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MANUALS ARE MODEL AND SERIAL NUMBER SPECIFIC.

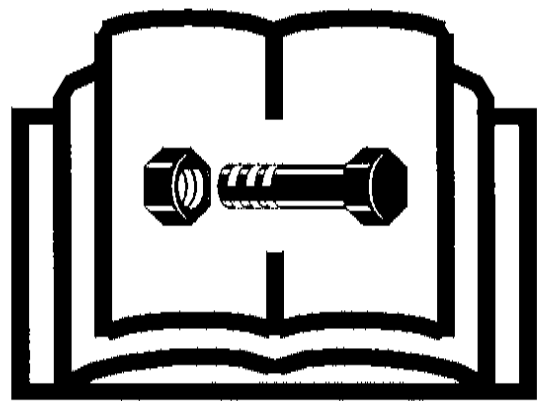
If additional printed manuals are required for your shop/office location, order by
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If a retail customer needs replacement manual(s) for a specific unit, contact the
factory's Customer Data Center at: 800-829-0051 or
customerdata@vermeermfg.com

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Vermeer

D24X40A Navigator



Parts Manual

PMJL97-1
SERIAL NO. 101-
ORDER NO. 105400-N40

INTRODUCTION

HOW TO USE THE MANUAL

This manual contains illustrations and parts lists of components and assemblies which make up the machine. Each page consists of the name of the assembly or component, a figure number, reference numbers, part numbers, part names, and the quantities of the parts used.

Assembly or component name helps identify the illustration and parts list for each figure. This name also helps locate the general area of the machine where the assembly or component can be located.

Figure numbers are used to identify each assembly or component and to group these assemblies or components into major categories.

Reference numbers shown in a column refers to the numbered parts in the illustration. This ties the part in the illustration to the part number and description in the parts list.

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Part numbers are used to identify individual parts or part assemblies.

Part descriptions provide the name of the part, plus additional information such as dimensional specifications and what parts are grouped together to form part assemblies, which helps you identify the part(s).

Quantities listed for each figure are only for that assembly or component and not the total used per machine.

Parts are listed by part number in numerical order in the back portion of the manual. After each part number is a list of references where the part is used in the manual.

This parts manual is not intended to be a complete guide for machine service or repairs. Contact your Vermeer dealer for any of your service or technical requirements.

ORDERING PARTS

Parts for repair or replacement are available through our network of authorized dealers located throughout the world.

Use only authorized Vermeer parts for repair or replacement. Always give the serial number

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and model number of the machine for which parts are being ordered. When ordering parts for component(s), which are not manufactured by Vermeer Manufacturing, also give the serial number of that component(s). Order all parts by part number, part name, and quantity needed.

UPDATING AND REORDERING MANUALS

The parts lists, illustrations, and specifications in this manual are based on the latest information available at time of publication. Your machine may have product improvements and options not yet contained in this manual.

Vermeer Manufacturing Company reserves the right to make changes at any time without notice or obligation to you.

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Your dealer will receive notice of these changes and can assist you with accurate parts identification when ordering.

A copy of this manual is supplied with each machine. Additional copies are available through your dealer. When ordering additional manuals, use the reorder number listed on the front cover and the quantity needed.

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2411 Highway 102
Pella, Iowa 50219-0200

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Revised April 1998 due to addition
of figure to manual. Added figure
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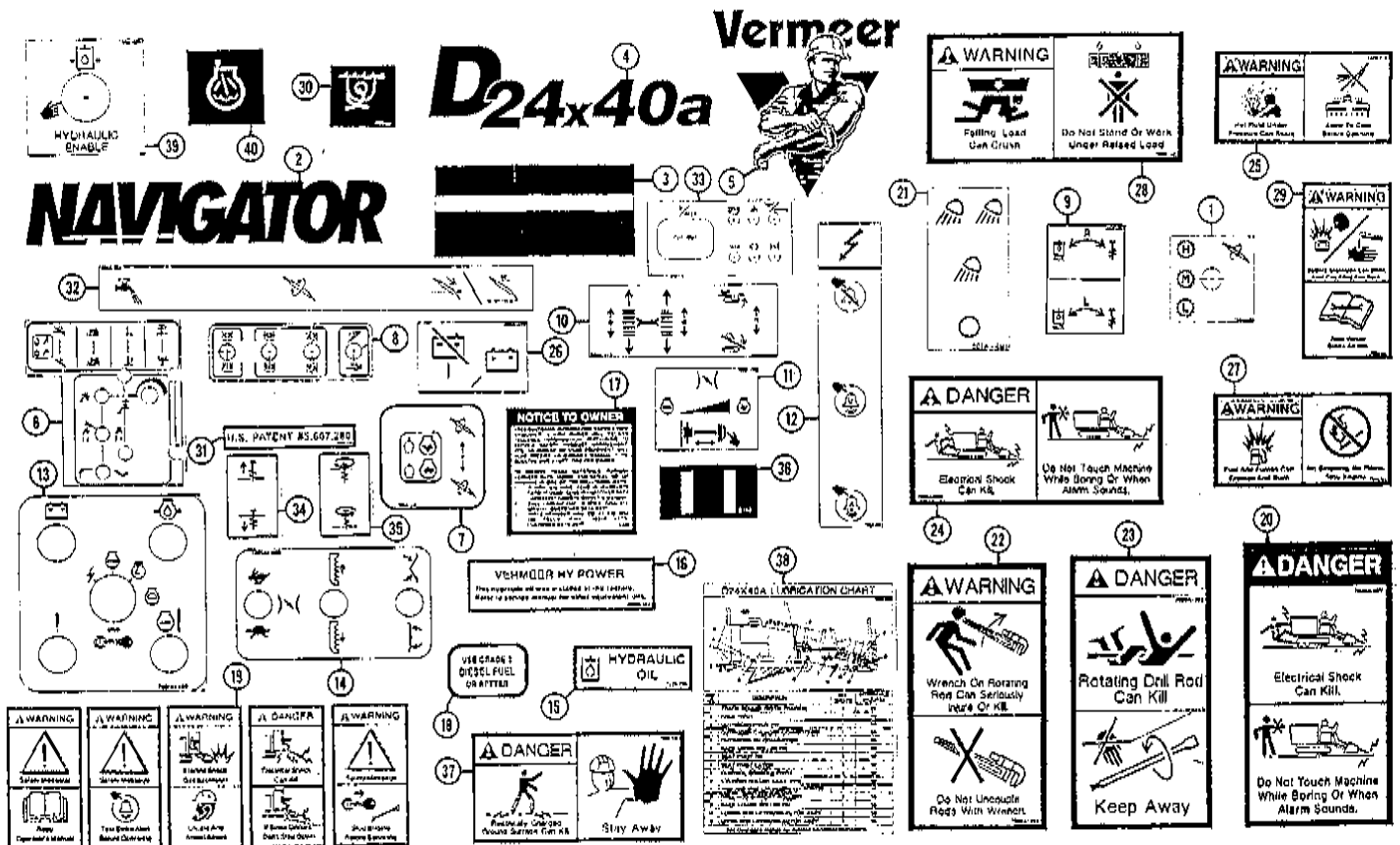
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DECAL ASSEMBLY (DOMESTIC)

Figure 1-1

Revised April 1998 due to update of decal assembly. Changed/added parts marked with *.

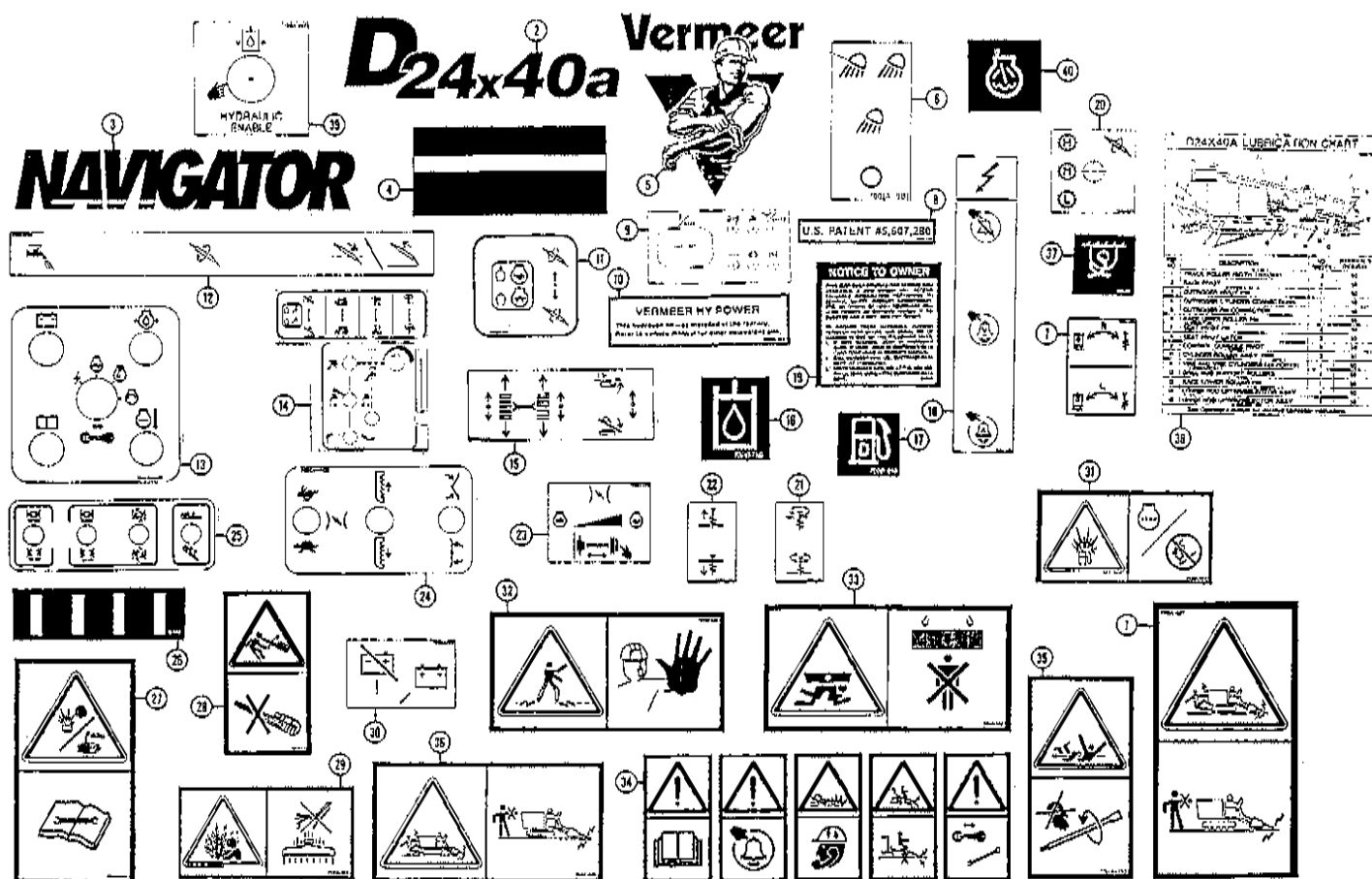


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.		
1-1	1	700IA-679	DECAL-DRILL 3 POSITION	1	1-1	22	7000A-394	DECAL - WARNING	1
1-1	2	70000-614	DECAL-MODEL NAVIGATOR (BIG)	2	1-1	23	7000A-393	DECAL - DANGER	1
1-1	3	70000-775	DECAL 3"VERMEER STRIPE (SPECIFY LENGTH)	9'6"	1-1	24	7000A-576	DECAL-DANGER	1
				1-1	25	2326-315	DECAL-WARNING	1	
1-1	4	7000A-778	DECAL-MODEL (D24X40A)	2	1-1	26	700IA-477	DECAL-BATTERY SWITCH (UG)	1
1-1	5	70000-785	DECAL 8"VERMEER LOGO	2	1-1	27	2326-324	DECAL-WARNING/REFUEL	1
1-1	6	700IA-743	DECAL-CONTROL PANEL	1	1-1	28	70000-563	DECAL-WARNING (UND)	2
1-1	7	700IA-441	DECAL-ROD ROTATION (UG)	1	1-1	29	70000-044	DECAL-WARNING(AT/UND)	1
1-1	8	700IA-426	DECAL-ROD VISES (UND)	1	1-1	30	*70000-834	DECAL-TIE DOWN POINT	5
1-1	9	700IA-696	DECAL-HYD. STAKE/REMOTE	1	1-1	31	7000A-740	DECAL-U.S. PATENT #5, 607, 280	1
1-1	10	700IA-472	DECAL-CTRL. TRACK & RACK (UG)	1	1-1	32	700IA-488	DECAL-INSTRUMENTS (UG)	1
1-1	11	700IA-473	DECAL-THROTTLE (UG)	1	1-1	33	700IA-771	DECAL-BREAKER LIGHTS	1
1-1	12	700IA-474	DECAL-STRIKE ALERT (UG)	1	1-1	34	700IA-305	DECAL-STAKE DRIVE THRUST (UND)	1
1-1	13	700IA-409	DECAL-IGNITION (UND)	1	1-1	35	700IA-306	DECAL-STAKE DRIVER ROTAT.(UND)	1
1-1	14	700IA-408	DECAL-LOADER (UND)	1	1-1	36	2326-142	DECAL-INDICATOR	1
1-1	15	2326-756	DECAL-HYDRAULIC OIL	1	1-1	37	70000-530	DECAL-DANGER	4
1-1	16	70000-394	DECAL-VERMEER HY POWER	1	1-1	38	7000A-900	DECAL-D24X40A LUBE CHART	1
1-1	17	2326-940	DECAL-NOTICE TO OWNERS	1	1-1	39	*700IA-967	DECAL-HYDRAULIC PRESET	1
1-1	18	70000-098	DECAL-DIESEL (AT/UND)	1	1-1	40	*700IA-193	DECAL-ETHER STARTING	1
1-1	19	7000A-528	DECAL-WARNING	1					
1-1	20	7000A-627	DECAL - DANGER	4			901228-069	DECAL ASSY-D24X40A NAV DOMESTIC	
1-1	21	700IA-881	DECAL-WORK LIGHT	1				(INC. ALL DECALS IN FIGURE 1-1)	

DECAL ASSEMBLY (INTERNATIONAL)

Figure 1-2

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decals. Changed/added parts marked with *.

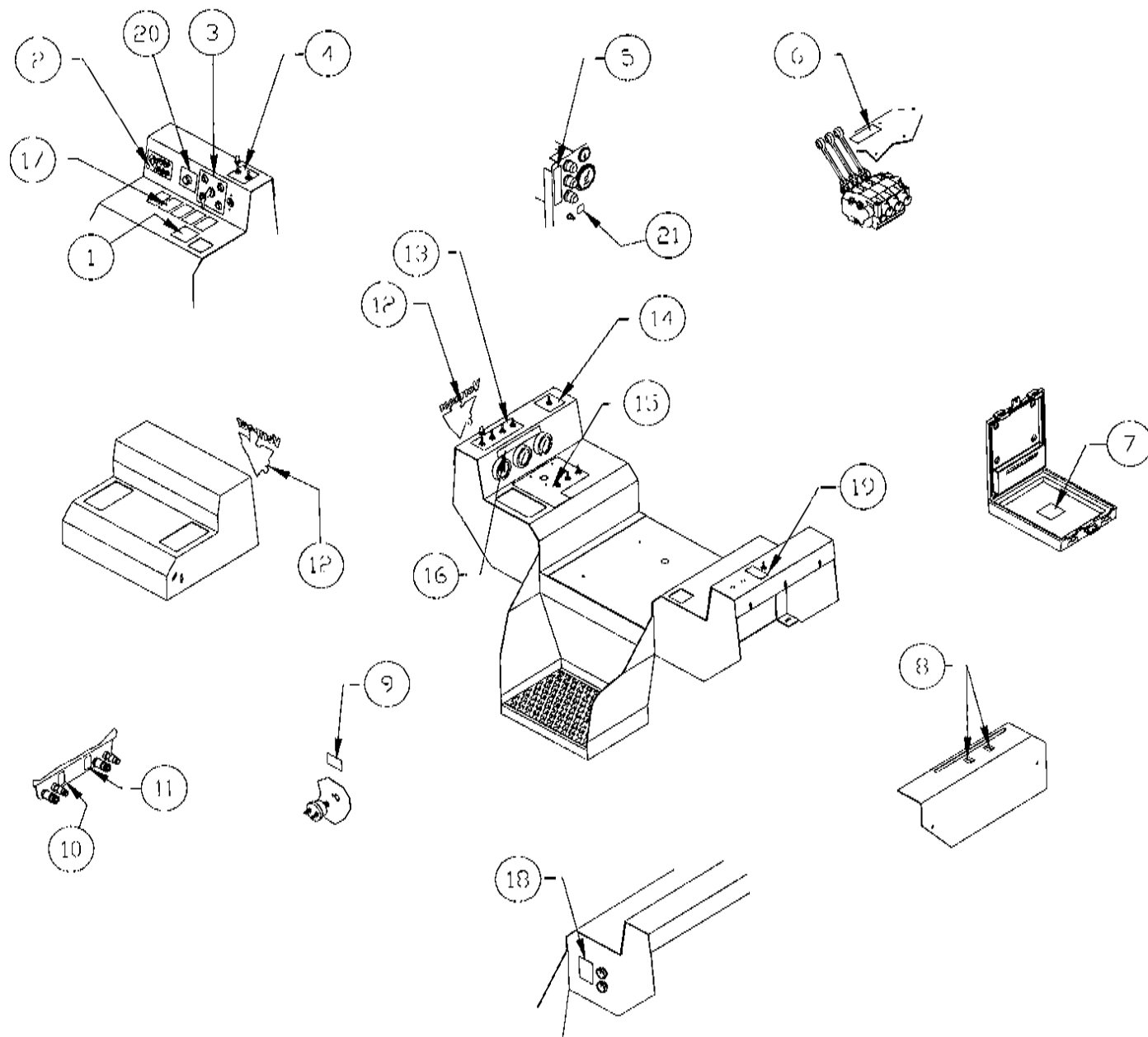


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
1-2	1	7001A-627 DECAL-DANGER	4	1-2	22	7001A-305 DECAL-STAKE DRIVE THRUST (UND)	1
1-2	2	7000A-778 DECAL-MODEL (D24X40A)	2	1-2	23	7001A-473 DECAL-THROTTLE (UG)	1
1-2	3	70000-614 DECAL-MODEL NAVIGATOR (BIG)	2	1-2	24	7001A-408 DECAL-LOADER (UND)	1
1-2	4	70000-775 DECAL 3" VERMEER STRIPE (SPECIFY LENGTH)	9'6"	1-2	25	7001A-426 DECAL-ROD VISES (UND)	1
1-2	5	70000-785 DECAL 8" VERMEER LOGO	2	1-2	26	2326-142 DECAL-INDICATOR	1
1-2	6	7001A-881 DECAL-WORK LIGHT	1	1-2	27	7000I-044 DECAL-WARNING	1
1-2	7	7001A-696 DECAL-HYD. STAKE/REMOTE	1	1-2	28	7001A-394 DECAL - WARNING	1
1-2	8	7000A-740 DECAL-U.S. PATENT #5, 607, 280	1	1-2	29	2326I-315 DECAL-WARNING	1
1-2	9	7001A-771 DECAL-BREAKER LIGHTS	1	1-2	30	7001A-477 DECAL-BATTERY SWITCH (UG)	1
1-2	10	70000-394 DECAL-VERMEER HY POWER	1	1-2	31	2326I-324 DECAL-WARNING	1
1-2	11	7001A-441 DECAL-ROD ROTATION (UG)	1	1-2	32	7000I-530 DECAL-DANGER	4
1-2	12	7001A-468 DECAL-INSTRUMENTS (UG)	1	1-2	33	7000I-563 DECAL-WARNING (UND)	2
1-2	13	7001A-409 DECAL-IGNITION (UND)	1	1-2	34	7001A-528 DECAL-WARNING	1
1-2	14	7001A-743 DECAL-CONTROL PANEL	1	1-2	35	7001A-393 DECAL - DANGER	1
1-2	15	7001A-472 DECAL-CTRL. TRACK & RACK (UG)	1	1-2	36	7001A-576 DECAL-DANGER	1
1-2	16	2326I-756 DECAL-HYDRAULIC FLUID	1	1-2	37	*70000-834 DECAL-TIE DOWN POINT	5
1-2	17	7000I-098 DECAL-DIESEL FUEL	1	1-2	38	7000A-900 DECAL-D24X40A LUBE CHART	1
1-2	18	7001A-474 DECAL-STRIKE ALERT (UG)	1	1-2	39	*7001A-967 DECAL-HYDRAULIC PRESET	1
1-2	19	2326-940 DECAL-NOTICE TO OWNERS	1	1-2	40	*7001A-193 DECAL-ETHER STARTING	1
1-2	20	7001A-679 DECAL-DRILL 3 POSITION	1				
1-2	21	7001A-306 DECAL-STAKE DRIVER ROTAT.(UND)	1				
					901228-070	DECAL ASSY-D24X40A NAV INTERNATIONAL (INC. ALL DECALS IN FIG. 1-2)	

DECAL LOCATION ASSEMBLY

Figure 1-3

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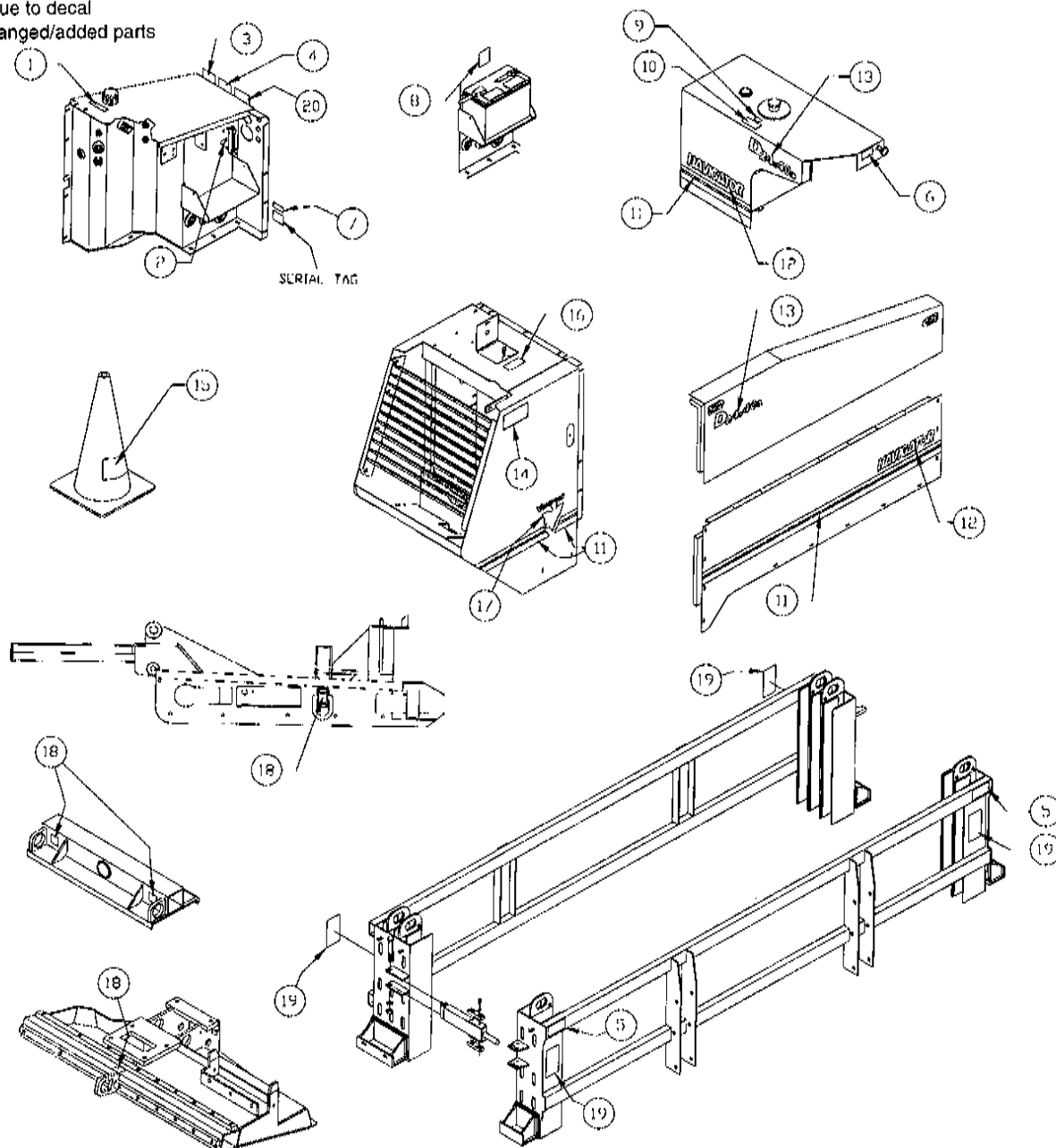


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
1-3	1	700IA-441 DECAL-ROD ROTATION (UG)	1	1-3	13	700IA-426 DECAL-ROD VISES (UND)	1
1-3	2	*700IA-771 DECAL-BREAKER LIGHTS	1	1-3	14	700IA-679 DECAL-DRILL 3 POSITION	1
1-3	3	700IA-409 DECAL-IGNITION (UND)	1	1-3	15	700IA-743 DECAL-CONTROL PANEL	1
1-3	4	700IA-408 DECAL-LOADER (UND)	1	1-3	16	700IA-488 DECAL-INSTRUMENTS (UG)	1
1-3	5	700IA-474 DECAL-STRIKE ALERT (UG)	1	1-3	17	700IA-528 DECAL-WARNING (INT.)	1
1-3	6	700IA-472 DECAL-CTRL. TRACK & RACK (UG)	1			700IA-528 DECAL-WARNING	1
1-3	7	2326-940 DECAL-NOTICE TO OWNERS	1				
1-3	8	2326-142 DECAL-INDICATOR	2	1-3	18	700IA-696 DECAL-HYD. STAKE/REMOTE	1
1-3	9	700IA-477 DECAL-BATTERY SWITCH (UG)	1	1-3	19	700IA-881 DECAL-WORK LIGHT	1
1-3	10	700IA-305 DECAL-STAKE DRIVE THRUST (UND)	1	1-3	20	*700IA-967 DECAL-HYDRAULIC PRESET	1
1-3	11	700IA-306 DECAL-STAKE DRIVER ROTAT.(UND)	1	1-3	21	*700IA-193 DECAL-ETHER STARTING	1
1-3	12	70000-785 DECAL 8"VERMEER LOGO	2				

DECAL LOCATION ASSEMBLY

Figure 1-4

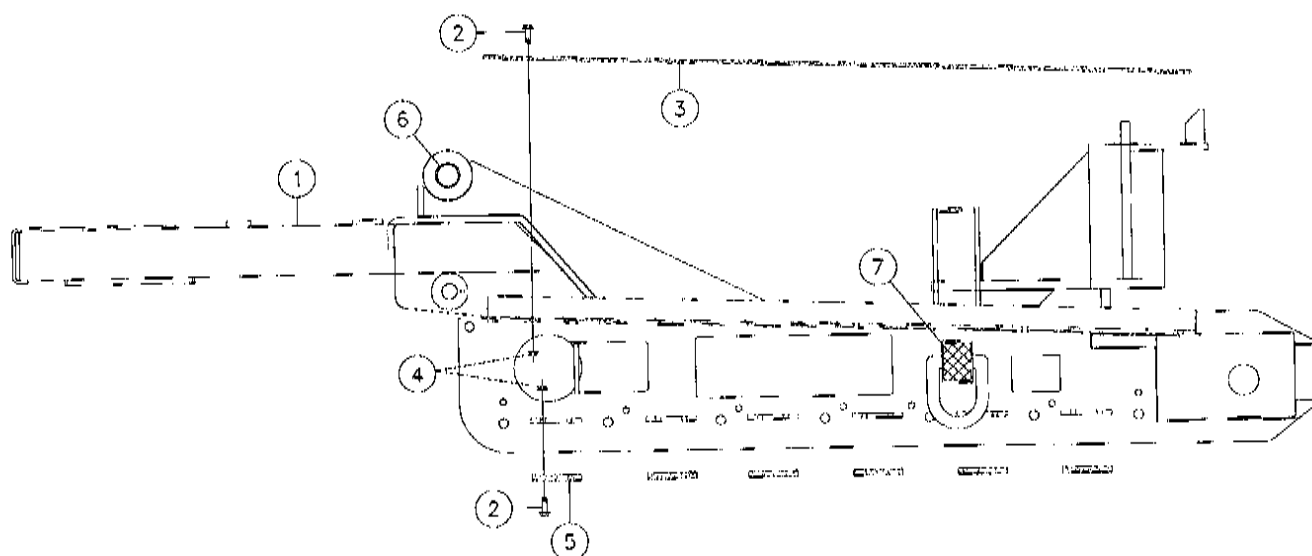
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REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
1-4	1	70000-394 DECAL-VERMEER HY POWER	1	1-4	10	2326-324 DECAL-WARNING/REFUEL	1
1-4	2	2326-756 DECAL-HYDRAULIC OIL	1			2326I-324 DECAL-WARNING (INT.)	1
		2326I-756 DECAL-HYDRAULIC FLUID (INT.)	1	1-4	11	70000-775 DECAL 3"VERMEER STRIPE	9.6'
1-4	3	7000A-393 DECAL - DANGER	1	1-4	12	70000-614 DECAL-MODEL NAVIGATOR (BIG)	2
		700IA-393 DECAL - DANGER (INT.)	1	1-4	13	7000A-778 DECAL-MODEL (D24X40A)	2
1-4	4	7000A-394 DECAL - WARNING	1	1-4	14	7000A-576 DECAL-DANGER	1
		700IA-394 DECAL - WARNING (INT.)	1			700IA-576 DECAL-DANGER (INT.)	1
1-4	5	70000-563 DECAL-WARNING	2	1-4	15	70000-530 DECAL-DANGER	4
		7000I-563 DECAL-WARNING (INT.)	2			7000I-530 DECAL-DANGER (INT.)	4
1-4	6	700IA-473 DECAL-THROTTLE	1	1-4	16	2326-315 DECAL-WARNING	1
1-4	7	7000A-740 DECAL-U.S. PATENT #5, 607, 280	1			2326I-315 DECAL-WARNING (INT.)	1
1-4	8	70000-044 DECAL-WARNING(AT/UND)	1	1-4	17	70000-785 DECAL 8"VERMEER LOGO	2
		7000I-044 DECAL-WARNING (INT.)	1	1-4	18	*70000-834 DECAL-TIE DOWN POINT	5
1-4	9	70000-098 DECAL-DIESEL (AT/UND)	1	1-4	19	7000A-627 DECAL-DANGER	4
		7000I-098 DECAL-DIESEL FUEL (INT.)	1			700IA-627 DECAL-DANGER (INT.)	4
				1-4	20	*7000A-900 DECAL-D24X40A LUBE CHART	1

MAIN FRAME ASSEMBLY

Figure 1-5

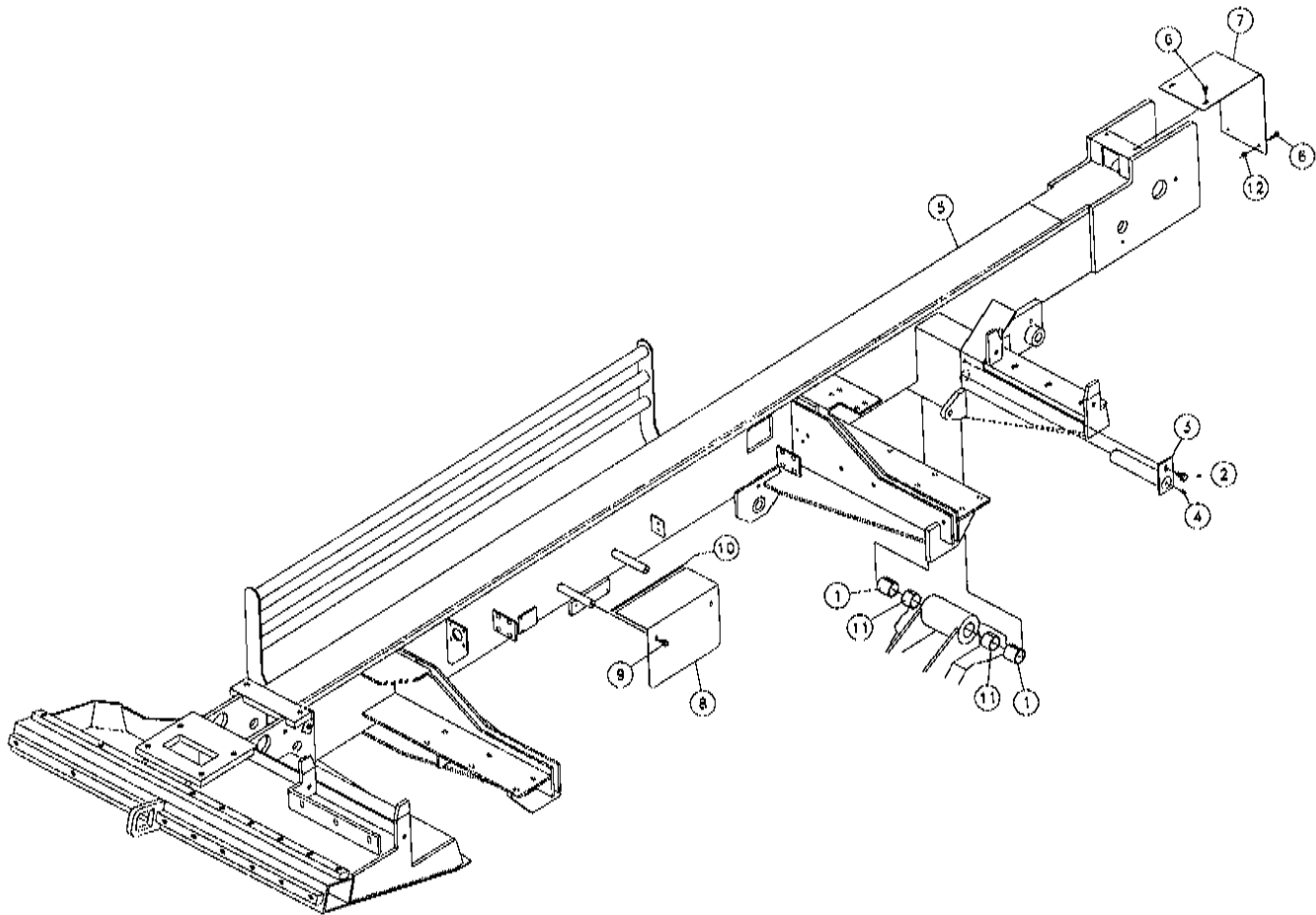


REF. NO.	PART NO.	DESCRIPTION	QTY.
1-5	1	235352-003 FRAME-ASSEMBLY-MAIN (INC. TWO OF REF. 6)	1
1-5	2	4475-012 BOLT-3/8-16X1 1/4 FLG WHIZ PLT	34
1-5	3	235960-001 PLATE-TOP WEAR STRIP	2
1-5	4	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	34
1-5	5	235959-001 PLATE-BOTTOM WEARSTRIP	12
1-5	6	1835-033 BSHG.-STL.-2 X 1 3/4 X 1 1/2	2
		1835-035 BSHG.-STL.-2 X 1 3/4 X 2	2
1-5	7	70000-834 DECAL-TIE DOWN POINT	2

RACK FRAME ASSEMBLY

Figure 1-6

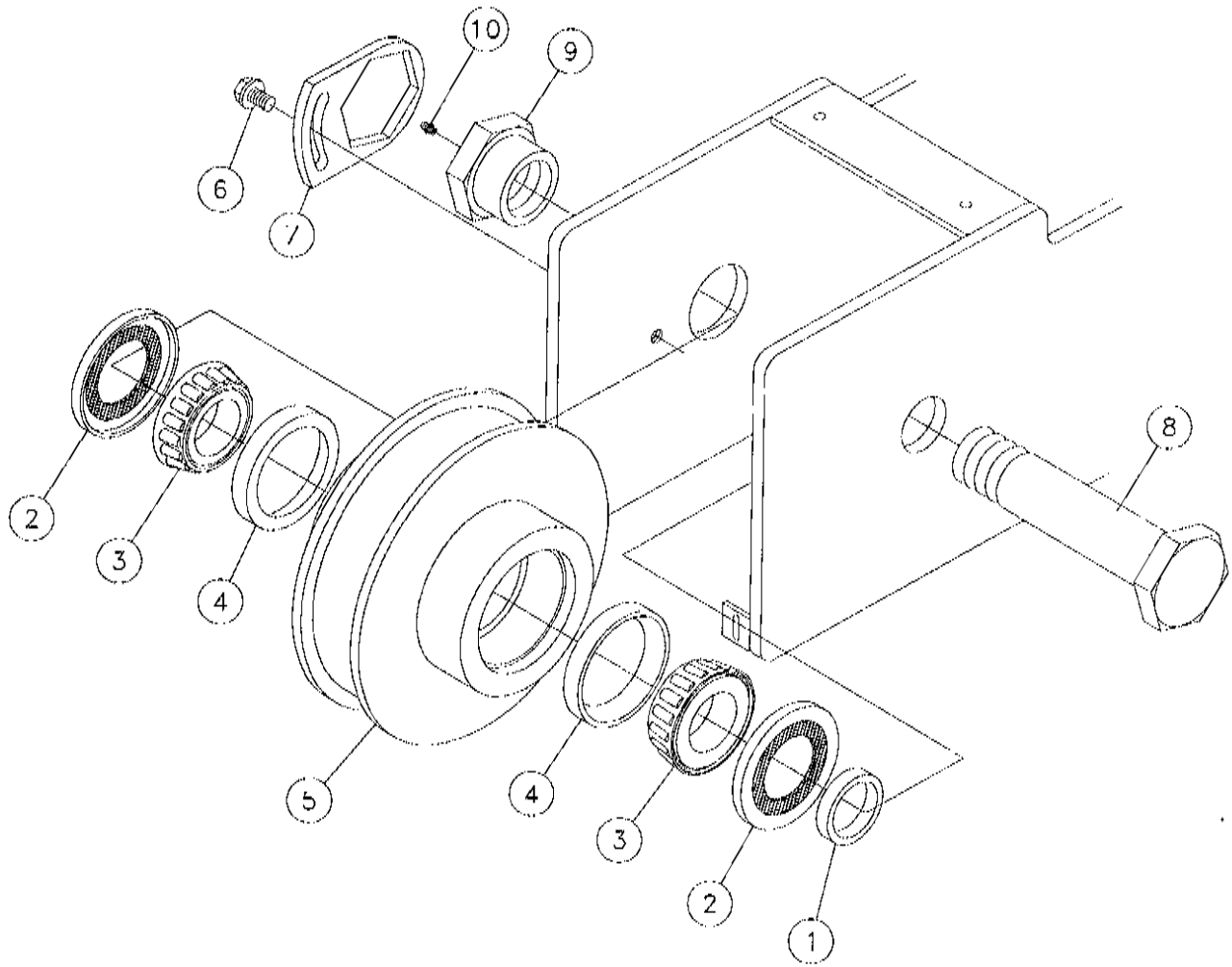
Revised April 1998 due to rack weldment update. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
1-6	1	1835-035 BSHG.-STL.-2 X 1 3/4 X 2	2
1-6	2	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	1
1-6	3	225150-001 PIN-PIVOT	1
1-6	4	586-001 ZERK-1/8" ST NPT GREASE	1
1-6	5	*235321-001 RACK TUBE - D24X40	1
1-6	6	4474-006 BOLT-5/16-18X3/4 FLANGE WHIZ	4
1-6	7	225170-001 PLATE-TOP ROLLER SHIELD	1
1-6	8	235759-001 PLATE-SHIELD	1
1-6	9	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	2
1-6	10	212522-001 TRIM-1/4 EDGE (SPECIFY LENGTH)	A/R
1-6	11	1835-033 BSHG.-STL.-2 X 1 3/4 X 1 1/2	2
1-6	12	408-001 NUT-5/16"-18 FLG WHIZ LOCK	2

ROLLER ASSEMBLY - UPPER

Figure 1-7

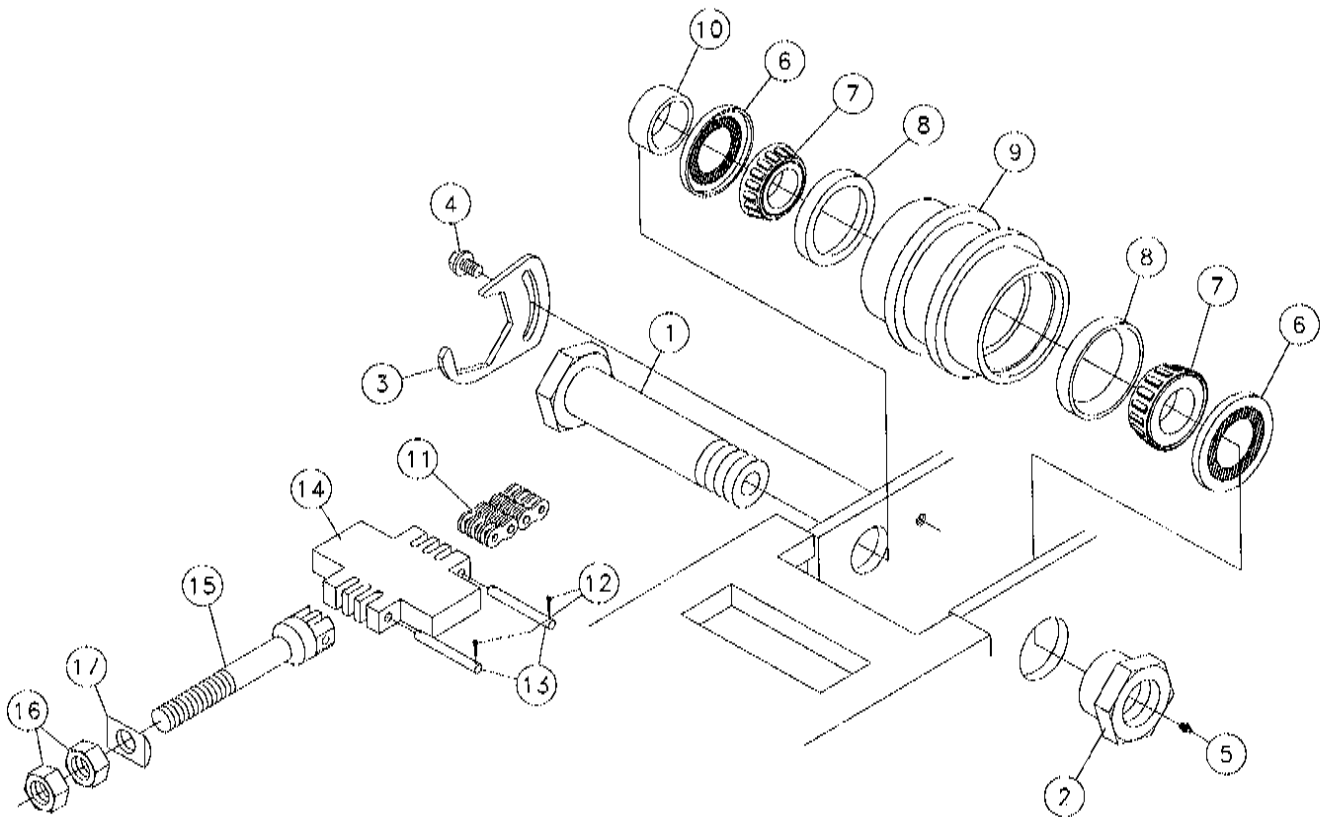


REF. NO.	PART NO.	DESCRIPTION	QTY.
1-7	1	213595-001 TUBE-SPACER	1
1-7	2	85752-001 SEAL	2
1-7	3	1716-085 CONE-BEARING	2
1-7	4	1715-063 CUP-BEARING	2
1-7	5	230823-001 ROLLER ASSY-UPPER (INC. REF. 4)	1
1-7	6	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	1
1-7	7	235829-001 PLATE-LOCK	1
1-7	8	213598-003 PIN ASSY-ROLLER (INC. REF. 11)	1
1-7	9	213594-001 HEX-NUT BEARING	1
1-7	10	586-001 ZERK-1/8" ST NPT GREASE	1

ROLLER ASSEMBLY - LOWER

Figure 1-8

Revised January 1998 due to chain length
change & tightener bolt (S/N 168) update.
Changed parts marked with *.

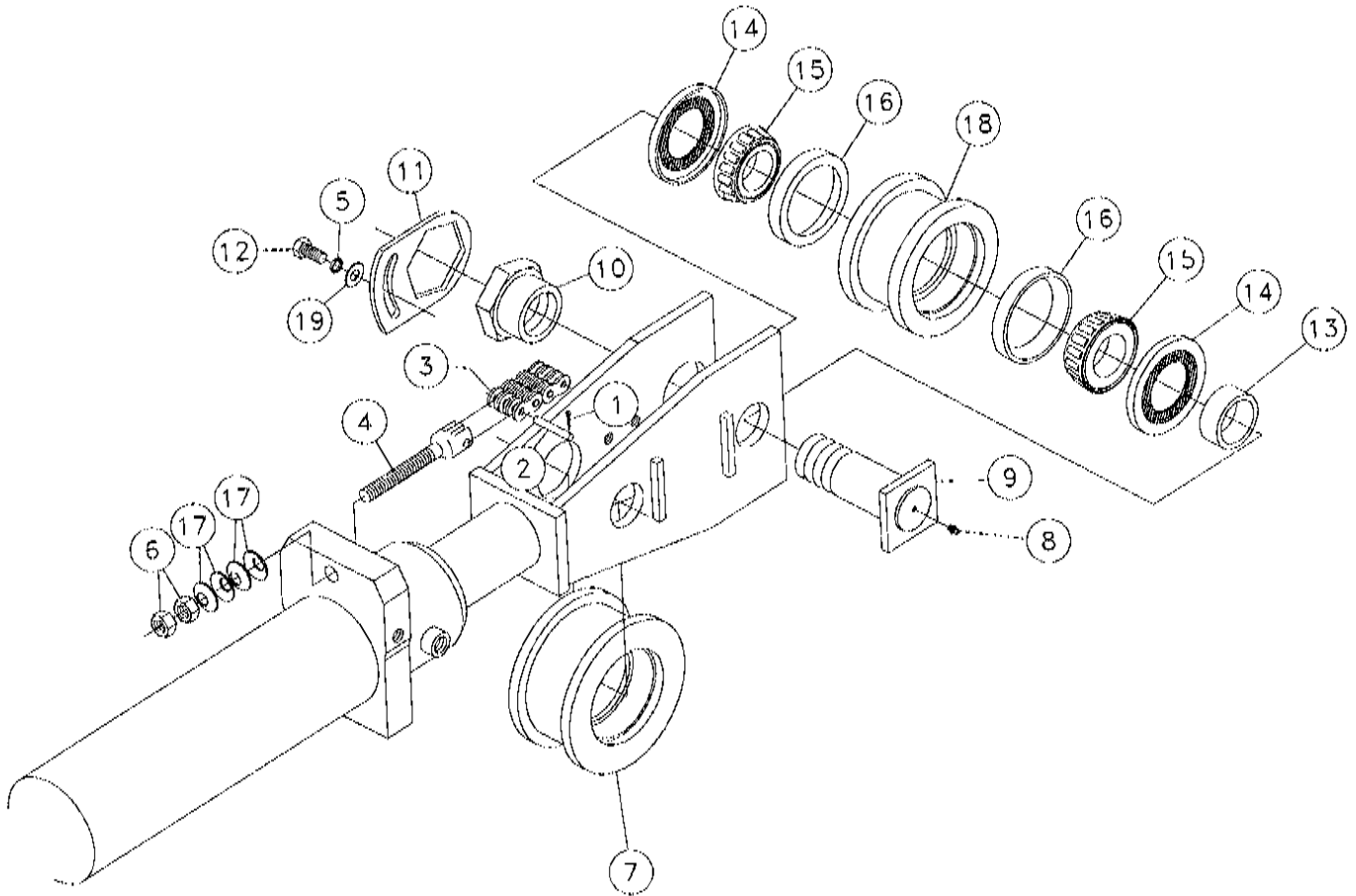


REF. NO.	PART NO.	DESCRIPTION	QTY.
1-8	1	213598-003 PIN ASSY-ROLLER (INC. REF. 5)	1
1-8	2	213594-001 HEX-NUT BEARING	1
1-8	3	230925-001 PLATE-LOCK	1
1-8	4	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	1
1-8	5	586-001 ZERK-1/8" ST NPT GREASE	1
1-8	6	85752-001 SEAL	2
1-8	7	1716-085 CONE-BEARING	2
1-8	8	1715-063 CUP-BEARING 45220	2
1-8	9	230961-001 ROLLER ASSY-LOWER (INC. REF. 8)	1
1-8	10	213595-001 TUBE-SPACER	1
1-8	11	*245009-001 CHAIN-LEAF BL866-165 PITCHES	1
		98422-001 LINK-BL866 CONNECTOR	
1-8	12	510-005 COTTER PIN-3/32" X 3/4"	4
1-8	13	89349-001 PIN-ANCHOR BL866 3/8 D1AX3.44	2
1-8	14	230944-001 PLATE-ANCHOR	1
1-8	15	*240818-001 BOLT-CHAIN TIGHTENER	1
1-8	16	75391-001 NUT-1"-14 UNF GR 8 HEX	2
1-8	17	240819-001 PLATE-ROCKER ADJ. WASHER	1

ROLLER ASSEMBLY - THRUST CYLINDER

Figure 1-9

Revised January 1998 due to update
of roller assy. Changed parts marked with *.

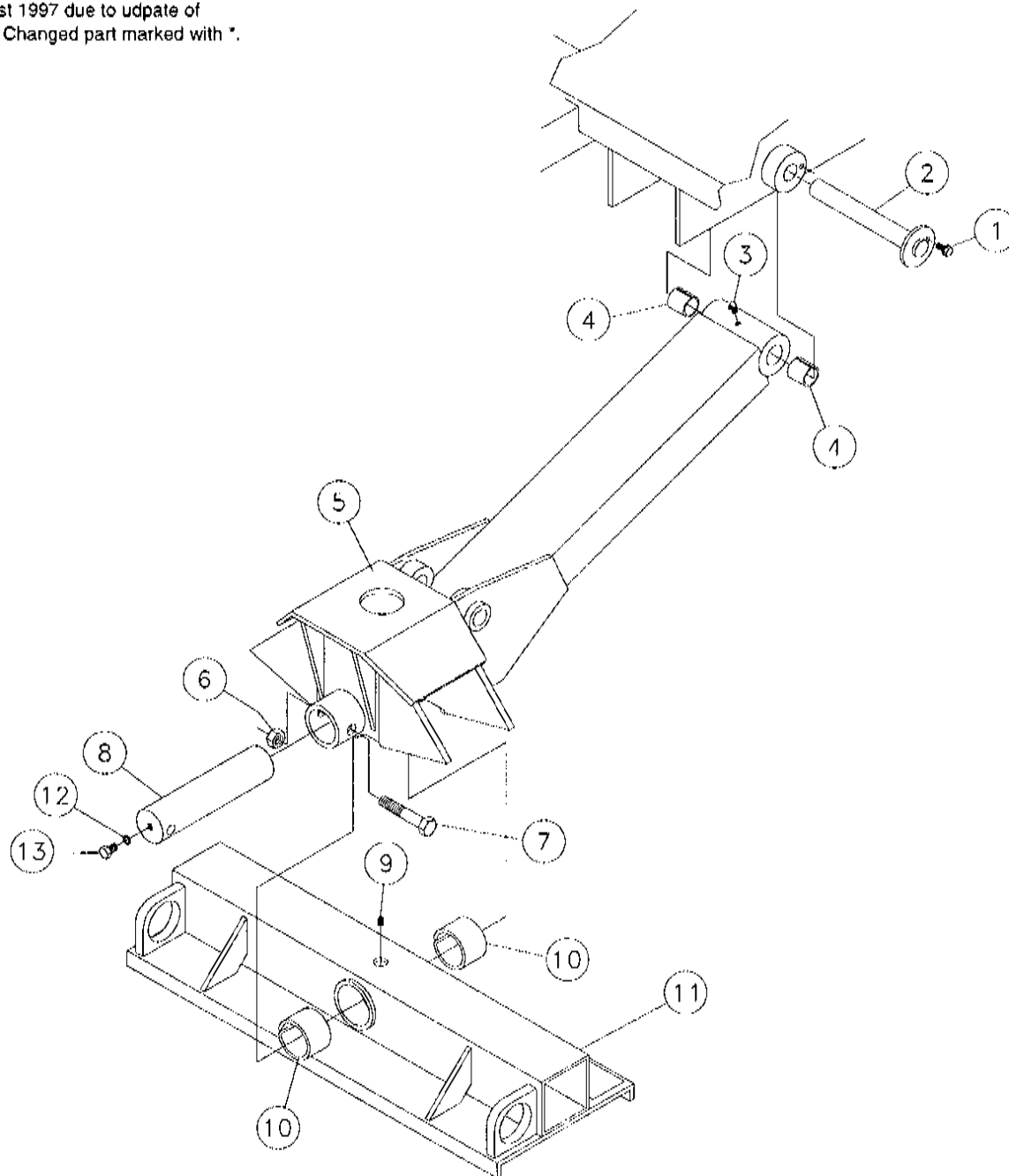


REF. NO.	PART NO.	DESCRIPTION	QTY.
1-9	1	510-005 COTTER PIN-3/32" X 3/4"	2
1-9	2	89371-001 PIN-BL866 ANCHOR 3/8" DIA X 2.38	1
1-9	3	86104-253 CHAIN-LEAF BL866 253 PITCHES	1
	98422-001 LINK-BL866 CONNECTOR		0
1-9	4	215584-001 BOLT-866 PULL CHAIN	1
1-9	5	480-011 WASHER-1/2 S/T LOCK	1
1-9	6	94974-001 NUT-3/4-16NF GRADE 8 HEX	2
1-9	7	*213685-001 ROLLER-ASSY-RAM (INC. REF. 16)	1
1-9	8	586-001 ZERK-1/8" ST NPT GREASE	2
1-9	9	211142-003 PIN ASSY-ROLLER (INC. REF. 8)	2
1-9	10	213594-001 HEX-NUT BEARING	2
1-9	11	235829-001 PLATE-LOCK	2
1-9	12	358-010 BOLT-1/2-13X1" GRADE#5 HEX	2
1-9	13	213595-001 TUBE-SPACER	2
1-9	14	85752-001 SEAL	4
1-9	15	1716-085 CONE-BEARING	4
1-9	16	1715-063 CUP-BEARING 45220	4
1-9	17	*217033-001 WASHER-BELLEVILLE 1.5 OD X .75 ID	28
1-9	18	*230962-001 ROLLER ASSY-SMALL (INC. REF. 16)	1
1-9	19	485-011 WASHER-1/2 FLAT	2

OUTRIGGER ARM ASSEMBLY

Figure 1-10

Revised August 1997 due to update of
outrigger arm. Changed part marked with *.

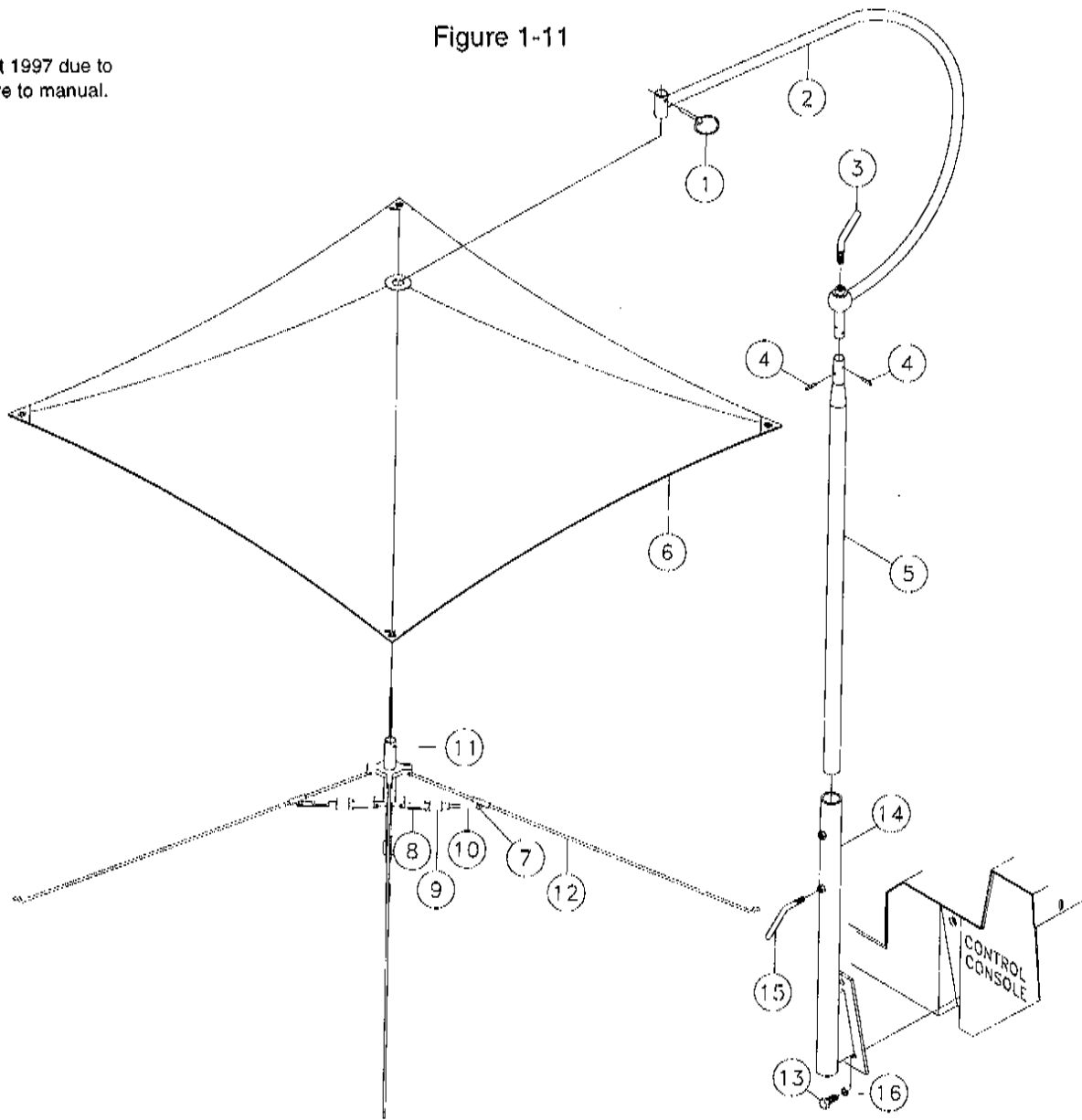


REF. NO.	PART NO.	DESCRIPTION	QTY.
1-10	1	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	1
1-10	2	230858-001 PIN-OUTRIGGER	1
1-10	3	590-001 ZERK-1/8" NPT 90 DEG GREASE	1
1-10	4	1835-027 BSHG.-STL.-1 1/2X1 1/4X1 1/2	2
1-10	5	*235828-003 ARM ASSY-OUTRIGGER (INC. REF. 3 & 4)	1
1-10	6	434-001 NUT-3/4 NC SLTL	1
1-10	7	369-044 BOLT-3/4-10X4 1/2" GRADE#5 HEX	1
1-10	8	235849-001 PIN-PIVOT	1
1-10	9	586-001 ZERK-1/8" ST NPT GREASE	1
1-10	10	1835-039 BSHG.-STL.-3 X 2 1/2 X 2	2
1-10	11	235833-003 PAD ASSY-OUTRIGGER (INC. REF. 9 & 10)	1
1-10	12	480-011 WASHER-1/2 S/T LOCK	1
1-10	13	358-016 BOLT-1/2-13X1 3/4 GRADE #5 HEX	1

UMBRELLA ASSEMBLY

Figure 1-11

Revised August 1997 due to
addition of figure to manual.



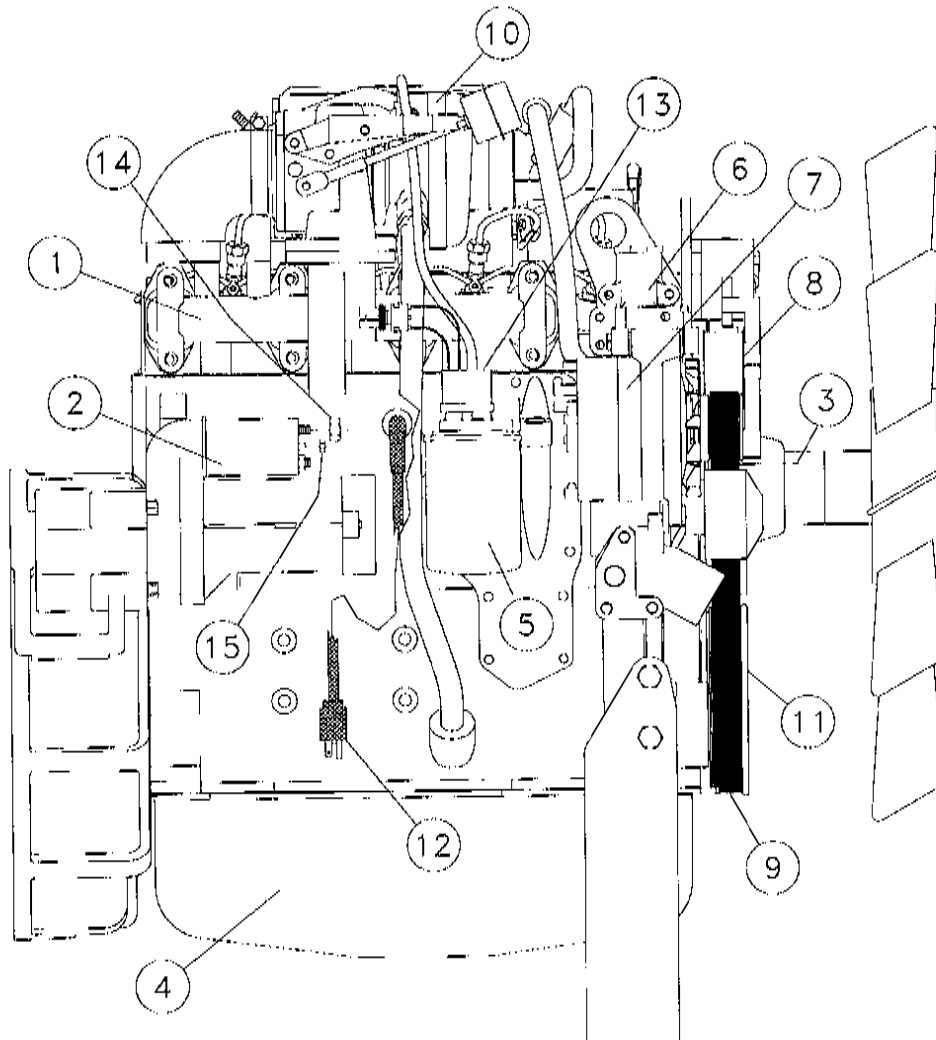
REF. NO.	PART NO.	DESCRIPTION	QTY.
1-11	1	1797-003 PIN-QUICK ATTACHMENT 1/4"	1
1-11	2	238181-003 CURVED SHAFT	1
1-11	3	238181-005 LOCKING HANDLE	1
1-11	4	1978-011 PIN-ROLL 3/16X1	2
1-11	5	238181-007 SUPPORT SHAFT-UMBRELLA	1
1-11	6	238181-009 CANVAS COVER-UMBRELLA	1
1-11	7	238181-011 RIVET-PUSH PIN	12
1-11	8	238181-013 TUBE-PUSH ROD	4
1-11	9	238181-015 CLIP-PUSH ROD LOCKING SPRING	4
1-11	10	238181-017 PUSH ROD	4
1-11	11	238181-019 CENTER TUBE W/SPIDERS	1
1-11	12	238181-021 BOW W/CLEVIS	4
1-11	13	358-010 BOLT-1/2"-13X1" GR 5 HEX	2
1-11	14	236499-001 MOUNT-D24X40A UMBRELLA	1
1-11	15	240038-001 BOLT-TIGHTENING 3/8"	2
1-11	16	480-011 WASHER-1/2" ST LOCK	2

238181-001 UMBRELLA ASSY. (INC. REF. 1-12)

ENGINE COMPONENTS

Figure 2-1

Revised November 1997 due to update
in parts list. Changed part marked with *.

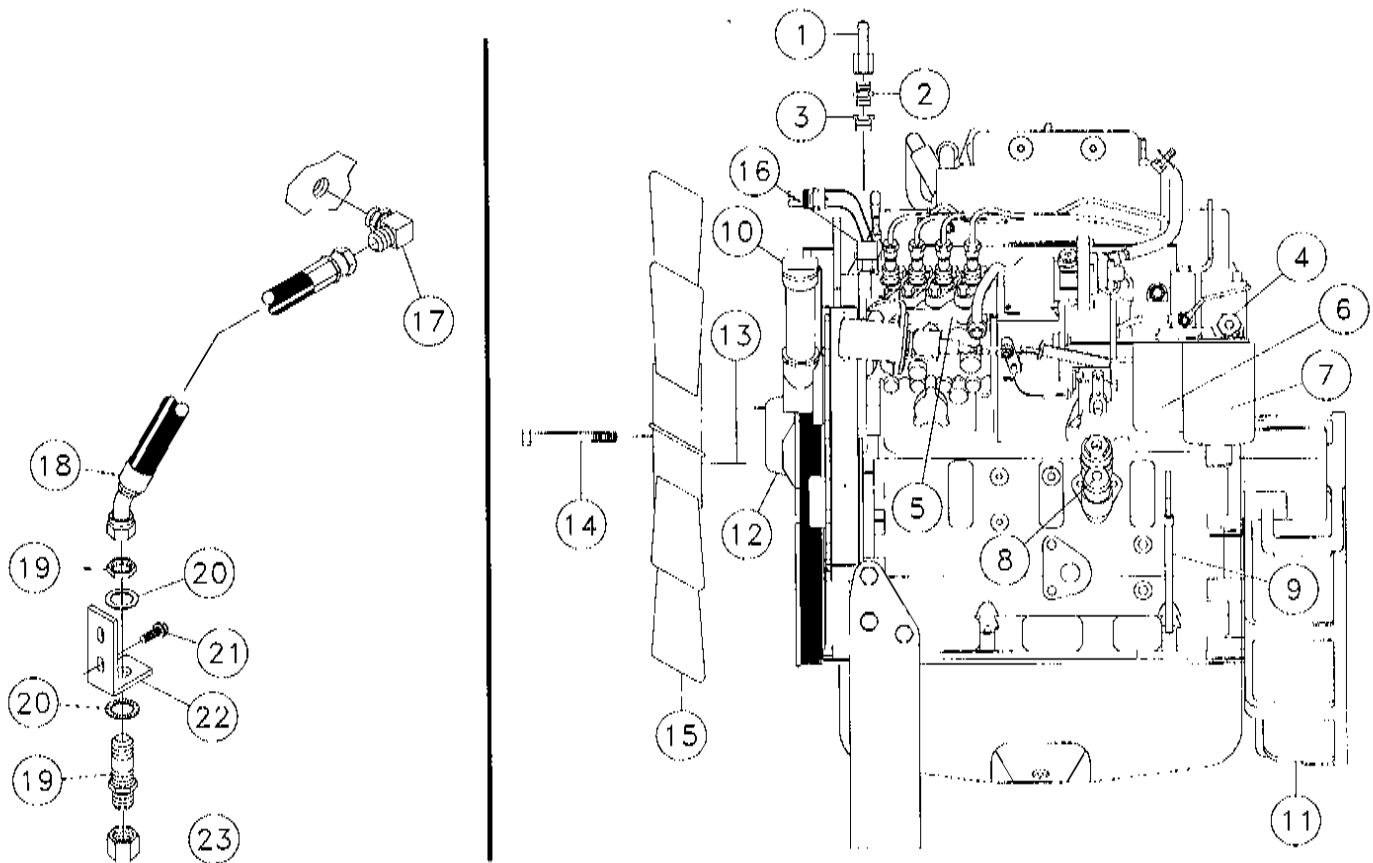


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
2-1	1	220162-003 • MANIFOLD-EXHAUST	1		220681-021 • ALTERNATOR MOUNTING BOLT-UPPER	1	
		220681-027 • EXHAUST MANIFOLD BOLT	8		220681-023 • ALTERNATOR MOUNTING BOLT-LOWER	2	
		234218-003 • GASKET-EXHAUST MANIFOLD	4	2-1	8	234218-005 • TENSIONER-BELT	1
2-1	2	*103000-001 • STARTER	1	2-1	9	234218-007 • BELT-DRIVE	1
		220681-025 • STARTER MOUNTING BOLT	2	2-1	10	234218-009 • TURBO	1
2-1	3	220162-009 • WATER PUMP	1		234218-011 • GASKET-TURBO	1	
		220681-031 • SEAL-RECTANGULAR RING	1	2-1	11	107606-001 • PULLEY-CRANKSHAFT	1
2-1	4	224558-009 • OIL PUMP	1		103011-001 • BOLT-CRANKSHAFT PULLEY	4	
2-1	5	104071-001 • FILTER-OIL	1	2-1	12	104067-001 • HEATER-ENGINE	1
2-1	6	104073-001 • THERMOSTAT	1		104068-001 • CABLE-ENGINE HEATER	1	
		104074-001 • GASKET-THERMOSTAT	1	2-1	13	98678-001 SWITCH-PRESSURE SIN POLE 9 PSI	1
2-1	7	220171-001 ALTERNATOR-MODIFIED 42 AMP	1				
		5902-001 ALTERNATOR FAN	1				
		220162-039 • SHEAVE-ALTERNATOR	1				
		220681-019 • ALTERNATOR BRACKET-LOWER	1				
		220681-017 • ALTERNATOR BRACKET-UPPER	1				

• ITEMS WARRANTED BY AUTHORIZED
CUMMINS DEALER

ENGINE COMPONENTS

Figure 2-2

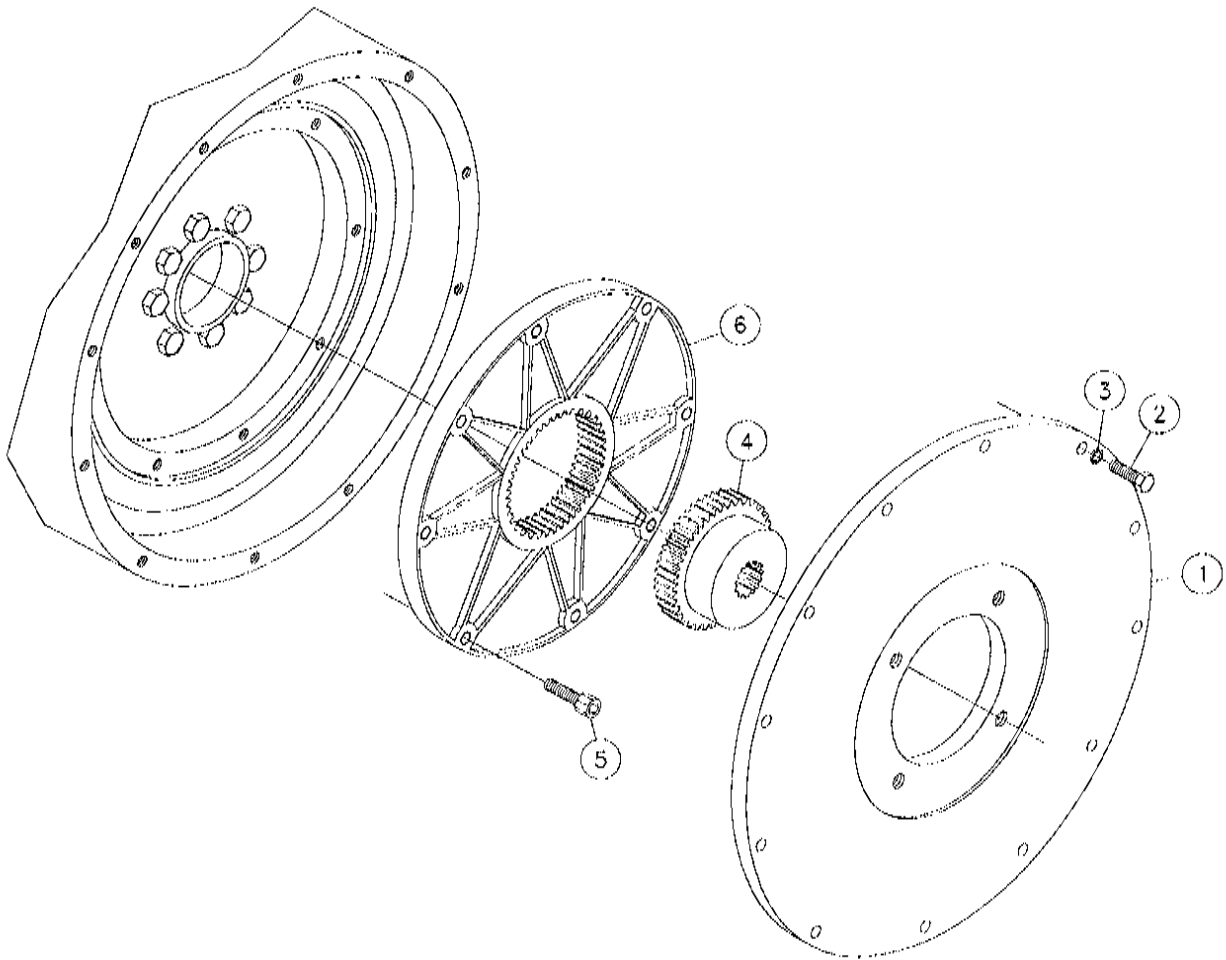


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
2-2	1	103007-001	1	2-2	12	234218-025	1
2-2	2	103006-001	1	2-2	13	234218-027	1
2-2	3	103005-001	1	2-2	14	234218-029	1
2-2	4	11981-001	1	2-2	15	64111-001	4
2-2	5	234218-013	1	2-2	16	224953-001	1
		234218-015	1	2-2	17	227965-001	1
		234218-017	4	2-2	18	100351-001	1
2-2	6	220162-025	1	2-2	19	53842-427	1
2-2	7	220162-023	1	2-2	20	77734-001	1
2-2	8	234218-019	1	2-2	21	240756-001	2
		220681-013	1	2-2	22	4474-006	2
2-2	9	234218-021	1	2-2	23	244254-001	1
		234218-023	1			78062-001	1
2-2	10	102996-001	1				
2-2	11	104063-001	1				
		103027-001	8				

• ITEMS WARRANTED BY AUTHORIZED
CUMMINS DEALER

PUMP DRIVE ASSEMBLY

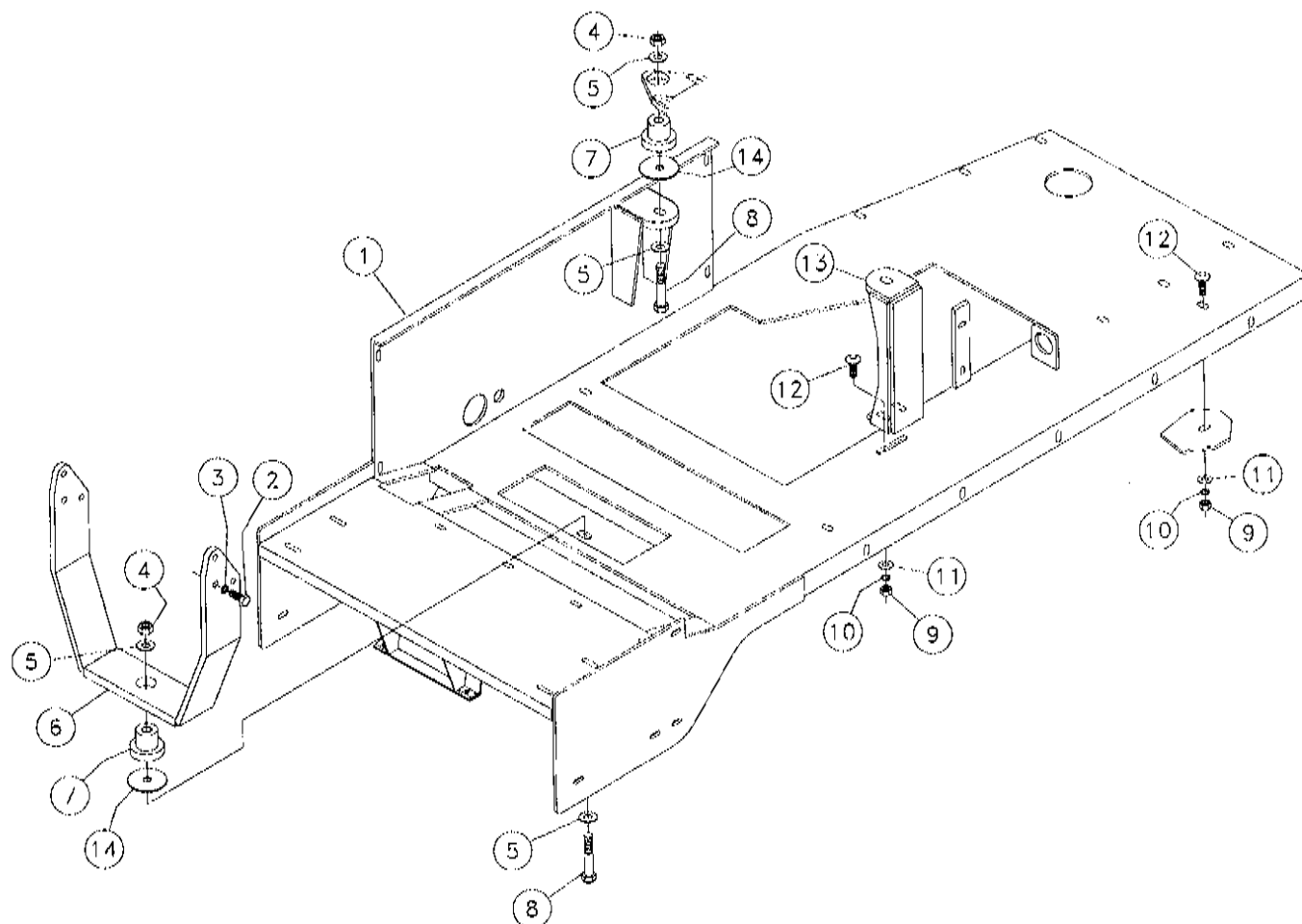
Figure 2-3



REF. NO.	PART NO.	DESCRIPTION	QTY.
2-3	1	220021-001 PLATE-PUMP MOUNT	1
2-3	2	77736-001 BOLT-10X35 DIN931	12
2-3	3	13625-001 WASHER-10 MM LOCK	12
2-3	4	220076-001 HUB-M65 55MM LONG 14T° C° SPLINE	1
2-3	5	4478-014 CAPSCREW-3/8-16X1 1/2 SOCHD G8	8
2-3	6	220075-001 FLANGE-65 FLE-PA 10° FLYWHEEL	1

ENGINE MOUNT ASSEMBLY

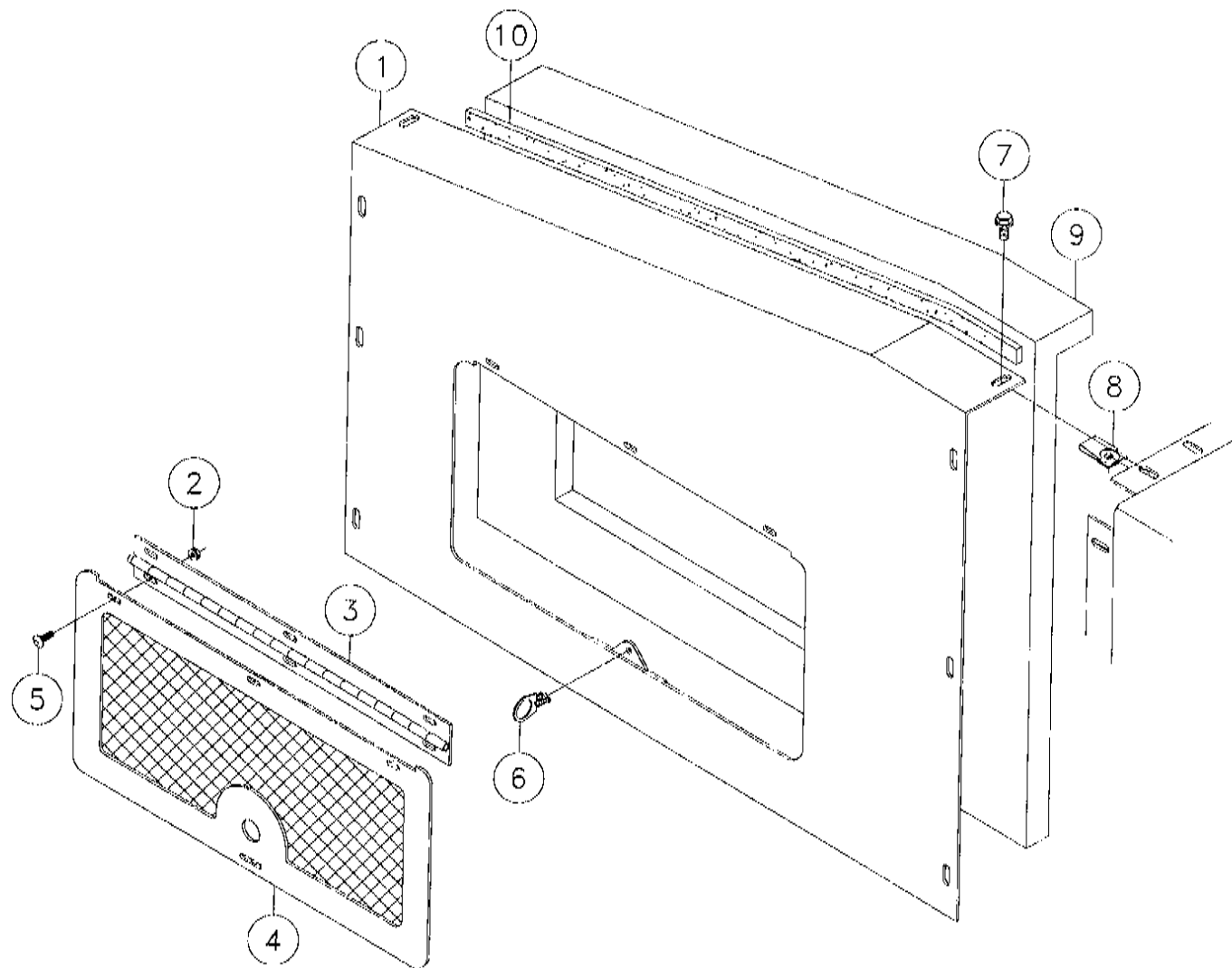
Figure 2-4



REF. NO.	PART NO.	DESCRIPTION	QTY.
2-4	1	238616-001 BASE-ENGINE MOUNTING	1
2-4	2	24772-001 BOLT-12M X 35 GR. 8.8 HEX HEAD	6
2-4	3	64108-001 WASHER-M12 LOCK	6
2-4	4	430-001 NUT-5/8 NC SLTL GRADE B ZINC	3
2-4	5	485-015 WASHER-5/8 FLAT	6
2-4	6	228267-001 MOUNT-FRONT ENGINE	1
2-4	7	220165-001 MOUNT-M500-50-NR RUBBER	3
2-4	8	366-034 BOLT-5/8-11X3 1/2 GRADE#5 HEX	3
2-4	9	421-001 NUT-1/2 NC HEX	6
2-4	10	480-011 WASHER-1/2 S/T LOCK	6
2-4	11	485-011 WASHER-1/2 FLAT	6
2-4	12	377-014 BOLT-1/2-13X1 1/2*GD#5CARRIAGE	6
2-4	13	228271-001 MOUNT-REAR ENGINE	1
2-4	14	220203-001 SLUG-ENGINE MOUNT	3

ENGINE COMPARTMENT SHIELDS ASSEMBLY (LEFT)

Figure 2-5

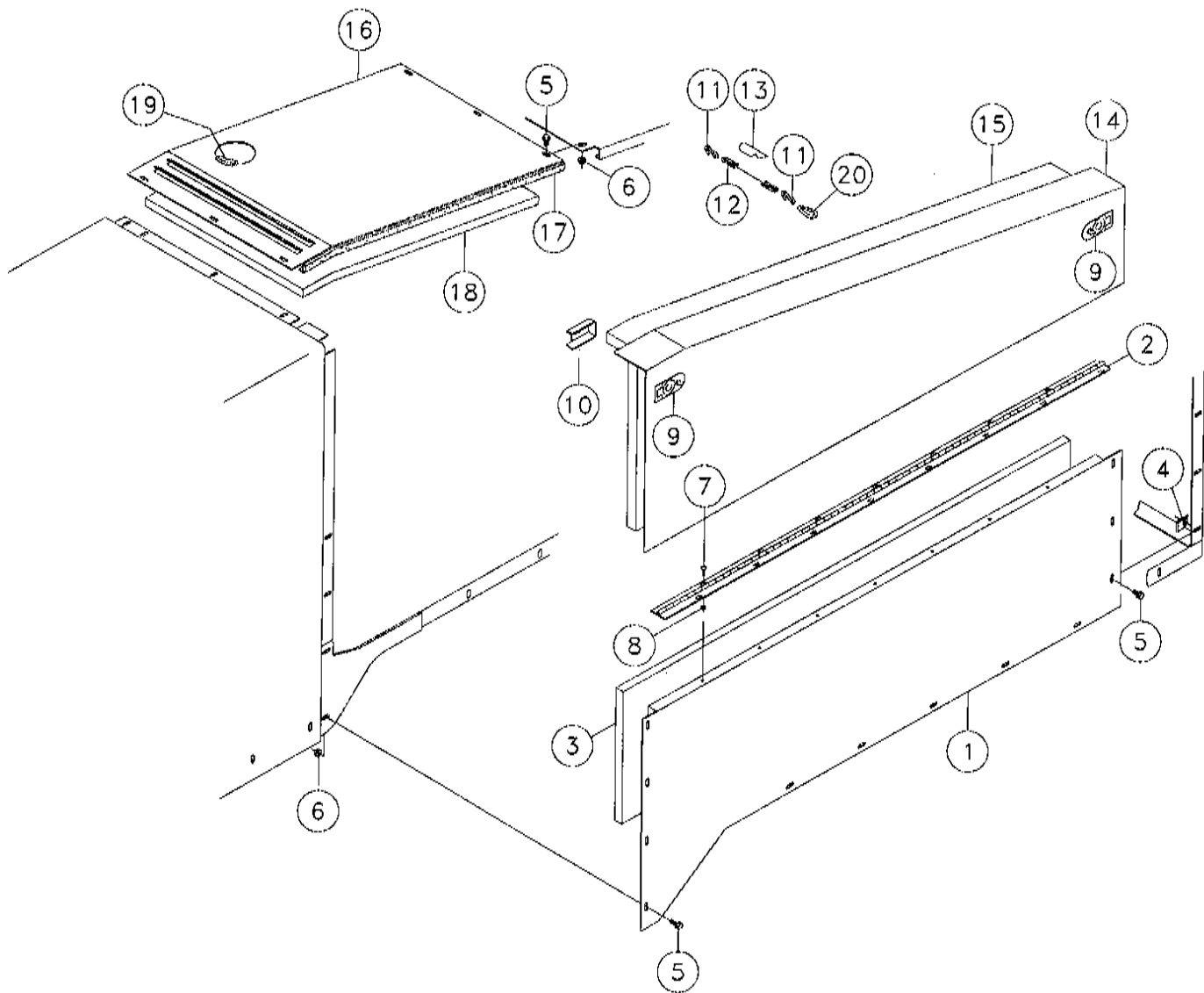


REF. NO.	PART NO.	DESCRIPTION	QTY.
2-5 1	238612-001	SHIELD-ENGINE SIDE	1
2-5 2	405-001	NUT-1/4 NC FLG WHIZ LOCK	4
2-5 3	240809-001	HINGE-ACCESS	1
2-5 4	240807-001	DOOR-ACCESS	1
2-5 5	373-005	BOLT-1/4-20X5/8 GR5 CARRIAGE	3
2-5 6	86113-001	FASTENER-1/4 TURN	1
2-5 7	4475-006	BOLT-3/8-16X3/4 FLG WHIZ	3
2-5 8	13323-001	U-CLIP - 3/8-16	8
2-5 9	238629-001	FOAM-LEFT SIDE SHIELD	1
2-5 10	18991-001	WEATHERSTRIP-5/16X3/4 SELFSTK (SPECIFY LENGTH)	A/R

ENGINE COMPARTMENT SHIELDS ASSEMBLY - TOP/RIGHT

Figure 2-6

Revised April 1998 due to addition of chain snap & update of sealing tape & u-clips. Changed/added parts marked with *.

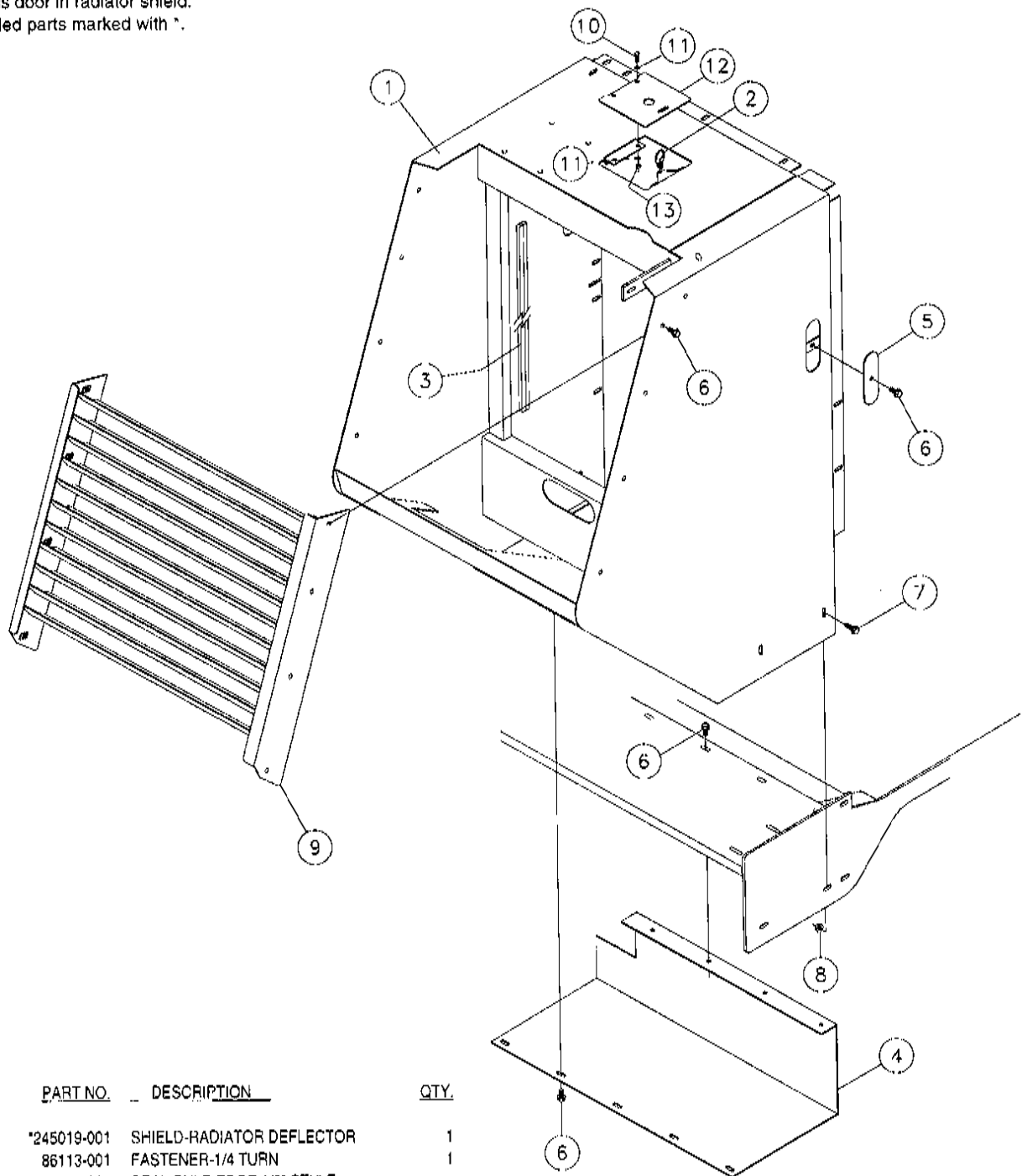


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.		
2-6	1	228366-001	SHIELD-LOWER ENGINE SIDE	1	2-6	12	904815-001	CHAIN-BREAKAWAY SWITCH	1
2-6	2	228373-001	HINGE-SHIELD	1	2-6	13	208065-001	SHRINK TUBE-3/4ID COMMERCL GRD (SPECIFY LENGTH)	A/R
2-6	3	228299-001	FOAM- LOWER SIDE SHIELD	1					
2-6	4	*13323-001	U-CLIP - 3/8-16	4	2-6	14	238610-001	SHIELD-UPPER SIDE ENGINE	1
2-6	5	4475-006	BOLT-3/8-16X3/4 FLG WHIZ	18	2-6	15	238628-001	FOAM-UPPER SIDE SHIELD	1
2-6	6	4536-001	NUT - 3/8-16 FLG. WHIZ LOCK	16	2-6	16	238627-001	SHIELD-TOP ENGINE	1
2-6	7	373-005	BOLT-1/4-20X5/8 GR5 CARRIAGE	15	2-6	17	*245059-001	TAPE-URETHANE 3/4" (SPECIFY LENGTH)	A/R
2-6	8	405-001	NUT-1/4 NC FLG WHIZ LOCK	15					
2-6	9	110479-001	LATCH-SEALED LEVER (INC. KEYS)	2	2-6	18	238624-001	FOAM-TOP SHIELD	1
		97874-003	KEYS	2	2-6	19	97456-001	SEAL-BULB EDGE 1/8" STYLE (SPECIFY LENGTH)	A/R
		228308-001	BAR-CLAMP	2					
2-6	11	76533-001	HOOK- 3/16 "S"	2	2-6	20	*235748-001	CHAIN SNAP-3/16" SS	1

RADIATOR SHIELD ASSEMBLY

Figure 2-7

Revised April 1998 due to change to
bolt-on access door in radiator shield.
Changed/added parts marked with *.

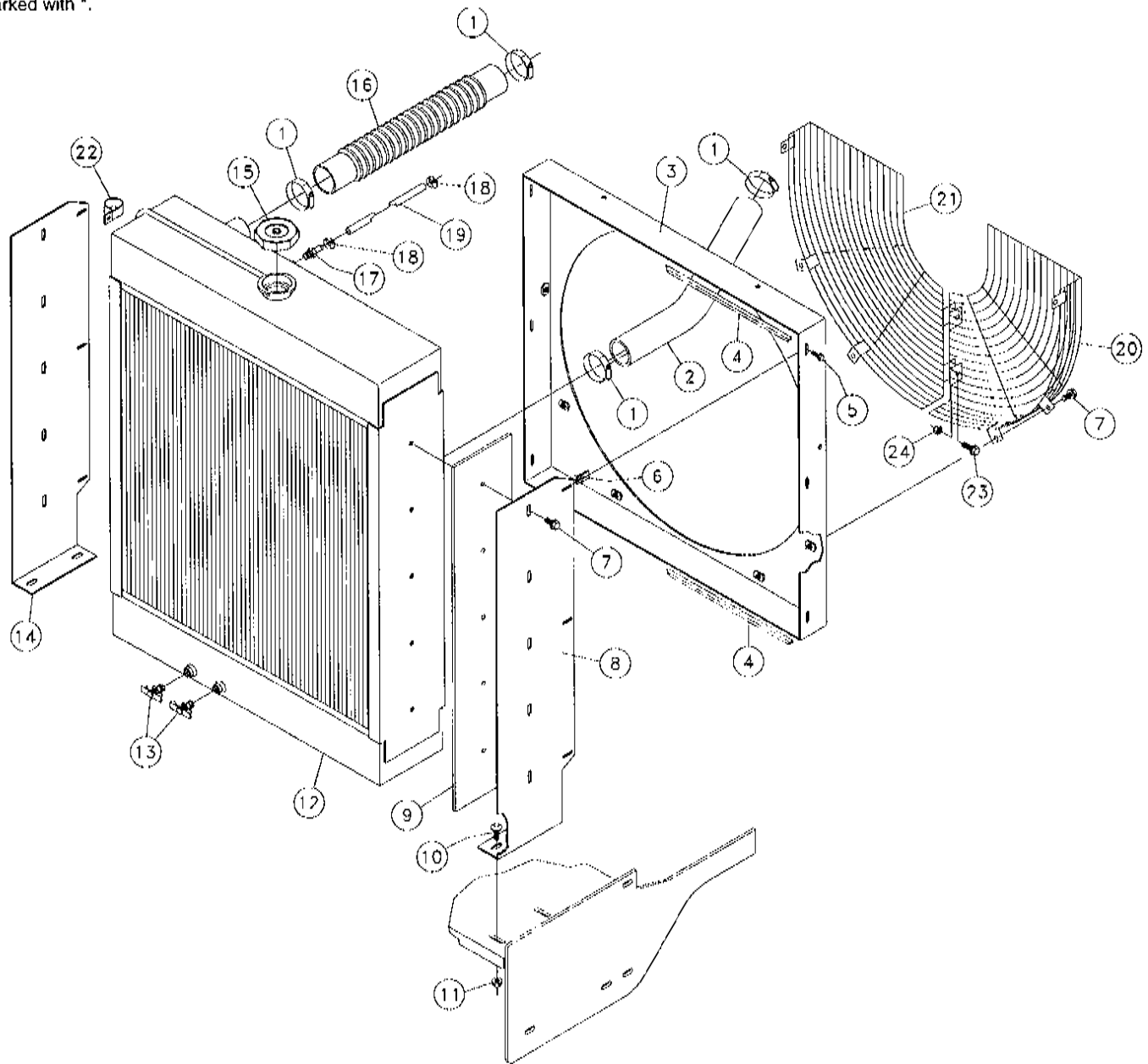


REF. NO.	PART NO.	DESCRIPTION	QTY.
2-7	1	*245019-001 SHIELD-RADIATOR DEFLECTOR	1
2-7	2	86113-001 FASTENER-1/4 TURN	1
2-7	3	97456-001 SEAL-BULB EDGE 1/8" STYLE (SPECIFY LENGTH)	A/R
2-7	4	238614-001 SHIELD-MUFFLER	1
2-7	5	245014-001 COVER-ACCESS	2
2-7	6	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	19
2-7	7	4475-010 BOLT-3/8-16X1 FLG WHIZ	4
2-7	8	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	4
2-7	9	245039-001 INSERT-GRILLE	1
2-7	10	*235734-001 BOLT-1/4-20X3/4 GR8 ZINC PLTD	2
2-7	11	*235716-001 WASHER-1/4 SAE HARD ZINC PLTD	4
2-7	12	*245063-001 DOOR-ACCESS	1
2-7	13	*235732-001 NUT-1/4-20 GR8 ZINC PLTD	2

RADIATOR ASSEMBLY

Figure 2-8

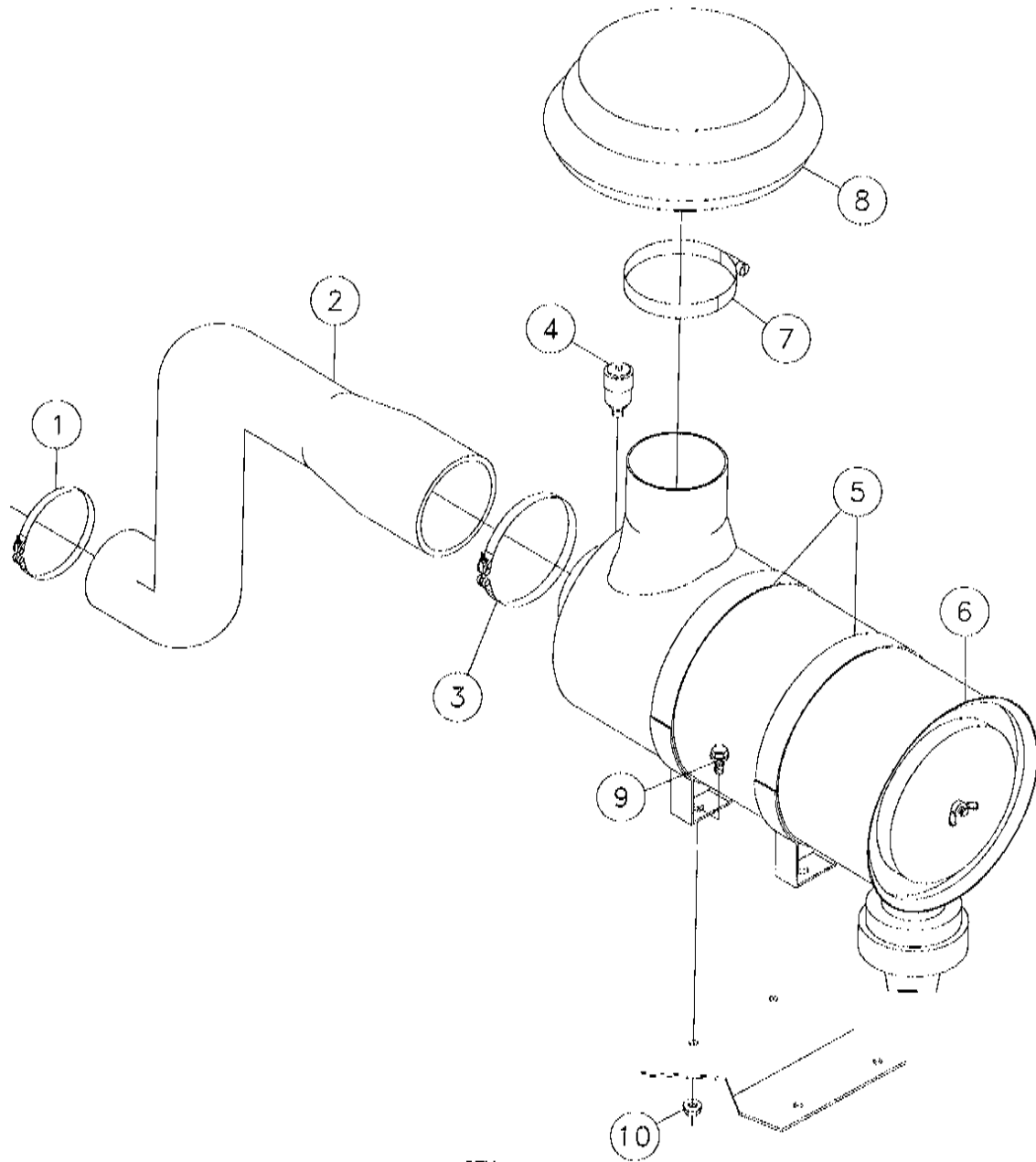
Revised August 1997 due to update of drawing & parts list. Changed/added parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
2-8	1	1580-011 HOSE CLAMP - 2"	4	2-8	13	225532-005 DRAIN COCK-1/4"	2
2-8	2	240804-001 HOSE-LOWER RADIATOR	1	2-8	14	238600-001 PLATE-RADIATOR MOUNTING	1
2-8	3	238564-001 SHROUD - FAN	1	2-8	15	68125-001 CAP-RADIATOR TR102 (7 PSI)	1
2-8	4	97456-001 SEAL-BULB EDGE 1/8" STYLE (SPECIFY LENGTH)	2	2-8	16	224849-001 HOSE-1 3/4ID X 19" COOLANT (UPPER)	1
2-8	5	4473-006 BOLT-1/4-20X3/4 FLG WHIZ	6	2-8	17	102118-001 FITTING-1/4NPT X 3/8 HOSE BARB	1
2-8	6	*18982-001 U-CLIP-1/4-20 SP/3/4 THROAT	6	2-8	18	1580-001 HOSE CLAMP - 3/8"	2
2-8	7	*4475-006 BOLT-3/8-16X3/4 FLG WHIZ	16	2-8	19	57706-001 HOSE-3/8" 200PSI 1 PLY BLACK (SPECIFY LENGTH)	1
2-8	8	238601-001 PLATE-RADIATOR MOUNTING	1	2-8	20	238656-001 GUARD - LEFT	1
2-8	9	238640-001 FOAM-RADIATOR	2	2-8	21	238655-001 GUARD-RIGHT FAN	1
2-8	10	375-006 BOLT-3/8-16X3/4 CARRIAGE GR. 5	4	2-8	22	*2595-001 HOSE CLAMP-TS7FR 1/2"	2
2-8	11	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	6	2-8	23	*4475-010 BOLT-3/8"-16X1" FLG WHIZ	2
2-8	12	238636-001 RADIATOR-(13-6272611-3)	1	2-8	24	*416-001 NUT-3/8"-16 SLTL	2

AIR CLEANER ASSEMBLY

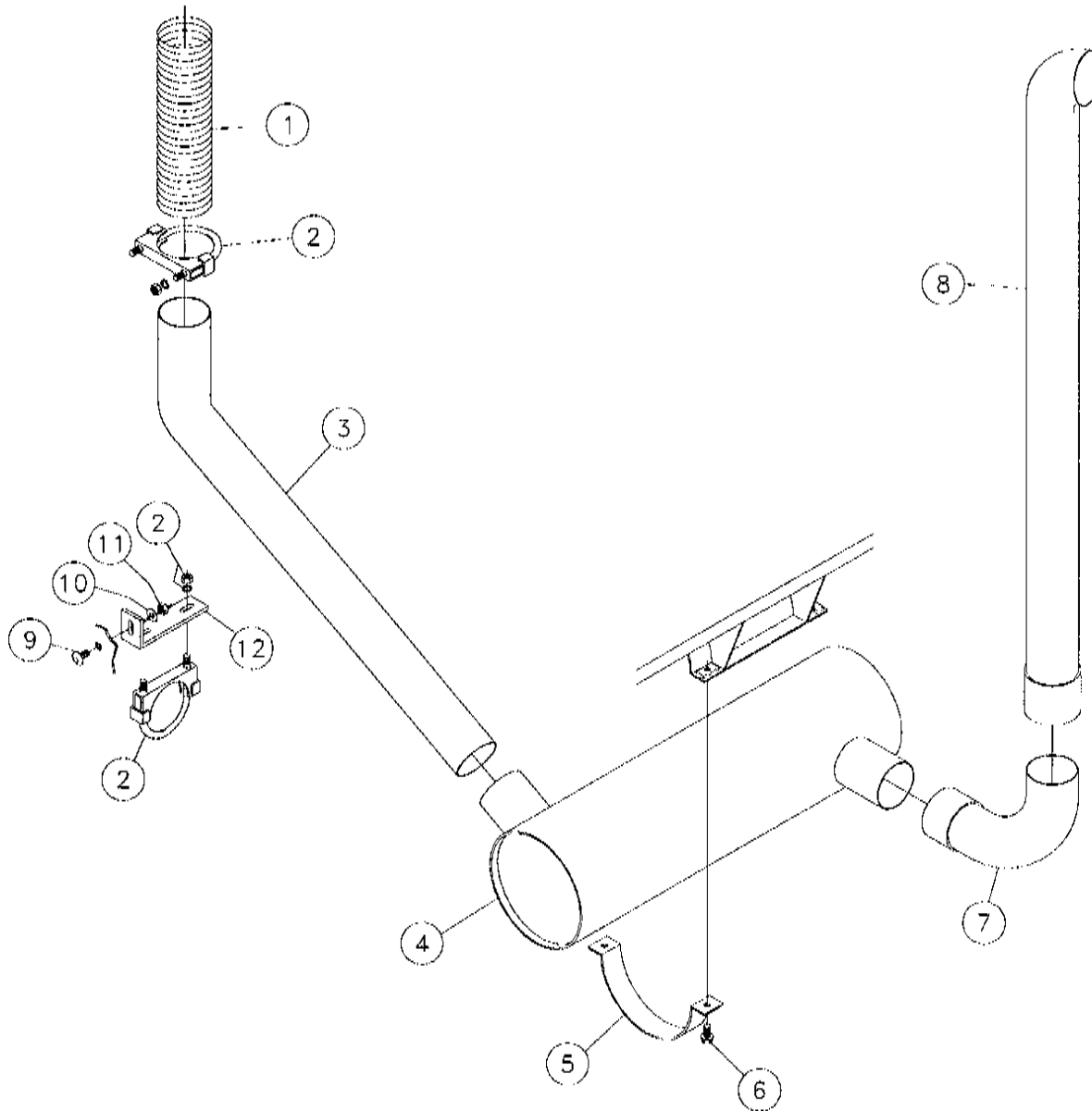
Figure 2-9



REF. NO.	PART NO.	DESCRIPTION	QTY.
2-9	1	96072-001 CLAMP-3 1/2" T-BOLT	1
2-9	2	240810-001 HOSE-AIR INTAKE	1
2-9	3	102628-001 CLAMP-4 1/2" T-BOLT	1
2-9	4	2165-001 INDICATOR	1
2-9	5	901499-001 MOUNTING BAND	2
2-9	6	901498-001 AIR CLEANER (BREAKDOWN FIG. 2-12)	1
2-9	7	1580-023 HOSE CLAMP - 5 1/2"	1
2-9	8	901500-001 AIR CLEANER CAP (INC. REF. 9)	1
2-9	9	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	4
2-9	10	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	4

MUFFLER ASSEMBLY

Figure 2-10

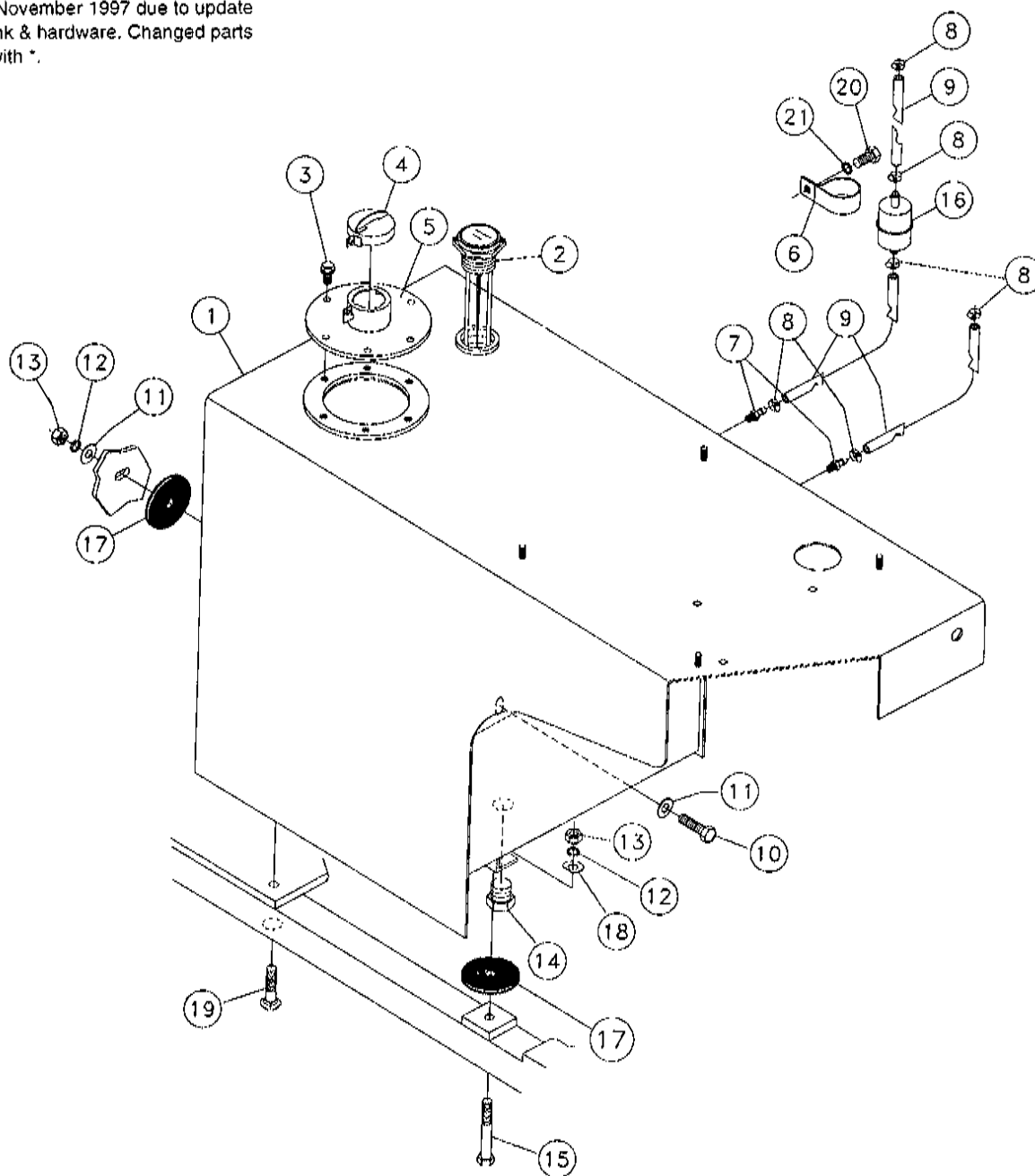


REF. NO.	PART NO.	DESCRIPTION	QTY.
2-10	1	240802-001 FLEX TUBING-3" DIA X 12"	1
2-10	2	2609-011 MUFFLER CLAMP - 3"	7
2-10	3	238641-001 PIPE-3" OD EXHAUST	1
2-10	4	238602-001 MUFFLER-3" EXHAUST	1
2-10	5	238625-001 STRAP-MUFFLER CLAMP	2
2-10	6	4475-012 BOLT-3/8-16X1 1/4 FLG WHIZ PLT	4
2-10	7	240803-001 TUBE-3" OD 90 DEGREES ELBOW	1
2-10	8	240814-001 STACK PIPE - 3" ALUM 60"	1
2-10	9	375-010 BOLT-3/8"-16X1"GD#5 CARRIAGE	1
2-10	10	485-007 WASHER-3/8 FLAT	1
2-10	11	416-001 NUT-3/8 NC SLTL	1
2-10	12	240759-001 PLATE-MUFFLER SUPPORT	1

FUEL TANK ASSEMBLY

Figure 2-11

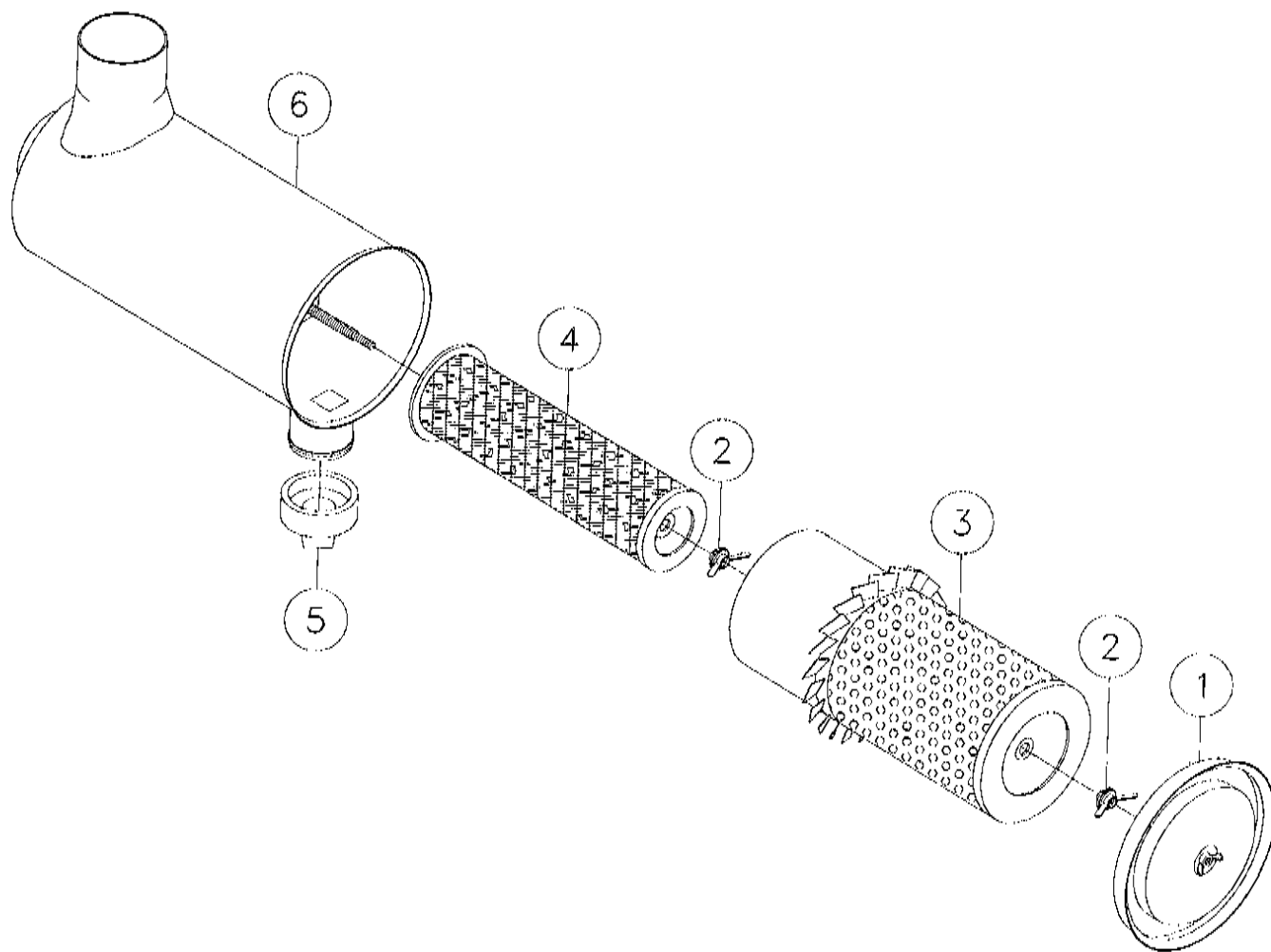
Revised November 1997 due to update of fuel tank & hardware. Changed parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
2-11	1	*236422-001 TANK-FUEL	1	2-11	12	480-011 WASHER-1/2 S/T LOCK	3
2-11	2	60109-001 8680 SPIRAL LEVEL GAUGE 19"	1	2-11	13	421-001 NUT-1/2 NC HEX	3
2-11	3	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	6	2-11	14	67570-001 PLUG- 12M	1
2-11	4	235909-001 CAP-DIESEL FUEL (LOCKABLE)	1	2-11	15	*358-036 1/2-13X3 3/4" GRADE#5 HEX BOLT	1
2-11	5	235899-001 FILLER-LOCKABLE FUEL	1	2-11	16	102995-001 STRAINER	1
2-11	6	*230965-001 CLAMP-1 3/4" W/ 17/32" HOLE	1	2-11	17	235944-001 DISK-RUBBER SPACER	3
2-11	7	78171-001 FITTING-1/8MNPTX5/16BARB STR.	2	2-11	18	4773-001 WASHER-SPECIAL 1/2" CLIPPED	2
2-11	8	1580-001 HOSE CLAMP - 3/8"	6	2-11	19	*377-016 BOLT-1/2-13X1 3/4" GD#5CARRIAGE	1
2-11	9	620-001 HOSE - 5/16 FUEL LINE (SPECIFY LENGTH)	2	2-11	20	64110-001 BOLT-M12X25 METRIC	1
2-11	10	358-012 BOLT-1/2-13 X 1 1/4 GR #5 HEX	1	2-11	21	64108-001 WASHER-M12 LOCK	1
2-11	11	485-011 WASHER-1/2 FLAT	1				

AIR CLEANER COMPONENTS

Figure 2-12

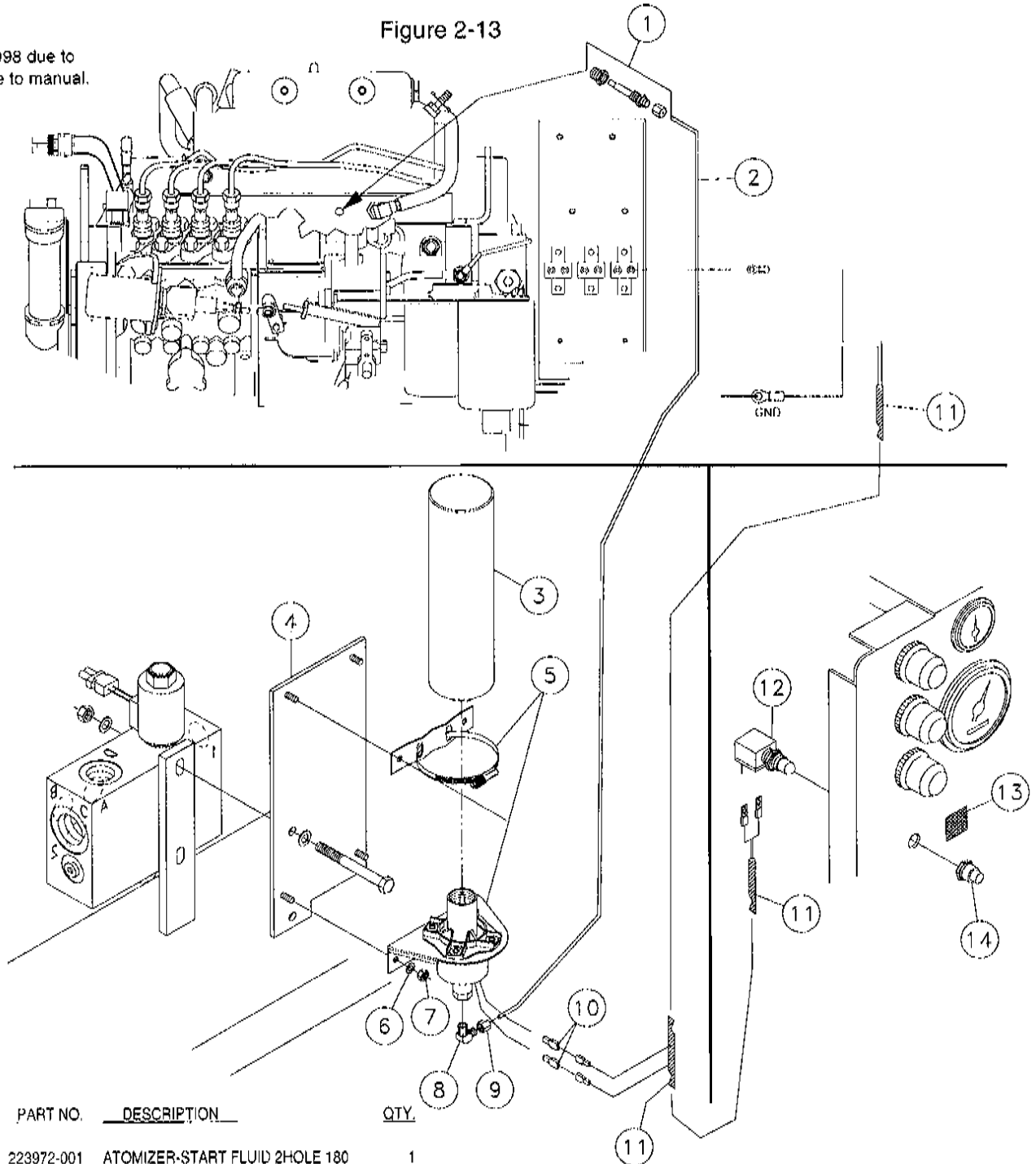


REF. NO.	PART NO.	DESCRIPTION	QTY.
2-12	1	901498-005 CUP ASSY	1
2-12	2	2146-009 NUT-WING	2
2-12	3	901498-003 ELEMENT-AIR CLEANER	1
2-12	4	901498-007 ELEMENT-SAFETY	1
2-12	5	200867-007 VALVE-VACUATOR	1
2-12	6	901498-009 BODY ASSY	1
	901498-001	AIR CLEANER (INC. ALL ITEMS IN THIS FIGURE)	

ETHER STARTING SYSTEM ASSEMBLY

Figure 2-13

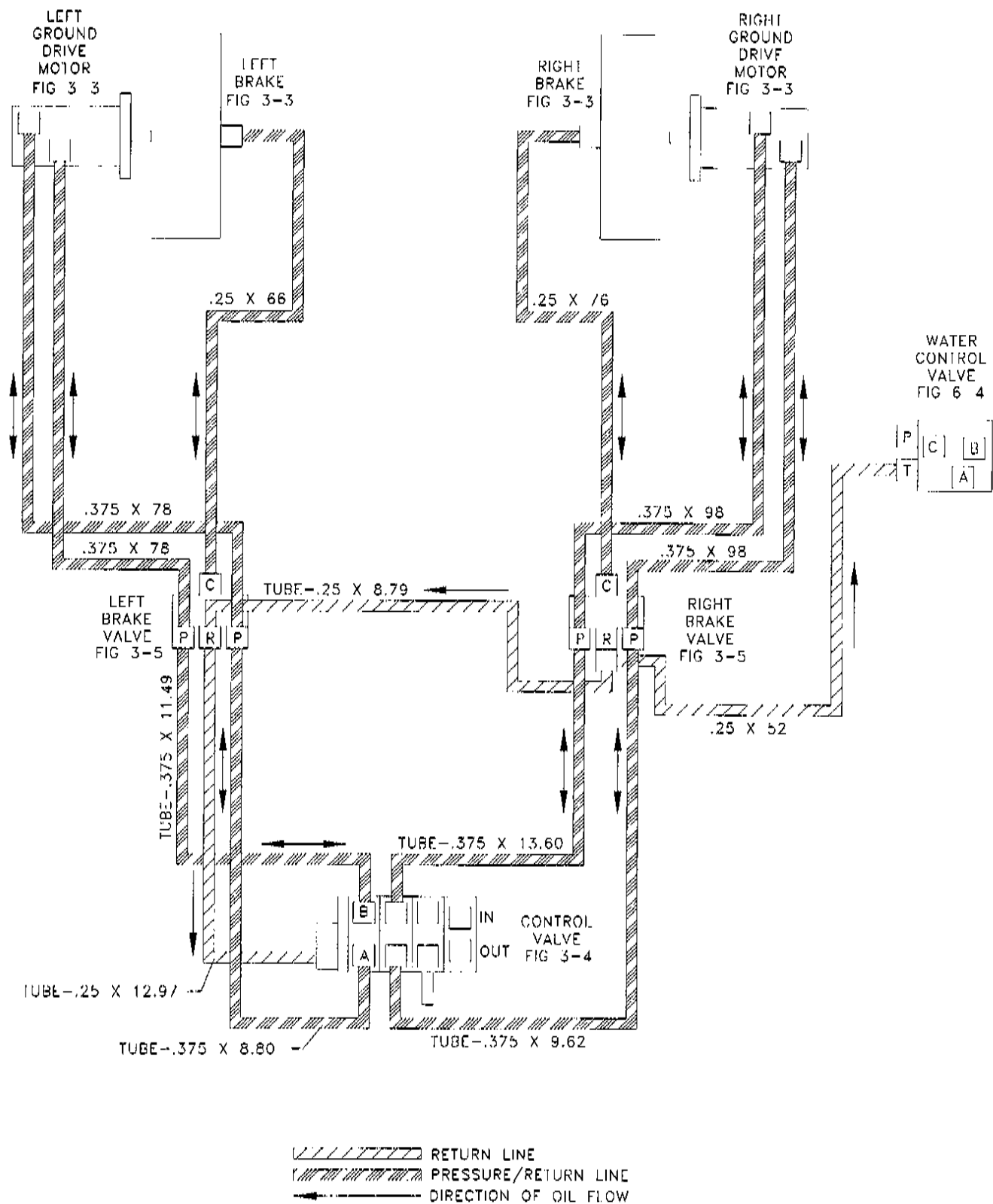
Revised April 1998 due to
addition of figure to manual.



REF. NO.	PART NO.	DESCRIPTION	QTY.
2-13	1	223972-001 ATOMIZER-START FLUID 2HOLE 180	1
2-13	2	202831-001 TUBING-NYLON 1/8OD X 100' (SPECIFY LENGTH)	1
2-13	3	223973-001 CYLINDER-START FLUID 18 OZ.	1
2-13	4	250543-001 ADAPTER-PLATE MOUNT	1
2-13	5	250606-001 ETHER AID KIT (INC. REF. 1, 2, 8, 9 & 12)	1
2-13	6	235716-001 WASHER-1/4 SAE HARD ZINC PLTD	4
2-13	7	235732-001 NUT-1/4-20 GR8 ZINC PLTD	4
2-13	8	125406-003 FITTING (INC. REF. 9)	1
2-13	9	125406-005 FITTING ASSY	1
2-13	10	18988-001 TERM-250FULL INS MALE SLD16GA	2
2-13	11	250545-001 WIRE HARNESS-ETHER SYSTEM	1
2-13	12	66816-001 SWITCH ASSY- #13389	1
2-13	13	7001A-193 DECAL-ETHER STARTING (UND)	1
2-13	14	90622-001 COVER-PUSHBUTTON SWITCH 5/8-32	1

HYDRAULIC COMPONENTS LOCATION DIAGRAM - GROUND DRIVE

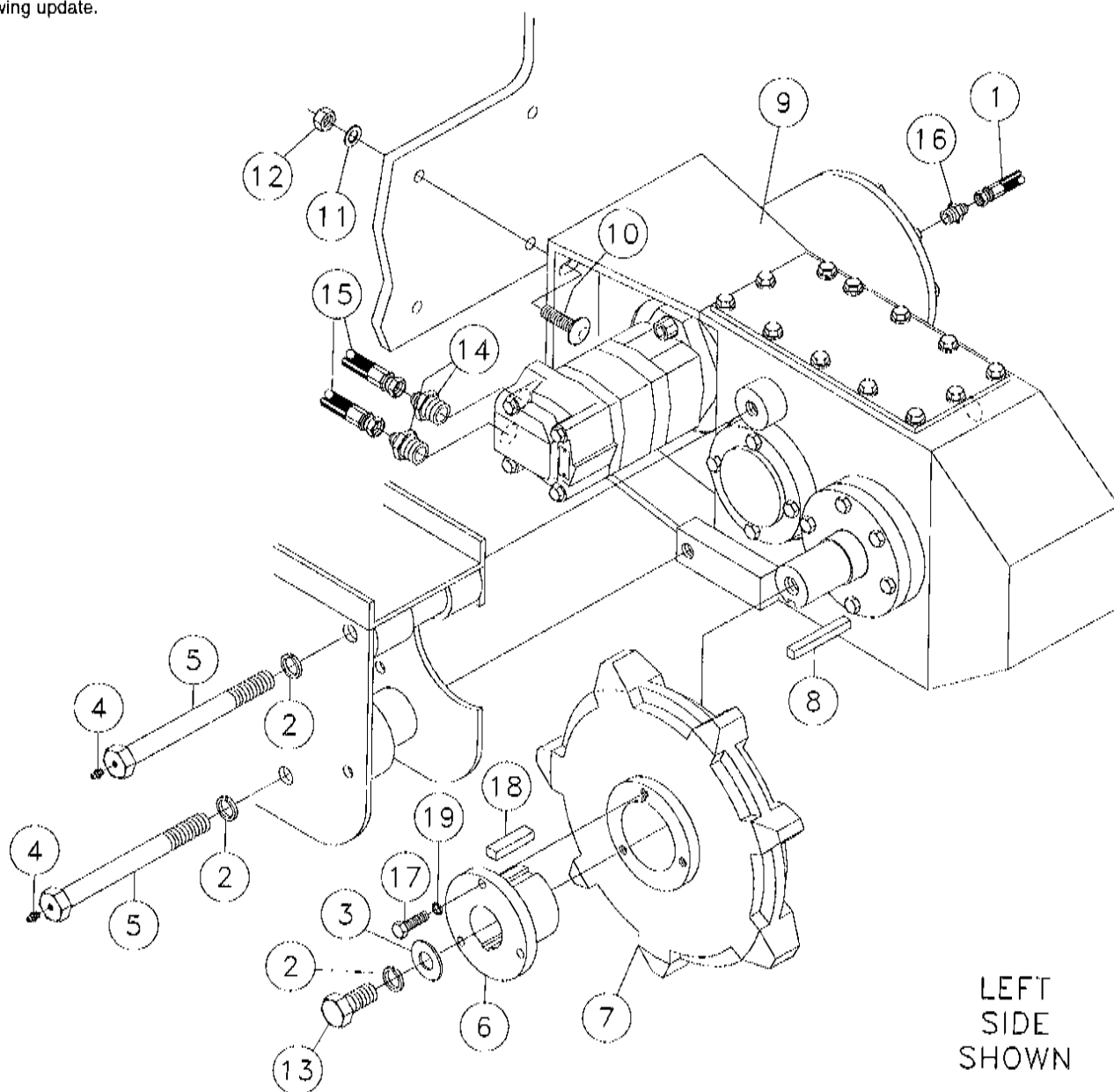
Figure 3-1



TRACK DRIVE GEARBOX ASSEMBLY

Figure 3-2

Revised August 1997 due to drawing update.



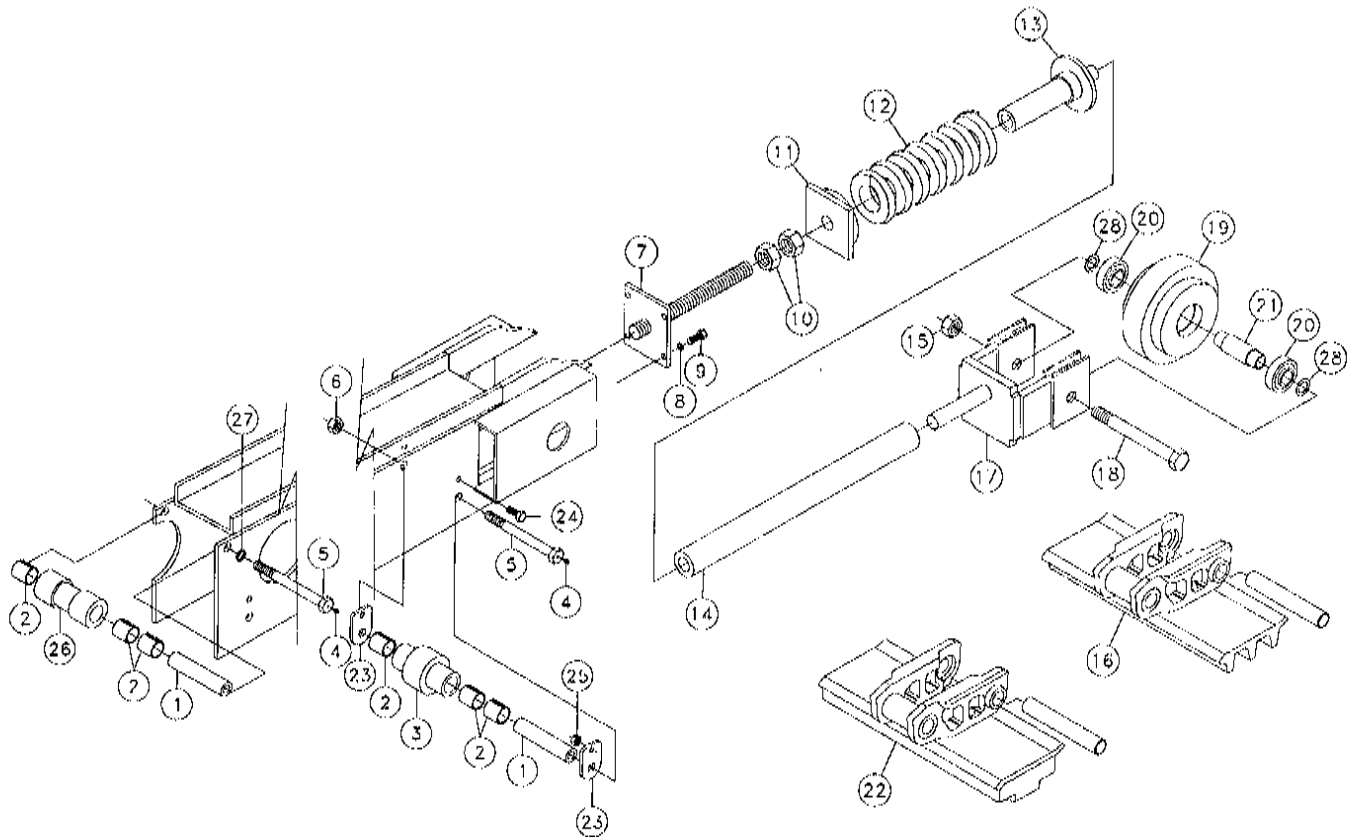
LEFT
SIDE
SHOWN

REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
3-2	1	53843-735 HOSE-1/4X66 4FSJICST/90D 3000# (LEFT SIDE)	1	222461-001	RIGHT GEARBOX ASSY (BREAKDOWN FIG. 3-6)	1	
		53843-737 HOSE-1/4X76 4FSJICST/90D 3000# (RIGHT SIDE)	1	3-2	10	377-016 1/2-13X1 3/4"GD#5CARRIAGE BOLT	8
3-2	2	480-017 WASHER-3/4 S/T LOCK	6	3-2	11	86510-001 WASHER-1/2 FLT HARDENED	8
3-2	3	485-017 WASHER-3/4 FLAT	2	3-2	12	421-001 NUT-1/2 NC HEX	8
3-2	4	598-001 ZERK-1/4" NF ST GREASE	2	3-2	13	369-014 BOLT-3/4"-10X 1 1/2"GRADE#5HEX	2
3-2	5	230923-001 BOLT-ROLLER ASSY (INC. REF. 4)	10	3-2	14	57946-001 10MX#6JIC ST ADAPTER	4
3-2	6	230897-001 BUSHING-1 3/4 ID TAPERED SPLIT (INC. REF. 17 & 18)	2	3-2	15	57940-089 HOSE-3/8X78 6FS JIC (100R2) (LEFT) (SHOWN)	2
3-2	7	228161-001 SPROCKET-7T W/ HUB	2			57940-279 HOSE-3/8X98 6FS JIC 3000 PSI (RIGHT)	2
3-2	8	579-019 HKEYS-3/8X3/8X3	2	3-2	16	57968-001 6M O-RING 4M JIC STRAIGHT	2
3-2	9	222462-001 LEFT GEARBOX ASSY (SHOWN) (BREAKDOWN FIG. 3-6)	1	3-2	17	354-012 BOLT-3/8 - 16X 1 1/4" GR5 HEX	6
				3-2	18	230897-003 KEY-1/2 X 3/8 X 2"	2
				3-2	19	480-007 WASHER-3/8 S/T LOCK	6

TRACK CHAIN, ROLLER & TIGHTENER ASSEMBLY

Figure 3-3

Revised November 1997 due to change
to center lock nut. Changed part marked with *.

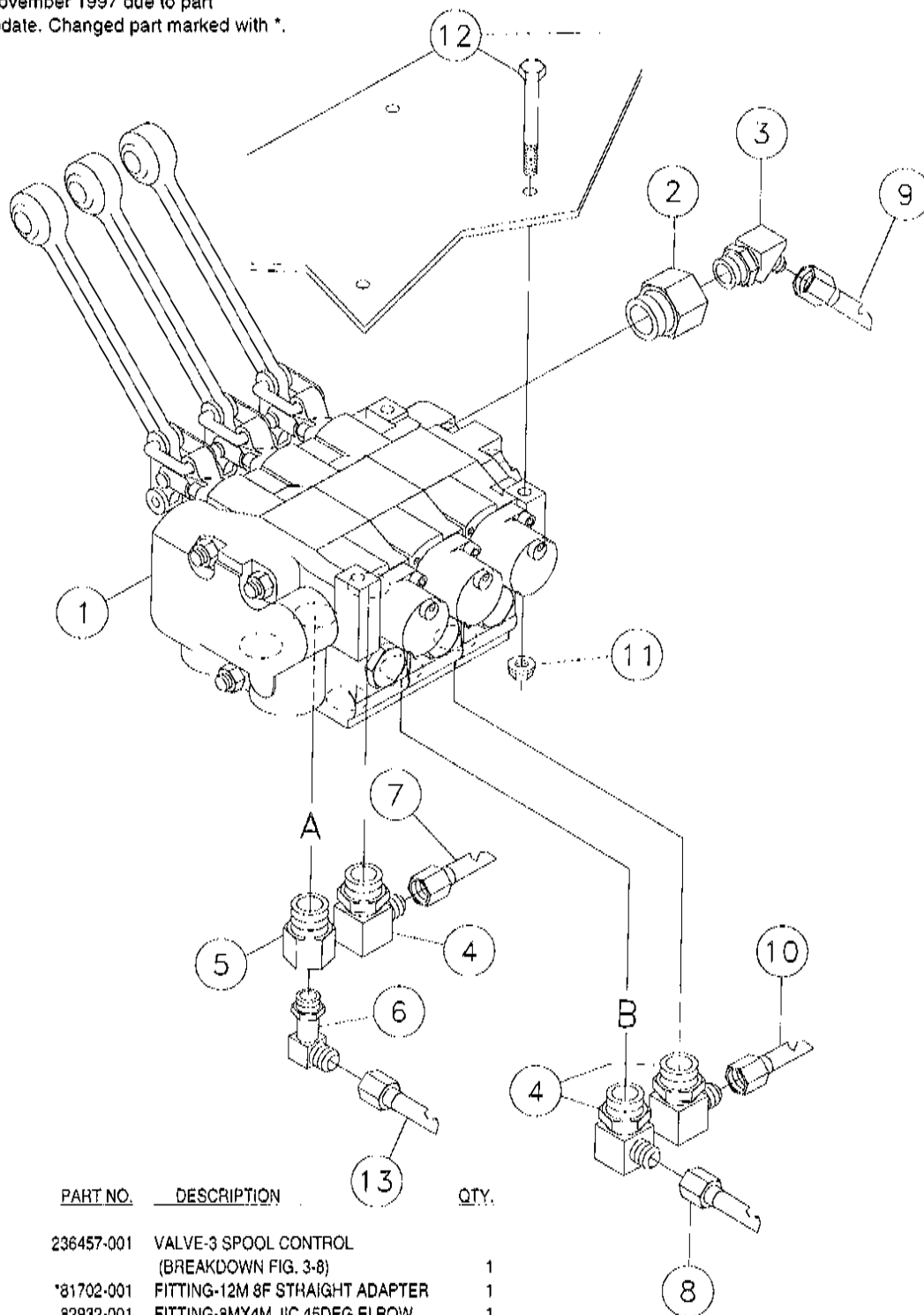


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
3-3	1	230894-001 TUBE - SPACER	16		230840-005	PIN-MASTER	1
3-3	2	1835-027 BSHG.-STL-1 1/2X1 1/4X1 1/2	48		230840-007	PIN-TRACK	33
3-3	3	235894-003 ROLLER ASSEMBLY-TRACK (INC. THREE OF REF. 2)	14	3-3	17	230904-001 SLIDER	2
3-3	4	598-001 ZERK-1/4" NF ST GREASE	16	3-3	18	388-090 BOLT-1 8UNCX9 GR.8	2
3-3	5	230923-001 BOLT-ROLLER ASSY (INC. REF. 4)	16	3-3	19	236469-001 IDLER ROLLER ASSY (INC. REF. 20 & 21)	2
3-3	6	*502118-001 NUT-3/4" NC CENTER LOCK	12	3-3	20	235970-001 BRG-1 1/4 BALL 3LIP SEALW/OCOL	4
3-3	7	230907-001 TIGHTENER- BASE PLATE	2	3-3	21	235969-001 TUBE-IDLER SPACER	2
3-3	8	480-011 WASHER-1/2 S/T LOCK	8	3-3	22	230841-001 RUBBER TRACK-25MMX400M CHAIN	2
3-3	9	358-014 BOLT-1/2-13X1 1/2"GRADE#5 HEX	8		230841-003	SECTION-TRACK (RUBBER)	34 (per track)
3-3	10	441-001 NUT-1 1/4-7 HEX	4		230840-005	PIN-MASTER	1
3-3	11	230906-001 CAP- SPRING	2		230840-007	PIN-TRACK	33
3-3	12	1803-051 SPRING-COMP.1"WX4 1/2OD X 12"	2	3-3	23	235888-001 PLATE-TRACK WASHER	28
3-3	13	230905-001 END- SPRING ALIGNMENT CHP	2	3-3	24	358-012 BOLT-1/2-13 X 1 1/4 GR #5 HEX	28
3-3	14	230888-001 TUBE- TIGHTENER	2	3-3	25	423-001 NUT-1/2 NC SLTL UTB	28
3-3	15	439-001 NUT-1" NC SLTL GRADE 5	2	3-3	26	236468-001 UPPER ROLLER ASSY (INC. THREE OF REF. 2)	2
3-3	16	230840-001 STEEL TRACK-35MMX40MM CHAIN	2	3-3	27	480-017 WASHER-3/4 S/T LOCK	4
	230840-003	SECTION-TRACK (STEEL)	34 (per track)	3-3	28	483-005 WASHER-1 1/2X1X14 GA M.B.	A/R

CONTROL VALVE ASSEMBLY - 3 SPOOL

Figure 3-4

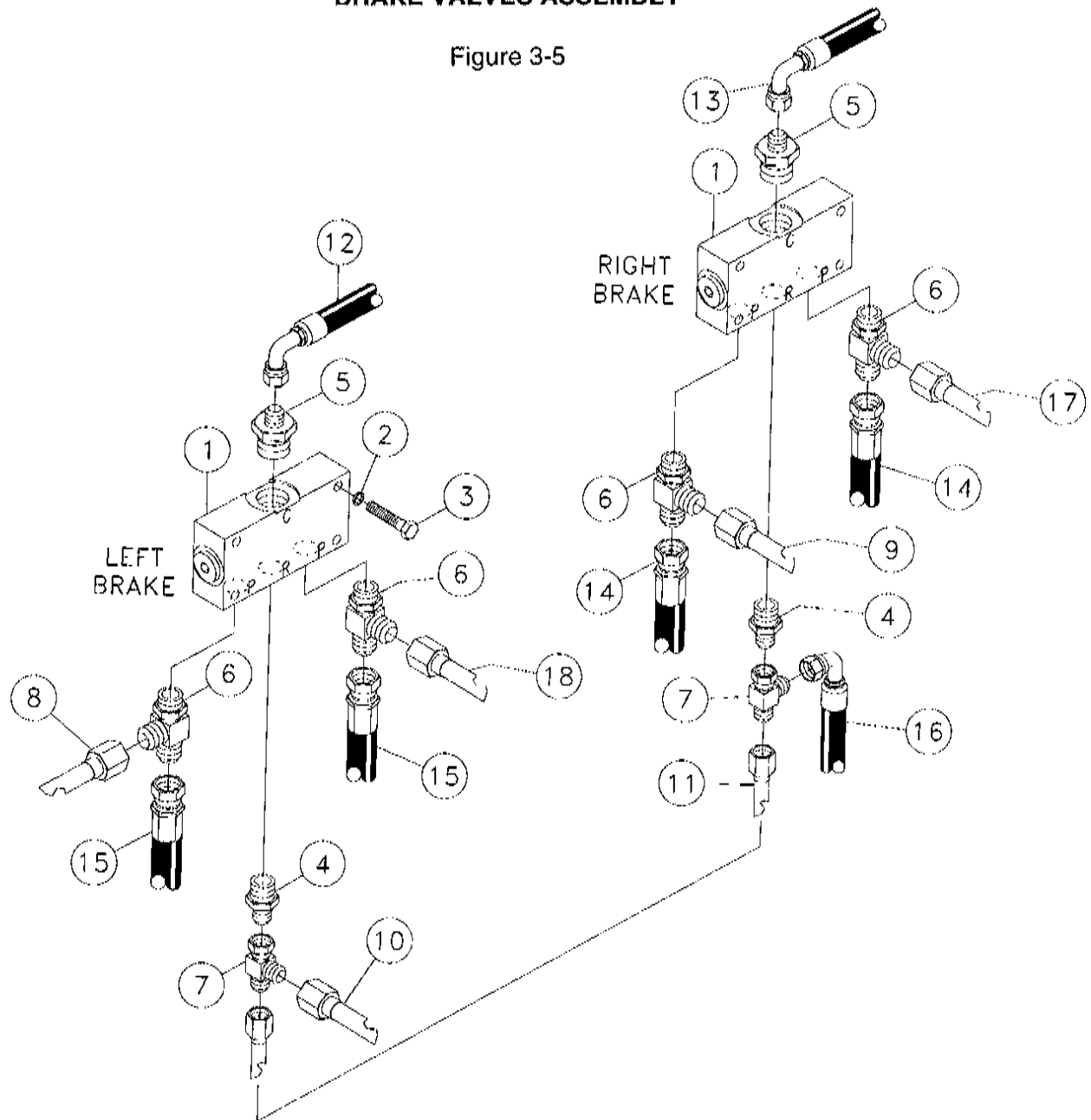
Revised November 1997 due to part number update. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
3-4	1	236457-001 VALVE-3 SPOOL CONTROL (BREAKDOWN FIG. 3-8)	1
3-4	2	*81702-001 FITTING-12M 8F STRAIGHT ADAPTER	1
3-4	3	82932-001 FITTING-8MX4M JIC 45DEG ELBOW	1
3-4	4	59401-001 6M JICX10M ADJ. 90 DEG.ELBOW	3
3-4	5	57967-001 10M-6F O-RING BUSHING	1
3-4	6	65570-001 6M X 6M JIC 90 DEGREE LONG	1
3-4	7	235994-001 TUBE-3/8 X .049 WALL - 8.80	1
3-4	8	235992-001 TUBE-3/8X.049 WALL - 13.60	1
3-4	9	235998-001 TUBE-1/4 X .035 WALL - 12.97	1
3-4	10	235995-001 TUBE-3/8 X .049 WALL - 11.49	1
3-4	11	1809-007 NUT - 5/16-18 SM.FLGE.T.L.	3
3-4	12	351-026 5/16-18X2 3/4IN.GR. #5HEX BOLT	3
3-4	13	235993-001 TUBE-3/8 X .049 WALL - 9.62	1

BRAKE VALVES ASSEMBLY

Figure 3-5

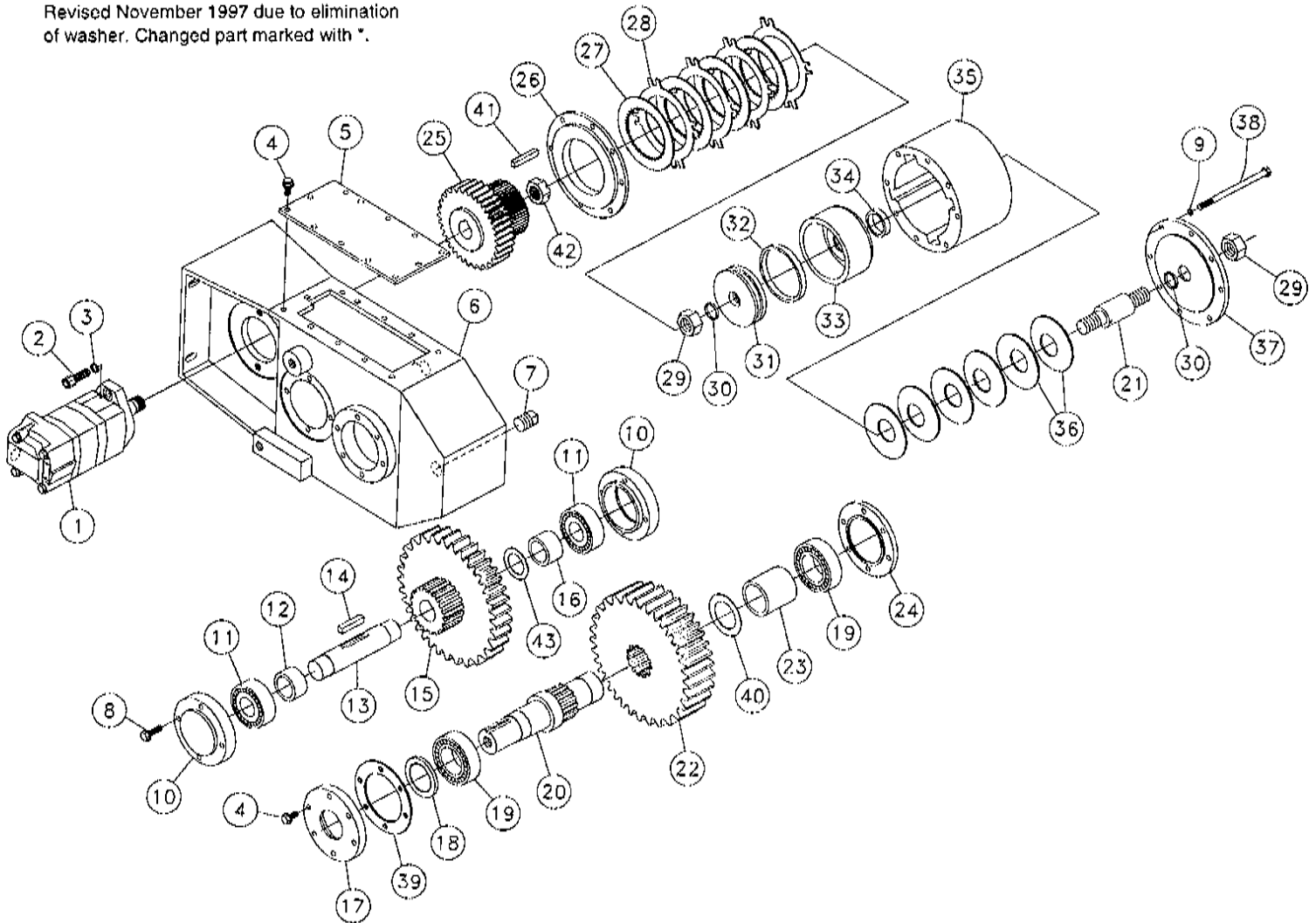


REF. NO.	PART NO.	DESCRIPTION	QTY.
3-5	1	225190-001 VALVE-SHUTTLE	2
3-5	2	480-003 WASHER-1/4 S/T LOCK	4
3-5	3	350-014 BOLT-1/4-20X1 1/2"GRADE#5 HEX	4
3-5	4	57968-001 6M O-RING 4M JIC STRAIGHT	2
3-5	5	53657-001 FITTING-8M OR X 4M JIC ST.	2
3-5	6	68774-001 FITTING-6MX6M JIC (RUN)X6M JIC	4
3-5	7	60248-001 TEE-4M JICX4M JICX4FS JIC	2
3-5	8	235995-001 TUBE-3/8 X .049 WALL - 11.49	1
3-5	9	235992-001 TUBE-3/8X.049 WALL - 13.60	1
3-5	10	235998-001 TUBE-1/4 X .035 WALL - 12.97	1
3-5	11	235997-001 TUBE-1/4 X .035 WALL - 8.79	1
3-5	12	53843-735 HOSE-1/4X66 4FSJICST/90D 3000#	1
3-5	13	53843-737 HOSE-1/4X76 4FSJICST/90D 3000#	1
3-5	14	57940-279 HOSE-3/8X98 6FS JIC 3000 PSI	2
3-5	15	57940-089 HOSE-3/8X78 6FS JIC (100R2)	2
3-5	16	236449-001 HOSE-1/4X52 4FSJIC ST/90 3000	1
3-5	17	235993-001 TUBE-3/8 X .049 WALL - 9.62	1
3-5	18	235994-001 TUBE-3/8 X .049 WALL - 8.80	1

TRACK DRIVE GEARBOX COMPONENTS

Figure 3-6

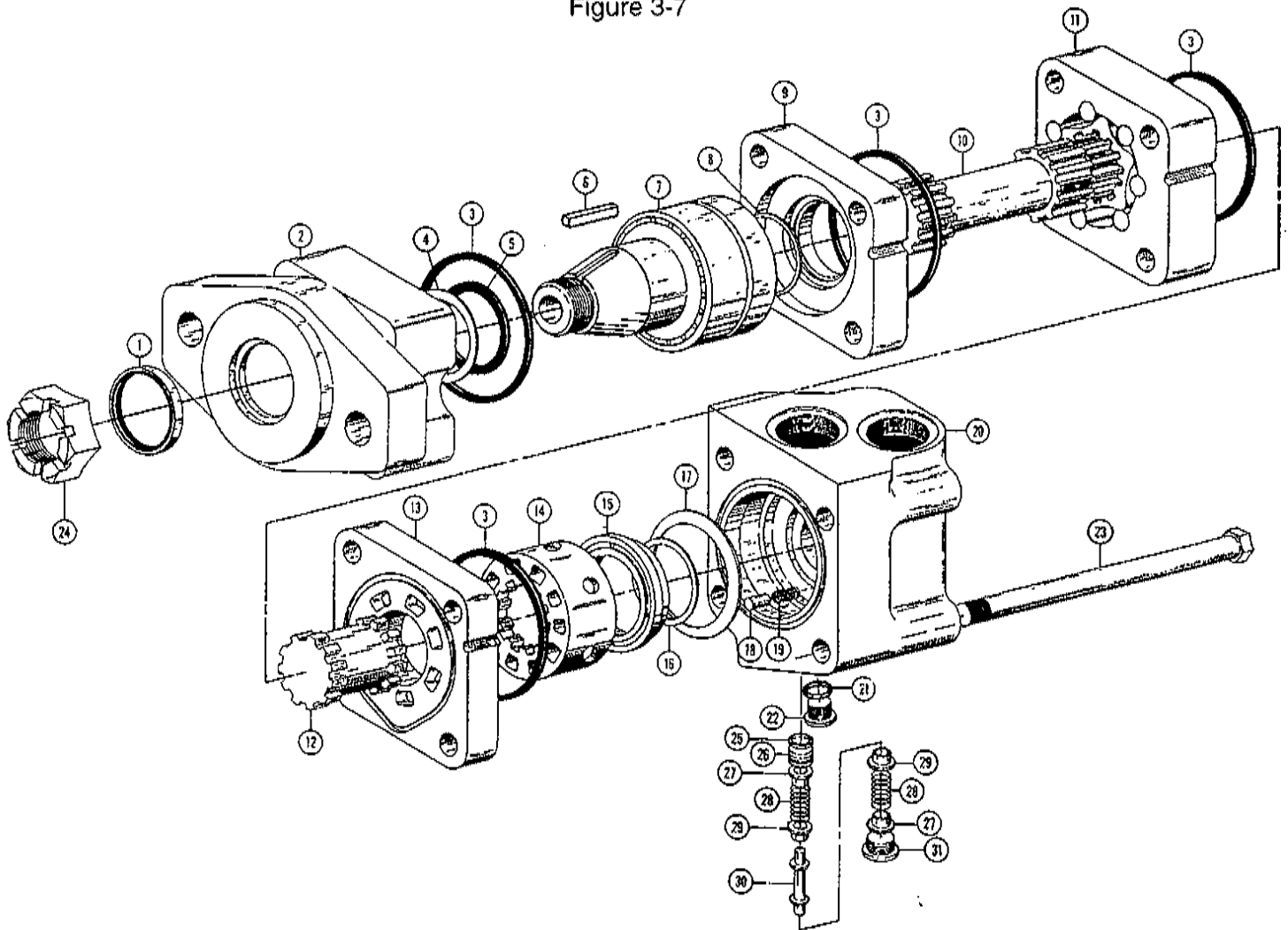
Revised November 1997 due to elimination of washer. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
3-6	1	230859-001 MOTOR- HYD. (BREAKDOWN FIG. 3-7)	1	3-6	24	225071-001 PLATE-BRG. CAP	1
3-6	2	58726-001 SCREW-1/2X13X1 1/4 SHC	2	3-6	25	225106-001 GEAR-33T BRAKE	1
3-6	3	480-011 WASHER-1/2 S/T LOCK	2	3-6	26	225098-001 PLATE-BRAKE MT	1
3-6	4	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	24	3-6	27	219132-001 DISC-BRAKE ROTOR	4
3-6	5	225103-001 COVER-GEAR BOX	1	3-6	28	219133-001 PLATE-BRAKE STATOR	4
3-6	6	222459-001 GEARBOX-LEFT TRACK (SHOWN)	1	3-6	29	5460-001 NUT -1-14 NF GR 8 SLTL	2
		222458-001 GEARBOX-RIGHT TRACK	1	3-6	30	793-017 O-RING	2
3-6	7	732-009 PLUG-3/4" PIPE BLACK STEEL	2	3-6	31	225107-001 PISTON	1
3-6	8	4475-012 BOLT-3/8-16X1 1/4 FLG WHIZ PLT	8	3-6	32	58139-001 UNI-RING-#12G-400320-375	1
3-6	9	480-007 WASHER-3/8 S/T LOCK	8	3-6	33	225110-001 BARREL-BRAKE CYLINDER	1
3-6	10	212840-001 HOUSING-BEARING	2	3-6	34	57301-001 ROD SEAL-#30-116128-375	1
3-6	11	224557-001 BEARING-ROLLER 35M BORE	2	3-6	35	225099-001 TUBE-BRAKE MOUNT	1
3-6	12	225075-001 SPACER-IDLER SHAFT	1	3-6	36	222486-001 WASHER-BELLEVILLE 940DX1.61ID	6
3-6	13	225070-001 SHAFT-IDLER	1	3-6	37	225113-001 PLATE-CYLINDER ROD	1
3-6	14	579-011 HKEYS-3/8X3/8X2	1	3-6	38	354-060 3/8-16X6" GRADE#5 HEX BOLT	8
3-6	15	225105-001 GEAR-18T/54T	1	3-6	39	235873-001 PLATE-SPACER	1
3-6	16	225074-001 SPACER-TUBE	1	3-6	40	*483-017 WASHER-3" OD X 2" ID X 14 GA M.B.	1
3-6	17	225072-001 PLATE-SEAL HOLDER	1	3-6	41	218249-003 KEY-SHAFT	1
3-6	18	230781-001 SEAL-C/R 19643	1	3-6	42	2876-003 NUT 1-20 CASTLE 4775W	1
3-6	19	1706-001 BRG.-22210 LB/C3 50MM SPH.ROL	2	3-6	43	483-009 WASHER-2 1/4X1 1/2X14 GA M.B.	1
3-6	20	235900-001 SHAFT BOX OUTPUT	1				
3-6	21	225111-001 ROD-CYLINDER	1		222462-001	LEFT GEARBOX ASSY (INC. ALL ITEMS IN FIG. 3-6)	1
3-6	22	235269-001 GEAR-54 TOOTH	1		222461-001	RIGHT GEARBOX ASSY (INC. ALL ITEMS IN FIG. 3-6)	1
3-6	23	225076-001 SPACER-SHAFT	1				

HYDRAULIC MOTOR COMPONENTS

Figure 3-7

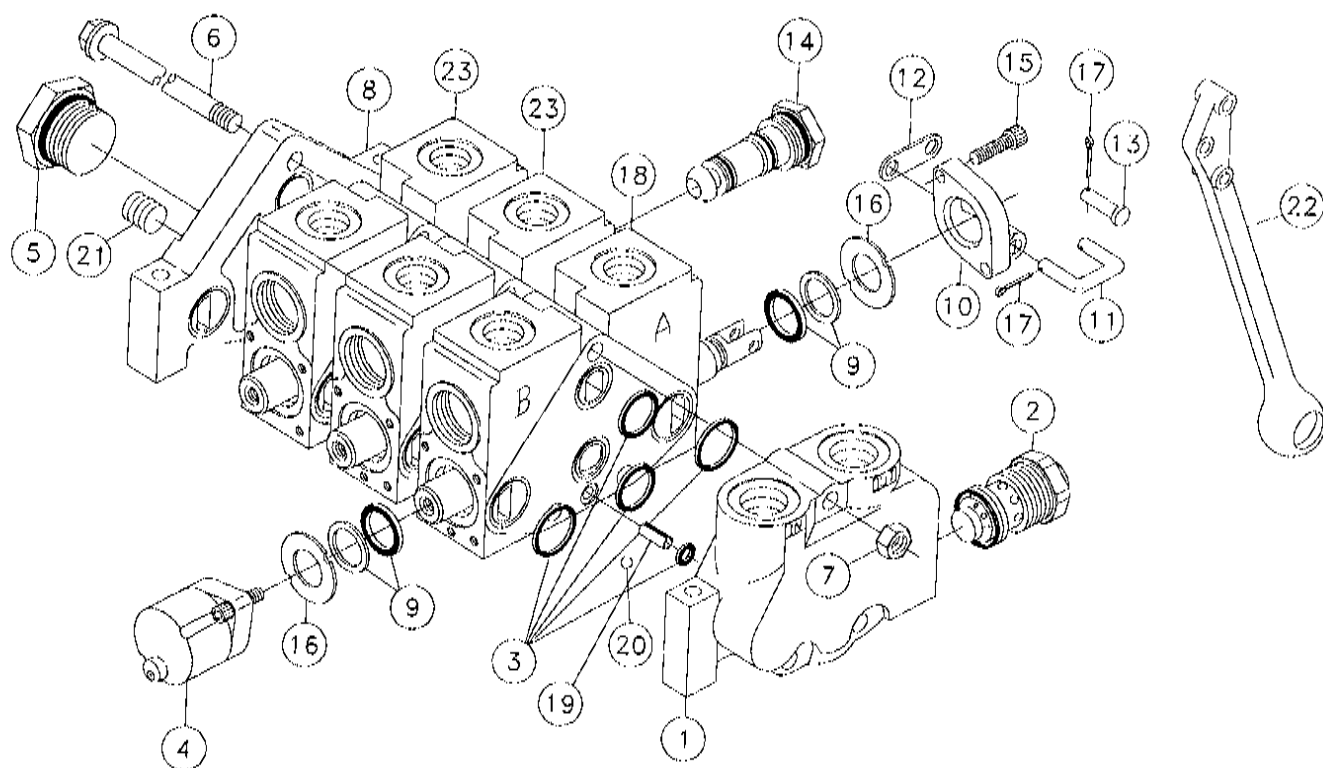


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
3-7	1	770-071 SEAL-DUST	1	3-7	18	770-037 PIN	2
3-7	2	770-073 HOUSING-BEARING	1	3-7	19	770-039 SPRING	2
3-7	3	770-007 SEAL-O RING	4	3-7	20	216770-003 HOUSING W/SHUTTLE (SAE 10 PORTS) MACHINED (INC. REF. 21 & 22)	1
3-7	4	770-009 WASHER-BACKUP	1	3-7	21	4485-023 O-RING	1
3-7	5	770-075 SEAL-SHAFT	1	3-7	22	4485-019 PLUG	1
3-7	6	218249-003 KEY-SHAFT	1	3-7	22	4485-021 PLUG ASSY (INC. REF. 21 & 22)	4
3-7	7	209107-005 SHAFT & BEARING KIT (INC. THE FOLLOWING PARTS:)		3-7	23	70020-007 BOLT	1
		NSS SHAFT-OUTPUT	1	3-7	24	2876-003 NUT 1-20 CASTLE 4775W	1
		NSS CONE-BEARING	2	3-7	25	1749-025 SEAL-O RING 15007 (90D)	1
		NSS CUP-BEARING	2	3-7	26	209137-017 PLUG	1
		NSS SPACER-BEARING	1	3-7	27	209137-019 SLEEVE-DASH POT	2
		NSS RING-RETAINING	1	3-7	28	209137-021 SPRING	2
3-7	8	770-017 SEAL-SHAFT FACE	1	3-7	29	209137-023 POPPET	2
3-7	9	770-079 PLATE-WEAR	1	3-7	30	209137-025 PISTON	1
3-7	10	70020-003 DRIVE	1	3-7	31	209137-027 PLUG ASSEMBLY	1
3-7	11	70020-005 GEROLER ASSY	1				
3-7	12	774-011 DRIVE-VALVE	1		230859-001	MOTOR- HYD. (INC. REF. 1-31)	
3-7	13	770-085 PLATE-VALVE	1		770-097	REPAIR KIT (INC. REF. 1, 3-5, 8, 16, 17 & 21)	
3-7	14	770-087 VALVE	1		NSS	NOT SOLD SEPARATELY	
3-7	15	770-089 PLATE-BALANCE	1				
3-7	16	770-057 SEAL-FACE INNER	1				
3-7	17	770-091 SEAL-FACE, OUTER	1				

NOTE: WHEN ORDERING REPLACEMENT PARTS, INCLUDE CHAR-LYNN PRODUCT NUMBER WITH ORDER. PRODUCT NO. IS 104-1014-006.

CONTROL VALVE COMPONENTS - 3 SPOOL

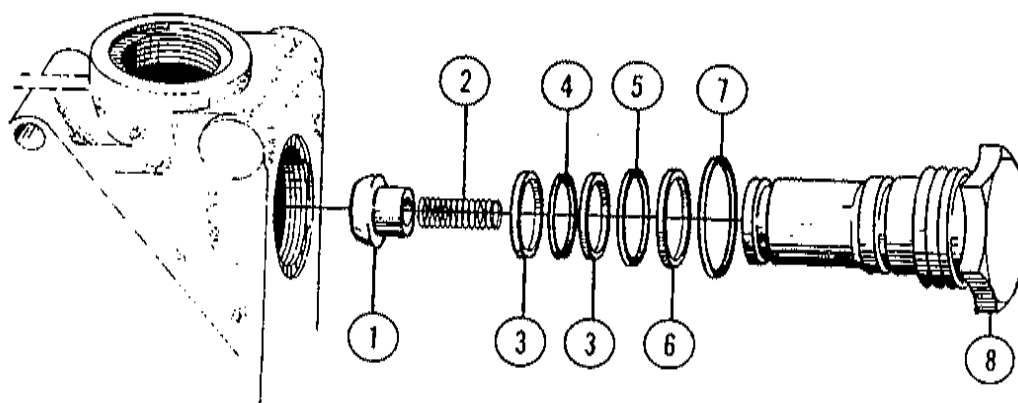
Figure 3-8



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
3-8	1	228113-003 LEFT COVER PLATE COMPLETE (INC. REF. 2)	1	3-8	15	79704-001 SCREW-1/4-20X7/8 SOC HD SELFLK	6
3-8	2	228113-005 WH MAIN RELIEF (3500 PSI) (BREAKDOWN FIG. 3-11)	1	3-8	16	3147-081 RETAIN-PLT WASH GRN 6752-001	6
3-8	3	87390-001 REPAIR KIT-LOAD SENSING SECT.	4	3-8	17	510-035 PIN-3/32 X 1/2 COTTER	9
3-8	4	6149-005 POSITIONER-STD. (BREAKDOWN FIG. 3-10)	3	3-8	18	224397-003 BODY ASSEMBLY-CENTER SECTION (INC. ONE OF REF. 3, 4, 9-11, 13, 19, 20 & 22, TWO OF REF. 14-16 & THREE OF REF. 17)	1
3-8	5	3152-011 PLUG SAE 12 (INC. O-RING)	1	3-8	19	87397-001 PIN-SPRING	1
3-8	5	3152-013 SEAL-O-RING	1	3-8	20	87398-001 BALL	1
3-8	6	16358-005 STUD KIT-3 SPOOL (INC. REF. 7)	1	3-8	21	3213-017 PLUG-RELIEF 3/8"	1
3-8	7	446-001 NUT-3/8 NF HEX	3	3-8	22	3147-039 HANDLE - CP VALVE	3
3-8	8	102976-001 COVER ASSY-RIGHT LOAD SEN. (INC. ONE OF REF. 3, 5 & 21)	1	3-8	23	236457-003 BODY ASSY-CNTR SEC W/FREE FLOW (INC. ONE OF REF. 3, 4, 9-11, 13, 19, 20 & 22, TWO OF REF. 14-16 & THREE OF REF. 17)	2
3-8	9	3147-077 REPAIR KIT	3				
3-8	10	3147-029 BRACKET	3				
3-8	11	4333-003 LINK-	3				
3-8	12	4333-005 PLATE-LINK	3				
3-8	13	2110-003 PIN-CLEVIS 1/4X7/8 - 47/64 UL	3				
3-8	14	3147-035 PLUG-LOAD CHECK STEEL (BREAKDOWN FIG. 3-9)	6				
						236457-001 VALVE-3 SPOOL CONTROL (INC. ALL ITEMS IN THIS FIGURE)	

LOAD CHECK PLUG COMPONENTS

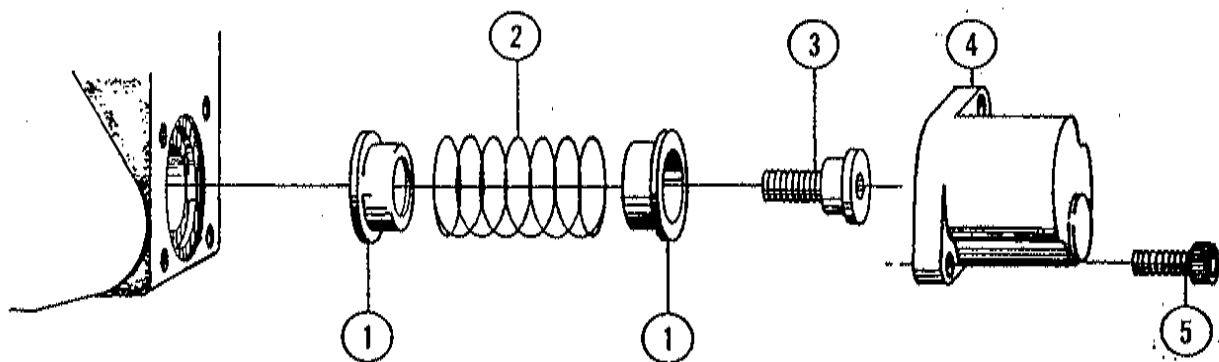
Figure 3-9



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.	
3-9	1	3128-009	POPPET-CHECK	1	3-9	7	NSS O-RING	1
3-9	2	3147-041	SPRING-CHECK	1	3-9	8	3147-043 PLUG-LIFT CHECK	1
3-9	3	NSS	WASHER-BACKUP (INNER)	2				
3-9	4	NSS	O-RING	1		3147-035	PLUG-LOAD CHECK STEEL	
3-9	5	NSS	O-RING (OUTER)	1			(INC. REF. 1-8)	
3-9	6	NSS	WASHER-BACKUP (OUTER)	1		3147-037	REPAIR KIT (INC. REF. 3-7)	

STANDARD SPOOL POSITIONER COMPONENTS

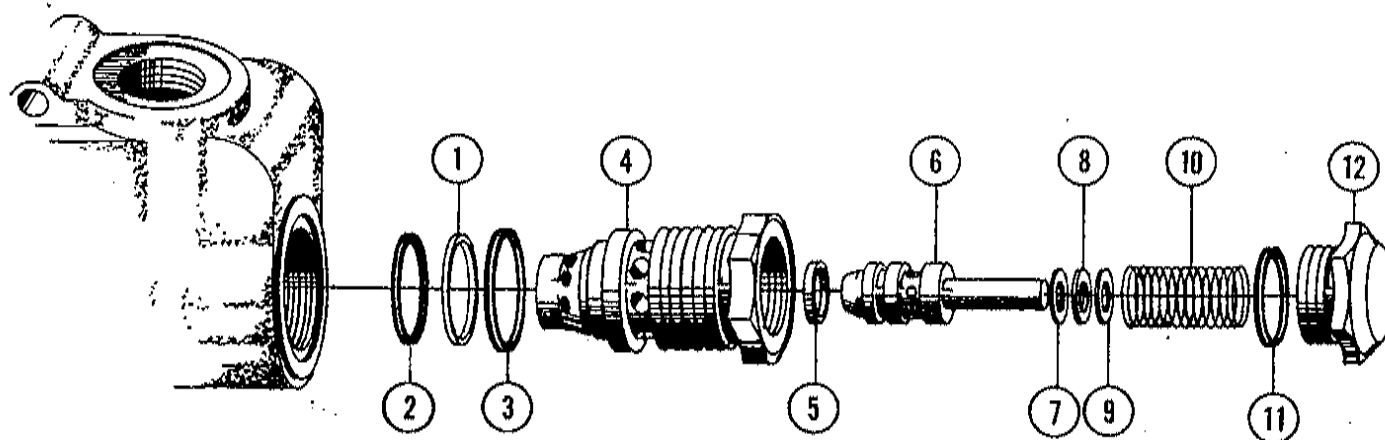
Figure 3-10



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.		
3-10	1	3149-005	COLLAR-SPRING	2	3-10	4	6149-043	BONNET	1
3-10	2	6149-057	SPRING-RETURN	1	3-10	5	79704-001	SCREW-1/4-20X7/8 SOC HD SELFLK	2
3-10	3	3149-013	COLLAR-SPOOL	1			6149-005	POSITIONER-STD. (INC. REF. 1-7)	

WH MAIN RELIEF COMPONENTS

Figure 3-11

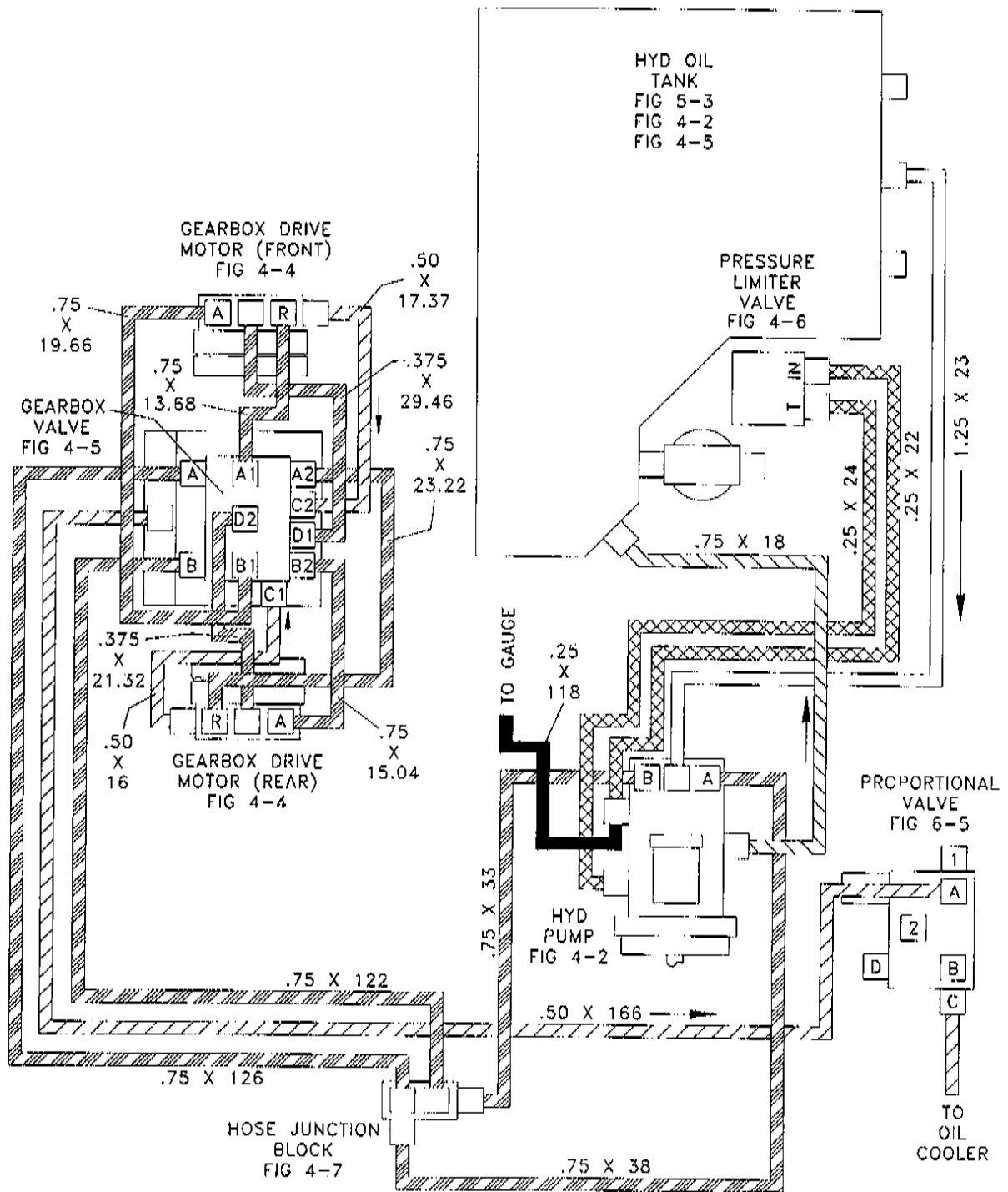


REF. NO.	PART NO.	DESCRIPTION	QTY.
3-11	1	NSS RING-BACKUP	1
3-11	2	NSS SEAL-O-RING	1
3-11	3	NSS SEAL-O-RING	1
3-11	4	15844-009 BODY-WH RELIEF	1
3-11	5	NSS RING-PISTON	1
3-11	6	NSS POPPET	1
3-11	7	208-019 SHIM-.010	A/R
3-11	8	208-017 SHIM-.020	A/R
3-11	9	208-015 SHIM-.040	A/R
3-11	10	228113-007 SPRING (3000-3500 PSI)	1
3-11	11	NSS SEAL-O-RING	1
3-11	12	3147-027 CAP	1
	3147-011	SERVICE KIT (INC. REF. 5 & 6)	
	15844-007	REPAIR KIT (INC. REF. 1, 3 & 11)	
	228113-005	WH MAIN RELIEF (3500 PSI) (INC. REF. 1-12)	

HYDRAULIC COMPONENTS LOCATION DIAGRAM - ROTATION DRIVE

Figure 4-1

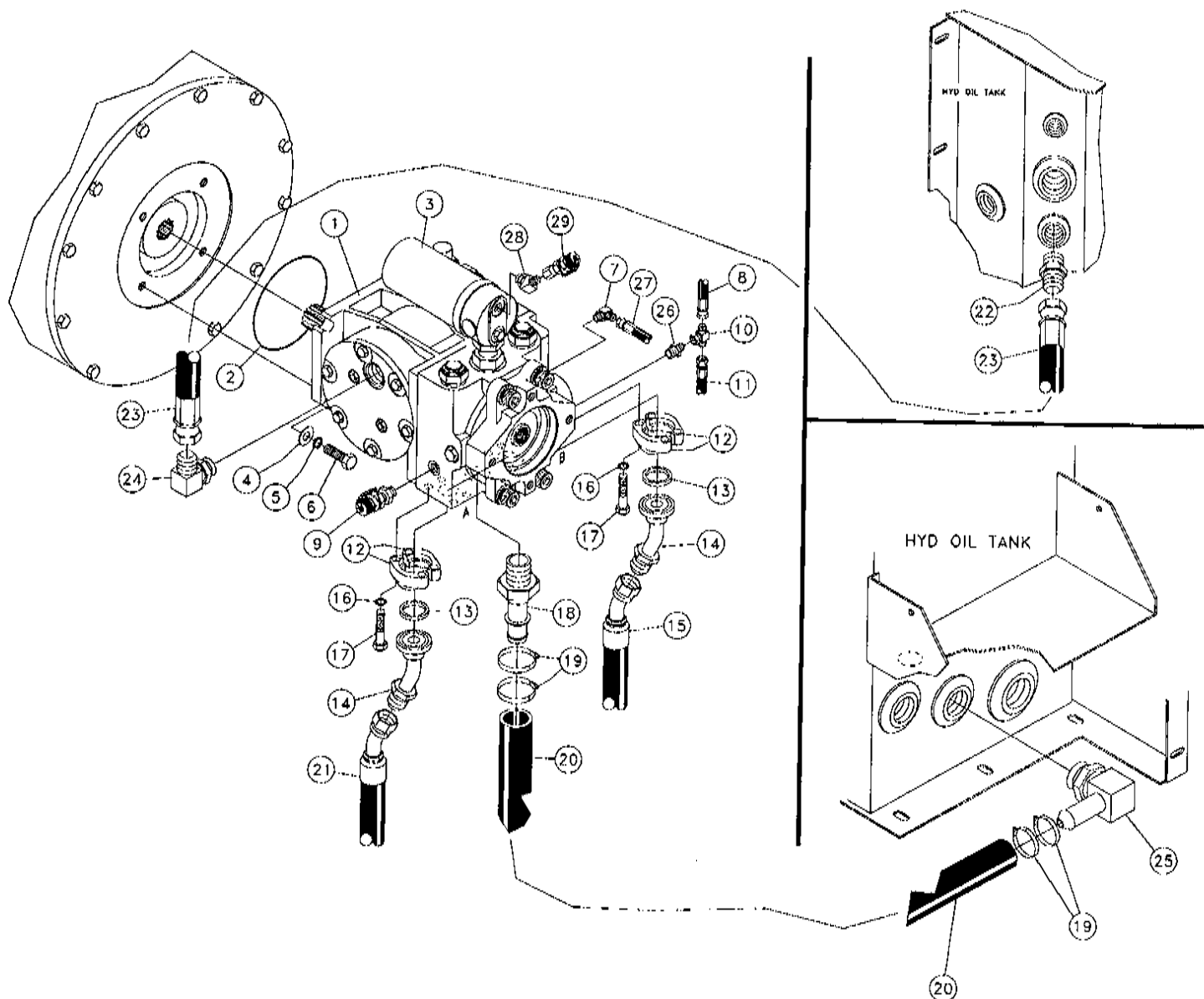
Revised November 1997 due to
schematic updates.



HYDROSTATIC PUMP ASSEMBLY

Figure 4-2

Revised November 1997 due to hose & hose clamp updates. Changed parts marked with *.

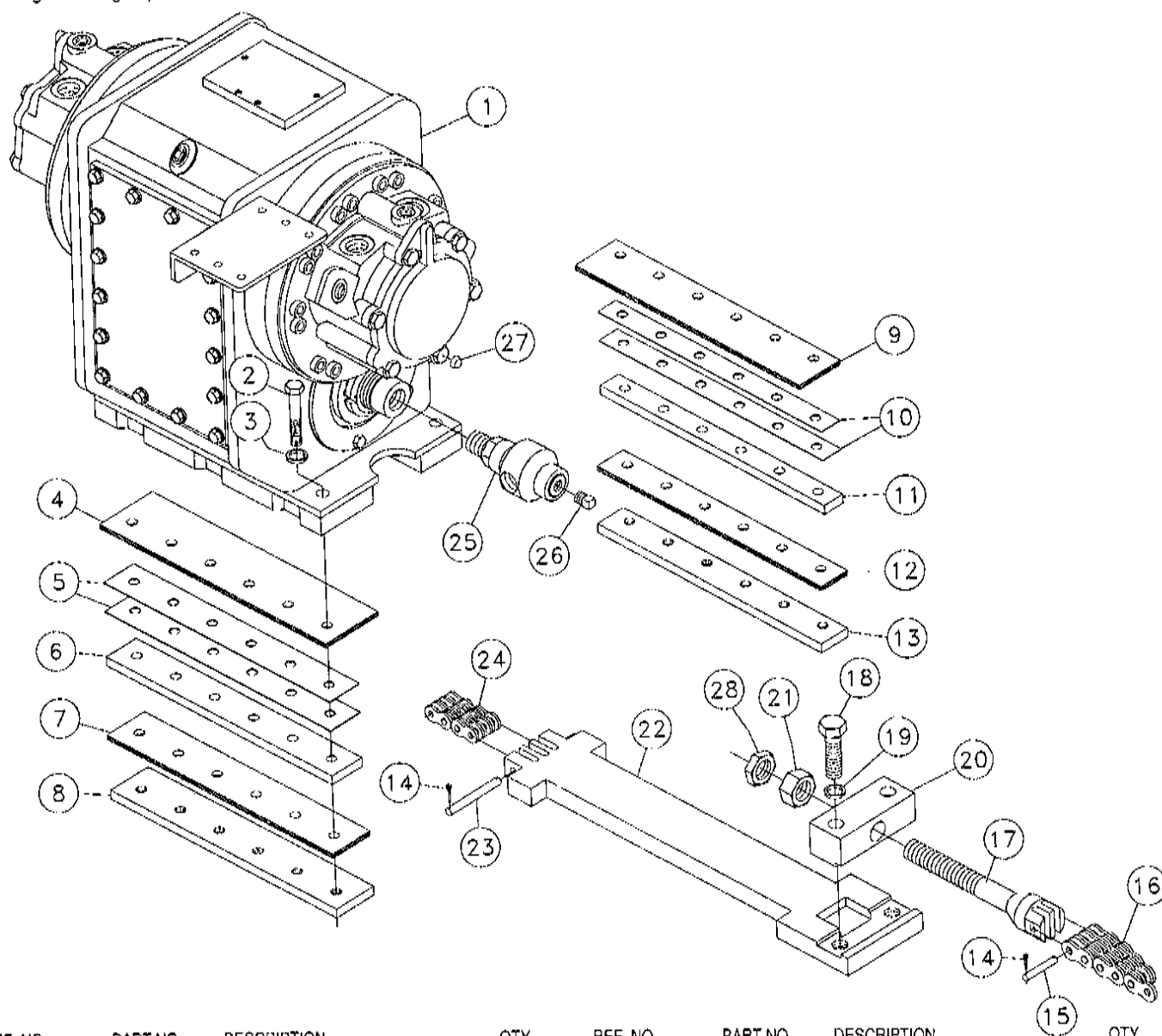


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
4-2	1	228116-001 PUMP ASSY.-HYD. (BREAKDOWN FIG. 4-16)	1	4-2	16	480-009 WASHER-7/16 S/T LOCK	8
4-2	2	85642-163 O-RING	1	4-2	17	357-016 7/16-14X1 3/4" GRADE#5 HEX BOLT	8
4-2	3	81902-001 FILTER-OIL	1	4-2	18	904818-001 INSERT-16M X 1 1/4 HOSE	1
4-2	4	86510-001 WASHER-1/2 FLT HARDENED	4	4-2	19	*238094-001 CLAMP-3/4 X 1 3/4 BAND W/ SCREW	4
4-2	5	480-011 WASHER-1/2 S/T LOCK	4	4-2	20	*240859-001 HOSE-1 1/4 SUCTION - 23"	1
4-2	6	75381-014 BOLT-1/2-UNCX1 1/2 GR.8 HEX	4	4-2	21	53845-807 HOSE-3/4X38 12FS/JICST/45D6000#	1
4-2	7	600118-001 FITTING-6MORINGX4MJIC90PARKER	1	4-2	22	53828-001 #12M O-RING-#12M JIC ST.	1
4-2	8	53843-743 HOSE-1/4X22 4FSJICST 6000 PSI	1	4-2	23	53845-531 HOSE-3/4X18 12FS JIC 3000 PSI	1
4-2	9	72056-001 COUPLER-DIAG. TCM-20 9/16NF	2	4-2	24	59410-001 12M JICX12M ADJ. 90 DEG.ELBOW	1
4-2	10	66996-001 TEE-4FS JIC BCHX4M JICX4M JIC	1	4-2	25	99999-001 FITTING-20MORINGX1 1/4BEAD 90	1
4-2	11	53843-739 HOSE-1/4X118 4FSJICST/ST 6000#	1	4-2	26	57968-001 6M O-RING 4M JIC STRAIGHT	1
4-2	12	67745-001 SPLIT FLANGE HALF CODE 62/16	4	4-2	27	68210-001 HOSE-1/4X24 4FS JIC (M2T)	1
4-2	13	72895-001 O RING-SQ. #16 FLANGE	2	4-2	28	82931-001 FITTING-6MX4M JIC 45 DEG ELBOW	1
4-2	14	65930-001 12 JIC MX1"-62 45	2	4-2	29	83015-001 FITTING-4F JIC DIAGNOSTIC	1
4-2	15	53845-749 HOSE-3/4X33 12FSJIC ST/45 6000	1				

ROTATION GEARBOX ASSEMBLY

Figure 4-3

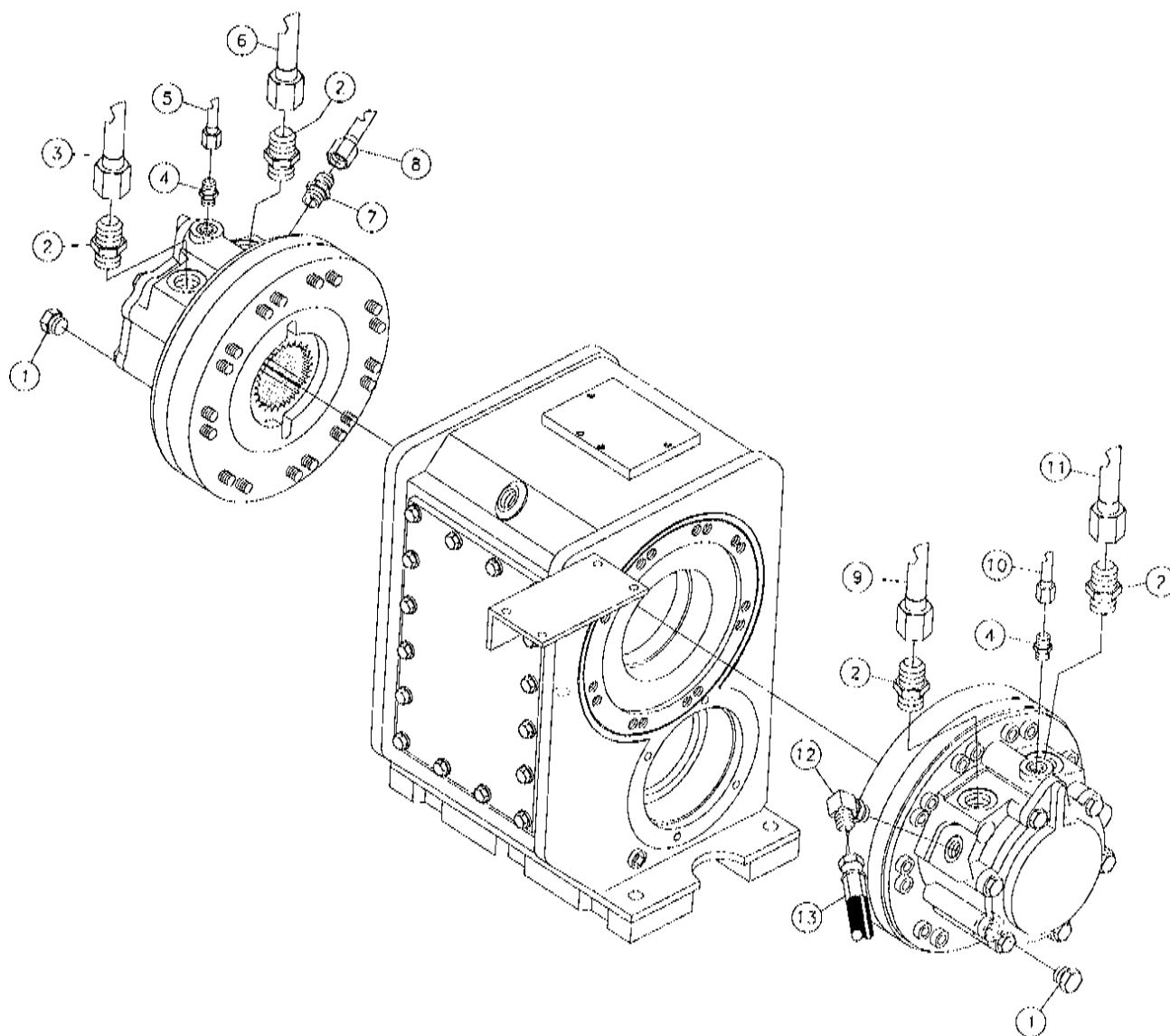
Revised January 1998 due to update of chain length. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
4-3	1	235779-001 GEARBOX - 3 SPEED (BREAKDOWN FIG. 4-11)	1	4-3	16	86104-253 CHAIN-LEAF BL866 253 PITCHES	1
4-3	2	358-030 1/2-13X3"GRADE#5HEX BOLT	12	4-3	17	98422-001 LINK-BL866 CONNECTOR	1
4-3	3	480-011 WASHER-1/2 S/T LOCK	12	4-3	18	240818-001 BOLT-CHAIN TIGHTENER	1
4-3	4	220963-001 BAR-WEAR(NYLATRON)	1	4-3	19	386-024 3/4-16X2 1/2 HEXHD BOLT GR8	2
4-3	5	220965-001 SHIM	2	4-3	20	480-017 WASHER-3/4 S/T LOCK	2
4-3	6	215344-001 SLIDE-GEARBOX	1	4-3	21	240840-001 BAR-BOLT ANCHOR	1
4-3	7	220887-001 BAR-WEAR (2.5" WIDE)	1	4-3	22	75391-001 NUT-1-14NF GRADE 8 HEX	1
4-3	8	215348-001 SLIDE-GEARBOX	1	4-3	23	225167-001 BAR-SLIDE	1
4-3	9	220964-001 BAR-WEAR	1	4-3	24	89349-001 PIN-ANCHOR BL866 3/8 D1AX3.44	1
4-3	10	220966-001 SHIM	2	4-3	25	*245009-001 CHAIN-LEAF BL866-165 PITCHES	1
4-3	11	215343-001 SLIDE-GEARBOX	1	4-3	26	98422-001 LINK-BL866 CONNECTOR	1
4-3	12	220886-001 BAR-WEAR (1.75" WIDE)	1	4-3	27	230813-001 SWIVEL-12M X 12F	1
4-3	13	215347-001 SLIDE-GEARBOX	1	4-3	28	224904-007 REPAIR KIT (INC. O-RINGS & SEALS)	1
4-3	14	510-005 COTTER PIN-3/32" X 3/4"	4	4-3	26	732-005 3/8" PIPE PLUG BLACK STEEL	1
4-3	15	89371-001 PIN-BL866 ANCHOR 3/8"D1AX2.38	1	4-3	27	101522-001 BUMPER-RUBBER SELF ADHES.3/4OD	2
				4-3	28	229131-001 NUT-1"-14 UNF HEX JAM	1

ROTATION DRIVE MOTOR HYDRAULICS ASSEMBLY

Figure 4-4

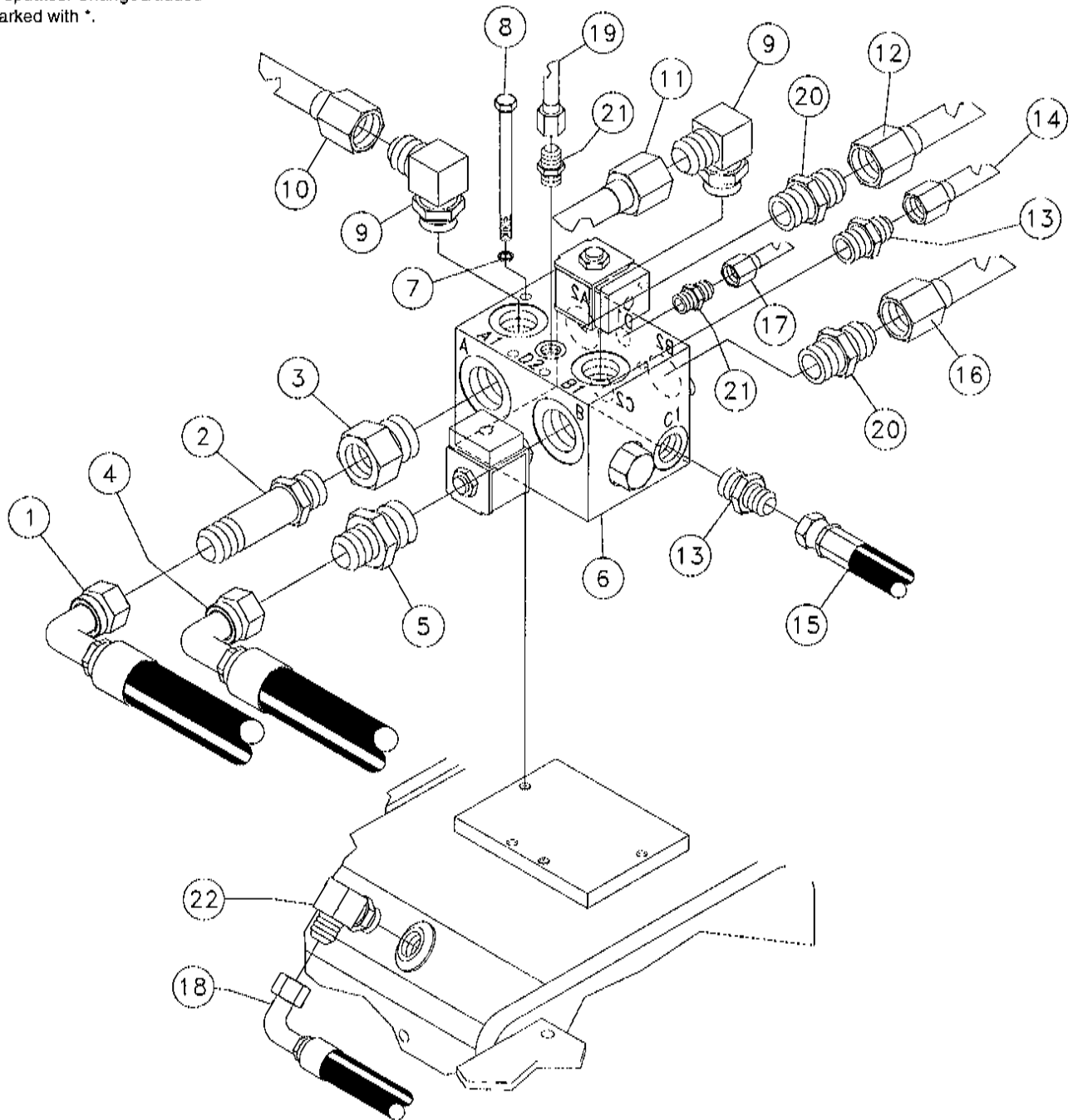


REF. NO.	PART NO.	DESCRIPTION	QTY.
4-4	1	56218-001 PLUG-#8M	2
4-4	2	53828-001 #12M O-RING-#12M JIC ST.	4
4-4	3	235794-001 TUBING-3/4 OD X16GA WALL-19.66	1
4-4	4	65565-001 FITTING-6M X 6M JIC ST.	2
4-4	5	235798-001 TUBING-3/8 OD X.049WALL-29.46	1
4-4	6	235792-001 TUBING-3/4OD X16GA WALL-13.68	1
4-4	7	53824-001 FITTING-#8M O-RING-#8M JIC ST.	1
4-4	8	235797-001 TUBING-1/2 OD X.049WALL-17.37	1
4-4	9	235793-001 TUBING-3/4 ODX16GA WALL-23.22	1
4-4	10	235799-001 TUBING-3/8 OD X.049WALL-21.32	1
4-4	11	235795-001 TUBING-3/4 ODX16GA WALL-15.04	1
4-4	12	53837-001 #8M O-RING-#8M JIC 90 DEG.	1
4-4	13	53844-061 HOSE-1/2X16 8FS JIC (100R1)	1

LOOP FLUSH VALVE ASSEMBLY

Figure 4-5

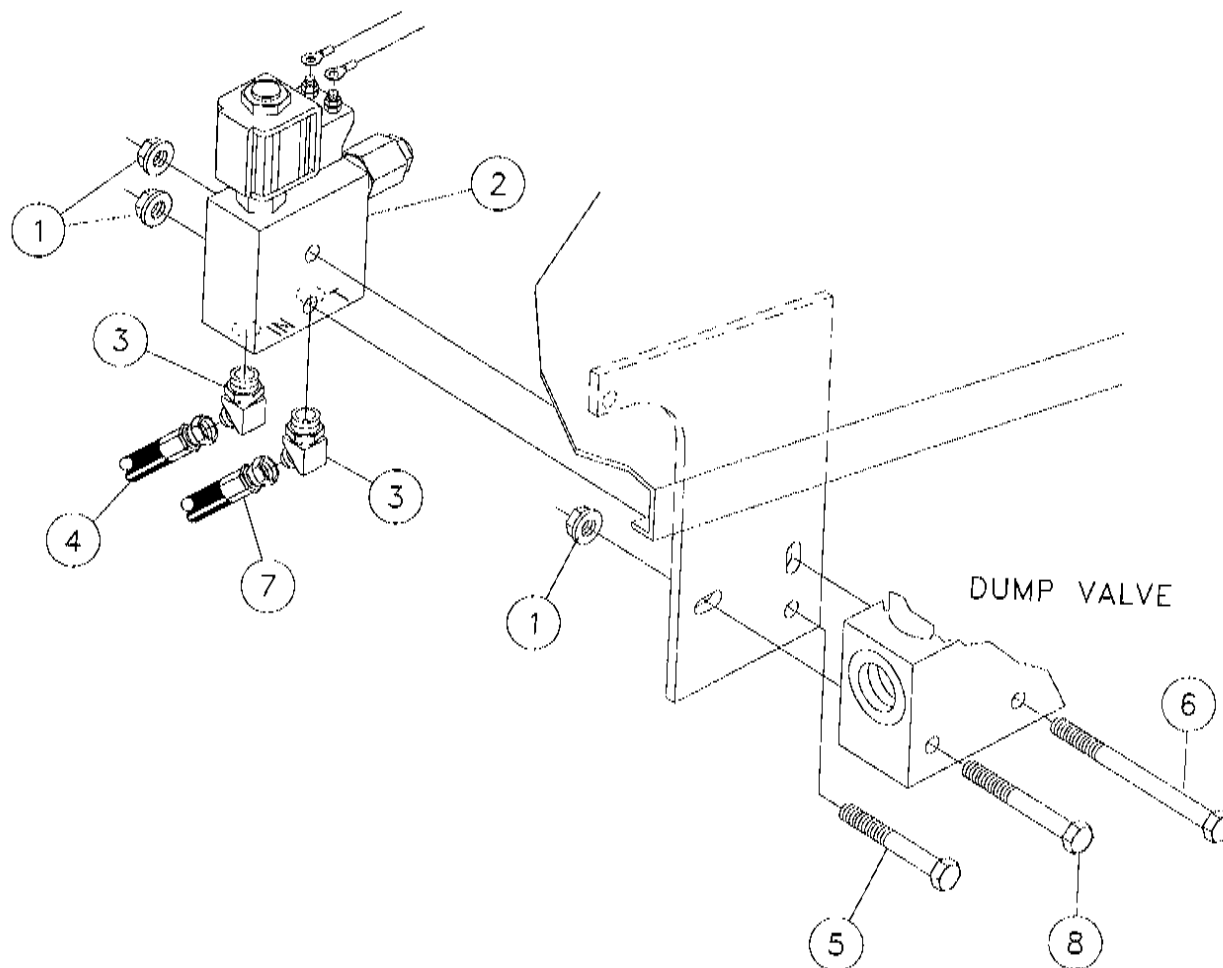
Revised November 1997 due to hose
& fitting updates. Changed/added
parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
4-5	1	53845-811	1	4-5	12	235793-001	1
4-5	2	59434-001	1	4-5	13	*53826-001	2
4-5	3	71252-001	1	4-5	14	235797-001	1
4-5	4	53845-809	1	4-5	15	53844-061	1
4-5	5	70008-001	1	4-5	16	235795-001	1
4-5	6	228132-001	1	4-5	17	235798-001	1
		(BREAKDOWN FIG. 4-13)		4-5	18	*244283-001	1
4-5	7	480-005	4	4-5	19	235799-001	1
4-5	8	351-044	4	4-5	20	53828-001	2
4-5	9	59410-001	3	4-5	21	65565-001	2
4-5	10	235792-001	1	4-5	22	*53837-001	1
4-5	11	235794-001	1				

PRESSURE LIMITER VALVE ASSEMBLY

Figure 4-6

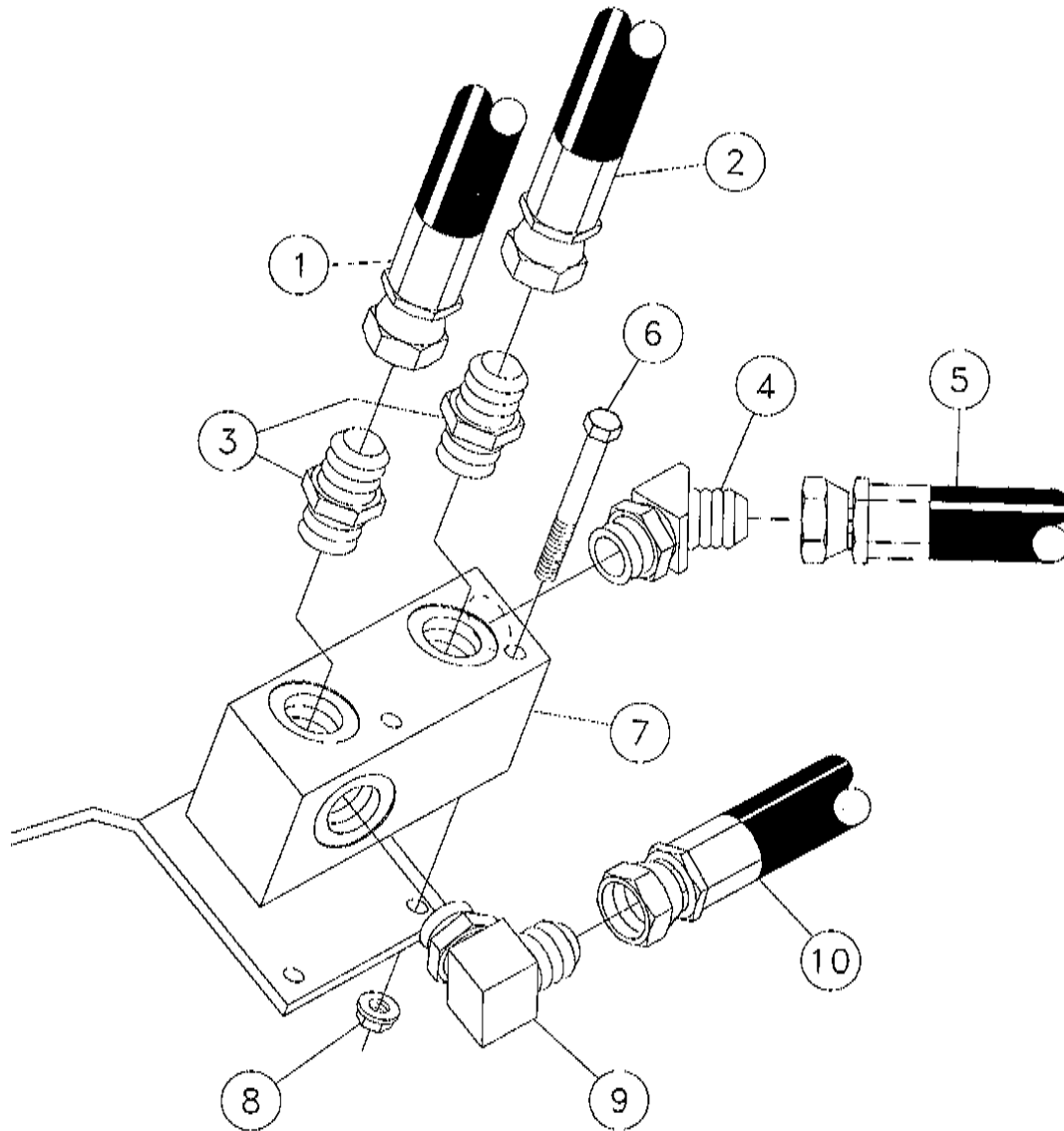


REF. NO.	PART NO.	DESCRIPTION	QTY.
4-6	1	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	3
4-6	2	228114-001 VALVE-REMOTE PRESSURE LIMITER (BREAKDOWN FIG. 4-12)	1
4-6	3	82931-001 FITTING-6MX4M JIC 45DEG.ELBOW	2
4-6	4	53843-743 HOSE-1/4X22 4FSJICST 6000 PSI	1
4-6	5	354-026 BOLT-3/8-16X2 3/4" GRADE#5HEX	1
4-6	6	354-044 3/8-16X4 1/2"GRADE#5 HEX BOLT	1
4-6	7	68210-001 HOSE-1/4X24 4FS JIC (M2T)	1
4-6	8	354-030 BOLT-3/8-16X3"GRADE#5 HEX	1

HOSE JUNCTION BLOCK ASSEMBLY

Figure 4-7

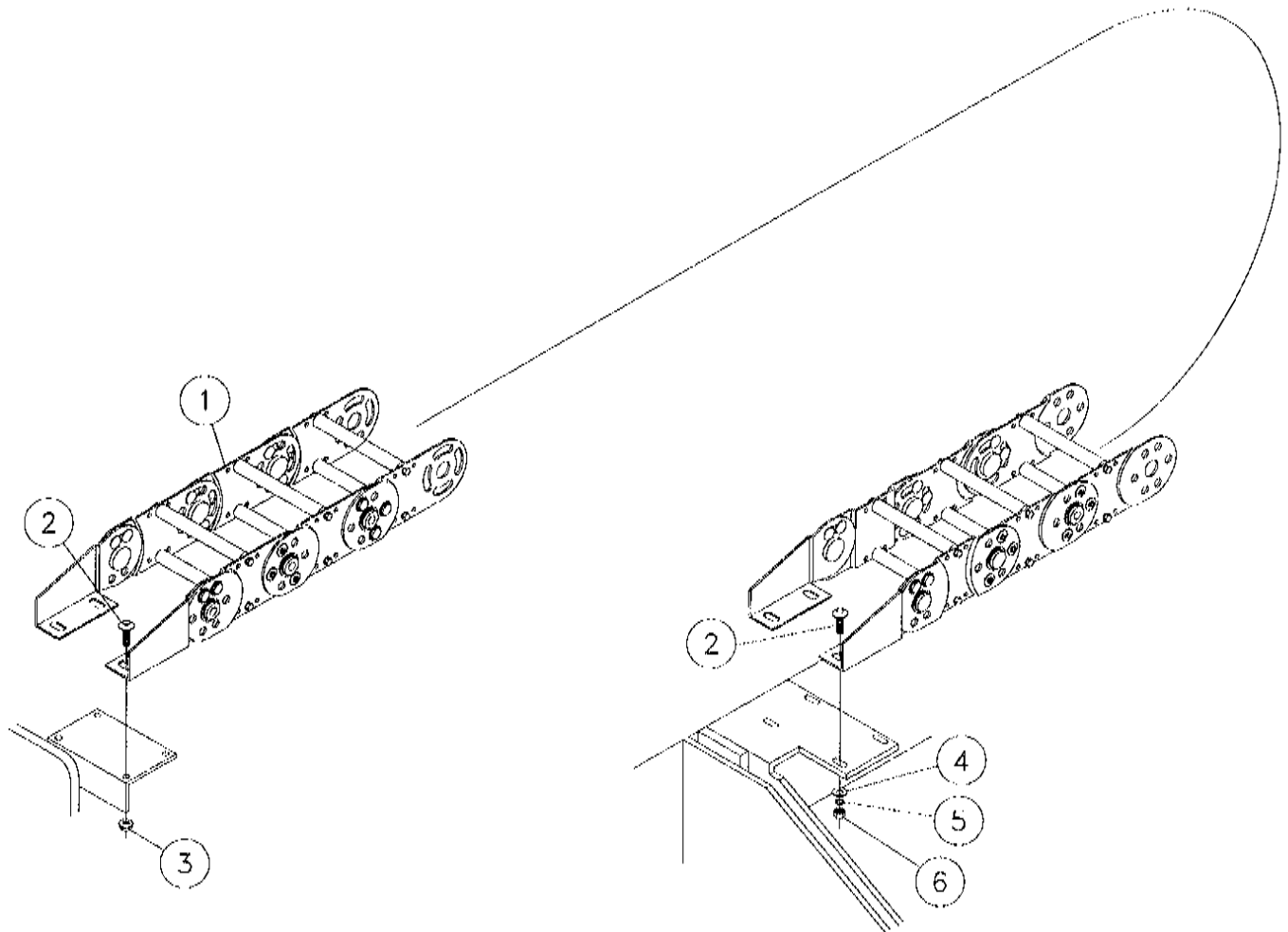
Revised November 1997 due to update
of junction block. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
4-7	1	53845-811 HOSE-3/4X126 12FSJICST/90D6000	1
4-7	2	53845-809 HOSE-3/4X122 12FSJICST/90D6000	1
4-7	3	53828-001 #12M O-RING-#12M JIC ST.	2
4-7	4	60718-001 12M JICX12M ADJ.45 DEG.EL	1
4-7	5	53845-749 HOSE-3/4X33 12FSJIC ST/45 6000	1
4-7	6	354-034 BOLT-3/8-16X3 1/2"GRADE#5 HEX	2
4-7	7	*225193-001 BLOCK-HOSE JCT	1
4-7	8	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	2
4-7	9	59410-001 12M JICX12M ADJ. 90 DEG.ELBOW	1
4-7	10	53845-807 HOSE-3/4X38 12FSJICST/45D6000#	1

HOSE CARRIER ASSEMBLY

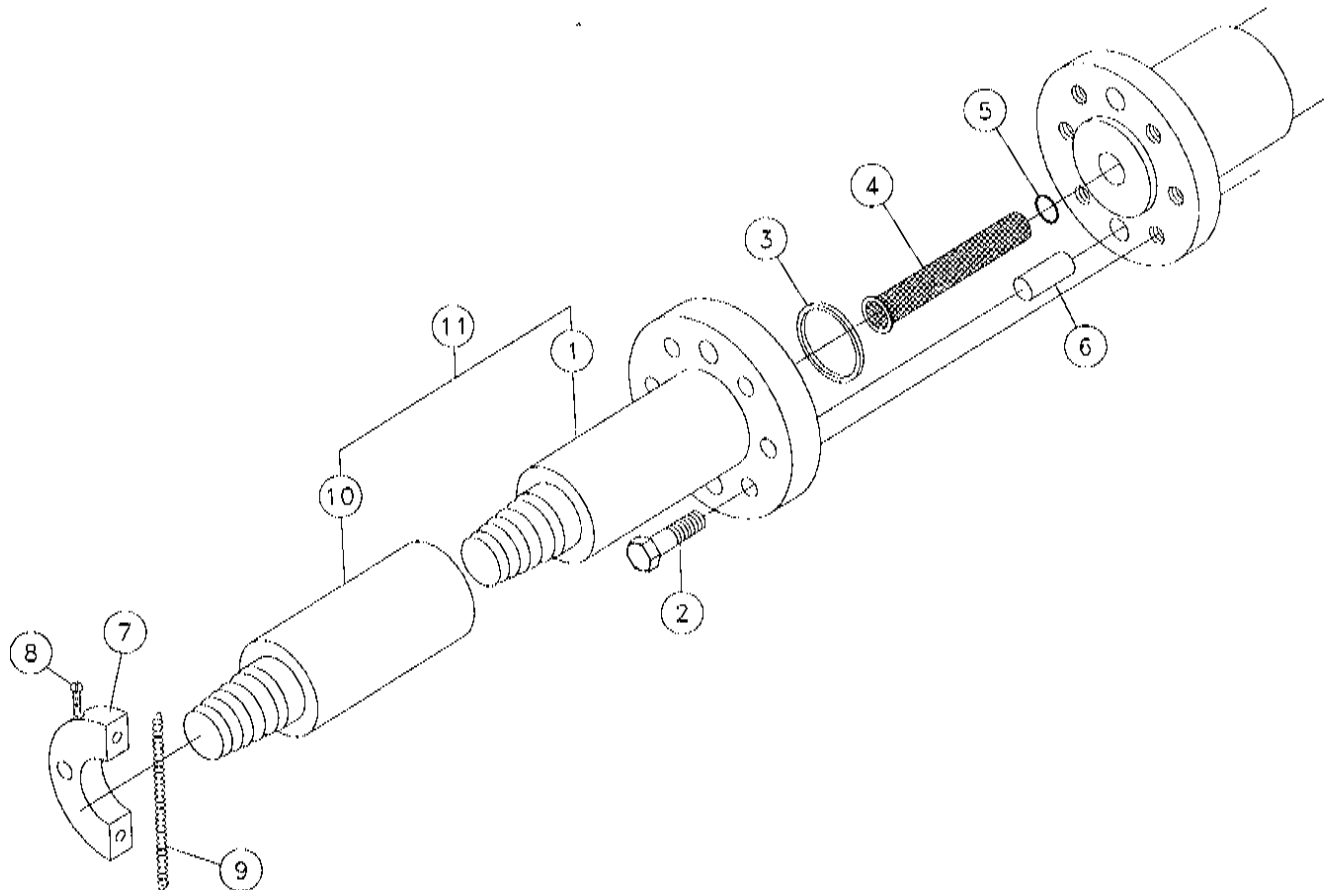
Figure 4-8



REF. NO.	PART NO.	DESCRIPTION	QTY.
4-8	1	225192-001 HOSE CARRIER (BREAKDOWN FIG. 4-14)	1
4-8	2	375-012 3/8-16X1 1/4"GD#5CARRIAGE BOLT	8
4-8	3	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	4
4-8	4	485-007 WASHER-3/8 FLAT	4
4-8	5	480-007 WASHER-3/8 S/T LOCK	4
4-8	6	412-001 NUT-3/8 NC HEX	4

DRIVE CHUCK ASSEMBLY

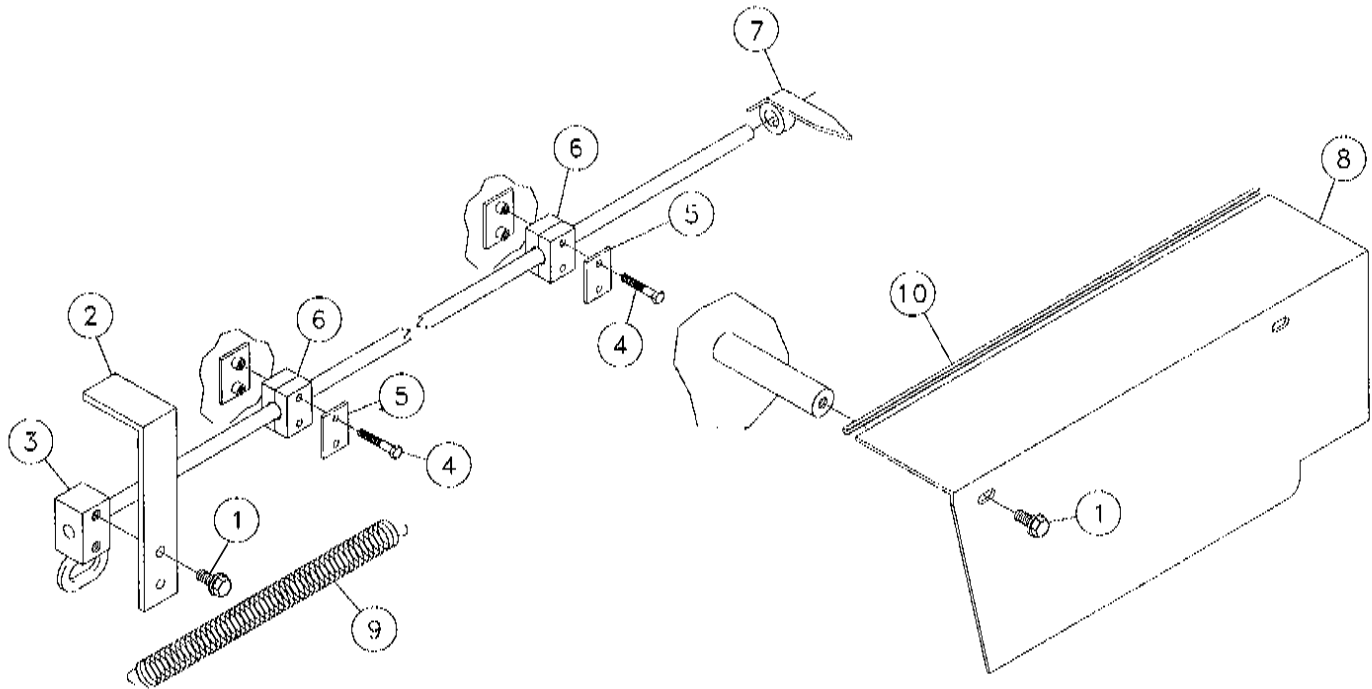
Figure 4-9



REF. NO.	PART NO.	DESCRIPTION	QTY.
4-9	1	230806-001 DRIVE CHUCK 2 5/8 OD	1
4-9	2	75381-016 BOLT-1/2-UNCX1 3/4 GR.8 HEX	6
4-9	3	72897-001 O RING-SQ. #24 FLANGE	1
4-9	4	905011-001 SCREEN (DRILL FLUID)	1
		905012-001 SCREEN (WATER)	1
4-9	5	904508-001 WASHER-BLACK RUBBER	1
4-9	6	70096-001 PIN-DOWEL 5/8 DIA. 1 1/2	2
4-9	7	216461-001 PLATE-CLOCK ARM	1
4-9	8	220692-001 SCREW-#6 X 3/4 PAN ED SELF-TAP	2
4-9	9	220693-001 SPRING-EXT. .25ODX.03WIRE-5.00	1
4-9	10	230945-001 SUB-2 3/8 VERMEER THREAD	1
4-9	11	230980-001 DRIVE CHUCK (INC. REF. 1 & 10)	1

ROD POSITION INDICATOR ASSEMBLY

Figure 4-10

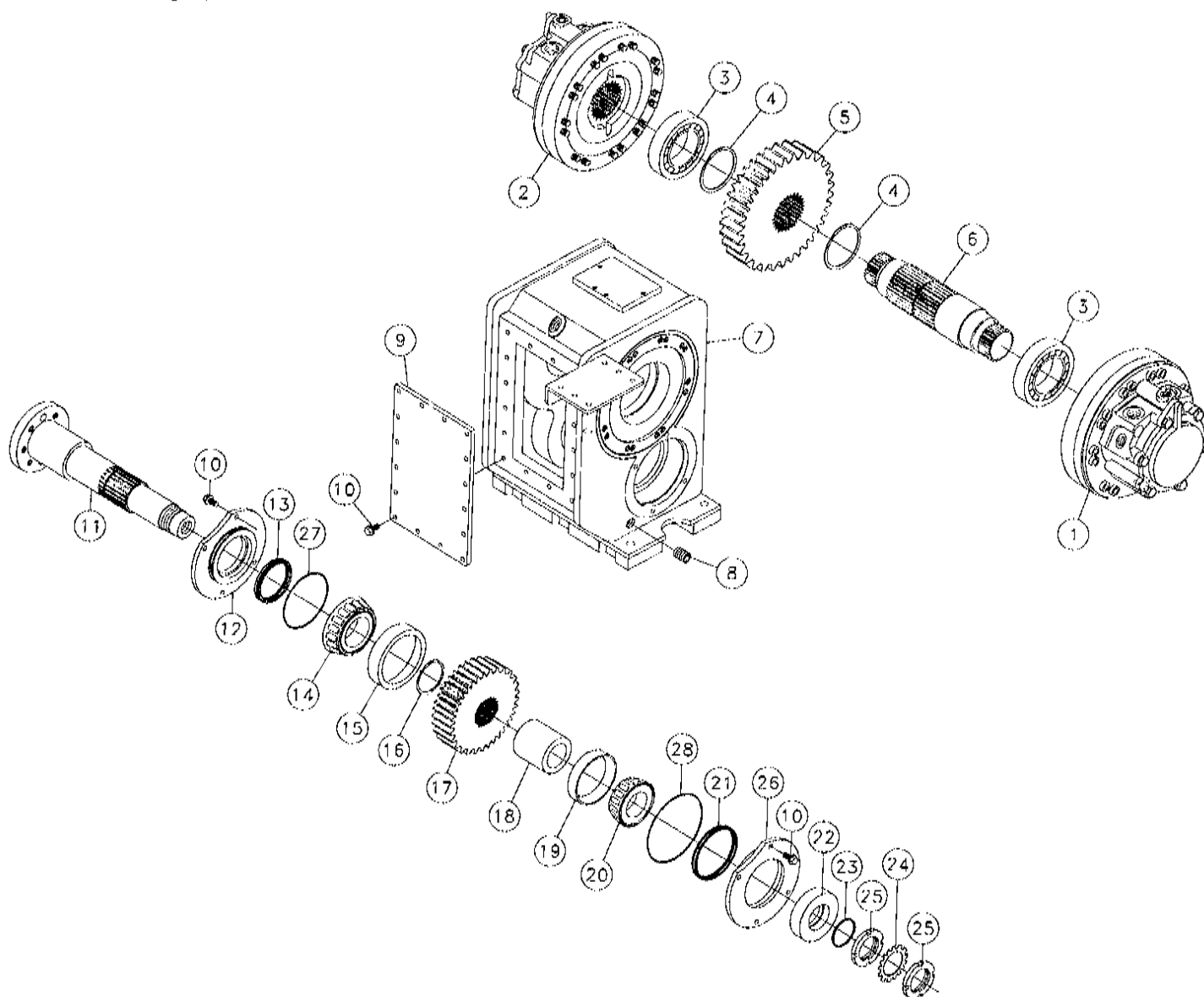


REF. NO.	PART NO.	DESCRIPTION	QTY.
4-10	1	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	4
4-10	2	225200-001 BAR-MARKER	1
4-10	3	225194-001 BAR-MARKER	1
4-10	4	350-014 BOLT-1/4-20X1 1/2"GRADE#5 HEX	4
4-10	5	903135-005 PLATE-COVER COP-2	2
4-10	6	903135-003 CLAMP-HOSE 20675-PP	4
4-10	7	230839-001 POINTER	1
4-10	8	235981-001 COVER-VALVE	1
4-10	9	1789-001 SPRING-1 1/8ODX15/16ID X15 EXT	1
4-10	10	212522-001 TRIM-1/4 EDGE (SPECIFY LENGTH)	A/R

ROTATION GEARBOX COMPONENTS

Figure 4-11

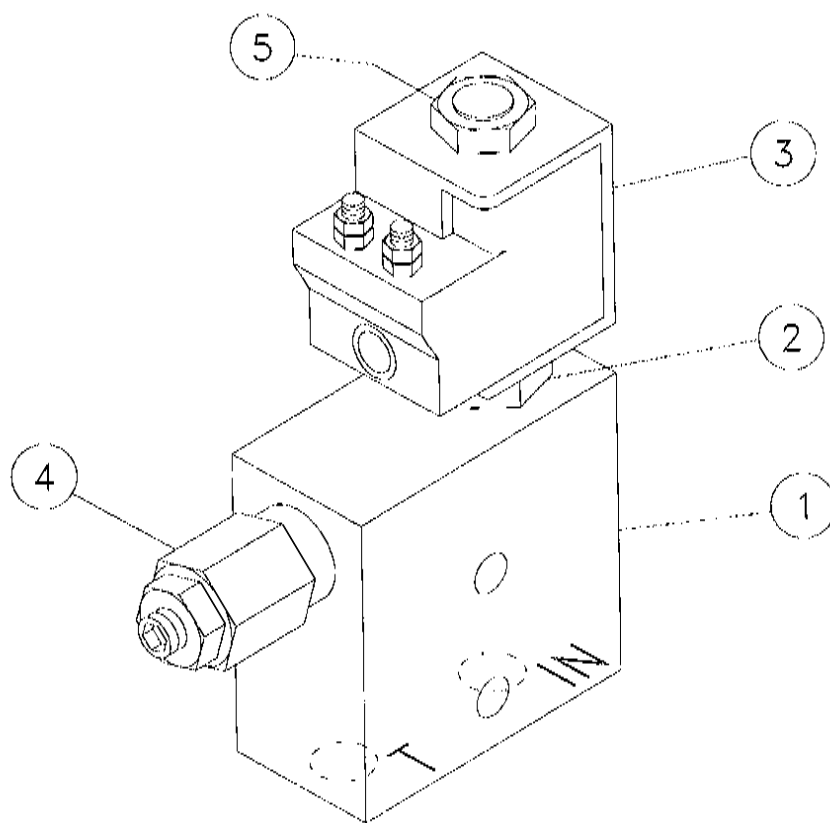
Revised November 1997 due to parts list correction. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.		
4-11	1	235790-001	MOTOR-HYD (BREAKDOWN FIG. 4-15)	1	4-11	17	220489-001	GEAR-26 TOOTH	1
4-11	2	235791-001	MOTOR-HYD (BREAKDOWN FIG. 4-16)	1	4-11	18	*228223-001	TUBE-GEAR SPACER	1
4-11	3	1706-007	BRG.-22215 LB/C3 75MM SPH.ROL.	2	4-11	19	1715-085	CUP-BEARING	1
4-11	4	224896-325	SNAP RING-3 1/4" EXTERNAL	2	4-11	20	1716-099	CONE-2 1/8" BRG.	1
4-11	5	220488-001	GEAR-37 TOOTH	1	4-11	21	235787-001	SEAL-4" HIGHT PRESSURE	1
4-11	6	220493-001	SHAFT-TOP MOTOR	1	4-11	22	215350-001	SLEEVE-SEAL	1
4-11	7	240850-001	HOUSING-GEARBOX D24X40A	1	4-11	23	214202-001	O-RING	1
4-11	8	735-003	1/2 COUNTERSUNK PIPE PLUG	1	4-11	24	94594-007	LOCKWASHER-2.844DIA.OVER TANGS	1
4-11	9	220487-001	PLATE-LID	1	4-11	25	214200-001	LOCKNUT-SLOTTED 2"-18 NF	2
4-11	10	4475-006	BOLT-3/8-16X3/4 FLG WHIZ	24	4-11	26	228131-001	GLAND-REAR SEAL	1
4-11	11	220492-001	SHAFT-ROTATION	1	4-11	27	228181-001	O-RING -#243 7OD BUNA-N	1
4-11	12	228158-001	GLAND-FRONT SEAL	1	4-11	28	228180-001	O-RING -#252 7OD BUNA-N	1
4-11	13	235788-001	SEAL-3 1/8" HIGH PRESSURE	1					
4-11	14	4771-061	BRG. CONE	1			240816-001	GEARBOX-D24X40A ROTATION (COMPLETE)	
4-11	15	1715-013	TIMKEN CUP-2 1/2"	1				(INC. ALL ITEMS IN FIGURE 4-11)	
4-11	16	224896-250	SNAP RING-2 1/2" EXTERNAL	1					

PRESSURE LIMITER VALVE COMPONENTS

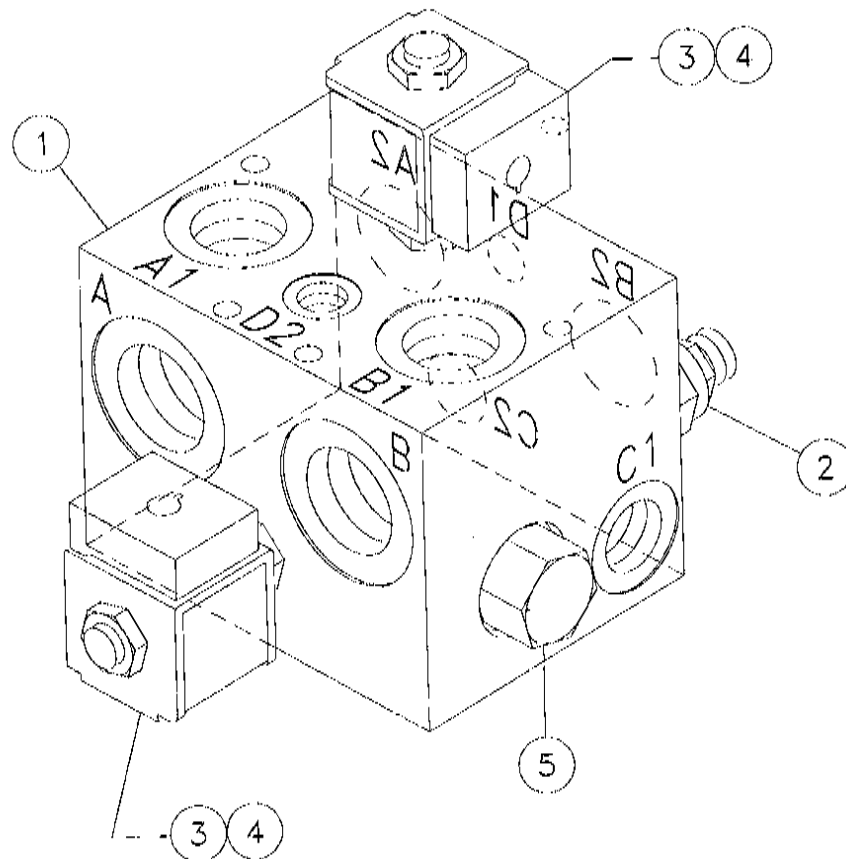
Figure 4-12



REF. NO.	PART NO.	DESCRIPTION	QTY.
4-12	1	228114-003 BODY-MANIFOLD	1
4-12	2	228114-005 CARTRIDGE	1
		228114-007 SEAL KIT	
4-12	3	228114-009 COIL	1
4-12	4	228114-011 VALVE RELIEF	1
		85647-025 REPAIR KIT	
4-12	5	3888-001 NUT-1/2 N.F. HEX JAM	1
	228114-001	VALVE-REMOTE PRESSURE LIMITER (INC. REF. 1-4)	

LOOP FLUSH VALVE COMPONENTS

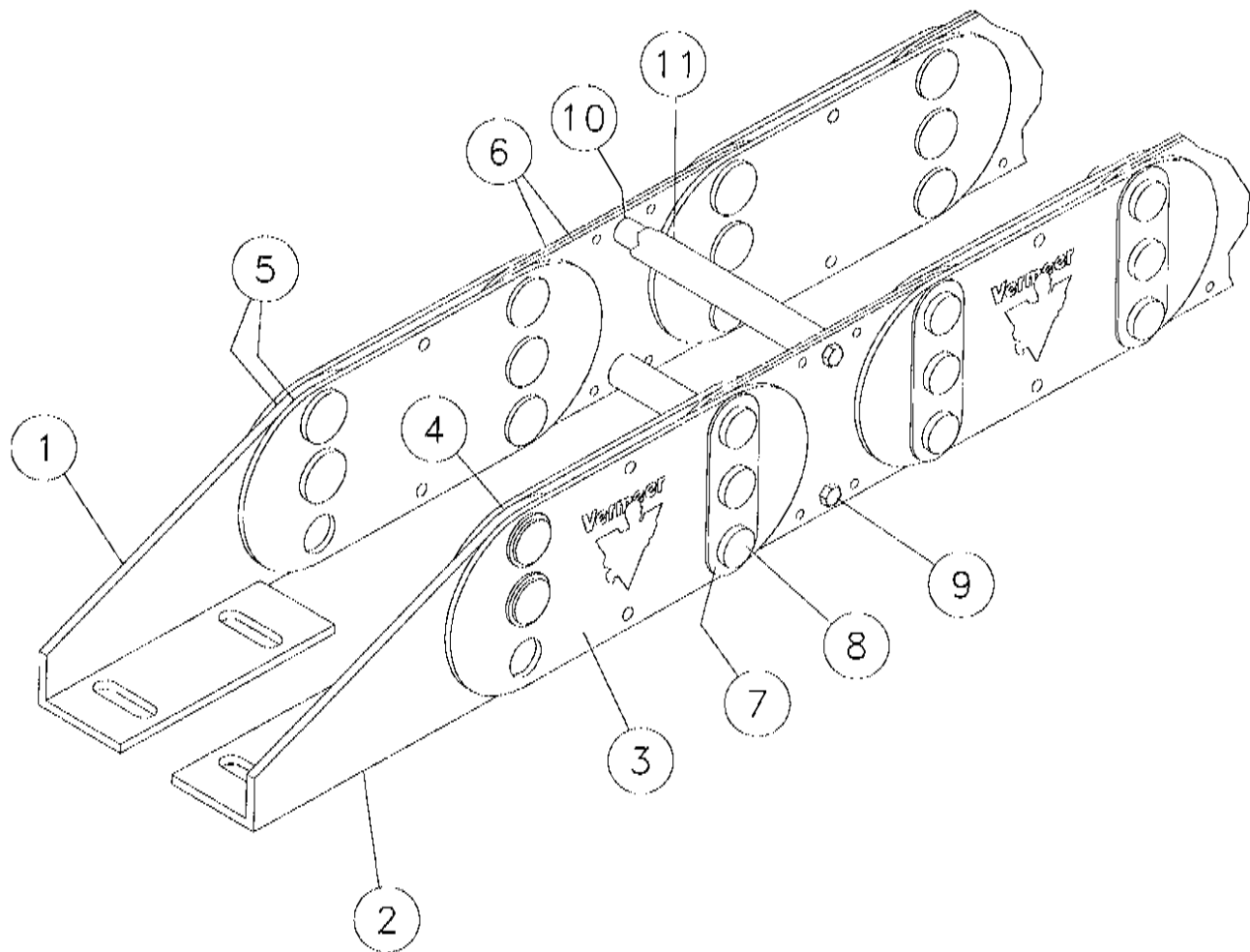
Figure 4-13



REF. NO.	PART NO.	DESCRIPTION	QTY.
4-13 1	228132-003	VALVE BODY	1
4-13 2	224476-007	RELIEF VALVE	1
	224476-009	SEAL KIT	
4-13 3	224476-005	CARTRIDGE-VALVE	2
	207418-009	REPAIR KIT-SOLENOID VALVE	
4-13 4	207418-005	SOLENOID VALVE COIL-2 POST	2
4-13 5	901562-011	VALVE-SHUTTLE	1
	204954-001	REPAIR KIT-SHUTTLE VALVE	
	228132-001	VALVE-3 SPEED LOOP FLUSH (INC. ALL ITEMS IN THIS FIGURE)	

HOSE CARRIER COMPONENTS

Figure 4-14

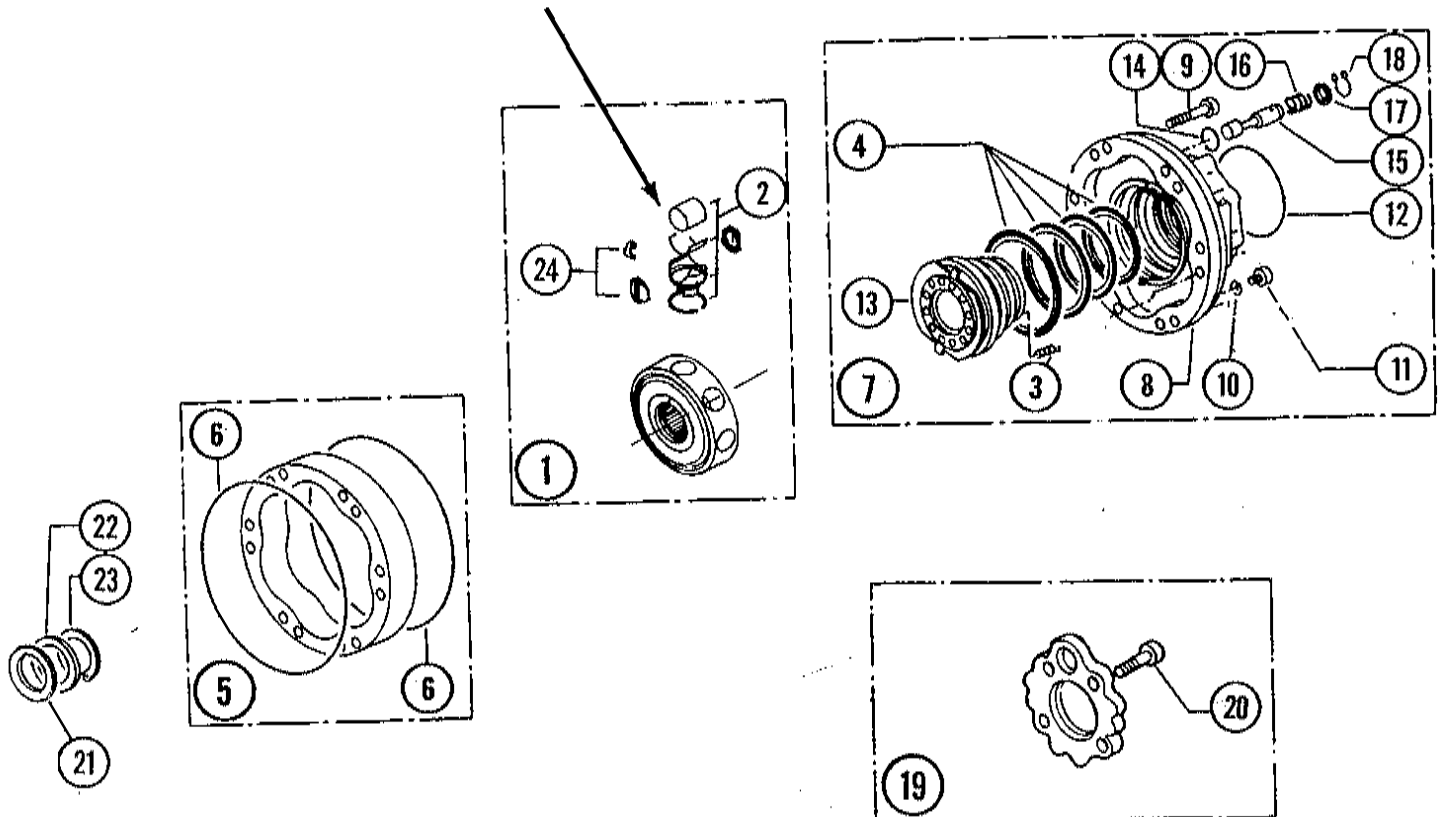


REF. NO.	PART NO.	DESCRIPTION	QTY.
4-14	1	234256-003 PT45E MOUNTING BRACKET ASSY (L)	2
4-14	2	234256-005 PT45E MOUNTING BRACKET ASSY (R)	2
4-14	3	234256-007 PT45E OUTER LINK W/VERMEER LOGO	22
4-14	4	234256-009 PT45E OUTER LINK	22
4-14	5	234256-011 PT45E ANTI-FRICTION DISC	90
4-14	6	225192-003 PT45E INNER LINK 5.709R	44
4-14	7	234256-015 PT45E CIRCULAR PUSH-ON	42
4-14	8	234256-017 PT45E HINGE PIN-PUSH ON FASTNR	126
4-14	9	234256-019 BOLT-WHIZ LOCK .250-20 X .620	44
4-14	10	225192-005 PT35E/45E CARRIER ROD (5.100)	22
4-14	11	225192-007 PT35E/45E NYLON SLEEVE (4.900)	22
		225192-001 HOSE CARRIER (COMPLETE) (INC. REF. 1-11)	

HYDRAULIC MOTOR COMPONENTS

Figure 4-15

THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.

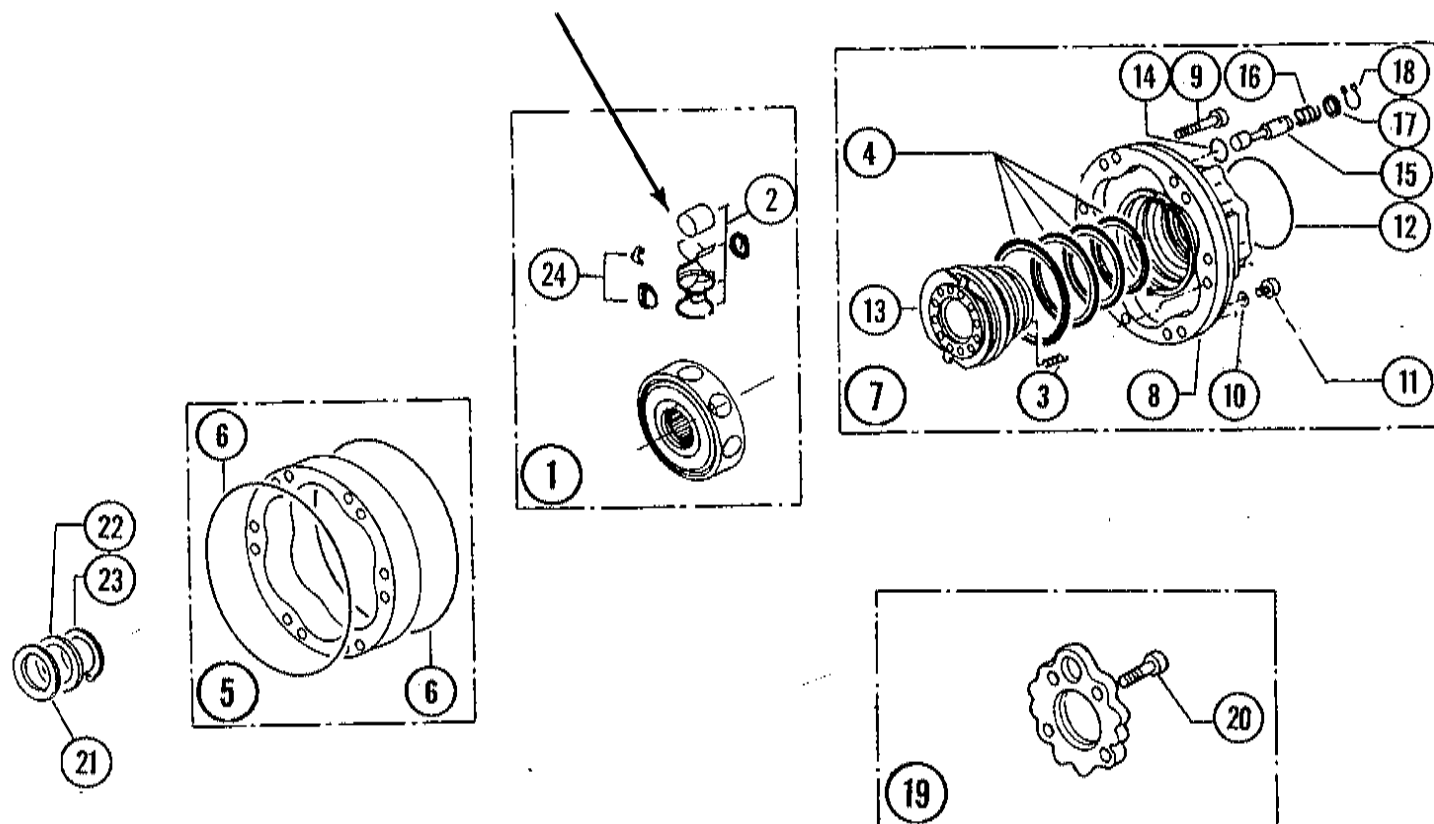


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
4-15	1	224897-003 CYLINDER BLOCK	1	4-15	14	235790-011 O-RING	1
4-15	2	208148-001 PISTON CL.1	A/R	4-15	15	235790-013 VALVE SPOOL	1
		224897-005 PISTON CL "0"	A/R	4-15	16	235790-015 SPRING	1
4-15	3	84550-029 SPRING	8	4-15	17	235790-017 WASHER	1
4-15	4	208157-001 VALVE SEAL RING KIT	1	4-15	18	235790-019 SNAP RING	1
4-15	5	208151-001 CAM RING	1	4-15	19	235790-021 BACK PLATE	1
4-15	6	208152-001 O-RING	2	4-15	20	235790-023 BOLT	6
4-15	7	235790-003 VALVING COVER ASSEMBLY	1	4-15	21	208163-001 SHIM	1
4-15	8	235790-005 VALVING COVER	1	4-15	22	208164-001 WASHER	1
4-15	9	235790-007 SCREW	16	4-15	23	224897-015 SNAP RING	1
4-15	10	64078-025 WASHER	2	4-15	24	224897-017 REPAIR KIT-PISTON	1
4-15	11	64078-027 SCREW-BLEEDING	2				
4-15	12	83651-025 O-RING-2.62X145.72	1				
4-15	13	235790-009 VALVING	1				
						235790-001 MOTOR-HYD (COMPLETE)	
						(INC. ALL OF FIGURE 4-15)	

HYDRAULIC MOTOR COMPONENTS

Figure 4-16

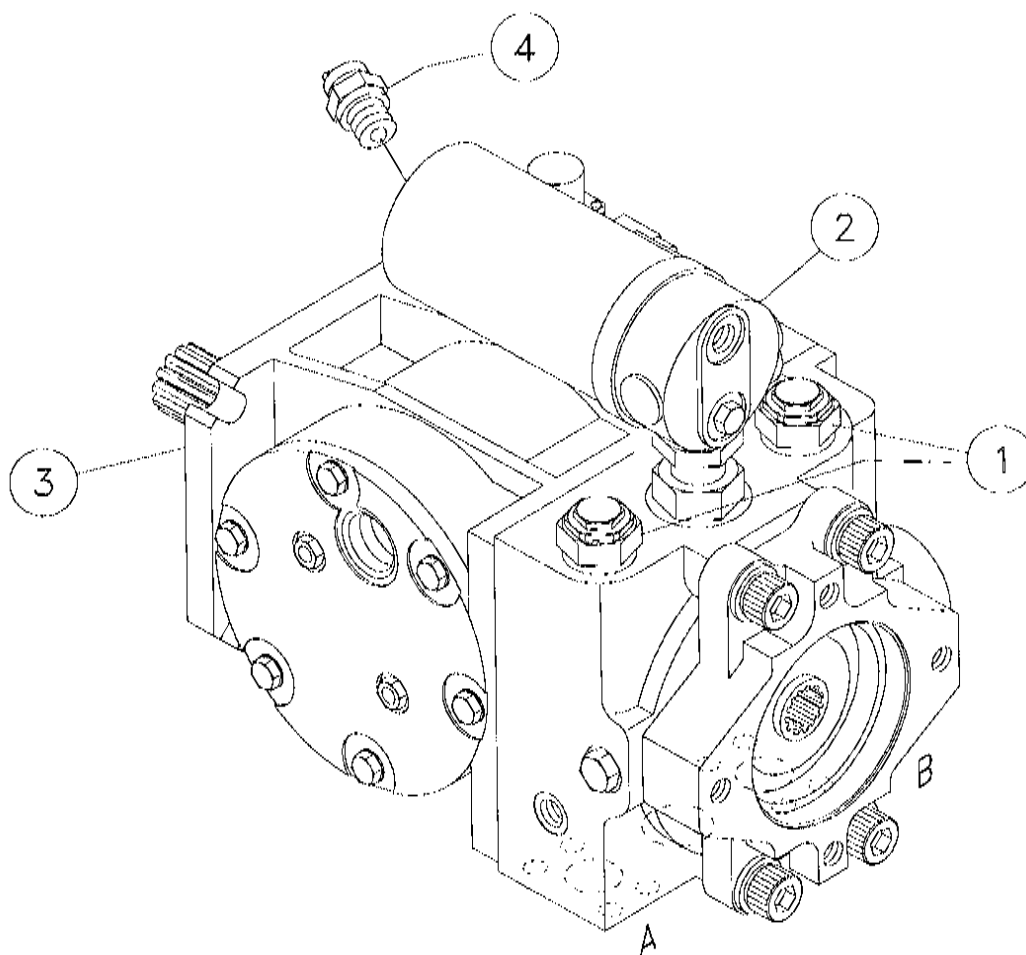
THERE IS THE POSSIBILITY OF HAVING TWO SIZES OF PISTONS IN A MOTOR. NORMALLY CL "0" IS USED. THERE IS NO MARKING ON THE PISTON OR CYLINDER BLOCK. THERE IS THE POSSIBILITY OF HAVING CL "1" WHICH IS 1mm OVER SIZE. THERE WILL BE A "1" STAMPED ON THE PISTON AND A CORRESPONDING "1" STAMPED ON THE CYLINDER BLOCK IN THE AREA OF THE EFFECTED CYLINDER BORE.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
4-16	1	224897-003 CYLINDER BLOCK	1	4-16	14	235790-011 O-RING	1
4-16	2	208148-001 PISTON CL.1	A/R	4-16	15	235790-013 VALVE SPOOL	1
		224897-005 PISTON CL "0"	A/R	4-16	16	235790-015 SPRING	1
4-16	3	84550-029 SPRING	8	4-16	17	235790-017 WASHER	1
4-16	4	208157-001 VALVE SEAL RING KIT	1	4-16	18	235790-019 SNAP RING	1
4-16	5	208151-001 CAM RING	1	4-16	19	235790-021 BACK PLATE	1
4-16	6	208152-001 O-RING	2	4-16	20	235790-023 BOLT	6
4-16	7	235790-003 VALVING COVER ASSEMBLY	1	4-16	21	208163-001 SHIM	1
4-16	8	235790-005 VALVING COVER	1	4-16	22	208164-001 WASHER	1
4-16	9	235790-007 SCREW	16	4-16	23	224897-015 SNAP RING	1
4-16	10	64078-025 WASHER	2	4-16	24	224897-017 REPAIR KIT-PISTON	1
4-16	11	64078-027 SCREW-BLEEDING	2				
4-16	12	83651-025 O-RING-2.62X145.72	1				
4-16	13	235790-009 VALVING	1				
						235791-001 MOTOR-HYD (COMPLETE)	
						(INC. ALL OF FIGURE 4-16)	

HYDRAULIC PUMP COMPONENTS

Figure 4-17



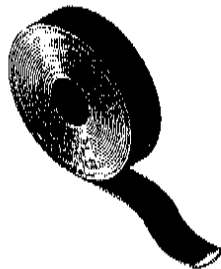
REF. NO.	PART NO.	DESCRIPTION	QTY.
4-17	1	+85642-007 VALVE-MULTI-FUNCTION	2
		85642-009 O-RING (OUTER)	1 per valve
		85642-011 O-RING (INNER)	1 per valve
		91019-003 FILTRATION MANIFOLD KIT	1
4-17	2	81902-001 FILTER-OIL	1
		85642-079 CARRIER-SEAL	1
4-17	3	85642-081 SEAL LIP	1
		85642-083 O-RING	1
	4	225187-003 NEUTRAL START SWITCH	1
	228116-001	PUMP ASSY.-HYDRAULIC	
	+	SPECIFY PRESSURE SETTING (PRESSURE SETTING IS 6090 PSI (420 bar))	



MISCELLANEOUS SUPPLIES

Figure 5-2

CORDURA SLEEVES



INSIDE DIAMETER	PART NUMBER
.71	83726-001
1.22	66094-001
1.42	67264-001
1.59	69129-001
1.81	53840-001
2.37	53841-001

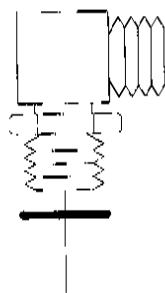
NOTE: SPECIFY LENGTH WHEN ORDERING

TIE STRAPS



LENGTH	PART NUMBER
4 IN.	78657-001
6 IN.	18355-001
8 IN.	59634-001
15 IN.	58151-001

O-RINGS



SAE FITTING SIZE	REPLACEMENT O-RING PART NO.
4M	78185-027
5M	53649-081
6M	59088-057
8M	59088-053
10M	792-029
12M	3152-013
14M	3155-015
16M	81580-001
20M	93316-001

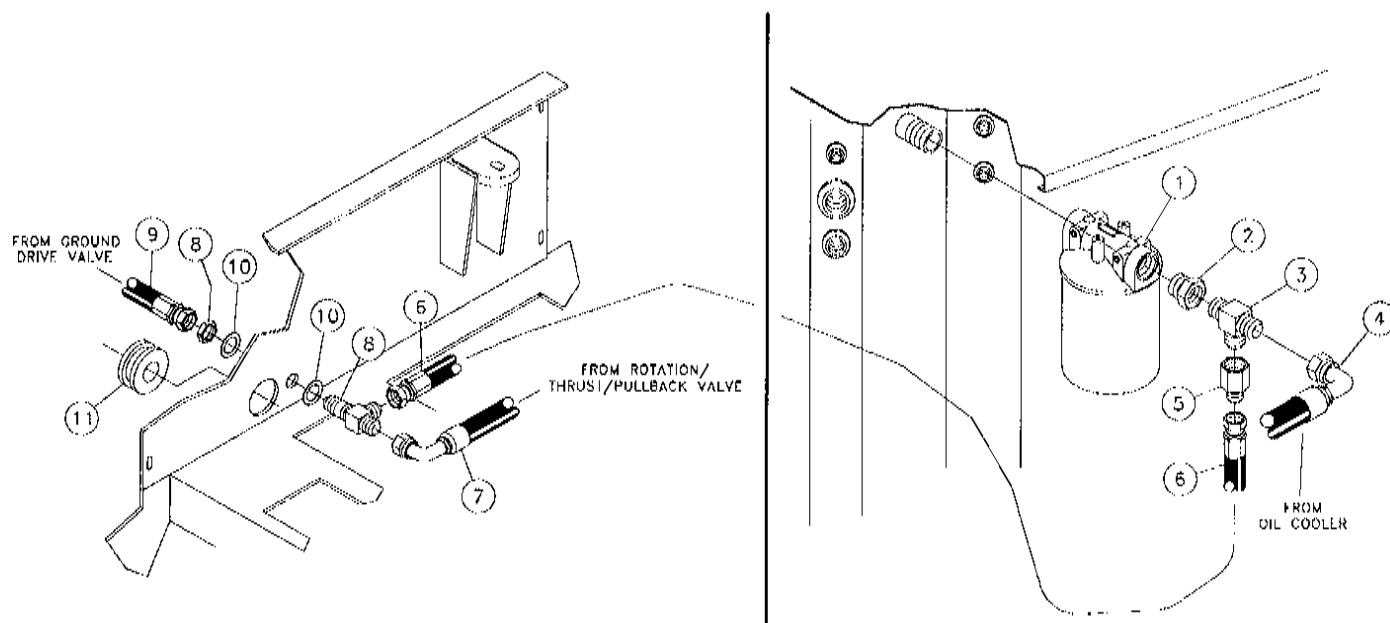
NOTE: O-RINGS LISTED ARE 90 DURAMETER

HYDRAULIC OIL TANK ASSEMBLY

HYDRAULIC OIL FILTER ASSEMBLY

Figure 5-4

Revised November 1997 due to hose
update. Changed part marked with *.

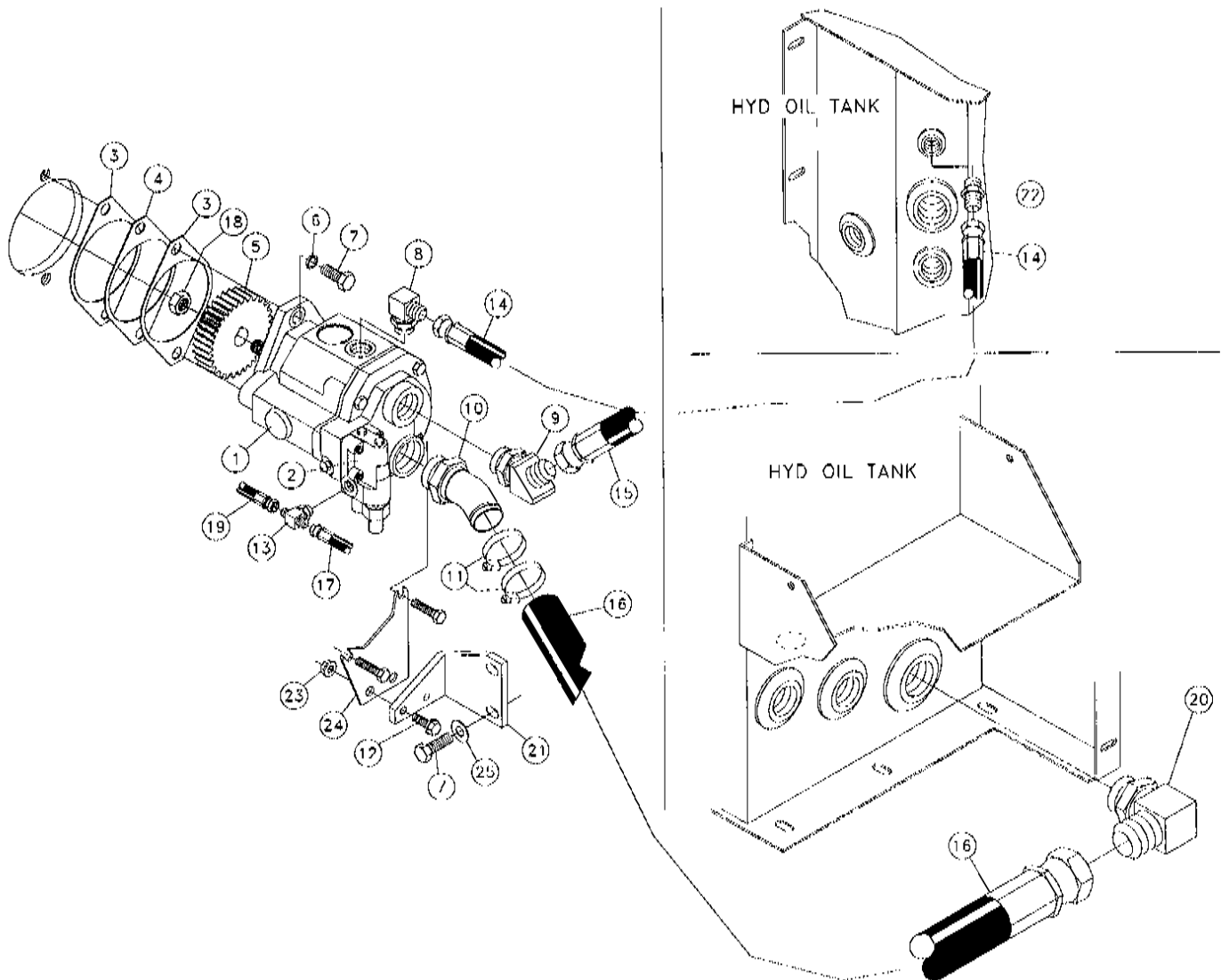


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-4	1	16284-001 FILTER-W/BYPASS	1
	2708-001	FILTER	1
5-4	2	730-019 1 1/4" X 1" HEX BUSHING STEEL	1
5-4	3	70030-001 16M JIC BCHX16M JIC X 1" M TEE	1
5-4	4	53846-249 HOSE-1X56 16FSJIC/16FSJIC 90	1
5-4	5	70028-001 FITTING-16F JICX 12M JIC	1
5-4	6	53845-111 3/4X60 12FS JIC(G2AT-HMP)100R2	1
5-4	7	53845-813 HOSE-3/4X140 12FSJICST/90D3000	1
5-4	8	96075-001 FITTING-12MJIC BLKHD RUN TEE	1
5-4	9	*53845-171 HOSE-3/4X54 12FS JIC 3000 PSI	1
5-4	10	13884-001 WASHER-1"2PIECE SELF-LOCK LOCK	1
5-4	11	1865-001 GROMMET - 1/4 X 2 1/2 (YELLOW)	1

IMPLEMENT PUMP ASSEMBLY

Figure 5-5

Revised January 1998 due to hydraulic pump update. Changed part marked with *.

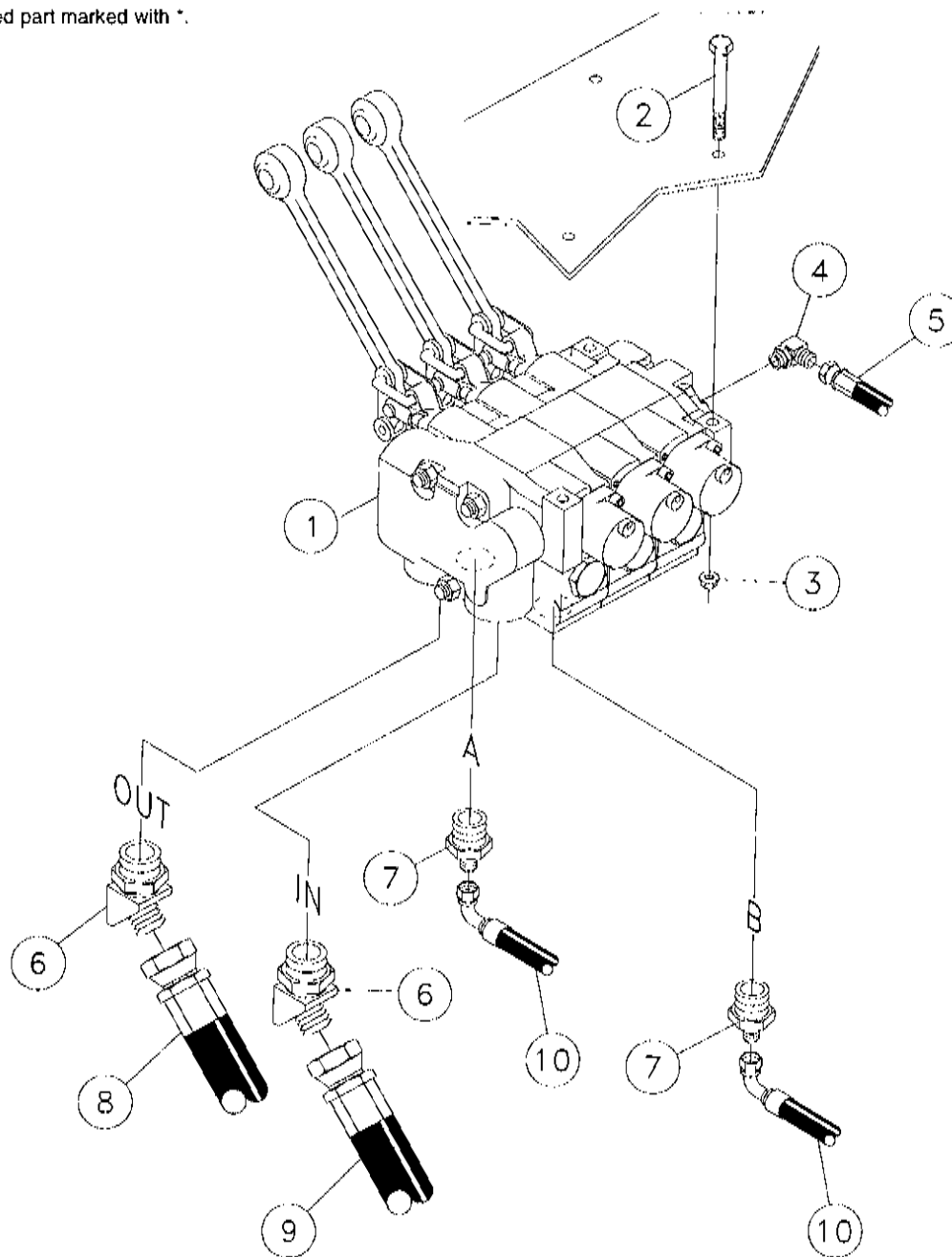


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
5-5	1	*240883-001 PUMP-2.77 CID PISTON	1	5-5	13	81343-001 4M (BCH)X4M JICX4M JIC TEE	1
		113253-003 SEAL KIT-PUMP/COMPENSATOR	1	5-5	14	53844-151 HOSE-1/2X40 8FS JIC 3000 PSI	1
5-5	2	98687-005 COMPENSATOR ASSEMBLY	1	5-5	15	53845-479 HOSE-3/4X38 12FS JIC 3000 PSI	1
5-5	3	103032-001 GASKET	2	5-5	16	94572-013 HOSE-1 1/2X49 24FSJIC/NONE 150	1
5-5	4	103029-001 SPACER-.060	1	5-5	17	53843-533 HOSE-1/4X44 4FS JIC ST/90 (3000)	1
5-5	5	103031-001 GEAR	1	5-5	18	103030-001 NUT	1
5-5	6	64108-001 WASHER-M12 LOCK	2	5-5	19	53843-487 HOSE-1/4X96 4FS JIC 3000 PSI	1
5-5	7	24772-001 BOLT-12M X 35 GR. 8.8 HEX HEAD	4	5-5	20	81921-001 FITTING-24MX24M JIC 90 DEG.	1
5-5	8	59407-001 8M JICX10M ADJ. 90 DEG. ELBOW	1	5-5	21	238514-001 BRACKET-PUMP SUPPORT	1
5-5	9	81212-001 FITTING-16MX12M JIC 45 ELBOW	1	5-5	22	53824-001 FITTING-#8M O-RING-#8M JIC ST.	1
5-5	10	103997-001 HOSE INSERT-20MX1 1/2 45 DEG.	1	5-5	23	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	2
5-5	11	1580-009 HOSE CLAMP - 1 3/4"	2	5-5	24	235805-001 PLATE-PUMP BRACKET	1
5-5	12	4475-010 BOLT-3/8-16X1 FLANGE WHIZ	2	5-5	25	485-009 WASHER-7/16 FLAT	2

CONTROL VALVE ASSEMBLY - 3 SPOOL

Figure 5-6

Revised November 1997 due to hose updates. Changed part marked with *.

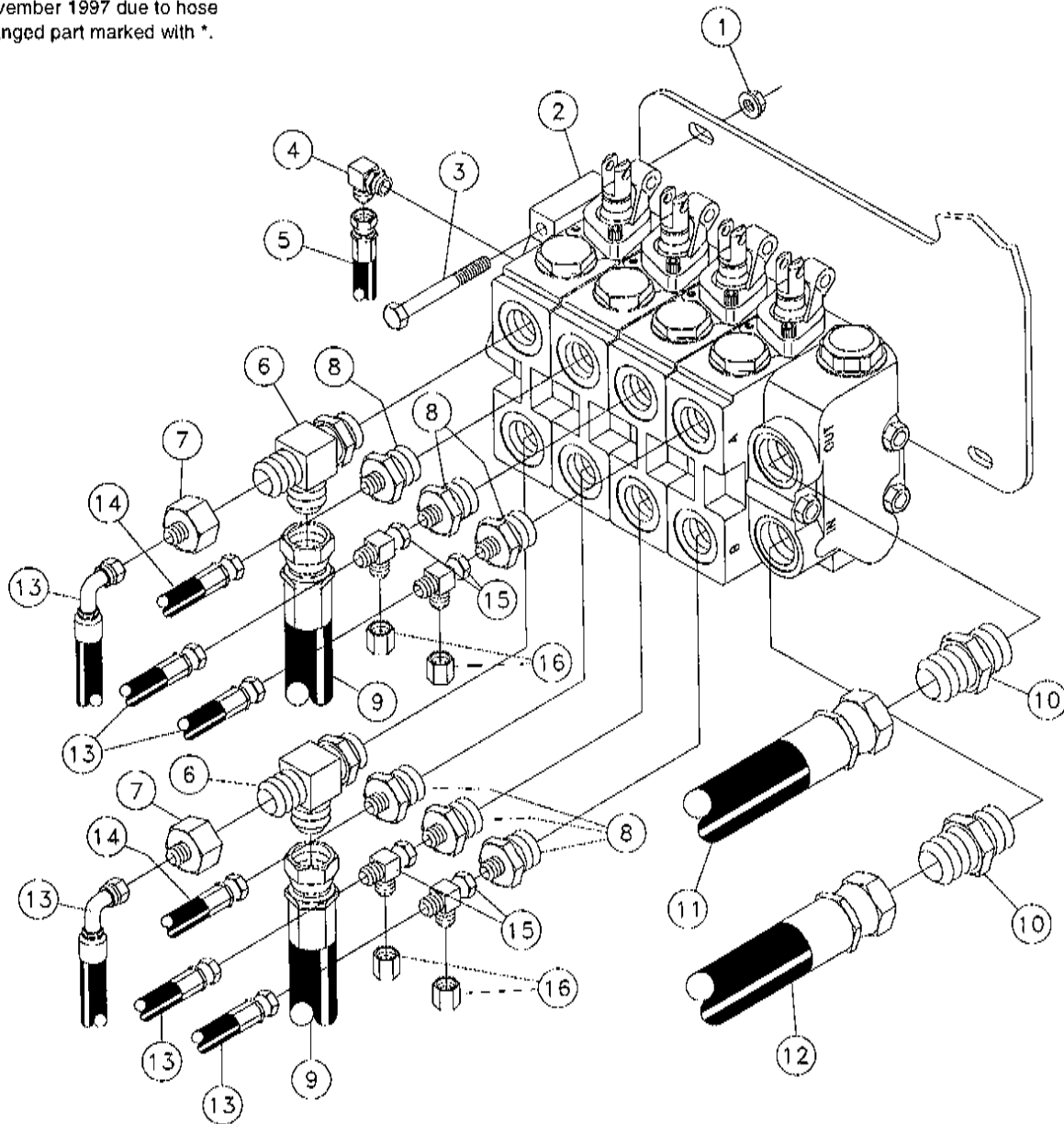


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-6	1	236457-001 VALVE-3 SPOOL CONTROL (BREAKDOWN FIG. 3-8)	1
5-6	2	351-026 5/16-18X2 3/4IN.GR. #5HEX BOLT	3
5-6	3	1809-007 NUT - 5/16-18 SM.FLGE.T.L.	3
5-6	4	59423-001 FIT-4M JICX4M ADJ.90 DEG.ELBOW	1
5-6	5	53843-487 HOSE-1/4X96 4FS JIC 3000 PSI	1
5-6	6	60718-001 12M JICX12M ADJ.45 DEG.EL	2
5-6	7	101507-001 FITTING-10MORX4MJIC STR.	2
5-6	8	*53845-171 HOSE-3/4X54 12FS JIC 3000 PSI	1
5-6	9	*240900-001 HOSE-3/4X120 12FS JIC 3000 PSI	1
5-6	10	53843-523 HOSE-1/4X86 4FS JIC ST/4FSJC90	2

CONTROL VALVE ASSEMBLY - 4 SPOOL

Figure 5-7

Revised November 1997 due to hose update. Changed part marked with *.

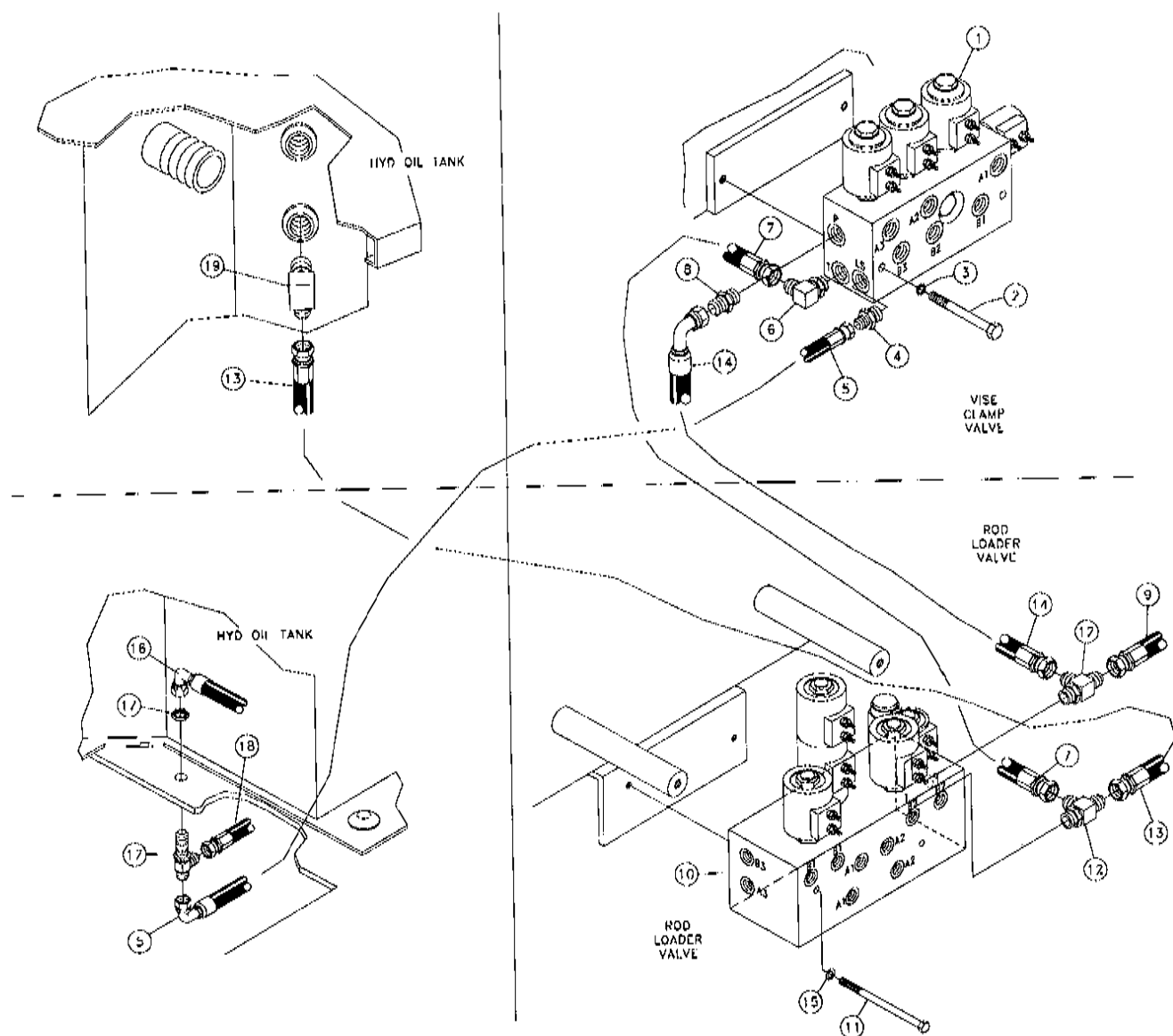


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-7 1	408-001	NUT-5/16 NC FLG WHIZ LOCK	3
5-7 2	236458-001	VALVE-4 SPOOL CONTROL (BREAKDOWN FIG. 5-15)	1
5-7 3	351-026	5/16-18X2 3/4IN.GR. #5HEX BOLT	3
5-7 4	59423-001	FIT-4M JICX4M ADJ.90 DEG.ELBOW	1
5-7 5	53843-331	HOSE-1/4X86 4FS JIC 3000 PSI	1
5-7 6	100873-001	FITTING-10MX10MJIC RUN TEE	2
5-7 7	65567-001	10 F JIC X 4M JIC	2
5-7 8	101507-001	FITTING-10MORX4MJIC STR.	6
5-7 9	53842-261	HOSE-5/8X20 10FSJIC 3000 PSI	2
5-7 10	53828-001	#12M O-RING-#12M JIC ST.	2
5-7 11	53845-813	HOSE-3/4X140 12FSJICST/90D3000	1
5-7 12	53845-519	HOSE-3/4 X 138 JIC 3100 PSI	1
5-7 13	53843-741	HOSE-1/4X18 4FSJICST/90 3000#	6
5-7 14	*240901-001	HOSE-1/4X147 4FSJICST/90D3000#	2
5-7 15	60248-001	TEE-4M JICX4M JICX4FS JIC	4
5-7 16	61664-001	CAP NUT-#4 JIC	4

SOLENOID VALVE ASSEMBLY (VISE CLAMP & ROD LOADER)

Figure 5-8

Revised April 1998 due to hose length, valve and hardware updates.
 Changed parts marked with *.

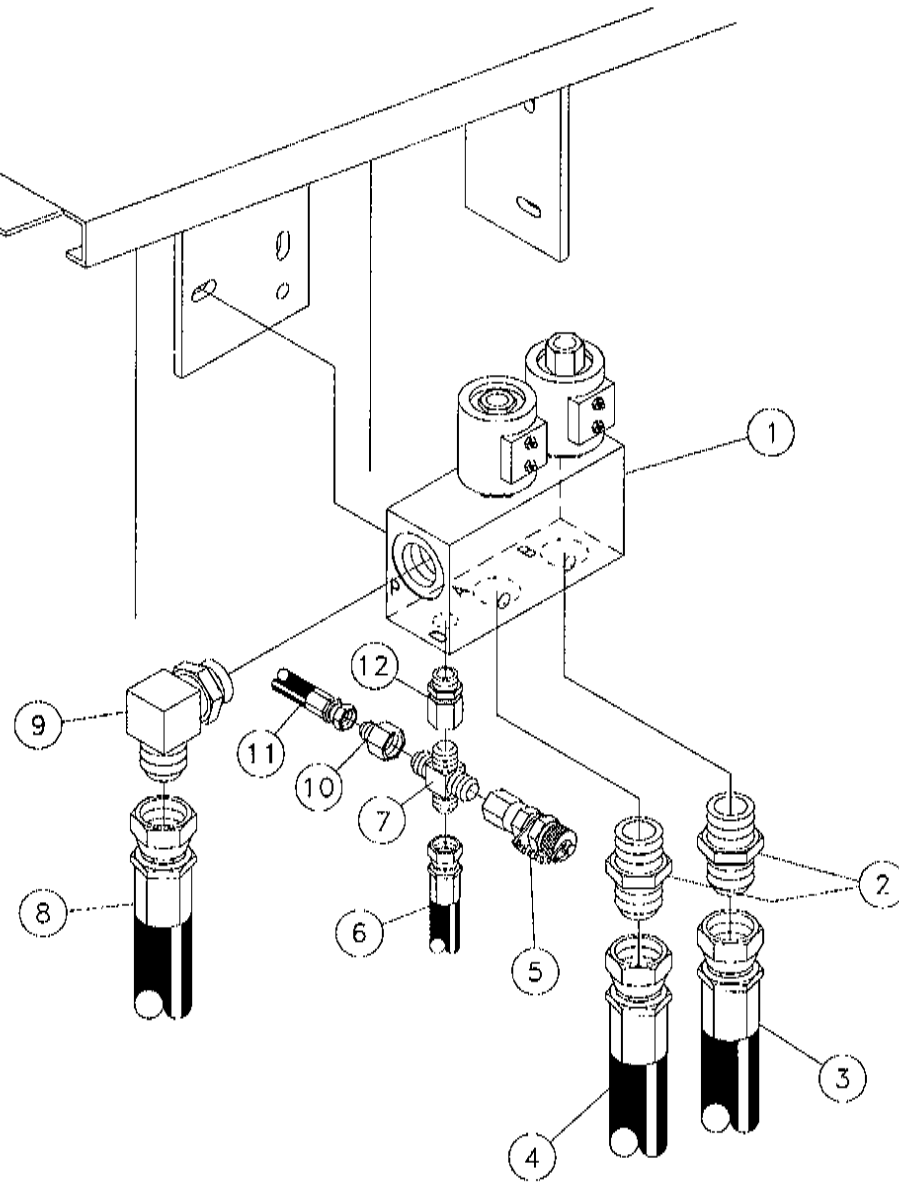


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
5-8	1	*240941-001 VALVE-VISE (BREAKDOWN FIG. 5-21)	1	5-8	10	*245016-001 VALVE-SOLENOID (BREAKDOWN FIG. 5-22)	1
5-8	2	*238212-001 BOLT-5/16"-18 X 3" GR 8 HEX ZINC PLT	2	5-8	11	*238243-001 BOLT-1/4"-20X4" GR 8 HEX ZINC	2
5-8	3	*235714-001 WASHER-5/16 SAE HARD ZINC PLTD	2	5-8	12	*68774-001 FITTING-6MX6M JIC (RUN)X6M JIC	2
5-8	4	57968-001 6M O-RING 4M JIC STRAIGHT	1	5-8	13	57940-051 HOSE-3/8X72 6FS JIC 3000 PSI	1
5-8	5	236449-001 HOSE-1/4X52 4FSJIC ST/90 3000	1	5-8	14	236495-001 HOSE-3/8X12 6FS JIC ST/90 3000	1
5-8	6	59426-001 FITTING-6M JICX6M ADJ 90 ELBOW	2	5-8	15	*235716-001 WASHER-1/4" SAE HARD ZINC	2
5-8	7	*57940-201 HOSE-3/8X10 6FS JIC SV/ST (100R2)	1	5-8	16	53843-533 HOSE-1/4X44 4FS JIC ST/90 (3000)	1
5-8	8	65565-001 FITTING-6M X 6M JIC ST.	2	5-8	17	88545-001 FITTING-4M JIC BLKHD RUN TEE	1
5-8	9	57940-581 HOSE-3/8X86 6FS JIC 3000 PSI	1	5-8	18	53843-331 HOSE-1/4X86 4FS JIC 3000 PSI	1
				5-8	19	57954-001 8MX6 JIC 90 DEG	1

DUMP VALVE ASSEMBLY

Figure 5-9

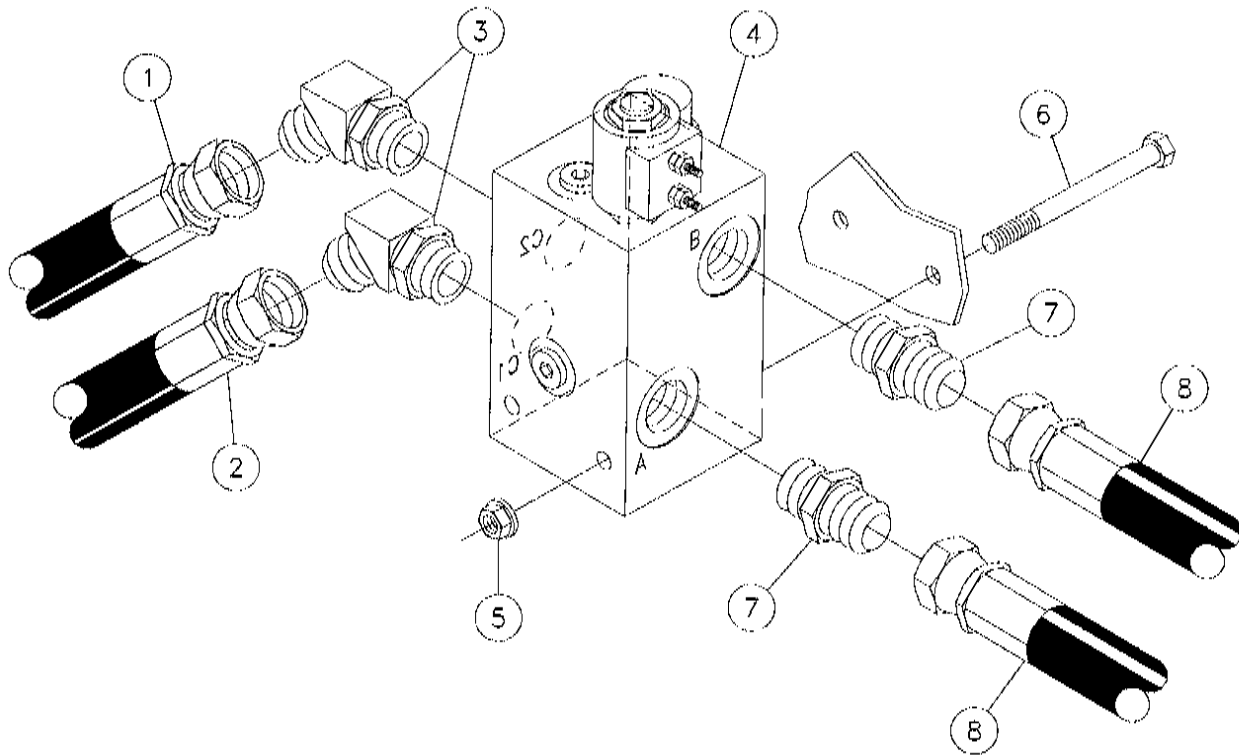
Revised November 1997 due to updates of valve description, fitting & hoses. Changed parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-9	1	*236410-001 VALVE-2 BANK 1-NQ/1-NC	1
5-9	2	53828-001 #12M O-RING-#12M JIC ST.	2
5-9	3	*240900-001 HOSE-3/4X120 12FS JIC 3000 PSI	1
5-9	4	53845-519 HOSE-3/4 X 138 JIC 3100 PSI	1
5-9	5	130600-001 COUPLER-DIAGNOSTIC, 6FJIC	1
5-9	6	57940-581 HOSE-3/8X86 6FS JIC 3000 PSI	1
5-9	7	86697-001 FITTING-6M JIC CROSS	1
5-9	8	*53845-479 HOSE-3/4X38 12FS JIC 3000 PSI	1
5-9	9	*59410-001 12M JICX12M ADJ.90 DEG.EL	1
5-9	10	59928-001 6F JICX4M JIC ST REDUCER	1
5-9	11	*53843-331 HOSE-1/4X86 4FS JIC 3000PSI	1
5-9	12	93411-001 6M O-RINGX6FS JIC STR ADAPTER	1

REGEN VALVE ASSEMBLY

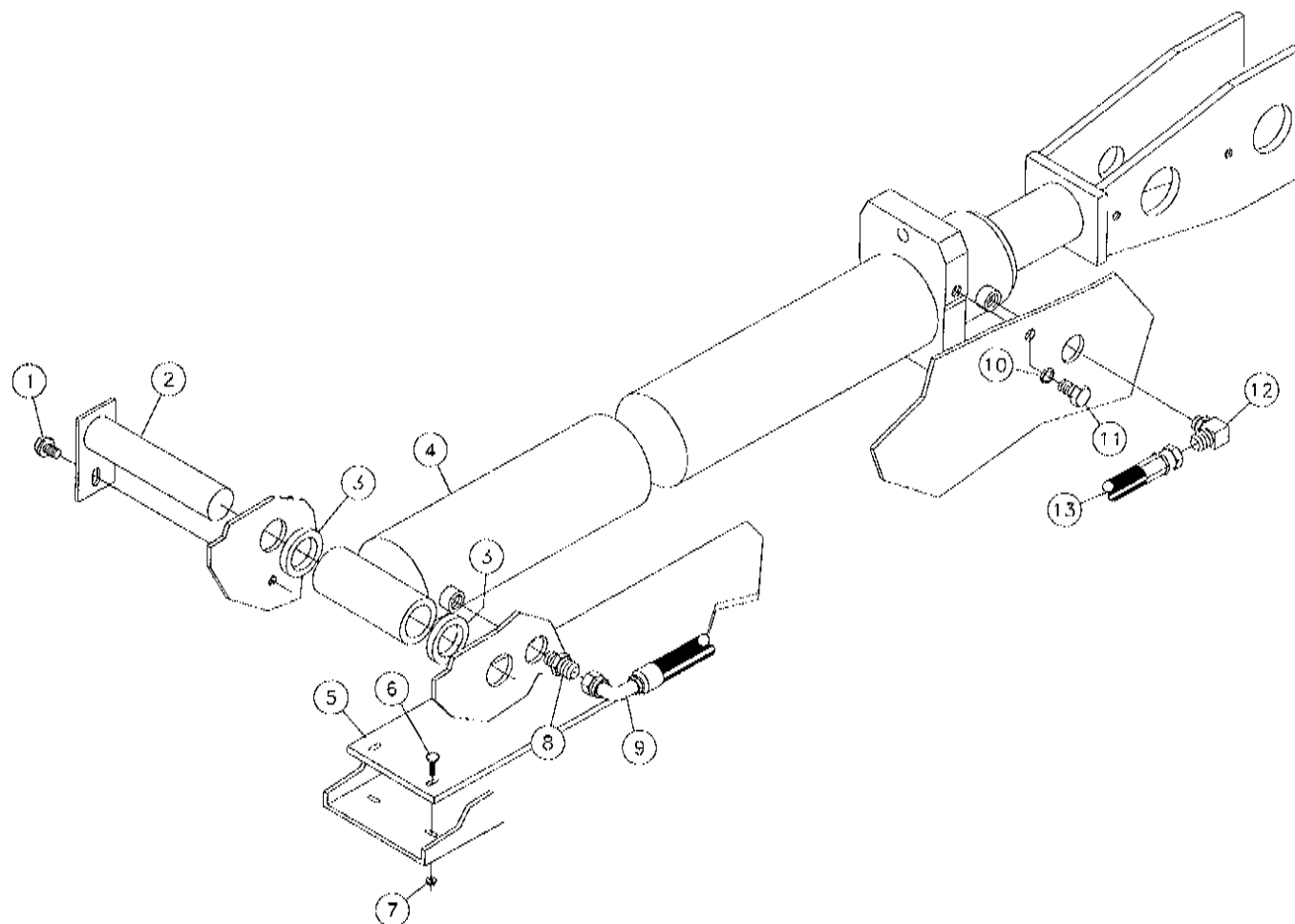
Figure 5-10



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-10	1	236454-001 HOSE-5/8X134 10FSJICST/90 3000	1
5-10	2	236455-001 HOSE-5/8X115 10FSJIC 3000 PSI	1
5-10	3	56725-001 FITTING-10MX10M JIC 45 DEG.	2
5-10	4	228124-001 VALVE-ELEC. SELECTABLE REGEN (BREAKDOWN FIG. 5-23)	1
5-10	5	408-001 NUT-5/16 NC FLG WHIZ LOCK	2
5-10	6	351-034 BOLT-5/16-18X3 1/2 HEXHD GR.5	2
5-10	7	53827-001 FITT.-#10M O-RING-#10M JIC ST.	2
5-10	8	53842-261 HOSE-5/8X20 10FSJIC 3000 PSI	2

THRUST/PULLBACK CYLINDER ASSEMBLY

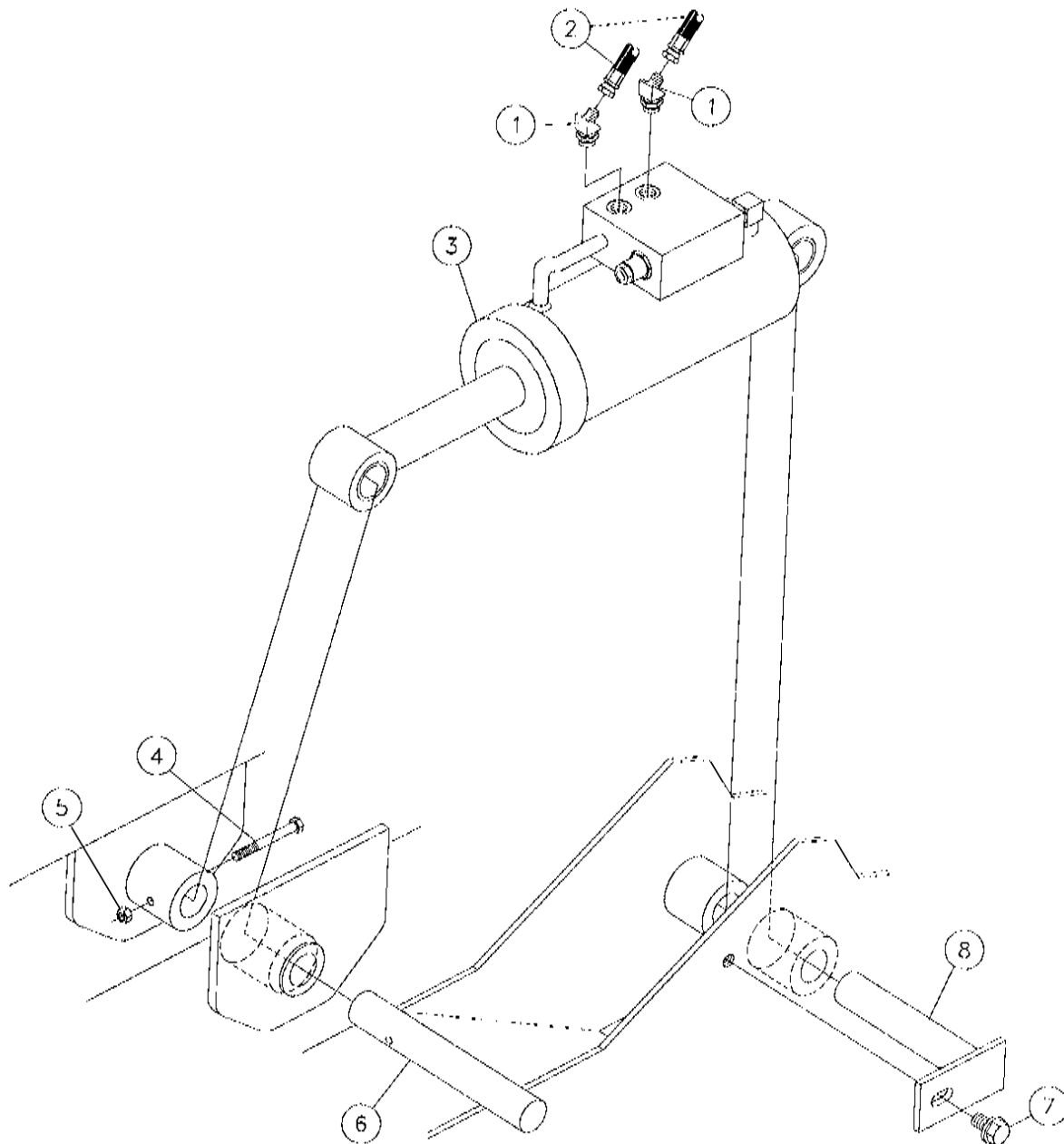
Figure 5-11



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-11 1	4476-006	BOLT-1/2-13X3/4 FLG WHIZ	1
5-11 2	211144-001	CYLINDER PIN	1
5-11 3	213667-001	TUBE-SPACER	2
5-11 4	215799-001	CYLINDER-4 1/2 X 65 W/2 1/4 ROD (BREAKDOWN FIG. 5-19)	1
5-11 5	213612-001	PLASTIC-CHAIN GUARD	2
5-11 6	543-007	1/4-20X7/8"ELEVATOR BOLT W/1/8	8
5-11 7	405-001	NUT-1/4 NC FLG WHIZ LOCK	8
5-11 8	67850-001	8M X 10M JIC STR	1
5-11 9	236454-001	HOSE-5/8X134 10FSJICST/90 3000	1
5-11 10	480-015	WASHER-5/8 S/T LOCK	2
5-11 11	366-012	5/8-11X1 1/4" GRADE#5 HEX BOLT	2
5-11 12	53823-001	#8M O-RING-#10M JIC 90 DEG.	1
5-11 13	236455-001	HOSE-5/8X115 10FSJIC 3000 PSI	1

RACK LIFT CYLINDER ASSEMBLY

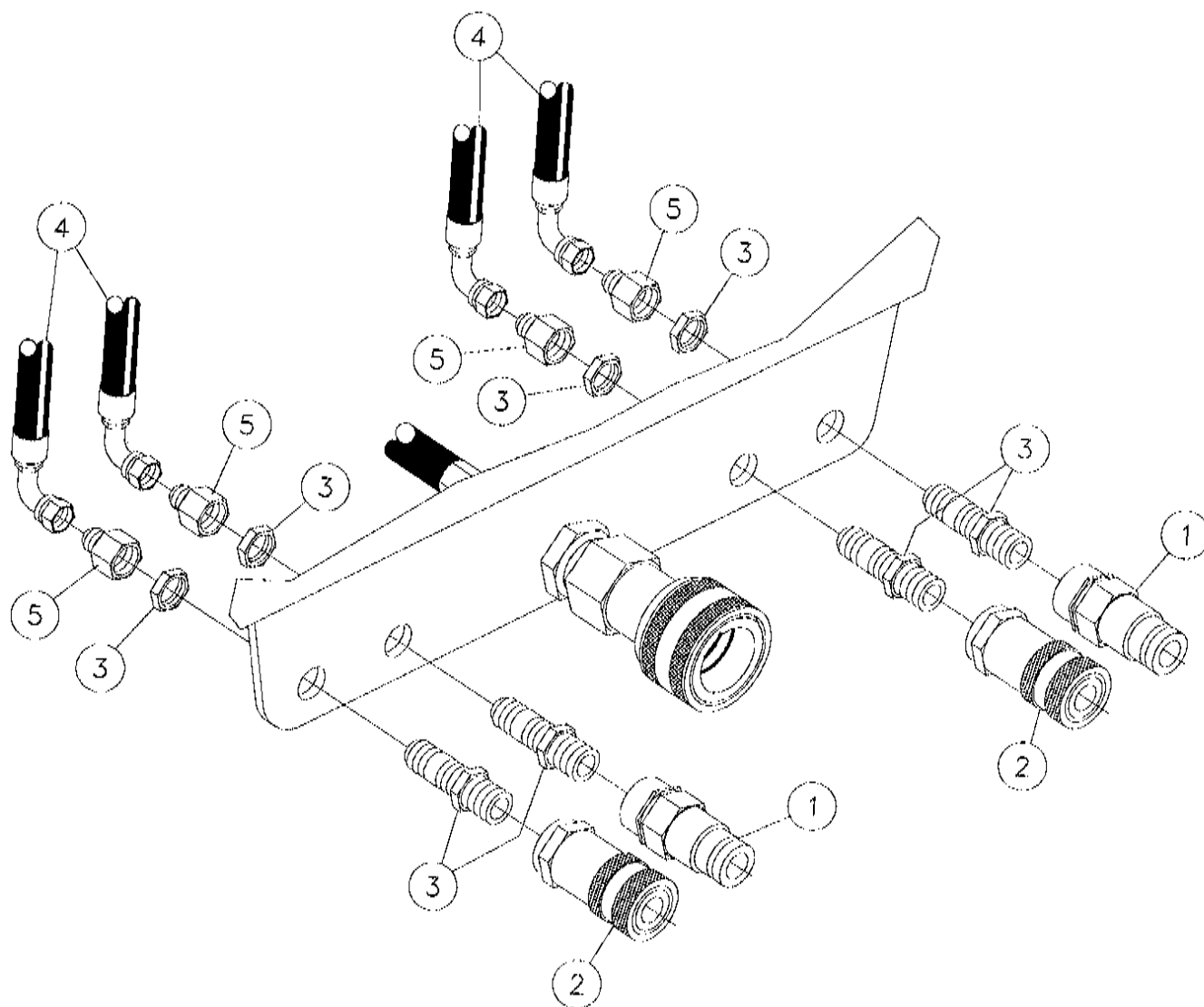
Figure 5-12



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-12	1	82931-001 FITTING-6MX4M JIC 45DEG.ELBOW	2
5-12	2	53843-523 HOSE-1/4X86 4FS JIC ST/4FSJC90	2
5-12	3	236423-001 CYLINDER- 4X7 HYD (BREAKDOWN FIG. 5-18)	1
5-12	4	351-030 5/16-18X3*GRADE #5 HEX BOLT	1
5-12	5	409-001 NUT-5/16 NC SLTL	1
5-12	6	213586-001 PIN-FOOT CYL. TOP	1
5-12	7	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	1
5-12	8	215602-001 PIN-CYLINDER	1

BULKHEAD ASSEMBLY

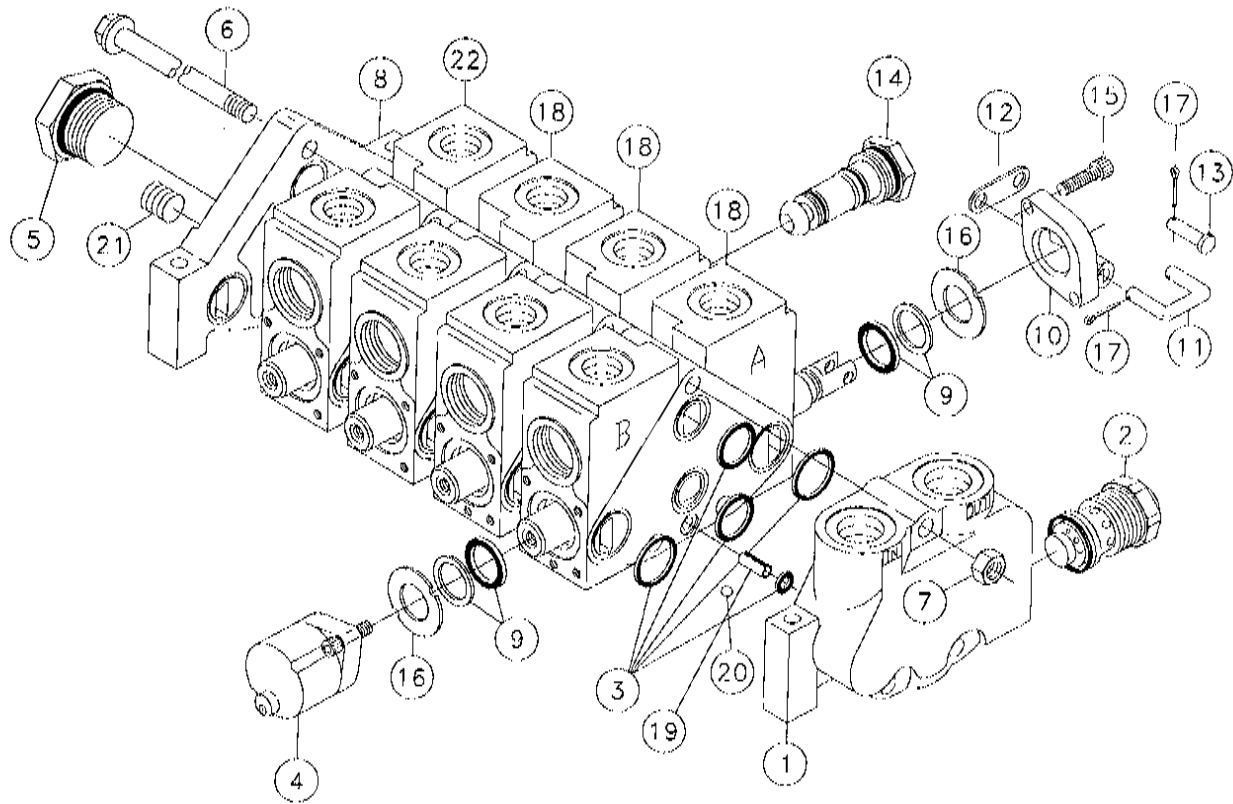
Figure 5-14



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-14	1	221503-001 COUPLER-3/8 NPT QUICK (MALE)	2
5-14	2	221504-001 COUPLER-3/8 NPT QUICK (FEMALE)	2
5-14	3	130987-001 FITTING-6MJIC/3/8MNPT BULKHEAD	4
5-14	4	53843-741 HOSE-1/4X18 4FSJICST/90 3000#	4
5-14	5	59928-001 6F JICX4M JIC ST REDUCER	4

CONTROL VALVE COMPONENTS - 4 SPOOL

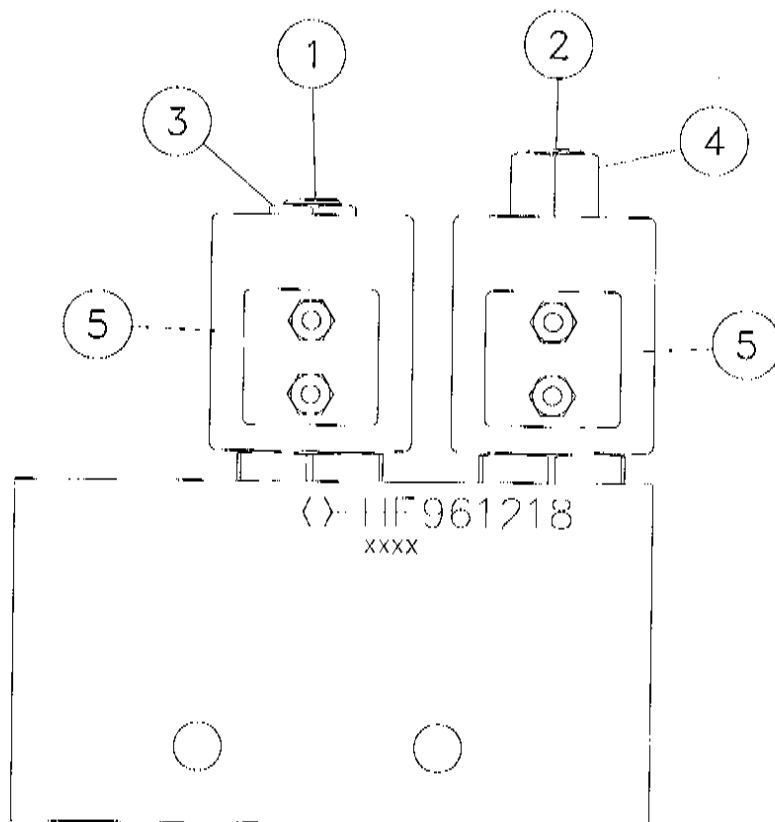
Figure 5-15



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
5-15	1	228113-003 LEFT COVER PLATE COMPLETE	1	5-15	14	3147-035 PLUG-LOAD CHECK STEEL	8
5-15	2	228113-005 WH MAIN RELIEF (3500 PSI)				(BREAKDOWN FIG. 3-9)	
5-15	3	87390-001 REPAIR KIT-LOAD SENSING SECT.	5	5-15	15	79704-001 SCREW-1/4-20X7/8 SOC HD SELFLK	8
5-15	4	6149-005 POSITIONER-STD. (BREAKDOWN FIG. 3-10)		5-15	16	3147-081 RETAIN-PLT WASH	8
5-15	5	3152-011 PLUG SAE 12 (INC. O-RING)	1	5-15	17	510-035 PIN-3/32 X 1/2 COTTER	12
		3152-013 SEAL-O-RING	1	5-15	18	236458-003 BODY ASSY-CNTR SEC W/FREE FLOW	
5-15	6	14173-003 STUD KIT-4 SECT. (INC. REF. 7)	1			(INC. ONE OF REF. 3, 4, 9-11, 13, 19 & 20, TWO OF REF. 14-16 & THREE OF REF. 17)	3
5-15	7	446-001 NUT-3/8 NF HEX	3	5-15	19	87397-001 PIN-SPRING	1
5-15	8	102976-001 COVER ASSY-RIGHT LOAD SEN.		5-15	20	87396-001 BALL	1
		(INC. ONE OF REF. 3, 5 & 21)	1	5-15	21	3213-017 PLUG-RELIEF 3/8"	1
5-15	9	3147-077 REPAIR KIT	4	5-15	22	236458-005 BODY ASSY-CENTER SECTION (INC. ONE OF REF. 3, 4, 9-11, 13, 19 & 20, TWO OF REF. 14-16 & THREE OF REF. 17)	1
5-15	10	3147-029 BRACKET	4				
5-15	11	4333-003 LINK (INC. REF. 12)	4				
5-15	12	4333-005 PLATE-LINK	4				
5-15	13	2110-003 PIN-CLEVIS 1/4X7/8 - 47/64 UL	4				
						236458-001 VALVE-4 SPOOL CONTROL (INC. ALL ITEMS IN THIS FIGURE)	

DUMP VALVE COMPONENTS

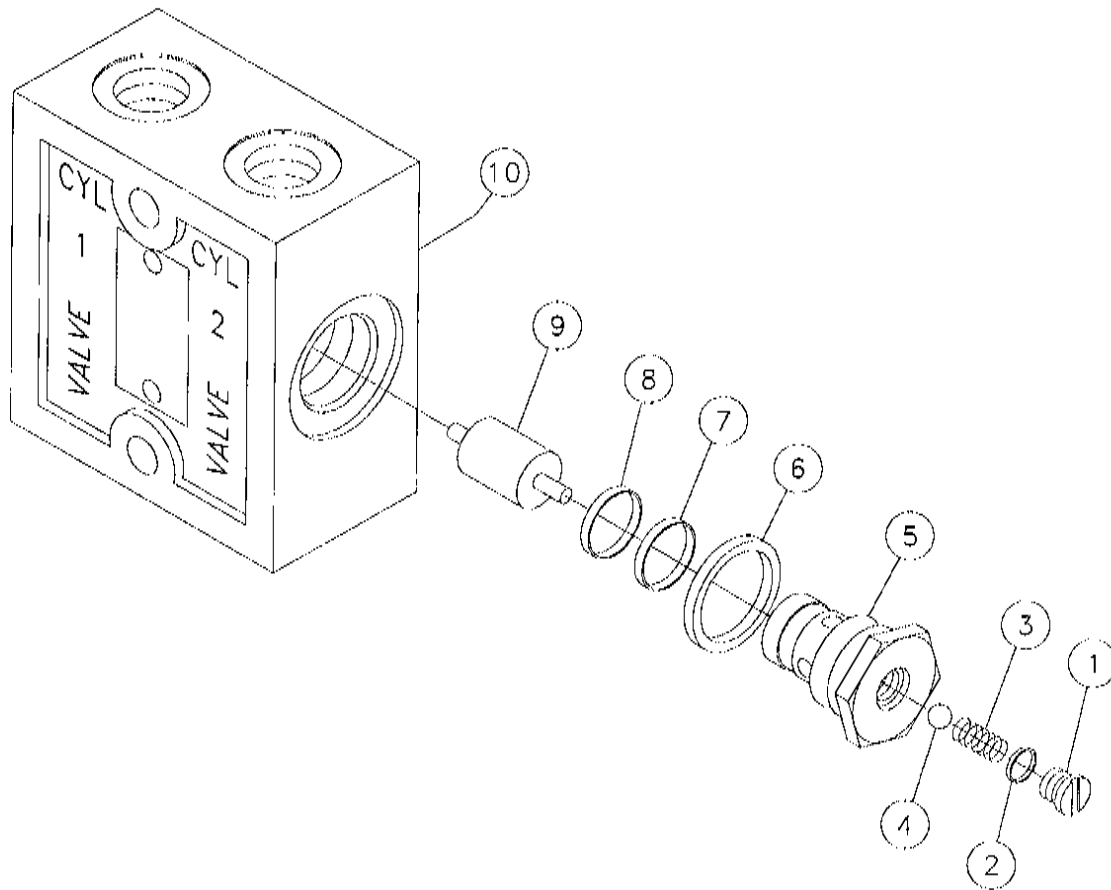
Figure 5-16



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-16	1	904525-007 POPPET-N/C	1
		904525-009 REPAIR KIT	1
5-16	2	904525-005 POPPET-N/O	1
		904525-009 REPAIR KIT	1
5-16	3	904525-011 NUT-COIL	1
5-16	4	904525-013 NUT-COIL (LONG)	1
5-16	5	904525-003 COIL-12V	2
	236410-001	VALVE-DUMP (INC. ALL ITMES IN THIS FIGURE)	

LOCK VALVE COMPONENTS

Figure 5-17

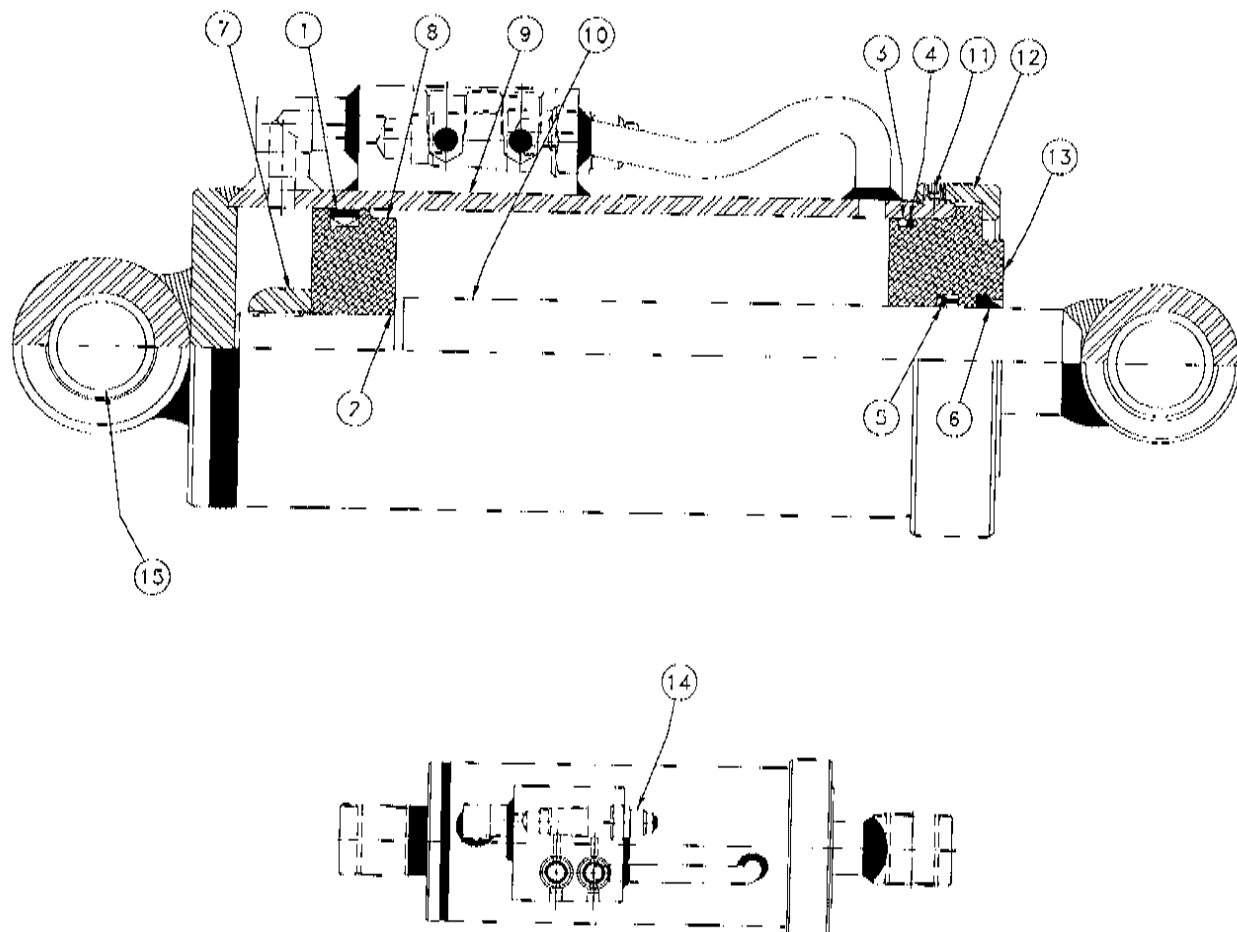


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-17 1	3216-007	PLUG-SEAT	2
5-17 2	NSS	O-RING	2
5-17 3	3216-009	SPRING-CHECK	2
5-17 4	3216-011	BALL	2
5-17 5	3216-013	SEAT	2
5-17 6	NSS	O-RING	2
5-17 7	NSS	O-RING	2
5-17 8	NSS	WASHER-BACKUP	2
5-17 9	3216-015	PISTON-D	1
5-17 10	NSS	HOUSING	1
	3216-003	REPAIR KIT (INC. TWO EACH OF REF. 2 & 6-8)	
	3216-005	REBUILDING KIT (INC. TWO EACH OF REF. 1-8 & ONE OF REF. 9)	
	86668-001	VALVE-LOCK (INC. REF. 1-10)	

HYDRAULIC CYLINDER COMPONENTS - 4" X 7"

Figure 5-18

Revised August 1997 due to addition of bushings to breakdown. Added parts marked with *.



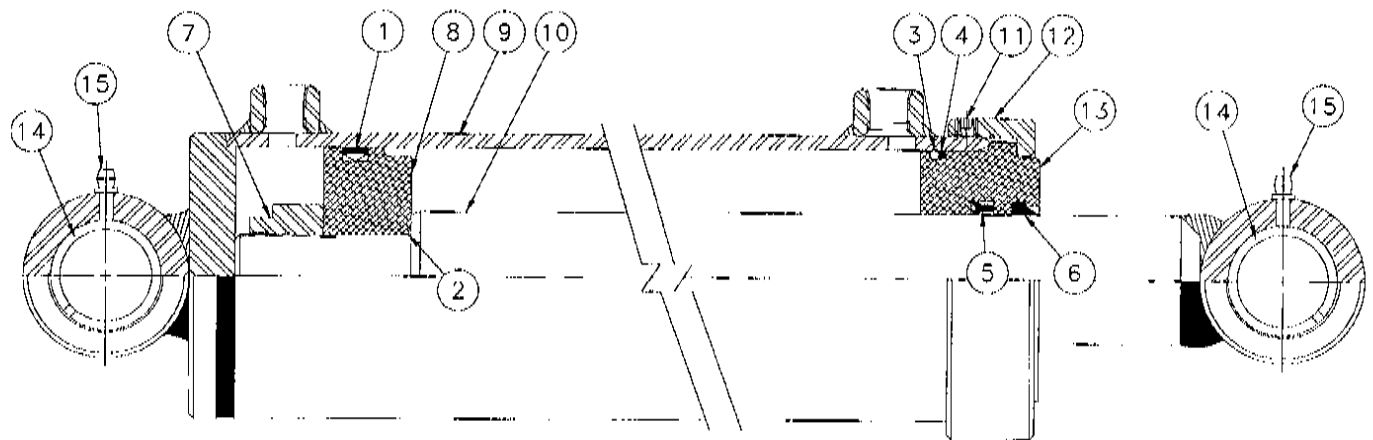
REF. NO.	PART NO.	DESCRIPTION	QTY.
5-18	1	230011-003 UNI-RING	1
5-18	2	223842-007 O-RING	1
5-18	3	203839-009 O-RING	1
5-18	4	200795-001 RING-BACKUP	1
5-18	5	236423-003 LOADED U-CUP	1
5-18	6	200808-001 WIPER	1
5-18	7	218496-007 LOCK NUT	1
5-18	8	236423-005 PISTON	1
5-18	9	236423-007 BARREL ASSEMBLY	1
5-18	10	236423-009 ROD ASSEMBLY	1
5-18	11	206557-009 NT SH SET SCREW	1
5-18	12	215325-011 THREAD CAP	1
5-18	13	204355-001 GLAND	1
5-18	14	229414-007 C.B. VALVE	1
5-18	15	*236423-013 BUSHING-1.50ODX1.254IDX1.00 SELF LUBRICATING	

NOTE: BUSHINGS ARE GLUED WITH
INDUSTRIAL GRADE ADHESIVE.

236423-001 CYLINDER- 4X7 HYD. (COMPLETE)
236423-011 SEAL KIT (INC. REF. 1-6)

HYDRAULIC CYLINDER COMPONENTS - 3 1/2" X 12"

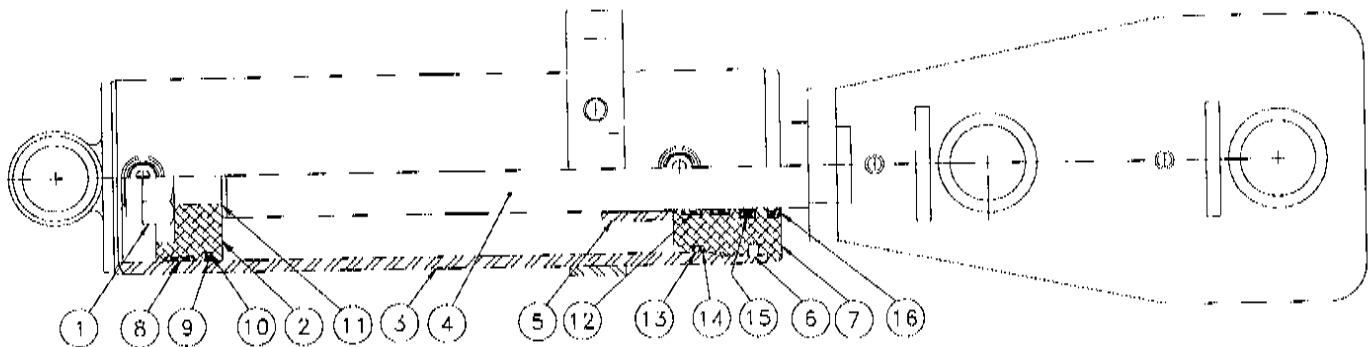
Figure 5-19



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-19	1	200789-001 UNI-RING	1
5-19	2	200820-001 O-RING	1
5-19	3	200822-001 O-RING 6	1
5-19	4	200787-001 WASHER-BACKUP	1
5-19	5	224977-003 LOADED-CUP	1
5-19	6	115404-017 ROD WIPER	1
5-19	7	224977-005 LOCKNUT	1
5-19	8	200786-001 PISTON	1
5-19	9	224977-007 BARREL ASSEMBLY	1
5-19	10	224977-009 ROD ASSEMBLY	1
5-19	11	212820-009 SET SCREW-SOCKET HD	1
5-19	12	200783-001 THREADED CAP	1
5-19	13	200786-001 GLAND	1
5-19	14	1835-027 BSHG.-STL.-1 1/2X1 1/4X1 1/2	2
5-19	15	215325-015 GREASE ZERK (DRIVE-IN)	2
	200782-001	SEAL KIT (INC. REF. 1-6)	
	224977-001	CYLINDER- HYD. 3 1/2"X12"	

HYDRAULIC CYLINDER COMPONENTS - 4 1/2" X 65"

Figure 5-20

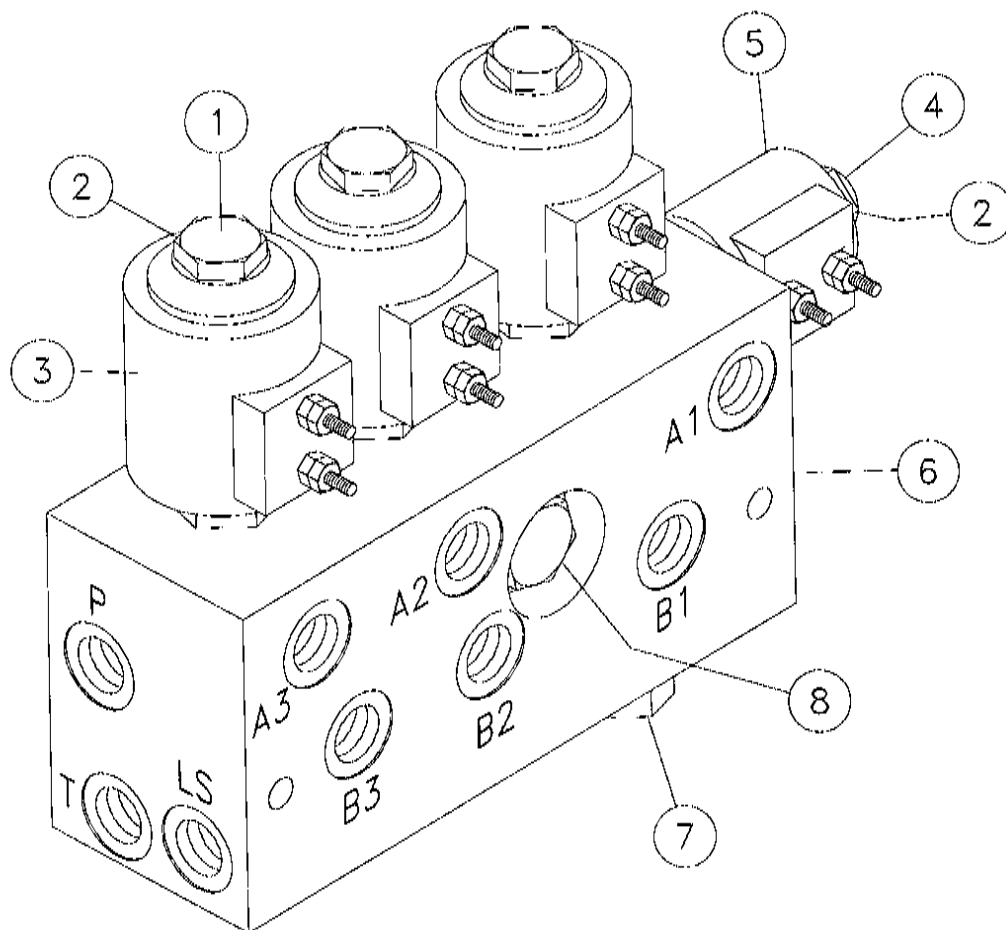


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-20	1	85777-031 NUT-1 1/2" 12 LOCK	1
5-20	2	212568-007 PISTON	1
5-20	3	215799-003 TUBE WELDMENT	1
5-20	4	215799-005 ROD WELDMENT	1
5-20	5	215799-007 ROD SPACER	1
5-20	6	99541-017 LOCKING INSERT	1
5-20	7	215799-009 HEAD GLAND	1
5-20	8	212568-009 WEAR BAND	1
5-20	9	212568-011 SEAL-SQ SECTION TEFLON	1
5-20	10	212568-013 SQUARE RING	1
5-20	11	85923-023 O-RING	1
5-20	12	215799-011 WEAR BAND	2
5-20	13	212568-017 O-RING	1
5-20	14	212568-019 BACKUP RING	1
5-20	15	215799-013 POLYPAK	1
5-20	16	215799-015 ROD WIPER	1
	215799-017	SEAL KIT (INC. REF. 8-16)	
	215799-001	CYLINDER-4 1/2 X 65 (COMPLETE)	

SOLENOID VALVE COMPONENTS (VISE CLAMP)

Figure 5-21

Revised April 1998 due to valve
breakdown update.

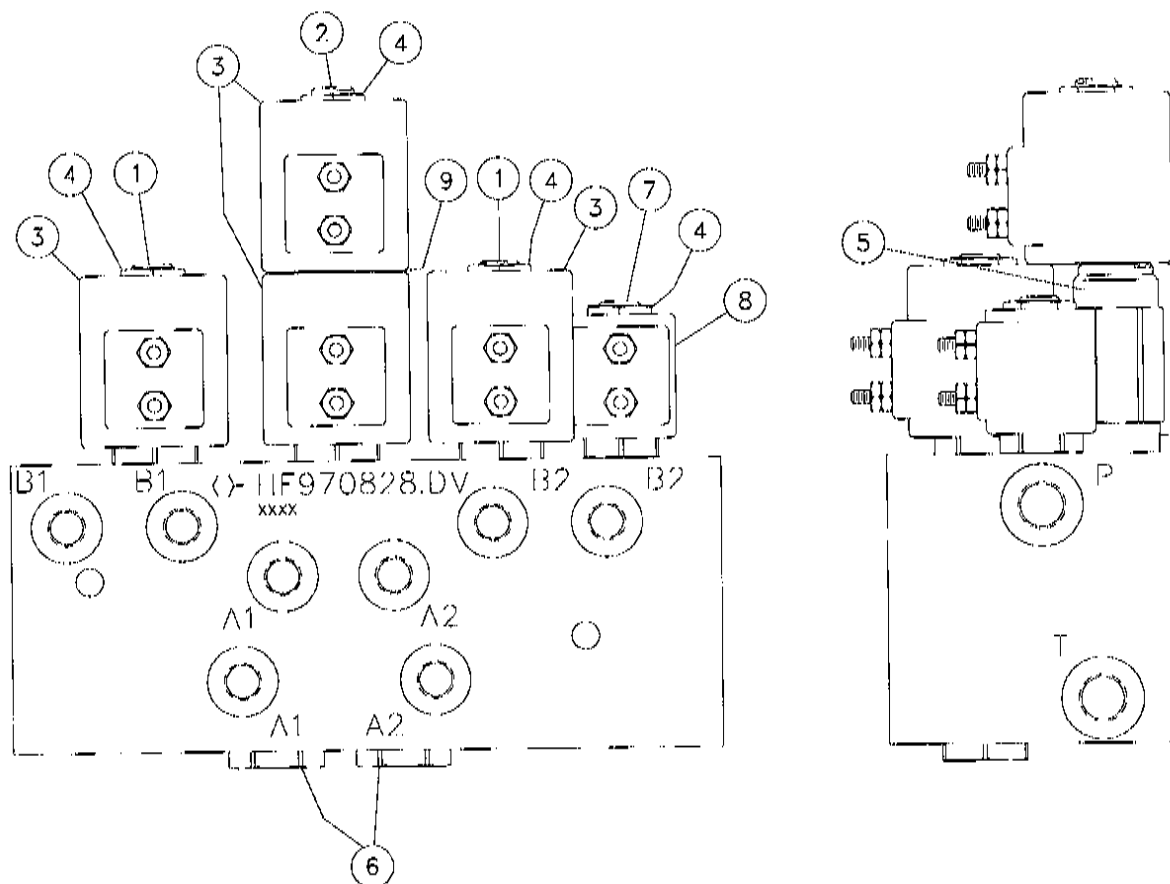


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-21	1	228128-003 CARTRIDGE-SOLENOID (INC. SEAL KIT & NUT)	3
		206271-007 REPAIR KIT	3
5-21	2	224886-007 NUT	4
5-21	3	240983-001 COIL-10 DV 12 VDC	3
5-21	4	228128-005 CARTRIDGE-SOLENOID (INC. SEAL KIT & NUT)	1
		228128-009 SEAL KIT	1
5-21	5	240941-003 COIL	1
5-21	6	228128-011 BODY-VALVE	1
5-21	7	228128-013 SENSE CHECK	1
		228128-015 SEAL KIT	1
5-21	8	228128-017 CHECK VALVE	1
		228128-009 SEAL KIT	1
		240941-001 VALVE-VISE (COMPLETE) (INC. ALL ITEMS IN THIS FIGURE)	

SOLENOID VALVE COMPONENTS (ROD LOADER)

Figure 5-22

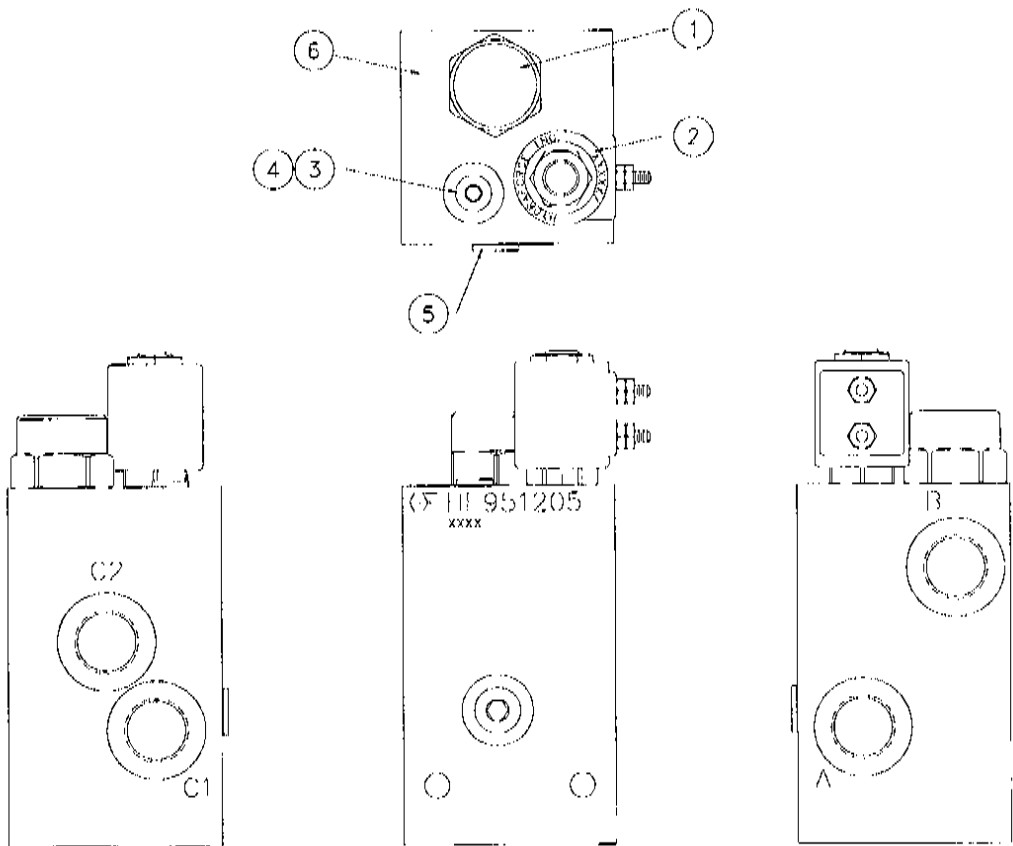
Revised April 1998 due to
valve breakdown update.



REF. NO.	PART NO.	DESCRIPTION	QTY.
5-22	1	212822-005 CARTRIDGE (INC. REPAIR KIT& NUT)	2
		206271-007 REPAIR KIT	
5-22	2	228129-003 CARTRIDGE-SOLENOID (INC. REPAIR KIT & NUT)	1
		206271-007 REPAIR KIT	
5-22	3	206271-005 COIL-12V DUAL POST	4
5-22	4	224886-007 NUT-COIL	4
5-22	5	240942-003 CARTRIDGE-PRESSURE RELIEF	1
		236316-005 SEAL KIT	
5-22	6	228179-003 FLOW DIVIDER/COMBINER	2
		228179-005 SEAL KIT	
5-22	7	240942-005 CARTRIDGE (INC. REPAIR KIT & NUT)	1
		228128-009 SEAL KIT	
		245016-003 ORIFICE DISC	1
5-22	8	228128-007 COIL	1
5-22	9	228129-007 SPACER	1
	245016-001	VALVE-SOLENOID (INC. ALL ITEMS IN THIS FIGURE)	

VALVE COMPONENTS - SELECTABLE REGEN

Figure 5-23

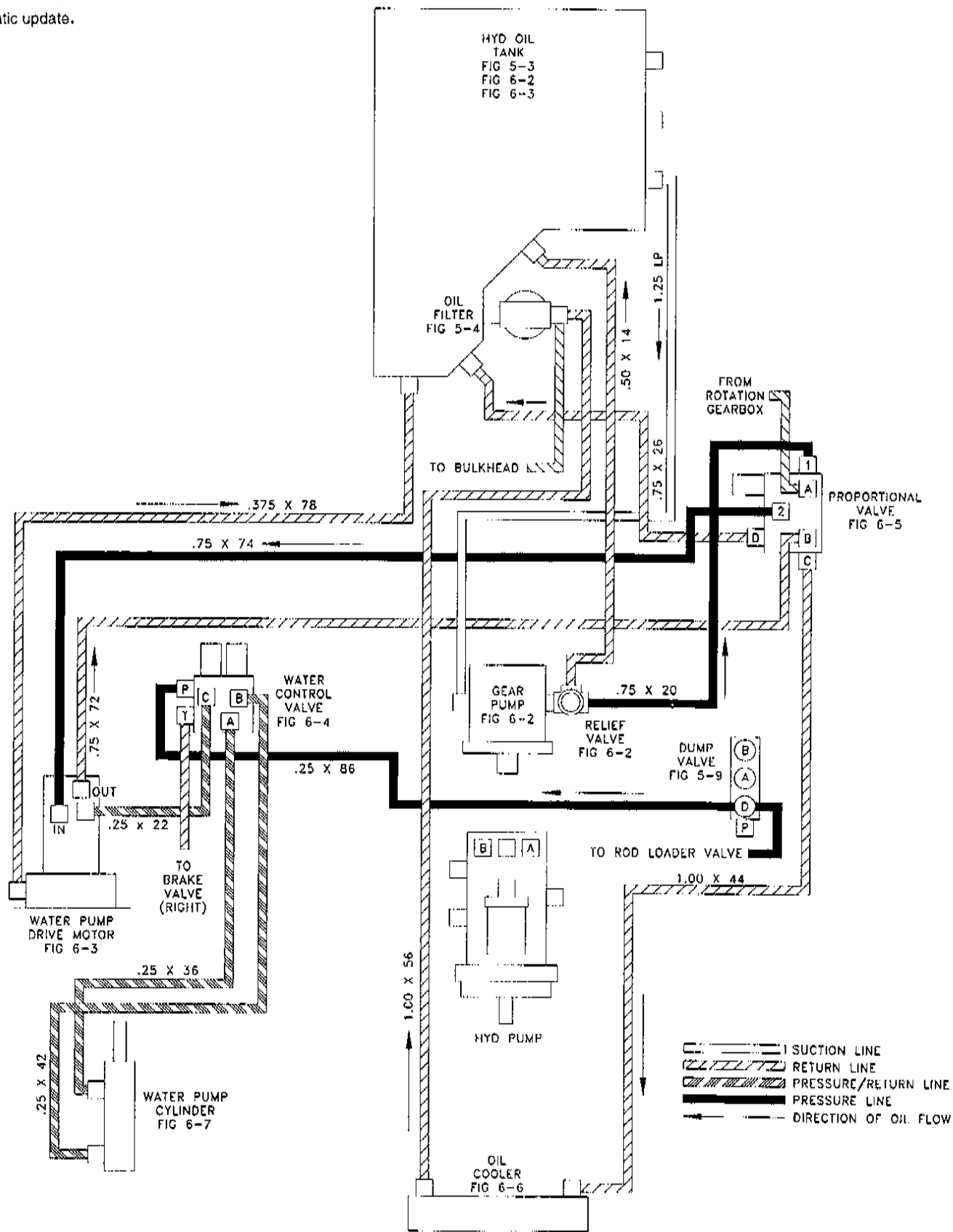


REF. NO.	PART NO.	DESCRIPTION	QTY.
5-23	1	228124-003 CARTRIDGE-PILOTED DIRECTIONAL	1
		228124-005 SEAL KIT	1
5-23	2	228124-017 CARTRIDGE-SOLENOID	
		(INC. COIL & SEAL KIT)	1
		228128-007 COIL	1
		110467-003 SEAL KIT	1
5-23	3	228124-007 ORIFICE PLUG	1
5-23	4	228124-009 PORT PLUG	1
		228124-011 SEAL KIT	1
5-23	5	228124-013 PORT PLUG	1
		228124-015 SEAL KIT	1
5-23	6	NSS BODY	1
	228124-001	VALVE-ELEC. SELECTABLE REGEN	

HYDRAULIC COMPONENTS LOCATION DIAGRAM - WATER SYSTEM

Figure 6-1

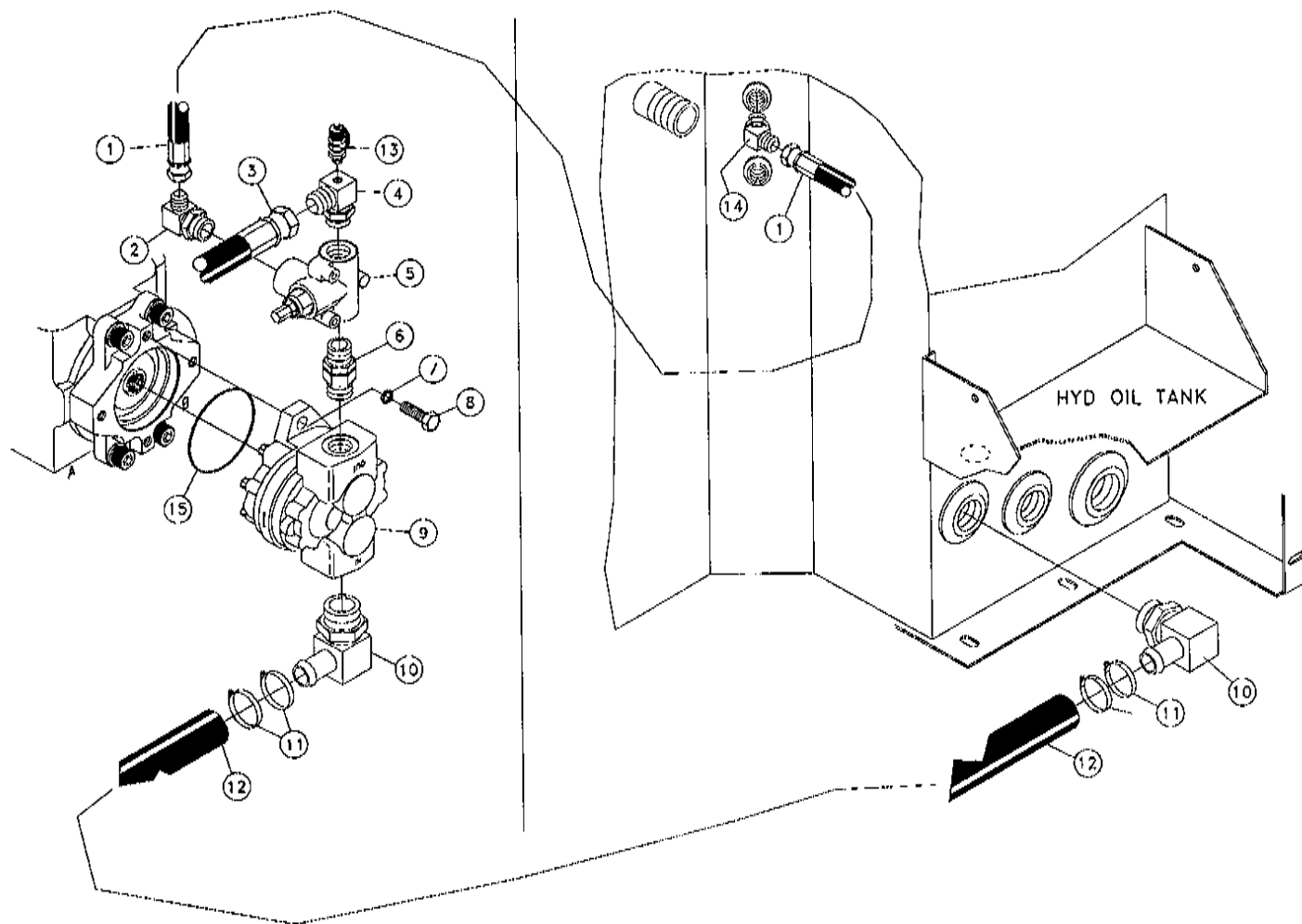
Revised November 1997 due to
schematic update.



GEAR PUMP ASSEMBLY

Figure 6-2

Revised November 1997 due to hose &
hose clamp update. Changed parts marked with *.

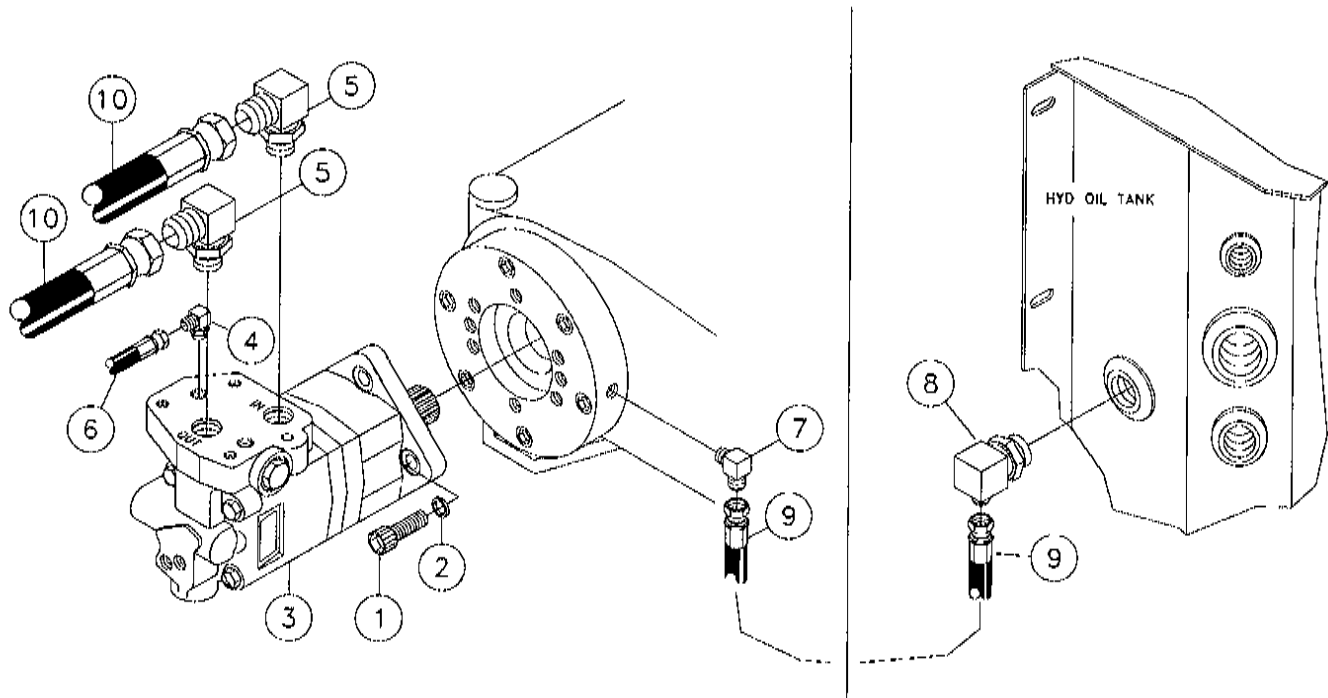


REF. NO.	PART NO.	DESCRIPTION	QTY.
6-2	1	HOSE-1/2X14" 8FS JIC ST/ST	1
6-2	2	FITTING-12MX8M JIC 90 D ELBOW	1
6-2	3	*53845-303 HOSE-3/4X20" 12FS JIC ST/ST (3000)	1
6-2	4	FITTING-PRESSURE CHECK	1
6-2	5	VALVE-2500 PSI RELIEF (BREAKDOWN FIG. 6-10)	1
6-2	6	12M HEX NIPPLE	1
6-2	7	WASHER-1/2 S/T LOCK	2
6-2	8	BOLT-1/2-13X1 1/2" GR ADE 5 HEX	2
6-2	9	PUMP-1.78 CID SPLINED SHAFT	1
6-2	10	FITTING-20M O-RING X 1 1/4 BEAD 90	2
6-2	11	*238094-001 CLAMP-3/4X1 3/4 BAND W/ SCREW	4
6-2	12	238599-001 HOSE-PUMP SUCTION	1
6-2	13	75492-001 FITTING-COUPLER MALE DIAG.	1
6-2	14	53834-001 FITTING-8M X 8M JIC 45 DEG ELBOW	1
6-2	15	76455-001 O-RING	1

HYDRAULIC MOTOR ASSEMBLY - WATER PUMP

Figure 6-3

Revised November 1997 due to hose & fitting updates. Changed parts marked with *.

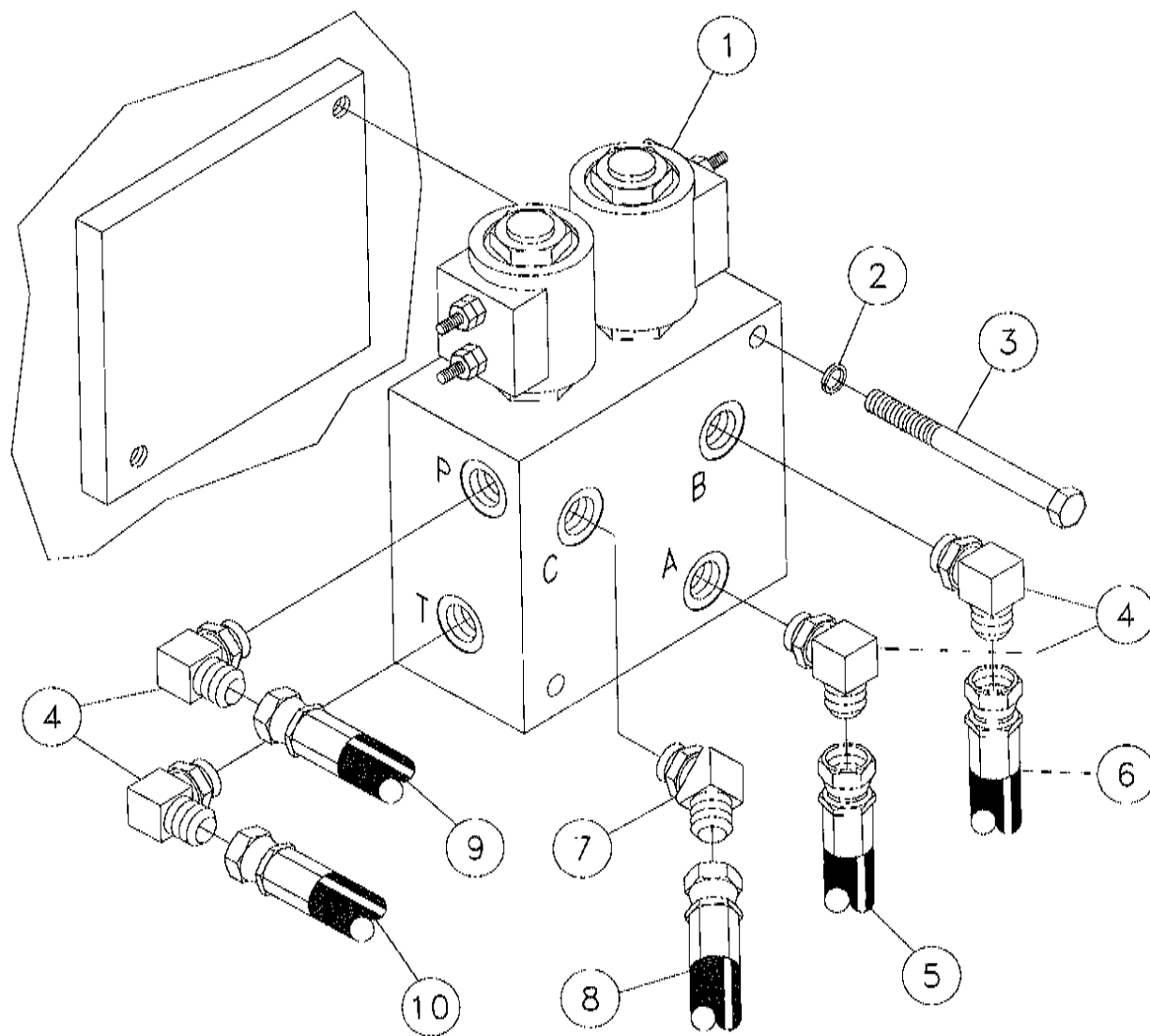


REF. NO.	PART NO.	DESCRIPTION	QTY.
6-3	1	514-014 1/2-13X1 1/2" SOCKET HEAD BOLT	4
6-3	2	490-011 WASHER-1/2 S/T LOCK	4
6-3	3	228098-003 MOTOR-HYD. (BREAKDOWN FIG. 6-9)	1
6-3	4	59423-001 FIT-4M JICX4M ADJ.90 DEG.ELBOW	1
6-3	5	53871-001 #10M O-RING X 12M JIC 90	2
6-3	6	53843-743 HOSE-1/4X22 4FSJICST 6000 PSI	1
6-3	7	68707-001 FITTING-1/4MX6M JIC 90 DEG.	1
6-3	8	*102115-001 FITTING-12M ORINGX6M JIC 90 D EL	1
6-3	9	*57940-089 HOSE-3/8X78 6FSJICST 3000#	1
6-3	10	*53845-135 HOSE-3/4X76 12FS JIC (3000PSI)	2

WATER CONTROL VALVE ASSEMBLY

Figure 6-4

Revised April 1998 due to hose updates. Changed parts marked with *.

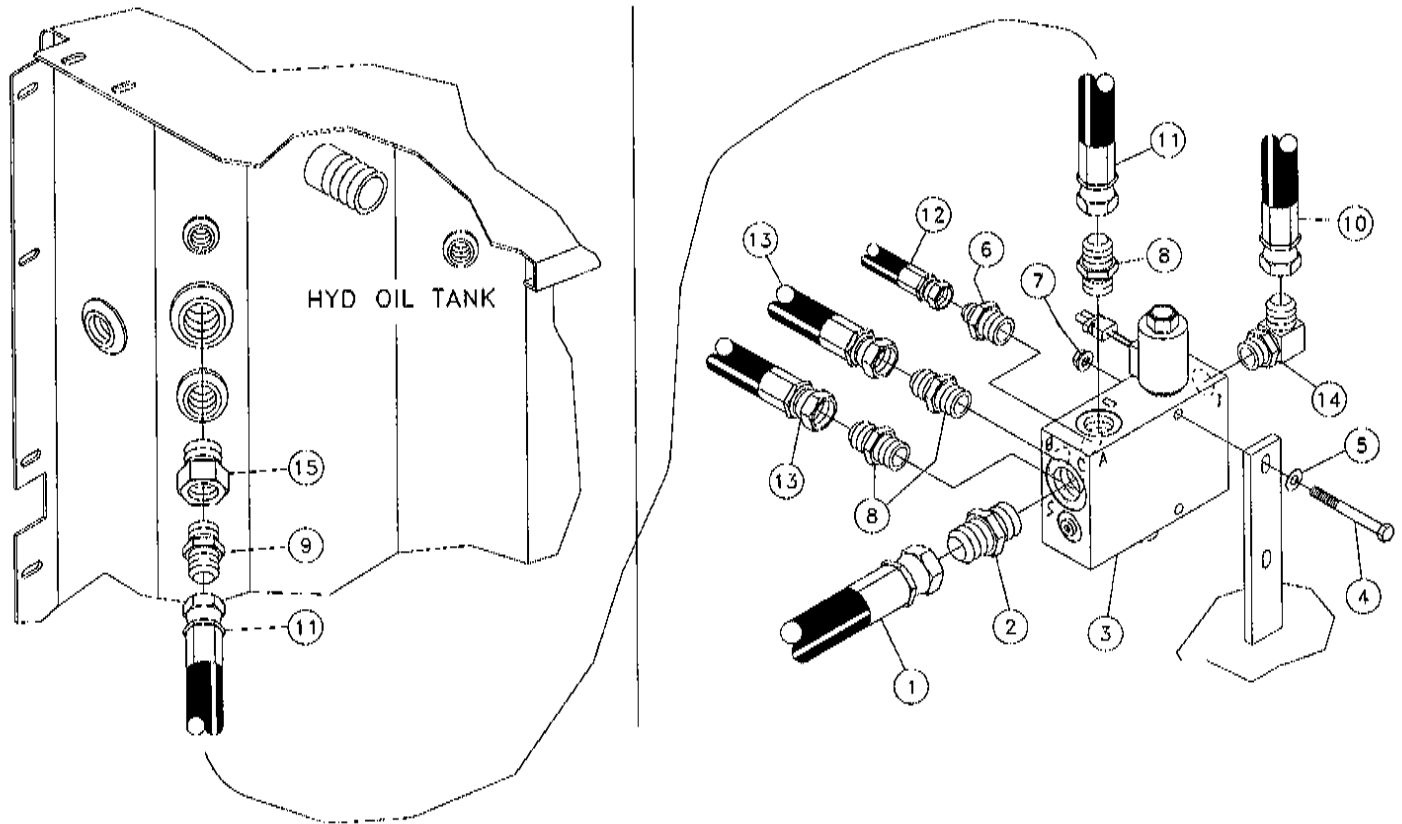


REF. NO.	PART NO.	DESCRIPTION	QTY.
6-4 1	236409-001	VALVE (BREAKDOWN FIG. 6-12)	1
6-4 2	480-003	WASHER-1/4 S/T LOCK	2
6-4 3	350-026	1/4-20X2 3/4" GRADE#5HEX BOLT	2
6-4 4	59423-001	FIT-4M JICX4M ADJ.90 DEG.ELBOW	4
6-4 5	*53843-701	HOSE-1/4X42 4FS JIC ST/90 (2750)	1
6-4 6	*53843-003	HOSE-1/4X36 4FS JIC (100R1)	1
6-4 7	58295-001	FITTING-4M OR X 4M JIC 45 DEG.	1
6-4 8	53843-743	HOSE-1/4X22 4FSJICST 6000 PSI	1
6-4 9	53843-589	HOSE-1/4X92 4FS JIC 3000PSI	1
6-4 10	236449-001	HOSE-1/4X52 4FSJIC ST/90 3000	1

PROPORTIONAL VALVE ASSEMBLY

Figure 6-5

Revised November 1997 due to hose, fitting & hardware updates. Changed/added parts marked with *.

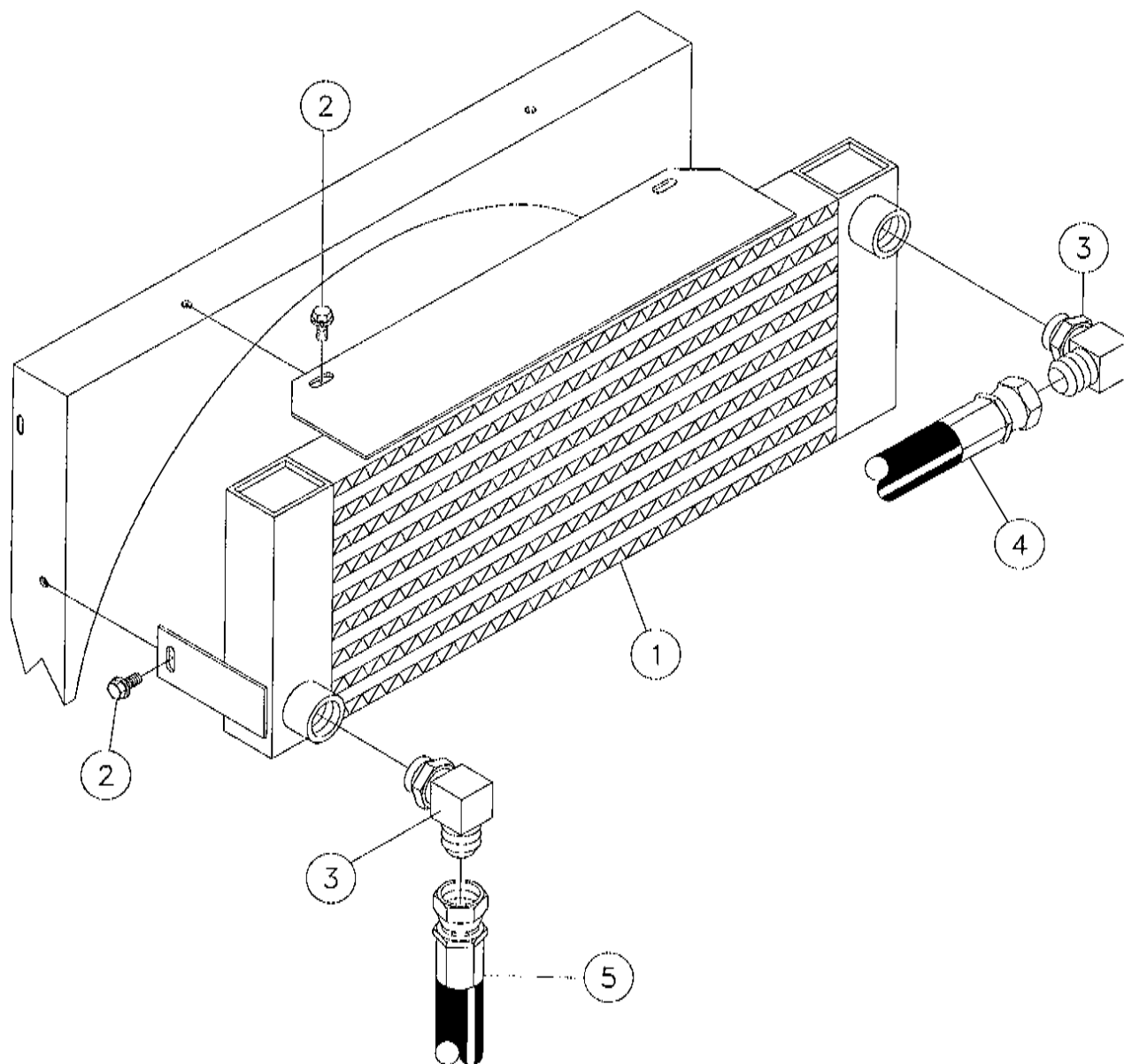


REF. NO.	PART NO.	DESCRIPTION...	QTY.
6-5	1	53846-017 HOSE-1X44 16FS JIC (100R4)	1
6-5	2	60907-001 FITTING-16M JICX16M STR ADAPT	1
6-5	3	236494-001 VALVE-PROPORTIONAL FLOW (BREAKDOWN FIG. 6-11)	1
6-5	4	354-034 BOLT-3/8-16X3 1/2"GRADE#5 HEX	2
6-5	5	485-007 WASHER-3/8 FLAT	2
6-5	6	*53825-001 FITTING-12MX8M JIC ST ADAPT	1
6-5	7	*4536-001 NUT-3/8 NC FLANGE WHIZ	2
6-5	8	*53828-001 #12M O-RING-#12M JIC ST.	3
6-5	9	229396-001 VALVE-85 PSI INLINE CHECK	1
6-5	10	53845-415 HOSE-3/4X24 12FS JIC 3000 PSI	1
6-5	11	53845-435 HOSE-3/4X26 12FS JIC 3000 PSI	1
6-5	12	*244283-001 HOSE-1/2"X166" 8FS JIC ST/90 (3000)	1
6-5	13	53845-135 HOSE-3/4X76 12FS JIC (3000PSI)	2
6-5	14	*59410-001 FITTING-12M X 12M JIC 90 D EL	1
6-5	15	*71252-001 FITTING-16M X 12F ST ADAPTER	1

OIL COOLER ASSEMBLY

Figure 6-6

Revised November 1997 due to parts lists correction. Changed parts marked with *.

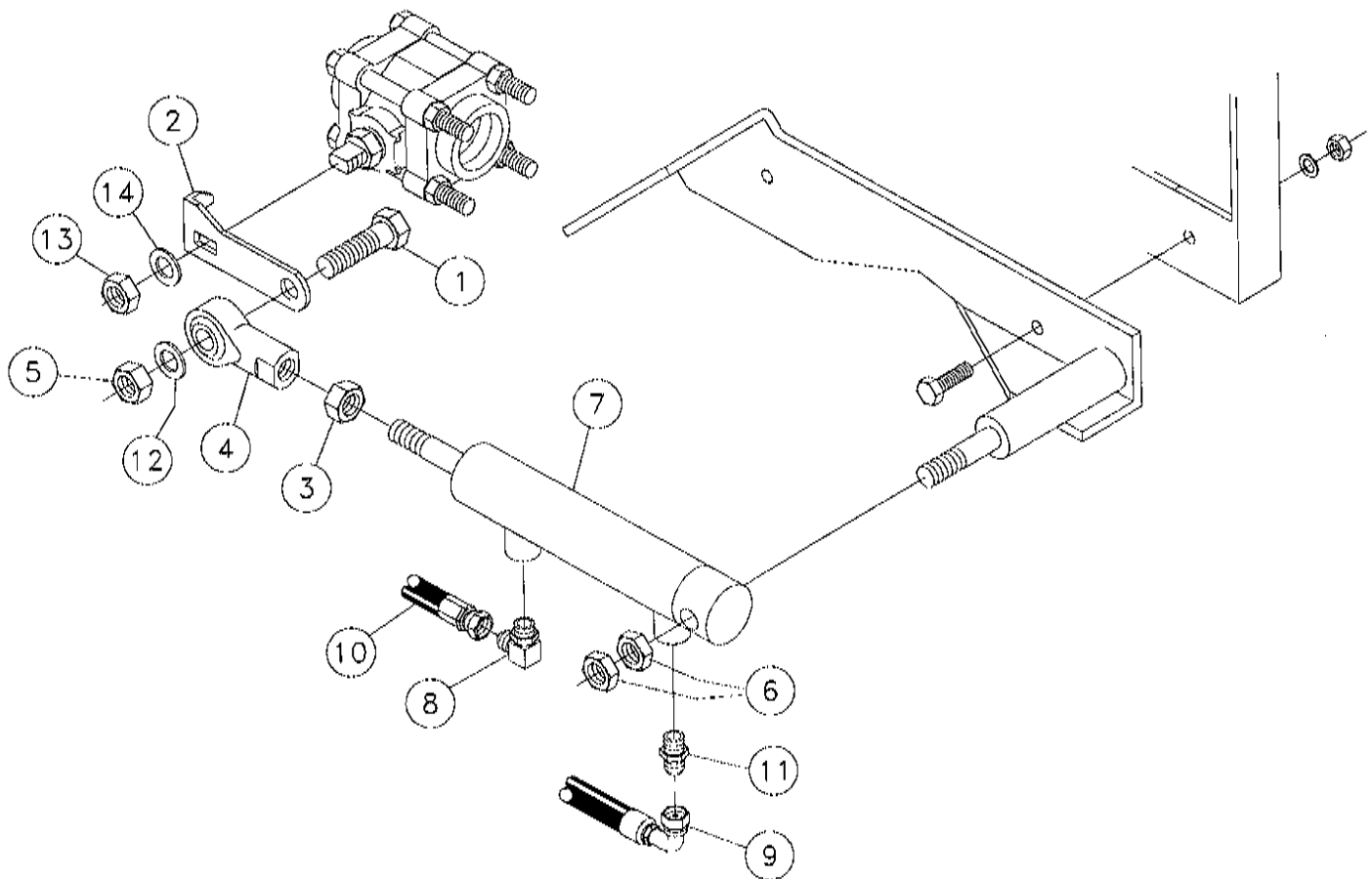


REF. NO.	PART NO.	DESCRIPTION	QTY.
6-6	1	238572-001 COOLER-HYD. OIL	1
6-6	2	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	4
6-6	3	61703-001 16M X 16M JIC 90	2
6-6	4	*53846-249 HOSE-1X56 16FSJIC/16FSJIC 90	1
6-6	5	*53846-017 HOSE-1X44 16FS JIC (100R4)	1

WATER PUMP ON/OFF CYLINDER ASSEMBLY

Figure 6-7

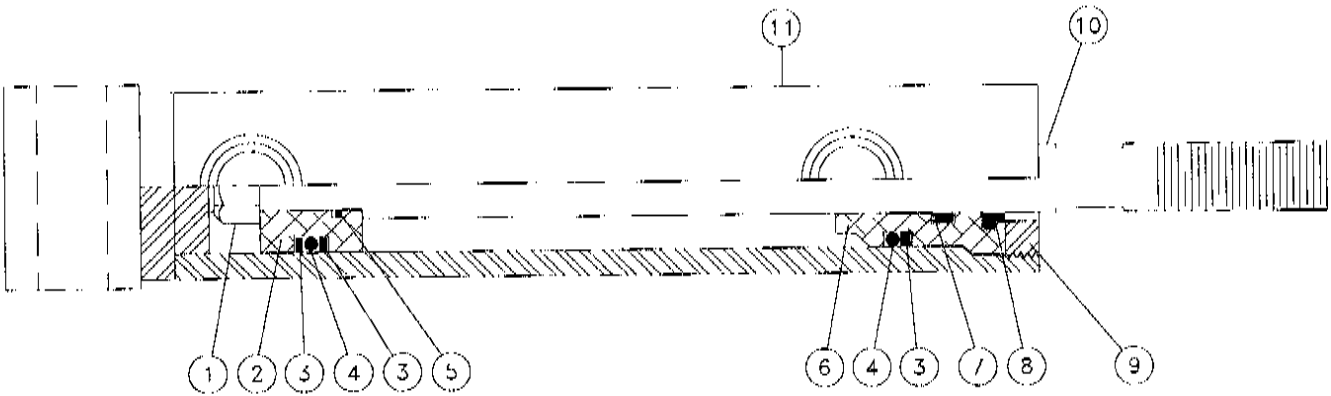
Revised April 1998 due to update of ball valve assy. (SN 343) & change to grade 8 hardware. Changed/added parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
6-7	1	*240334-001 BOLT-1/2-13X1 3/4 GR8 ZINC PLT	1
6-7	2	*245061-001 ARM-LEVER	1
6-7	3	*451-001 NUT-1/2 N.F. HEX	1
6-7	4	224291-001 BALL JOINT-1/2-20 FEMALE THDS.	1
6-7	5	*235731-001 NUT-1/2-13 GR8 ZINC PLTD	1
6-7	6	*75383-001 NUT-1/2-UNC GR.8 JAM HEX	2
6-7	7	234359-001 CYLINDER-1X3 1/2 (BREAKDOWN FIG. 6-8)	1
6-7	8	59423-001 FIT-4M JICX4M ADJ.90 DEG.ELBOW	1
6-7	9	53843-701 HOSE-1/4X42 4FSST/4FS90 2750	1
6-7	10	53843-003 HOSE-1/4X36 4FS JIC (100R1)	1
6-7	11	245007-001 FITTING-4MOR X 4MJIC R.063	1
6-7	12	*485-025 WASHER-1/2 FLAT-HARDENED-ZINC	1
6-7	13	*245079-003 STEM NUT	1
6-7	14	*245079-009 STEM SPRING	1

HYDRAULIC CYLINDER COMPONENTS - 1" X 3 1/2"

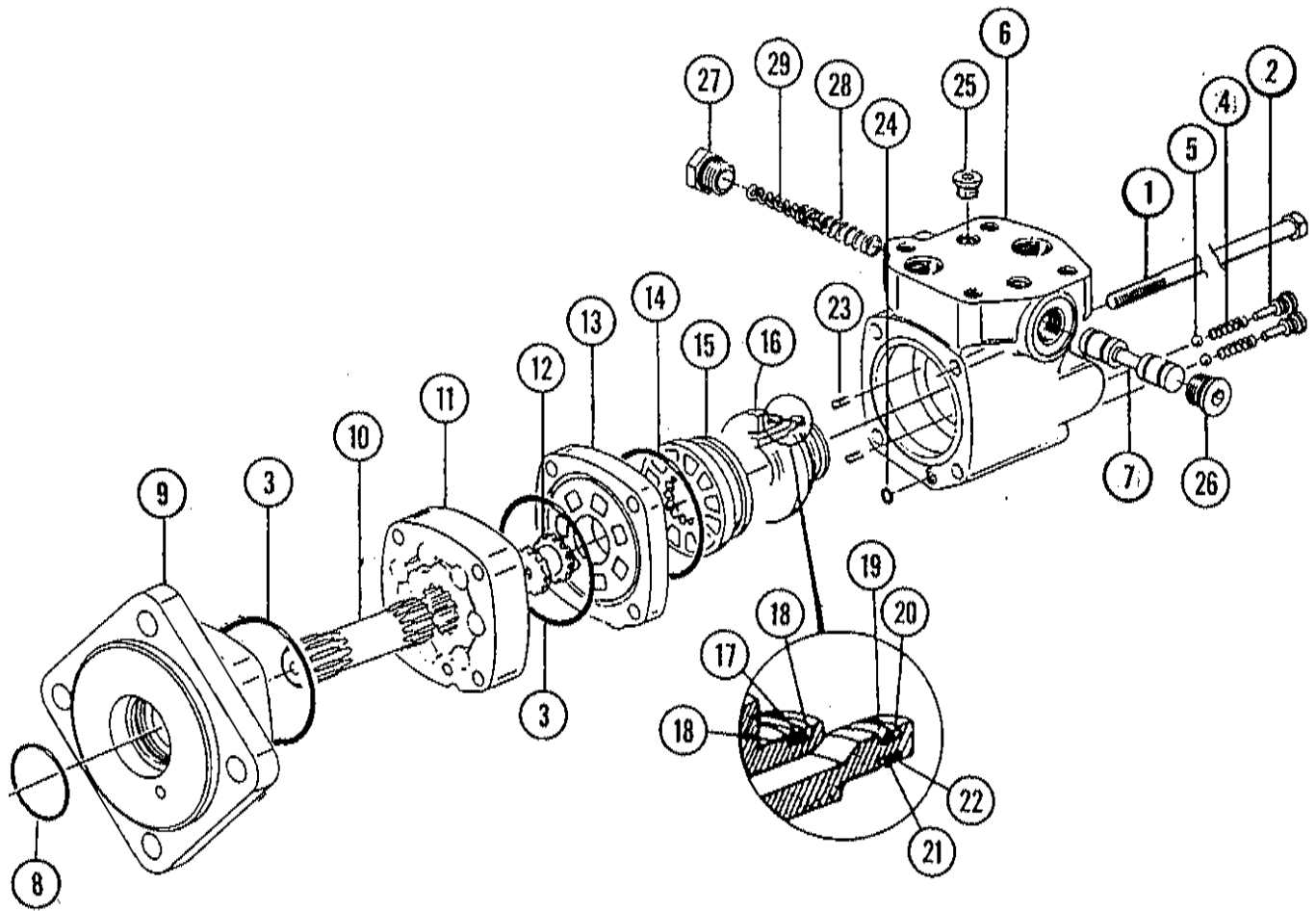
Figure 6-8



REF. NO.	PART NO.	DESCRIPTION	QTY.
6-8	1	234359-003 NUT	1
6-8	2	234359-005 PISTON	1
6-8	3	68094-057 WASHER-BACK-UP	3
6-8	4	68094-055 O-RING	2
6-8	5	1749-025 SEAL-O RING	1
6-8	6	234359-007 HEAD	1
6-8	7	234359-009 SEAL-ROD	1
6-8	8	234359-011 SEAL-DUST	1
6-8	9	234359-013 COLLAR	1
6-8	10	234359-015 SHAFT	1
6-8	11	234359-017 BARREL (W/CLEVIS AND PORTS)	1
	234359-001	CYLINDER-1X3 1/2 (INC. REF. 1-11)	
	234359-019	REPAIR KIT (INC. REF. 3, 4, 5, 7 & 8)	

HYDRAULIC MOTOR COMPONENTS

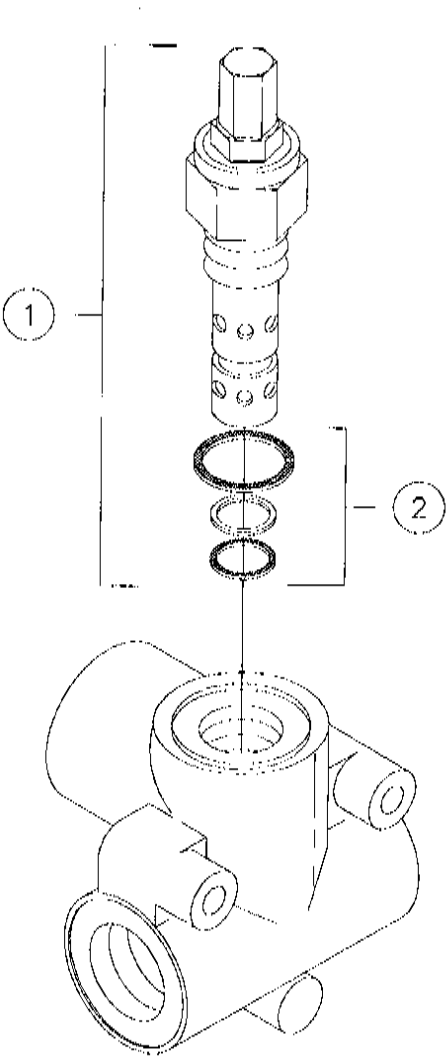
Figure 6-9



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
6-9	1	771-017 BOLT	4	6-9	20	201666-027 RING-BACKUP	1
6-9	2	4485-015 CHECK PLUG ASSY	2	6-9	21	201666-017 O-RING	1
		4485-011 O-RING)	2	6-9	22	201666-019 RING-BACKUP	1
6-9	3	770-007 SEAL-O RING	2	6-9	23	770-039 SPRING	2
6-9	4	770-051 SPRING	2	6-9	24	1749-025 SEAL-O RING	1
6-9	5	770-049 BALL	2	6-9	25	4485-021 PLUG ASSY	1
6-9	6	201666-029 HOUSING ASSY	1			4485-023 O-RING	1
6-9	7	201666-043 SPOOL-CONTROL	1	6-9	26	66845-001 PLUG ASSY	1
6-9	8	221557-007 SEAL-O-RING	1			4343-031 O-RING	1
6-9	9	221557-009 FLANGE-MOUNTING (BEARING LESS)	1	6-9	27	201666-035 PLUG ASSY	1
6-9	10	770-081 DRIVE	1			4343-031 O-RING	1
6-9	11	NSS GEROLER ASSY.	1	6-9	28	201666-041 SPRING-COMPRESSION	1
6-9	12	774-011 DRIVE-VALVE	1	6-9	29	201666-039 SPRING-COMPRESSION	1
6-9	13	201666-007 PLATE-VALVE	1			228098-003 MOTOR-HYD. (INC. REF. 1-29)	
6-9	14	201666-009 SEAL	1			221557-003 REPAIR KIT (INC. REF. 3, 8, 14, 17-22 & 25-27)	
6-9	15	220749-003 VALVE	1				
6-9	16	201666-013 RING ASSY-BALANCING	1				
		201666-015 PIN-SPRING	2				
6-9	17	201666-023 O-RING	1	NOTE: WHEN ORDERING REPLACEMENT PARTS INCLUDE PRODUCT NO. 106-2005-001 WITH ORDER.			
6-9	18	201666-021 RING-BACKUP	2				
6-9	19	201666-025 O-RING	1				

INLINE RELIEF VALVE COMPONENTS

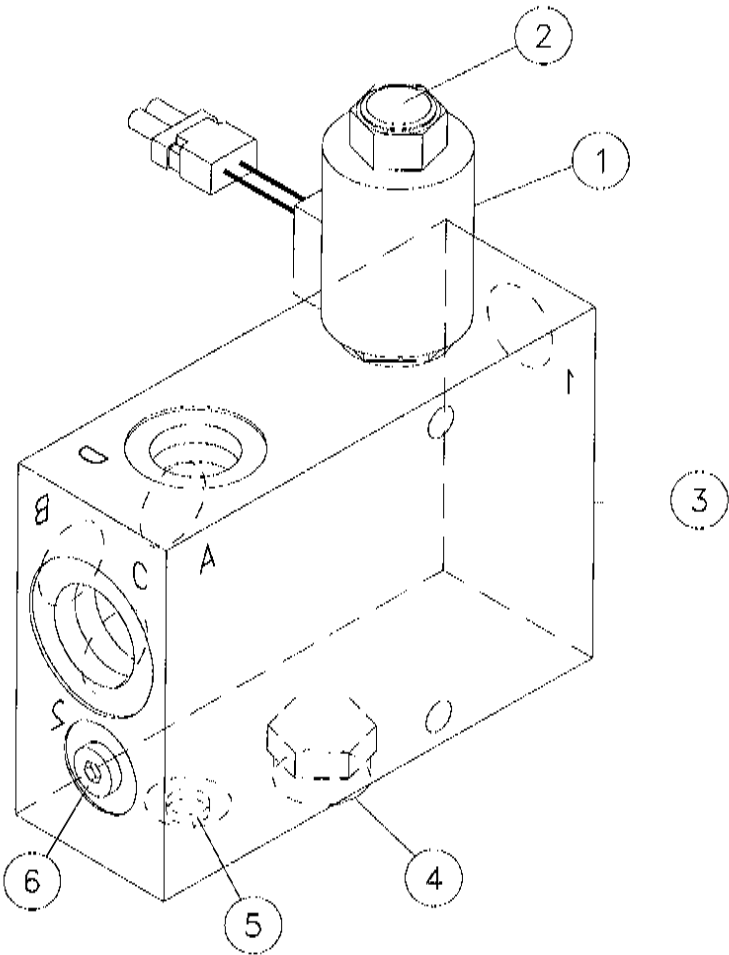
Figure 6-10



REF. NO.	PART NO.	DESCRIPTION	QTY.
6-10	1	228266-003 CARTRIDGE-2000 PSI RELIEF	1
		228251-003 CARTRIDGE-2500 PSI RELIEF	1
		228252-003 CARTRIDGE -3000 PSI RELIEF	1
6-10	2	213758-017 SEAL KIT-RELIEF (INC. INTERNAL & EXTERNAL SEALS)	1
		228251-001 VALVE-2500 PSI RELIEF (INC. BODY & REF. 1)	

PROPORTIONAL VALVE COMPONENTS

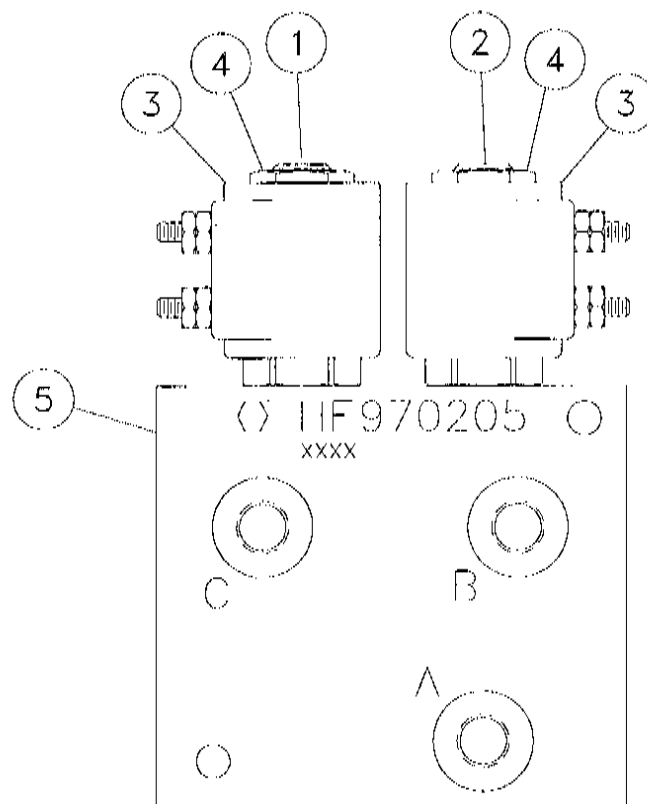
Figure 6-11



REF. NO.	PART NO.	DESCRIPTION	QTY.
6-11	1	236494-003 COIL	1
6-11	2	229096-005 PV VALVE ASSY	1
		228096-007 SEAL KIT	
6-11	3	N/A BODY	1
6-11	4	228096-011 COMPENSATOR ASSY	1
		228096-013 SEAL KIT	
6-11	5	500659-021 SAE PLUG	1
		228128-015 SEAL KIT	
6-11	6	236494-005 PLUG-SAE	4
		236494-007 SEAL KIT	
	236494-001	VALVE-PROPORTIONAL FLOW (INC. ALL ITEMS IN THIS FIGURE)	

SOLENOID VALVE COMPONENTS

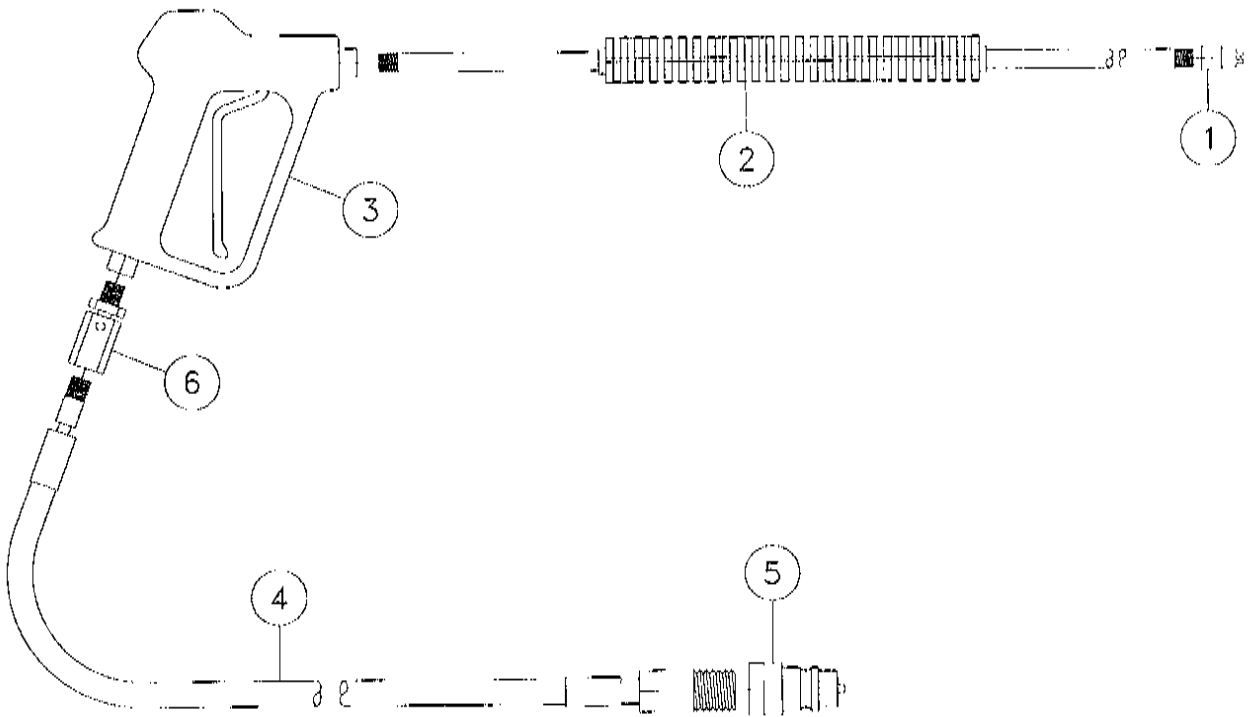
Figure 6-12



REF. NO.	PART NO.	DESCRIPTION	QTY.
6-12	1	228124-017 CARTRIDGE-SOLENOID	1
	110467-003	SEAL KIT	
6-12	2	234863-005 CARTRIDGE	1
	236409-003	SEAL KIT	
6-12	3	228128-007 COIL	2
6-12	4	904525-011 NUT-COIL	2
6-12	5	NSS BODY	1
	236409-001	VALVE-WATER CONTROL (INC. REF. 1-4)	
	NSS	NOT SOLD SEPARATELY	

WAND ASSEMBLY

Figure 7-1

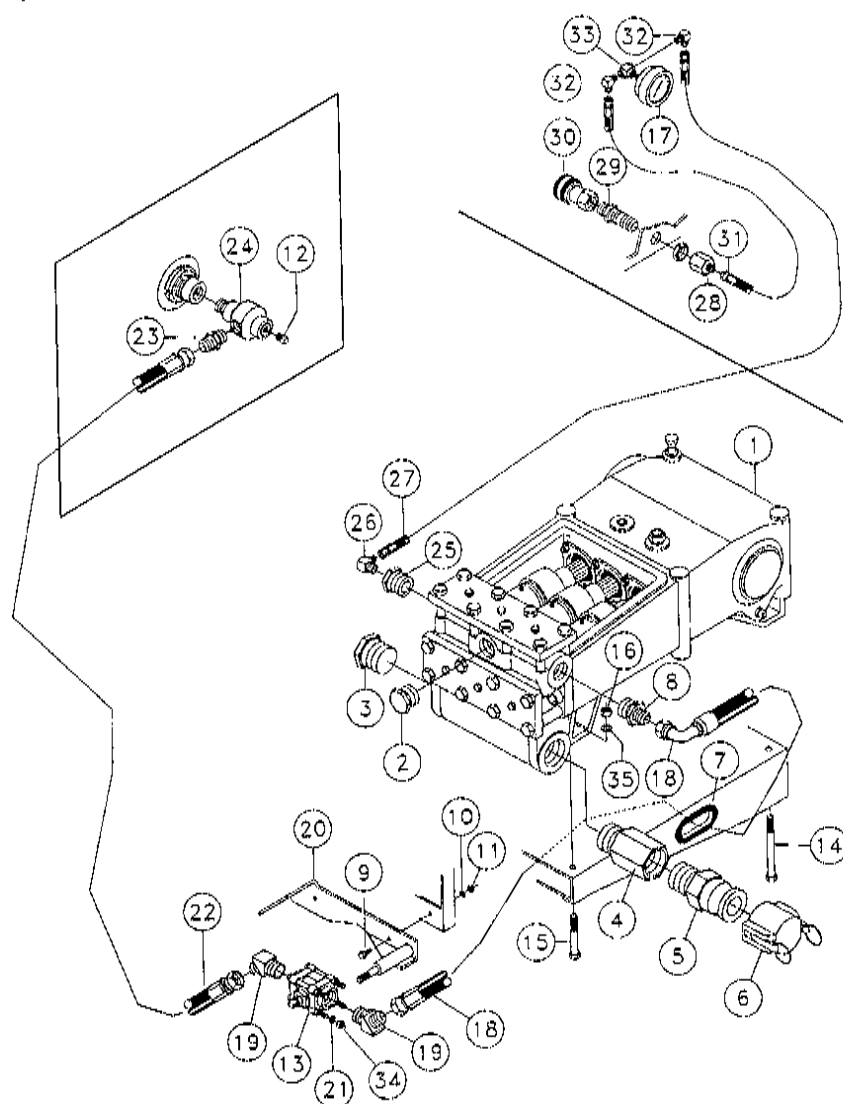


<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
7-1 1	904576-001	SPRAY NOZZLE	1
7-1 2	904577-001	MOLDED LANCE	1
7-1 3	904578-001	GUN HANDLE	1
7-1 4	614-027	HOSE-1/2X300 3/8MNPT 3000#	1
7-1 5	221511-001	COUPLER-3/4 NPT QUICK (MALE)	1
7-1 6	235967-001	FITTING-3/8MNPT X3/8FNPT SWVL	1
	235777-001	WAND ASSEMBLY (INC. REF. 1-6)	

WATER PUMP ASSEMBLY - 38 GALLON

Figure 7-2

Revised April 1998 due to update of ball valve assy. (SN 343) & change to grade 8 hardware. Changed/added parts marked with *.



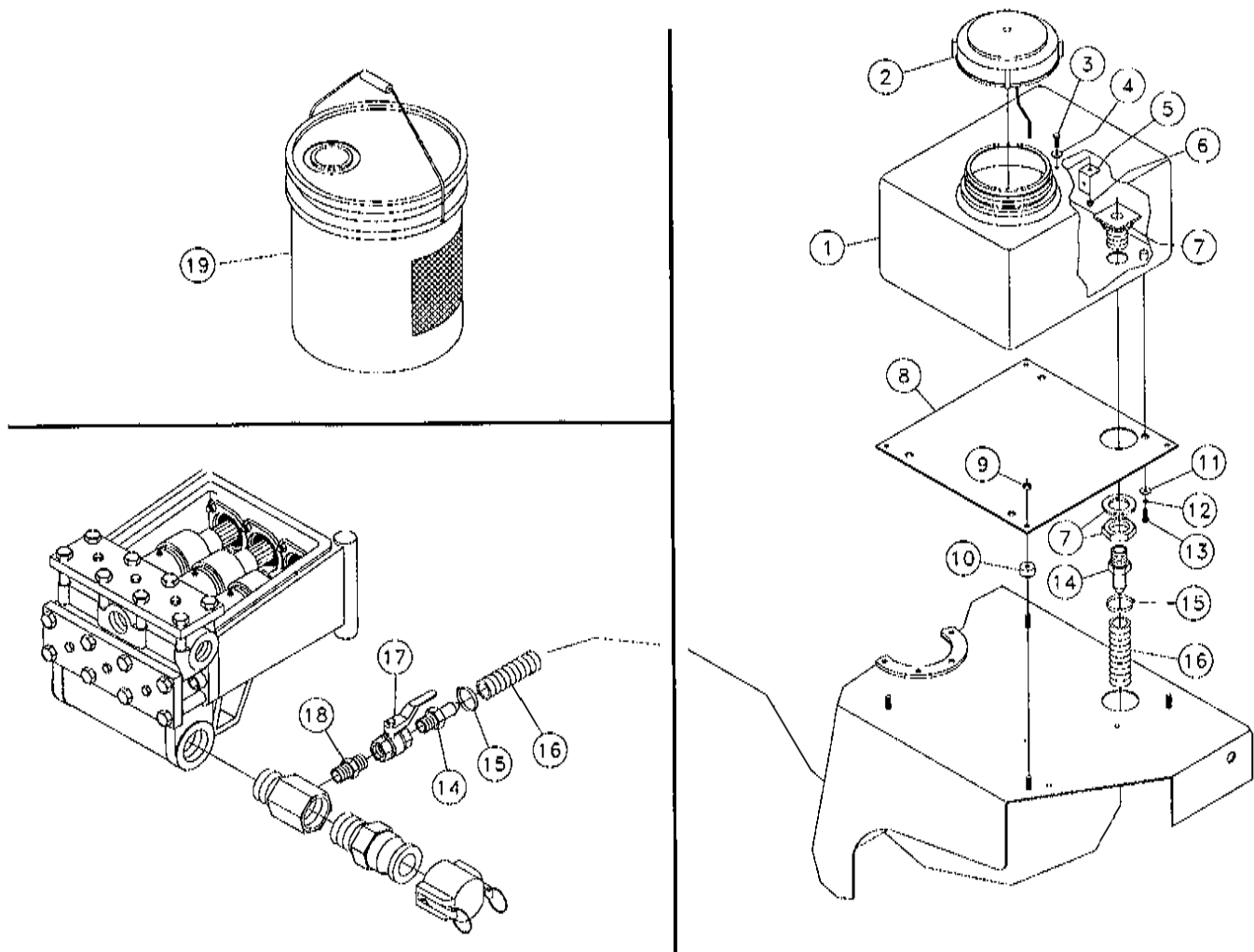
REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
7-2	1	*224904-005 PUMP-WATER (BREAKDOWN FIG. 7-7)	1	7-2	19	100849-001 FITTING-1MNPTX12MJIC 45 DEG.	1
7-2	2	120885-001 FITTING-1 1/4 NPT PIPE PLUG	1	7-2	20	*245074-001 SUPPORT-BALL VALVE	1
7-2	3	732-019 2" PIPE PLUG BLACK	1	7-2	21	*235713-001 WASHER-3/8 SAE HARD ZINC PLTD	4
7-2	4	236472-001 FITTING-2"MX3/4"FX2" M NPT TEE	1	7-2	22	53845-339 HOSE-3/4X156 12FS JIC 3000 PSI	1
7-2	5	224940-001 COUPLING-2" MPT X2" M CAM LOCK	1	7-2	23	53828-001 #12M O-RING-#12M JIC ST.	1
7-2	6	224941-001 CAP-2" CAM LOCK	1	7-2	24	230813-001 SWIVEL-12M X 12F	1
7-2	7	212522-001 TRIM-1/4 EDGE (SPECIFY LENGTH)	A/R		224904-007	REPAIR KIT (INC. O-RINGS & SEALS)	1
7-2	8	236474-001 FITTING-1 1/4MNPTX12MJIC 90 DEG. EL	1	7-2	25	904830-001 FITTING 1 1/4NPT X 1/2NPT RED.	1
7-2	9	*238209-001 BOLT-5/16-18X1 GR8 HEX ZINC YC	2	7-2	26	60723-001 1/2MX6M JIC 90 DEG. ELBOW	1
7-2	10	*235714-001 WASHER-5/16 SAE HARD ZINC PLTD	2	7-2	27	57940-591 HOSE-3/8X188 6FS JIC 3000 PSI	1
7-2	11	*235741-001 NUT-5/16-18 GR8 ZINC PLTD	2	7-2	28	60909-001 6M JICX12F JIC ST. ADAPTER	1
7-2	12	732-005 3/8" PIPE PLUG BLACK STEEL	1	7-2	29	105150-001 FITTING-12M JICX3/4NPT BULKHD	1
7-2	13	*245079-001 VALVE-BALL (BREAKDOWN FIG. 7-5)	1	7-2	30	221512-001 COUPLER-3/4 NPT QUICK (FEMALE)	1
7-2	14	*238240-001 BOLT 1/2"-13X5 1/2" GR8 HEX Y	2	7-2	31	57940-275 HOSE-3/8X32 6FS JIC 3000 PSI	1
7-2	15	*238241-001 BOLT 1/2"-13X 3 1/2" GR8 HEX Y	2	7-2	32	68707-001 FITTING-1/4MX6M JIC 90 DEG.	2
7-2	16	*235731-001 NUT-1/2-13 GR8 ZINC PLTD	4	7-2	33	210788-001 PIPE TEE-1/4F X 1/4F X 1/4F	1
7-2	17	234343-001 GAUGE-PRESSURE 0-2000 PSI	1	7-2	34	*250508-001 NUT-3/8-NC GR8 TOP LOCK Y/ZINC	4
7-2	18	53845-409 HOSE-3/4X36 12FSJICST/12FSJC90	1	7-2	35	*485-025 WASHER-1/2 FLAT-HARDENED-ZINC	4

Revised April 1998 due to
elimination of figure from manual.

ANTI-FREEZE SYSTEM ASSEMBLY

Figure 7-4

Revised November 1997 due to hose
update & parts list correction. Changed
parts marked with *.

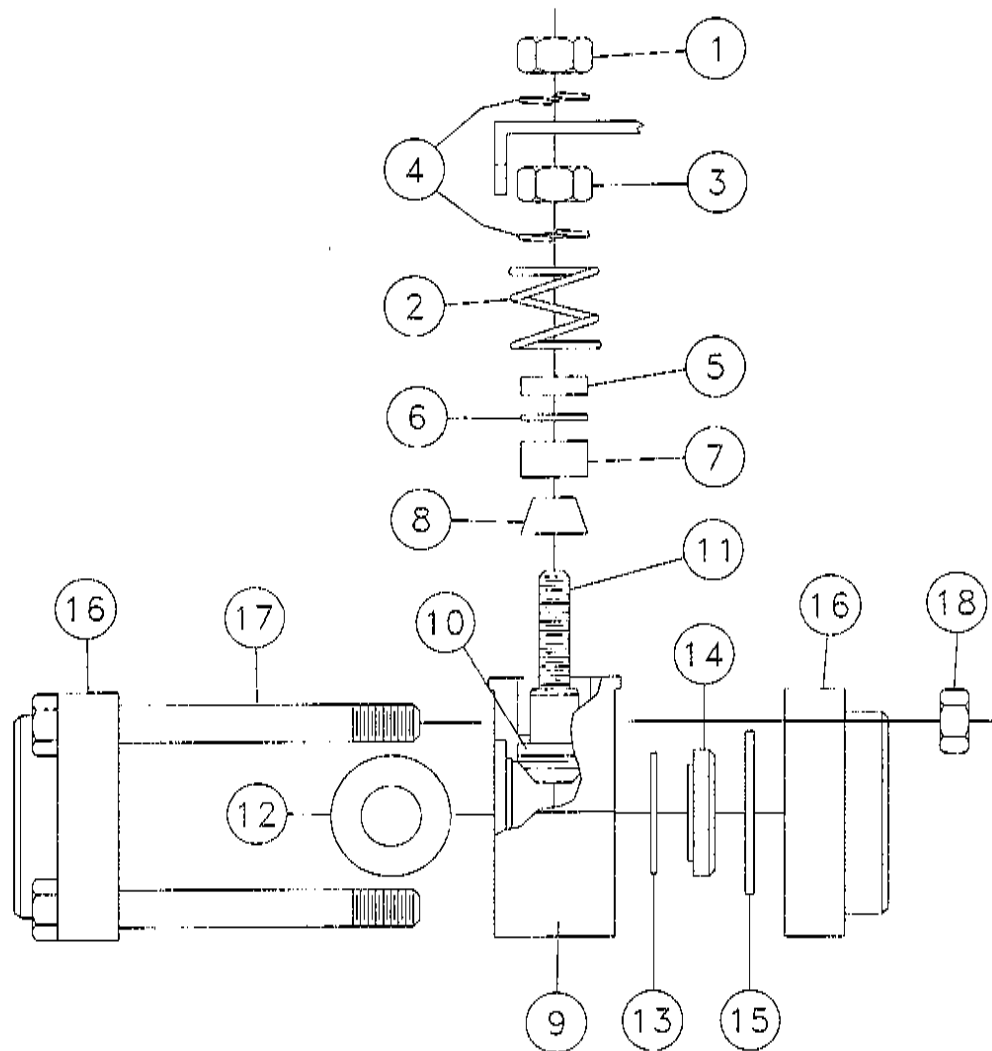


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
7-4	1	236466-001 TANK-6 GALLON POLY (INC. REF. 2-7)	1	7-4	13	350-006 BOLT-1/4-20X3/4" GRADE #5 HEX	4
7-4	2	236466-003 LID-TANK W/ STRING	1	7-4	14	905437-001 FITTING-3/4X1 BARB ST. NYLON	2
7-4	3	350-006 BOLT-1/4-20X3/4" GRADE #5 HEX	1	7-4	15	1580-003 HOSE CLAMP - 3/4"	2
7-4	4	236466-005 WASHER-1/4" SEAL	1	7-4	16	*244288-001 HOSE-SUCTION	1
7-4	5	236466-007 CLIP	1	7-4	17	3379-001 VALVE - 3/4" BALL - #101R NPT	1
7-4	6	401-001 NUT-1/4 NC HEX	1	7-4	18	*707-007 3/4" HEX NIPPLE	1
7-4	7	904062-005 3/4" BUNG	1	7-4	19	210779-001 NAVIGATOR FREEZE GUARD (SHOWN)	1
7-4	8	236471-001 PLATE-TANK MOUNT	1			(5 GALLON)	1
7-4	9	409-001 NUT-5/16 NC SLTL	4		70000-675	DECAL-NAV FREEZE GUARD (5 GAL)	1
7-4	10	244251-001 DISC-RUBBER SPACER	4		210779-005	NAVIGATOR FREEZE GUARD (55 GAL)	1
7-4	11	485-003 WASHER-1/4 FLAT	4		7000A-027	DECAL-NAV FREEZE GUARD (55 GAL)	1
7-4	12	480-003 WASHER-1/4 S/T LOCK	4				

BALL VALVE COMPONENTS - 1"

Figure 7-5

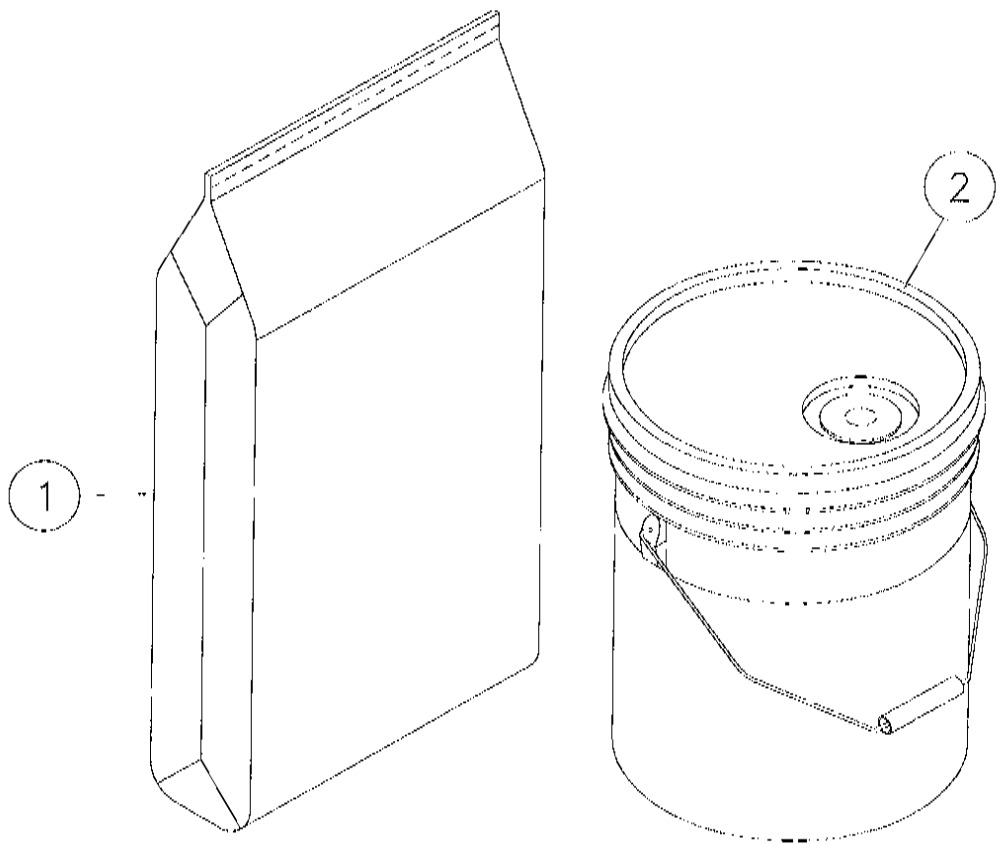
Revised April 1998 due to
update of ball valve.



<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
7-5	1	245079-003 STEM NUT	1
7-5	2	245079-005 GROUNDING SPRING	1
7-5	3	245079-007 STEM NUT	1
7-5	4	245079-009 STEM SPRING	2
7-5	5	245079-011 GLAND	1
7-5	6	245079-013 PACKING SUPPORT	1
7-5	7	245079-015 TOP PACKING	1
7-5	8	245079-017 BOTTOM PACKING	1
7-5	9	245079-019 CENTER BODY	1
7-5	10	245079-021 STEM BEARING	2
7-5	11	245079-023 STEM	1
7-5	12	245079-025 BALL	1
7-5	13	245079-027 SUPPORT RING	2
7-5	14	245079-029 SEAT/SEAT SPRING	2
7-5	15	245079-031 O-RING	2
7-5	16	245079-033 FLANGE	2
7-5	17	245079-035 BODY STUD	4
7-5	18	245079-037 BODY NUT	8
		245079-039 KIT-MAINTENANCE (INC. REF. 4-6, 10 & 16)	
		245079-001 VALVE-1" HIGH PRESS STL BALL	

DRILL FLUID

Figure 7-6

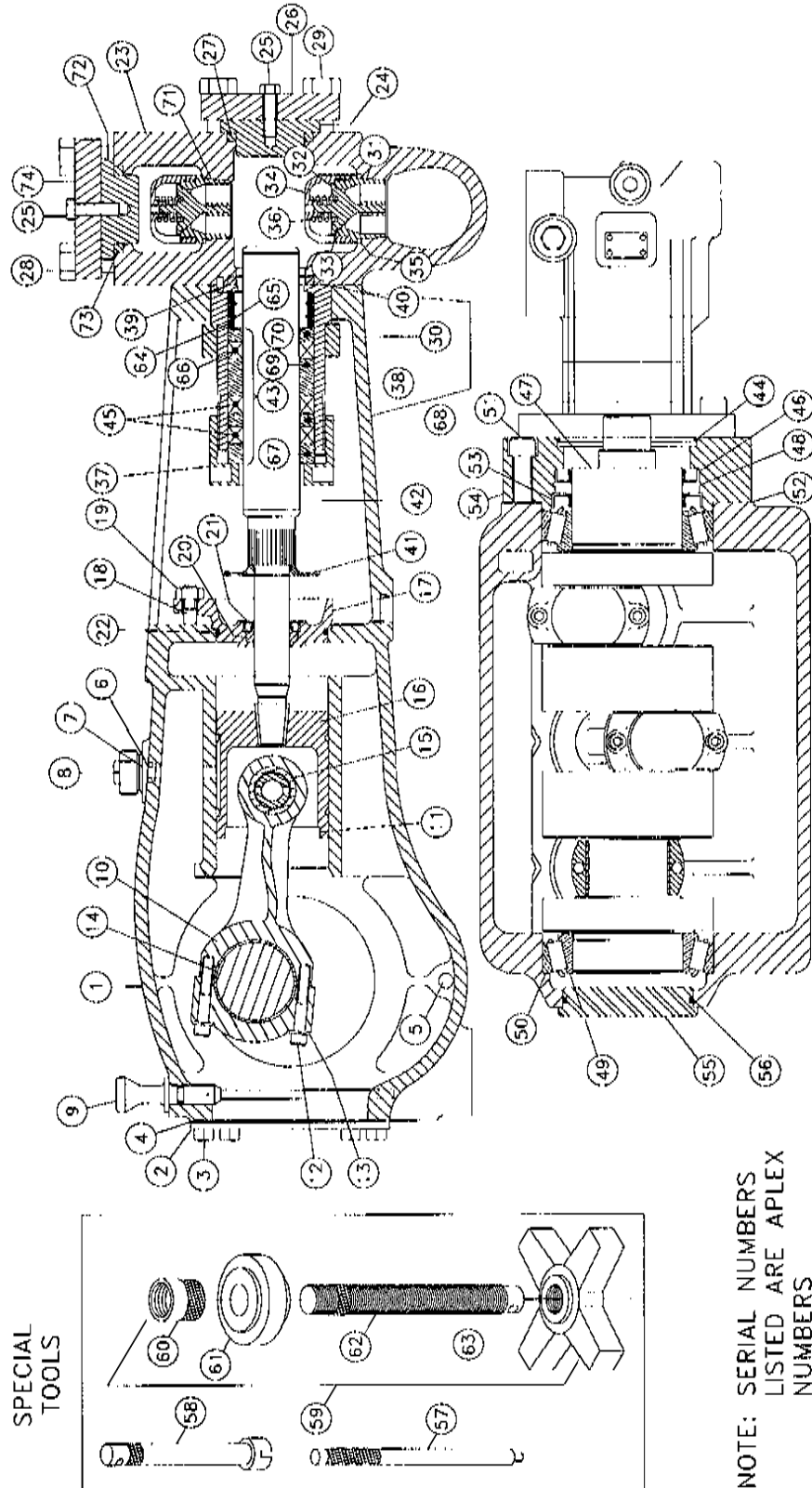


REF. NO.		PART NO.	DESCRIPTION	QTY.
7-6	1	904882-001	50LBS BAG QUICK GELL BENTONITE	1
		123596-001	BORE-GEL (50 LB BAG)	1
7-6	2	905216-001	POLYMER	1
		123595-001	EZ-MUD - 5 GALLON	1

WATER PUMP COMPONENTS

Figure 7-7

Revised April 1998 due to relocation of figure in book.



WATER PUMP COMPONENTS

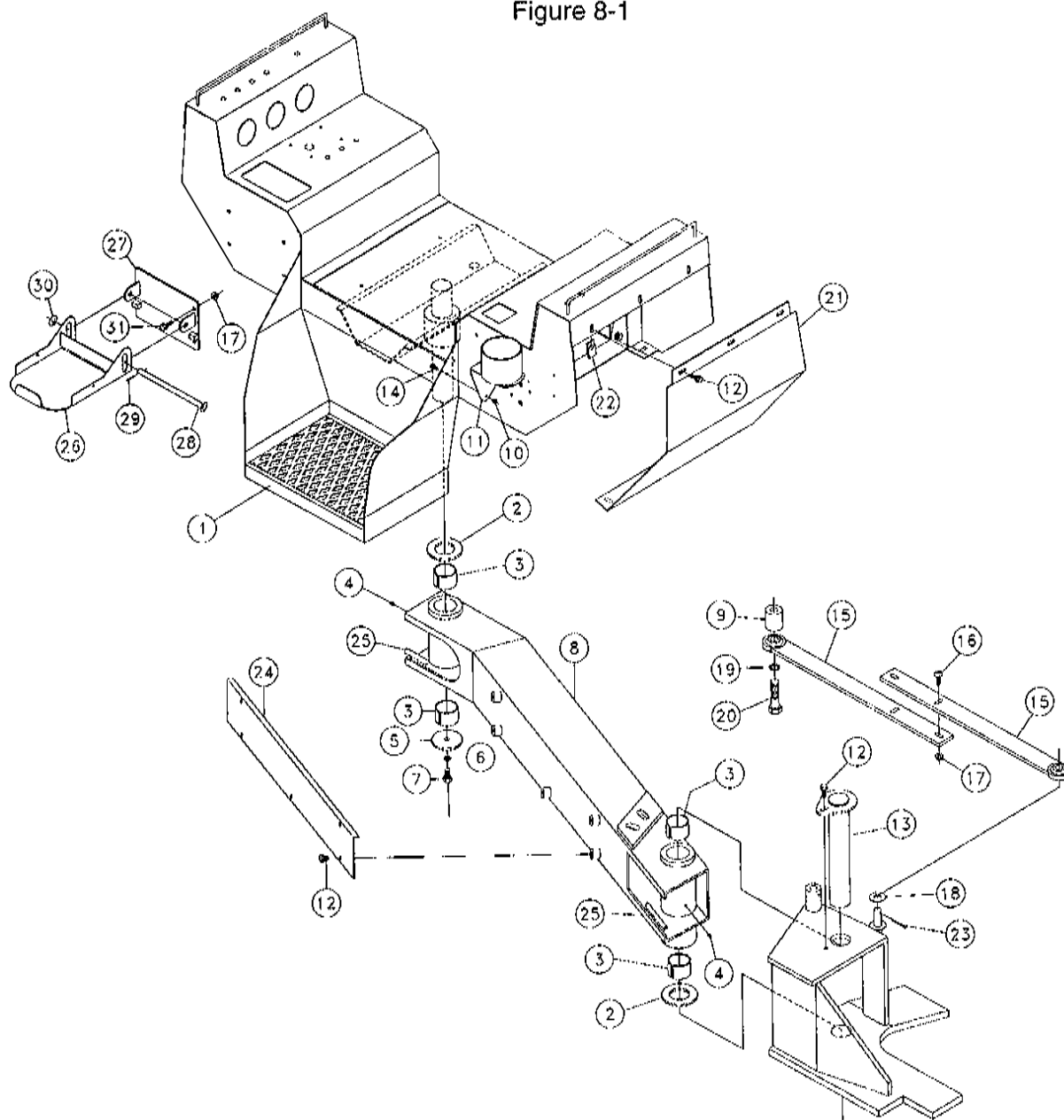
Figure 7-7

Revised April 1998 due to relocation of figure in book, update in qty's & change in fluid end body.

REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
7-7	1	220741-003 POWER FRAME (PUMP W/DIPSTICK) (SN#0-999)	1	7-7	44	220741-125 O-RING NITRILE	1
		228098-005 POWERFRAMEW/ DIPSTICK (SN#1000 UP)	1	7-7	45	*224662-009 TWO STYLE 141 PACKING	6
7-7	2	220741-007 CRANKCASE COVER	1	7-7	46	220741-123 OIL SEAL (SN#0-999)	1
7-7	3	220741-009 3/8-16X5/8 HHCS	8			228098-023 OIL SEAL (SN#1000-1050)	1
7-7	4	220741-011 GASKET-CRANKCASE COVER	1	7-7	47	220741-107 CRANKSHAFT (SN#0-999) SPLINED	1
7-7	5	220741-013 1/4" NPT PLUG-SQUARE HEAD	2			241000-001 CRANKSHAFT-KEYED (SN#0-999)	1
7-7	6	220741-015 1/8" NPT PLUG-SOCKET HEAD	3			228098-009 CRANKSHAFT (SN#1000-1050)	1
7-7	7	220741-017 1/2" NPT PLUG-SOCKET HEAD	1			228098-011 CRANKSHAFT (SN#1051 UP)	1
7-7	8	220741-019 BREATHER-CRANKCASE 3/4M NPT	1	7-7	48	220741-109 RETAINING RING-SPIRAL (SN#0-1050)	1
7-7	9	220741-021 OIL LEVEL DIPSTICK	1			N/R NOT REQUIRED (SN#1051 UP)	
7-7	9	220741-023 O-RING 2-023	1	7-7	49	220741-111 BEAR CONE (SN #0-999) (INC CUP)	2
7-7	10	*220741-025 CONNECTING ROD (INC. REF. 11, 12 & 13)	3			228098-013 CONE (SN#1000 UP)	2
7-7	11	*220741-027 WRIST PIN BUSHING	3	7-7	50	NSS BEARING UP)SN #0-999)	2
7-7	12	*220741-029 5/16-18X2" SOCKET HD CAP SCREW	6			228098-015 CUP (SN #1000 UP)	1
7-7	13	*220741-031 5/16" LOCKWASHER	6	7-7	51	55419-001 SCREW-1/2-13X2 SOCKET HEAD CAP	6
7-7	14	*220741-033 CRANK PIN BEARING HALF(2 PCS)	6	7-7	52	220741-113 SHIM SET	1
7-7	15	*220741-035 WRIST PIN	3	7-7	53	220741-115 OIL SEAL	2
7-7	16	*220741-037 CROSSHEAD	3	7-7	54	220741-117 BRNG RETAINER/MOTOR ADAPTER (SN#0-999)	1
7-7	17	*220741-039 WIPER BOX	3			228098-017 BRNG RET/MOTOR ADAPTER (SN#1000-1050)	1
7-7	18	*220741-041 STUD-3/8"-16X1 5/8"	6			228098-019 BRNG RET/MOTOR ADAPTER (SN #1051 UP)	1
7-7	19	*220741-043 3/18" - 16 HEX NUT	6			220741-119 FRAME PLUG	1
7-7	20	*220741-045 POLYPAK RING	3	7-7	55	220741-121 O-RING	1
7-7	21	*220741-047 OIL SEAL (SN#0-999)	3	7-7	56	224726-001 WRENCH-GLAND	1
		*228098-021 OIL SEAL (SN#1000-1050)	3	7-7	57	224727-001 WRENCH-CAGE	1
		*228098-025 OIL SEAL (SN#1051 UP)	3	7-7	58	224894-001 SEAT FULLER COMPLETE (INC. REF. 60-63)	1
7-7	22	*220741-049 O-RING	3	7-7	59	224890-001 PULLER HEAD	1
7-7	23	*251787-001 FLUID END BODY ASSY. (SN#0-2999) (INC. ONE OF REF. 74 & THREE OF 71-73)	1	7-7	60	224891-001 BRIDGE	1
		*248821-001 BODY-FLUID END (SN#3000 UP)	1	7-7	61	224892-001 STEM PULLER	1
		*220741-053 3/4"-10X2 SOCKET HD CAP SCREW	2	7-7	62	224893-001 WING NUT	1
7-7	24	*220741-055 VALVE COVER&CYL HD PLUG	3	7-7	63	*224952-005 ELASTOMER SPRG-2 1/2X2 13/64	9
7-7	25	220741-057 3/8-16X1 1/4" HHCS	6	7-7	65	*224952-003 SPACER-2 15/32X2-1/16 (ALUM)	6
7-7	26	*220741-059 RETAINER PLATE	1	7-7	66	*224662-005 STYLE 140 PACKING	3
7-7	27	*220741-061 FLUID SEAL-NITRILE RUBBER	3	7-7	67	*224662-013 GLAND RING-BRONZE	3
7-7	28	220741-063 5/8-11X3 1/2" HHCS	8	7-7	68	*224662-011 SPACER-BRONZE	3
7-7	29	220741-065 5/8-11X7 1/2" HHCS	8	7-7	69	*224662-007 SPACER-BRONZE	3
7-7	30	*220741-067 STUFFING BOX RETAINER PLATE	3	7-7	70	*224662-003 SPRING ADAPTER-BRONZE	3
		*220741-069 3/8-16 X 1 1/2" HHCS	6	7-7	71	*220741-071 VALVE SEAT HARDENED SS (SN#0-2999)	3
7-7	31	*220741-071 VALVE SEAT-HARDENED SS	3			*248822-001 VALVE SEAT (SN#3000 UP)	3
7-7	32	*220741-073 DOUBLE STEM VALVE-SS	6	7-7	72	*220741-055 VALVE COVER & CYL HD PLUG (SN#0-2999)	3
7-7	33	*220741-075 O-RING-POLYURETHANE (SIZE 024)	6			*224408-109 VALVE COVER & CYL HYD PLUG (SN#3000)	3
7-7	34	*220741-077 GUIDE CAGE-STAINLESS STEEL	6	7-7	73	*220741-061 FLUID SEAL-NITRILE RUBBER (SN#0-2999)	3
7-7	35	*220741-079 O-RING NITRILE RUBBER(SIZE029)	6			*224408-131 SEAL-STUFFING BOX RUBBER (SN #3000 UP)	3
7-7	36	*220741-081 VALVE SPRING-1 9/16 FREE LGTH	6			*220741-059 RETAINER PLATE (SN #0-2999)	1
7-7	37	*220741-083 GLAND-PLUNGER	3	7-7	74	*248823-001 RETAINER-VALVE COVER (SN#3000 UP)	1
7-7	38	*220741-085 STUFFING BOX-PLUNGER	3			224904-005 PUMP-WATER (INC. REF. 1-56, 64-74)	
7-7	39	*220741-087 ROLL PIN-1/4X5/8	3				
7-7	40	*220741-089 SEAL-STUFFING BOX	3				
7-7	41	*220741-091 BAFFLE PLATE-LOW TEMP. RUBBER	3				
7-7	42	*220741-093 PLUNGER-1 3/4" DIA.	3				
7-7	43	224662-001 HI/LOW PACKING	3				

CONTROL CONSOLE ASSEMBLY

Figure 8-1

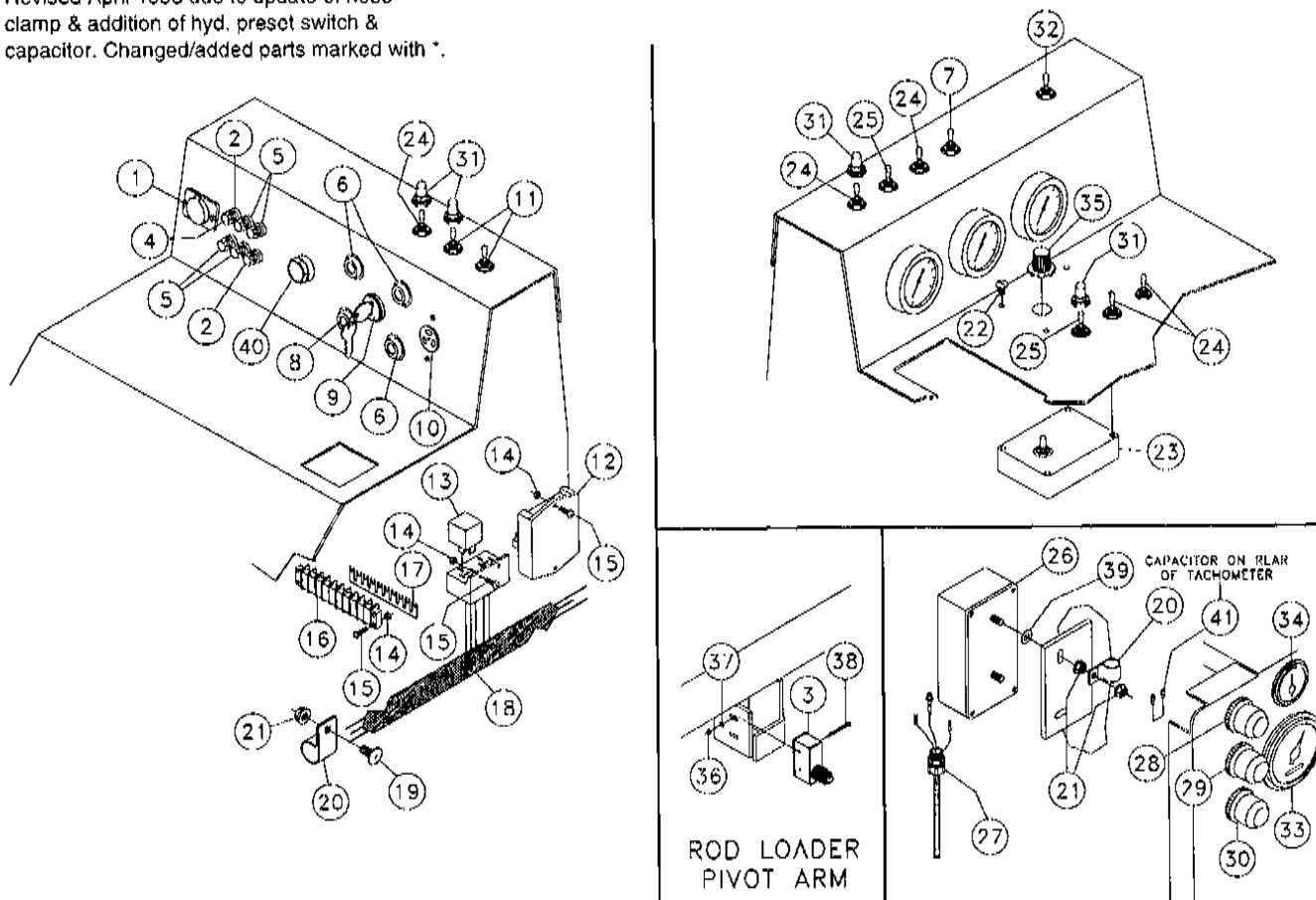


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
8-1	1	236414-001 CONSOLE-CONTROL	1	8-1	16	375-012 3/8-16X1 1/4"GD#5CARRIAGE BOLT	2
8-1	2	215200-001 WASHER-THRUST	2	8-1	17	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	2
8-1	3	85790-003 BUSHING-SPRING 2 1/4X2 X 1 1/2	4	8-1	18	485-017 WASHER-3/4 FLAT	6
8-1	4	598-001 ZERK-1/4" NF ST GREASE	2	8-1	19	480-017 WASHER-3/4 S/T LOCK	1
8-1	5	53276-001 WASHER-JACKSHAFT END	1	8-1	20	369-030 BOLT-3/4-10X3" GRADE#5 HEX	1
8-1	6	480-011 WASHER-1/2 S/T LOCK	1	8-1	21	228333-001 COVER-CONSOLE	2
8-1	7	358-012 BOLT-1/2-13 X 1 1/4 GR #5 HEX	1	8-1	22	13323-001 U-CLIP - 3/8-16	10
8-1	8	235934-003 ARM ASSEMBLY-SEAT SWING (INC. TWO OF REF. 4 & FOUR OF REF. 3)	1	8-1	23	510-011 COTTER PIN-1/8" X 1 1/2"	1
8-1	9	1084-019 TUBE-1 1/4"ODX3/4"ID-2"	1	8-1	24	228176-001 COVER-HOSE	1
8-1	10	405-001 NUT-1/4 NC FLG WHIZ LOCK	2	8-1	25	212522-001 TRIM-1/4" EDGE (SPECIFY LENGTH)	A/R
8-1	11	236397-001 HOLDER-CUP/RADIO	1	8-1	26	240020-001 SHELF-GREASE BUCKET	1
8-1	12	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	16	8-1	27	240023-001 MOUNT-GREASE BUCKET SHEET	1
8-1	13	228354-001 PIN-PIVOT	1	8-1	28	240033-001 PIN-GREASE BUCKET SHELF	1
8-1	14	4473-004 1/4-20X1/2 FLGE WHIZ BOLT	2	8-1	29	510-005 COTTER PIN-3/32" X 3/4"	1
8-1	15	228351-001 BAR-LINKAGE	2	8-1	30	485-011 WASHER-1/2 FLAT	1
				8-1	31	4475-010 BOLT-3/8-16X1 FLANGE WHIZ	2

CONTROL PANEL ASSEMBLY

Figure 8-2

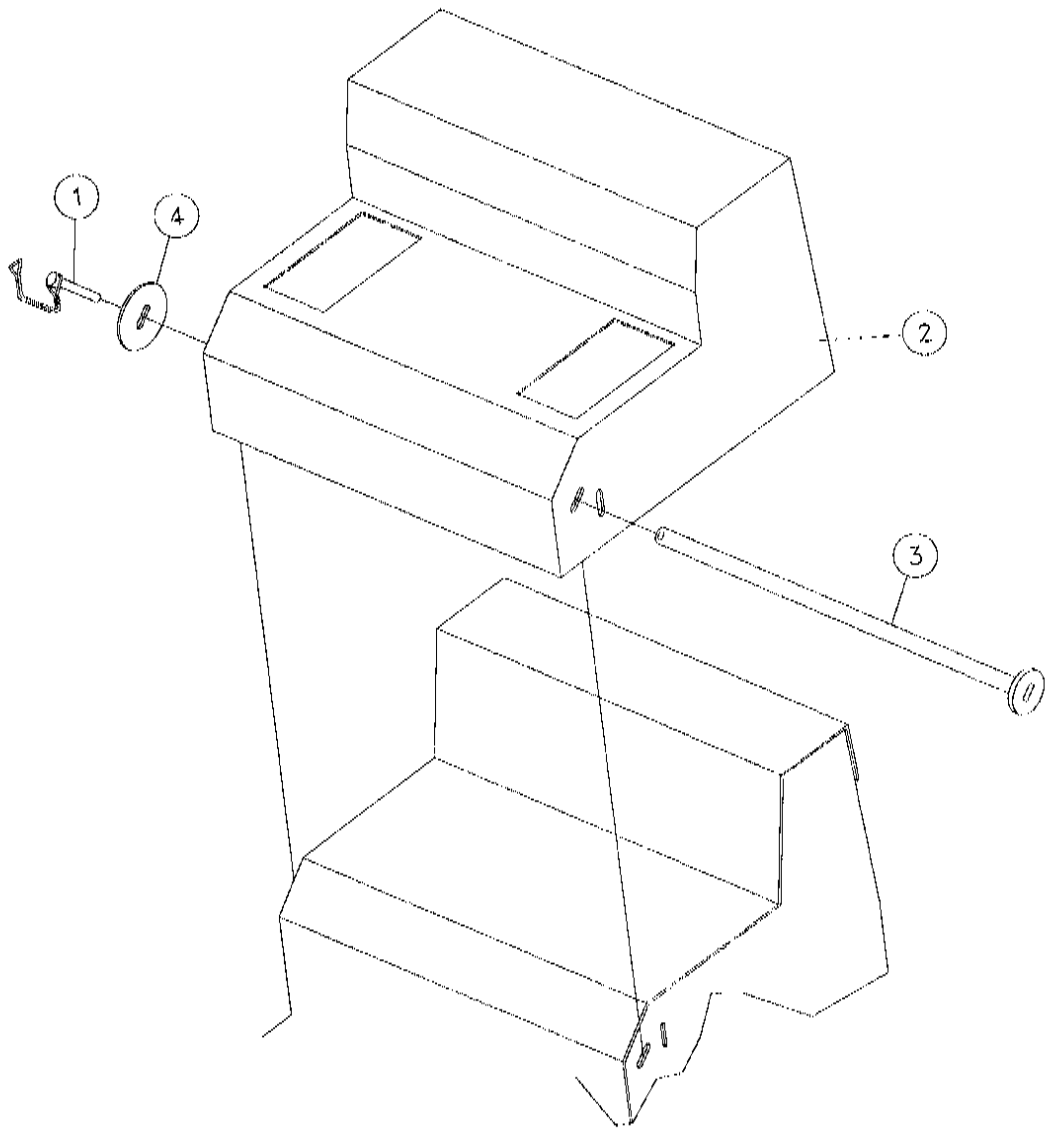
Revised April 1998 due to update of hose clamp & addition of hyd. preset switch & capacitor. Changed/added parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
8-2	1	236473-001 OUTLET-12 V STAINLESS	1	8-2	23	228389-001 MODULE-WATER CONTROL	1
		57200-001 SCREW-#8-32X1/2 RND.HD.MACH.	2	8-2	24	67292-001 SWITCH-TOGGLE 8500K9 SEALED	5
		69759-001 LOCK NUT-#8-32 NYLON INSERT PL	2	8-2	25	86580-001 SWITCH-DPST ON-ON	2
8-2	2	72079-001 BREAKER 45-700-514-DD 5 AMP	2	8-2	26	217231-001 ZAP ALERT-CURRENT SENSE	1
8-2	3	219154-001 SWITCH-15A SCWT .047"PT WTRPRF	1	8-2	27	230814-001 ZAP ALERT COIL .14"COAX(3-WIRE	1
8-2	4	89597-001 COVER-BREAKER SWITCH	6	8-2	28	215995-001 STRIKE ALERT RESET BUTTON ASSY	1
8-2	5	72081-001 BREAKER 45-700-514-DD 15 AMP	4			215996-001 BUTTON-BLACK EXTENDED CONTACT	1
8-2	6	27148-001 LIGHT-RED WARNING	3			215997-001 BOOT-BLACK RUBBER	1
		70889-001 BULB. #112-1418	4			215998-001 BLOCK-N.C. CONTACT	1
8-2	7	236411-001 SWITCH-SPDT ON-OFF-ON (ITL1-5)	1	8-2	29	215991-001 STRIKE ALERT TEST BUTTON ASSY	1
8-2	8	81374-001 LIGHT-GREEN WARNING	1			215993-001 BOOT-GREEN RUBBER	1
8-2	9	63579-001 SWITCH-1219 GENERAL	1			215994-001 BLOCK-N.O. CONTACT	1
8-2	9	66462-001 KEY- NG- 100/1219 GENERAL	1			215992-001 BUTTON-GREEN FLUSH CONTACT	1
8-2	10	904346-001 BUZZER	1	8-2	30	226209-001 BUTTON ASSY-CURRENT TEST	1
		905001-001 BOLT-8-32 X 2 STOVE	2			215993-001 BOOT-GREEN RUBBER	1
		904995-001 WASHER-8 INTERNAL STAR	2			904423-001 CONTACT BLOCK	1
		399-001 NUT-8-32 HEX	2			215992-001 BUTTON-GREEN FLUSH CONTACT	1
8-2	11	67081-001 SWITCH-8510K4 CUTLER HAMMER	2	8-2	31	5537-001 COVER-TOGGLE SWITCH	11
8-2	12	231248-001 RELAY-LOW VOLTAGE SENSING	1	8-2	32	86579-001 SWITCH-4 POLE ON-ON-ON	1
8-2	13	219137-001 RELAY-BOSCH NO/NC 20/30 AMP	2	8-2	33	201785-001 TACH/ HOURMETER	1
8-2	14	400-001 NUT-3/16 NC HEX	6	8-2	34	201793-001 GAUGE-WATER TEMP 1	
8-2	15	1802-006 BOLT-10-24 X 3/4 RND HD STOVE	6	8-2	35	78114-001 CONTROL KNOB 1	1
8-2	16	79803-001 10 POLE TERMINAL BLOCK	1	8-2	36	69757-001 LOCKNUT-#6-32 NYLON INSERT PLT	2
8-2	17	236435-001 TERMINAL JUMPER .267-A42-10	1	8-2	37	57337-001 WASHER-#6 FLAT	2
8-2	18	236408-001 HARNESS-D24X40A WIRE	1	8-2	38	93831-001 BOLT-6-32UNCX1 1/4 STOVE	2
8-2	19	374-006 BOLT-5/16"-18X3/4GD#5CARRIAGE	4	8-2	39	485-005 WASHER-5/16" FLAT	2
8-2	20	*2595-009 CLAMP - 1 1/4" HOSE	3	8-2	40	*245090-001 SWITCH	1
8-2	21	408-001 NUT-5/16 NC FLG WHIZ LOCK	8	8-2	41	*244949-001 CAPACITOR	1
8-2	22	103202-001 SCREW-1/4-20X1/2 STH MACHINE	4				

VANDAL SHIELD ASSEMBLY

Figure 8-3

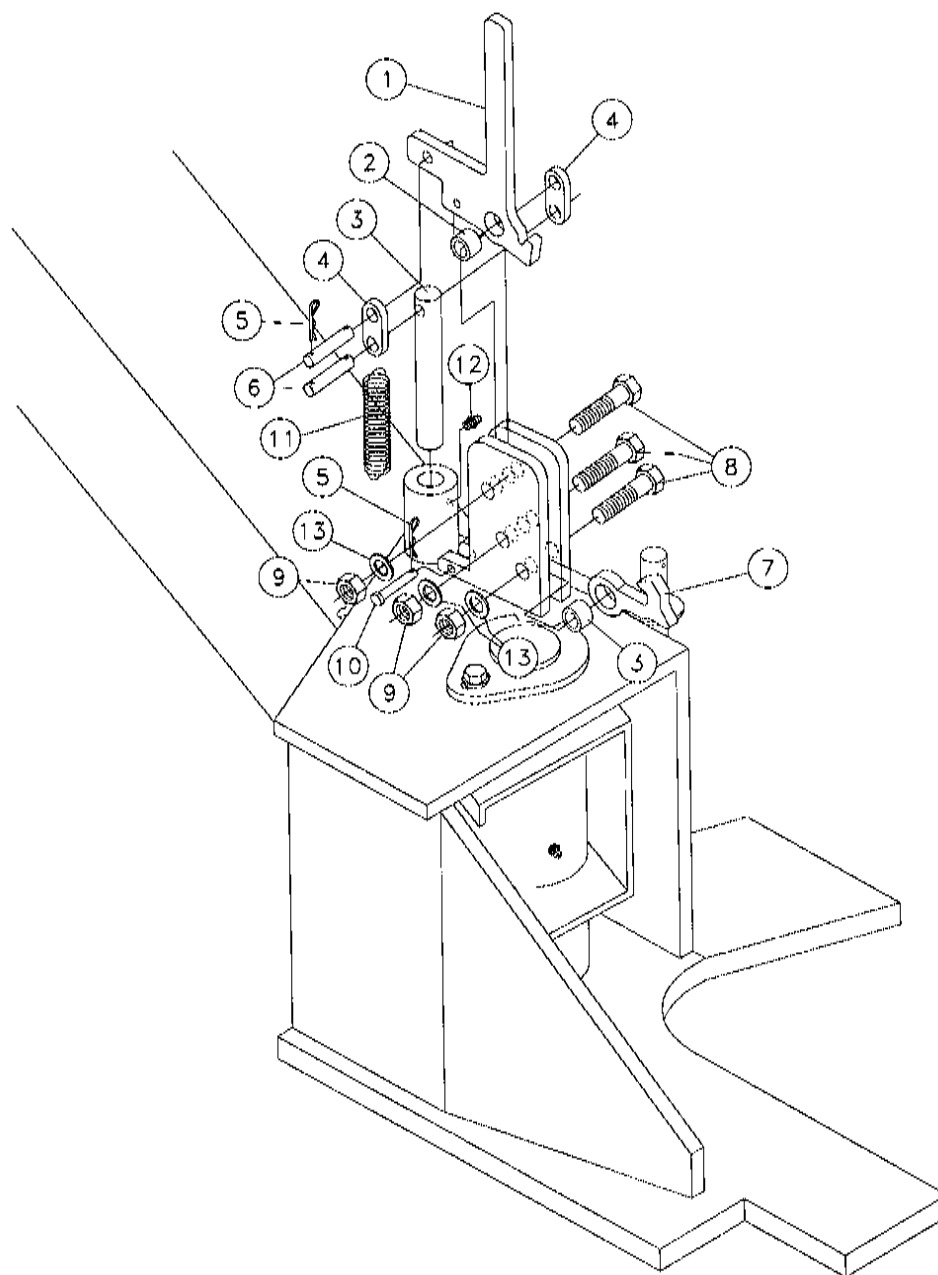


REF. NO.	PART NO.	DESCRIPTION	QTY.
8-3 1	2108-001	LYNCH PIN - 1/4 X 2	2
8-3 2	230964-001	COVER-VANDAL	2
8-3 3	235975-001	BAR-VANDAL SHIELD CROSS	2
8-3 4	240758-001	SHIM - SHIPPING	2

SEAT PIVOT LATCH ASSEMBLY

Figure 8-4

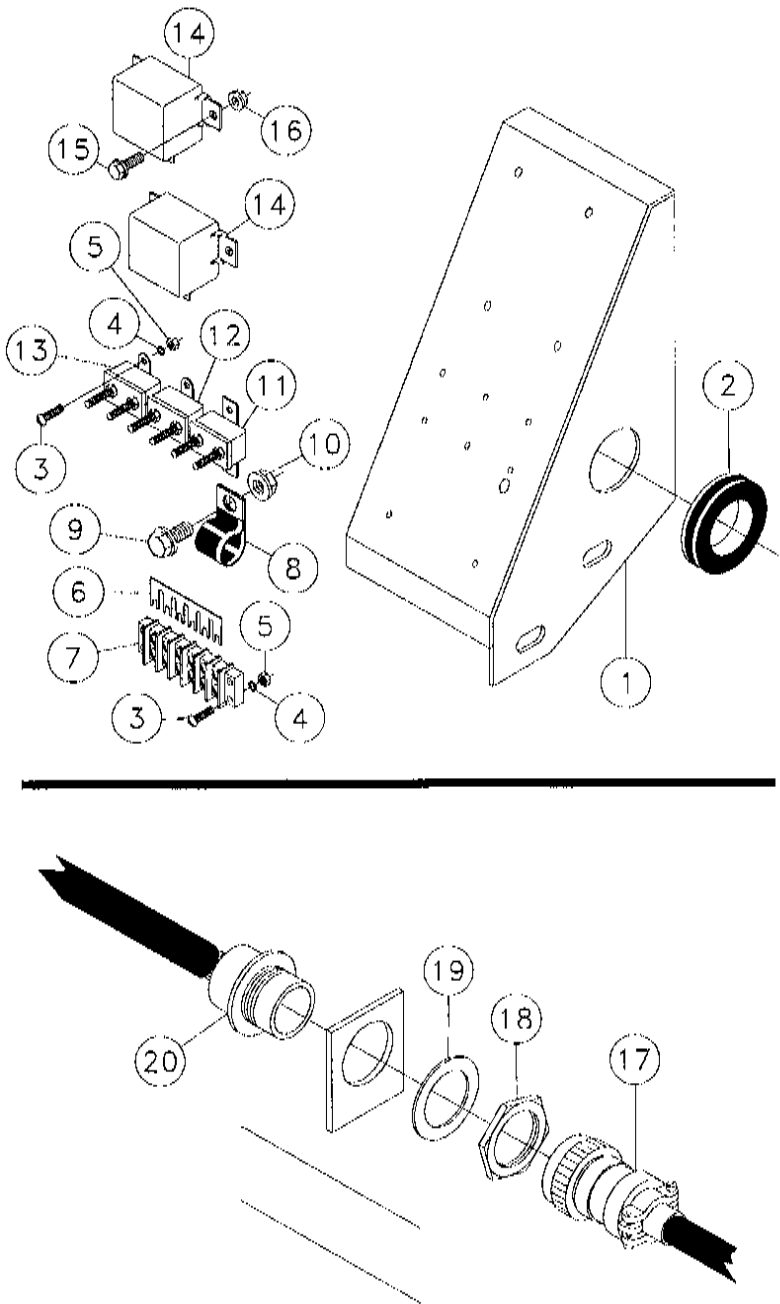
Revised April 1998 due to hardware update. Changed/added parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
8-4	1	235862-001 PLATE-HANDLE	1
8-4	2	235868-001 BRZ BUSHING-.752 X .5015-.50	2
8-4	3	235864-001 PIN	1
8-4	4	235863-001 PLATE-LINK	2
8-4	5	1794-007 HAIR PIN COTTER -.080 WIRE	5
8-4	6	235866-001 PIN-LINK	2
8-4	7	235860-001 PLATE-CATCH	1
8-4	8	*235718-001 BOLT-1/2-13X2 GRADE #8 HEX ZINC PLT	3
8-4	9	*235731-001 NUT-1/2-13 GR 8 HEX ZINC PLT	3
8-4	10	235878-001 CLEVIS PIN -1/4 X 1 1/2	1
8-4	11	235869-001 SPRING-EXT. 3/4 OD X .085-3.00	1
8-4	12	598-001 ZERK-1/4" NF ST GREASE	1
8-4	13	*485-025 WASHER-1/2" FLAT HARDENED ZINC	3

ENGINE ELECTRICAL PANEL/HARNESS ASSEMBLY

Figure 8-5

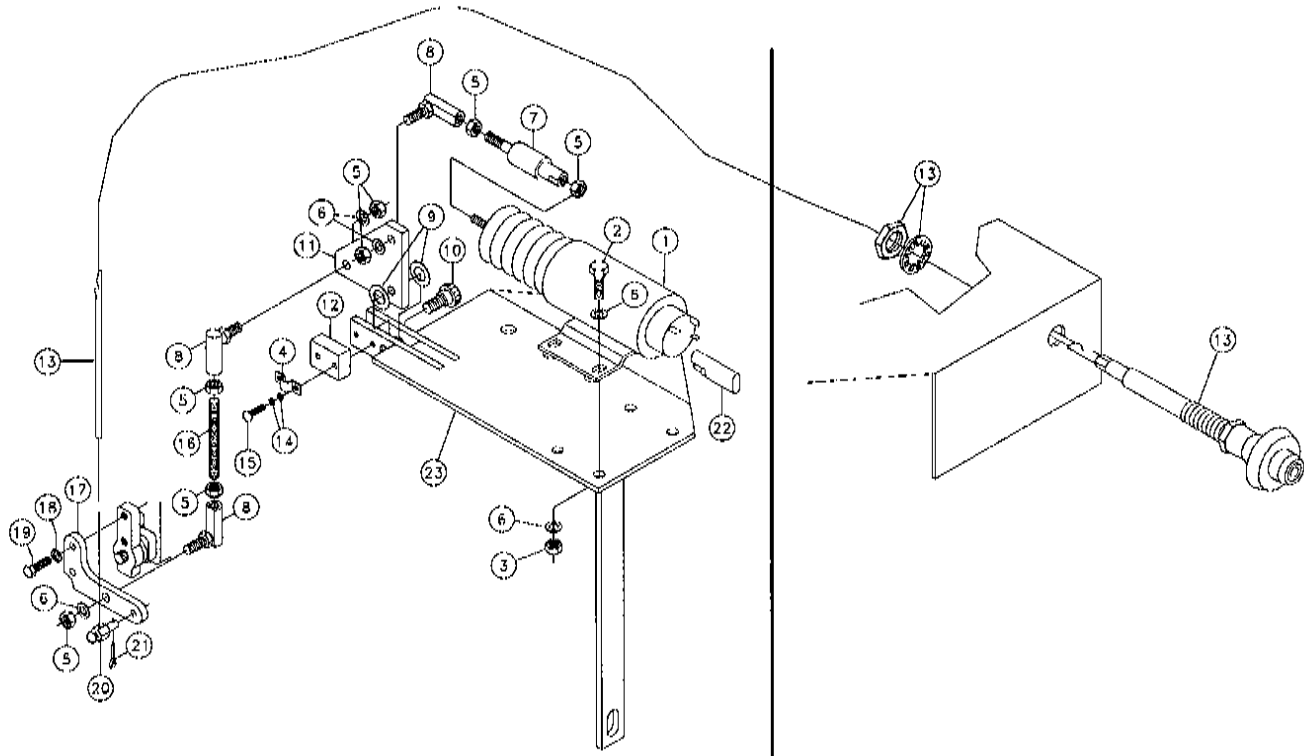


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.		
8-5	1	238646-001	PANEL-ELECTRICAL	1	8-5	11	86582-001	BREAKER-40A TYPE 1 W/METALCASE	1
8-5	2	902402-001	GROMMET-1 1/2"RUBBER	1	8-5	12	64075-001	BREAKER-RAMCO 121A30A3M01	1
8-5	3	1802-006	BOLT-10-24 X 3/4 RND HD STOVE	8	8-5	13	21285-001	BREAKER-RAMCO 12A15A0 15AMP	1
8-5	4	480-001	WASHER-3/16 S/T LOCK	8	8-5	14	86217-001	RELAY-BOSCH SPST 75 AMP SEALED	2
8-5	5	400-001	NUT-3/16 NC HEX	8	8-5	15	4473-006	BOLT-1/4-20X3/4 FLG WHIZ	4
8-5	6	26453-001	TERMINAL JUMPER	1	8-5	16	405-001	NUT-1/4 NC FLG WHIZ LOCK	4
8-5	7	26452-001	TERMINAL	1	8-5	17	236408-001	HARNESS-D24X40A WIRE	1
8-5	8	2595-001	HOSE CLAMP - TS7FR 1/2"	1	8-5	18	87697-003	NUT-PANEL	1
8-5	9	4475-006	BOLT-3/8-16X3/4 FLG WHIZ	1	8-5	19	87697-005	WASHER-LOCK	1
8-5	10	4536-001	NUT - 3/8-16 FLG. WHIZ LOCK	1	8-5	20	238650-001	HARNESS-D24X40A ENGINE WIRE	1

THROTTLE ASSEMBLY

Figure 8-6

Revised April 1998 due to update
of throttle assembly (SN 304).

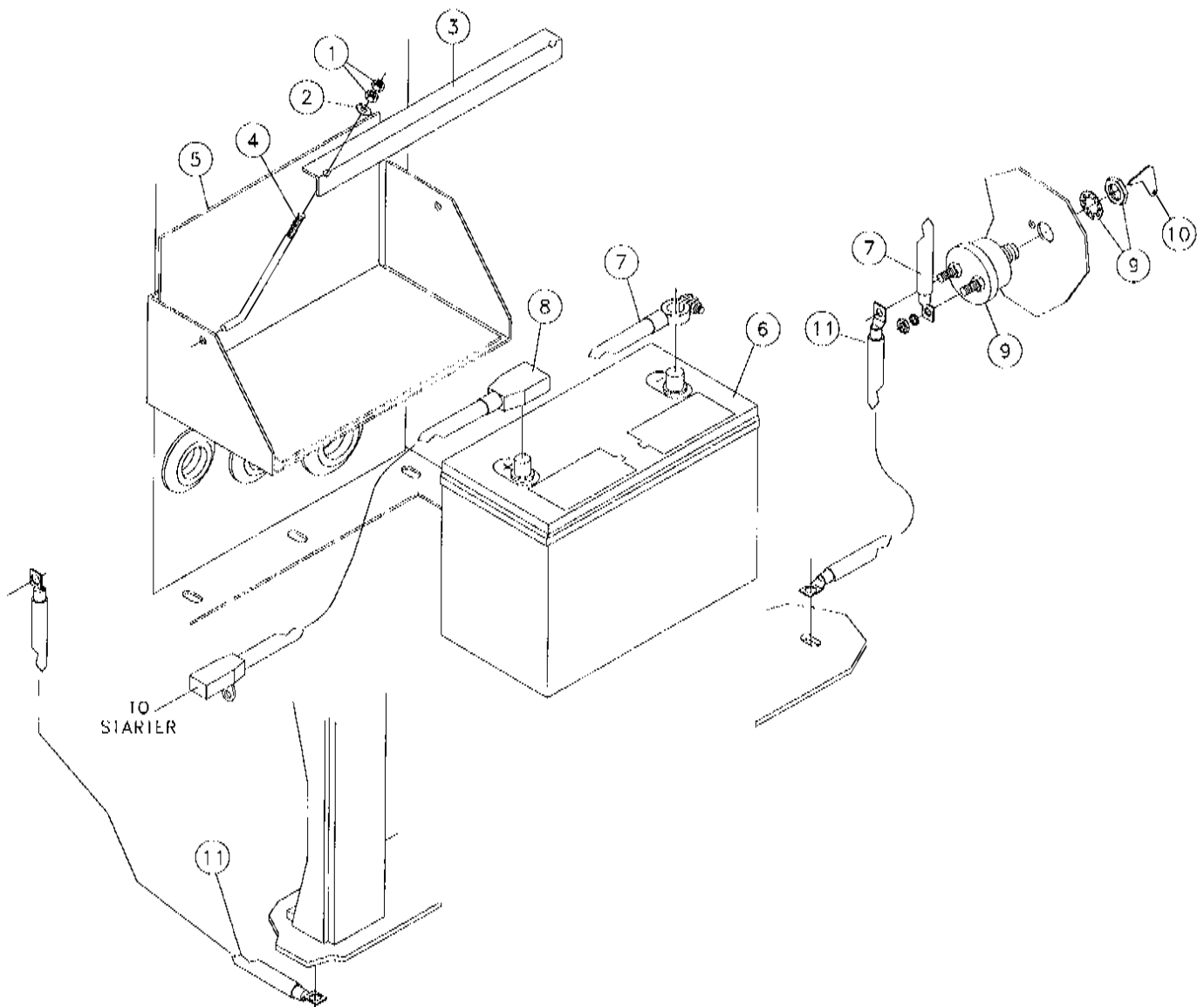


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
8-6	1	904548-001 SOLENOID-#2370	1	8-6	13	245077-001 CABLE-150" CONTROL W/ARMOR	1
8-6	2	238209-001 BOLT-5/16-18X1 GR8 HEX ZINC YC	4	8-6	14	480-001 WASHER-3/16 S/T LOCK	4
8-6	3	235741-001 NUT-5/16-18 GR8 ZINC PLTD	4	8-6	15	533-010 SCREW-10-24X1 RND.HD.MACH.SLT	2
8-6	4	249810-001 CLAMP-A044476	1	8-6	16	238704-001 ROD-THROTTLE LINKAGE	1
8-6	5	445-001 NUT-5/16 NF HEX	6	8-6	17	238689-001 BAR-THROTTLE LINKAGE	1
8-6	6	235714-001 WASHER-5/16 SAE HARD ZINC PLTD	7	8-6	18	250511-001 6 MM HARD WASHER Y/ZINC	2
8-6	7	214242-001 SWIVEL-5/16 SOLENOID SPRING	1	8-6	19	243776-001 BOLT-6M X 15M GR8 HEX MET ZINC	2
8-6	8	4153-001 BALL JOINT - 5/16 SUPERIOR	3	8-6	20	2809-001 PIVOT AQ47641	1
8-6	9	4542-005 WSHR-7/8OD X1/2ID X18 GA MB	2	8-6	21	510-005 COTTER PIN-3/32" X 3/4"	1
8-6	10	238717-001 SCREW-1/2X5/8 SOC HD SHOULDER	1	8-6	22	904562-001 RECTIFIER	1
8-6	11	238690-001 PLATE-THROTTLE LINKAGE PIVOT	1	8-6	23	238691-001 MOUNT-THROTTLE SOLENOID	1
8-6	12	238703-001 SPACER-THROTTLE CABLE MOUNT	1				

BATTERY ASSEMBLY

Figure 8-7

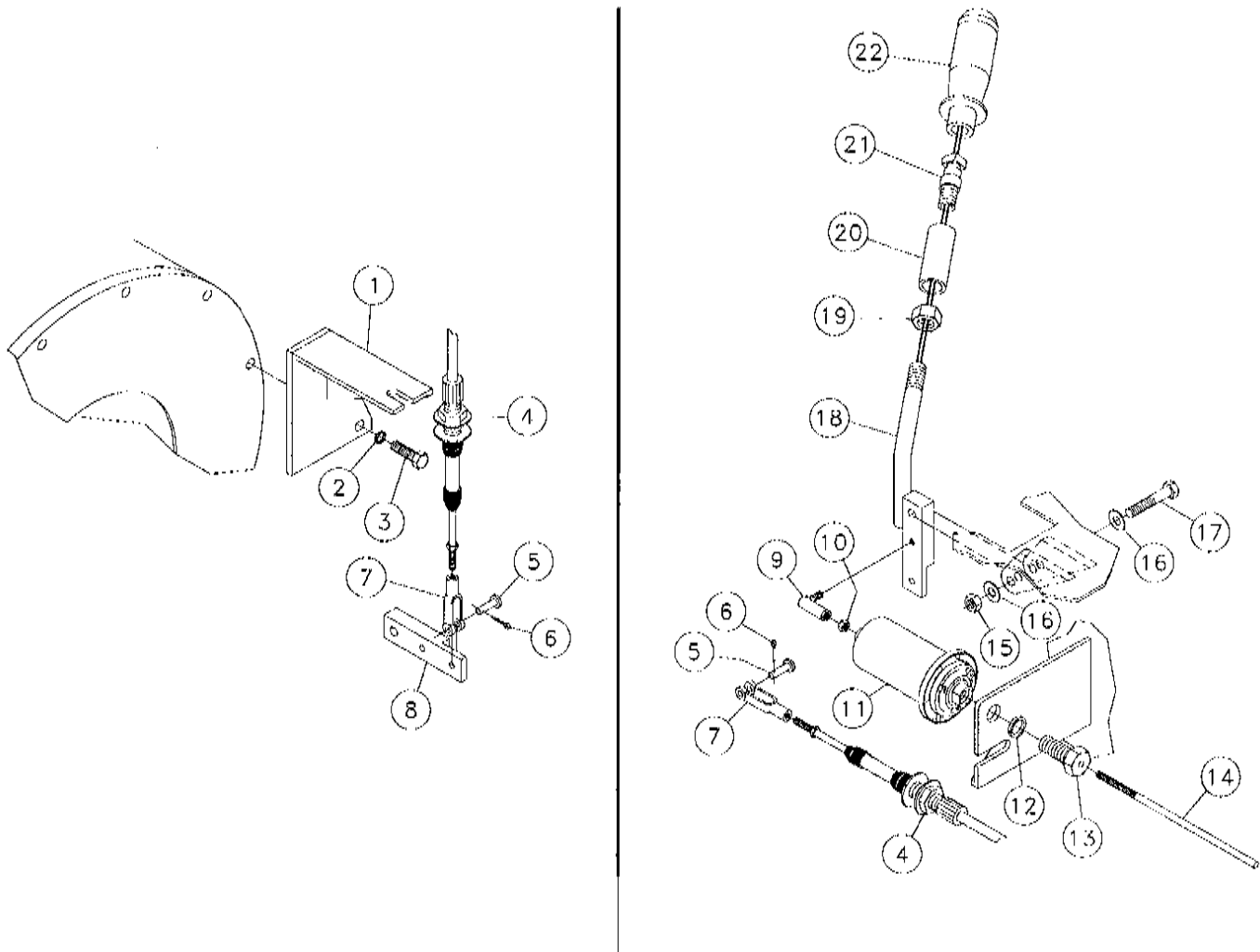
Revised January 1998 due to battery cable update. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
8-7	1	406-001 NUT-5/16 NC HEX	4
8-7	2	485-005 WASHER-5/16 FLAT	2
8-7	3	214360-001 HOLDDOWN-BATTERY	1
8-7	4	240880-001 BOLT-BATTERY ANCHOR	2
8-7	5	903884-001 PAD-BATTERY	1
8-7	6	N/A BATTERY-GROUP 31 950CCA	1
8-7	7	228399-001 CABLE-BATT. 2/0GA.X40\"N-E BLACK	1
8-7	8	*245015-001 BATT CABLE-2/10 3/8 90D 48 P-ER	1
8-7	9	904365-001 DISCONNECT SWITCH	1
8-7	10	87356-003 KEY	1
8-7	11	228400-001 CABLE-BATT. 2/0 GA.X15\"E-E BLK	2

CONTROL LEVER ASSEMBLY (ROTATION)

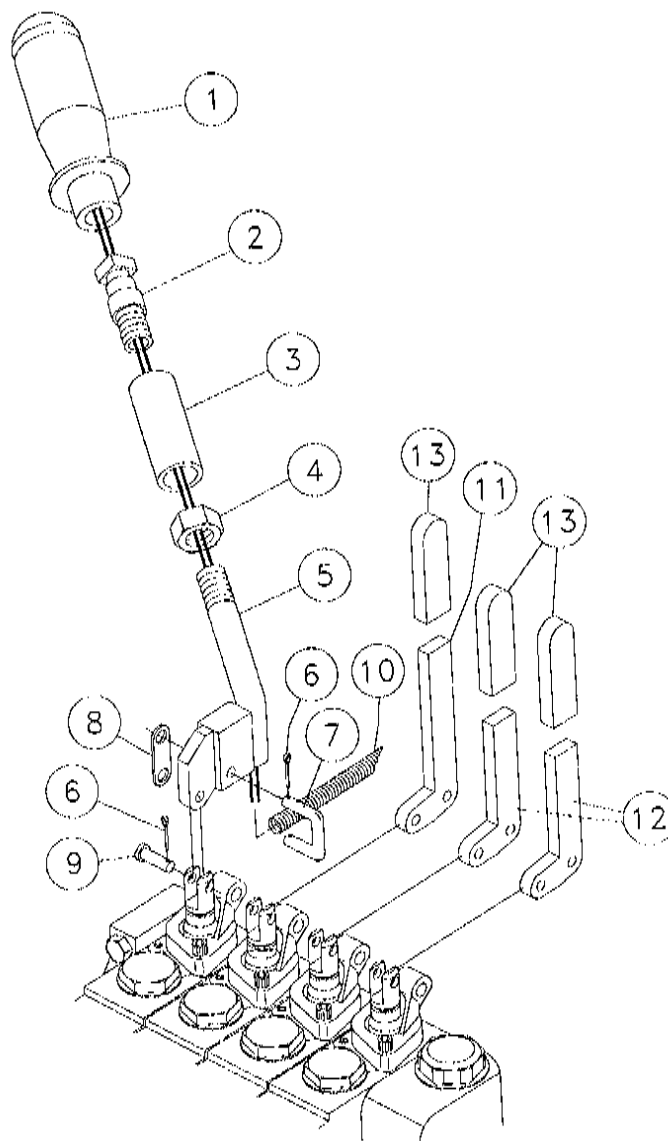
Figure 8-8



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
8-8	1	228364-001 MOUNT-CABLE	1	8-8	12	480-015 WASHER-5/8 S/T LOCK	1
8-8	2	13625-001 WASHER-10 MM LOCK	2	8-8	13	228412-001 BOLT-GUIDE MOUNT	1
8-8	3	77736-001 BOLT-10X35 DIN931	2	8-8	14	220107-001 ROD-SPRING GUIDE	1
8-8	4	228398-001 CABLE-180" CONTROL	1	8-8	15	416-001 NUT-3/8 NC SLTL	1
8-8	5	2110-003 PIN-CLEVIS 1/4X7/8 - 47/64 UL	2	8-8	16	485-007 WASHER-3/8 FLAT	2
8-8	6	510-005 COTTER PIN-3/32" X 3/4"	2	8-8	17	354-020 3/8-16X2" GRADE#5 HEX BOLT	1
8-8	7	2786-001 CLEVIS-A31125 30 SERIES	2	8-8	18	228361-001 LEVER-ROTATION	1
8-8	8	228118-001 LEVER-90 SERIES MODIFIED	1	8-8	19	452-001 NUT-5/8 N.F. HEX	1
8-8	9	1489-001 BALL JOINT - 1/4" SP1002 CP	1	8-8	20	216295-001 TUBE-EXTENSION	1
8-8	10	4734-001 NUT-1/4-28 NF HEX	1	8-8	21	216293-001 ROD-JOYSTICK	1
8-8	11	220180-001 SPRING CENTER-CABLE CONTROL	1	8-8	22	228407-001 HANDLE ASSY-CONTROL	1

CONTROL LEVER ASSEMBLY (THRUST/PULLBACK)

Figure 8-9

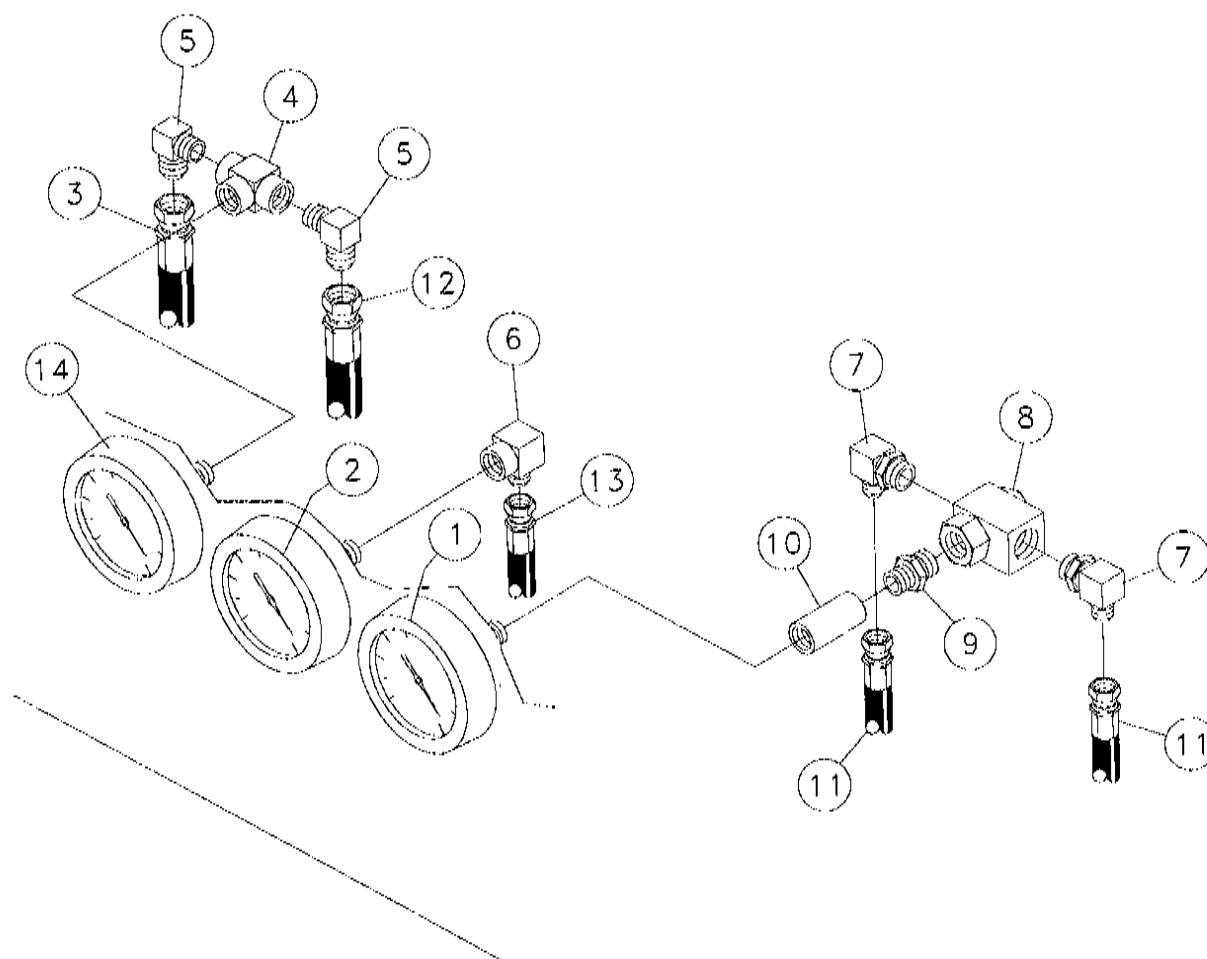


<u>REF. NO.</u>	<u>PART. NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
8-9	1	228406-001 HANDLE ASSY-CONTROL	1
8-9	2	216293-001 ROD-JOYSTICK	1
8-9	3	216295-001 TUBE-EXTENSION	1
8-9	4	452-001 NUT-5/8 N.F. HEX	1
8-9	5	228403-001 LEVER-THRUST/PULLBACK	1
8-9	6	510-035 PIN-3/32 X 1/2 COTTER	12
8-9	7	4333-003 LINK-	4
8-9	8	4333-005 PLATE-LINK	4
8-9	9	2110-003 PIN-CLEVIS 1/4X7/8 - 47/64 UL	4
8-9	10	86319-001 LOOM-FLEX GARD HI TEMP 3/8 ID	1
8-9	11	228494-001 LEVER-CONTROL VALVE	1
8-9	12	228495-001 LEVER-CONTROL VALVE	2
8-9	13	201482-001 HANDLE-BLACK PLASTIC 2 1/2"	3

PRESSURE GAUGE ASSEMBLY

Figure 8-10

Revised January 1998 due to addition
of shuttle valve & fitting updates (S/N 235).
Changed parts marked with *.

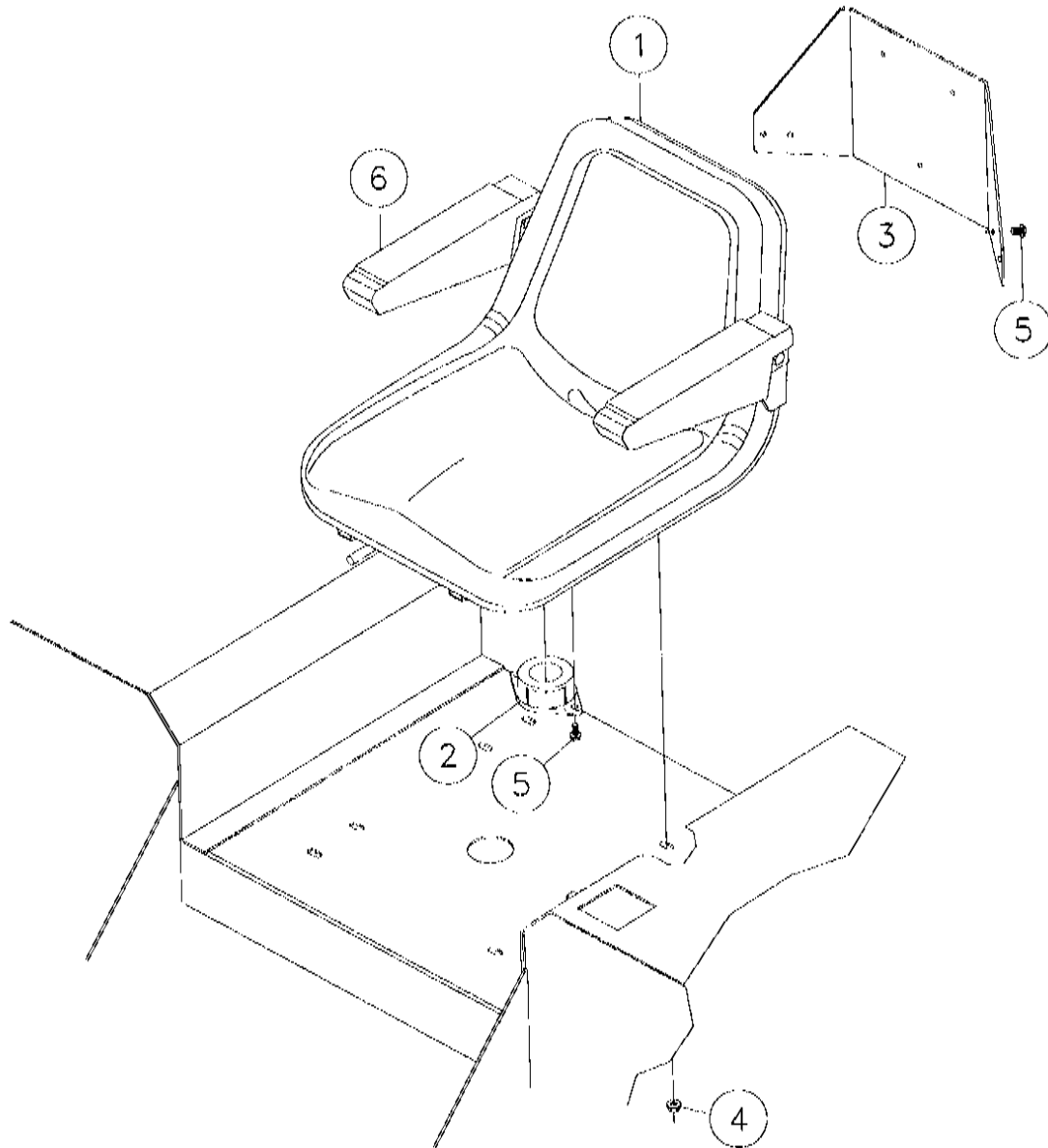


REF. NO.	PART NO.	DESCRIPTION	QTY.
8-10	1	904537-001 GAUGE-5000 PSI SPAN	1
8-10	2	228421-001 GAUGE-7500 PSI SPAN	1
8-10	3	57940-275 HOSE-3/8X32 6FS JIC 3000 PSI	1
8-10	4	210788-001 PIPE TEE-1/4F X 1/4F X 1/4F	1
8-10	5	68707-001 FITTING-1/4MX6M JIC 90 DEG.	2
8-10	6	81665-001 FITTING-1/4FX4M JIC 90 DEG.	1
8-10	7	*57950-001 FITTING-6M X 4M JIC 90 DEG EL	2
8-10	8	*240391-001 VALVE-SHUTTLE	1
8-10	9	*100852-001 FITTING-6M X 1/4M NPT ST ADAPT	1
8-10	10	723-001 1/4" COUPLING BLACK STEEL	1
8-10	11	53843-741 HOSE-1/4X18 4FSJICST/90 3000#	2
8-10	12	57940-591 HOSE-3/8X188 6FS JIC 3000 PSI	1
8-10	13	53843-739 HOSE-1/4X118 4FSJICST/ST 6000#	1
8-10	14	234343-001 GAUGE-PRESSURE 0-2000 PSI	1

SEAT ASSEMBLY

Figure 8-11

Revised January 1998 due to update
of seat mounting plate.

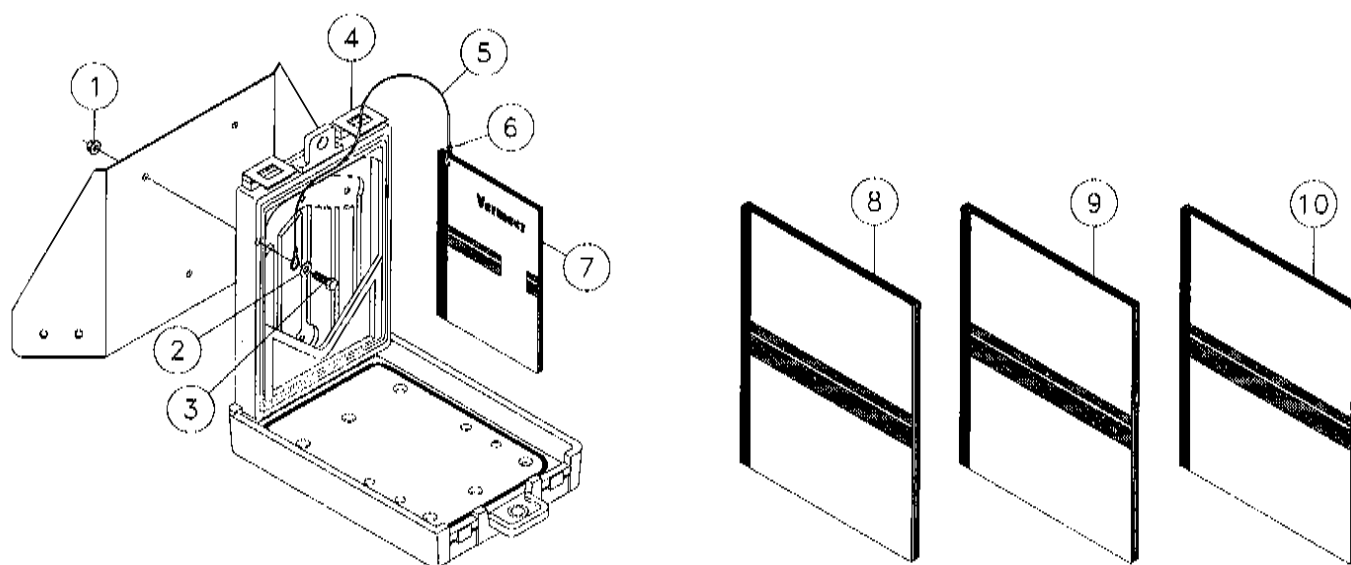


REF. NO.	PART NO.	DESCRIPTION	QTY.
8-11	1	219186-001 SEAT-MILSCO OLYMPIC (DOES NOT INC. ARM REST)	1
8-11	2	219186-003 SWITCH-SAFETY	1
8-11	3	235683-001 MOUNT-MANUAL BOX	4
8-11	4	408-001 NUT-5/16 NC FLG WHIZ LOCK	4
8-11	5	4474-004 5/16-18X1/2 FLG WHIZ BOLT	6
8-11	6	220238-001 KIT-ARM REST (OPT.) (INC. MOUNTING HARDWARE)	1

LITERATURE BOX ASSEMBLY

Figure 8-12

Revised November 1997 due to literature compartment update. Changed part marked with *.

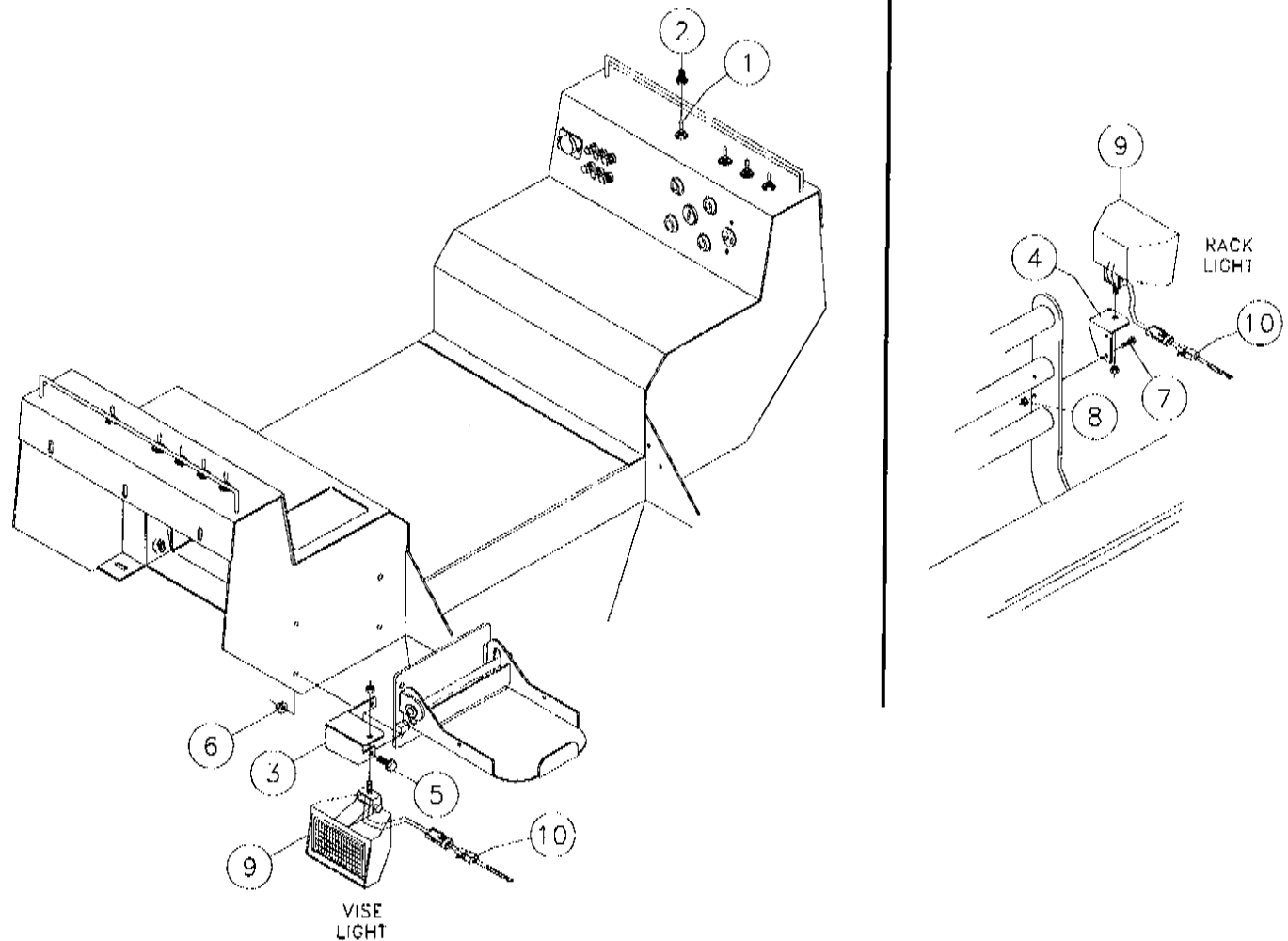


REF. NO.	PART NO.	DESCRIPTION	QTY.
8-12	1	405-001 NUT-1/4 NC FLG WHIZ LOCK	3
8-12	2	485-003 WASHER-1/4 FLAT	3
8-12	3	350-006 BOLT-1/4-20X3/4"GRADE #5 HEX	3
8-12	4	*142410-001 CASE-9X6 LITERATURE COMPARTMENT	1
8-12	5	142954-001 CABLE-.068DIA.NYLON CT.-36.00	1
8-12	6	142423-001 CRIMP-CABLE (FOR.068DIA.CABLE)	2
8-12	7	236452-001 MANUAL ASSY-24X40A OM MINI 1ST (INC. REF. 5 & 6)	1
8-12	8	105400-N38 D24X40A NAVIGATOR (OM) 1ST ED	1
8-12	9	105400-N39 D24X40A NAVIGATOR (MM) 1ST ED	1
8-12	10	105400-N40 D24X40A NAVIGATOR (PM) 1ST ED	1

WORK LIGHT ASSEMBLY

Figure 8-13

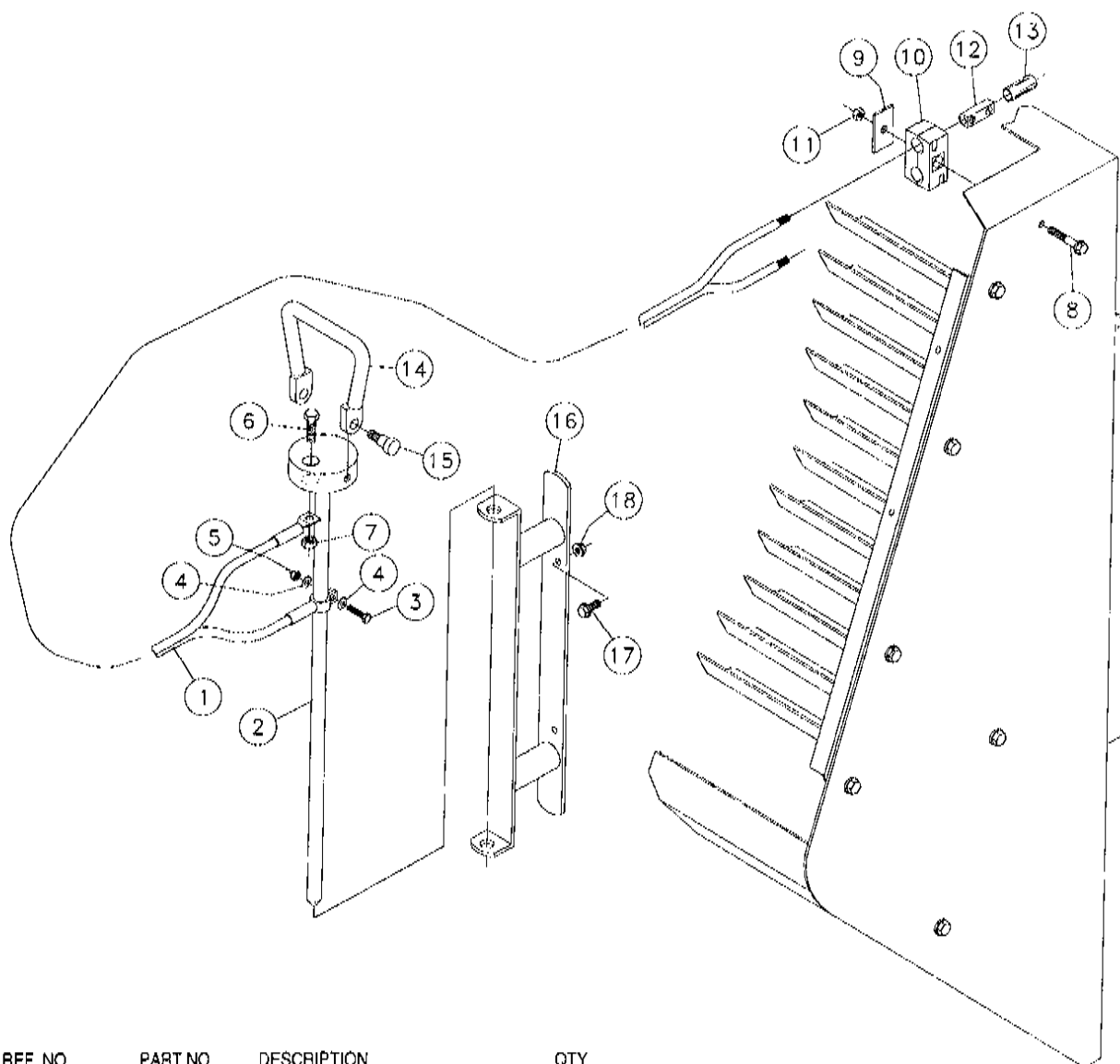
Revised November 1997 due to
addition of figure to manual.



REF. NO.	PART NO.	DESCRIPTION	QTY.
8-13	1	67293-001 SWITCH-TOGGLE SEALED	1
8-13	2	5537-001 COVER-TOGGLE SWITCH	1
8-13	3	245004-001 BRACKET-VISE LIGHT	1
8-13	4	245003-001 BRACKET-RACK LIGHT	1
8-13	5	4475-010 BOLT-3/8-16X1 FLANGE WHIZ	2
8-13	6	4536-001 NUT-3/8-16 FLG WHIZ LOCK	2
8-13	7	4473-006 BOLT-1/4-20 X 3/4 FLG WHIZ	2
8-13	8	405-001 NUT-1/4-20 FLG WHIZ LOCK	2
8-13	9	245006-001 LIGHT-ASSEMBLY 3 X 5 FLOOD	2
8-13	10	245002-001 HARNESS-LIGHT KIT WIRE	1

VOLTAGE STAKE ASSEMBLY

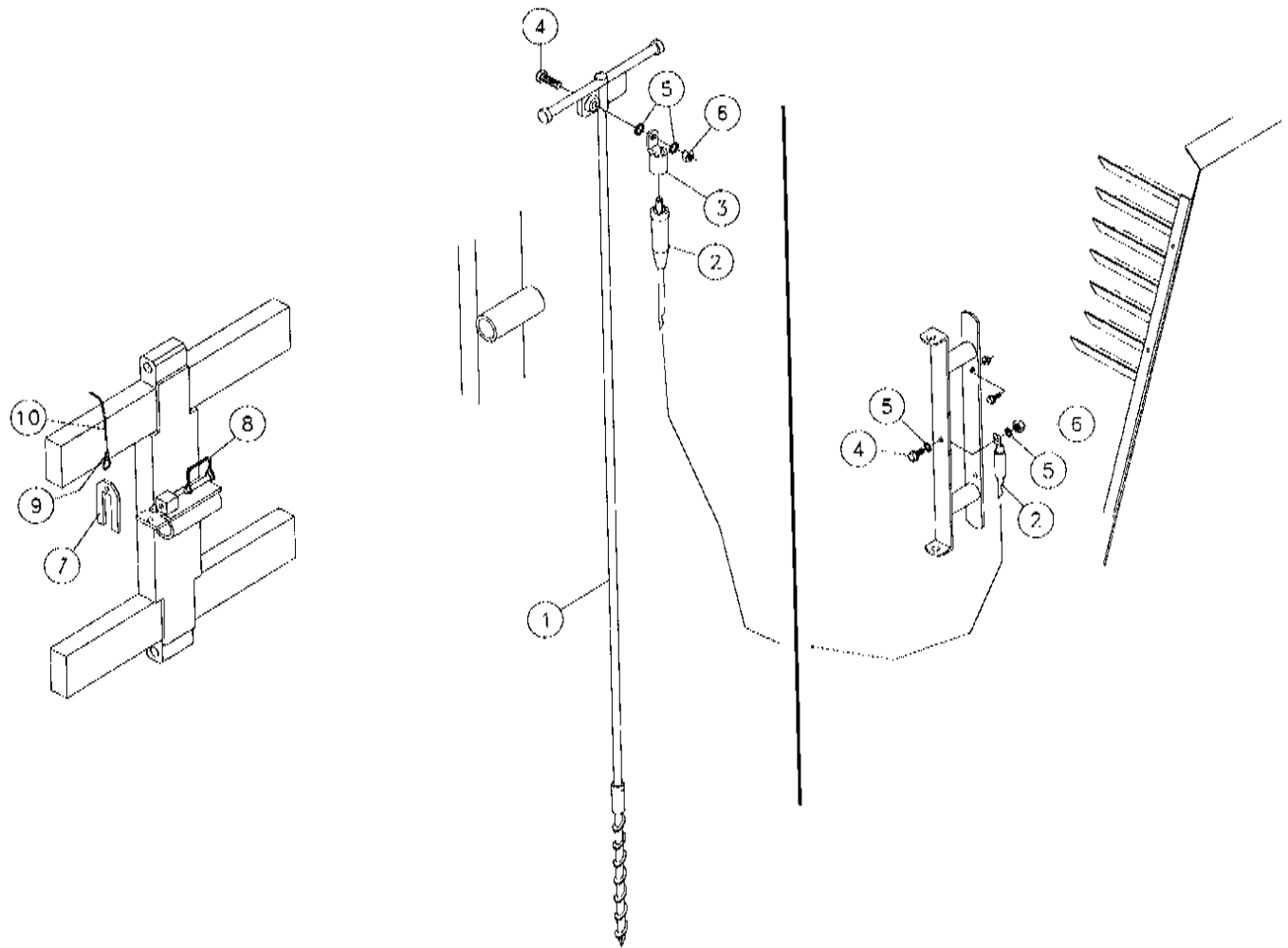
Figure 9-1



REF. NO.	PART NO.	DESCRIPTION	QTY.
9-1 1	217967-001	CORD ASSY - VOLTAGE STAKE	1
9-1 2	234167-001	STAKE-VOLTAGE	1
9-1 3	350-010	1/4-20 X 1" GRADE #5 HEX BOLT	1
9-1 4	485-003	WASHER-1/4 FLAT	2
9-1 5	403-001	NUT-1/4 NC SLTL	1
9-1 6	354-012	BOLT-3/8 - 16X 1 1/4" GR5 HEX	1
9-1 7	416-001	NUT-3/8 NC SLTL	1
9-1 8	351-016	BOLT-5/16-18X1 3/4" GRADE#5 HEX	1
9-1 9	67846-003	PLATE-TWIN COVER	1
9-1 10	900035-005	CLAMP-3/8" DOUBLE HOSE	2
9-1 11	409-001	NUT-5/16 NC SLTL	1
9-1 12	904355-001	CONNECTOR	2
9-1 13	208065-001	SHRINK TUBE-3/4ID COMMERCIAL GRD (SPECIFY LENGTH)	2
9-1 14	234164-001	HANDLE-VOLTAGE STAKE	1
9-1 15	240056-001	SCREW-1/2-13X1/2 NCSOC HD ZNC	2
9-1 16	240791-001	BRACKET-VOLTAGE STAKE	1
9-1 17	4474-006	BOLT-5/16-18X3/4 FLANGE WHIZ	2
9-1 18	408-001	NUT-5/16 NC FLG WHIZ LOCK	2

GROUND STAKE ASSEMBLY

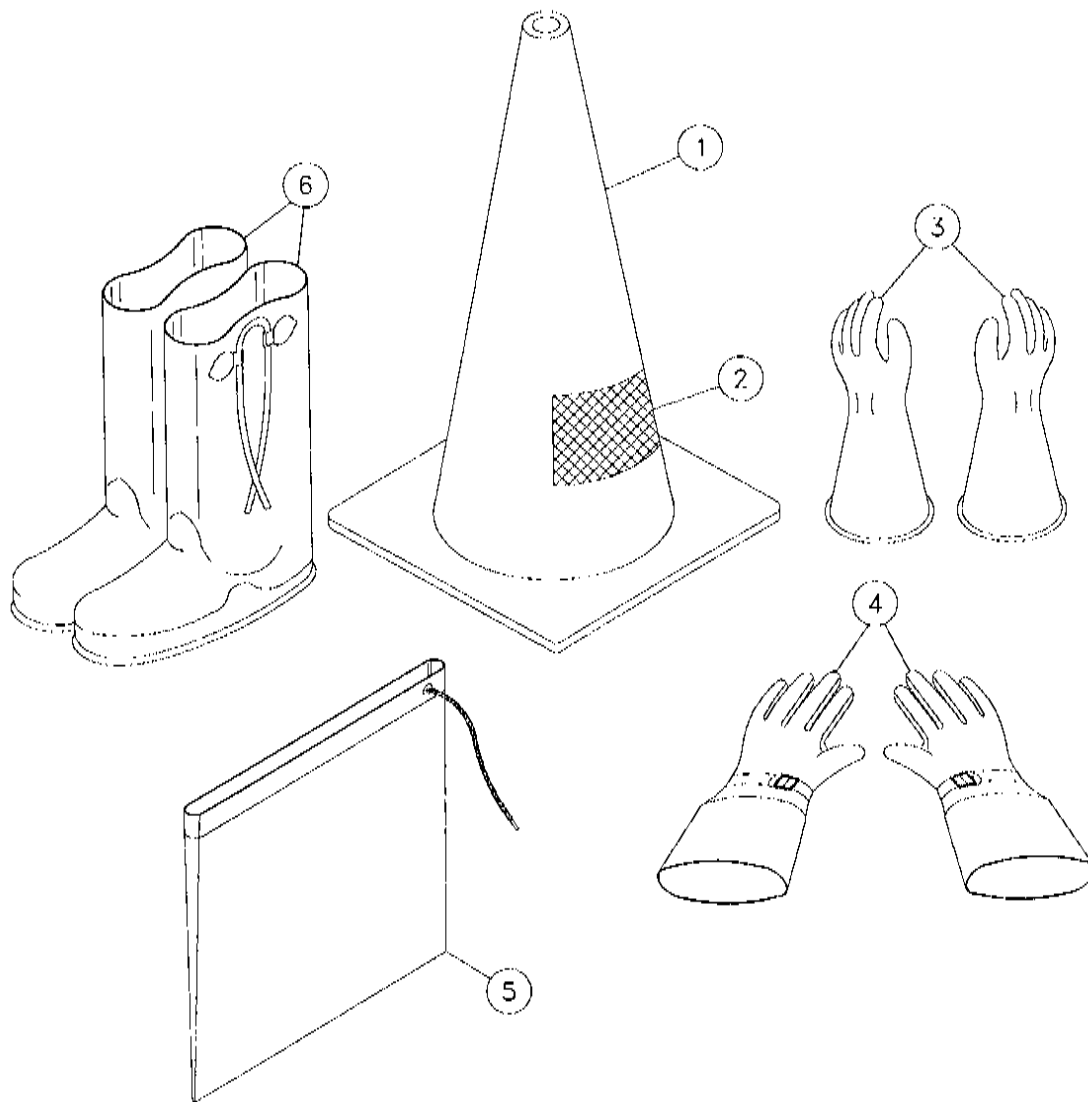
Figure 9-2



REF. NO.	PART NO.	DESCRIPTION	QTY.
9-2	1	904546-001 STAKE-T-HANDLE GROUND	1
9-2	2	229285-001 GROUND CORD ASSY	1
9-2	3	904731-001 TWECO FEMALE TERMINAL	1
9-2	4	57867-012 1/2-13X1 1/4 GR5 HEX BOLT NP	2
9-2	5	482-003 WASHER-1/2 INT STAR	4
9-2	6	423-001 NUT-1/2 NC SLTL UTB	2
9-2	7	230804-001 PLATE-KEEPER	1
9-2	8	2108-001 LYNCH PIN - 1/4 X 2	1
9-2	9	1838-001 CONNECTOR-WIRE (ETC)	2
9-2	10	1830-007 CABLE-3/32"NYLON COATED (SPECIFY LENGTH)	A/R

SAFETY FEATURES - GLOVES, BOOTS, CONES

Figure 9-3

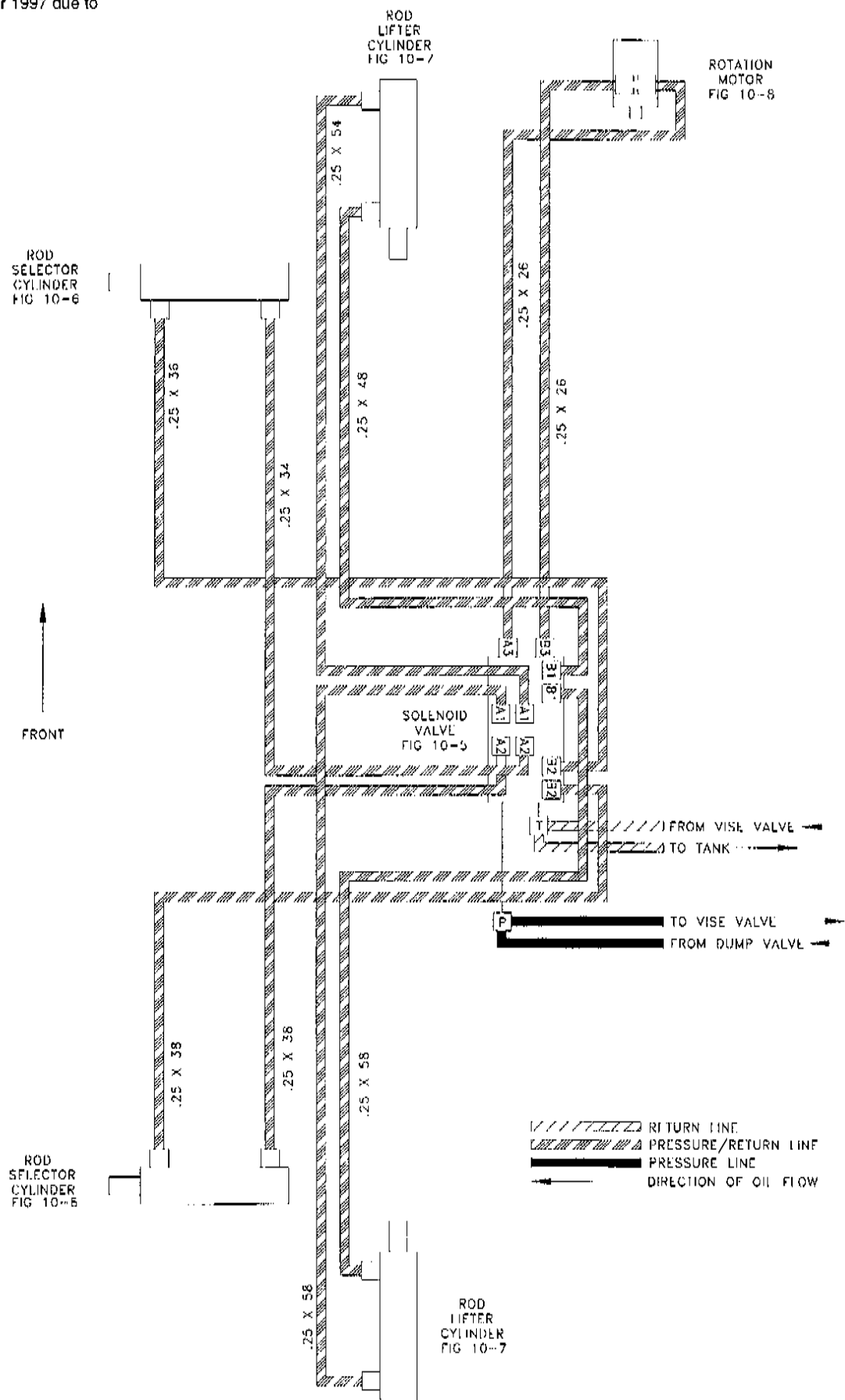


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
9-3	1	904541-001 CONES-ORANGE PVC	4	210785-001		GLOVE KIT-SIZE 10 (INC. 1 PAIR OF RUBBER GLOVES, 1 PAIR OF LEATHER GLOVES & 1 GLOVE BAG REF. 5)	1
9-3	2	70000-530 DECAL-DANGER	4				
		70001-530 DECAL-DANGER (INTERNATIONAL)	4	224990-001		GLOVE KIT-SIZE 11 (INC. 1 PAIR OF RUBBER GLOVES, 1 PAIR OF LEATHER GLOVES & 1 GLOVE BAG REF. 5)	1
9-3	3	210782-001 GLOVES-SIZE 9 RUBBER INSULATE	1 pair				
		210782-005 GLOVES-SIZE 9 1/2 RUBBER INSUL	1 pair	224991-001		GLOVE KIT-SIZE 12 (INC. 1 PAIR OF RUBBER GLOVES, 1 PAIR OF LEATHER GLOVES & 1 GLOVE BAG REF. 5)	1
		210782-003 GLOVES-SIZE 10 RUBBER INSULATE	1 pair				
		210782-007 GLOVE-SIZE 11 RUBBER INSULATED	1 pair				
		210782-009 GLOVE-SIZE 12 RUBBER INSULATED	1 pair				
		210783-001 GLOVES-SIZE 9 LEATHER PROTECT	1 pair				
9-3	4	210783-005 GLOVES-SIZE 9 1/2 LEATHER PROT	1 pair	9-3	5	210784-001 BAG-GLOVE	1
		210783-003 GLOVES-SIZE 10 LEATHER PROTECT	1 pair	9-3	6	210780-009 BOOTS-SIZE 9 OVER-THE-SHOE	1 pair
		210783-007 GLOVE-SIZE 11 LEATHER PROTECT	1 pair			210780-001 BOOTS-SIZE 10 OVER-THE-SHOE	1 pair
		210783-009 GLOVE-SIZE 12 LEATHER PROTECT	1 pair			210780-003 BOOTS-SIZE 11 OVER-THE-SHOE	1 pair
		210781-001 GLOVE KIT-SIZE 9 (INC. 1 PAIR OF RUBBER GLOVES, 1 PAIR OF LEATHER GLOVES & 1 GLOVE BAG REF. 5)	1			210780-005 BOOTS-SIZE 12 OVER-THE-SHOE	1 pair
		224979-001 GLOVE KIT-SIZE 9 1/2 (INC. 1 PAIR OF GLOVES, 1 PAIR OF LEATHER GLOVES & 1 GLOVE BAG REF. 5)	1			210780-007 BOOTS-SIZE 13 OVER-THE-SHOE	1 pair
						210780-011 BOOTS-SIZE 14 OVER-THE-SHOE	1 pair
						210780-013 BOOTS-SIZE 15 OVER-THE-SHOE	1 pair

HYDRAULIC COMPONENTS LOCATION DIAGRAM - ROD LOADER

Revised November 1997 due to schematic update.

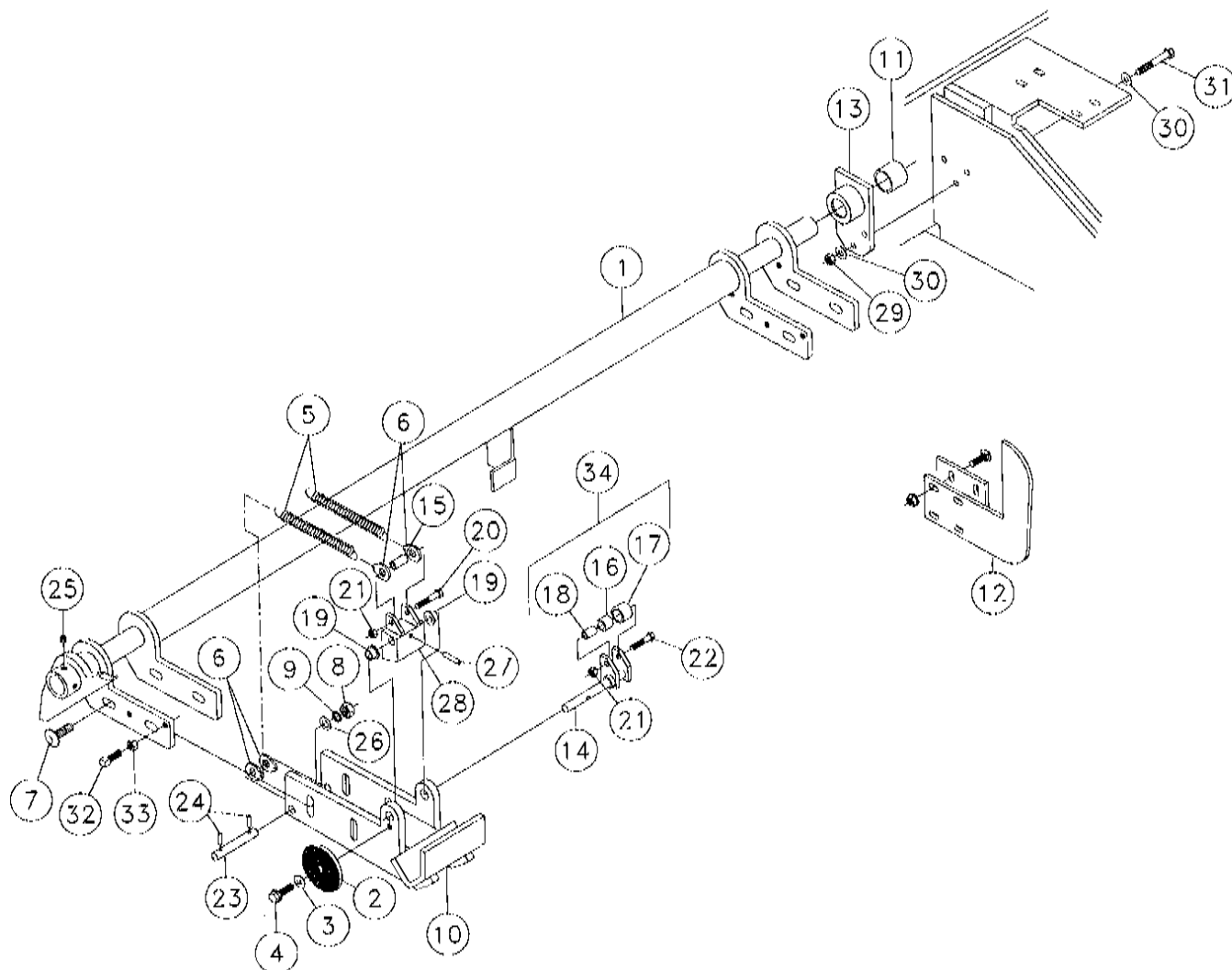
Figure 10-1



PIVOT ARM ASSEMBLY

Figure 10-2

Revised August 1997 due to hardware update. Changed parts marked with *.

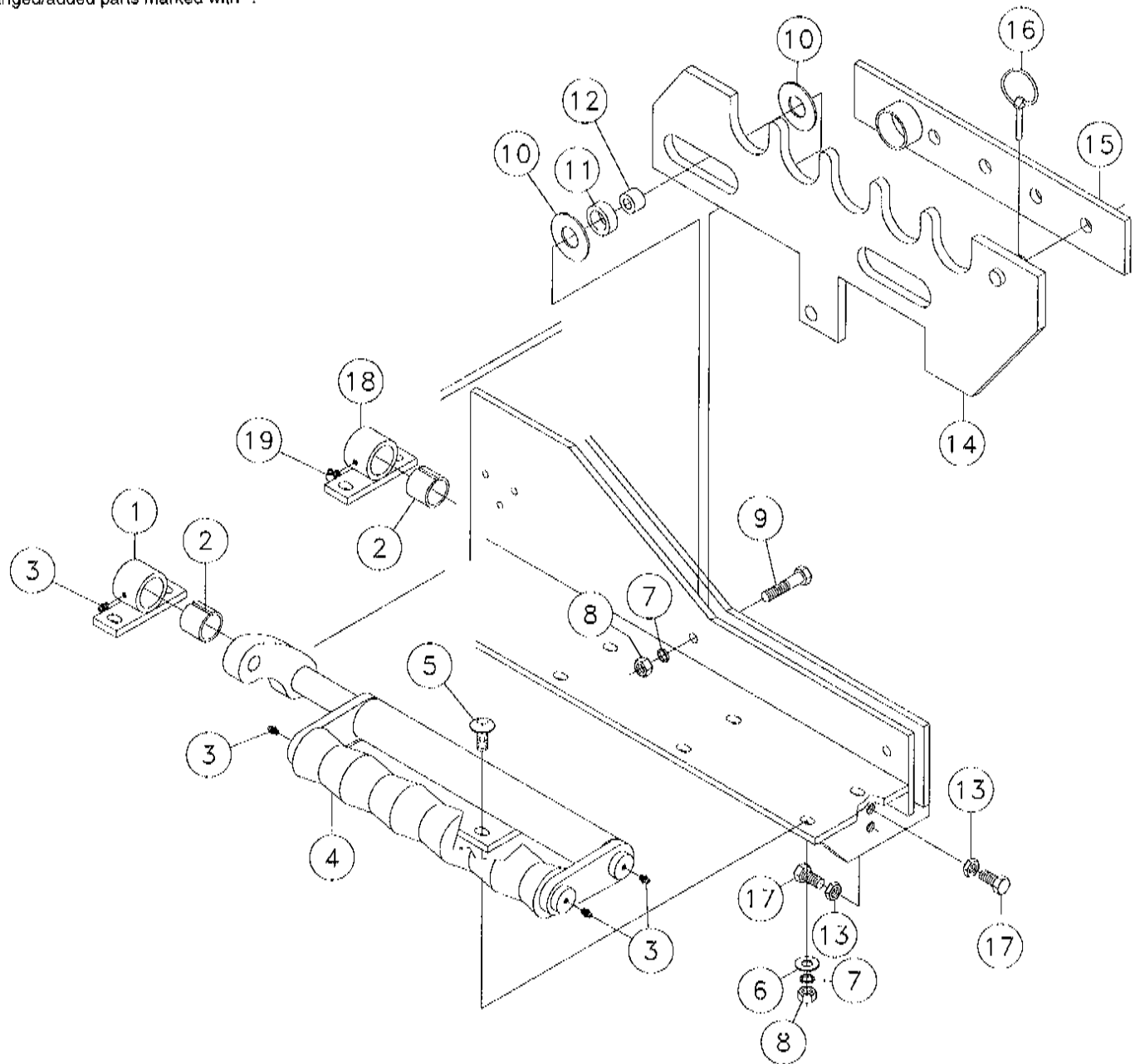


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
10-2	1	230940-001 PIVOT-LOADER ARM	1	10-2	18	228151-001 TUBE-ROLLER ARM MOUNT	2
10-2	2	230863-001 DISK-HOLDER	1	10-2	19	230999-001 BRZ BUSHING-.627 X .502 X .50	4
10-2	3	485-007 WASHER-3/8 FLAT	1	10-2	20	351-020 BOLTS-5/16-18X2"GRADE#5 HEX	2
10-2	4	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	1	10-2	21	409-001 NUT-5/16 NC SLTL	4
10-2	5	1789-009 SPRING - EXTENSION 5"	4	10-2	22	351-016 BOLT-5/16-18X1 3/4"GRADE#5 HEX	2
10-2	6	230960-001 PLATE-WASHER TAB	4	10-2	23	228153-001 BAR-SPRING ATTACHMENT	2
10-2	7	377-014 BOLT-1/2-13X1 1/2"GD#5CARRIAGE	8	10-2	24	1978-011 PIN-ROLL 3/16 X 1	4
10-2	8	421-001 NUT-1/2 NC HEX	8	10-2	25	524-001 SSS-5/16-18X5/16	2
10-2	9	480-011 WASHER-1/2 S/T LOCK	8	10-2	26	86510-001 WASHER-1/2 FLT HARDENED	8
10-2	10	228145-001 ARM-ROD LOADER	2	10-2	27	1788-023 PIN-EXPANSION 1/4 X 1 1/4	2
10-2	11	224738-001 BRZ.BUSHING-1.252X1.502-1 1/4	1	10-2	28	228147-001 BAR-SPRING LOCK	2
10-2	12	225210-001 PLATE-RELEASE	2	10-2	29	*416-001 NUT-3/8 NC SLTL	3
10-2	13	228137-001 BUSHING-ROD LOADER ARM (INC. REF. 11)	1	10-2	30	*235713-001 WASHER-3/8 SAE HARD ZINC PLTD	6
10-2	14	228146-001 ROD-RELEASE ARM	2	10-2	31	354-024 BOLT-3/8-16X2 1/2"GRADE#5 HEX	3
10-2	15	228148-001 TUBE-ROUND SPRING ATTACH	2	10-2	32	235320-001 SQ HSS -3/8-16X1 CUP PI (ZINC)	4
10-2	16	228152-001 BRZ BUSHING-.753X.503-.625	2	10-2	33	413-001 NUT-3/8 NC HEX JAM	4
10-2	17	228150-001 TUBE-ARM ROLLER	2	10-2	34	240770-001 ROD RELEASE ROLLER ASSY	2

ROD LIFTER/SELECTOR ASSEMBLY

Figure 10-3

Revised January 1998 due to update pivot
mount assemblies & roller assemblies.
Changed/added parts marked with *.



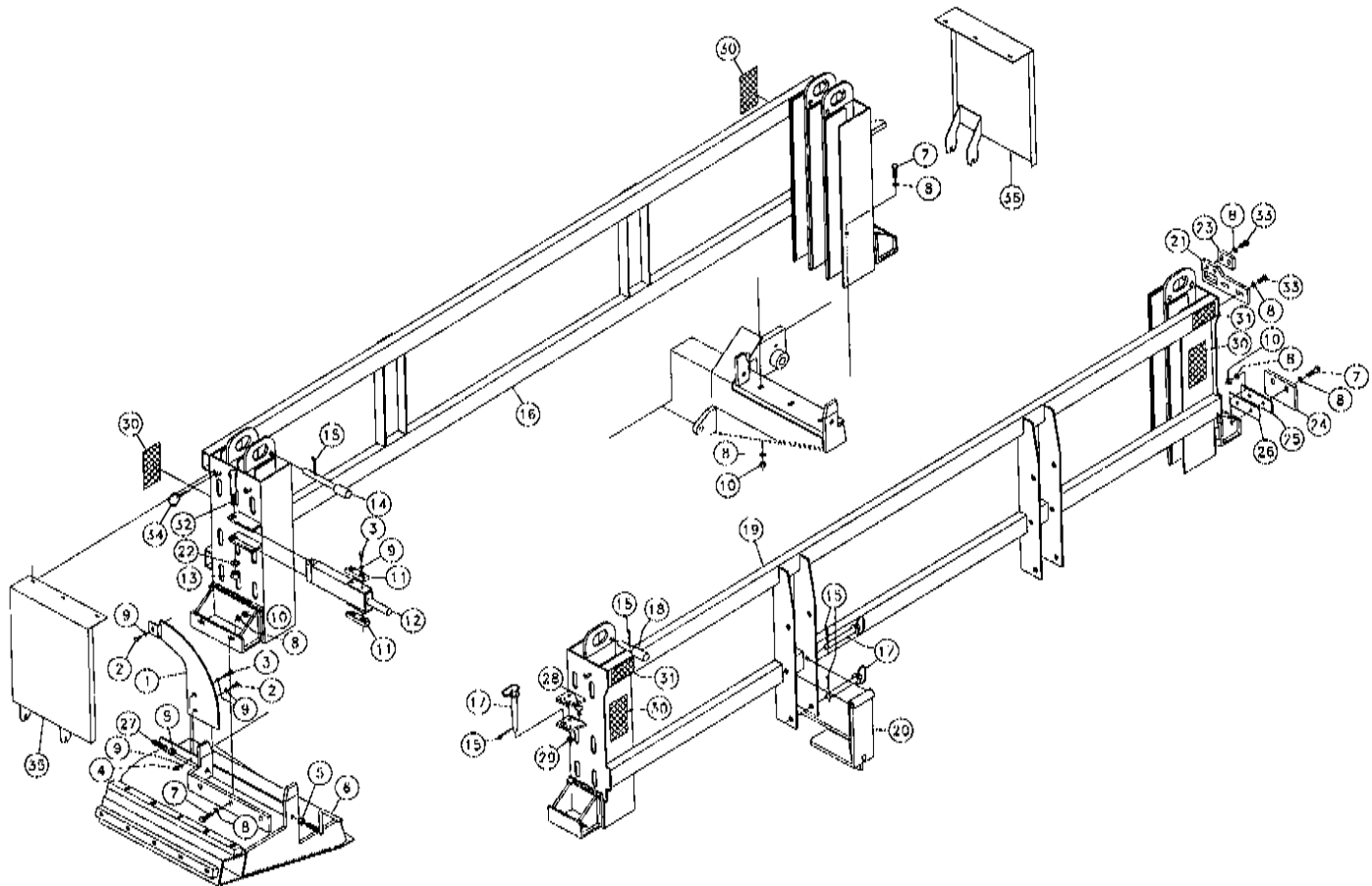
REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
10-3	1	*225140-003 PIVOT MOUNT ASSEMBLY (FRONT) (INC ONE EACH OF REF. 2 & 3)	1	10-3	9	358-022 BOLT-1/2-13X2 1/4" GRADE#5 HEX	4
10-3	2	1835-085 BUSHING-STL 1 1/2X1 1/4-1 1/4	2	10-3	10	230968-001 WASHER-2 380DX1.06OD-.06THRUST	8
10-3	3	*598-001 ZERK-1/4" NF ST GREASE (FRONT)	7	10-3	11	235773-001 ROLLER-SELECTOR PLATE	4
10-3	4	*235329-003 ROLLER ASSY SCALLOPED ROD (FRONT) (SHOWN) (INC. THREE OF REF. 3)	1	10-3	12	235772-001 BSHG-1.002 OD X.516ID-.670 STL	4
		*235330-003 ROLLER ASSY-SCALLOPED ROD (REAR) (INC. THREE OF REF. 3)	1	10-3	13	422-001 NUT-1/2 NC HEX JAM	4
10-3	5	377-014 BOLT-1/2-13X1 1/2" GD#5 CARRIAGE	12	10-3	14	225184-001 PLATE-ROD SELECTOR	2
10-3	6	485-011 WASHER-1/2 FLAT	12	10-3	15	225185-001 BAR-SELECTOR	2
10-3	7	480-011 WASHER-1/2 S/T LOCK	16	10-3	16	1797-003 PIN-QUICK ATTACHMENT 1/4"	2
10-3	8	421-001 NUT-1/2 NC HEX	16	10-3	17	75381-010 BOLT-1/2-UNCX1 GR.8 HEX	4
				10-3	18	*240771-001 MOUNT ASSY-PIVOT (REAR) (INC. ONE OF REF. 2 & REF. 19)	1
				10-3	19	*597-001 ZERK-1/4 NF 90 DEG. GREASE	1

ROD BOX ASSEMBLY

Figure 10-4

Revised April 1998 due to addition of
drainage slots, protective covers to rod
boxes & hardware updates.

Changed/added parts marked with *.

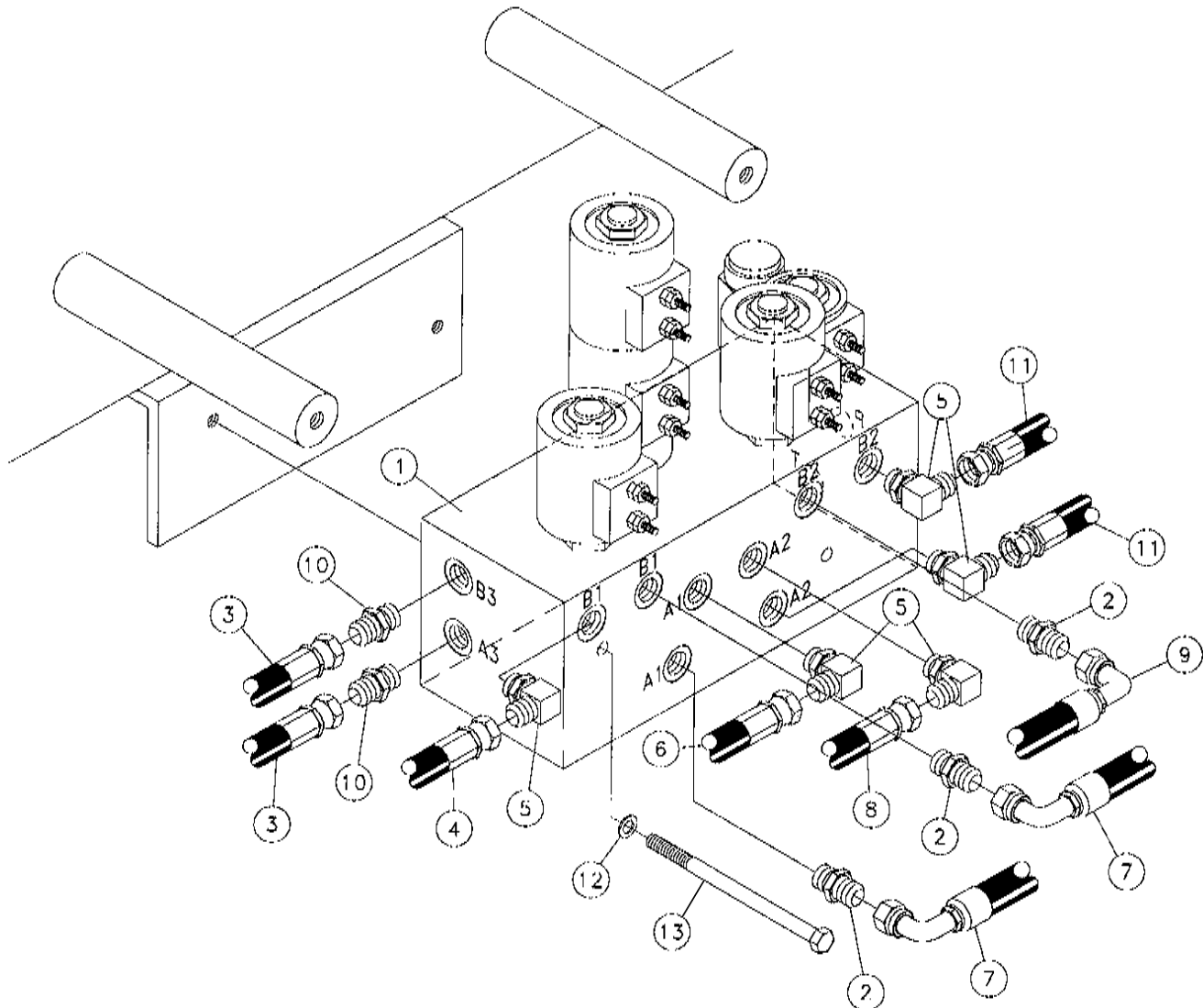


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
10-4	1	228066-001	1	10-4	19	*251278-001	1
10-4	2	*235726-001	2			BOX ASSY-TWO ROW ROD (INC.	
10-4	3	*235736-001	5			TWO EACH OF REF. 30 & 31)	
10-4	4	*235725-001	1	10-4	20	236120-001	2
10-4	5	*250514-001	4	10-4	21	236189-001	1
10-4	6	236463-001	2	10-4	22	*235717-001	1
10-4	7	*235718-001	4	10-4	23	*236224-001	1
10-4	8	*485-025	12	10-4	24	236080-001	1
10-4	9	*235713-001	4	10-4	25	236081-001	1
10-4	10	*235731-001	6	10-4	26	236225-001	1
10-4	11	236183-001	2	10-4	27	231973-020	2
10-4	12	236228-001	1			SQ HSS-5/8-11X2 CUP PT(ZINC)	
10-4	13	*250510-001	1	10-4	28	377-012	1
10-4	14	236460-001	2	10-4	29	*235722-001	1
10-4	15	1794-003	9	10-4	30	7000A-627	4
10-4	16	*251270-003	1	10-4	31	70000-563	2
		(INC. TWO OF REF. 30)		10-4	32	*240340-001	1
10-4	17	2107-007	5	10-4	33	*235729-001	4
10-4	18	236462-001	2	10-4	34	*1797-003	6
		PIN-HITCH 3/4 X 6		10-4	35	*243232-001	1
		PIN-ROD HOLDER		10-4	36	*243233-001	1
						COVER ROD BOX END	
						COVER ROD BOX END	

ROD LOADER VALVE ASSEMBLY

Figure 10-5

Revised April 1998 due to solenoid valve update & elimination of hose clamps. Changed part marked with *.

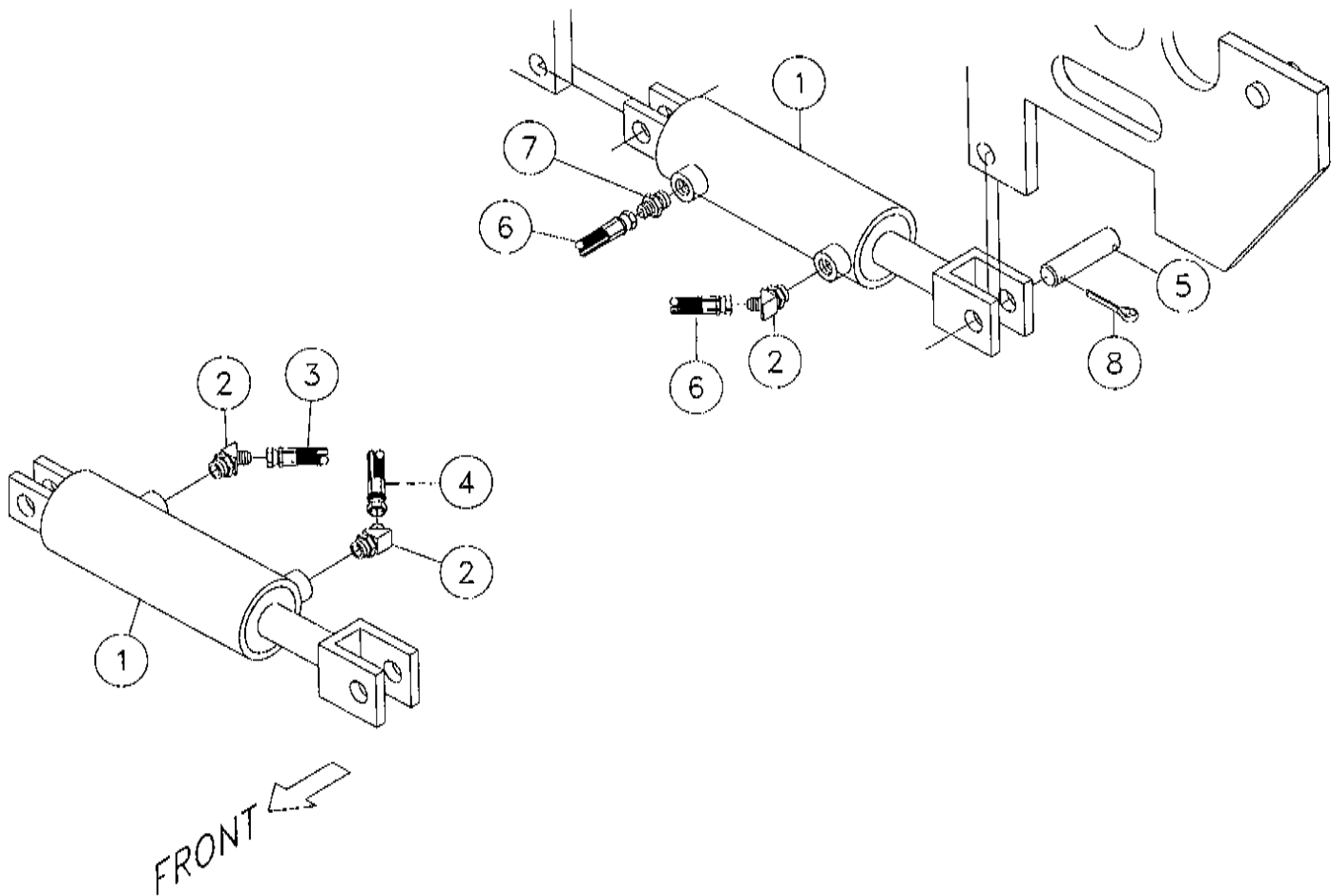


REF. NO.	PART NO.	DESCRIPTION	QTY.
10-5	1	*245016-001 VALVE-SOLENOID (BREAKDOWN FIG. 5-22)	1
10-5	2	60908-001 FITTING-4MX4M JIC STR ADAPTER	3
10-5	3	244261-001 HOSE-1/4X26 4FS JIC ST/45 (3000)	2
10-5	4	53843-709 HOSE-1/4X48 4FS JIC 3000 PSI	1
10-5	5	59423-001 FIT-4M JICX4M ADJ.90 DEG.ELBOW	5
10-5	6	53843-005 HOSE-1/4X54 4FS JIC 3000PSI	1
10-5	7	53843-759 HOSE-1/4X58 4FSJICST/90 3000#	2
10-5	8	53843-241 HOSE-1/4X34 4FS JIC 3000 PSI	1
10-5	9	53843-519 HOSE-1/4X36 4FSJICST/4FSJIC90	1
10-5	10	236439-001 FITTING-4M X 4M JIC R.031	2
10-5	11	53843-377 HOSE-1/4X38 4FS JIC 3000 PSI	2
10-5	12	480-003 WASHER-1/4 S/T LOCK	2
10-5	13	350-040 1/4-20X4" GRADE#5 HEX BOLT	2

ROD SELECTOR CYLINDER ASSEMBLY

Figure 10-6

Revised November 1997 due to hose
update & hardware correction. Changed
parts marked with *.

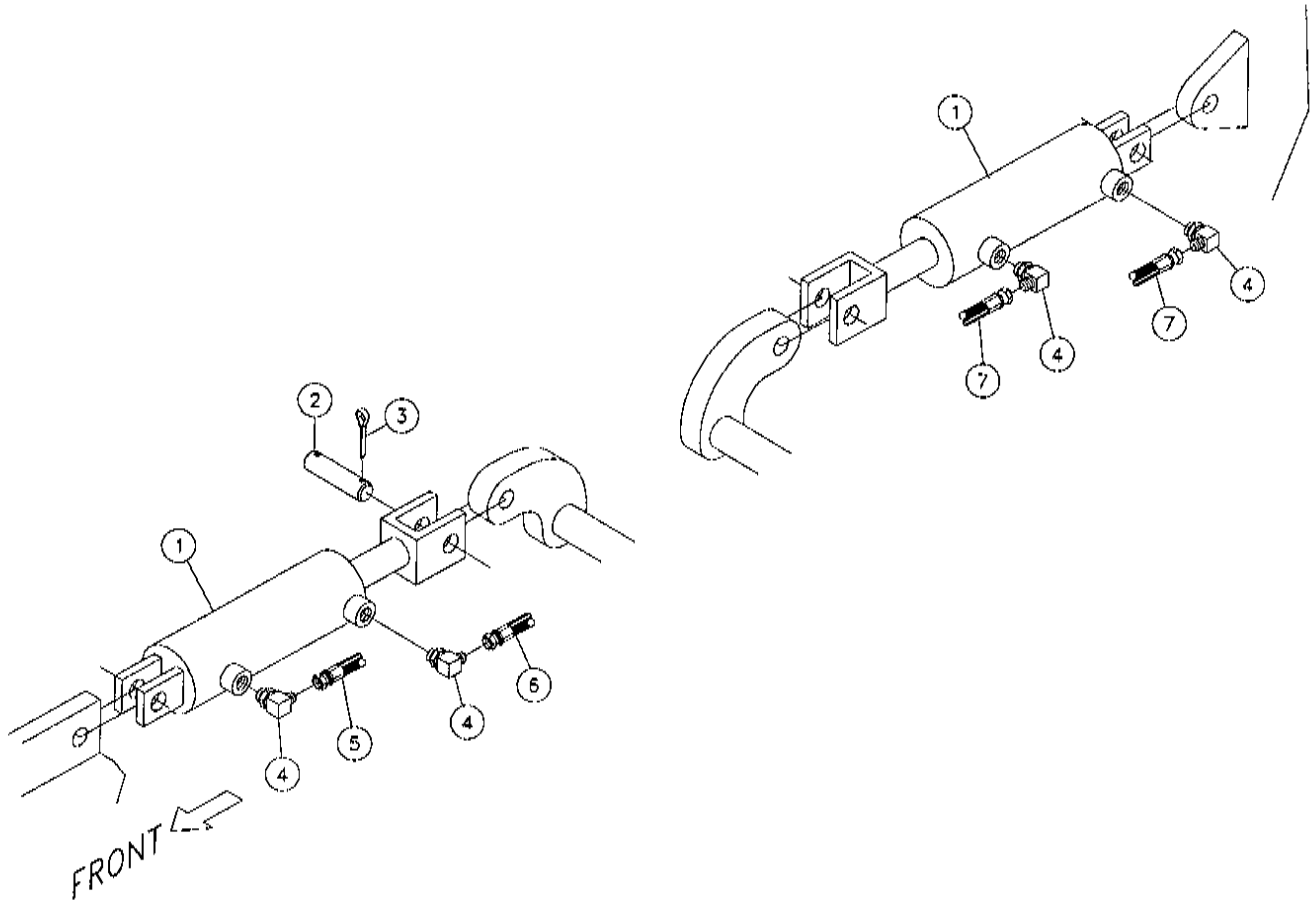


REF. NO.	PART NO.	DESCRIPTION	QTY.
10-6	1	219107-001 CYL-2 X 5 (BREAKDOWN FIG. 10-9)	2
10-6	2	82931-001 FITTING-6MX4M JIC 45DEG.ELBOW	3
10-6	3	53843-241 HOSE-1/4X34 4FS JIC 3000 PSI	1
10-6	4	*53843-519 HOSE-1/4X36 4FSJICST/4FSJIC90	1
10-6	5	*902445-001 PIN-CYLINDER	4
10-6	6	*53843-377 HOSE-1/4X38 4FS JIC 3000 PSI	2
10-6	7	57968-001 6M O-RING 4M JIC STRAIGHT	1
10-6	8	*510-047 COTTER PIN-3/16" X 1 1/4"	8

ROD LIFTER CYLINDER ASSEMBLY

Figure 10-7

Revised November 1997 due to hose
update & hardware correction. Changed
parts marked with *.

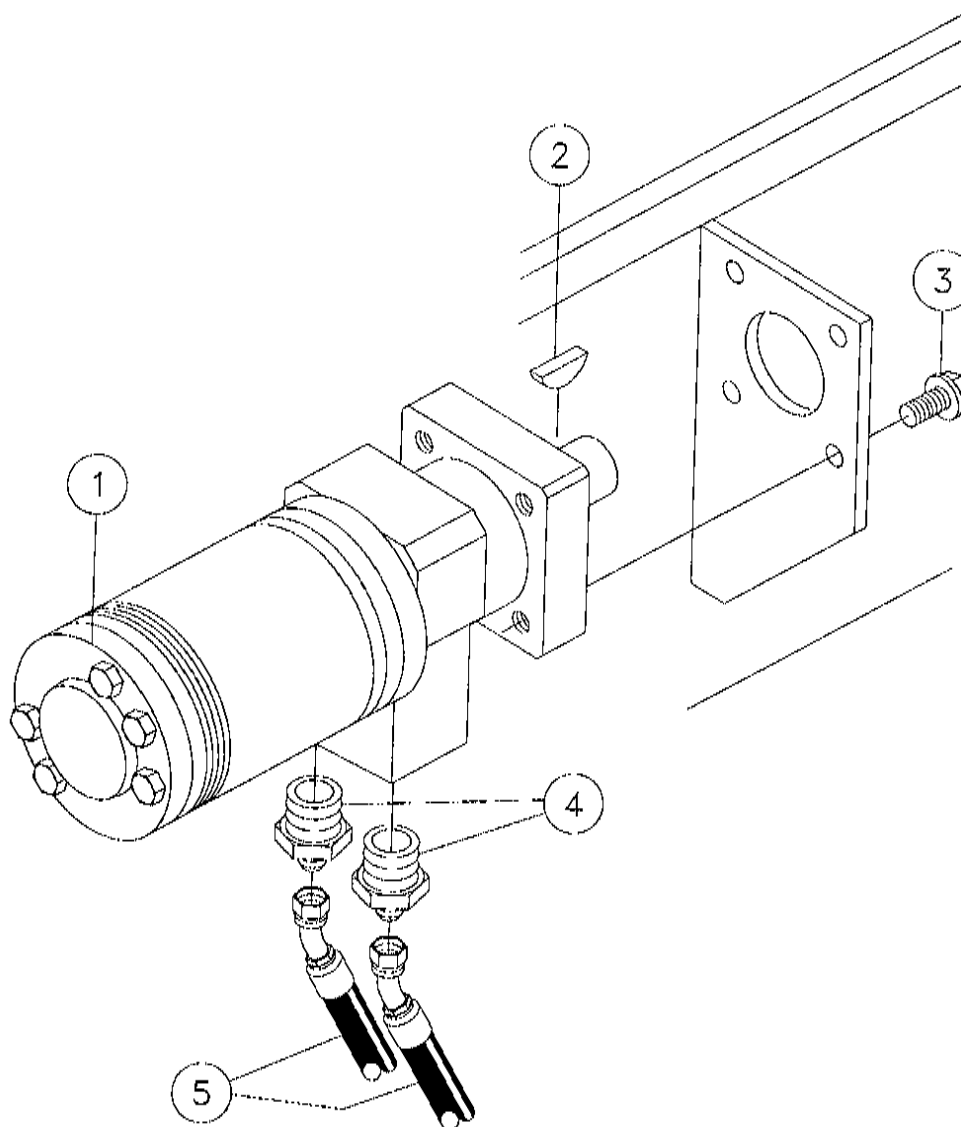


REF. NO.	PART NO.	DESCRIPTION	QTY.
10-7	1	230958-001 CYLINDER-1 1/2 X 5 (BREAKDOWN FIG. 10-10)	2
10-7	2	902445-001 PIN-CYLINDER	4
10-7	3	*510-047 COTTER PIN-3/16" X 1 1/4"	8
10-7	4	600118-001 FITTING-6MORINGX4MJIC90	4
10-7	5	*53843-005 HOSE-1/4X54 4FS JIC 3000PSI	1
10-7	6	*53843-709 HOSE-1/4X48 4FS JIC 3000 PSI	1
10-7	7	53843-759 HOSE-1/4X58 4FSJICST/90 3000#	2

ROTATION MOTOR ASSEMBLY

Figure 10-8

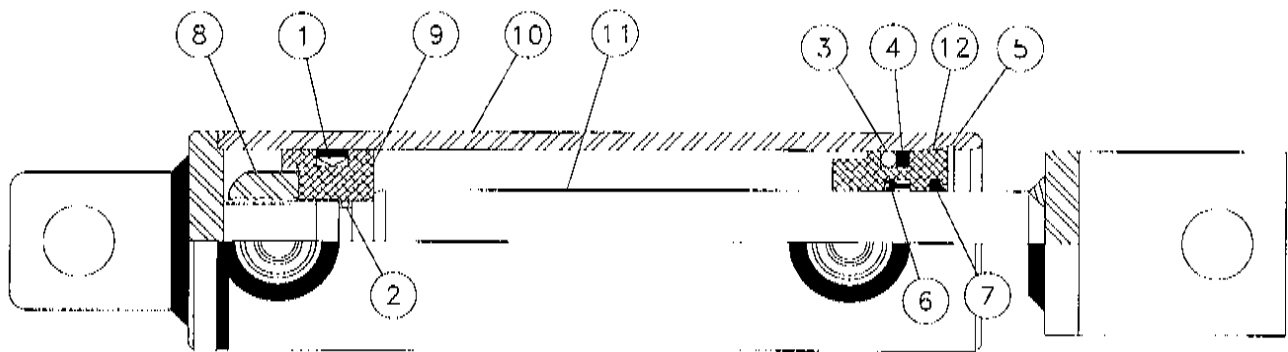
Revised November 1997 due to hose update. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
10-8	1	214193-001 MOTOR-HYD (BREAKDOWN FIG. 10-11)	1
10-8	2	542-009 WOODRUFF KEY-#15 1/4 X 1	1
10-8	3	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	4
10-8	4	101507-001 FITTING-10MORX4MJIC STR.	2
10-8	5	*244261-001 HOSE-1/4X26 4FS JIC ST/45 (3000)	2

HYDRAULIC CYLINDER COMPONENTS - 2" X 5"

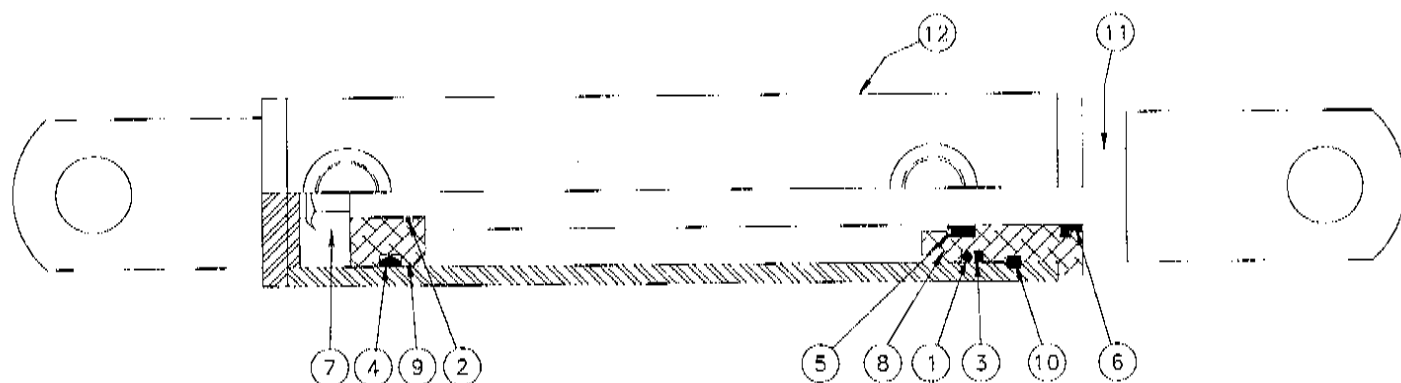
Figure 10-9



<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
10-9	1	200833-001 UNIRING 12G-200120-312	1
10-9	2	208-007 O-RING-SPRG CAP	1
10-9	3	51181-001 O-RING	1
10-9	4	200914-001 WASHER-326 BACKUP	1
10-9	5	602-200 SNAP RING-INT. N5000-200	1
10-9	6	219107-009 LOADED U-CUP	1
10-9	7	219107-011 ROD WIPER	1
10-9	8	330-011 NUT-7/8-14 NF SLTL GR.C	1
10-9	9	219107-013 PISTON	1
10-9	10	219107-003 BARREL ASSEMBLY	1
10-9	11	219107-005 ROD ASSEMBLY	1
10-9	12	219107-007 SNAP RING HEAD	1
	219107-001	CYL-2 X 5 (INC. REF. 1-12)	
	219107-015	REPAIR KIT-2"CYLINDER (INC. REF. 1-7)	

HYDRAULIC CYLINDER COMPONENTS - 1 1/2" X 5"

Figure 10-10



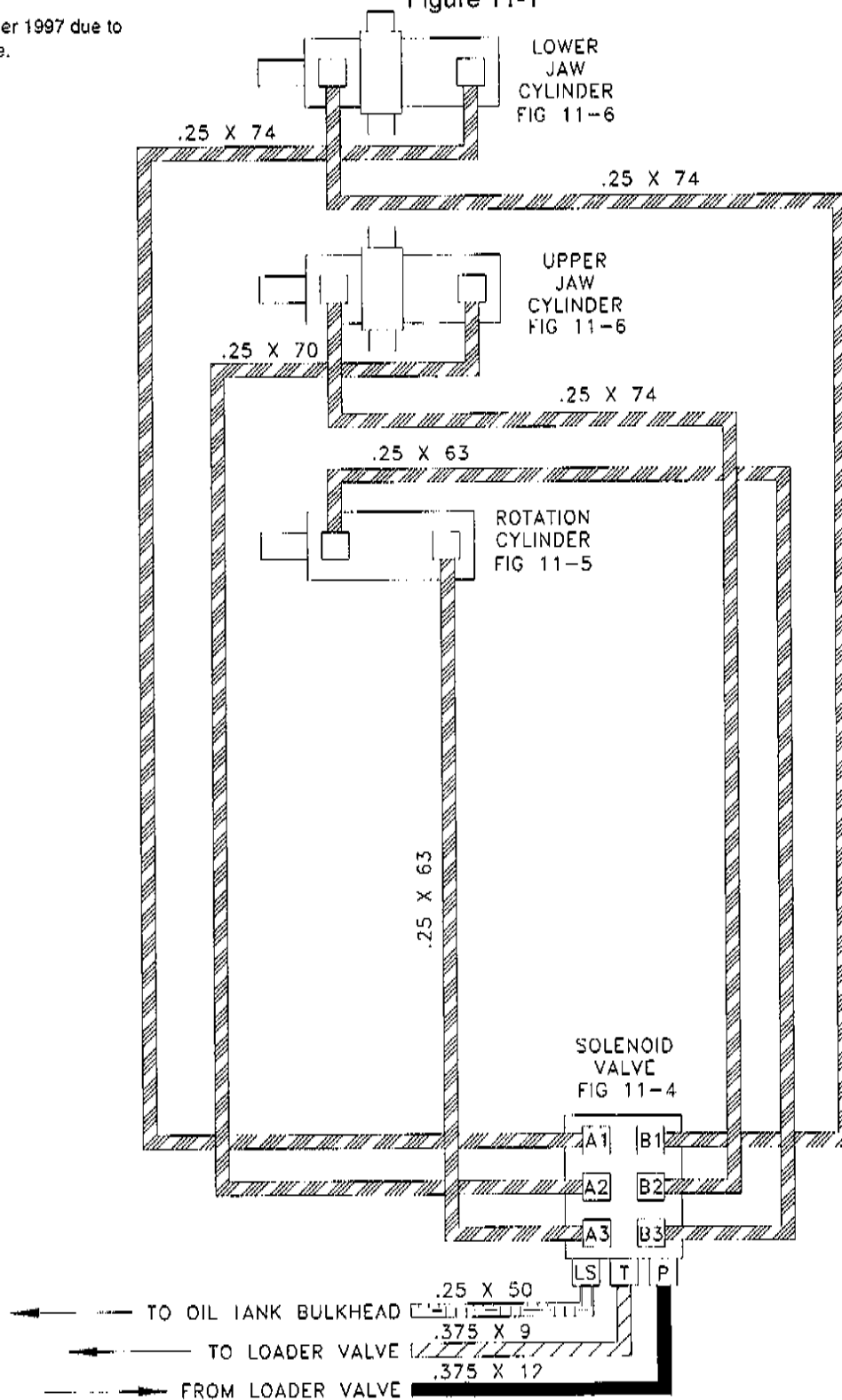
REF. NO.	PART NO.	DESCRIPTION	QTY.
10-10	1	4883-001 O-RING	1
10-10	2	16138-031 O-RING	1
10-10	3	60531-001 BACK-UP WASHER	1
10-10	4	230958-003 UNIRING	1
10-10	5	230958-005 ROD SEAL	1
10-10	6	230958-007 WIPER-ROD	1
10-10	7	230958-009 NUT	1
10-10	8	230958-011 HEAD	1
10-10	9	230958-013 PISTON	1
10-10	10	230958-015 KEYSTOCK	1
10-10	11	230958-017 ROD-PISTON	1
10-10	12	230958-019 BODY-CYLINDER	1
	230958-001	CYLINDER-1 1/2 X 5 (INC. REF. 1-12)	
	230958-021	REPAIR KIT -1 1/2" CYL (INC. REF. 1-6)	

Figure 10-11

HYDRAULIC COMPONENTS LOCATION DIAGRAM - VISE CLAMP

Figure 11-1

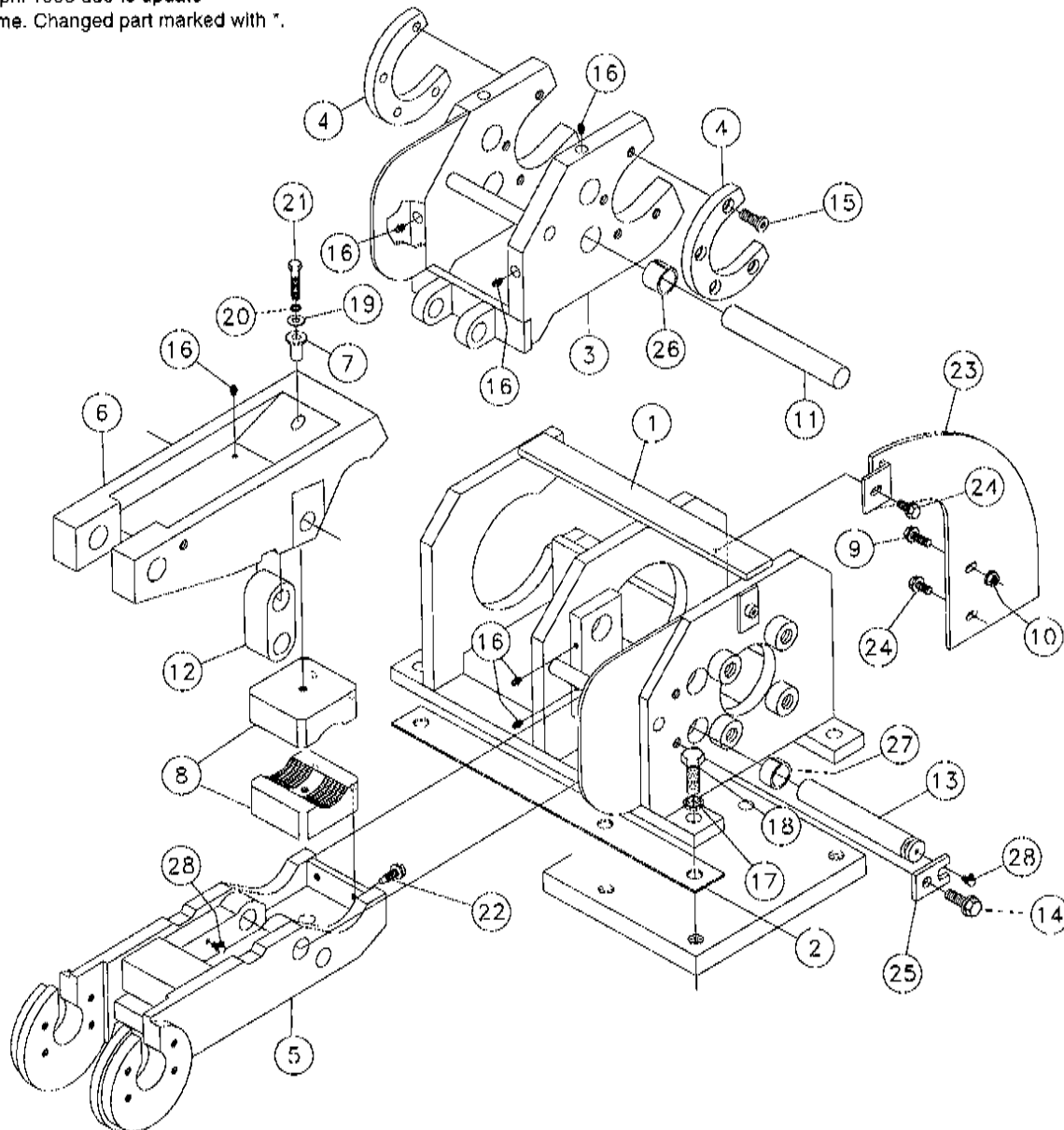
Revised November 1997 due to
schematic update.



CLAMP ASSEMBLY

Figure 11-2

Revised April 1998 due to update
of vise frame. Changed part marked with *.

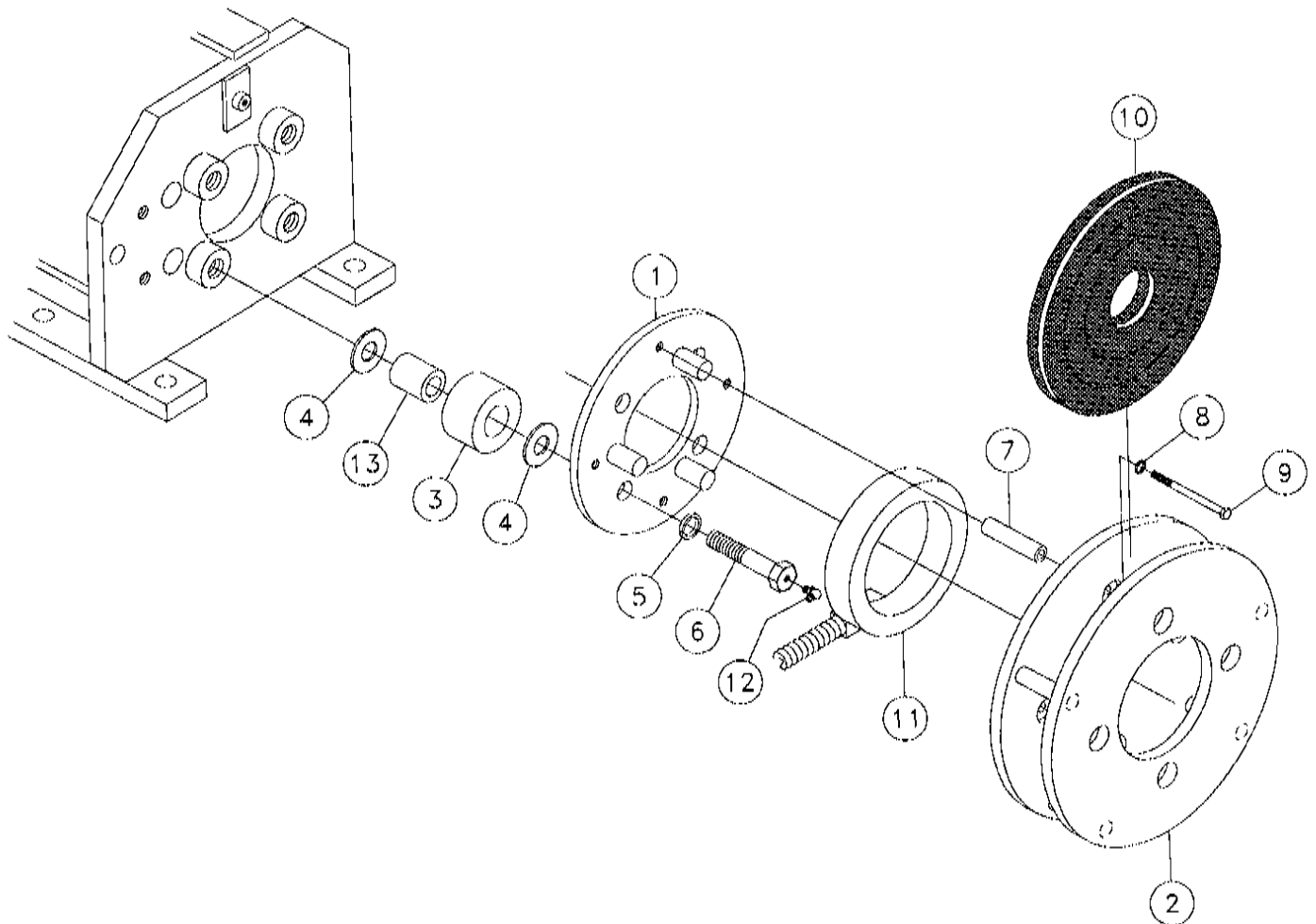


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
11-2	1	*243025-003 FRAME ASSY.-VISE (INC. TWO OF REF. 16 & REF. 27)	1	11-2	13	240909-003 PIN ASSY.-VISE (INC. ONE OF REF. 28)	2
11-2	2	228030-001 SHIM-MOUNTING 1/16	A/R	11-2	14	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	2
		228036-001 SHIM-MOUNTING 1/8	A/R	11-2	15	240854-001 SCREW-1/2"-13X 1 1/4" LOW SH	8
11-2	3	240885-003 PIVOT ASSY. (INC. FOUR OF REF. 16 & REF. 26)	1	11-2	16	598-001 ZERK-1/4 NF ST GREASE	6
11-2	4	240908-001 PLATE-INSERT	2	11-2	17	480-017 WASHER-3/4 S/T LOCK	6
11-2	5	240910-003 ARM ASSY.-LOWER VISE (INC. TWO OF REF. 28)	2	11-2	18	369-020 3/4-10X2" GRADE#5 HEX BOLT	6
11-2	6	240916-003 ARM ASSY.-UPPER VISE (INC. TWO OF REF. 16)	2	11-2	19	485-007 WASHER-3/8 FLAT	2
11-2	7	228064-001 INSERT-FASTENER	2	11-2	20	480-007 WASHER-3/8 S/T LOCK	2
11-2	8	230831-001 DIE-CONTOUR VERMEER 2 5/8	4	11-2	21	354-016 BOLT-3/8-16X1 3/4" GRADE#5 HEX	2
11-2	9	4475-010 BOLT-3/8-16X1 FLANGE WHIZ	1	11-2	22	230842-001 BOLT-JAW PIN	4
11-2	10	4536-001 NUT - 3/8-16 FLG. WHIZ LOCK	1	11-2	23	228066-001 PLATE- GUIDE	1
11-2	11	240918-001 PIN-PIVOT	2	11-2	24	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	2
11-2	12	240917-001 PLATE-LINK	2	11-2	25	235929-001 PLATE-TAB	2
				11-2	26	240877-001 BUSHING-1 3/8 OD X 1 1/8" ID X 1"	4
				11-2	27	240878-001 BUSHING-1 3/8" OD X 1 1/8" ID X 3/4"	4
				11-2	28	597-001 ZERK-1/4 NF X 90 D GREASE	4

ZAP ALERT COIL ASSEMBLY

Figure 11-3

Revised April 1998 due to update of
guide roller assy. Changed/added
parts marked with *.

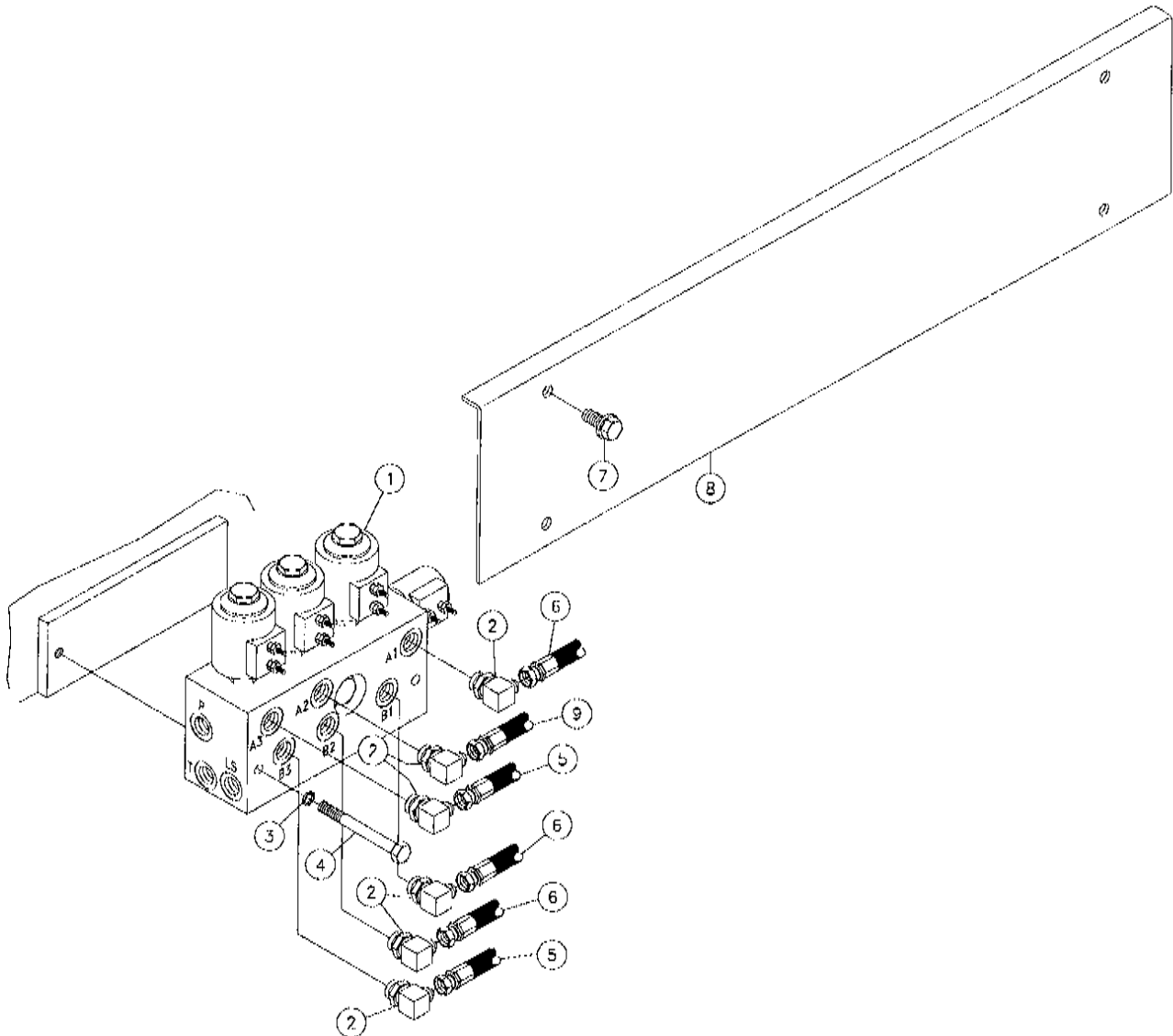


REF. NO.	PART NO.	DESCRIPTION	QTY.
11-3	1	228051-001 SUPPORT-ROLLER	1
11-3	2	235313-001 HOLDER-ROD WIPER	1
11-3	3	*244679-001 ROLLER-GUIDE	4
11-3	4	*485-017 WASHER-3/4 FLAT	8
11-3	5	480-017 WASHER-3/4 S/T LOCK	4
11-3	6	235915-003 BOLT ASSEMBLY-GREASE (INC. ONE OF REF. 12)	4
11-3	7	1070-049 TUBE-5/8ODX11GA.-2 9/16"	4
11-3	8	480-007 WASHER-3/8 S/T LOCK	4
11-3	9	354-034 BOLT-3/8-16X3 1/2" GRADE#5 HEX	4
11-3	10	235924-001 WIPER-2 3/8 OD ROD	1
11-3	11	230814-001 ZAP ALERT COIL -14' COAX(3-WIRE)	1
11-3	12	597-001 ZERK-1/4" NF 90 DEG GREASE	4
11-3	13	*244678-001 BUSHING-GUIDE ROLLER	4

SOLENOID VALVE ASSEMBLY - 3 BANK (VISE CLAMP)

Figure 11-4

Revised November 1997 due to hose
updates. Changed parts marked with *.

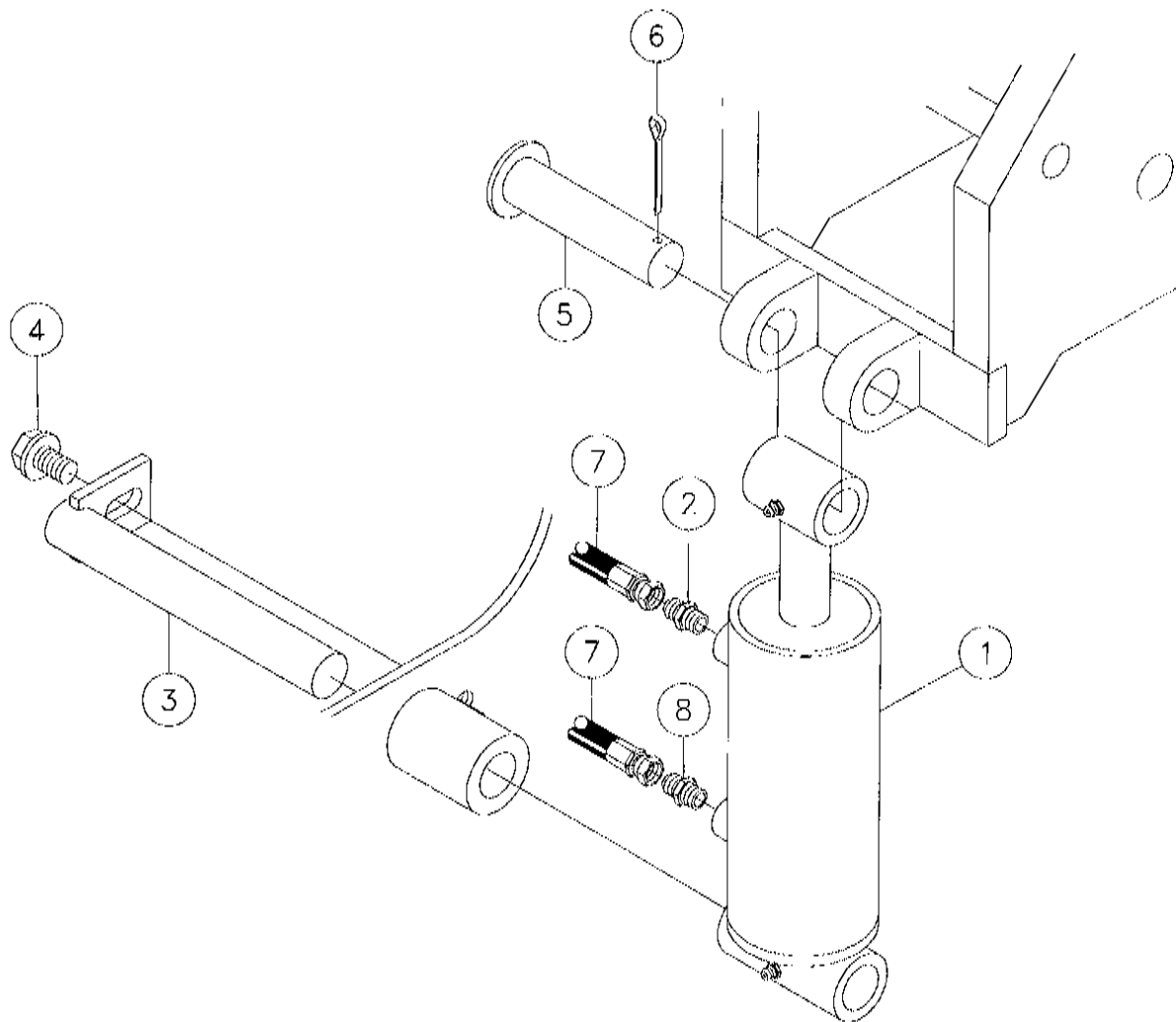


REF. NO.	PART NO.	DESCRIPTION	QTY.
11-4	1	228128-001 VALVE-3 SECTION 3-WAY SOLENOID (BREAKDOWN FIG. 5-21)	1
11-4	2	57950-001 FITTING-6M X 4 JIC 90 DEG.	6
11-4	3	480-005 WASHER-5/16 S/T LOCK	2
11-4	4	351-030 5/16-18X3" GRADE #5 HEX BOLT	2
11-4	5	53843-587 HOSE-1/4X63 4FS JIC 3000 PSI	2
11-4	6	*53843-119 HOSE-1/4X74 4FS JIC ST/ST (100R1)	3
11-4	7	4475-006 BOLT-3/8-16X3/4 FLG WHIZ	4
11-4	8	228090-001 COVER-HOSE	1
11-4	9	*53843-689 HOSE-1/4X70 4FS JIC 3000 PSI	1

ROTATION CYLINDER ASSEMBLY

Figure 11-5

Revised November 1997 due to fitting
update. Changed part marked with *.

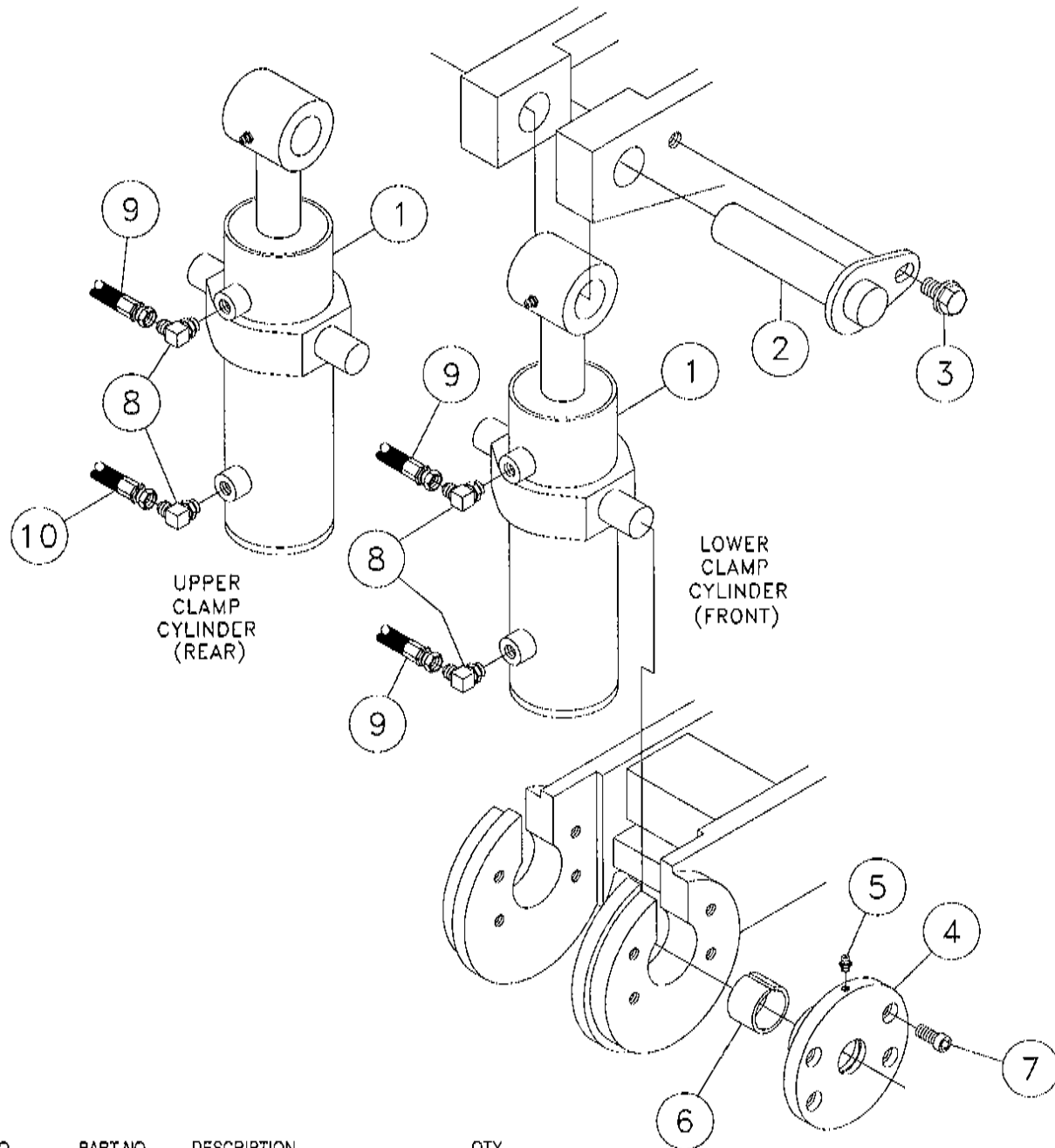


REF. NO.	PART NO.	DESCRIPTION	QTY.
11-5	1	228021-001 CYLINDER-2 1/2 X 3 HYD (BREAKDOWN FIG. 11-8)	1
11-5	2	60908-001 FITTING-4MX4M JIC STR ADAPTER	1
11-5	3	228037-001 PIN-STATIONARY	1
11-5	4	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	1
11-5	5	228061-001 PIN-TILT	1
11-5	6	510-025 COTTER PIN-3/16" X 2"	1
11-5	7	53843-587 HOSE-1/4X63 4FS JIC 3000 PSI	2
11-5	8	*245007-001 FITTING-4MOR X 4MJIC R.063	1

JAW CYLINDER ASSEMBLY

Figure 11-6

Revised November 1997 due to cylinder change, trunion bushing update and hardware & hose updates (Serial No. 219). Changed parts marked with *.

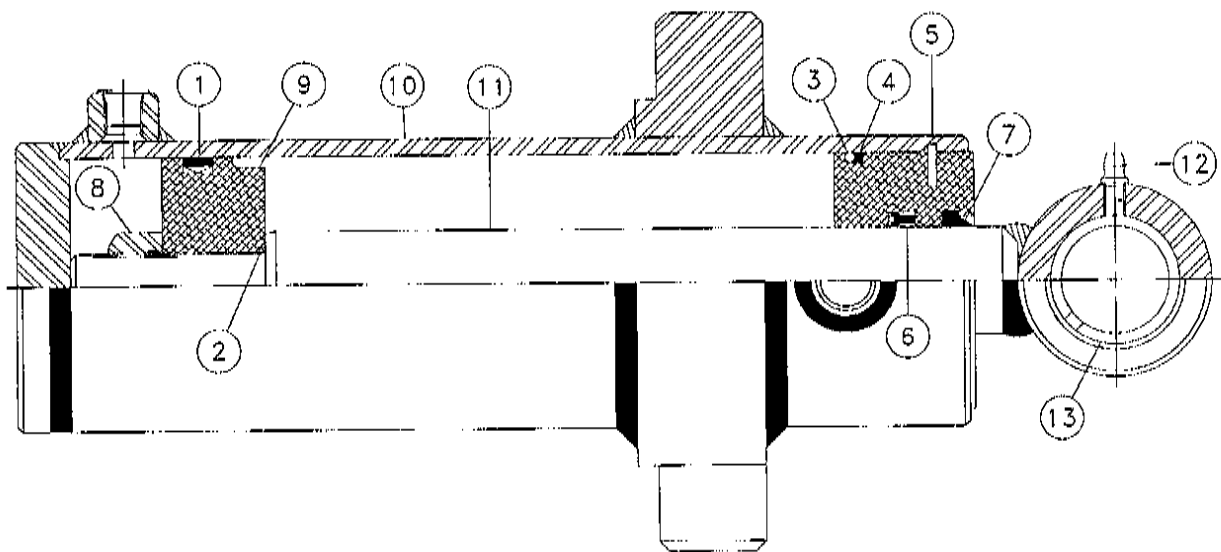


REF. NO.	PART NO.	DESCRIPTION	QTY.
11-6	1	*228165-001 CYLINDER-2 1/2" X 6 5/8 HYD (BREAKDOWN FIG. 11-7)	2
11-6	2	228058-001 PIN-CLAMP	2
11-6	3	4476-006 BOLT-1/2-13X3/4 FLG WHIZ	2
11-6	4	*240907-001 BUSHING-TRUNNION (INC. REF. 5 & 6)	4
11-6	5	598-001 ZERK-1/4" NF ST GREASE	4
11-6	6	1835-025 BSHG.-STL.- 1 1/2 X 1 1/4 X 1	4
11-6	7	*601696-010 SOCK HD CAP SCREW 3/8-16X1" ZINC	16
11-6	8	59423-001 FIT-4M JICX4M ADJ.90 DEG.ELBOW	1
11-6	9	*53843-119 HOSE-1/4X74 4FS JIC ST/ST (100R1)	3
11-6	10	*53843-689 HOSE-1/4X70 4FS JIC 3000 PSI	1

HYDRAULIC CYLINDER COMPONENTS - 2 1/2" X 6 5/8"

Figure 11-7

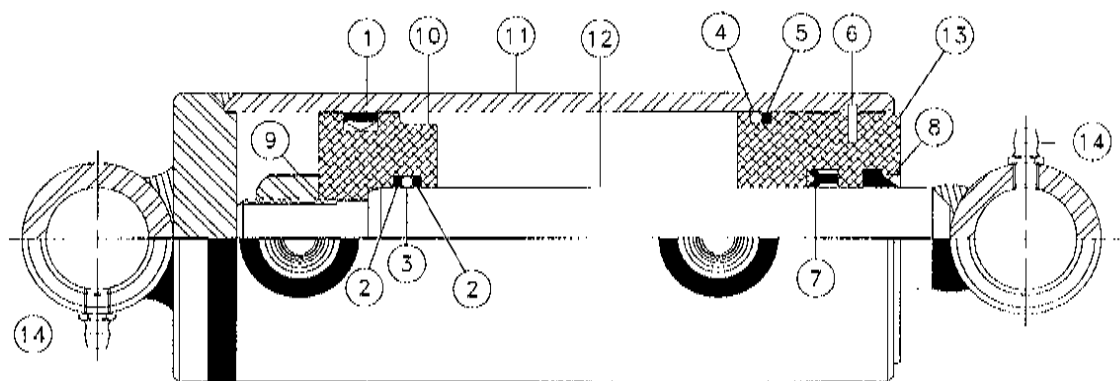
Revised November 1997 due to
cylinder update (Serial No.219).



<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
11-7	1	228165-003 PSP SEAL	1
11-7	2	228165-005 O-RING	1
11-7	3	228165-007 O-RING	1
11-7	4	228165-009 WASHER-BACKUP	1
11-7	5	228165-011 RING-IRETAINING	1
11-7	6	228165-013 POLYPAK SEAL	1
11-7	7	228165-015 DUST SEAL	1
11-7	8	230977-003 NUT	1
11-7	9	228165-017 PISTON	1
11-7	10	228165-019 BARREL ASSEMBLY	1
11-7	11	228165-021 ROD ASSEMBLY-PISTON (INC. REF. 12 & 13)	1
11-7	12	598-001 ZERK-1/4" NF ST GREASE	1
11-7	13	1835-025 BSHG.-STL.- 1 1/2 X 1 1/4 X 1	2
	228165-001	CYLINDER-2 1/2 X 6 5/8 HYD (INC. ALL ITEMS IN THIS FIGURE)	
	228165-023	SEAL KIT (INC. REF. 1-7)	

HYDRAULIC CYLINDER COMPONENTS - 2 1/2" X 3"

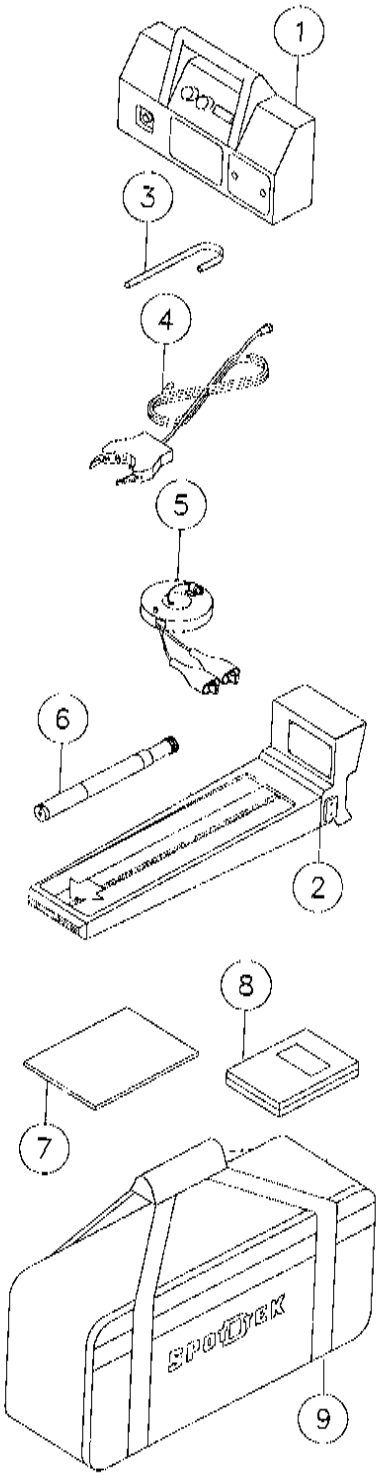
Figure 11-8



REF. NO.	PART NO.	DESCRIPTION	QTY.
11-8	1	200769-001 UNI-RING	1
11-8	2	208177-001 WASHER-BACKUP	2
11-8	3	208178-001 O-RING	1
11-8	4	51175-001 O-RING	1
11-8	5	200841-001 BACKUP WASHER	1
11-8	6	222440-009 INTERNAL SNAP RING	1
11-8	7	205001-001 1" LOADED U-CUP	1
11-8	8	219111-011 ROD WIPER	1
11-8	9	93180-007 LOCKOUT .750-16 UNF	1
11-8	10	228021-003 PISTON	1
11-8	11	228021-005 BODY ASSEMBLY-CYLINDER (INC. REF. 14)	1
11-8	12	228021-007 ROD ASSEMBLY-CYLINDER (INC. REF. 14)	1
11-8	13	200925-001 GLAND	1
11-8	14	598-001 ZERK-1/4" NF ST GREASE	2
	228021-001	CYLINDER-2 1/2 X 3 HYD (INC. REF. 1-14)	
	228021-009	SEAL KIT (INC. REF. 1-8)	

LOCATION PACKAGE, SPOT D TEK II.2 UTILITY

Figure 12-1



REF. NO.	PART NO.	DESCRIPTION	QTY.
12-1	1	213900-019 SUNSCREEN FOR TRANSMITTER	1
		213900-003 TRANSMITTER FOR SPOT D TEK II	1
12-1	2	215941-001 RECEIVER II.2	1
12-1	3	213900-013 GROUND STAKE - SPOT D TEK II	1
12-1	4	213900-007 EXTERNAL COIL - SPOT D TEK II	1
12-1	5	213900-015 DIRECT CONNECTION CABLE	1
12-1	6	215942-001 DIR. PROBE II.2 (BREAKDOWN FIG. 12-4)	1
12-1	7	215938-003 OPERATIONAL MANUAL	1
12-1	8	213900-021 VIDEO TAPE	1
12-1	9	213900-009 CASE FOR SPOT D TEK II	1

215938-001 SPOTDTEK II.2 UTILITY LOC. PKG
(INC. REF. 1-9)

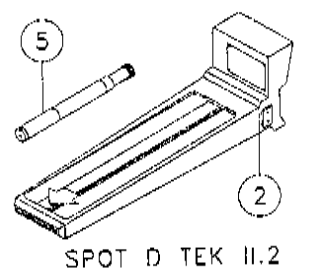
ACCESSORIES

213900-023 SUNSCREEN-RECEIVER/11.2 MONITOR
213900-025 RAINCOVER-RECEIVER

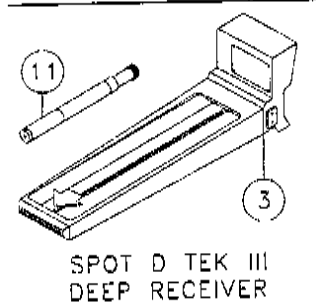
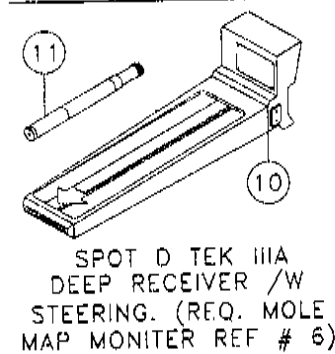
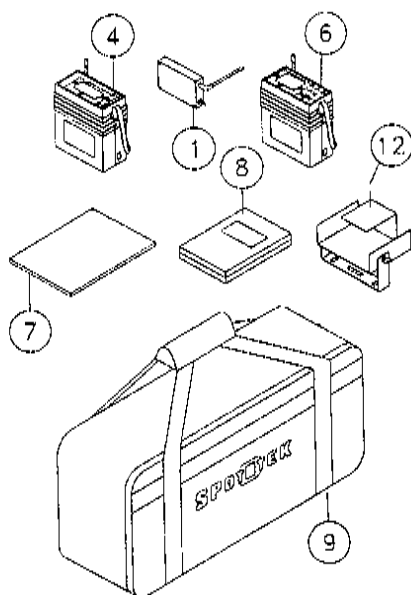
LOCATION PACKAGE, SPOT D TEK II.2, III & IIIA

Figure 12-2

Revised April 1998 due to addition
of remote monitor holder. Added
part marked with *.



SPOT D TEK II.2

SPOT D TEK III
DEEP RECEIVERSPOT D TEK IIIA
DEEP RECEIVER /W
STEERING. (REQ. MOLE
MAP MONITOR REF # 6)

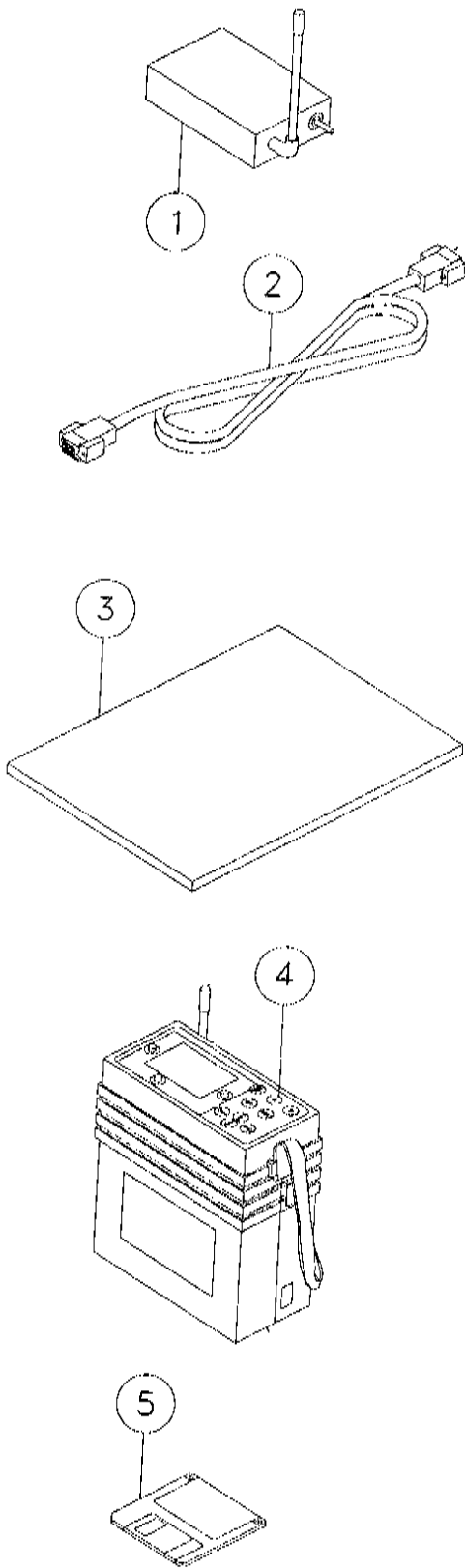
REF. NO.	PART NO.	DESCRIPTION	QTY.
12-2	1	213902-005 WIRELESS TRANSMITTER	1
12-2	2	215941-001 RECEIVER II.2	1
12-2	3	231197-003 RECEIVER-III	1
12-2	4	215943-001 WIRELESS MONITOR II.2	1
12-2	5	215942-001 DIR.PROBE II.2 (BREAKDOWN FIG. 12-4)	1
12-2	6	231109-001 MONITOR - MOLE MAP	1
12-2	7	215938-003 OPERATIONAL MANUAL	1
12-2	8	215940-003 VIDEO TAPE-INSTRUCTIONAL (LOCATING W/ PROBES)	1
12-2	9	213900-009 CASE FOR SPOT D TEK II	1
12-2	10	231111-003 RECEIVER-III	1
12-2	11	231110-001 SPOT-D-TEK DEEP SONDE (BREAKDOWN FIG. 12-5)	1
12-2	12	*244935-001 HOLDER ASSY.-REMOTE MONITOR	1
	215940-001	SPOTDTEK II.2 REMOTE MON. PKG. (INC. REF. 1 & 4)	
	215939-001	SPOTDTEK II.2 DIRECT.BORE PKG. (INC. REF. 2, 5 & 7-9)	
	231197-001	SPOT-D-TEK III DEEP RECEIVER (INC. REF. 3 & 7-9)	
	231111-001	SPOT-D-TEK IIIA DEEP REC W/REM STEERING FUNCTION (INC. REF. 7-9 & 10)	

ACCESSORIES

216871-001	ANTENNA-TRANSMITTER/MONITOR
213900-023	SUNSCREEN-RECEIVER II.2 MONIT
213900-025	RAINCOVER-RECEIVER
213902-011	RAINCOVER-II.2 MONITOR
238762-001	SUNSCREEN-MOLE MAP MONITOR
238763-001	RAIN COVER-MOLE MAP MONITOR

LOCATION PACKAGE, SPOT D TEK MOLE MAPPING SYSTEM

Figure 12-3



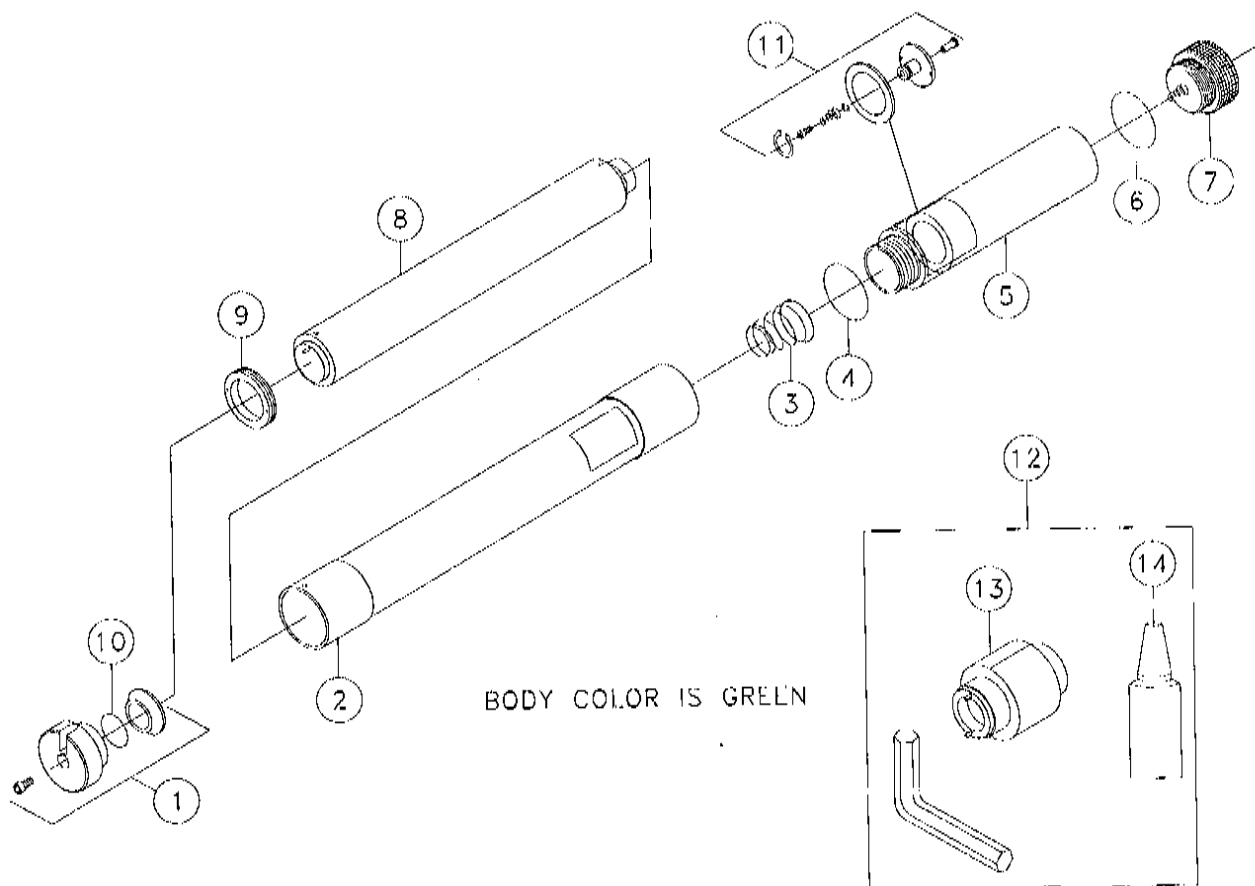
<u>REF. NO.</u>		<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
12-3	1	213902-005	WIRELESS TRANSMITTER (INC. REF. 3)	1
12-3	2	231109-005	COMPUTER CORD	1
12-3	3	231109-007	OPERATIONAL MANUAL	1
12-3	4	231109-001	MONITOR-MOLE MAP	1
12-3	5	231109-003	MAPPING SOFTWARE REPLACE DISK	1
		231113-001	MAPPING SYSTEM COMPLETE (INC. REF. 1-5)	

ACCESSORIES

238763-001	RAIN COVER-MOLE MAP MONITOR
238762-001	SUNSCREEN-MOLE MAP MONITOR
216871-001	ANTENNA-TRANSMITTER/MONITOR

SPOT-D-TEK II.2 DIRECTIONAL PROBE (REPAIRABLE) COMPONENTS

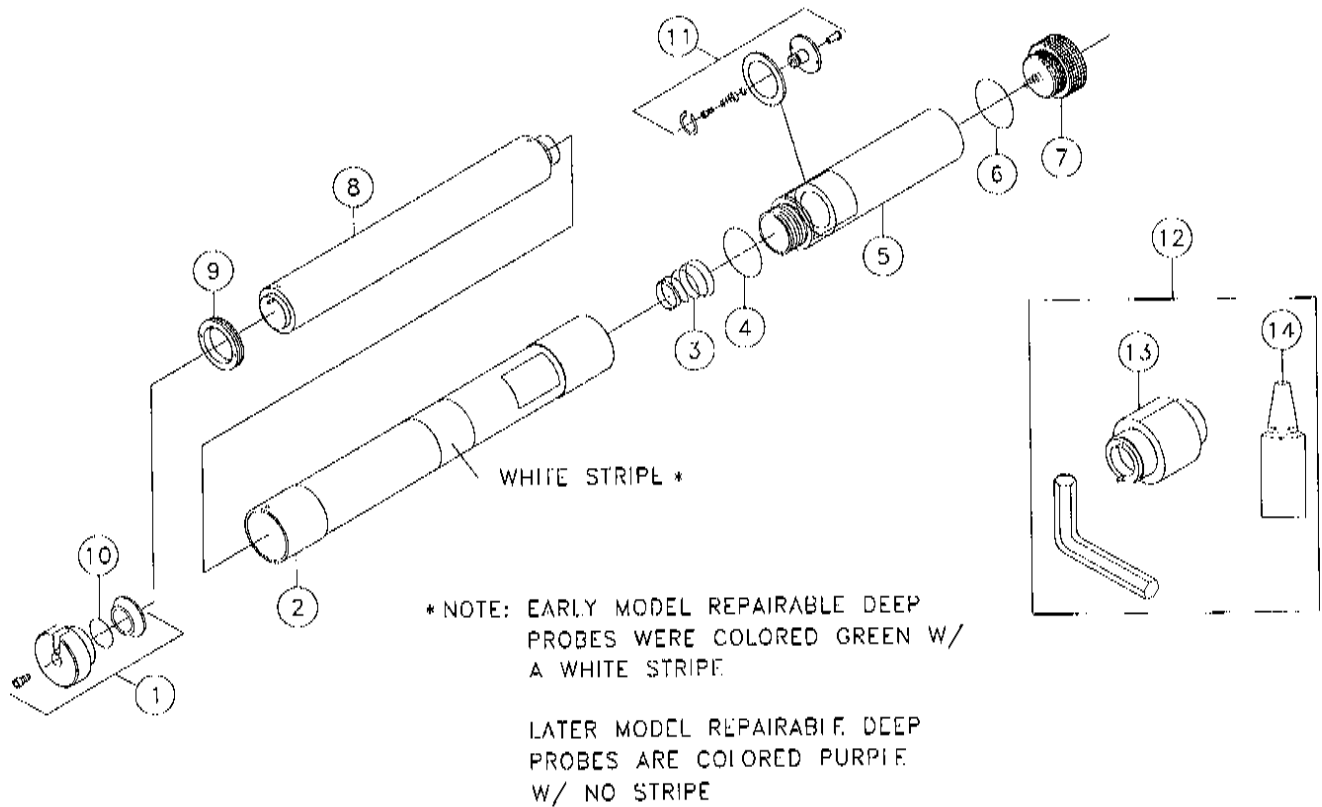
Figure 12-4



REF. NO.	PART NO.	DESCRIPTION	QTY.
12-4	1	215942-003 SLOTTED HEAD ASSEMBLY	1
12-4	2	215942-005 FIBER PROBE BODY 11.2	1
12-4	3	215942-007 SPRING - SUSPENSION	1
12-4	4	215942-009 O-RING	1
12-4	5	215942-011 BATTERY COMPARTMENT ASSEMBLY	1
12-4	6	215942-013 O-RING	1
12-4	7	215942-015 BATTERY CAP ASSEMBLY	1
12-4	8	215942-017 SOLID STATE ELEC. CAPSULE 11.2	1
12-4	9	215942-019 ROUND SET NUT	1
12-4	10	215942-021 O-RING	1
12-4	11	215942-023 BATTERY CONTACT ASSEMBLY	1
12-4	12	215942-025 MAINTENANCE TOOL KIT	1
12-4	13	215942-027 TOOL-CAPSULE LINE-UP	1
12-4	14	215942-029 SEALANT-SILICONE	1
	215942-001	DIR. PROBE II.2 (REPAIRABLE) (INC. ALL ITEMS IN THIS FIGURE)	

SPOT-D-TEK II.2 DEEP SONDE (REPAIRABLE) COMPONENTS

Figure 12-5

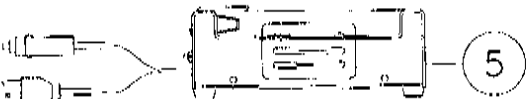
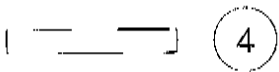
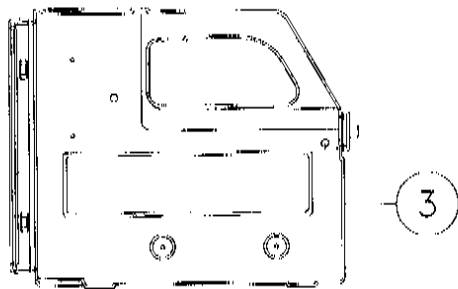
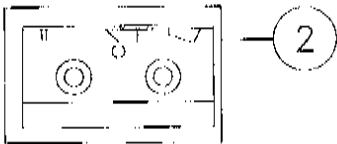
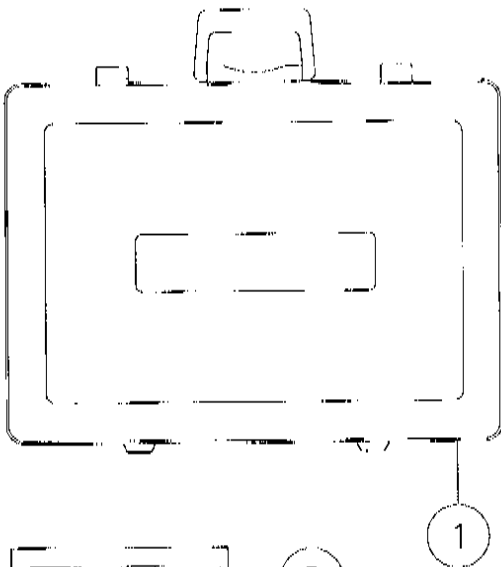


REF. NO.	PART NO.	DESCRIPTION	QTY.
12-5	1	215942-003 SLOTTED HEAD ASSEMBLY	1
12-5	2	231110-003 FIBER PROBE BODY 11.2 (DEEP)	1
12-5	3	215942-007 SPRING - SUSPENSION	1
12-5	4	215942-009 O-RING	1
12-5	5	215942-011 BATTERY COMPARTMENT ASSEMBLY	1
12-5	6	215942-013 O-RING	1
12-5	7	215942-015 BATTERY CAP ASSEMBLY	1
12-5	8	231110-005 SOLID STATE ELECT CAPSULE 11.2	1
12-5	9	215942-019 ROUND SET NUT	1
12-5	10	215942-021 O-RING	1
12-5	11	215942-023 BATTERY CONTACT ASSEMBLY	1
12-5	12	215942-025 MAINTENANCE TOOL KIT	1
12-5	13	215942-027 TOOL-CAPSULE LINE-UP	1
12-5	14	215942-029 SEALANT-SILICONE	1
	231110-001	SPOT-D-TEK DEEP SONDE (REPAIRABLE) (INC. ALL ITEMS IN THIS FIGURE)	

LOCATION PACKAGE, MARK III - DIGITRAK - DOMESTIC AND INTERNATIONAL

Figure 13-1

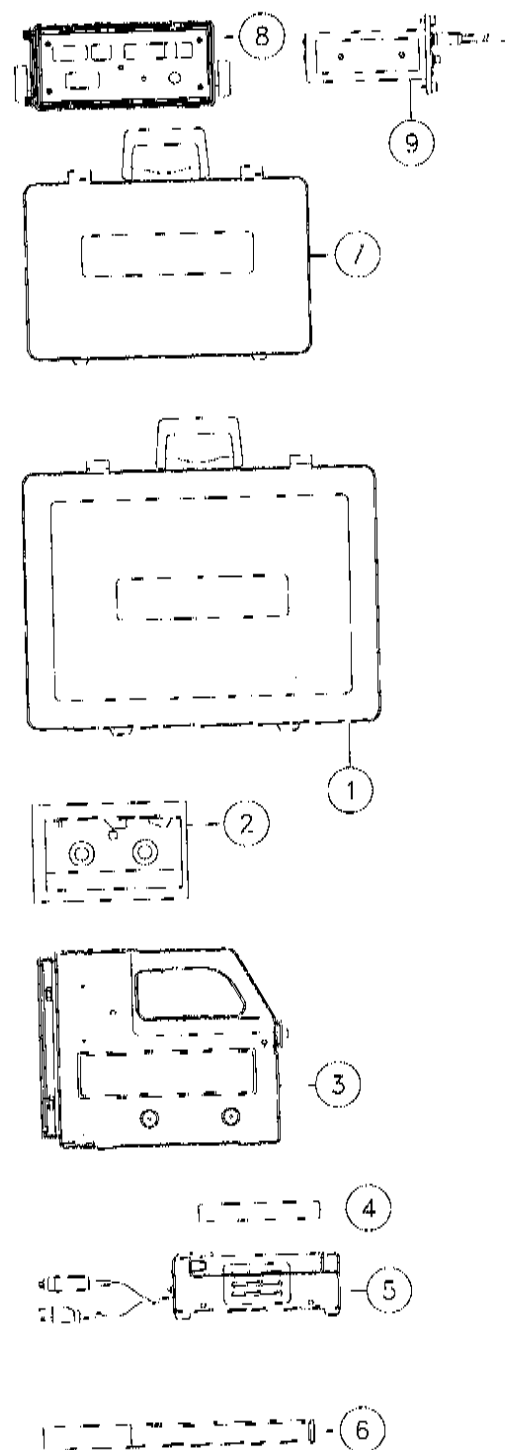
<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
13-1	1	213389-011 DIGITRAK CARRYING CASE	1
13-1	2	231990-001 DIGITRAK OP. MAN. TRAIN VIDEO	1
13-1	3	231991-001 DIGITRAK RECEIVER-ENGLISH/METR	1
13-1	4	213389-009 DIGITRAK BATTERY PACK	2
13-1	5	213389-007 DIGITRAK SMART CHARGER115/230V	1
13-1	6	221806-001 SONDE-15' BLUE	1
		221643-001 SONDE-50' RED	1
		213086-001 O-RING #122	3
		213389-005 SONDE-30' YELLOW	1
	231212-001	DIGITRAK STD.LOCATOR(US/CAN) (INC. REF. 1-5)	1



LOCATION PACKAGE, MARK III - DIGITRAK (W/ REMOTE DISPLAY) DOMESTIC

Figure 13-2

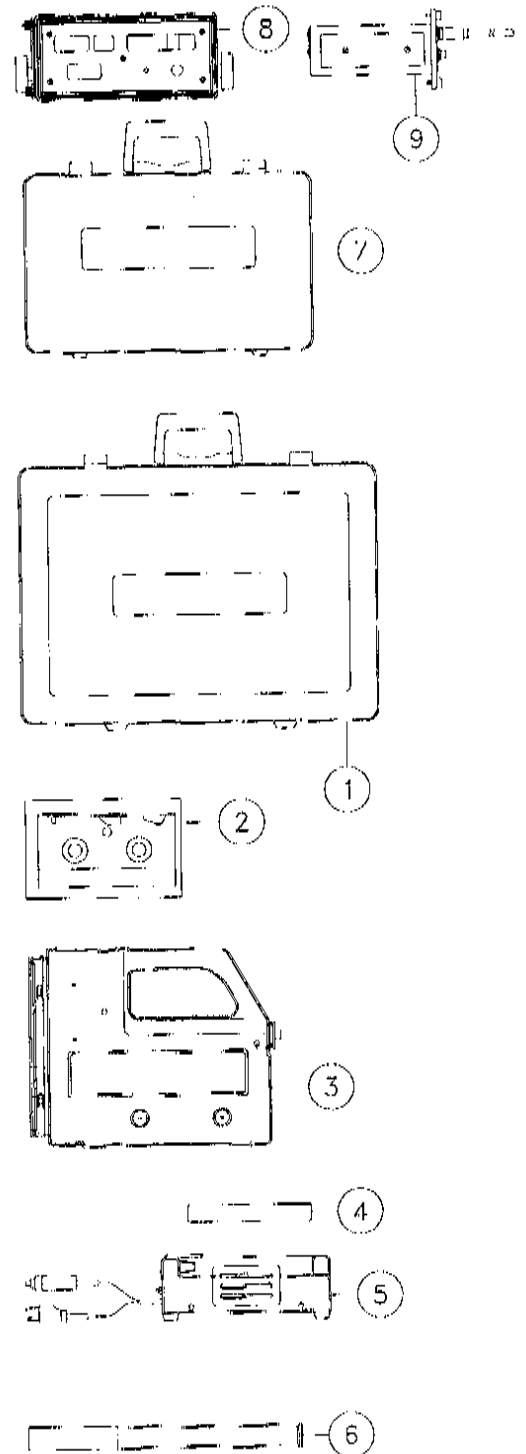
REF. NO.	PART NO.	DESCRIPTION	QTY. STD.	CABLE SONDE
13-2	1	213389-011 DIGITRAK CARRYING CASE	1	1
13-2	2	231990-001 DIGITRAK OP. MAN. TRAIN VIDEO	1	1
13-2	3	231992-001 RECEIVER W/REMOTE ENGLISH/METR	1	1
13-2	4	213389-009 DIGITRAK BATTERY PACK	2	-
13-2	5	213389-007 DIGITRAK SMART CHARGER 115/230V	1	-
13-2	6	221806-001 SONDE-15' BLUE	1	-
		221643-001 SONDE-50' RED	1	-
		226197-001 50'LR SONDE W/0.1% PITCH(MGT)	1	-
		226200-001 SONDE-100' CABLE .1P MAGENTA	-	1
		226199-001 SONDE-100' CABLE GREEN	-	1
		213086-001 O-RING #122	3	3
		213389-005 SONDE-30' YELLOW	1	-
13-2	7	221658-001 REMOTE CARRYING CASE	1	1
13-2	8	231993-001 DIGITRAK REMOTE DISPLAY	1	1
		231994-001 REMOTE DISPLY FOR CALBE SONDE	-	1
13-2	9	226195-001 CABLE SONDE POWER SUPPLY	-	1
		231218-001 DCI REMOTE LOCATOR SYS(US/CAN) (INC. REF. 1-5, 7 & 8)		
		231221-001 DCI REM CABLE SONDE SYS(US/CAN) (INC. REF. 1-3 & 7-9)		



LOCATION PACKAGE, MARK III - DIGITRAK (W/ REMOTE DISPLAY) INTERNATIONAL

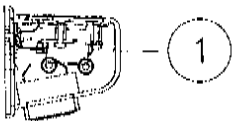
Figure 13-3

REF. NO.	PART NO.	DESCRIPTION	QTY. STD.	CABLE SONDE
13-3	1	213389-011 DIGITRAK CARRYING CASE	1	1
13-3	2	231990-001 DIGITRAK OP. MAN. TRAIN VIDEO	1	1
13-3	3	231995-001 RECEIVER W/REMOTE FUNCTION AU	1	1
		231996-001 RECEIVER W/REMOTE FUNCTION UK	1	1
13-3	4	213389-009 DIGITRAK BATTERY PACK	2	-
13-3	5	213389-007 DIGITRAK SMART CHARGER 115/230V	1	-
13-3	6	221806-001 SONDE-15' BLUE	1	-
		221643-001 SONDE-50' RED	1	-
		226197-001 50'LR SONDE W/0.1% PITCH(MGT)	1	-
		226200-001 SONDE-100' CABLE .1P MAGENTA	-	1
		226199-001 SONDE-100' CABLE GREEN	-	1
		213086-001 O-RING #122	3	3
		213389-005 SONDE-30' YELLOW	1	-
13-3	7	221658-001 REMOTE CARRYING CASE	1	1
13-3	8	231997-001 REMOTE DISPLAY AU	1	-
		231998-001 REMOTE DISPLY FOR CBLE SOND AU	1	1
		231999-001 REMOTE DISPLAY UK	1	-
		238750-001 REMOTE DISPLAY FOR CABLE SOND UK	1	1
13-3	9	226195-001 CABLE SONDE POWER SUPPLY	1	-
		231219-001 DCI REMOTE LOCATOR SYS (AU) (INC. REF. 1-5, 7 & 8)		
		231222-001 DCI REM CABLE SONDE SYS (AU) (INC. REF. 1-3 & 7-9)		
		231220-001 DCI REMOTE LOCATOR SYS (UK) (INC. REF. 1-5, 7 & 8)		
		231223-001 DCI REM CABLE SONDE SYS (UK) (INC. REF. 1-3 & 7-9)		

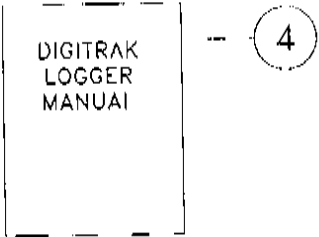
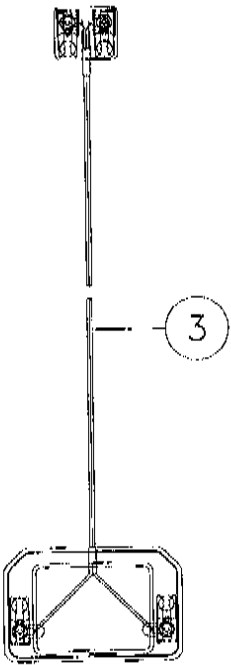
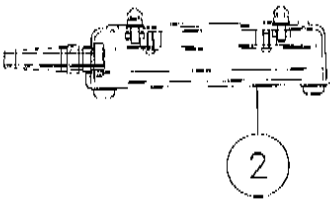


DATA LOGGER, MARK III - DIGITRAK

Figure 13-4

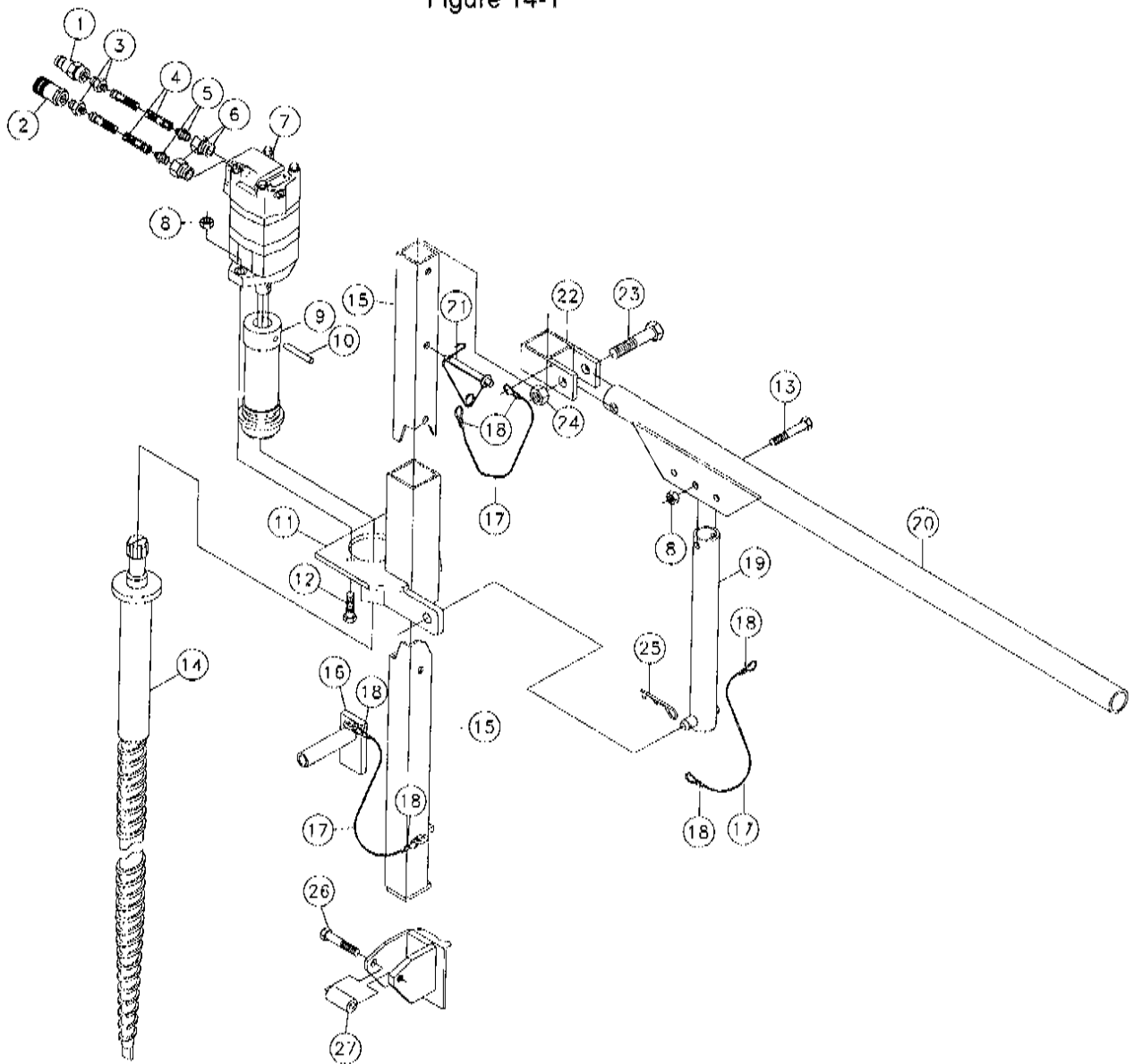


REF. NO.	PART NO.	DESCRIPTION	QTY.
13-4	1	231224-001 DATA LOGGER MODULE	1
13-4	2	231228-001 DATA-LOG/PC INTERFACE	1
13-4	3	238751-001 DATA LOG REAL TIME CABLE	1
13-4	4	238752-001 DIGITRAK LOGGER MANUAL	1



POWER STAKEDOWN ASSEMBLY

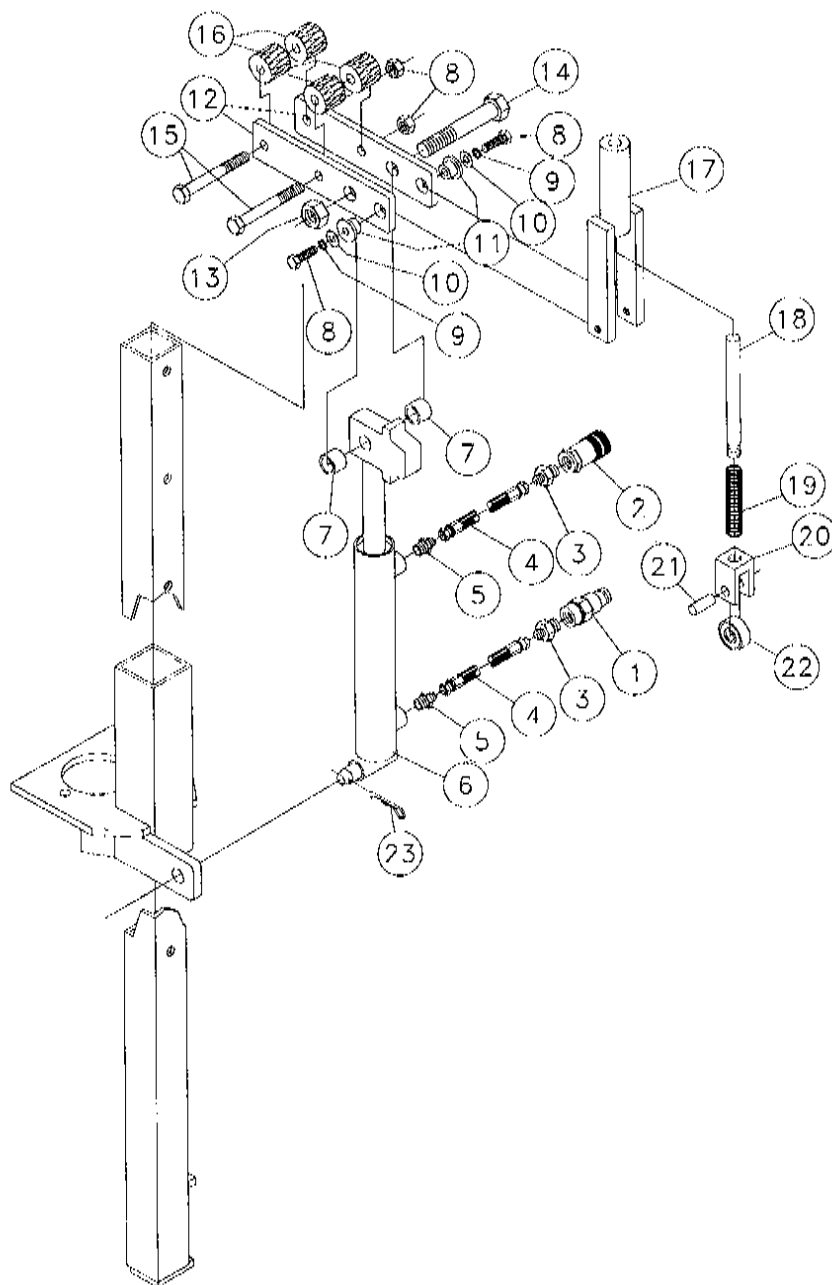
Figure 14-1



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
14-1	1	221503-001 COUPLER-3/8 NPT QUICK (MALE)	1	14-1	14	228504-001 STAKE-4 FT. EARTH	4
14-1	2	221504-001 COUPLER-3/8 NPT QUICK (FEMALE)	1	14-1	15	228509-001 TUBE-STAKING	1
14-1	3	93707-001 FITTING-4M JICX 3/8M NPT STR.	2	14-1	16	225019-001 BAR-LOCK	1
14-1	4	53843-099 HOSE-1/4X210 4FS JIC (100R1)	2	14-1	17	1830-007 CABLE-3/32" NYLON COATED (SPECIFY LENGTH)	A/R
14-1	5	57968-001 6M O-RING 4M JIC STRAIGHT	2	14-1	18	1838-001 CONNECTOR-WIRE (ETC)	6
14-1	6	57967-001 10M-6F O-RING BUSHING	2	14-1	19	228526-001 LINK	1
14-1	7	228514-001 MOTOR-HYD (BREAKDOWN FIG. 14-4)	1	14-1	20	228529-001 HANDLE	1
14-1	8	423-001 NUT-1/2 NC SLTL UTB	3	14-1	21	103734-001 LYNCH PIN - 1/2 X 3 1/2	1
14-1	9	228511-001 COUPLER-1 1/4" DRIVE	1	14-1	22	228524-001 COLLAR	1
		75814-041 Q.D. COLLAR KIT (INC. BRASS COLLAR, SNAP RING & THREE BALLS)	1	14-1	23	369-034 BOLT-3/4-10X3 1/2" GR5 HEX	1
14-1	10	228516-001 PIN-3/8X2 1/2 TYPE A GROOVED	1	14-1	24	434-001 NUT-3/4 NC SLTL	1
14-1	11	225016-001 MOUNT-MOTOR	1	14-1	25	1794-003 HAIR PIN COTTER - .148 WIRE	1
14-1	12	358-016 BOLT-1/2-13X1 3/4 GRADE #5 HEX	2	14-1	26	358-026 1/2-13X2 3/4" GRADE #5 HEX BOLT	1
14-1	13	358-030 1/2-13X3" GRADE #5 HEX BOLT	1	14-1	27	1081-049 TUBE-1" ODX9/16" IDX2 1/16	1

CYLINDER ASSIST - POWER STAKE DOWN

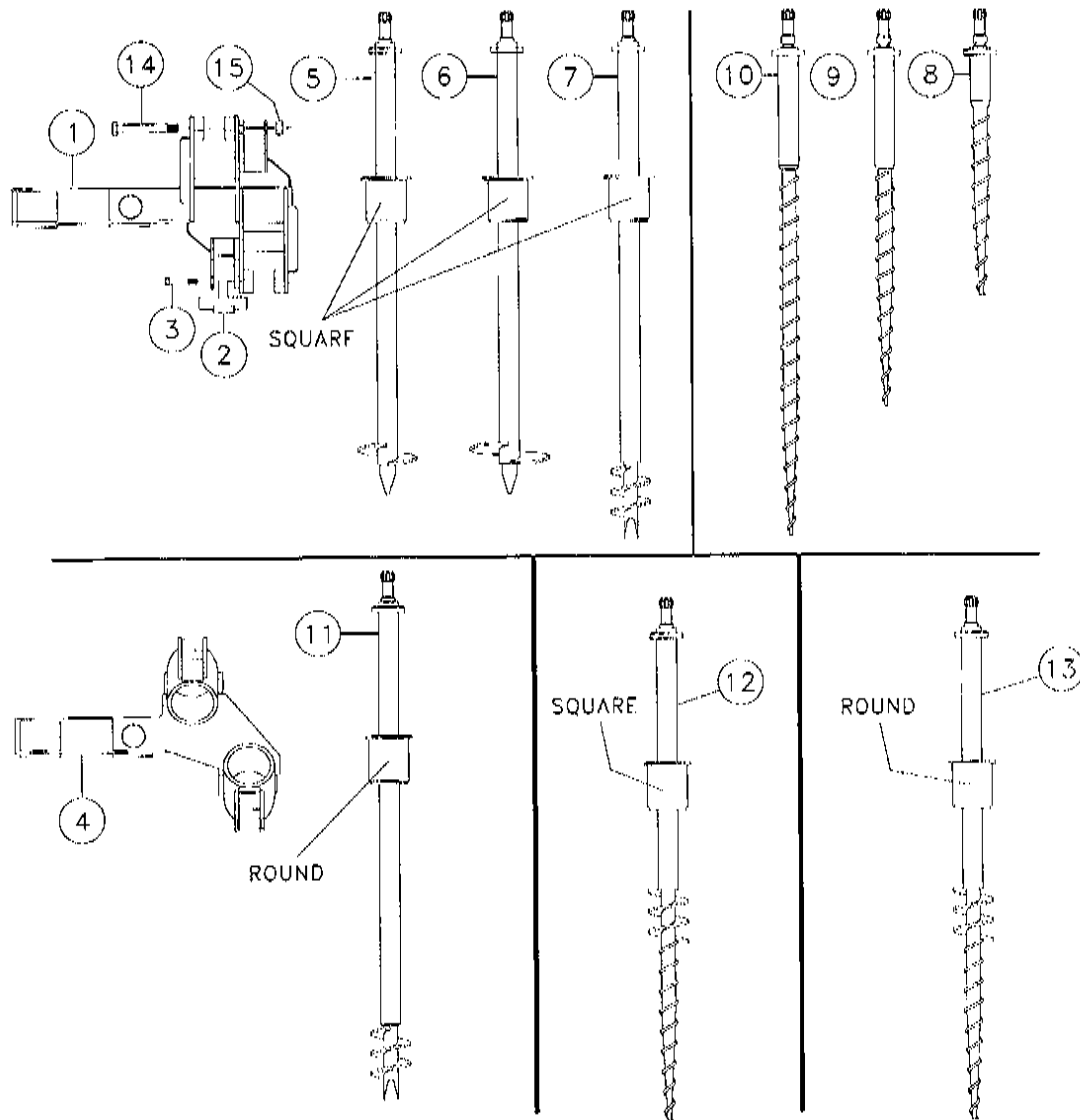
Figure 14-2



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
14-2	1	221503-001 COUPLER-3/8 NPT QUICK (MALE)	1	14-2	12	220998-001 LOCK-ROLLER	2
14-2	2	221504-001 COUPLER-3/8 NPT QUICK (FEMALE)	1	14-2	13	434-001 NUT-3/4 NC SLTL	1
14-2	3	93707-001 FITTING-4M JICX 3/8M NPT STR.	2	14-2	14	369-044 BOLT-3/4-10X4 1/2" GRADE#5 HEX	1
14-2	4	53843-099 HOSE-1/4X210 4FS JIC (100R1)	2	14-2	15	358-040 1/2-13X4"GRADE#5 HEX BOLT	2
14-2	5	57968-001 6M O-RING 4M JIC STRAIGHT	2	14-2	16	905341-001 ROLLER	4
14-2	6	224589-001 CYLINDER 1 1/2 X 8 HYD (BREAKDOWN FIG. 14-5)	1	14-2	17	220993-001 BRACKET-ROLLER MOUNT	1
14-2	7	1068-057 TUBE-1 1/4"ODX13/16"ID-3/4"	2	14-2	18	220999-001 GUIDE-ROLLER	1
14-2	8	354-006 BOLT-3/8"-16X3/4"GRADE#5 HEX	2	14-2	19	1803-015 SPRING - COMP. #39 3 1/2" OA	1
14-2	9	480-007 WASHER-3/8 S/T LOCK	2	14-2	20	220992-001 MOUNT-ROLLER	1
14-2	10	485-007 WASHER-3/8 FLAT	2	14-2	21	224579-001 ROLL PIN- 1/2 X 1 1/4	1
14-2	11	225038-001 BUSHING-PIVOT	2	14-2	22	1732-003 BEARING-#202KRR7 FAFNIR	1
				14-2	23	1794-003 HAIR PIN COTTER - .148 WIRE	1

STAKE ASSEMBLY

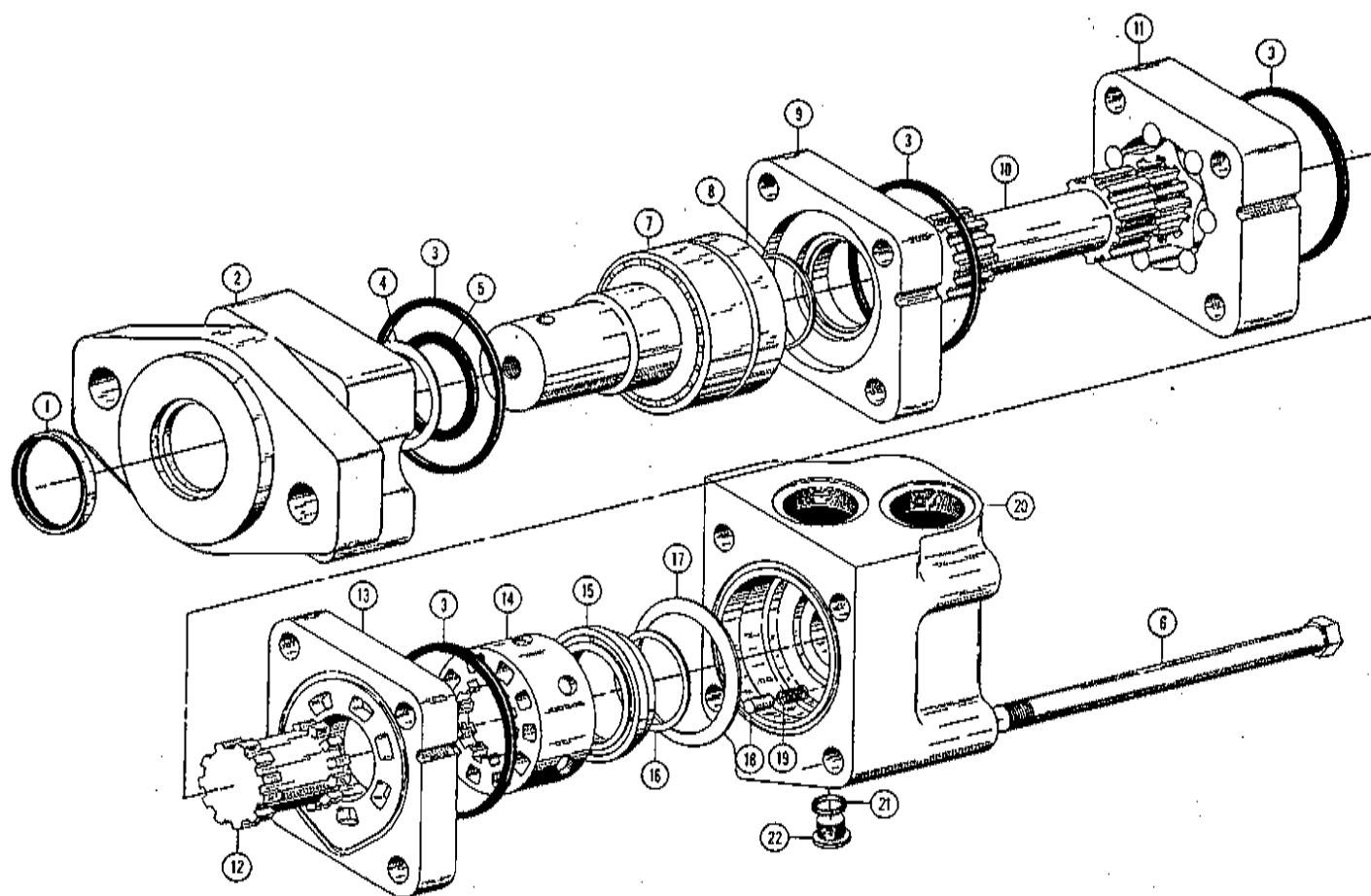
Figure 14-3



REF. NO.	PART NO.	DESCRIPTION	QTY.
14-3	1	220927-001 EAP-LARGE ANCHOR	1
14-3	2	1081-049 TUBE-1"ODX9/16"IDX2 1/16	1
14-3	3	358-026 1/2-13X2 3/4"GRADE#5HEX BOLT	1
14-3	4	228537-001 MOUNT-STAKE	1
14-3	5	226019-001 6" DELUXE SAND STAKE	1
14-3	6	220938-001 8"DELUXE SAND STAKE	1
14-3	7	228506-001 STAKE-4" FLIGHT SQ CAN	1
14-3	8	228547-001 STAKE-EARTH (24")	1
14-3	9	228533-001 STAKE-EARTH (36")	1
14-3	10	228504-001 STAKE-EARTH (48")	1
14-3	11	228505-001 STAKE-4" FLIGHT ROUND CAN	1
14-3	12	228551-001 STAKE-4" TAPER FLIGHT-SQ CAN	1
14-3	13	228550-001 STAKE-4" TAPER FLIGHT-RND CAN	1
14-3	14	369-060 BOLT-3/4"-10X6" GR 5 HEX	2
14-3	15	432-001 NUT-3/4" NC HEX	2

HYDRAULIC MOTOR COMPONENTS

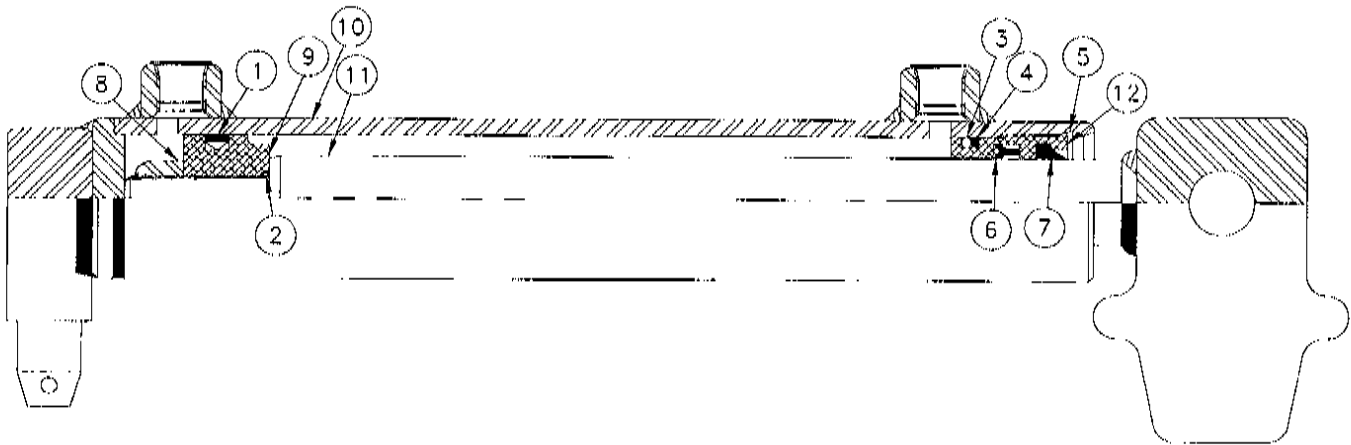
Figure 14-4



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
14-4	1	770-071 SEAL-DUST	1	14-4	17	770-091 SEAL-FACE, OUTER	1
14-4	2	770-073 HOUSING-BEARING	1	14-4	18	770-037 PIN	2
14-4	3	770-007 SEAL-O RING	4	14-4	19	770-039 SPRING	2
14-4	4	770-009 WASHER-BACKUP	1	14-4	20	770-093 HOUSING-(SAE 10 PORTS)	
14-4	5	770-075 SEAL-SHAFT	1			(INC. REF. 21 & 22)	1
14-4	6	70020-007 BOLT	4	14-4	21	4485-023 O-RING	1
14-4	7	228514-003 SHAFT AND BEARING KIT-1 1/4	1	14-4	22	4485-019 PLUG	1
14-4	8	770-017 SEAL-SHAFT FACE	1	14-4	22	4485-021 PLUG ASSY (INC. REF. 21 & 22)	1
14-4	9	770-079 PLATE-WEAR	1				
14-4	10	774-023 DRIVE-	1		228514-001	MOTOR-HYD. 2 BOLT FLANGE (INC. ALL	
14-4	11	774-025 GEROLER ASSY	1			ITEMS N THIS FIGURE)	
14-4	12	774-011 DRIVE-VALVE	1		770-097	REPAIR KIT (INC. REF. 1, 3, 4, 5, 8, 16,	
14-4	13	770-085 PLATE-VALVE	1			17 & 21)	
14-4	14	770-087 VALVE-	1				
14-4	15	770-089 PLATE-BALANCE	1	NOTE: WHEN ORDERING REPLACEMENT PARTS, INCLUDE THE PRODUCT NUMBER 104-1743-006 WITH YOUR ORDER.			
14-4	16	770-057 SEAL-FACE INNER	1				

HYDRAULIC CYLINDER COMPONENTS - 1 1/2" X 8"

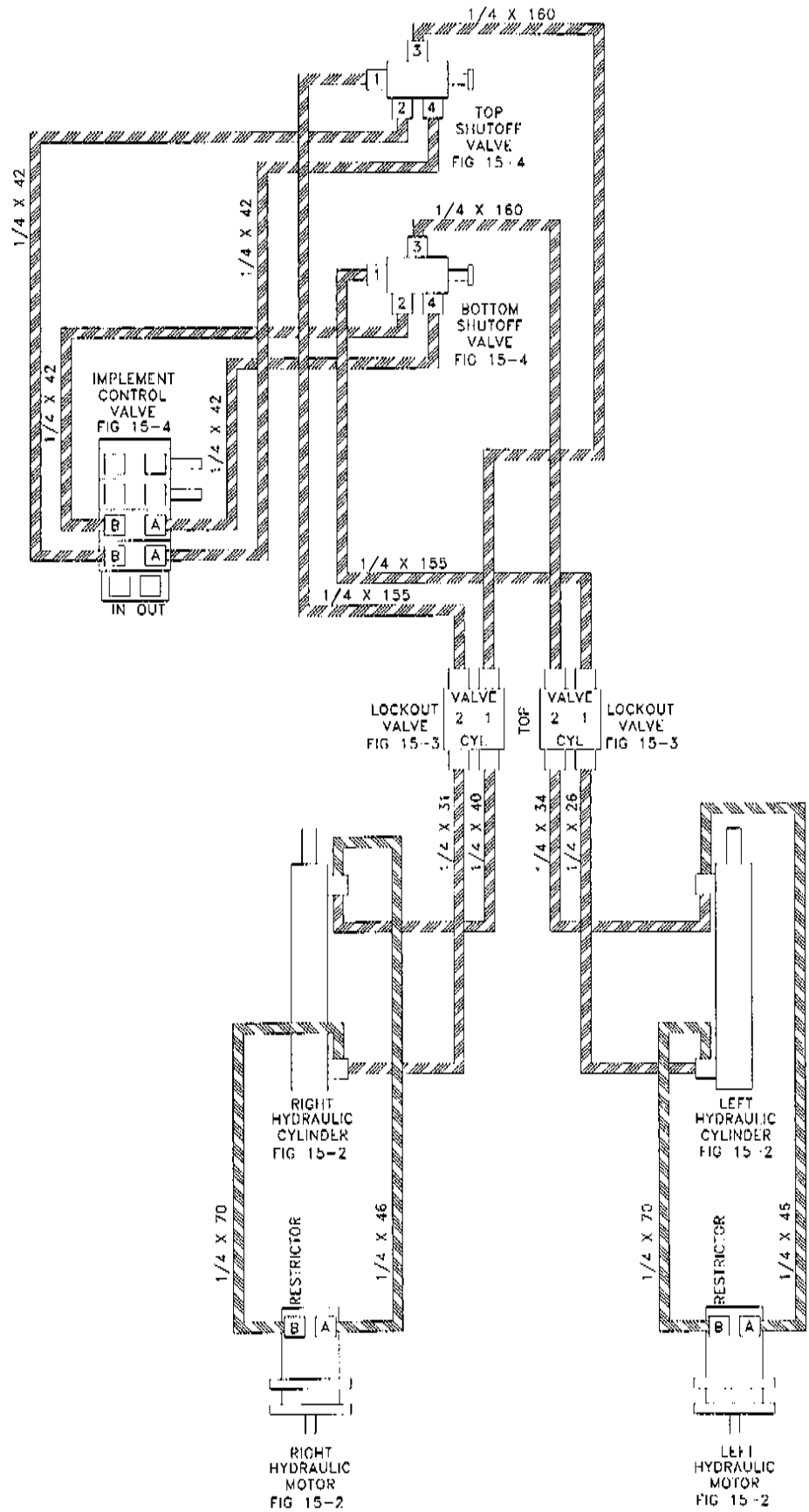
Figure 14-5



REF. NO.	PART NO.	DESCRIPTION	QTY.
14-5	1	215170-003 UNI-RING	1
14-5	2	223998-003 O-RING	1
14-5	3	202727-001 O-RING	1
14-5	4	202726-001 WASHER-BACK-UP	1
14-5	5	224589-009 INTERNAL SNAP RING	1
14-5	6	219111-009 LOADED U-CUP	1
14-5	7	219111-011 ROD WIPER	1
14-5	8	215170-011 LOCKNUT-ELASTIC	1
14-5	9	202720-001 PISTON	1
14-5	10	224589-003 BODY ASSEMBLY	1
14-5	11	224589-005 ROD ASSEMBLY	1
14-5	12	224589-007 GLAND	1
	224589-001	CYLINDER 1 1/2 X 8 HYD (INC. REF. 1-12)	
	224589-011	SEAL KIT (INC. REF. 1-7)	

HYDRAULIC COMPONENTS LOCATION DIAGRAM - STATIONARY STAKE DOWN

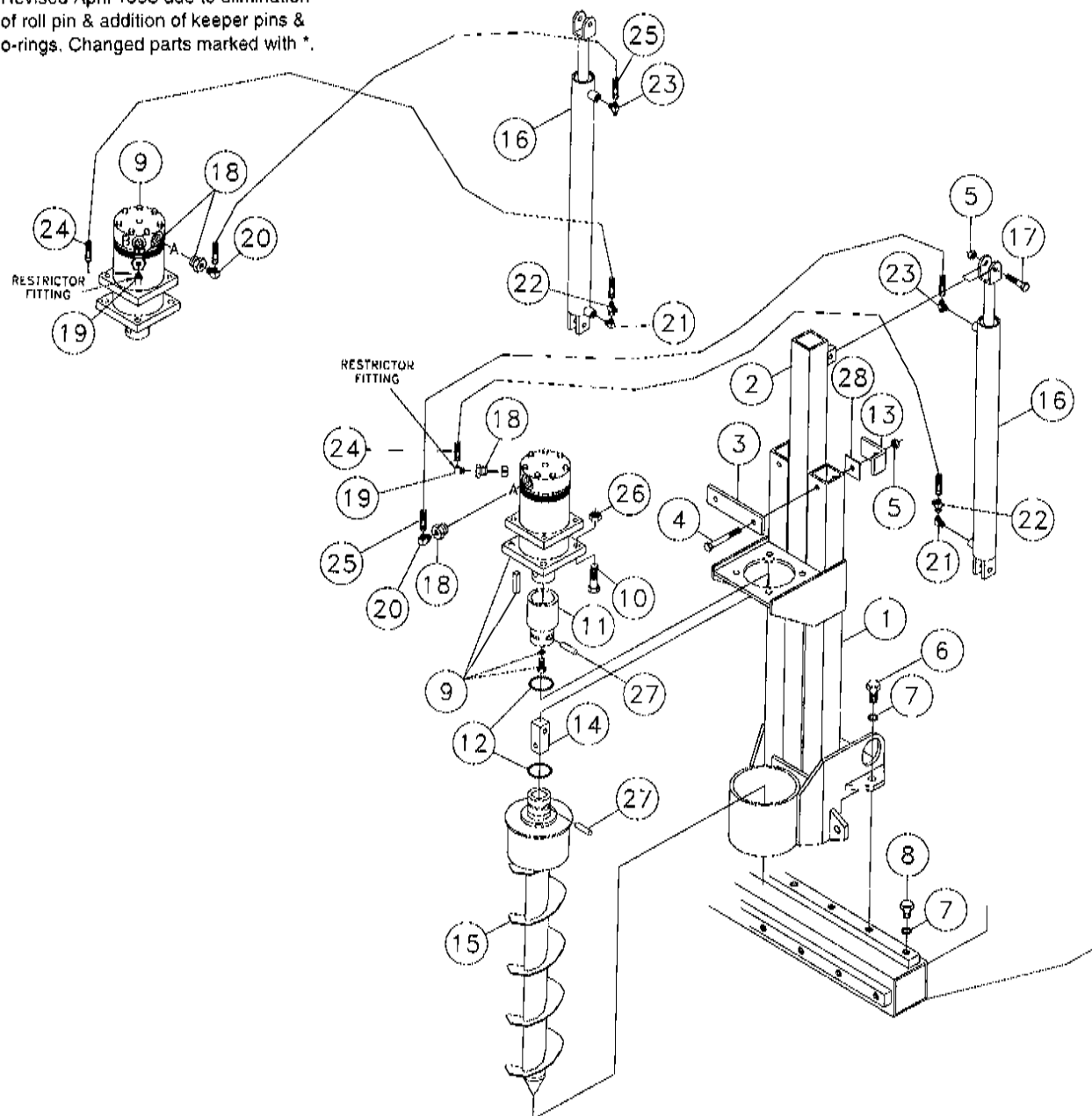
Figure 15-1



STATIONARY STAKEDOWN ASSEMBLY

Figure 15-2

Revised April 1998 due to elimination of roll pin & addition of keeper pins & o-rings. Changed parts marked with *.

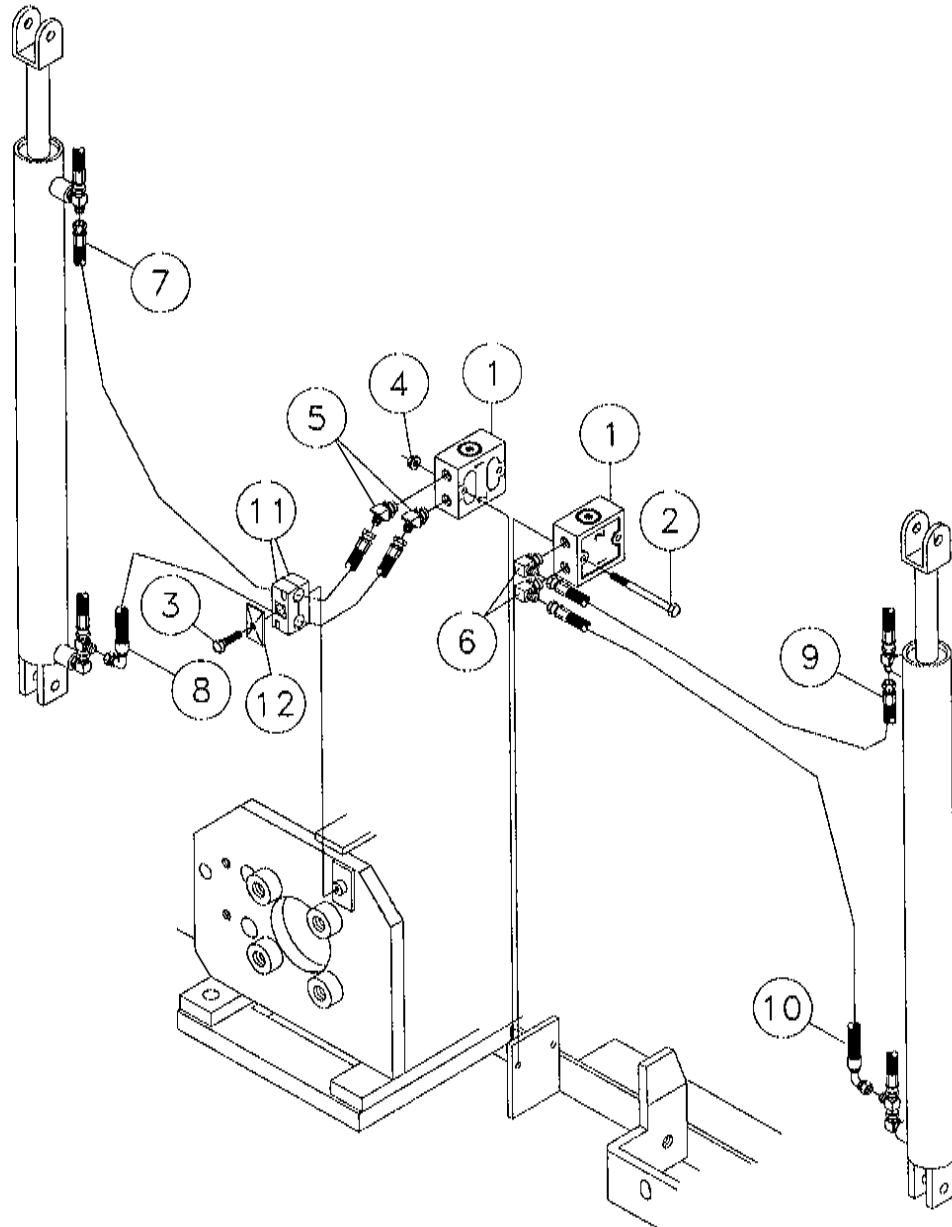


REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
15-2	1	235916-001 TOWER-STAKEDOWN	2	15-2	16	232422-001 CYLINDER-1 1/2X24 (BREAKDOWN FIG. 15-6)	2
		235916-001 TOWER-STAKEDOWN	2	15-2	17	358-020 BOLT-1/2-13X2" GRADE#5 HEX	4
15-2	2	236210-001 MOUNT-SLIDE MOTOR	2	15-2	18	117452-001 FITTING-12M ORINGX6F ORING STR	4
15-2	3	232482-001 BAR-REINFORCEMENT	2	15-2	19	70054-001 FITTING-6MX4 M JIC 90 W/.060	2
15-2	4	358-040 1/2-13X4" GRADE#5 HEX BOLT	4	15-2	20	57950-001 FITTING-6M X 4 JIC 90 DEG.	2
15-2	5	423-001 NUT-1/2 NC SLTL UTB	8	15-2	21	245001-001 FIT-4M JICX4M ADJ.90 DEG.ELBOW R.031	2
15-2	6	369-014 BOLT-3/4"-10X 1 1/2" GRADE#5HEX	8	15-2	22	60248-001 TEE-4M JICX4M JICX4FS JIC	2
15-2	7	480-017 WASHER-3/4 S/T LOCK	12	15-2	23	81343-001 4M (BCH)X4M JICX4M JIC TEE	2
15-2	8	235946-001 BOLT-3/4-10 X 1" 6D5 HEX	4	15-2	24	53843-689 HOSE-1/4X70 4FS JIC 3000 PSI	2
15-2	9	236219-001 HYD MOTOR66CI (BREAKDOWN FIG. 15-5)	2	15-2	25	53843-567 HOSE-1/4X46 4FS JIC 3000 PSI	2
15-2	10	366-022 BOLT-5/8-11X2 1/4" GRADE#5 HEX	8	15-2	26	430-001 NUT-5/8 NC SLTL GRADE B ZINC	8
15-2	11	236205-001 HUB-STAKE DRIVE	2	15-2	27	*236200-001 PIN-STAKE KEEPER	4
15-2	12	*236229-001 O-RING - 329	4	15-2	28	236233-001 PLATE-SPACER	4
15-2	13	*236232-001 BAR-GUIDE	4				
15-2	14	236230-001 BAR-STAKE DRIVE	2				
15-2	15	232484-001 STAKE-6" FLIGHT	2				

LOCK VALVE ASSEMBLY

Figure 15-3

Revised November 1997 due to hardware updates. Changed parts marked with *.

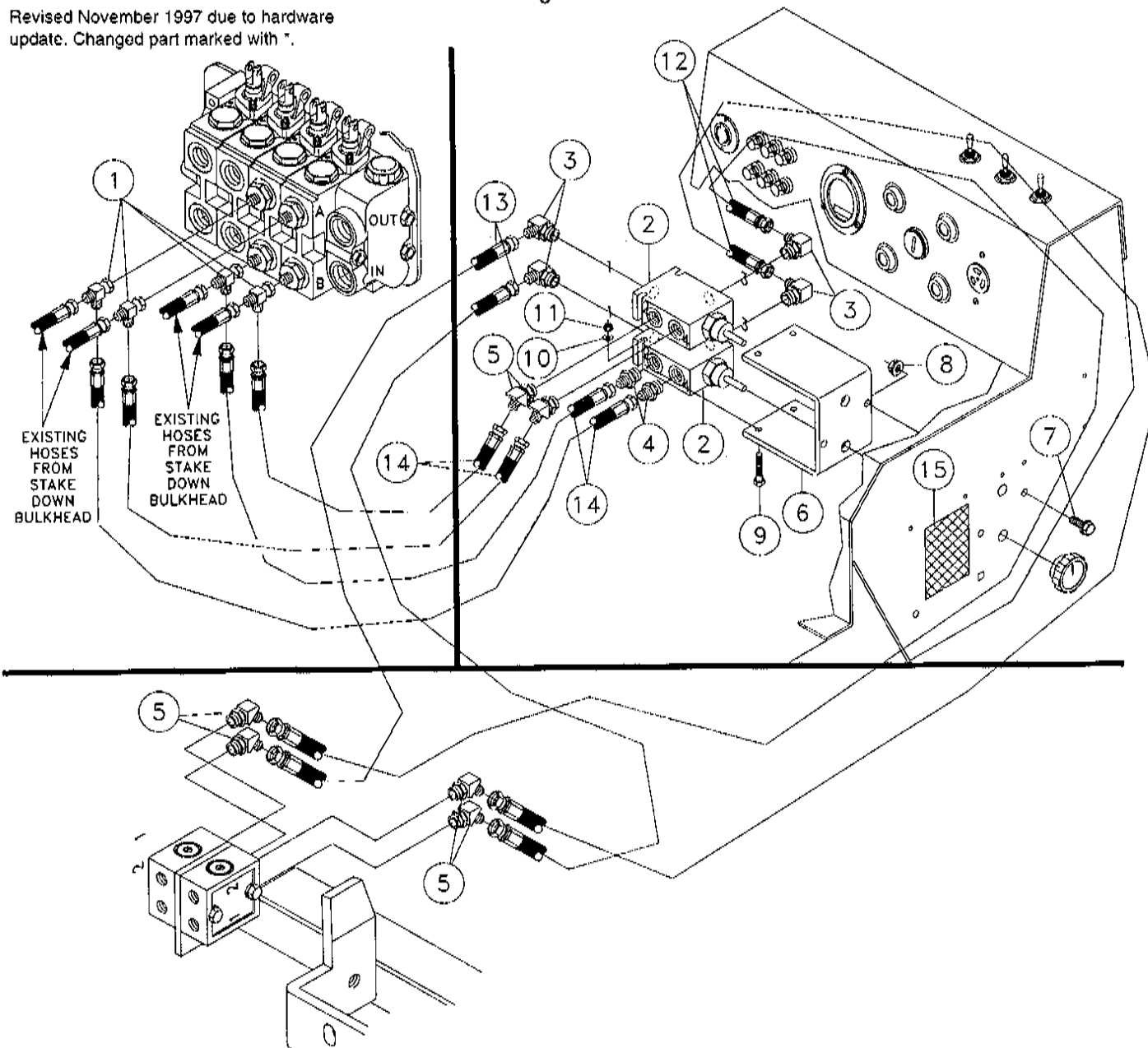


REF. NO.	PART NO.	DESCRIPTION	QTY.
15-3	1	86668-001 VALVE-LOA-6-D (BREAKDOWN FIG. 5-17)	2
15-3	2	351-036 5/16-18X3 3/4 GR 5 HEX BOLT	2
15-3	3	*351-012 BOLT-5/16"-18 X 1 1/4" GR 5 HEX	1
15-3	4	*408-001 NUT-5/16 - 18NC FLANGE WHIZ	2
15-3	5	82931-001 FITTING-6MX4M JIC 45DEG.ELBOW	2
15-3	6	57950-001 FITTING-6M X 4 JIC 90 DEG.	2
15-3	7	53843-185 HOSE-1/4X40 4FS JIC 3000 PSI	1
15-3	8	236482-001 HOSE-1/4X31 4FS JIC ST90 3000	1
15-3	9	53843-241 HOSE-1/4X34 4FS JIC 3000 PSI	1
15-3	10	236481-001 HOSE-1/4X26 4FS JIC ST/90 3000	1
15-3	11	67846-005 CLAMP-TWIN	2
15-3	12	67846-003 PLATE-TWIN COVER	1

SHUTOFF VALVE ASSEMBLY

Figure 15-4

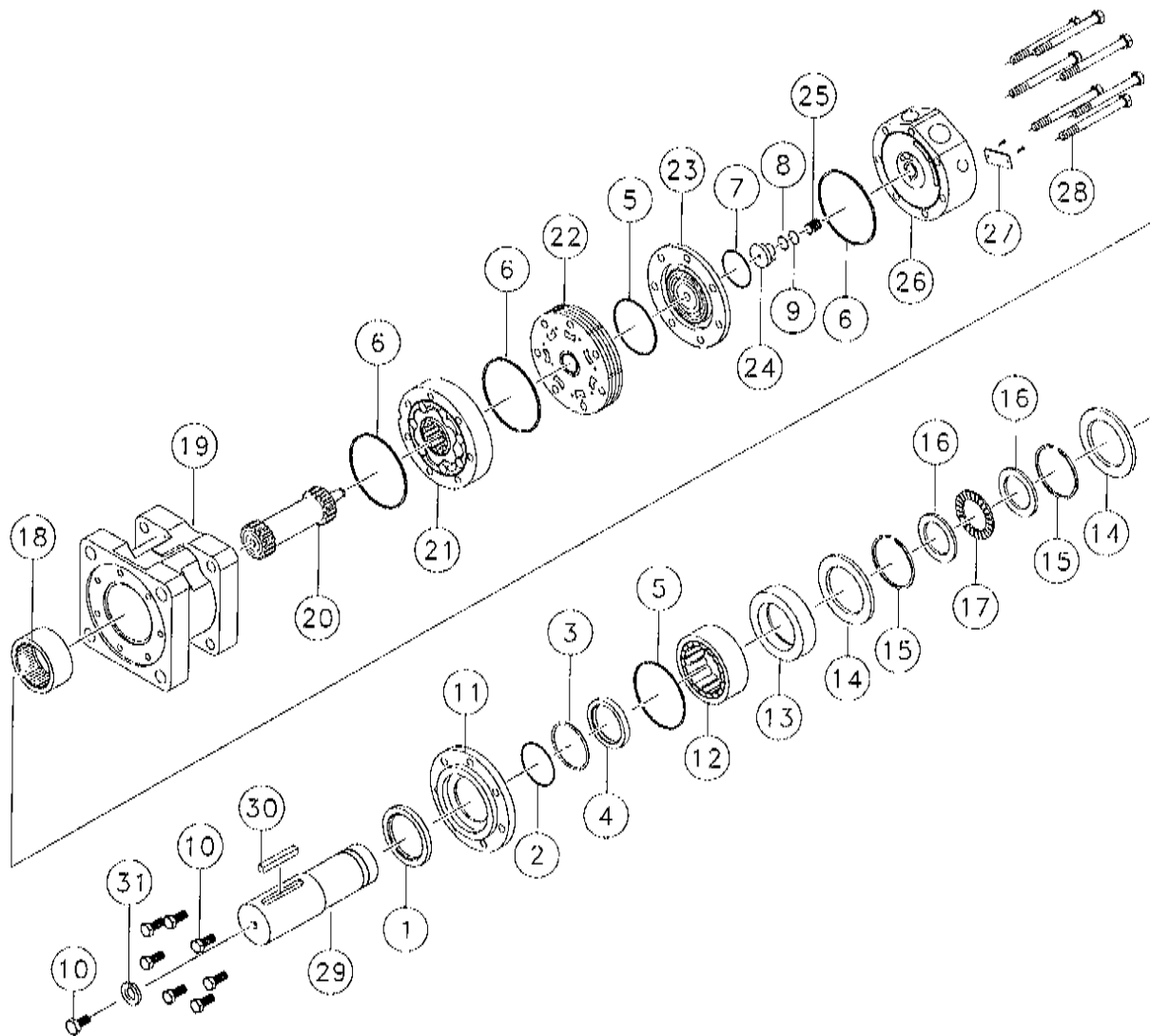
Revised November 1997 due to hardware update. Changed part marked with *.



REF. NO.	PART NO.	DESCRIPTION	QTY.
15-4	1	60248-001 TEE-4M JICX4M JICX4FS JIC	4
15-4	2	236406-001 VALVE-4WAY, 2 POS. SHUTOFF (BREAKDOWN FIG. 15-7)	
15-4	3	57950-001 FITTING-6M X 4 JIC 90 DEG.	2
15-4	4	57968-001 6M O-RING 4M JIC STRAIGHT	2
15-4	5	82931-001 FITTING-6MX4M JIC 45DEG.ELBOW	6
15-4	6	236402-001 PLATE-SHUT OFF MOUNT	1
15-4	7	*4474-006 BOLT-5/16-18 X 3/4 GR 5 FLANGE WHIZ	2
15-4	8	409-001 NUT-5/16 NC SLTL	2
15-4	9	350-020 1/4-20X2" GRADE #5 HEX BOLT	4
15-4	10	485-003 WASHER-1/4 FLAT	4
15-4	11	403-001 NUT-1/4 NC SLTL	4
15-4	12	53843-177 HOSE-1/4X160 4FS JIC 100R1	2
15-4	13	53843-617 HOSE-1/4X155 4FS JIC 3000 PSI	2
15-4	14	53843-011 HOSE-1/4X42 4FS JIC (100R1)	4
15-4	15	7001A-696 DECAL-HYD. STAKE/REMOTE	1

HYDRAULIC MOTOR COMPONENTS

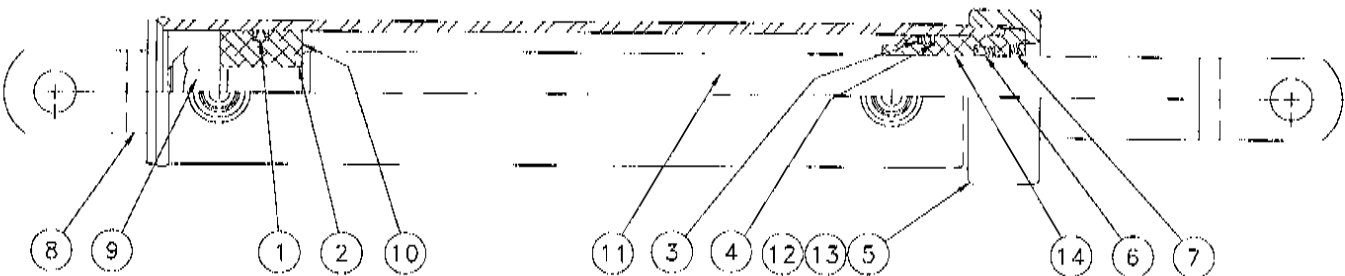
Figure 15-5



REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
15-5	1	NSS SEAL-DUST	1	15-5	19	236219-023 HOUSING	1
15-5	2	NSS SHIM-METAL BACKUP	1	15-5	20	236219-025 DRIVE LINK	1
15-5	3	NSS SEAL-TEFLON BACKUP	1	15-5	21	236219-027 ROTOR ASSEMBLY	1
15-5	4	NSS SEAL-SHAFT	1	15-5	22	236219-029 MANIFOLD	1
15-5	5	NSS SEAL-LATHE CUT	2	15-5	23	236219-031 COMMUTATOR ASSEMBLY	1
15-5	6	NSS SEAL-BODY	3	15-5	24	236219-033 PISTON-ENDCOVER	1
15-5	7	NSS SEAL-COMMUTATOR	1	15-5	25	236219-035 SPRING-PISTON	1
15-5	8	NSS SEAL-O-RING	1	15-5	26	236219-037 ENDCOVER (INC. REF. 8, 9, 24 & 25)	1
15-5	9	NSS SEAL-TEFLON BACKUP	1	15-5	28	236219-039 BOLT	7
15-5	10	393-010 BOLT-1/2-20X1 GR.8 HEX HEAD	8	15-5	29	236219-041 SHAFT-ASSEMBLY (INC. REF. 1-5, 10-17 & 29-31)	1
15-5	11	236219-007 RING-PILOT	1	15-5	30	236219-005 KEY-SHAFT	1
15-5	12	236219-009 BEARING-2 1/2" ROLLER	1	15-5	31	480-011 WASHER-1/2 S/T LOCK	1
15-5	13	236219-011 SPACER-BEARING	1				
15-5	14	236219-013 WASHER-RETAINING	2				
15-5	15	236219-015 SNAP RING	2				
15-5	16	236219-017 WASHER-THRUST	2			236219-001 HYD MOTOR-66CI (INC. ALL ITEMS IN THIS FIGURE)	
15-5	17	236219-019 BEARING-THRUST	1			236219-003 SEAL KIT (INC. REF. 1-9)	
15-5	18	236219-021 BEARING-REAR HOUSING	1				

HYDRAULIC CYLINDER COMPONENTS - 1 1/2" X 24"

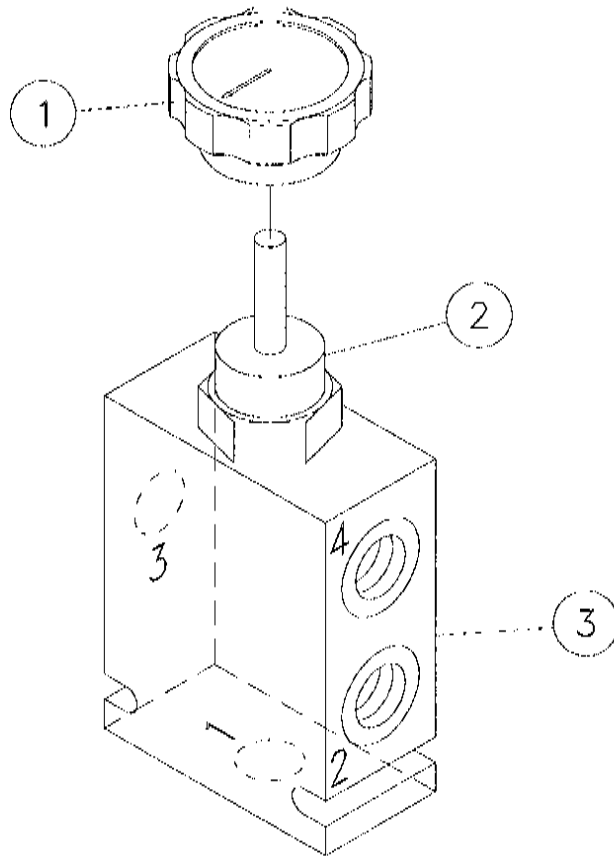
Figure 15-6



REF. NO.	PART NO.	DESCRIPTION	QTY.
15-6	1	232422-003 T-SEAL	1
15-6	2	232422-005 O-RING	1
15-6	3	232422-007 O-RING	1
15-6	4	232422-009 BACKUP RING	1
15-6	5	232422-011 LOCKING INSERT	1
15-6	6	232422-013 DOUBLE LIP U-CUP	1
15-6	7	232422-015 ROD WIPER	1
15-6	8	232422-017 TUBE WELDMENT	1
15-6	9	232422-019 .625-18UNF LOCKNUT	1
15-6	10	232422-021 PISTON	1
15-6	11	232422-023 ROD WELDMENT	1
15-6	12	232422-025 HEAD GLAND CAP	1
15-6	13	99859-005 SCREW-LG SET .313-18 X .25	1
15-6	14	232422-027 HEAD GLAND	1
	232422-029	SEAL KIT (INC. REF. 1-7)	
	232422-001	CYLINDER-1 1/2X24 (INC. ALL ITEMS IN THIS FIGURE)	

SHUT OFF VALVE COMPONENTS

Figure 15-7

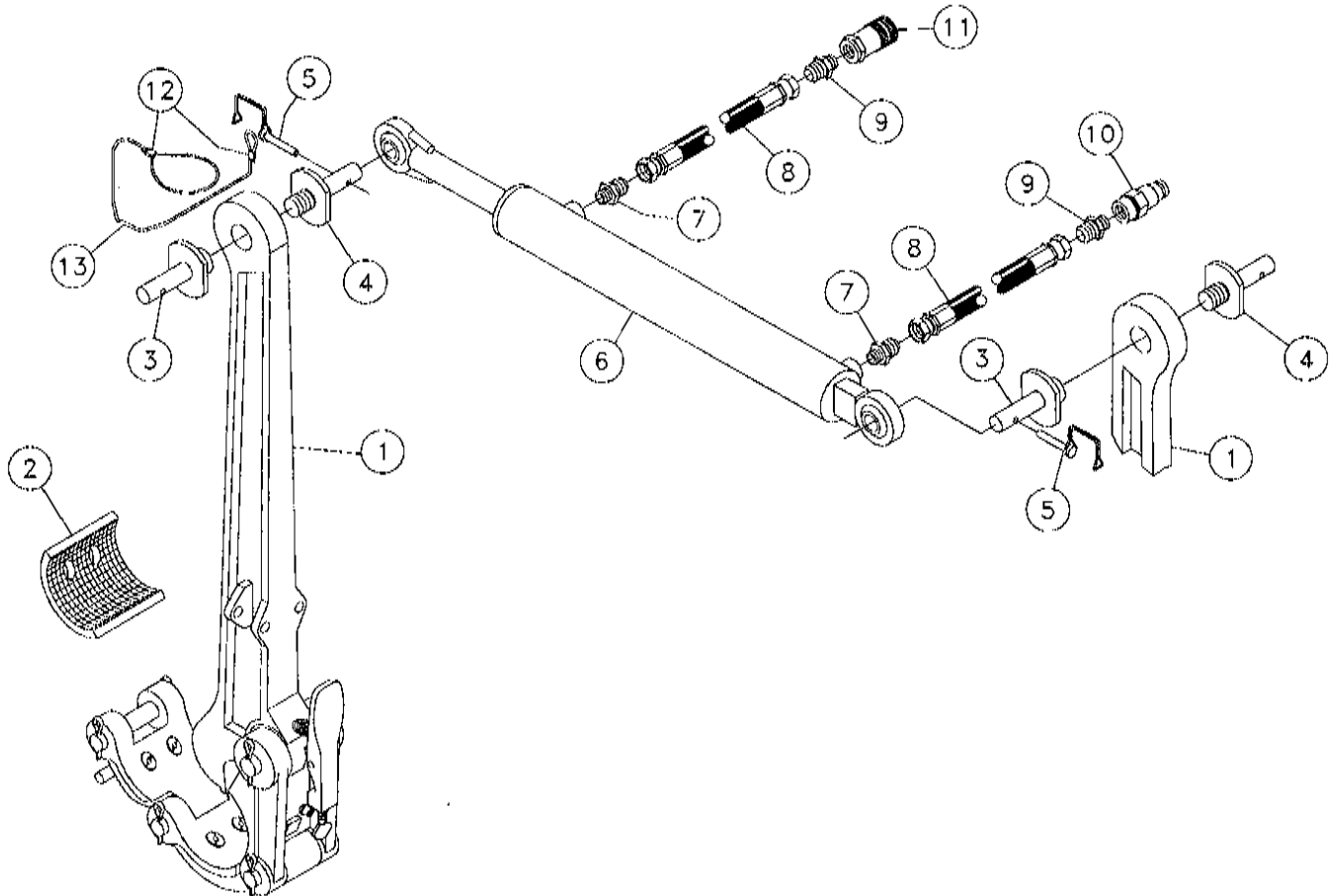


REF. NO.	PART NO.	DESCRIPTION	QTY.
15-7 1	236406-003	KNOB	1
15-7 2	236406-005	VALVE	1
15-7 3	NSS	BODY	1
	236406-001	VALVE-4WAY, 2 POS. SHUTOFF (INC. ALL ITEMS IN THIS FIGURE)	
	236406-007	REPAIR KIT	
	NSS	NOT SOLD SEPARATELY	

TUBING TONG ASSEMBLY

Figure 16-1

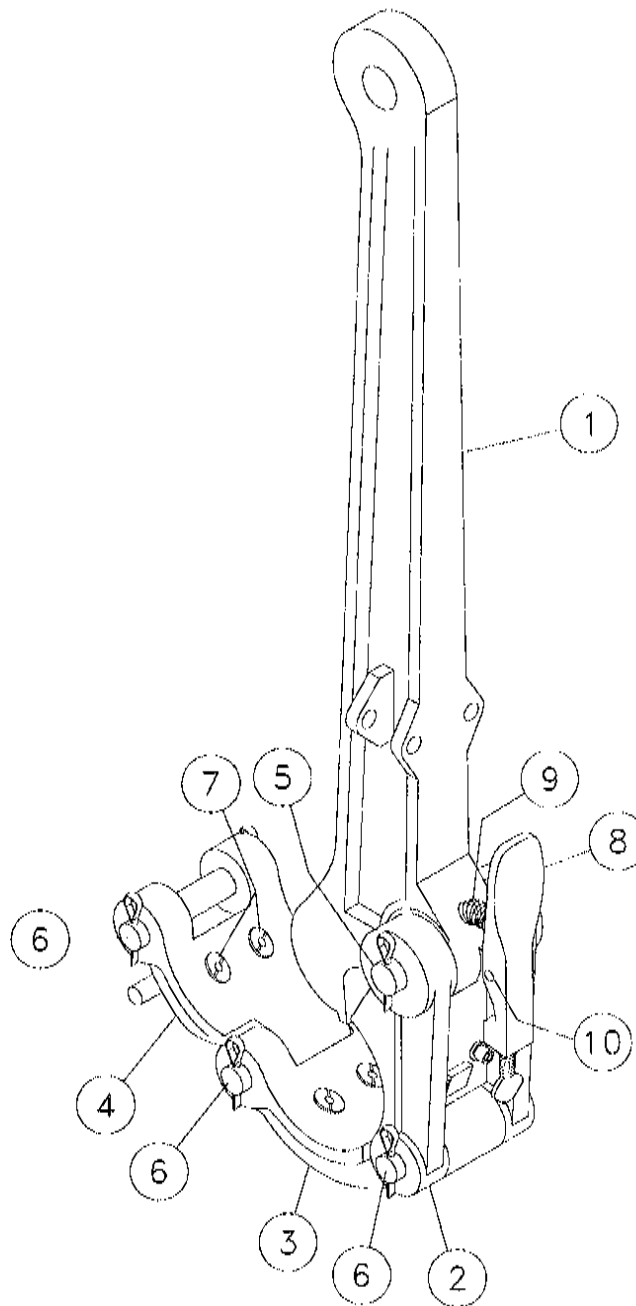
Revised November 1997 due to update of tubing tong dies & cylinder pin & addition of cable. Changed/added parts marked with *.



REF. NO.	PART NO.	DESCRIPTION	2 3/8"	QTY. 2 7/8"	3 1/2"
16-1	1	230970-001 TONG-K30 LIGHT WEIGHT TUBING (BREAKDOWN FIG. 16-2)	2	2	2
16-1	2	*235870-001 DIES-2 5/8" TUBING TONG (3/ SET)	1		
		*230972-001 DIES-3 1/4" TUBING TONG (3/ SET)		1	
		*230974-001 DIES-3 5/8" TUBING TONG (3?SET)			1
16-1	3	*234967-001 PIN-FEMALE CYLINDER	2	2	2
16-1	4	234966-001 PIN-MALE CYLINDER	2	2	2
16-1	5	2108-001 LYNCH PIN - 1/4 X 2	2	2	2
16-1	6	230977-001 CYLINDER-2"X15" (BREAKDOWN FIG. 16-3)	1	1	1
16-1	7	86235-001 6M ORING X 8M JIC STR.	2	2	2
16-1	8	53844-167 HOSE-1/2X240 8FS JIC 3000 PSI	2	2	2
16-1	9	68634-001 FITTING-3/8MX8M JIC (STR)	2	2	2
16-1	10	221503-001 COUPLER-3/8 NPT QUICK (MALE)	1	1	1
16-1	11	221504-001 COUPLER-3/8 NPT QUICK (FEMALE)	1	1	1
16-1	12	*1838-001 CONNECTOR-WIRE (ETC)	4	4	4
16-1	13	*240546-001 CABLE-3/32" NYLON-18.00"	2	2	2

TUBING TONG COMPONENTS

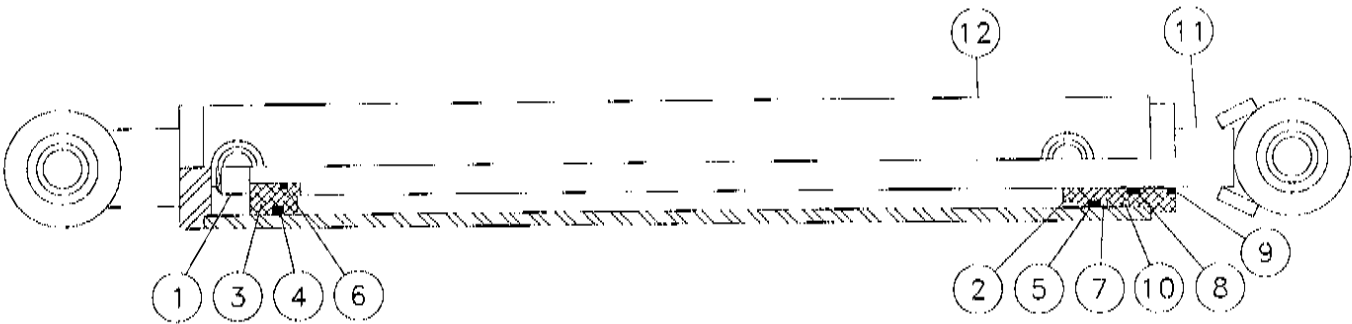
Figure 16-2



<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
16-2	1	230970-003 TONG HANDLE	1
16-2	2	230970-005 HANDLE JAW	1
16-2	3	230970-007 CENTER JAW	1
16-2	4	230970-009 LATCH JAW	1
16-2	5	230970-011 HANDLE PIN	1
16-2	6	230970-013 JAW PIN	3
16-2	7	230970-015 BUSHING AND SCREW	6
16-2	8	230970-017 ADJUSTABLE TONG LATCH	1
16-2	9	230970-019 LATCH SPRING	1
16-2	10	230970-021 LATCH RIVET	1
	230970-001	TONG-K30 LIGHT WEIGHT TUBING (COMPLETE) (INC. ALL ITEMS IN THIS FIGURE)	

HYDRAULIC CYLINDER COMPONENTS - 2" X 15"

Figure 16-3

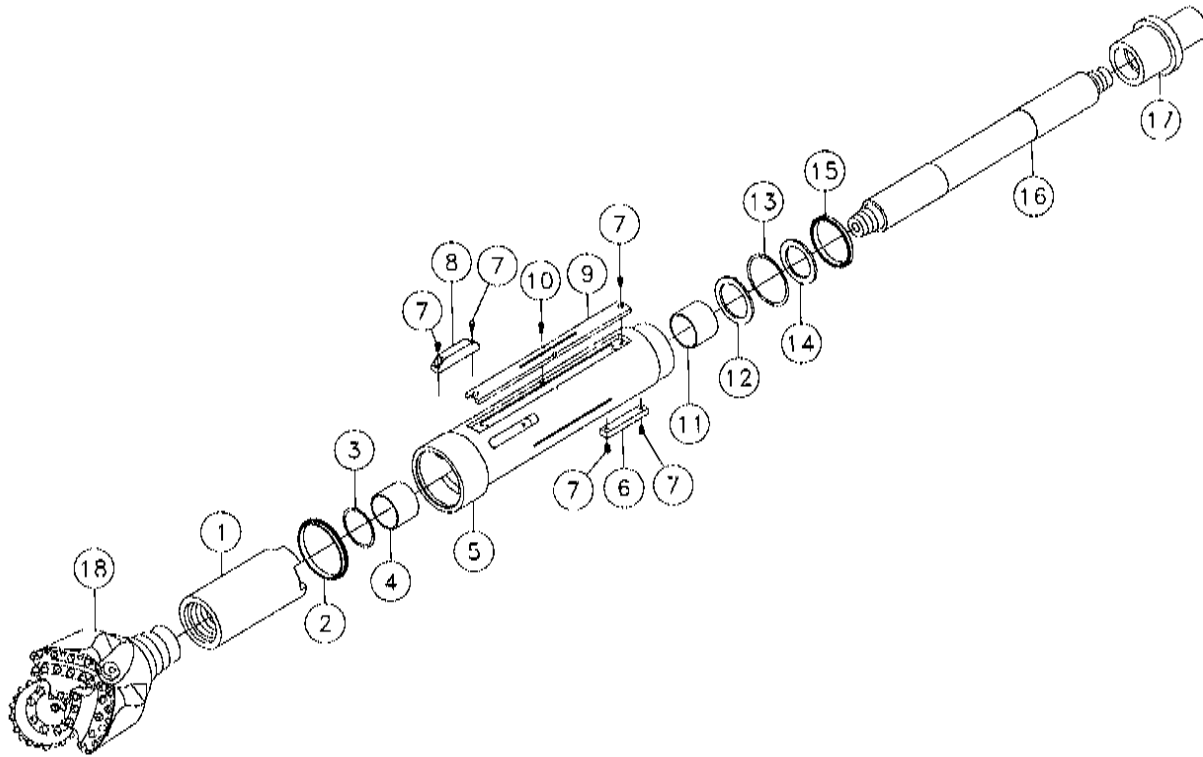


REF. NO.	PART NO.	DESCRIPTION	QTY.
16-3	1	230977-003 NUT	1
16-3	2	230977-005 HEAD	1
16-3	3	230977-007 PISTON	1
16-3	4	230977-009 PSP-SEAL	1
16-3	5	51181-001 O-RING #326	1
16-3	6	792-029 O-RING	1
16-3	7	230977-011 BACK-UP	1
16-3	8	230977-013 ROD SEAL	1
16-3	9	230977-015 DUST SEAL	1
16-3	10	230977-017 RETAINING RING1	1
16-3	11	230977-019 SHAFT (W/CLEVIS)	1
16-3	12	230977-021 BARREL (W/CLEVIS AND PORTS)	1
	230977-023	REPAIR KIT (INC. REF. 4-10)	
	230977-001	CYLINDER-2"X15" (INC. ALL ITEMS IN THIS FIGURE)	

ROCK DRILLING HEAD ASSEMBLY

Figure 17-1

Revised April 1998 due to
addition of figure to manual.



REF. NO.	PART NO.	DESCRIPTION	QTY.
17-1	1	235298-001 DRIVE SUB-LOWER	1
17-1	2	240661-001 ROD WIPER - 4 1/2 PARKER	1
17-1	3	240658-001 RETAINING RING-3.125 INTERNAL	1
17-1	4	240637-001 BEARING-ROCK HEAD FRONT	1
17-1	5	240654-001 HOUSING ASSEMBLY (INC. REF. 4 & 11)	1
17-1	6	234943-001 SLIDER-REAR	2
17-1	7	512-006 3/8-16X3/4" SOCKET HEAD BOLT	10
17-1	8	234942-001 SLIDER-FRONT	2
17-1	9	240656-001 LID ASSEMBLY	1
17-1	10	240560-001 BOLT-5/16-18 X 3/8 SOC HD CAP	2
17-1	11	240636-001 BEARING-ROCK HEAD REAR	1
17-1	12	234976-001 THRUST WEAR PLATE	1
17-1	13	240659-001 RETAINING RING-3.875 INTERNAL	1
17-1	14	240639-001 BEARING-THRUST	1
17-1	15	240660-001 ROD WIPER- 3 1/2 PARKER	1
17-1	16	235301-001 DRIVE SHAFT - 2 5/8	1
17-1	17	235296-001 DRIVE SHAFT SUB - UPPER	1
17-1	18	240641-001 TRI CONE BIT-6 1/2"13 CARBIDE	1

FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.				
10-9	2	208-007	5-11	11	366-012	10-2	8	421-001	5-11	10	480-015
3-11	9	208-015	15-2	10	366-022	10-3	8	421-001	3-2	2	480-017
3-11	8	208-017	2-4	8	366-034	10-4	10	421-001	3-3	27	480-017
3-11	7	208-019	3-2	13	369-014	2-11	13	421-001	4-3	19	480-017
8-10	8	236-001	15-2	6	369-014	10-3	13	422-001	8-1	19	480-017
10-9	8	330-011	11-2	18	369-020	10-4	29	422-001	11-2	17	480-017
7-4	3	350-006	8-1	20	369-030	3-3	25	423-001	11-3	5	480-017
7-4	13	350-006	14-1	23	369-034	6-7	5	423-001	15-2	7	480-017
8-12	3	350-006	1-10	7	369-044	7-2	16	423-001	9-2	5	482-003
9-1	3	350-010	14-2	14	369-044	8-4	9	423-001	3-3	28	483-005
3-5	3	350-014	10-4	32	369-050	9-2	6	423-001	3-6	43	483-009
4-10	4	350-014	2-5	5	373-005	10-4	23	423-001	3-6	44	483-017
15-4	9	350-020	2-6	7	373-005	14-1	8	423-001	7-4	11	485-003
6-4	3	350-026	8-2	19	374-006	15-2	5	423-001	9-1	4	485-003
10-5	13	350-040	2-8	10	375-006	10-4	5	429-001	15-4	10	485-003
7-2	9	351-006	2-7	7	375-010	2-4	4	430-001	8-12	2	485-003
15-4	7	351-010	2-10	9	375-010	15-2	26	430-001	8-7	2	485-005
15-3	13	351-012	4-8	2	375-012	3-3	6	434-001	4-8	4	485-007
9-1	8	351-016	5-3	15	375-012	1-10	6	434-001	5-3	16	485-007
10-2	22	351-016	8-1	16	375-012	10-4	13	434-001	6-5	5	485-007
10-2	20	351-020	10-4	28	377-012	14-1	24	434-001	8-8	16	485-007
5-13	9	351-020	2-4	12	377-014	14-2	13	434-001	10-2	3	485-007
10-6	16	351-022	5-3	11	377-014	3-3	15	439-001	11-2	19	485-007
3-4	12	351-026	10-2	7	377-014	3-3	10	441-001	14-2	10	485-007
5-6	2	351-026	10-3	5	377-014	8-6	4	445-001	2-10	10	485-007
5-7	3	351-026	3-2	10	377-016	3-8	7	446-001	5-5	25	485-009
5-8	2	351-030	10-4	7	377-016	5-15	7	446-001	1-9	19	485-011
11-4	4	351-030	2-11	19	377-020	8-8	19	452-001	2-4	11	485-011
5-12	4	351-030	15-5	10	383-010	8-9	4	452-001	5-3	12	485-011
5-13	2	351-030	4-3	18	386-024	5-3	7	480-001	8-1	30	485-011
5-10	6	351-034	3-3	18	388-090	8-5	4	480-001	10-3	6	485-011
5-8	11	351-036	8-2	10	399-001	3-5	2	480-003	10-4	8	485-011
15-3	2	351-036	8-2	14	400-001	6-4	2	480-003	2-11	11	485-011
4-5	8	351-044	8-5	5	400-001	7-4	12	480-003	2-4	5	485-015
14-2	8	354-006	7-4	6	401-001	8-6	10	480-003	3-2	3	485-017
3-2	17	354-012	9-1	5	403-001	10-5	12	480-003	8-1	18	485-017
9-1	6	354-012	15-4	11	403-001	4-5	7	480-005	11-3	4	485-017
11-2	21	354-016	2-5	2	405-001	5-8	3	480-005	10-4	33	485-025
8-8	17	354-020	2-6	8	405-001	7-2	10	480-005	1-8	12	510-005
10-2	31	354-024	8-1	10	405-001	11-4	3	480-005	1-9	1	510-005
4-6	5	354-026	8-5	16	405-001	15-3	3	480-005	4-3	14	510-005
4-6	8	354-030	5-11	7	405-001	5-13	10	480-005	8-1	29	510-005
4-7	6	354-034	8-12	1	405-001	3-2	19	480-007	8-8	6	510-005
6-5	4	354-034	7-2	11	406-001	3-6	9	480-007	8-1	23	510-011
11-3	9	354-034	8-7	1	406-001	4-8	5	480-007	10-6	8	510-021
4-6	6	354-044	15-3	4	406-001	5-3	17	480-007	10-7	3	510-021
3-6	38	354-060	5-7	1	408-001	6-5	6	480-007	11-5	6	510-025
4-2	17	357-016	8-2	21	408-001	10-2	30	480-007	3-8	17	510-035
1-9	12	358-010	8-6	3	408-001	11-2	20	480-007	8-9	6	510-035
3-3	24	358-012	9-1	18	408-001	11-3	8	480-007	5-15	17	510-035
8-1	7	358-012	5-10	5	408-001	14-2	9	480-007	6-3	1	514-014
2-11	10	358-012	8-11	4	408-001	4-2	16	480-009	10-2	25	524-001
3-3	9	358-014	7-4	9	409-001	1-9	5	480-011	8-6	17	533-004
6-7	1	358-014	9-1	11	409-001	2-4	10	480-011	10-1	120	542-009
10-4	22	358-014	10-2	21	409-001	3-3	8	480-011	10-8	2	542-009
11-2	15	358-014	15-4	8	409-001	3-6	3	480-011	5-11	6	543-007
8-4	8	358-016	5-12	5	409-001	4-2	5	480-011	3-6	14	579-011
1-10	13	358-016	5-13	1	409-001	4-3	3	480-011	3-2	8	579-019
14-1	12	358-016	4-8	6	412-001	5-3	13	480-011	1-6	4	586-001
15-2	17	358-020	5-3	18	412-001	6-3	2	480-011	1-7	10	586-001
10-3	9	358-022	6-5	7	412-001	8-1	6	480-011	1-8	5	586-001
14-1	26	358-026	10-2	29	412-001	1-10	12	480-011	1-9	8	586-001
4-3	2	358-030	10-2	33	413-001	10-2	9	480-011	1-10	9	586-001
14-1	13	358-030	8-8	15	416-001	10-3	7	480-011	1-10	3	590-001
2-11	15	358-034	9-1	7	416-001	10-4	9	480-011	10-3	3	597-001
7-2	15	358-036	2-10	11	416-001	11-2	16	480-011	11-3	12	597-001
14-2	15	358-040	2-4	9	421-001	15-5	31	480-011	3-2	4	598-001
15-2	4	358-040	3-2	12	421-001	2-11	12	480-011	3-3	4	598-001
7-2	14	358-060	5-3	14	421-001	8-8	12	480-015	8-1	4	598-001

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FIG. NO.		PART NO.	FIG. NO.		PART NO.	FIG. NO.		PART NO.	FIG. NO.		PART NO.
8-4	12	598-001	3-6	30	793-017	3-8	13	2110-003	3-8	12	4333-005
10-3	3	598-001	11-3	7	1070-049	8-8	5	2110-003	8-9	8	4333-005
11-6	5	598-001	14-1	27	1081-049	8-9	9	2110-003	5-15	12	4333-005
11-7	12	598-001	8-1	9	1084-019	5-15	13	2110-003	6-9	26	4343-031
11-8	14	598-001	14-2	7	1088-057	2-12	2	2146-009	6-9	27	4343-031
10-9	5	602-200	8-8	9	1489-001	2-9	4	2165-001	8-1	14	4473-004
1-9	17	602-412	2-8	18	1580-001	1-1	36	2326-142	2-8	5	4473-006
7-1	4	614-027	2-11	8	1580-001	1-2	26	2326-142	8-5	15	4473-006
2-11	9	620-001	7-4	15	1580-003	1-3	8	2326-142	8-11	5	4474-004
8-10	10	723-001	5-5	11	1580-007	1-1	25	2326-315	1-6	6	4474-006
5-4	2	730-019	4-2	19	1580-009	1-4	16	2326-315	2-2	21	4474-006
7-2	13	730-019	2-8	1	1580-011	1-1	27	2326-324	8-6	2	4474-006
4-3	26	732-005	2-9	7	1580-023	1-4	10	2326-324	9-1	17	4474-006
7-2	12	732-005	3-6	19	1706-001	1-1	1	2326-595	1-6	9	4475-006
3-6	7	732-009	4-11	3	1706-007	1-2	1	2326-595	2-5	7	4475-006
7-2	3	732-019	4-11	15	1715-013	1-1	15	2326-756	2-6	5	4475-006
4-11	8	735-003	1-7	4	1715-063	1-4	2	2326-756	2-7	6	4475-006
7-4	18	736-007	1-8	8	1715-063	1-1	17	2326-940	2-8	7	4475-006
10-1	1 2	751-003	1-9	16	1715-063	1-2	19	2326-940	2-9	9	4475-006
10-1	1 6	751-009	4-11	19	1715-085	1-4	5	2326-940	3-6	4	4475-006
10-1	1 7	751-011	1-7	3	1716-085	8-5	8	2595-001	5-3	1	4475-006
10-1	1 8	751-013	1-8	7	1716-085	8-2	20	2595-007	6-6	2	4475-006
10-1	1 14	751-017	1-9	15	1716-085	2-10	2	2609-011	8-1	12	4475-006
10-1	1 16	751-021	4-11	20	1716-099	5-4	1	2708-001	8-5	9	4475-006
10-1	1 9	765-007	14-2	22	1732-003	8-8	7	2786-001	1-10	1	4475-006
10-1	1 10	765-009	10-1	1 1	1749-003	8-6	12	2809-001	10-2	4	4475-006
3-7	3	770-007	3-7	25	1749-025	3-6	42	2876-003	10-4	2	4475-006
6-9	3	770-007	6-8	5	1749-025	3-7	24	2876-003	10-8	3	4475-006
14-4	3	770-007	6-9	24	1749-025	8-10	9	3115-031	11-2	24	4475-006
3-7	4	770-009	10-1	1 18	1754-005	3-9	1	3128-009	11-4	7	4475-006
14-4	4	770-009	10-2	27	1788-023	3-11		3147-011	2-11	3	4475-006
3-7	8	770-017	4-10	9	1789-001	3-11	12	3147-027	4-10	1	4475-006
14-4	8	770-017	8-6	7	1789-009	3-8	10	3147-029	4-11	10	4475-006
3-7	18	770-037	10-2	5	1789-009	5-15	10	3147-029	5-5	12	4475-010
14-4	18	770-037	10-4	15	1794-003	3-8	14	3147-035	8-1	31	4475-010
3-7	19	770-039	14-1	25	1794-003	3-9		3147-035	10-4	3	4475-010
6-9	23	770-039	14-2	23	1794-003	5-15	14	3147-035	11-2	9	4475-010
14-4	19	770-039	8-4	5	1794-007	3-9		3147-037	1-5	2	4475-012
6-9	5	770-049	8-6	13	1794-007	3-8	22	3147-039	3-6	8	4475-012
6-9	4	770-051	10-3	16	1797-003	3-9	2	3147-041	2-10	6	4475-012
3-7	16	770-057	5-3	7	1802-006	3-9	8	3147-043	1-6	2	4476-006
14-4	16	770-057	8-2	15	1802-006	3-8	9	3147-077	1-7	6	4476-006
3-7	1	770-071	8-5	3	1802-006	5-15	9	3147-077	1-8	4	4476-006
14-4	1	770-071	14-2	19	1803-015	3-8	16	3147-081	11-2	14	4476-006
3-7	2	770-073	3-3	12	1803-051	5-15	16	3147-081	11-5	4	4476-006
14-4	2	770-073	6-7	3	1809-001	3-10	1	3149-005	11-6	3	4476-006
3-7	5	770-075	3-4	11	1809-007	3-10	3	3149-013	5-11	1	4476-006
14-4	5	770-075	5-6	3	1809-007	3-8	5	3152-011	5-12	7	4476-006
3-7	9	770-079	9-2	10	1830-007	5-15	5	3152-011	5-13	13	4476-006
14-4	9	770-079	14-1	17	1830-007	3-8	5	3152-013	11-6	7	4478-001
6-9	10	770-081	11-6	6	1835-025	5-15	5	3152-013	2-3	5	4478-014
3-7	13	770-085	11-7	13	1835-025	3-8	21	3213-017	5-13	15	4478-014
14-4	13	770-085	3-3	2	1835-027	5-15	21	3213-017	6-9	2	4485-011
3-7	14	770-087	1-10	4	1835-027	5-17		3216-003	6-9	2	4485-015
14-4	14	770-087	5-19	14	1835-027	5-17		3216-005	3-7	22	4485-019
3-7	15	770-089	1-5	6	1835-033	5-17	1	3216-007	14-4	22	4485-019
14-4	15	770-089	1-6	11	1835-033	5-17	3	3216-009	3-7	22	4485-021
3-7	17	770-091	1-5	6	1835-035	5-17	4	3216-011	6-9	25	4485-021
14-4	17	770-091	1-6	1	1835-035	5-17	5	3216-013	14-4	22	4485-021
14-4	20	770-093	1-10	10	1835-039	5-17	9	3216-015	3-7	21	4485-023
3-7		770-097	10-3	2	1835-085	8-7	8	3262-003	6-9	25	4485-023
14-4		770-097	9-2	9	1838-001	7-4	17	3379-001	14-4	21	4485-023
6-9	1	771-017	14-1	18	1838-001	6-7	6	3888-001	1-5	4	4536-001
3-7	12	774-011	5-4	11	1865-001	4-12	5	3888-001	2-6	6	4536-001
6-9	12	774-011	10-2	24	1978-011	2-11	6	4022-001	2-7	8	4536-001
14-4	12	774-011	10-4	17	2107-007	8-6	19	4119-001	2-8	11	4536-001
14-4	10	774-023	8-3	1	2108-001	3-8	11	4333-003	2-9	10	4536-001
14-4	11	774-025	9-2	8	2108-001	8-9	7	4333-003	4-6	1	4536-001
16-3	6	792-029	16-1	5	2108-001	5-15	11	4333-003	4-7	8	4536-001

FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.				
4-8	3	4536-001	7-2	23	53828-001	16-1	8	53844-167	15-4	4	57968-001
5-5	23	4536-001	4-4	12	53837-001	5-4	6	53845-111	5-13	7	57968-001
8-1	17	4536-001	5-7	9	53842-261	6-3	11	53845-135	3-6	32	58139-001
8-5	10	4536-001	5-10	8	53842-261	6-5	13	53845-135	6-4	7	58295-001
10-4	4	4536-001	2-2	18	53842-427	5-5	15	53845-225	3-6	2	58726-001
11-2	10	4536-001	6-4	6	53843-003	5-9	8	53845-225	3-4	4	59401-001
8-6	9	4734-001	6-7	10	53843-003	7-2	22	53845-339	5-5	8	59407-001
8-8	10	4734-001	6-4	5	53843-011	7-2	18	53845-409	4-2	24	59410-001
4-11	14	4771-061	15-4	14	53843-011	6-5	10	53845-415	4-5	9	59410-001
2-11	18	4773-001	14-1	4	53843-099	6-5	11	53845-435	4-7	9	59410-001
10-1	0 1	4883-001	14-2	4	53843-099	5-6	9	53845-451	5-6	4	59423-001
3-6	29	5460-001	15-4	12	53843-177	5-9	3	53845-451	5-7	4	59423-001
8-2	31	5537-001	10-5	10	53843-185	5-7	12	53845-519	6-3	4	59423-001
2-8	6	5549-001	10-6	5	53843-185	5-9	4	53845-519	6-4	4	59423-001
2-1	7	5902-001	15-3	7	53843-185	4-2	23	53845-531	6-7	8	59423-001
3-8	4	6149-005	5-5	17	53843-187	5-4	9	53845-537	10-5	5	59423-001
3-10		6149-005	5-8	16	53843-187	5-6	8	53845-537	11-6	8	59423-001
5-15	4	6149-005	5-13	5	53843-189	4-2	15	53845-749	15-2	21	59423-001
3-10	4	6149-043	10-5	6	53843-209	4-7	5	53845-749	5-8	6	59426-001
3-10	2	6149-057	10-7	5	53843-209	4-2	21	53845-807	6-3	10	59426-001
10-1	1 5	6284-003	10-5	3	53843-239	4-7	10	53845-807	7-2	21	59428-001
2-2	4	11981-001	10-8	5	53843-239	4-5	4	53845-809	4-5	2	59434-001
2-5	8	13323-001	10-5	8	53843-241	4-7	2	53845-809	5-9	10	59928-001
2-6	4	13323-001	10-6	3	53843-241	4-5	1	53845-811	5-14	5	59928-001
8-1	22	13323-001	15-3	9	53843-241	4-7	1	53845-811	2-11	2	60109-001
2-3	3	13625-001	5-7	5	53843-331	5-4	7	53845-813	3-5	7	60248-001
8-8	2	13625-001	5-8	18	53843-331	5-7	11	53845-813	5-7	15	60248-001
5-4	10	13884-001	10-5	11	53843-377	6-5	1	53846-017	15-2	22	60248-001
5-15	6	14173-003	10-6	6	53843-377	6-6	5	53846-017	15-4	1	60248-001
8-6	15	15693-001	11-4	6	53843-437	5-4	4	53846-249	10-1	0 3	60531-001
3-11		15844-007	11-6	9	53843-437	6-6	4	53846-249	4-7	4	60718-001
3-11	4	15844-009	11-4	9	53843-451	6-3	5	53871-001	5-6	6	60718-001
10-1	0 2	16138-031	11-6	10	53843-451	7-3	51	55419-001	5-9	9	60718-001
5-4	1	16284-001	5-5	19	53843-487	4-4	1	56218-001	7-2	26	60723-001
3-8	6	16358-005	5-6	5	53843-487	8-10	7	56647-001	6-5	2	60907-001
8-6	14	17391-001	5-6	10	53843-523	5-10	3	56725-001	10-5	2	60908-001
2-5	10	18991-001	5-12	2	53843-523	8-2	1	57200-001	11-5	2	60908-001
2-6	17	18991-001	10-5	9	53843-543	3-6	34	57301-001	7-2	28	60909-001
5-3	8	18991-001	10-6	4	53843-543	8-2	37	57337-001	5-7	16	61664-001
8-5	13	21285-001	15-2	25	53843-567	2-8	19	57706-001	6-6	3	61703-001
1-2	29	23261-315	11-4	5	53843-587	9-2	4	57867-012	8-2	9	63579-001
1-4	16	23261-315	11-5	7	53843-587	3-2	15	57940-089	8-5	12	64075-001
1-2	31	23261-324	5-9	11	53843-589	3-5	15	57940-089	4-15	10	64078-025
1-4	10	23261-324	6-4	9	53843-589	5-8	13	57940-271	4-16	10	64078-025
1-2	16	23261-756	10-5	4	53843-591	7-2	31	57940-275	4-15	11	64078-027
1-4	2	23261-756	10-7	6	53843-591	8-10	3	57940-275	4-16	11	64078-027
2-4	2	24772-001	15-4	13	53843-617	3-2	15	57940-279	2-4	3	64108-001
5-5	7	24772-001	15-2	24	53843-689	3-5	14	57940-279	5-5	6	64108-001
8-5	7	26452-001	6-7	9	53843-701	5-8	7	57940-333	2-2	14	64111-001
8-5	6	26453-001	5-7	14	53843-733	5-8	9	57940-581	4-4	4	65565-001
8-6	23	26692-001	5-13	11	53843-733	5-9	6	57940-581	4-5	21	65565-001
8-2	6	27148-001	3-2	1	53843-735	7-2	27	57940-591	5-8	8	65565-001
11-8	4	51175-001	3-5	12	53843-735	8-10	12	57940-591	5-7	7	65567-001
10-9	3	51181-001	3-2	1	53843-737	6-3	9	57940-715	3-4	6	65570-001
16-3	5	51181-001	3-5	13	53843-737	3-2	14	57946-001	4-2	14	65930-001
8-1	5	53276-001	4-2	11	53843-739	11-4	2	57950-001	8-2	9	66462-001
3-5	5	53657-001	8-10	13	53843-739	15-2	20	57950-001	6-9	26	66845-001
3-4	2	53663-001	5-7	13	53843-741	15-3	6	57950-001	4-2	10	66996-001
5-11	12	53823-001	5-14	4	53843-741	15-4	3	57950-001	8-2	11	67081-001
4-4	7	53824-001	8-10	11	53843-741	5-8	19	57954-001	8-6	11	67271-001
5-5	22	53824-001	4-2	8	53843-743	3-4	5	57967-001	8-2	24	67292-001
5-10	7	53827-001	4-6	4	53843-743	14-1	6	57967-001	2-11	14	67570-001
4-2	22	53828-001	6-3	6	53843-743	3-2	16	57968-001	4-2	12	67745-001
4-4	2	53828-001	6-4	8	53843-743	3-5	4	57968-001	9-1	9	67846-003
4-5	20	53828-001	10-5	7	53843-759	4-2	25	57968-001	10-5	15	67846-003
4-7	3	53828-001	10-7	7	53843-759	5-8	4	57968-001	15-3	12	67846-003
5-7	10	53828-001	4-4	13	53844-061	10-6	7	57968-001	15-3	11	67846-005
5-9	2	53828-001	4-5	15	53844-061	14-1	5	57968-001	5-11	8	67850-001
6-5	8	53828-001	5-5	14	53844-151	14-2	5	57968-001	6-8	4	68094-055

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FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.				
6-8	3	68094-057	1-2	7	7000A-003	14-4	6	70020-007	8-5	14	86217-001
2-8	15	68125-001	1-4	6	7000A-003	5-4	5	70028-001	16-1	7	86235-001
4-2	27	68210-001	7-4	19	7000A-027	5-4	3	70030-001	8-9	10	86319-001
4-6	7	68210-001	1-1	19	7000A-325	15-2	19	70054-001	3-2	11	86510-001
16-1	9	68634-001	1-3	18	7000A-325	4-9	6	70096-001	4-2	4	86510-001
6-3	7	68707-001	1-1	23	7000A-393	8-2	6	70889-001	10-2	26	86510-001
7-2	32	68707-001	1-4	3	7000A-393	4-5	3	71252-001	8-2	32	86579-001
8-10	5	68707-001	1-1	22	7000A-394	4-2	9	72056-001	8-2	25	86580-001
3-5	6	68774-001	1-4	4	7000A-394	8-2	2	72079-001	8-5	11	86582-001
5-8	12	68774-001	1-1	20	7000A-395	8-2	5	72081-001	15-3	1	86668-001
8-2	36	69757-001	1-1	9	7000A-467	4-2	13	72895-001	5-13	8	86668-001
8-2	1	69759-001	1-2	20	7000A-467	4-9	3	72897-001	5-17		86668-001
1-1	34	700IA-305	1-3	17	7000A-528	10-3	17	75381-010	5-9	7	86697-001
1-2	22	700IA-305	1-1	24	7000A-576	4-2	6	75381-014	8-7	10	87356-003
1-3	10	700IA-305	1-4	14	7000A-576	4-9	2	75381-016	3-8	3	87390-001
1-1	35	700IA-306	1-4	19	7000A-627	14-1	9	75814-041	5-15	3	87390-001
1-2	21	700IA-306	10-4	30	7000A-627	2-6	11	76533-001	3-8	19	87397-001
1-3	11	700IA-306	1-1	31	7000A-740	2-2	19	77734-001	5-15	19	87397-001
1-3	18	700IA-325	1-2	8	7000A-740	2-3	2	77736-001	3-8	20	87398-001
1-3	18	700IA-325	1-4	7	7000A-740	8-8	3	77736-001	5-15	20	87398-001
1-2	35	700IA-393	1-1	4	7000A-778	2-2	23	78062-001	8-5	18	87697-003
1-4	3	700IA-393	1-2	2	7000A-778	8-2	35	78114-001	8-5	19	87697-005
1-2	28	700IA-394	1-4	13	7000A-778	2-11	7	78171-001	5-8	17	88545-001
1-4	4	700IA-394	1-2	27	7000I-044	5-3	3	78544-001	1-8	13	89349-001
1-1	14	700IA-408	1-4	8	7000I-044	10-1	119	79530-009	4-3	23	89349-001
1-2	24	700IA-408	1-2	17	7000I-098	3-8	15	79704-001	1-9	2	89371-001
1-3	4	700IA-408	1-4	9	7000I-098	3-10	5	79704-001	4-3	15	89371-001
1-1	13	700IA-409	1-2	6	7000I-294	5-15	15	79704-001	8-2	4	89597-001
1-2	13	700IA-409	1-3	7	7000I-294	8-2	16	79803-001	4-17	2	91019-003
1-3	3	700IA-409	1-1	37	7000I-530	5-5	9	81212-001	11-7	8	93180-007
1-1	8	700IA-426	1-2	32	7000I-530	5-3	10	81214-001	11-8	9	93180-007
1-2	25	700IA-426	1-4	15	7000I-530	5-5	13	81343-001	5-9	12	93411-001
1-3	13	700IA-426	9-3	2	7000I-530	15-2	23	81343-001	14-1	3	93707-001
1-1	7	700IA-441	1-2	33	7000I-563	8-2	8	81374-001	14-2	3	93707-001
1-2	11	700IA-441	1-4	20	7000I-563	5-3	9	81590-001	8-2	38	93831-001
1-3	1	700IA-441	1-1	29	70000-044	8-10	6	81665-001	5-5	16	94572-013
1-1	10	700IA-472	1-4	8	70000-044	4-2	3	81902-001	4-11	24	94594-007
1-2	15	700IA-472	1-1	18	70000-098	4-17	2	81902-001	1-8	16	94974-001
1-3	6	700IA-472	1-4	9	70000-098	5-5	20	81921-001	1-9	6	94974-001
1-1	11	700IA-473	1-1	21	70000-294	4-6	3	82931-001	4-3	21	94974-001
1-2	23	700IA-473	1-3	7	70000-294	10-6	2	82931-001	2-9	1	96072-001
1-4	21	700IA-473	1-1	16	70000-394	15-3	5	82931-001	5-4	8	96075-001
1-1	12	700IA-474	1-2	10	70000-394	15-4	5	82931-001	5-3	2	96291-001
1-2	18	700IA-474	1-4	1	70000-394	5-12	1	82931-001	8-7	4	96458-001
1-3	5	700IA-474	1-4	15	70000-530	3-4	3	82932-001	2-7	3	97456-001
1-1	26	700IA-477	9-3	2	70000-530	4-15	12	83651-025	2-8	4	97456-001
1-2	30	700IA-477	1-1	28	70000-563	4-16	12	83651-025	2-6	9	97874-003
1-3	9	700IA-477	1-4	20	70000-563	4-15	3	84550-029	1-8	11	98422-001
1-1	32	700IA-488	10-4	31	70000-563	4-16	3	84550-029	1-9	3	98422-001
1-2	12	700IA-488	1-1	2	70000-614	4-17	1	85642-007	4-3	16	98422-001
1-3	16	700IA-488	1-2	3	70000-614	4-17	1	85642-009	4-3	24	98422-001
1-2	34	700IA-528	1-4	12	70000-614	4-17	1	85642-011	2-1	13	98678-001
1-3	17	700IA-528	7-4	19	70000-675	4-17	3	85642-079	5-5	2	98687-005
1-2	36	700IA-576	1-1	3	70000-775	4-17	3	85642-081	8-6	18	99042-001
1-4	14	700IA-576	1-2	4	70000-775	4-17	3	85642-083	5-20	6	99541-017
1-4	19	700IA-627	1-4	11	70000-775	4-2	2	85642-163	15-6	13	99859-005
1-1	40	700IA-679	1-1	5	70000-785	4-12	4	85647-025	4-2	25	99999-001
1-2	39	700IA-679	1-2	5	70000-785	1-7	2	85752-001	2-2	17	100351-001
1-3	14	700IA-679	1-3	12	70000-785	1-8	6	85752-001	7-2	19	100849-001
1-3	2	700IA-686	1-4	17	70000-785	1-9	14	85752-001	5-7	6	100873-001
1-1	39	700IA-696	1-1	38	70000-834	5-20	1	85777-031	5-6	7	101507-001
1-2	38	700IA-696	1-2	37	70000-834	8-1	3	85790-003	5-7	8	101507-001
15-4	15	700IA-696	1-4	18	70000-834	5-20	11	85923-023	10-8	4	101507-001
1-1	6	700IA-743	1-5	7	70000-834	1-8	11	86104-163	4-3	27	101522-001
1-2	14	700IA-743	4-5	5	70008-001	4-3	24	86104-163	2-8	17	102118-001
1-3	15	700IA-743	7-2	8	70010-001	1-9	3	86104-253	2-9	3	102628-001
1-1	33	700IA-771	3-7	10	70020-003	4-3	16	86104-253	3-8	8	102976-001
1-2	9	700IA-771	3-7	11	70020-005	2-5	6	86113-001	5-15	8	102976-001
1-1	30	7000A-003	3-7	23	70020-007	2-7	2	86113-001	2-11	16	102995-001

FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.				
2-2	10	102996-001	6-9	20	201666-027	9-3	5	210784-001	14-5	1	215170-003
2-2	3	103005-001	6-9	6	201666-029	9-3	4	210785-001	14-5	8	215170-011
2-2	2	103006-001	6-9	27	201666-035	7-2	33	210788-001	8-1	2	215200-001
2-2	1	103007-001	6-9	29	201666-039	8-10	4	210788-001	10-1	17	215258-001
2-1	11	103011-001	6-9	28	201666-041	1-9	9	211142-003	5-18	12	215325-011
2-2	11	103027-001	6-9	7	201666-043	5-11	2	211144-001	5-19	15	215325-015
5-5	4	103029-001	8-2	33	201785-001	1-6	10	212522-001	4-3	11	215343-001
5-5	18	103030-001	8-2	34	201793-001	7-2	7	212522-001	4-3	6	215344-001
5-5	5	103031-001	14-5	9	202720-001	4-10	10	212522-001	4-3	13	215347-001
5-5	3	103032-001	14-5	4	202726-001	5-20	2	212568-007	4-3	8	215348-001
8-2	22	103202-001	14-5	3	202727-001	5-20	8	212568-009	4-11	22	215350-001
14-1	21	103734-001	11-7	9	203022-001	5-20	9	212568-011	1-9	4	215584-001
5-5	10	103997-001	5-18	3	203839-009	5-20	10	212568-013	5-12	8	215602-001
2-2	11	104063-001	5-18	13	204355-001	5-20	13	212568-017	5-11	4	215799-001
2-1	12	104067-001	8-12	4	204812-001	5-20	14	212568-019	5-20		215799-001
2-1	12	104068-001	4-13	5	204954-001	5-19	11	212820-009	5-20	3	215799-003
2-1	5	104071-001	11-8	7	205001-001	5-22	1	212822-005	5-20	4	215799-005
2-1	6	104073-001	11-7	6	205003-001	3-6	10	212840-001	5-20	5	215799-007
2-1	6	104074-001	5-21	1	206271-005	13-1	6	213086-001	5-20	7	215799-009
7-2	29	105150-001	5-22	3	206271-005	13-2	6	213086-001	5-20	12	215799-011
8-12	8	105400-N38	5-21	1	206271-007	13-3	6	213086-001	5-20	15	215799-013
8-12	9	105400-N39	5-22	1	206271-007	13-1	6	213389-005	5-20	16	215799-015
8-12	10	105400-N40	5-22	2	206271-007	13-2	6	213389-005	5-20		215799-017
2-1	11	107606-001	5-18	11	206557-009	13-3	6	213389-005	12-1		215938-001
5-23	2	110467-003	4-13	4	207418-005	13-1	5	213389-007	12-1	7	215938-003
6-12	1	110467-003	4-13	3	207418-009	13-2	5	213389-007	12-2	7	215938-003
2-6	9	110479-001	2-6	13	208065-001	13-3	5	213389-007	12-2		215939-001
1-8	17	110886-001	9-1	13	208065-001	13-1	4	213389-009	12-2		215940-001
5-5	1	113253-003	4-15	2	208148-001	13-2	4	213389-009	12-2	8	215940-003
5-19	6	115404-017	4-16	2	208148-001	13-3	4	213389-009	12-1	2	215941-001
5-8	15	117452-001	4-15	5	208151-001	13-1	1	213389-011	12-2	2	215941-001
6-3	8	117452-001	4-16	5	208151-001	13-2	1	213389-011	12-1	6	215942-001
15-2	18	117452-001	4-15	6	208152-001	13-3	1	213389-011	12-2	5	215942-001
7-2	2	120885-001	4-16	6	208152-001	5-12	6	213586-001	12-4		215942-001
7-6	2	123595-001	4-15	4	208157-001	5-13	3	213586-001	12-4	1	215942-003
7-6	1	123596-001	4-16	4	208157-001	1-7	9	213594-001	12-5	1	215942-003
5-9	5	130600-001	4-15	21	208163-001	1-8	2	213594-001	12-4	2	215942-005
5-14	3	130987-001	4-16	21	208163-001	1-9	10	213594-001	12-4	3	215942-007
8-12	6	142423-001	4-15	22	208164-001	1-7	1	213595-001	12-5	3	215942-007
8-12	5	142954-001	4-16	22	208164-001	1-8	10	213595-001	12-4	4	215942-009
11-8	1	200769-001	11-8	2	208177-001	1-9	13	213595-001	12-5	4	215942-009
11-7	4	200778-001	11-8	3	208178-001	1-7	8	213598-003	12-4	5	215942-011
5-19		200782-001	3-7	7	209107-005	1-8	1	213598-003	12-5	5	215942-011
5-19	12	200783-001	3-7	26	209137-017	5-11	5	213612-001	12-4	6	215942-013
5-19	13	200786-001	3-7	27	209137-019	1-9	7	213685-001	12-5	6	215942-013
5-19	4	200787-001	3-7	28	209137-021	5-11	3	213687-001	12-4	7	215942-015
5-19	8	200788-001	3-7	29	209137-023	6-10	2	213758-017	12-5	7	215942-015
5-19	1	200789-001	3-7	30	209137-025	12-1	1	213900-003	12-4	8	215942-017
5-18	4	200795-001	3-7	31	209137-027	12-1	4	213900-007	12-4	9	215942-019
5-18	6	200808-001	7-4	19	210779-001	12-1	9	213900-009	12-5	9	215942-019
11-7	3	200809-001	7-4	19	210779-005	12-2	9	213900-009	12-4	10	215942-021
11-7	7	200819-001	9-3	6	210780-001	12-1	3	213900-013	12-5	10	215942-021
5-19	2	200820-001	9-3	6	210780-003	12-1	5	213900-015	12-4	11	215942-023
5-19	3	200822-001	9-3	6	210780-005	12-1	1	213900-019	12-5	11	215942-023
10-9	1	200833-001	9-3	6	210780-007	12-1	8	213900-021	12-4	12	215942-025
11-8	5	200841-001	9-3	6	210780-009	12-1		213900-023	12-5	12	215942-025
2-12	5	200867-007	9-3	6	210780-011	12-2		213900-023	12-4	13	215942-027
10-9	4	200914-001	9-3	6	210780-013	12-1		213900-025	12-5	13	215942-027
11-8	13	200925-001	9-3	4	210781-001	12-2		213900-025	12-4	14	215942-029
8-9	13	201482-001	9-3	3	210782-001	12-2	1	213902-005	12-5	14	215942-029
6-9	13	201666-007	9-3	3	210782-003	12-3	1	213902-005	12-2	4	215943-001
6-9	14	201666-009	9-3	3	210782-005	12-2		213902-011	8-2	29	215991-001
6-9	16	201666-013	9-3	3	210782-007	10-1	1	214193-001	8-2	29	215992-001
6-9	16	201666-015	9-3	3	210782-009	10-8	1	214193-001	8-2	30	215992-001
6-9	21	201666-017	9-3	3	210783-001	10-1	1 11	214193-003	8-2	29	215993-001
6-9	22	201666-019	9-3	4	210783-003	10-1	1 13	214193-005	8-2	30	215993-001
6-9	18	201666-021	9-3	4	210783-005	4-11	25	214200-001	8-2	29	215994-001
6-9	17	201666-023	9-3	4	210783-007	4-11	23	214202-001	8-2	28	215995-001
3-9	19	201666-025	9-3	4	210783-009	8-7	3	214360-001	8-2	28	215996-001

FIG. NO.		PART NO.	FIG. NO.		PART NO.	FIG. NO.		PART NO.	FIG. NO.		PART NO.
8-2	28	215997-001	7-3	4	220741-011	5-14	2	221504-001	7-2	24	224904-007
8-2	28	215998-001	7-3	5	220741-013	7-1	5	221511-001	11-3	3	224934-001
8-8	21	216293-001	7-3	6	220741-015	7-2	30	221512-001	7-2	5	224940-001
8-9	2	216293-001	7-3	7	220741-017	6-9	8	221557-007	7-2	6	224941-001
8-8	20	216295-001	7-3	8	220741-019	6-9	9	221557-009	5-3	4	224944-001
8-9	3	216295-001	7-3	9	220741-021	13-1	6	221643-001	7-3	65	224952-003
4-9	7	216461-001	7-3	9	220741-023	13-2	6	221643-001	7-3	64	224952-005
3-7	20	216770-003	7-3	10	220741-025	13-3	6	221643-001	2-2	15	224953-001
12-2		216871-001	7-3	11	220741-027	13-2	7	221658-001	5-13	6	224977-001
12-3		216871-001	7-3	12	220741-029	13-3	7	221658-001	5-19		224977-001
1-9	20	217033-001	7-3	13	220741-031	11-7	2	221766-015	5-19	5	224977-003
8-2	26	217231-001	7-3	14	220741-033	13-1	6	221806-001	5-19	7	224977-005
9-1	1	217967-001	7-3	15	220741-035	13-2	6	221806-001	5-19	9	224977-007
3-6	41	218249-003	7-3	16	220741-037	13-3	6	221806-001	5-19	10	224977-009
3-7	6	218249-003	7-3	17	220741-039	11-8	6	222440-009	9-3	4	224979-001
5-18	7	218496-007	7-3	18	220741-041	3-6	6	222458-001	9-3	4	224990-001
10-6	1	219107-001	7-3	19	220741-043	3-6	6	222459-001	9-3	4	224991-001
10-9		219107-001	7-3	20	220741-045	3-2	9	222461-001	14-1	11	225016-001
10-9	10	219107-003	7-3	21	220741-047	3-6		222461-001	14-1	16	225019-001
10-9	11	219107-005	7-3	22	220741-049	3-2	9	222462-001	14-2	11	225038-001
10-9	12	219107-007	7-3	23	220741-053	3-6		222462-001	3-6	13	225070-001
10-9	6	219107-009	7-3	24	220741-055	3-6	36	222486-001	3-6	24	225071-001
10-9	7	219107-011	7-3	25	220741-057	5-18	2	223842-007	3-6	17	225072-001
10-9	9	219107-013	7-3	26	220741-059	14-5	2	223998-003	3-6	16	225074-001
10-9		219107-015	7-3	27	220741-061	6-7	4	224291-001	3-6	12	225075-001
14-5	6	219111-009	7-3	28	220741-063	3-8	18	224397-003	3-6	23	225076-001
11-8	8	219111-011	7-3	29	220741-065	4-13	3	224476-005	3-6	26	225098-001
14-5	7	219111-011	7-3	30	220741-067	4-13	2	224476-007	3-6	35	225099-001
8-2	12	219131-001	7-3	30	220741-069	4-13	2	224476-009	3-6	5	225103-001
3-6	27	219132-001	7-3	31	220741-071	3-6	11	224557-001	3-6	15	225105-001
3-6	28	219133-001	7-3	32	220741-073	2-1	4	224558-009	3-6	25	225106-001
8-2	13	219137-001	7-3	33	220741-075	14-2	21	224579-001	3-6	31	225107-001
8-2	3	219154-001	7-3	34	220741-077	14-2	6	224589-001	3-6	33	225110-001
8-11	1	219186-001	7-3	35	220741-079	14-5		224589-001	3-6	21	225111-001
8-11	2	219186-003	7-3	36	220741-081	14-5	10	224589-003	3-6	37	225113-001
2-3	1	220021-001	7-3	37	220741-083	14-5	11	224589-005	10-3	1	225140-003
2-3	6	220075-001	7-3	38	220741-085	14-5	12	224589-007	1-6	3	225150-001
2-3	4	220076-001	7-3	39	220741-087	14-5	5	224589-009	5-13	12	225152-001
8-8	14	220107-001	7-3	40	220741-089	14-5		224589-011	4-3	22	225167-001
2-1	1	220162-003	7-3	41	220741-091	7-3	43	224662-001	4-3	20	225168-001
2-1	2	220162-005	7-3	42	220741-093	7-3	70	224662-003	1-6	7	225170-001
2-1	3	220162-009	7-3	47	220741-107	7-3	66	224662-005	10-3	14	225184-001
2-2	7	220162-023	7-3	48	220741-109	7-3	69	224662-007	10-3	15	225185-001
2-2	6	220162-025	7-3	49	220741-111	7-3	45	224662-009	4-17	4	225187-003
2-1	7	220162-039	7-3	52	220741-113	7-3	68	224662-011	3-5	1	225190-001
2-4	7	220165-001	7-3	53	220741-115	7-3	67	224662-013	4-8	1	225192-001
2-1	7	220171-001	7-3	54	220741-117	7-3	57	224726-001	4-14		225192-001
8-8	11	220180-001	7-3	55	220741-119	7-3	58	224727-001	4-14	6	225192-003
2-4	14	220203-001	7-3	56	220741-121	10-2	11	224738-001	4-14	10	225192-005
8-11	6	220238-001	7-3	46	220741-123	2-8	16	224849-001	4-14	11	225192-007
4-11	9	220487-001	7-3	44	220741-125	7-3	60	224890-001	4-7	7	225193-001
4-11	5	220488-001	6-9	15	220749-003	7-3	61	224891-001	4-10	3	225194-001
4-11	17	220489-001	4-3	12	220886-001	7-3	62	224892-001	4-10	2	225200-001
4-11	11	220492-001	4-3	7	220887-001	7-3	63	224893-001	10-2	12	225210-001
4-11	6	220493-001	4-3	4	220963-001	7-3	59	224894-001	2-8	13	225532-005
4-11	18	220495-001	4-3	9	220964-001	4-11	16	224896-250	13-2	9	226195-001
2-2	8	220681-013	4-3	5	220965-001	4-11	4	224896-325	13-3	9	226195-001
2-1	7	220681-017	4-3	10	220966-001	4-15	1	224897-003	13-2	6	226197-001
2-1	7	220681-019	14-2	20	220992-001	4-16	1	224897-003	13-3	6	226197-001
2-1	7	220681-021	14-2	17	220993-001	4-15	2	224897-005	13-2	6	226199-001
2-1	7	220681-023	14-2	12	220998-001	4-16	2	224897-005	13-3	6	226199-001
2-1	2	220681-025	14-2	18	220999-001	4-15	23	224897-015	13-2	6	226200-001
2-1	1	220681-027	14-1	1	221503-001	4-16	23	224897-015	13-3	6	226200-001
2-1	3	220681-031	14-2	1	221503-001	4-15	24	224897-017	8-2	30	226209-001
4-9	8	220692-001	16-1	10	221503-001	4-16	24	224897-017	5-5	1	227873-001
4-9	9	220693-001	5-14	1	221503-001	7-3	23	224904-003	2-2	16	227965-001
7-3	1	220741-003	14-1	2	221504-001	7-2	1	224904-005	11-2	1	228001-001
7-3	2	220741-007	14-2	2	221504-001	7-3		224904-005	11-2	3	228007-001
7-3	3	220741-009	16-1	11	221504-001	4-3	25	224904-007	11-2	4	228013-001

FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.				
11-2	11	228014-001	5-8	1	228128-001	14-1	9	228511-001	16-1	1	230970-001
11-2	12	228019-001	11-4	1	228128-001	14-1	7	228514-001	16-2		230970-001
11-6	1	228020-001	5-21		228128-001	14-4		228514-001	16-2	1	230970-003
11-7		228020-001	5-21	1	228128-003	14-4	7	228514-003	16-2	2	230970-005
11-7	1	228020-003	5-21	2	228128-005	14-1	10	228516-001	16-2	3	230970-007
11-7	10	228020-005	5-21	2	228128-007	14-1	22	228524-001	16-2	4	230970-009
11-7	11	228020-007	5-23	2	228128-007	14-1	19	228526-001	16-2	5	230970-011
11-7		228020-009	6-12	3	228128-007	14-1	20	228529-001	16-2	6	230970-013
11-5	1	228021-001	5-21	2	228128-009	9-2	2	229285-001	16-2	7	230970-015
11-8		228021-001	5-21	3	228128-011	6-5	9	229396-001	16-2	8	230970-017
11-8	10	228021-003	5-21	4	228128-013	5-18	14	229414-007	16-2	9	230970-019
11-8	11	228021-005	5-21	4	228128-015	5-18	1	230011-003	16-2	10	230970-021
11-8	12	228021-007	6-11	5	228128-015	11-7	5	230384-011	16-1	6	230977-001
11-8		228021-009	5-22	2	228129-003	3-6	18	230781-001	16-3		230977-001
11-2	2	228030-001	4-11	26	228131-001	9-2	7	230804-001	16-3	1	230977-003
11-2	2	228036-001	4-5	6	228132-001	4-9	1	230806-001	16-3	2	230977-005
11-5	3	228037-001	4-13		228132-001	4-3	25	230813-001	16-3	3	230977-007
11-3	1	228051-001	4-13	1	228132-003	7-2	24	230813-001	16-3	4	230977-009
11-6	2	228058-001	10-2	13	228137-001	8-2	27	230814-001	16-3	7	230977-011
11-5	5	228061-001	10-2	10	228145-001	11-3	11	230814-001	16-3	8	230977-013
11-2	7	228064-001	10-2	14	228146-001	1-7	5	230823-001	16-3	9	230977-015
10-4	1	228066-001	10-2	28	228147-001	11-2	8	230831-001	16-3	10	230977-017
11-2	23	228066-001	10-2	15	228148-001	4-10	7	230839-001	16-3	11	230977-019
11-6	4	228082-001	10-2	17	228150-001	3-3	16	230840-001	16-3	12	230977-021
11-4	8	228090-001	10-2	18	228151-001	3-3	16	230840-003	16-3		230977-023
6-11	2	228096-005	10-2	16	228152-001	3-3	16	230840-005	4-9	11	230980-001
6-11	2	228096-007	10-2	23	228153-001	3-3	22	230840-005	10-2	19	230999-001
6-11	4	228096-011	4-11	12	228158-001	3-3	16	230840-007	12-2	6	231109-001
6-11	4	228096-013	3-2	7	228161-001	3-3	22	230840-007	12-3	4	231109-001
6-3	3	228098-003	5-8	10	228174-001	3-3	22	230841-001	12-3	5	231109-003
6-9		228098-003	10-5	1	228174-001	3-3	22	230841-003	12-3	2	231109-005
7-3	1	228098-005	5-22		228174-001	11-2	22	230842-001	12-3	3	231109-007
7-3	47	228098-009	5-22		228174-003	1-10	2	230858-001	12-2	11	231110-001
7-3	47	228098-011	8-1	24	228176-001	3-6	1	230859-001	12-5		231110-001
7-3	49	228098-013	5-22	6	228179-003	3-7		230859-001	12-5	2	231110-003
7-3	50	228098-015	5-22	6	228179-005	10-2	2	230863-001	12-5	8	231110-005
7-3	54	228098-017	4-11	28	228180-001	3-3	14	230888-001	12-2		231111-001
7-3	54	228098-019	4-11	27	228181-001	3-3	1	230894-001	12-2	10	231111-003
7-3	21	228098-021	4-5	13	228221-001	3-2	6	230897-001	12-3		231113-001
7-3	46	228098-023	6-10		228251-001	3-2	18	230897-003	12-2		231197-001
7-3	21	228098-025	6-10	1	228251-003	3-3	17	230904-001	12-2	3	231197-003
7-3	46	228098-025	6-10	1	228252-003	3-3	13	230905-001	13-1		231212-001
3-8	1	228113-003	6-10	1	228266-003	3-3	11	230906-001	13-2		231218-001
5-15	1	228113-003	2-4	6	228267-001	3-3	7	230907-001	13-3		231219-001
3-8	2	228113-005	2-4	13	228271-001	3-2	5	230923-001	13-3		231220-001
3-11		228113-005	2-6	3	228299-001	3-3	5	230923-001	13-2		231221-001
5-15	2	228113-005	2-6	10	228308-001	1-8	3	230925-001	13-3		231222-001
3-11	10	228113-007	8-1	21	228333-001	10-2	1	230940-001	13-3		231223-001
4-6	2	228114-001	8-1	15	228351-001	1-8	14	230944-001	13-4	1	231224-001
4-12		228114-001	8-1	13	228354-001	4-9	10	230945-001	13-4	2	231228-001
4-12	1	228114-003	8-8	18	228361-001	1-8	15	230957-001	10-4	27	231973-020
4-12	2	228114-005	8-8	1	228364-001	4-3	17	230957-001	13-1	2	231990-001
4-12	2	228114-007	2-6	1	228366-001	10-1	0	230958-001	13-2	2	231990-001
4-12	3	228114-009	2-6	2	228373-001	10-7	1	230958-001	13-3	2	231990-001
4-12	4	228114-011	8-2	23	228389-001	10-1	0 4	230958-003	13-1	3	231991-001
4-2	1	228116-001	8-6	21	228397-001	10-1	0 5	230958-005	13-2	3	231992-001
4-17		228116-001	8-8	4	228398-001	10-1	0 6	230958-007	13-2	8	231993-001
8-8	8	228118-001	8-7	7	228399-001	10-1	0 7	230958-009	13-2	8	231994-001
5-10	4	228124-001	8-7	11	228400-001	10-1	0 8	230958-011	13-3	3	231995-001
5-23		228124-001	8-9	5	228403-001	10-1	0 9	230958-013	13-3	3	231996-001
5-23	1	228124-003	8-9	1	228406-001	10-1	0 10	230958-015	13-3	8	231997-001
5-23	1	228124-005	8-8	22	228407-001	10-1	0 11	230958-017	13-3	8	231998-001
5-23	3	228124-007	8-8	13	228412-001	10-1	0 12	230958-019	13-3	8	231999-001
5-23	4	228124-009	8-10	2	228421-001	10-1	0	230958-021	15-2	16	232422-001
5-23	4	228124-011	8-2	18	228436-001	10-2	6	230960-001	15-6		232422-001
5-23	5	228124-013	8-9	11	228494-001	1-8	9	230961-001	15-6	1	232422-003
5-23	5	228124-015	8-9	12	228495-001	1-9	18	230962-001	15-6	2	232422-005
5-23	2	228124-017	14-1	14	228504-001	8-3	2	230964-001	15-6	3	232422-007
6-12	1	228124-017	14-1	15	228509-001	10-3	10	230968-001	15-6	4	232422-009

FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.	FIG. NO.	PART NO.				
15-6	5	232422-011	4-3	1	235779-001	5-13	14	235919-001	15-4	2	236406-001
15-6	6	232422-013	4-11	21	235787-001	11-3	10	235924-001	15-7		236406-001
15-6	7	232422-015	4-11	13	235788-001	11-2	13	235928-001	15-7	1	236406-003
15-6	8	232422-017	4-11	1	235790-001	11-2	25	235929-001	15-7	2	236406-005
15-6	9	232422-019	4-15		235790-001	8-1	8	235934-003	15-7		236406-007
15-6	10	232422-021	4-15	7	235790-003	2-11	17	235944-001	8-5	17	236408-001
15-6	11	232422-023	4-16	7	235790-003	15-2	8	235946-001	6-4	1	236409-001
15-6	12	232422-025	4-15	8	235790-005	1-5	5	235959-001	6-12		236409-001
15-6	14	232422-027	4-16	8	235790-005	1-5	3	235960-001	6-12	2	236409-003
15-6		232422-029	4-15	9	235790-007	7-1	6	235967-001	5-9	1	236410-001
15-2	3	232482-001	4-16	9	235790-007	3-3	21	235969-001	5-16		236410-001
15-2	15	232484-001	4-15	13	235790-009	3-3	20	235970-001	8-2	7	236411-001
9-1	14	234164-001	4-16	13	235790-009	8-3	3	235975-001	8-1	1	236414-001
9-1	2	234167-001	4-15	14	235790-011	4-10	8	235981-001	2-11	1	236422-001
2-1	1	234218-003	4-16	14	235790-011	3-4	8	235992-001	5-12	3	236423-001
2-1	8	234218-005	4-15	15	235790-013	3-5	9	235992-001	5-18		236423-001
2-1	9	234218-007	4-16	15	235790-013	3-4	13	235993-001	5-18	5	236423-003
2-1	10	234218-009	4-15	16	235790-015	3-5	17	235993-001	5-18	8	236423-005
2-1	10	234218-011	4-16	16	235790-015	3-4	7	235994-001	5-18	9	236423-007
2-2	5	234218-013	4-15	17	235790-017	3-5	18	235994-001	5-18	10	236423-009
2-2	5	234218-015	4-16	17	235790-017	3-4	10	235995-001	5-18		236423-011
2-2	5	234218-017	4-15	18	235790-019	3-5	8	235995-001	8-2	17	236435-001
2-2	8	234218-019	4-16	18	235790-019	3-5	11	235997-001	6-7	11	236439-001
2-2	9	234218-021	4-15	19	235790-021	3-4	9	235998-001	11-5	8	236439-001
2-2	9	234218-023	4-16	19	235790-021	3-5	10	235998-001	3-5	16	236449-001
2-2	12	234218-025	4-15	20	235790-023	10-4	24	236080-001	5-8	5	236449-001
2-2	13	234218-027	4-16	20	235790-023	10-4	25	236081-001	6-4	10	236449-001
2-2	13	234218-029	4-11	2	235791-001	10-4	20	236120-001	8-12	7	236452-001
4-14	1	234256-003	4-16		235791-001	15-2	13	236134-001	5-10	1	236454-001
4-14	2	234256-005	4-4	6	235792-001	10-4	16	236172-003	5-11	9	236454-001
4-14	3	234256-007	4-5	10	235792-001	10-4	11	236183-001	5-10	2	236455-001
4-14	4	234256-009	4-4	9	235793-001	10-4	21	236189-001	5-11	13	236455-001
4-14	5	234256-011	4-5	12	235793-001	15-2	27	236200-001	3-4	1	236457-001
4-14	7	234256-015	4-4	3	235794-001	15-2	11	236205-001	3-8		236457-001
4-14	8	234256-017	4-5	11	235794-001	15-2	2	236210-001	5-6	1	236457-001
4-14	9	234256-019	4-4	11	235795-001	10-4	19	236215-003	3-8	23	236457-003
7-2	17	234343-001	4-5	16	235795-001	15-2	9	236219-001	5-7	2	236458-001
8-10	14	234343-001	4-4	8	235797-001	15-5		236219-001	5-15		236458-001
6-7	7	234359-001	4-5	14	235797-001	15-5		236219-003	5-15	18	236458-003
6-8		234359-001	4-4	5	235798-001	15-5	30	236219-005	5-15	22	236458-005
6-8	1	234359-003	4-5	17	235798-001	15-5	11	236219-007	10-4	14	236460-001
6-8	2	234359-005	4-4	10	235799-001	15-5	12	236219-009	10-4	18	236462-001
6-8	6	234359-007	4-5	19	235799-001	15-5	13	236219-011	10-4	6	236463-001
6-8	7	234359-009	5-5	24	235805-001	15-5	14	236219-013	7-4	1	236466-001
6-8	8	234359-011	5-3	6	235808-001	15-5	15	236219-015	7-4	2	236466-003
6-8	9	234359-013	1-10	5	235828-003	15-5	16	236219-017	7-4	4	236466-005
6-8	10	234359-015	1-7	7	235829-001	15-5	17	236219-019	7-4	5	236466-007
6-8	11	234359-017	1-9	11	235829-001	15-5	18	236219-021	3-3	26	236468-001
6-8		234359-019	1-10	11	235833-003	15-5	19	236219-023	3-3	19	236469-001
6-7	2	234361-001	1-10	8	235849-001	15-5	20	236219-025	7-4	8	236471-001
6-12	2	234863-005	8-4	7	235860-001	15-5	21	236219-027	7-2	4	236472-001
16-1	4	234966-001	8-4	1	235862-001	15-5	22	236219-029	8-2	1	236473-001
16-1	3	234967-001	8-4	4	235863-001	15-5	23	236219-031	7-2	34	236474-001
3-6	22	235269-001	8-4	3	235864-001	15-5	24	236219-033	15-3	10	236481-001
11-3	2	235313-001	8-4	6	235866-001	15-5	25	236219-035	15-3	8	236482-001
10-2	32	235320-001	8-4	2	235868-001	15-5	26	236219-037	10-5	17	236488-001
1-6	5	235321-001	8-4	11	235869-001	15-5	28	236219-039	6-5	3	236494-001
10-3	4	235329-003	16-1	2	235870-001	15-5	29	236219-041	6-11		236494-001
10-3	4	235330-003	3-6	40	235872-001	10-4	35	236224-001	6-11	1	236494-003
1-5	1	235352-003	3-6	39	235873-001	10-4	26	236225-001	6-11	6	236494-005
11-2	5	235353-001	8-4	10	235878-001	10-4	12	236228-001	6-11	6	236494-007
11-2	6	235354-001	3-3	23	235888-001	15-2	12	236229-001	5-8	14	236495-001
2-7	9	235412-001	3-3	3	235894-003	15-2	14	236230-001	4-5	18	236496-001
8-11	3	235683-001	2-11	5	235899-001	15-2	29	236232-001	6-5	12	236496-001
10-4	34	235729-001	3-6	20	235900-001	15-2	28	236233-001	5-5	21	238514-001
1-6	8	235759-001	2-11	4	235909-001	5-22	5	236316-005	2-8	3	238564-001
10-3	12	235772-001	11-3	6	235915-003	8-1	11	236397-001	6-6	1	238572-001
10-3	11	235773-001	15-2	1	235916-001	7-2	20	236399-001	5-3	5	238594-001
7-1		235777-001	15-2	1	235916-001	15-4	6	236402-001	2-8	14	238600-001

<u>FIG. NO.</u>		<u>PART NO.</u>	<u>FIG. NO.</u>		<u>PART NO.</u>
2-8	8	238601-001	2-12	3	901498-003
2-10	4	238602-001	2-12	1	901498-005
2-7	1	238603-001	2-12	4	901498-007
2-6	14	238610-001	2-12	6	901498-009
2-5	1	238612-001	2-9	5	901499-001
2-7	4	238614-001	2-9	8	901500-001
2-4	1	238616-001	4-13	5	901562-011
2-6	18	238624-001	8-5	2	902402-001
2-10	5	238625-001	10-6	9	902445-001
2-6	16	238627-001	10-7	2	902445-001
2-6	15	238628-001	4-10	6	903135-003
2-5	9	238629-001	4-10	5	903135-005
2-7	5	238630-001	8-7	5	903884-001
2-8	12	238636-001	7-4	7	904062-005
2-8	9	238640-001	8-2	10	904346-001
2-10	3	238641-001	9-1	12	904355-001
8-6	5	238643-001	8-7	9	904365-001
8-5	1	238646-001	8-2	30	904423-001
8-5	20	238650-001	4-9	5	904508-001
8-6	16	238652-001	5-16	5	904525-003
2-8	21	238655-001	5-16	2	904525-005
2-8	20	238656-001	5-16	1	904525-007
13-3	8	238750-001	5-16	1	904525-009
13-4	3	238751-001	5-16	2	904525-009
13-4	4	238752-001	5-16	3	904525-011
12-2		238762-001	5-21	5	904525-011
12-3		238762-001	5-22	4	904525-011
12-2		238763-001	6-12	4	904525-011
12-3		238763-001	5-16	4	904525-013
8-1	26	240020-001	8-10	1	904537-001
8-1	27	240023-001	9-3	1	904541-001
8-1	28	240033-001	9-2	1	904546-001
9-1	15	240056-001	8-6	1	904548-001
2-2	20	240756-001	8-6	22	904562-001
4-2	20	240757-001	7-1	1	904576-001
8-3	4	240758-001	7-1	2	904577-001
2-10	12	240759-001	7-1	3	904578-001
10-2	34	240770-001	9-2	3	904731-001
10-3	1	240771-001	2-6	12	904815-001
8-6	20	240789-001	4-2	18	904818-001
9-1	16	240791-001	7-2	25	904830-001
8-6	8	240801-001	7-6	1	904882-001
2-10	1	240802-001	8-2	10	904995-001
2-10	7	240803-001	8-2	10	905001-001
2-8	2	240804-001	4-9	4	905011-001
2-5	4	240807-001	4-9	4	905012-001
2-5	3	240809-001	7-6	2	905216-001
2-9	2	240810-001	14-2	16	905341-001
2-10	8	240814-001	7-4	16	905429-001
8-6	6	240815-001	7-5		905433-001
4-11		240816-001	7-5	1	905433-003
4-11	7	240850-001	7-5	2	905433-005
7-3	47	241000-001	7-5	3	905433-007
7-4	10	244251-001	7-5	4	905433-009
2-2	22	244254-001	7-5	5	905433-011
6-11	5	500659-021	7-5	6	905433-013
4-2	7	600118-001	7-5	7	905433-015
10-7	4	600118-001	7-5	8	905433-017
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10-1	1 3	900028-003	7-4	14	905437-001
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10-1	1	900028-021			
9-1	10	900035-005			
10-5	14	900035-005			
1-1		901228-069			
1-2		901228-070			
2-9	6	901498-001			
2-12		901498-001			

