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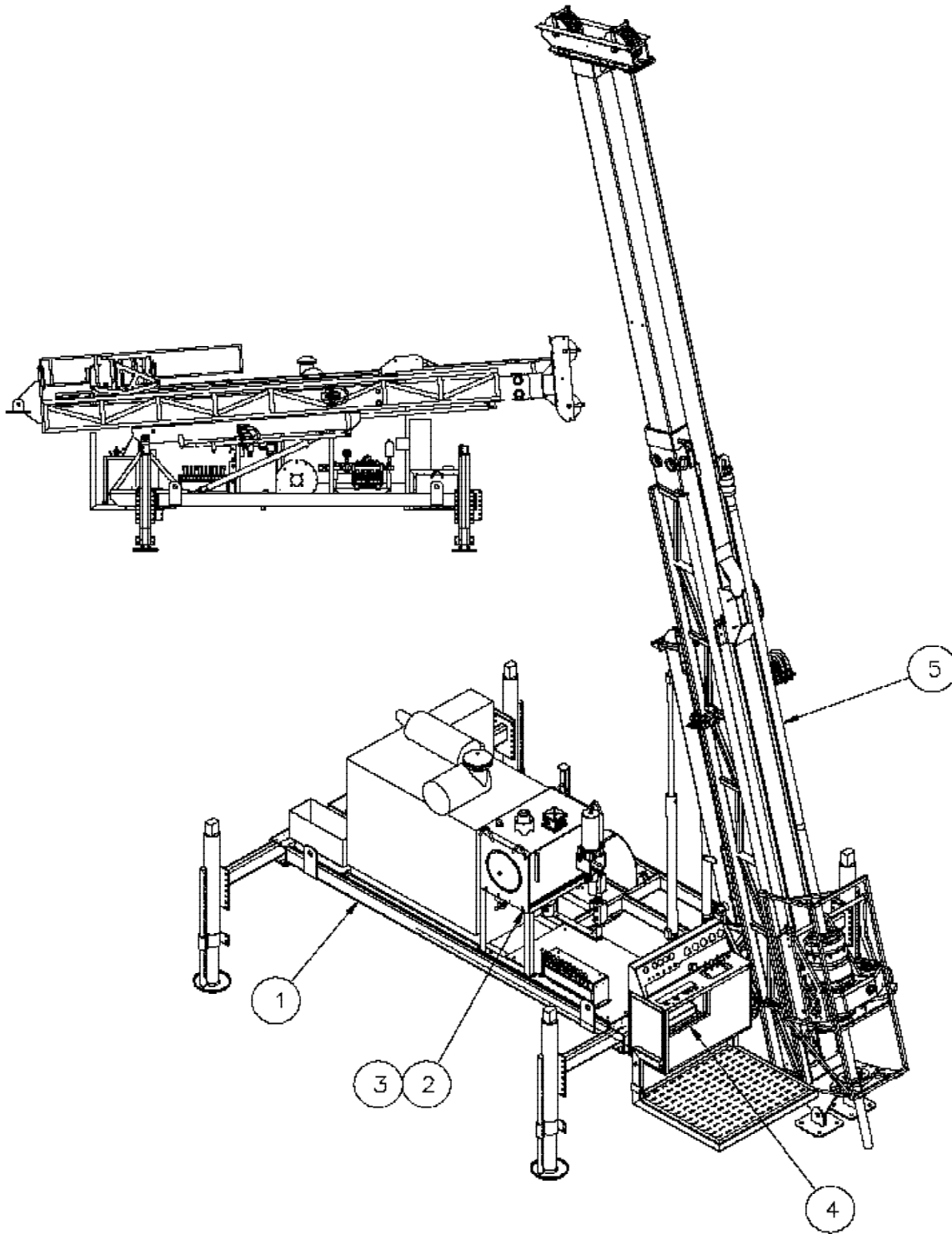


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REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547421	1	BASIC LF90D MODULE ( Page 4 )
2		3547422	1	ENGINE MODULE, CUMMINS ( Page 122 )
3		3547742	1	PQ HEAD MODULE ( Page 128 )
4		3548248	1	ROD CLAMP MODULE ( Page 150 )
5		3544485	1	HOIST ASM, WIRELINE LF70/LF90
6		3547029	1	HYDRAULIC POWERED FLUID PUMP (W11) ( Page 164 )
7		3670446	1	PUMP MODULE, 420 DIESEL POWERED [FMC L09]
8		3547418	1	MANIFOLD, FLUID CIRCULATION ( Page 188 )
9		102306	1	MUD MIXER ASSEMBLY, [Hydraulic]
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27		3543129	1	Liner Kit, Water Pump [FMC W11]
28		102633	1	Spare Parts Kit, Mud Mixer
29		306085	1	Spare Parts Kit, Rod Clamp Group
30		3547263	1	Spare Parts Kit, PQ Head
31		3541832	1	Seal Kit, Rotation Motor
32		3543526	1	SEAL KIT, PQ CHUCK
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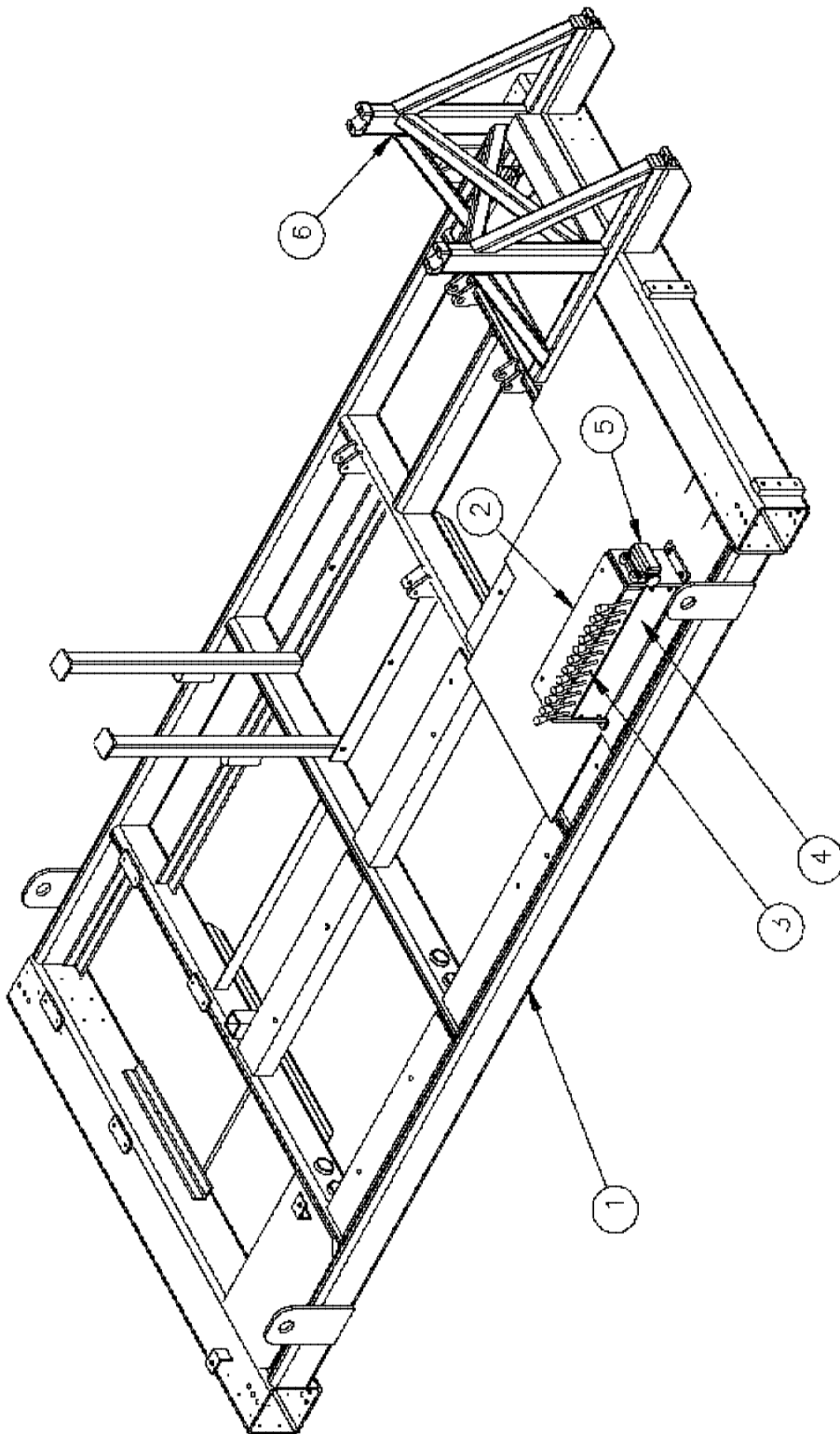


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
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3		3547162	1	PUMP DRIVE MODULE ( Page 34 )
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7		3548268	1	COOLER MODULE ( Page 72 )
8		3547819	1	PLUMBING GROUP ( Page 78 )

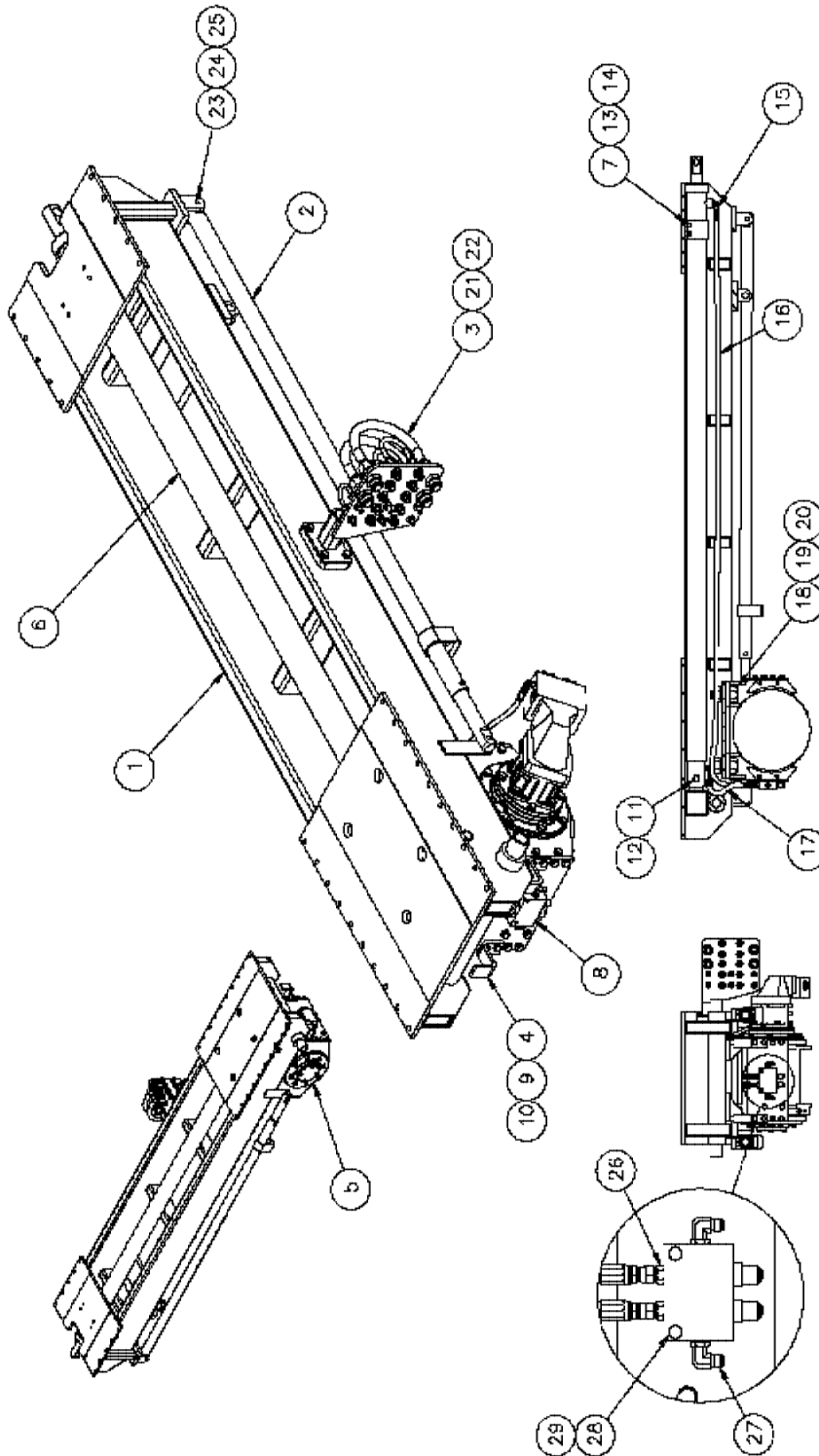




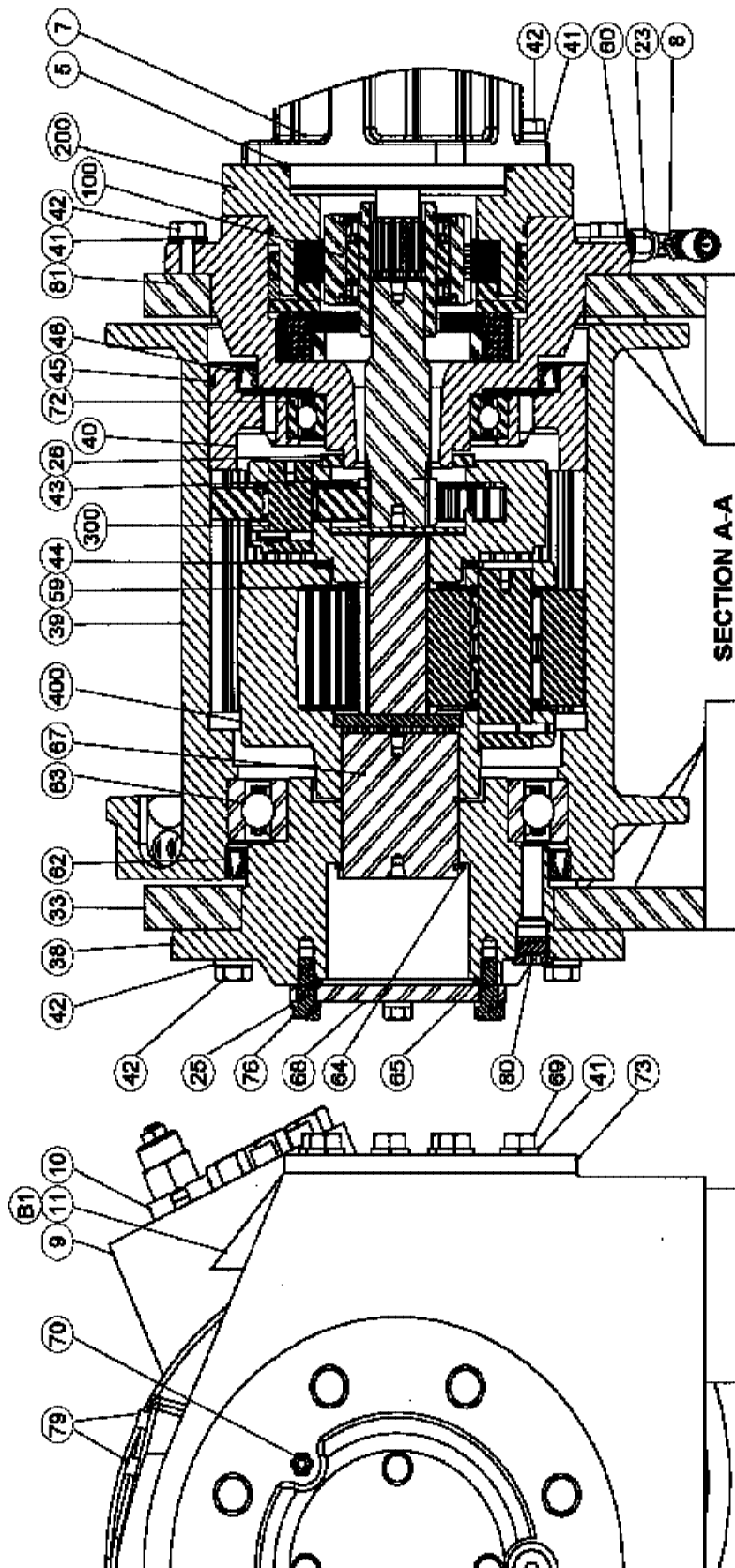
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547165	1	BASE FRAME ASSEMBLY ( Page 8 )
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3		3548337	1	CYLINDER LH, MAST RAISE ( Page 18 )
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5			2	PIN
6			8	SNAP RING
7		3547168	1	FUEL TANK ASSEMBLY ( Page 20 )
8		3547170	2	PIN, MAST LOCKING
9		36801	4	PIN, COTTER
10		100265	2	CAP, MAST MOUNTING SWIVEL
11		102218	4	C/SCR, HH 3/4-16 UNF x 2-3/4"
12		102956	4	LOCKWASHER, Dia3/4 (GR.8) [Gr.8]
13		3547169	1	BATTERY GROUP ( Page 22 )
14		3547530	2	MOUNT, AUXILLIARY COOLER
15			4	C/SCR
16			4	LOCKWASHER
17			1	STRIP, RUBBER
18		3548338	1	CYLINDER RH, MAST RAISE ( Page 24 )



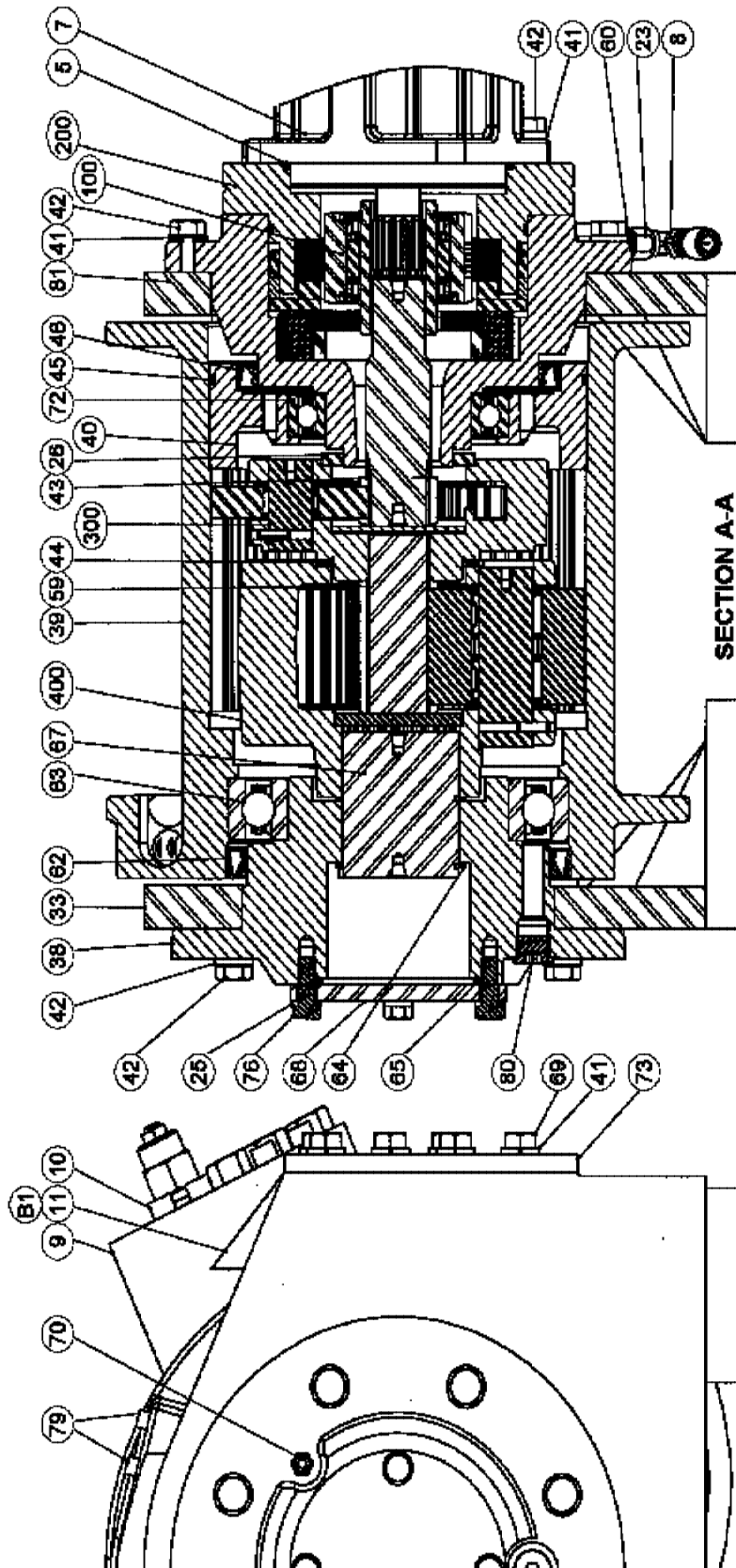
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1		3547166	1	BASE FRAME WELDMENT
2		3547212	1	MOUNT, VALVE 12 BANK
3			1	COVER



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547216	1	DUMP FRAME WELDMENT
2		3545328	2	SUPPORT GRP, MAST LEG
3		3547710	1	ASSEMBLY, HOSE HANGER
4		3547704	1	HOSE, HANGER
5		3546537	1	WINCH, PLANETARY 16000 LB
6		3547042	1	DUMP CYLINDER
7		3547523	1	SUPPORT, CYLINDER
8			1	C/B VALVE ASSEMBLY
9			4	C/SCR
10			4	LOCK WASHER
11			1	PIN
12			2	SNAP-RING
13			4	C/SCR
14			4	LOCK WASHER
15			5	ADAPTER 6 ORB x 6 JIC x 90°
16			1	HOSE
17			1	HOSE
18			4	C/SCR
19			4	LOCK WASHER
20			4	NUT
21			4	C/SCR
22			4	LOCK WASHER
23			4	C/SCR
24			4	WASHER
25			4	NUT
26			2	ADAPTER 6 ORB x 6 JIC
27			2	C/SCR
28			2	LOCK WASHER



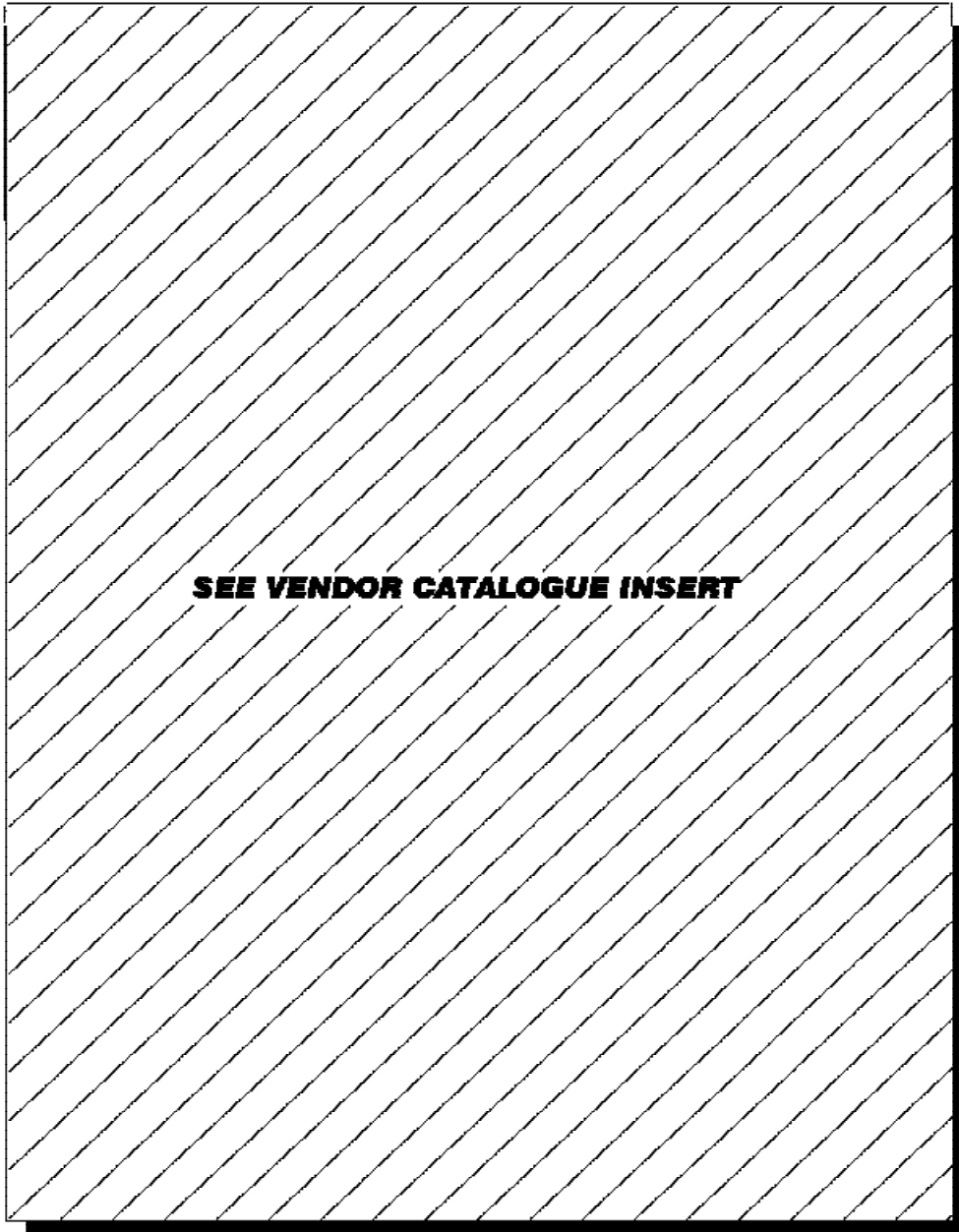
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
-1		76381	1	NAMEPLATE, GH5/PD5 WINCH
-2		11842	4	SCREW, DRIVE
-3		25131	1	ELBOW / O-RING
-4		12465	2	O-RING
-5		75288	2	PLUG, SHIPPING
5		10330	1	O-RING
7		102307	1	MOTOR, HYD
8			1	HOSE ASSY [25749]
9		105786	1	COUNTERBALANCE VALVE
10		27664	8	CAPSCREW
11		105827	4	GUARD, CABLE
12		25614	1	SHAFT, PRIMARY PLANET GEAR
23		26140	1	SWIVEL NUT, 90 deg ELBOW
25		27152	4	LOCKWASHER
26		27375	1	SPACER
32		100028	1	MOTOR SUPPORT
33		105774	1	SUPPORT END PLATE
38		105770	1	BEARING SUPPORT
39		105769	1	CABLE DRUM
40		26480	1	CABLE DRUM CLOSURE
41		11026	44	LOCKWASHER
42		104322	24	CAPSCREW
43		26479	1	GEAR, PRIMARY SUN
44		40129	1	WASHER, THRUST
45		76208	1	ORING
46		22818	1	SEAL, OIL
59		100854	1	GEAR, SUN OUTPUT
60		25864	1	ADAPTER
62		10427	1	SEAL
63		24487	1	BEARING, BALL
64		70575	2	RETAINING RING, EXTERNAL
65		21283	1	O-RING
67		105772	1	TORQUE SHAFT
68		101409	1	COVER GEAR SIDE, CLUTCH SHAFT
69		104174	20	CAPSCREW
70		18062	1	RELIEF VALVE, 7.5-15 PSI
72		24110	1	BEARING, BALL
73		105784	2	TIE PLATE
76		104309	4	CAPSCREW
79		31223	2	16056-620 SCREW, SOC SET UN
80		32411	1	16496-8 PLUG, O-RING FLUSH



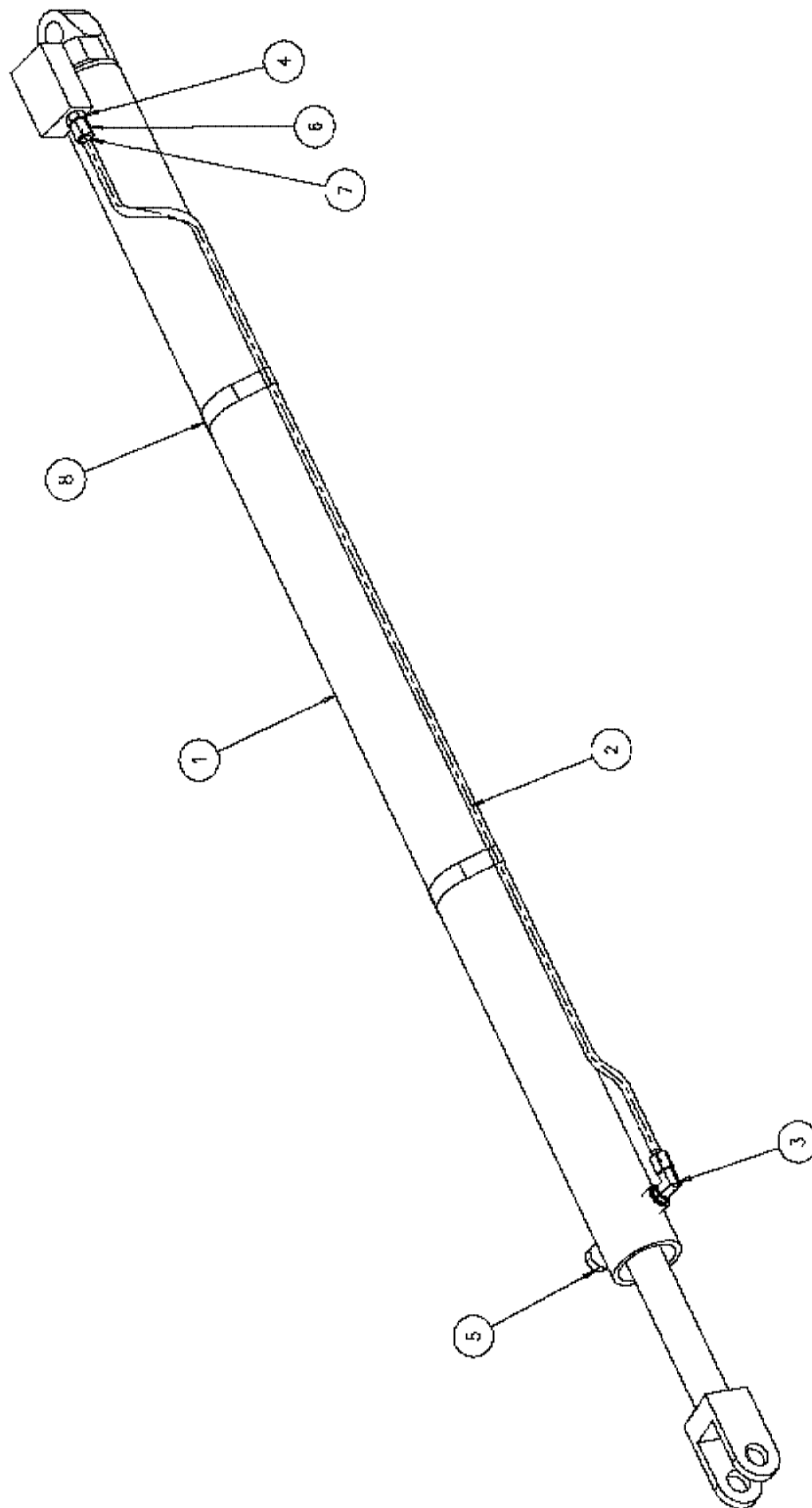


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
81		105773	1	MOTOR END PLATE
100		81716	1	CLUTCH ASSY, SPRAG (C SPL SHAFT)
200		83363	1	BRAKE CYLINDER SUB-ASSY 4BOL
300		82342	1	PRIMARY PLANET CARRIER ASSY
400		81845	1	PLANET CARRIER ASSY
500	V	3546537_M	REF	Service Manual, 16000 lb Winch [BRADEN] ( Page 16 )

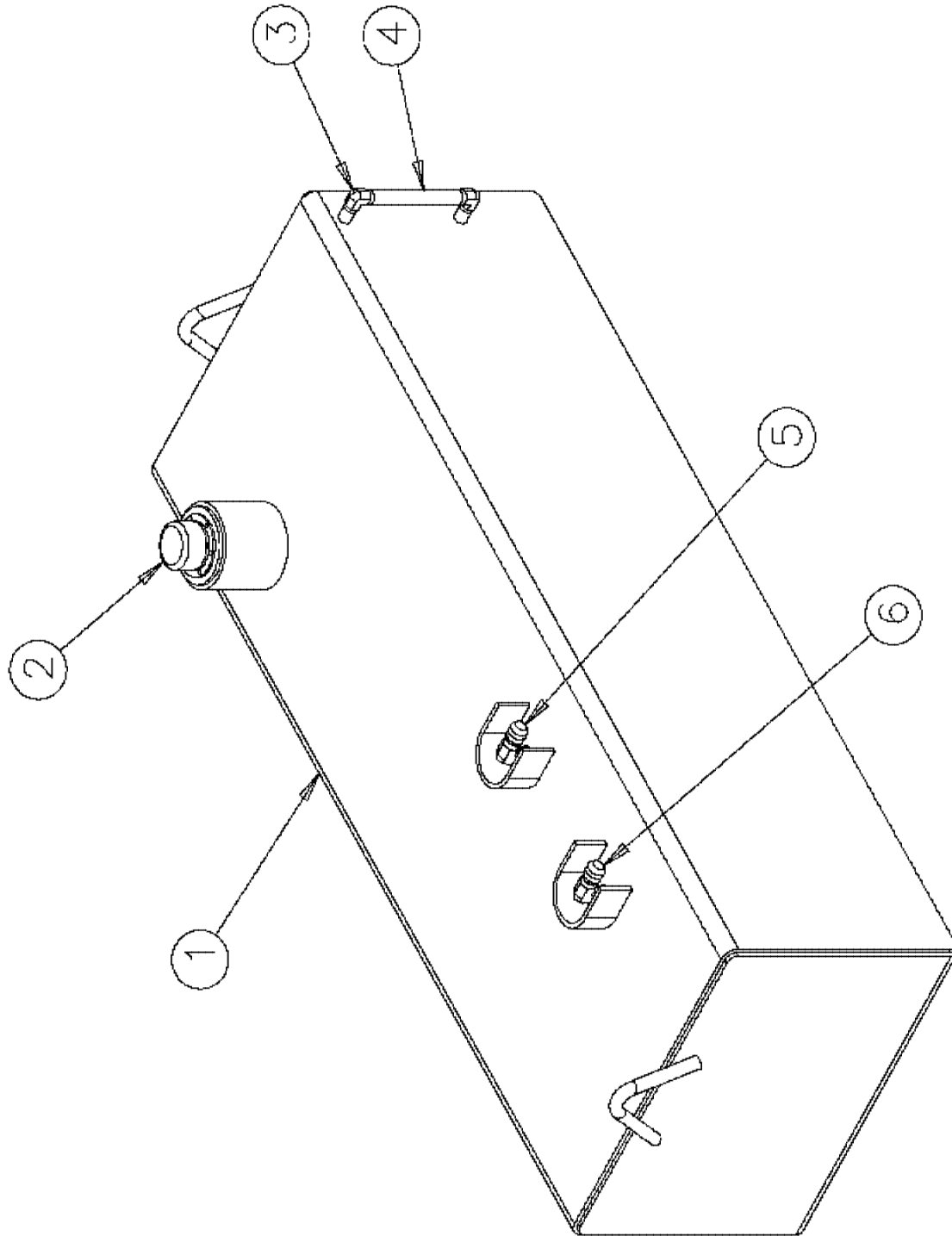
V) See VENDOR literature.



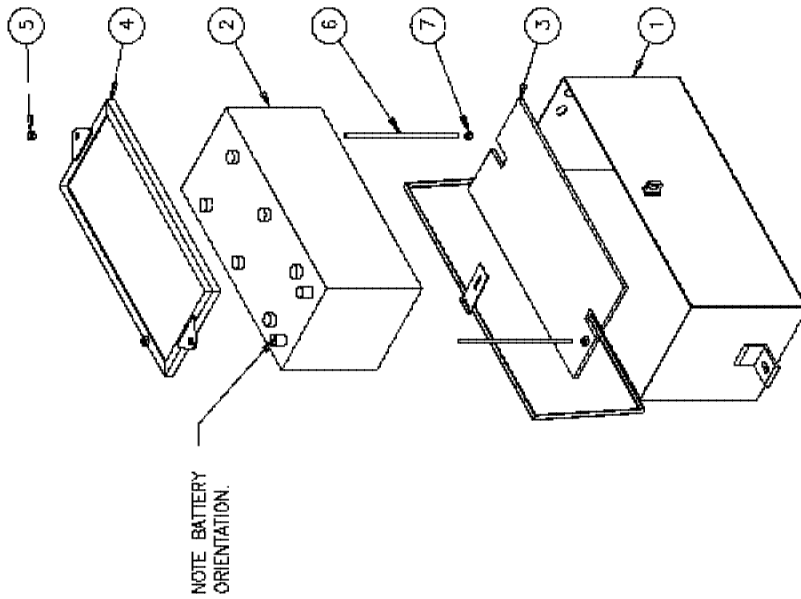
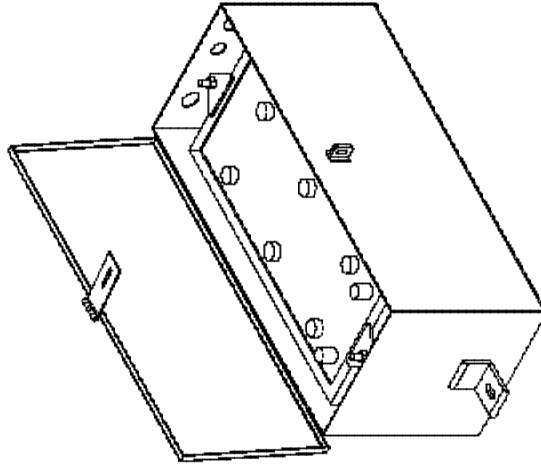




REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547601	1	CYLINDER, MAST RAISING
2		3548271	1	TUBE, LH RIGID
3		36478	1	ADAP, HYD #6 JIC x #6 ORB x 90Deg
4		33660	1	ADAP, HYD 6JIC x 6 ORB
5		44195	1	ADAP, HYD 6 ORB PLUG
6		3548403	2	NUT, 3/8 JIC TUBE FITTING
7		3548404	2	SLEEVE, 3/8 JIC TUBE FITTING
8		3548405	2	CLAMP, 4" ID BAND



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547221	1	WELDMENT, FUEL TANK
2		100290	1	CAP, FILLER BREATHER [Fuel Tank]
3		100996	2	FITTING, HOSE END
4		102017	1	HOSE, CLEAR, 3/8 ID [1/3/8]
5			1	ADAPTER
6			1	ADAPTER

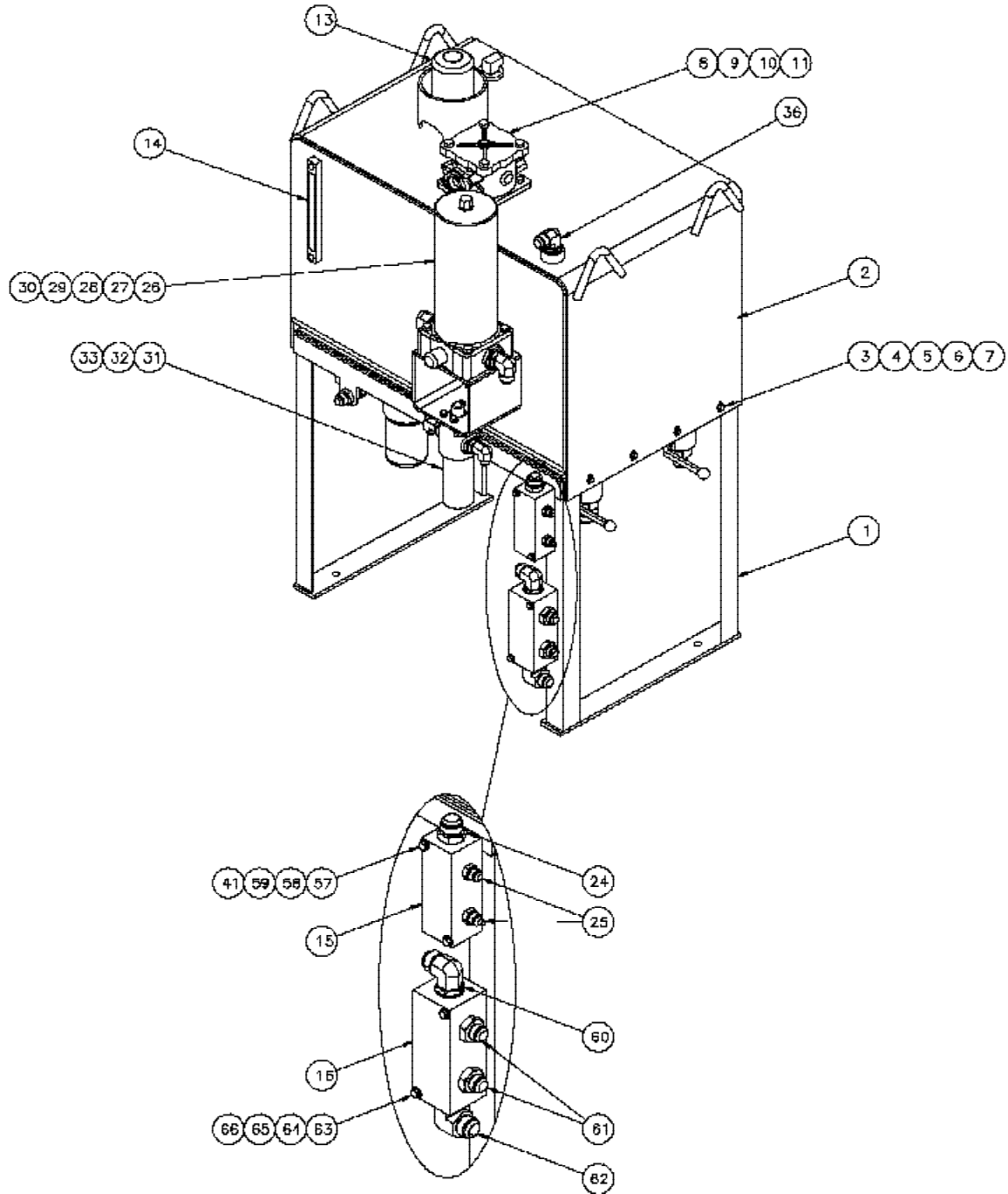




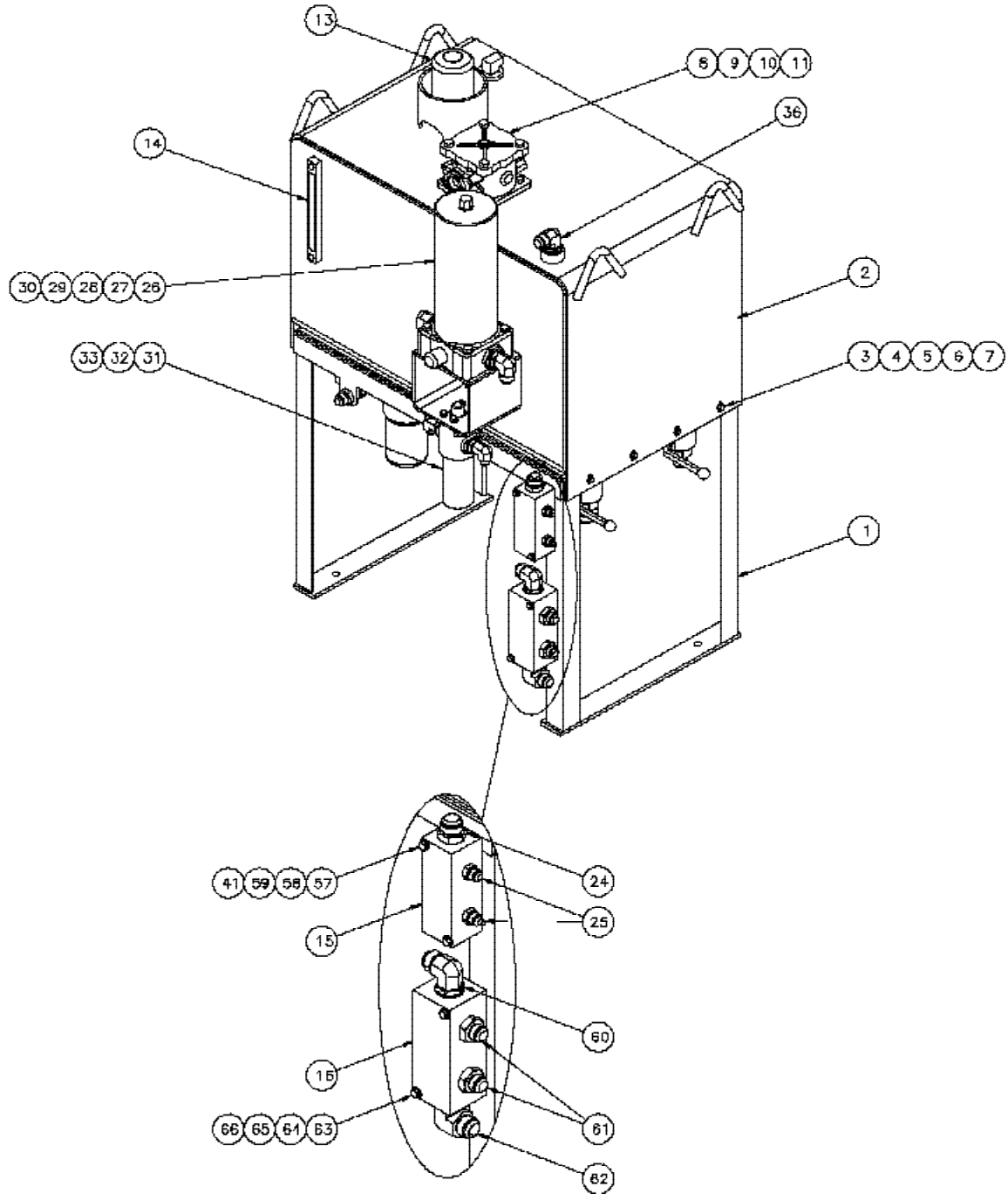
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547222	1	BATTERY BOX
2		21875	1	BATTERY, 4D [Douglas]
3		104375	1	INSERT, CHIP-BOARD, BATTERY BOX [Battery Box]
4		104291	1	RETAINER, BATTERY
5		44527	2	NUT, HEX 3/8-16UNC
6		104294	2	ROD, THD, 3/8-16 UNC [3/8-16 UNC]
7		44711	2	NUT, JAM, 3/8-16 UNC



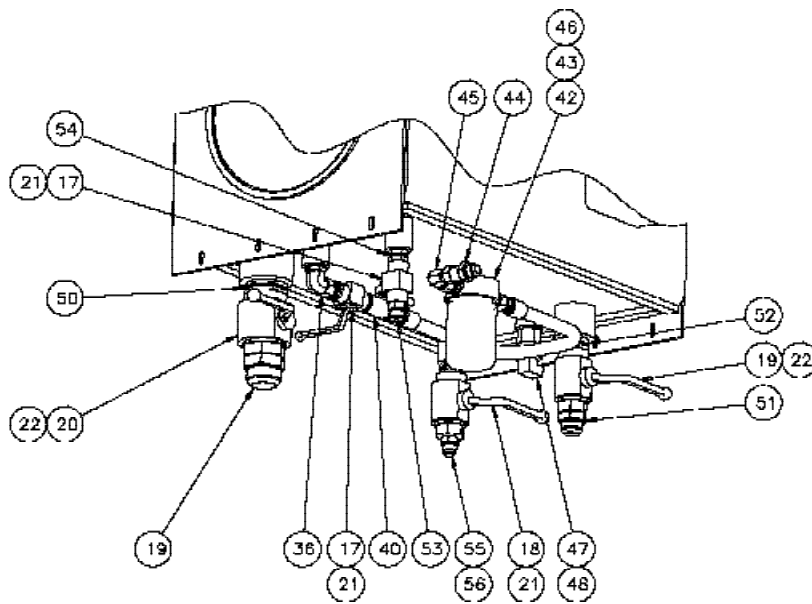
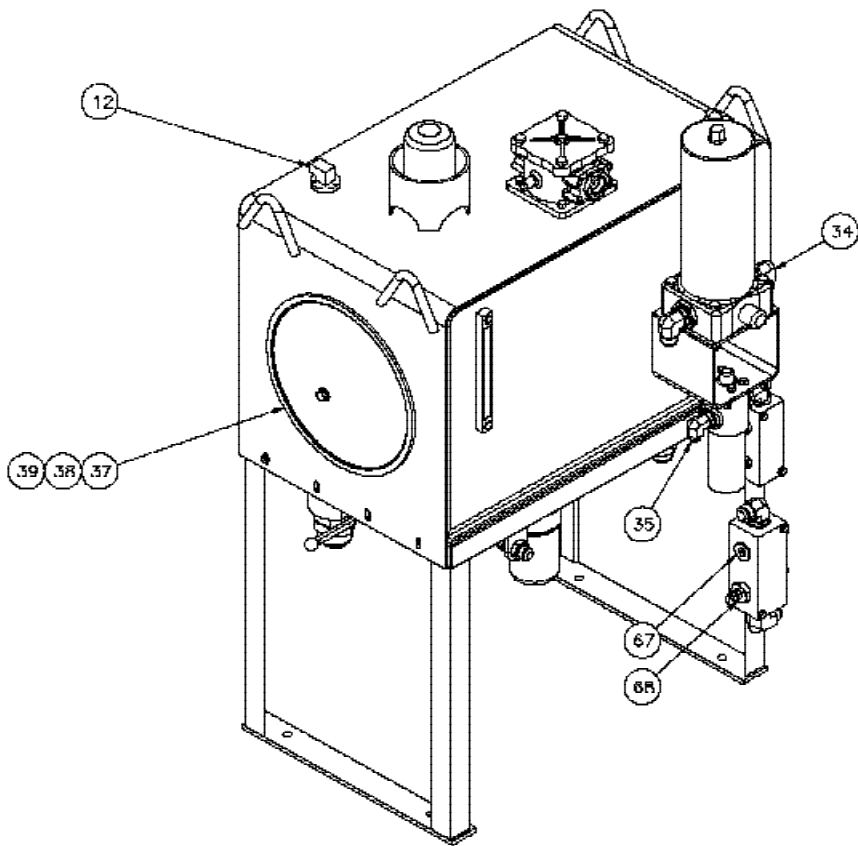
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547601	1	CYLINDER, MAST RAISING
2		36478	1	ADAP, HYD #6 JIC x #6 ORB x 90Deg
3		33660	1	ADAP, HYD 6JIC x 6 ORB
4		44195	1	ADAP, HYD 6 ORB PLUG
5		3548403	2	NUT, 3/8 JIC TUBE FITTING
6		3548404	2	SLEEVE, 3/8 JIC TUBE FITTING
7		3548405	2	CLAMP, 4" ID BAND
8		3548269	1	TUBE, RH RIGID



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547171	1	TANK STAND WELDMENT
2		3547453	1	HYDRAULIC TANK WELDMENT
3		3544315	96"	STRIP, RUBBER 1/2x1-1/2x33
4		44536	8	C/SCR, HH 3/8-16UNC x 1-1/2
5		44611	8	WASHER, FLAT 3/8 ID
6		44520	8	WASHER, 3/8 ID LOCK
7		44527	8	NUT, HEX 3/8-16UNC
8		3547602	1	FILTER, RETURN
9		3547603	4	WASHER, SEALING
10			4	C/SCR
11			4	NUT
12		3547604	1	GAUGE, FLOAT LEVEL
13		3547605	1	FILTER, BREATHER
14		3543274	1	GAUGE, FLUID LEVEL 10"
15		3547606	1	MANIFOLD, RETURN
16		3547607	1	MANIFOLD, RETURN
17		3547618	2	VALVE, BALL O-RING 3/4"
18		3546945	1	VALVE, BALL O-RING 1"
19		3547619	1	VALVE, BALL O-RING 1 1/4"
20		3547620	1	VALVE, BALL O-RING 2"
21		3547636	3	LOCK, HANDLE 3/4" & 1"
22		3547637	2	LOCK, HANDLE 1 1/4" & 2"
23			1	PLUG, O-RING
24			1	ADAPTER
25			2	ADAPTER
26		3547608	1	FILTER, HIGH PRESSURE
27			4	C/SCR
28			4	LOCKWASHER
29			4	FLATWASHER
30			4	NUT
31		3547609	1	FILTER, MEDIUM PRESSURE
32			4	LOCKWASHER
33			4	C/SCR
34			2	ADAPTER
35			2	ADAPTER
36			1	ADAPTER, 12 ORB (M) x 12 JIC (F)
37		104245	1	COVER, END RESERVOIR
38		3544202	1	BAR, COVER X
39		47843	1	C/SCR HH 5/8-11NC x 3-1/4 LG
40		3544141	1	VALVE, CHECK INLINE 12JIC
41			2	NUT
42		3547610	1	FILTER, SPIN-ON

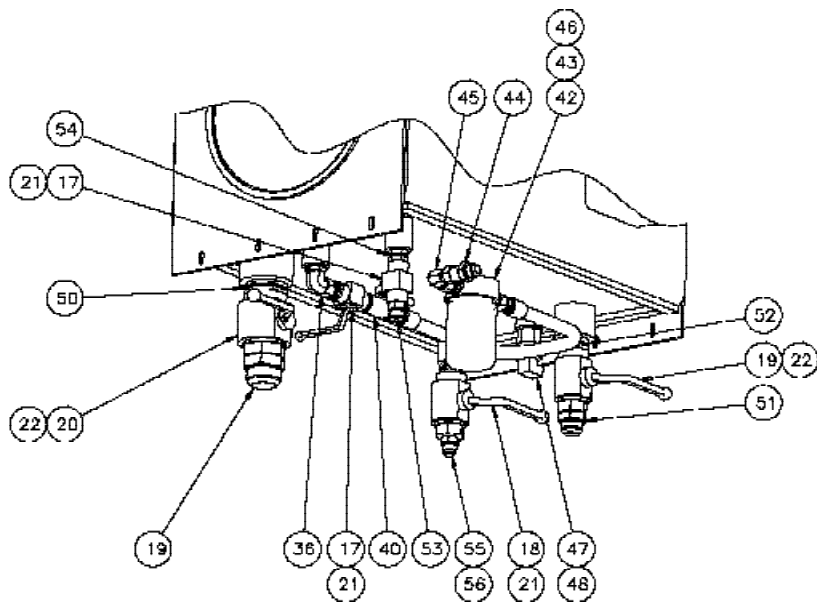
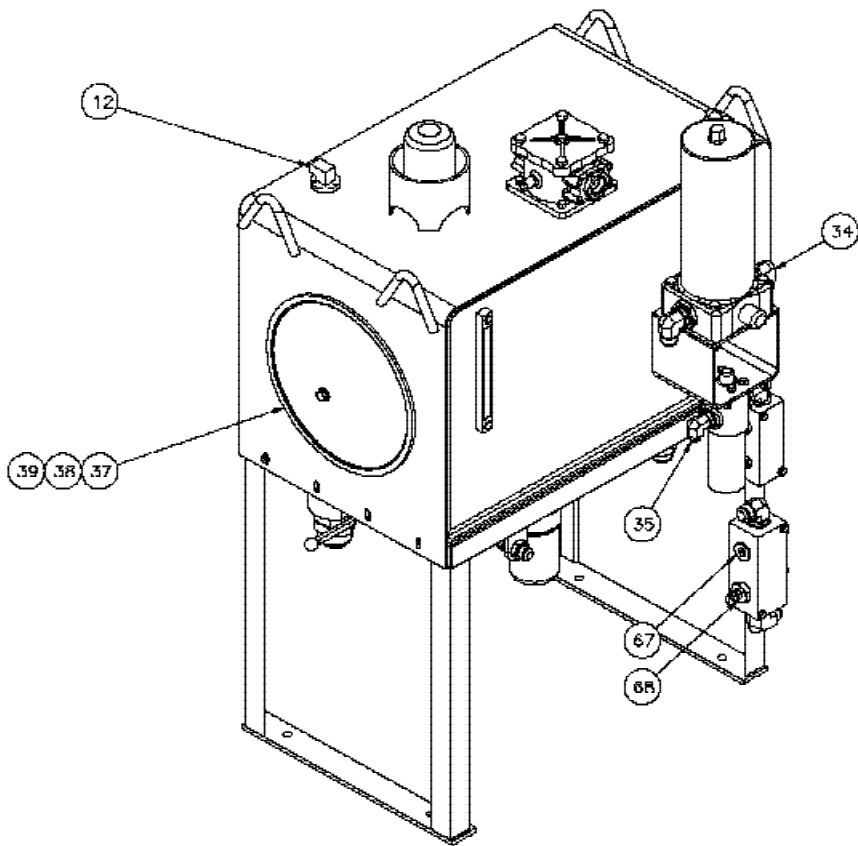


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
43			1	HOSE
44			1	ADAPTER
45			1	ADAPTER, B/HD
46			1	ADAPTER
47		3547651	1	SWITCH, TEMPERATURE 160°F
48			1	ADAPTER
49			1	ADAPTER
50			1	ADAPTER
51			1	ADAPTER
52			1	ADAPTER
53			1	ADAPTER
54			1	ADAPTER
55			1	ADAPTER
56			1	ADAPTER
57			2	C/SCR
58			2	FLATWASHER
59			2	LOCKWASHER
60			1	ADAPTER
61			1	ADAPTER
62			1	ADAPTER
63			2	C/SCR
64			2	FLATWASHER
65			2	LOCKWASHER
66			2	NUT
67			1	ADAPTER
68			1	PLUG

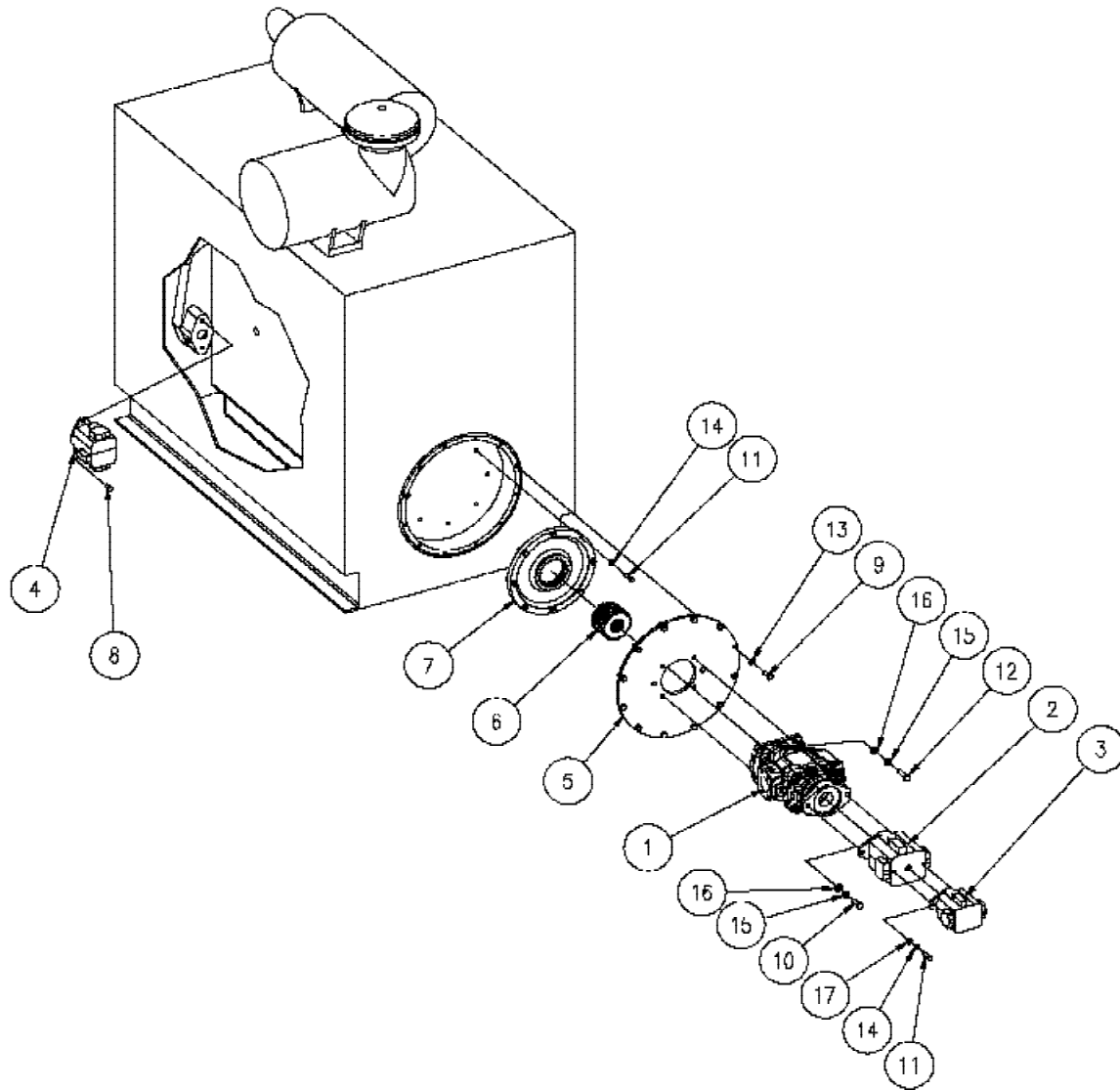




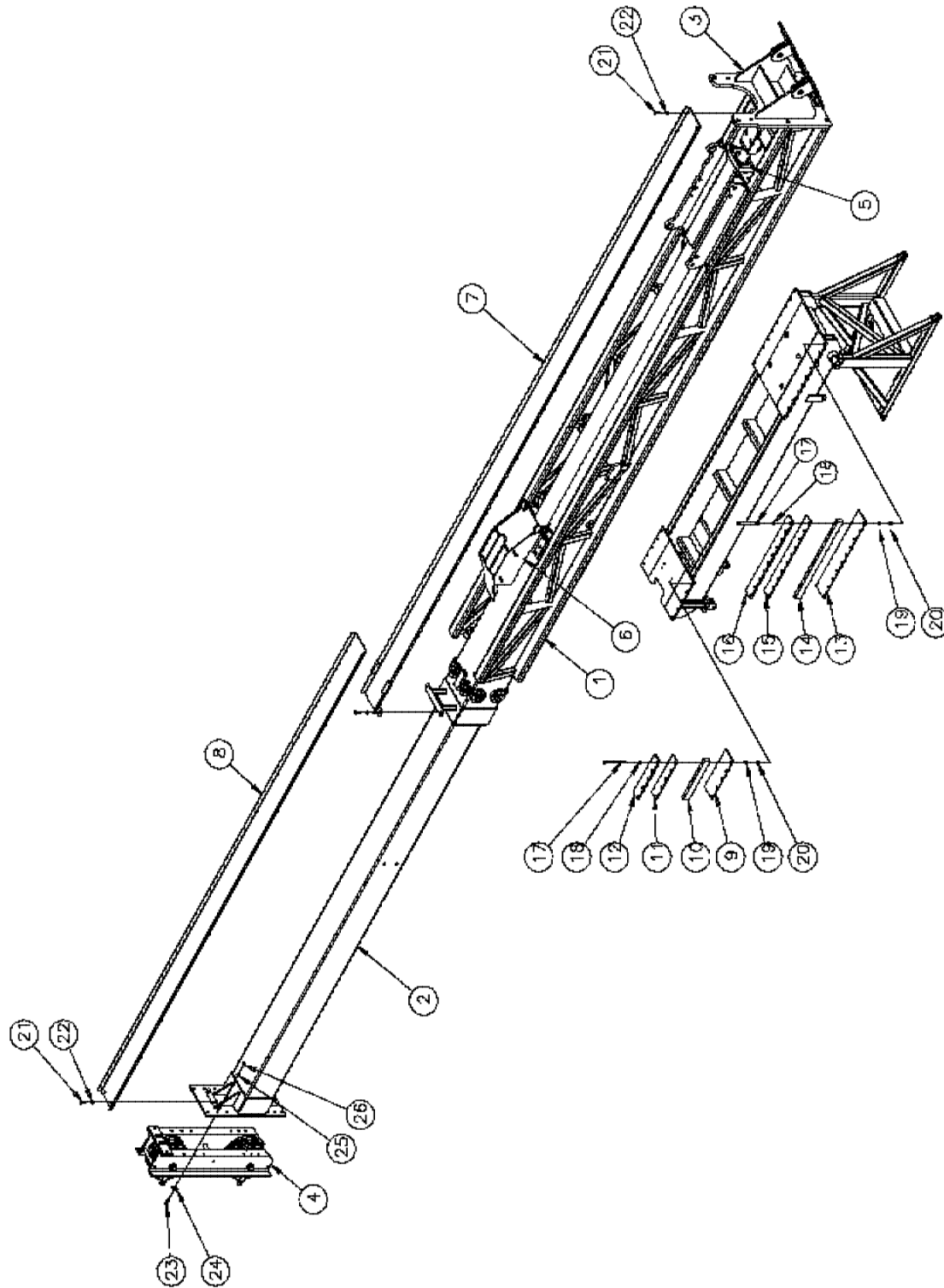
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547171	1	TANK STAND WELDMENT
2		3547453	1	HYDRAULIC TANK WELDMENT
3		3544315	96"	STRIP, RUBBER 1/2x1-1/2x33
4		44536	8	C/SCR, HH 3/8-16UNC x 1-1/2
5		44611	8	WASHER, FLAT 3/8 ID
6		44520	8	WASHER, 3/8 ID LOCK
7		44527	8	NUT, HEX 3/8-16UNC
8		3547602	1	FILTER, RETURN
9		3547603	4	WASHER, SEALING
10			4	C/SCR
11			4	NUT
12		3547604	1	GAUGE, FLOAT LEVEL
13		3547605	1	FILTER, BREATHER
14		3543274	1	GAUGE, FLUID LEVEL 10"
15		3547606	1	MANIFOLD, RETURN
16		3547607	1	MANIFOLD, RETURN
17		3547618	2	VALVE, BALL O-RING 3/4"
18		3546945	1	VALVE, BALL O-RING 1"
19		3547619	1	VALVE, BALL O-RING 1 1/4"
20		3547620	1	VALVE, BALL O-RING 2"
21		3547636	3	LOCK, HANDLE 3/4" & 1"
22		3547637	2	LOCK, HANDLE 1 1/4" & 2"
23			1	PLUG, O-RING
24			1	ADAPTER
25			2	ADAPTER
26		3547608	1	FILTER, HIGH PRESSURE
27			4	C/SCR
28			4	LOCKWASHER
29			4	FLATWASHER
30			4	NUT
31		3547609	1	FILTER, MEDIUM PRESSURE
32			4	LOCKWASHER
33			4	C/SCR
34			2	ADAPTER
35			2	ADAPTER
36			1	ADAPTER, 12 ORB (M) x 12 JIC (F)
37		104245	1	COVER, END RESERVOIR
38		3544202	1	BAR, COVER X
39		47843	1	C/SCR HH 5/8-11NC x 3-1/4 LG
40		3544141	1	VALVE, CHECK INLINE 12JIC
41			2	NUT
42		3547610	1	FILTER, SPIN-ON



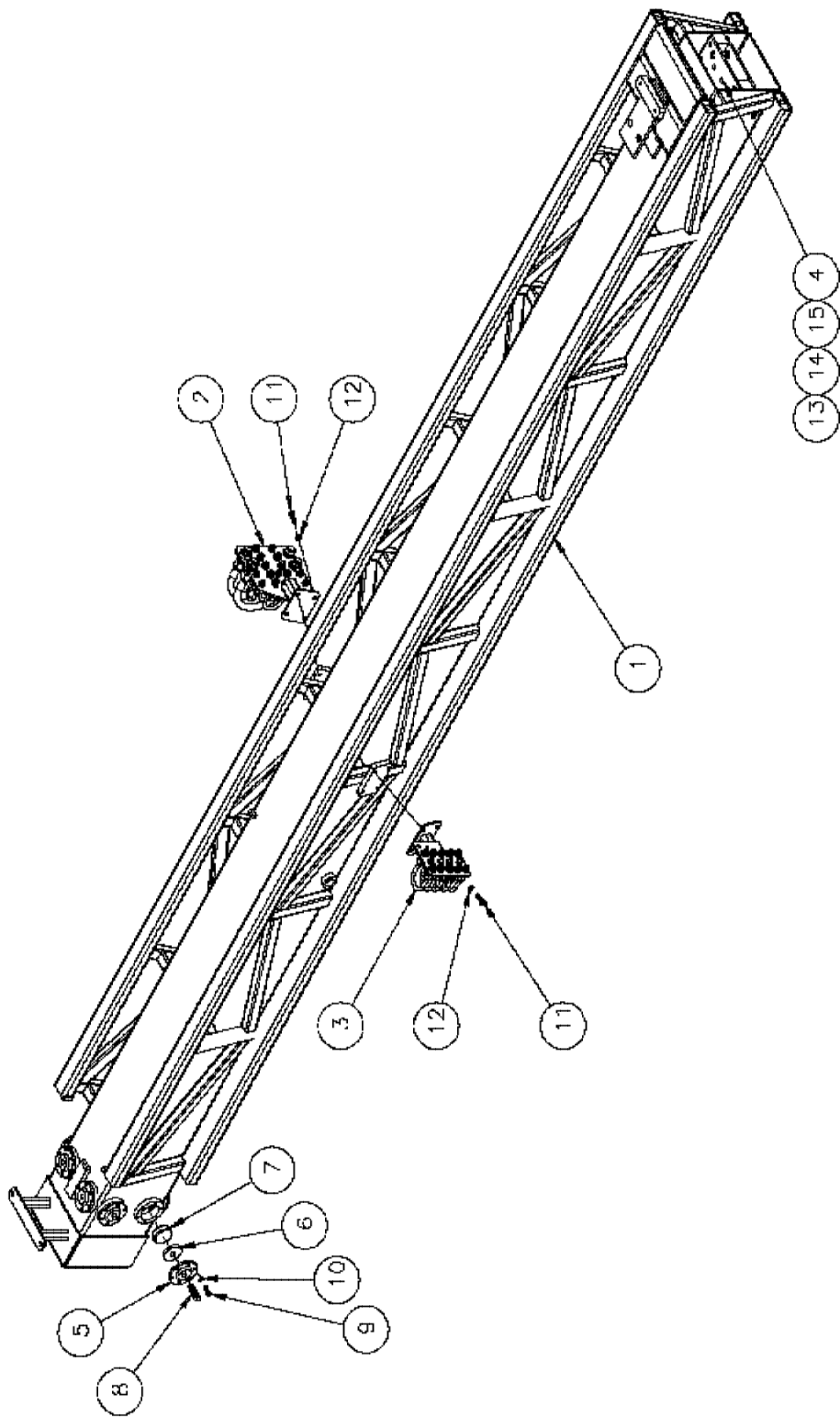
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
43			1	HOSE
44			1	ADAPTER
45			1	ADAPTER, B/HD
46			1	ADAPTER
47		3547651	1	SWITCH, TEMPERATURE 160°F
48			1	ADAPTER
49			1	ADAPTER
50			1	ADAPTER
51			1	ADAPTER
52			1	ADAPTER
53			1	ADAPTER
54			1	ADAPTER
55			1	ADAPTER
56			1	ADAPTER
57			2	C/SCR
58			2	FLATWASHER
59			2	LOCKWASHER
60			1	ADAPTER
61			1	ADAPTER
62			1	ADAPTER
63			2	C/SCR
64			2	FLATWASHER
65			2	LOCKWASHER
66			2	NUT
67			1	ADAPTER
68			1	PLUG



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3548309	1	PUMP, P3 PRIMARY
2		3544140	1	PUMP, SECONDARY PVP33
3		100184	1	PUMP, AUXILIARY 70122 [Secondary]
4		3548229	1	PUMP, AUXILIARY
5		3544383	1	PLATE, PUMP MOUNTING
6		3544526	1	HUB, SAE 'C' SPLINE
7		100293	1	COUPLING, FLYWHEEL
8		68884	2	C/SCR, HH M10x1.5x20 GR10.9
9		68886	11	C/SCR, HH M10x1.5x30GR10.9
10		44530	2	C/SCR, HH 1/2-13UNC x 1 1/4
11		44536	10	C/SCR, HH 3/8-16UNC x 1-1/2
12		44640	4	C/SCR, HH 1/2-13 UNC x 1 3/4
13		93128	12	L/WASHER, SPLIT SPING, M10
14		44520	10	WASHER, 3/8 ID LOCK
15		44521	6	WASHER, LOCK 1/2 ID
16		44621	6	WASHER, FLAT 1/2"
17		44859	2	WASHER, FLAT GR 8 3/8

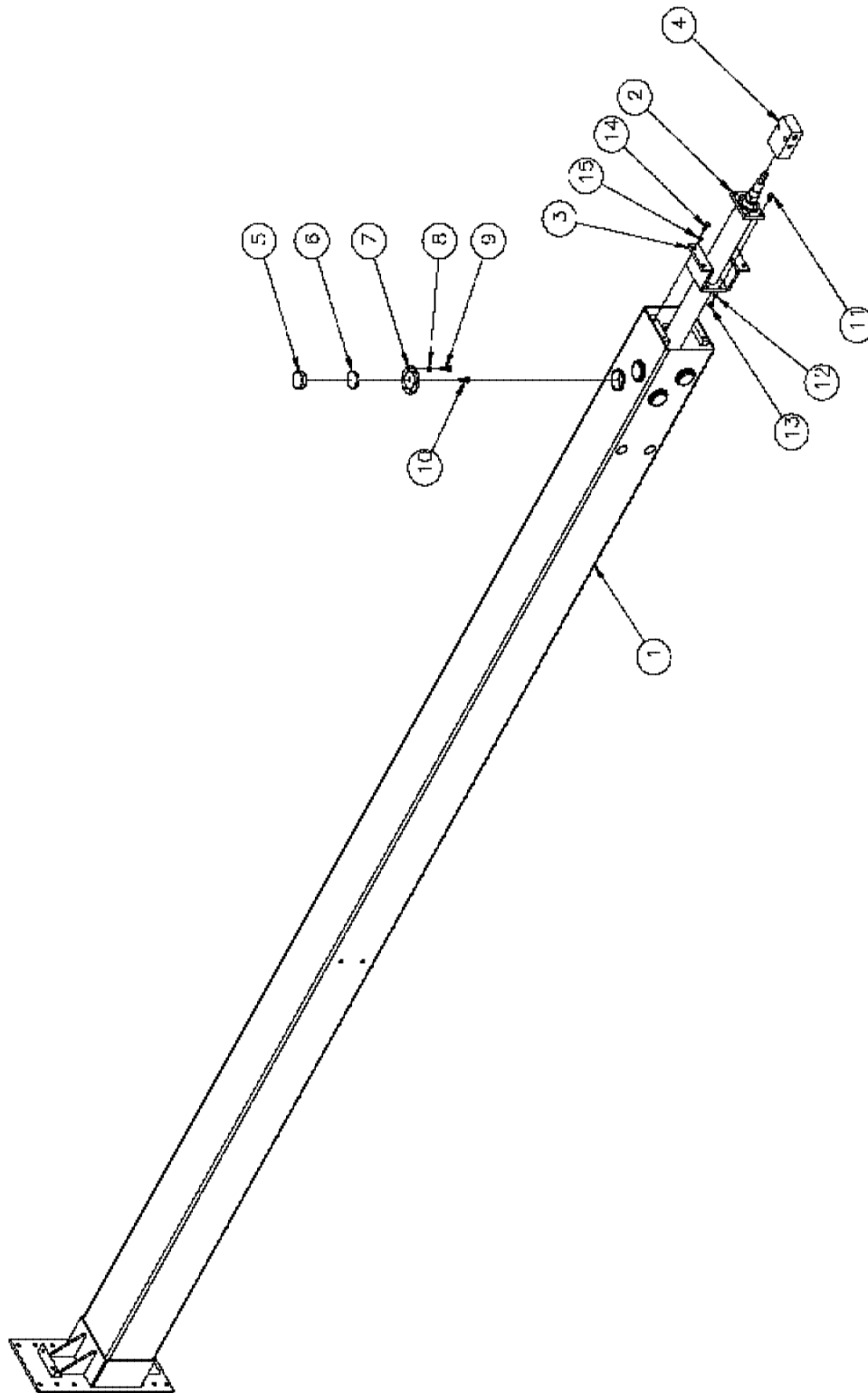


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547183	1	LOWER MAST ASSEMBLY ( Page 38 )
2		3547185	1	UPPER MAST ASSEMBLY ( Page 40 )
3		3547768	1	FOOT PLATE ASSEMBLY ( Page 42 )
4		3547172	1	CROWN BLOCK ASSEMBLY ( Page 44 )
5		3547734	1	SLIDE ASSEMBLY ( Page 46 )
6		3547770	1	ROD GUIDE ASSEMBLY
7		3547517	1	ROD TRAY, LOWER
8		3547521	1	ROD TRAY, UPPER
9		3547541	2	WEAR PAD, MAST SLIDE SHORT
10		3547525	2	SPACER, ALUMINUM
11		3547539	2	WEAR PAD, MAST SLIDE SHORT
12		3547527	2	CLAMPING PLATE, UPPER
13		3547540	2	WEAR PAD, MAST SLIDE LONG
14		3547524	2	SPACER, ALUMINUM
15		3547542	2	WEAR PAD, MAST SLIDE LONG
16		3547526	2	CLAMPING PLATE, LOWER
17			30	C/SCR, HH
18			30	FLATWASHER
19			30	LOCKWASHER
20			30	NUT
21			6	C/SCR
22			6	LOCKWASHER
23			12	C/SCR
24			12	BEVEL WASHER
25			12	LOCKWASHER
26			12	NUT
27		3547535	1	GUARD, PQ HEAD NOT SHOWN

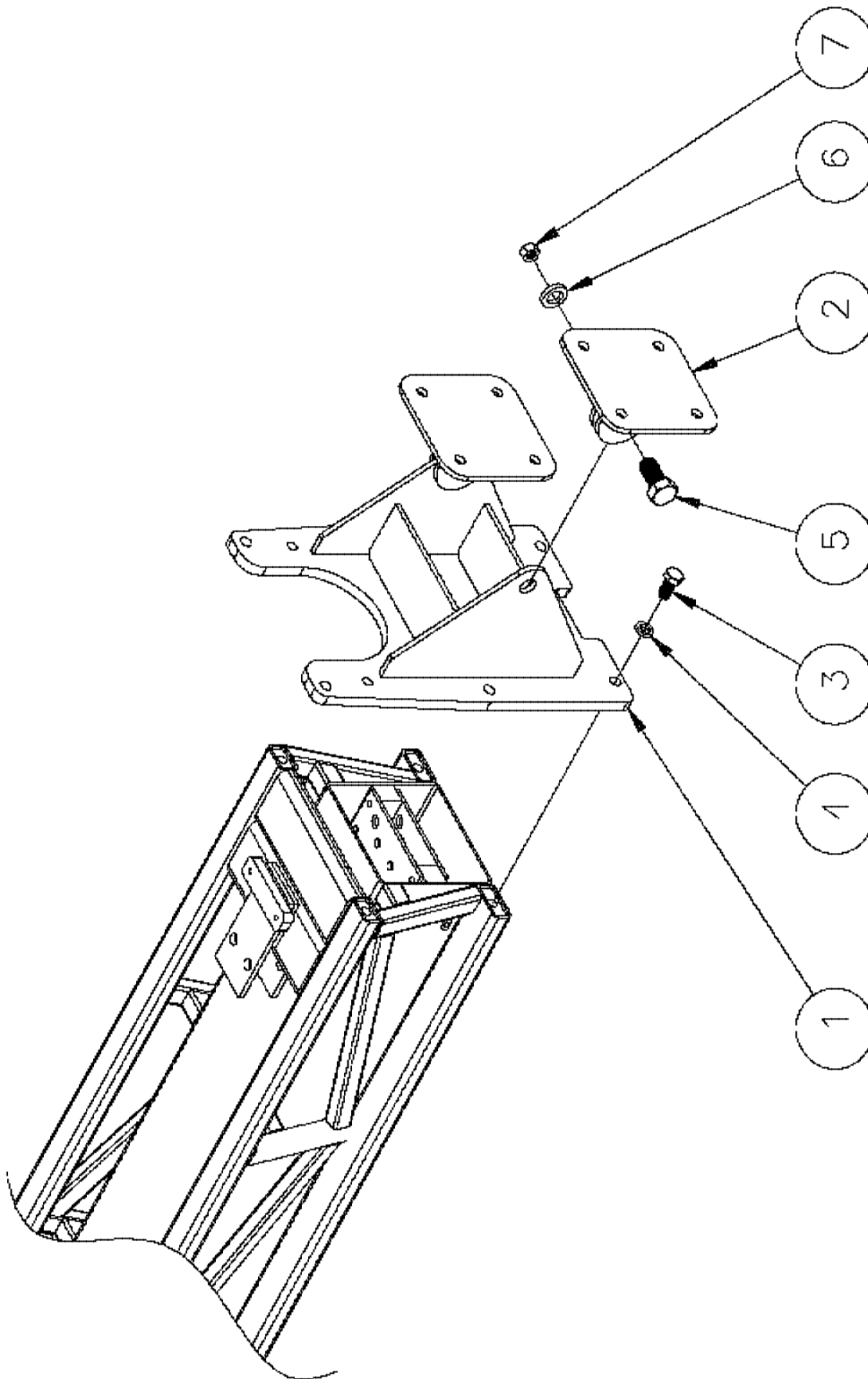




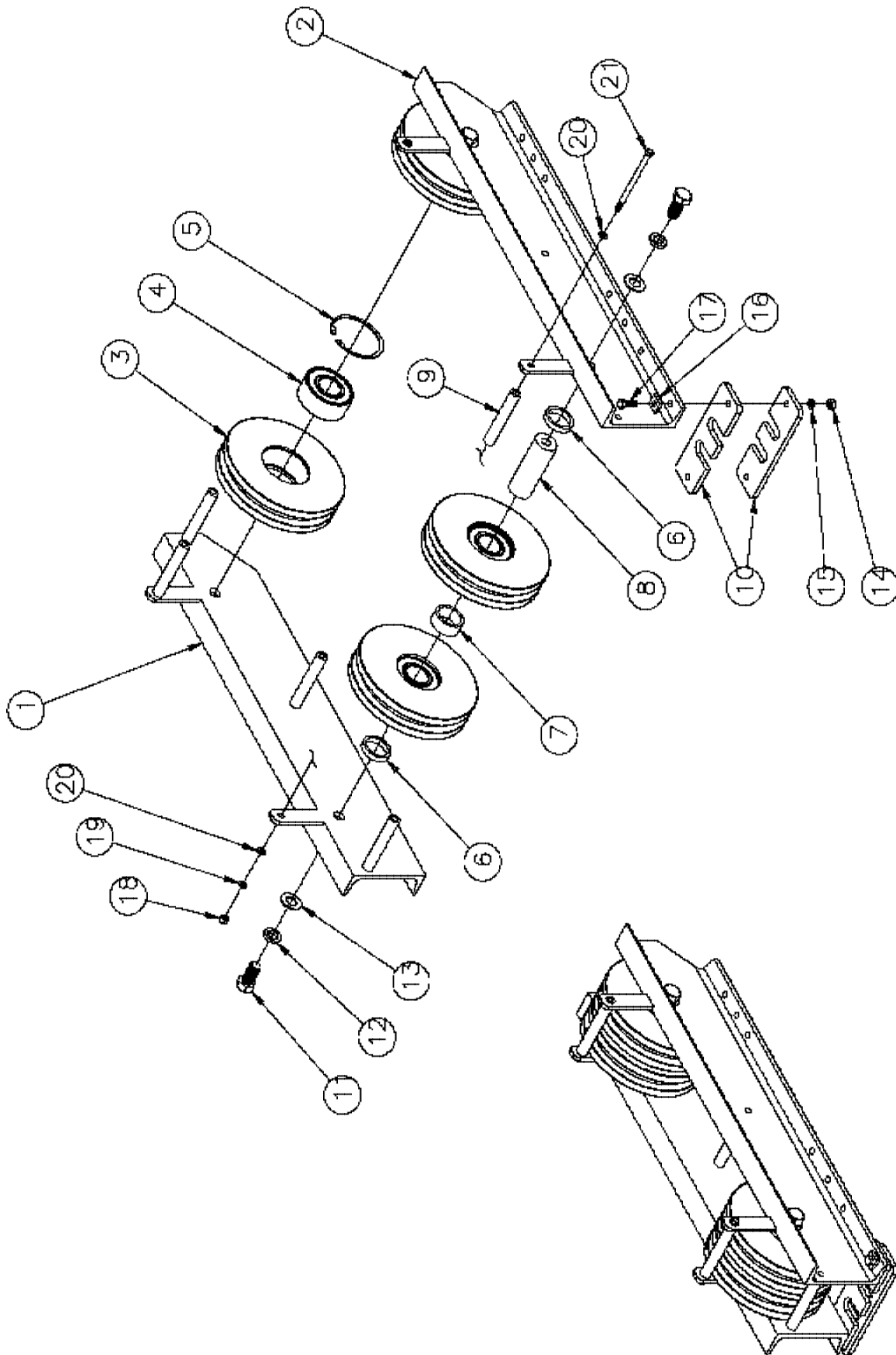
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547191	1	LOWER MAST WELDMENT
2		3547706	1	ASSEMBLY, HOSE HANGER
3		3547709	1	ASSEMBLY, HOSE HANGER
4		3547195	2	MOUNT, EXTEND CYLINDER
5		3547194	8	COVER, PAD HOUSING
6		3547193	8	PLATE, PAD BACKUP
7		3547192	8	PAD, WEAR
8			8	SET SCREW
9			48	C/SCR
10			48	LOCK WASHER
11			8	C/SCR
12			8	LOCK WASHER
13			4	C/SCR
14			4	LOCK WASHER
15			4	NUT



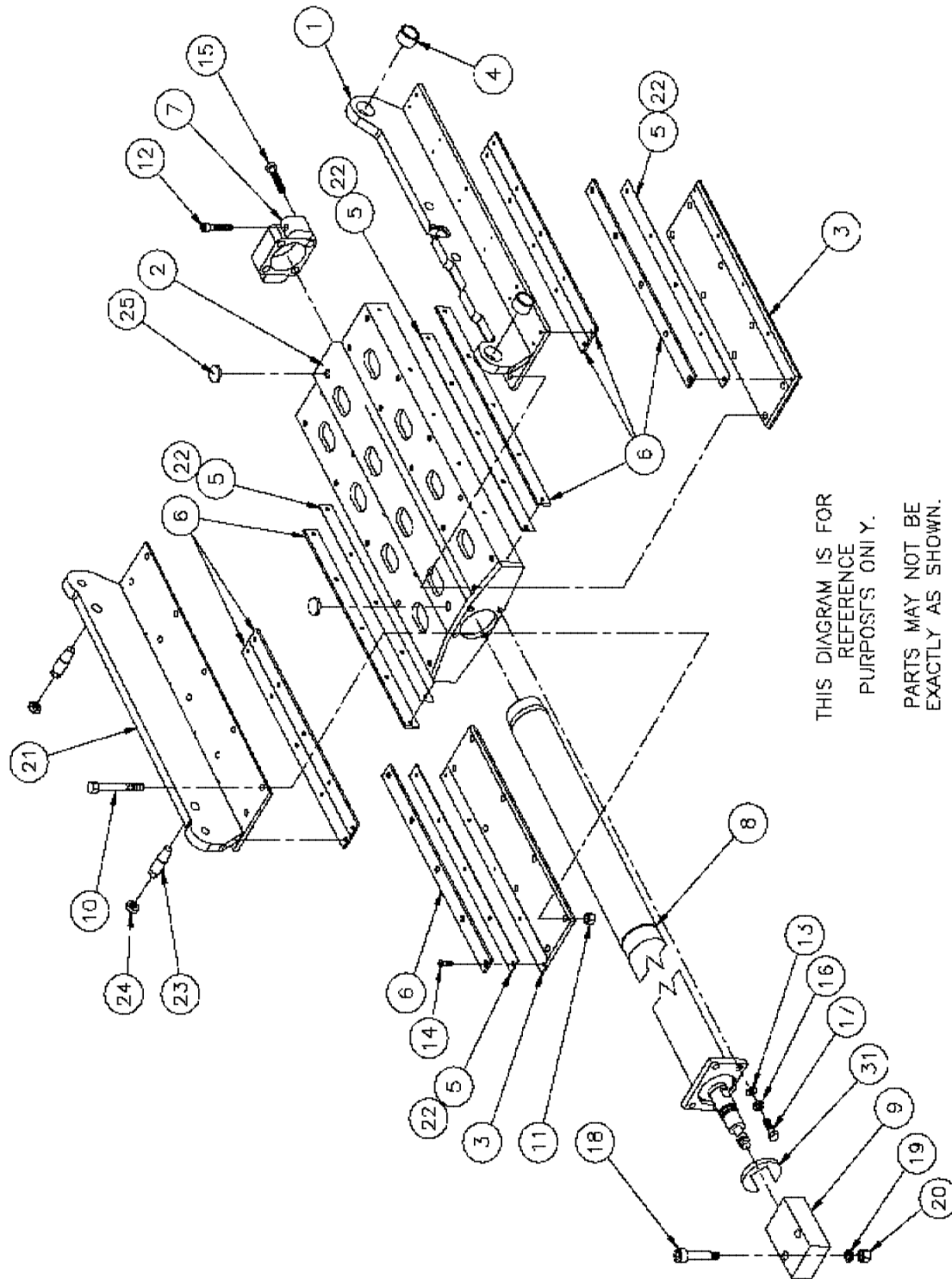
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547196	1	WELDMENT, UPPER MAST
2		3547197	1	MOUNT, EXTEND CYLINDER
3		3540675	1	CYLINDER, 132" STROKE
4		100176	1	MANIFOLD, FEED CYLINDER
5		3547192	8	PAD, WEAR
6		3547193	8	PLATE, PAD BACKUP
7		3547194	8	COVER, PAD HOUSING
8			48	C/SCR
9			48	LOCK WASHER
10			8	SET SCREW
11			4	C/SCR
12			4	LOCK WASHER
13			4	NUT



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3547187	1	FOOT PLATE WELDMENT
2		3547519	2	FOOT, LOWER MAST
3			4	C/SCR
4			4	LOCKWASHER
5			2	C/SCR
6			2	LOCKWASHER
7			2	NUT



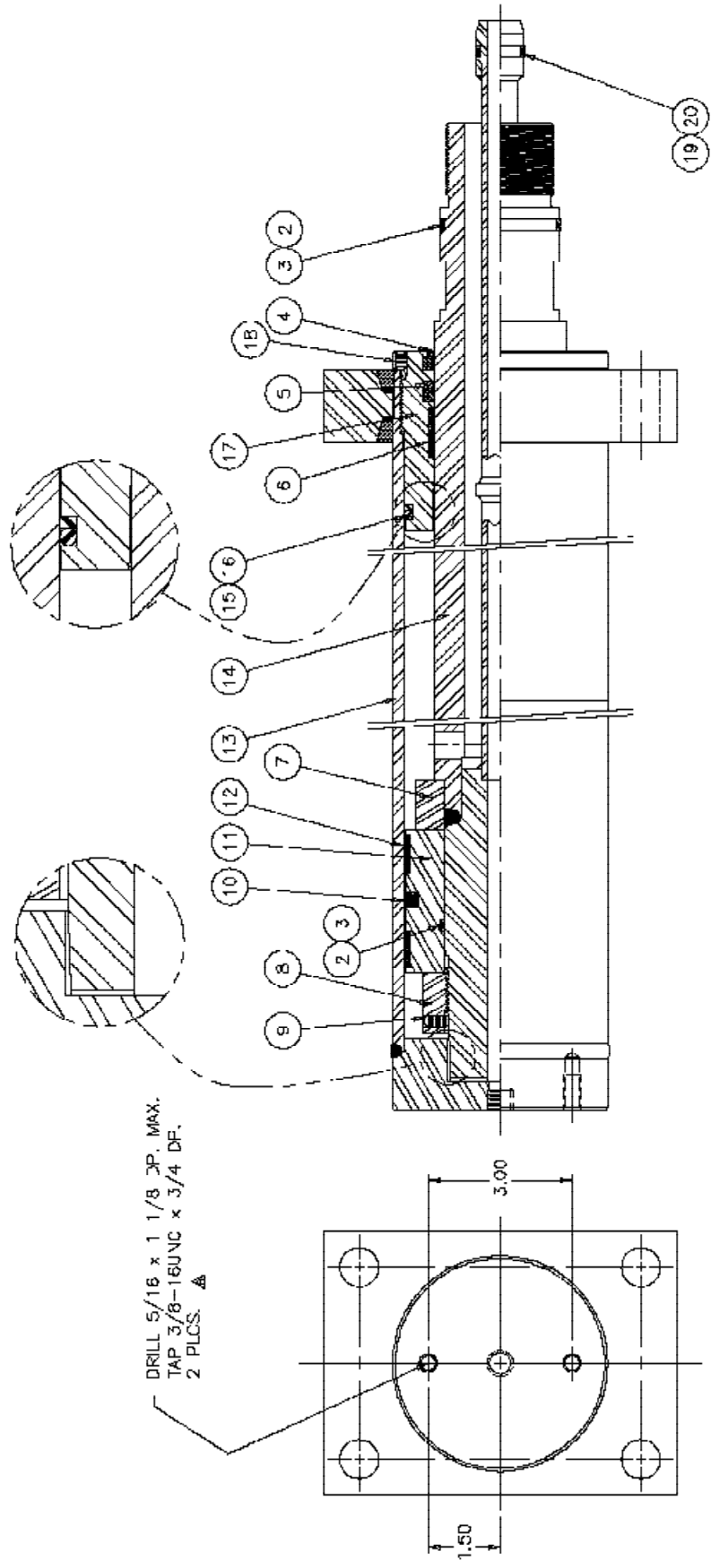
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547228	1	WELDMENT, SIDE LH
2		3547229	1	WELDMENT, SIDE RH
3		3547230	4	WHEEL, SHEAVE
4		3547231	4	BEARING
5		3548179	4	SNAP-RING
6		3547234	4	SPACER, SHORT
7		3547233	2	SPACER, LONG
8		3547232	2	SHAFT, AXLE
9		3547235	5	SPACER TUBE
10		3547522	2	GUIDE, CABLE
11		3540276	4	C/SCR 1 UNF x 2" Lg.
12		44575	4	WASHER, LOCK 1" ID
13		19464	4	WASHER, FLAT 1" ID
14		44525	2	NUT, HEX 1/2-13UNC
15		44521	2	WASHER, LOCK 1/2 ID
16		568511	2	WASHER, BEVEL
17		44651	2	C/SCR, HH 1/2-13UNC x 2 1/4"
18		44525	5	NUT, HEX 1/2-13UNC
19		44521	5	WASHER, LOCK 1/2 ID



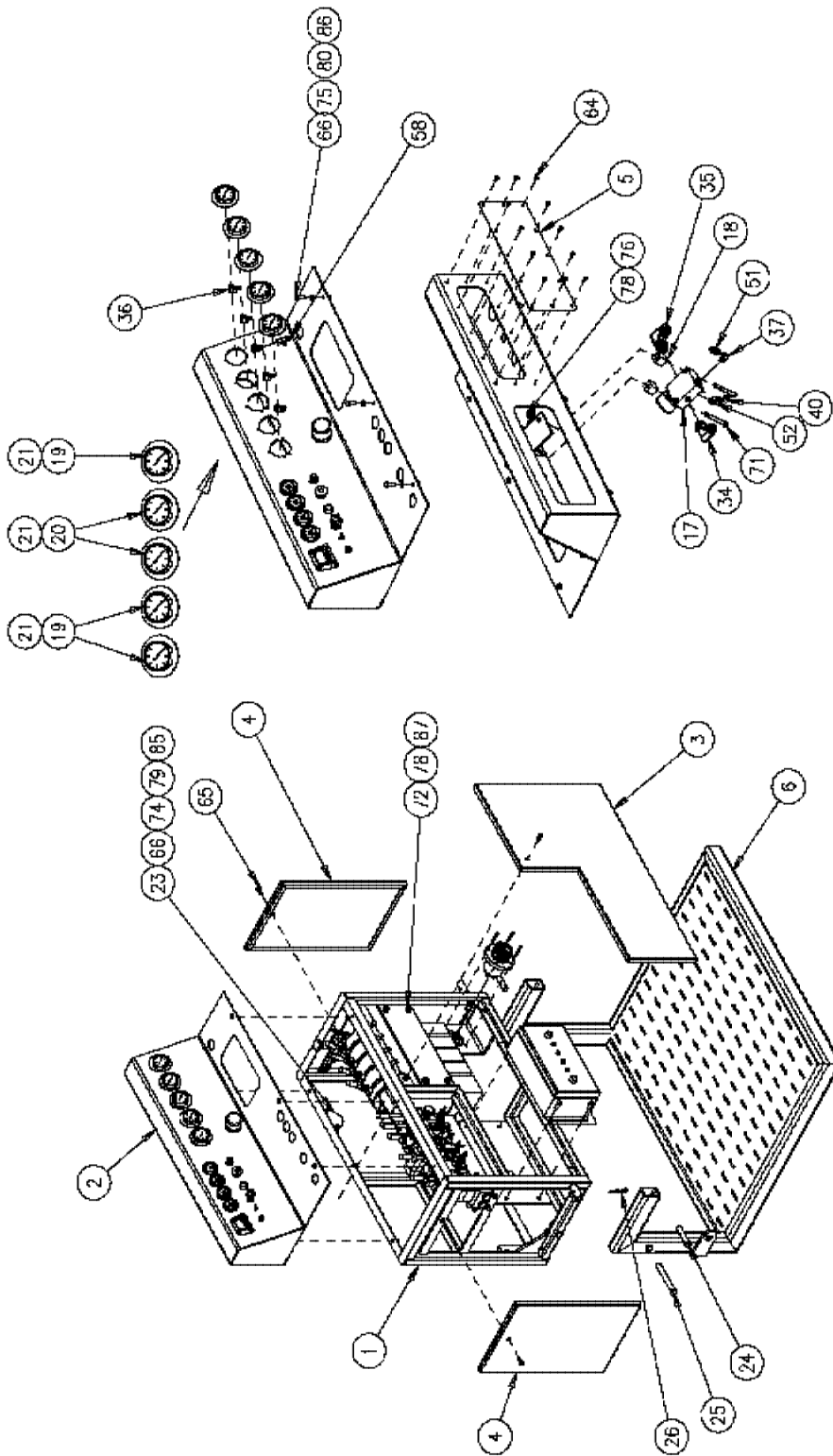
THIS DIAGRAM IS FOR  
REFERENCE  
PURPOSES ONLY.  
PARTS MAY NOT BE  
EXACTLY AS SHOWN.



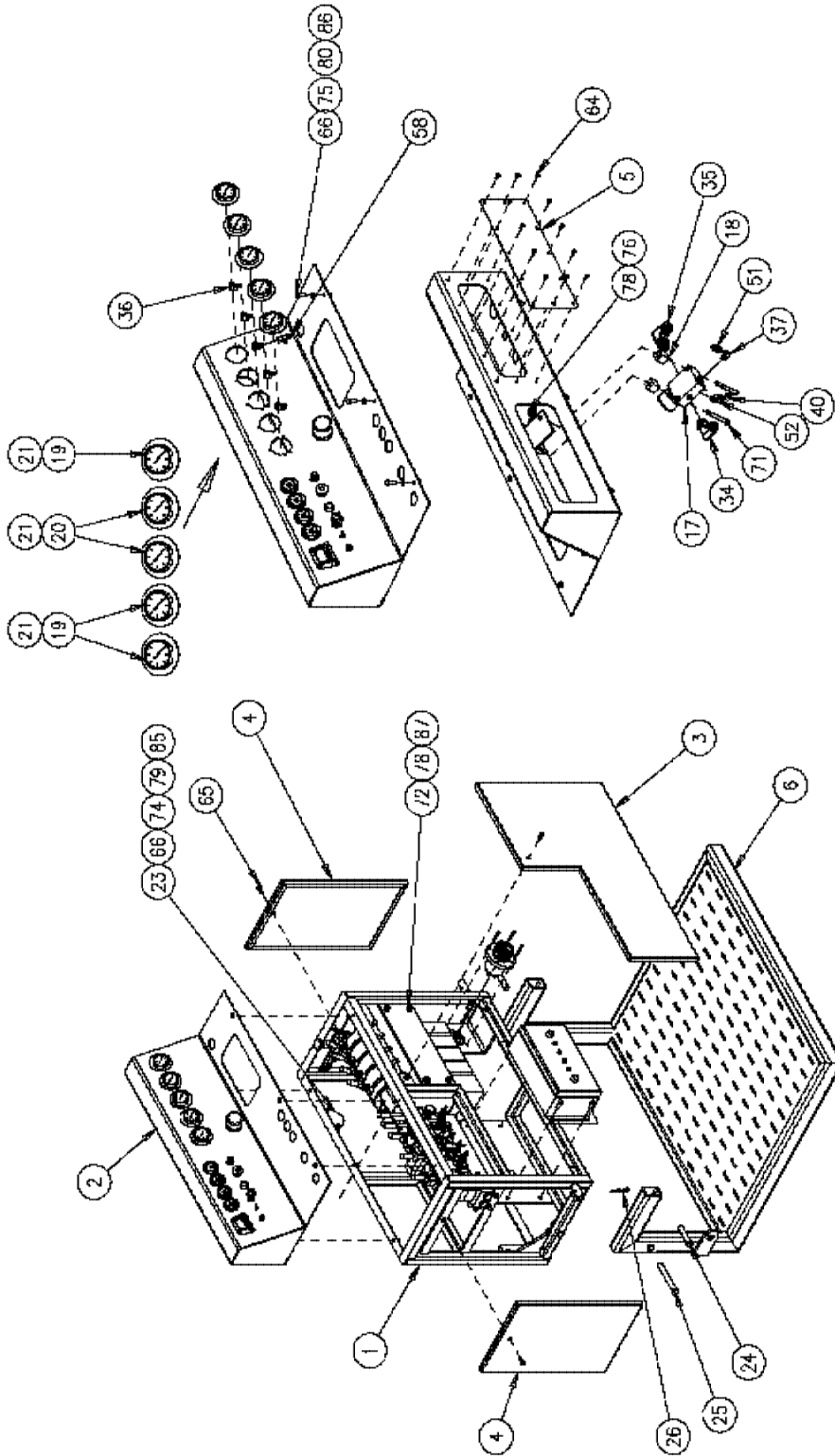
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547512	1	MOUNT, RIGHT HAND
2		3546156	1	MIDBODY, SLIDE FRAME
3		3546459	2	BOTTOM PLATE
4		3547394	2	BUSHING
5		3546460	4	SHIM, 28 Ga. (.018")
6		3547733	8	WEAR PAD
7		3546465	1	SUPPORT, FEED CYLINDER
8		3546100	1	CYLINDER, FEED 132" STROKE [4" Bore, 2 3/4" Rod]
9		3546463	1	MANIFOLD, FEED CYLINDER
10		44578	20	C/SCR, HH 1/2-13UNC x 4"
11		101061	20	LOCKNUT, 1/2-13UNC STOVER [Stover]
12		46102	2	C/SCR SH 1/2-13 NC x 1-3/4Lg.
13		64729	4	FLATWASHER, 1/2 ID (HARDENED)
14		102166	48	C/SCR, FLAT HD. 1/4-20 x 1/2"
15		47568	4	C/SCR, SOC HD 1/2-13 x 2" LG.
16		102955	4	LOCKWASHER, 1/2" ID
17		64697	4	C/SCR, HH 1/2-13 x 1 1/2" LG.
18		35730	2	BOLT, SHOULDER 3/4 x 3" LG.
19		44575	2	WASHER, LOCK 1" ID
20		44573	2	NUT, 1"-8UNC HEX
21		3547513	1	MOUNT, LEFT HAND
22		3546461	4	SHIM, 30 Ga. (.015")
23		3547392	2	TAPERED PIN
24		3547735	2	NUT, JAM 1" UNF
25		100879	2	PAD, WEAR



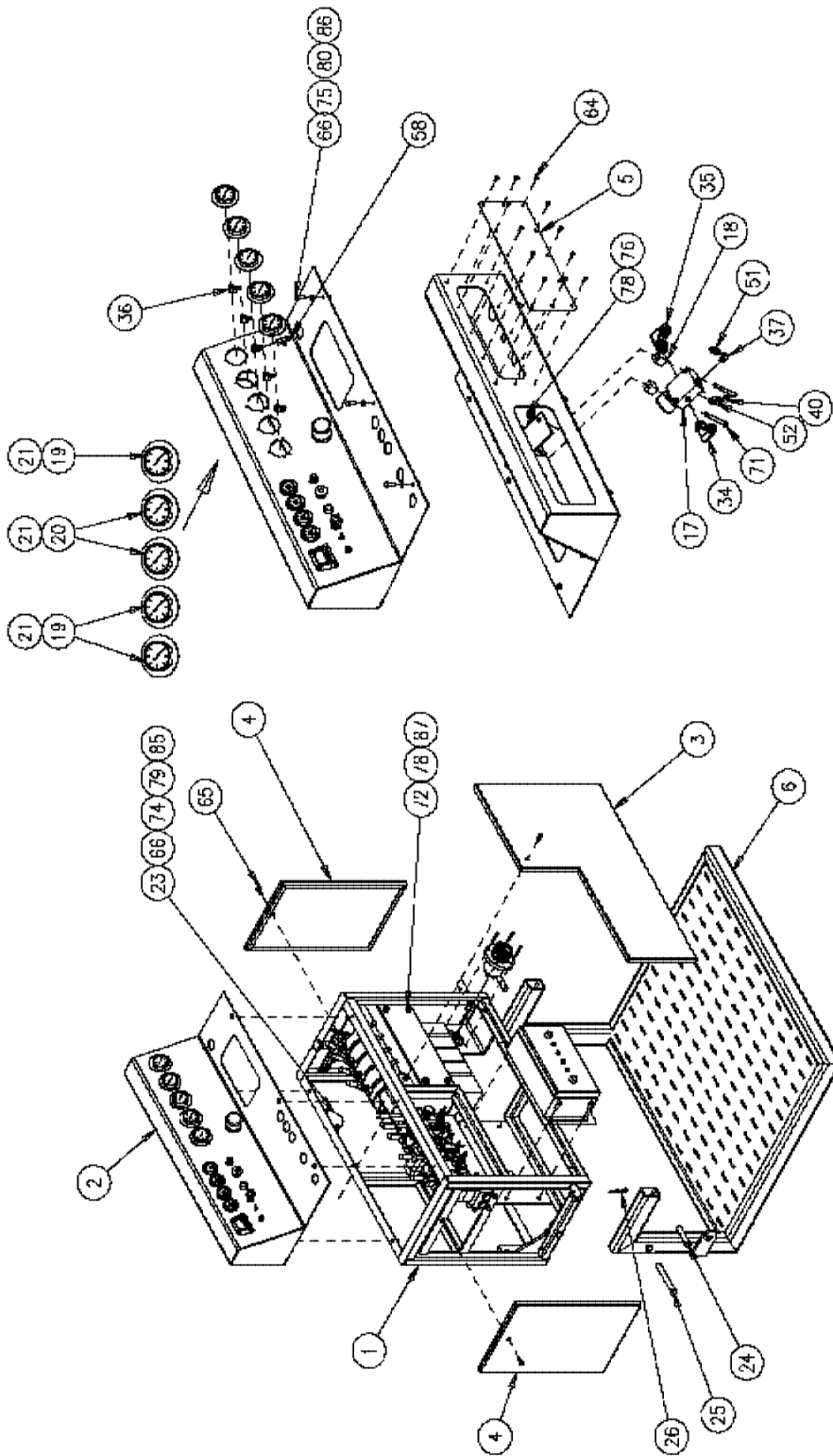
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3546115	REF	SEAL KIT, CYLINDER FEED (LF90 Long Stroke]
2			4	RING, BACKUP #141
3			2	O-RING, #141
4			1	WIPER, ROD
5			1	SEAL, ROD
6			1	RING, GLAND WEAR
7			1	SPACER
8			1	NUT, PISTON
9		44682	2	S/SCR, SH 1/4-20 x 1/2 Lg
10			1	SEAL, PISTON
11			1	PISTON
12			2	RING, PISTON WEAR
13			1	CASE WELDMENT
14			1	ROD WELDMENT
15		37924	1	O-RING, #342
16			1	RING, BACKUP #342
17			1	GLAND, HEAD
18		44663	2	S/SCR, SH 1/4-20 x 3/8 Lg.
19			1	O-RING, #117
20			2	RING, BACKUP #117



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547531	1	CONTROL STAND LF90D
2		3547532	1	CONTROL STAND CONSOLE
3		3547225	1	COVER, FRONT
4		3547226	2	COVER, SIDE
5		3547533	1	REAR CONSOLE COVER
6		3547534	1	OPERATOR PLATFORM
7		3547756	1	MANIFOLD ASSEMBLY D03 ( Page 62 )
8		3547757	1	MAIN CONTROL VALVE
9		3544247	4	SPRING, COMPRESSION
10		3544246	4	PLUNGER, LOCKING
11		3544249	8	COLLAR, SHAFT 10MM
12		3547793	1	PLATE, LOCKOUT
13		3546028	1	MANIFOLD, PRE-TORQUE VALVE
14		3546021	1	COIL, 12VDC CONTROL VALVE
15		3547802	1	VALVE, PRE-TORQUE RELIEF
16		3547801	1	VALVE, SOLENOID
17		3546891	1	VALVE, WATER PUMP CONTROL
18		3548163	2	SPACER
19		3548136	3	GAUGE, PRESSURE 0-3000 psi
20		3548137	2	GAUGE, PRESSURE 0-5000 psi
21		3548142	5	RING, FACE
22		3548165	1	GAUGE ISOLATOR
23		3547783	1	SHUTDOWN CONTROL ( Page 68 )
24		3547660	1	PIN, LOCK OPERATOR STAND
25		3547659	2	PIN, OPERATOR STAND
26		102113	3	CLIP, HITCH PIN
27		36445	2	ADAP, HYD 12JIC x 12ORB x 45Deg
28		33750	1	ADAPT, HYD #16 JIC x #16 JIC(F) x 45°
29		36431	1	ADAP, HYD 16 JIC - 16 ORB x 45°
30		3544120	3	ADAP, HYD #6 JIC x #8 ORB x 45Deg
31		33748	3	ADAPT, HYD #8 JIC x #8 JIC(F) x 45°
32		29000	8	ADAPT, HYD #8 JIC x #8 ORB x 45°
33		36457	1	ADAP, HYD 8 JIC - 8 ORB x 90°
34		35895	1	ADAP, HYD 12 JIC - 12 ORB x 90°
35		38849	1	ADAP, HYD 16JIC x 12ORB x 90Deg
36		26056	5	ADAP, HYD 4 JIC - 4 NPT x 90°
37		37015	1	ADAP, HYD #4 JIC x #4 ORB x 90Deg
38		40237	1	ADAP, HYD 4 JIC - 6 ORB x 90°
39		3541667	1	ADAP, HYD 90Deg 8 ORB x 4 JIC
40		44302	1	ADAPT, HYD #6 JIC x #4 ORB x 90
41		39690	1	ADAP, HYD 8 JIC x 90°
42		49229	2	ADAP, HYD CAP 8 JIC

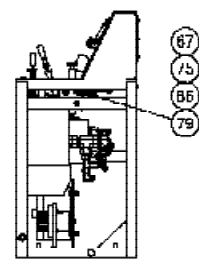
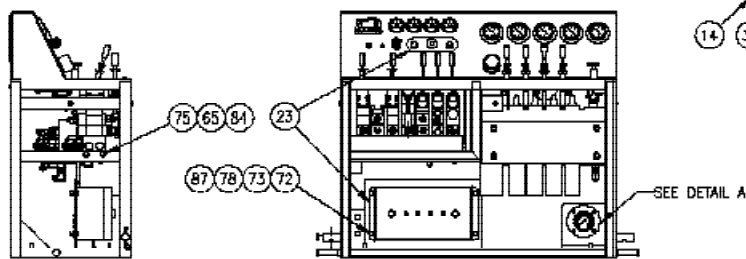
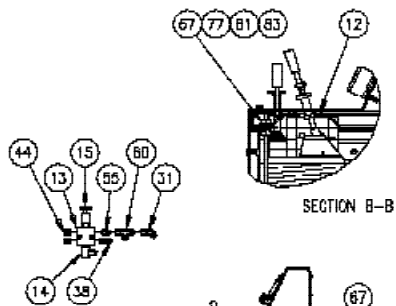
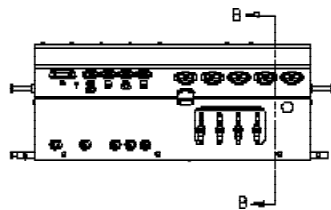
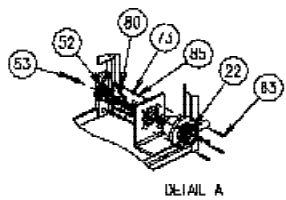
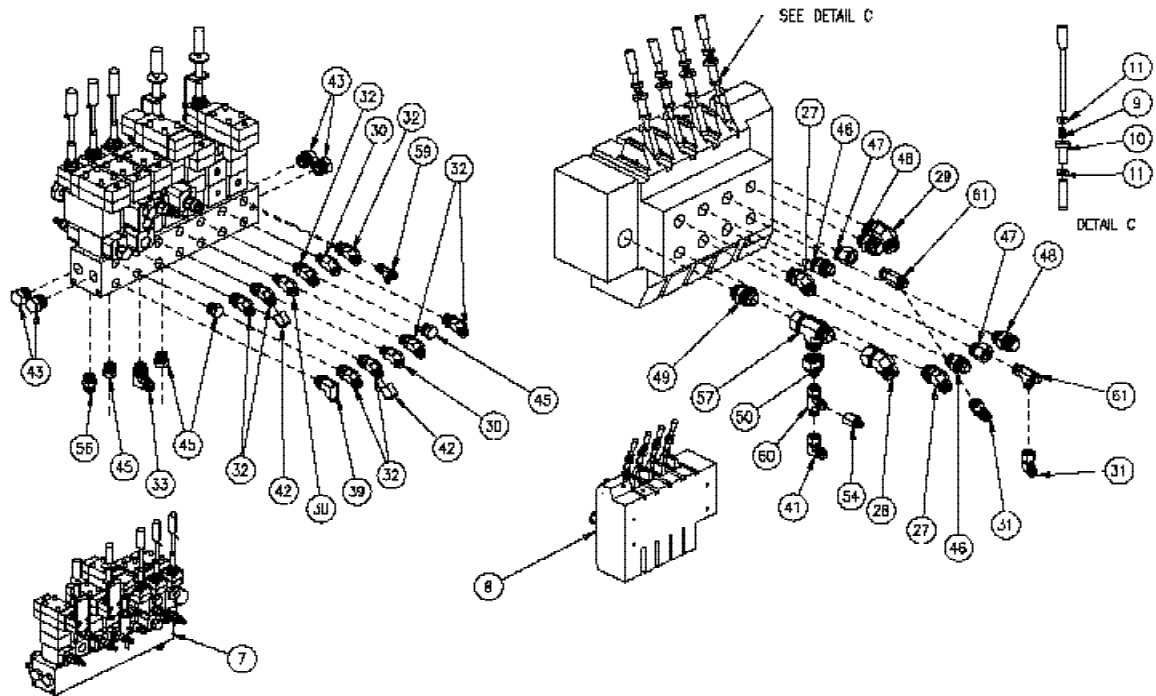


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
43		101644	4	PLUG, #10 SAE ORB
44		44195	2	ADAP, HYD 6 ORB PLUG
45		39572	4	ADAP HYD PLUG #8 ORB
46		36463	2	ADAP, HYD 12 JIC x 12 ORB
47		34214	2	ADAP, HYD 12 ORB - 8 ORB F
48		33697	2	ADAP, HYD 16 JIC - 12 JIC
49		25470	1	ADAP, HYD 16JIC x 16 ORB
50		33720	1	ADAP, HYD 16 JIC (F) - 8 JIC
51		306220	1	ADAP, HYD #4 JIC(F) x #4 NPT(F)
52		35897	7	ADAP, HYD 4 JIC - 4 ORB
53		39511	1	ADAP, HYD 6 JIC - 4 ORB
54		33718	1	ADAP, HYD 8 JIC - 6 JIC
55		33069	1	ADAP, HYD #6 ORB x #8 JIC
56		36458	1	ADAP, HYD 8 JIC x 8 ORB
57		32978	1	ADAP, HYD 16 JIC TEE
58		33791	1	ADAP, #4 JIC x #4 JIC (F) x 4 JIC
59		33681	1	ADAP, HYD #4 JIC x # 4 ORB TEE
60		33429	2	ADAP, #8 JIC x #8 JIC(F) x #8 JIC
61		39737	2	ADAP, HYD 8 JIC - 8 ORB TEE
63		48011	4	C/SCR, SH 1/4-20 UNC x 1-1/2 GR8
64		3542056	12	C/SCR, BH 1/4-20 UNC x 1/2Lg.
65		3547792	3	C/SCR, BH 3/8-16 UNC x 1 Lg.
66		44509	6	C/SCR, HH 5/16-18UNC x 1 LG - L.C. #90214-86
67		44513	3	C/SCR, HH 1/2-13 UNC x 1 GR8
68		44536	4	C/SCR, HH 3/8-16UNC x 1-1/2
69		44584	2	C/SCR, HH 1/4-20 UNC x 1-1/2 GR8
70		44673	2	C/SCR, HH 5/16UNC x 2 LG
71		44858	2	C/SCR, HH 3/8-16 UNC x 3-1/2 GR8
72		46078	8	C/SCR, HH 7/16-14 UNC x 1 GR8
73		44518	6	LOCKWASHER, 1/4" ID
74		44519	8	L/WASHER, 5/16 SAE G8
75		44520	6	WASHER, 3/8 ID LOCK
76		44521	3	WASHER, LOCK 1/2 ID
77		44525	3	NUT, HEX 1/2-13UNC
78		44527	2	NUT, HEX 3/8-16UNC
79		44552	8	NUT, 5/16UNC
80		44567	6	NUT, HEX 1/4-20UNC
81		44621	6	WASHER, FLAT 1/2"
82		44660	8	WASHER, LOCK 7/16 ID
83		44680	4	HEXNUT, 7/16-14 3B
84		44859	4	WASHER, FLAT GR 8 3/8
85		46087	8	WASHER, FLAT 1/4" ID

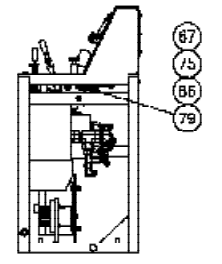
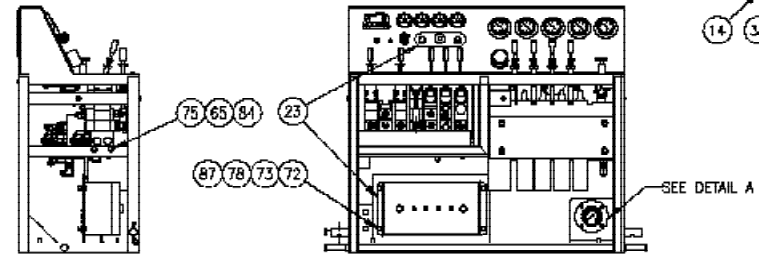
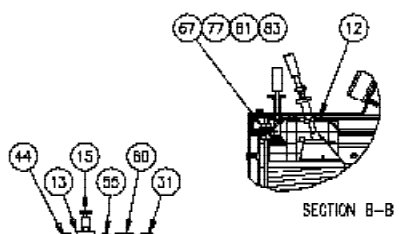
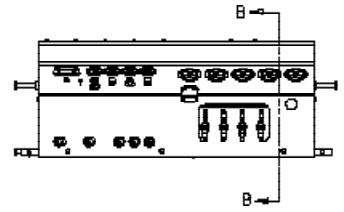
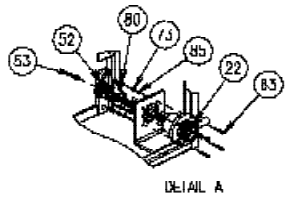
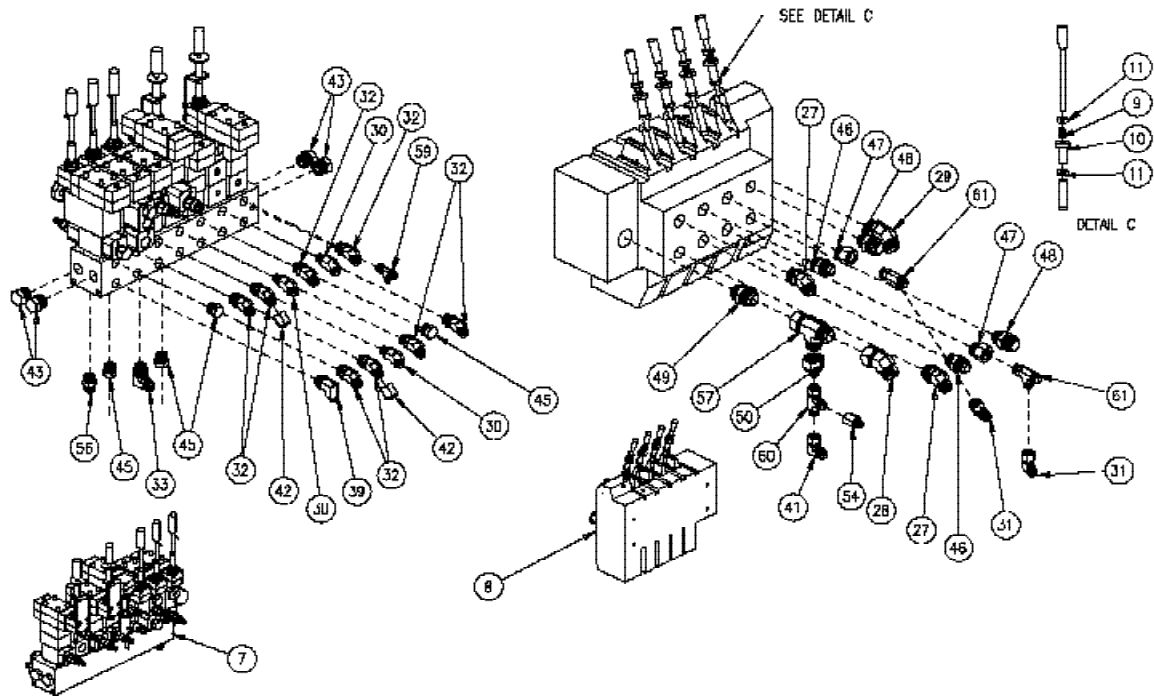




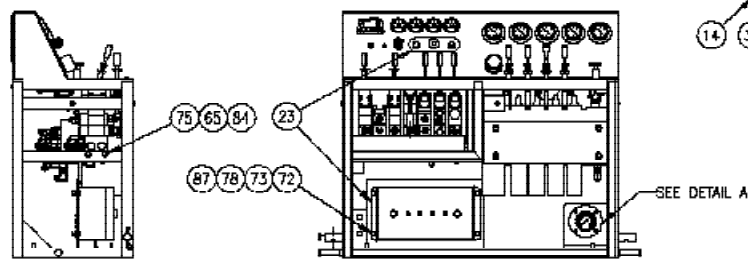
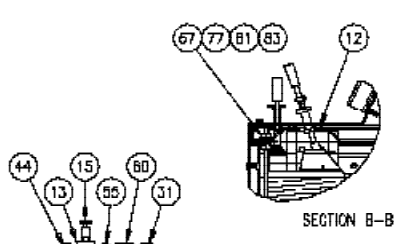
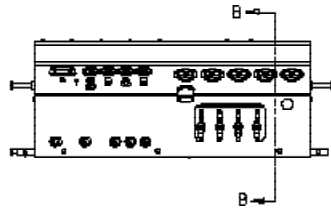
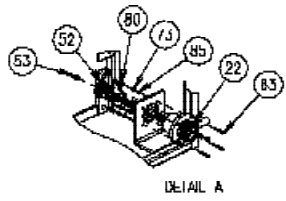
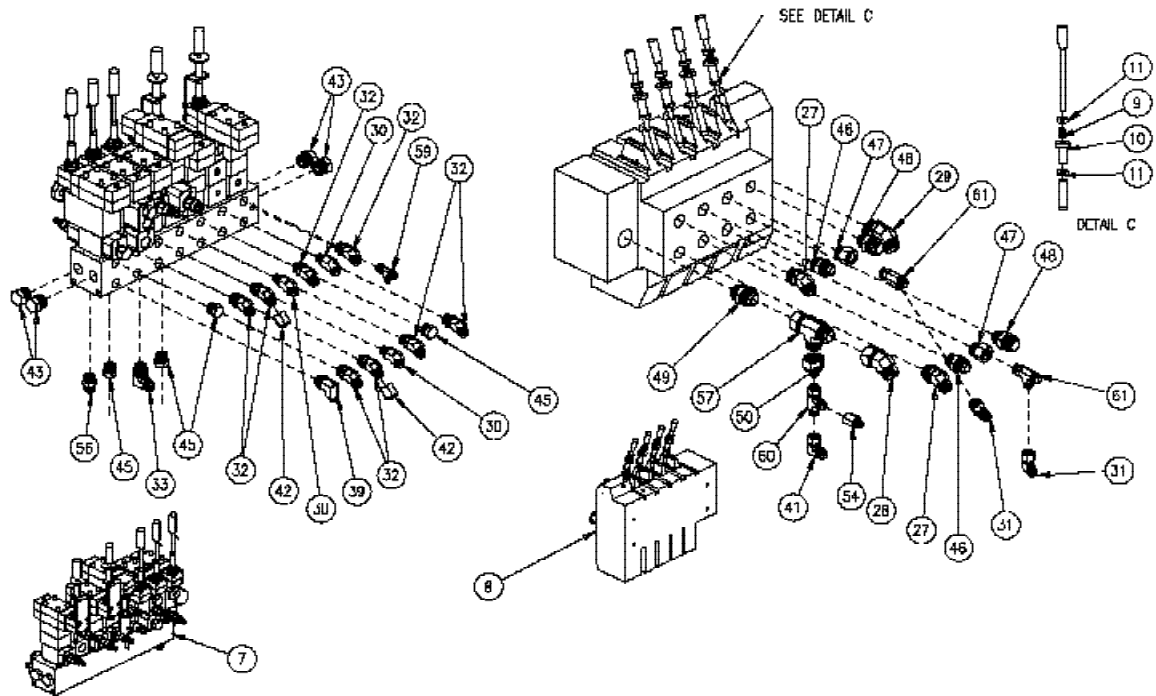
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
86		46510	14	WASHER, FLAT, GR8, 5/16
87		8500042	8	WASHER, FLAT GR8 7/16



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547531	1	CONTROL STAND LF90D
2		3547532	1	CONTROL STAND CONSOLE
3		3547225	1	COVER, FRONT
4		3547226	2	COVER, SIDE
5		3547533	1	REAR CONSOLE COVER
6		3547534	1	OPERATOR PLATFORM
7		3547756	1	MANIFOLD ASSEMBLY D03 ( Page 62 )
8		3547757	1	MAIN CONTROL VALVE
9		3544247	4	SPRING, COMPRESSION
10		3544246	4	PLUNGER, LOCKING
11		3544249	8	COLLAR, SHAFT 10MM
12		3547793	1	PLATE, LOCKOUT
13		3546028	1	MANIFOLD, PRE-TORQUE VALVE
14		3546021	1	COIL, 12VDC CONTROL VALVE
15		3547802	1	VALVE, PRE-TORQUE RELIEF
16		3547801	1	VALVE, SOLENOID
17		3546891	1	VALVE, WATER PUMP CONTROL
18		3548163	2	SPACER
19		3548136	3	GAUGE, PRESSURE 0-3000 psi
20		3548137	2	GAUGE, PRESSURE 0-5000 psi
21		3548142	5	RING, FACE
22		3548165	1	GAUGE ISOLATOR
23		3547783	1	SHUTDOWN CONTROL ( Page 68 )
24		3547660	1	PIN, LOCK OPERATOR STAND
25		3547659	2	PIN, OPERATOR STAND
26		102113	3	CLIP, HITCH PIN
27		36445	2	ADAP, HYD 12JIC x 12ORB x 45Deg
28		33750	1	ADAPT, HYD #16 JIC x #16 JIC(F) x 45°
29		36431	1	ADAP, HYD 16 JIC - 16 ORB x 45°
30		3544120	3	ADAP, HYD #6 JIC x #8 ORB x 45Deg
31		33748	3	ADAPT, HYD #8 JIC x #8 JIC(F) x 45°
32		29000	8	ADAPT, HYD #8 JIC x #8 ORB x 45°
33		36457	1	ADAP, HYD 8 JIC - 8 ORB x 90°
34		35895	1	ADAP, HYD 12 JIC - 12 ORB x 90°
35		38849	1	ADAP, HYD 16JIC x 12ORB x 90Deg
36		26056	5	ADAP, HYD 4 JIC - 4 NPT x 90°
37		37015	1	ADAP, HYD #4 JIC x #4 ORB x 90Deg
38		40237	1	ADAP, HYD 4 JIC - 6 ORB x 90°
39		3541667	1	ADAP, HYD 90Deg 8 ORB x 4 JIC
40		44302	1	ADAPT, HYD #6 JIC x #4 ORB x 90
41		39690	1	ADAP, HYD 8 JIC x 90°
42		49229	2	ADAP, HYD CAP 8 JIC

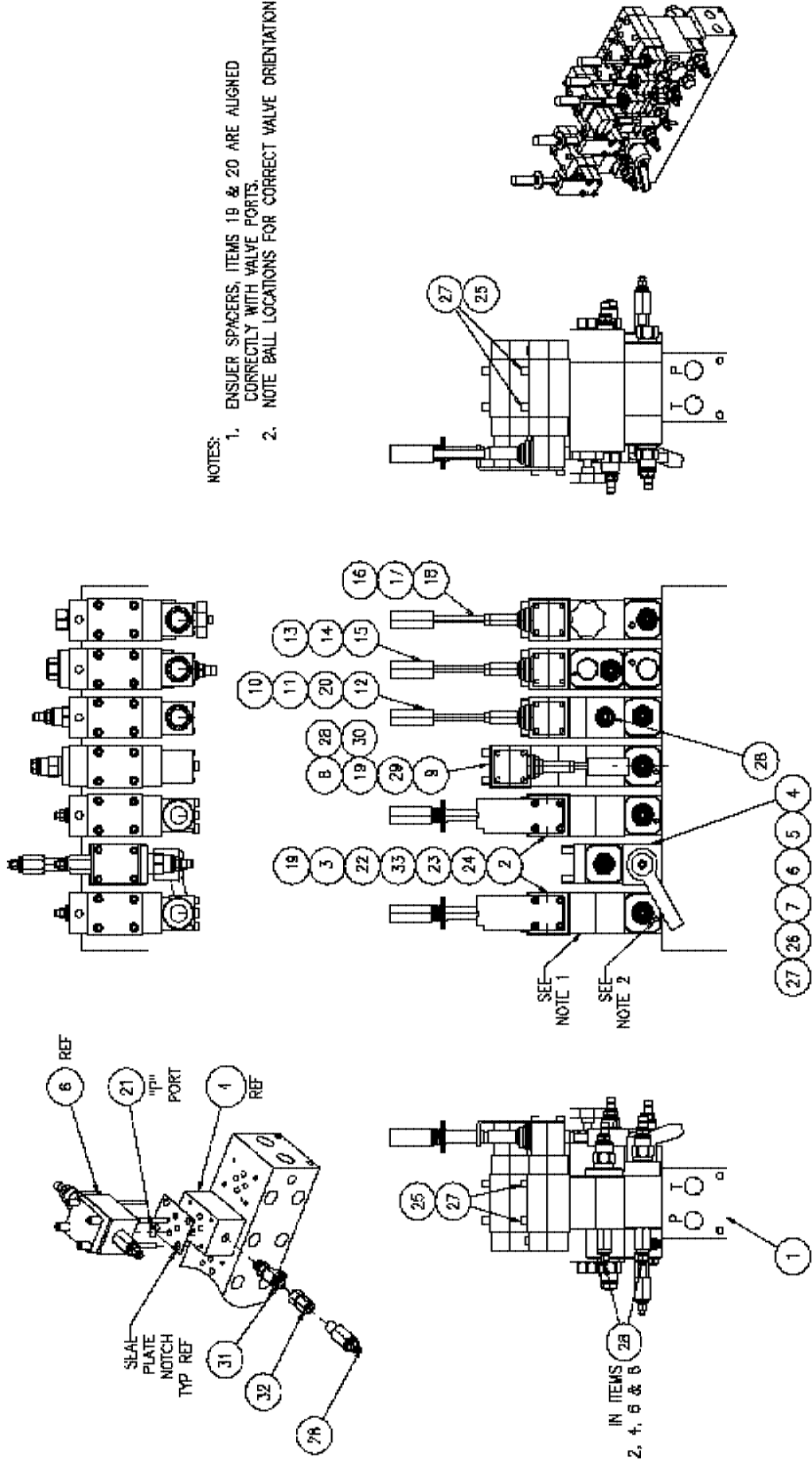


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
43		101644	4	PLUG, #10 SAE ORB
44		44195	2	ADAP, HYD 6 ORB PLUG
45		39572	4	ADAP HYD PLUG #8 ORB
46		36463	2	ADAP, HYD 12 JIC x 12 ORB
47		34214	2	ADAP, HYD 12 ORB - 8 ORB F
48		33697	2	ADAP, HYD 16 JIC - 12 JIC
49		25470	1	ADAP, HYD 16JIC x 16 ORB
50		33720	1	ADAP, HYD 16 JIC (F) - 8 JIC
51		306220	1	ADAP, HYD #4 JIC(F) x #4 NPT(F)
52		35897	7	ADAP, HYD 4 JIC - 4 ORB
53		39511	1	ADAP, HYD 6 JIC - 4 ORB
54		33718	1	ADAP, HYD 8 JIC - 6 JIC
55		33069	1	ADAP, HYD #6 ORB x #8 JIC
56		36458	1	ADAP, HYD 8 JIC x 8 ORB
57		32978	1	ADAP, HYD 16 JIC TEE
58		33791	1	ADAP, #4 JIC x #4 JIC (F) x 4 JIC
59		33681	1	ADAP, HYD #4 JIC x # 4 ORB TEE
60		33429	2	ADAP, #8 JIC x #8 JIC(F) x #8 JIC
61		39737	2	ADAP, HYD 8 JIC - 8 ORB TEE
63		48011	4	C/SCR, SH 1/4-20 UNC x 1-1/2 GR8
64		3542056	12	C/SCR, BH 1/4-20 UNC x 1/2Lg.
65		3547792	3	C/SCR, BH 3/8-16 UNC x 1 Lg.
66		44509	6	C/SCR, HH 5/16-18UNC x 1 LG - L.C. #90214-86
67		44513	3	C/SCR, HH 1/2-13 UNC x 1 GR8
68		44536	4	C/SCR, HH 3/8-16UNC x 1-1/2
69		44584	2	C/SCR, HH 1/4-20 UNC x 1-1/2 GR8
70		44673	2	C/SCR, HH 5/16UNC x 2 LG
71		44858	2	C/SCR, HH 3/8-16 UNC x 3-1/2 GR8
72		46078	8	C/SCR, HH 7/16-14 UNC x 1 GR8
73		44518	6	LOCKWASHER, 1/4" ID
74		44519	8	L/WASHER, 5/16 SAE G8
75		44520	6	WASHER, 3/8 ID LOCK
76		44521	3	WASHER, LOCK 1/2 ID
77		44525	3	NUT, HEX 1/2-13UNC
78		44527	2	NUT, HEX 3/8-16UNC
79		44552	8	NUT, 5/16UNC
80		44567	6	NUT, HEX 1/4-20UNC
81		44621	6	WASHER, FLAT 1/2"
82		44660	8	WASHER, LOCK 7/16 ID
83		44680	4	HEXNUT, 7/16-14 3B
84		44859	4	WASHER, FLAT GR 8 3/8
85		46087	8	WASHER, FLAT 1/4" ID



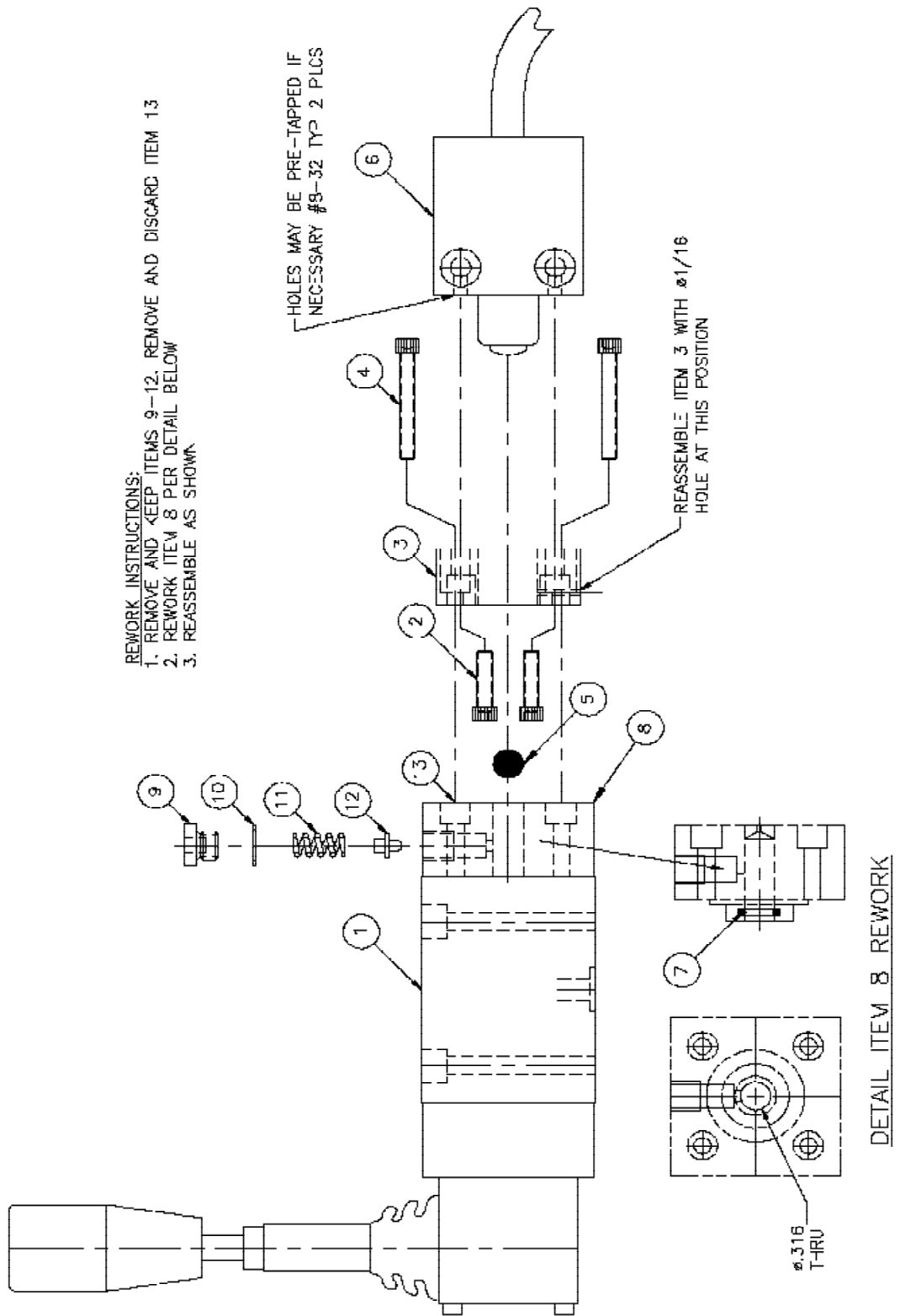
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
86		46510	14	WASHER, FLAT, GR8, 5/16
87		8500042	8	WASHER, FLAT GR8 7/16

- NOTES:
1. ENSURE SPACERS, ITEMS 19 & 20 ARE ALIGNED CORRECTLY WITH VALVE PORTS.
  2. NOTE BALL LOCATIONS FOR CORRECT VALVE ORIENTATION

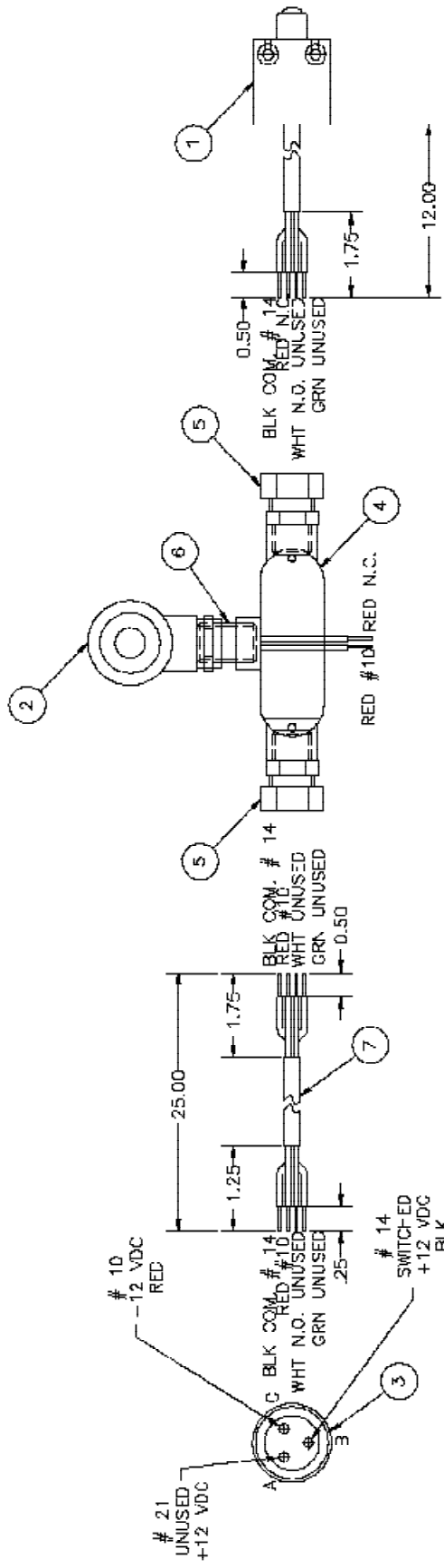




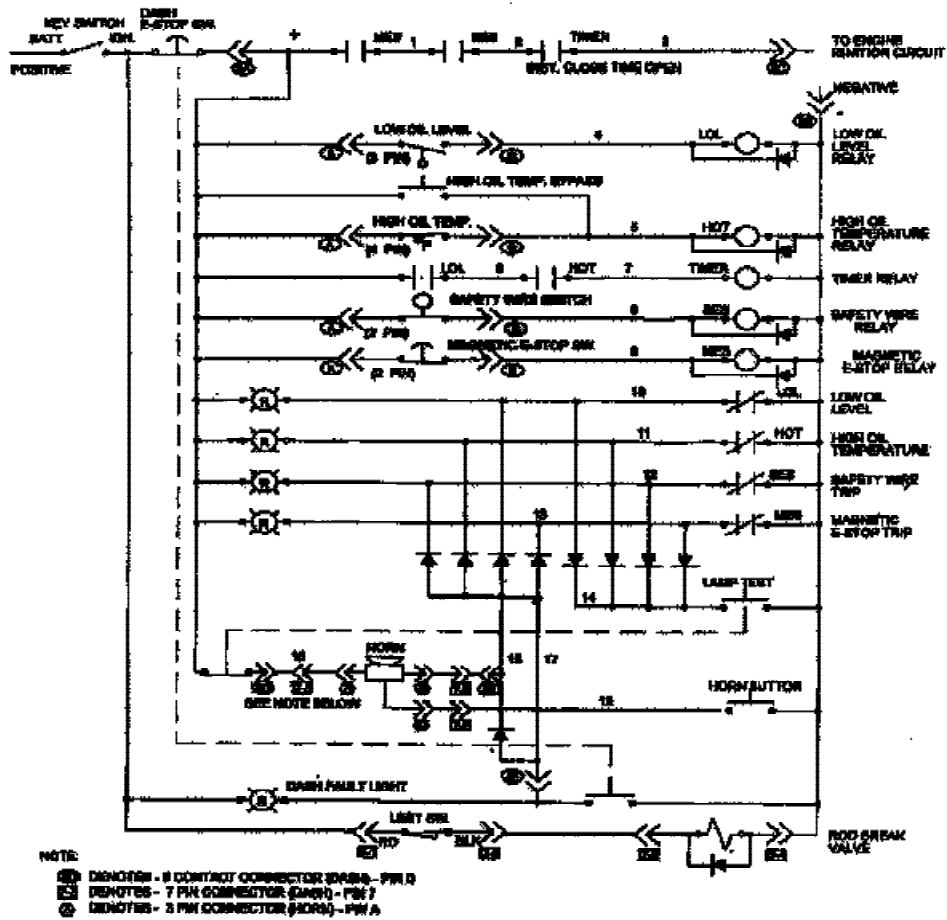
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3544172	1	MANIFOLD REWORK, D03
2		100231	2	VALVE, PRESS. REDUCING/RELIEVING
3		3544273	2	VALVE, CTRL CHUCK & ROD CLAMP
4		101664	1	VALVE, BODY HOIST BRAKE RELEASE
5		100705	1	CARTRIDGE, VALVE HOIST BRAKE
6		100229	1	VALVE, CONTROL ROTATION PRESS [Rotation]
7		100230	1	PLATE, CROSSOVER
8		3543963	1	VALVE, PRESS RED'G MAST RAISING
9		3544275	1	VALVE, CONTROL MAST RAISING
10		101878	1	VALVE, FEED MUD MIXER
11		100226	1	VALVE, SEQUENCE MUD MIXER
12		3544272	1	VALVE, CONTROL MUD MIXER
13		3544145	1	VALVE, CHECK ROD MAKE/BREAK
14		3544144	1	VALVE, PRESS CTRL ROD MAKE/BRK
15		3546010	1	VALVE, DIRECTIONAL (PRE-TORQUE)
16		3544271	1	VALVE, CONTROL HEAD FEED
17		104101	1	VALVE, PRESS REDUCING HEAD FEED
18		3544270	1	VALVE, FEED CONTROL HEAD
19		3544263	3	SPACER, 2-1/2"
20		3544262	1	SPACER, 3/4"
21		3544264	1	ORIFICE, FIXED .018" PORT "P"
22		3544239	2	PLATE, LOCKING
23		3544240	2	PLUNGER, LOCKING
24		3544241	2	SPRING, COMPRESSION
25		3544252	20	STUD, #10-24UNC x 6.56 LG
26		101963	4	STUD, #10-24UNC x 4.75 LG
27		100608	28	NUT, STUD #10-24 UNC
28		60093	6	CPLG, DIAGNOSTIC
29		3547787	1	VALVE, HEAD OPENER
30		3548113	4	STUD, #10-24UNC x 8.31 Lg.
31		33681	1	ADAP, HYD #4 JIC x # 4 ORB TEE
32		306220	1	ADAP, HYD #4 JIC(F) x #4 NPT(F)
33		93398	8	C/SCR, SH M5x.8x15 GR10.9



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3544274	1	VALVE, CONTROL HEAD FLOAT [includes items 7-13]
2		3546011	2	C/SCR, SH #8-32 x 5/8" Lg.
3		3546012	1	MOUNT, SWITCH
4		3546013	4	C/SCR, SH M4 x 30mm Lg.
5		38044	1	BALL, 5/16 ST
6		3546014	1	SWITCH ASSEMBLY PRE-TORQUE KIT (Rev. A) ( Page 66 )
7			REF	O-RING, 2-011 [included in item 1]
8			REF	END COVER (rework) [included in item 1]
9			REF	PLUG, 8mm x 1mm [included in item 1]
10			REF	COPPER RING [included in item 1]
11			REF	SPRING [included in item 1]
12			REF	DETENT [included in item 1]
13			REF	C/SCR, M4 x 20mm [included in item 1]



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3546020	1	SWITCH, PRE-TORQUE KIT
2		3546021	1	COIL, 12VDC CONTROL VALVE
3		3546022	1	PLUG, STRAIGHT ELEC
4		3546023	1	BOX, 1/2" T CONDUIT
5		3546024	2	CONNECTOR, POWER CORD
6		3546025	1	NIPPLE, 1/2" CONDUIT
7			REF	CORD FROM ITEM #1 x 25.00 Lg
8		3546027	3	CONNECTOR, YELLOW WIRE

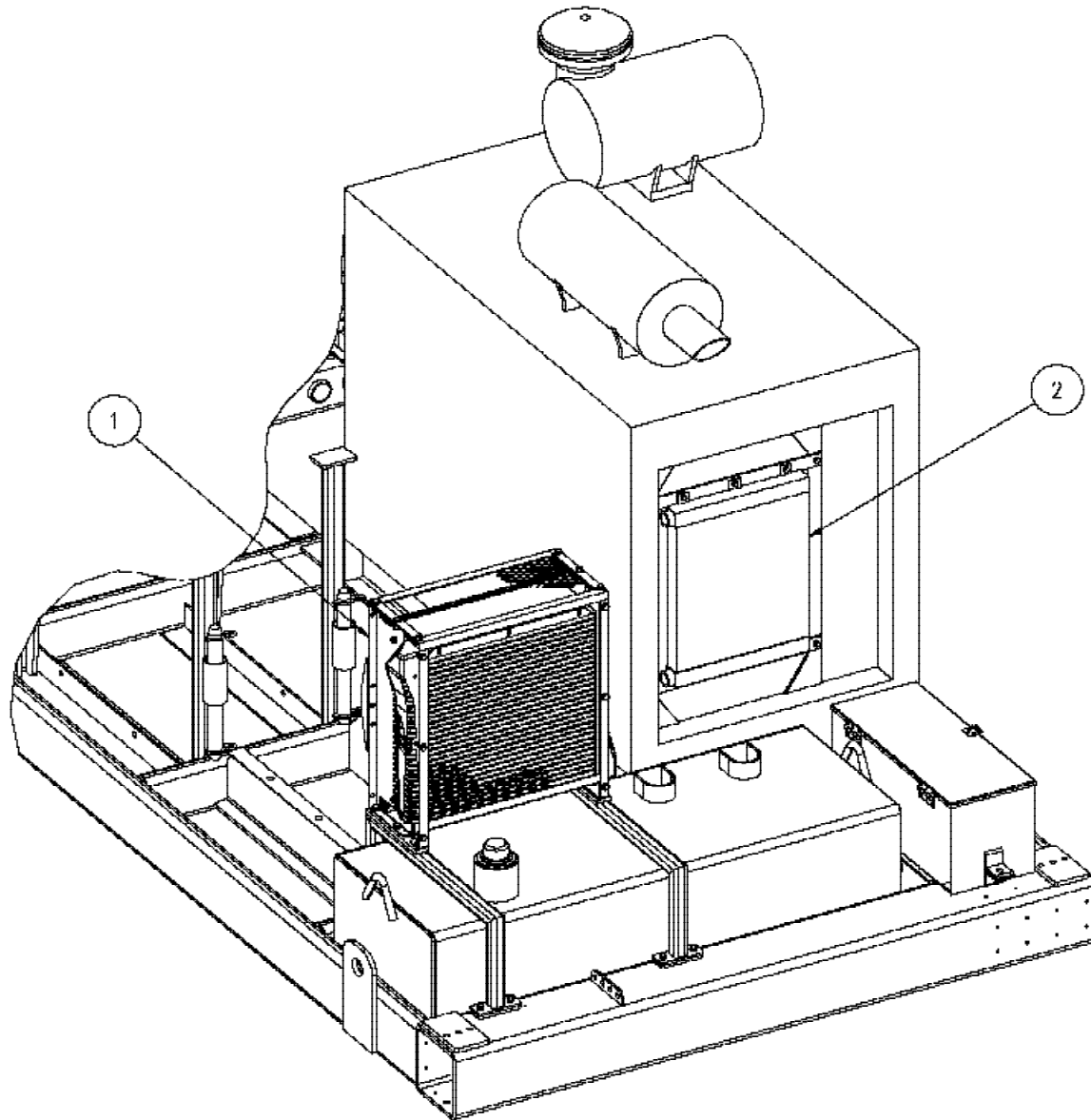


<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3548322	REF	SPARES, SHUTDOWN CONTROLS ( Page 70 )

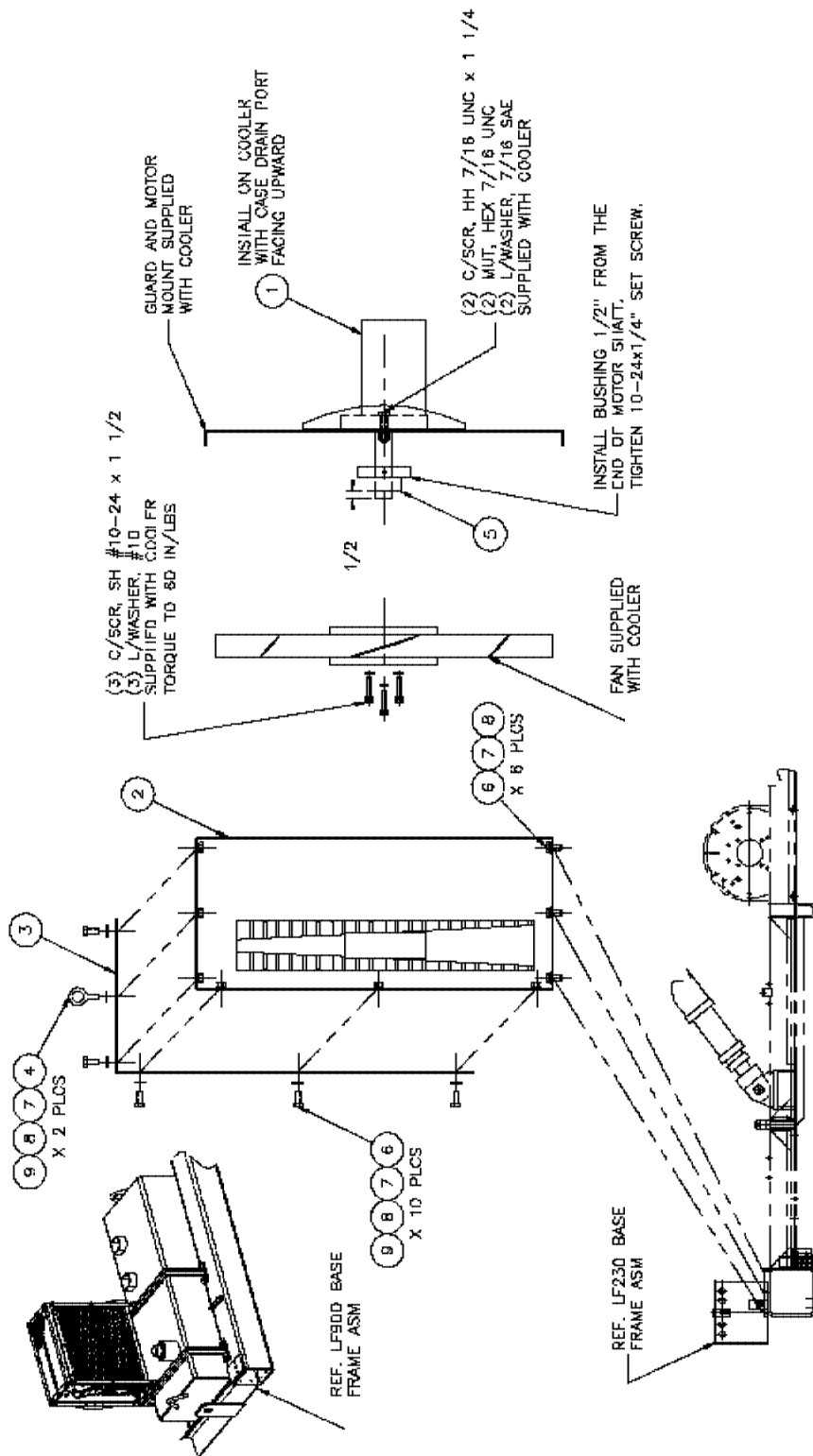




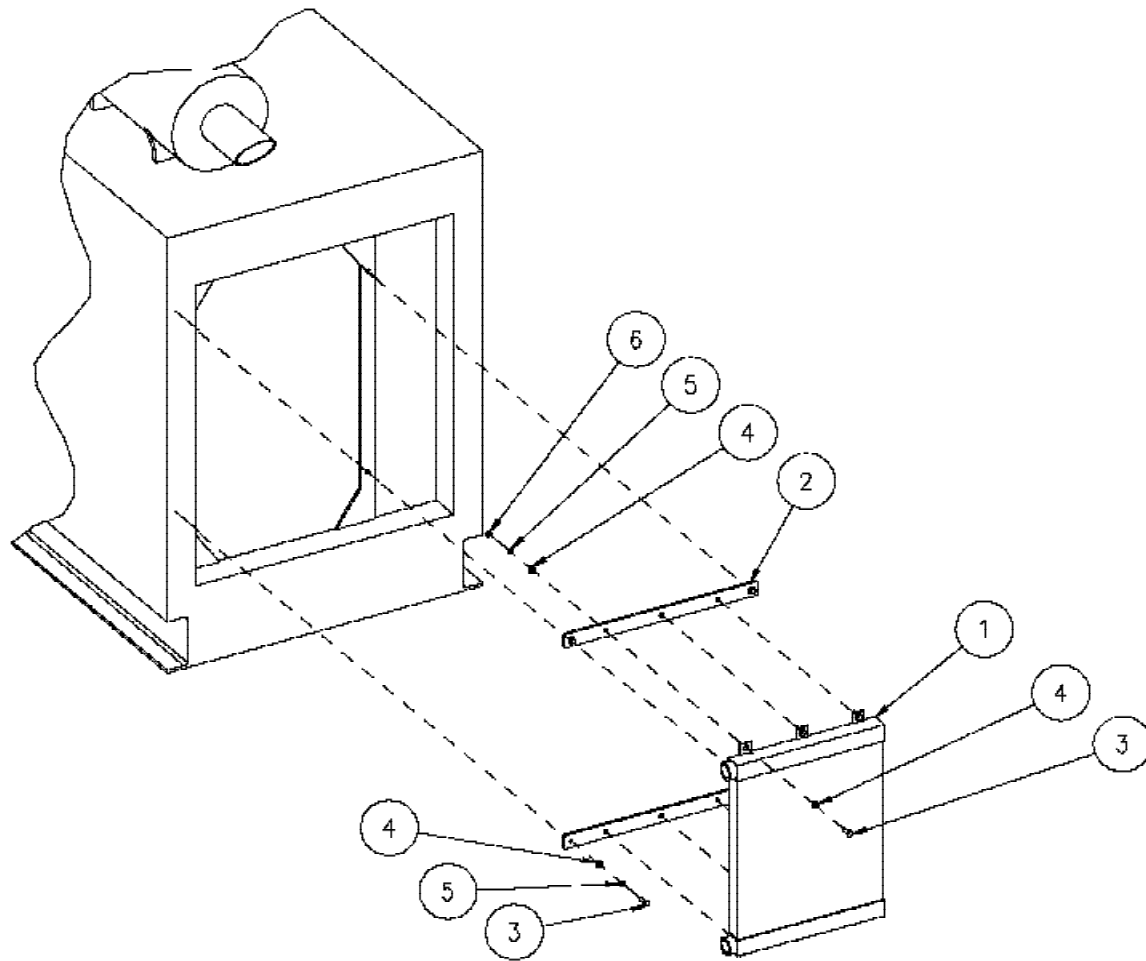
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3548323	2	N/O CONTACT BLOCK, GREEN
2		3548324	2	N/C CONTACT BLOCK, RED
3		3548325	2	PUSH BUTTON, GREEN
4		3548326	1	PUSH BUTTON, BLACK
5		3548327	4	RELAY, 12VDC
6		3548328	1	OIL LEVEL CABLE
7		3548329	1	OIL TEMP CABLE
8		3548330	1	SAFETY WIRE CABLE
9		3548331	1	E-STOP CABLE
10		3548332	1	E-STOP BUTTON, RED
11		3548333	1	CONTACT BLOCK 12VDC
12		3548334	1	LIGHT BULB 12VDC
13		3548335	1	PRE TORQUE ASSEMBLY



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3546384	1	COOLER GROUP, MAIN HYDRAULICS ( Page 74 )
2		3548308	1	COOLER GROUP, HEAD HYDRAULICS ( Page 76 )



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3546729	1	MOTOR, LF230/90D OIL COOLER
2		3546730	1	COOLER, LF230/90D HYDRAULIC OIL
3		3547425	1	GUARD, LF230/90D REMOTE COOLER
4			2	BOLT, EYE 3/8 UNC
5		3547470	1	BUSHING, REMOTE COOLER FAN
6		44512	16	C/SCR, HH 3/8-16UNC x 1 LG
7		44859	18	WASHER, FLAT GR 8 3/8
8		44520	18	WASHER, 3/8 ID LOCK
9		103968	12	NUT, HEX 3/8-16UNC




REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3546731	1	COOLER, HYDRAULIC LF90D/230
2		3548312	2	SUPPORT, HEAD COOLER LF90D
3		44509	10	C/SCR, HH 5/16-18UNC x 1 LG - L.C. #90214-86
4		46510	20	WASHER, FLAT, GR8, 5/16
5		44519	10	LWASHER, 5/16 SAE G8
6		44552	10	NUT, 5/16UNC

<b>BOART LONGYEAR</b>		<b>SPECIFICATION</b>			
<b>3547819A1.DOC</b>					
<b>TITLE: MAIN HYDRAULICS PIPING GRP, LF90D</b>					
PREPARED:	AF	REV:	ECN:	DATE:	
AUTHORIZED:		REV:	ECN:	DATE:	
APPROVED:		REV:	ECN:	DATE:	
USED ON:		REV: A	ECN: ISSUED	DATE:	
<b>HOSE END LEGEND</b>					
<b>A - Female JIC Swivel    B - Female JIC Swivel 90°</b> <b>C - Female JIC Swivel 90° (Extra Long)    D - Male NPT    E - Male JIC</b> <b>F - 90° Split Flange (Code 61)    G - 90° Split Flange (Code 62)</b> <b>H - Female Swivel 45°</b>					
<b>HOSE ASSEMBLIES</b>					
<u>No</u>	<u>SIZE</u>	<u>CUT LENGTH</u>	<u>END</u>	<u>TYPE</u>	<u>QTY</u>
1	#6	41.5	A-A	100R2AT	1
2	#6	15.5	A-A	100R2AT	1
3	#6	48.5	A-A	100R2AT	1
4	#6	24.5	A-A	100R2AT	1
5	#6	41.5	A-A	100R2AT	1
6	#6	15.5	A-A	100R2AT	1
7	#6	55.5	A-A	100R2AT	1
8	#6	79.5	A-A	100R2AT	1
9	#6	56.5	A-B	100R2AT	1
10	#6	55.5	A-B	100R2AT	1
11	#6	57.5	A-B	100R2AT	1
12	#6	55.5	A-B	100R2AT	1
13	#6	59.5	A-B	100R2AT	1
14	#6	55.5	A-B	100R2AT	1
15	#6	100.5	A-B	100R2AT	1
16	#6	100.5	A-B	100R2AT	1
17	#6	170.5	A-A	100R2AT	1
18	#6	170.5	A-A	100R2AT	1
19	#6	176.5	A-A	100R2AT	1
20	#6	176.5	A-A	100R2AT	1
21	#6	121.5	A-A	100R2AT	1
22	#6	123.5	A-A	100R2AT	1
23	#6	131.5	A-C	100R2AT	1
24	#6	134.5	A-B	100R2AT	1
25	#6	84.5	A-A	100R2AT	1
26	#6	84.5	A-A	100R2AT	1
27	#6	87.5	A-A	100R2AT	1

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 <b>BOART LONGYEAR</b>			<b>SPECIFICATION</b>		
<b>3547819A1</b>					
28	#6	87.5	A-A	100R2AT	1
29	#6	19	A-A	100R2AT	2
31	#8	7.25	A-B	100R2AT	1
32	#6	102.5	B-B	100R2AT	1
33	#8	114.5	A-A	100R2AT	1
34	#8	114.5	A-A	100R2AT	1
36	#8	18.5	A-A	100R2AT	1
37	#8	18.5	A-A	100R2AT	1
38	#8	55	A-H	100R2AT	1
39	#6	55.5	A-A	100R2AT	1
40	#8	194.5	A-A	100R2AT	2
41	#8	15	A-B	100R2AT	1
44	#8	85	A-A	100R2AT	1
45	#8	22	A-C	100R2AT	1
46	#8	38	A-A	100R2AT	1
47	#8	18	A-B	100R2AT	1
48	#8	162	A-A	100R2AT	1
49	#18	89	A-H	100R2AT	1
50	#10	103	C(#10)-A(#12)	100R2AT	1
51	#8	150	A-A	100R2AT	2
52	#12	13	A-C	100R2AT	1
53	#8	72.5	A-C	100R2AT	1
54	#4	130	A-A	100R2AT	1
56	#12	119.25	A-A	100R2AT	1
57	#12	83.5	A-B	100R2AT	1
58	#8		A-A	100R2AT	2
59	#8	174	A-A	100R2AT	2
60	#8	149	A-A	100R2AT	2
62	#12	98.5	A-B	100R2AT	1
63	#12	19.75	A-C	100R2AT	1
64	#6	133	A-B	100R2AT	1
65	#6	49	A-B	100R2AT	1
66	#6	150.5	A-A	100R2AT	2
67	#8	259	A-A	100R2AT	1
68	#8	170	A-A	100R2AT	1
70	#12	83.25	A-G	100R2AT	1
71	#18	85.5	A-G	100R19	1
76	#8	75.5	A-B	100R2AT	1
77	#8	129	A-A	100R2AT	1
78	#8	129	A-A	100R2AT	1
79	#8	129	A-A	100R2AT	1
80	#8	129	A-A	100R2AT	1
81	#8	129	A-A	100R2AT	1
82	#6	129.5	A-A	100R2AT	1

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 <b>BOART LONGYEAR</b>			<b>SPECIFICATION</b>		
<b>3547819A1</b>					
83	#6	129.5	A-A	100R2AT	1
84	#6	129.5	A-A	100R2AT	1
85	#18	127.5	A-A	100R13	1
86	#16	127.5	A-A	100R13	1
87	#18	122.5	A-A	100R13	1
88	#18	122.5	A-A	100R13	1
89	#18	166.5	A-B	100R13	1
90	#18	166.5	A-B	100R13	1
91	#8	190.5	A-A	100R2AT	1
92	#8	167.5	A-H	100R2AT	1
93	#8	181	A-A	100R2AT	1
94	#6	171.5	A-A	100R2AT	1
95	#8	179.5	A-A	100R2AT	1
96	#8	163	A-H	100R2AT	1
97	#8	167	A-A	100R2AT	1
98	#8	201	A-A	100R2AT	1
99	#12	71	A-A	100R13	1
100	#12	71	A-A	100R13	1
101	#16	43	A-G	100R13	1
102	#18	75.5	A-A	100R4	1
105	#20	38	A-G	100R4	1
106	#32	45	A-G	100R4	1
107	#12	36.5	A-B	100R4	1
108	#8	36	A-B	100R2AT	1
109	#20	39.5	A-C	100R4	1
110	#18	20.75	A-B	100R2AT	1
112	#8	80.5	A-A	100R2AT	1
115	#8	21	A-C	100R2AT	1
116	#8	18.5	A-C	100R2AT	1
117	#8	5.25	A-B	100R2AT	2
122	#12	85.5	A-G	100R2AT	1
123	#18	47.5	A-A	100R4	1
124	#6	119.5	A-A	100R2AT	1
125	#4	14	A-B	100R2AT	1
126	#8	13	A-B	100R2AT	1
127	#8	12	A-B	100R2AT	1
129	#4	55	A-A	100R2AT	1
130	#4	17.5	A-A	100R2AT	1
131	#4	57	A-A	100R2AT	1
132	#4	57	A-A	100R2AT	1
133	#4	80	A-A	100R2AT	1
134	#4	60	A-A	100R2AT	1
135	#4	60	A-A	100R2AT	1
136	#6	150.5	A-A	100R2AT	1

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<b>BOART LONGYEAR</b>			<b>SPECIFICATION</b>		
<b>3647819A1</b>					
137	#6	15	A-A	100R2AT	1
138	#6	165.5	A-B	100R2AT	1
139	#8	128	A-B	100R2AT	2
140	#8	119.5	A-A	100R2AT	2
141	#8	127	A-A	100R2AT	2
142	#4	21	A-A	100R2AT	1
143	#4	23	A-A	100R2AT	1
144	#8	27.5	A-B	100R2AT	2
145	#8	27	A-A	100R2AT	2
146	#6	169.5	A-A	100R2AT	1
151	#4	39.5	A-B	100R2AT	1
152	#4	20.5	A-A	100R2AT	1
153	#4	34.5	A-A	100R2AT	1
<b>ADAPTERS &amp; OTHER COMPONENTS</b>					
<u>Item No</u>	<u>Part No</u>	<u>DESCRIPTION</u>			<u>QTY</u>
155	26042	ADAP, HYD STR 8 JIC			2
157	33716	ADAP, HYD STR 4 JIC - 6 JIC			1
158	33716	ADAP, HYD STR 8 JIC - 6 JIC			1
159	2405-16-08	ADAP, HYD STR 16 JIC - 8 JIC			1
160	2405-24-12	ADAP, HYD STR 24 JIC - 12 JIC			2
161	26056	ADAP, HYD 90 4 JIC - 4 NPT			5
162	37663	ADAP, HYD TEE 8 JIC - 8 JIC - 8 NPT			2
167	3474-12-12	ADAP, HYD STR 12 ORB			1
168	3474-16-16	ADAP, HYD STR 16 ORB			1
169	3474-20-20	ADAP, HYD STR 20 ORB			1
170	3474-32-32	ADAP, HYD STR 32 ORB			1
171	35887	ADAP, HYD STR 4 JIC - 4 ORB			7
173	39511	ADAP, HYD STR 8 JIC - 4 ORB			1
174	35465	ADAP, HYD STR 6 JIC - 6 ORB			3
176	33844	ADAP, HYD STR 6 JIC - 12 ORB			1
177	33089	ADAP, HYD STR 8 JIC - 6 ORB			1
179	40079	ADAP, HYD STR 8 JIC - 10 ORB			1
181	36960	ADAP, HYD STR 12 JIC - 10 ORB			2
182	36463	ADAP, HYD STR 12 JIC - 12 ORB			2
185	25470	ADAP, HYD STR 16 JIC - 16 ORB			1
186	33108	ADAP, HYD STR 20 JIC - 20 ORB			1
187	32987	ADAP, HYD STR 20 JIC - 24 ORB			1
188	33859	ADAP, HYD STR 32 JIC - 32 ORB			1
190	6400-16-08	ADAP, HYD STR 16 ORB - 8 JIC			1
191	44195	ADAP, HYD PLUG 6 ORB			2

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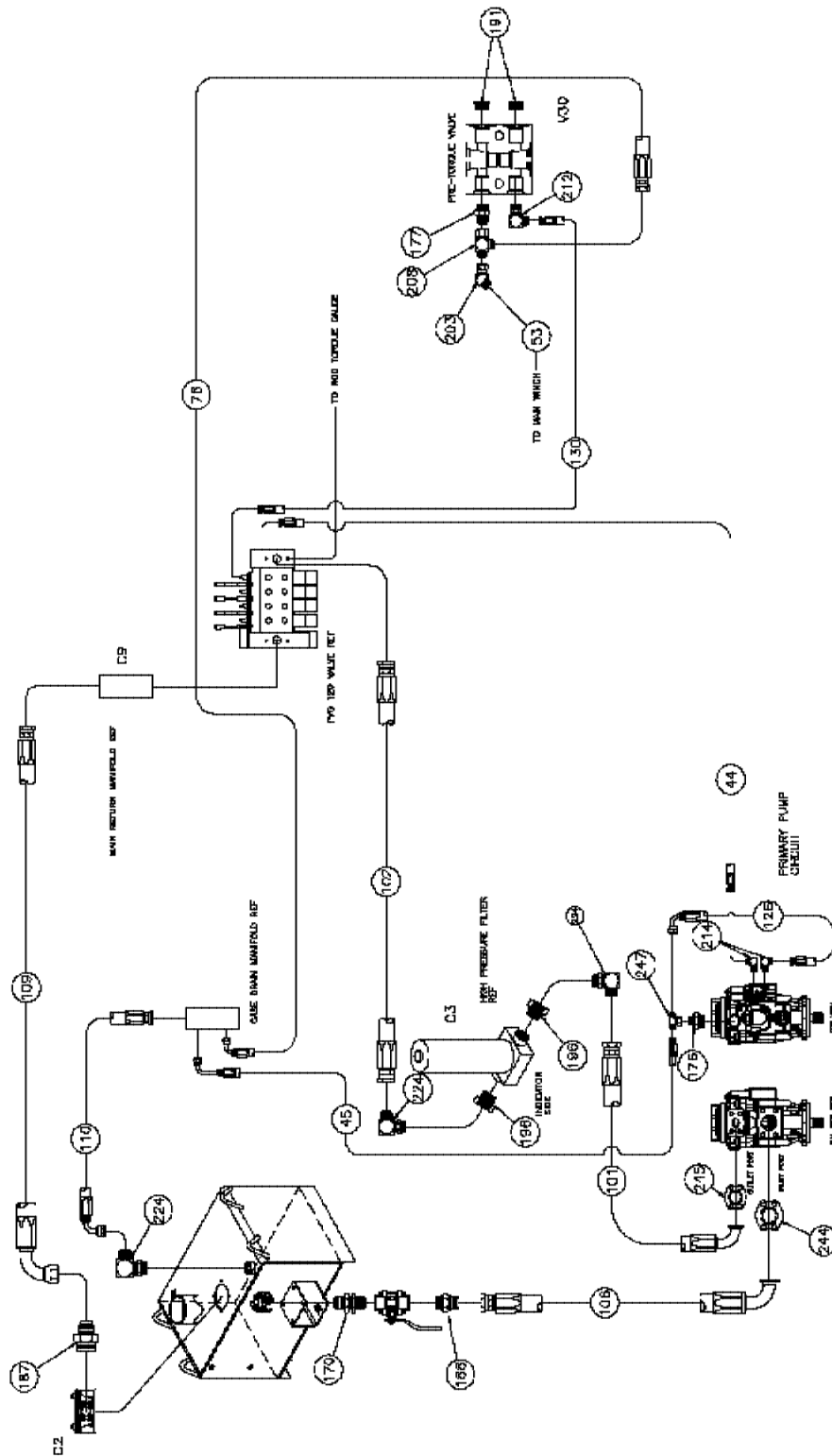


 <b>BOART LONGYEAR</b>		<b>SPECIFICATION</b>	
<b>3547819A1</b>			
182	49229	ADAP, HYD PLUG 8 JIC	2
195	3474-16-08	ADAP, HYD STR 16 ORB – 8 ORB	2
196	3474-24-16	ADAP, HYD STR 24 ORB – 16 ORB	2
197	33214	ADAP, HYD 90 4 JIC	1
199	39690	ADAP, HYD 90 8 JIC	1
200	43072	ADAP, HYD 90 12 JIC	1
202	39208	ADAP, HYD 45 6 JIC	1
203	33748	ADAP, HYD 45 8 JIC	5
204	33750	ADAP, HYD 45 18 JIC	1
205	306220	ADAP, HYD STR 4 JIC – 4 NPT	3
208	33791	ADAP, HYD TEE 4 JIC	2
207	2603-08-08-08	ADAP, HYD TEE 8 JIC – 8 JIC – 8 JIC	1
208	33429	ADAP, HYD TEE 6 JIC	3
209	32978	ADAP, HYD TEE 16 JIC	1
211	37015	ADAP, HYD 90 4 JIC – 4 ORB	1
212	40237	ADAP, HYD 90 4 JIC – 6 ORB	2
214	44302	ADAP, HYD 90 8 JIC – 4 ORB	5
215	36478	ADAP, HYD 90 8 JIC – 6 ORB	3
216	32556	ADAP, HYD 90 8 JIC – 6 ORB	3
217	36457	ADAP, HYD 90 8 JIC – 8 ORB	3
218	38452	ADAP, HYD 90 LONG 8 JIC – 8 ORB	1
219	40082	ADAP, HYD 90 8 JIC – 10 ORB	2
220	39222	ADAP, HYD 90 8 JIC – 12 ORB	2
221	39222	ADAP, HYD 90 10 JIC – 10 ORB	1
222	35895	ADAP, HYD 90 12 JIC – 12 ORB	5
223	38848	ADAP, HYD 90 16 JIC – 12 ORB	1
224	36424	ADAP, HYD 90 16 JIC – 16 ORB	3
231	39186	ADAP, HYD 45 18 JIC – 12 ORB	1
233	33678	ADAP, HYD TEE 6 JIC – 6 JIC – 6 ORB	2
235	39737	ADAP, HYD TEE 8 JIC – 8 JIC – 8 ORB	3
243	CFHS 20	SPLIT FLANGE 20	1
244	CFHS 32	SPLIT FLANGE 32	1
245	CFHS 16	SPLIT FLANGE 16	1
246	33749	ADAP, HYD 45 12 JIC	1
247	39021	ADAP, HYD TEE 6 JIC	1
248	33171	ADAP, HYD 90 6 JIC – 8 ORB	1
249	22523	ADAP, HYD 90 8 JIC – 8 NPT	2
250		CAP – 10 ORB	1
253	40255	ADAP, HYD LON 8 JIC – 8 ORB	1

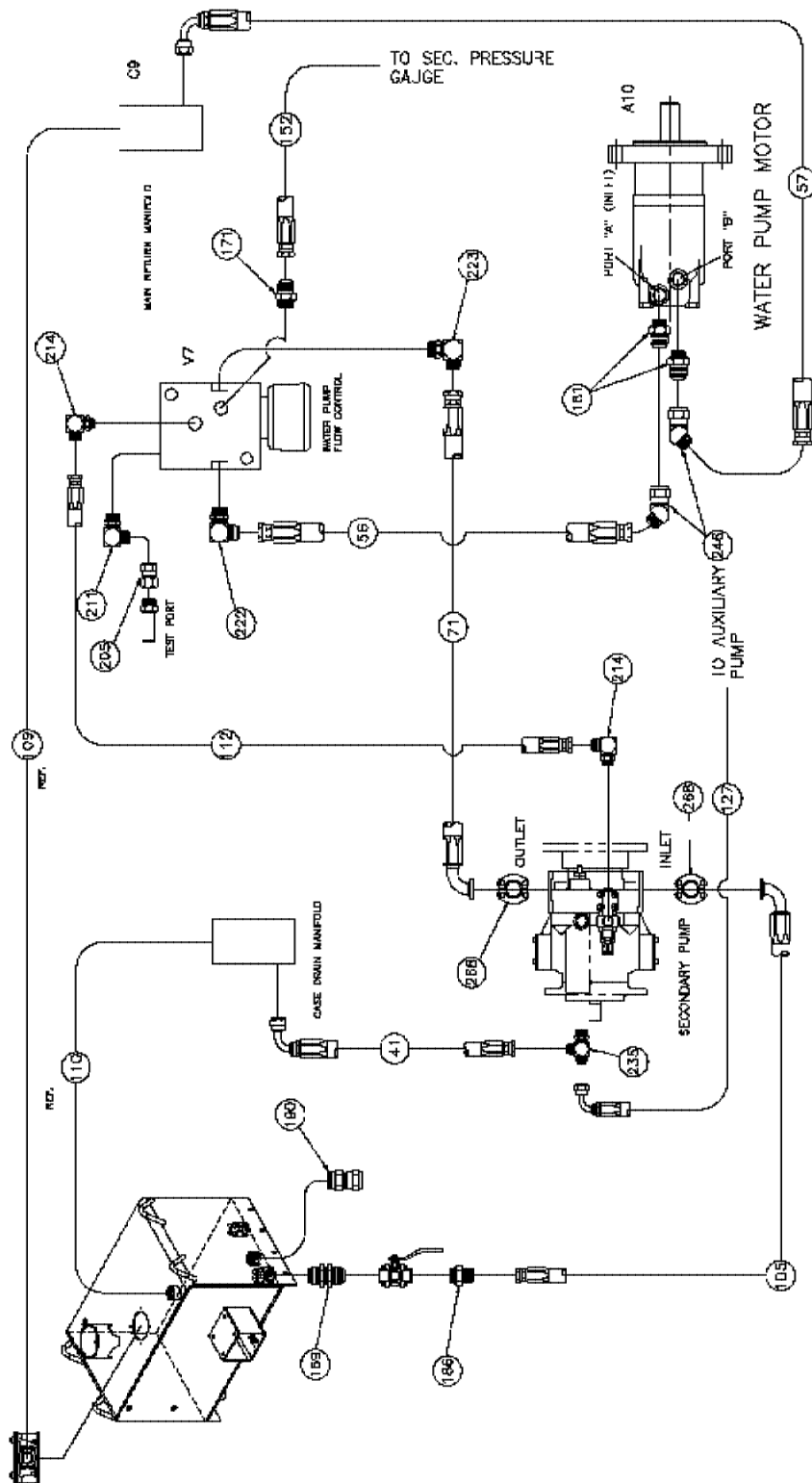
3547819A1 page 5 of 8  
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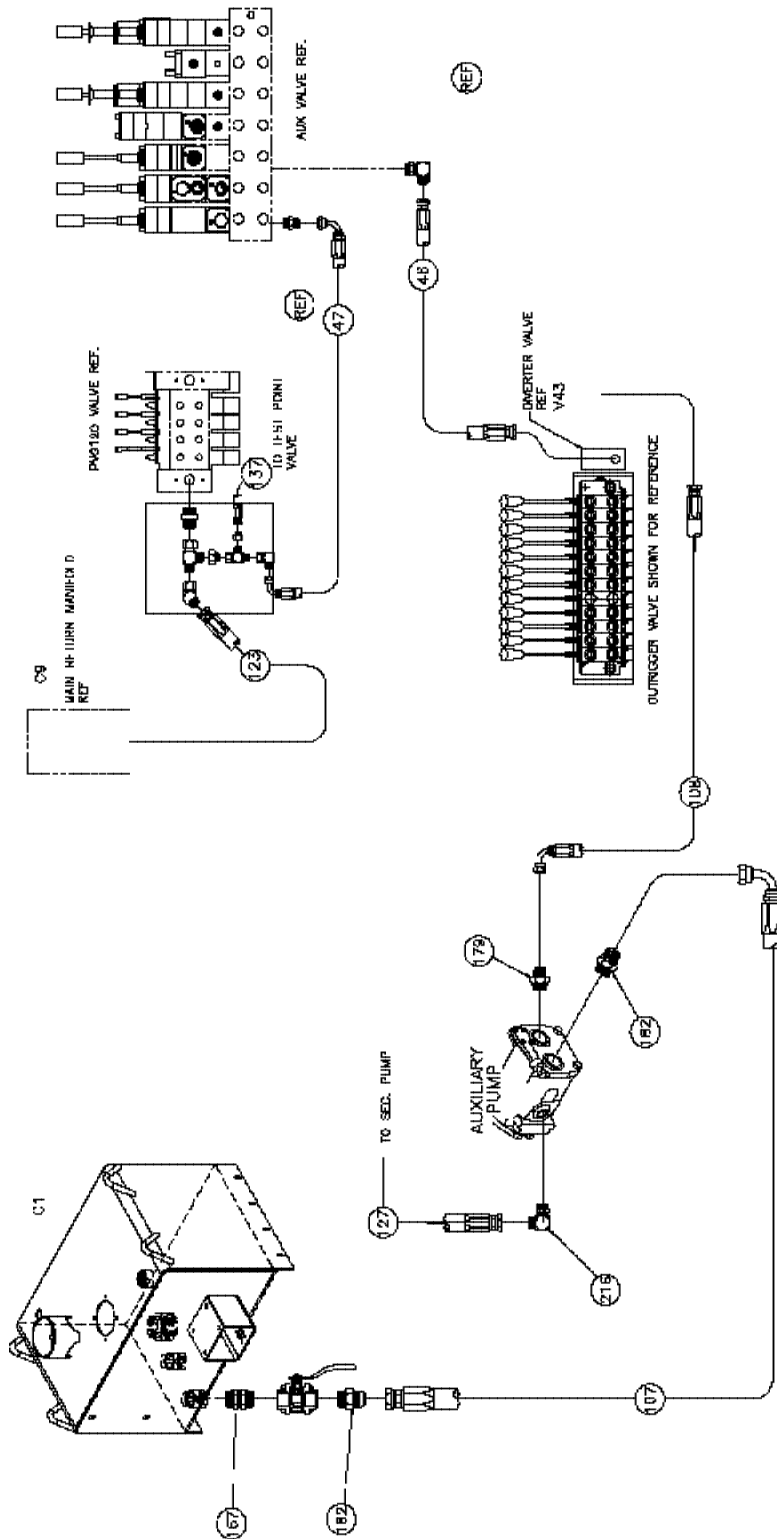




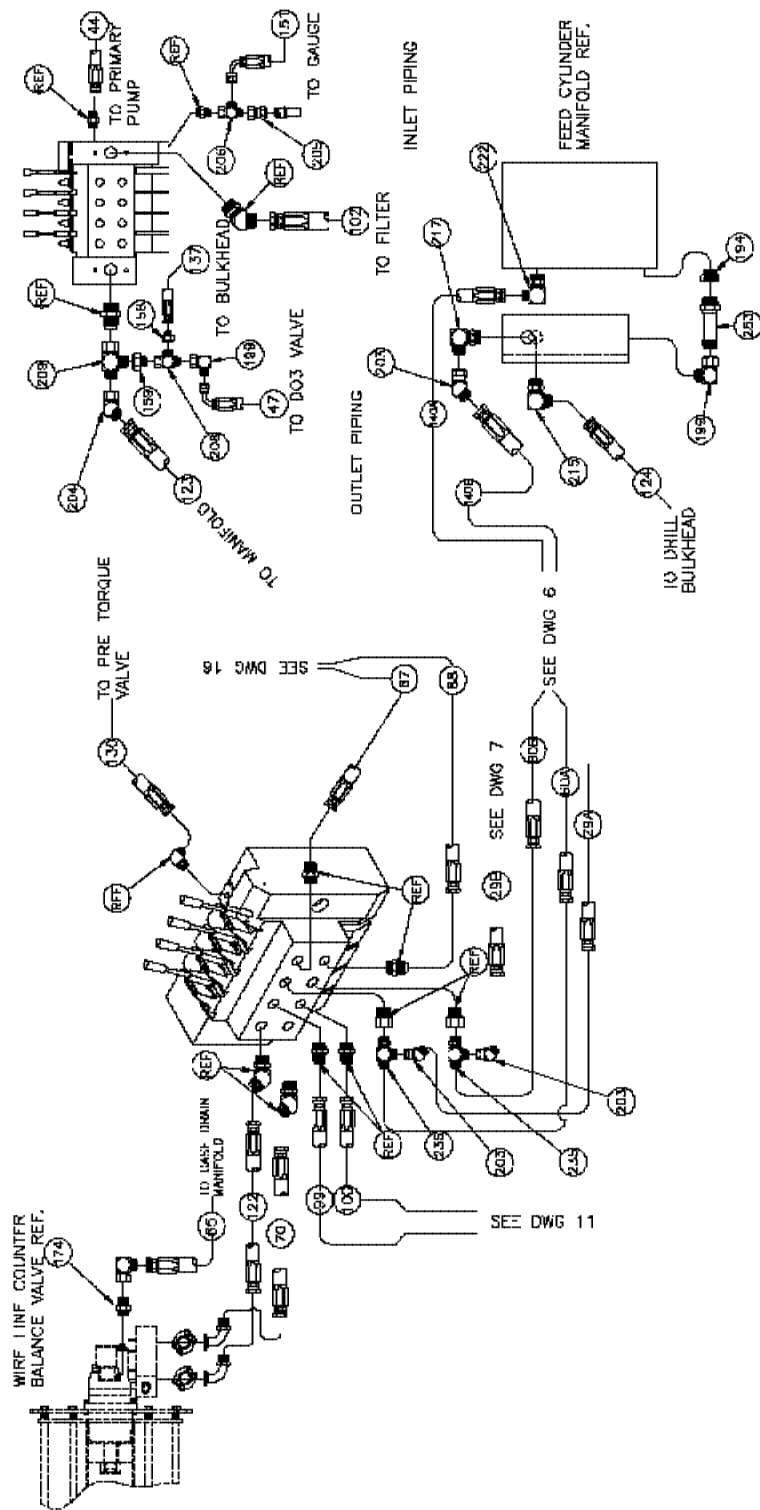






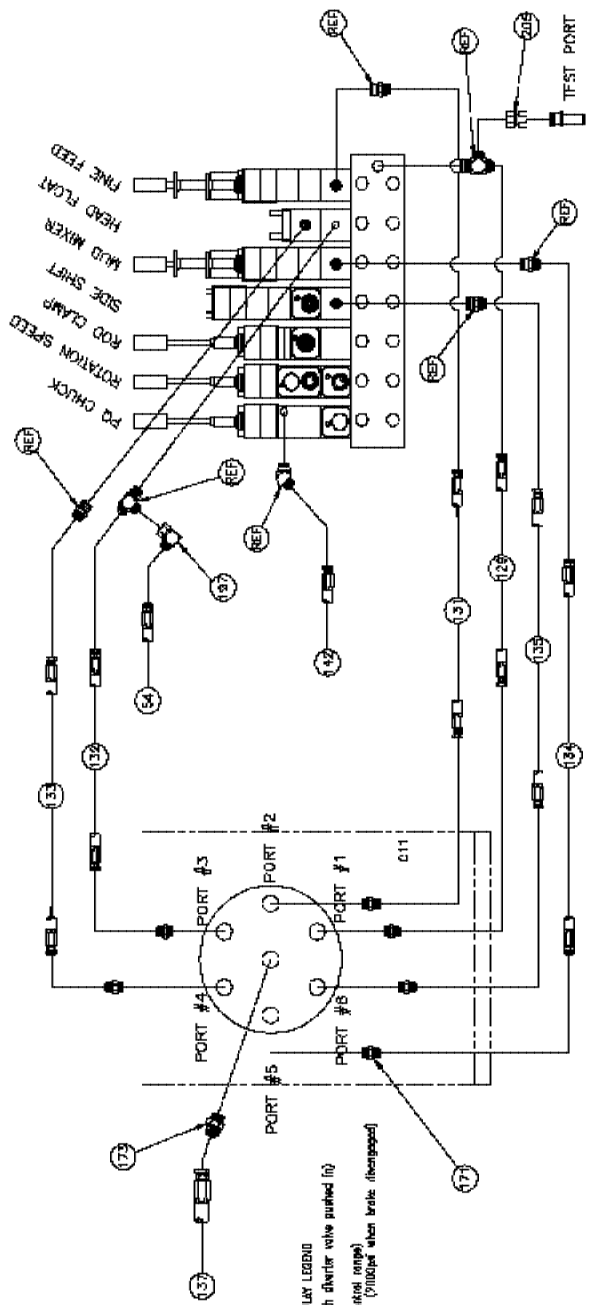






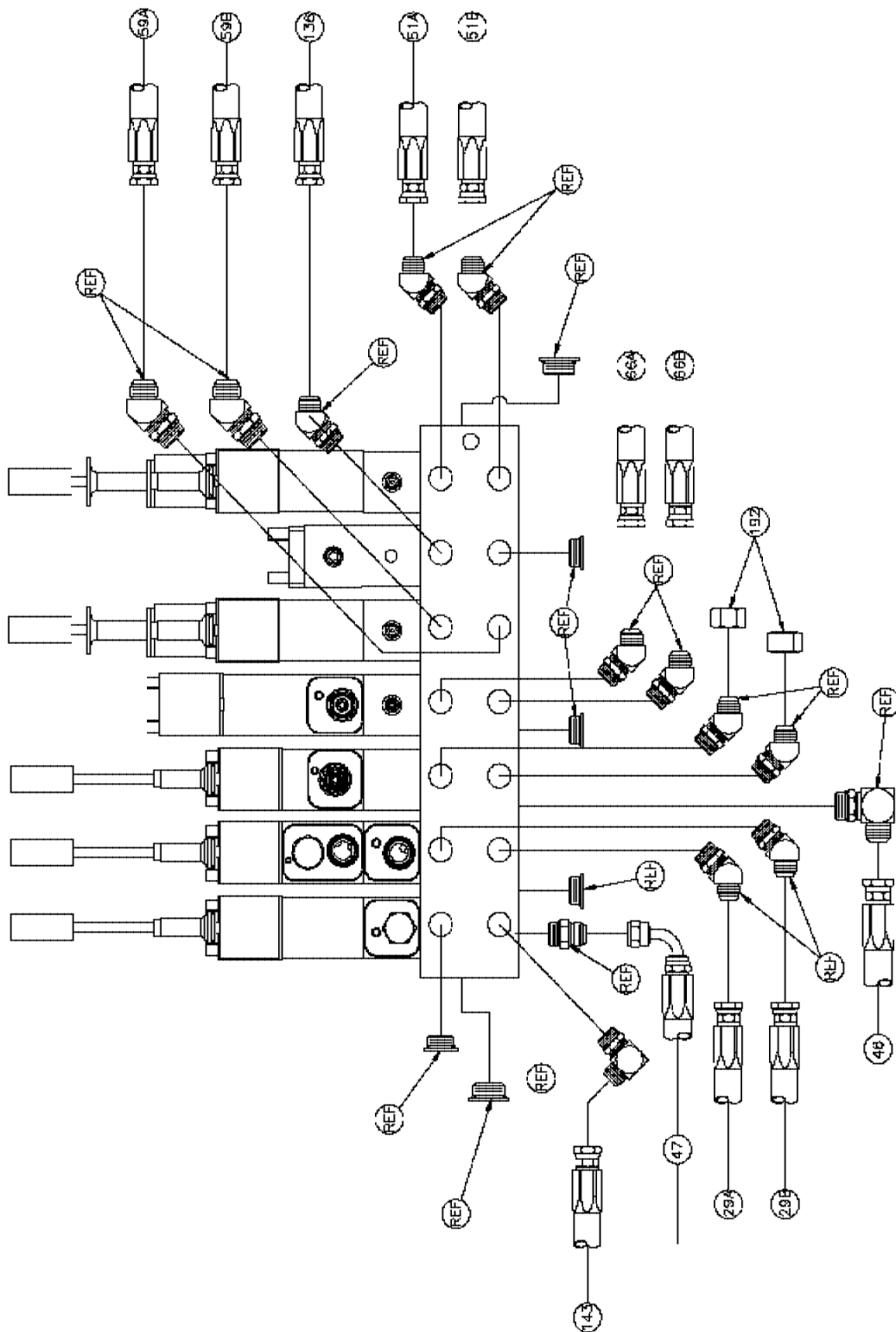




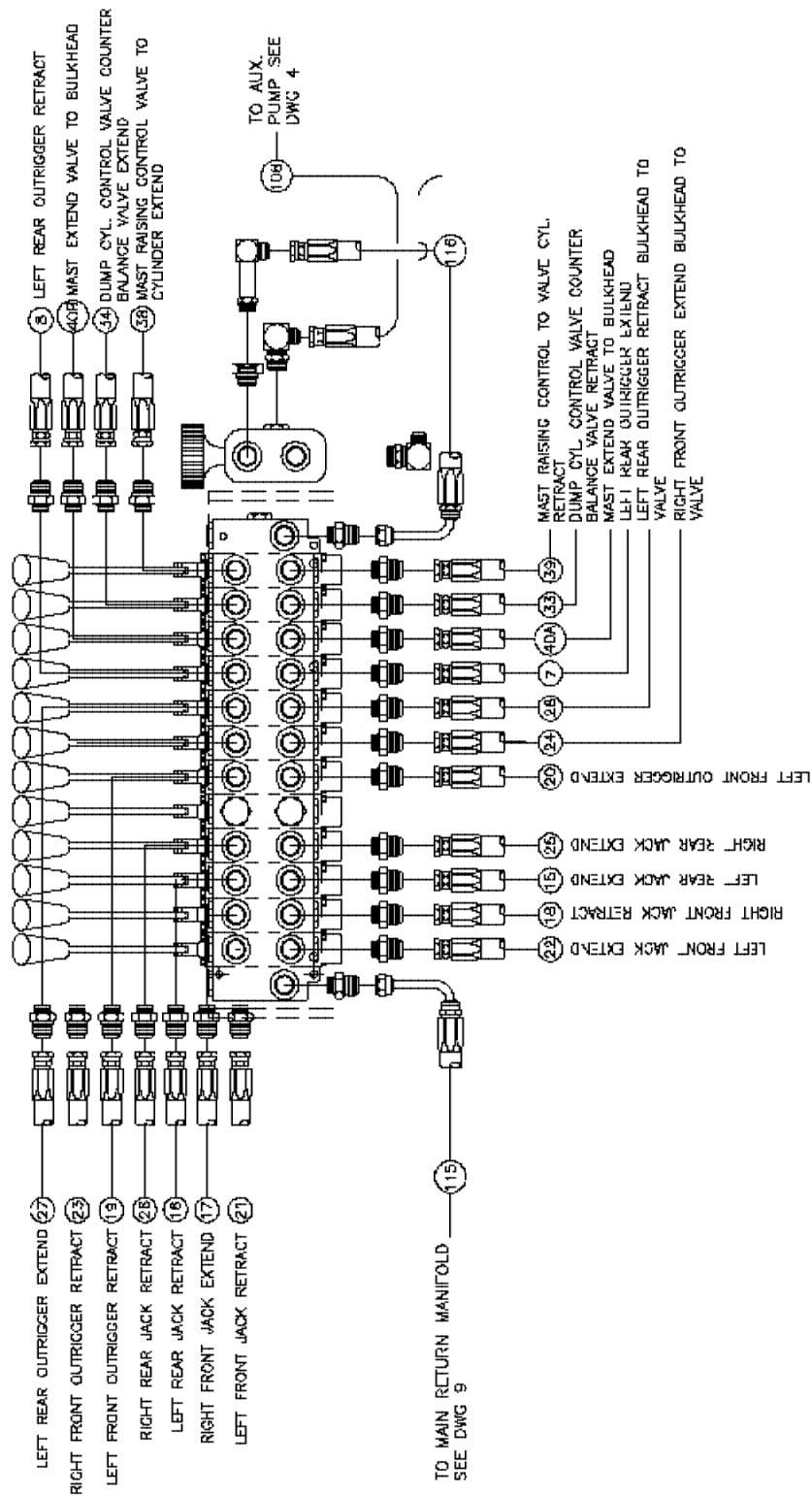


- ROTARY PRESSURE GAUGE DISPLAY LEGEND
1. AUXILIARY PRESS. (2000 psi & mark with divider valve pushed in)
  2. CHUCK PRESS. (1400-1450 psi)
  3. ROTATION SPEED PRESS. (45-100psi control range)
  4. MAIN LINE MUDCHUCK BEARING BEARING PRESS. (200psi when brake disengaged)
  5. SIDE SHIFT PRESS. (1000-2000psi)

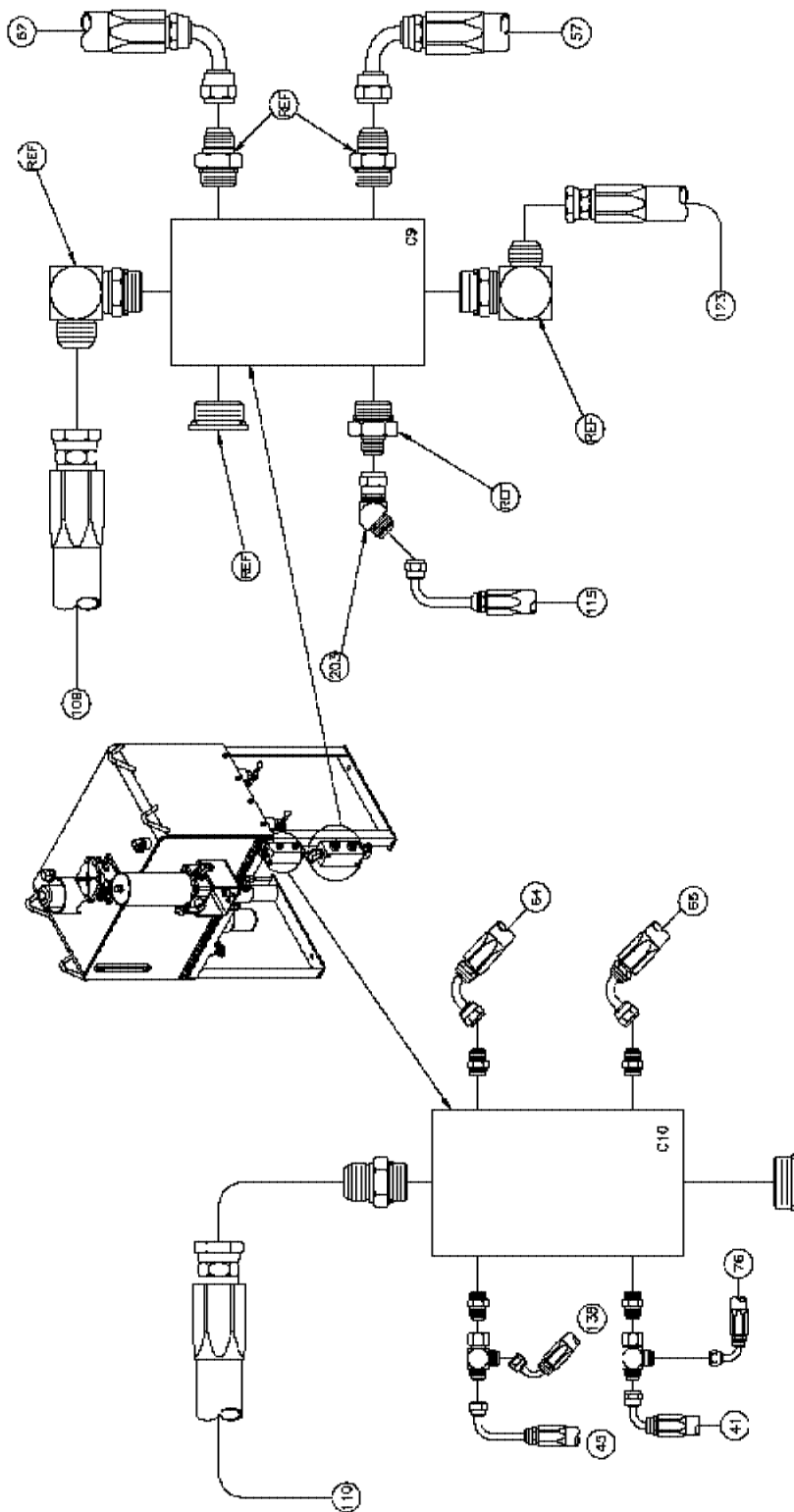








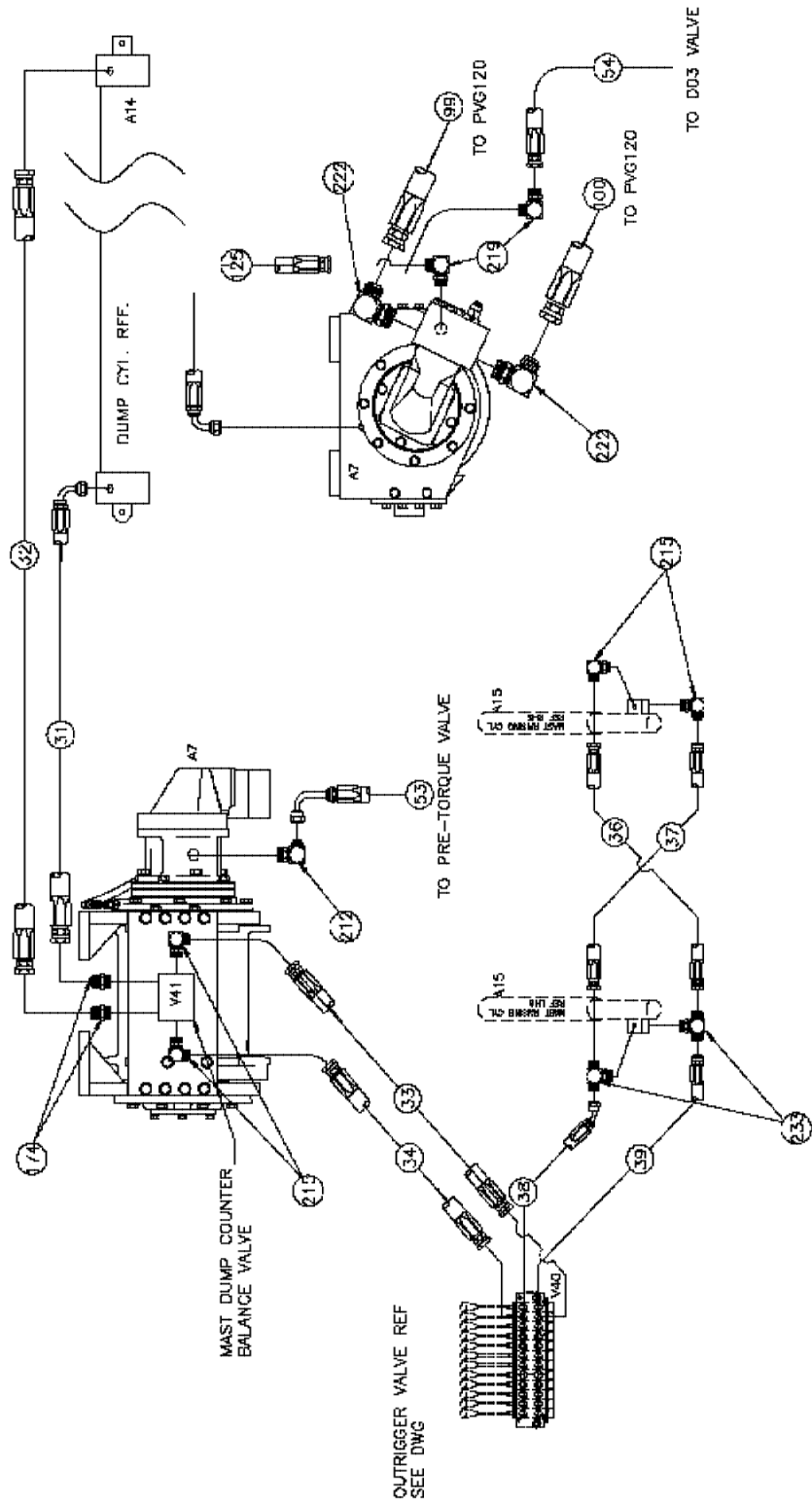




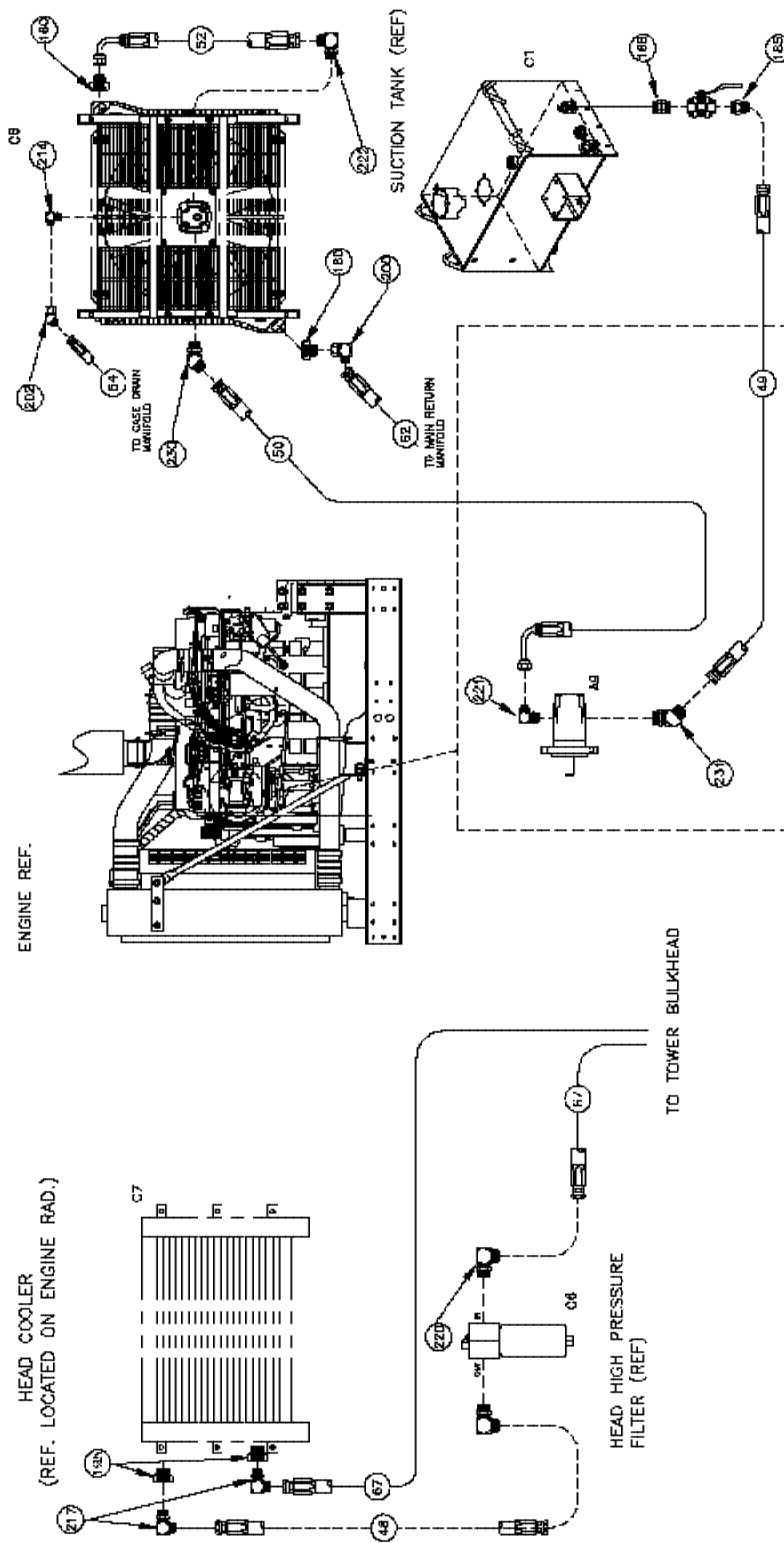
CASE DRAIN MANIFOLD



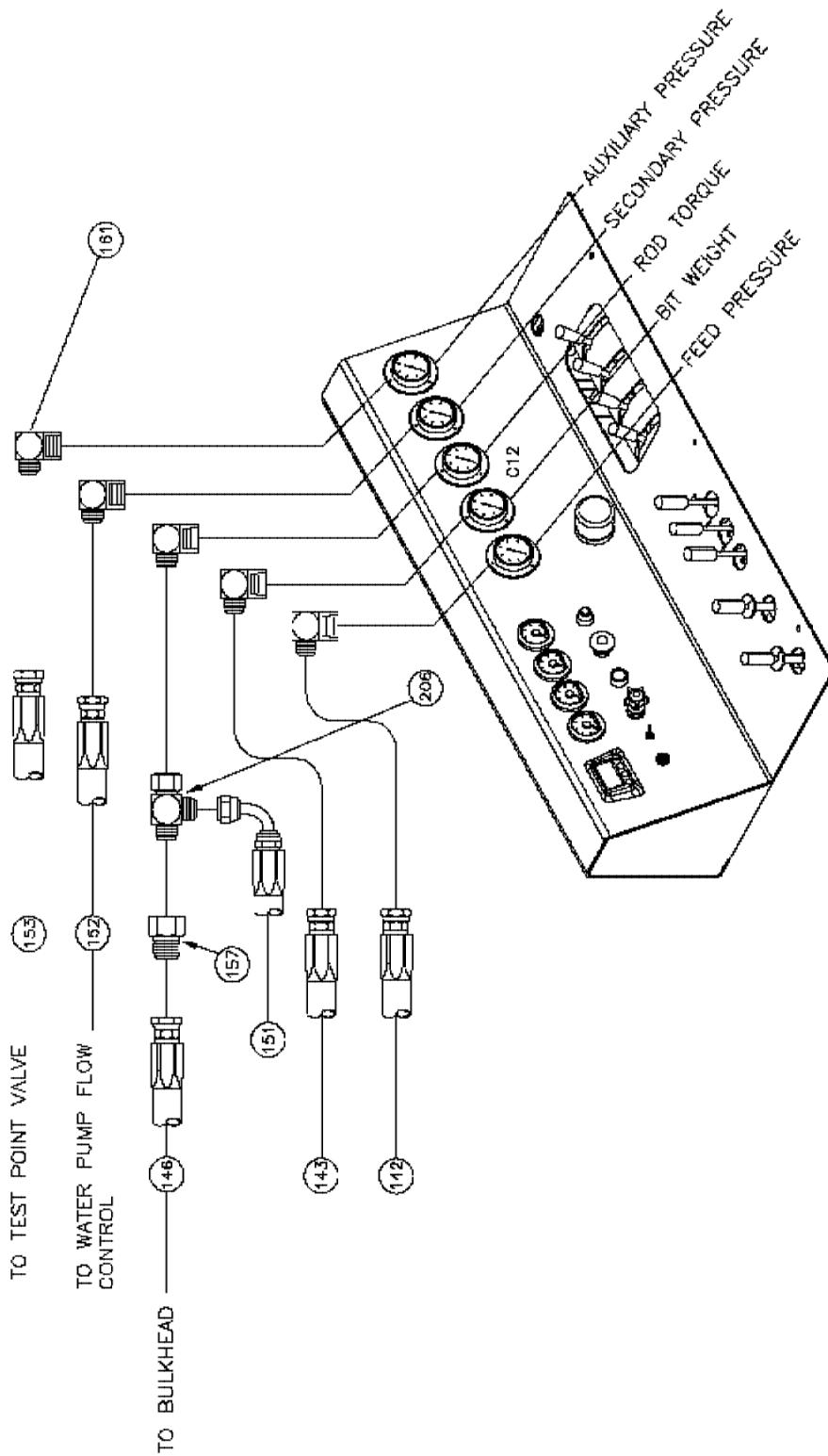




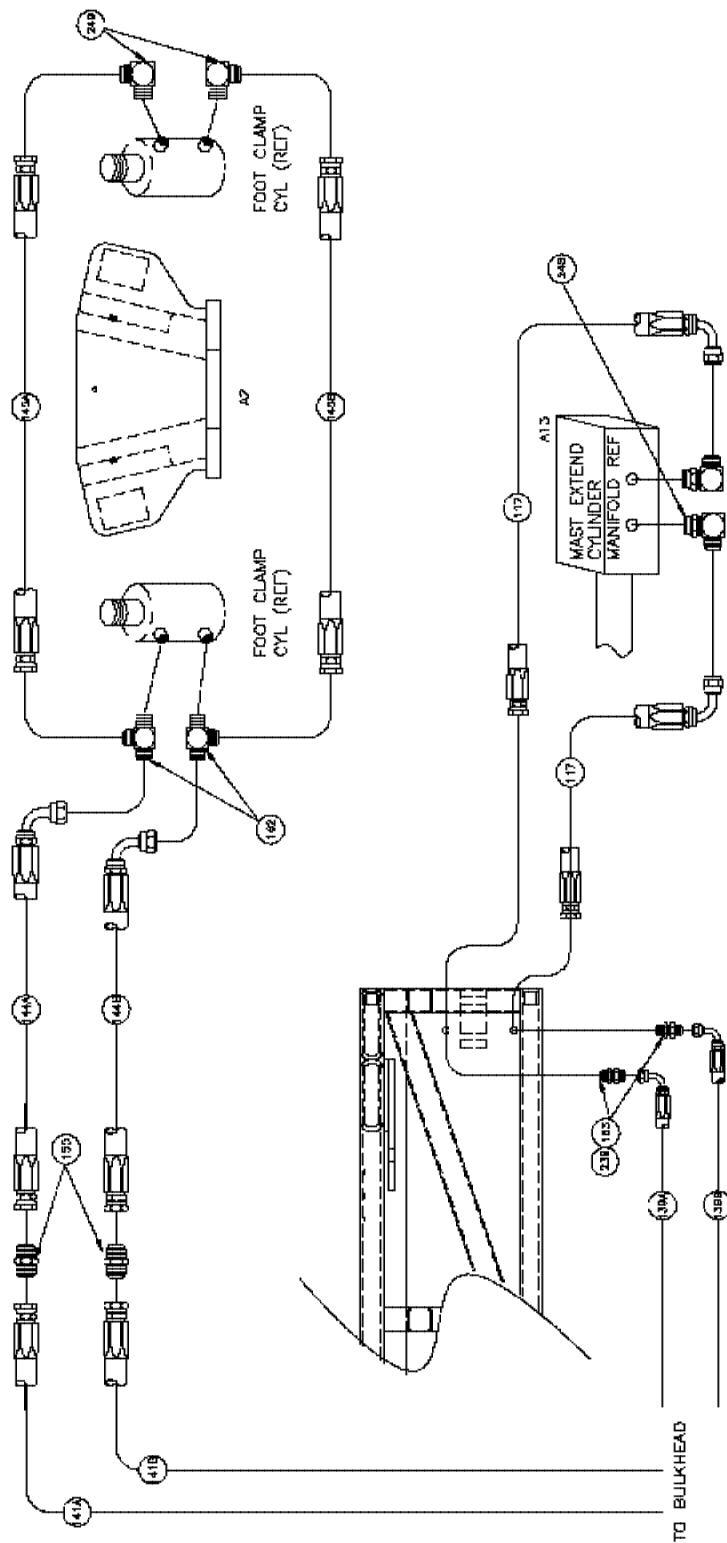






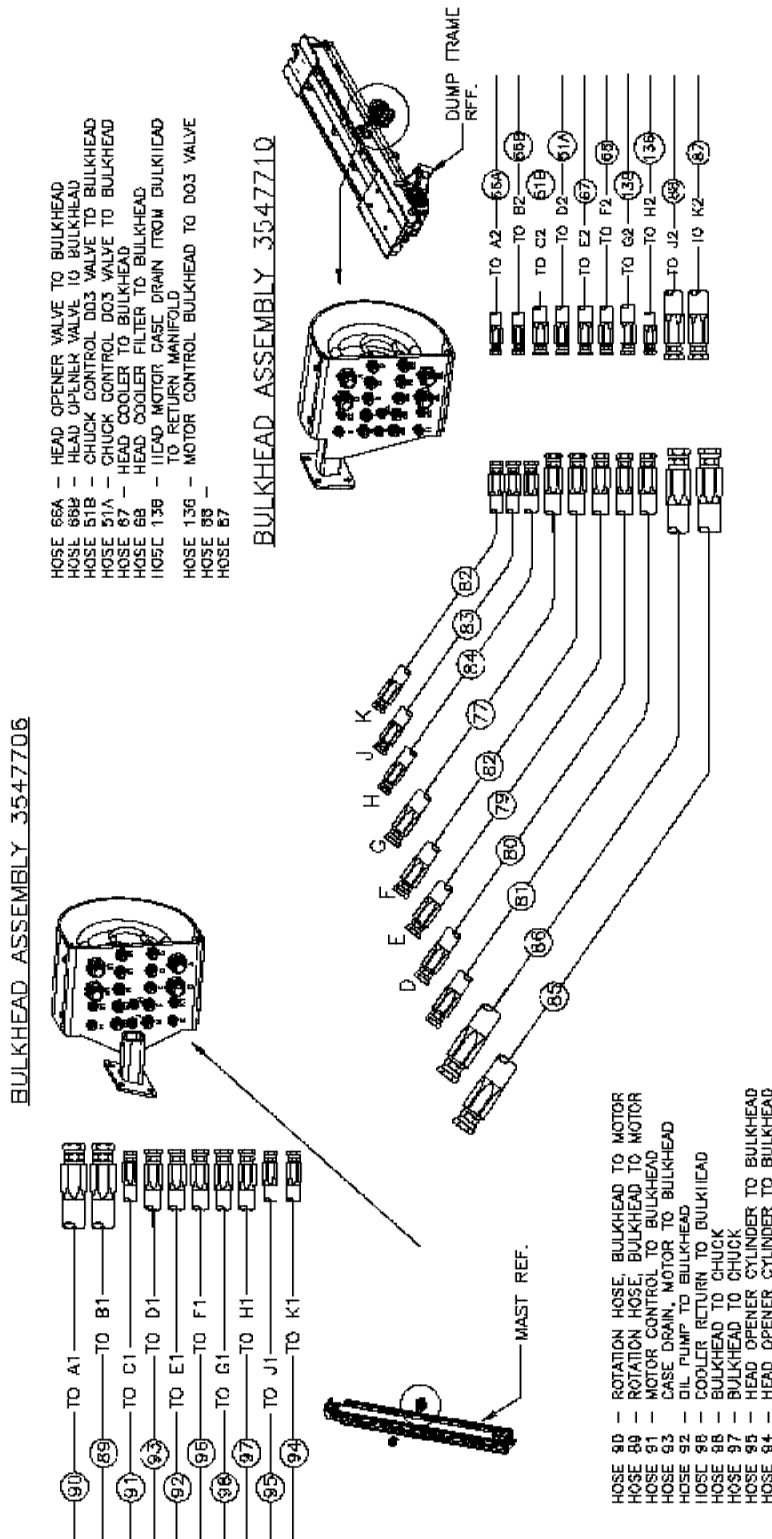




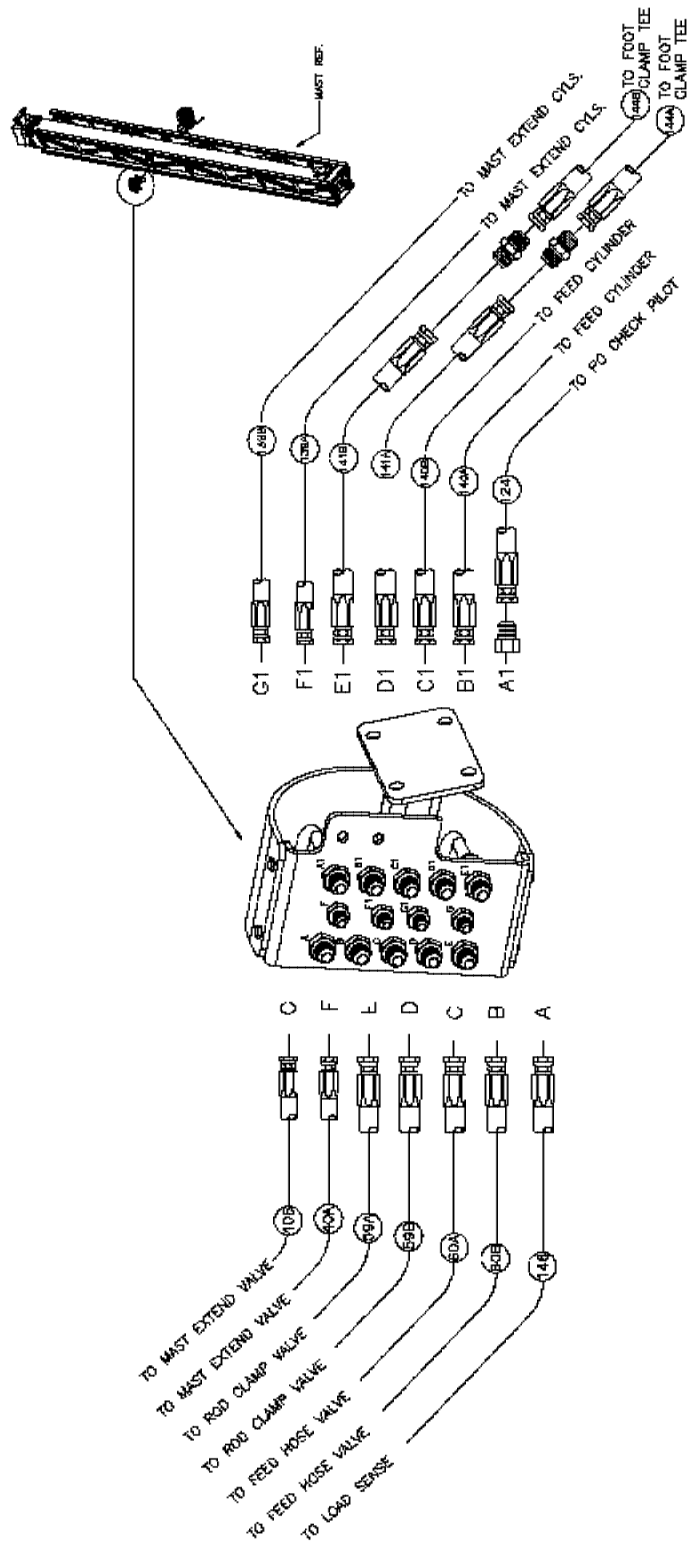




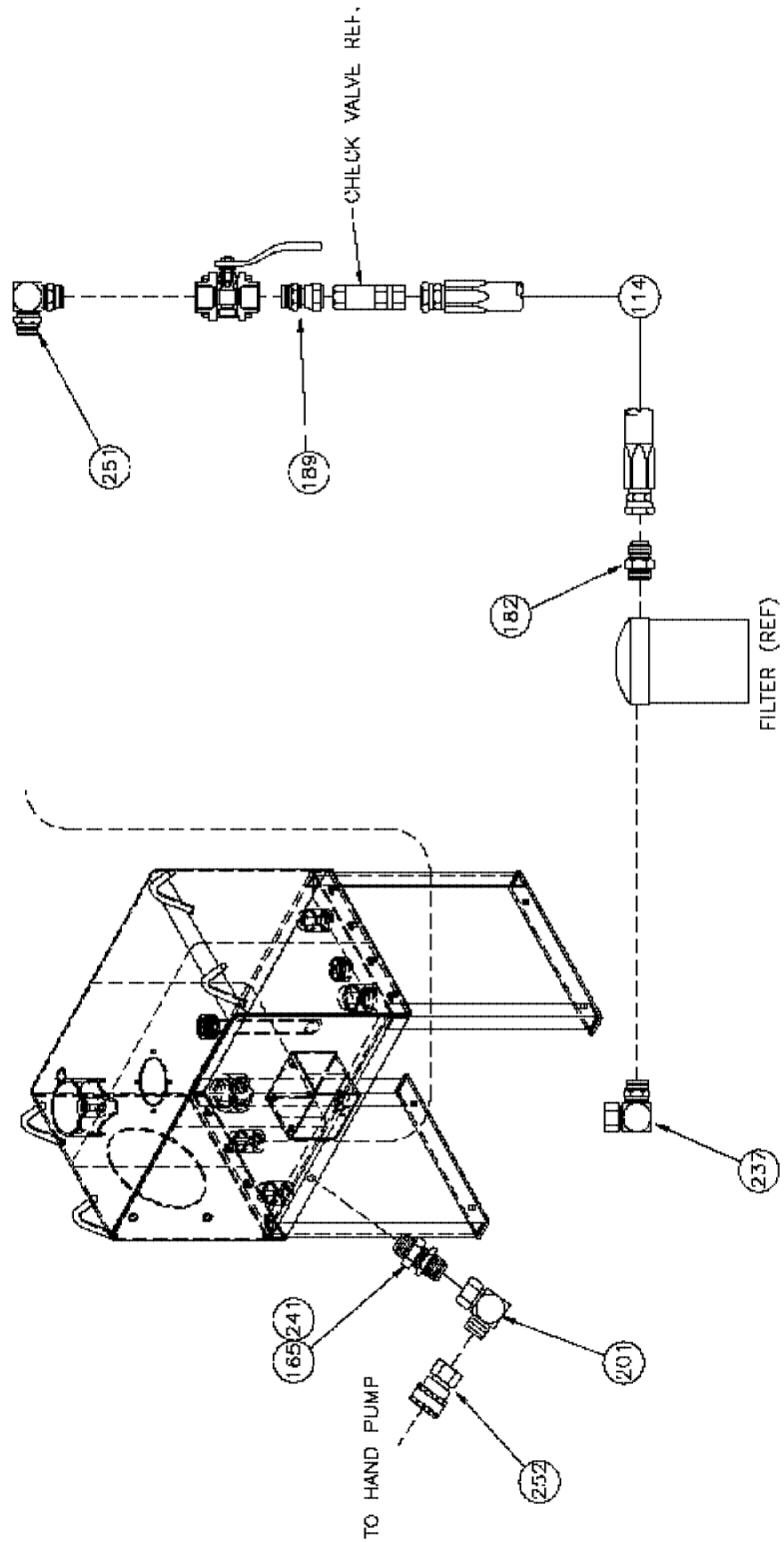




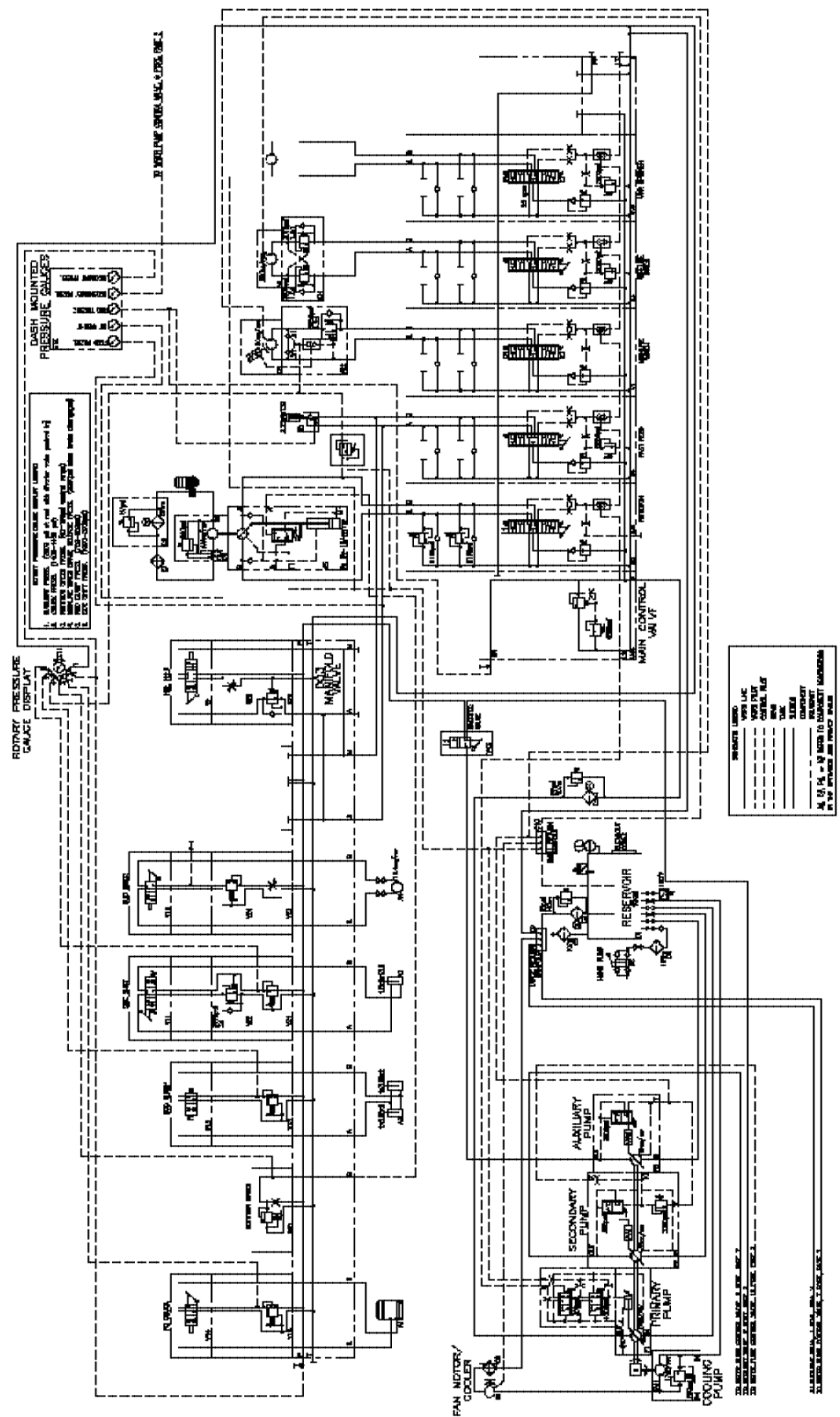






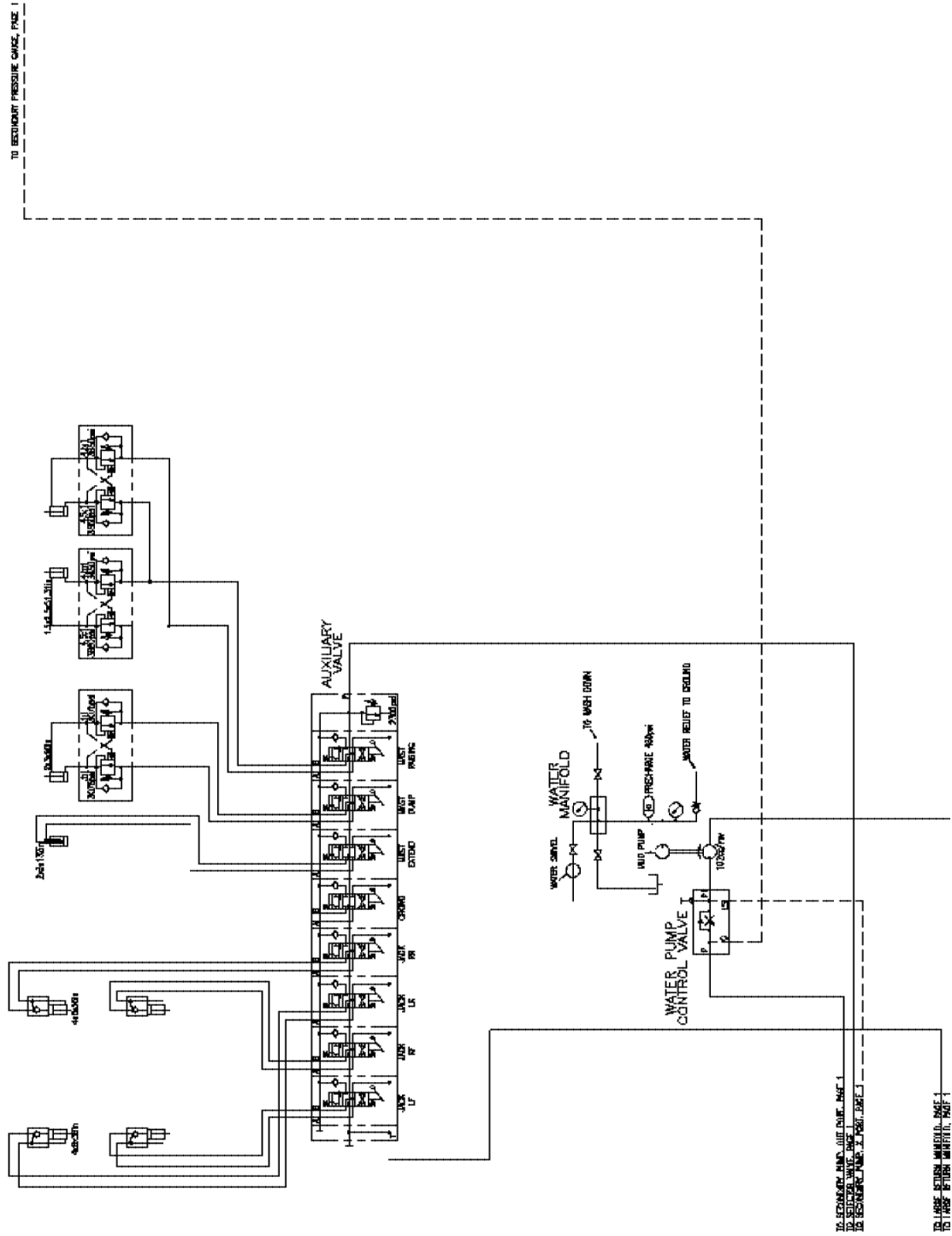








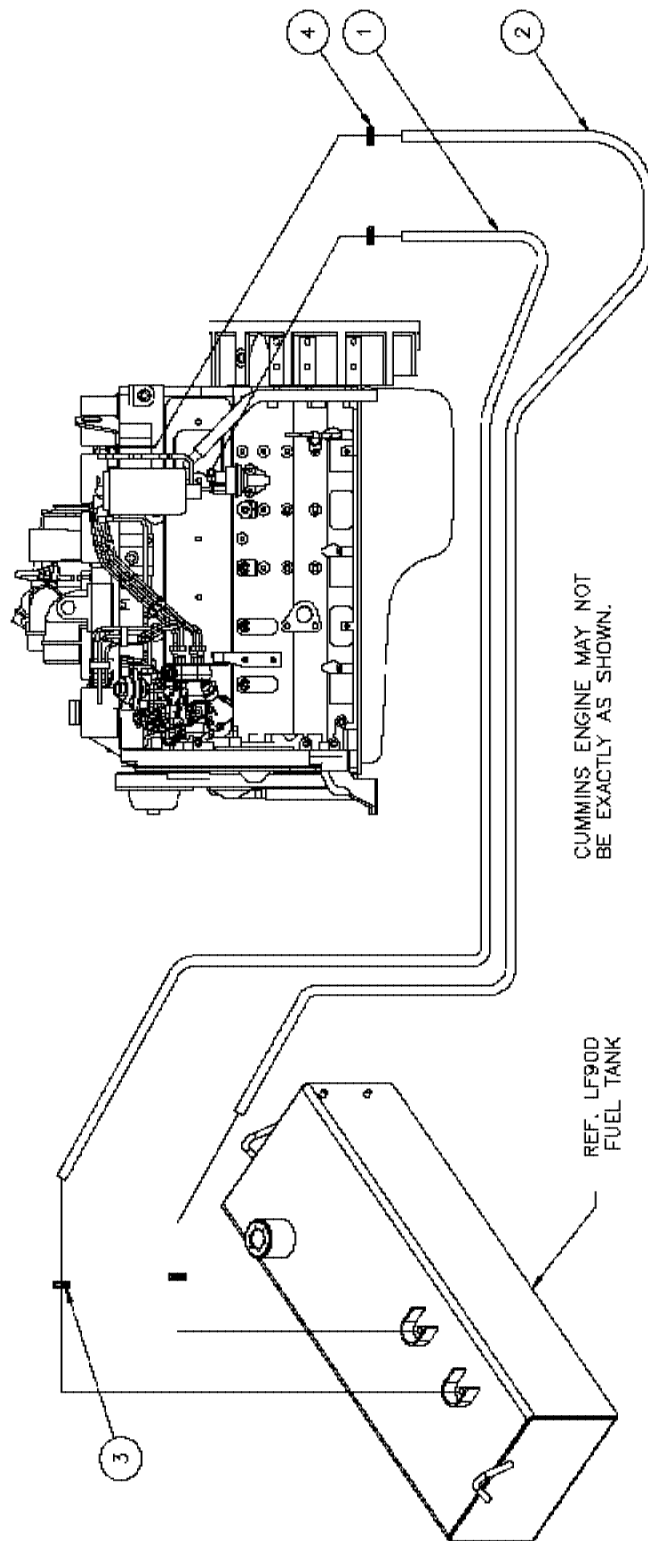




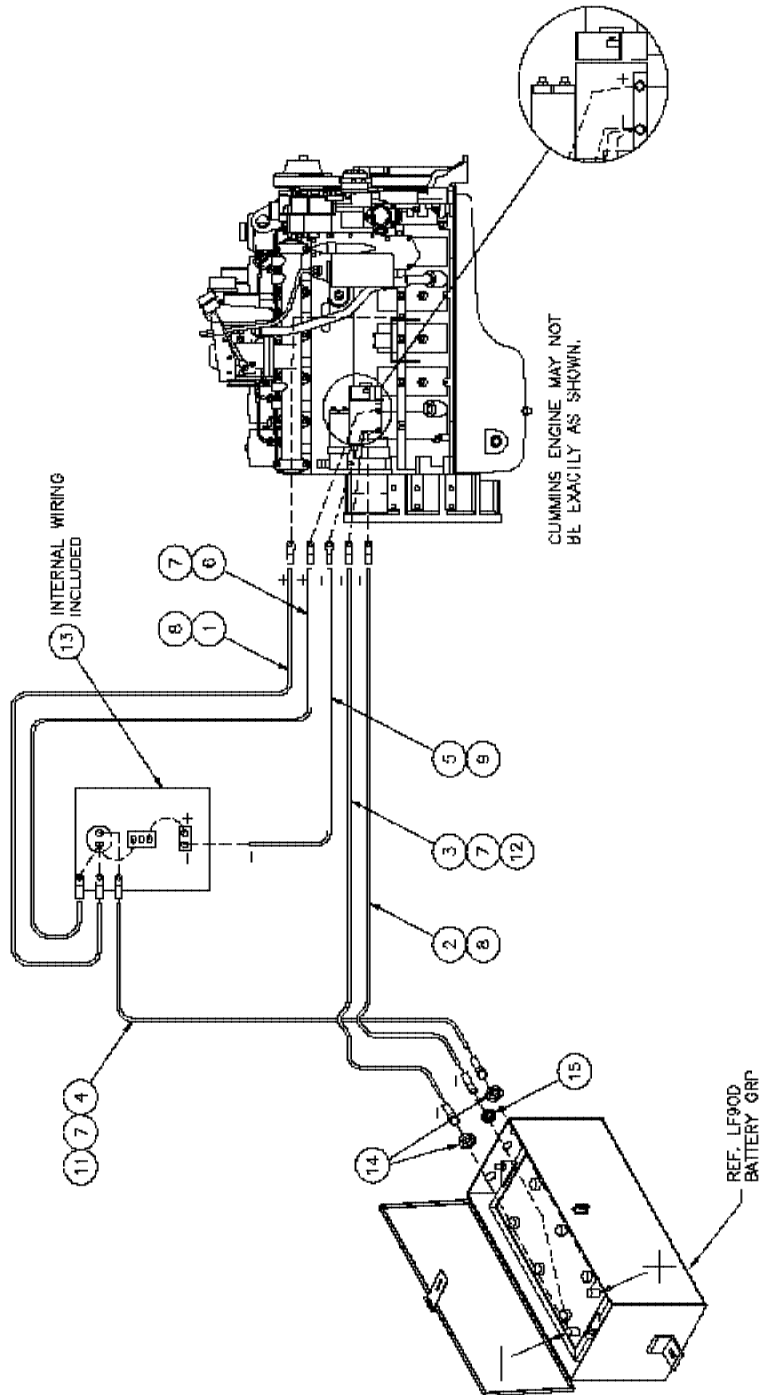




<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3548254	1	FUEL PIPING GROUP ( Page 124 )
2		3548256	1	BATTERY WIRING GROUP ( Page 126 )

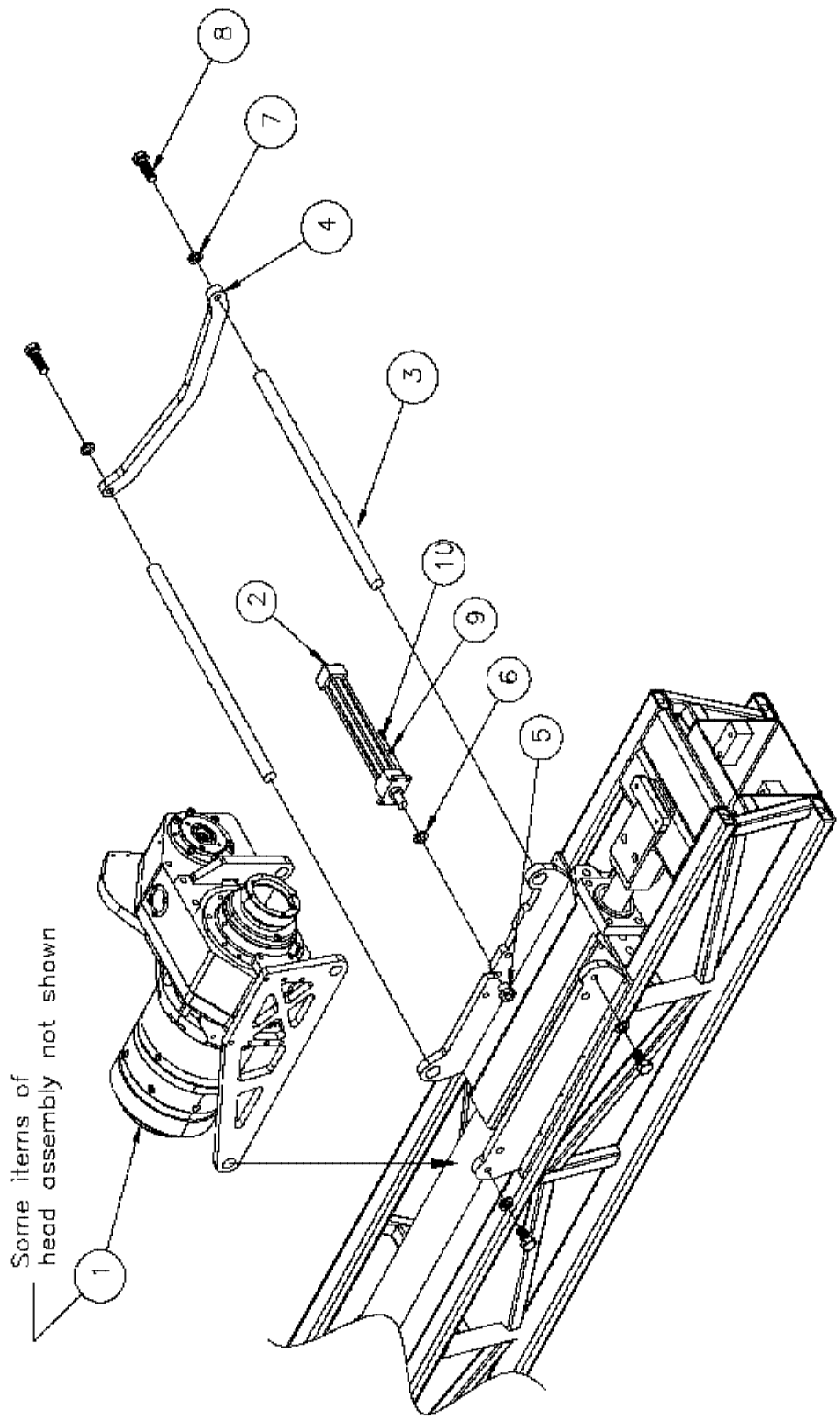


<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3542252	1	HOSE Ø1/2 X 120" Lg.
2		3544544	1	HOSE, 5/16 ID SAE30R7
3		8500435	2	CLAMP. HOSE SIZE 8
4		306143	2	CLAMP, HOSE (5/8" OD)

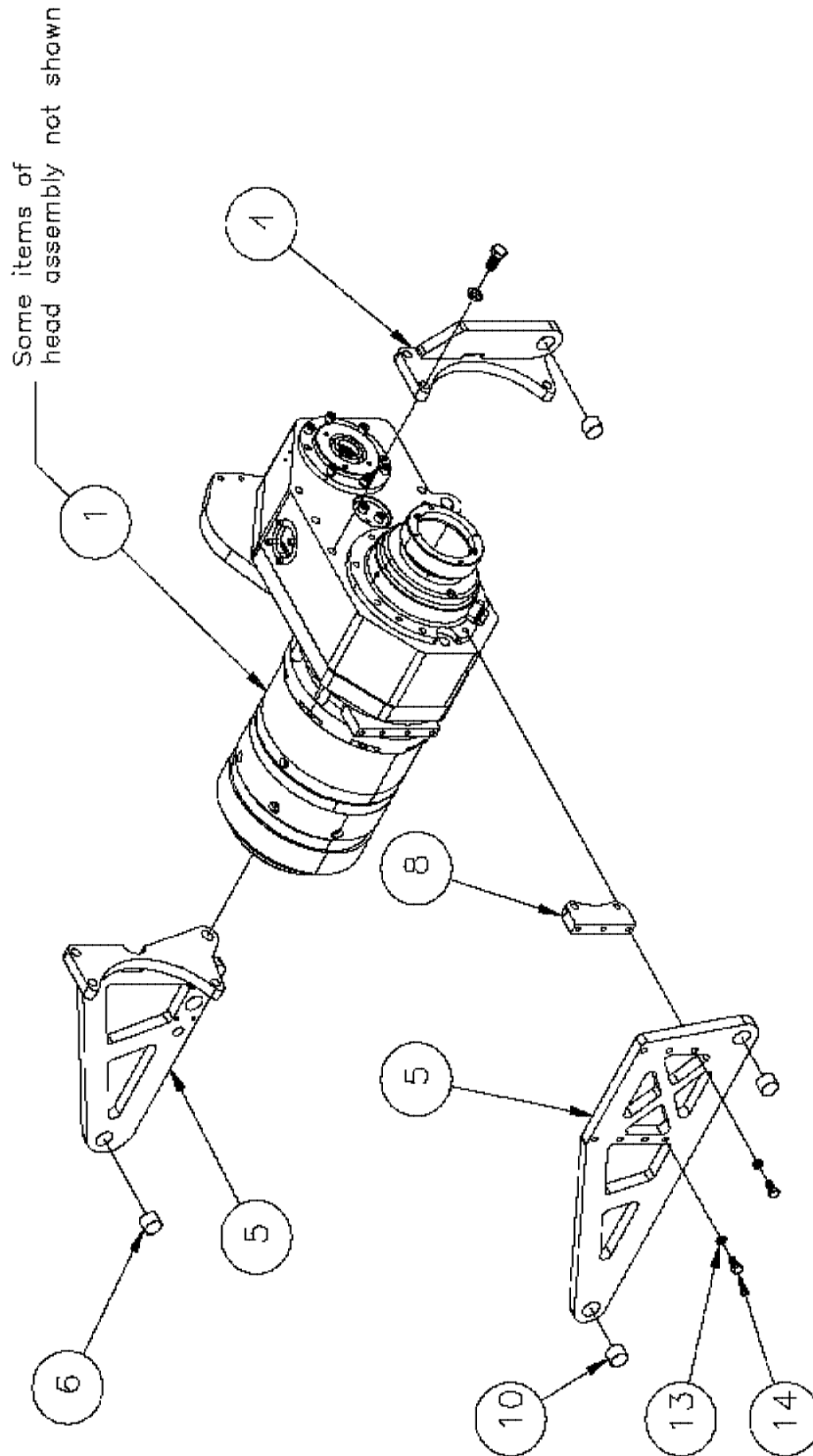




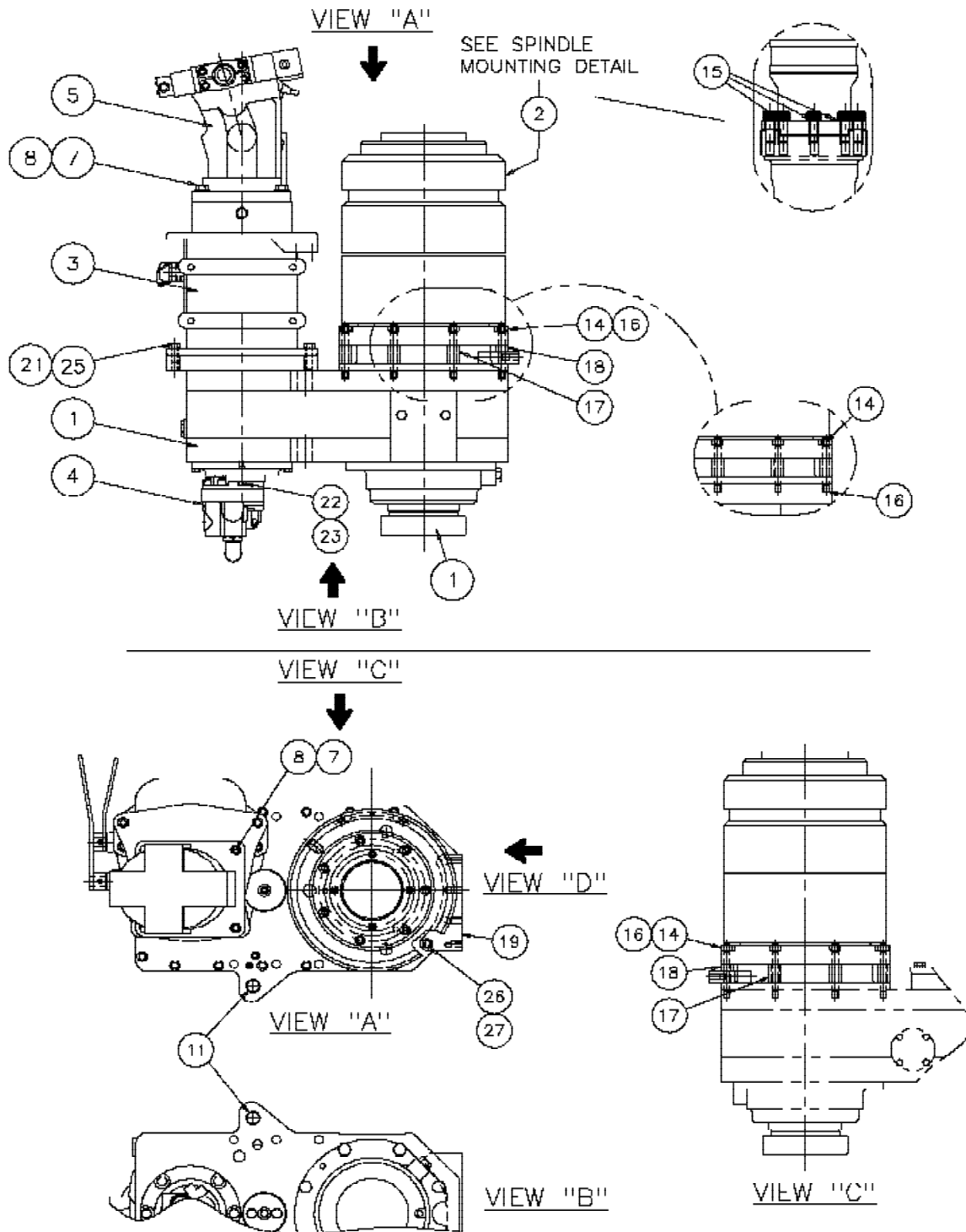
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3548257	1	CABLE, RED 4 AWG x 94 Lg
2		3548258	1	CABLE, BLACK 4 AWG x 124 Lg
3		3548260	1	CABLE, BLACK 1/0 AWG x 125 Lg
4		3548270	1	CABLE, RED 1/0 AWG x 126 Lg
5		3548261	1	CABLE, BLACK 12 AWG x 80 Lg
6		3548259	1	CABLE, RED 1/0 AWG 82 Lg
7		3548262	4	LUG, RING TERMINAL 1/0 AWG
8		306382	4	LUG, RING TERMINAL 4 AWG
9		3548263	1	LUG, RING TERMINAL 12 AWG
10		306385	12	SHRINK TUBE
11		3548264	1	TERMINAL, BATTERY CABLE (POS)
12		3548265	1	TERMINAL, BATTERY CABLE (NEG)
13		3548035	1	MASTER DISCONNECT PANEL
14		3548266	2	GROMMET, RUBBER
15		3548267	1	GROMMET, RUBBER



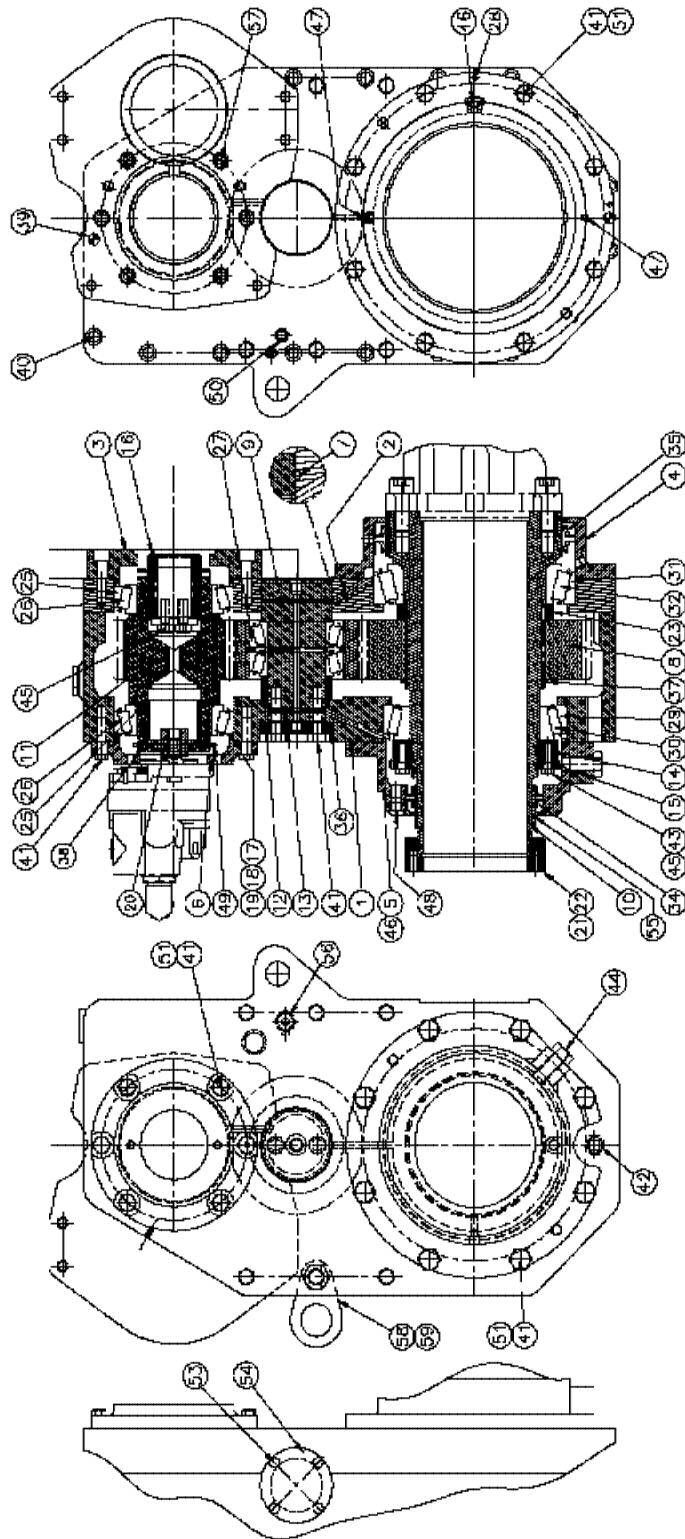
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547366	1	DRIVE MODULE, PQ ( Page 130 )
2		3547545	1	CYLINDER, HEAD OPENER
3		3547391	2	BAR, GUIDE
4		3547389	1	END PLATE, RIGHT SIDE
5		3547390	1	NUT, FLANGE
6		3547393	1	WASHER
7			4	LOCKWASHER
8			4	C/SCR
9			4	LOCKWASHER
10			4	C/SCR



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3547379	1	HEAD ASSEMBLY LF90D ( Page 132 )
2		3547383	1	MOUNT
3		3547382	1	MOUNT
4		3547380	1	MOUNT, LOWER
5		3547381	1	MOUNT, UPPER
6		3547394	4	BUSHING
7		3547395	1	HOSE HANGER
8		3547546	1	PIPING GROUP



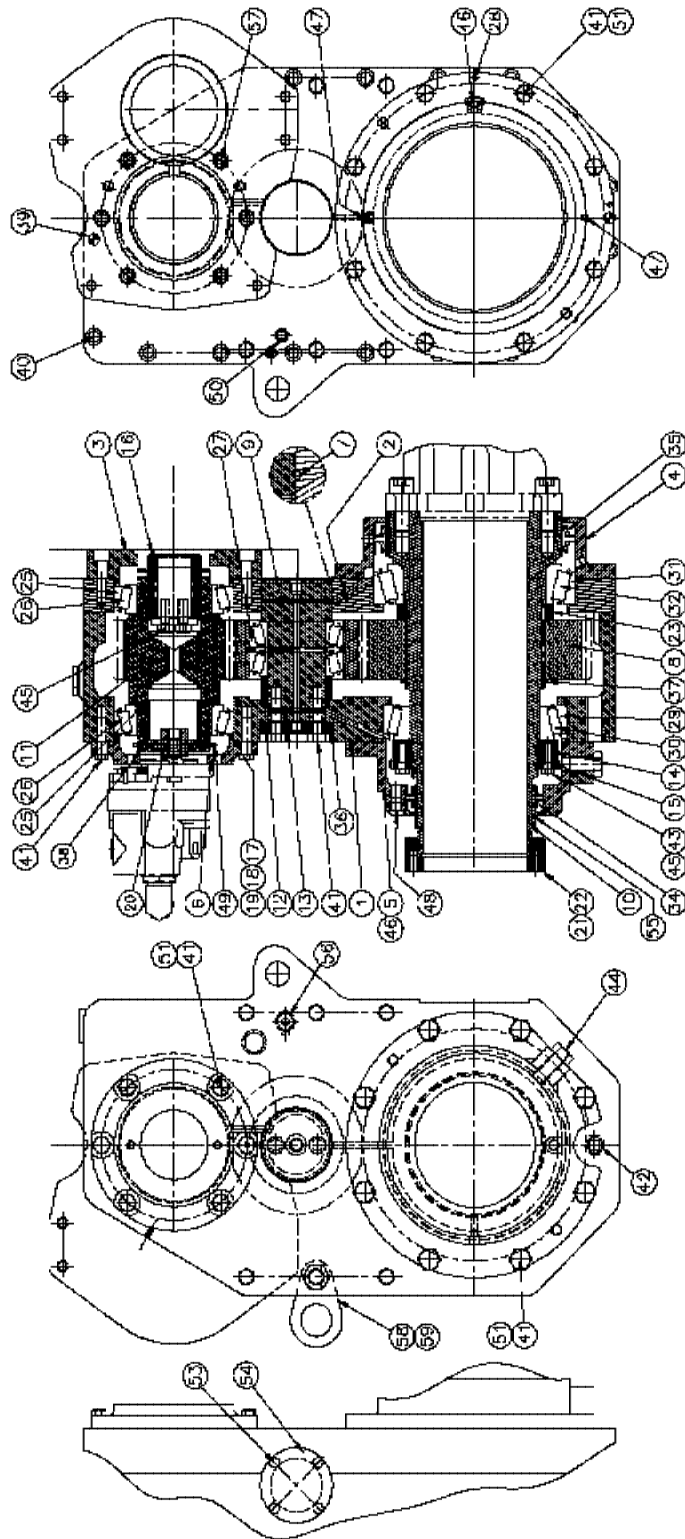
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547367	1	HEAD ASSEMBLY, BASIC ( Page 134 )
2		3542840	1	CHUCK ASM, PQ NITROGEN GAS LF70/LF140 ( Page 140 )
3		3547405	1	TRANSMISSION, LF90D SUB ASM.
4		3544946	1	PUMP, HYDRAULIC GEAR
5		103816	1	MOTOR, HYDRAULIC
7		49830	6	C/SCR, HH 3/4-10UNC x 2 LG
8		44523	4	LOCKWASHER, Dia3/4
10		44520	2	WASHER, 3/8 ID LOCK
11		102225	3	BUSHING, STEEL
13		3541286	1	LUG, LIFTING
14		44525	8	NUT, HEX 1/2-13UNC
15		103243	8	C/SCR, SH 3/4-10UNC x 1 3/4
16		3542838	8	STUD, 1/2-13UNC PQ CHUCK
17		3542839	6	SPACER, PQ CHUCK
18		3547401	1	SPACER, PQ CHUCK (SHORT)
19		3547384	1	MOUNTING PLATE, UPPER
21		44521	6	WASHER, LOCK 1/2 ID
22		44512	2	C/SCR, HH 3/8-16UNC x 1 LG
23		44520	2	WASHER, 3/8 ID LOCK
24		14892	1	GUN, GREASE
25		104231	6	C/SCR, HH 1/2-13UNC x 1 3/4" Lg.
26		44510	1	C/SCR, HH 1/2-13 NC x 1.5Lg.
27		44521	1	WASHER, LOCK 1/2 ID



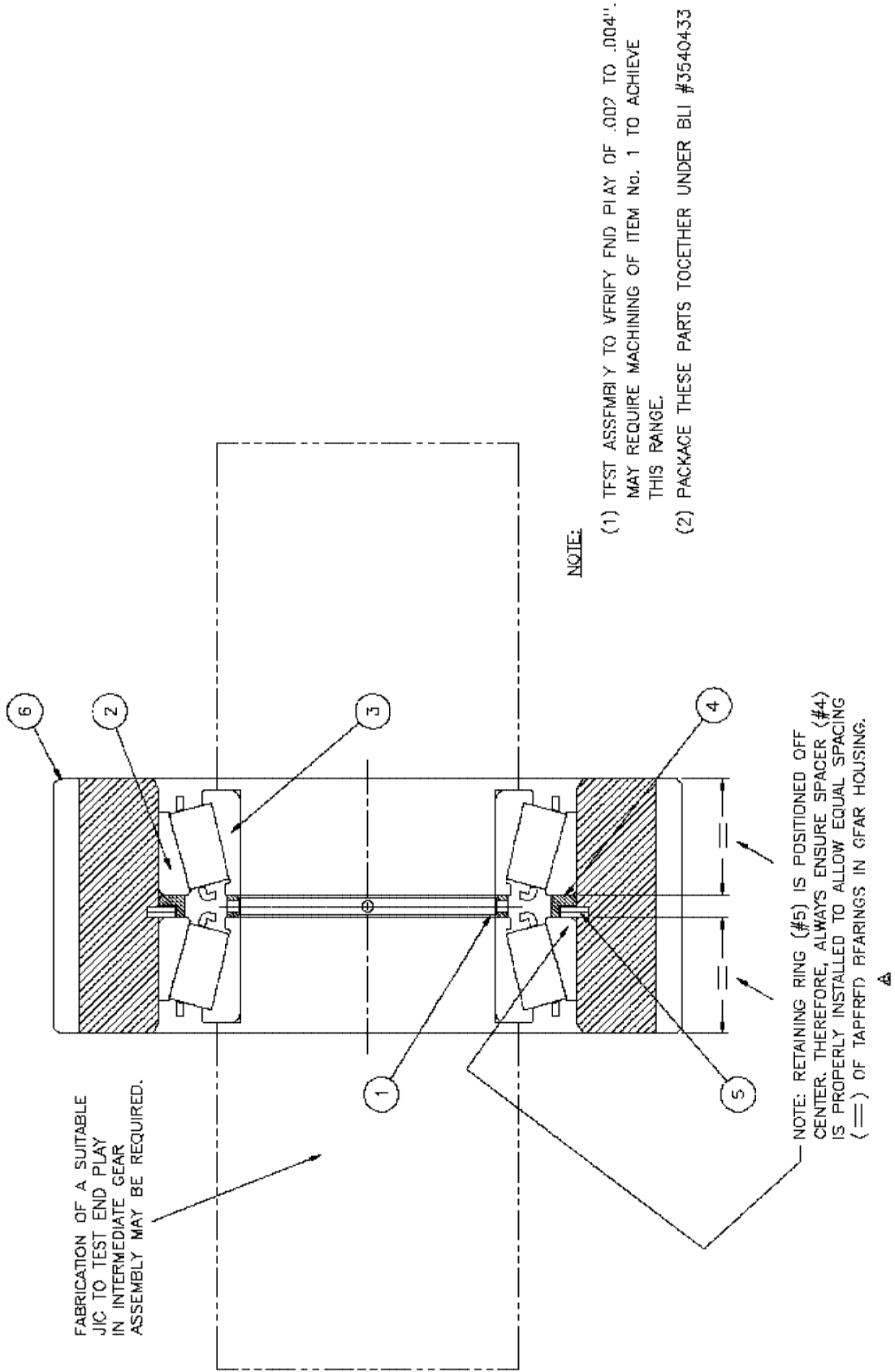


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		306473	1	HOUSING-MAIN
2		3547369	1	COVER, HOUSING
3		3547368	1	CARRIER, TRANSMISSION INPUT
4		306476	1	CAP- BEARING UPPER (OUTPUT)
5		306477	1	CAP- BEARING LOWER (OUTPUT)
6		3547372	1	COVER, PUMP MOUNTING
7		3547404	1	O-RING
8		306468	1	GEAR-OUTPUT
9		3547371	1	SHAFT, INTERMEDIATE - IDLER
10	00	3546753	1	SPINDLE, PQ HEAD DRIVE
11		306466	1	PINION AND SHAFT-INPUT
12		306481	1	SPACER-INTERMEDIATE
13		3547370	1	PLATE, INTERMEDIATE LOCK
14		306483	1	RING-INNER LOCK
15		306484	1	RING-OUTER LOCK
16		306485	1	ADAPTOR-SPLINED
17		306487	3	SHIM-.005 THICK [Ref Chart #306505]
18		306488	3	SHIM-.007 THICK [Ref Chart #306505]
19		306489	1	SHIM-.020 THICK [Ref Chart #306505]
20		3546712	1	ADAPTER ASM, PQ HEAD PUMP
21		44661	2	S/SCR, SH 1/4UNC x 3/4 LG
22		104464	1	NUT, SPINDLE
23		306493	1	SPACER-OUTPUT
25		306585	2	CUP-BEARING, O.D. 5.75
26		306587	2	CONE-BEARING, I.D. 3.625"
27		3540433	1	GEAR, INTERMEDIATE ASSEMBLY (PQ HEAD)
28		45676	4	C/SCR, SH 1/2-13 NC x 3/4 Lg.
29		306590	1	CUP-BEARING, O.D. 8.875"
30		306592	1	CONE-BEARING, I.D. 6.25"
31		306593	1	CUP-BEARING, O.D. 9.75
32		306594	1	CONE-BEARING, I.D. 6.875"
33		44538	2	C/SCR, HH 3/8-16 NC x 1/2 Lg.
34		306599	2	SEAL-OIL, ID 5.75" OD 6.625" [Lower Output]
35		306600	2	SEAL-OIL, ID 8.5" OD 9.75 [Upper Output]
36		48761	1	O'RING, SHAFT INTERMEDIATE
37		306603	1	RING-SNAP, Dia6.75" SHAFT
38		3546713	2	PIN, 1/4 DIA. x 1 1/4 LG DOWEL
39		3540648	2	DOWEL-GROOVED Dia1/2" x 1.75"LG.
40		46102	19	C/SCR SH 1/2-13 NC x 1-3/4Lg.
41		44510	16	C/SCR, HH 1/2-13 NC x 1.5Lg.
42		3540054	1	PLUG-MAGNETIC PIPE [3/4 NPT, Magnetic]

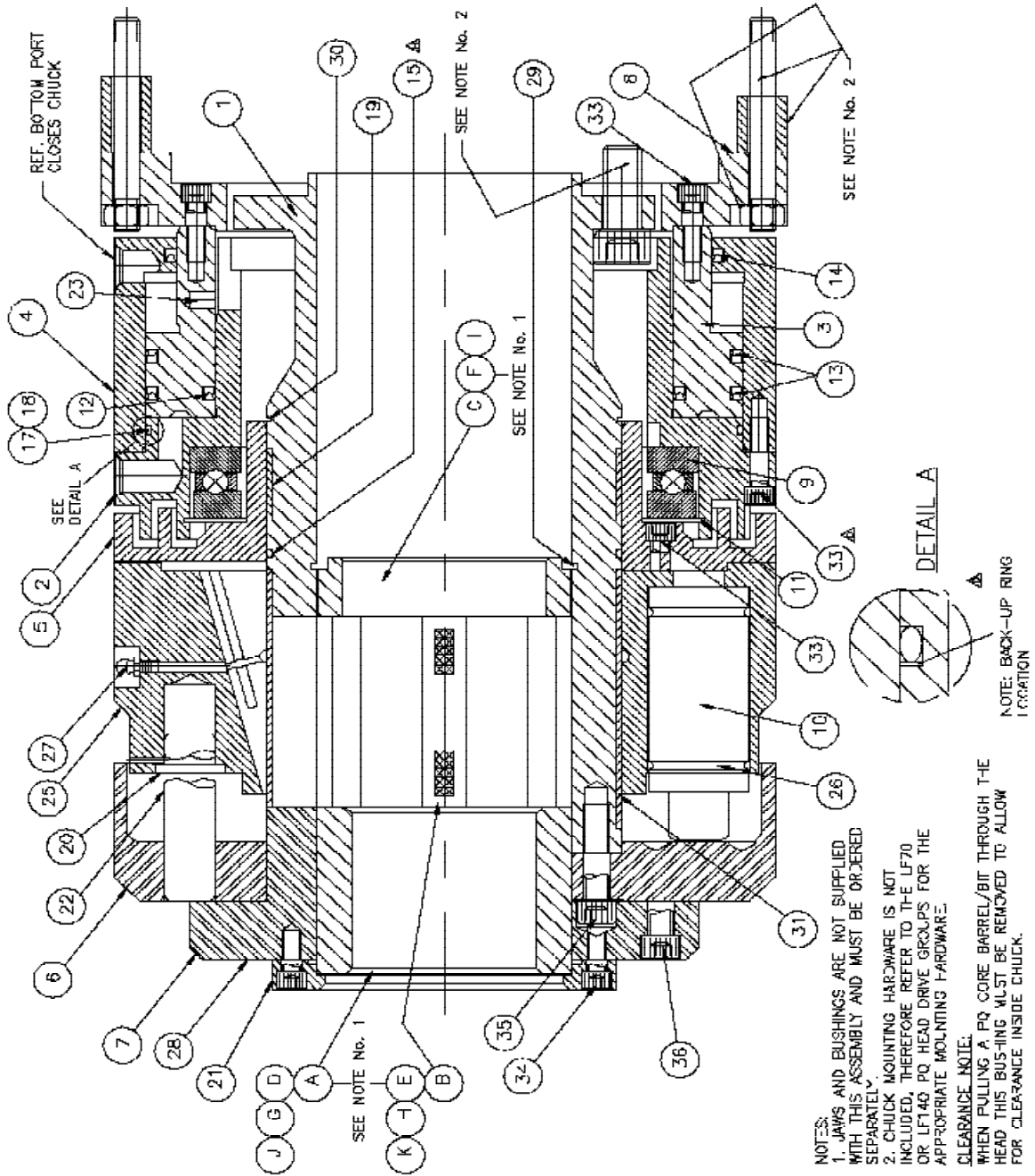
00) STAINLESS SLEEVES SUPPLIED WITH THIS ITEM, FOR INDIVIDUAL SLEEVES SEE PART 306494 & 3546752



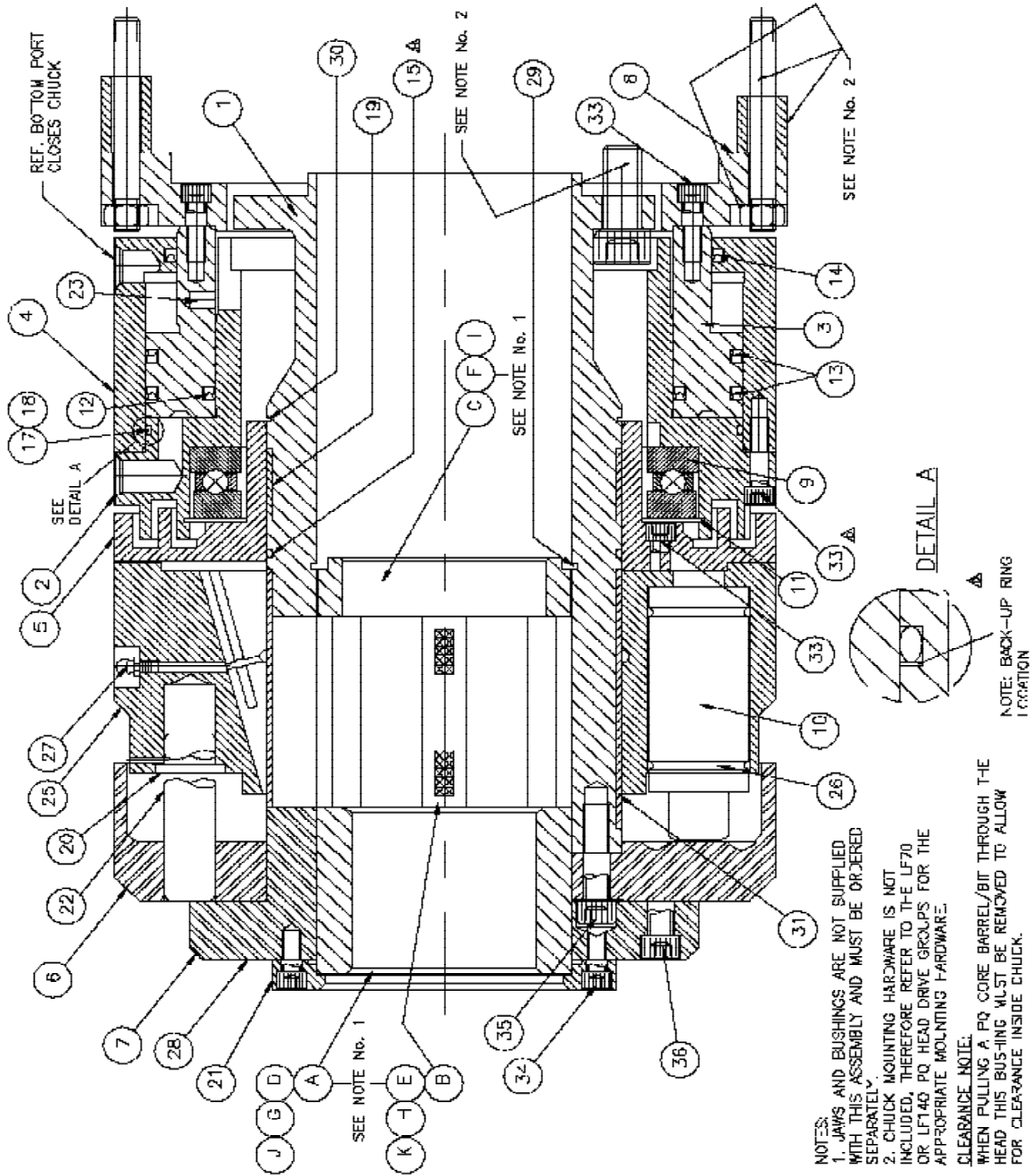
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
43		306608	6	C/SCR,HH 3/8-16x1-1/4 Lg (Rwk)
44		39572	1	ADAP HYD PLUG #8 ORB
45		44766	A/R	WIRE-LOCK Dia.047
46		16634	1	FITTING-GREASE 1/8 NPTF
47		38045	2	PLUG, 1/8 STEEL PIPE
48		22079	2	PLUG-SOCKET PIPE, 1/4 N.P.T.
49		306604	1	RING-SNAP, Dia3.625" SHAFT
50		22080	1	PLUG-SOCKET PIPE, 3/8" N.P.T.
51		44521	23	WASHER, LOCK 1/2 ID
52		19917	1	FITTING, GREASE 1/8 NPT x 45Deg
53		44551	4	C/SCR, HH 5/16-18 x 3/4 Lg.
54		100327	1	COVER, SERVICE
56		18784	1	ADAPT, HYD PLUG, 3/4 NPT [socket head]
57		44531	6	C/SCR, SH 1/2-13UNC x 1 1/2 LG
58		3541286	1	LUG, LIFTING
59		46098	1	C/SCR, HH 3/4 UNC x 1 1/2 Lg.



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		306492	1	SPACER, BEARING (REWORK)
2		306588	2	CUP, BEARING O.D. 4.5276
3		306589	2	CONE, BEARING I.D. 2.7559
4		306597	1	SPACER, CUP
5		3540005	1	RING, RETAINING Dia4.5" HOUSING
6		306469	1	GEAR, INTERMEDIATE

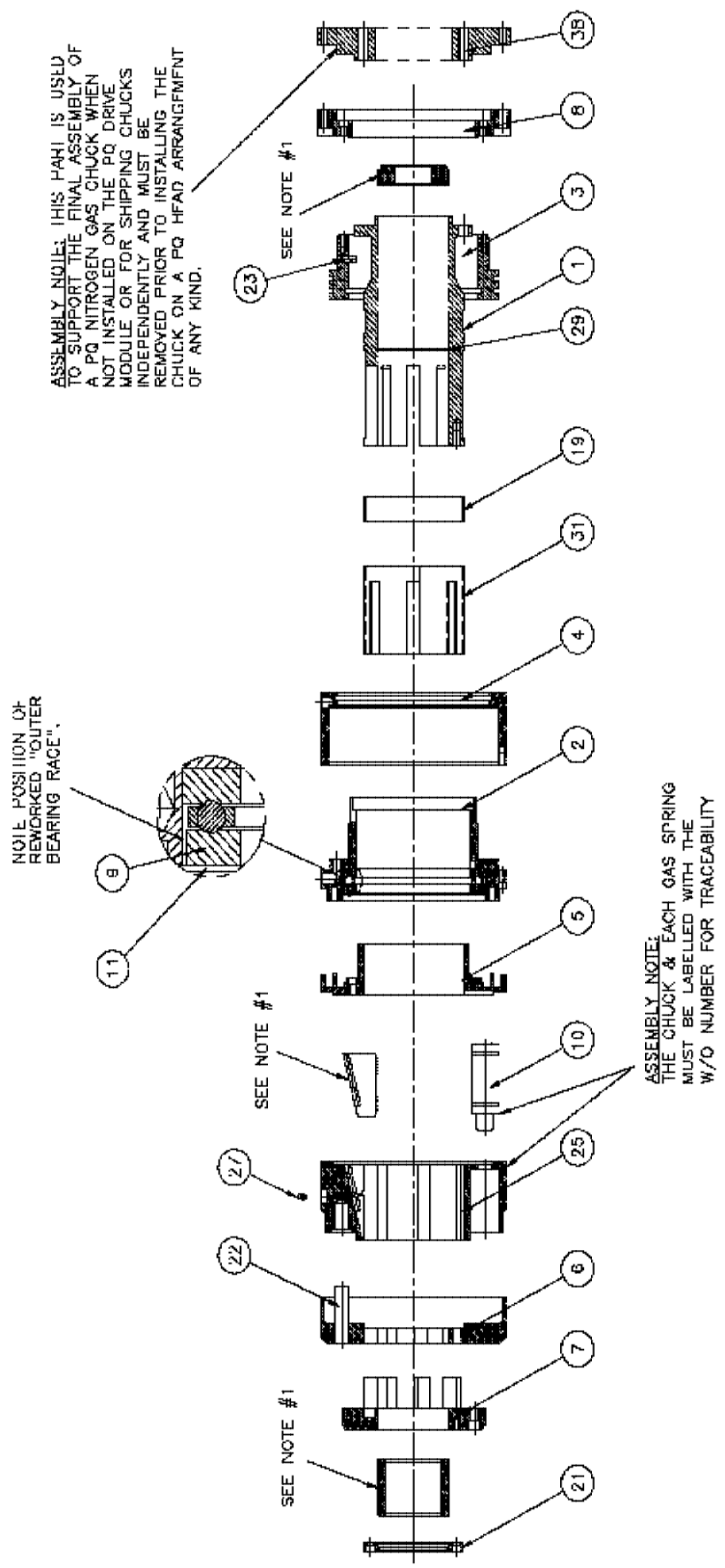


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3543477	1	SPINDLE, PQ CHUCK NITRO
2		3543478	1	INNER CYLINDER, CHUCK NITRO
3		3543479	1	PISTON, PQ CHUCK NITRO
4		3543480	1	CYLINDER, OUTER CHUCK NITRO
5		3543481	1	LABRINTH SEAL, CHUCK NITRO
6		3543482	1	RETAINER, SPRING PQ CHUCK
7		3543483	1	RETAINER, JAW PQ CHUCK NITRO
8		3543490	1	ADAPTER, MTG CHUCK NITRO
9		3543496	1	BEARING, BALL THRUST
10		3543497	7	GAS SPRING, NITROGEN PQ CHUCK
11		3543499	1	RING, RETAINING INTERNAL
12		3543500	1	CUP SEAL, INNER URETHANE
13		3543501	2	CUP SEAL, OUTER URETHANE
14		3543502	1	CUP SEAL, PISTON URETHANE
15		3543503	1	O'RING, PQ CHUCK SPINDLE
17		3543505	1	O'RING, PQ CHUCK CYLINDER
18		3543506	1	RING, BACK-UP PQ CHUCK CYL
19		3543507	1	RING, SPINDLE WEAR LOWER
20		3543508	3	SEAL, OIL GUIDE PIN
21		3543509	1	BUSHING, RETAINER GUIDE
22		3543510	3	PIN, DOWEL 1 DIA x 3 1/2 LG
23		3543511	3	PIN, DOWEL 3/8 DIA x 1 LG
25		3543515	1	BOWL, PQ CHUCK NITRO
26		3543519	7	O'RING, GAS SPRING PQ CHUCK
27		3543520	10	NIPPLE, GREASE 1/4-28 STRAIGHT
28		3543521	3	SCREW, SET 1/2-13UNC x 1 1/4
29		3543523	1	RING, RETAINING INTERNAL
30		3543524	1	RING, RETAINING EXTERNAL
31		3543514	1	SLEEVE, WEAR SPINDLE UPPER
33		46527	27	C/SCR, SH 3/8-16UNC x 1 1/4 LG
34		44570	4	C/SCR, SH 3/8-16UNC x 3/4 LG
35		47226	14	C/SCR, SH 1/2-20UNF x 2 LG
36		44531	7	C/SCR, SH 1/2-13UNC x 1 1/2 LG
37		3543526	REF.	SEAL KIT, PQ CHUCK ( Page 148 )
38		3543774	REF.	SUPPORT PLT, PQ CHUCK
39		3543876	1	GREASE, ULTRA DUTY 14oz TUBE
A		3543489	REF	BUSHING, BRQHP (UPPER)
B		3544188	REF	JAW SET, BRQHP
C		3543522	REF	BUSHING, BRQHP (LOWER)
D		3543301	REF	BUSHING, BW CSG, NRQHP (UPPER)
E		3543471	REF	JAW SET, BW CSG, NRQHP ROD
F		3543303	REF	BUSHING, BW CSG, NRQHP (LOWER)

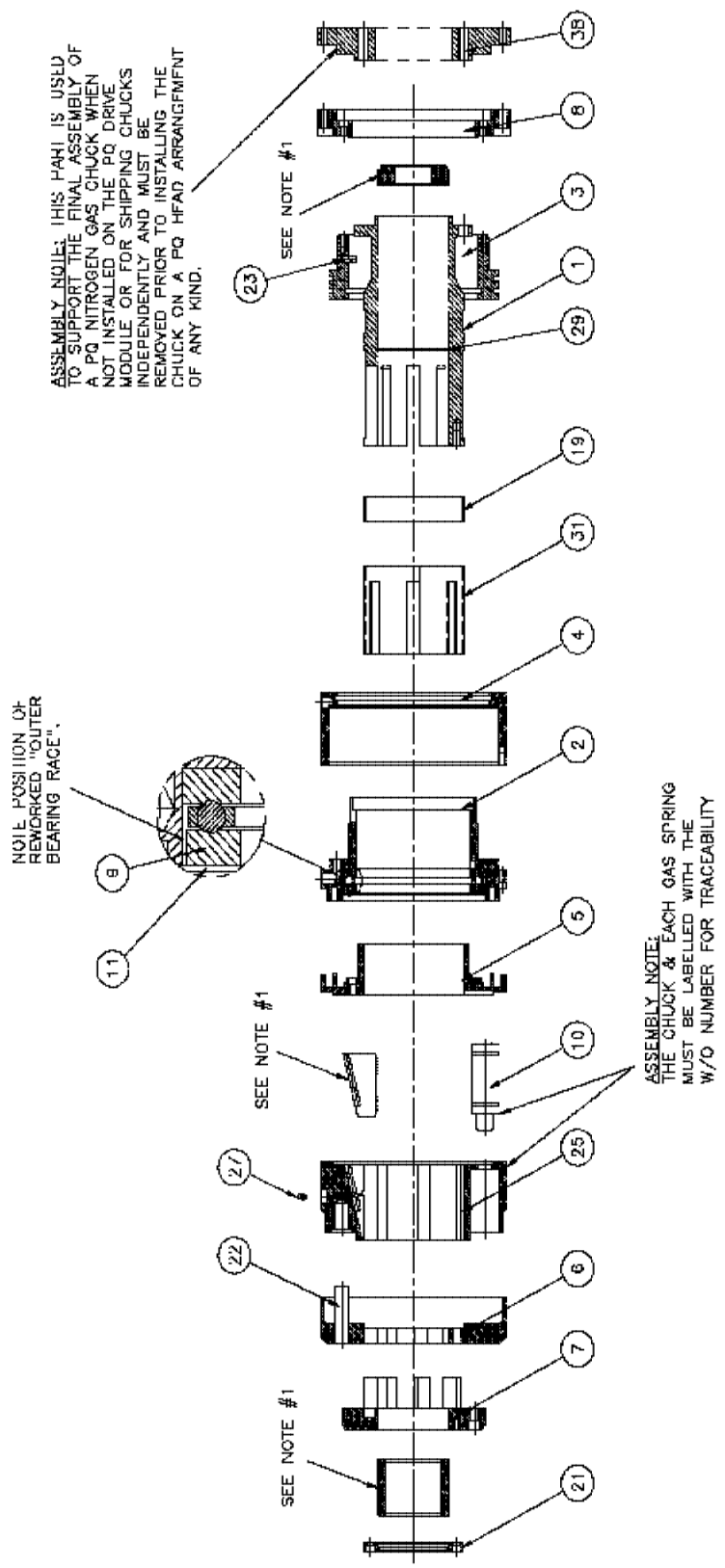




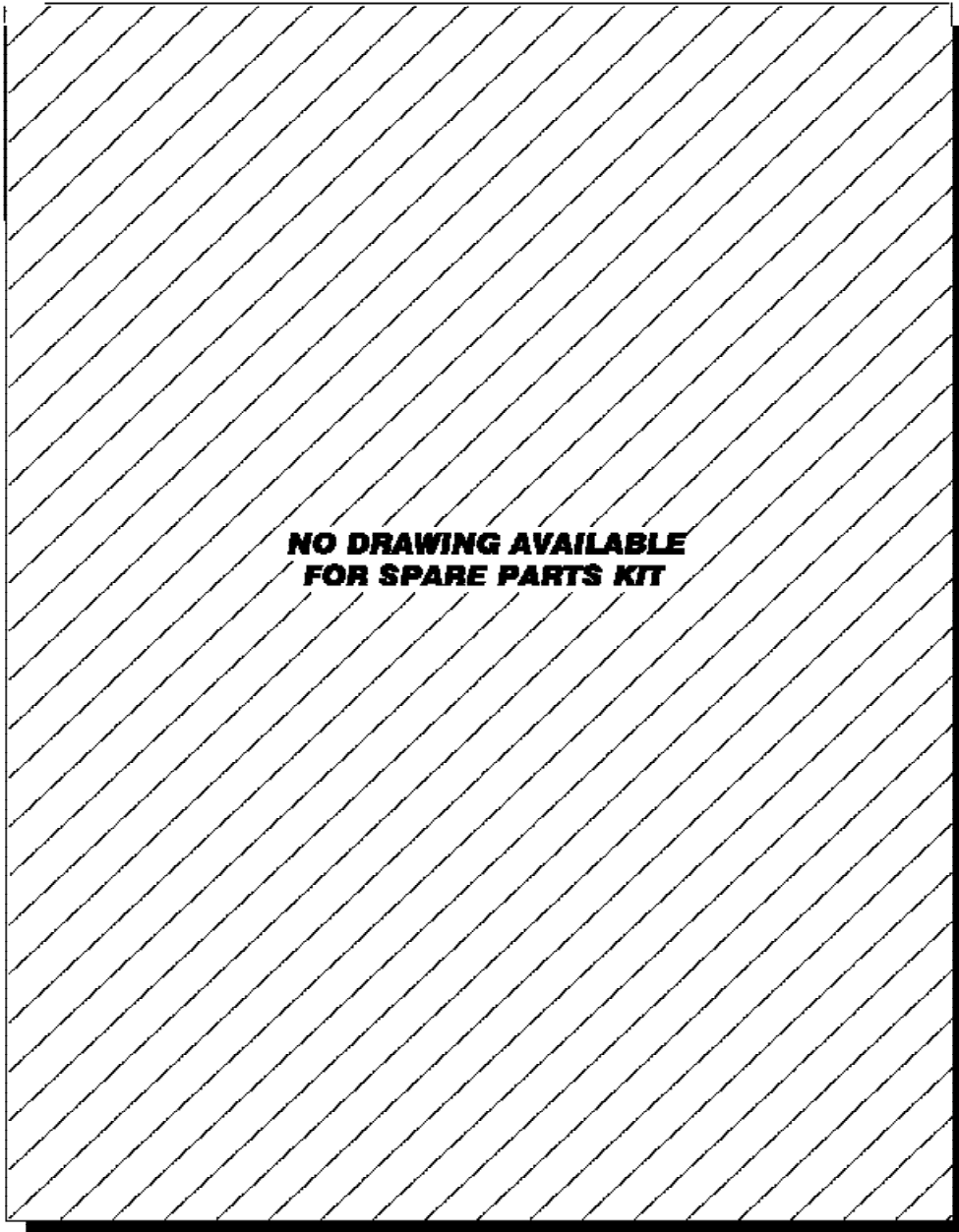
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
G		3543299	REF	BUSHING, NW CSG, HRQHP (UPPER)
H		3543472	REF	JAW SET, NW CSG, HRQHP ROD
I		3543300	REF	BUSHING, NW CSG, HRQHP (LOWER)
J		3543298	REF	BUSHING, HWT CSG, PQ (UPPER)
K		3543473	REF	JAW SET, HWT CSG, PQ ROD



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3543477	1	SPINDLE, PQ CHUCK NITRO
2		3543478	1	INNER CYLINDER, CHUCK NITRO
3		3543479	1	PISTON, PQ CHUCK NITRO
4		3543480	1	CYLINDER, OUTER CHUCK NITRO
5		3543481	1	LABRINTH SEAL, CHUCK NITRO
6		3543482	1	RETAINER, SPRING PQ CHUCK
7		3543483	1	RETAINER, JAW PQ CHUCK NITRO
8		3543490	1	ADAPTER, MTG CHUCK NITRO
9		3543496	1	BEARING, BALL THRUST
10		3543497	7	GAS SPRING, NITROGEN PQ CHUCK
11		3543499	1	RING, RETAINING INTERNAL
12		3543500	1	CUP SEAL, INNER URETHANE
13		3543501	2	CUP SEAL, OUTER URETHANE
14		3543502	1	CUP SEAL, PISTON URETHANE
15		3543503	1	O'RING, PQ CHUCK SPINDLE
17		3543505	1	O'RING, PQ CHUCK CYLINDER
18		3543506	1	RING, BACK-UP PQ CHUCK CYL
19		3543507	1	RING, SPINDLE WEAR LOWER
20		3543508	3	SEAL, OIL GUIDE PIN
21		3543509	1	BUSHING, RETAINER GUIDE
22		3543510	3	PIN, DOWEL 1 DIA x 3 1/2 LG
23		3543511	3	PIN, DOWEL 3/8 DIA x 1 LG
25		3543515	1	BOWL, PQ CHUCK NITRO
26		3543519	7	O'RING, GAS SPRING PQ CHUCK
27		3543520	10	NIPPLE, GREASE 1/4-28 STRAIGHT
28		3543521	3	SCREW, SET 1/2-13UNC x 1 1/4
29		3543523	1	RING, RETAINING INTERNAL
30		3543524	1	RING, RETAINING EXTERNAL
31		3543514	1	SLEEVE, WEAR SPINDLE UPPER
33		46527	27	C/SCR, SH 3/8-16UNC x 1 1/4 LG
34		44570	4	C/SCR, SH 3/8-16UNC x 3/4 LG
35		47226	14	C/SCR, SH 1/2-20UNF x 2 LG
36		44531	7	C/SCR, SH 1/2-13UNC x 1 1/2 LG
37		3543526	REF.	SEAL KIT, PQ CHUCK ( Page 148 )
38		3543774	REF.	SUPPORT PLT, PQ CHUCK
39		3543876	1	GREASE, ULTRA DUTY 14oz TUBE
A		3543489	REF	BUSHING, BRQHP (UPPER)
B		3544188	REF	JAW SET, BRQHP
C		3543522	REF	BUSHING, BRQHP (LOWER)
D		3543301	REF	BUSHING, BW CSG, NRQHP (UPPER)
E		3543471	REF	JAW SET, BW CSG, NRQHP ROD
F		3543303	REF	BUSHING, BW CSG, NRQHP (LOWER)

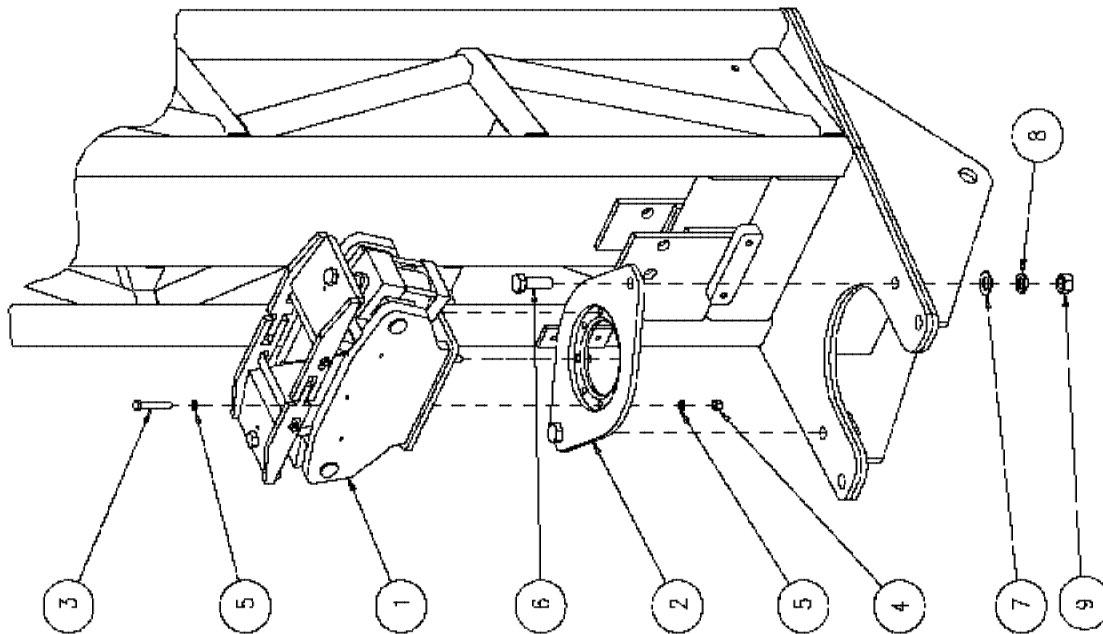
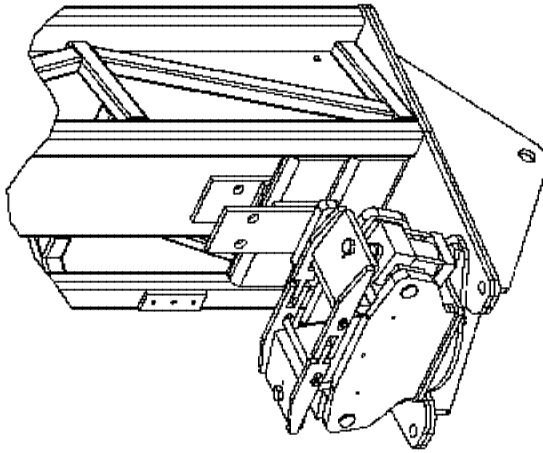


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
G		3543299	REF	BUSHING, NW CSG, HRQHP (UPPER)
H		3543472	REF	JAW SET, NW CSG, HRQHP ROD
I		3543300	REF	BUSHING, NW CSG, HRQHP (LOWER)
J		3543298	REF	BUSHING, HWT CSG, PQ (UPPER)
K		3543473	REF	JAW SET, HWT CSG, PQ ROD



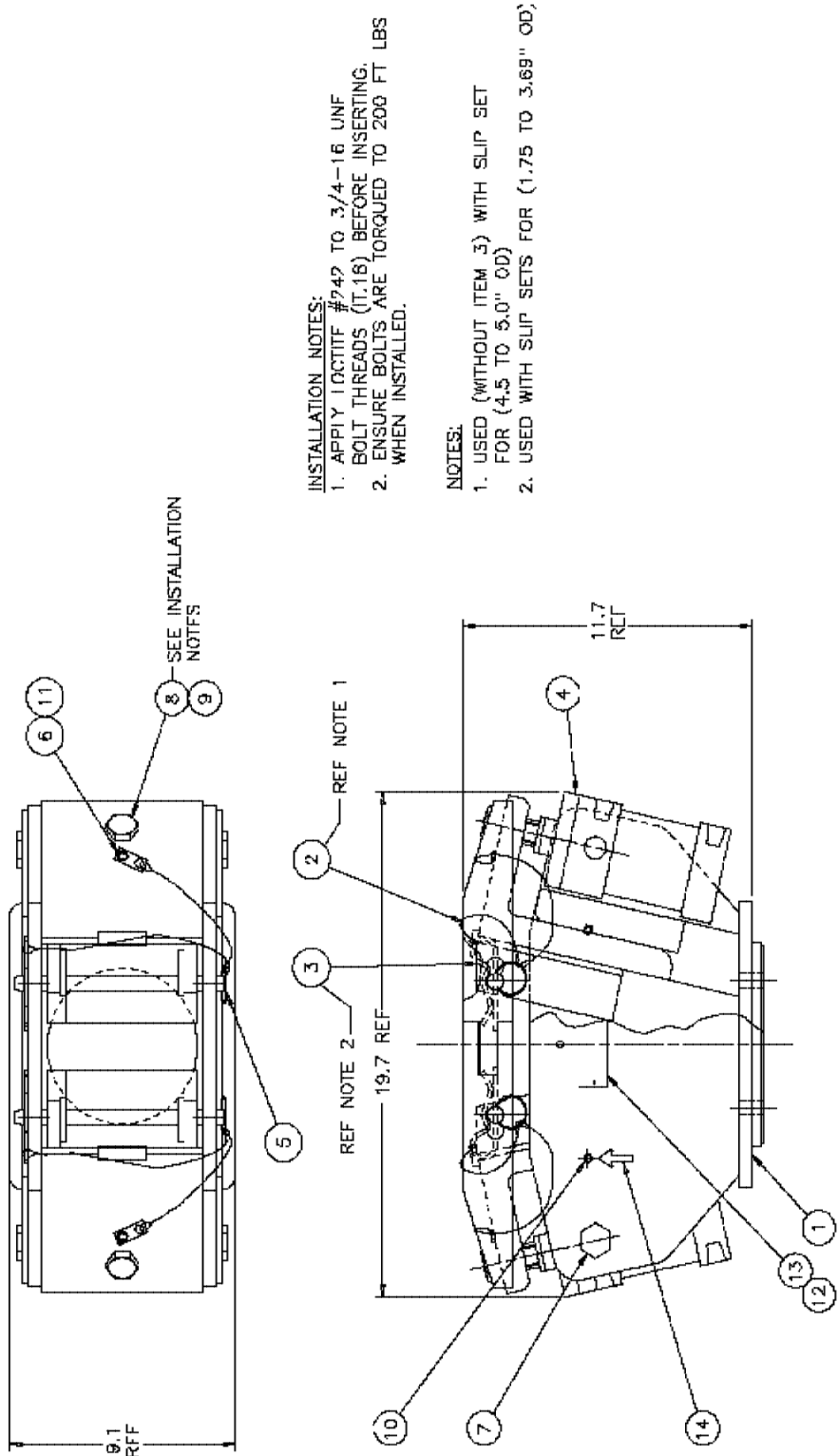
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3543500	1	CUP SEAL, INNER URETHANE
2		3543501	2	CUP SEAL, OUTER URETHANE
3		3543502	1	CUP SEAL, PISTON URETHANE
4		3543503	1	O'RING, PQ CHUCK SPINDLE
5		3543504	1	RING, BACK-UP PQ CHUCK SPINDLE
6		3543505	1	O'RING, PQ CHUCK CYLINDER
7		3543506	1	RING, BACK-UP PQ CHUCK CYL
8		3543508	3	SEAL, OIL GUIDE PIN
9		3543519	7	O'RING, GAS SPRING PQ CHUCK

NOTE: PLUMBING INCLUDED IN BASIC DRILL





REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3548310	1	CLAMP MODULE, HYDRAULIC ROD ( Page 152 )
2		3547520	1	BASE, ROD CLAMP MOUNT
3		44532	4	C/SCR, HH 1/2-13UNC x 2-3/4
4		44525	4	NUT, HEX 1/2-13UNC
5		3544766	8	WASHER, NORD-LOCK 1/2"
6		28962	2	C/SCR. HH 7/8-9 UNC x 2 1/2 Lg.
7		27763	2	WASHER, FLAT, GR 8, Ø7/8
8		44643	2	L/WASHER, SPLIT SPRING Ø7/8
9		44601	2	HEXNUT, Ø7/8-9 UNC



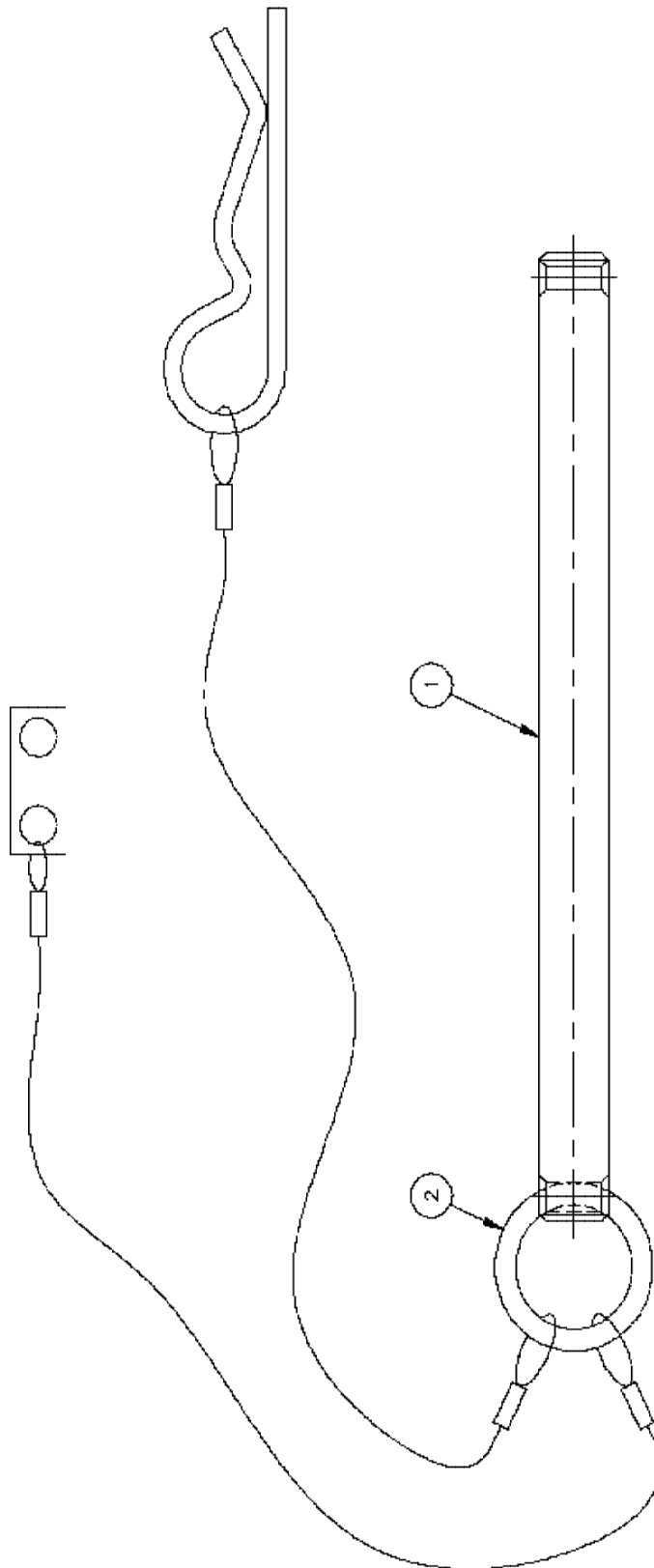
**INSTALLATION NOTES:**

1. APPLY LOCTITE #747 TO 3/4-16 UNF BOLT THREADS (T.16) BEFORE INSERTING.
2. ENSURE BOLTS ARE TORQUED TO 200 FT LBS WHEN INSTALLED.

**NOTES:**

1. USED (WITHOUT ITEM 3) WITH SLIP SET FOR (4.5 TO 5.0" OD)
2. USED WITH SLIP SETS FOR (1.75 TO 3.69" OD)

REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		102806	1	BOWL, ROD CLAMP
2		49937	2	GUIDE, WELD'T (SLIPS 4.5" to 5" OD) [Slips 4.5" to 5"]
3		3540049	2	ADAPTER (SLIPS 1.75-3.69 O.D.) [SLIPS 1.75-3.69 O.D.]
4		41621	2	CYLINDER, HYDRAULIC
5		3543253	2	PIN ASM, QUICK RELEASE CLAMP ASM
6		44954	2	C/SCR HH #10-24 UNC x 1/2LG
7		50229	4	BOLT, TRUNION
8		43008	2	C/SCR, HH. 3/4-16 UNF x 2"Lg. 3/4-16 UNF x 2"
9		44523	2	LOCKWASHER, Dia3/4
10		17447	4	FITTING, GREASE ( Page 156 )
11		44540	2	LOCKWASHER, #10
12		44891	1	PLATE, Q.C.
13		23183	2	SCREW, DRIVE
14		24586	1	DECAL SPEC (GREASE)



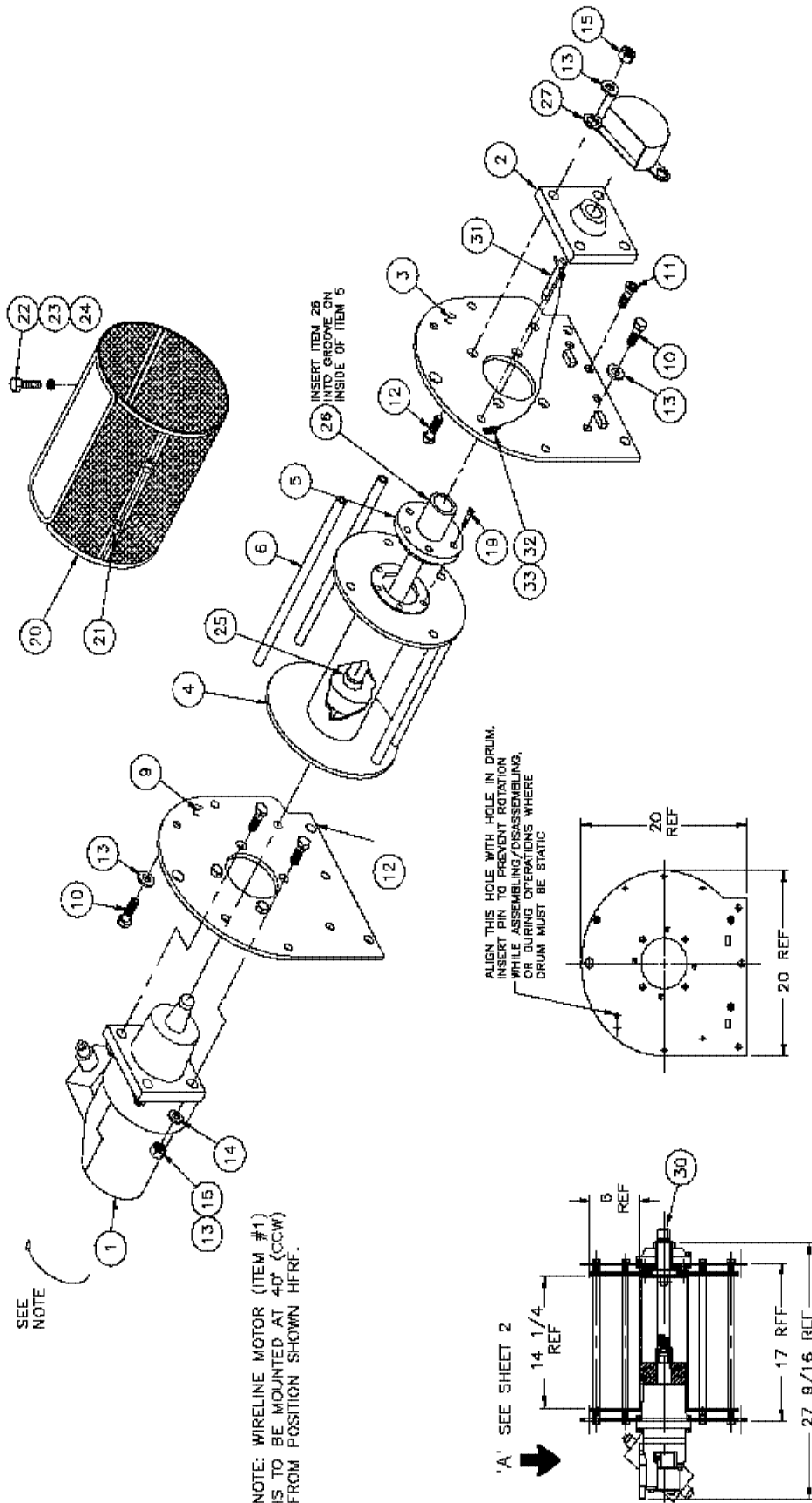
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3543254	1	PIN, QUICK RELEASE
2		3543255	1	LANYARD GROUP, QUICK PIN



**REF NO    REM    PART NUMBER    QTY    DESCRIPTION**

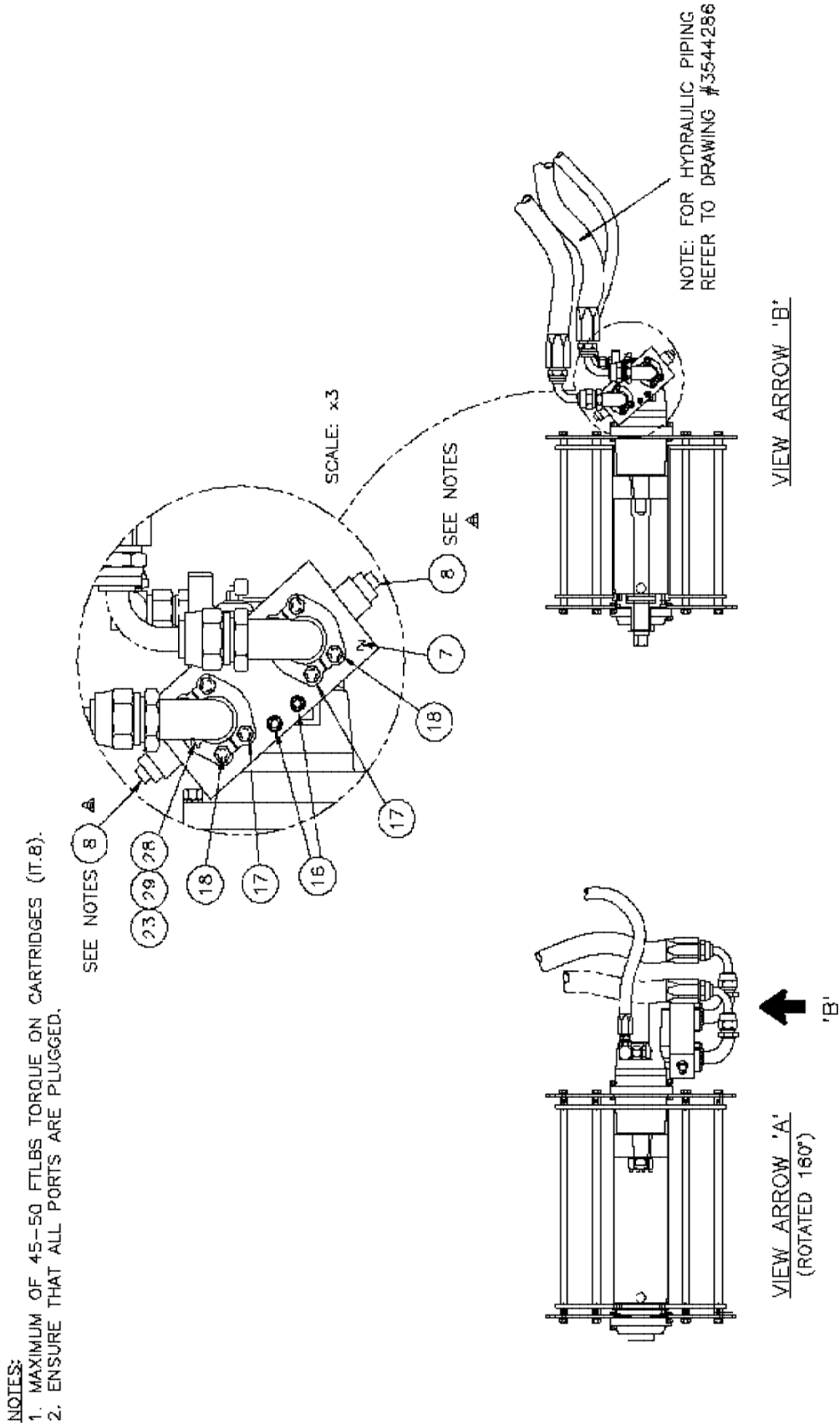
**17447    FITTING, GREASE**



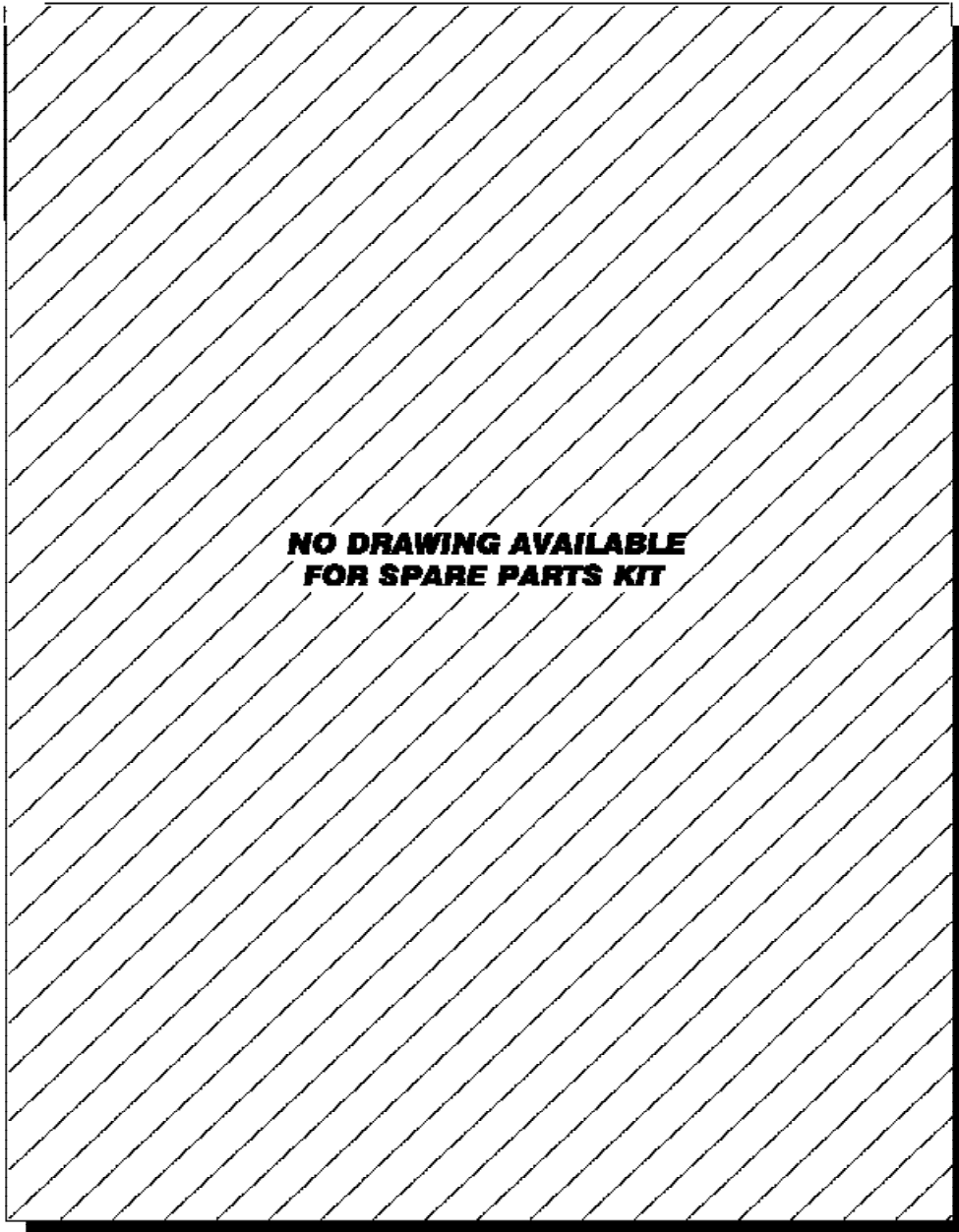




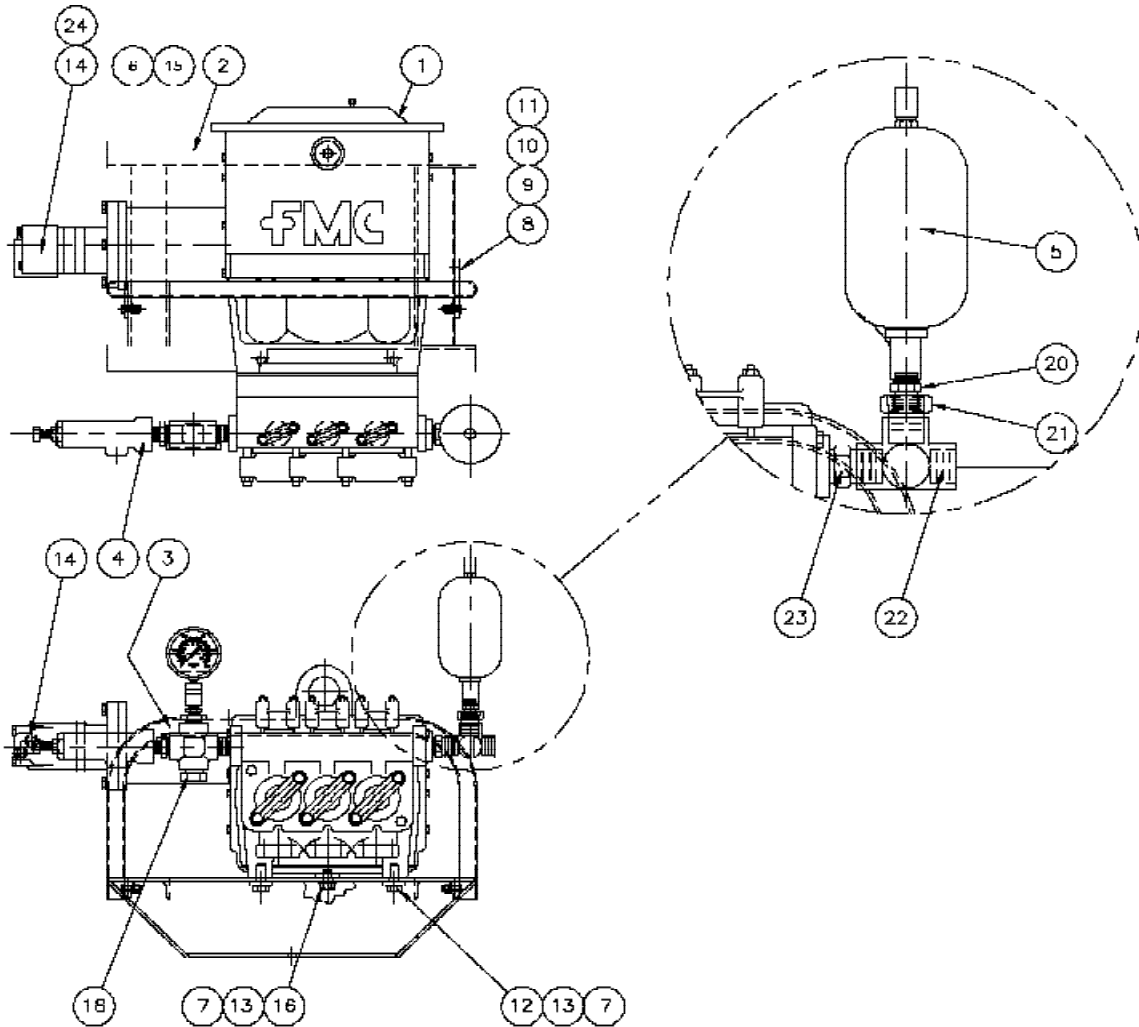
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		104862	1	MOTOR, HYDRAULIC
2		104859	1	4 BOLT FLANGE BEARING
3		306125	1	END PLATE (RHS)
4		306123	1	DRUM WELDMENT
5		104858	1	BEARING SHAFT
6		102725	9	SPACER BAR
7		104863	1	BODY, HYDRAULIC
8		3546773	2	CARTRIDGE, COUNTERBALANCE
9		306126	1	END PLATE (LHS)
10		44512	10	C/SCR, HH 3/8-16UNC x 1 LG
11		47266	8	C/SCR FLAT HD 3/8-16 x 3/4 Lg.
12		44640	8	C/SCR, HH 1/2-13 UNC x 1 3/4
13		44521	8	WASHER, LOCK 1/2 ID
14		44520	20	WASHER, 3/8 ID LOCK
15		44525	8	NUT, HEX 1/2-13UNC
16		63607	4	C/SCR SH 3/8-16 x 2 1/2 Lg.
17		44728	4	C/SCR HH 3/8-16 x 3 1/4 Lg.
18		44593	4	C/SCR, HH 3/8-16UNC x 1 1/4 - L.C. #90214-115
19		44630	5	C/SCR SH 3/8-16 x 1 Lg.
20		306127	1	GUARD, W/L HOIST
21		26112	2	PIN, QUICK RELEASE Dia1/4" [1/4]
22		44638	1	C/SCR HH, 3/8-16 x 2 3/4 Lg.
23		44520	9	WASHER, 3/8 ID LOCK
24		44527	1	NUT, HEX 3/8-16UNC
25		306129	1	RETAINING/DISASM. TOOL
26		37500	1	O-RING Dia1 1/2 I.D
27		306155	1	GUARD, BEARING W/L
28		306182	2	FLANGE KIT (#12)
29		33840	2	ADAP. HYD. 90Deg #12S/F x #12JIC(F)
30		3540032	1	PIN, COTTER 1/8 x 2 1/2 LG [1/8 x 2 1/2" Lg.]
31		3540214	1	PIN, QUICK RELEASE, ASM.
32		44954	1	C/SCR HH #10-24 UNC x 1/2LG
33		44540	1	LOCKWASHER, #10
		306206	REF	Spare Parts Kit, Wireline Hoist (Rev B) ( Page 162 )
35		49799	1	ANCHOR, WIRELINE CABLE
36			1	SET SCREW, 1/4 x 3/8 LG



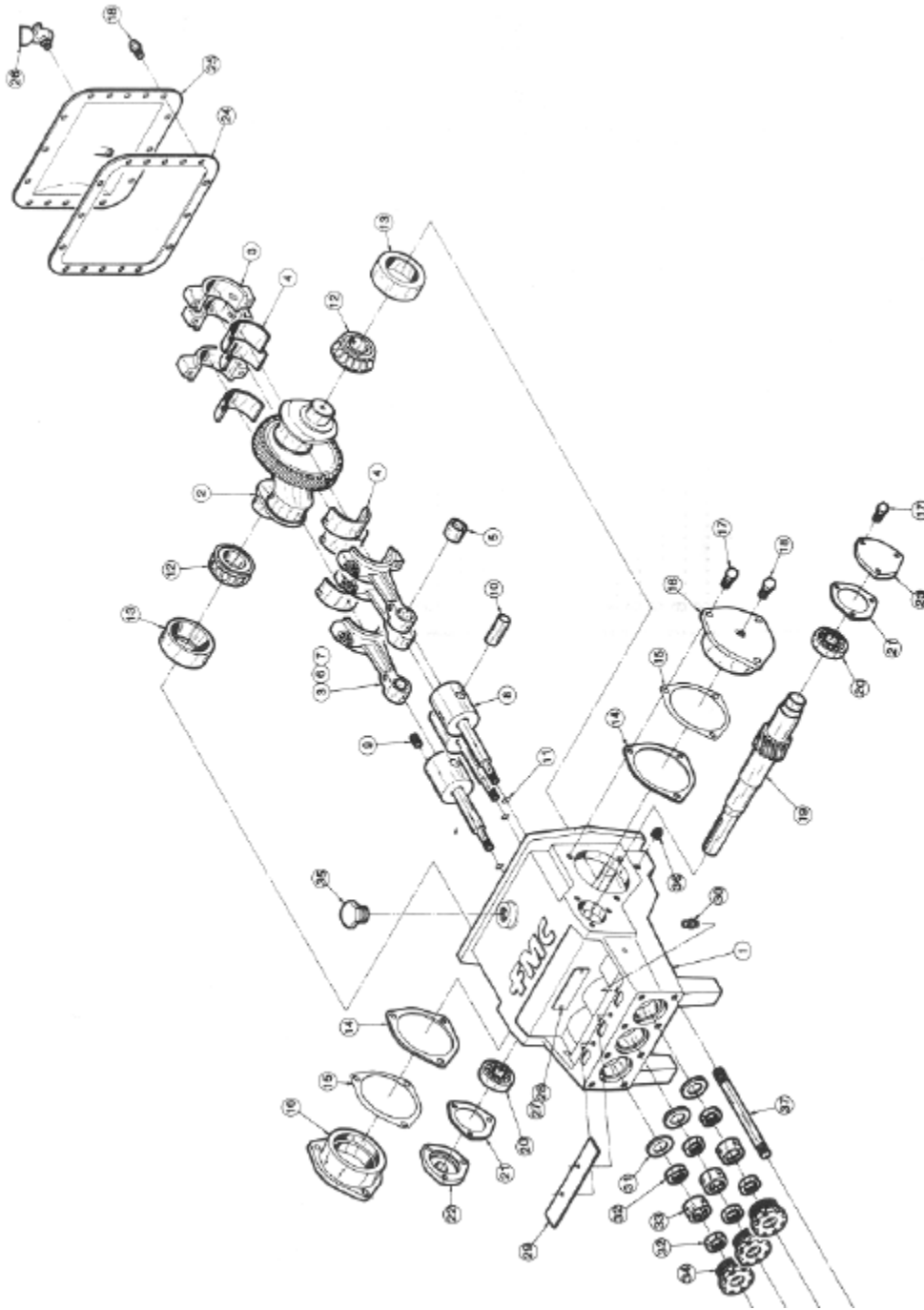
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		104862	1	MOTOR, HYDRAULIC
2		104859	1	4 BOLT FLANGE BEARING
3		306125	1	END PLATE (RHS)
4		306123	1	DRUM WELDMENT
5		104858	1	BEARING SHAFT
6		102725	9	SPACER BAR
7		104863	1	BODY, HYDRAULIC
8		3546773	2	CARTRIDGE, COUNTERBALANCE
9		306126	1	END PLATE (LHS)
10		44512	10	C/SCR, HH 3/8-16UNC x 1 LG
11		47266	8	C/SCR FLAT HD 3/8-16 x 3/4 Lg.
12		44640	8	C/SCR, HH 1/2-13 UNC x 1 3/4
13		44521	8	WASHER, LOCK 1/2 ID
14		44520	20	WASHER, 3/8 ID LOCK
15		44525	8	NUT, HEX 1/2-13UNC
16		63607	4	C/SCR SH 3/8-16 x 2 1/2 Lg.
17		44728	4	C/SCR HH 3/8-16 x 3 1/4 Lg.
18		44593	4	C/SCR, HH 3/8-16UNC x 1 1/4 - L.C. #90214-115
19		44630	5	C/SCR SH 3/8-16 x 1 Lg.
20		306127	1	GUARD, W/L HOIST
21		26112	2	PIN, QUICK RELEASE Dia1/4" [1/4]
22		44638	1	C/SCR HH, 3/8-16 x 2 3/4 Lg.
23		44520	9	WASHER, 3/8 ID LOCK
24		44527	1	NUT, HEX 3/8-16UNC
25		306129	1	RETAINING/DISASM. TOOL
26		37500	1	O-RING Dia1 1/2 I.D
27		306155	1	GUARD, BEARING W/L
28		306182	2	FLANGE KIT (#12)
29		33840	2	ADAP. HYD. 90Deg #12S/F x #12JIC(F)
30		3540032	1	PIN, COTTER 1/8 x 2 1/2 LG [1/8 x 2 1/2" Lg.]
31		3540214	1	PIN, QUICK RELEASE, ASM.
32		44954	1	C/SCR HH #10-24 UNC x 1/2LG
33		44540	1	LOCKWASHER, #10
		306206	REF	Spare Parts Kit, Wireline Hoist (Rev B) ( Page 162 )
35		49799	1	ANCHOR, WIRELINE CABLE
36			1	SET SCREW, 1/4 x 3/8 LG



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		104859	1	4 BOLT FLANGE BEARING
3		306208	1	SEAL KIT
5		104864	1	CARTRIDGE

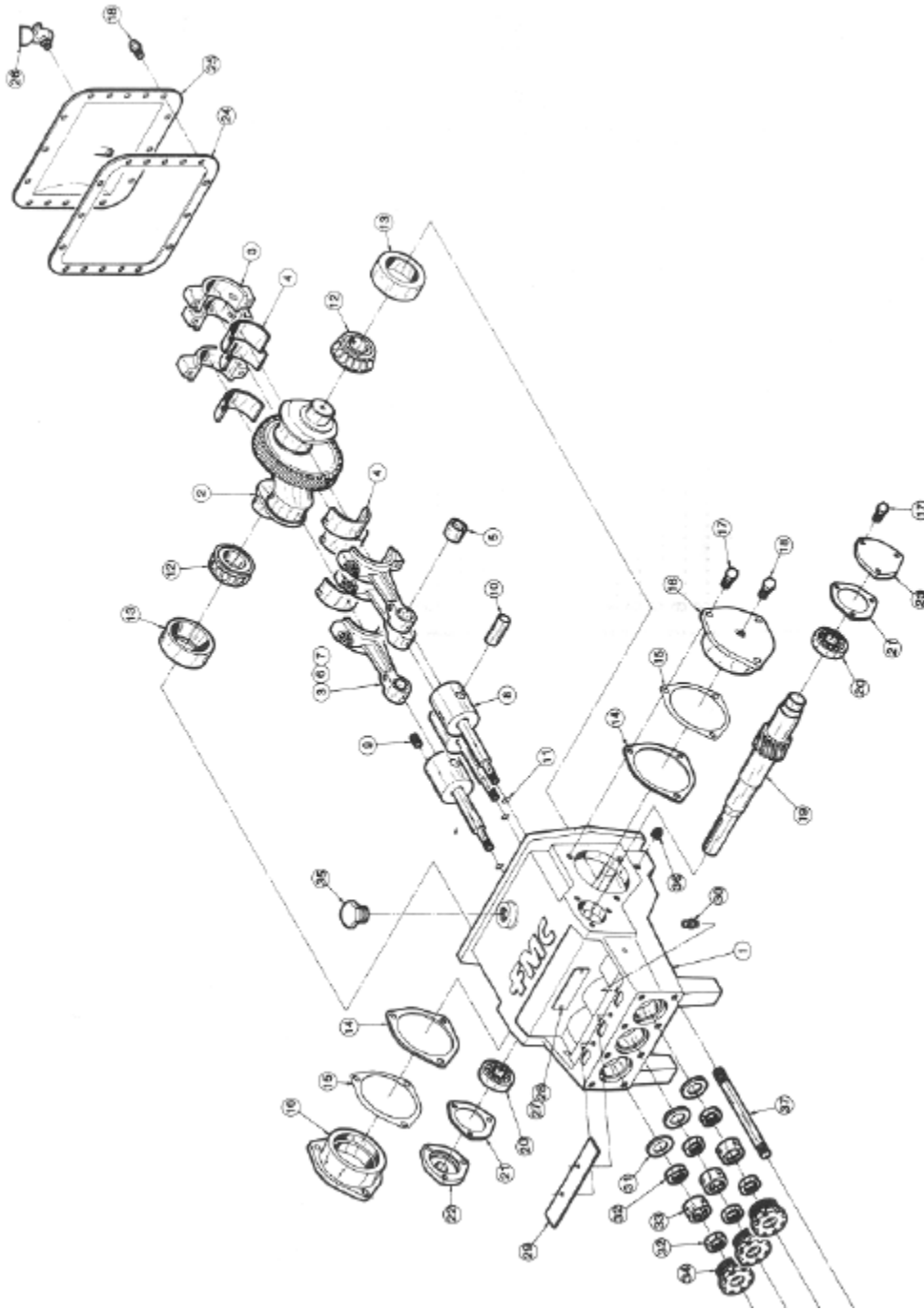


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		24821	1	PUMP, WATER (W11)
2		3543281	1	SKID WELDMENT (W11)
3		3543282	1	BAR, LIFTING W11 PUMP
4		18185	1	DISCHARGE ASM, PUMP #20 NPT CONNECTIONS
5		3544479	1	ACCUMULATOR, 1 QUART
6		38298	1	PLATE, SUB/SMALL ASSEMBLY ID
7		19325	3	WASHER, BEVEL Dia5/8
8		44510	4	C/SCR, HH 1/2-13 NC x 1.5Lg.
9		17121	4	WASHER, BEVEL Dia1/2
10		44521	4	WASHER, LOCK 1/2 ID
11		44525	4	NUT, HEX 1/2-13UNC
12		44514	2	C/SCR, HH 5/8-11 UNC x 1 3/4"
13		44522	3	WASHER, LOCK 3/8 ID - L.C. #90343-8
14		3547406	1	DRIVE GROUP, WATER PUMP W11
15		23183	2	SCREW, DRIVE
16		44514	1	C/SCR, HH 5/8-11 UNC x 1 3/4"
17		14570	1	HOSE ASM, SUCTION 2" ID x 20 FT.
18		18183	1	PLUG, 1 1/4 NPT
19		48896	1	ELBOW, 2" NPT x 90° X.H.
20		101029	1	ADAP, HYD #12 ORB x #12 NPT
21		40128	1	ADAP, HYD #12 NPT(F) x #20 NPT
22		34171	1	ADAP, HYD TEE #20 NPT(F)
23		34062	1	ADAP, HYD #20 NPT x #20 NPT
24		3544481	0	KIT, CHAR-LYNN MOTOR SEAL (Single speed fluid pump)
25			1	NIPPLE, 2" NPT x 12" Lg. X.H.

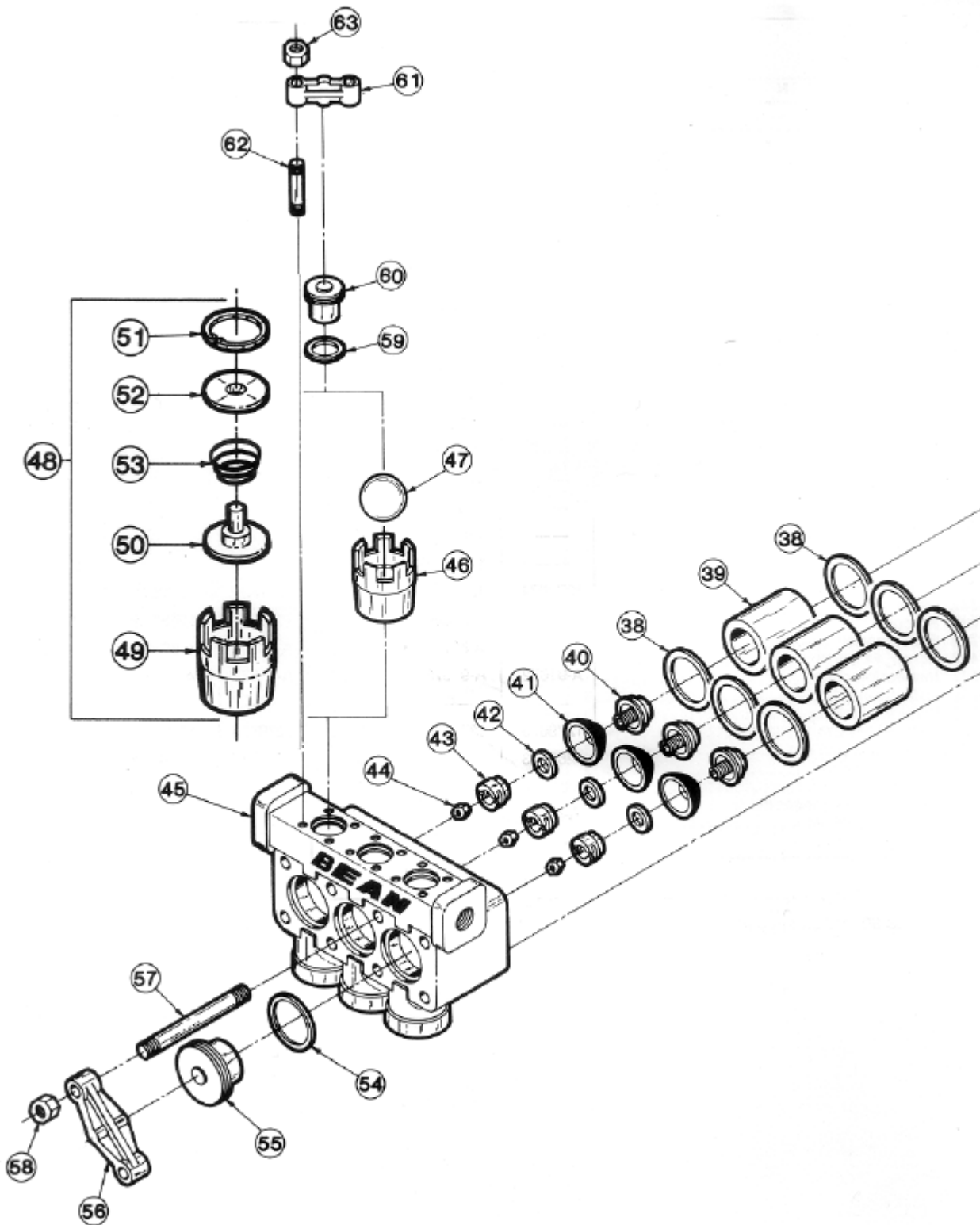




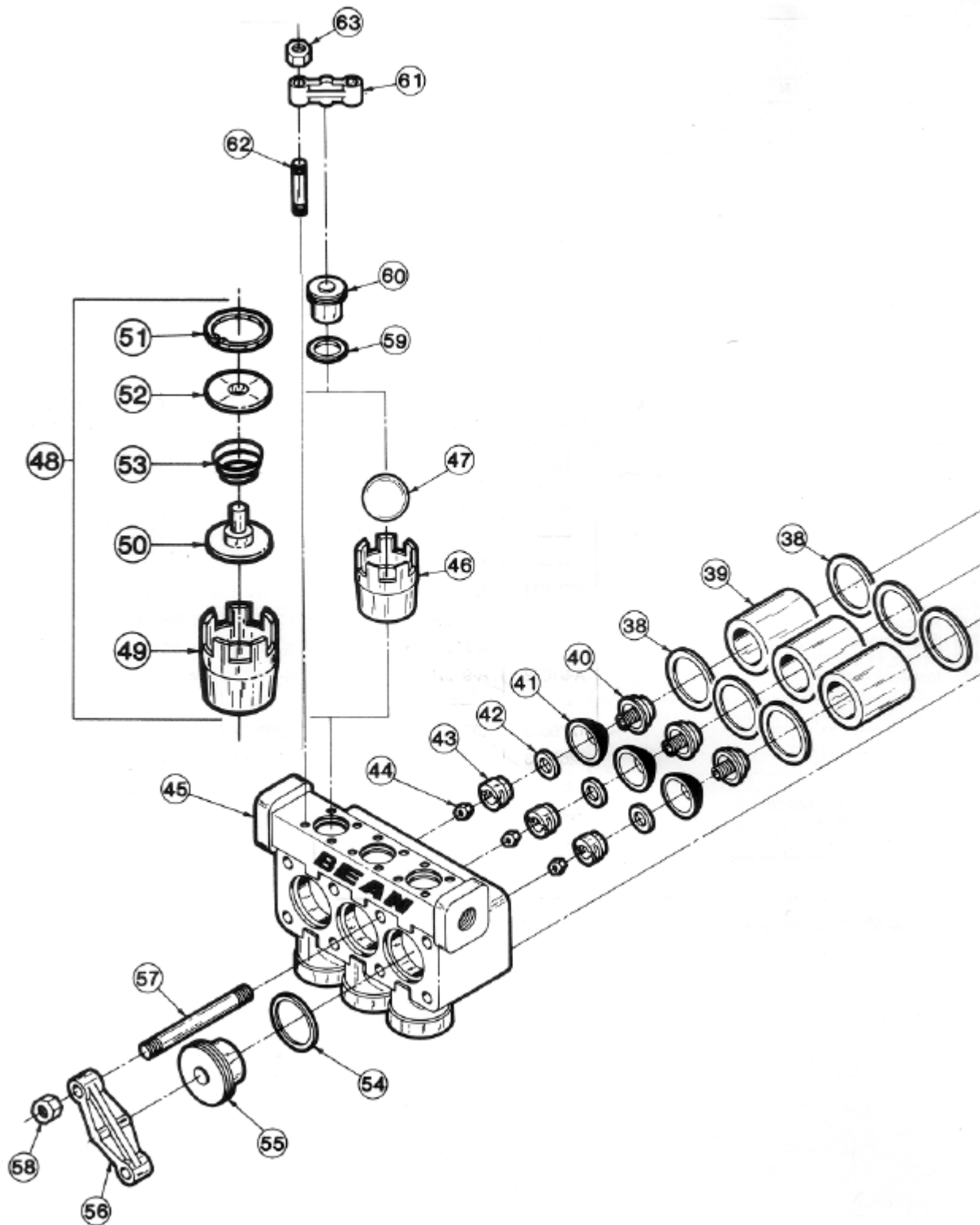
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		79105	1	CASE, PUMP
2		79328	1	CRANKSHAFT
3		75077	3	ROD, CONNECTION
4		75033	3	INSERT, BEARING
5		75032	3	BUSHING, CONNECTION ROD
6		78547	6	BOLT, CONNECTION ROD
7		60899	6	LOCKNUT, 1/2-20 UNF
8		75072	3	CROSSHEAD & ROD ASSEMBLY
9		79904	6	S/SCR, SH 5/16-18 UNC x 5/16
10		75076	3	WRIST-PIN
11		79327	3	O-RING, PACKING (5/8 x 1/16)
12		79121	3	CONE, BEARING
13		79120	2	CUP, BEARING
14		75044	2	GASKET, CRANKSHAFT BEARING
15		79113	1	SHIM, .005
16		79114	2	HOUSING, CRANKSHAFT BEARING
17		44530	12	C/SCR, HH 1/2-13UNC x 1 1/4
18		44529	18	C/SCR, HH 1/2-13UNC x 3/4"
19		79116	1	SHAFT, PINION
20		18208	2	BEARING, CRANKSHAFT BALL
21		75043	2	GASKET, PINION BEARING
22		79109	1	CAP, BEARING PINION
23		79108	1	CAP, PINION BEARING
24		75045	1	GASKET, COVER
25		79123	1	COVER, PLATE
26		79098	1	PETCOCK, 1/8" NPT
27		79905	1	PLATE, MODEL
28		79906	2	SCREW, #4 x 3/16
30		16634	3	FITTING-GREASE 1/8 NPTF
31		79748	3	WASHER, PACKING
32		79321	6	SEAL, OIL
33		79320	3	SLEEVE, PACKING NUT
34		79326	3	NUT, PLUNGER ROD
35		79081	1	CAP, OIL FILTER
36		79112	2	PLUG, PIPE
37		75041	6	STUD, LONG (5/8" dia.)
38		79322	6	GASKET, CYLINDER JOINT
39		79103	3	CERAMIC LINED STEEL
40		75037	3	CUP, PLUNGER
41		75003	3	PACKING, NEOPRENE
42		75062	3	WASHER, PLUNGER CUP
43		75012	3	NUT, PLUNGER



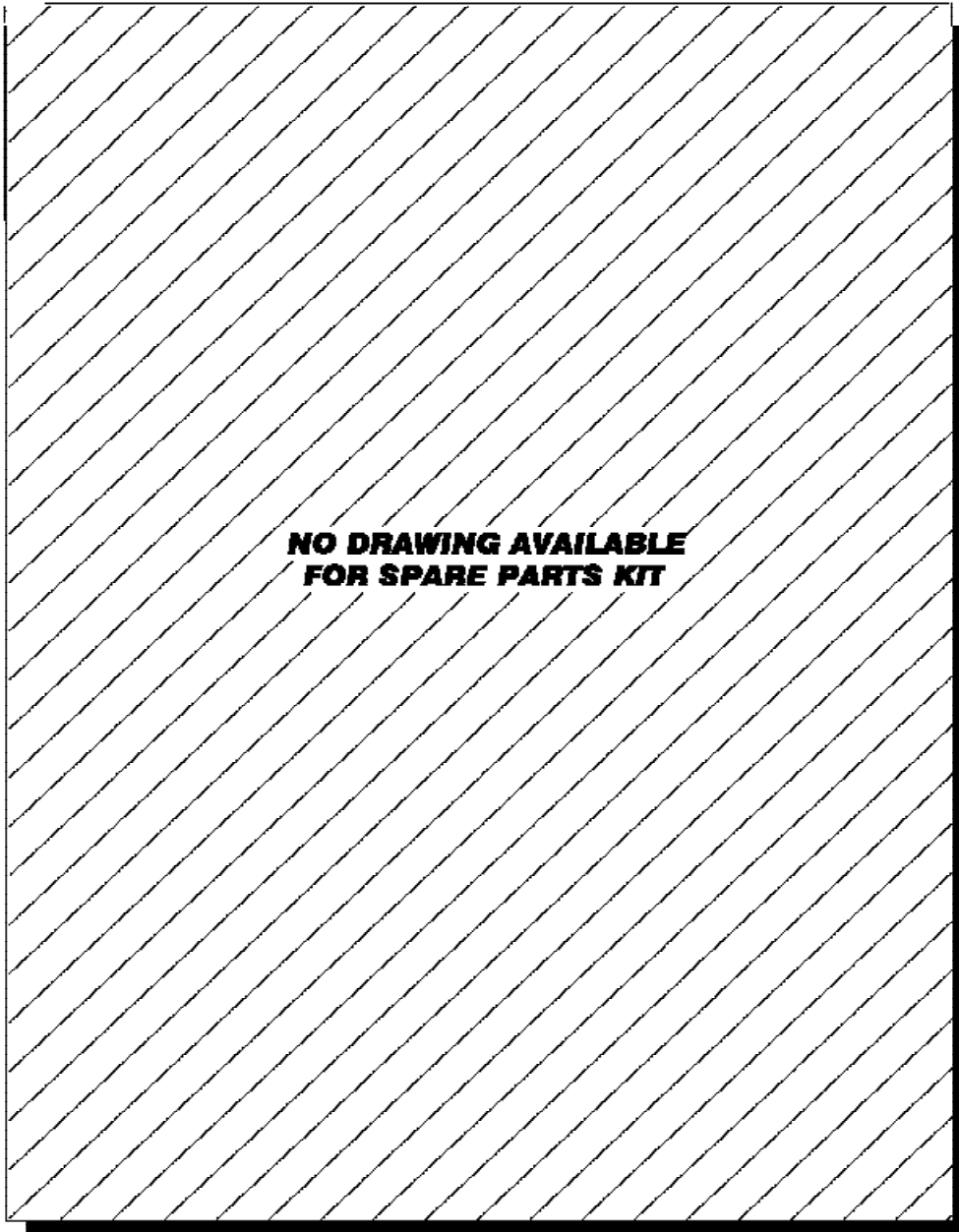
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
44		75027	3	NUT, SPECIAL
45		79325	1	VALVE, CHAMBER
46		79324	6	VALVE SEAT, BALL
47		26157	6	BALL, 1-1/8" DIA.
54		79323	3	GASKET, CYLINDER HEAD
55		63684	3	COVER, CYLINDER
56		79101	3	CLAMP, CYLINDER HEAD
57		75042	2	STUD, CYLINDER
58		44526	8	NUT, HH 5/8-11 UNC
59		79334	3	GASKET, VALVE COVER
60		79882	3	VALVE, COVER
61		78541	3	CLAMP, VALVE COVER
62		75022	6	STUD, 1/2 X 3-1/4"
63		44525	6	NUT, HEX 1/2-13UNC
64		28097	2	PLUG, 2" NPT PIPE
65		18183	1	PLUG, 1 1/4 NPT
66		75019	1	PLUNGER, CAP REMOVER
67		79333	1	VALVE SEAT REMOVER
68		36686	REF	Spare Parts Kit, W11 Water Pump (Rev A) ( Page 174 )



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		79105	1	CASE, PUMP
2		79328	1	CRANKSHAFT
3		75077	3	ROD, CONNECTION
4		75033	3	INSERT, BEARING
5		75032	3	BUSHING, CONNECTION ROD
6		78547	6	BOLT, CONNECTION ROD
7		60899	6	LOCKNUT, 1/2-20 UNF
8		75072	3	CROSSHEAD & ROD ASSEMBLY
9		79904	6	S/SCR, SH 5/16-18 UNC x 5/16
10		75076	3	WRIST-PIN
11		79327	3	O-RING, PACKING (5/8 x 1/16)
12		79121	3	CONE, BEARING
13		79120	2	CUP, BEARING
14		75044	2	GASKET, CRANKSHAFT BEARING
15		79113	1	SHIM, .005
16		79114	2	HOUSING, CRANKSHAFT BEARING
17		44530	12	C/SCR, HH 1/2-13UNC x 1 1/4
18		44529	18	C/SCR, HH 1/2-13UNC x 3/4"
19		79116	1	SHAFT, PINION
20		18208	2	BEARING, CRANKSHAFT BALL
21		75043	2	GASKET, PINION BEARING
22		79109	1	CAP, BEARING PINION
23		79108	1	CAP, PINION BEARING
24		75045	1	GASKET, COVER
25		79123	1	COVER, PLATE
26		79098	1	PETCOCK, 1/8" NPT
27		79905	1	PLATE, MODEL
28		79906	2	SCREW, #4 x 3/16
30		16634	3	FITTING-GREASE 1/8 NPTF
31		79748	3	WASHER, PACKING
32		79321	6	SEAL, OIL
33		79320	3	SLEEVE, PACKING NUT
34		79326	3	NUT, PLUNGER ROD
35		79081	1	CAP, OIL FILTER
36		79112	2	PLUG, PIPE
37		75041	6	STUD, LONG (5/8" dia.)
38		79322	6	GASKET, CYLINDER JOINT
39		79103	3	CERAMIC LINED STEEL
40		75037	3	CUP, PLUNGER
41		75003	3	PACKING, NEOPRENE
42		75062	3	WASHER, PLUNGER CUP
43		75012	3	NUT, PLUNGER

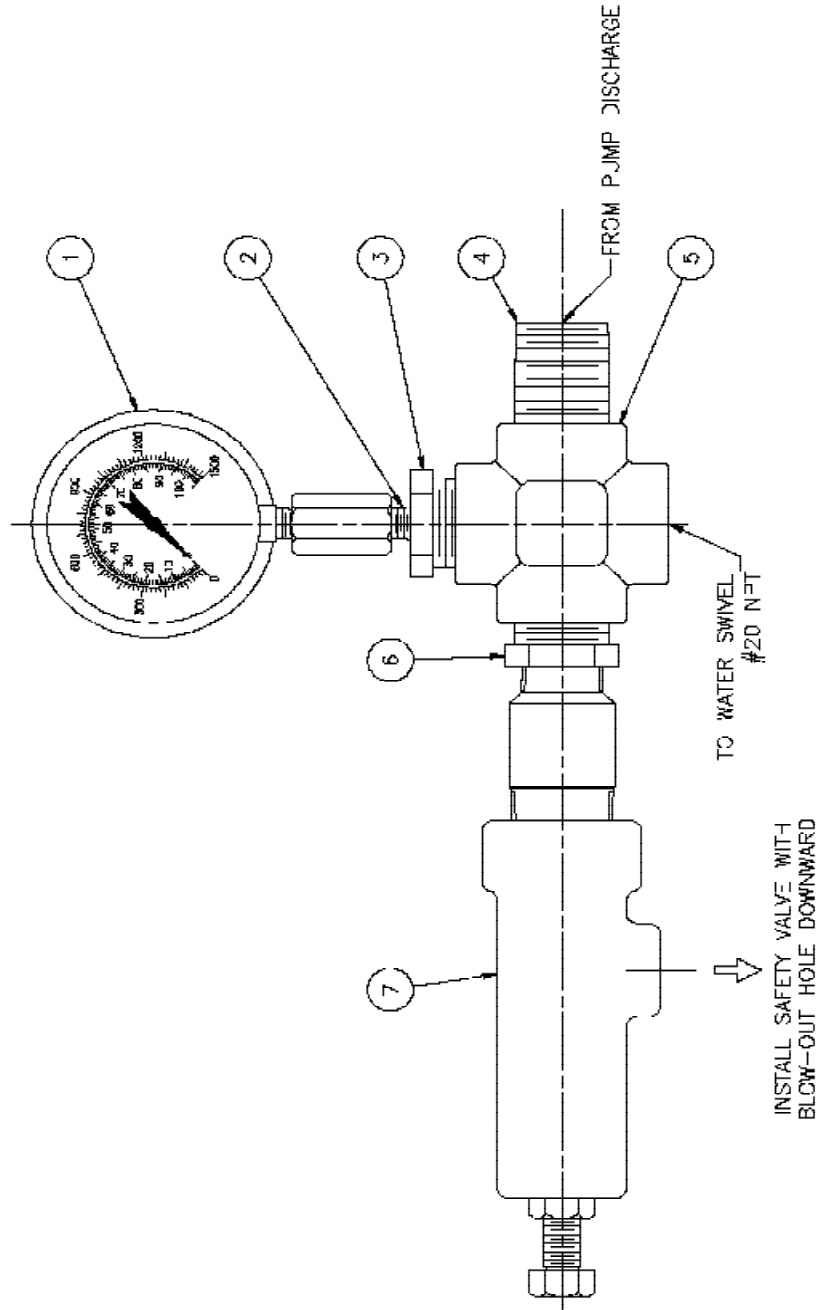


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
44		75027	3	NUT, SPECIAL
45		79325	1	VALVE, CHAMBER
46		79324	6	VALVE SEAT, BALL
47		26157	6	BALL, 1-1/8" DIA.
54		79323	3	GASKET, CYLINDER HEAD
55		63684	3	COVER, CYLINDER
56		79101	3	CLAMP, CYLINDER HEAD
57		75042	2	STUD, CYLINDER
58		44526	8	NUT, HH 5/8-11 UNC
59		79334	3	GASKET, VALVE COVER
60		79882	3	VALVE, COVER
61		78541	3	CLAMP, VALVE COVER
62		75022	6	STUD, 1/2 X 3-1/4"
63		44525	6	NUT, HEX 1/2-13UNC
64		28097	2	PLUG, 2" NPT PIPE
65		18183	1	PLUG, 1 1/4 NPT
66		75019	1	PLUNGER, CAP REMOVER
67		79333	1	VALVE SEAT REMOVER
68		36686	REF	Spare Parts Kit, W11 Water Pump (Rev A) ( Page 174 )

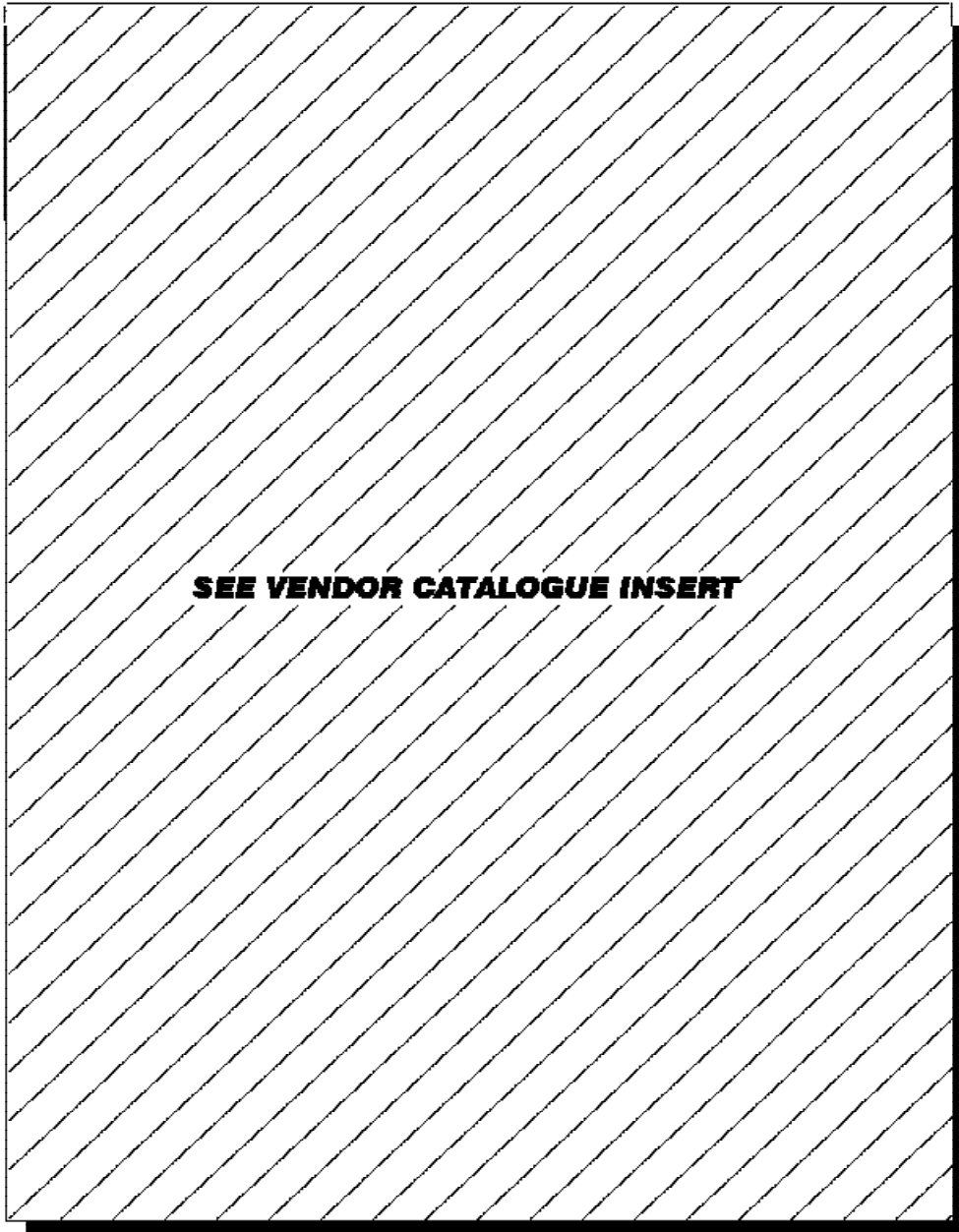




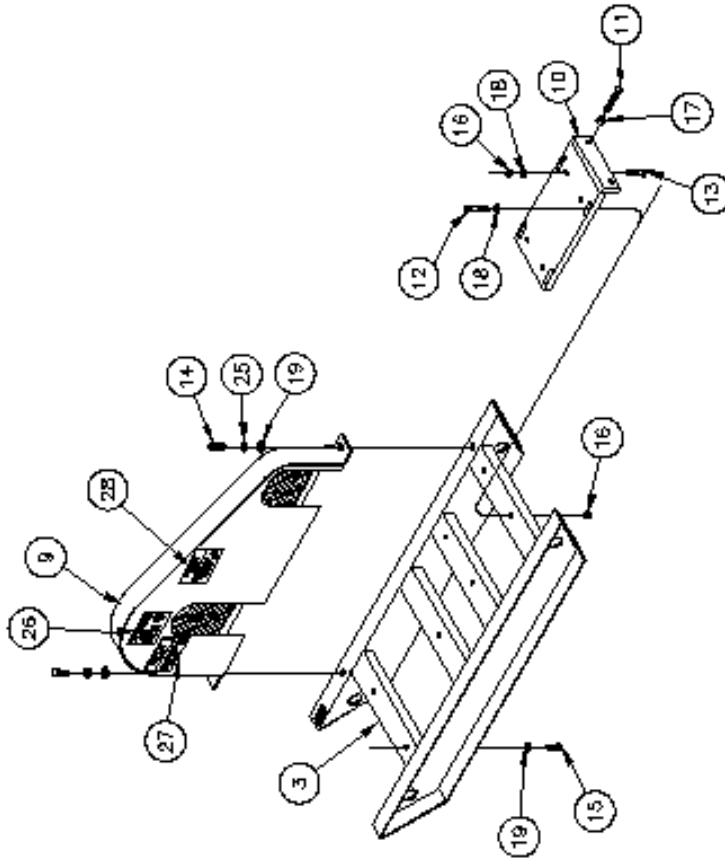
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		79321	6	SEAL, OIL
2		79103	3	CERAMIC LINED STEEL
3		75070	3	GASKET, CYLINDER
4		75071	24	GASKET, FUEL INJ PUMP
5		79324	6	VALVE SEAT, BALL
6		26157	6	BALL, 1-1/8" DIA.
7		75069	12	GASKET, VALVE COVER
8		79606	12	PACKING, PLUNGER CUP
9		75012	3	NUT, PLUNGER
10		79327	3	O-RING, PACKING (5/8 x 1/16)



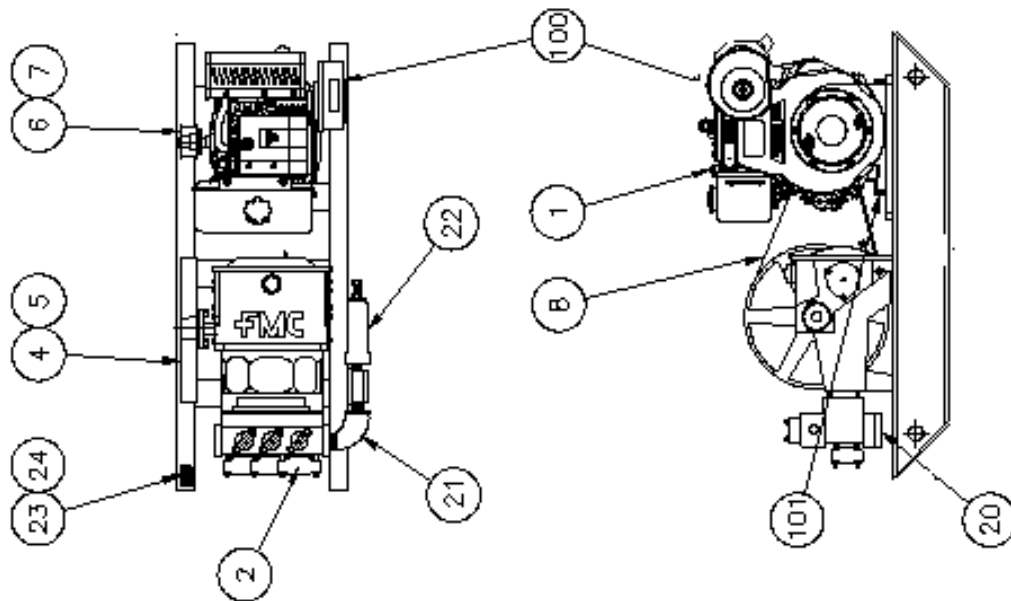
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		19163	1	GAUGE, PRESSURE
2		17905	1	NIPPLE, CLOSE #8 NPT XH
3		18922	1	BUSHING, HEX PIPE #20 x #8 NPT
4		20720	1	NIPPLE, #20 NPT x 2 LG XH
5		21063	1	CROSS, PIPE #20 NPT
6		17944	1	BUSHING, HEX PIPE #20 x #16 NPT
7		72-00-018	1	VALVE, PRESSURE RELIEF







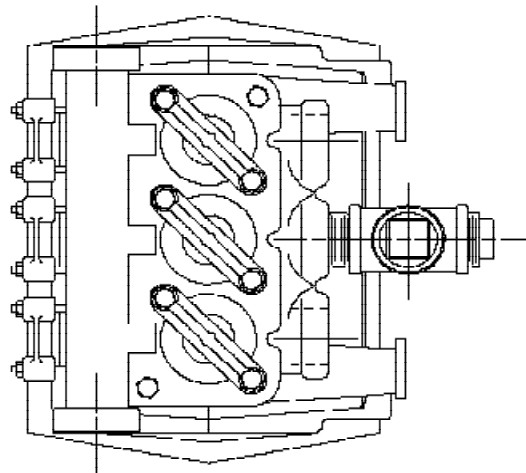
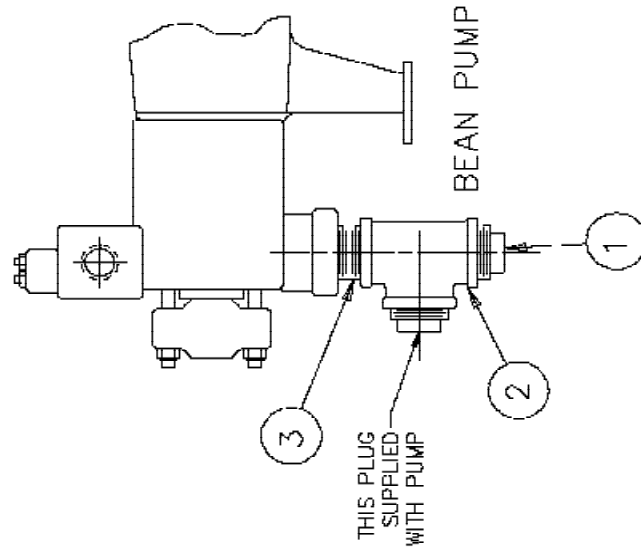
OUTPUT: 76 1/m @ 35 Bar (20GPM @ 500 psi)  
 WEIGHT: 240 Kg (530 lbs)  
 ENGINE: KUBOTA OC95, 6kW (8 HP)  
 PUMP: FMC MODEL L09  
 GEARBELT REDUCTION: 4.8:1



REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1	V	3670437	1	ENGINE, KUBOTA DIESEL
2		36618	1	PUMP [FMC-L09]
3		3670438	1	WELDMENT, SKID
4		3670439	1	PULLEY, DRIVEN
5		3670440	1	BUSHING, DRIVEN 1-1/8 X1/4kw
6		3670441	1	PULLEY, DRIVER
7		3670442	1	BUSHING, DRIVER 1" X 1/4"kw
8		3670443	1	BELT, DRIVE
9		3670444	1	WELDMENT, BELT GUARD
10		3670445	1	PLATE, MOTOR MOUNTING
11		44532	2	C/SCR, HH 1/2-13UNC x 2-3/4
12		44595	4	HHCS, 3/8-16 UNC x 2-1/2" lg.
13		44600	4	HHCS, 3/8"-16 UNC x 2" lg.
14		44513	2	C/SCR, HH 1/2-13 UNC x 1 GR8
15		44640	4	C/SCR, HH 1/2-13 UNC x 1 3/4
16		104024	8	NUT, HEX (NYLOCK) 3/8-16UNC [Nyloc]
17		44525	2	NUT, HEX 1/2-13UNC
18		44611	8	WASHER, FLAT 3/8 ID
19		44647	6	WASHER, 1/2 ID FLAT
20		27627	1	INTAKE ASSEMBLY, SUCTION ( Page 182 )
21		21411	1	ELBOW, STREET [1"NPT x 1"NPT (F)
22		18040	1	DISCHARGE ASM, PUMP #16 NPT CONNECTIONS ( Page 184 )
23		38298	1	PLATE, SUB/SMALL ASSEMBLY ID
24		23183	1	SCREW, DRIVE
25		44521	2	WASHER, LOCK 1/2 ID
26		3670573	1	DECAL, "Keep Guards In Place"
27		3670574	1	DECAL, "Read Instructions"
28		3670575	1	DECAL, "Wear Safety Equipment"
29	*	21769	1	CABLE, BATTERY GROUND [27" Lg.]
30	*	21568	1	CABLE, BATTERY POS [27" Lg.]
31	*	18902	1	HOSE, SUCTION [1-1/2" ID x 15 ft. Lg.]
32	*	568388	1	END CONNECTOR, MALE [1" NPT]
33	*	103748	1	HOSE, SUPPLY [1" ID x 100 ft. Lg.]
100		3670572	REF	FILTER, AIR
101		3670571	REF	FILTER, OIL
102	*	3570576	REF	PUMP, ELECTRIC [12VDC]
103		36685	REF	Spare Parts Kit, Water Pump [FMC Model L09] ( Page 186 )

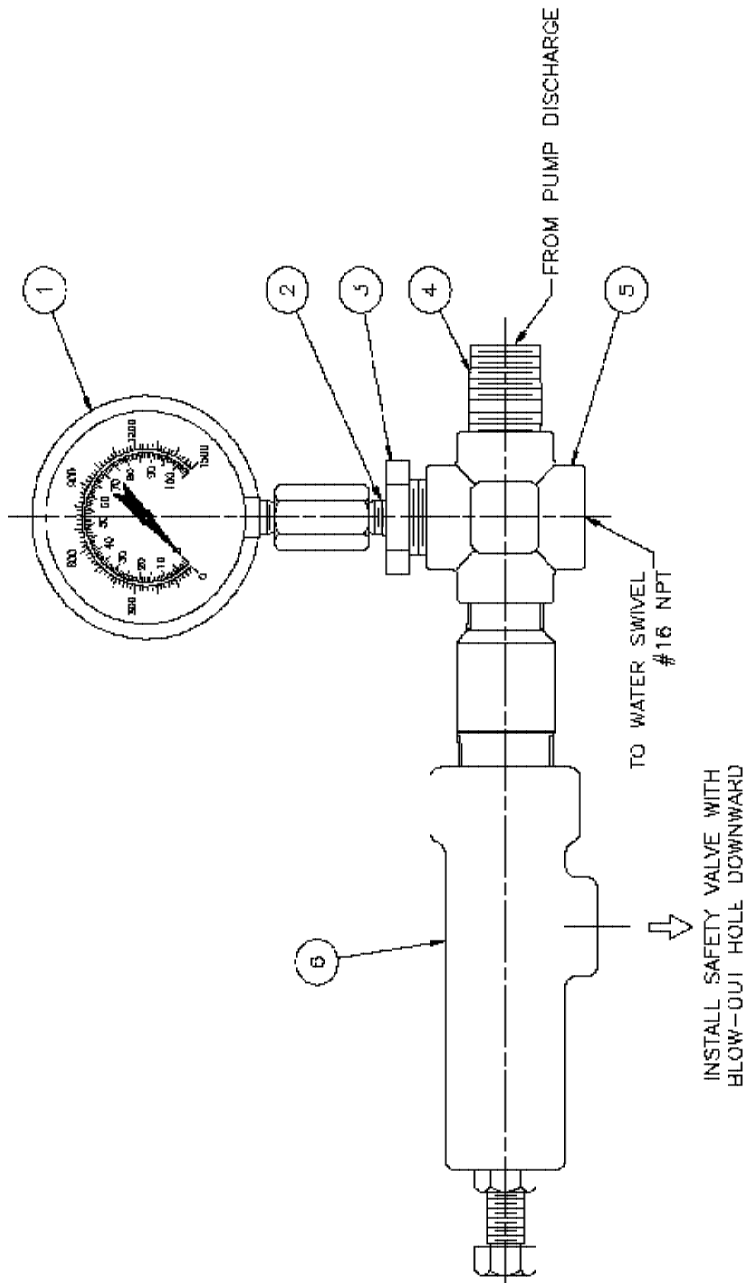
\*) Indicates items not shown on drawing.

V) See VENDOR literature.

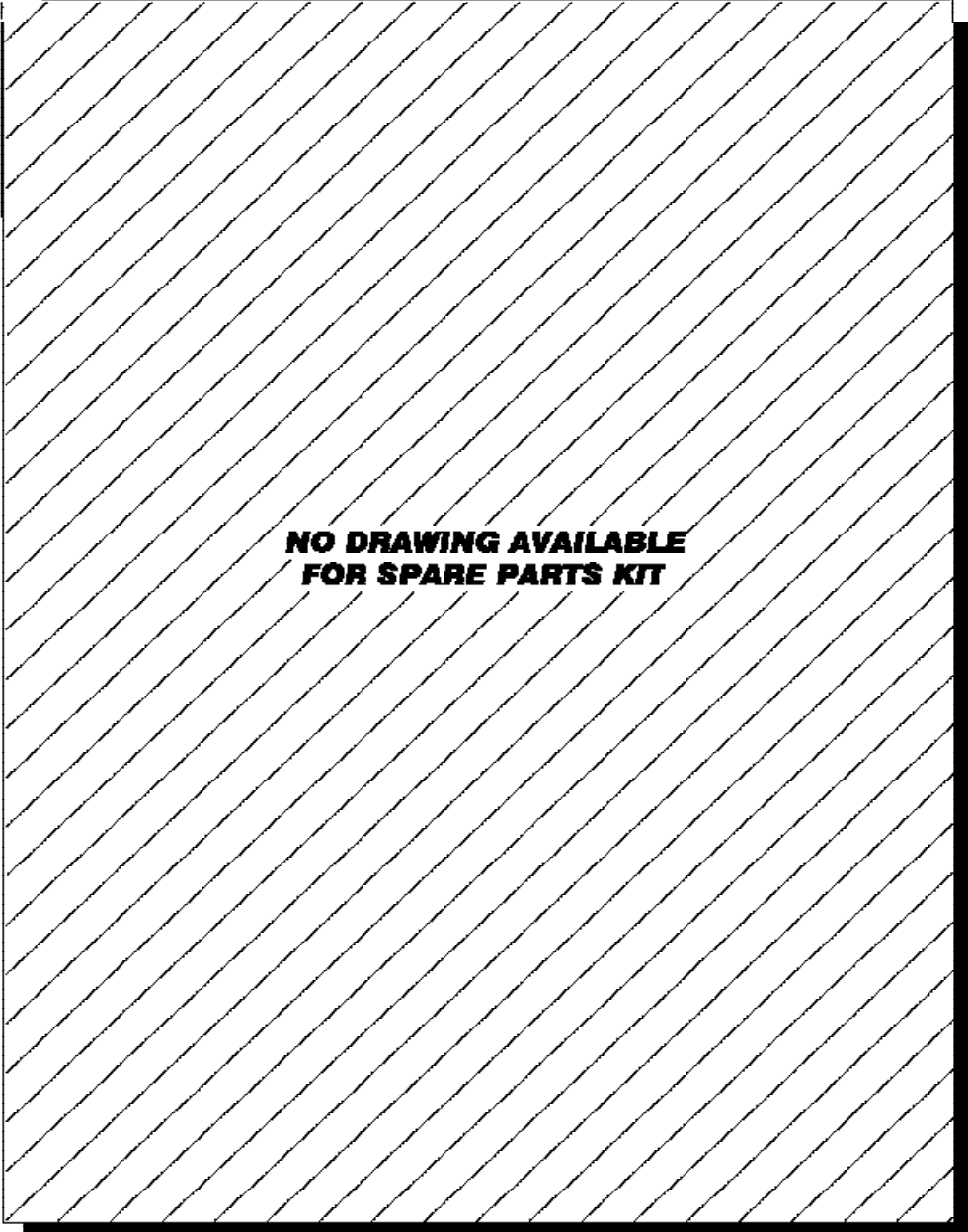




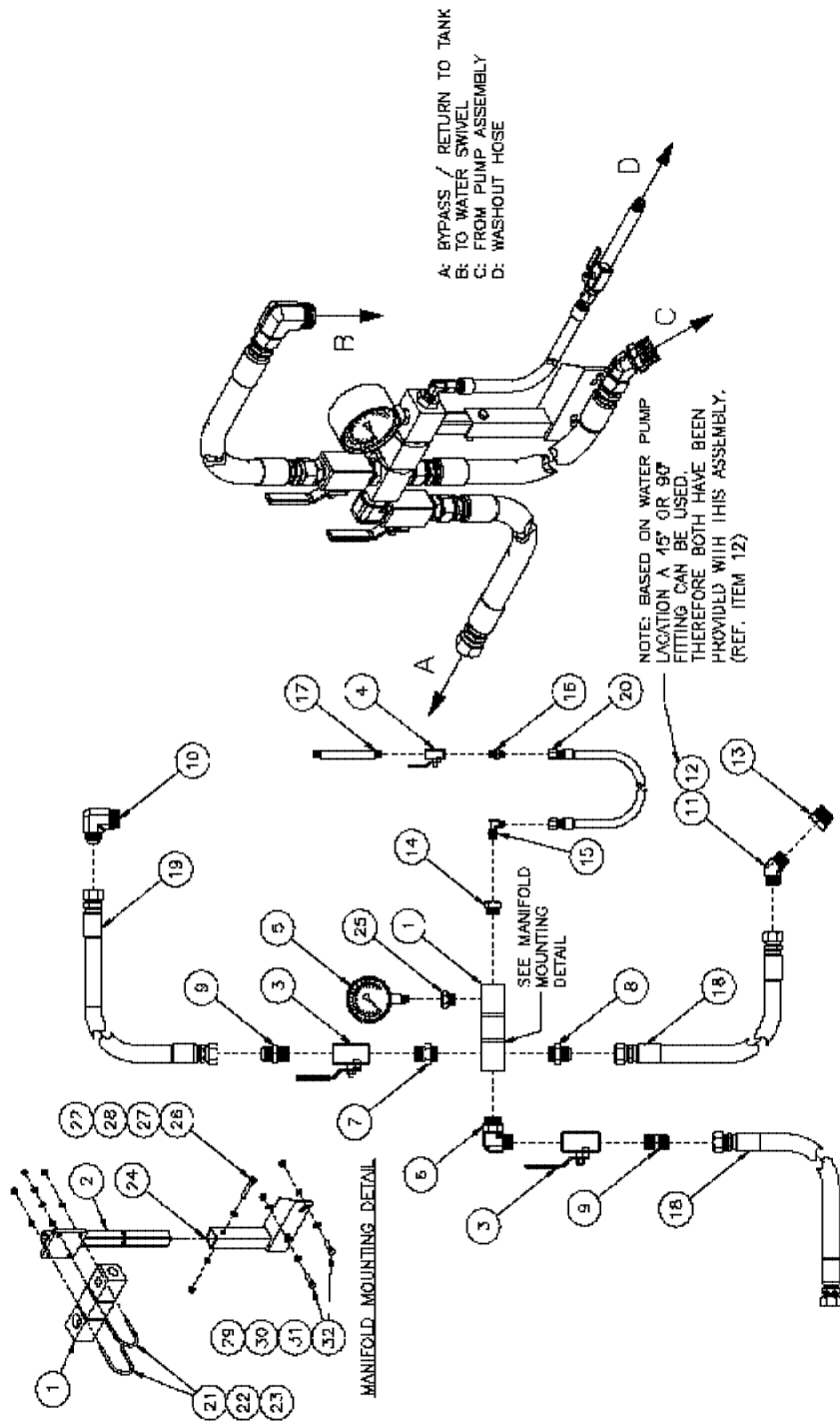
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		18475	1	PLUG, SQ HD [1 1/2 NPT]
2		18680	1	TEE (1-1/2 NPT)
3		17666	1	NIPPLE, CLOSE (1-1/2 NPT STD.)



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		19163	1	GAUGE, PRESSURE
2		17905	1	NIPPLE, CLOSE #8 NPT XH
3		18867	1	BUSHING, HEX PIPE #16 x #8 NPT
4		19612	1	NIPPLE, #16 NPT x 2 LG XH
5		18175	1	CROSS, PIPE #16 NPT
6		72-00-018	1	VALVE, PRESSURE RELIEF

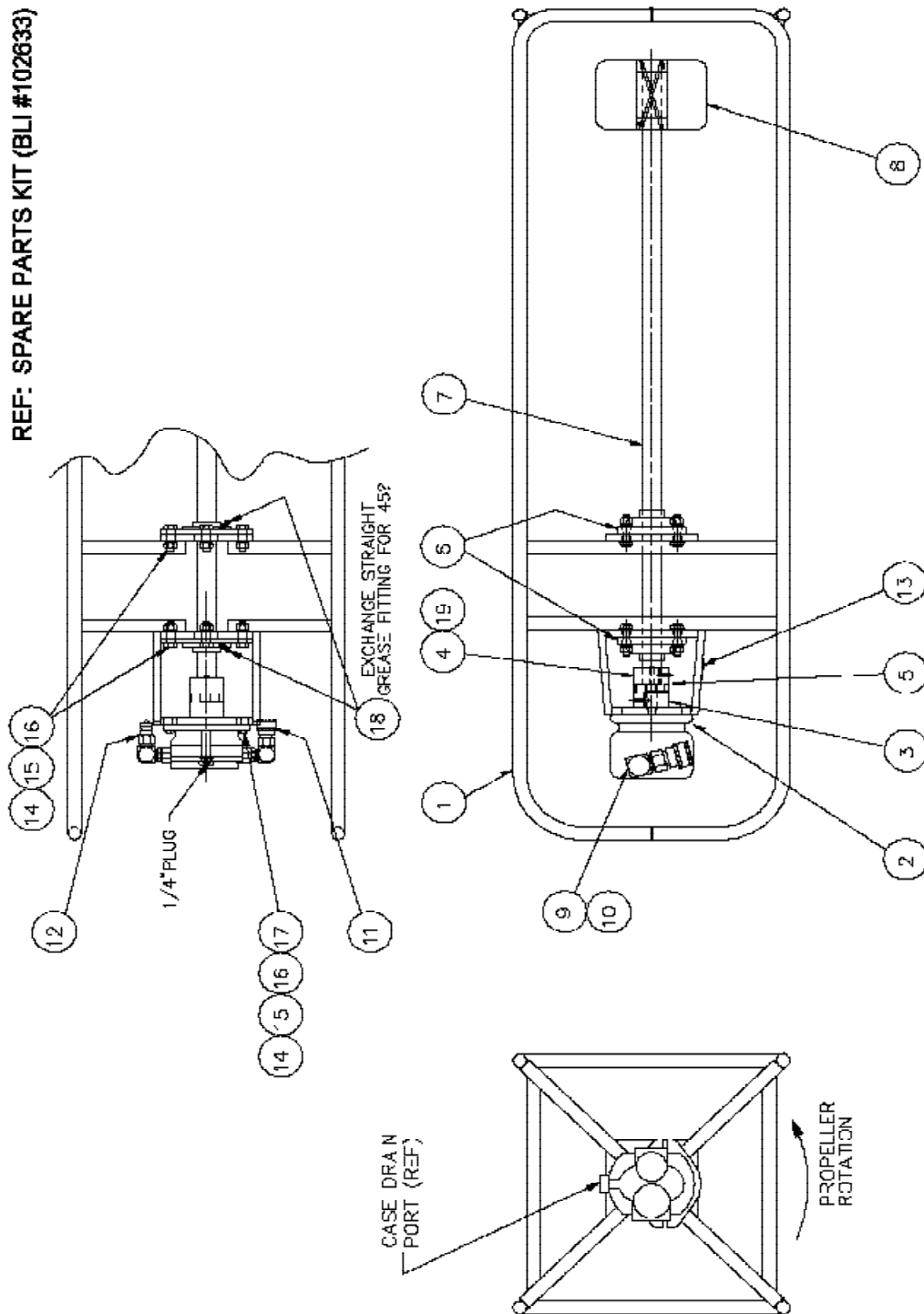


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		79321	6	SEAL, OIL
2		79066	3	CYLINDER, STEEL [Backer/Ceramic]
3		75066	3	GASKET, CYLINDER
4		75068	24	GASKET, CYLINDER HEAD
5		21836	6	SEAT, VALVE [Mud Type]
6		25397	6	VALVE, BALL
7		75067	12	GASKET, VALVE COVER
8		79607	12	PACKING, COBOXILATED [Plunger Cup]
9		75012	3	NUT, PLUNGER
10		79327	3	O-RING, PACKING (5/8 x 1/16)
11		79335	3	HOLDER, SEAL [Packing]



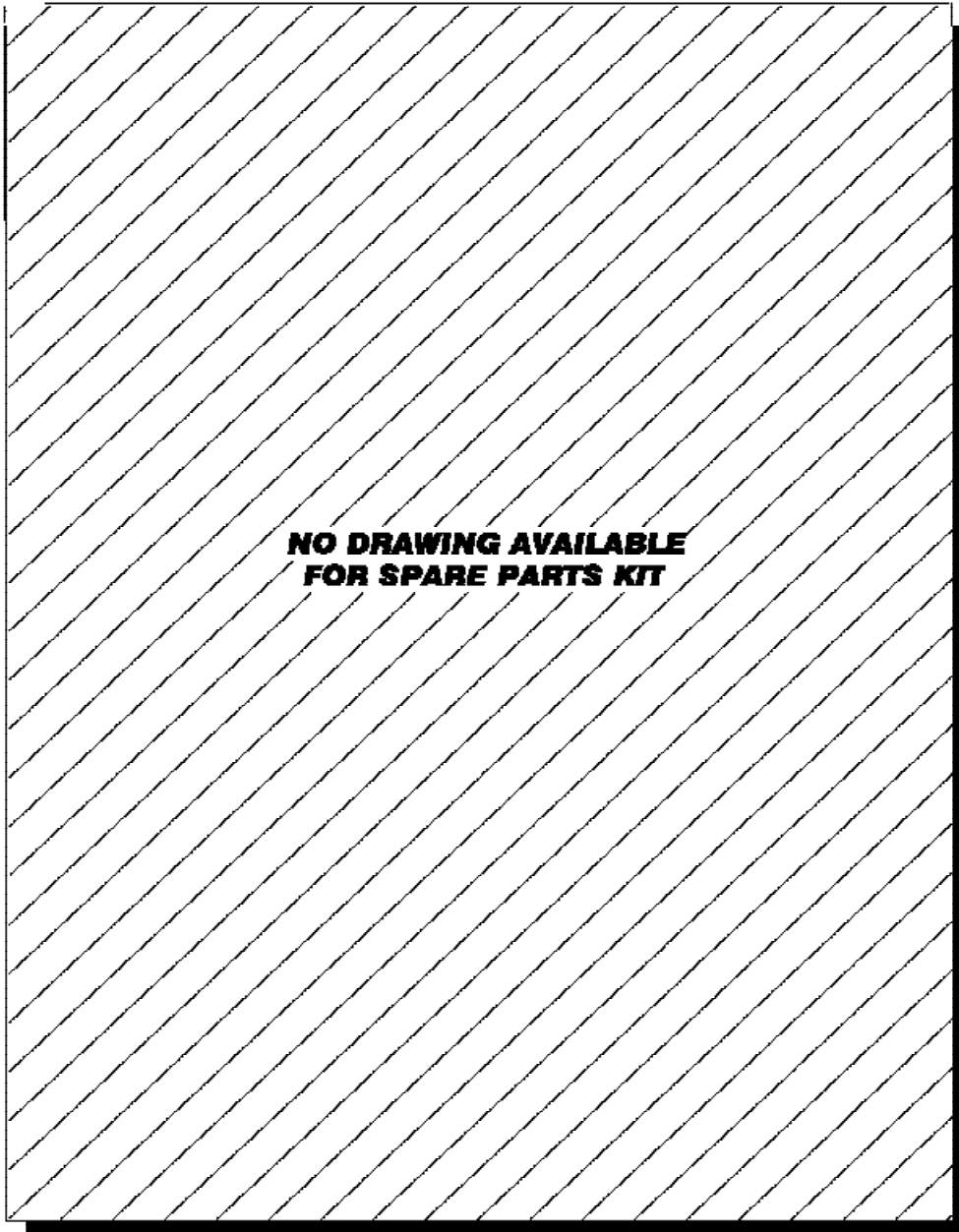
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547467	1	MANIFOLD, WATER PUMP BLOCK
2		3540368	1	STAND WELDMENT
3		3547478	2	VALVE, BALL 1" NPT (2000PSI RATED)
4		3547479	1	VALVE, BALL 1/2" NPT (2000PSI RATED)
5		19163	1	GAUGE, PRESSURE
6			1	ADAP, HYD 16 ORB x 16 NPT 90°
7			1	ADAP, HYD 16 ORB x 16 NPT
8		25470	1	ADAP, HYD 16JIC x 16 ORB
9		19971	2	ADAP, HYD 16 JIC x 16 NPT
10		44080	1	ADAP, HYD 16 JIC x 20 NPT
11		22508	1	ADAP, HYD 16 JIC x 16 NPT 45°
12		25475	1	ADAP, HYD 16 JIC x 16 NPT 90°
13		34083	1	ADAP, HYD 20 NPT x 16 NPT (F)
14		36466	1	ADAP, HYD 12 ORB x 6 ORB (F)
15		36478	1	ADAP, HYD #6 JIC x #6 ORB x 90Deg
16		39014	1	ADAP, HYD 6 JIC x 8 NPT
17		20827	1	NIPPLE, PIPE 8 NPT x 6 Lg.
18		33074	2	HOSE ASM 16 x 300 Lg.
19		63789	1	HOSE ASM, 1" ID x 39FT LG.
20		3541057	1	HOSE ASM 3/8" IDx 270 LG
21		28809	2	U-BOLT 1 1/2" PIPE
22		46510	5	WASHER, FLAT, GR8, 5/16
23		44567	4	NUT, HEX 1/4-20UNC
24		3540369	1	SOCKET TUBE & COOLER BRACKET
25		89171	1	ADAP, HYD #8 ORB x #8 NPT (F)
26		44673	1	C/SCR, HH 5/16UNC x 2 LG
27		44519	1	L/WASHER, 5/16 SAE G8
28		44552	1	NUT, 5/16UNC
29		44593	2	C/SCR, HH 3/8-16UNC x 1 1/4 - L.C. #90214-115
30		44611	2	WASHER, FLAT 3/8 ID
31		44520	2	WASHER, 3/8 ID LOCK
32		103968	2	NUT, HEX 3/8-16UNC

REF: SPARE PARTS KIT (BLI #102633)

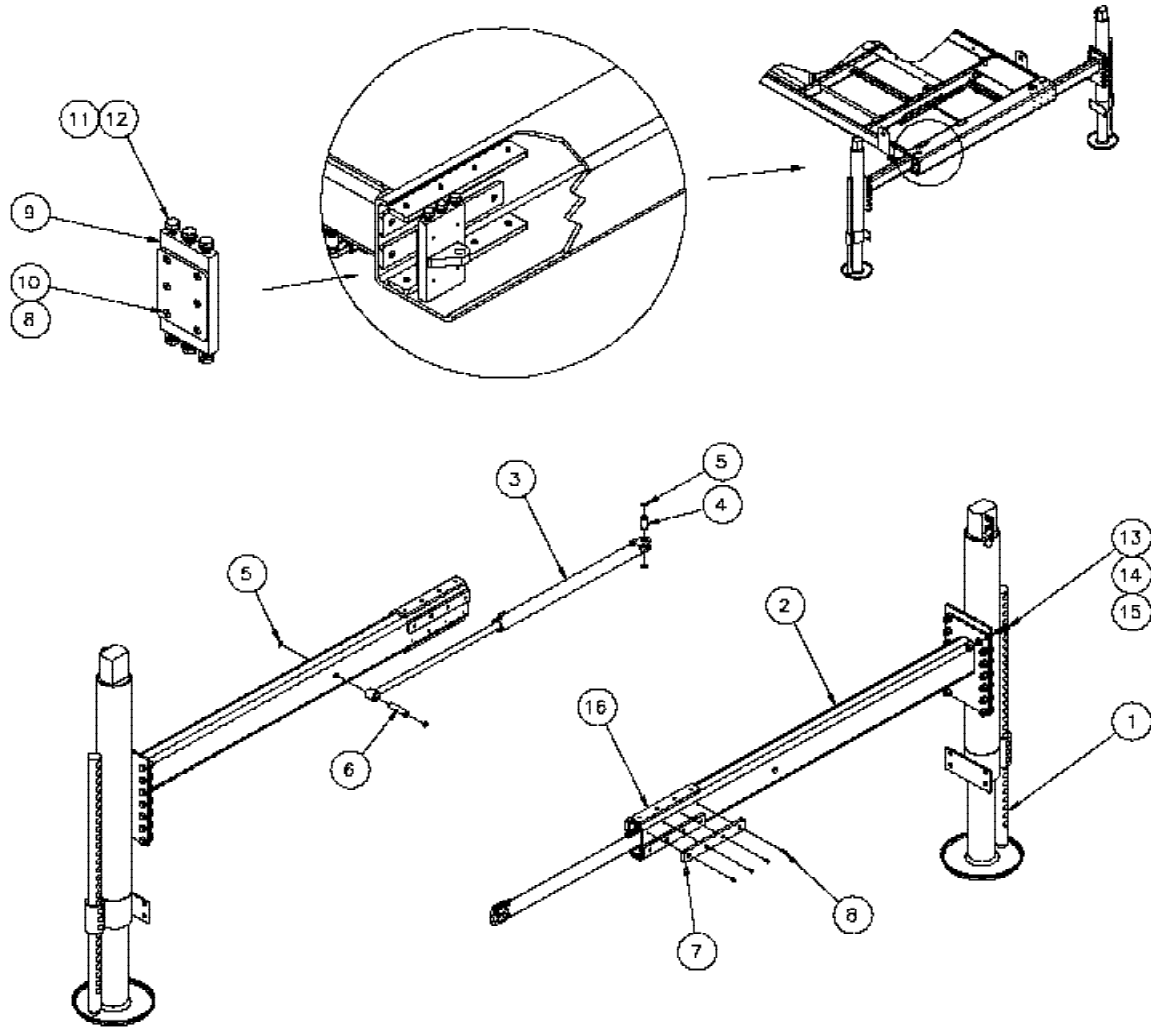




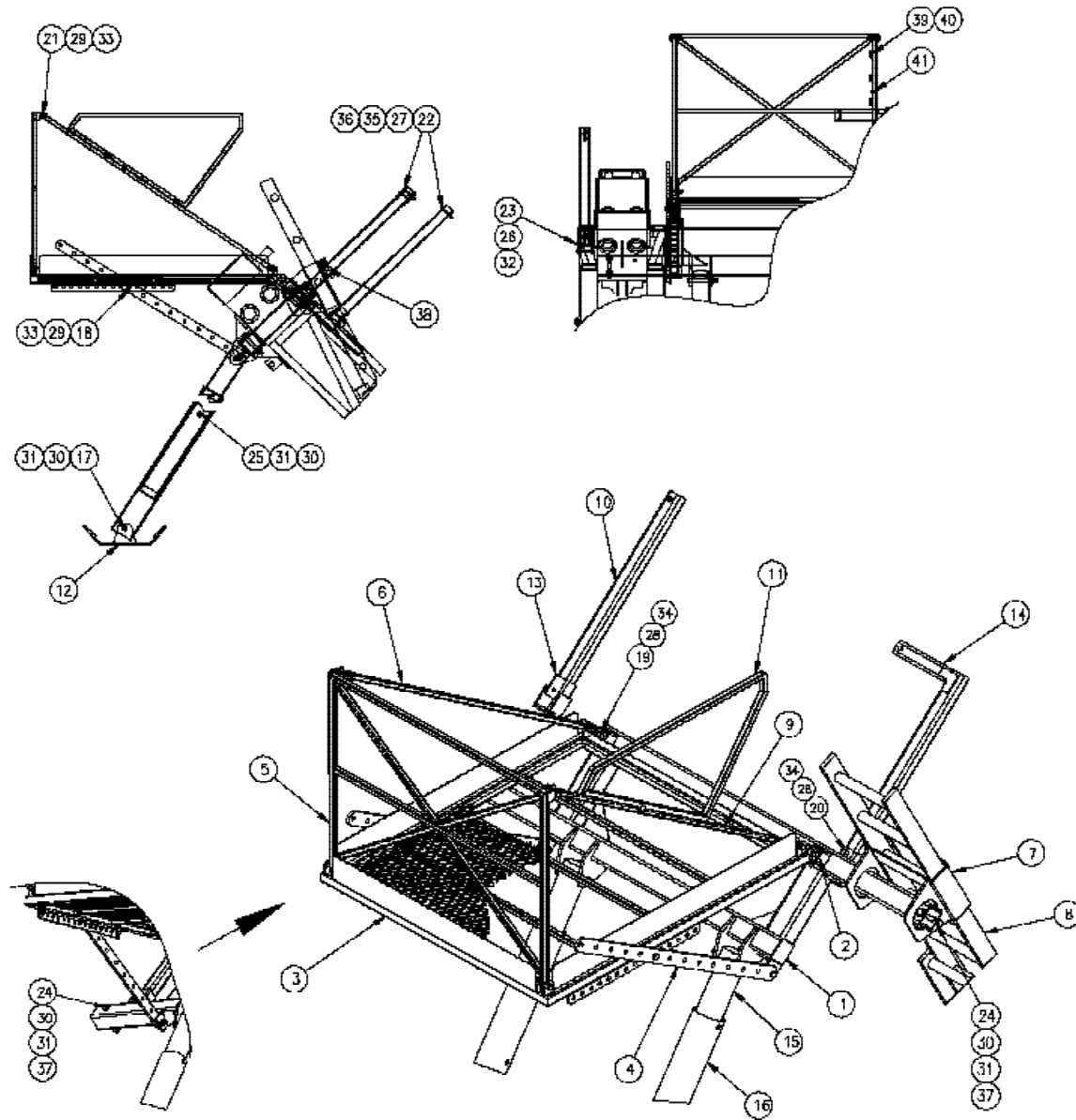
REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		101486	1	SUPPORT ASSEMBLY, BEARING
2		101491	1	MOTOR, HYDRAULIC
3		101557	1	COUPLER, JAW [Rework]
4		101490	1	COUPLER, JAW
5		101494	1	SPIDER, RUBBER
6		101493	2	BEARING, BALL FLANGE
7		101488	1	SHAFT, MUD MIXER
8		101492	1	PROPELLER WELDMENT
9		102190	2	ADAPT, HYD #8 SAE x 1/2" NPT x 90°
10		34214	2	ADAP, HYD 12 ORB - 8 ORB F
11		101536	1	COUPLER, HALF, FEMALE 1/2" NPT
12		101537	1	COUPLER, HALF, MALE 1/2" NPT
13		38298	1	PLATE, SUB/SMALL ASSEMBLY ID
14		44536	10	C/SCR, HH 3/8-16UNC x 1-1/2
15		44520	10	WASHER, 3/8 ID LOCK
16		44527	10	NUT, HEX 3/8-16UNC
17		44610	2	WASHER, FLAT 5/16 SAE G8
18		19917	2	FITTING, GREASE 1/8 NPT x 45Deg
19		46152	1	KEY, 1/4 sq. x 1" Lg.
		102633	REF	Spare Parts Kit, Mud Mixer ( Page 192 )



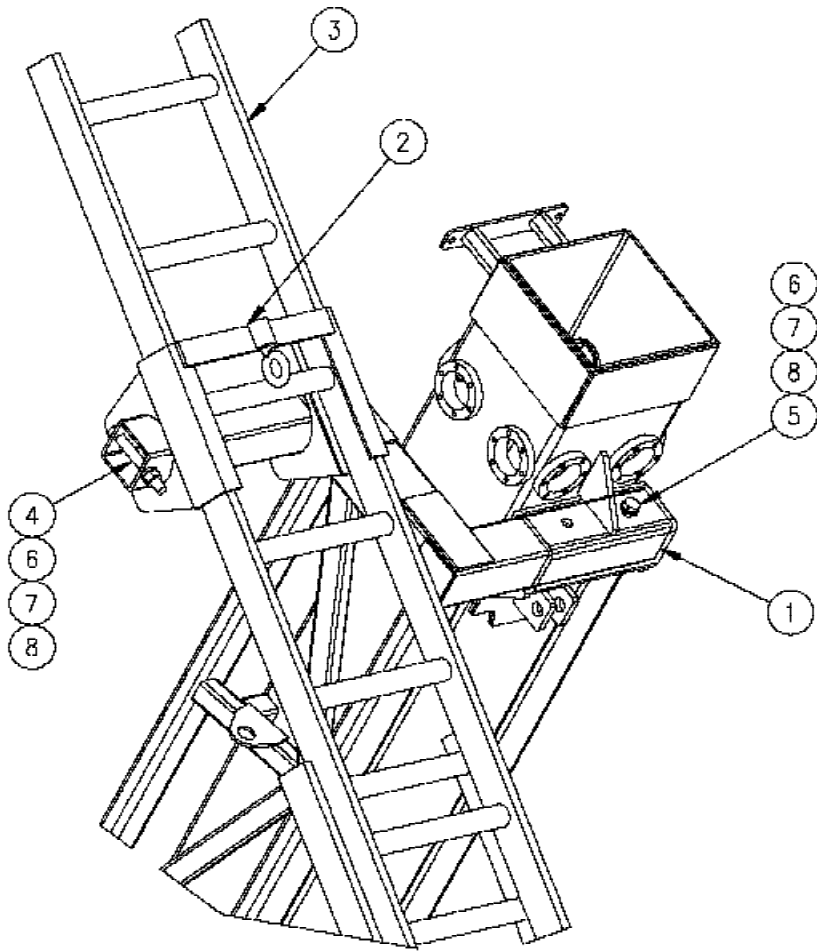
<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		101557	1	COUPLER, JAW [Rework]
2		101494	1	SPIDER, RUBBER
3		101490	1	COUPLER, JAW
4		96770	1	Seal Kit, Cartridge Valve 100214 & 215 M/L Hoist
5		96653	1	Seal Plate Kit, Body Valve (100211) W/L Hoist



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3541598	4	LEG, STABILIZER OUTRIGGER
2		3547209	4	WELDMENT, OUTRIGGER TUBE
3		3547210	4	CYLINDER, OUTRIGGER
4		3547463	4	PIN, OUTRIGGER
5			16	CLIP, RETAINING
6			1	PIN, OUTRIGGER
7		3547537	20	WEAR PAD
8			168	SCREW, BRASS
9		3547211	4	MOUNT, CYLINDER OUTRIGGER
10		3547536	4	WEAR PAD
11			24	C/SCR
12			24	LOCKWASHER
13			56	C/SCR
14			56	LOCKWASHER
15			56	NUT
16		3547538	16	WEAR PAD

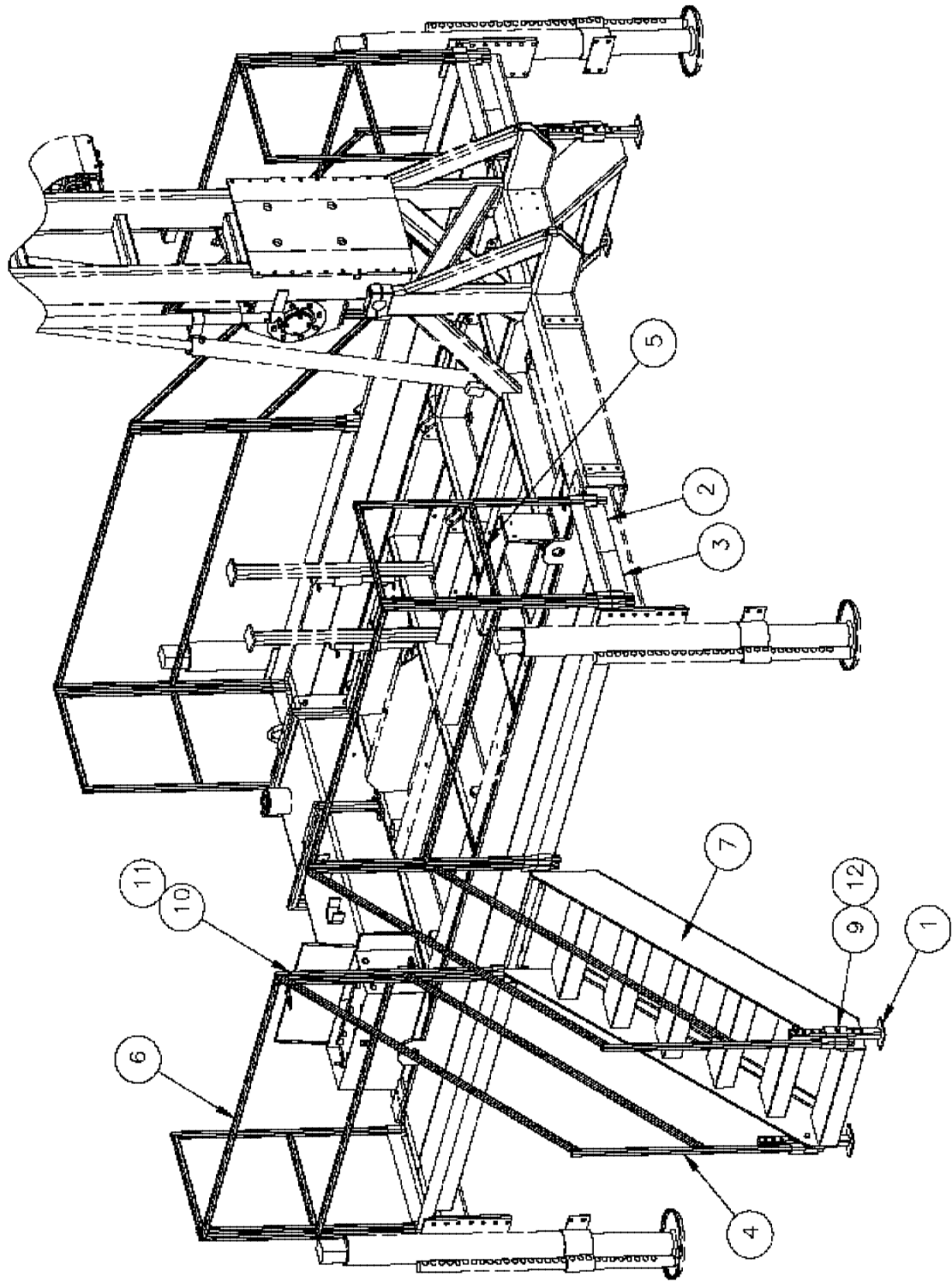


REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547959	1	WELDMENT, RODRACK MAIN
2		3547960	2	WELDMENT, RODRACK ADJUSTMENT
3		3547649	1	PLATFORM
4		3547643	2	BAR, PLATFORM STABILIZER
5		61588	1	RAILING, PLATFORM
6		3547650	1	BRACE, RAILING
7		3543138	1	BRACKET, LADDER SLIDE
8		3541854	1	LADDER, EXTENSION (28') [28']
9		3547750	1	TUBE, RAILING
10		3547646	1	TUBE
11		3547737	1	SAFETY RAILING
12		3548106	2	FOOT, SUPPORT LEG
13		3547645	1	WELDMENT, RAIL MOUNT
14		3547641	1	WELDMENT, ROD SUPPORT
15		3548053	2	LEG, INNER TUBE
16		3548054	2	LEG, OUTER TUBE
17		104488	2	C/SCR, HH 3/4-10 UNC x 8"
18		44549	4	C/SCR, HH 5/8-11UNC x 2 LG
19		44560	2	C/SCR, HH 1/2-13UNC x 3 1/2
20		44578	1	C/SCR, HH 1/2-13UNC x 4"
21		44802	8	C/SCR, HH 5/8-11UNC x 3 GR8
22		44858	2	C/SCR, HH 3/8-16 UNC x 3-1/2 GR8
23		46054	3	C/SCR, HH 5/16-18UNC x 4 GR8
24		60417	2	C/SCR, HH 3/4-10 x 6 1/2 Lg. GR. 8
25		3540630	4	C/SCR, HH 3/4-10 UNC x 7.0 Lg 3/4-10 UNC x 7"
26		44519	3	L/WASHER, 5/16 SAE G8
27		44520	2	WASHER, 3/8 ID LOCK
28		44521	3	WASHER, LOCK 1/2 ID
29		44522	12	WASHER, LOCK 3/8 ID - L.C. #90343-8
30		44523	8	LOCKWASHER, Dia3/4
31		44524	8	NUT, HEX 3/4-10 UNC
32		44552	3	NUT, 5/16UNC
33		44526	12	NUT, HH 5/8-11 UNC
34		44525	3	NUT, HEX 1/2-13UNC
35		44527	2	NUT, HEX 3/8-16UNC
36		44859	2	WASHER, FLAT GR 8 3/8
37		46091	2	WASHER, FLAT Dia3/4 (SAE)
38		3541238	1	BOLT, EYE SHOULDER 3/4-10UNC
39		22351	4	PIN, CLEVIS 3/16 DIA x 2
40		44615	4	PIN, COTTER 3/32 x 3/4
41		45656	1	PIN, QUICK RELEASE, Ø3/8

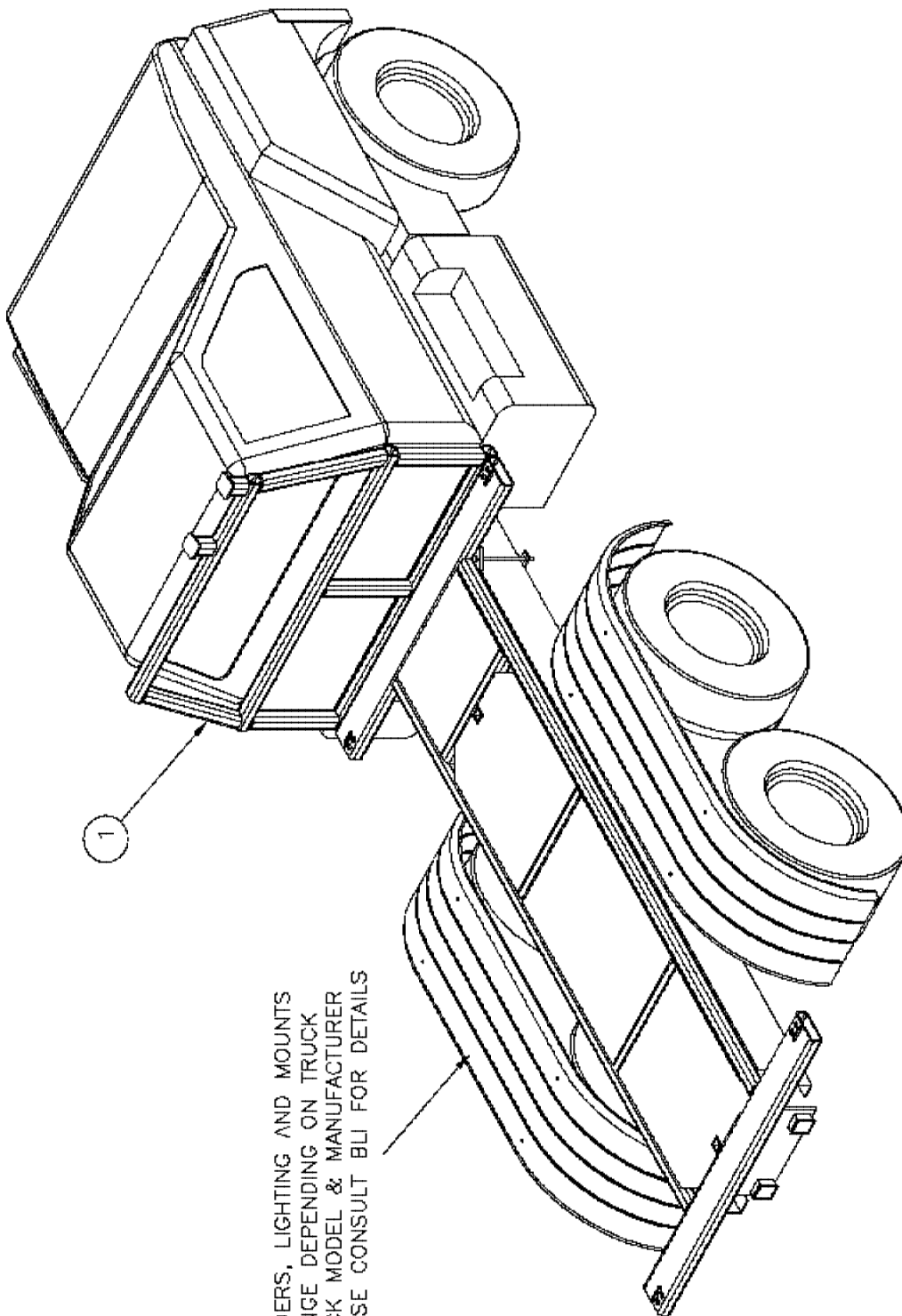




REF NO	REM	PART NUMBER	QTY	DESCRIPTION
1		3547753	1	SUPPORT, LADDER
2		3543138	1	BRACKET, LADDER SLIDE
3		3541854	1	LADDER, EXTENSION (28') [28']
4		39797	1	C/SCR, HH 3/4-10 x 6 Lg. GR.8
5		60417	1	C/SCR, HH 3/4-10 x 6 1/2 Lg. GR. 8
6		44523	2	LOCKWASHER, Dia3/4
7		44524	2	NUT, HEX 3/4-10 UNC
8		46091	2	WASHER, FLAT Dia3/4 (SAE)
9		3541238	1	BOLT, EYE SHOULDER 3/4-10UNC



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		3544114	4	SUPPORT LEG, STAIRS
2		3548022	2	WELDMENT CATWALK INNER
3		3548034	2	WELDMENT CATWALK OUTER
4		3548044	4	WELDMENT, STAIR HAND RAIL
5		3548041	4	WELDMENT, HANDRAIL END
6		3548043	4	WELDMENT, HANDRAIL SIDE
7		3548038	2	WELDMENT, STAIRS
8		44512	6	C/SCR, HH 3/8-16UNC x 1 LG
9		44602	4	C/SCR, HH 1/2-13 UNC x 3 GR8
10		44649	8	C/SCR, HH 1/4-20 UNC
11		44567	8	NUT, HEX 1/4-20UNC
12		44525	4	NUT, HEX 1/2-13UNC
13		44527	6	NUT, HEX 3/8-16UNC



FENDERS, LIGHTING AND MOUNTS  
CHANGE DEPENDING ON TRUCK  
TRUCK MODEL & MANUFACTURER  
PLEASE CONSULT BLI FOR DETAILS

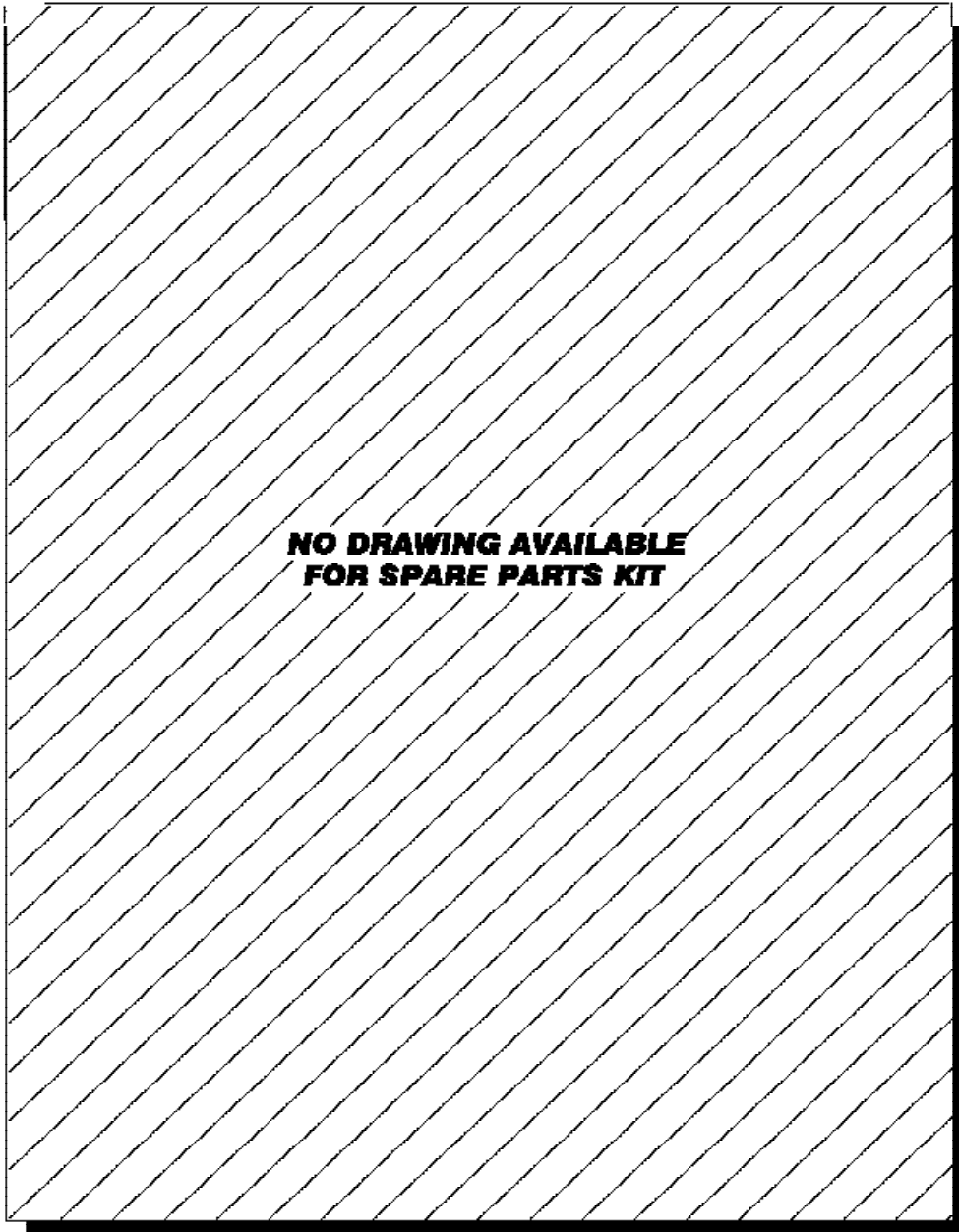




**REF NO    REM    PART NUMBER    QTY    DESCRIPTION**

**3547240    Spare Part Kit, Cummins (Minor spares)**

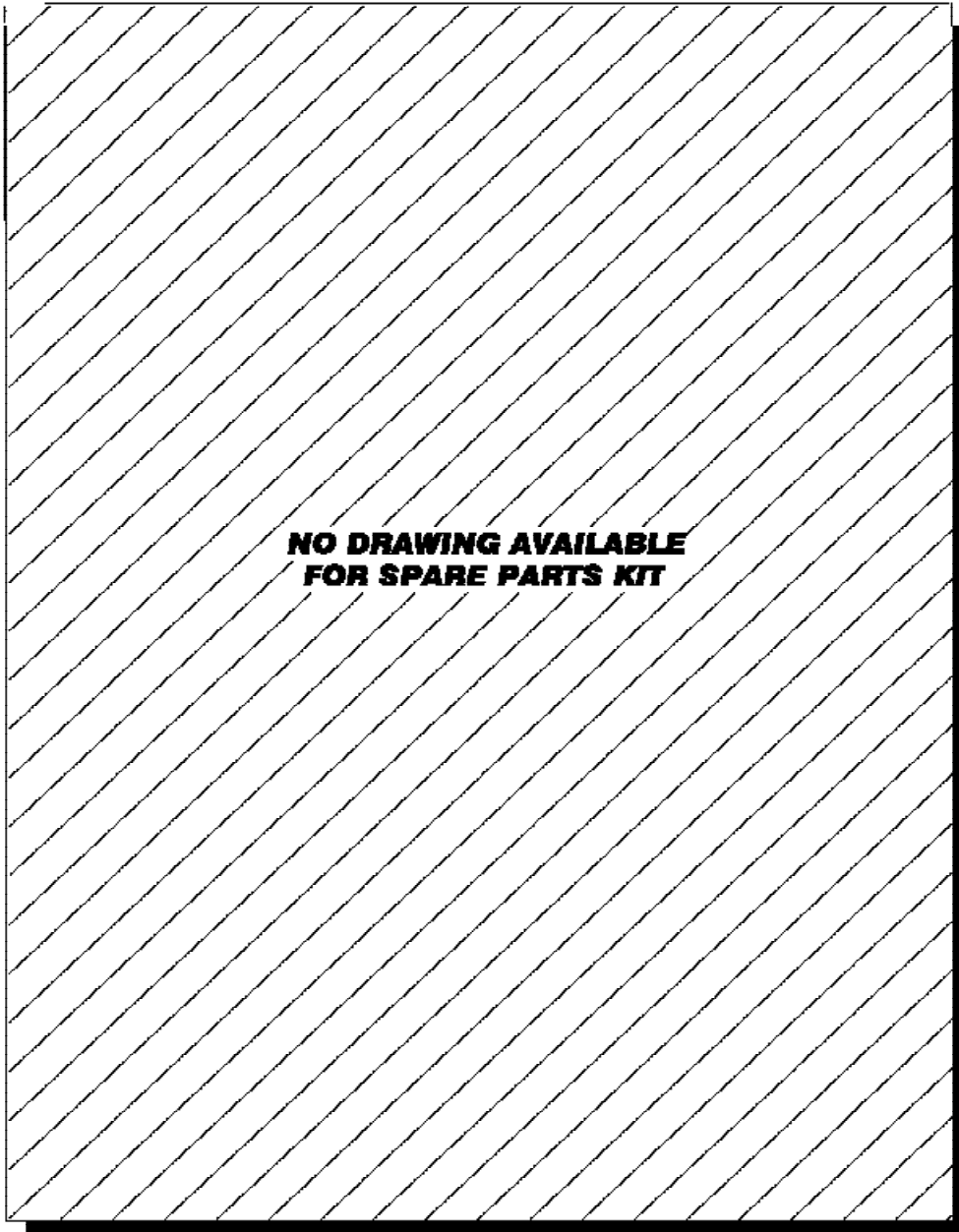




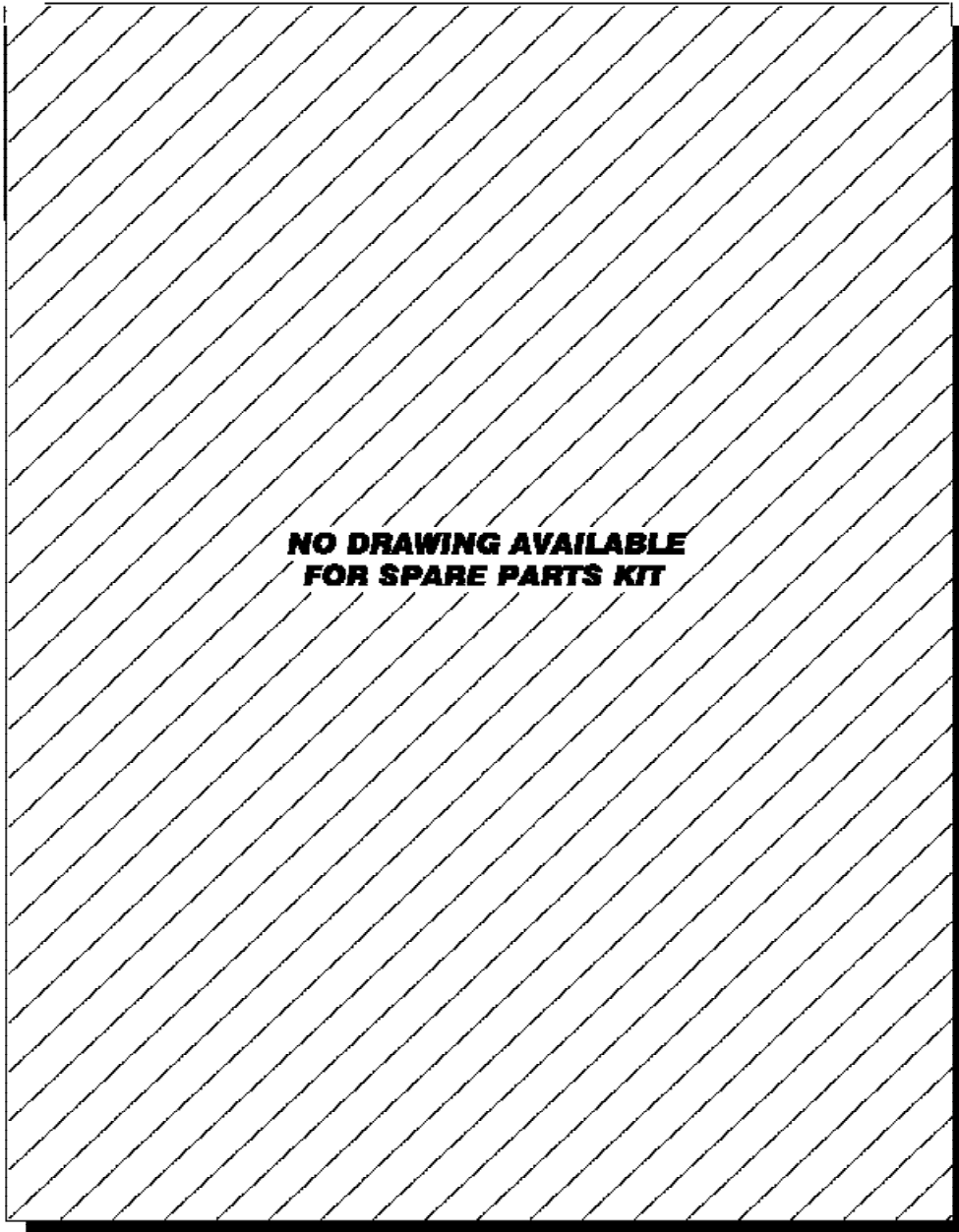


<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		100625	1	COUPLING HUB, 1 BORE [1" Bore]
2		100627	1	INSERT COUPLING
3		100787	1	COUPLING HUB, 1 1/8" BORE [Rework]
4		19163	1	GAUGE, PRESSURE
5	K	36685	1	Spare Parts Kit, Water Pump [FMC Model L09]

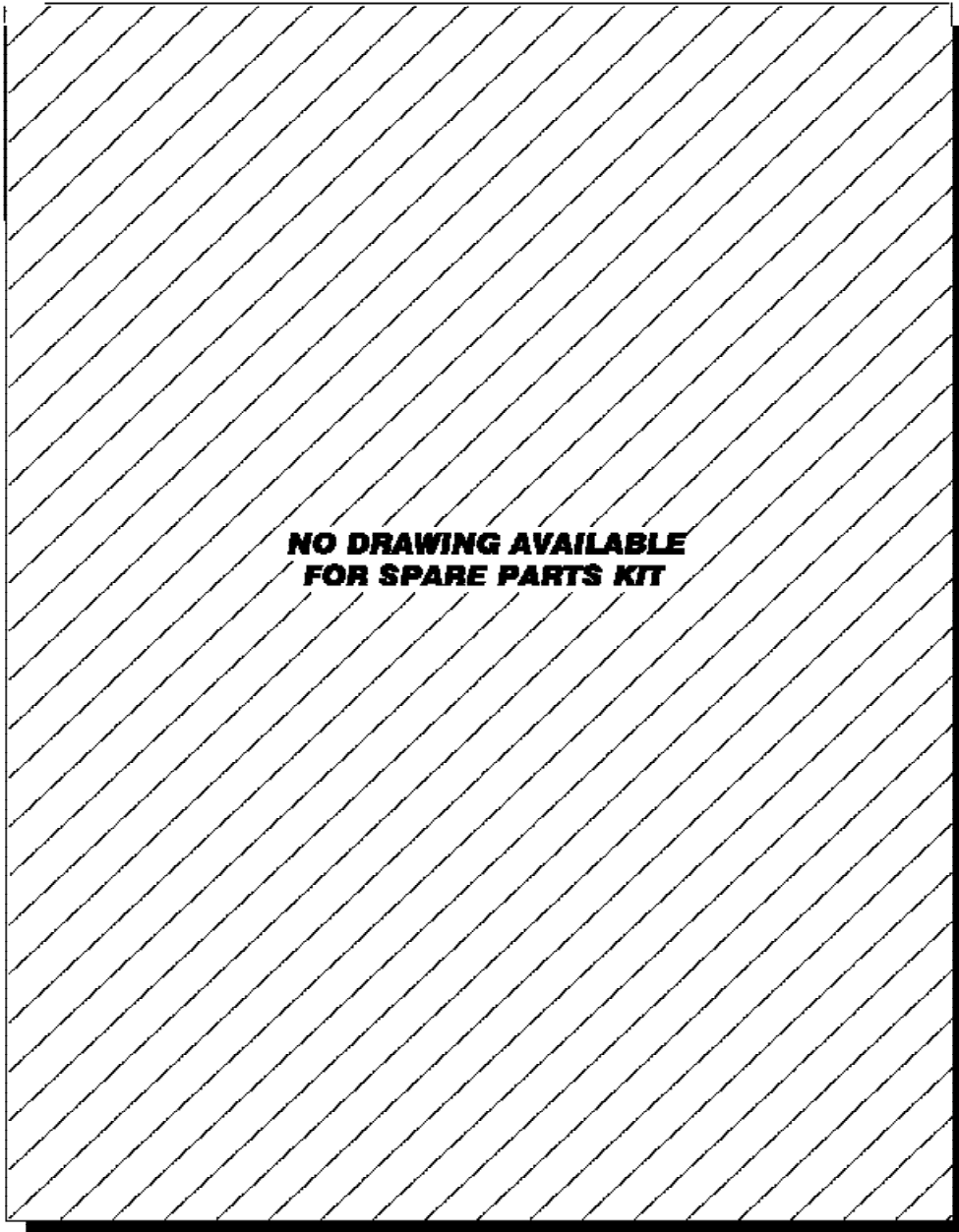
K) Select appropriate 'note' (in CATBASE) to view KITcontents. (i.e. Spares/Conversion)



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		100625	1	COUPLING HUB, 1 BORE [1" Bore]
2		100627	1	INSERT COUPLING
3		102136	1	COUPLING HUB, 1 1/2 BORE
4		19163	1	GAUGE, PRESSURE
5		36686	1	Spare Parts Kit, W11 Water Pump (Rev A) ( Page 174 )



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		75012	3	NUT, PLUNGER
2		75027	3	NUT, SPECIAL
3		79903	3	CYLINDER
4		75004	3	CUP, PLUNGER [L09 NIT/FAB]
5		75028	3	CUP, PLUNGER
6		75059	3	WASHER, PACKING



<b>REF NO</b>	<b>REM</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>DESCRIPTION</b>
1		96770	1	Seal Kit, Cartridge Valve 100214 & 215 M/L Hoist
2		101536	1	COUPLER, HALF, FEMALE 1/2" NPT
3		101537	1	COUPLER, HALF, MALE 1/2" NPT
4		34956	2	Spare Parts Kit, Cylinder Assembly





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