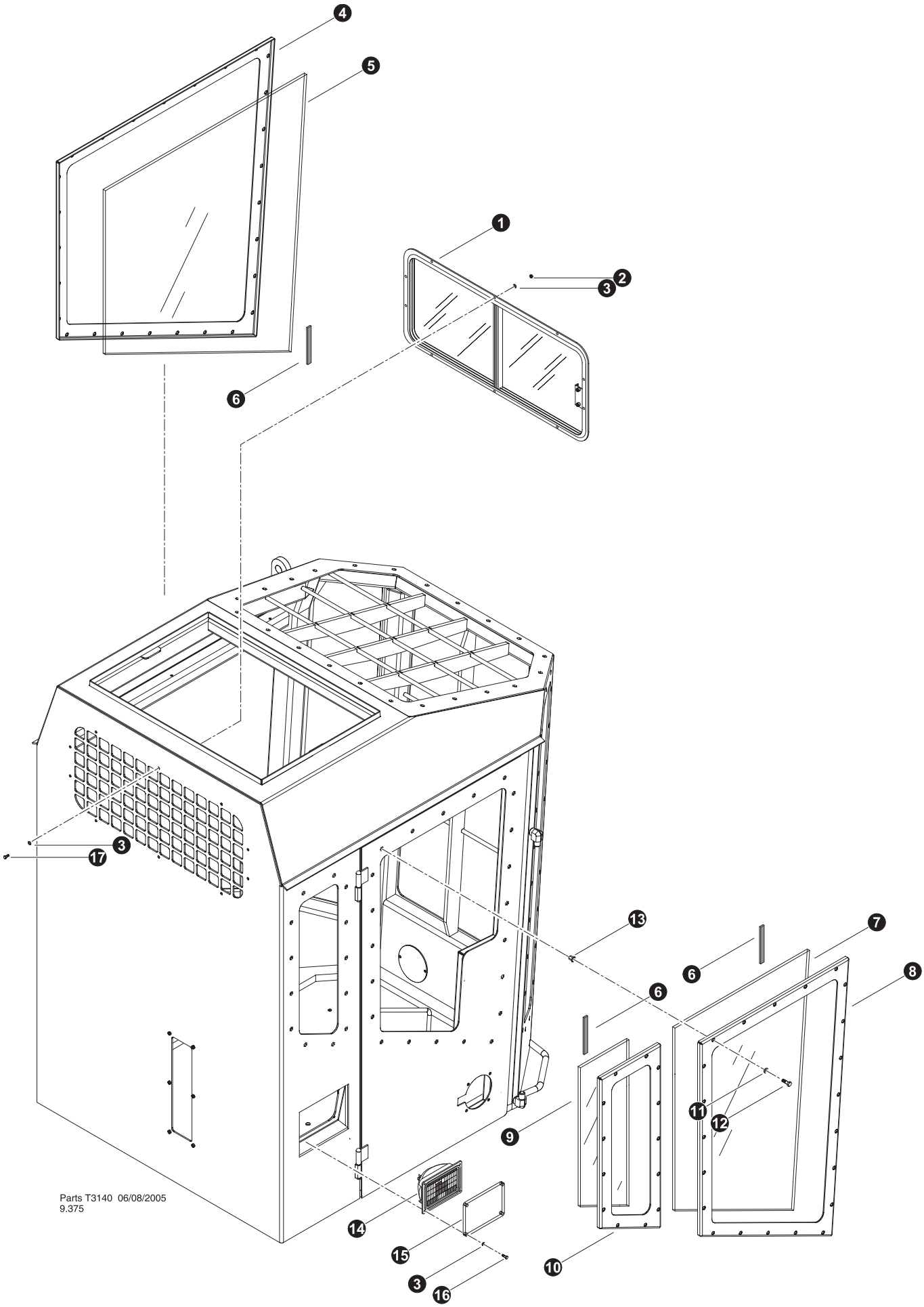
Parts T3139 06/08/2005
9.375

WINDOW INSTALLATION
(Front Window Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	20084-OC	22		BOLT - .375" X 1.75"	
2	15528-OC	92		WASHER, SAE FLAT - .375"	
3	42377-OC	1		FRAME, TOP WINDOW	
4	51697-OC	1		LEXAN, SKYLITE - 830	
5	42378-OC	AR	✂	WEATHERSTRIPPING, WINDOW 5/16 X 3/4 X 5	
6	51810-OC	92		INSERT, THREADED - 3/8"-16	
7	42373-OC	1		FRAME, FRONT L.H. SIDE WINDOW - 830	
8	51692-OC	1		LEXAN, LH AND RH FRONT WINDOW - 830	
9	42371-OC	1		FRAME, FRONT WINDOW	
10	51691-OC	1		LEXON, FRONT WINDOW - 830	
11	51692-OC	1		LEXAN, LH AND RH FRONT WINDOW - 830	
12	42372-OC	1		FRAME, FRONT R.H. SIDE WINDOW	
13	15576-OC	8		BOLT - .25" X 1"	
14	10757-OC	8		WASHER, SAE FLAT - .25"	
15	16811-OC	2		LEXON, LIGHT GUARD	
16	REF	2	🕮	LIGHT	ES
17	51698-OC	1		LEXAN, SKYLITE - SCRATCH GUARD - 830	
18	10731-OC	70		BOLT - .375" X 1.5"	

🕮 See referenced page for component or assembly breakdown.
✂ Bulk material - order length required in feet or meters.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Parts T3140 06/08/2005
9.375

WINDOW INSTALLATION
(Rear and Side Window Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51719-OC	1		WINDOW, SLIDING - TF830	
2	10811-OC	10		NUT, LOCK - .25"	
3	10757-OC	20		WASHER, SAE FLAT - .25"	
4	42376-OC	1		FRAME, BOOM SIDE WINDOW	
5	51694-OC	1		LEXAN, LH (BOOM SIDE) WINDOW - 830	
6	42378-OC	AR	✂	WEATHERSTRIPPING, WINDOW 5/16 X 3/4 X 5	
7	51695-OC	1		LEXAN, DOOR WINDOW - 830	
8	42374-OC	1		FRAME, DOOR WINDOW	
9	51696-OC	1		LEXAN, RH AFT DOOR SIDE WINDOW - 830	
10	42375-OC	1		FRAME, OPERA WINDOW - 830	
11	15528-OC	62		WASHER, SAE FLAT - .375"	
12	10731-OC	62		BOLT - .375" X 1.5"	
13	51810-OC	62		INSERT, THREADED - 3/8"-16	
14	REF	1	🕮	LIGHT	ES
15	16811-OC	1		LEXON, LIGHT GUARD	
16	15576-OC	4		BOLT - .25" X 1"	
17	15604-OC	10		BOLT - .25" X .75"	

✂ Bulk material - order length required in feet or meters.
🕮 See referenced page for component or assembly breakdown.

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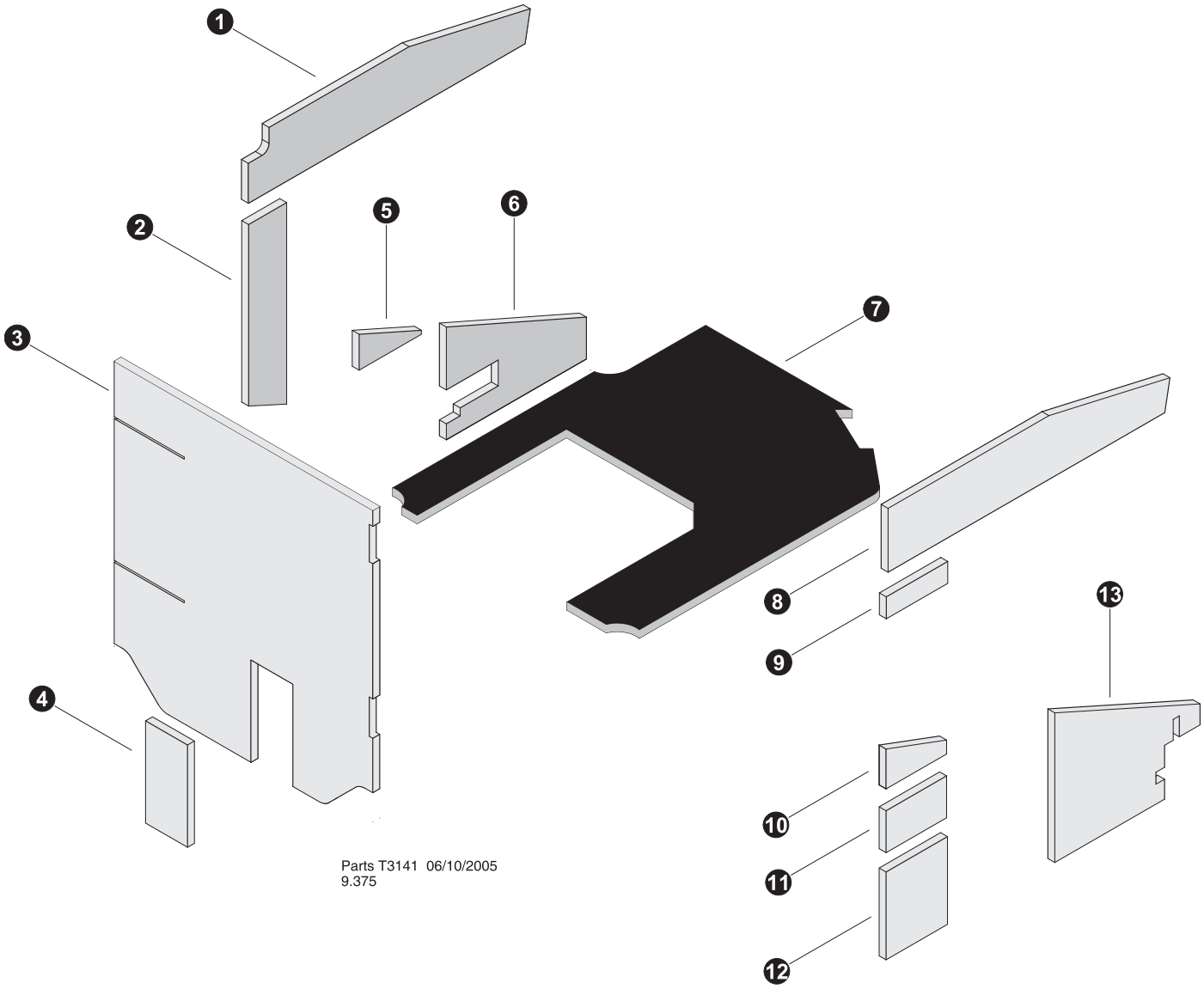
Section OC-3

Operator's Cab - Interior Components

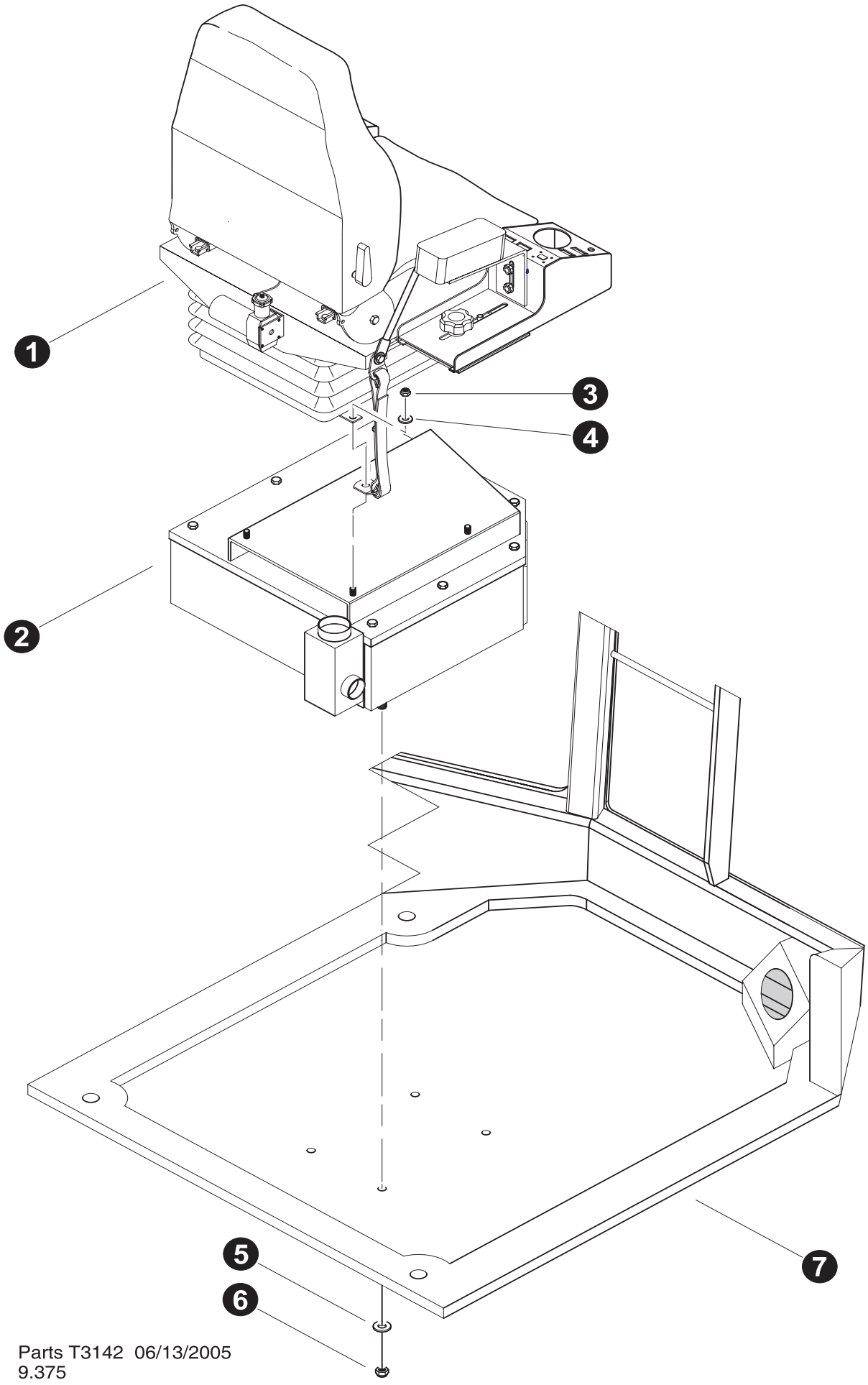


Parts T3141 06/10/2005
9.375

INTERIOR TRIM & FLOORMAT

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51707-OC	1	❑	KIT, CAB INSULATION - 630/830	
1	42681-OC	1		TRIM, PANEL - UPPER LEFT DASH	
2	42673-OC	1		TRIM, PANEL - LEFT REAR	
3	42676-OC	1		TRIM, PANEL - REAR CAB	
4	42682-OC	1		TRIM, PANEL - REAR BULKHEAD PLATE	
5	42675-OC	1		TRIM, PANEL - ABOVE ELECTRICAL PANEL	
6	42679-OC	1		TRIM, PANEL - LEFT CAB WALL	
7	42543-OC	1		FLOORMAT, 830/630 (1.0")	
8	42680-OC	1		TRIM, PANEL - UPPER RIGHT DASH	
9	42669-OC	1		TRIM, PANEL - UPPER RIGHT SIDE WINDOW	
10	42670-OC	1		TRIM, PANEL - LOWER RIGHT SIDE WINDOW #1	
11	42671-OC	1		TRIM, PANEL - LOWER RIGHT SIDE WINDOW #2	
12	42672-OC	1		TRIM, PANEL - LOWER RIGHT SIDE WINDOW #3	
13	42679-OC	1		TRIM, PANEL - CAB DOOR	

❑ Assembly or Kit - includes all items indented underneath.

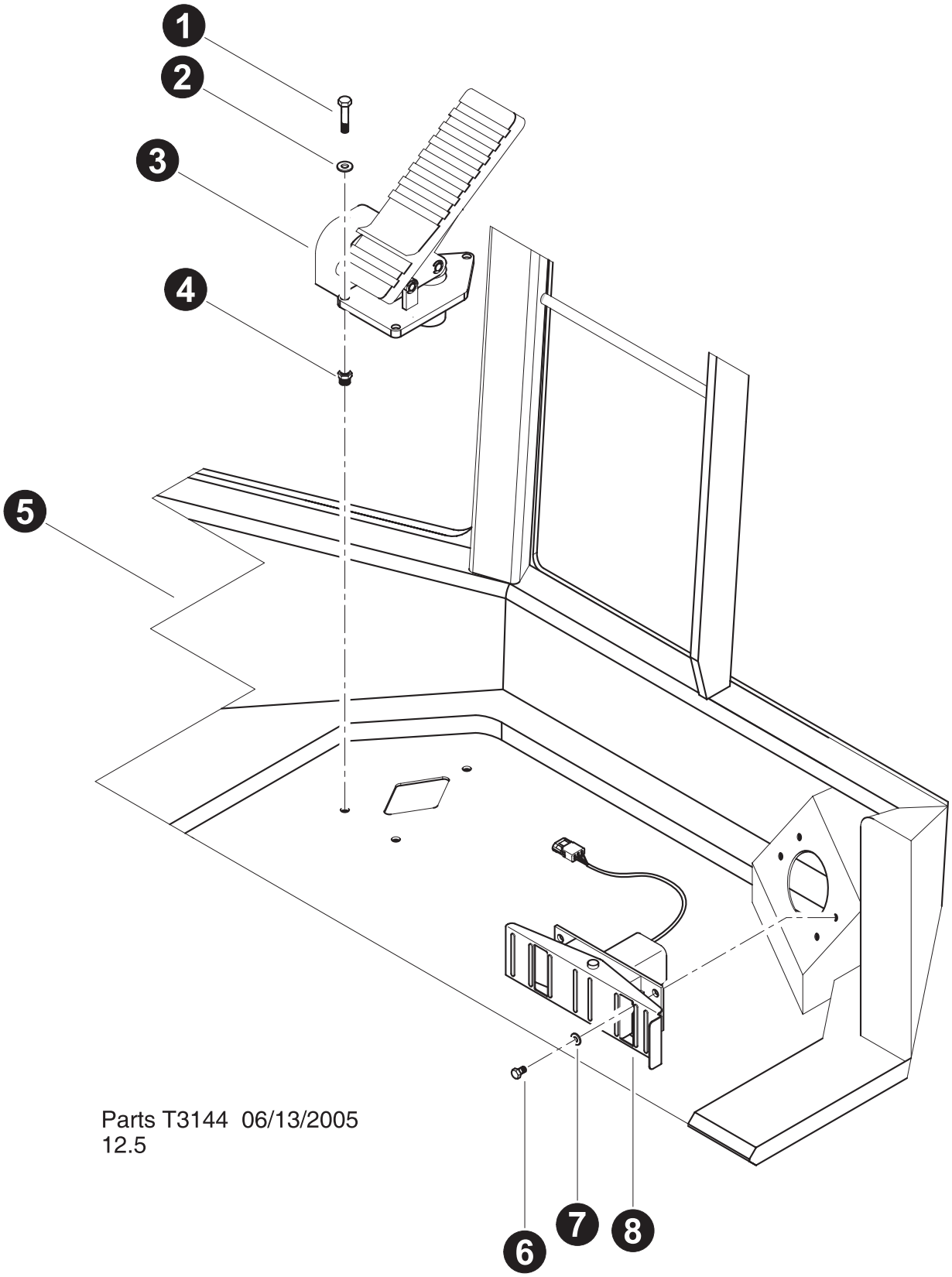


Parts T3142 06/13/2005
9.375

OPERATOR'S SEAT INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	SEAT ASSEMBLY	OC-3
2	REF.	1	🕮	AC / HEATER UNIT ASSEMBLY	OC-4
3	10812-OC	4		NUT, LOCK - .3125"	
4	15559-OC	4		WASHER, SAE FLAT - .3125"	
5	22666-OC	4		WASHER, SAE FLAT - .5" (EXTRA THICK)	
6	10815-OC	4		NUT, LOCK - .5"	
7	REF.	1	🕮	OPERATOR'S CAB	OC-1

🕮 See referenced page for component or assembly breakdown.

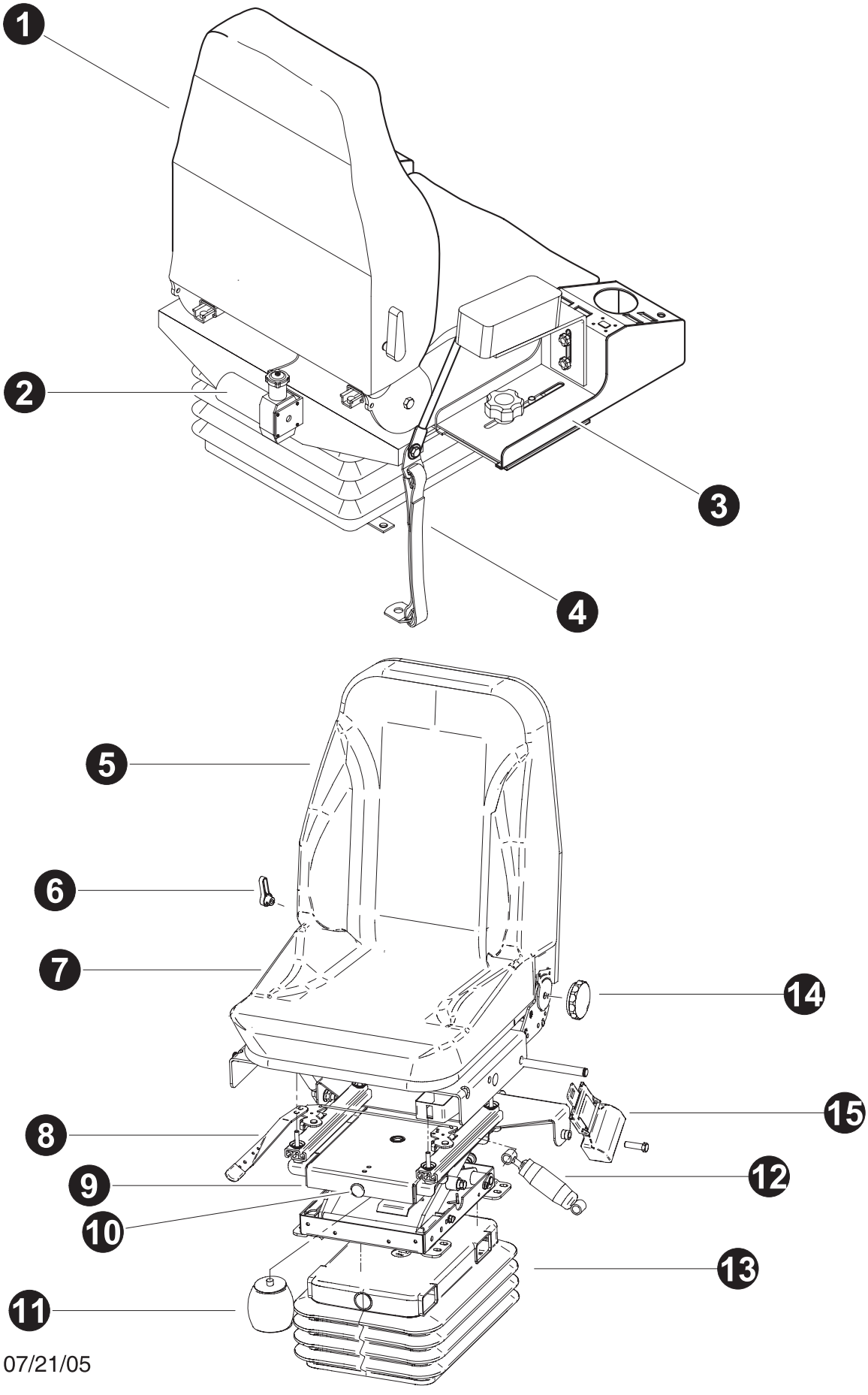


Parts T3144 06/13/2005
12.5

FOOT PEDALS INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	10823-OC	3		BOLT - .3125" X 2"	
2	15559-OC	3		WASHER, SAE FLAT - .3125"	
3	REF.	1	🕮	TRAVEL BRAKE FOOT PEDAL	ES
4	16018-OC	3		BUSHING, REDUCER - 6405-6-4	
5	REF.	1	🕮	OPERATOR'S CAB	OC-1
6	15604-OC	4		BOLT - .25" X .75"	
7	10757-OC	4		WASHER, SAE FLAT - .25"	
8	REF.	1	🕮	WHEEL DRIVE FOOT CONTROL	ES

🕮 See referenced page for component or assembly breakdown.

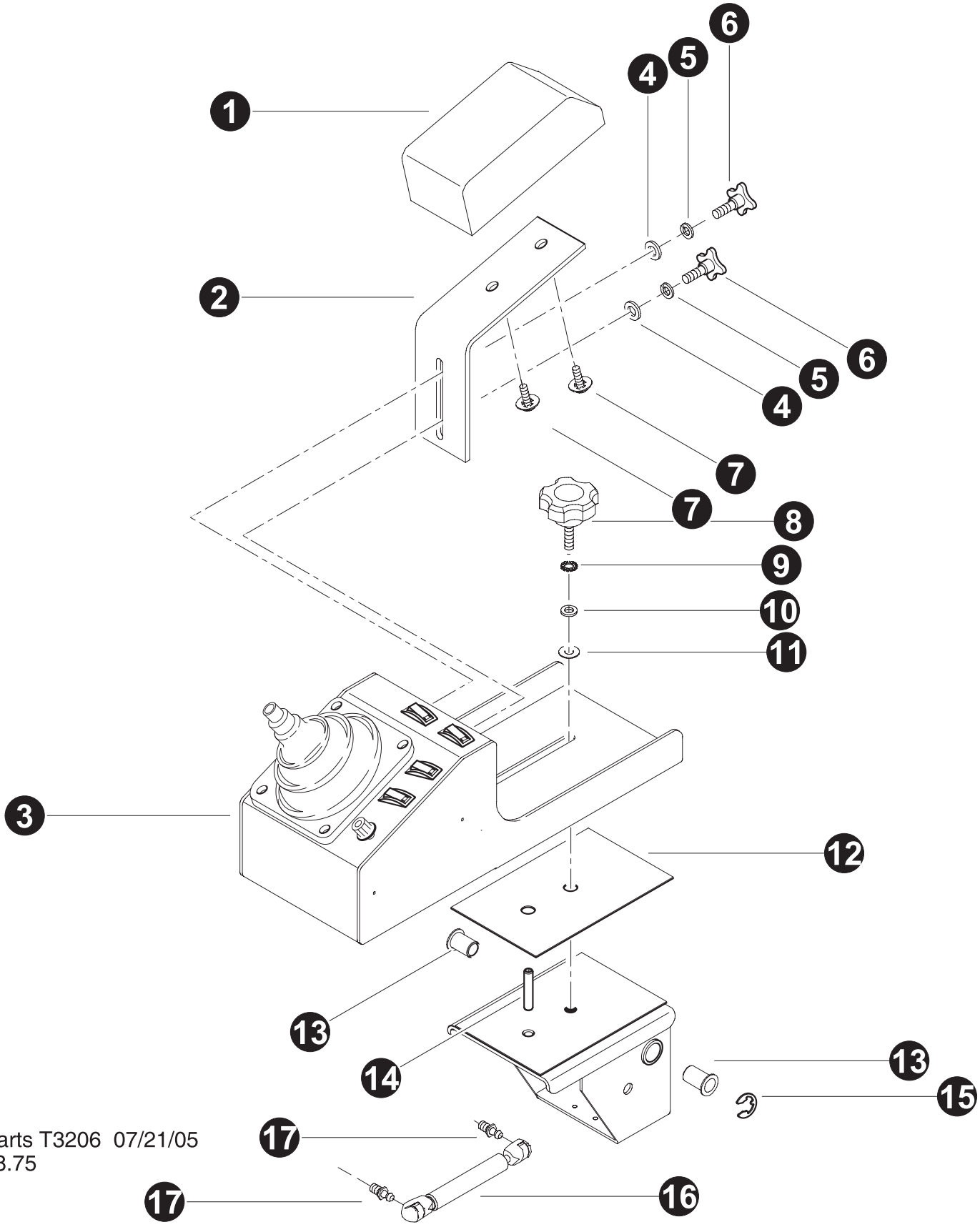


Parts T3207 07/21/05
18.75

OPERATOR'S SEAT BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51633-OC	1	❑	SEAT ASSY, AIR RIDE and HEATER	
2	52077-OC	1		COMPRESSOR, air ride seat (24 VOLT)	
3	REF.	1	🕮	JOYSTICK CONTROL ARM ASSEMBLY	OC-3
4		1		KIT, tethers (104949 PS)	
5		1		COVER, top seat back (308098 DN)	
6		1		LEVER, lumbar adjustment	
7		1		COVER, bottom seat (307025 DN)	
8		1		TRACK SET, adjustable slides (179837 PS)	
9		1	❑	SUSPENTION, low profile w/air (108106 PS)	
10		1		VALVE, air ride with hardware (102715 PS)	
11		1		SPRING, air bag (103351 PS)	
12		1		SHOCK, heavy duty (102362 PS)	
13		1		BELLOWS, suspention cover (102805 PS)	
14		1		KNOB, recliner adjustment (101965 PS)	
15		1		SEAT BELT, retractable (103041 PS)	

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



Parts T3206 07/21/05
18.75

OPERATOR'S CONTROL ARM BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1		1		PAD, arm rest	
2	51942-OC	1		BRACKET, ARM REST	
3	REF	1		JOYSTICK BRACKET ASSEMBLY	ES-3
4	15528-OC	2		WASHER, SAE FLAT - .375"	
5	10701-OC	2		WASHER, LOCK - .375"	
6		2		KNOB, arm rest adjustment	
7		2		BOLT,	
8		1	❑	KNOB, control arm adjustment (104089 PS)	
9		1		WASHER, serrated lock - .375"	
10	15528-OC	1		WASHER, SAE FLAT - .375"	
11		1		WASHER, plastic slide 3/8"	
12		1		SLIDER, control arm (505638 PS)	
13		2		BUSHING, plastic (707606 PS)	
14		1		PIN, roll (708325 PS)	
15		1		RING, retaining (707616 PS)	
16		1	❑	KIT, gas spring (104099 PS)	
17		2		BOLT, spring mounts	

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

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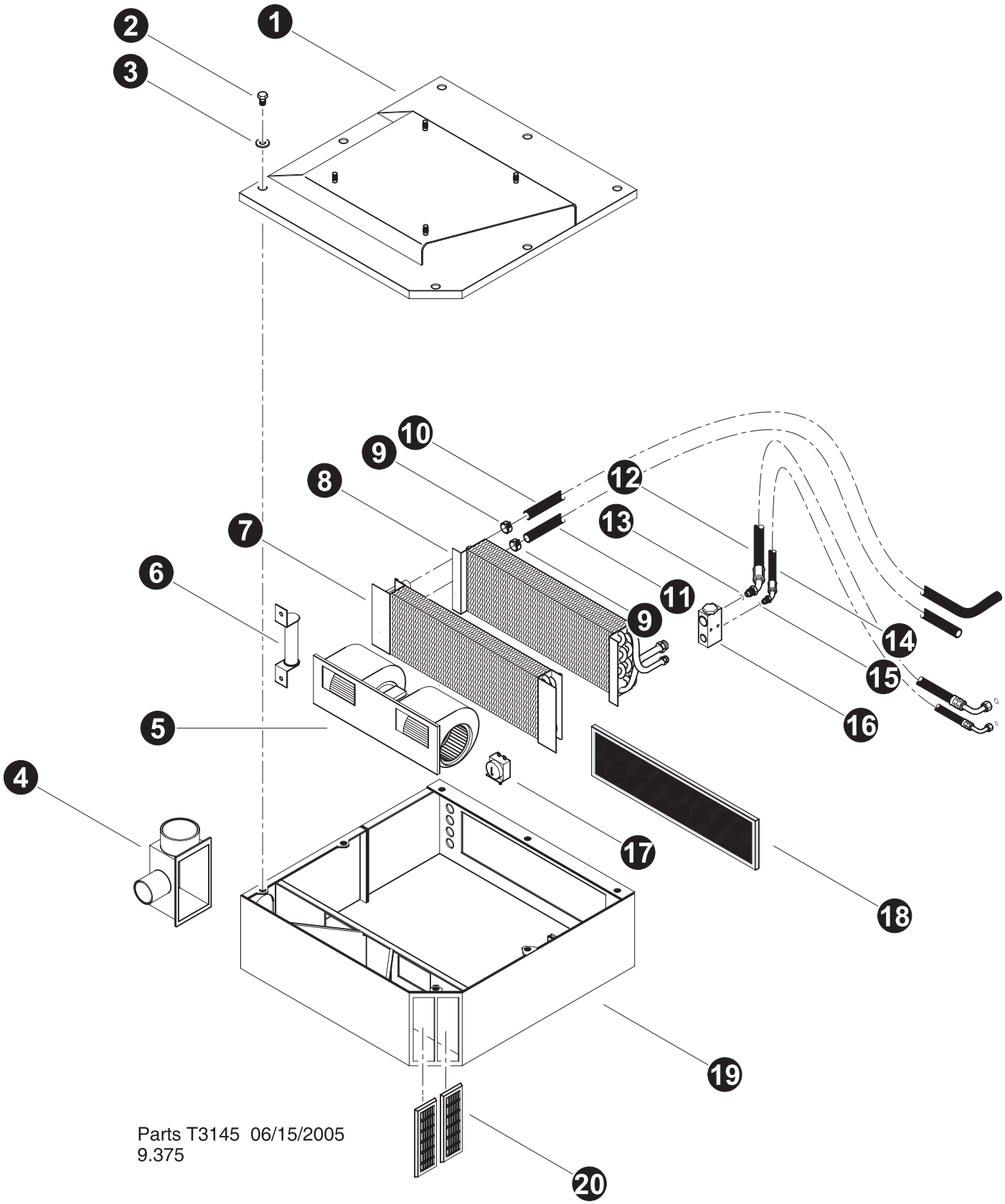
Section OC-4

Operator's Cab -
Air Conditioner / Heater Unit



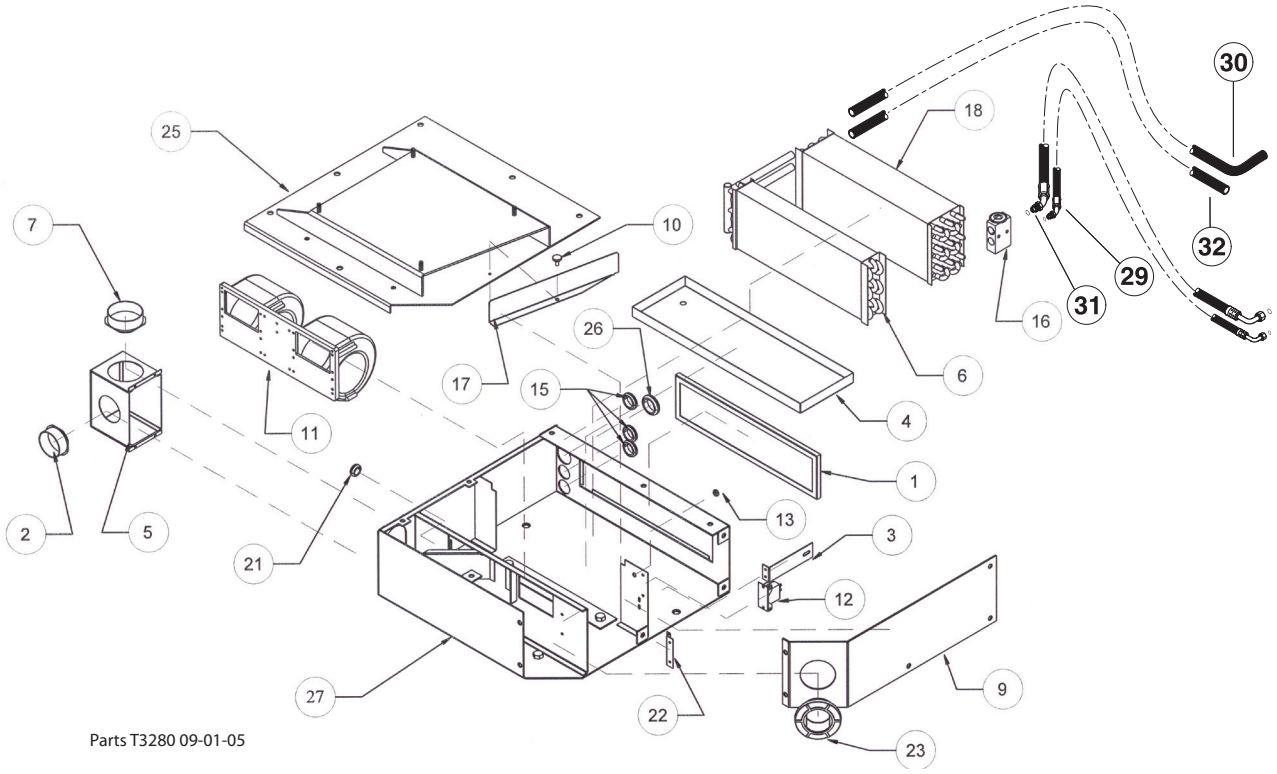
Parts T3145 06/15/2005
9.375

AIR CONDITIONER / HEATER UNIT

(machines - 0098 thru. 0114, 0116, 0117, & 0120)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51688-OC	1	❑	KIT, HEATER/ AC - EAGLE	
1		1		COVER, SEAT MOUNT (103071)	
2	15542-OC	7		BOLT - .375" X .75"	
3	15528-OC	7		WASHER, SAE FLAT - .375"	
4		1		COVER, AIR DUCT	
5		1		BLOWER ASSEMBLY (405833)	
6		1		RESISTOR, FAN SPEED CONTROL (405414)	
7		1		HEATER COIL (405607)	
8		1		EVAPORATOR COIL (405608)	
9		2		CLAMP, HOSE (301159)	
10		1		HOSE, 90 formed (407608)	
11		1		HOSE, 5/8" bulk (090016)	
12		1		HOSE ASSEMBLY #10 (490727)	
13		1		O-RING #10 (405864)	
14		1		HOSE ASSEMBLY #06 (490726)	
15		1		O-RING #06 (405862)	
16		1		EXPANSION VALVE (405017)	
17		1		SWITCH, THEROSTAT (404968)	
18		1		FILTER, INTAKE AC-HEAT (402332)	
19		1		HOUSING, MAIN (203175)	
20		2		LOUVER, RECTANGLE (405687)	
-		1		WIRING HARNESS (420377)	

❑ Kit or Assembly includes al items Underneath



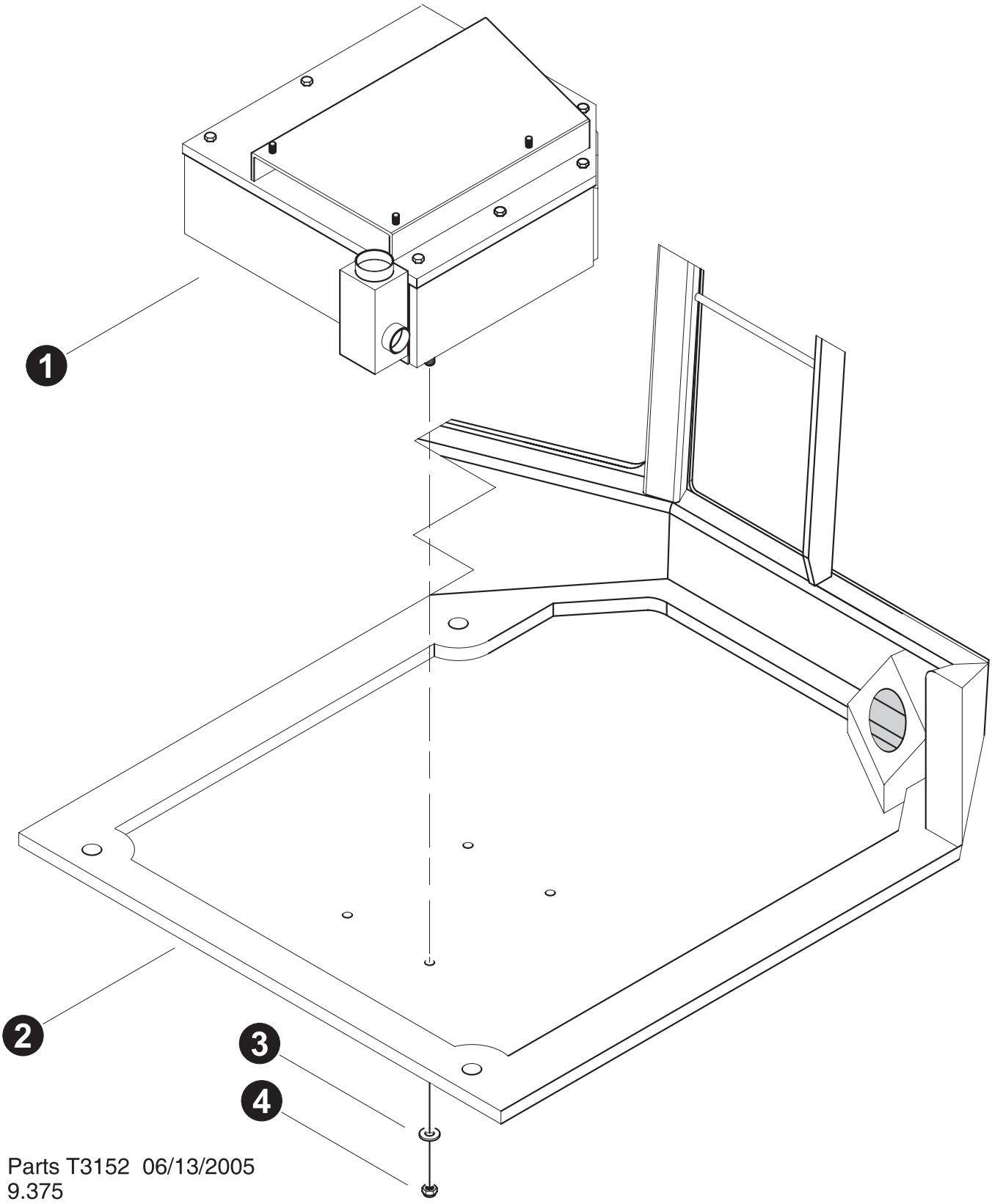
Parts T3280 09-01-05

AIR CONDITIONER / HEATER UNIT

(machines - 0121 and above)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	52104-OC	1	❑	KIT, HEATER/AC - BADGER (830/630)	
1	-OC	1		FILTER, (BT8-1038)	
2	-OC	1		ADAPTER, HOSE - 2.5" (BT2-0998)	
3	-OC	1		SUPPORT, EXP VALVE (BA-765978-6)	
4	-OC	1		PAN, DRAIN (BA6-0940)	
5	-OC	1		BOX, HOSE ADAPTER (BA-765-978-28)	
6	-OC	1		HEATER CORE (BA6-1007)	
7	-OC	1		ADAPTER, HOSE -3" (BT2-1024)	
8	15542-OC	11		BOLT - .375" X .75"	
9	-OC	1		PANEL, ACCESS (BA-765-978-27)	
10	-OC	1		KNOB (BT0-0787)	
11	-OC	1		BLOWER ASSEMBLY - 24V (BT3-0104-4)	
12	-OC	1		THEROSTAT (R-71-3200)	
13	-OC	1		GROMMET - .25" X .375" (2074)	
14	15528-OC	11		WASHER, SAE FLAT - .375"	
15	-OC	3		GROMMET - 1" X 1.75" (BA0-1014)	
16	-OC	1		VALVE, EXPANSION (R-71-8300)	
17	-OC	1		COVER, SEAT MOUNT(BA-765-978-19)	
18	-OC	1		COIL, EVAPORATOR (BA6-1008)	
19	-OC	1		NUT, 1/4" SPN LOCK (ODV3)	
20	-OC	1		BOLT, 1/4" - 24 X 1.5" (B106)	
21	-OC	1		GROMMET - 1.125" X .625" (BA0-1000)	
22	-OC	1		BRACKET, SIDE BLOWER (BA-765-978-25)	
23	-OC	1		DIFFUSER (BT2-1019)	
24	-OC	6		BOLT, 10-24 X .50" (1XWP)	
25	-OC	1		COVER ASSEMBLY (BA-765-978-26)	
26	-OC	1		GROMMET - 1.3125" X 2" (BA0-1013)	
27	-OC	1		HOUSING PEDESTAL (BA-765-978)	
28	-OC	6		NUT, 10-24 (ODVO)	
29	-OC	1		HOSE, AC - #6 (BA-765-H6)	
30	-OC	1		HOSE, HEATER - PRE FORMED (BA9-0800)	
31	-OC	1		HOSE, AC - #10-12 (BA-765-H12)	
32	-OC	31"		HOSE, HEATER - 5/8" (H-153-B)	

❑ Kit or Assembly includes al items Underneath



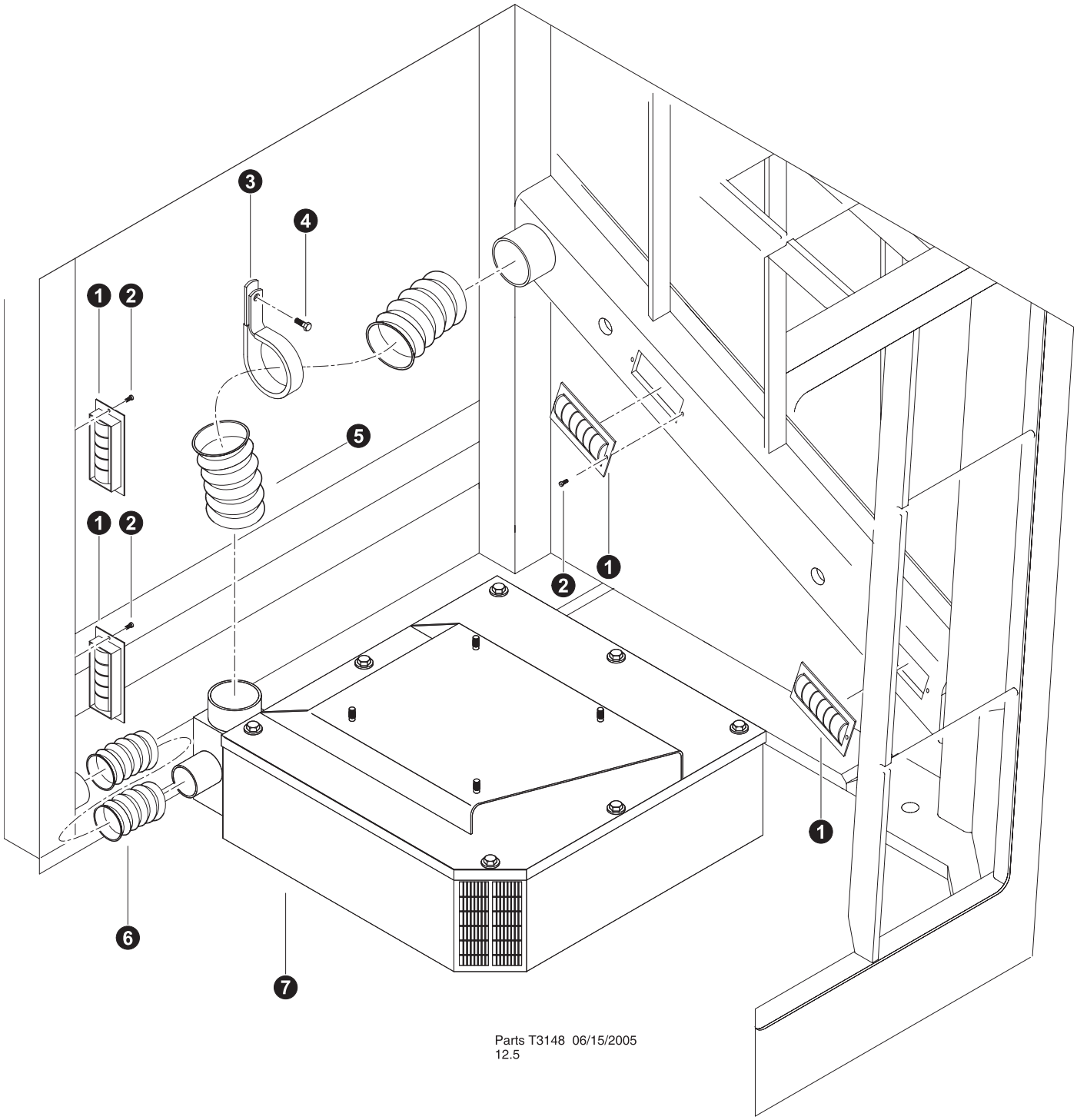
Parts T3152 06/13/2005
9.375

AIR CONDITIONER / HEATER UNIT

(Installation)
(machines - 0098 thru. 0114, 0116, 0117, & 0120)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	AIR CONDITIONER / HEATER UNIT.	OC-4
2	REF.	1	🕮	OPERATOR'S CAB ASSEMBLY	OC-1
3	50464-OC	4		WASHER, SAE FLAT - .75" (EXTRA THICK)	
4	10815-OC	4		NUT, LOCK - .5"	

❑ Kit or Assembly includes al items Underneath



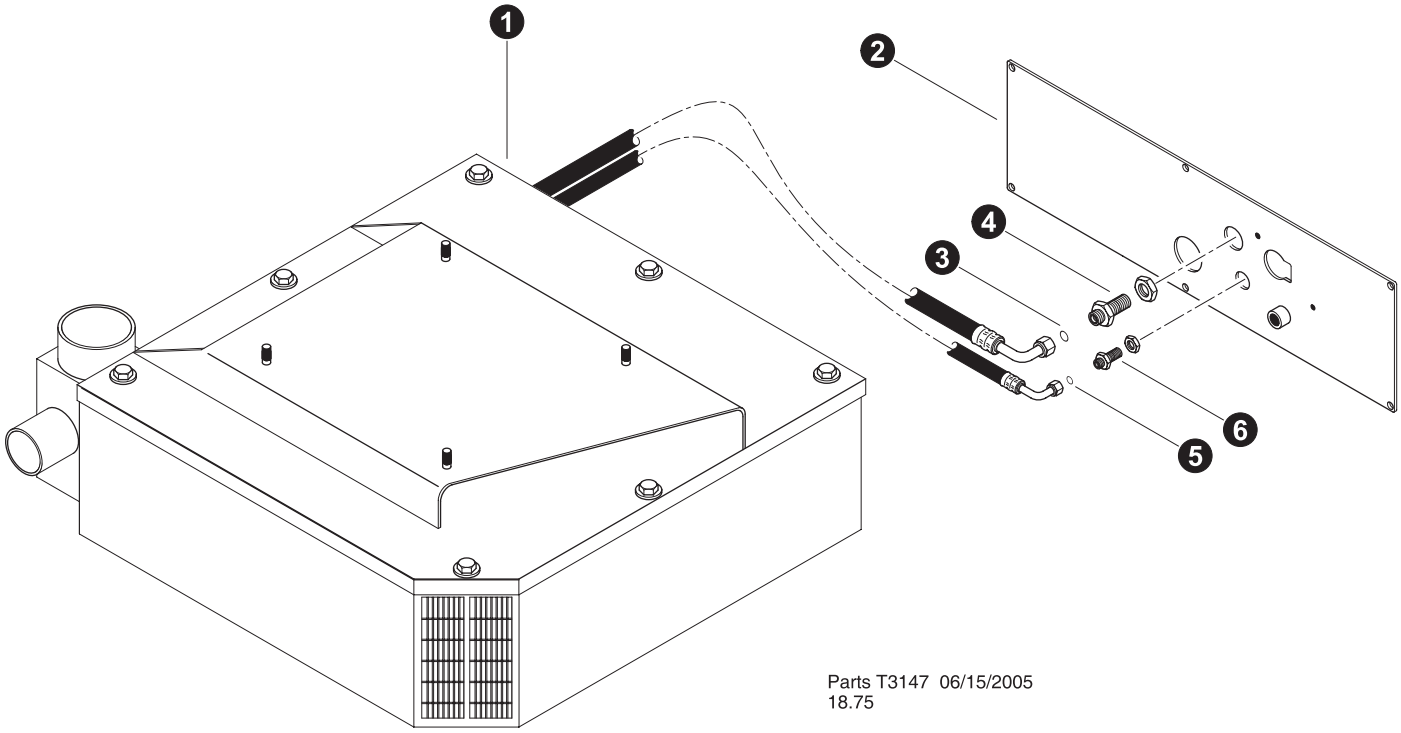
Parts T3148 06/15/2005
12.5

AIR CONDTITIONER / HEATER DUCT INSTALLATION

(machines - 0098 thru. 0114, 0116, 0117, & 0120)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51640-OC	4		VENT, LOUVER - CAB HEAT (TF830)	
2	-OC	8		SCREW, self-tapping - #6 x 1/2" (84933)	
3	51795-OC	1		CLAMP, rubber coated - 3 1/2"	
4	17255-OC	1		SCREW, SELF TAPPING - #10-24 X .75"	
5	-OC	AR	✂	HOSE, flexible - 3"	
6	50938-OC	AR	✂	HOSE, flexible - 2 1/2"	
7	REF.	1	🕮	AIR CONDITIONER / HEATER UNIT.	OC-4

✂ Built material - order length rquired in feet or meters.
❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.

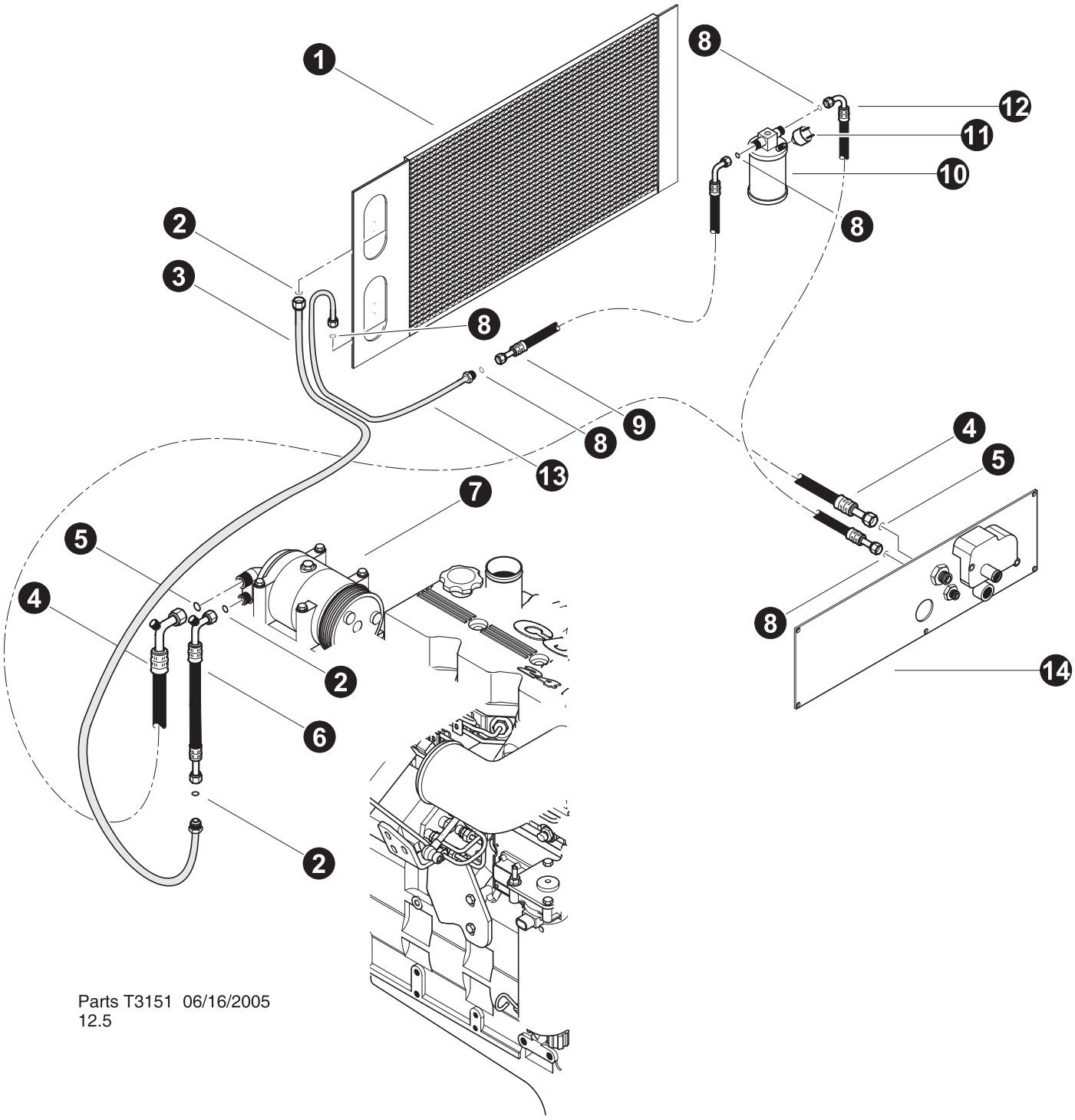


Parts T3147 06/15/2005
18.75

AIR CONDITIONER LINES
(Cab Interior)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	AIR CONDITIONER / HEATER UNIT.	OC-4
2	51949-OC	1		BULKHEAD PLATE, CAB SIDE	
3		1		O-RING #10 (405864)	
4	50944-OC	1		CONNECTOR, straight bulkhead - #10	
5		1		O-RING #06 (405862)	
6	50943-OC	1		CONNECTOR, straight bulkhead - #6	

❑ See referenced page for component or assembly breakdown.



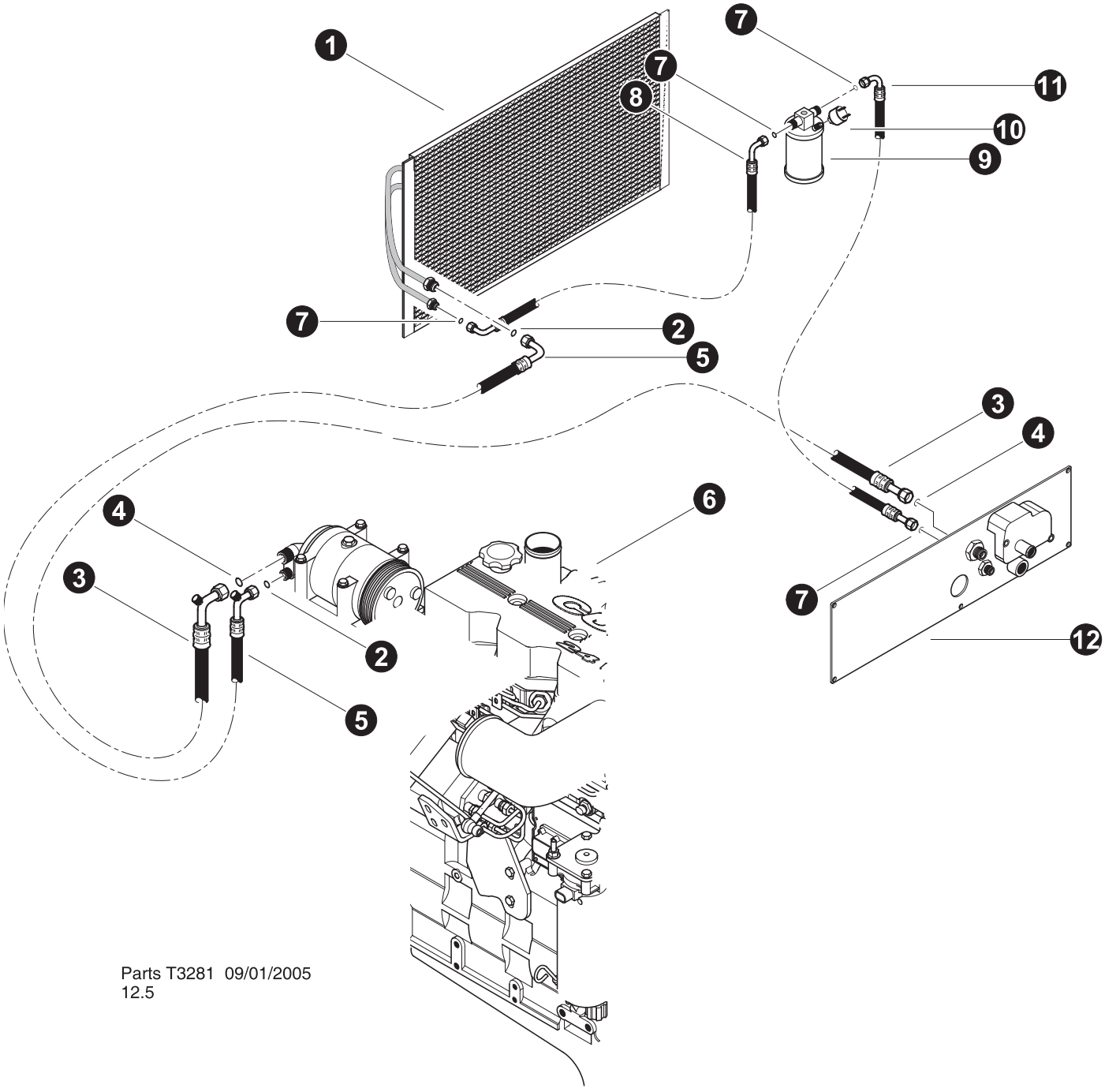
Parts T3151 06/16/2005
12.5

AIR CONDITIONER LINES
(Cab Extrior)

(machines - 0098 thru. 0114, 0116, 0117, & 0120)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52080-OC	1		CONDENSER, A/C Eagle Unit (830-630)	
2	-OC	3		O-RING #08 (405863)	
3	-OC	1		TUBING, 1/2" CONDENSOR LINE (830-630)	
4	-OC	1		HOSE, air conditioner - #10 x 119" (Female 90°/Female STR) (Compressor to Cab Bulkhead)	
5		2		O-RING #10 (405864)	
6	-OC	1		HOSE, air conditioner - #8 x 13.5" (Female 90°/Female STR) (Compressor to Condensor tubing inlet)	
7	REF	1		CUMMINS QSC ENGINE ASSEMBLY	EE-1
8		5		O-RING #06 (405862)	
9	-OC	1		HOSE, air conditioner - #6 x 40" (Female 90°/Female STR) (Condensor tubing outlet to Drier inlet)	
10	50937-OC	1		DRIER, A/C - (EAGLE 24V SYSTEM)	
11	50951-OC	1		SWITCH, binary (Eagle unit)	
12	-OC	1		HOSE, air conditioner - #6 x 78" (Female 90°/Female STR) (Drier outlet to Cab Bulkhead)	
13	-OC	1		TUBING, 3/8" CONDENSOR LINE (830-630)	
14	REF.	1	🕮	BULKHEAD PLATE ASSEMBLY	OC-4

🕮 See referenced page for component or assembly breakdown.



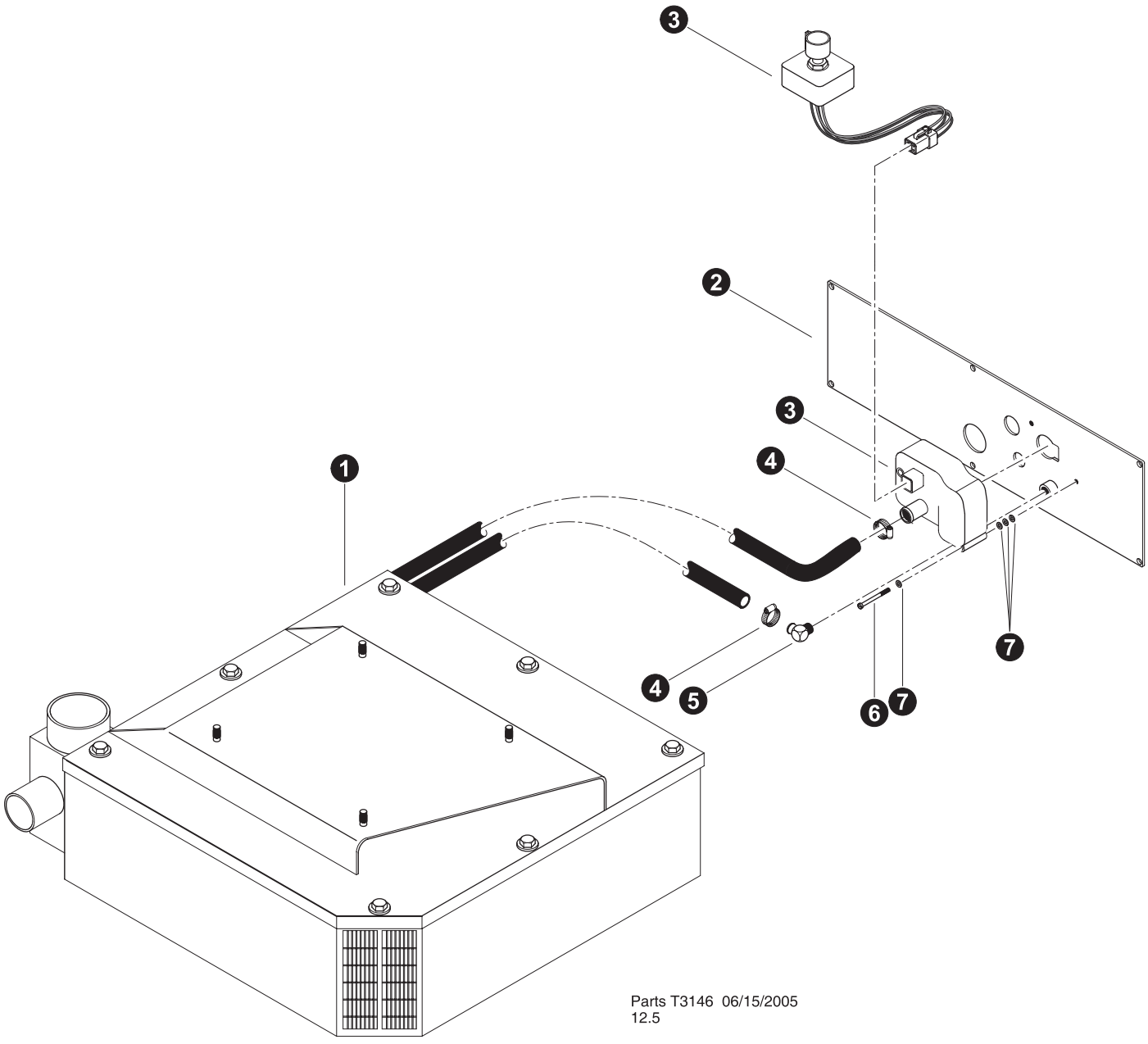
Parts T3281 09/01/2005
12.5

AIR CONDITIONER LINES
(Cab Extrior)

(machines - 0121 and above)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52156-OC	1		CONDENSER, A/C Badger Unit (830-630)	
2	-OC	3		O-RING #08 (405863)	
3	-OC	1		HOSE, air conditioner - #10 x 110" (Female 90°/Female STR) (TP-101) (Compressor to Cab Bulkhead)	
4		2		O-RING #10 (405864)	
5	-OC	1		HOSE, air conditioner - #8 x 16" (Female 90°/Female 90°) (TP-100) (Compressor to Condensor tubing inlet)	
6	REF	1		CUMMINS QSC ENGINE ASSEMBLY	EE-1
7		5		O-RING #06 (405862)	
8	-OC	1		HOSE, air conditioner - #6 x 80" (Female 90°/Female 90°) (TP-102) (Condensor tubing outlet to Drier inlet)	
9	50937-OC	1		DRIER, A/C - (EAGLE 24V SYSTEM)	
10	50951-OC	1		SWITCH, binary (Eagle unit)	
11	-OC	1		HOSE, air conditioner - #6 x 80" (Female 90°/Female STR) (TP-103) (Drier outlet to Cab Bulkhead)	
12	REF.	1	🕮	BULKHEAD PLATE ASSEMBLY	OC-4

🕮 See referenced page for component or assembly breakdown.

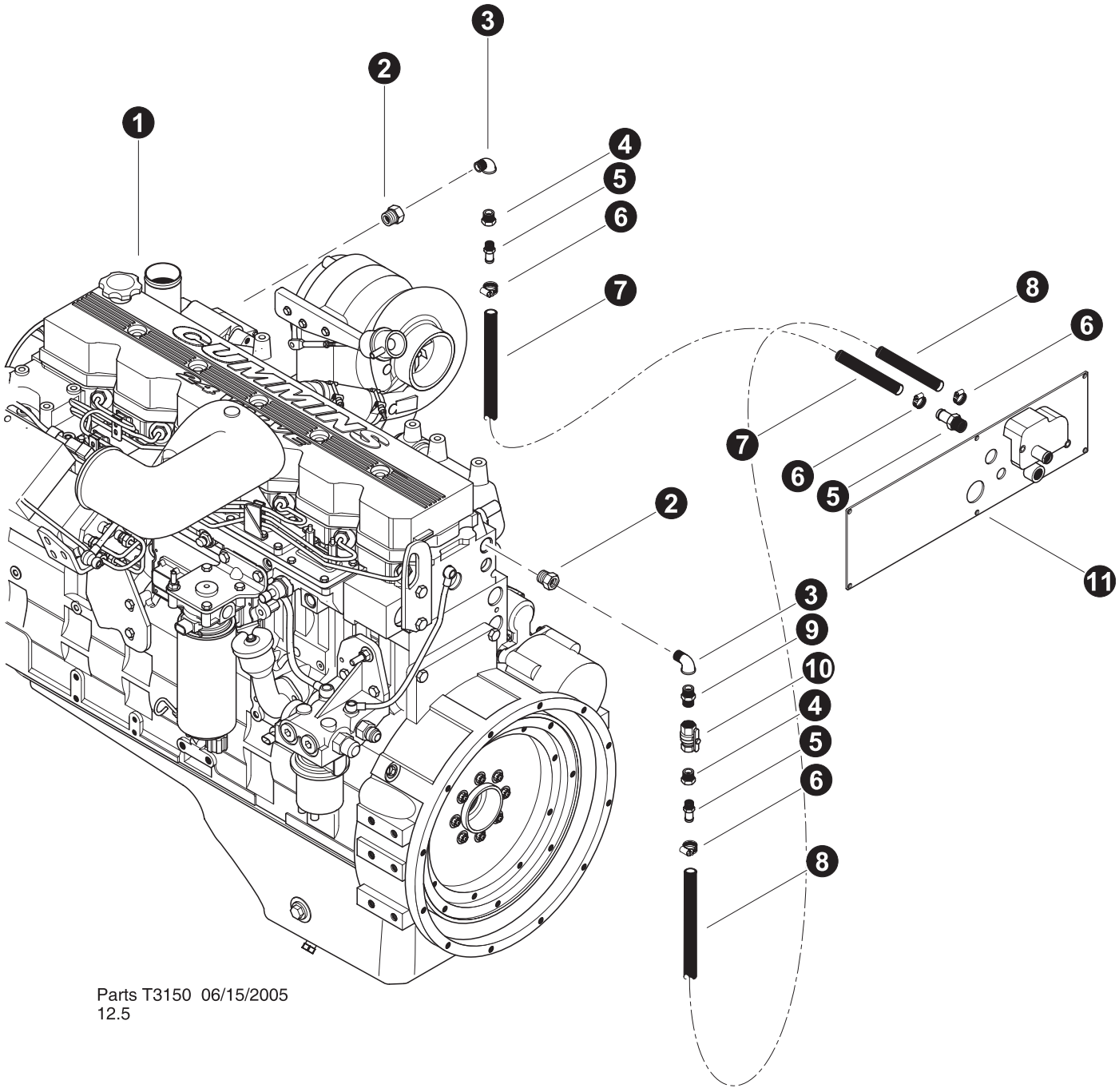


Parts T3146 06/15/2005
12.5

HEATER LINES
(Cab Interior)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	AIR CONDITIONER / HEATER UNIT.	OC-4
2	51949-OC	1		BULKHEAD PLATE, CAB SIDE	
3	50936-OC	1		VALVE, WATER - KIT (24v Eagle with Electronic Thermostat control)	
4	10759-OC	2		CLAMP, hose - worm style - 7/8"	
5	52081-OC	1		ELBOW, 90 BRASS - NIPPLE #6 npt x 5/8	
6	16127-OC	2		SCREW, MACHINE - #10-24 X 1.25"	
7	10800-OC	8		WASHER, FLAT - .25"	

✂ Bulk material - order length required in feet or meters.
🕮 See referenced page for component or assembly breakdown.



Parts T3150 06/15/2005
12.5

HEATER LINES
(Cab Exterior - Cummins QSC)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		CUMMINS QSC ENGINE ASSEMBLY.	EE-1
2	15513-OC	2		BUSHING, REDUCER - 5406-12-8	
3	15660-OC	2		ELBOW, BLACK 90 STREET - .5"	
4	15630-OC	2		BUSHING, REDUCER - 5406-8-6	
5	51502-OC	3		NIPPLE, KING - .38NPT X .63 HOSE	
6	10759-OC	4		CLAMP, hose - worm style - 7/8"	
7	16717-OC	1	✂	HOSE, heater - 5/8" *(Bulkhead to engine)*	
8	16717-OC	1	✂	HOSE, heater - 5/8" *(Bulkhead to engine)*	
9	16126-OC	1		NIPPLE, CLOSE .5"	
10	51714-OC	1		VALVE, BALL - WATER SHUT OFF HEATER 1/2"	
11	REF.	1	🕮	BULKHEAD PLATE ASSEMBLY	OC-4

✂ Bulk material - order length required in feet or meters.
🕮 See referenced page for component or assembly breakdown.

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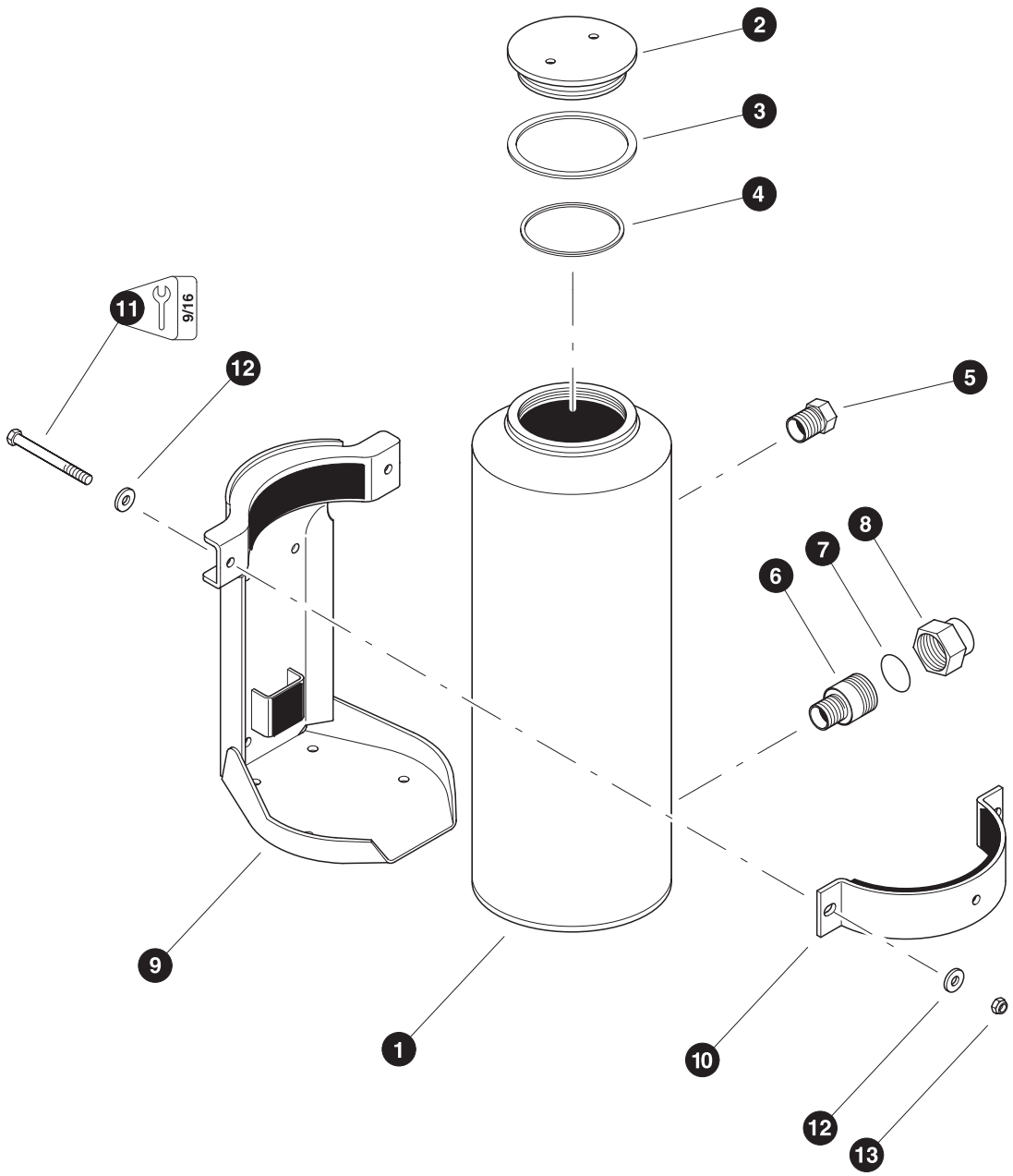
Section OC-5

Operator's Cab -
Optional Fire Suppression System

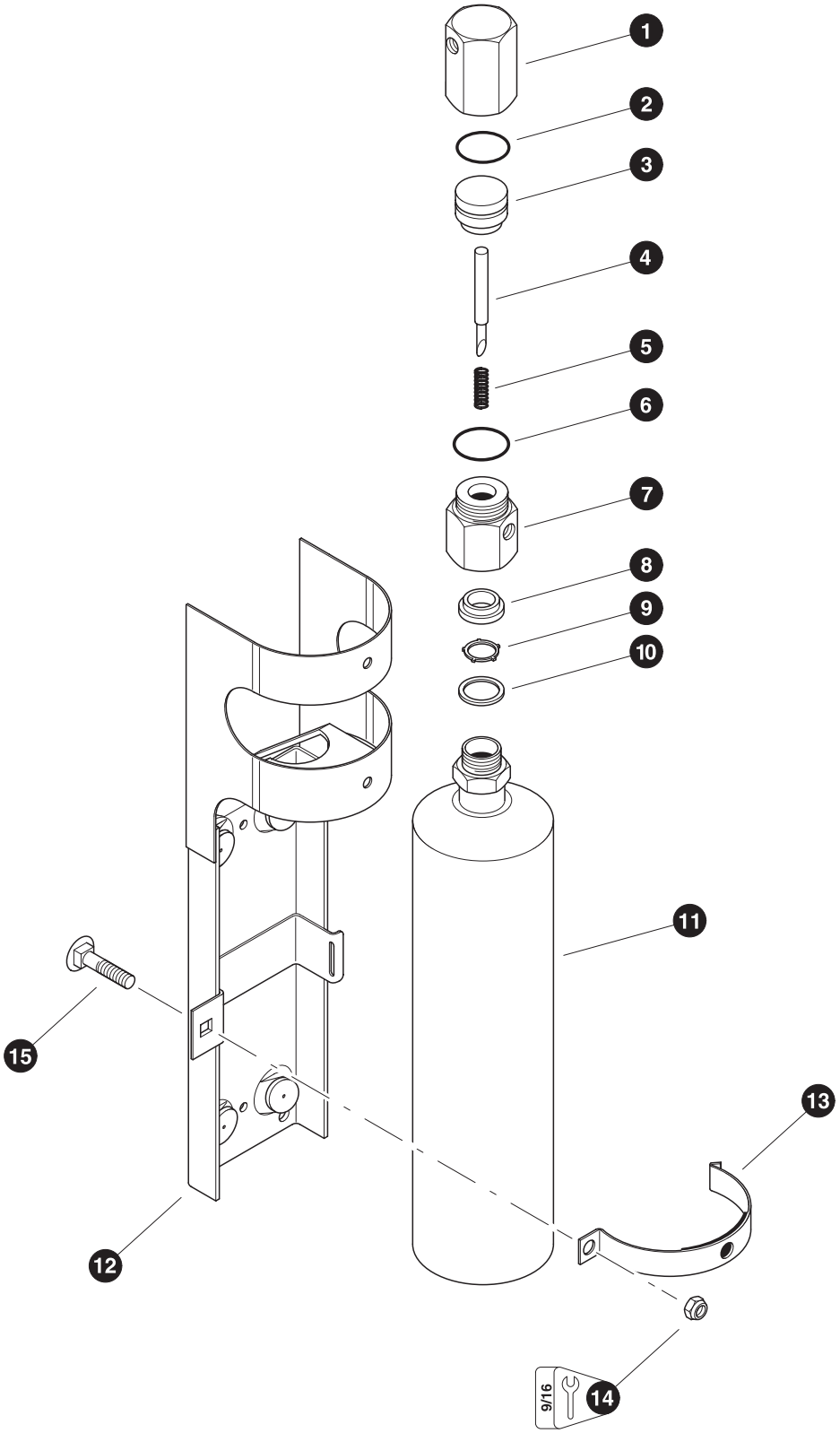


Parts 00595 10/17/2000
25.0

DRY CHEMICAL TANK

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	24616-OC	1	❑	FIRE PROTECTION SYSTEM - ANSUL (SC-N)	
1	NSS	1		DRY CHEMICAL TANK	
-	21235-OC	1	❑	FILL CAP ASSEMBLY	
2	NSS	1		CAP, fill	
3	21233-OC	1		GASKET	
4	21234-OC	1		RING, quad	
5	21236-OC	1		ADAPTER	
-	21237-OC	1	❑	BURSTING DISC UNION	
6	21238-OC	1		ADAPTER	
7	21239-OC	1		DISC, bursting	
8	21240-OC	1		RING, union tail piece	
-	21241-OC	1	❑	DRY CHEMICAL TANK BRACKET	
9	NSS	1		BRACKET, dry chemical tank	
	21244-OC	1		PAD, clamp arm	
	21245-OC	1		PAD, bumper	
	21246-OC	1		PAD, base	
10	21242-OC	1		CLAMP. band	
	21243-OC	1		PAD, band clamp	
11	15592-OC	2		BOLT - 3/8" x 4"	
12	15528-OC	4		WASHER, SAE flat - 3/8"	
13	15507-OC	2		NUT, nylock - 3/8"	

☐ Kit or Assembly - includes all items indented underneath.

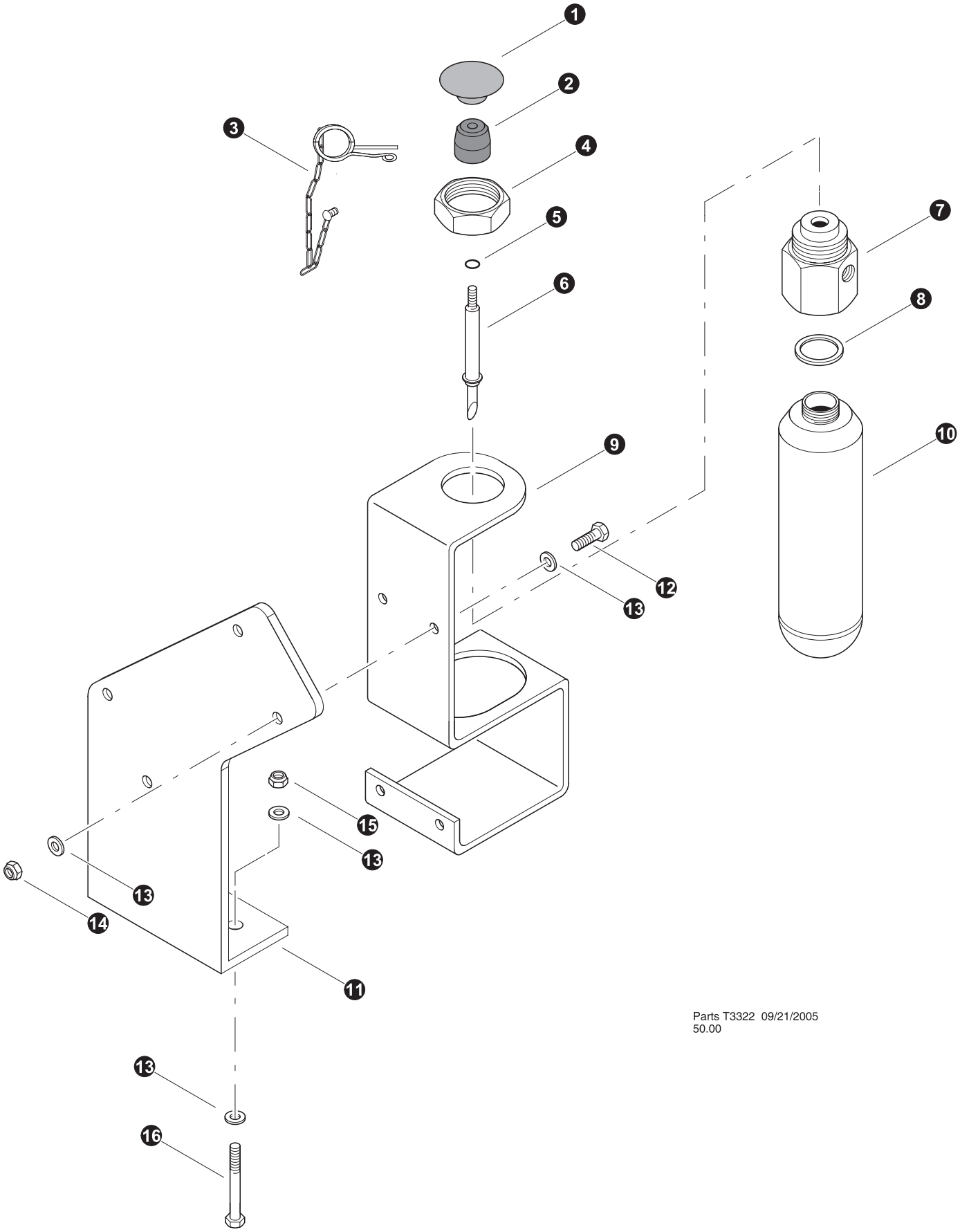


Parts 00596 10/17/2000
37.50

NITROGEN CYLINDER

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	24616-OC	1	❑	FIRE PROTECTION SYSTEM - ANSUL (SC-N)	
--	21248-OC	1	❑	PNEUMATIC ACTUATOR ASSEMBLY	
1	21249-OC	1		BODY, actuator - upper	
2	21250-OC	1		O-RING, slave piston	
3	21251-OC	1		PISTON, pneumatic slave	
4	21252-OC	1		PIN, puncture	
5	21253-OC	1		SPRING	
6	21254-OC	1		O-RING, actuator body	
7	21255-OC	1		BODY, actuator - lower	
8	21256-OC	1		WASHER	
9	21257-OC	1		RING, retaining	
10	21258-OC	1		GASKET	
11	21276-OC	1		CARTRIDGE, nitrogen *(Includes shipping cap)*	
--	21260-OC	1	❑	BRACKET ASSEMBLY, nitrogen tank	
12	NSS	1		BRACKET, nitrogen cylinder	
13	21261-OC	1		ARM, clamp	
	21262-OC	1		PAD, clamp arm	
14	15507-OC	1		NUT, nylock - 3/8"	
15	21263-OC	1		BOLT, carriage - 3/8" x 1"	

☐ Kit or Assembly - includes all items indented underneath.

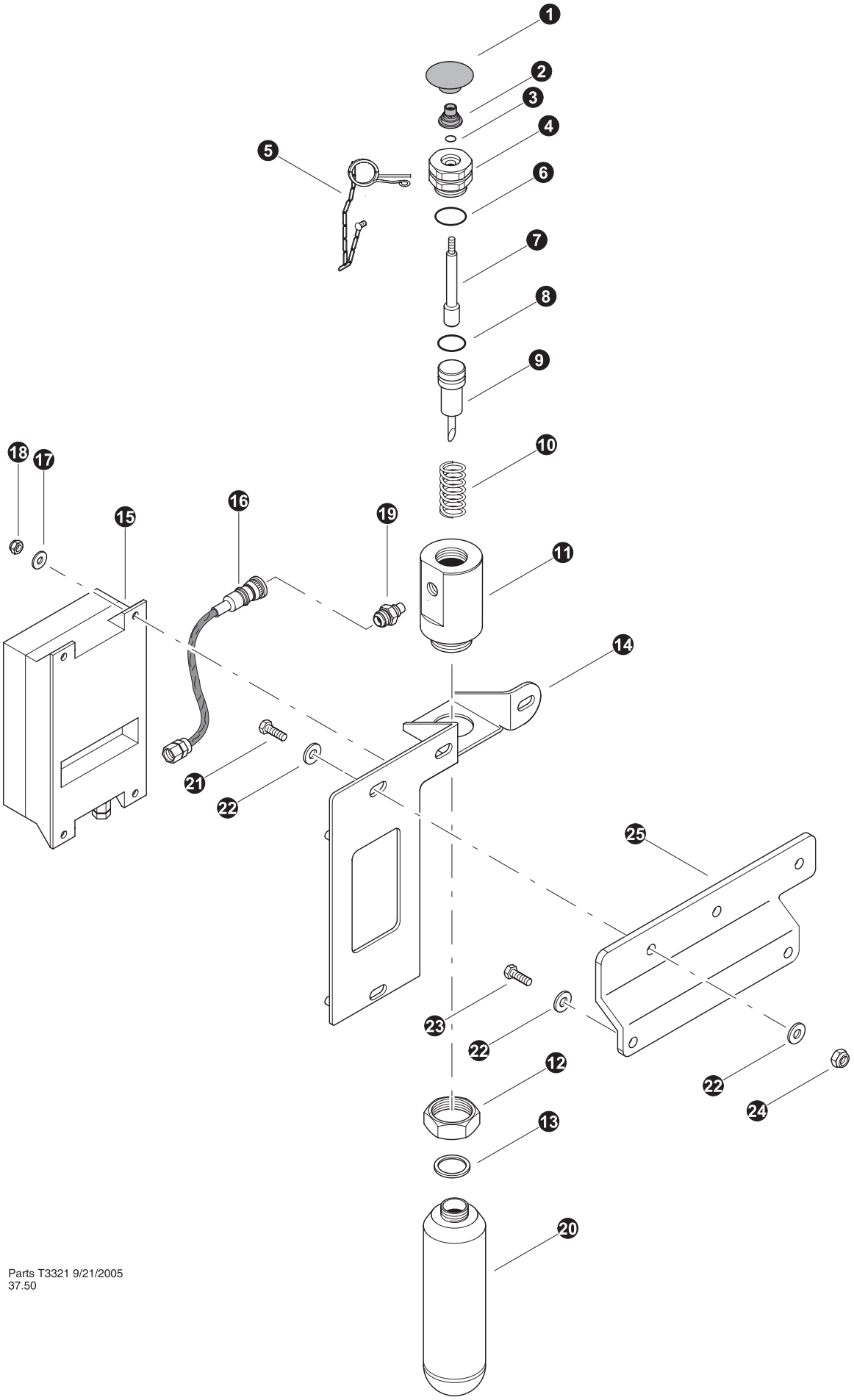


Parts T3322 09/21/2005
50.00

MANUAL ACTUATOR
(Exterior Mount)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	24616-OC	1	❑	FIRE PROTECTION SYSTEM - ANSUL (SC-N)	
--	21264-OC	1	❑	MANUAL ACTUATOR ASSEMBLY	
1	21265-OC	1		KNOB	
2	21266-OC	1		BOOT	
3	21272-OC	1		PIN, safety ring	
	21273-OC	1		CHAIN	
	21274-OC	1		SCREW, drive	
	21275-OC	1		WIRE, lead seal *(Not shown)*	
4	21267-OC	1		NUT, jam	
5	21270-OC	1		O-RING, puncture pin	
6	21271-OC	1		PIN, puncture	
7	21269-OC	1		BODY, actuator	
8	21258-OC	1		GASKET	
9	21268-OC	1		BRACKET, manual actuator	
10	21259-OC	1		CARTRIDGE, manual actuator *(Includes shipping cap)*	
11	51937-OC	1		BRACKET, FIRE SUPPRESSION MANUAL ACTUATOR	
12	15576-OC	2		BOLT - .25" X 1"	
13	10757-OC	6		WASHER, SAE FLAT - .25"	
14	15509-OC	2		NUT, NYLOCK - .25"	
15	15509-OC	2		NUT, NYLOCK - .25"	
16	15568-OC	2		BOLT - .25" X 2"	

☐ Kit or Assembly - includes all items indented underneath.

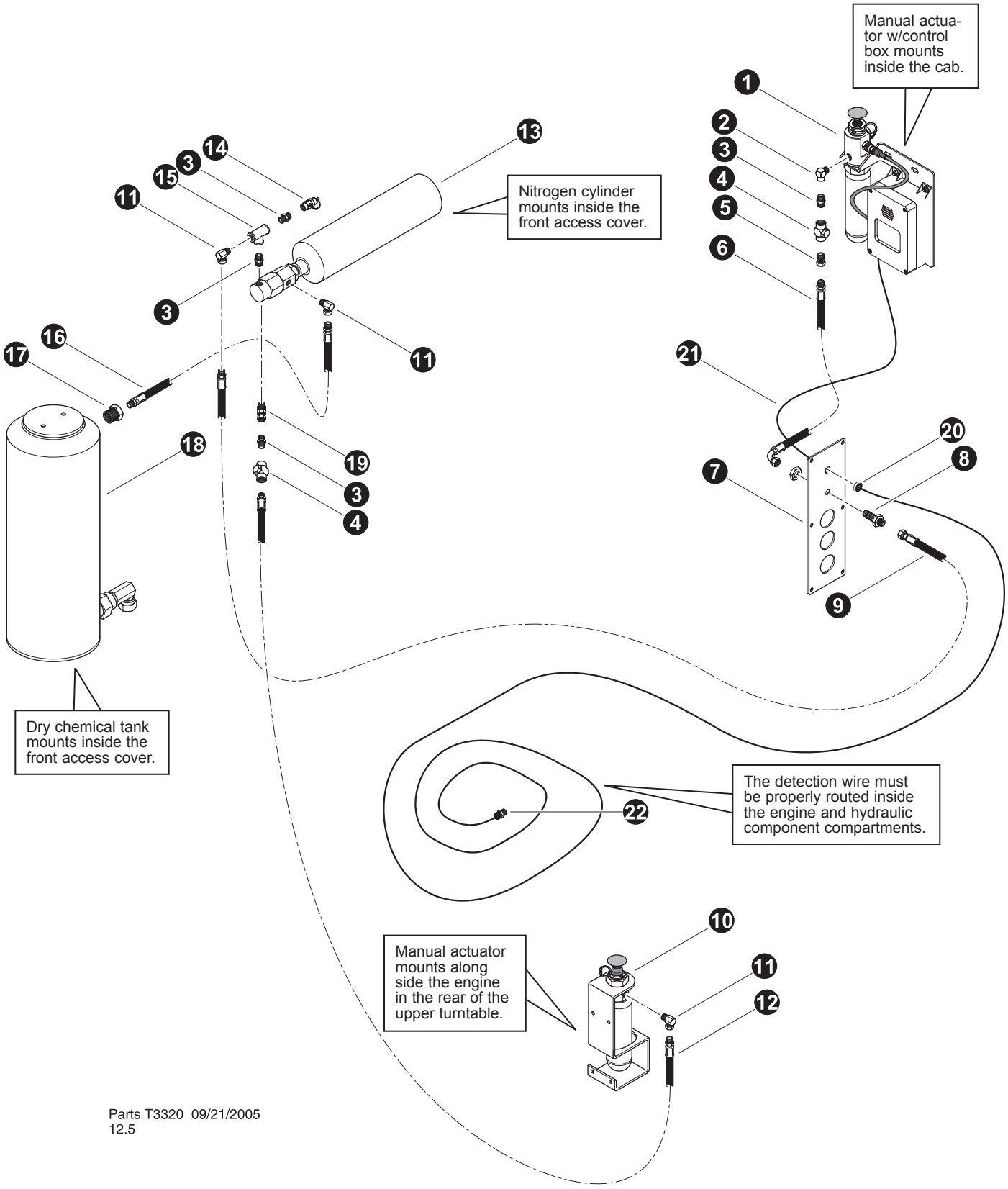


Parts T3321 9/21/2005
37.50

AUTO / MANUAL ACTUATOR
(Interior Mount)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	24616-OC	1	❑	FIRE PROTECTION SYSTEM - ANSUL (SC-N)	
--	21294-OC	1	❑	AUTO / MANUAL ACTUATOR ASSEMBLY	
1	21265-OC	1		KNOB	
2	21277-OC	1		BOOT	
3	21279-OC	1		O-RING, stem	
4	21278-OC	1		ADAPTER, boot	
5	21272-OC	1		PIN, safety ring	
	21273-OC	1		CHAIN	
	21274-OC	1		SCREW, drive	
	21275-OC	1		WIRE, lead seal *(Not shown)*	
6	21280-OC	1		O-RING, adapter boot	
7	21281-OC	1		STEM	
8	21282-OC	1		O-RING, puncture pin	
9	21283-OC	1		PIN, puncture	
10	21284-OC	1		SPRING	
11	21285-OC	1		BODY, adapter	
12	21286-OC	1		NUT, jam	
13	21258-OC	1		GASKET	
14	- - - -	1		BRACKET, auto / manual actuator	
15	NSS	1		CONTROL BOX ASSEMBLY	
16	24626-OC	1		CABLE, signal	
17	10810-OC	4		WASHER, SAE flat - 1/4"	
18	15509-OC	4		BOLT, nylock - 1/4"	
19	16515-OC	1		SQUIB	
20	21288-OC	1		CARTRIDGE, manual actuator *(Includes shipping cap)*	
21	15576-OC	2		BOLT - .25" X 1"	
22	10757-OC	6		WASHER, SAE FLAT - .25"	
23	15604-OC	2		BOLT - .25" X .75"	
24	15509-OC	2		NUT, NYLOCK - .25"	
25	52012-OC	1		BRACKET, FIRE SUPP AUTO / MANUAL ACT.	

❑ Kit or Assembly - includes all items indented underneath.



Parts T3320 09/21/2005
12.5

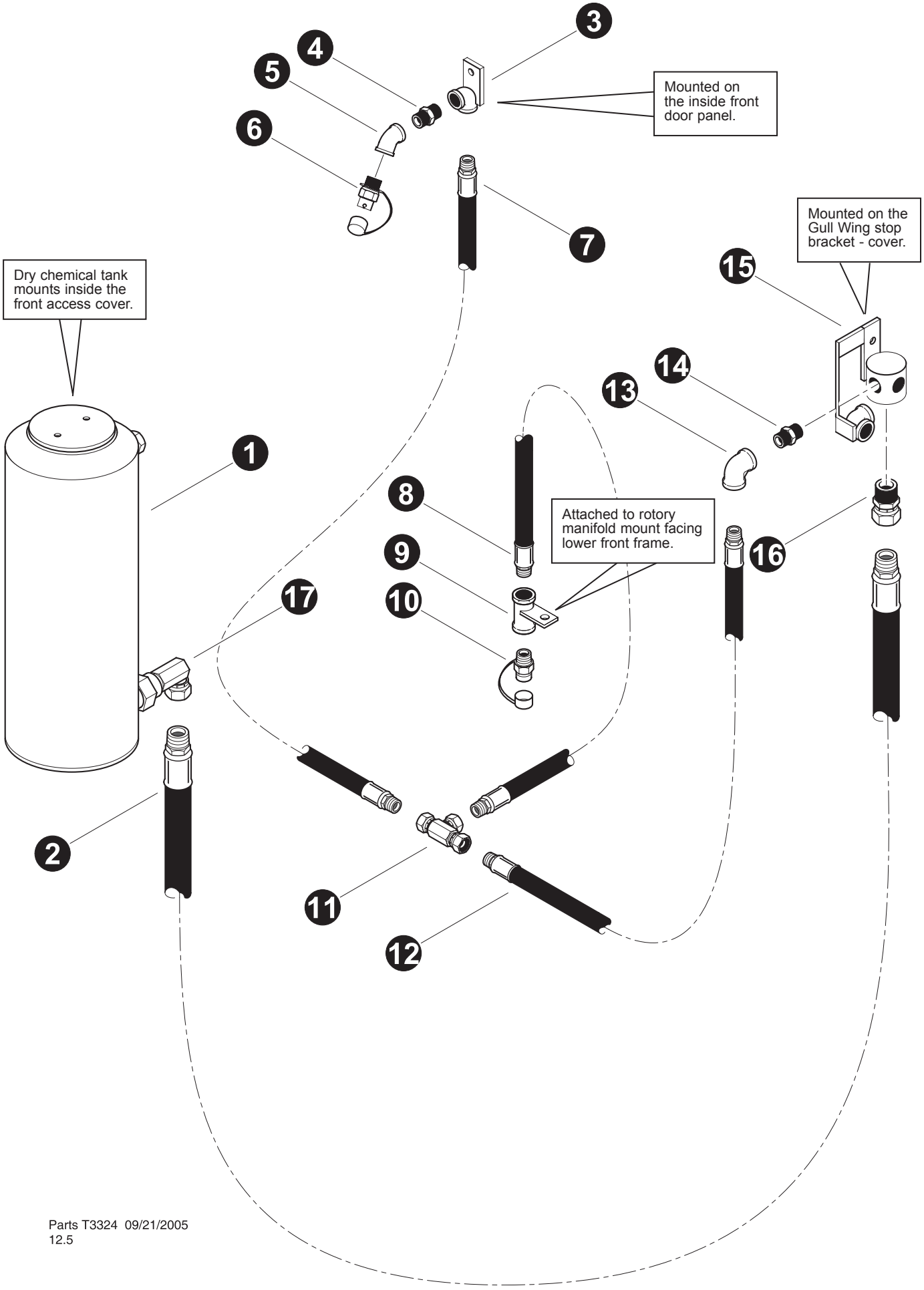
ACTUATION SYSTEM INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	AUTO / MANUAL ACTUATOR ASSEMBLY.	OC-5
2	16251-OC	1		ELBOW, 90 STREET - 5502-4	
3	15567-OC	4		CONNECTOR, straight - 5404-4	
4	16778-OC	2		VALVE, check	
5	11331-OC	1		CONNECTOR, STR SWIVEL - 1404-4-4	
6	-OC	1		HOSE ASSEMBLY - 2030 -04-04PS-04O9 *(Interior auto / manual actuator to nitrogen cylinder)*	
7	REF.	1	🕮	CAB REAR ELECTRICAL BULKHEAD PLATE	ES-2
8	18582-OC	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
9	-OC	1		HOSE ASSEMBLY - 2156 -04-04PS-04OS *(Interior auto / manual actuator to nitrogen cylinder)*	
10	REF.	1	🕮	MANUAL ACTUATOR ASSEMBLY	OC-5
11	10320-OC	3		ELBOW, 90 SWIVEL - 1501-4-4	
12	-OC	1		HOSE ASSEMBLY - 2109 -04-04PS-04PS *(Exterior manual actuator to nitrogen cylinder)*	
13	REF.	1	🕮	NITROGEN CYLINDER ASSEMBLY	OC-5
14	21299-OC	1		VALVE, safety relief	
15	16310-OC	1		TEE, BLACK - .25"	
16	-OC	1		HOSE ASSEMBLY - 2016 -04-04PS-04PS *(Dry chemical tank to Nitrogen cylinder)*	
17	21236-OC	1		ADAPTER, DRY CHEM TANK	
18	REF	1	🕮	DRY CHEMICAL TANK ASSEMBLY.	OC-5
19	11372-OC	1		ELBOW, 45 SWIVEL - 1503-4-4	
20	42513-OC	1		GROMMET, .375 I.D.	
21	50504-OC	50 ft		WIRE, detection *(Routed from the control box throughout the engine, hydraulic pump and hydraulic valve compartments)*	
22	-OC	1		SQUIB, ELECTRICAL CONNECTOR	

🕮 See reference page for component or assembly breakdown.

IMPORTANT NOTE !

Detection wire needs to be properly routed and isolated away from high temperature items (turbo & exhaust). Improper routing of the detection wire could cause system to not detect fire and to not operate properly. Wire also needs to be properly isolated away from items that could cause damage and wear to the wire. Contact TimberPro if you have any question on the routing of the detection wire.



Parts T3324 09/21/2005
12.5

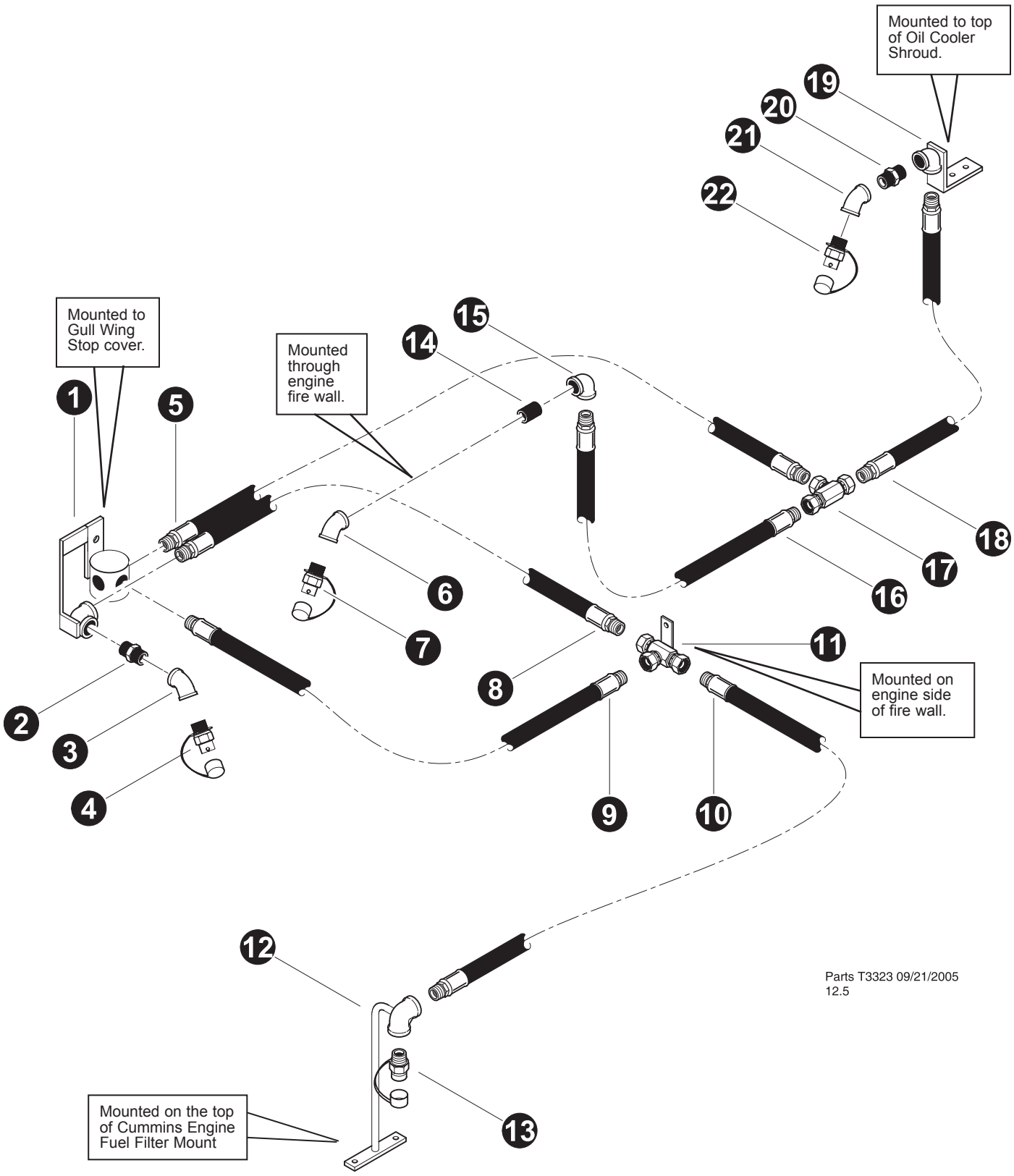
FIRE SUPPRESSION LINES
(Dry Chemical Tank To Distributions Tee)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	DRY CHEMICAL TANK ASSEMBLY.	OC-5
2	-OC	1		HOSE ASSEMBLY - 2107-12-12PS-12PS (Dry Chemical Tank to Main distribution tee)	
3	-OC	1		MANIFOLD, fire nozzle	
4	16126-OC	1		NIPPLE, CLOSE .5"	
5	16122-OC	1		ELBOW, BLACK 45 STREET - .5"	
6	17838-OC	3		NOZZLE, V pattern - .5"	
7	-OC	1		HOSE ASSEMBLY - 2033 -08-08PS-08PS (Valve compartment tee to main control valve nozzle)	
8	-OC	1		HOSE ASSEMBLY - 2034 -08-08PS-08PS (Valve compartment tee to rotory manifold compartment nozzle)	
9	-OC	1		MANIFOLD, fire nozzle	
10	16776-OC	1		NOZZLE, Cone pattern - .5"	
11	11379-OC	1		TEE - 1603-8-8-8	
12	-OC	1		HOSE ASSEMBLY - 2052 -08-08PS-08PS (Valve compartment tee to main distribution manifold)	
13	15660-OC	1		ELBOW, BLACK 90 STREET - .5"	
14	16126-OC	1		NIPPLE, CLOSE .5"	
15	-OC	1		MANIFOLD, main fire distribution	
16	11304-OC	1		CONNECTOR, STR SWIVEL - 1404-12-12	
17	10359-OC	1		ELBOW, 90 SWIVEL - 1501-12-12	

🕮 See reference page for component or assembly breakdown.

IMPORTANT NOTE !

Proper routing of fire suppression hoses, nozzle placement and direction of nozzle pattern are very important in the proper operation of the fire suppression system. Please contact TimberPro for any questions you have on proper installation of fire suppression components.


Mounted to top of Oil Cooler Shroud.
19
20
21
22
Mounted to Gull Wing Stop cover.
1
5
Mounted through engine fire wall.
14
15
6
7
8
11
Mounted on engine side of fire wall.
18
17
16
2
3
4
9
10
12
13
Mounted on the top of Cummins Engine Fuel Filter Mount
Parts T3323 09/21/2005
12.5

FIRE SUPPRESSION LINES
(Distribution Tee To Engine & Pump Compartments)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	-OC	1		MANIFOLD, main fire distribution	
2	16126-OC	1		NIPPLE, CLOSE .5"	
3	16122-OC	1		ELBOW, BLACK 45 STREET - .5"	
4	17838-OC	1		NOZZLE, V pattern - .5"	
5	-OC	1		HOSE ASSEMBLY - 2056 -08-08PS-08PS (Pump Compartment tee to Main Distribution tee)	
6	16122-OC	1		ELBOW, BLACK 45 STREET - .5"	
7	17838-OC	1		NOZZLE, V pattern - .5"	
8	-OC	1		HOSE ASSEMBLY - 2028 -08-08PS-08PS (Engine Compartment tee to right side engine nozzle)	
9	-OC	1		HOSE ASSEMBLY - 2035 -08-08PS-08PS (Engine Compartment tee to Main Distribution tee)	
10	-OC	1		HOSE ASSEMBLY - 2024 -08-08PS-08PS (Engine Compartment tee to left	
side				engine nozzle)	
11	-OC	1		TEE - 1603-8-8-8 w/bracket	
12	-OC	1		MANIFOLD, right side fire nozzle	
13	17838-OC	1		NOZZLE, V pattern - .5"	
14	16126-OC	1		NIPPLE, CLOSE .5"	
15	15660-OC	1		ELBOW, BLACK 90 STREET - .5"	
16	-OC	1		HOSE ASSEMBLY - 2030 -08-08PS-08PS (Rear engine compartment nozzle	
to				pump compartment tee)	
17	11379-OC	1		TEE - 1603-8-8-8	
18	-OC	1		HOSE ASSEMBLY - 2033 -08-08PS-08PS (Pump compartment nozzle to pump compartment tee)	
19	-OC	1		MANIFOLD, pump compartment fire nozzle	
20	16126-OC	1		NIPPLE, CLOSE .5"	
21	16122-OC	1		ELBOW, BLACK 45 STREET - .5"	
22	16776-OC	1		NOZZLE, Cone pattern - .5"	

📖 See reference page for component or assembly breakdown.

IMPORTANT NOTE !

Proper routing of fire suppression hoses, nozzle placement and direction of nozzle pattern are very important in the proper operation of the fire suppression system. Please contact TimberPro for any questions you have on proper installation of fire suppression components.

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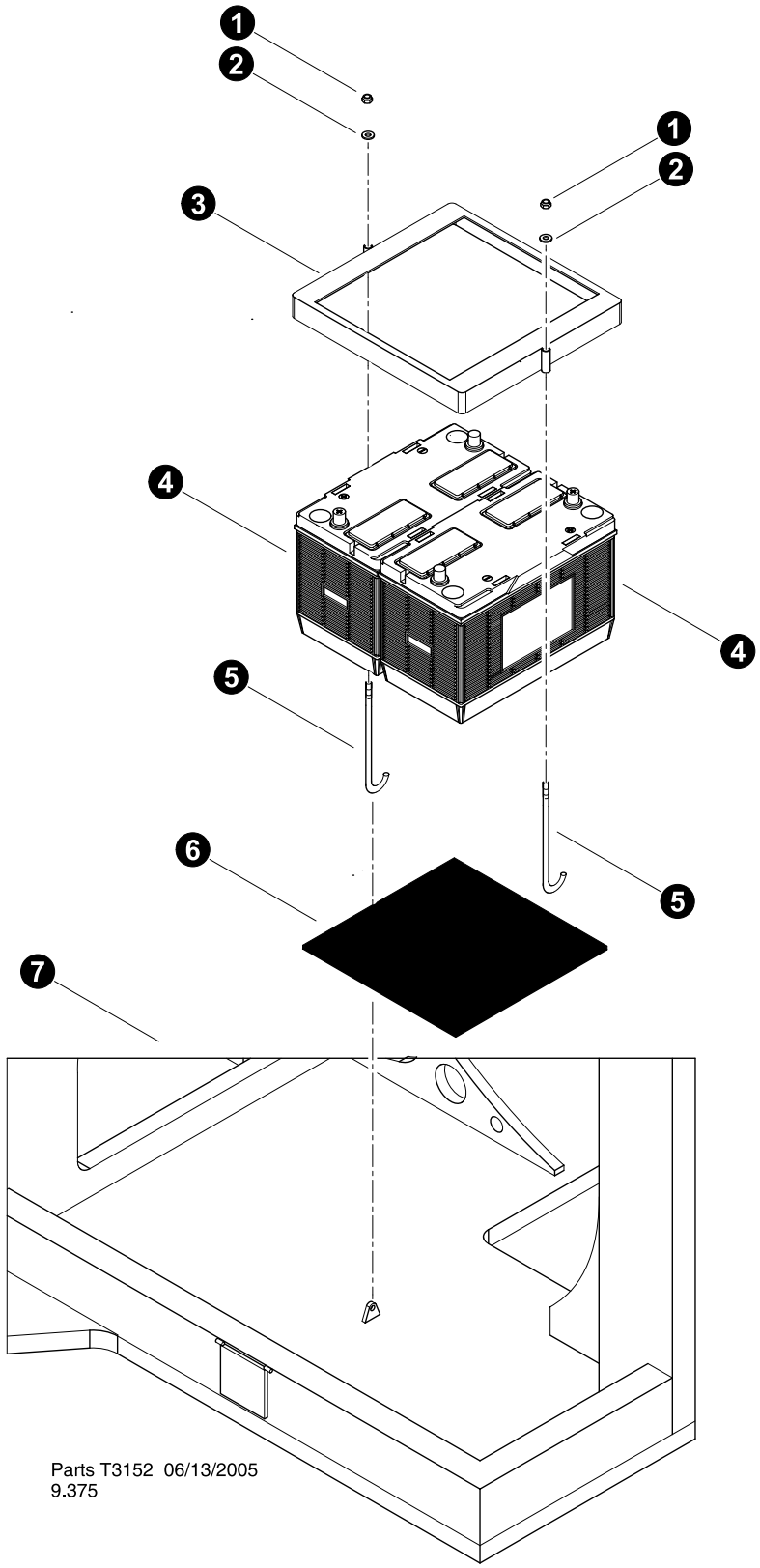
Section ES-1

Electrical System - Engine Compartment

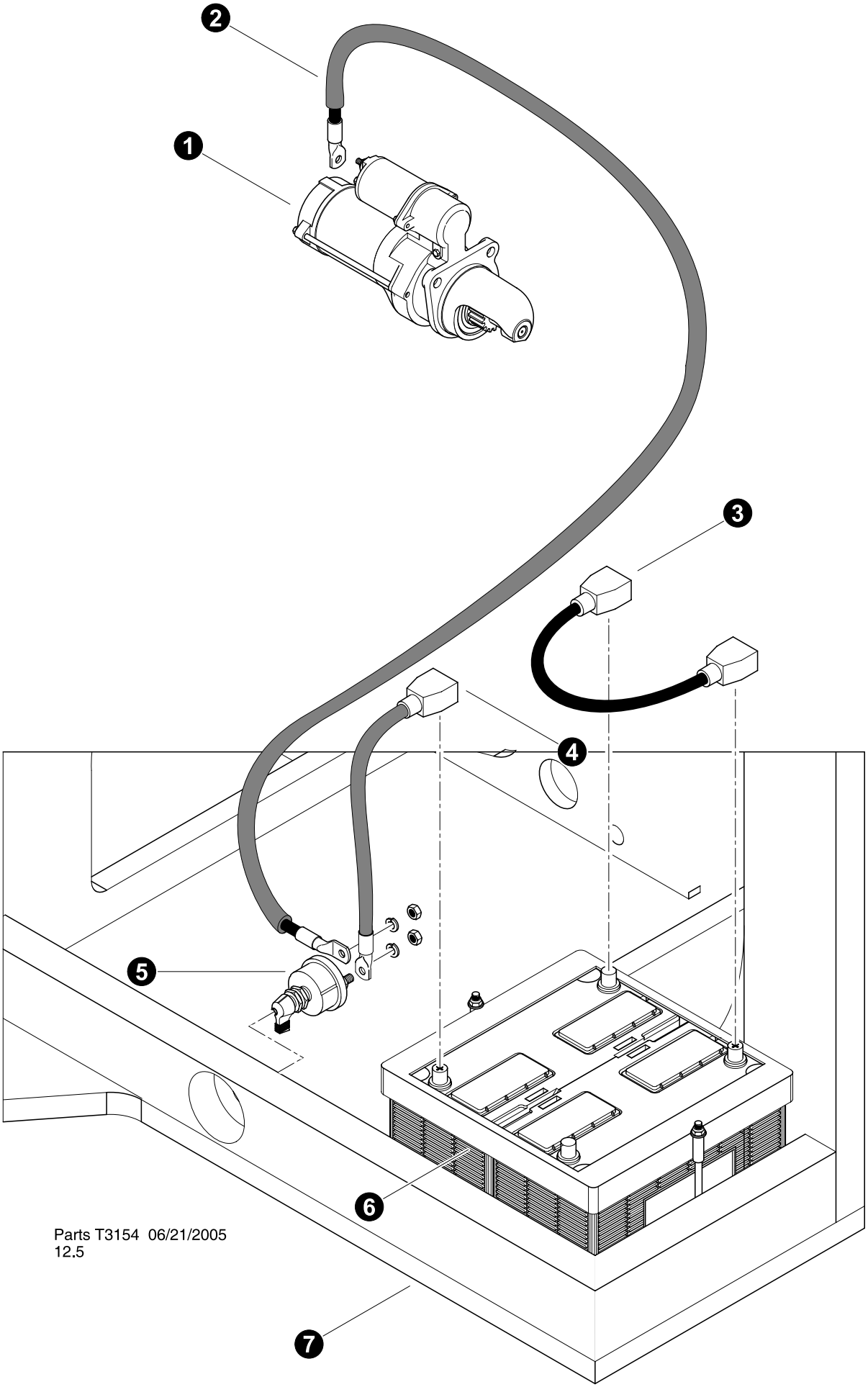


Parts T3152 06/13/2005
9.375

ENGINE ELECTRICAL SYSTEM
Battery Installation

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	10788-ES	2		NUT, NYLOCK - .3125”	
2	15559-ES	2		WASHER, SAE FLAT - .3125”	
3	51759-ES	1		BRACKET, BATTERY HOLD DOWN	
4	17150-ES	2		BATTERY, HEAVY DUTY	
5	51722-ES	1		HOLD DOWN, BATTERY - 830/630 (2 PER PACK)	
6		1		RUBBER PAD, 1/4”	
7	REF.	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.



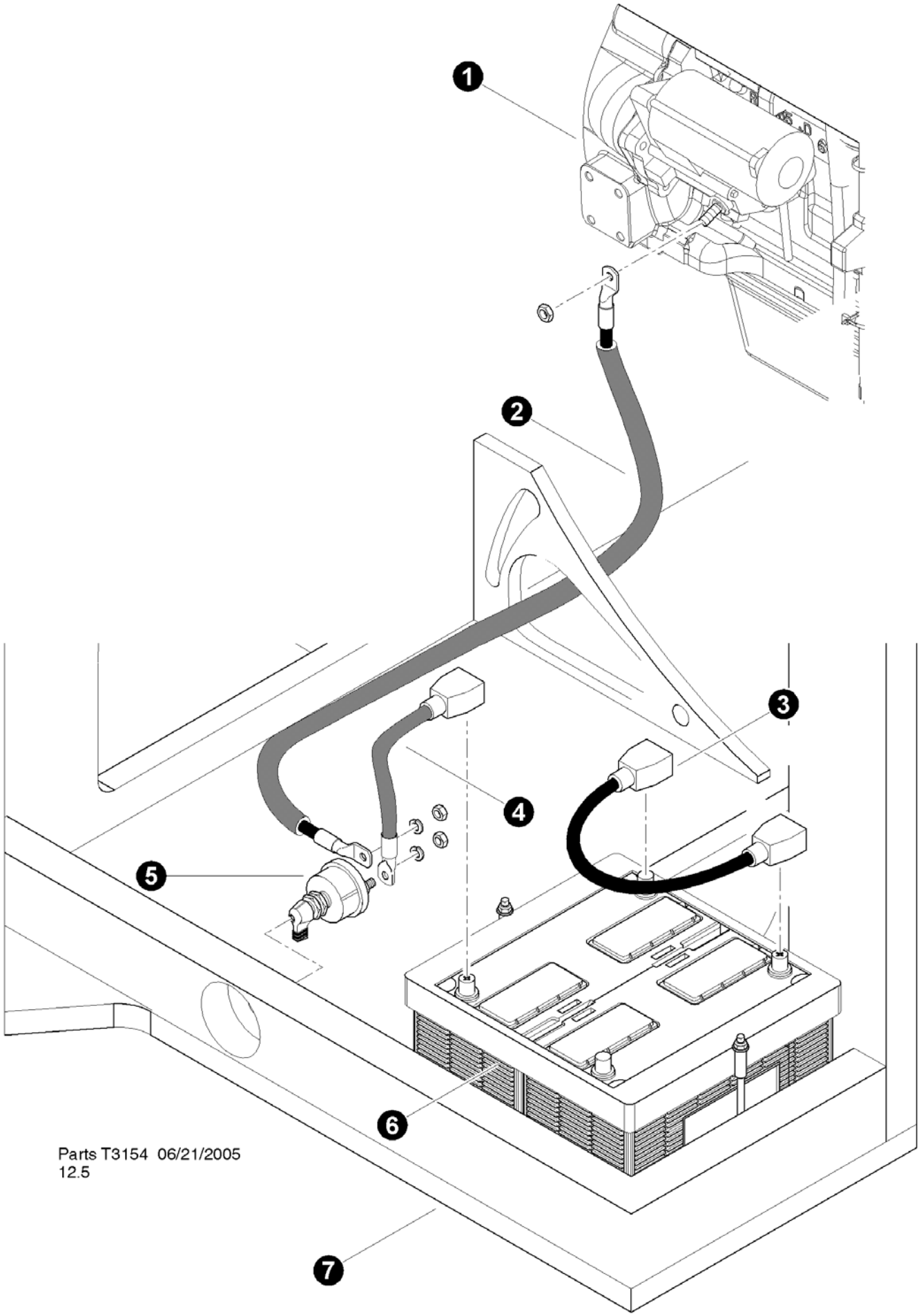
Parts T3154 06/21/2005
12.5

ENGINE ELECTRICAL SYSTEM

Battery Positive to Starter
(Machine built before SN 144-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	STARTER	EE/JD
2	51749-ES	1		CABLE, MASTER DISC. TO STARTER POS	
3	24300-ES	1		CABLE, BATTERY POS/NEG JUMPER	
4	51746-ES	1		CABLE, BAT. POSITIVE TO MAST. DISCONNECT	
5	25200-ES	1		SWITCH, MASTER SHUT-OFF(1/2” STUD)	
6	REF	1	🕮	BATTERY ASSEMBLY	ES-1
7	REF.	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.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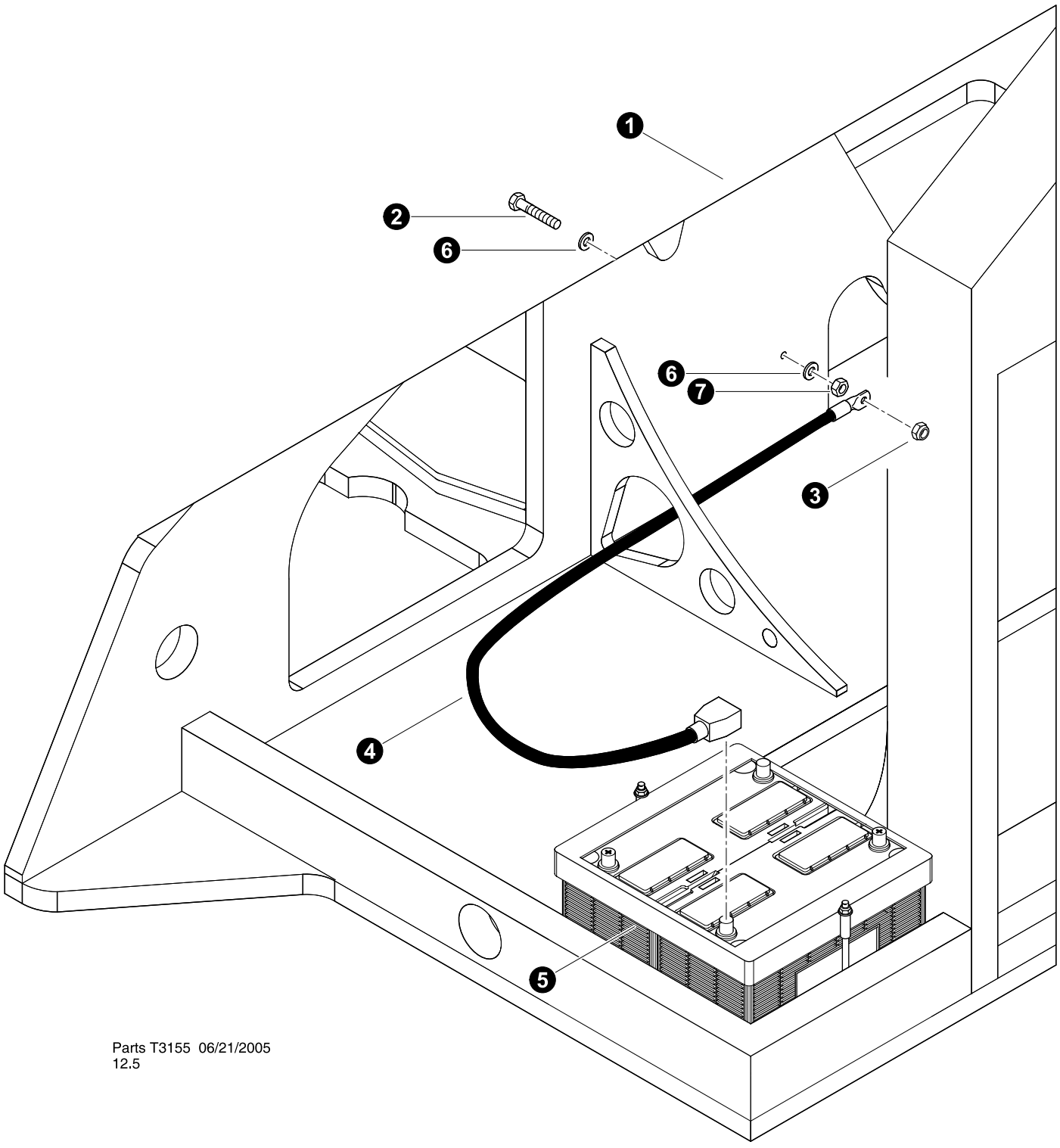
Parts T3154 06/21/2005
12.5

ENGINE ELECTRICAL SYSTEM

Battery Positive to Starter
(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	STARTER	EE/JD
2	51749-ES	1		CABLE, MASTER DISC. TO STARTER POS	
3	24300-ES	1		CABLE, BATTERY POS/NEG JUMPER	
4	51746-ES	1		CABLE, BAT. POSITIVE TO MAST. DISCONNECT	
5	25200-ES	1		SWITCH, MASTER SHUT-OFF(1/2” STUD)	
6	REF	1	🕮	BATTERY ASSEMBLY	ES-1
7	REF.	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.



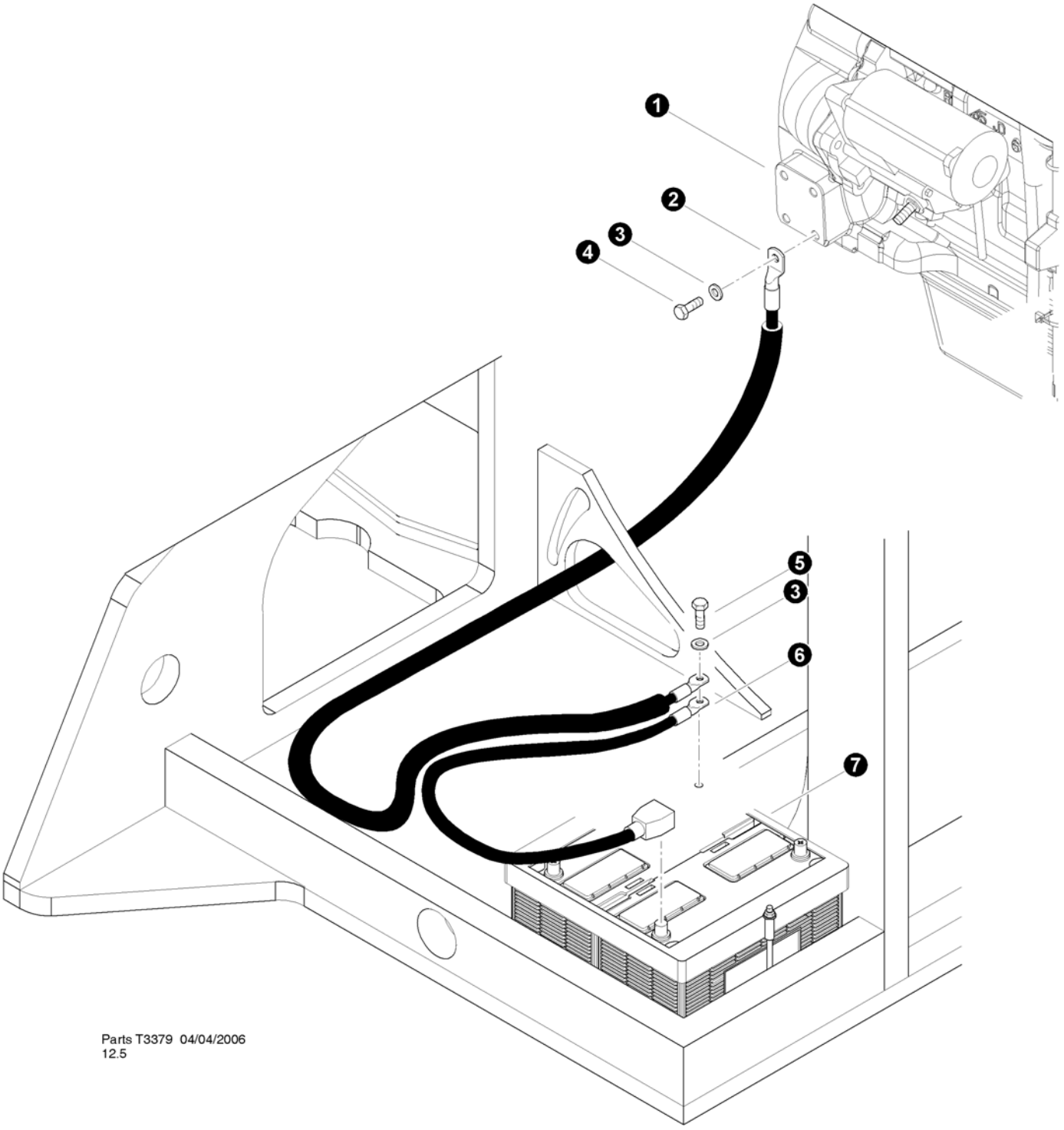
Parts T3155 06/21/2005
12.5

ENGINE ELECTRICAL SYSTEM

Battery Negative to Main Grounding Stud
(Machine built before SN 144-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1
2	10893-ES	1		BOLT - .5” X 3”	
3	10815-ES	1		NUT, LOCK - .5”	
4	51747-ES	1		CABLE, BATTERY NEG. TO GROUND STUD	
5	REF	1	🕮	BATTERY ASSEMBLY	ES-1
6	15534-ES	2		WASHER, SAE FLAT - .5”	
7	10711-ES	1		NUT, HEX - .5”	

🕮 See referenced page for component or assembly breakdown.



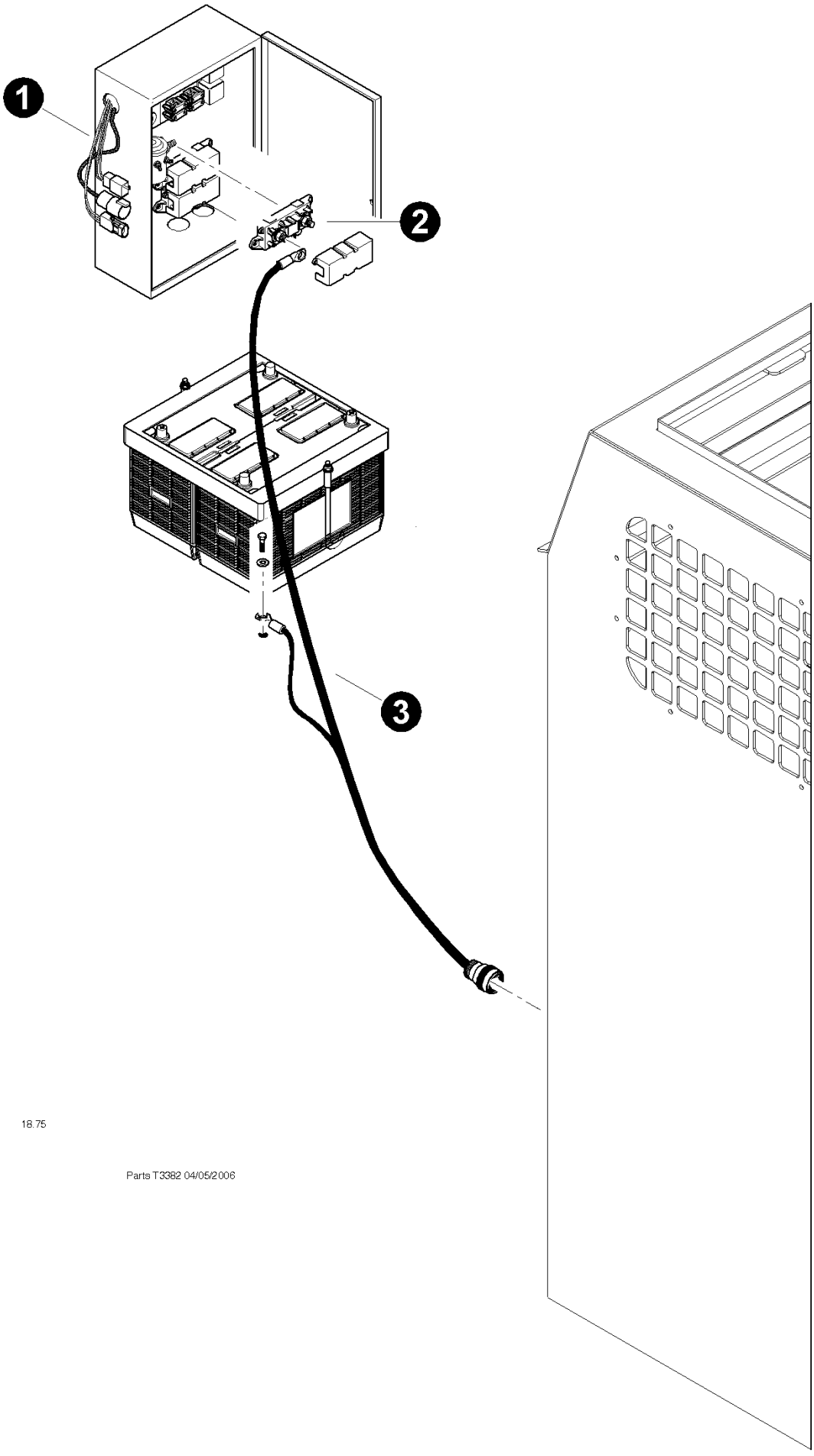
Parts T3379 04/04/2006
12.5

ENGINE ELECTRICAL SYSTEM

Battery Negative to Main Grounding Stud
(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	UPPER TURNTABLE ASSEMBLY	UP-1
2	52393-ES	1		CABLE, GROUND TO STARTER NEG. (830/630)	
3	15534-ES	2		WASHER, SAE FLAT - .5”	
4	18415-ES	1		BOLT - 12MM-1.75P X 30MM	
5	50100-ES	1		BOLT - .5” X 1.25”	
6	51747-ES	1		CABLE, BATTERY NEG. TO GROUND STUD	
7	REF	1	🕮	BATTERY ASSEMBLY	ES-1

🕮 See referenced page for component or assembly breakdown.



18.75

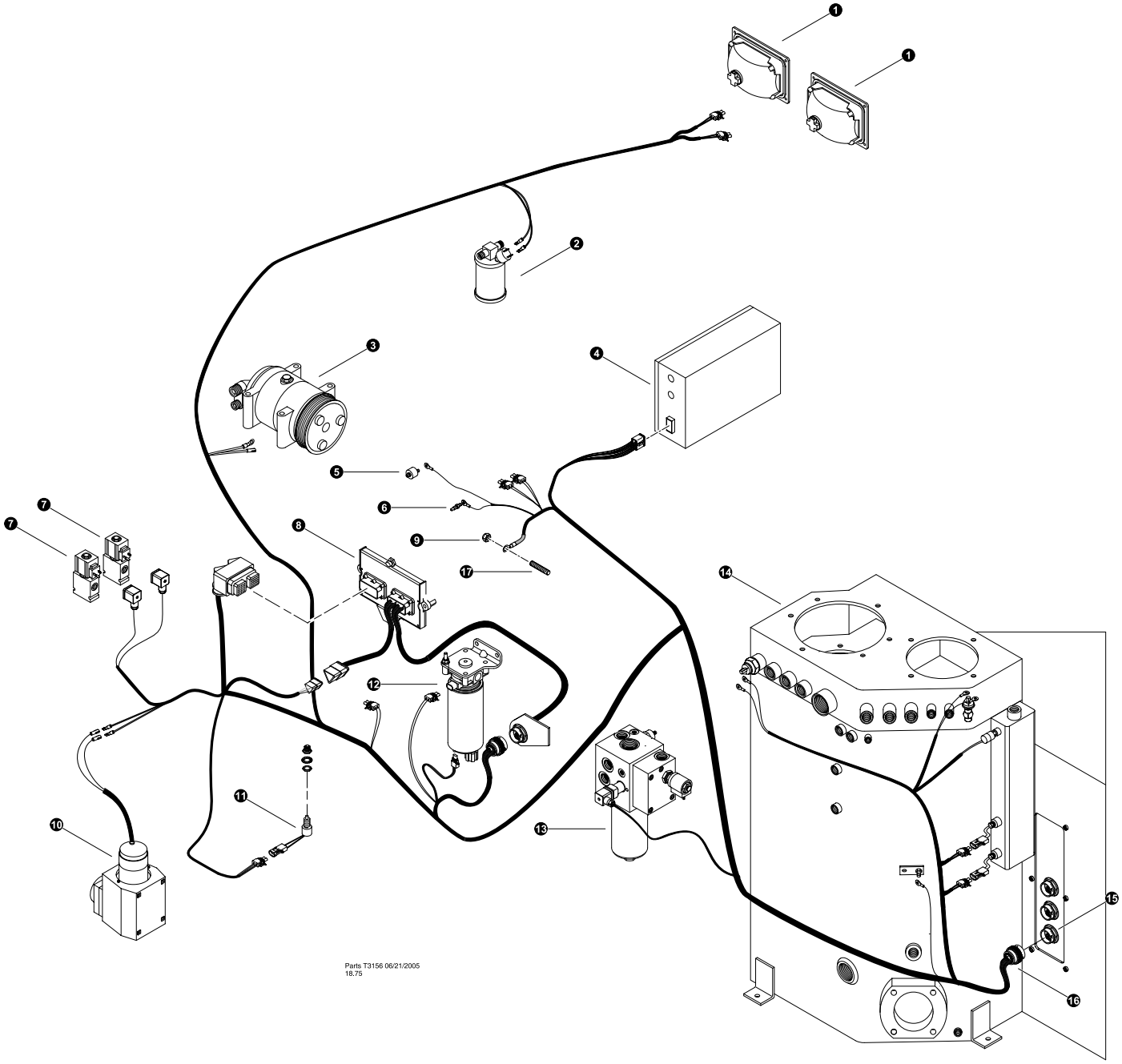
Parts T3382 04/05/2006

ENGINE ELECTRICAL SYSTEM

Cab Load Center Power Harness
(Machine built after SN 143-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	23619-ES	1		FUSE, 100 AMP (MEGA)	
3	52385-ES	1		HARNESS, CAB LOAD CENTER FEED (830/630)	

🕮 See referenced page for component or assembly breakdown.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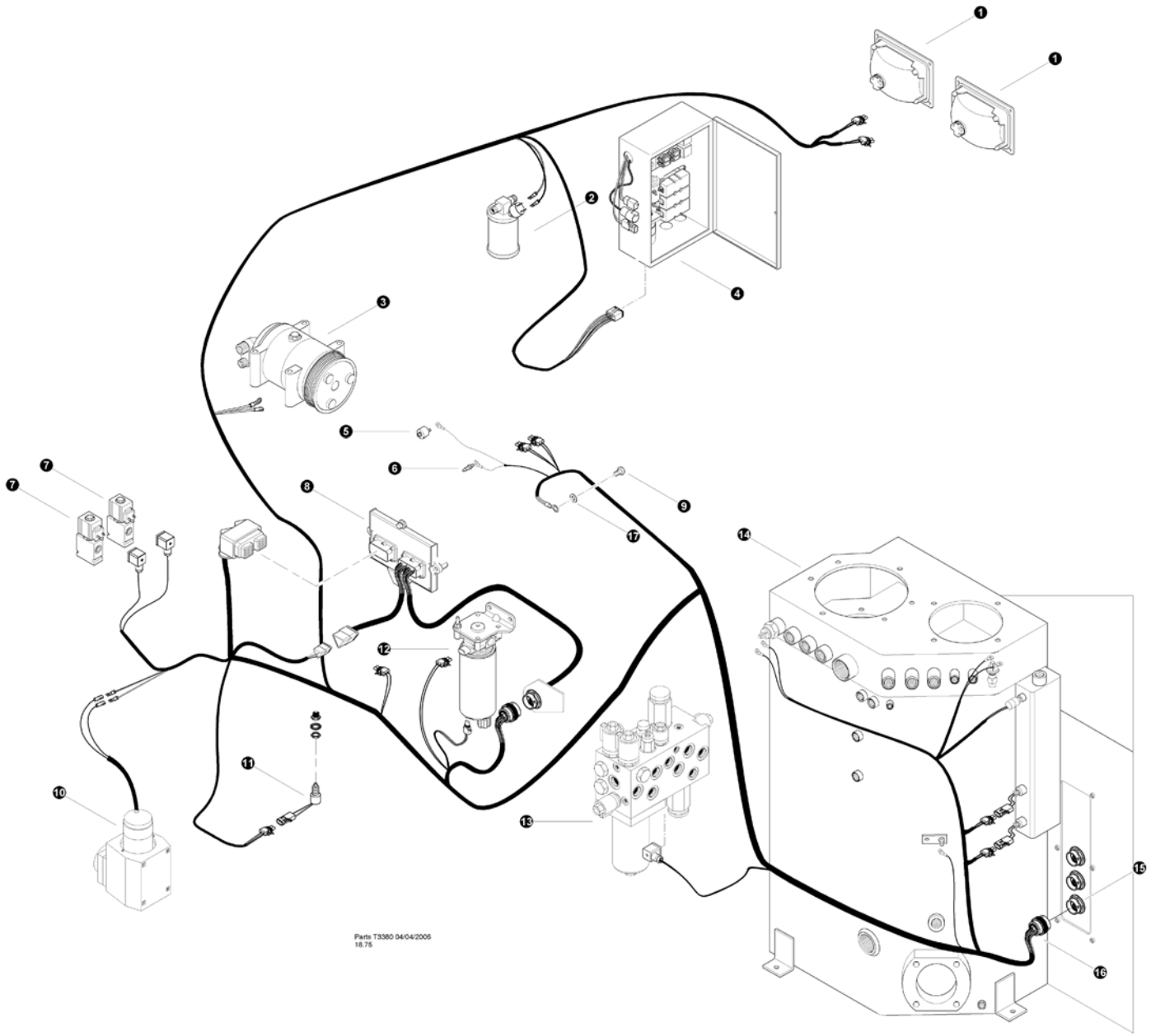
Parts T3156 06/21/2005
18.75

ENGINE ELECTRICAL SYSTEM

Main Engine Electrical Harness
(Cummins QSC Tier2)
(Machine SN 143-021306 and Before)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	LIGHT ASSEMBLY	ES-1
2	REF	1	🕮	AC DRIER with BIANARY SWITCH ASSEMBLY	OC-3
3	REF.	1	🕮	AC COMPRESSOR	EE-1
4	REF.	1	🕮	ENGINE ELECTRICAL CENTER	ES-1
5	REF.	1	🕮	ENGINE OIL PRESSURE SENDER	EE-1
6	REF.	1	🕮	ENGINE TEMPERATURE SENDER	EE-1
7	REF.	1	🕮	VACUUM / VENT VALVE	UP-2
8	REF.	1	🕮	ENGINE ECU	EE-1
9	10815-ES	1		NUT, LOCK - .5”	
10	REF.	1	🕮	VACUUM PUMP	UP-2
11	25104-ES	1		SWITCH, DOOR LIMIT/FILL PUMP	
12	REF	1	🕮	FUEL HEATER / FILTER ASSEMBLY	EE-1
13	REF	1	🕮	WHEEL DRIVE CHARGE FILTER ASSEMBLY	WD-3
14	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
15	REF	1	🕮	OPERATORS CAB ELECTRICAL CENTER	ES-2
16	51743-ES	1		HARNESS, ENGINE COMPARTMENT - 830/630	
17	REF	1	🕮	GROUND STUD ASSEMBLY	ES-1

🕮 See referenced page for component or assembly breakdown.

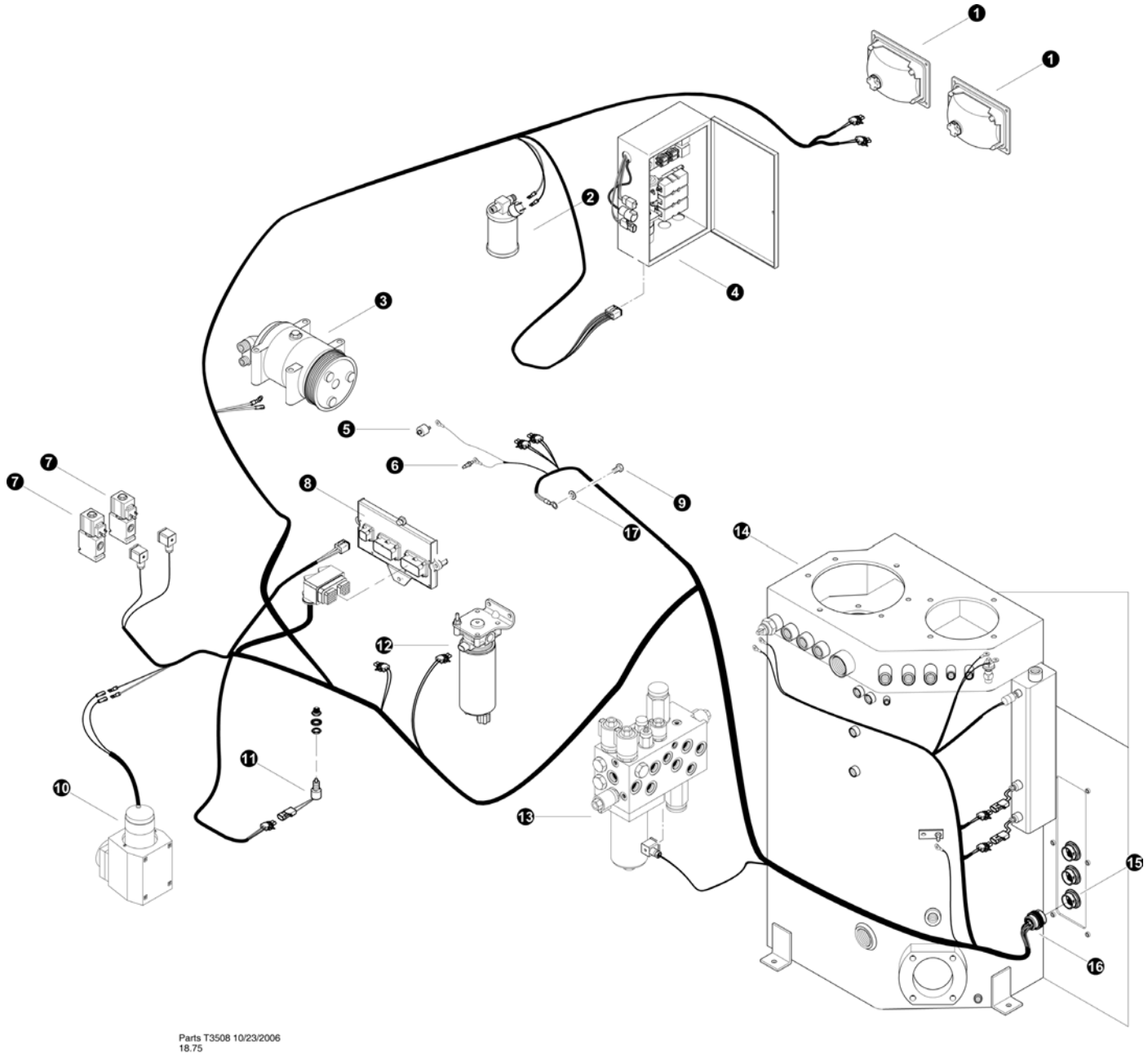

Parts T3380 04/04/2006
18.75

ENGINE ELECTRICAL SYSTEM

Main Engine Electrical Harness
(Cummins QSC Tier2)
(Machine SN 144-021306 to 188-020207)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	LIGHT ASSEMBLY	ES-1
2	REF	1	🕮	AC DRIER with BIANARY SWITCH ASSEMBLY	OC-3
3	REF.	1	🕮	AC COMPRESSOR	EE-1
4	REF.	1	🕮	ENGINE ELECTRICAL CENTER	ES-1
5	REF.	1	🕮	ENGINE OIL PRESSURE SENDER	EE-1
6	REF.	1	🕮	ENGINE TEMPERATURE SENDER	EE-1
7	REF.	1	🕮	VACUUM / VENT VALVE	UP-2
8	REF.	1	🕮	ENGINE ECU	EE-1
9	18415-ES	1		BOLT - 12MM-1.75P X 30MM	
10	REF.	1	🕮	VACUUM PUMP	UP-2
11	25104-ES	1		SWITCH, DOOR LIMIT/FILL PUMP	
12	REF	1	🕮	FUEL HEATER / FILTER ASSEMBLY	EE-1
13	REF	1	🕮	WHEEL DRIVE CHARGE FILTER ASSEMBLY	WD-3
14	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
15	REF	1	🕮	OPERATORS CAB ELECTRICAL CENTER	ES-2
16	52368-ES	1		HARNESS, ENGINE COMPARTMENT - 830/630	
17	15534-ES	2		WASHER, SAE FLAT - .5”	

🕮 See referenced page for component or assembly breakdown.



Parts T3508 10/23/2006
18.75

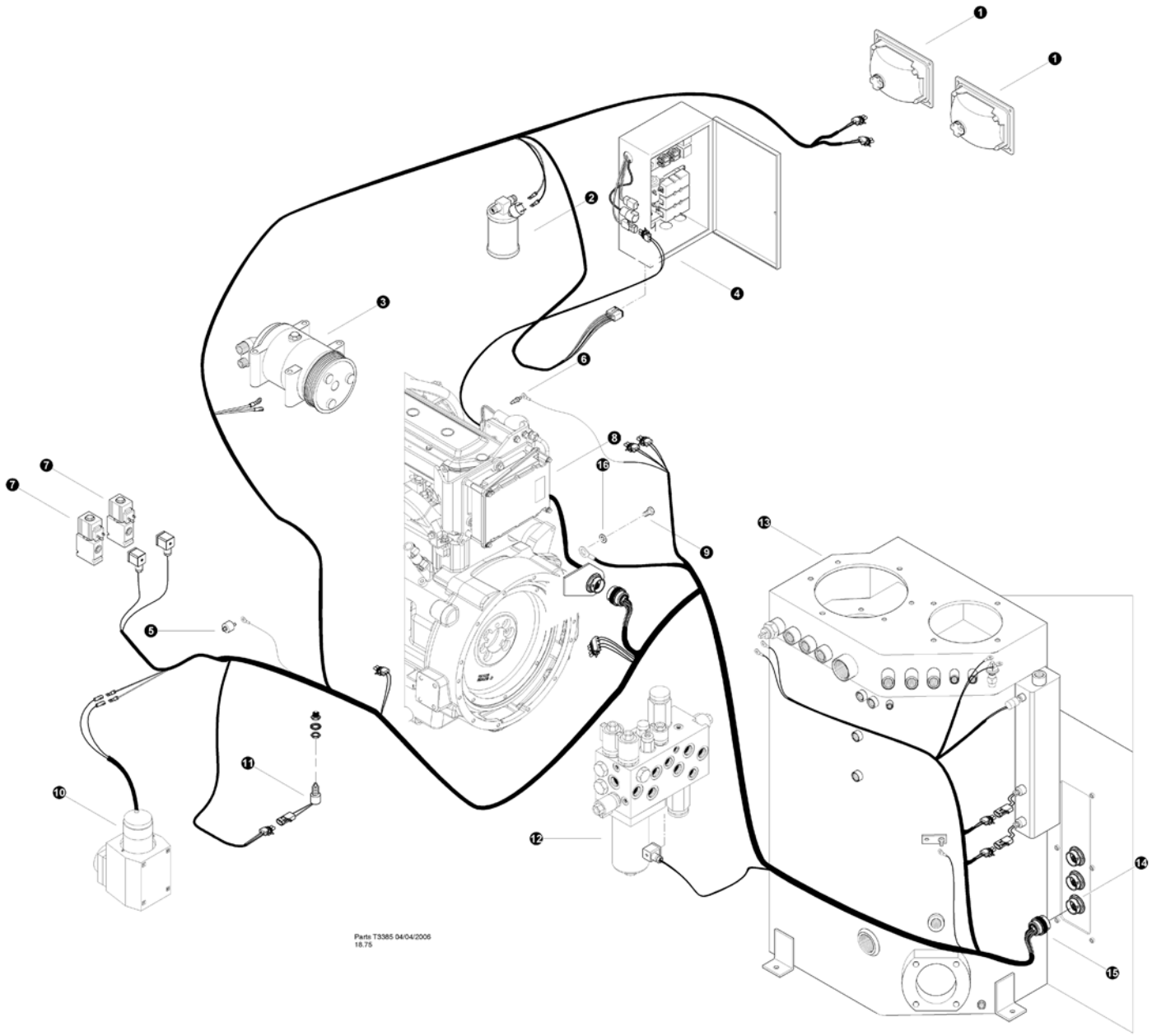
ENGINE ELECTRICAL SYSTEM

Main Engine Electrical Harness
(Cummins QSC and QSB Tier3)

(Machines SN 0189-020907 and After**)**

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	LIGHT ASSEMBLY	ES-1
2	REF	1	🕮	AC DRIER with BIANARY SWITCH ASSEMBLY	OC-3
3	REF.	1	🕮	AC COMPRESSOR	EE-1
4	REF.	1	🕮	ENGINE ELECTRICAL CENTER	ES-1
5	REF.	1	🕮	ENGINE OIL PRESSURE SENDER	EE-1
6	REF.	1	🕮	ENGINE TEMPERATURE SENDER	EE-1
7	REF.	1	🕮	VACUUM / VENT VALVE	UP-2
8	REF.	1	🕮	ENGINE ECU	EE-1
9	18415-ES	1		BOLT - 12MM-1.75P X 30MM	
10	REF.	1	🕮	VACUUM PUMP	UP-2
11	25104-ES	1		SWITCH, DOOR LIMIT/FILL PUMP	
12	REF	1	🕮	FUEL HEATER / FILTER ASSEMBLY	EE-1
13	REF	1	🕮	WHEEL DRIVE CHARGE FILTER ASSEMBLY	WD-3
14	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
15	REF	1	🕮	OPERATORS CAB ELECTRICAL CENTER	ES-2
16	52637-ES	1		HARNESS, ENGINE COMP - 830/630 (Tier 3)	
17	15534-ES	2		WASHER, SAE FLAT - .5”	

🕮 See referenced page for component or assembly breakdown.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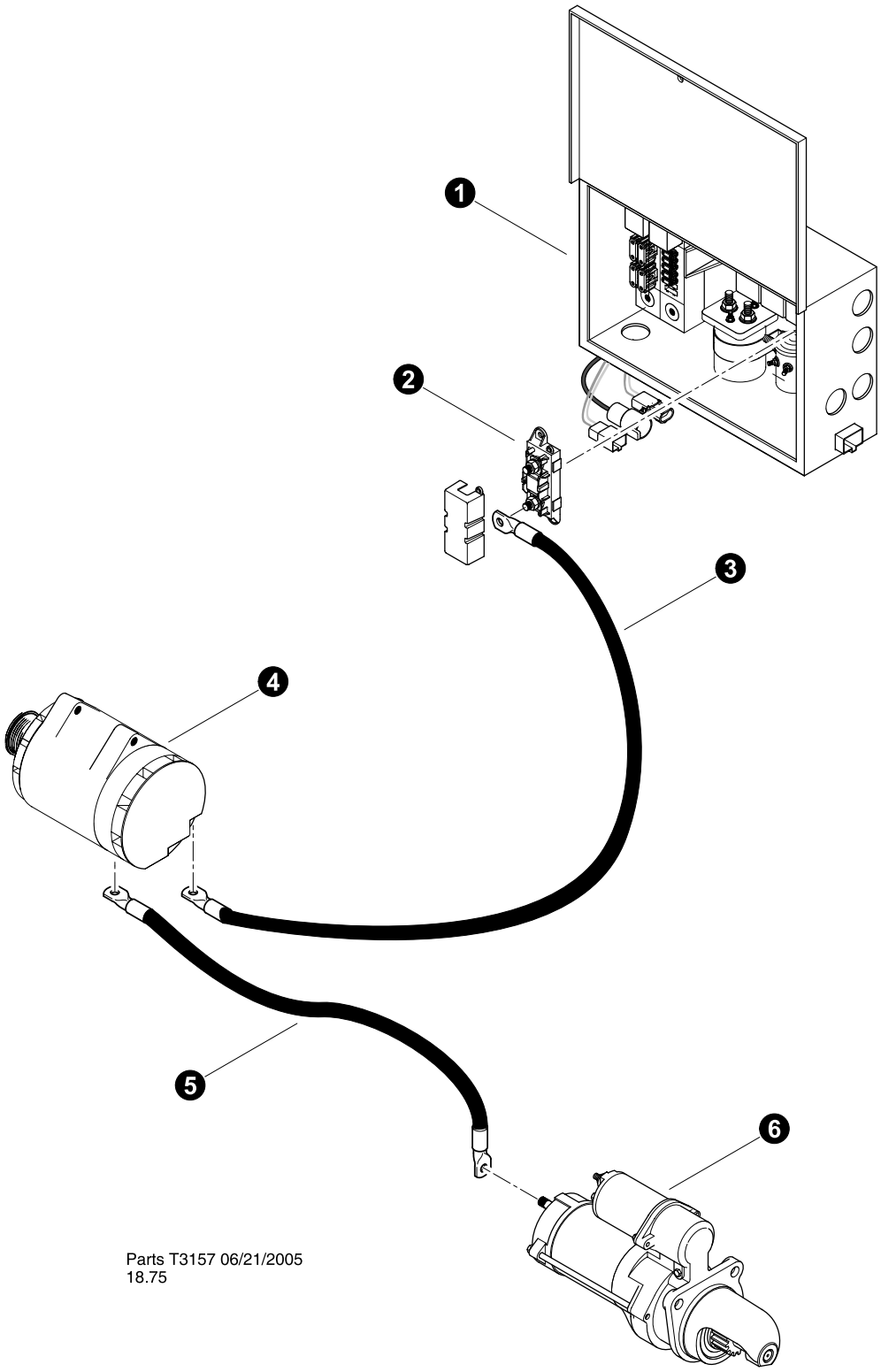
Parts T3385 04/04/2006
18.75

ENGINE ELECTRICAL SYSTEM

Main Engine Electrical Harness
(John Deere Engine)
(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	LIGHT ASSEMBLY	ES-1
2	REF	1	🕮	AC DRIER with BIANARY SWITCH ASSEMBLY	OC-3
3	REF.	1	🕮	AC COMPRESSOR	EE-1
4	REF.	1	🕮	ENGINE ELECTRICAL CENTER	ES-1
5	REF.	1	🕮	ENGINE OIL PRESSURE SENDER	EE-1
6	REF.	1	🕮	ENGINE TEMPERATURE SENDER	EE-1
7	REF.	1	🕮	VACUUM / VENT VALVE	UP-2
8	REF.	1	🕮	ENGINE ECU	EE-1
9	18415-ES	1		BOLT - 12MM-1.75P X 30MM	
10	REF.	1	🕮	VACUUM PUMP	UP-2
11	25104-ES	1		SWITCH, DOOR LIMIT/FILL PUMP	
12	REF	1	🕮	WHEEL DRIVE CHARGE FILTER ASSEMBLY	WD-3
13	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
14	REF	1	🕮	OPERATORS CAB ELECTRICAL CENTER	ES-2
15	-ES	1		HARNESS, ENGINE COMPARTMENT - 830/630	
16	15534-ES	2		WASHER, SAE FLAT - .5”	

🕮 See referenced page for component or assembly breakdown.



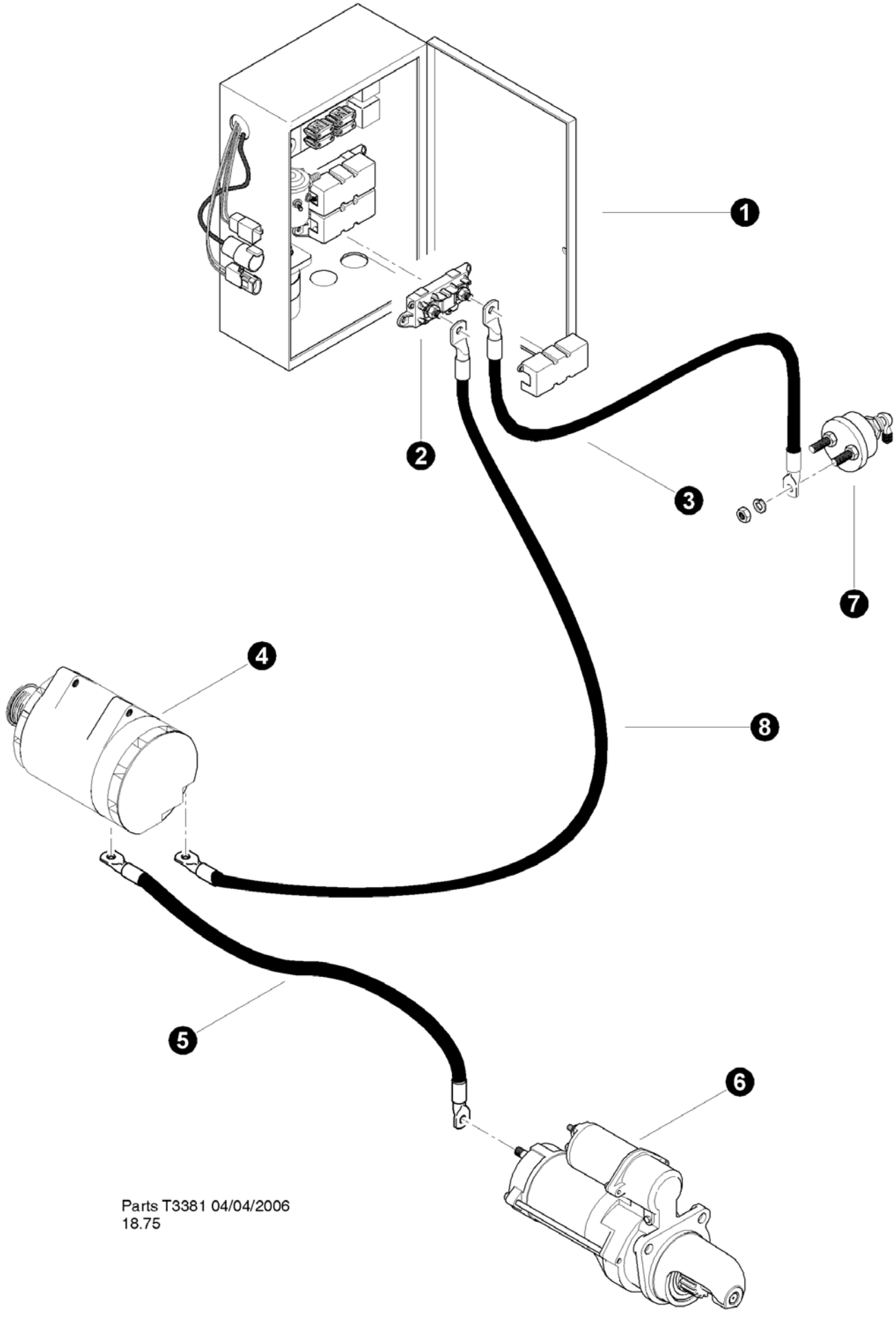
Parts T3157 06/21/2005
18.75

ENGINE ELECTRICAL SYSTEM

Alternator Electrical
(Cummins QSC)
(Machine built before SN 144-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	23619-ES	1		FUSE, 100 AMP (MEGA)	
3	51744-ES	1		CABLE, ATL. TO FUSE CHARGE - 830/630	
4	REF.	1	🕮	ALTERNATOR	EE/JD
5	24304-ES			CABLE, ALTERNATOR GROUND	
6	REF.	1	🕮	STARTER	EE/JD

🕮 See referenced page for component or assembly breakdown.



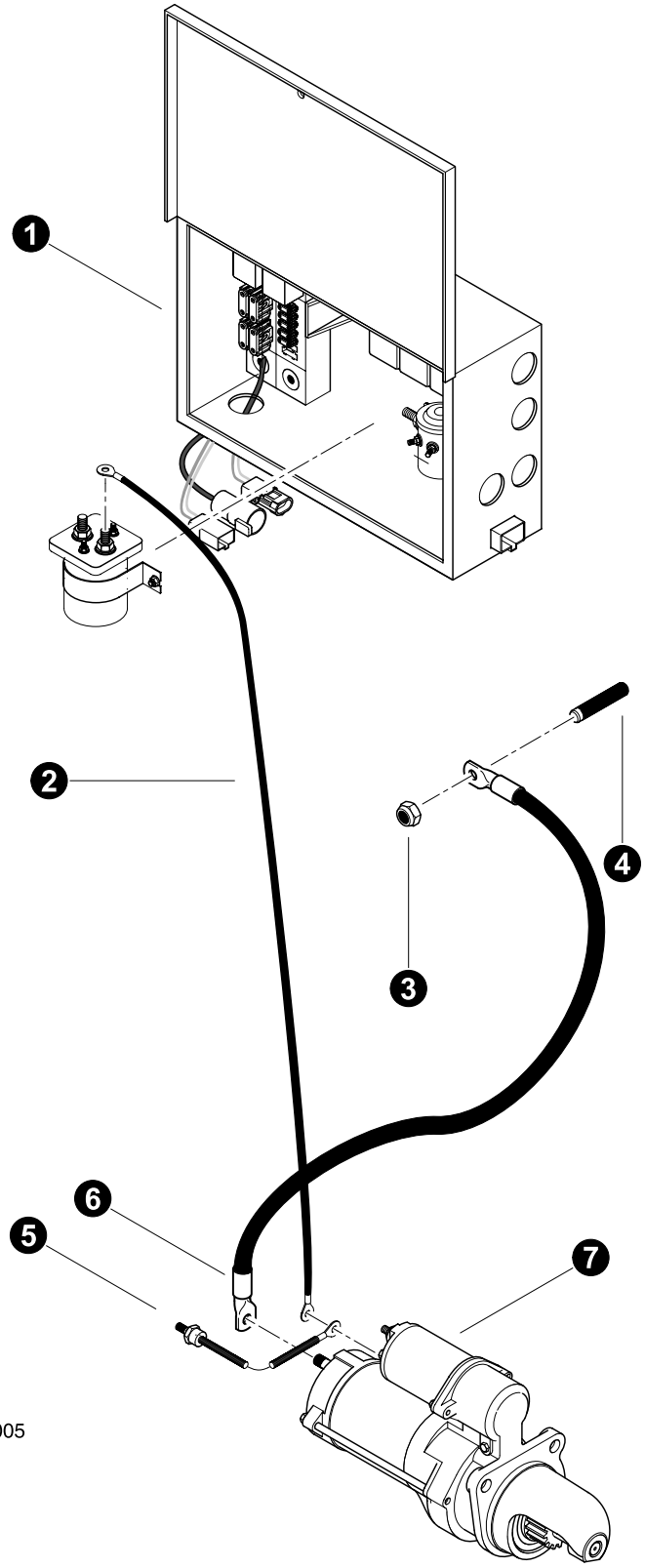
Parts T3381 04/04/2006
18.75

ENGINE ELECTRICAL SYSTEM

Alternator Electrical
(Cummins QSC)
(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	23619-ES	1		FUSE, 100 AMP (MEGA)	
3	52388-ES	1		CABLE, STARTER TO FUSE (830-630)	
4	REF.	1	🕮	ALTERNATOR	EE/JD
5	24304-ES	1		CABLE, ALTERNATOR GROUND	
6	REF.	1	🕮	STARTER	EE/JD
7	25200-ES	1		SWITCH, MASTER SHUT-OFF(1/2” STUD)	
8	52389-ES	1		CABLE, ALT. TO FUSE CHARGE (830/630)	

🕮 See referenced page for component or assembly breakdown.



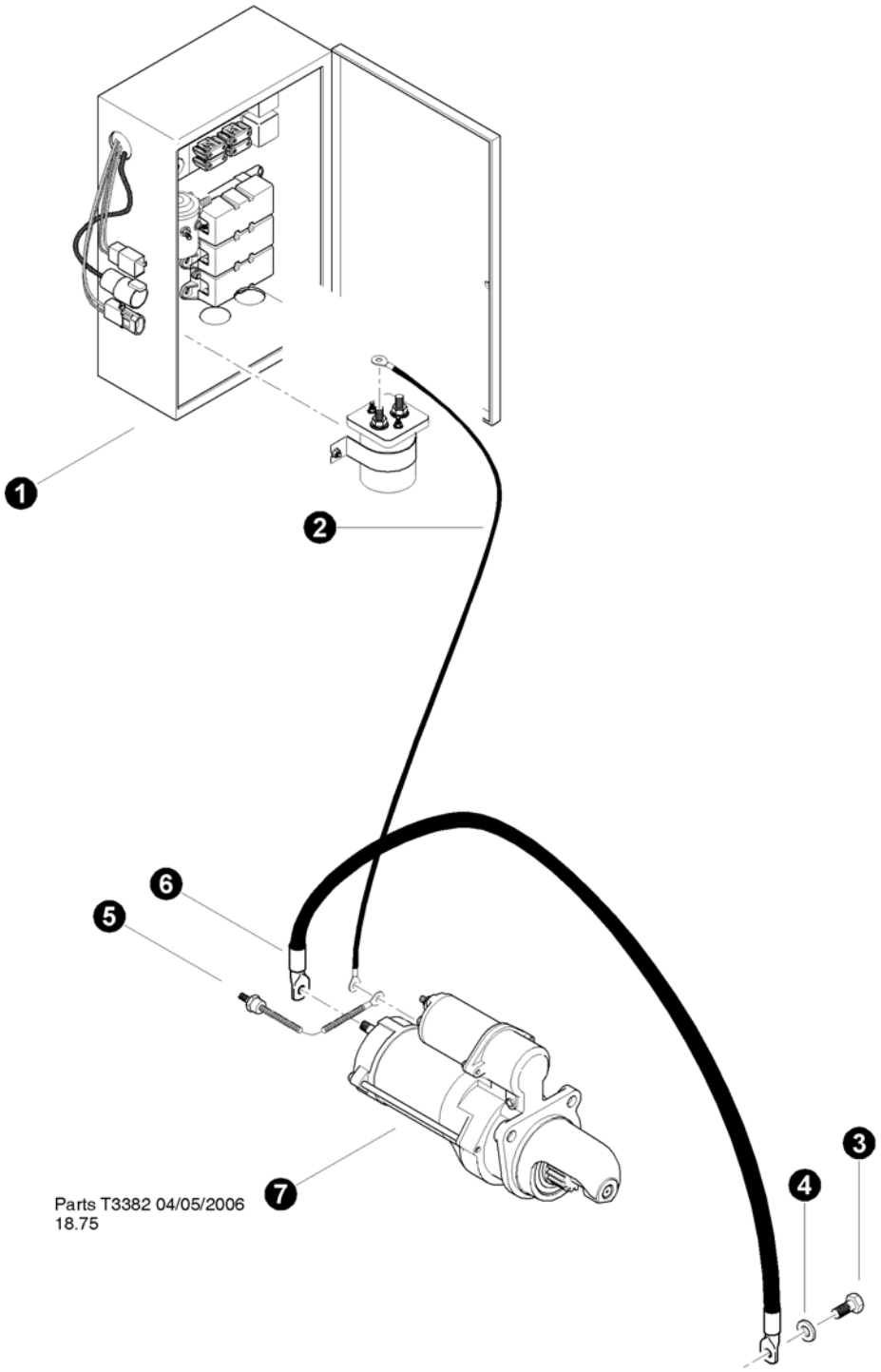
Parts T3158 06/21/2005
18.75

ENGINE ELECTRICAL SYSTEM

Starter Electrical
(Cummins QSC)
(Machine built before SN 144-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	51750-ES	1		CABLE, START RELAY TO STARTER SOL.	
3	10815-ES	1		NUT, LOCK - .5”	
4	REF	1	🕮	GROUND STUD ASSEMBLY	ES-1
5	25052-ES	1		DIODE, assembly engine start relay	
6	17394-ES	1		CABLE, BATTERY - C SERIES STARTER GROUND	
7	REF.	1	🕮	STARTER	EE/JD

🕮 See referenced page for component or assembly breakdown.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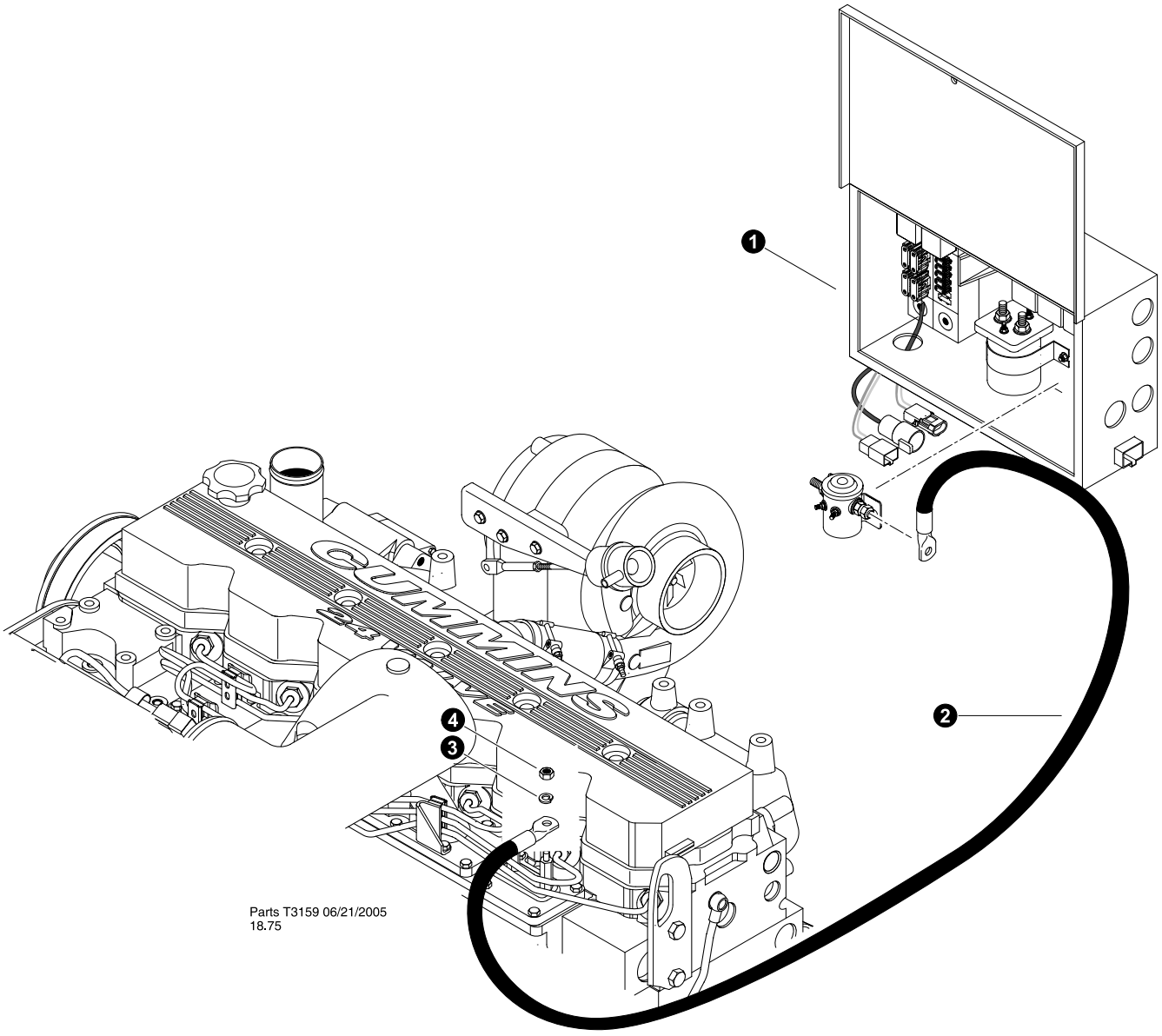
Parts T3382 04/05/2006
18.75

ENGINE ELECTRICAL SYSTEM

Starter Electrical
(Cummins QSC)
(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	52391ES	1		CABLE, START RELAY TO STARTER SOL.	
3	10815-ES	1		NUT, LOCK - .5”	
4	REF	1	🕮	GROUND STUD ASSEMBLY	ES-1
5	25052-ES	1		DIODE, assembly engine start relay	
6	17394-ES	1		CABLE, BATTERY - C SERIES STARTER GROUND	
7	REF.	1	🕮	STARTER	EE/JD

🕮 See referenced page for component or assembly breakdown.



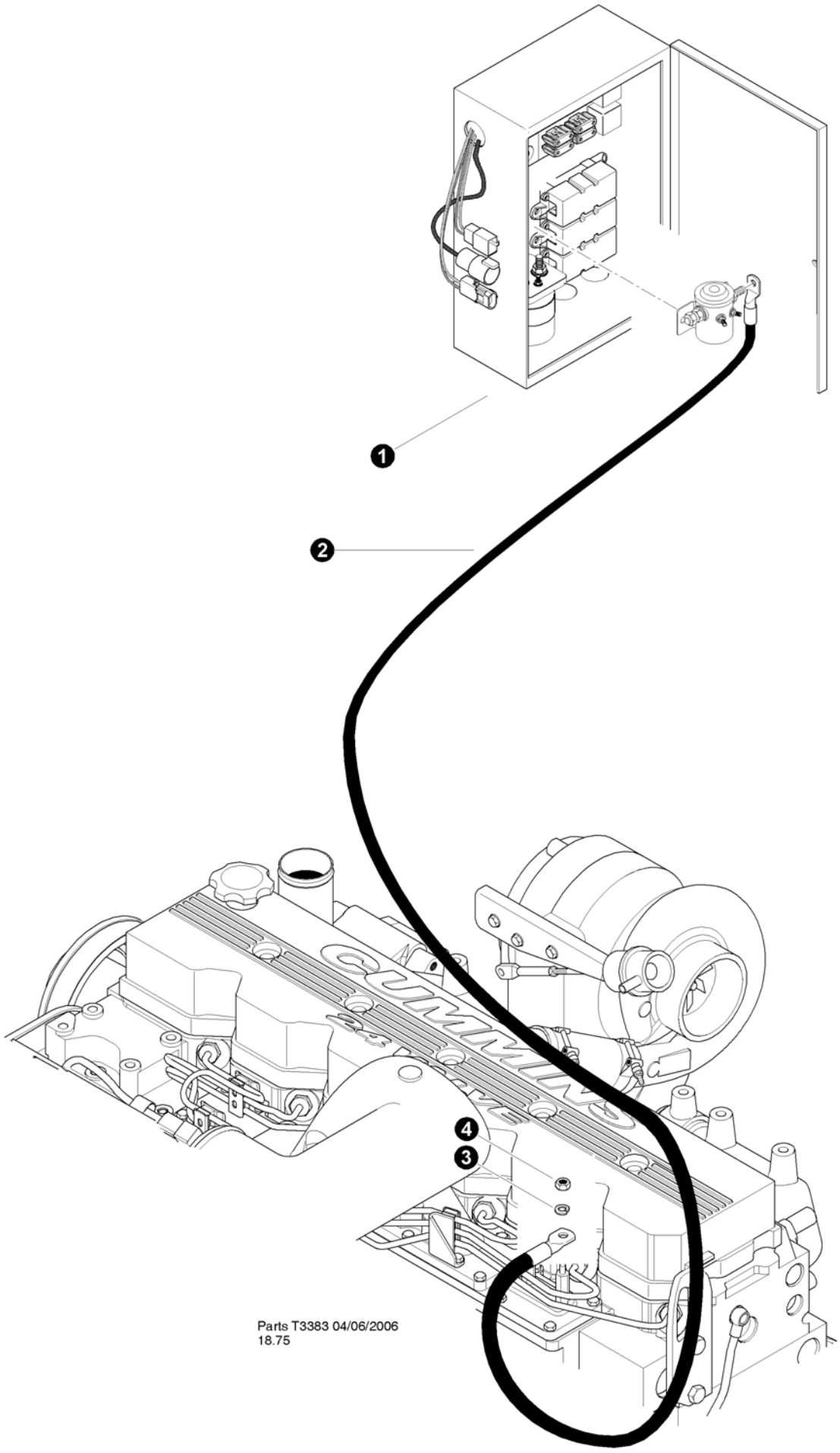
Parts T3159 06/21/2005
18.75

ENGINE ELECTRICAL SYSTEM

Grid Heater Cable
(Cummins QSC)
(Machine built before SN 144-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	51767-ES	1		CABLE, GRID HEATER (830/630)	
3	10756-ES	1		WASHER, LOCK - .25”	
4	16117	1		NUT, HEX - 6MM	

🕮 See referenced page for component or assembly breakdown.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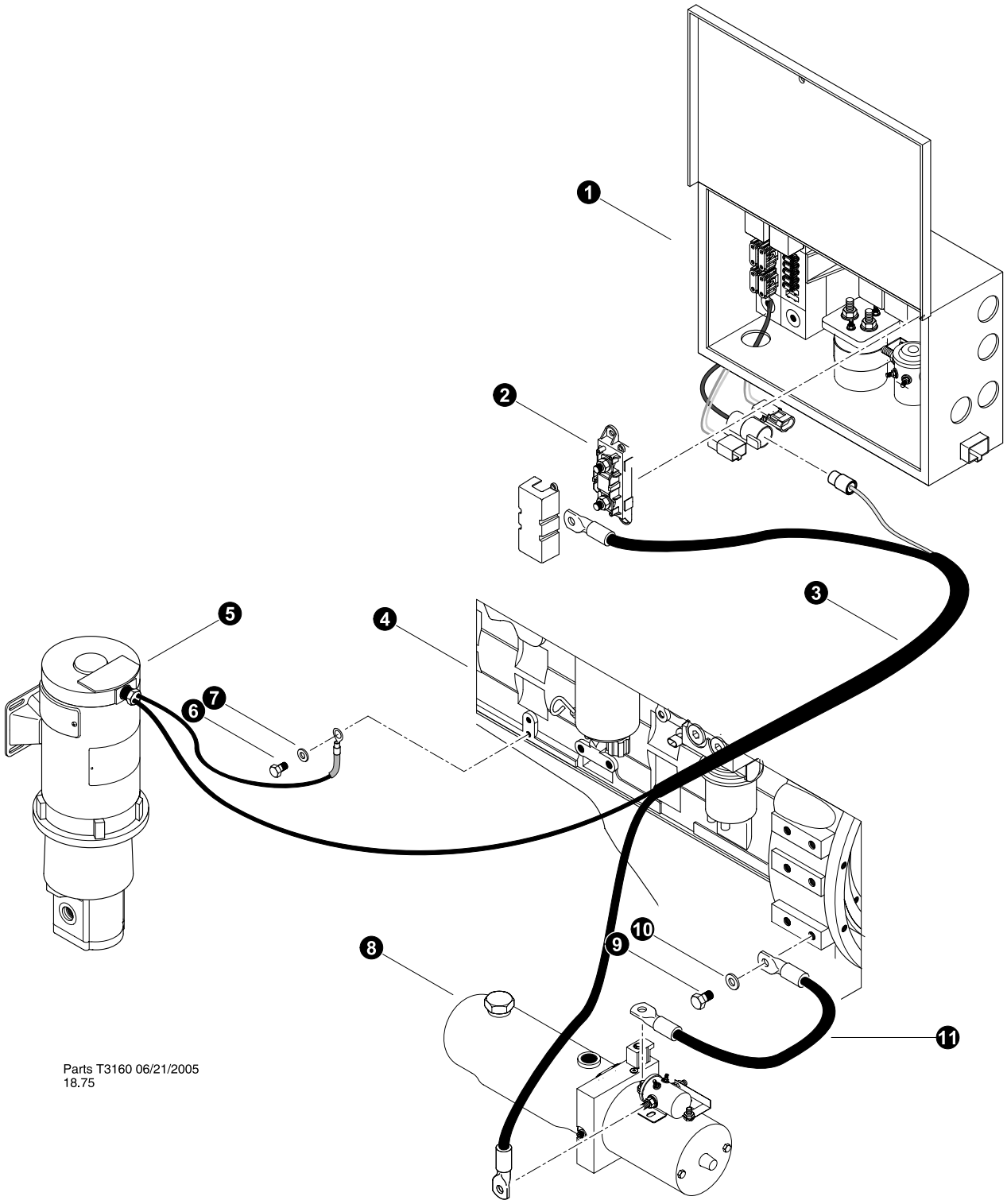
Parts T3383 04/06/2006
18.75

ENGINE ELECTRICAL SYSTEM

Grid Heater Cable
(Cummins QSC)
(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	52386-ES	1		CABLE, GRID HEATER (830/630)	
3	10756-ES	1		WASHER, LOCK - .25”	
4	16117	1		NUT, HEX - 6MM	

🕮 See referenced page for component or assembly breakdown.



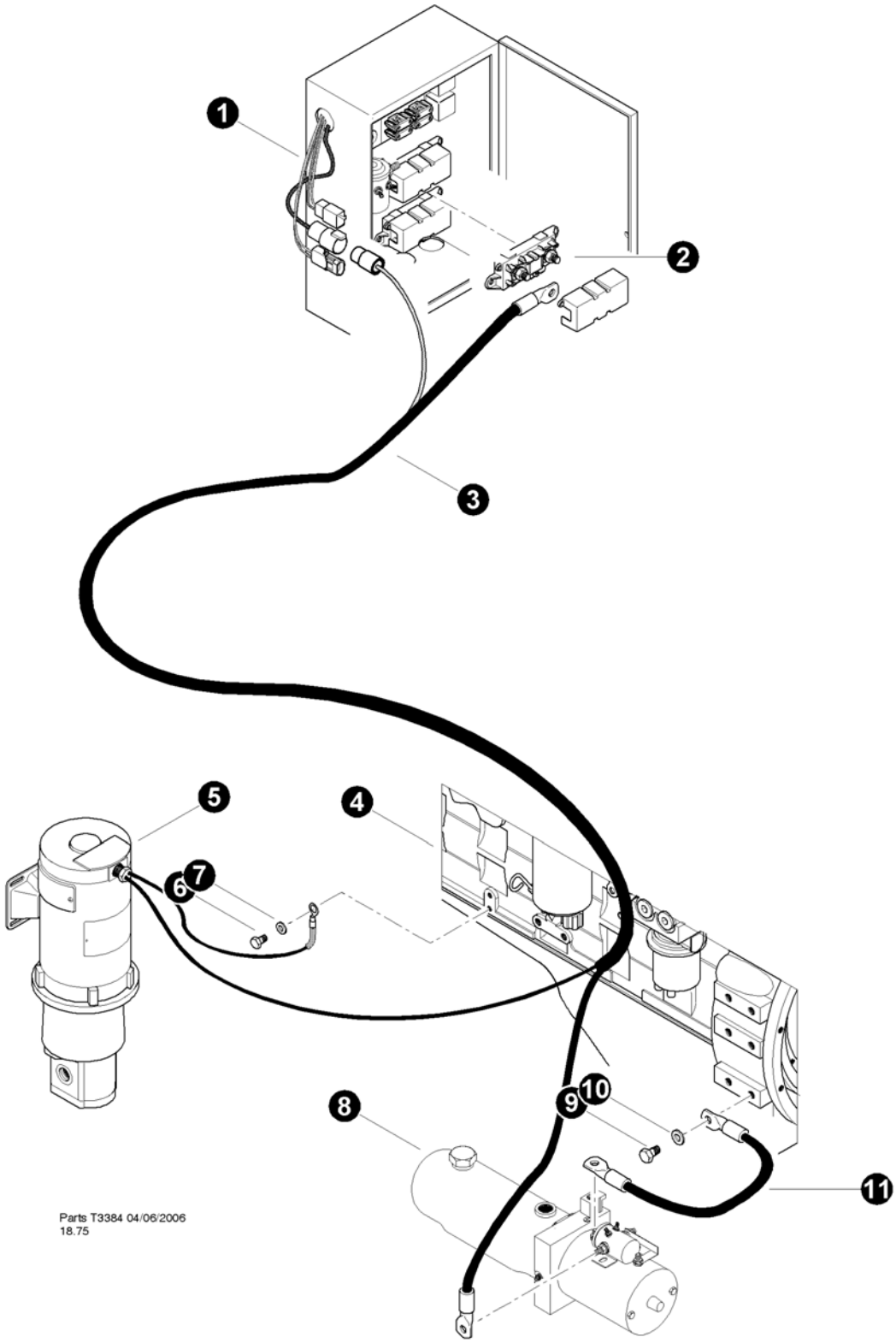
Parts T3160 06/21/2005
18.75

ENGINE ELECTRICAL SYSTEM

Fill Pump and Gull Wing Lift Pump Harness
(Machine built before SN 144-021306)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	23619-ES	1		FUSE, 100 AMP (MEGA)	
3	51748-ES	1		CABLE, FILL PUMP/DOOR PUMP	
4	REF.	1	🕮	ENGINE ASSEMBLY	EE/JD
5	REF.	1	🕮	FILL PUMP ASSEMBLY	UP-2
6	15556-ES	1		BOLT - 12MM-1.75P X 20MM	
7	15534-ES	1		WASHER, SAE FLAT - .5”	
8	REF	1	🕮	GULL WING DOOR LIFT PUMP ASSEMBLY	UP-3
9	15556-ES	1		BOLT - 12MM-1.75P X 20MM	
10	15534-ES	1		WASHER, SAE FLAT - .5”	
11	51875-ES	1		CABLE, GROUND - LIFT PUMP 830/630	

🕮 See referenced page for component or assembly breakdown.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Parts T3384 04/06/2006
18.75

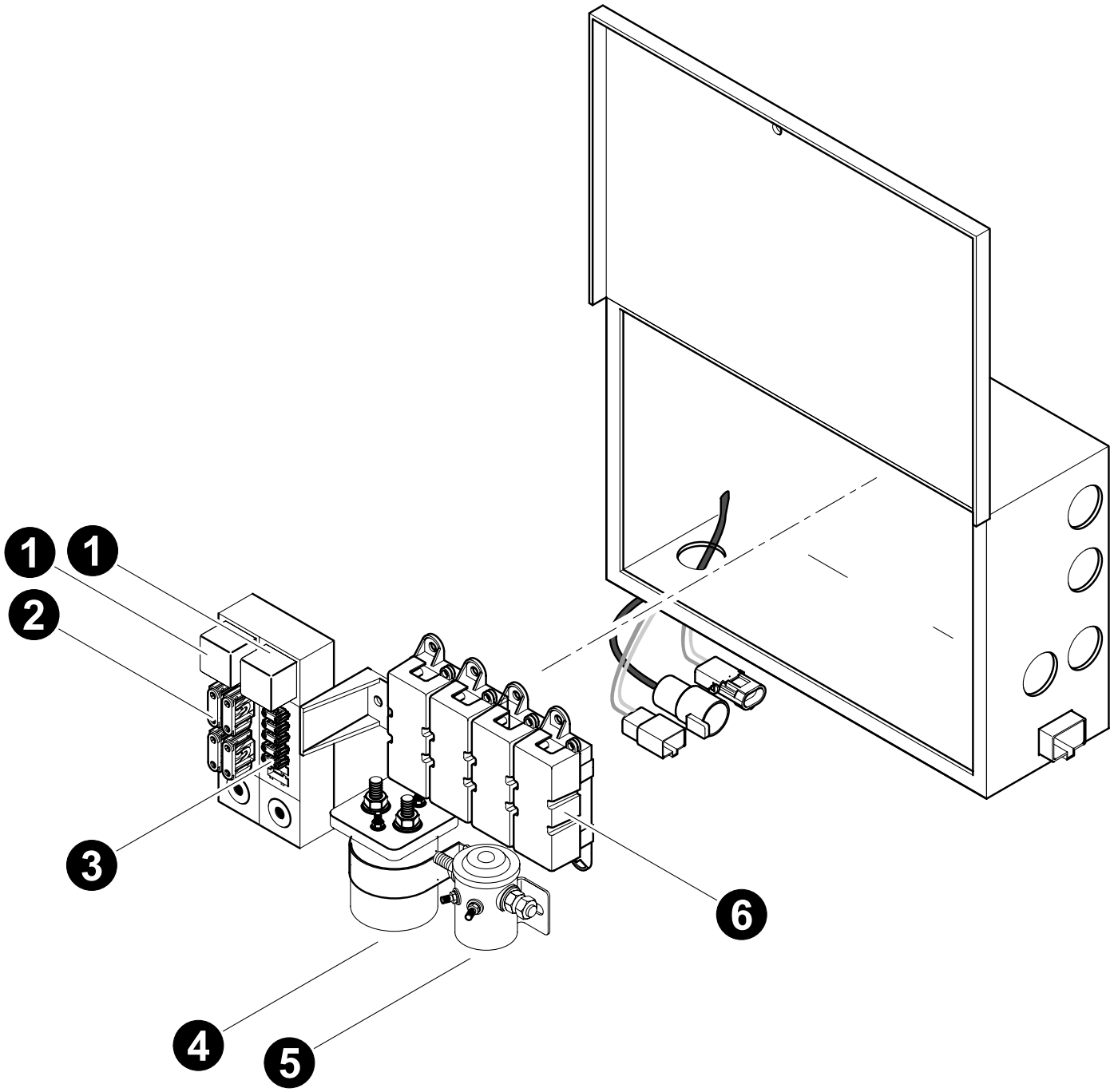
ENGINE ELECTRICAL SYSTEM

Fill Pump and Gull Wing Lift Pump Harness

(Machine SN 144-021306 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ENGINE ELECTRICAL CENTER ASSEMBLY	ES-1
2	23619-ES	1		FUSE, 100 AMP (MEGA)	
3	52387-ES	1		CABLE, FILL PUMP/DOOR PUMP	
4	REF.	1	🕮	ENGINE ASSEMBLY	EE/JD
5	REF.	1	🕮	FILL PUMP ASSEMBLY	UP-2
6	15556-ES	1		BOLT - 12MM-1.75P X 20MM	
7	15534-ES	1		WASHER, SAE FLAT - .5”	
8	REF	1	🕮	GULL WING DOOR LIFT PUMP ASSEMBLY	UP-3
9	15556-ES	1		BOLT - 12MM-1.75P X 20MM	
10	15534-ES	1		WASHER, SAE FLAT - .5”	
11	51875-ES	1		CABLE, GROUND - LIFT PUMP 830/630	

🕮 See referenced page for component or assembly breakdown.

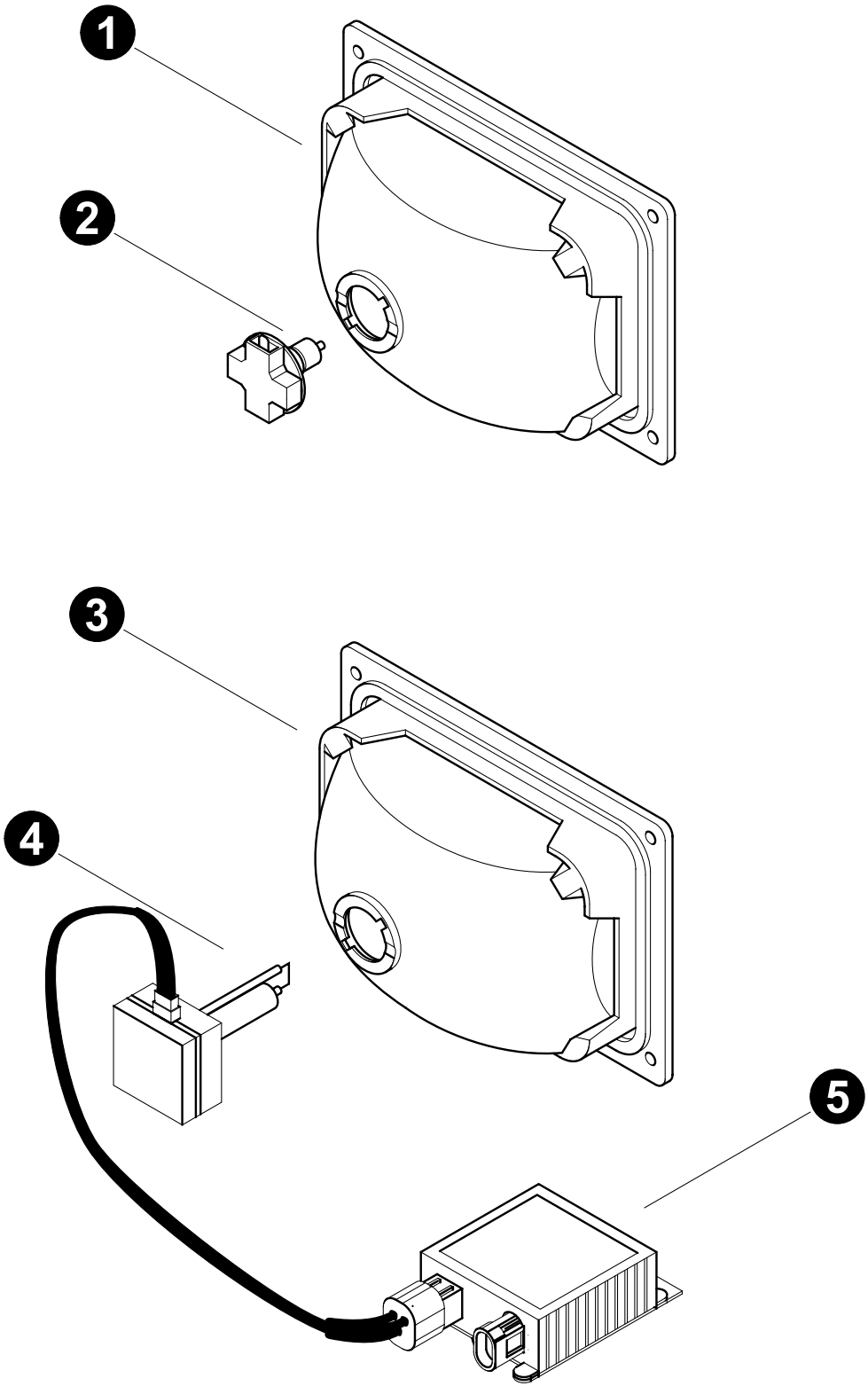


Parts T3161 06/21/2005

ENGINE ELECTRICAL SYSTEM
Engine Electrical Center Breakdown

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51765-ES	1		LOAD CENTER - ENGINE COMPARTMENT(830/630)	
1	51755-ES	2		RELAY, 70 AMP - LIGHTS / IGNITION / ACCESORY	
2	21892-ES	1		FUSE, MAXI - 30 AMP (John Deere Engine)	
	21894-ES	1		FUSE, MAXI - 40 AMP (lights)	
	21893-ES	2		FUSE, MAXI - 50 AMP (fill pump & starter)	
3	24512-ES	4		FUSE, ATO - 10 AMP (lights)	
	51754-ES	1		FUSE, ATO - 10 AMP (Espar Pre Heater)	
4	25117-ES	1		RELAY, STARTER - 24 volt (WHITE/ROGERS)	
5	25199-ES	1		RELAY, GRID HEATER - 24 volt (COLE HERSEE)	
6	23619-ES	4		FUSE, 100 AMP - MEGA (cab power supply, gull wing lift pump, grid heater, alternator)	

📖 See referenced page for component or assembly breakdown.



Parts T3162 06/21/2005

ENGINE ELECTRICAL SYSTEM
Lights

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23604-ES	1	❒	LIGHT, FLUSH MOUNT - 24V	
2	24819-ES	1		BULB, FLUSH MOUNT LIGHT - 24V	
3	51324-ES	1	❒	LIGHT, FLUSH MOUNT - 24V (XENON) (Optional)	
4	26858-ES	1		BULB, HID (all HID Lights)	
5	51396-ES	1		BALLAST, assembly 24 volt HID 9760/520	

🕮 See referenced page for component or assembly breakdown.
❒ Assembly that includes all items indented below.

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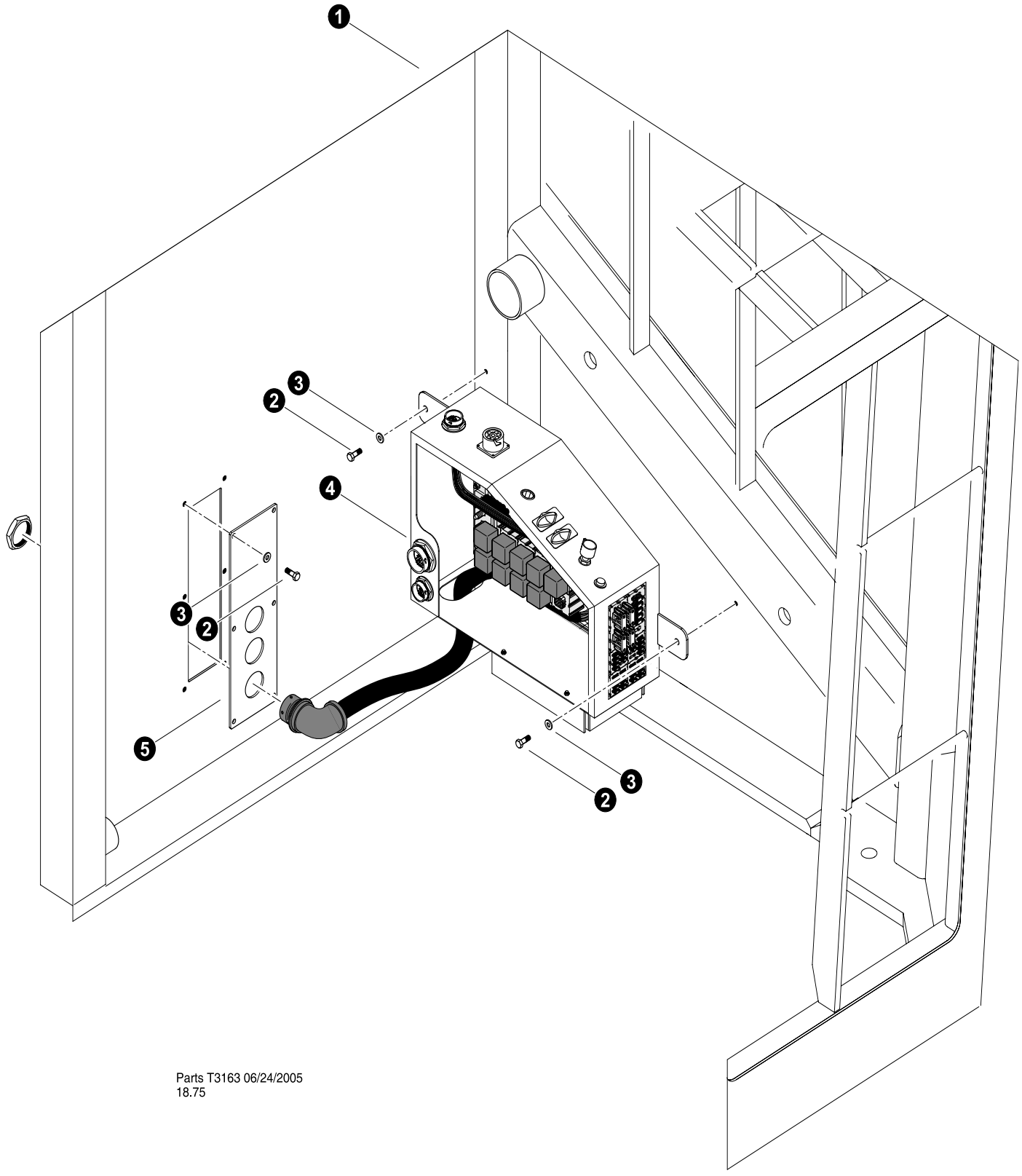
Section ES-2

Electrical System - Operator's Cab

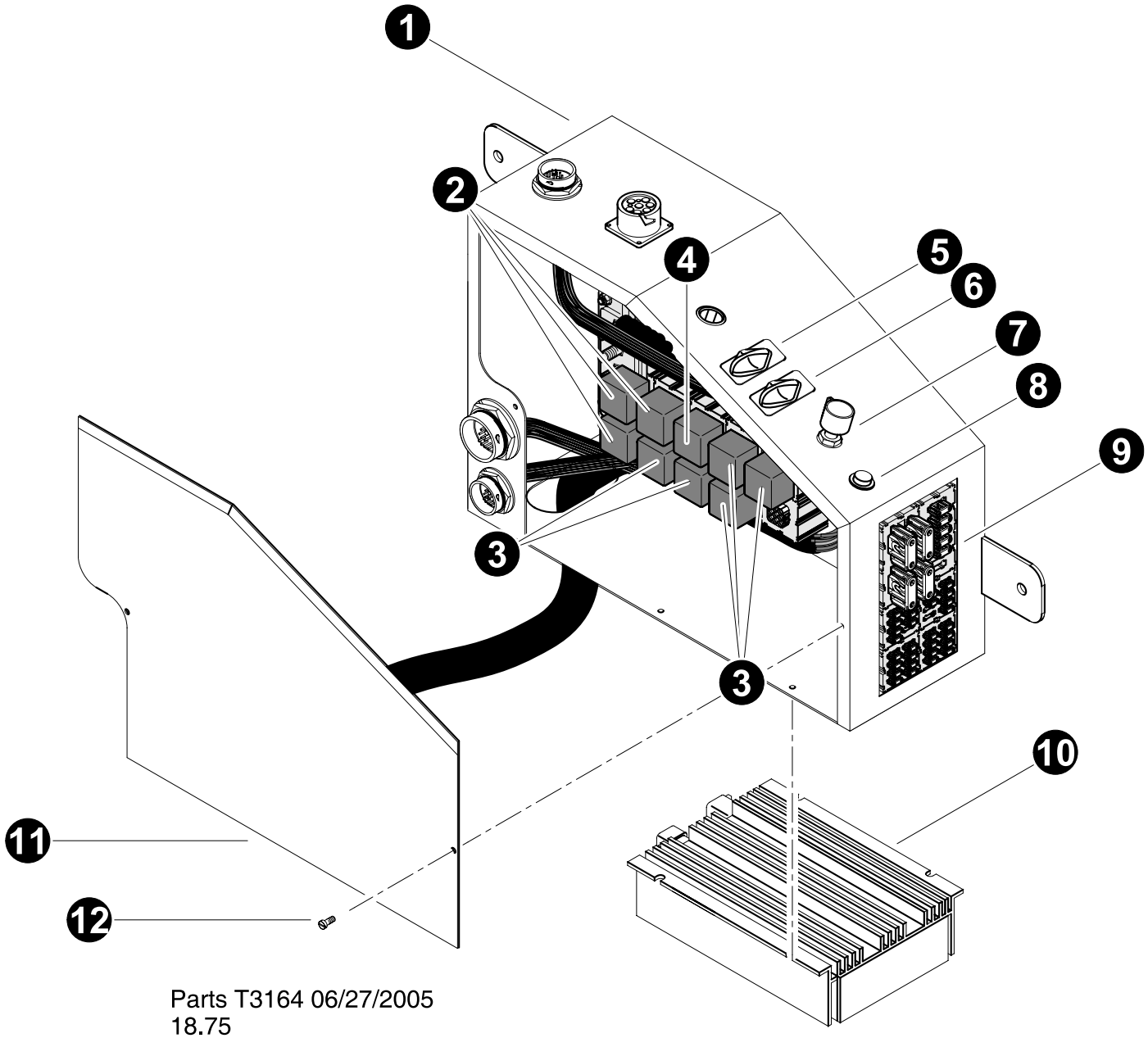


Parts T3163 06/24/2005
18.75

MAIN ELECTRICAL CENTER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	OPERATOR'S CAB ASSEMBLY	OC-1
2	15604-ES	8		BOLT - .25" X .75"	
3	10757-ES	8		WASHER, SAE FLAT - .25"	
4	REF	1	🕮	MAIN ELECTRICAL CENTER ASSEMBLY	ES-2
5	51950-ES	1		BULKHEAD PLATE, CAB REAR	

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

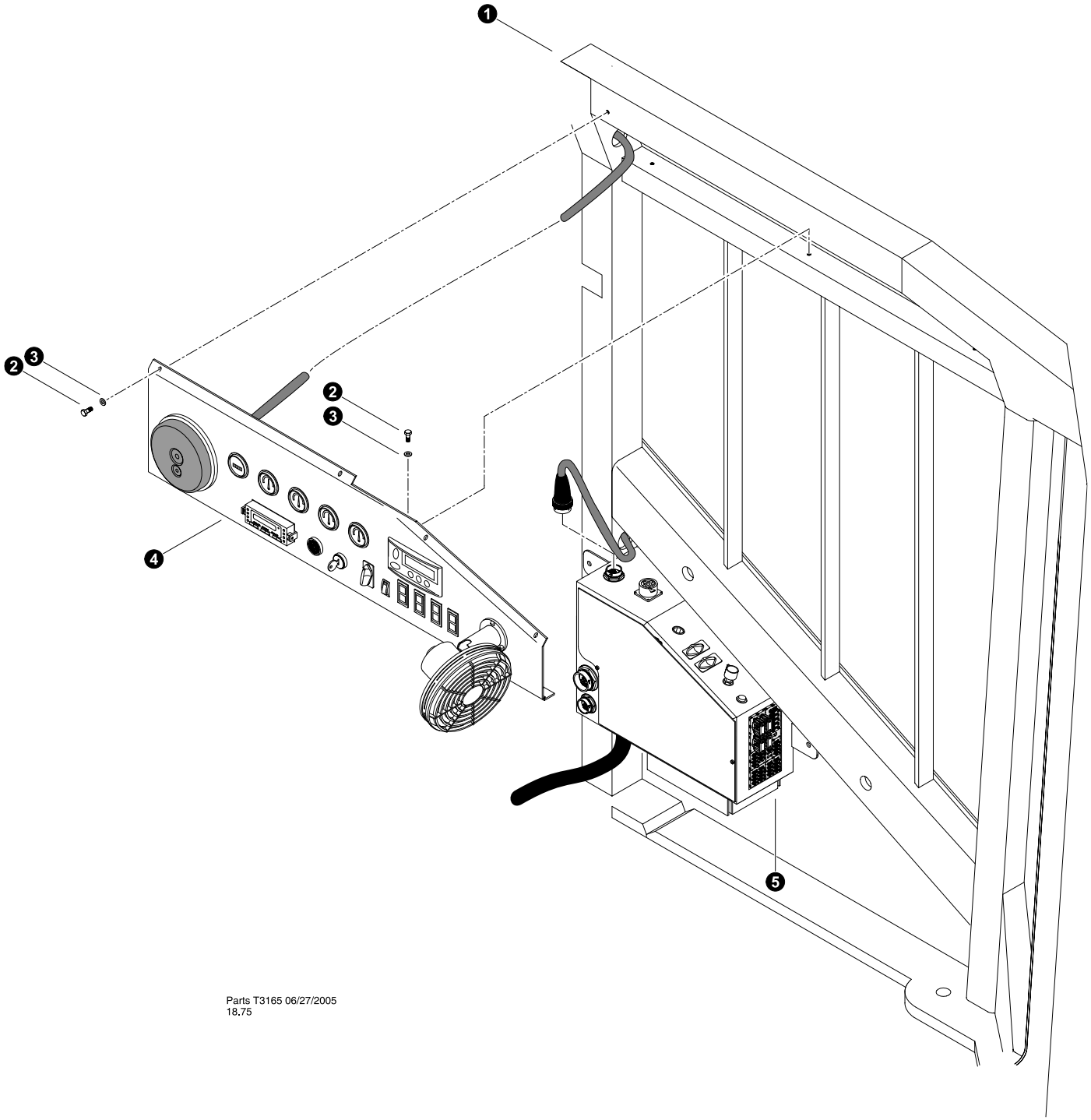


Parts T3164 06/27/2005
18.75

MAIN ELECTRICAL CENTER BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51766-ES	1	❑	MAIN ELECTRICAL LOAD CENTER (830/630)	
2	51755-ES	3		RELAY, 24-VOLT (70 AMP)	
3	24323-ES	5		RELAY, 24-VOLT (30 AMP)	
4	21895-ES	1		RELAY, 12-VOLT (30 AMP)	
5	51672-ES	1		SWITCH, HEATER FANS - OTTO	
6	51671-ES	1		SWITCH, AC/HEAT MODE - OTTO	
7	REF	1	🕮	WATER VALVE CONTROL THERMOSTAT	OC-4
8	52398-ES	1		LIGHT, LED DASH - GREEN	
9	21892-ES	1		FUSE, maxi - 30 amp *(Green)*	
	21894-ES	1		FUSE, maxi - 40 amp *(Orange)*	
	21893-ES	1		FUSE, maxi - 50 amp *(Red)*	
	24321-ES	4		FUSE, MINI - 3 AMP (Purple)	
	21890-ES	7		FUSE, mini - 5 amp *(Light brown)*	
	21888-ES	5		FUSE, mini - 7.5 amp *(Dark Brown)*	
	22658-ES	9		FUSE, mini - 10 amp *(Red)*	
	21887-ES	4		FUSE, mini - 15 amp *(Blue)*	
	24512-ES	1		FUSE, ATO - 10 AMP (Red)	
	51754-ES	2		FUSE, ATO - 20 AMP (Yellow)	
	50401-ES	3		FUSE, ATO - 30 AMP (Green)	
10	23324-ES	1		CONVERTER, 24V TO 12V - CURRENT 25AMP	
11	42611-ES	1		COVER, ELECTRICAL CENTER	
12	17255-ES	2		SCREW, SELF TAPPING - #10-24 X .75"	
-	51753-ES	1		KIT, ELECTRICAL- FUSE/RELAY- 830/630 24V	

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

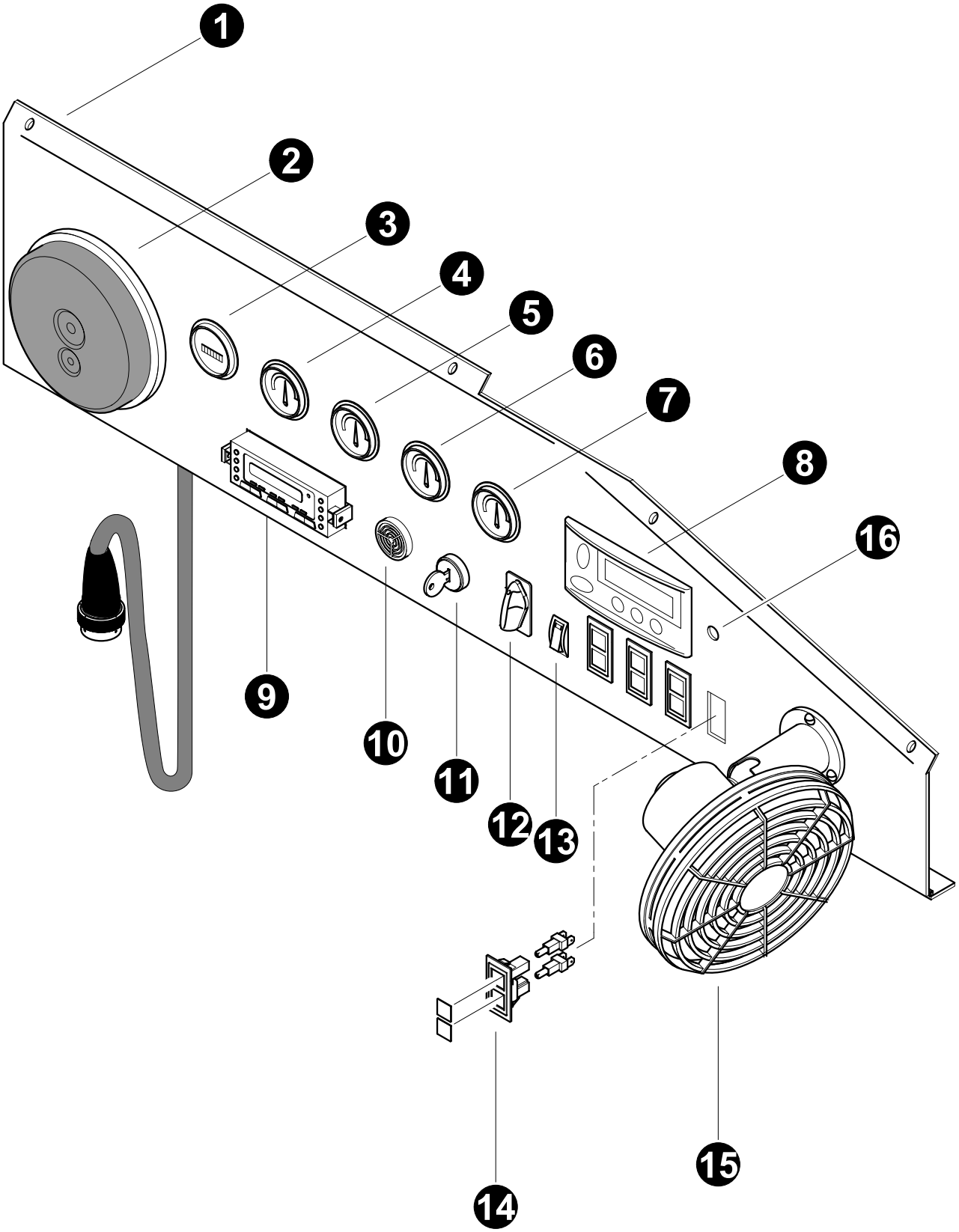


Parts T3165 06/27/2005
18.75

UPPER DASH INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	OPERATOR'S CAB ASSEMBLY	OC-1
2	15604-ES	7		BOLT - .25" X .75"	
3	10757-ES	7		WASHER, SAE FLAT - .25"	
4	REF	1	🕮	UPPER DASH ASSEMBLY.	ES-2
5	REF	1	🕮	MAIN ELECTRICAL CENTER ASSEMBLY	ES-2

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

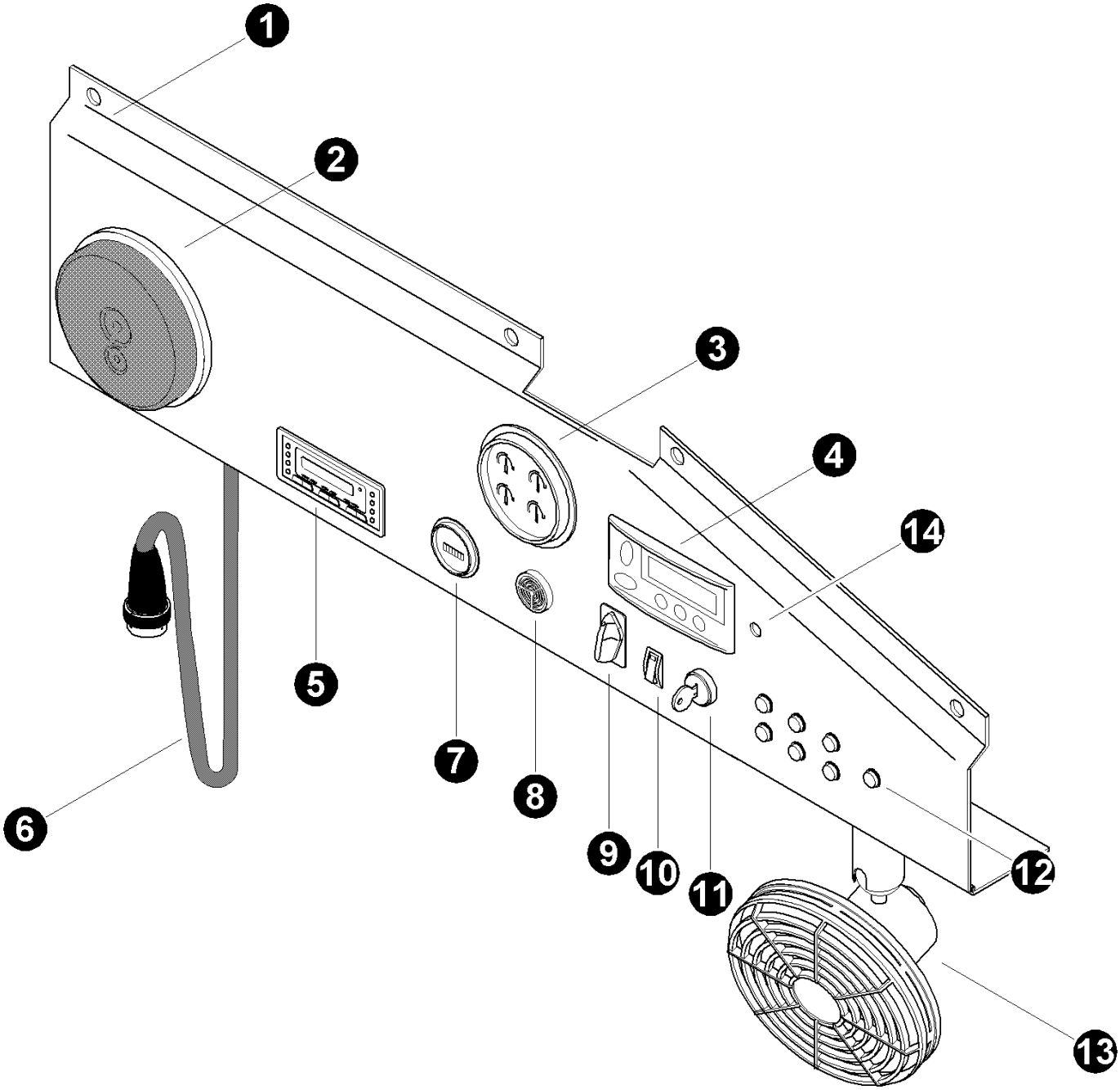


Parts T3166 06/27/2005
18.75

UPPER DASH BREAKDOWN
(machines SN 151 and before)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51817-ES	1	❑	DASH ASSEMBLY - UPPER LH (830)	
2	24710-ES	1		SPEAKER	
3	15025-ES	1		GAUGE, HOURMETER	
4	51701-ES	1		GAUGE, VOLTMETER - 830	
5	51700-ES	1		GAUGE, TEMERATURE - 830	
6	51699-ES	1		GAUGE, ENGINE OIL PRESSURE - 830	
7	51700-ES	1		GAUGE, TEMERATURE - 830	
8	REF	1	🕮	MDM CONTROL MODULE	ES-3
9	REF	1	🕮	RADIO CONTROL MODULE	ES-2
10	15027-ES	1		SIREN, WARNING	
11	15028-ES	1	❑	SWITCH, IGNITION	
-	16936-ES	2		KEY, IGNITION - NG100	
12	51673-ES	1		SWITCH, VENT/ VACUUM - (OPTIONAL)	
13	51664-ES	1		SWITCH, LIGHT	
14	18171-ES	4	❑	CLUSTER, warning lights	
-	23538-ES	7		LIGHT - *(24V)*	
-	24705-ES	5		LENS, LIGHT INDICATOR - YELLOW (BLANK)	
-	50959-ES	1		LENS, LIGHT INDICATOR - RED (BLANK)	
-	18173-ES	1		LENS, LIGHT INDICATOR - LOW OIL (RED)	
-	20831-ES	1		LENS, LIGHT INDICATOR - BLACK (BLANK)	
15	23279-ES	1	🕮	FAN, WINDSHIELD DEFROST - 24V	
16	REF-ES	1	🕮	MDM PROGRAMING EXTENTION CABLE.	ES-3

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

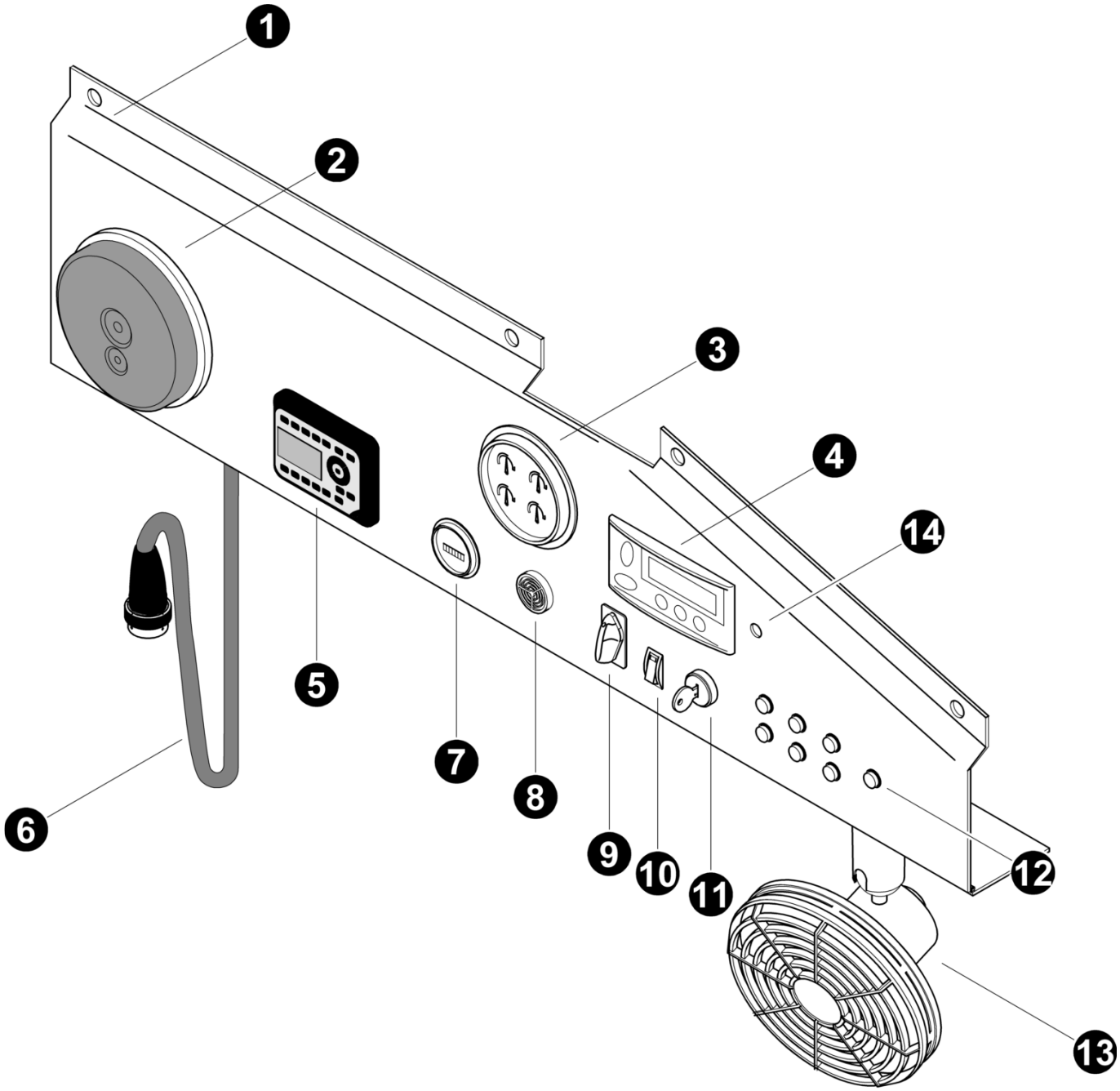


Parts T3386 06/27/2005
18.75

UPPER DASH BREAKDOWN
Beede 4in1 gauge
(machines SN 152 to SN 0179)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	-ES	1	❑	DASH ASSEMBLY - UPPER LH (830)	
1	52341-ES	1		PANEL, DASH L.H. (BEEDE 4IN1 GAUGE)	
-	52346-ES	1		DECAL, CAB Upper Lt Dash	
2	24710-ES	1		SPEAKER	
3	52420-ES	1		GAUGE, 4 IN ONE - 24 V (BEEDE)	
4	REF	1	🕮	MDM IQAN CONTROL MODULE	ES-3
5	REF	1	🕮	RADIO CONTROL MODULE	ES-2
6	52406-ES	1		HARNESS, DASH - UPPER (CURRENT 830/630)	
7	52401-ES	1		GAUGE, HOUR METER - CURRENT	
8	15027-ES	1		SIREN, WARNING	
9	51673-ES	1		SWITCH, VENT/ VACUUM - (OPTIONAL)	
10	51664-ES	1		SWITCH, LIGHT	
11	52414-ES	1	❑	SWITCH, IGNITION - INDAK	
-	52417-ES	2		KEY, IGNITION - CURRENT (A880)	
12	52400-ES	1		LIGHT, LED DASH - AMBER (1 PER) Wait to Start	
-	52397-ES	2		LIGHT, LED DASH - RED (2 PER) Stop Engine, Low Hyd Oil	
-	52399-ES	4		LIGHT, LED DASH - YELLOW (4 PER)	
13	23279-ES	1	🕮	FAN, WINDSHIELD DEFROST - 24V	
14	REF-ES	1	🕮	MDM PROGRAMING EXTENTION CABLE.	ES-3

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

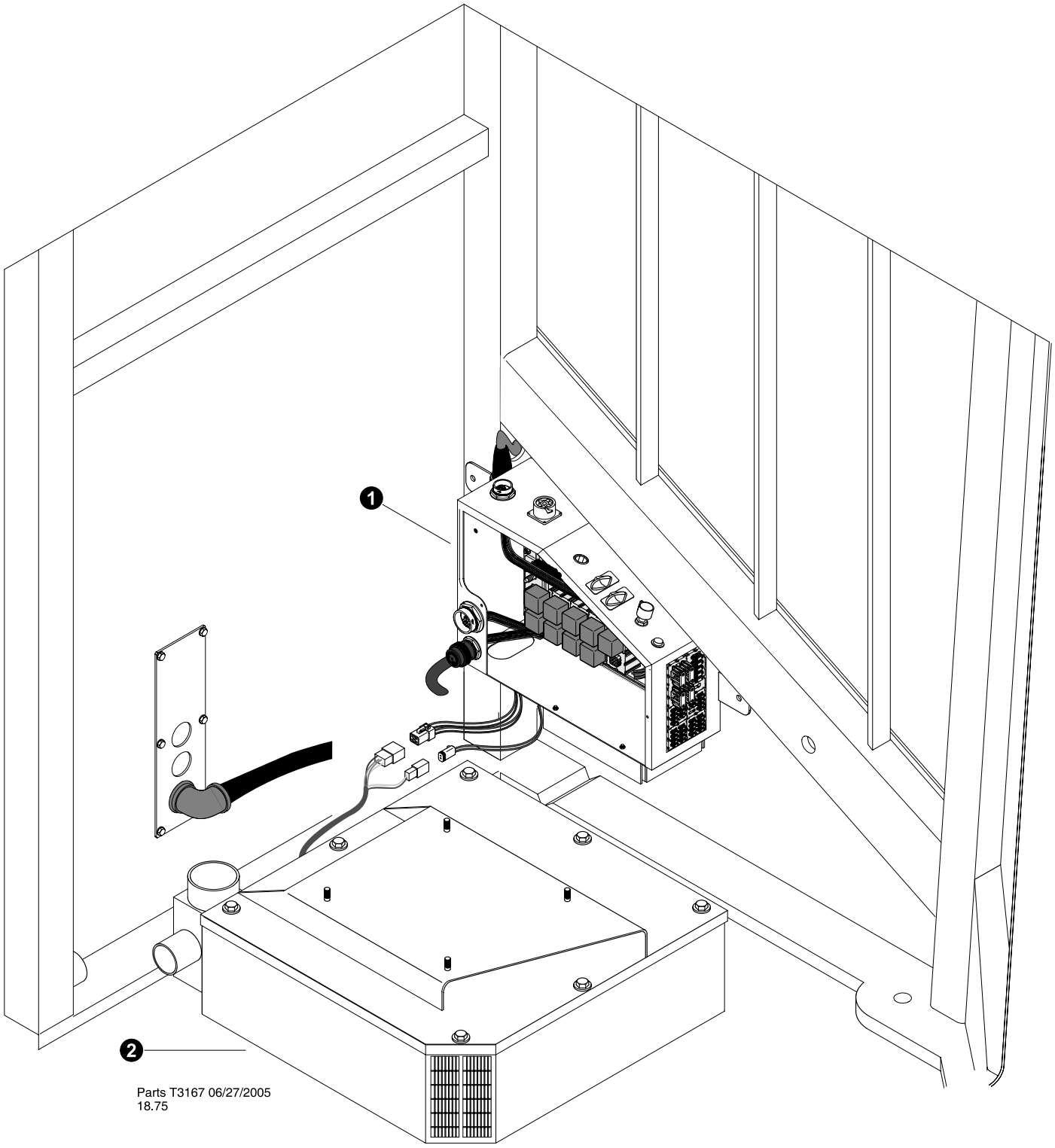


Parts T3506 10/17/2006
18.75

UPPER DASH BREAKDOWN
Beede 4in1 gauge / Jensen Radio
(machines SN 0180 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	-ES	1	❑	DASH ASSEMBLY - UPPER LH (830)	
1	52341-ES	1		PANEL, DASH L.H. (BEEDE 4IN1 GAUGE)	
-	52346-ES	1		DECAL, CAB Upper Lt Dash	
2	24710-ES	1		SPEAKER	
3	52420-ES	1		GAUGE, 4 IN ONE - 24 V (BEEDE)	
4	REF	1	🕮	MDM IQAN CONTROL MODULE	ES-3
5	52640-ES	1		RADIO, HEAVY DUTY - AM/FM/WB (ASA)	
6	52406-ES	1		HARNESS, DASH - UPPER (CURRENT 830/630)	
7	52401-ES	1		GAUGE, HOUR METER - CURRENT	
8	15027-ES	1		SIREN, WARNING	
9	51673-ES	1		SWITCH, VENT/ VACUUM - (OPTIONAL)	
10	51664-ES	1		SWITCH, LIGHT	
11	52414-ES	1	❑	SWITCH, IGNITION - INDAK	
-	52417-ES	2		KEY, IGNITION - CURRENT (A880)	
12	52400-ES	1		LIGHT, LED DASH - AMBER (1 PER) Wait to Start	
-	52397-ES	2		LIGHT, LED DASH - RED (2 PER) Stop Engine, Low Hyd Oil	
-	52399-ES	4		LIGHT, LED DASH - YELLOW (4 PER)	
13	23279-ES	1	🕮	FAN, WINDSHIELD DEFROST - 24V	
14	REF-ES	1	🕮	MDM PROGRAMING EXTENTION CABLE.	ES-3

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

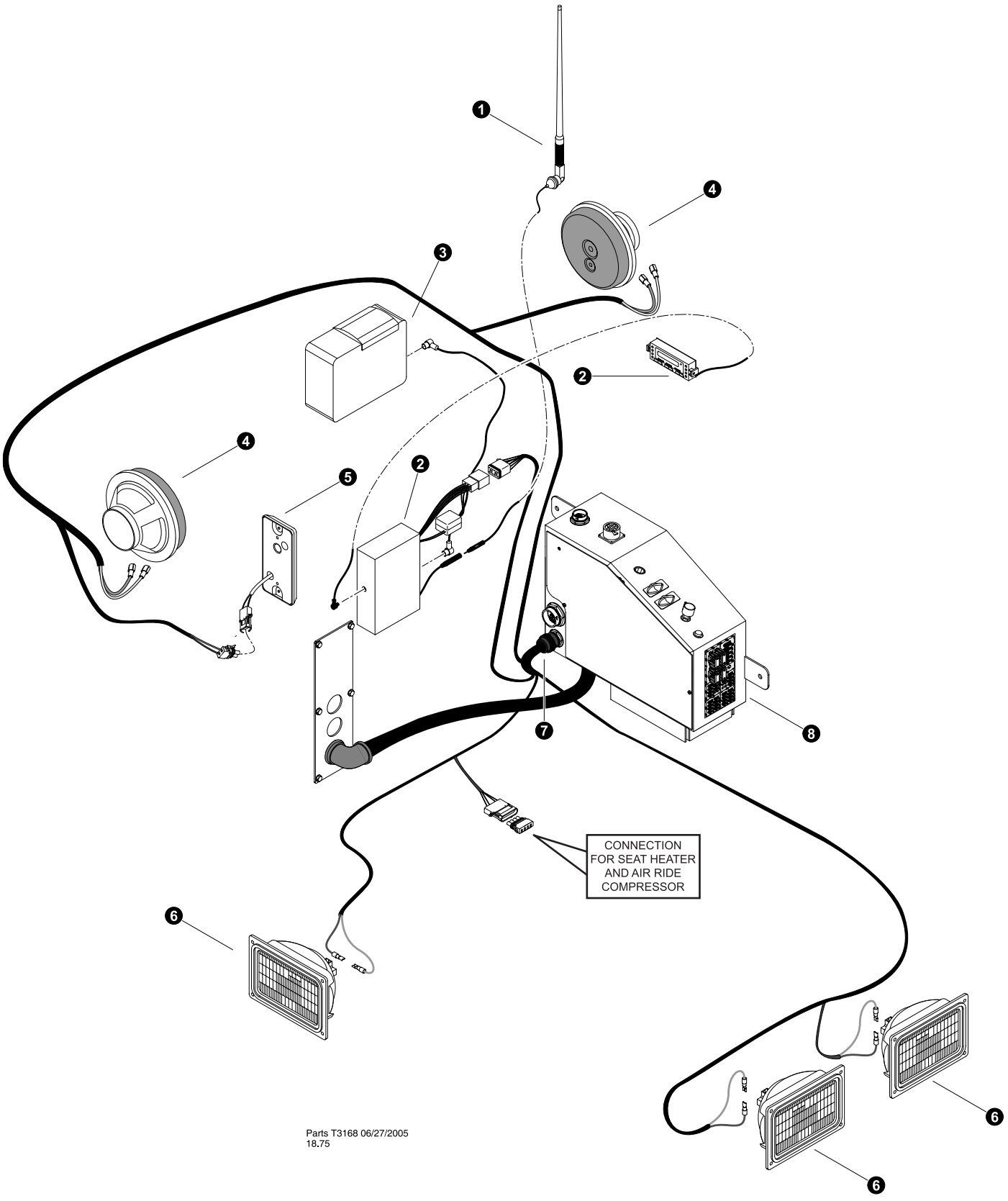


Parts T3167 06/27/2005
18.75

A/C AND HEATER CONNECTIONS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	MAIN ELECTRICAL CENTER ASSEMBLY	ES-2
2	REF	1	🕮	HEATER A/C UNIT ASSEMBLY	OC-2

❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.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CONNECTION
FOR SEAT HEATER
AND AIR RIDE
COMPRESSOR
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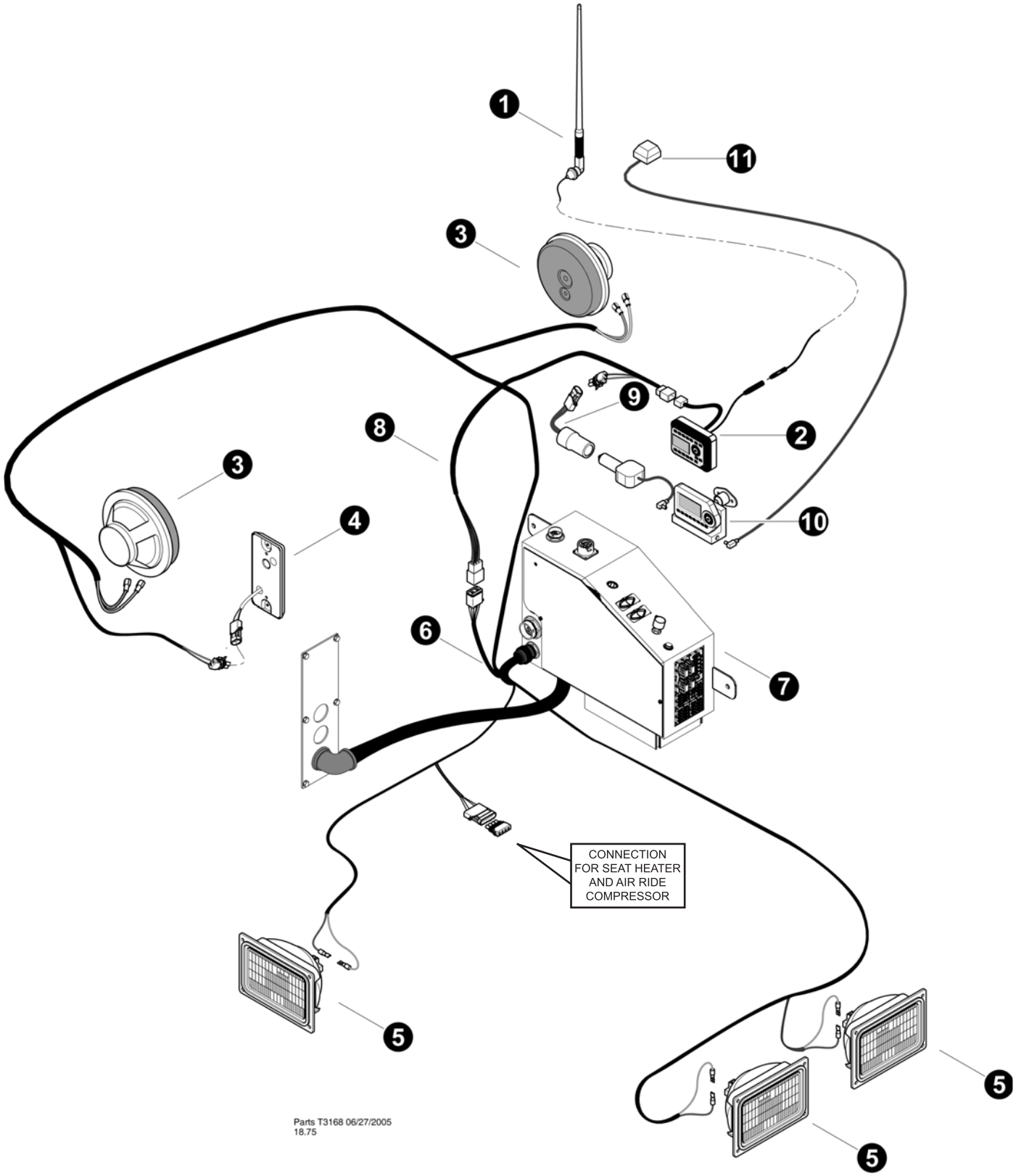
Parts T3168 06/27/2005
18.75

OPERATOR'S CAB ELECTRICAL HARNESS
(Lights and Radio)

(Machine SN# 0179 and before)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	24583-ES	1		ANTENNA, radio 1" hole	
2	51679-ES	1		RADIO - S1	
	NSS	1		RADIO - CONTROL MODULE	
	NSS	1		RADIO - AMP/TUNER MODULE	
3	51680-ES	1		COMPACT DISC CHANGER (10 DISC) - OPTIONAL	
4	24710-ES	2		SPEAKERS	
5	23614-ES	1		LIGHT, DOME - 24V	
6	REF	3		LIGHT ASSEMBLIES	ES-2
7	51769-ES	1		HARNESS, CAB - 830/630	
8	REF	1	🕮	MAIN ELECTRICAL CENTER ASSEMBLY	ES-2

❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.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CONNECTION
FOR SEAT HEATER
AND AIR RIDE
COMPRESSOR
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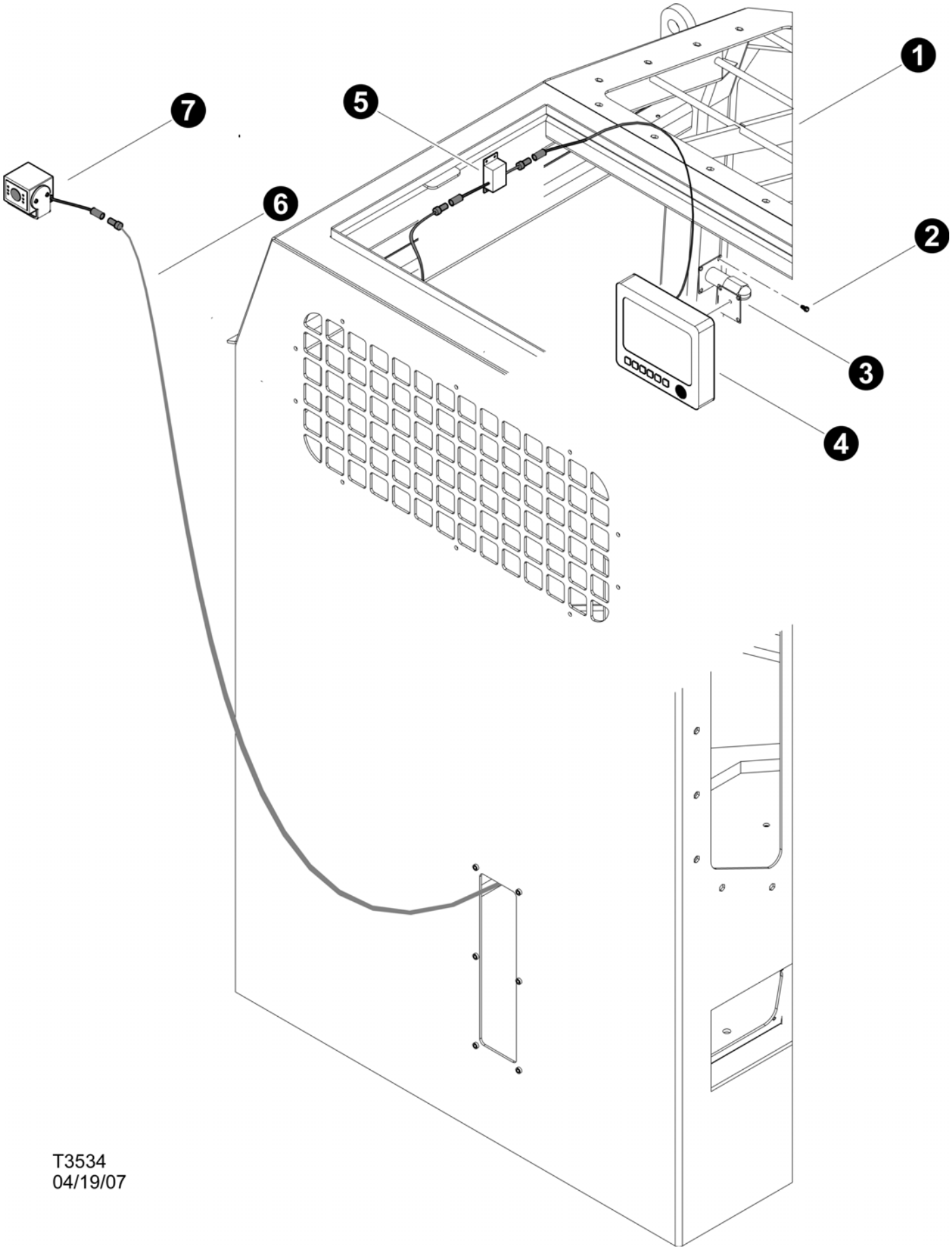
Parts T3168 06/27/2005
18.75

OPERATOR'S CAB ELECTRICAL HARNESS
(Lights and Radio)

(Machine SN# 0180 and after)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	24583-ES	1		ANTENNA, radio 1" hole	
2	52640-ES	1		RADIO, HEAVY DUTY - AM/FM/WB (ASA)	
3	24710-ES	2		SPEAKERS	
4	23614-ES	1		LIGHT, DOME - 24V	
5	REF	3		LIGHT ASSEMBLIES	ES-2
6	51769-ES	1		HARNESS, CAB - 830/630	
7	REF	1	🕮	MAIN ELECTRICAL CENTER ASSEMBLY	ES-2
8	52652-ES	1		HARNESS, CAB - 830/630 Jensen Radio	
9	-ES	1		HARNESS, XM Plug Adapter	
10	52680-ES	1	❑	RADIO, XM KIT - ASA - (Kit Includes Power Cord, Antenna and Cradle)	
11	-ES	1		ANTENNA, XM - ASA radio (118-1133)	

❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.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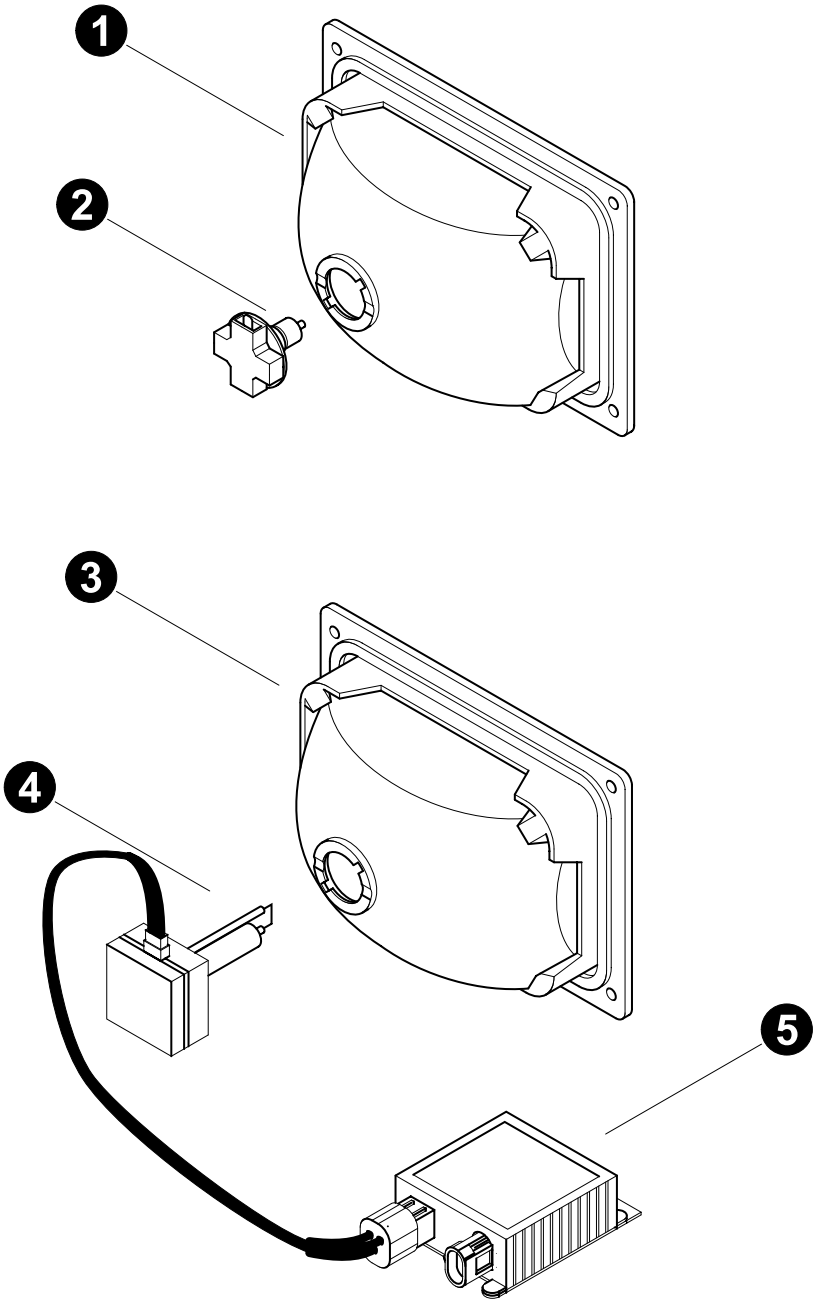
T3534
04/19/07

Rear View Camera Installation

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		OPERATOR'S CAB	OC-1
2	17254-ES	4		SCREW, SELF TAPPING - #10-24 X .5"	
-	52557-ES	1	❑	CAMERA, REARVIEW (Kit)	
3	-ES	1		BRACKET, LCD Monitor Mount (72704)	
4	-ES	1		MONITOR, 7" LCD Screen (AOM713WP)	
5	-ES	1		JUNCTION BOX - Camera System	
6	-ES	1		CABLE, Rear View Camera 25' cable (CEC25)	
7	-ES	1		CAMERA, Rear View - Color (VCCS130)	

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



Parts T3162 06/21/2005

CAB LIGHTS BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23604-ES	1	❒	LIGHT, FLUSH MOUNT - 24V	
2	24819-ES	1		BULB, FLUSH MOUNT LIGHT - 24V	
3	51324-ES	1	❒	LIGHT, FLUSH MOUNT - 24V (XENON) (Optional)	
4	26858-ES	1		BULB, HID (all HID Lights)	
5	51396-ES	1		BALLAST, assembly 24 volt HID 9760/520	

🕮 See referenced page for component or assembly breakdown.
❒ Assembly that includes all items indented below.

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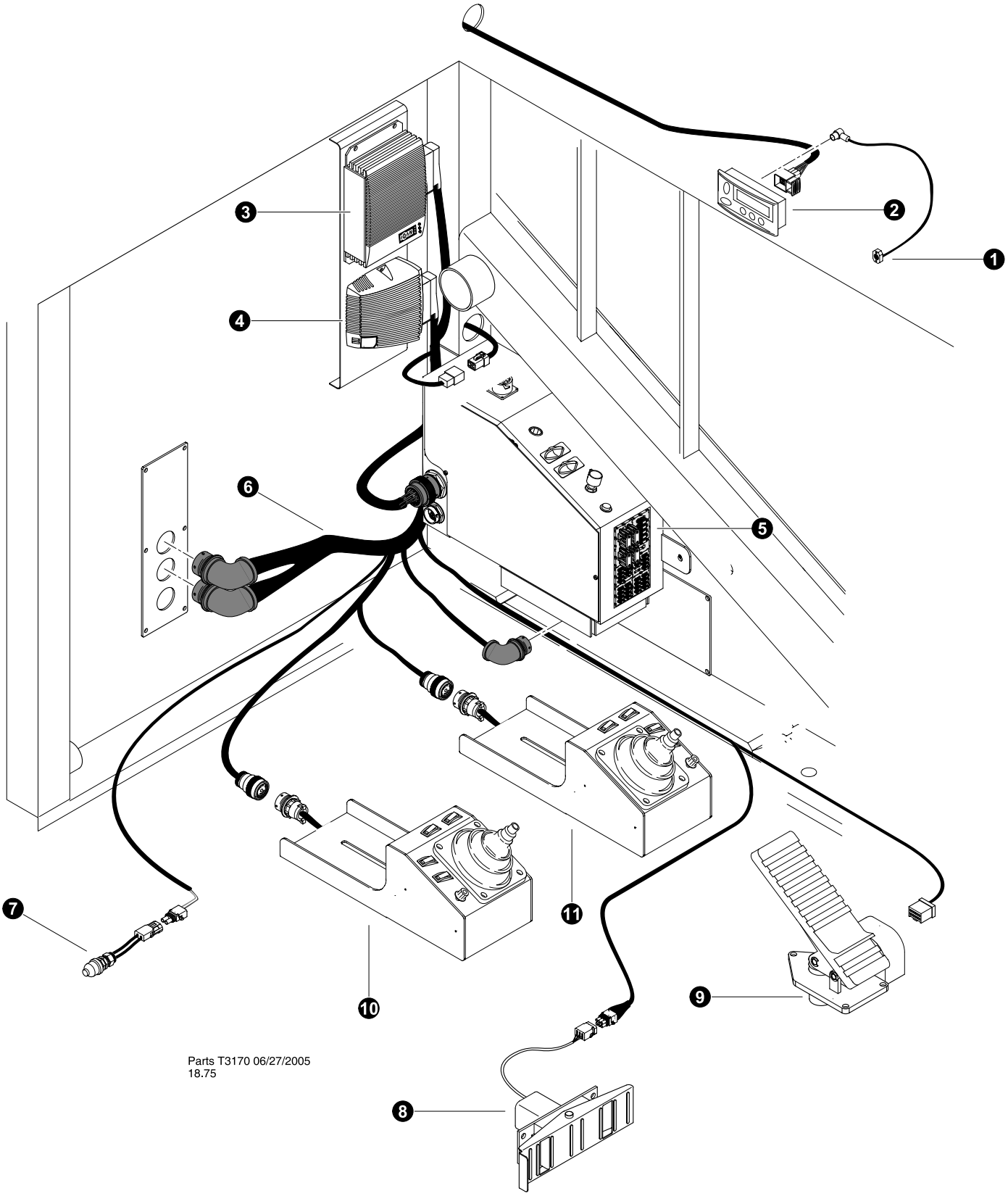
Section ES-3

Electrical System - IQAN Control System

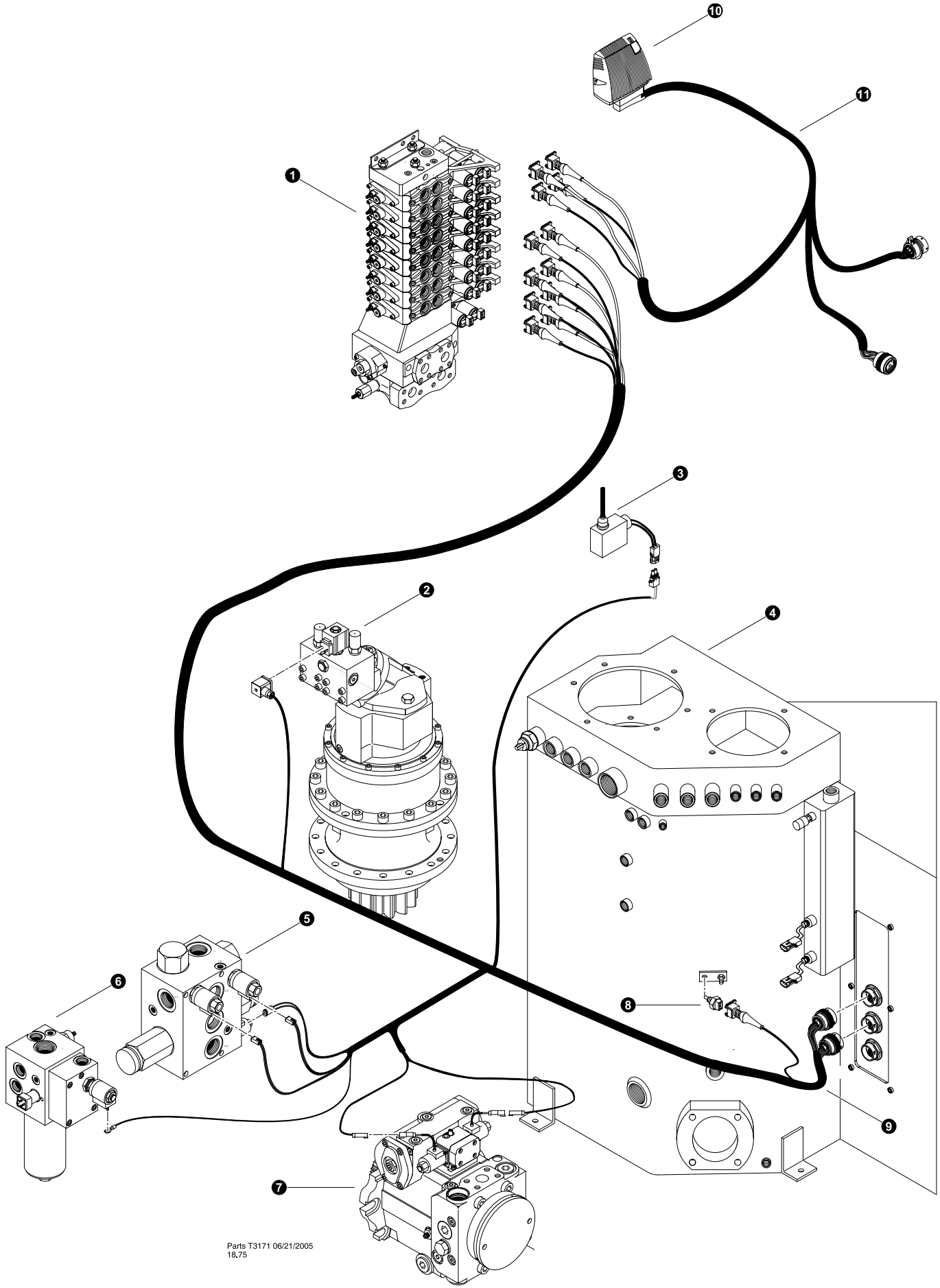


Parts T3170 06/27/2005
18.75

IQAN - CAB CONTROL HARNESS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52052-ES	1		CABLE, MDM PROG. EXTENTION - (830/630)	
2	24415-ES	1		MODULE, MDM IQAN SCREEN	
3	50482-ES	1		MODULE, XP	
4	51487-ES	1		MODULE, XT2	
5	REF.	1	🕮	CAB ELECTRICAL CENTER	ES-2
6	52050-ES	1		HARNESS, CAB - IQAN (830/630)	
7	25104-ES	1		SWITCH, DOOR LIMIT/FILL PUMP	
8	REF.	1	🕮	DRIVE PEDAL CONTROL	ES-3
9	REF.	1	🕮	BRAKE PEDAL CONTROL	ES-3
10	REF.	1	🕮	RIGHT JOYSTICK CONTROL PANEL.	ES-3
11	REF.	1	🕮	LEFT JOYSTICK CONTROL PANEL	ES-3

🕮 See referenced page for component or assembly breakdown.

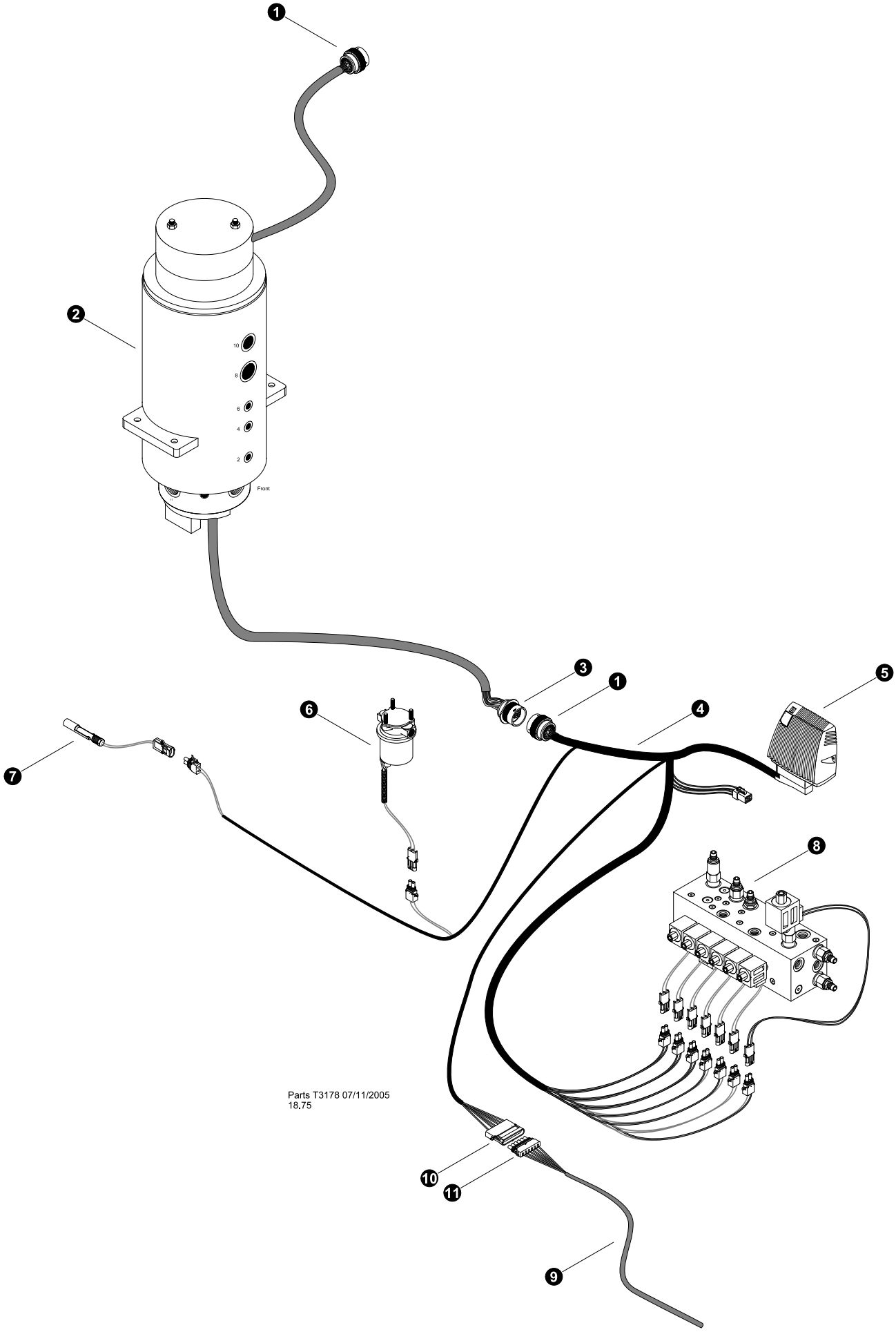


Parts T3171 06/21/2005
18.75

IQAN - ENGINE & VALVE COMPARTMENT HARNESSES

eREF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH/CH/HH
2	REF.	1	🕮	SWING MOTOR ASSEMBLY	LH/CH/HH
3	51933-ES	1		SWITCH, LIMIT-GULLWING DOOR SAFETY	
4	REF.	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
5	REF.	1	🕮	FAN CONTROL VALVE	UP-3
6	REF.	1	🕮	WHEEL DRIVE CHARGE VALVE ASSEMBLY	WD
7	REF.	1	🕮	WHEEL DRIVE PUMP	WD-1
8	24531-ES	1		TRANSDUCER, HYD TEMP	
9	52051-ES	1		HARNESS, MACHINE - IQAN (830/630)	
10	50158-ES	1		MODULE, XP2 (Auxillary Module - Optional)	
11	52514-ES	1		HARNESS, IQAN - AUX. (Auxillary Harness - Optional) Used with Disc Saw	

🕮 See referenced page for component or assembly breakdown.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Parts T3178 07/11/2005
18.75
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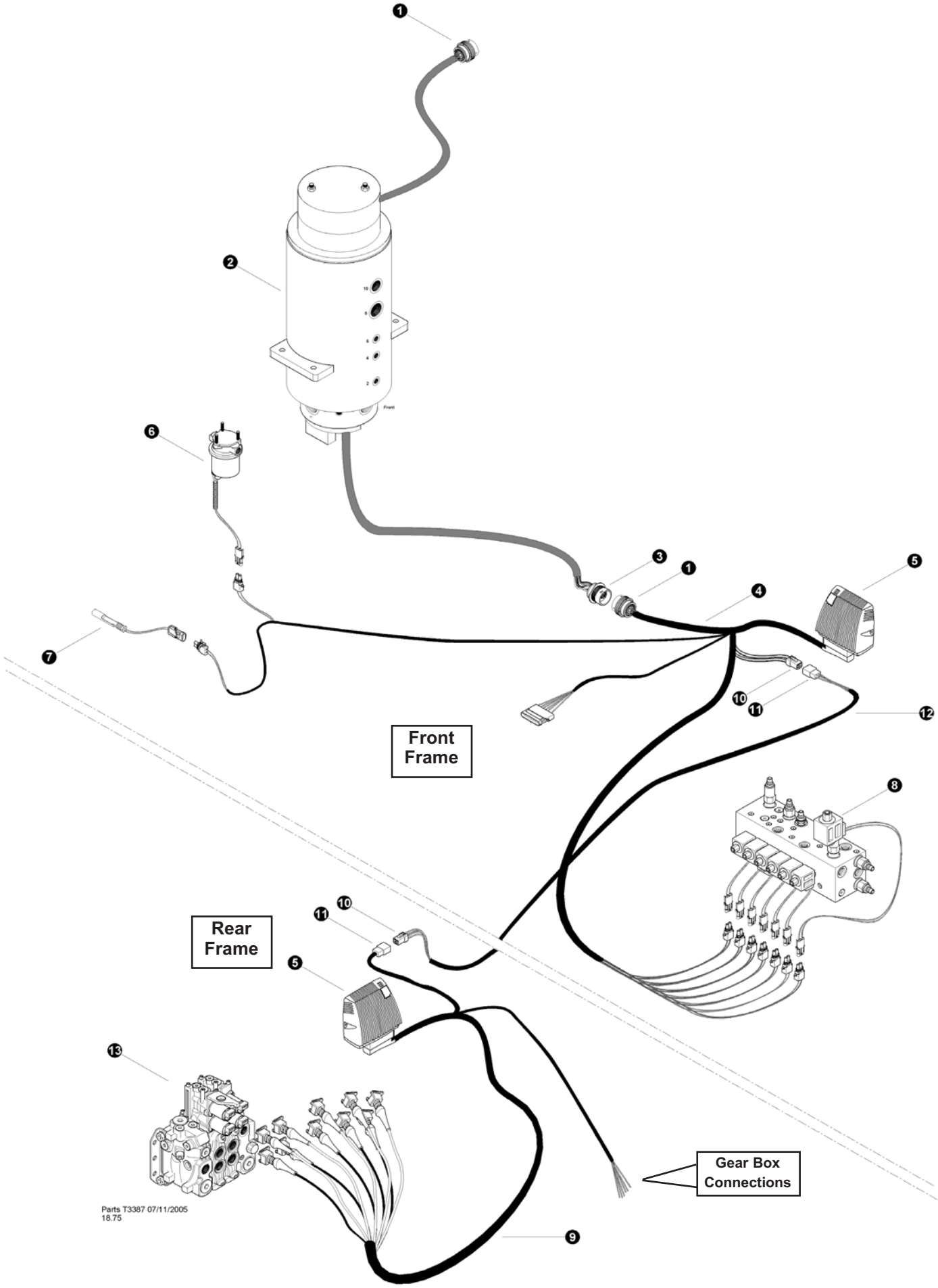
IQAN - LOWER FRAME HARNESS
(TF 830,840 - Nonleveling)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	51749-ES	2	CONNECTOR, DEUTCH, 8 PIN - MALE	
2	REF	1	ROTORY MANIFOLD ASSEMBLY	UP-1
3	51793-ES	1	CONNECTOR, DEUTCH, 8 PIN - FEMALE	
4	51959-ES	1	CONTROL, KIT - VOAC/IQAN LOWER (830)	
5	50158-ES	1	MODULE, XP2	
6	REF	1	FUEL PUMP ASSEMBLY	FF-3
7	51379-ES	1	SWITCH, HYD. OIL LEVEL	
8	REF	1	LOWER CONTROL MANIFOLD.	FF-4
9	25122-ES	17 ft	WIRE - 18 GA. 8 CONDUCTOR (500’ SPOOL)	
10		1	KIT, CONNECTOR - 6 POSITION - WAYTEK (FEMALE)	
11		1	KIT, CONNECTOR - 6 POSITION - WAYTEK (MALE)	

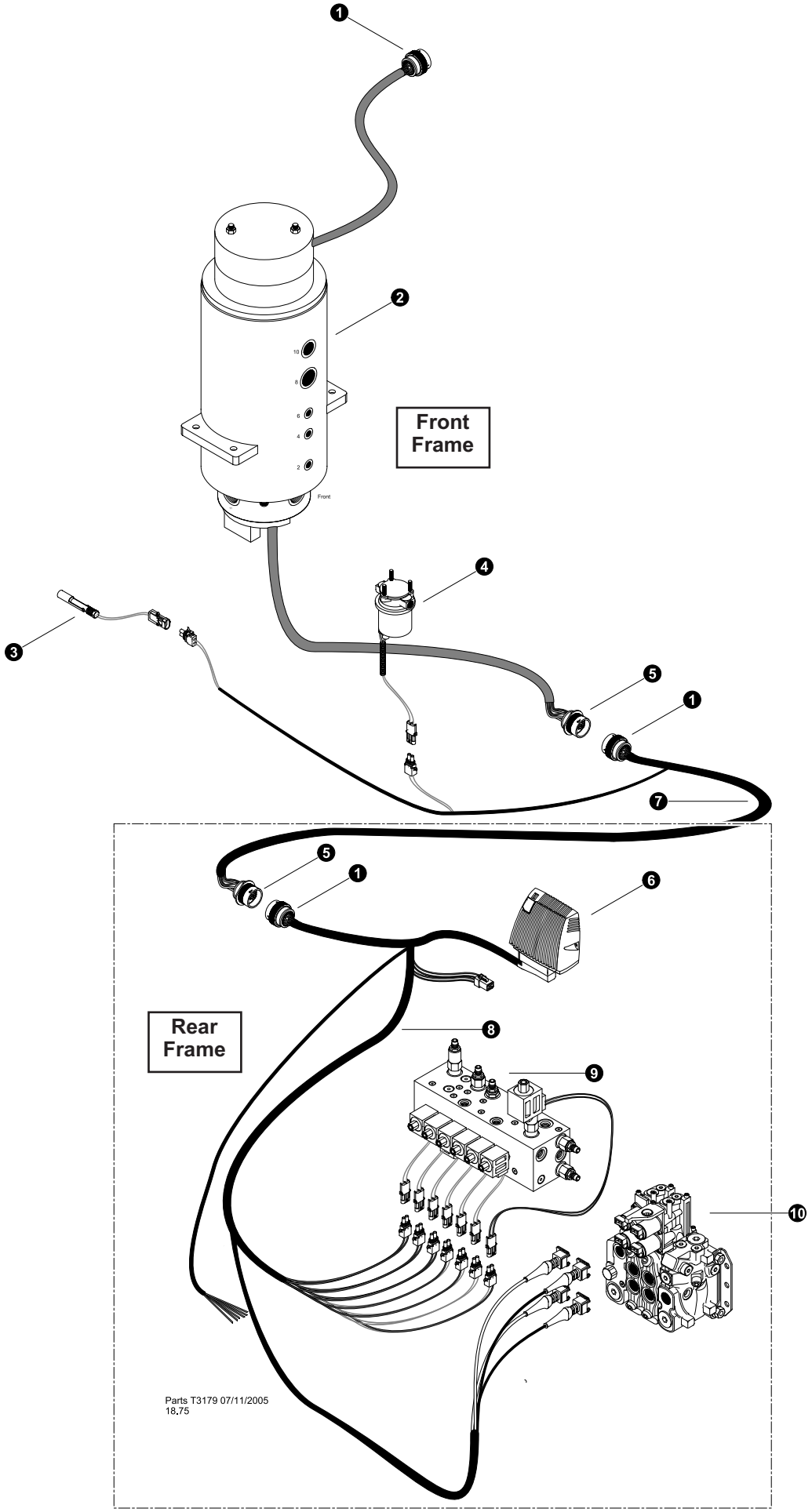
📖 See referenced page for component or assembly breakdown.


Front Frame
Rear Frame
Gear Box Connections
Parts T3387 07/11/2005
18.75

IQAN - LOWER FRAME HARNESS
(TF 830,840 - Add on Harness for Clam Bunk and Other Options)

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	51749-ES	2	CONNECTOR, DEUTCH, 8 PIN - MALE	
2	REF	1	ROTORY MANIFOLD ASSEMBLY	UP-1
3	51793-ES	1	CONNECTOR, DEUTCH, 8 PIN - FEMALE	
4	51959-ES	1	CONTROL, KIT - VOAC/IQAN LOWER (830)	
5	50158-ES	1	MODULE, XP2	
6	REF	1	FUEL PUMP ASSEMBLY	FF-3
7	51379-ES	1	SWITCH, HYD. OIL LEVEL	
8	REF	1	LOWER CONTROL MANIFOLD.	FF-4
9	51961-ES	1	CONTROL, KIT - VOAC/IQAN lower-xtra XP2	
10	-ES	1	CONNECTOR 4 POSITION Plug- DEUTSCH DT06-4S (AD13070-2)	
	26705-ES		SOCKETS,	
	-ES		WEDGE, W4S (AD13071-1)	
11	-ES	1	CONNECTOR 4 POSITION Socket - DEUTSCH DT04-4P (AD13069-2)	
	26706-ES		PINS,	
	-ES		WEDGE, W4P (AD13071-2)	
12	-ES	1	Harness, Front frame to Rear Frame	
13	REF	1	VOAC CONTROL VALVE	LH-2

📖 See referenced page for component or assembly breakdown.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Front Frame
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Rear Frame
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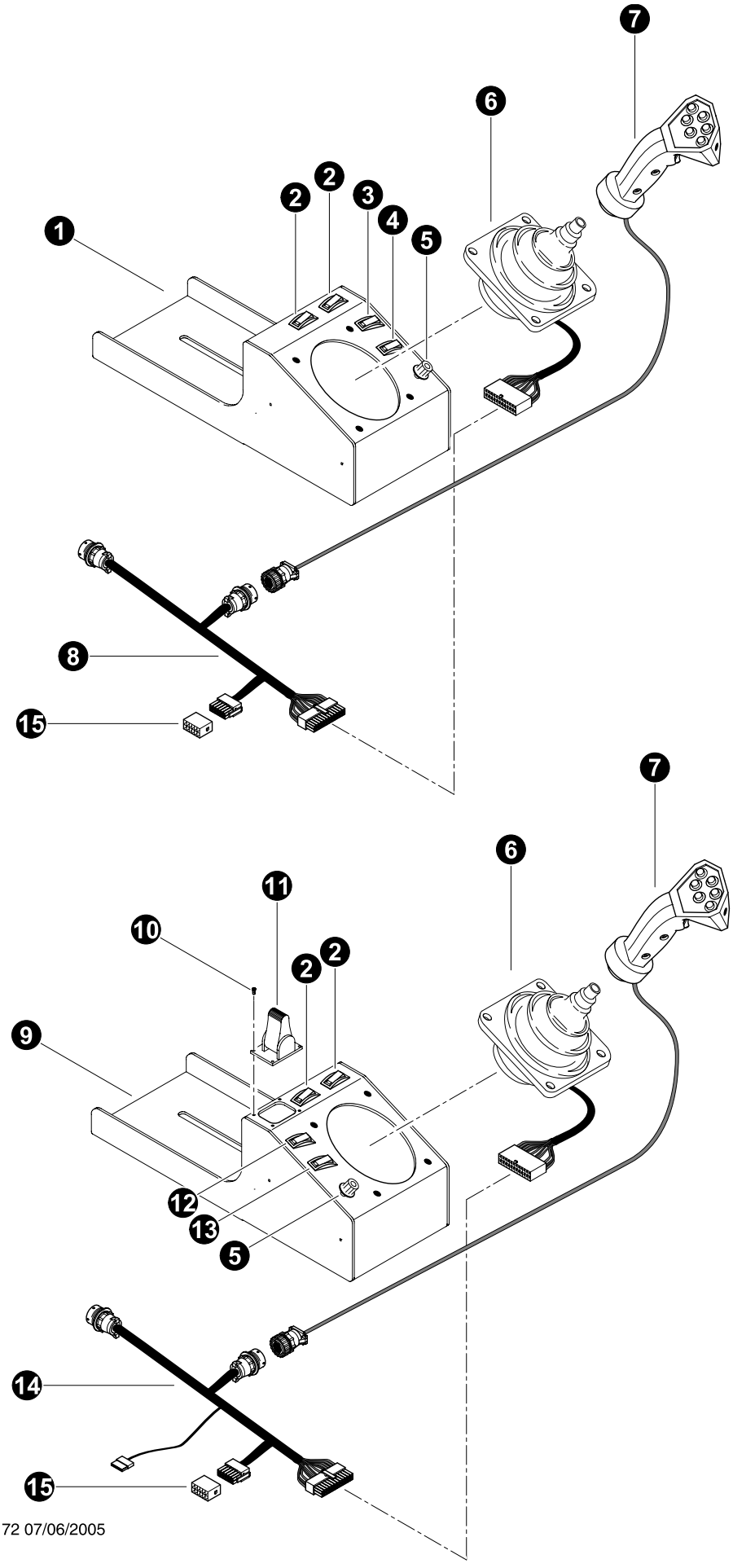
Parts T3179 07/11/2005
18.75

IQAN - LOWER FRAME HARNESS (TB 630)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51749-ES	3		CONNECTOR, DEUTCH, 8 PIN - MALE	
2	REF	1		ROTORY MANIFOLD ASSEMBLY	UP-1
3	51379-ES	1		SWITCH, HYD. OIL LEVEL	
4	REF	1		FUEL PUMP ASSEMBLY	FF-3
5	51793-ES	2		CONNECTOR, DEUTCH, 8 PIN - FEMALE	
6	50158-ES	1		MODULE, XP2	
7	51960-ES	1		CONTROL, KIT - VOAC/IQAN LOWER (830) FRONT	
8	51960-ES	1		CONTROL, KIT - VOAC/IQAN LOWER (830) REAR	
9	REF	1		LOWER CONTROL MANIFOLD.	FF-4
10	REF.	1	🕮	LOWER STEER / LEVEL VALVE	HR

🕮 See referenced page for component or assembly breakdown.

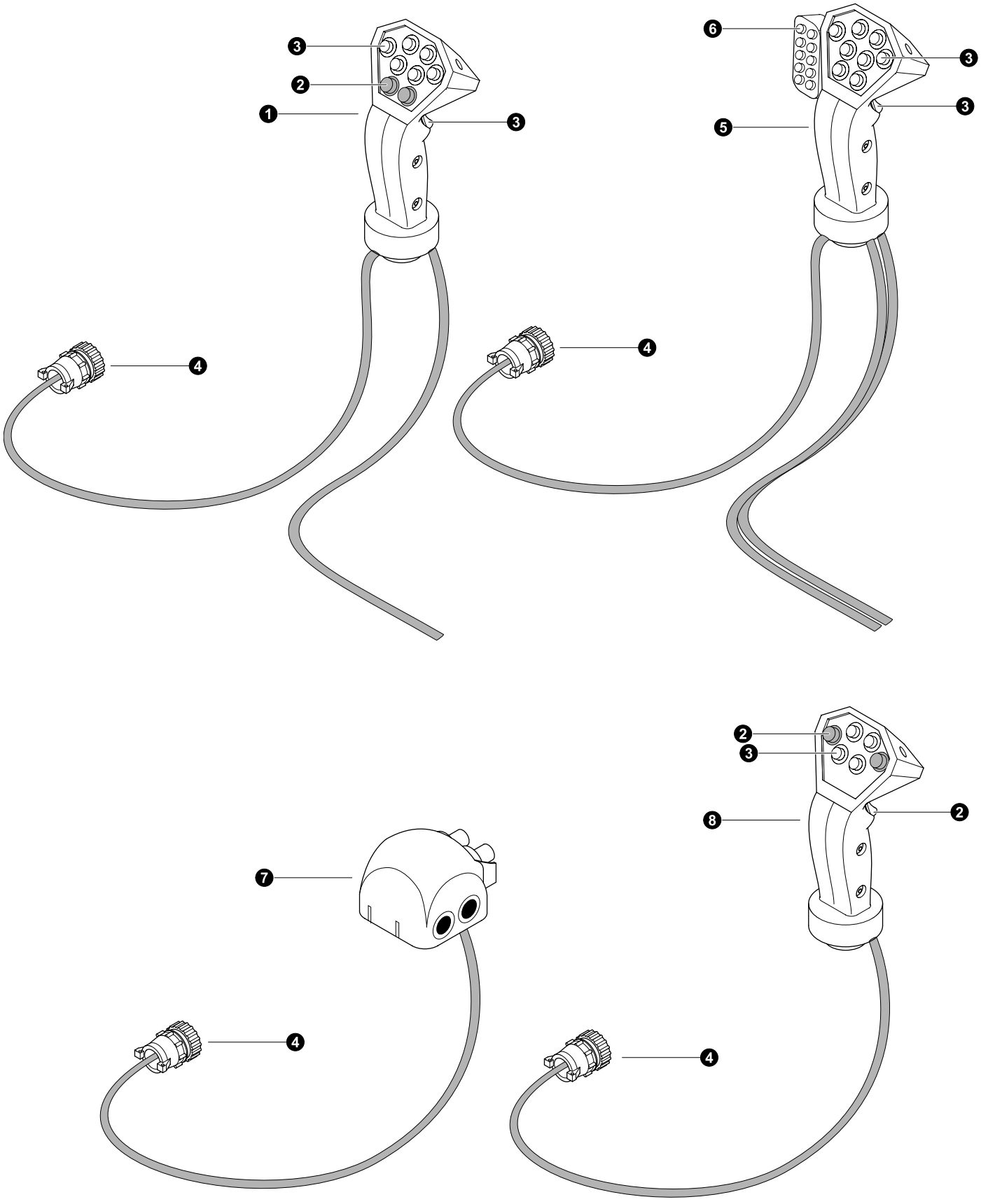


Parts T3172 07/06/2005
18.75

IQAN - LEFT AND RIGHT CONTROL PANELS

REF	PART #	QTY	DESCRIPTION	SEE SECTION
1	51604-ES	1	BRACKET, JOYSTICK MOUNT L.H. - 630/830	
2	51666-ES	4	SWITCH, ON - OFF (AMBER) DIFF, MAX REV, STEER REVERSE, DETENT	
3	51665-ES	1	SWITCH, ON - OFF (RED) PARKING BRAKE	
4	51669-ES	1	SWITCH, ARMING/CHARGE HEATER	
5	51741-ES	2	POT, DETENTED - THROTTLE/SPEED	
6	REF	2	JOYSTICK CONTROL MODULE	ES-3
7	REF	2	HANDLE ASSEMBLY	ES-3
8	51963-ES	1	HARNESS, JOYSTICK PANEL 830/630 - LH	
9	51603-ES	1	BRACKET, JOYSTICK MOUNT R.H. - 630/830	
10		4	SCREW, SELF TAPPING - #8 X .5”	
11	REF	2	JOYSTICK STEER CONTROL.	ES-3
12	51667-ES	1	SWITCH, GEAR BOX SHIFT (ON-ON) (GREEN)	
13	51668-ES	1	SWITCH, MOTOR SHIFT - (ON-OFF-ON) (GREEN)	
14	51964-ES	1	HARNESS, JOYSTICK PANEL 830/630 - RH	
15		2	KIT, CONNECTOR - MOLEX 12 PIN	

📖 See referenced page for component or assembly breakdown.

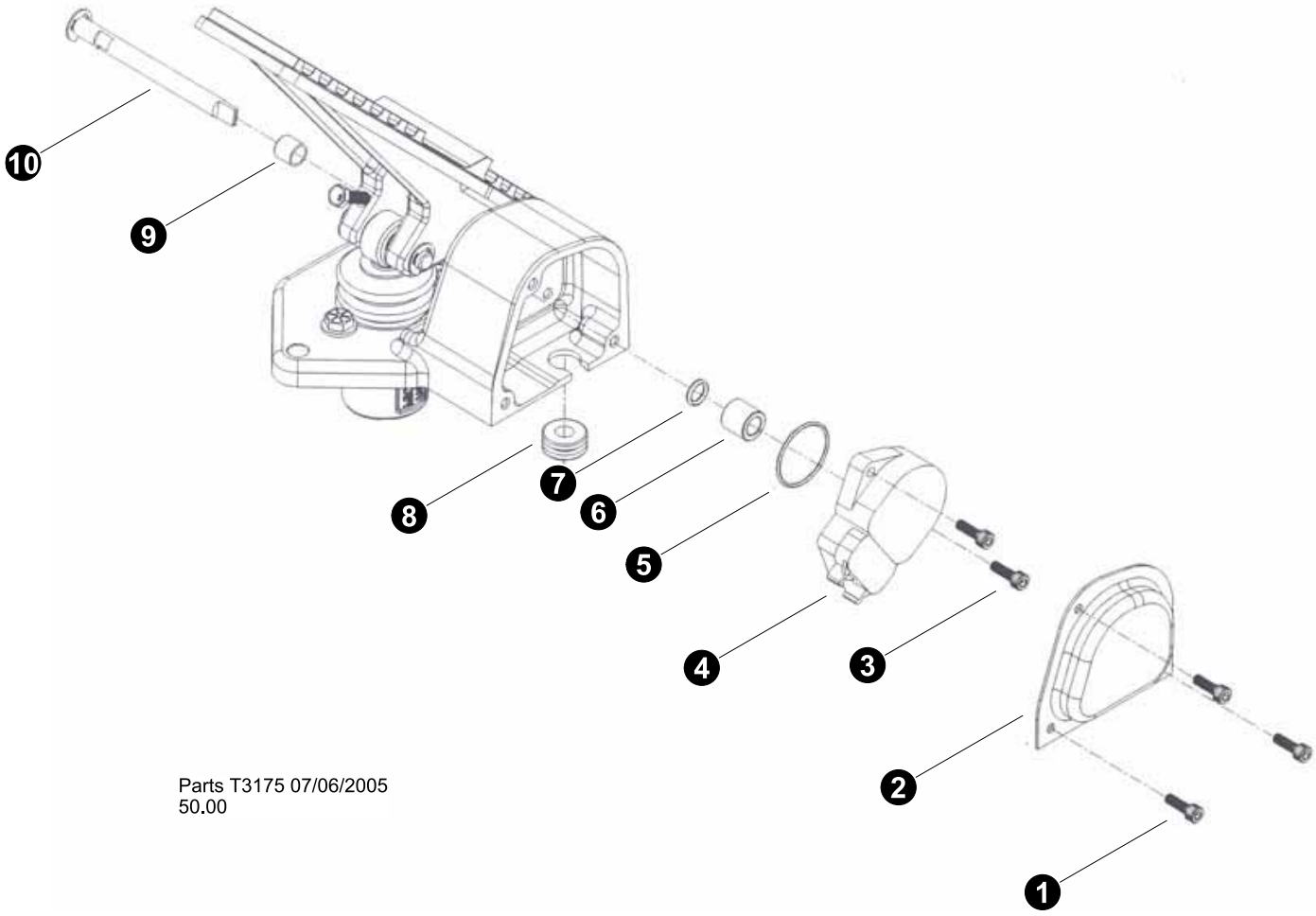


Parts T3174 07/06/2005
50.00

HANDCONTROL BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51567-ES	1		HAND CONTROL, SURE GRIP - LH (LOGMAX)	
2	51947-ES	2		SWITCH, PUSH BUTTON REPAIR KIT (PROPORTIONAL)	
-	52094-ES	2		KIT, REPAIR - PROPORTIONAL BUTTON COVER	
3	20961-ES	8		SWITCH, PUSH BUTTON (DIGITAL)	
4	50372-ES	1		CONNECTOR, PLUG - 14 POS AMP	
5	51566-ES	1		HAND CONTROL, SURE GRIP - RH W/KEYPAD (LOGMAX)	
3	20961-ES	10		SWITCH, PUSH BUTTON (DIGITAL)	
6	52095-ES	10		SWITCH, PUSH BUTTON (SURE GRIP KEYPAD)	
7	50505-ES	1		HAND CONTROL, UPPER - P&G (FORWARDER OPTION)	
8	51809-ES	1		HAND CONTROL, UPPER - SURE GRIP (830/630) STANDARD	
2	51947-ES	2		SWITCH, PUSH BUTTON REPAIR KIT (PROPORTIONAL)	
-	51730-ES	1		SWITCH, PUSH BUTTON REPAIR KIT - TRIGGER (PROPORTIONAL)	
-	52094-ES	2		KIT, REPAIR - PROPORTIONAL BUTTON COVER	
3	20961-ES	8		SWITCH, PUSH BUTTON (DIGITAL)	

🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in repair kit

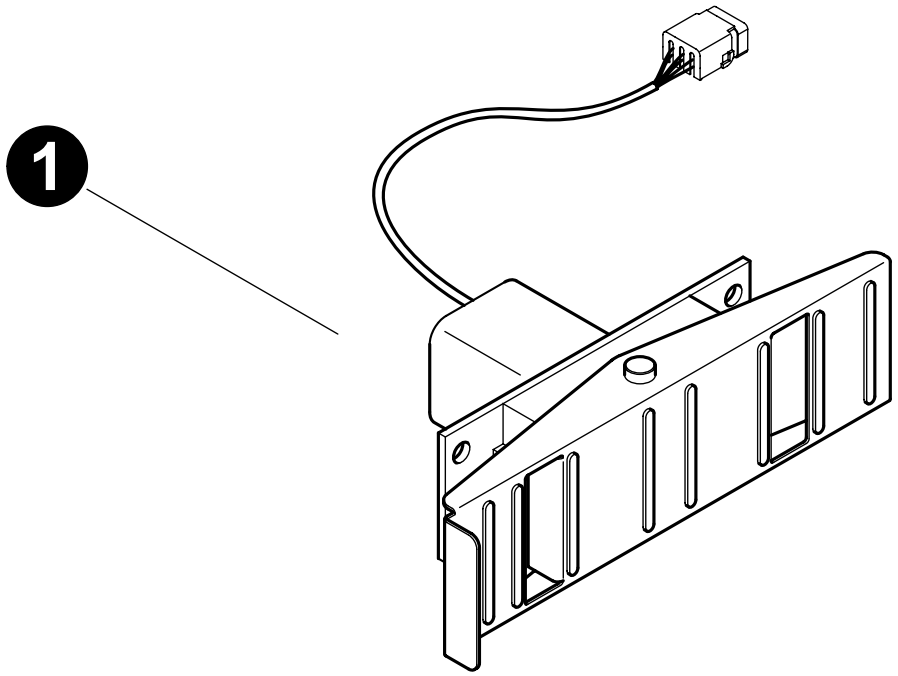


Parts T3175 07/06/2005
50.00

BRAKE PEDAL CONTROL

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51626-ES	1	❑	PEDAL, BRAKE CONTROL - ELECTRONIC TF830	
1	-	3		SCREW	
2	-	1		COVER	
3	-	2	⌘	SCREW	
4	-	1	⌘	POSITION SENSOR	
5	-	1	⌘	O-RING	
6	-	1	⌘	BEARING	
7	-	1	⌘	ORING	
8	-	1	⌘	GROMMET	
9	-	1		BEARING	
10	-	1		PIN	
-	52096-ES	1	⌘	KIT, REPAIR - MICO BRAKE PEDAL	

🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in repair kit



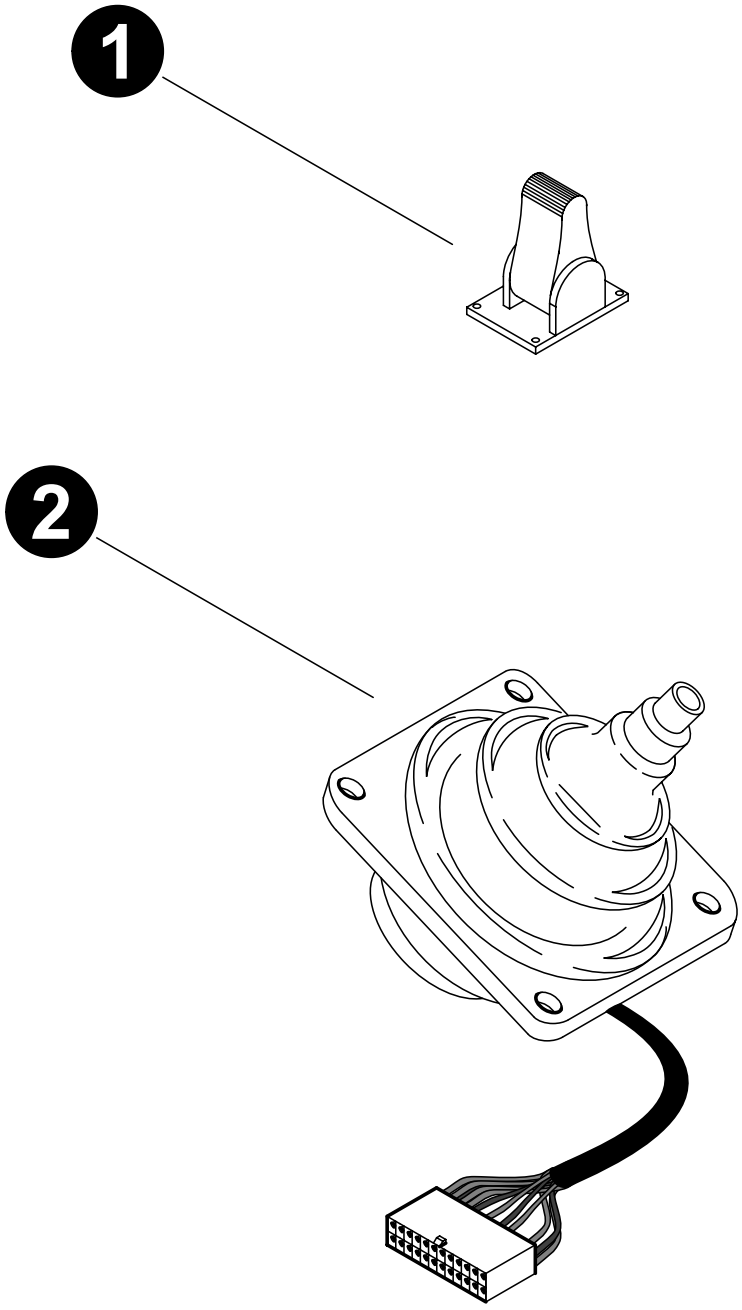
Parts T3176 07/06/2005
50.00

WHEEL DRIVE CONTROL PEDAL

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51491-ES	1		PEDAL, FOOT CONTROL - DUAL AXIS , OTTO CONTROLS (SEALED)	

Disassembly of these components is not recommended.

📖 See referenced page for component or assembly breakdown.



Parts T3177 07/06/2005
50.00

JOYSTICK CONTROLS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51708-ES	1		JOYSTICK CONTROL - P & G - STEER	
2	52049-ES	1		JOYSTICK CONTROL - LL MODULE (830/630)	

Disassembly of these components is not recommended.

📖 See referenced page for component or assembly breakdown.

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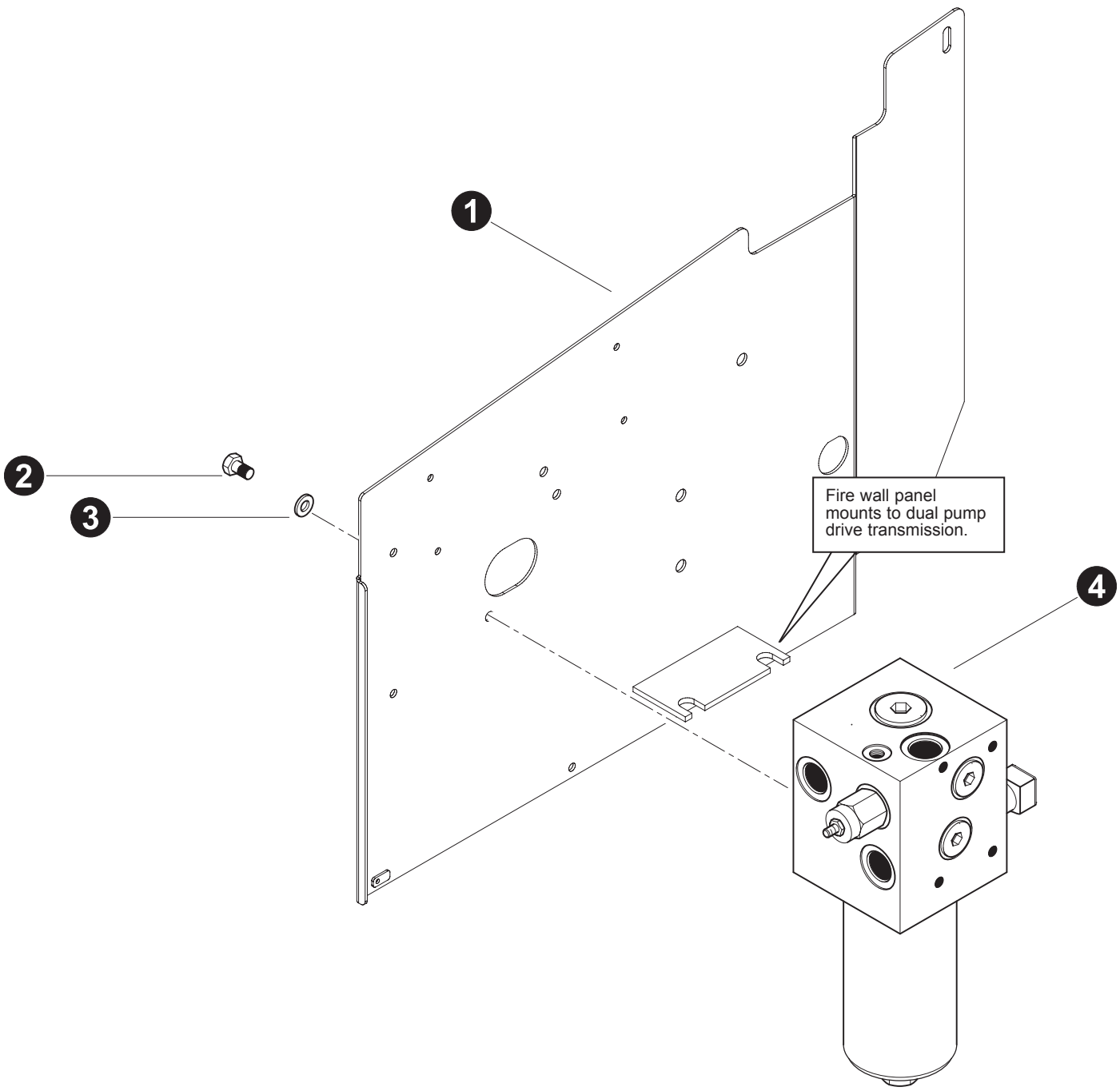
Section WD-1

Wheel Drive -
Charge Pressure Circuit

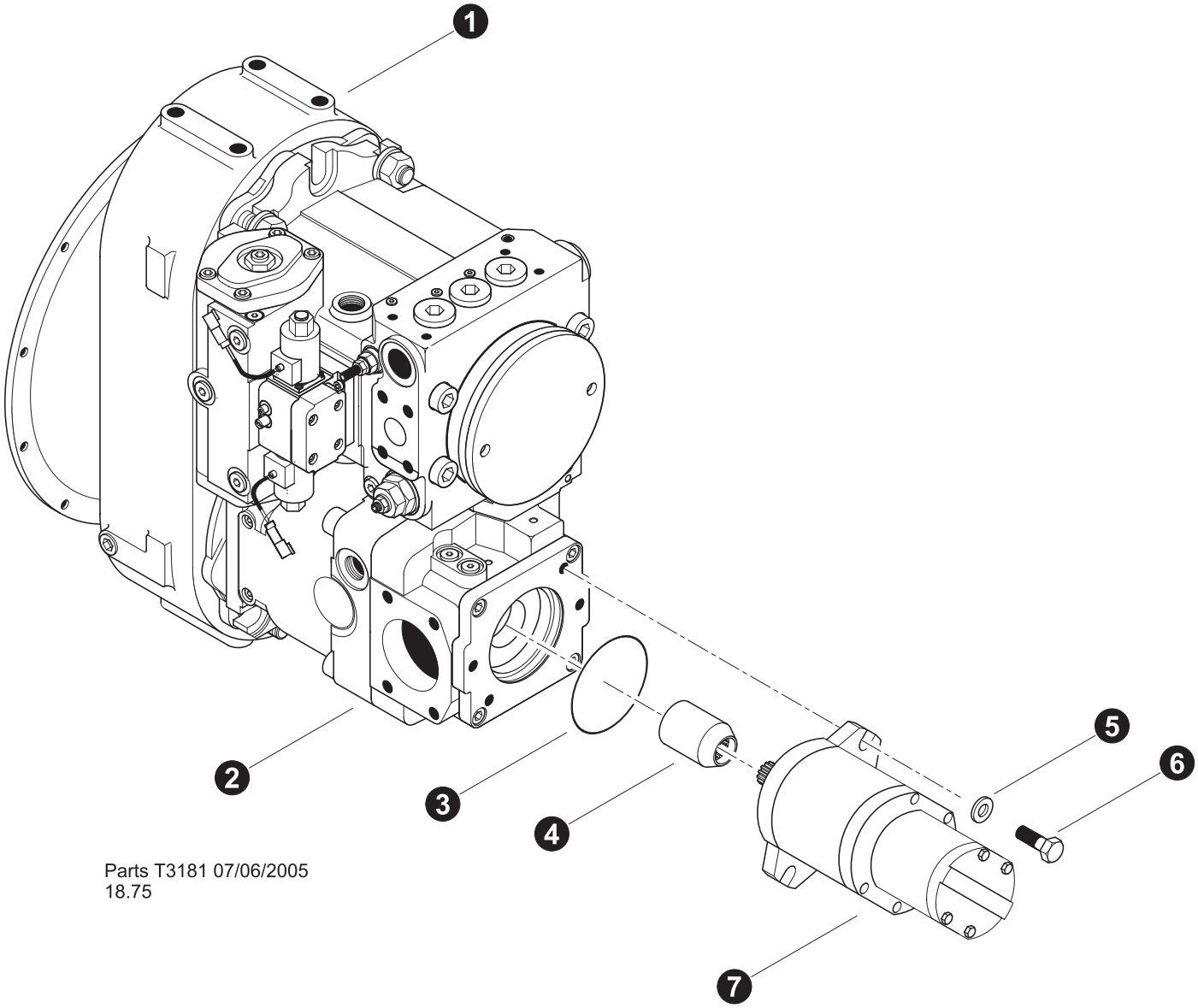


Parts T3182 07/14/2005
18.75

CHARGE FILTER MANIFOLD INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	BARRIER, UPPER	UP-1
2	11707-WD	2		BOLT - .375” X 1”	
3	10802-WD	2		WASHER, FLAT - .375”	
4	REF	1	🕮	CHARGE FILTER MANIFOLD	WD-3

🕮 See referenced page for component or assembly breakdown.

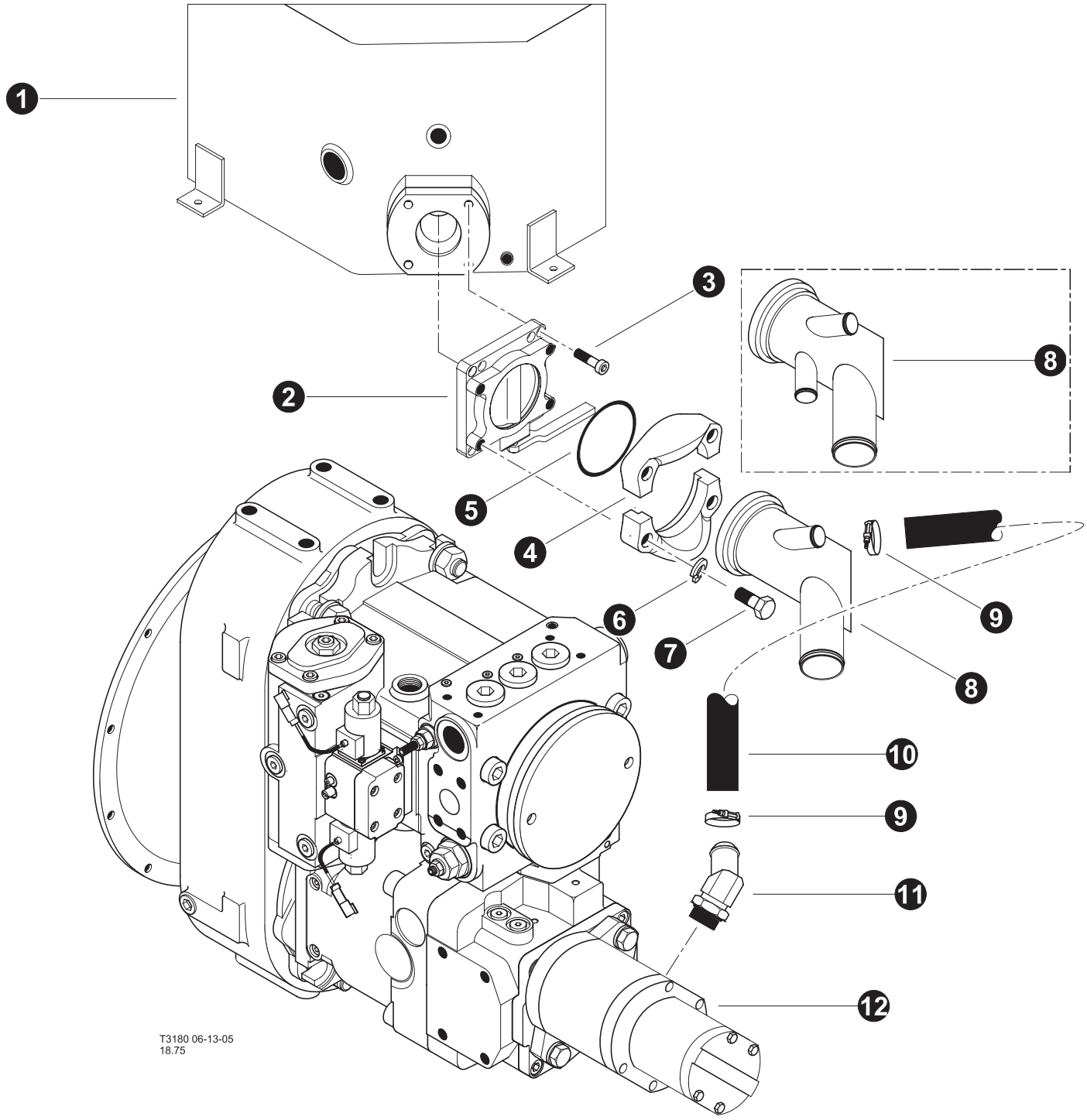


Parts T3181 07/06/2005
18.75

CHARGE PUMP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	DUAL PUMP DRIVE TRANSMISSION.	EE-2
2	REF.	1	🕮	IMPLEMENT PUMP	LH,HH,CH
3	18844-WD	1		O-RING, THRU DRIVE COVER - REXROTH 130CC	
4	23480-WD	1		COUPLING, SHAFT REX130 IMP/CHARGE PUMP-B	
5	15534-WD	2		WASHER, SAE FLAT - .5”	
6	50100-WD	2		BOLT - .5” X 1.25”	
7	REF	1	🕮	CHARGE PUMP ASSEMBLY	WD-3

🕮 See referenced page for component or assembly breakdown.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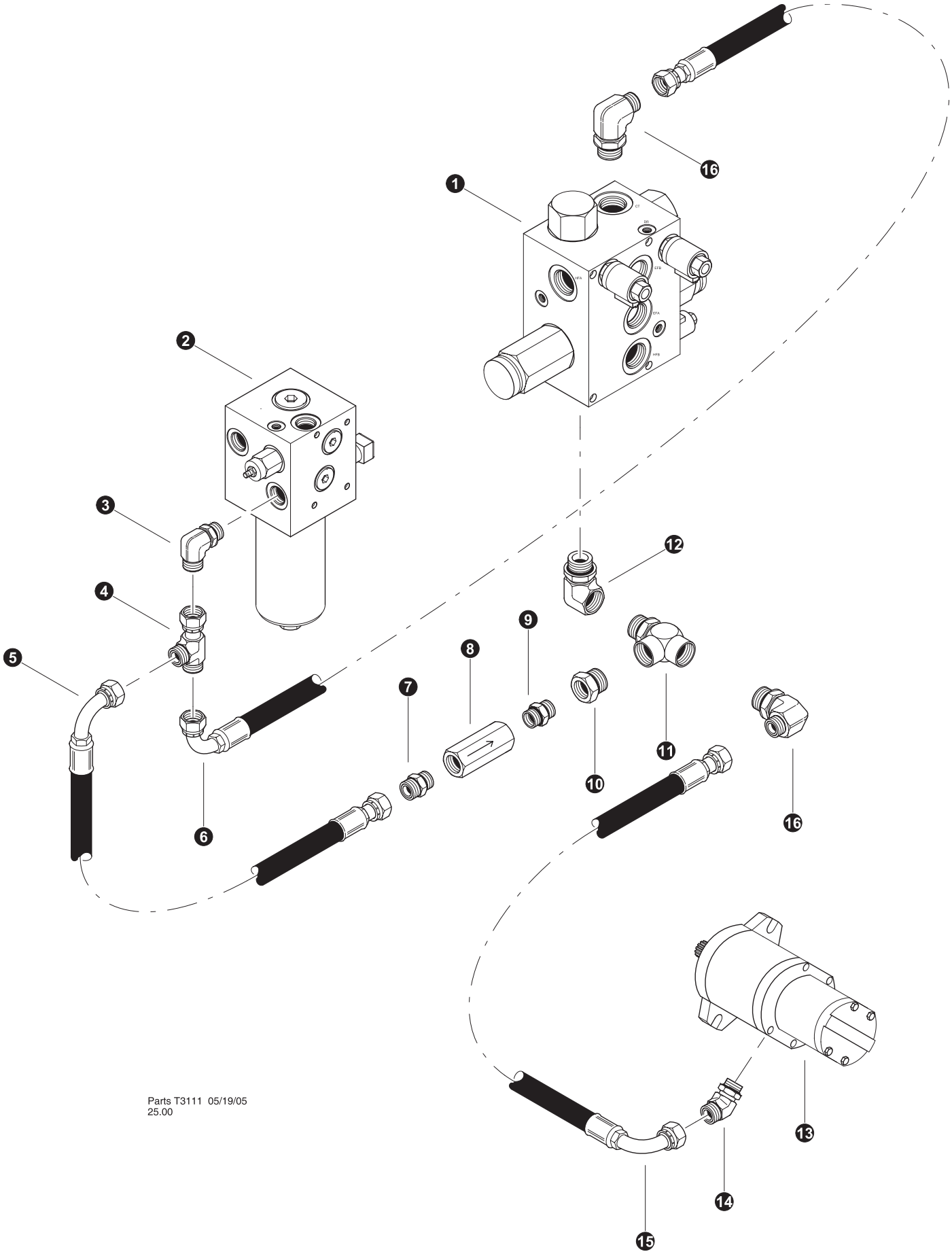
T3180 06-13-05
18.75

CHARGE PUMP INLET (SUCTION)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	51619-WD	1		VALVE, SHUT OFF - BUTTERFLY (4”)	
3	23095-WD	4		BOLT, ALLEN HEAD - .625” x 2”	
4	51625-WD	1	❑	KIT, FLANGE - SUCTION TUBE (4”)	
5		1		O-RING - SUCTION TUBE (4”)	
6	10721-WD	4		WASHER, LOCK - .625”	
7	15526-WD	4		BOLT - .625” X 2”	
8	42461-WD	1		TUBE, SUCTION - 4” FLANGE - W/O DISC SAW	
8	51886-WD	1		TUBE, SUCTION - 4” FLANGE - WITH DISC SAW	
9	15641-WD	2		CLAMP, strap band - 2”	
10	-WD	1		HOSE ASSEMBLY - 2013-24-0-0	
11	51830-WD	1		NIPPLE, KING SUCTION 1.5 X 20 SAE (45 DEGREE)	
12	REF.	1	🕮	WHEEL DRIVE CHARGE PUMP	WD-3

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



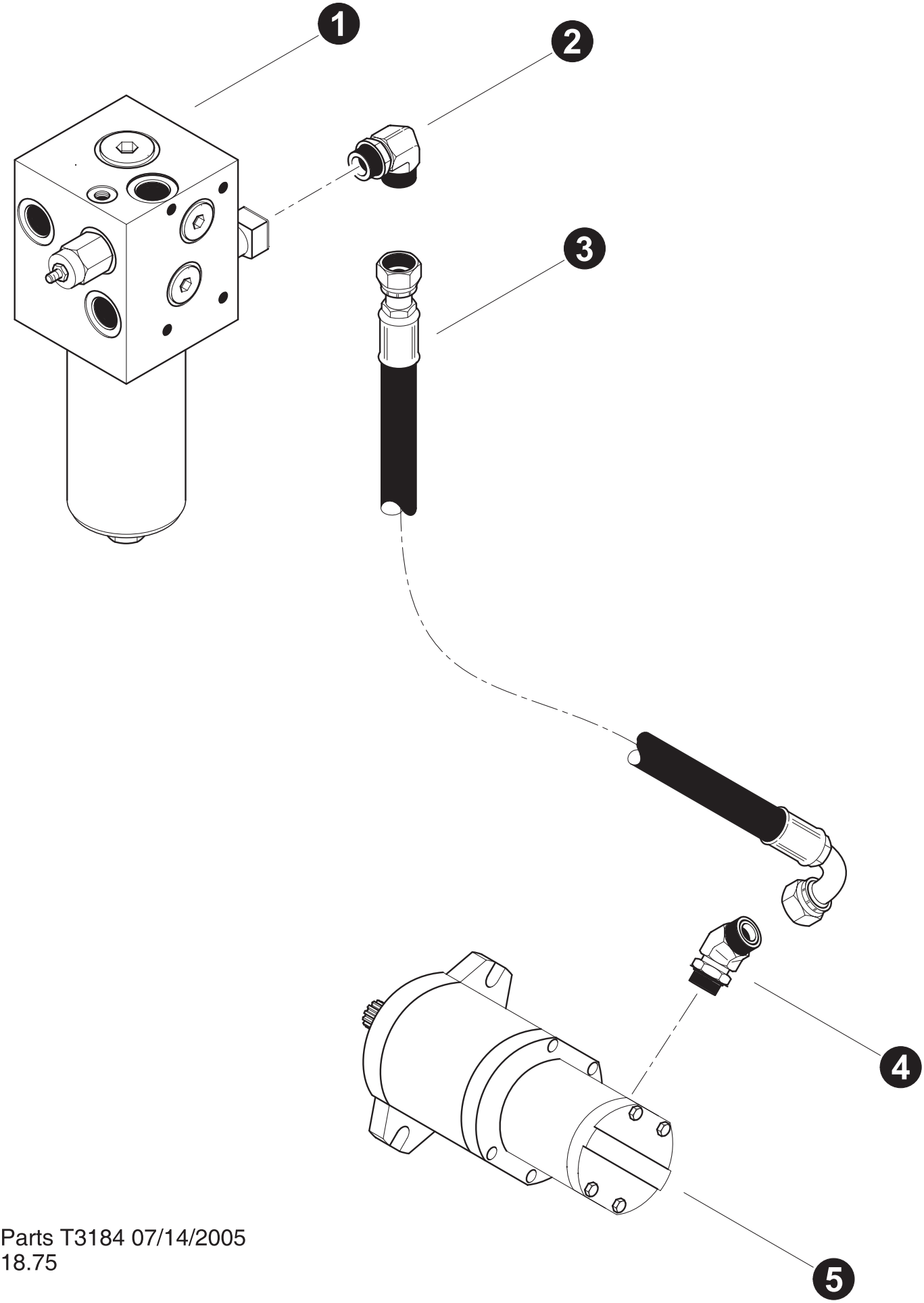
Parts T3111 05/19/05
25.00

CHARGE PUMP OUTLET (PRESSURE)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		FAN CONTROL MANIFOLD.	UP-3
2	REF	1		CHARGE PRESSURE MANIFOLD	WD-3
3	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
4	17687-WD	1		TEE - FF2114T-1212S	
5	-WD	1		HOSE ASSEMBLY 2026.5 12OS 1209 (CP port check valve on fan control valve to charge manifold “P” port tee)	
6	-WD	1		HOSE ASSEMBLY 2046 12OS 1209 (CT port on fan control valve to charge manifold “P” port tee)	
7	16913-WD	1		CONNECTOR, STR - FF1852T-1208S	
8	51928-WD	1		VALVE, CHECK - 7 PSI (#8 SAE)	
9	51932-WD	1		CONNECTOR, STR - 6403-08	
10	16719-WD	1		BUSHING, REDUCER - 6410-16-8	
11	21856-WD	1		TEE - 16 AOG5JG5-S RUN	
12	51832-WD	1		ELBOW, 90 - 1” ORS X 1” SAE FEMALE	
13	REF	1		WHEEL DRIVE CHARGE PUMP	WD-3
14	19127-WD	1		ELBOW, 45 - FF2068T-1212S	
15	-WD	1		HOSE ASSEMBLY 2041 12OS 1209 (CP port check valve on fan control valve to charge pump “P” port)	
16	19128-WD	1		ELBOW, 90 - FF1868T-1216S	

📖 See referenced page for component or assembly breakdown.

❑ Kit or Assembly - inlcudes all items indented underneath.

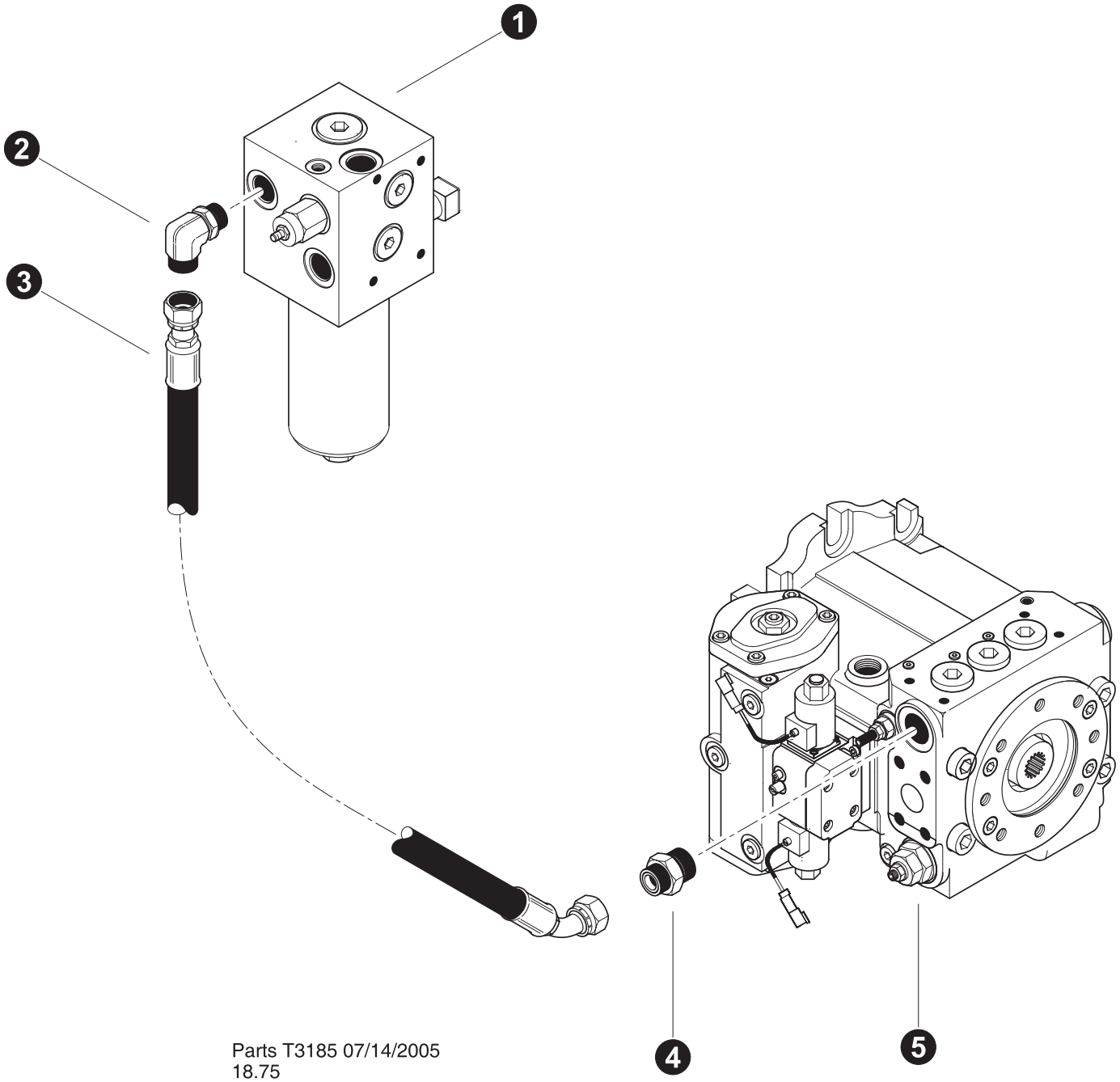


Parts T3184 07/14/2005
18.75

CHARGE PUMP SECONDARY INLET

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CHARGE FILTER MANIFOLD	WD-3
2	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
3		1		HOSE ASSEMBLY - 2051-12-12OS-12O9 (CHARGE PUMP TO P1 PORT)	
4	19127-WD	1		ELBOW, 45 - FF2068T-1212S	
5	REF.	1	🕮	WHEEL DRIVE CHARGE PUMP	WD-3

🕮 See referenced page for component or assembly breakdown.

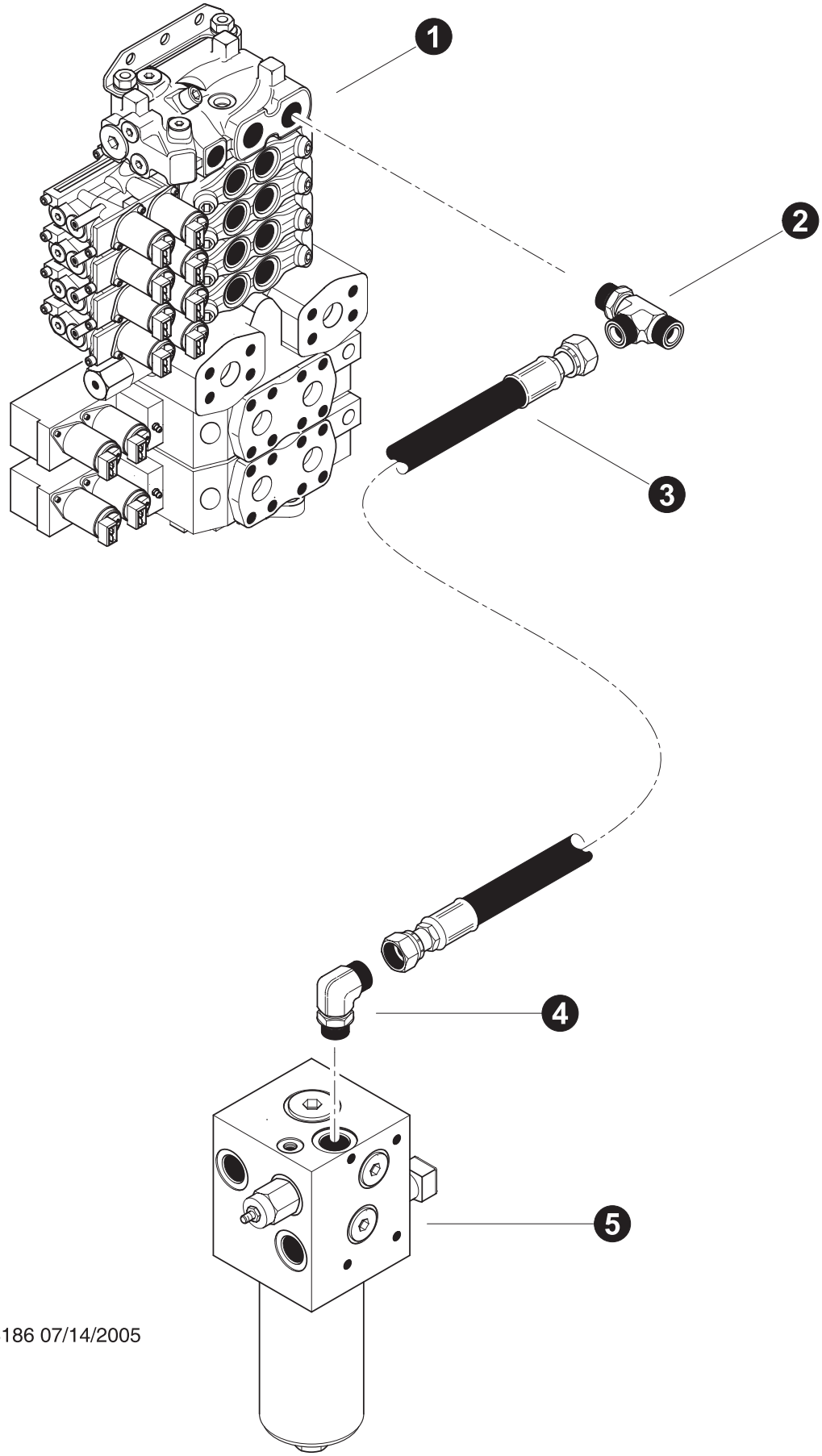


Parts T3185 07/14/2005
18.75

WHEEL DRIVE PUMP CHARGE PRESSURE INLET

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CHARGE FILTER MANIFOLD	WD-3
2	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
3		1		HOSE ASSEMBLY - 2051-12-12OS-12O4 (DRIVE PUMP FA TO FL PORT)	
4	15226-WD	1		CONNECTOR, STR - FF1852T-1216S	
5	REF.	1	🕮	WHEEL DRIVE PUMP	WD-3

🕮 See referenced page for component or assembly breakdown.

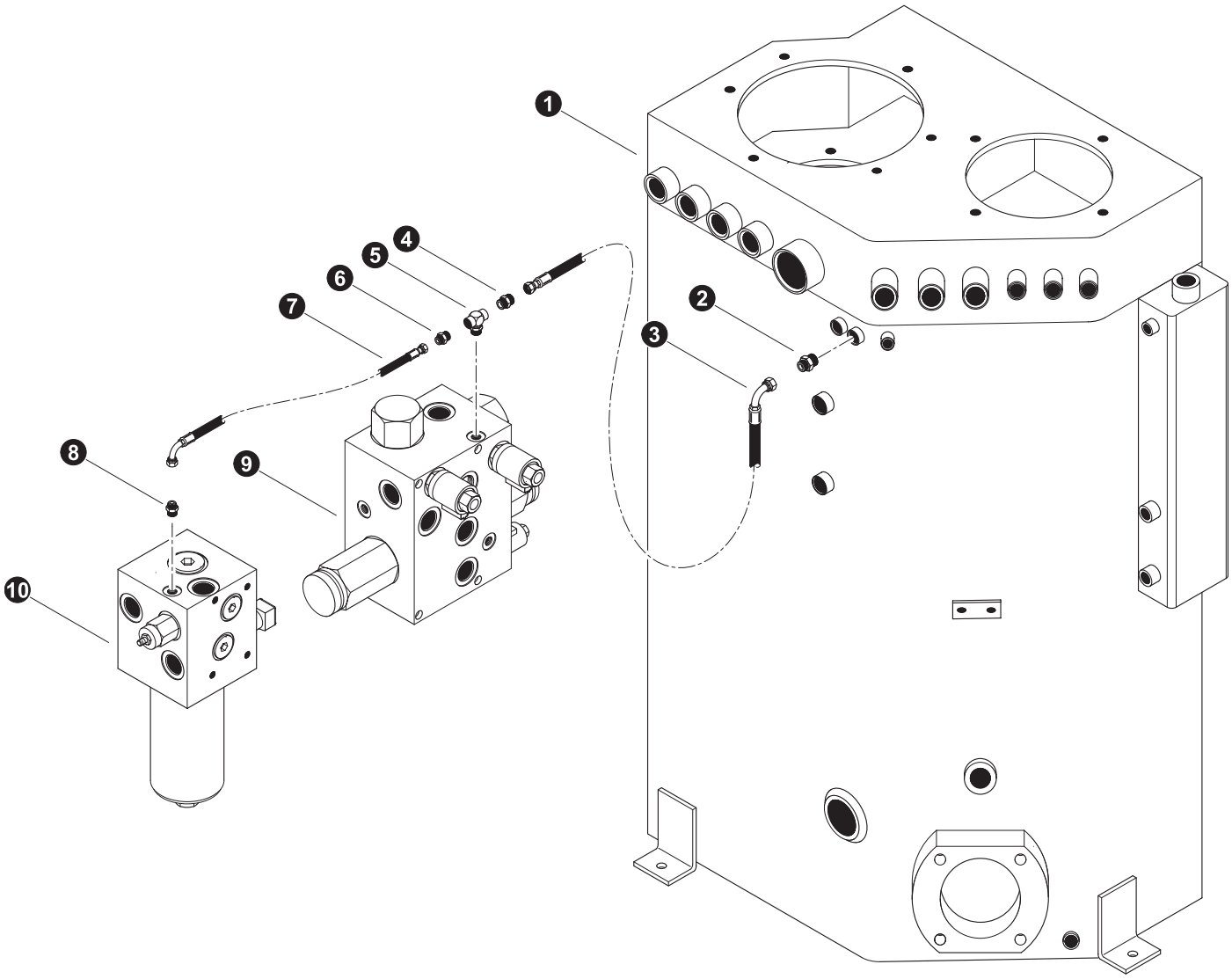


Parts T3186 07/14/2005
18.75

CHARGE FILTER MANIFOLD TANK TO REGEN CIRCUIT

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CONTROL VALVE ASSEMBLY	LH,HH,CH
2	51969-LH	1		TEE, RUN - 12 R50LO-S	
3		1		HOSE ASSEMBLY - 2136-12-12OS-12OS-W (CHARGE MANIFOLD T1 TO T3 PORT ON CONTROL VALVE)	
4	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
5	REF.	1	🕮	CHARGE FILTER MANIFOLD	WD-3

🕮 See referenced page for component or assembly breakdown.

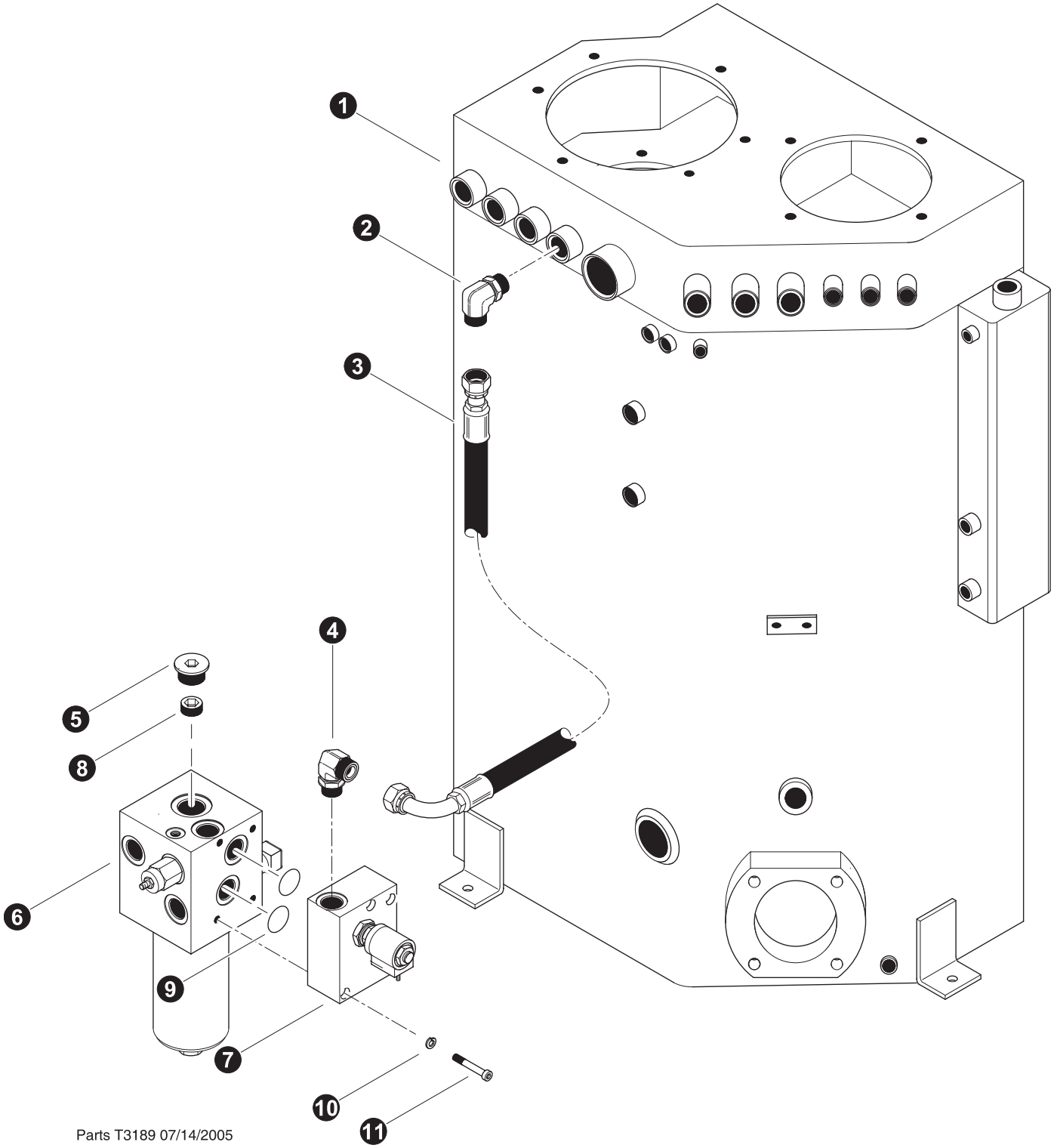


Parts T3187 07/14/2005
18.75

CHARGE FILTER MANIFOLD DRAIN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	22901-WD	1		CONNECTOR, STR - 6-8 F5OLO-S	
3	50990-WD	1		HOSE ASSEMBLY - 2030-06-060S-0609 (FAN VALVE DRAIN TEE TO TANK RETURN PORT)	
4	18034-WD	1		CONNECTOR, STR - FF1852T-0606S	
5	52079-WD	1		TEE - G5G5JA0	
6	15124-WD	1		CONNECTOR, STR - FF1852T-0406S	
7		1		HOSE ASSEMBLY - 2030-04-040S-0409 (FAN VALVE DRAIN TEE TO CHARGE MANIFOLD DRAIN)	
8	16541-WD	1		CONNECTOR, STR - FF1852T-0404S	
9	REF.	1	🕮	COOLER FAN CONTOL VALVE.	UP-3
10	REF.	1	🕮	CHARGE FILTER MANIFOLD	WD-3

🕮 See referenced page for component or assembly breakdown.



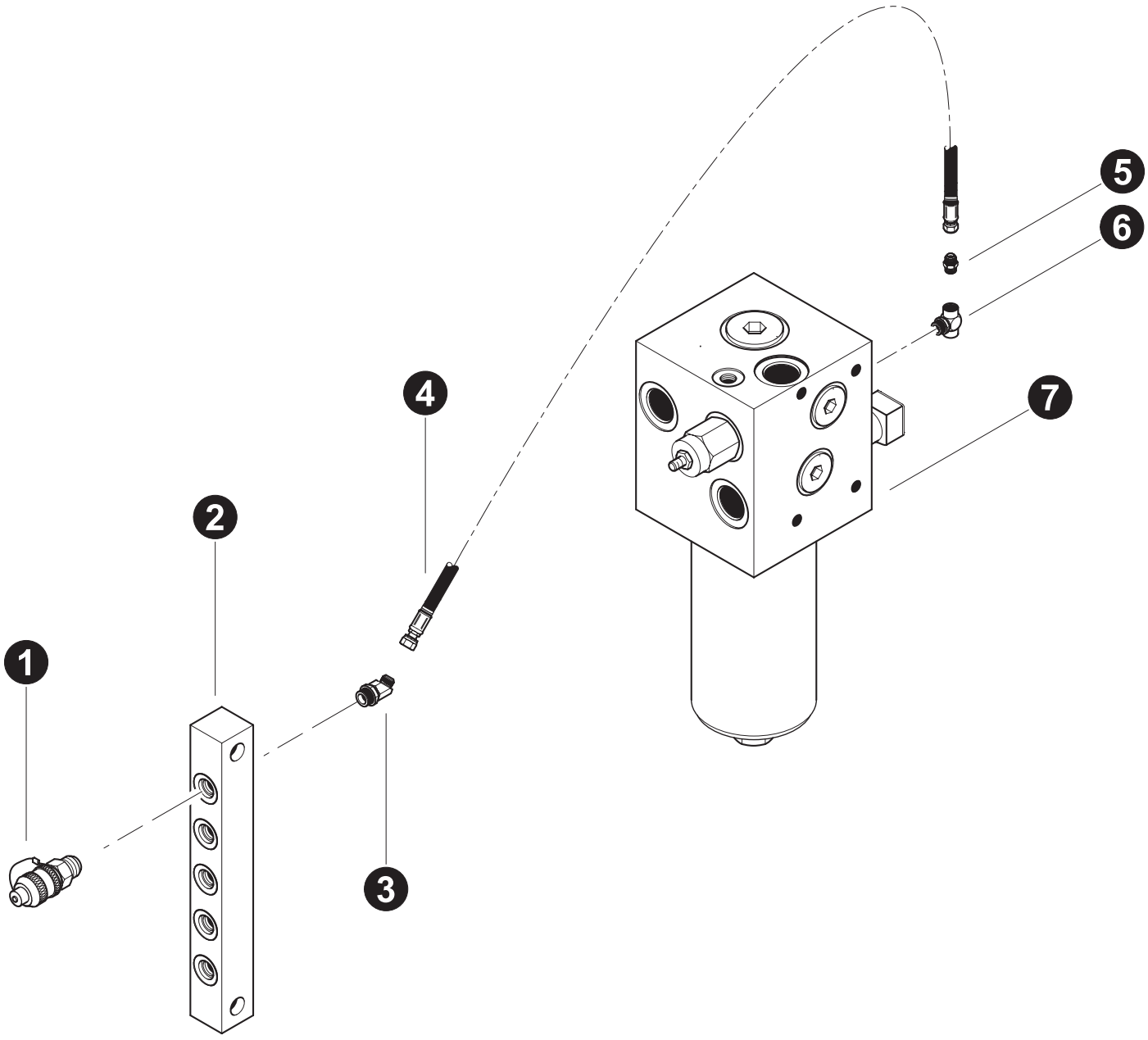
Parts T3189 07/14/2005

18.75

OPTIONAL CHARGE HEATER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY.	UP-2
2	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
3	-WD	1		HOSE ASSEMBLY - 2027-12-120S-1209 (CHARGE HEATER MANIFOLD TO TANK RETURN)	
4	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
5	19847-WD	1		PLUG - 6408-HHP-16	
6	REF.	1	🕮	CHARGE FILTER MANIFOLD	WD-3
7	REF.	1	❑	CHARGE HEATER MANIFOLD	WD-3
8	21676-WD	1		PLUG, orifice	
9	21675-WD	2		O-RING, housing	
10		4		LOCK WASHER	
11		4		ALLEN BOLT	

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



Parts T3188 07/14/2005
18.75

CHARGE FILTER MANIFOLD GAUGE PORT LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	16037-WD	1		TAP, gauge port (1/4” ORB)	
2	REF.	1	🕮	PRESSURE CHECK MANIFOLD	UP-4
3	51884-WD	1		ELBOW, 45 - (4 V50X-S)	
4	-WD	1		HOSE ASSEMBLY - 1015-02-04JS-04JS (Charge filter manifold gauge port to pressure check manifold) Part of kit #51836	
5	51887-WD	1		CONNECTOR, STR - (4F50X-S)	
6	24293-WD	1		TEE - 4-G5G5JAO-S	
7	REF.	1	🕮	CHARGE PRESSURE FILTER MANIFOLD.	WD-3

🕮 See referenced page for component or assembly breakdown.

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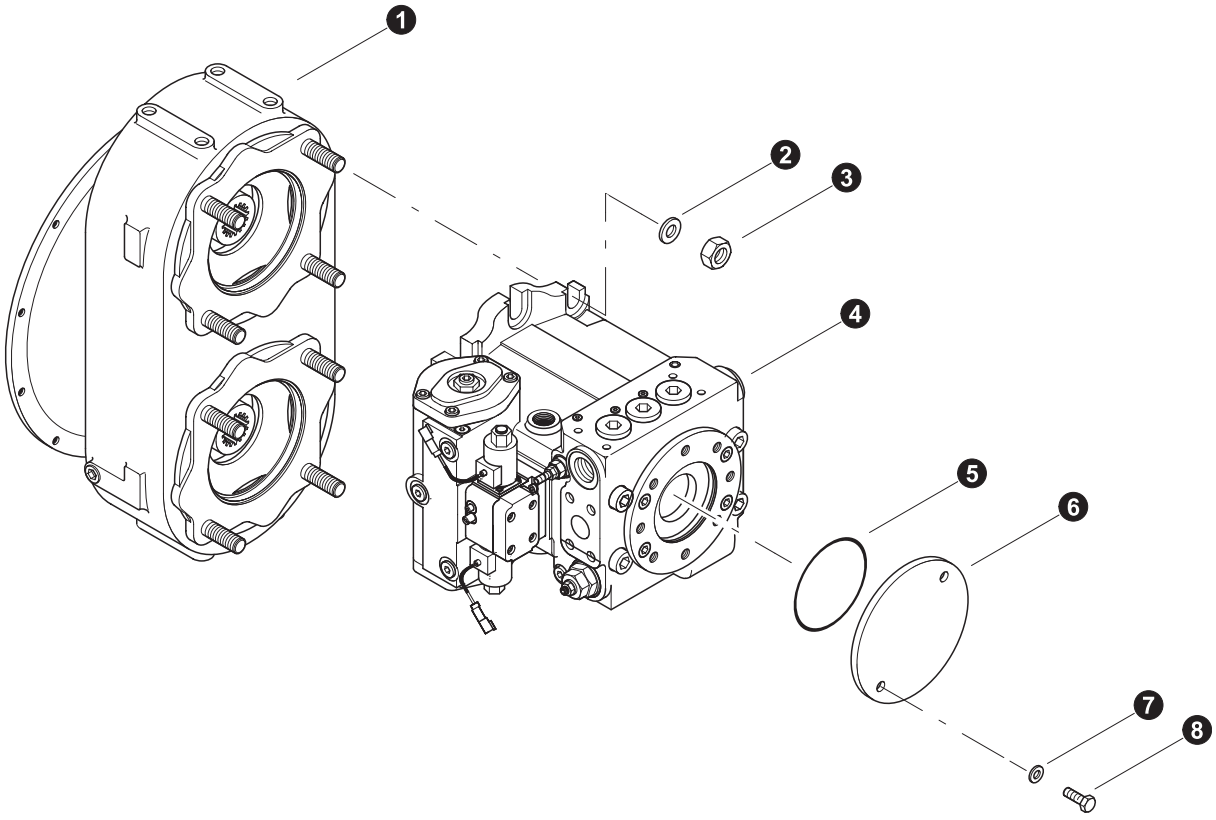
Section WD-2

Wheel Drive -
Wheel Drive Pump Circuit

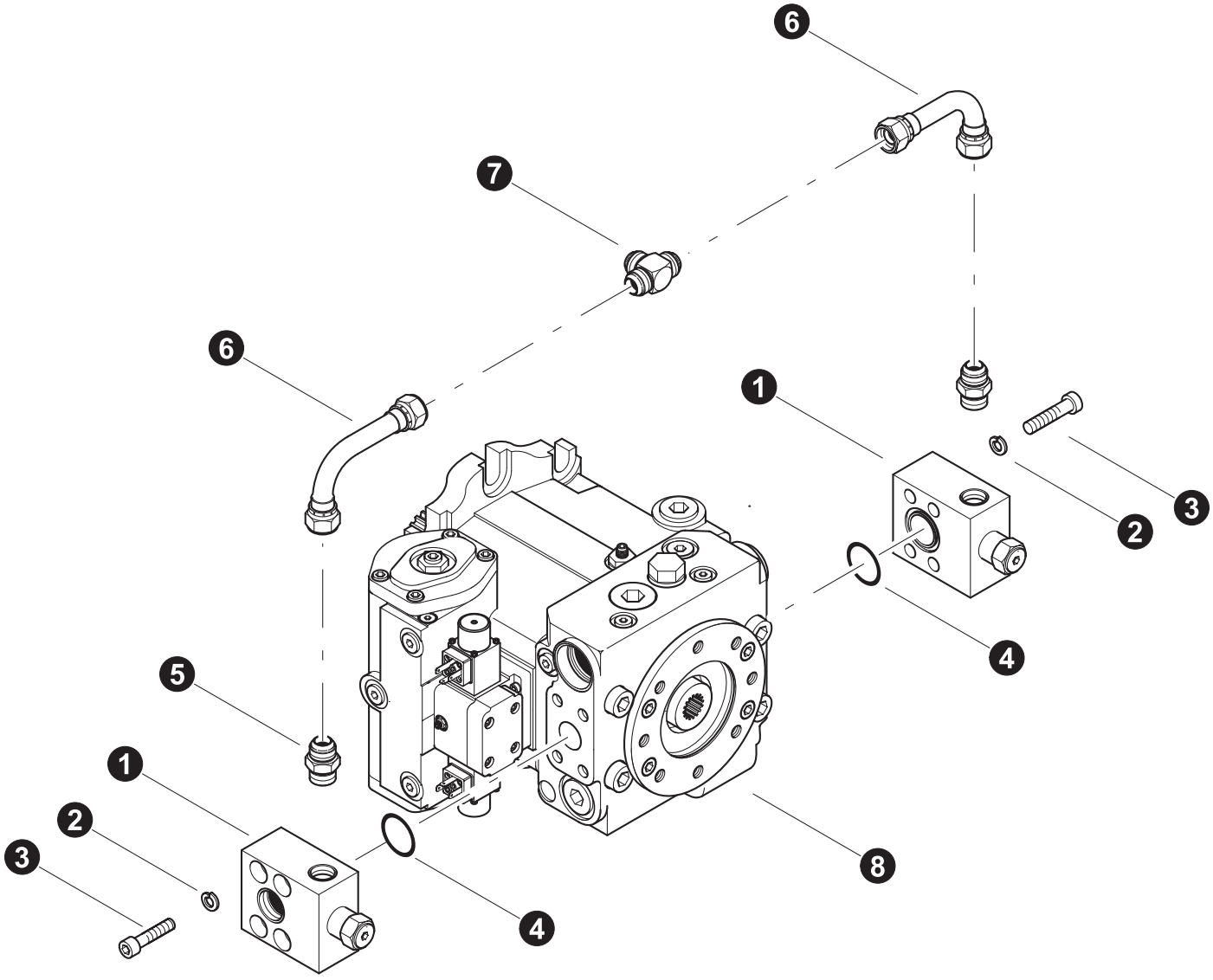


Parts T2666 04/30/2003
18.75

WHEEL DRIVE PUMP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	TRANSMISSION double pump drive	EE,JD-2
2	15550-WD	4		WASHER, SAE flat - 3/4”	
3	10776-WD	4		NUT, hex - 3/4”	
4	REF.	1	🕮	WHEEL DRIVE PUMP	WD-3
5	15453-WD	1		O-RING	
6	18414-WD	1		COVER, thru drive	
7	15534-WD	4		WASHER, SAE flat - 1/2”	
8	10783-WD	2		BOLT - 1/2” x 1”	

🕮 See referenced page for component or assembly breakdown.



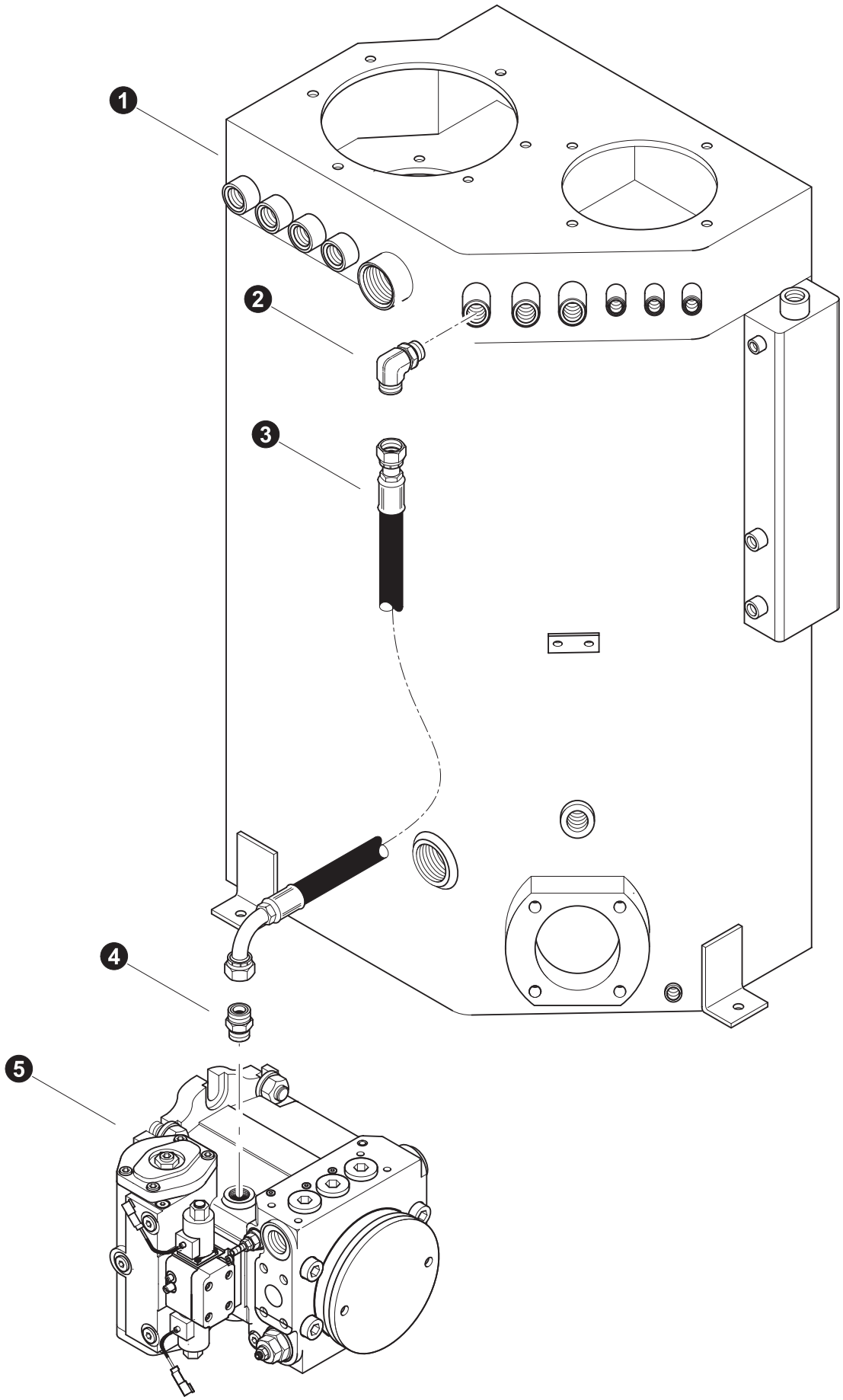
Parts T3192 07/14/2005
18.75

WHEEL DRIVE SYSTEM

Anti-Cavitation Block Installation

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51773-WD	2		MANIFOLD, KIT ANTI CAV- WHEEL DRIVE	
2	50075-WD	8		WASHER, LOCK - .5” HIGH COLLAR	
3	17141-WD	8		BOLT, ALLEN HEAD - .5” X 2.75”	
4	15378-WD	2		O-RING - 1.25” SF (CODE 61/62)	
5	11324-WD	2		CONNECTOR, STR - 6400-12	
6	52100-WD	2		TUBE, HYDRAULIC - FORMED 90 DRIVE PUMP	
7	52090-WD	1		TEE - 12WJJTX-S	
8	REF.	1	🕮	WHEEL DRIVE PUMP	WD-3

🕮 See referenced page for component or assembly breakdown.



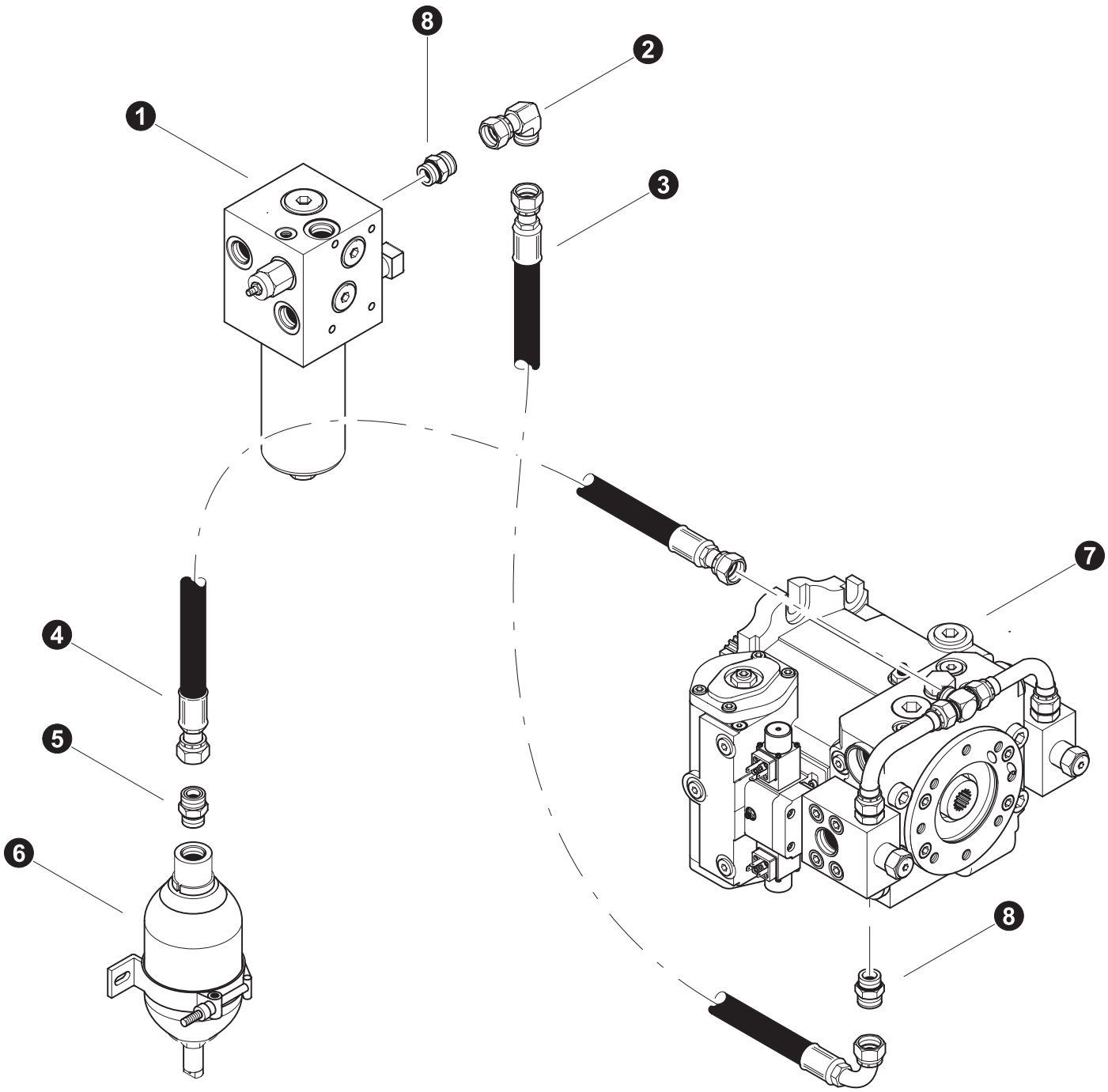
Parts T3194 07/18/2005
18.75

WHEEL DRIVE SYSTEM

Case Drain Hose

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
2	17688-WD	1		ELBOW, 90 - FF1868T-1212S	
3		1		HOSE ASSEMBLY - 2030.5 12-12OS-12O9 Pump Case to Hydraulic Tank	
4	15152-WD	1		CONNECTOR, STR - FF1852T-1212S	
5	REF.	1	🕮	WHEEL DRIVE PUMP	WD-3

🕮 See referenced page for component or assembly breakdown.



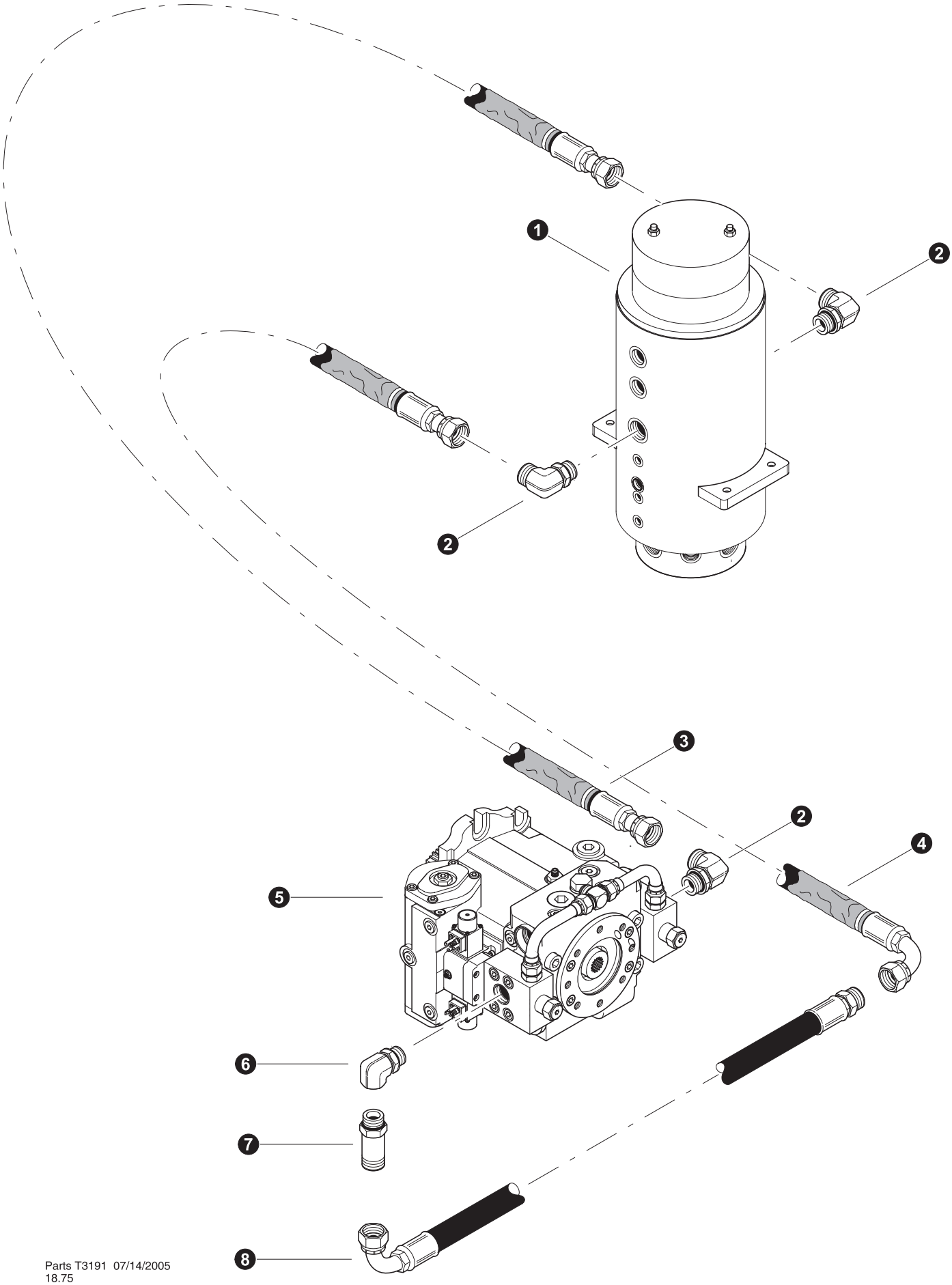
Parts T3193 07/18/2005
18.75

WHEEL DRIVE SYSTEM

Anti-Cavitaion Connections

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CHARGE FILTER MANIFOLD	WD-1
2	17670-WD	1		ELBOW, 90 SWIVEL - FF2098T-1212S	
3		1		HOSE ASSEMBLY - 2038 12-12OS-12O9 Charge Manifold “F2” to Wheel Drive Pump Anti-Cav Block	
4		1		HOSE ASSEMBLY - 2032 12-12OS-12JS Wheel Drive Pump Anti Cav Tee to Accumulator	
5	15152-WD	1		CONNECTOR, STR - FF1852T-1212S	
6	51709-WD	1		ACCUMULATOR, GAS - WHEEL DRIVE	
7	REF.	1	🕮	WHEEL DRIVE PUMP	WD-3
8	15152-WD	1		CONNECTOR, STR - FF1852T-1212S	

🕮 See referenced page for component or assembly breakdown.



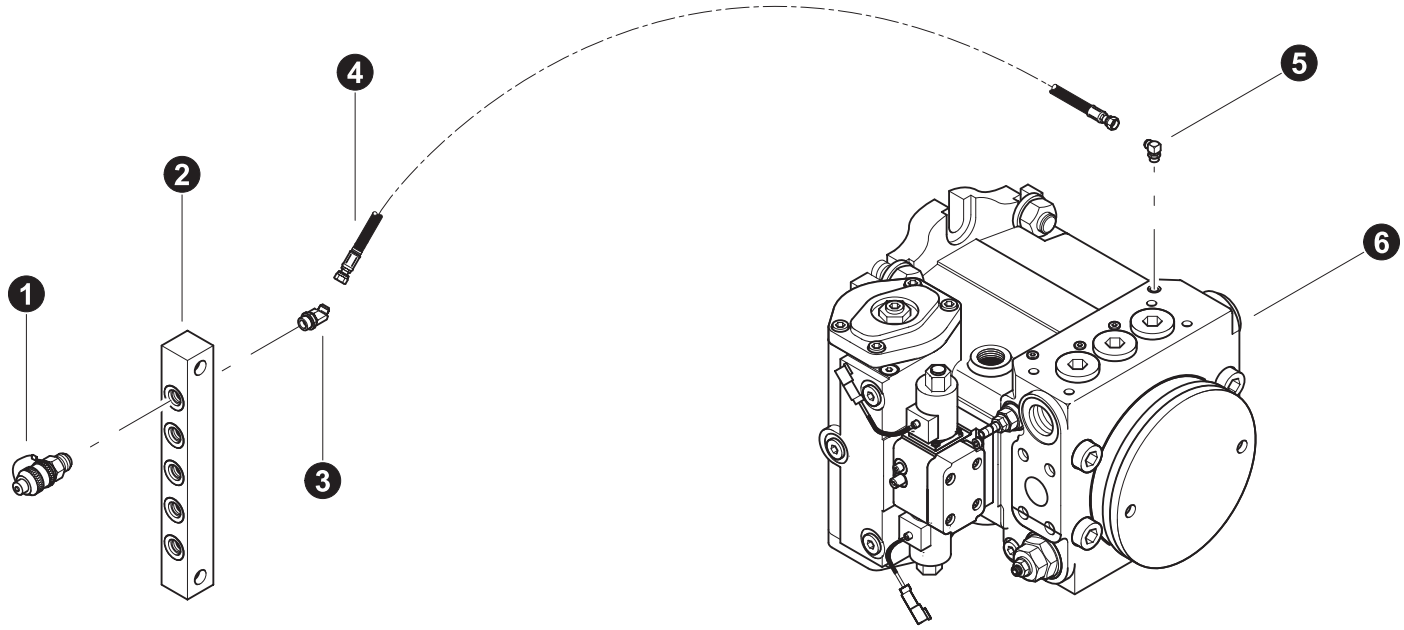
Parts T3191 07/14/2005
18.75

WHEEL DRIVE SYSTEM

Drive Pump Pressure Connections

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTORY MANIFOLD	UP-1
2	15228-WD	2		ELBOW, 90 - FF1868T-1616S	
3		1		HOSE ASSEMBLY - 6118 16-16OS-16OS Wheel Drive Pump “A” Port to Rotory Manifold #8 Port	
4		1		HOSE ASSEMBLY - 6107.5 16-16OS-16O9 “B” Port Jumper to Rotory Manifold #7 Port	
5	REF.	1	🕮	WHEEL DRIVE PUMP	WD-3
6	51832-WD	1		ELBOW, 90 - 1” ORS X 1” SAE FEMALE	
7	51831-WD	1		CONNECTOR, STR LONG - 16 FF5060-S	
8		1		HOSE ASSEMBLY - 6017.25 16-16OM-16O9 Wheel Drive Pump “B” Port	

🕮 See referenced page for component or assembly breakdown.



Parts T3195 07/18/2005
18.75

WHEEL DRIVE PUMP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	16037-WD	1		TAP, gauge port (1/4” ORB)	
2	REF.	1	🕮	PRESSURE CHECK MANIFOLD	UP-4
3	51884-WD	1		ELBOW, 45 - (4 V50X-S)	
4	-WD	1		HOSE ASSEMBLY - 1058-02-04JS-04JS (Wheel Drive Pump gauge port to pressure check manifold) Part of kit #51836	
5	51889-WD	1		ELBOW, 90 - (4C50X-S)	
6	REF.	1	🕮	Wheel Drive Pump	WD-3

🕮 See referenced page for component or assembly breakdown.

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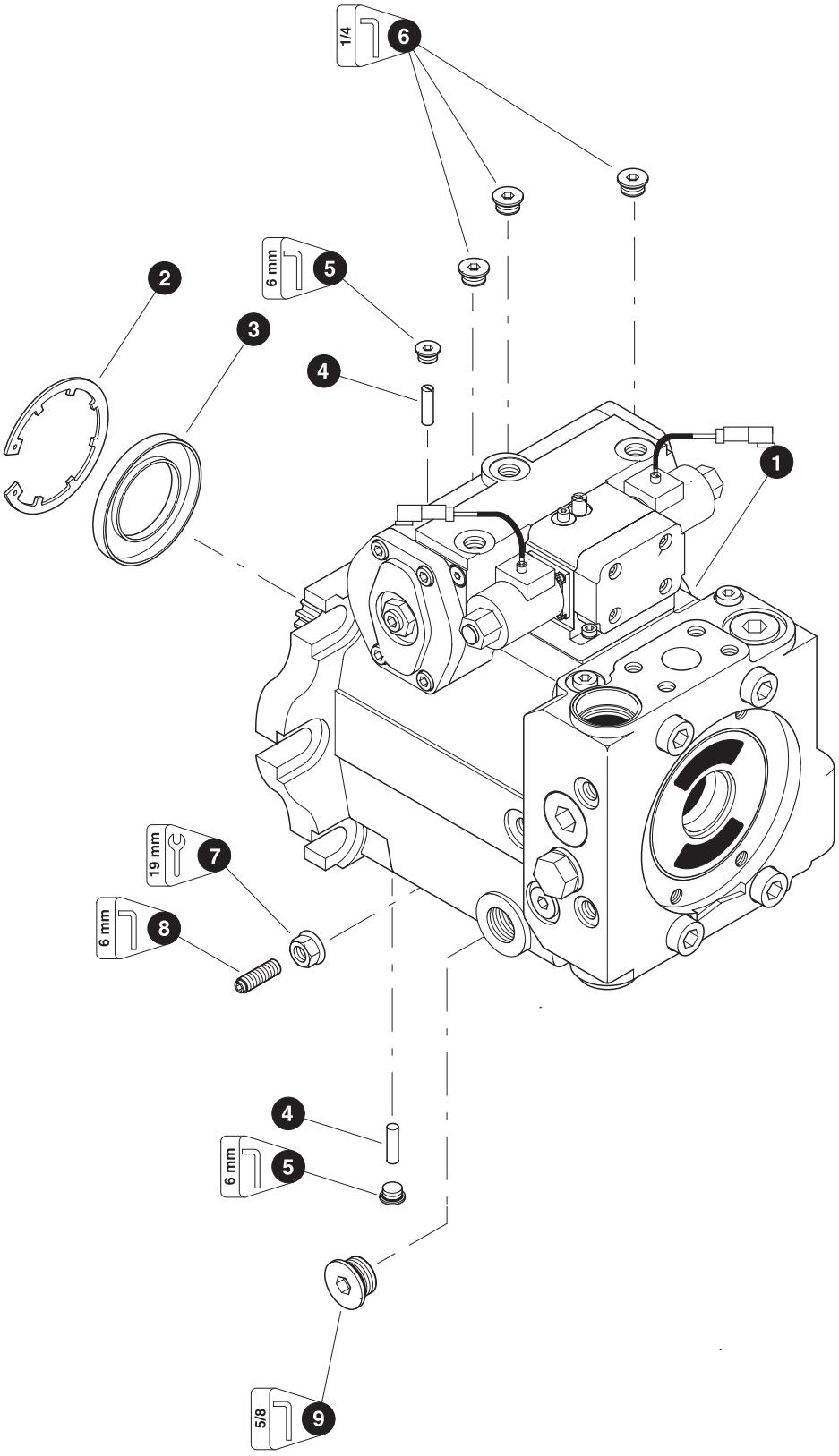
Section WD-3

Wheel Drive -
Wheel Drive System Components



Parts T2676 05/15/2003
37.50

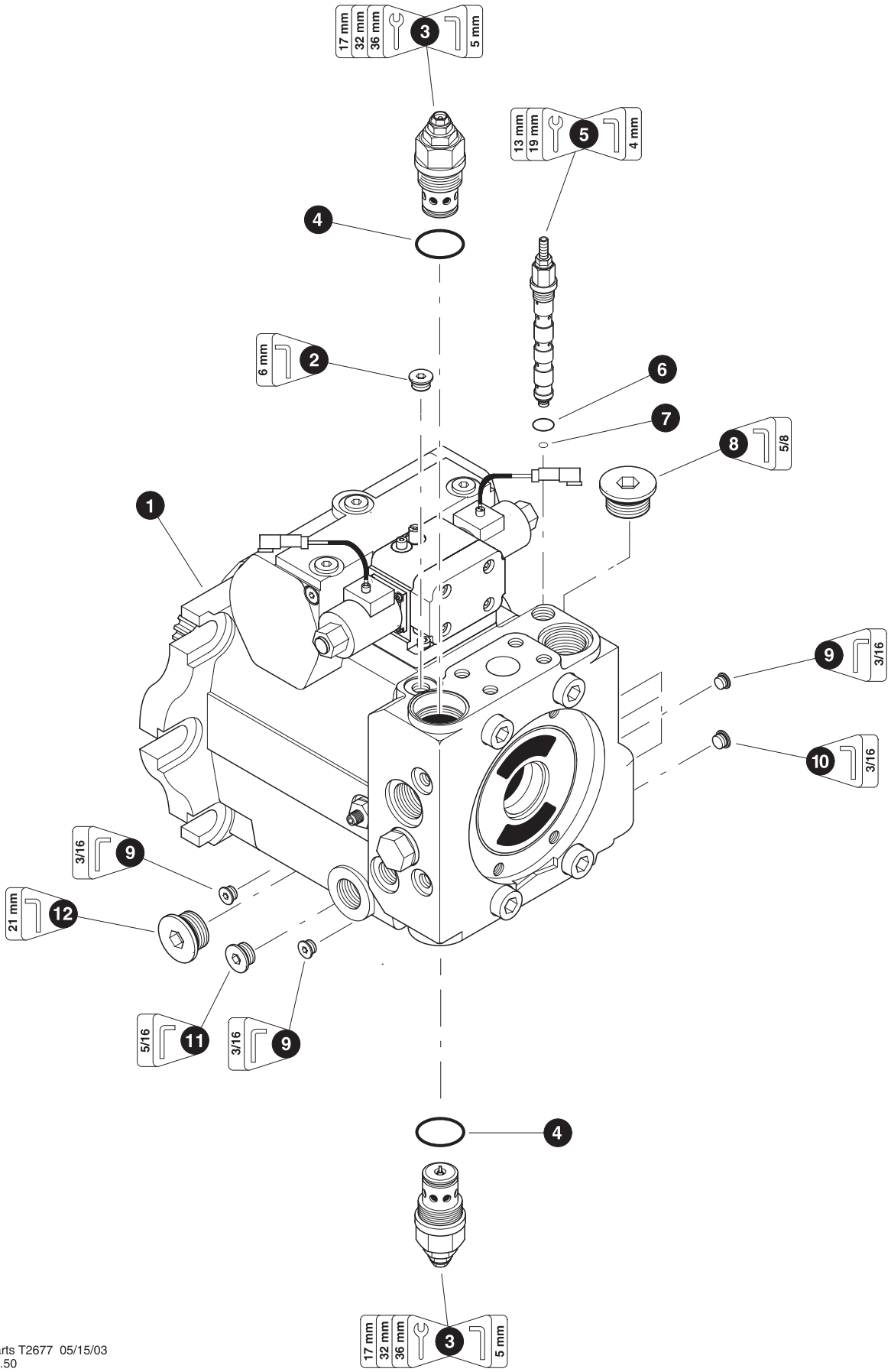
WHEEL DRIVE PUMP - REXROTH AA4VG125
(Forward Cast Housing Components)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23612-WD	1	❑	PUMP, wheel drive - Rexroth AA4VG125 - 24V	
2	20315-WD	1		RING, snap	
3	19353-WD	1	⌘	SEAL, shaft	
4	20318-WD	2		PIN, cradle	
5	20317-WD	2	⌘	PLUG - 12mm-1.5P	
6	15412-WD	4	❑	PLUG - 6408-HHP-6	
	20320-WD	1	⌘	O-RING, ORB - #6	
7	20329-WD	1	⌘	NUT, seal - 12mm-1.5P	
8	20327-WD	1		PIN, threaded - 12mm-1.5P	
9	19847-WD	1	❑	PLUG - 6408-HHP-16	
	20324-WD	1	⌘	O-RING, ORB - #16	
-	19356-WD	1		KIT, seal repair - complete AA4VG125 pump	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19356-WD.

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 T2677 05/15/03
37.50

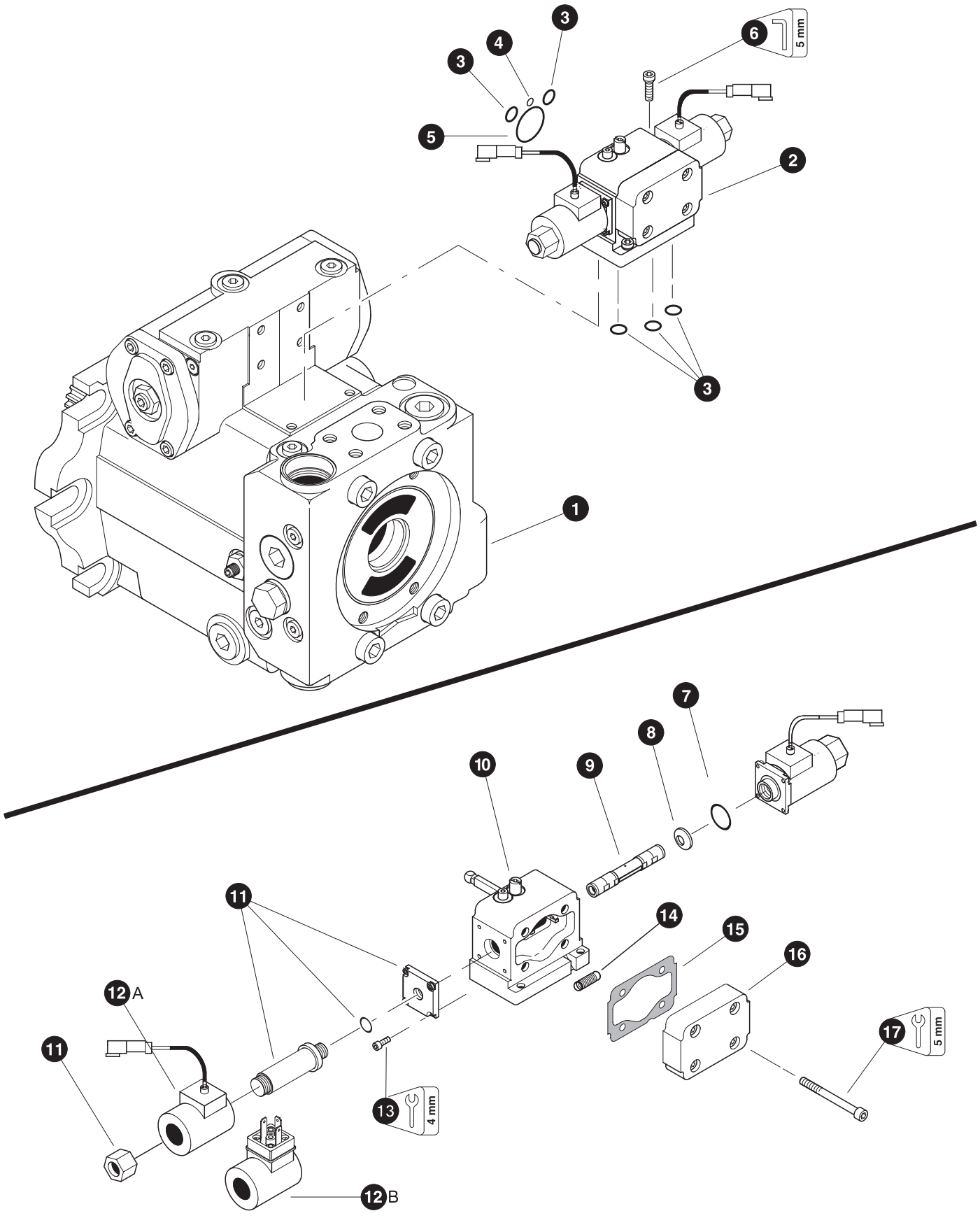
WHEEL DRIVE PUMP - REXROTH AA4VG125
(Rear Port Block Components)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	WHEEL DRIVE PUMP - Rexroth AA4VG125	WD-3
2	20317-WD	1	⌘	PLUG - 12mm-1.5P	
3	20330-WD	2	❑	CARTRIDGE, high pressure relief valve	
	20331-WD	1	⌘	NUT, seal - 10mm-1.0P	
4	20332-WD	1	⌘	O-RING, HPRV cartridge	
5	20254-WD	1	❑	CARTRIDGE, POR relief valve	
6	20337-WD	1	⌘	O-RING, POR relief valve - body	
7	20338-WD	1	⌘	O-RING, POR relief valve - chamber	
8	19847-WD	1	❑	PLUG - 6408-HHP-16	
	20324-WD	1	⌘	O-RING, ORB - #16	
9	20339-WD	4	⌘	PLUG - 8mm-1.0P	
10	11383-WD	2	❑	PLUG - 6408-HHP-4	
	20319-WD	1	⌘	O-RING, ORB - #4	
11	19271-WD	2	❑	PLUG - 6408-HHP-10	
	20322-WD	1	⌘	O-RING, ORB - #10	
12	20333-WD	1	❑	PLUG - 42mm-2.0P	
	20334-WD	1	⌘	O-RING, ORB - 42mm-2.0P	
-	19356-WD	1		KIT, seal repair - complete AA4VG125 pump	

🕮 See referenced page for component breakdown.
❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19356-WD.

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.

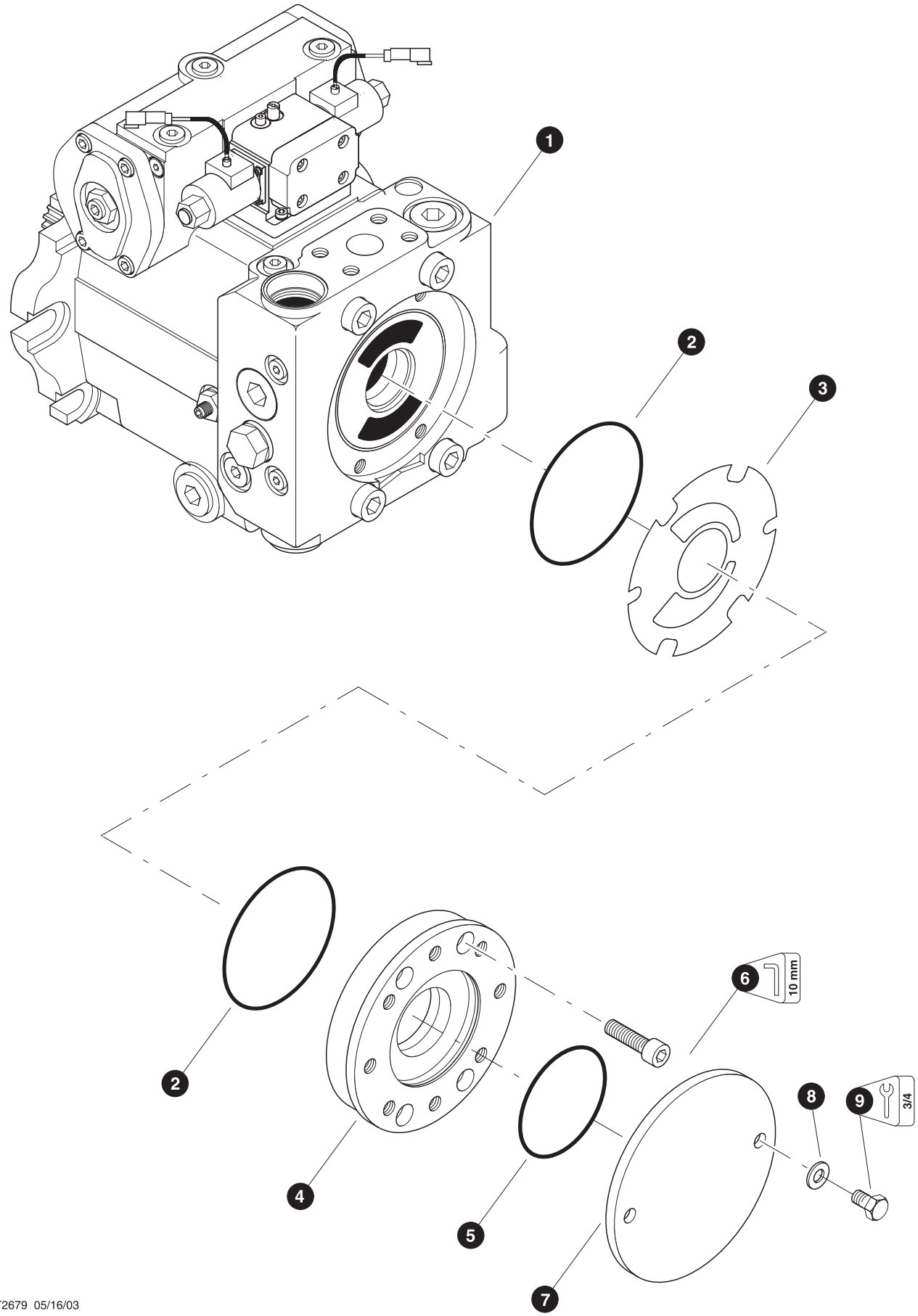


Parts T2678 05/16/03
37.50

WHEEL DRIVE PUMP - REXROTH AA4VG125
(Stroke Control Assembly)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	WHEEL DRIVE PUMP - Rexroth AA4VG125	WD-3
2	50935-WD	1	❑	VALVE, stroke control - 24V current	
3	20342-WD	5	⌘	O-RING, stroke control	
4	20343-WD	1	⌘	O-RING, stroke control	
5	20344-WD	1	⌘	O-RING, stroke control	
6	20345-WD	2		BOLT, allen head - 6mm x 20mm	
7	-	2	⌘	O-RING, (09083764)	
8	-	2		SPRING, CUP (02601640)	
9	NSS	1		SPOOL,	
10	-	1		MODULE, stroke control - (02046894)	
11	-	2		COIL STEM, assembly (02046037)	
12a	50465-WD	2		COIL, solenoid - 24V	
12b	50043-WD	2		COIL, solenoid - (hershman style connector 24v) (old style)	
13	-	8		BOLT, allen head - 4mm (09083183)	
14	-	1		SPRING, stroke centering (02063327)	
15	-	1	⌘	GASKET, (09651478)	
16	-	1		COVER, (09443201)	
17	-	4		BOLT, allen head - 6mm (09085831)	
-	19356-WD	1		KIT, seal repair - complete AA4VG125 pump	

🕮 See referenced page for component breakdown.
❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19356-WD



Parts T2679 05/16/03
37.50

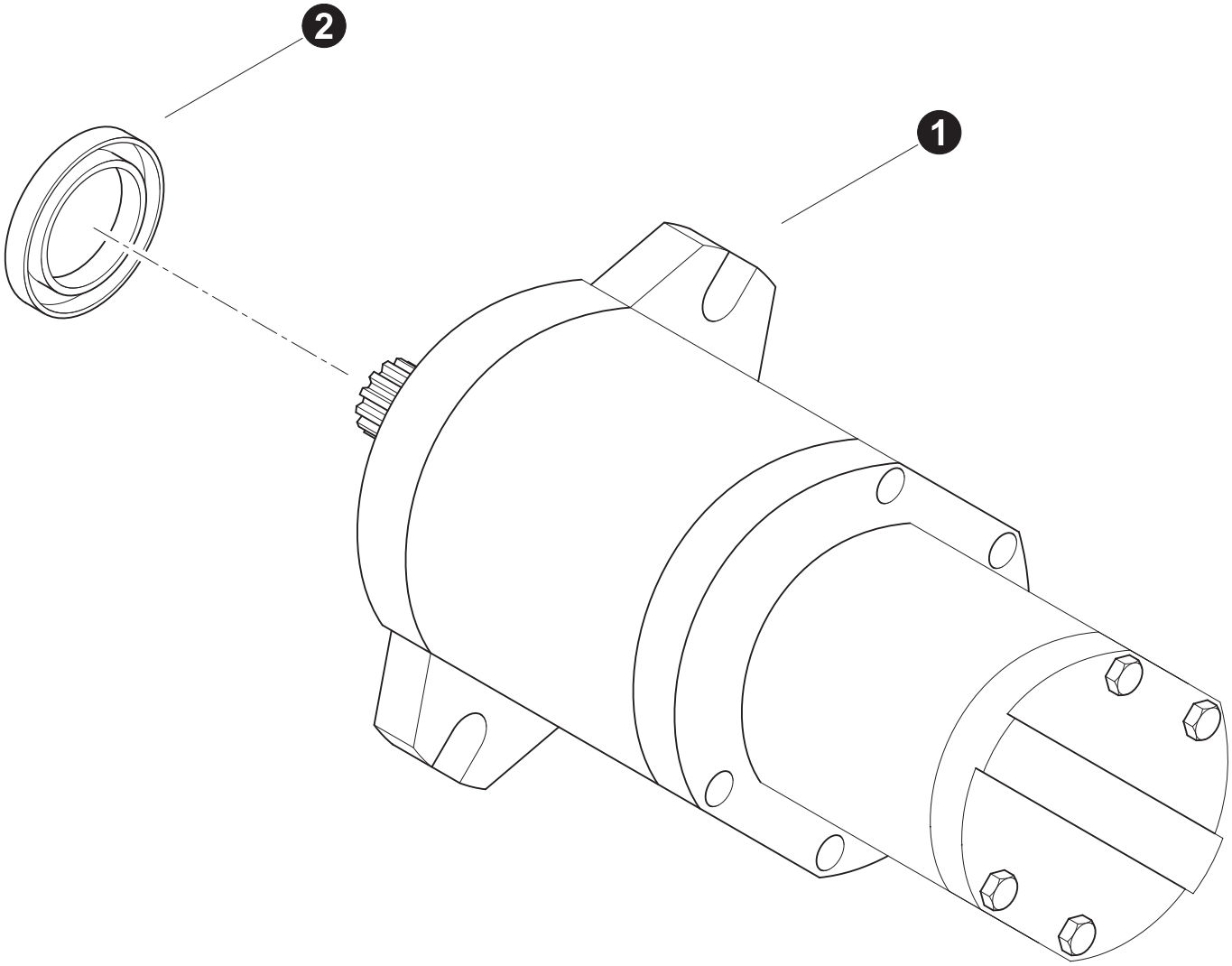
WHEEL DRIVE PUMP - REXROTH AA4VG125
(Thru Drive Components)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	WHEEL DRIVE PUMP - Rexroth AA4VG125	WD-3
-	- - - - -	1	❑	THRU DRIVE ASSEMBLY (No gear charge pump)	
2	20368-WD	2	⌘	O-RING, thru drive wear plate	
3	20369-WD	1		PLATE, wear	
4	NSS	1		HOUSING	
5	21624-WD	1		O-RING, thru drive pilot (SAE ”B”)	
6	18954-WD	4		BOLT, allen head - 12mm-1.75P x 40mm	
7	18414	1		COUPLING, thru drive	
8	18040	1		WASHER, flat - .5”	
9	10783	1		BOLT - .5” X 1”	
-	19356-WD	1		KIT, seal repair - complete AA4VG125 pump	

🕮 See referenced page for component breakdown.
❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19356-WD.

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.

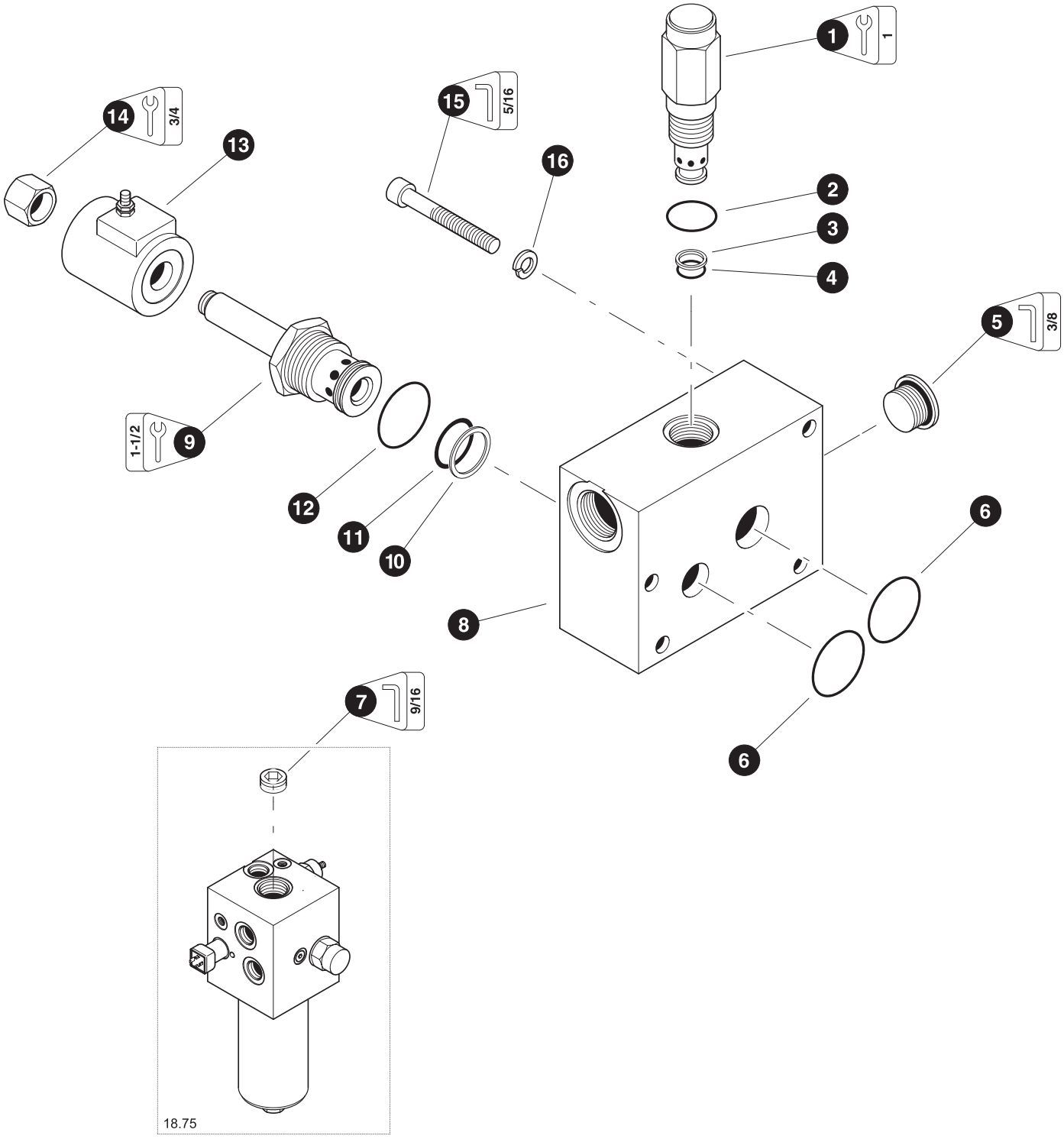


Parts T3190 07/14/2005
50.00

Charge Pump Breakdown

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51629-WD	1	❑	PUMP, CHARGE -DUAL FLOW	
2	52160-WD	1		SEAL, shaft	

❑ Kit or Assembly - includes all items indented underneath.



Parts T2680 05/16/2003
37.50

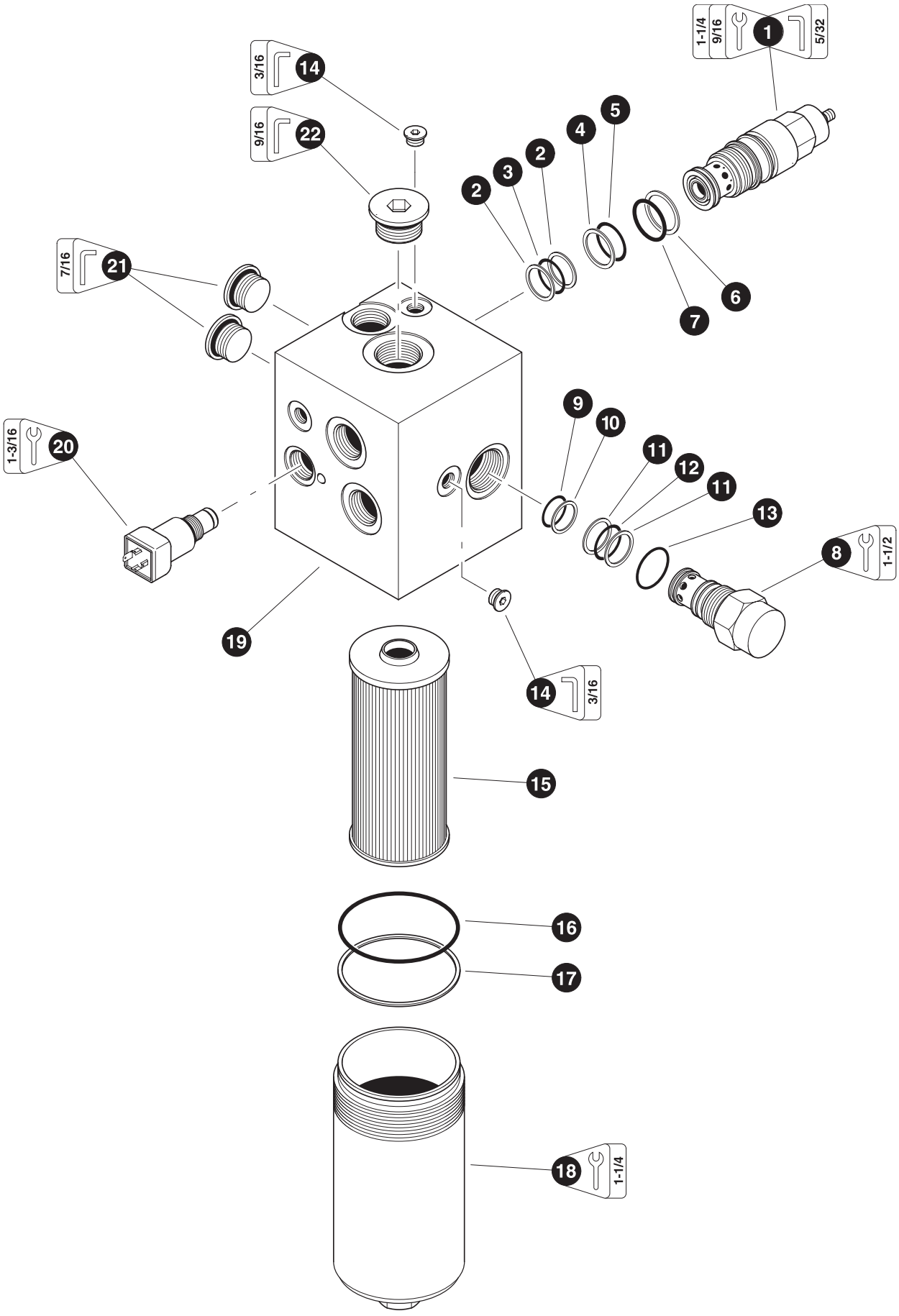
Charge Heater Breakdown

(Used on Serial Number 0128 and Down)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	19823-WD	1	❑	MANIFOLD, charge oil heater	
1	21673-WD	1	❑	CARTRIDGE, relief valve (RV10)	
2	NSS	1	⌘	O-RING, body	
3	NSS	1	⌘	RING, back-up - chamber	
4	NSS	1	⌘	O-RING, chamber	
5	15584-WD	1		PLUG - 6408-HHP-12	
6	21675-WD	2		O-RING, housing	
7	21676-WD	1		PLUG, orifice	
8	NSS	1		HOUSING, valve body	
9	21674-WD	1	❑	CARTRIDGE, solenoid valve (SV16)	
10	NSS	1	♦	O-RING, chamber	
11	NSS	1	♦	RING, back-up - chamber	
12	NSS	1	♦	O-RING, body	
13	23620-WD	1		COIL, 24V	
14	NSS	1		NUT	
15		4		LOCK WASHER	
16		4		ALLEN BOLT	

-	21677-WD	1	KIT, seal repair - relief valve cartridge
-	21678-WD	1	KIT, seal repair - solenoid cartridge

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 21677-WD.
♦ Included in seal repair kit Part # 21678-WD.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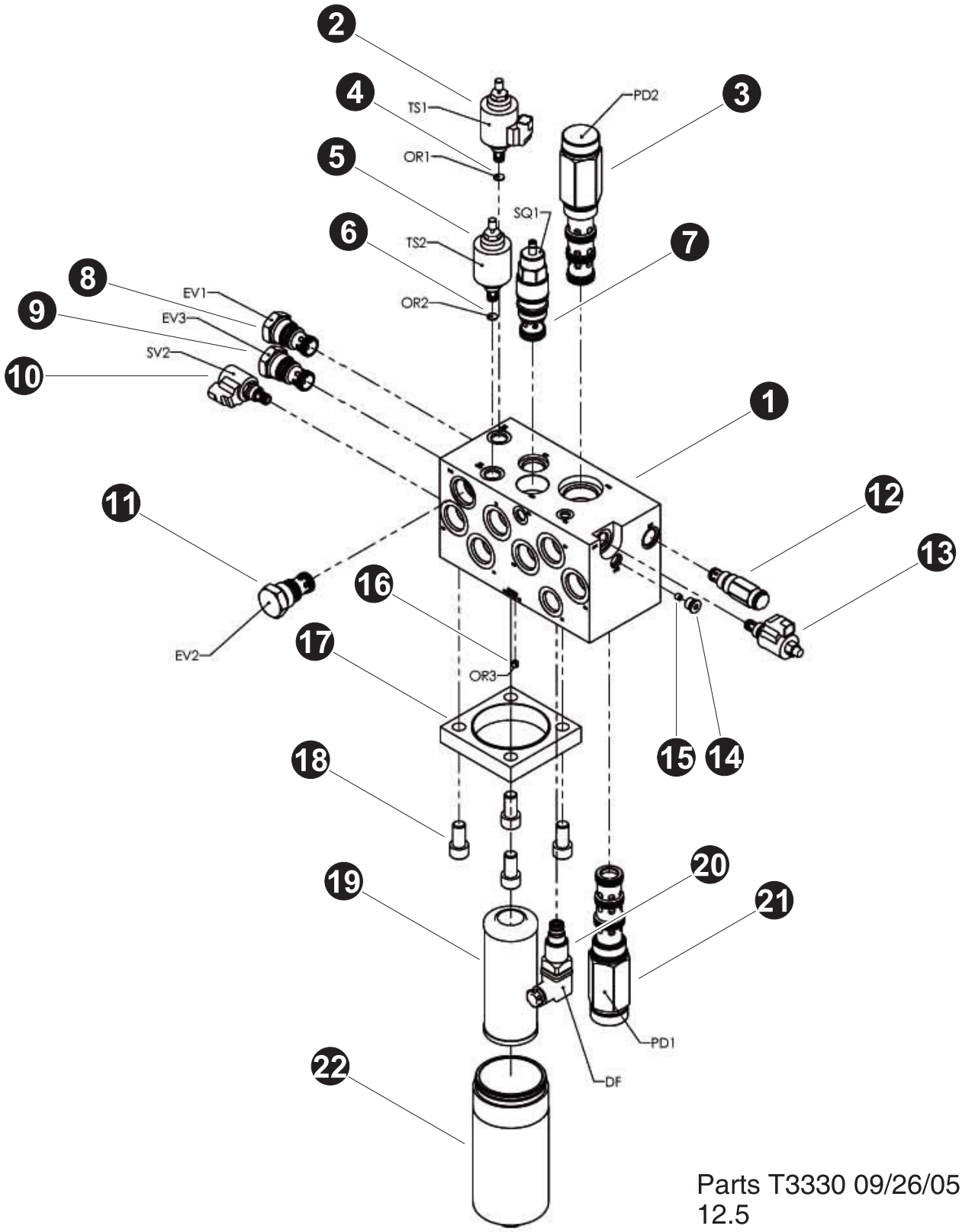
1-1/4

Charge Filter Manifold Breakdown

(Used on Serial Number 0128 and Down)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	19821-WD	1	❑	FILTER/MANIFOLD, charge	
1	17812-WD	1	❑	CARTRIDGE, relief	
2	NSS	2	⌘	RING, back-up - chamber	
3	NSS	1	⌘	O-RING - chamber	
4	NSS	1	⌘	RING, back-up - chamber	
5	NSS	1	⌘	O-RING - chamber	
6	NSS	1	⌘	RING, back-up - body	
7	NSS	1	⌘	O-RING - body	
8	19876-WD	1	❑	CARTRIDGE, check	
9	NSS	1	⌘	O-RING - chamber	
10	NSS	1	⌘	RING, back-up - chamber	
11	NSS	2	⌘	RING, back-up - chamber	
12	NSS	1	⌘	O-RING - chamber	
13	NSS	1	⌘	O-RING - body	
14	11383-WD	1		PLUG - 6408-HHP-4	
15	19861-WD	1		ELEMENT, hydrostatic charge filter	
16	19862-WD	1		RING, back-up - canister	
17	19863-WD	1		O-RING, canister	
18	19864-WD	1		CANISTER	
19	NSS	1		BODY	
20	17675-WD	1		SWITCH, filter indicator	
21	15584-WD	2		PLUG - 6408-HHP-12	
22	19847-WD	1		PLUG - 6408-HHP-16	

❑ Kit or assembly. Includes all items indented underneath.
⌘ Included in seal repair kit PN# 16086-WD.



Parts T3330 09/26/05
12.5

Fan / Charge System Control Valve Breakdown

(Used on Serial Number 0129 and Up)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	52099-WD	1	❑	VALVE, FAN / CHARGE SYSTEM CONTROL	
1	-WD	1		MANIFOLD, fan / charge	
2	-WD	1		CARTRIDGE, HYDRAFORCE -TS38-20BM-0-N-24ER-VCO8-2	
	-WD			KIT, SEAL (SKO8-2X-B)	
3	-WD	1	❒	CARTRIDGE, HYDRAFORCE - PD42-M40N-0-N-160-VC42-M4	
-	-WD			KIT, SEAL (SK42-4X-MMM)	
4	-WD	1		ORIFACE	
5	-WD	1	❒	CARTRIDGE, HYDRAFORCE -TS38-20BM-0-N-24ER-VCO8-2	
-	-WD			KIT, SEAL (SKO8-2X-B)	
6	-WD	1		ORIFACE	
7	-WD	1	❑	CARTRIDGE, SUN HYDRAULICS - SCGA-LDNT-17A	
-	-WD			KIT, SEAL (990-017-006)	
8	-WD	1	❑	CARTRIDGE, HYDRAFORCE -EV16-S34-0-N-70-VC16-S3	
-	-WD			KIT, SEAL (SK16-3X-MM)	
9	-WD	1	❒	CARTRIDGE, HYDRAFORCE -EV16-S34-0-N-70-VC16-S3	
-	-WD			KIT, SEAL (SK16-3X-MM)	
10	-WD	1	❒	CARTRIDGE, HYDRAFORCE -SV08-21-VCO8-2	
-	-WD			KIT, SEAL (SKO8-2X-T)	
11	-WD	1	❒	CARTRIDGE, HYDRAFORCE - EV16-S34-0-N-0-70-VC16-S3	
-	-WD			KIT, SEAL (SK20-3X-MM)	
12	-WD	1	❒	CARTRIDGE, HYDRAFORCE - RV10-28-VC10-2	
-	-WD			KIT, SEAL (SK10-2X-MM)	
13	-WD	1	❒	CARTRIDGE, HYDRAFORCE - SVO8-30M-0-P-24ER-VCO8-3	
-	-WD			KIT, SEAL (SKO8-3X-MM)	
14	-WD	1		PLUG	
15	-WD	1		ORIFACE	
16	-WD	1		ORIFACE - 1/16” NPTF (.031)	
17	-WD	1	❒	FLANGE, Filter canister	
-	-WD	1		O-RING, Filter canister flange	
18	-WD	4		BOLT, ALLEN -	
19	19861-WD	1		ELEMENT, hydrostatic charge filter	
20	17675-WD	1		SWITCH, filter indicator	
21	-WD	1	❒	CARTRIDGE, HYDRAFORCE - PD42-M40N-0-N-160-VC42-M4	
-	-WD			KIT, SEAL (SK42-4X-MMM)	
22	19864-WD	1	❒	CANISTER	
-	19863-WD	1		O-RING, canister	
-	19862-WD	1		RING, back-up - canister	

❑ Kit or assembly. Includes all items indented underneath.

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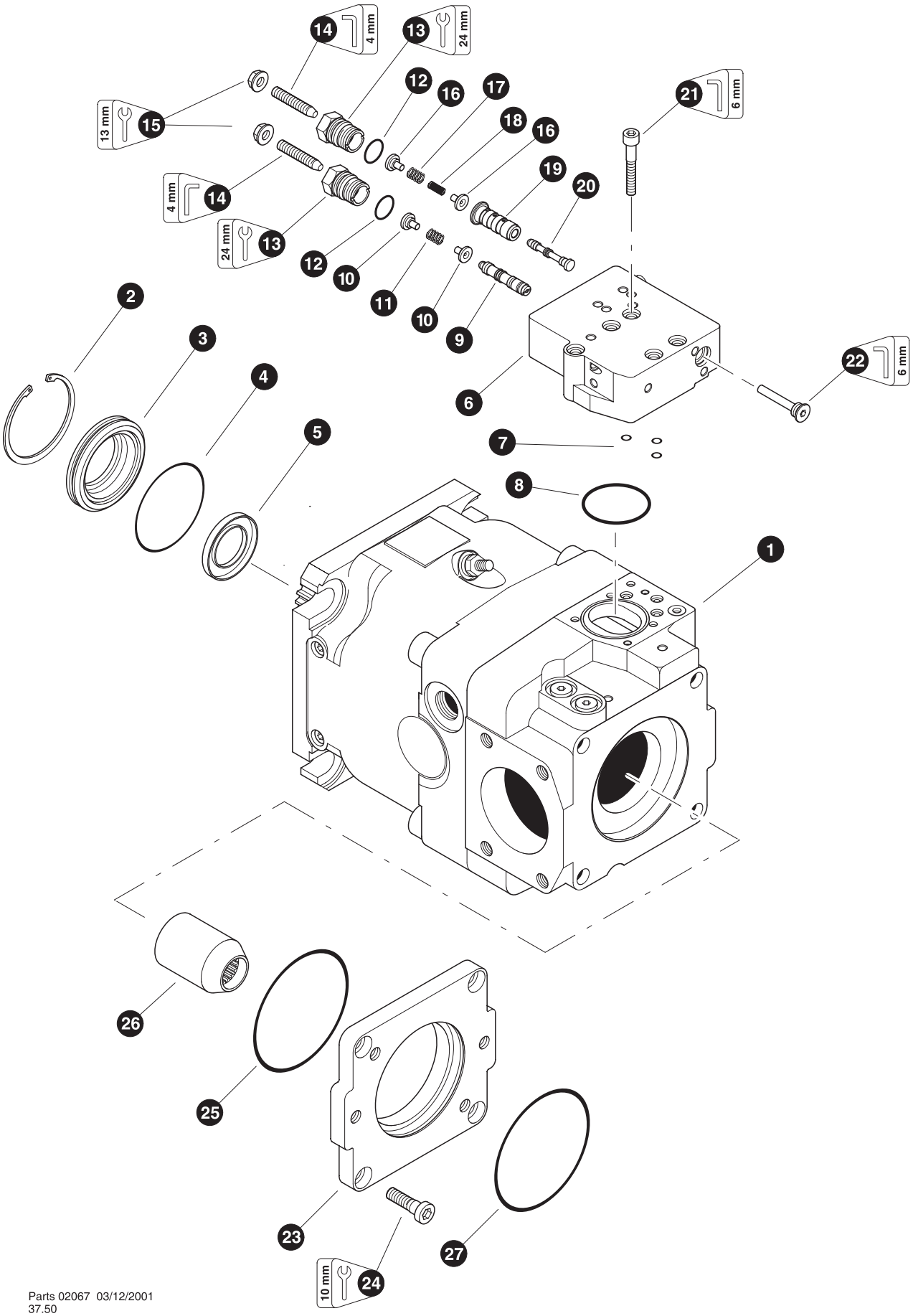
Section LH-1

Loader 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-LH	1	❑	PUMP, implement - Rexroth 145cc	
2	21546-LH	1		RING, seal retaining	
3	21547-LH	1		COVER, front	
4	21548-LH	1	⌘	O-RING, front cover	
5	18687-LH	1	⌘	SEAL, shaft	
6	18681-LH	1	❑	COMPENSATOR	
7	20809-LH	3	⌘	O-RING, quad	
8	20808-LH	1	⌘	O-RING, compensator	
9	NSS	1		SPOOL. POR pressure	
10	21551-LH	2		RETAINER, spring	
11	21552-LH	1		SPRING	
12	21553-LH	2	⌘	O-RING, compensator cap	
13	21554-LH	2		CAP, compensator	
14	20358-LH	2	⌘	NUT, seal	
15	21555-LH	2		SCREW, adjusting	
16	21558-LH	2		RETAINER, spring	
17	21556-LH	1		SPRING	
18	21557-LH	1		SPRING	
19	NSS	1		SLEEVE, spool	
20	NSS	1		SPOOL, stand-by pressure	
21	21559-LH	5		BOLT, allen head - 8mm x 50mm	
22	NSS	1		PLUG	
23	24424-LH	1	❑	KIT, FLANGE, thru drive vlo	
24	17608-LH	4		BOLT, allen head - 12mm-1.75P x 30mm	
25	17744-LH	1	⌘	O-RING, thru drive flange	
26	18843-LH	1		COUPLING, thru drive	
27	18844-LH	1		O-RING, thru drive cover	
--	18799-LH	1		KIT, seal repair *(Complete pump)*	

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

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.

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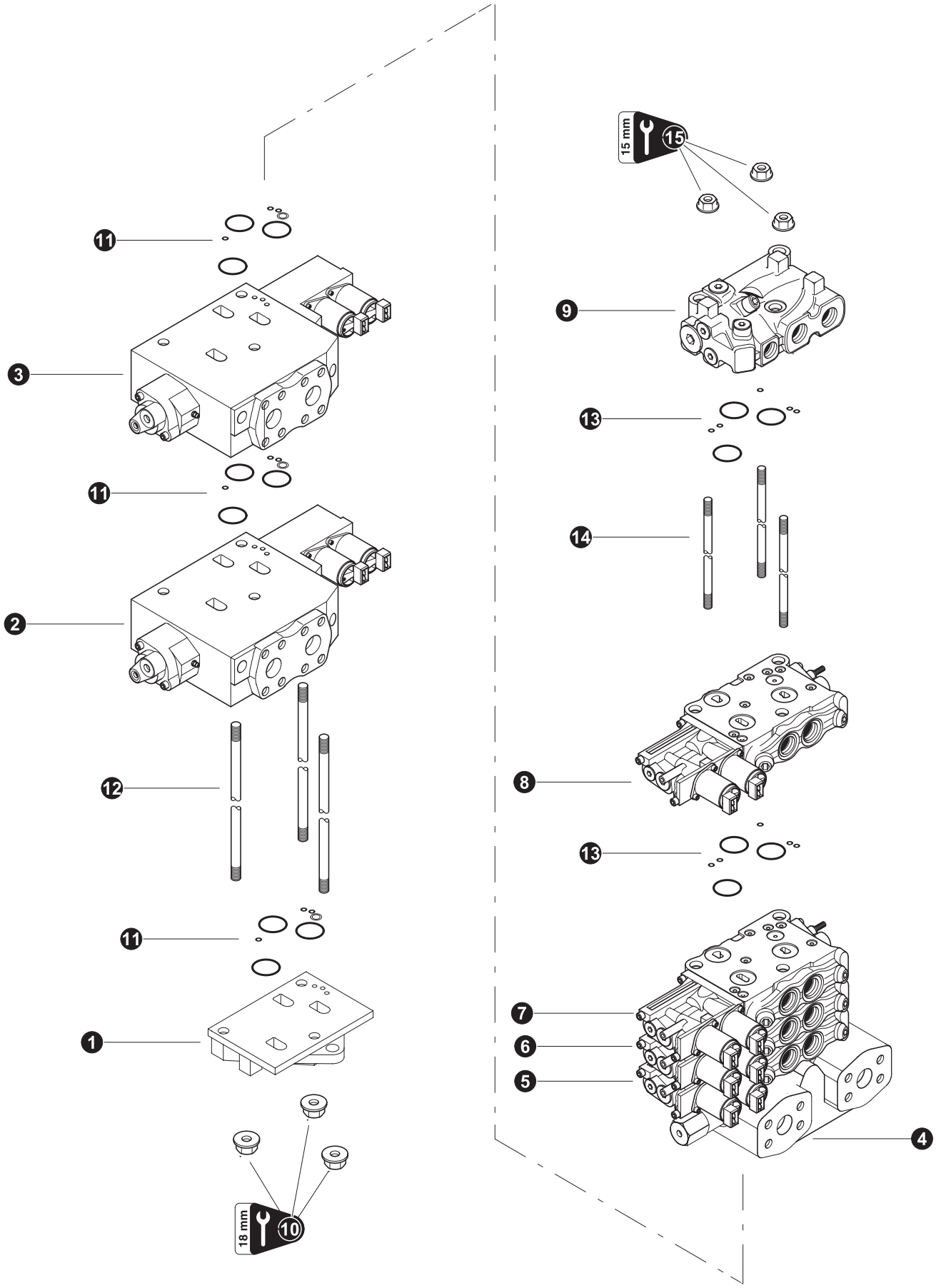
Section LH-2

Loader Hydraulics - Control Valve

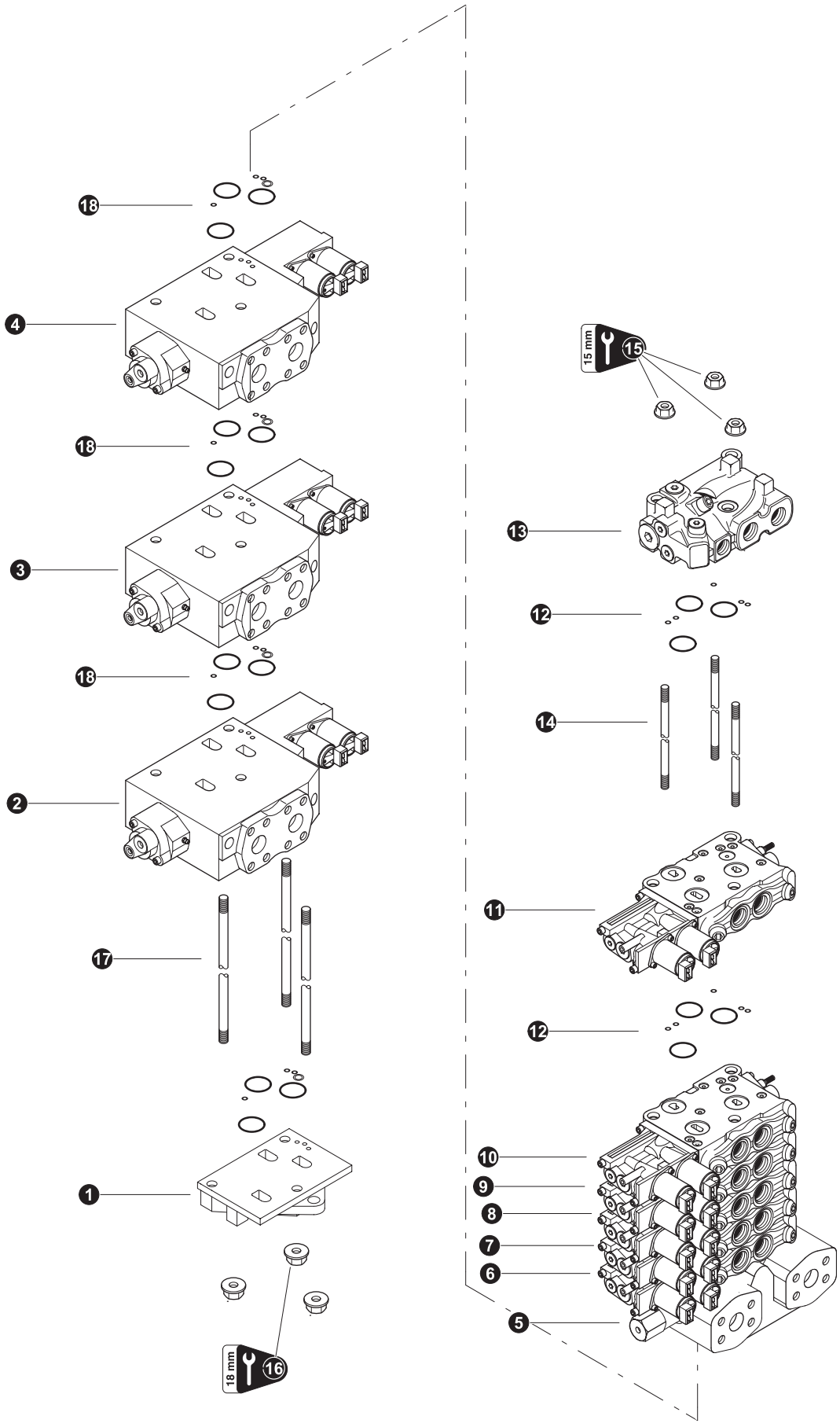


Parts T3211 07/26/2005
25.00

MAIN CONTROL VALVE
(Forwarder TF 830, 840)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51618-LH	1	❑	VALVE, MAIN - VOAC (24 volt / 6 sections) FWD	
-	51847-LH	1	❑	VALVE, MAIN - VOAC (24 volt / 7 sections) w / squirt boom	
1	REF	1	🕮	K220 END CAP	LH-2
2	REF.	1	🕮	VALVE SECTION - Main Boom function	LH-2
3	REF.	1	🕮	VALVE SECTION - Stick Boom function	LH-2
4	REF.	1	🕮	MID INLET / OUTLET	LH-2
5	REF	1	🕮	VALVE SECTION - Grapple O\C function	LH-2
-	REF	1	🕮	VALVE SECTION - (optional) Squirt Boom	LH-2
6	REF.	1	🕮	VALVE SECTION - Rotate function	LH-2
7	REF.	1	🕮	VALVE SECTION - Steer function	LH-2
8	REF.	1	🕮	VALVE SECTION - Swing function	LH-2
9	REF	1	🕮	L90 END CAP	LH-2
10	25131-LH	3		NUT, flange - 12mm *(Torque to 55 ft.lbs. (75 Nm))*	
11	25132-LH	6		KIT, seal repair - K220 face seals	
12	- - -	3		ROD, tie - K220 *(2-Section span)*	
13	23404-LH	5		KIT, seal repair - L90LS face seals	
14	25133-LH	3		ROD, tie - L90LS *(4-Section span)*	
14	25134-LH	3		ROD, tie - L90LS *(5-Section span)*	
15	23913-LH	3		NUT, flange - 10mm *(Torque to 33 ft.lbs. (45 Nm))*	

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

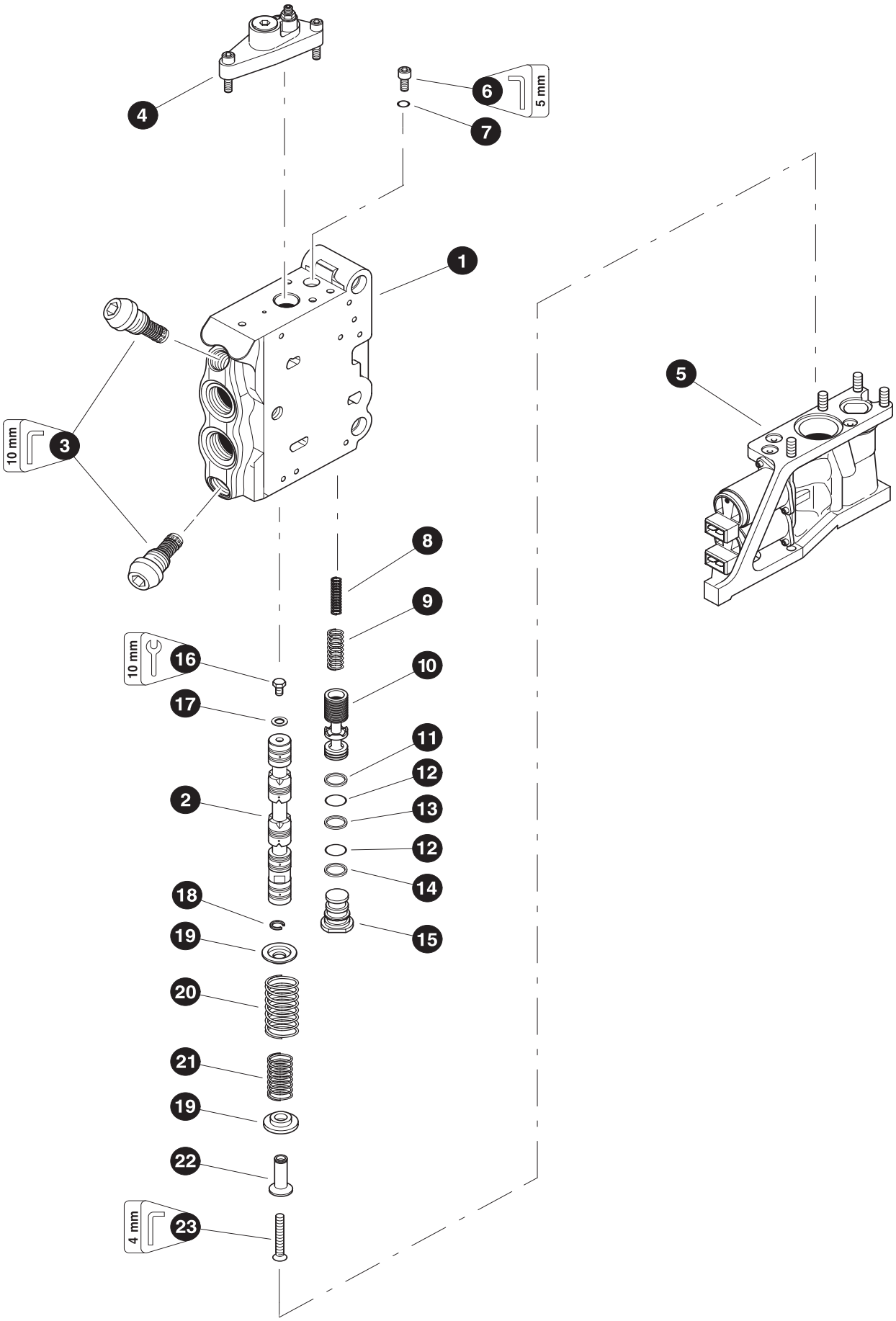


Parts T3265 08/09/2005
25.00

MAIN CONTROL VALVE
(Harvester TF 830, 840, & TB 630)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51849-LH	1	❑	VALVE, MAIN (3-K220/6-L90) LOG MAX / COMBO	
1	REF	1	🕮	K220 END CAP	LH-2
2	REF.	1	🕮	VALVE SECTION - Main Boom function	LH-2
3	REF.	1	🕮	VALVE SECTION - Stick Boom function	LH-2
4	REF.	1	🕮	VALVE SECTION - Processor function	LH-2
5	REF.	1	🕮	MID INLET / OUTLET	LH-2
6	REF	1	🕮	VALVE SECTION - Grapple O\C function	LH-2
7	REF	1	🕮	VALVE SECTION - Squirt Boom	LH-2
8	REF.	1	🕮	VALVE SECTION - Rotate function	LH-2
9	REF.	1	🕮	VALVE SECTION - Steer function	LH-2
10	REF.	1	🕮	VALVE SECTION - Swing function	LH-2
11	REF.	1	🕮	VALVE SECTION - Processor function	LH-2
12	23404-LH	5		KIT, seal repair - L90LS face seals	
13	REF	1	🕮	L90 END CAP	LH-2
14	23912-LH	3		ROD, TIE - VOAC (L90LS)(6 SEC)	
15	23913-LH	3		NUT, flange - 10mm *(Torque to 33 ft.lbs. (45 Nm))*	
16	25131-LH	3		NUT, flange - 12mm *(Torque to 55 ft.lbs. (75 Nm))*	
17	- - -	3		ROD, tie - K220 *(3-Section span) (9120092374)*	
18	25132-LH	4		KIT, seal repair - K220 face seals	

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



Parts 01318 09/15/99
37.50

L90LS VALVE SECTION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	-LH	1	🕮	VALVE SECTION - Grapple O\C function (L90LS-MS-US60-272)	
-	-LH	1	🕮	VALVE SECTION - (optional) Squirt Boom (L90LS-MS-US60-275)	
-	-LH	1	🕮	VALVE SECTION - Rotate function (L90LS-MS-US60-273)	
-	-LH	1	🕮	VALVE SECTION - Steer function (L90LS-MS-US60-270)	
-	-LH	1	🕮	VALVE SECTION - Swing function (L90LS-MS-US60-271)	
-	-LH	1	🕮	VALVE SECTION - Aux Processor (L90LS-MS-US60-281)	
-	-LH	1	🕮	VALVE SECTION - Cab Level function (L90LS-MS-US60-276)	
1	NSS	1		BODY, valve section	
2	- - - - -	1		SPOOL, grapple rotate MBX (393000S218)	
2	- - - - -	1		SPOOL, steer/shear RDX (393000S230)	
2	- - - - -	1		SPOOL, swing - RCD	
2	- - - - -	1		SPOOL, squirt boom / processor / grapple - RKX (393000S490)	
2	- - - - -	1		SPOOL, cab level - ZEX	
3	- - - -	2		CARTRIDGE, port relief (230 Bar) (393000K568)	
3	- - - - -	2		CARTRIDGE, port relief (250 Bar) (393000K569)	
3	- - - - -	2		CARTRIDGE, port relief (280 Bar) (393000K571)	
3	- - - - -	2		CARTRIDGE, port relief (300 Bar) (393000K572)	
4	REF.	1	🕮	SECTION END CAP ASSEMBLY - “A” port side	LH-2
5	REF.	1	🕮	SECTION END CAP ASSEMBLY - “B” port side	LH-2
-	- - - - -	1	❑	KIT, compensator - “KX” (Swing, Steer)(see note #1)	
-	- - - - -	1	❑	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	
	- - - - -		❑	KIT, compensator plug w/seals (393000K171)	
-	- - - - -	1	❑	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-LH	1	❑	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	

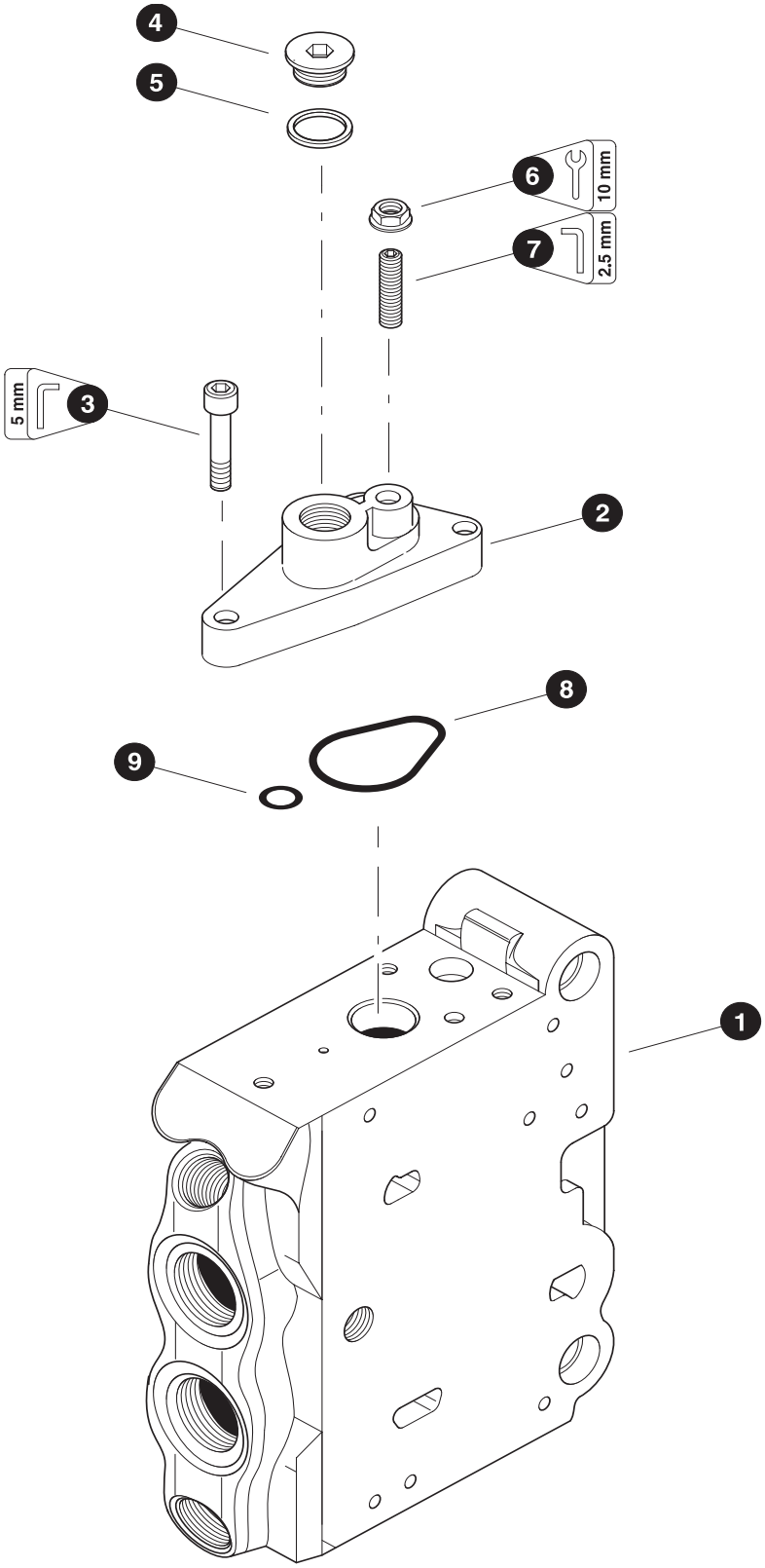
❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.

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 labled #5.

KX - blue (393000K616)
green (393000K617)
red (393000K618)

K - blue (393000K169)
green (393000K469)
red (393000K669)

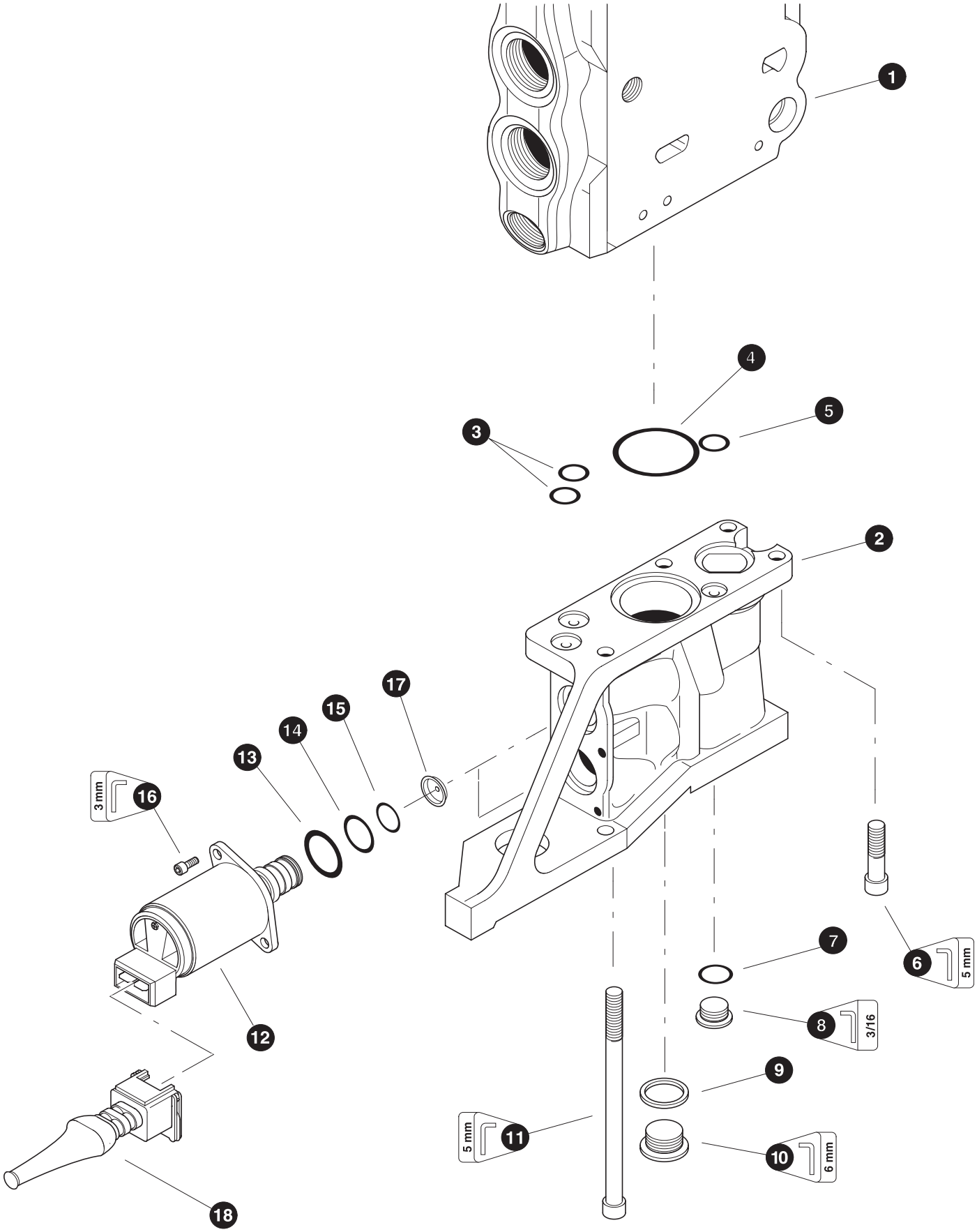


Parts 01734 08/08/2000
75.00

L90LS VALVE END CAP

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	NSS	1		VALVE SECTION BODY	
-	23414-LH	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-LH	1		PLUG - 6408-HHP-6	
5	- - - - -	1	⌘	RING, seal (3-906)	
6	- - - - -	1	⌘	NUT, seal - 6mm (3763131)	
7	- - - - -	1		SCREW, adjustment (3764640)	
-	23415-LH	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

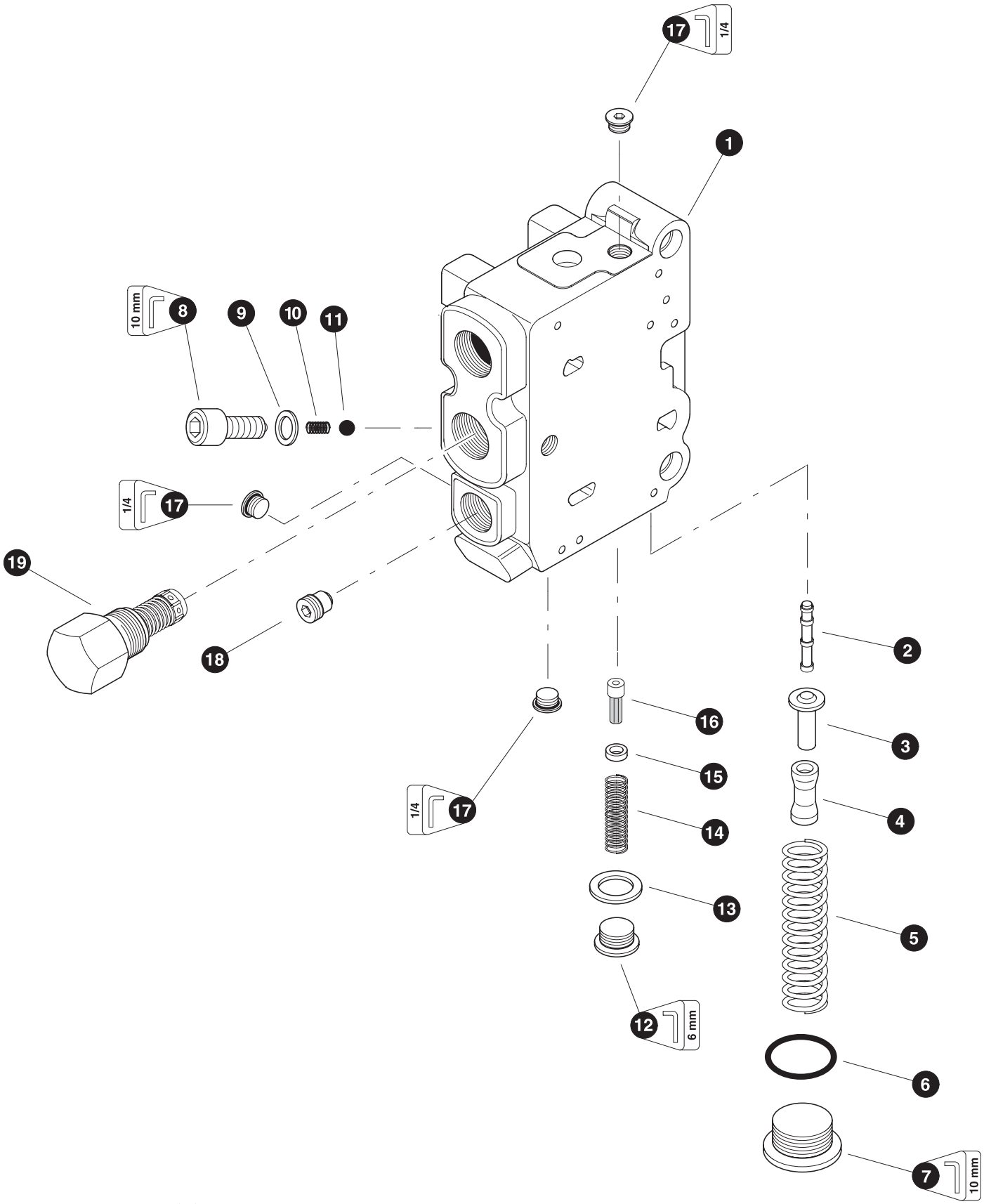
L90LS VALVE CONTROL CAP

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	NSS	1		VALVE SECTION BODY	
-	23416-LH	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-LH	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-LH	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 orfice (voac solenoid)(see note #1 below)	
18	19179-LH	2		CONNECTOR, (kit) voac controll valve	
-	23417-LH	1		KIT, seal repair - “B” port side end cap	
-	23418-LH	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:

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



Parts 01319 09/16/99
62.00

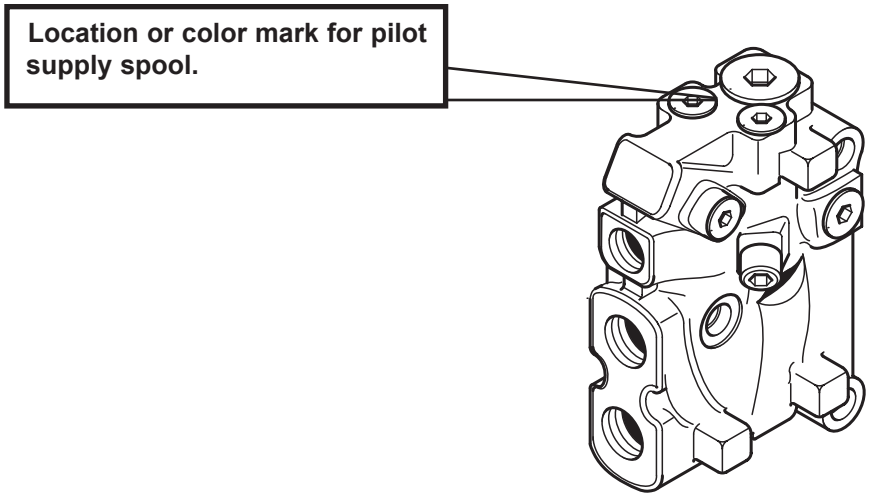
L90LS VALVE OUTLET

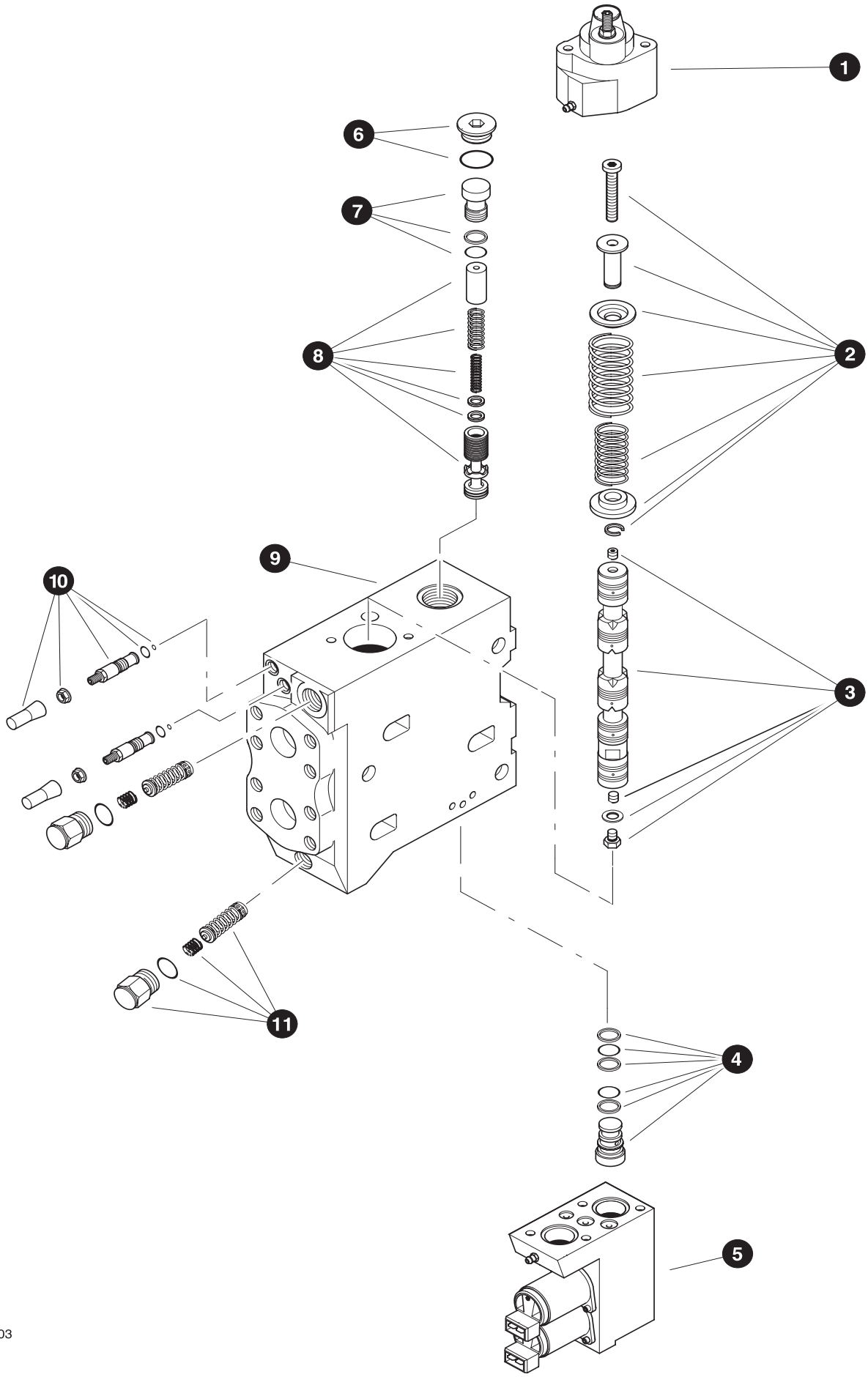
REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	23412-LH	1	❑	VALVE SECTION, outlet	
1	NSS	1		BODY, valve section	
-	23431-LH	1	❑	KIT, pilot supply reducer (Green)(35 bar)(see note #1)	
	23432-LH	1	❑	KIT, pilot supply reducer (Red)(35 bar)(see note #1)	
2	- - - - -	1		SPOOL, pilot reducer	
3	- - - - -	1		RETAINER, spring	
4	- - - - -	1		SPACER, spring	
5	- - - - -	1		SPRING	
6	- - - - -	1		O-RING (0663909901)	
7	- - - - -	1		PLUG (9126244413)	
8	- - - - -	1		PLUG (9127320022)	
9	- - - - -	1		RING, seal (06611005)	
10	- - - - -	1		SPRING	
11	- - - - -	1		BALL, check	
-	23433-LH	1	❑	KIT, pilot supply strainer	
12	- - - - -	1		PLUG (9127320020)	
13	- - - - -	1		RING, seal (06611020)	
14	- - - - -	1		SPRING	
15	- - - - -	1		SPACER	
16	- - - - -	1		STRAINER (9126386076)	
17	15412-LH	3		PLUG - 6408-HHP-6	
18	- - - - -	1		PLUG, pilot drain (393000K078)	
19	- - - - -	1		Counter press. valve - 130 PSI (393000K068)	

❑ Kit or Assembly - includes all items indented underneath.

NOTE #1

Each section is color coded to insure proper fit, please check color mark before ordering.



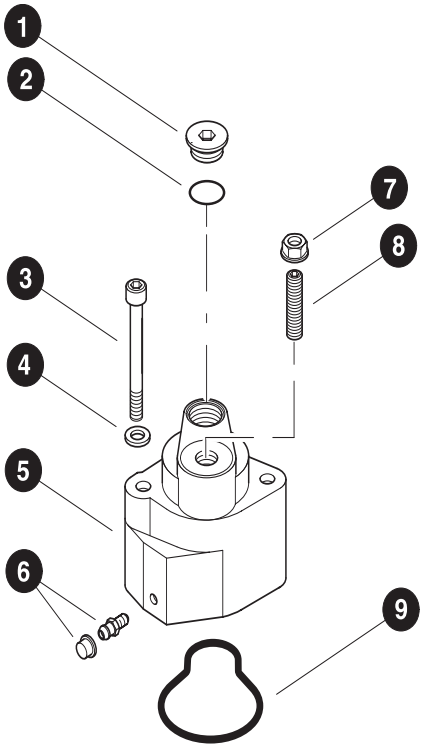


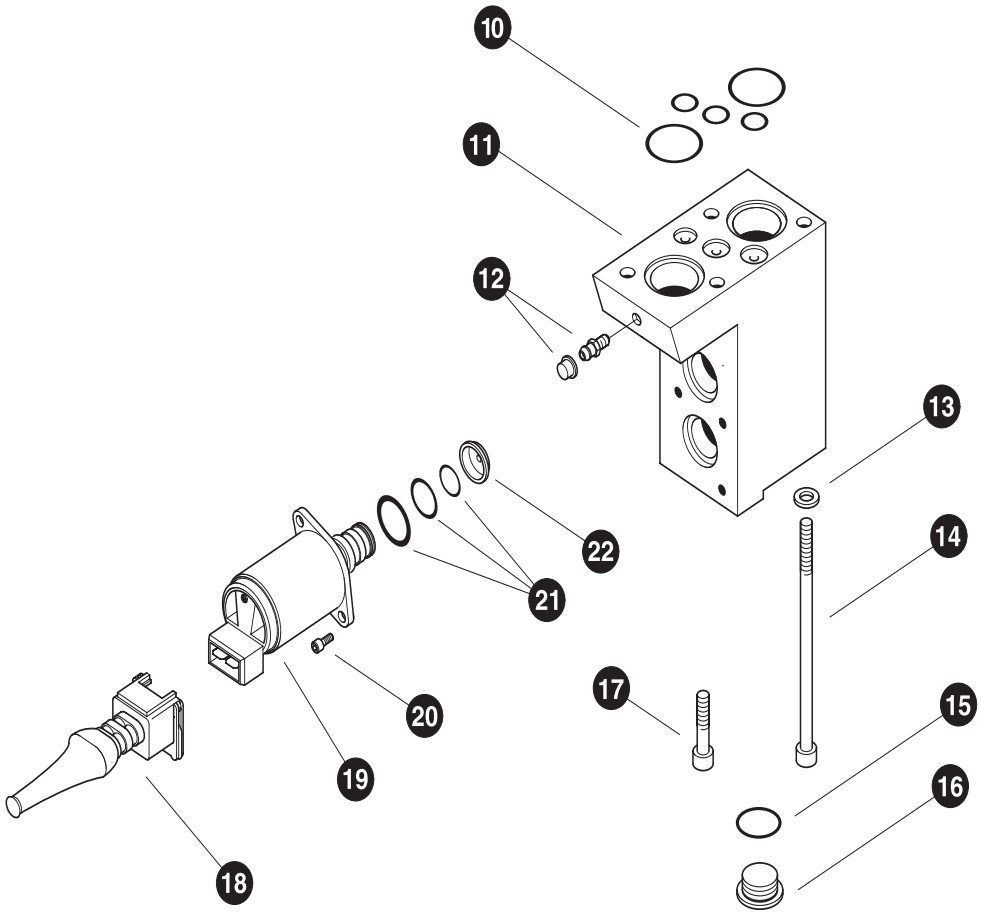
Parts T2761 07/15/03
37.50

VOAC K220 VALVE SECTION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	-LH	1	❑	VALVE SECTION, K220 - STICK - FORW BOOM (K220LS-MS-US60-232)	
-	-LH	1	❑	VALVE SECTION, K220 - MAIN - FORW BOOM (K220LS-MS-US60-231)	
-	-LH	1	❑	VALVE SECTION, K220 - PROCESSOR (K220LS-MS-US60-235)	
1	REF.	1	🕮	CAP, “B”port	CH-2-18
2	- - - - -	1		KIT, SPOOL SPRING - (9120092015)	
3	- - - - -	1		SPOOL, STICK -	
3	- - - - -	1		SPOOL, MAIN - TUA	
3	- - - - -	1		SPOOL, PROCESSOR - RAX	
4	- - - - -	1	❑	KIT, PLUG 3 (3764731)	
-	- - - - -	1		SEAL KIT, plug 3 (9120092355)	
5	- - - - -	1	🕮	CONTROL CAP ASSEMBLY - “A” port side	CH-2-18
6	- - - - -	1	❑	KIT, PLUG 1 (9126244419)	
-	- - - - -	1		O-RING, plug 1 (0663910401)	
7	- - - - -	1	❑	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	❑	KIT, FEED REDUCER (3763680)	
-	- - - - -	1		O-RING, feed reducer (91256182)	
-	- - - - -	1		O-RING, feed reducer (06639050)	
-	- - - - -			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
-	51264-LH	1	❑	CUP, PILOT - K220 W / FLOW LIMIT	
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-LH	2		KIT, CONNECTOR -VOAC solenoid	
-	20976-LH	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 orfice 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)

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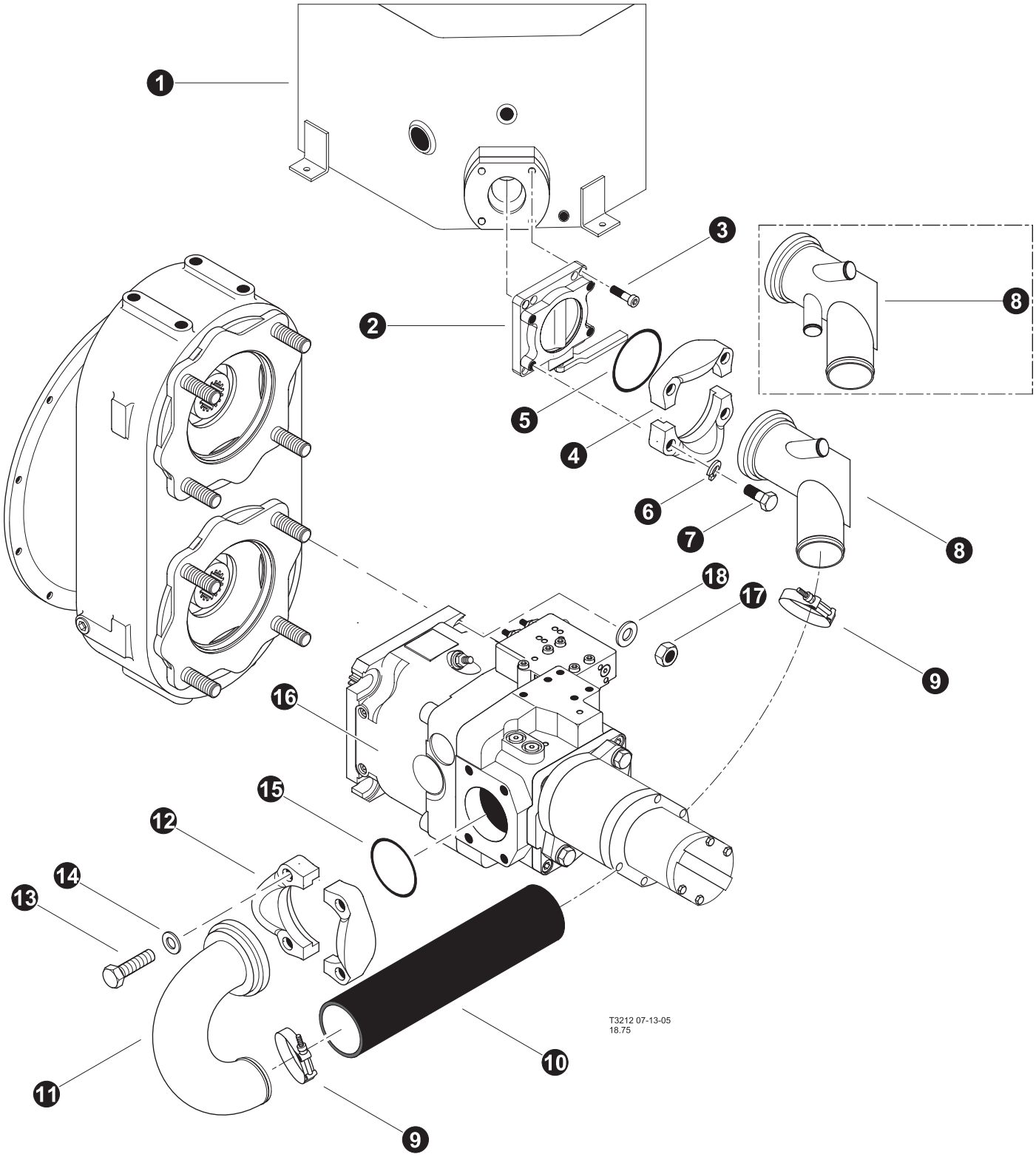
Section LH-3

Loader Implements -
Supply, Tank, Load sense, and Drain Circuits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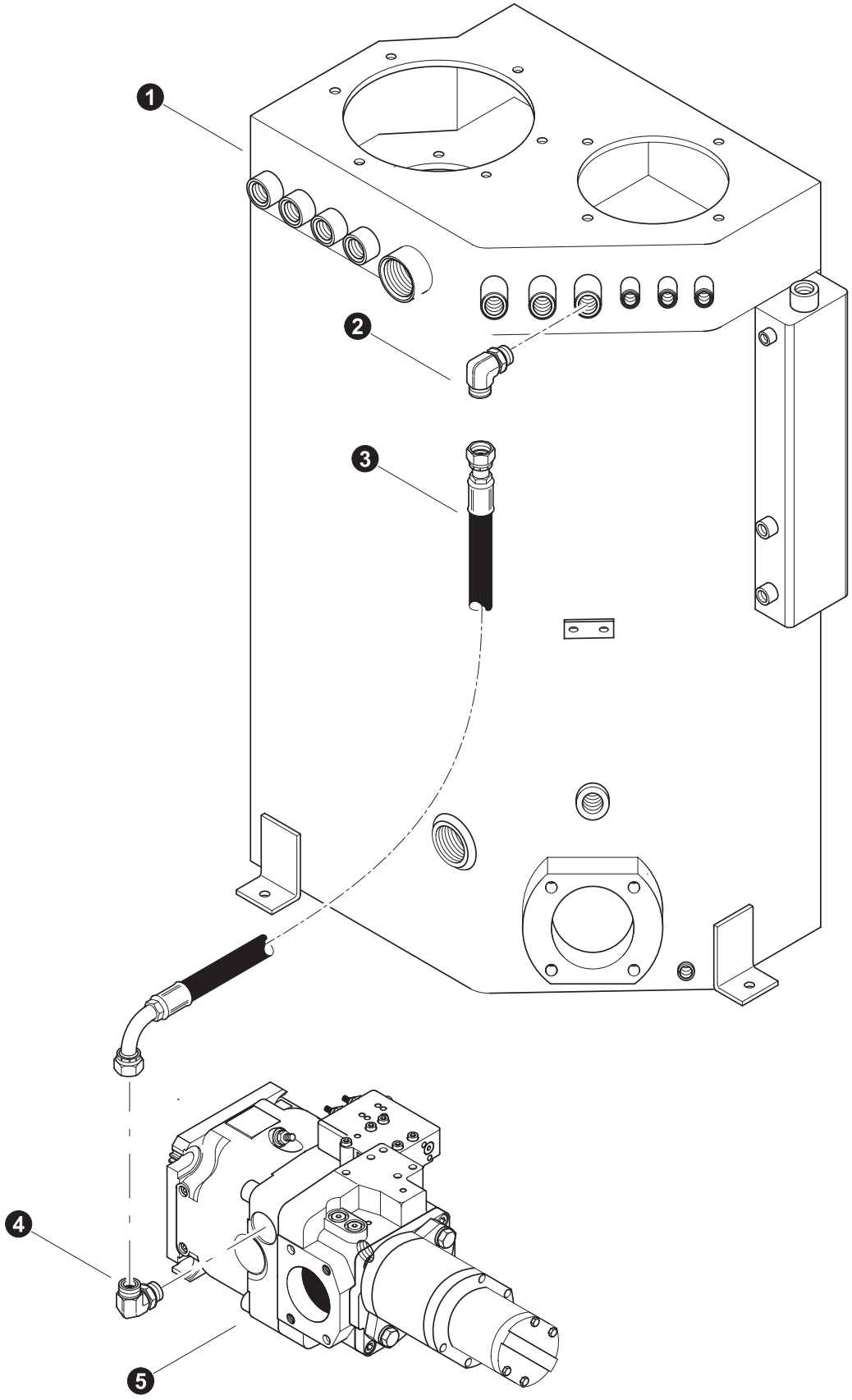
T3212 07-13-05
18.75

IMPLEMENT PUMP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
2	51619-LH	1		VALVE, SHUT OFF - BUTTERFLY (4”)	
3	23095-LH	4		BOLT, ALLEN HEAD - .625” x 2”	
4	51625-LH	1	❑	KIT, FLANGE - SUCTION TUBE (4”)	
5		1		O-RING - SUCTION TUBE (4”)	
6	10721-LH	4		WASHER, LOCK - .625”	
7	15526-LH	4		BOLT - .625” X 2”	
8	42461-LH	1		TUBE, SUCTION - 4” FLANGE - W/O DISC SAW	
8	51886-LH	1		TUBE, SUCTION - 4” FLANGE - WITH DISC SAW	
9	15190-LH	2		CLAMP, strap band - 3-1/8”	
10		1		HOSE ASSEMBLY - 1012 48-0-0	
11	51876-LH	1		TUBE, SUCTION 180 DEG 3.0” 630/830	
12	18306-LH	1	❑	KIT, split flange - 3” *(Code 61)*	
13	15562-LH	1		BOLT - 5/8” x 2”	
14	10721-LH	4		WASHER, lock - 5/8”	
15	18695-LH	1		O-RING - 3” SF	
16	REF	1	🕮	IMPLEMENT PUMP.	LH-1

🕮 See referenced page for component or assembly breakdown.
✂ Bulk material - order length required in feet or meters.
❑ Kit or Assembly - includes all items indented underneath.

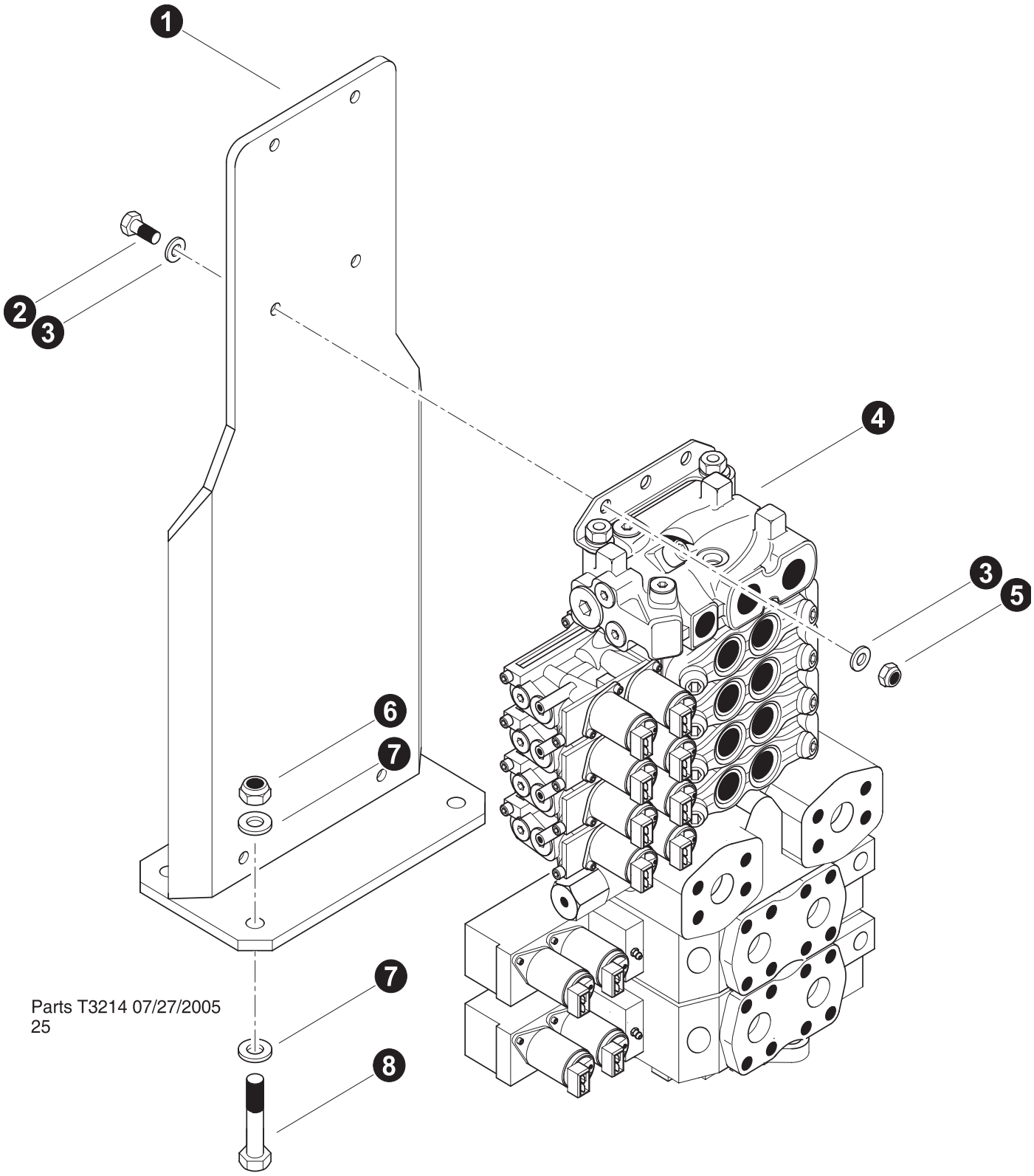


Parts T3213 07/18/2005
18.75

IMPLEMENT PUMP CASE DRAIN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1		HYDRAULIC TANK	UP-2
2	17688-LH	1		ELBOW, 90 - FF1868T-1212S	
3	-LH	1		HOSE ASSEMBLY - 2045-12-120S-1209 *(Implement pump case drain port to hydraulic tank)*	
4	17688-LH	1		ELBOW, 90 - FF1868T-1212S	
5	REF.	1	🕮	IMPLEMENT PUMP.	LH-1

🕮 See referenced page for component or assembly breakdown.

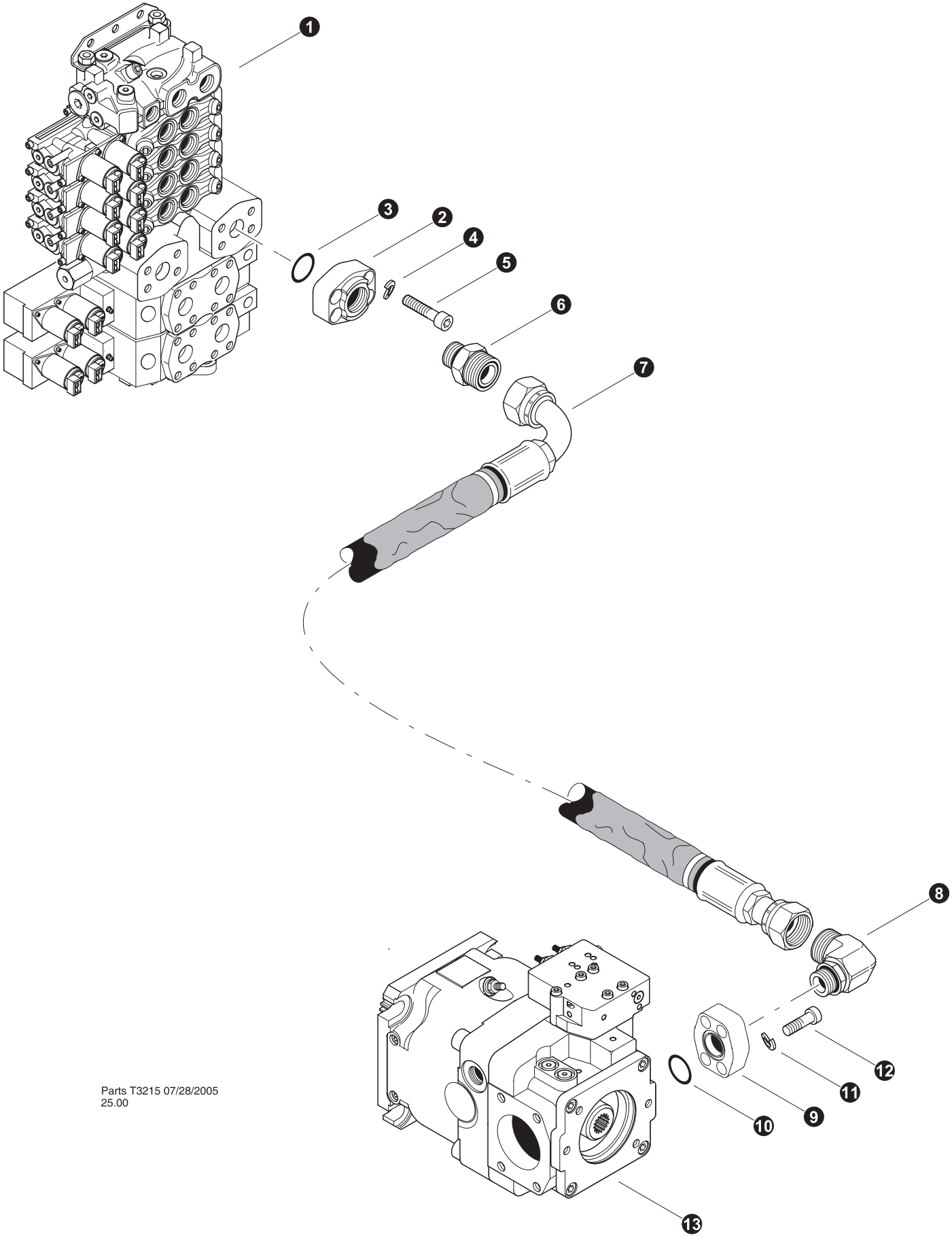


Parts T3214 07/27/2005
25

MAIN CONTROL VALVE MOUNTING

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42489-LH	1		BRACKET, MAIN VALVE CONTROL - TF830	
2	15507-LH	4		BOLT, 3/8 X 1 1/4”	
3	15528-LH	8		WASHER, SAE 3/8”	
4	REF	1	🕮	MAIN CONTROL VALVE	LH-2
5	10813-LH	4		NUT, lock 3/8”	
6	10815-LH	4		NUT, LOCK - .5”	
7	15534-LH	8		WASHER, SAE FLAT - .5”	
8	15567-LH	4		BOLT - .5” X 2.5”	

🕮 See referenced page for component or assembly breakdown.

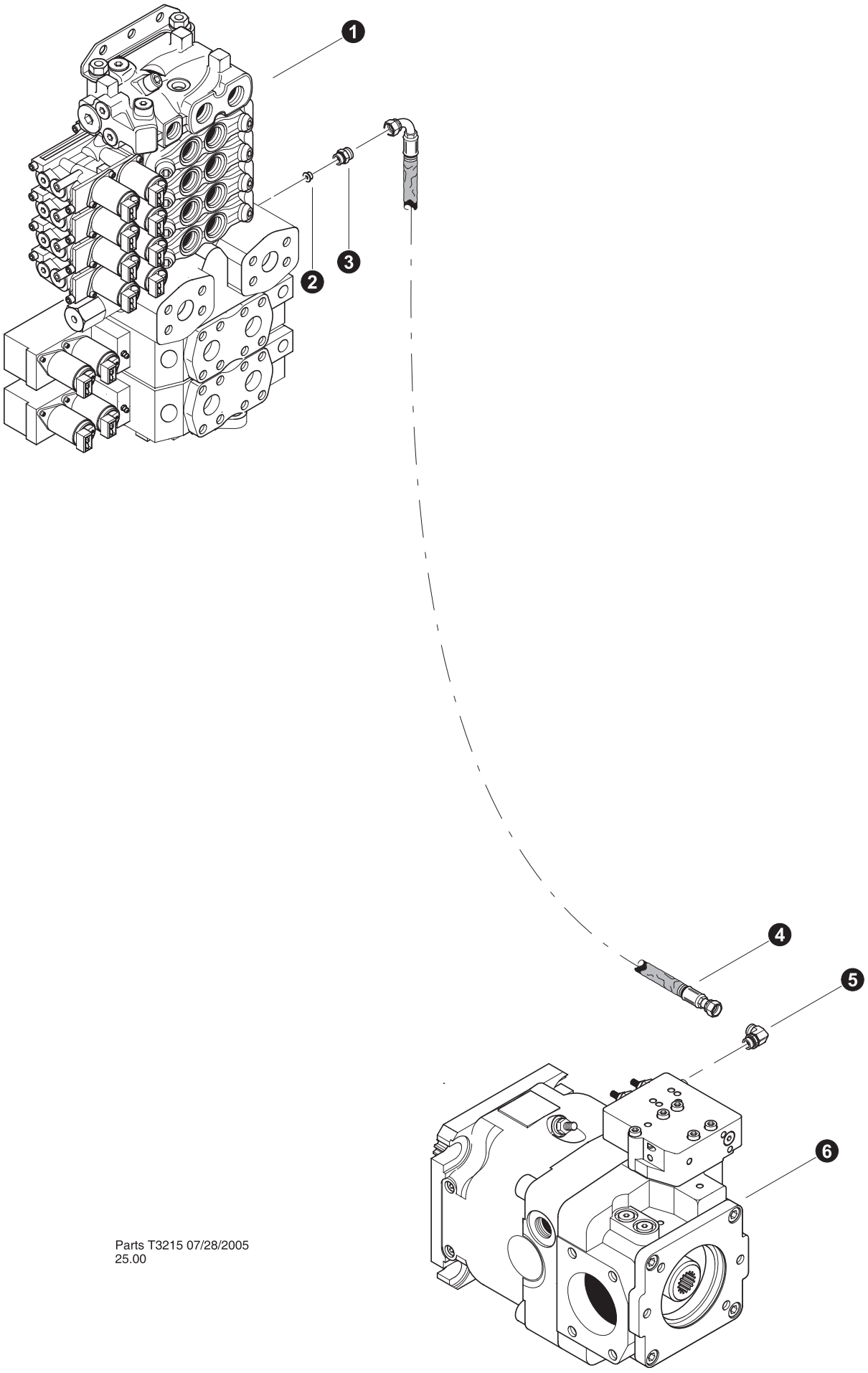


Parts T3215 07/28/2005
25.00

IMPLEMENT PUMP PRESSURE LINE TO MAIN CONTROL VALVE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	18397-LH	1	❑	CONNECTOR, FLANGE PAD - 1” C 62	
3	15377-LH	1		O-RING - 1”	
4	-	4		WASHER, lock	
5	18988-LH	4		BOLT, ALLEN HEAD - 12MM-1.75P X 45MM	
6	17063-LH	1		CONNECTOR, STR - FF1852T-2016S	
7	-LH	1		HOSE ASSEMBLY - 4092.5-20-200S-2009-W *(Implement pump pressure outlet to main control valve pressure inlet port “P1”)*	
8	17055-LH	1		ELBOW, 90 - FF1868T-2020S	
9	17016-LH	1	❑	CONNECTOR, FLANGE PAD - 1.25” C 62	
10	-	1		O-RING - 1.25”	
11	-	4		WASHER, lock	
12	-	4		BOLT, ALLEN HEAD	
13	REF.	1	🕮	IMPLEMENT PUMP.	LH-1

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

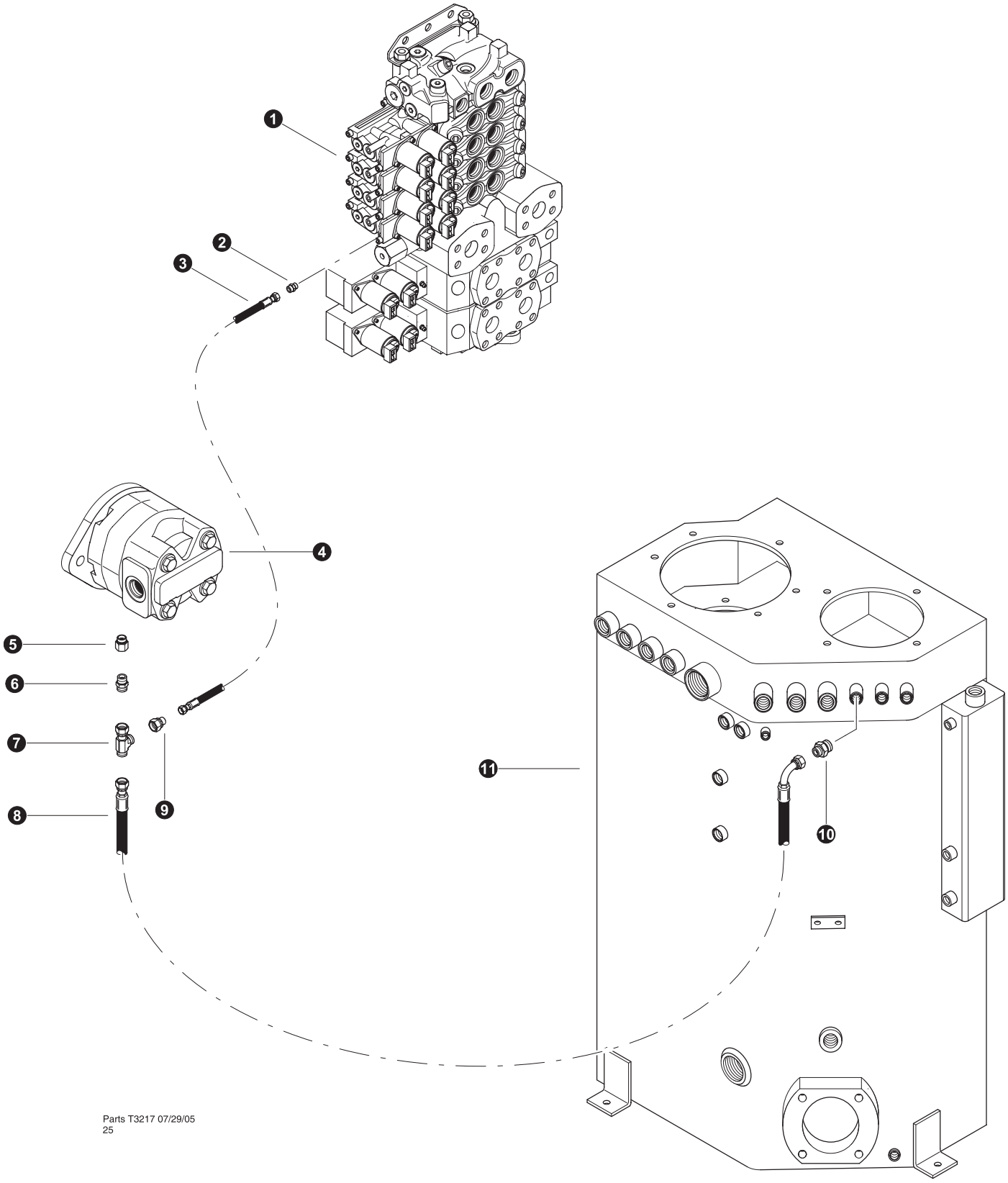


Parts T3215 07/28/2005
25.00

MAIN CONTROL VALVE LOAD SENSE LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	15488-LH	1		CONNECTOR, STR - 6400-6 *(Tapped for 0.024" orifice)*	
3	24091-LH	1		ORIFICE - 0.024"	
4	-LH	1		HOSE ASSEMBLY - 2113-06-060S-0609-W *(Control Valve load sense "PL" port to Implement Pump controler)*	
5	16296-LH	2		ELBOW, 90° - FF1868T-0606	
6	REF.	1	🕮	IMPLEMENT PUMP.	LH-1

🕮 See referenced page for component or assembly breakdown.

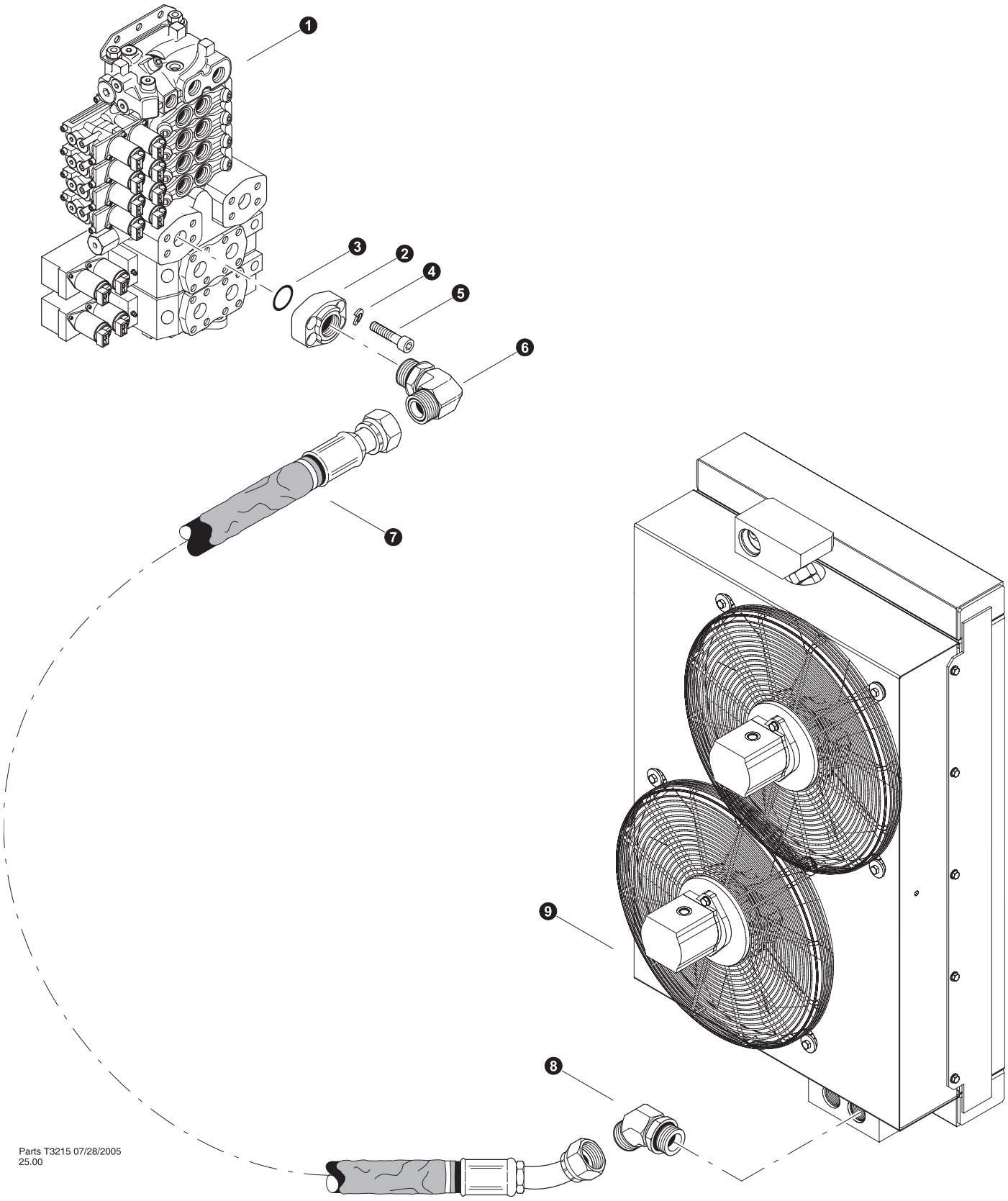


Parts T3217 07/29/05
25

MAIN CONTROL VALVE PILOT DRAIN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	15487-LH	1		CONNECTOR, STR - 6400-6-4	
3	-LH	1		HOSE ASSEMBLY - 2036.5-04-040S-040S *(Main control valve port "TP" to fan motor drain tee)*	
4	REF	2		FAN DRIVE MOTOR	UP-3
5	51413-LH	1		BUSHING, REDUCER - 4 - 1/4 F50G	
6	16295-LH	1		CONNECTOR, STR - FF2031T-0604S	
7	22730-LH	1		TEE - 6 R6LO-S	
8	-UP	1		HOSE ASSEMBLY 2112 06 06OS 0609 (fan motor case drain to tank)	
9	51888-LH	1		REDUCER, TUBE END - (6-4 TRL0N)	
10	22901-LH	1		CONNECTOR, STR - 6-8 F5OLO-S	
11	REF	1		HYDRAULIC TANK BREAKDOWN	UP-2

🕮 See referenced page for component or assembly breakdown.



Parts T3215 07/28/2005
25.00

MAIN CONTROL VALVE RETURN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	17909-LH	1	❑	CONNECTOR, FLANGE PAD - 1.25” CODE 61	
3	-	1		O-RING - 1”	
4	-	4		WASHER, lock	
5	20444-LH	4		BOLT, ALLEN HEAD - 10MM-1.5P X 35MM	
6	17055-LH	1		ELBOW, 90 - FF1868T-2020S	
7	-LH	1		HOSE ASSEMBLY - 4104-20-200S-2004-W *(oil cooler inlet to main control valve tank port “T1”)*	
8	17056-LH	1		ELBOW, 45 - FF2068T-2020S	
9	REF	1		OIL COOLER BREAKDOWN	UP-3

🕮 See referenced page for component or assembly breakdown.

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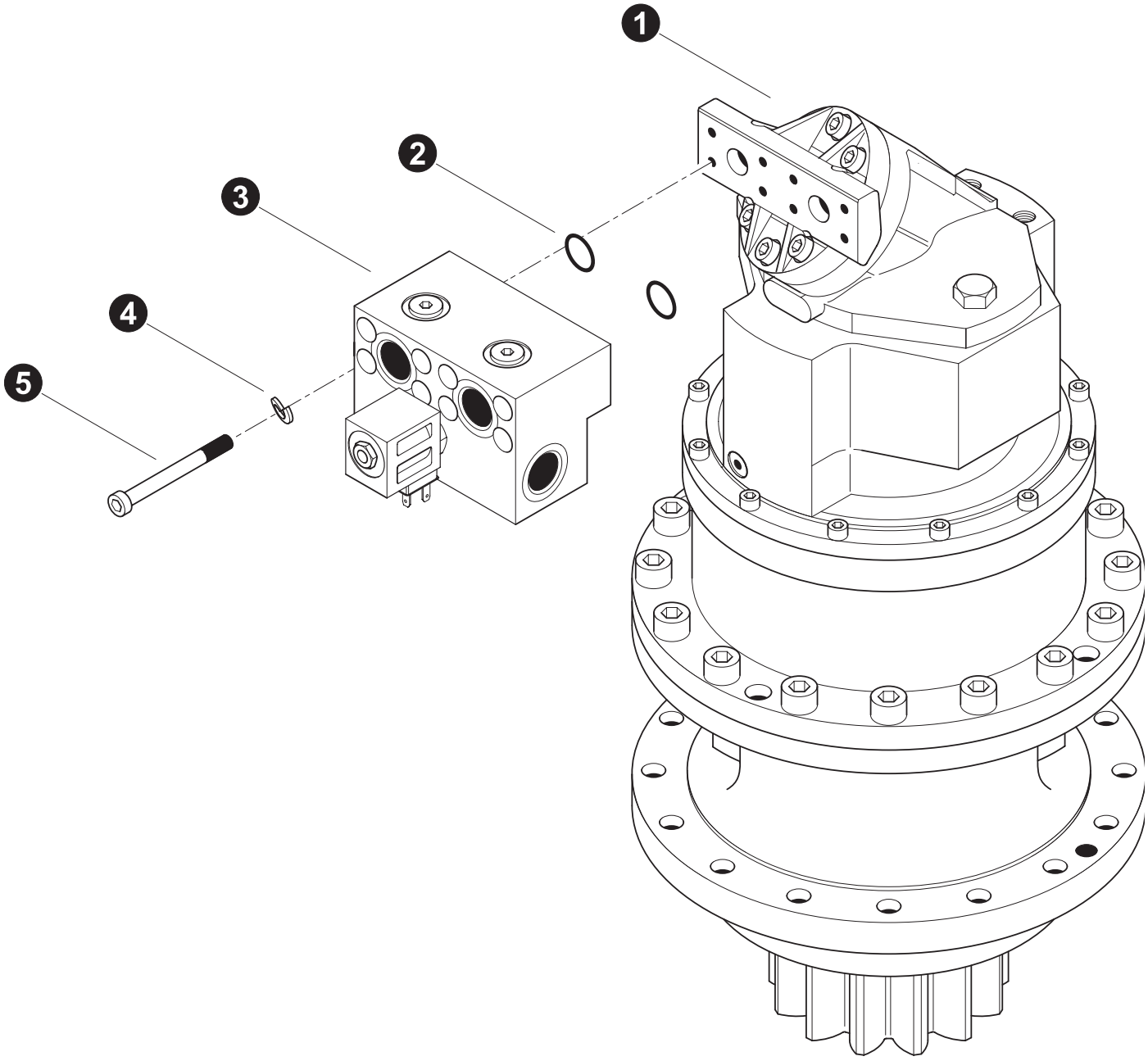
Section LH-4

Loader Hydraulics - Swing Motor Hydraulics

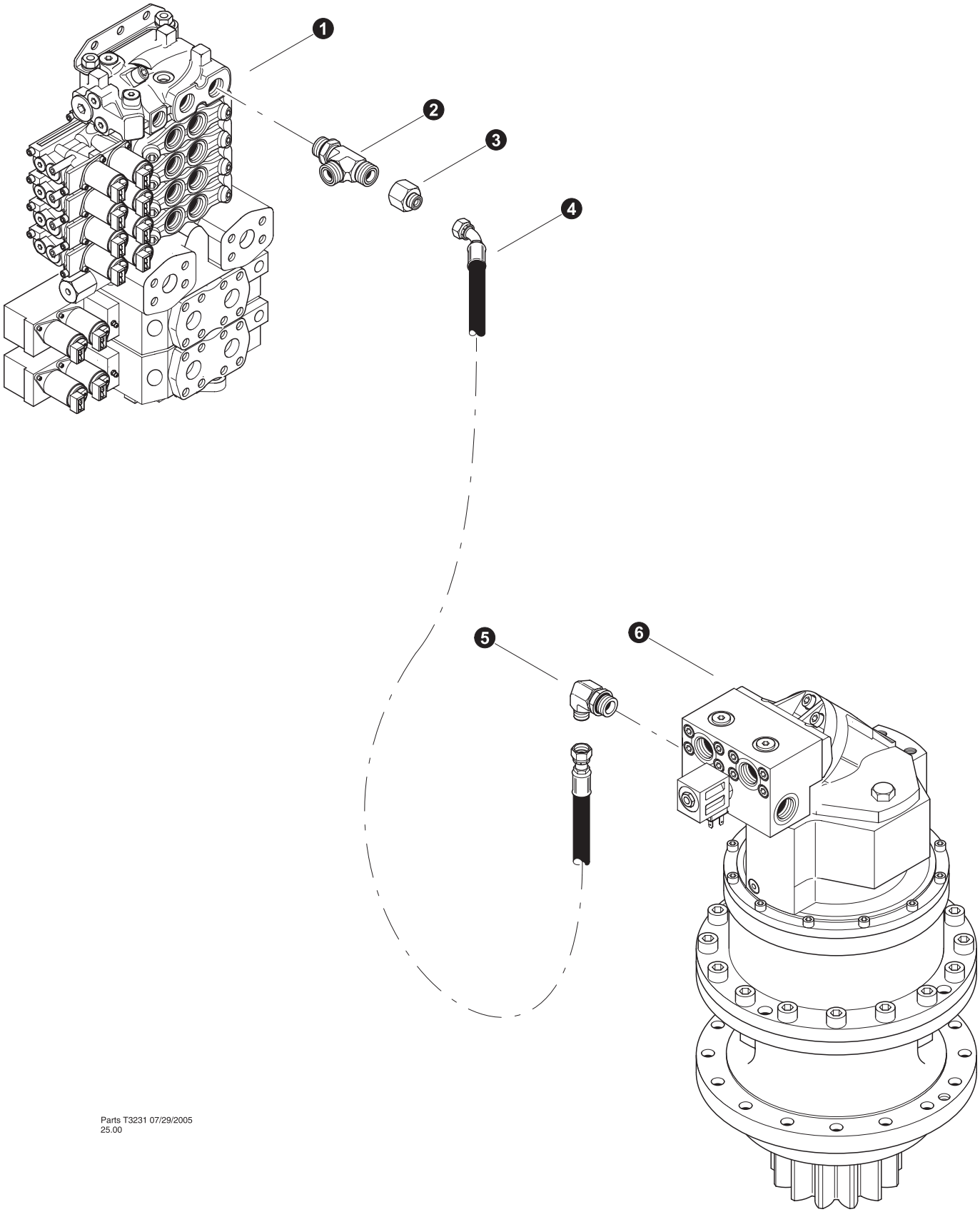


Parts T3234 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(anti-cavitation valve installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4
2	-LH	2		O-RING, 3/4 code 62	
3	REF.	1	🕮	ANTI-CAVITATION VALVE.	LH-4
4	-LH	4		WASHER, LOCK - 10 mm HIGH COLLAR	
5	51389-LH	4		BOLT, ALLEN HEAD - 10MM-1.5P X 100MM	

🕮 See referenced page for component or assembly breakdown.

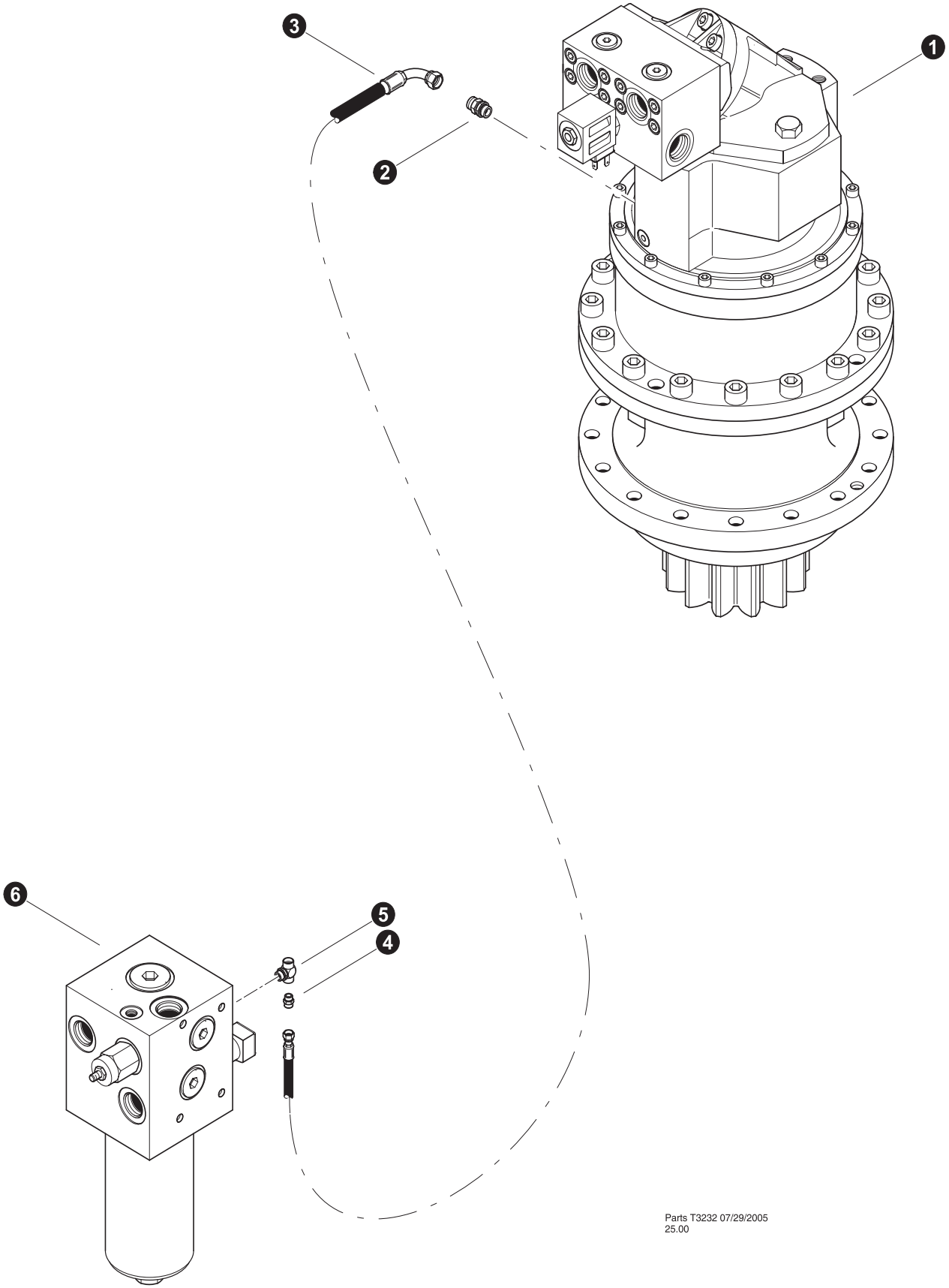


Parts T3231 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(anti cavitaion block supply)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	51969-LH	1		TEE, RUN - 12 R50LO-S	
3	18581-LH	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
4	-LH	1		HOSE ASSEMBLY - 4073-08-080S-0804*(anti-cav supply port to main control valve port T3)*	
5	15372-LH	3		ELBOW, 90 - FF1868T-0812S	
6	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4

🕮 See referenced page for component or assembly breakdown.

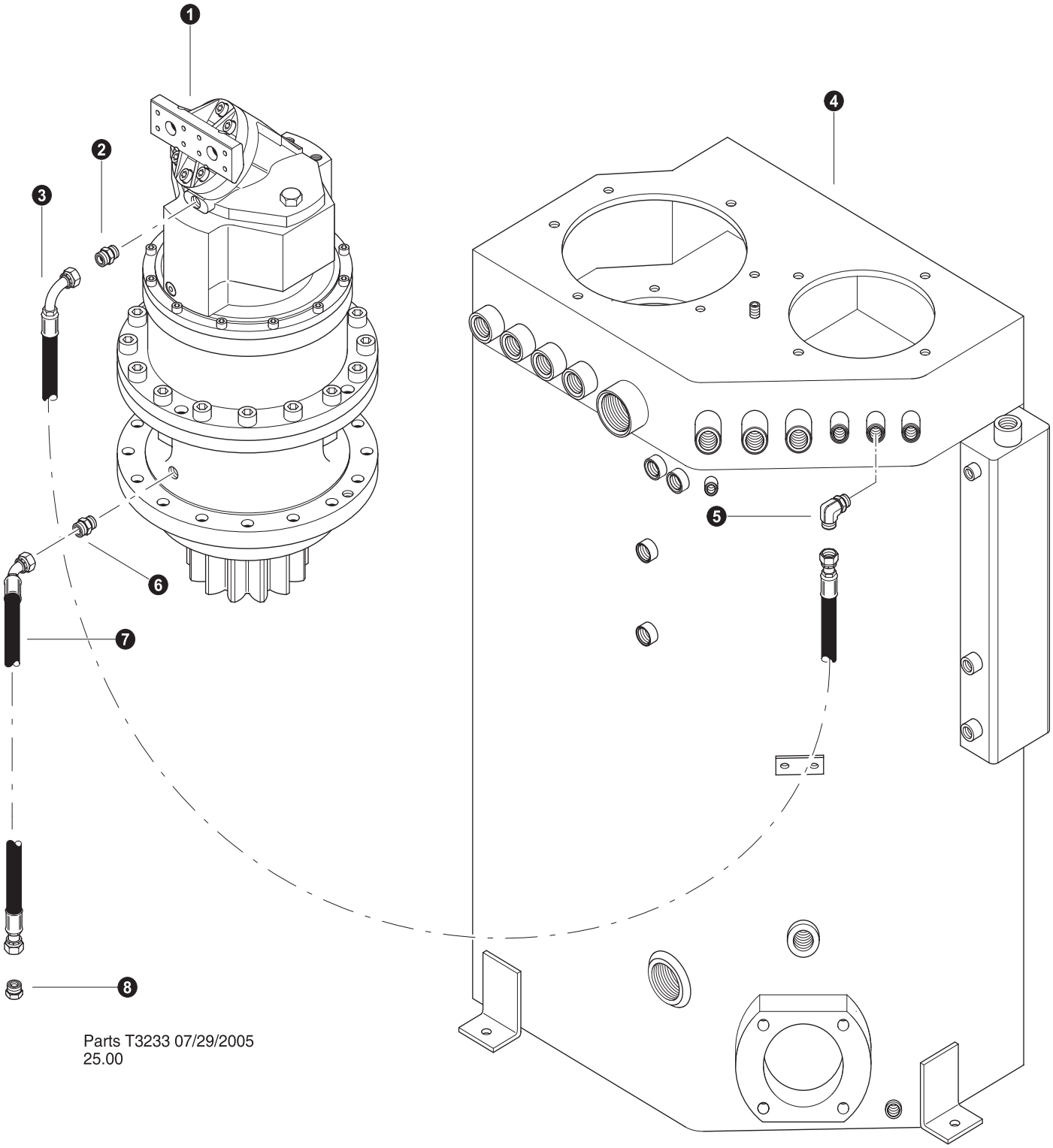


Parts T3232 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(swing gearbox brake release)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4
2	19469-LH	1		CONNECTOR, STR METRIC - 4M12F82EDMLO-S	
3	50425-LB	1		HOSE ASSEMBLY - 2053-04-040S-0409 *(swing motor gearbox brake relase port to G1 port charge valve)*	
4	16541-LH	1		CONNECTOR, STR - FF1852T-0404S	
5	24293-LH	1		TEE - 4-G5G5JAO-S	
6	REF.	1	🕮	CHARGE VALVE / FILTER ASSEMBLY	WD-1

🕮 See referenced page for component or assembly breakdown.

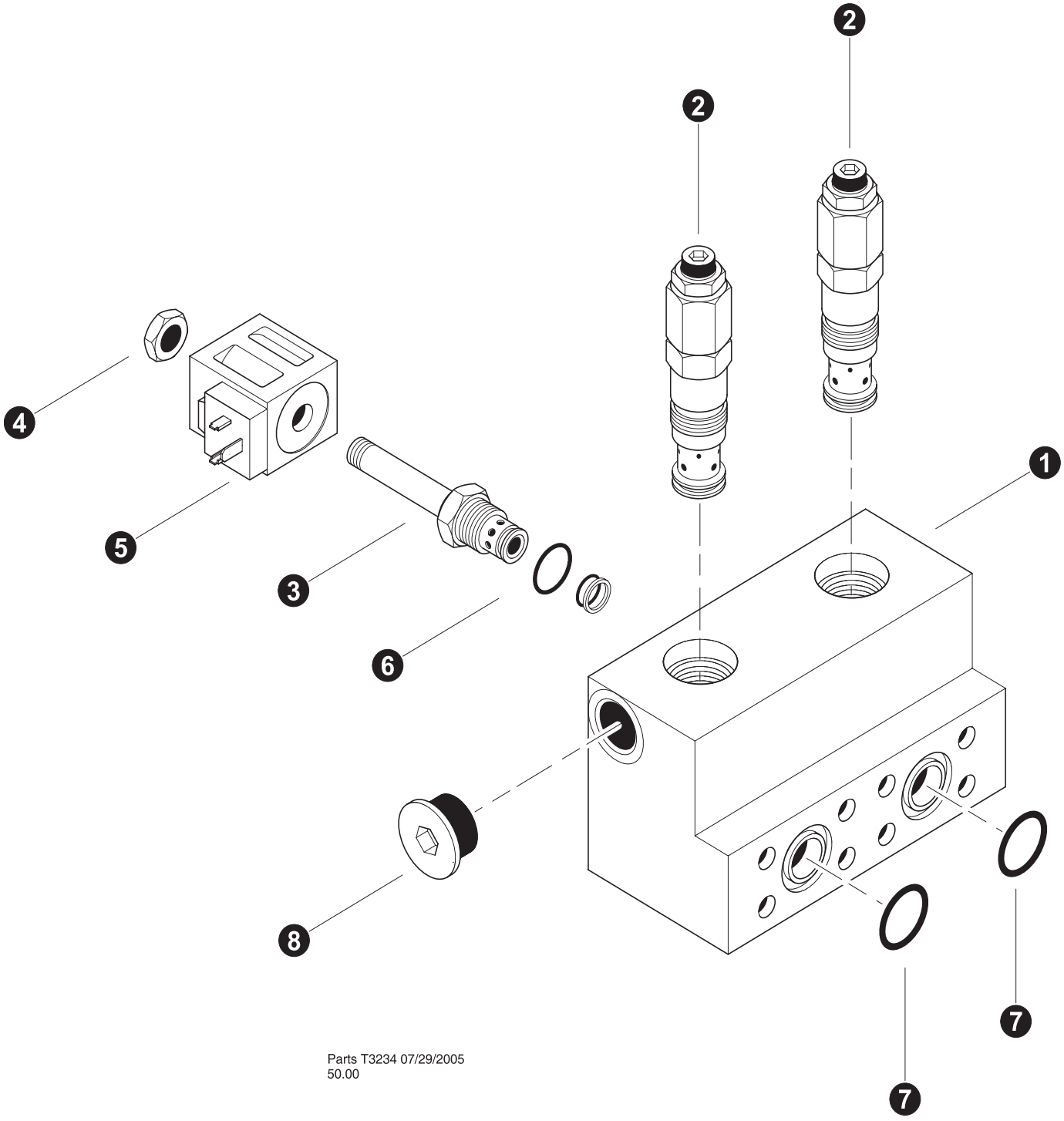


Parts T3233 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(swing motor drain)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4
2	24182-LH	1		CONNECTOR, STR - 6002-08-8BSPP	
3	-LH	1		HOSE ASSEMBLY - 2076-08-08OS-0809 (swing motor case drain to hydraulic tank)	
4	REF.	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
5	16360-LH	1		ELBOW, 90 - FF1868T-0808S	
6	24182-LH	1		CONNECTOR, STR - 6002-08-8BSPP	
7	-LH	1		HOSE ASSEMBLY - 2033-08-08OS-0804 (swing motor gearbox drain)	
8	11390-LH	1		PLUG - 2408-8	

🕮 See referenced page for component or assembly breakdown.



Parts T3234 07/29/2005
50.00

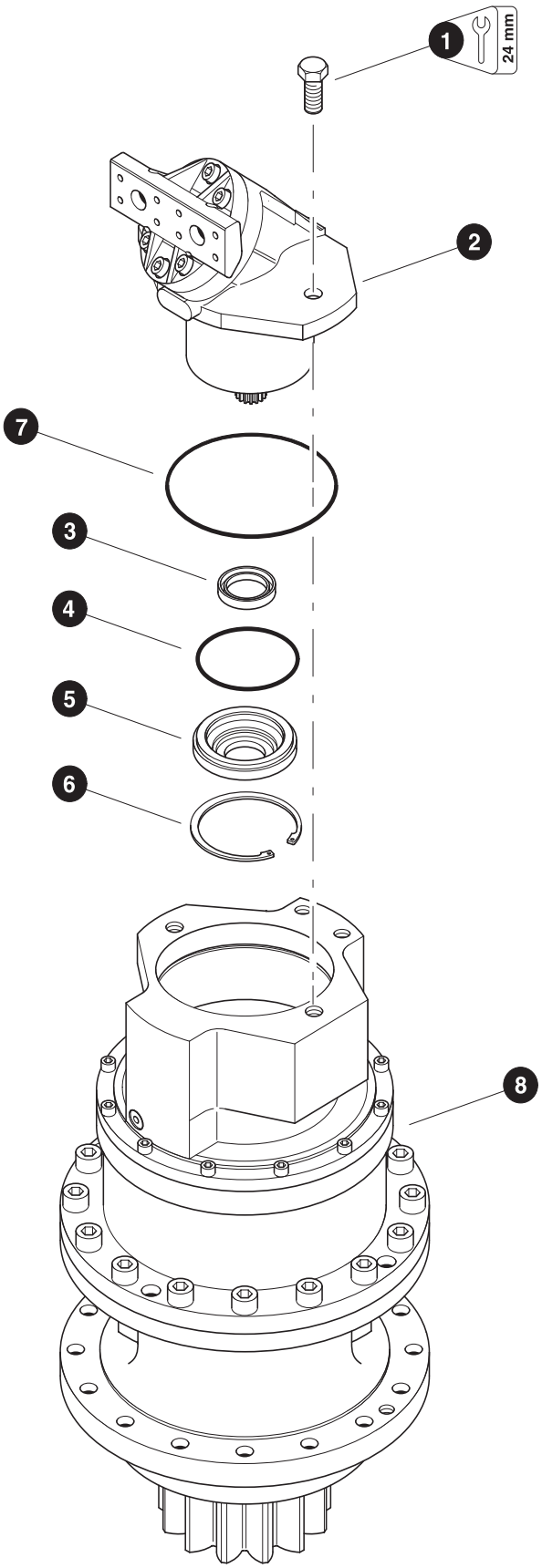
SWING MOTOR HYDRAULICS
(anti-cavitation valve)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52015-UP	1		VALVE, SWING ANTI/CAV W/FLOAT LOW MOUNT	
2	51507-UP	2		CARTRIDGE, Anti-Cav (51055-20 D03 B)	
3	20597-HR	2	❑	CARTRIDGE, solenoid - 24V	
4	NSS	1		NUT	
5	22554	1		COIL, SOLENOID - (PARKER)	
6	-LH	1	⌘	KIT, SEAL - solenoid valve	
7	-LH	2		O-RING - 3/4” code 62	
8	11385-LH	1		PLUG - 6408-12	

❑ Kit or Assembly - includes all items indented underneath.

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 00625 11/10/2000
25.00

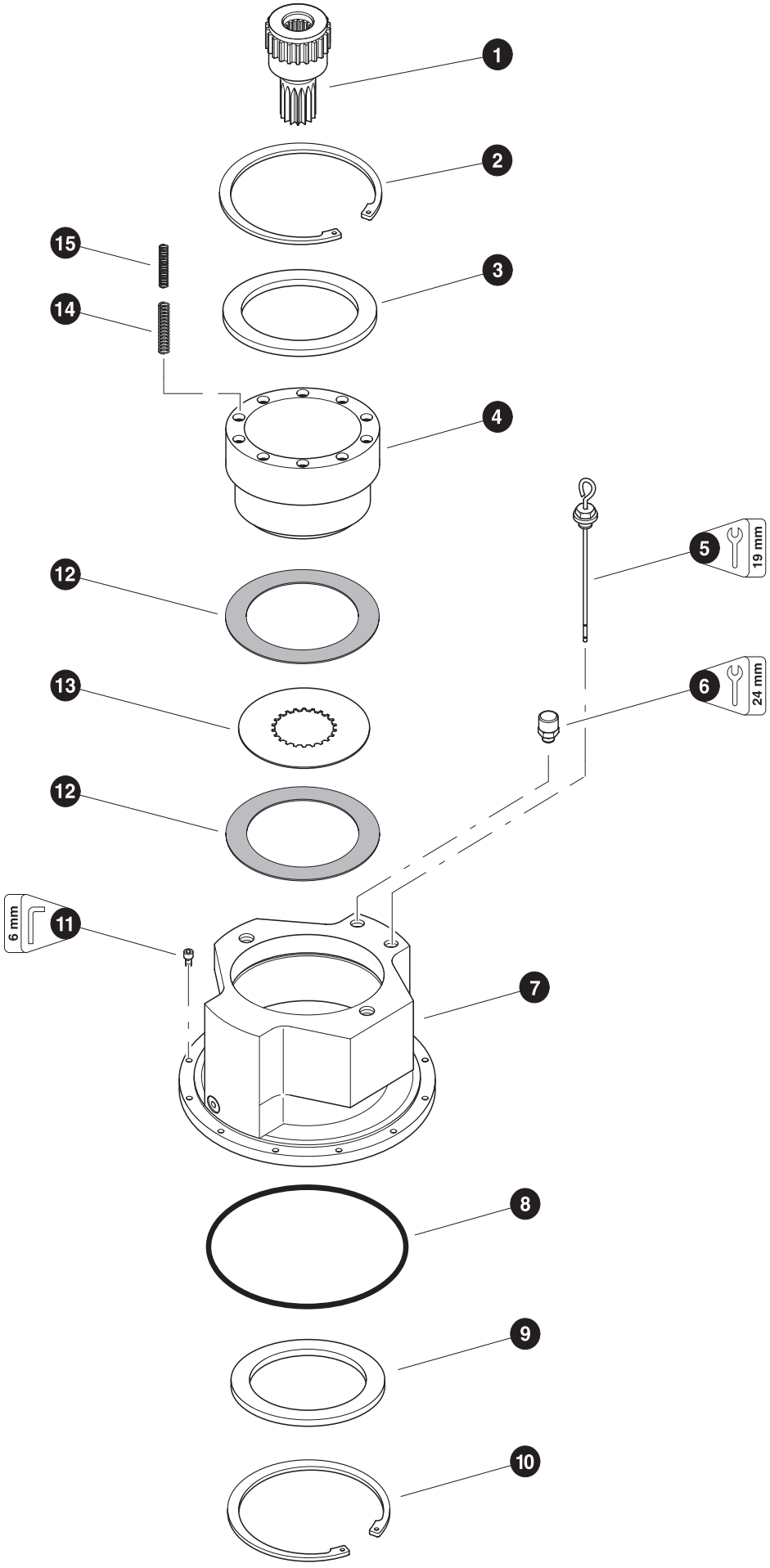
SWING MOTOR HYDRAULICS
(swing motor installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	20070-UP	1	❑	MOTOR/GEARBOX, swing - Lohmann Gearbox & 45cc motor	
1	20661-UP	1		BOLT - 16mm-2.0P x 35mm	
2	17312-UP	1	❑	MOTOR, hydraulic - Rexroth A2FE45 cc	
	17238-UP	1	❑	MOTOR, hydraulic - Rexroth A2FE56 cc (Optional)	
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	22694-UP	1		GEARBOX - Lohmann	

❑ Kit or Assembly - includes all items indented underneath.

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 00626 11/10/2000
25.00

SWING MOTOR HYDRAULICS
(swing gearbox breakdown)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	22694-UP	1		GEARBOX - 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 component suppliers, it is not recommended that the component be disassembled further than is shown in the illustration.

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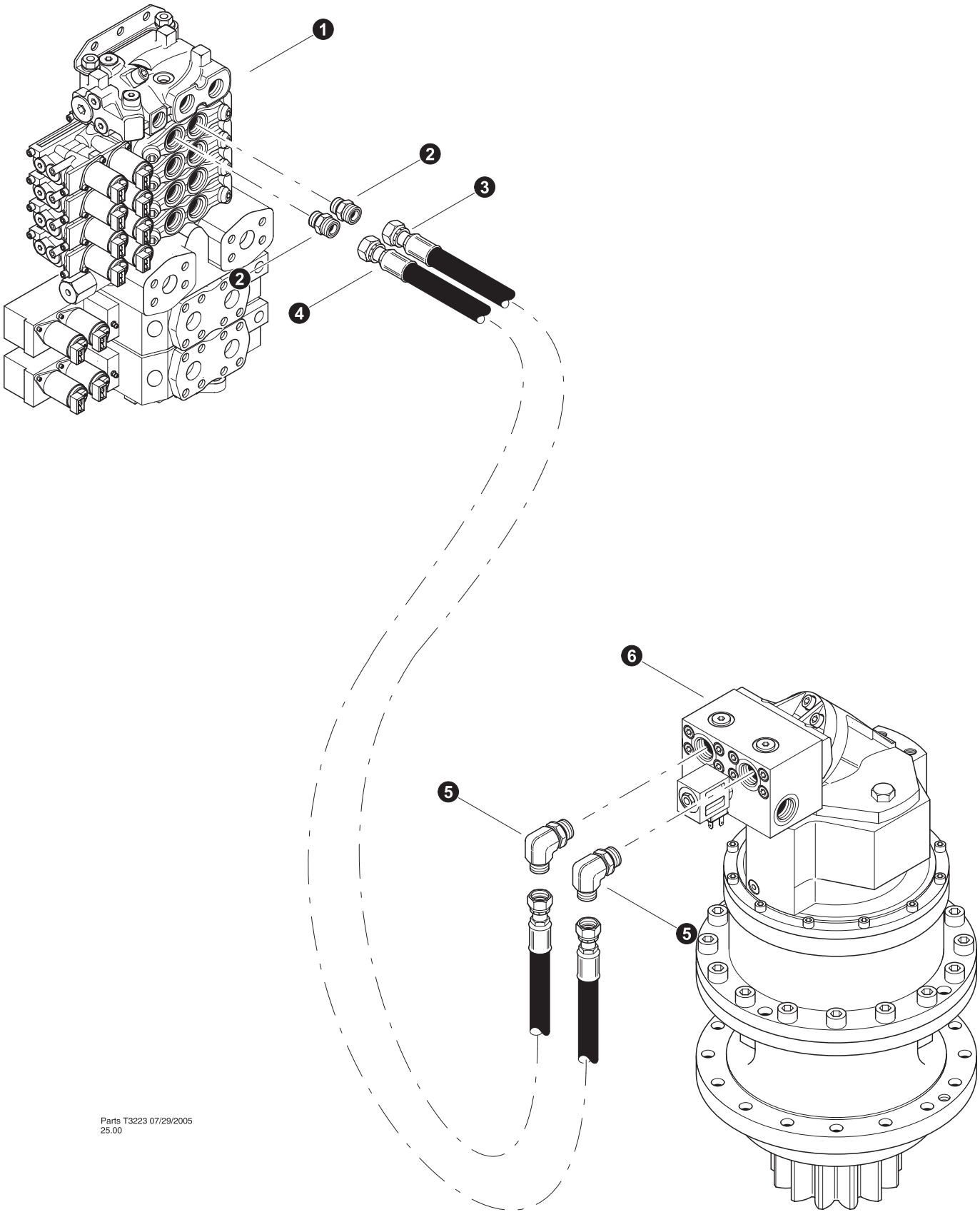
Section LH-5

Loader Hydraulics - Implement Function Connections

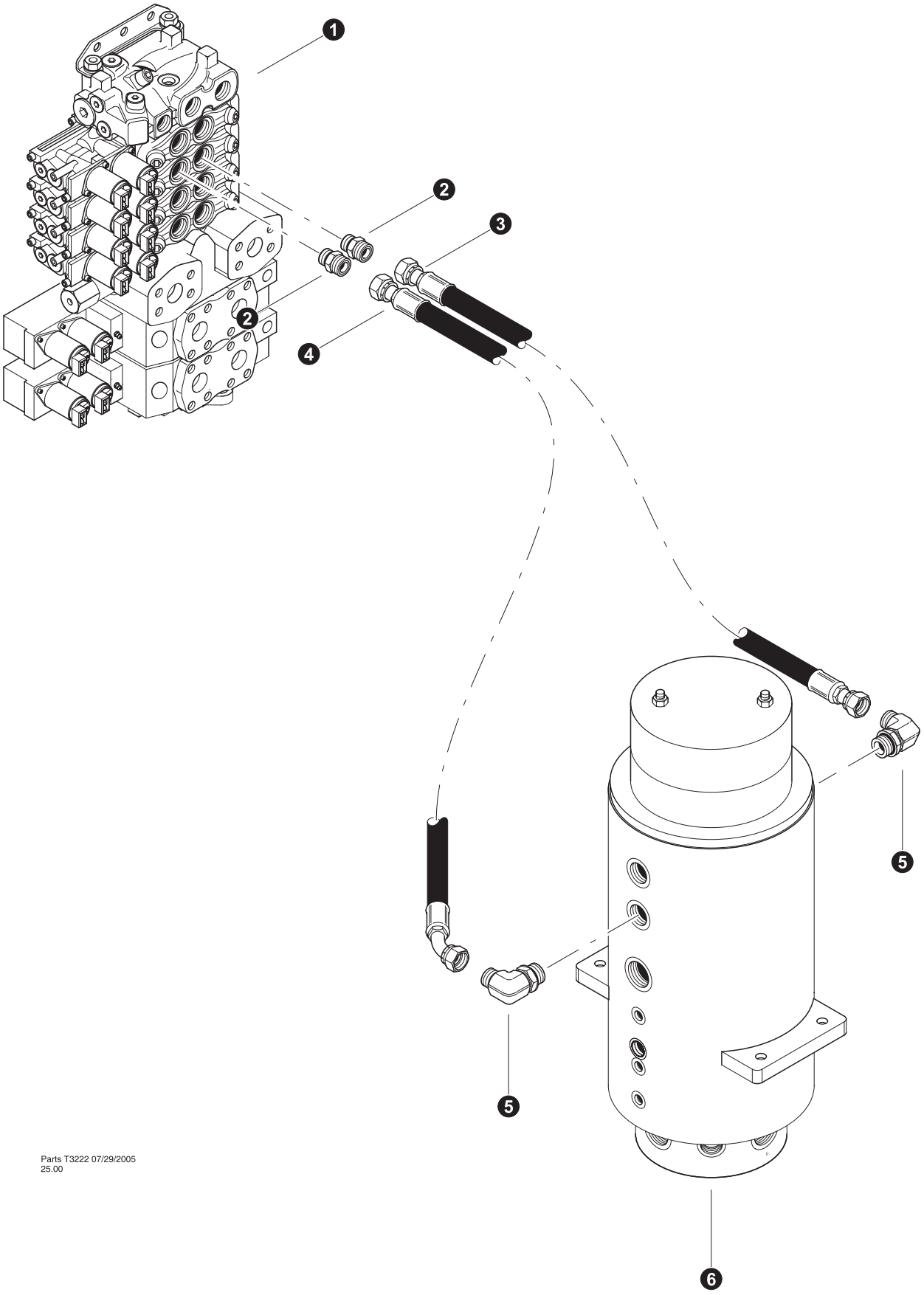


Parts T3223 07/29/2005
25.00

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

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	LH-2
2	50039-LH	2		CONNECTOR, STR - 848-TTO-10X10	
3	-LH	1		HOSE ASSEMBLY - 4069-10-100S-100S *(Swing valve section work port "A" to swing motor anti-cav "Left" port)*	
4	-LH	1		HOSE ASSEMBLY - 4075-10-100S-100S *(Swing valve section work port "B" to swing motor anti-cav "Right" port)*	
5	50036-LH	3		ELBOW, 90 - 849-TTO-10X12	
6	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4

🕮 See referenced page for component or assembly breakdown.

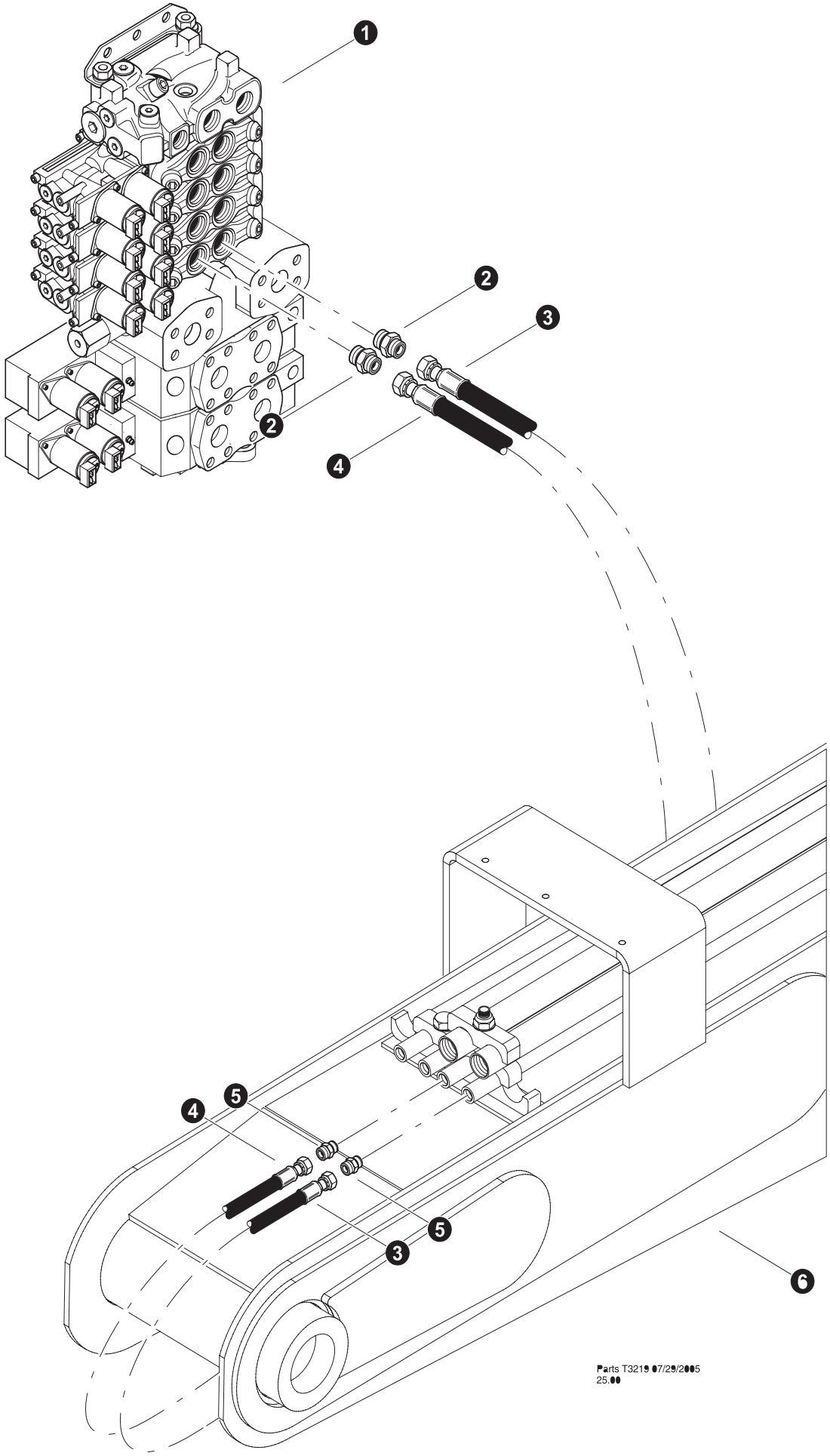


Parts T3222 07/29/2005
25.00

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

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	LH-2
2	50039-LH	2		CONNECTOR, STR - 848-TTO-10X10	
3	-LH	1		HOSE ASSEMBLY - 4030-10-100S-100S*(Steer valve section work port "A" to rotory manifold #10 port)*	
4	-LH	1		HOSE ASSEMBLY - 4036.5-10-100S-1004*(Steer valve section work port "B" to rotory manifold #9 port)*	
5	50036-LH	3		ELBOW, 90 - 849-TTO-10X12	
6	REF.	1	🕮	ROTORY MANIFOLD ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.


1
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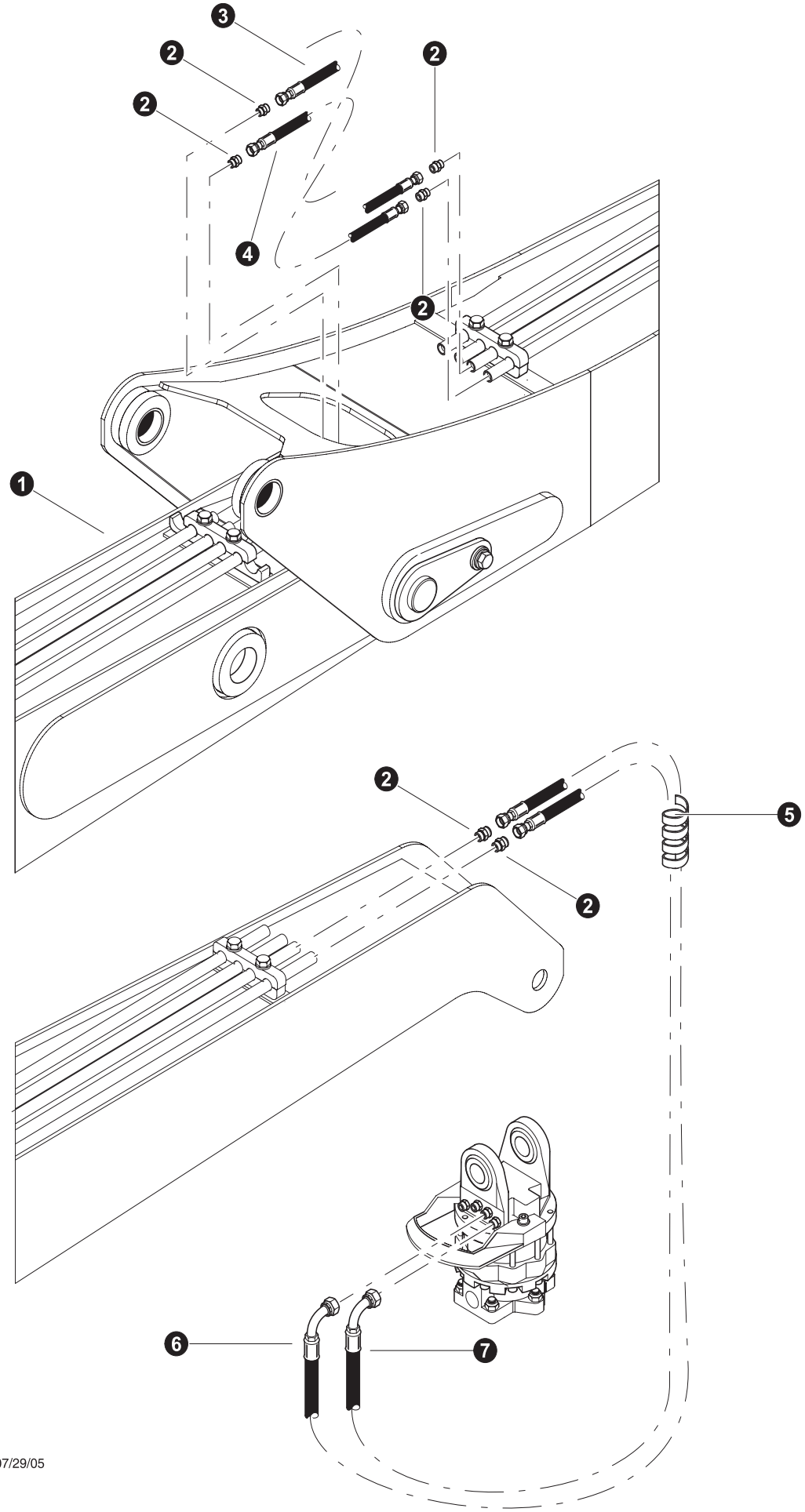
Parts T3219 07/29/2005
25.00

GRAPPLE OPEN/CLOSE FUNCTION
(Main Control Valve To Main Boom Tube Lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	LH-2
2	15115-LB	2		CONNECTOR, straight - FF1852T-0810S	
3	-LB	1		HOSE ASSEMBLY - 4069-08-080S-080S *(Grapple valve section work port "A" to main boom right outside tube line)*	
4	-LB	1		HOSE ASSEMBLY - 4067-08-080S-080S *(Grapple valve section work port "B" to main boom right inside tube line)*	
5	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
6	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

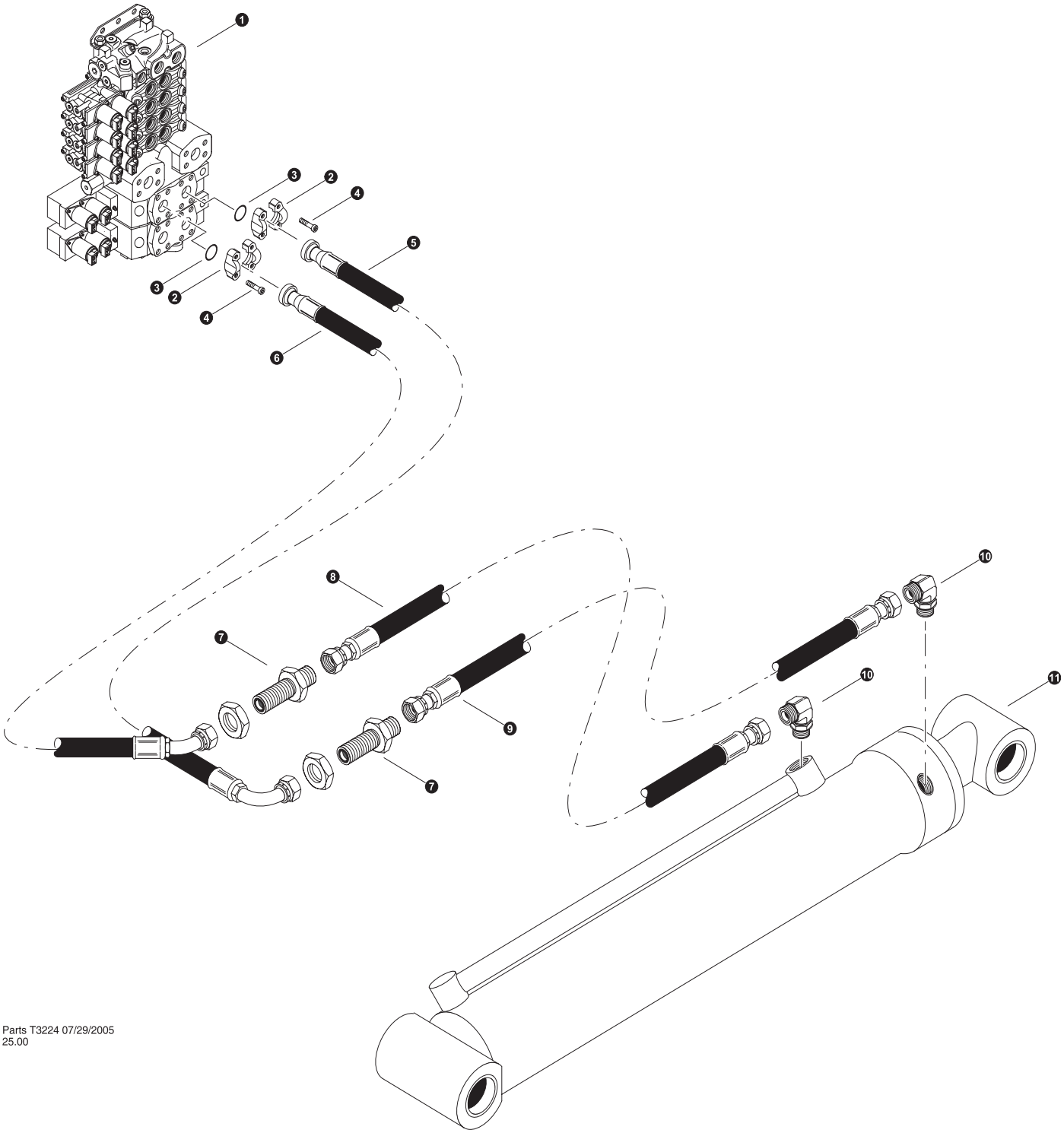


Parts T3327 07/29/05
12.5

GRAPPLE OPEN/CLOSE FUNCTION
(Main & Stick Boom Tube lines to Grapple)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOADER BOOM ASSEMBLY	LB
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4045-08-080S-080S *(main boom to stick boom tube lines)*	
4	-LH	1		HOSE ASSEMBLY - 4045-08-080S-080S *(main boom to stick boom tube lines)*	
5	19677-LH	6 ft		PROTECTOR, HOSE - SPRIAL (1.25")(BULK)	
6	51482-LH	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(stick boom tube lines to grapple rotator)*	
7	51482-LH	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(stick boom tube lines to grapple rotator)*	

🕮 See referenced page for component or assembly breakdown.

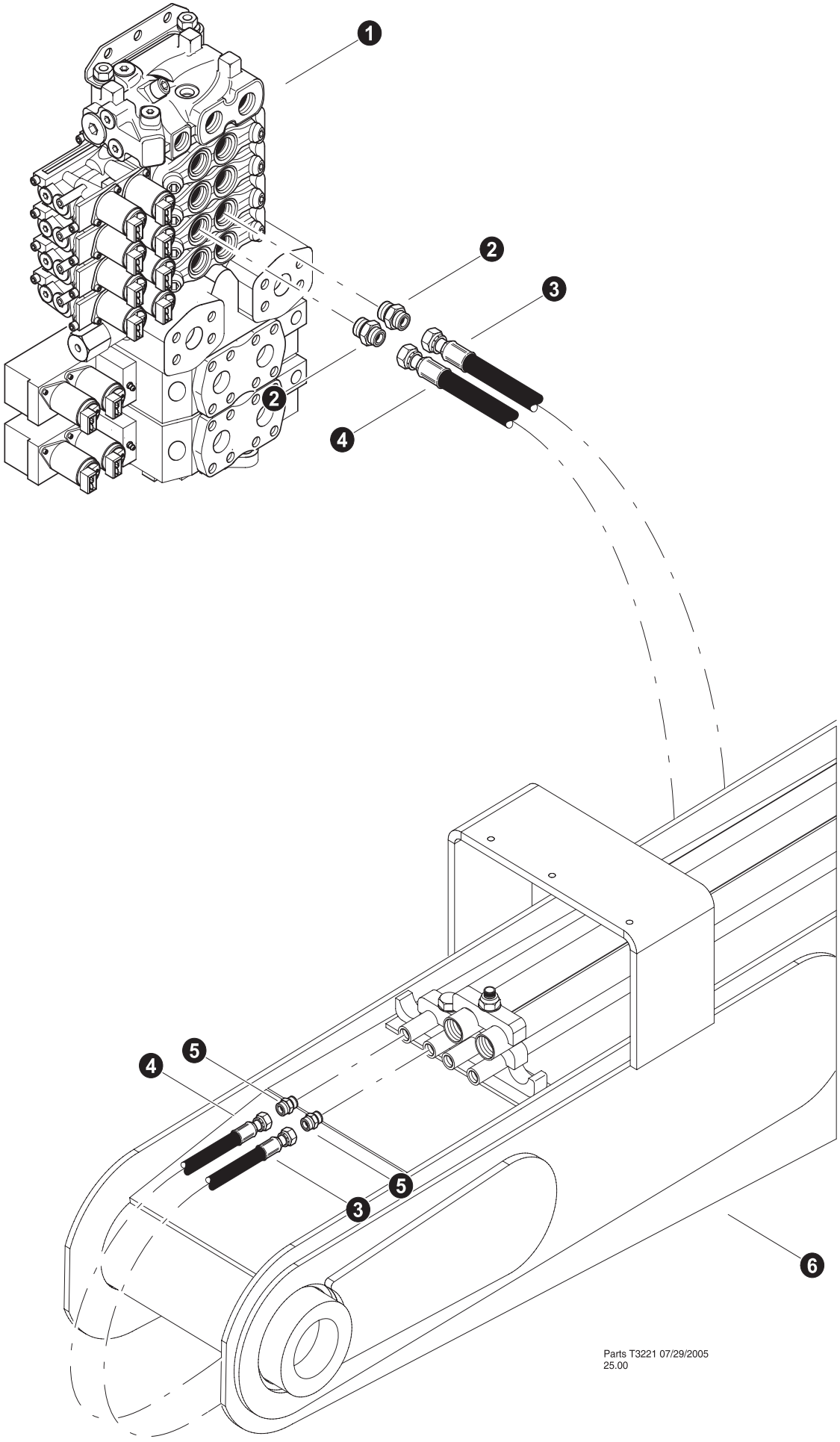


Parts T3224 07/29/2005
25.00

MAIN BOOM CYLINDER FUNCTION
(Main Control Valve To Main Boom (Hoist) Cylinder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	LH-2
2	15111-HH	2	❑	KIT, split flange - 1” SF *(Code 61)*	
3	15377-HH	2		O-RING - 1” SF	
4	18979-HH	8		BOLT, allen M10 X 45MM	
5	-LB	1		HOSE ASSEMBLY - 4032-16-1609-16PA *(Main boom valve work port “B” to main boom cylinder bulkhead)*	
6	-LB	1		HOSE ASSEMBLY - 4024-16-1604-16PA *(Main boom valve work port “A” to main boom cylinder bulkhead)*	
7	20033-LH	2		CONNECTOR, STR BULKHEAD - 832-TT-16	
8	-LB	1		HOSE ASSEMBLY - 4053-16-160S-160S *(main boom bulkhead to main boom cylinder base port)*	
9	50864-LB	1		HOSE ASSEMBLY - 4061-16-160S-160S *(main boom bulkhead to main boom cylinder rod port)*	
10	REF.	1	🕮	MAIN BOOM (HOIST) CYLINDER	LB-3

🕮 See referenced page for component or assembly breakdown.

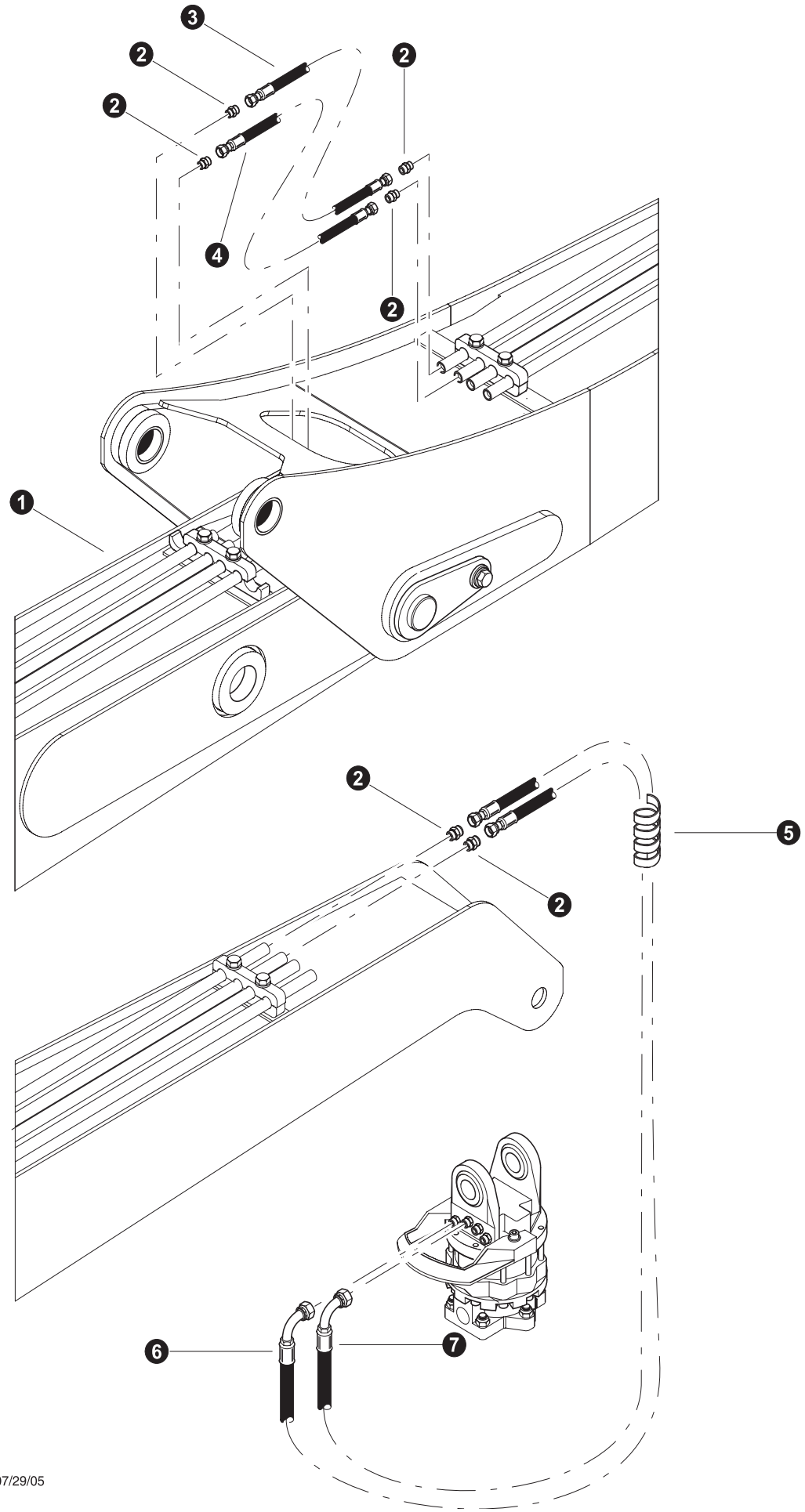


Parts T3221 07/29/2005
25.00

GRAPPLE ROTATE FUNCTION
(Main Control Valve To Main Boom Tube Lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	LH-2
2	15115-LB	2		CONNECTOR, straight - FF1852T-0810S	
3	-LB	1		HOSE ASSEMBLY - 4068-08-080S-080S *(Rotate valve section work port "A" to main boom left inside tube line)*	
4	-LB	1		HOSE ASSEMBLY - 4066-08-080S-080S *(Rotate valve section work port "B" to main boom left outside tube line)*	
5	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
6	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

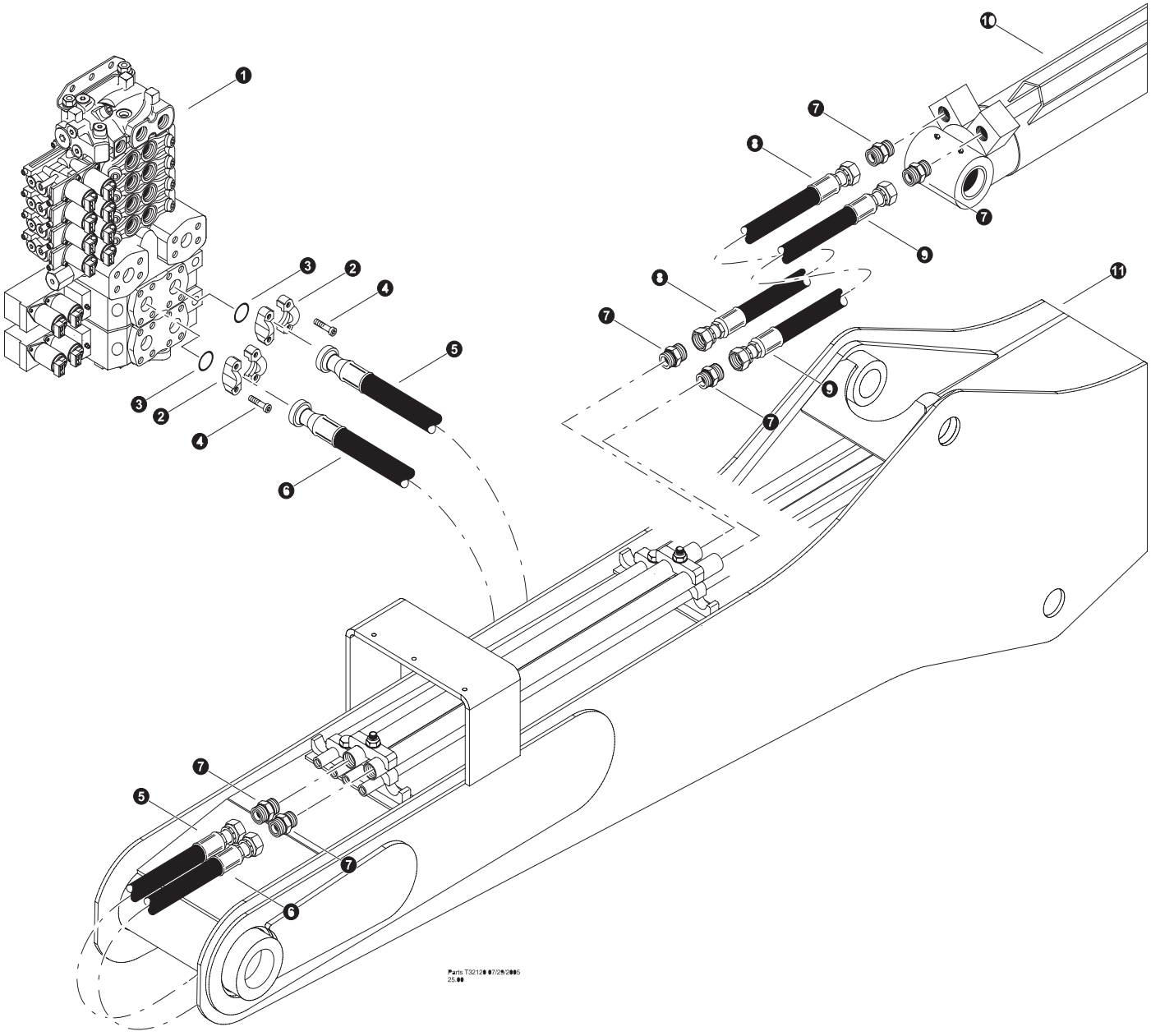


Parts T3325 07/29/05
12.5

GRAPPLE ROTATE FUNCTION
(Main & Stick Boom Tube lines to Grapple)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOADER BOOM ASSEMBLY	LB
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4045-08-080S-080S *(main boom to stick boom tube lines)*	
4	-LH	1		HOSE ASSEMBLY - 4045-08-080S-080S *(main boom to stick boom tube lines)*	
5	19677-LH	6 ft		PROTECTOR, HOSE - SPRIAL (1.25")(BULK)	
6	51482-LH	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(stick boom tube lines to grapple rotator)*	
7	51482-LH	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(stick boom tube lines to grapple rotator)*	

🕮 See referenced page for component or assembly breakdown.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STICK BOOM CYLINDER FUNCTION
(Main Control Valve To Main Boom Tube Lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	15111-HH	2	❑	KIT, split flange - 1" SF *(Code 61)*	
3	15377-HH	2		O-RING - 1" SF	
4	18979-HH	8		BOLT, allen M10 X 45MM	
5	-LB	1		HOSE ASSEMBLY - 4075.5-16-1609-16PA *(Stick boom valve work port "B" to main boom tube line base side)*	
6	-LB	1		HOSE ASSEMBLY - 4075.5-16-1604-16PA *(Stick boom valve work port "A" to main boom tube line rod side)*	
7	18406-LH	6	🕮	CONNECTOR, STR - FF1852T-1612S	
8	-LB	1		HOSE ASSEMBLY - 4024.5-16-160S-16OS *(Stick Cylinder to main boom tube line base side)*	
9	-LB	1		HOSE ASSEMBLY - 4025-16-16OS-16OS *(Stick Cylinder to main boom tube line rod side)*	
10	REF.	1	🕮	STICK BOOM CYLINDER	LB-3
11	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

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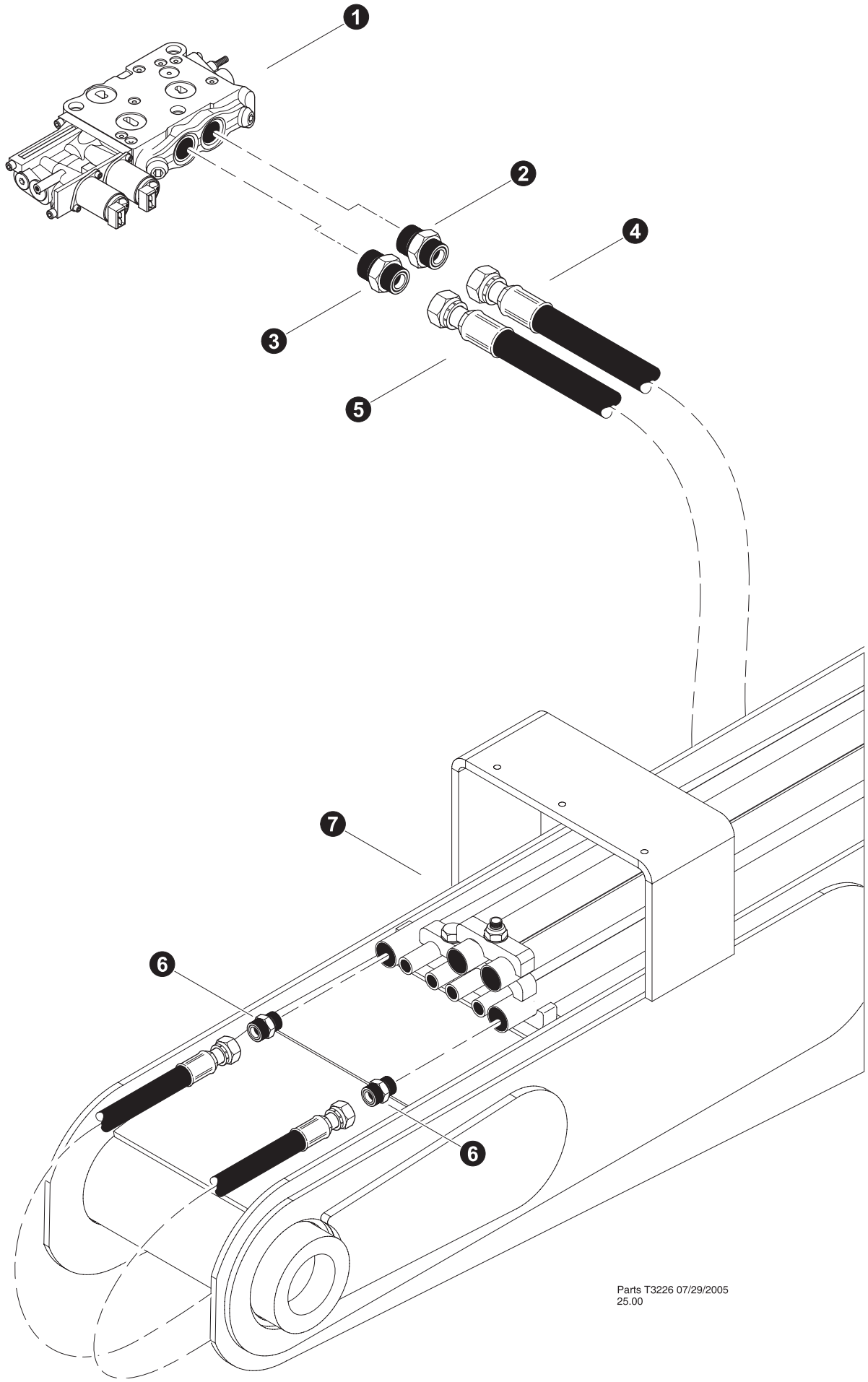
Section LH-6

Loader Hydraulics - (Optional) Squirt Boom Connections

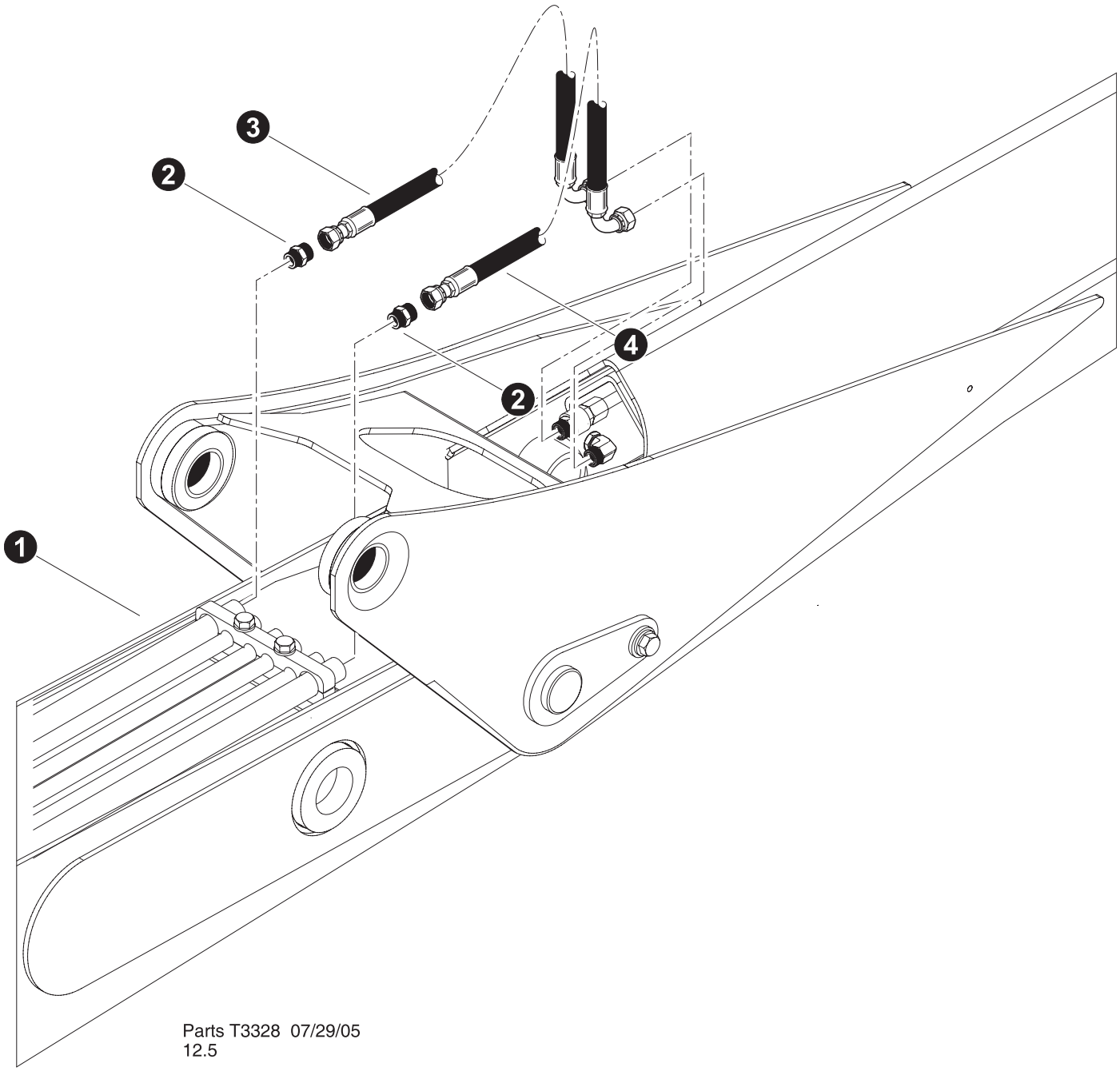


Parts T3226 07/29/2005
25.00

SQUIRT BOOM CONNECTIONS
(Main Control Valve To Squirt Cylinder tube lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	VALVE SECTION - SQUIRT	LH-2
2	16851-LH	1		CONNECTOR, STR - FF1852T-1210S	
3	16851-LH	1		CONNECTOR, STR - FF1852T-1210S	
4	-LH	1		HOSE ASSEMBLY - 4067-12-120S-120S *(Squirt Boom Section"A" port to Main Boom)*	
5	-LH	1		HOSE ASSEMBLY - 4067-12-120S-120S *(Squirt Boom Section"B" port to Main Boom)*	
6	15152-LH	2		CONNECTOR, STR - FF1852T-1212S	
7	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

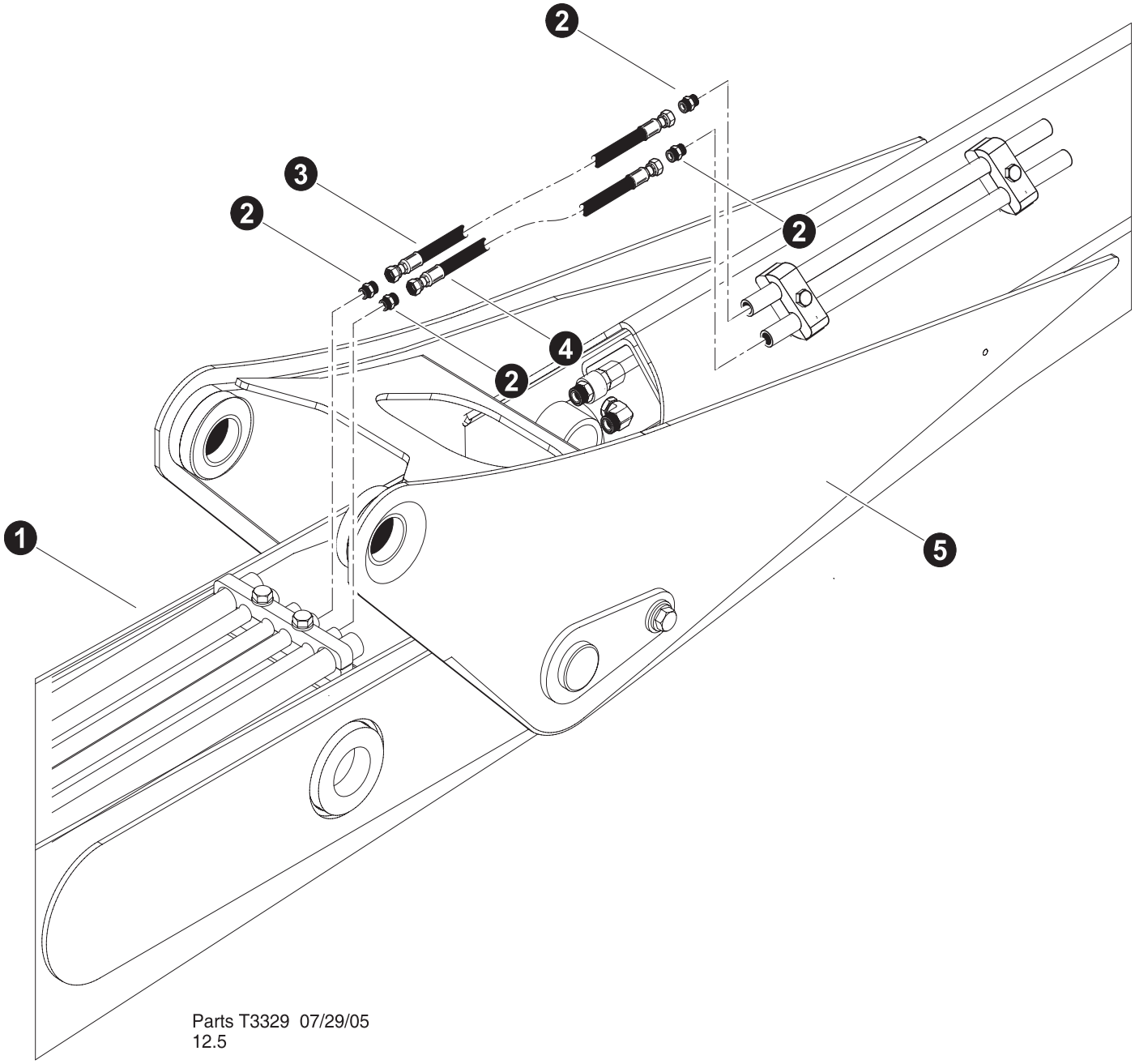


Parts T3328 07/29/05
12.5

SQUIRT BOOM CONNECTIONS
(Main Boom To Squirt Cylinder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN / SQUIRT BOOM ASSEMBLY	LB-1
2	15152-LH	2		CONNECTOR, STR - FF1852T-1212S	
3	-LH	1		HOSE ASSEMBLY - 4042-12-120S-1209 *(Main Boom tube line to Squirt Boom Cylinder)*	
4	-LH	1		HOSE ASSEMBLY - 4042-12-120S-1209 *(Main Boom tube line to Squirt Boom Cylinder)*	

🕮 See referenced page for component or assembly breakdown.

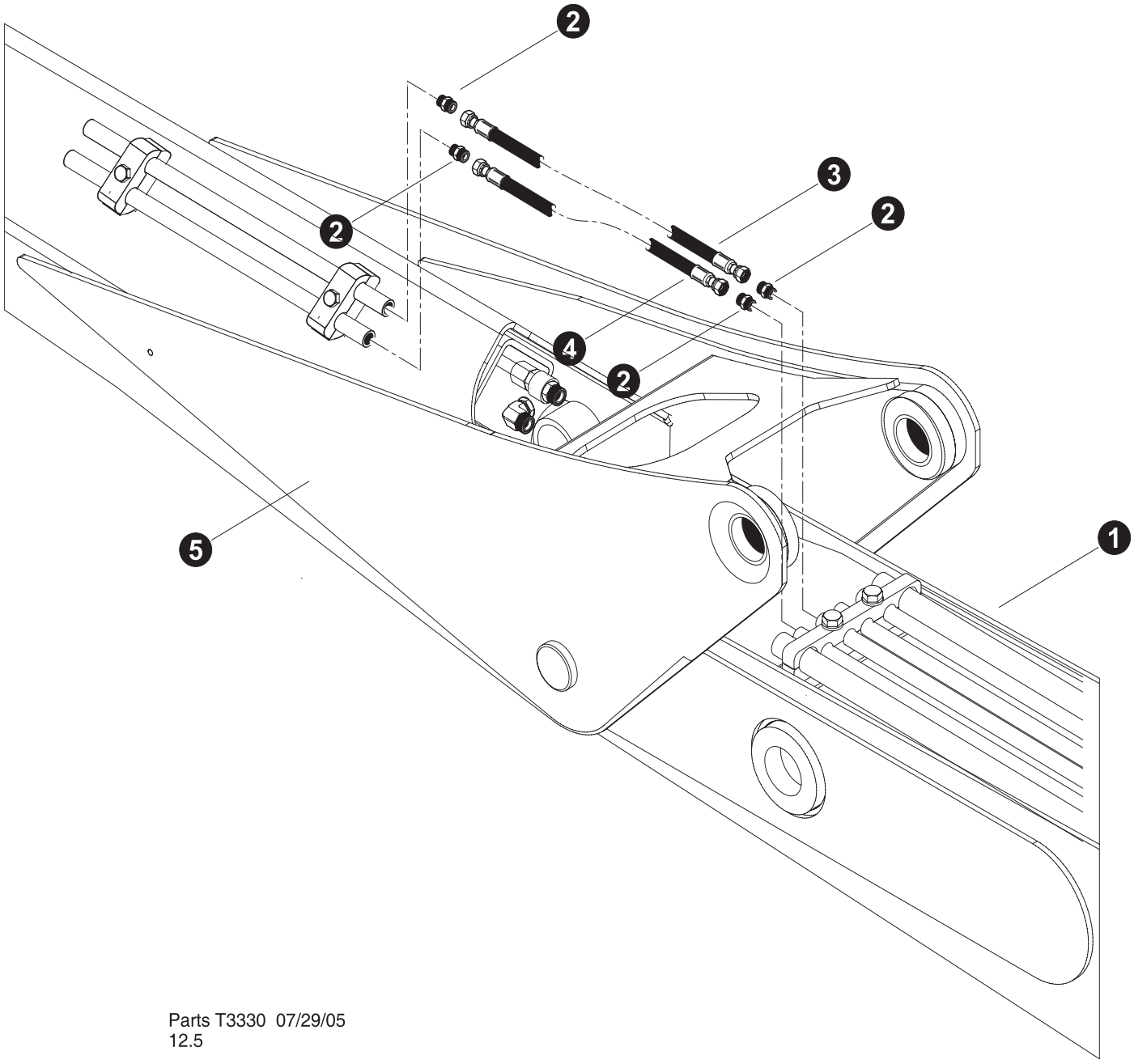


Parts T3329 07/29/05
12.5

SQUIRT BOOM CONNECTIONS
(Cab Side - Main Boom To Squirt Boom Tube Lines)
(Grapple Open and Close)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom tube line)*	
4	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom tube line)*	
5	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

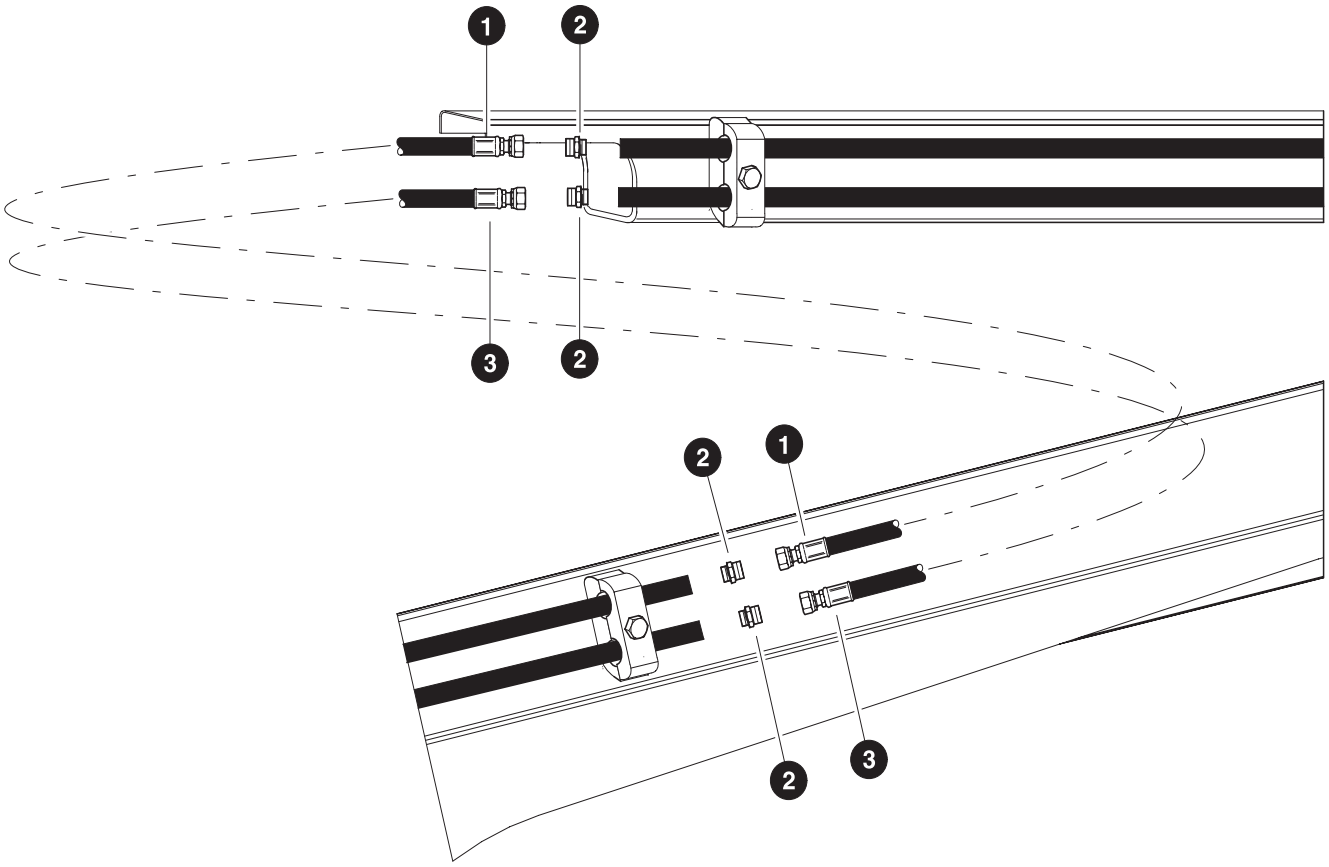


Parts T3330 07/29/05
12.5

SQUIRT BOOM CONNECTIONS
(Valve Side - Main Boom To Squirt Boom Tube Lines)
(Grapple Rotate)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom tube line)*	
4	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom tube line)*	
5	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.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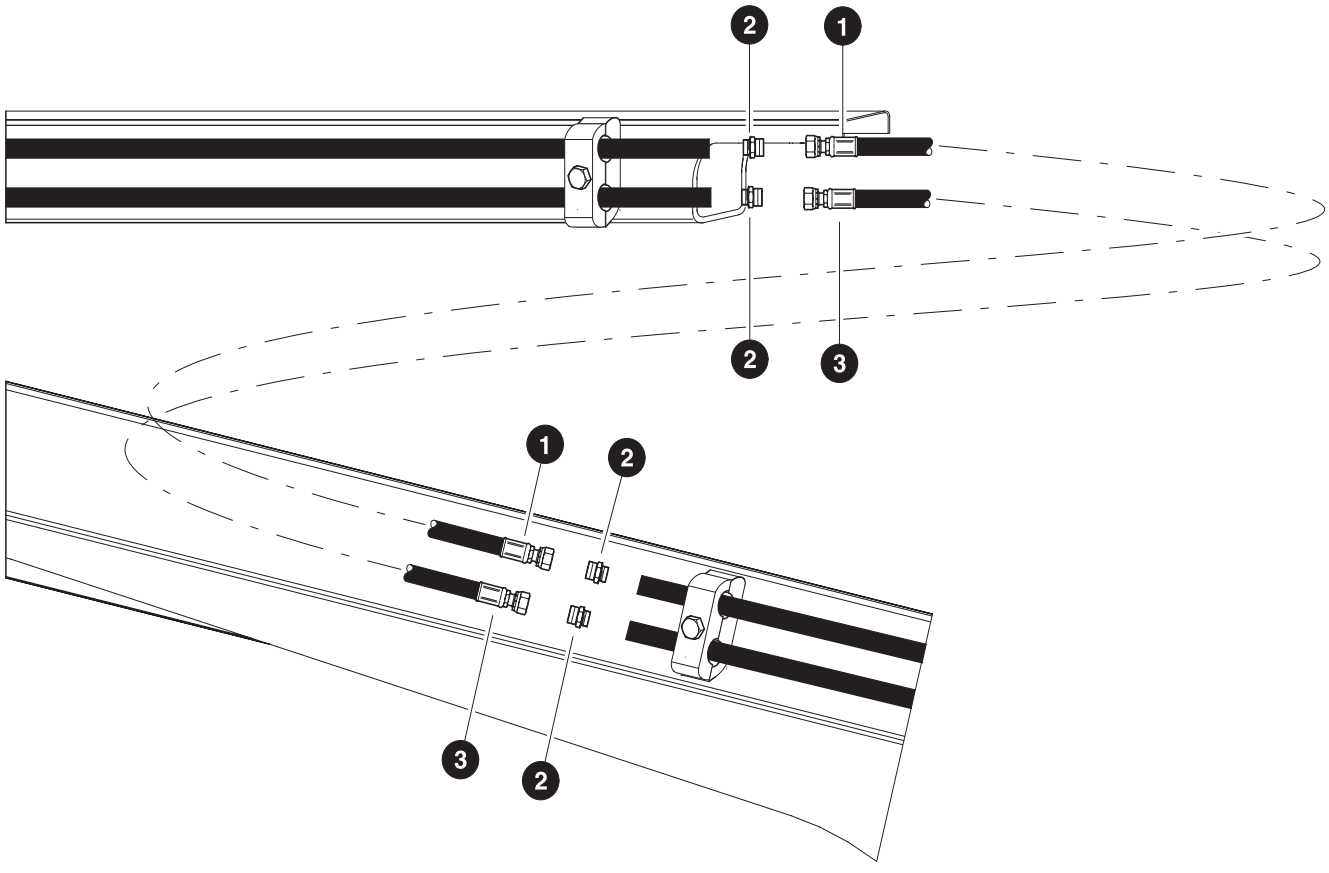
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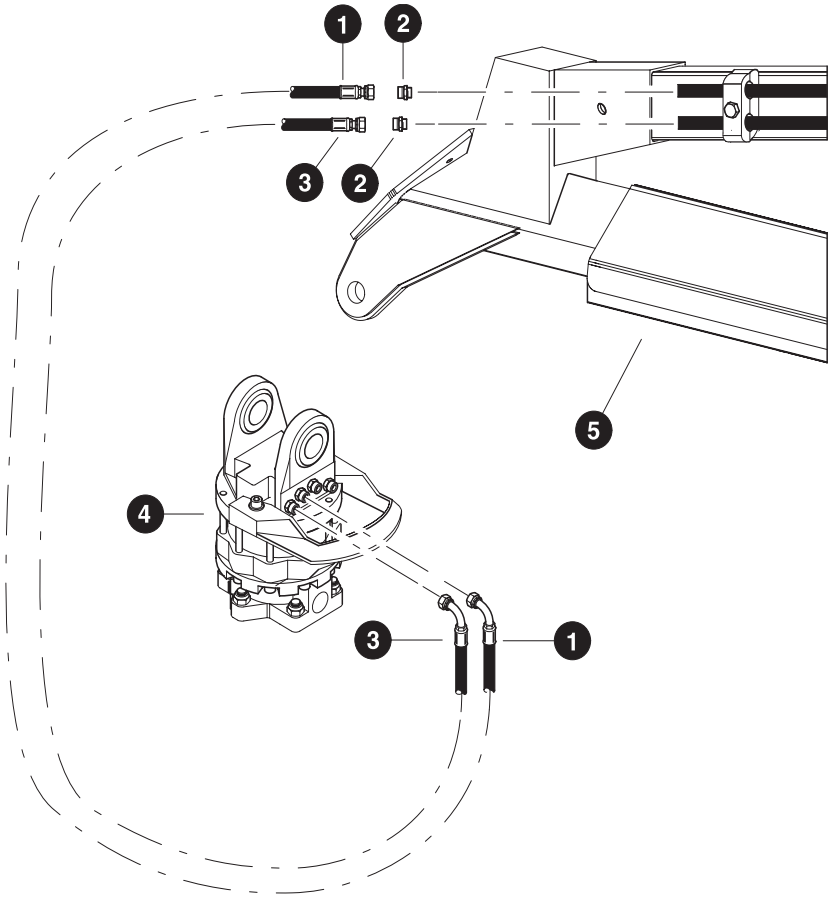
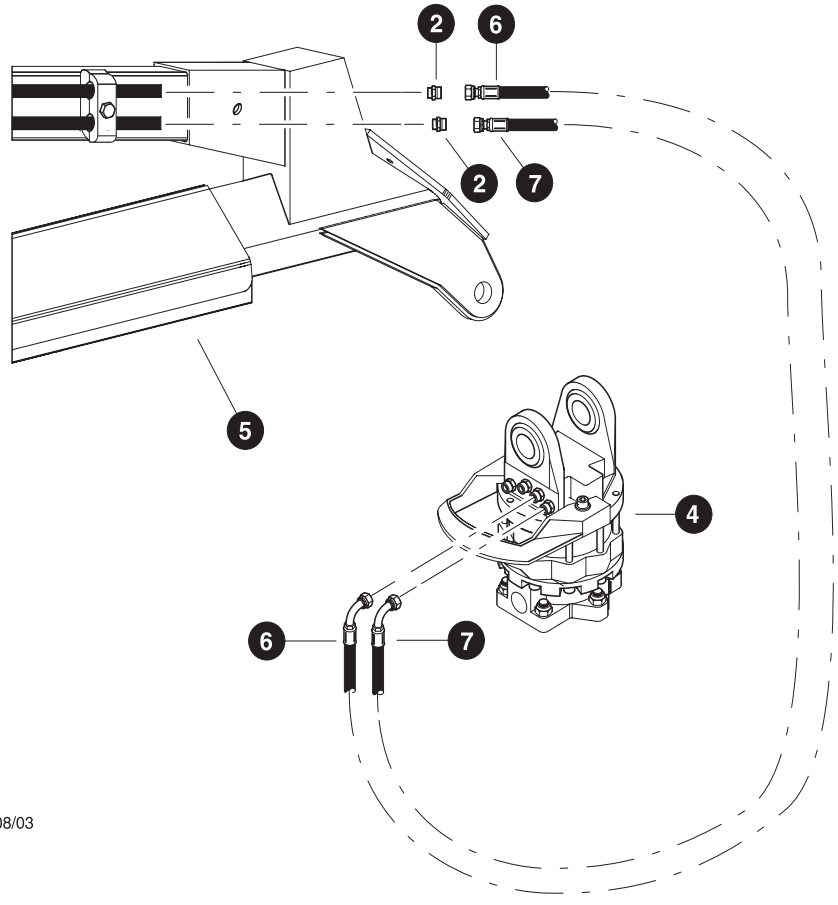
SQUIRT BOOM CONNECTIONS
(Squirt boom Stinger Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	- - -	2		HOSE ASSEMBLY - 4092-08-080S-080S (Squirt boom lowertube line to Singer lower tubeline)	
2	15117-LB	4		CONNECTOR, STR FF 1852T - 08-08S .	
3	- - -	2		HOSE ASSEMBLY - 4092-08-080S-080S (Squirt boom lowertube line to Singer lower tubeline)	





Parts T2746 07/08/03
12.50

SQUIRT BOOM CONNECTIONS
(Squirt Boom Tube lines To Grapple Rotator)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	-LB	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(Squirt boom top engine-side hoseline to grapple middle engine-side port)*	
2	15117-LB	4		CONNECTOR, STR FF 1852T - 08-08S	
3	-LB	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(Squirt boom bottom engine-side hoseline to grapple outer engine-side port)*	
4	REF.	1	🕮	ROTATOR, GV17.	LB-5
5	REF.	1	🕮	SQUIRT BOOM ASSY.	LB-2
6	-LB	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(Squirt boom top cab-side hoseline to grapple middle cab-side port)*	
7	-LB	1		HOSE ASSEMBLY - 4069-08-080S-0809 *(Squirt boom bottom cab-side hoseline to grapple outer cab-side port)*	

🕮 See referenced page for component or assembly breakdown.

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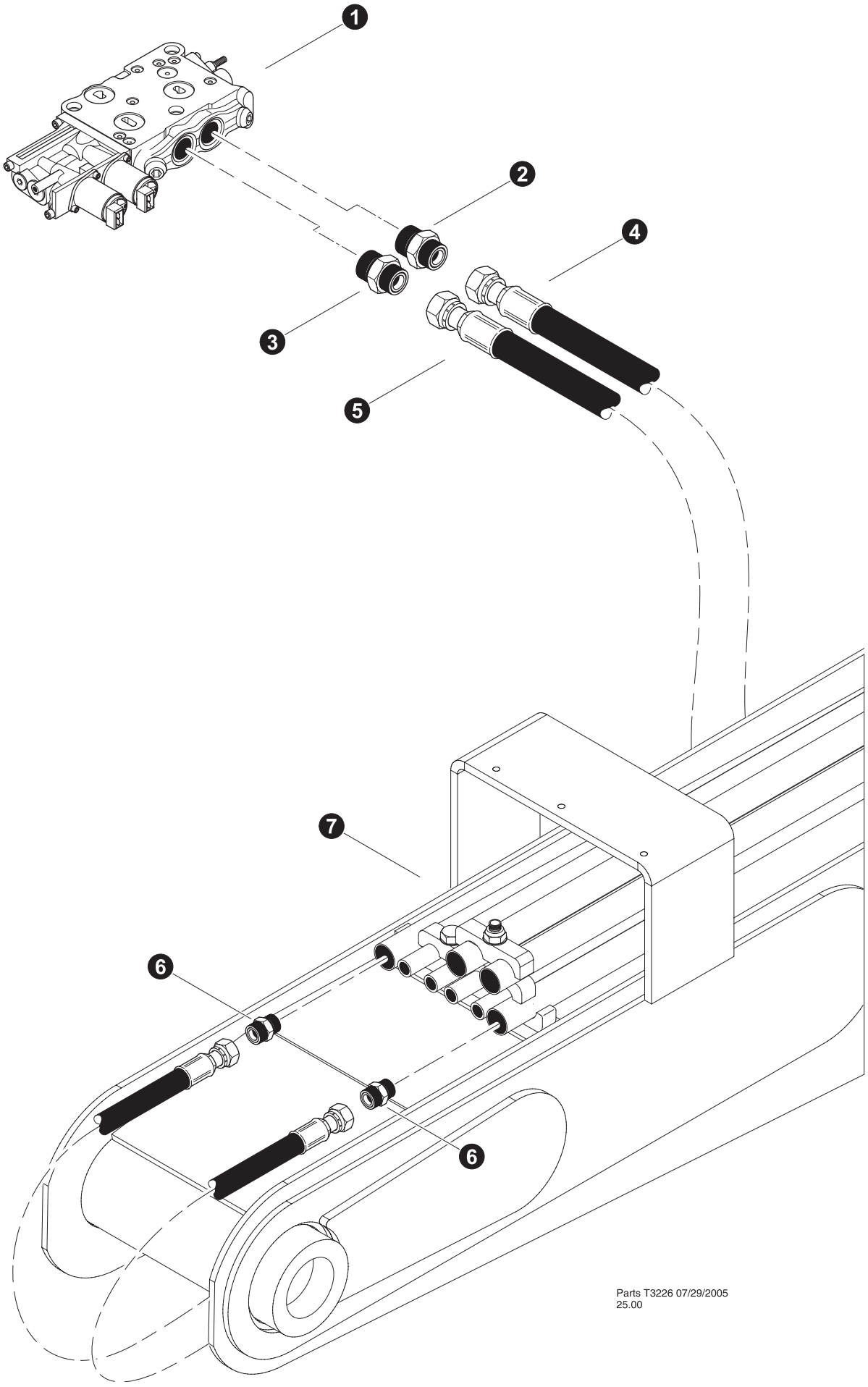
Section LH-7

Loader Hydraulics - Harvester / Squirt Boom Connections

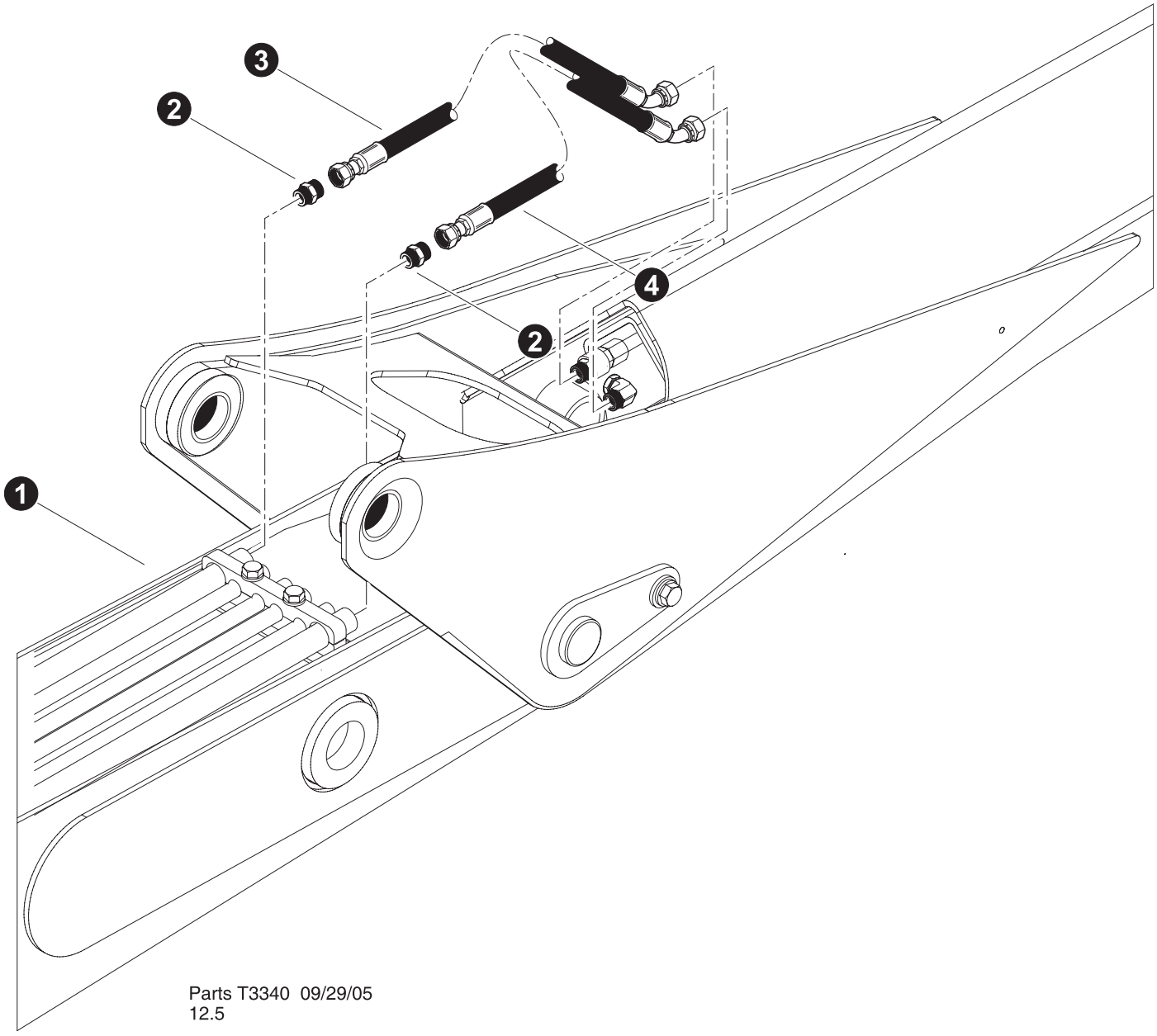


Parts T3226 07/29/2005
25.00

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main Control Valve To Squirt Cylinder tube lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	VALVE SECTION - SQUIRT	LH-2
2	16851-LH	1		CONNECTOR, STR - FF1852T-1210S	
3	16851-LH	1		CONNECTOR, STR - FF1852T-1210S	
4	-LH	1		HOSE ASSEMBLY - 4067-12-120S-120S *(Squirt Boom Section"A" port to Main Boom)*	
5	-LH	1		HOSE ASSEMBLY - 4067-12-120S-120S *(Squirt Boom Section"B" port to Main Boom)*	
6	15152-LH	2		CONNECTOR, STR - FF1852T-1212S	
7	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

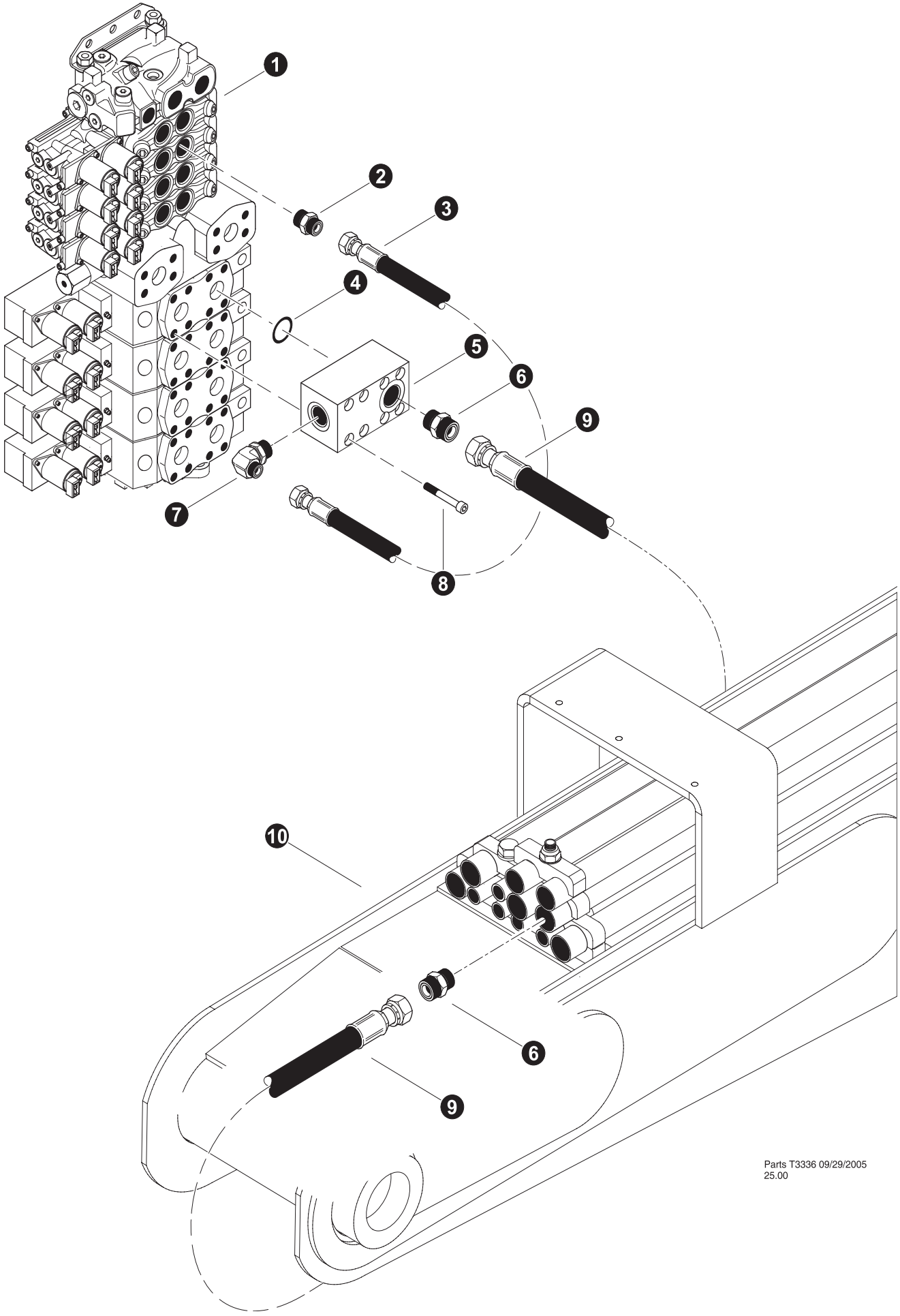


Parts T3340 09/29/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main Boom To Squirt Cylinder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN / SQUIRT BOOM ASSEMBLY	LB-1
2	15152-LH	2		CONNECTOR, STR - FF1852T-1212S	
3	-LH	1		HOSE ASSEMBLY - 4039-12-120S-1204 *(Main Boom tube line to Squirt Boom Cylinder)*	
4	-LH	1		HOSE ASSEMBLY - 4039-12-120S-1204 *(Main Boom tube line to Squirt Boom Cylinder)*	

🕮 See referenced page for component or assembly breakdown.

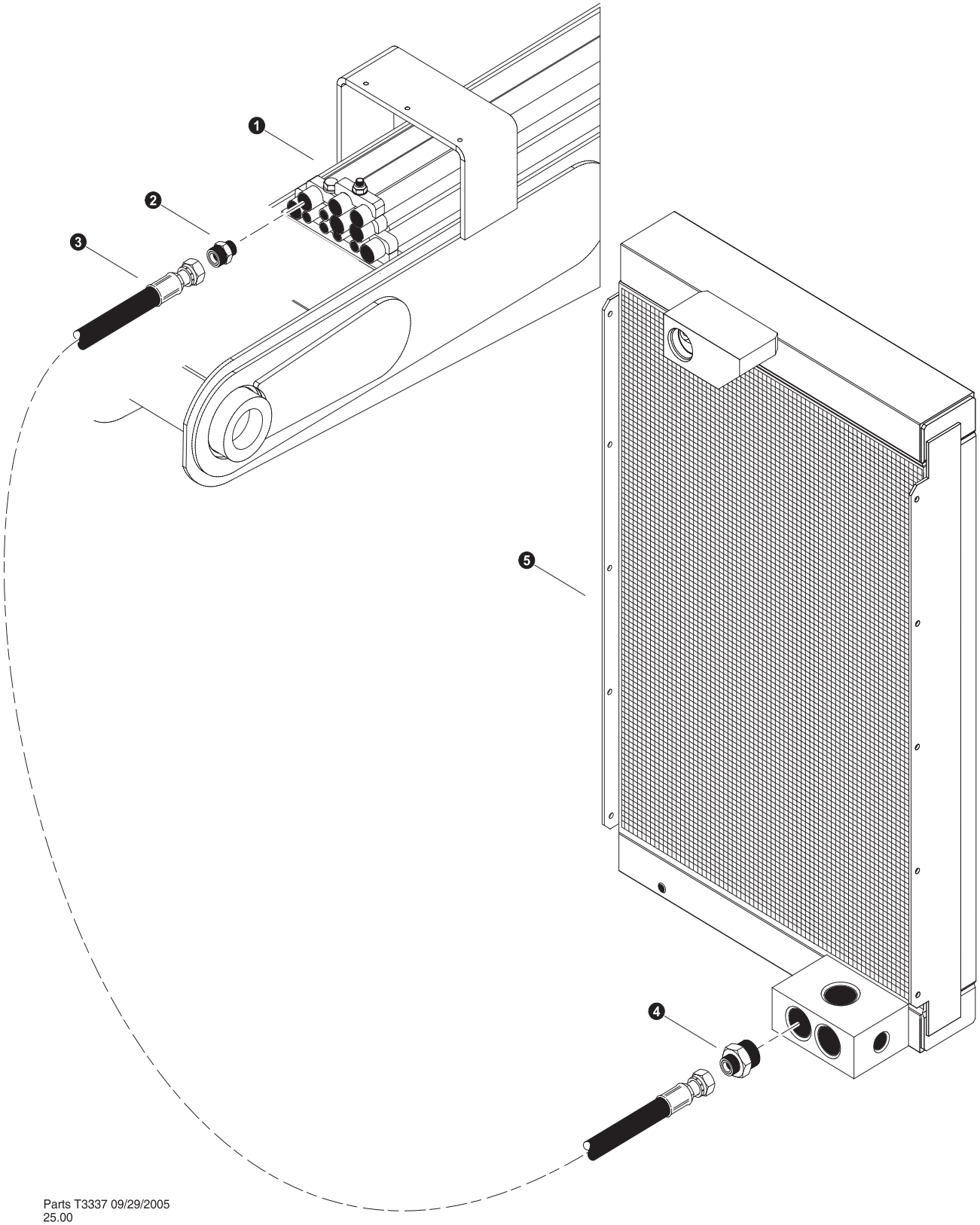


Parts T3336 09/29/2005
25.00

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Pressure and Tank Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	15115-LH	1		CONNECTOR, straight - FF1852T-0810S	
3	-LH	1		HOSE ASSEMBLY - 4029-08-080S-080S *(L90 processor valve to combined flow block)*	
4	15377-LH	2		O-RING - 1” SF	
5	51807-LH	1		MANIFOLD, COMBINED FLOW - VOAC COMBO	
6	15225-LH	2		CONNECTOR, STR - FF1852T-1616S	
7	15372-LH	1		ELBOW, 90 - FF1868T-0812S	
8	50117-LH	8		BOLT, ALLEN HEAD - 10MM-1.5P X 75MM	
9	-LH	1		HOSE ASSEMBLY - 4075-16-160S-160S *(Combined flow block to Main Boom)*	
10	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

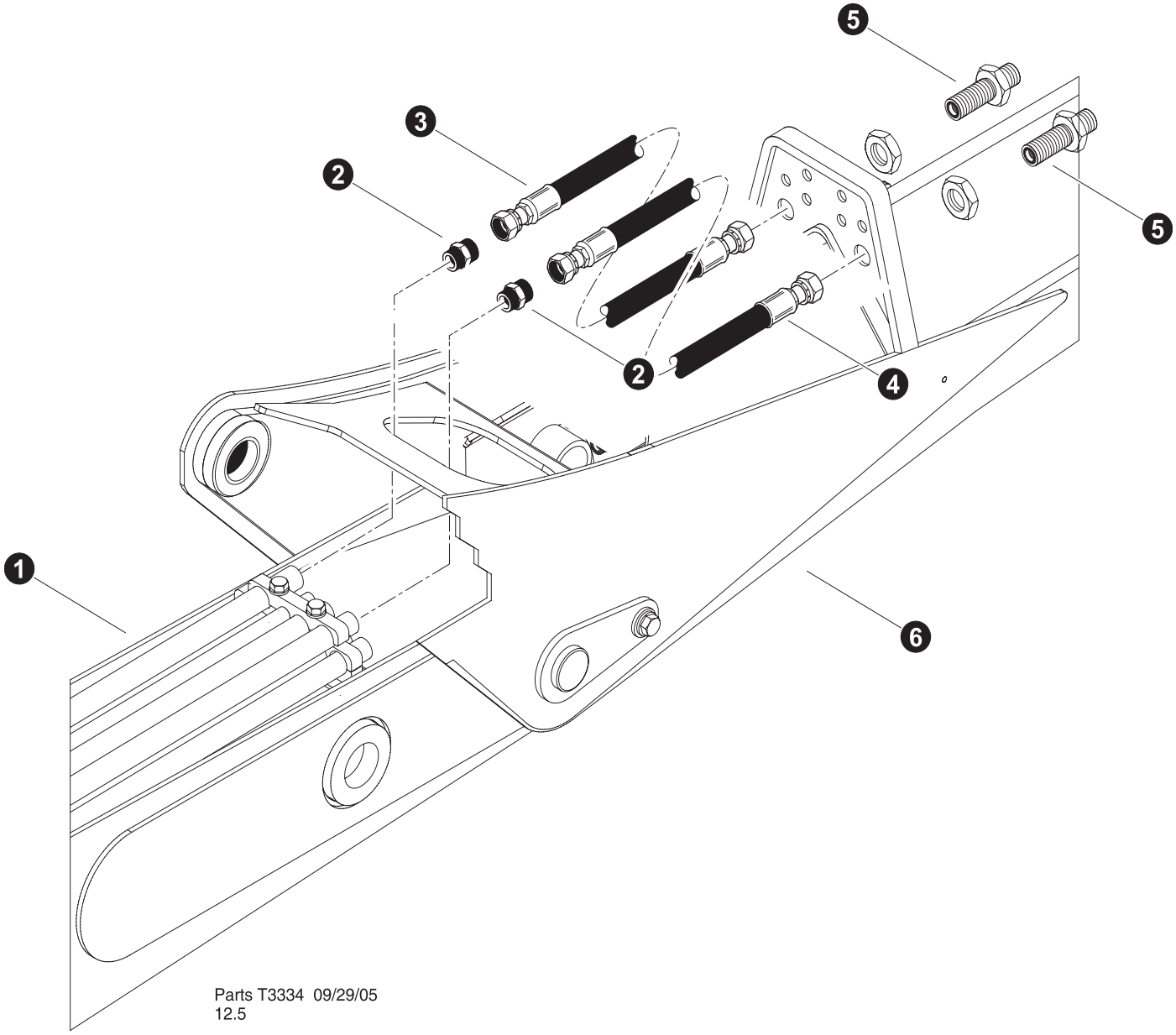


Parts T3337 09/29/2005
25.00

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main Boom - Pressure and Tank Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15225-LH	2		CONNECTOR, STR - FF1852T-1616S	
3	-LH	1		HOSE ASSEMBLY - 2169.5-20-160S-160S *(Attachment Return to Oil Cooler)*	
4	16542-LH	1		CONNECTOR, STR - FF1852T-1620S	
5	REF.	1	🕮	OIL COOLER ASSEMBLY	UP-3

🕮 See referenced page for component or assembly breakdown.

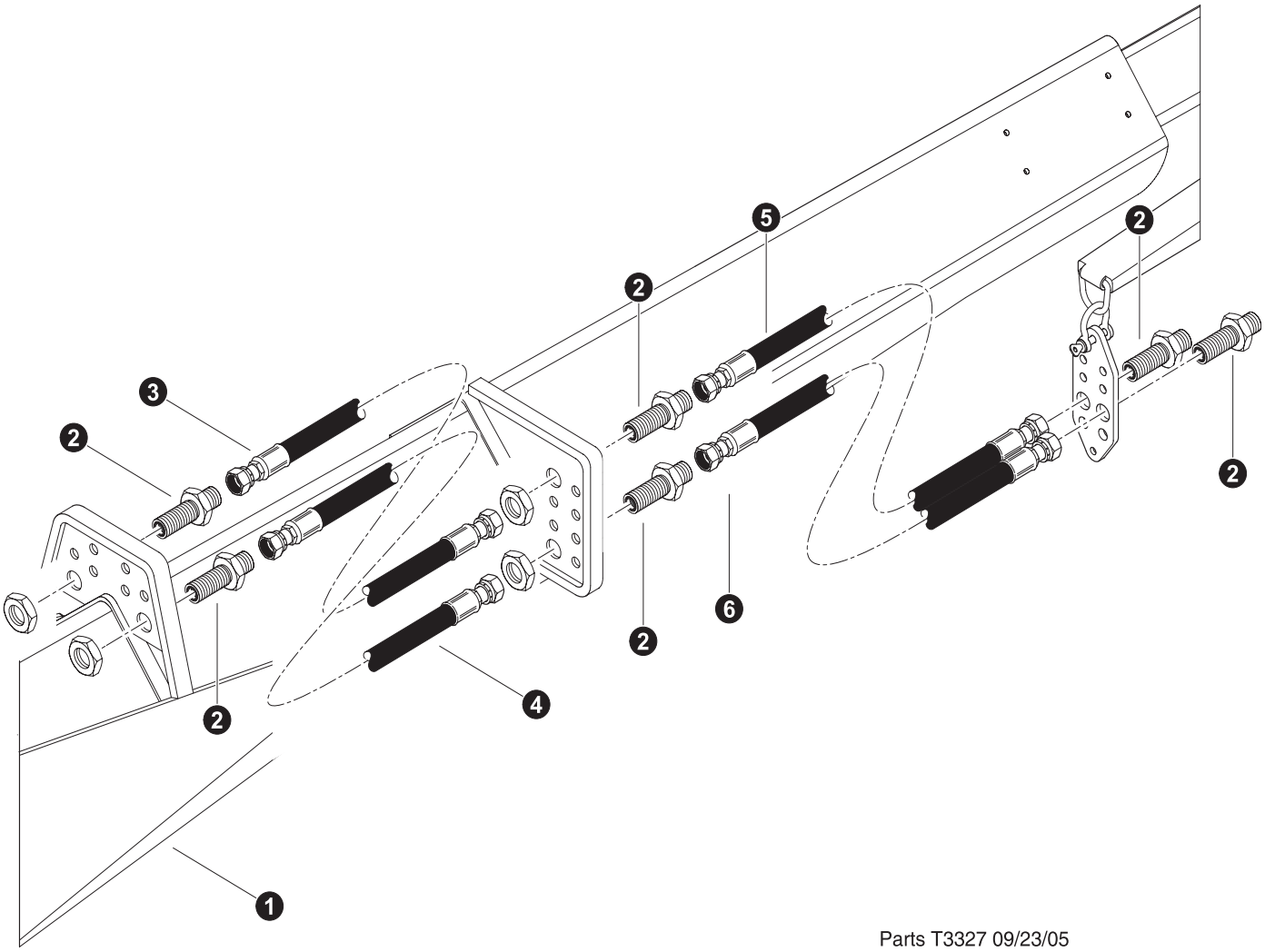


Parts T3334 09/29/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main to Squirt Boom - Pressure and Tank Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15225-LH	2		CONNECTOR, STR - FF1852T-1616S	
3	-LH	1		HOSE ASSEMBLY - 4049-08-160S-160S *(Main Boom tube line to Squirt Boom)*	
4	-LH	1		HOSE ASSEMBLY - 4049-08-160S-160S *(Main Boom tube line to Squirt Boom)*	
5	20033-LH	2		CONNECTOR, STR BULKHEAD - 832-TT-16	
6	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

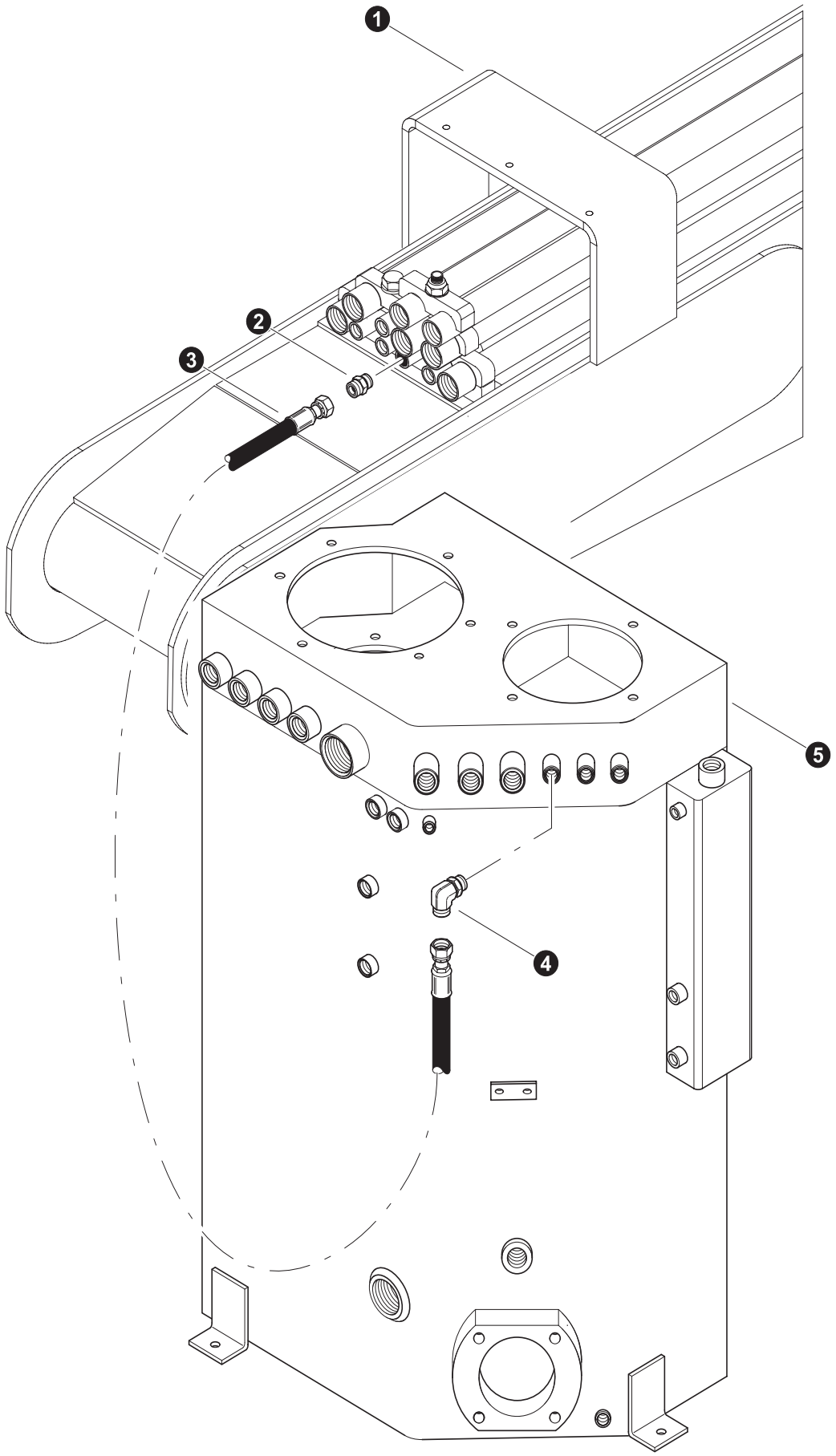


Parts T3327 09/23/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Squirt Boom - Pressure and Tank Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1
2	20033-LH	2		CONNECTOR, STR BULKHEAD - 832-TT-16	
3	-LH	1		HOSE ASSEMBLY - 4039.5-16-160S-160S *(Squirt Boom Return Hose)*	
4	-LH	1		HOSE ASSEMBLY - 4038-16-160S-160S *(Squirt Boom Pressure Hose)*	
5	-LH	1		HOSE ASSEMBLY - 4110-16-160S-160S *(Squirt Boom Return Hose)*	
6	-LH	1		HOSE ASSEMBLY - 4106-16-160S-160S *(Squirt Boom Pressure Hose)*	

🕮 See referenced page for component or assembly breakdown.

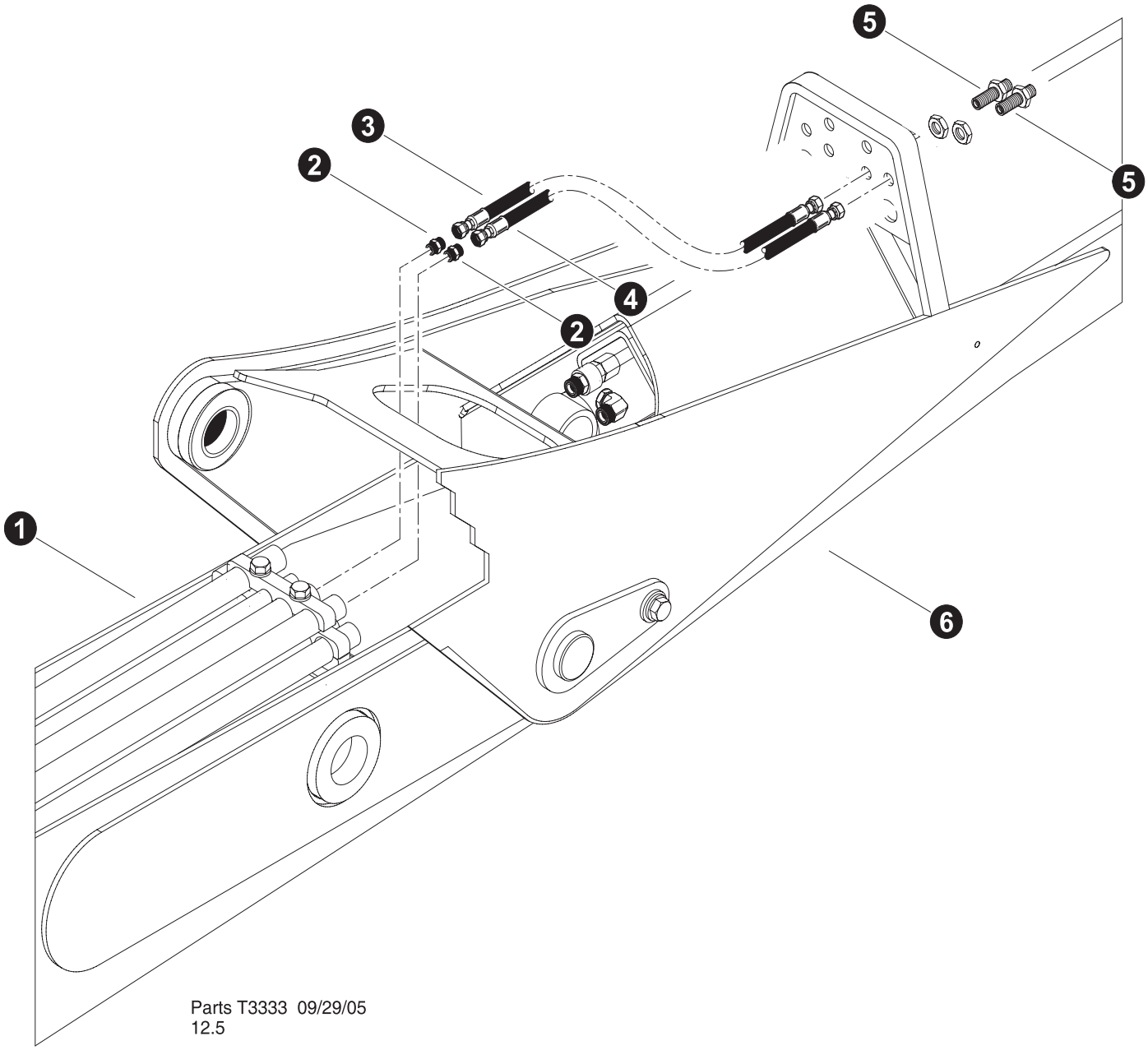


Parts T3338 09/29/2005
25.00

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main Boom - Case Drain Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4182-08-080S-080S *(Main Boom tube line to Hydraulic Tank Case Drain Filter)*	
4	16360-LH	1		ELBOW, 90 - FF1868T-0808S	
5	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

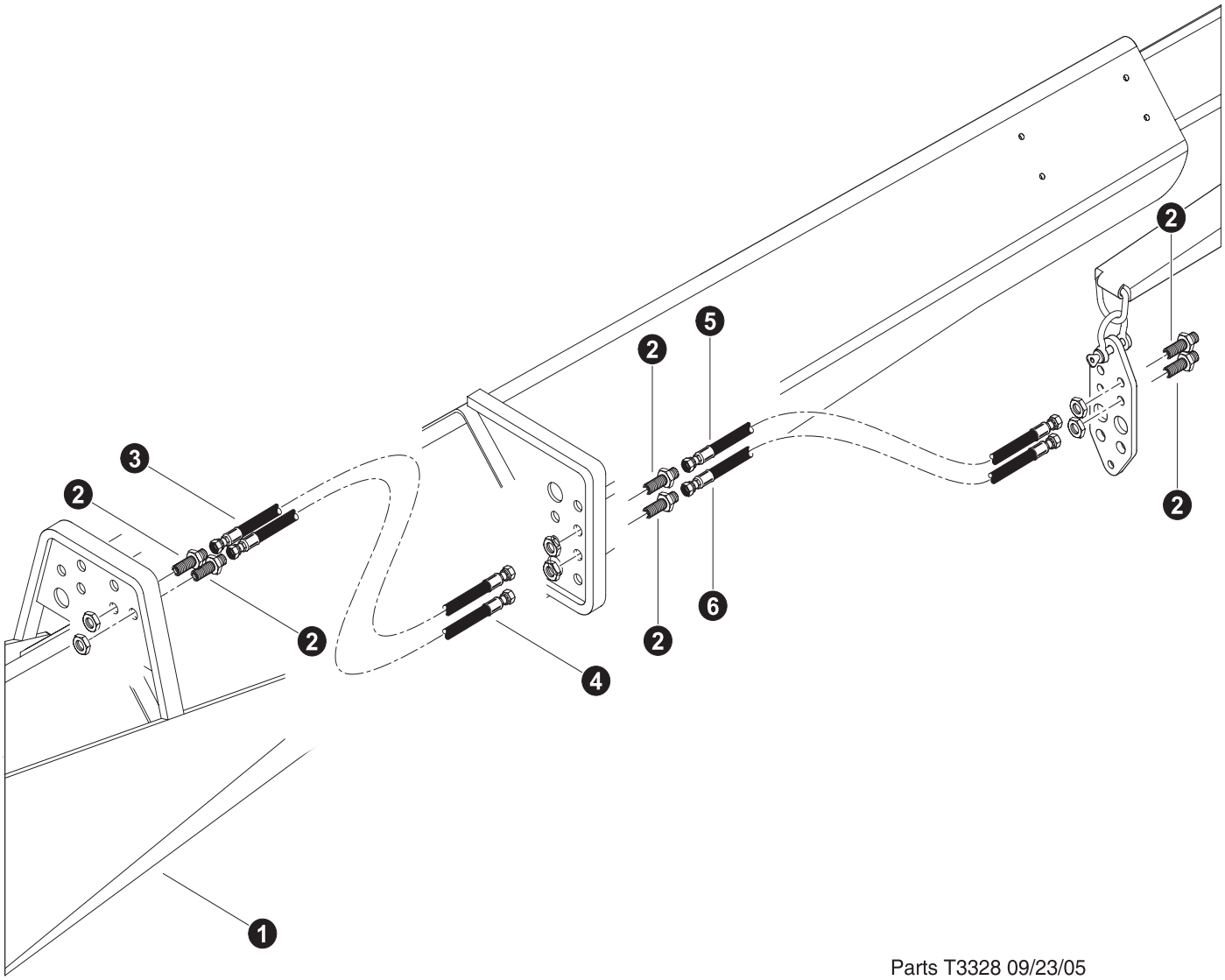


Parts T3333 09/29/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main to Squirt Boom - Wire and Case Drain Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom)*	
4	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom)*	
5	20196-LH	2		CONNECTOR, STR BULKHEAD - FF1994T-0808S	
6	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1

🕮 See referenced page for component or assembly breakdown.

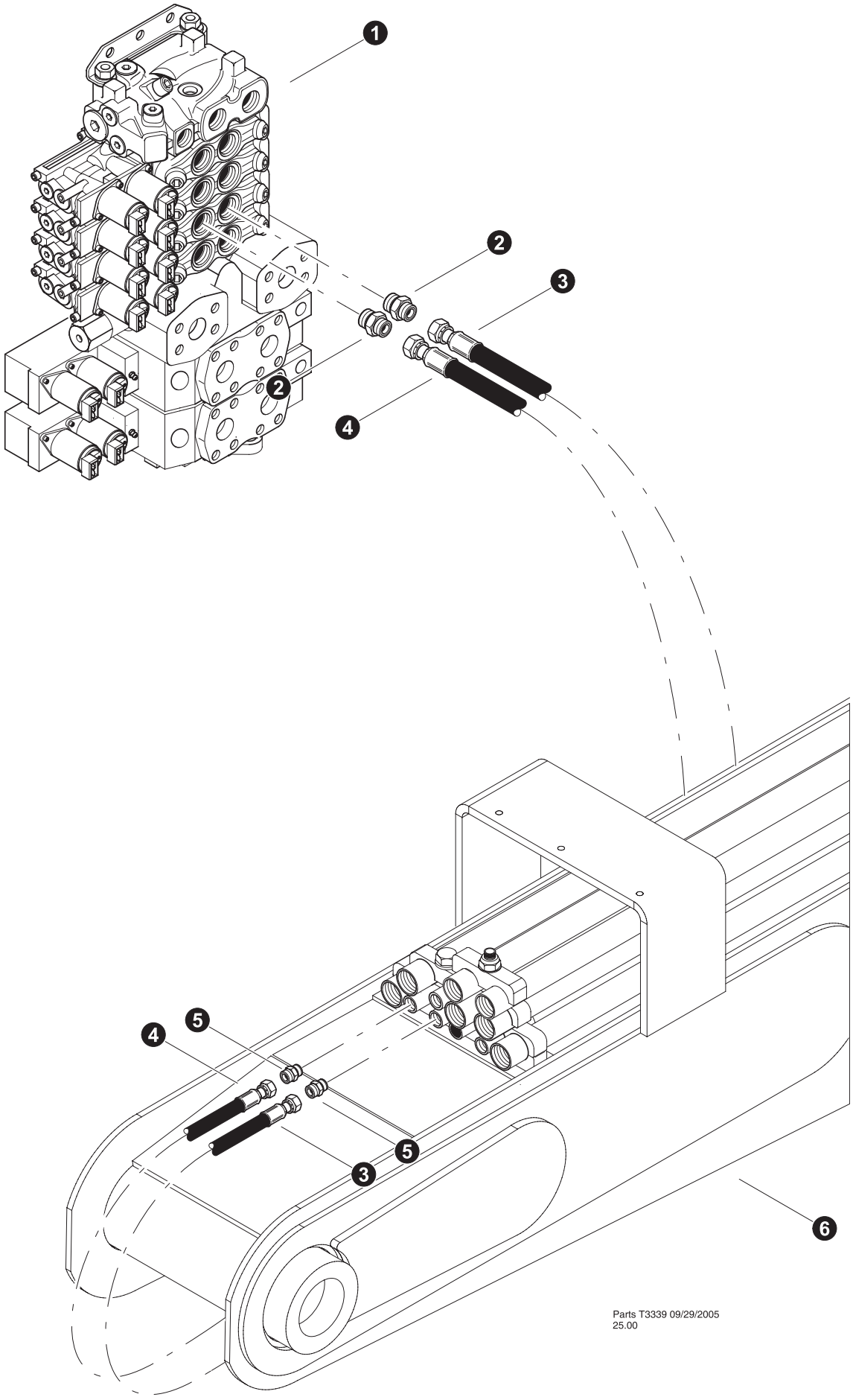


Parts T3328 09/23/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Squirt Boom - Wire and Case Drain Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1
2	20196-LH	2		CONNECTOR, STR BULKHEAD - FF1994T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4040-08-080S-080S *(Squirt Boom Case Drain Hose)*	
4	-LH	1		HOSE ASSEMBLY - 4040.5-08-080S-080S *(Squirt Boom Wire Hose)*	
5	-LH	1		HOSE ASSEMBLY - 4108-08-080S-080S *(Squirt Boom Case Drain Hose)*	
6	-LH	1		HOSE ASSEMBLY - 4110-08-080S-080S *(Squirt Boom Wire Hose)*	

🕮 See referenced page for component or assembly breakdown.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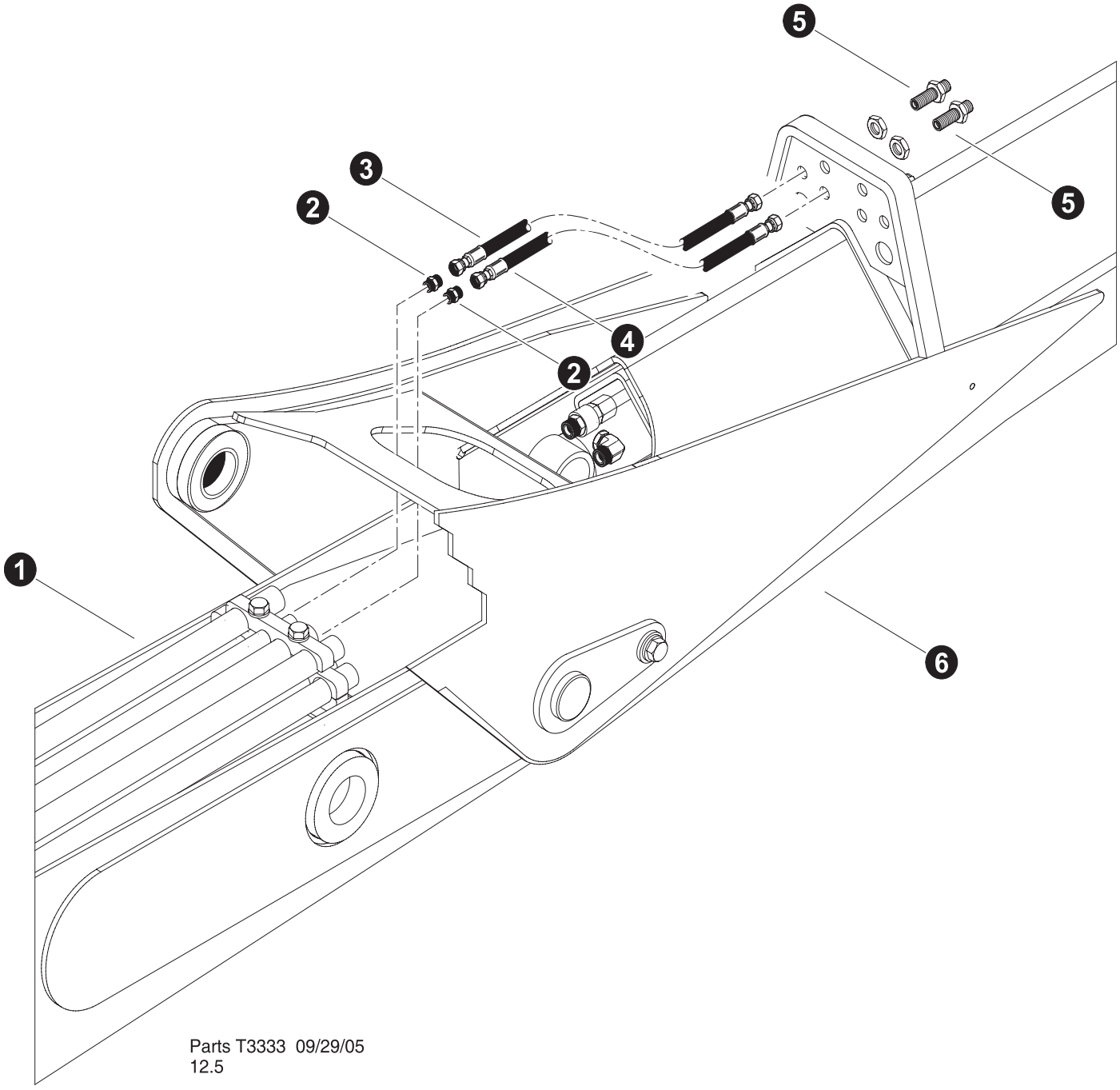
Parts T3339 09/29/2005
25.00

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main Boom - Head Rotate Connections)

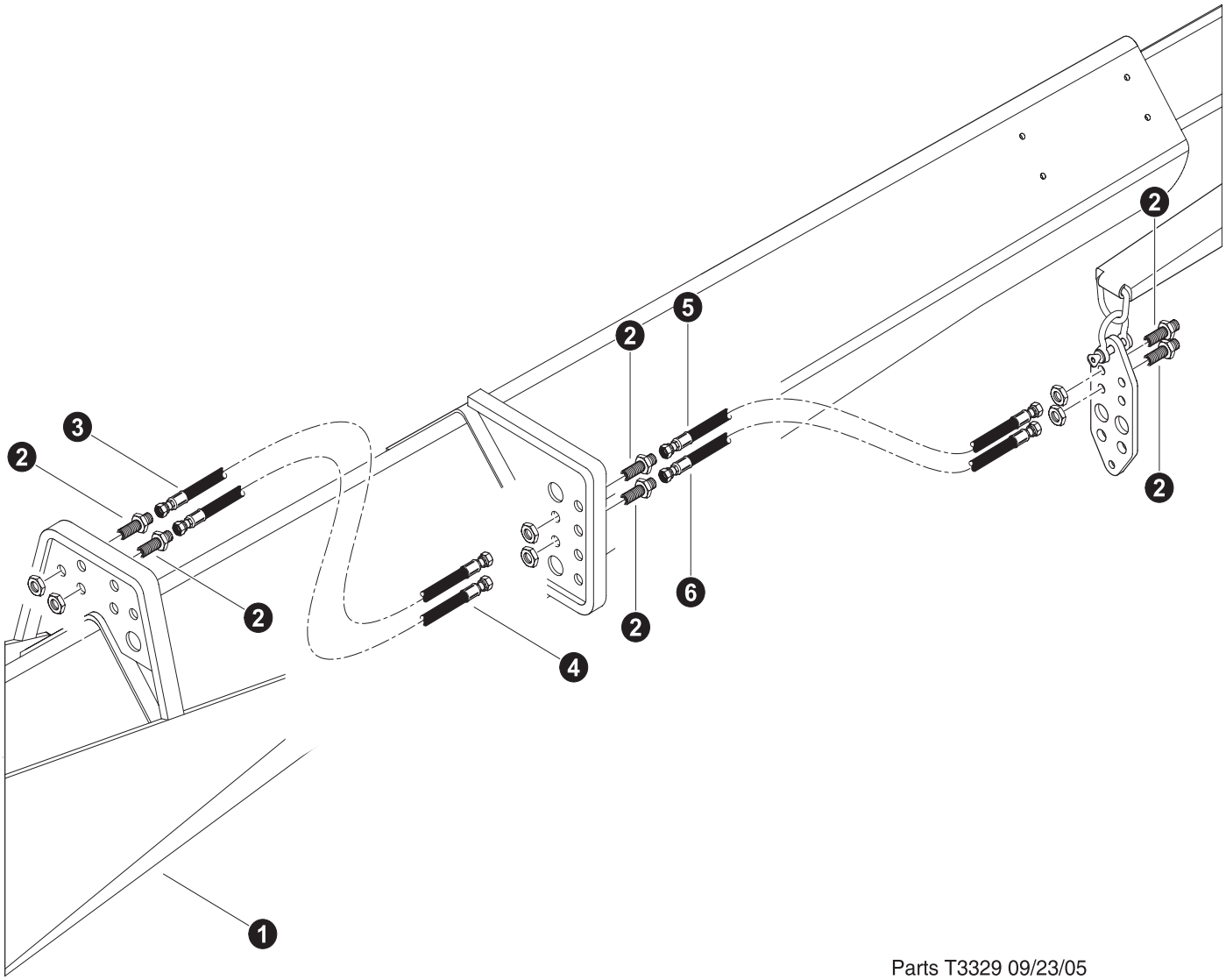
REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	15115-LH	2		CONNECTOR, straight - FF1852T-0810S	
3	-LB	1		HOSE ASSEMBLY - 4069-08-080S-080S *(Rotate valve section work port "A" to main boom left inside tube line)*	
4	-LB	1		HOSE ASSEMBLY - 4068-08-080S-080S *(Rotate valve section work port "B" to main boom left outside tube line)*	
5	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
6	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1



Parts T3333 09/29/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Main to Squirt Boom - Head Rotate Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	15117-LH	2		CONNECTOR, STR - FF1852T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom)*	
4	-LH	1		HOSE ASSEMBLY - 4049-08-080S-080S *(Main Boom tube line to Squirt Boom)*	
5	20196-LH	2		CONNECTOR, STR BULKHEAD - FF1994T-0808S	
6	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1



Parts T3329 09/23/05
12.5

HARVESTER WITH SQUIRT BOOM CONNECTIONS
(Squirt Boom - Head Rotate Connections)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-1
2	20196-LH	2		CONNECTOR, STR BULKHEAD - FF1994T-0808S	
3	-LH	1		HOSE ASSEMBLY - 4041-08-080S-080S *(Squirt Boom Rotate Hose)*	
4	-LH	1		HOSE ASSEMBLY - 4042-08-080S-080S *(Squirt Boom Rotate Hose)*	
5	-LH	1		HOSE ASSEMBLY - 4110-08-080S-080S *(Squirt Boom Rotate Hose)*	
6	-LH	1		HOSE ASSEMBLY - 4108-08-080S-080S *(Squirt Boom Rotate Hose)*	

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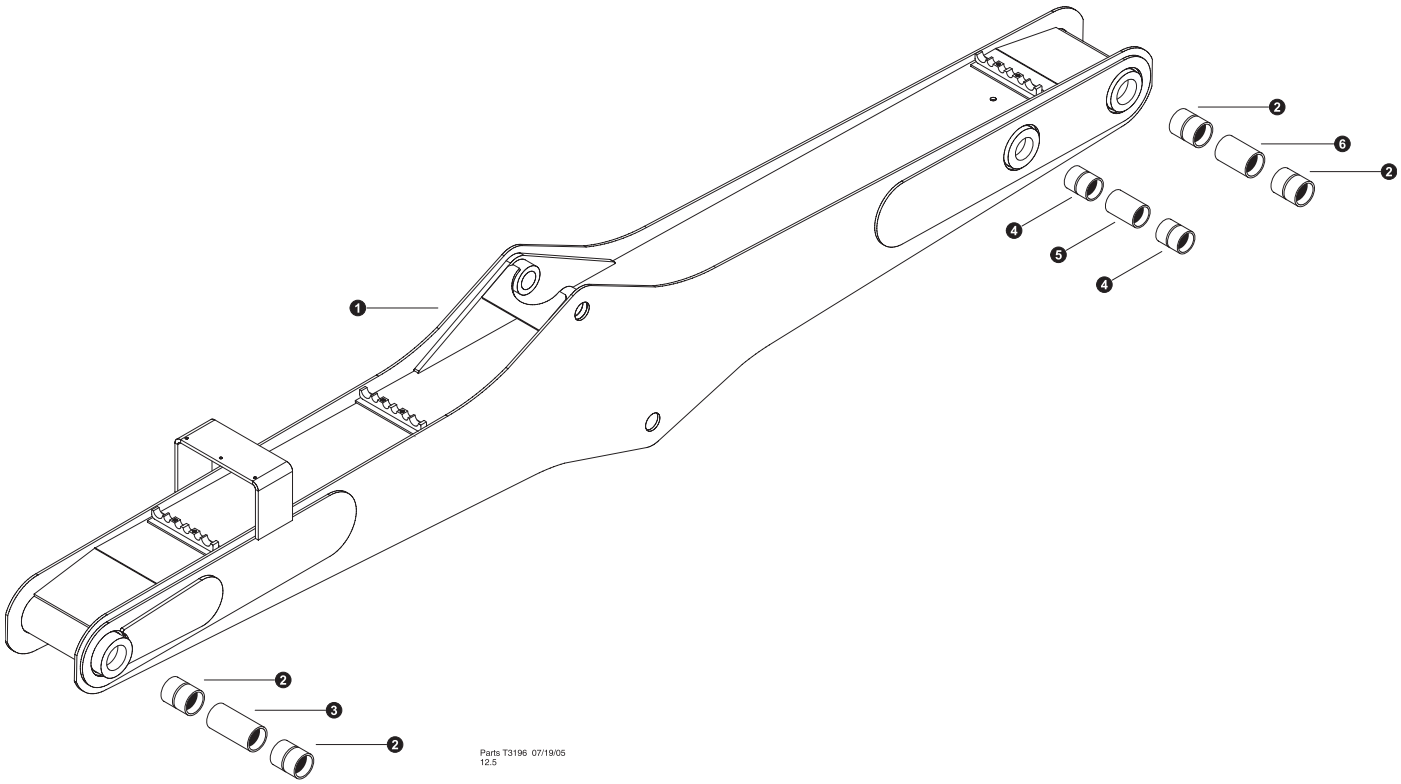
Section LB-1

Loader Booms - Main Boom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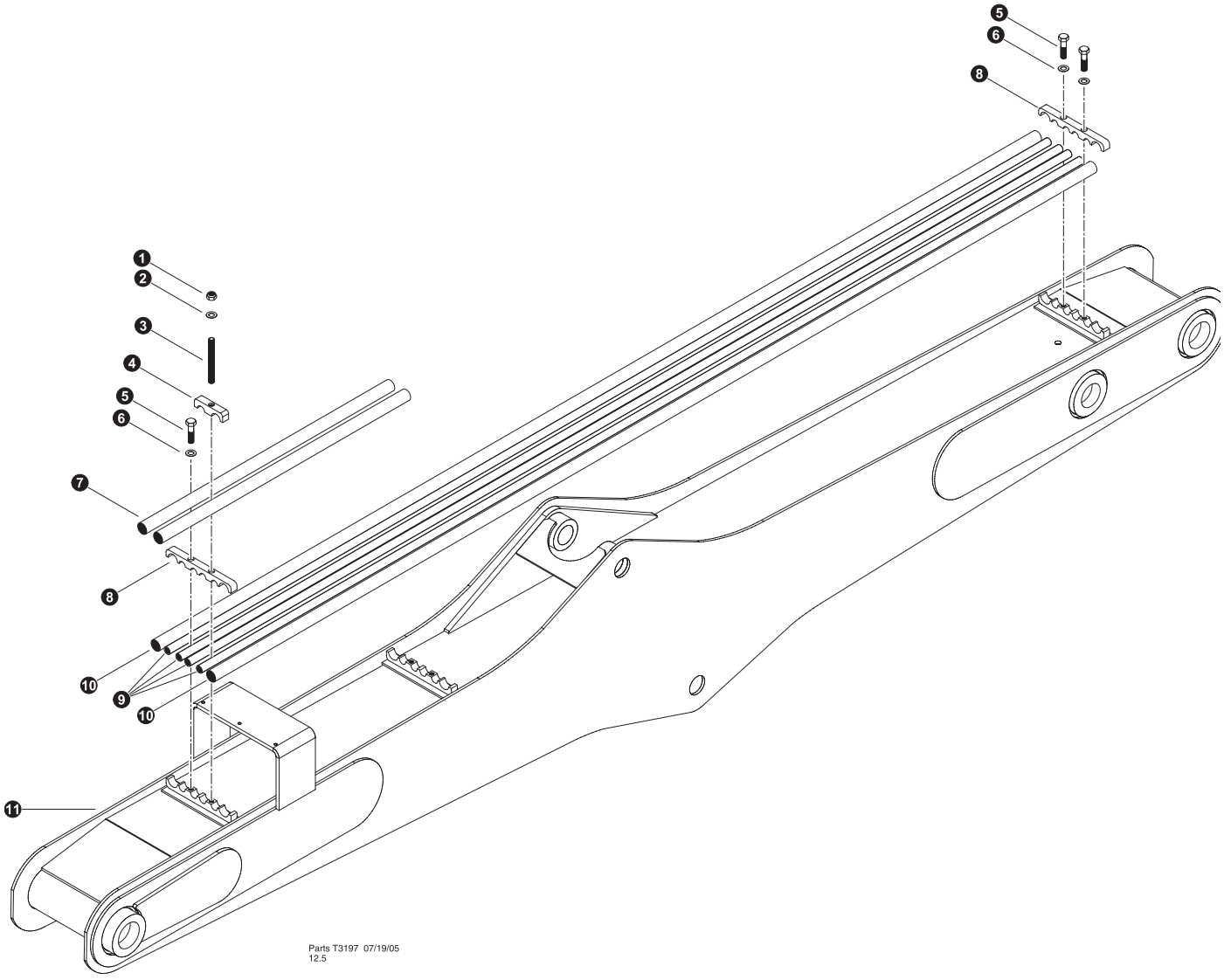
Parts T3196 07/19/05
12.5

MAIN BOOM ASSEMBLY
(Forwarder / Combo)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51535-LB	1	❑	WELDMENT, MAIN BOOM (forwarder)	
2	42485-LB	4		BUSHING - 3.5” X 3.0” X 4.25” UNDERSIZE	
3	12365-LB	1		SPACER, BASE - 3” X 7.44”	
4	42482-LB	2		BUSHING - 3” X 2.5” X 4.25” UNDERSIZE	
5	42265-LB	1		SPACER, NOSE - 2.5” ID X 5.438”(NEW BOOM	
6	42185-LB	1		SPACER, NOSE	

❑ Kit or Assembly - includes all items indented underneath.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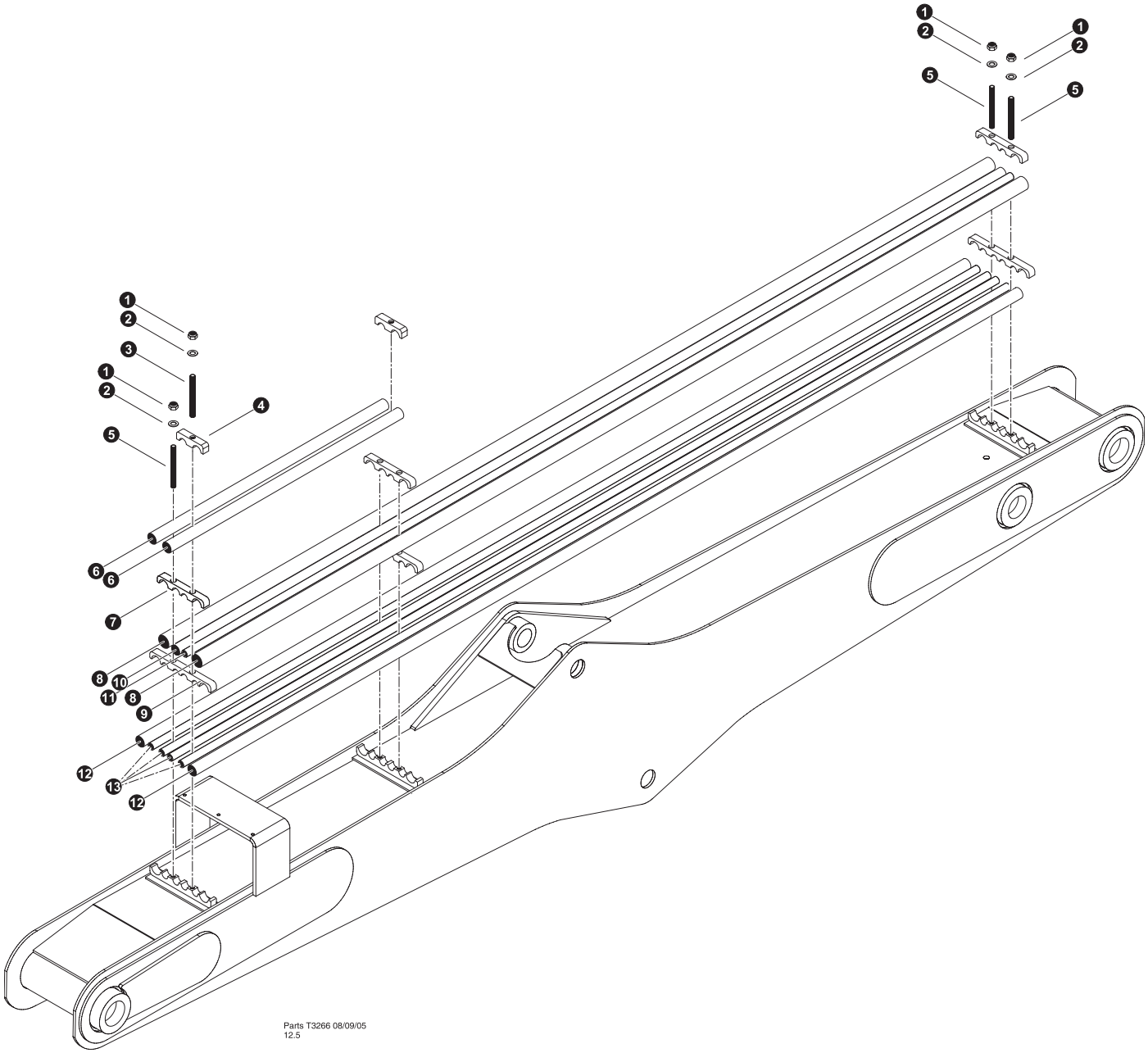
Parts T3197 07/19/05
12.5

MAIN BOOM TUBE LINES
(Forwarder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	15563-LB			NUT, nylock - 5/8”	
2	10771-LB	3		WASHER, SAE flat - 5/8”	
3	15672-LB	3		STUD - 5/8” x 5-1/4”	
4	19324-LB	2		CLAMP, tubeline - 3/4” x 3/4”	
5	15681-LB	3		BOLT - .625” X 2.25”	
6	10771-LB	3		WASHER, SAE flat - 5/8”	
7	51785-LB	2		TUBELINE - .75” x 42” FWD MAIN	
8	42236-LB	3		CLAMP, MAIN BOOM FORWARDER TOP	
9	51782-LB	4		TUBELINE - .5” x 148” FWD MAIN	
10	51783-LB	2		TUBELINE - .75” x 148” (OPTIONAL FOR SQUIRT)	
11	REF	1	🕮	MAIN BOOM ASSEMBLY.	LB-1

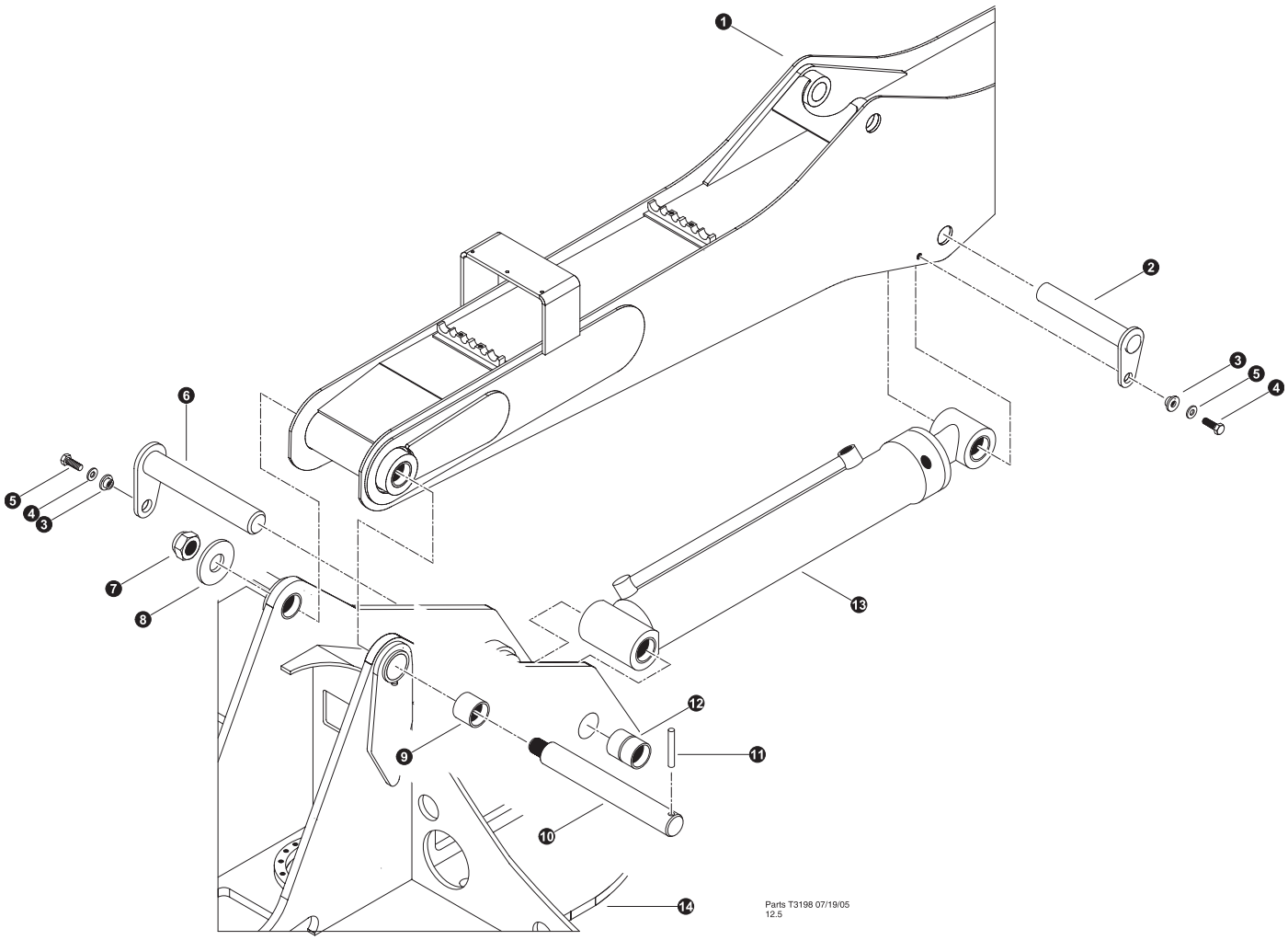
❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.


Parts T3266 08/09/05
12.5

MAIN BOOM TUBE LINES
(TF 830 Combo & TB 630)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	15563-LB	6		NUT, nylock - 5/8”	
2	10771-LB	6		WASHER, SAE flat - 5/8”	
3	17062-LB	2		STUD - .625” X 8”	
4	19324-LB	2		CLAMP, tubeline - 3/4” x 3/4”	
5	15672-LB	4		STUD - 5/8” x 5-1/4”	
6	51785-LB	2		TUBELINE - .75” x 42” FWD MAIN	
7	42512-LB	3		CLAMP, MAIN COMBO	
8	51784-LB	1		TUBELINE - 1” x 148” FWD MAIN - T830	
9	42236-LB	3		CLAMP, MAIN BOOM FORWARDER	
10	52173-LB	1		TUBELINE - BLACK PIPE (ELECTRICAL)	
11	51782-LB	1		TUBELINE - .5” x 148” FWD MAIN	
12	51783-LB	2		TUBELINE - .75” x 148” (OPTIONAL FOR SQUIRT)	
13	51782-LB	4		TUBELINE - .5” x 148” FWD MAIN	
14	REF	1	🕮	MAIN BOOM ASSEMBLY.	LB-1

❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.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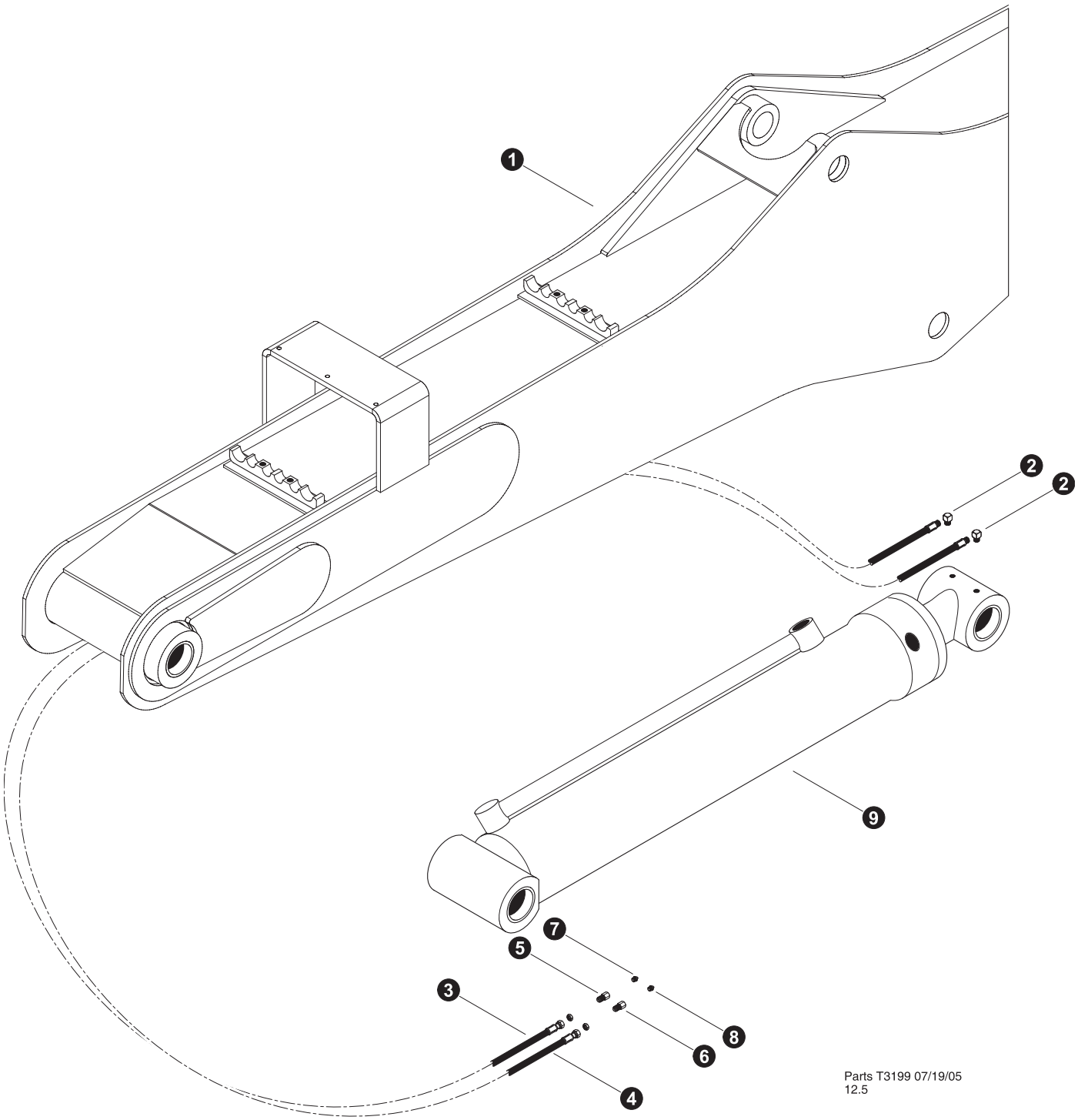
Parts T3198 07/19/05
12.5

MAIN BOOM AND CYLINDER INSTALLATION (Forwarder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	MAIN BOOM ASSEMBLY	LB-1
2	51643-LB	1		PIN ASSEMBLY, 2.49 DIA X 13.13”	
3	18570-LB	2		WASHER, PIN RETAINING	
4	15550-LB	2		WASHER, SAE FLAT - .75”	
5	15549-LB	2		BOLT - .75” X 2.0	
6	51575-LB	1		PIN ASSEMBLY, 2.99 DIA X 18.63”	
7	10728-LB	1		NUT, NYLOCK - 2” (ZINC PLATED)	
8	19384-LB	1		WASHER, BURNED - 2.12” ID X 6” OD X .5”	
9	42484-LB	2		BUSHING - 3.5” X 3.0” X 2.0” UNDERSIZE	
10	51952-LB	1		PIN ASSEMBLY, 2.99 DIA X 24.63”	
11	51953-LB	1		PIN, DOWEL 1 DIA X 5 LG	
12	42485-LB	2		BUSHING - 3.5” X 3.0” X 4.25” UNDERSIZE	
13	REF.	1		MAIN BOOM CYLINDER (FORWARDER)	LB-4
14	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1

🕮 See referenced page for component or assembly breakdown.



Parts T3199 07/19/05
12.5

MAIN BOOM AND CYLINDER GREASE LINES
(Forwarder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM	LB-1
2	22281-LB	2		ELBOW, 90 - 5546132	
3		1		HOSE ASSEMBLY, 2143-02-02PS-04JS (part of kit # 51978)	
4		1		HOSE ASSEMBLY, 2143-02-02PS-04JS (part of kit # 51978)	
5	15658-LB	1		CONNECTOR, STR BULKHEAD - 2239-2-4S	
6	15658-LB	1		CONNECTOR, STR BULKHEAD - 2239-2-4S	
7	10704-LB	1		FITTING, GREASE - .125 NPT - STR	
8	10704-LB	1		FITTING, GREASE - .125 NPT - STR	
9	REF.	1	🕮	MAIN BOOM (HOIST) CYLINDER	LB-4

🕮 See referenced page for component or assembly breakdown.

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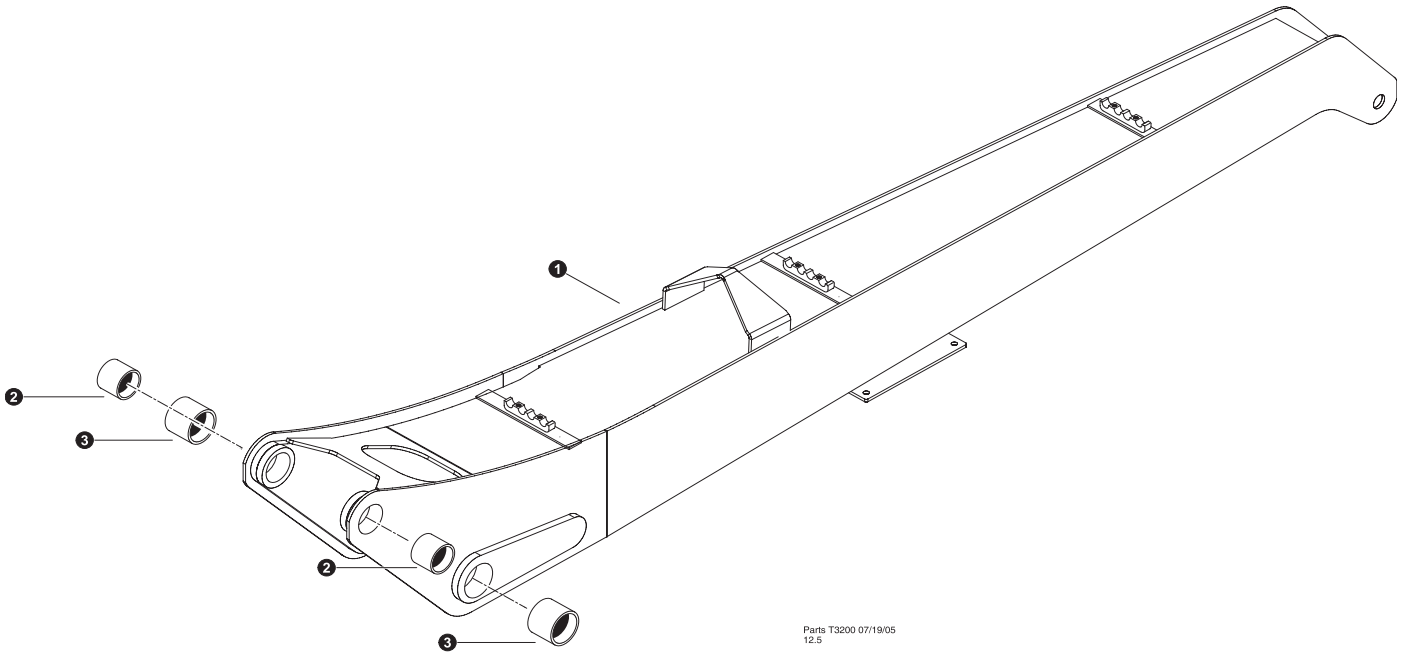
Section LB-2

Loader Booms - Stick Boom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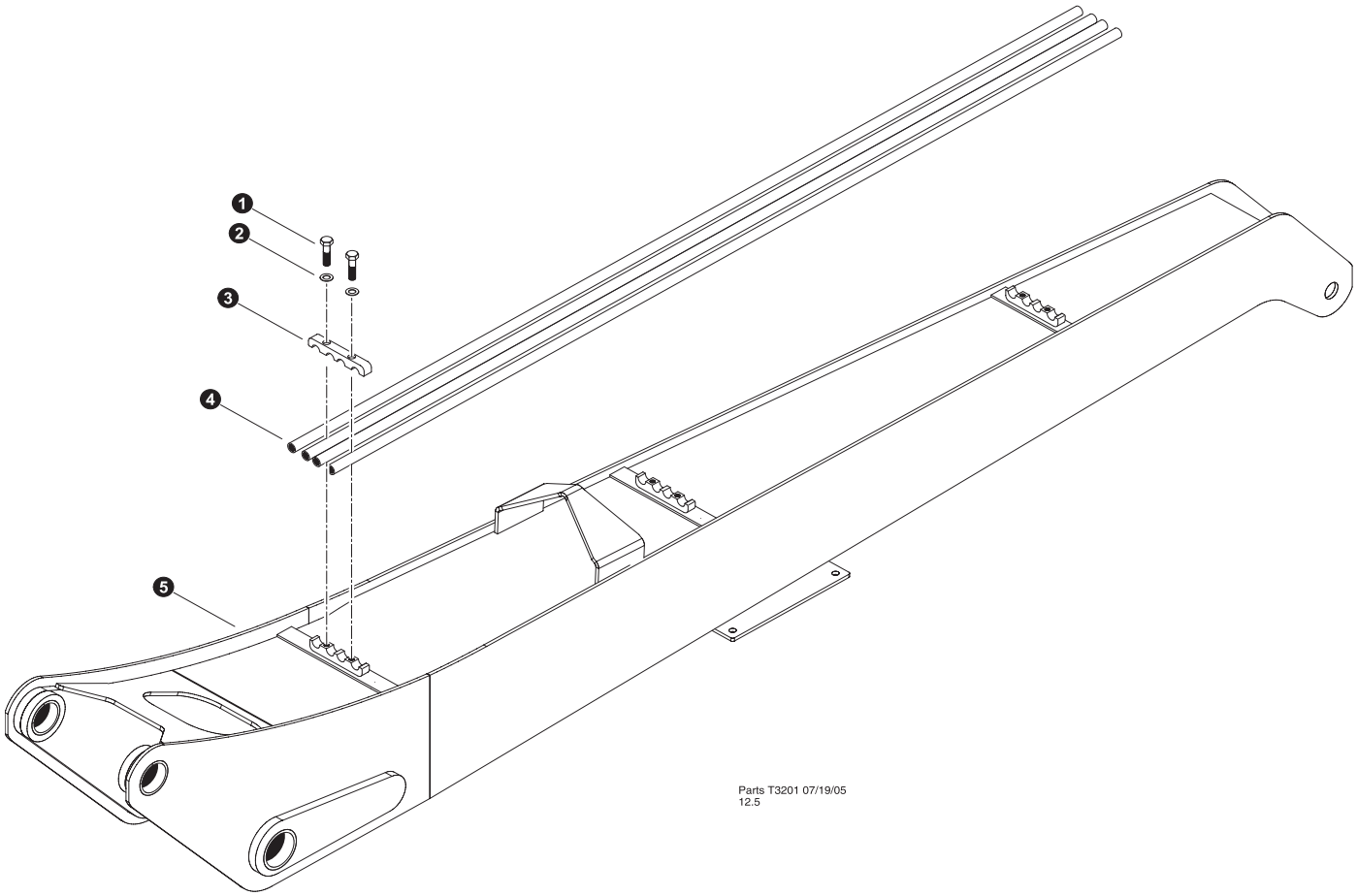
Parts T3200 07/19/05
12.5

STICK BOOM COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51536-LB	1	❑	WELDMENT, STICK BOOM 4-BAR	
2	42515-LB	2		BUSHING - 3” X 2.5” X 2.0” UNDERSIZE	
3	42484-LB	2		BUSHING - 3.5” X 3.0” X 2.0” UNDERSIZE	

❑ Kit or Assembly - includes all items indented underneath.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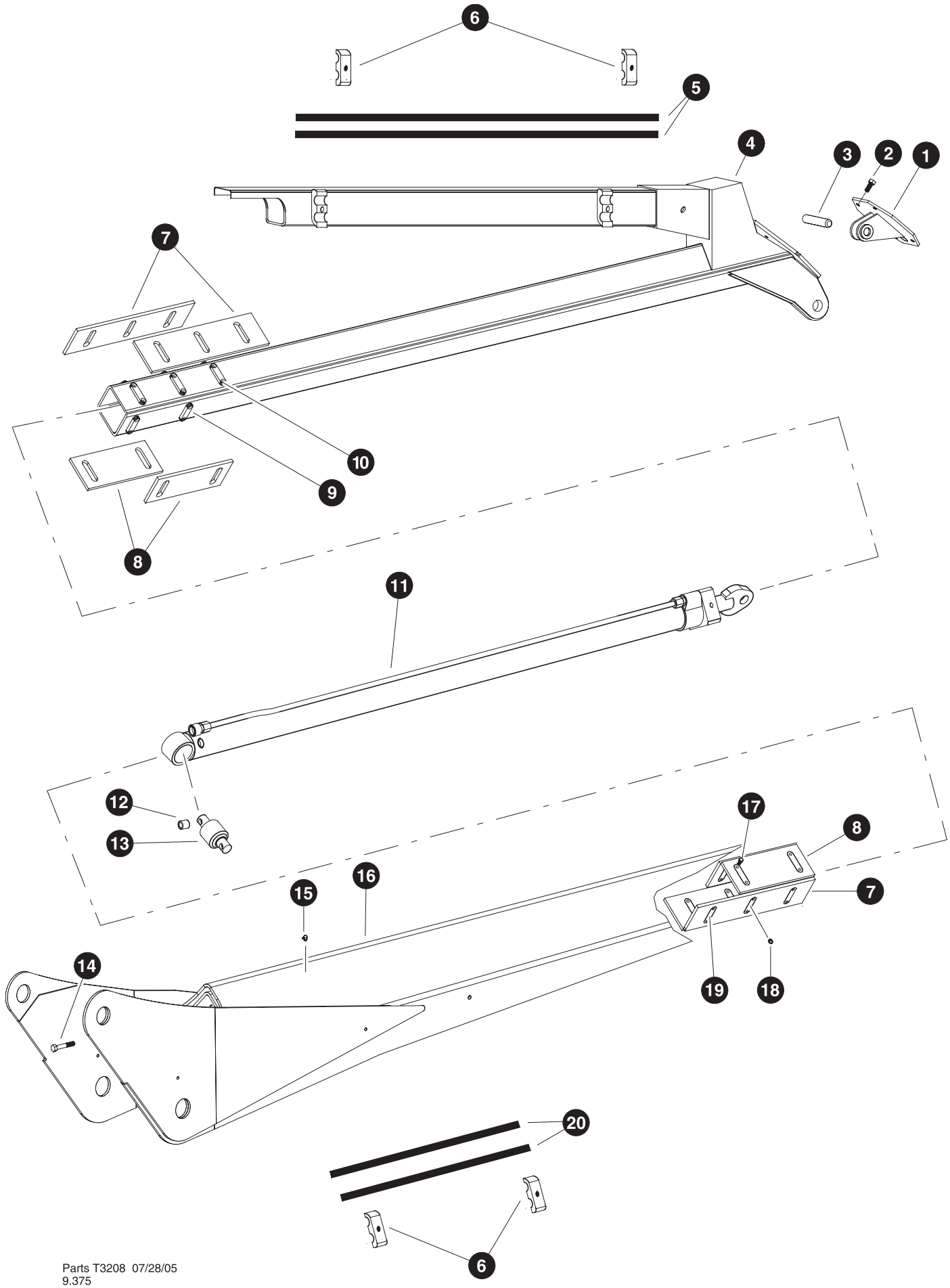
Parts T3201 07/19/05
12.5

STICK BOOM TUBELINE INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	15526-LB	6		BOLT - 5/8” x 2”	
2	10771-LB	6		WASHER, SAE flat - 5/8”	
3	42571-LB	3		CLAMP, TUBELINE 1/2”	
4	51815-LB			TUBELINE - .5” X 108” (STICK BOOM -830)	
5	REF	1	🕮	STICK BOOM ASSEMBLY	LB-2

🕮 See referenced page for component or assembly breakdown.

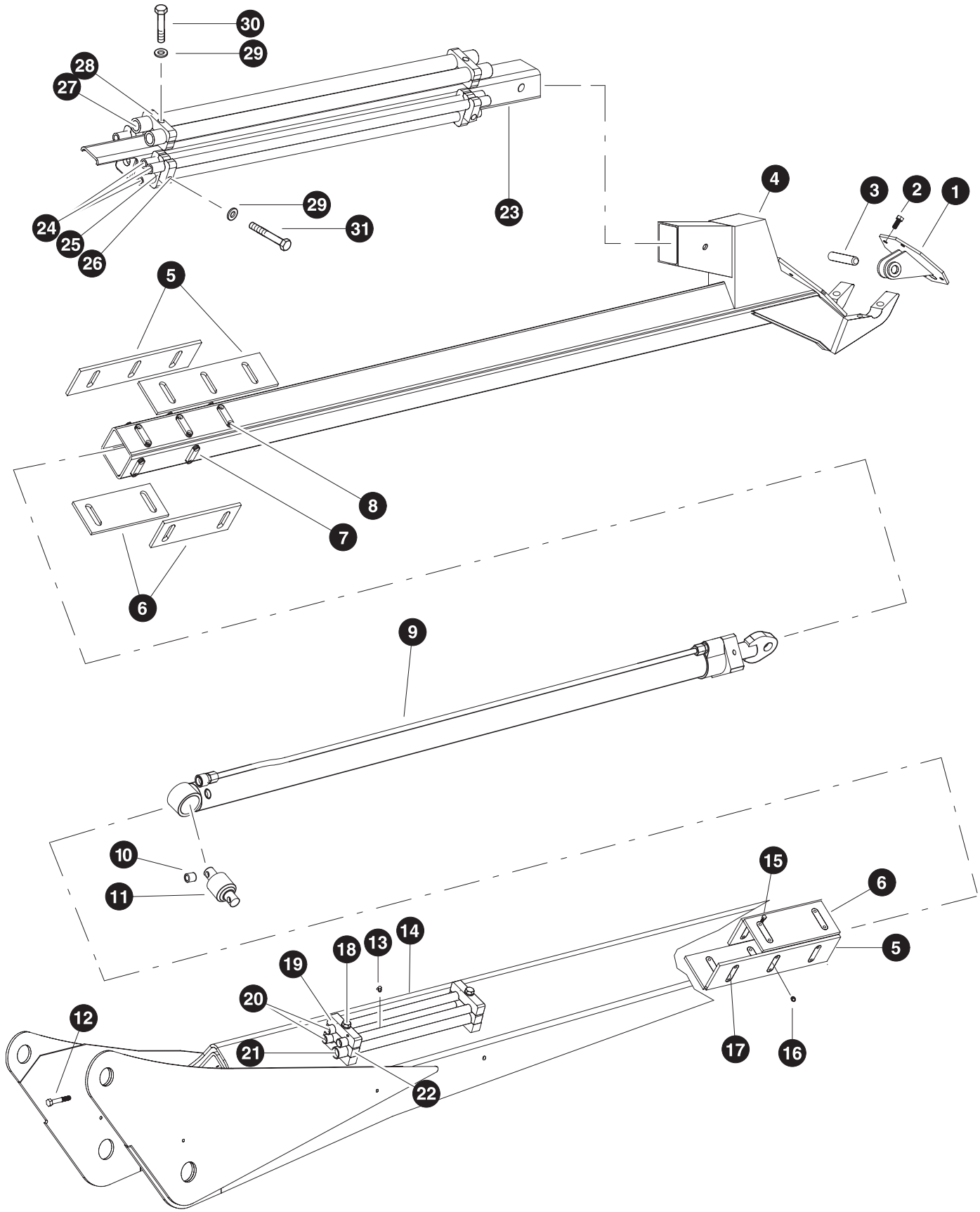


Parts T3208 07/28/05
9.375

SQUIRT BOOM COMPONENTS
(Forwarder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
	51634-LB	1	❑	BOOM, SQUIRT STICK - forwarder 4 / BAR	
1	- - -	1		CYLINDER ANCHOR (XB2017)	
2	15502-LB	4		BOLT, 5/8 X 1.5	
3	- - -	1		PIN (XB2015)	
4	- - -	1		SLIDE TUBE	
5	19679-LB	4		TUBELINE, 1/2” X 48”	
6	15272-LB	8		CLAMP, saddle 1/2 x 1/2	
7	- - -	4		WEAR PAD, long (XB3006)	
8	- - -	4		WEAR PAD, short (XB3005)	
9	- - -	10		PUCKS, retaining - countersunk (XB3021)	
10	- - -	20		SCREWS, 3/8 X 3/4 brass (XB5001)	
11	REF	1		CYLINDER, squirt boom 6’	LB-3
12	- - -	2		SPACER, squirt cylinder mount	
13	- - -	1		BUSHING, squirt cyl rear (HEN44695)	
14	10719-LB	2		BOLT, 5/8 X 4”	
15	15682-LB	2		FITTING, grease .125 - 90	
16	- - -	1		OUTER SHELL, ()	
17	- - -	20		BOLT, 3/8 X 7/8 bronze (XB5007)	
18	10704-LB	2		FITTING, grease .125 - str.	
19	- - -	10		PUCKS, retaining - tapped (XB3020)	
20	19495-LB	4		TUBELINE, 1/2” X 24”	

❑ Kit or Assembly - includes all items indented underneath.

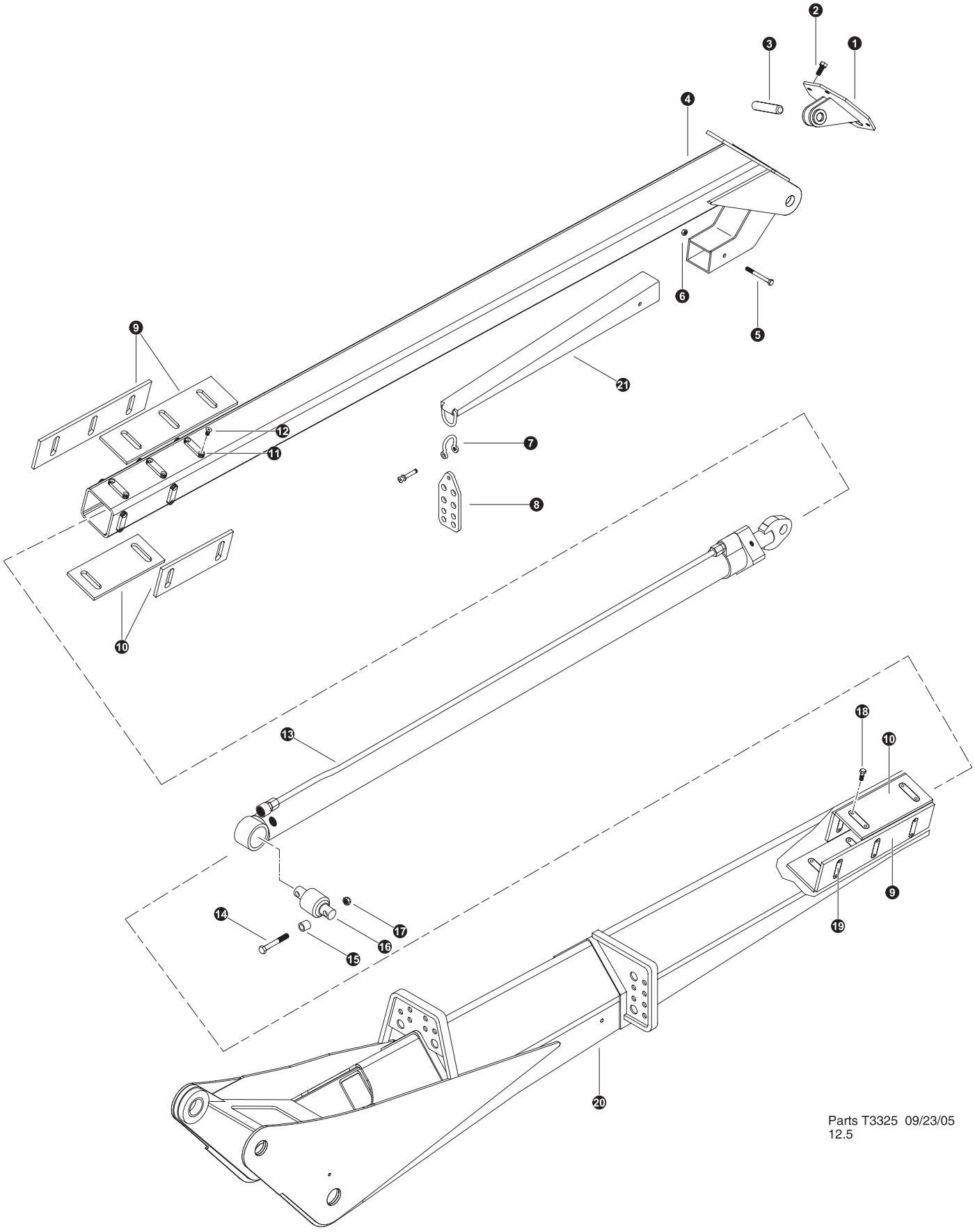


Parts T3331 10/01/05
9.375

SQUIRT BOOM COMPONENTS
(Combo Machine - Heavy Duty Squirt Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
	52158-LB	1	❑	BOOM, SQUIRT 6' (If quick change modifications need to be added please specify when ordering)	
1	- - -	1		CYLINDER ANCHOR (XB2017)	
2	15502-LB	4		BOLT, 5/8 X 1.5	
3	- - -	1		PIN (XB2015)	
4	-LB	1		SLIDE TUBE (quick change)	
5	- - -	4		WEAR PAD, long (XB3006)	
6	- - -	4		WEAR PAD, short (XB3005)	
7	- - -	10		PUCKS, retaining - countersunk (XB3021)	
8	- - -	20		SCREWS, 3/8 X 3/4 brass (XB5001)	
9	REF.	1	🕮	CYLINDER, squirt boom 6'	CC-3
10	- - -	2		SPACER, squirt cylinder mount	
11	- - -	1		BUSHING, squirt cyl rear (HEN44695)	
12	10719-LB	2		BOLT, 5/8 X 4"	
13	15682-LB	2		FITTING, grease .125 - 90	
14	- - -	1		OUTER SHELL,	
15	- - -	20		BOLT, 3/8 X 7/8 bronze (XB5007)	
16	10704-LB	2		FITTING, grease .125 - str.	
17	- - -	10		PUCKS, retaining - tapped (XB3020)	
18	15526-LB	4		BOLT - .625" X 2"	
19	15272-LB	4		CLAMP, SADDLE TOP TUBE - .5" & .5"	
20	19495-LB	5		TUBELINE - .5" X 24"	
21	19497-LB	2		TUBELINE - 1" X 24"	
22	40953-LB	4		CLAMP, SADDLE - DRILLED - .5" X 1"	
23	40690-LB	1		STINGER TUBE, ATTACHMENT ASSEMBLY (quick change)	
24	19679-LB	5		TUBELINE - .5" X 48"	
25	15272-LB	4		CLAMP, SADDLE TOP TUBE - .5" & .5"	
26	42237-LB	2		CLAMP, SADDLE TOP TUBE - .5"	
27	19681-LB	2		TUBELINE - 1" X 48"	
28	12447-LB	2		CLAMP, SADDLE TOP TUBE - 1" & 1"	
29	10771-LB	6		WASHER, SAE FLAT - .625"	
30	15681-LB	4		BOLT - .625" X 2.25"	
31	10720-LB	2		BOLT - .625" X 3"	

❑ Kit or Assembly - includes all items indented underneath.

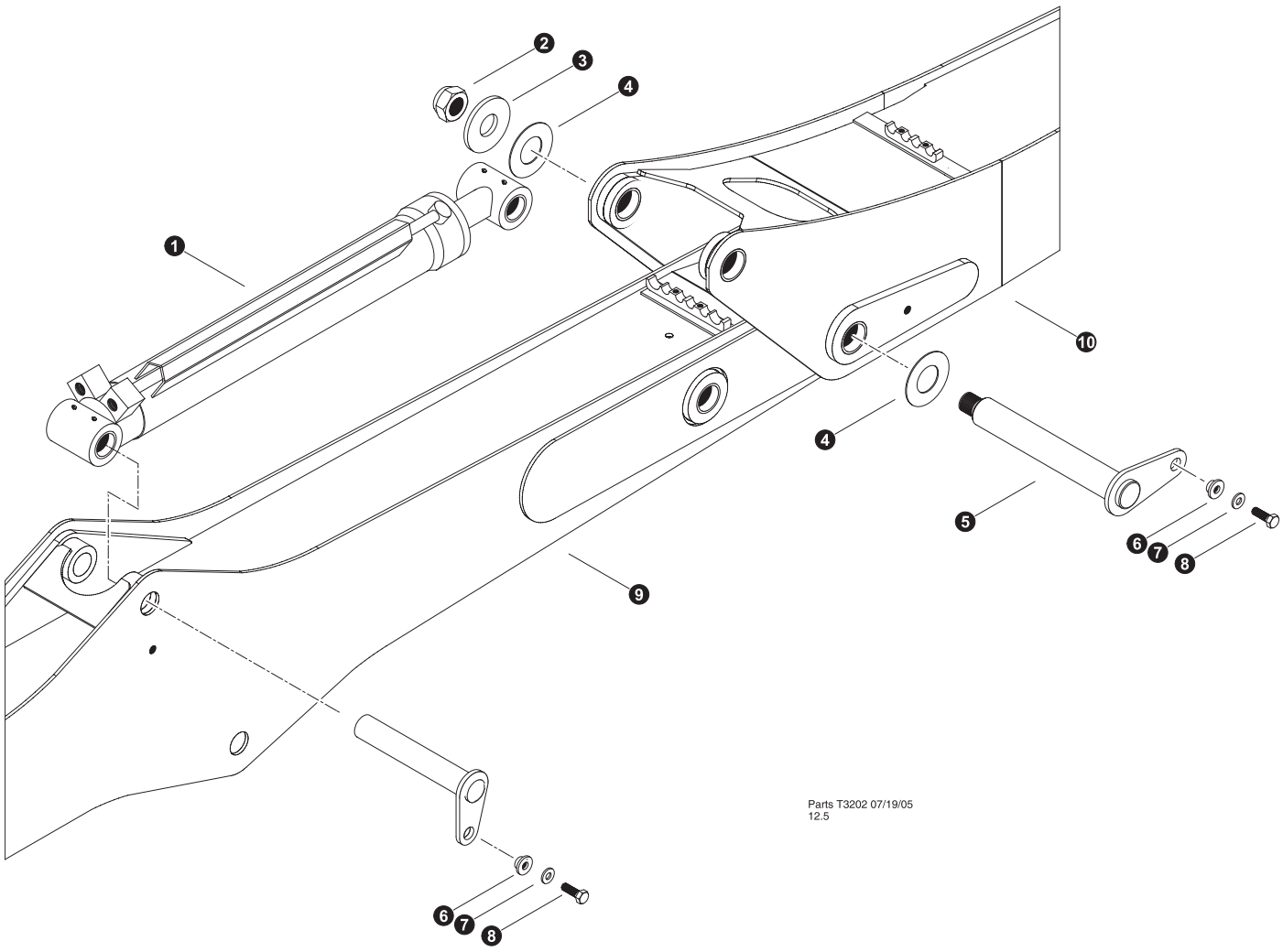


Parts T3325 09/23/05
12.5

SQUIRT BOOM COMPONENTS
(Harvester - Heavy Duty Squirt Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
	52087-LB	1	❑	BOOM, SQUIRT STICK - Heavy Duty 4 / BAR	
1	- - -	1		CYLINDER ANCHOR (XB2017)	
2	15502-LB	4		BOLT, 5/8 X 1.5	
3	- - -	1		PIN (XB2015)	
4	- - -	1		SLIDE TUBE (heavy duty with harvester stinger)	
5	10815-HB	1		NUT, lock 1/2”	
6	10836-HB	1		BOLT - 1/2” x 5-1/2”	
7	21065-HB	1		PLATE, bulkhead stinger	
8	21064-HB	1		SHACKLE, screw pin anchor 1/2”	
9	- - -	4		WEAR PAD, long (XB3006)	
10	- - -	4		WEAR PAD, short (XB3005)	
11	- - -	20		SCREWS, 3/8 X 3/4 brass (XB5001)	
12	- - -	10		PUCKS, retaining - countersunk (XB3021)	
13	REF	1		CYLINDER, squirt boom 6’	LB-3
14	10719-LB	2		BOLT, 5/8 X 4”	
15	- - -	2		SPACER, squirt cylinder mount	
16	- - -	1		BUSHING, squirt cyl rear (HEN44695)	
17	10816-LH	2		NUT, LOCK - .625”	
18	- - -	20		BOLT, 3/8 X 7/8 bronze (XB5007)	
19	- - -	10		PUCKS, retaining - tapped (XB3020)	
20	- - -	1		OUTER SHELL, Heavy Duty Squirt Boom	
21	21063-HB	1		WELDMENT, squirt boom stinger	

❑ Kit or Assembly - includes all items indented underneath.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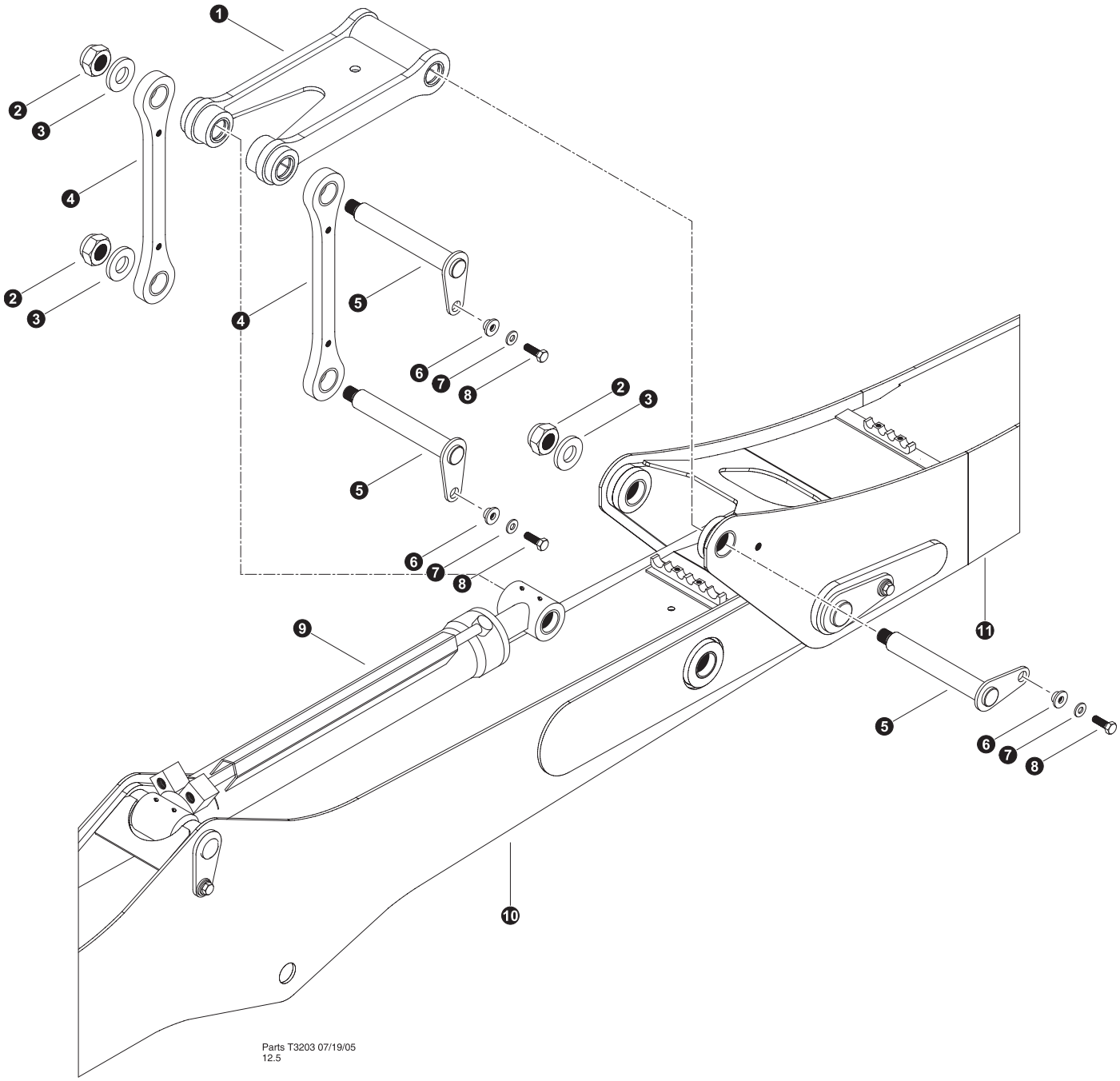
Parts T3202 07/19/05
12.5

STICK BOOM INSTALLATION
(Installation the same for squirt boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1		STICK BOOM CYLINDER	LB-3
2	10728-LB	1		NUT, nylock - 2”	
3	19384-LB	1		WASHER, burned	
4	19150-LB	AR		SHIM - 1/4” thick	
	16633-LB	AR		SHIM - 7 gauge	
	16637-LB	AR		SHIM - 10 gauge	
	16638-LB	AR		SHIM - 14 gauge	
5	51440-LB	1		PIN ASSEMBLY, 2.99 DIA X 21.5 (2” NUT)	
6	18570-LB	1		WASHER, pin retaining	
7	15550-LB	1		WASHER, SAE flat - 3/4”	
8	15549-LB	1		BOLT - 3/4” x 2”	
9	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
10	REF.	1	🕮	STICK BOOM ASSEMBLY	LB-2

🕮 See referenced page for component or assembly breakdown.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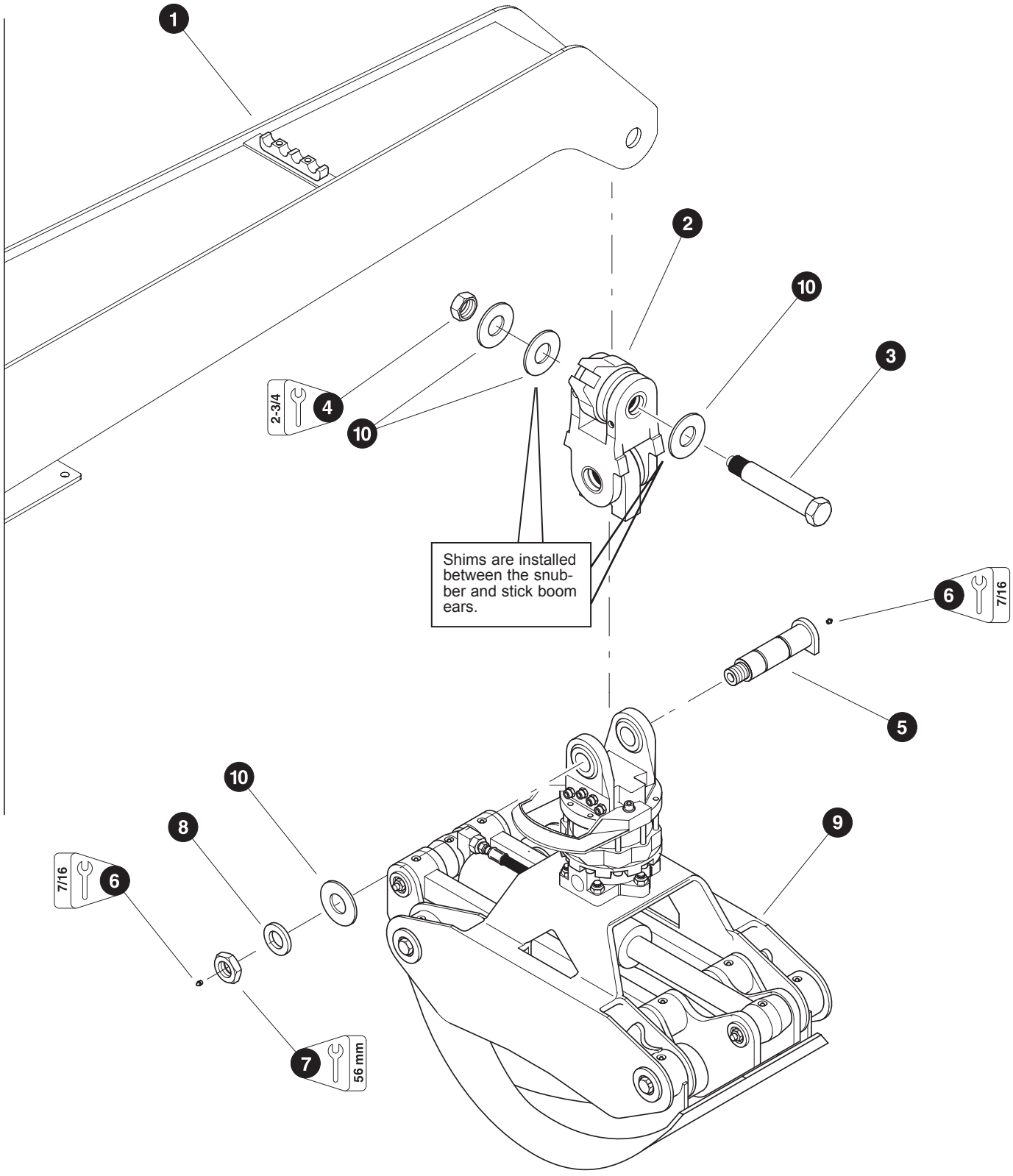
Parts T3203 07/19/05
12.5

STICK BOOM 4 - BAR LINK INSTALLATION
(Installation the same for squirt boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42241-LB	1		LINK, CYLINDER	
2	10728-LB	1		NUT, nylock - 2”	
3	12021-LB	3		WASHER, BURNED	
4	52002-LB	2		LINK, DOGBONE 25.5”	
5	42245-LB	3		PIN ASSEMBLY, 2.49 DIA X 19.13 (2” NUT)	
6	18570-LB	3		WASHER, pin retaining	
7	15550-LB	3		WASHER, SAE flat - 3/4”	
8	15549-LB	3		BOLT - 3/4” x 2”	
9	REF	1		STICK BOOM CYLINDER	LB-3
10	REF.	1	🕮	MAIN BOOM ASSEMBLY	LB-1
11	REF.	1	🕮	STICK BOOM ASSEMBLY	LB-2

🕮 See referenced page for component or assembly breakdown.



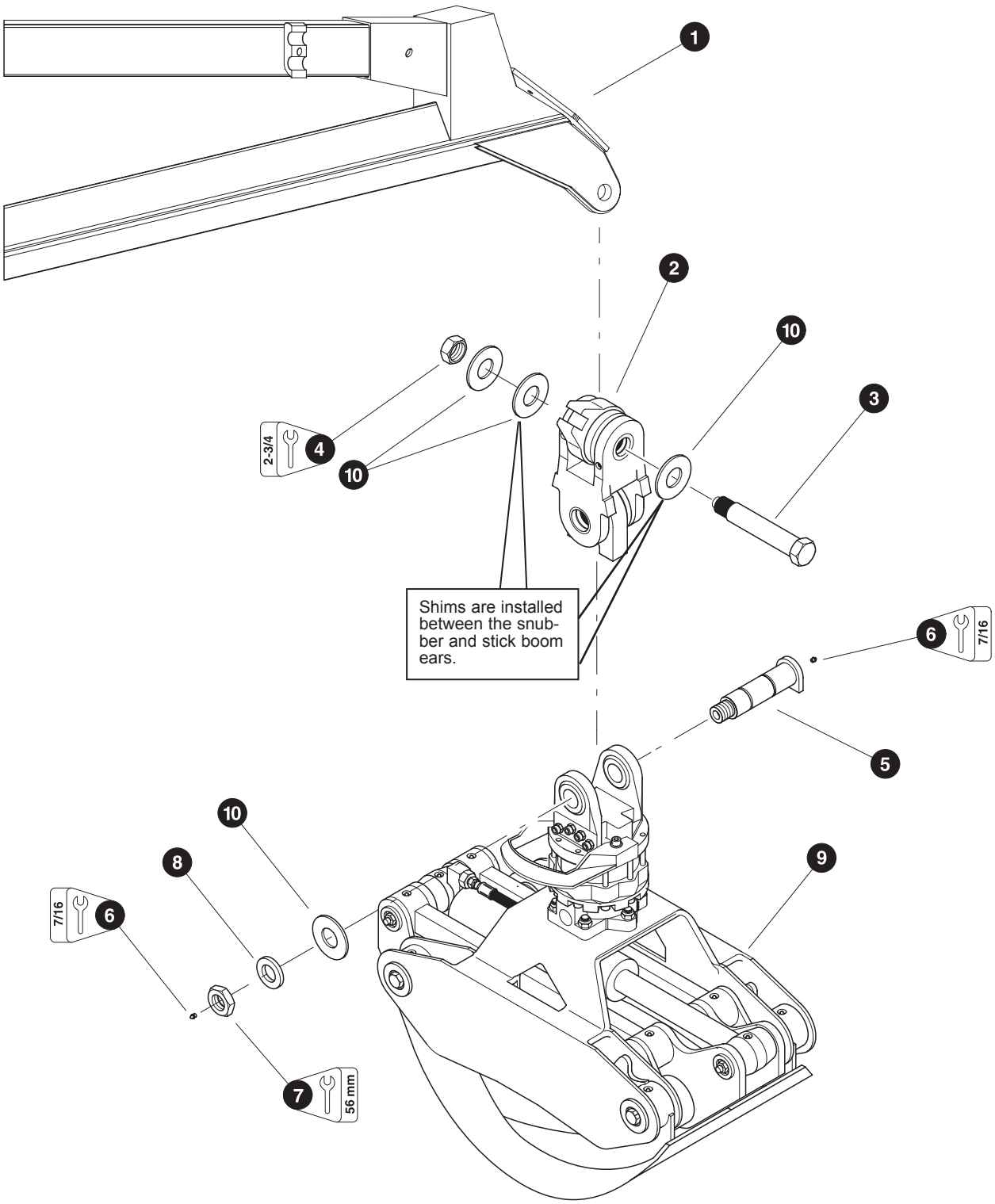
Parts T3205 07/14/05
12.50

HULTDINS SUPERGRIP 360S GRAPPLE INSTALLATION

(With Optional QUADCO Snubber)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	STICK BOOM ASSEMBLY	LB-2
2	19790-LB	1	❑	SNUBBER	
3	23528-LB	1		PIN - 1-3/4” x 10-3/4”	
4	20811-LB	1		NUT, nylock - 1-1/2”	
5	19789-LB	1	❑	PIN, grapple mount	
6	10704-LB	2		FITTING, grease - 1/8” pipe thread	
7	50281-LB	1		NUT, grapple mount pin	
8	50282-LB	1		WASHER, grapple mount pin	
9	REF.	1	❑	GRAPPLE - Hultdins 360S *(See Manufacturer’s Manual)*	
10	19682-LB	4		SHIM, 1.75 X .075	

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



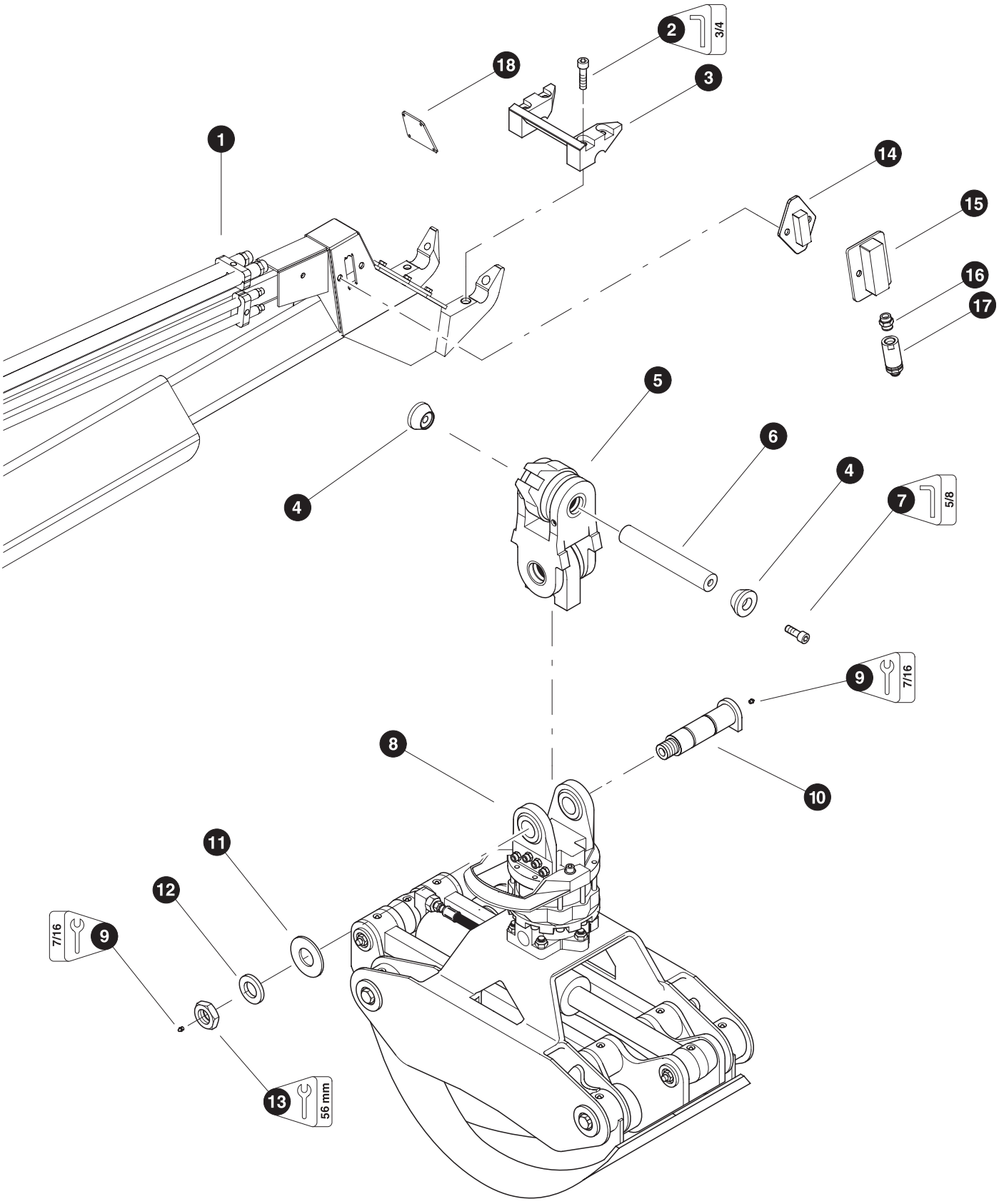
Parts T2750 07/14/03
12.50

HULTDINS SUPERGRIP 360S GRAPPLE INSTALLATION

(Optional Squirt Boom Instalation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	STICK BOOM ASSEMBLY	LB-2
2	19790-LB	1	❑	SNUBBER	
3	23528-LB	1		PIN - 1-3/4” x 10-3/4”	
4	20811-LB	1		NUT, nylock - 1-1/2”	
5	19789-LB	1	❑	PIN, grapple mount	
6	10704-LB	2		FITTING, grease - 1/8” pipe thread	
7	50281-LB	1		NUT, grapple mount pin	
8	50282-LB	1		WASHER, grapple mount pin	
9	REF.	1	❑	GRAPPLE - Hultdins 360S *(See Manufacturer’s Manual)*	
10	19682-LB	4		SHIM, 1.75 X .075	

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



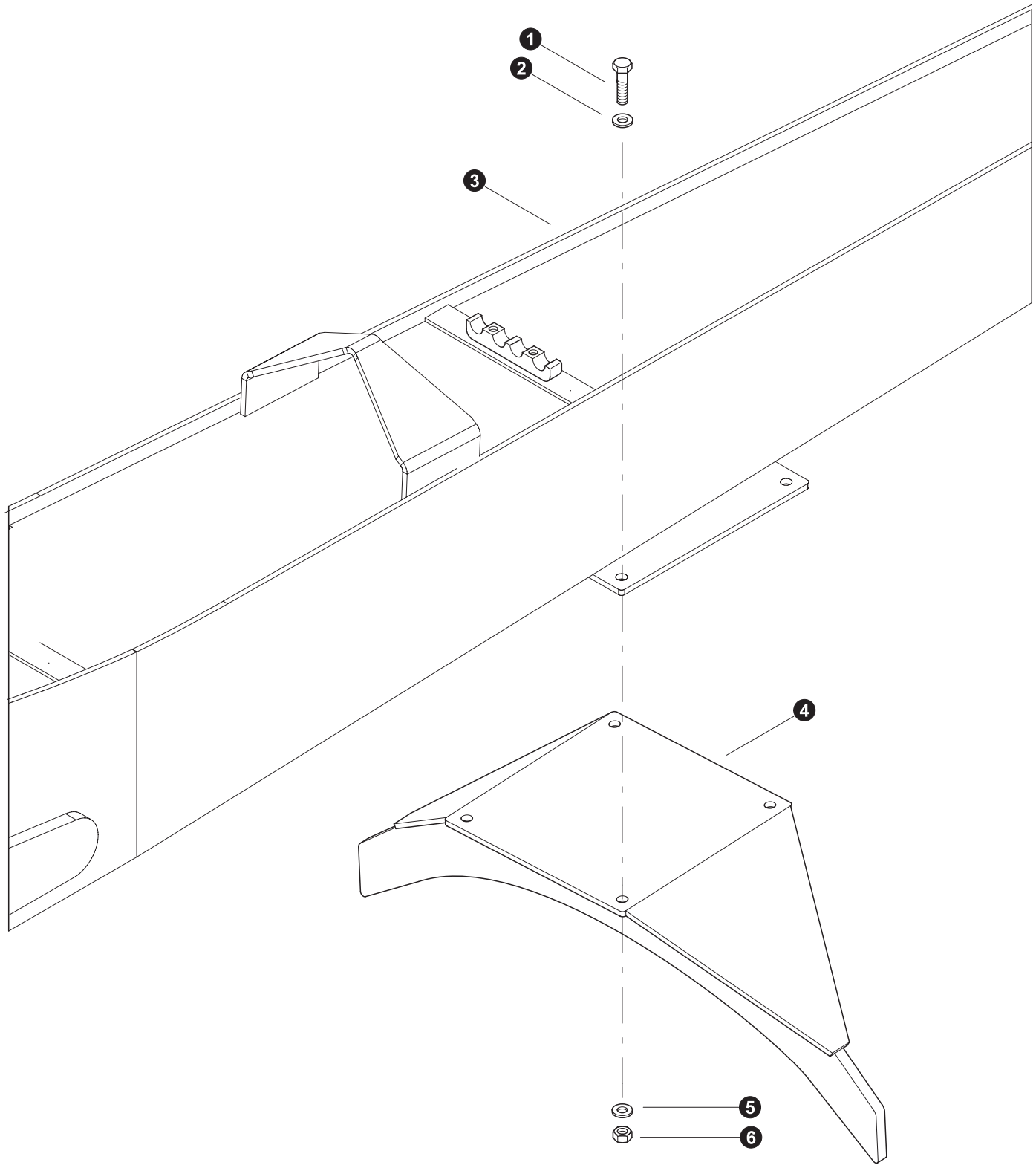
Parts T2917 10/01/03
12.50

HULTDINS SUPERGRIP 360S GRAPPLE INSTALLATION

(Combo Machine with Quick Change)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	SQUIRT BOOM ASSEMBLY	LB-2
2	51218-LB	4		BOLT, ALLEN HEAD - .875” X 3.5”	
3	51219-LB	1		CLAMP, QUICK CHANGE (TOP)	
4	40674-LB	2		TAPPER, Quick Change Pin	
5	19790-LB	1		SNUBBER (Quadco)	
6	40673-LB	2		PIN, 1.75” (quick change)	
7	51217-LB	4		BOLT, ALLEN HEAD - .875” X 2”	
8	REF.	1	❑	GRAPPLE - Hultdins 360S	LB-4
9	10704-LB	2		FITTING, grease - 1/8” pipe thread	
10	19789-LB	1		PIN, grapple mount	
11	19682-LB	4		SHIM, 1.75 X .075	
12	50282-LB	1		WASHER, grapple mount pin	
13	50281-LB	1		NUT, grapple mount pin	
14	40704-LB	1		COVER, FRONT PLATE (quick change)	
15	40681-LB	1		COVER, QUICK CHANGE ELEC CONNECTOR	
16	19473-LB	1		CONNECTOR, STR - 6403-16	
17	19541-LB	1		SWIVEL, INLINE	
18	40703-LB	1		COVER, ELECTRICAL (quick change)	

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



Parts T3204 07/21/05
18.75

OPTIONAL STICK BOOM MOUNTED HEEL

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	10736-LB	4		BOLT - 1/2” x 2”	
2	15534-LB	8		WASHER, SAE flat - 1/2”	
3	REF.	1	🕮	STICK BOOM ASSEMBLY	LB-2
4	20858-LB	1		WELDMENT, stick boom heel	
5	10815-LB	4		NUT, lock - 1/2”	

🕮 See referenced page for component or assembly breakdown.

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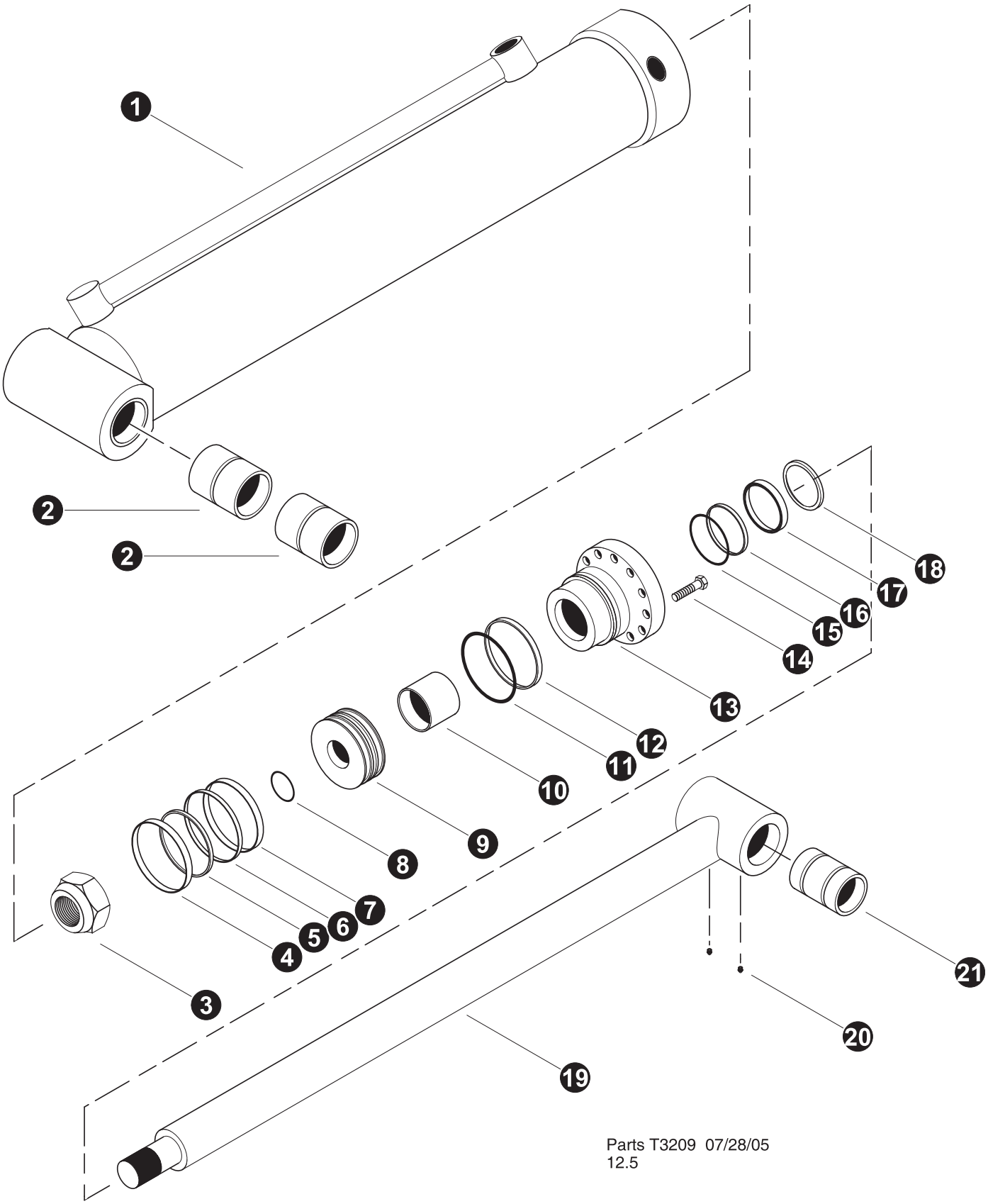
Section LB-3

Loader Booms - Cylinders



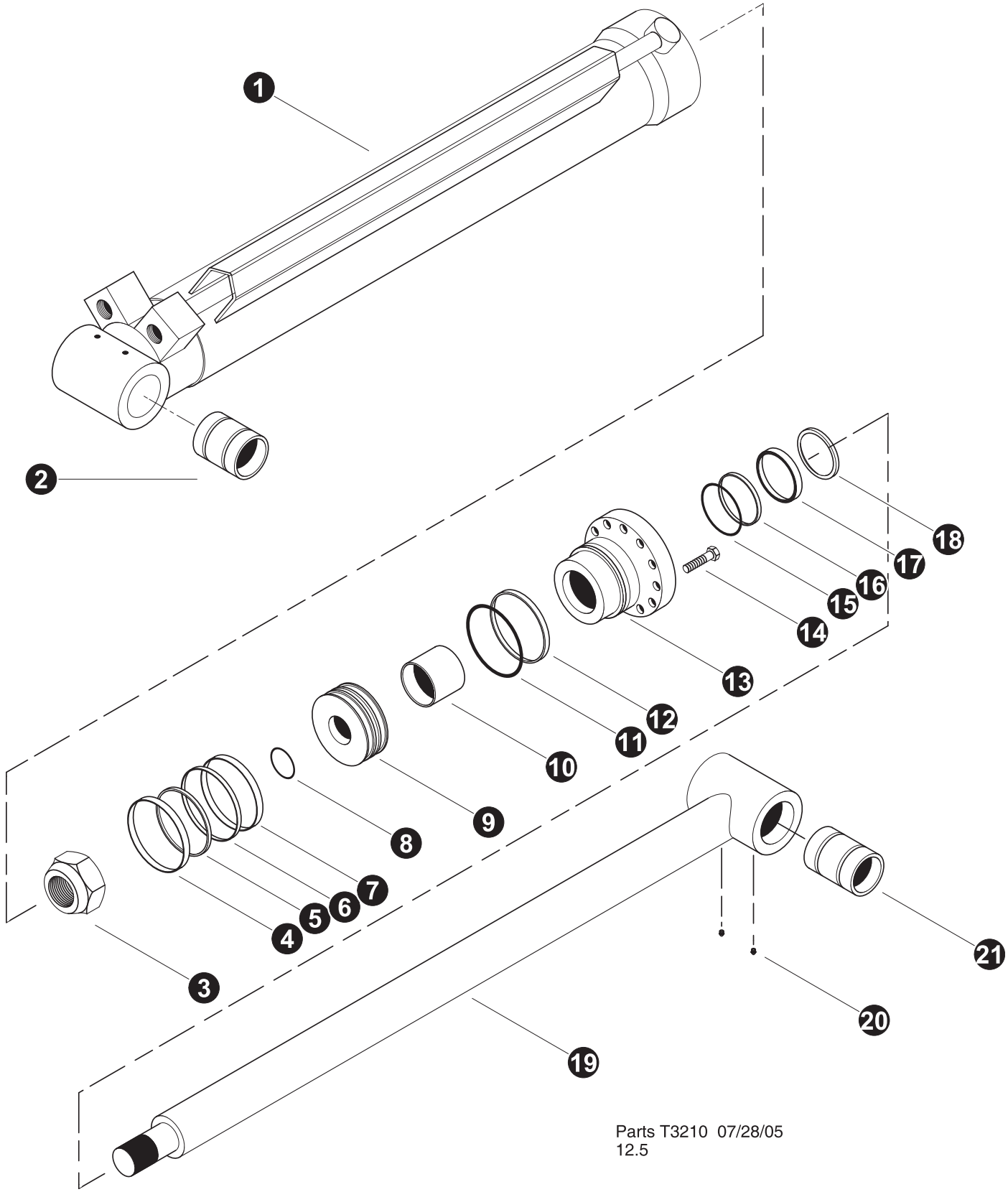
Parts T3209 07/28/05
12.5

MAIN BOOM (HOIST) CYLINDER

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	52005-LB	1	❑	MAIN BOOM CYLINDER ASSEMBLY	
1	-LB	1	❑	BARREL ASSEMBLY	
2	11706-LB	2		BUSHING - 3” x 4-1/4”	
3	15287-LB	1		NUT, cylinder rod - 2” NF ***(Torque to 2700 +/- 200 ft.lbs. (3600 +/- 265 Nm))***	
4	NSS	1	⌘	RING, piston	
5	NSS	1	⌘	RING, backup piston	
6	NSS	1	⌘	RING, piston	
7	NSS	1	⌘	RING, piston	
8	NSS	1	⌘	O-RING, piston	
9	23206-LB	1		PISTON	
10	NSS	1	⌘	RING, rod bearing wear	
11	NSS	1	⌘	O-RING, rod bearing	
12	NSS	1	⌘	RING, rod bearing back-up	
13	-LB	1		BEARING, rod (500860B)	
14	-LB	12		BOLT - 5/8” ***(Torque to 175 ft.lbs (233 Nm))***	
15	NSS	1	⌘	RING, rod bearing back-up	
16	NSS	1	⌘	RING, rod bearing	
17	NSS	1	⌘	U-CUP, rod bearing	
18	NSS	1	⌘	WIPER, rod	
19	-LB	1	❑	ROD ASSEMBLY (302034B)	
20	10704-LB	1		FITTING, straight grease - 1/8” pipe thread	
21	-LB	1		BUSHING	

-	52107-LB	1	⌘	KIT, SEAL REPAIR - STICK CYL 830/630	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 52107-LB.

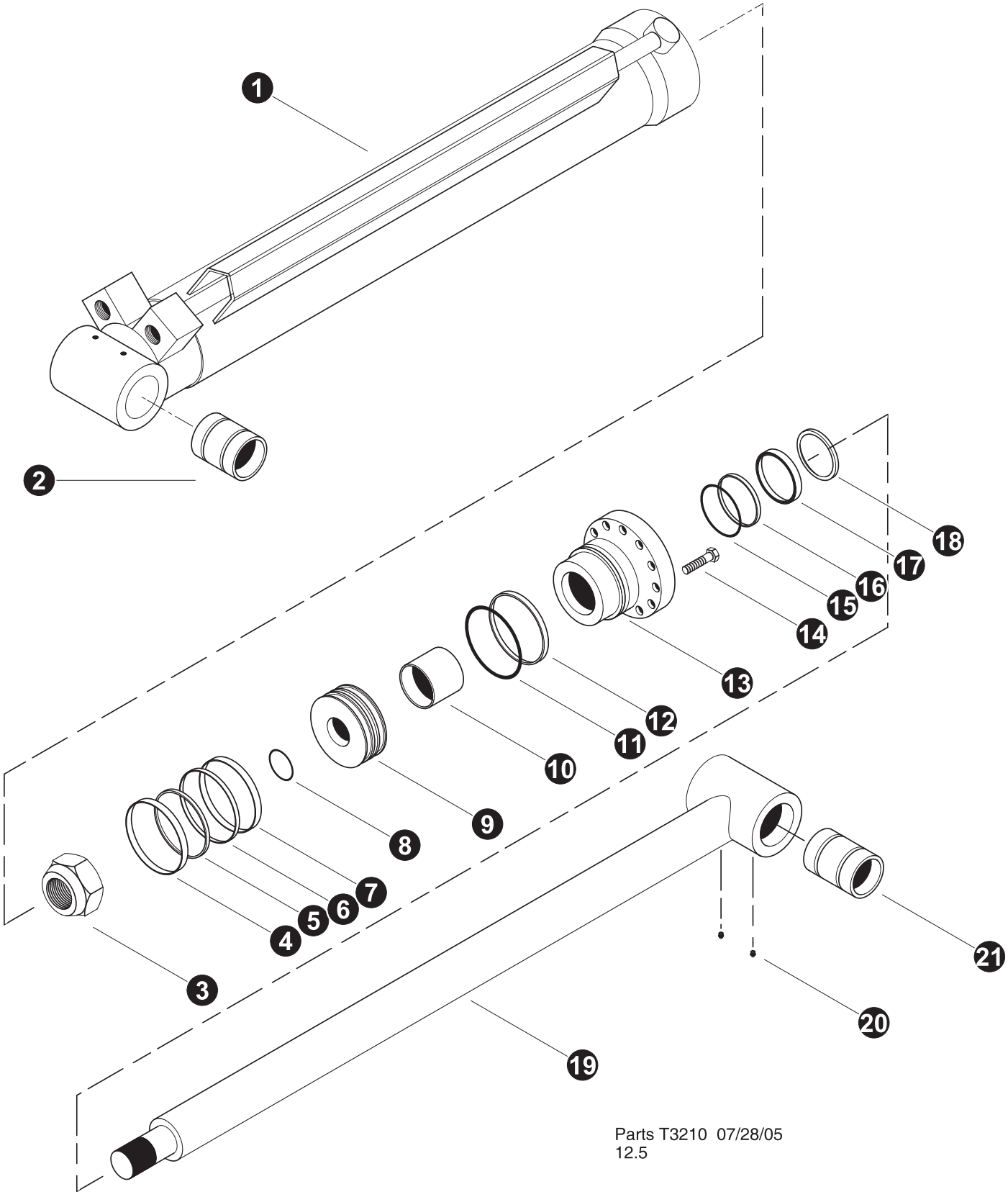


Parts T3210 07/28/05
12.5

STICK BOOM (JIB) CYLINDER
(Forwarder)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	51562-LB	1	❑	STICK BOOM CYLINDER ASSEMBLY	
1	-LB	1	❑	BARREL ASSEMBLY (203232B)	
2	-LB	1		BUSHING	
3	15287-LB	1		NUT, cylinder rod - 2” NF ***(Torque to 2700 +/- 200 ft.lbs. (3600 +/- 265 Nm))***	
4	NSS	1	⌘	RING, piston	
5	NSS	1	⌘	RING, backup piston	
6	NSS	1	⌘	RING, piston	
7	NSS	1	⌘	RING, piston	
8	NSS	1	⌘	O-RING, piston	
9	-LB	1		PISTON (400541B)	
10	NSS	1	⌘	RING, rod bearing wear	
11	NSS	1	⌘	O-RING, rod bearing	
12	NSS	1	⌘	RING, rod bearing back-up	
13	-LB	1		BEARING, rod (500826B)	
14	-LB	12		BOLT - 5/8” ***(Torque to 175 ft.lbs (233 Nm))***	
15	NSS	1	⌘	RING, rod bearing back-up	
16	NSS	1	⌘	RING, rod bearing	
17	NSS	1	⌘	U-CUP, rod bearing	
18	NSS	1	⌘	WIPER, rod	
19	-LB	1	❑	ROD ASSEMBLY (301946B)	
20	10704-LB	1		FITTING, straight grease - 1/8” pipe thread	
21	-LB	1		BUSHING	
-	52108-LB	1		KIT, seal repair - stick boom cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 52108-LB.

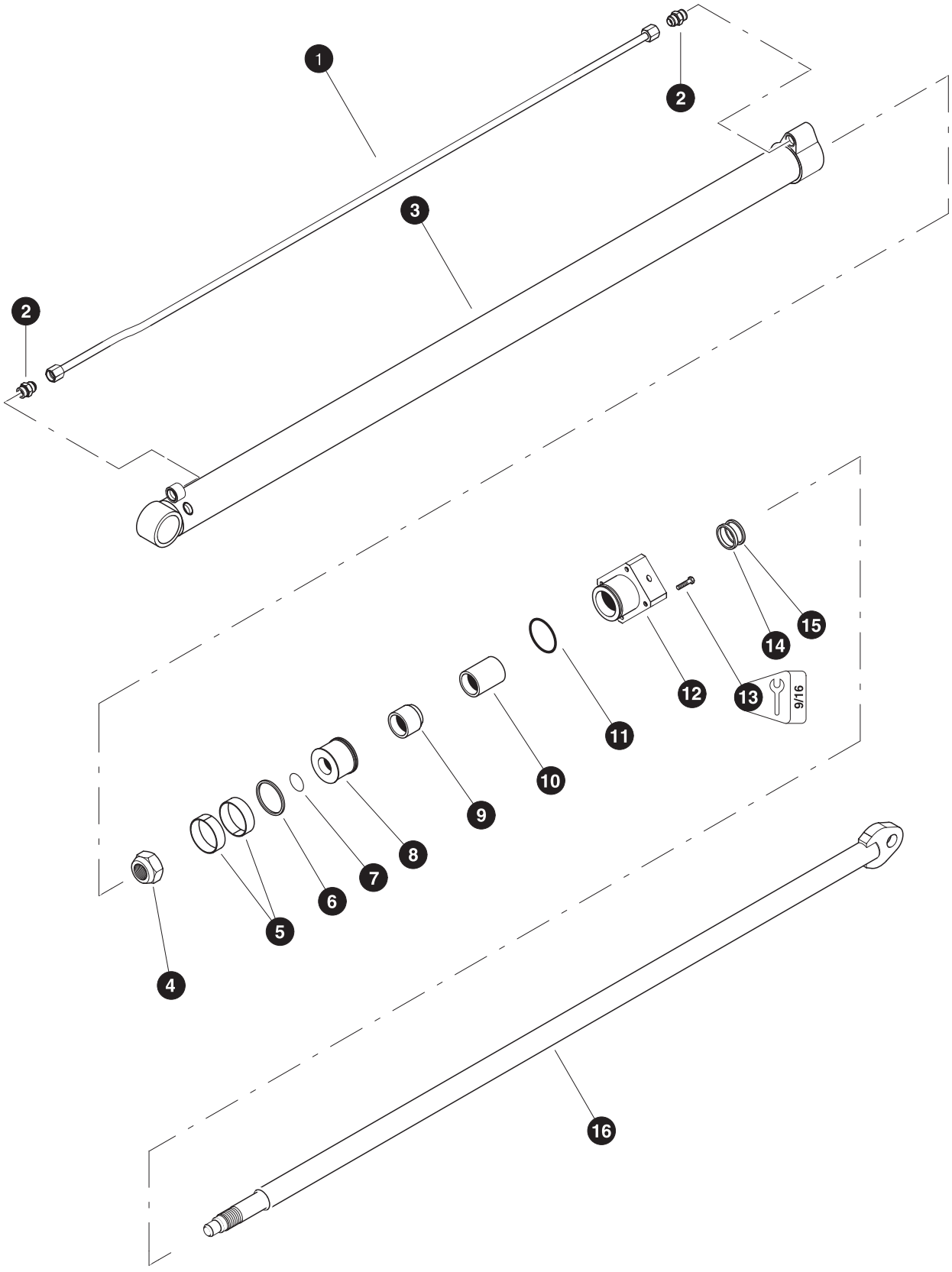


Parts T3210 07/28/05
12.5

STICK BOOM (JIB) CYLINDER
(Harvester - Heavy Duty)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	52016-LB	1	❑	CYLINDER, STICK - FWD 4/BAR (HD 5.5” DIA)	
1	-LB	1	❑	BARREL ASSEMBLY (203329B)	
2	-LB	1		BUSHING	
3	15287-LB	1		NUT, cylinder rod - 2” NF ***(Torque to 2700 +/- 200 ft.lbs. (3600 +/- 265 Nm))***	
4	NSS	1	⌘	RING, piston	
5	NSS	1	⌘	RING, backup piston	
6	NSS	1	⌘	RING, piston	
7	NSS	1	⌘	RING, piston	
8	NSS	1	⌘	O-RING, piston	
9	23206-LB	1		PISTON	
10	NSS	1	⌘	RING, rod bearing wear	
11	NSS	1	⌘	O-RING, rod bearing	
12	NSS	1	⌘	RING, rod bearing back-up	
13	-LB	1		BEARING, rod (500860B)	
14	-LB	12		BOLT - 5/8” ***(Torque to 175 ft.lbs (233 Nm))***	
15	NSS	1	⌘	RING, rod bearing back-up	
16	NSS	1	⌘	RING, rod bearing	
17	NSS	1	⌘	U-CUP, rod bearing	
18	NSS	1	⌘	WIPER, rod	
19	-LB	1	❑	ROD ASSEMBLY (301946B)	
20	10704-LB	1		FITTING, straight grease - 1/8” pipe thread	
21	-LB	1		BUSHING	
-	52107-LB	1	⌘	KIT, SEAL REPAIR - STICK CYL 830/630	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 52107-LB.



Parts T2754 07/14/2003
12.50

SQUIRT BOOM CYLINDER
(optional)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	51008-LB	1	❑	CYLINDER, 6' squirt	
1	- - -	1		TRANSFER TUBE (281266a)	
2	- - -	1		FITTING (710785a)	
3	51028-LB	1		BARREL ASSEMBLY	
4	51032-LB	1		NUT (712118A)	
5	- - -	1	⌘	RING, piston - wear	
6	- - -	1	⌘	RING, piston - square	
7	- - -	1	⌘	O-RING, piston	
8	51030-LB	1		PISTON	
9	- - -	1		CUSHION SLEEVE	
10	- - -	1		BUSHING, rod bearing (bronze)	
11	- - -	1	⌘	O-RING, rod bearing	
12	51031-LB	1		BEARING, rod	
13	- - -	4		BOLT - (711206A)	
14	- - -	1	⌘	U-CUP, rod bearing	
15	- - -	1	⌘	WIPER, rod	
16	51029-LB	1		ROD ASSEMBLY	
-	51033-LB	1		KIT, seal repair - boom extension cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 51033-LB

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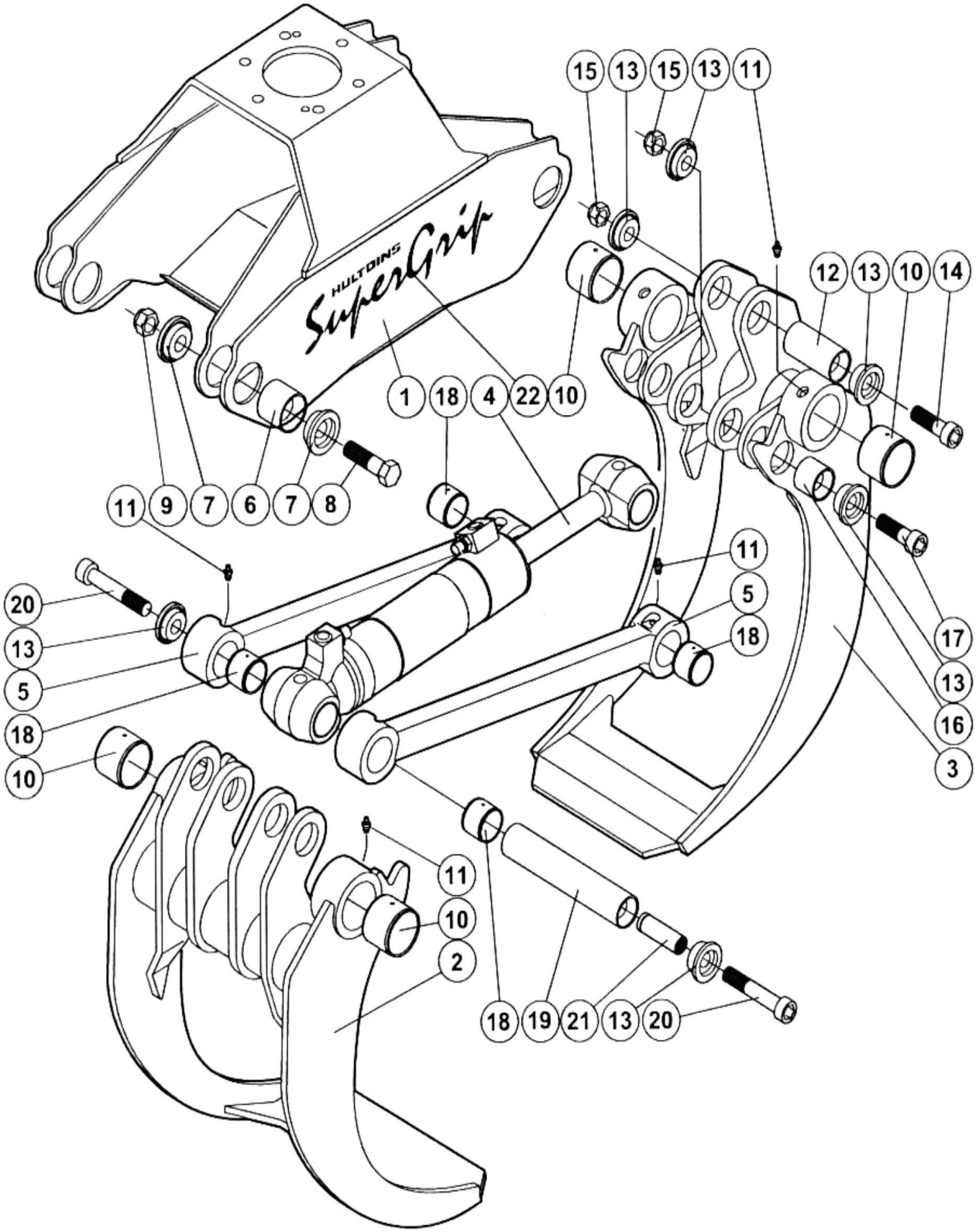
Section LB-4

Loader Booms - Hultdins Grapple

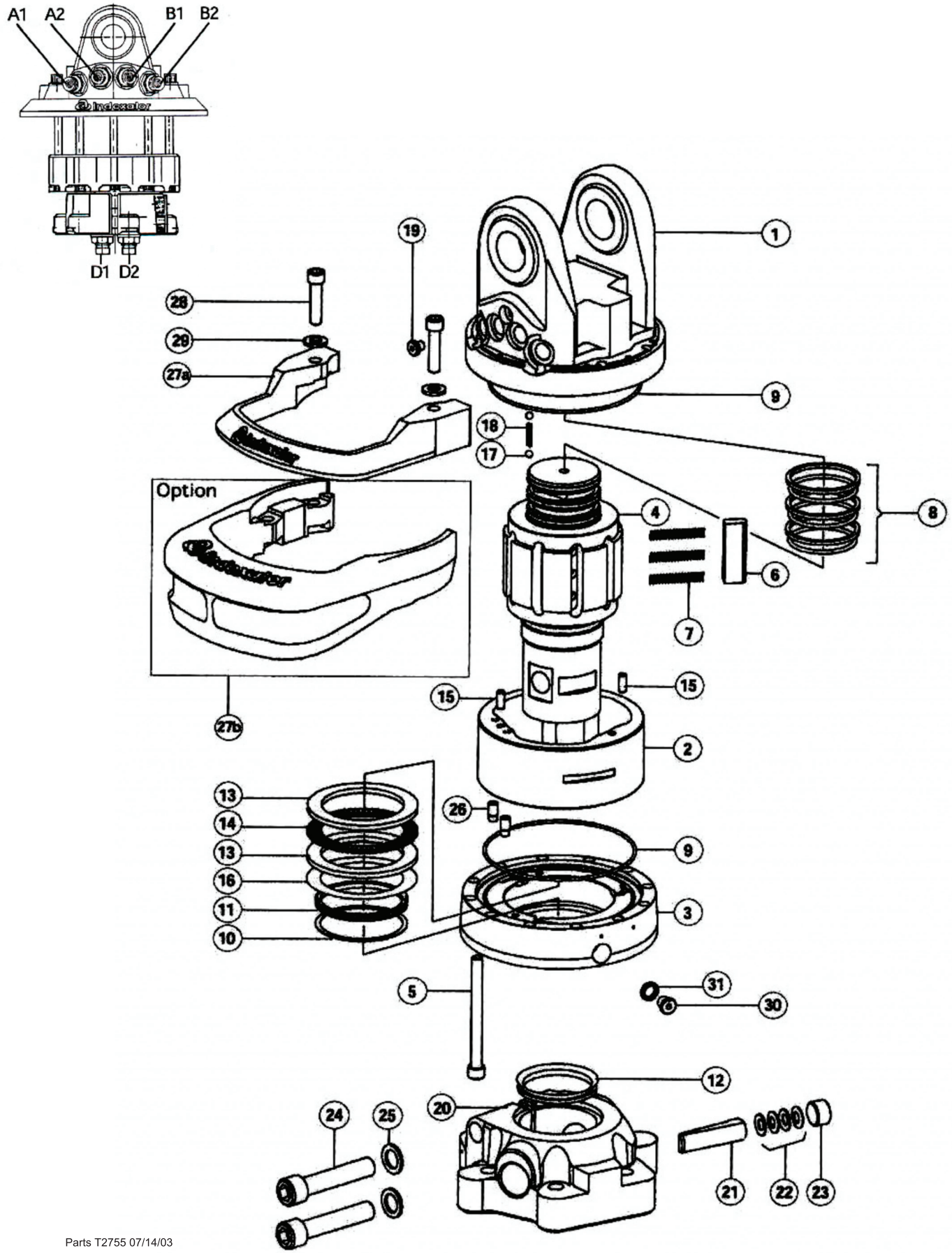


Parts T2757 07/14/03

HULTDINS 360S GRAPPLE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	22719-LB	1	❑	GRAPPLE, Hultdins 360s w\GV 17us	
1	- - -	1		FRAME, (0680501)	
2	- - -	1		GRAPPLE ARM, female (0680508)	
3	- - -	1		GRAPPLE ARM, male (0680507)	
4	- - -	1		CYLINDER (0150016)	
5	- - -	2		ROD (0680030)	
6	- - -	4		PIN (0680521)	
7	- - -	8		WASHER (0683021)	
8	- - -	4		SCREW, hex (0104634)	
9	- - -	4		NUT (0106033)	
10	- - -	4		BUSHING, (0683071)	
11	- - -	8		NIPPLE, grease (0114004)	
12	- - -	1		PIN (0680077)	
13	- - -	8		WASHER (0680054)	
14	- - -	1		BOLT, allen (0104132)	
15	- - -	3		NUT, (0106030)	
16	- - -	2		PIN, (0680015)	
17	- - -	2		BOLT, allen (0104502)	
18	- - -	4		BUSHING, (0680072)	
19	- - -	1		PIN, (0680075)	
20	- - -	1		BOLT, allen (0104502)	
20	- - -	1		BOLT, allen (0104132)	
21	- - -	1		NUT, (0660263)	

❑ Kit or Assembly - includes all items indented underneath.

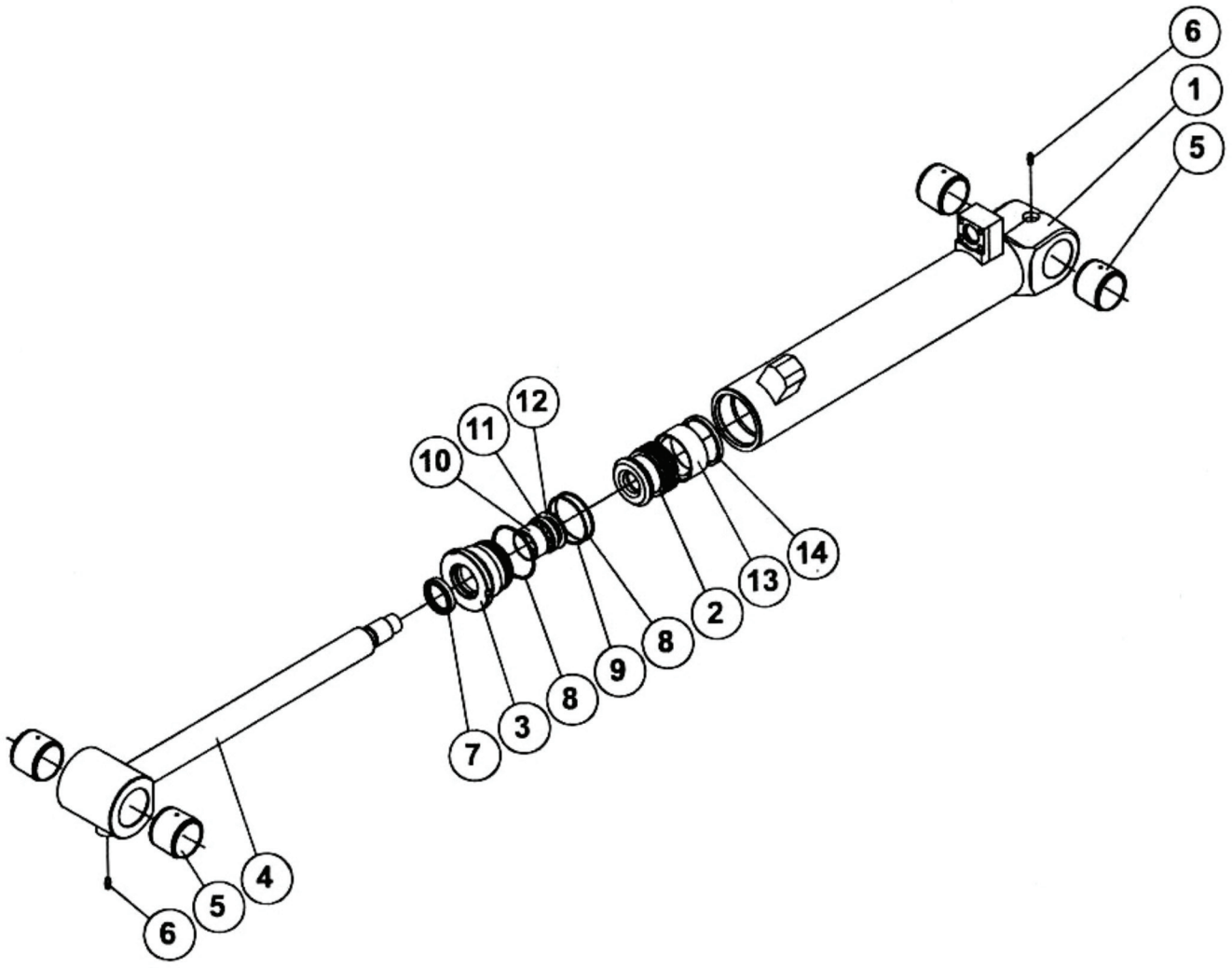


Parts T2755 07/14/03

HULTDINS 360S GRAPPLE
(Indexator GV 17us Rotator)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	50586-LB	1	❑	ROTATOR, GV 17us	
1	- - -	1		STATOR PLATE, upper (5114178)	
2	- - -	1		STATOR FRAME (5114023)	
3	- - -	1		STATOR PLATE, lower (5114020)	
4	- - -	1		ROTATOR SHAFT, (5117027)	
5	- - -	12		SCREW, (1002120)	
6	- - -	9		VANE, (5011160)	
7	- - -	27		SPRING, (5006030)	
8	- - -	3	⌘	GLIDE RING, (1005669)	
9	- - -	2	⌘	O-RING (1013515)	
10	- - -	1	⌘	RING, support (1015064)	
11	- - -	1	⌘	SEAL (1023753)	
12	- - -	1	⌘	V-RING (1019470)	
13	- - -	2		WASHER, (1018951)	
14	- - -	1		BEARING, axial needle (1015080)	
15	- - -	4		PIN (1019900)	
16	- - -	1		SHIM SET (5010081)	
17	- - -	2		BALL (1005545)	
18	- - -	1		SPRING (1020536)	
19	- - -	1		PLUG, (5001381)	
20	- - -	1		LINK, lower (5117022)	
21	- - -	1		WEDGE, (5010038)	
22	- - -	4		SPRING, cup (1015643)	
23	- - -	1		SCREW, locking (5010039)	
24	- - -	2		SCREW, (1019488)	
25	- - -	2		WASHER, (1019496)	
26	- - -	2		RESTRICTOR, (5011107)	
27	- - -	1		GUARD, hose (5011006)	
28	- - -	2		SCREW, (1019926)	
29	- - -	2		WASHER, (1017326)	
30	- - -	1		PLUG, magnetic (1025709)	
31	- - -	1		SEAL, bonded (1019116)	
-	20276-LB	1		KIT, seal repair - GV 17 rotator	
A1	15115-LB	1		CONNECTOR, straight - 848 TTO 08X10	
A2	15115-LB	1		CONNECTOR, straight - 848 TTO 08X10	
B1	15115-LB	1		CONNECTOR, straight - 848 TTO 08X10	
B2	15115-LB	1		CONNECTOR, straight - 848 TTO 08X10	
D1	15117-LB	1		CONNECTOR, straight - 848 TTO 08 X 08	
D2	15117-LB	1		CONNECTOR, straight - 848 TTO 08 X 08	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20276-LB.



Parts T2756 07/14/03

HULTDINS 360S GRAPPLE
(Cylinder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51035-LB	1	❑	CYLINDER, hultdins grapple (0150016)	
1	- - -	1		BARREL (0150555)	
2	- - -	1		PISTON (0150502)	
3	- - -	1		GLAND (0150503)	
4	- - -	1		ROD (0150554)	
5	- - -	4		BEARING, plain (0680073)	
6	- - -	2		FITTING, grease M6 (0114004)	
7	- - -	1	⌘	SEAL, dust	
8	- - -	2	⌘	O-RING	
9	- - -	1	⌘	RING, backup	
10	- - -	1	⌘	RING, guide	
11	- - -	1	⌘	SEAL, rod	
12	- - -	1	⌘	RING, retainer	
13	- - -	1	⌘	SEAL, piston	
14	- - -	1		RING, piston (0150527)	
	51034-LB			KIT, SEAL REPAIR (0121076)	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part #51034 -LB.

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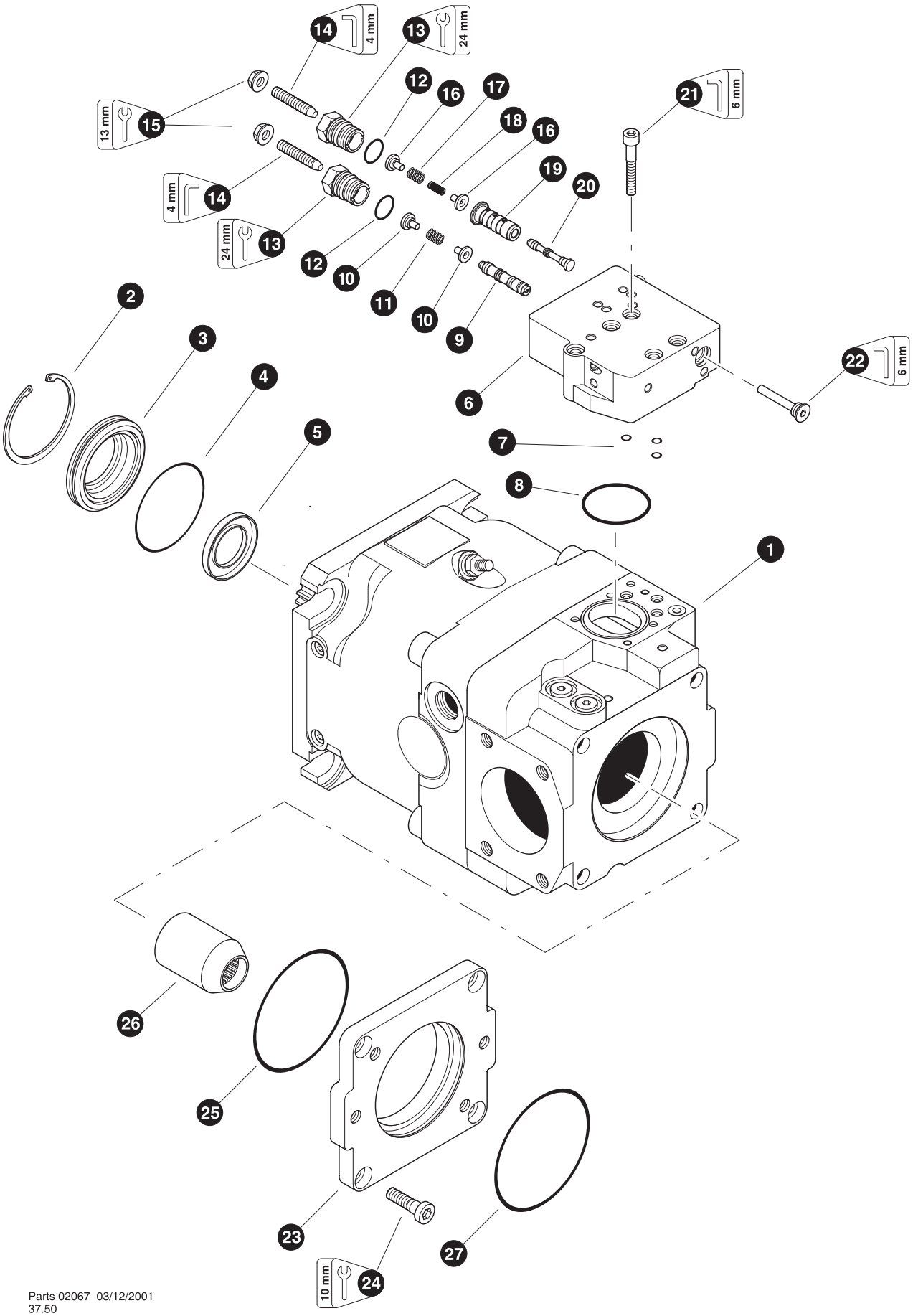
Section HH-1

Harvester / Feller Buncher Hydraulics - Implement Pumps



Parts 02067 03/12/2001
37.50

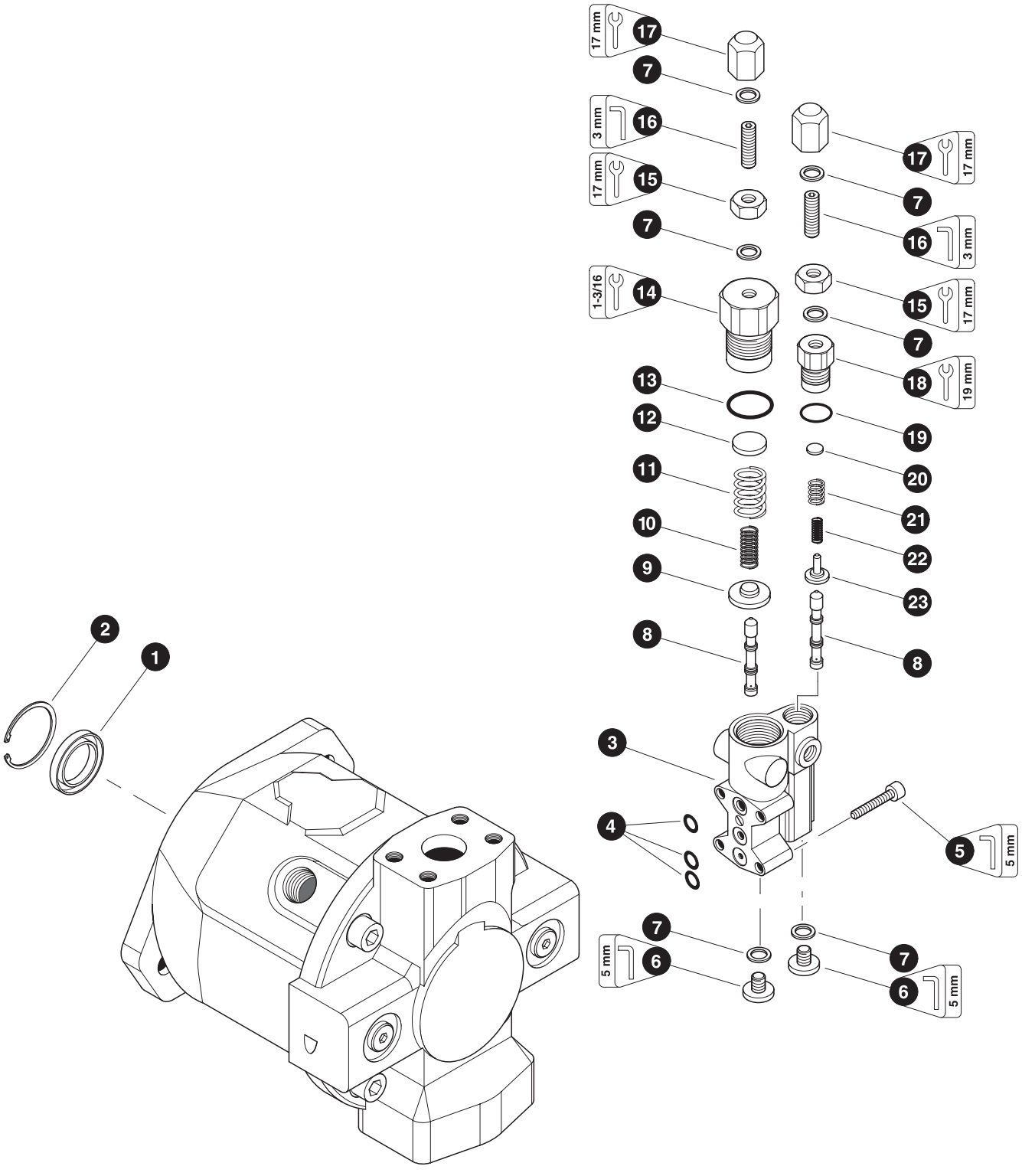
IMPLEMENT PUMP
(Rexroth 145cc)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	24505-HH	1	❑	PUMP, implement - Rexroth 145cc	
2	21546-HH	1		RING, seal retaining	
3	21547-HH	1		COVER, front	
4	21548-HH	1	⌘	O-RING, front cover	
5	18687-HH	1	⌘	SEAL, shaft	
6	18681-HH	1	❑	COMPENSATOR	
7	20809-HH	3	⌘	O-RING, quad	
8	20808-HH	1	⌘	O-RING, compensator	
9	NSS	1		SPOOL. POR pressure	
10	21551-HH	2		RETAINER, spring	
11	21552-HH	1		SPRING	
12	21553-HH	2	⌘	O-RING, compensator cap	
13	21554-HH	2		CAP, compensator	
14	20358-HH	2	⌘	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	❑	KIT, FLANGE, thru drive vlo	
24	17608-HH	4		BOLT, allen head - 12mm-1.75P x 30mm	
25	17744-HH	1	⌘	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 *(Complete pump)*	

❑ 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.

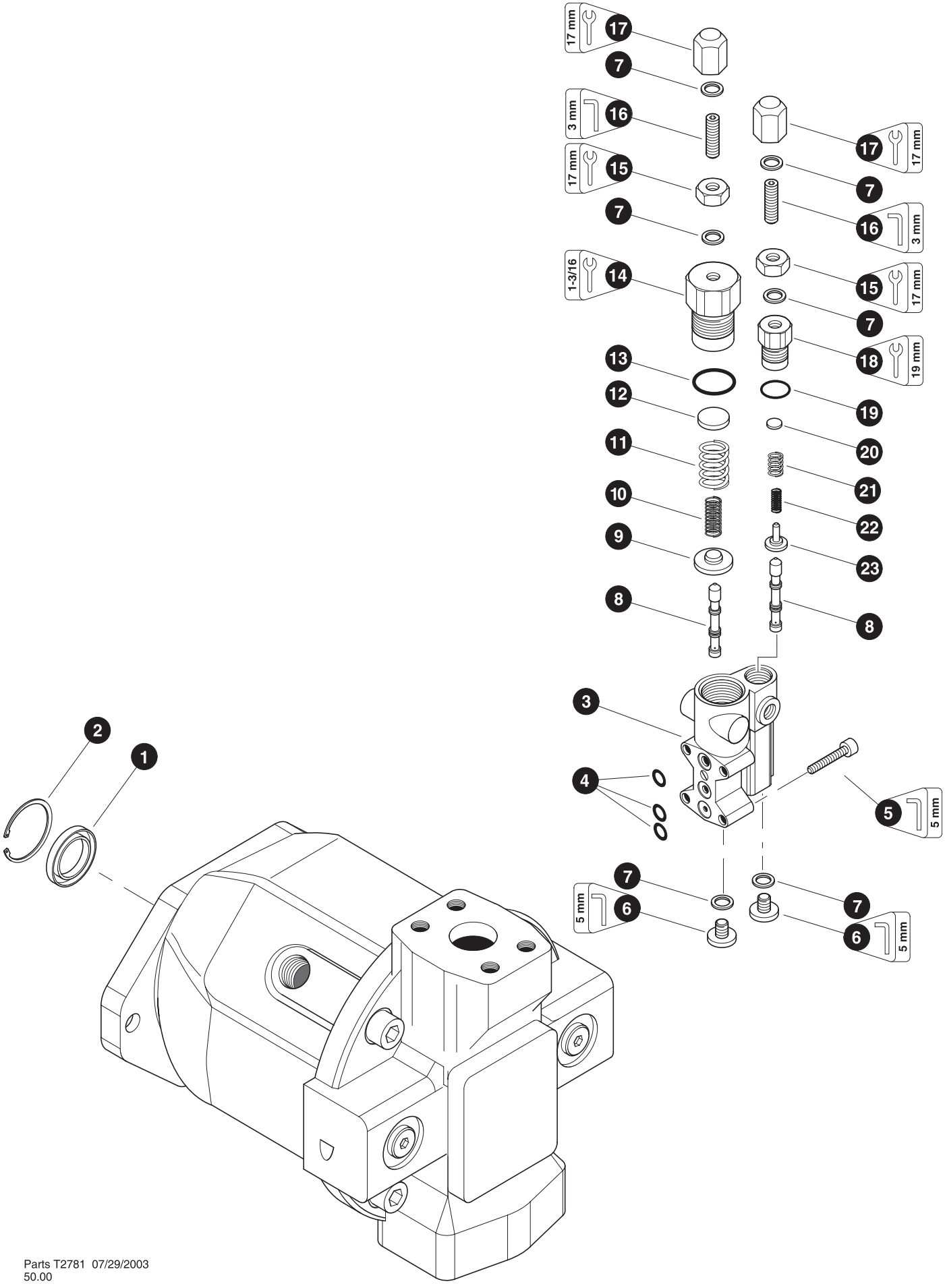


Parts 00867 01/01/2001
50.00

AUX - DISC SAW PUMP
(45 cc)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	15317-HH	1	❑	PUMP, disc saw (45 CC)	
1	15890-HH	1	⌘	SEAL, shaft	
2	21581-HH	1		RING, seal retaining	
--	15891-HH	1	❑	COMPENSATOR, pump control	
3	NSS	1		HOUSING ASSEMBLY	
4	16856-HH	3	⌘	O-RING	
5	21582-HH	4		BOLT, compensator mounting	
6	20339-HH	2		PLUG	
7	16855-HH	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-HH	2		NUT, jam - 8mm	
16	17459-HH	2		SCREW, adjustment - 8mm	
17	17697-HH	2		NUT, acorn	
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-HH	1		KIT, seal repair - disc saw pump	

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

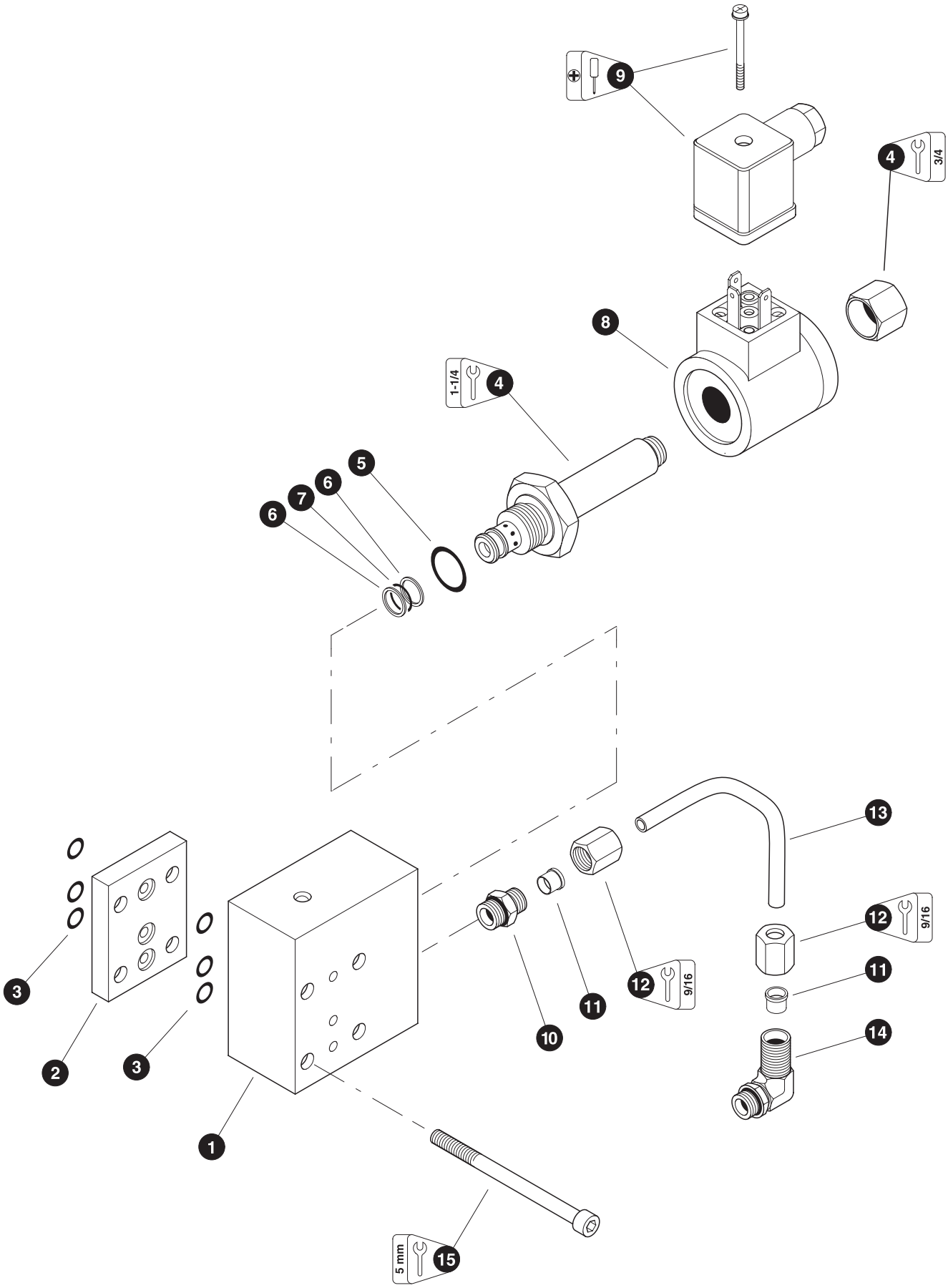


Parts T2781 07/29/2003
50.00

AUX - BRUSH PUMP
(71 cc)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	19509-HH	1	❑	PUMP, AUX - Brush cutter 71cc	
1	22881-HH	1		SEAL, shaft	
2	22882-HH	1		RING, seal retaining	
--	15891-HH	1	❑	COMPENSATOR, pump control	
3	NSS	1		HOUSING ASSEMBLY	
4	16856-HH	3	⌘	O-RING	
5	21582-HH	4		BOLT, compensator mounting	
6	20339-HH	2		PLUG	
7	16855-HH	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-HH	2		NUT, jam - 8mm	
16	17459-HH	2		SCREW, adjustment - 8mm	
17	17697-HH	2		NUT, acorn	
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-HH	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-HH	1	❑	CONTROL, electric compensator	
1	22595-HH	1		BLOCK	
2	22596-HH	1		PLATE, block	
3	21604-HH	6		O-RING	
4	22597-HH	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-HH	1		COIL, solenoid - 24V	
9	17145-HH	1		CONNECTOR, electrical - Hirschmann *(Includes hardware)*	
10	22599-HH	1		CONNECTOR, tube	
11	22600-HH	2		FERRULE	
12	22601-HH	2		NUT, tube	
13	22602-HH	1		TUBE, hydraulic	
14	22604-HH	1		ELBOW, 90° tube	
15	22603-HH	4		BOLT, allen head	
-	22598-HH	1		KIT, seal repair - solenoid cartridge	

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

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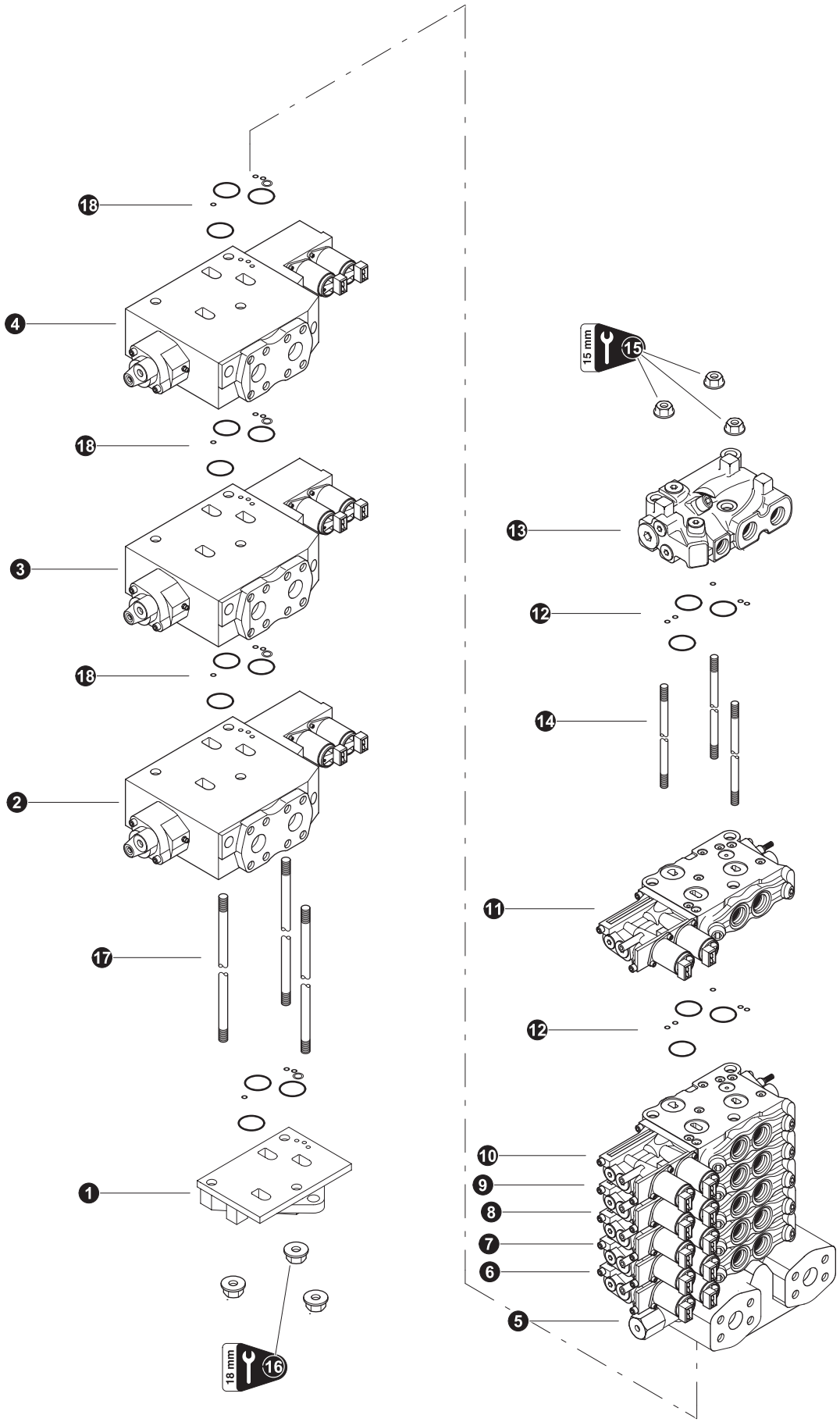
Section LH-2

Harvester / Feller Buncher Hydraulics - Control Valve

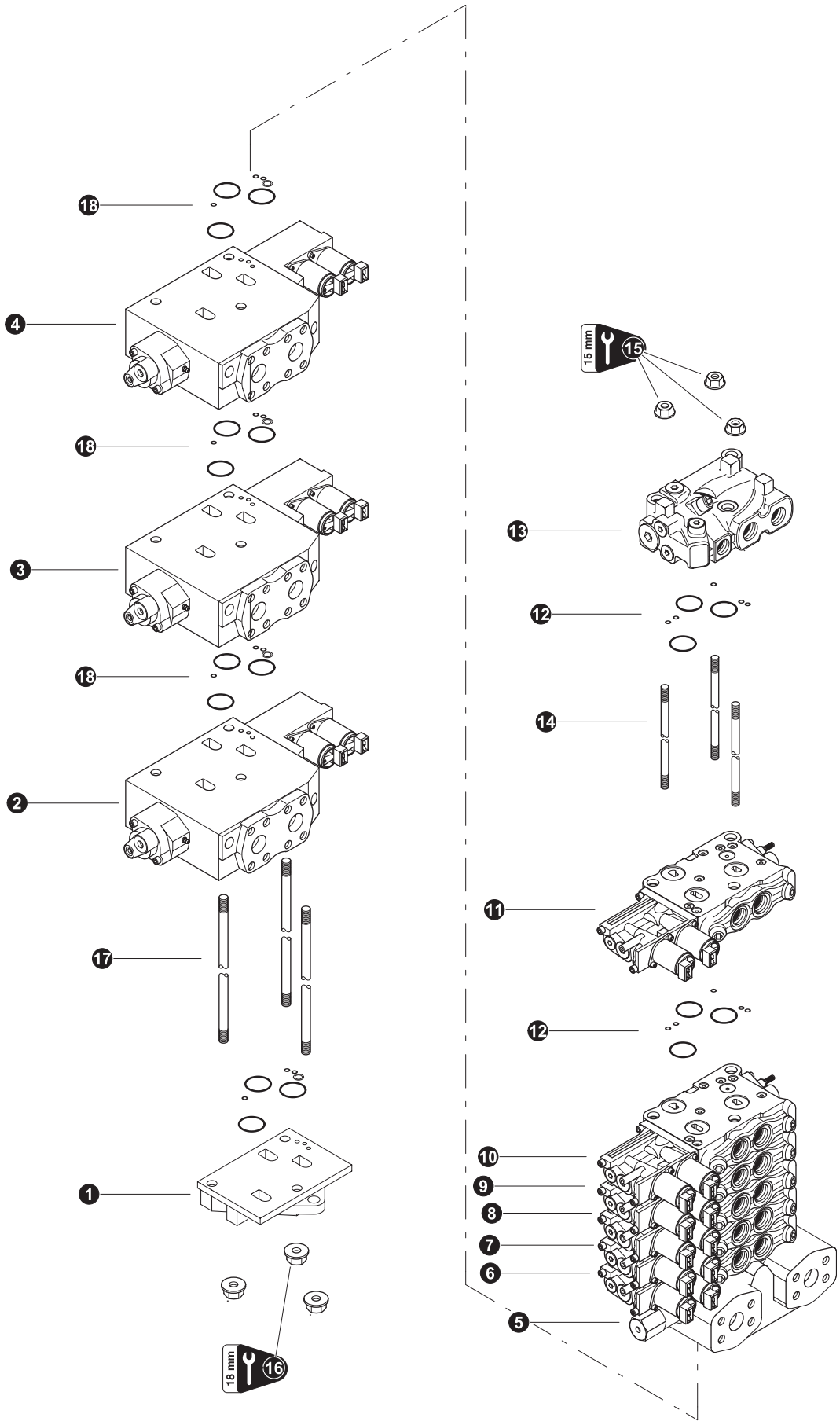


Parts T3265 08/09/2005
25.00

MAIN CONTROL VALVE
(Feller Buncher - TF 830, 840 & TB 630)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51845-HH	1	❑	VALVE, MAIN (3-K220/6-L90) LOG MAX / COMBO	
1	REF	1	🕮	K220 END CAP	HH-2
2	REF.	1	🕮	VALVE SECTION - Main Boom function	HH-2
3	REF.	1	🕮	VALVE SECTION - Stick Boom function	HH-2
4	REF.	1	🕮	VALVE SECTION - Processor function	HH-2
5	REF.	1	🕮	MID INLET / OUTLET	HH-2
6	REF	1	🕮	VALVE SECTION - Cab Level function	HH-2
7	REF	1	🕮	VALVE SECTION - Squirt Boom	HH-2
8	REF.	1	🕮	VALVE SECTION - Rotate function	HH-2
9	REF.	1	🕮	VALVE SECTION - Steer function	HH-2
10	REF.	1	🕮	VALVE SECTION - Swing function	HH-2
11	REF.	1	🕮	VALVE SECTION - Processor function	HH-2
12	23404-HH	5		KIT, seal repair - L90LS face seals	
13	REF	1	🕮	L90 END CAP	HH-2
14	23912-HH	3		ROD, TIE - VOAC (L90LS)(6 SEC)	
15	23913-HH	3		NUT, flange - 10mm *(Torque to 33 ft.lbs. (45 Nm))*	
16	25131-HH	3		NUT, flange - 12mm *(Torque to 55 ft.lbs. (75 Nm))*	
17	- - -	3		ROD, tie - K220 *(3-Section span) (9120092374)*	
18	25132-HH	4		KIT, seal repair - K220 face seals	

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

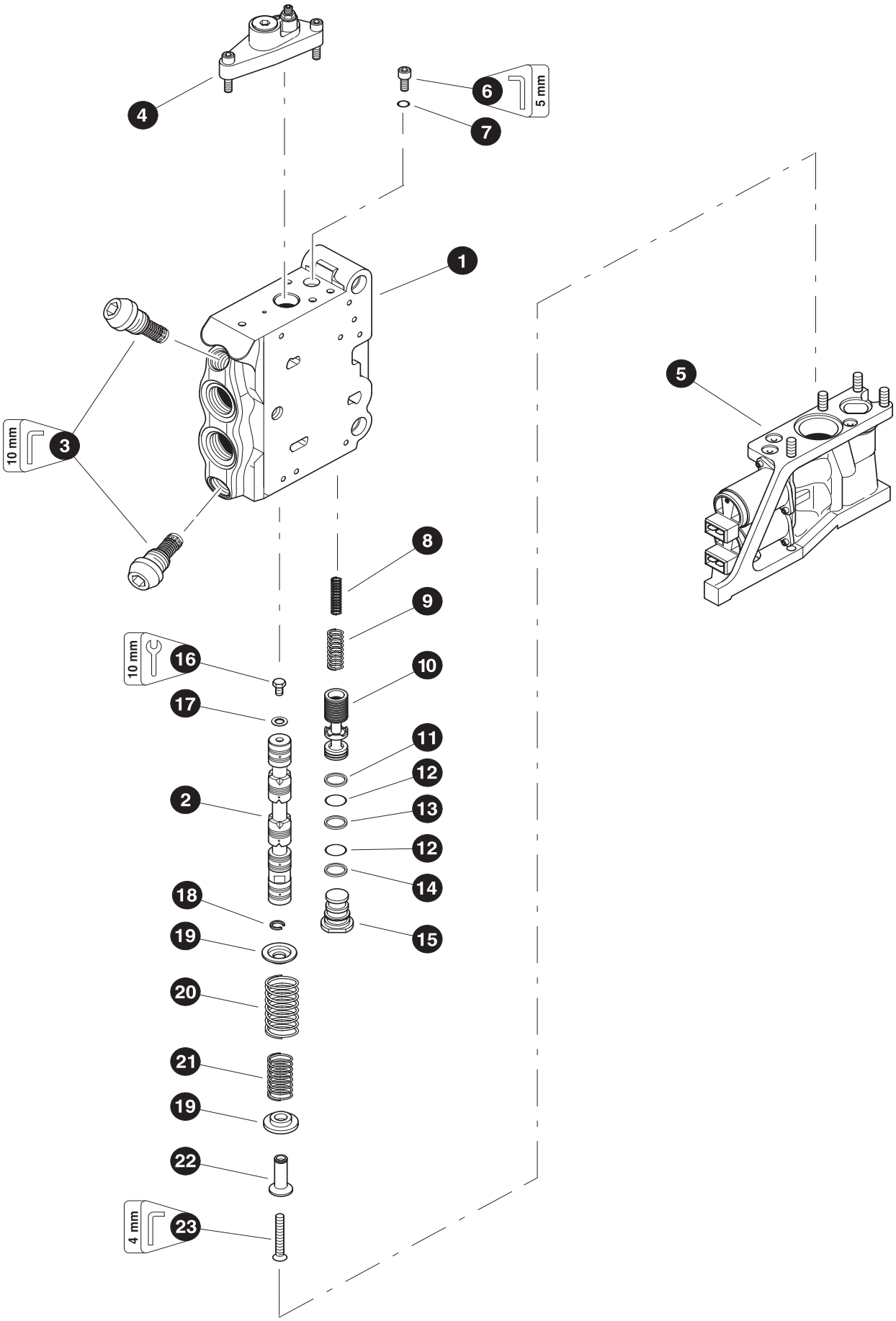


Parts T3265 08/09/2005
25.00

MAIN CONTROL VALVE
(Harvester - TF 830, 840 & TB 630)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51849-HH	1	❑	VALVE, MAIN (3-K220/6-L90) LOG MAX / COMBO	
1	REF	1	🕮	K220 END CAP	HH-2
2	REF.	1	🕮	VALVE SECTION - Main Boom function	HH-2
3	REF.	1	🕮	VALVE SECTION - Stick Boom function	HH-2
4	REF.	1	🕮	VALVE SECTION - Tool Cylinder function	HH-2
5	REF.	1	🕮	MID INLET / OUTLET	HH-2
6	REF	1	🕮	VALVE SECTION - Accumulator Cylinder	HH-2
7	REF	1	🕮	VALVE SECTION - Clamp Cylinder	HH-2
8	REF.	1	🕮	VALVE SECTION - Lateral Tilt	HH-2
9	REF.	1	🕮	VALVE SECTION - Swing	HH-2
10	REF.	1	🕮	VALVE SECTION - Cab Level	HH-2
10	REF.	1	🕮	VALVE SECTION - Steer Cylinder	HH-2
12	23404-HH	5		KIT, seal repair - L90LS face seals	
13	REF	1	🕮	L90 END CAP	HH-2
14	23912-HH	3		ROD, TIE - VOAC (L90LS)(6 SEC)	
15	23913-HH	3		NUT, flange - 10mm *(Torque to 33 ft.lbs. (45 Nm))*	
16	25131-HH	3		NUT, flange - 12mm *(Torque to 55 ft.lbs. (75 Nm))*	
17	- - -	3		ROD, tie - K220 *(3-Section span) (9120092374)*	
18	25132-HH	4		KIT, seal repair - K220 face seals	

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



Parts 01318 09/15/99
37.50

L90LS VALVE SECTION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	-HH	1	🕮	VALVE SECTION - (optional) Squirt Boom (L90LS-MS-US60-275)	
-	-HH	1	🕮	VALVE SECTION - Rotate / Lateral Tilt function (L90LS-MS-US60-273)	
-	-HH	1	🕮	VALVE SECTION - Steer function (L90LS-MS-US60-270)	
-	-HH	1	🕮	VALVE SECTION - Swing function (L90LS-MS-US60-271)	
-	-HH	1	🕮	VALVE SECTION - Cab Level function (L90LS-MS-US60-276)	
-	-HH	1	🕮	VALVE SECTION - Accumulator Cylinder (L90LS-MS-US60-274)	
1	NSS	1		BODY, valve section	
2	- - - - -	1		SPOOL, grapple rotate MBX (393000S218)	
2	- - - - -	1		SPOOL, steer/shear RDX (393000S230)	
2	- - - - -	1		SPOOL, swing - RCD	
2	- - - - -	1		SPOOL, squirt boom / processor / grapple - RKX (393000S490)	
2	- - - - -	1		SPOOL, cab level - ZEX	
3	- - - -	2		CARTRIDGE, port relief (230 Bar) (393000K568)	
3	- - - - -	2		CARTRIDGE, port relief (250 Bar) (393000K569)	
3	- - - - -	2		CARTRIDGE, port relief (280 Bar) (393000K571)	
3	- - - - -	2		CARTRIDGE, port relief (300 Bar) (393000K572)	
4	REF.	1	🕮	SECTION END CAP ASSEMBLY - “A” port side	HH-2
5	REF.	1	🕮	SECTION END CAP ASSEMBLY - “B” port side	HH-2
-	- - - - -	1	❑	KIT, compensator - “KX” (Swing, Steer)(see note #1)	
-	- - - - -	1	❑	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	
	- - - - -		❑	KIT, compensator plug w/seals (393000K171)	
-	- - - - -	1	❑	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	❑	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.

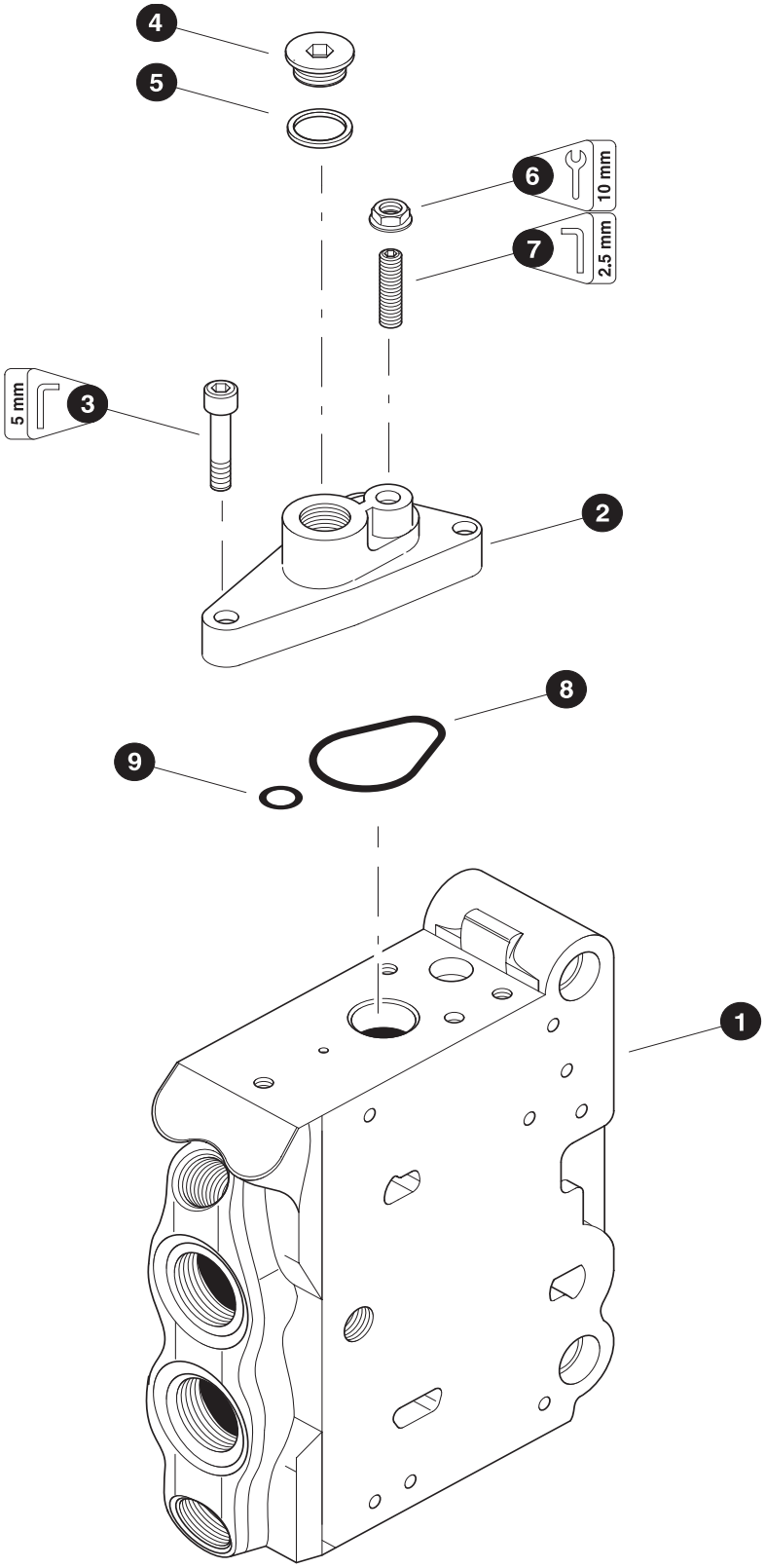
🕮 See referenced page for component or assembly breakdown.

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 labled #5.

KX - blue (393000K616)
green (393000K617)
red (393000K618)

K - blue (393000K169)
green (393000K469)
red (393000K669)

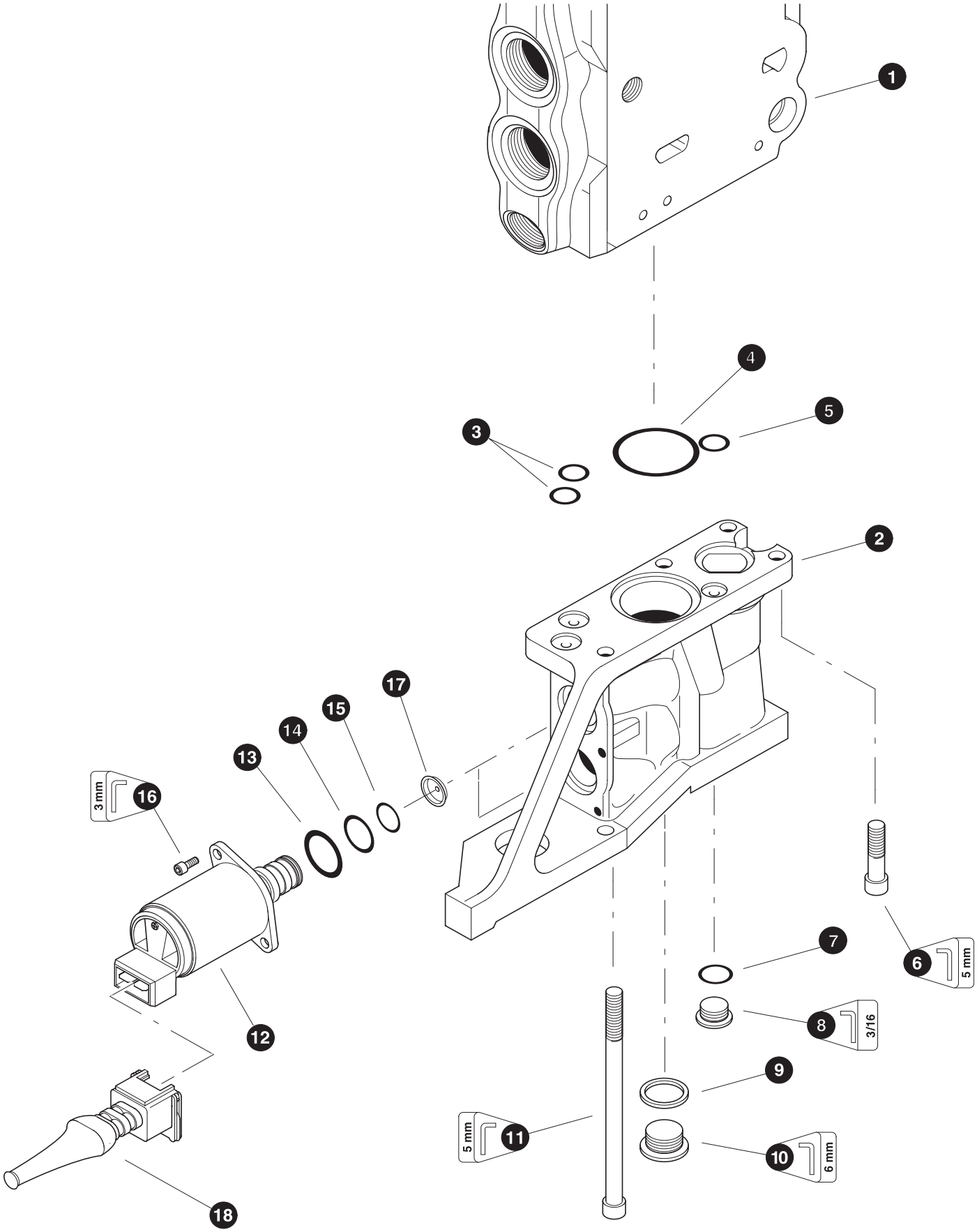


Parts 01734 08/08/2000
75.00

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

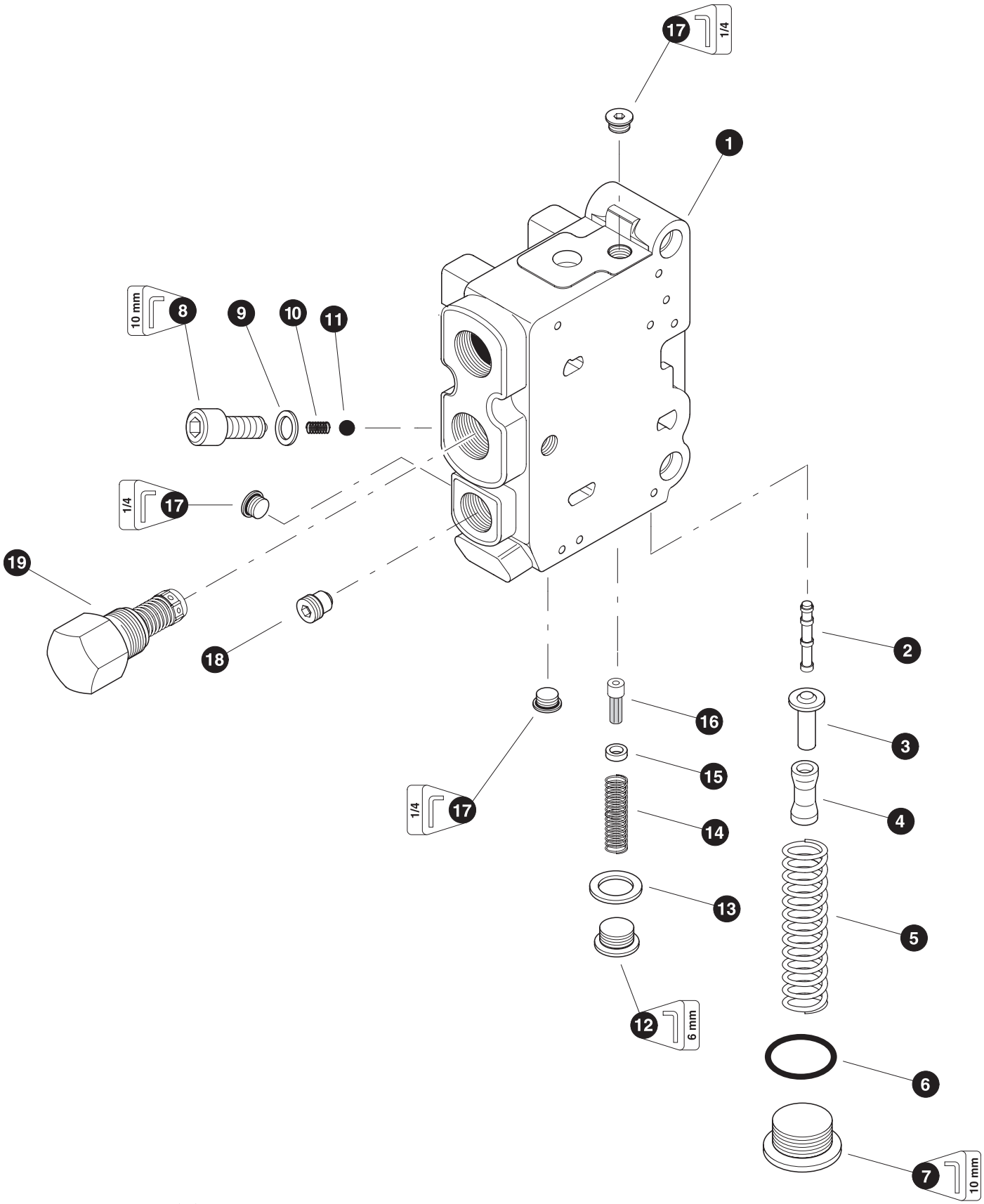
L90LS VALVE CONTROL CAP

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 orfice (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:

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



Parts 01319 09/16/99
62.00

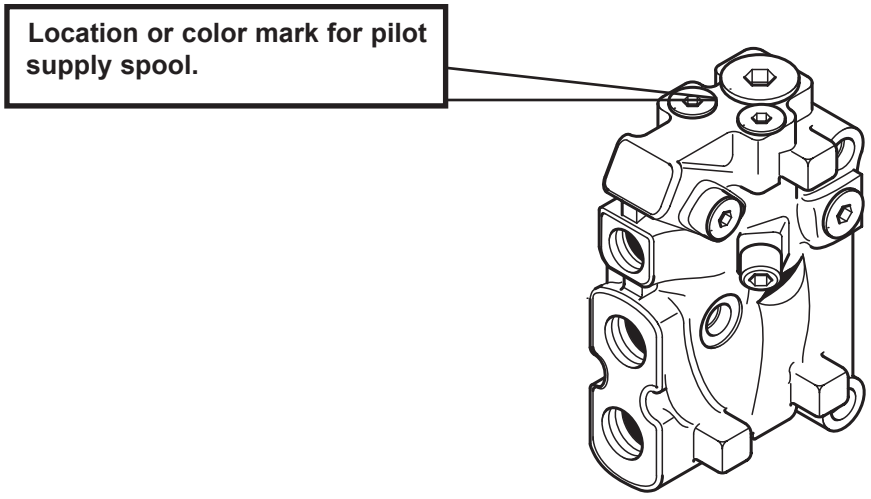
L90LS VALVE OUTLET

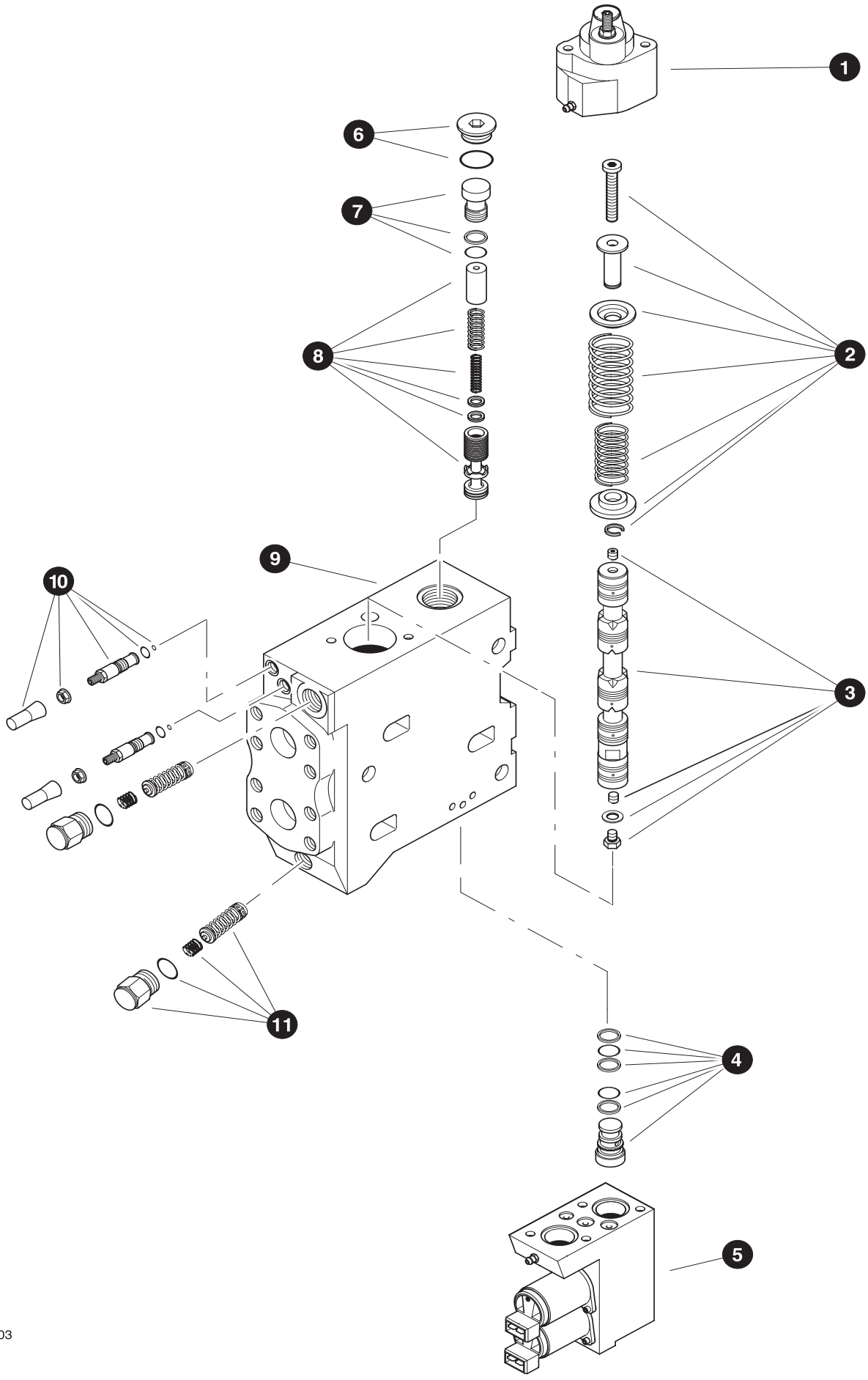
REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	23412-HH	1	❑	VALVE SECTION, outlet	
1	NSS	1		BODY, valve section	
-	23431-HH	1	❑	KIT, pilot supply reducer (Green)(35 bar)(see note #1)	
	23432-HH	1	❑	KIT, pilot supply reducer (Red)(35 bar)(see note #1)	
2	- - - - -	1		SPOOL, pilot reducer	
3	- - - - -	1		RETAINER, spring	
4	- - - - -	1		SPACER, spring	
5	- - - - -	1		SPRING	
6	- - - - -	1		O-RING (0663909901)	
7	- - - - -	1		PLUG (9126244413)	
8	- - - - -	1		PLUG (9127320022)	
9	- - - - -	1		RING, seal (06611005)	
10	- - - - -	1		SPRING	
11	- - - - -	1		BALL, check	
-	23433-HH	1	❑	KIT, pilot supply strainer	
12	- - - - -	1		PLUG (9127320020)	
13	- - - - -	1		RING, seal (06611020)	
14	- - - - -	1		SPRING	
15	- - - - -	1		SPACER	
16	- - - - -	1		STRAINER (9126386076)	
17	15412-HH	3		PLUG - 6408-HHP-6	
18	- - - - -	1		PLUG, pilot drain (393000K078)	
19	- - - - -	1		Counter press. valve - 130 PSI (393000K068)	

❑ Kit or Assembly - includes all items indented underneath.

NOTE #1

Each section is color coded to insure proper fit, please check color mark before ordering.



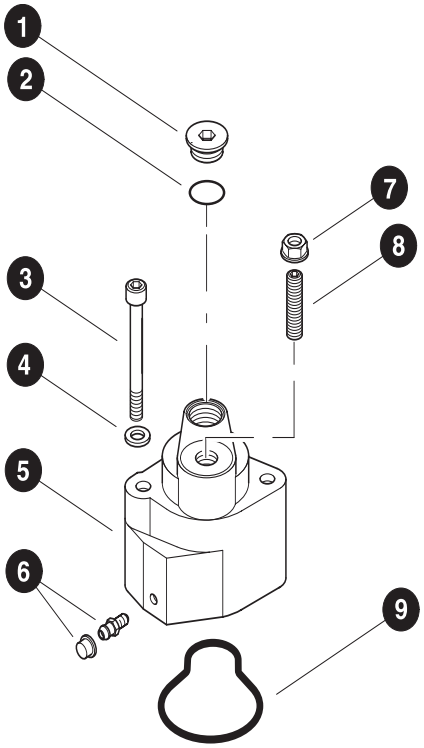


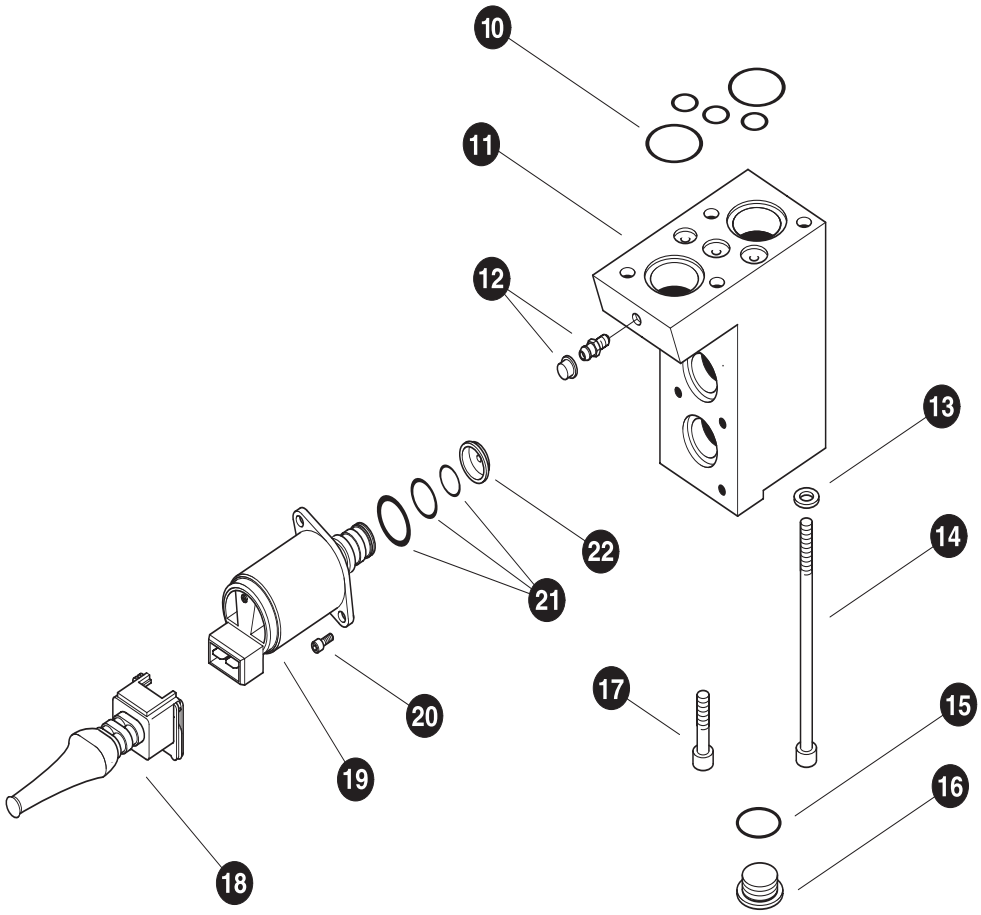
Parts T2761 07/15/03
37.50

VOAC K220 VALVE SECTION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	-HH	1	❑	VALVE SECTION, K220 - STICK - HARV. BOOM (K220LS-MS-US60-234)	
-	-HH	1	❑	VALVE SECTION, K220 - MAIN - HARV. BOOM (K220LS-MS-US60-233)	
-	-HH	1	❑	VALVE SECTION, K220 - Tool Tilt Cylinder (K220LS-MS-US60-235)	
-	-HH	1	❑	VALVE SECTION, K220 - PROCESSOR (K220LS-MS-US60-236)	
1	REF.	1	🕮	CAP, “B”port	HH-2-18
2	- - - - -	1		KIT, SPOOL SPRING - (9120092015)	
3	- - - - -	1		SPOOL, STICK -	
3	- - - - -	1		SPOOL, MAIN - TUA	
3	- - - - -	1		SPOOL, PROCESSOR - RAX	
4	- - - - -	1	❑	KIT, PLUG 3 (3764731)	
-	- - - - -	1		SEAL KIT, plug 3 (9120092355)	
5	- - - - -	1	🕮	CONTROL CAP ASSEMBLY - “A” port side	HH-2-18
6	- - - - -	1	❑	KIT, PLUG 1 (9126244419)	
-	- - - - -	1		O-RING, plug 1 (0663910401)	
7	- - - - -	1	❑	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	❑	KIT, FEED REDUCER (3763680)	
-	- - - - -	1		O-RING, feed reducer (91256182)	
-	- - - - -	1		O-RING, feed reducer (06639050)	
-	- - - - -			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
-	51264-HH	1	❑	CUP, PILOT - K220 W / FLOW LIMIT	
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 orfice 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)

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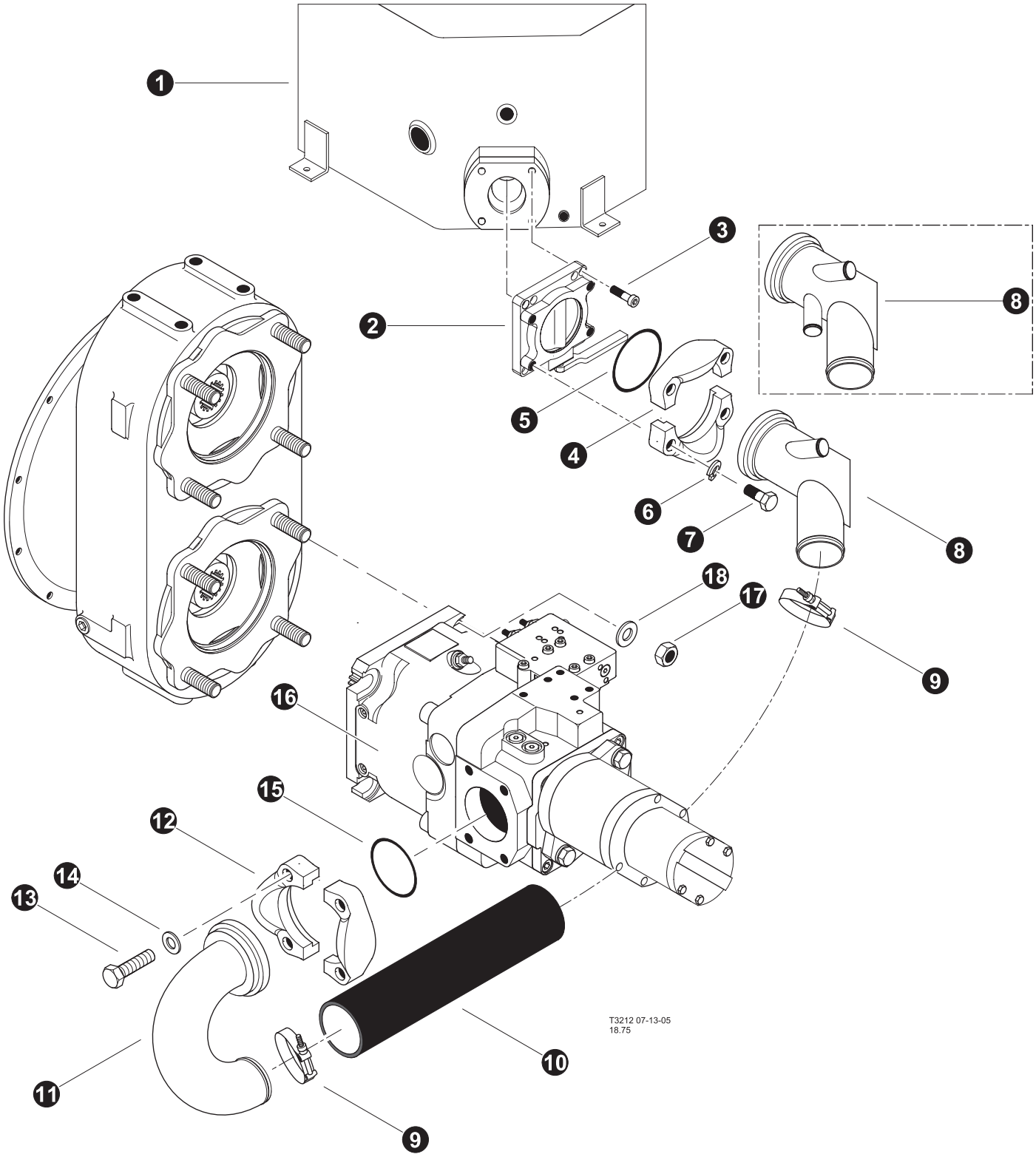
Section HH-3

Harvester / Feller Buncher Hydraulics - Supply, Tank, Load sense, and Drain Circuits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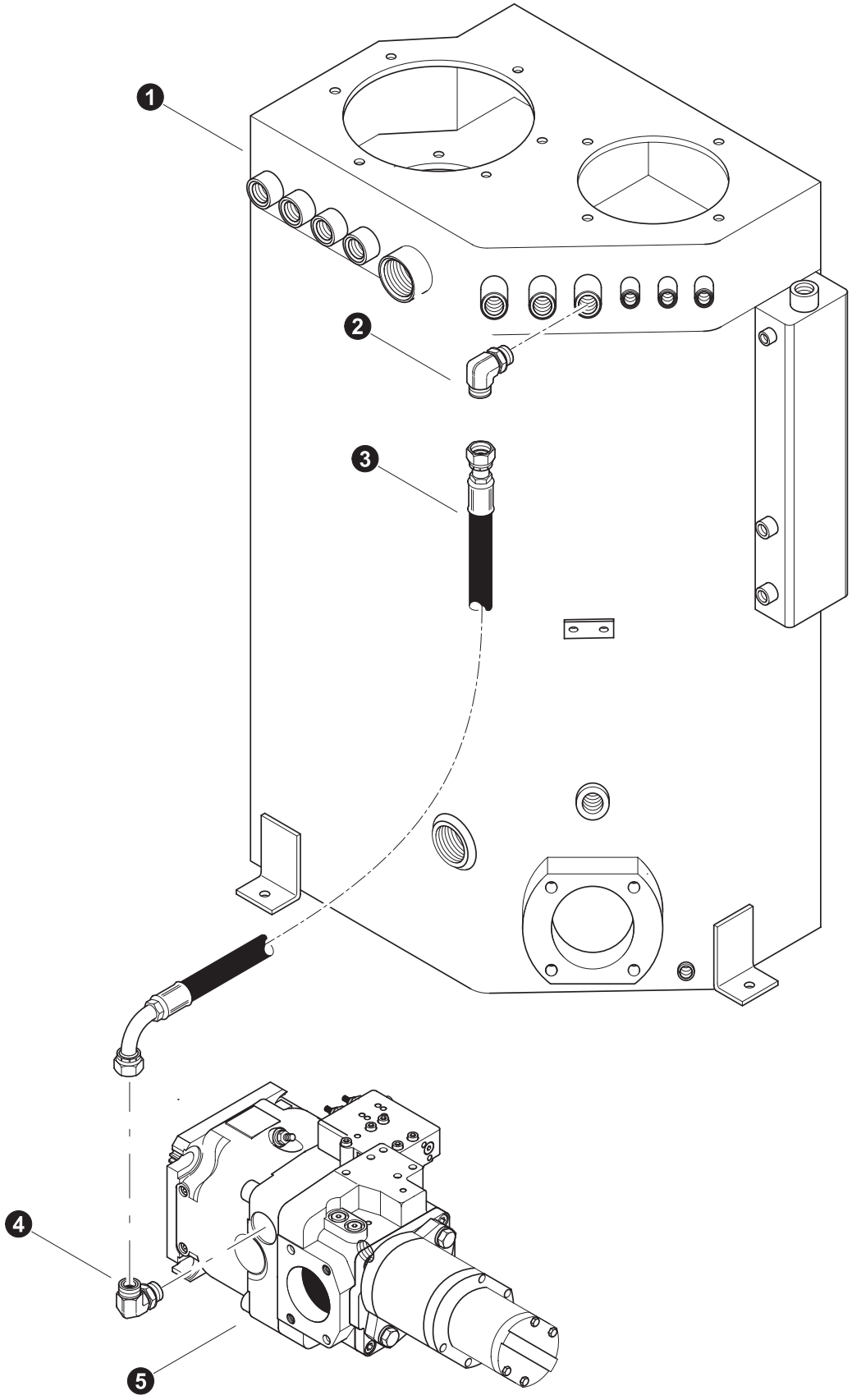
T3212 07-13-05
18.75

IMPLEMENT PUMP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
2	51619-HH	1		VALVE, SHUT OFF - BUTTERFLY (4”)	
3	23095-HH	4		BOLT, ALLEN HEAD - .625” x 2”	
4	51625-HH	1	❑	KIT, FLANGE - SUCTION TUBE (4”)	
5		1		O-RING - SUCTION TUBE (4”)	
6	10721-HH	4		WASHER, LOCK - .625”	
7	15526-HH	4		BOLT - .625” X 2”	
8	42461-HH	1		TUBE, SUCTION - 4” FLANGE - W/O DISC SAW	
8	51886-HH	1		TUBE, SUCTION - 4” FLANGE - WITH DISC SAW	
9	15190-HH	2		CLAMP, strap band - 3-1/8”	
10	-HH	1		HOSE ASSEMBLY - 1013 48-0-0	
11	51876-HH	1		TUBE, SUCTION 180 DEG 3.0” 630/830	
12	18306-HH	1	❑	KIT, split flange - 3” *(Code 61)*	
13	15562-HH	1		BOLT - 5/8” x 2”	
14	10721-HH	4		WASHER, lock - 5/8”	
15	18695-HH	1		O-RING - 3” SF	
16	REF	1	🕮	IMPLEMENT PUMP.	HH-1

🕮 See referenced page for component or assembly breakdown.
✂ Bulk material - order length required in feet or meters.
❑ Kit or Assembly - includes all items indented underneath.

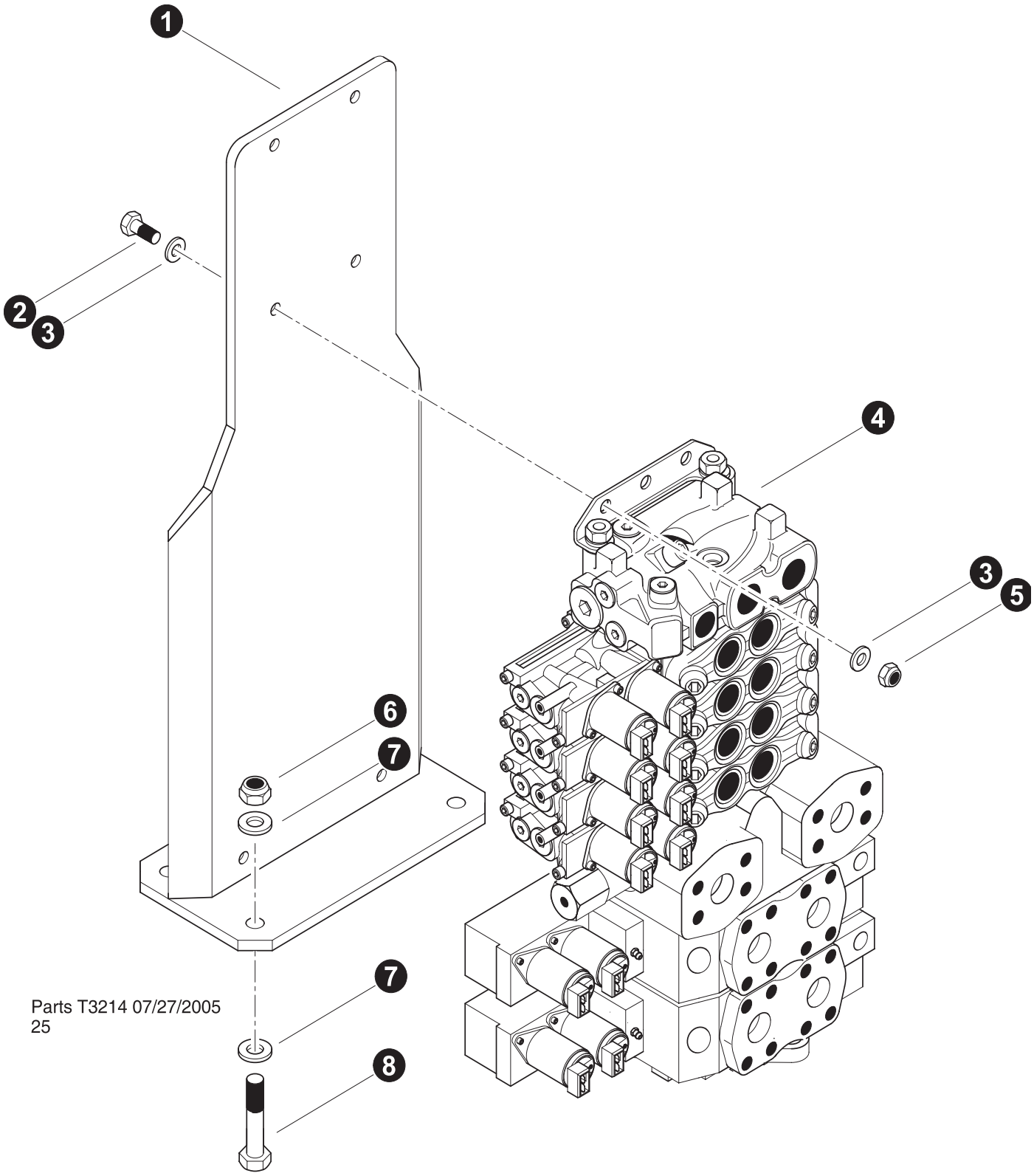


Parts T3213 07/18/2005
18.75

IMPLEMENT PUMP CASE DRAIN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1		HYDRAULIC TANK	UP-2
2	17688-HH	1		ELBOW, 90 - FF1868T-1212S	
3	-HH	1		HOSE ASSEMBLY - 2045-12-120S-1209 *(Implement pump case drain port to hydraulic tank)*	
4	17688-HH	1		ELBOW, 90 - FF1868T-1212S	
5	REF.	1	🕮	IMPLEMENT PUMP.	HH-1

🕮 See referenced page for component or assembly breakdown.

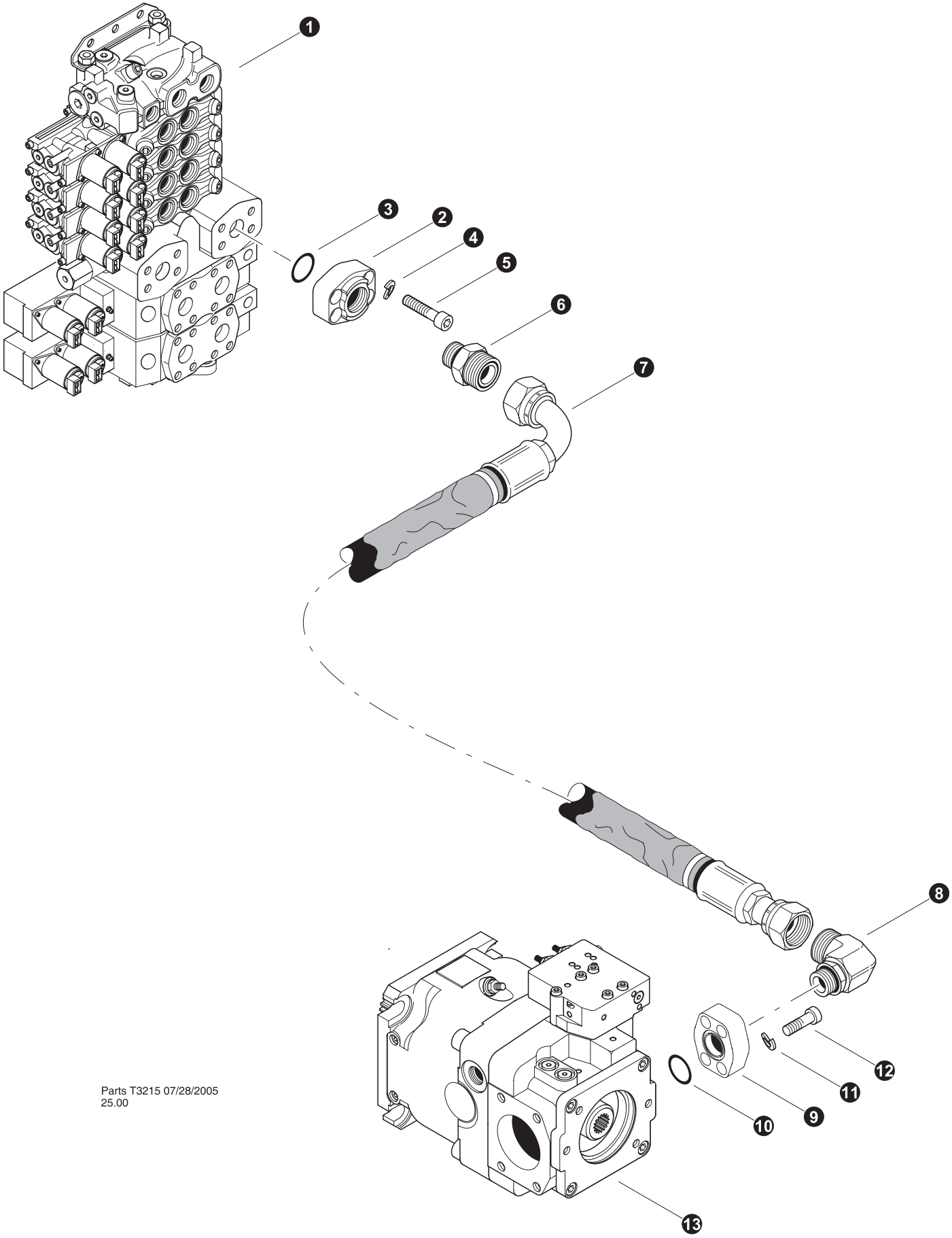


Parts T3214 07/27/2005
25

MAIN CONTROL VALVE MOUNTING

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42489-HH	1		BRACKET, MAIN VALVE CONTROL - TF830	
2	15507-HH	4		BOLT, 3/8 X 1 1/4”	
3	15528-HH	8		WASHER, SAE 3/8”	
4	REF	1	🕮	MAIN CONTROL VALVE	HH-2
5	10813-HH	4		NUT, lock 3/8”	
6	10815-HH	4		NUT, LOCK - .5”	
7	15534-HH	8		WASHER, SAE FLAT - .5”	
8	15567-HH	4		BOLT - .5” X 2.5”	

🕮 See referenced page for component or assembly breakdown.

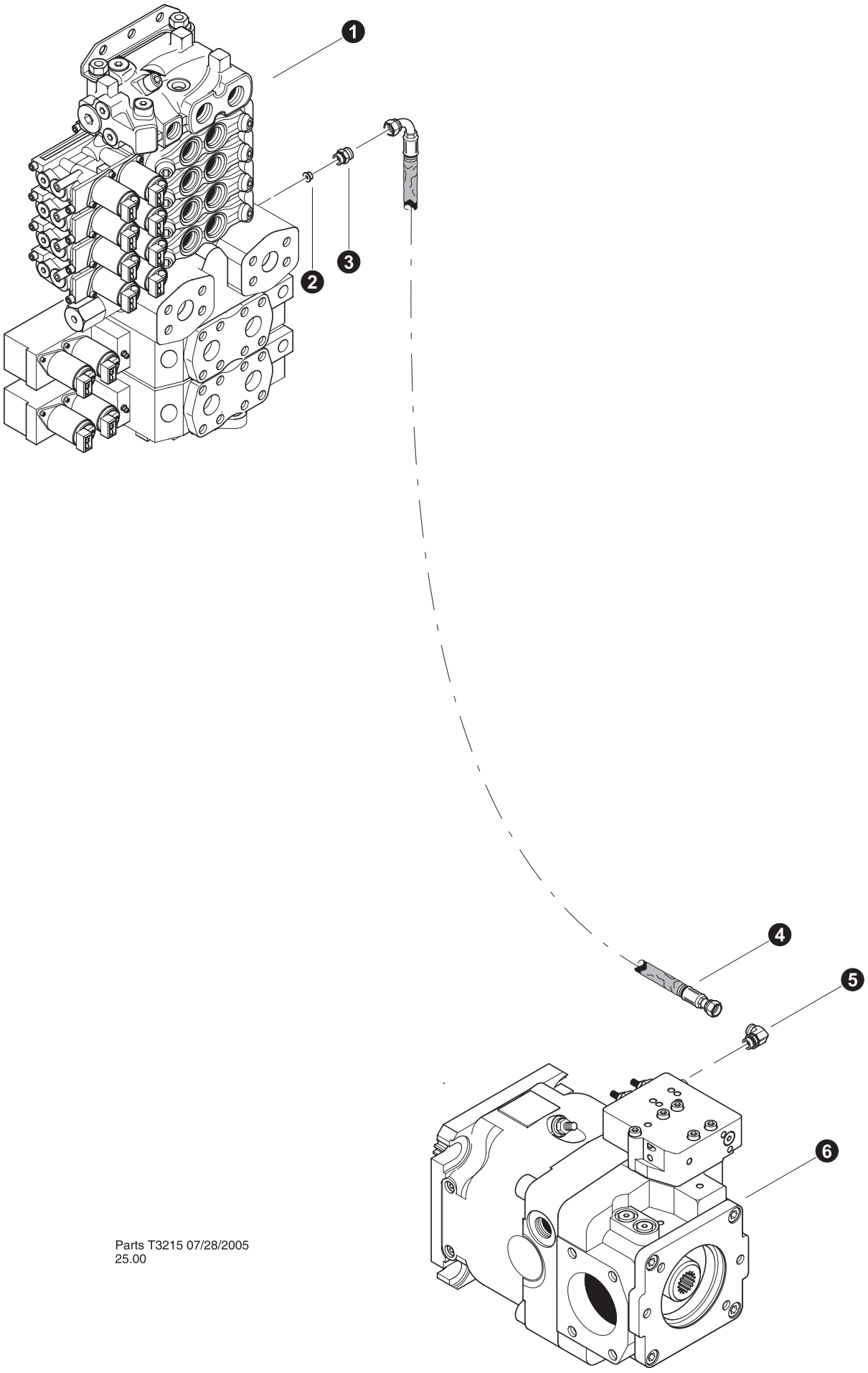


Parts T3215 07/28/2005
25.00

IMPLEMENT PUMP PRESSURE LINE TO MAIN CONTROL VALVE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	HH-2
2	18397-HH	1	❑	CONNECTOR, FLANGE PAD - 1” C 62	
3	15377-HH	1		O-RING - 1”	
4	-	4		WASHER, lock	
5	18988-HH	4		BOLT, ALLEN HEAD - 12MM-1.75P X 45MM	
6	17063-HH	1		CONNECTOR, STR - FF1852T-2016S	
7	-HH	1		HOSE ASSEMBLY - 4092.5-20-200S-2009-W *(Implement pump pressure outlet to main control valve pressure inlet port “P1”)*	
8	17055-HH	1		ELBOW, 90 - FF1868T-2020S	
9	17016-HH	1	❑	CONNECTOR, FLANGE PAD - 1.25” C 62	
10	-	1		O-RING - 1.25”	
11	-	4		WASHER, lock	
12	-	4		BOLT, ALLEN HEAD	
13	REF.	1	🕮	IMPLEMENT PUMP.	HH-1

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

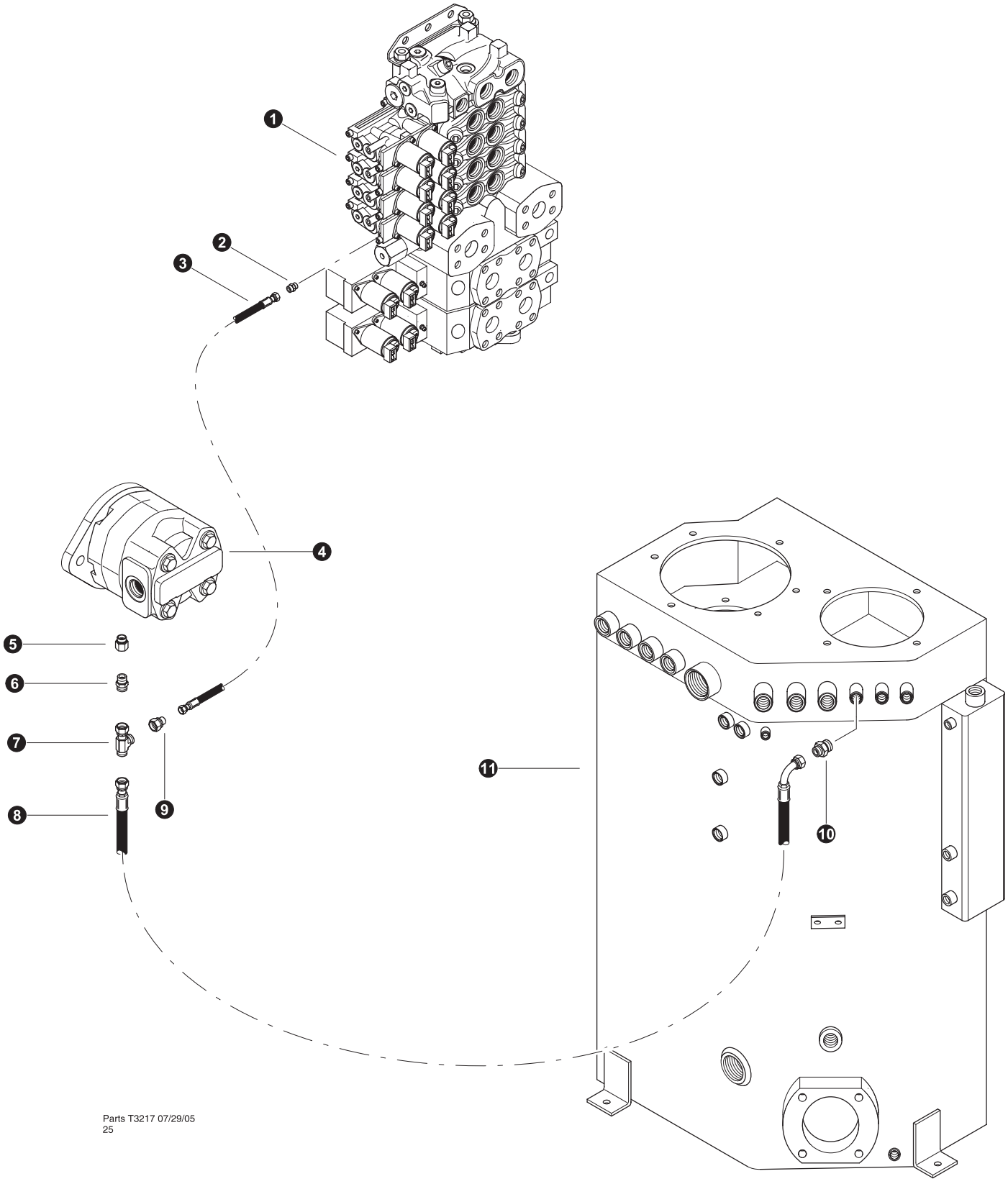


Parts T3215 07/28/2005
25.00

MAIN CONTROL VALVE LOAD SENSE LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	HH-2
2	15488-HH	1		CONNECTOR, STR - 6400-6 *(Tapped for 0.024" orifice)*	
3	24091-HH	1		ORIFICE - 0.024"	
4	-HH	1		HOSE ASSEMBLY - 2113-06-060S-0609-W *(Control Valve load sense "PL" port to Implement Pump controler)*	
5	16296-HH	2		ELBOW, 90° - FF1868T-0606	
6	REF.	1	🕮	IMPLEMENT PUMP.	HH-1

🕮 See referenced page for component or assembly breakdown.

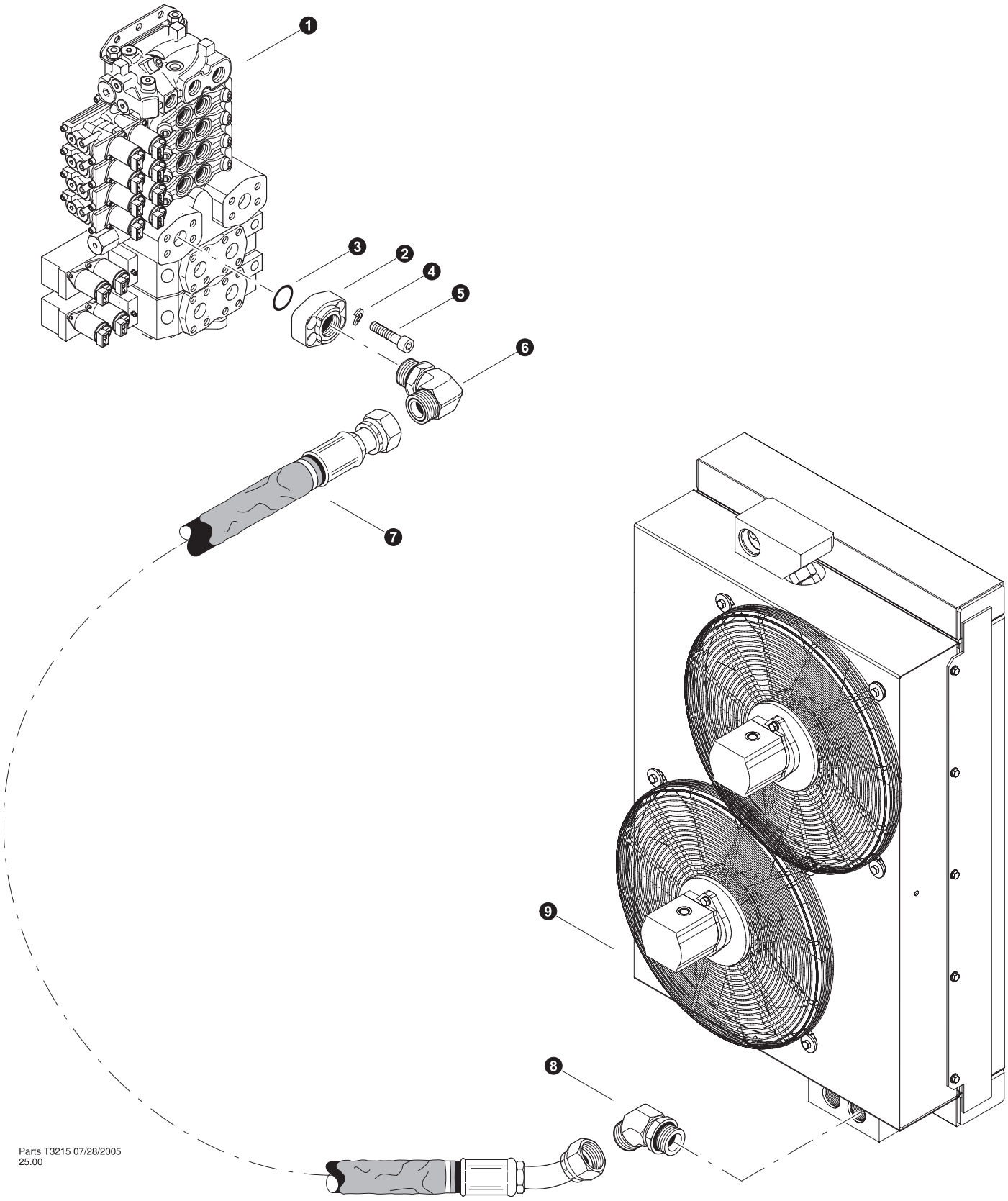


Parts T3217 07/29/05
25

MAIN CONTROL VALVE PILOT DRAIN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	HH-2
2	15487-HH	1		CONNECTOR, STR - 6400-6-4	
3	-LH	1		HOSE ASSEMBLY - 2036.5-04-040S-040S *(Main control valve port "TP" to fan motor drain tee)*	
4	REF	2		FAN DRIVE MOTOR	UP-3
5	51413-HH	1		BUSHING, REDUCER - 4 - 1/4 F50G	
6	16295-HH	1		CONNECTOR, STR - FF2031T-0604S	
7	22730-HH	1		TEE - 6 R6LO-S	
8	-UP	1		HOSE ASSEMBLY 2112 06 06OS 0609 (fan motor case drain to tank)	
9	51888-HH	1		REDUCER, TUBE END - (6-4 TRL0N)	
10	22901-HH	1		CONNECTOR, STR - 6-8 F5OLO-S	
11	REF	1		HYDRAULIC TANK BREAKDOWN	UP-2

🕮 See referenced page for component or assembly breakdown.



Parts T3215 07/28/2005
25.00

MAIN CONTROL VALVE RETURN LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	HH-2
2	17909-HH	1	❑	CONNECTOR, FLANGE PAD - 1.25” CODE 61	
3	-	1		O-RING - 1”	
4	-	4		WASHER, lock	
5	20444-HH	4		BOLT, ALLEN HEAD - 10MM-1.5P X 35MM	
6	17055-HH	1		ELBOW, 90 - FF1868T-2020S	
7	-HH	1		HOSE ASSEMBLY - 4104-20-200S-2004-W *(oil cooler inlet to main control valve tank port “T1”)*	
8	17056-HH	1		ELBOW, 45 - FF2068T-2020S	
9	REF	1		OIL COOLER BREAKDOWN	UP-3

🕮 See referenced page for component or assembly breakdown.

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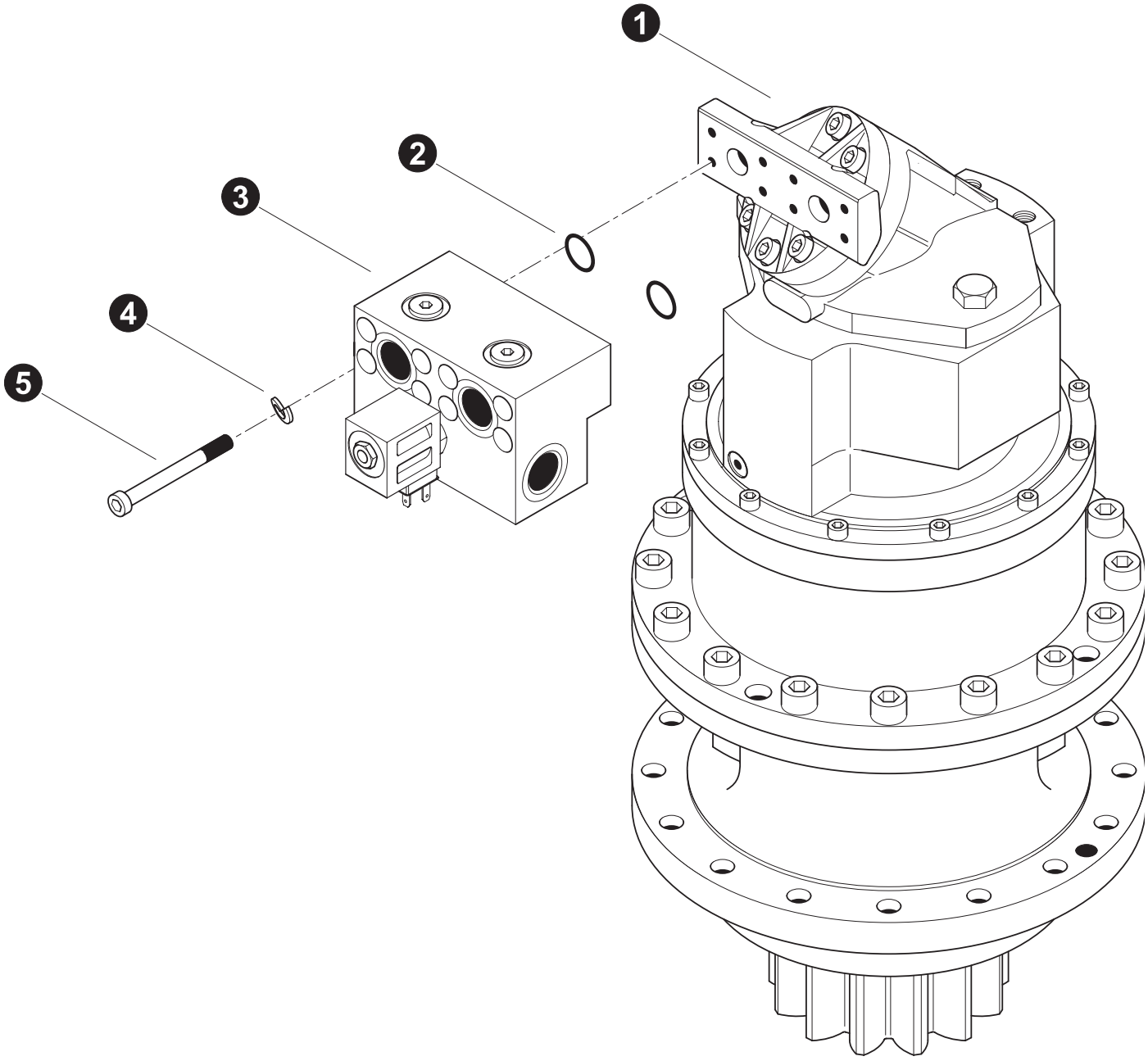
Section HH-4

Harvester / Feller Buncher Hydraulics - Swing Motor Hydraulics

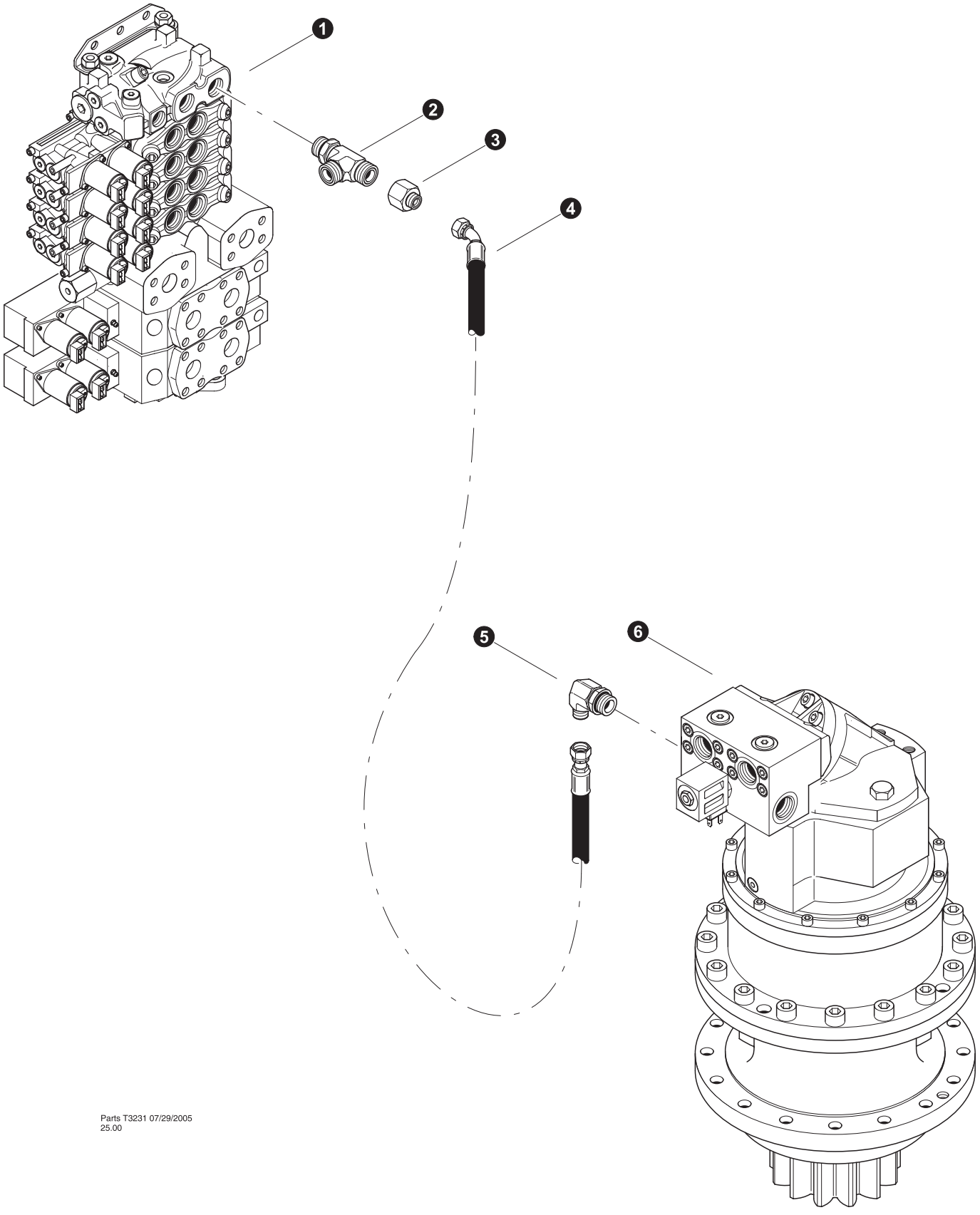


Parts T3234 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(anti-cavitation valve installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4
2	-LH	2		O-RING, 3/4 code 62	
3	REF.	1	🕮	ANTI-CAVITATION VALVE.	LH-4
4	-LH	4		WASHER, LOCK - 10 mm HIGH COLLAR	
5	51389-LH	4		BOLT, ALLEN HEAD - 10MM-1.5P X 100MM	

🕮 See referenced page for component or assembly breakdown.

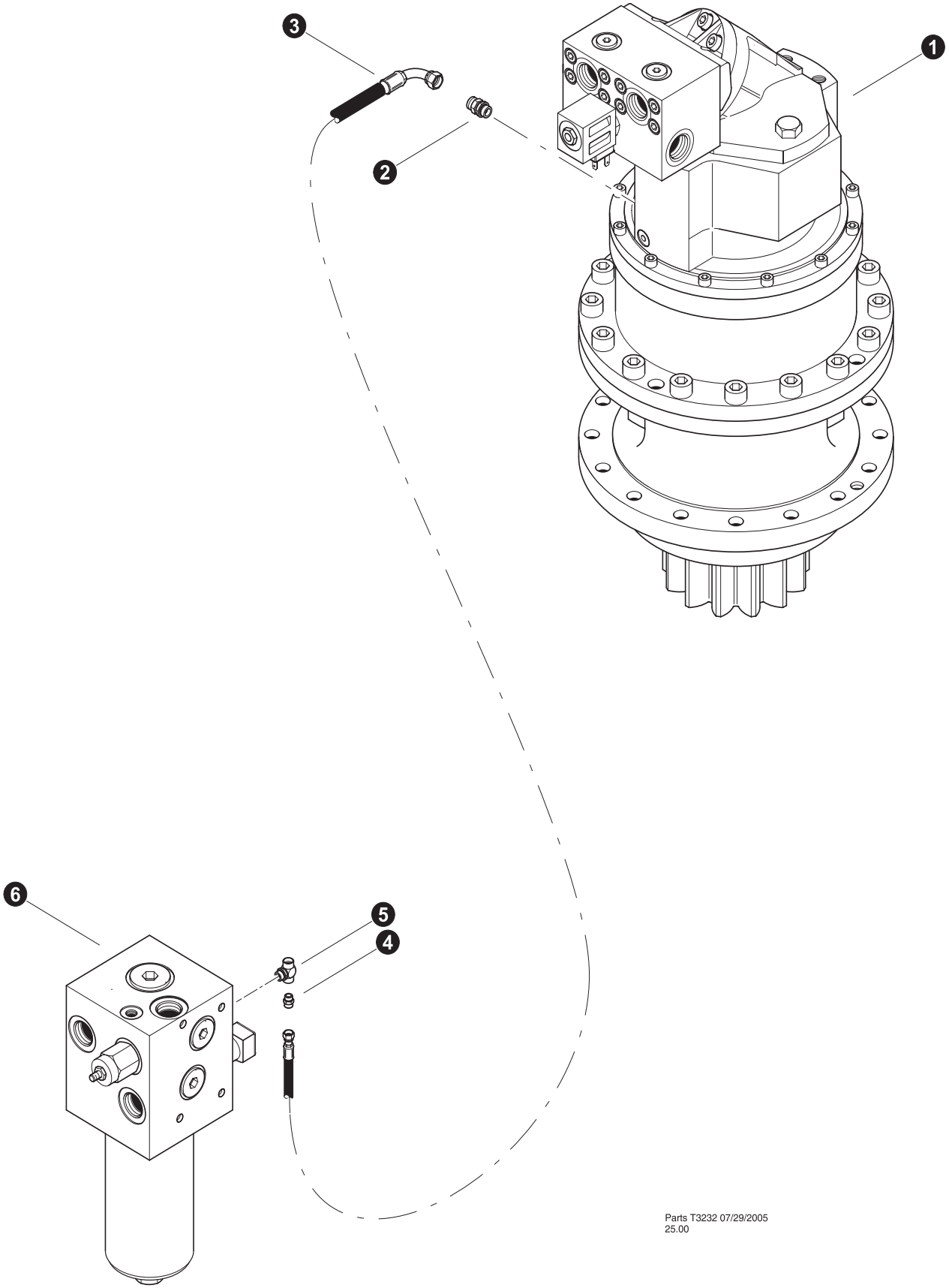


Parts T3231 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(anti cavitaion block supply)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE	LH-2
2	51969-LH	1		TEE, RUN - 12 R50LO-S	
3	18581-LH	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
4	-LH	1		HOSE ASSEMBLY - 4073-08-080S-0804*(anti-cav supply port to main control valve port T3)*	
5	15372-LH	3		ELBOW, 90 - FF1868T-0812S	
6	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4

🕮 See referenced page for component or assembly breakdown.

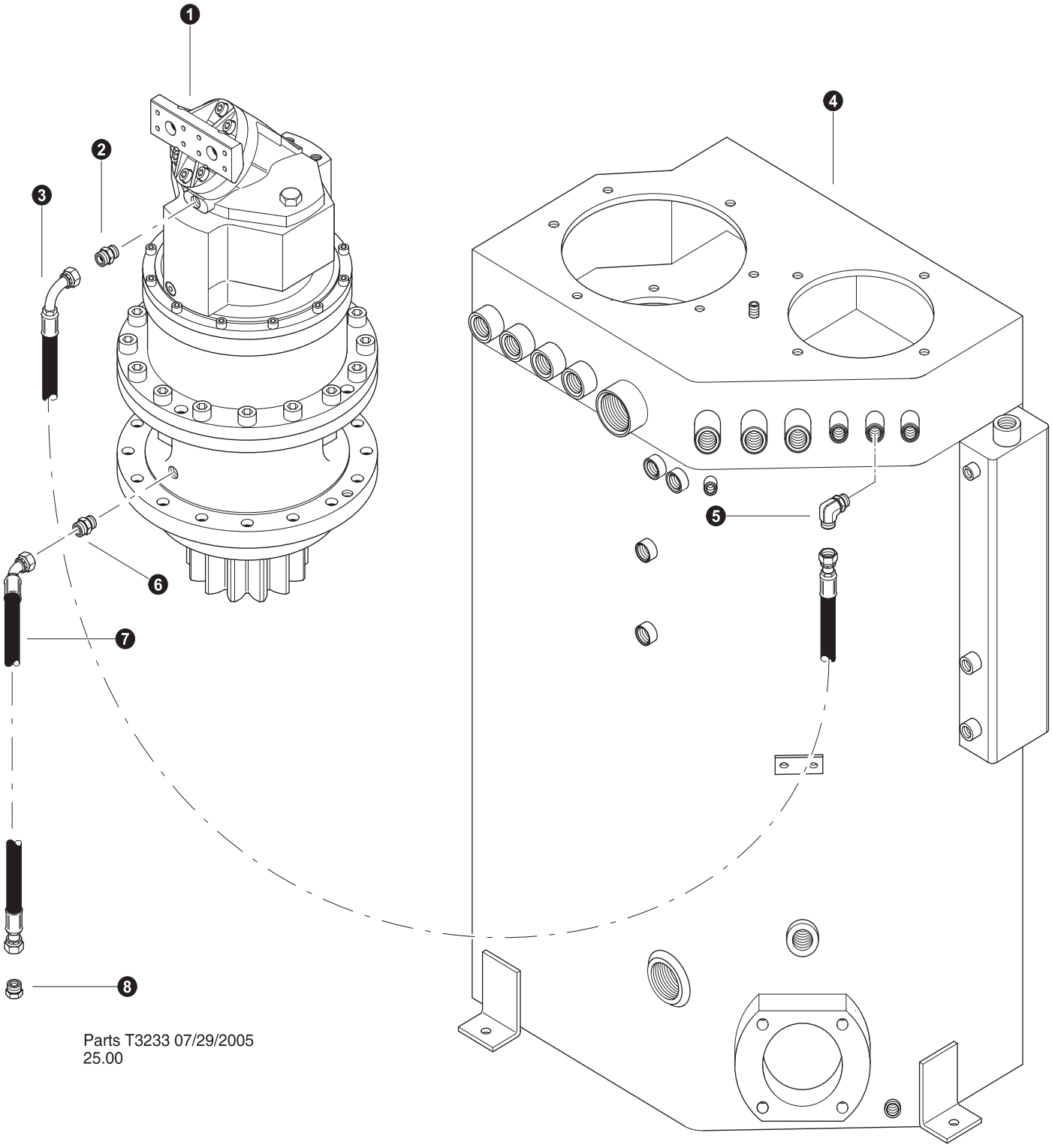


Parts T3232 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(swing gearbox brake release)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4
2	19469-LH	1		CONNECTOR, STR METRIC - 4M12F82EDMLO-S	
3	50425-LB	1		HOSE ASSEMBLY - 2053-04-040S-0409 *(swing motor gearbox brake relase port to G1 port charge valve)*	
4	16541-LH	1		CONNECTOR, STR - FF1852T-0404S	
5	24293-LH	1		TEE - 4-G5G5JAO-S	
6	REF.	1	🕮	CHARGE VALVE / FILTER ASSEMBLY	WD-1

🕮 See referenced page for component or assembly breakdown.

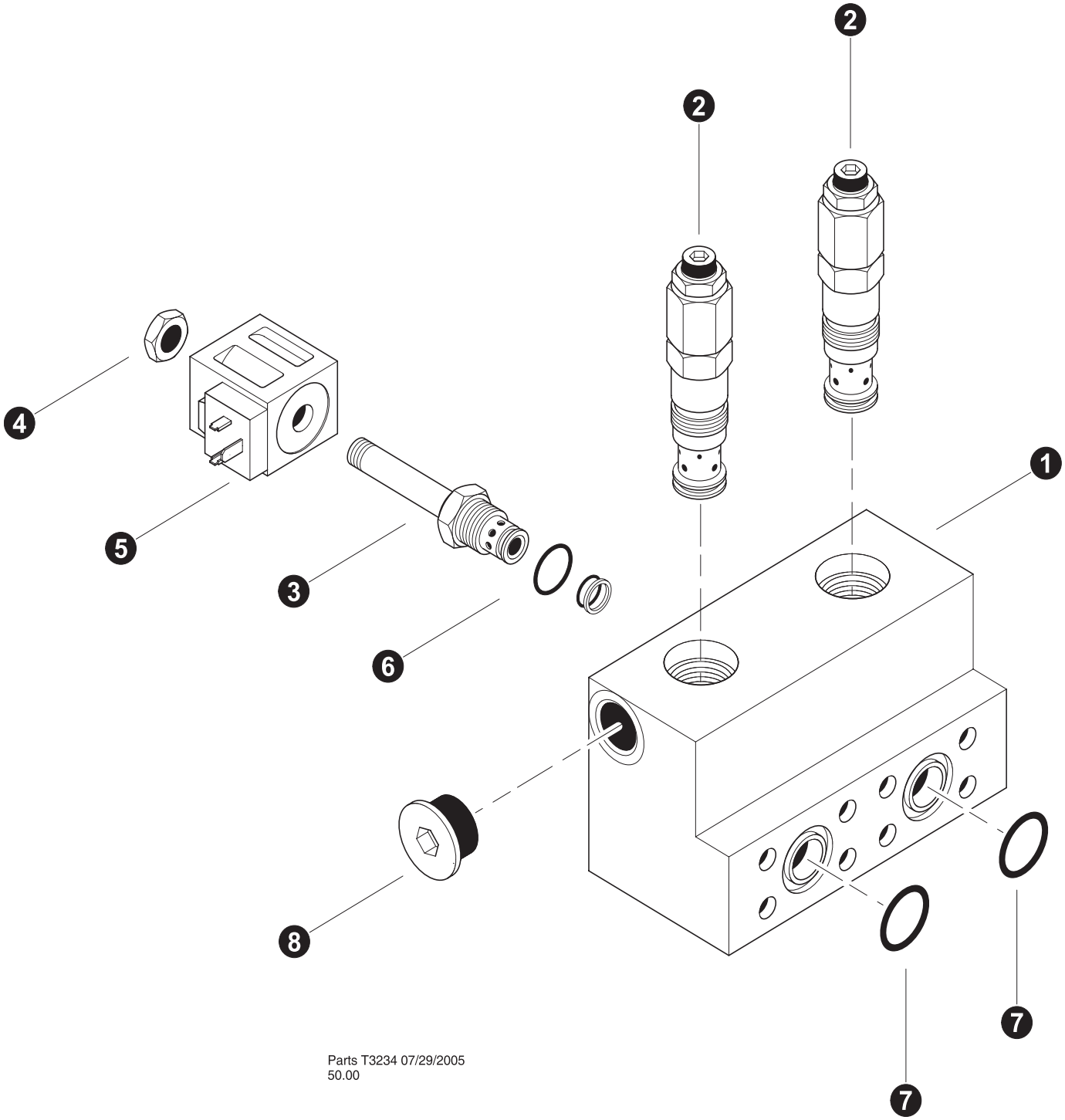


Parts T3233 07/29/2005
25.00

SWING MOTOR HYDRAULICS
(swing motor drain)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MOTOR/GEARBOX - SWING	LH-4
2	24182-LH	1		CONNECTOR, STR - 6002-08-8BSPP	
3	-LH	1		HOSE ASSEMBLY - 2076-08-08OS-0809 (swing motor case drain to hydraulic tank)	
4	REF.	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2
5	16360-LH	1		ELBOW, 90 - FF1868T-0808S	
6	24182-LH	1		CONNECTOR, STR - 6002-08-8BSPP	
7	-LH	1		HOSE ASSEMBLY - 2033-08-08OS-0804 (swing motor gearbox drain)	
8	11390-LH	1		PLUG - 2408-8	

🕮 See referenced page for component or assembly breakdown.



Parts T3234 07/29/2005
50.00

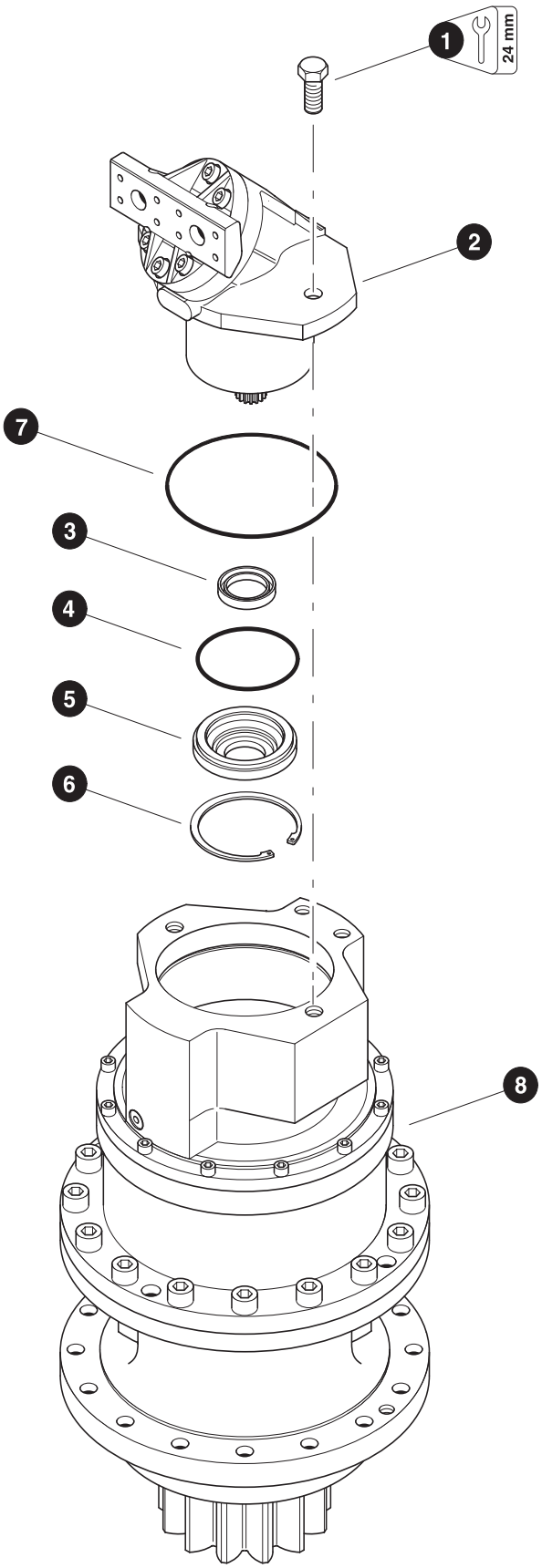
SWING MOTOR HYDRAULICS
(anti-cavitation valve)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52015-UP	1		VALVE, SWING ANTI/CAV W/FLOAT LOW MOUNT	
2	51507-UP	2		CARTRIDGE, Anti-Cav (51055-20 D03 B)	
3	20597-HR	2	❑	CARTRIDGE, solenoid - 24V	
4	NSS	1		NUT	
5	22554	1		COIL, SOLENOID - (PARKER)	
6	-LH	1	⌘	KIT, SEAL - solenoid valve	
7	-LH	2		O-RING - 3/4” code 62	
8	11385-LH	1		PLUG - 6408-12	

❑ Kit or Assembly - includes all items indented underneath.

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 00625 11/10/2000
25.00

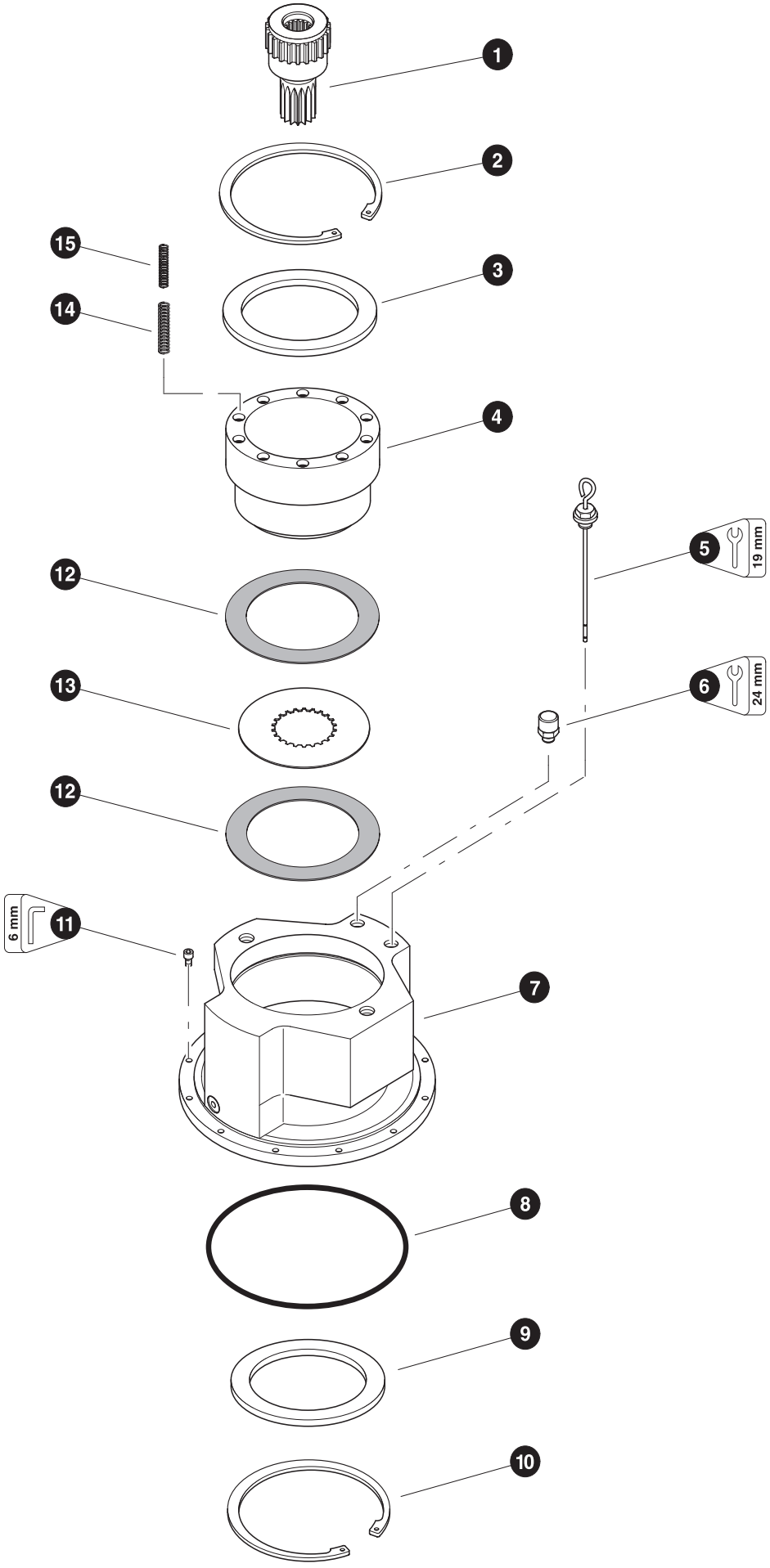
SWING MOTOR HYDRAULICS
(swing motor installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	20070-UP	1	❑	MOTOR/GEARBOX, swing - Lohmann Gearbox & 45cc motor	
1	20661-UP	1		BOLT - 16mm-2.0P x 35mm	
2	17312-UP	1	❑	MOTOR, hydraulic - Rexroth A2FE45 cc	
	17238-UP	1	❑	MOTOR, hydraulic - Rexroth A2FE56 cc (Optional)	
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	22694-UP	1		GEARBOX - Lohmann	

❑ Kit or Assembly - includes all items indented underneath.

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 00626 11/10/2000
25.00

SWING MOTOR HYDRAULICS
(swing gearbox breakdown)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	22694-UP	1		GEARBOX - 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 component suppliers, it is not recommended that the component be disassembled further than is shown in the illustration.

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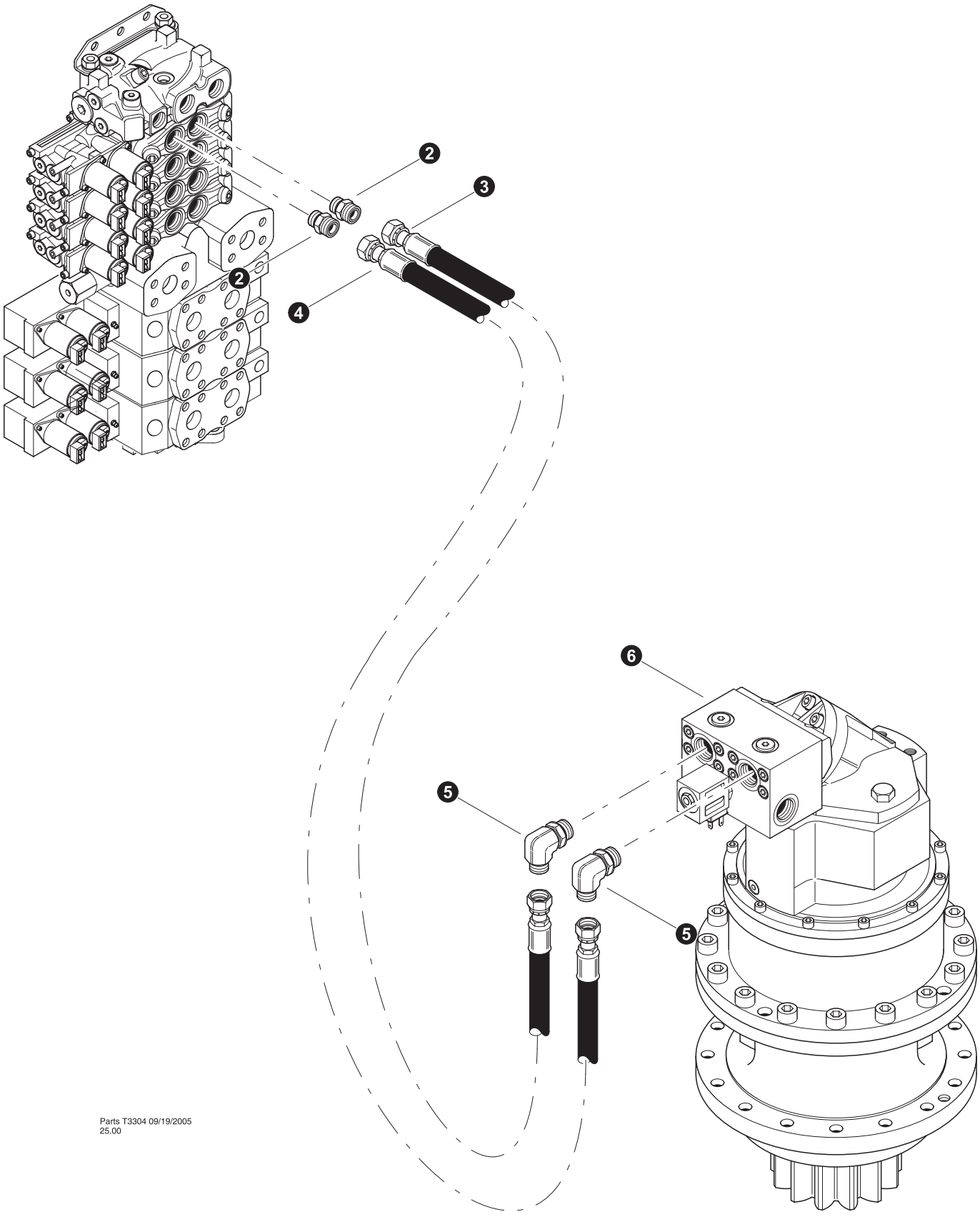
Section HH-5

Harvester / Feller Buncher Hydraulics - Implement Connections (Harvester)

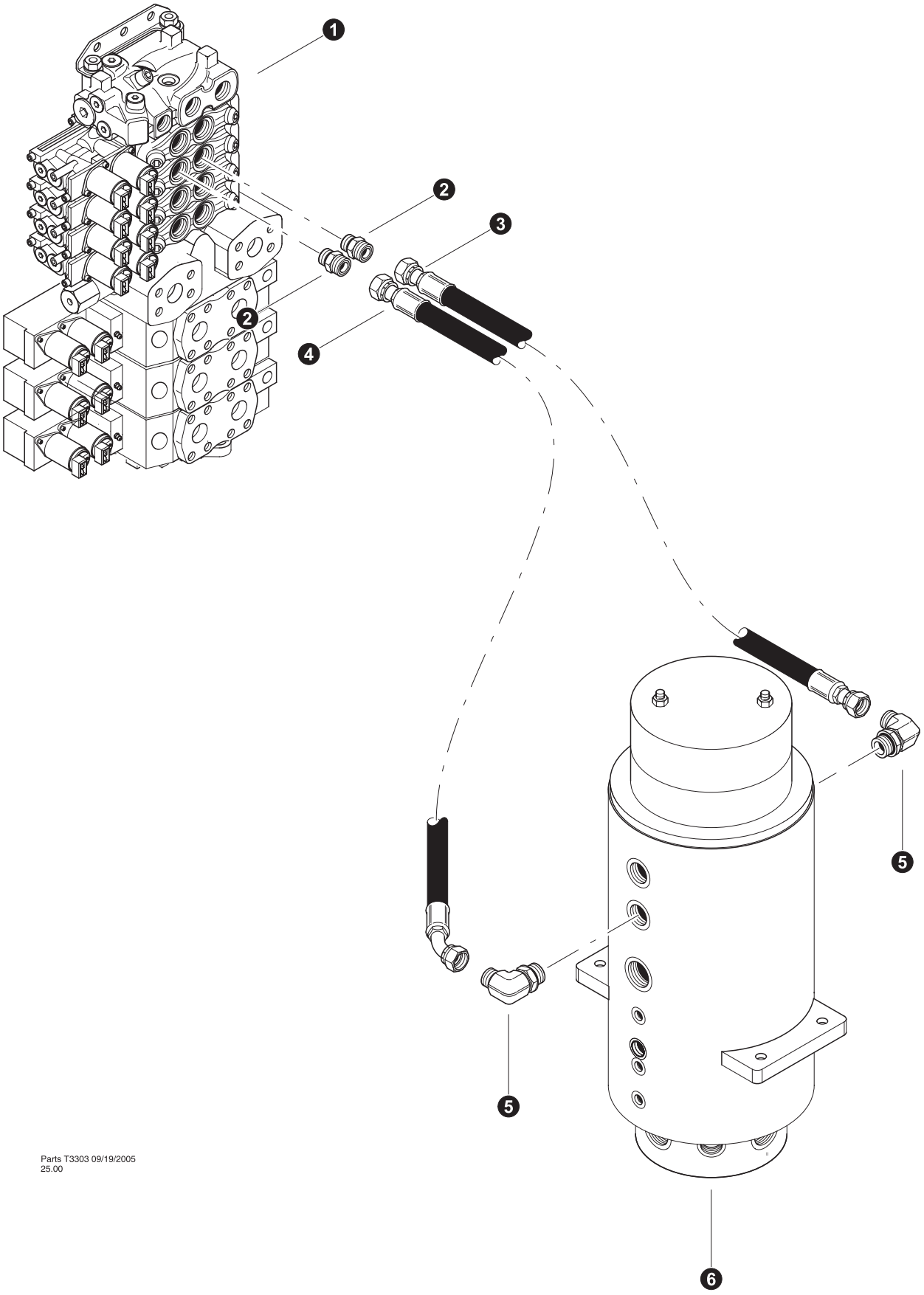


Parts T3304 09/19/2005
25.00

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

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	HH-2
2	50039-HH	2		CONNECTOR, STR - 848-TTO-10X10	
3	-HH	1		HOSE ASSEMBLY - 4069-10-100S-100S *(Swing valve section work port "A" to swing motor anti-cav "Left" port)*	
4	-HH	1		HOSE ASSEMBLY - 4075-10-100S-100S *(Swing valve section work port "B" to swing motor anti-cav "Right" port)*	
5	50036-HH	2		ELBOW, 90 - 849-TTO-10X12	
6	REF.	1	🕮	MOTOR/GEARBOX - SWING	HH-4

🕮 See referenced page for component or assembly breakdown.

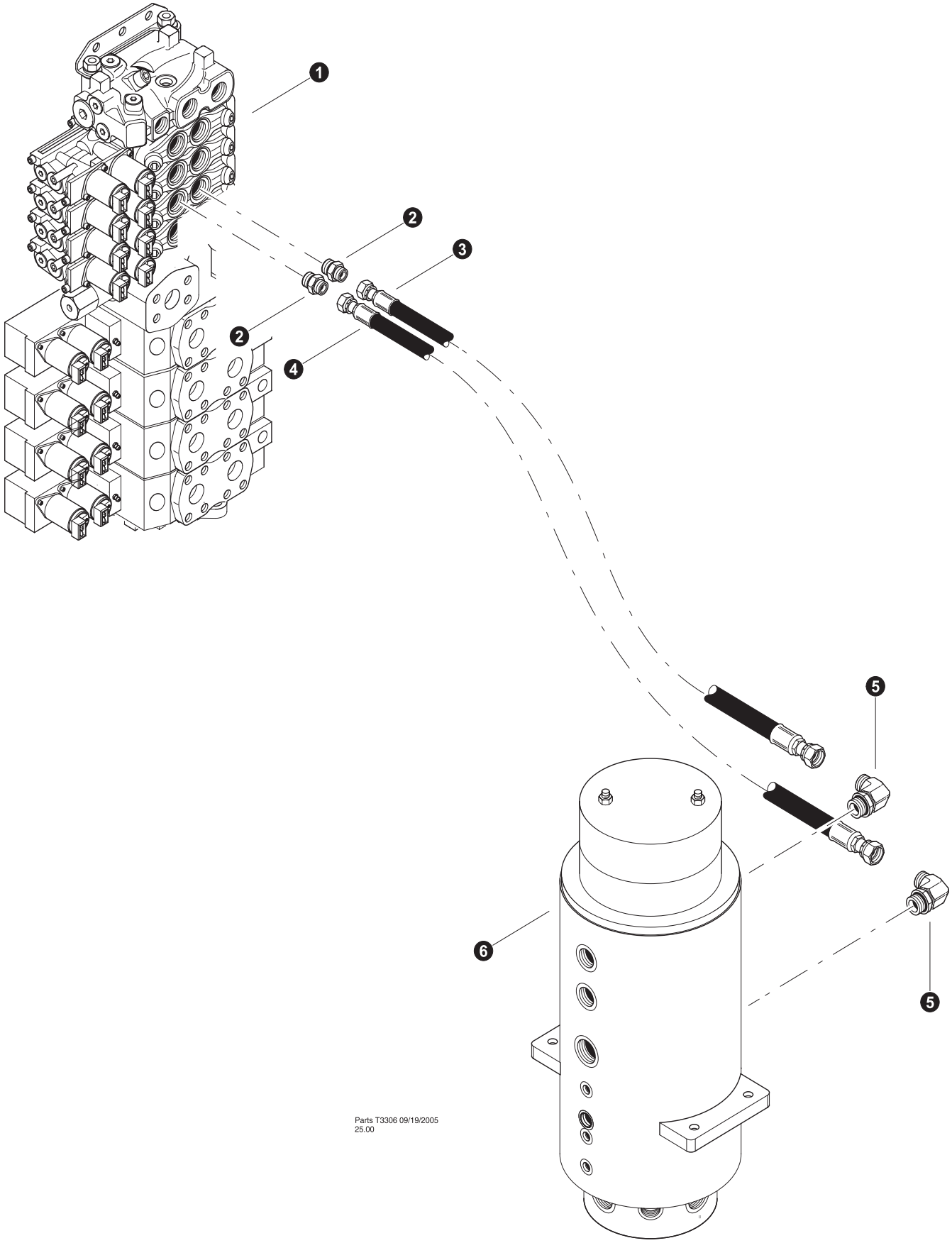


Parts T3303 09/19/2005
25.00

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

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	HH-2
2	50039-HH	2		CONNECTOR, STR - 848-TTO-10X10	
3	-HH	1		HOSE ASSEMBLY - 4030-10-100S-100S*(Steer valve section work port "A" to rotory manifold #10 port)*	
4	-HH	1		HOSE ASSEMBLY - 4036.5-10-100S-1004*(Steer valve section work port "B" to rotory manifold #9 port)*	
5	50036-HH	2		ELBOW, 90 - 849-TTO-10X12	
6	REF.	1	🕮	ROTORY MANIFOLD ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.

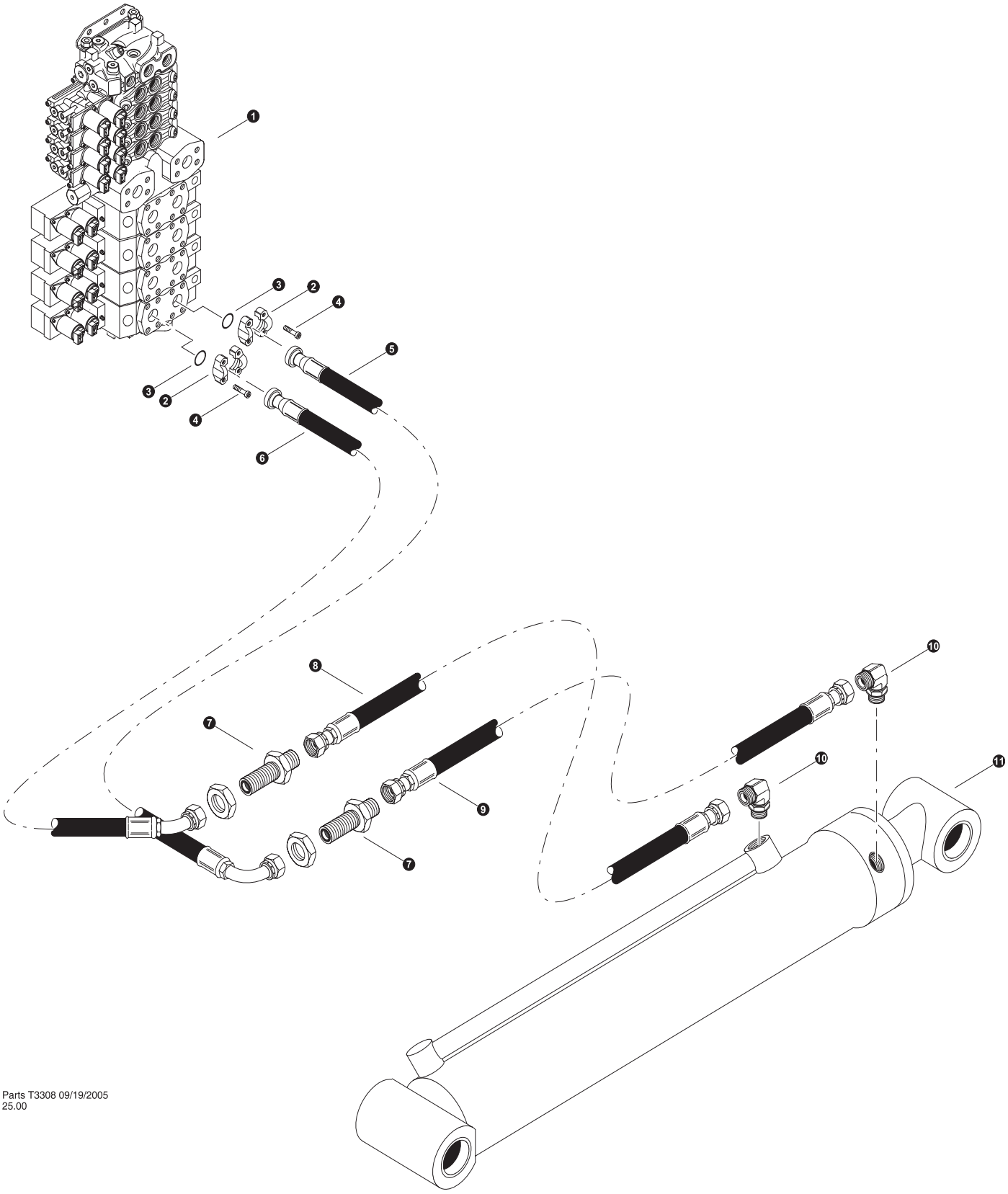


Parts T3306 09/19/2005
25.00

CAB LEVEL FUNCTION
(Main Control Valve To Upper Rotary Manifold Ports)
(Optional)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	HH-2
2	15115-HH	2		CONNECTOR, straight - FF1852T-0810S	
3	-HH	1		HOSE ASSEMBLY - 4030-08-080S-080S *(Level Valve "A" port to Rotory Manifold #12 port)*	
4	-HH	1		HOSE ASSEMBLY - 4035-08-080S-080S *(Level Valve "B" port to Rotory Manifold #6 port)*	
5	16360-HH	2		ELBOW, 90 - FF1868T-0808S	
6	REF.	1	🕮	ROTORY MANIFOLD ASSEMBLY	UP-1

🕮 See referenced page for component or assembly breakdown.

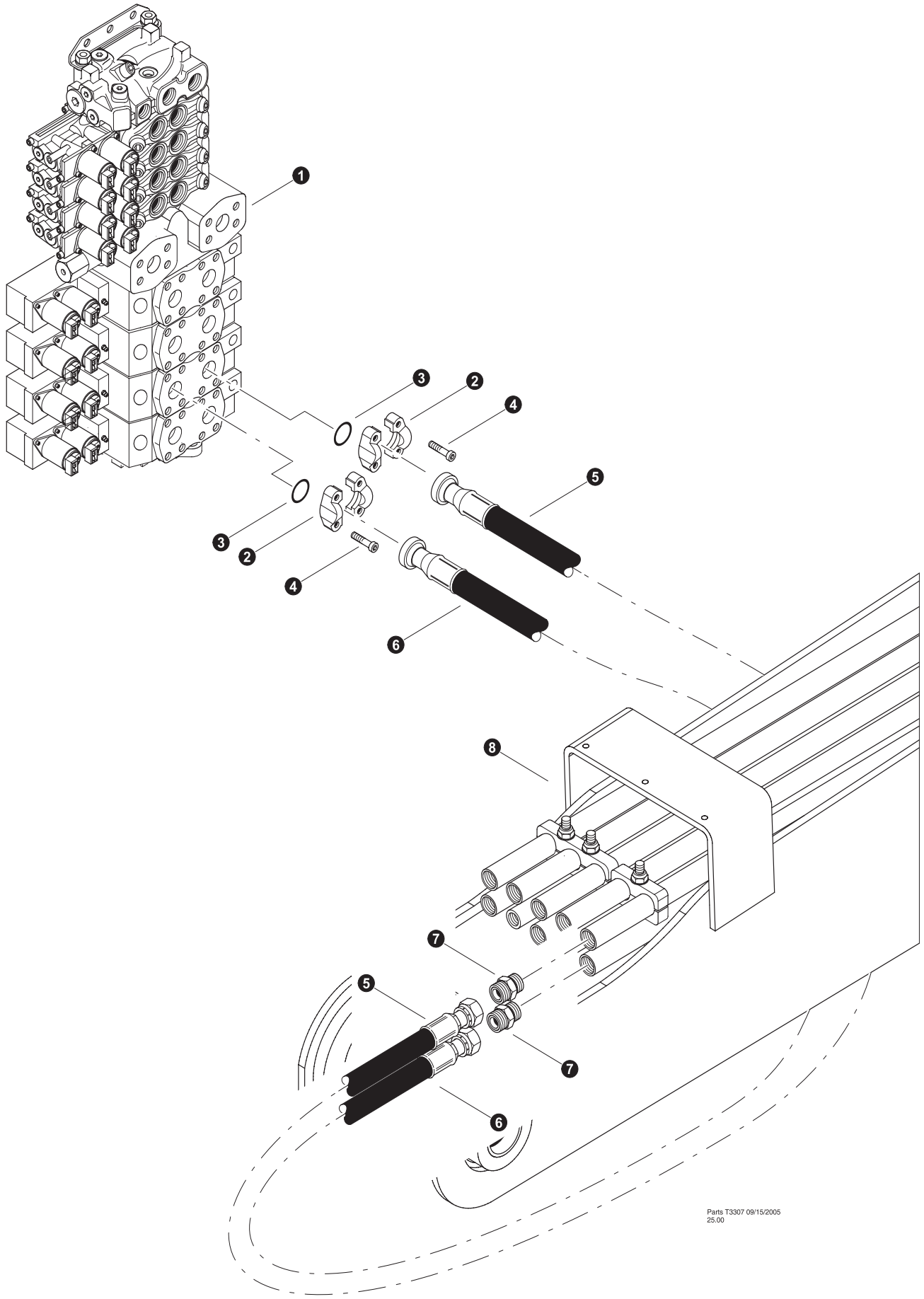


Parts T3308 09/19/2005
25.00

MAIN BOOM CYLINDER FUNCTION
(Main Control Valve To Main Boom (Hoist) Cylinder)

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)*	
3	15377-HH	2		O-RING - 1" SF	
4	18979-HH	8		BOLT, allen M10 X 45MM	
5	-HH	1		HOSE ASSEMBLY - 4032-16-1609-16PA *(Main boom valve work port "B" to main boom cylinder bulkhead)*	
6	-HH	1		HOSE ASSEMBLY - 4024-16-1604-16PA *(Main boom valve work port "A" to main boom cylinder bulkhead)*	
7	20033-HH	2		CONNECTOR, STR BULKHEAD - 832-TT-16	
8	-HH	1		HOSE ASSEMBLY - 4066-16-160S-160S *(main boom bulkhead to main boom cylinder base port)*	
9	50864-HH	1		HOSE ASSEMBLY - 4057.5-16-160S-160S *(main boom bulkhead to main boom cylinder rod port)*	
10	REF.	1	🕮	MAIN BOOM (HOIST) CYLINDER	HB-3

🕮 See referenced page for component or assembly breakdown.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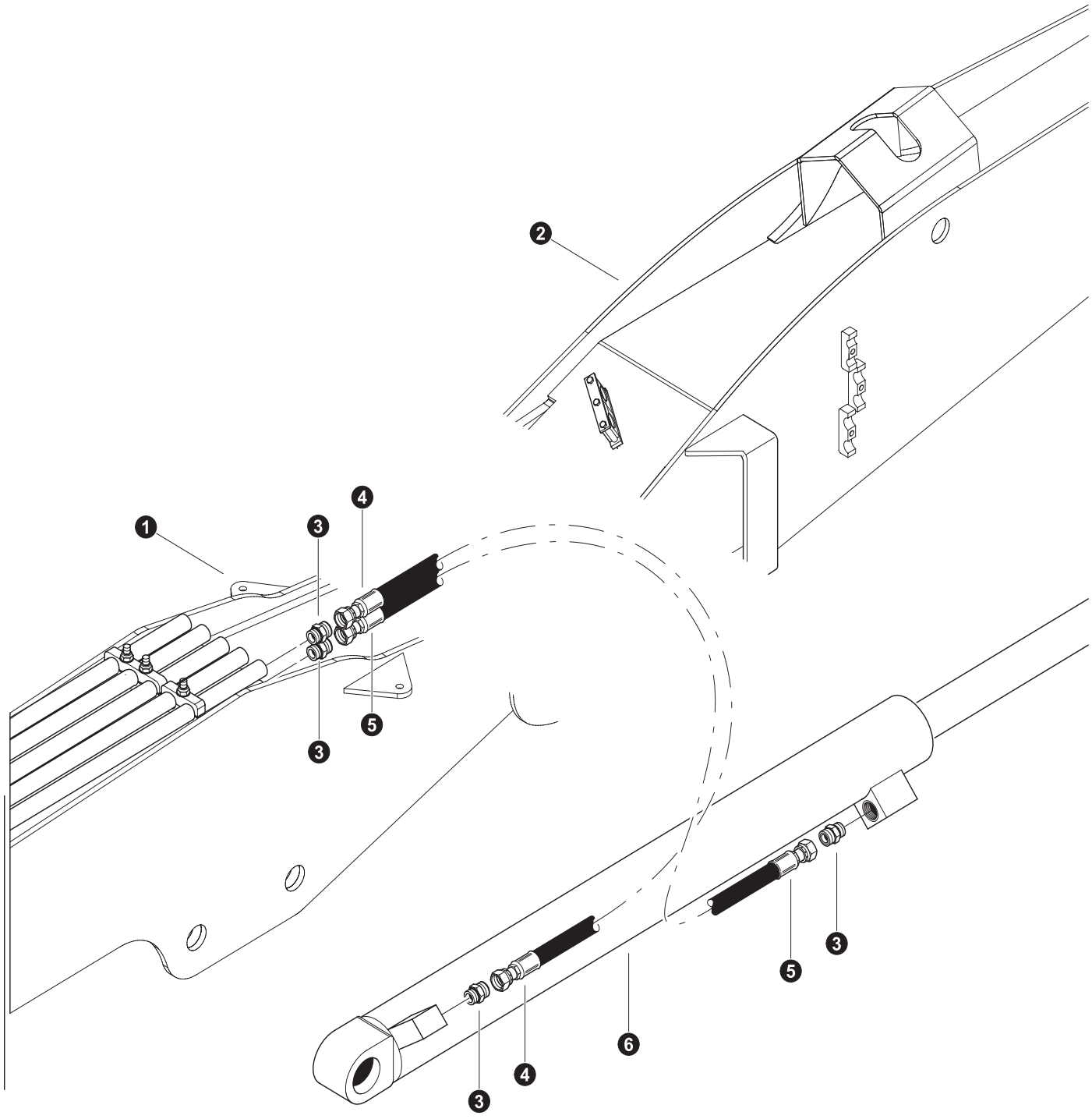
Parts T3307 09/15/2005
25.00

STICK BOOM CYLINDER FUNCTION
(Main Control Valve To Main Boom Tube Lines)

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)*	
3	15377-HH	2		O-RING - 1" SF	
4	18979-HH	8		BOLT, allen M10 X 45MM	
5	50731-HH	1		HOSE ASSEMBLY - 4075-16-160S-16PA *(Stick boom valve work port "B" to main boom tube line rod side)*	
6	-HH	1		HOSE ASSEMBLY - 4073-16-160S-16PA *(Stick boom valve work port "A" to main boom tube line base side)*	
7	15225-HH	6		CONNECTOR, STR - FF1852T-1616S	
8	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1

🕮 See referenced page for component or assembly breakdown.

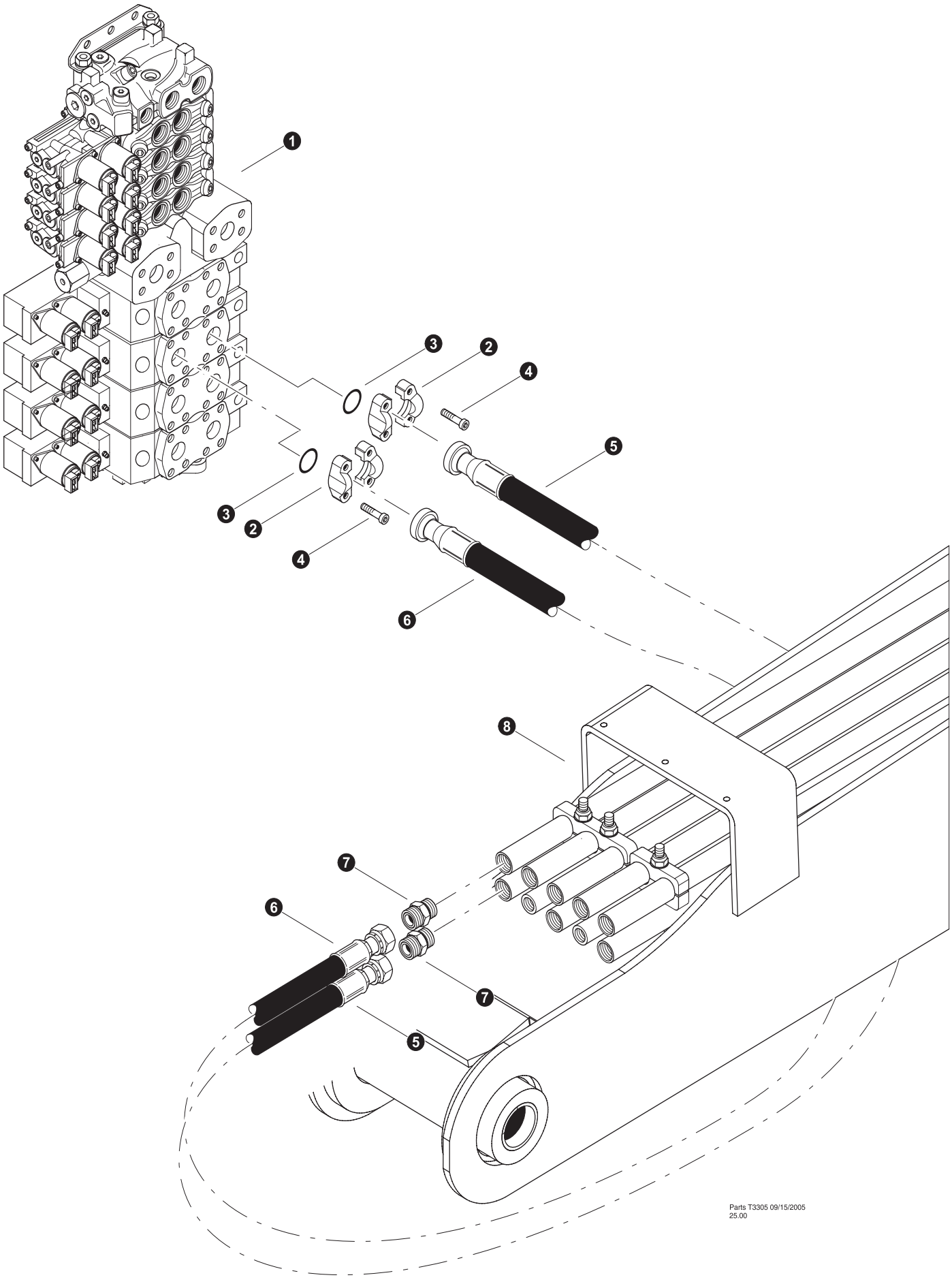


Parts T3312 09/12/2005
12.5

STICK BOOM CYLINDER FUNCTION
(Main Boom To Stick Boom Lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	STICK BOOM CYLINDER	HB-3
2	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
3	15225-HH	6		CONNECTOR, STR - FF1852T-1616S	
4	-HH	1		HOSE ASSEMBLY - 4117-16-160S-16OS *(Main Boom to Stick Cylinder Rod)*	
5	-HH	1		HOSE ASSEMBLY - 4094-16-160S-16OS *(Main Boom to Stick Cylinder Base)*	
6	REF.	1	🕮	STICK CYLINDER	HB-3

🕮 See referenced page for component or assembly breakdown.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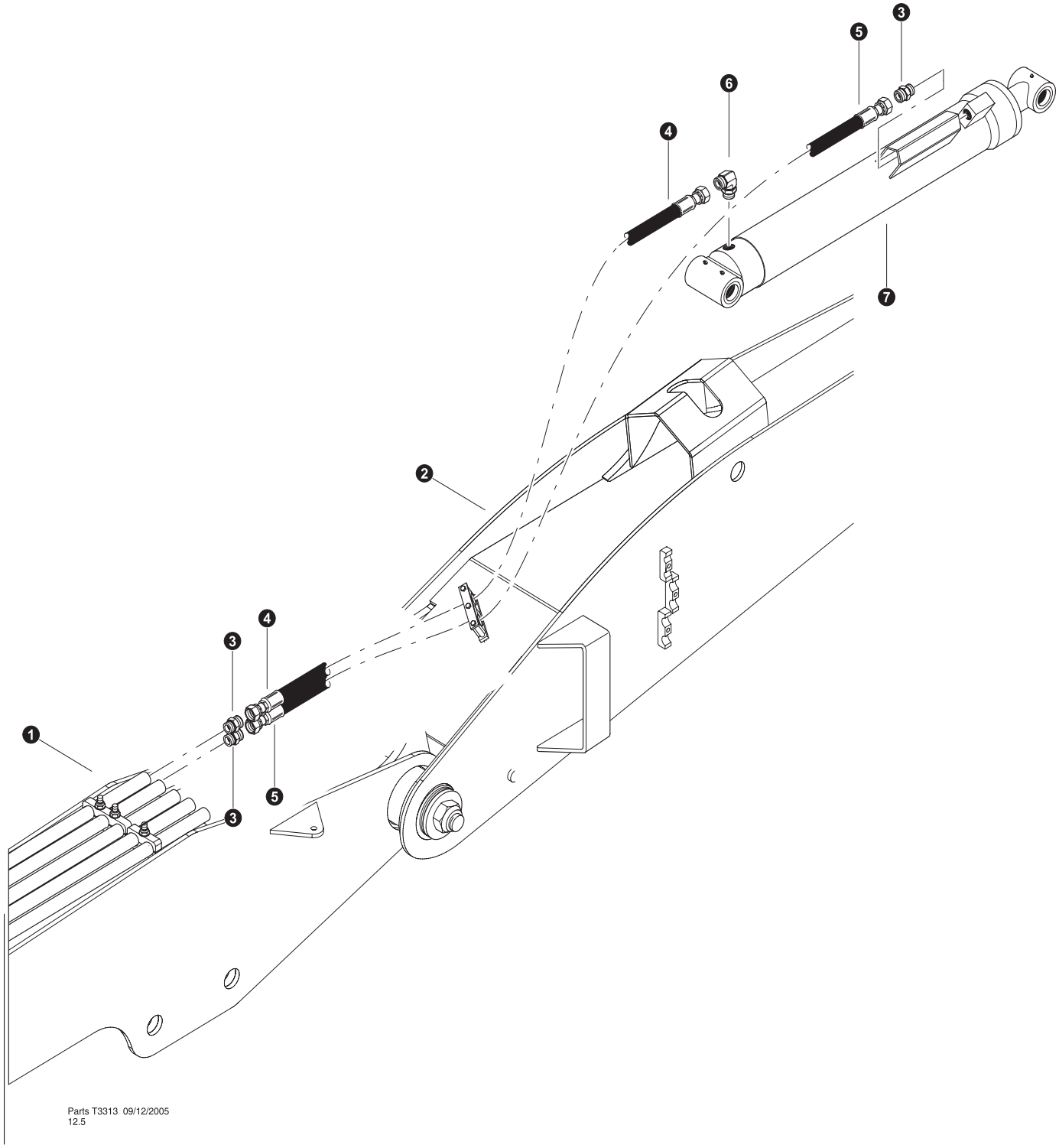
Parts T3305 09/15/2005
25.00

TOOL CYLINDER FUNCTION
(Main Control Valve To Main Boom Tube Lines)

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)*	
3	15377-HH	2		O-RING - 1” SF	
4	18979-HH	8		BOLT, allen M10 X 45MM	
5	-HH	1		HOSE ASSEMBLY - 4073-16-160S-16PA *(Tool Cyl valve work port “B” to main boom tube line base side)*	
6	-HH	1		HOSE ASSEMBLY - 4073-16-160S-16PA *(Tool Cyl valve work port “A” to main boom tube line rod side)*	
7	15225-HH	6		CONNECTOR, STR - FF1852T-1616S	
8	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1

🕮 See referenced page for component or assembly breakdown.

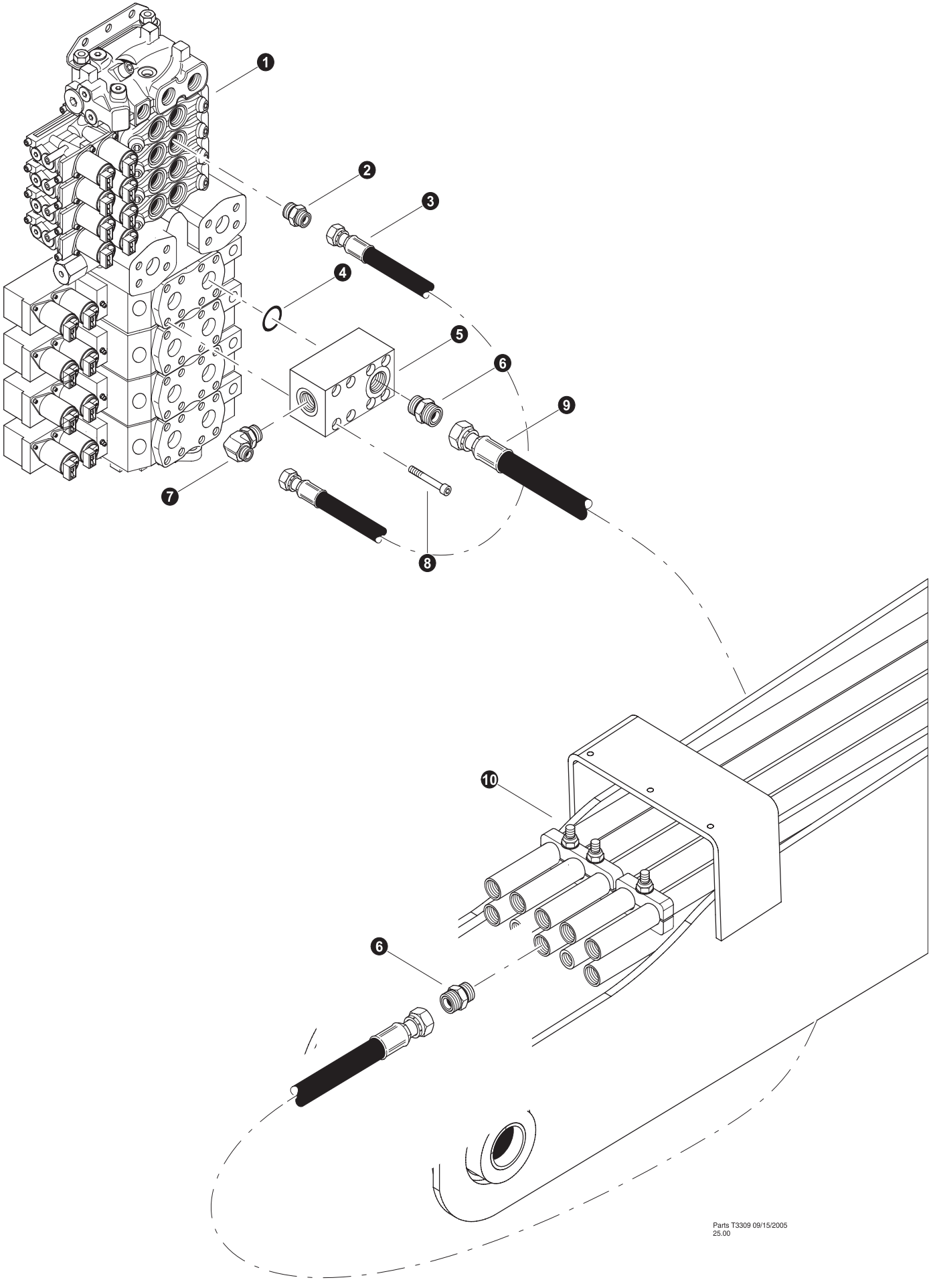


Parts T3313 09/12/2005
12.5

TOOL CYLINDER FUNCTION
(Main Boom To Tool Cylinder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-1
3	15225-HH	3		CONNECTOR, STR - FF1852T-1616S	
4	-HH	1		HOSE ASSEMBLY - 4108-16-160S-16OS *(Main Boom to Tool Cylinder Base)*	
5	-HH	1		HOSE ASSEMBLY - 4154-16-160S-16OS *(Main Boom to Tool Cylinder Rod)*	
6	15228-HH	1		ELBOW, 90 - FF1868T-1616S	
7	REF.	1	🕮	TOOL CYLINDER	HB-3

🕮 See referenced page for component or assembly breakdown.

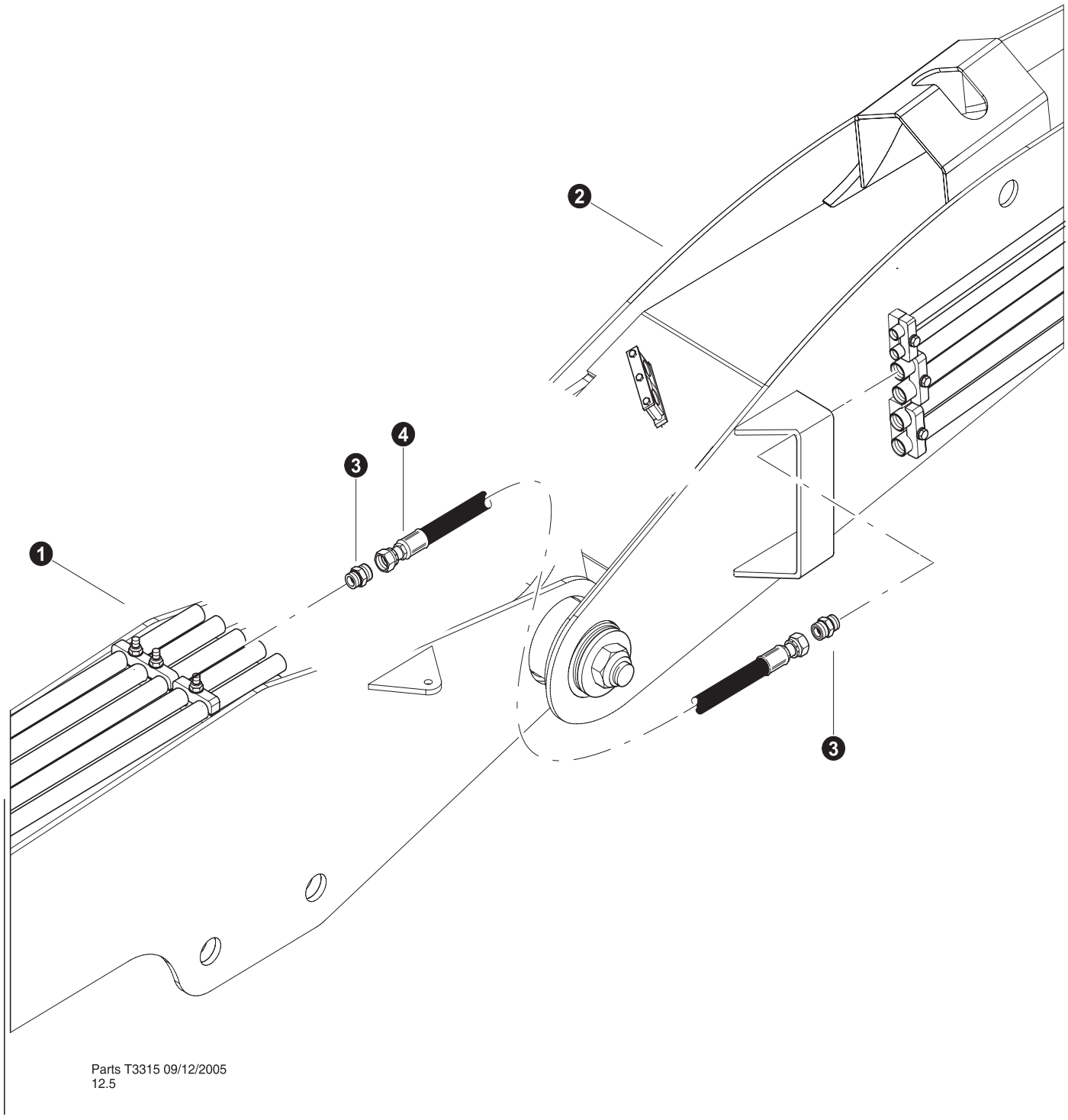


Parts T3309 09/15/2005
25.00

HARVESTER ATTACHMENT PRESSURE
(Valve to Main Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN CONTROL VALVE.	HH-2
2	15115-HH	1		CONNECTOR, straight - FF1852T-0810S	
3	-HH	1		HOSE ASSEMBLY - 4029-08-080S-080S *()*	
4	15377-HH	2		O-RING - 1” SF	
5	51807-HH	1		MANIFOLD, COMBINED FLOW - VOAC COMBO	
6	15225-HH	2		CONNECTOR, STR - FF1852T-1616S	
7	15372-HH	1		ELBOW, 90 - FF1868T-0812S	
8	50117-HH	8		BOLT, ALLEN HEAD - 10MM-1.5P X 75MM	
9	-HH	1		HOSE ASSEMBLY - 4070.5-16-160S-160S *()*	
10	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1

🕮 See referenced page for component or assembly breakdown.

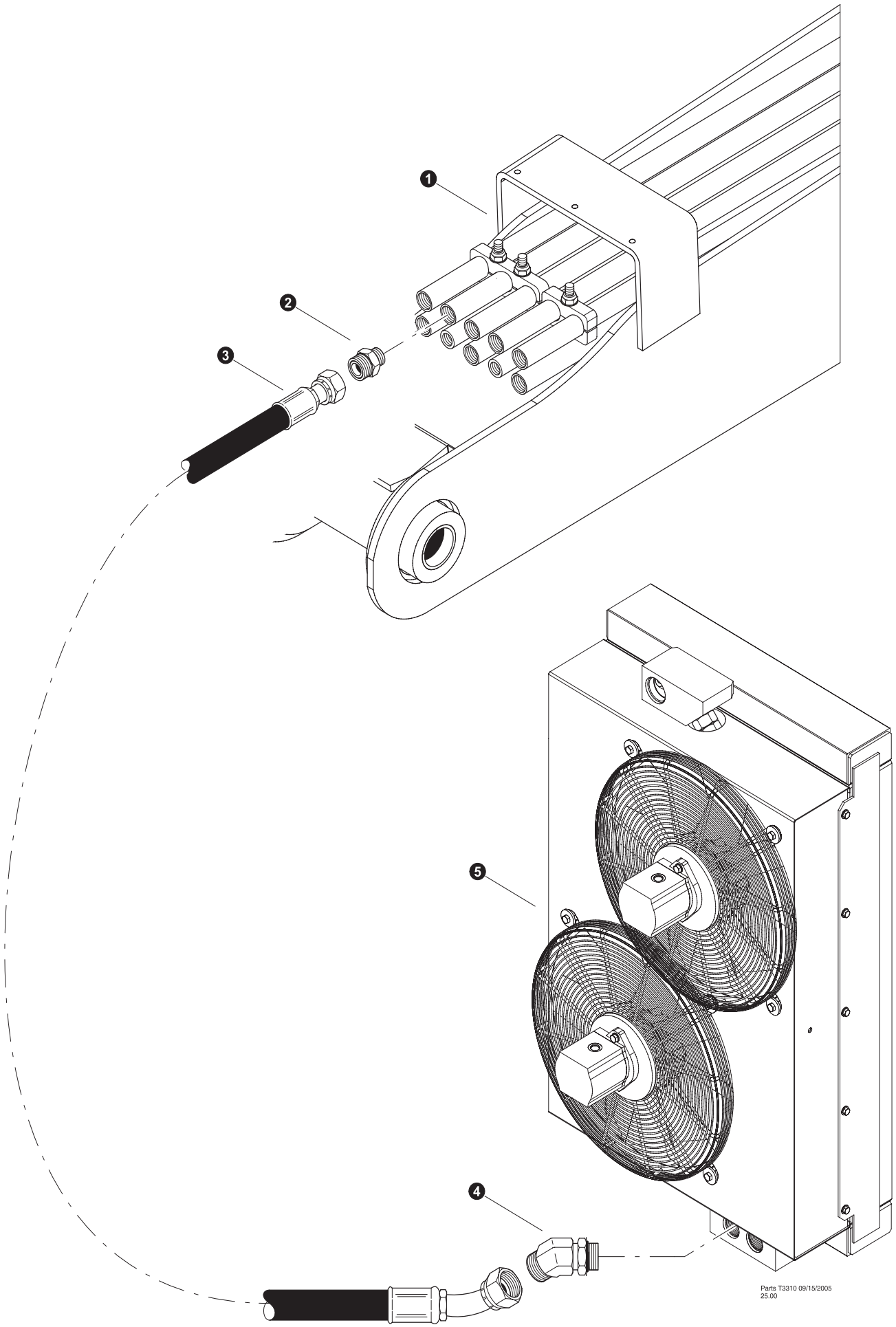


Parts T3315 09/12/2005
12.5

HARVESTER ATTACHMENT PRESSURE
(Main Boom to Stick Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-1
3	15225-HH	2		CONNECTOR, STR - FF1852T-1616S	
4	-HH	1		HOSE ASSEMBLY - 4075-16-160S-16OS *(Main Boom to Stick Cyl)*	

🕮 See referenced page for component or assembly breakdown.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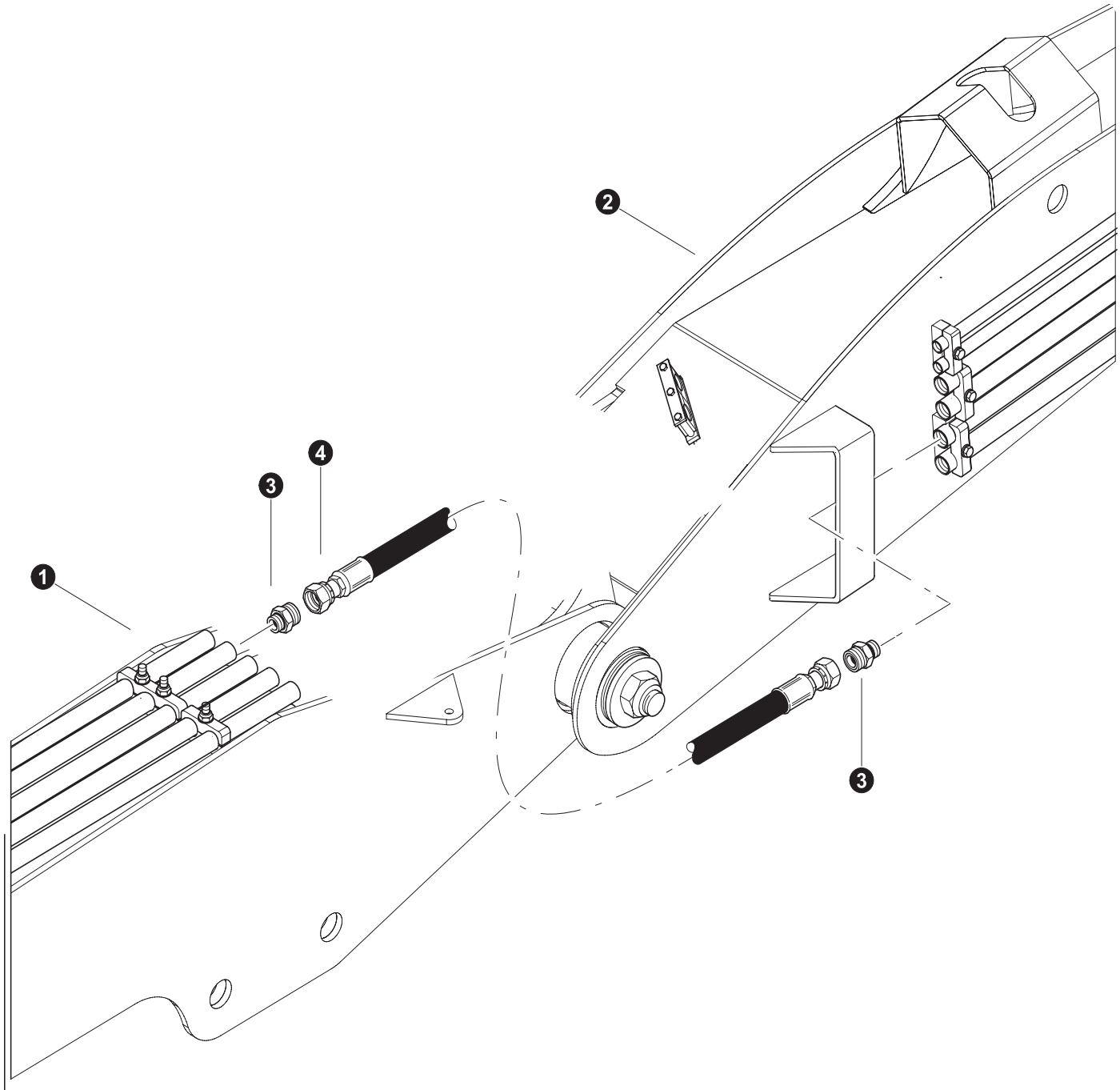
Parts T3310 09/15/2005
25.00

HARVESTER ATTACHMENT RETURN
(Oil Cooler to Main Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	16542-HH	1		CONNECTOR, STR - FF1852T-1620S	
3	-HH	1		HOSE ASSEMBLY - 2180-20-200S-200S *(Attachment Return to Oil Cooler)*	
4	17056-HH	1		ELBOW, 45 - FF2068T-2020S	
5	REF.	1	🕮	OIL COOLER ASSEMBLY	UP-3

🕮 See referenced page for component or assembly breakdown.

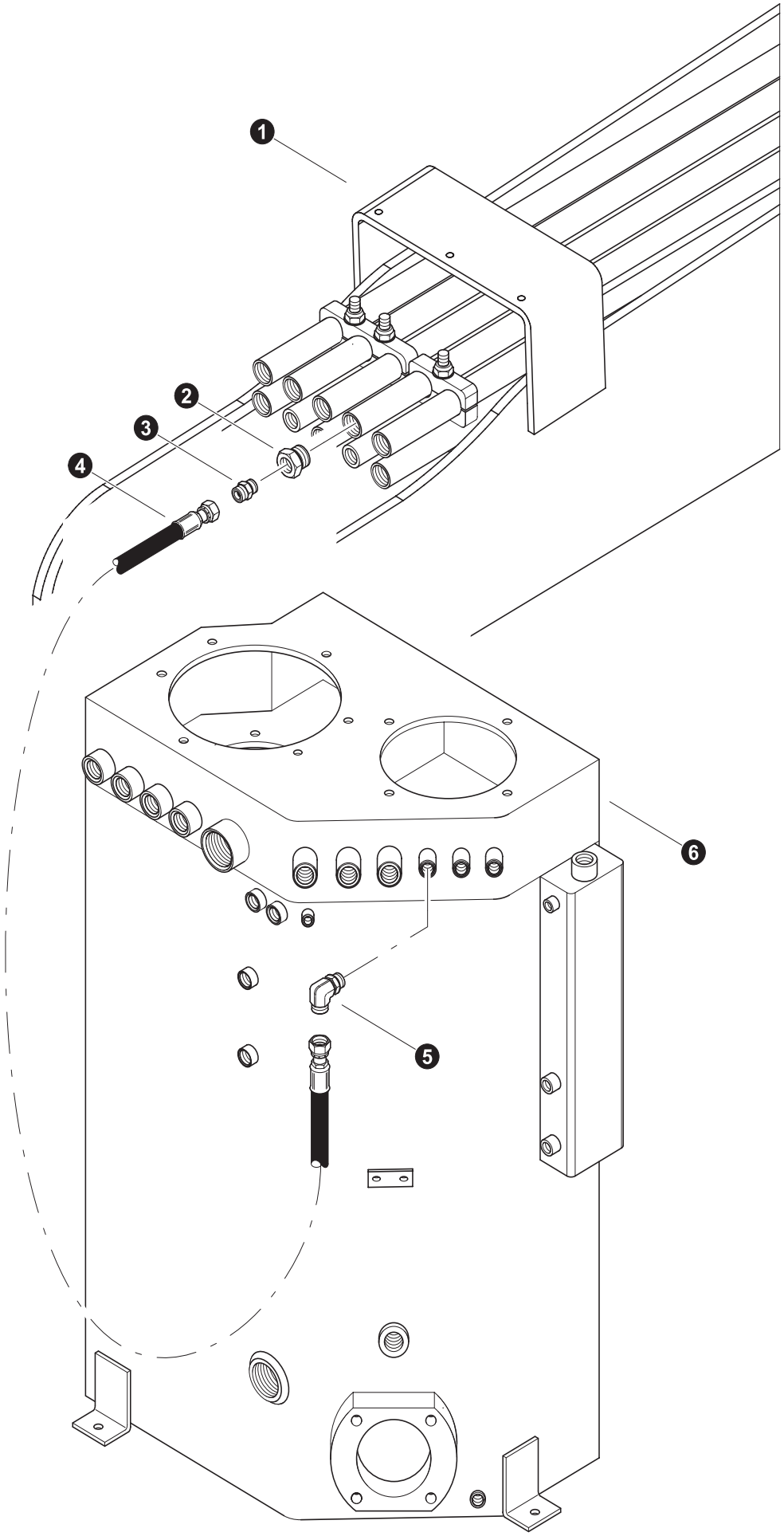


Parts T3314 09/12/2005
12.5

HARVESTER ATTACHMENT RETURN
(Main Boom to Stick Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-1
3	16542-HH	2		CONNECTOR, STR - FF1852T-1620S	
4	-HH	1		HOSE ASSEMBLY - 4073-20-200S-20OS *(Main Boom to Stick Cyl)*	

🕮 See referenced page for component or assembly breakdown.

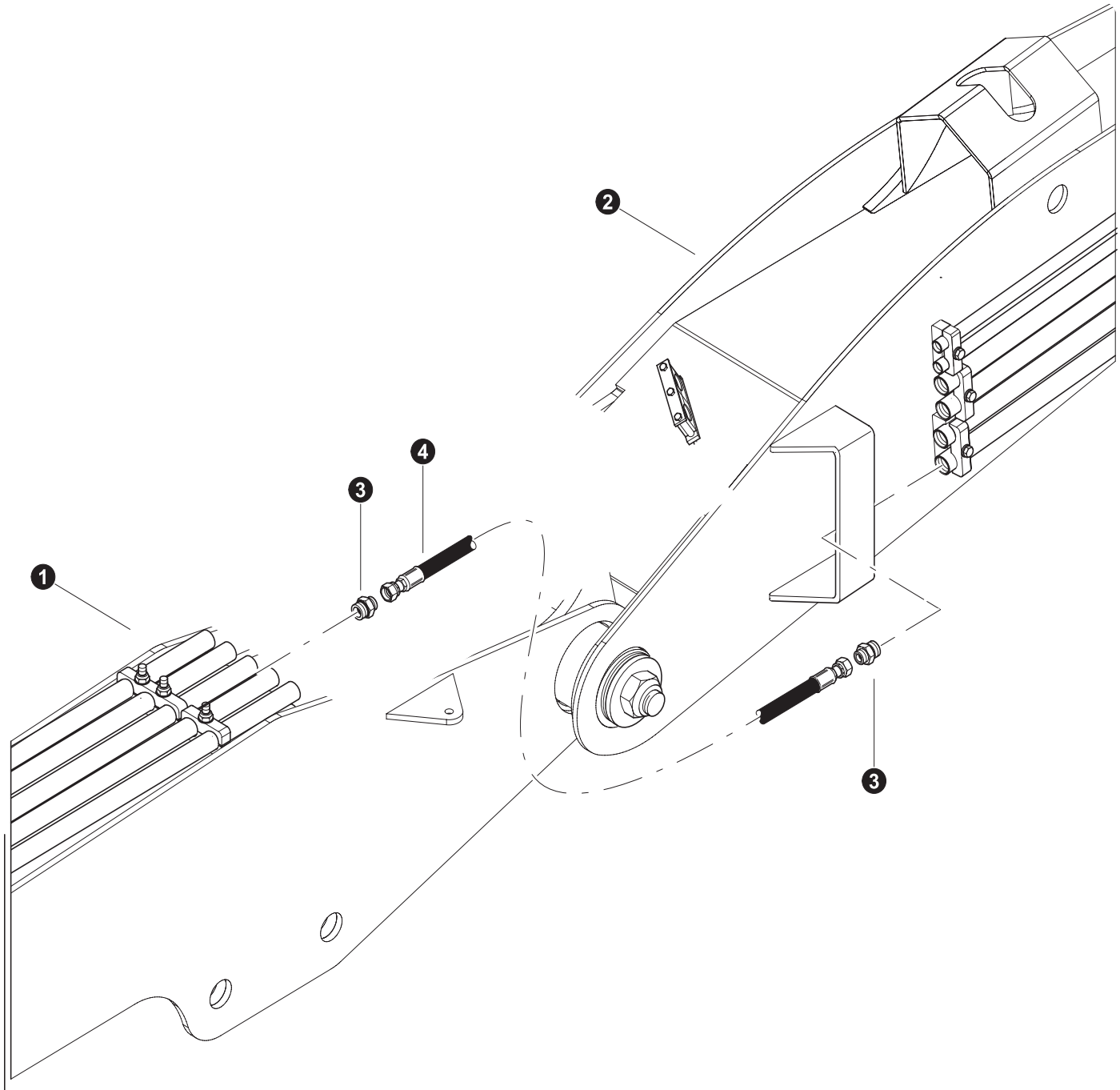


Parts T3311 09/15/2005
25.00

HARVESTER ATTACHMENT CASE DRAIN
(Oil Tank to Main Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	15117-HH	1		CONNECTOR, STR - FF1852T-0808S	
3	16719-HH	1		BUSHING, REDUCER - 6410-16-8	
4	-HH	1		HOSE ASSEMBLY - 2205-08-080S-08OS *(Main Boom to Hydraulic Tank Case Drain Filter)*	
5	REF.	1	🕮	HYDRAULIC TANK ASSEMBLY	UP-2

🕮 See referenced page for component or assembly breakdown.



Parts T3316 09/12/2005
12.5

HARVESTER ATTACHMENT CASE DRAIN
(Main Boom to Stick Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-1
3	15226-HH	2		CONNECTOR, STR - FF1852T-1216S	
4	-HH	1		HOSE ASSEMBLY - 4073.5-12-120S-12OS *(Main Boom to Stick Cyl)*	

🕮 See referenced page for component or assembly breakdown.

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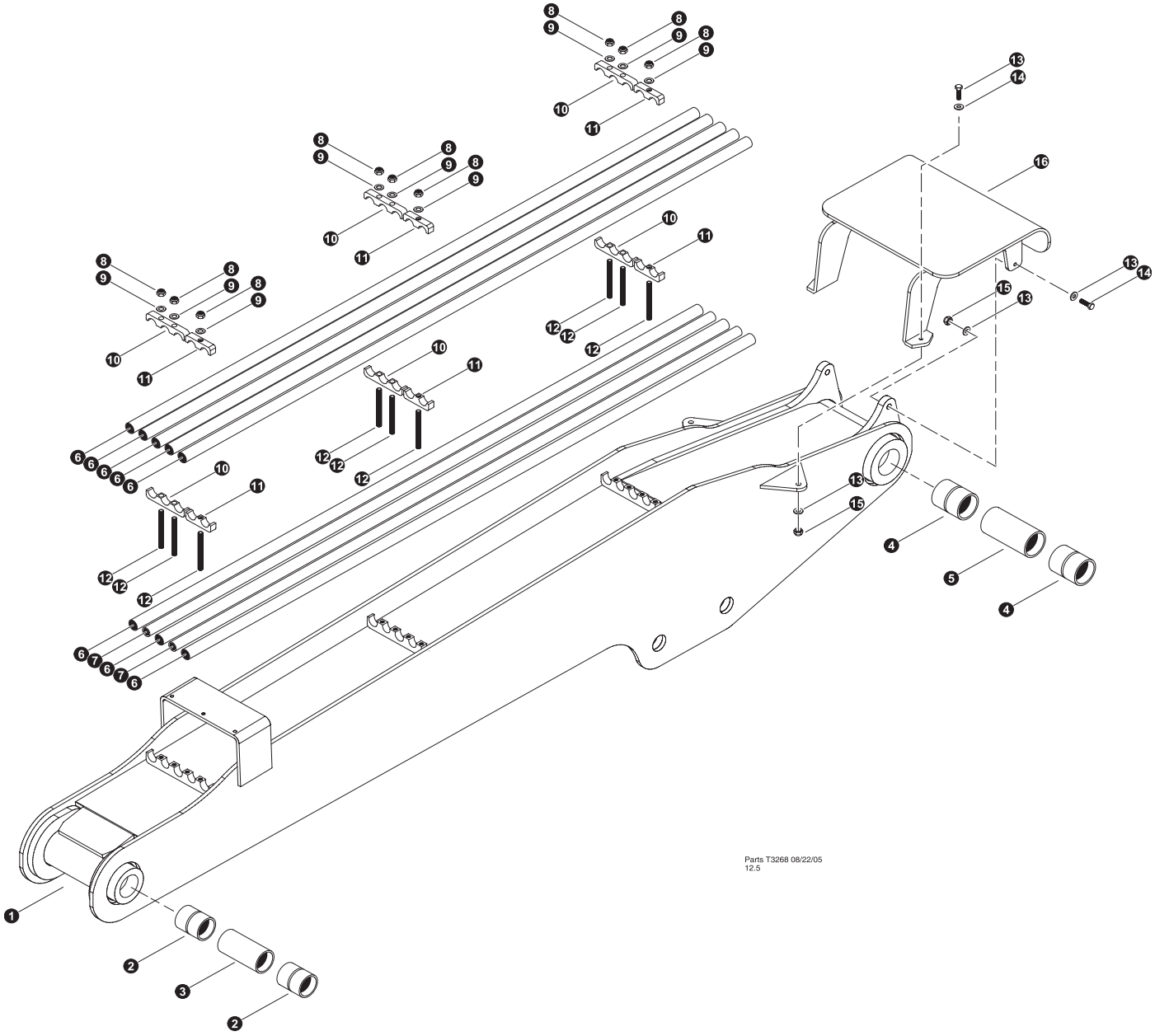
Section HB-1

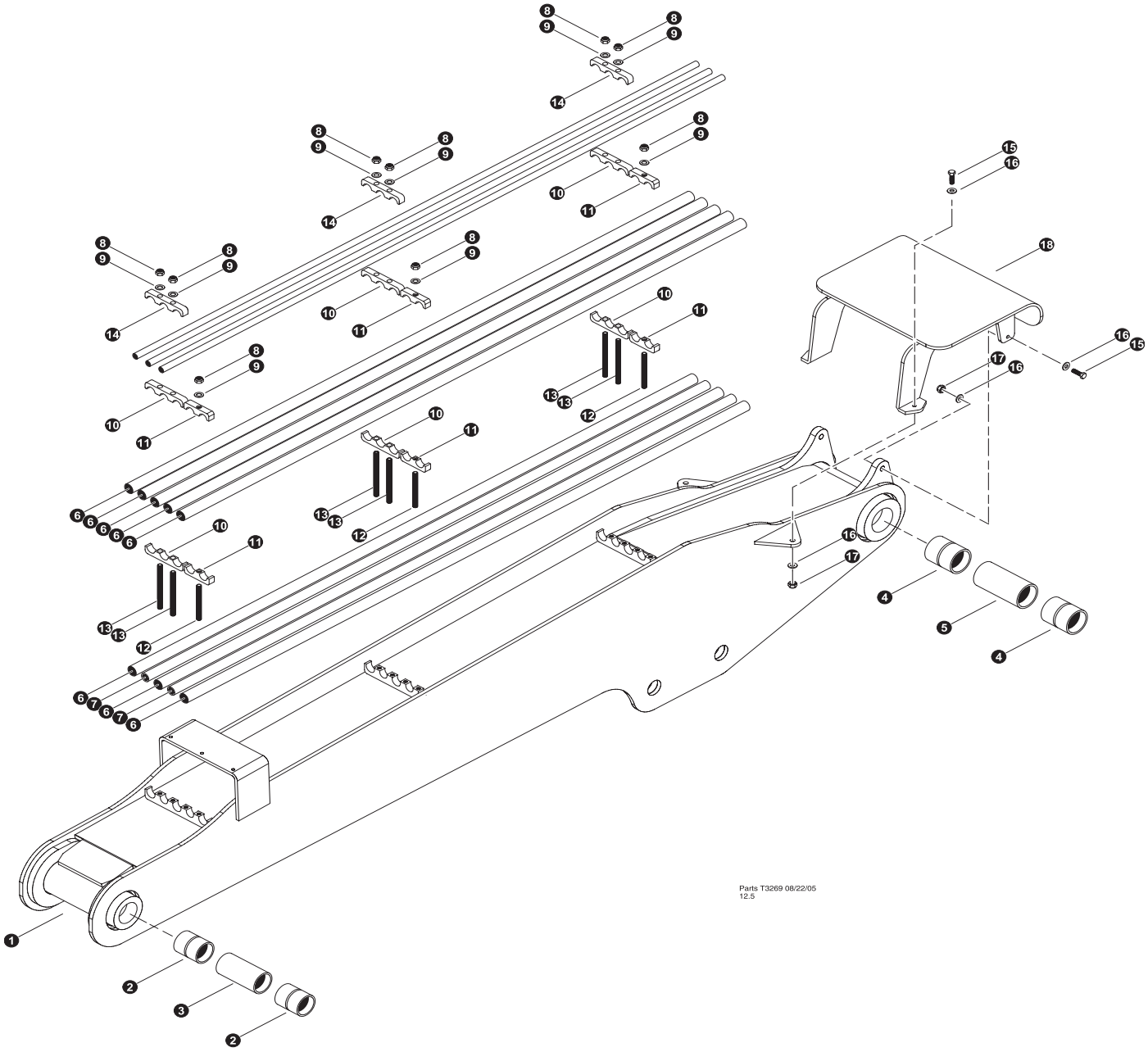
Harvester Booms - Main Boom


Parts T3268 08/22/05
12.5

MAIN BOOM COMPONENTS
(Harvester / Buncher Boom)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51595-HB	1	❑	WELDMENT, MAIN BOOM (STRAIGHT TB - 830 / 630)	
2	42485-HB	2		BUSHING - 3.5” X 3.0” X 4.25” UNDERSIZE	
3	12365-HB	1		SPACER, base - 3” x 7-1/2”	
4	18564-HB	2		BUSHING - 3.5” X 4.25”	
5	42410-HB	1		SPACER, 3.5 X 7.44	
6	51833-HB	8		TUBELINE - 1” X 108” FB MAIN TF830	
7	51834-HB	2		TUBELINE - .75” X 108” FB MAIN TF830	
8	15563-HB	9		NUT, nylock - 5/8”	
9	10771-HB	9		WASHER, SAE flat - 5/8”	
10	85086-HB	6		CLAMP, saddle top tube - 1” x 1” x 1”	
11	12447-HB	6		CLAMP, saddle top tube - 1” x 1”	
12	15672-HB	9		STUD - 5/8” x 6-1/4”	
13	15517-HB	4		BOLT - .625” X 2.5”	
14	10771-HB	8		WASHER, SAE flat - 5/8”	
15	10816-HB	4		NUT, LOCK - .625”	
16	51988-HB	1		GUARD, HOSE - MAIN BOOM (FB) 630/830	

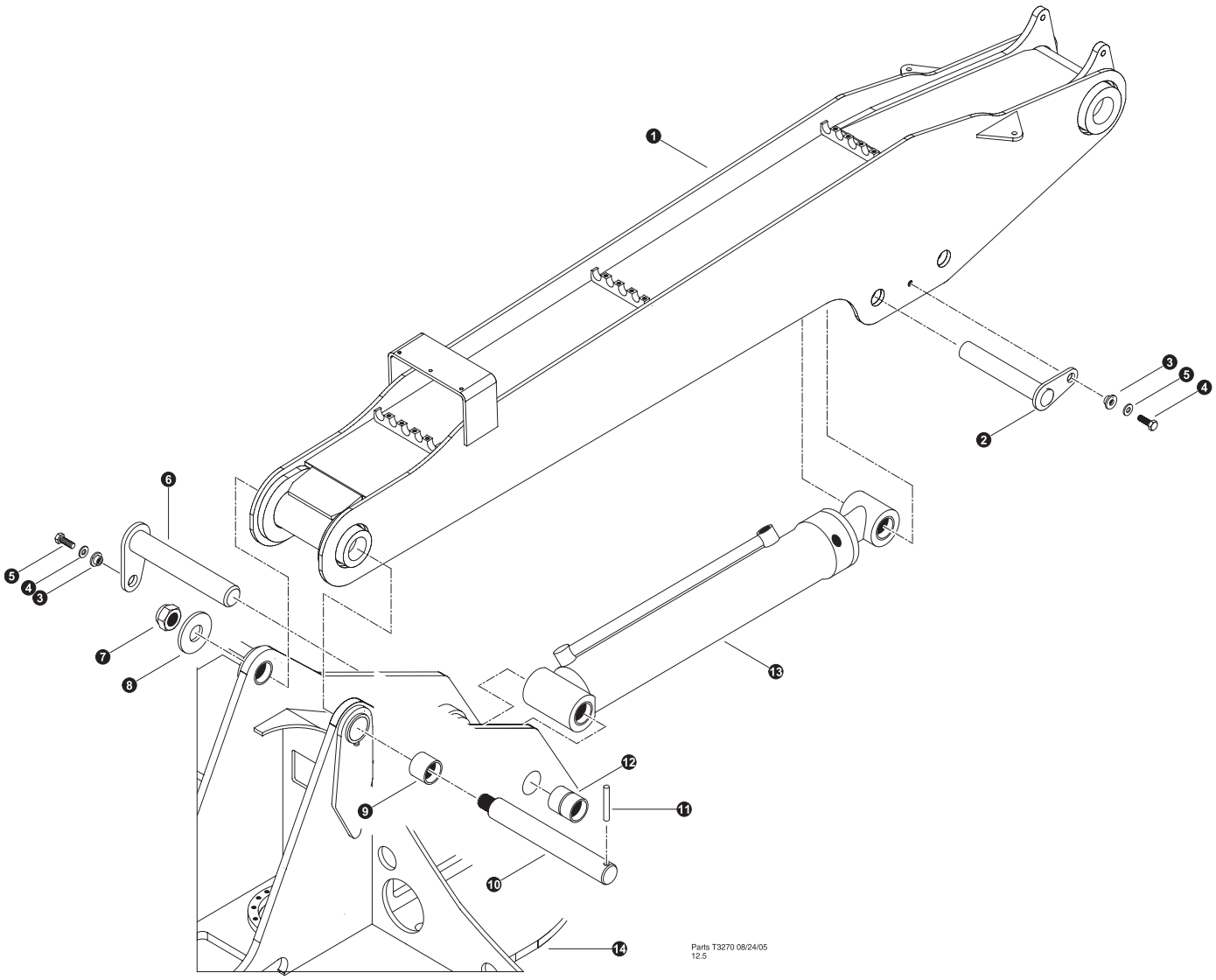
❑ Kit or Assembly - includes all items indented underneath.


Parts T3269 08/22/05
12.5

MAIN BOOM COMPONENTS
(Harvester / Buncher Boom)
Extra Tube lines for Disc Saw

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51595-HB	1	❑	WELDMENT, MAIN BOOM (STRAIGHT TB - 830 / 630)	
2	42485-HB	2		BUSHING - 3.5” X 3.0” X 4.25” UNDERSIZE	
3	12365-HB	1		SPACER, base - 3” x 7-1/2”	
4	18564-HB	2		BUSHING - 3.5” X 4.25”	
5	42410-HB	1		SPACER, 3.5 X 7.44	
6	51833-HB	8		TUBELINE - 1” X 108” FB MAIN TF830	
7	51834-HB	2		TUBELINE - .75” X 108” FB MAIN TF830	
8	15563-HB	9		NUT, nylock - 5/8”	
9	10771-HB	9		WASHER, SAE flat - 5/8”	
10	85086-HB	6		CLAMP, saddle top tube - 1” x 1” x 1”	
11	12447-HB	6		CLAMP, saddle top tube - 1” x 1”	
12	15672-HB	3		STUD - 5/8” x 6-1/4”	
13	17062-HB	6		STUD - 5/8” X 8”	
14	85086-HB	3		CLAMP, saddle top tube - 1” x 1” x 1”	
15	15517-HB	4		BOLT - .625” X 2.5”	
16	10771-HB	8		WASHER, SAE flat - 5/8”	
17	10816-HB	4		NUT, LOCK - .625”	
18	51988-HB	1		GUARD, HOSE - MAIN BOOM (FB) 630/830	

❑ Kit or Assembly - includes all items indented underneath.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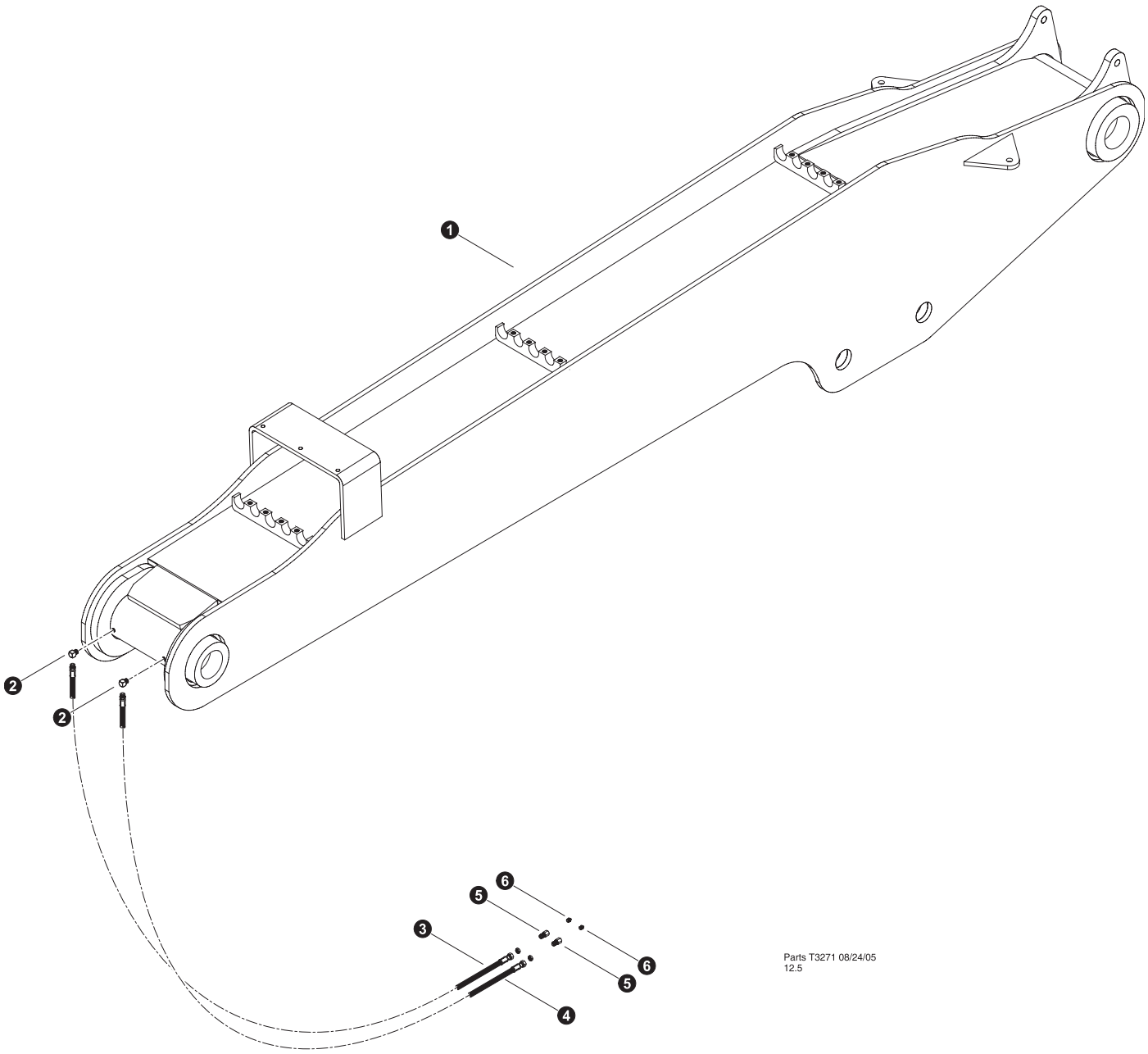
Parts T3270 08/24/05
12.5

MAIN BOOM INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	51653-LB	1		PIN ASSEMBLY, 2.99 DIA X 14.25”	
3	18570-LB	2		WASHER, PIN RETAINING	
4	15550-LB	2		WASHER, SAE FLAT - .75”	
5	15549-LB	2		BOLT - .75” X 2.0	
6	51575-LB	1		PIN ASSEMBLY, 2.99 DIA X 18.63”	
7	10728-LB	1		NUT, NYLOCK - 2” (ZINC PLATED)	
8	19384-LB	1		WASHER, BURNED - 2.12” ID X 6” OD X .5”	
9	42484-LB	2		BUSHING - 3.5” X 3.0” X 2.0” UNDERSIZE	
10	51952-LB	1		PIN ASSEMBLY, 2.99 DIA X 24.63”	
11	51953-LB	1		PIN, DOWEL 1 DIA X 5 LG	
12	42485-LB	2		BUSHING - 3.5” X 3.0” X 4.25” UNDERSIZE	
13	REF.	1		MAIN BOOM CYLINDER (Feller Buncher)	HB-4
14	REF.	1	🕮	UPPER TURNTABLE WELDMENT	UP-1

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



Parts T3271 08/24/05
12.5

MAIN BOOM GREASE LINES

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	22281-HB	6		FITTING, 90° - 5546132	
-	51977-HB	1	❑	KIT, hose - grease lines - *Feller Buncher*	
3	-HB	2		HOSE ASSEMBLY 2060-02-02PS-04JS	
4	-HB	2		HOSE ASSEMBLY 2052-02-02PS-04JS	
5	15658-HB	2		CONNECTOR, straight bulkhead - 2239-2-4S	
6	10704-HB	7		FITTING, straight grease - 1/8” pipe thread	

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

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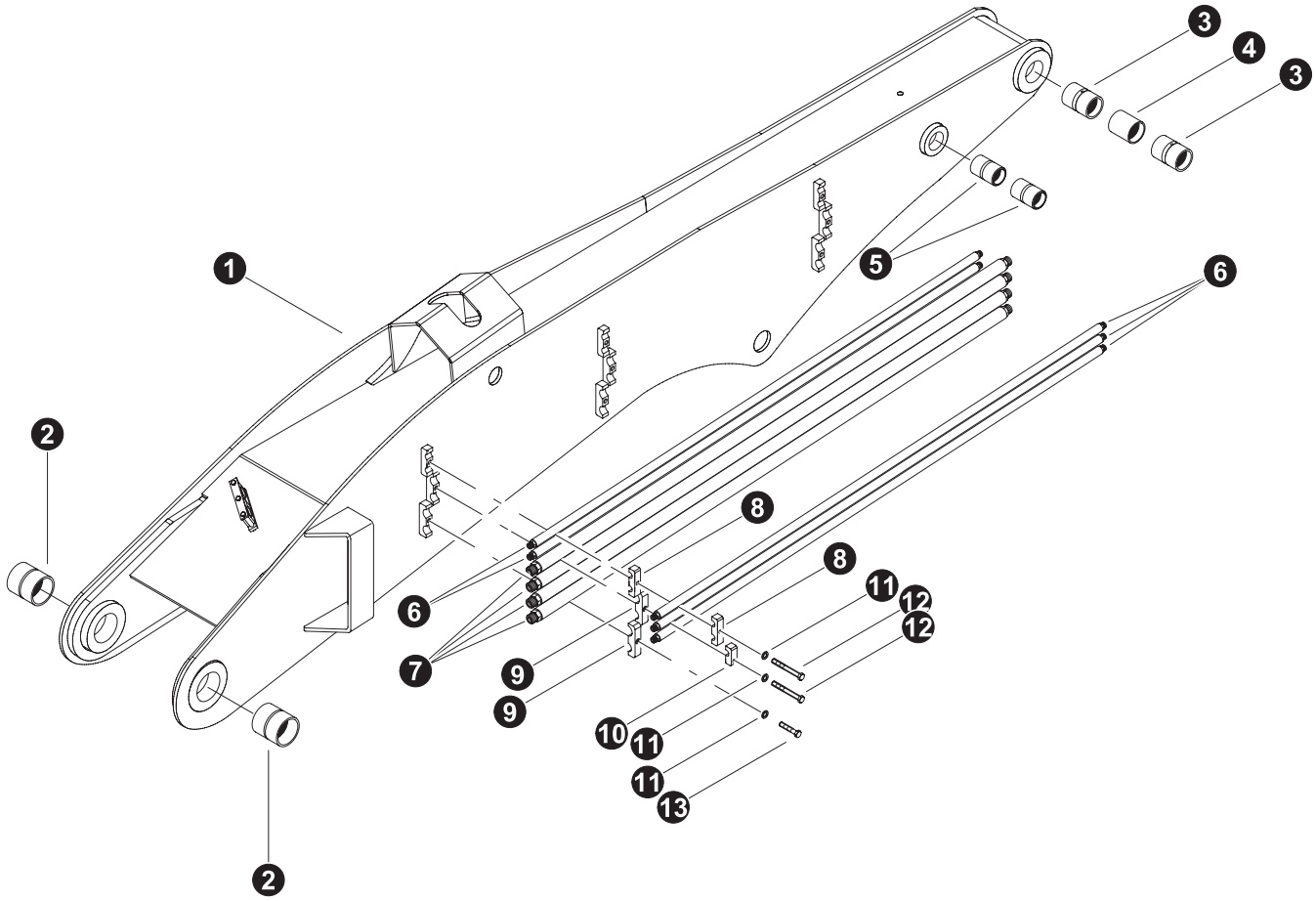
Section HB-2

Harvester Booms - Stick Boom

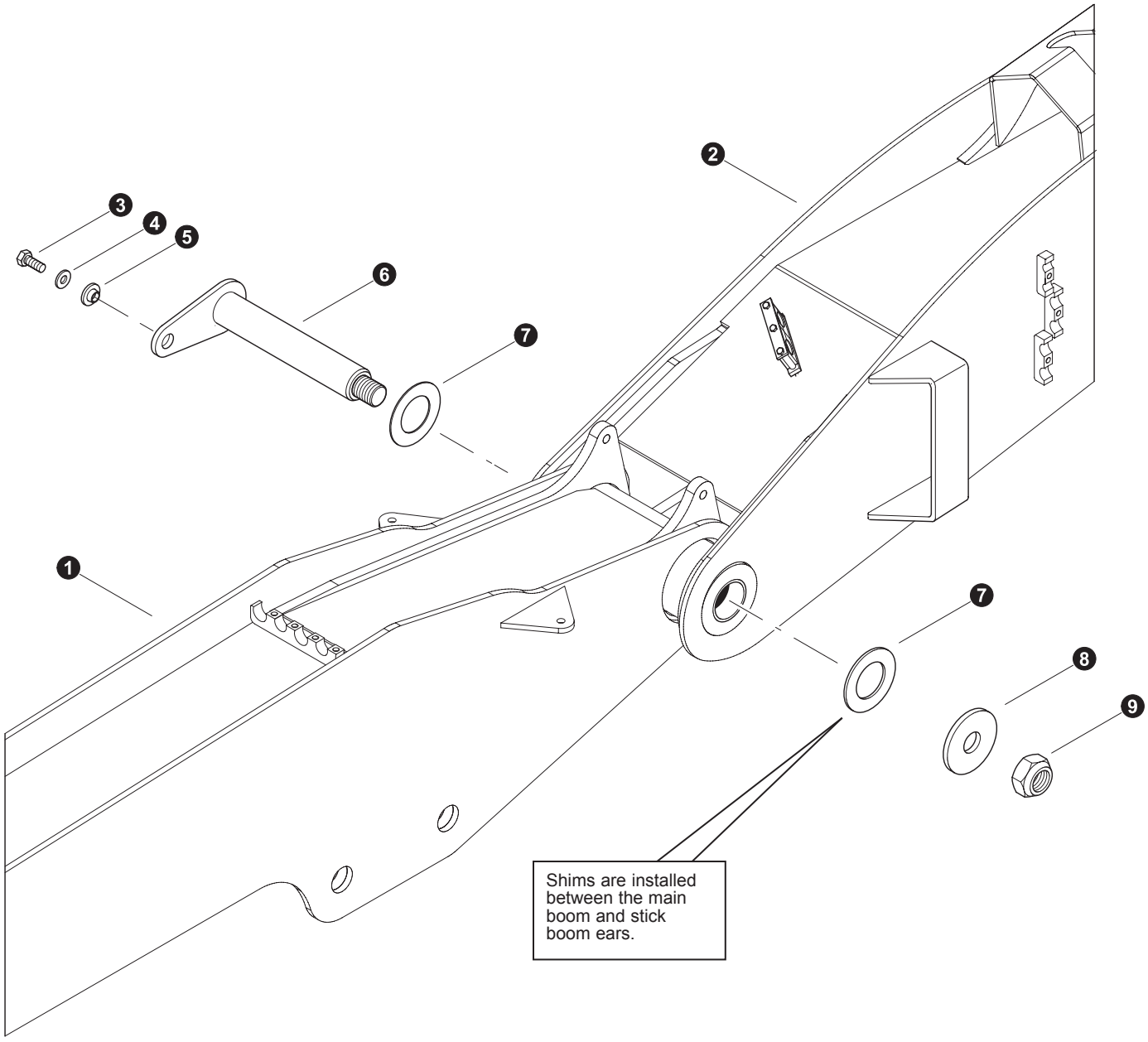


Parts T3272 08/29/2005
6.25

STICK BOOM COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51596-HB	1		WELDMENT, stick boom - TB 830 / 630	
2	18565-HB	2		BUSHING - 3.5” X 2.5”	
3	11704-HB	2		BUSHING - 2-1/2” x 4-1/4”	
4	12268-HB	1		SPACER, nose - 2-1/2” x 3-1/2”	
5	11704-HB	2		BUSHING - 2-1/2” x 4-1/4”	
6	16513-HB	5		TUBELINE - 1/2” x 80” *(Straight)*	
7	16506-HB	4		TUBELINE - 1” x 84” *(Straight)*	
8	15272-HB	3		CLAMP, saddle top tube - 1/2” x 1/2”	
9	12447-HB	6		CLAMP, SADDLE TOP TUBE - 1” & 1”	
10	23222-HB	3		CLAMP, SADDLE TOP TUBE - .5” (1 TUBE)	
11	10771-HB	9		WASHER, SAE flat - 5/8”	
12	10773-HB	6		BOLT - .625” X 3.5”	
13	15681-HB	3		BOLT - 5/8” X 2.25”	

❑ Kit or Assembly - includes all items indented underneath.

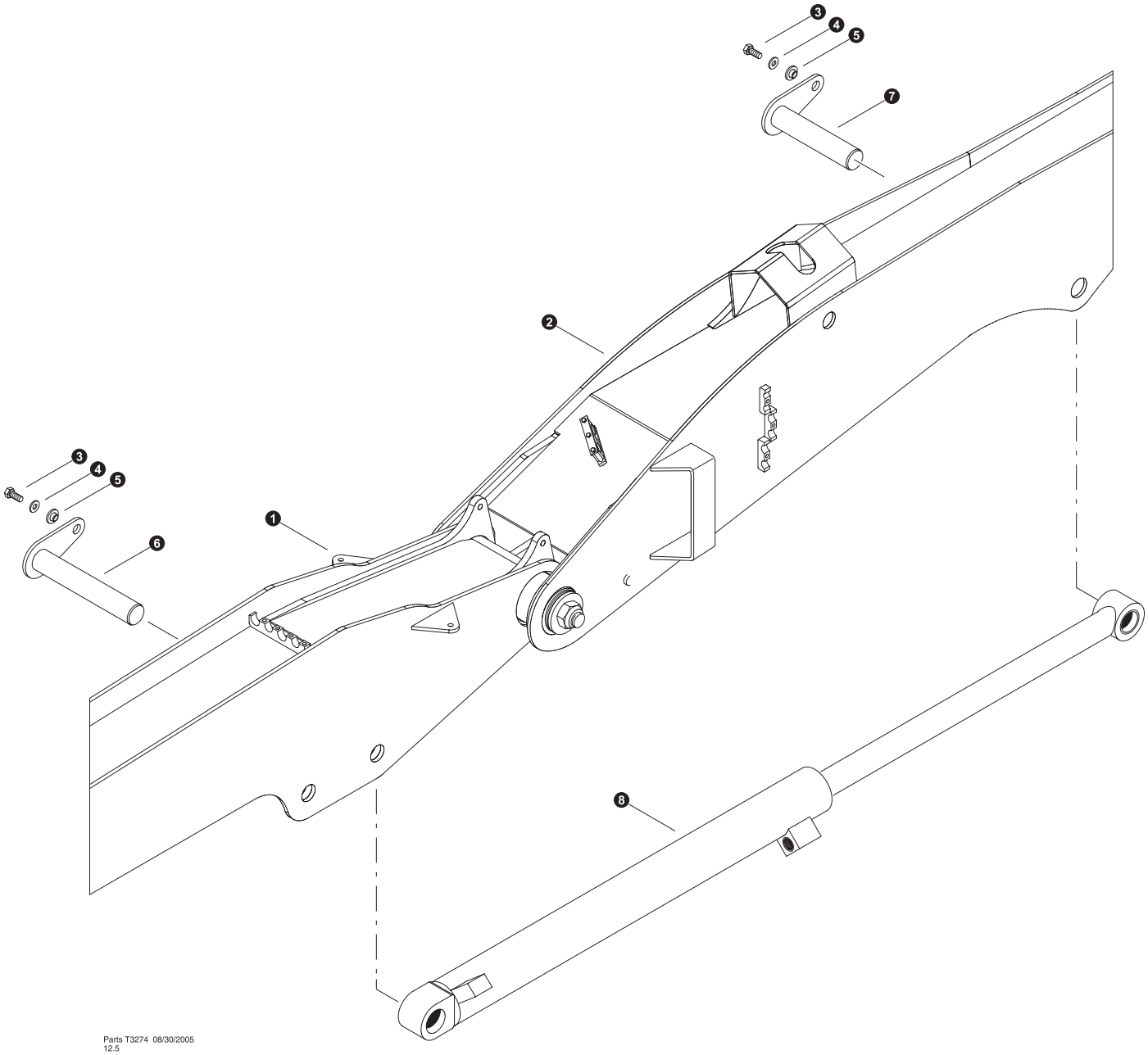


Parts T3273 08/29/2005
12.50

STICK BOOM INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-2
3	15549-HB	1		BOLT - 3/4” x 2”	
4	15550-HB	1		WASHER, SAE flat - 3/4”	
5	18570-HB	1		WASHER, pin retaining	
6	51644-HB	1		PIN ASSEMBLY, 3.50 DIA X 21.06 (2” NUT)	
7	18678-HB	AR		SHIM - 7 gauge	
	18679-HB	AR		SHIM - 10 gauge	
	18680-HB	AR		SHIM - 14 gauge	
8	19384-HB	1		WASHER, burned	
9	10728-HB	1		NUT, nylock - 2”	

🕮 See referenced page for component or assembly breakdown.

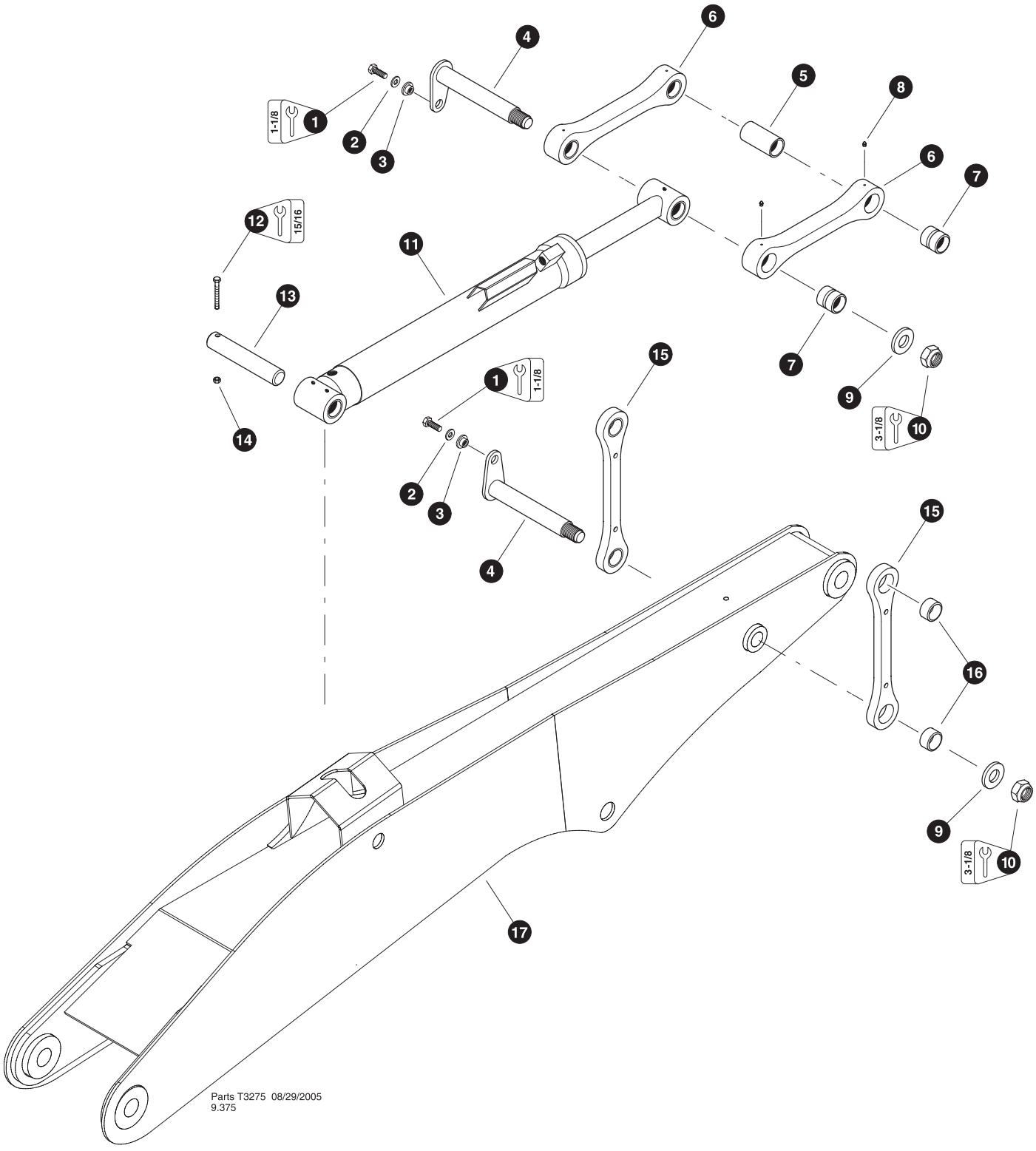


Parts T3274 08/30/2005
12.5

STICK BOOM (JIB) CYLINDER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM ASSEMBLY	HB-1
2	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-2
3	15549-HB	1		BOLT - 3/4” x 2”	
4	15550-HB	1		WASHER, SAE flat - 3/4”	
5	18570-HB	1		WASHER, pin retaining	
6	21008-HB	1		PIN ASSEMBLY - 3” x 14-1/4”	
7	50738-HB	1		PIN ASSEMBLY, 2.99 DIA X 10.75”	
8	REF.	1	🕮	STICK BOOM (JIB) CYLINDER	HB-4

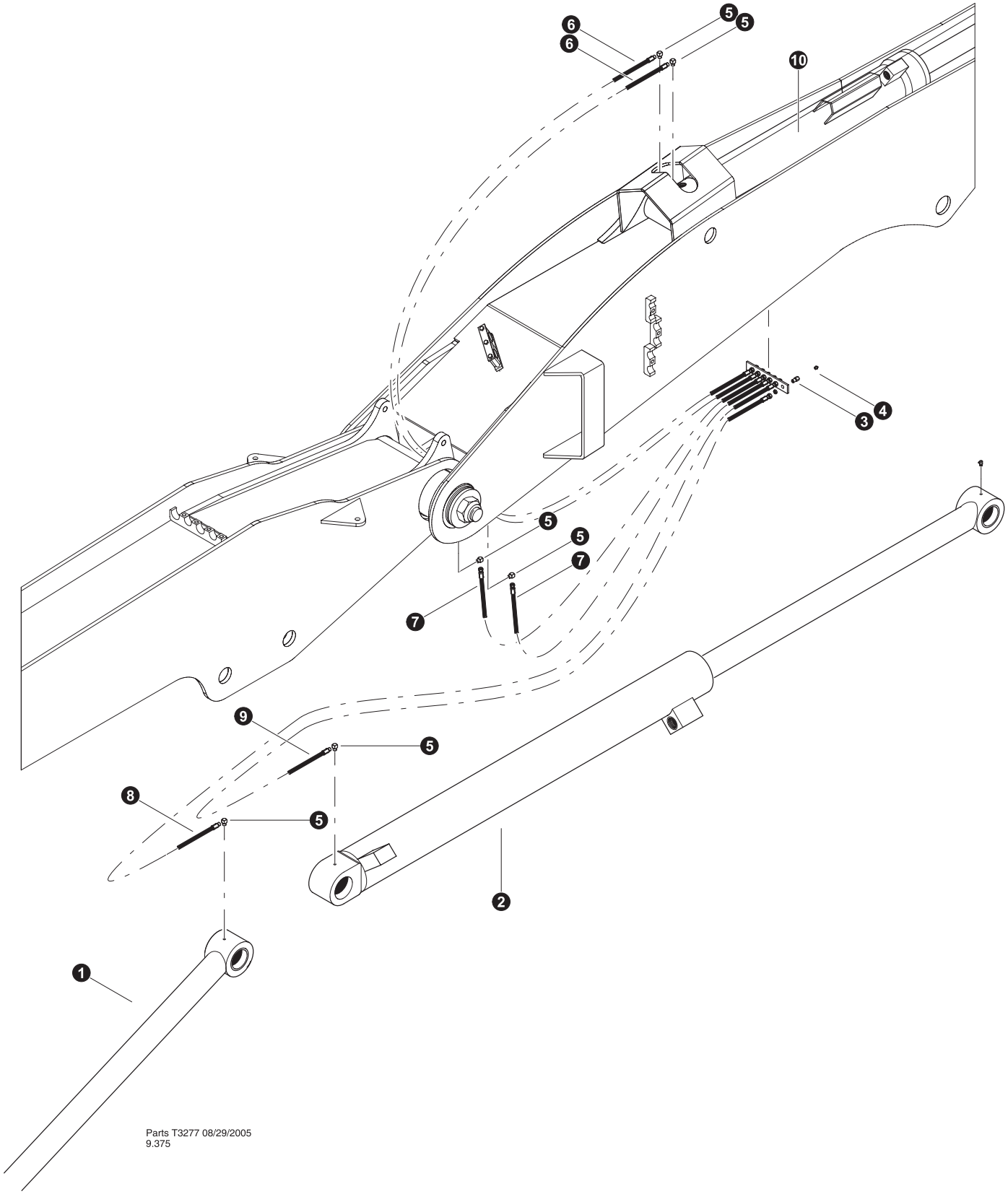
🕮 See referenced page for component or assembly breakdown.


1-1/8
15/16
3-1/8
Parts T3275 08/29/2005
9.375

4-BAR LINKAGE INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	15549-HB	2		BOLT - 3/4” x 2”	
2	15550-HB	2		WASHER, SAE flat - 3/4”	
3	18570-HB	2		WASHER, pin retaining	
4	14246-HB	2		PIN, link mounting	
5	14243-HB	1		SPACER	
6	22451-HB	2	❑	LINK, connecting - top	
7	14241-HB	4		BUSHING - 2-1/2” x 3”	
8	10704-HB	4		FITTING, straight grease - 1/8” pipe thread	
9	12021-HB	2		WASHER, burned	
10	10728-HB	2		NUT, nylock - 2”	
11	REF.	1	🕮	TOOL TILT CYLINDER	HB-4
12	10719-HB	1		BOLT - 5/8” x 4”	
13	51645-HB	1		PIN ASSEMBLY, 2.50 DIA X 14.75”	
14	15563-HB	1		NUT, nylock - 5/8”	
15	22450-HB	2	❑	LINK, connecting - side	
16	14242-HB	4		BUSHING - 2-1/2” x 1-1/2”	
17	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-2

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

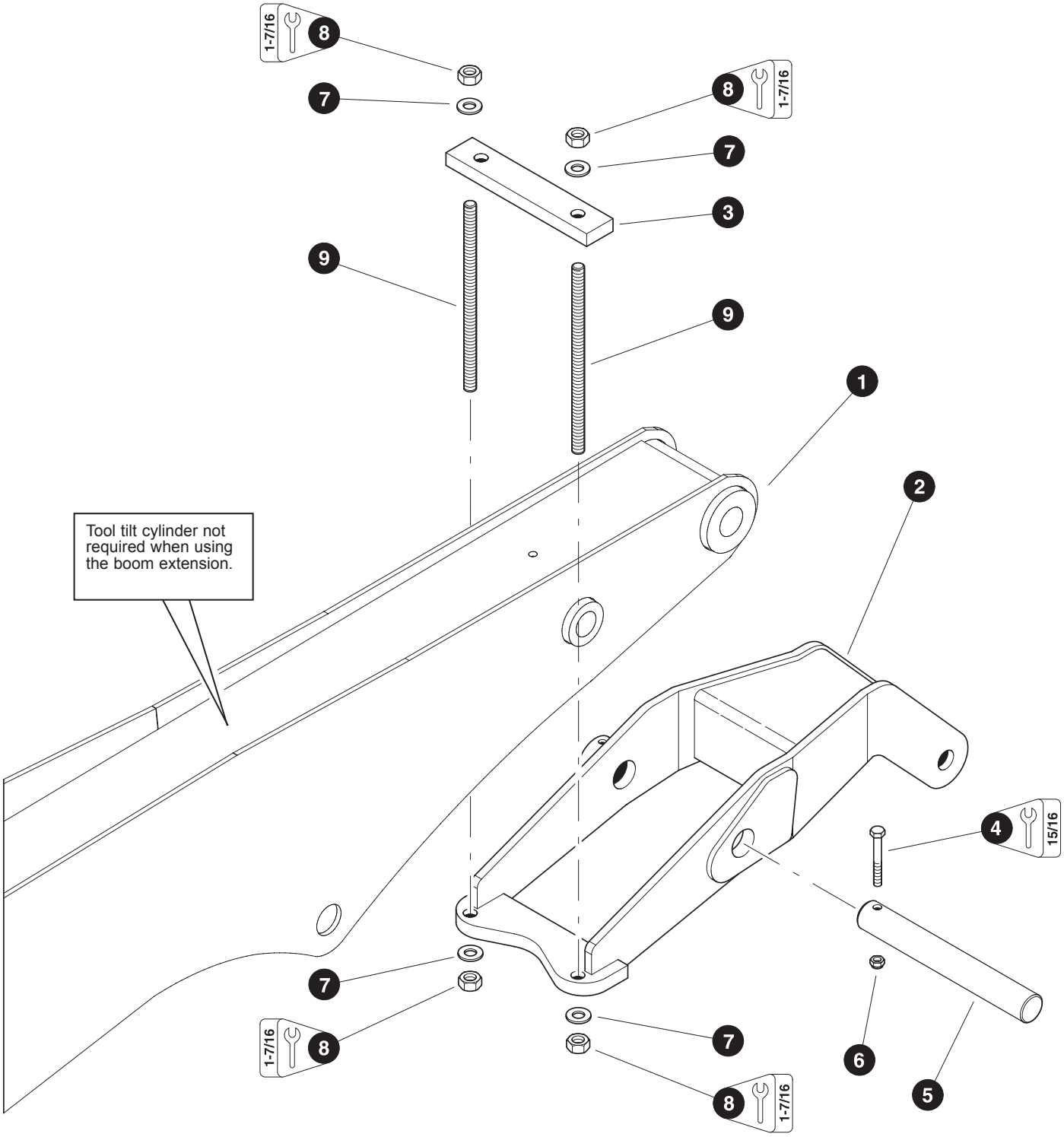


Parts T3277 08/29/2005
9.375

BOOM GREASE LINES

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	MAIN BOOM CYLINDER	HB-4
2	REF.	1	🕮	STICK BOOM CYLINDER	HB-4
3	15658-HB	2		CONNECTOR, straight bulkhead - 2239-2-4S	
4	10704-HB	7		FITTING, straight grease - 1/8” pipe thread	
5	22281-HB	6		FITTING, 90° - 5546132	
-	51977-HB	1	❑	KIT, hose - grease lines - *Feller Buncher*	
6	-HB	2		HOSE ASSEMBLY 2117.5-02-02PS-04JS	
7	-HB	2		HOSE ASSEMBLY 2072-02-02PS-04JS	
8	-HB	1		HOSE ASSEMBLY 2131-02-02PS-04JS	
9	-HB	1		HOSE ASSEMBLY 2122-02-02PS-04JS	
10	REF.	1	🕮	TOOL CYLINDER	HB-4

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



Parts T3276 08/30/2005
12.5

OPTIONAL BOOM EXTENSION INSTALLATION
(Used with CTL and Grapple Attachments)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	STICK BOOM ASSEMBLY	HB-2
2	17691-HB	1	❑	WELDMENT, boom extension	
3	19024-HB	1		BAR, boom extension mounting	
4	10838-HB	1		BOLT - 5/8” x 5”	
5	10748-HB	1		PIN - 2-1/2” x 18-1/2”	
6	15563-HB	1		NUT, nylock - 5/8”	
7	15579-HB	4		WASHER, SAE flat - 1”	
8	18253-HB	4		NUT, lock - 1”	
9	19025-HB	2		ROD, threaded - 1” x 18” *(Grade 8 ready rod)*	

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

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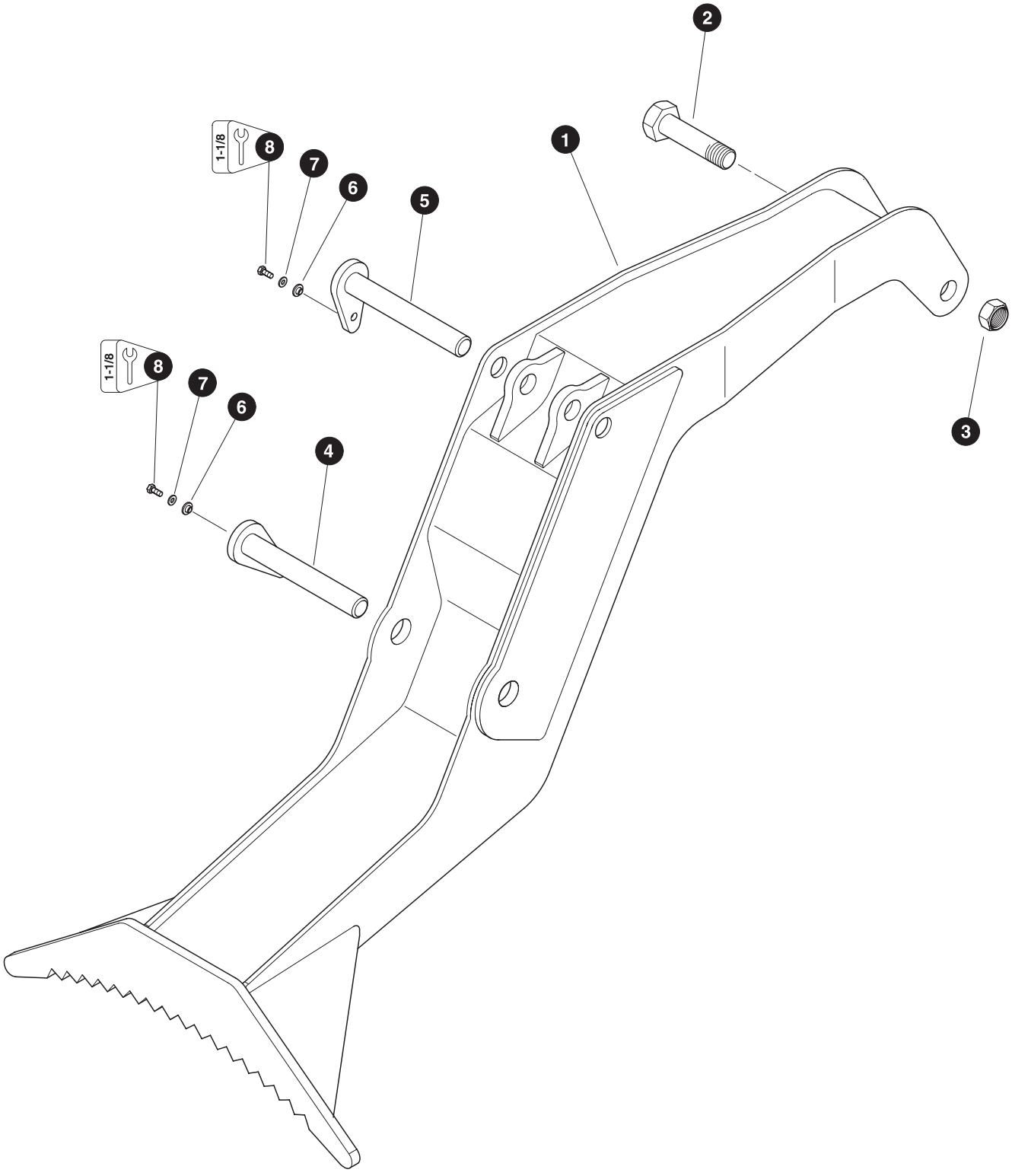
Section HB-3

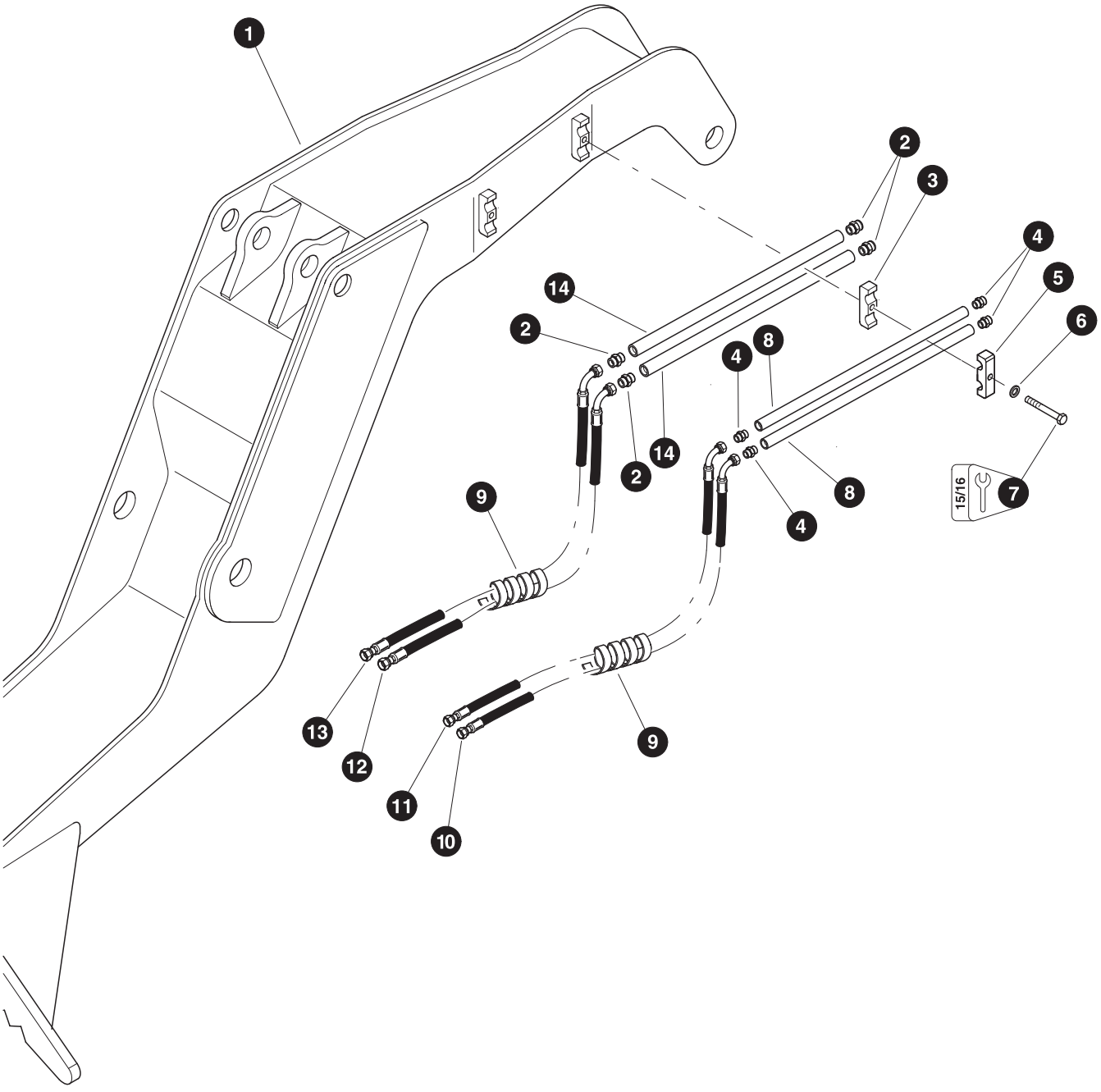
Harvester Booms -
Heel Boom (Shovel Logging Adapter)



Parts 00916 12/01/98
12.50

HEEL BOOM WELDMENT INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51838-HB	1		LIVE HEEL-2.5 PIV PIN-1.75 BOOM PIN 630	
2	51138-HB	1		PIN, 1-3/4” heel to attachment	
3	18402-HB	1		NUT, nylock - 1-3/4”	
4	19718-HB	1		PIN, heel to stick boom	
5	19718-HB	1		PIN, heel to 4 bar knuckle	
6	18570-HB	2		WASHER, pin retaining	
7	15501-HB	2		WASHER, flat - 5/8”	
8	15549-HB	2		BOLT - 3/4” x 2”	

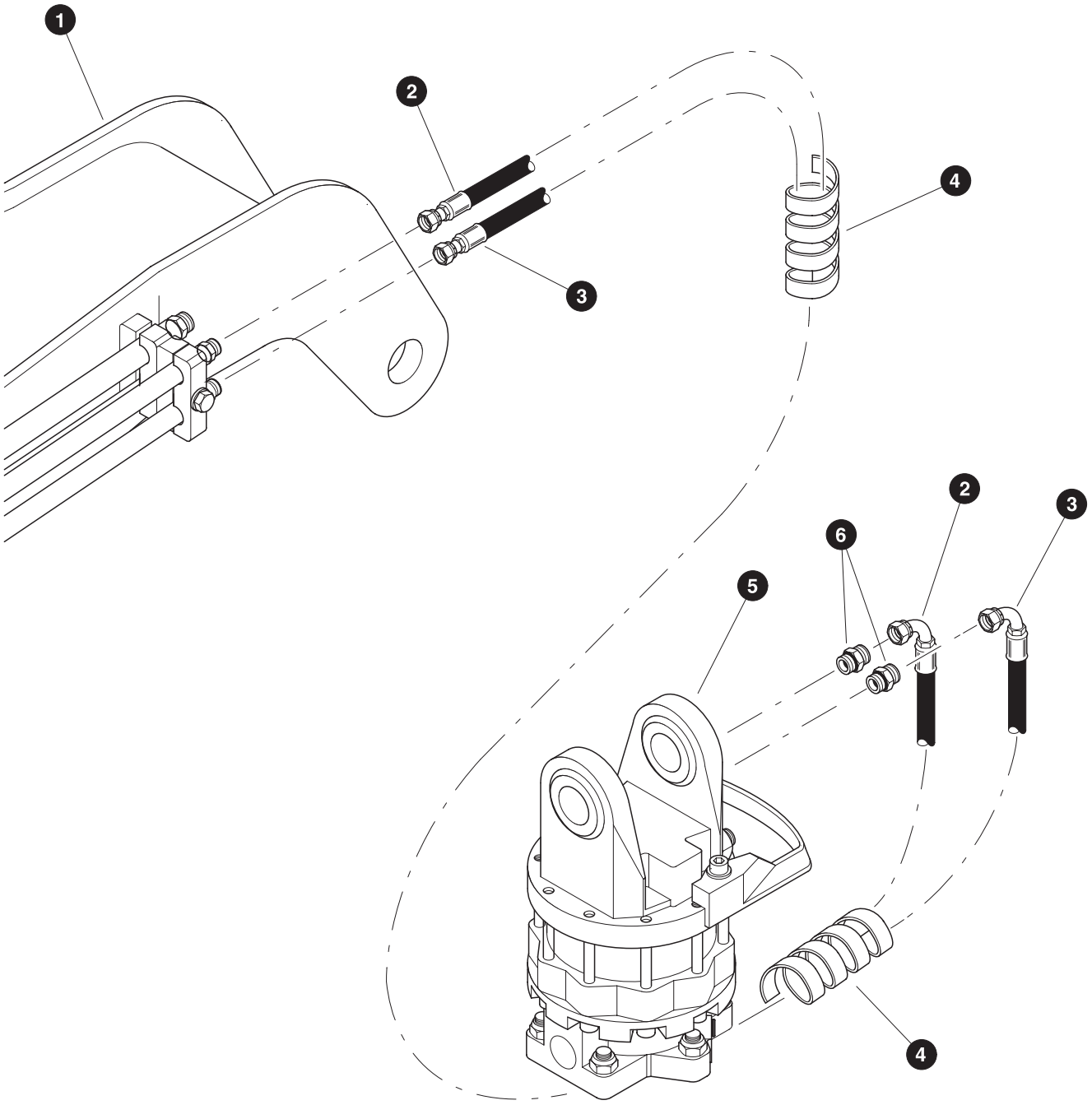


Parts 00913 12/01/2000
12.50

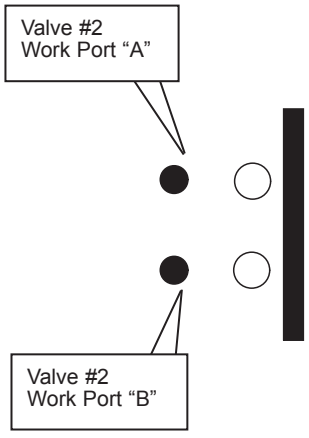
HEEL BOOM TUBELINES & HOSES
(With - 1/2" and 3/4" Attachment Supply Lines)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HEEL BOOM WELDMENT	HB-4
2	15152-HB	4		CONNECTOR, straight - FF1852T-1212S	
3	19324-HB	2		CLAMP, saddle - 3/4" x 3/4"	
4	15272-HB	4		CLAMP, saddle - 1/2" x 1/2"	
5	15117-HB	4		CONNECTOR, straight - FF1852T-0808S	
6	10771-HB	2		WASHER, sae flat 5/8"	
7	10719-HB	2		BOLT - 5/8" x 4"	
8	19495-HB	2		TUBELINE - 1/2" x 24"	
9	19677-HB	AR	✂	PROTECTOR, spiral hose wrap - 1-1/4"	
10	21536-HB	1		HOSE ASSEMBLY - 4072-08-080S-0809 *(Heel boom bottom outside tubeline to stick boom tubelines)*	
11	20488-HB	1		HOSE ASSEMBLY - 4075-08-080S-0804 *(Heel boom top outside tubeline to stick boom tubelines)*	
12	21537-HB	1		HOSE ASSEMBLY - 4072-12-120S-1204 *(Heel boom bottom inside tubeline to stick boom tubelines)*	
13	21538-HB	1		HOSE ASSEMBLY - 4074-12-120S-1209 *(Heel boom top inside tubeline to stick boom tubelines)*	
14	19496-HB	2		TUBELINE - 3/4" x 24"	

🕮 See referenced page for component or assembly breakdown.
✂ Bulk material - order length required in feet or meters.



Heel boom tubeline connections as viewed from the nose of the heel boom looking towards the rear of the machine.



Parts 00918 12/01/2000
25.00

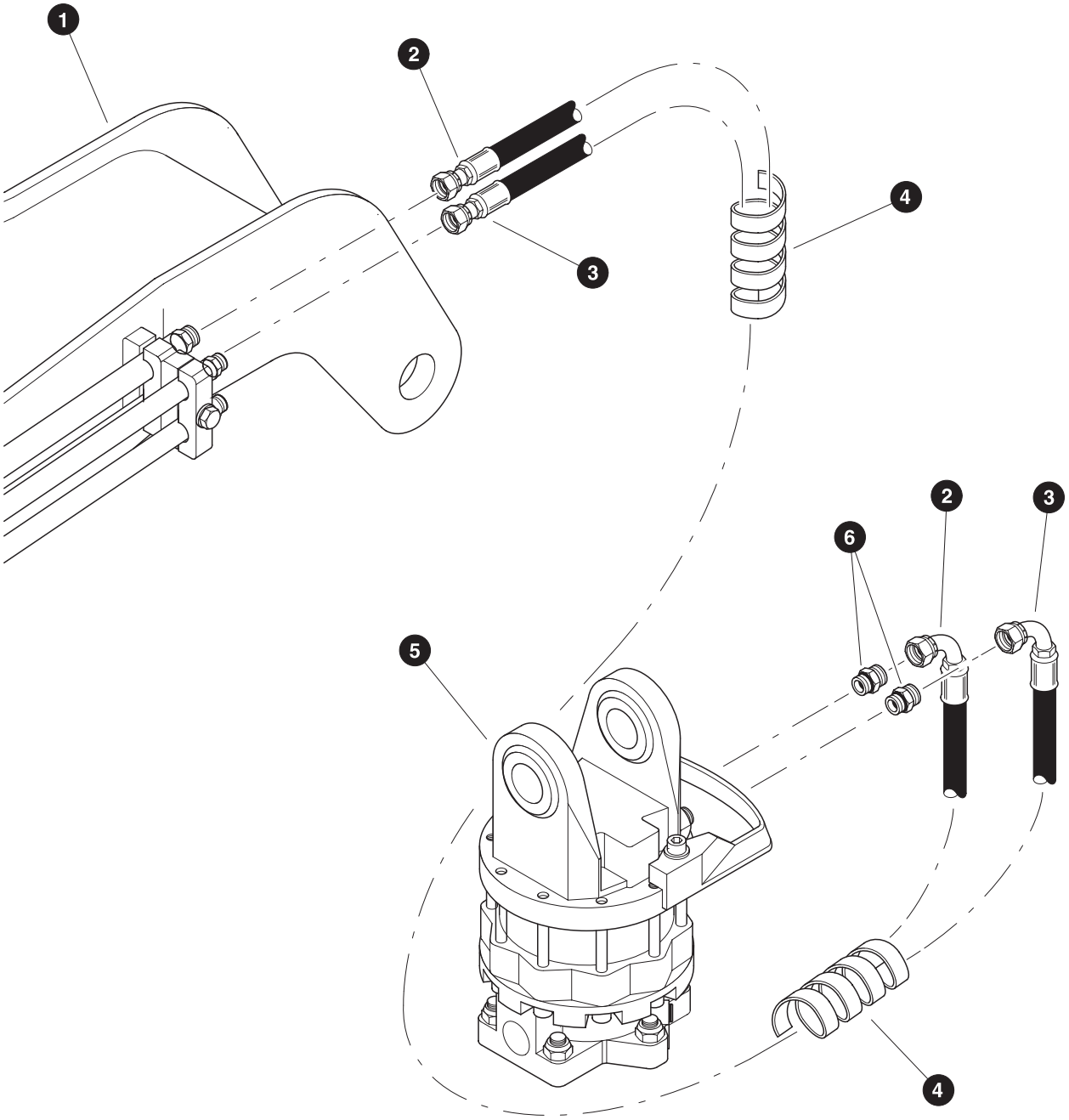
WORK LINES - GRAPPLE OPEN/CLOSE FUNCTION
(Heel Boom Tubelines To Grapple Rotator)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HEEL BOOM WELDMENT	HB-4
2	16407-HB	1		HOSE ASSEMBLY - 4038-08-080S-0809 *(Heel boom top outside tubeline to grapple outer engine-side port)*	
3	21535-HB	1		HOSE ASSEMBLY - 4037-08-080S-0809 *(Heel boom bottom outside tubeline to grapple middle engine-side port)*	
4	19677-HB	AR	✂	PROTECTOR, spiral hose wrap - 1-1/4”	
5	REF.	1	🕮	GRAPPLE BUCKET ROTATOR *(See Note Below)*	
6	REF.	2	✈	CONNECTOR, straight *(See Note Below)*	

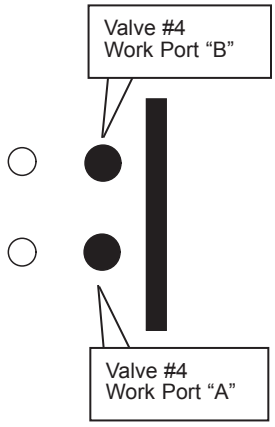
🕮 See referenced page for component or assembly breakdown.
✂ Bulk material - order length required in feet or meters.
❑ Kit or Assembly - includes all items indented underneath.

Note:

Reference product manuals supplied by grapple manufacturer.



Heel boom tubeline connections as viewed from the nose of the heel boom looking towards the rear of the machine.



Parts 00917 12/01/2000
25.00

WORK LINES - GRAPPLE ROTATE FUNCTION
(Heel Boom Tubelines To Grapple Rotator)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HEEL BOOM WELDMENT	HB-4
2	21533-HB	1		HOSE ASSEMBLY - 4038-12-120S-1209 *(Heel boom top inside tubeline to grapple outer engine-side port)*	
3	21533-HB	1		HOSE ASSEMBLY - 4035-12-120S-1209 *(Heel boom bottom inside tubeline to grapple middle engine-side port)*	
4	19677-HB	AR	✂	PROTECTOR, spiral hose wrap - 1-1/4”	
5	REF.	1	🕮	GRAPPLE BUCKET ROTATOR *(See Note Below)*	
6	REF.	2		CONNECTOR, straight *(See Note Below)*	

🕮 See referenced page for component or assembly breakdown.
✂ Bulk material - order length required in feet or meters.

Note:

Reference product manuals supplied by grapple manufacturer.

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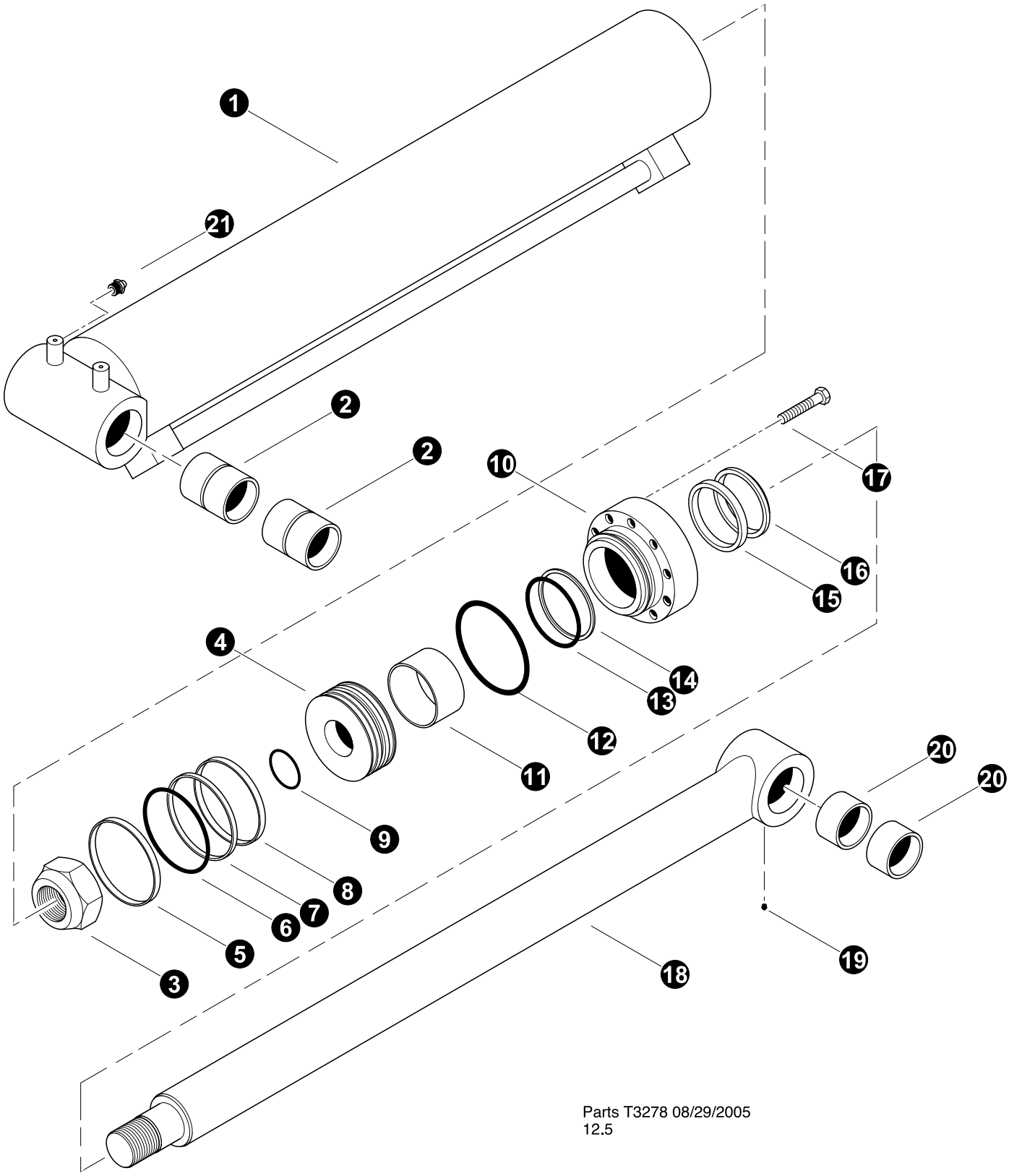
Section HB-4

Harvester Booms - Cylinders



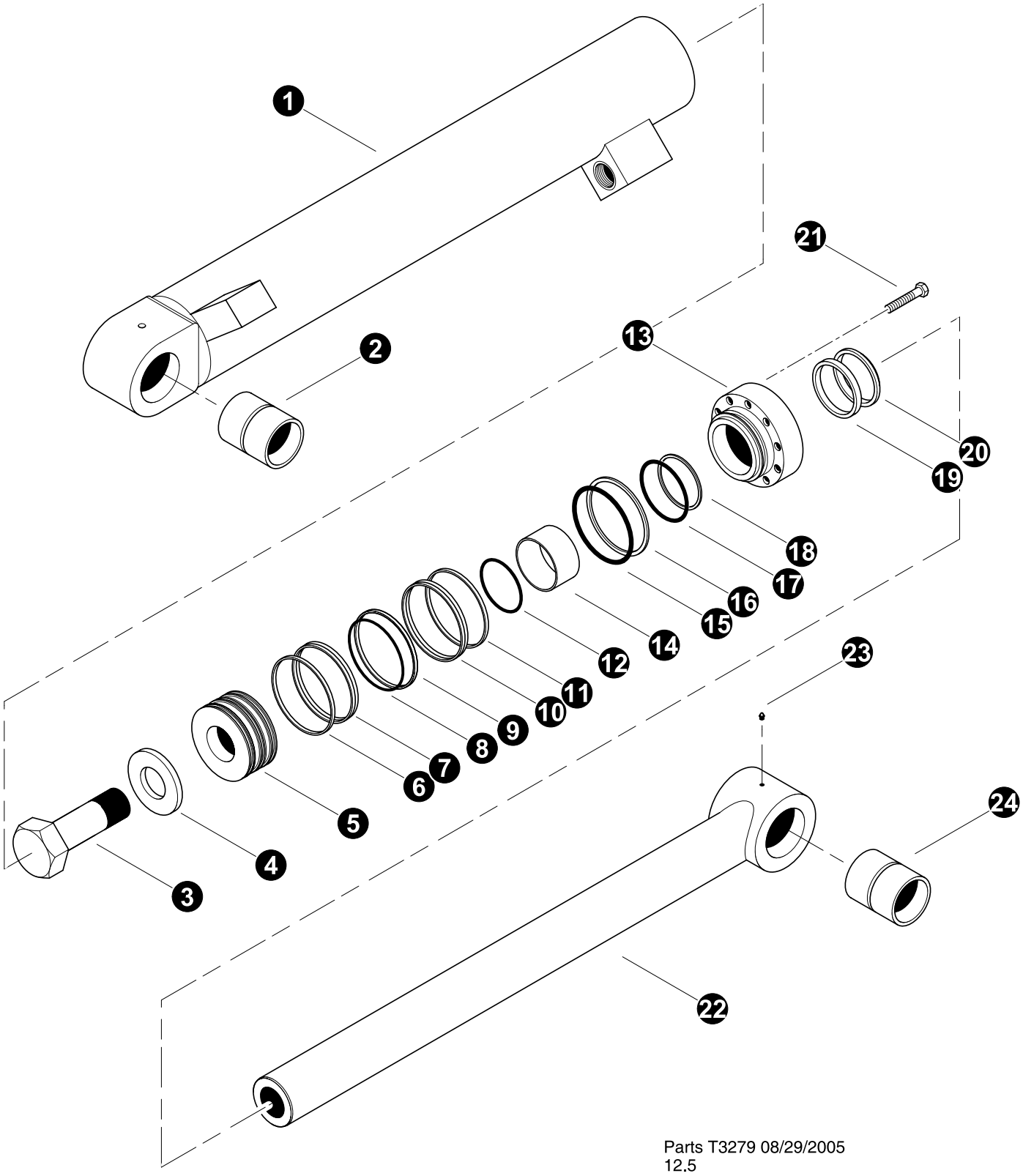
Parts T3278 08/29/2005
12.5

MAIN BOOM (HOIST) CYLINDER - 6”

(Used on machines built after 07/18/05)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51975-FB	1	❑	MAIN BOOM CYLINDER ASSEMBLY	
1	203314B-FB	1	❑	BARREL ASSEMBLY	
2	11706-FB	2		BUSHING - 3” x 4-1/4”	
3	712096A-FB	1		NUT, 2.75”-11 (711181A) ***(ft.lbs (Nm))***	
4	400990B-FB	1	❑	PISTON	
5	NSS	1	⌘	RING, piston wear	
6	NSS	1	⌘	O-RING, piston seal backup	
7	NSS	1	⌘	RING, piston wear	
8	NSS	1	⌘	RING, piston wear	
9	NSS	1	⌘	O-RING, piston seal	
10	501040B-FB	1	❑	BEARING, rod	
11	NSS	1	⌘	RING, rod bearing wear	
12	NSS	1	⌘	O-RING, rod bearing - outer	
13	NSS	1	⌘	RING, rod bearing o-ring backup	
14	NSS	1	⌘	O-RING, rod seal backup	
15	NSS	1	⌘	U-CUP, rod bearing	
16	NSS	1	⌘	WIPER, rod	
17	711001A-FB	12		BOLT - 5/8” x 2-1/4” ***(175 ft.lbs (233 Nm))***	
18	301981B-FB	1	❑	ROD ASSEMBLY	
19	10704-HB	1		FITTING, straight grease - 1/8” pipe thread	
20	42486-HB	2		BUSHING - 3.5” X 3.0” X 3.0” UNDERSIZE	
21	54106-HB	1		FITTING, straight grease - 1/4” pipe	
-	52125-FB	1		KIT, seal repair - main boom cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 52125-FB.

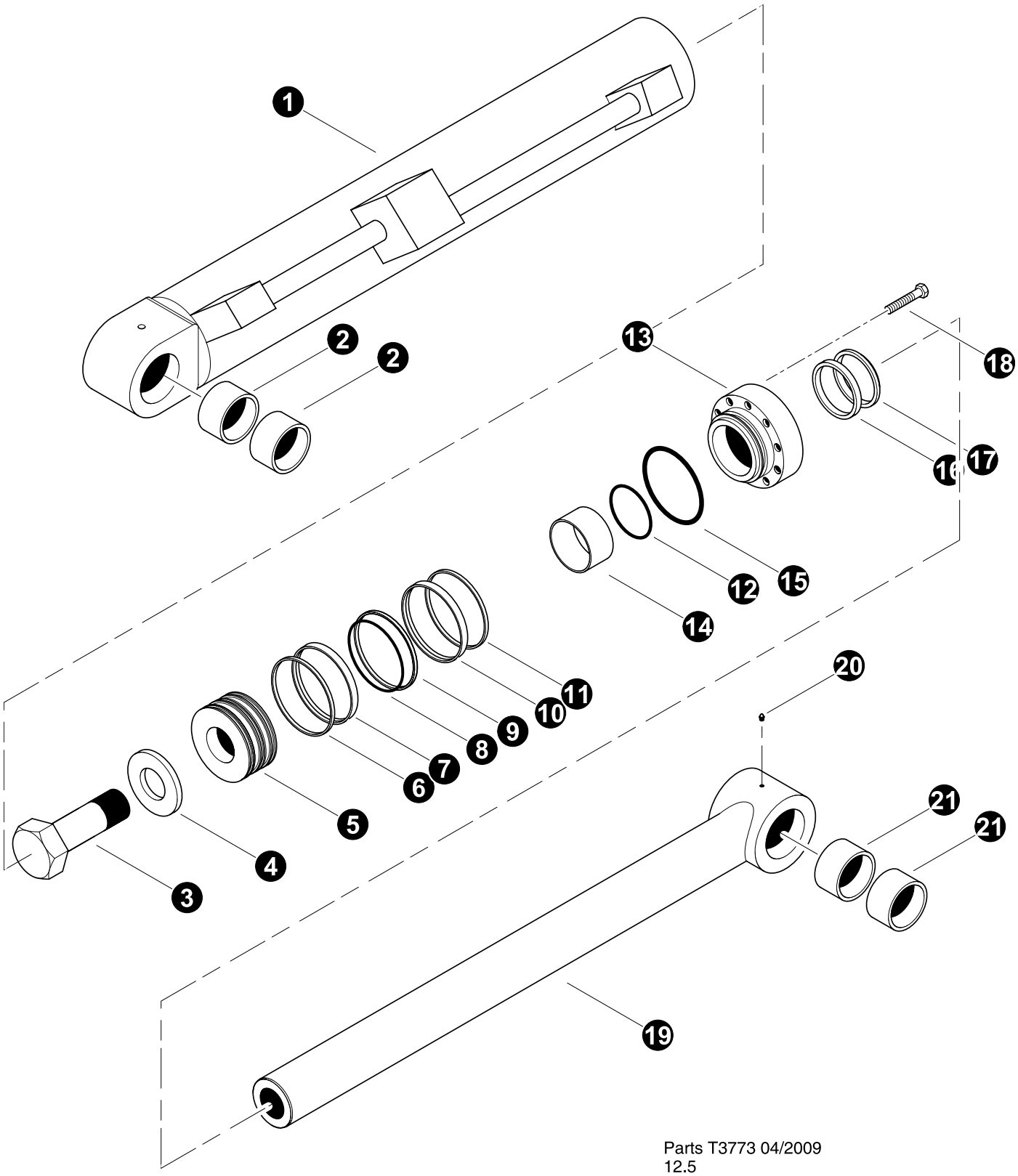


Parts T3279 08/29/2005
12.5

STICK BOOM (JIB) CYLINDER - 5”
(OLD STYLE BARREL)
(Used on machines built after 07/18/05)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51976-HB	1	❑	STICK BOOM CYLINDER ASSEMBLY	
1	-HB	1	❑	BARREL ASSEMBLY (203320B)	
2	11706-HB	1		BUSHING - 3” x 4-1/4”	
3	16566-HB	1		NUT, cylinder rod - 2-1/4” ***(2700 +/- 200 ft.lbs. (3600 +/- 265 Nm))***	
4	NSS	1	⌘	RING, piston wear	
5	NSS	1	⌘	RING, piston square	
6	NSS	1	⌘	RING, piston chem-cast	
7	NSS	1	⌘	RING, piston wear	
8	NSS	1	⌘	O-RING, piston	
9	19574-HB	1		PISTON	
10	NSS	1	⌘	RING, rod bearing wear	
11	NSS	1	⌘	O-RING, rod bearing	
12	NSS	1	⌘	RING, rod bearing back-up	
13	16567-HB	1		BEARING, rod	
14	10720-HB	10		BOLT - 5/8” x 3” ***(175 ft.lbs (233 Nm))***	
15	NSS	1	⌘	U-CUP, rod bearing	
16	NSS	1	⌘	WIPER, rod	
17	18280-HB	1	❑	ROD ASSEMBLY	
18	11706-HB	1		BUSHING - 3” x 4-1/4”	
19	10704-HB	1		FITTING, straight grease - 1/8” pipe thread	
-	52117-HB	1		KIT, seal repair - stick boom cylinder (See Note Below)	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 52117-HB.

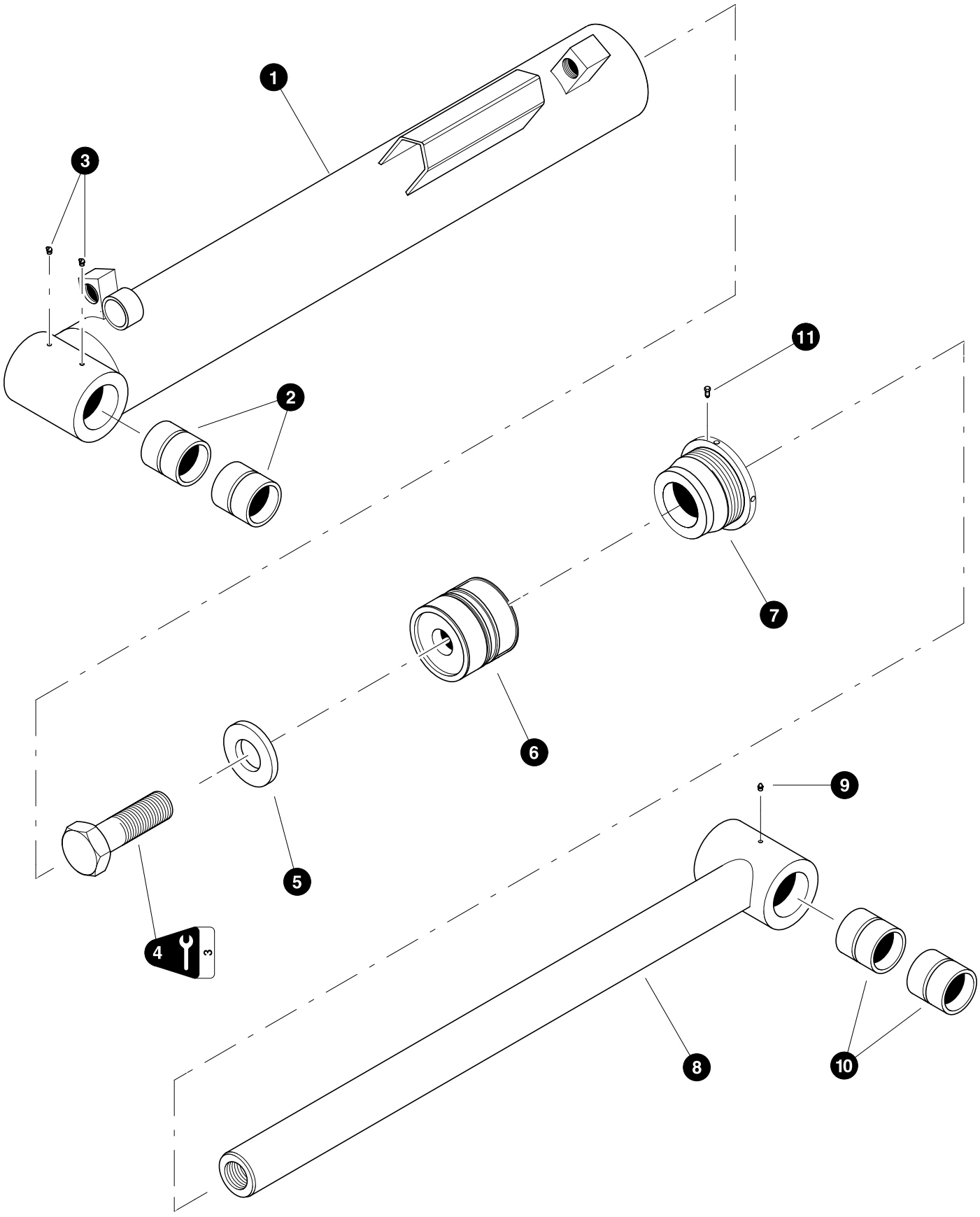


Parts T3773 04/2009
12.5

STICK BOOM (JIB) CYLINDER - 5”
(UPDATED BARREL)
(Used on machines built after 07/18/05)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51976-HB	1	❑	STICK BOOM CYLINDER ASSEMBLY 150810B	
1	52880-HB	1	❑	BARREL ASSEMBLY (203320B)	
2	42486-HB	2		BUSHING - 3.5” X 3.0” X 3.0” UNDERSIZE	
3	19956-HB	1		BOLT, cylinder rod - 2” -12UN” ***(2700 +/- 200 ft.lbs. (3600 +/- 265 Nm)) (USE LOCTITE #242)***	
4	718032A-HB	1		WASHER,	
5	53904-HB			PISTON	
6	NSS	1	⌘	RING, piston seal	
7	NSS	1	⌘	RING, piston wear	
8	NSS	1	⌘	O-RING, piston seal backup	
9	NSS	1	⌘	RING, piston seal	
10	NSS	1	⌘	RING, piston wear	
11	NSS	1	⌘	RING, piston seal	
12	NSS	1	⌘	O-RING	
13	53905-HB	1		BEARING, rod	
14	NSS	1	⌘	RING, rod bearing wear	
15	NSS	1	⌘	O-RING, rod bearing	
16	NSS	1	⌘	U-CUP, rod bearing	
17	NSS	1	⌘	WIPER, rod	
18	711001A-HB	1		BOLT, rod bearing ***(175 +/- 5 ft.lbs. (237 Nm))***	
19	53903-HB	1	❑	ROD ASSEMBLY (301980B)	
20	10704-HB	1		FITTING, straight grease - 1/8” pipe thread	
21	42486-HB	2		BUSHING - 3.5” X 3.0” X 3.0” UNDERSIZE	
-	52117-HB	1		KIT, seal repair - stick boom cylinder (See Note Below)	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 52117-HB.



Parts T2787 08/01/2003
18.75

TOOL TILT CYLINDER

(Ram Rod)

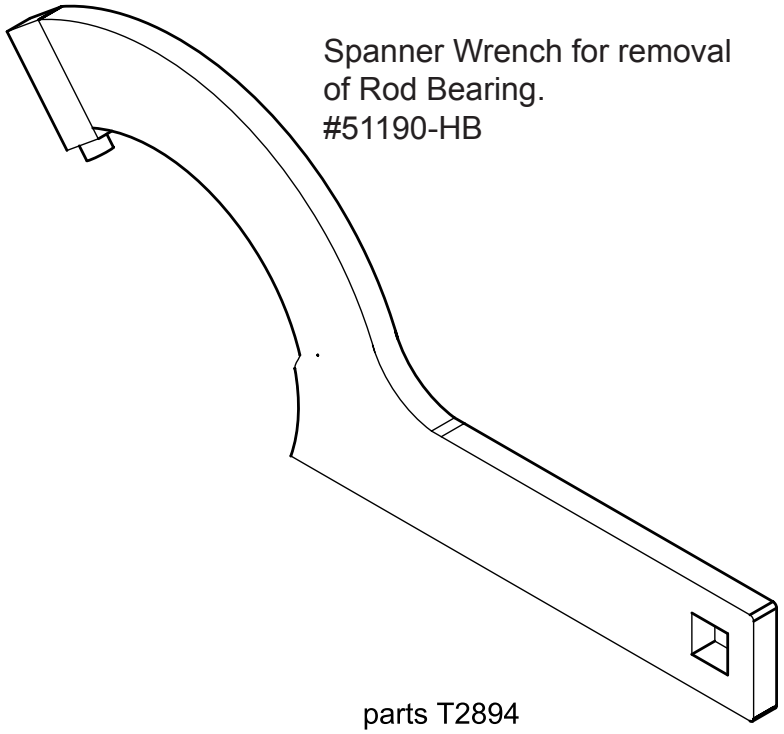
Early 2005 machines only

check part number on base end of cylinder barrel for identification

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	50493-HB	1	❑	TOOL TILT CYLINDER ASSEMBLY	
1	51072-HB	1	❑	BARREL ASSEMBLY	
2	14241-HB	2		BUSHING - 2-1/2" x 3"	
3	15683-HB	2		FITTING, 45 grease - 1/8" pipe thread	
4	51073-HB	1		BOLT, cylinder rod - 2" x 4" ***(2300 ft-lbs(+ / - 230)) (lube threads with high tempature lubricant before assembly)***	
5	- - -	2		WASHER, FLAT - 2.00-12UNF X 4 G8 (718048)	
6	51069-HB	1		PISTON	
-	NSS	1	⌘	KIT, seal repair - Tool Cyl. Piston	
7	51070-HB	1		BEARING, rod (see note #1)	
-	NSS	1	⌘	KIT, seal repair - Tool Cyl Rod Bearing	
8	51071-HB	1	❑	ROD ASSEMBLY	
9	10704-HB	1		FITTING, straight grease - 1/8" pipe thread	
10	14241-HB	2		BUSHING - 2-1/2" x 3"	
11	- - -	1		SCREW, self tapping - rod bearing lock (711004)	
-	51068-HB	1		KIT, Seal Repair Tool Cyl.	

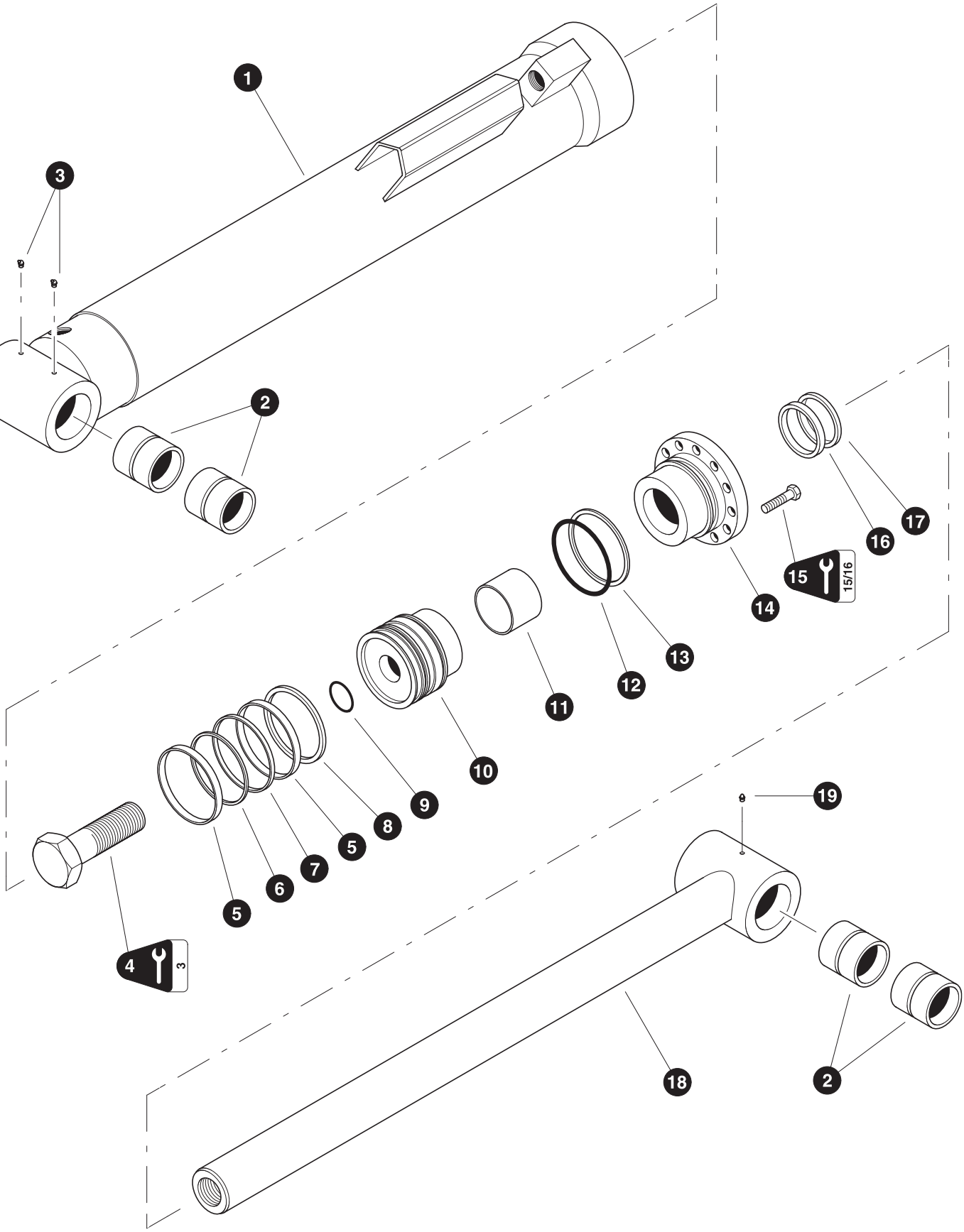
❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 51068-HB.

Note #1
Threads should be thourghly cleaned and dry. Install lubricated Anti-seize before assembly.Torque head until fully seated against barrel. Increase torque by 100 ft-lbs and apply final torque. Drill and tap #8-32nc X .25 deep between head flange and barrel for locking screw.



Spanner Wrench for removal of Rod Bearing.
#51190-HB

parts T2894



Parts 02132 03/16/2001
18.75

TOOL TILT CYLINDER

(Used With 4-Bar Linkage)(Jarp)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	24006-HB	1	❑	CYLINDER, TOOL - FB (JARP)	
1	22985-HB	1	❑	BARREL ASSEMBLY	
2	14241-HB	2		BUSHING - 2-1/2" x 3"	
3	15683-HB	2		FITTING, 45 grease - 1/8" pipe thread	
4	24563-HB	1		BOLT, PISTON RETAINING (2700 +/- 200 ft.lbs. (3600 +/- 265 Nm))	
5	NSS	2	⌘	RING, piston wear	
6	NSS	1	⌘	RING, piston square	
7	NSS	1	⌘	RING, piston chem-cast	
8	NSS	1	⌘	RING, piston wear	
9	NSS	1	⌘	O-RING, piston	
10	22986-HB	1		PISTON	
11	NSS	1	⌘	RING, rod bearing wear	
12	NSS	1	⌘	O-RING, rod bearing	
13	NSS	1	⌘	RING, rod bearing back-up	
14	24562-HB	1		BEARING, rod	
15	15681-HB	12		BOLT - 5/8" x 2-1/4" (175 ft.lbs (233 Nm))	
16	NSS	1	⌘	U-CUP, rod bearing	
17	NSS	1	⌘	WIPER, rod	
18	22537-HB	1	❑	ROD ASSEMBLY	
19	10704-HB	1		FITTING, straight grease - 1/8" pipe thread	
-	22988-HB	1		KIT, seal repair - tool tilt cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 22988-HB.

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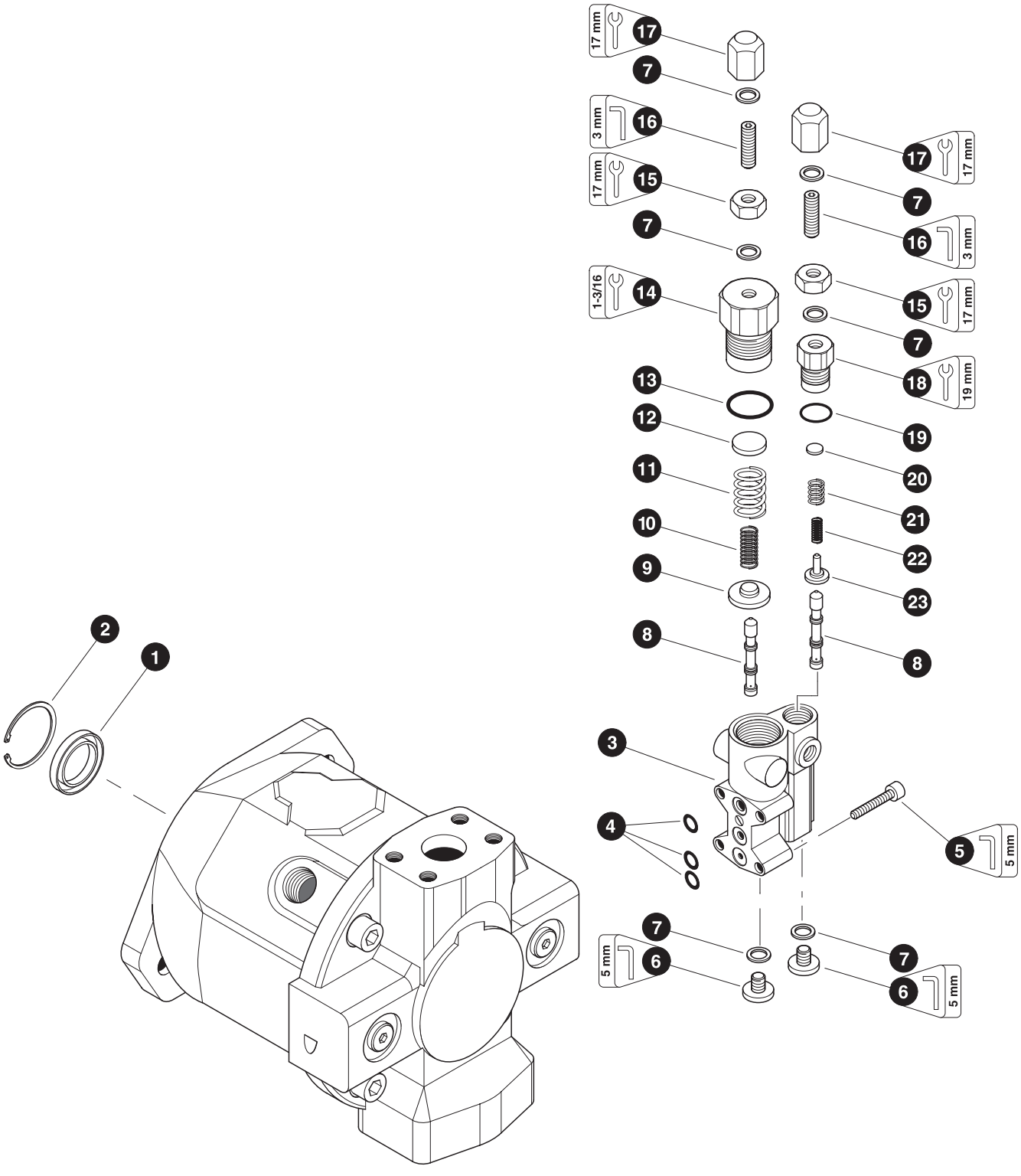
Section OD-1

Optional Disc Saw - Hydraulic Pumps & Valves

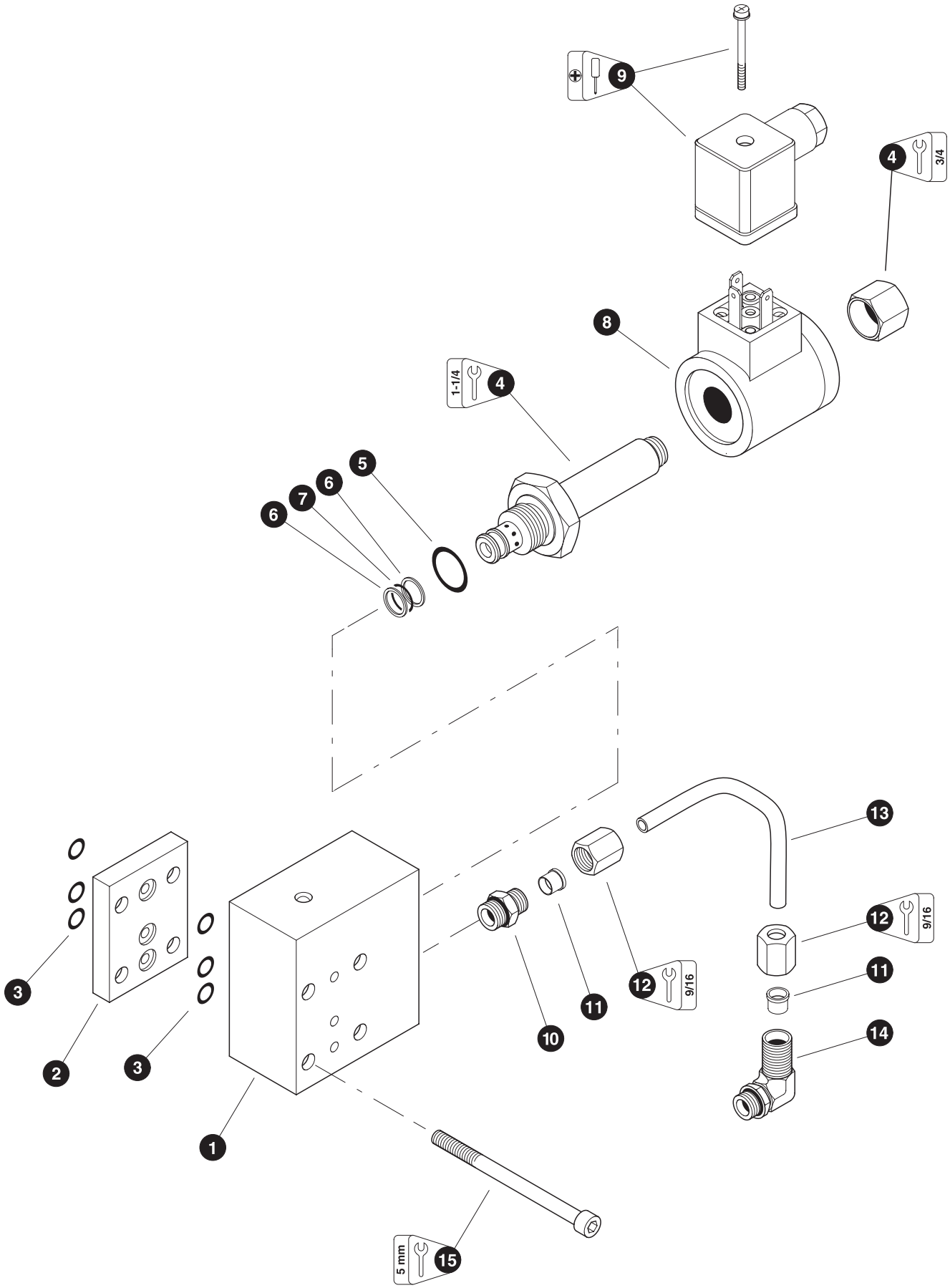


Parts 00867 01/01/2001
50.00

DISC SAW PUMP

REF	PART #	QTY		DESCRIPTION	SEE SECTION
--	15317-OD	1	❑	PUMP, disc saw	
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, acorn	
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.

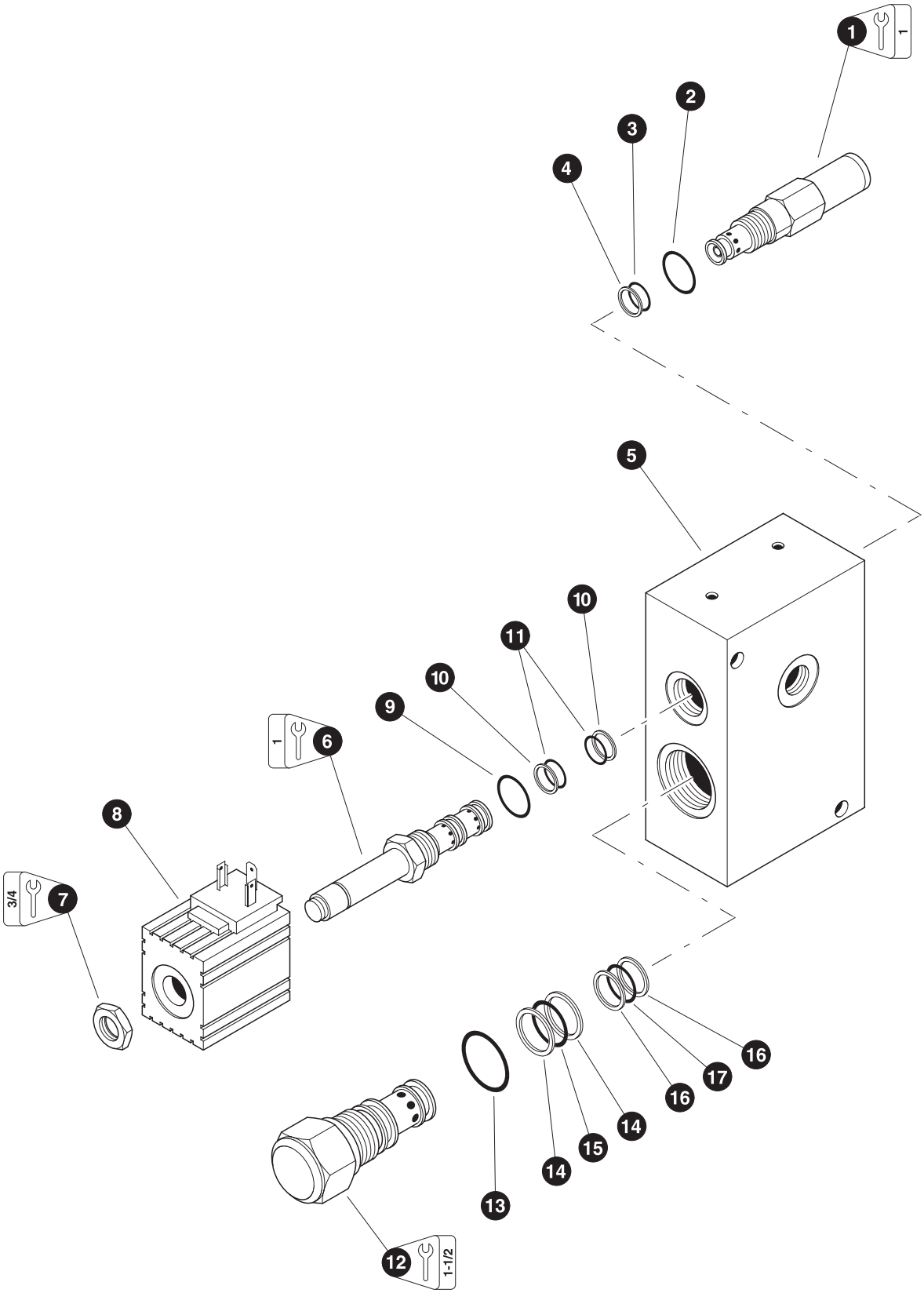


Parts 01325 01/01/2001
75.00

ELECTRIC COMPENSATOR CONTROL
(Used With Disc Saw 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 01033 01/01/2001
62.50

DISC SAW STOP VALVE
(Used With Disc Saw Pump)
(New Style Stop Valve)
(machines built after 6/01/04)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	23728-OD	1	❑	VALVE, SAW STOP - 24 Volt	
1	-OD	1	❑	CARTRIDGE, relief valve (RV08-20A-0-N-5 Hydraforce)	
2	NSS	1	⌘	O-RING, body	
3	NSS	1	⌘	O-RING, chamber	
4	NSS	1	⌘	RING, back-up - chamber	
5	NSS	1		HOUSING, valve body (204010901-40 M&W)	
6	-OD	1	❑	CARTRIDGE, saw stop solenoid (SV08-31M-0-N-24DG Hydraforce)	
7	NSS	1		NUT	
8	-OD	1		COIL, solenoid - 24 Volt (6306024 Hydraforce)	
9	NSS	1	♦	O-RING, body	
10	NSS	2	♦	RING, back-up - chamber	
11	NSS	2	♦	O-RING, chamber	
12	-OD	1	❑	CARTRIDGE, logic valve (EV16-S34-0-N-40 Hydraforce)	
13	NSS	1	■	O-RING, body	
14	NSS	2	■	RING, back-up - chamber *(Large)*	
15	NSS	1	■	O-RING, chamber *(Large)*	
16	NSS	2	■	RING, back-up - chamber *(Small)*	
17	NSS	1	■	O-RING, chamber *(Small)*	
-	-OD	1	❑	KIT, seal repair - complete saw stop valve	
-	-OD	1	❍	KIT, seal repair - saw stop solenoid cartridge (SK08-3X-MM)	
-	-OD	1	❍	KIT, seal repair - logic valve (SK16-3X-MM)	
-	-OD	1	❍	KIT, seal repair - relief valve cartridge (SK08-2X-B)	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # -OD.(SK08-2X-B)
♦ Included in seal repair kit Part # -OD.(SK08-3X-MM)
■ Included in seal repair kit Part # -OD.(SK16-3X-MM)

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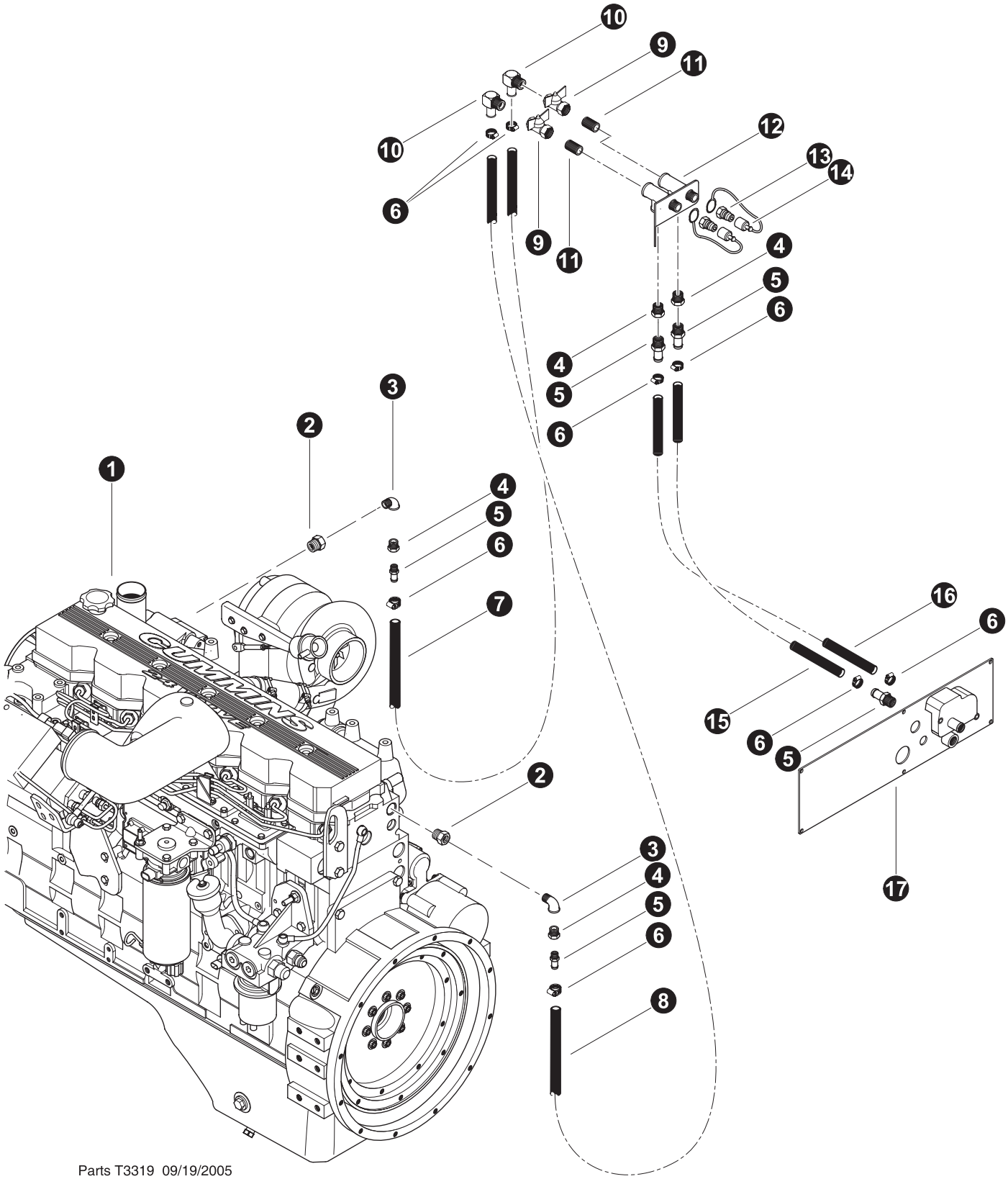
Section OH-1

Optional Heaters-
Wet Kit Installation



Parts T3319 09/19/2005
12.5

Wet Kit Installation

(QSC 8.3L Cummins)

REF	PART #	QTY		DESCRIPTION	
1	REF	1		CUMMINS QSC ENGINE ASSEMBLY.	EE-1
2	15513-OC	2		BUSHING, REDUCER - 5406-12-8	
3	15660-OC	2		ELBOW, BLACK 90 STREET - .5”	
4	15630-OC	4		BUSHING, REDUCER - 5406-8-6	
5	51502-OC	5		NIPPLE, KING - .38NPT X .63 HOSE	
6	10759-OC	8		CLAMP, hose - worm style - 7/8”	
7	16717-OC	60”	✂	HOSE, heater - 5/8” *(shut off valve to engine)*	
8	16717-OC	84”	✂	HOSE, heater - 5/8” *(shut off valve to engine)*	
9	51714-OC	2		VALVE, BALL - WATER SHUT OFF HEATER 1/2”	
10	52166-OH	2		ELBOW, 90 BRASS - NIPPLE #8 npt x 5/8	
11	16126-OH	2		NIPPLE, CLOSE .5”	
12	51941-OH	1		BRACKET, WET KIT QUICK COUPLERS	
13	17307M-OH	2		QUICK DISCONNECT - male	
-	17307F-OH	2		QUICK DISCONNECT - female (Female connector for supply vehicle)	
14	17323M-OH	2		COVER, Quick Disconnect	
15	16717-OC	61”	✂	HOSE, heater - 5/8” *(wet kit bracket to cab)*	
16	16717-OC	62”	✂	HOSE, heater - 5/8” *(wet kit bracket to cab)*	
17	REF.	1	🕮	BULKHEAD PLATE ASSEMBLY	OC-4

✂ Bulk material - order length required in feet or meters.
🕮 See referenced page for component or assembly breakdown.

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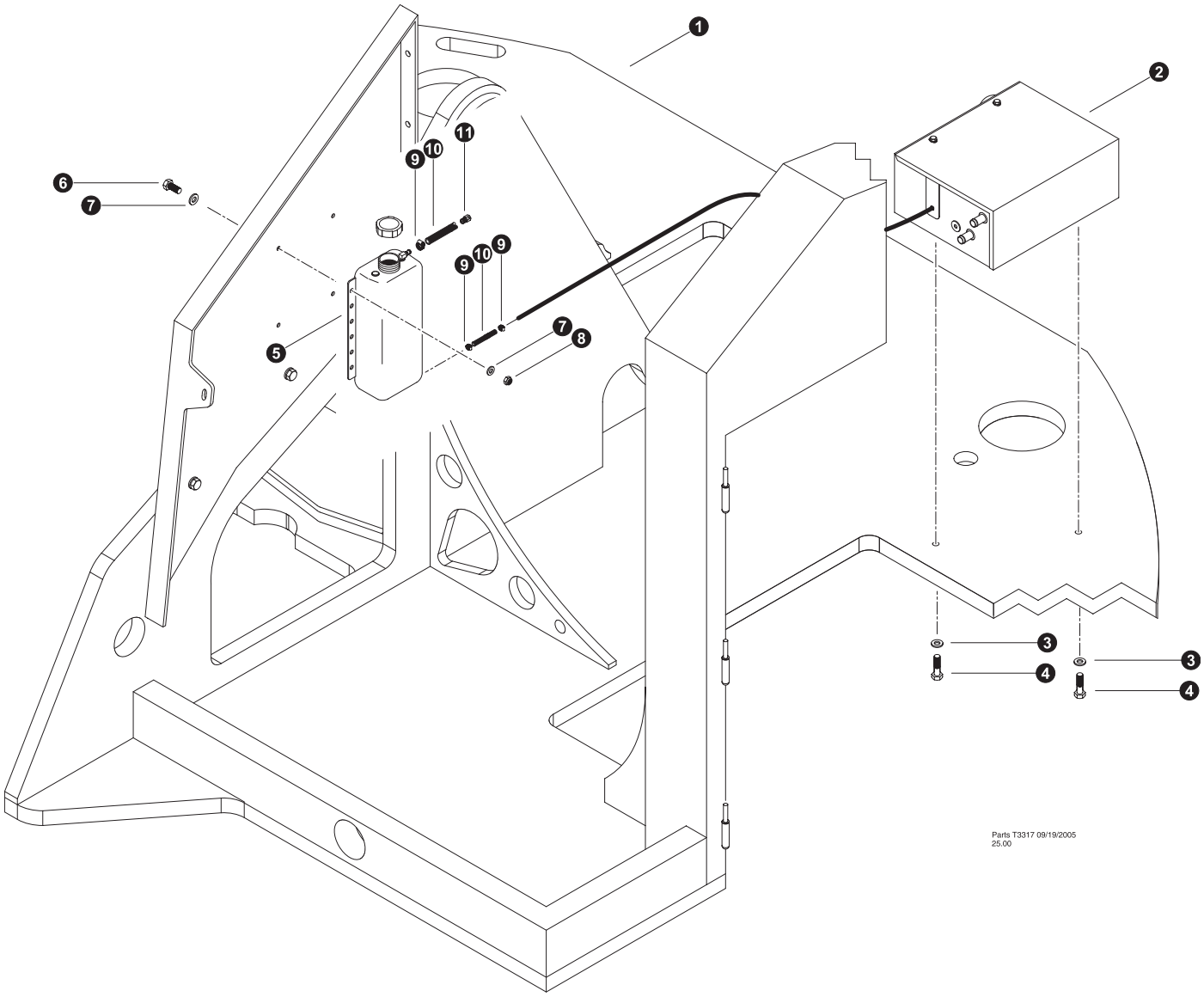
Section OH-2

Optional Heaters-
Espar Heater Installation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Parts T3317 09/19/2005
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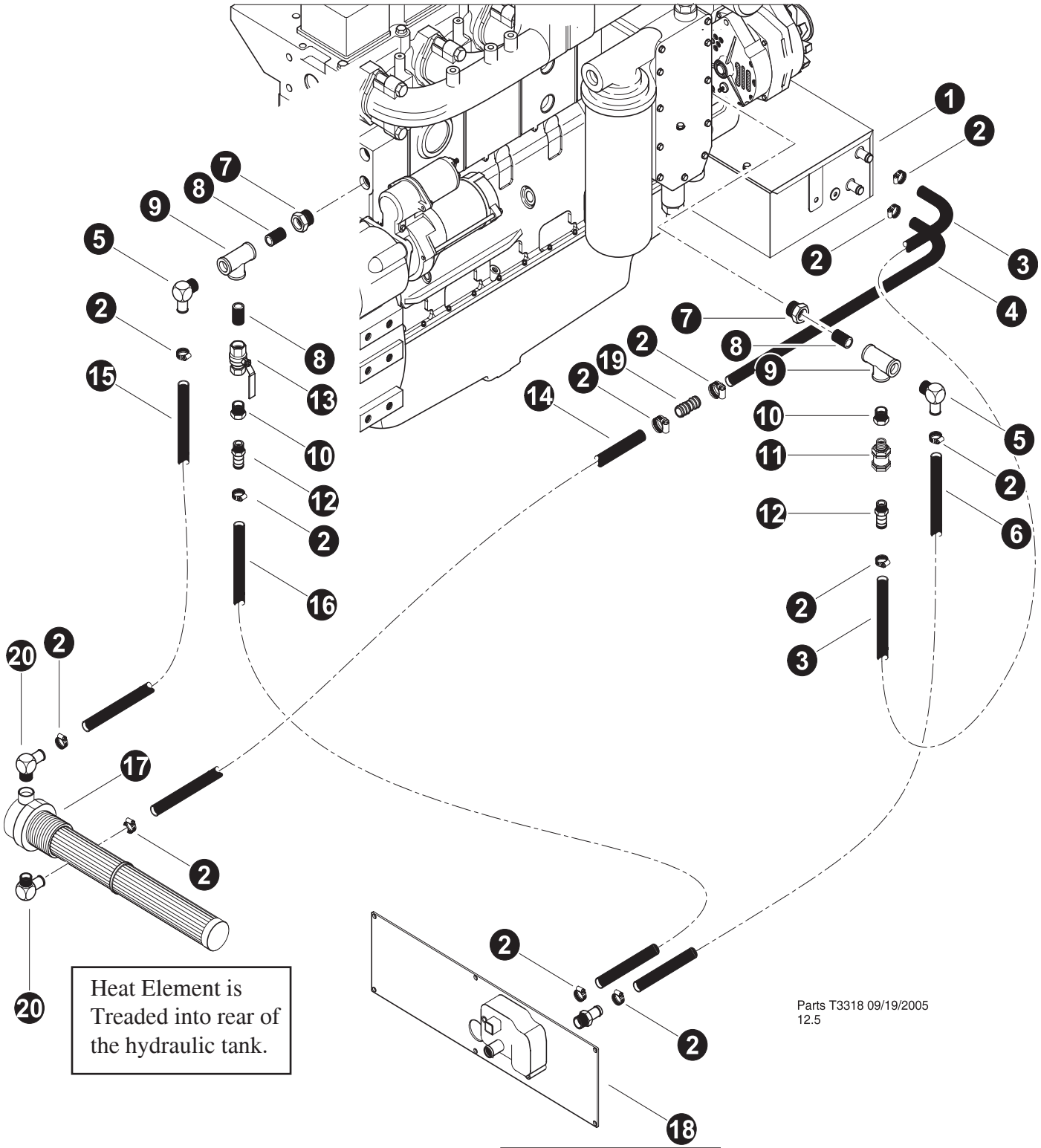
Espar Heater
(Heater Installation)

REF	PART #	QTY		DESCRIPTION
1	REF	1	🕮	UPPER TURNTABLE ASSEMBLY UP-1
2	REF	1	🕮	ESPAR PRE-HEATER SYSTEM OH-2
3	15528-OH	2		WASHER, SAE FLAT - .375”
4	15529-OH	2		BOLT - .375” X 2”
5	16925-OH	1		BOTTLE, fuel - (cap included)
6	15589-OH	4		BOLT - .3125” X 1”
7	10801-OH	8		WASHER, FLAT - .3125”
8	10788-OH	4		NUT, NYLOCK - .3125”
9	10759-OH	3		CLAMP, HOSE - WORM STYLE - .875”
10	16238-OH	1		HOSE, FUEL LINE (BULK) - .3125”
11	22906-OH	1		BEATHER, fuel vent

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


Heat Element is Treaded into rear of the hydraulic tank.
The water valve is located inside the operator's Cab.
Parts T3318 09/19/2005
12.5

Espar Heater
(Heater Installation)
Cummins QSC 8.3L

REF	PART #	QTY		DESCRIPTION	
1	REF	1	🕮	ESPAR PRE-HEATER SYSTEM	OH-2
2	16256-OH	12		CLAMP, HOSE - WORM STYLE - 1”	
3	-OH	1		HOSE, 90 degree (28470)	
4	-OH	1		HOSE, 90 degree (18075)	
5	52166-OH	1		ELBOW, 90 BRASS - NIPPLE #8 npt x 5/8	
6	16717-OH	ft	✂	HOSE, HEATER - (BULK ROLL) .625” X 250’	
7	15513-OH	3		BUSHING, REDUCER - 5406-12-8	
8	16126-OH	3		NIPPLE, CLOSE .5”	
9	16125-OH	2		TEE, BLACK - .5”	
10	15630-OH	2		BUSHING, REDUCER - 5406-8-6	
11	15652-OH	1		VALVE, CHECK - HYDRAULIC/FUEL TANK	
12	51502-OH	2		NIPPLE, KING - .38NPT X .63 HOSE	
13	51714-OH	1		VALVE, BALL - WATER SHUT OFF HEATER 1/2”	
14	16717-OH	ft	✂	HOSE, HEATER - (BULK ROLL) .625” X 250’	
15	16717-OH	ft	✂	HOSE, HEATER - (BULK ROLL) .625” X 250’	
16	16717-OH	ft	✂	HOSE, HEATER - (BULK ROLL) .625” X 250’	
17	51437-OH	1		HEATER, element - Artic Fox	
18	REF	1	🕮	WATER VALVE ASSEMBLY	OC-3
19	52167-OH	1		CONNECTOR, STR HOSE BARB - 5/8” x 5/8”	
20	51974-OH	1		ELBOW, 90 - 4501-10-12	

✂ 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.

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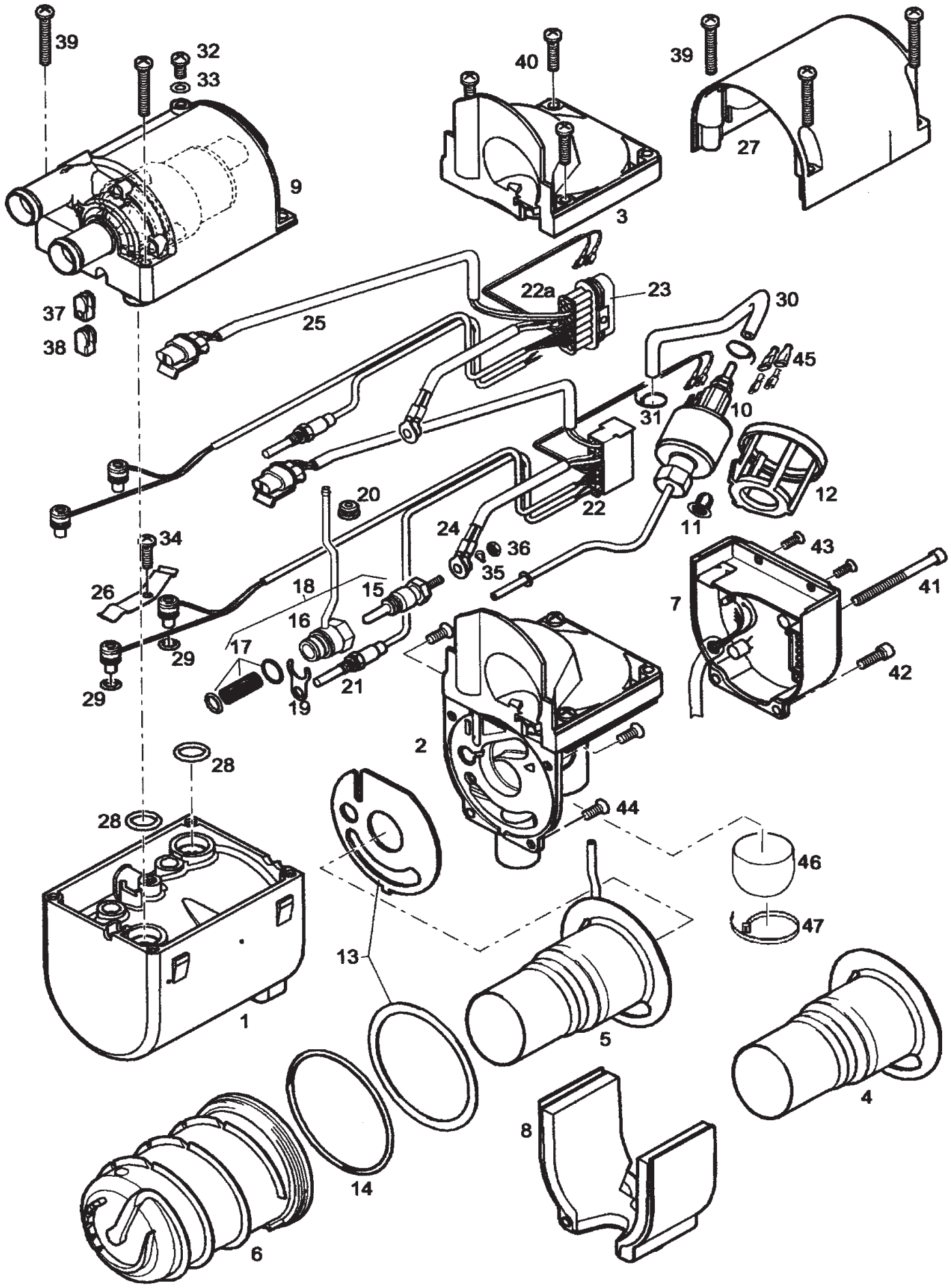
Section OH-3

Optional Heaters-
Espar Parts Breakdown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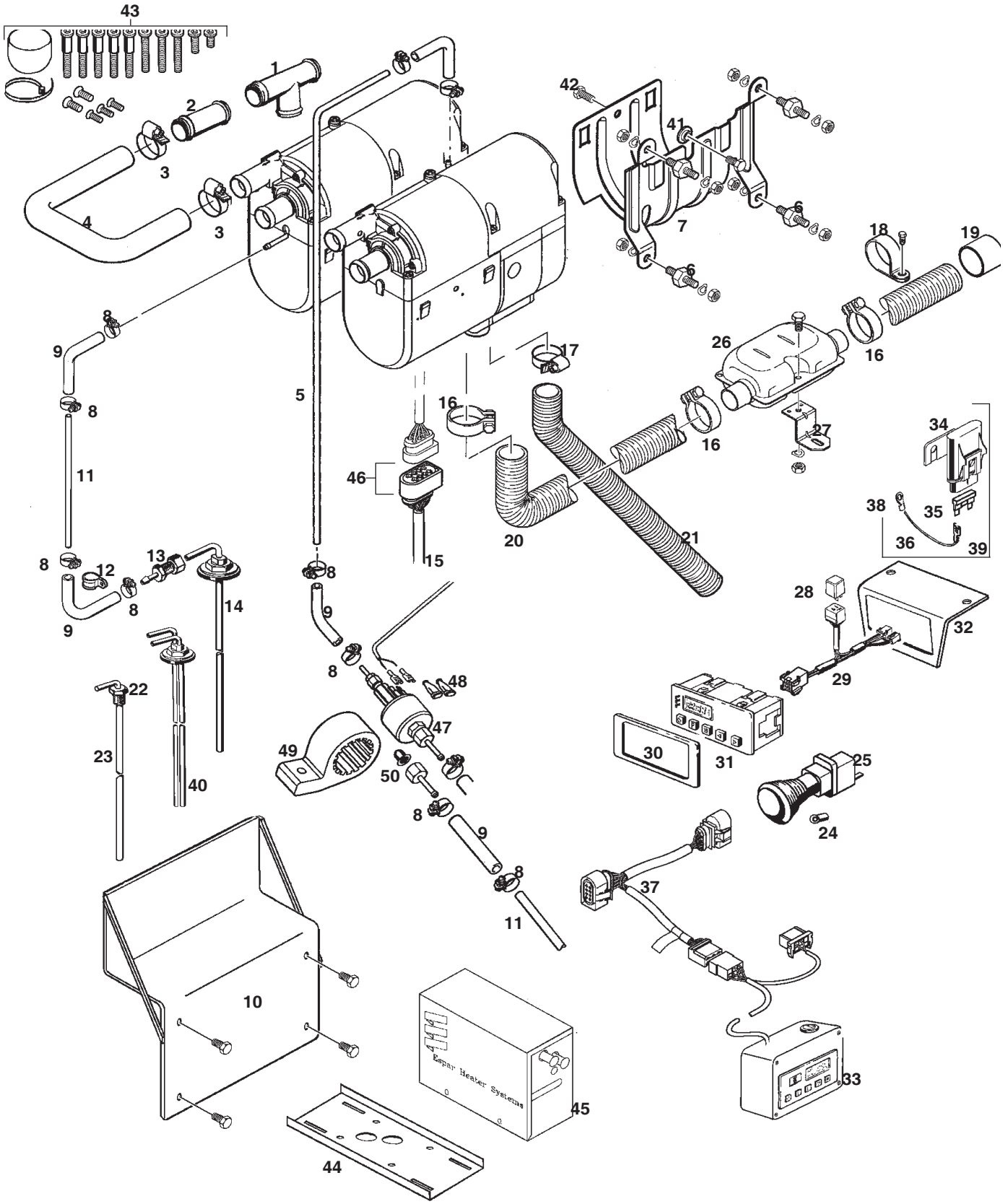
Espar hydronic - Pre Heater (heater breakdown)

REF	PART #	QTY		DESCRIPTION
-	51578-OH	1	❑	KIT, PREHEATER - ESPAR (24V)
1		1		OUTER CASING (251922010101)
2		1		CUMBUSTION AIR BLOWER with COVER (252146991500) .
3		1		COVER (252137010002) .
4		1		BURNER
5		1		BURNER (252146100000)
6		1		HEAT EXCHANGER (251922060001)
7		1		CONTROL UNIT (225202001003) .
8		1		COVER
9		1		WATER PUMP (252118250000)
10		1		FUEL METERING PUMP (251942450000)
11		1		STRAINER
12		1		PUMP HOLDER (251864990021)
13		1		SEAL & GASKET (251864990021)
14		1		O-RING (32075104)
15		1		GLOW PIN (252107011000)
16		1		GLOW PIN CONNECTION
17		1		LINING AND 2 O-RINGS
18		1		PLUG CONNECTION COMPLETE (252147011300)
19		1		HOLDER (201752010004)
20		1		SLEEVE (201752010002)
21		1		FLAME SENSOR (251920350000)
22		1		OVERHEAT & TEMP SENSORS \ CABLE & CONNECTORS (252147012000)
23		1		CONTROL UNIT PLUG - COMPLETE (221000301010)
24		1		CABLE SECTION, GLOW PLUG (251920011800)
25		1		CABLE, WATER PUMP (201753011800)
26		1		SPRING LEAF (251922010005)
27		1		COVER FUEL METERING PUMP (251917010003)
28		1		ORING (32075119)
29		1		ORING, SENSOR (32075111)
30		1		FUEL HOSE (251917010011)
31		1		HOSE CLIP (20931071)
32		1		BLEED SCREW (251917250012)
33		1		BLEED SCREW WASHER
34		1		TAPITE SCREW (10910104)
35		1		SPRING WASHER (17122112)
36		1		NUT (11010024)
37		1		SLEEVE (251917010005)
38		1		GROMMET
39		1		BOLT M5X35 (10910027)
40		1		BOLT M5X25 (10910102)
41		1		BOLT (10010300)
42		1		BOLT M5X16 (10910101)
43		1		SCREW M4X10 (10910100)
44		1		SCREW (10210400)
45		1		BOOT (32031120)
46		1		DUST COVER (CA000073)

❑ Kit or Assembly - includes all items indented underneath.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Espar hydronic - Pre Heater (heater breakdown)

REF	PART #	QTY		DESCRIPTION
-	51578-OH	1	❑	KIT, PREHEATER - ESPAR (24V
1		1		T-PIECE 20MM (201673801100) .
2		1		CONNECTING PIPE (201534880001)
3		1		CLAMP 20MM-32MM (102065020032)
4		1		HOSE (251917800001)
5		1		1.5M PLASTIC FUEL LINE (09031118)
6		1		MOUNT (201185000001)
7		1		HEATER BRACKET (251864800001)
8		1		HOSE CLAMP 9 MM (102063009098)
9		1		HOSE, FUEL (36075300)
10		1		BRACKET (CA010085)
11		1		FUEL LINE 2MM (09031117) .
12		1		CLAMP, PIPE 10MM (15200147)
13		1		FUEL PIPE REDUCER (CA012092)
14		1		FUEL PICK UP (CA012056)
15		1		MAIN HEATER HARNESS (CA160502-001)
16		1		EXHAUST CLAMP 27-30MM (15261102)
17		1		INTAKE HOSE CLAMP102064016025)
18		1		C CLAMP 28MM (15210051)
19		1		EXHAUST SLEEVE (251729800600)
20		1		EXHAUST HOSE (36061299)
21		1		INTAKE HOSE (36000099)
22		1		COMPRESSION FITTING
23		1		STRAIT PICKUP TUBE
24		1		BULB 24V (20700006)
25		1		SWITCH 24V (CA100004)
26		1		MUFFLER (251864810100)
27		1		CLAMP (201533880007)
28		1		RELAY 24V (20300092)
29		1		HARNESS ADAPTER, TIMER (CA160008001)
30		1		BEZEL, TIMER (251482700700)
31		1		TIMER, 7 DAY (221000303600) KIT W\HARNESS (CA100136)
32		1		BRACKET, TIMER (CA010061)
33		1		FAULT CODE DEVICE (CA105020)
34		1		MAIN FUSE HOLDER (CA107001)
35		1		FUSE (CA107005)
36		1		WIRE, RED (CA161908)
37		1		HARNESS, FAULT CODE (CA105028)
38		1		TERMINAL 3\8” (CA190014)
39		1		FUSE LINK HARNESS (CA165108)
40		1		DOUBLE PICKUP (CA012057001)
41		1		SPACER (251864800002) .
42		1		SCREW (CA300103)
43		1		REPLACEMENT HARDWARE KIT (CA100190)
44		1		BRACKET, FRAME MOUNT (CA010028)
45		1		BOX, BASE (CA010101) LID (CA010102)
46		1		PLUG CABLES - COMPLETE (221000301021)
47		1		FUEL PUMP 24V (221000500300)
48		1		BOOT SLEEVE (32031120)
49		1		FUEL PUMP HOLDER (221000500300)
50		1		FILTER, FUEL (224502000100) .

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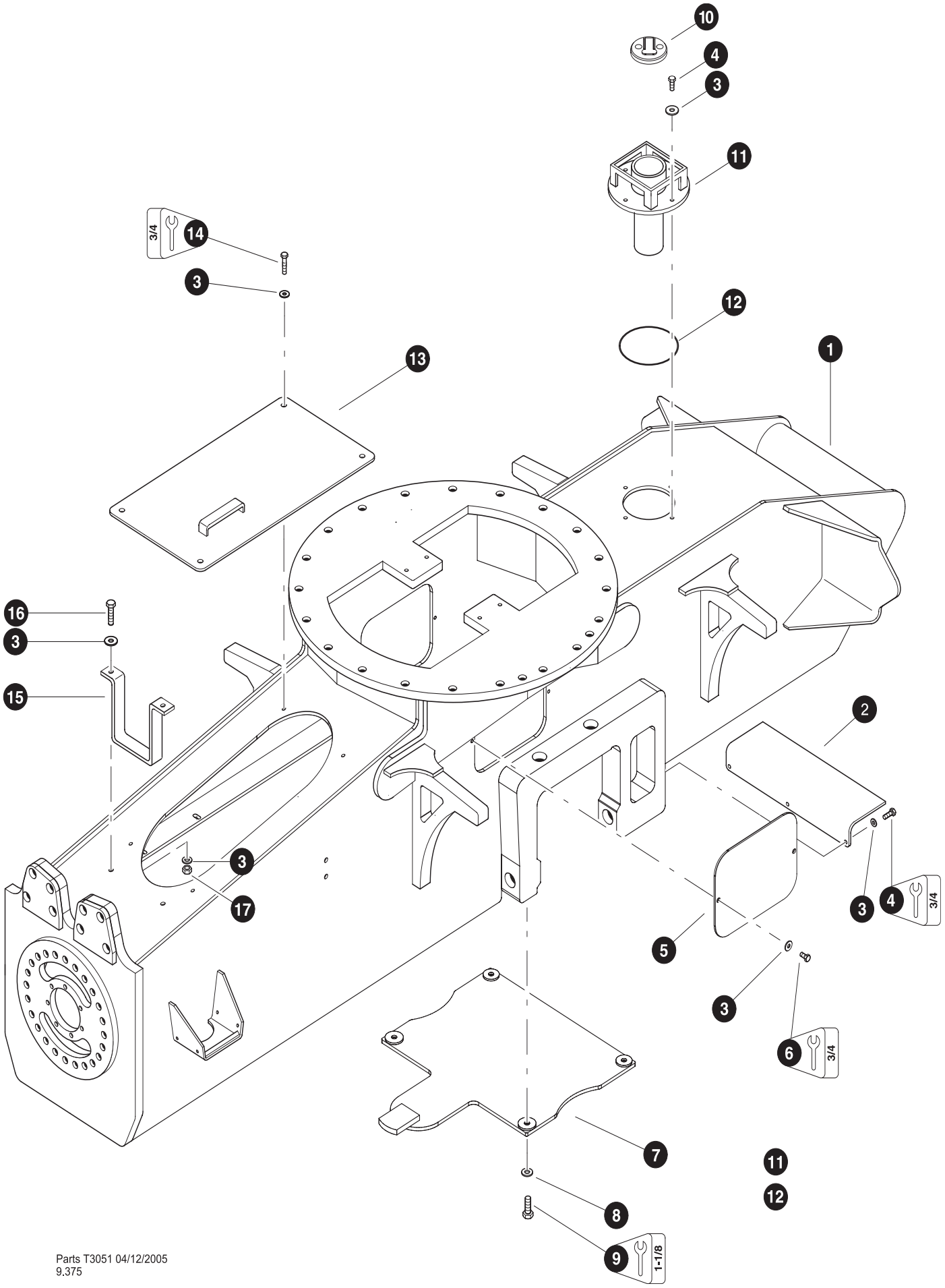
Section FF-1

TF 830 & 840 Front Frame - Frame / Covers / Brackets / Steps

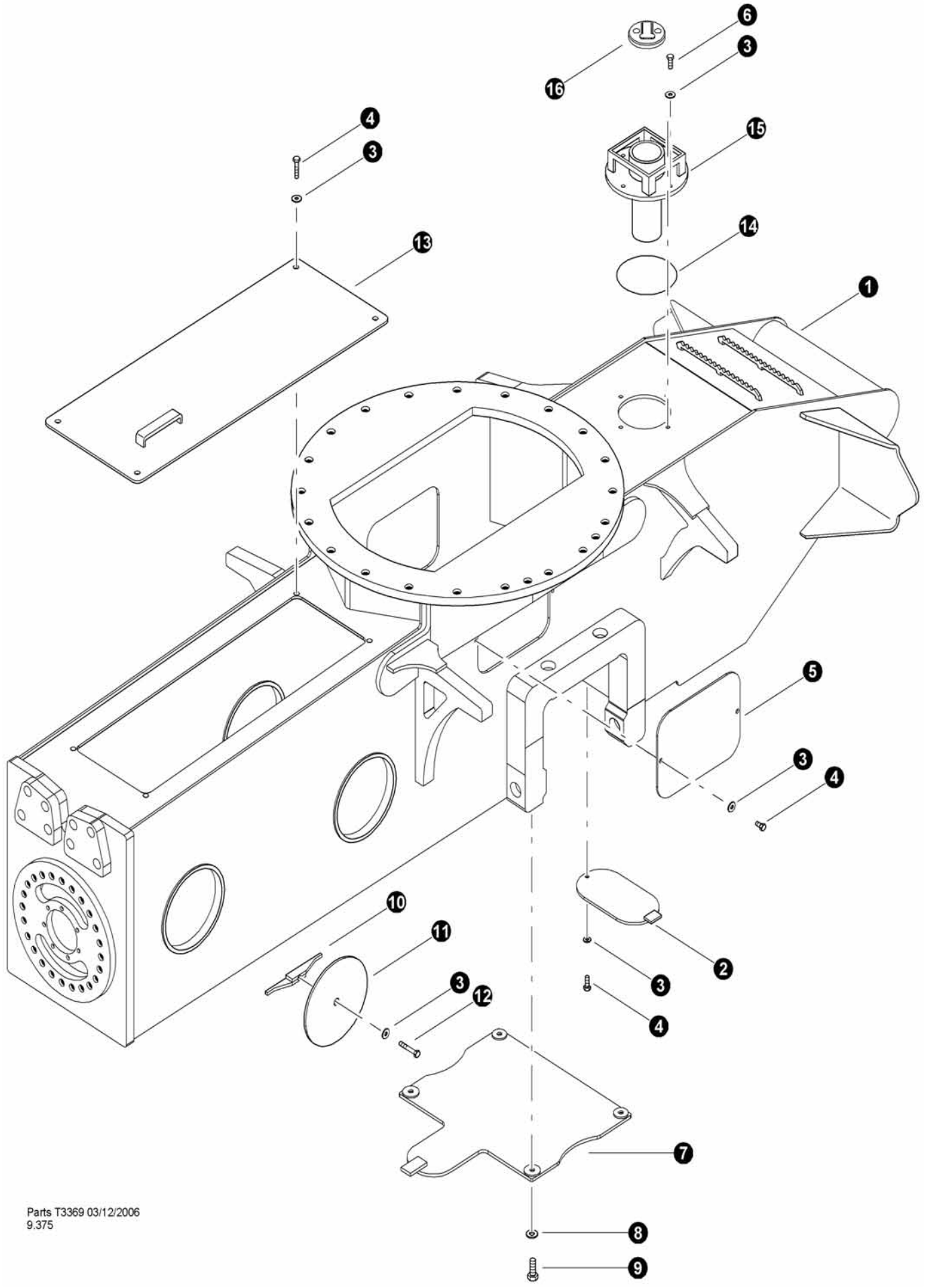


Parts T3051 04/12/2005
9.375

FRONT FRAME AND ACCESS COVERS
(Covers and Brackets)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50953-FF	1		WELDMENT, front frame	
2	42414-FF	1		COVER, AXLE BOX END (WITH FUEL SENSOR)	
3	15534-FF	19		WASHER, SAE flat - 1/2”	
4	10783-FF	7		BOLT - 1/2” x 1”	
5	40894-FF	2		COVER, RISER	
6	15528-FF	4		BOLT - 1/2” x 1 1/2”	
7	51415-FF	1		COVER, AXLE BOTTOM	
8	15550-FF	4		WASHER, SAE flat - 3/4	
9	10839-FF	4		BOLT - 3/4” X 1.5”	
10	16585-FF	1		CAP, FUEL (locking)	
11	REF	1	🕮	COVER, FUEL	FF-4
12	15600-FF	1		O-RING, fuel tank cover	
13	40962-FF	1		COVER, TOP REAR	
14	10783-FF	4		BOLT - 1/2” x 1”	
15	42398-FF	1		BRACKET, HOSE BASKET	
16	15565-FF	2		BOLT - 1/2” X 2.5”	
17	10815-FF	2		NUT, LOCK - 1/2"	

🕮 See referenced page for component or assembly breakdown.

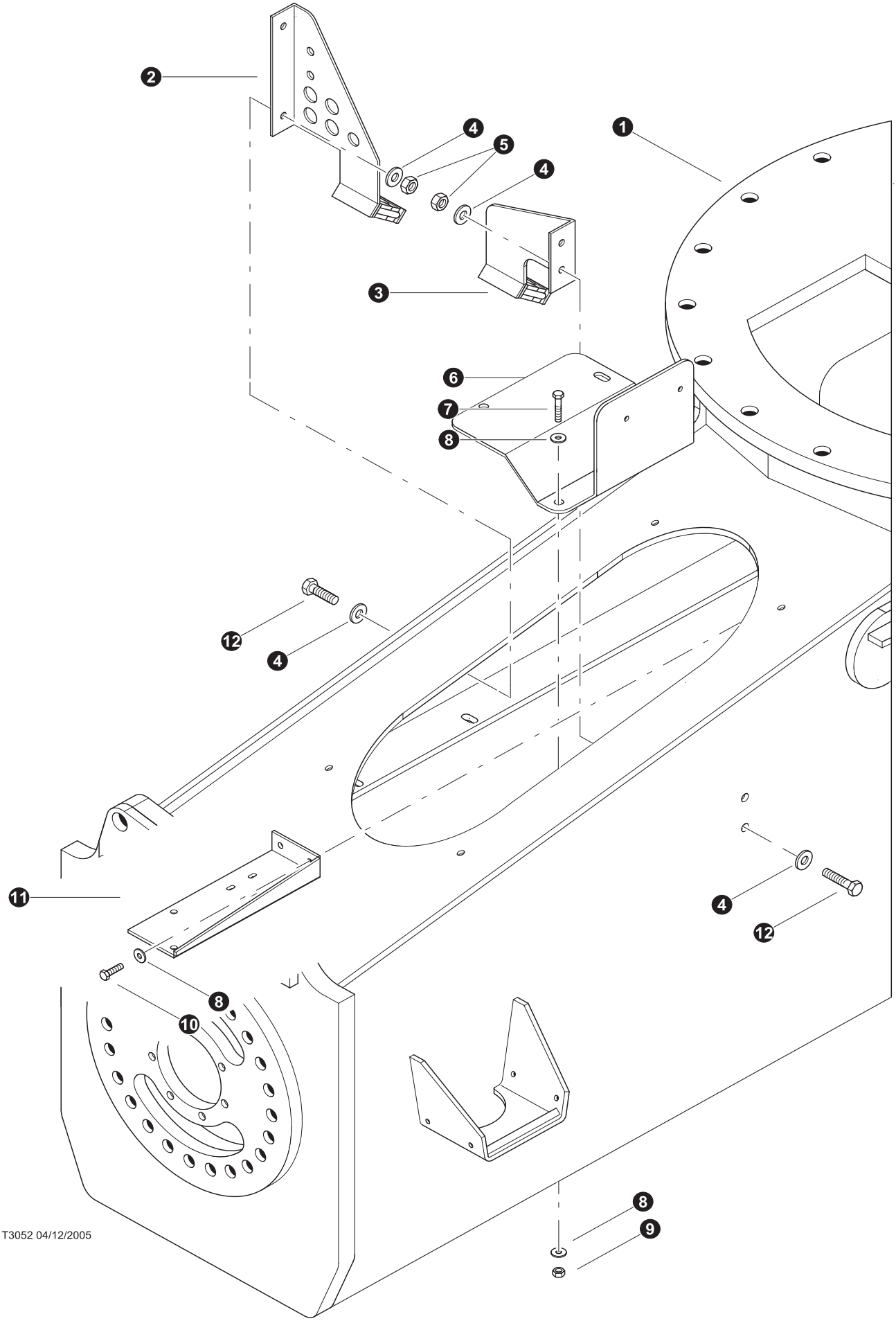


Parts T3369 03/12/2006
9.375

FRONT FRAME AND ACCESS COVERS
(Covers and Brackets)
Machine SN-0152-04/14/06 and After

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52408-FF	1		WELDMENT, front frame TF 830 / 840	
2	52370-FF	1		COVER, AXLE BOX END (WITH FUEL SENSOR)	
3	15534-FF			WASHER, SAE flat - 1/2”	
4	15528-FF	4		BOLT - 1/2” x 1 1/2”	
5	40894-FF	2		COVER, RISER	
6	10783-FF	7		BOLT - 1/2” x 1”	
7	52215-FF	1		COVER, AXLE BOTTOM	
8	15550-FF	4		WASHER, SAE flat - 3/4	
9	10839-FF	4		BOLT - 3/4” X 1.5”	
10	52358-FF	4		RETAINER, ROUND COVER	
11	52357-FF	4		COVER, ROUND - FRONT FRAME	
12	15565-FF	2		BOLT - 1/2” X 2.5”	
13	52371-FF	1		COVER, TOP REAR	
14	15600-FF	1		O-RING, fuel tank cover	
15	REF	1	🕮	COVER, FUEL	FF-4
16	16585-FF	1		CAP, FUEL (locking)	

🕮 See referenced page for component or assembly breakdown.



Parts T3052 04/12/2005
18.5

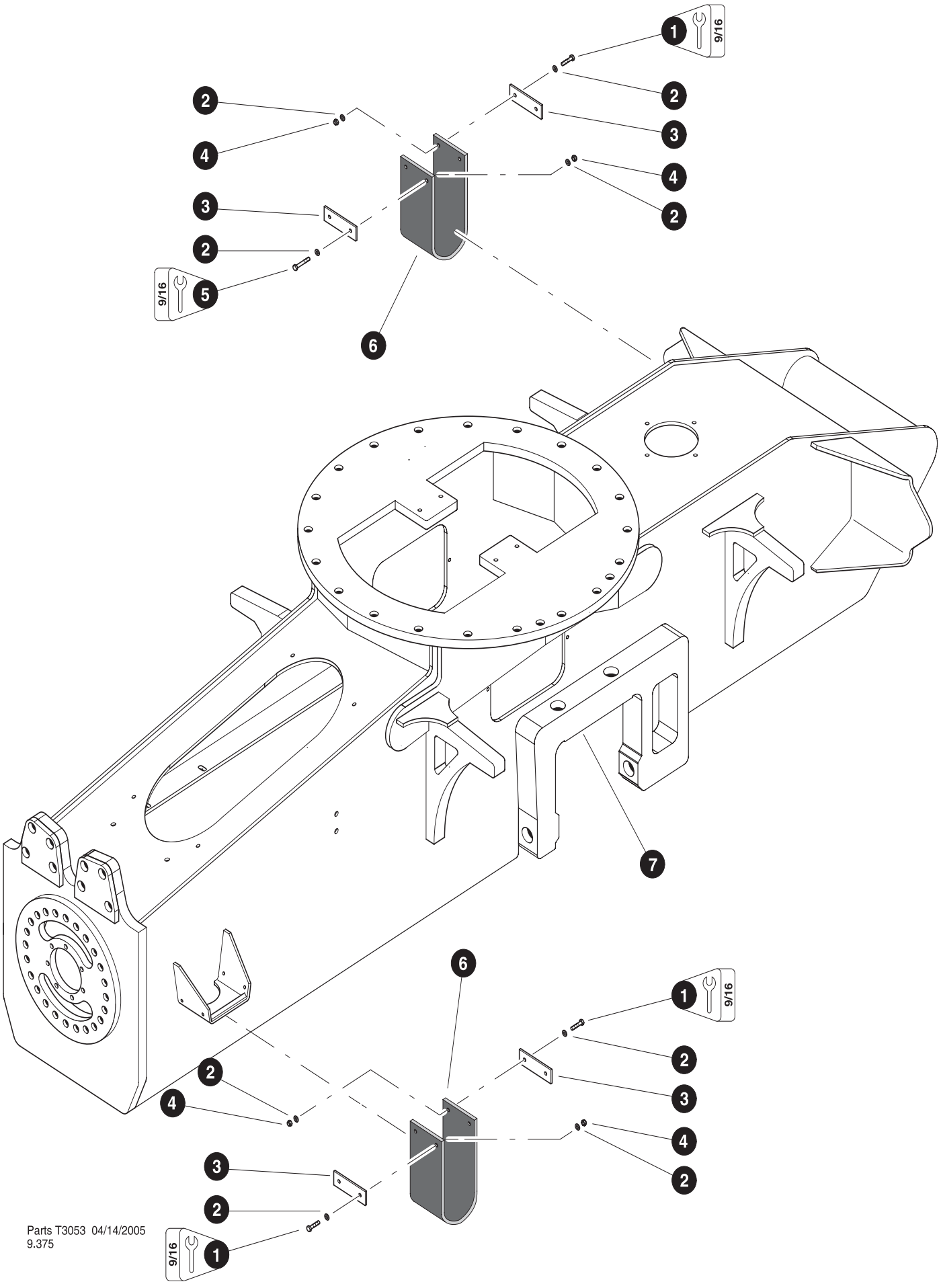
FRONT FRAME MOUNTING BRACKETS

(Mounting Brackets)

Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
2	51867-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
3	51866-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (RH)	
4	15534-FF	8		WASHER, SAE flat - 1/2”	
5	10815-FF	4		NUT, LOCK - 1/2"	
6	51868-FF	1		BRACKET, LOWER MANIFOLD SUPPORT	
7	10402-FF	2		BOLT - .375” X 1.25”	
8	15528-FF	6		WASHER, SAE flat - 3/8”	
9	10813-FF	8		NUT, lock - 3/8”	
10	15542-FF	2		BOLT - .375” X .75”	
11	51752-FF	1		MOUNT, FUEL COMPONENTS	
12	10739-FF	4		BOLT - .5” X 1.5”	

🕮 See referenced page for component or assembly breakdown.



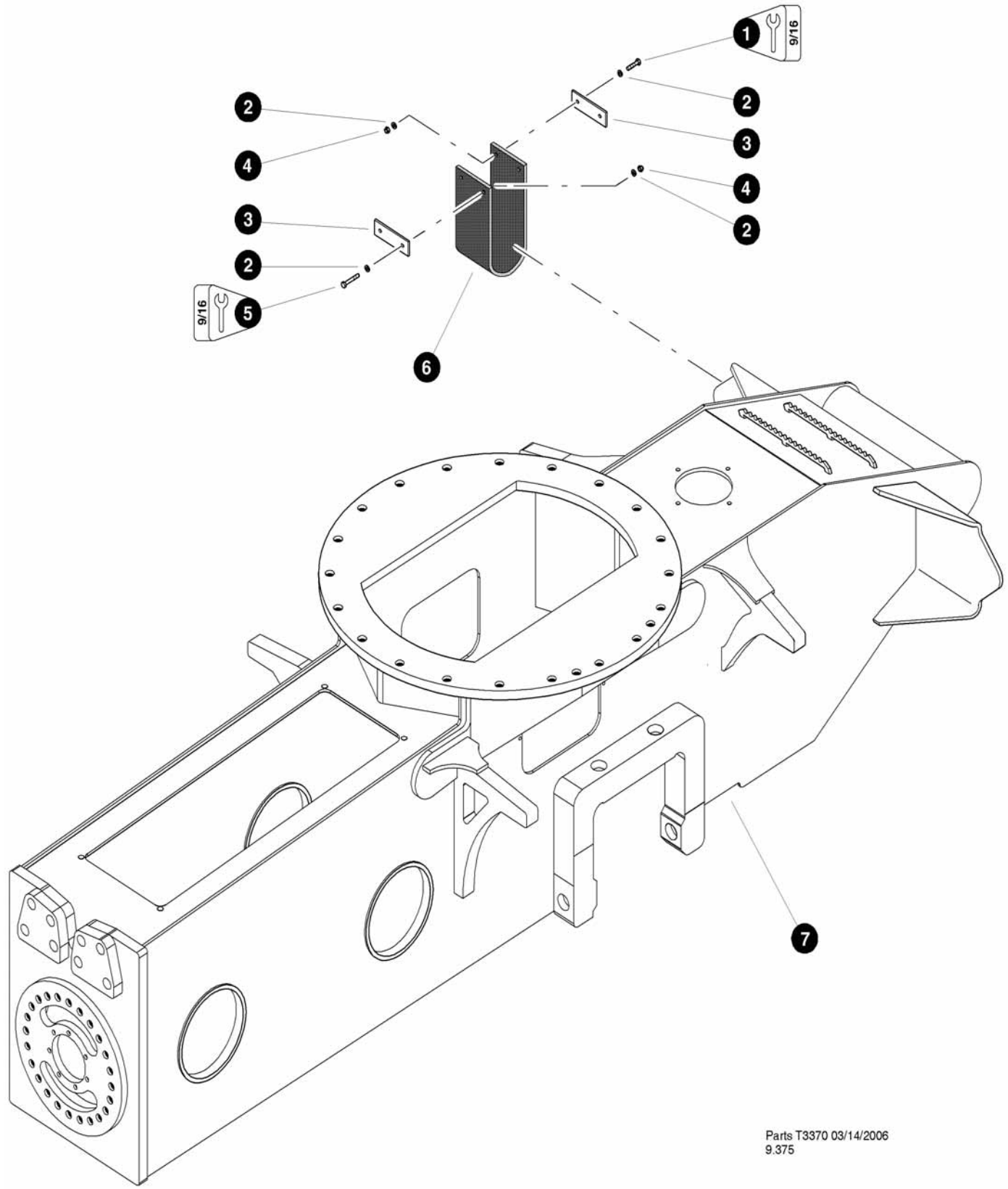
Parts T3053 04/14/2005
9.375

FRAME STEPS INSTALLATION

Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	20084-FF	6		BOLT - 3/8” x 1-3/4”	
2	15528-FF	16		WASHER, SAE flat - 3/8”	
3	20209-FF	4		RETAINER, rubber step	
4	10813-FF	8		NUT, lock - 3/8”	
5	20084-FF	2		BOLT - 3/8” x 1-3/4”	
6	20210-FF	2		STEP, rubber	
7	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1

🕮 See referenced page for component or assembly breakdown.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Parts T3370 03/14/2006
9.375

FRAME STEPS INSTALLATION

Machine SN-0152-04/14/06 and After

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	20084-FF	2		BOLT - 3/8” x 1-3/4”	
2	15528-FF	8		WASHER, SAE flat - 3/8”	
3	20209-FF	2		RETAINER, rubber step	
4	10813-FF	8		NUT, lock - 3/8”	
5	20084-FF	2		BOLT - 3/8” x 1-3/4”	
6	20210-FF	1		STEP, rubber	
7	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1

🕮 See referenced page for component or assembly breakdown.

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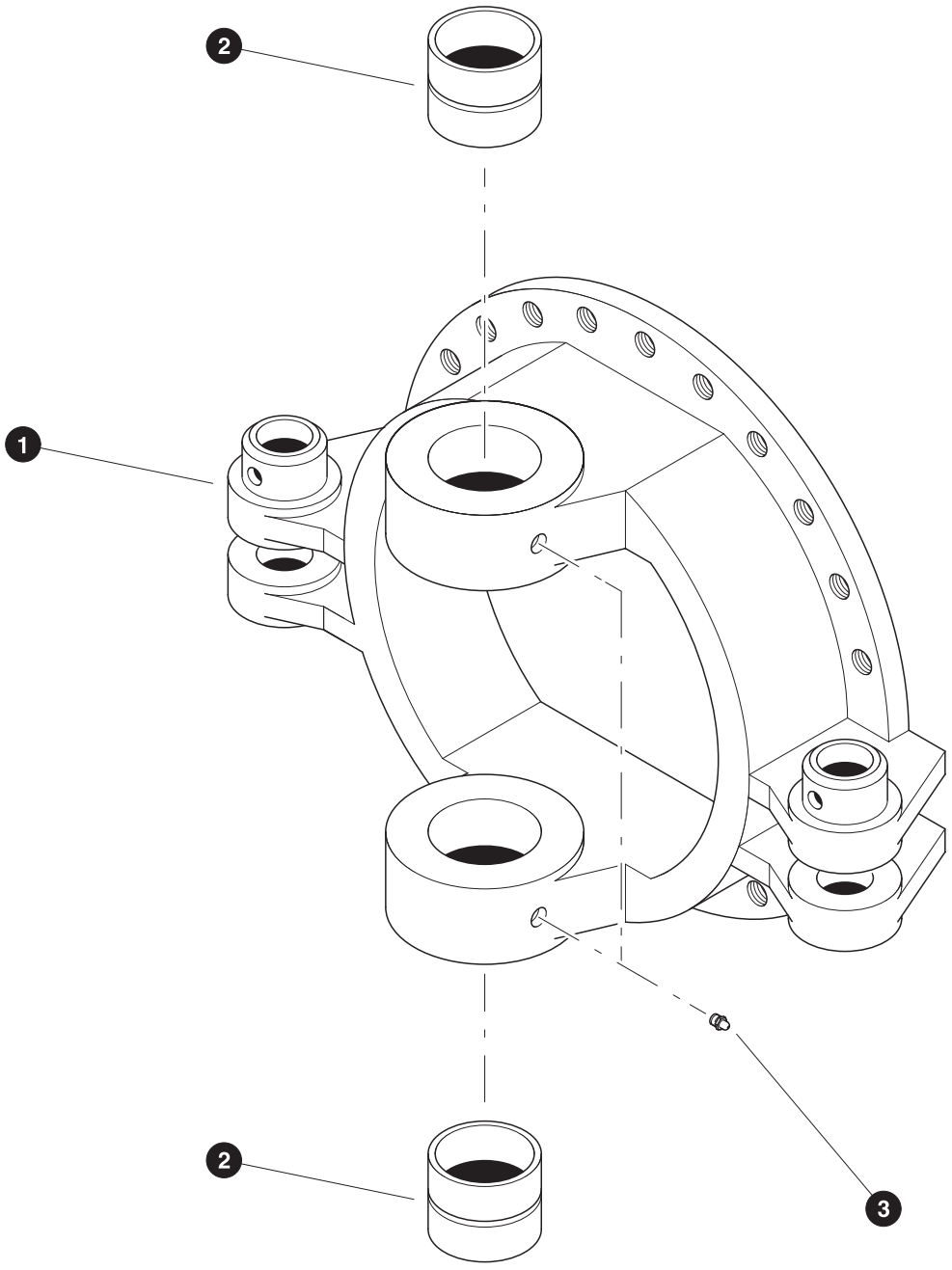
Section FF-2

TF 830 Front Frame - Component Installation



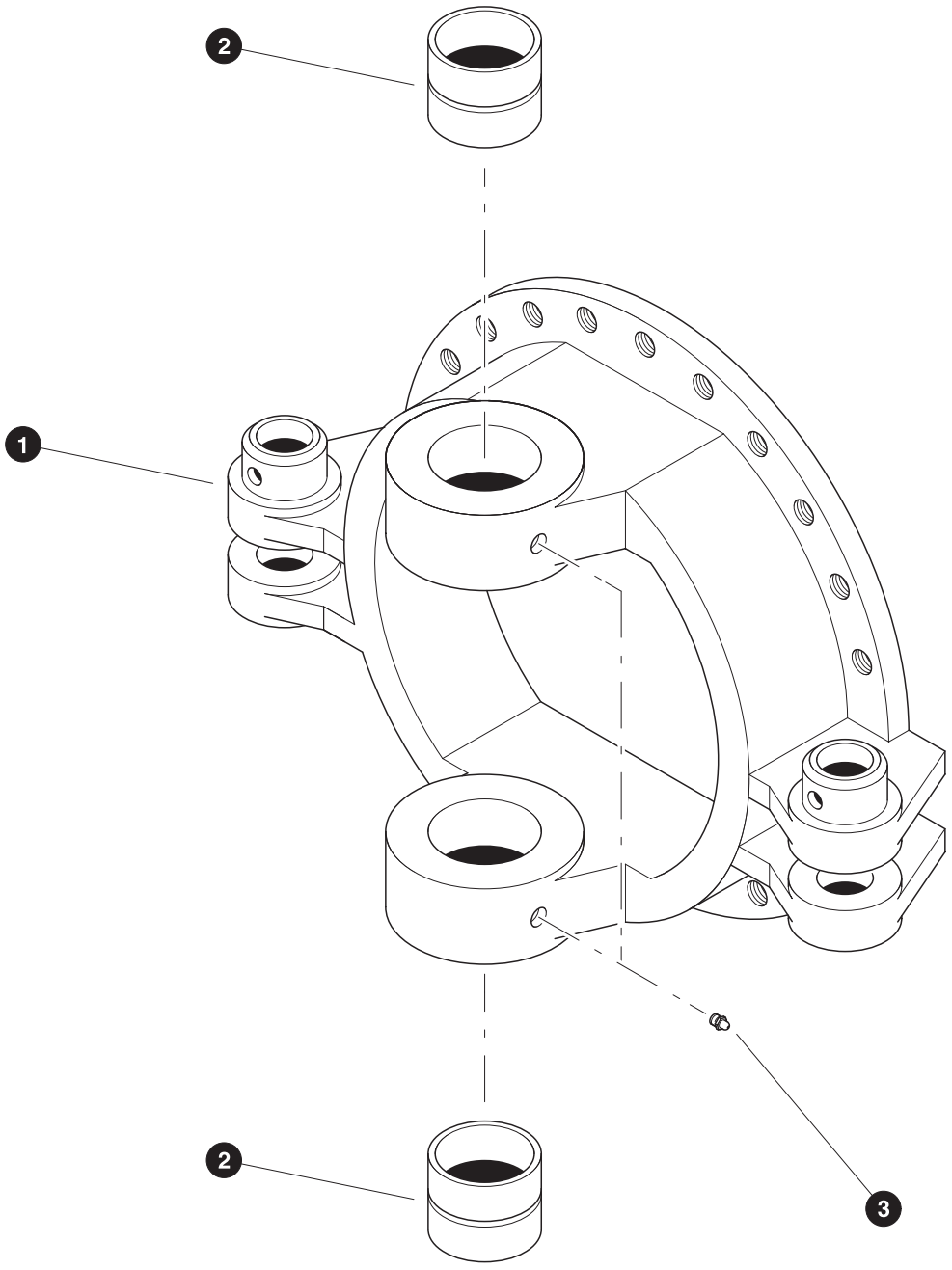
Parts 01720 07/27/2000
25.00

FRAME ARTICULATION CASTING

Machines SN 0098 021505 to 0172 092106

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23099-830-FF	1	❑	CASTING, frame articulation (tapped holes)	
2	23103-FF	2		BUSHING - 3-1/2” x 2-3/4”	
3	10704-FF	2		FITTING, grease - 1/8” pipe thread	

❑ Kit or Assembly - includes all items indented underneath.



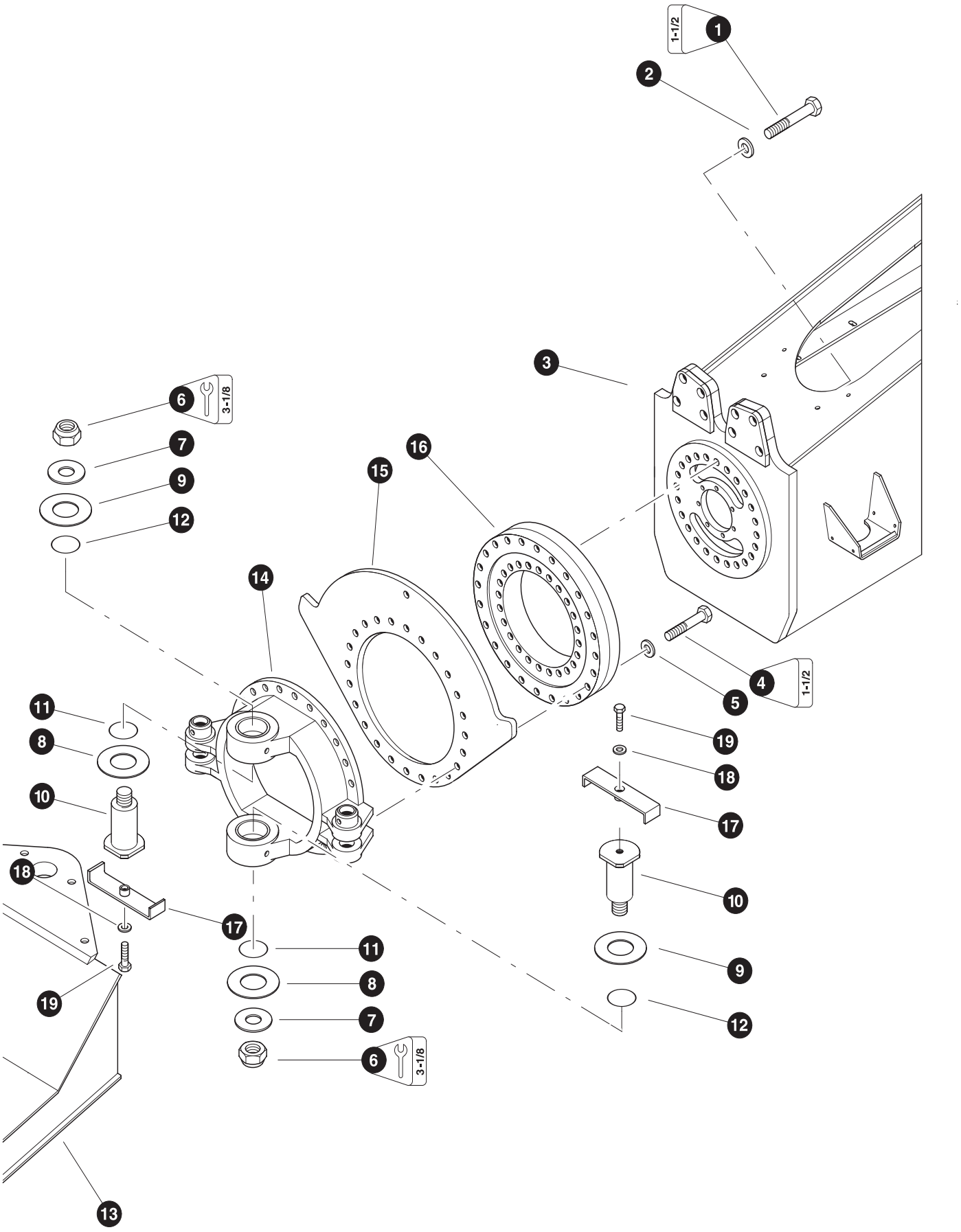
Parts 01720 07/27/2000
25.00

FRAME ARTICULATION CASTING

Machine SN 173 092806 to present

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	52038-FF	1	❑	CASTING, HINGE PLATE - 830 3.5 PIN	
2	52021-FF	2		BUSHING - 3.5” X 3.75”(STRAIGHT GROOVES)	
3	10704-FF	2		FITTING, grease - 1/8” pipe thread	

❑ Kit or Assembly - includes all items indented underneath.



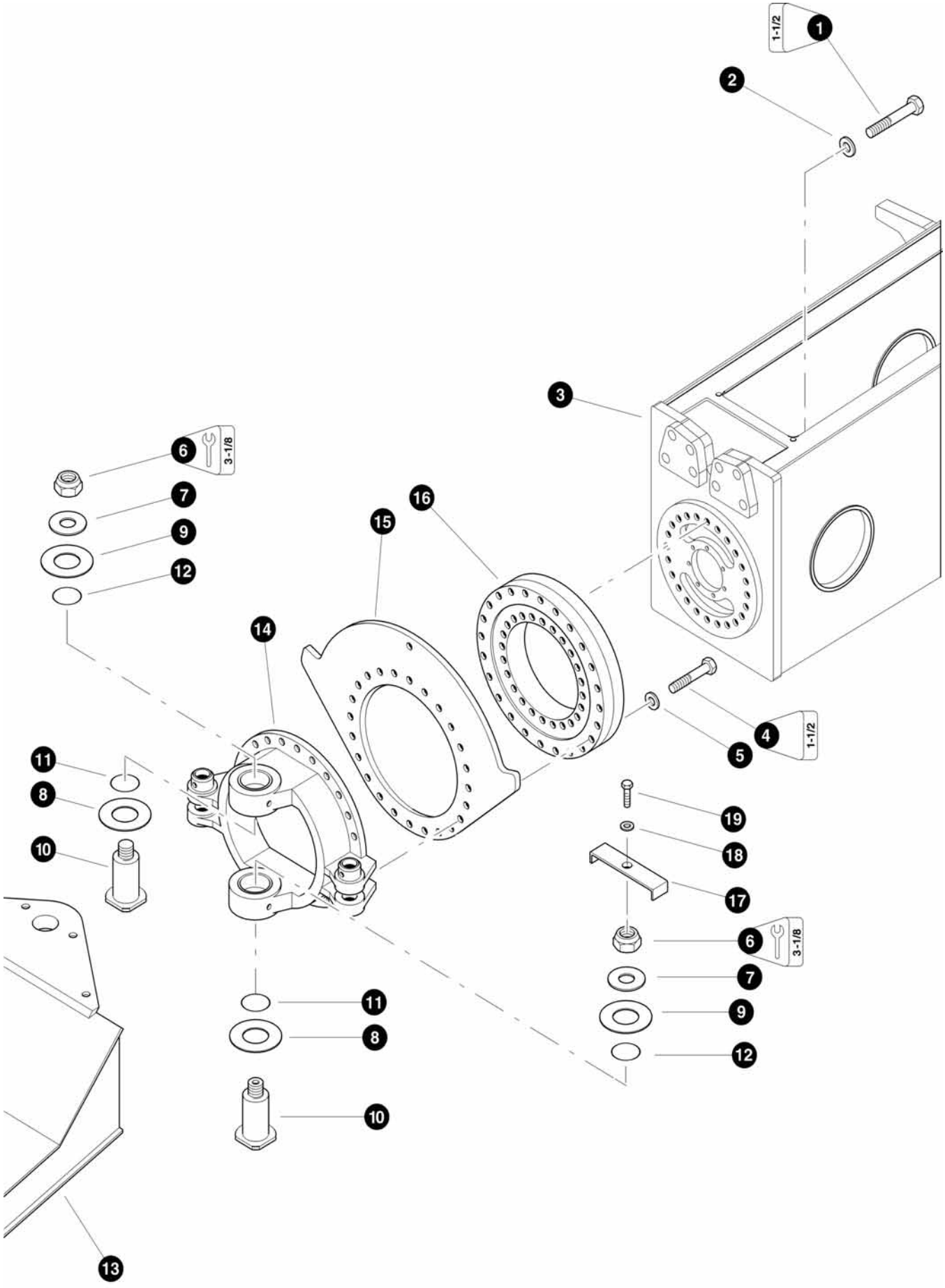
Parts T3054 04/14/2005
9.375

FRAME ARTICULATION INSTALLATION

Machines built before SN-0152-041406

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23387-FF	24		BOLT - 1” x 6-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
2	18532-FF	24		WASHER, SAE FLAT - 1” (EXTRA THICK)	
3	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
4	18672-FF	24		BOLT - 1” x 7-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
5	15579-FF	24		WASHER, SAE flat - 1”	
6	10728-FF	2		NUT, nylock - 2”	
7	51499-FF	2		WASHER, articulation pin (3/8” thick)	
8	23106-FF	2		WASHER, thrust - thin (Brass)	
9	23105-FF	2		WASHER, thrust - thick (Brass)	
10	51433-FF	2		PIN, articulation vee - 3-1/2” x 9”	
11	21577-FF	2		O-RING - thin	
12	24546-FF	2		O-RING - thick	
13	REF.	1	🕮	REAR FRAME WELDMENT.	FR-1
14	REF.	1	🕮	FRAME ARTICULATION CASTING	FF-2
15	80830-FF	1		PLATE, braking	
16	24999-FF	1		BEARING, articulation	
17	40830-FF	2		BRACKET, articulation joint hose	
18	15550-FF	4		WASHER, SAE flat - 3/4”	
19	10775-FF	2		BOLT - .75” X 2.5”	

🕮 See referenced page for component or assembly breakdown.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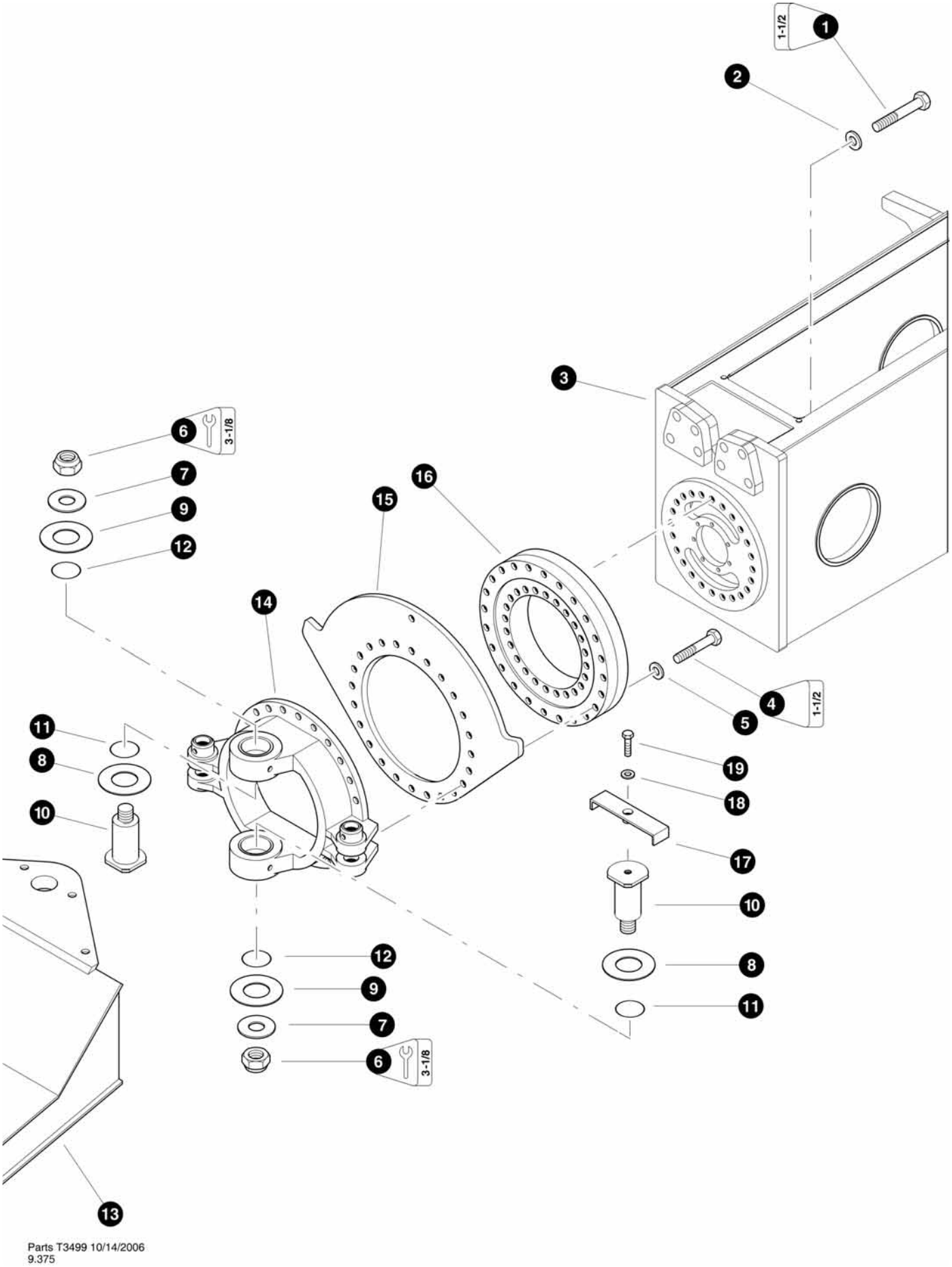
Parts T3390 04/14/2006
9.375

FRAME ARTICULATION INSTALLATION

Machine SN-0152-041406 to SN-0167-080806 and SN-0169-082506 to SN-0171-090106

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23387-FF	24		BOLT - 1” x 6-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
2	18532-FF	24		WASHER, SAE FLAT - 1” (EXTRA THICK)	
3	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
4	18672-FF	24		BOLT - 1” x 7-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
5	15579-FF	24		WASHER, SAE flat - 1”	
6	10728-FF	2		NUT, nylock - 2”	
7	51499-FF	2		WASHER, articulation pin (3/8” thick)	
8	23106-FF	2		WASHER, thrust - thin (Brass)	
9	23105-FF	2		WASHER, thrust - thick (Brass)	
10	51433-FF	2		PIN, articulation vee - 3-1/2” x 9” (Must be drilled and tapped for bracket)	
11	21577-FF	2		O-RING - thin	
12	24546-FF	2		O-RING - thick	
13	REF.	1	🕮	REAR FRAME WELDMENT.	FR-1
14	REF.	1	🕮	FRAME ARTICULATION CASTING	FF-2
15	80830-FF	1		PLATE, braking	
16	24999-FF	1		BEARING, articulation	
17	52490-FF	2		BRACKET, HOSE HOLD DOWN 830W/FRT TRANS	
18	15550-FF	1		WASHER, SAE flat - 3/4”	
19	10839-FF	1		BOLT - .75” X 1.5”-FF	

🕮 See referenced page for component or assembly breakdown.



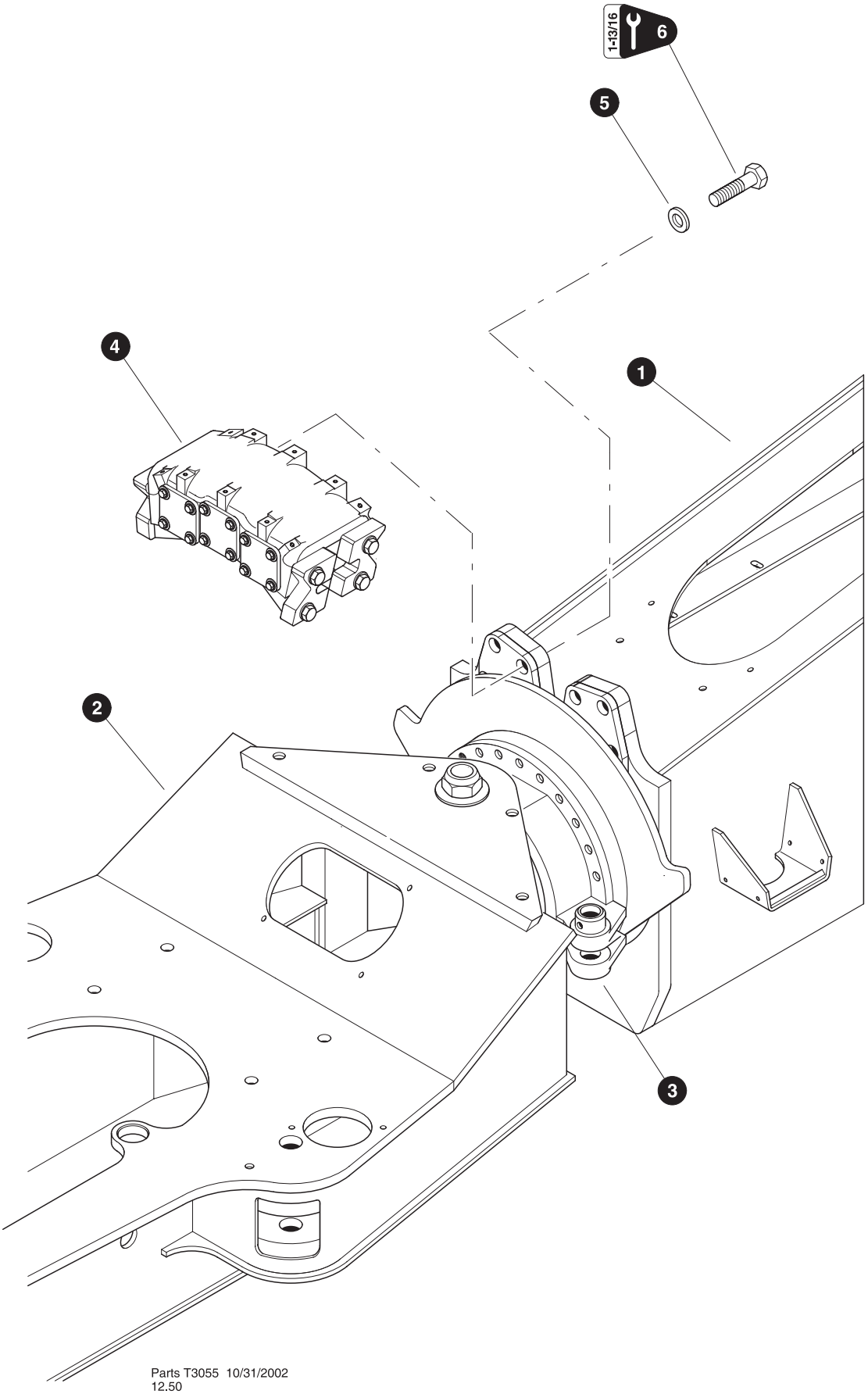
Parts T3499 10/14/2006
9.375

FRAME ARTICULATION INSTALLATION

Machine SN-0173-092806 to present

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23387-FF	24		BOLT - 1” x 6-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
2	18532-FF	24		WASHER, SAE FLAT - 1” (EXTRA THICK)	
3	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
4	18672-FF	24		BOLT - 1” x 7-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
5	15579-FF	24		WASHER, SAE flat - 1”	
6	10728-FF	2		NUT, nylock - 2”	
7	51499-FF	2		WASHER, articulation pin (3/8” thick)	
8	23106-FF	2		WASHER, thrust - thin (Brass)	
9	23105-FF	2		WASHER, thrust - thick (Brass)	
10	52605-FF	2		PIN - 3.5 X 10.00 ART. - VEE-CHROMED	
11	21577-FF	2		O-RING - thin	
12	24546-FF	2		O-RING - thick	
13	REF.	1	🕮	REAR FRAME WELDMENT.	FR-1
14	REF.	1	🕮	FRAME ARTICULATION CASTING	FF-2
15	80830-FF	1		PLATE, braking	
16	24999-FF	1		BEARING, articulation	
17	52490-FF	2		BRACKET, HOSE HOLD DOWN 830W/FRT TRANS	
18	15550-FF	1		WASHER, SAE flat - 3/4”	
19	10839-FF	1		BOLT - .75” X 1.5”-FF	

🕮 See referenced page for component or assembly breakdown.



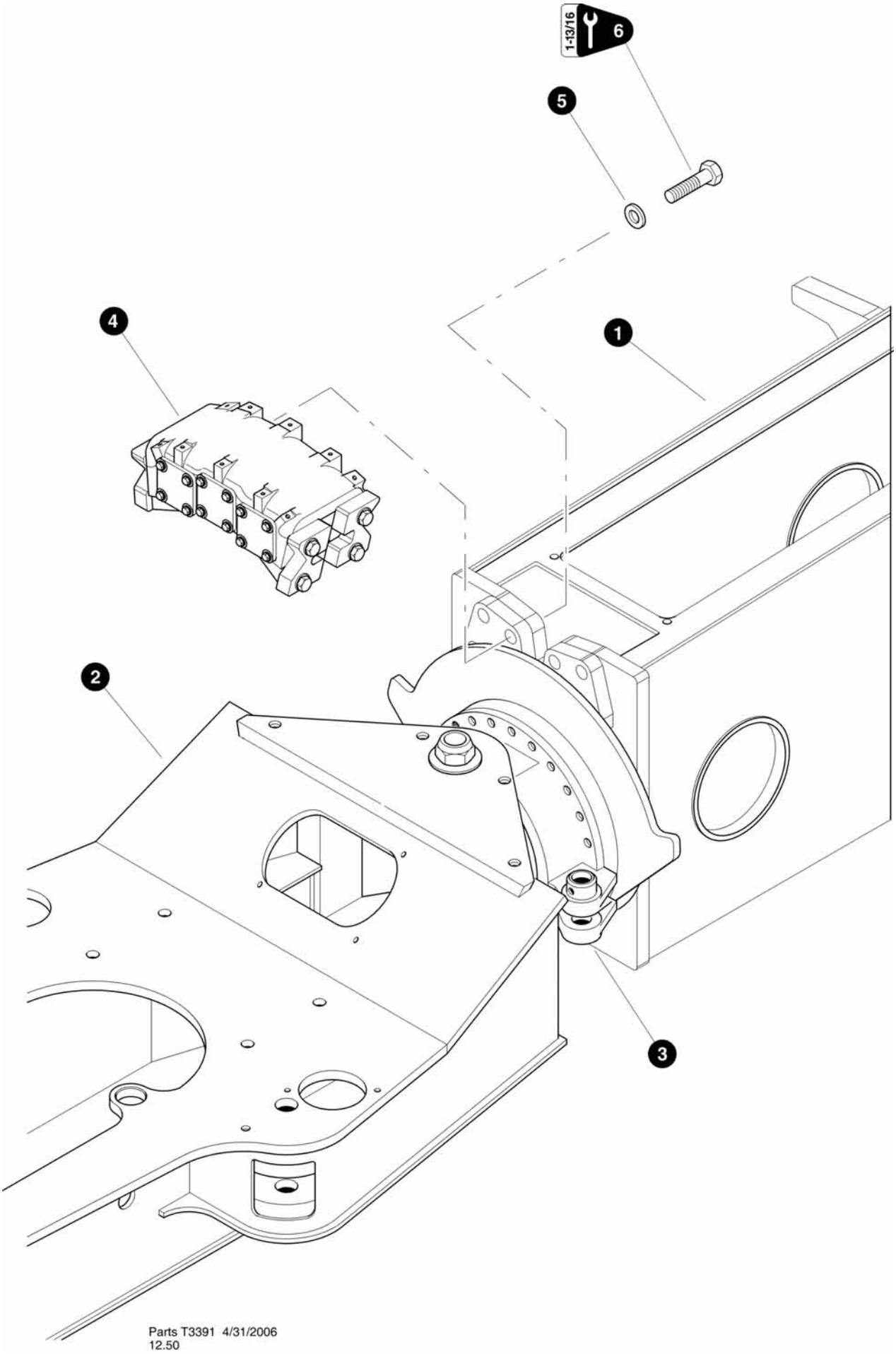
Parts T3055 10/31/2002
12.50

FRAME LOCK BRAKE INSTALLATION

Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	FRONT FRAME WELDMENT	FF-1
2	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
3	REF.	1	🕮	FRAME ARTICULATION CASTING	FF-2
4	REF.	1	🕮	FRAME LOCK BRAKE	FF-5
5	22531-FF	8		WASHER - 1-1/4”	
6	23351-FF	8		BOLT - 1-1/4” x 4-1/2” NF	

🕮 See referenced page for component or assembly breakdown.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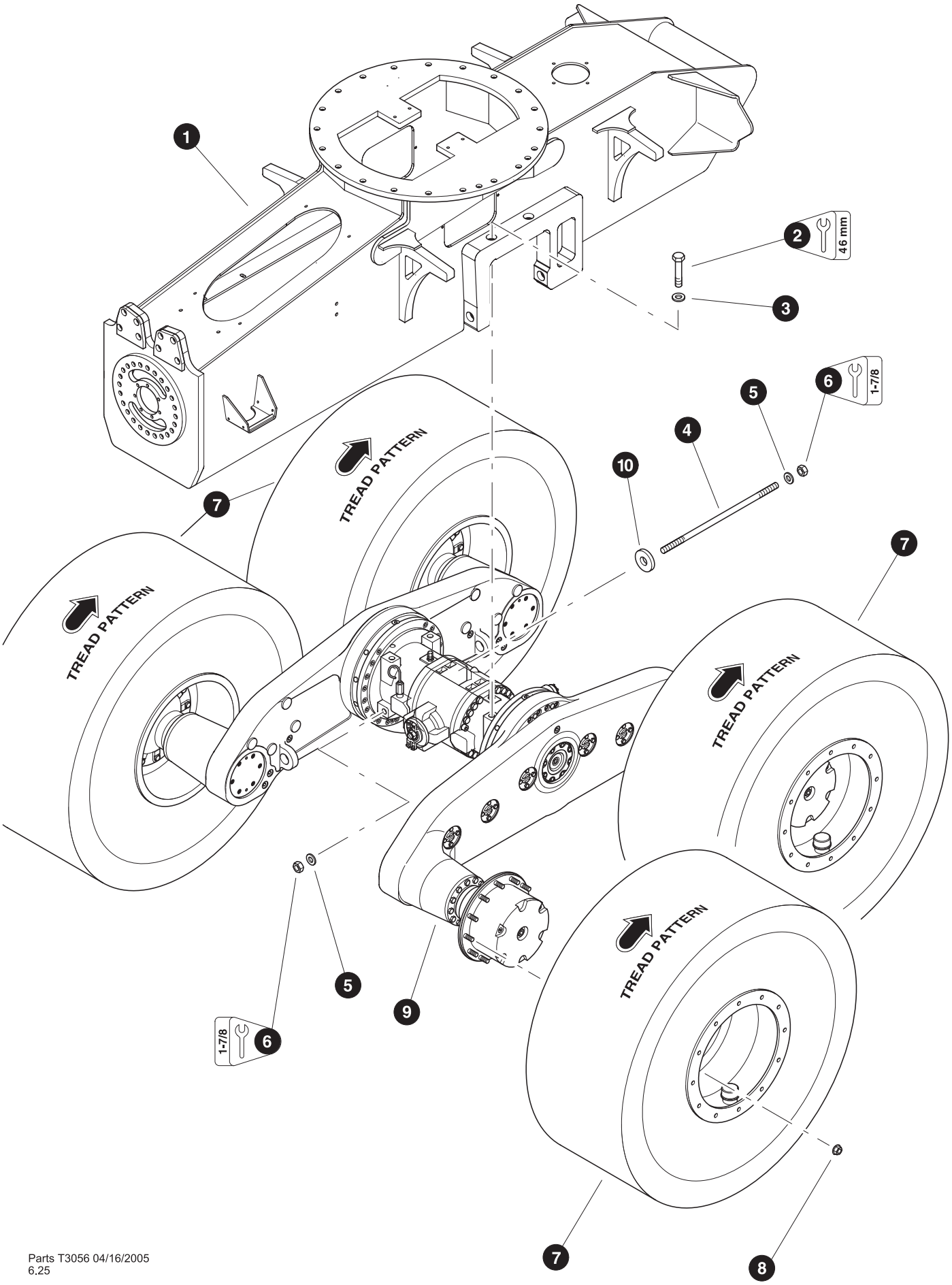
Parts T3391 4/31/2006
12.50

FRAME LOCK BRAKE INSTALLATION

Machine SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	FRONT FRAME WELDMENT	FF-1
2	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
3	REF.	1	🕮	FRAME ARTICULATION CASTING	FF-2
4	REF.	1	🕮	FRAME LOCK BRAKE	FF-5
5	22531-FF	8		WASHER - 1-1/4”	
6	23351-FF	8		BOLT - 1-1/4” x 4-1/2” NF	

🕮 See referenced page for component or assembly breakdown.



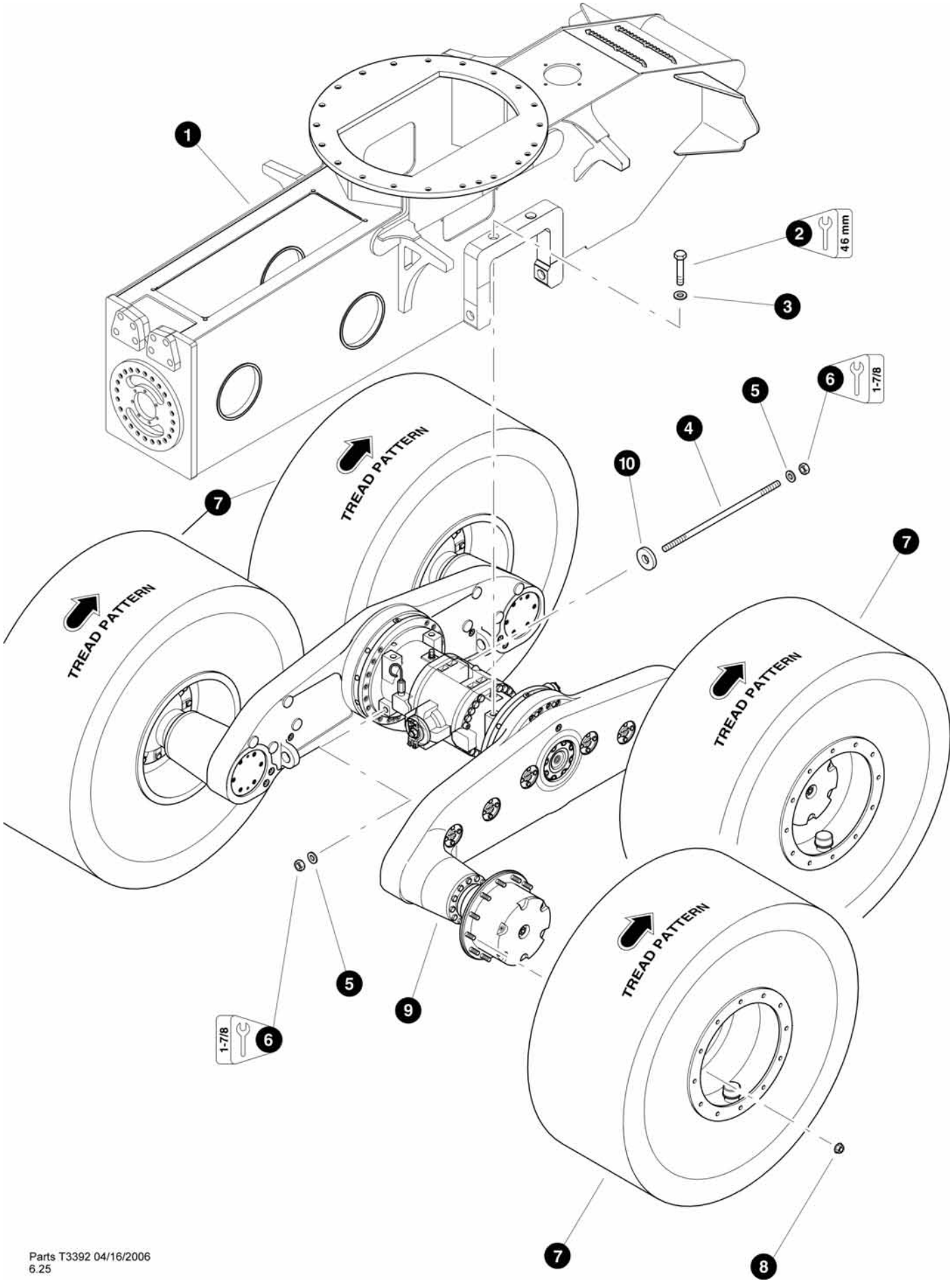
Parts T3056 04/16/2005
6.25

FRONT AXLE INSTALLATION

Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
2	23567-FF	4		BOLT - 30mm-3.5P x 220mm (Torque to 1100 ft.lbs. (1465 Nm))	
3	23568-FF	4		WASHER, hardened flat - 30mm	
4	23851-FF	2		STUD, axle spreader box - 1-1/4”	
5	22531-FF	4		WASHER, SAE flat - 1-1/4”	
6	23989-FF	4		NUT, lock - 1-1/4” (Torque to 1200 ft.lbs. (1600 Nm))	
7	REF.	4	🕮	WHEEL ASSEMBLY	AX-3
8	19361-FF	48		NUT, lug (Torque to 600 ft.lbs. (800 Nm))	
9	REF.	1	🕮	FRONT AXLE	AX-1
10	24003-FF	2		SPACER, axle spreader stud	

🕮 See referenced page for component or assembly breakdown.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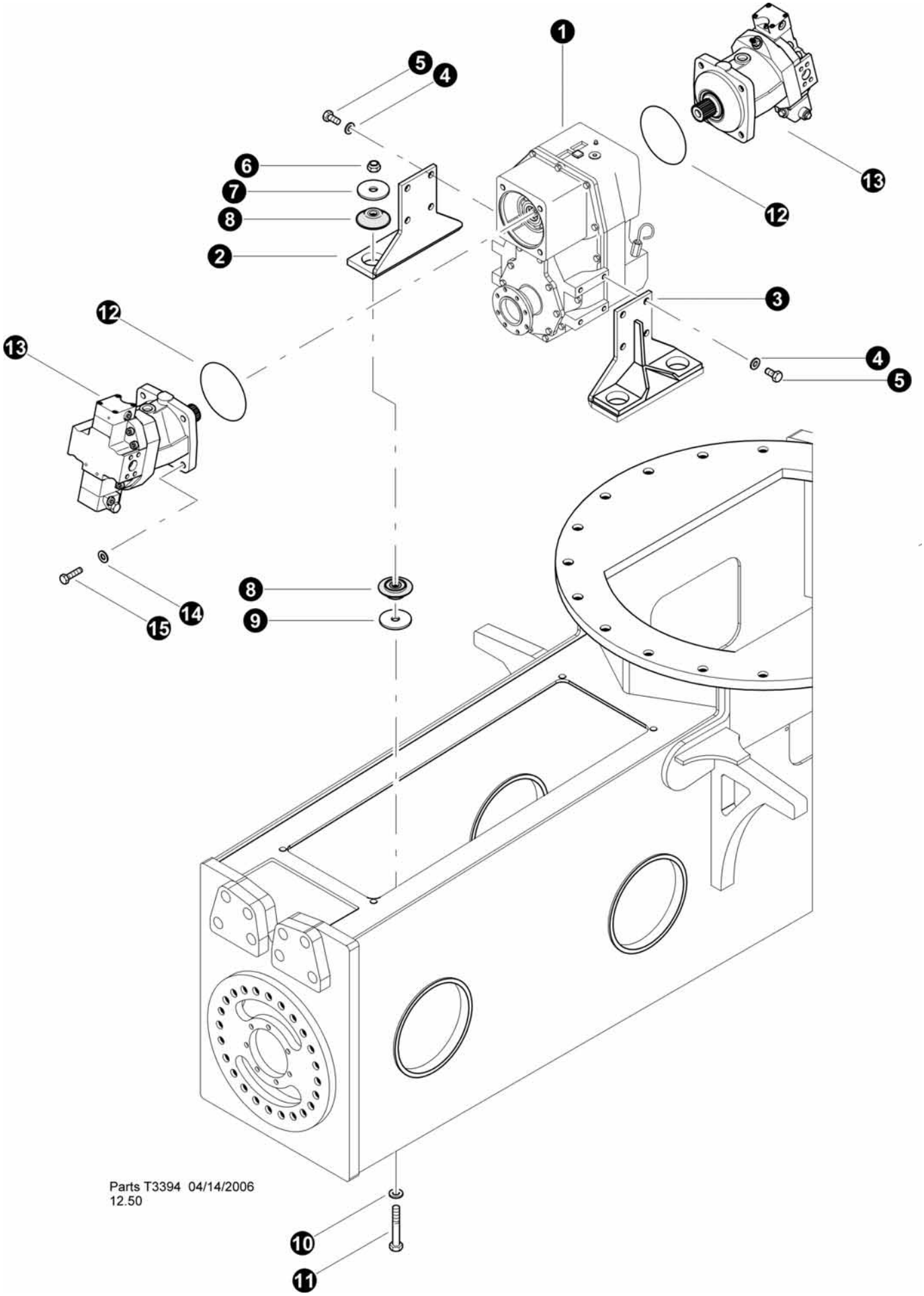
Parts T3392 04/16/2006
6.25

FRONT AXLE INSTALLATION

Machine SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
2	23567-FF	4		BOLT - 30mm-3.5P x 220mm (Torque to 1100 ft.lbs. (1465 Nm))	
3	23990	4		WASHER, SAE FLAT - 1.25” (EXTRA THICK)	
4	52485-FF	2		STUD - 1.25” - 7 X 27.50”	
5	22531-FF	4		WASHER, SAE flat - 1-1/4”	
6	23989-FF	4		NUT, lock - 1-1/4” (Torque to 1200 ft.lbs. (1600 Nm))	
7	REF.	4	🕮	WHEEL ASSEMBLY	AX-3
8	19361-FF	48		NUT, lug (Torque to 600 ft.lbs. (800 Nm))	
9	REF.	1	🕮	FRONT AXLE	AX-1
10	24003-FF	2		SPACER, axle spreader stud	

🕮 See referenced page for component or assembly breakdown.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Parts T3394 04/14/2006
12.50

TRANSFER CASE / GEARBOX AND MOTOR INSTALLATION

Machine SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF	1		Transfer Case NAF	AX-4
2	52119-FF	1		MOUNT, TRANSMISSION TIM-15 TF810-840	
3	52119-FF	1		MOUNT, TRANSMISSION TIM-15 TF810-840	
4	50447-FR	8		WASHER, FLAT - 16MM	
5	50382-FR	8		BOLT - 16mm 2.00 X 40mm ***(Torque to 180 ft-lbs)*** *(See Note #1 Below)*	
6	10817-FR	4		NUT, lock 3/4”	
7	17918-FR	8		WASHER, isolator mount .875”	
8	17904-FR	8		ISOLATOR	
9	17918-FR	8		WASHER, isolator mount .875”	
10	15550-FR	8		WASHER, SAE flat - 3/4”	
11	10844-FR	4		BOLT - 3/4” x 5”	
12	20967-FR	2		O-RING, WHEEL DRIVE MOTOR PILOT (FWD)	
13	REF	1		WHEEL DRIVE MOTOR.	FF-4
14	42110-FR	8		WASHER, FLAT - 20MM	
15	18525-FR	8		BOLT, - 20mm X 50 mm *(See Note #1 Below)* ***(Torque to 180 ft-lbs)***	

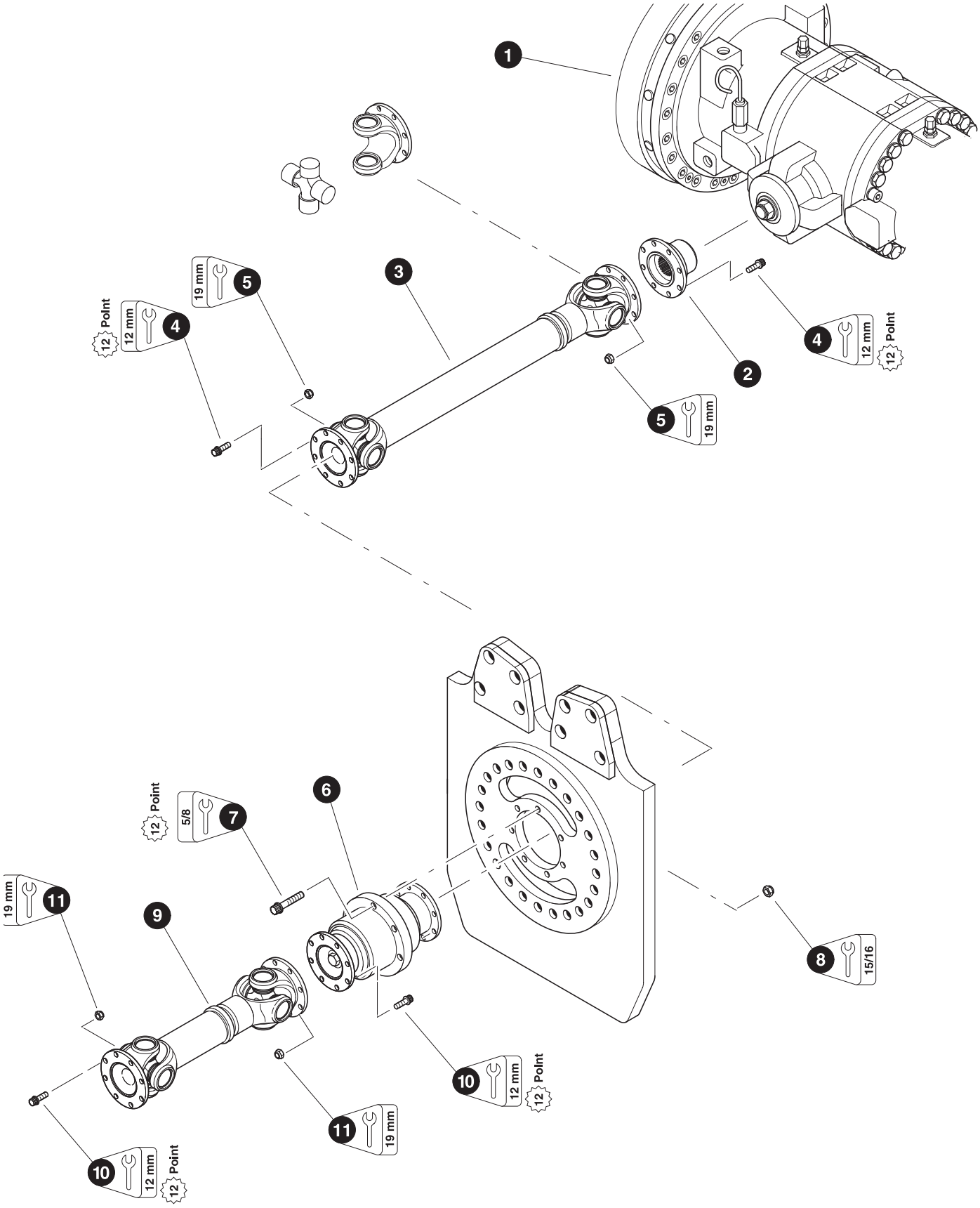
📖 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 243 (blue) on threads during installation.

Note #2:

Use Loctite 271 (red) on threads during installation.



Parts T3057 04/14/2005
12.50

FRONT DRIVE-SHAFT INSTALLATION

Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	🕮	FRONT AXLE	AX-1
2	23997-FF	1		YOKE, companion flange - axle (Torque nut to 590 ft lbs.(800 Nm) (see note #2))	
3	51384-FF	1	❑	DRIVE SHAFT, heavy duty (Center joint to front axle)(475677-61)	
	- - - - -	2		FITTING, 90° grease - 10mm	
	50466-FF	2		KIT, CROSS & BEARING	
	50467-FF	2		YOKE, FLANGE (90mm)	
4	50261-FF	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
5	50262-FF	16		NUT, lock - 12mm	
6	25218-FF	1		IDLER, driveshaft (HD)	
7	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
8	10816	6		NUT, lock - 5/8”	
9	25968-FF	1	❑	DRIVE SHAFT (Center joint) (20” (503mm) C/L-C/L) (fits all TF front frames with HD driveshafts) (457176-61)	
	- - - - -	2		FITTING, 90° grease - 10mm	
	50466-FF	2		KIT, CROSS & BEARING	
	50467-FF	2		YOKE, FLANGE (90mm)	
10	50261-FF	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
11	50262-FF	16		NUT, lock - 12mm	

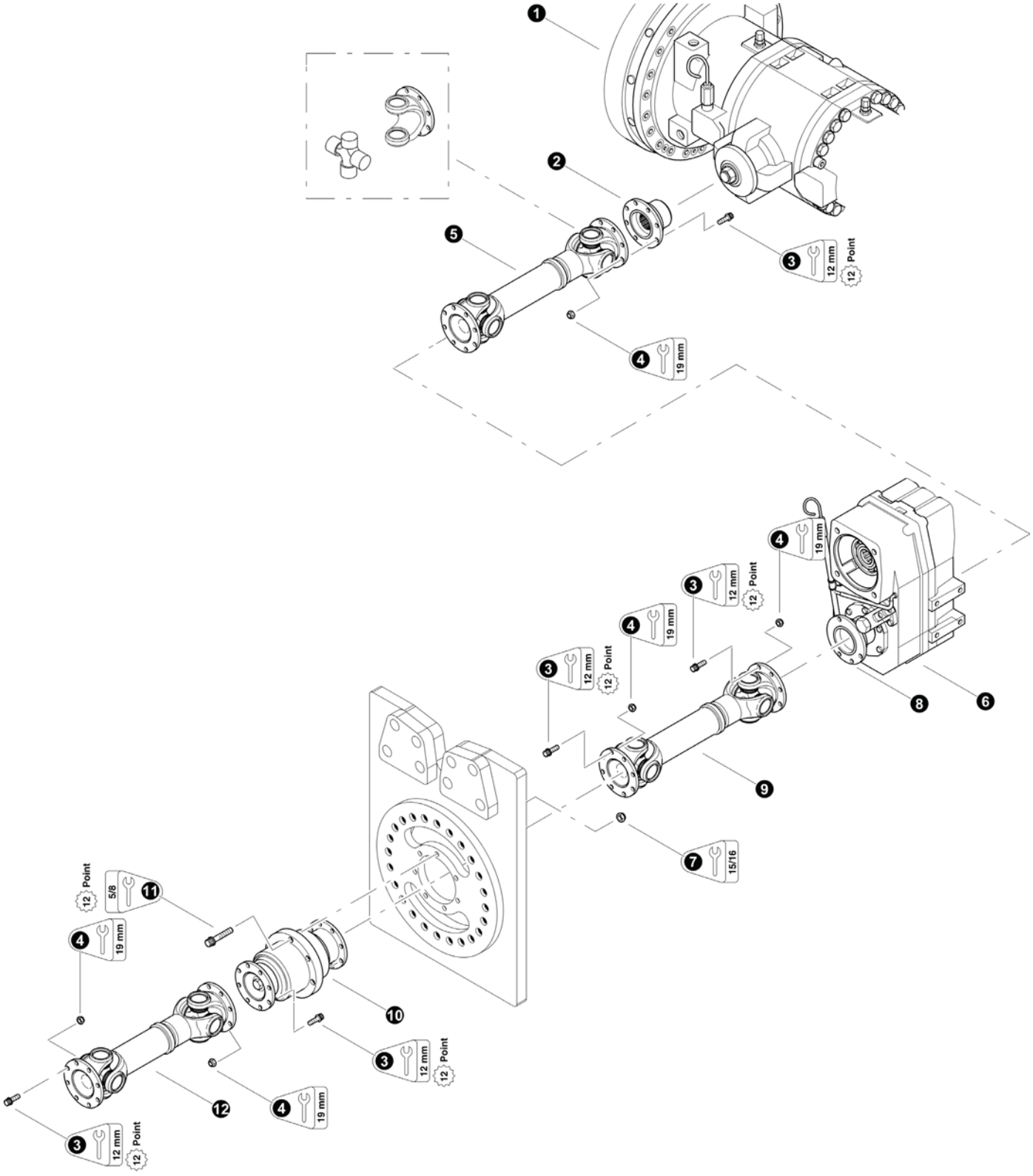
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 243 (blue) on threads during installation.

Note #2:

Use Loctite 271 (red) on threads during installation.



Parts T3394 04/14/2006
12.50

FRONT DRIVE-SHAFT INSTALLATION

Machine SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	🕮	FRONT AXLE	AX-1
2	23997-FF	1		YOKE, companion flange - axle (Torque nut to 590 ft lbs.(800 Nm) (see note #2))	
3	50261-FF	48		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
4	50262-FF	48		NUT, lock - 12mm	
5	50283-FF	1	❑	DRIVE SHAFT, (Transfer Case to front axle)(464295-61)	
	- - - - -	2		FITTING, 90° grease - 10mm	
	50466-FF	2		KIT, CROSS & BEARING	
	50467-FF	2		YOKE, FLANGE (90mm)	
6	REF	1		Transfer Case NAF	AX-4
7	10816-FF	6		NUT, lock - 5/8”	
8	-FF	2		YOKE, HD flange - NAF Transfercase (7521.238)	
9	23996-FF	1	❑	DRIVE SHAFT (Transfer Case to Carrier Bearing) (445731-61)	
	- - - - -	2		FITTING, 90° grease - 10mm	
	50466-FF	2		KIT, CROSS & BEARING	
	50467-FF	2		YOKE, FLANGE (90mm)	
10	25218-FF	1		IDLER, driveshaft (HD)	
11	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
12	25968-FF	1	❑	DRIVE SHAFT (Center joint) (20” (503mm) C/L-C/L) (fits all TF front frames with HD driveshafts) (457176-61)	
	- - - - -	2		FITTING, 90° grease - 10mm	
	50466-FF	2		KIT, CROSS & BEARING	
	50467-FF	2		YOKE, FLANGE (90mm)	

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

Note #1:

Use Loctite 243 (blue) on threads during installation.

Note #2:

Use Loctite 271 (red) on threads during installation.

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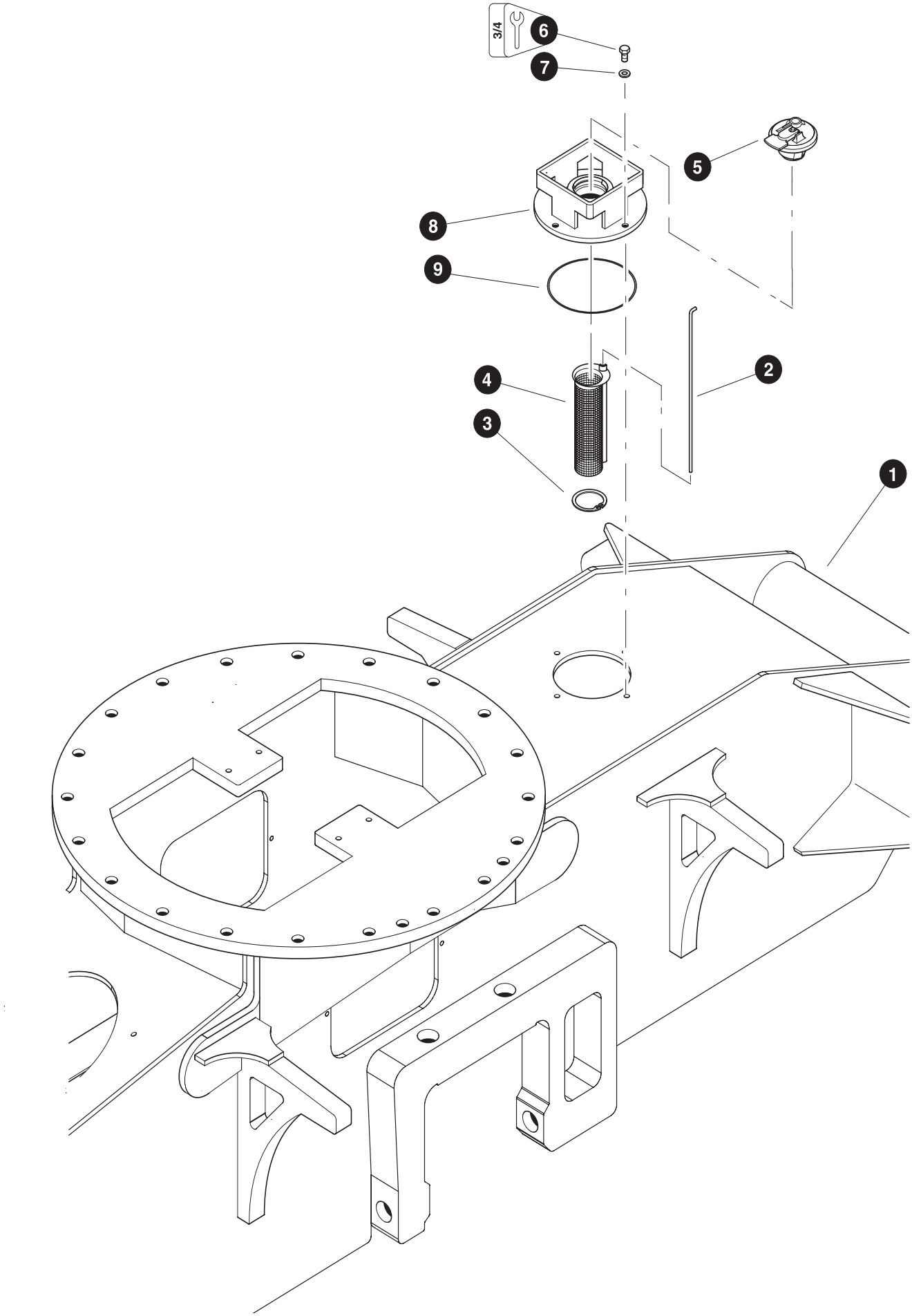
Section FF-3

TF 830 Front Frame - Fuel Tank Components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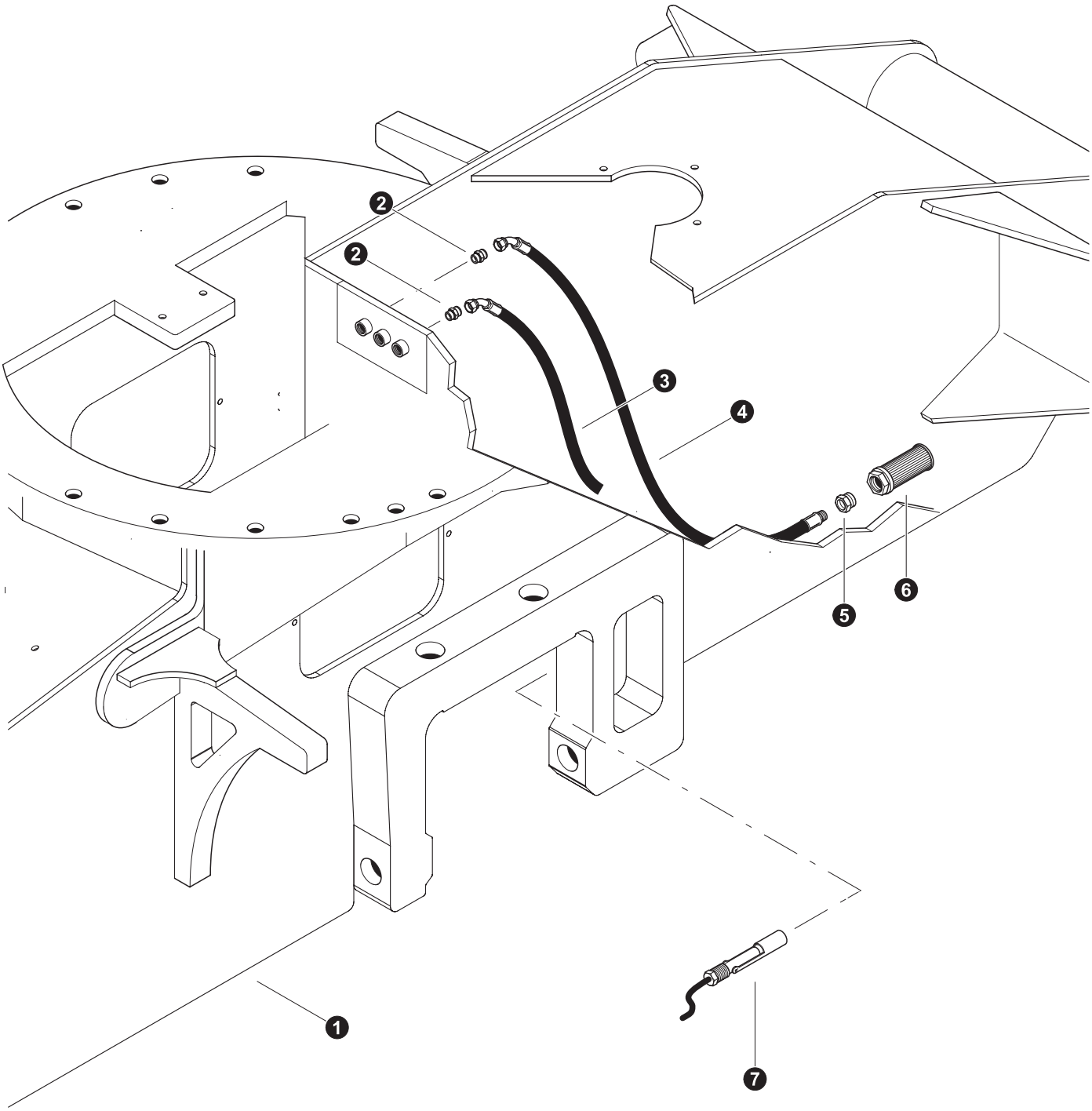
FUEL FILL STRAINER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
2	17492-FF	1		DIPSTICK, fuel level	
3	17115-FF	1		RING, snap - fuel strainer retainer	
4	17114-FF	1		STRAINER, fuel	
5	16585-FF	1		CAP, fuel	
6	10783-FF	4		BOLT - 1/2” x 1”	
7	15534-FF	4		WASHER, SAE flat - 1/2”	
8	16516-FF	1		COVER, fuel tank	
9	15600-FF	1		O-RING - 8”	

🕮 See referenced page for component or assembly breakdown.

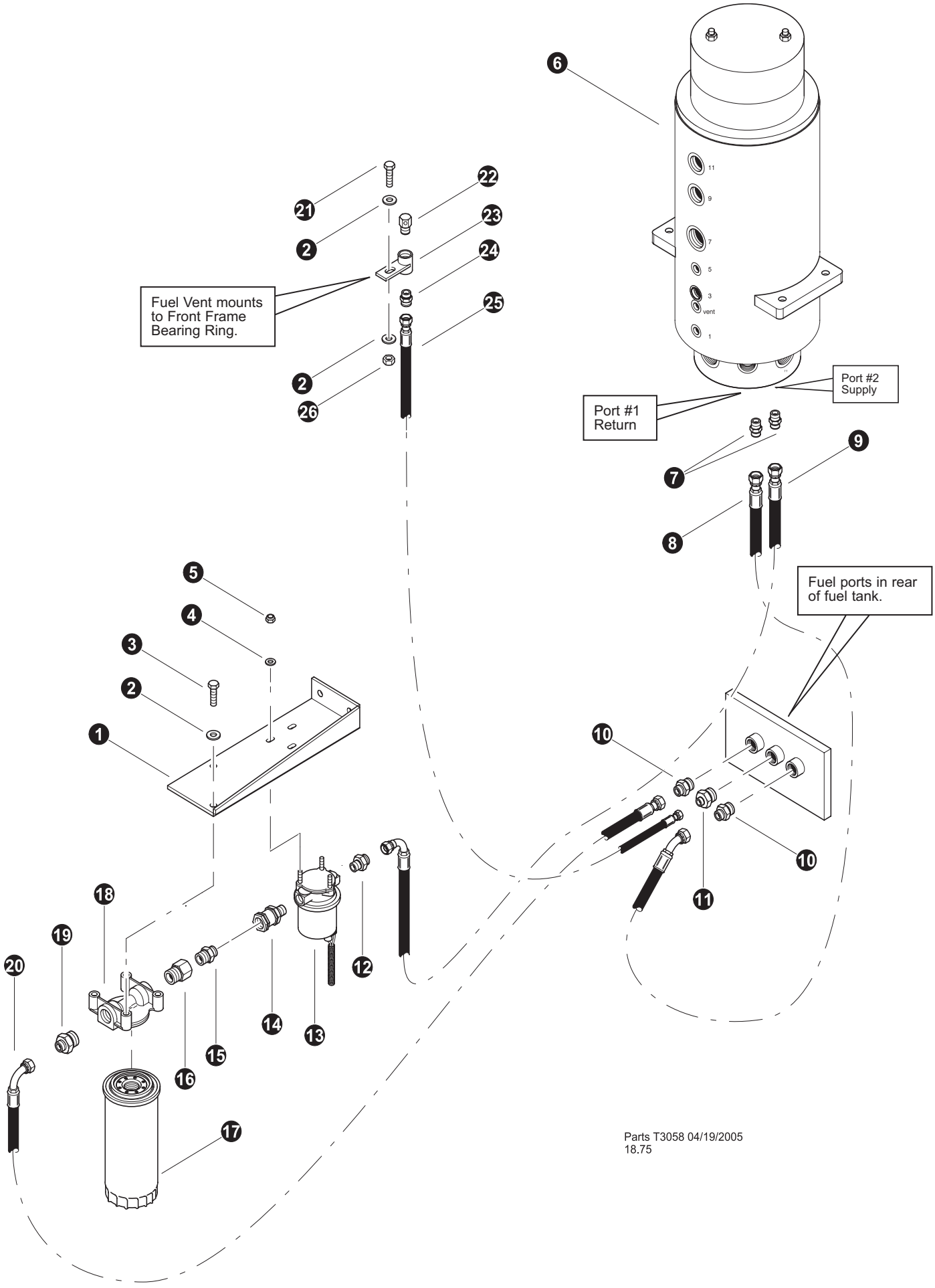


Parts T3059 04/19/2005
12.50

FUEL LINES
(Supply & Return Lines Inside Fuel Tank)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	FF-1
2	15117-FF	2		CONNECTOR, straight - FF1852T-0808S	
3	50576-FF	1		HOSE ASSEMBLY - 2018-08-0809-open (Fuel return)	
4	50577-FF	1		HOSE ASSEMBLY - 2067-08-0809-08MPS (Fuel supply)	
5	15513-FF	1		BUSHING, REDUCER - 5406-12-8	
6	17271-FF	1		FILTER, screen	
7	51379-FF			SWITCH, HYD.or Fuel OIL LEVEL .50 NPT GEMS	

🕮 See referenced page for component or assembly breakdown.



Parts T3058 04/19/2005
18.75

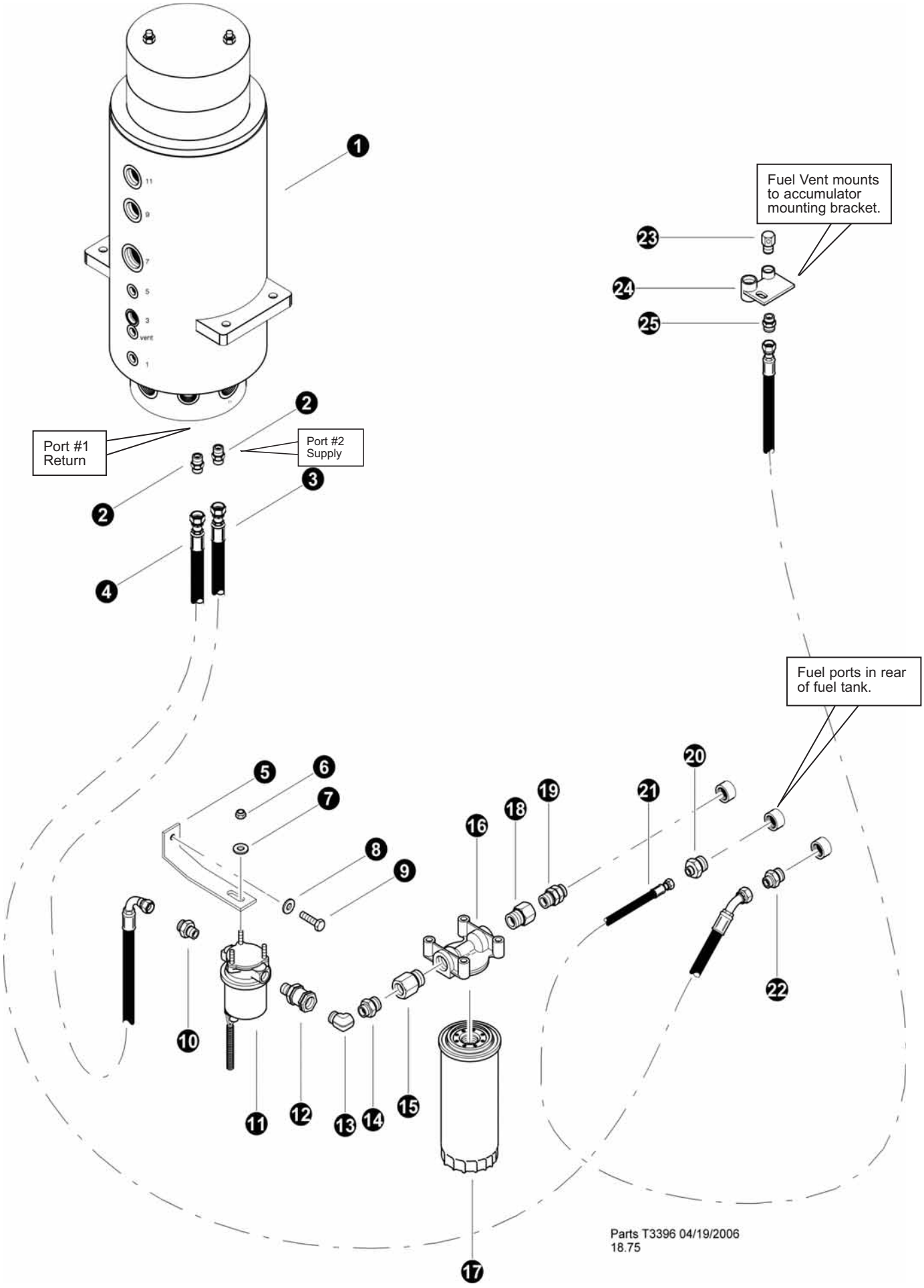
FUEL LINES

(Supply & Return Lines From Fuel Tank To Rotary Manifold)

Machine built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51752-FF	1		MOUNT, FUEL COMPONENTS	
2	15528-FF	4		WASHER, SAE flat - 3/8”	
3	11707-FF	2		BOLT - .375” X 1”	
4	10757-FF	3		WASHER, SAE flat - 1/4”	
5	10755-FF	3		NUT, hex - 1/4”	
6	REF.	1	🕮	ROTARY MANIFOLD	UP-1
7	18034-FF	2		CONNECTOR, STR - FF1852T-0606S	
8	-FF	1		HOSE ASSEMBLY - 2029-06-060S-0604 (Fuel return from rotary manifold port #2 to fuel tank)	
9	-FF	1		HOSE ASSEMBLY - 2039.5-06-060S-0609 (Fuel supply from rotary manifold port #1 to fuel lift pump)	
10	22902-FF	2		CONNECTOR, STR - 848-TT-08x06	
11	15504-FF	1		CONNECTOR, straight - FF2031T-0408S	
12	51878-FF	1		CONNECTOR, STR - MALE PIPE (6-6 FL0-S)	
13	21966-FF	1		PUMP, fuel - 12 volt	
14	15652-FF	1		VALVE, check	
-	21966-FF	1		PUMP, fuel - 12 volt (machine built after 02/01/04)	
15	51982-FF	1		CONNECTOR, STR - (8-3/8 F50F-S)	
16	19290-FF	1		BUSHING, REDUCER - 6410-10-8	
17	16575-FF	1		FILTER, spin-on fuel	
18	16574-FF	1		MOUNT, filter head	
19	15115-FF	1		CONNECTOR, straight - FF1852T-0810S	
20	-FF	1		HOSE ASSEMBLY - 2063.5-06-060S-0609 (Fuel supply from fuel tank to fuel pre-filter)	
21	20084-FF	1		BOLT - .375” X 1.75”	
22	22906-FF	1		BREATHER, fuel vent	
23	23393-FF	1		BRACKET, 800 Fuel tank vent	
24	15131-FF	1		CONNECTOR, straight - FF2031T-0404S	
25	-FF	1		HOSE ASSEMBLY - 2032-04-040S-040S (Fuel tank vent port to fuel vent breather)	
26	10813-FF	1		NUT, LOCK - .375”	

🕮 See referenced page for component or assembly breakdown.


Fuel Vent mounts to accumulator mounting bracket.
Port #1 Return
Port #2 Supply
Fuel ports in rear of fuel tank.
Parts T3396 04/19/2006
18.75

FUEL LINES

(Supply & Return Lines From Fuel Tank To Rotary Manifold)

Machine SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	18034-FF	2		CONNECTOR, STR - FF1852T-0606S	
3	-FF	1		HOSE ASSEMBLY - 2031-06-060S-0609 (Fuel supply from rotary manifold port #2 to fuel tank)	
4	-FF	1		HOSE ASSEMBLY - 2031-06-060S-0604 (Fuel return from rotary manifold port #1 to fuel lift pump)	
5	52382-FF	1		BRACKET, FUEL PUMP MOUNT	
6	10755-FF	3		NUT, hex - 1/4”	
7	10757-FF	3		WASHER, SAE flat - 1/4”	
8	15559-FF	1		WASHER, SAE FLAT - .3125”	
9	15605-FF	1		BOLT - .3125” X .75”	
10	51878-FF	1		CONNECTOR, STR - MALE PIPE (6-6 FL0-S)	
11	21966-FF	1		PUMP, fuel - 12 volt (machine built after 02/01/04)	
12	15652-FF	1		VALVE, check	
13	24287-FF	1		ELBOW, 90 STREET .375” NPT - BRASS	
14	51982-FF	1		CONNECTOR, STR - (8-3/8 F50F-S)	
15	19290-FF	1		BUSHING, REDUCER - 6410-10-8	
16	16574-FF	1		MOUNT, filter head	
17	16575-FF	1		FILTER, spin-on fuel	
18	19290-FF	1		BUSHING, REDUCER - 6410-10-8	
19	51932-FF	1		CONNECTOR, STR - 6403-08	
20	15504-FF	1		CONNECTOR, straight - FF2031T-0408S	
21	-FF	1		HOSE ASSEMBLY - 2022.5-04-040S-0404 (Fuel tank vent port to fuel vent breather)	
22	22902-FF	1		CONNECTOR, STR - 848-TT-08x06	
23	22906-FF	1		BREATHER, fuel vent	
24	52218-FF	1		BRACKET, VENT MOUNT (.50&.25NPT)VERT.	
25	15131-FF	1		CONNECTOR, straight - FF2031T-0404S	

🕮 See referenced page for component or assembly breakdown.

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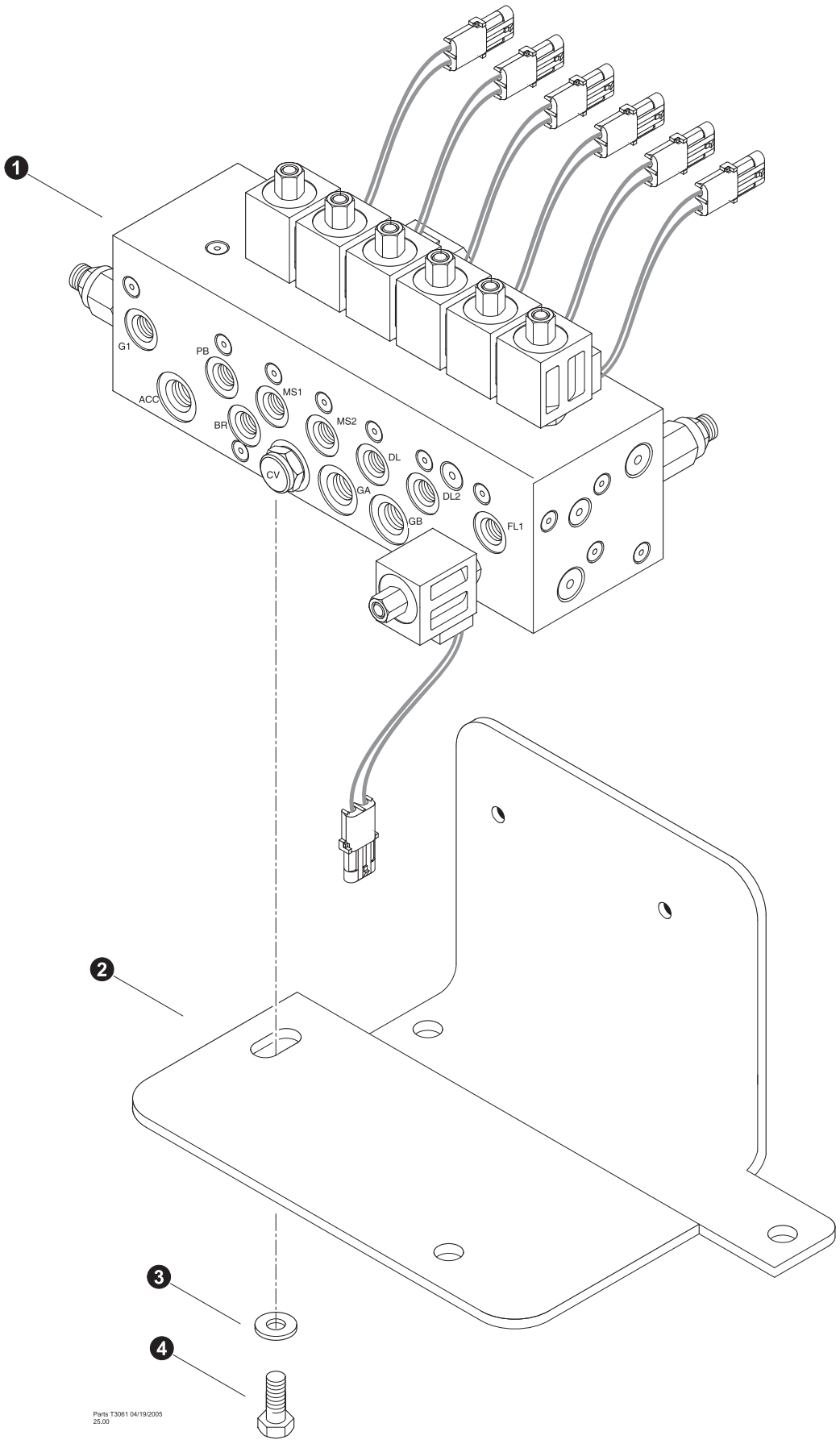
Section FF-4

TF 830 / 840 Front Frame - Lower Solenoid Manifold Circuits and Components Breakdown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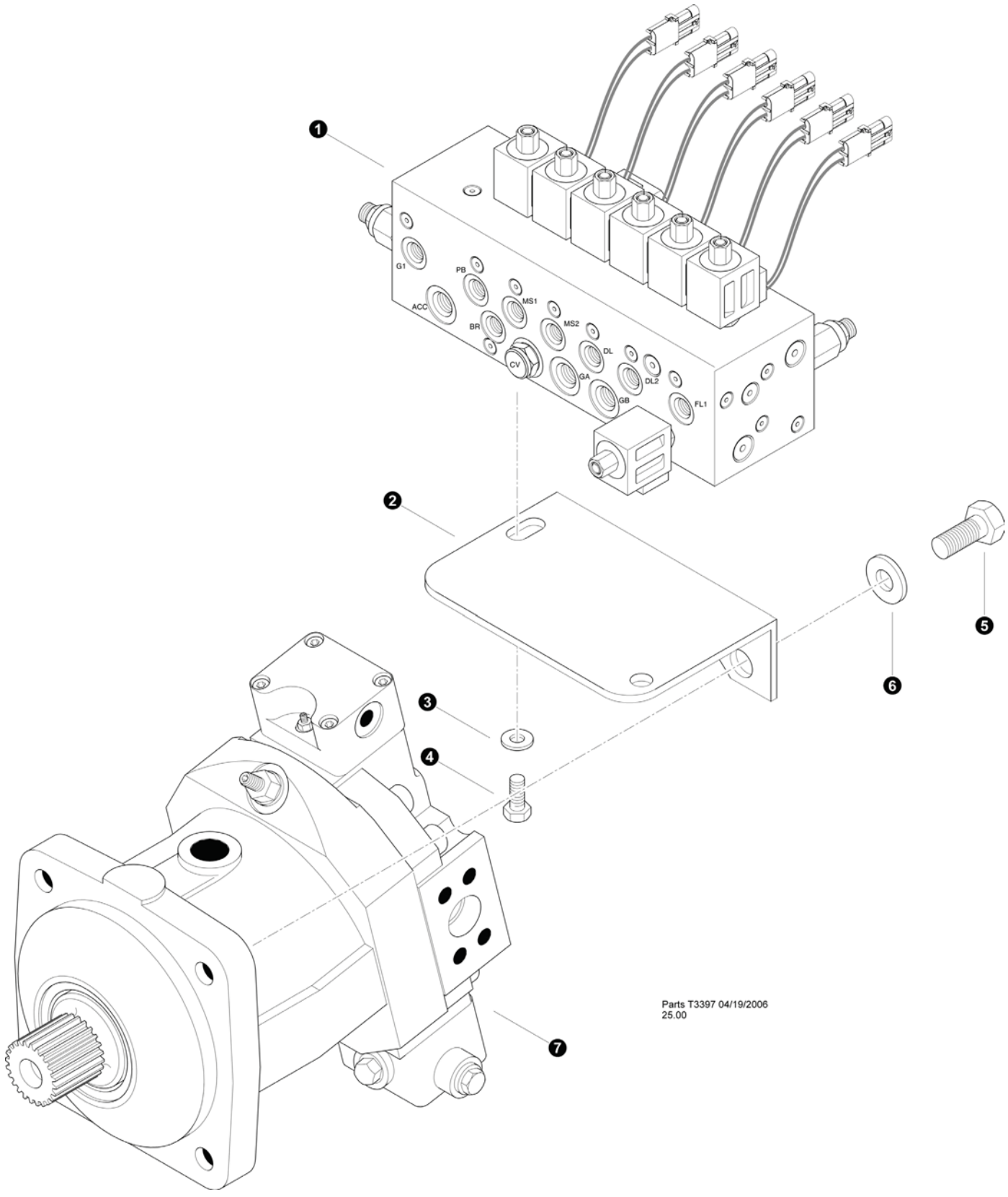
Parts T3061 04/19/2005
25.00

Lower Solenoid Manifold Circuits and Components Breakdown *(Lower Solenoid Manifold Mounting)*

Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	51868-FF	1		BRACKET, LOWER MANIFOLD SUPPORT	
3	10802-FF	2		WASHER, flat - 3/8”	
4	15542-FF	2		BOLT - .375” X .75”	

🕮 See referenced page for component or assembly breakdown.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Parts T3397 04/19/2006
25.00

Lower Solenoid Manifold Circuits and Components Breakdown *(Lower Solenoid Manifold Mounting)*

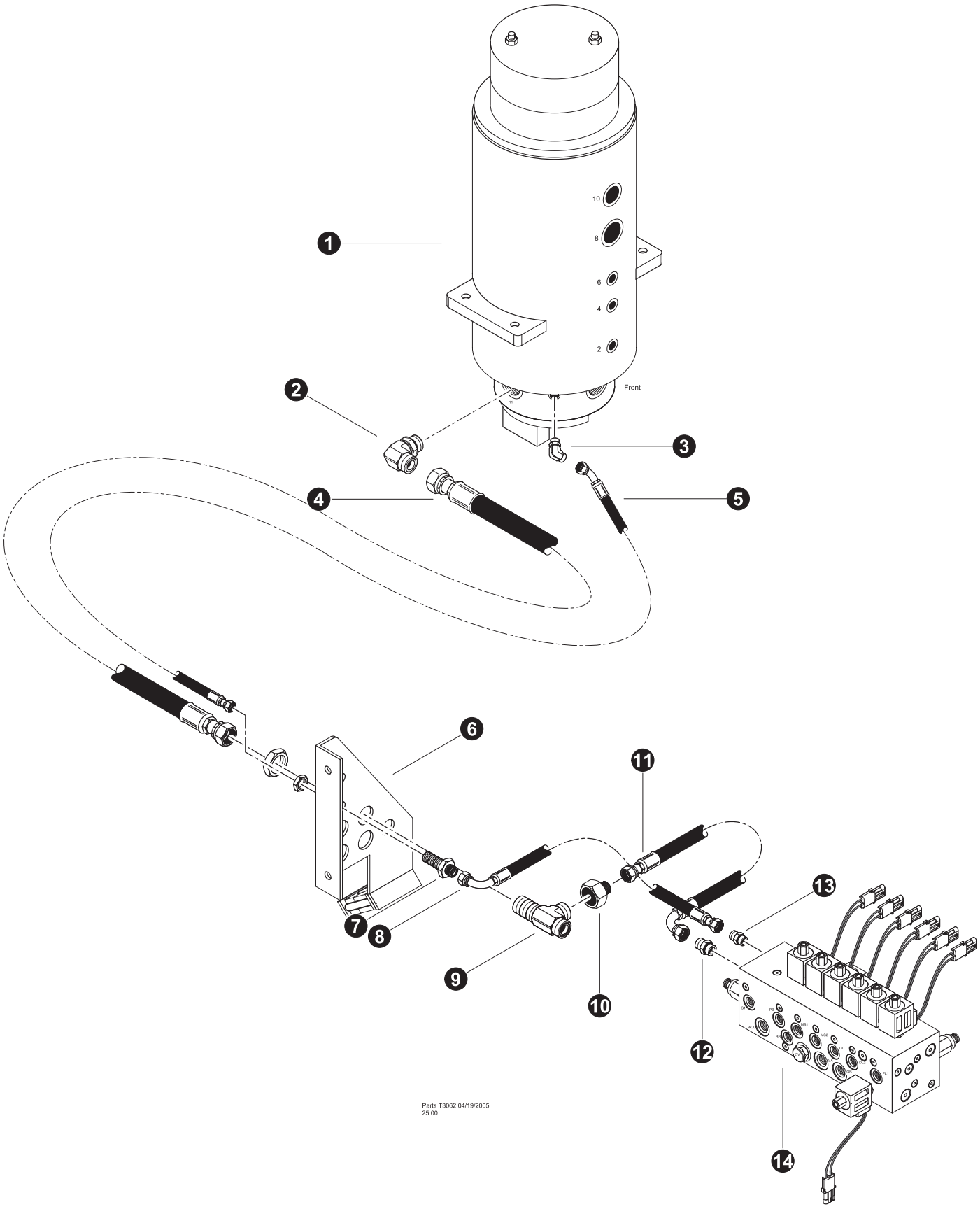
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	52380-FF	1		BRACKET, MANIFOLD MOUNT FRT FRAME	
3	10802-FF	2		WASHER, flat - 3/8”	
4	15542-FF	2		BOLT - .375” X .75”	
5	18525-FR	8		BOLT, - 20mm X 50 mm *(See Note #1 Below)* ***(Torque to 180 ft-lbs)***	
6	42110-FR	8		WASHER, FLAT - 20MM	

🕮 See referenced page for component or assembly breakdown.

Note #1:

Use Loctite 242 *(BLUE)* during install.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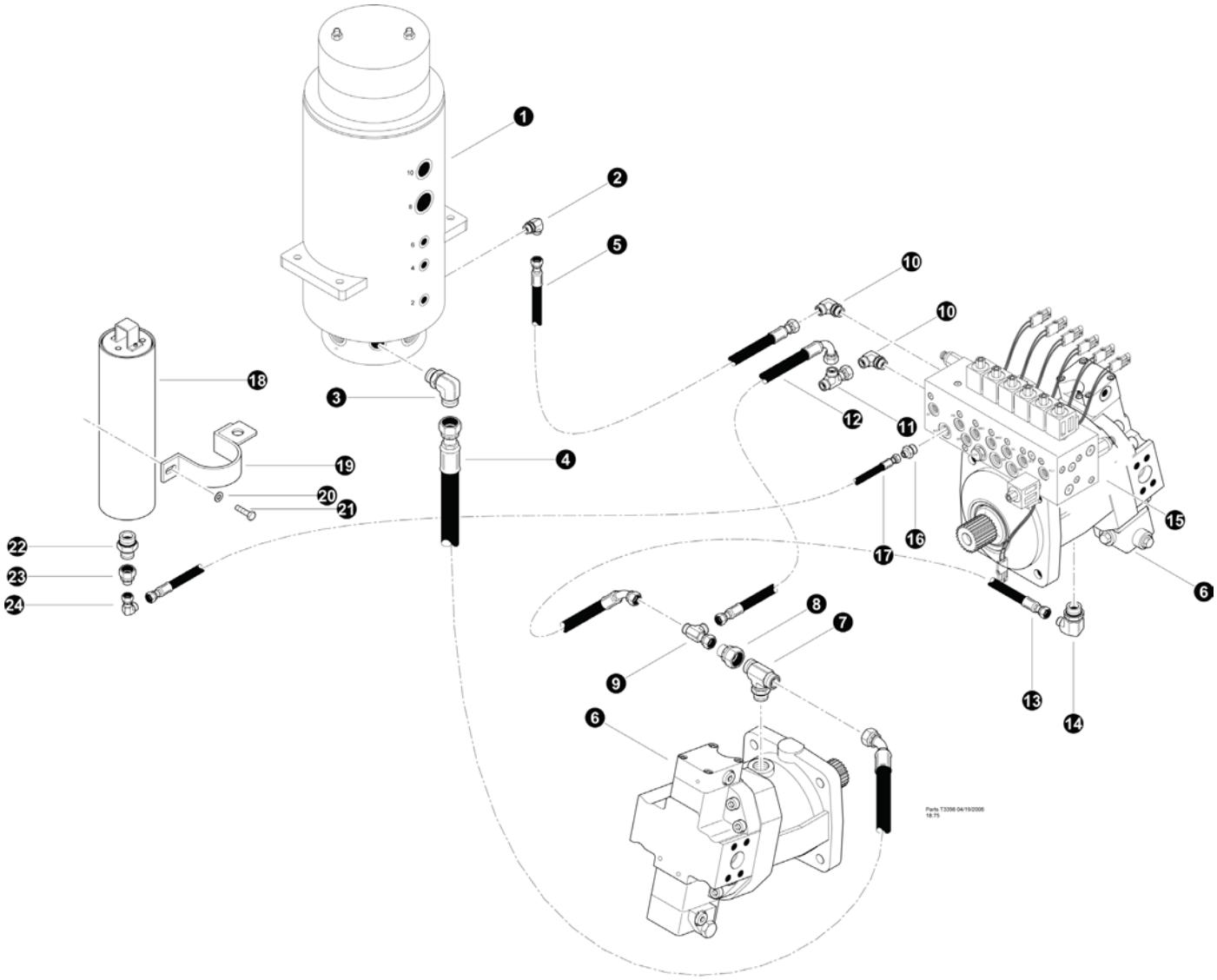
Parts T3062 04/19/2005
25.00

Lower Solenoid Manifold Circuits and Components Breakdown
(Lower Manifold - Pressure and Tank Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	17688-FF	1		ELBOW, 90 - FF1868T-1212S	
3	16296-FF	1		ELBOW, 90° - FF1868T-0606S	
4	-FF	1		HOSE ASSEMBLY - 4040.5-12-120S-120S (Case Drain Bulkhead to port “11”)	
5	-FF	1		HOSE ASSEMBLY - 2042-06-060S-0604 (Rotory Manifold Port “4” to Lower Manifold Pressure Bulkhead)	
6	51867-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
7	50420-FF			CONNECTOR, STR BULKHEAD - 832-TT-06	
8	-FF	1		HOSE ASSEMBLY - 2042-06-060S-0604 (Rotory Manifold Port “4” to Lower Manifold Pressure Bulkhead)	
9	20029-FF	1		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
10	18581-FF	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
11	50975-FF	1		HOSE ASSEMBLY - 2022-08-080S-0809 (Lower Manifold “T” port to Case Drain Bulkhead)	
12	15117-FF	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
13	18034-FF	1		CONNECTOR, STR - ORS FF2281T-0606S	
14	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4

🕮 See referenced page for component or assembly breakdown.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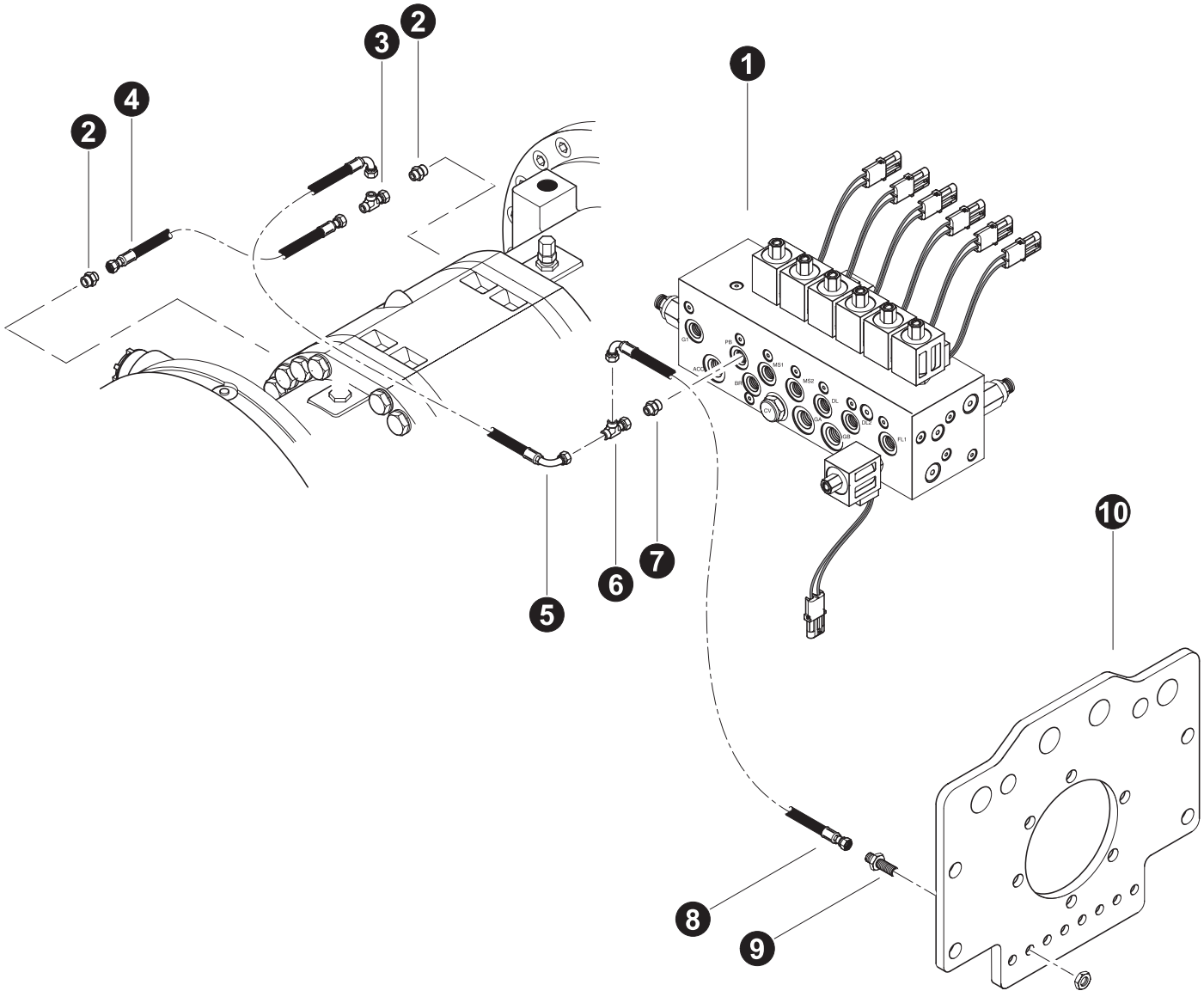
Lower Solenoid Manifold Circuits and Components Breakdown
(Lower Manifold - Pressure and Tank Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	22405-FF	1		ELBOW, 90 - 8-6 C5OLO-S	
3	17688-FF	1		ELBOW, 90 - FF1868T-1212S	
4	-FF	1		HOSE ASSEMBLY - 2049-12-120S-1204 (Motor Case Drain to port “11”)	
5	-FF	1		HOSE ASSEMBLY - 2068-08-08OS-08OS (Rotory Manifold Port “4” to Lower Manifold Pressure)	
6	REF	1	🕮	WHEEL DRIVE MOTOR.	FF-5
7	20029-FF	1		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
8	15117-FF	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
9	20066-FF	1		TEE - 8 S5OLO-S - BRANCH	
	20029-FF	1		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
10	16360-FF	2		ELBOW, 90 - FF1868T-0808S	
11	20066-FF	1		TEE - 8 S5OLO-S - BRANCH	
12	-FF	1		HOSE ASSEMBLY - 2019-08-080S-0809 (Lower Manifold “T” port to Case Drain Tee)	
13	18034-FF	1		HOSE ASSEMBLY - 2039.5-08-080S-0804 (Wheel Drive Motor Case Jumper)	
14	15372-FF	1		ELBOW, 90 - FF1868T-0812S	
15	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
16	15504-FF	1		CONNECTOR, STR - FF1852T-0408S	
17	-FF	1		HOSE ASSEMBLY - 2062-04-04OS-04OS *(“ACC” port to accumulator)*	
18	23130-FF	1	❑	ACCUMULATOR, GAS PISTON (FWD)	
-	-FF	1		KIT, SEAL REPAIR - (RK0300-H000)	
19	23223-FF	1		CLAMP, ACCUMULATOR MOUNTING (PISTON)	
20	10802-FF	2		WASHER, FLAT - .375”	
21	10731-FF	2		BOLT - .375” X 1.5”	
22	15238-FF	1		CONNECTOR, STR - FF1852T-0812S	
23	19221-FF	1		CONNECTOR, REDUCER - ORS FF2281T-0408S	
24	15145-FF	1		ELBOW, 90 SWIVEL - FF2098T-0404S	

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

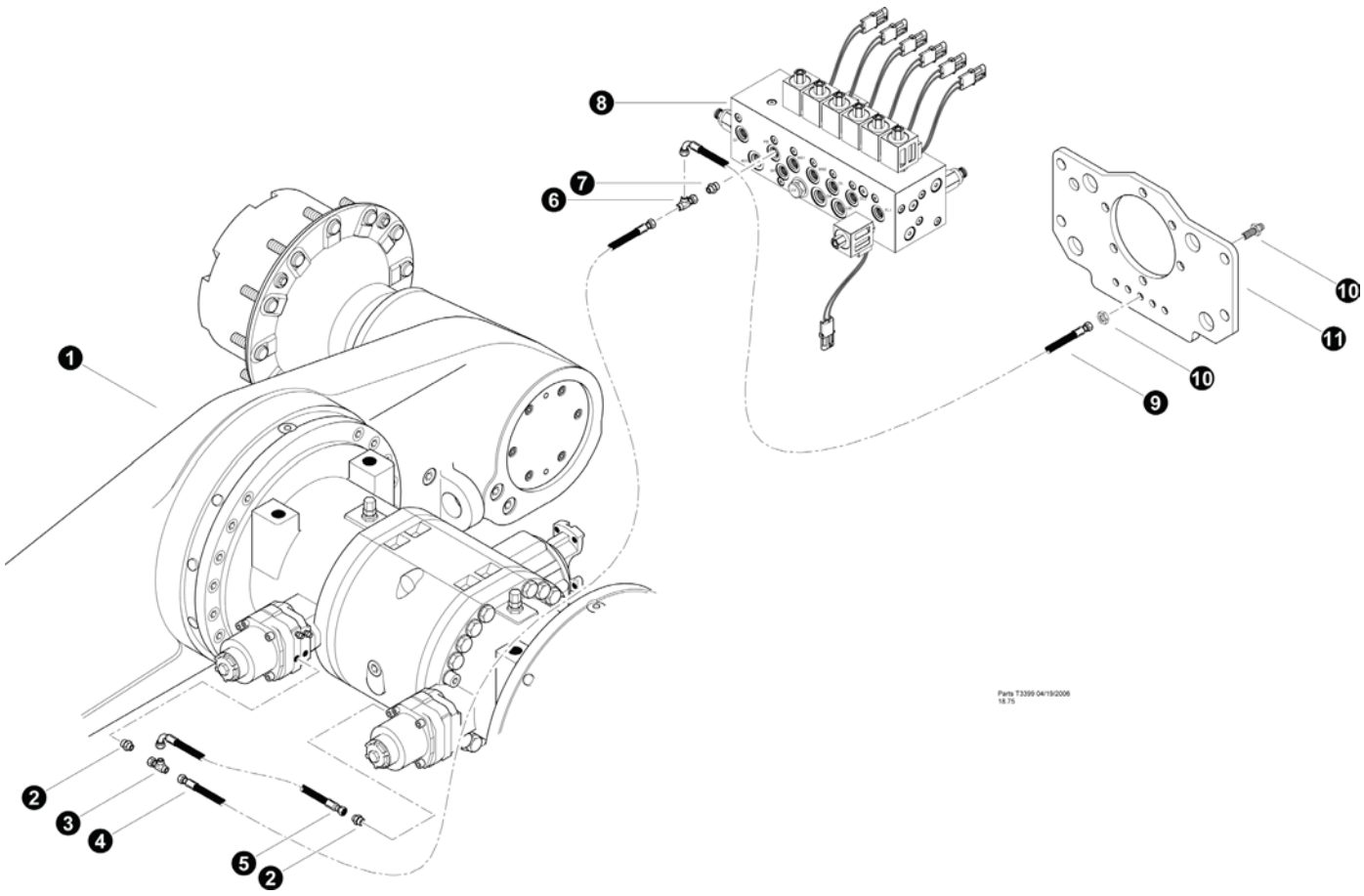


Parts T3063 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Parking Brake Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	19470-FF	2		CONNECTOR, STR METRIC - 4M14F8OMLOS	
3	15176-FF	1		TEE - FF2114T-0404S	
4	50607-FF	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (Parking Brake Jumper)	
5	-FF	1		HOSE ASSEMBLY - 2085-04-040S-0409 (Front Axle Parking Brake to Lower Manifold “PB” port tee)	
6	15176-FF	1		TEE - FF2114T-0404S	
7	15124-FF			CONNECTOR, STR - FF1852T-0406S	
8	50638-FF	1		HOSE ASSEMBLY - 2082-04-040S-0409 (Lower Manifold “PB” tee to Parking Brake Bulkhead)	
9	18582-FF	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
10	42290-FF	1		BRACKET, BEARING MOUNT - DRIVELINE (830)	

🕮 See referenced page for component or assembly breakdown.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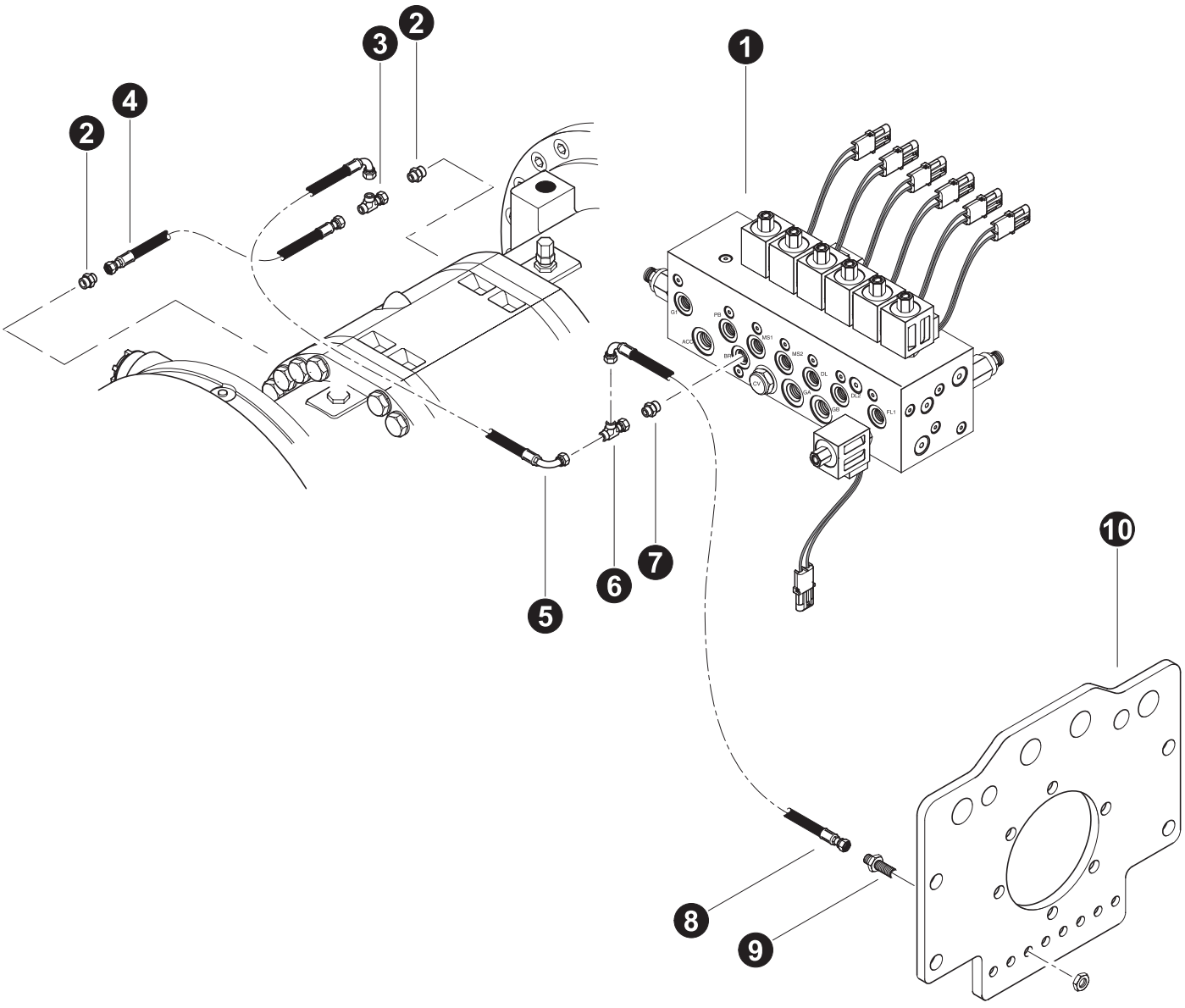
Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Parking Brake Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT AXLE	AX
2	19470-FF	2		CONNECTOR, STR METRIC - 4M14F8OMLOS	
3	15176-FF	1		TEE - FF2114T-0404S	
4	-FF	1		HOSE ASSEMBLY - 2088-04-040S-0409 (Front Axle Parking Brake to Lower Manifold “PB” port tee)	
5	50607-FF	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (Parking Brake Jumper)	
6	15176-FF	1		TEE - FF2114T-0404S	
7	15124-FF			CONNECTOR, STR - FF1852T-0406S	
8	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
9	-FF	1		HOSE ASSEMBLY - 2103-04-040S-040S (Lower Manifold “PB” tee to Parking Brake Bulkhead)	
10	18582-FF	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
11	52486-FF	1		BRACKET, BRG MOUNT - DRIVELINE 830	

🕮 See referenced page for component or assembly breakdown.

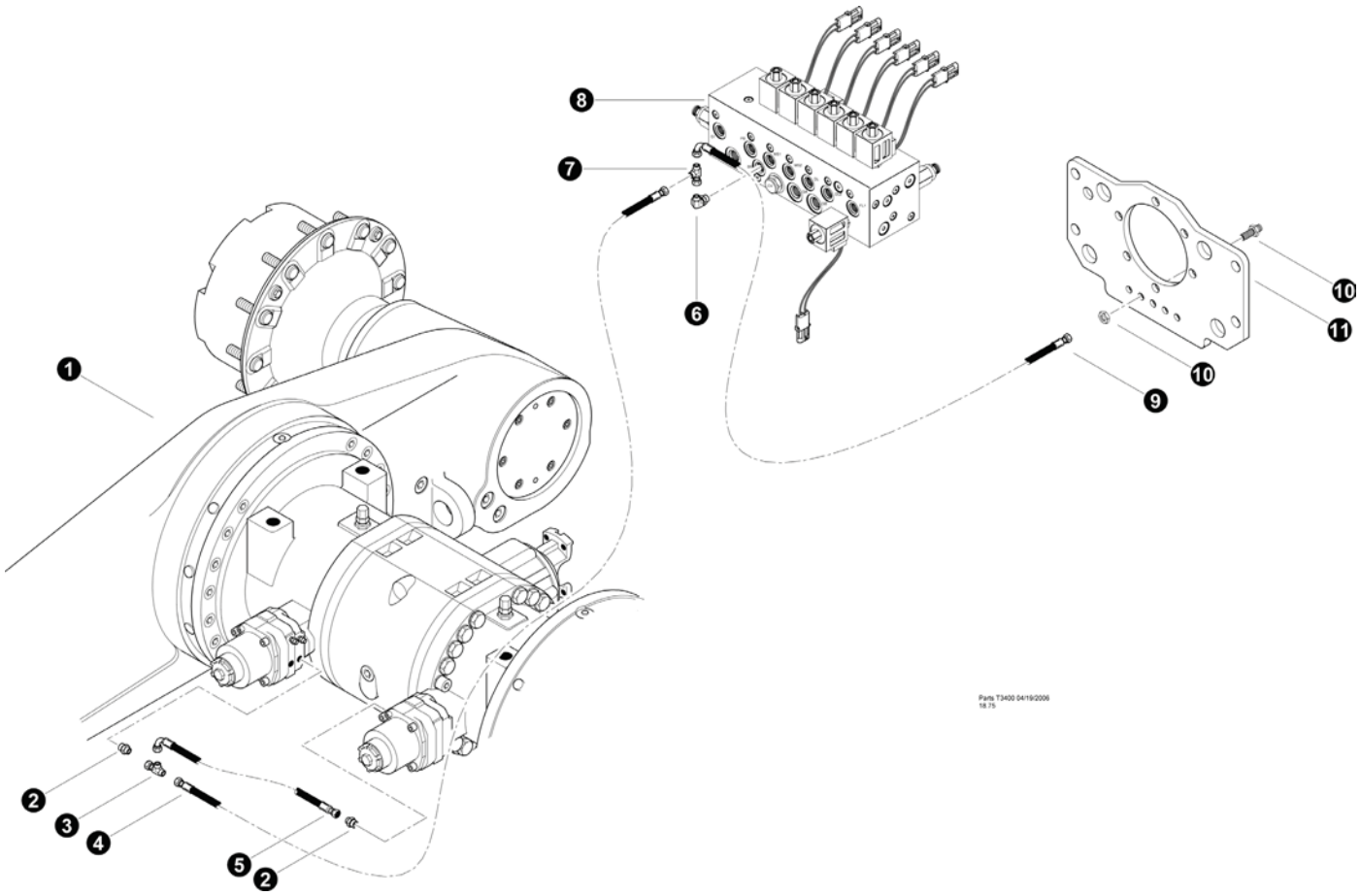


Parts T3064 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Travel Brake Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	19470-FF	2		CONNECTOR, STR METRIC - 4M14F8OMLOS	
3	15176-FF	1		TEE - FF2114T-0404S	
4	50607-FF	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (Parking Brake Jumper)	
5	-FF	1		HOSE ASSEMBLY - 2085-04-040S-0409 (Front Axle Travel Brake to Lower Manifold “TB” port tee)	
6	15176-FF	1		TEE - FF2114T-0404S	
7	15124-FF			CONNECTOR, STR - FF1852T-0406S	
8	50638-FF	1		HOSE ASSEMBLY - 2082-04-040S-0409 (Lower Manifold “TB” tee to Travel Brake Bulkhead)	
9	18582-FF	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
10	42290-FF	1		BRACKET, BEARING MOUNT - DRIVELINE (830)	

🕮 See referenced page for component or assembly breakdown.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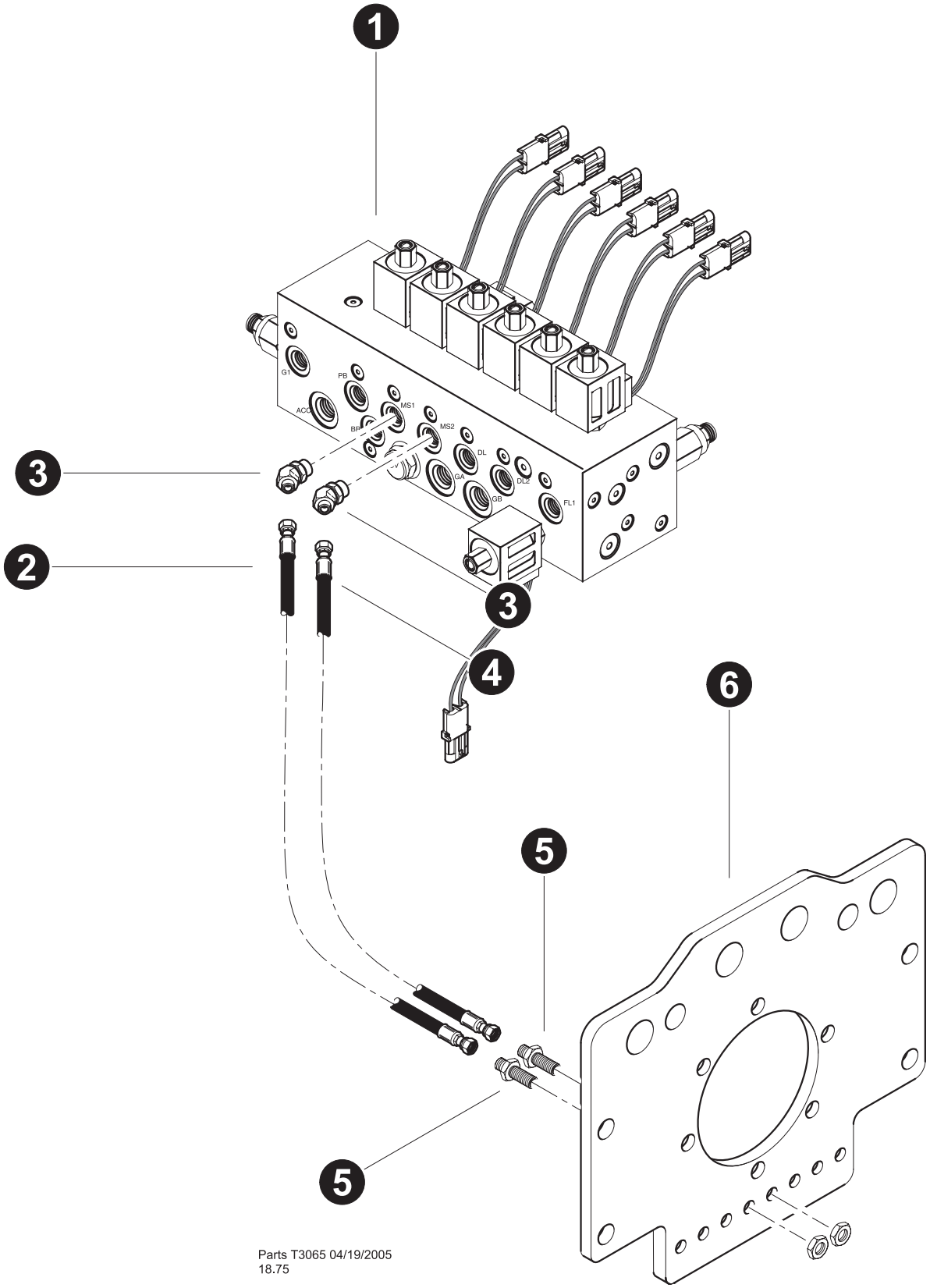
Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Travel Brake Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT AXLE	AX
2	19470-FF	2		CONNECTOR, STR METRIC - 4M14F8OMLOS	
3	15176-FF	1		TEE - FF2114T-0404S	
4	-FF	1		HOSE ASSEMBLY - 2087-04-040S-0409 (Front Axle Travel Brake to Lower Manifold “TB” port tee)	
5	50607-FF	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (Travel Brake Jumper)	
6	15133-FF			ELBOW, 90 - FF1868T-0406S	
7	15176-FF	1		TEE - FF2114T-0404S	
8	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
9	-FF	1		HOSE ASSEMBLY - 2102-04-040S-0409 (Lower Manifold “TB” tee to Parking Brake Bulkhead)	
10	18582-FF	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
11	52486-FF	1		BRACKET, BRG MOUNT - DRIVELINE 830	

🕮 See referenced page for component or assembly breakdown.

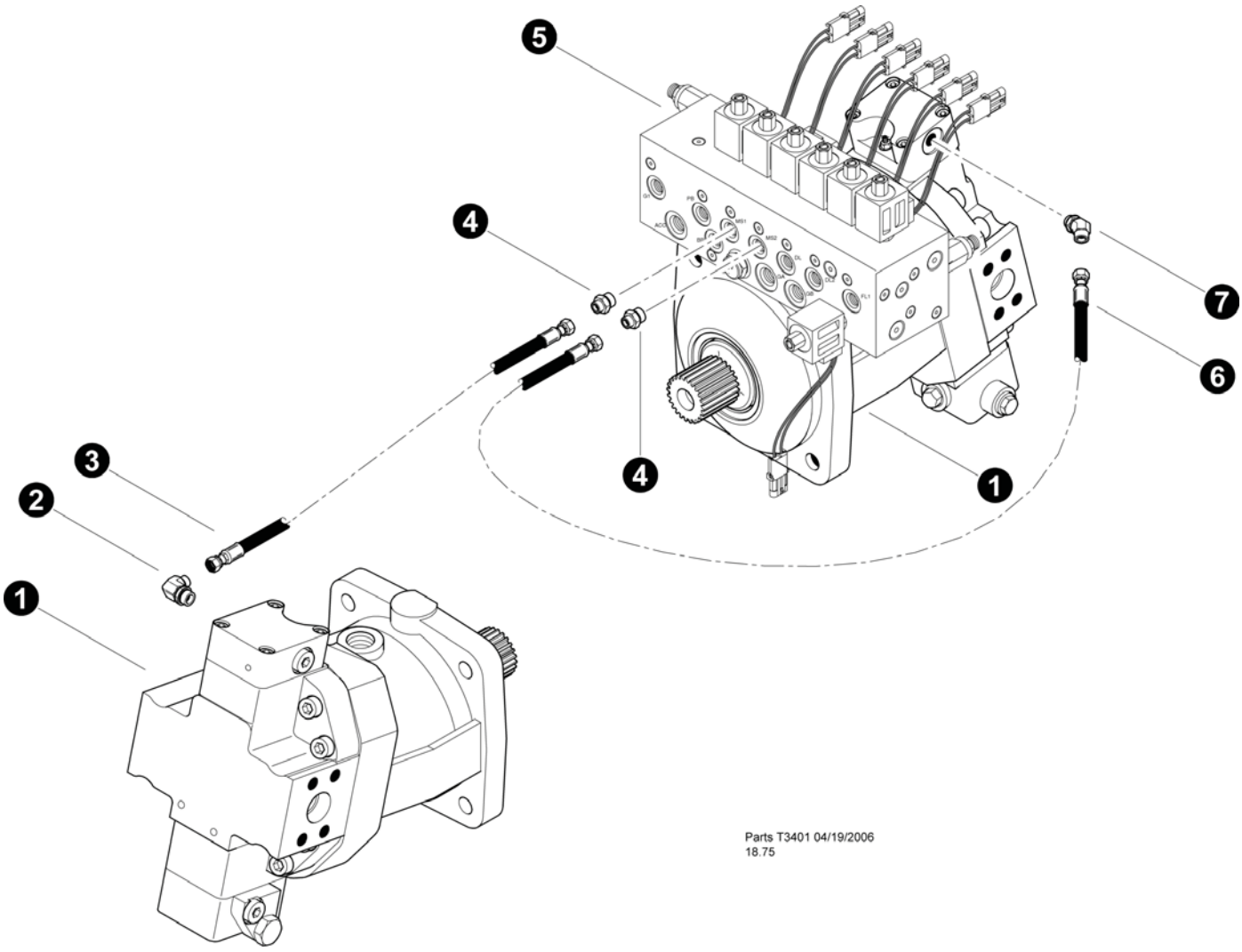


Parts T3065 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Motor Shift Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	-FF	1		HOSE ASSEMBLY - 2081-04-040S-040S (MS Bulkhead to Lower Manifold “MS” port)	
3	23322-FF	2		ELBOW, 45 - 6-4 V5OLO-S	
4	-FF	1		HOSE ASSEMBLY - 2080-04-040S-040S (MS1 Bulkhead to Lower Manifold “MS1” port)	
5	18582-FF	2		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
6	42290-FF	1		BRACKET, BEARING MOUNT - DRIVELINE (830)	

🕮 See referenced page for component or assembly breakdown.

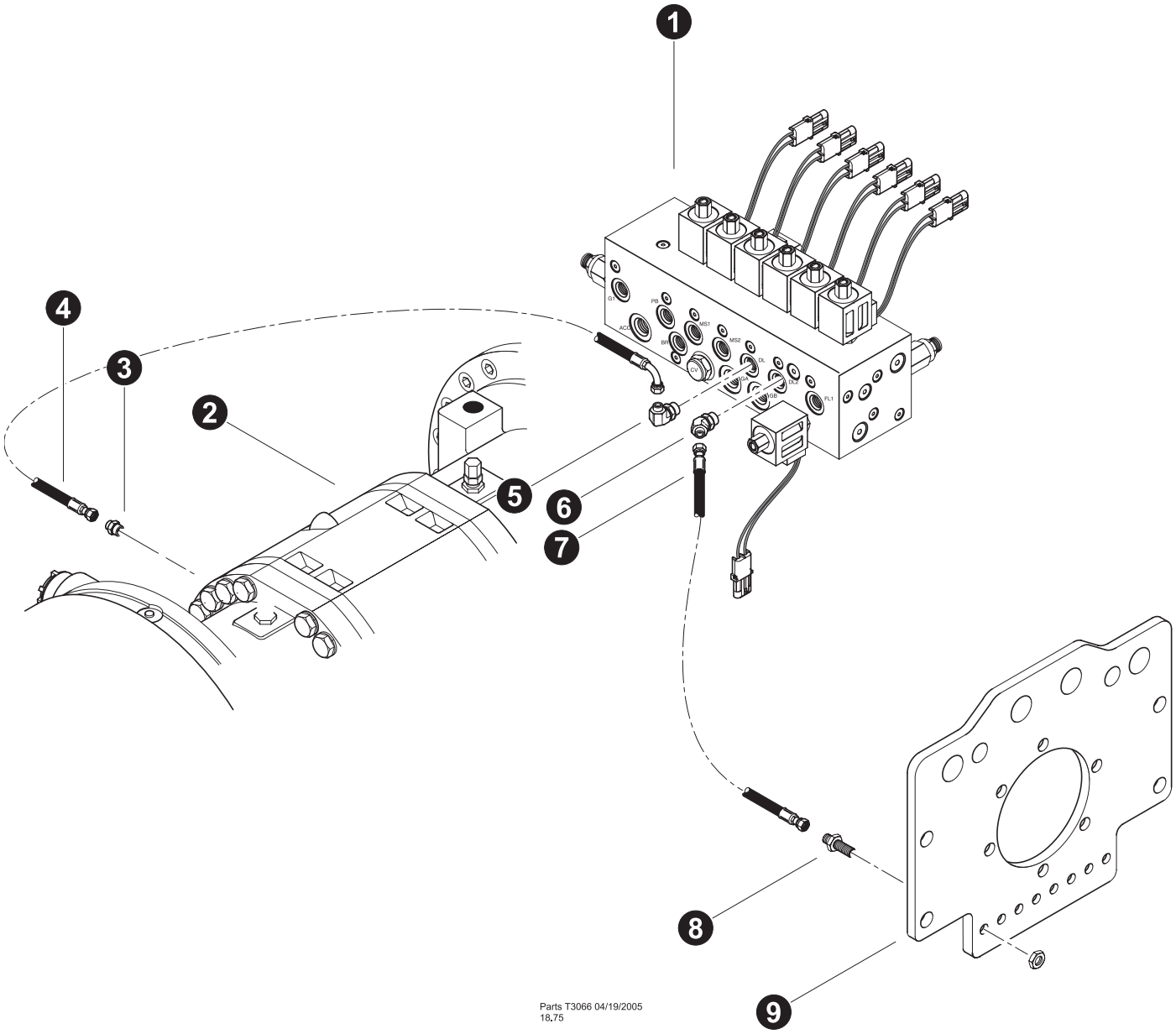


Parts T3401 04/19/2006
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Motor Shift Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	WHEEL DRIVE MOTOR.	FF-5
2	15133-FF			ELBOW, 90 - FF1868T-0406S	
3	-FF	1		HOSE ASSEMBLY - 2022.5-04-040S-040S (Front Motor to Lower Manifold “MS1” port)	
4	15124-FF			CONNECTOR, STR - FF1852T-0406S	
5	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
6	-FF	1		HOSE ASSEMBLY - 2048-04-040S-040S (Rear Motor to Lower Manifold “MS2” port)	
7	23322-FF	2		ELBOW, 45 - 6-4 V5OLO-S	

🕮 See referenced page for component or assembly breakdown.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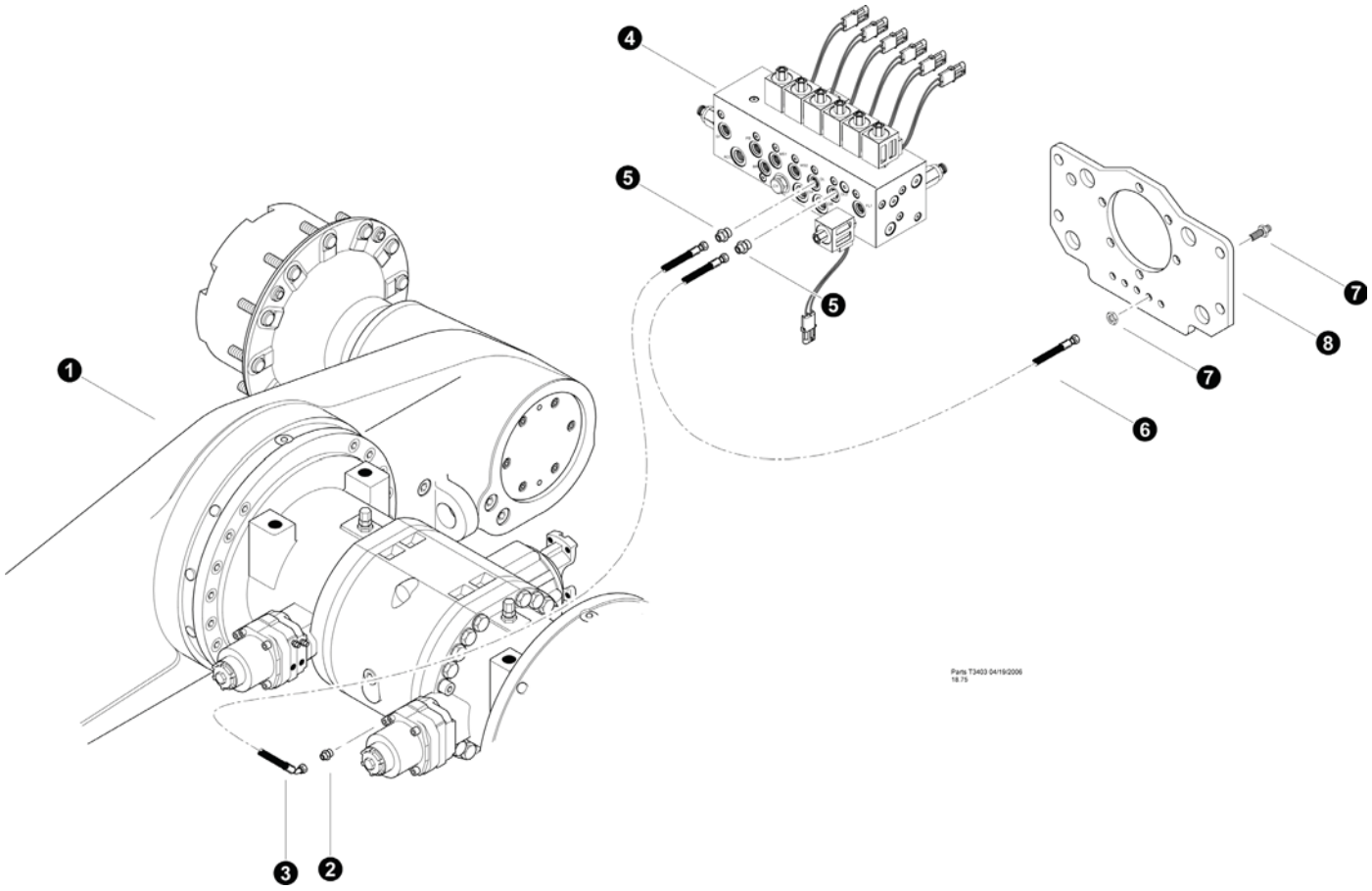
Parts T3066 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Differential Lock Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	REF.	1	🕮	FRONT BOGIE AXLE	AX
3	19470-FF	1		CONNECTOR, STR METRIC - 4M14F8OMLOS	
4	-FF	1		HOSE ASSEMBLY - 2085-04-04OS-04O9 (Front Axle Differential Lock to Lower Manifold “DL” port)	
5	15133-FF	1		ELBOW, 90 - FF1868T-0406S	
6	23322-FF	1		ELBOW, 45 - 6-4 V5OLO-S	
7	-FF	1		HOSE ASSEMBLY - 2080-04-04OS-04OS (Differential Lock Bulkhead to Lower Manifold “DL2” port)	
8	18582-FF	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
9	42290-FF	1		BRACKET, BEARING MOUNT - DRIVELINE (830)	

🕮 See referenced page for component or assembly breakdown.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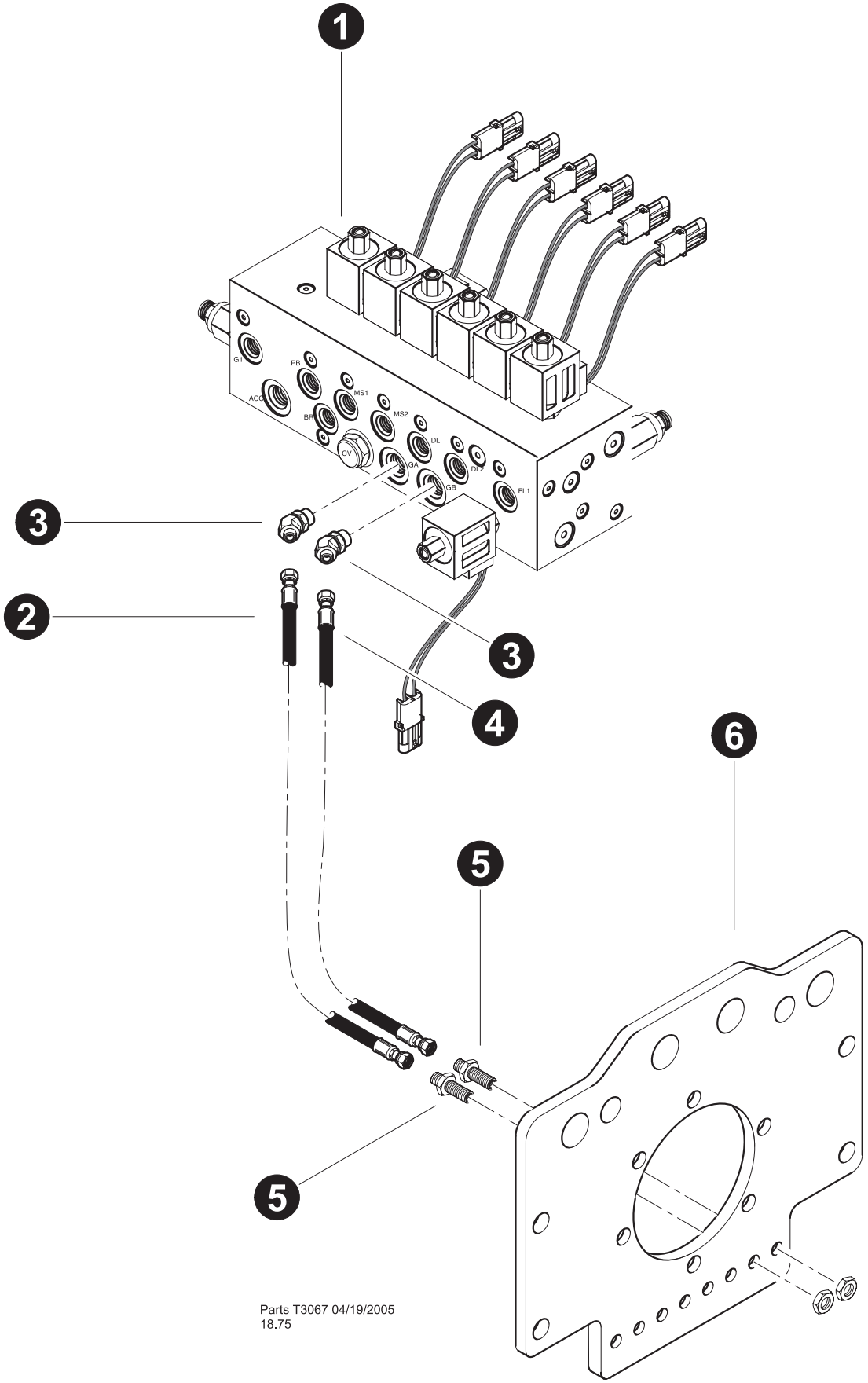
Parts T3403 04/19/2006
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Differential Lock Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	FRONT AXLE	AX
2	19470-FF	1		CONNECTOR, STR METRIC - 4M14F8OMLOS	
3	-FF	1		HOSE ASSEMBLY - 2084-04-04OS-04O4 (Front Axle Differential Lock to Lower Manifold “DL” port)	
4	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
5	15124-FF			CONNECTOR, STR - FF1852T-0406S	
6	-FF	1		HOSE ASSEMBLY - 2098-04-04OS-04OS (Differential Lock Bulkhead to Lower Manifold “DL2” port)	
7	18582-FF	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
8	52486-FF	1		BRACKET, BRG MOUNT - DRIVELINE 830	

🕮 See referenced page for component or assembly breakdown.

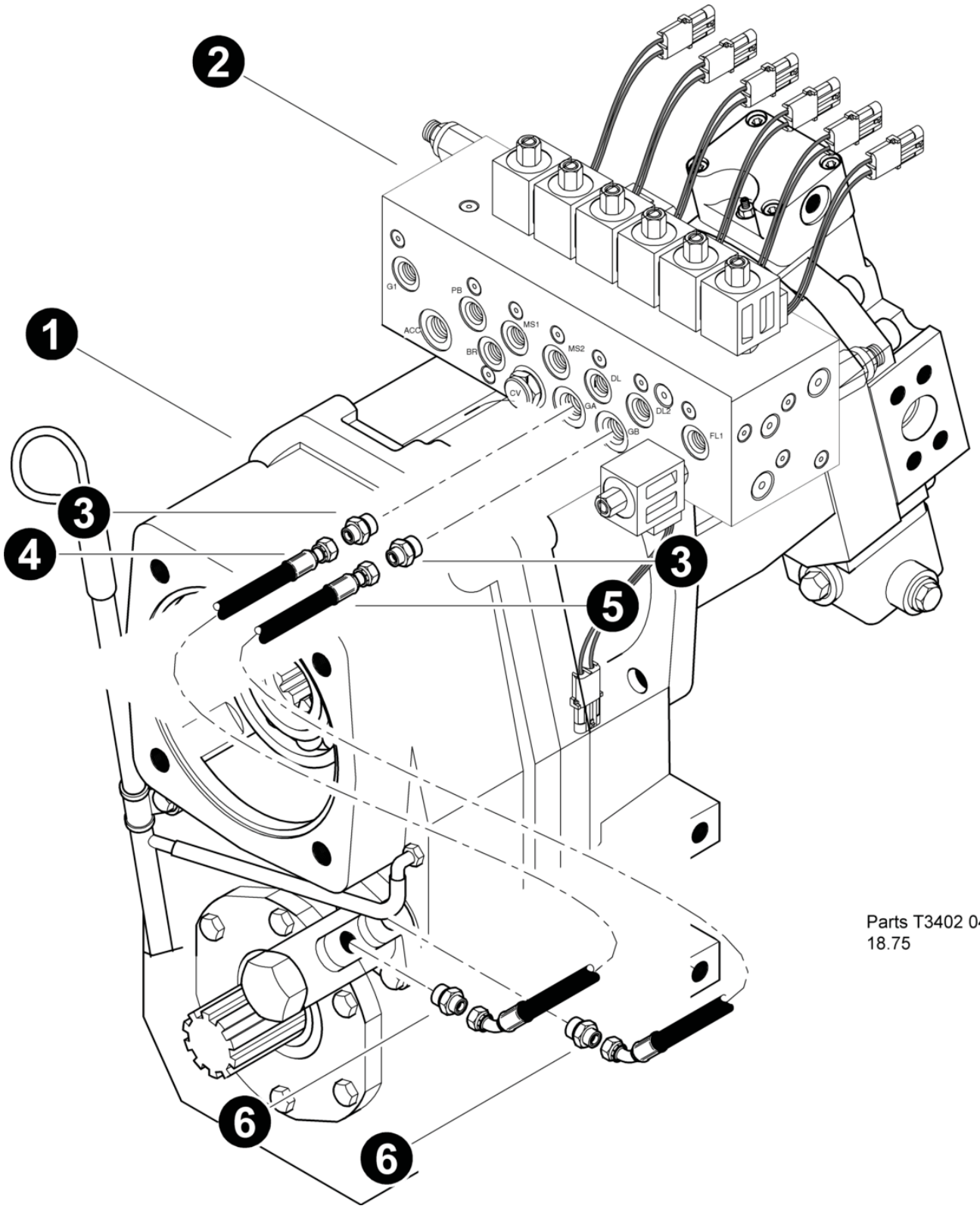


Parts T3067 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Gear Box Shift Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	-FF	1		HOSE ASSEMBLY - 2080-04-040S-040S (GA Bulkhead to Lower Manifold “GA” port)	
3	23322-FF	2		ELBOW, 45 - 6-4 V5OLO-S	
4	-FF	1		HOSE ASSEMBLY - 2080-04-040S-040S (GB Bulkhead to Lower Manifold “GB” port)	
5	18582-FF	2		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
6	42290-FF	1		BRACKET, BEARING MOUNT - DRIVELINE (830)	

🕮 See referenced page for component or assembly breakdown.

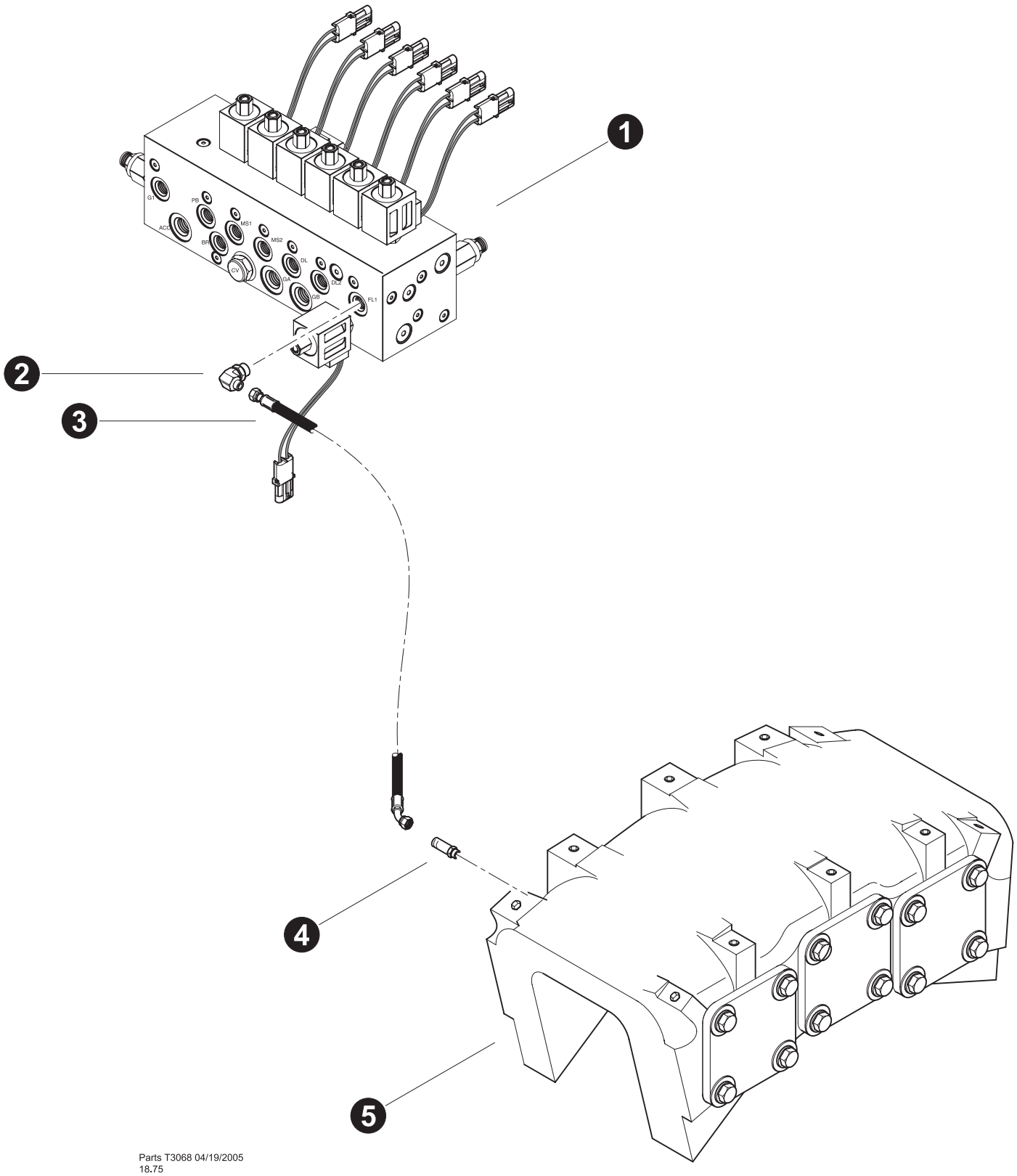


Parts T3402 04/19/2006
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Gear Box Shift Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	TRANSFER CASE (NAF)	AX
2	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
3	15124-FF			CONNECTOR, STR - FF1852T-0406S	
4	-FF	1		HOSE ASSEMBLY - 2020-04-040S-0404 (GB Bulkhead to Lower Manifold “GA” port)	
5	-FF	1		HOSE ASSEMBLY - 2020-04-040S-0404 (GB Bulkhead to Lower Manifold “GB” port)	
6	19470-FF	2		CONNECTOR, STR METRIC - 4M14F8OMLOS	

🕮 See referenced page for component or assembly breakdown.

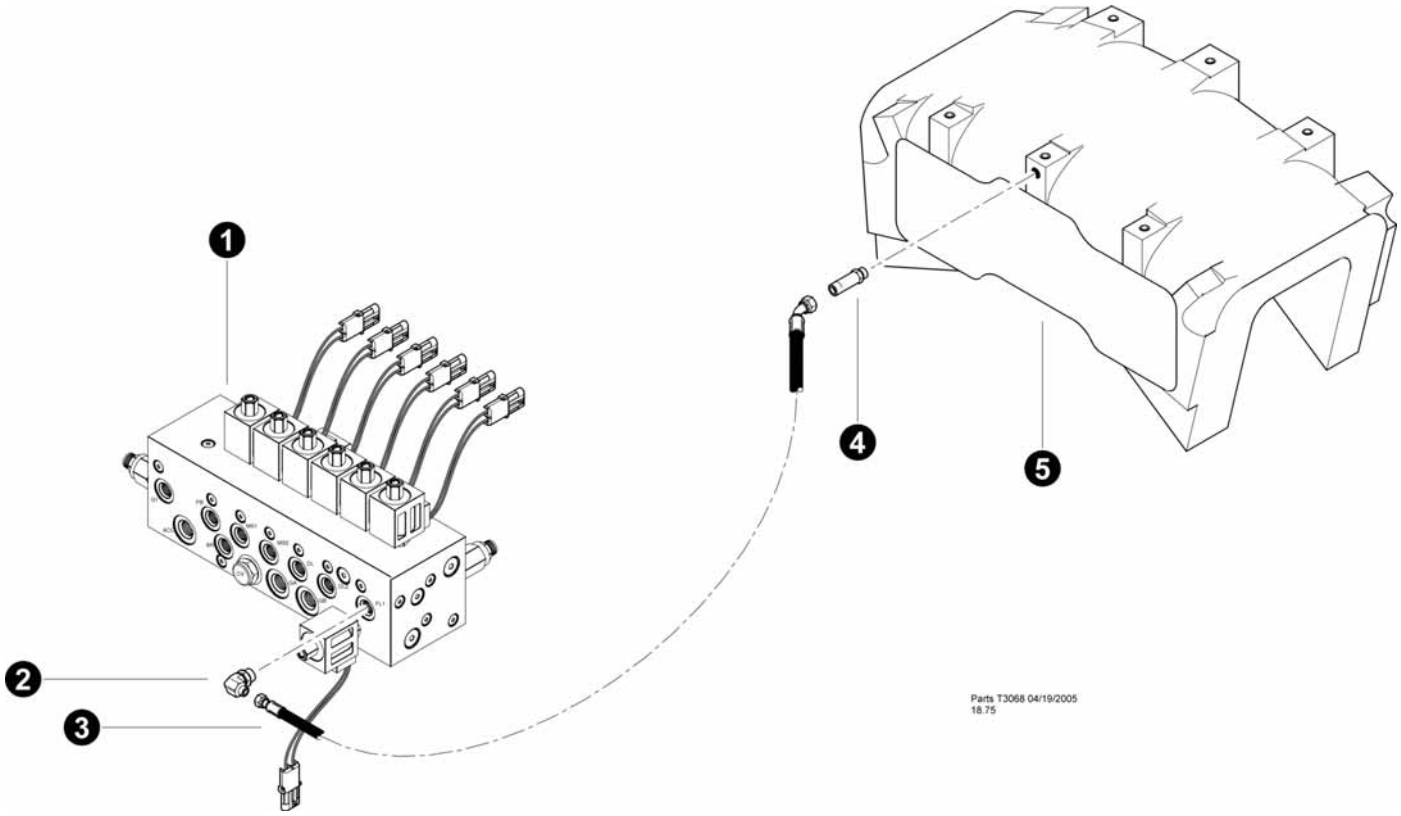


Parts T3068 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Frame Lock Connections)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	15133-FF	1		ELBOW, 90 - FF1868T-0406S	
3	-FF	1		HOSE ASSEMBLY - 2028-04-040S-0404 (Lower Manifold “FL” port to frame lock caliper)	
4	20991-FF	2		CONNECTOR, STR LONG - 848L-TTO-04X04	
5	REF.	1	🕮	FRAME LOCK CALIPER BRAKE.	FF-4

🕮 See referenced page for component or assembly breakdown.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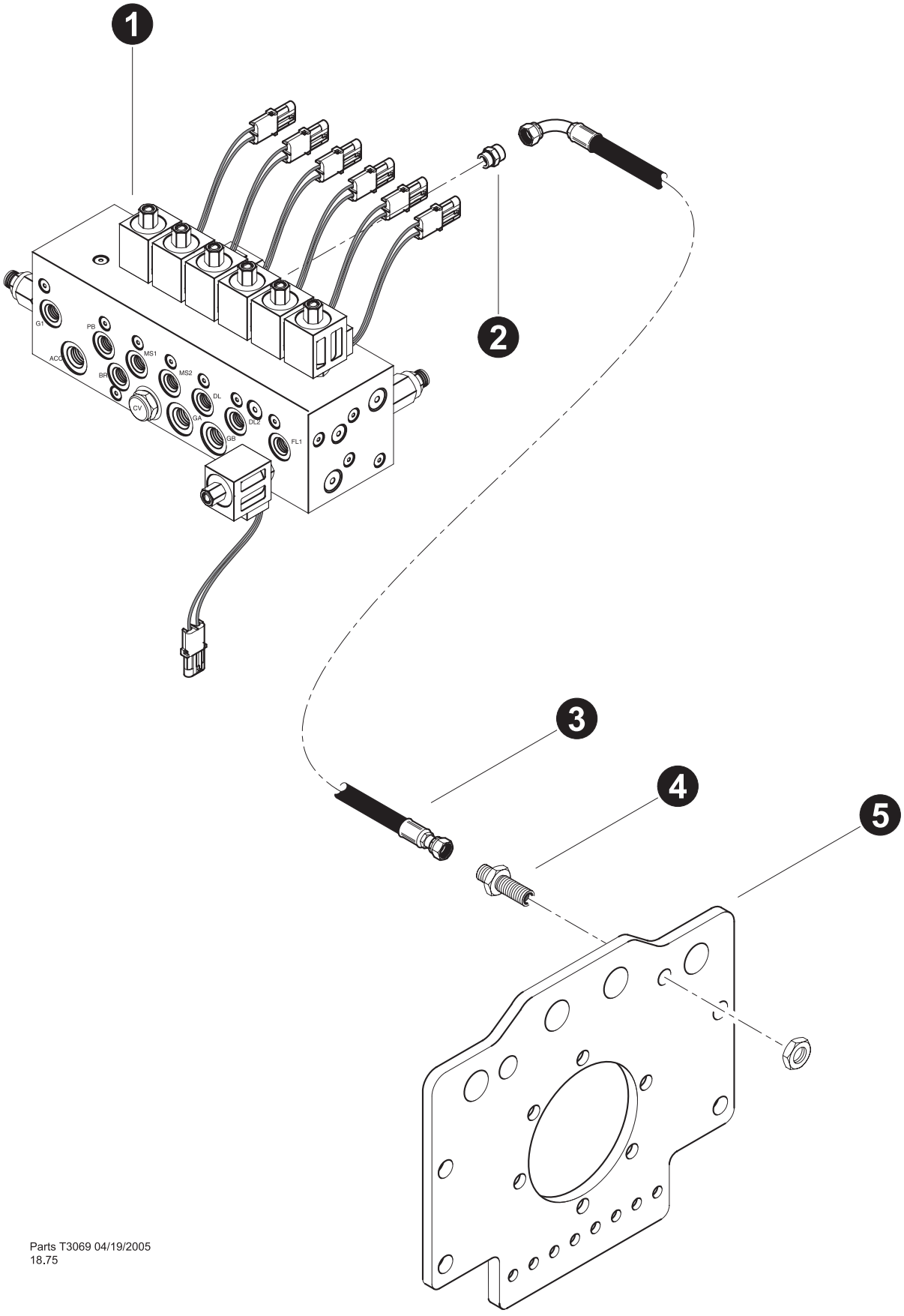
Parts T3068 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Frame Lock Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	15133-FF	1		ELBOW, 90 - FF1868T-0406S	
3	-FF	1		HOSE ASSEMBLY - 2046.5-04-040S-0404 (Lower Manifold “FL” port to frame lock caliper)	
4	20991-FF	2		CONNECTOR, STR LONG - 848L-TTO-04X04	
5	REF.	1	🕮	FRAME LOCK CALIPER BRAKE.	FF-4

🕮 See referenced page for component or assembly breakdown.

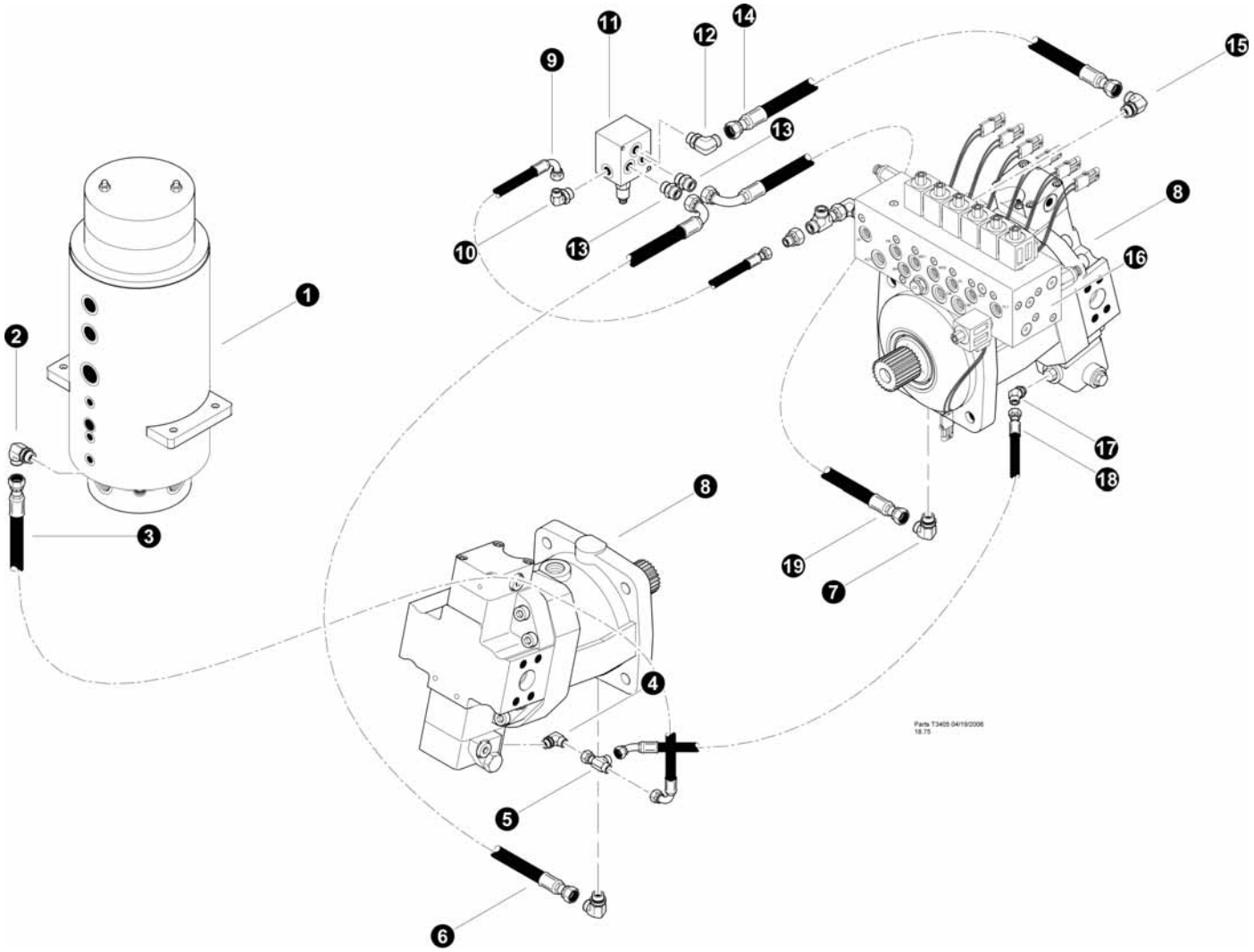


Parts T3069 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Motor Flushing Supply Connection)
Machines built before SN-0152-04/14/06

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-4
2	18034-FF	1		CONNECTOR, STR - FF1852T-0606S	
3	-FF	1		HOSE ASSEMBLY - 2066-06-060S-0609 (Lower solenoid manifold port “flush” to motor flushing pressure bulkhead)	
4	50420-FF			CONNECTOR, STR BULKHEAD - 832-TT-06	
5	42290-FF	1		BRACKET, BEARING MOUNT - DRIVELINE (830)	

🕮 See referenced page for component or assembly breakdown.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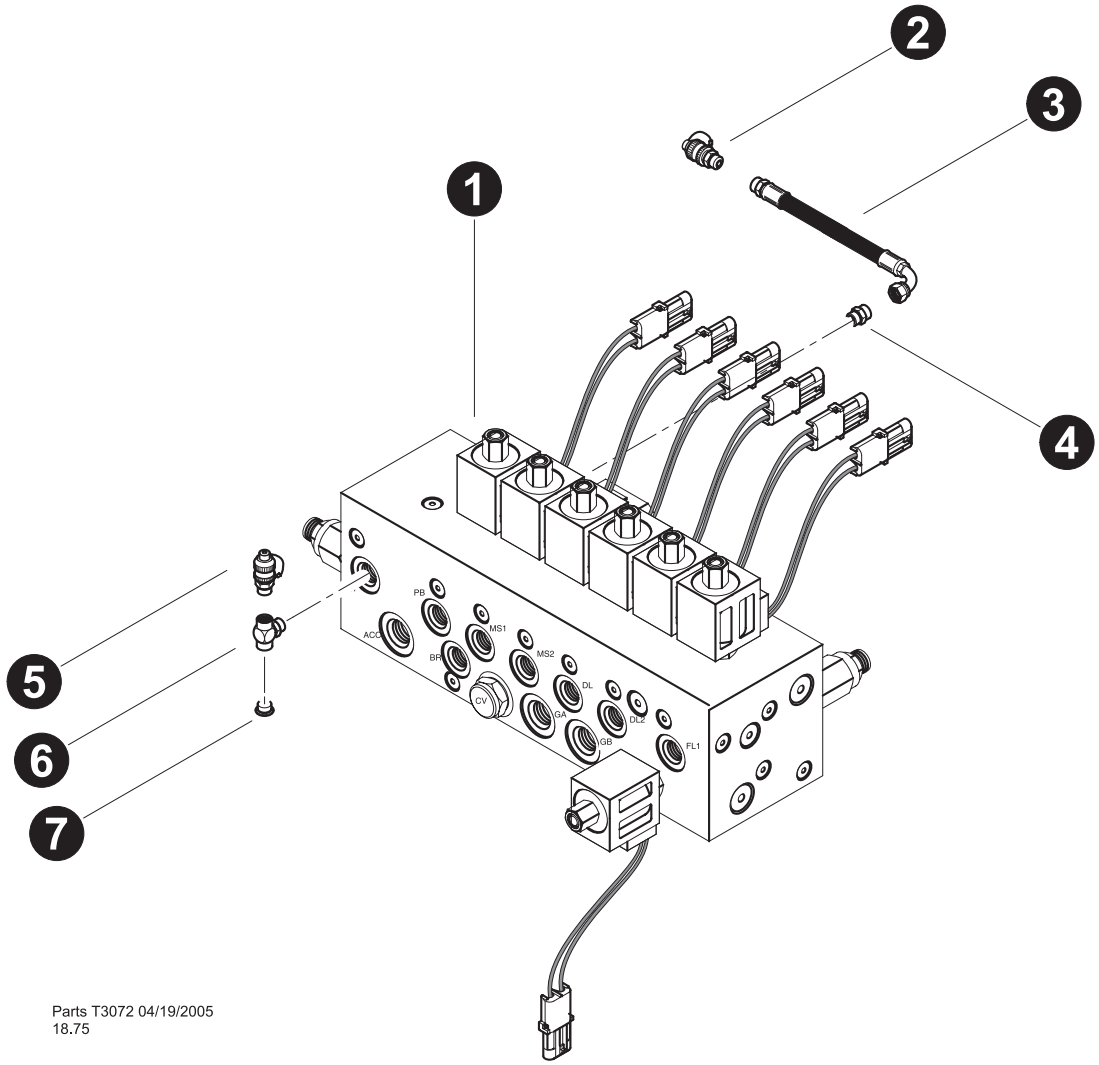
Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Motor Flushing Supply and Return Connections)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	16296-FF	1		ELBOW, 90 - FF1868T-0606S	
3	-FF	1		HOSE ASSEMBLY - 2060-06-060S-0604 (Rotory Manifold port “3” to flushing return tee)	
4	16296-FF	1		ELBOW, 90 - FF1868T-0606S	
5	22730-FF	1		TEE - 6 R6LO-S	
6	-FF	1		HOSE ASSEMBLY - 2025-06-06OS-06O9 (Flushing manifold to Front Motor)	
7	22405-FF	2		ELBOW, 90 - 8-6 C5OLO-S	
8	REF.	1	🕮	WHEEL DRIVE MOTOR.	FR-5
9	-FF	1		HOSE ASSEMBLY - 2019-04-04OS-04O9 (Flushing manifold to drain)	
10	15133-FF	1		ELBOW, 90 - FF1868T-0406S	
11	REF.	1	🕮	MANIFOLD, FLUSHING - WHEEL MOTORS	FR-4
12	16296-FF	1		ELBOW, 90 - FF1868T-0606S	
13	18034-FF	2		CONNECTOR, STR - FF1852T-0606S	
14	-FF	1		HOSE ASSEMBLY - 2012.5-06-060S-060S (Flush manifold to FL port)	
15	16296-FF	1		ELBOW, 90 - FF1868T-0606S	
16	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-5
17	23015-FF	1		ELBOW, 45 - 6 V5OLO-S	
18	-FF	1		HOSE ASSEMBLY - 2042-06-06OS-06O4 (Front Motor to Rear Motor)	
19	-FF	1		HOSE ASSEMBLY - 2025-06-06OS-06O9 (Flushing manifold to Rear Motor)	

🕮 See referenced page for component or assembly breakdown.

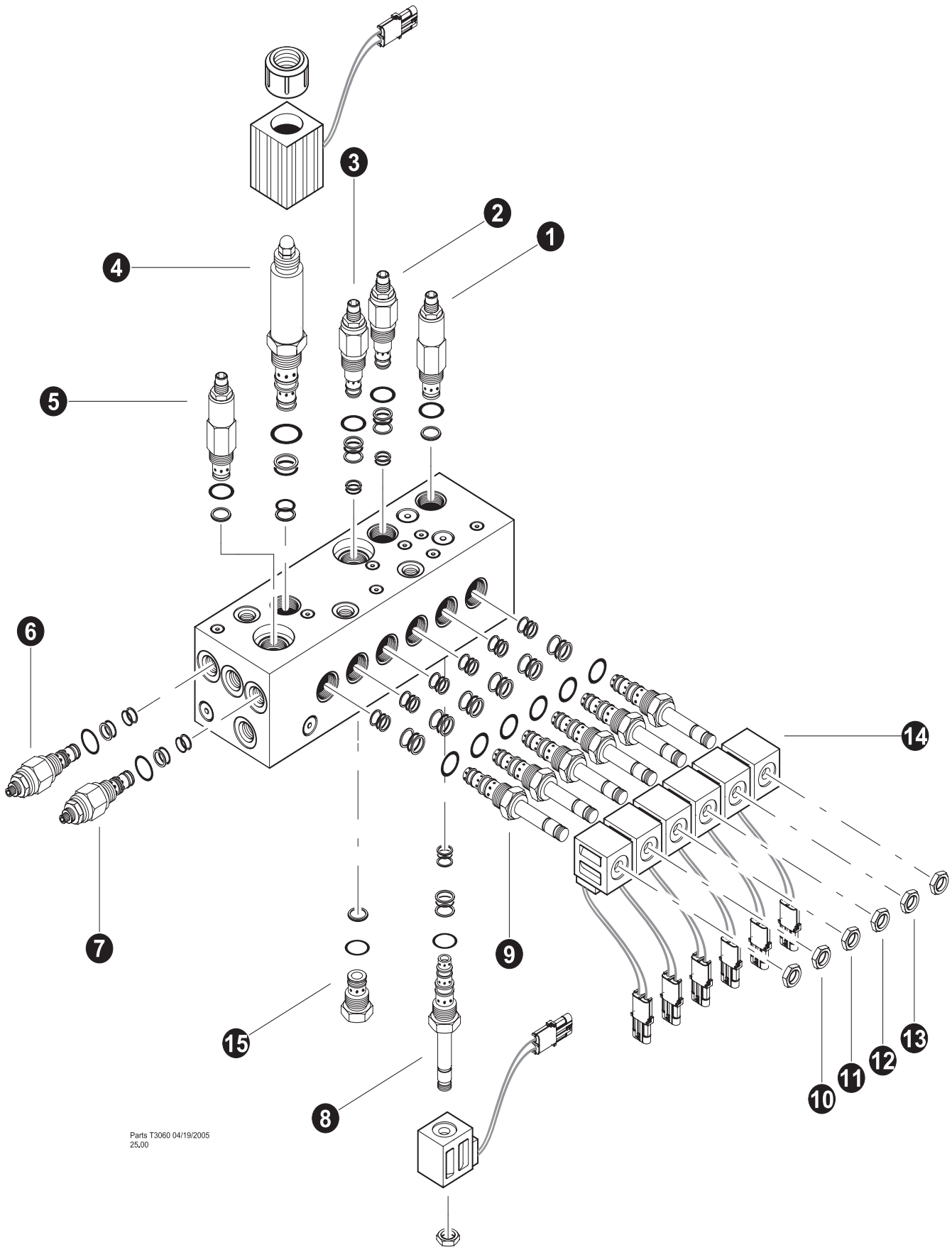


Parts T3072 04/19/2005
18.75

Lower Solenoid Manifold Circuits and Components Breakdown
(Front Frame - Lower Manifold Gauge Ports)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	LOWER SOLENOID MANIFOLD	FF-5
2	16037-FF	1		TAP, GAUGE PORT - .25” SAE	
3	-FF	1		HOSE ASSEMBLY - 2006.5-04-04FF-04O9	
4	16541-FF			CONNECTOR, STR - FF1852T-0404S	
5	16037-FF	1		TAP, GAUGE PORT - .25” SAE	
6	24293-FF	1		TEE - 4-G5G5JAO-S	
7	11383-FF	1		PLUG - 6408-HHP-4	

🕮 See referenced page for component or assembly breakdown.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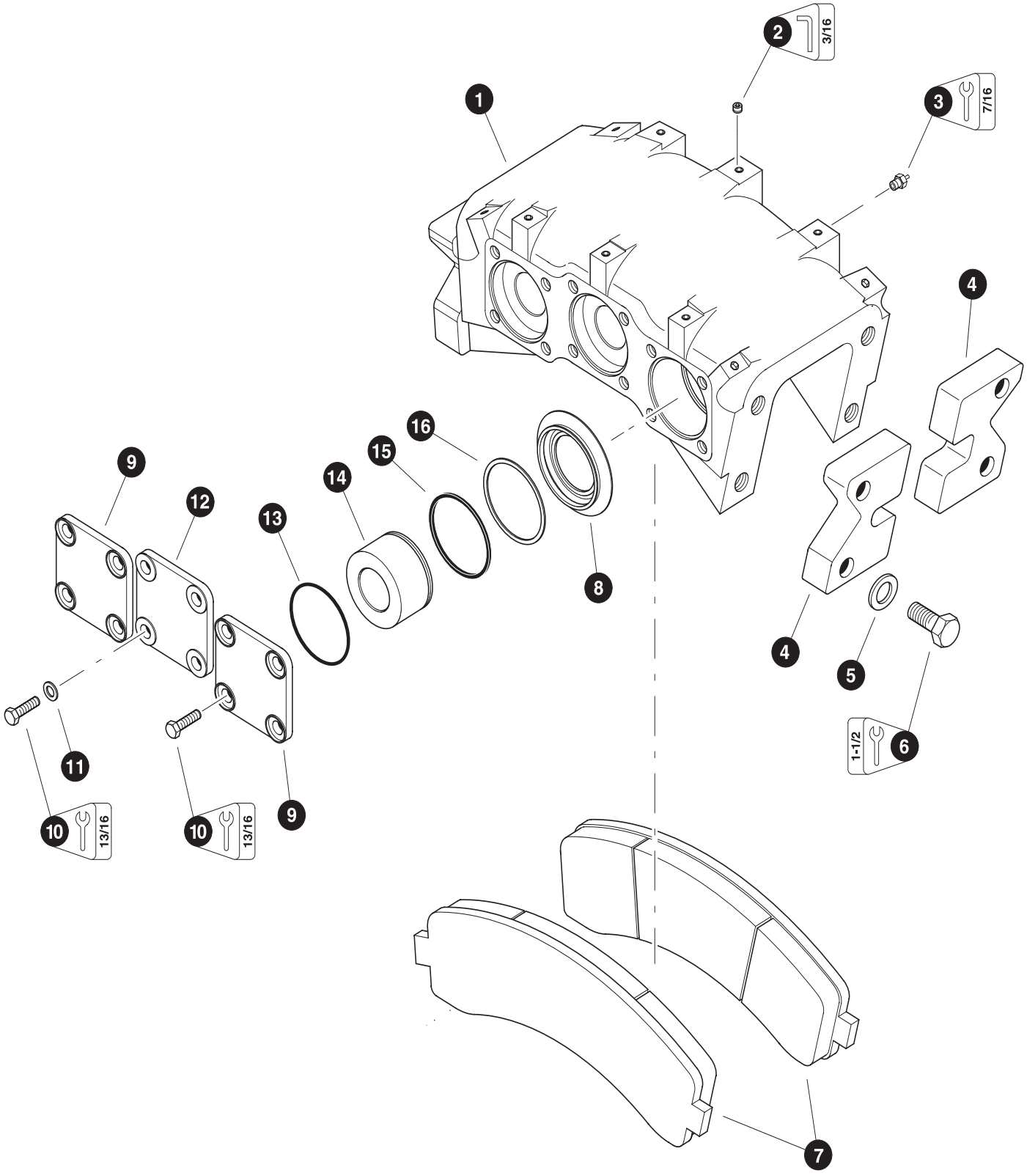
Parts T3060 04/19/2005
25.00

Lower Solenoid Manifold Circuits and Components Breakdown *(Lower Solenoid Manifold Breakdown)*

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	51623-FF	1	❑	VALVE, LOWER MANIFOLD - CAN/BUS TF830	
		1		BLOCK, Lower Manifold (XM04033revC)	
1	52206-FF	1		CARTRIDGE, Secondary relief valve (RDH103S30) 900 psi	
				KIT, Seal Repair (SK10-2N)	
2	52163-FF	1		CARTRIDGE, GB shift counter balance valve (CBPA-080N-S-0-30)	
				KIT, Seal Repair (SKN-0828)	
3	52163-FF	1		CARTRIDGE, GB shift counter balance valve (CBPA-080N-S-0-30)	
				KIT, Seal Repair (SKN-0828)	
4	52212-FF	1		CARTRIDGE, Travel Brake proportional valve (EPRR-10-N-10-0-24DL)	
				KIT, Seal Repair (SK08-2N)	
				Solenoid, 24 volt Proportional	
5	52162-FF	1		CARTRIDGE, Main relief valve (RDH103S30) 2000 psi	
				KIT, Seal Repair (SK10-2N)	
6	52415-FF	1		CARTRIDGE, Park Brake reducing / relief valve (PRH081S10) 900 psi	
				KIT, Seal Repair (SK08-3N)	
7	52207-FF	1		CARTRIDGE, Solenoids reducing / relief valve (PRH081S10) 425 psi	
				KIT, Seal Repair (SK08-3N)	
8	52208-FF	1		CARTRIDGE, Frame Lock directional valve cartridge (DSH081NR)	
				KIT, Seal Repair (SK08-2N)	
	52211-FF			COIL, 24 volt	
9	52209-FF	1		CARTRIDGE, Park Brake solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
	52211-FF			COIL, 24 volt	
10	52209-FF	1		CARTRIDGE, Motor Shift “1” solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
	52211-FF			COIL, 24 volt	
11	52209-FF	1		CARTRIDGE, Motor Shift “2” solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
	52211-FF			COIL, 24 volt	
12	52209-FF	1		CARTRIDGE, Diff Lock solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
	52211-FF			COIL, 24 volt	
13	52209-FF	1		CARTRIDGE,Gear Box Shift “A” solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
	52211-FF			COIL, 24 volt	
14	52209-FF	1		CARTRIDGE, Gear Box Shift “B” solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
	52211-FF			COIL, 24 volt	
15	52210-FF	1		CARTRIDGE, Accumulator check valve cartridge (CVH103P)	
				KIT, Seal Repair (SK10-2N)	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in

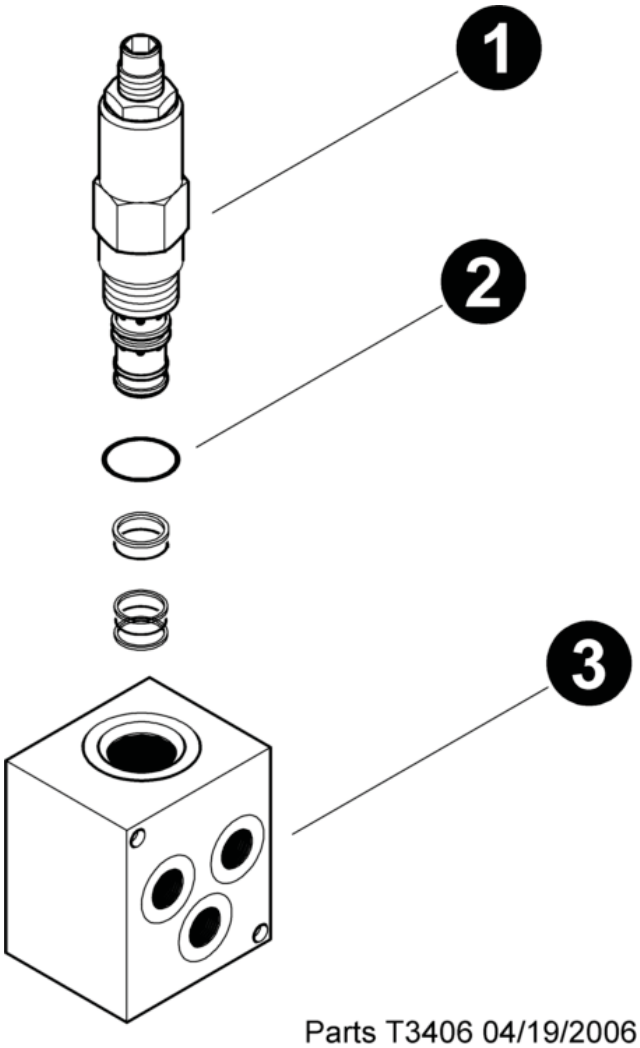


Parts 01736 07/08/2000
37.50

Lower Solenoid Manifold Circuits and Components Breakdown *(Frame Lock Caliper Breakdown)*

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	20953-FF	1	🕮	FRAME LOCK BRAKE	
1	NSS	1		HOUSING	
2	- - - - -	13		PLUG	
3	- - - - -	1		SCREW, bleed	
4	- - - - -	4		RETAINER, brake pad	
5	- - - - -	8		WASHER	
6	- - - - -	8		BOLT	
7	24406-FF	1		PAD, brake (pair)	
8	NSS	6	⌘	BOOT, piston	
9	23445-FF	2		COVER, piston (Machined special to countersink bolt heads)	
10	24088-FF	12		BOLT - 9/16” x 1-1/4”	
11	- - - - -	4		WASHER	
12	23444-FF	1		COVER, piston	
13	NSS	6	⌘	O-RING, piston cover	
14	24434-FF	6		PISTON, brake caliper	
15	NSS	6	⌘	SEAL, piston	
16	NSS	6	⌘	RING, back-up	
-	23113-FF	1		KIT, seal repair - frame lock brake	

🕮 Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit PN# 23113.



Parts T3406 04/19/2006
25

Lower Solenoid Manifold Circuits and Components Breakdown *(Flushing Relief Manifold)*

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	52148-FF	1	❑	MANIFOLD, FLUSHING - WHEEL MOTORS	
1	-FF	1	❑	VALVE, Sequence (PS10 - 36 - 0 - N - 04/)	
2	-FF	1		KIT, Seal (SK10-3X-BM)	
3	-FF	1		MANIFOLD - wheel motor flushing	

❑ Kit or Assembly - includes all items indented underneath.

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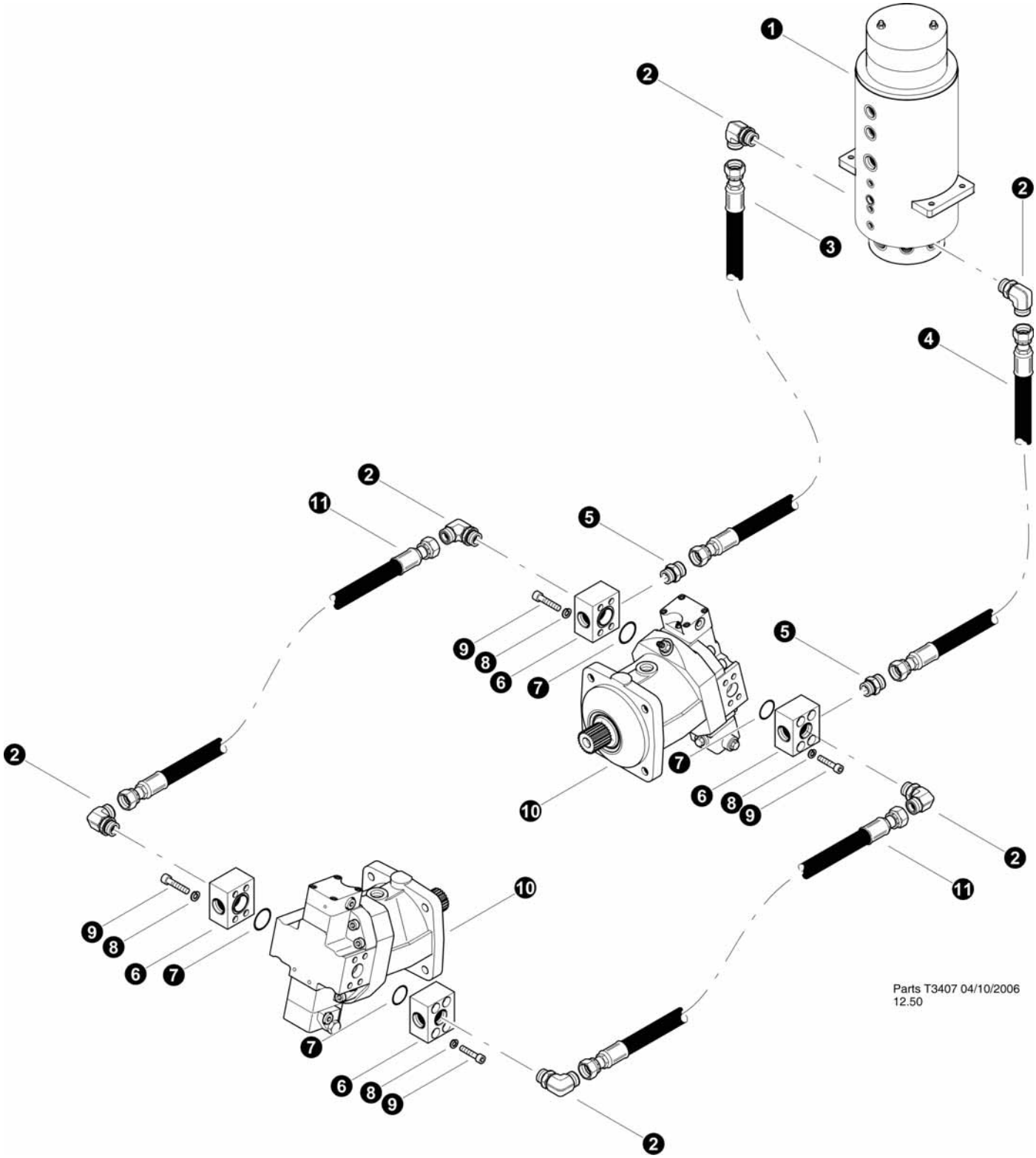
Section FF-5

TF 830, 840 Front Frame - Drive Motor Hydraulics

(Transfer Case Mounted in Front Frame)
Machines SN-0152-04/14/06 and after


Parts T3407 04/10/2006
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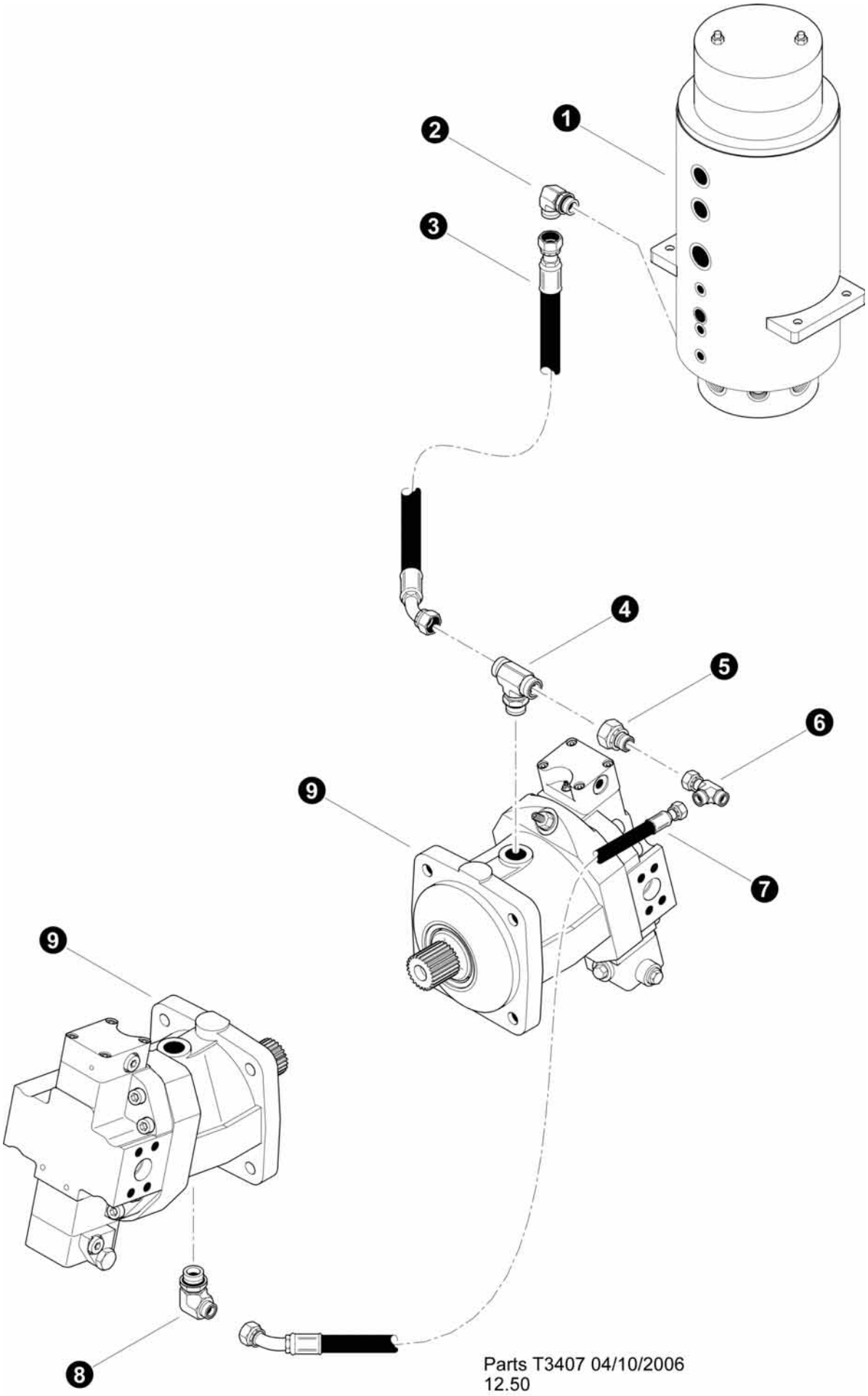
DRIVE MOTOR HYDRAULICS

Front to Rear Hydraulic Motor Connection - Pressure
(Standard Front and All Rear Frames)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD.	UP-1
2	15484-FF	2		ELBOW, 90 - 6801-16	
3	-FF	1		HOSE ASSEMBLY - 6029-16-16OS-16OS (Rotary manifold lower port “7” to Drive Motor)	
4	-FF	1		HOSE ASSEMBLY - 6029-16-16OS-16OS (Rotary manifold lower port “8” to Drive Motor)	
5	15497-FF	2		CONNECTOR, straight - 6400-16	
6	26008-FF	4		MANIFOLD, rexroth drive motor	
7	15378-FF	2		O-RING, 1.25”	
8	50075-FF	8		WASHER, LOCK 1/2	
9	50074-FF	8		BOLT, ALLEN 1/2 X 1 1/2”	
10	REF	1		HYDRAULIC WHEEL DRIVE MOTOR	FF-5
11	-FF	1		HOSE ASSEMBLY - 6037-16-16OS-16OS (Front Drive Motor to Rear Drive Motor)	

🕮 See referenced page for component or assembly breakdown.



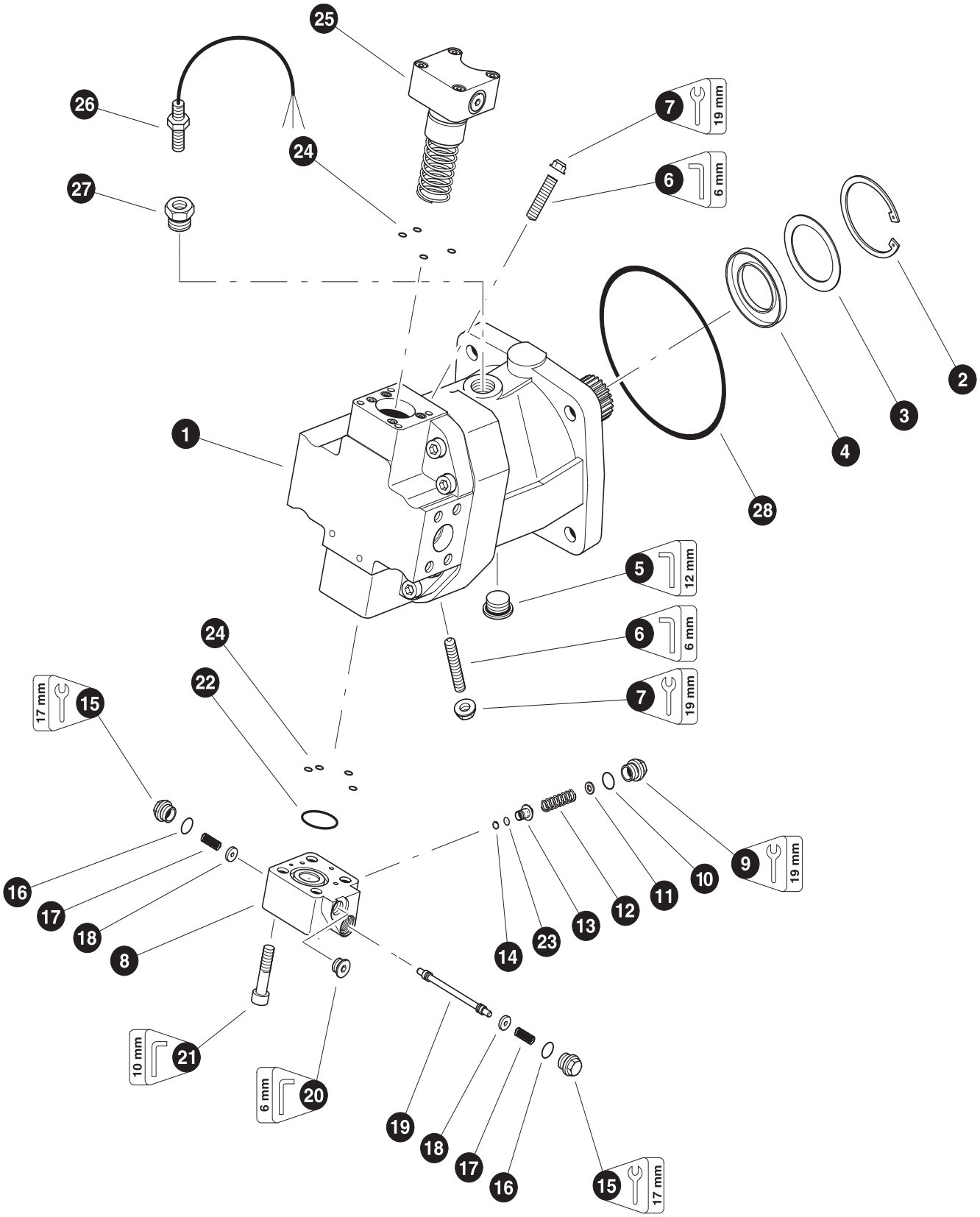
Parts T3407 04/10/2006
12.50

DRIVE MOTOR HYDRAULICS

ROTARY MANIFOLD TO REAR DRIVE MOTOR
(Standard Front and All Rear Frames)
Machines SN-0152-04/14/06 and after

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	17688-FF	1		ELBOW, 90 - FF1868T-1212S	
3	-FF	1		HOSE ASSEMBLY - 2049-12-120S-1204 (Motor Case Drain to port “11”)	
4	20029-FF	1		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
5	15117-FF	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
6	20066-FF	1		TEE - 8 S5OLO-S - BRANCH	
7	50975-FF	1		HOSE ASSEMBLY - 2039.5-08-080S-0804 (Case Drain Motor Jumper)	
8	15372-FF	1		ELBOW, 90 - FF1868T-0812S	
9	REF	1		HYDRAULIC WHEEL DRIVE MOTOR	FF-5

🕮 See referenced page for component or assembly breakdown.



Parts 00474 02/22/98
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REXROTH 160cc MOTOR

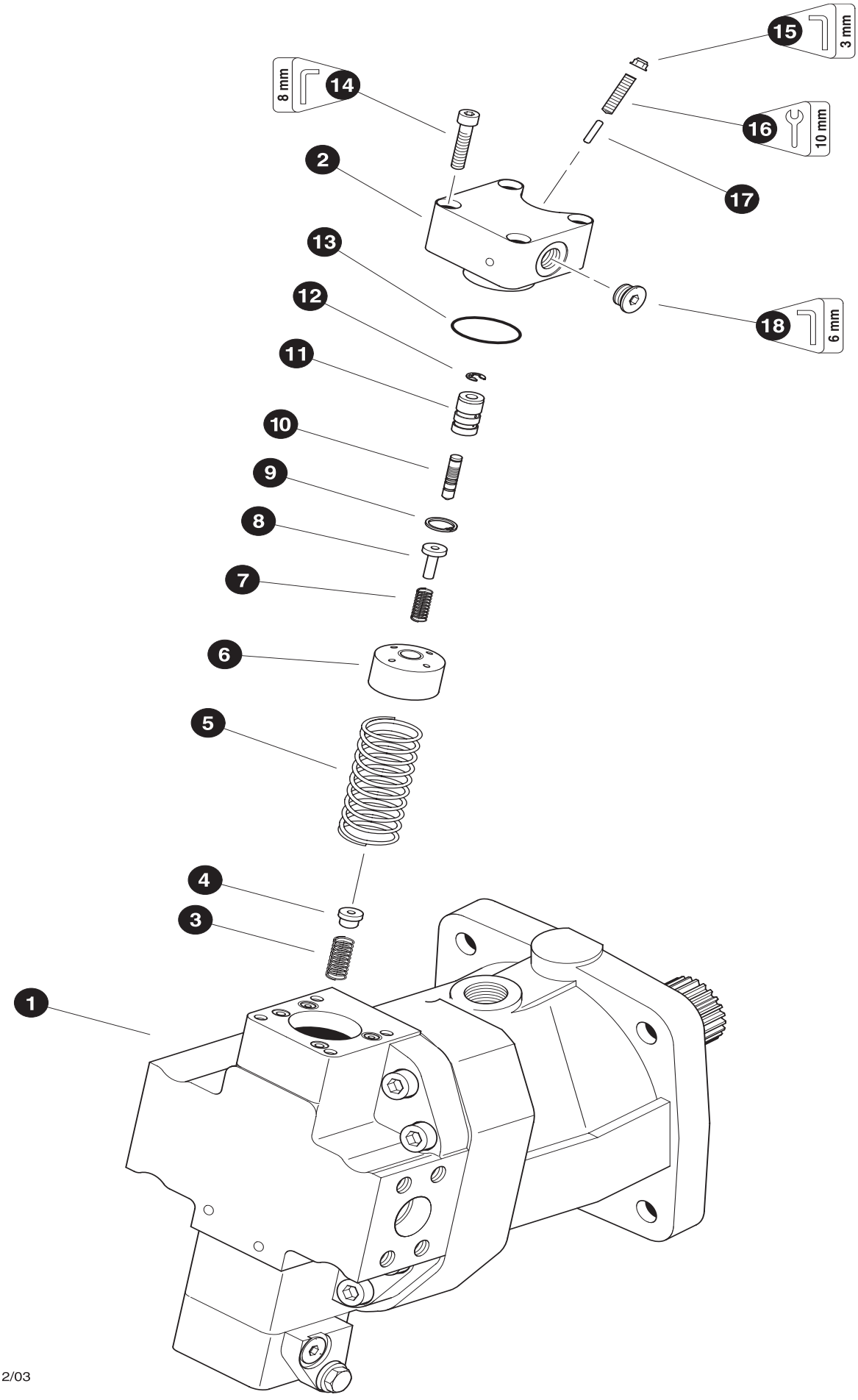
(Standard)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51869-0-FF	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Front) (w/speed counter ring) (Vg Min = 0 cubic meters) (flushing)*	
	51869-70-FF	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Rear) (w/speed counter ring) (Vg Min = 70 cubic meters) (flushing)*	
2	20685-FF	1		RING, snap	
3	20686-FF	1		SHIM, shaft seal	
4	20687-FF	1	⌘	SEAL, shaft	
5	19692-FF	1		PLUG - 26mm-1.5P *(BSPP thread)*	
6	*51987-FF*	*1*		SCREW, adjusting *(0 - Displacement min)(needed for front motor)*	
	20688-FF	2		SCREW, adjusting *(Displacement min & max)*	
7	20689-FF	2	⌘	NUT, seal	
8	20690-FF	1	❑	STROKING PISTON COVER ASSEMBLY	
9	20691-FF	1		PLUG	
10	20713-FF	1	⌘	O-RING	
11	20714-FF	1		SHIM	
12	20715-FF	1		SPRING	
13	20716-FF	1		POPPET	
14	20718-FF	1		RING, snap	
15	20719-FF	2		PLUG	
16	20720-FF	2	⌘	O-RING	
17	20721-FF	2		SPRING	
18	20722-FF	2		RETAINER, spring	
19	NSS	1		SPOOL	
20	20693-FF	1		PLUG - 14mm-1.5P *(BSPP thread)*	
21	20723-FF	4		BOLT, allen head	
22	20724-FF	1	⌘	O-RING	
23	20717-FF	1		ORIFICE, flushing - 1.2mm	
24	NSS	8		O-RING	
25	REF.	1		STROKING PISTON CONTROL ASSEMBLY	FF-5
26	24656-FF	1		SENSOR, SPEED PICKUP (rexroth hydro motor)	
27	51098-FF	1		FITTING, speed pickup rexroth (sae)	
28	20967-FF	1		O-RING, WHEEL DRIVE MOTOR (gearbox pilot)	
-	20725-FF	1		KIT, seal repair - complete AA6VM160 motor	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20725-FF.

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 T2811 08/12/03
37.50

REXROTH 160cc MOTOR
HA2T Controler Brakedown

(Standard)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51869-0-FF	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Front) (w/speed counter ring) (Vg Min = 0 cubic meters) (flushing)*	
	51869-70-FF	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Rear) (w/speed counter ring) (Vg Min = 70 cubic meters) (flushing)*	
2	20726-FF	1	❑	CONTROL, MOTOR STROKE ASSEMBLY *(HA2T)*	
3	- - -	1		SPRING, (HU00444549)	
4	- - -	1		RETAINER, spring (HU00421860)	
5	- - -	1		SPRING (HU00651116)	
6	- - -	1		BUSHING, spring (HU00651118)	
7	20729-FF	1		SPRING	
8	- - -	1		RETAINER, spring (HU00921351)	
9	20731-FF	1		RING, snap	
10	- - -	1		SPOOL, control (HU00430748)	
11	20732-FF	1		BUSHING, control spool	
12	20734-FF	1		E-CLIP, control spo	
13	- - -	1	⌘	O-RING (68103-025)	
14	- - -	4		BOLT, allen head (60118-063)	
15	20737-FF	1	⌘	NUT, seal	
16	20738-FF	1		SCREW, adjusting *(Stroke control)*	
17	- - -	1		PIN, stroke adjustment (69116-019)	
18	20693-FF	1		PLUG - 14mm-1.5P *(BSPP thread)*	
-	20725-FF	1		KIT, seal repair - complete AA6VM160 motor	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20725-FF

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.

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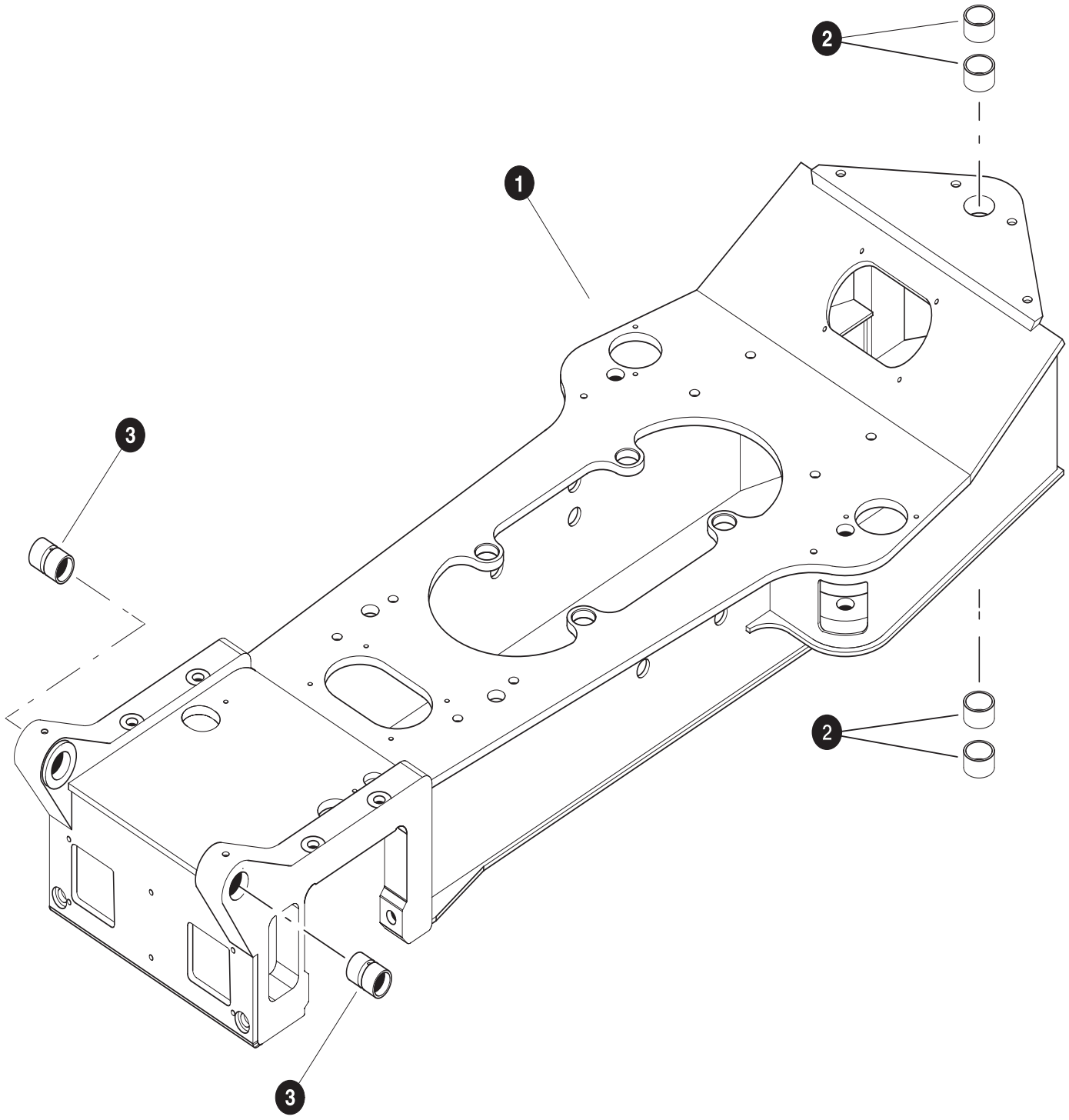
Section FR-1

TF 820 E Rear Frame - Structural / Covers / Pins

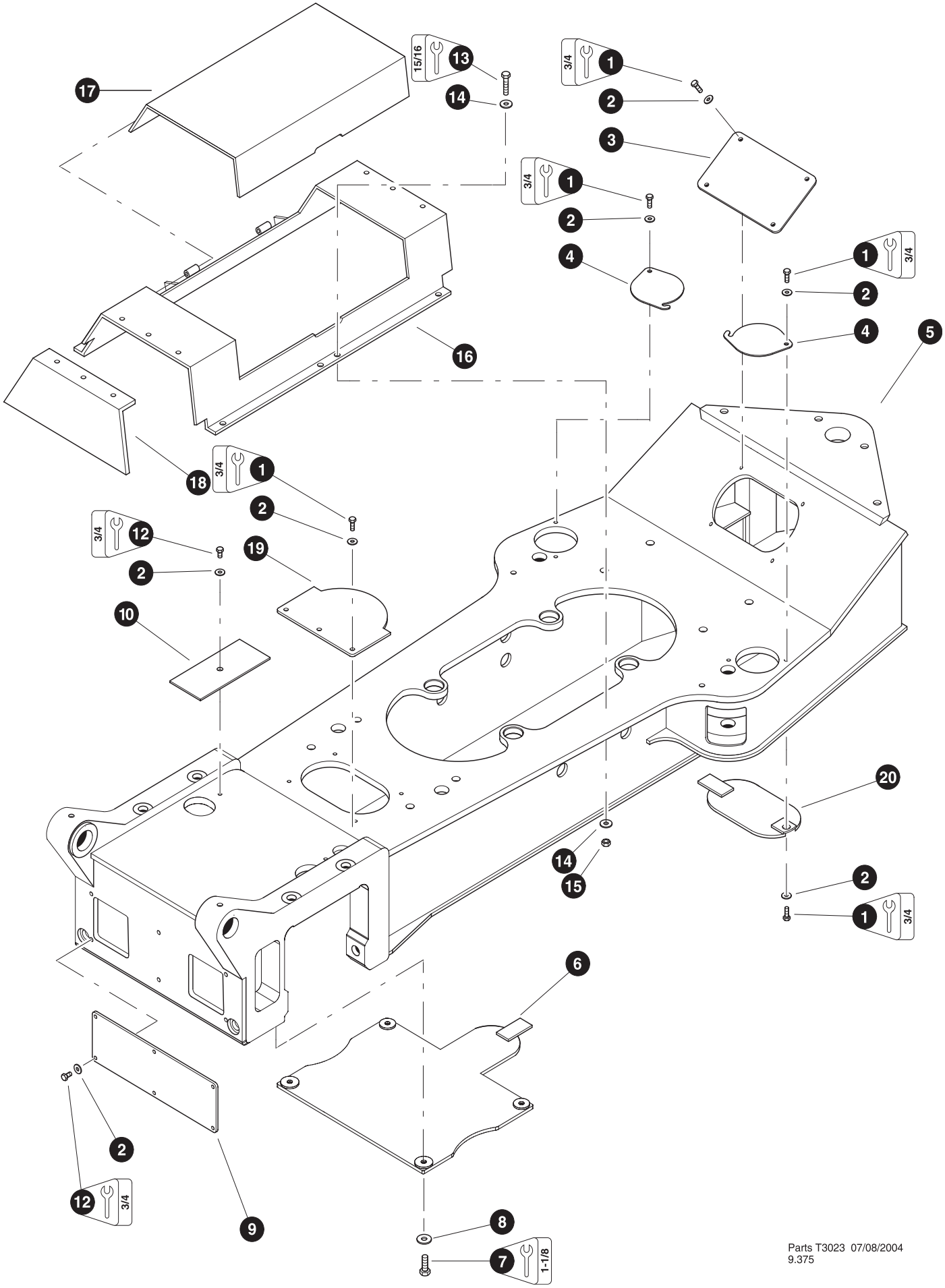


Parts T2960 03/08/2004
9.375

REAR FRAME COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50960-FR	1	❑	REAR FRAME WELDMENT *(Standard length)*	
	50961-FR	1	❑	REAR FRAME WELDMENT *(24" longer)*	
	51383-FR	1	❑	REAR FRAME WELDMENT *(48" longer)*	
2	23104-FR	4		BUSHING - 3-1/2" x 1-1/2"	
3	11704-FR	2		BUSHING - 2-1/2" x 4-1/4"	

❑ Kit or Assembly - includes all items indented underneath.

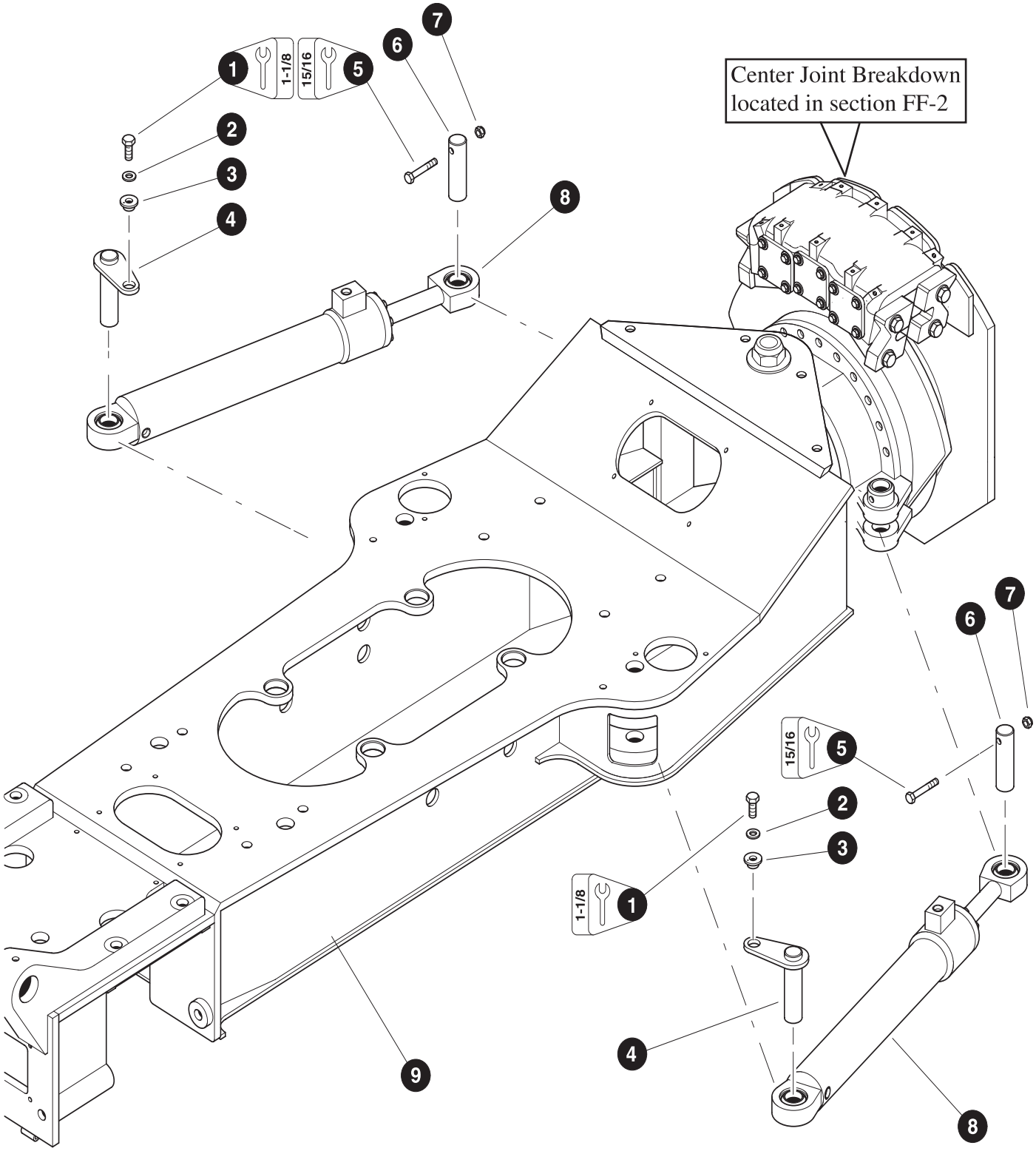


Parts T3023 07/08/2004
9.375

REAR FRAME ACCESS COVERS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	10739-FR	30		BOLT - 1/2" x 1-1/2"	
2	15534-FR	39		WASHER, SAE flat - 1/2"	
3	19395-FR	1		COVER, access - steerbox / axle	
4	12150-FR	2		COVER, access - steer cylinder	
5	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
6	51415-FR	1		COVER, access - rear frame axle *(Lower)*	
7	10835-FR	2		BOLT - 1/2" x 4-1/2"	
8	10815-FR	2		NUT, lock - 1/2"	
9	80316-FR	1		COVER, access - axle box end	
10	42162-FR	2		COVER, access - rear frame axle top	
11	19394-FR	1		COVER, access - driveshaft	
12	10783-FR	9		BOLT - 1/2" x 1"	
13	15681-FR	8		BOLT, 5/8 X 2.25"	
14	10771-FR	16		WASHER, SAE flat - 5/8	
15	10816-FR	8		NUT, LOCK 5/8	
-	51553-FR	1	❑	GUARD, GEARBOX (complete assembly)	
16	51554-FR	1		GUARD, GEARBOX (Frame)	
17	51555-FR	1		GUARD, GEARBOX (Cover)	
18	51556-FR	1		GUARD, end cap (Optional - used when no bunks are installed or custom bunks are used)	
19	42166-FR	1		COVER, access - rear frame top	
20	40983-FR	1		COVER, access - rear frame bottom (standard frame)	
-	40988-FR	1		COVER, access - rear frame bottom (2' longer frame)	
-	42163-FR	1		COVER, access - rear frame bottom (4' longer frame)	

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



Parts T2803 08/08/03
9.375

STEER CYLINDER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	15549-FR	2		BOLT - 3/4” x 2”	
2	15550-FR	2		WASHER, SAE flat - 3/4”	
3	18570-FR	2		WASHER, pin retaining	
4	80769-FR	2		PIN, steer cylinder mounting - base	
5	10719-FR	2		BOLT - 5/8” x 4”	
6	19448-FR	2		PIN, steer cylinder mounting - rod	
7	15563-FR	2		NUT, nylock - 5/8”	
8	REF.	2	🕮	STEER CYLINDER	FR-4
9	REF.	1		REAR FRAME WELDMENT	FR-1

🕮 See referenced page for component or assembly breakdown.

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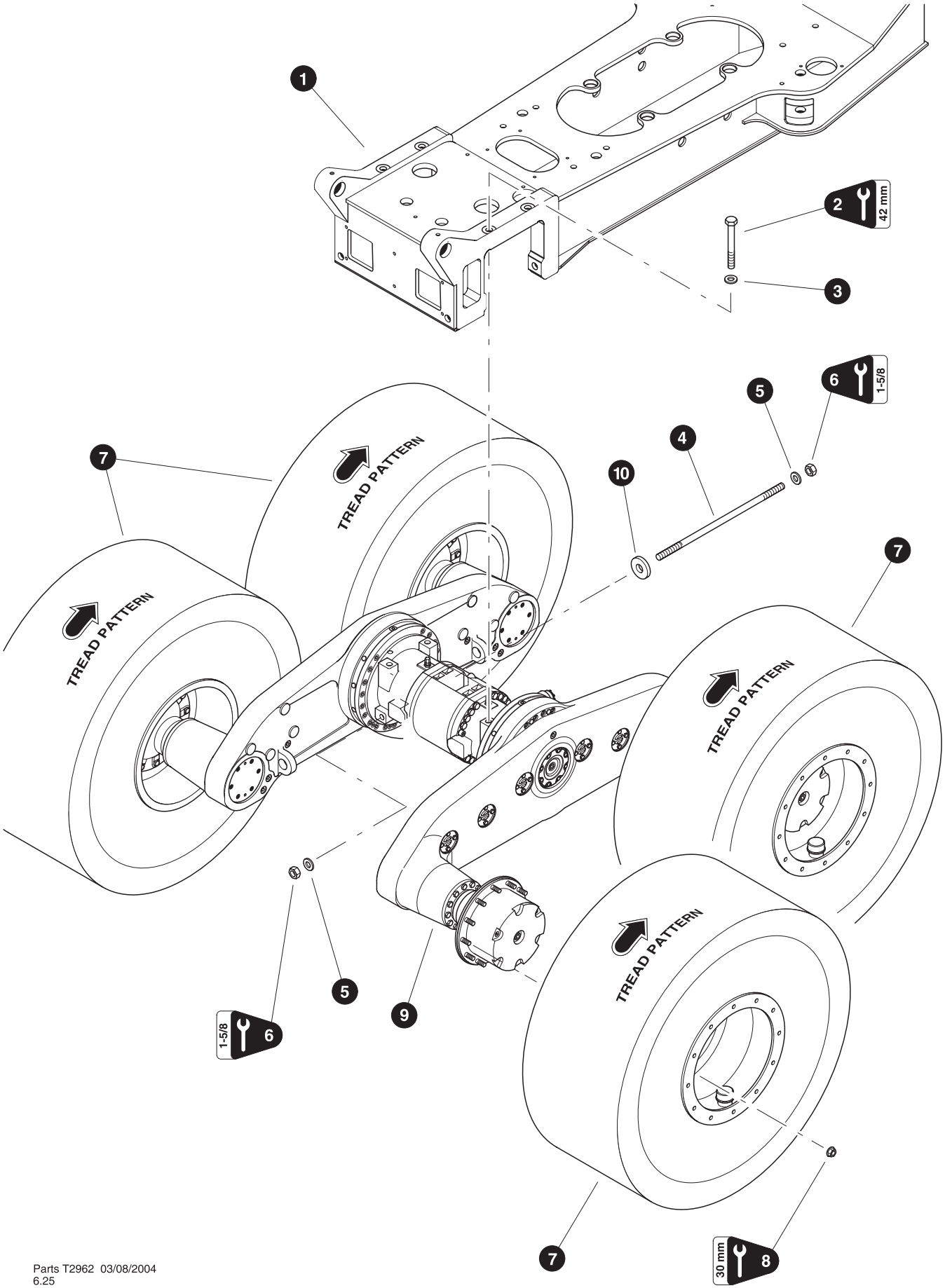
Section FR-2

TF 830, 840 Rear Frame - Frame & Drivetrain Installation

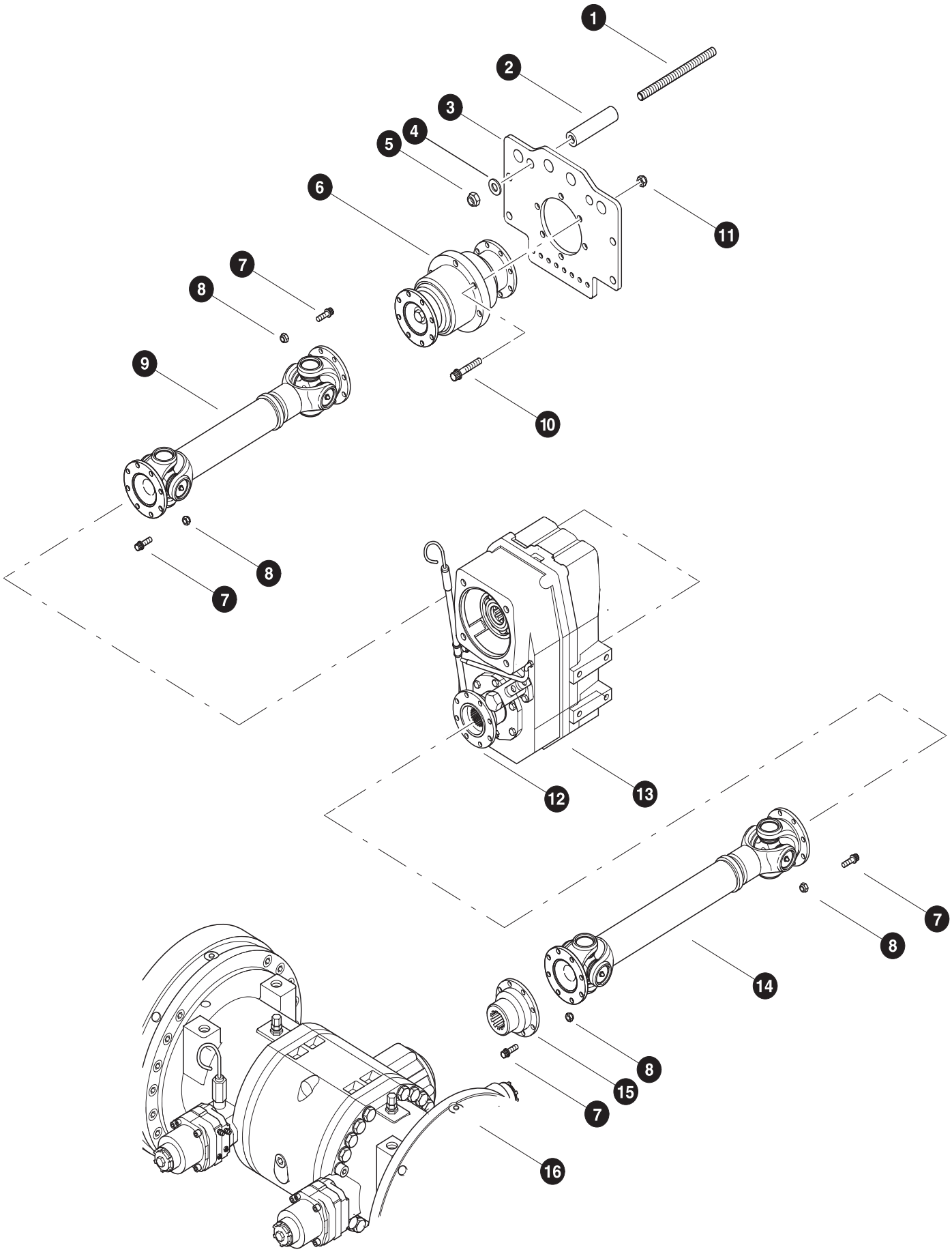


Parts T2962 03/08/2004
6.25

REAR AXLE INSTALLATION
(Machines Built After 12/01/03)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
2	23567-FR	4		BOLT - 30mm-3.5P x 220mm ***(Torque to 1100 ft.lbs. (1465 Nm))***	
3	23568-FR	4		WASHER, hardened flat - 30mm	
4	23851-FR	2		STUD - 1.25”- 7 X 31” ***(Torque to 1200 ft.lbs. (1600 Nm))***	
5	22531-FR	4		WASHER, SAE flat - 1-1/4”	
6	23989-FR	4		NUT, lock - 1-1/4”	
7	REF.	4	🕮	WHEEL ASSEMBLY	AX-5
8	19361-FR	48		NUT, lug ***(Torque to 600 ft.lbs. (800 Nm))***	
9	REF.	1	🕮	REAR AXLE.	AX-1
10	24003-FR	2		SPACER, axle spreader box	

🕮 See referenced page for component or assembly breakdown.



Parts T2805 08/08/03
12.50

DRIVE SHAFT INSTALLATION (NAF 2-SPEED SHAFTS)

(STANDARD FRAME)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	26037-FR	4		STUD, 3/4 X 8.5 (see note #2)	
2	80721-FR	4		SPACER	
3	42290-FR	1		BRACKET, bearing mount	
4	15550-FR	4		WASHER, SAE flat 3/4	
5	10817-FR	4		NUT, lock - 3/4”	
6	25218-FR	1		IDLER, driveshaft (HD)	
7	50261-FR	32		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
8	50262-FR	32		NUT, lock - 12mm	
9	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
10	50050-FR	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
11	10816-FR	6		NUT, lock - 5/8”	
12	-FR	2		YOKE, HD flange - NAF gearbox (7521.238)	
13	REF.	1	🕮	GEARBOX ASSY.	AX-4
14	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
15	23997-FR	1		YOKE, companion flange - AXLE	
16	REF.	1	🕮	AXEL ASSY..	AX-1-2
17	42290-FR	1			

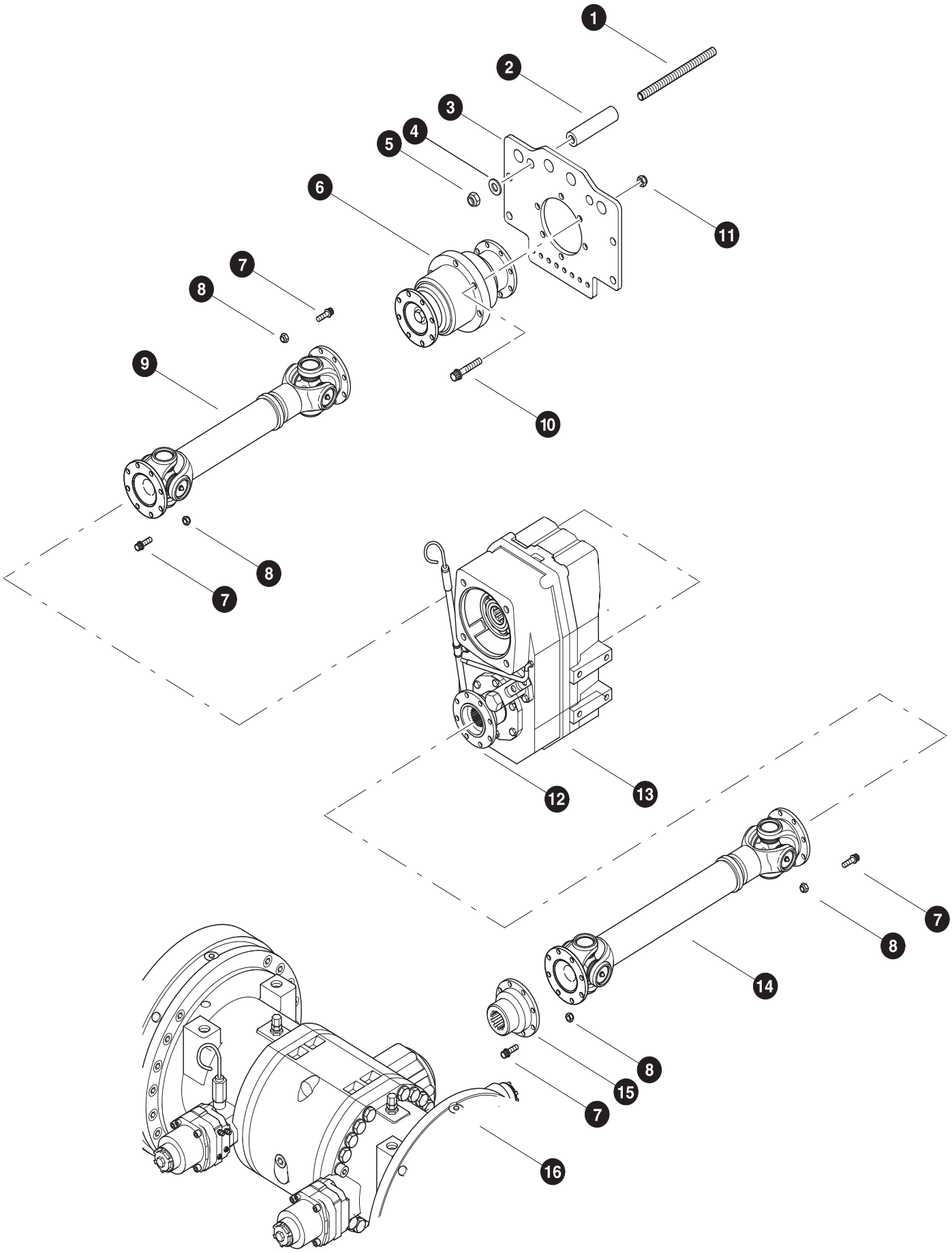
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 242 (blue) during installation.

Note #2:

Use Loctite 262 (red) during installation.



Parts T2805 08/08/03
12.50

DRIVE SHAFT INSTALLATION (NAF 2-SPEED SHAFTS)

(2-FOOT LONGER FRAME)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	26037-FR	4		STUD, 3/4 X 8.5 (see note #2)	
2	80721-FR	4		SPACER	
3	42290-FR	1		BRACKET, bearing mount	
4	15550-FR	4		WASHER, SAE flat 3/4	
5	10817-FR	4		NUT, lock - 3/4”	
6	25218-FR	1		IDLER, driveshaft (HD)	
7	50261-FR	32		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
8	50262-FR	32		NUT, lock - 12mm	
9	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
10	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
11	10816-FR	6		NUT, lock - 5/8”	
12	-FR	2		YOKE, HD flange - NAF gearbox (7521.238)	
13	REF.	1	🕮	GEARBOX ASSY.	AX-4
14	51986-FR	1	❑	DRIVE SHAFT (Gearbox to Axel) (472672-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
15	23997-FR	1		YOKE, companion flange - AXLE	
16	REF.	1	🕮	AXEL ASSY..	AX-1-2

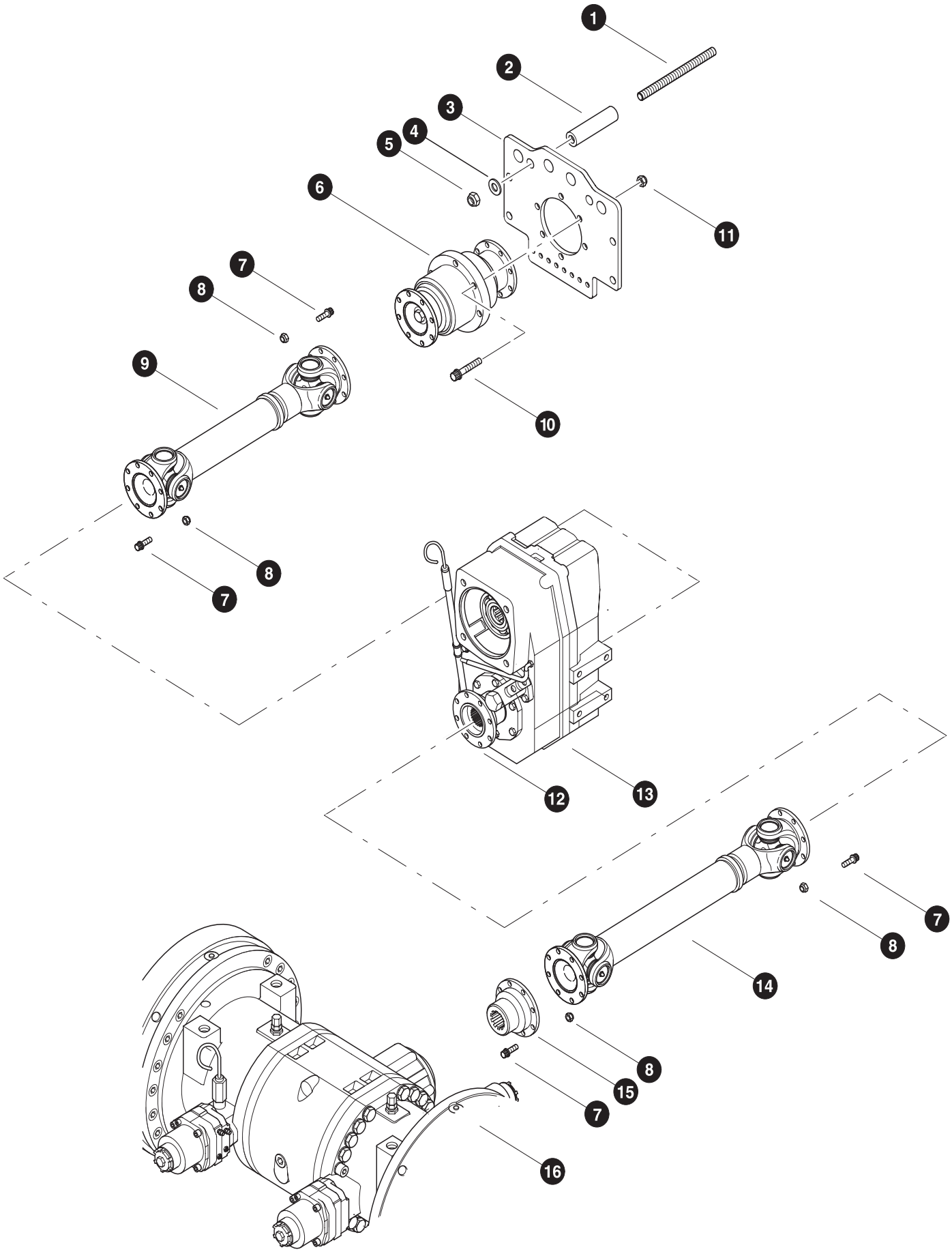
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 242 (blue) during installation.

Note #2:

Use Loctite 262 (red) during installation.



Parts T2805 08/08/03
12.50

DRIVE SHAFT INSTALLATION (NAF 2-SPEED SHAFTS)

(4-FOOT LONGER FRAME)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	26037-FR	4		STUD, 3/4 X 8.5 (see note #2)	
2	80721-FR	4		SPACER	
3	42290-FR	1		BRACKET, bearing mount	
4	15550-FR	4		WASHER, SAE flat 3/4	
5	10817-FR	4		NUT, lock - 3/4”	
6	25218-FR	1		IDLER, driveshaft (HD)	
7	50261-FR	32		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
8	50262-FR	32		NUT, lock - 12mm	
9	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
10	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
11	10816-FR	6		NUT, lock - 5/8”	
12	-FR	2		YOKE, HD flange - NAF gearbox (7521.238)	
13	REF.	1	🕮	GEARBOX ASSY.	AX-4
14	- - -	1	❑	DRIVE SHAFT (Gearbox to Axel) (479637-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
15	23997-FR	1		YOKE, companion flange - AXLE	
16	REF.	1	🕮	AXEL ASSY..	AX-1-2

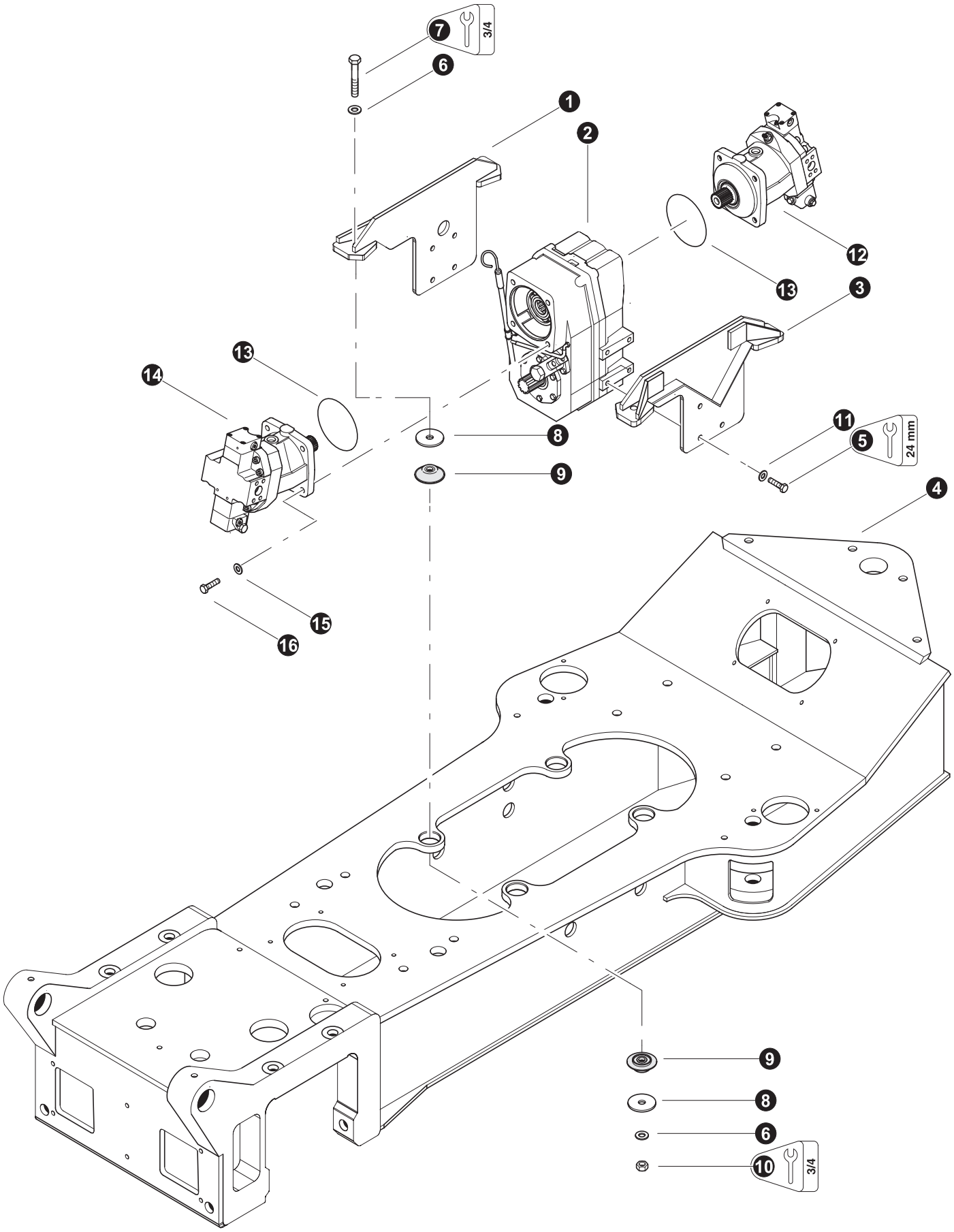
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 242 (blue) during installation.

Note #2:

Use Loctite 262 (red) during installation.



Parts T2963 03/08/04
9.375

REAR FRAME GEARBOX MOUNTING

Hydraulic Motor and Gearbox Installation
(NAF -DUAL MOTOR, 2 SPEED GEARBOX)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50830-FR	1		MOUNT, L.H. NAF 2 SPD 820 (REAR FRAME)	
2	REF.	1	🕮	TRANSFER CASE.	AX-4
3	50829-FR	1		MOUNT, R.H. NAF 2 SPD 820 (REAR FRAME)	
4	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
5	50382-FR	8		BOLT - 16mm 2.00 X 40mm ***(Torque to 180 ft-lbs)*** *(See Note #1 Below)*	
6	15550-FR	8		WASHER, SAE flat - 3/4”	
7	10844-FR	4		BOLT - 3/4” x 5”	
8	17918-FR	8		WASHER, isolator mount .875”	
9	17904-FR	8		ISOLATOR	
10	10817-FR	4		NUT, lock 3/4”	
11	10771-FR	8		WASHER, SAE flat - 5/8”	
14	20967-FR	2		O-RING, WHEEL DRIVE MOTOR PILOT (FWD)	
15	42110-FR	8		WASHER, FLAT - 20MM	
16	18525-FR	8		BOLT, - 20mm X 50 mm *(See Note #1 Below)*	

🕮 See referenced page for component or assembly breakdown.

Note #1:

Use Loctite 242 *(BLUE)* during install.

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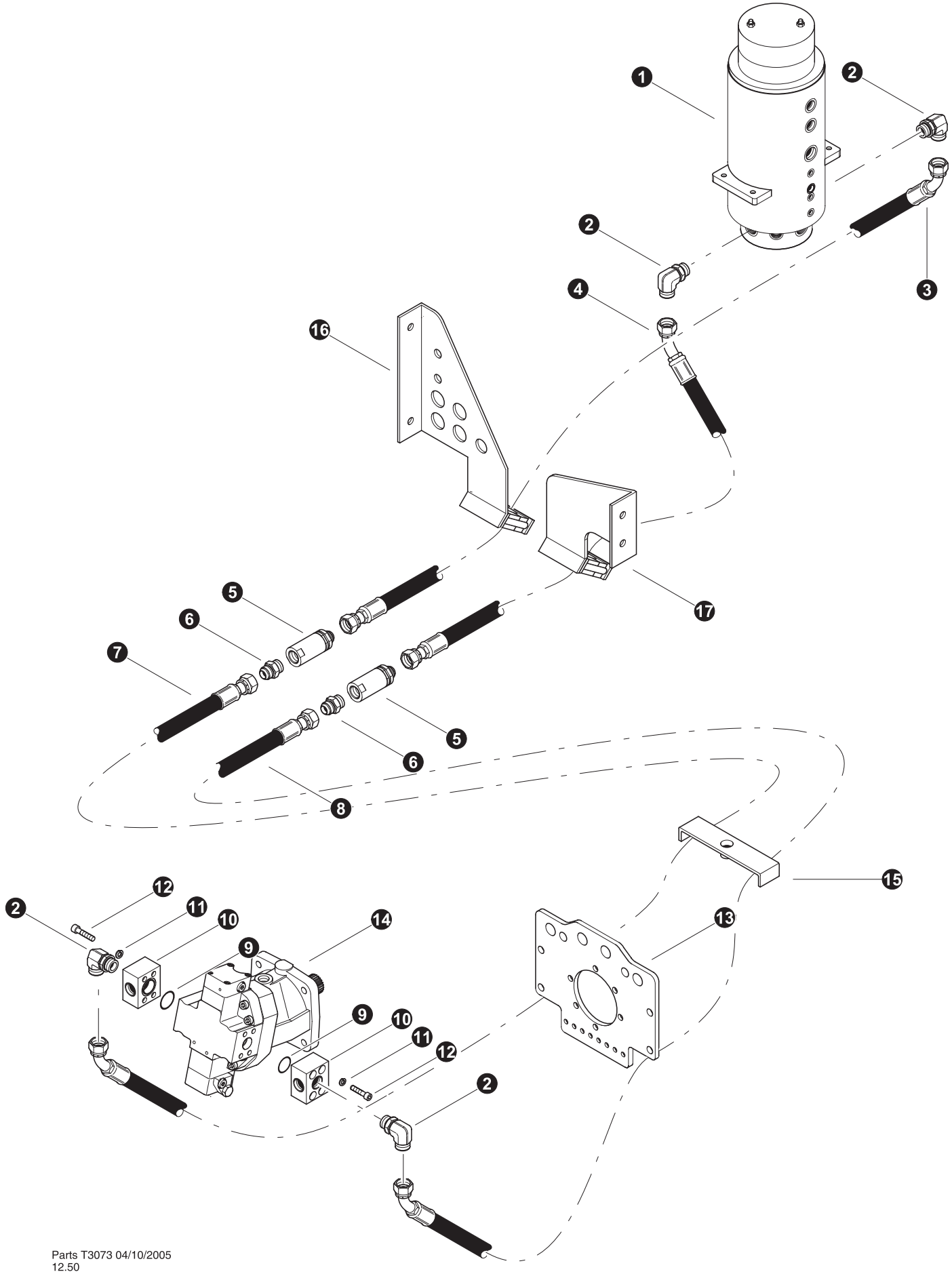
Section FR-3

TF 820 REAR FRAME - Hydraulic Circuits



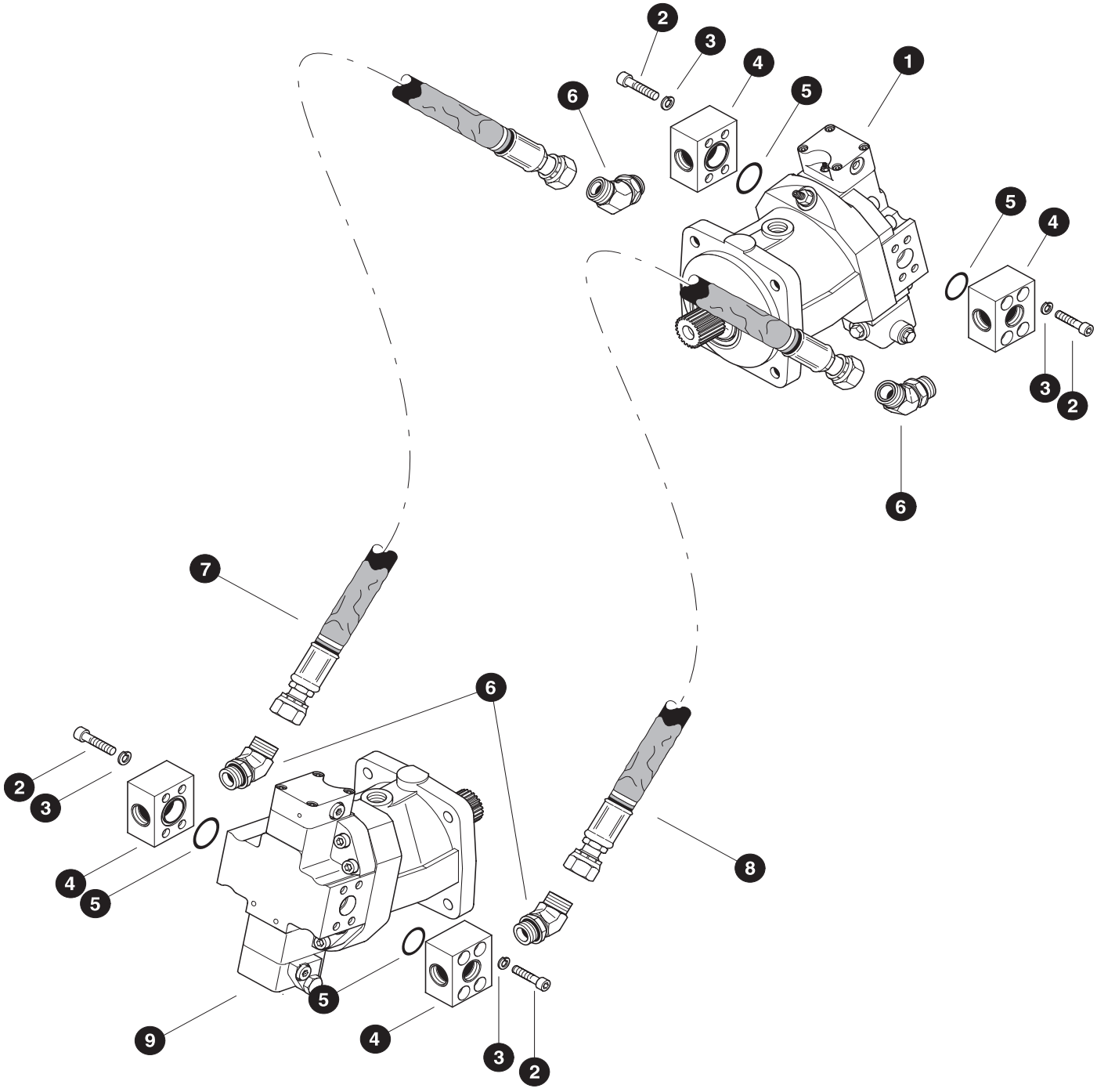
Parts T3073 04/10/2005
12.50

REAR FRAME HYDRAULICS

ROTARY MANIFOLD TO REAR DRIVE MOTOR
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD.	UP-1
2	15484-FR	2		ELBOW, 90 - 6801-16	
3	-FR	1		HOSE ASSEMBLY - 6052-16-16JS-1604 (Rotary manifold lower port “7” to driveline swivel)	
4	-FR	1		HOSE ASSEMBLY - 6044-16-16JS-1604 (Rotary manifold lower port “8” to driveline swivel)	
5	19541-FR	2		SWIVEL, inline - PS1610310-16-16-716	
6	15497-FR	2		CONNECTOR, straight - 6400-16	
7	-FR	1		HOSE ASSEMBLY - 6144-16-16JS-1604 (Driveline swivel to rear hydro motor)	
8	-FR	1		HOSE ASSEMBLY - 6144-16-16JS-1604 (Driveline swivel to rear hydro motor)	
9	15378-FR	2		O-RING, 1.25”	
10	26008-FR	2		MANIFOLD, rexroth drive motor	
11	50075-FR	8		WASHER, LOCK 1/2	
12	50074-FR	8		BOLT, ALLEN 1/2 X 1 1/2”	
13	42290-FR	1		BRACKET, bearing mount	
14	REF	1		HYDRAULIC WHEEL DRIVE MOTOR	FR-4
15	40830-FF	1		BRACKET, articulation joint hose	
16	51867-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
17	51866-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (RH)	

🕮 See referenced page for component or assembly breakdown.



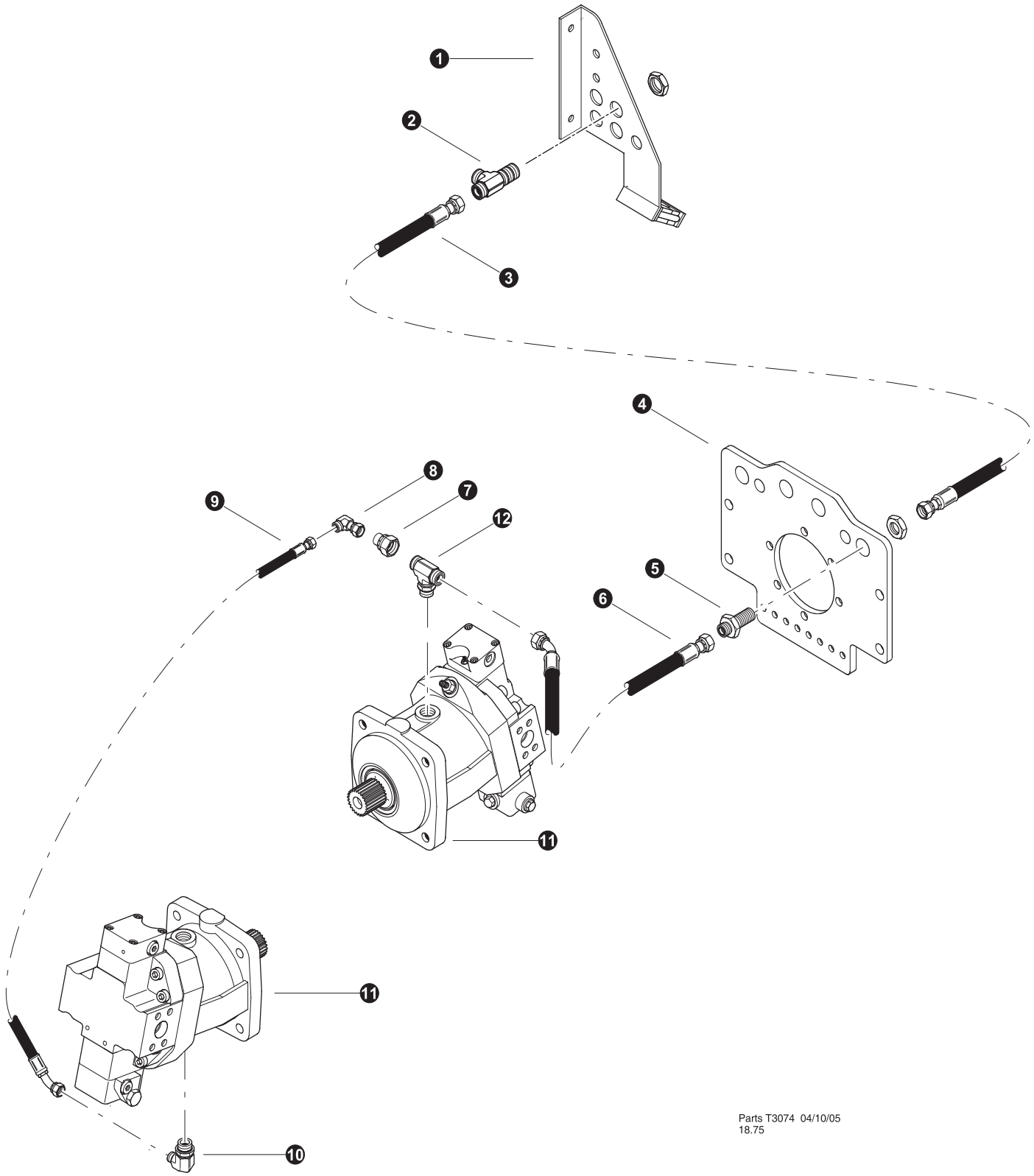
Parts T2820 08/13/2003
18.75

REAR FRAME HYDRAULICS

Front to Rear Hydraulic Motor Connection - Pressure (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	WHEEL DRIVE MOTOR	FR-4
2	50074-FR	8		BOLT, ALLEN 1/2 X 1 1/2”	
3	50075-FR	8		WASHER, LOCK 1/2	
4	26008-FR	2		MANIFOLD, rexroth drive motor	
5	15378-FR	2		O-RING, 1.25”	
6	15473-FR	4		ELBOW, 45 FF6802 - 16	
7	50904-FR	1		HOSE ASSEMBLY - 6033-16-160S-160S (Rear wheel drive motor port “B” tee to front wheel drive motor port “A”)	
8	50904-FR	1		HOSE ASSEMBLY - 6033-16-160S-160S (Rear wheel drive motor port “B” tee to front wheel drive motor port “A”)	
9	REF.	1	🕮	WHEEL DRIVE MOTOR	FR-4

🕮 See referenced page for component or assembly breakdown.



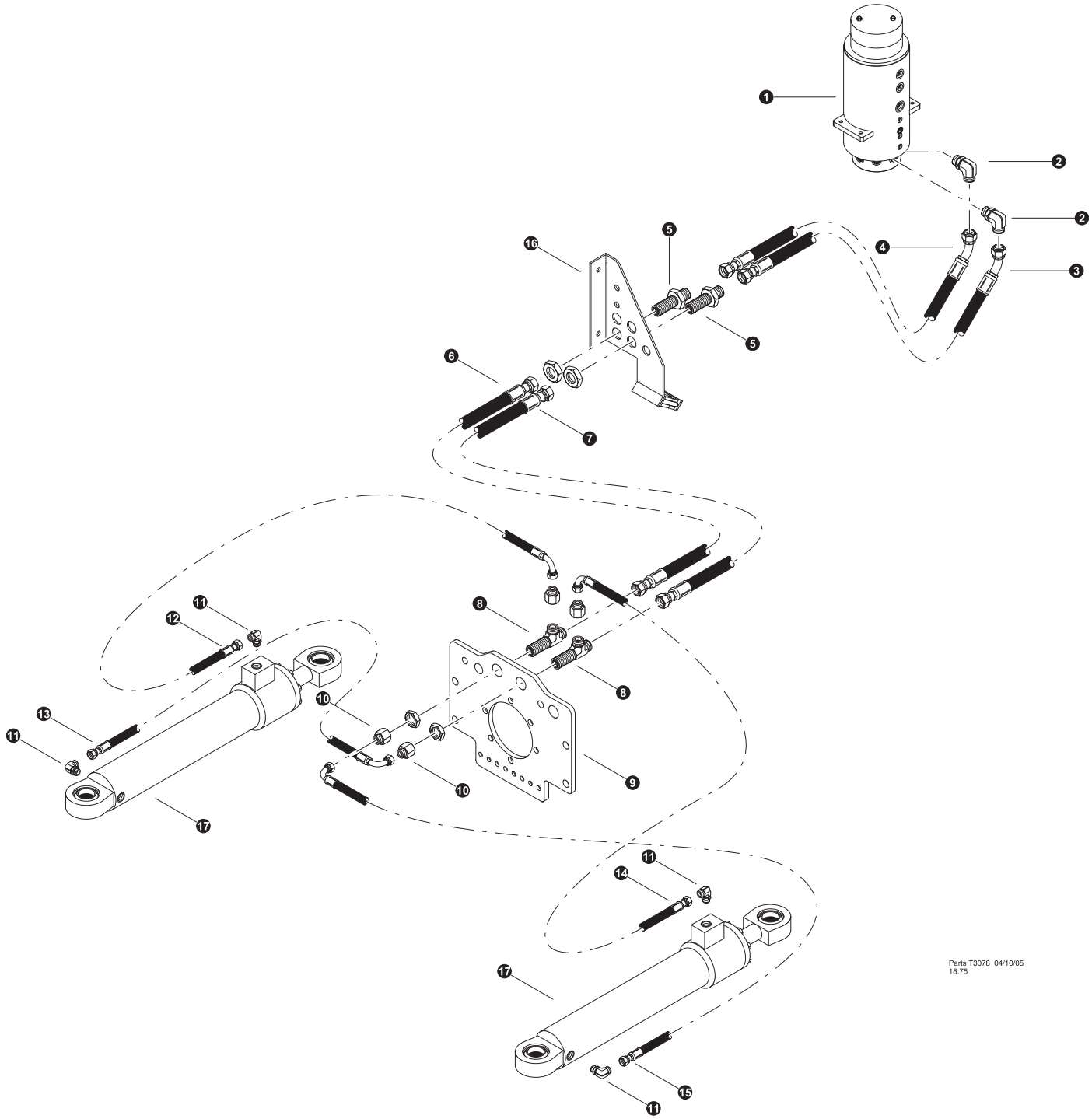
Parts T3074 04/10/05
18.75

REAR FRAME HYDRAULICS

Front to Rear Hydraulic Motor Connection - Case Drain (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51867-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
2	20029-FR	1		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
3	-FR	1		HOSE ASSEMBLY - 4040.5-12-120S-120S (Bulkhead tee to rear bulkhead plate)	
4	42290-FR	1		BRACKET, bearing mount	
5	19754-FR	1		CONNECTOR, STR BULKHEAD - 12 WLO-WLNL-S	
6	-FR	1		HOSE ASSEMBLY - 2052-12-120S-1204 (Bulkhead to Front motor case tee)	
7	18581-FR	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
8	17085-FR	1		ELBOW, 90 SWIVEL - 6500-8	
9	50619-FR	1		HOSE ASSEMBLY - 4030-08-08OS-08O9 (Front motor to rear motor case drain)	
10	15372-FR	1		ELBOW, 90 - FF1868T-0812S	
11	REF.	2	🕮	WHEEL DRIVE MOTOR	FR-4
12	22907-FR	1		TEE - 845-TTO-12X12 RUN	

🕮 See referenced page for component or assembly breakdown.

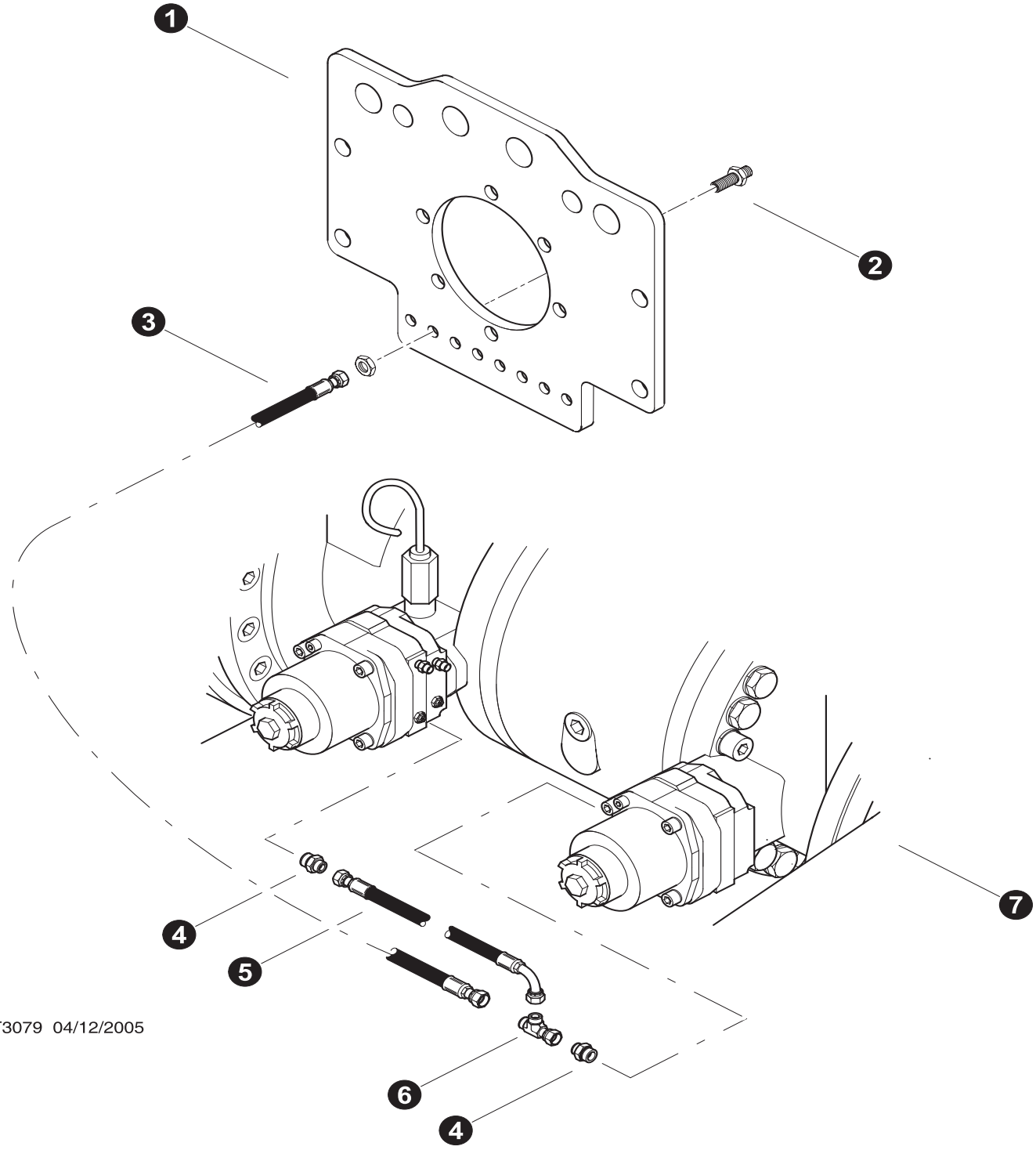

Parts T3078 04/10/05
18.75

REAR FRAME HYDRAULICS

Steering Connections
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	17688-FR	2		ELBOW, 90 - FF1868T-1212S	
3	-FR	1		HOSE ASSEMBLY - 4048-12-120S-1204 (Lower rotary manifold port #9 to Right bulkhead fitting)	
4	-FR	1		HOSE ASSEMBLY - 4051.5-12-120S-1204 (Lower rotary manifold port #10 to Left bulkhead fitting)	
5	19754-FR	2		CONNECTOR, straight bulkhead - 12WL0-WLNL-S	
6	-FR	1		HOSE ASSEMBLY - 4077-12-120S-120S (Left bulkhead fitting to Left bulk head Tee fitting)	
7	-FR	1		HOSE ASSEMBLY - 4077-12-120S-120S (Right bulkhead fitting to Right bulk head Tee fitting)	
8	20029-FR	2		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
9	42290-FR	1		BRACKET, bearing mount	
10	18581-FR	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
11	16360-FR	4		ELBOW, 90° - FF1868T-0808S	
12	50898-FR	1		HOSE ASSEMBLY - 4065-08-080S-0809 (Left bulkhead tee to left steer cylinder rod port)	
13	50617-FR	4		HOSE ASSEMBLY - 4048-08-080S-0809 (Left bulkhead tee to left steer cylinder base port)	
14	50898-FR	1		HOSE ASSEMBLY - 4065-08-080S-0809 (Right bulkhead tee to left steer cylinder rod port)	
15	50617-FR	4		HOSE ASSEMBLY - 4048-08-080S-0809 (Right bulkhead tee to Right steer cylinder base port)	
16	51867-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
17	REF.	2	🕮	STEER CYLINDERS	FR-4

🕮 See referenced page for component or assembly breakdown.



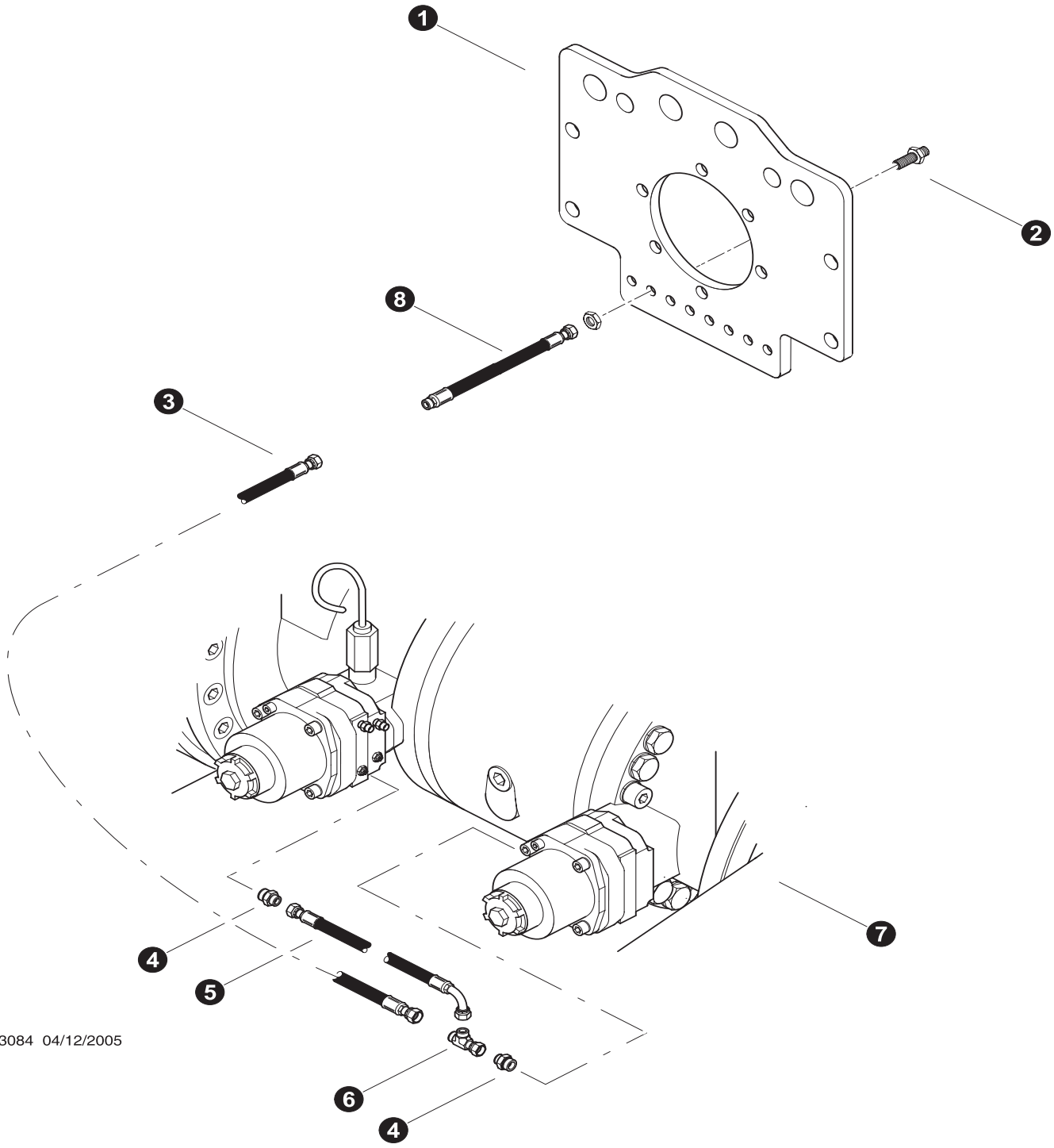
Parts T3079 04/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Parking Brake (Standard Front and Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-FR	1		HOSE ASSEMBLY - 2129-04-04OS-04OS (Rear frame PB bulkhead to Rear Axle)	
4	19470-FR	2		CONNECTOR, STR 04-14m	
5	50607-FR	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (PB jumper hose on rear axel)	
6	15176-FR	2		TEE - 04	
7	REF.	1	🕮	REAR AXLE ASSEMBLY.	AX

🕮 See referenced page for component or assembly breakdown.



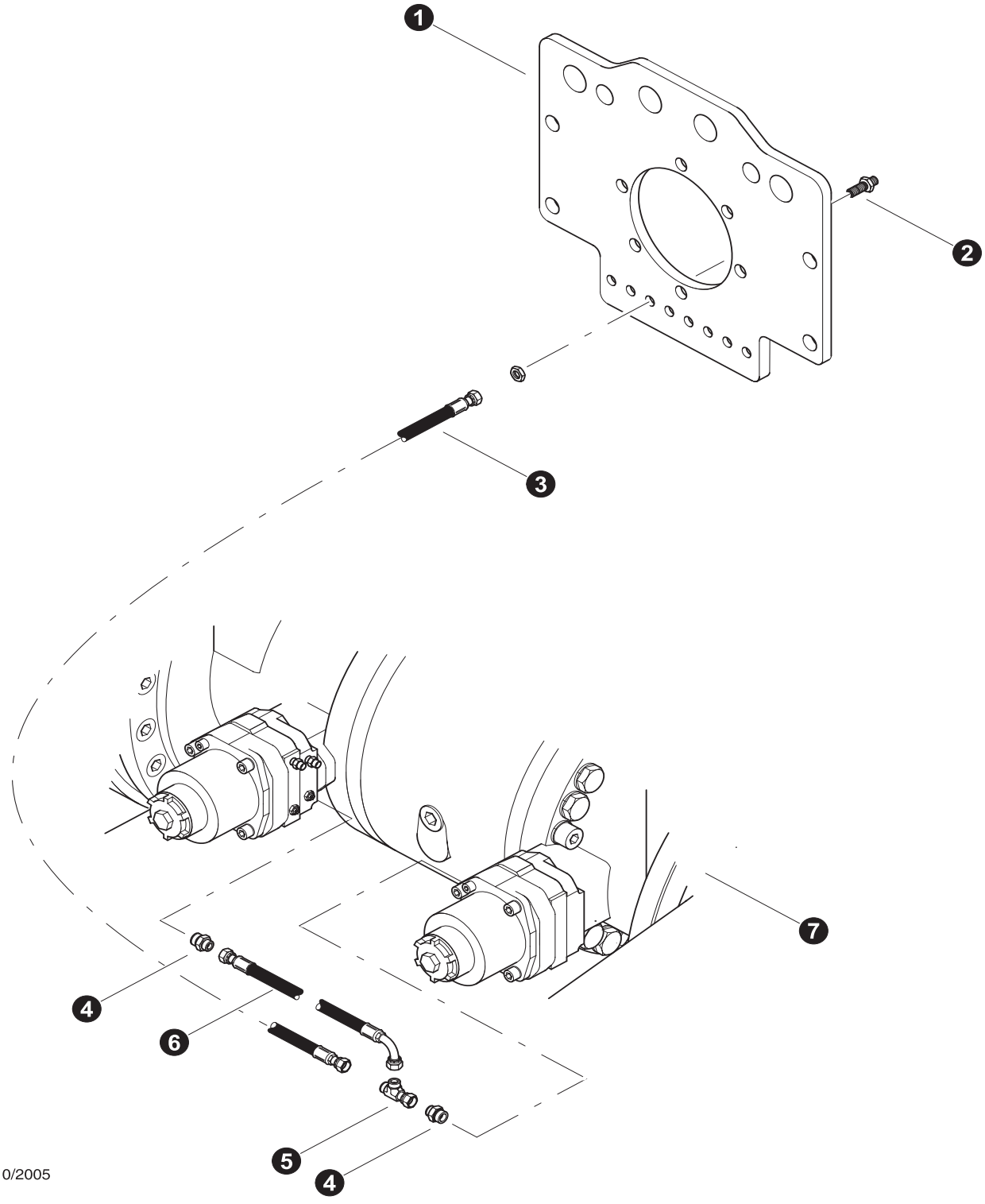
Parts T3084 04/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Parking Brake (Standard Front and 2 foot longer Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-FR	1		HOSE ASSEMBLY - 2129-04-04OS-04OS (Rear frame PB bulkhead to Rear Axle)	
4	19470-FR	2		CONNECTOR, STR 04-14m	
5	50607-FR	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (PB jumper hose on rear axel)	
6	15176-FR	2		TEE - 04	
7	REF.	1	🕮	REAR AXLE ASSEMBLY.	AX
8	24886-FR	1		HOSE ASSEMBLY - 4024-04-04OS-04OM (PB 2’ jumper hose)	

🕮 See referenced page for component or assembly breakdown.



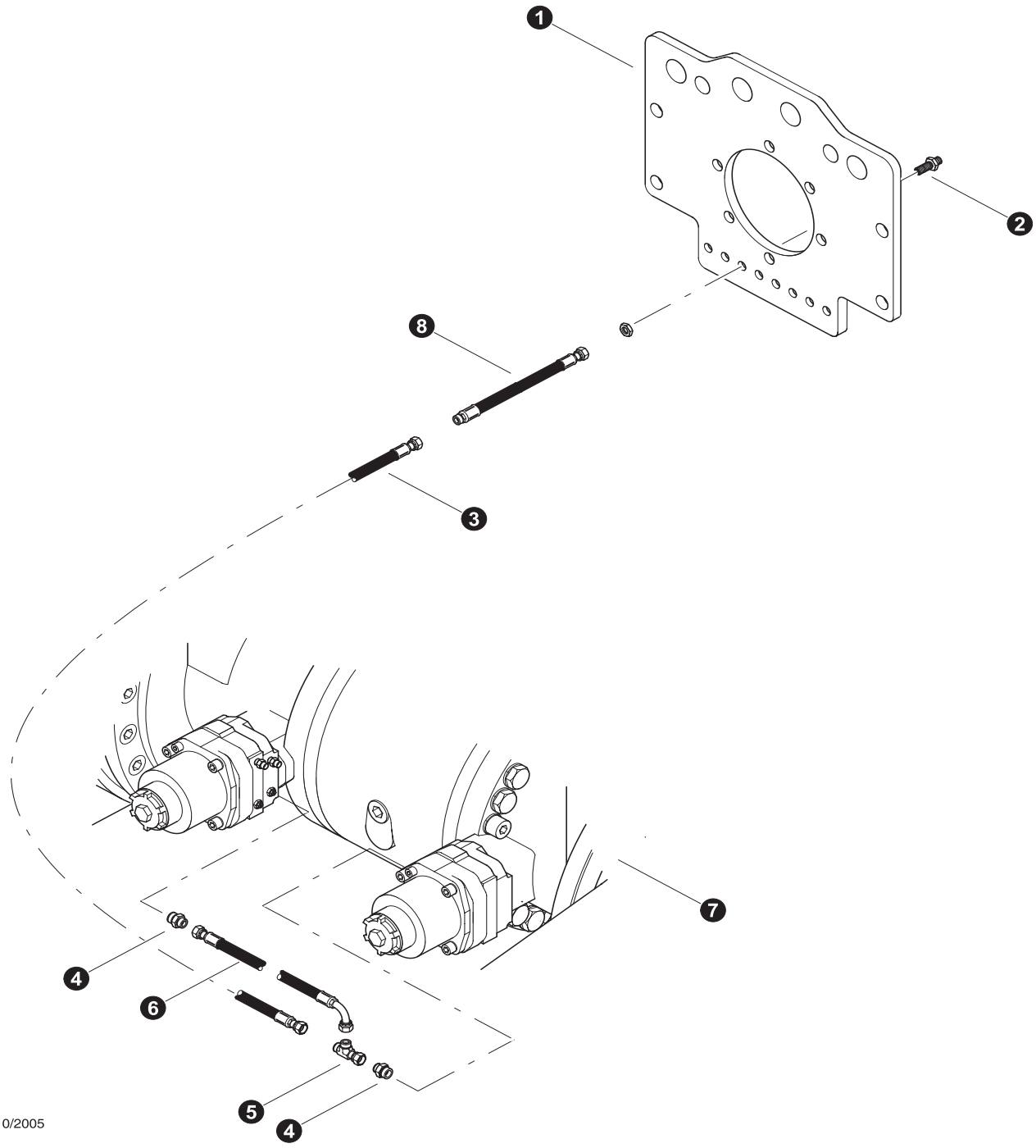
Parts T3080 04/10/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Travel Brake (Standard Front and Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-FR	1		HOSE ASSEMBLY - 2129-04-04OS-04OS (Rear frame TB bulkhead to Rear Axle)	
4	19470-FR	2		CONNECTOR, STR 04-14m	
5	50607-FR	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (TB jumper hose on rear axel)	
6	15176-FR	2		TEE - 04	
7	REF.	1	🕮	REAR AXLE ASSEMBLY.	AX

🕮 See referenced page for component or assembly breakdown.



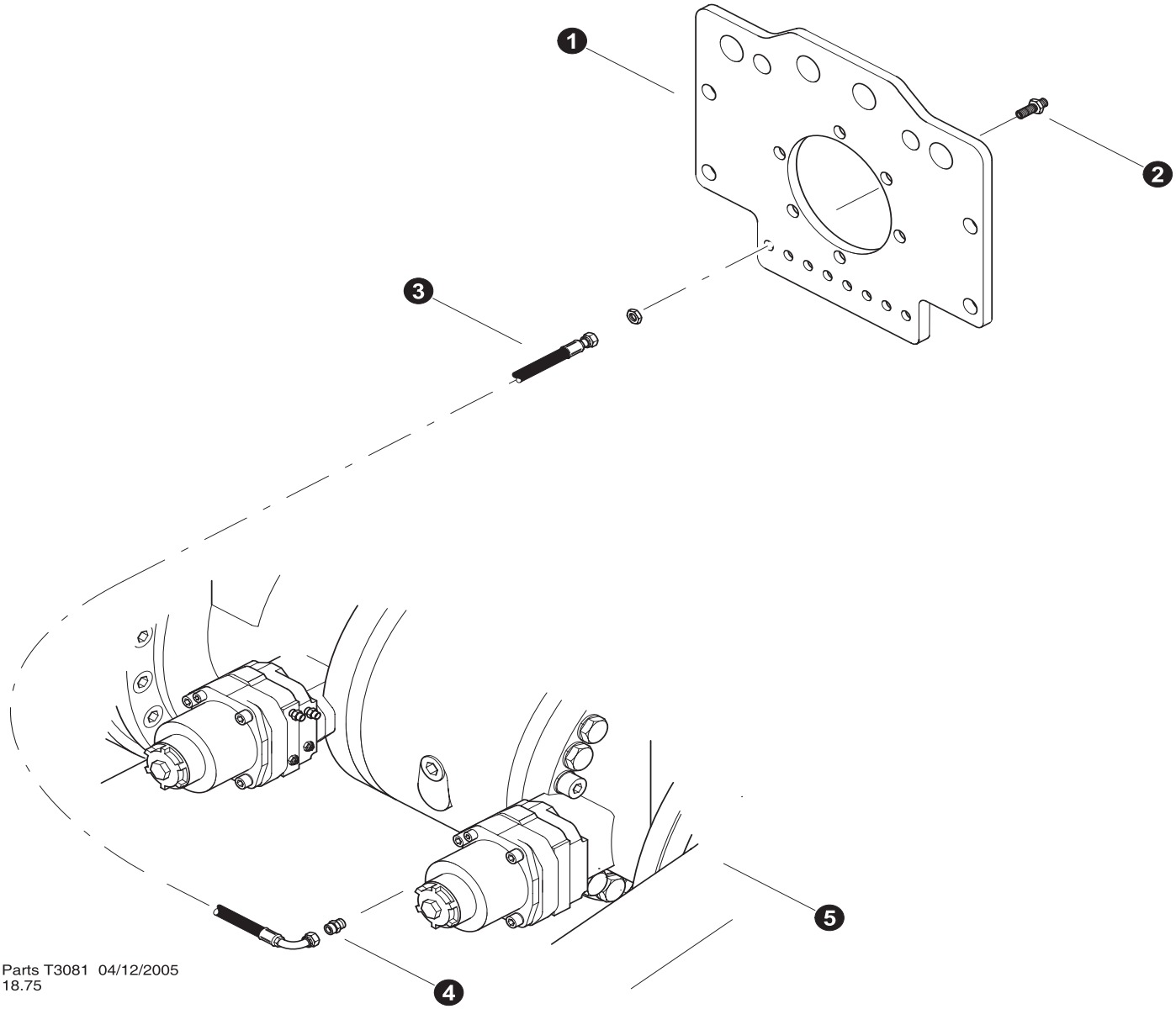
Parts T3085 04/10/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Travel Brake (Standard Front and 2 foot longer Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-FR	1		HOSE ASSEMBLY - 2129-04-04OS-04OS (Rear frame TB bulkhead to Rear Axle)	
4	19470-FR	2		CONNECTOR, STR 04-14m	
5	50607-FR	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (TB jumper hose on rear axel)	
6	15176-FR	2		TEE - 04	
7	REF.	1	🕮	REAR AXLE ASSEMBLY.	AX
8	24886-FR	1		HOSE ASSEMBLY - 4024-04-04OS-04OM (PB 2’ jumper hose)	

🕮 See referenced page for component or assembly breakdown.



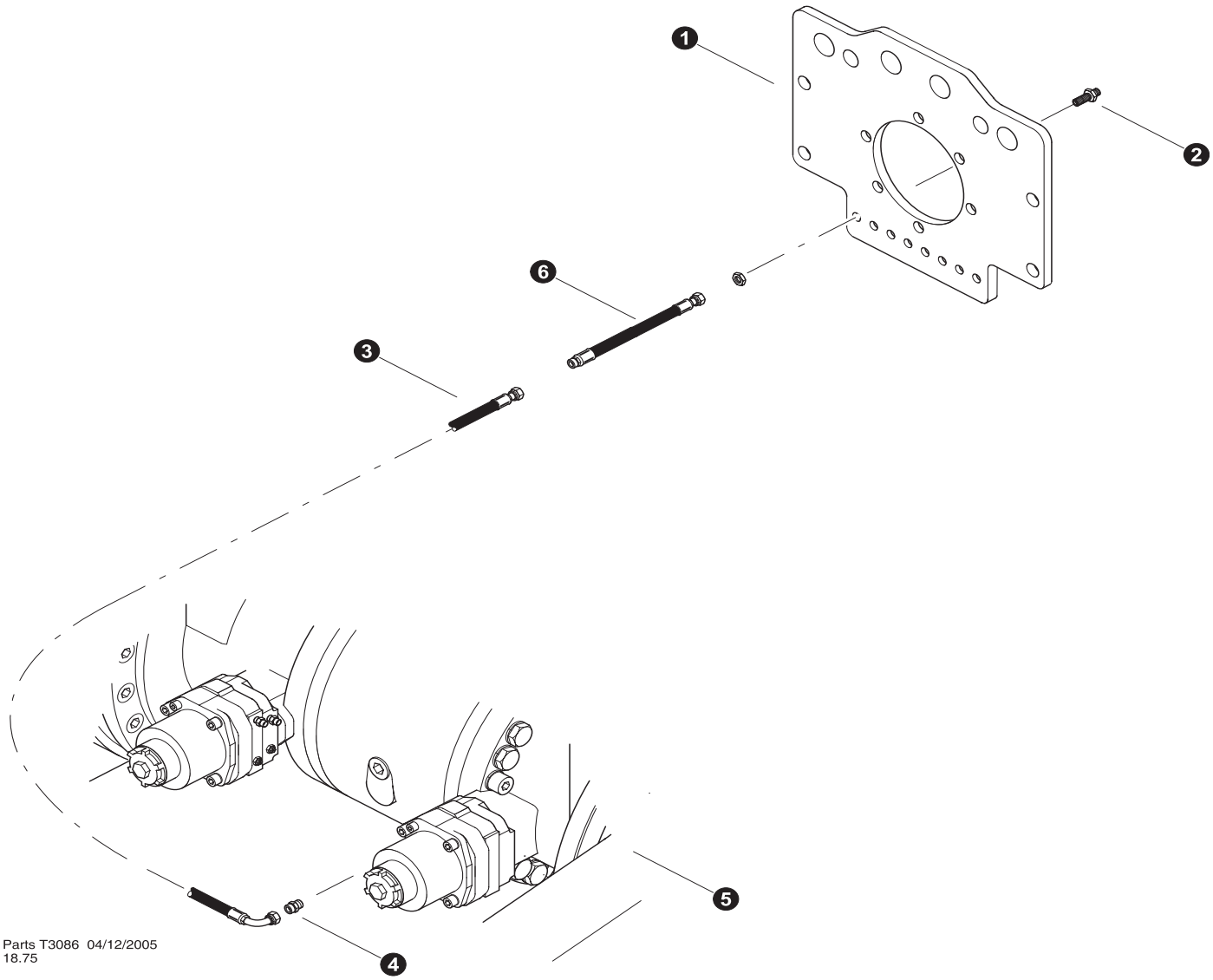
Parts T3081 04/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Differental Lock (Standard Front and Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-FR	1		HOSE ASSEMBLY - 2129-04-04OS-04OS (Rear frame TB bulkhead to Rear Axle)	
4	19470-FR	1		CONNECTOR, STR 04-14m	
5	REF.	1	🕮	REAR AXLE ASSEMBLY.	AX

🕮 See referenced page for component or assembly breakdown.



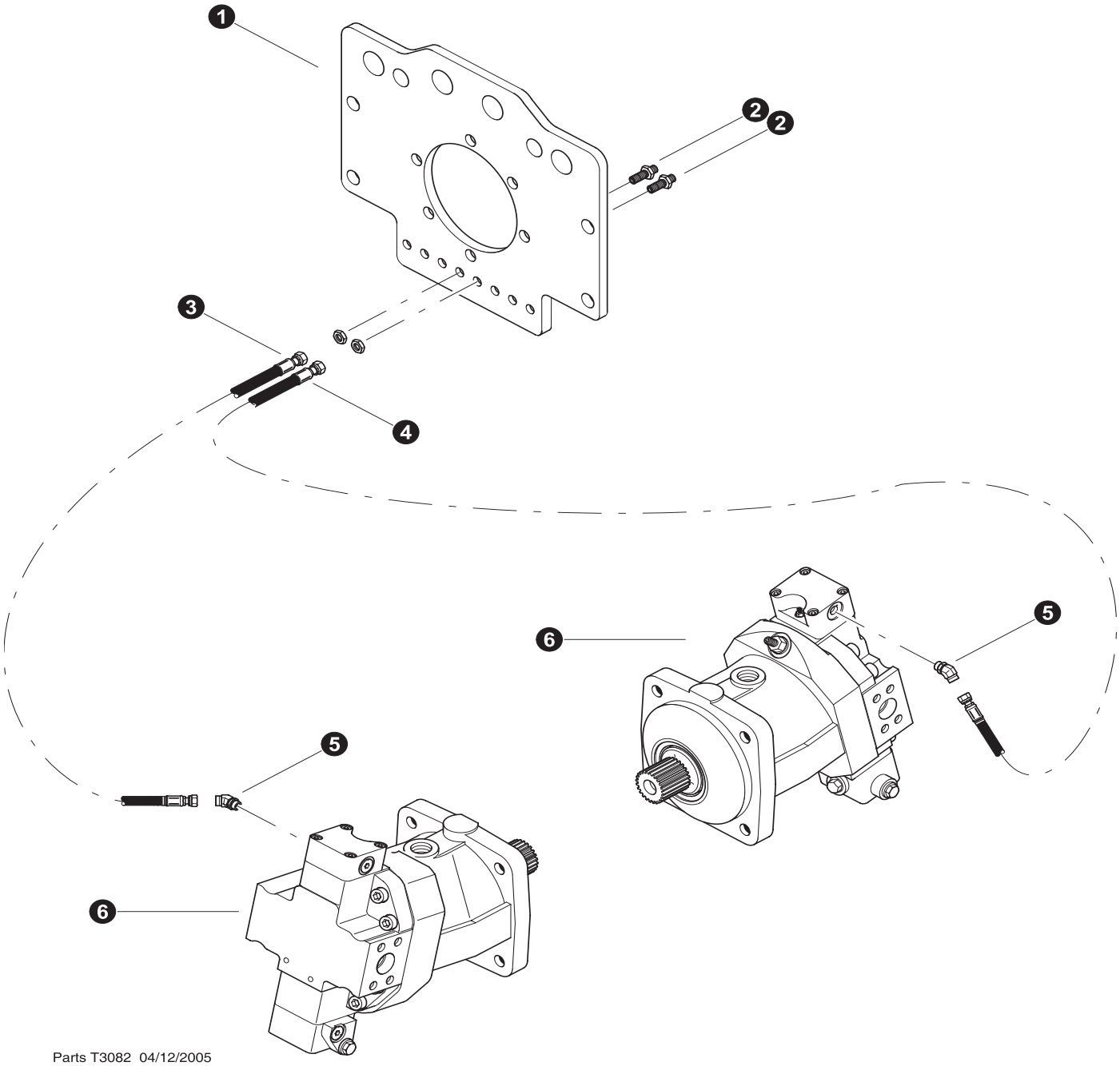
Parts T3086 04/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Differental Lock (Standard Front and 2 foot longer Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-FR	1		HOSE ASSEMBLY - 2129-04-04OS-04OS (Rear frame TB bulkhead to Rear Axle)	
4	19470-FR	1		CONNECTOR, STR 04-14m	
5	REF.	1	🕮	REAR AXLE ASSEMBLY.	AX
6	24886-FR	1		HOSE ASSEMBLY - 4024-04-04OS-04OM (PB 2' jumper hose) .	

🕮 See referenced page for component or assembly breakdown.



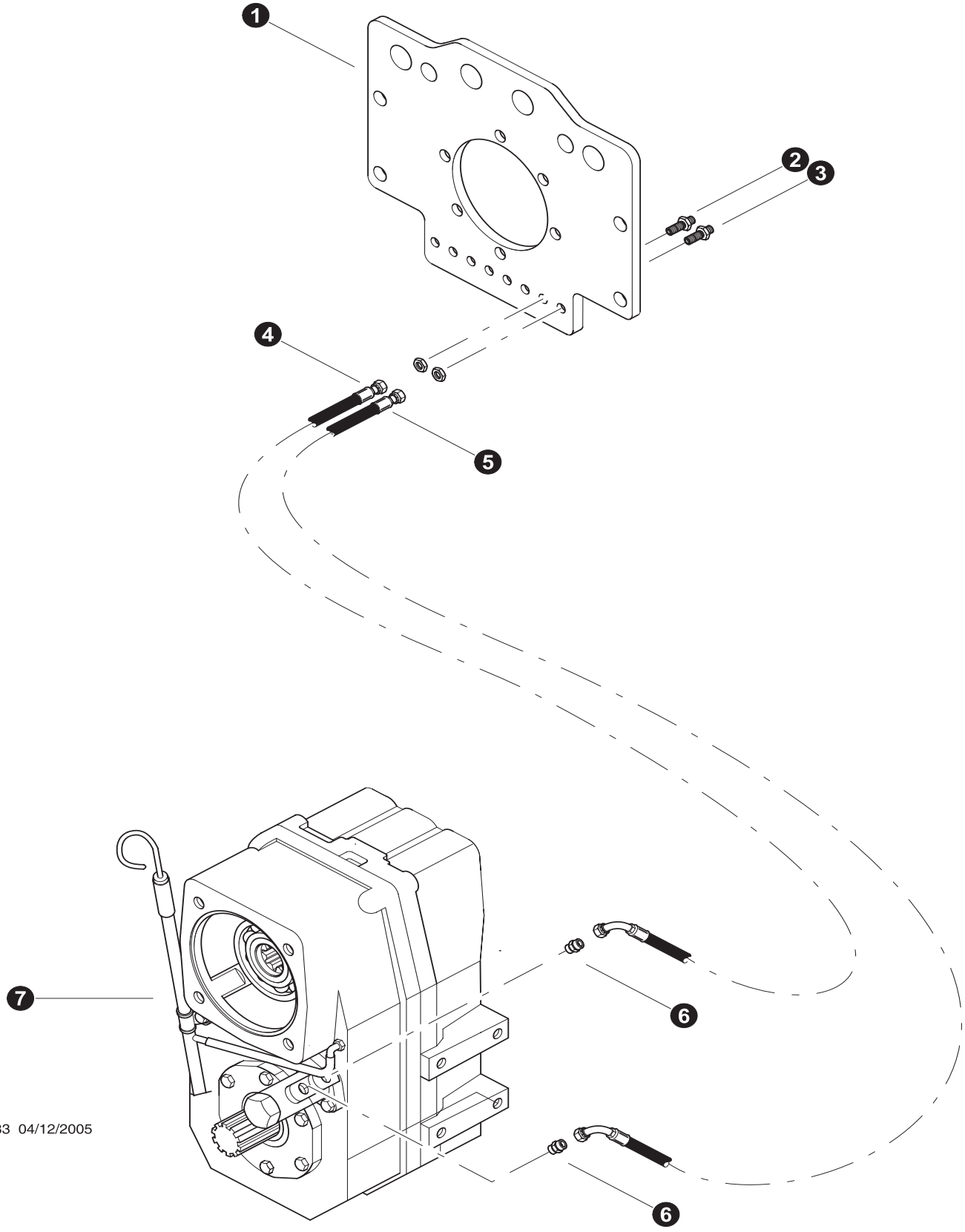
Parts T3082 04/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Hydraulic Motor Shift (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	2		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	50599-FR	1		HOSE ASSEMBLY - 2051-04-04OS-04OS (MS bulkhead to Front Motor)	
4	50603-FR	1		HOSE ASSEMBLY - 2093-04-04OS-04OS (MS1 bulkhead to Rear Motor)	
5	17646-FR	1		ELBOW, 45 V50LOS 0406	
6	REF.	1	🕮	WHEEL DRIVE MOTOR	FR-4

🕮 See referenced page for component or assembly breakdown.



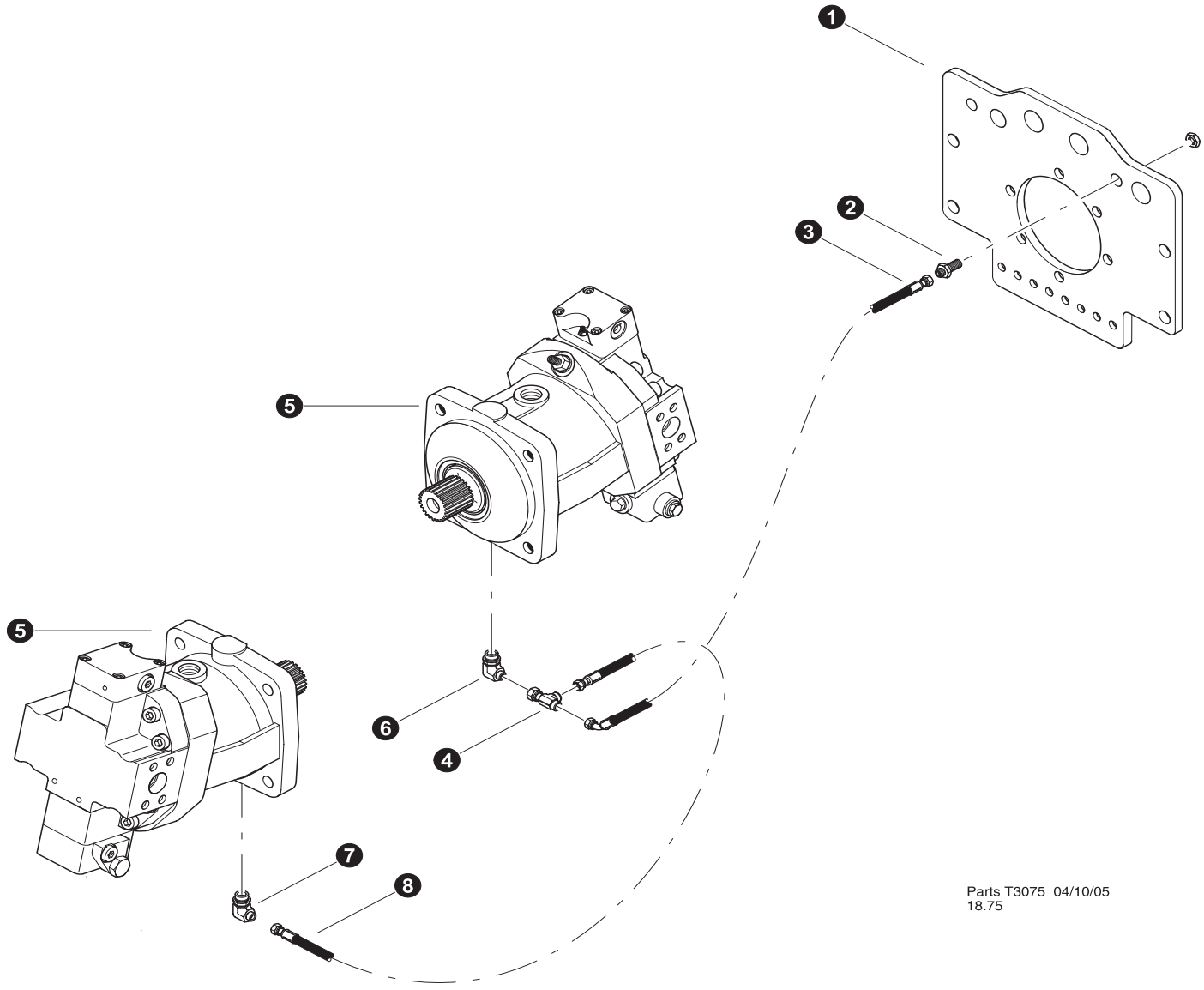
Parts T3083 04/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Gear Box Shift
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	18582-FR	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	18582-FR	1		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
4	50608-FR	1		HOSE ASSEMBLY - 2088-04-04OS-04O9 (GA bulkhead to Gear Box)	
5	50608-FR	1		HOSE ASSEMBLY - 2088-04-04OS-04O9 (GB bulkhead to Gear Box)	
6	19470-FR	2		CONNECTOR, STR 04-14m	
7	REF.	1	🕮	GEARBOX ASSEMBLY	AX

🕮 See referenced page for component or assembly breakdown.



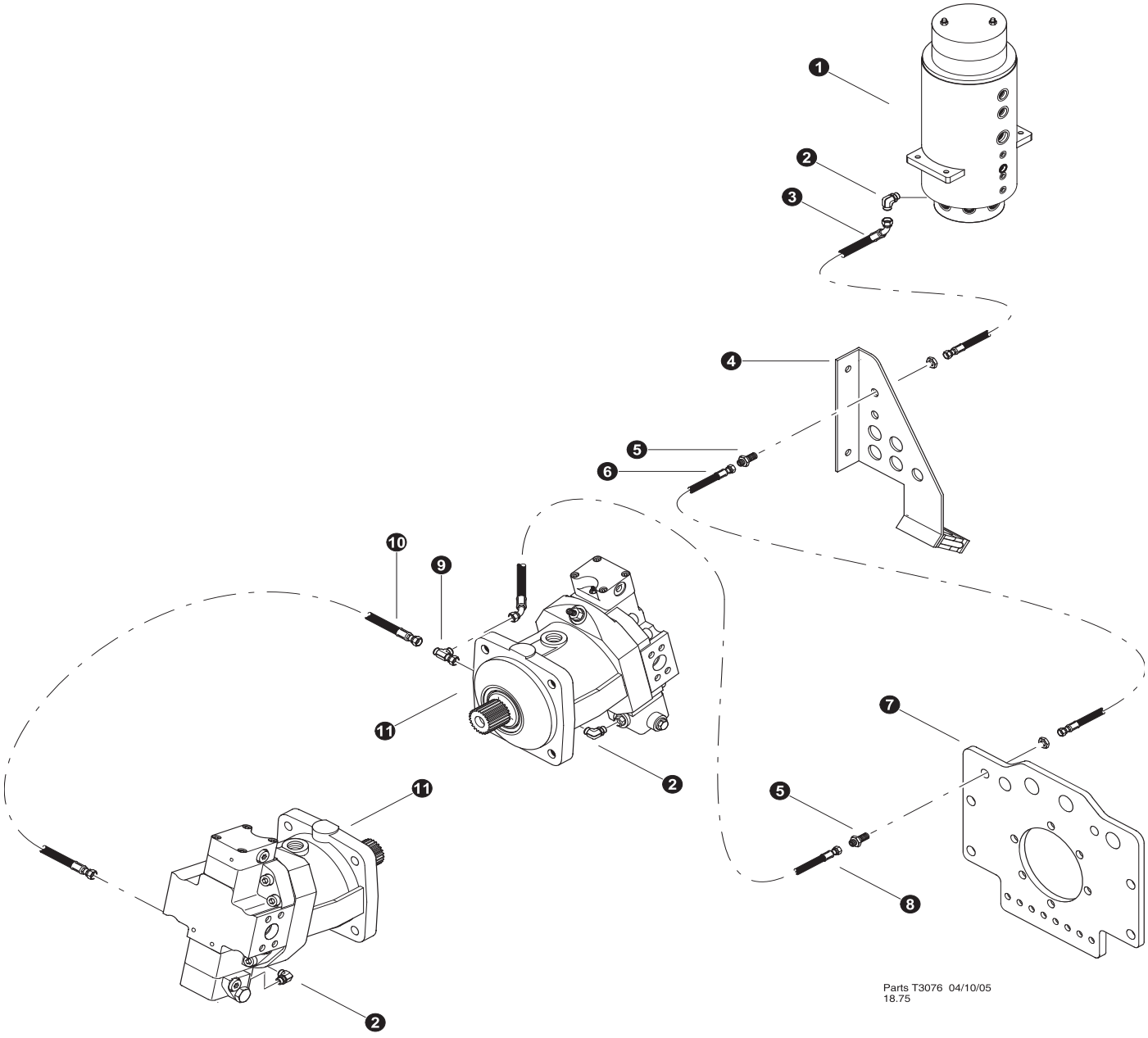
Parts T3075 04/10/05
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Hydro Motor Flushing Pressure (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-FR	1		BRACKET, bearing mount	
2	50420-FR	1		CONNECTOR, STR BULKHEAD - 832-TT-06	
3	50599-FR	1		HOSE ASSEMBLY - 2051.5-06-06OS-06O4 (Flushing Bulkhead to Front Motor)	
4	22730-FR	1		TEE - 6 R6LO-S	
5	REF.	1	🕮	WHEEL DRIVE MOTOR	FR-4
6	22405-FR	1		ELBOW, 90 - 8-6 C5OLO-S	
7	22405-FR	1		ELBOW, 90 - 8-6 C5OLO-S	
8	-FR	1		HOSE ASSEMBLY - 2053-06-06OS-06OS (Front Motor Flushing to Rear Motor)	

🕮 See referenced page for component or assembly breakdown.


1
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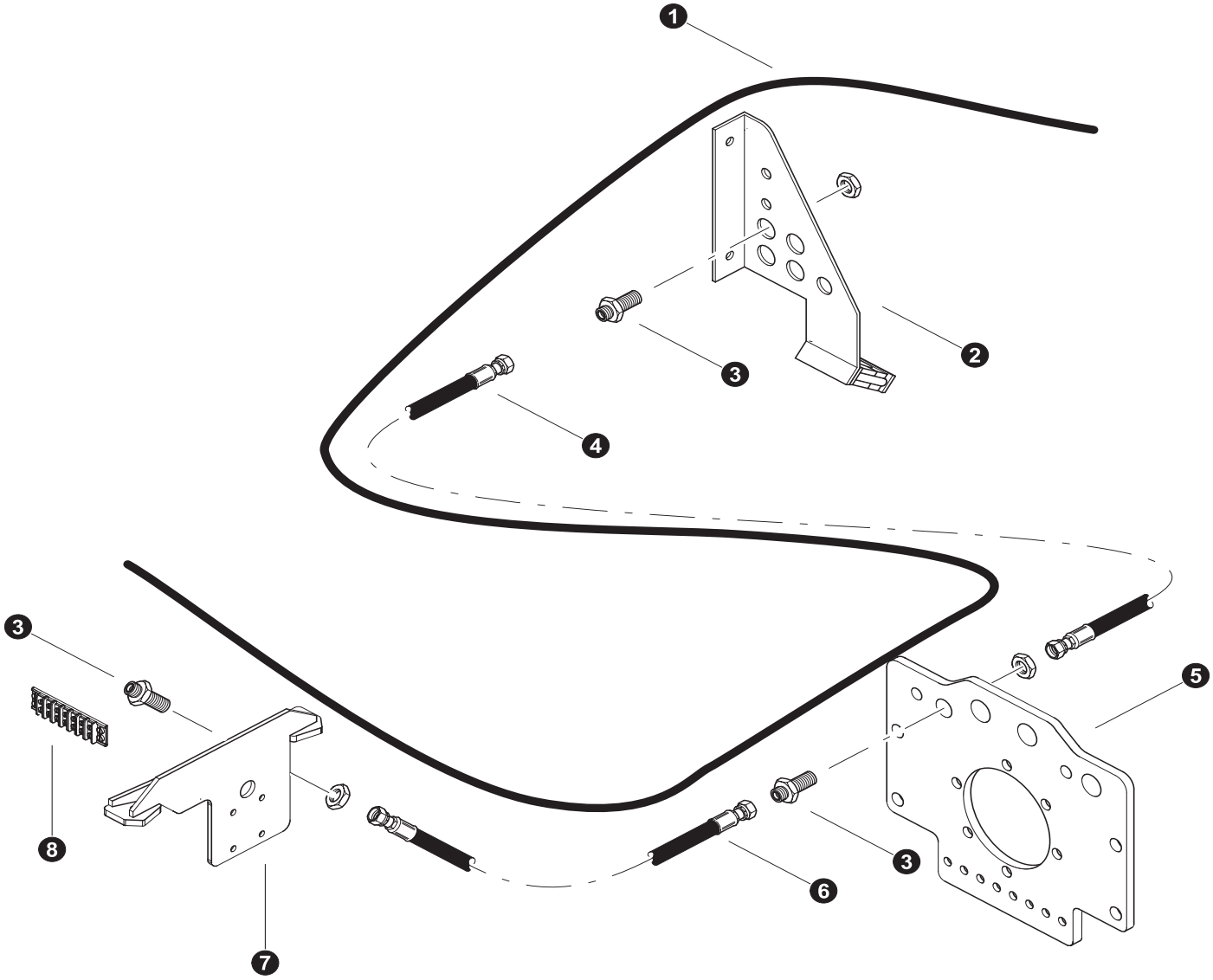
Parts T3076 04/10/05
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Hydro Motor Flushing Return (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD	UP-1
2	16296-FR	1		ELBOW, 90 - FF1868T-0606S	
3	-FR	1		HOSE ASSEMBLY - 2039-06-060S-0604 (Rotory Manifold port “3” to bulkhead)	
4	51867-FF	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
5	50420-FR	1		CONNECTOR, STR BULKHEAD - 832-TT-06	
6	50599-FR	1		HOSE ASSEMBLY - 2081-06-06OS-06O4 (Flushing Return Bulkhead to Rear Frame Bulkhead)	
7	42290-FR	1		BRACKET, bearing mount	
8	-FR	1		HOSE ASSEMBLY - 2053-06-06OS-06O4 (Flushing Return Bulkhead to Front Motor)	
9	22730-FR	1		TEE - 6 R6LO-S	
10	-FR	1		HOSE ASSEMBLY - 2056-06-06OS-06O4 (Front Motor to Rear Motor)	
11	REF.	1	🕮	WHEEL DRIVE MOTOR	FR-4

🕮 See referenced page for component or assembly breakdown.



Parts T3077 04/10/05
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Electrical Wire Hose (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	25122-FR	17ft	✂	WIRE - 18 GA. 8 CONDUCTOR (500' SPOOL)	
2	51867-FR	1		BRACKET, HOSE SUPPORT FT/FRAME (LH)	
3	50037-FR	1		CONNECTOR, STR BULKHEAD - 832-TT-10	
4	-FR	1		HOSE ASSEMBLY - 2077-10-100S-100S (Wire Bulkhead to rear bulkhead plate)	
5	42290-FR	1		BRACKET, bearing mount	
6	-FR	1		HOSE ASSEMBLY - 2060-10-100S-100S (Wire Bulkhead to transfer case mount)	
7	REF.	1	🕮	TRANSFER CASE MOUNT	FR-2
8	-FR	1	❑	TERMINAL, BLOCK (6 terminals)	
-	15050-FR	6		TERMINAL, BLOCK	
-	15051-FR		✂	TRACK, FORMED - 36" LONG	
-	15052-FR	2		STOP, END TERMINAL BLOCK	

🕮 See referenced page for component or assembly breakdown.
❑ Items indented below are part of assembly.
✂ Items sold in bulk, specify length needed on order

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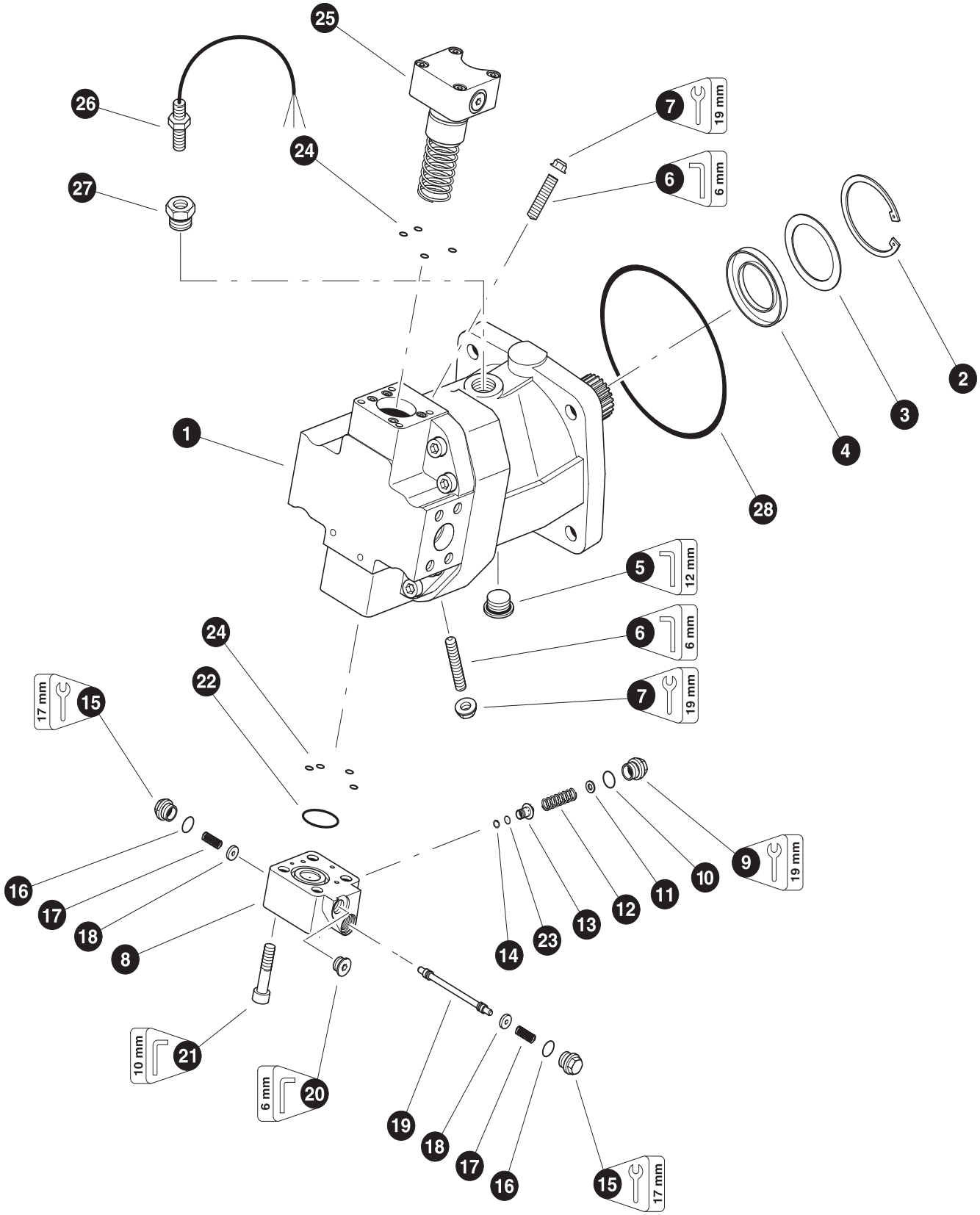
Section FR-4

TF 820 Rear Frame - Hydraulic Components Breakdown



Parts 00474 02/22/98
25.00

REXROTH 160cc MOTOR

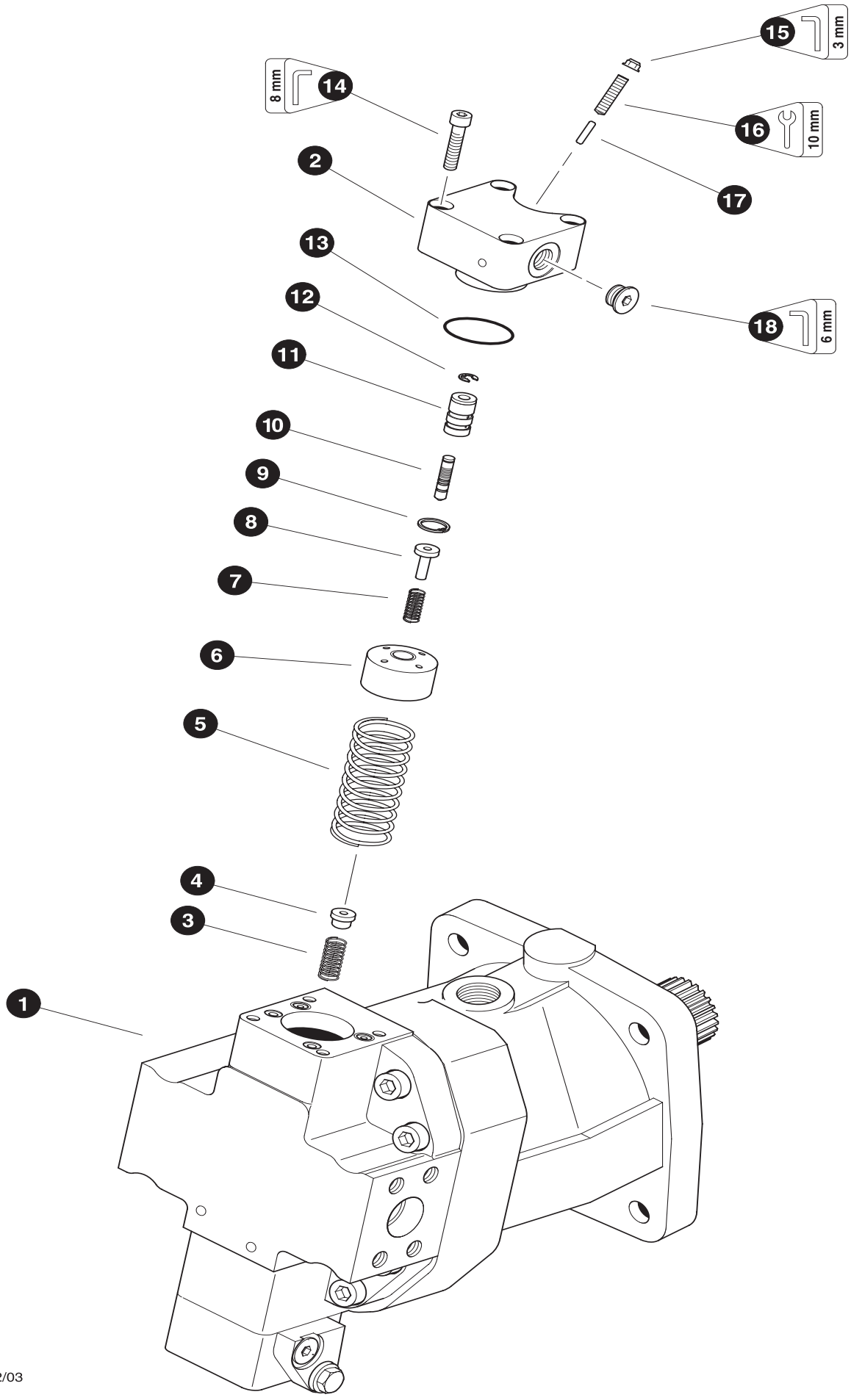
(Standard)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51869-0-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Front) (w/speed counter ring) (Vg Min = 0 cubic meters) (flushing)*	
	51869-70-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Rear) (w/speed counter ring) (Vg Min = 70 cubic meters) (flushing)*	
2	20685-FR	1		RING, snap	
3	20686-FR	1		SHIM, shaft seal	
4	20687-FR	1	⌘	SEAL, shaft	
5	19692-FR	1		PLUG - 26mm-1.5P *(BSPP thread)*	
6	*51987-FR*	*1*		SCREW, adjusting *(0 - Displacement min)(needed for front motor)*	
	20688-FR	2		SCREW, adjusting *(Displacement min & max)*	
7	20689-FR	2	⌘	NUT, seal	
8	20690-FR	1	❑	STROKING PISTON COVER ASSEMBLY	
9	20691-FR	1		PLUG	
10	20713-FR	1	⌘	O-RING	
11	20714-FR	1		SHIM	
12	20715-FR	1		SPRING	
13	20716-FR	1		POPPET	
14	20718-FR	1		RING, snap	
15	20719-FR	2		PLUG	
16	20720-FR	2	⌘	O-RING	
17	20721-FR	2		SPRING	
18	20722-FR	2		RETAINER, spring	
19	NSS	1		SPOOL	
20	20693-FR	1		PLUG - 14mm-1.5P *(BSPP thread)*	
21	20723-FR	4		BOLT, allen head	
22	20724-FR	1	⌘	O-RING	
23	20717-FR	1		ORIFICE, flushing - 1.2mm	
24	NSS	8		O-RING	
25	REF.	1		STROKING PISTON CONTROL ASSEMBLY	CR-4-4
26	24656-FR	1		SENSOR, SPEED PICKUP (rexroth hydro motor)	
27	51098-FR	1		FITTING, speed pickup rexroth (sae)	
28	20967-FR	1		O-RING, WHEEL DRIVE MOTOR (gearbox pilot)	
-	20725-CR	1		KIT, seal repair - complete AA6VM160 motor	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20725-CR.

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 T2811 08/12/03
37.50

REXROTH 160cc MOTOR
HA2T Controler Brakedown

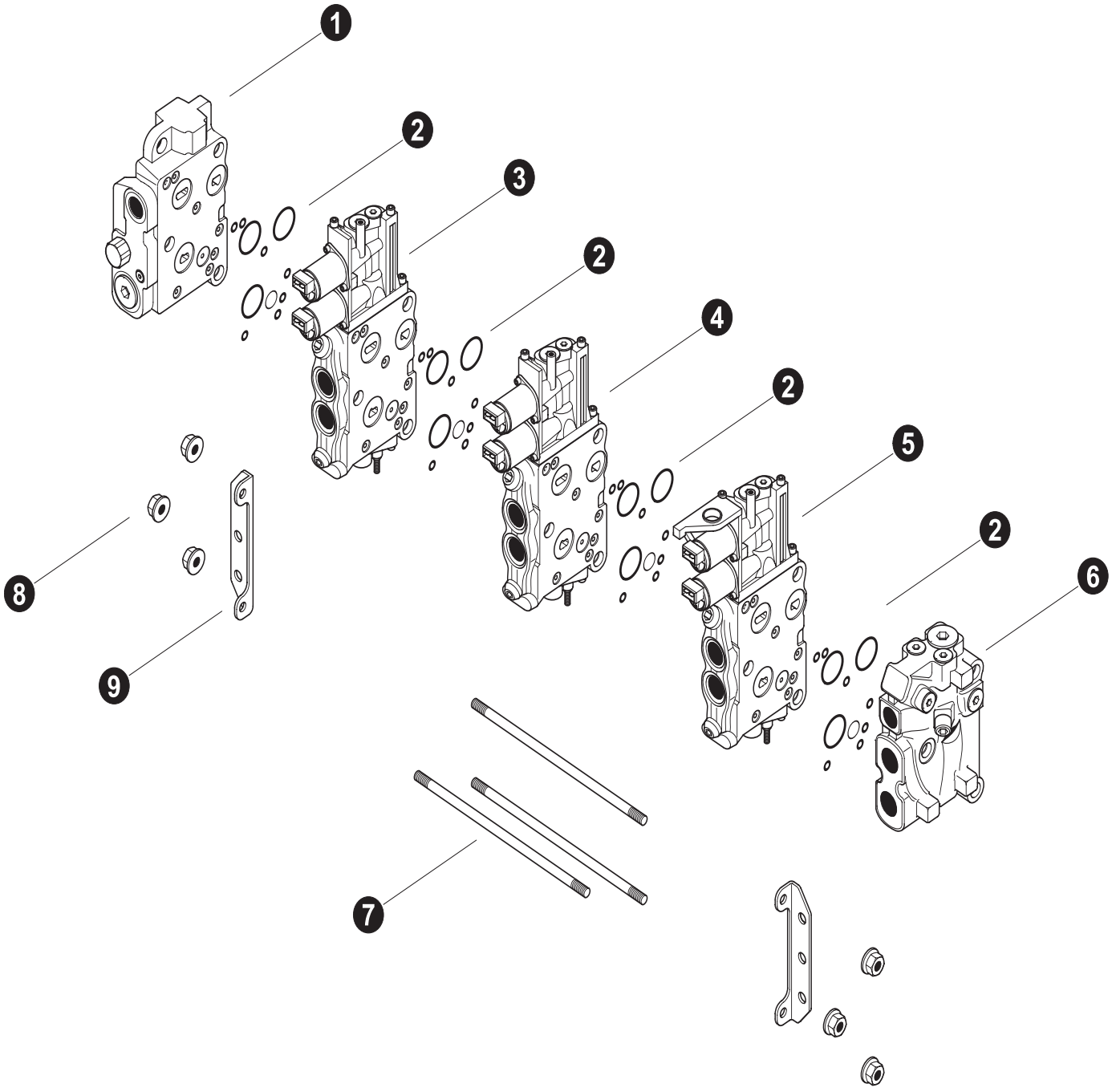
(Standard)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51869-0-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Front) (w/speed counter ring) (Vg Min = 0 cubic meters) (flushing)*	
	51869-70-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Rear) (w/speed counter ring) (Vg Min = 70 cubic meters) (flushing)*	
2	20726-FR	1	❑	CONTROL, MOTOR STROKE ASSEMBLY *(HA2T)*	
3	- - -	1		SPRING, (HU00444549)	
4	- - -	1		RETAINER, spring (HU00421860)	
5	- - -	1		SPRING (HU00651116)	
6	- - -	1		BUSHING, spring (HU00651118)	
7	20729-FR	1		SPRING	
8	- - -	1		RETAINER, spring (HU00921351)	
9	20731-FR	1		RING, snap	
10	- - -	1		SPOOL, control (HU00430748)	
11	20732-FR	1		BUSHING, control spool	
12	20734-FR	1		E-CLIP, control spo	
13	- - -	1	⌘	O-RING (68103-025)	
14	- - -	4		BOLT, allen head (60118-063)	
15	20737-FR	1	⌘	NUT, seal	
16	20738-FR	1		SCREW, adjusting *(Stroke control)*	
17	- - -	1		PIN, stroke adjustment (69116-019)	
18	20693-FR	1		PLUG - 14mm-1.5P *(BSPP thread)*	
-	20725-FR	1		KIT, seal repair - complete AA6VM160 motor	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20725-CR.

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 T3264 08/09/2005
18.75

LOWER VOAC CONTROL VALVE BREAKDOWN (TF 830 with CLAM BUNK)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	52010-FR	1	❑	VALVE, MAIN - VOAC (3-L90) STEER/CLAMBUNK	
1	REF	1	🕮	VALVE SECTION - inlet	LH-2
2	23404-FR	7		KIT, seal repair - L90LS face seals	
3	23321-FR	1	🕮	VALVE SECTION, steer - (P/L-3000 PSI)	LH-2
4	24774-FR	1	🕮	VALVE SECTION, clam bunk cyl	LH-2
5	24774-FR	1	🕮	VALVE SECTION, clam bunk cyl	LH-2
6	REF	1	🕮	VALVE SECTION - outlet	LH-2
7	-HR	1	❑	KIT, tie rod (3 section) (393000K003)	
8	23913-FR	6		NUT (Special torque procedure) (See Note #2 Below)	
9	23402-FR	1		KIT, mounting brackets	

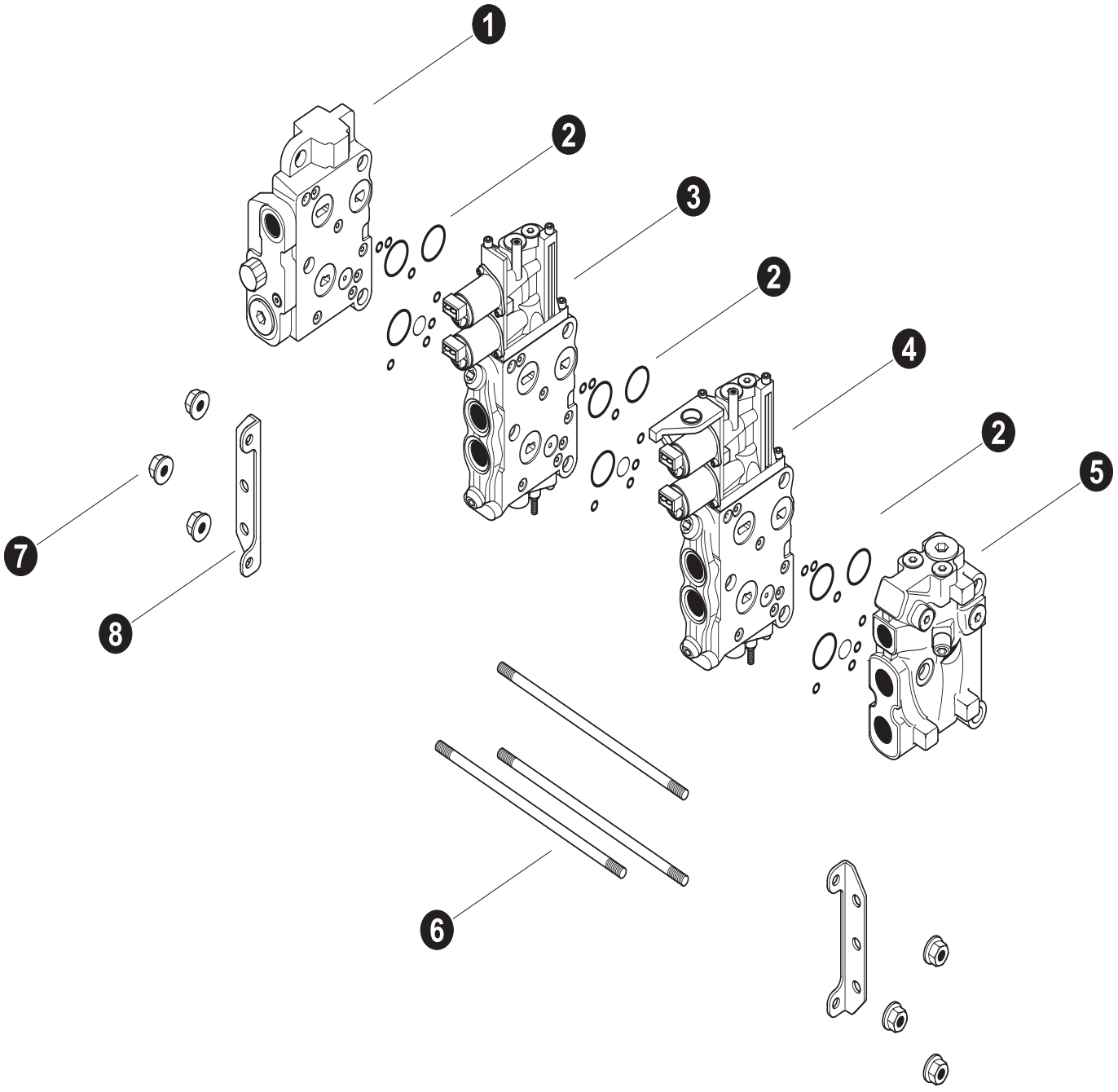
❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.

Note #1:

Illustration and parts list reflects a standard valve configuration used for a TF 830 W / CLAM BUNK machine. Contact your dealer if your valve or machine configuration differs.

Note #2:

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



Parts T3263 08/09/2005
18.75

LOWER VOAC CONTROL VALVE BREAKDOWN (TF 830 LEVELING)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51848-FR	1	❑	VALVE, MAIN - LOWER (2-L90) STEER/LEVEL	
1	REF	1	🕮	VALVE SECTION - inlet	LH-2
2	23404-FR	7		KIT, seal repair - L90LS face seals	
3	23321-FR	1	🕮	VALVE SECTION, steer - (P/L-3000 PSI)	LH-2
4	24778-FR	1	🕮	VALVE SECTION, cab level	LH-2
5	REF	1	🕮	VALVE SECTION - outlet	LH-2
6	-HR	1	❑	KIT, tie rod (2 section) (393000K002)	
7	23913-FR	6		NUT (Special torque procedure) (See Note #2 Below)	
8	23402-FR	1		KIT, mounting brackets	

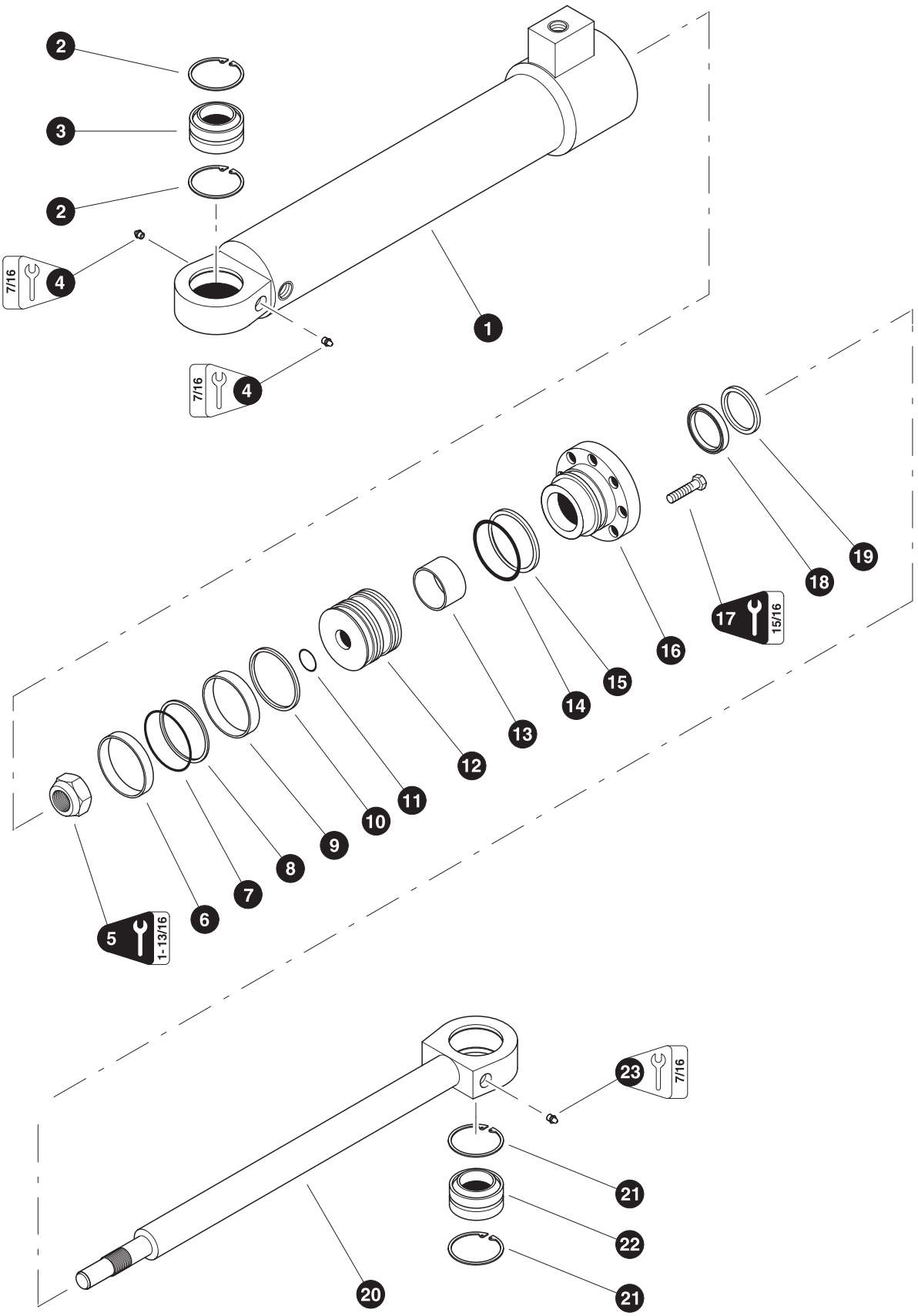
❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.

Note #1:

Illustration and parts list reflects a standard valve configuration used for a TB 630 leveling machine. Contact your dealer if your valve or machine configuration differs.

Note #2:

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



00194 01/17/97
18.75

STEER CYLINDER
(Jarp 2.25” Rod)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51584-FR	2	❑	CYLINDER, STEER (2.25” ROD) - JARP	
1	51681-FR	1	❑	BARREL ASSEMBLY	
2	19916-FR	2		RING, snap	
3	19917-FR	1		BUSHING, spherical - 2”	
4	10704-FR	1		FITTING, straight grease - 1/8” pipe thread	
5	-FR	1		NUT, cylinder rod - 1-3/4” ***(Torque to 885 +/- 60 ft.lbs. (1175 +/- 80 Nm))***	
6	NSS	1	⌘	RING, piston wear	
7	NSS	1	⌘	RING, piston loader	
8	NSS	1	⌘	RING, piston chem-cast	
9	NSS	1	⌘	RING, piston wear	
10	NSS	1	⌘	RING, piston seal	
11	NSS	1	⌘	O-RING, piston	
12	-FR	1		PISTON	
13	NSS	1	⌘	RING, rod bearing wear	
14	NSS	1	⌘	O-RING, rod bearing	
15	NSS	1	⌘	RING, rod bearing back-up	
16	51685-FR	1		BEARING, rod	
17	15681-FR	8		BOLT - 5/8” x 2-1/4” ***(Torque to 175 ft.lbs (233 Nm))***	
18	NSS	1	⌘	U-CUP, rod bearing	
19	NSS	1	⌘	WIPER, rod	
20	51682-FR	1	❑	ROD ASSEMBLY	
21	19916-FR	2		RING, snap	
22	19917-FR	1		BUSHING, spherical - 2”	
23	10704-FR	1		FITTING, straight grease - 1/8” pipe thread	
-	51683-FR	1		KIT, seal repair - steer cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19750-FR.

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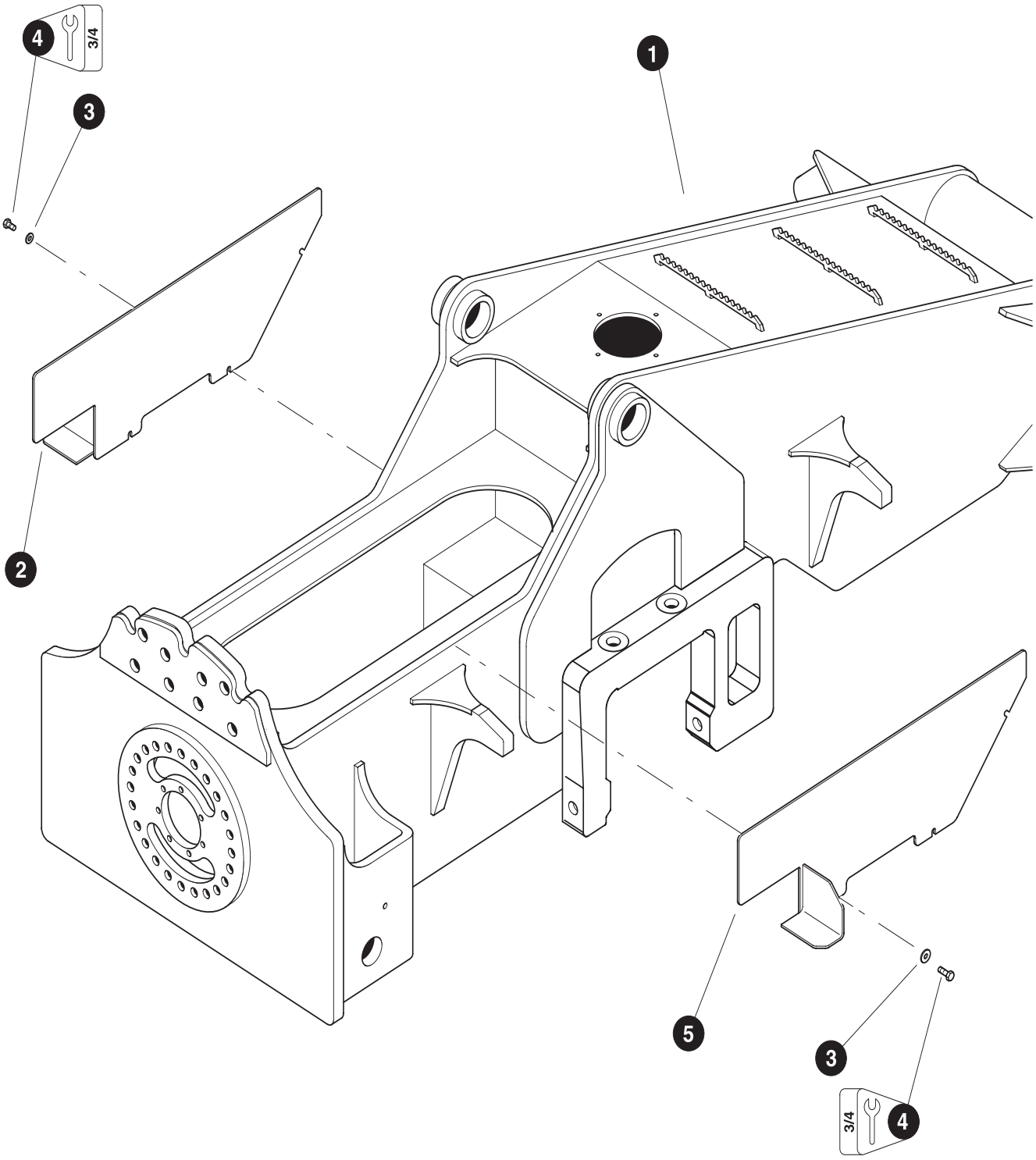
Section BF-1

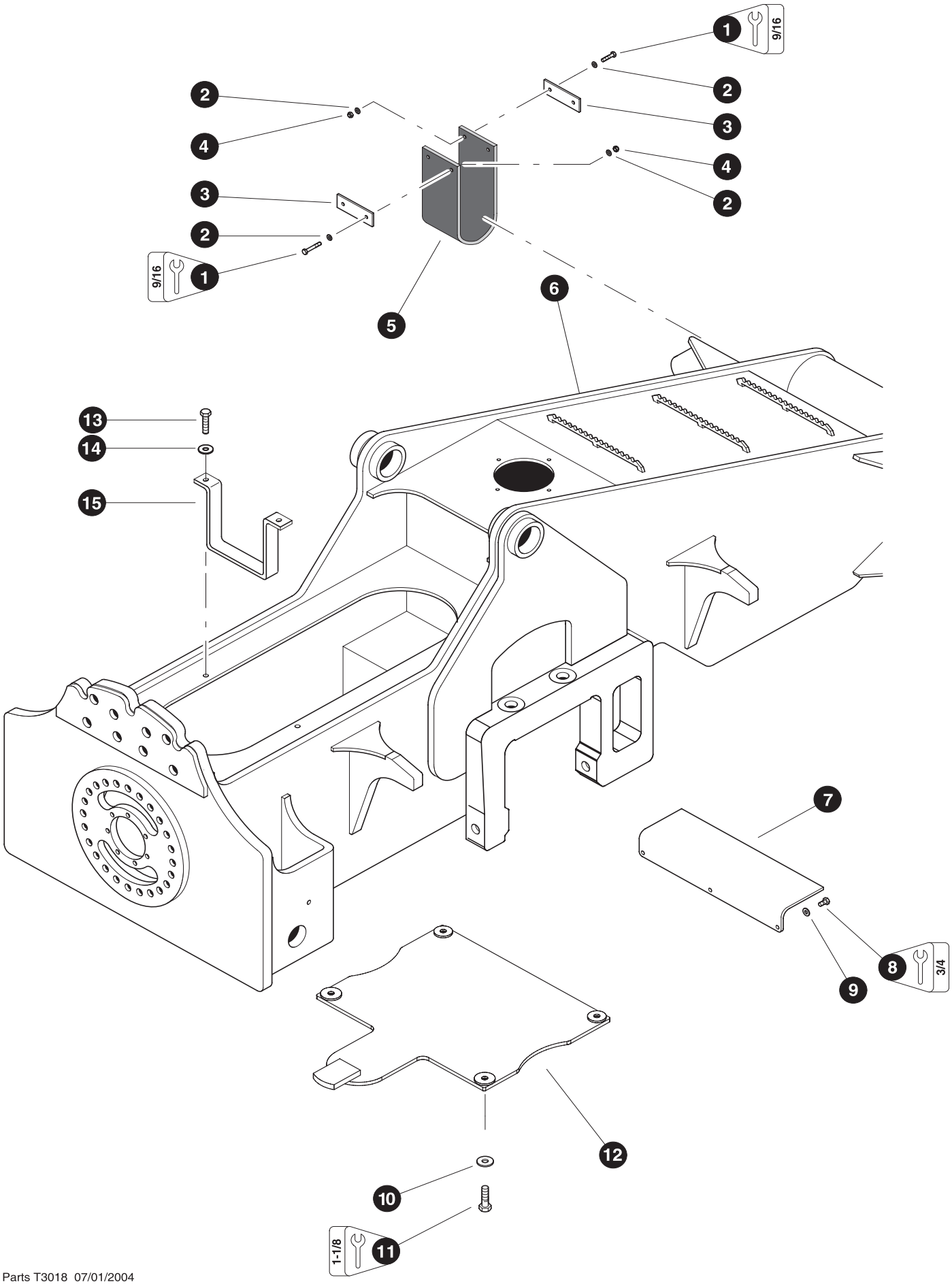
TB 830, 840 Leveling Front Frame - Structural Components



Parts 01600 03/01/2000
9.375

FRAME ACCESS COVERS
(General)

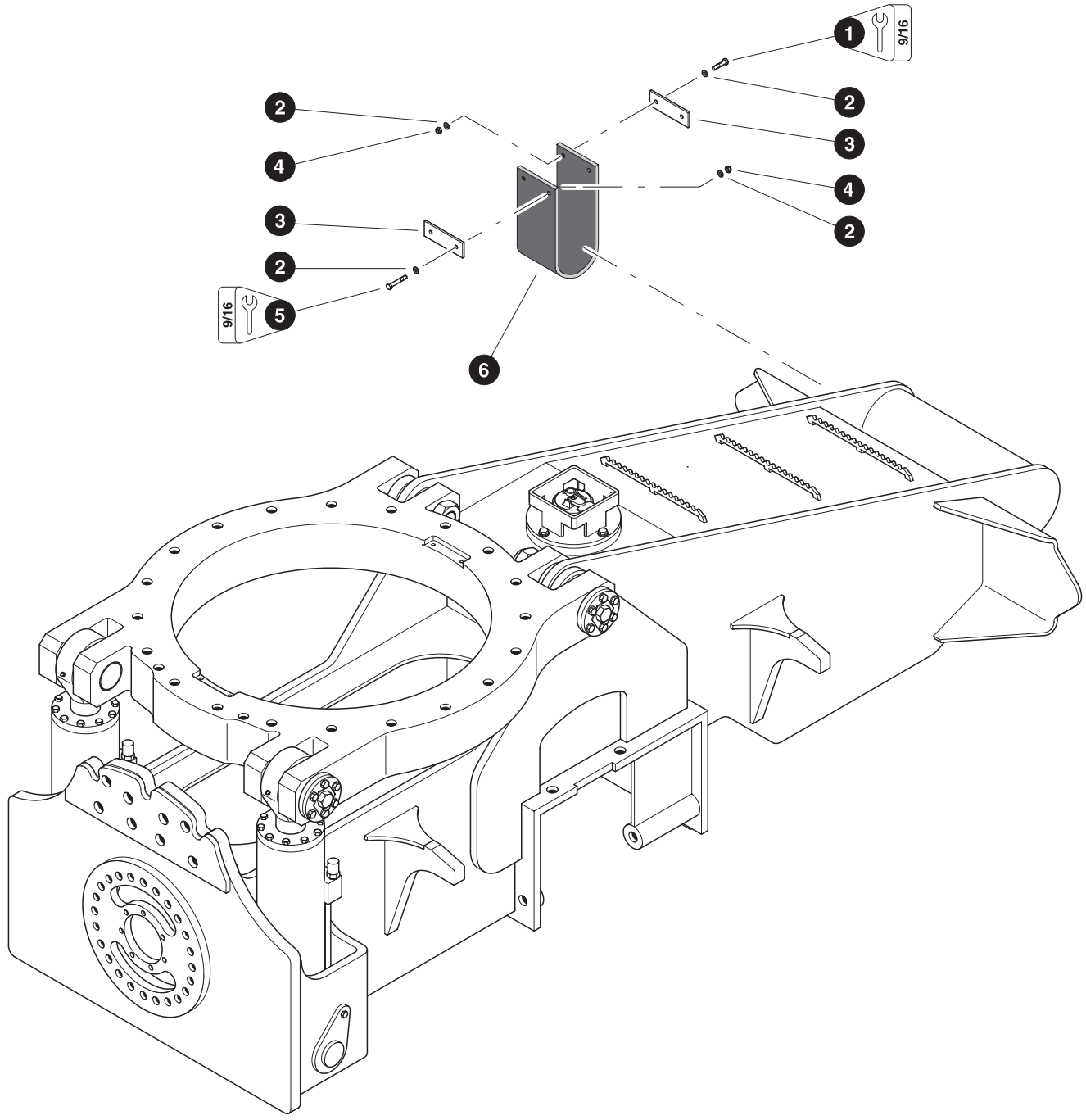
REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	80534-BF	1		FRONT FRAME WELDMENT	
2	51104-BF	2		COVER, access (left)	
3	15534-BF	10		WASHER, SAE flat - 1/2”	
4	10783-BF	6		BOLT - 1/2” x 1”	
5	51105-BF	2		COVER, access (Right)	



Parts T3018 07/01/2004
9.375

FRAME ACCESS COVERS
(Axle Box Area)

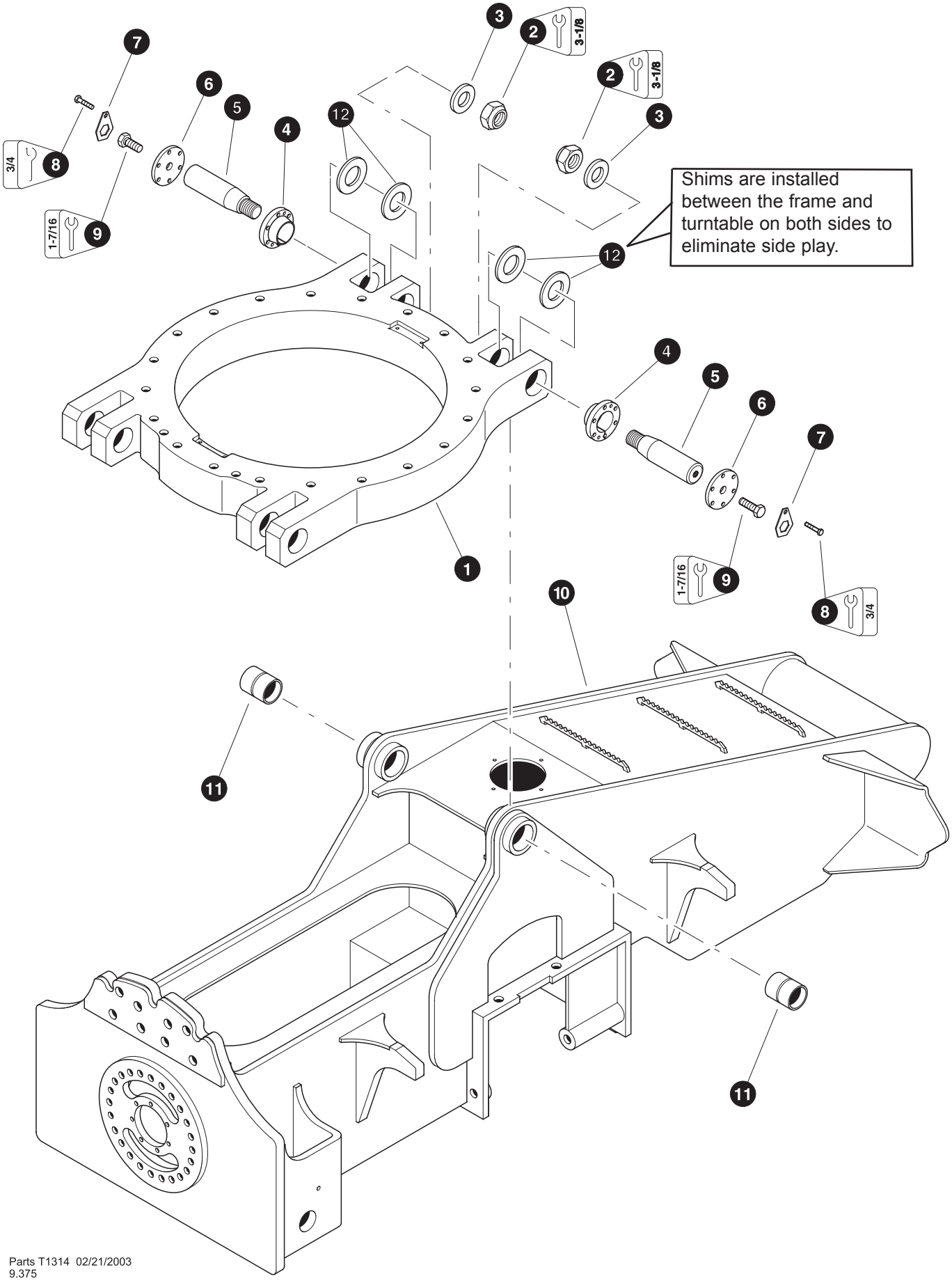
REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	20084-BF	3		BOLT - 3/8” x 1-3/4”	
2	15528-BF	8		WASHER, SAE flat - 3/8”	
3	20209-BF	2		RETAINER, rubber step	
4	10813-BF	8		NUT, lock - 3/8”	
5	20210-BF	1		STEP, rubber	
6	REF	1	🕮	FRONT FRAME WELDMENT	BF-1
7	42414-BF	1		COVER, access - axle box	
8	10783-BF	6		BOLT - 1/2” x 1”	
9	15534-BF	8		WASHER, SAE flat - 1/2”	
10	15550-BF	8		WASHER, SAE flat - 3/4”	
11	15549-BF	2		BOLT - 3/4” x 1 1/2”	
12	51415-BF	1		COVER, access - front frame axle	
13	10739-HL	2		BOLT - .5” X 1.5”	
14	15534-HL	4		WASHER, SAE flat - 1/2”	
15	40829-HL	1		BRACKET, HOSE BRACKET - LEVELING	



Parts 01303 08/24/2000
9.375

FRAME STEP INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	20084-BF	3		BOLT - 3/8” x 1-3/4”	
2	15528-BF	8		WASHER, SAE flat - 3/8”	
3	20209-BF	2		RETAINER, rubber step	
4	10813-BF	8		NUT, lock - 3/8”	
5	10731-BF	1		BOLT - 3/8” x 1-1/2”	
6	20210-BF	1		STEP, rubber	

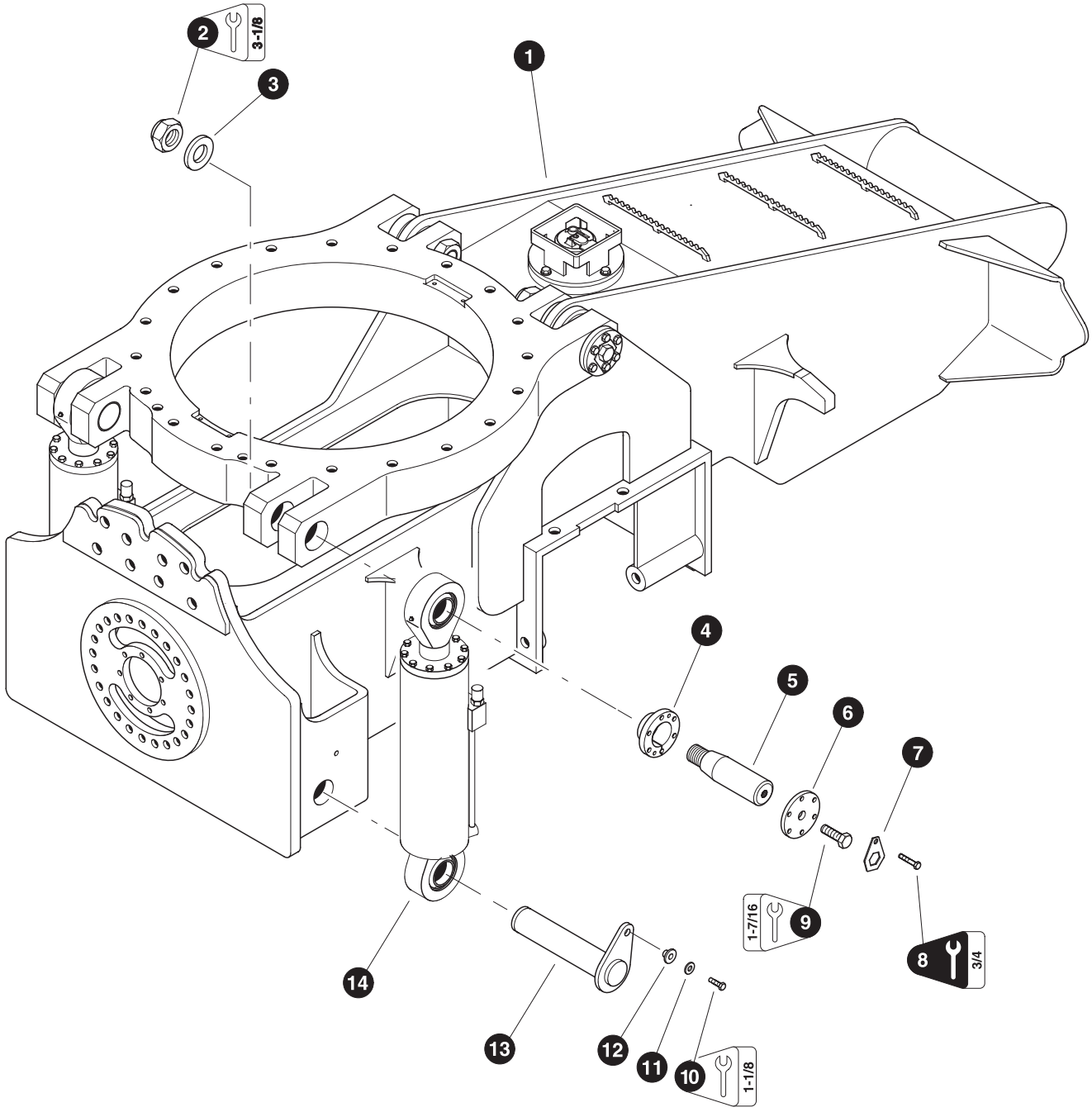


Parts T1314 02/21/2003
9.375

CAB LEVELING COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	85347-BF	1		PLATE, lower turntable	
2	10728-BF	2		NUT, nylock - 2”	
3	12021-BF	2		WASHER, burned	
4	12352-BF	2		HUB, taper - 1-1/4”	
5	18054-BF	2		PIN, chrome - 3” x 11-3/4”	
6	12115-BF	2		CAP, taper hub	
7	12116-BF	2		LOCK, center taper hub bolt	
8	15565-BF	12		BOLT - 1/2” x 2-1/2” (Torque to 100 ft.lbs. (133 Nm))	
9	15552-BF	2		BOLT - 1” x 2-1/2”	
10	REF.	1	🕮	FRONT FRAME WELDMENT	BF-1
11	11706-BF	2		BUSHING - 3” x 4-1/4”	
12	19150-BF	AR		SHIM - 1/4” thick	
	16333-BF	AR		SHIM - 7 gauge (.179”) thick	
	16637-BF	AR		SHIM - 10 gauge (.135”) thick	
	16338-BF	AR		SHIM - 14 gauge (.075”) thick	

🕮 See referenced page for component or assembly breakdown.



Parts 01315 09/13/99
9.375

CAB LEVEL CYLINDER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	BF-1
2	10728-BF	2		NUT, nylock - 2”	
3	12021-BF	2		WASHER, burned	
4	12352-BF	2		HUB, taper - 1-1/4”	
5	18055-BF	2		PIN, Chrome - 3” x 11”	
6	12115-BF	2		CAP, taper hub	
7	12116-BF	2		LOCK, center taper hub bolt	
8	15565-BF	12		BOLT - 1/2” x 2-1/2” (Torque to 100 ft.lbs. (133 Nm))	
9	15552-BF	2		BOLT - 1” x 2-1/2”	
10	15549-BF	1		BOLT - 3/4” x 2”	
11	15550-BF	1		WASHER, SAE flat - 3/4”	
12	18570-BF	1		WASHER, pin retaining	
13	52098-BF	1		PIN ASSEMBLY, 3X10.5 (LEVELING BASE CYL)	
14	REF.	2	🕮	CAB LEVEL CYLINDER	BF-5

🕮 See referenced page for component or assembly breakdown.

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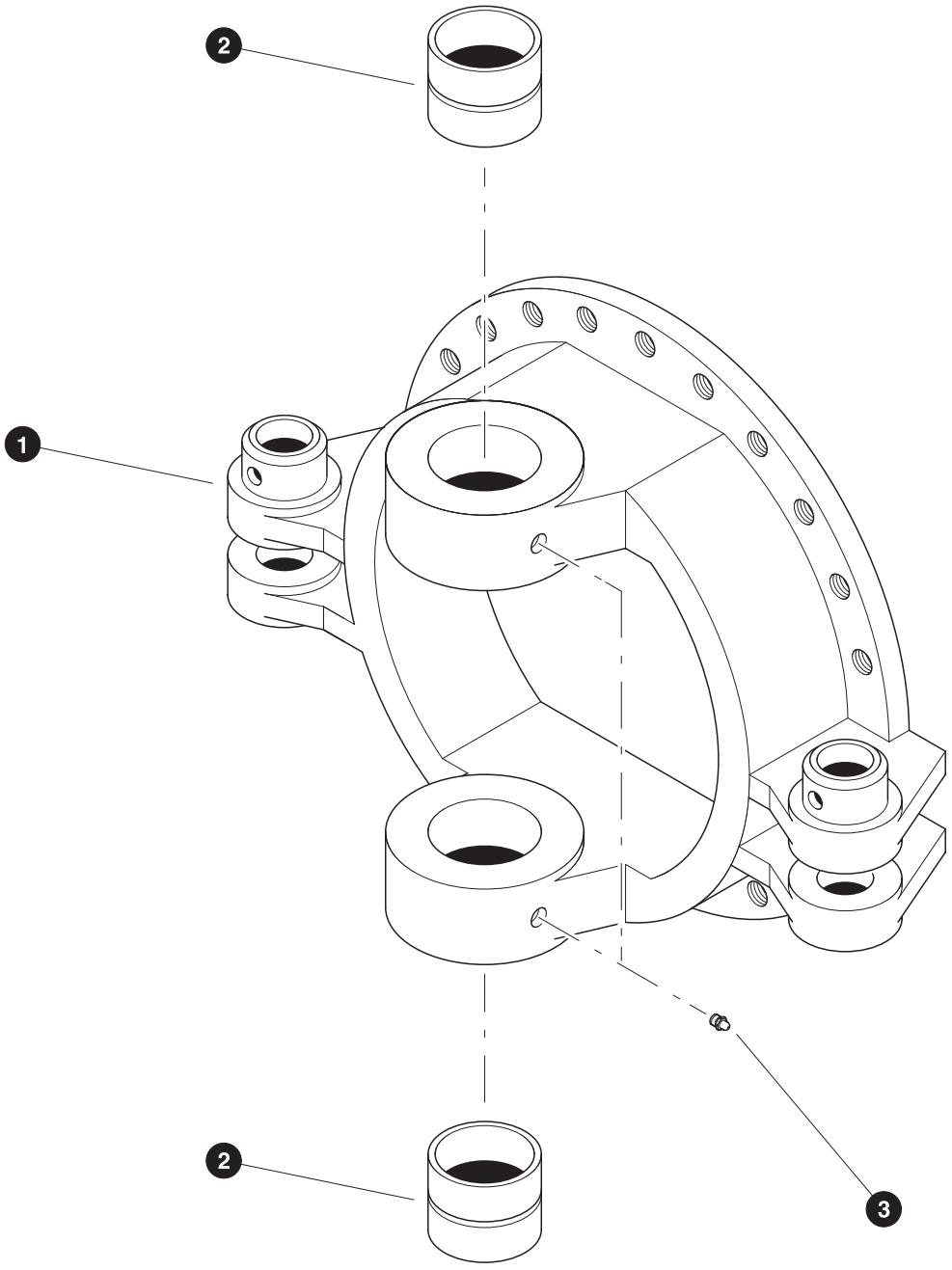
Section BF-2

TB 830, 840 Leveling Front Frame - Articulation Components & Installation

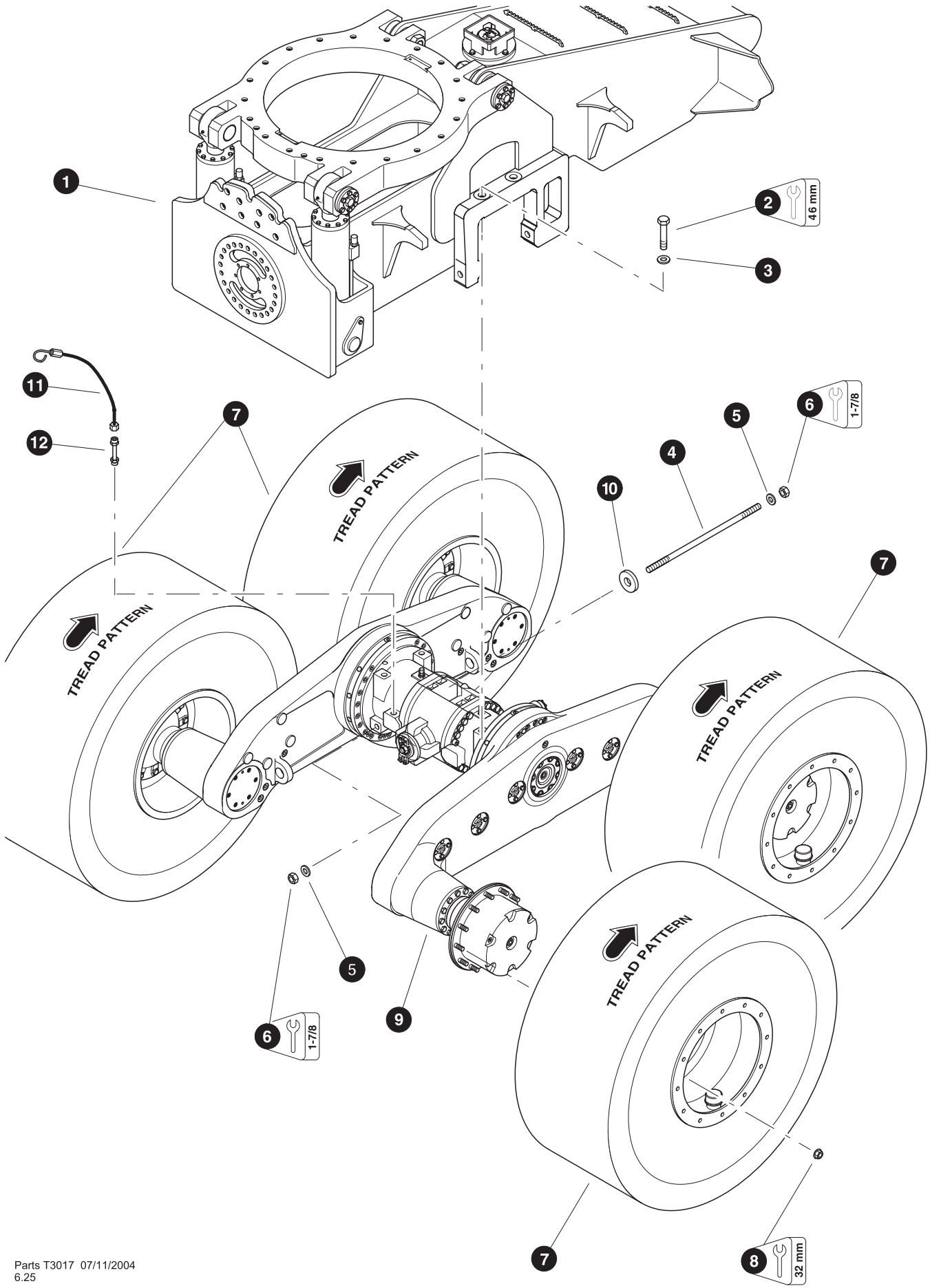


Parts 01720 07/27/2000
25.00

FRAME ARTICULATION CASTING

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23099-830-FF	1	❑	CASTING, frame articulation (tapped holes)	
2	23103-FF	2		BUSHING - 3-1/2” x 2-3/4”	
3	10704-FF	2		FITTING, grease - 1/8” pipe thread	

❑ Kit or Assembly - includes all items indented underneath.

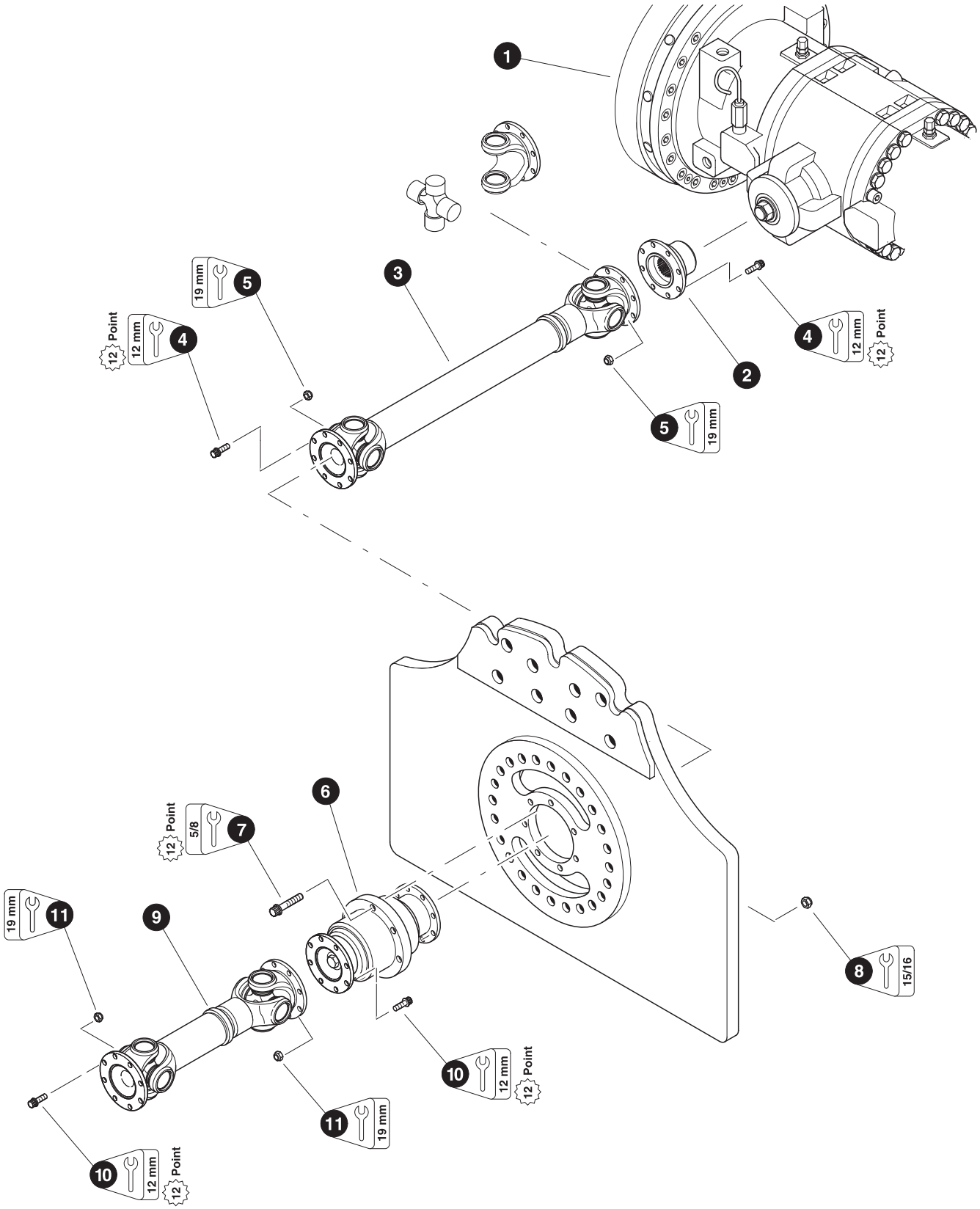


Parts T3017 07/11/2004
6.25

FRONT AXLE INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	BF-1
2	23567-BF	4		BOLT - 30mm-3.5P x 220mm (Torque to 1100 ft.lbs. (1465 Nm))	
3	23568-BF	4		WASHER, hardened flat - 30mm	
4	23851-BF	2		STUD, axle spreader box - 1-1/4" (Torque to 1200 ft.lbs. (1600 Nm))	
5	22531-BF	4		WASHER, SAE flat - 1-1/4"	
6	23989-BF	4		NUT, lock - 1-1/4"	
7	REF.	4	🕮	WHEEL ASSEMBLY	AX-3
8	19361-BF	48		NUT, lug (Torque to 600 ft.lbs. (800 Nm))	
9	REF.	1	🕮	FRONT AXLE	AX-1
10	24003-BF	2		SPACER, axle spreader stud	
11	21165-BF	1		TUBE, dipstick (top)	
-	21561-BF	1		BLADE, dipstick	
12	21164-BF	1		TUBE, dipstick (bottom)	

🕮 See referenced page for component or assembly breakdown.



Parts T2629 02/24/2003
12.50

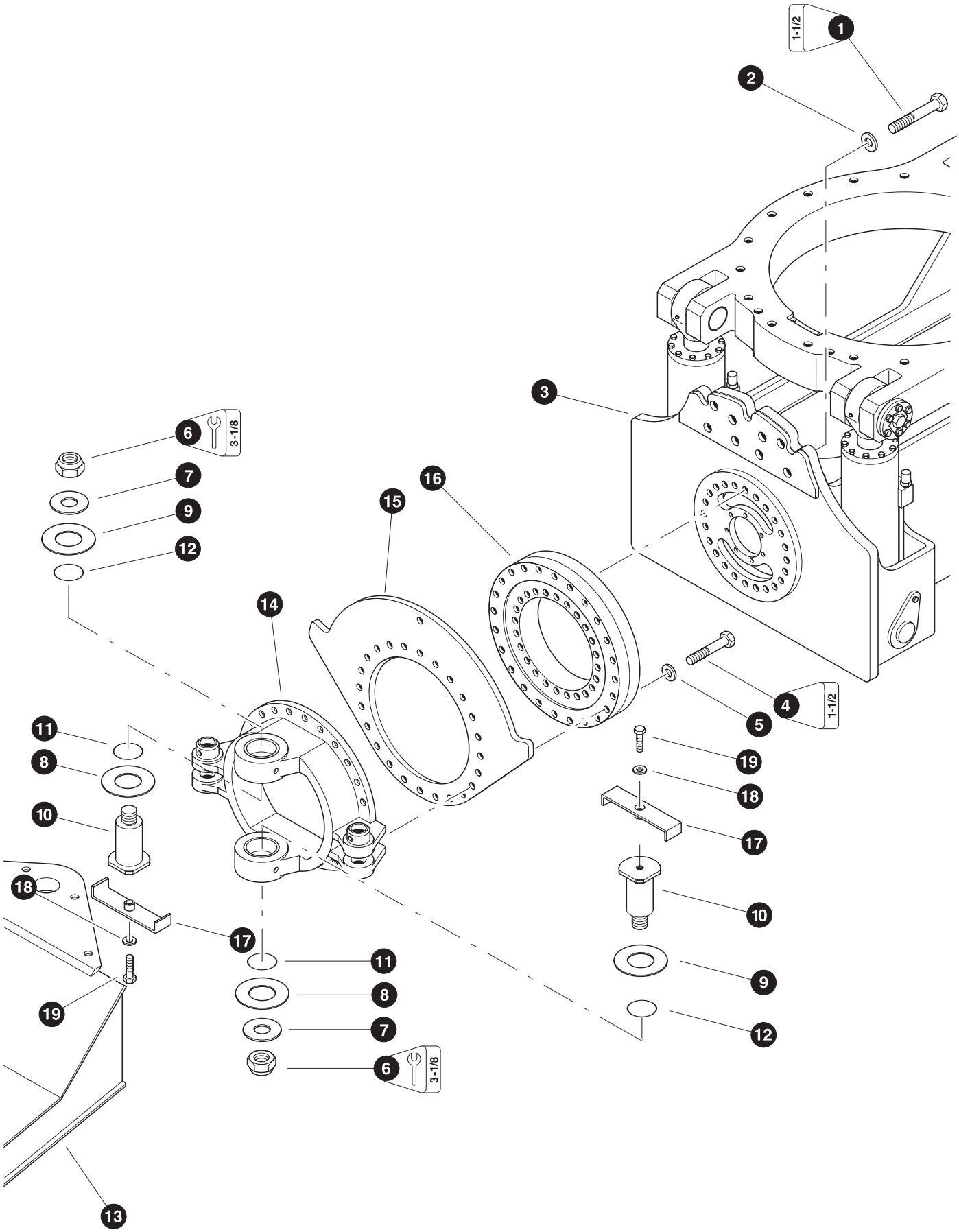
DRIVE SHAFT INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT AXLE	AX-1
2	23997-BF	1		YOKE, companion flange - axle	
3	51092-BF	1	❑	DRIVE SHAFT, heavy duty (Center joint to front axle)	
	- - - - -	2		FITTING, 90° grease - 10mm	
4	50261-BF	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
5	50262-BF	16		NUT, lock - 12mm	
6	25218-BF	1		IDLER, driveshaft (HD)	
7	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
8	10816	6		NUT, lock - 5/8”	
9	25968-BF	1	❑	DRIVE SHAFT (Center joint)	
	- - - - -	2		FITTING, 90° grease - 10mm	
10	50261-BF	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
11	50262-BF	16		NUT, lock - 12mm	

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

Note #1:

Use Loctite 242 (blue) during installation.

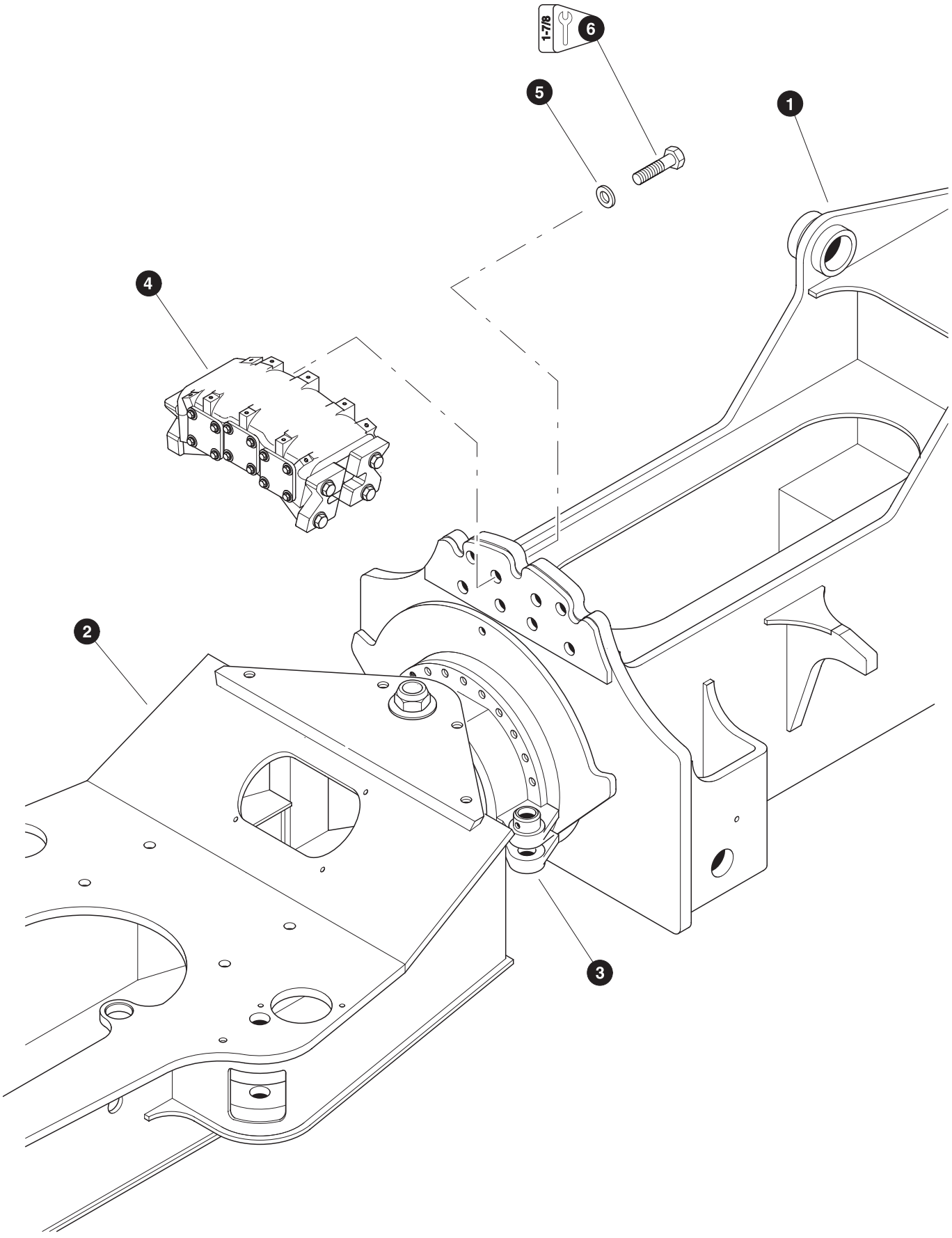


Parts T2625 08/14/2005
9.375

FRAME ARTICULATION INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23387-FF	24		BOLT - 1” x 6-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
2	18532-FF	24		WASHER, SAE FLAT - 1” (EXTRA THICK)	
3	REF.	1	🕮	FRONT FRAME WELDMENT	BF-1
4	18672-FF	24		BOLT - 1” x 7-1/2” (Torque to 1000 ft.lbs (1330 Nm))	
5	15579-FF	24		WASHER, SAE flat - 1”	
6	10728-FF	2		NUT, nylock - 2”	
7	51499-FF	2		WASHER, articulation pin (3/8” thick)	
8	23106-FF	2		WASHER, thrust - thin (Brass)	
9	23105-FF	2		WASHER, thrust - thick (Brass)	
10	51433-FF	2		PIN, articulation vee - 3-1/2” x 9”	
11	21577-FF	2		O-RING - thin	
12	24546-FF	2		O-RING - thick	
13	REF.	1	🕮	REAR FRAME WELDMENT.	BR-1
14	REF.	1	🕮	FRAME ARTICULATION CASTING	BF-2
15	80830-FF	1		PLATE, braking	
16	24999-FF	1		BEARING, articulation	
17	40830-FF	2		BRACKET, articulation joint hose	
18	15550-FF	4		WASHER, SAE flat - 3/4”	
19	10775-FF	2		BOLT - .75” X 2.5”	

🕮 See referenced page for component or assembly breakdown.

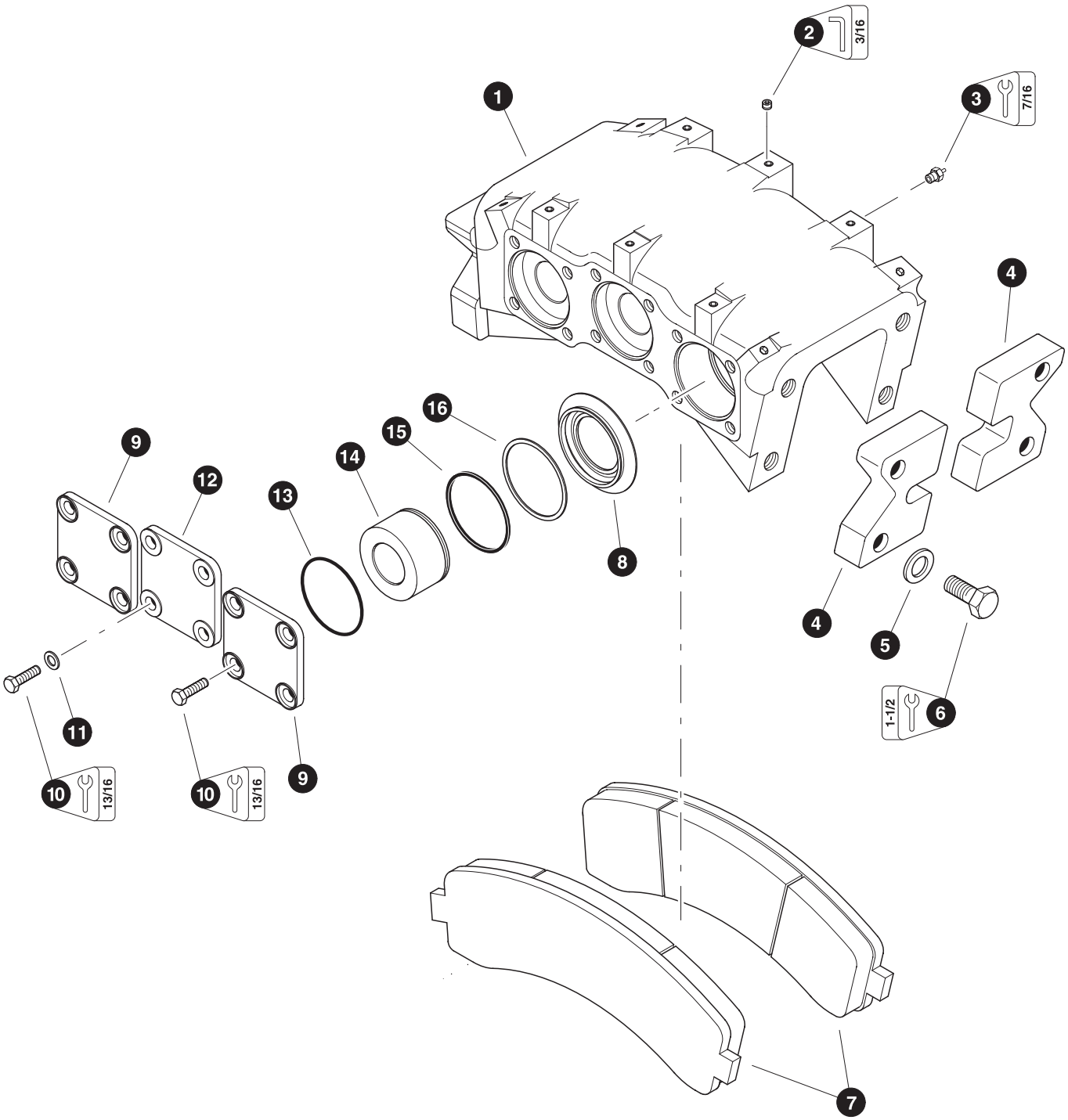


Parts T2627 11/12/2002
12.50

FRAME LOCK BRAKE INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	FRONT FRAME WELDMENT	BF-1
2	REF.	1	🕮	REAR FRAME WELDMENT	BR-1
3	REF.	1	🕮	FRAME ARTICULATION CASTING	BF-2
4	REF.	1	🕮	FRAME LOCK BRAKE	BF-2
5	22531-BF	8		WASHER - 1-1/4”	
6	23351-BF	8		BOLT - 1-1/4” x 4-1/2” NF	

🕮 See referenced page for component or assembly breakdown.



Parts 01736 07/08/2000
37.50

FRAME LOCK BRAKE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	20953-BF	1	❑	FRAME LOCK BRAKE	
1	NSS	1		HOUSING	
2	- - - - -	13		PLUG	
3	- - - - -	1		SCREW, bleed	
4	- - - - -	4		RETAINER, brake pad	
5	- - - - -	8		WASHER	
6	- - - - -	8		BOLT	
7	24406-BF	1		PAD, brake (pair)	
8	NSS	6	⌘	BOOT, piston	
9	23445-BF	2		COVER, piston (Machined special to countersink bolt heads)	
10	24088-BF	12		BOLT - 9/16” x 1-1/4”	
11	- - - - -	4		WASHER	
12	23444-BF	1		COVER, piston	
13	NSS	6	⌘	O-RING, piston cover	
14	24434-BF	6		PISTON, brake caliper	
15	NSS	6	⌘	SEAL, piston	
16	NSS	6	⌘	RING, back-up	
-	23113-BF	1		KIT, seal repair - frame lock brake	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit PN# 23113.

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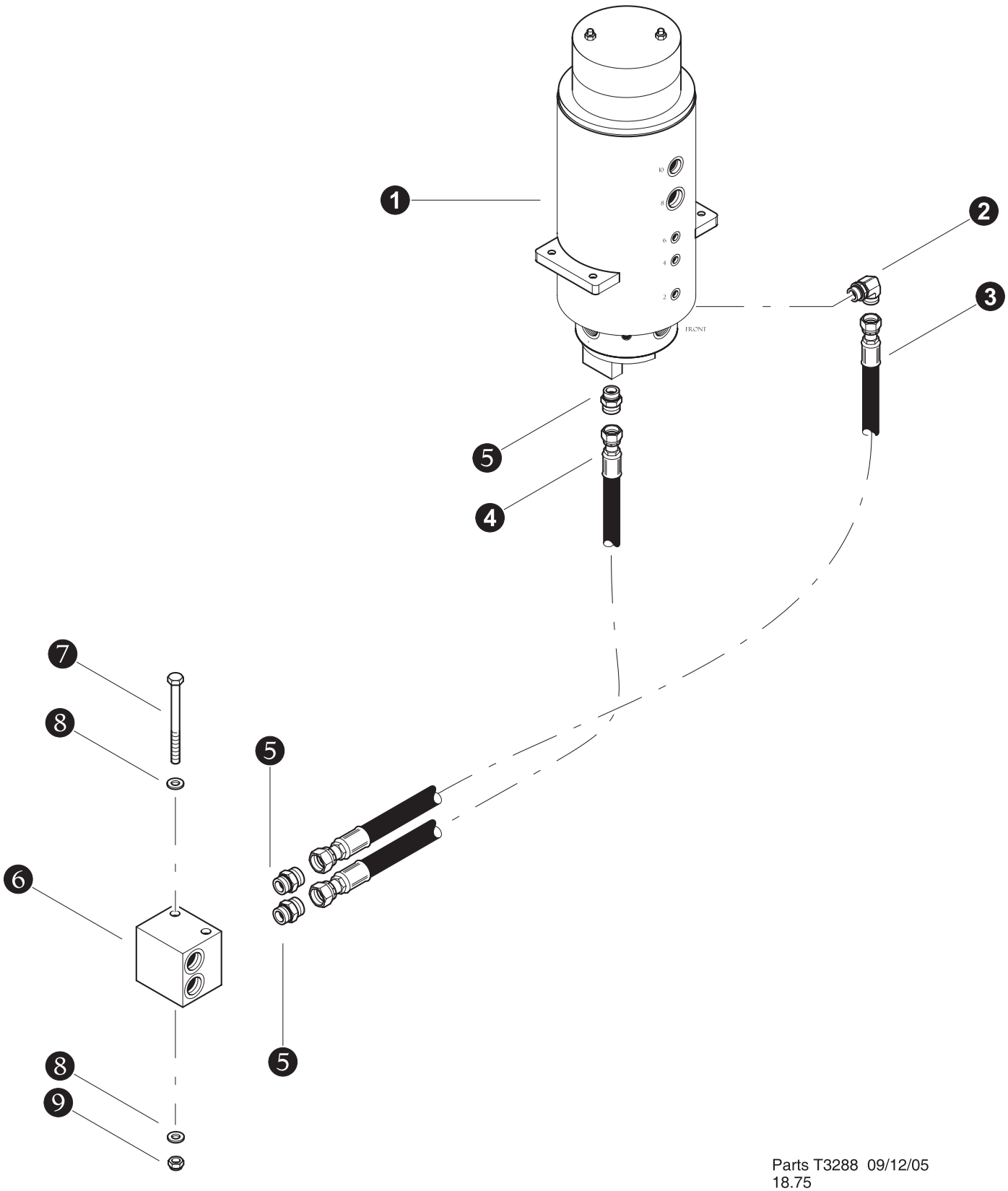
Section HL-3

TB 830 Leveling Front Frame - Hydraulics

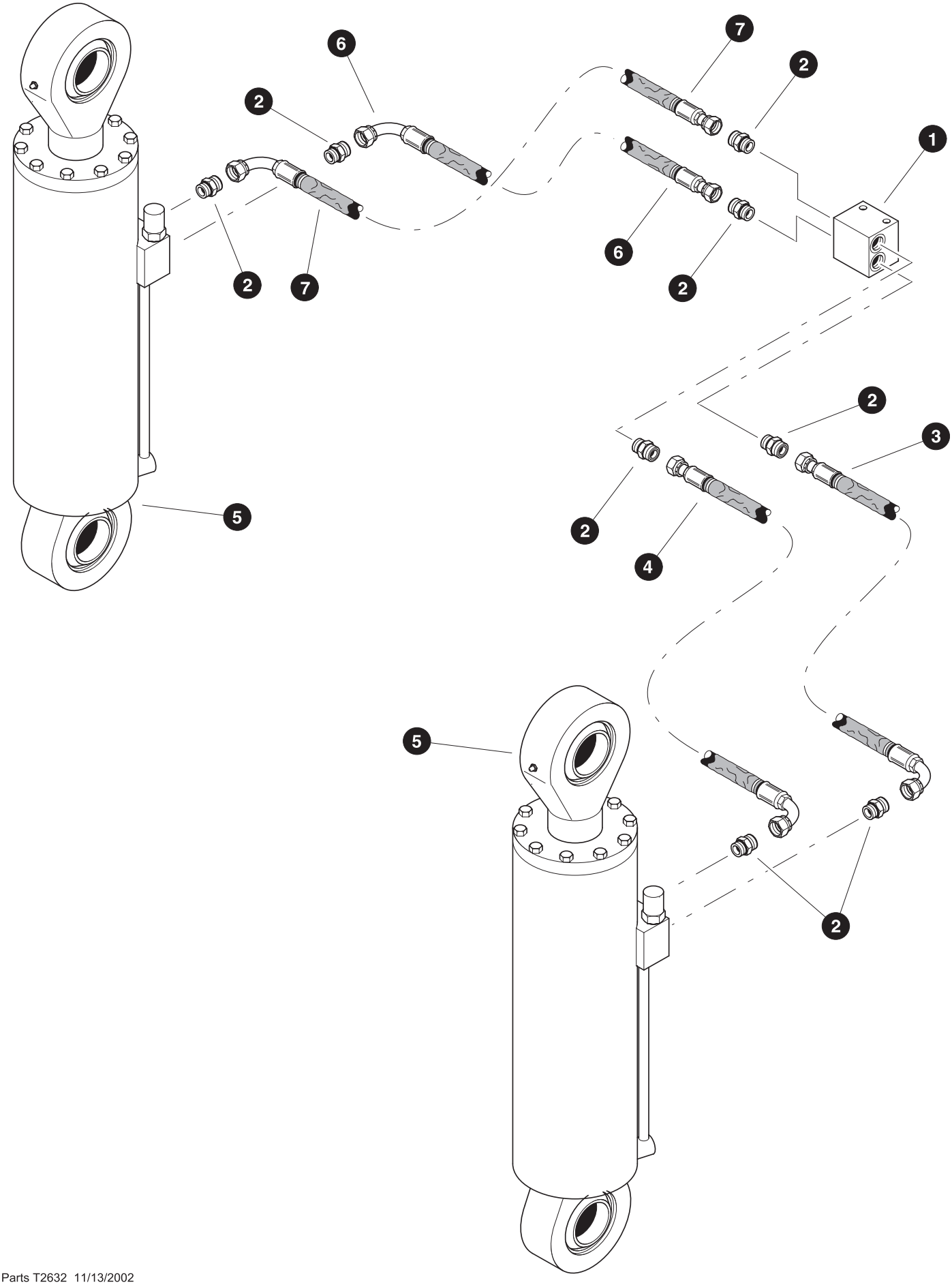


Parts T3288 09/12/05
18.75

LEVELING HYDRAULICS
(Bulkhead Plate to Leveling Manifold)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTORY MANIFOLD	UP-1
2	16360-BF	1		ELBOW, 90 - FF1868T-0808S	
3	-BF	1		HOSE ASSEMBLY - 4052 -08-08OS-08OS (Rotory Manifold #6 to Top Port of Leveling Manifold (Rod))	
4	-BF	1		HOSE ASSEMBLY - 4050 -08-08OS-08OS (Rotory Manifold #12 to Bottom Port of Leveling Manifold(Base))	
5	15117-BF	3		CONNECTOR, STR - FF1852T-0808S	
6	22717-BF	1		MANIFOLD, leveling	
7	10813-BF	2		NUT, lock - 3/8”	
8	15528-BF	4		WASHER, SAE flat - 3/8”	
9	10753-BF	2		BOLT - 3/8” x 4-1/2”	

🕮 See referenced page for component or assembly breakdown.

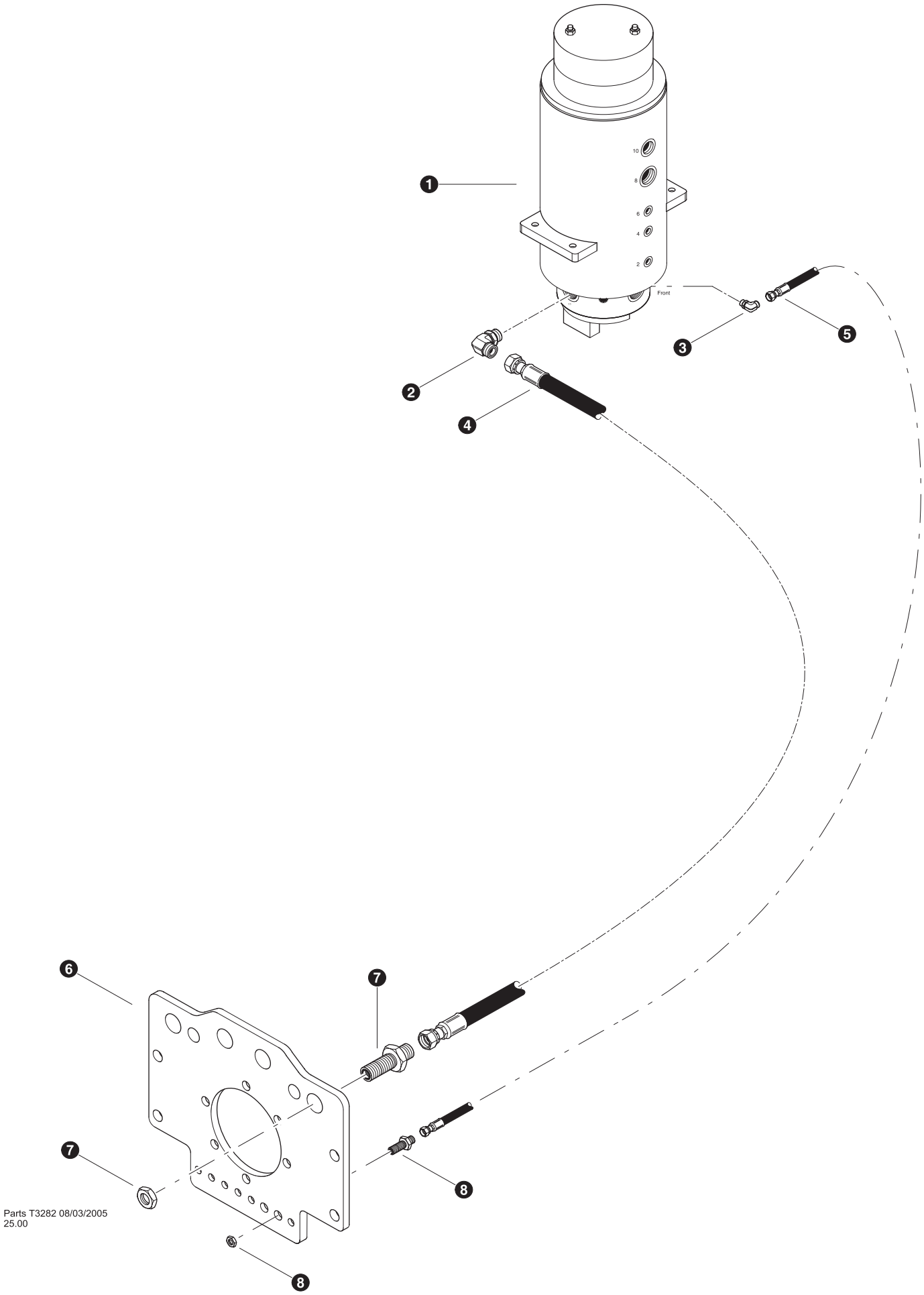


Parts T2632 11/13/2002
18.75

LEVELING HYDRAULICS
(Leveling Manifold to Leveling Cylinders)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	22717-BF	1		MANIFOLD, leveling	
2	15115-BF	8		CONNECTOR, straight - FF1852T-081OS	
3	50324-BF	1		HOSE ASSEMBLY - 4025-08-08OS-08O9-W (Bottom RH port of leveling manifold to RH leveling cylinder base port)	
4	50323-BF	1		HOSE ASSEMBLY - 4023-08-08OS-08O9-W (Top RH port of leveling manifld to RH leveling cylinder rod port)	
5	REF	2	🕮	LEVELING CYLINDER	BF-3
6	50323-BF	1		HOSE ASSEMBLY - 4023-08-080S-08O9 *(Top LH port of leveling manifold to LH leveling cylinder rod port)*	
7	50324-BF	1		HOSE ASSEMBLY - 4025-08-08OS-08O9 *(Bottom LH port of leveling manifold to LH leveling cylinder base port)*	

🕮 See referenced page for component or assembly breakdown.

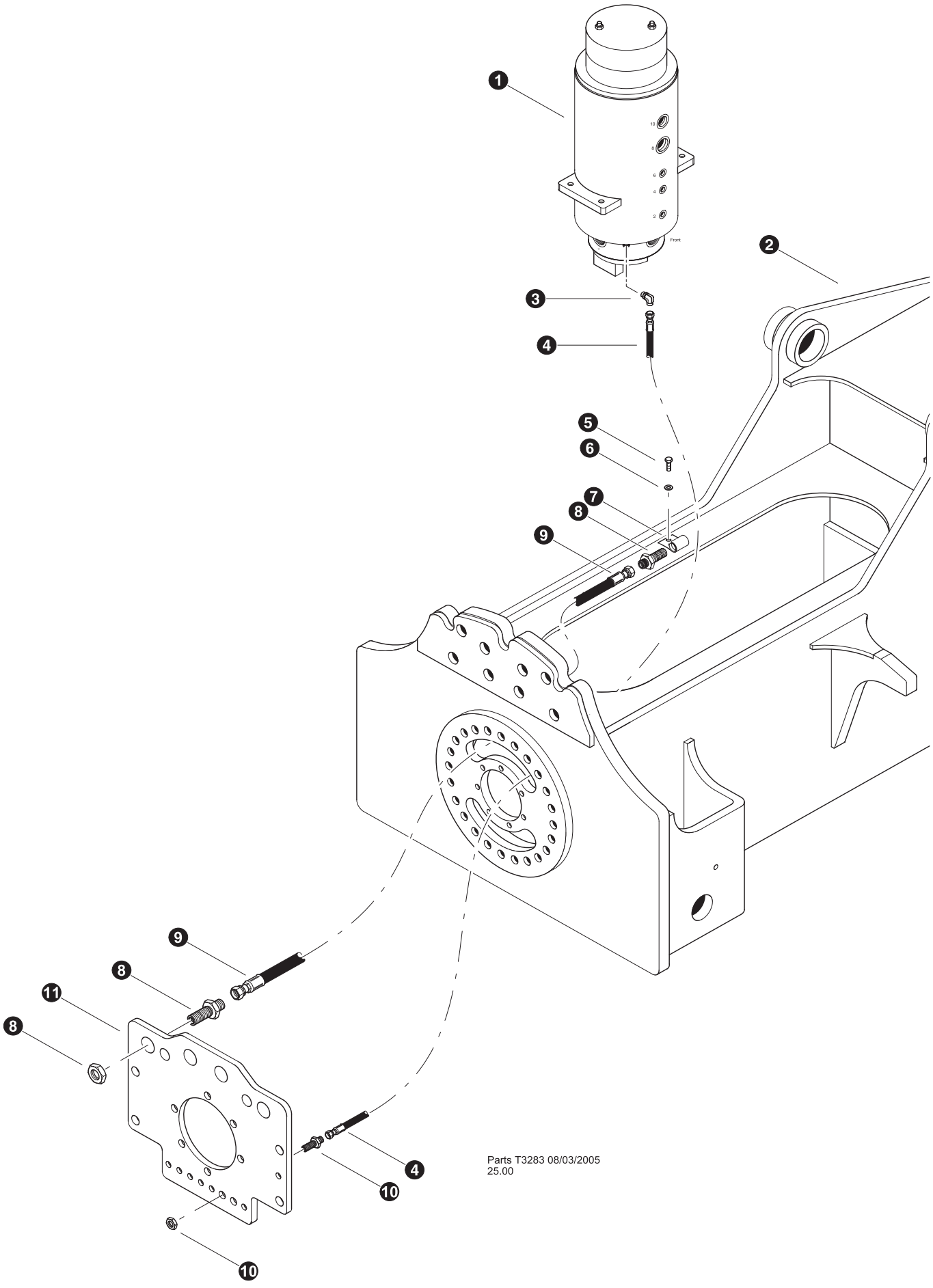


Parts T3282 08/03/2005
25.00

MOTOR CASE DRAIN & SOLENOID MANIFOLD PRESSURE
(Rotory Manifold to Rear Frame Bulkhead Plate)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTORY MANIFOLD	UP-1
2	17688-BF	1		ELBOW, 90 - FF1868T-1212S	
3	16296-BF	1		ELBOW, 90 - FF1868T-0606S	
4	50320-BF	1		HOSE ASSEMBLY - 4085-12-120S-120S (rear frame bulkhead plate to rotary manifold port #11)	
5	-HL	1		HOSE ASSEMBLY - 2086.5-06-060S-060S (rear frame bulkhead plate to rotary manifold port #4)	
6	42290-BF	1		BRACKET, bearing mount - (bulkhead plate 830)	
7	17009-BF	1		CONNECTOR, STR BULKHEAD - 2700-12	
8	50420-BF	1		CONNECTOR, STR BULKHEAD - 832-TT-06	

🕮 See referenced page for component or assembly breakdown.

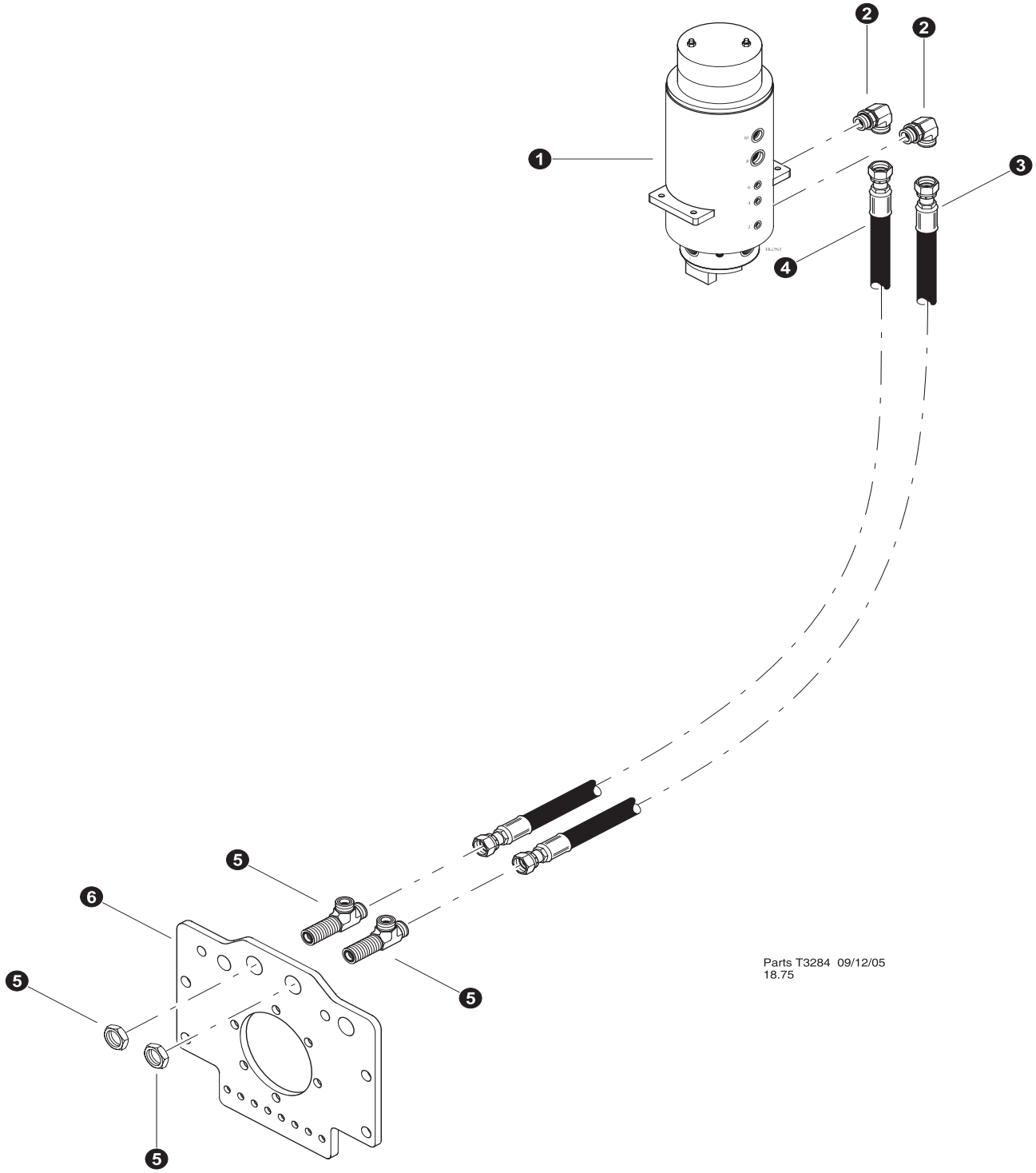


Parts T3283 08/03/2005
25.00

MOTOR FLUSH RETURN & WIRE HOSE
(Rotory Manifold to Rear Frame Bulkhead Plate)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTORY MANIFOLD	UP-1
2	REF.	1	🕮	FRONT FRAME TB 830 - LEVELING	BF-1
3	16296-BF	1		ELBOW, 90 - FF1868T-0606S	
4	-HL	1		HOSE ASSEMBLY - 208-06-060S-060S (rear frame bulkhead plate to rotary manifold port #3)	
5	11707-BF	1		BOLT, 3/8 X 1”	
6	15528-BF	1		WASHER, 3/8 sae flat	
7	22202-BF	1		BRACKET, 3/4 pipe union	
8	50037-BF	1		CONNECTOR, STR - BULKHEAD - 10	
9	-BF	1		HOSE ASSEMBLY - 2063-10-10OS-10OS (can bus wire)	
10	50420-BF	1		CONNECTOR, STR BULKHEAD - 832-TT-06	
11	42290-BF	1		BRACKET, bearing mount - (bulkhead plate 830)	

🕮 See referenced page for component or assembly breakdown.

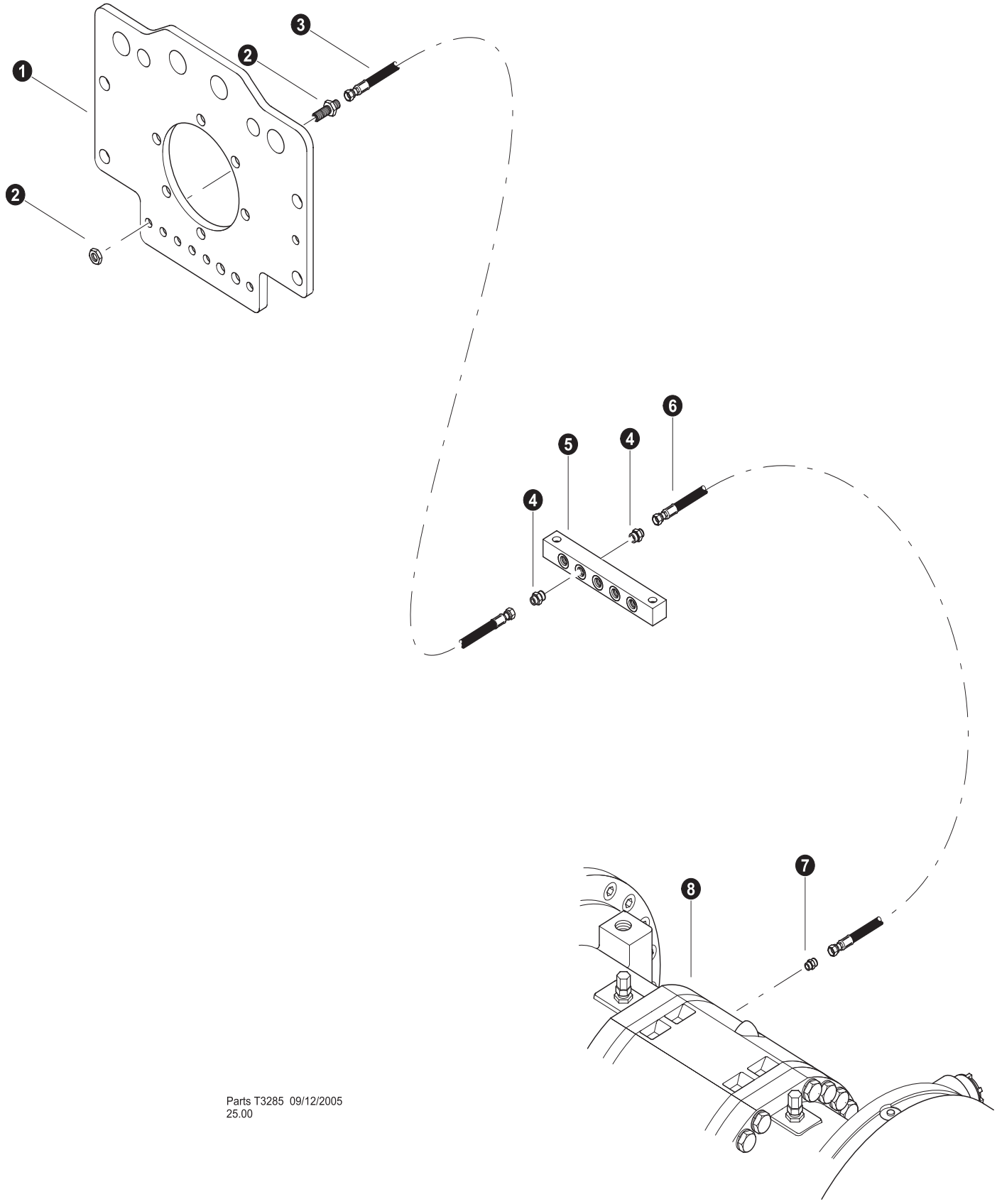


Parts T3284 09/12/05
18.75

STEER PRESSURE LINES
(Rotory Manifold to Rear Frame Bulkhead Plate)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTORY MANIFOLD	UP-1
2	17688-BF	1		ELBOW, 90 - FF1868T-1212S	
3	-BF	1		HOSE ASSEMBLY - 4093-12-120S-120S (rear frame bulkhead plate to rotary manifold port #9)	
4	-BF	1		HOSE ASSEMBLY - 4094-12-120S-120S (rear frame bulkhead plate to rotary manifold port #10)	
5	17009-BF	1		CONNECTOR, STR BULKHEAD - 2700-12	
6	42290-BF	1		BRACKET, bearing mount - (bulkhead plate 830)	

🕮 See referenced page for component or assembly breakdown.



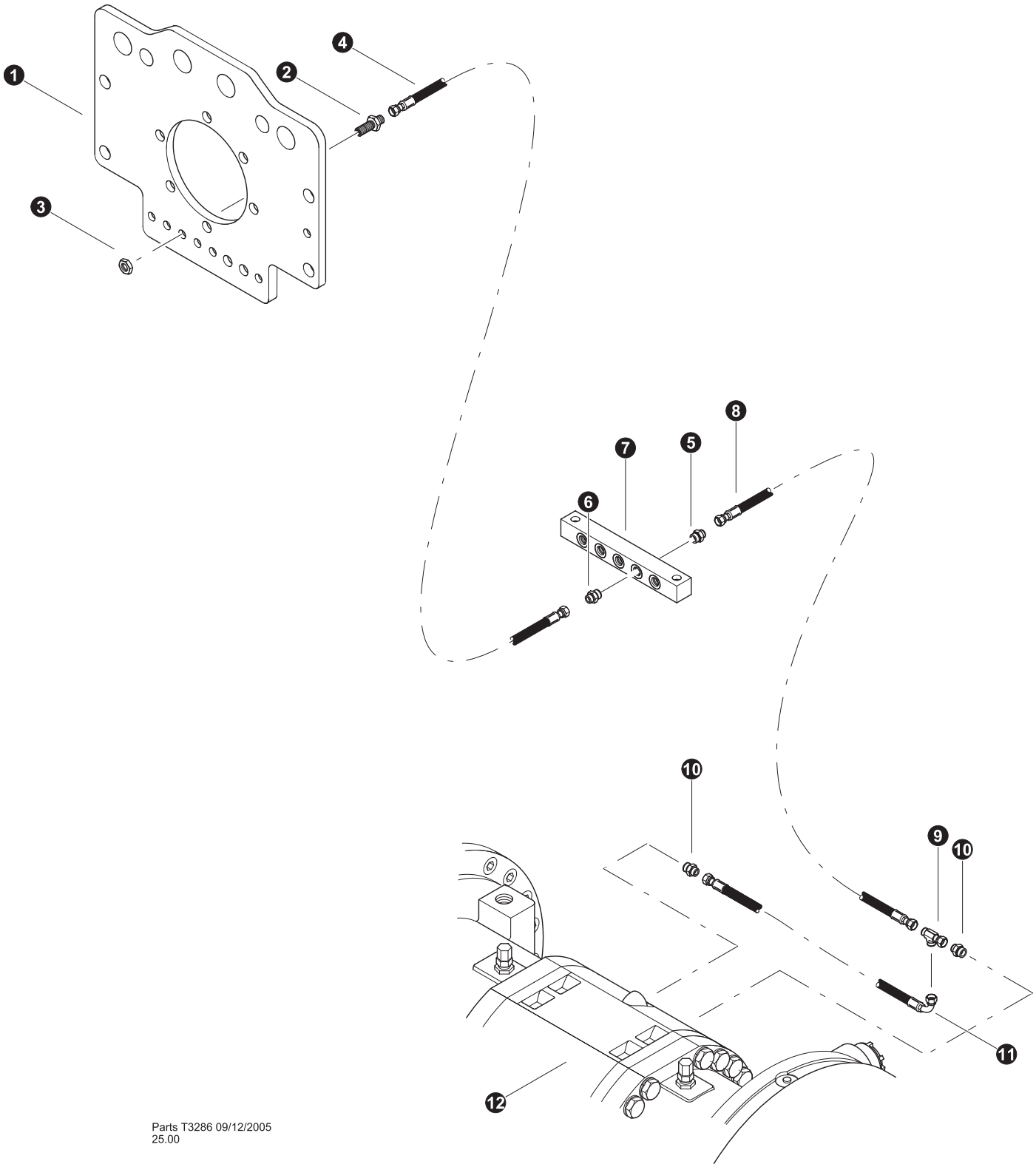
Parts T3285 09/12/2005
25.00

FRONT AXLE DIFFERENTIAL LOCK LINES
(From Rear Frame Bulkhead Plate to Front Axel)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	18582-BF	1		CONNECTOR, straight bulkhead - 04	
2	50575-BF	1		HOSE ASSEMBLY - 2087-04-040S-040S (Junction manifold to rear frame bulkhead plate)	
3	42201-BF	1		BRACKET, bearing mount - (bulkhead plate 630)	
4	15124-BF	2		CONNECTOR, straight - FF1852T-0404S	
5	22287-BF	1		MANIFOLD, GAUGE	
6	50573-BF	1		HOSE ASSEMBLY - 2044-04-040S-040S (Junction manifold to front axle)	
7	19470-BF	2		CONNECTOR, straight - 4M14F8OMLO-S	
8	REF.	1	🕮	FRONT AXLE	AX-1

🕮 See referenced page for component or assembly breakdown.

42290-HL	1	BRACKET, bearing mount - (bulkhead plate 830)	

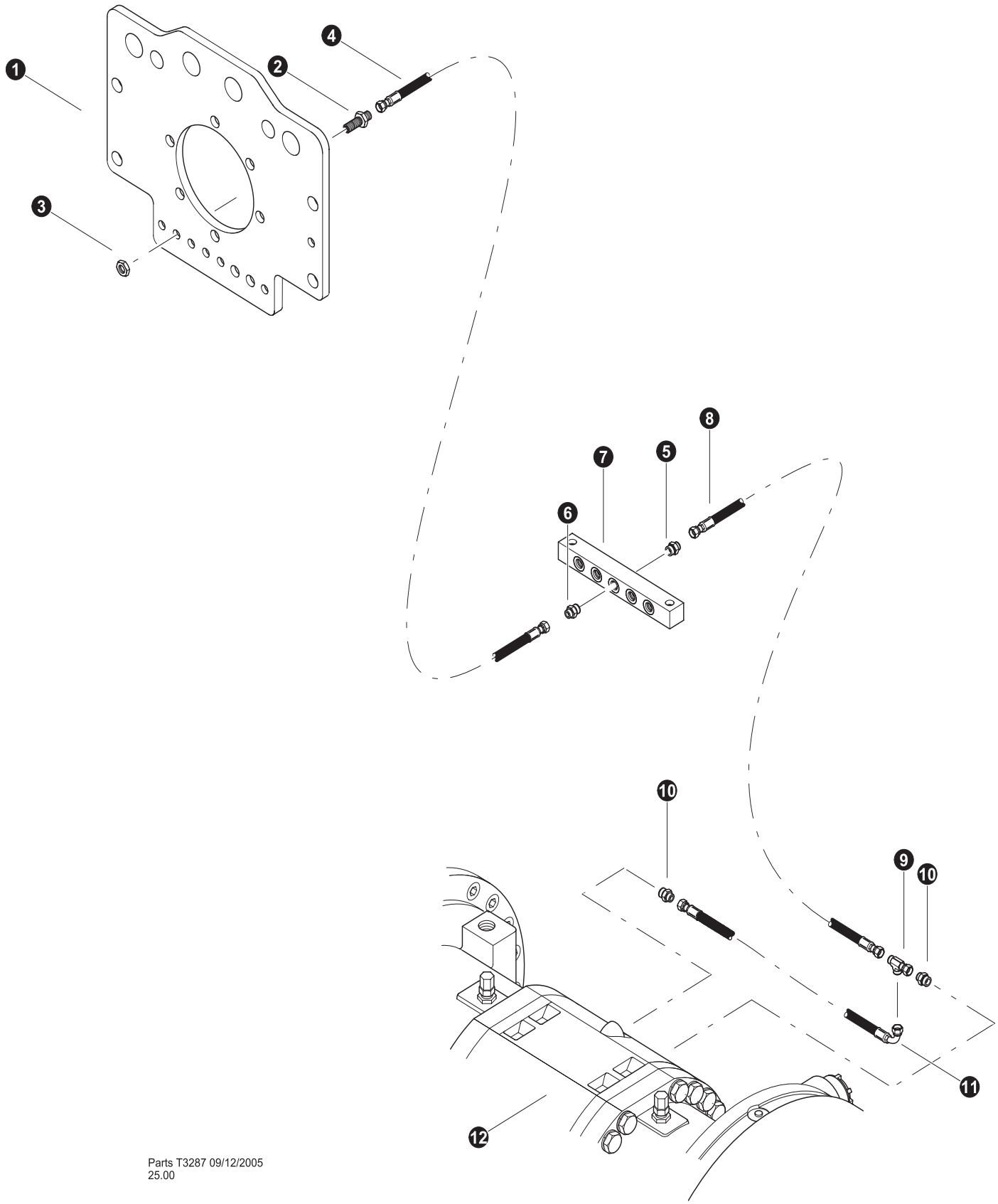


Parts T3286 09/12/2005
25.00

FRONT AXLE TRAVEL BRAKE LINES
(From Rear Frame Bulkhead Plate to Front Axel)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	18582-BF	1		CONNECTOR, straight bulkhead - 04	
2	50575-BF	1		HOSE ASSEMBLY - 2087-04-040S-040S (Junction manifold to rear frame bulkhead plate)	
3	42201-BF	1		BRACKET, bearing mount - (bulkhead plate 630)	
4	15124-BF	2		CONNECTOR, straight - FF1852T-0404S	
5	22287-BF	1		MANIFOLD, GAUGE	
6	50573-BF	1		HOSE ASSEMBLY - 2044-04-040S-040S (Junction manifold to front axle tee)	
7	19470-BF	2		CONNECTOR, straight - 4M14F8OMLO-S	
8	50607-BF	1		HOSE ASSEMBLY - 2009.5-04-040S-0409	
9	15176-BF	2		TEE - FF2114T-0404S	
10	REF.	1	🕮	FRONT AXLE	AX-1

🕮 See referenced page for component or assembly breakdown.

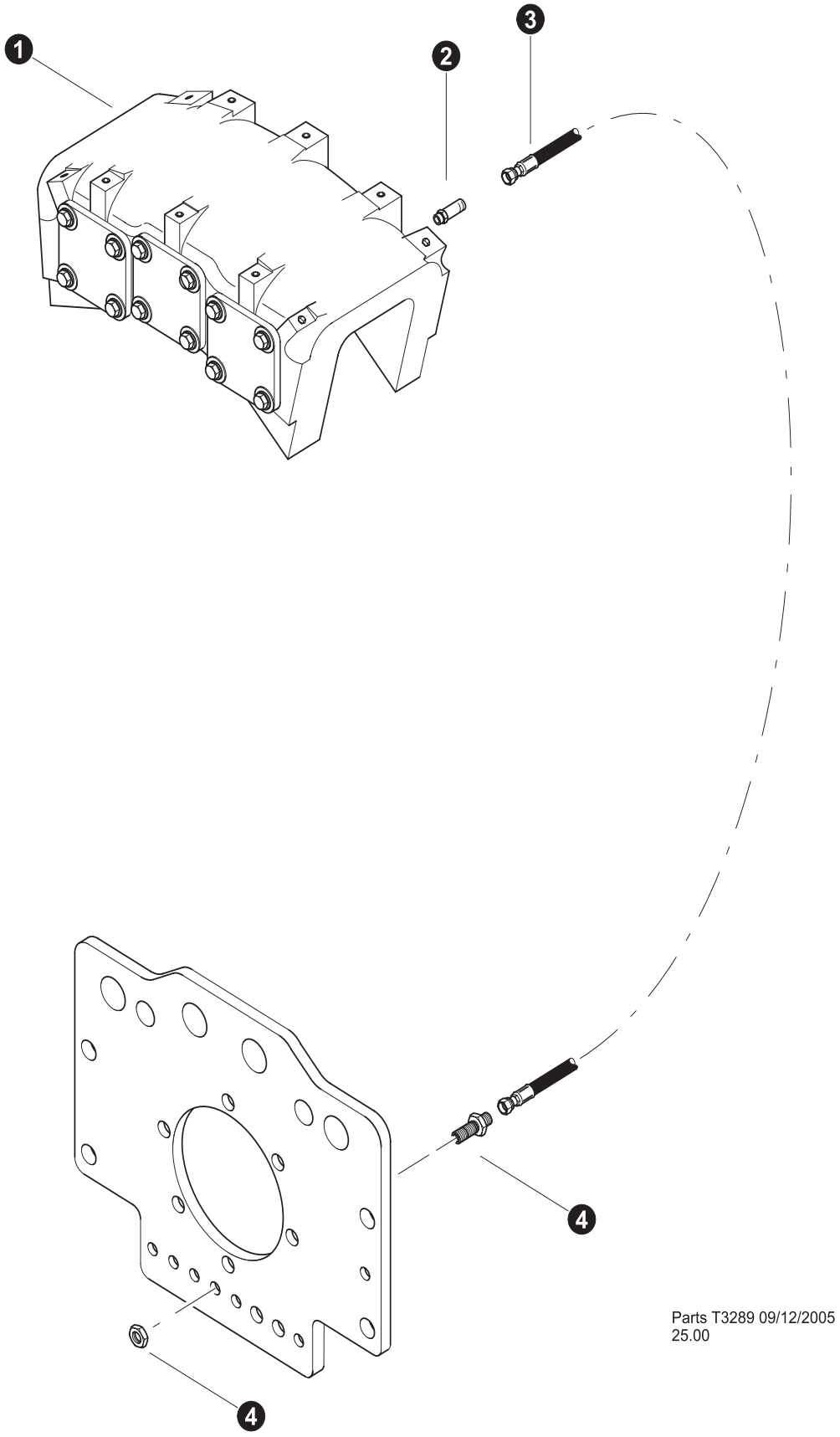


Parts T3287 09/12/2005
25.00

FRONT AXLE PARKING BRAKE LINES
(From Rear Frame Bulkhead Plate to Front Axel)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	18582-BF	1		CONNECTOR, straight bulkhead - 04	
2	50575-BF	1		HOSE ASSEMBLY - 2087-04-040S-040S (Junction manifold to rear frame bulkhead plate)	
3	42201-BF	1		BRACKET, bearing mount - (bulkhead plate 630)	
4	15124-BF	2		CONNECTOR, straight - FF1852T-0404S	
5	22287-BF	1		MANIFOLD, GAUGE	
6	50573-BF	1		HOSE ASSEMBLY - 2044-04-040S-040S (Junction manifold to front axle tee)	
7	19470-BF	2		CONNECTOR, straight - 4M14F8OMLO-S	
8	50607-BF	1		HOSE ASSEMBLY - 2009.5-04-040S-0409	
9	15176-BF	2		TEE - FF2114T-0404S	
10	REF.	1	🕮	FRONT AXLE	AX-1

🕮 See referenced page for component or assembly breakdown.

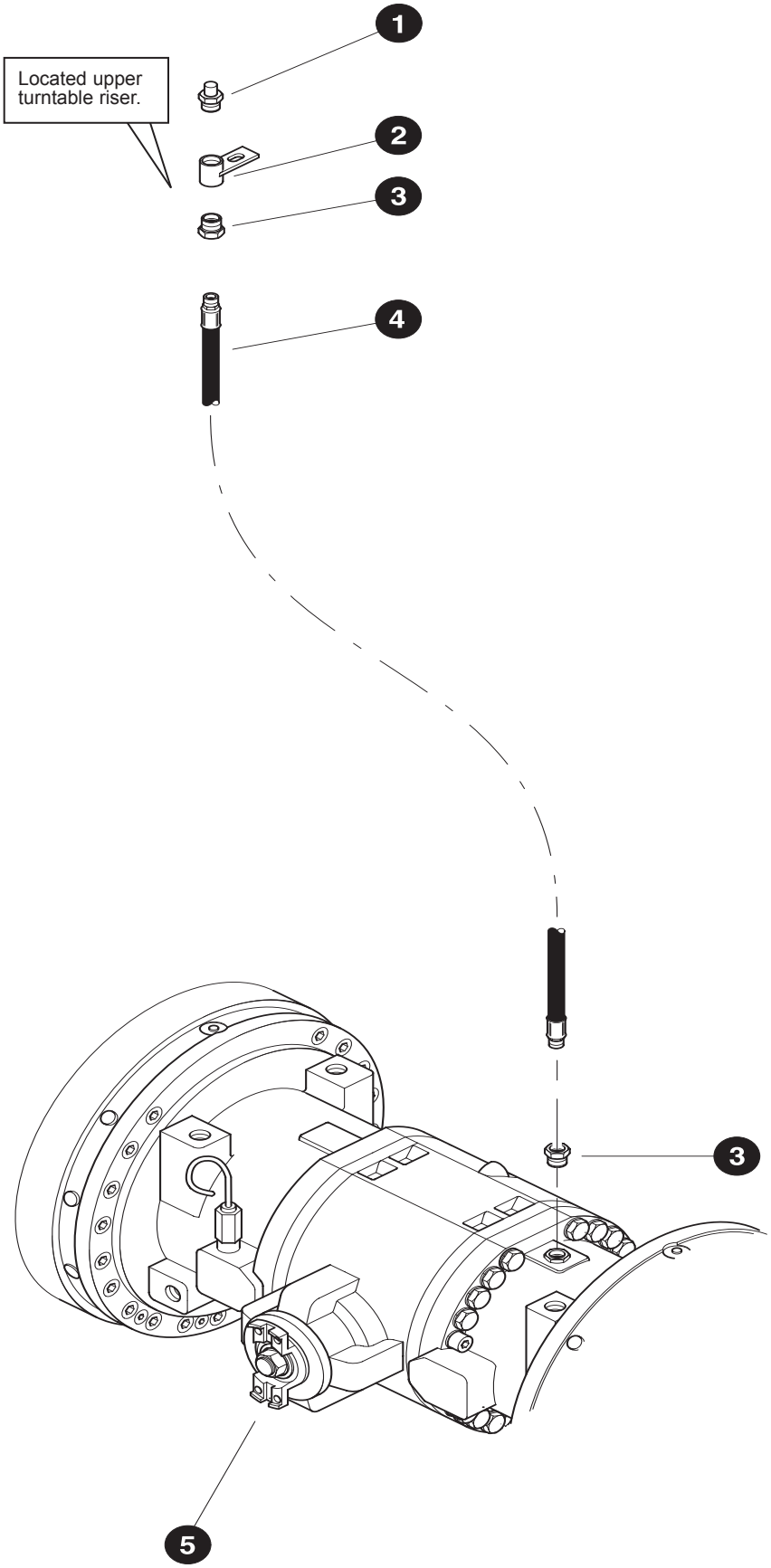


Parts T3289 09/12/2005
25.00

FRAME LOCK LINE
(From Rear Frame Bulkhead Plate to Frame Lock)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	FRAME LOCK BRAKE	BF-3
2	20991-BF	1		CONNECTOR, STR LONG - 848L-TTO-04X04	
3	-BF	1		HOSE ASSEMBLY - 2079-04-040S-040S (Frame lock)	
4	18582-BF	1		CONNECTOR, straight bulkhead - 04	

🕮 See referenced page for component or assembly breakdown.

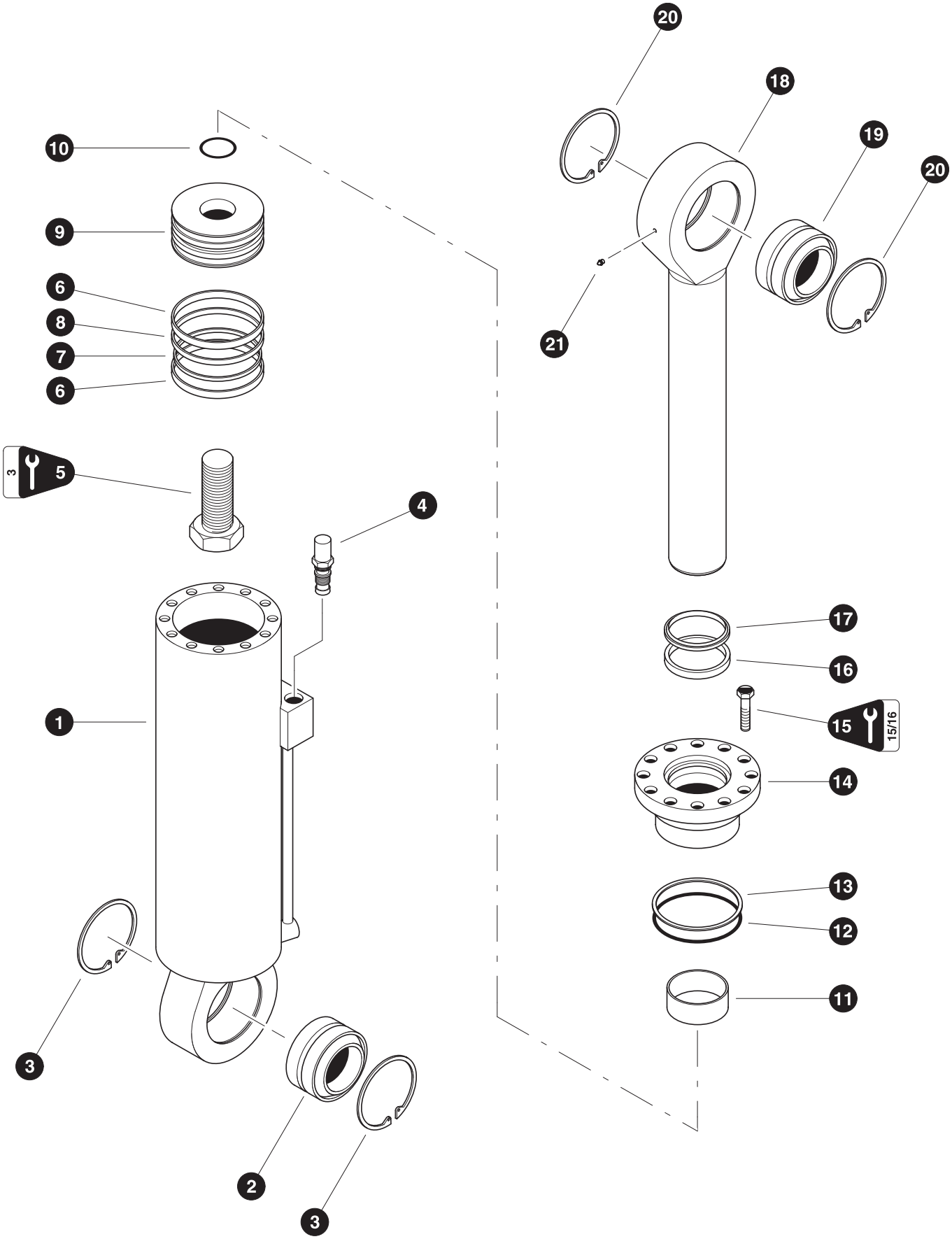


Parts T2838 08/25/2003
12.50

FRONT AXLE VENT LINE

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	22570-BF	1		VENT, axle	
2	50723-BF	1		BRACKET, vent mount - 8	
3	11312-BF	1		BUSHING, PIPE 4 - 8	
4	-BF	1		HOSE ASSEMBLY - 2026-04-04MP-04MP (Axle vent port to vent mounting bracket)	
5	REF.	1	🕮	FRONT AXLE	AX-1

🕮 See referenced page for component or assembly breakdown.

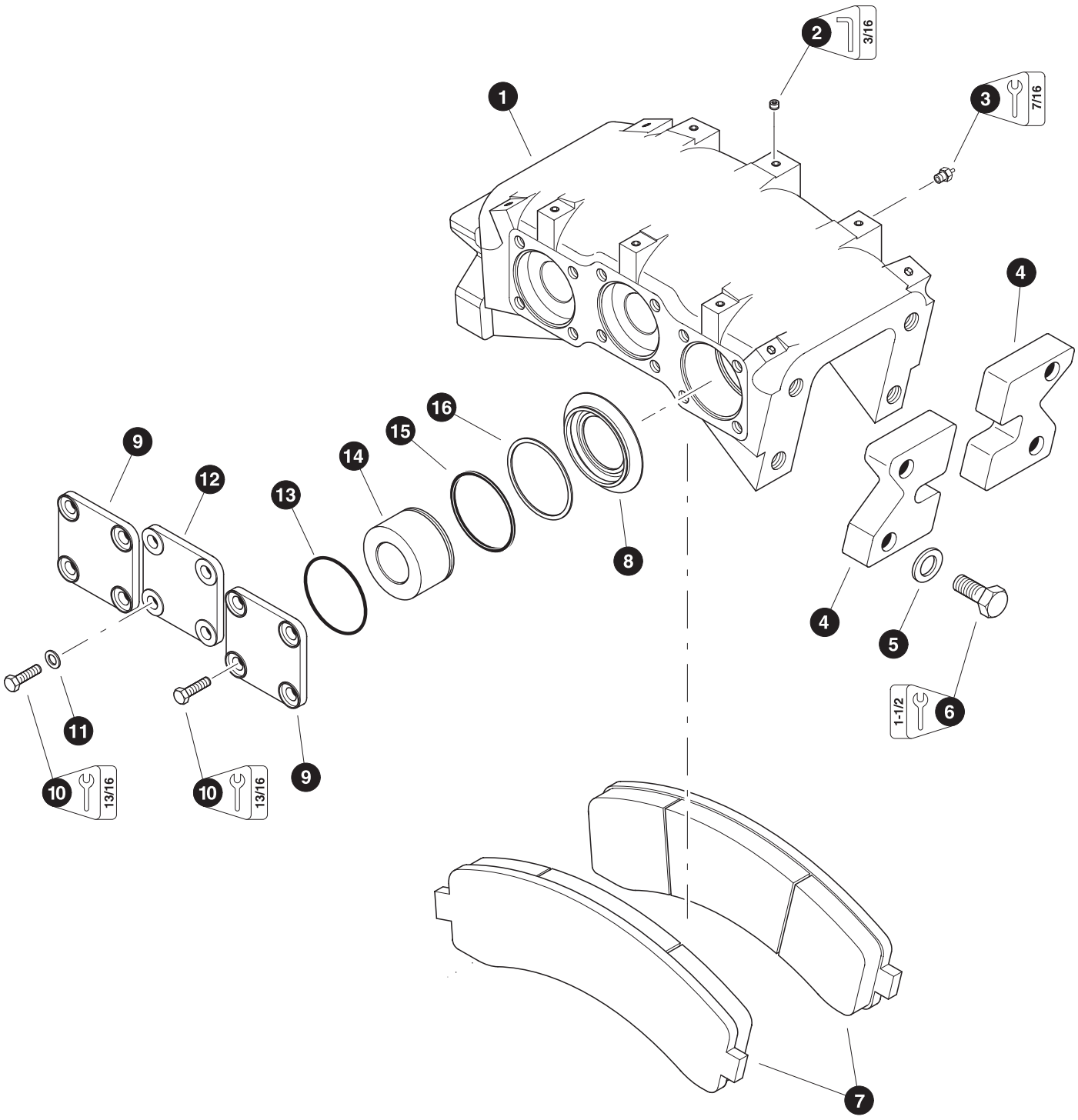


Parts 01788 08/29/2000
18.75

LEVELING CYLINDER BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	22547-BF	1	❑	LEVEL CYLINDER ASSEMBLY	
1	23482-BF	1	❑	BARREL ASSEMBLY	
2	12127-BF	1		BUSHING, spherical - 3”	
3	17833-BF	2		Ring, snap - 3” spherical bushing	
4	23216-BF	2		CARTRIDGE, holding	
5	19956-BF	1		BOLT, cylinder rod - 2” x 4-1/4” **(2700 +/- 200 ft lbs (3600 +/- 265 Nm))**	
6	NSS	2	⌘	RING, piston wear	
7	NSS	1	⌘	RING, piston square	
8	NSS	1	⌘	RING, piston chem-cast	
9	23483-BF	1		PISTON	
10	NSS	1	⌘	O-RING, piston	
11	NSS	1	⌘	RING, rod bearing wear	
12	NSS	1	⌘	O-RING, rod bearing	
13	NSS	1	⌘	RING, rod bearing back-up	
14	19954	1	⌘	BEARING, rod	
15	15681-BF	12		BOLT - 5/8” x 2-1/4” **(175 ft lbs (233Nm))**	
16	NSS	1	⌘	U-CUP, rod bearing	
17	NSS	1	⌘	WIPER, rod	
18	23485-BF	1	❑	ROD ASSEMBLY	
19	12127-BF	1		BUSHING, spherical - 3”	
20	17833-BF	2		RING, snap - 3” spherical bushing	
21	10704-BF	1		FITTING, grease	
-	23486-BF	1		KIT, seal repair - level cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part #23486-BF



Parts 01736 07/08/2000
37.50

FRAME LOCK BRAKE BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	20953-BF	1	🕮	FRAME LOCK BRAKE	
1	NSS	1		HOUSING	
2	- - - - -	13		PLUG	
3	- - - - -	1		SCREW, bleed	
4	- - - - -	4		RETAINER, brake pad	
5	- - - - -	8		WASHER	
6	- - - - -	8		BOLT	
7	24406-BF	1		PAD, brake (pair)	
8	NSS	6	⌘	BOOT, piston	
9	23445-BF	2		COVER, piston (Machined special to countersink bolt heads)	
10	24088-BF	12		BOLT - 9/16” x 1-1/4”	
11	- - - - -	4		WASHER	
12	23444-BF	1		COVER, piston	
13	NSS	6	⌘	O-RING, piston cover	
14	24434-BF	6		PISTON, brake caliper	
15	NSS	6	⌘	SEAL, piston	
16	NSS	6	⌘	RING, back-up	
-	23113-BF	1		KIT, seal repair - frame lock brake	

🕮 Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit PN# 23113.

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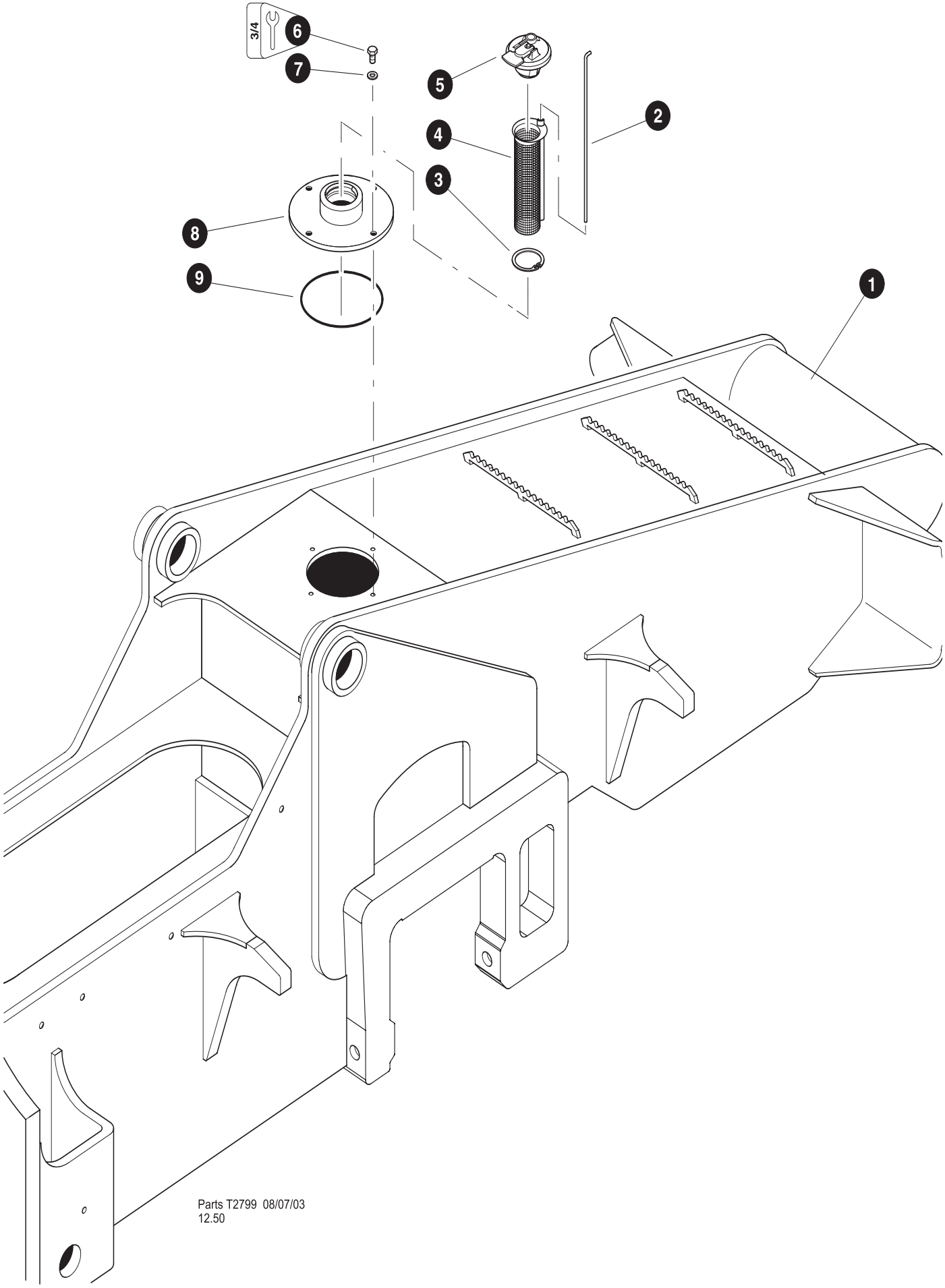
Section BF-4

TB 830, 840 Leveling Front Frame - Fuel Tank Components

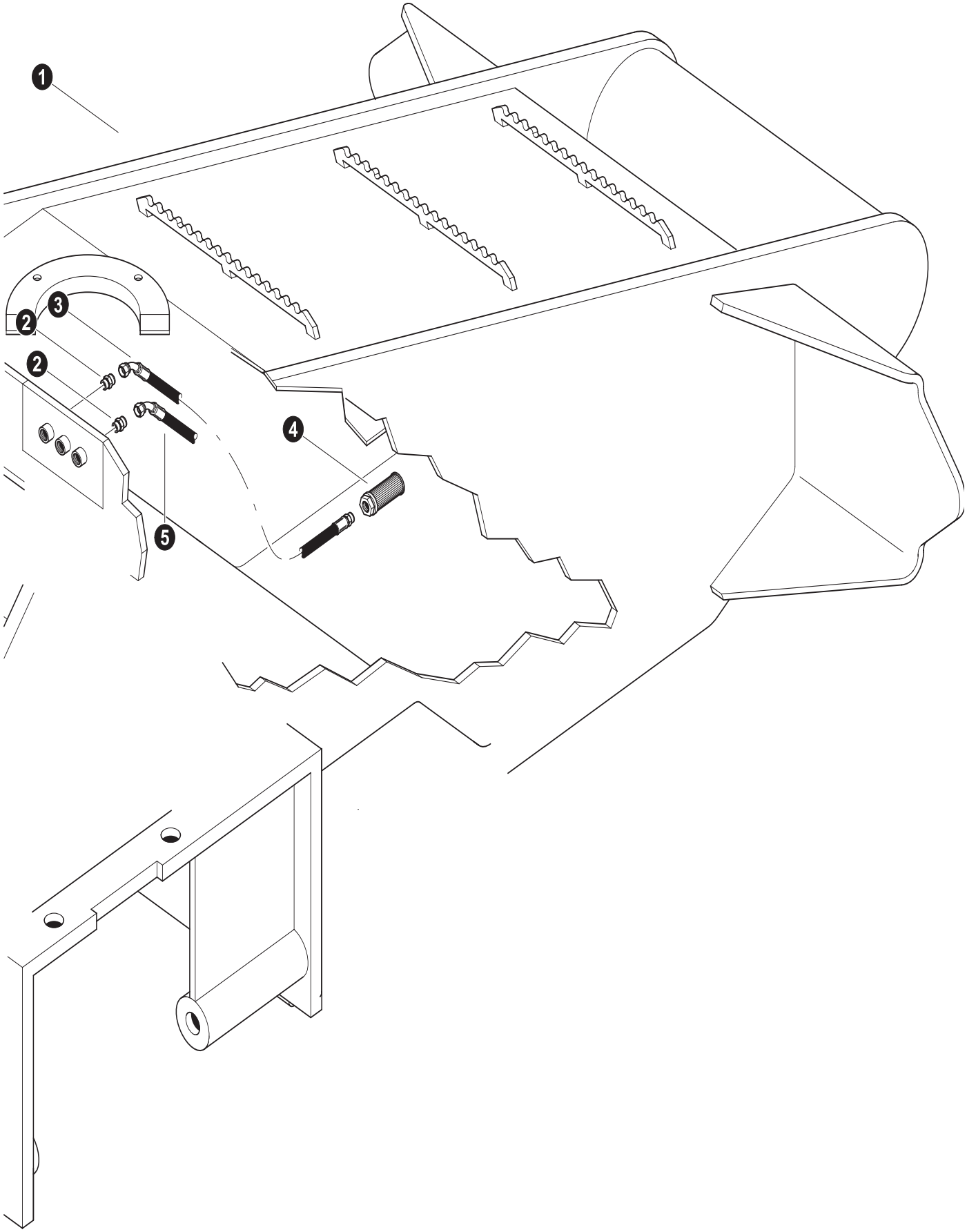


Parts T2799 08/07/03
12.50

FUEL FILL STRAINER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	BF-1
2	17492-BF	1		DIPSTICK, fuel level	
3	17115-BF	1		RING, snap - fuel strainer retainer	
4	17114-BF	1		STRAINER, fuel	
5	16585-BF	1		CAP, fuel	
6	10783-BF	4		BOLT - 1/2” x 1”	
7	15534-BF	4		WASHER, SAE flat - 1/2”	
8	14079-BF	1		COVER, fuel tank	
9	15600-BF	1		O-RING - 8”	

🕮 See referenced page for component or assembly breakdown.

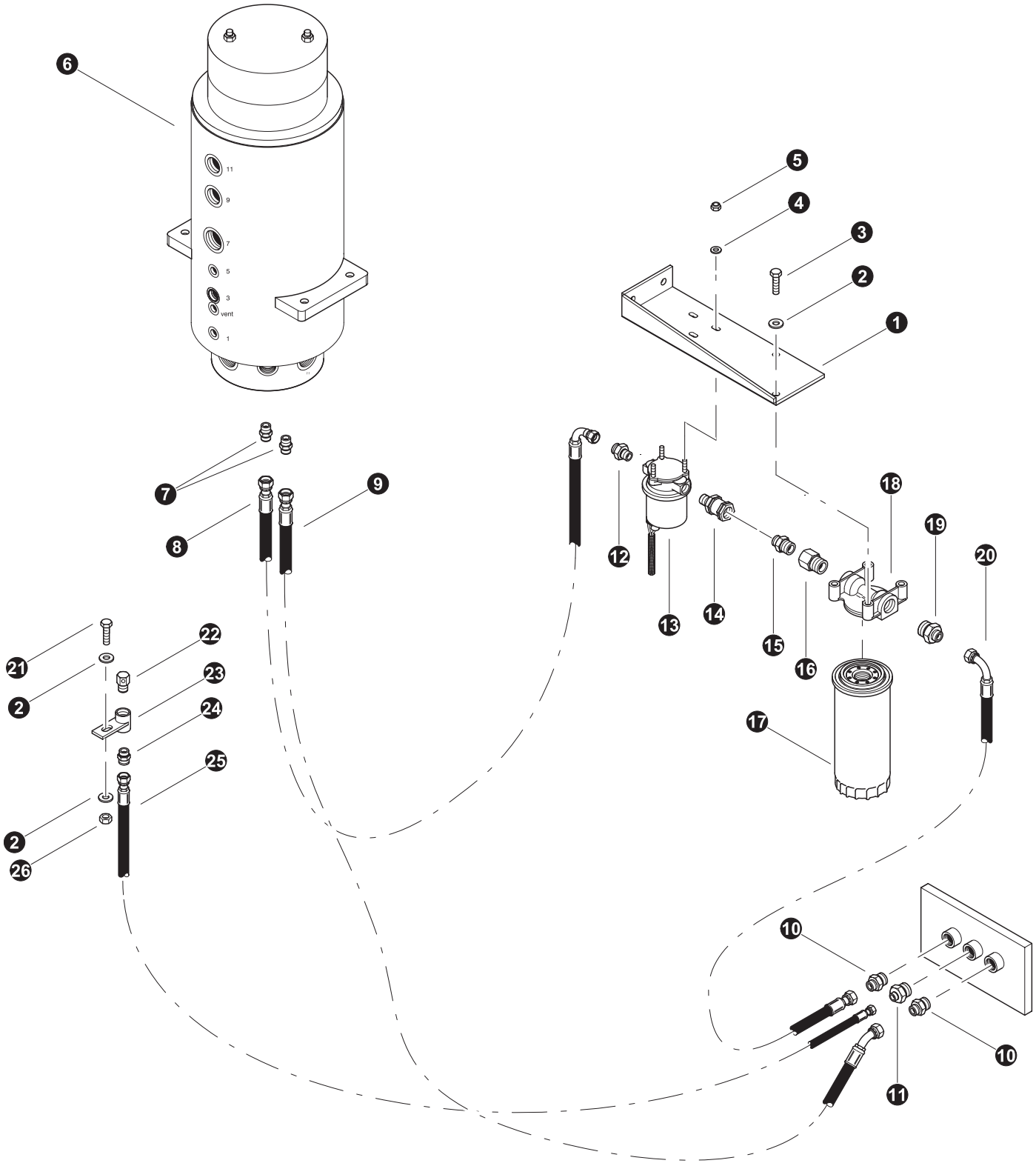


Parts T2798 08/05/03
18.75

FUEL LINES
(Supply & Return Lines Inside Fuel Tank)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	FRONT FRAME WELDMENT	BF-1
2	15117-BF	2		CONNECTOR, straight - FF1852T-0808S	
3	50576-BF	1		HOSE ASSEMBLY - 2018-08-0804 (Fuel return)	
4	17271-BF	1		FILTER, screen	
5	50577-BF	1		HOSE ASSEMBLY - 2067-08-0804-08MP (Fuel supply)	

🕮 See referenced page for component or assembly breakdown.



Parts T3058 04/19/2005
18.75

FUEL LINES
(Supply & Return Lines From Fuel Tank To Rotary Manifold)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51752-BF	1		MOUNT, FUEL COMPONENTS	
2	15528-BF	4		WASHER, SAE flat - 3/8”	
3	11707-BF	2		BOLT - .375” X 1”	
4	10757-BF	3		WASHER, SAE flat - 1/4”	
5	10755-BF	3		NUT, hex - 1/4”	
6	REF.	1	🕮	ROTARY MANIFOLD	UP-1
7	18034-BF	2		CONNECTOR, STR - FF1852T-0606S	
8	-BF	1		HOSE ASSEMBLY - 2043-06-060S-0609 (Fuel supply from rotary manifold port #2 to fuel lift pump)	
9	-BF	1		HOSE ASSEMBLY - 2047-06-060S-0604 (Fuel return from rotary manifold port #1 to fuel tank)	
10	22902-BF	2		CONNECTOR, STR - 848-TT-08x06	
11	15504-BF	1		CONNECTOR, straight - FF2031T-0408S	
12	51878-BF	1		CONNECTOR, STR - MALE PIPE (6-6 FL0-S)	
13	21966-BF	1		PUMP, fuel - 12 volt	
14	15652-BF	1		VALVE, check	
-	21966-BF	1		PUMP, fuel - 12 volt (machine built after 02/01/04)	
15	51982-BF	1		CONNECTOR, STR - (8-3/8 F50F-S)	
16	19290-BF	1		BUSHING, REDUCER - 6410-10-8	
17	16575-BF	1		FILTER, spin-on fuel	
18	16574-BF	1		MOUNT, filter head	
19	15115-BF	1		CONNECTOR, straight - FF1852T-0810S	
20	-BF	1		HOSE ASSEMBLY - 2020-06-060S-0609 (Fuel supply from fuel tank to fuel pre-filter)	
21	20084-BF	1		BOLT - .375” X 1.75”	
22	22906-BF	1		BREATHER, fuel vent	
23	23393-BF	1		BRACKET, 800 Fuel tank vent	
24	15131-BF	1		CONNECTOR, straight - FF2031T-0404S	
25	-BF	1		HOSE ASSEMBLY - 2032-04-040S-040S (Fuel tank vent port to fuel vent breather)	
26	10813-BF	1		NUT, LOCK - .375”	

🕮 See referenced page for component or assembly breakdown.

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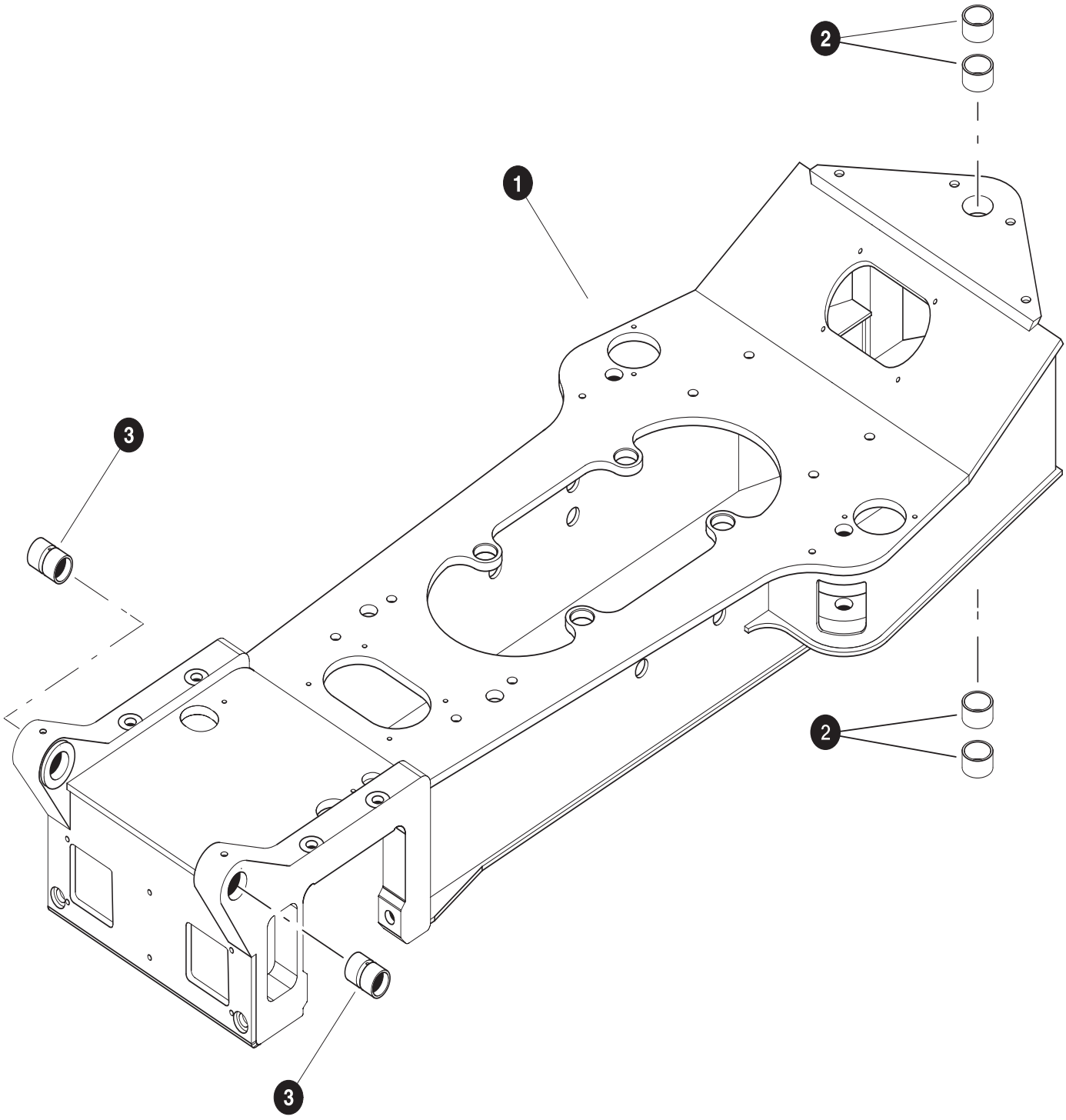
Section BR-1

TB 830 Rear Frame - Structural / Covers / Pins

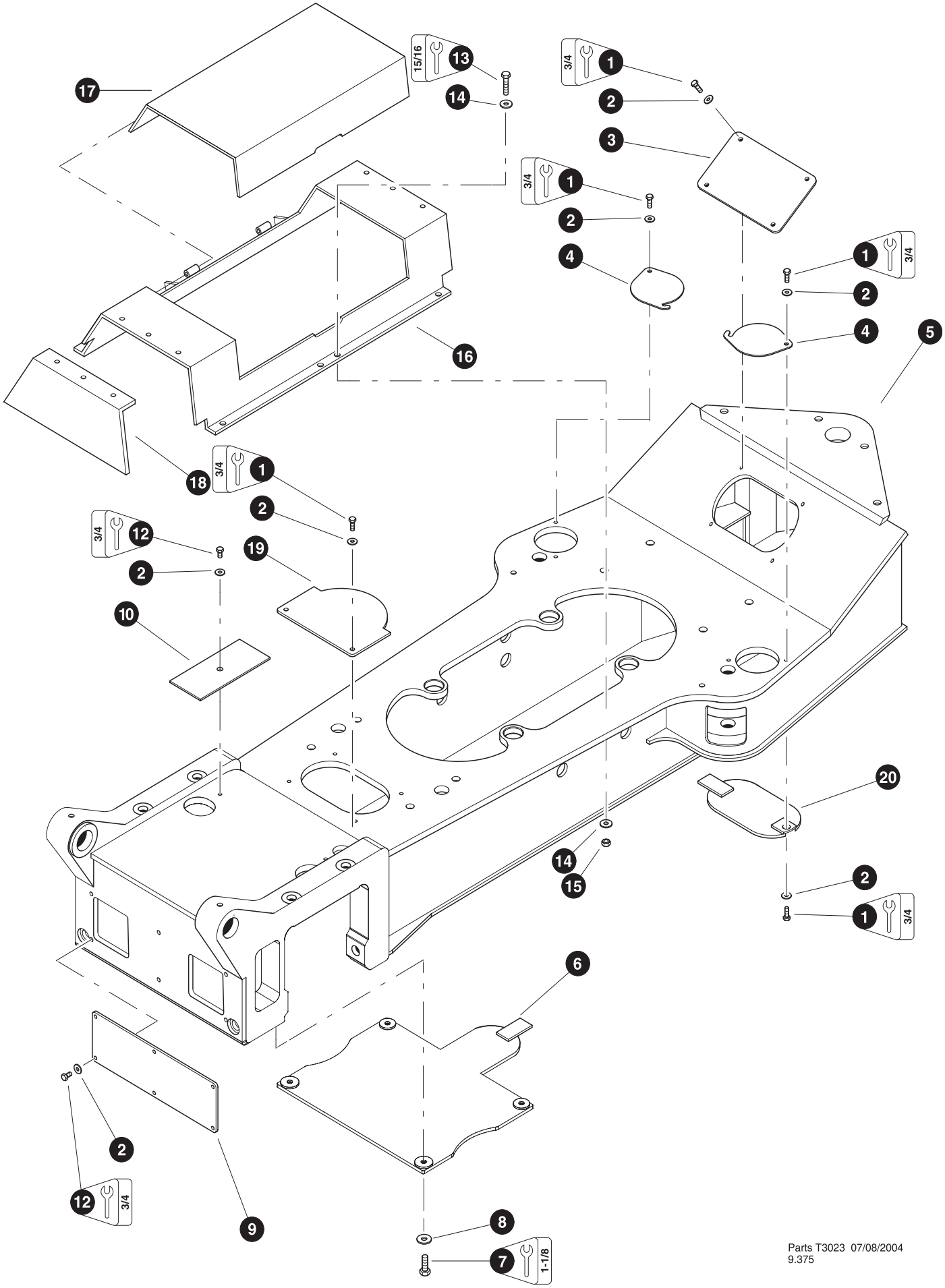


Parts T2960 03/08/2004
9.375

REAR FRAME COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50960-FR	1	❑	REAR FRAME WELDMENT *(Standard length)*	
	50961-FR	1	❑	REAR FRAME WELDMENT *(24" longer)*	
	51383-FR	1	❑	REAR FRAME WELDMENT *(48" longer)*	
2	23104-FR	4		BUSHING - 3-1/2" x 1-1/2"	
3	11704-FR	2		BUSHING - 2-1/2" x 4-1/4"	

❑ Kit or Assembly - includes all items indented underneath.

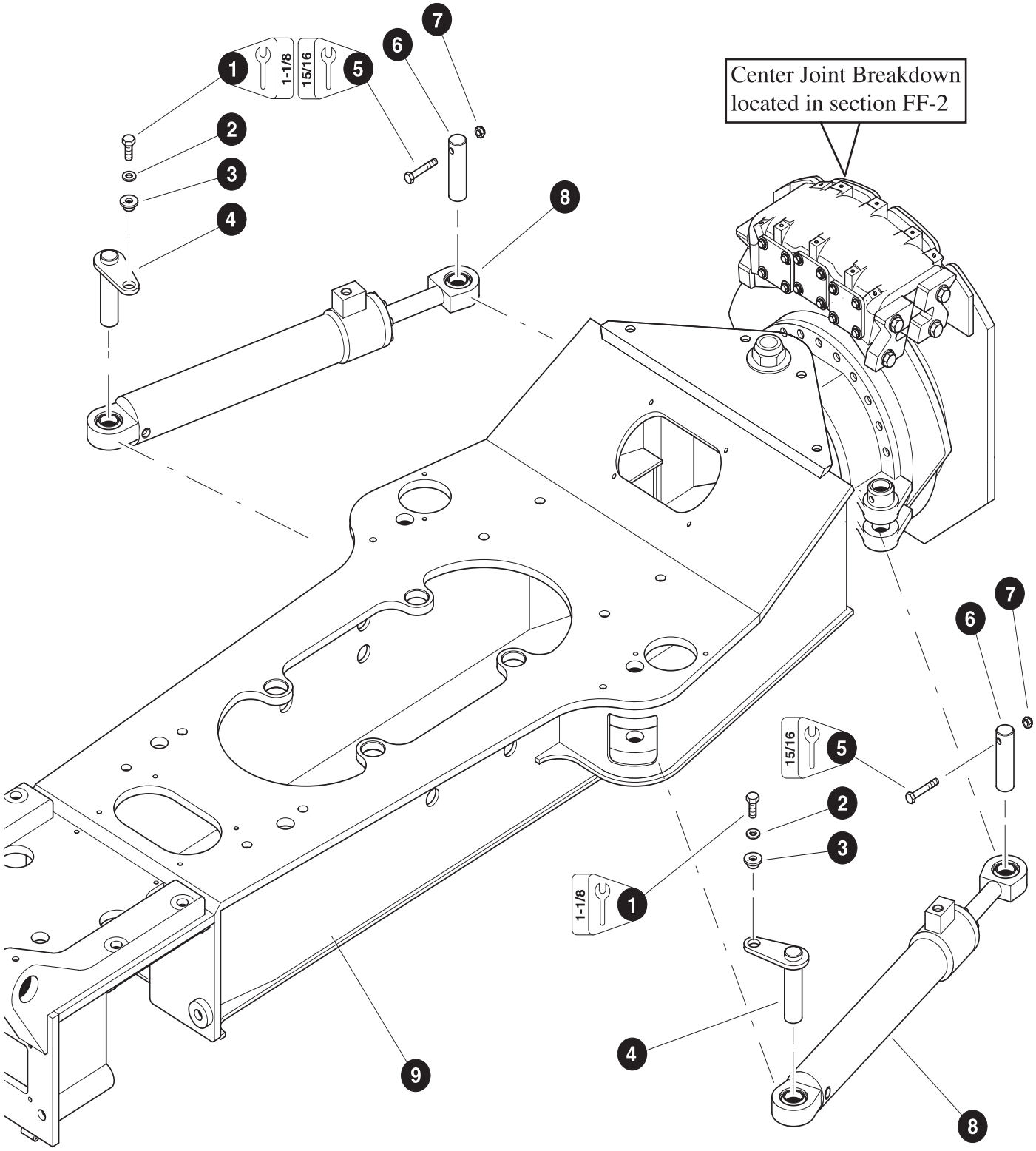


Parts T3023 07/08/2004
9.375

REAR FRAME ACCESS COVERS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	10739-FR	30		BOLT - 1/2” x 1-1/2”	
2	15534-FR	39		WASHER, SAE flat - 1/2”	
3	19395-FR	1		COVER, access - steerbox / axle	
4	12150-FR	2		COVER, access - steer cylinder	
5	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
6	51415-FR	1		COVER, access - rear frame axle *(Lower)*	
7	10835-FR	2		BOLT - 1/2” x 4-1/2”	
8	10815-FR	2		NUT, lock - 1/2”	
9	80316-FR	1		COVER, access - axle box end	
10	42162-FR	2		COVER, access - rear frame axle top	
11	19394-FR	1		COVER, access - driveshaft	
12	10783-FR	9		BOLT - 1/2” x 1”	
13	15681-FR	8		BOLT, 5/8 X 2.25”	
14	10771-FR	16		WASHER, SAE flat - 5/8	
15	10816-FR	8		NUT, LOCK 5/8	
-	51553-FR	1	❑	GUARD, GEARBOX (complete assembly)	
16	51554-FR	1		GUARD, GEARBOX (Frame)	
17	51555-FR	1		GUARD, GEARBOX (Cover)	
18	51556-FR	1		GUARD, end cap (Optional - used when no bunks are installed or custom bunks are used)	
19	42166-FR	1		COVER, access - rear frame top	
20	40983-FR	1		COVER, access - rear frame bottom (standard frame)	
-	40988-FR	1		COVER, access - rear frame bottom (2’ longer frame)	
-	42163-FR	1		COVER, access - rear frame bottom (4’ longer frame)	

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



Parts T2803 08/08/03
9.375

STEER CYLINDER INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	15549-FR	2		BOLT - 3/4” x 2”	
2	15550-FR	2		WASHER, SAE flat - 3/4”	
3	18570-FR	2		WASHER, pin retaining	
4	80769-FR	2		PIN, steer cylinder mounting - base	
5	10719-FR	2		BOLT - 5/8” x 4”	
6	19448-FR	2		PIN, steer cylinder mounting - rod	
7	15563-FR	2		NUT, nylock - 5/8”	
8	REF.	2	🕮	STEER CYLINDER	FR-4
9	REF.	1		REAR FRAME WELDMENT	FR-1

🕮 See referenced page for component or assembly breakdown.

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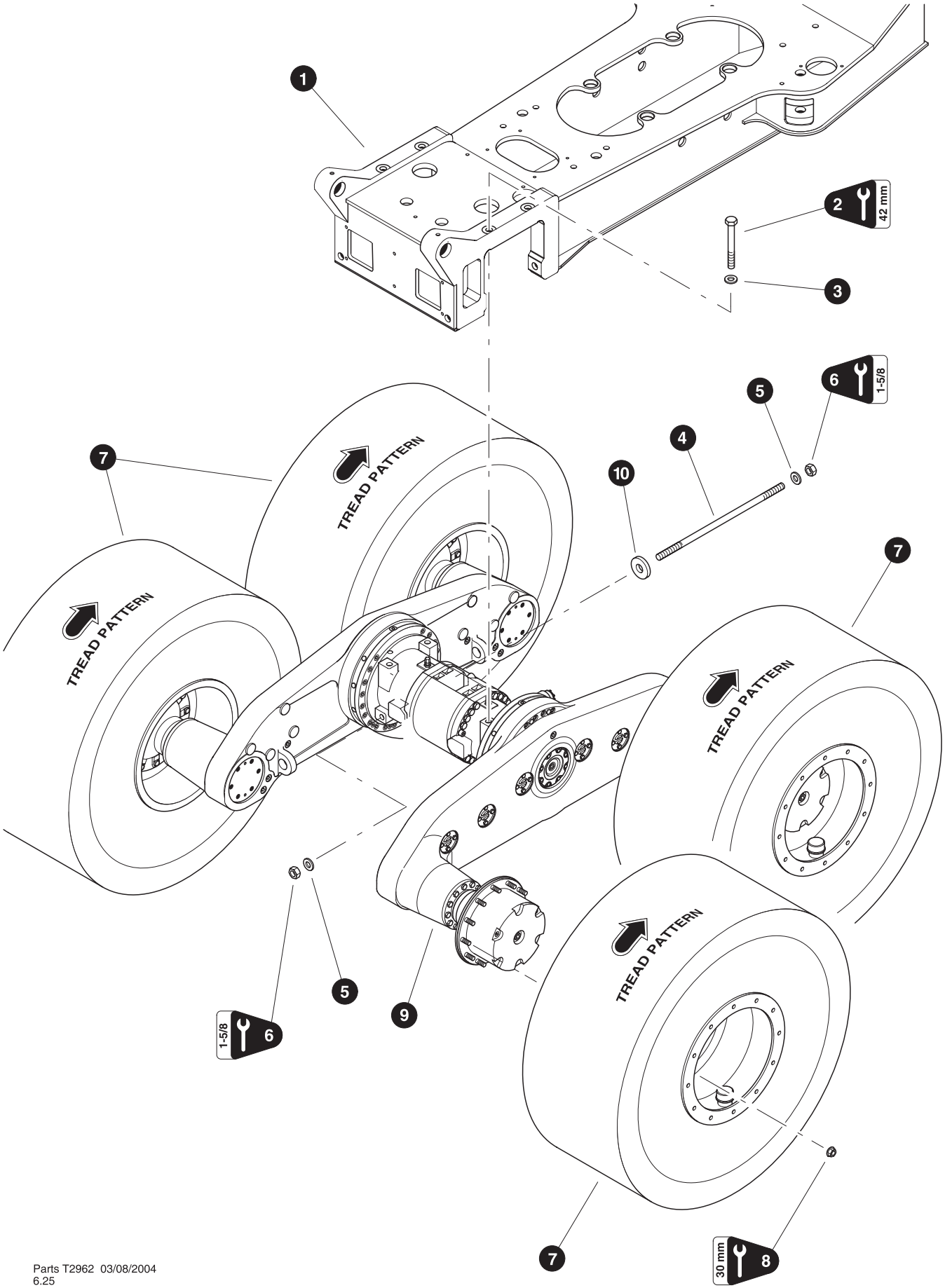
Section BR-2

TB 830, 840 Rear Frame - Frame & Drivetrain Installation

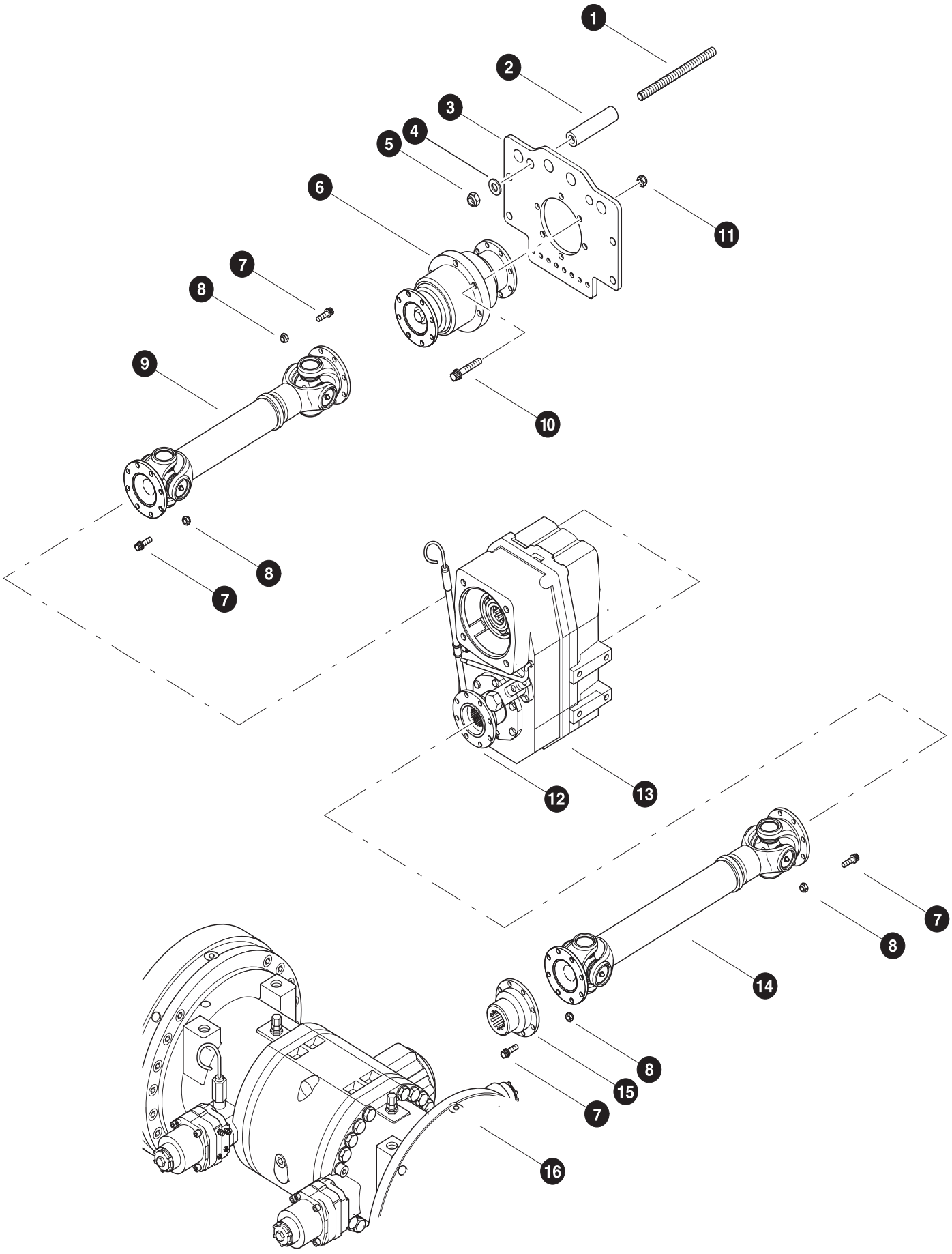


Parts T2962 03/08/2004
6.25

REAR AXLE INSTALLATION
(Machines Built After 12/01/03)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
2	23567-FR	4		BOLT - 30mm-3.5P x 220mm ***(Torque to 1100 ft.lbs. (1465 Nm))***	
3	23568-FR	4		WASHER, hardened flat - 30mm	
4	23851-FR	2		STUD - 1.25”- 7 X 31” ***(Torque to 1200 ft.lbs. (1600 Nm))***	
5	22531-FR	4		WASHER, SAE flat - 1-1/4”	
6	23989-FR	4		NUT, lock - 1-1/4”	
7	REF.	4	🕮	WHEEL ASSEMBLY	AX-5
8	19361-FR	48		NUT, lug ***(Torque to 600 ft.lbs. (800 Nm))***	
9	REF.	1	🕮	REAR AXLE.	AX-1
10	24003-FR	2		SPACER, axle spreader box	

🕮 See referenced page for component or assembly breakdown.



Parts T2805 08/08/03
12.50

DRIVE SHAFT INSTALLATION (NAF 2-SPEED SHAFTS)

(STANDARD FRAME)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	26037-FR	4		STUD, 3/4 X 8.5 (see note #2)	
2	80721-FR	4		SPACER	
3	42290-FR	1		BRACKET, bearing mount	
4	15550-FR	4		WASHER, SAE flat 3/4	
5	10817-FR	4		NUT, lock - 3/4”	
6	25218-FR	1		IDLER, driveshaft (HD)	
7	50261-FR	32		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
8	50262-FR	32		NUT, lock - 12mm	
9	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
10	50050-FR	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
11	10816-FR	6		NUT, lock - 5/8”	
12	-FR	2		YOKE, HD flange - NAF gearbox (7521.238)	
13	REF.	1	🕮	GEARBOX ASSY.	AX-4
14	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
15	23997-FR	1		YOKE, companion flange - AXLE	
16	REF.	1	🕮	AXEL ASSY..	AX-1-2
17	42290-FR	1			

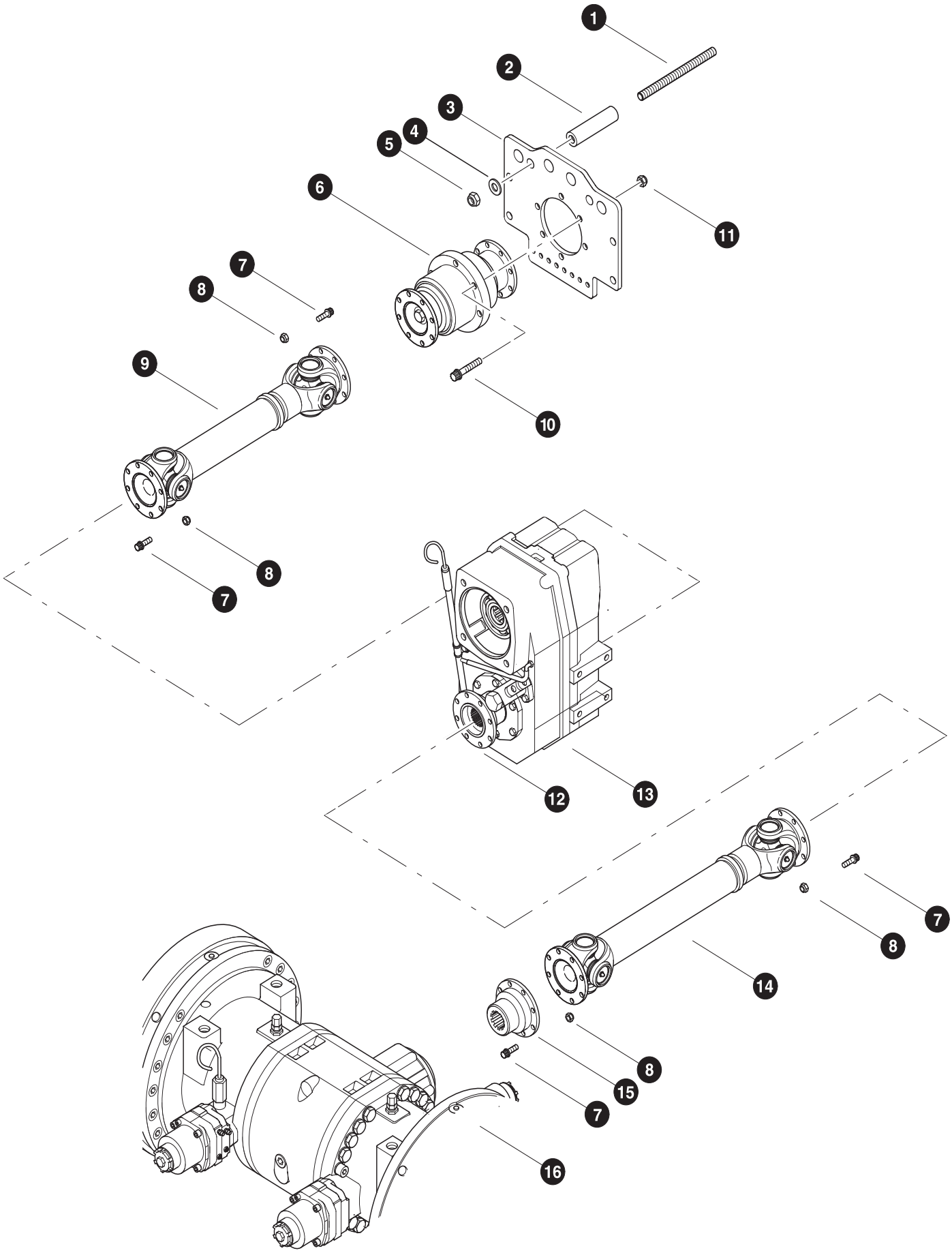
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 242 (blue) during installation.

Note #2:

Use Loctite 262 (red) during installation.



Parts T2805 08/08/03
12.50

DRIVE SHAFT INSTALLATION (NAF 2-SPEED SHAFTS)

(2-FOOT LONGER FRAME)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	26037-FR	4		STUD, 3/4 X 8.5 (see note #2)	
2	80721-FR	4		SPACER	
3	42290-FR	1		BRACKET, bearing mount	
4	15550-FR	4		WASHER, SAE flat 3/4	
5	10817-FR	4		NUT, lock - 3/4”	
6	25218-FR	1		IDLER, driveshaft (HD)	
7	50261-FR	32		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
8	50262-FR	32		NUT, lock - 12mm	
9	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
10	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
11	10816-FR	6		NUT, lock - 5/8”	
12	-FR	2		YOKE, HD flange - NAF gearbox (7521.238)	
13	REF.	1	🕮	GEARBOX ASSY.	AX-4
14	51986-FR	1	❑	DRIVE SHAFT (Gearbox to Axel) (472672-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
15	23997-FR	1		YOKE, companion flange - AXLE	
16	REF.	1	🕮	AXEL ASSY..	AX-1-2

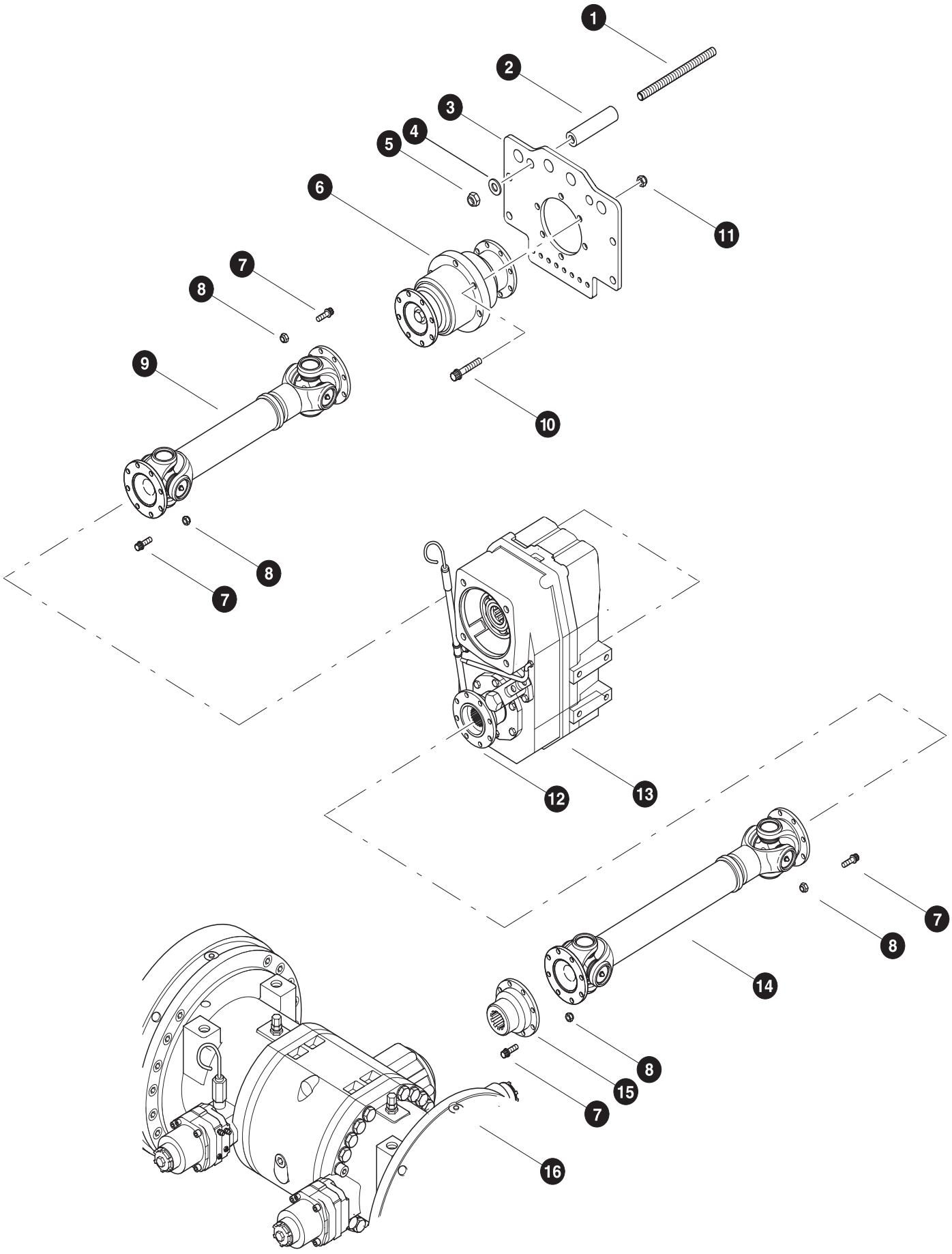
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 242 (blue) during installation.

Note #2:

Use Loctite 262 (red) during installation.



Parts T2805 08/08/03
12.50

DRIVE SHAFT INSTALLATION (NAF 2-SPEED SHAFTS)

(4-FOOT LONGER FRAME)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	26037-FR	4		STUD, 3/4 X 8.5 (see note #2)	
2	80721-FR	4		SPACER	
3	42290-FR	1		BRACKET, bearing mount	
4	15550-FR	4		WASHER, SAE flat 3/4	
5	10817-FR	4		NUT, lock - 3/4”	
6	25218-FR	1		IDLER, driveshaft (HD)	
7	50261-FR	32		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
8	50262-FR	32		NUT, lock - 12mm	
9	50791-FR	1	❑	DRIVE SHAFT (Gearbox to Center) (469284-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
10	50050	6		BOLT, 12 point - 5/8” x 3” (See Note #1 Below) (Torque to 130 ft.lbs. (175 Nm))	
11	10816-FR	6		NUT, lock - 5/8”	
12	-FR	2		YOKE, HD flange - NAF gearbox (7521.238)	
13	REF.	1	🕮	GEARBOX ASSY.	AX-4
14	- - -	1	❑	DRIVE SHAFT (Gearbox to Axel) (479637-61)	
	50466-FR	2		KIT, CROSS & BEARING	
	50467-FR	2		YOKE, FLANGE (90mm)	
	50261-FR	16		BOLT, 12 point - 12mm-1.75P x 35mm (See Note #1 Below)	
	50262-FR	16		NUT, lock - 12mm	
15	23997-FR	1		YOKE, companion flange - AXLE	
16	REF.	1	🕮	AXEL ASSY..	AX-1-2

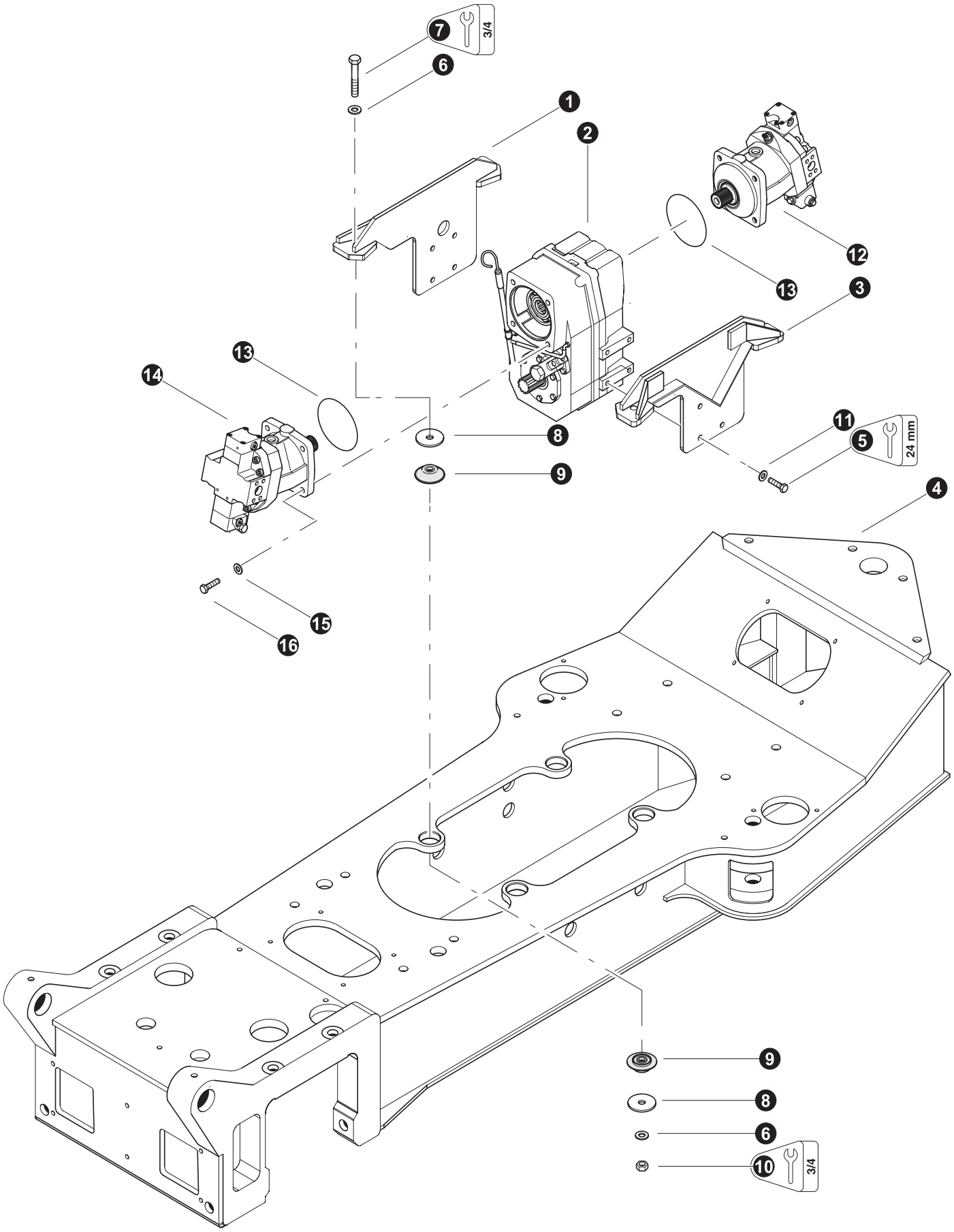
🕮 See referenced page for component or assembly breakdown.
❑ Kit or Assembly - includes all items indented underneath.

Note #1:

Use Loctite 242 (blue) during installation.

Note #2:

Use Loctite 262 (red) during installation.



Parts T2963 03/08/04
9.375

REAR FRAME GEARBOX MOUNTING

Hydraulic Motor and Gearbox Installation
(NAF -DUAL MOTOR, 2 SPEED GEARBOX)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	50830-FR	1		MOUNT, L.H. NAF 2 SPD 820 (REAR FRAME)	
2	REF.	1	🕮	TRANSFER CASE.	AX-4
3	50829-FR	1		MOUNT, R.H. NAF 2 SPD 820 (REAR FRAME)	
4	REF.	1	🕮	REAR FRAME WELDMENT	FR-1
5	50382-FR	8		BOLT - 16mm 2.00 X 40mm ***(Torque to 180 ft-lbs)*** *(See Note #1 Below)*	
6	15550-FR	8		WASHER, SAE flat - 3/4”	
7	10844-FR	4		BOLT - 3/4” x 5”	
8	17918-FR	8		WASHER, isolator mount .875”	
9	17904-FR	8		ISOLATOR	
10	10817-FR	4		NUT, lock 3/4”	
11	10771-FR	8		WASHER, SAE flat - 5/8”	
14	20967-FR	2		O-RING, WHEEL DRIVE MOTOR PILOT (FWD)	
15	42110-FR	8		WASHER, FLAT - 20MM	
16	18525-FR	8		BOLT, - 20mm X 50 mm *(See Note #1 Below)*	

🕮 See referenced page for component or assembly breakdown.

Note #1:

Use Loctite 242 *(BLUE)* during install.

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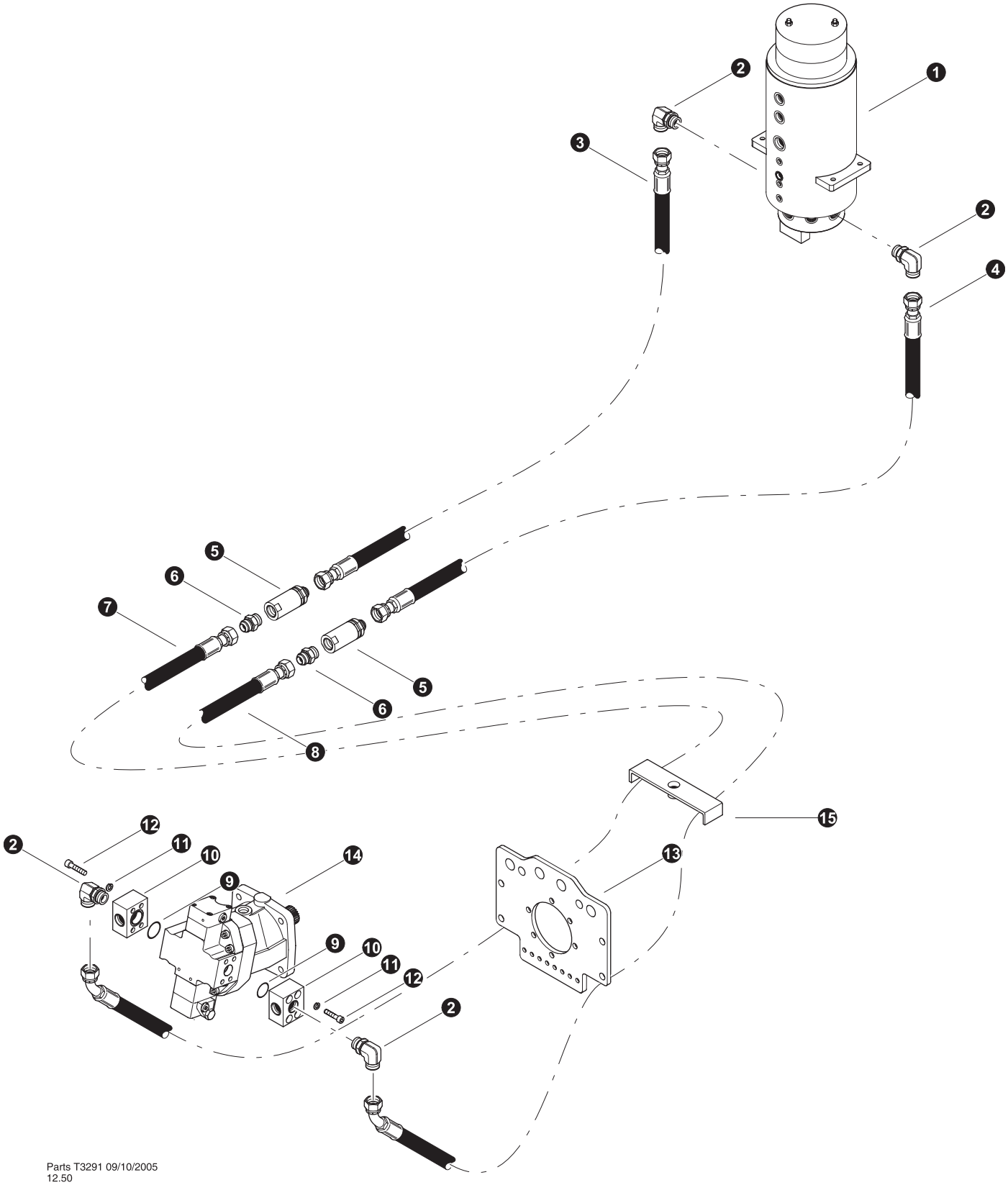
Section BR-3

TB 830 REAR FRAME - Hydraulic Circuits



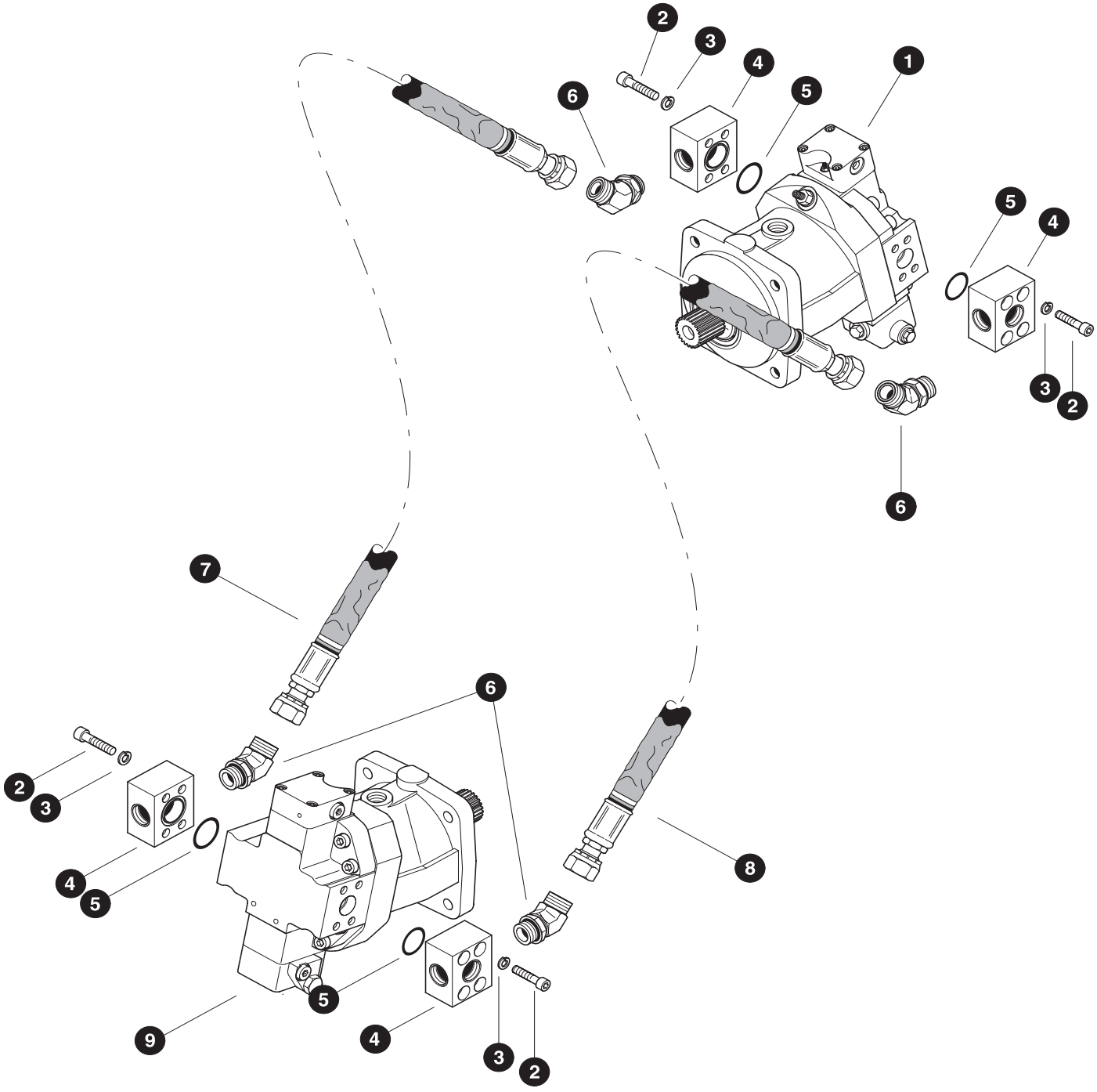
Parts T3291 09/10/2005
12.50

REAR FRAME HYDRAULICS

ROTARY MANIFOLD TO REAR DRIVE MOTOR
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	ROTARY MANIFOLD.	UP-1
2	15484-BR	2		ELBOW, 90 - 6801-16	
3	-BR	1		HOSE ASSEMBLY - 6052-16-16JS-160S (Rotary manifold lower port “7” to driveline swivel)	
4	-BR	1		HOSE ASSEMBLY - 6052-16-16JS-160S (Rotary manifold lower port “8” to driveline swivel)	
5	19541-BR	2		SWIVEL, inline - PS1610310-16-16-716	
6	15497-BR	2		CONNECTOR, straight - 6400-16	
7	-BR	1		HOSE ASSEMBLY - 6120-16-16JS-160S (Driveline swivel to rear hydro motor)	
8	-BR	1		HOSE ASSEMBLY - 6120-16-16JS-160S (Driveline swivel to rear hydro motor)	
9	15378-BR	2		O-RING, 1.25”	
10	26008-BR	2		MANIFOLD, rexroth drive motor	
11	50075-BR	8		WASHER, LOCK 1/2	
12	50074-BR	8		BOLT, ALLEN 1/2 X 1 1/2”	
13	42290-BR	1		BRACKET, bearing mount	
14	REF	1		HYDRAULIC WHEEL DRIVE MOTOR	BR-4
15	40830-BR	1		BRACKET, articulation joint hose	

🕮 See referenced page for component or assembly breakdown.



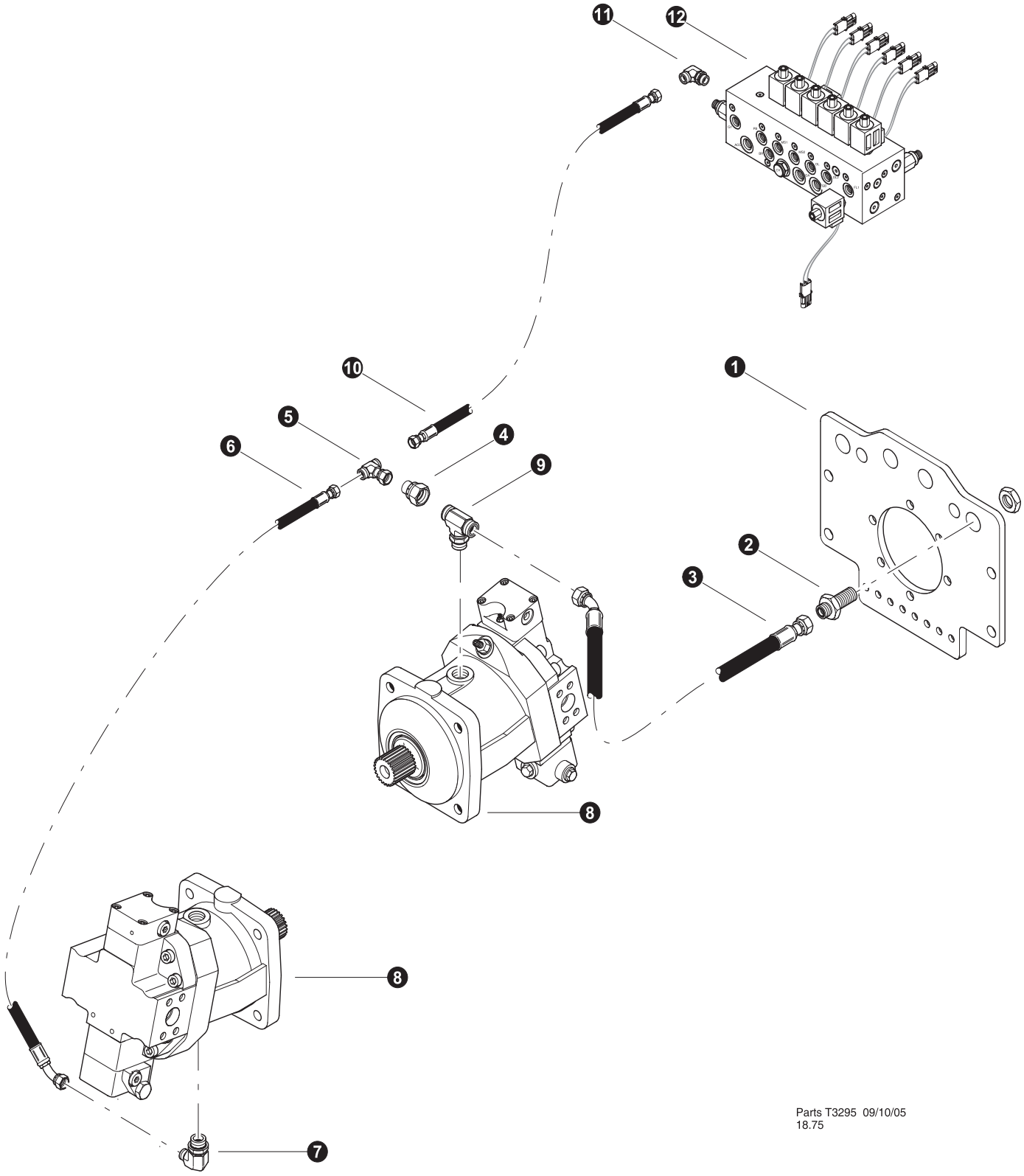
Parts T2820 08/13/2003
18.75

REAR FRAME HYDRAULICS

Front to Rear Hydraulic Motor Connection - Pressure (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	WHEEL DRIVE MOTOR	BR-4
2	50074-BR	8		BOLT, ALLEN 1/2 X 1 1/2”	
3	50075-BR	8		WASHER, LOCK 1/2	
4	26008-BR	2		MANIFOLD, rexroth drive motor	
5	15378-BR	2		O-RING, 1.25”	
6	15473-BR	4		ELBOW, 45 FF6802 - 16	
7	50904-BR	1		HOSE ASSEMBLY - 6033-16-160S-160S (Rear wheel drive motor port “B” tee to front wheel drive motor port “A”)	
8	50904-BR	1		HOSE ASSEMBLY - 6033-16-160S-160S (Rear wheel drive motor port “B” tee to front wheel drive motor port “A”)	
9	REF.	1	🕮	WHEEL DRIVE MOTOR	BR-4

🕮 See referenced page for component or assembly breakdown.



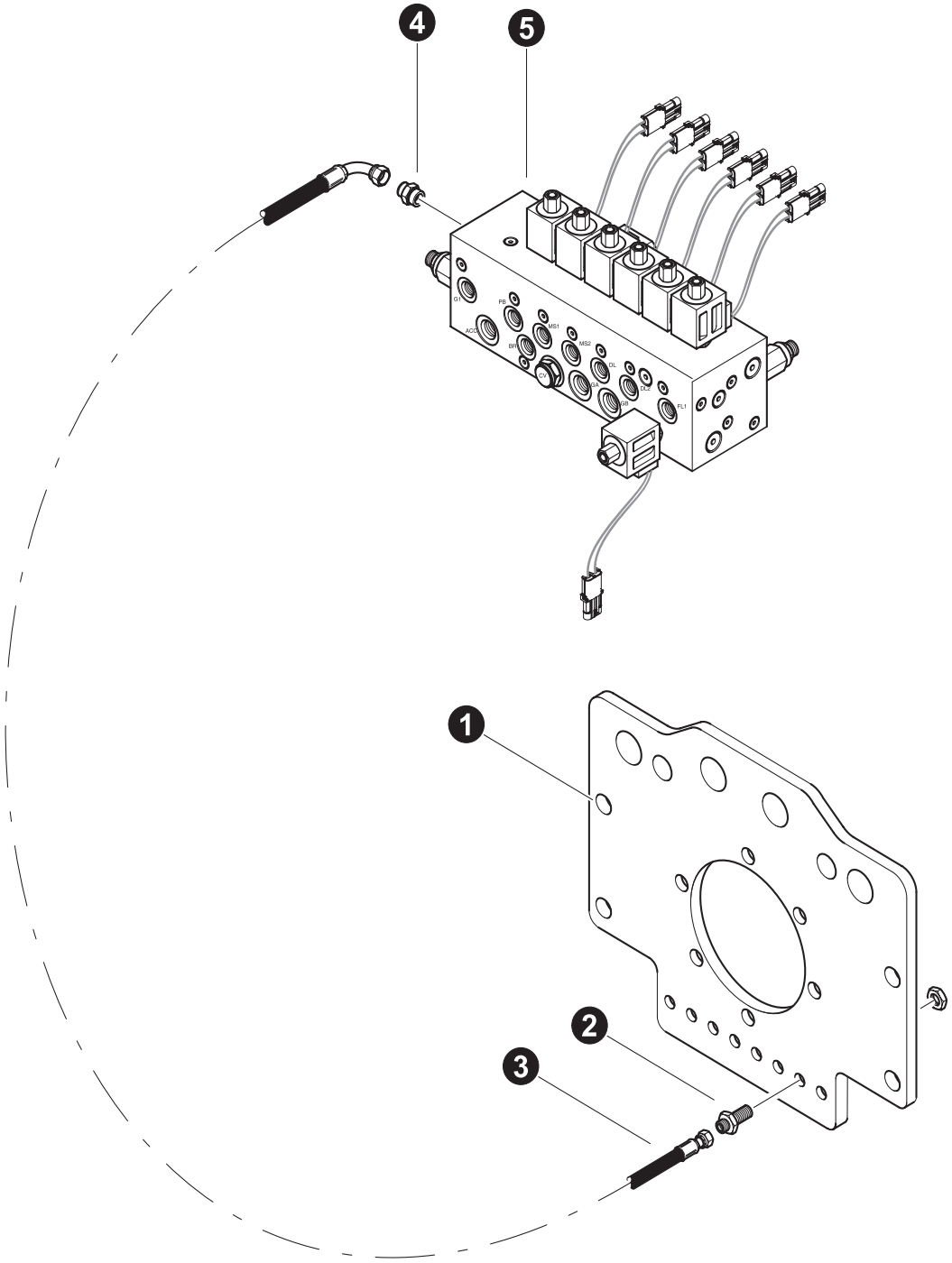
Parts T3295 09/10/05
18.75

REAR FRAME HYDRAULICS

Front to Rear Hydraulic Motor Connection - Case Drain (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-BR	1		BRACKET, bearing mount	
2	19754-BR	1		CONNECTOR, STR BULKHEAD - 12 WLO-WLNL-S	
3	-BR	1		HOSE ASSEMBLY - 2052-12-120S-1204 (Bulkhead tee to rear bulkhead plate)	
4	18581-BR	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
5	51611-BR	1		TEE - 8S6L0-S - BRANCH	
6	-BR	1		HOSE ASSEMBLY - 4039.5-08-08OS-08O4 (Front motor to rear motor case drain)	
7	15372-BR	1		ELBOW, 90 - FF1868T-0812S	
8	REF.	2	🕮	WHEEL DRIVE MOTOR	BR-4
9	22907-BR	1		TEE - 845-TTO-12X12 RUN	
10	-BR	1		HOSE ASSEMBLY - 2014-08-080S-080S (Front motor case tee to “T” port of lower solenoid valve)	
11	16360-BR	1		ELBOW, 90 - FF1868T-0808S	
12	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4

🕮 See referenced page for component or assembly breakdown.



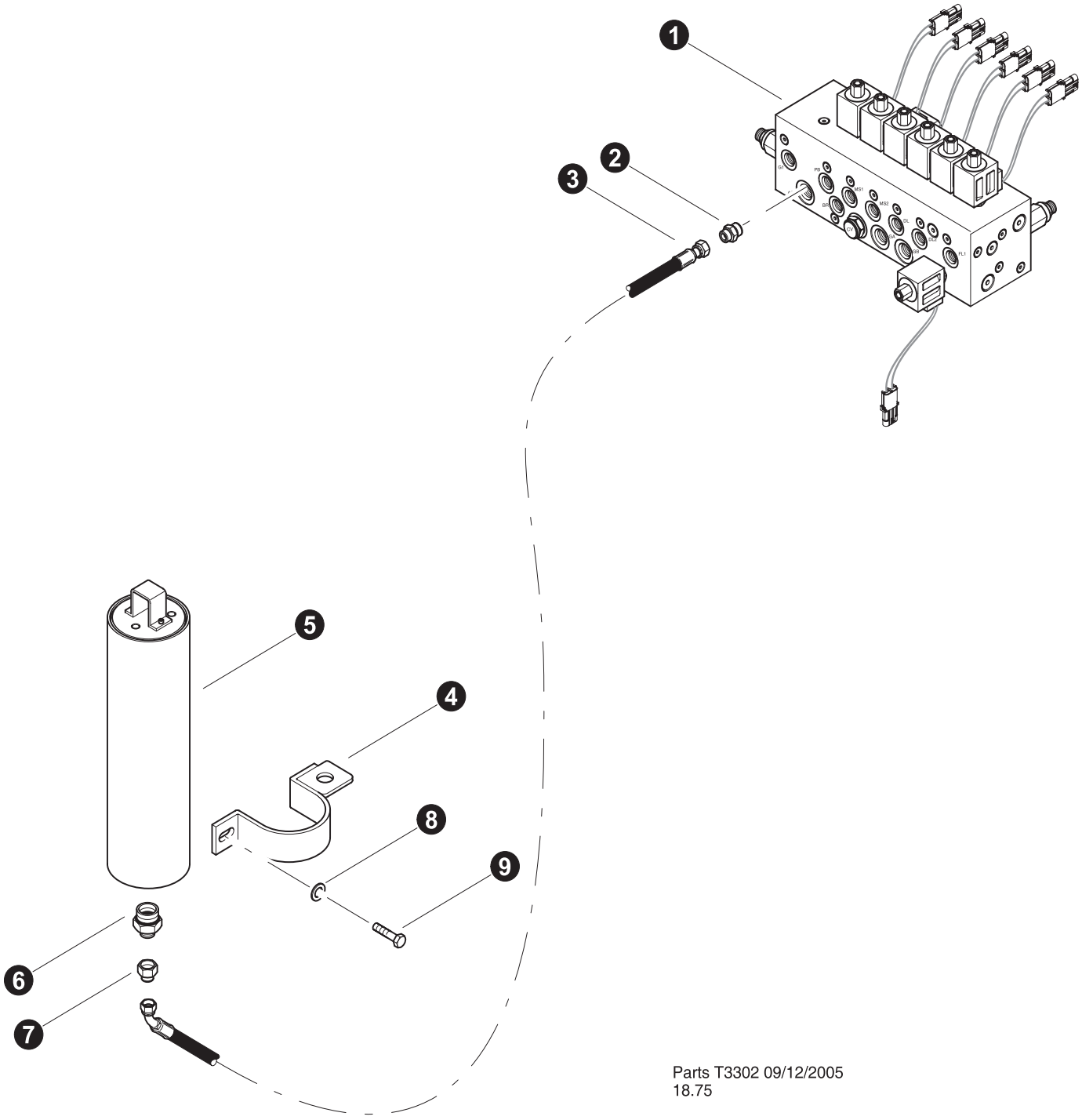
Parts T3301 09/10/05
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold - Pressure
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-BR	1		BRACKET, bearing mount	
2	50420-BR	1		CONNECTOR, STR BULKHEAD - 832-TT-06	
3	-BR	1		HOSE ASSEMBLY - 2046-06-060S-0609 (Bulkhead to Lower Solenoid Valve “P” port)	
4	18034-BR	1		CONNECTOR, STR - FF1852T-0606S	
5	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4

🕮 See referenced page for component or assembly breakdown.



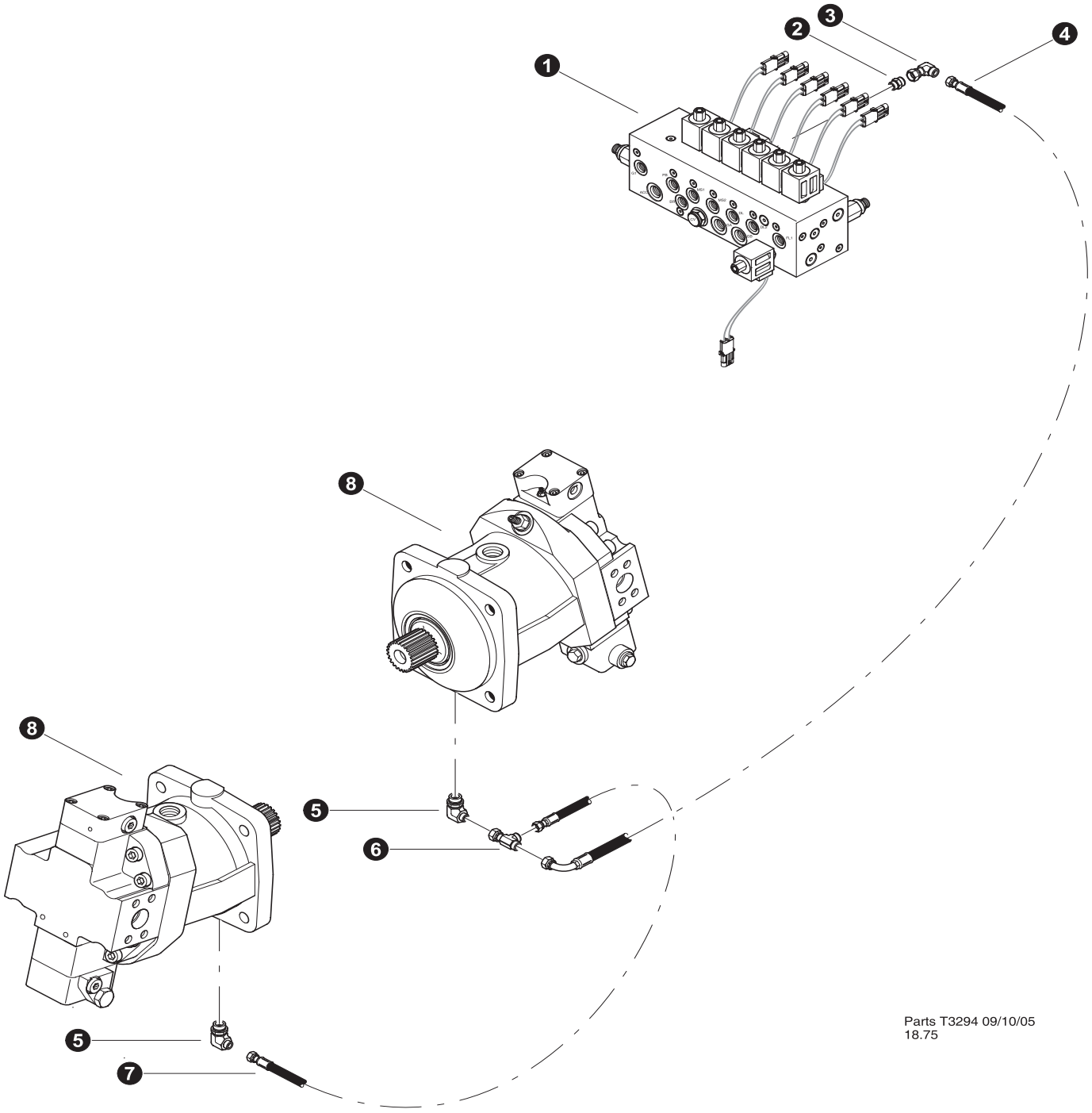
Parts T3302 09/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold - Accumulator
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
2	15124-BR	1		CONNECTOR, STR - FF1852T-0406S	
3	-FR	1		HOSE ASSEMBLY - 2065-04-040S-0404 (Accumulator to Lower Solenoid Valve “ACC” port)	
4	23223-BR	1		CLAMP, ACCUMULATOR MOUNTING (PISTON)	
5	23130-BR	1		ACCUMULATOR, GAS PISTON (FWD)	
6	15238-BR	1		CONNECTOR, STR - FF1852T-0812S	
7	19221-BR	1		CONNECTOR, REDUCER - ORS FF2281T-0408S	
8	10802-BR	2		WASHER, FLAT - .375”	
9	10731-BR	2		BOLT - .375” X 1.5”	

🕮 See referenced page for component or assembly breakdown.



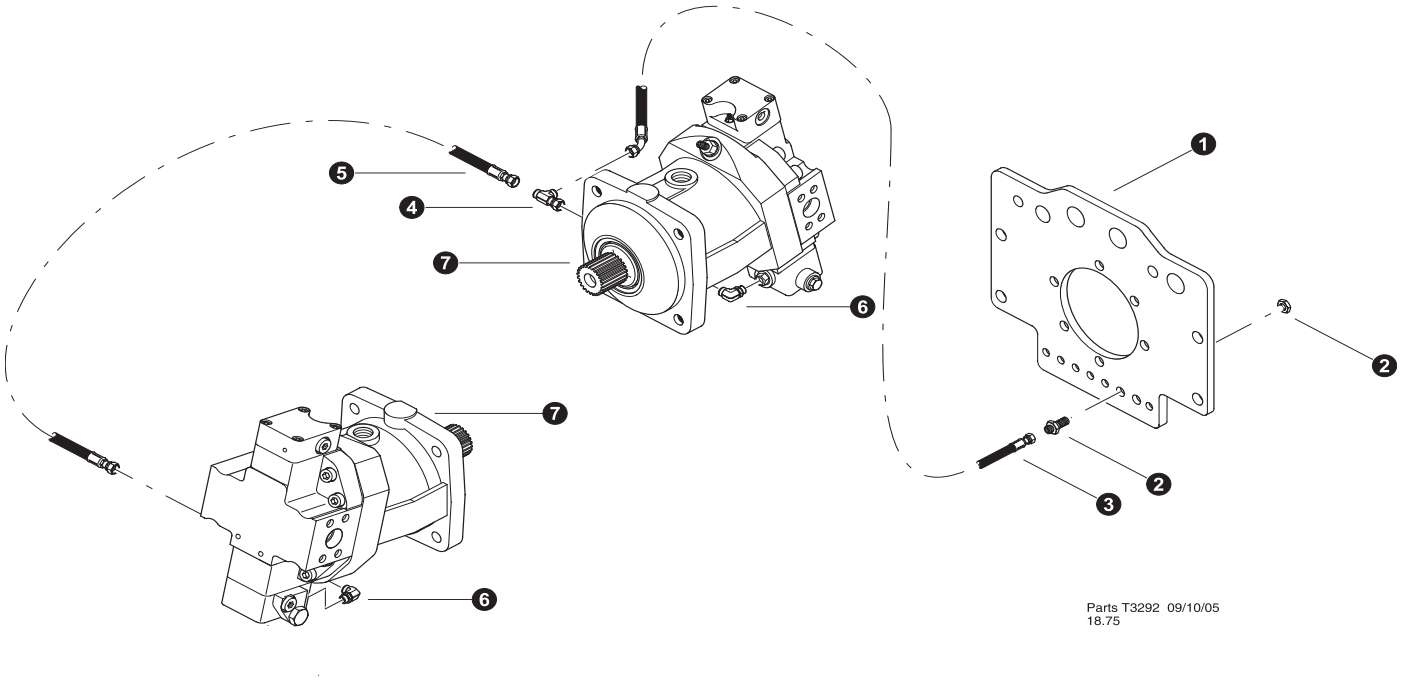
Parts T3294 09/10/05
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Hydro Motor Flushing Pressure (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
2	18034-BR	1		CONNECTOR, STR - FF1852T-0606S	
3	20035-BR	1		ELBOW, 90 SWIVEL - 6 C6LO-S	
4	-BR	1		HOSE ASSEMBLY - 2033-06-06OS-06O9 (Front Motor Flushing to “FLUSH 1” port lower solenoid valve)	
5	22405-BR	1		ELBOW, 90 - 8-6 C5OLO-S	
6	22730-BR	1		TEE - 6 R6LO-S	
7	-BR	1		HOSE ASSEMBLY - 2055-06-06OS-06OS (Front Motor Flushing to Rear Motor)	
8	REF.	1	🕮	WHEEL DRIVE MOTOR	BR-4

🕮 See referenced page for component or assembly breakdown.



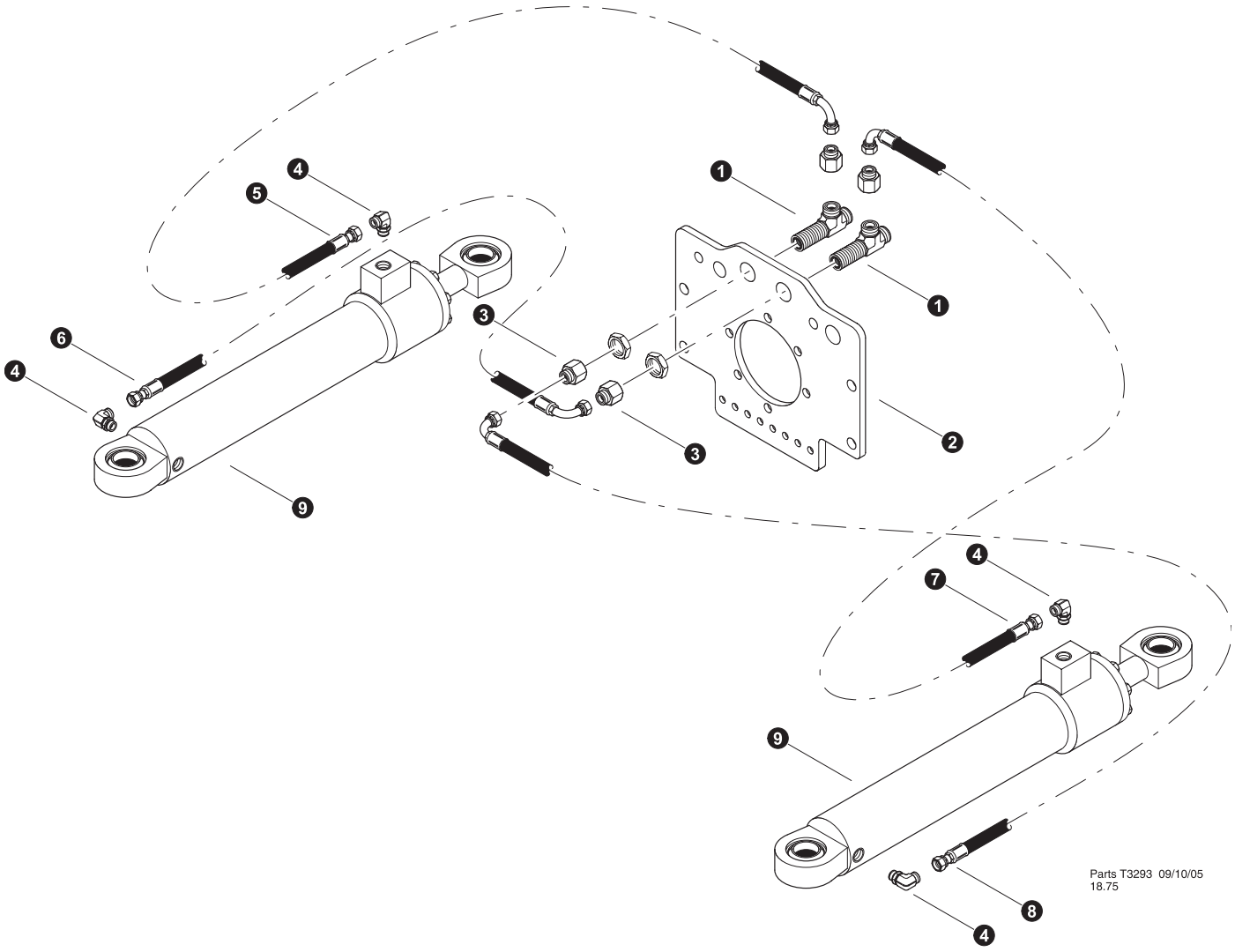
Parts T3292 09/10/05
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Hydro Motor Flushing Return (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-BR	1		BRACKET, bearing mount	
2	50420-BR	1		CONNECTOR, STR BULKHEAD - 832-TT-06	
3	-BR	1		HOSE ASSEMBLY - 2044-06-060S-0609 (Bulkhead to Front Motor Flushing Return)	
4	22730-BR	1		TEE - 6 R6LO-S	
5	-BR	1		HOSE ASSEMBLY - 2044-06-06OS-06OS (Front Motor to Rear Motor)	
6	16296-BR	2		ELBOW, 90 - FF1868T-0606S	
7	REF.	1	🕮	WHEEL DRIVE MOTOR	BR-4

🕮 See referenced page for component or assembly breakdown.

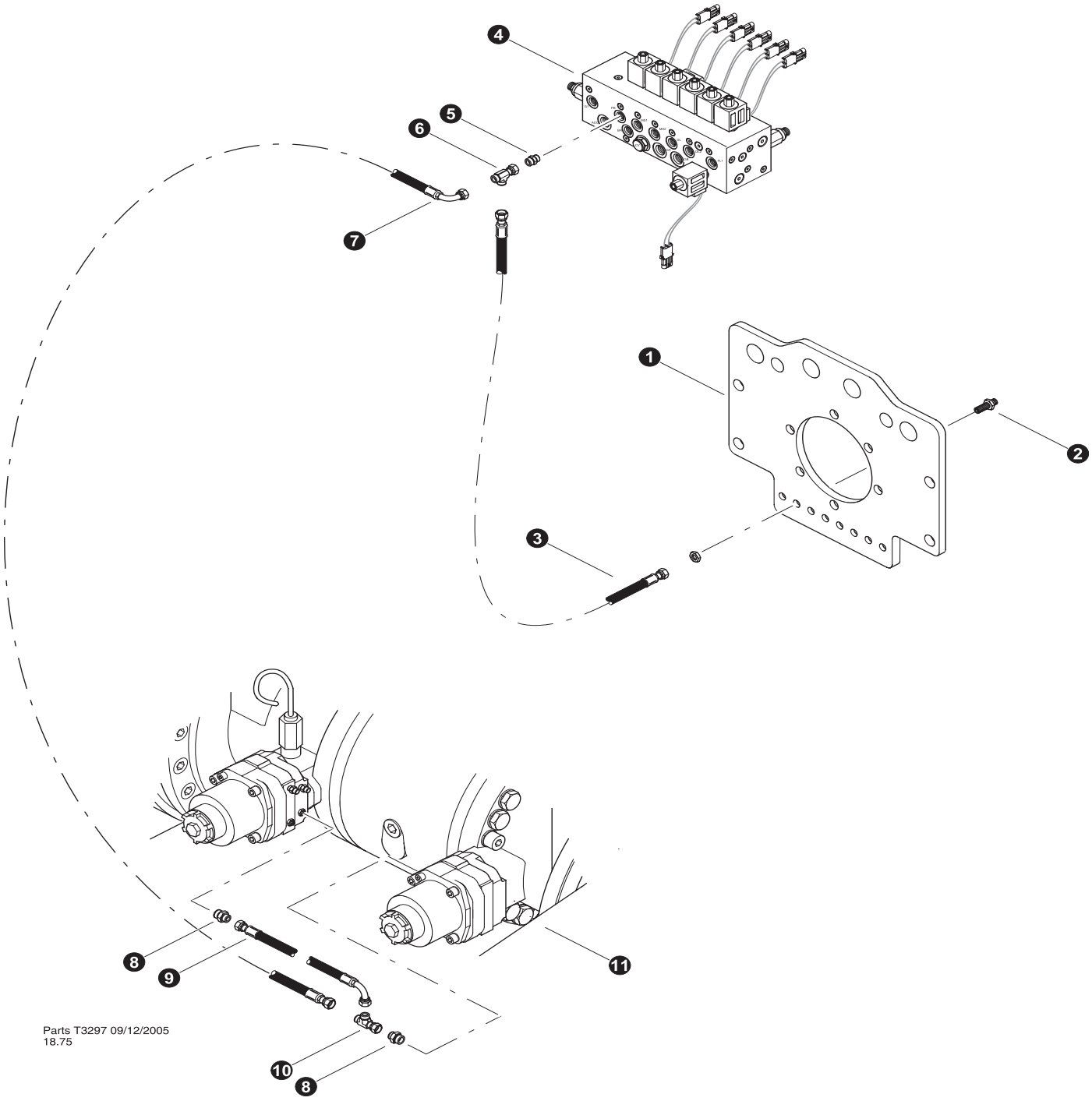

Parts T3293 09/10/05
18.75

REAR FRAME HYDRAULICS

Steering Connections
(Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	20029-BR	2		TEE, BULKHEAD RUN - 12 WJJLO-WLNL-S	
2	42290-BR	1		BRACKET, bearing mount	
3	18581-BR	1		CONNECTOR, REDUCER - ORS FF2281T-0812S	
4	16360-BR	4		ELBOW, 90° - FF1868T-0808S	
5	50898-BR	1		HOSE ASSEMBLY - 4065-08-080S-0809 (Left bulkhead tee to left steer cylinder rod port)	
6	50617-BR	4		HOSE ASSEMBLY - 4048-08-080S-0809 (Left bulkhead tee to left steer cylinder base port)	
7	50898-BR	1		HOSE ASSEMBLY - 4065-08-080S-0809 (Right bulkhead tee to left steer cylinder rod port)	
8	50617-BR	4		HOSE ASSEMBLY - 4048-08-080S-0809 (Right bulkhead tee to Right steer cylinder base port)	
9	REF.	2	🕮	STEER CYLINDERS	BR-4

🕮 See referenced page for component or assembly breakdown.



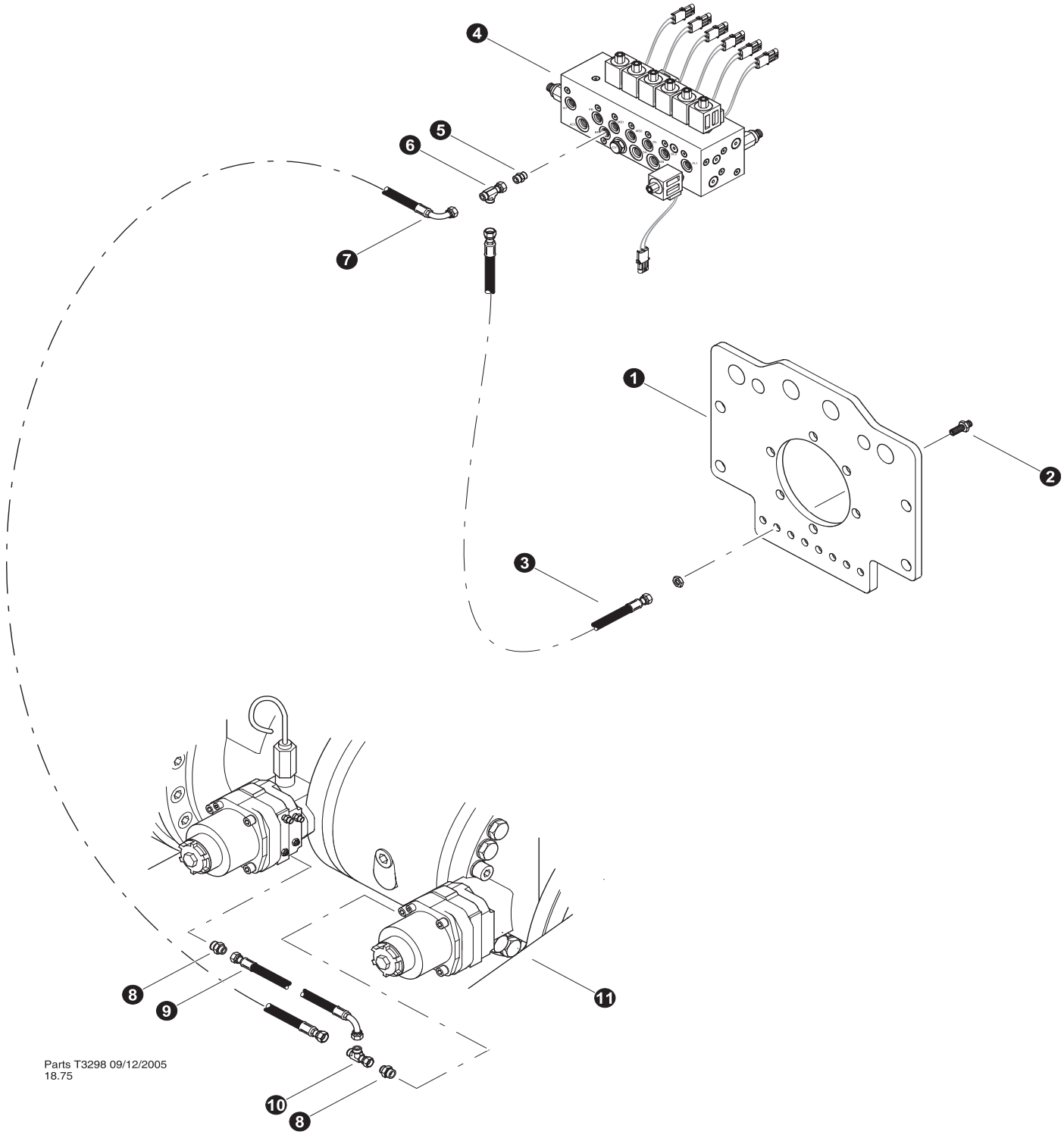
Parts T3297 09/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Parking Brake (Standard Front and Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-BR	1		BRACKET, bearing mount	
2	18582-BR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-BR	1		HOSE ASSEMBLY - 2037.5-04-04OS-04O9 (PB bulkhead to Lower Solenoid Valve PB port)	
4	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
5	15124-BR	1		CONNECTOR, STR - FF1852T-0406S	
6	15176-BR	2		TEE - 04	
7	50607-BR	1		HOSE ASSEMBLY - 2123-04-04OS-04OS (PB to Rear Axel)	
8	19470-BR	2		CONNECTOR, STR 04-14m	
9	50607-BR	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (PB jumper hose on rear axel)	
10	15176-BR	2		TEE - 04	
11	REF.	1	🕮	REAR AXLE ASSEMBLY	AX

🕮 See referenced page for component or assembly breakdown.



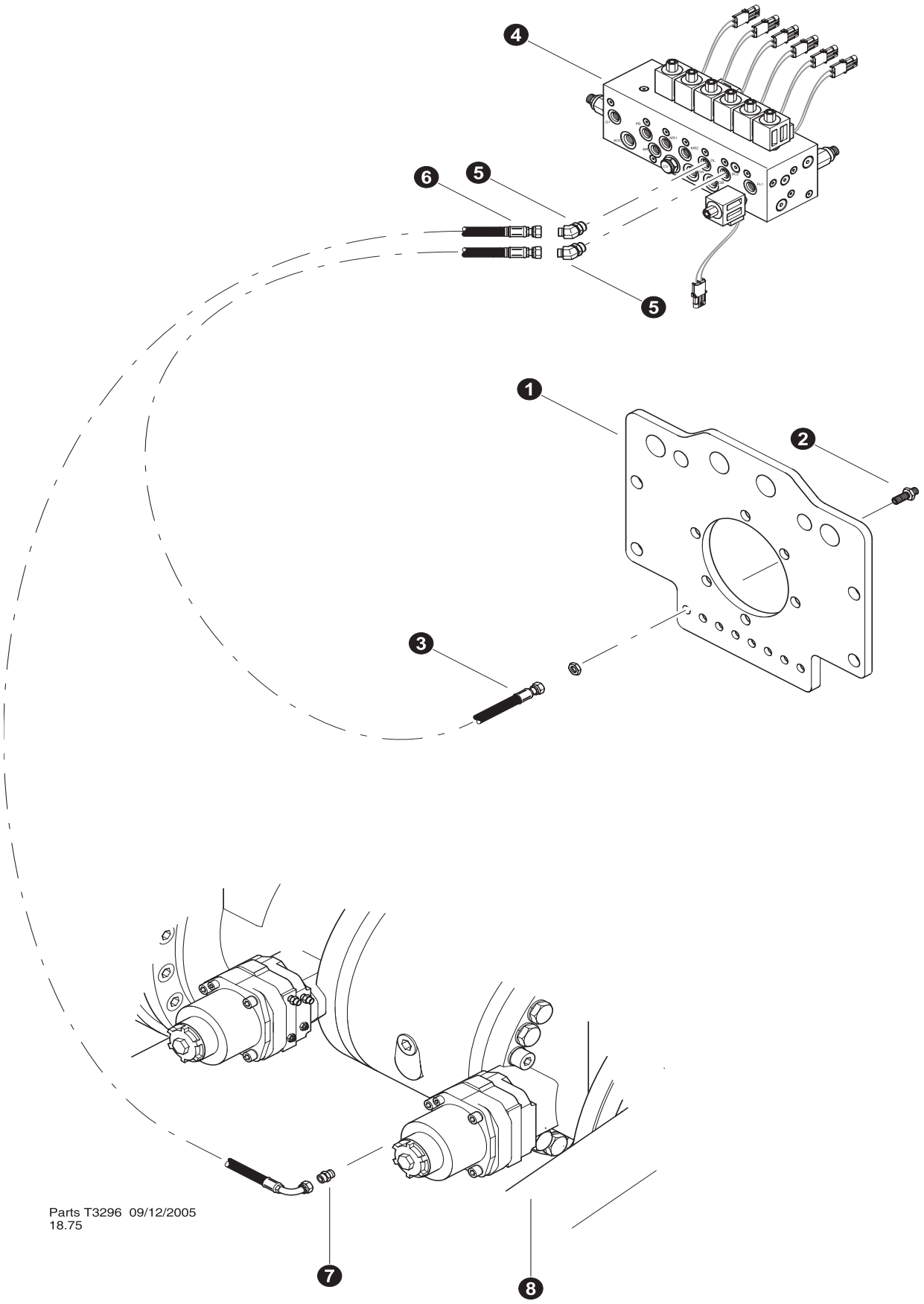
Parts T3298 09/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Travel Brake (Standard Front and Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-BR	1		BRACKET, bearing mount	
2	18582-BR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-BR	1		HOSE ASSEMBLY - 2039.5-04-04OS-04O9 (TB bulkhead to Lower Solenoid Valve BR port)	
4	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
5	15124-BR	1		CONNECTOR, STR - FF1852T-0406S	
6	15176-BR	2		TEE - 04	
7	50607-BR	1		HOSE ASSEMBLY - 2123-04-04OS-04OS (TB to Rear Axel)	
8	19470-BR	2		CONNECTOR, STR 04-14m	
9	50607-BR	1		HOSE ASSEMBLY - 2009.5-04-04OS-04O9 (TB jumper hose on rear axel)	
10	15176-BR	2		TEE - 04	
11	REF.	1	🕮	REAR AXLE ASSEMBLY	AX

🕮 See referenced page for component or assembly breakdown.



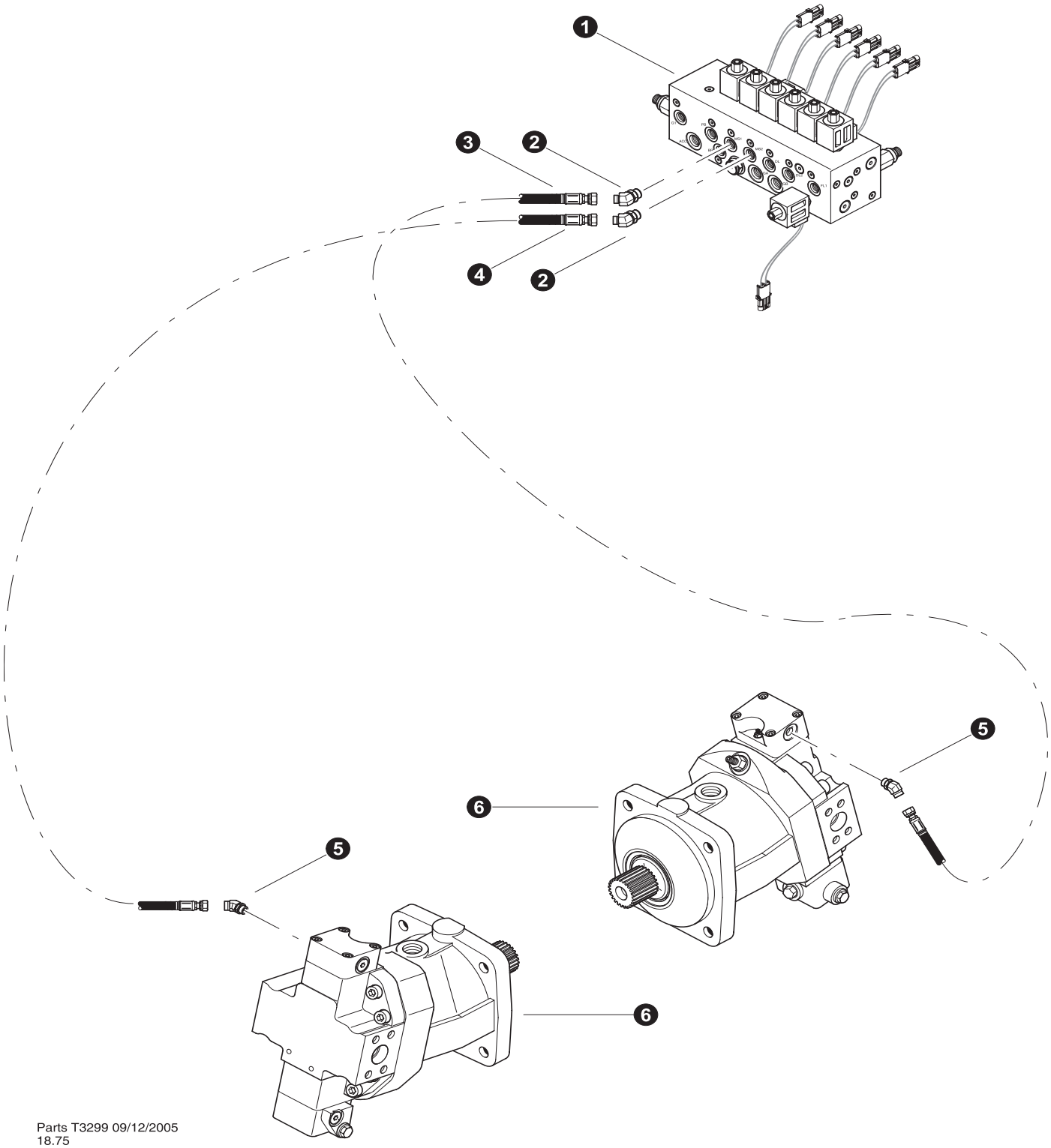
Parts T3296 09/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Differental Lock (Standard Front and Rear Frame)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	42290-BR	1		BRACKET, bearing mount	
2	18582-BR	1`		CONNECTOR, STR BULKHEAD - FF1994T-0404S	
3	-BR	1		HOSE ASSEMBLY - 2048-04-04OS-04OS (DL bulkhead to Lower Solenoid Valve DL2 port)	
4	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
5	17646-BR	1		ELBOW, 45 - FF2068T-0406S	
6	50607-BR	1		HOSE ASSEMBLY - 2131-04-04OS-04O9 (DL to Rear Axel)	
7	19470-BR	2		CONNECTOR, STR 04-14m	
8	REF.	1	🕮	REAR AXLE ASSEMBLY	AX

🕮 See referenced page for component or assembly breakdown.



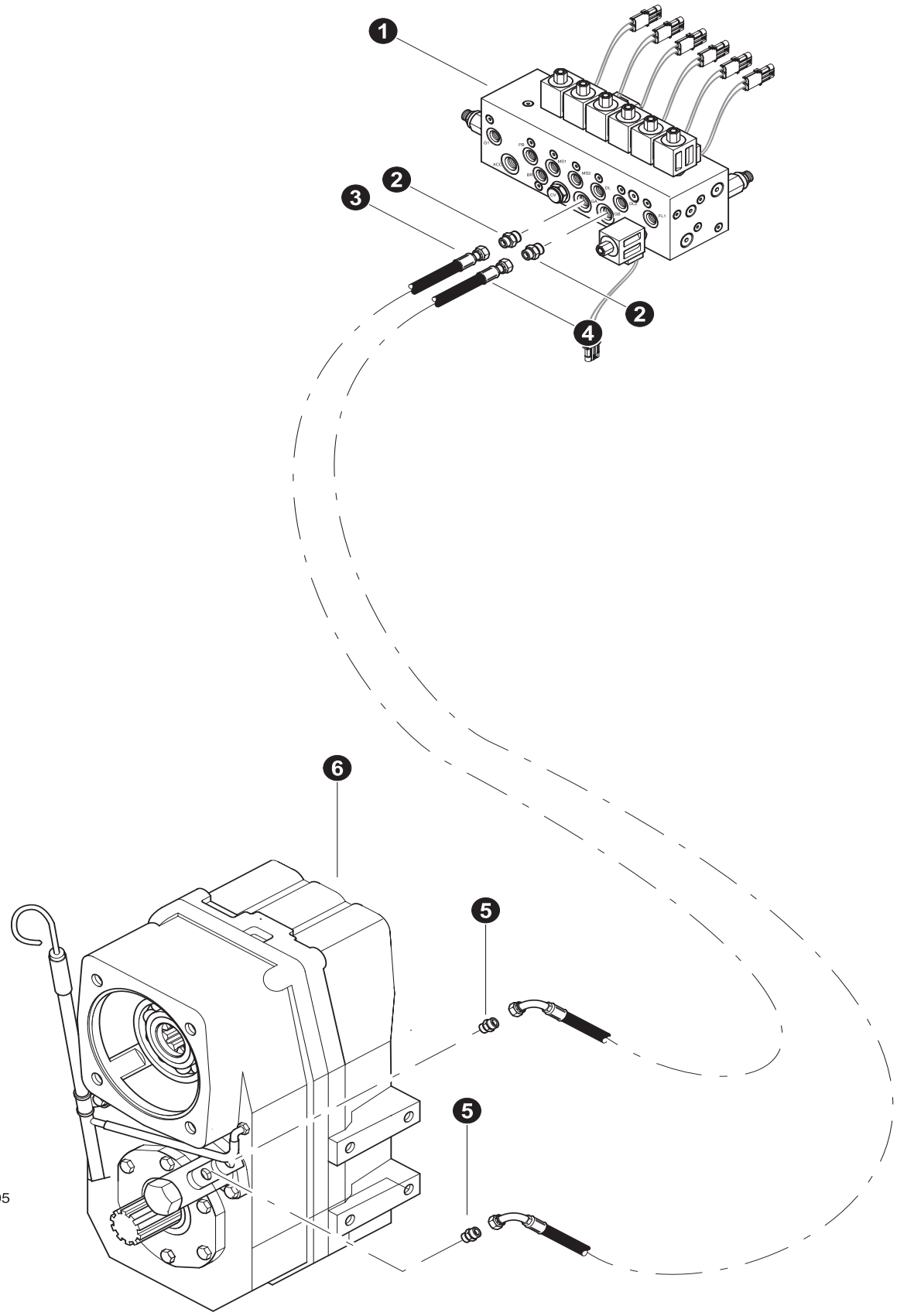
Parts T3299 09/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Hydraulic Motor Shift (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
2	17646-BR	1		ELBOW, 45 - FF2068T-0406S	
3	-BR	1		HOSE ASSEMBLY - 2048-04-04OS-04OS (DL bulkhead to Lower Solenoid Valve DL2 port)	
4	-BR	1		HOSE ASSEMBLY - 2048-04-04OS-04OS (DL bulkhead to Lower Solenoid Valve DL2 port)	
5	17646-BR	1		ELBOW, 45 - FF2068T-0406S	
6	REF.	1	🕮	HYDRAULIC WHEEL DRIVE MOTOR	BR-4

🕮 See referenced page for component or assembly breakdown.



Parts T3300 09/12/2005
18.75

REAR FRAME HYDRAULICS

Lower Solenoid Manifold Connections - Gear Box Shift (Standard Front and All Rear Frames)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	2	🕮	LOWER SOLENOID VALVE	BR-4
2	15124-BR	2		CONNECTOR, STR - FF1852T-0406S	
3	50608-BR	1		HOSE ASSEMBLY - 2074-04-04OS-04O9 (GA Port to Gear Box)	
4	50608-BR	1		HOSE ASSEMBLY - 2074-04-04OS-04O9 (GB Port to Gear Box)	
5	19470-BR	2		CONNECTOR, STR 04-14m	
6	REF.	1	🕮	GEARBOX ASSEMBLY	AX

🕮 See referenced page for component or assembly breakdown.

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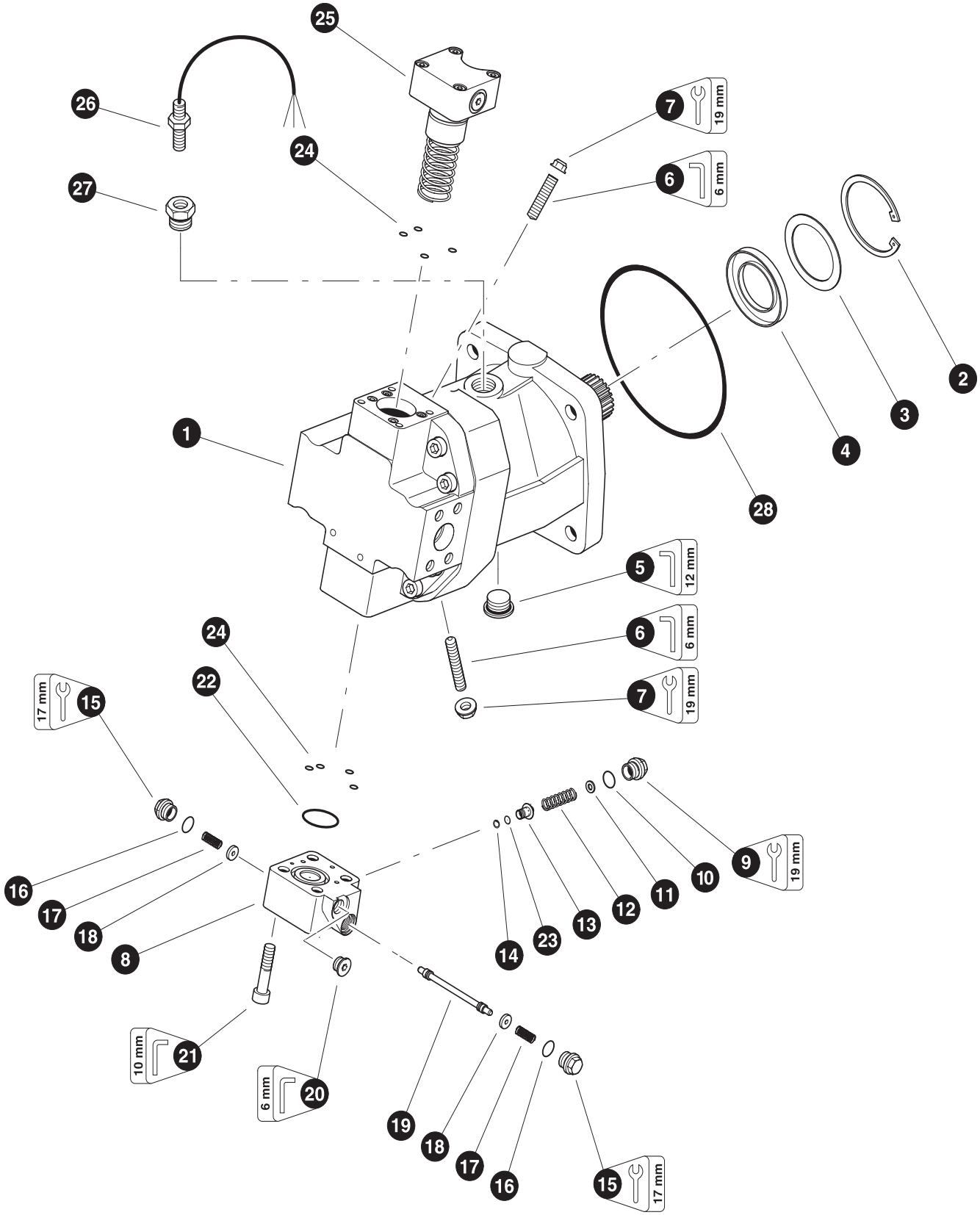
Section BR-4

TB 830, 840 Rear Frame - Hydraulic Components Breakdown



Parts 00474 02/22/98
25.00

REXROTH 160cc MOTOR

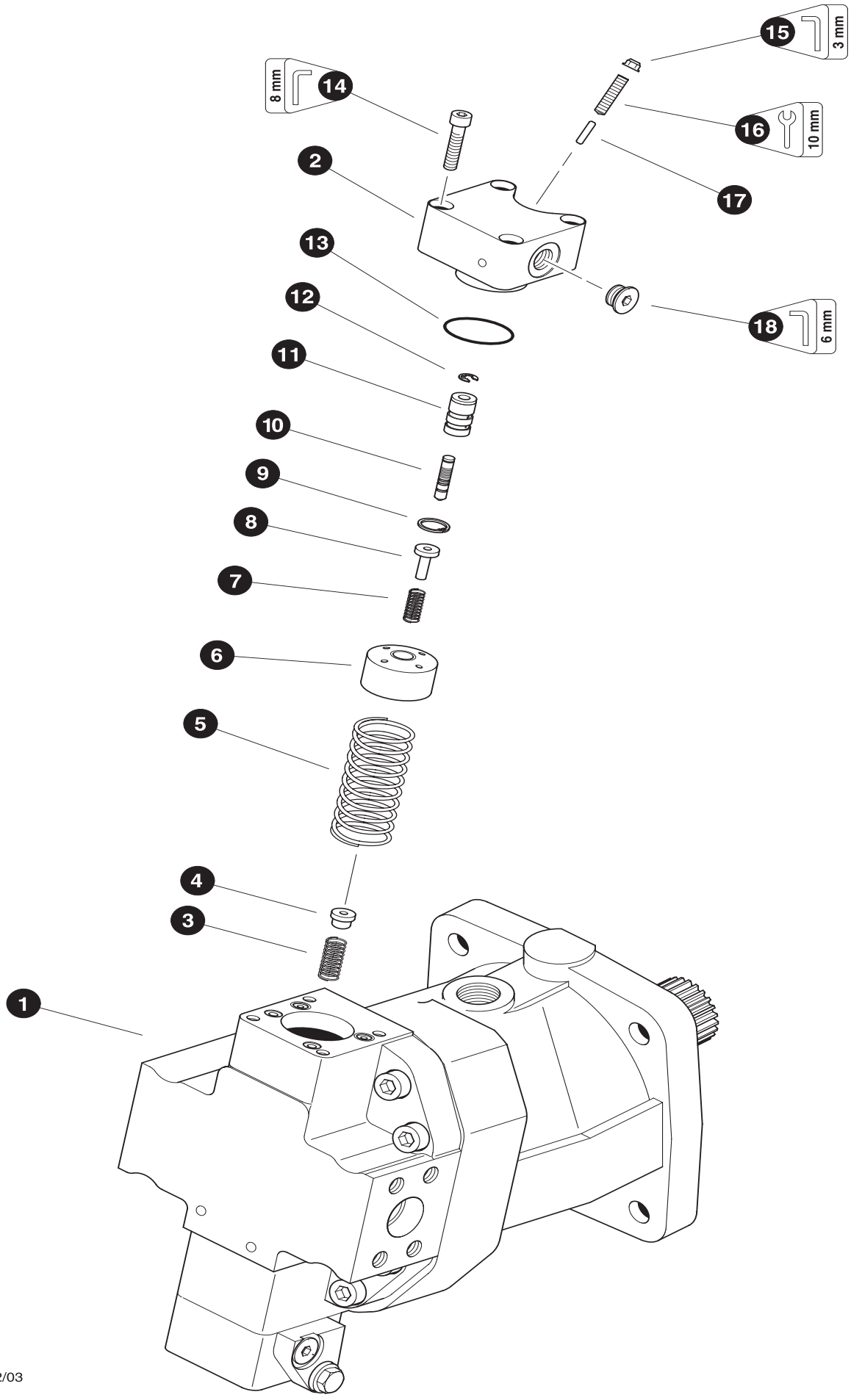
(Standard)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51869-0-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Front) (w/speed counter ring) (Vg Min = 0 cubic meters) (flushing)*	
	51869-70-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Rear) (w/speed counter ring) (Vg Min = 70 cubic meters) (flushing)*	
2	20685-FR	1		RING, snap	
3	20686-FR	1		SHIM, shaft seal	
4	20687-FR	1	⌘	SEAL, shaft	
5	19692-FR	1		PLUG - 26mm-1.5P *(BSPP thread)*	
6	*51987-FR*	*1*		SCREW, adjusting *(0 - Displacement min)(needed for front motor)*	
	20688-FR	2		SCREW, adjusting *(Displacement min & max)*	
7	20689-FR	2	⌘	NUT, seal	
8	20690-FR	1	❑	STROKING PISTON COVER ASSEMBLY	
9	20691-FR	1		PLUG	
10	20713-FR	1	⌘	O-RING	
11	20714-FR	1		SHIM	
12	20715-FR	1		SPRING	
13	20716-FR	1		POPPET	
14	20718-FR	1		RING, snap	
15	20719-FR	2		PLUG	
16	20720-FR	2	⌘	O-RING	
17	20721-FR	2		SPRING	
18	20722-FR	2		RETAINER, spring	
19	NSS	1		SPOOL	
20	20693-FR	1		PLUG - 14mm-1.5P *(BSPP thread)*	
21	20723-FR	4		BOLT, allen head	
22	20724-FR	1	⌘	O-RING	
23	20717-FR	1		ORIFICE, flushing - 1.2mm	
24	NSS	8		O-RING	
25	REF.	1		STROKING PISTON CONTROL ASSEMBLY	CR-4-4
26	24656-FR	1		SENSOR, SPEED PICKUP (rexroth hydro motor)	
27	51098-FR	1		FITTING, speed pickup rexroth (sae)	
28	20967-FR	1		O-RING, WHEEL DRIVE MOTOR (gearbox pilot)	
-	20725-CR	1		KIT, seal repair - complete AA6VM160 motor	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20725-CR.

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 T2811 08/12/03
37.50

REXROTH 160cc MOTOR
HA2T Controler Brakedown

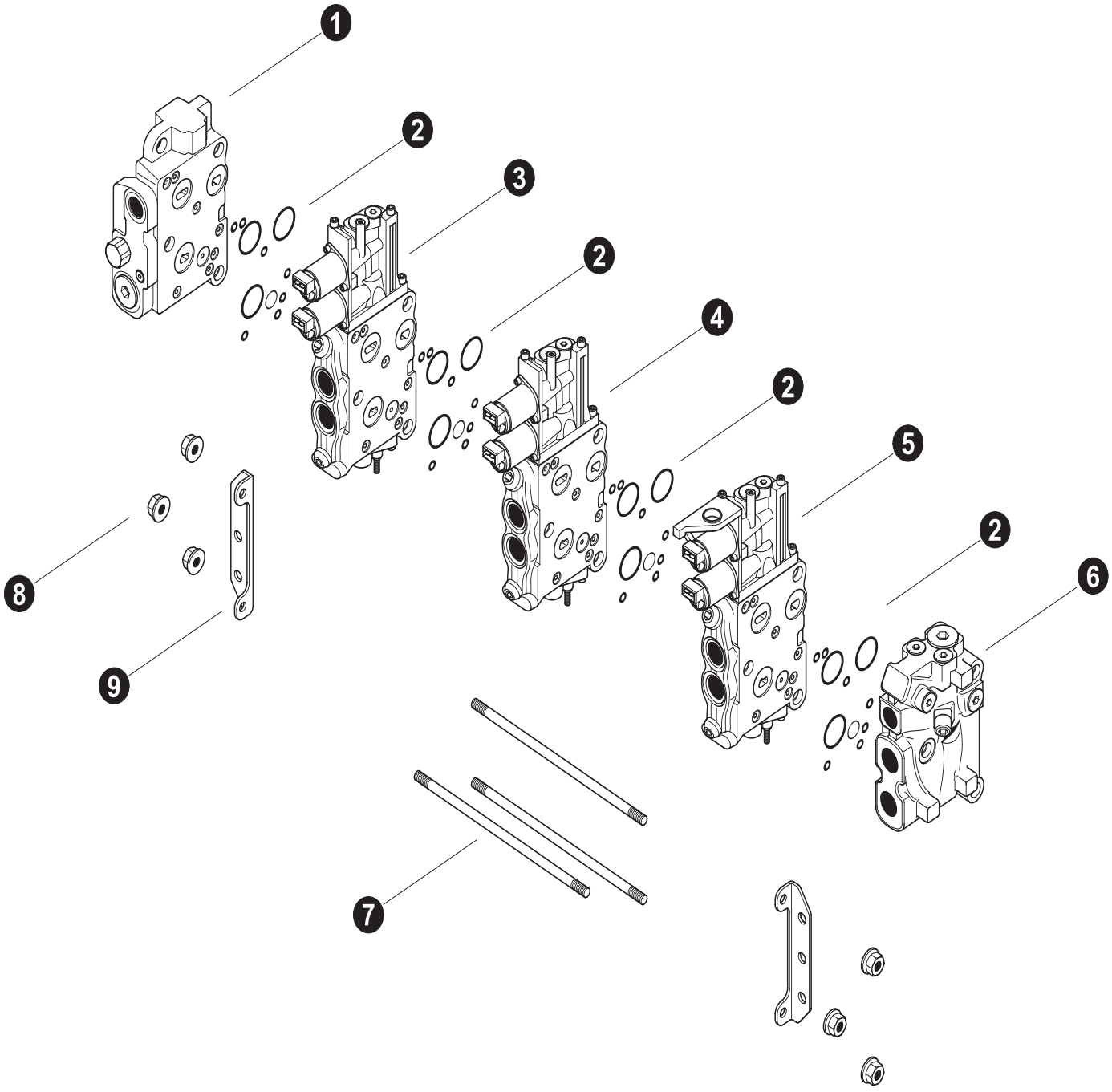
(Standard)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51869-0-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Front) (w/speed counter ring) (Vg Min = 0 cubic meters) (flushing)*	
	51869-70-FR	1	❑	MOTOR, wheel drive - Rexroth AA6VM160 *(Rear) (w/speed counter ring) (Vg Min = 70 cubic meters) (flushing)*	
2	20726-FR	1	❑	CONTROL, MOTOR STROKE ASSEMBLY *(HA2T)*	
3	- - -	1		SPRING, (HU00444549)	
4	- - -	1		RETAINER, spring (HU00421860)	
5	- - -	1		SPRING (HU00651116)	
6	- - -	1		BUSHING, spring (HU00651118)	
7	20729-FR	1		SPRING	
8	- - -	1		RETAINER, spring (HU00921351)	
9	20731-FR	1		RING, snap	
10	- - -	1		SPOOL, control (HU00430748)	
11	20732-FR	1		BUSHING, control spool	
12	20734-FR	1		E-CLIP, control spo	
13	- - -	1	⌘	O-RING (68103-025)	
14	- - -	4		BOLT, allen head (60118-063)	
15	20737-FR	1	⌘	NUT, seal	
16	20738-FR	1		SCREW, adjusting *(Stroke control)*	
17	- - -	1		PIN, stroke adjustment (69116-019)	
18	20693-FR	1		PLUG - 14mm-1.5P *(BSPP thread)*	
-	20725-FR	1		KIT, seal repair - complete AA6VM160 motor	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 20725-CR.

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 T3264 08/09/2005
18.75

LOWER VOAC CONTROL VALVE BREAKDOWN (TB 830 with CLAM BUNK)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	52010-FR	1	❑	VALVE, MAIN - VOAC (3-L90) STEER/CLAMBUNK	
1	REF	1	🕮	VALVE SECTION - inlet	LH-2
2	23404-FR	7		KIT, seal repair - L90LS face seals	
3	23321-FR	1	🕮	VALVE SECTION, steer - (P/L-3000 PSI)	LH-2
4	24774-FR	1	🕮	VALVE SECTION, clam bunk cyl	LH-2
5	24774-FR	1	🕮	VALVE SECTION, clam bunk cyl	LH-2
6	REF	1	🕮	VALVE SECTION - outlet	LH-2
7	-HR	1	❑	KIT, tie rod (3 section) (393000K003)	
8	23913-FR	6		NUT (Special torque procedure) (See Note #2 Below)	
9	23402-FR	1		KIT, mounting brackets	

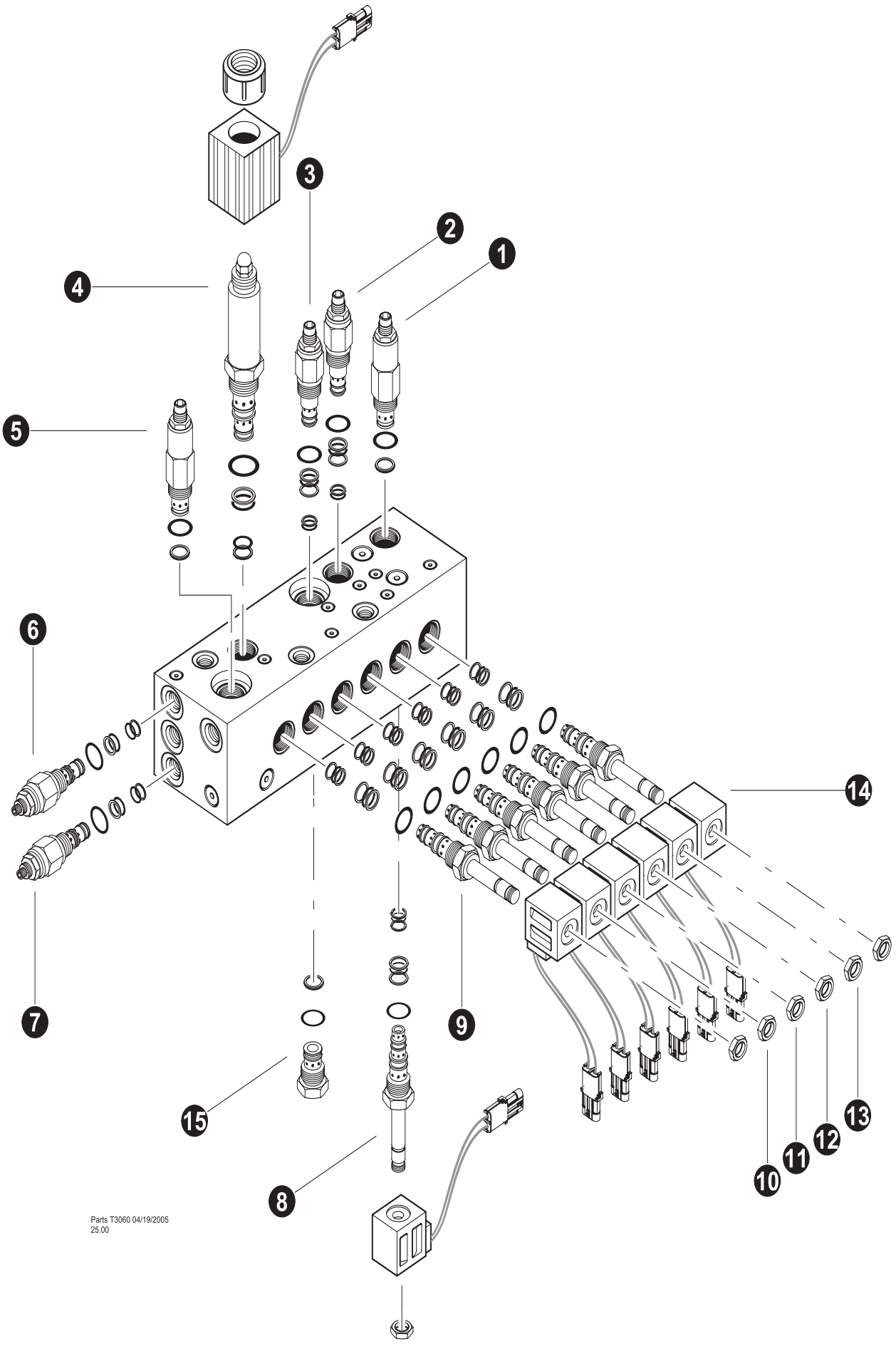
❑ Kit or Assembly - includes all items indented underneath.
🕮 See referenced page for component or assembly breakdown.

Note #1:

Illustration and parts list reflects a standard valve configuration used for a TF 830 W / CLAM BUNK machine. Contact your dealer if your valve or machine configuration differs.

Note #2:

Tie rod nuts should be torqued in a clockwise pattern in three steps,
7.5 ft.lbs. (10 Nm), 22.5 ft.lbs. (30 Nm) and 33.5 ft.lbs. (45 Nm).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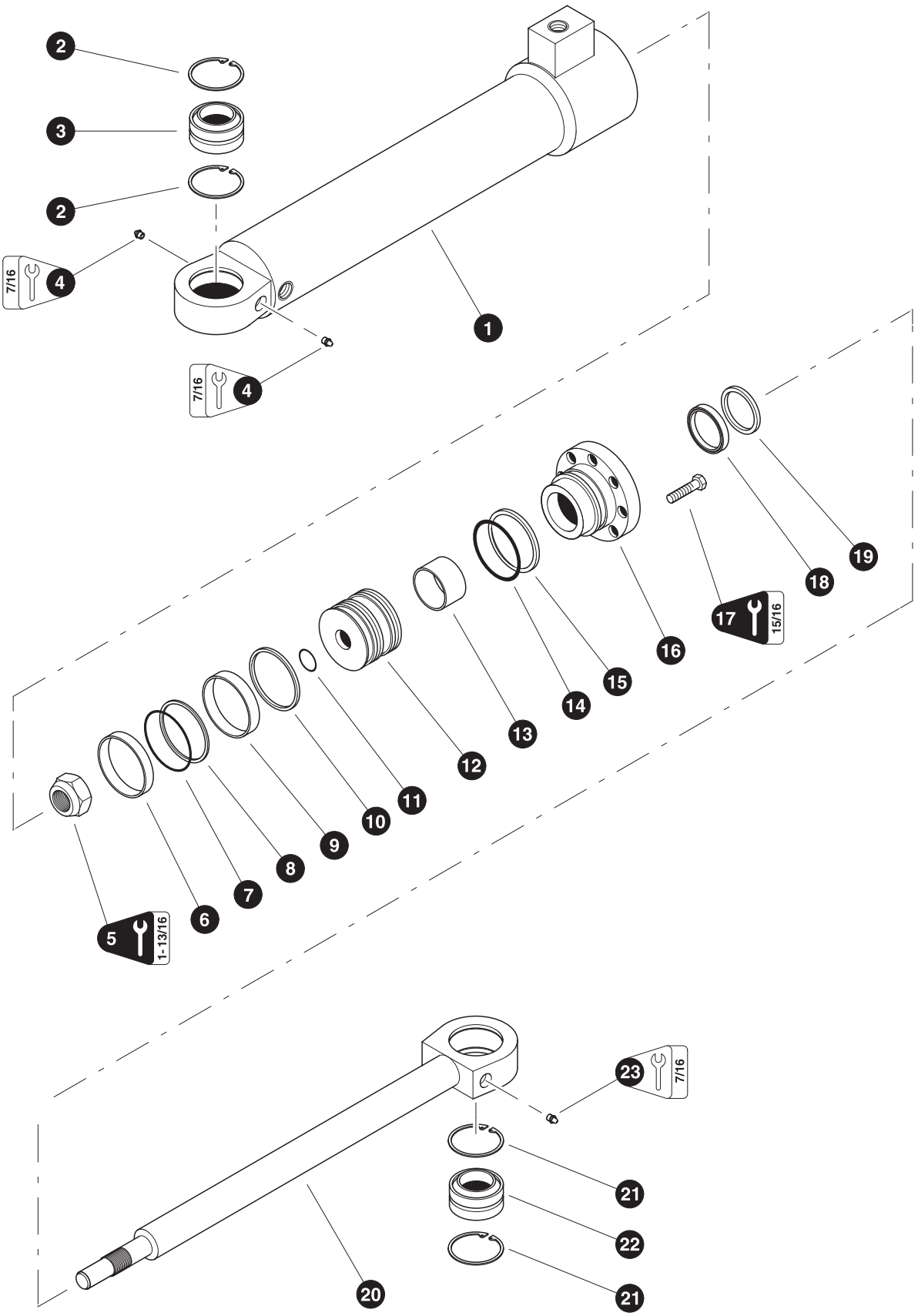
Parts T3060 04/19/2005
25.00

LOWER SOLENOID VALVE BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51623-FF	1	❑	VALVE, LOWER MANIFOLD - CAN/BUS TF830	
		1		BLOCK, Lower Manifold (XM04033revC)	
1	-FF	1		CARTRIDGE, relief valve (RDH103S30)	
				KIT, Seal Repair (SK10-2N)	
2	-FF	1		CARTRIDGE, counter balance valve (CBPA-080N-S-0-30)	
				KIT, Seal Repair (SKN-0828)	
3	-FF	1		CARTRIDGE, counter balance valve (CBPA-080N-S-0-30)	
				KIT, Seal Repair (SKN-0828)	
4	-FF	1		CARTRIDGE, proportional control valve (EPRR-10-N-10-0-24DL)	
				KIT, Seal Repair (SK08-2N)	
				Solenoid, 24 volt Proportional	
5	-FF	1		CARTRIDGE, relief valve (RDH103S30)	
				KIT, Seal Repair (SK10-2N)	
6	-FF	1		CARTRIDGE, reducing / relief valve (PRH081S10)	
				KIT, Seal Repair (SK08-3N)	
7	-FF	1		CARTRIDGE, reducing / relief valve (PRH081S10)	
				KIT, Seal Repair (SK08-3N)	
8	-FF	1		CARTRIDGE, directional valve cartridge (DSH081NR)	
				KIT, Seal Repair (SK08-2N)	
				Solenoid, 24 volt (S8LWS24)	
9	-FF	1		CARTRIDGE, solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
				Solenoid, 24 volt (S8LWS24)	
10	-FF	1		CARTRIDGE, solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
				Solenoid, 24 volt (S8LWS24)	
11	-FF	1		CARTRIDGE, solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
				Solenoid, 24 volt (S8LWS24)	
12	-FF	1		CARTRIDGE, solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
				Solenoid, 24 volt (S8LWS24)	
13	-FF	1		CARTRIDGE, solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
				Solenoid, 24 volt (S8LWS24)	
14	-FF	1		CARTRIDGE, solenoid valve 3-way (DSH083)	
				KIT, Seal Repair (SK08-3N)	
				Solenoid, 24 volt (S8LWS24)	
15	-FF	1		CARTRIDGE, check valve cartridge (CVH103P)	
				KIT, Seal Repair (SK10-2N)	

❑ Kit or Assembly - includes all items indented underneath.



00194 01/17/97
18.75

STEER CYLINDER
(Jarp 2.25" Rod)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	51584-FR	2	❑	CYLINDER, STEER (2.25" ROD) - JARP	
1	51681-FR	1	❑	BARREL ASSEMBLY	
2	19916-FR	2		RING, snap	
3	19917-FR	1		BUSHING, spherical - 2"	
4	10704-FR	1		FITTING, straight grease - 1/8" pipe thread	
5	-FR	1		NUT, cylinder rod - 1-3/4" ***(Torque to 885 +/- 60 ft.lbs. (1175 +/- 80 Nm))***	
6	NSS	1	⌘	RING, piston wear	
7	NSS	1	⌘	RING, piston loader	
8	NSS	1	⌘	RING, piston chem-cast	
9	NSS	1	⌘	RING, piston wear	
10	NSS	1	⌘	RING, piston seal	
11	NSS	1	⌘	O-RING, piston	
12	-FR	1		PISTON	
13	NSS	1	⌘	RING, rod bearing wear	
14	NSS	1	⌘	O-RING, rod bearing	
15	NSS	1	⌘	RING, rod bearing back-up	
16	51685-FR	1		BEARING, rod	
17	15681-FR	8		BOLT - 5/8" x 2-1/4" ***(Torque to 175 ft.lbs (233 Nm))***	
18	NSS	1	⌘	U-CUP, rod bearing	
19	NSS	1	⌘	WIPER, rod	
20	51682-FR	1	❑	ROD ASSEMBLY	
21	19916-FR	2		RING, snap	
22	19917-FR	1		BUSHING, spherical - 2"	
23	10704-FR	1		FITTING, straight grease - 1/8" pipe thread	
-	51683-FR	1		KIT, seal repair - steer cylinder	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19750-FR.

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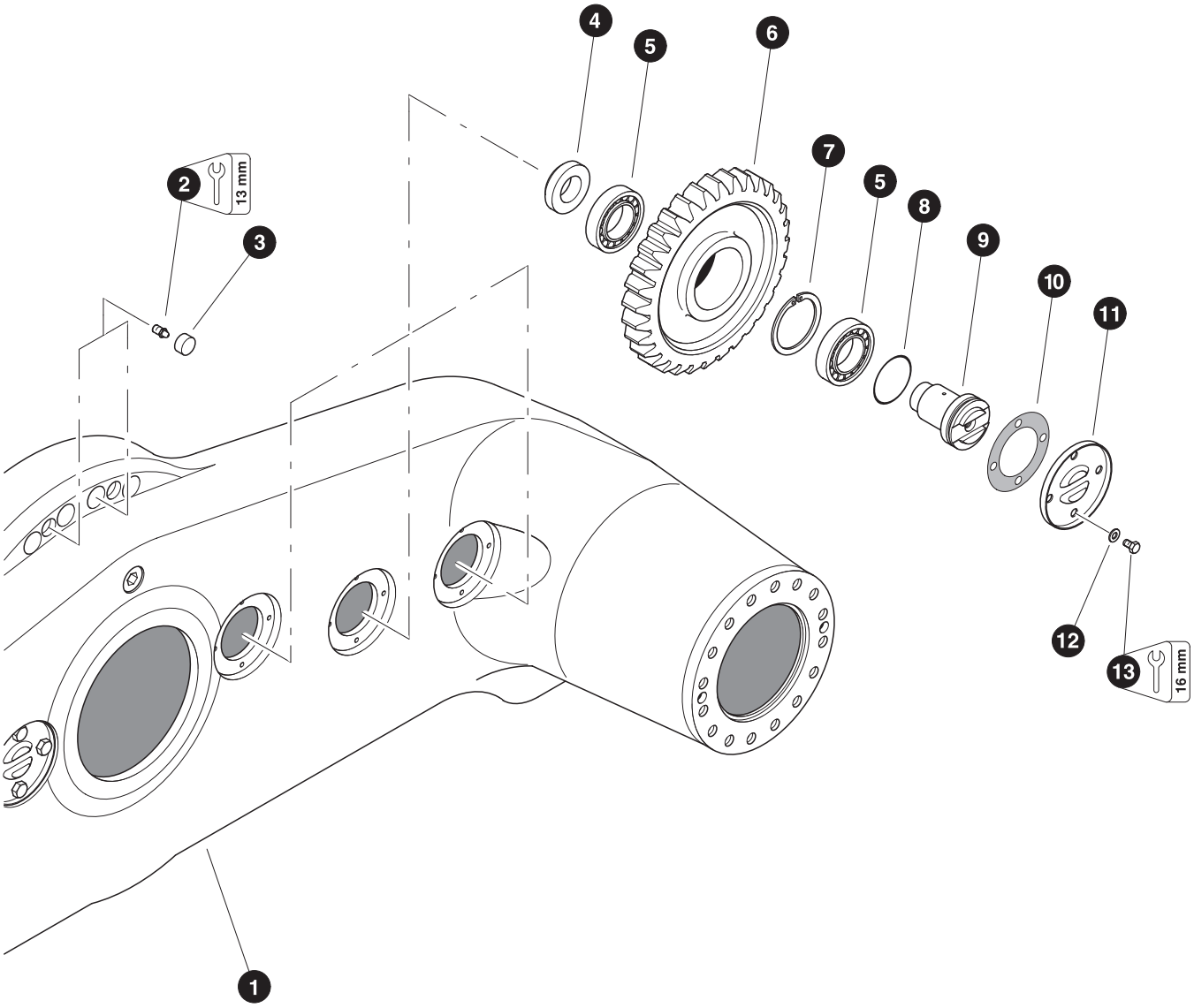
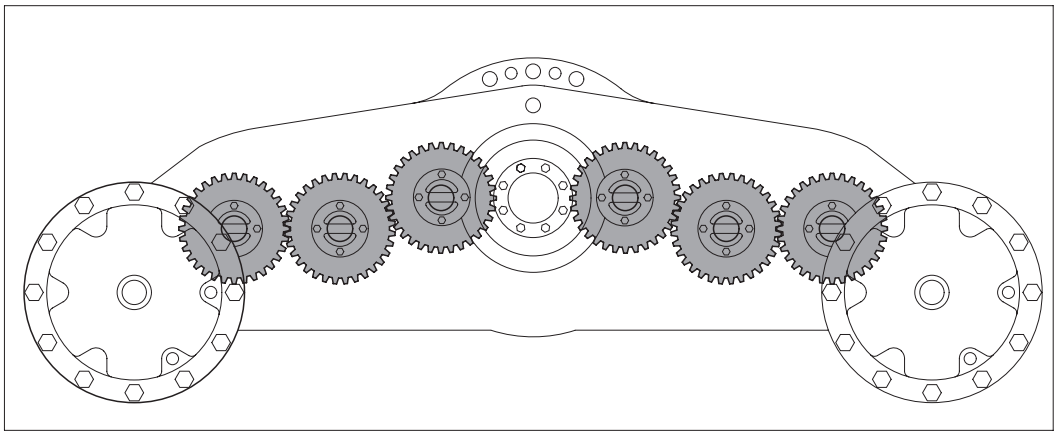
Section AX-1

Axles & Gearboxes -
TIM 08 Rear Bogie Axle (TF 830)
and
TIM 17 Front Bogie Axle
(TF 830 and TB 630)





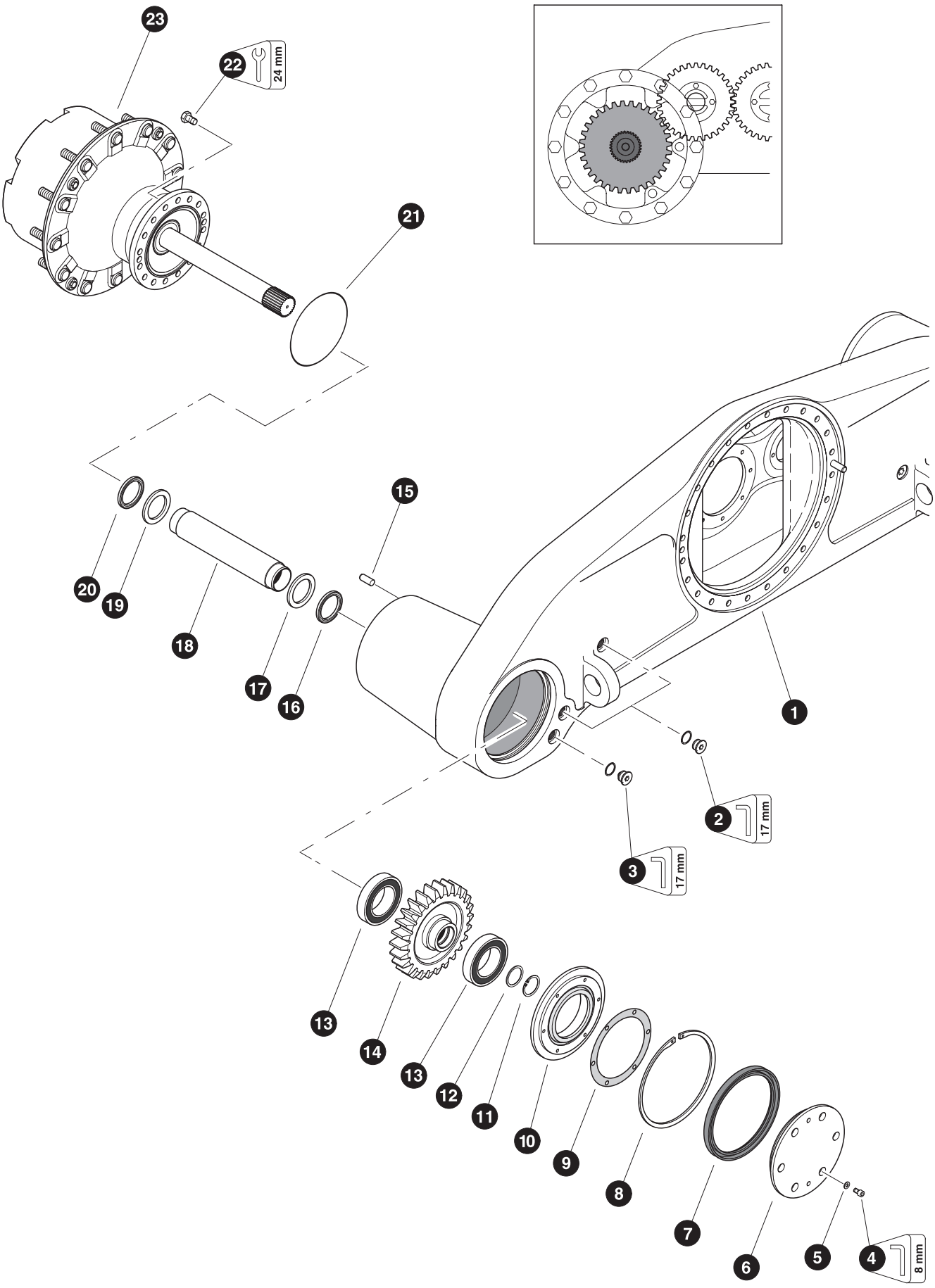
Parts 01759 08/18/2000
18.75

AXLE BEAM HOUSING GEAR INSTALLATION
TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	23492-AX	1		AXEL ASSEMBLY, TANDEM (TIM 08)	
-		1		AXEL ASSEMBLY, TANDEM (TIM 17)	
1	NSS	1		HOUSING, axle beam	
2	23689-AX	2		FITTING, grease (tapered)	
3	23690-AX	2		PLUG, grease	
4	23691-AX	6		BUSHING, spacer	
5	23692-AX	12		BEARING, roller	
6	23693-AX	6		GEAR - 32 teeth	
7	23694-AX	6		RING, retaining	
8	23695-AX	6		O-RING	
9	23696-AX	6		STUD, gear shaft	
-	7321.131	6		STUD, gear shaft	
10	23697-AX	6		GASKET, gear shaft stud (2mm thick)	
11	23698-AX	6		COVER, access	
12	23699-AX	24		WASHER, hardened - 10mm	
13	23700-AX	24		BOLT - 10mm x 20mm	

Note:

Quantities listed are for a single axle beam. LH and RH installations are identical.



Parts 01760 08/18/2000

PLANETARY HUB INSTALLATION

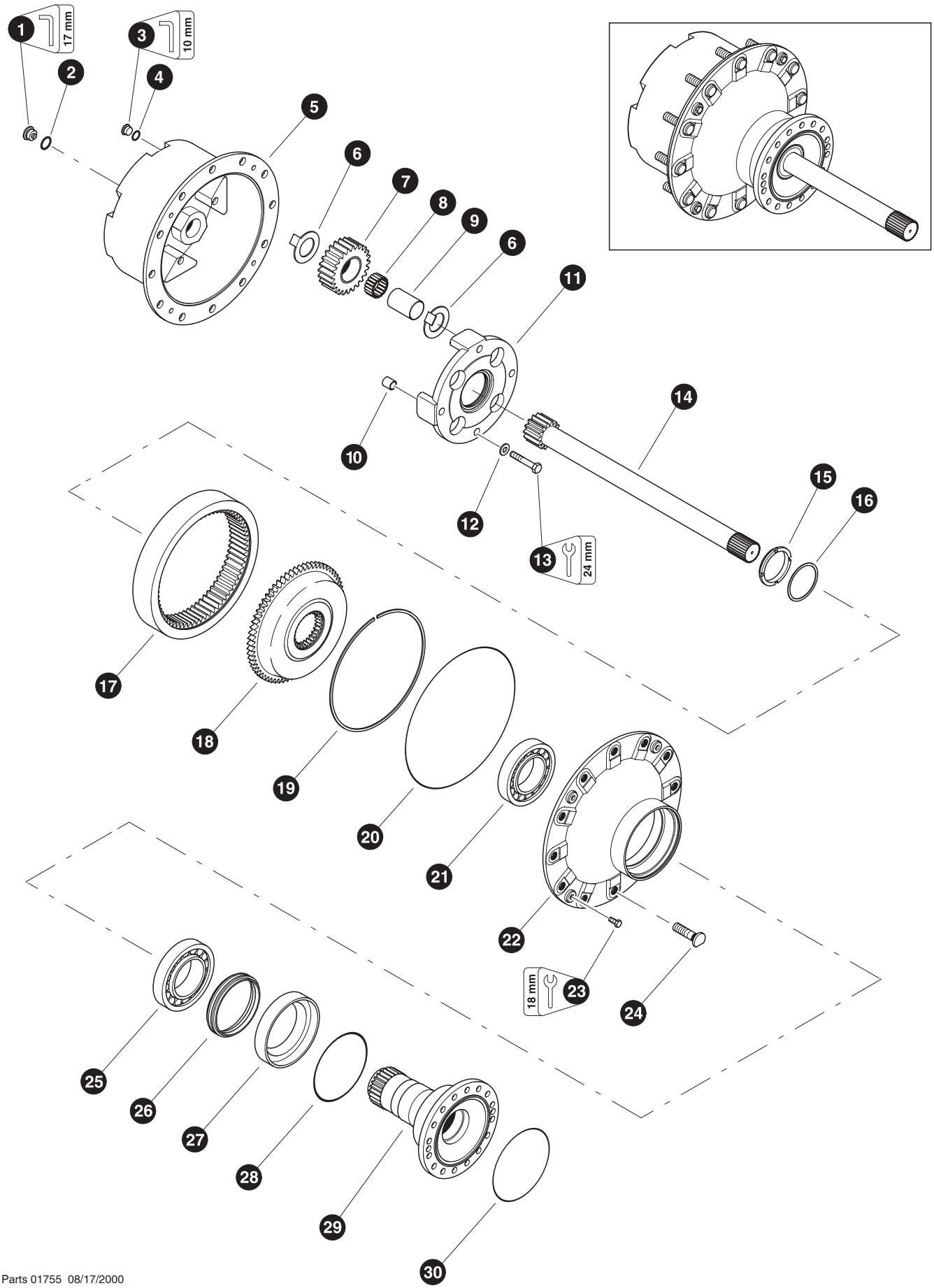
TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HOUSING, axle beam	AX-1
2	23710-AX	2	❑	PLUG, fill / save oil - 30mm	
	23712-AX	1		RING, seal	
3	23711-AX	1	❑	PLUG, drain - 30mm (Magnetic)	
	23712-AX	1		RING, seal	
4	23721-AX	6		BOLT, allen head - 10mm x 20mm	
5	23722-AX	6		WASHER, lock - 10mm	
6	23723-AX	1		COVER, access	
7	23724-AX	1		RING, seal	
8	23725-AX	1		RING, retaining	
9	23726-AX	1		GASKET, inner gear cover	
10	23727-AX	1		COVER, inner gear	
11	23728-AX	1		RING, retaining	
12	23729-AX	1		WASHER, support	
13	23730-AX	2		BEARING, ball	
14	23731-AX	1		GEAR, planetary input (26 teeth) (TIM 08)	
-	9804.352	1		GEAR, planetary input (26 teeth) (TIM 17)	
15	23732-AX	2		PIN, dowel - 16mm	
16	23733-AX	1		SEAL, oil - outboard	
17	23734-AX	1		WASHER - outboard	
18	23735-AX	1		PIPE, planetary shaft	
19	23736-AX	1		WASHER - inboard	
20	23737-AX	1		SEAL, oil - inboard	
21	23738-AX	1		O-RING, planetary pilot	
22	23739-AX	18		BOLT - 16mm x 40mm	
23	REF.	1	🕮	PLANETARY HUB ASSEMBLY	AX-1

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

Note:

Quantities listed are for a single planetary hub installation. Installations are identical



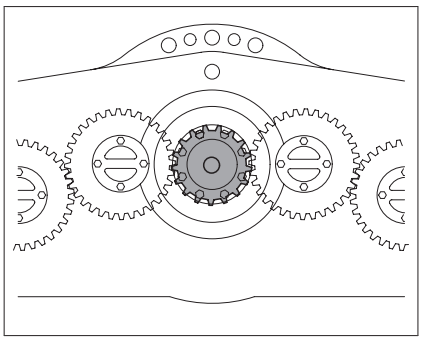
Parts 01755 08/17/2000
12.50

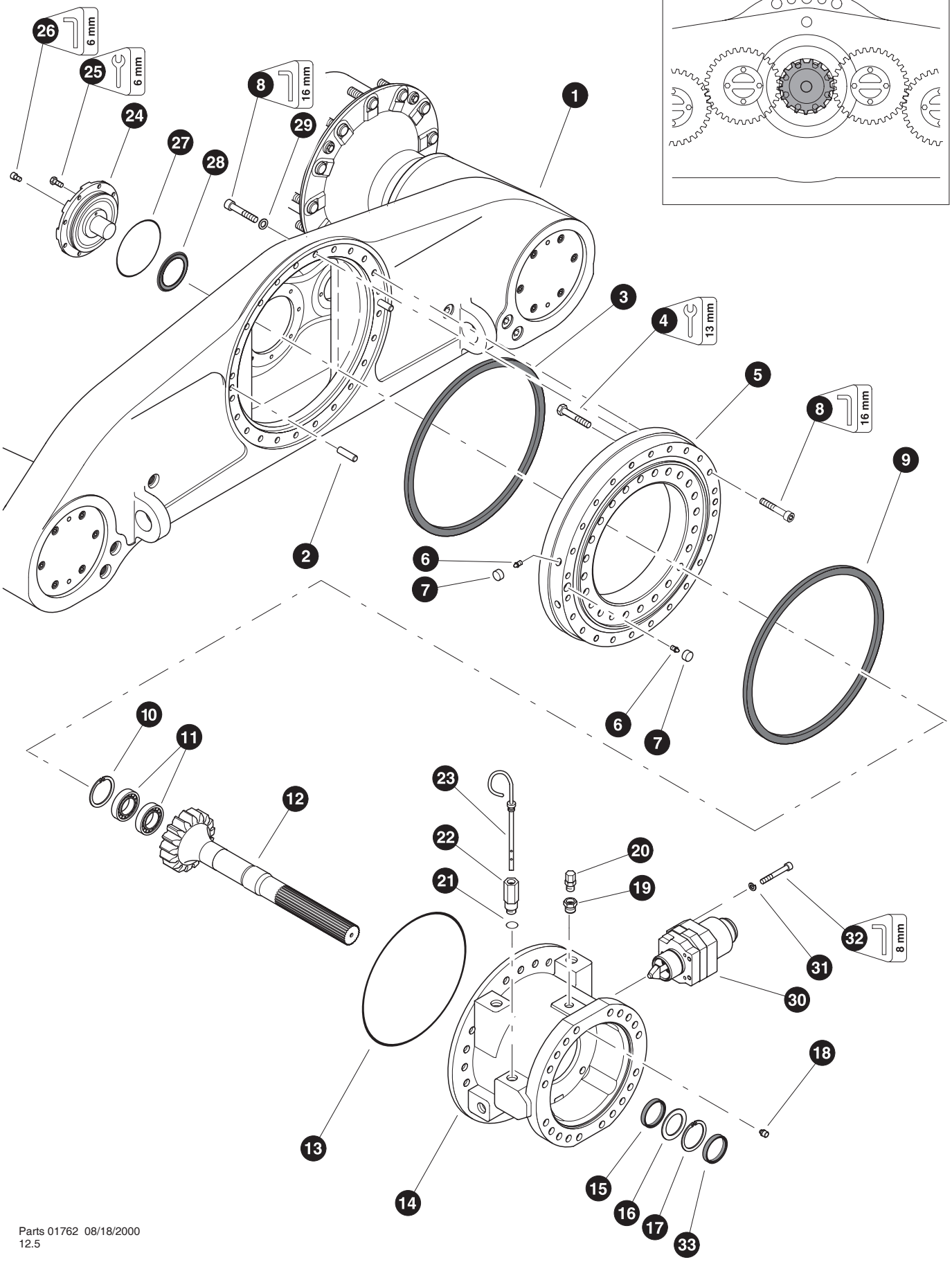
PLANETARY HUB ASSEMBLY

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	22833-AX	4	❑	PLANETARY HUB	
1	23741-AX	1	❑	PLUG, drain - 20mm (Magnetic)	
	23742-AX	1		RING, seal	
3	23743-AX	2	❑	PLUG, screw - M30 (Adhesive coated)	
4	23744-AX	2		RING, seal	
5	23745-AX	1		HOUSING, planetary cage	
6	23746-AX	8		DISK, check	
7	23747-AX	4		GEAR, planetary (25 teeth)	
8	23748-AX	4		CAGE, needle roller bearing	
9	23751-AX	4		SHAFT, planetary gear	
10	23752-AX	4		BUSHING, shear	
11	23753-AX	1		CAGE, planetary gear	
12	23754-AX	4		WASHER, flat - 16mm	
13	23755-AX	4		BOLT - 16mm x 90mm	
14	23756-AX	1		SHAFT, sun gear	
15	23757-AX	1		NUT, sun gear	
16	23758-AX	AR		WASHER, adjustment	
17	23759-AX	1		GEAR, rim (66 teeth)	
18	23760-AX	1		GEAR, carrier ring (66 teeth)	
19	23761-AX	1		RING, spring	
20	23762-AX	1		O-RING, wheel hub housing	
21	23763-AX	1		BEARING, tapered roller - inboard	
22	23764-AX	1		HOUSING, wheel hub	
23	23765-AX	4		BOLT - 12mm x 30mm	
24	22245-AX	12		BOLT, wheel mounting stud	
25	23767-AX	1		BEARING, tapered roller - outboard	
26	23768-AX	1		SEAL, shaft - axle stub	
27	23769-AX	1		RING, axle stub	
28	23770-AX	1		O-RING, axle stub	
29	23771-AX	1		STUB, axle	
30	23772-AX	1		O-RING, planetary hub pilot	

❑ Kit or Assembly - includes all items indented underneath.





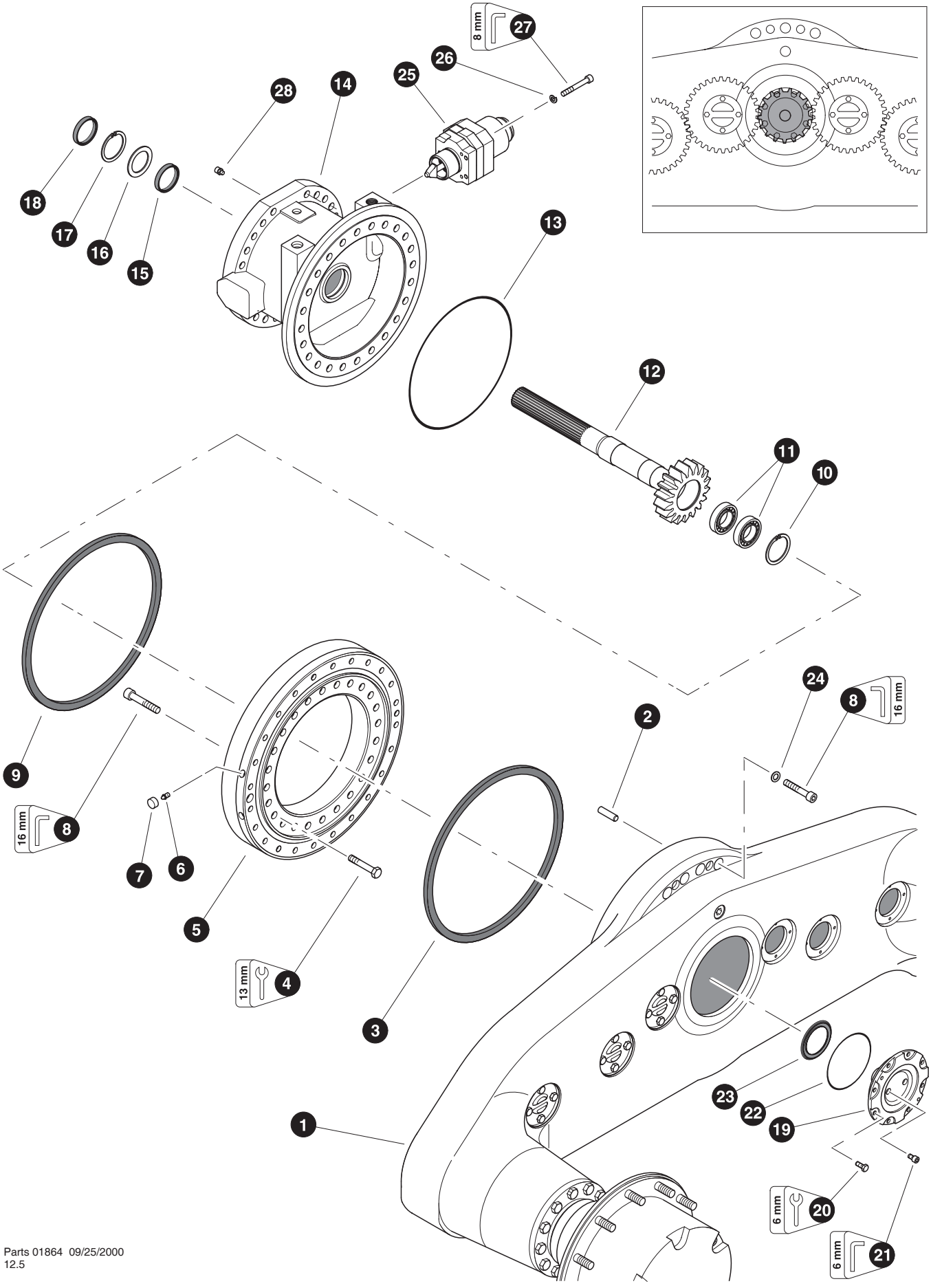
Parts 01762 08/18/2000
12.5

AXLE BEAM INSTALLATION TO OUTER DIFFERENTIAL - LH

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HOUSING, axle beam	AX-1
2	23777-AX	2		PIN, dowel	
3	23778-AX	1		RING, seal	
4	23779-AX	24		BOLT - 20mm x 90mm	
5	23780-AX	2		BEARING, axle beam	
6	23689-AX	10		FITTING, grease (tapered)	
7	23690-AX	10		PLUG, grease	
8	23781-AX	24		BOLT, allen head - 18mm x 85mm	
9	23783-AX	1		RING, scrapper	
9	7308.071	1		RING, scrapper	
10	- - - - -	1		RING, retaining	
11	23784-AX	2		BEARING, roller	
12	23785-AX	1		SHAFT, sun gear (17 teeth)	
13	23787-AX	1		O-RING	
14	7276.082	1		HOUSING, axle beam mounting - (TIM 08)	
-	7276.115	1		HOUSING, axle beam mounting - (TIM 17)	
15	23788-AX	2		SEAL, oil	
16	23789-AX	1		RING, retaining	
17	23790-AX	1		WASHER, support	
18	23791-AX	1		BREATHER, axle beam mount housing - internal	
19	23792-AX	2		BUSHING, reducer	
20	22570-AX	1		BREATHER, axle differential	
21	1180.541	1		O-RING	
22	7322.074	1		DIPSTICK tube	
23	7325.026	1		Dipstick (TIM 08)	
-	7325.037	1		Dipstick (TIM 17)	
24	23794-AX	1		STUB, bearing (TIM 08)	
-	7321.120	1		STUB, bearing (TIM 17)	
25	23795-AX	8		BOLT - 10mm x 25mm	
26	23797-AX	2		BOLT, allen head - 8mm x 16mm	
27	23798-AX	1		O-RING (TIM 08)	
28	23799-AX	1		SEAL, ring axle shaft	
29	23800-AX	24		WASHER, hardened	
30	REF.	1	🕮	BRAKE CYLINDER ASSEMBLY	AX-1
31	23802-AX	4		WASHER, lock	
32	23803-AX	4		BOLT, allen head - 10mm x 30mm	
33	24603-AX	1		SEAL, oil	

🕮 See referenced page for component or assembly breakdown.



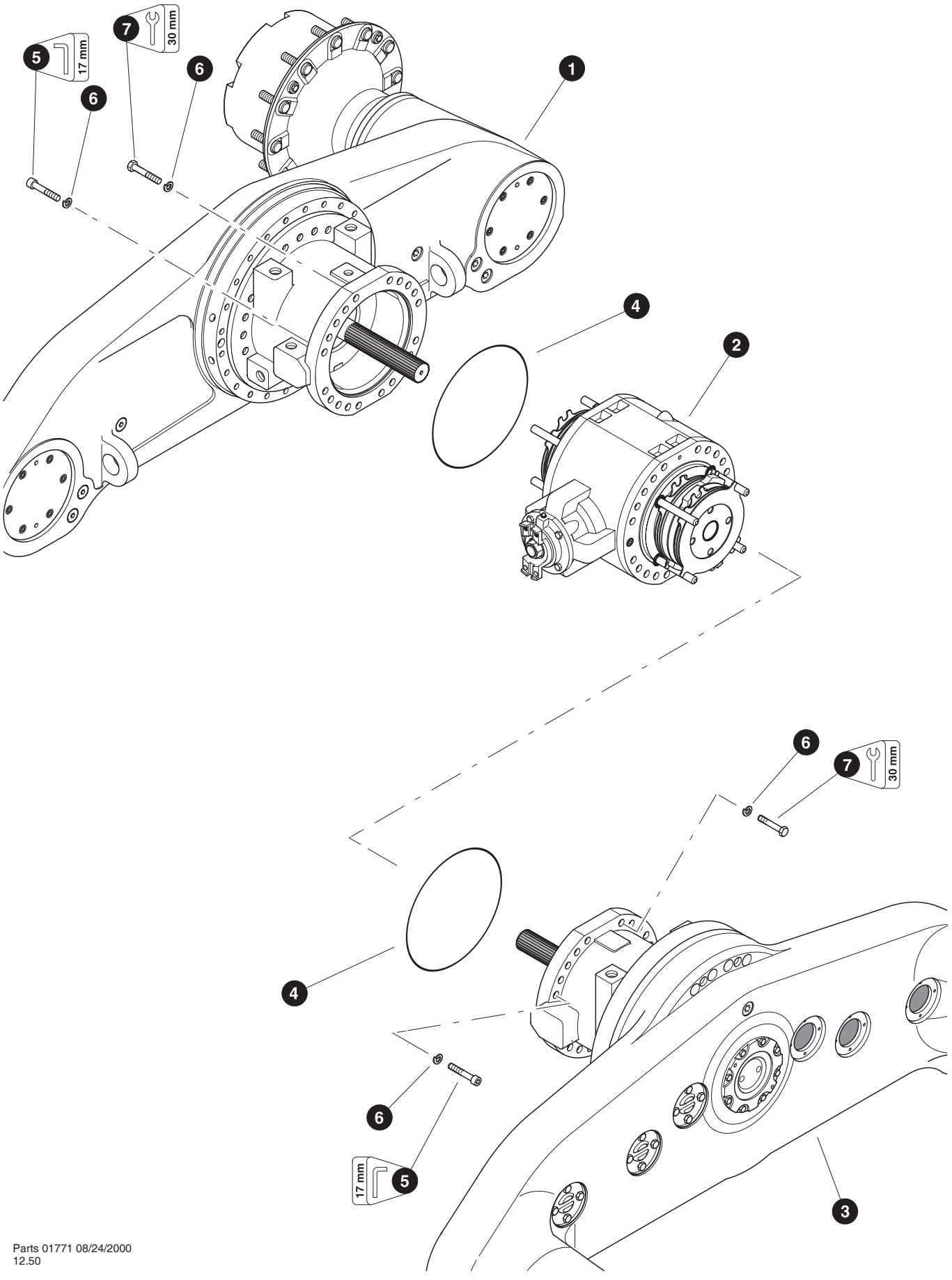
Parts 01864 09/25/2000
12.5

AXLE BEAM INSTALLATION TO OUTER DIFFERENTIAL - RH

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	HOUSING, axle beam	AX-1
2	23777-AX	2		PIN, dowel	
3	23778-AX	1		RING, seal	
4	23779-AX	24		BOLT - 20mm x 90mm	
5	23780-AX	2		BEARING, axle beam	
6	23689-AX	10		FITTING, grease (tapered)	
7	23690-AX	10		PLUG, grease	
8	23781-AX	24		BOLT, allen head - 18mm x 85mm	
9	23783-AX	1		RING, scrapper	
10	- - - - -	1		RING, retaining	
11	23784-AX	2		BEARING, roller	
12	23785-AX	1		SHAFT, sun gear (17 teeth)	
13	23787-AX	1		O-RING	
14	7276.081	1		HOUSING, axle beam mounting - RH (TIM 08)	
-	7276.114	1		HOUSING, axle beam mounting - RH (TIM 17)	
15	23788-AX	2		SEAL, oil	
16	23789-AX	1		RING, retaining	
17	23790-AX	1		WASHER, support	
18	24603-AX	1		SEAl, oil	
19	23794-AX	1		STUB, bearing	
20	23795-AX	8		BOLT - 10mm x 25mm	
21	23797-AX	2		BOLT, allen head - 8mm x 16mm	
22	23798-AX	1		O-RING	
23	23799-AX	1		SEAL, ring axle shaft	
24	23800-AX	24		WASHER, hardened	
25	REF.	1	🕮	BRAKE CYLINDER ASSEMBLY	AX-1
26	23802-AX	4		WASHER, lock	
27	23803-AX	4		BOLT, allen head - 10mm x 30mm	
28	23791-AX	1		BREATHER, axle beam mount housing - internal	

🕮 See referenced page for component or assembly breakdown.



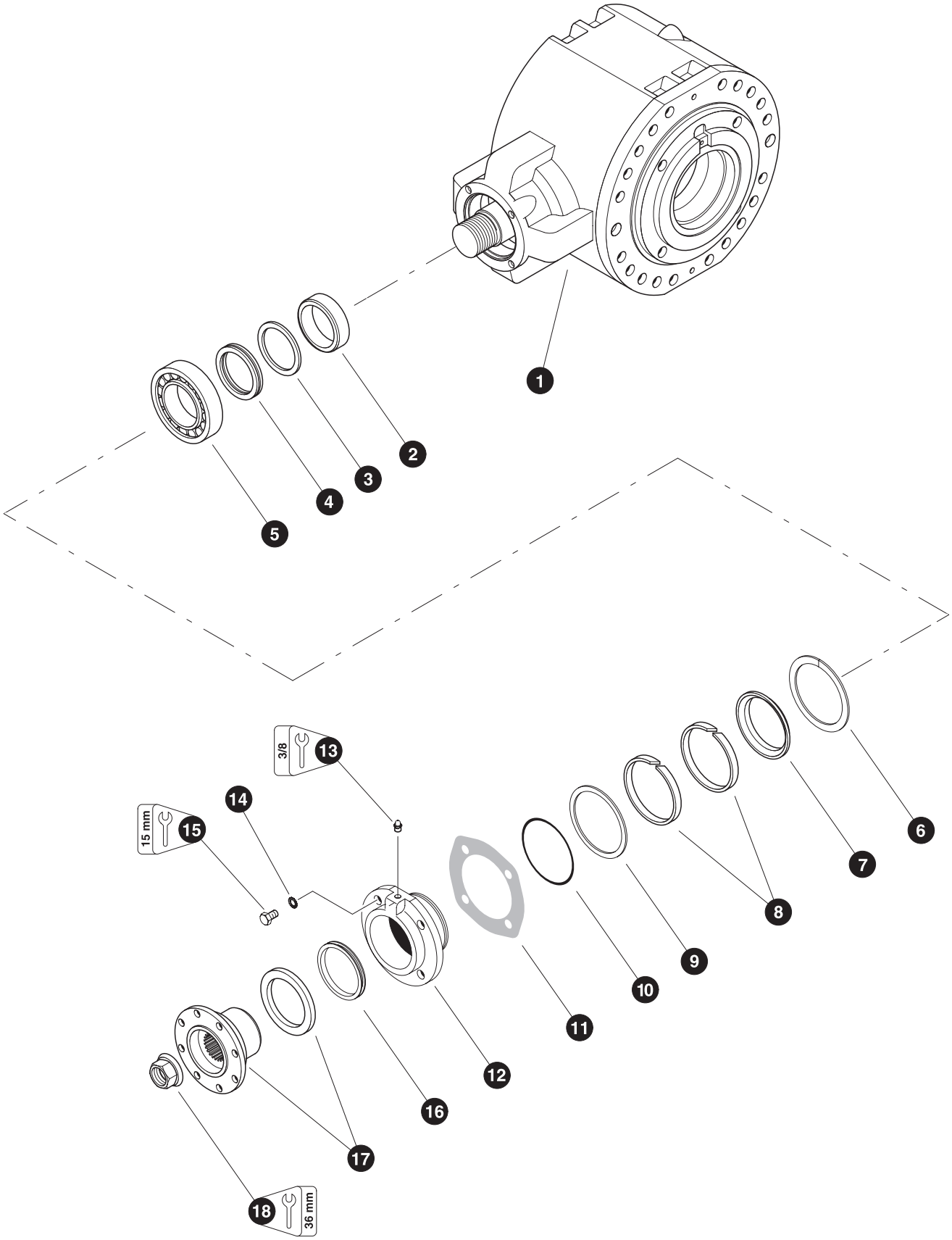
Parts 01771 08/24/2000
12.50

INNER DIFFERENTIAL INSTALLATION

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	TANDEM AXLE BEAM - LH.	AX-1
2	REF.	1		INNER DIFFERENTIAL COMPONENTS	
3	REF.	1	🕮	TANDEM AXLE BEAM - RH	AX-1
4	23805-AX	2		O-RING	
5	23803-AX	8		BOLT, allen head - 20mm x 90mm	
6	23806-AX	64		WASHER, lock - 20mm	
7	23807-AX	32		BOLT - 20mm x 90mm	

🕮 See referenced page for component or assembly breakdown.

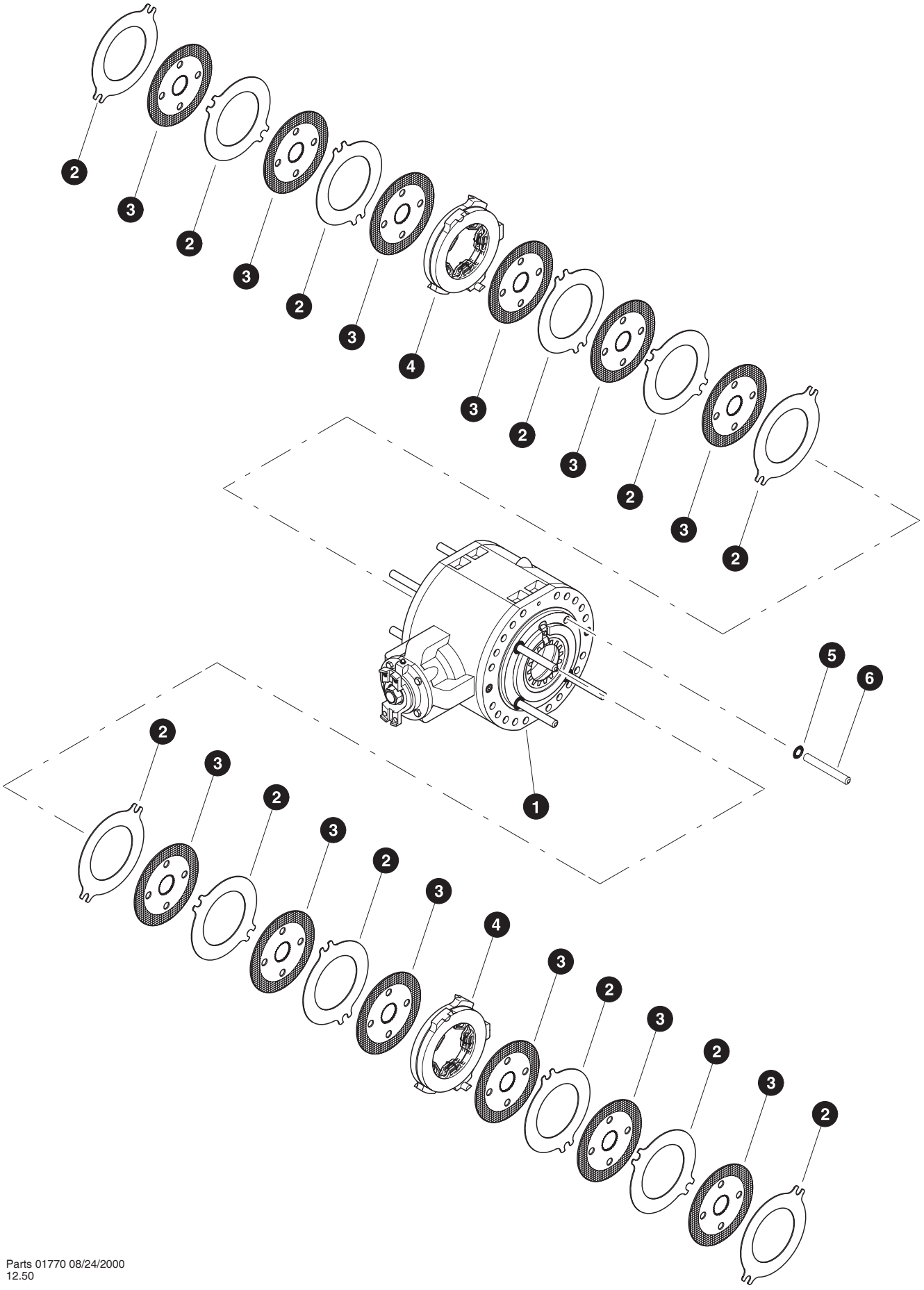


Parts 01768 08/23/2000
12.5

INNER DIFFERENTIAL COMPONENTS
(Drive Shaft Yoke Installation)

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1		INNER DIFFERENTIAL COMPONENTS	AX-1
2	23808-AX	1		SPACER, bushing	
3	23809-AX	AR		WASHER, adjusting	
4	23810-AX	AR		SPACER, bushing	
5	23811-AX	1		BEARING, tapered roller	
6	23812-AX	1		RING, spring	
7	23813-AX	1		SEAL, radial	
8	23814-AX	2		RING, seal	
9	23815-AX	1		WASHER, drive shaft cover	
10	23816-AX	1		O-RING, drive shaft cover	
11	23817-AX	1		GASKET, drive shaft cover	
12	23818-AX	1		COVER, drive shaft	
13	23819-AX	1		FITTING, grease	
14	23820-AX	4		WASHER, lock - 10mm	
15	23821-AX	4		BOLT - 10mm x 25mm	
16	23822-AX	1		V-RING	
17	23997-AX	1		YOKE, COMPANION FLANGE - AXLE (HD)	
18	23824-AX	1		NUT, flange - 40mm	

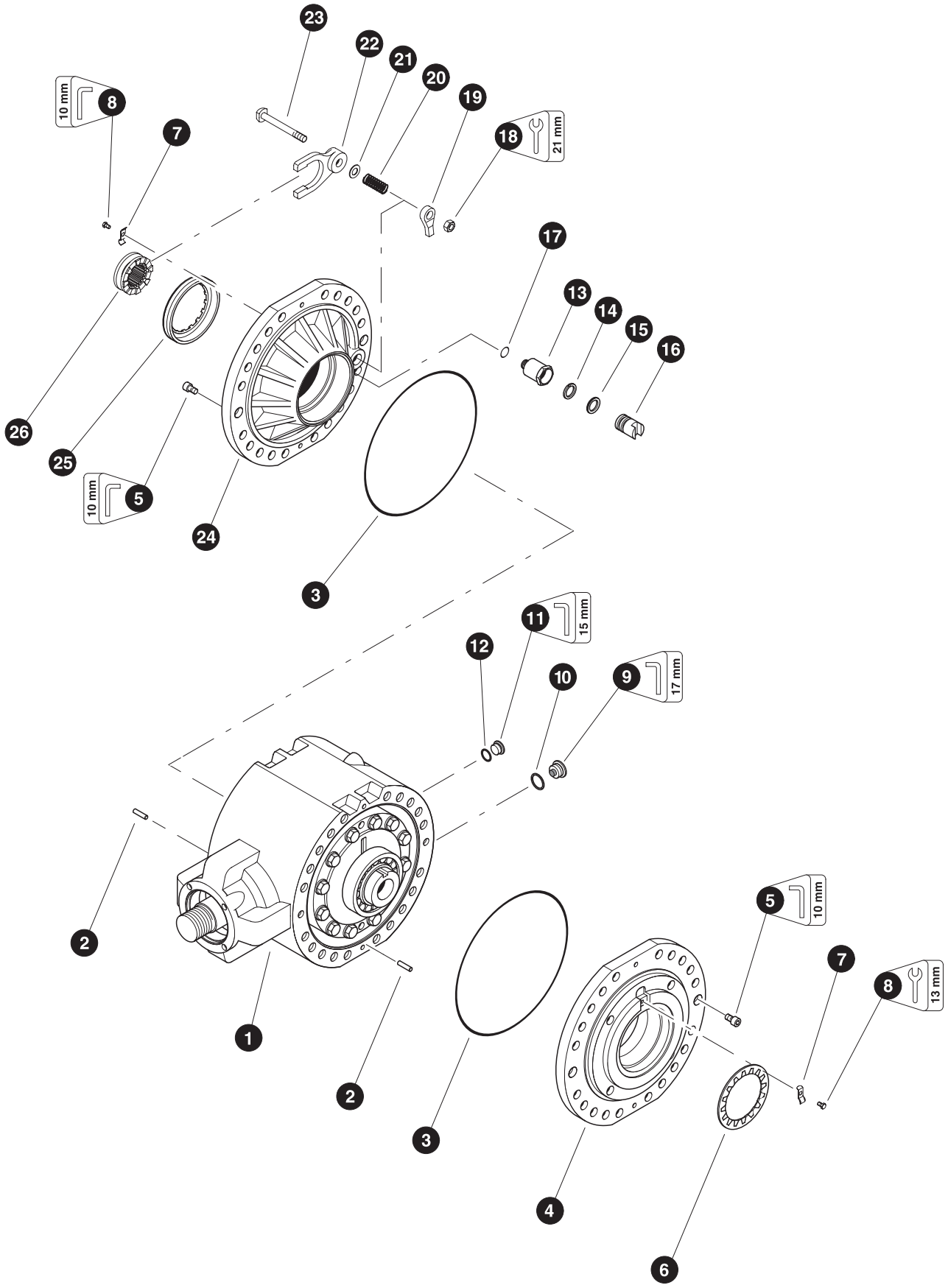


Parts 01770 08/24/2000
12.50

INNER DIFFERENTIAL COMPONENTS
(Brake Pack Installation)

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1		INNER DIFFERENTIAL COMPONENTS	AX-1
2	23825-AX	12		DISK, intermediate	
3	23826-AX	12		DISK, coated (TIM 08)	
-	7345.057	12		DISK, coated (TIM 17)	
4	23827-AX	2		DISK, operating	
5	23828-AX	8		WASHER, toothed	
6	23829-AX	8		PIN, straight	



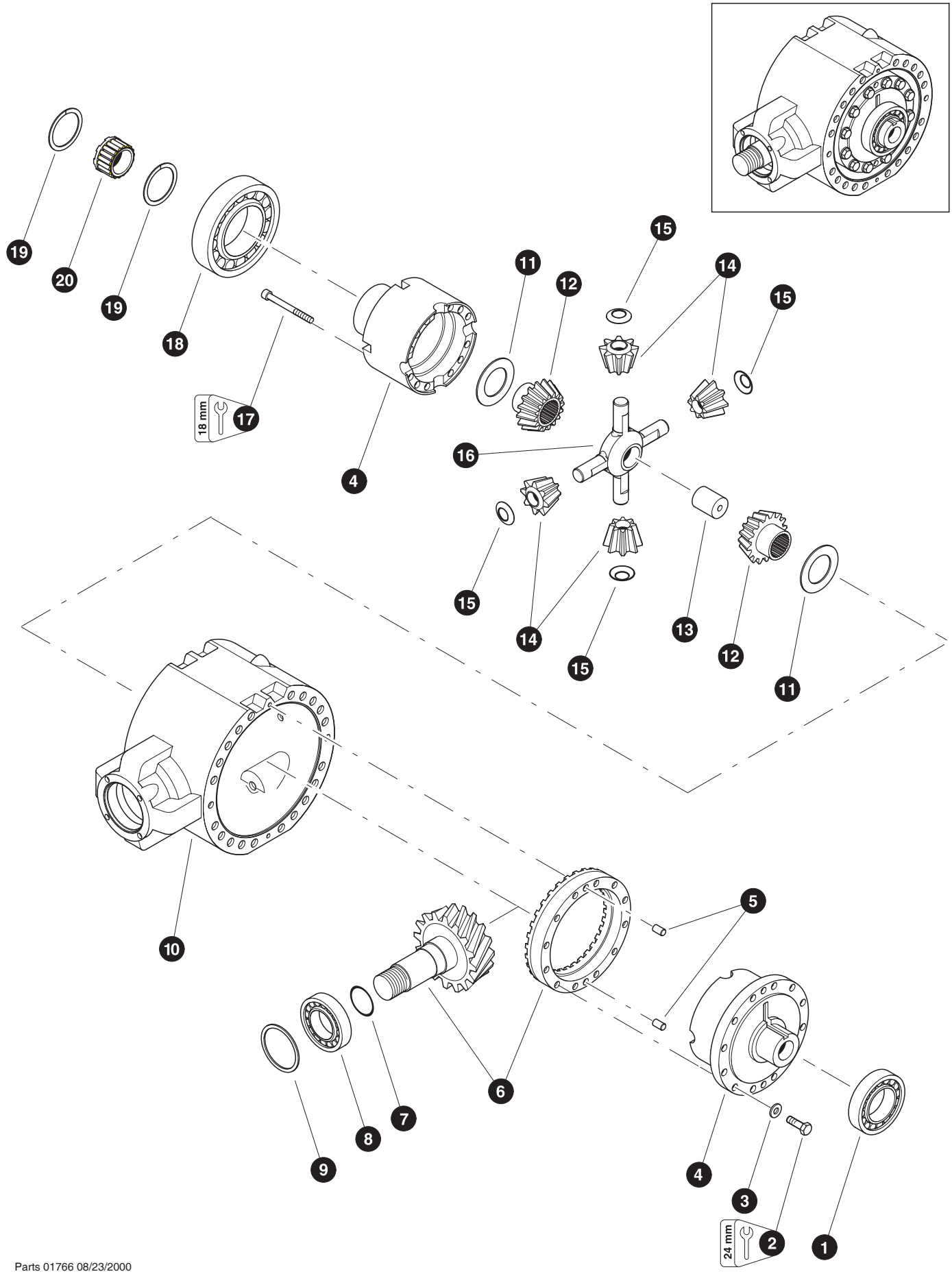
Parts 01767 08/23/2000
12.5

INNER DIFFERENTIAL COMPONENTS
(Differential Lock Installation)

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1		INNER DIFFERENTIAL COMPONENTS	AX-1
2	23830-AX	4		PIN, dowel	
3	23831-AX	2		O-RING	
4	23832-AX	1		FLANGE - RH	
5	23721-AX	4		BOLT, allen head - 10mm x 20mm	
6	23833-AX	1		NUT, flange	
7	23834-AX	2		PLATE, locking	
8	23835-AX	2		BOLT - 8mm x 16mm	
9	23741-AX	1		PLUG - 20mm (With magnet)	
10	23742-AX	1		RING, seal	
11	23836-AX	1		PLUG - 30mm	
12	23712-AX	1		RING, seal	
-	- - - - -	1	❑	CYLINDER, differential lock	
13	23837-AX	1		BARREL	
14	23838-AX	1		RING, groove	
15	23839-AX	1		RING, seal	
16	23840-AX	1		PISTON	
17	23841-AX	1		O-RING	
18	23842-AX	1		NUT, hex - 14mm	
19	23843-AX	1		LEVER, shifting	
-	9809.116	1		LEVER, shifting	
20	23844-AX	1		SPRING, pressure	
21	23845-AX	AR		WASHER, adjusting	
22	23846-AX	1		FORK, shift	
23	23847-AX	1		ROD, shifting	
-	9816.132	1		ROD, shifting	
24	23848-AX	1		FLANGE - LH	
25	23849-AX	1		NUT	
26	23850-AX	1		SLEEVE, shifting	

❑ Kit or Assembly - includes all items indented underneath.

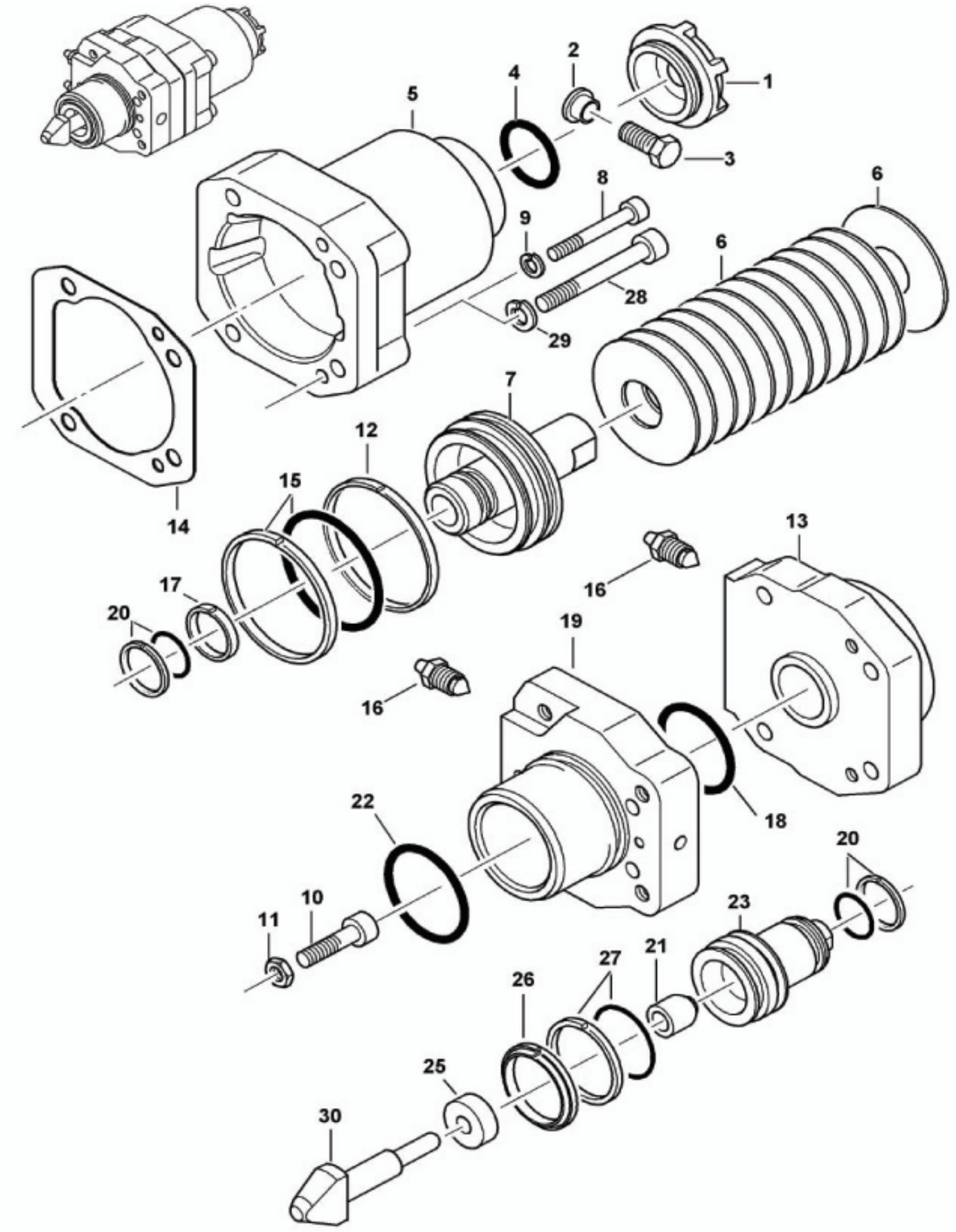


Parts 01766 08/23/2000
15.00

INNER DIFFERENTIAL COMPONENTS
(Differential Gear Installation)

TIM 08 and TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	23852-AX	1		BEARING, tapered roller	
2	23853-AX	16		BOLT - 16mm x 40mm	
3	23754-AX	16		WASHER, hardened - 16mm	
4	23854-AX	1		CAGE, differential	
5	23855-AX	4		PIN, dowel	
6	23856-AX	1		WHEEL, crown (With pinion - 34/12 teeth) (TIM 08)	
-	2101.336	1		WHEEL, crown (With pinion - 34/12 teeth) (TIM 17)	
7	23857-AX	1		O-RING	
8	23858-AX	1		BEARING, tapered roller	
9	23859-AX	AR		WASHER, adjusting	
10	23860-AX	1		HOUSING, differential (TIM 08)	
-	7506.269	1		HOUSING, differential (TIM 17)	
11	23861-AX	2		DISK, check	
12	23862-AX	2		GEAR, differential	
13	23863-AX	1		PACKAGE, adjusting bolt (TIM 08)	
-	7321.123	1		PACKAGE, adjusting bolt (TIM 17)	
14	23864-AX	4		GEAR, planetary	
15	23865-AX	4		WASHER, thrust	
16	23866-AX	1		CROSS, planetary gear	
17	23867-AX	12		BOLT, allen head - 12mm x 85mm	
18	23868-AX	1		BEARING, tapered roller	
19	23869-AX	2		RING, spring	
20	23870-AX	1		SLEEVE, clutch coupling	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BRAKE CYLINDER ASSEMBLY

TIM 08 AND TIM 17

REF	PART #	QTY		DESCRIPTION	SEE SECTION
- - -	5350.028	1		Spring loaded cyl. complete (TIM 08)	
- - -	5350.044	1		Spring loaded cyl. complete (TIM 17)	
1	5266.012	1		Screw Plug M50x1,5 (TIM 17)	
	5266.014	1		Screw Plug M50x1,5 (TIM 08)	
2	1250.616	1		Plug (TIM 17)	
	5254.017	1		Cover (TIM 08)	
3	1010.316	1		Hex bolt 1 M12x25	
4	1170.095	1		O-ring 1 40x5	
5	5275.002	1		Housing 1	
6	1250.237	26		Plate spring 26 80x31x2,5	
7	5252.163	1		Piston	
	5252.095	1		Piston	
8	23886-AX	2		BOLT, allen head - 8mm x 60mm	
9	23885-AX	2		WASHER, lock - 8mm	
10	23871-AX	1		BOLT, allen head - 10mm x 40mm	
11	23872-AX	1		NUT, hex - 10mm	
12	1180.795	1		Guide ring 1 80x85x5,6	
13	5263.115	1		Cylinder (upper part) (TIM 17)	
	5263.060	1		Cylinder (upper part) (TIM 08)	
14	7319.068	1		Gasket	
15	1180.885	1		Piston seal 1 85x69,5x6, (TIM 17)	
	1180.839	1		Piston seal (TIM 08)	
16	23883-AX	2		VALVE, breather	
17	1180.794	1		ring 1 30x35x5,6	
18	23884-AX	1		O-RING	
19	23882-AX	1		HOUSING, lower cylinder (TIM 08)	
19	5263.114	1		HOUSING, lower cylinder (TIM 17)	
20	23873-AX	1		SEAL, piston	
21	23878-AX	1		STUD	
22	23881-AX	1		O-RING	
23	23875-AX	1		PISTON, compression (TIM 08)	
23	5252.161	1		PISTON, compression (TIM 17)	
24					
25	23879-AX	1		RING	
26	23876-AX	2		SEAL, piston (TIM 08)	
26	1180.884	1		SEAL, piston (TIM 17)	
27	1180.884	1		Piston seal 1 55x44x4,2 (TIM 17)	
28	1020.257	4		Allen screw M10x80	
29	1190.031	4		Locking clip	
30	23880-AX	1		WEDGE	
---	7340.015	1		englisch Indication plate	
---	1750.764	2		Blind rivet	

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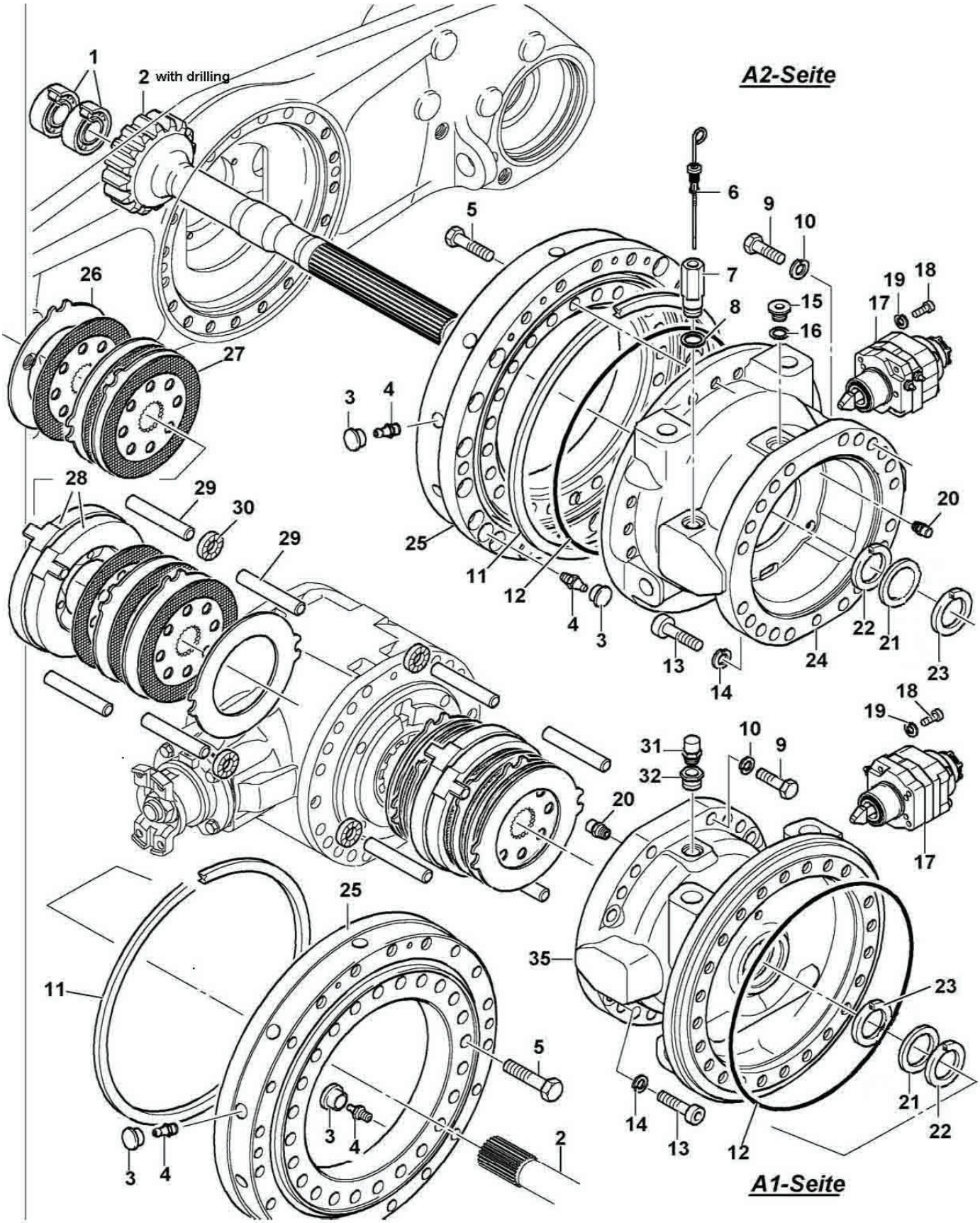
Section AX-2

Axles, Transfer Cases & Wheels- TIM 18 - Heavy Duty Bogie Axle (TF 840 & TS 630)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TIM 18 Bogie Axle

(Axle Beam Breakdown)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	51185-AX	1	AXLE, TIM 18 Heavy Duty	
1	1130.067	2	Cylinder roller bearing - 45x85x23, SL182209C3 INA	
2	7818.146	1	Sun gear shaft - Z=17 with drilling	
2	7818.145	1	Sun gear shaft - Z=17	
3	1750.710	10	Plug - D25	
4	1250.104	10	Taper grease nipple - AM8x1, 5.8 71412	
5	1010.669	24	Hexagon screw - M20x2x90	
6	7325.037	1	Dipstick	
7	7322.074	1	Threaded stud	
8	1180.541	1	Seal ring - A27x32x2, CU 7603	
9 A1	1010.664	18	Hexagon screw - M20x2x95	
9 A2	1010.668	18	Hexagon screw - M20x2x90, 10.9 960	
10	7316.044	18	Washer - VSK 20	
11	7308.071	1	Scraper ring - D450xD480x13	
12	1170.726	1	O-ring - OR 415x5	
13	1020.620	4	Allen screw - M20x2x90, 10.9 912	
14	---			
15	1040.151	1	Screw plug - G 3/4 “, 8.8 908	
16	1180.541	1	Seal ring - A27x32x2, CU 7603	
17	5350.049	1	Spring loaded cylinder	
18	1020.260	3	Allen screw - M10x30	
19	1190.031	3	Locking clip - VSKZ 10	
20	1250.002	1	Breather - M10x1 keg.	
21	7315.187	1	Washer	
22	1160.236	1	Oil seal - 60x80x10	
23	7308.063	1	Oil seal - 60x80x16 472	
24	7276.133	1	Axle housing	
25	7305.033	1	Slewing ring	
26	7344.036	6	Intermediate disk	
27	7345.057	6	Coated disk	
28	5504.002	1	Operating disk	
29	1200.297	2	Straight pin - 20m6x140	
30	1190.211	2	Toothed ring - ZA 20	
31	1250.015	1	Breather - R1/2”, 0,3 bar	
32	1750.705	1	Reducing nipple - R3/4xR1/2”	
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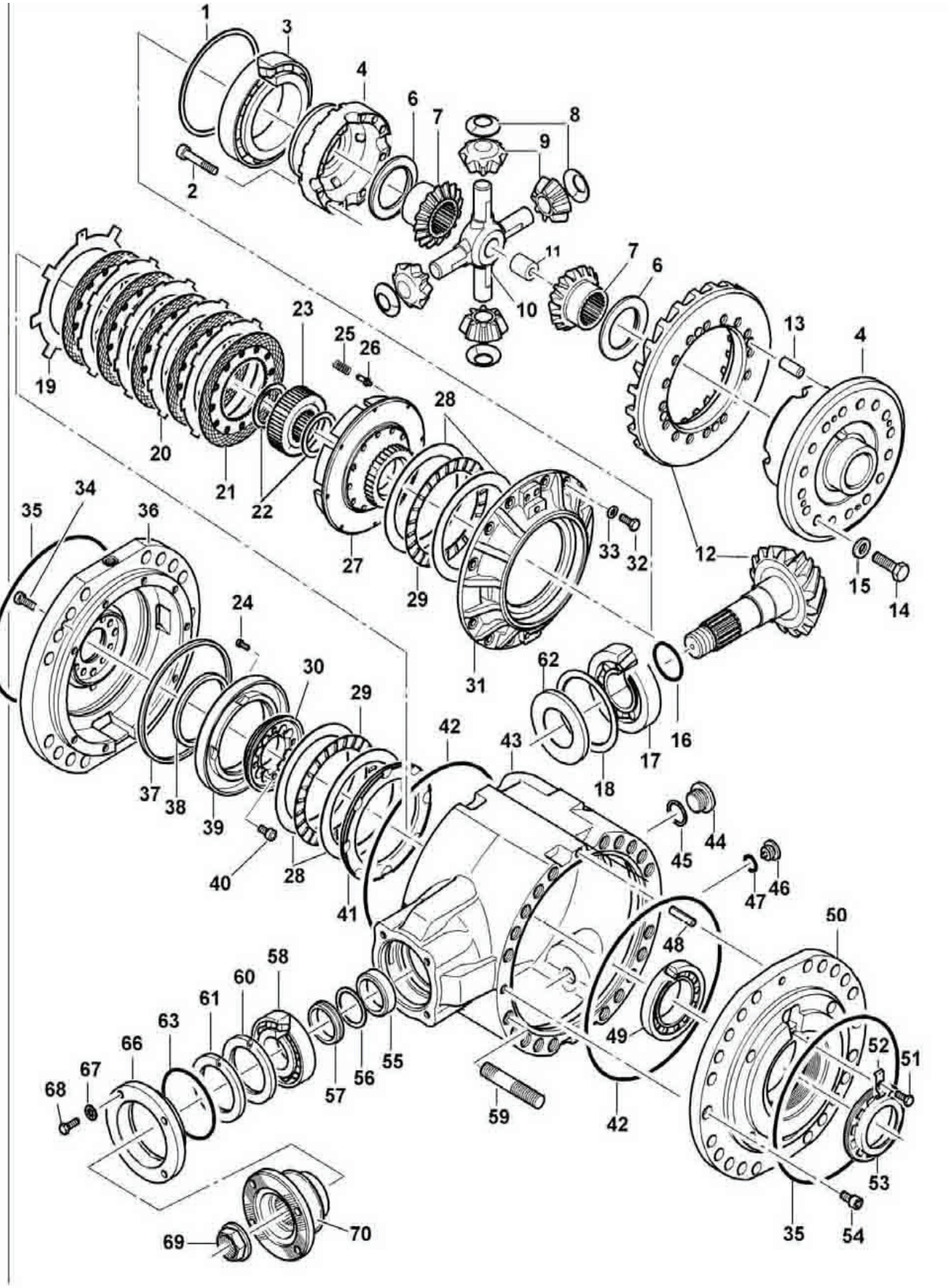
34	---			
35	7276.132	1	Axle housing	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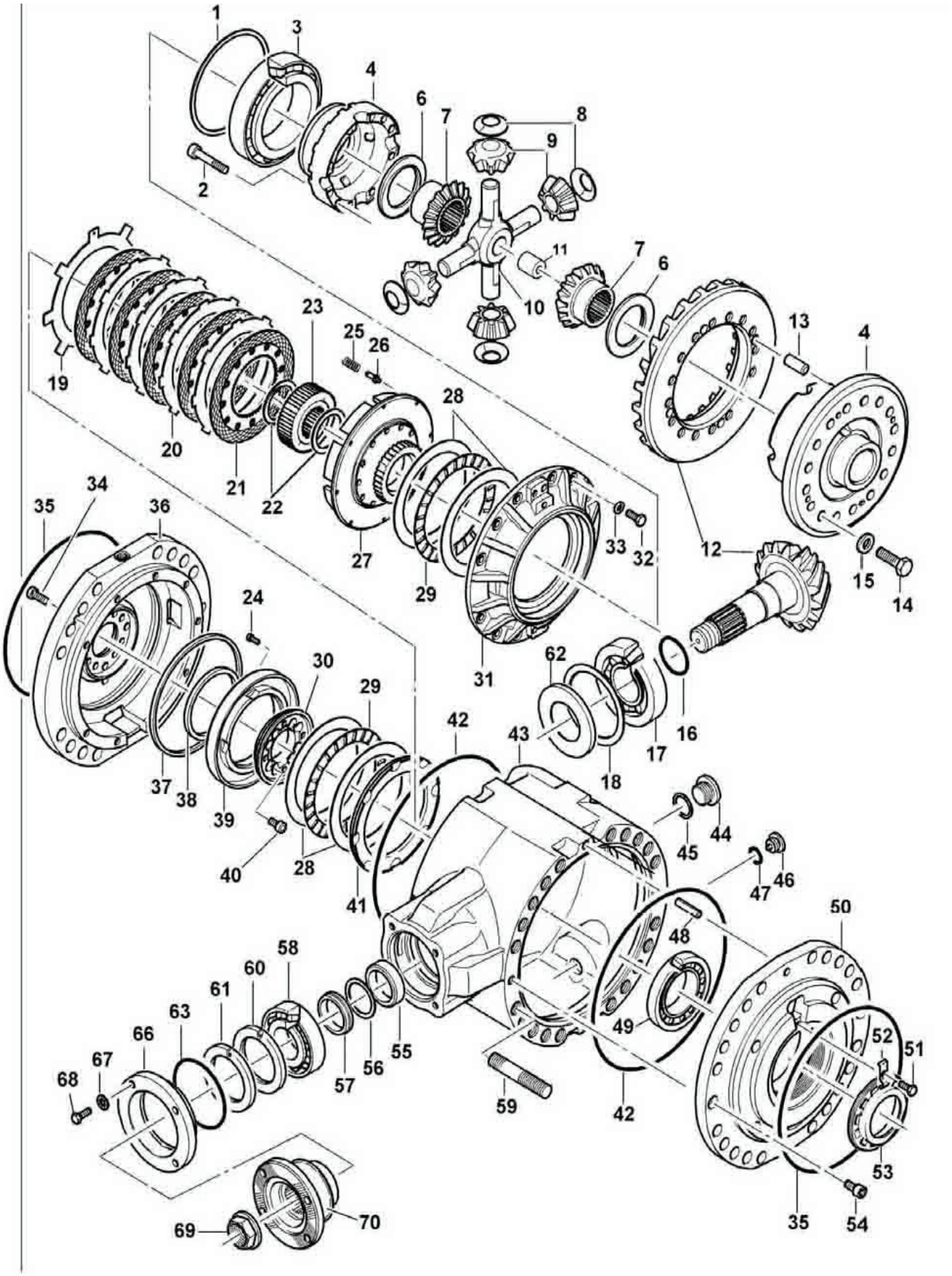
TIM 18 Bogie Axle

(Differential Breakdown)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	2108.060	1	❑	Adjusting kit - s=1,0 bis 2,25	
1	7317.297			Adjusting washer n.Bed. s=1,5	
1	7317.298			Adjusting washer n.Bed. s=1,55	
1	7317.299			Adjusting washer n.Bed. s=1,6	
1	7317.300			Adjusting washer n.Bed. s=1,65	
1	7317.301			Adjusting washer n.Bed. s=1,7	
1	7317.302			Adjusting washer n.Bed. s=1,75	
1	7317.303			Adjusting washer n.Bed. s=1,8	
1	7317.304			Adjusting washer n.Bed. s=1,85	
1	7317.305			Adjusting washer n.Bed. s=1,9	
1	7317.306			Adjusting washer n.Bed. s=1,95	
1	7317.307			Adjusting washer n.Bed. s=2,0	
1	7317.308			Adjusting washer n.Bed. s=2,05	
1	7317.309			Adjusting washer n.Bed. s=2,1	
1	7317.310			Adjusting washer n.Bed. s=2,15	
1	7317.311			Adjusting washer n.Bed. s=2,2	
1	7317.312			Adjusting washer n.Bed. s=2,25	
1	7317.323			Adjusting washer n.Bed. s=1,0	
1	7317.324			Adjusting washer n.Bed. s=1,2	
2	1020.374	12		Allen screw - M12x80, 10.9 VP n.TI-58 912	
3	1110.233	1		Tapered-roller bearing - JP13049AJP13010	
4	2102.188	1		Differential cage	
5	---				
6	7517.014	2	❑	Adjusting kit 2 s=1,5 bis 4,0	
6	7510.028			Check disk 2 s=2,8	
6	7510.029			Check disk 2 s=3,0	
6	7510.030			Check disk 2 s=3,2	
6	7510.031			Check disk 2 s=2,0	
6	7510.032			Check disk 2 s=2,2	
6	7510.033			Check disk 2 s=2,6	
6	7510.034			Check disk 2 s=4,0	
6	7510.035			Check disk 2 s=3,4	
6	7510.036			Check disk 2 s=3,6	
7	7510.055	2		Differential gear - s=3,8	
8	7518.024	4		Thrust washer	
9	7514.031	4		Planetary gear	
10	7515.029	1		Cross bolt	
11	7321.123	1		Stud	
12	2101.355	1		Crown wheel / pinion z=34/12	
13	1200.228	4		Straight pin - 16m6x40, ST GEHAERTET 6325	
14	7322.121	16		Screw - M16x1.5x45, 10.9 n. TI-58 933	
15	7316.045	16		Washer - 16.1x30x4, C45 GEHAERTET	
16	1170.013	1		O-ring - OR 42x4.5, 72NBR872	
17	1110.223	1		Tapered-roller bearing - 9278/9220	
18	2108.047	1	❑	Adjusting kit - s=3,0 bis 2,5 je 0,25	
18	7317.247			Adjusting washer n.Bed. s=3,0	
18	7317.248			Adjusting washer n.Bed. s=2,75	
18	7317.249			Adjusting washer n.Bed. s=2,5	
19	7344.050	1		Driven disk	

❑ Kit or Assembly - includes all items indented underneath.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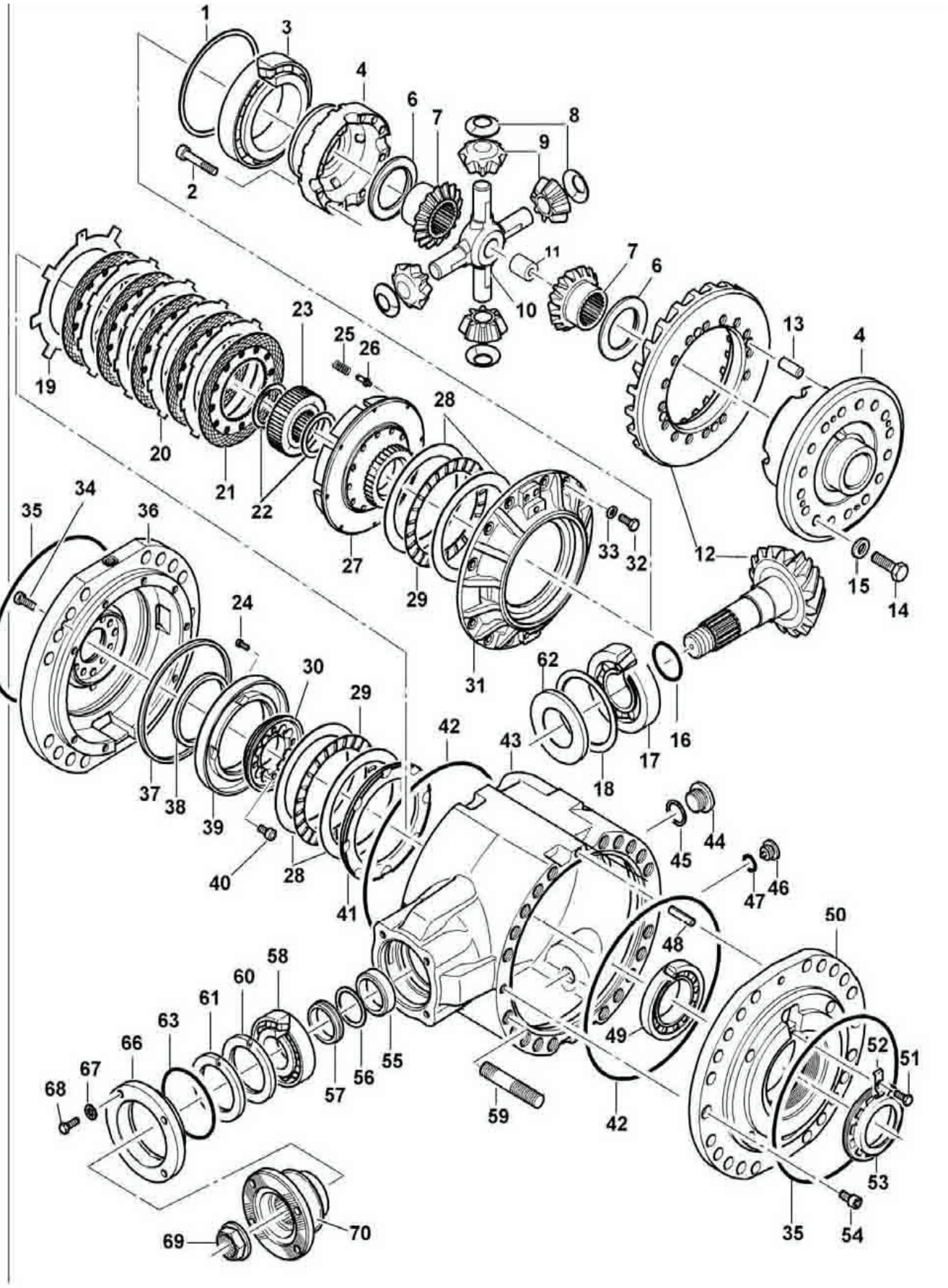
TIM 18 Bogie Axle

(Differential Breakdown Cont...)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
20	7344.049	5		Driven disk	
21	7345.056	6		Coated disk	
22	7316.125	2		Check disk	
23	9867.093	1		Disk support	
24	1020.029	1		Allen screw M16x10	
25	7331.048	8		Pressure spring	
26	7322.113	8		Screw	
27	9867.092	1		Disk support	
28	1130.596	3		Rotor disk - AS 150x190x1	
29	1130.283	2		Axial needle bearing - AXK 150x190x5	
30	5252.176	1		Piston	
31	7527.175	1		Flange	
32	1010.266	12		Hexagon screw - M10x35, 10.9 VP n.TI-58 933	
33	7316.048	12		Washer - 10.1x21x2, C45	
34	1020.212	2		Allen screw - M10x20	
35	1170.735	2		O-ring - OR 354x4, 72NBR872	
36	7527.239	1		Flange	
37	7308.074	1		Shaft seal - NBR80 SHORE A	
38	1180.905	1		Shaft seal - 125x109,5x6,3	
39	5252.143	1		Piston	
40	1020.220	8		Allen screw - M10x20, 8.8 VP n.Ti-58	
41	7316.176	1		Check disk	
42	1170.726	2		O-ring - OR 415x5, 72NBR872	
43	7506.203	1		Differential housing	
44	1040.103	1		Screw plug - M30x1.5, 5.8	
45	1180.507	1		Seal ring - A30x36x2, CU 7603	
46	9556.021	1		Screw plug - M20x1.5, 5.8 M. MAGNET 908	
47	1180.502	1		Seal ring - A20x24x1.5, CU 7603	
48	1200.235	2		Straight pin - 16m6x55 1481	
49	1110.171	1		Tapered-roller bearing - 9321/9386H	
50	7527.207	1		Flange	
51	1010.129	1		Hexagon screw - M8x16, 10.9 VP n.TI-58 933	
52	9566.019	1		Locking plate	
53	7329.073	1		Nut - M85x2	
54	1020.216	2		Allen screw - M10x30, 8.8 912	
55	---				
56	2108.046	1	❑	Adjusting kit - s=0,96 bis 1,44 je 0,04 steigend	
56	7317.234			Adjusting washer n.B. s=0,96	
56	7317.235			Adjusting washer n.B. s=1,0	
56	7317.236			Adjusting washer n.B. s=1,04	
56	7317.237			Adjusting washer n.B. s=1,08	
56	7317.238			Adjusting washer n.B. s=1,12	
56	7317.239			Adjusting washer n.B. s=1,16	
56	7317.240			Adjusting washer n.B. s=1,20	
56	7317.241			Adjusting washer n.B. s=1,24	
56	7317.242			Adjusting washer n.B. s=1,28	
56	7317.243			Adjusting washer n.B. s=1,32	
56	7317.244			Adjusting washer n.B. s=1,36	
56	7317.245			Adjusting washer n.B. s=1,40	
56	7317.246			Adjusting washer n.B. s=1,44	

❑ Kit or Assembly - includes all items indented underneath.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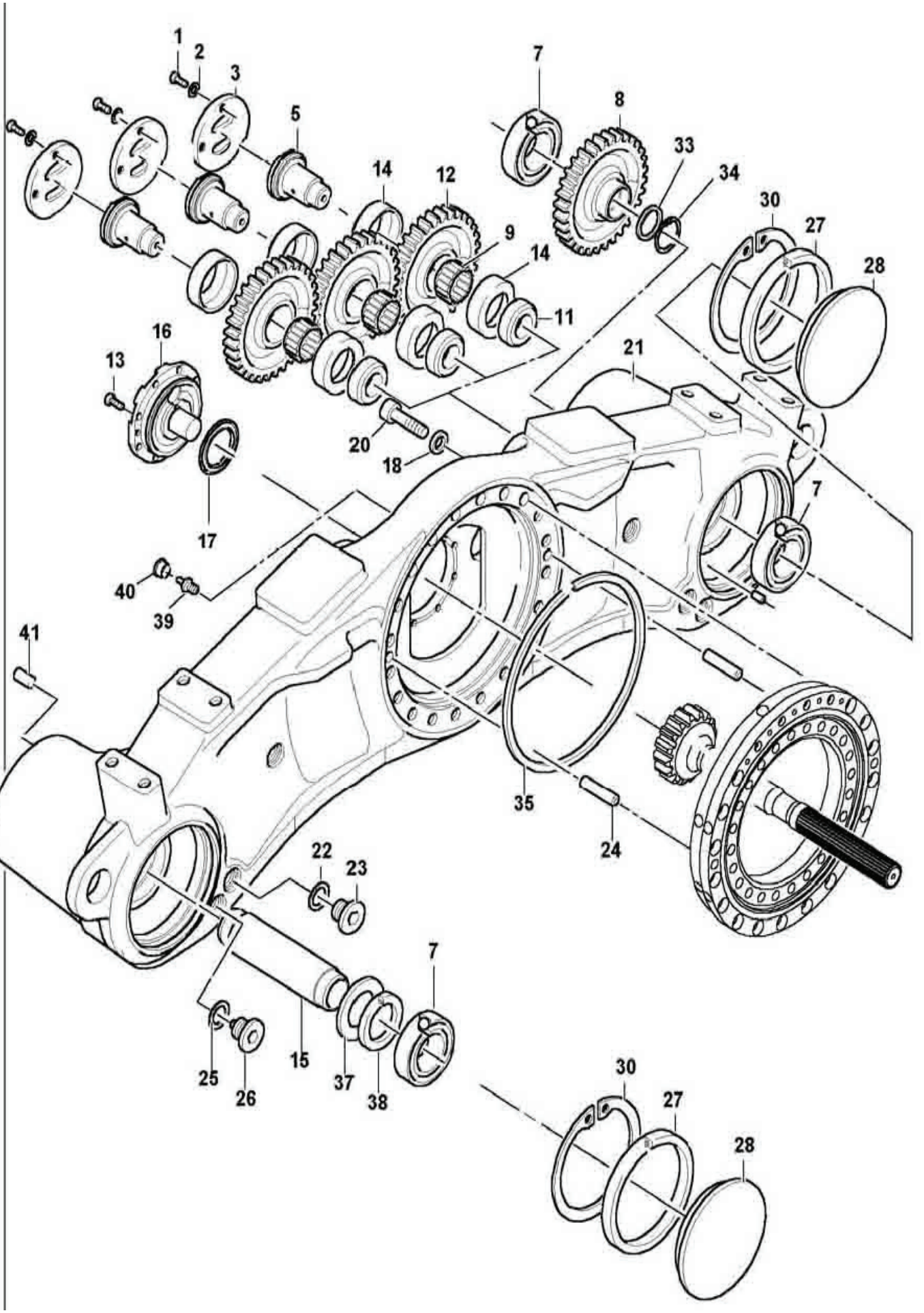
TIM 18 Bogie Axle

(Differential Breakdown Cont...)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
57	2108.045	1		Spacer bush n.Bed. D58xD76x"s"	
57	7311.117			Spacer bush n.Bed. s=11,51	
57	7311.118			Spacer bush n.Bed. s=11,99	
57	7311.119	1		Spacer bush n.Bed. s=12,47	
58	1110.229	1		Tapered-roller bearing - 78214C/78551	
59	1030.614	12		Spring ring - M20x45 10.9 939	
60	7308.054	1		Radial seal - 76,25x101,64x11	
61	7308.055	1		Seal ring - 76,25x101,64x7	
62	7301.064	1		Washer	
63	1180.125	1		V-ring 1 V-80 A	
64	---				
65	---				
66	7301.124	1		Cover	
67	1190.011	4		Locking clip - D 10	
68	1010.201	4		Hexagon screw - M10x25	
69	7329.057	1		Nut - M40x1.5	
70	2107.210	1		Drive shaft flange	
---	2219.057	1		DIFF.-KORB KOMPLETT 1 Pos.2/4/6/7/8/9/10	
---	7340.018	1		Type plate	
---	1200.110	2		Pin - 3x5 N4/	
---	1170.612	1		O-ring - OR106x2	

❑ Kit or Assembly - includes all items indented underneath.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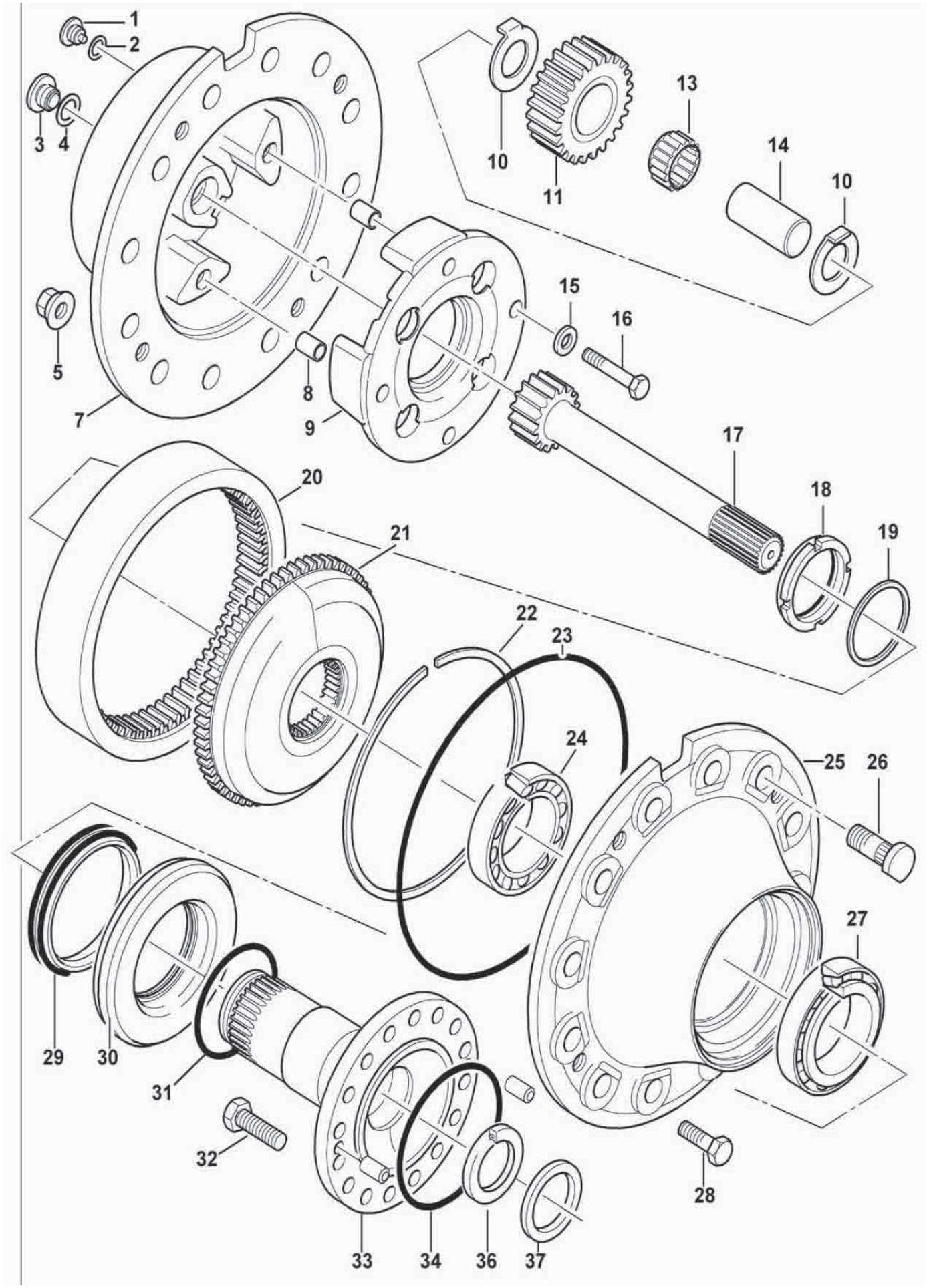
TIM 18 Bogie Axle

(Bogie Housing Breakdown)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	1010.233	48	Hexagon screw - M10x20	
2	7316.048	48	Washer - 10.1x21x2	
3	7302.011	12	Cover - 1541	
4	---			
5	7321.131	12	Stud	
6	---			
7	1120.107	8	Grooved ball bearing - 6215-2RSR C3	
8	9804.533	4	Gear - Z=27	
9	1130.057	24	Cylinder roller bearing - SL 18 2210 C3	
10	1220.702	12	Seeger-ring - 90x3 472	
11	7311.089	12	Spacer bush	
12	9,804,532	12	Gear - Z=32	
13	1010.234	16	Hexagon screw - M10x25	
14	1020.113	4	Allen screw - M8x16	
15	7343.030	4	Pipe	
16	7321.120	2	Bearing stud	
17	1180.841	2	Axial shaft seal ring - 76x106x6.5	
18	7316.044	8	Washer - D30x4	
19	---		2 OR 152x4, 72NBR872	
20	1020.619	48	Allen screw - M18x2x85	
21	7277.084	2	Bogie housing	
22	1180.507	10	Seal ring - A30x36x2, CU 7603	
23	1040.103	10	Screw plug - M30x1.5, 8.8 908	
24	1200.206	4	Straight pin - 16m6x70	
25	1180.507	4	Seal ring - A30x36x2	
26	7323.013	4	Screw plug - M30X1.5	
27	7308.051	4	Seal ring - AS220x250x15 3760	
28	7302.034	4	Cover	
29	7319.087	4	Gasket - 0.5 dick, AFM38	
30	1220.837	4	Seeger-ring - J250x5 472	
32	1020.029	2	Allen screw - M6x10	
32	1020.220	24	Allen screw - M10x20	
33	1210.110	4	Supporting washer - SS 45x55x3	
34	1220.714	4	Seeger-ring - 55x2 472	
35	7308.040	2	Seal ring - A450x480x12 3760	
36	7301.070	4	Cover	
37	7315.106	4	Washer	
38	1160.243	4	Oil seal - 65x100x12 BA	
39	1250.104	4	Taper grease nipple - AM 8x1, 5.8 71412	
40	1750.710	4	Plug - D25	
41	1200.286	8	Straight pin - 6m6x32	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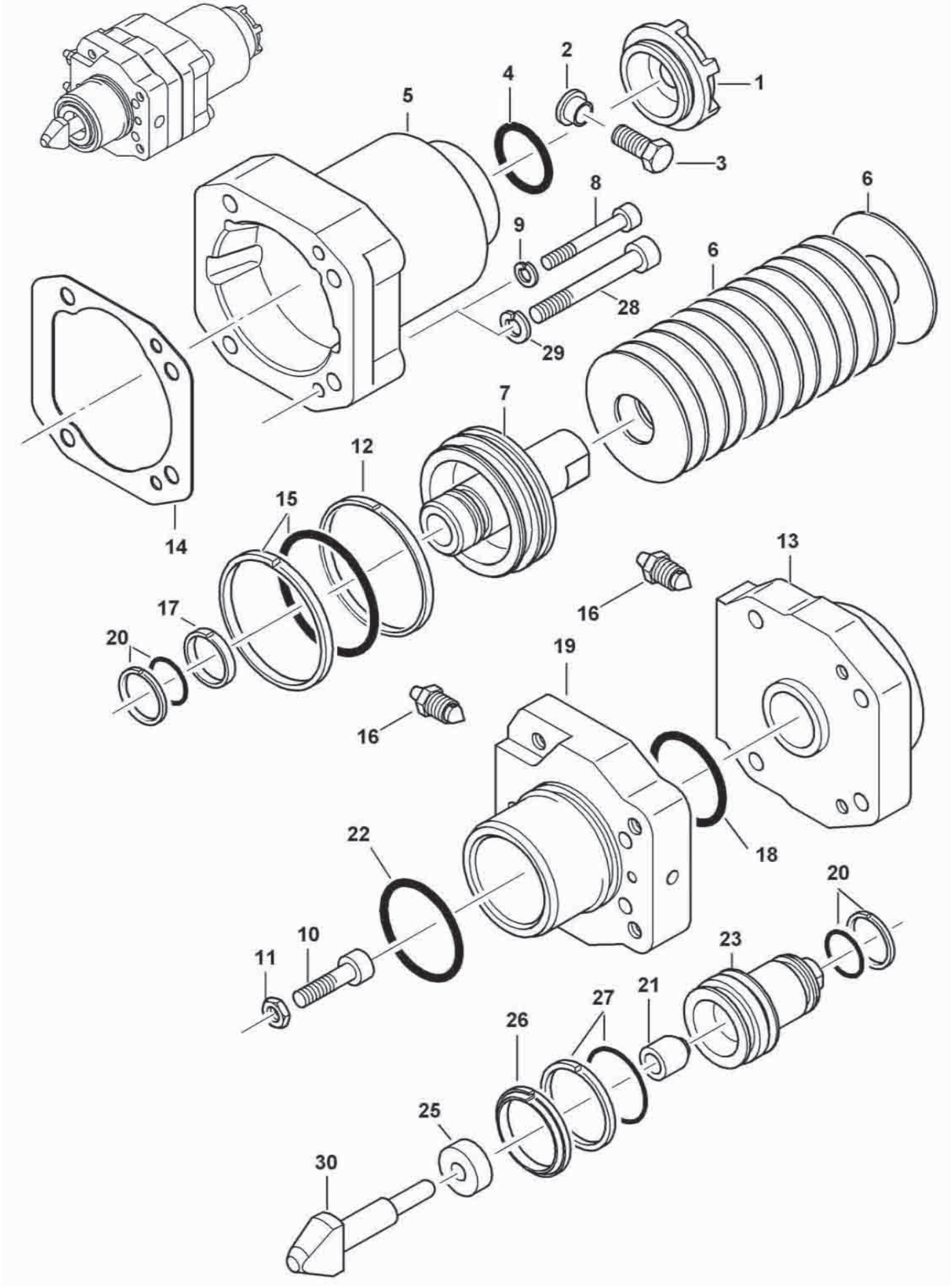
TIM 18 Bogie Axle

(Wheel End Breakdown)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	9556.021	2		Screw plug - M20x1.5	
2	1180.502	2		Seal ring - A20x24x1.5	
3	7323.016	1		Screw plug - M30X1.5	
4	2108.017	1		Washer package 1 s=2,5 / 1,0 / 0,5	
4	1210.113			Supporting washer n.B. s=2,5	
4	1210.295			Seeger washer n.B. s=1,0	
4	1210.296			Seeger washer n.B. s=0,5	
5	1060.408	23		Nut with turnable washer - M22x1.5	
6	---				
7	7821.257	1		Planetary cage	
8	7313.018	4		Shear bushing	
9	7821.179	1		Planetary cage	
10	9633.010	8		Check disk	
11	7806.060	4		Planetary gear - Z=25	
12	---				
13	1130.280	4		Needle roller cages - K45X60X45FH	
14	7807.056	4		Planetary stud	
15	7316.045	4		Washer - 16.1x30x4	
16	1010.536	4		Hexagon screw - M16x90	
17	7818.124	1		Sun gear shaft - Z=14	
18	7329.073	1		Nut - M85x2	
19	7317.047	1	❑	Adjusting kit - s=1,375 bis 2,5 je 0,125	
19	7317.208			Adjusting washer n.B. s=1,375	
19	7317.207			Adjusting washer n.B. s=1,5	
19	7317.206			Adjusting washer n.B. s=1,625	
19	7317.205			Adjusting washer n.B. s=1,75	
19	7317.204			Adjusting washer n.B. s=1,875	
19	7317.203			Adjusting washer n.B. s=2.0	
19	7317.202			Adjusting washer n.B. s=2,125	
19	7317.201			Adjusting washer n.B. s=2,25	
19	7317.200			Adjusting washer n.B. s=2,375	
19	7317.199			Adjusting washer n.B. s=2,5	
20	7801.042	1		Gear rim - Z=66	
21	7804.058	1		Ring gear carrier - Z=66	
22	1220.913	1		Spring ring - SB 310	
23	1170.755	1		O-ring - OR 345x5, 72NBR872	
24	1110.221	1		Tapered-roller bearing - 331 22	
25	7828.142	1		Wheel hub	
26	7133.032	23		Wheel bolt	
27	1110.222	1		Tapered-roller bearing - 320 24X TIMKEN	
28	1020345	12		Allen screw - M12x30	
29	1180.325	1		Slide ring sealing - 7690 H-56	
30	7306.032	1		Axle stub ring	
31	1170.547	1		O-ring - OR 120x4	
32	1030.614	16		Stud - M1620x45	
32a	1060.010	16		Hexagon nut - M20	
33	7814.233	1		Stub axle	
34	1170.553	1		O-ring - OR 150x5	
35	---				
36	1160.244	1		Oil seal - 65x75x8 BASL	
37	7315.107	1		Washer	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TIM 18 Bogie Axle

(Spring Loaded Cylinder Breakdown)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	5350.049	1	Spring loaded cyl.	
1	5266.044	1	Screw Plug - M50x1,5	
2	1250.616	1	Protective cap - GPN 300-F10	
3	1020.301	1	Allen screw - M12x30	
4	1170.107	1	O-ring - 46x3 72 NBR 872	
5	5275.004	1	Housing 1	
6	1250.237	26	Plate spring - 80x31x2,5 Nr. 920 197 01 Fa.Bauer	
7	5252.163	1	Piston	
8	1020.153	2	Allen screw - M8x60 10.9 912	
9	1190.105	2	Locking ring 8 St 7980	
10	1020.211	1	Allen screw - M10x40 8.8 912	
11	1060.115	1	Hex nut - AM10 10 439	
12	1180.795	1	Guide ring - 80x85x5,6 GP 6500 850-C380 FaB.u.S.	
13	5263.115	1	Cylinder (upper part) 1	
14	7319.068	1	Gasket - AFM 38	
15	1180.885	1	Piston seal - 85x69,5x6,3	
16	1250.598	2	Breather valve with dust hood - M14x1,5	
17	1180.794	1	Guide ring - 30x35x5,6	
18	1170.292	1	O-ring - 55x5	
19	5263.127	1	Cylinder (lower part)	
20	1180.883	2	Piston seal - 35x27,5x3,2	
21	5214.002	1	Stud	
22	1170.240	1	O-ring - 60x4	
23	5252.161	1	Pressure piston	
24	---			
25	5265.026	1	Ring	
26	1180.832	2	Piston seal - 55x45x7C2 5045 N3512 HNBR90 Parker	
27	1180.884	1	Piston seal - 55x44x4,2 PTO 200 550-T46 N Fa.B+S	
28	1020.257	4	Allen screw - M10x80 10.9 912	
29	1190.031	4	Locking clip	
30	7835.001	1	Wedge	
-	7340.015	1	english Indication plate	
-	1750.764	2	Blind rivet	

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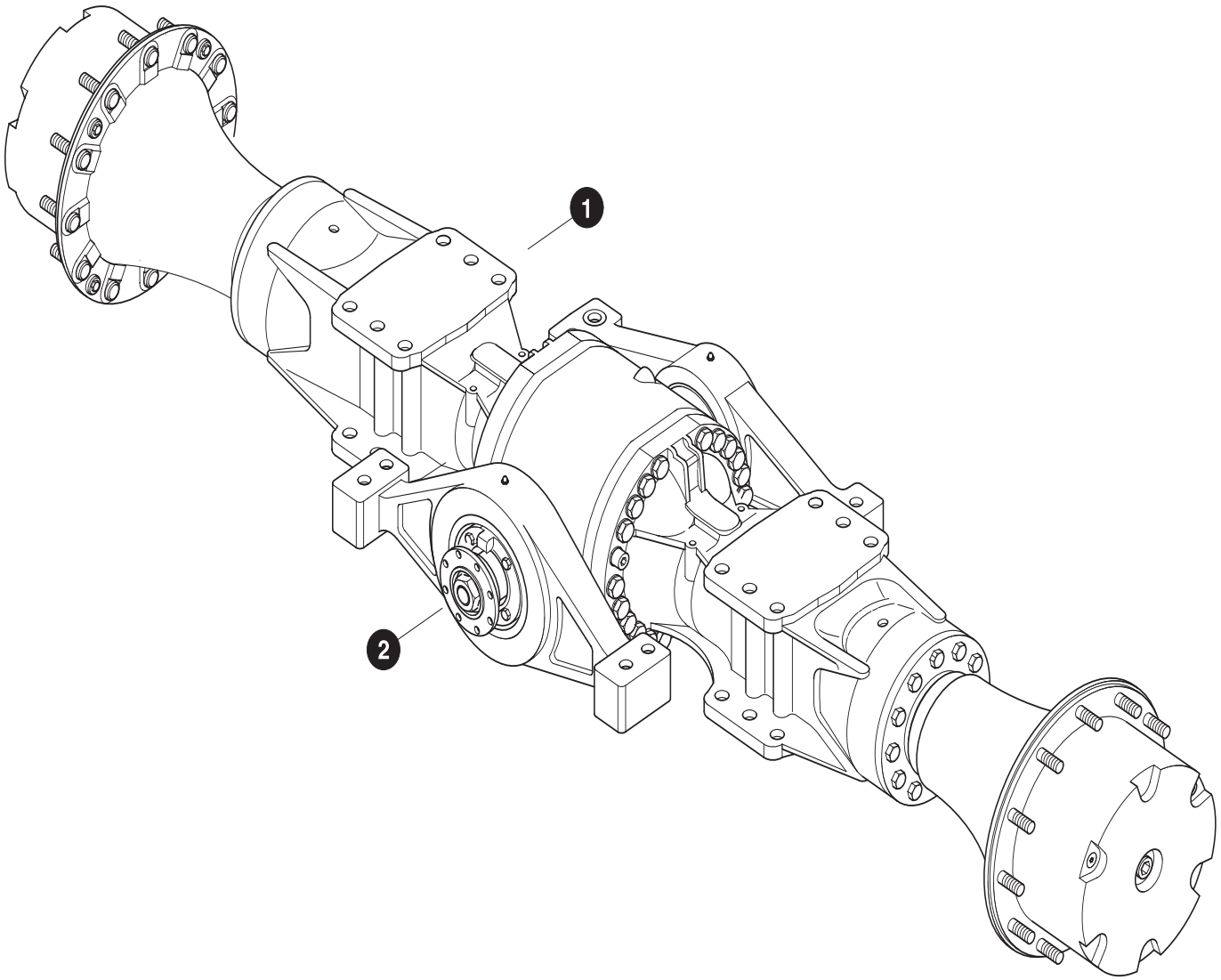
Section AX-3

Axles & Gearboxes -
TIM 12 Heavy Duty Single Axle (TS 630)
and
TIM 14 Single Axle
(TB 630)



parts T2885 09/03/03
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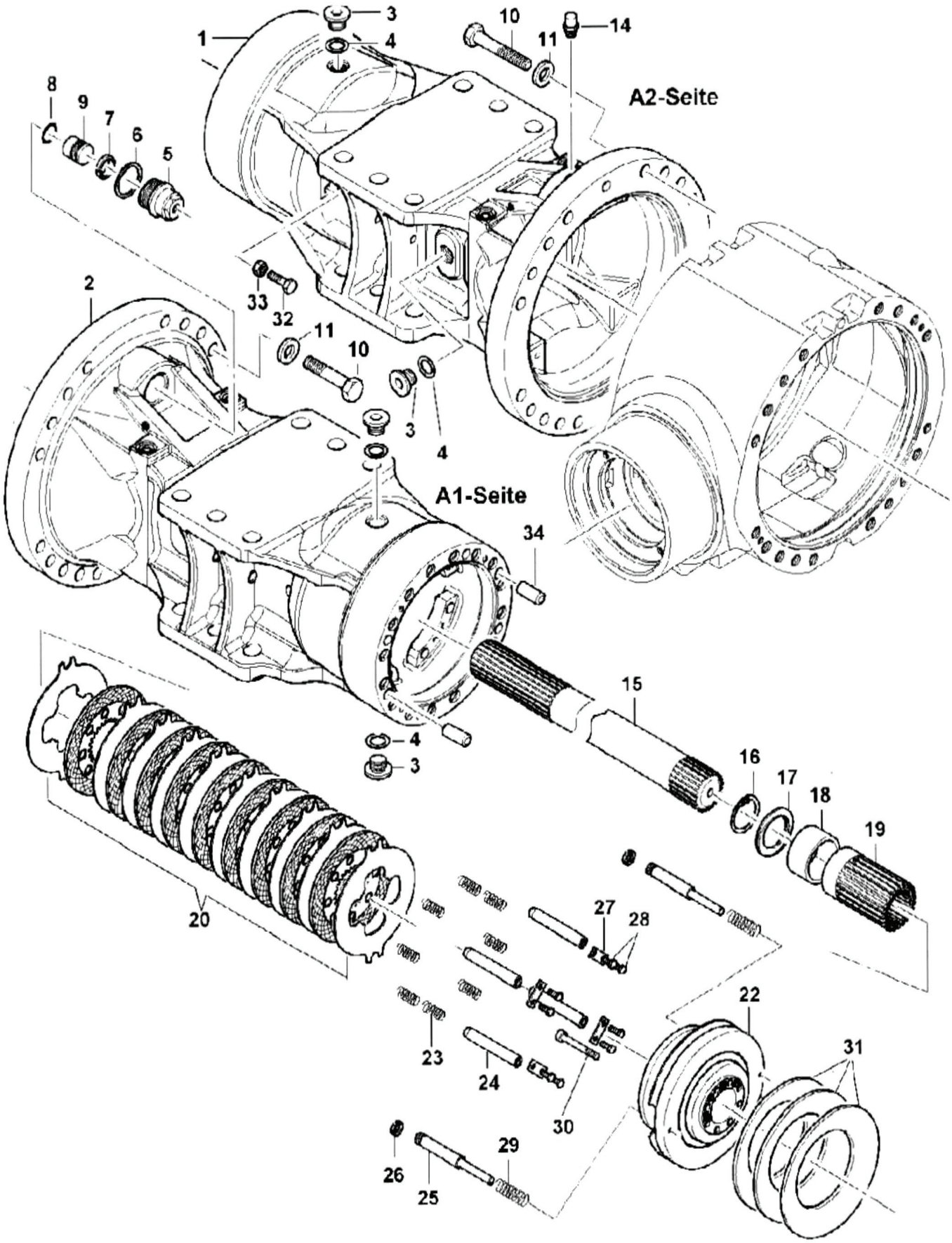
SINGLE AXLE

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	25015-AX	1		AXLE, SINGLE (tim 14)	
2	23997-AX	1		YOKE, companion flange	.



parts T2884 09/03/03
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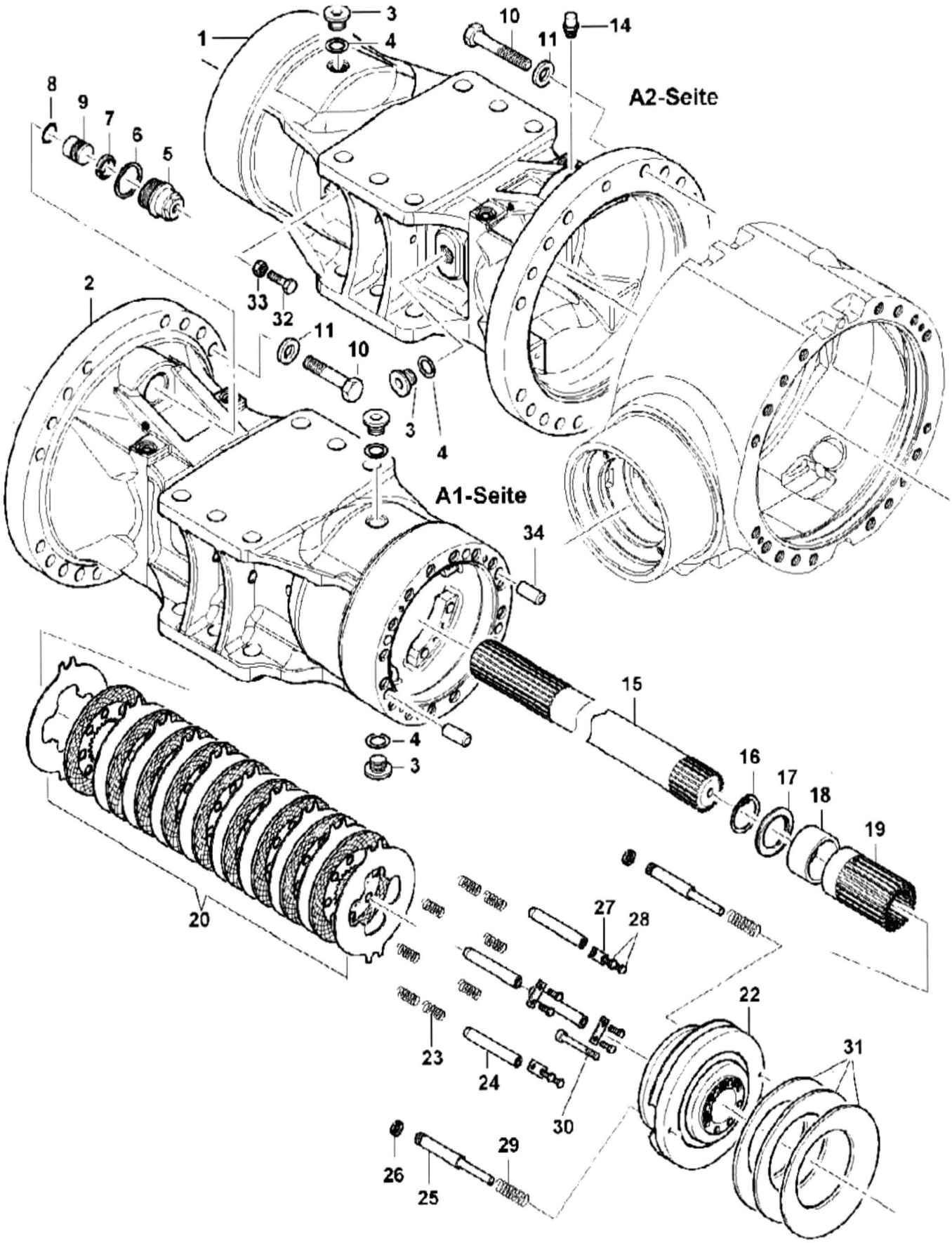
SINGLE AXLE
(axle beam)
(A1)

(NAF TIM 14)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
1	- - -			
2	- - -	1	AXEL HOUSING (7271.196)	
3	- - -	3	SCREW PLUG (1040.151)	
4	- - -	3	SEAL RING (1180.541)	
5	- - -	1	CYLINDER (5263.033)	
6	- - -	1	SEAL RING (1180.555)	
7	- - -	1	GROVE RING (1180.734)	
8	- - -	1	SHAFT SEAL (1180.811)	
9	- - -	1	PISTON (5252.117)	
10	- - -	8	HEXAGON SCREW (7322.122)	
11	- - -	18	WASHER (7316.044)	
12	- - -			
13	- - -			
14	- - -			
15	- - -	1	DRIVE SHAFT (72200.131)	
16	- - -	1	SEEGER-RING (1220.626)	
17	- - -	1	CHECK DISK (7316.111)	
17a	- - -	2	PIN (7321.103)	
18	- - -	1	BUSH (7312.038)	
19	- - -	1	DISK SUPPORT (9867.099)	
20	- - -	1	MULTI-PLATE PACKAGE (2109.008)	
20	- - -	10	DRIVEN DISK (7344.037)	
20	- - -		DRIVE DISK OF S = 5.0	
20	- - -		DRIVE DISK OF S = 5.3	
21	- - -			
22	- - -	1	RING PISTON BRACKET CYLINDER (5360.037)	
23	- - -	8	PRESSURE SPRING (7331.036)	
24	- - -	4	STUD (7320.034)	
25	- - -	2	STUD (7320.033)	
26	- - -	2	SHAFT SEAL (1180.827)	
27	- - -	4	WASHER (7315.116)	
28	- - -	8	HEXAGON SCREW (1010.010)	
29	- - -	2	PRESSURE SPRING (7331.055)	
30	- - -	8	ALLEN SCREW (1020.154)	
31	- - -	3	DISK SPRING (7331.030)	
32	- - -	2	HEXAGON SCREW (1010.304)	
33	- - -	2	HEX NUT (1060.132)	
34	- - -	2	STRAIGHT PIN (1200.228)	
-	- - -	1	TYPE PLATE (7340.018)	
-	- - -	2	PIN (1200.110)	



parts T2884 09/03/03
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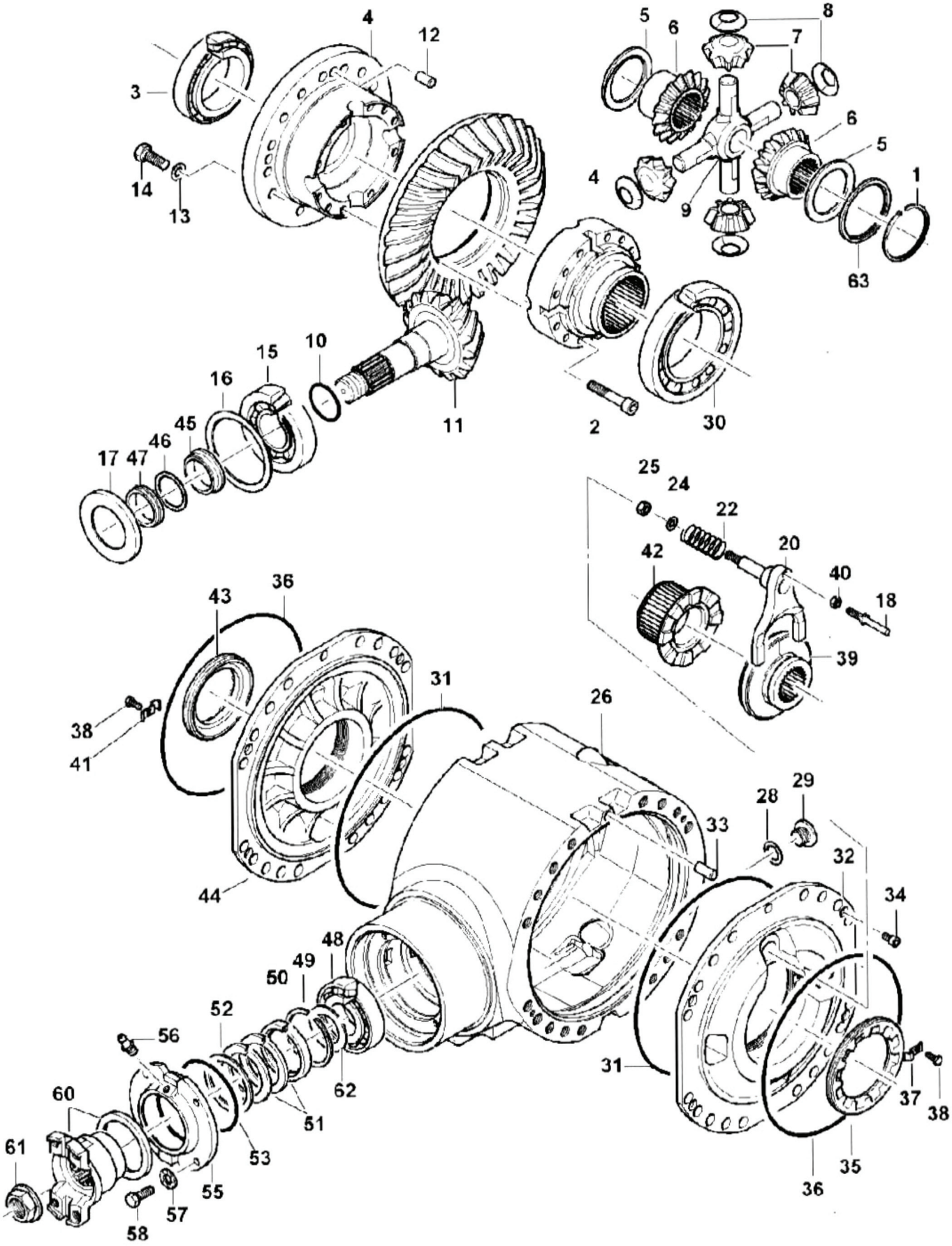
SINGLE AXLE
(axle beam)
(A2)

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	- - -	1		AXEL HOUSING (7271.197)	
2	- - -				
3	- - -	3		SCREW PLUG (1040.151)	
4	- - -	3		SEAL RING (1180.541)	
5	- - -				
6	- - -				
7	- - -				
8	- - -				
9	- - -				
10	- - -	8		HEXAGON SCREW (7322.122)	
11	- - -	18		WASHER (7316.044)	
12	- - -				
13	- - -				
14	- - -	1		BREATHER (9566.030)	
15	- - -	1		DRIVE SHAFT (7220.131)	
16	- - -	1		SEEGER-RING (1220.626)	
17	- - -	1		CHECK DISK (7316.111)	
17a	- - -	2		PIN (7321.103)	
18	- - -	1		BUSH (7312.038)	
19	- - -	1		DISK SUPPORT (9867.099)	
20	- - -	1		MULTI-PLATE PACKAGE (2109.008)	
20	- - -	10		DRIVEN DISK (7344.037)	
20	- - -			DRIVE DISK TH. = 5.0 (7345.038)	
20	- - -			DRIVE DISK TH - 5.3 (7.45.059)	
21	- - -				
22	- - -	1		RING PISTON BRACKET CYLINDER (5360.037)	
23	- - -	8		PRESSURE SPRING (7331.036)	
24	- - -	4		STUD (7320.034)	
25	- - -	2		STUD (7320.033)	
26	- - -	2		SHAFT SEAL (1180.827)	
27	- - -	4		WASHER (7315.116)	
28	- - -	8		HEXAGON SCREW (1010.010)	
29	- - -	2		PRESSURE SPRING (7331.055)	
30	- - -	8		ALLEN SCREW (1020.154)	
31	- - -	3		DISK SPRING (7331.030)	
32	- - -	2		HEXAGON SCREW (1010.304)	
33	- - -	2		HEX NUT (1060.132)	
34	- - -	2		STRAIGHT PIN (1200.228)	

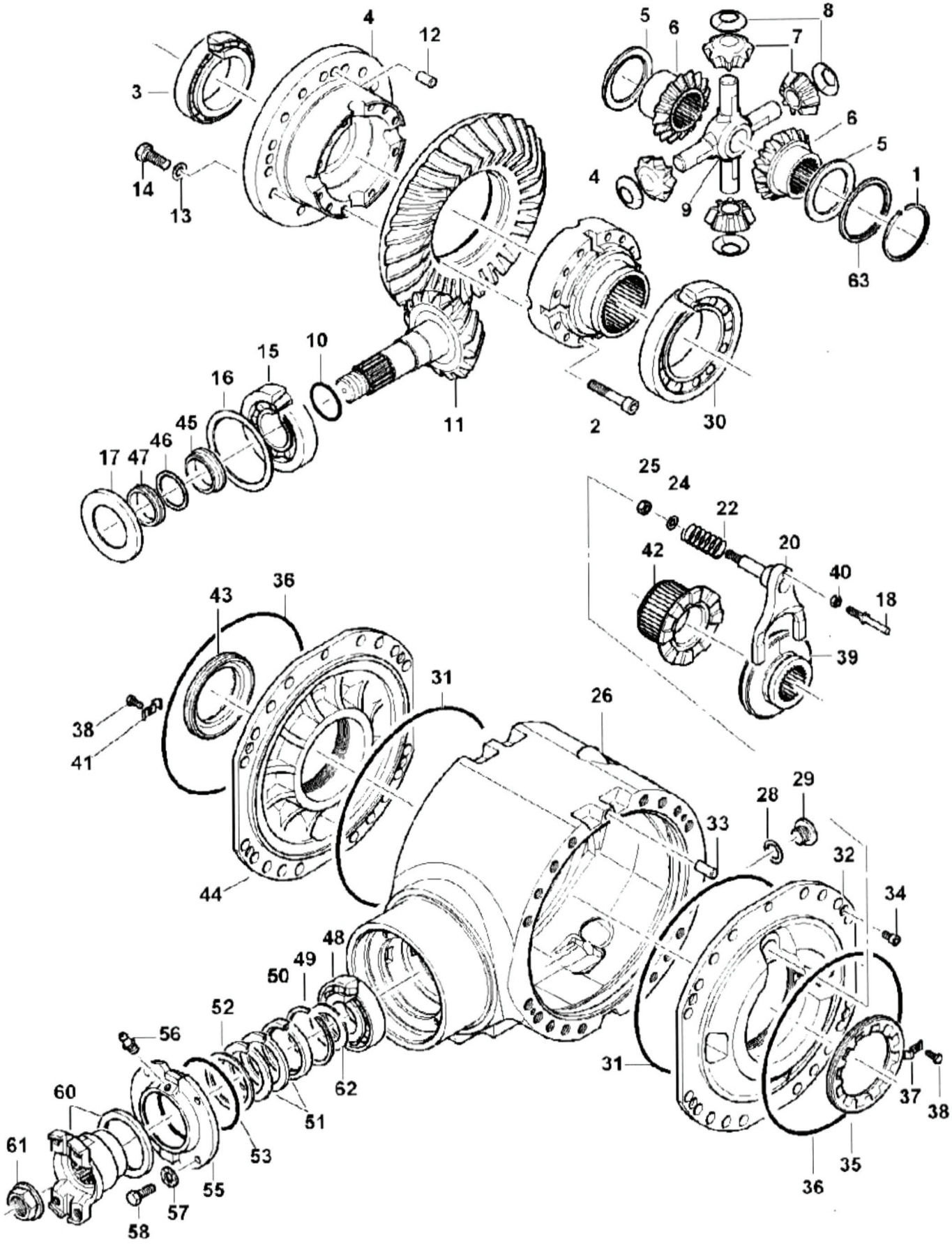


parts T2882 09/03/03
25.00

SINGLE AXLE (DIFFERENTIAL)

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	- - -	1		SPRING RING (1220.936)	
2	- - -	12		ALLEN SCREW (1020.374)	
3	- - -	1		TAPERED-ROLLER BEARING (1110.111)	
4	- - -	1		DIFFERENTIAL CAGE (2102.157)	
5	- - -	2	❑	ADJUSTING KIT (7517.014)	
5	- - -			CHECK DISK (7517.028)	
5	- - -			CHECK DISK (7517.29)	
5	- - -			CHECK DISK (7517.030)	
5	- - -			CHECK DISK (7517.031)	
6	- - -			CHECK DISK (7517.032)	
6	- - -	2		DIFFERENTIAL GEAR (7513.053)	
7	- - -	4		PLANETARY GEAR (7514.031)	
8	- - -	4		THRUST WASHER (7518.024)	
9	- - -	1		CROSS BOLT (7515.029)	
10	- - -	1		O-RING (1170.013)	
11	- - -	1		CROWN WHEEL / PINION (2101.335)	
12	- - -	4		STRAIGHT PIN (1200.228)	
13	- - -	16		SCREW (7322.077)	
14	- - -	16		WASHER (7316.045)	
15	- - -	1		TAPERED-ROLLER BEARING (1110.223)	
16	- - -	1	❑	ADJUSTING KIT (2108.047)	
16	- - -			ADJUSTING WASHER (7317.247)	
16	- - -			ADJUSTING WASHER (7317.248)	
16	- - -			ADJUSTING WASHER (7317.249)	
17	- - -	1		COVER (7301.064)	
18	- - -	1		SHIFTING ROD (9816.129)	
20	- - -	1		SHIFT FORK (9809.115)	
22	- - -	1		PRESSURE SPRING (7331.016)	
23	- - -				
24	- - -	1		WASHER (7316.047)	
25	- - -	1		HEX NUT (1060.009)	
26	- - -	1		DIFFERENTIAL HOUSING (7506.250)	
28	- - -	1		O-RING (1180.541)	
29	- - -	1		SCREW PLUG (1040.151)	
30	- - -	1		TAPERED-ROLLER BEARING (1110.220)	
31	- - -	4		O-RING (1170.735)	
32	- - -	1		FLANGE (7527.185)	
33	- - -	2		STRAIGHT PIN (1200.228)	
34	- - -	4		ALLEN SCREW (1020.203)	
35	- - -	1		NUT (7329.092)	
37	- - -	2		LOCKING PLATE (9566.010)	
38	- - -	2		HEXAGON SCREW (1010.129)	
39	- - -	1		SHFTING SLEEVE (9813.144)	
40	- - -	1		HEX NUT (1060.007)	
41	- - -	1		LOCKING PLATE (9566.019)	
42	- - -	1		CLUTCH-COUPLING SLEEVE (9813.142)	
43	- - -	1		NUT (9310.072)	
44	- - -	1		FLANGE (7527.184)	
45	- - -	1		SPACER BUSH (7311.116)	



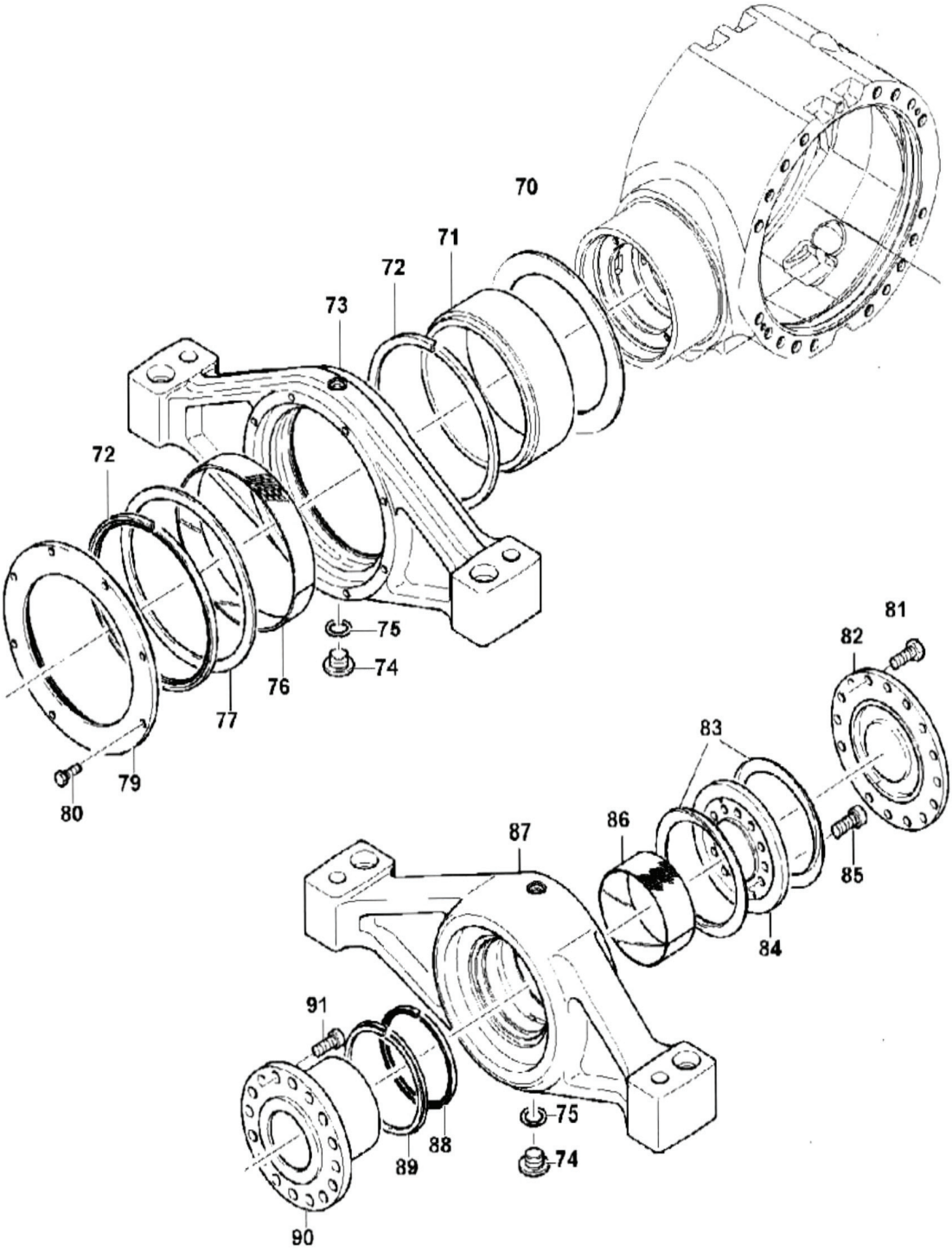
parts T2882 09/03/03
25.00

SINGLE AXLE (DIFFERENTIAL) (continued)

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
46	- - -	1	❑	ADJUSTING KIT	
46	- - -			ADJUSTING WASHER (7317.234)	
46	- - -			ADJUSTING WASHER (7317.235)	
46	- - -			ADJUSTING WASHER (7317.236)	
46	- - -			ADJUSTING WASHER (7317.237)	
46	- - -			ADJUSTING WASHER (7317.238)	
46	- - -			ADJUSTING WASHER (7317.239)	
46	- - -			ADJUSTING WASHER (7317.240)	
46	- - -			ADJUSTING WASHER (7317.241)	
46	- - -			ADJUSTING WASHER (7317.242)	
46	- - -			ADJUSTING WASHER (7317.243)	
46	- - -			ADJUSTING WASHER (7317.244)	
46	- - -			ADJUSTING WASHER (7317.245)	
46	- - -			ADJUSTING WASHER (7317.246)	
47	- - -	1	❑	ADJUSTING KIT (2108.045)	
47	- - -			SPACER BUSH (7311.117)	
47	- - -			SPACER BUSH (7311.118)	
47	- - -			SPACER BUSH (7311.119)	
48	- - -	1		TAPERED-ROLLER BEARING (1110.29)	
49	- - -	1		SPRING RING (1220.932)	
50	- - -	1		RADIAL SEAL (7308.054)	
51	- - -	2		SEAL RING (7308.055)	
52	- - -	1		WASHER (7315.110)	
52a	- - -	1		V - RING (1180.125)	
53	- - -	1		O-RING (1170.534)	
54	- - -				
55	- - -	1		COVER (7301.124)	
56	- - -	1		TAPERED GREASE NIPPLE (1250.103)	
57	- - -	4		LOCKING CLIP (1190.011)	
58	- - -	4		HEXAGON SCREW (1010.201)	
59	- - -				
60	- - -	1		DRIVE SHAFT FLANGE (7521.236)	
61	- - -	1		NUT (7329.057)	
62	- - -	1		WASHER (7315.181)	
63	- - -	1		SPACER BUSH (7311.159)	

❑ Kit or Assembly - includes all items indented underneath.

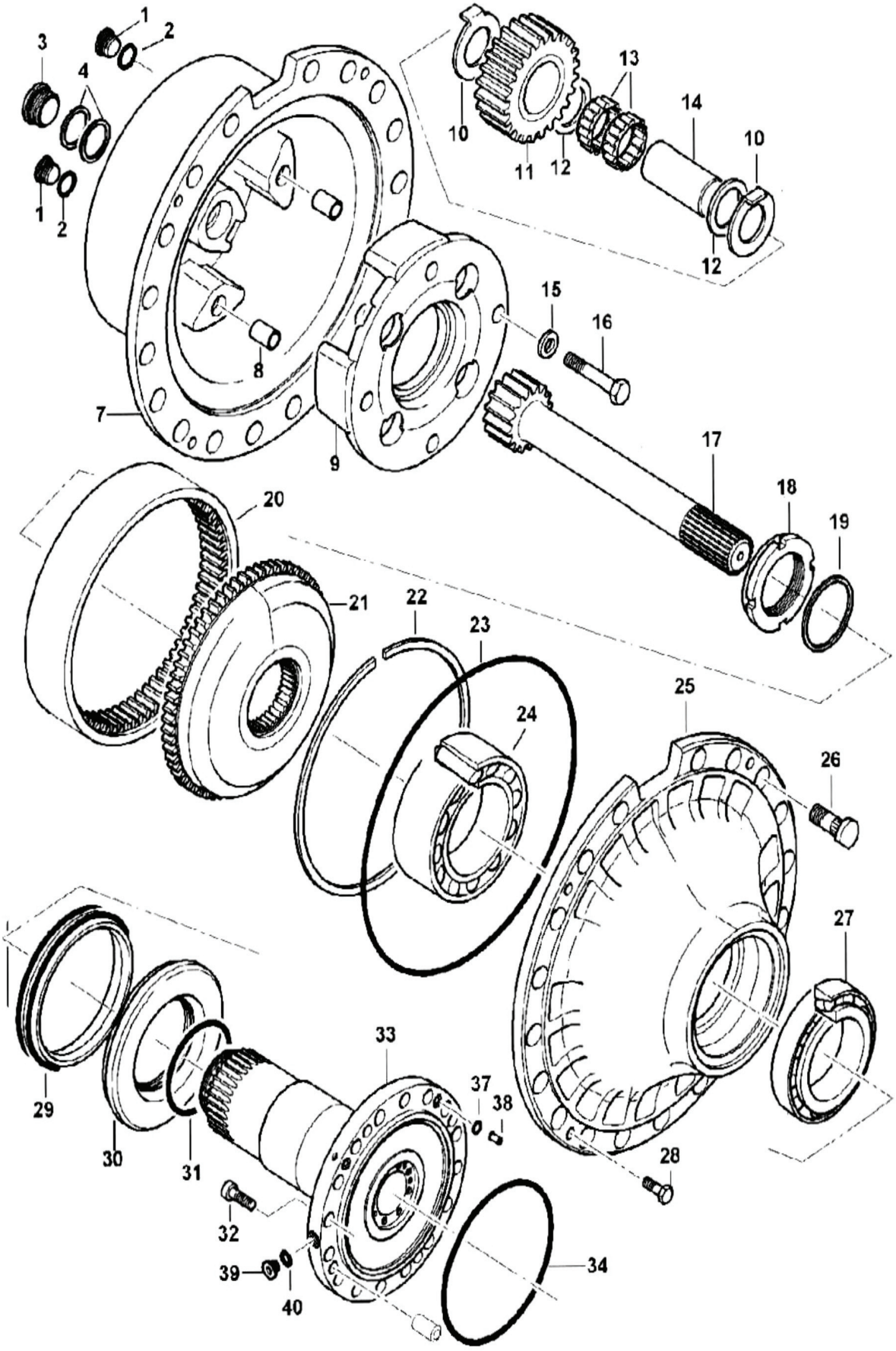


parts T2881 09/03/03
25.00

SINGLE AXLE
(DIFFERENTIAL PIVOT)

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
70	- - -	1		WASHER (7316.153)	
71	- - -	1		RING (7307.135)	
72	- - -	2		OIL SEAL (7308.036)	
73	- - -	1		AXLE BALANCER (7533.011)	
74	- - -	2		SCREW PLUG (1040.115)	
75	- - -	2		SEAL RING (1180.505)	
76	- - -	1		BOXTREES (7312.101)	
77	- - -	1		WASHER (7316.154)	
78	- - -				
79	- - -	1		WASHER (7315.219)	
80	- - -	8		HEXAGON SCREW (1010.201)	
81	- - -	16		SCREW (7322.088)	
82	- - -	1		COVER (7302.051)	
83	- - -	2		CHECK DISK (7316.114)	
84	- - -	1		COVER (7302.050)	
85	- - -	12		ALLEN SCREW (1020.372)	
86	- - -	1		BOXTREES	
87	- - -	1		AXLE BALANCER (7533.012)	
88	- - -	1		OIL SEAL (1180.881)	
89	- - -	1		V-RING (1180.126)	
90	- - -	1		BEARING STUD (7321.102)	
91	- - -	16		ALLEN SCREW (1020.506)	



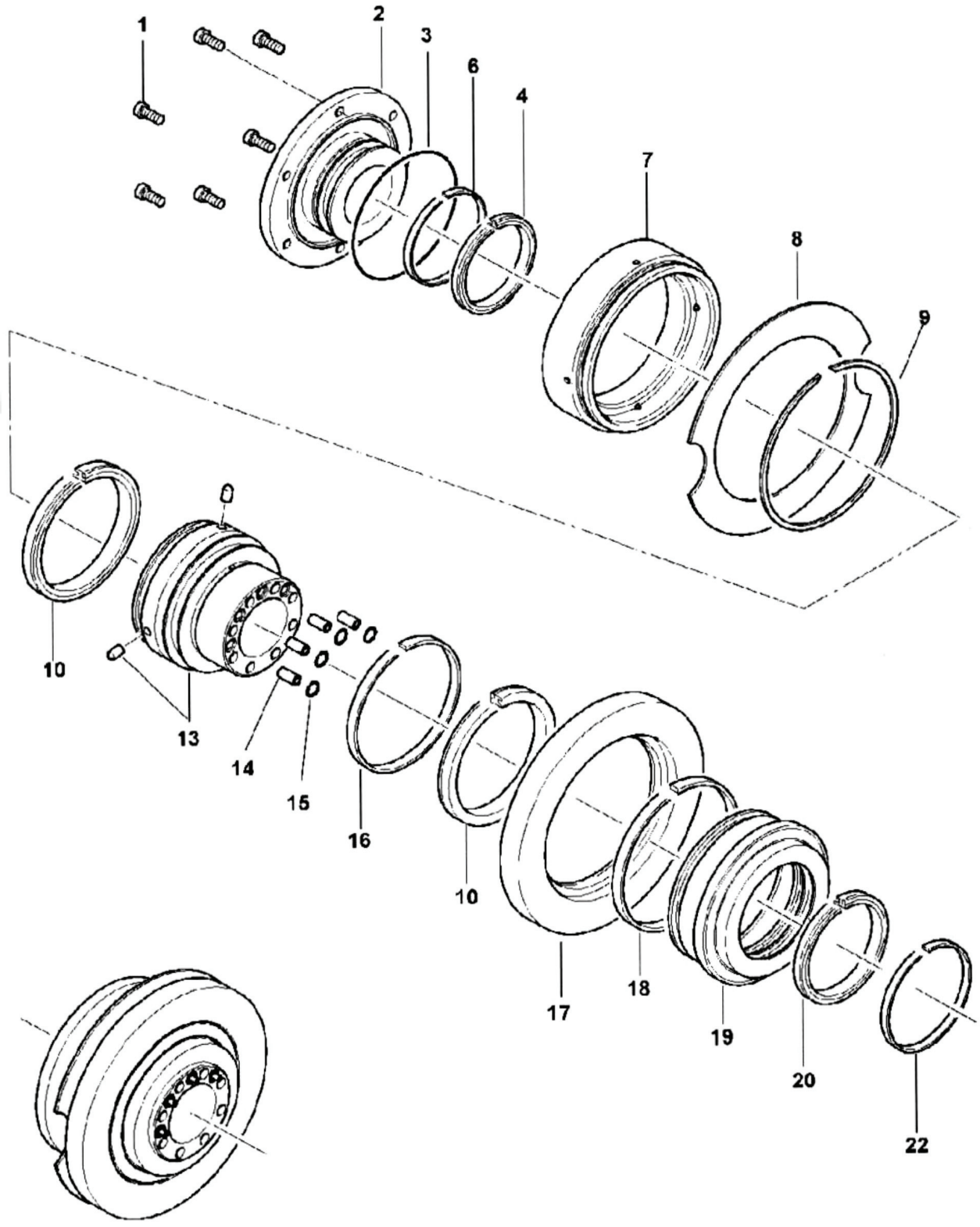
parts T2883 09/03/03
25.00

SINGLE AXLE
(planetary)

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	- - -	3		SCREW PLUG (1040.151)	
2	- - -	3		SEAL RING (1180.541)	
3	- - -	2		SCREW PLUG (7323.016)	
4	- - -	2	❑	ADJUSTING KIT (2108.017)	
4	- - -			SUPPORTING WASHER (1210.110)	
4	- - -			SEEGER WASHER (1210.218)	
5	- - -				
6	- - -				
7	- - -	2		PLANETARY CAGE (7821.257)	
8	- - -	8		SHEAR BUSHING (7313.018)	
9	- - -	2		PLANETARY CAGE (7821.179)	
10	- - -	16		CHECK DISK (9633.010)	
11	- - -	8		PLANETARY GEAR (7806.060)	
12	- - -	16		SUPPORTING WASHER (1210.101)	
13	- - -	16		NEEDLE ROLLER CAGES (1130.280)	
14	- - -	8		PLANETARY STUD (7807.056)	
15	- - -	8		WASHER (7316.045)	
16	- - -	8		HEXAGON SCREW (1010.536)	
17	- - -	2		SUN GEAR SHAFT (7818.083)	
18	- - -	2		NUT (7329.073)	
19	- - -	2		ADJUSTING KIT (7317.047)	
19	- - -	10		ADJUSTING WASHER (7317.208)	
20	- - -	2		GEAR RIM (7801.042)	
21	- - -	2		RING GEAR CARRIER (7804.058)	
22	- - -	2		SPRING RING (1220.913)	
23	- - -	2		O-RING (1170755)	
24	- - -	2		TAPERED-ROLLER BEARING (1110.221)	
25	- - -	2		WHEEL HUB (7828.142)	
26	- - -	38		WHEEL BOLT (7133.032)	
27	- - -	2		TAPERED-ROLLER BEARING (1110.222)	
28	- - -	8		HEXAGON SCREW (7322.088)	
29	- - -	2		SLIDE RING SEALING (1180.325)	
30	- - -	2		AXLE STUB RING (7306.032)	
31	- - -	2		O-RING (1170.547)	
32	- - -	32		ALLEN SCREW (1020.625)	
33	- - -	2		STUB AXLE (7914.239)	
34	- - -	2		O-RING (1170.725)	
35	- - -				
36	- - -				
37	- - -	4		O-RING (1170.104)	
38	- - -	4		BUSHING (7312.082)	
39	- - -	4		SCREW PLUG (1040.105)	
40	- - -	4		SEAL RING (1180.503)	

❑ Kit or Assembly - includes all items indented underneath.

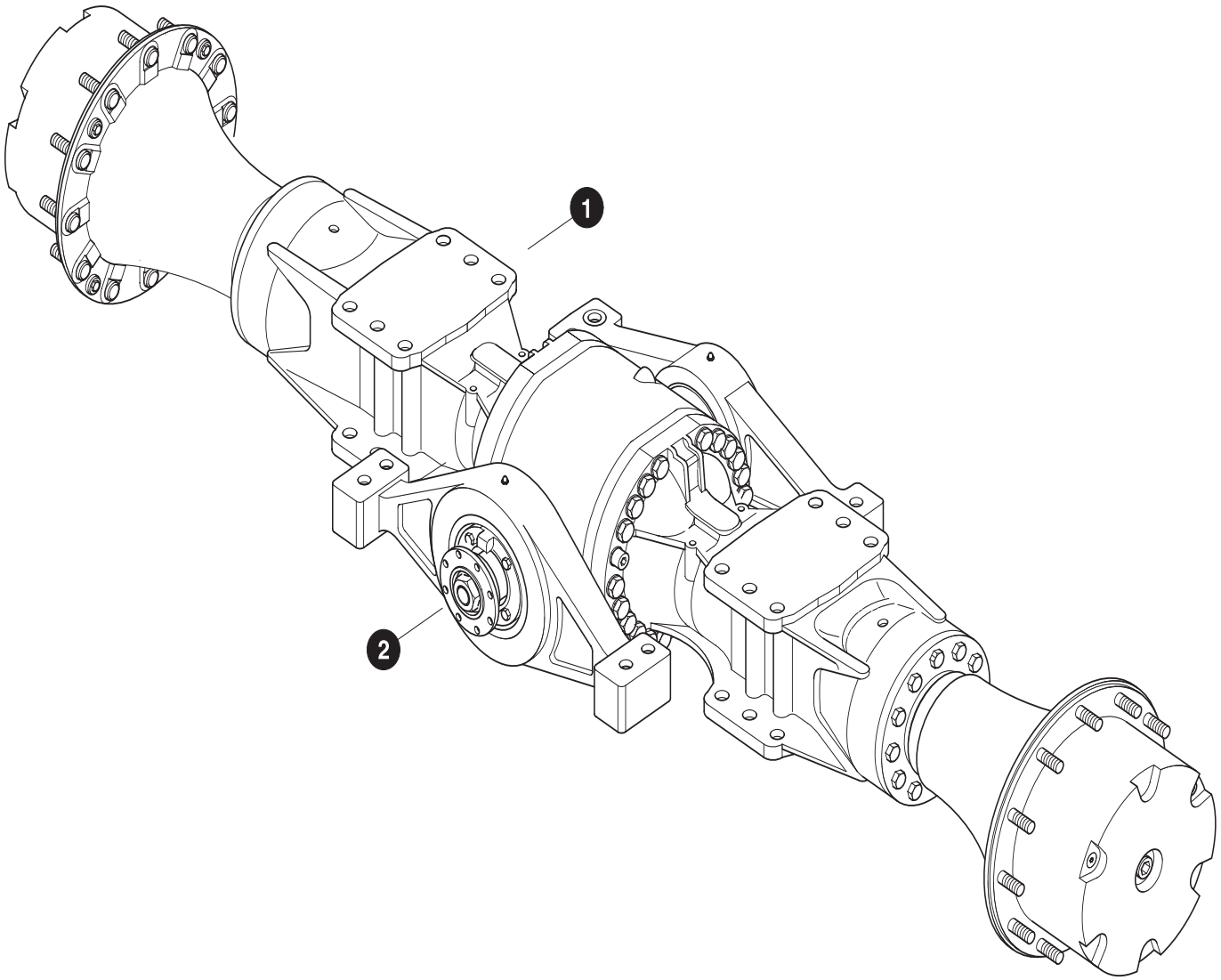


parts T2882 09/03/03
25.00

SINGLE AXLE
(brake piston)

(NAF TIM 14)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	- - -	1		BRAKE CYLINDER COMPLETE (5360.037)	
1	- - -	6		ALLEN SCREW (1020.155)	
2	- - -	1		PISTON (5252.135)	
3	- - -	1		O-RING (1170.607)	
4	- - -	1		SHAFT SEAL (7308.088)	
5	- - -				
6	- - -	1		PISTON GUIDE RING (7308.058)	
7	- - -	1		INTERMEDIATE RING (7307.124)	
8	- - -	1		WASHER (7315.197)	
9	- - -	1		SPRING RING (1220.901)	
10	- - -	2		SHAFT SEAL (7308.087)	
11	- - -				
12	- - -				
13	- - -	1		CYLINDER COMPETE (2429.015)	
14	- - -	4		BUSH (7312.083)	
15	- - -	4		O-RING (1170.103)	
16	- - -	1		PISTON GUIDE RING (7308.059)	
17	- - -	1		WASHER (7315.114)	
18	- - -	1		PISTON GUIDE RING (7308.057)	
19	- - -	1		PISTON (5252.154)	
20	- - -	1		SHAFT SEAL (7308.089)	
21	- - -				
22	- - -	1		WEAR BAND (1180.822)	

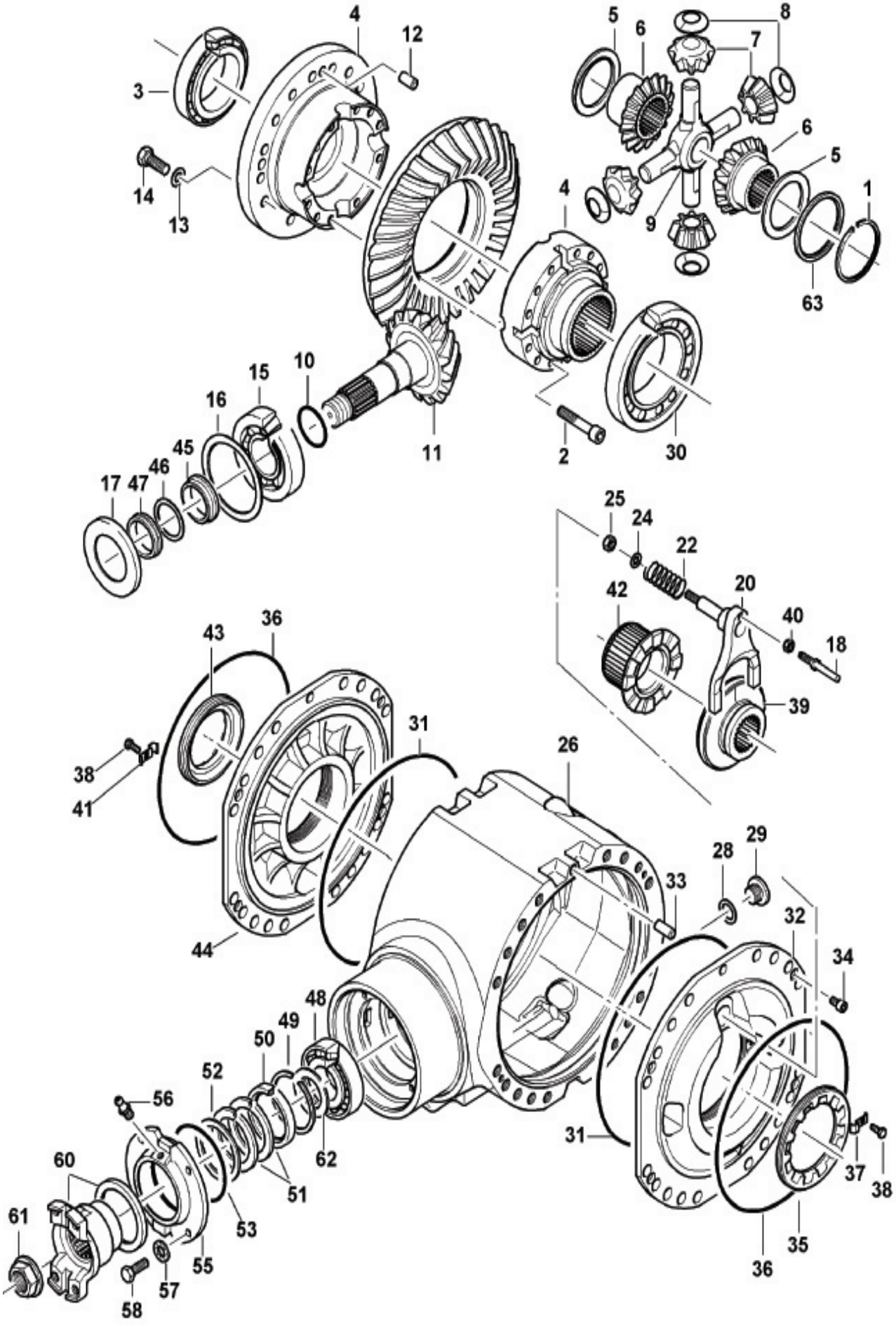


parts T2885 09/03/03
25.00

SINGLE AXLE

(NAF TIM 12)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	50489-AX	1		AXLE, SINGLE - HD TIM 12 (TS620)	
2	23997-AX	1		YOKE, companion flange	.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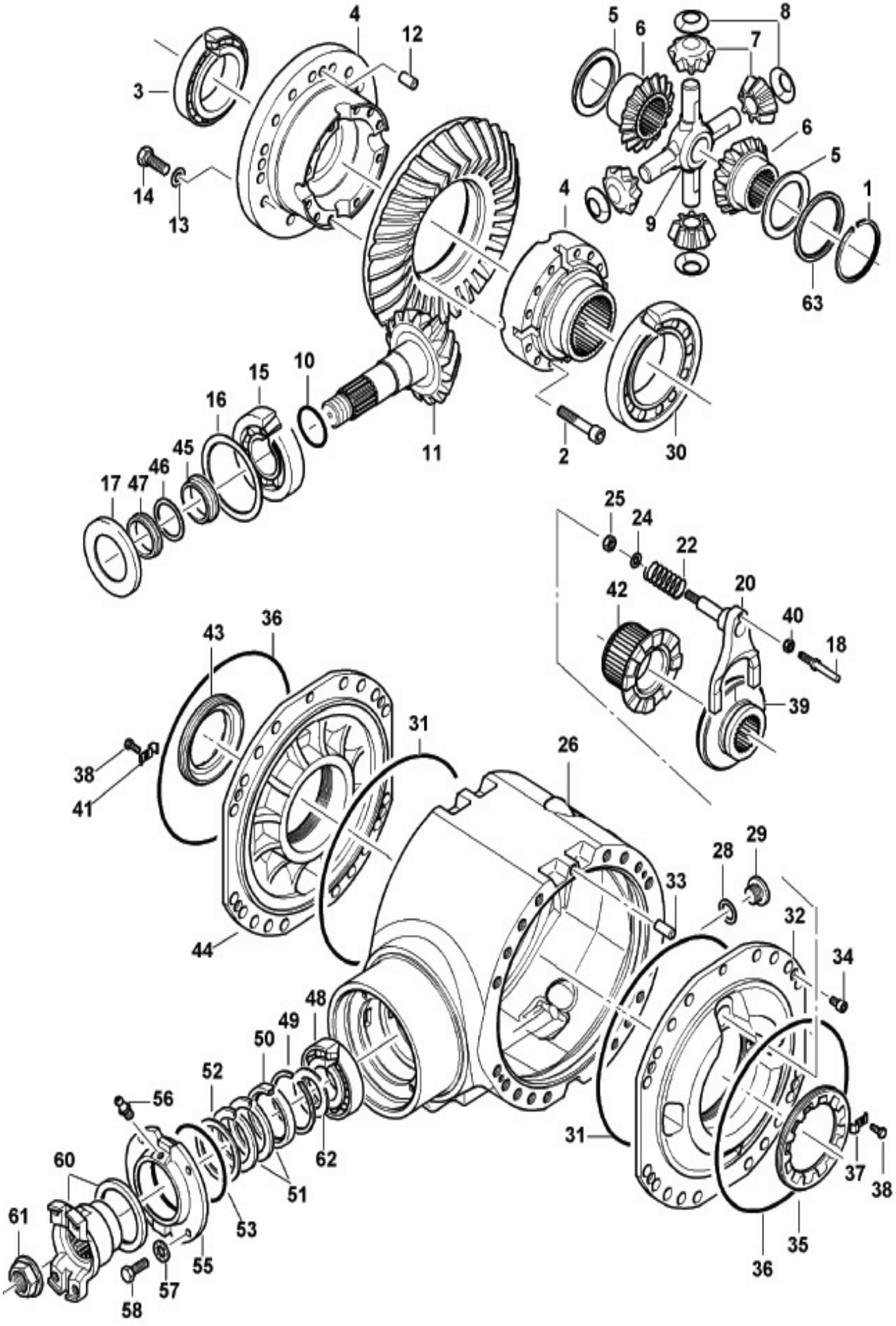
SINGLE AXLE

(NAF TIM 12)
Differential

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	1220.936	1		Spring ring SP 95	
2	1020.374	12		Allen screw M12x80, 8.8 VP n.TI-58 912	
3	1110.111	1		Tapered-roller bearing 320 19X	
4	2102.157	1		Differential cage	
5	7517.014	2	❑	Adjusting kit s=2,8 / 3,0 / 3,2 / 2,0 / 2,2	
5	7517.028	1		Check disk n.B. s=2,8	
5	7517.029	1		Check disk n.B. s=3,0	
5	7517.030	1		Check disk n.B. s=3,2	
5	7517.031	1		Check disk n.B. s=2,0	
6	7517.032	1		Check disk n.B. s=2,2	
6	7513.053	2		Differential gear	
7	7514.031	4		Planetary gear	
8	7518.024	4		Thrust washer	
9	7515.029	1		Cross bolt	
10	1170.013	1		O-ring OR 42x4.5, 72NBR872	
11	2101.335	1		Crown wheel / pinion z=34/7	
12	1200.228	4		Straight pin 16m6x40, ST GEHAERTET 6325	
13	7322.077	16		Screw M16x1.5x50, 10.9 n. TI-58/2	
14	7316.045	16		Washer M16.1x30x4, C45 GEHAERTET	
15	1110.223	1		Tapered-roller bearing 9278/9220 TIMKEN	
16	2108.047	1	❑	Adjusting kit s=3,0 / 2,75 / 2,5	
16	7317.247	1		Adjusting washer n.B. s=3,0	
16	7317.248	1		Adjusting washer n.B. s=2,75	
16	7317.249	1		Adjusting washer n.B. s=2,5	
17	7301.064	1		Cover	
18	9816.129	1		Shifting rod	
19	---				
20	9809.115	1		Shift fork	
21	---				
22	7331.016	1		Pressure spring	
23	---				
24	7316.047	1		Washer 12.1x24x3, C45 GEHAERTET	
25	1060.009	1		Hex. nut M12, 10 934	
26	7506.250	1		Differential housing	
27	---				
28	1180.541	1		O-ring A 27x32x2, CU 7603	
29	1040.151	1		Screw plug G 3/4", 5.8 908K	
30	1110.220	1		Tapered-roller bearing IP 12049/12010	
31	1170.735	4		O-ring OR 345x4, 72NBR872	
32	7527.185	1		Flange	
33	1200.228	2		Straight pin 16m6x40, ST GEHAERTET 6325	
34	1020.203	4		Allen screw M10x16, 8.8 7984	
35	7329.092	1		Nut M168x1.5	
36	---				
37	9566.010	2		Locking plate	
38	1010.129	2		Hexagon screw M8x16, 10.9 VP n.TI-58 933	
39	9813.144	1		Shifting sleeve	

❑ Kit or Assembly - includes all items indented underneath.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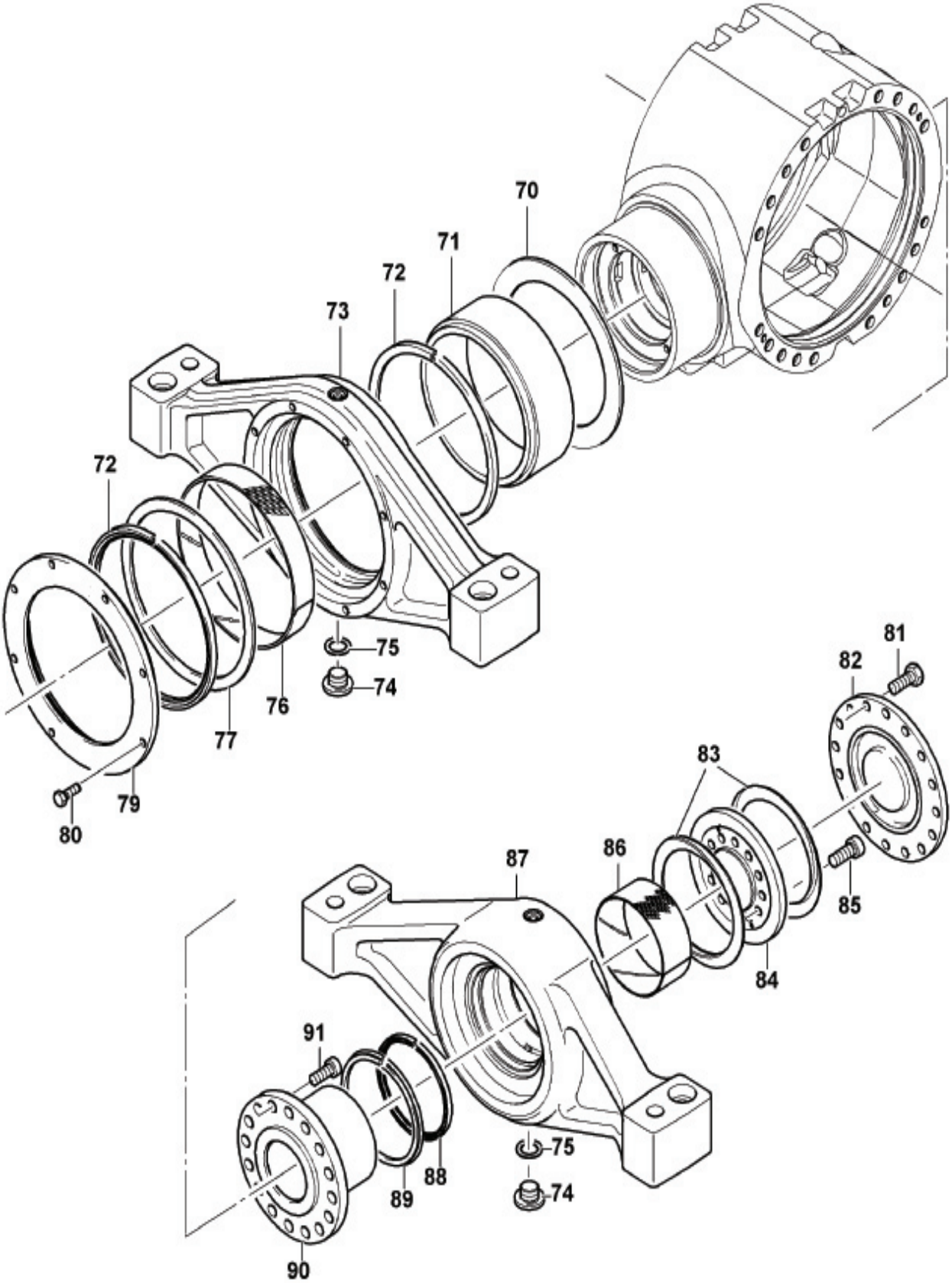
SINGLE AXLE

(NAF TIM 12)
Differential Cont...

REF	PART #	QTY		DESCRIPTION	SEE PAGE
40	1060.007	1		Hex. nut M10, 10 934	
41	9566.019	1		Locking blate	
42	9813.142	1		Clutch-coupling sleeve	
43	9310.072	1		Nut M144x1.5	
44	7527.184	1		Flange	
45	7311.116	1		Spacer bush	
46	2108.046	1	❑	Adjusting kit s=0,96 bis 1,44 je 0,04 steigend	
46	7317.234	1		Adjusting washer n.B. s=0,96	
46	7317.235	1		Adjusting washer n.B. s=1,0	
46	7317.236	1		Adjusting washer n.B. s=1,04	
46	7317.237	1		Adjusting washer n.B. s=1,08	
46	7317.238	1		Adjusting washer n.B. s=1,12	
46	7317.239	1		Adjusting washer n.B. s=1,16	
46	7317.240	1		Adjusting washer n.B. s=1,20	
46	7317.241	1		Adjusting washer n.B. s=1,24	
46	7317.242	1		Adjusting washer n.B. s=1,28	
46	7317.243	1		Adjusting washer n.B. s=1,32	
46	7317.244	1		Adjusting washer n.B. s=1,36	
46	7317.245	1		Adjusting washer n.B. s=1,40	
46	7317.246	1		Adjusting washer n.B. s=1,44	
47	2108.045	1	❑	Adjusting kit s=11,51 / 11,99 / 12,47	
47	7311.117	1		Spacer bush n.B. s=11,51	
47	7311.118	1		Spacer bush n.B. s=11,99	
47	7311.119	1		Spacer bush n.B. s=12,47	
48	1110.229	1		Tapered-roller bearing 78 214C/78 551	
49	1220.932	1		Spring ring SB 102	
50	7308.054	1		Radial seal 76.25x101.64x11	
51	7308.055	2		Seal ring 76.25x101.64x7	
52	7315.110	1		Washer	
52a	1180.125	1		V - ring 1 parts not exatly as show	
53	1170.534	1		O-ring OR 120x3, 72NBR872	
54	---				
55	7301.124	1		Cover	
56	1250.103	1		Taper grease nipple AM 10x1 71412	
57	1190.011	4		Locking clip 10, ST	
58	1010.201	4		Hexagon screw M10x25, 10.9 933	
59	---				
60	7521.236	1		Drive shaft flange	
61	7329.057	1		Nut M40x1.5	
62	7315.181	1		Washer	
63	7311.159	1		Spacer bush	

❑ Kit or Assembly - includes all items indented underneath.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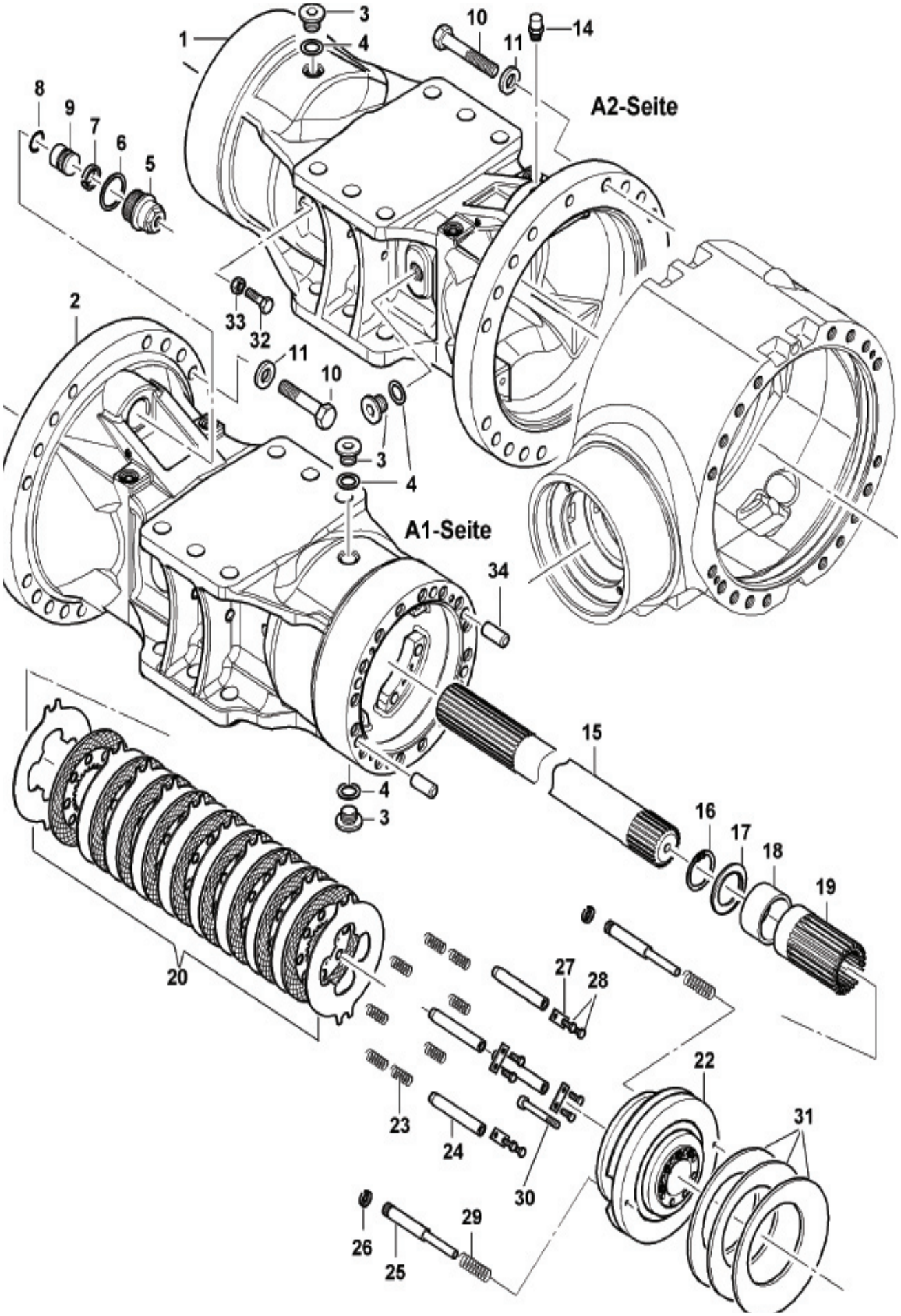
SINGLE AXLE

(NAF TIM 12)
Differential Cont...

REF	PART #	QTY		DESCRIPTION	SEE PAGE
70	7316.153	1		Washer	
71	7307.135	1		Ring	
72	7308.036	2		Oil seal 260x280x10 BA NBR 70	
73	7533.011	1		Axle balancer	
74	1040.115	2		Screw plug M10x1, 5.8 Innensechskant 908 k	
75	1180.505	2		Seal ring A10x13x1, CU 7603	
76	7312.101	1		Boxtrees CUSN8	
77	7316.154	1		Washer	
78	---				
79	7315.219	1		Washer	
80	1010.201	8		Hexagon screw M10x25, 10.9 933	
81	7322.088	16		Screw M12x30, 10.9 VP n.TI-58 933	
82	7302.051	1		Cover	
83	7316.114	2		Check disk CUSN8(B09)	
84	7302.050	1		Cover	
85	1020.372	12		Allen screw M12x40, 10.9 VP n.TI-58 7984	
86	7312.102	1		Boxtrees CUSN8(B09)	
87	7533.012	1		Axle balancer	
88	1180.881	1		Oil seal 145x153x7 A5 E050 N3587 PARKER	
89	1180.126	1		V-ring CR 401602 VR3 SKF	
90	7321.102	1		Bearing stud	
91	1020.506	16		Allen screw M16x40, 10.9 VP n.TI-58 912	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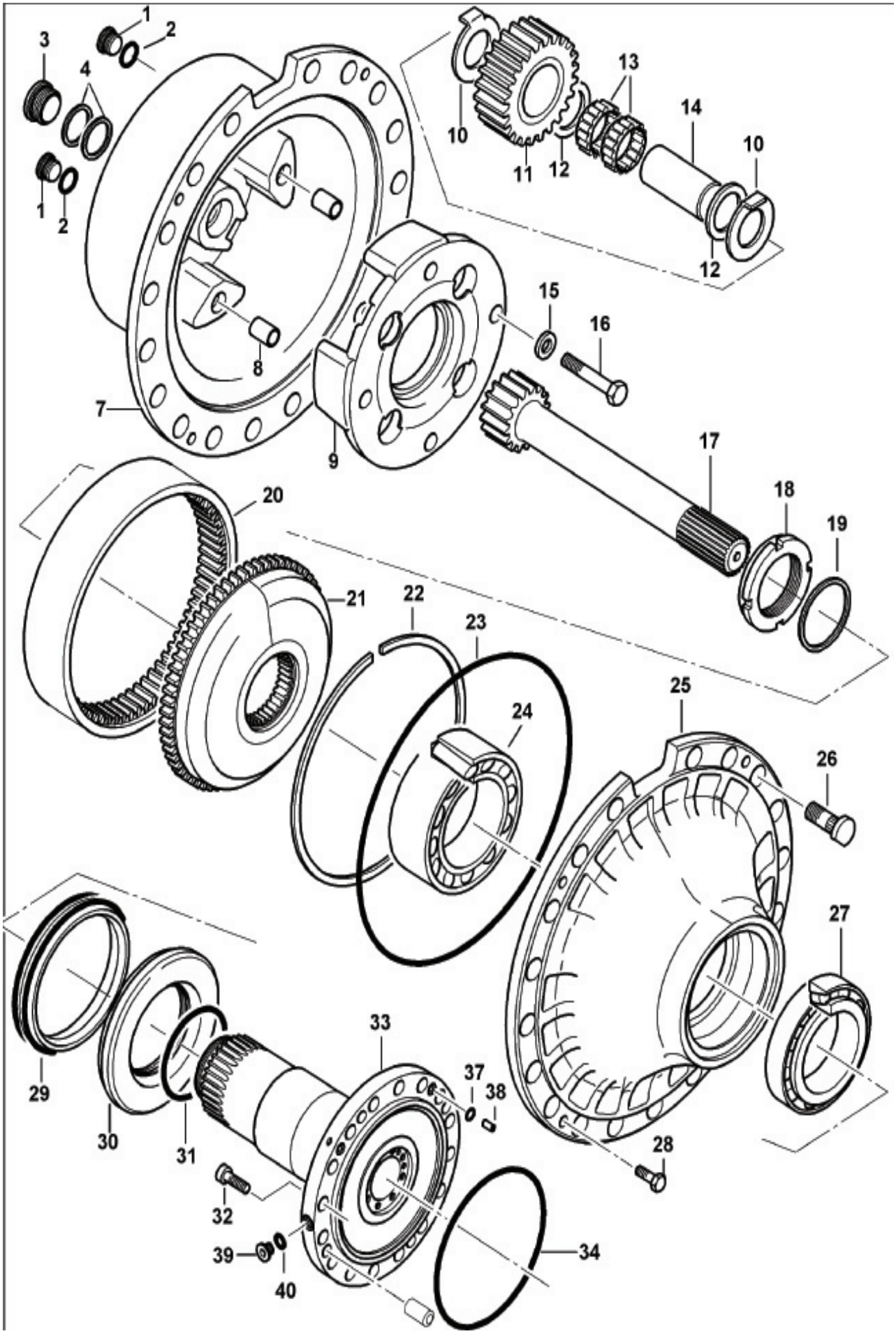
SINGLE AXLE

(NAF TIM 12)
Axle beam

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	7271.197	1		Axle housing (A2 only)	
2	7271.196	1		Axle housing (A1 only)	
3	1040.151	3		Screw plug G 3/4" 5.8	
4	1180.541	3		Seal ring A27x32x2, CU 7603	
5	5263.033	1		Cylinder (A1 only)	
6	1180.555	1		Seal ring C45x52x2.5, CU/AL 7603 (A1 only)	
7	1180.734	1		Groove ring 32x24x5.5, C2 3035 N3584 NBR PARK (A1 only)	
8	1180.811	1		Shaft seal 32x24.5x3.2, OE1032 00801 PARKER (A1 only)	
9	5252.117	1		Piston (A1 only)	
10	7322.122	8		Hexagon screw M18x2x80, 10.9 VP 960	
11	7316.044	18		Washer	
12	---				
13	---				
14	9566.030	1		Beather (A2 only)	
15	7220.131	1		Drive shaft	
16	1220.626	1		Seeger-ring 50x2 472	
17	7316.111	1		Check disk	
17a	7321.103	2		Pin 2 parts not exatly as show	
18	7312.038	1		Bush	
19	9867.099	1		Disk support	
20	2109.008	1	❑	multi-plate package	
20	7344.037	1		Driven disk	
20	7345.038	1		Drive disk of S = 5,0	
20	7345.059	1		Drive disk of S = 5,3	
21	---				
22	5360.037	1		Ring piston bracke cylinder	
23	7331.036	8		Pressure spring	
24	7320.034	4		Stud	
25	7320.033	2		Stud	
26	1180.827	2		Shaft seal 18x10x5.5, C2 1092 N3584 PARKER	
27	7315.116	4		Washer	
28	1010.010	8		Hexagon screw M6x12, 8.8 VP n.TI-58 933	
29	7331.055	2		Pressure spring	
30	1020.154	8		Allen screw M8x70, 10.9 VP n.TI-58 912	
31	7331.030	3		Disk spring	
32	1010.304	2		Hexagon screw M12x35, 8.8 933	
33	1060.132	2		Hex nut M12, 10 439	
34	1200.228	2		Straight pin 16m6x40, ST GEHAERTET 6325	
---	7340.018	1		Type plate (A1 only)	
---	1200.110	2		Pin (A1 only)	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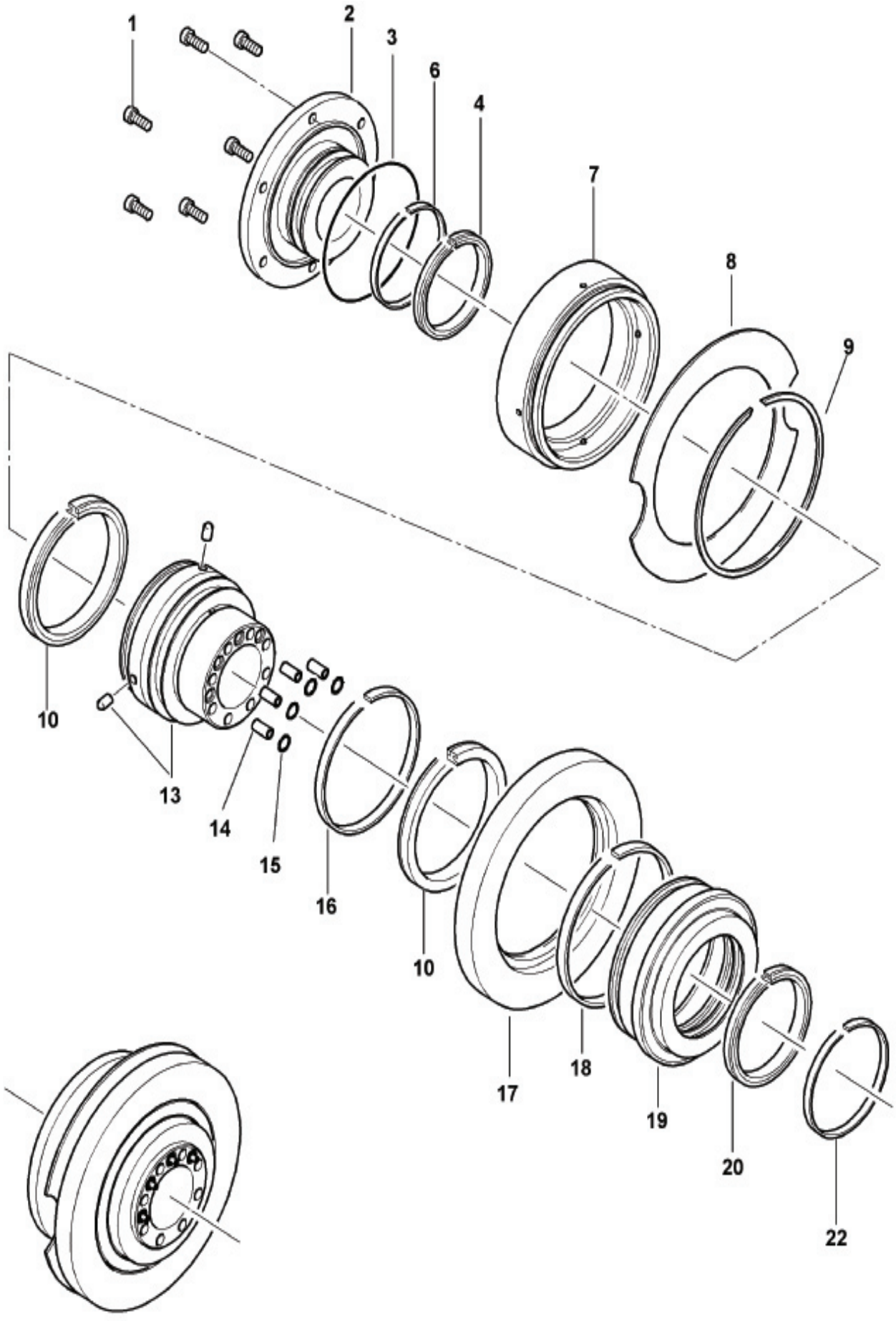
SINGLE AXLE

(NAF TIM 12)
Outer component

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	1040.151	3		Screw plug G 3/4" 5.8	
2	1180.541	3		Seal ring A27x32x2, CU 7603	
3	7323.026	2		Screw plug M45X1.5, 5.8	
4	2108.022	2	❑	Adjusting kit s=3,0 / 1,0	
4	1210.110	1		Supporting washer n.B. SS 45x55x3,0	
4	1210.218	1		Seeger washer n.B. PS 45x55x1.0	
5	---				
6	---				
7	7821.245	2		Planetary cage	
8	7313.018	8		Shear bushing	
9	7821.179	2		Planetary cage	
10	9633.010	16		Check disk	
11	7806.078	8		Planetary gear Z=25	
12	1210.101	16		Supporting washer SS 45x56x3	
13	1130.281	16		Needle roller cages K 45x57x25	
14	7807.067	8		Planetary stud	
15	7316.045	8		Washer 16.1x30x4, GEHAERTET	
16	1010.536	8		Hexagon screw M16x90, 10.9 VP n.TI-58 931	
17	7818.111	2		Sun gear shaft Z=14	
18	7329.073	2		Nut M85x2, 8	
19	7317.047	2	❑	Adjusting kit s=1,375 bis 2,5 je 0,125	
19	7317.208	1		Adjusting washer n.B. s=1,375	
19	7317.207	1		Adjusting washer n.B. s=1,5	
19	7317.206	1		Adjusting washer n.B. s=1,625	
19	7317.205	1		Adjusting washer n.B. s=1,75	
19	7317.204	1		Adjusting washer n.B. s=1,875	
19	7317.203	1		Adjusting washer n.B. s=2.0	
19	7317.202	1		Adjusting washer n.B. s=2,125	
19	7317.201	1		Adjusting washer n.B. s=2,25	
19	7317.200	1		Adjusting washer n.B. s=2,375	
19	7317.199	1		Adjusting washer n.B. s=2,5	
20	7801.065	2		Gear rim Z=66	
21	7804.058	2		Ring gear carrier Z=66	
22	1220.913	2		Spring ring SB 310	
23	1170.726	2		O-ring OR 415x5, 72NBR872	
24	1110.227	2		Tapered-roller bearing 32222	
25	7828.123	2		Wheel hub	
26	7133.063	38		Wheel bolt	
27	1110.090	2		Tapered-roller bearing 320 24x	
28	7322.088	8		Hexagon screw M12x30, 10.9 VP 933	
29	1180.325	2		Slide ring sealing 76.90 H-56	
30	7306.032	2		Axle stub ring	
31	1170.547	2		O-ring OR 120x4, 72NBR872	
32	1020.625	32		Allen screw M18x2x60, 10.9 VP n.TI-58 912	
33	7814.202	2		Stub axle	
34	1170.725	2		O-ring OR 210x4, 72NBR872	
35	---				
36	---				
37	1170.104	4		O-ring OR 9x3, 85-90	
38	7312.082	4		Bush	
39	1040.105	4		Screw plug M14x1.5, 5.8	
40	1180.503	4		Seal ring A14x18x1.5, CU 7603	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SINGLE AXLE

(NAF TIM 12)
Ring piston bracke cylinder

REF	PART #	QTY		DESCRIPTION	SEE PAGE
---	5360.037	1		Bracke cylinder complete	
1	1020.155	6		Allen screw M8x20, 10.9 VP 6912	
2	5252.135	1		Piston	
3	1170.607	1		O-ring OR 120x3, 85-90 SHORE NBR	
4	7308.088	1		Shaft seal 90x78x9.5	
5	---				
6	7308.058	1		Piston guide ring 85x90x5.5 FR PARKER	
7	7307.124	1		Intermediate ring	
8	7315.197	1		Washer	
9	1220.901	1		Spring ring SW 155	
10	7308.087	2		Shaft seal 125x110x11 N8557	
11	---				
12	---				
13	2429.015	1		Cylinder compl.	
14	7312.083	4		Bush	
15	1170.103	4		O-ring OR 6x3, 85-90 SHORE NBR	
16	7308.059	1		Piston guide ring 120x125x5.5 FR PARKER	
17	7315.114	1		Washer	
18	7308.057	1		Piston guide ring 135x140x5.5 FR PARKER	
19	5252.154	1		Piston	
20	7308.089	1		Shaft seal 90x102x9.5 N8557	
21	---				
22	1180.822			FUEHRUNGSBAND 7/14/2003 90x95x5.6	

❑ Kit or Assembly - includes all items indented underneath.

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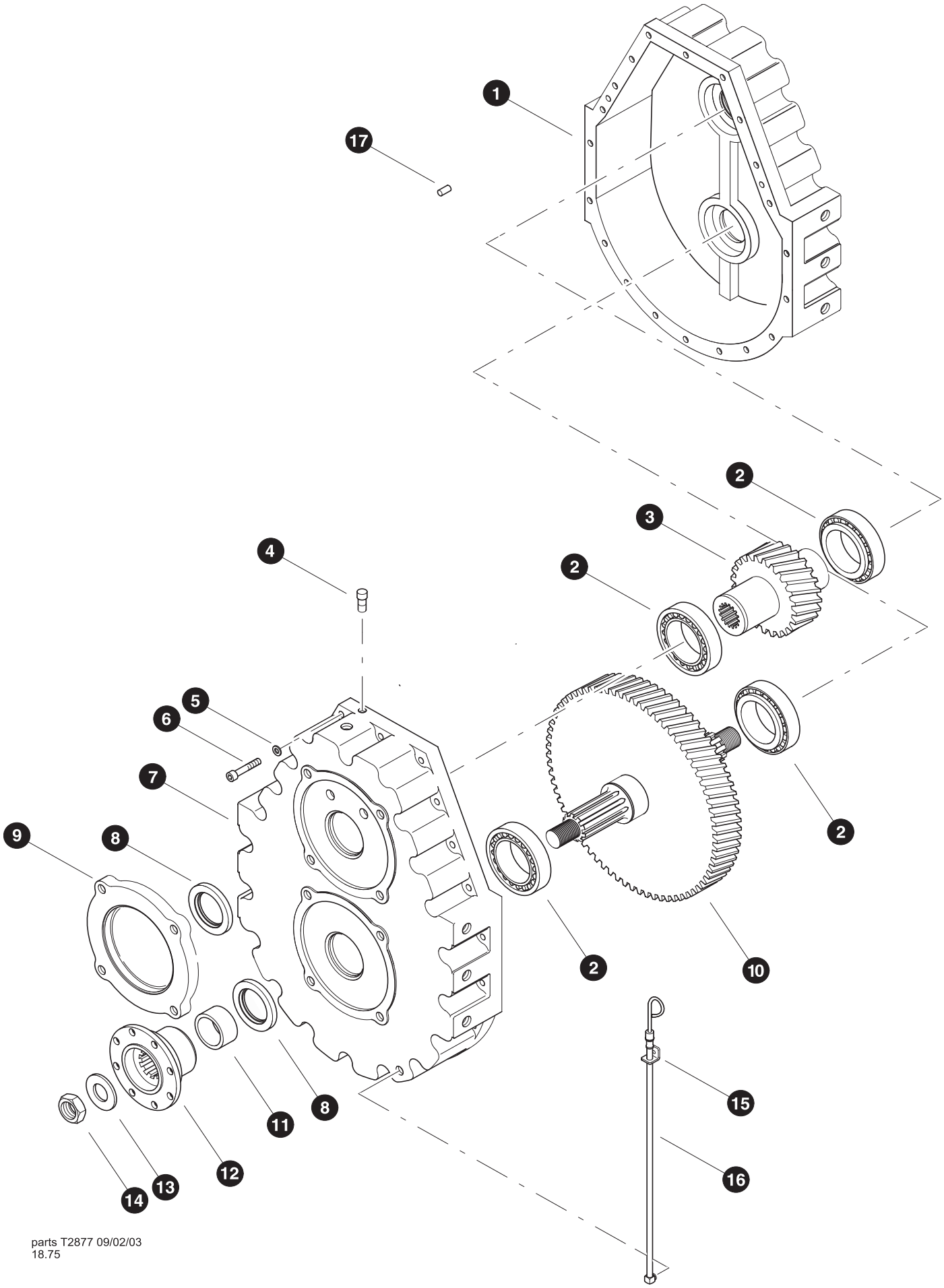
Section AX-4

Axles, Transfer Cases & Wheels- Transfer Cases



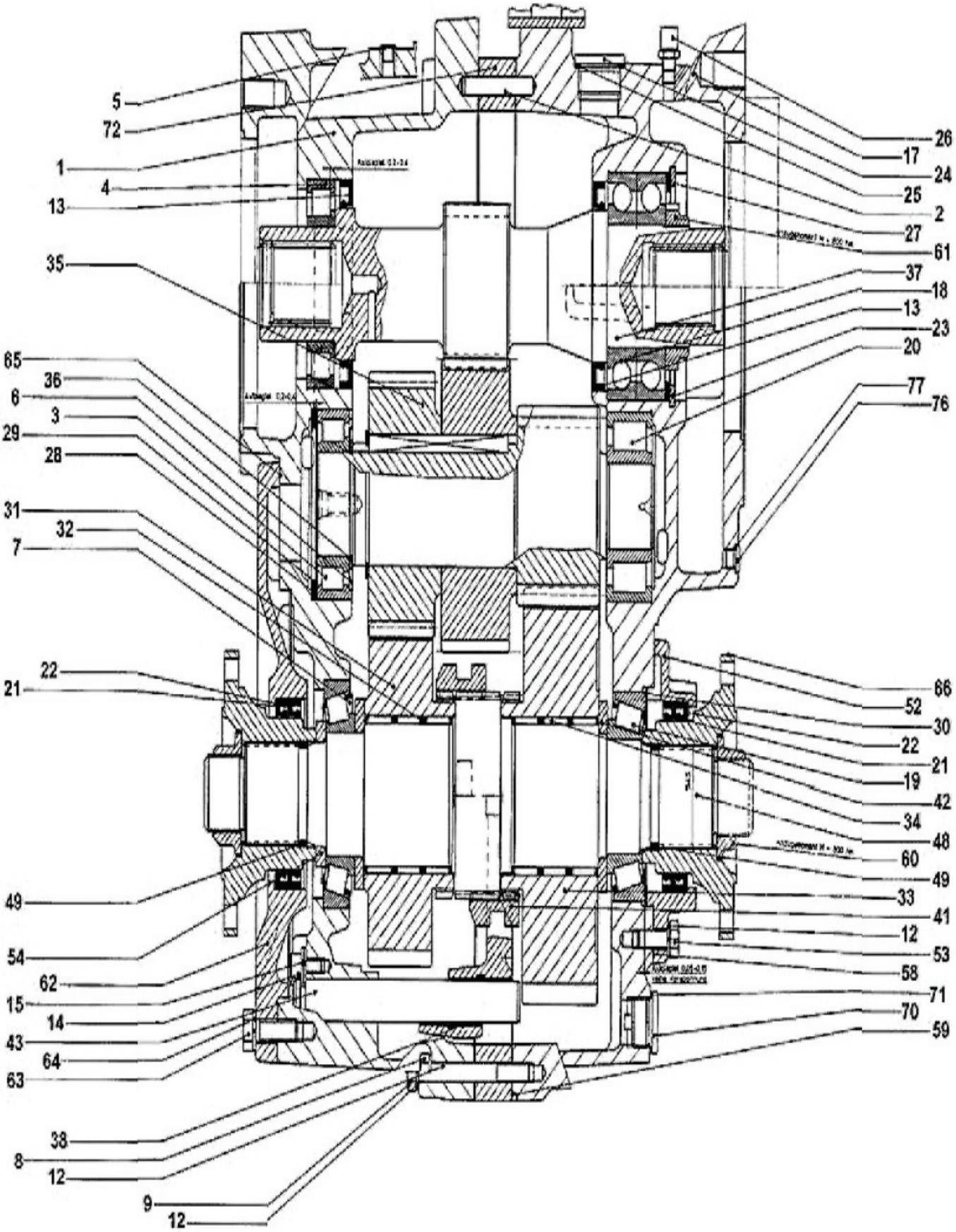
parts T2877 09/02/03
18.75

TRANSFER CASE
(Superior Single Speed)

(TS 630)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
--	20097-AX	1	❑	TRANSFER CASE	
1	- - -	1		HOUSING (00007249)	
2	24344-AX	4		BEARING, cone	
-	24343-AX	4		BEARING, cup	
3	23681-AX	1	❑	GEAR/SHAFT ASSEMBLY, input	
	- - -	1		SHAFT	
	- - -	1		GEAR *(26 teeth)*	
4	23395-AX	1		BREATHER, gearbox	
	24342-AX	1		GEAR *(103 teeth)*	
5	23526-AX	20		WASHER, housing bolt	
6	23517-AX	20		BOLT, housing	
7	- - -	1		HOUSING (00007250)	
8	22010-AX	4		SEAL, shaft	
9	23683-AX	2		ADAPTER, motor pad - SAE “D”	
10	23682-AX	1	❑	GEAR/SHAFT ASSEMBLY, output	
	- - -	1		SHAFT	
	- - -	1		GEAR *(103 teeth)*	
11	23686-AX	2		SPACER	
12	23998-AX	2		YOKE, driveshaft	
13	23684-AX	2		WASHER, yoke	
14	23685-AX	2		NUT, yoke	
15	23688-AX	1		BRACKET, dipstick mounting	
16	23687-AX	1		DIPSTICK	
17	23518-AX	2		PIN, dowel	

❑ Kit or Assembly - includes all items indented underneath.

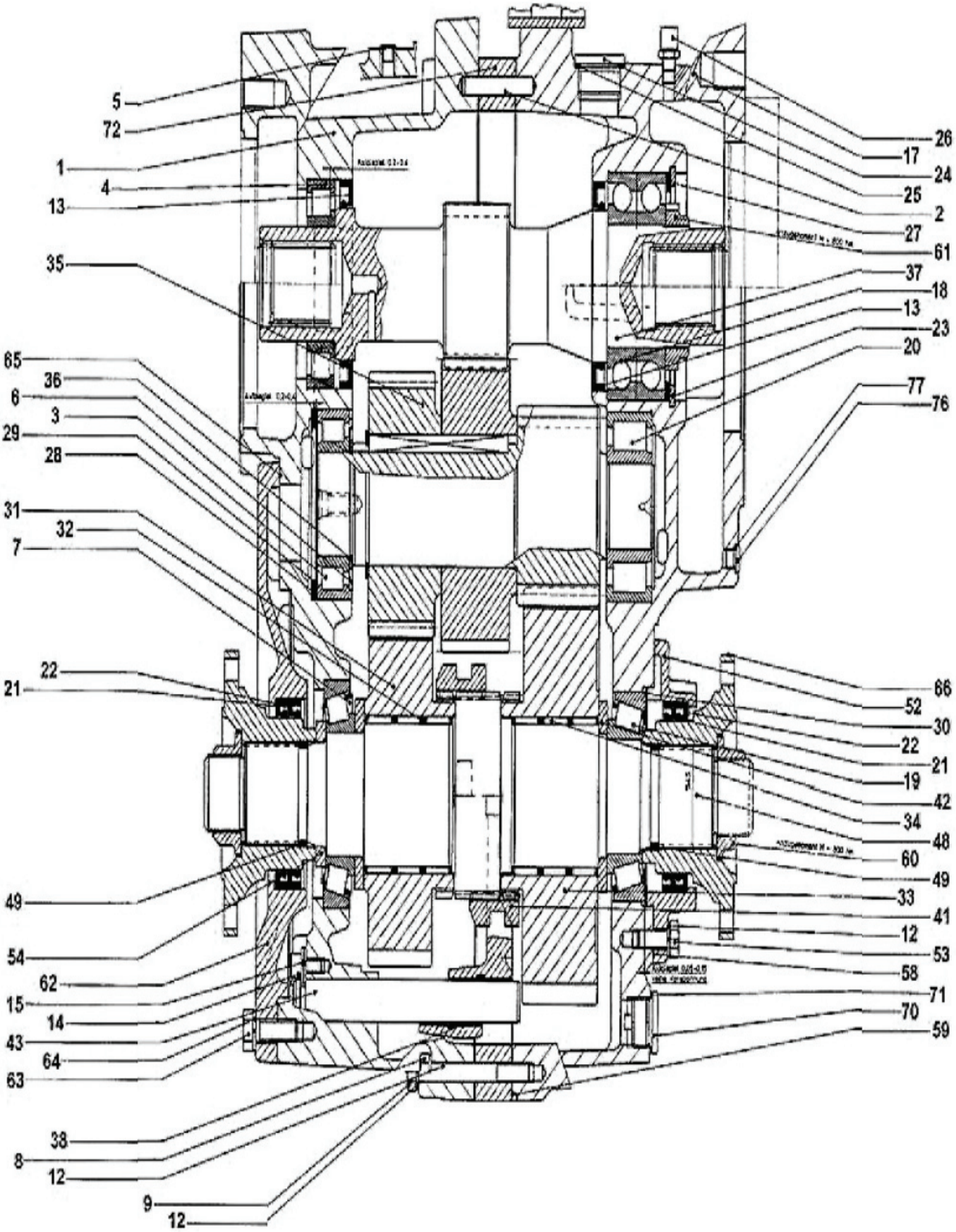


parts T2887 09/09/03
18.75

TRANSFER CASE

TIM 15 - (TF 830 & TF 840)
(NAF TWO SPEED DUEL MOTOR)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	50371-AX	1	GEARBOX, DUAL MOTOR-2SP - TIM 15 NAF (830-840)	
1	- - -	1	HOUSING (9801.517)	
2	- - -	2	STRAIGHT PIN (1200.602)	
3	- - -	1	CYLINDER ROLLER BEARING (1130.049)	
4	- - -	1	CYLINDER ROLLER BEARING (1130.076)	
5	- - -	1	PLUG (1250.620)	
6	- - -	1	NILOS-RING (1180.760)	
7	- - -	1	TAPERED ROLLER BEARING (1110.119)	
8	- - -	6	HEXAGON SCREW (1510.212)	
9	- - -	4	HEXAGON SCREW (1510.213)	
10	- - -	1	HEXAGON SCREW (1010.225)	
11	- - -	2	HEXAGON SCREW (1510.215)	
12	- - -	13	LOCKING CLIP (1190.015)	
13	- - -	2	OIL SEAL (1160.220)	
14	- - -	1	ALLEN SCREW (1020.113)	
15	- - -	2	WASHER (7316.057)	
16	- - -	8	PLUG (1250.626)	
17	- - -	1	HOUSING (9801.434)	
18	- - -	2	TAPERED-ROLLER BEARING (1130.579)	
19	- - -	1	TAPERED-ROLLER BEARING (1110.014)	
20	- - -	1	CYLINDER ROLLER BEARING (1130.058)	
21	- - -	2	OIL SEAL (1160.121)	
22	- - -	2	OIL SEAL (1160.217)	
23	- - -	1	SEEGER-RING (1220.802)	
24	- - -	1	SCREW PLUG (1040.180)	
25	- - -	1	SEAL RING (1180.518)	
26	- - -	1	BREATHER (1250.001)	
27	- - -	1	SUPPORTING WASHER (1210.125)	
28	- - -	1	SUPPORTING WASHER (1210.119)	
29	- - -	1	ADJUSTING KIT (2108.013)	
30	- - -	1	ADJUSTING KIT (2108.021)	
31	- - -	1	GEAR (9804.520)	
32	- - -	3	NEEDLE ROLLER CAGES (1130.272)	
33	- - -	1	GEAR (9804.522)	
34	- - -	3	NEEDLE ROLLER CAGES (1130.272)	
35	- - -	1	GEAR BLOCK (2205.156)	
36	- - -	1	SUPPORTING WASHER (1210.121)	
37	- - -	1	DRIVE PINION (9805.310)	
38	- - -	1	SHIFTING LEVER COMPL (9809.110)	
39	- - -	1	SHIFTING LEVER CONTROL (9809.118)	
40	- - -	1	HEXAGON SCREW (1010.219)	
41	- - -	1	WASHER (9813.149)	
42	- - -	2	SHIFTING SLEEVE (7315.060)	
43	- - -	1	WASHER (9816.119)	
44	- - -	1	SHIFTING ROD (1060.003)	
45	- - -	1	HEX. NUT (2108.049)	
46	- - -	2	(1750.848)	
47	- - -	2	ADJUSTING KIT (2108.003)	
48	- - -	1	SHAFT (7222.080)	
49	- - -	2	O-RING (1170.065)	
50	- - -	1	SHIFT CYLINDER COMPL (9880.098)	

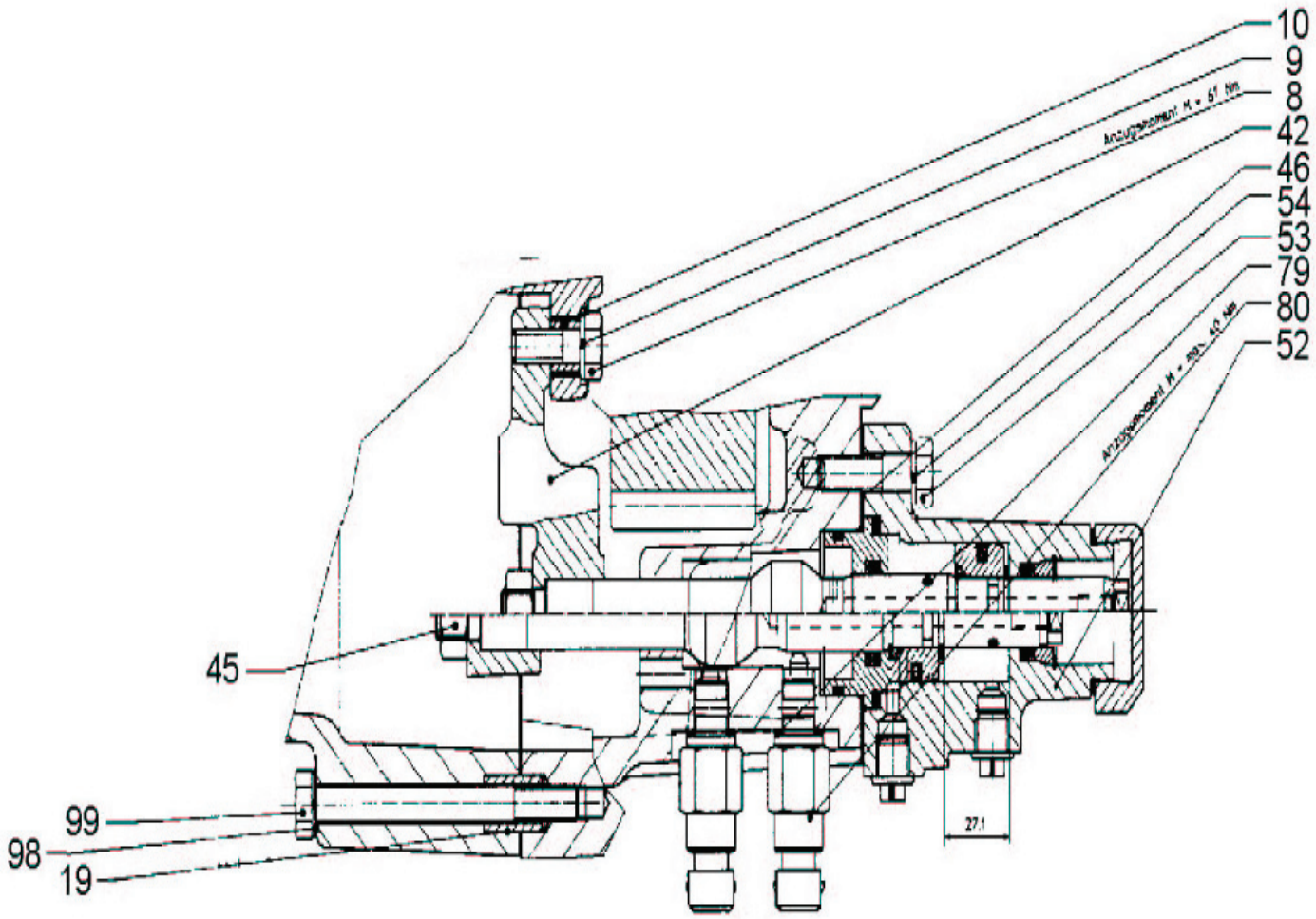


parts T2887 09/09/03
18.75

TRANSFER CASE

TIM 15 - (TF 830 & TF 840)
(NAF TWO SPEED DUEL MOTOR)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
51	- - -	2		HEXAGON SCREW (1010.242)	
52	- - -	1		COVER (7301.029)	
53	- - -	6		HEXAGON SCREW (1010.201)	
54		1		(7311.163)	
55	- - -	1		SPACER BUSHNG (7311.111)	
56	- - -	12		SHEAR BUSHING (7313.012)	
57	- - -	1		WASHER (7316.048)	
58	- - -	1		GASKET (7319.033)	
59	- - -	2		GASKET (7319.129)	
60	- - -	2		NUT (7329.057)	
61	- - -	1		NUT (7329.093)	
62	- - -	1		C0VER (7301.141)	
63	- - -	9		HEXAGON SCREW (1010.346)	
64	- - -	9		LOCKING CLIP (1190.017)	
65	- - -	1		GASKET (7319.030)	
66	- - -	2		CARDAN FLANGE (7521.238)	
67	- - -	1		DIPSTICK (7325.046)	
68	- - -	1		TUBE (7343.027)	
69	- - -	1		SEAL RING (1180.508)	
70	- - -	1		SCREW PLUG (7323.025)	
71	- - -	1		SEAL RING (1180.541)	
72	- - -	1		(9801.389)	
73	- - -	1		(7412.016)	
74	- - -	1		(1020.522)	
75	- - -	6		(7312.084)	
76	- - -	1		(1040.115)	
77	- - -	1		(1180.505)	
--		1		TYPE PLATE (7340.018)	
--		2		PIN (1200.110)	



parts T2889 09/09/03
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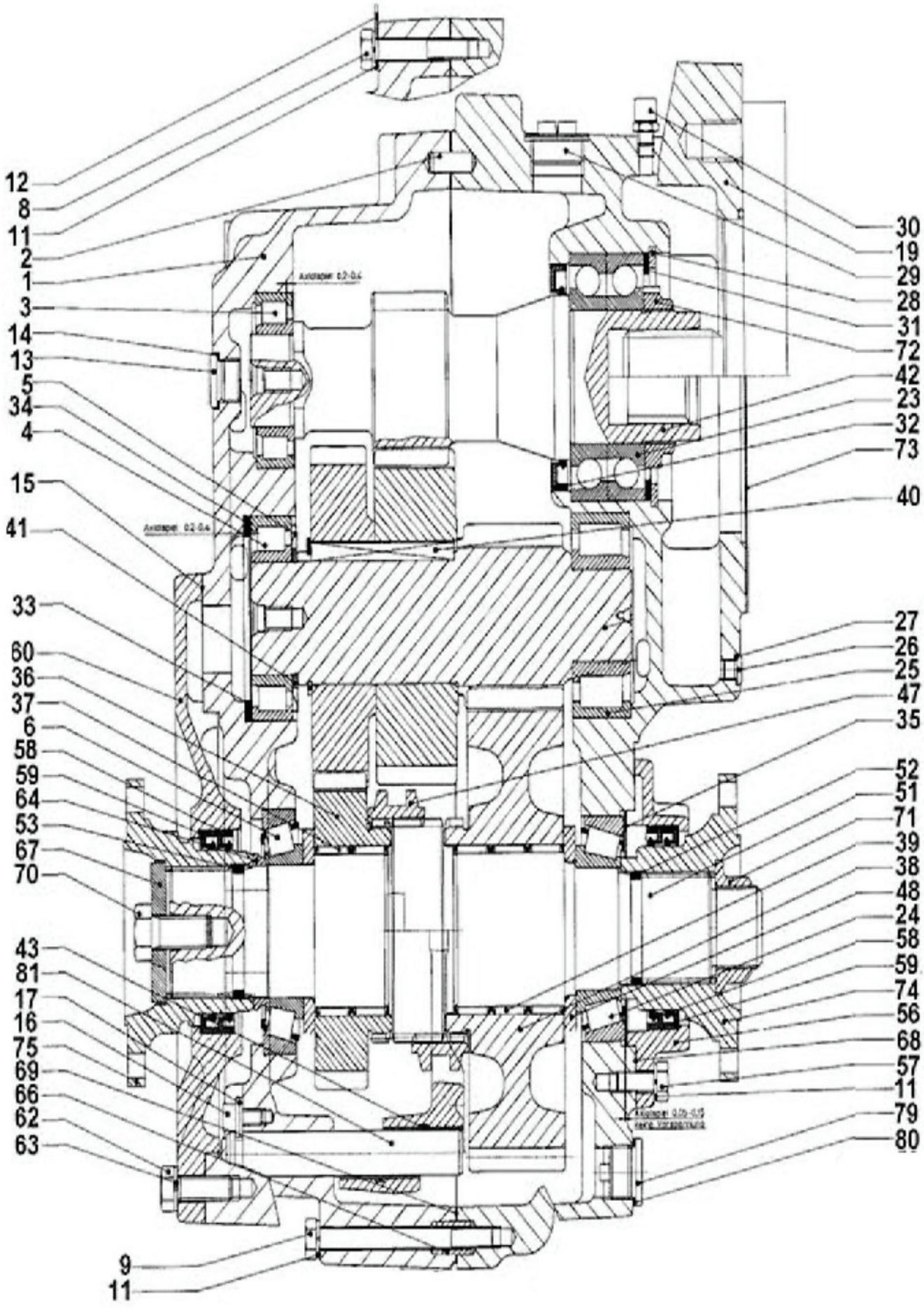
TRANSFER CASE

TIM 15 - (TF 830 & TF 840)
(NAF TWO SPEED DUEL MOTOR)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	- - -	1		SHIFT CYLINDER COMPLETE (9880.098)	
8	- - -	1		BOLT, HEX (1010.219)	
9	- - -	1		WASHER (7316.048)	
10	- - -	1		SLEEVE, SPACER (7311.111)	
19	- - -	1		BUSHING, SHEAR (7313.012)	
42	- - -	1		LEVER, SHIFT (9809.118)	
45	- - -	1		NUT, SHIFT ROD (1060.003)	
46	- - -	1		WASHER PACKAGE (2108.049)	
52	- - -	1		CYLINDER	
53	- - -	1		BOLT, HEX (1010.242)	
54	- - -	2		WASHER, LOCKING (1190.015)	
79	- - -	2		WASHER, ADJUSTING (2108.003)	
80	54093-AX	2		SWITCH, PRESSURE (1750.848)	
98	- - -	1		WASHER, LOCKING (1190.015)	
99	- - -	1		BOLT, HEX (1510.215)	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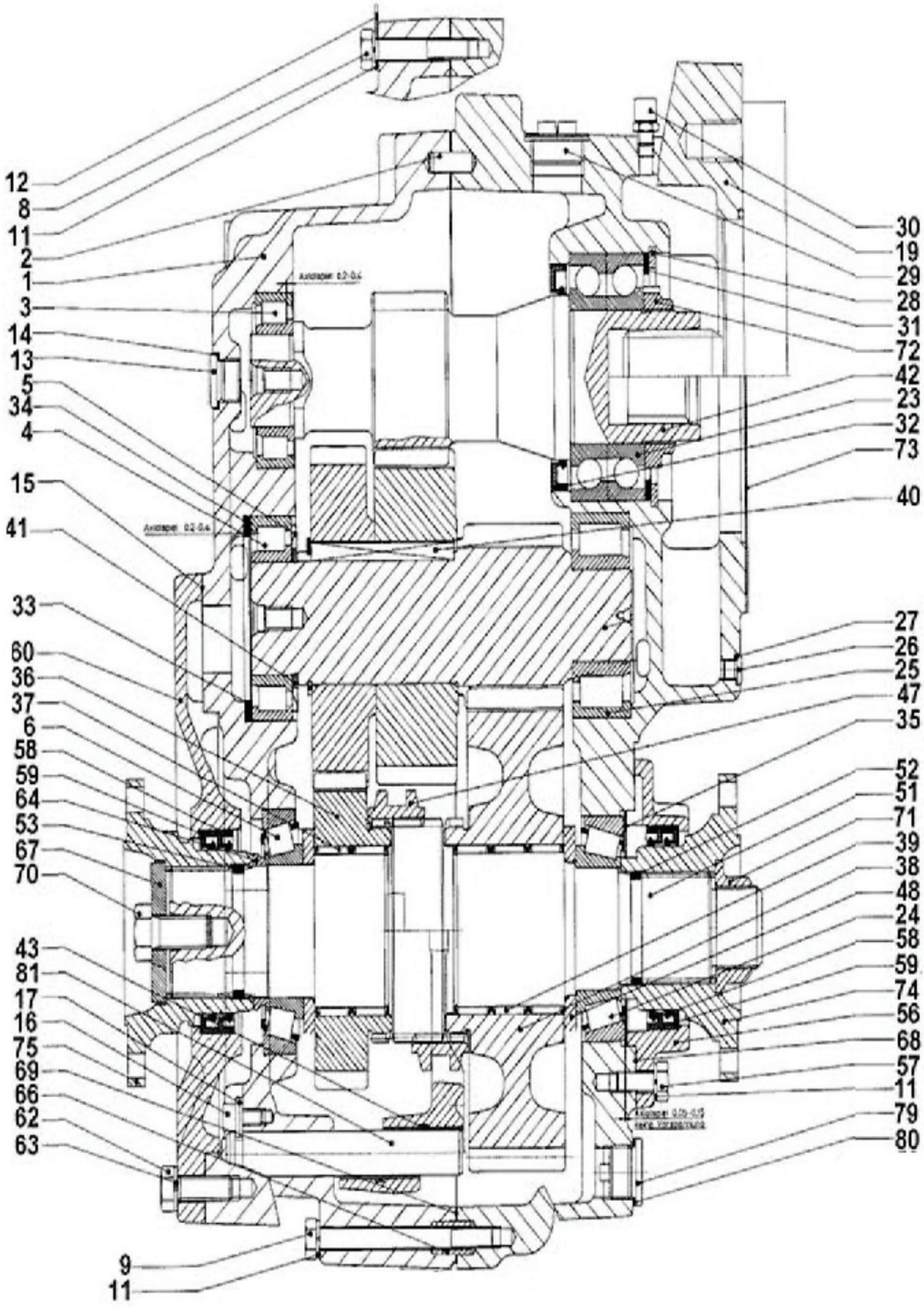
TRANSFER CASE

TIM 16 - (TB 630)
(NAF TWO SPEED SINGLE MOTOR)

REF	PART #	QTY	DESCRIPTION	SEE PAGE
-	50502	1	GEARBOX, VG75 - SINGLE MOTOR-2SP TIM 16 (TB620)	
1	- - -	1	HOUSING (9801.486)	
2	- - -	2	STRAIGHT PIN (1200.258)	
3	- - -	1	CYLINDER ROLLER BEARING (1130.045)	
4	- - -	1	CYLINDER ROLLER BREARING (1130.049)	
5	- - -	1	NILOS-RING (1180.760)	
6	- - -	1	TAPERED ROLLER BEARING (1110.119)	
7	- - -	6	HEXAGON SCREW (1010.205)	
8	- - -	4	HEXAGON SCREW (1010.210)	
9	- - -	1	HEXAGON SCREW (1010.252)	
10	- - -	2	HEXAGON SCREW (1010.226)	
11	- - -	13	LOCKING CLIP (1190.015)	
12	- - -	1	FISCHPLATE (7402.005)	
13	- - -	1	SCEW PLUG (1040.125)	
14	- - -	1	SEAL RING (1180.525)	
15	- - -	1	SEAL RING (7319.030)	
16	- - -	1	ALLEN SCREW (1020.113)	
17	- - -	2	WASHER (7316.057)	
18	- - -	8	PLUG (1250.626)	
19	- - -	1	HOUSING (9801.523)	
20	- - -	2	BUSHING (7312.112)	
21	- - -	2	(1750.848)	
22	- - -	2	ADJUSTING KIT (2108.003)	
23	- - -	2	TAPERED-ROLLER BEARING (1130.579)	
24	- - -	1	TAPERED-ROLLER BEARING (1110.014)	
25	- - -	1	CYLINDER ROLLER BEARING (1130.058)	
26	- - -	1	SCREW PLUG (1040.115)	
27	- - -	1	SEAL RING (1180.505)	
28	- - -	1	SEEGER-RING (1220.802)	
29	- - -	1	PLUG (1750.742)	
30	- - -	1	BREATHER (1250.001)	
31	- - -	1	SUPPORTING WASHER (1210.125)	
32	- - -	1	OIL SEAL (1160.220)	
33	- - -	1	SUPPORTING WASHER (1210.119)	
34	- - -	1	ADJUSTING KIT (2108.013)	
35	- - -	1	ADJUSTING IT (2108.021)	
36	- - -	1	GEAR (9804.292)	
37	- - -	2	NEEDLE ROLLER CAGES (1130.272)	
38	- - -	1	GEAR (9804.440)	
39	- - -	3	NEEDLE ROLLER CAGES (1130.272)	
40	- - -	1	GEAR BLOCK (2205.132)	
41	- - -	1	SUPPORTING WASHER (1210.121)	
42	- - -	1	DRIVE PINION (9805.312)	
43	- - -	1	SHIFTING LEVER COMPL (9809.107)	
44	- - -	1	SHIFTING LEVER COMPL (9809.078)	
45	- - -	1	HEXAGON SCREW (1010.219)	
46	- - -	1	WASHER (7316.048)	
47	- - -	1	SHIFTING SLEEVE (9813.135)	
48	- - -	2	WASHER (7315.060)	
81	- - -	1	SHIFTING ROD (9816.065)	
49	- - -	1	HEX. NUT (1060.003)	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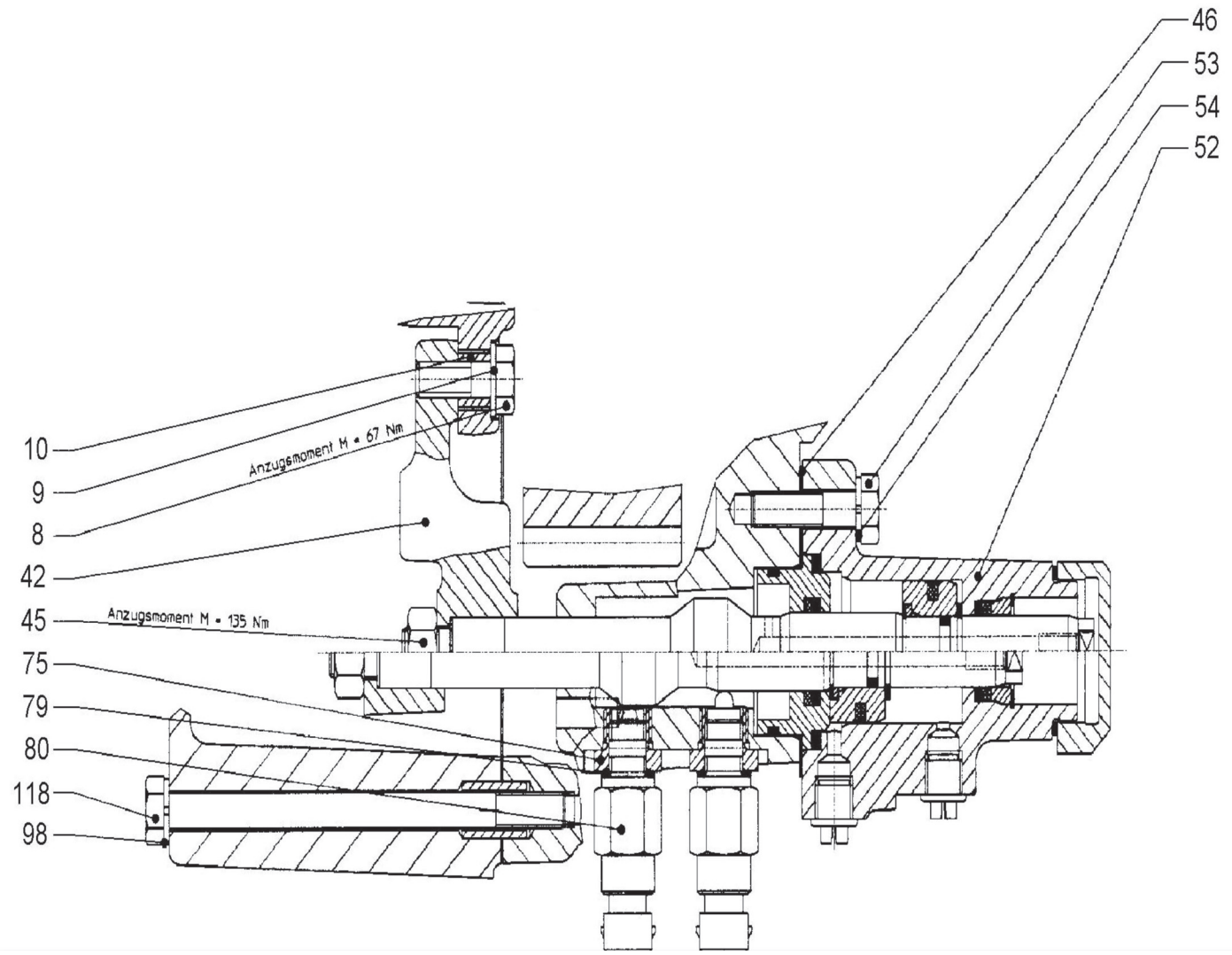
TRANSFER CASE

TIM 16 - (TB 630)
(NAF TWO SPEED SINGLE MOTOR)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
50	- - -	1		ADJUSTING KIT (2108.049)	
51	- - -	1		SHAFT (7222.057)	
52	- - -	1		O-RING (1170.090)	
53	- - -	1		O-RING (1170.792)	
54	- - -	1		SHIFT CYLINDER COMPL (9880.100)	
55	- - -	2		HEXAGON SCREW (1010.242)	
11	- - -	2		LOCKING CLIP (1190.015)	
56	- - -	1		(7301.029)	
57	- - -	6		HEXAGON SCREW (1010.201)	
11	- - -	6		LOCKING CLIP (1190.015)	
58	- - -	2		OIL SEAL (1160.121)	
59	- - -	2		OIL SEAL (1160.217)	
60	- - -	1		COVER (7301.141)	
62	- - -	9		HEXAGON SCEW (1010.346)	
63	- - -	9		LOCKING CLIP (1190.017)	
64	- - -	1		SPACER BUSHING (7311.093)	
65	- - -	1		SPACER BUSHING (7311.111)	
66	- - -	6		SHEAR BUSHING (7313.012)	
67	- - -	1		WASHER (7315.094)	
68	- - -	1		GASKET (7319.033)	
69	- - -	1		GASKET (7319.129)	
70	- - -	1		HEXAGON SCREW (7322.073)	
71	- - -	1		NUT (7329.057)	
72	- - -	1		NUT (7329.093)	
73	- - -	1		(7333.054)	
74	- - -	1		CARDAN FLANGE (7521.135)	
75	- - -	1		CARDAN FLANGE (7521.239)	
76	- - -	1		DIPSTICK (7325.045)	
77	- - -	1		THREADED STUD (7322.112)	
78	- - -	1		SEAL RING (1180.525)	
79	- - -	1		SCREW PLUG (7323.025)	
80	- - -	1		SEAL RING (1180.541)	
--		1		TYPE PLATE (7340.018)	
--		2		PIN (1200.110)	



parts T2888 09/09/03
18.75

TRANSFER CASE

TIM 16 - (TB 630)
(NAF TWO SPEED SINGLE MOTOR)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
-	- - -	1		SHIFT CYLINDER COMPLETE (9880.100)	
8	- - -	1		BOLT, HEX (1010.219)	
9	- - -	1		WASHER (7316.048)	
10	- - -	1		SLEEVE, SPACER (7311.111)	
42	- - -	1		LEVER, SHIFT (9809.078)	
45	- - -	1		NUT, SHIFT ROD (1060.003)	
46	- - -	1		WASHER PACKAGE (2108.049)	
52	- - -	1		CYLINDER	
53	- - -	1		BOLT, HEX (1010.242)	
54	- - -	2		WASHER, LOCKING (1190.015)	
75	- - -	2		BUSHING (7312.112)	
79	- - -	2		WASHER, ADJUSTING (2108.003)	
80	54093-AX	2		SWITCH, PRESSURE (1750.848)	
98	- - -	1		WASHER, LOCKING (1190.015)	
118	- - -	1		BOLT, HEX (1010.226)	

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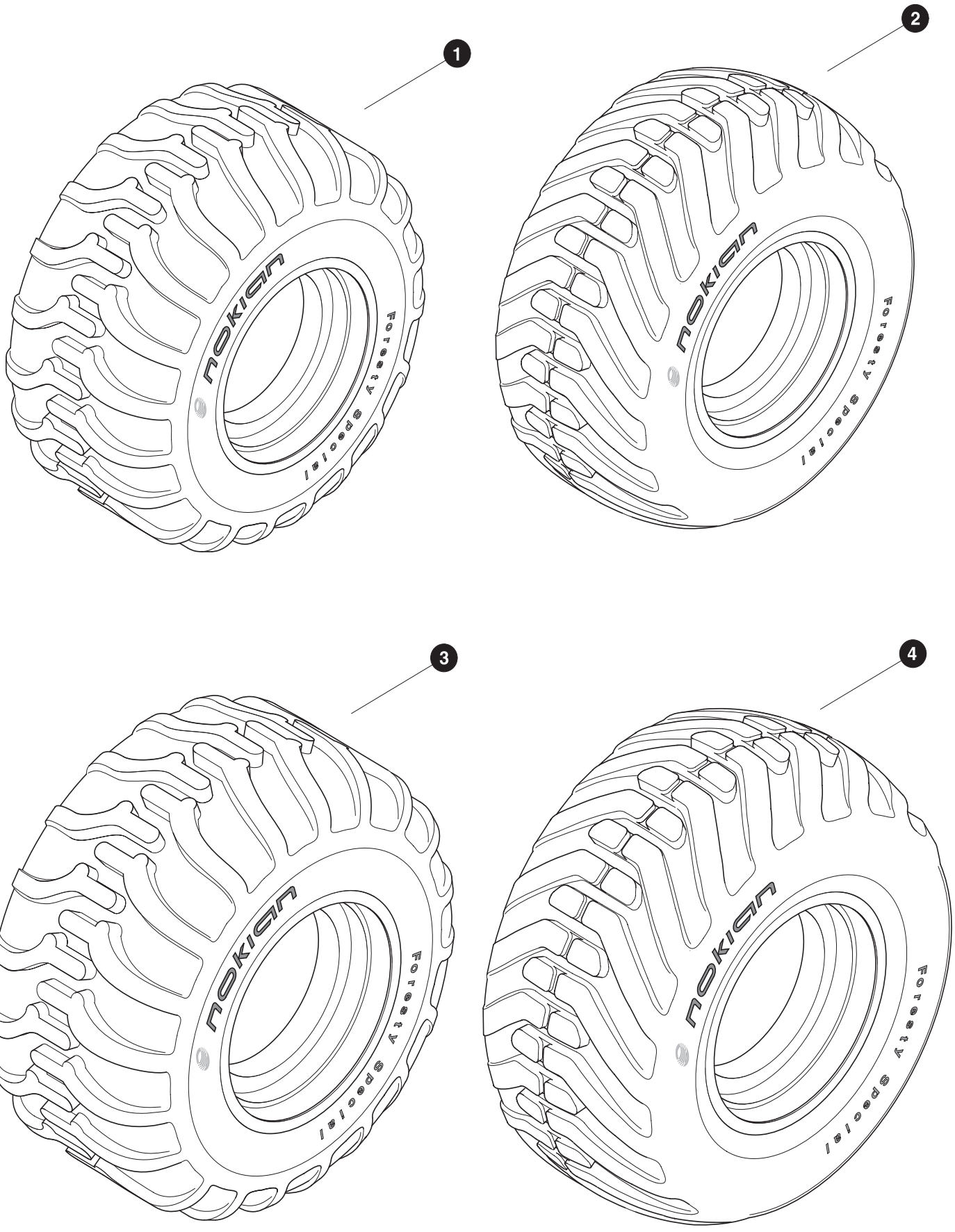
Section AX-5

Axles, Transfer Cases & Wheels - Tires and Wheels



Parts T2876 08/28/03
9.375

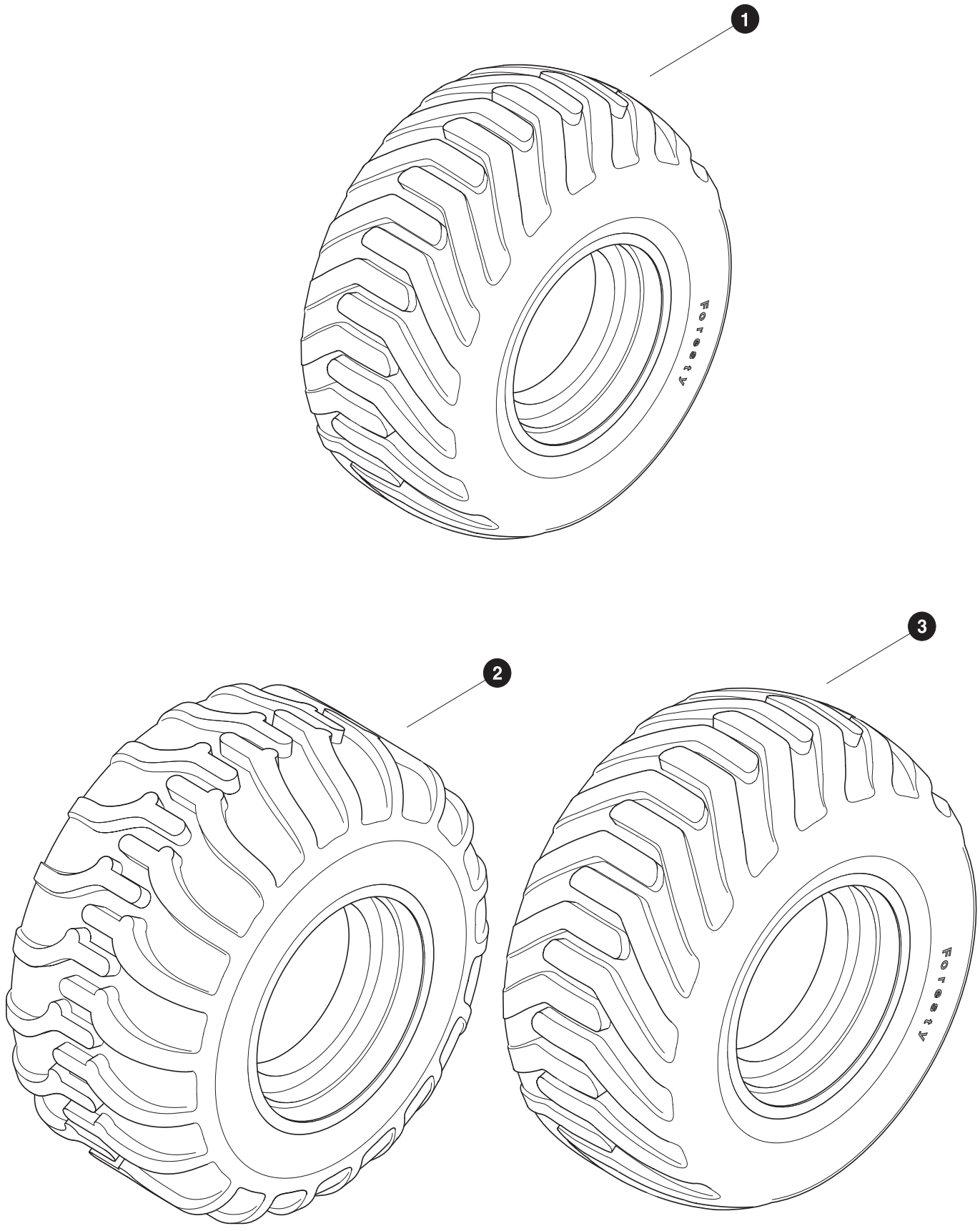
WHEEL ASSEMBLIES
(NOKIAN)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	20006-AX		❑	WHEEL ASSEMBLY, 700/55-26.5" - LH *(Aggressive tread)*	
1	20007-AX		❑	WHEEL ASSEMBLY, 700/55-26.5" - RH *(Aggressive tread)*	
-	- - -	1		TIRE - 700/55-26.5"/20 ply *(Nokian) (T486091)*	
-	21137-AX	1		RIM, wheel - 750/55-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover (T499985)	
-	- - -	1		TUBE, tire - 700/55-26.5" (3550167)	
2	19053-AX		❑	WHEEL ASSEMBLY, 700/55-26.5" - LH *(Non-aggressive tread)*	
2	20005-AX		❑	WHEEL ASSEMBLY, 700/55-26.5" - RH*(Non-aggressive tread)*	
-	- - -	1		TIRE - 700/55-26.5"/20 ply *(Nokian) (T486095)*	
-	21137-AX	1		RIM, wheel - 750/55-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover (T499985)	
-	- - -	1		TUBE, tire - 700/55-26.5" (3550167)	
3	23673-L-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - LH *(Aggressive tread)*	
3	23673-R-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - RH *(Aggressive tread)*	
-	23674-AX	1		TIRE - 750/55-26.5"/20 ply *(Nokian)(Aggressive tread)*	
-	21137-AX	1		RIM, wheel - 750/55-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover (T499985)	
-	20313-AX	1		TUBE, tire - 750/55-26.5"	
4	20310-L-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - LH *(Non-aggressive tread)*	
4	20310-R-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - RH*(Non-aggressive tread)*	
-	20312-AX	1		TIRE - 750/55-26.5"/20 ply *(Nokian)(Non-aggressive tread)*	
-	21137-AX	1		RIM, wheel - 750/55-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover (T499985)	
-	20313-AX	1		TUBE, tire - 750/55-26.5"	

❑ Kit or Assembly - includes all items indented underneath.

Note:

LH and RH wheels are the result of the tire being mounted on the rim so that the tread is running the same direction on both sides of the machine when installed.



Parts T3070 04/28/05
9.375

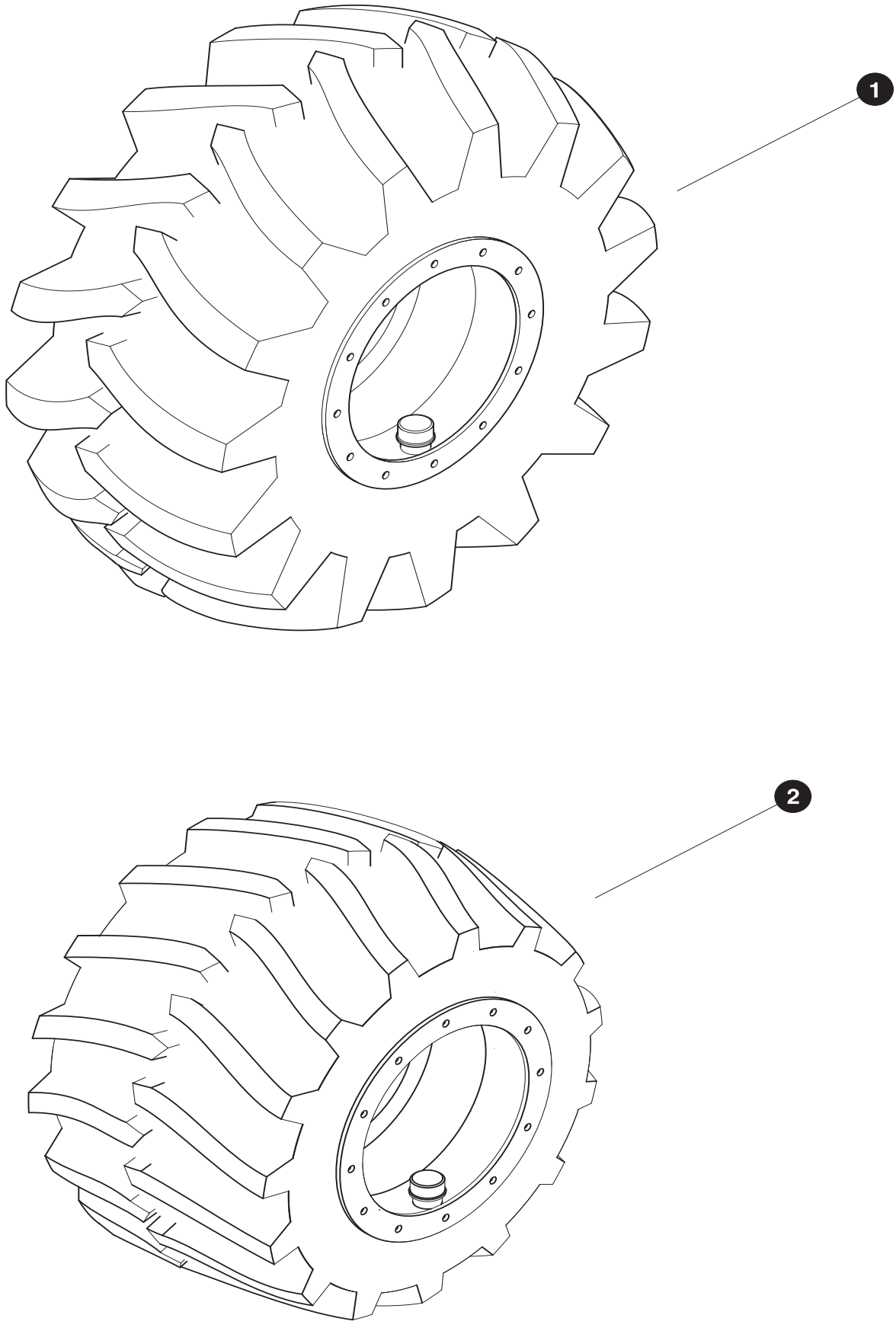
WHEEL ASSEMBLIES
(PRIMEX)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	51579-L-AX		❑	WHEEL ASSEMBLY, 700/50-26.5" - LH ELS*(Non-aggressive tread)*	
1	51579-R-AX		❑	WHEEL ASSEMBLY, 700/50-26.5" - RH ELS*(Non-aggressive tread)*	
-	51778-AX	1		TIRE - 700/50-26.5" ELS *(Primex)*	
-	- - -	1		RIM, wheel - 750/50-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover	
-	- - -	1		TUBE, tire - 700/50-26.5"	
2	51581-L-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - LH TRS*(Aggressive tread)*	
2	51581-R-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - RH TRS*(Aggressive tread)*	
-	- - -	1		TIRE - 750/55-26.5" TRS *(Primex)*	
-	- - -	1		RIM, wheel - 750/50-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover	
-	- - -	1		TUBE, tire - 750/55-26.5"	
3	51580-L-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - LH ELS*(Non-aggressive tread)*	
3	51580-R-AX		❑	WHEEL ASSEMBLY, 750/55-26.5" - RH ELS*(Non-aggressive tread)*	
-	51792-AX	1		TIRE - 750/55-26.5" ELS *(Primex)*	
-	- - -	1		RIM, wheel - 750/50-26.5"	
-	- - -	1		PLUG, black pipe - valve stem cover	
-	- - -	1		TUBE, tire - 750/55-26.5"	

❑ Kit or Assembly - includes all items indented underneath.

Note:

LH and RH wheels are the result of the tire being mounted on the rim so that the tread is running the same direction on both sides of the machine when installed.



Parts T2875 08/28/03
9.375

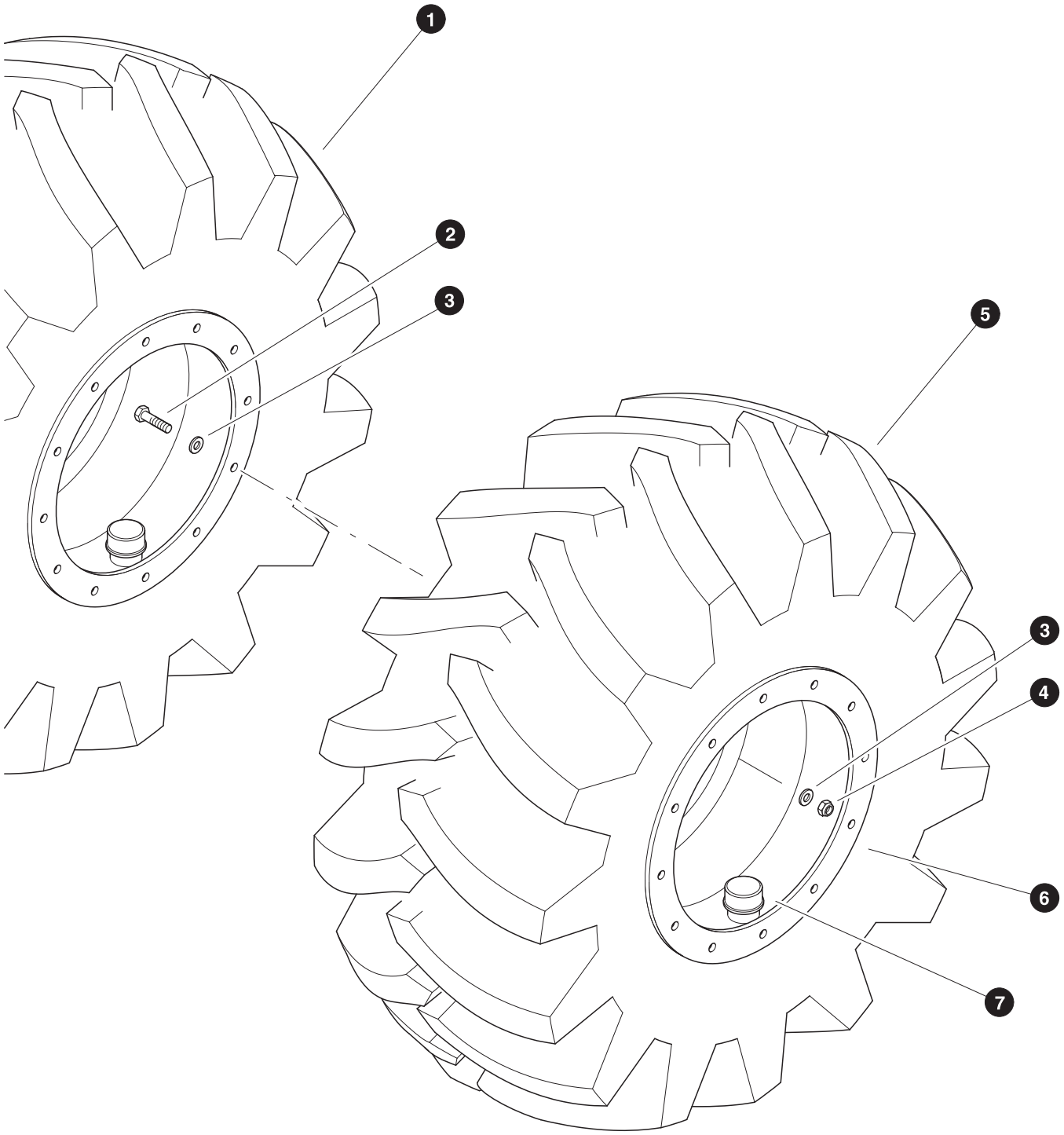
WHEEL ASSEMBLIES
(FIRESTONE)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	20915-L-AX		❑	WHEEL ASSEMBLY, 28L-26 - LH *(With spacer for dual tires)*	
1	20915-R-AX		❑	WHEEL ASSEMBLY, 28L-26 - RH *(With spacer for dual tires)*	
-	19795-AX	1		TIRE/TUBE - 28L-26/14 ply *(Firestone)*	
-	22409-AX	1		RIM, wheel - 28L-26 *(With spacer for dual tires)*	
-	NSS	1		CAP, black pipe - vavle stem cover	
-	19798-AX	1		TUBE, tire - 28L-26	
2	19909-L-AX		❑	WHEEL ASSEMBLY, 54 x 37” - LH (high floation)	
2	19909-R-AX		❑	WHEEL ASSEMBLY, 54 x 37” - RH (high floation)	
-	19791-AX	1		TIRE - 54 x 37”/12 ply *(Firestone)*	
-	19803-AX	1		RIM, wheel - 54 x 37”	
-	NSS	1		CAP, black pipe - vavle stem cover	

❑ Kit or Assembly - includes all items indented underneath.

Note:

LH and RH wheels are the result of the tire being mounted on the rim so that the tread is running the same direction on both sides of the machine when installed.



Parts 01863 09/25/2000
12.50

WHEEL ASSEMBLIES

(Dual Configuration - 28L-26 & 23.1-26 - 16 Wheels Total)

(Firestone dual tires)

REF	PART #	QTY		DESCRIPTION	SEE PAGE
1	REF.		🕮	WHEEL ASSEMBLY, 28L-26 - LH	AX-3-2
	REF.		🕮	WHEEL ASSEMBLY, 28L-26 - RH	AX-3-2
2	10840-AX	96		BOLT - 3/4" x 3"	
3	15550-AX	192		WASHER, SAE flat - 3/4"	
4	10817-AX	96		NUT, lock - 3/4"	
--	19911-L-AX	4	❑	WHEEL ASSEMBLY, 23.1-26 - LH	
--	19911-R-AX	4	❑	WHEEL ASSEMBLY, 23.1-26 - RH	
5	19800-AX	1		TIRE/TUBE - 23.1-26/14 ply *(Firestone)*	
6	19920-AX	1		RIM, wheel - 23.1-26	
7	NSS	1		CAP, black pipe	

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

Note:

LH and RH wheels are the result of the tire being mounted on the rim so that the tread is running the same direction on both sides of the machine when installed.

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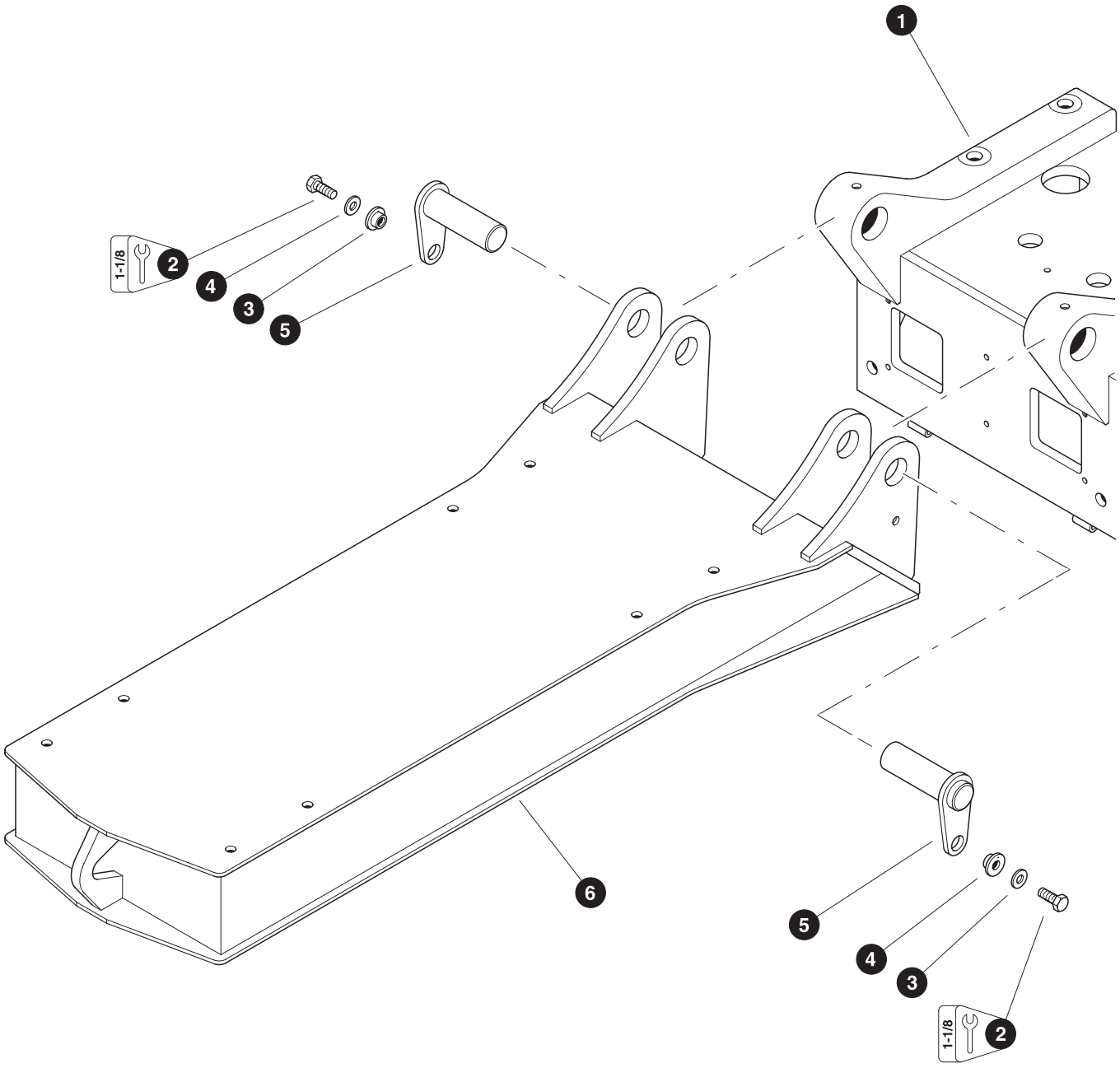
Section FB-1

Floating Bunk, Log Stakes & Headacke Rack - Installation

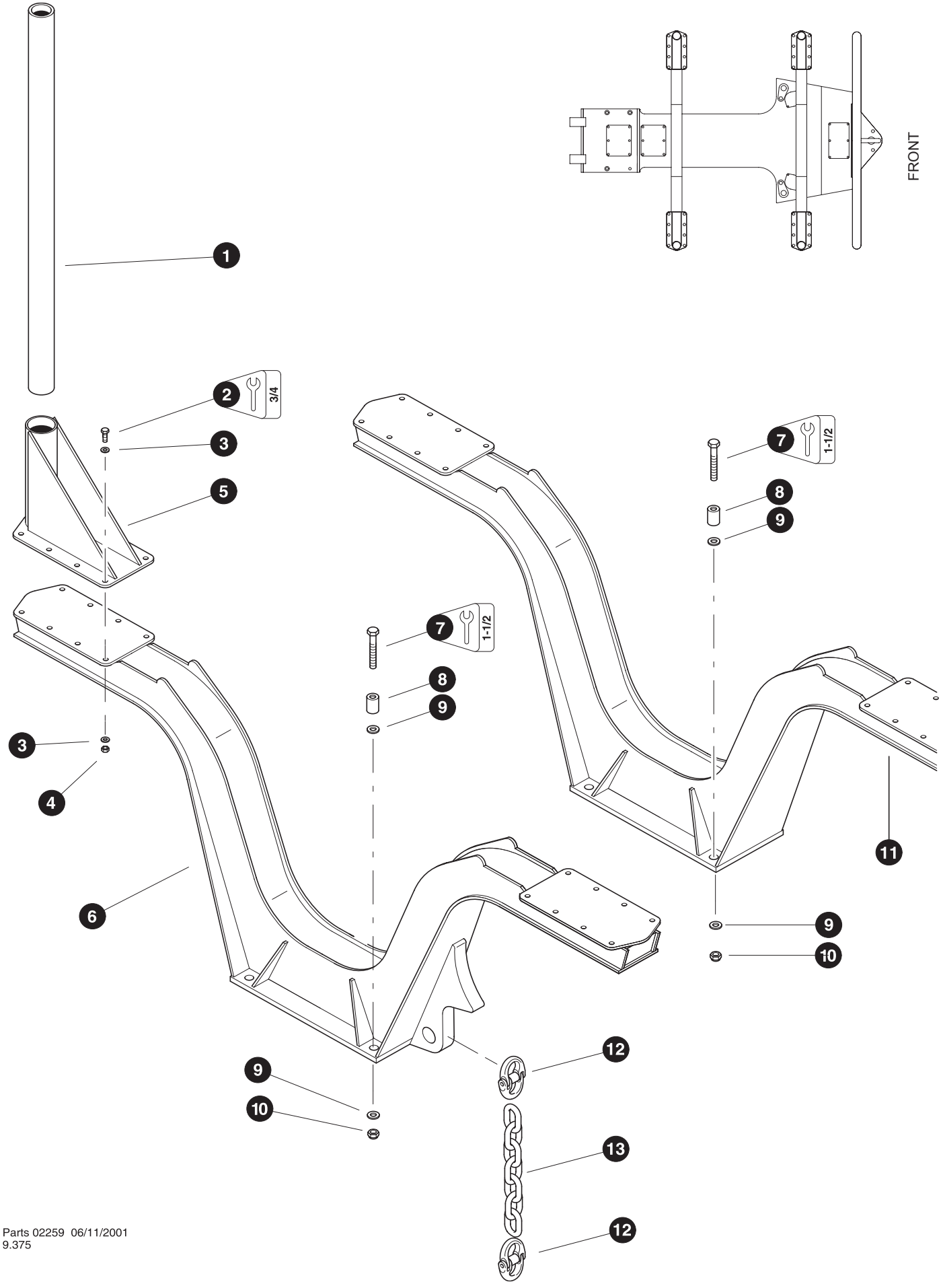


Parts 01917 11/27/2000
12.50

FLOATING BUNK INSTALLATION
(Typical)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF	1	🕮	REAR FRAME WELDMENT	FR-1
2	15549-FB	2		BOLT - 3/4” x 2”	
3	18570-FB	2		WASHER, pin retaining	
4	15550-FB	2		WASHER, SAE flat - 3/4”	
5	23434-FB	2		PIN, floating bunk - 2-1/2” x 7-7/8”	
6	13481-FB	1		WELDMENT, FLOATING BUNK - FWD (2.5”)	

🕮 See referenced page for component or assembly breakdown.



Parts 02259 06/11/2001
9.375

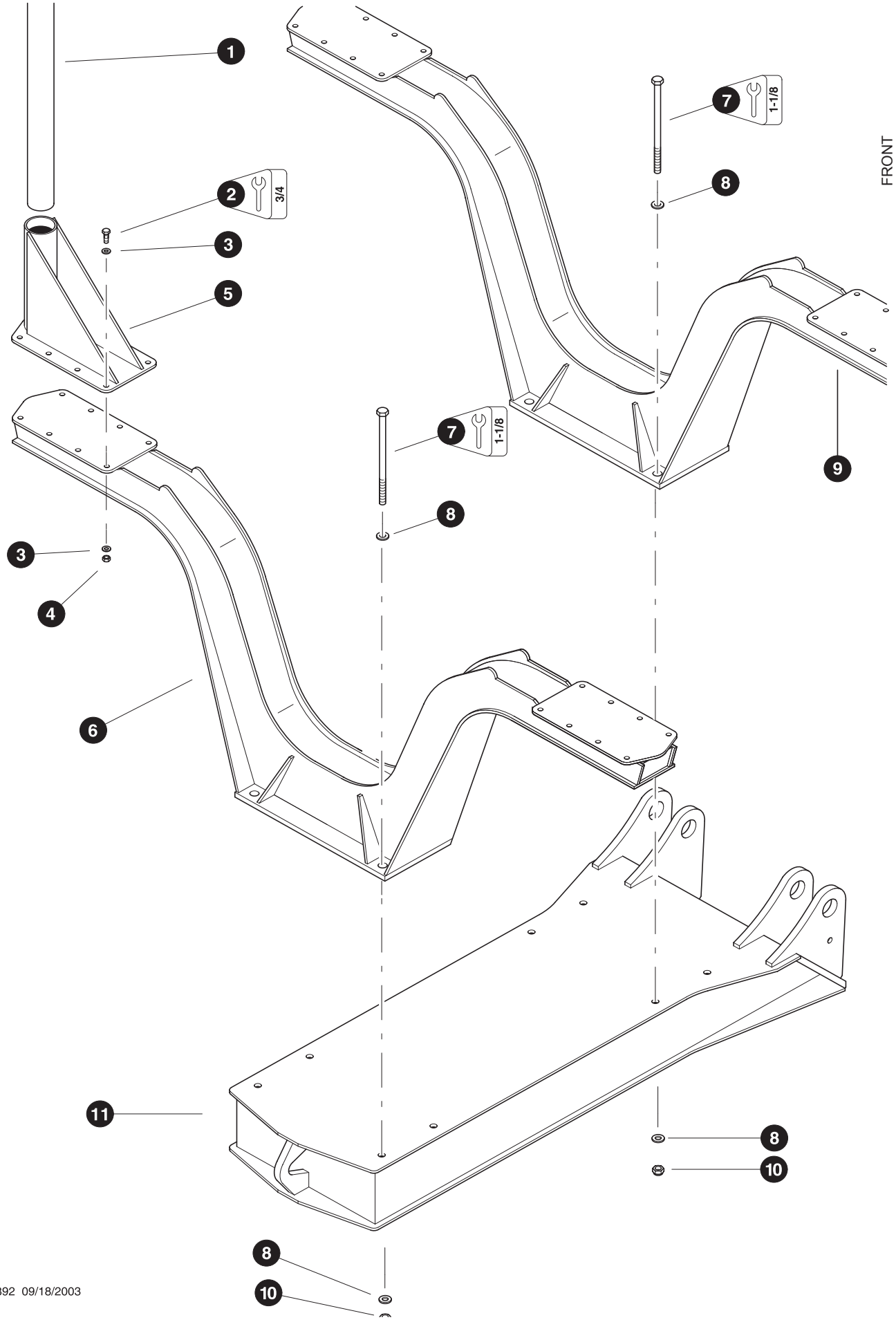
LOG BUNK & STAKE INSTALLATION
(Typical - Forwarder)

(Rear Frame Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	21013-FB	4		TUBE, log stake	
2	10736-FB	24		BOLT - 1/2" x 2"	
3	15534-FB	48		WASHER, SAE flat - 1/2"	
4	10815-FB	24		NUT, lock - 1/2"	
5	80398-FB	4		WELDMENT, log stake pocket	
6	50982-FB	1		BUNK, log bunk w/axle stops and 2" riser - *(Used on machines with Standard 700/50x26.5 or Optional 750/50x26.5 wheels)*	
7	20906-FB	8		BOLT - 1"X 5.5" *(Used when mounting log bunk to the rear frame)*	
8	12463-FB	8		SPACER, 1"	
9	18532-FB	16		WASHER, SAE flat - 1"	
10	18253-FB	16		NUT, lock - 1"	
11	50981-FB	1		BUNK, log bunk w/ 2" riser - *(Used on machines with Standard 700/50x26.5 or Optional 750/50x26.5 wheels)*	
12	24416-FB	4		LINK, connecting - 3/4"	
13	24442-FB	2		CHAIN, axle stop - 3/4" *(7 Links)*	

Note:

When ordering log bunk weldments, be sure to specify wether or not an axle stop is required.
See illustration at left.



Parts T2892 09/18/2003
9.375

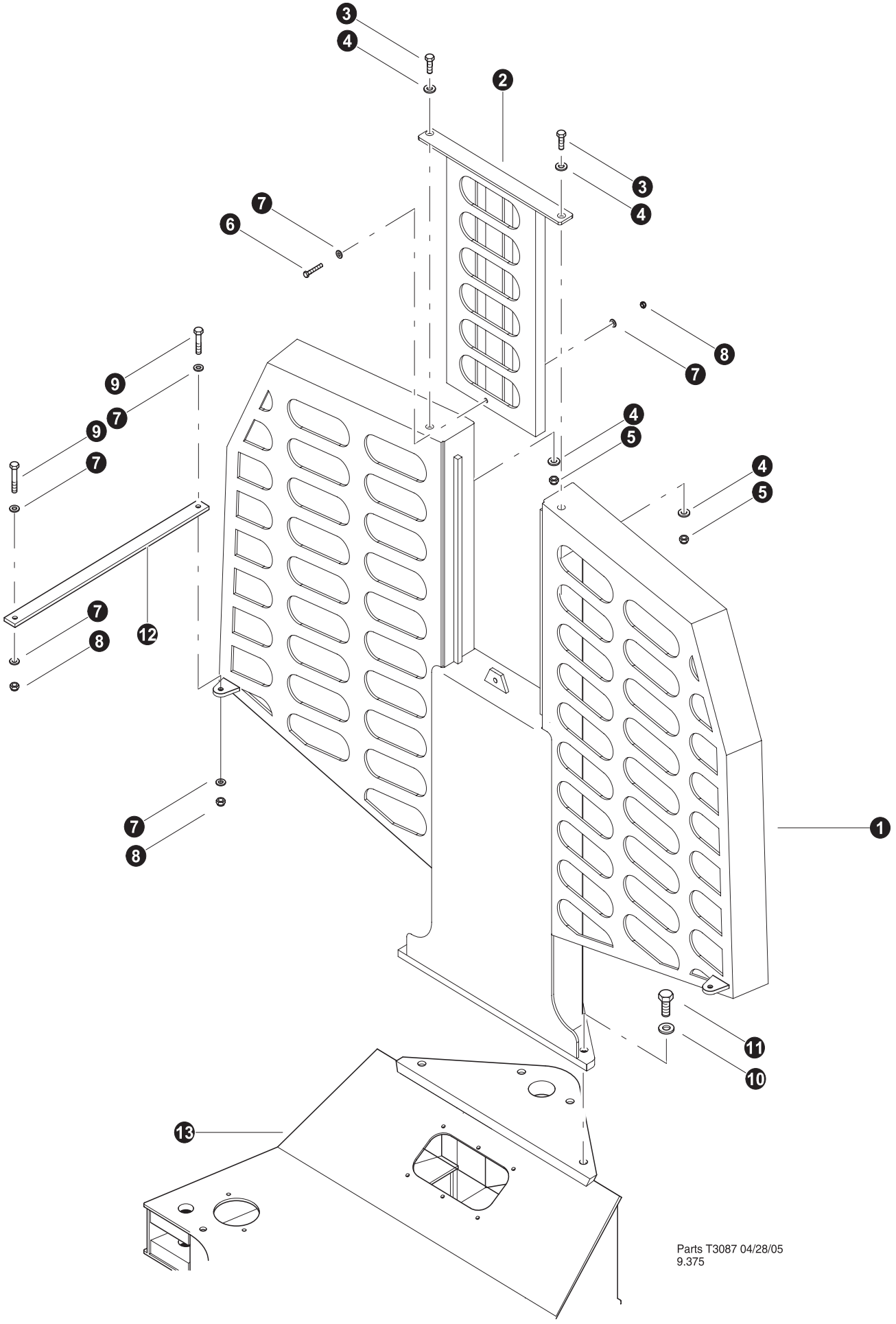
LOG BUNK & STAKE INSTALLATION

(Typical - Forwarder)

(Floating Bunk Installation)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	21013-FB	4		TUBE, log stake	
2	10736-FB	24		BOLT - 1/2” x 2”	
3	15534-FB	48		WASHER, SAE flat - 1/2”	
4	10815-FB	24		NUT, lock - 1/2”	
5	80398-FB	4		WELDMENT, log stake pocket	
6	50981-FB	3		BUNK, log bunk - 28” *(Used on machines with Standard 700/50x26.5 or Optional 750/50x26.5 wheels)*	
7	20905-FB	8		BOLT - 3/4”X 12” *(Used when mounting log bunk to the floating bunk)*	
8	15550-FB	16		WASHER, SAE flat - 3/4”	
9	80742-FB	2		BUNK, log bunk - *(Used on machines with Standard 700/50x26.5 or Optional 750/50x26.5 wheels)*	
10	10817-FB	16		NUT, lock - 3/4”	
11	REF.	1	🕮	FLOATING BUNK	FB-1

🕮 See referenced page for component or assembly breakdown.



Parts T3087 04/28/05
9.375

HEADACHE RACK INSTALLATION
(Typical - Forwarder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	51979-FB	1	❑	HEADACHE RACK ASSY. - TF-830 WINGED BACK	
2	51980-FB	1		HEADACHE RACK DOOR	
3	15549-FB	2		BOLT - .75” X 2.0	
4	15550-FB	4		WASHER, SAE FLAT - .75”	
5	10817-FB	2		NUT, LOCK - 3/4	
6	10834-FB	1		BOLT - .5” X 4”	
7	15534-FB	9		WASHER, SAE flat - 1/2”	
8	10815-FB	4		NUT, lock - 1/2	
9	10736-FB	4		BOLT - 1/2” x 2”	
10	15579-FB	4		WASHER, FLAT 1”	
11	15552-FB	4		BOLT - 1” x 2-1/2”	
12	22291-FB	2		BAR, stabilizer	
13	REF.	1	🕮	REAR FRAME	FR-1

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

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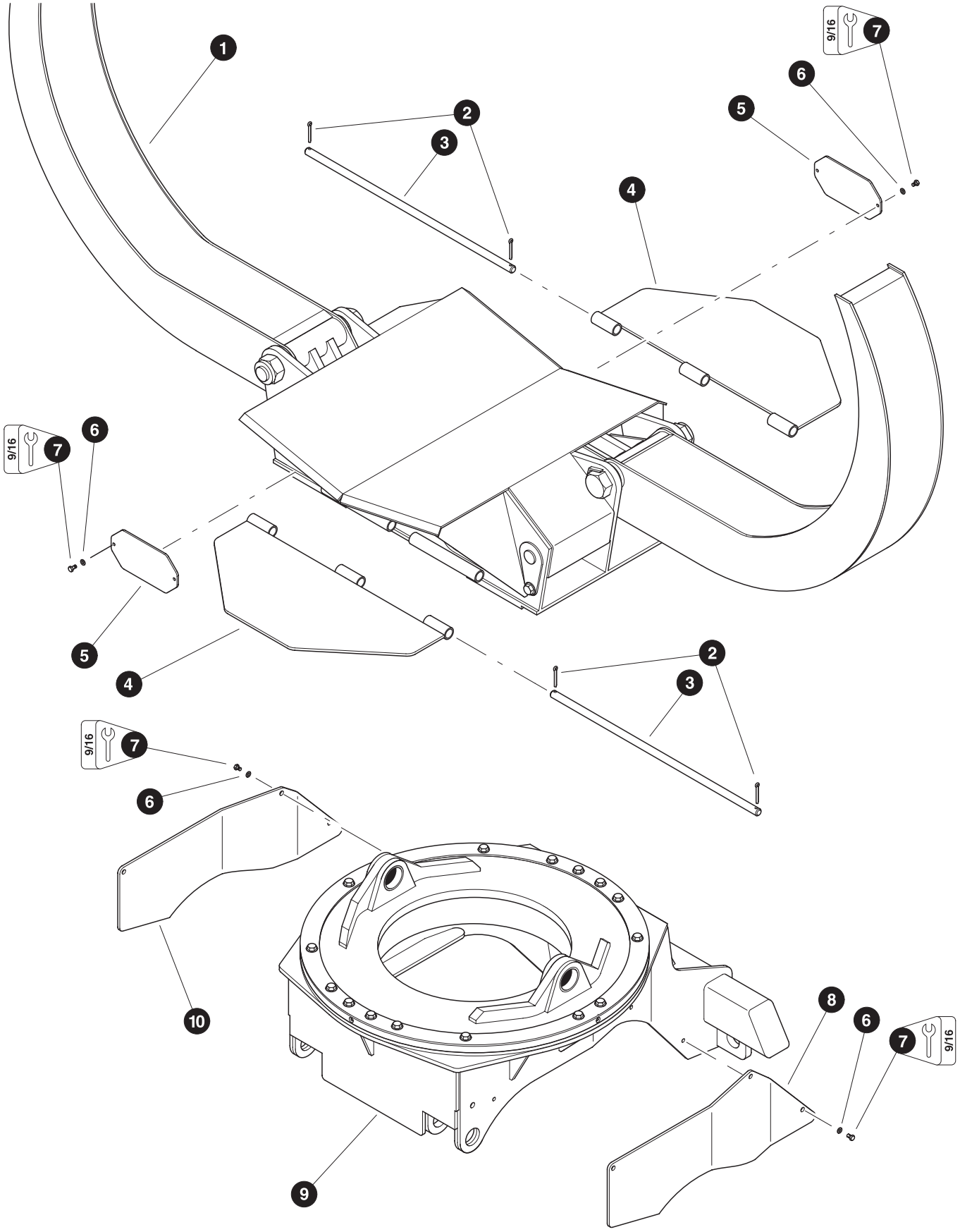
Section CB-1

Clam Bunk - Structural

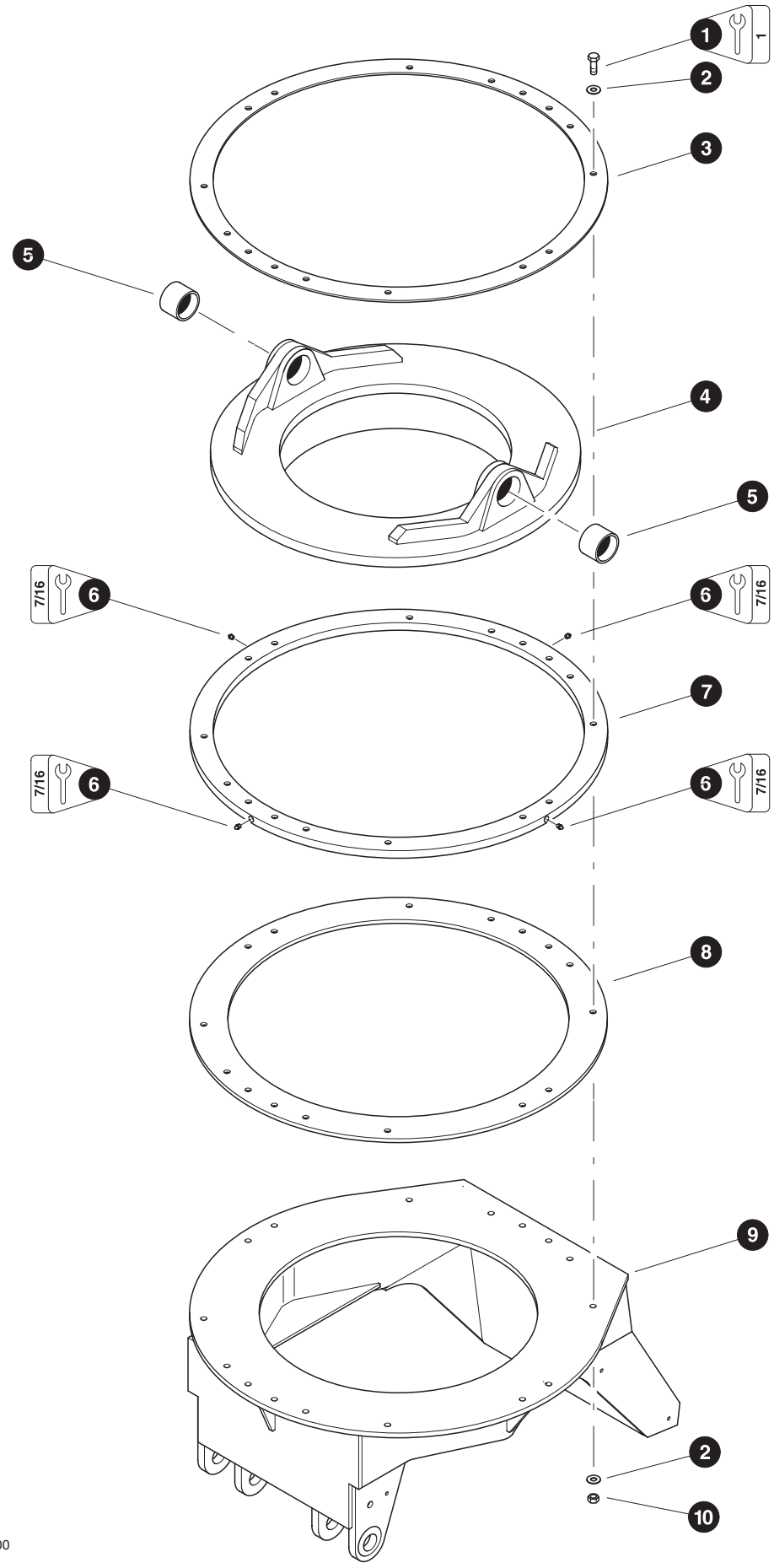


Parts 01916 11/27/2000
9.375

CLAM BUNK ACCESS COVERS & GUARDS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	23992-CB	1	❑	CLAM BUNK COMPLETE (2.5” Pins)	
1	REF.	1	🕮	CLAM BUNK UPPER COMPONENTS	CB-1
2	20249-CB	4		PIN, cotter - 1/4” x 2”	
3	13390-CB	2		SHAFT, hinge cover	
4	13385-CB	2		COVER, hinge	
5	13415-CB	4		COVER, access - arm mounting base	
6	15528-CB	14		WASHER, SAE flat - 3/8”	
7	11707-CB	14		BOLT - 3/8” x 1”	
8	13488-CB	1		COVER, access - clam mounting base - RH	
9	REF.	1	🕮	CLAM BUNK LOWER BASE COMPONENTS	CB-1
10	13489-CB	1		COVER, access - clam mounting base - LH	

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

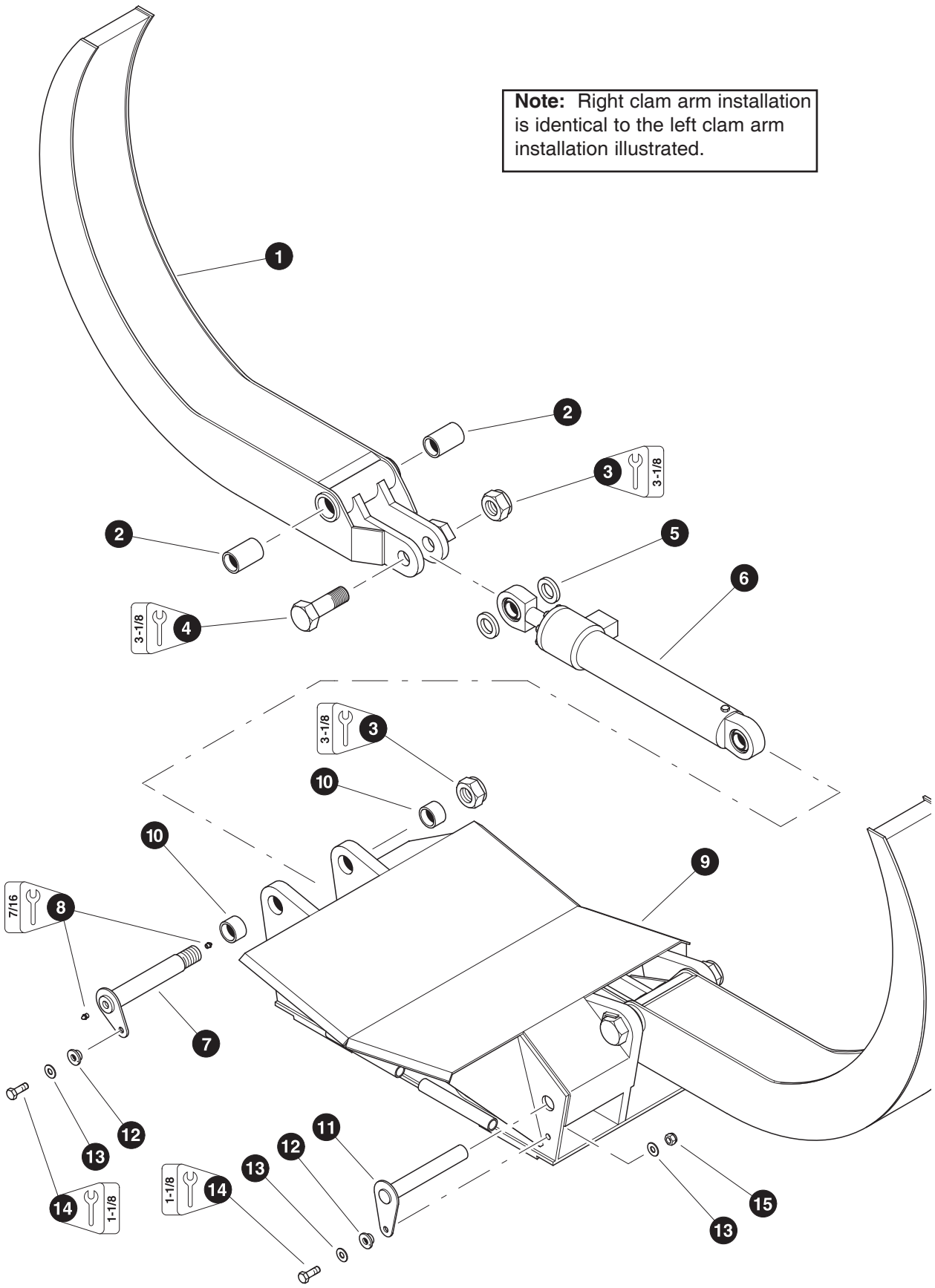


Parts 01909 11/22/2000
9.375

CLAM BUNK LOWER BASE COMPONENTS

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	10773-CB	16		BOLT - 5/8” x 3-1/2”	
2	10771-CB	32		WASHER, SAE flat - 5/8”	
3	13380-CB	1		RING, clam pivot hold-down	
4	13465-CB	1	❑	WELDMENT, clam pivot	
5	12397-CB	2		BUSHING - 3” x 2-1/2”	
6	10704-CB	4		FITTING, grease	
7	13463-CB	1		RING, clam pivot spacer	
8	13366-CB	1		RING, clam pivot wear	
9	13480-CB	1		WELDMENT, clam mounting base	
10	10816-CB	16		NUT, lock - 5/8”	

❑ Kit or Assembly - includes all items indented underneath.

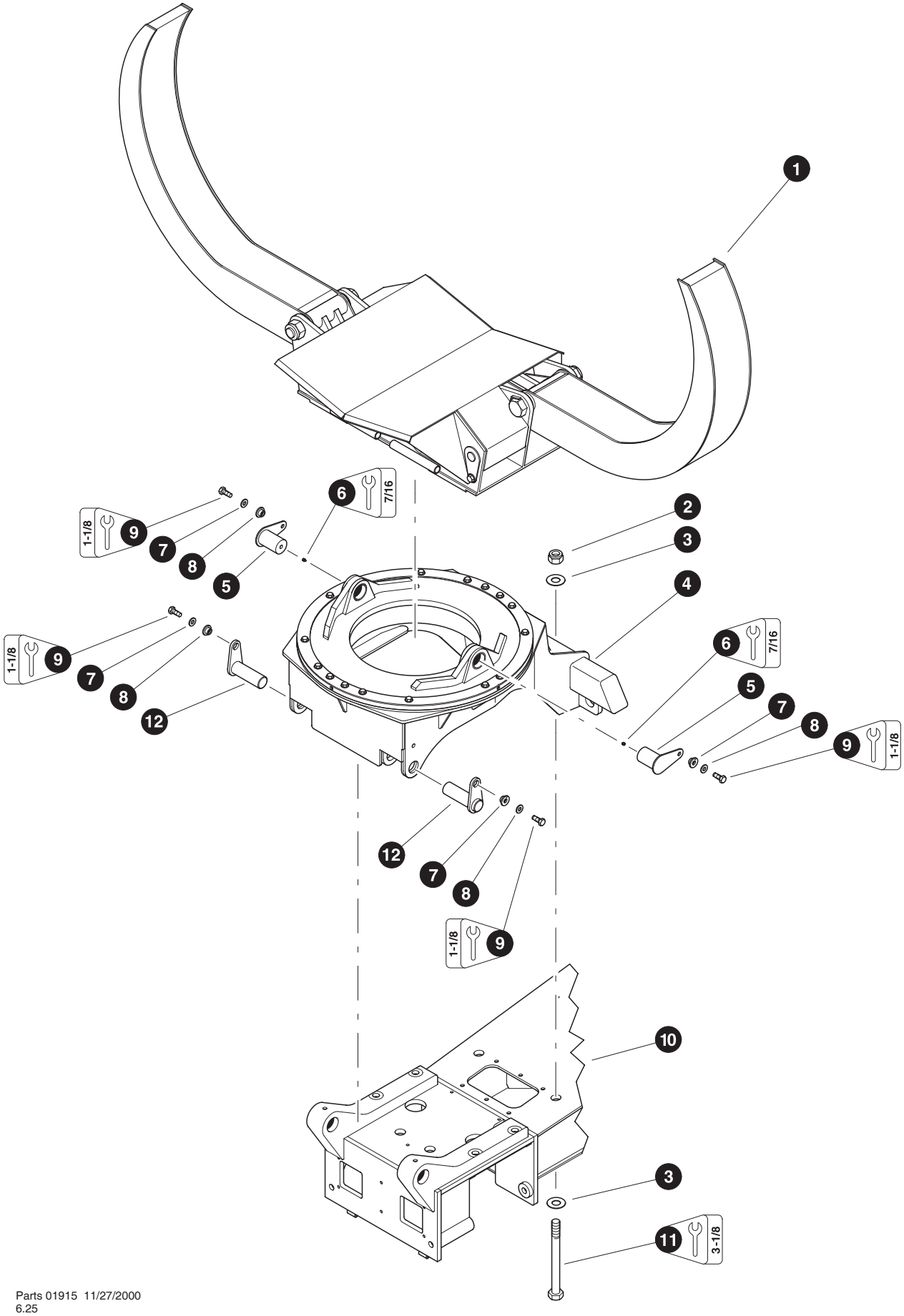


Parts 02016 12/12/2001
9.375

CLAM BUNK ARM INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	13535-CB	2	❑	WELDMENT, clam bunk arm	
2	11704-CB	2		BUSHING - 2-1/2” x 4-1/4”	
3	10728-CB	4		NUT, nylock - 2”	
4	20251-CB	2		PIN, clam cylinder rod - 2” x 7”	
5	20758-CB	4		SPACER	
6	REF.	2	🕮	CLAM BUNK CYLINDER.	CB-2
7	13533-CB	2	❑	PIN, clam arm - 2-1/2” x 18”	
8	10704-CB	4		FITTING, grease	
9	13531-CB	1	❑	WELDMENT, clam arm base	
10	13532-CB	4		BUSHING - 2” x 1-3/4”	
11	19542-CB	2		PIN, clam cylinder base	
12	18570-CB	4		WASHER, pin retaining	
13	15550-CB	6		WASHER, SAE flat - 3/4”	
14	10775-CB	4		BOLT - 3/4” x 2-1/2”	
15	10817-CB	2		NUT, lock - 3/4”	

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



Parts 01915 11/27/2000
6.25

CLAM BUNK UNIT INSTALLATION

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CLAM BUNK UPPER COMPONENTS	CB-1
2	19614-CB	2		NUT, lock - 1-1/2”	
3	19613-CB	4		WASHER, flat - 1-1/2”	
4	REF.	1	🕮	CLAM BUNK LOWER BASE COMPONENTS	CB-1
5	19544-CB	2	❑	PIN, clam bunk pivot	
6	10704-CB	1		FITTING, grease	
7	18570-CB	4		WASHER, pin retaining	
8	15550-CB	4		WASHER, SAE flat - 3/4”	
9	10549-CB	4		BOLT - 3/4” x 2”	
10	REF.	1	🕮	REAR FRAME WELDMENT	
11	20415-CB	2		BOLT - 1-1/2” x 19”	
12	23434-CB	2		PIN, floating bunk - 2-1/2” x 7-7/8”	

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

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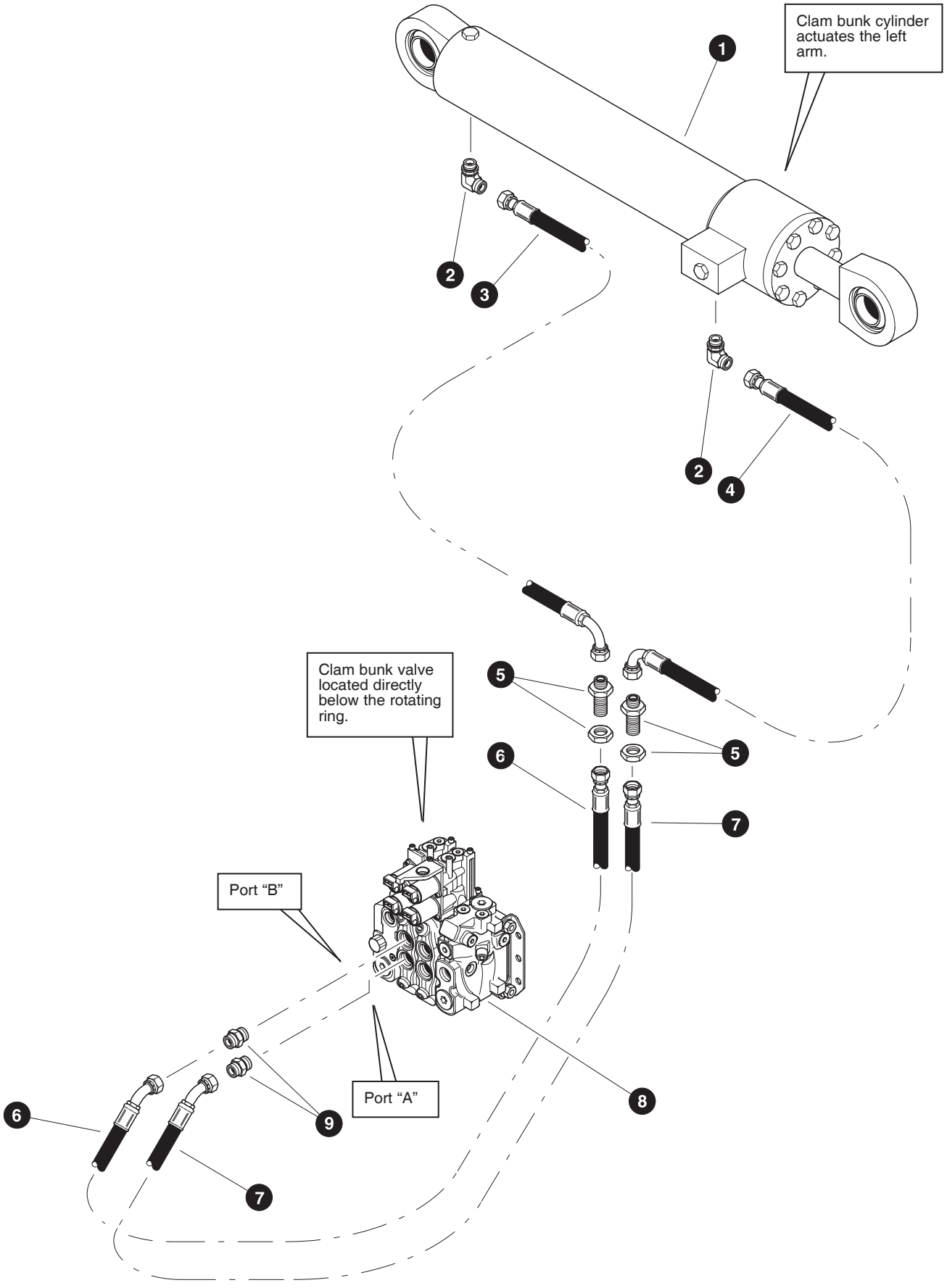
Section CB-2

Clam Bunk -
Hydraulic Circuits & Components



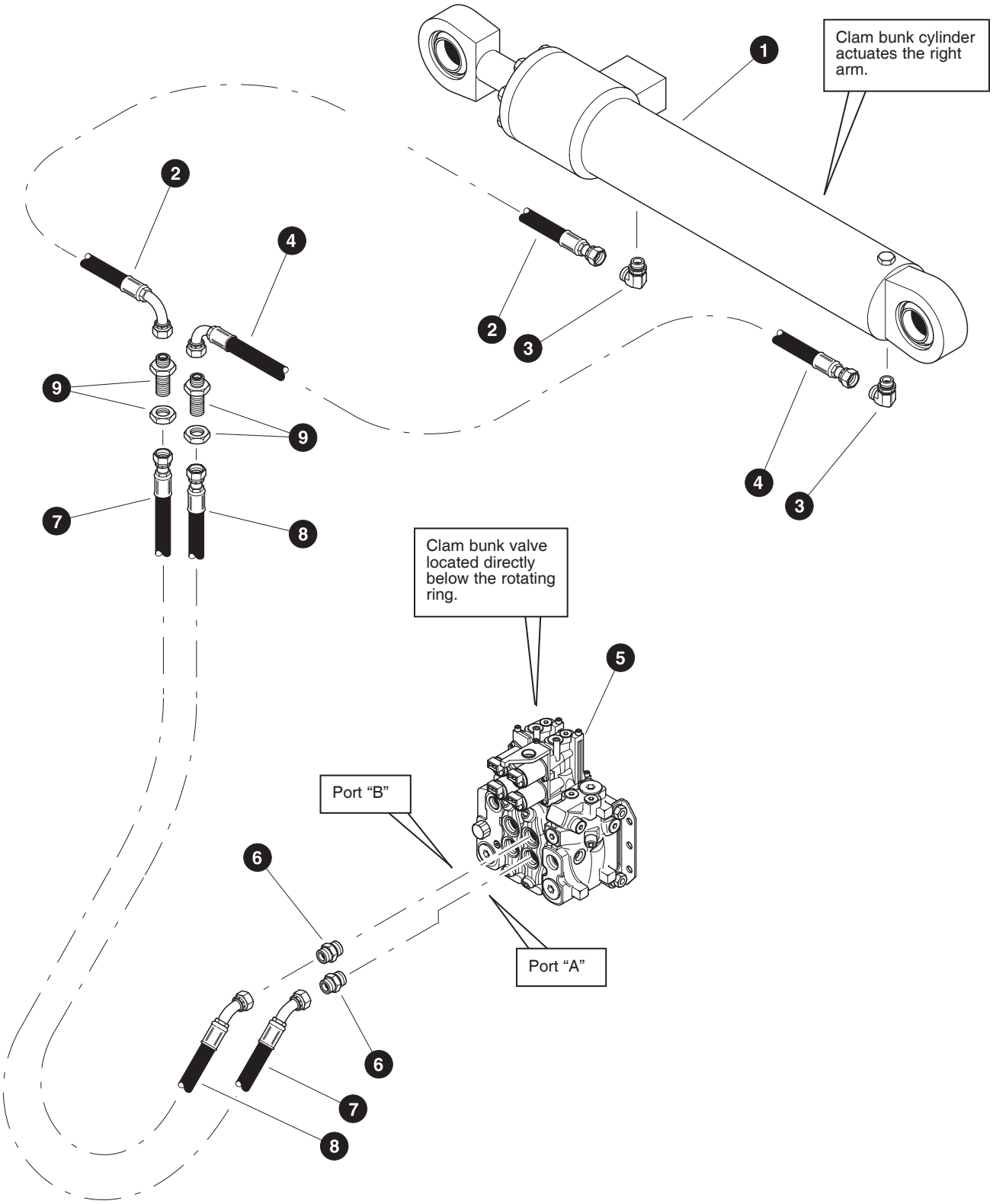
Parts 01991 01/22/200
18.75

CLAM BUNK ARM LINES
(Clam Bunk Valve To Left Clam Bunk Cylinder)

(Used on machines PDN# 151FWD and above)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CLAM BUNK CYLINDER.	CB-2
2	16360-CB	2		ELBOW, 90° - FF1868T-0808S	
3	17483-CB	1		HOSE ASSEMBLY - 4019-08-080S-0809 *(Clam bunk cylinder base port to left front bulkhead fitting)*	
4	20195-CB	1		HOSE ASSEMBLY - 4031-08-080S-0809 *(Clam bunk cylinder rod port to right front bulkhead fitting)*	
5	20196-CB	2		CONNECTOR, straight bulkhead - FF1994T-0808S	
6					
7					
8	REF.	1	🕮	CLAM BUNK CONTROL VALVE.	CB-3
9	15115-CB	2		CONNECTOR, straight - FF1852T-0810S	

🕮 See referenced page for component or assembly breakdown.

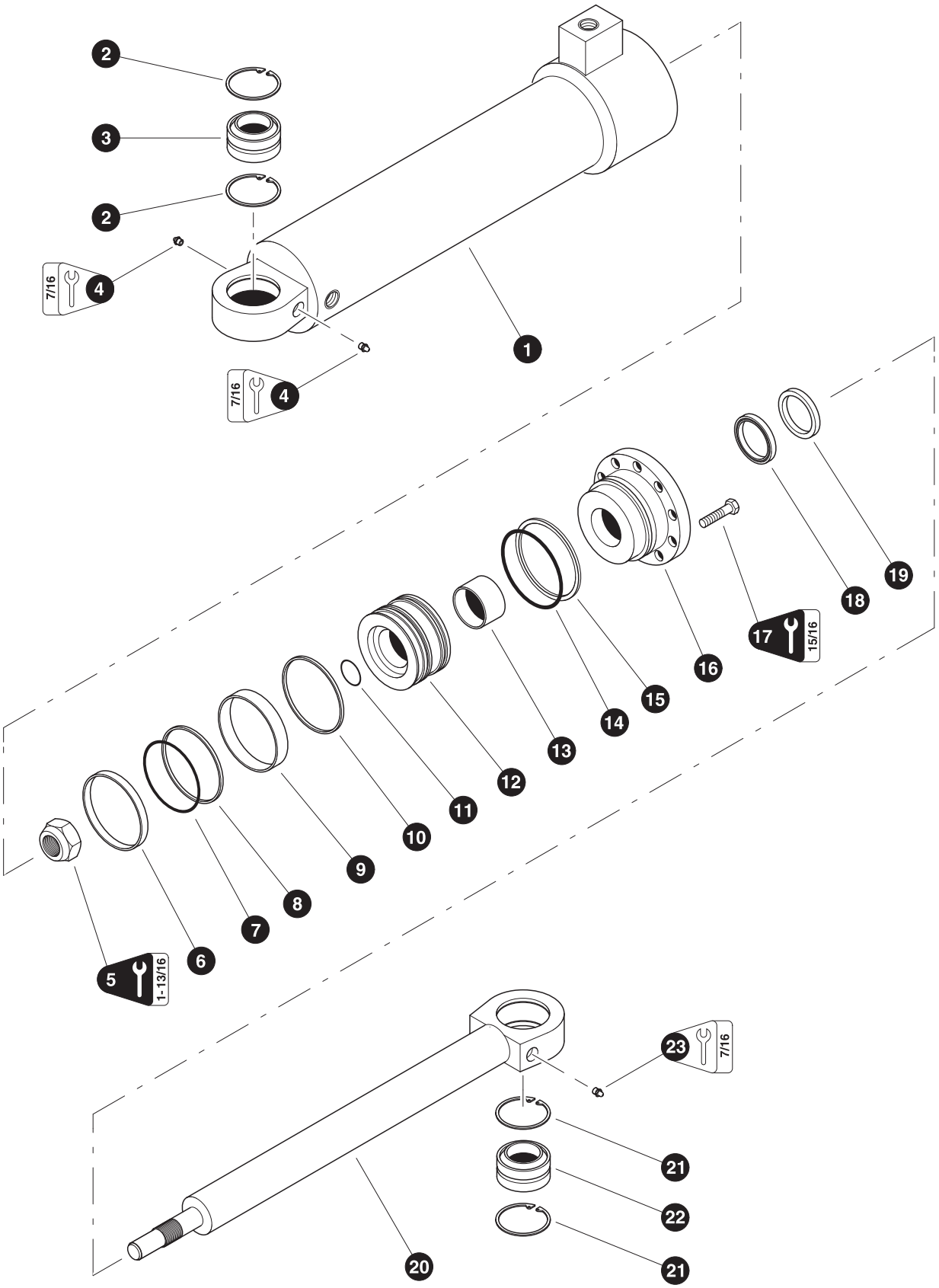


Parts 01992 01/22/2001
18.75

CLAM BUNK ARM LINES
(Clam Bunk Valve To Right Clam Bunk Cylinder)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
1	REF.	1	🕮	CLAM BUNK CYLINDER.	CB-2
2	16360-CB	2		ELBOW, 90° - FF1868T-0808S	
3	20195-CB	1		HOSE ASSEMBLY - 4031-08-080S-0809 *(Clam bunk cylinder rod port to left rear bulkhead fitting)*	
4	17483-CB	1		HOSE ASSEMBLY - 4019-08-080S-0809 *(Clam bunk cylinder base port to right rear bulkhead fitting)*	
5	REF.	1	🕮	CLAM BUNK CONTROL VALVE.	CB-3
6	15115-CB	2		CONNECTOR, straight - FF1852T-0810S	
7					
8					
9	20196-CB	2		CONNECTOR, straight bulkhead - FF1994T-0808S	

🕮 See referenced page for component or assembly breakdown.

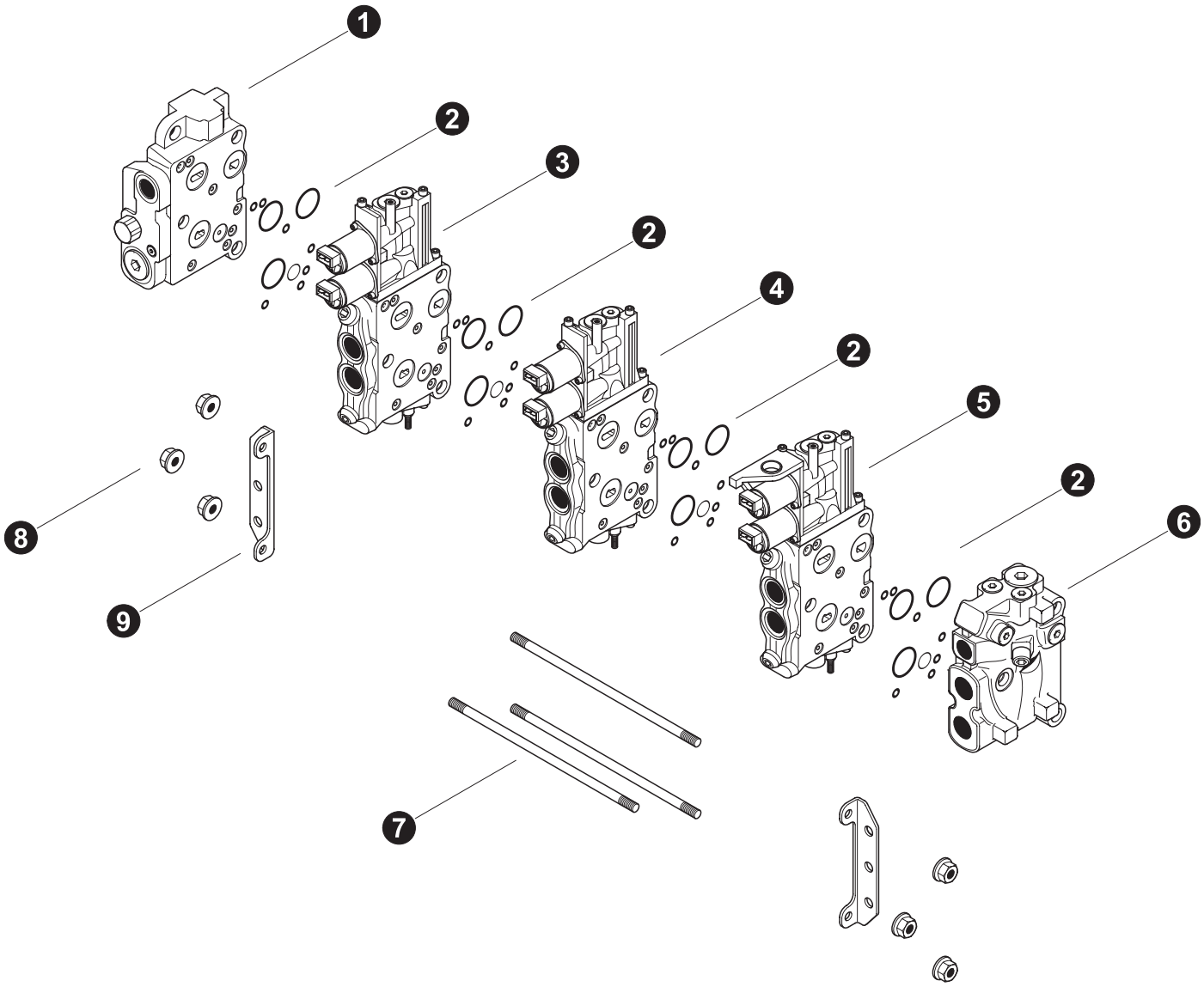


00268 09/08/97
18.75

CLAM ARM CYLINDER
(Jarp)

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	19738-CB	2	❑	CLAM ARM CYLINDER ASSEMBLY	
1	19960-CB	1	❑	BARREL ASSEMBLY	
2	19916-CB	2		RING, snap	
3	19917-CB	1		BUSHING, spherical - 2”	
4	10704-CB	1		FITTING, straight grease - 1/8” pipe thread	
5	15914-CB	1		NUT, cylinder rod - 1-3/4” ***(Torque to 885 +/- 60 ft.lbs. (1175 +/- 80 Nm))***	
6	NSS	1	⌘	RING, piston wear	
7	NSS	1	⌘	RING, piston loader	
8	NSS	1	⌘	RING, piston chem-cast	
9	NSS	1	⌘	RING, piston wear	
10	NSS	1	⌘	RING, piston seal	
11	NSS	1	⌘	O-RING, piston	
12	19573-CB	1		PISTON	
13	NSS	1	⌘	RING, rod bearing wear	
14	NSS	1	⌘	O-RING, rod bearing	
15	NSS	1	⌘	RING, rod bearing back-up	
16	19962-CB	1		BEARING, rod	
17	15681-CB	8		BOLT - 5/8” x 2-1/4” ***(Torque to 175 ft.lbs (233 Nm))***	
18	NSS	1	⌘	U-CUP, rod bearing	
19	NSS	1	⌘	WIPER, rod	
20	19963-CB	1	❑	ROD ASSEMBLY	
21	19916-CB	2		RING, snap	
22	19917-CB	1		BUSHING, spherical - 2”	
23	10704-CB	1		FITTING, straight grease - 1/8” pipe thread	
-	19964-CB	1		KIT, seal repair - steer/clam arm cylinder - 5”	

❑ Kit or Assembly - includes all items indented underneath.
⌘ Included in seal repair kit Part # 19964-LB.



Parts T3264 08/09/2005
18.75

LOWER VOAC CONTROL VALVE BREAKDOWN

REF	PART #	QTY		DESCRIPTION	SEE SECTION
-	52010-CB	1	❑	VALVE, MAIN - VOAC (3-L90) STEER/CLAMBUNK	
1	REF	1	🕮	VALVE SECTION - inlet	LH-2
2	23404-CB	7		KIT, seal repair - L90LS face seals	
3	23321-CB	1	🕮	VALVE SECTION, steer - (P/L-3000 PSI)	LH-2
4	24774-CB	1	🕮	VALVE SECTION, clam bunk cyl	LH-2
5	24774-CB	1	🕮	VALVE SECTION, clam bunk cyl	LH-2
6	REF	1	🕮	VALVE SECTION - outlet	LH-2
7	-HR	1	❑	KIT, tie rod (3 section) (393000K003)	
8	23913-CB	6		NUT (Special torque procedure) (See Note #2 Below)	
9	23402-CB	1		KIT, mounting brackets	

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

Note #1:

Illustration and parts list reflects a standard valve configuration used for a TF 830 W / CLAM BUNK machine. Contact your dealer if your valve or machine configuration differs.

Note #2:

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

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