



Illustrated Parts Manual

**Model
45HA**

**P/N
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An Oshkosh Corporation Company

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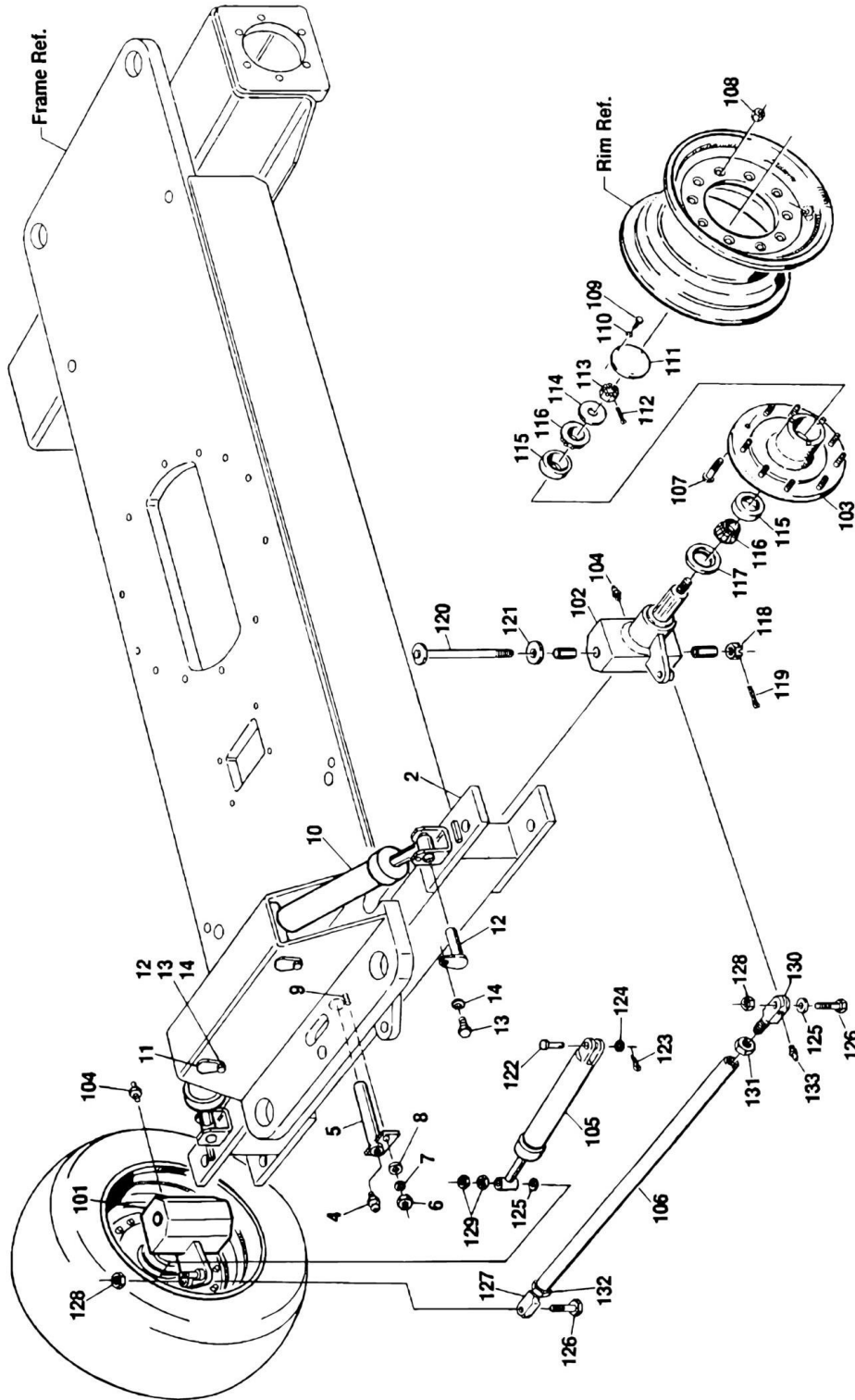
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SECTION 1 - FRAME

SECTION 1 - FRAME

FIGURE 1-1. FRAME AND STEERING INSTALLATION - 5FT-9IN/1.75M 2WD FRAME (WITH SINGLE ROD CYLINDER)



SECTION 1 - FRAME

FIGURE 1-1. FRAME AND STEERING INSTALLATION - 5FT-9IN/1.75M 2WD FRAME (WITH SINGLE ROD CYLINDER)

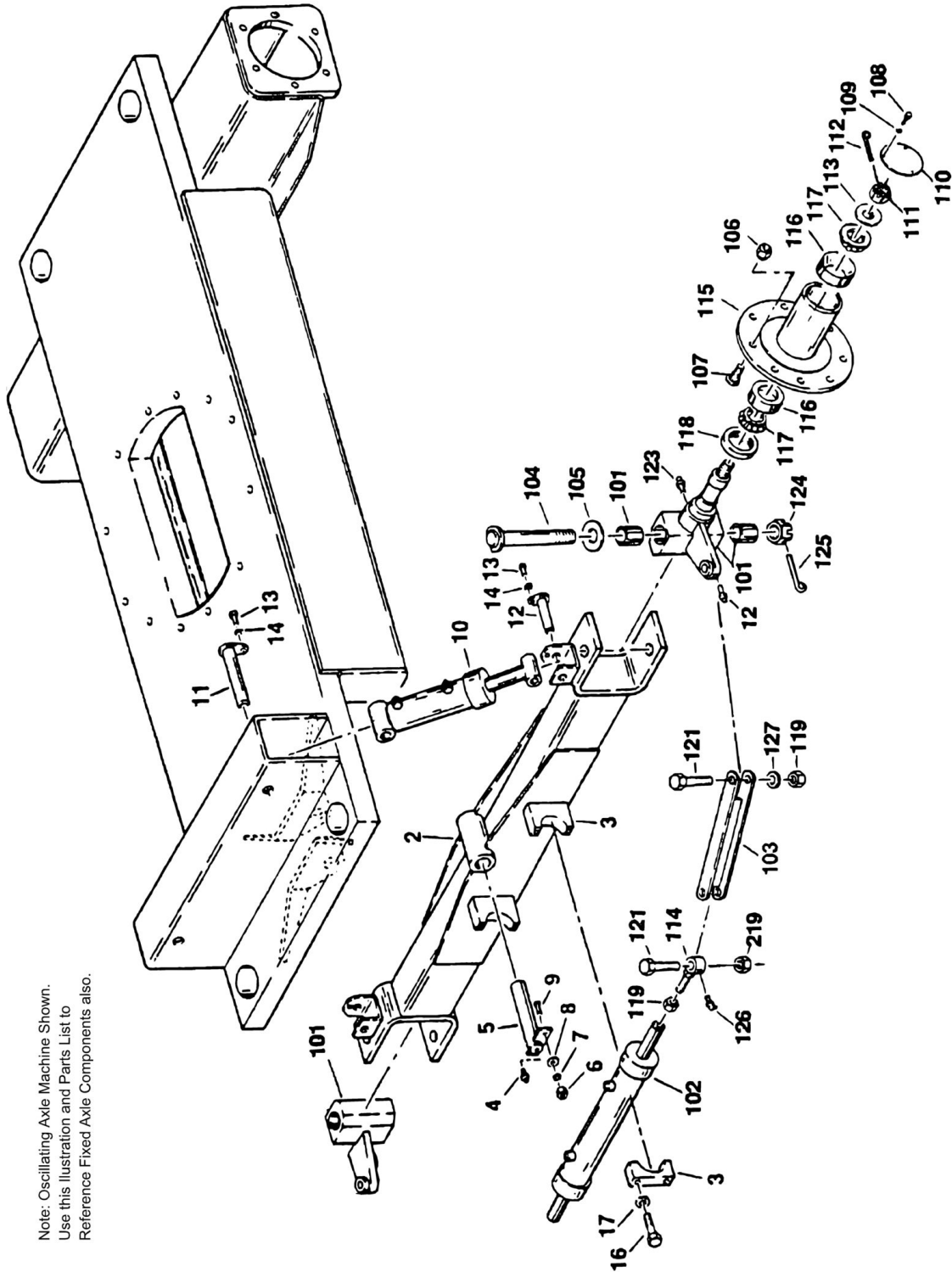
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	FRAME OPTIONS	
	2360288	1	Fixed Axle (Standard Stability/Standard Platform)	
	2360283	1	Oscillating Axle (Standard Stability/Standard Platform)	
	2360322	1	Fixed Axle (2 to 1 Stability/Low Mount Platform)	
	2360321	1	Oscillating Axle (2 to 1 Stability/Low Mount Platform)	
	0251326	Ref	OSCILLATING AXLE INSTALLATION (OPTIONAL)	B
2	4843094	1	Axle Weldment	
4	2160002	1	Fitting, Grease	
5	4842621	1	Pin, Pivot	
6	3311601	1	Nut 3/8in-16NC	
7	4761600	1	Lockwasher 3/8in	
8	4751600	1	Flatwasher 3/8in	
9	4300034	1	Stud (Welded on Part)	
10	1682406	2	Lockout Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
11	4842622	2	Pin (Top)	
12	4842794	2	Pin (Bottom)	
13	0641406	4	Bolt 1/4in-20NC x 3/4in	
14	4761400	4	Lockwasher 1/4in	
14	4751400	4	Flatwasher 1/4in	
	0239197	Ref	STEERING INSTALLATION	E
101	4130207	1	Spindle - Right Side	
101	0960839	2	Bushing, Bronze	
102	4130210	1	Spindle - Left Side	
102	0960839	2	Bushing, Bronze	
103	2780153	2	Hub, Wheel (Includes Item 107)	
104	2160002	3	Fitting, Grease	
105	1682020	1	Steer Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
106	3840962	1	Tie-Rod	
107	0630137	18	Stud, Wheel (Part of Item 103)	
108	3300012	18	Nut, Wheel	
109	0721003	6	Bolt #10-24NC x 3/8in	
110	4761000	6	Lockwasher #10	
111	1120019	2	Cap, Hub	
112	3450608	2	Pin, Cotter 3/16in x 2in	
113	3322603	2	Nut, Slotted 1in-12NF	
114	4740001	2	Washer, Hardened	
115	0440112	2	Cup, Bearing	
116	0440113	2	Cone, Bearing	
117	3960373	2	Seal, Oil	
118	3323003	2	Nut, Slotted 1 1/4in-12NF	
119	3450609	2	Pin, Cotter 3/16in x 2 1/4in	
120	3421340	2	Kingpin	
121	0440162	2	Washer, Thrust	
122	3431622	1	Pin, Clevis	
123	3450608	1	Pin, Cotter 3/16in x 2in	
124	4712600	1	Flatwasher 1in	
125	0440091	3	Washer, Thrust	

SECTION 1 - FRAME

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
126	0642628	2	Bolt 1in-8NC x 3 1/2in	
127	0560805	1	Block, Tie-Rod (Right Side)	
128	3312602	2	Nut, Jam 1in-8NC	
129	3300175	1	Locknut	
130	0560804	1	Block, Tie-Rod (Left Side)	
131	3300229	1	Nut, Jam (Left Hand Thread)	
132	3323002	1	Nut, Jam 1 1/4in-12NF	
133	2160003	2	Fitting, Grease - 45	

SECTION 1 - FRAME

FIGURE 1-2. FRAME AND STEERING INSTALLATION - 6FT-6IN/2M 2WD FRAME (WITH DOUBLE ROD CYLINDER)



Note: Oscillating Axle Machine Shown.
Use this Illustration and Parts List to
Reference Fixed Axle Components also.

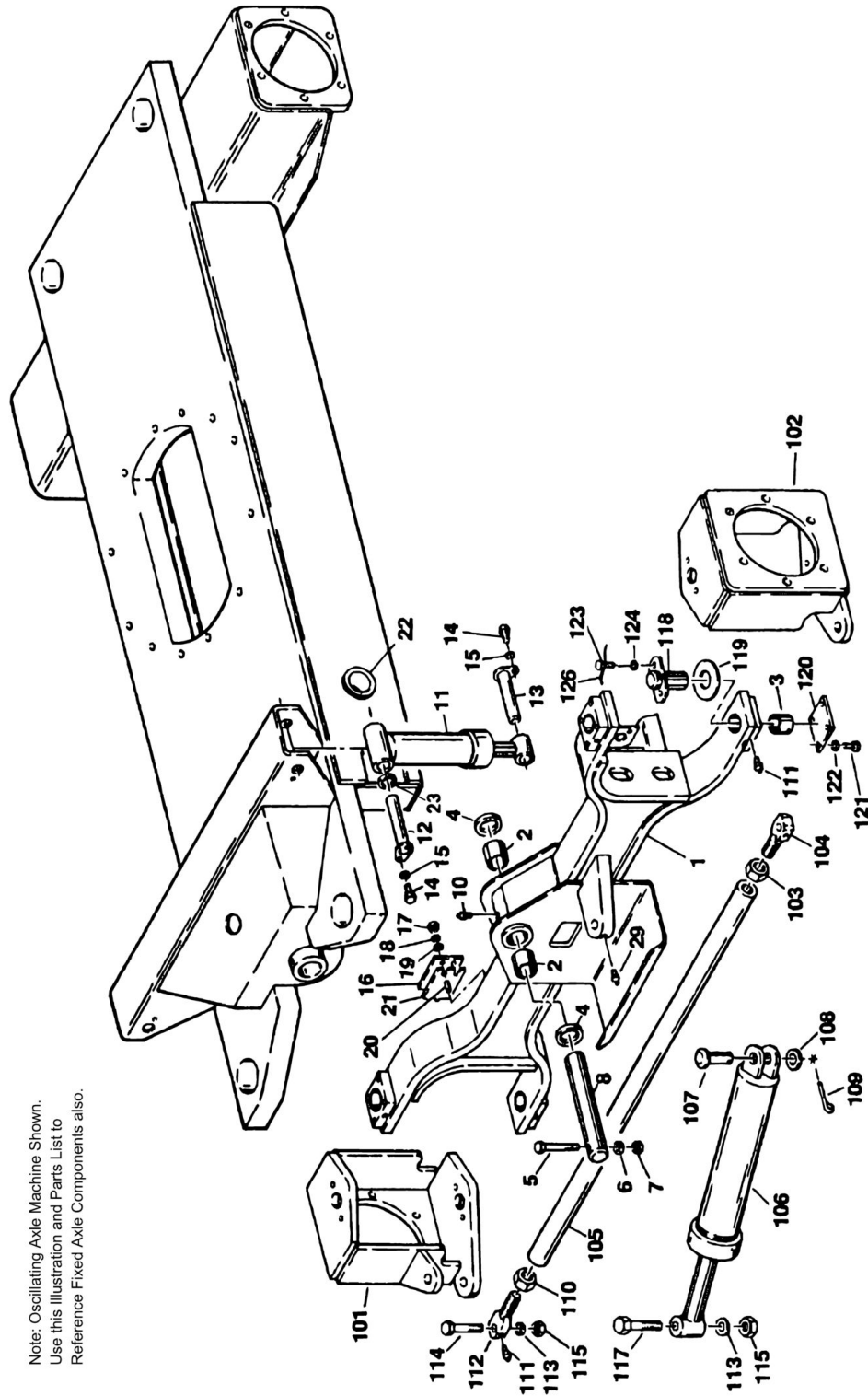
SECTION 1 - FRAME

FIGURE 1-2. FRAME AND STEERING INSTALLATION - 6FT-6IN/2M 2WD FRAME (WITH DOUBLE ROD CYLINDER)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	FRAME OPTIONS	
	2360262	Ref	Fixed Axle	
	2360274	Ref	Oscillating Axle	
	0251327	Ref	OSCILLATING AXLE INSTALLATION (OPTIONAL)	-
2	4842982	1	Axle Weldment	
3	0238390	2	Mounting Block Assembly - Steer Cylinder	
4	2160002	1	Fitting, Grease	
5	4842621	1	Pin, Pivot (Axle)	
6	3311601	1	Nut 3/8in-16NC	
7	4761600	1	Lockwasher 3/8in	
8	4751600	1	Flatwasher 3/8in	
9	4300034	1	Stud (Welded on Part)	
10	1682406	2	Lockout Cylinder Assembly (See CYLIBDER SECTION for Breakdown)	
11	4842622	2	Pin (Top) (Lockout Cylinder)	
12	4842794	2	Pin (Bottom) (Lockout Cylinder)	
13	0641406	4	Bolt 1/4in-20NC x 3/4in	
14	4761400	4	Lockwasher 1/4in	
	0238395	Ref	STEERING INSTALLATION	7
101	4130197	2	Spindle	
101	0960839	2	Bushing, Bronze	
102		Ref	Steer Cylinder Assembly Options (See CYLINDER SECTION for Breakdown)	
102	1681814	1	Steer Cylinder Assembly (Prior to SN 31941)	
102	1683511	1	Steer Cylinder Assembly (SN 31941 to Present)	
103	4842860	2	Tie-Rod	
104	3421340	2	Kingpin	
105	0440162	2	Washer, Thrust	
106	3300012	18	Nut, Wheel 1/2in-20NF	
107	0630137	18	Bolt, Wheel (Part of Item 115)	
108	0721004	6	Bolt #10-24 x 1/2in	
109	4761000	6	Lockwasher #10	
110	1120019	2	Cap, Hub	
111	3322603	2	Nut, Slotted 1in-12NF	
112	3450608	2	Pin, Cotter 3/16in x 2in	
113	4740001	2	Washer, Hardened	
114	4842624	2	Block, Tie-Rod	
115	2780153		Hub, Wheel	
116	0440112	4	Cup, Bearing	
117	0440113	4	Cone, Bearing	
118	3960373	2	Seal, Oil	
119	3312205	6	Locknut 3/4in-10NC	
121	0642224	4	Bolt 3/4in-10NC x 3in	
123	2160002	2	Fitting, Grease - Straight	
124	3323003	2	Nut, Slotted 1 1/4in-12NF	
125	3450609	2	Pin, Cotter 3/16in x 2 1/4in	
126	2160001	4	Fitting, Grease - 90	
127	4740156	2	Washer, Thrust	

SECTION 1 - FRAME

FIGURE 1-3. FRAME AND STEERING INSTALLATION 6FT-6IN/2M 4WD FRAME



SECTION 1 - FRAME

FIGURE 1-3. FRAME AND STEERING INSTALLATION 6FT-6IN/2M 4WD FRAME

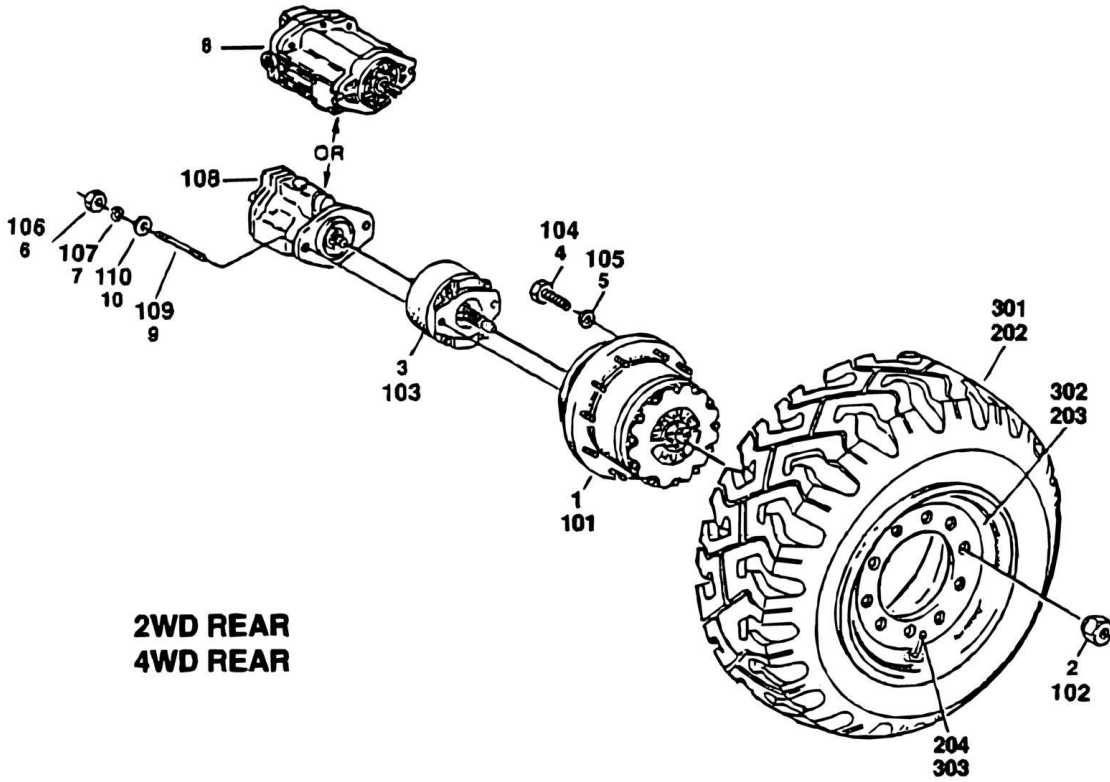
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	FRAME OPTIONS	
	2360277	1	Fixed Axle (Machines with 8.75in & 9.5in Tires)	
	2360392	1	Fixed Axle (Machines with 12in Tires)	
	2360272	1	Oscillating Axle (Machines with 8.75in & 9.5in Tires)	
	2360393	1	Oscillating Axle (Machines with 12in Tires)	
	0251976	Ref	OSCILLATING AXLE INSTALLATION (OPTIONAL)	3
1	4842930	1	Axle Weldment	
2	0961003	2	Bushing, Bronze (Axle Pivot)	
3	0961029	4	Bushing, Bronze (Steer Pivot)	
4	4740158	2	Washer, Thrust	
5	0641630	1	Bolt 3/8in-16NC x 3 3/4in	
6	4751600	1	Flatwasher 3/8in	
7	3311605	1	Locknut 3/8in-16NC	
8	3421500	1	Pin, Pivot (Axle)	
10	2160002	1	Fitting, Grease - Straight	
11	1682406	2	Lockout Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
12	4842622	2	Pin, Attach (Top) (Lockout Cylinder)	
13	4842794	2	Pin, Attach (Bottom) (Lockout Cylinder)	
14	0641406	4	Bolt 1/4in-20NC x 3/4in	
15	4761400	4	Lockwasher 1/4in	
15	4751400	4	Flatwasher 1/4in	
16	4220115	2	Stop, Axle	
17	3311801	4	Nut 1/2in-13NC	
18	4761800	4	Lockwasher 1/2in	
19	4751800	4	Flatwasher 1/2in	
20	4300045	4	Stud (Welded on Part)	
21	4070690	AR	Shim	
22	0961127	2	Bushing, Snap	
23	4712600	AR	Flatwasher	
	0238637	Ref	STEERING INSTALLATION	E
101	4130192	1	Spindle (Right Side)	
102	4130190	1	Spindle (Left Side)	
103	3300229	1	Nut, Jam (Left Hand Thread)	
104	0560714	1	Block, Tie-Rod (Left Side)	
105	3840861	1	Tie-Rod	
106	1681892	1	Steer Cylinder Assy (See CYLINDER SECTION for Breakdown)	
107	3431622	1	Pin, Clevis	
108	4712600	1	Flatwasher 1in Narrow	
109	3450606	1	Pin, Cotter 3/16in x 1 1/2in	
110	3323002	1	Nut, Jam 1 1/4in-12NF	
111	2160002	6	Fitting, Grease	
112	0560605	1	Block, Tie-Rod (Right Side)	
113	0440091	3	Washer, Thrust	
114	0642628	2	Bolt 1in-8NC x 3 1/2in	
115	3312602	3	Nut, Jam 1in-8NC	
117	0630369	1	Bolt, Special	
118	3421190	4	Kingpin	
119	0440161	2	Bearing, Thrust	
120		Ref	Plate, Cover Options:	

SECTION 1 - FRAME

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
120	3530244	4	Plate, Cover (Prior to August 1992)	
120	3536410	4	Plate, Cover (August 1992 to Present)	
121	0641404	8	Bolt 1/4in-20NC x 1/2in (Prior to August 1992)	
121	4300106	8	Drivescrew (August 1992 to Present)	
122	4761400	8	Lockwasher 1/4in (Prior to August 1992 Only)	
123	0630083	8	Bolt, Special	
124	4761600	8	Lockwasher 3/8in	
126	4920096	4 ft/20cm	Wire, Safety	
	0100011	AR	Loctite #242	

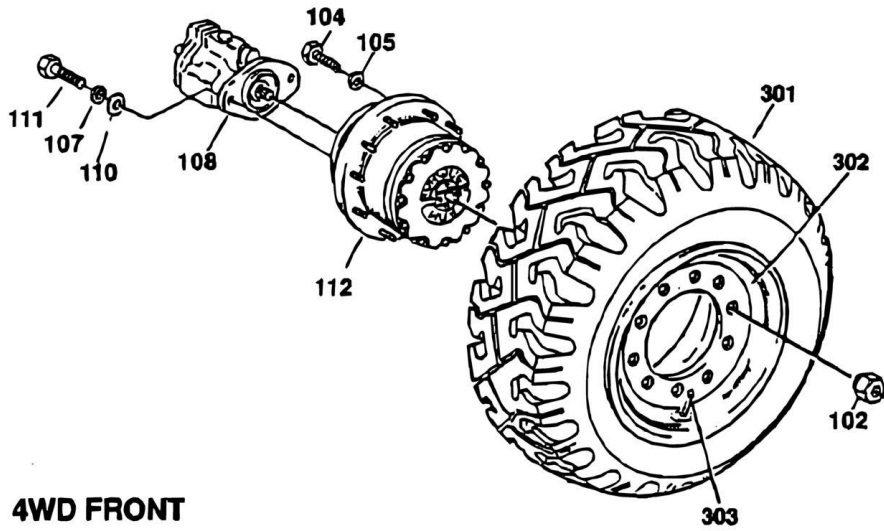
SECTION 1 - FRAME

FIGURE 1-4. TIRE AND WHEEL DRIVE INSTALLATIONS



**2WD REAR
4WD REAR**

ITEMS NOT SHOWN: 201



4WD FRONT

SECTION 1 - FRAME

FIGURE 1-4. TIRE AND WHEEL DRIVE INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	WHEEL DRIVE INSTALLATIONS (2WD)	
	0238521	Ref	Gas/Diesel Machines Built (Prior to October 1992)	C
	0238521	Ref	All Electric Machines Built (October 1992 to Present)	C
	0253630	Ref	Gas/Diesel Machines Built (October 1992 to Present) (Standard)	-
	0270217	Ref	Gas/Diesel Machines (Post Production Alternative)(Standard)	1
	0256126	Ref	Gas/Diesel Machines Built (October 1992 to Present) (15% Maximum Gradability)	-
	0250218	Ref	Gas/Diesel Machines (Post Production Alternative) (15% Maximum Gradability)	1
1		Ref	Drive Hub Assembly Options (See DRIVE HUB ASSEMBLIES for Breakdown):	
1		Ref	Electric Machines:	
1	2780134 See Note	2	Electric Machines (Prior to March 1989) (W1B1 Stamped on ID Plate) (Note: When replacing complete hub recommend using 2780168 Hub Assembly.)	
1	2780168	2	Electric Machines (March 1989 to Present) (W1BF Stamped on ID Plate)	
1		Ref	Gas/Diesel Machines:	
1	2780134 See Note	2	Gas/Diesel Machines (Prior to March 1989) (W1B1 Stamped on ID Plate) (Note: When replacing complete hub recommend using 2780168 Hub Assembly.)	
1	2780168	2	Gas/Diesel Machines (March 1989 to October 1992) (W1BF Stamped on ID Plate)	
1	2780169	2	Gas/Diesel Machines (October 1992 to Present) (Standard)	
1	2780167	2	Gas/Diesel Machines (October 1992 to Present) (15% Max Gradability)	
2	3300012	18	Nut, Wheel	
3		Ref	Drive Brake Assembly Options:	
3	0920072	2	Drive Brake Assembly (Prior to January 1992) (Ausco) (See DRIVE BRAKE ASSEMBLY - AUSCO for Breakdown)	
3	0920084	2	Drive Brake Assembly (January 1992 to SN 33475) (Mico) (See DRIVE BRAKE ASSEMBLY - MICO for Breakdown)	
3	0920110	2	Drive Brake Assembly (Mico) (See DRIVE BRAKE ASSEMBLY - MICO for Breakdown) (SN 33476 to Present)	
3	0920119	2	Optional Brake (Mico) (May be used as alternative) (was p/n 0920117)	
3	7018612	1	Repair Kit - 0920117/0920119 Brake (Includes Case Seal, Piston Inner and Outer O-Rings and Back-up Rings, Stator Disc, Rotor Disc, Return Plate, Springs, Oil Seal, Bearing, 2 Retaining Rings & 2 Mounting Face Gaskets) (1 Per Assembly)	
3	7000731	2	Gasket, Mounting Face	
4	0642016	12	Bolt 5/8in-11NC x 2in	
5	4762000	12	Lockwasher 5/8in	
6	3311801	4	Nut 1/2in-13NC	
7	4761800	4	Lockwasher 1/2in	
8	1001096405	2	Drive Motor Assembly (See DRIVE MOTOR ASSEMBLY - 2WD for Breakdown) (was p/n 3160132)	
9	4300092	4	Stud 1/2in x 5 1/2in	
10	4751800	4	Flatwasher 1/2in	
	0250432	Ref	WHEEL DRIVE INSTALLATION (4WD) (REAR DRIVE HAS SEPARATE HUB AND BRAKE)	C

SECTION 1 - FRAME

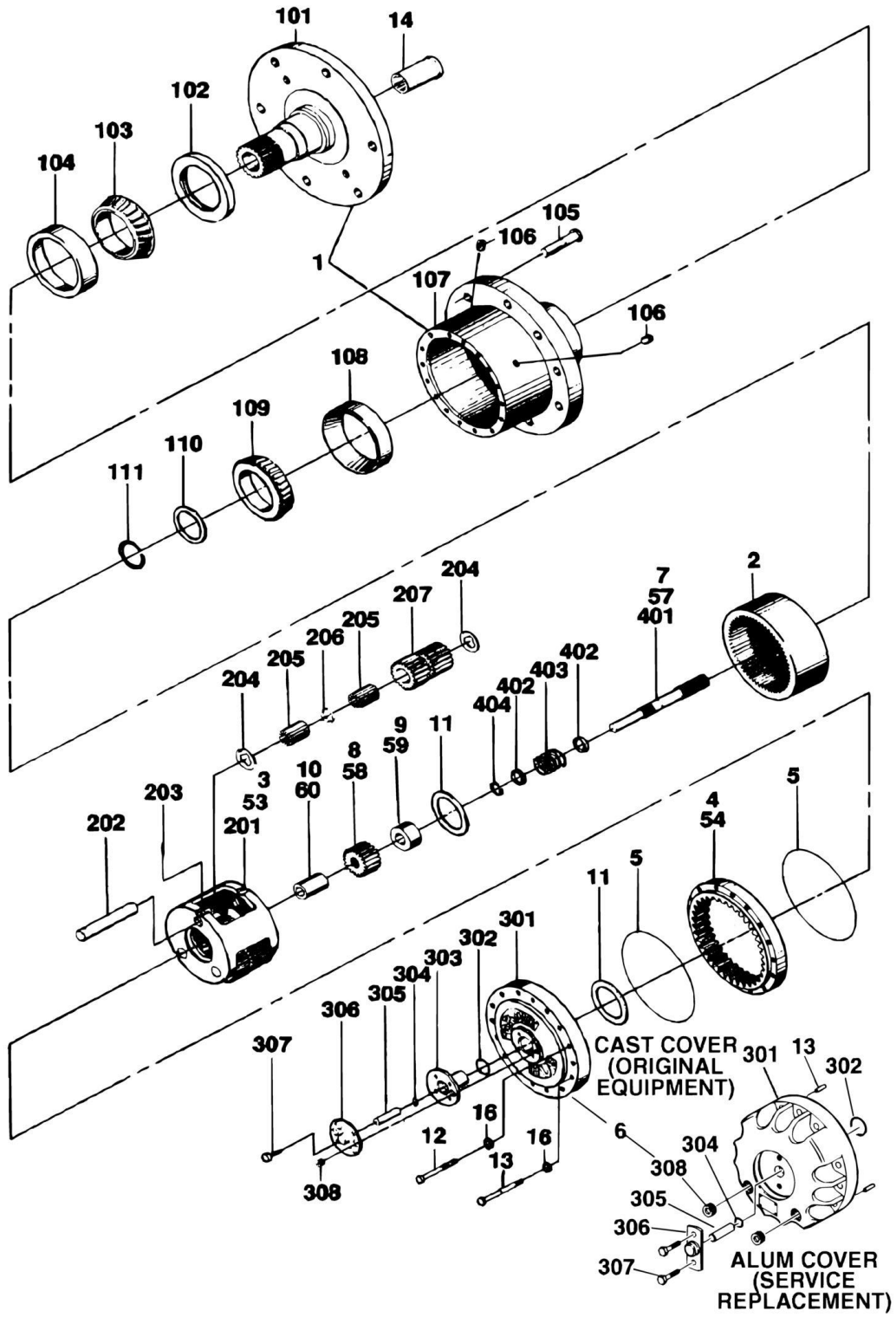
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0270158	Ref	WHEEL DRIVE INSTALLATION (4WD) (POST PRODUCTION ALTERNATIVE)	1
101		Ref	Drive Hub Assembly - Rear Options (See DRIVE HUB ASSEMBLIES for Breakdown):	
101	2780175	2	Drive Hub Assembly - Rear (September 1989 to November 1992)	
101	2780167	2	Drive Hub Assembly - Rear (November 1992 to Present)	
102	3300012	36	Nut, Wheel	
103		Ref	Drive Brake Assembly Options:	
103	0920072	2	Drive Brake Assembly (September 1989 to January 1992) (Ausco) (See DRIVE BREAK ASSEMBLY - AUSCO for Breakdown)	
103	0920084	2	Drive Brake Assembly (January 1992 to SN 33475) (Mico) (See DRIVE BREAK ASSEMBLY - MICO for Breakdown)	
103	0920110	2	Drive Brake Assembly (Mico) (See DRIVE BREAK ASSEMBLY - MICO for Breakdown) (SN 33476 to Present)	
103	0920119	2	Optional Brake (Mico) (May be used as alternative) (was p/n 0920117)	
103	7018612	1	Repair Kit - 0920117/0920119 Brake (Includes Case Seal, Piston Inner and Outer O-Rings and Back-up Rings, Stator Disc, Rotor Disc, Return Plate, Springs, Oil Seal, Bearing, 2 Retaining Rings & 2 Mounting Face Gaskets) (1 Per Assembly)	
103	7000731	2	Gasket, Mounting Face	
104	0642014	24	Bolt 5/8in-11NC x 2in	
105	4762000	24	Lockwasher 5/8in	
106	3311801	4	Nut 1/2in-13NC	
107	4761800	8	Lockwasher 1/2in	
108	3160130	4	Drive Motor Assembly (See DRIVE MOTOR ASSEMBLY – 4WD for Breakdown)	
109	4300092	4	Stud 1/2in-13NC x 5 1/2in	
110	4751800	8	Flatwasher 1/2in	
111	0641810	4	Bolt 1/2in-13NC x 1 1/4in	
112		Ref	Drive Hub/Brake Assembly - Front Options (See DRIVE HUB/BREAK ASSEMBLIES for Breakdown)	
112	2780150	2	Drive Hub/Brake Assembly - Front (September 1989 to August 1992)	
112	2780193	2	Drive Hub/Brake Assembly - Front (August 1992 to November 1992)	
112	2780191	2	Drive Hub/Brake Assembly - Front (November 1992 to Present)	
		Ref	TIRE AND WHEEL OPTIONS (2WD)	
201		Ref	Tire and Wheel Options (2WD Front) (Not Shown)	
201	0239396	2	Tire and Wheel Assembly - Pneumatic - 9.50in x 16.5in	
201	4520110	2	Tire - 9.50in x 16.5in (General Jumbo GLT)	
201	0253131	2	Tire and Wheel Assembly - Foam Filled 8.75in x 16.5in LT (Goodyear Unisteel) (Prior to SN 31086)	
201	0253131	2	Tire and Wheel Assembly - Foam-Filled 8.75in x 16.5in LT (Galaxy) (SN 31086 to Present)	
201	0239806	2	Tire and Wheel Assembly - Foam-Filled 9.5in x 16.5in (General)	
		Ref	Note: Assemblies may require ballast/foam filling to manufacture's specifications prior to installing on a machine. Refer to Operation and Safety or Service and Maintenance Manuals. Purchase individual tire and /or rim only if able to foam fill tire and wheel assembly, otherwise, purchase complete assembly.	
202		Ref	Tire and Wheel Options (2WD Rear)	
202	0239397	2	Tire and Wheel Assembly - Pneumatic 9.5in x 16.5in Rear (Optional)	

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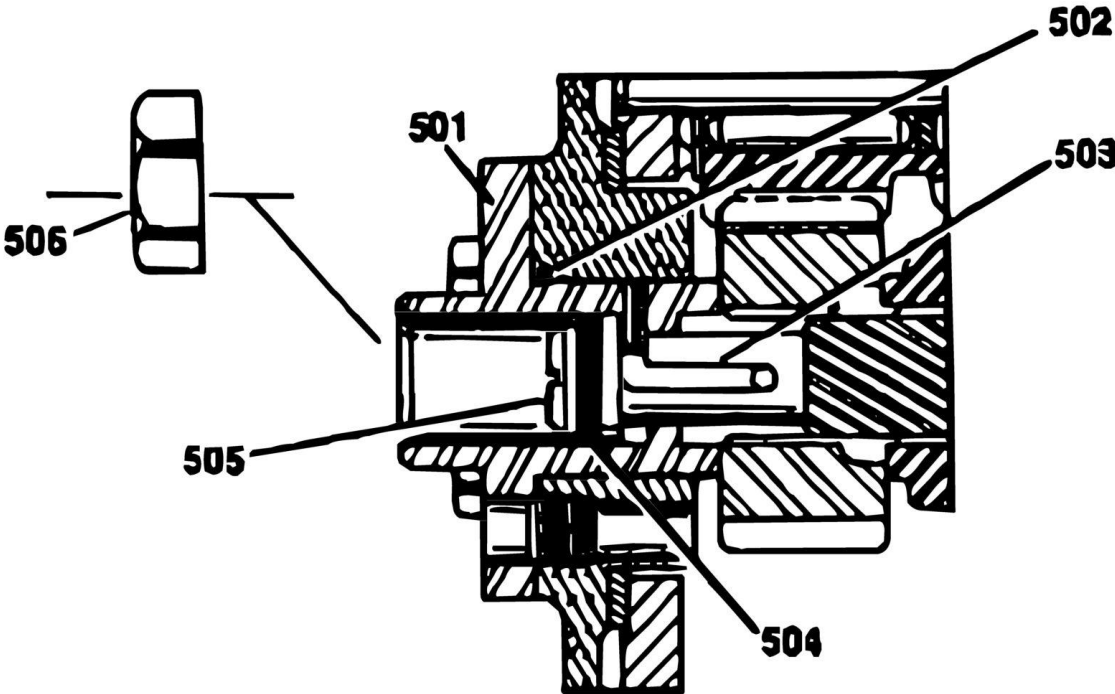
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
202	4520111	2	Tire - 9.5in x 16.5in (General Jumbo GLT)	
202	0253131	2	Tire and Wheel Assembly - Foam-Filled 8.75in x 16.5in LT (Goodyear Unisteel) (Prior to SN 31086)	
202	0253131	2	Tire and Wheel Assembly - Foam-Filled 8.75in x 16.5in LT (Galaxy) (SN 31086 to Present)	
202	0239805	2	Tire and Wheel Assembly - Foam-Filled 9.5in x 16.5in (General)	
		Ref	Note: Assemblies may require ballast/foam filling to manufacture's specifications prior to installing on a machine. Refer to Operation and Safety or Service and Maintenance Manuals. Purchase individual tire and /or rim only if able to foam fill tire and wheel assembly, otherwise, purchase complete assembly.	
203		Ref	Rim Options:	
203	4842561	4	Rim (8.75in Tires)	
203	4842994	4	Rim (9.5in Tires)	
204	4640392	4	Valve, Air	
		Ref	TIRE AND WHEEL OPTIONS (4WD)	
301		Ref	Tire and Wheel Options (4WD Front and Rear)	
301	0239397	4	Tire and Wheel Assembly - Pneumatic 9.5in x 16.5in	
301	4520106	4	Tire - 9.5in x 16.50in (General GLT Traction II)	
301	0251260	2	Tire and Wheel Assembly - LH Side Pneumatic 12in x 16.5in (NHS)	
301	0251259	2	Tire and Wheel Assembly - RH Side Pneumatic 12in x 16.5in (NHS)	
301	4520129	4	Tire - 12in x 16.5in (NHS)	
301	0253131	4	Tire and Wheel Assembly - Foam-Filled 8.75in x 16.50 LT (Goodyear Unisteel) (Prior to SN 31086)	
301	0253131	4	Tire and Wheel Assembly - Foam-Filled 8.75in x 16.5in LT (Galaxy) (SN 31086 to Present)	
301	0239806	4	Tire and Wheel Assembly - Foam-Filled 9.5in x 16.5in (General)	
		Ref	Note: Assemblies may require ballast/foam filling to manufacture's specifications prior to installing on a machine. Refer to Operation and Safety or Service and Maintenance Manuals. Purchase individual tire and /or rim only if able to foam fill tire and wheel assembly, otherwise, purchase complete assembly.	
302		Ref	Rim Options:	
302	4842561	4	Rim (8.75in Tires)	
302	4842994	4	Rim (9.5in Tires)	
302	4860126	4	Rim (12in Tires)	
303	4640392	4	Valve, Air	

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FIGURE 1-5. DRIVE HUB ASSEMBLIES



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FIGURE 1-5. DRIVE HUB ASSEMBLIES

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	DRIVE HUB ASSEMBLIES	
1	7010428	1	Hub-Spindle Sub-Assembly (See Items 101-111)	
2	7000246	1	Gear, Internal	
3		Ref	Carrier Assembly (See Items 201-207)	
4		Ref	Gear, Ring (See Item 54 for Options)	
5	7000230	2	O-Ring	
6		Ref	Cover Assembly (Includes Items 301-308)	
7		Ref	Input Shaft Assembly (See Item 57 for Options)	
8		Ref	Gear, Input (See Item 58 for Options)	
9		Ref	Spacer, Thrust (See Items 59 for Options)	
10		Ref	Spacer, Thrust (See Item 60 for Options)	
11	7000253	2	Washer, Thrust	
11	7017096	1	Spacer (Aluminum Cover (Service Replacement))	
12		Ref	Bolt Options:	
12	7000217	12	Cast Cover (Original Equipment)	
12	7017067	12	Aluminum Cover (Service Replacement)	
13		Ref	Hardware Options:	
13	7000214	4	Bolt Used on Cast Cover (Original Equipment)	
13	7017080	4	Dowel Pin Used Aluminum Cover (Service Replacement)	
14	7000206	1	Coupling	
16	7007603	16	Flatwasher	
		Ref	DRIVE HUB ASSEMBLIES	
	2780168	Ref	Electric Machines	
		Ref	Gas/Diesel Machines	
	2780168	Ref	2WD (Prior to October 1992)	-
	2780169	Ref	2WD (October 1992 to September 1995)	-
	2780167	Ref	2WD (September 1995 to Present)	-
	2780175	Ref	4WD Rear Drive Only (September 1989 to November 1992)	-
	2780167	Ref	4WD Rear Drive Only (November 1992 to Present)	-
53		Ref	Carrier Assembly Options (See Items 201-207 for Breakdown):	
53	7000202	1	2780168/2780175 Hubs	
53	7000247	1	2780167/2780169 Hubs	
54		Ref	Gear, Ring Options:	
54	7007634	1	2780175 Hubs	
54	7000203	1	2780168 Hub	
54	7000248	1	2780167/2780167 Hubs	
57		Ref	Input Shaft Assembly Options (See items 401-404 for Breakdown):	
57	7000250	1	2WD Machines	
57	7007650	1	4WD Machines	
58		Ref	Gear, Input Options:	
58	7000201	1	Electric Machines	
58	7000201	1	2WD Gas/Diesel Machines (Prior to October 1992)	
58	7000251	1	2WD Gas/Diesel Machines (October 1992 to Present)	
58	7007652	1	4WD Machines	
59		Ref	Spacer, Thrust Options:	
59	7000252	1	2WD Machines	
59	7007653	1	4WD Machines	
60		Ref	Spacer, Thrust Options:	
60	Not Required	0	2WD Machines	

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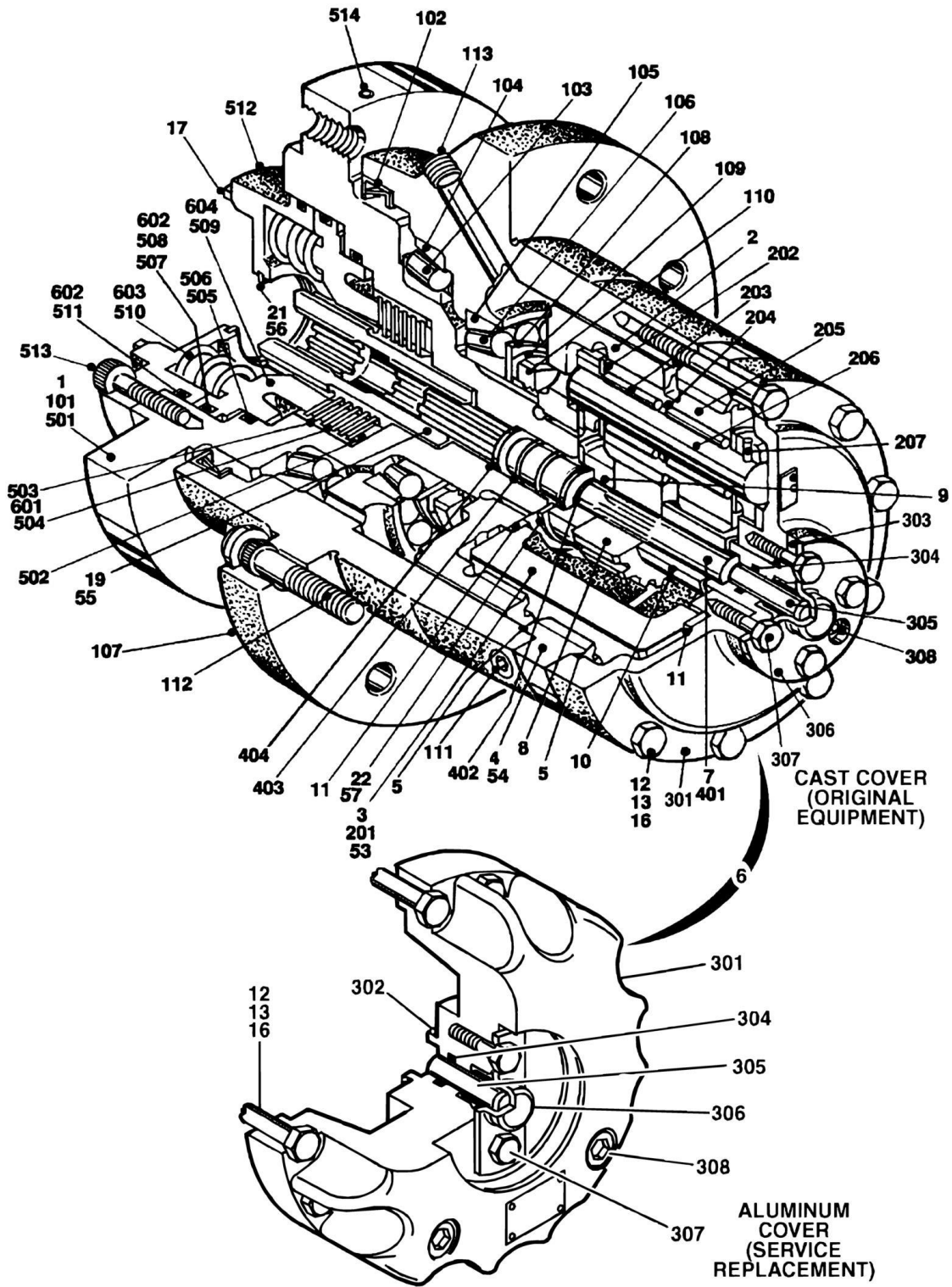
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
60	7007654	1	4WD Machines	
	7010428	Ref	HUB - SPINDLE SUB-ASSEMBLY	
101	7001997	1	Spindle	
102	2900034	1	Seal	
103	7010429	1	Cone, Bearing	
104	7010429	1	Cup, Bearing	
105	7007697	9	Bolt, Wheel	
106	7000242	2	Plug, Pipe	
107	7007601	1	Hub	
108	7000257	1	Cup, Bearing	
109	7000258	1	Cone, Bearing	
110	2900034	1	Spacer	
111	2900034	1	Ring, Retaining	
		Ref	CARRIER ASSEMBLY OPTIONS	
	7000202	Ref	2780168/2780175 Hubs	
	7000247	Ref	2780167/2780169 Hubs	
201	7001931	1	Carrier	
202	7001911	3	Shaft	
203	7001913	3	Pin, Roll	
204	7001985	6	Washer, Thrust	
205	7001909	96	Roller, Needle	
206	7000263	3	Spacer	
207		Ref	Gear, Cluster Options:	
207	7007643	3	2780168/2780175 Hubs	
207	7001912	3	2780167/2780169 Hubs	
		Ref	COVER ASSEMBLY	
	See Kit Options	Ref	Cast Cover (Original Equipment)	
	See Kit Options	Ref	Aluminum Cover (Service Replacement)	
301		Ref	Cover Options:	
301	70001111	1	Cast Cover (Original Equipment) (was p/n 7000226)	
301	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017091)	
302		Ref	O-Ring Options:	
302	70001111	1	Cast Cover (Original Equipment)	
302	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017070)	
303		Ref	Cap, Cover	
303	70001111	1	Cast Cover (Original Equipment)	
303	Not Required	0	Aluminum Cover (Service Replacement)	
304		Ref	O-Ring Options:	
304	70001111	1	Cast Cover (Original Equipment)	
304	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017095)	
305		Ref	Rod, Disconnect Options:	
305	70001111	1	Cast Cover (Original Equipment)	
305	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017092)	
306		Ref	Cap, Disconnect	
306	70001111	1	Cast Cover (Original Equipment)	
306	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017093)	
307		Ref	Bolt Options:	
307	70001111	4	Cast Cover (Original Equipment) (was p/n 7017093)	
307	70001349	2	Aluminum Cover (Service Replacement) (was p/n 7000216)	
308		Ref	Plug, Pipe Options:	
308	70001111	1	Cast Cover (Original Equipment) (was p/n 7000243)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
308	70001349	2	Aluminum Cover (Service Replacement) (was p/n 7017094)	
		Ref	INPUT SHAFT ASSEMBLY	
	7000250	Ref	2WD	
	7007650	Ref	4WD	
401		Ref	Shaft Options:	
401	7000260	1	2WD	
401	7007651	1	4WD	
402	7000263	2	Spacer	
403	7000262	1	Spring	
404	7000261	1	Ring, Retaining	
		Ref	KIT OPTIONS:	
	7010429	1	Bearing Kit (Includes Items 103 & 104)	
	2900034	1	Seal Kit (Includes Items 5, 102, 110 & 111)	
	See Note	1	Disconnect and Seal Kit (Includes Items 5, 102, 110, 111 & 302-306) (was p/n 2900137) (Note: Use Cover Kit as Replacement)	
		Ref	Cover Kit Options: (Note: Kit Replaces Items 5, 11 (Spacer), 12, 13 (Dowel Pins) & 301-308)	
	70001111	1	Cast Cover (Original Equipment) (was p/n 7001989 & p/n 7017099)	
	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017090)	
	2901157	Ref	DISCONNECT HUB ASSEMBLY (CAST COVER (ORIGINAL EQUIPMENT) ONLY) (OPTIONAL)	-
501	7002025	1	Cover	
502	7000215	1	O-Ring	
503	7007669	1	Pin, Spring	
504	7010446	1	Seal	
505	7010444	1	Rod, Disconnect	
506	7010447	1	Cap, Dust	

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FIGURE 1-6. DRIVE HUB/BRAKE ASSEMBLIES



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FIGURE 1-6. DRIVE HUB/BRAKE ASSEMBLIES

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	DRIVE HUB/BRAKE ASSEMBLIES - 4WD (FRONT ONLY)	
1		Ref	Hub/spindle/Brake Assembly (See Items 101-113 for Breakdown)	
2	7007691	1	Gear, Internal	
3		Ref	Carrier Assembly (See Item 53 for Options)	
4		Ref	Gear, Ring (See Item 54 for Options)	
5	7000230	2	O-Ring	
6		Ref	Cover Assembly (Includes Items 301-308)	
7	7007650	1	Input Shaft Assembly (See Items 401-404 for Breakdown)	
8	7007652	1	Gear, Input	
9	7007653	1	Spacer, Input	
10	7007654	1	Spacer, Input	
11	7000253	2	Washer, Thrust	
11	7017096	1	Spacer (Aluminum Cover (Service Replacement)	
12		Ref	Bolt Options:	
12	7000217	12	Cast Cover (Original Equipment)	
12	7017067	12	Aluminum Cover (Service Replacement)	
13		Ref	Hardware Options:	
13	7000214	4	Bolt Used on Cast Cover (Original Equipment)	
13	7017067	4	Dowel Pin Used on Aluminum Cover (Service Replacement)	
16	7007603	16	Flatwasher	
17	7007692	1	Gasket	
19		Ref	Coupling (See Item 55 for Options)	
21		Ref	Ring, Retainer (See Item 56 for Options)	
22		Ref	Washer, Thrust (See Item 57 for Options)	
		Ref	DRIVE HUB/BRAKE ASSEMBLY	
	2780193	Ref	Drive Hub/Brake Assembly (Prior To November 1992)	-
	2780191	Ref	Drive Hub/Brake Assembly (November 1992 To Present)	-
53		Ref	Carrier Assembly Options (See Items 201-207 for Breakdown):	
53	7000202	1	Carrier Assembly (Prior to November 1992)	
53	7000247	1	Carrier Assembly (November 1992 to Present)	
54		Ref	Gear, Ring Options:	
54	7000203	1	Gear, Ring (Prior to November 1992)	
54	7000248	1	Gear, Ring (November 1992 to Present)	
55	7010470	1	Coupling	
56	7010459	1	Ring, Retainer	
57	7001922	1	Washer, Thrust Options	
		Ref	HUB/SPINDLE/BRAKE SUB-ASSEMBLY	
101		Ref	Brake Assembly Options:	
101	7010469	1	2780193 & 2780191 Hubs with I.D. Plate (Item 309) Stamped June 1992 or Earlier (See Items 501-514 for Breakdown)	
101	7010473	1	2780193 & 2780191 Hubs with I.D. Plate (Item 309) Stamped July 1992 or Later (See Items 601-604 for Breakdown)	
102	Kit	1	Seal, Lip	
103	7007683	1	Cup, Bearing	
104	7007684	1	Cone, Bearing	
105	7007685	1	Cup, Bearing	
106	7007686	1	Cone, Bearing	
107	7007687	1	Housing	
108	7007688	1	Flatwasher, Tanged	
109	7997689	1	Flatwasher, Tanged	

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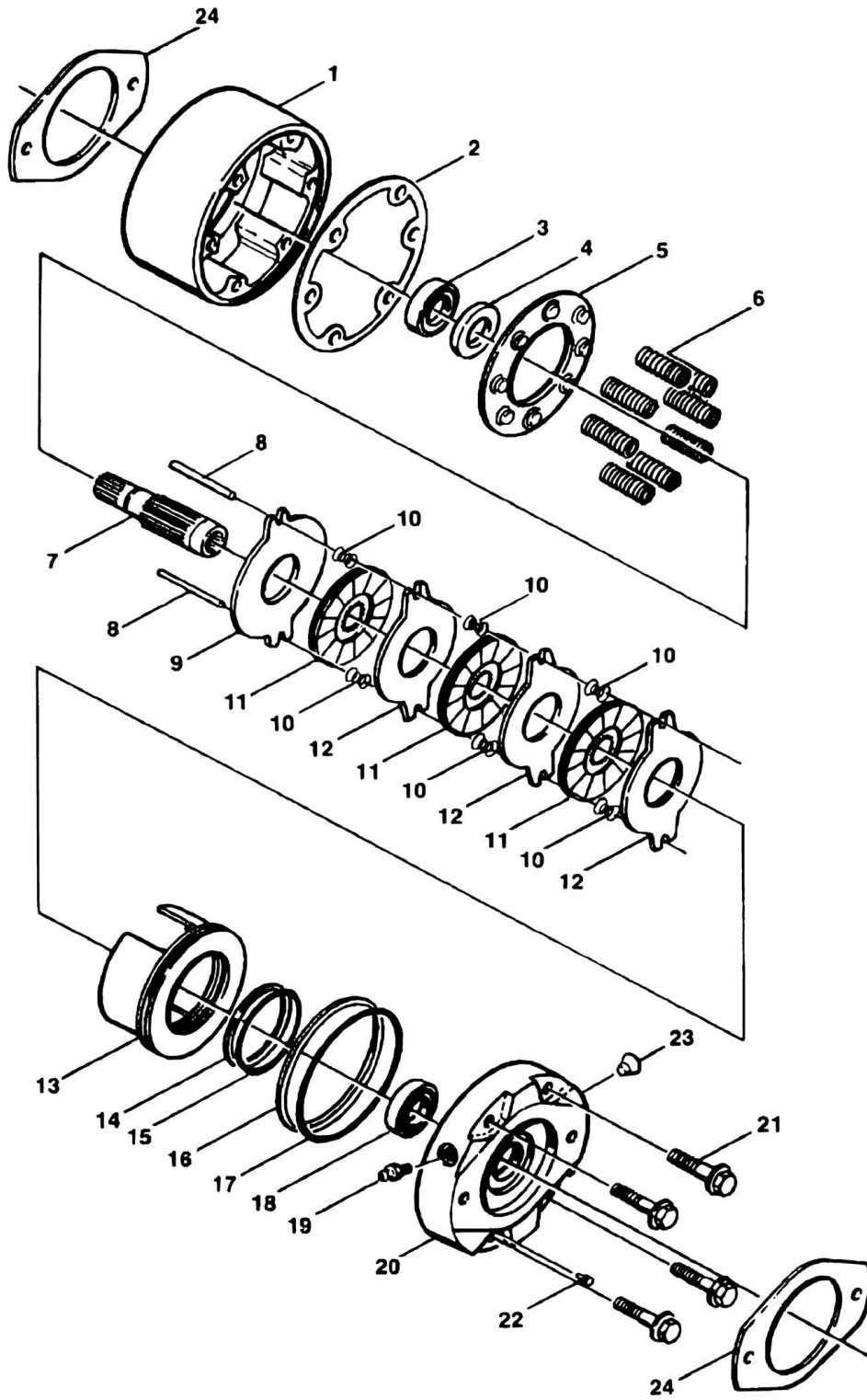
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
110	7007690	1	Nut, Bearing	
111	7000242	2	Plug, Pipe 1/4in NPT	
112	7000241	9	Stud, Wheel	
113	7007617	2	Plug, Pipe 3/8in NPT (Magnetic)	
		Ref	CARRIER ASSEMBLY	
	7000202	Ref	Carrier Assembly (Prior to November 1992)	
	7000247	Ref	Carrier Assembly (November 1992 to Present)	
201	7001931	1	Carrier	
202	7001985	6	Washer, Thrust - Tanged	
203	7001909	96	Bearing, Needle	
204	7000263	3	Spacer, Thrust	
205	7001911	3	Shaft, Planet	
206		Ref	Gear, Cluster Options:	
206	7001912	3	Gear, Cluster (November 1992 to Present)	
206	7007643	3	Gear, Cluster (Prior to November 1992)	
207		Ref	Rollpin Options:	
207	7001913	3	Rollpin (Prior to August 1992)	
207	7010474	3	Rollpin (August 1992 to November 1992)	
207	7001913	3	Rollpin (November 1992 to Present)	
		Ref	COVER ASSEMBLY	
	See Kit Options	Ref	Cast Cover (Original Equipment)	
	See Kit Options	Ref	Aluminum Cover (Service Replacement)	
301		Ref	Cover Options:	
301	70001111	1	Cast Cover (Original Equipment) (was p/n 7000226)	
301	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017091)	
302		Ref	O-Ring Options:	
302	70001111	1	Cast Cover (Original Equipment)	
302	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017070)	
303		Ref	Cap, Cover	
303	70001111	1	Cast Cover (Original Equipment)	
303	Not Required	0	Aluminum Cover (Service Replacement)	
304		Ref	O-Ring Options:	
304	70001111	1	Cast Cover (Original Equipment)	
304	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017095)	
305		Ref	Rod, Disconnect Options:	
305	70001111	1	Cast Cover (Original Equipment) (was p/n 7000212)	
305	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017092)	
306		Ref	Cap, Disconnect Options:	
306	70001111	1	Cast Cover (Original Equipment) (was p/n 7000211)	
306	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017093)	
307		Ref	Bolt Options:	
307	70001111	4	Cast Cover (Original Equipment) (was p/n 7000220)	
307	70001349	2	Aluminum Cover (Service Replacement) (was p/n 7000216)	
308		Ref	Plug, Pipe Options:	
308	70001111	1	Cast Cover (Original Equipment) (was p/n 7000243)	
308	70001349	2	Aluminum Cover (Service Replacement) (was p/n 7017094)	
		Ref	Cover Kit Options: (Note: Kit Replaces Items 5, 11 (Spacer), 12, 13 (Dowel Pins) & 301-308)	
	70001111	1	Cast Cover (Original Equipment) (was p/n 7001989 & p/n 7017099)	
	70001349	1	Aluminum Cover (Service Replacement) (was p/n 7017090)	
	7007650	Ref	INPUT SHAFT ASSEMBLY	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
401	7007651	1	Shaft - 4WD Machines	
402	7000261	1	Ring, Retaining	
403	7000262	1	Spring	
404	7000263	2	Spacer, Thrust	
	7010469	Ref	BRAKE ASSEMBLY - 2780193 & 2780191 HUBS WITH I.D. PLATE (ITEM 309) STAMPED JUNE 1992 OR EARLIER	
501	7014100	1	Spindle	
502	7014101	1	Spacer	
503	7014102	7	Disc, Stationary	
504	7014103	6	Disc, Rotating	
505	Kit	1	Ring, Back-up	
506	Kit	1	O-Ring	
507	Kit	1	Ring, Back-up	
508	Kit	1	O-Ring	
509	7014108	1	Piston	
510	7014109	6	Spring	
510	7014110	2	Spring	
511	Kit	1	O-Ring	
512	7014112	1	Cover	
513	Not Available	8	Bolt, Socket Head 3/8in-16NC x 1 1/4in	
514	7014113	1	Expander	
	2900816	1	Brake O-Ring Kit (Includes Items 505-508 & 511)	
	7010473	Ref	BRAKE ASSEMBLY - 2780193 & 2780191 HUBS WITH I.D. PLATE (ITEM 309) STAMPED JULY 1992 OR LATER	
601	7010475	1	Brake Lining Kit	
602	7010476	1	Brake O-Ring Kit	
603	7010477	1	Brake Spring Repair Kit	
604	7010478	1	Brake Piston Repair Kit	
	2900754		Seal Kit - Hub (Includes Items 5, 17, 102, 302 & 304)	

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FIGURE 1-7. DRIVE BRAKE ASSEMBLY - AUSCO



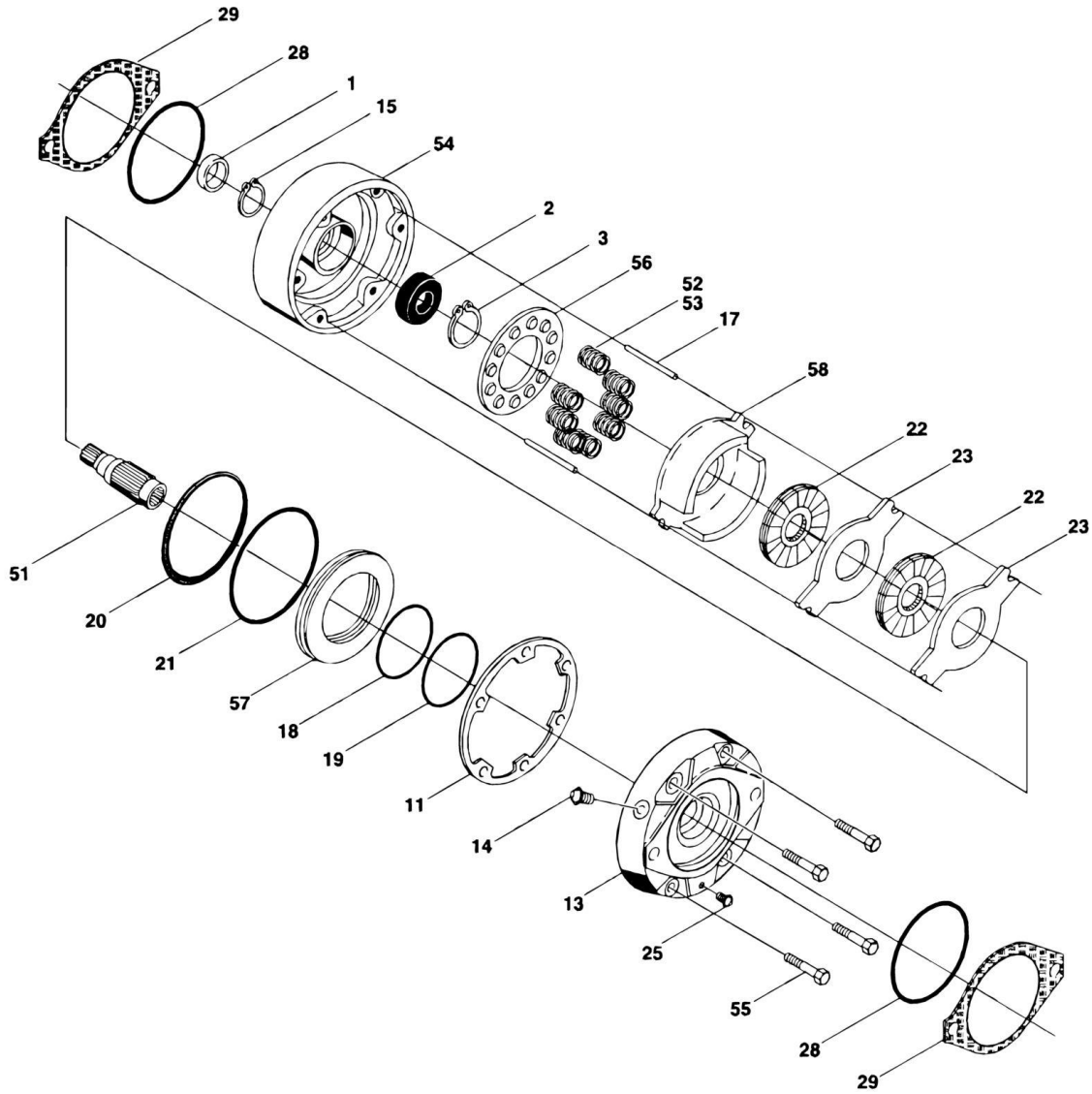
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FIGURE 1-7. DRIVE BRAKE ASSEMBLY - AUSCO

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0920072	Ref	DRIVE BRAKE ASSEMBLY - AUSCO	D
1	7003047	1	Housing	
2	Kit	1	Gasket	
3	7003049	1	Bearing	
4	Kit	1	Seal, Oil	
5	7003051	1	Retainer, Spring	
6	7003052	8	Spring, Compression	
7	7003070	1	Shaft, Splined	
8	7000717	2	Pin, Torque	
9	7003054	1	Disc, Primary	
10	7003006	6	Spring, Separator	
11	7003055	3	Disc, Rotating	
12	7003056	3	Disc, Stationary	
13	7003057	1	Piston	
14	Kit	1	Ring, Backup	
15	Kit	1	O-Ring	
16	Kit	1	Ring, Backup	
17	Kit	1	O-Ring	
18	7000760	1	Bearing	
19	7000796	1	Screw, Bleeder	
20	7003071	1	Plate, Power	
21	7003007	4	Screw	
22	7003059	1	Valve, Pressure	
23	7000728	1	Plug	
24	Kit	2	Gasket	
	2900662	1	Seal Kit (Includes Items 2, 4, 14, 15, 16, 17 & 24)	

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FIGURE 1-8. DRIVE BRAKE ASSEMBLY - MICO



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FIGURE 1-8. DRIVE BRAKE ASSEMBLY - MICO

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	DRIVE BRAKE ASSEMBLY - MICO	
1	Kit	1	Seal, Oil	
2	Kit	1	Bearing	
3	7007977	1	Ring, Retaining	
11	Kit	1	Seal, Case	
13	7007986	1	Cover	
14		Ref	Screw, Bleeder/Plug Options:	
14	7007914	1	Bleeder (Prior to SN 33476)	
14	7018609	1	Plug (SN 33476 to Present)	
15	7011716	1	Ring, Retainer	
16	7011717	1	Guide, Spring	
17	7007987	2	Pin, Dowel	
18	Kit	1	Ring, Back-up	
19	Kit	1	O-Ring	
20	Kit	1	Ring, Back-up	
21	Kit	1	O-Ring	
22	Kit	2	Rotor	
23	Kit	2	Stator	
25	7007924	1	Plug, Pipe	
28	Kit	2	O-Ring	
29	7007933	2	Gasket	
	2900766	1	Seal Kit (Includes Items 1, 11, 18, 19, 20, 21, 28 & 29)	
	2900768	1	Bearing Kit (Includes Items 1, 2, 11, 28 & 29)	
		Ref	DRIVE BRAKE ASSEMBLY - MICO	
	0920084	Ref	Drive Brake Assembly - Mico (Prior to SN 33476)	A
	0920110	Ref	Drive Brake Assembly - Mico (SN 33476 to Present)	C
51	7011712	1	Shaft	
52		Ref	Spring Options:	
52	7007979	6	Spring (Inner) (Prior to SN 33476)	
52	7007980	6	Spring (Outer) (Prior to SN 33476)	
52	Item 53	1	Spring (SN 33476 to Present)	
53		Ref	Spring Options:	
53	Item 52	1	Spring (Prior to SN 33476)	
53	7007970	6	Spring (Red) (SN 33476 to Present)	
53	7018602	3	Spring (Blue) (SN 33476 to Present)	
54		Ref	Housing Options:	
54	7011713	1	Housing (Prior to SN 33476)	
54	7018605	1	Housing (SN 33476 to Present)	
55		Ref	Bolt, Washer Head Options:	
55	7007985	4	Bolt, Washer Head (Prior to SN 33476)	
55	7018607	4	Bolt, Washer Head (SN 33476 to Present)	
56		Ref	Guide, Spring Options:	
56	7011717	1	Guide, Spring (Prior to SN 33476)	
56	7018606	1	Guide, Spring (SN 33476 to Present)	
57		Ref	Piston Options:	
57	7007923	1	Piston (Prior to SN 33476)	
57	7018603	1	Piston (SN 33476 to Present)	
58		Ref	Return Plate/Separator Options:	
58		Ref	Return Plate/Separator Components: (Prior to SN 33476)	
58	Kit	1	Plate, Return	

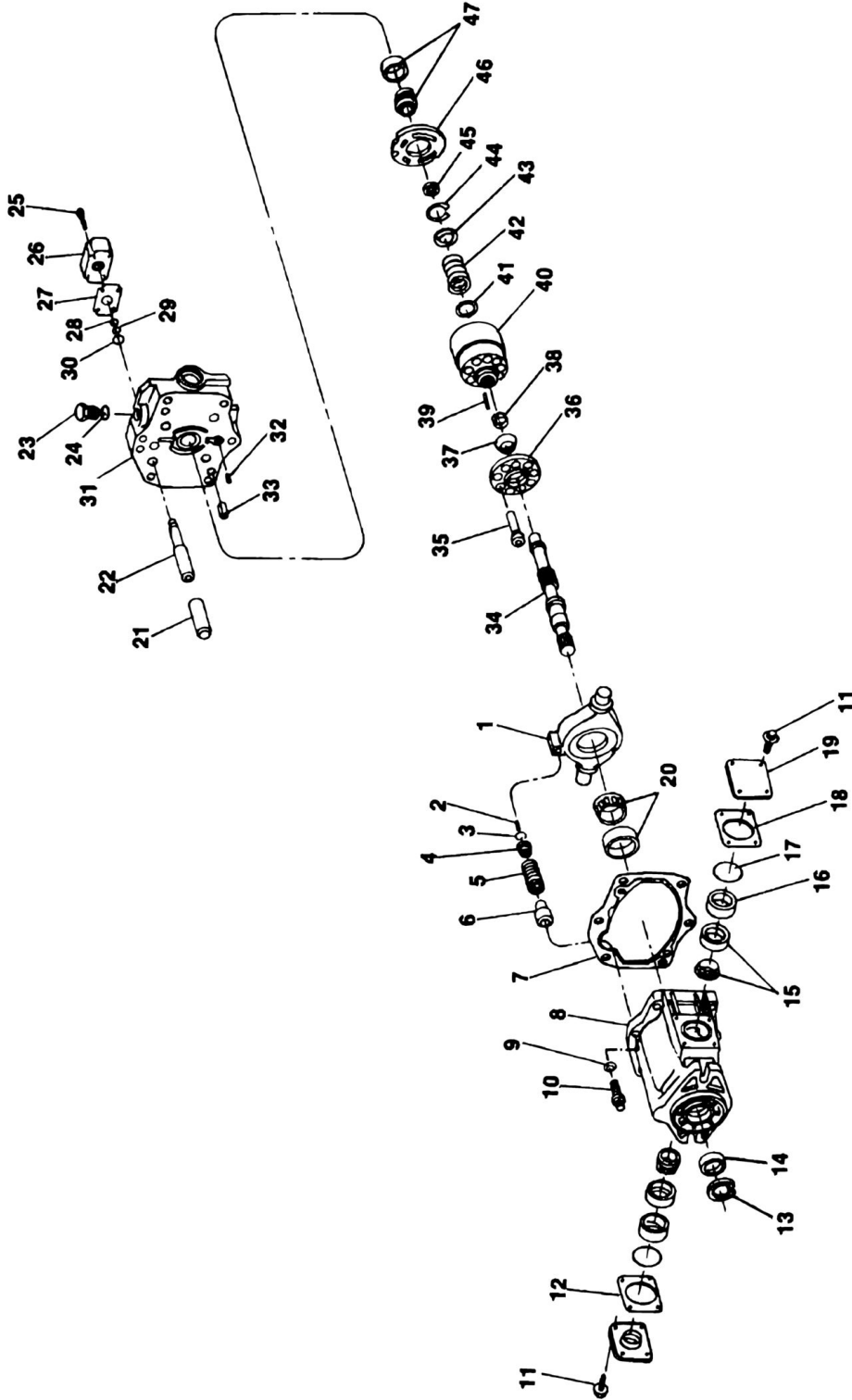
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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
58	7011715	2	Separator Assembly	
58	7011714	4	Pin	
58	7007983	2	Separator	
58	7018605	AR	Return Plate/Separator Components: (SN 33476 to Present)	
58	Kit	1	Return Plate/Separator Assembly	
		Ref	Lining Kit Options (Includes Items 58, 11, 20, 21, 22, 23, 26 & 27):	
	2900767	1	Lining Kit (Prior to SN 33476)	
	7018608	1	Lining Kit (SN 33476 to Present)	

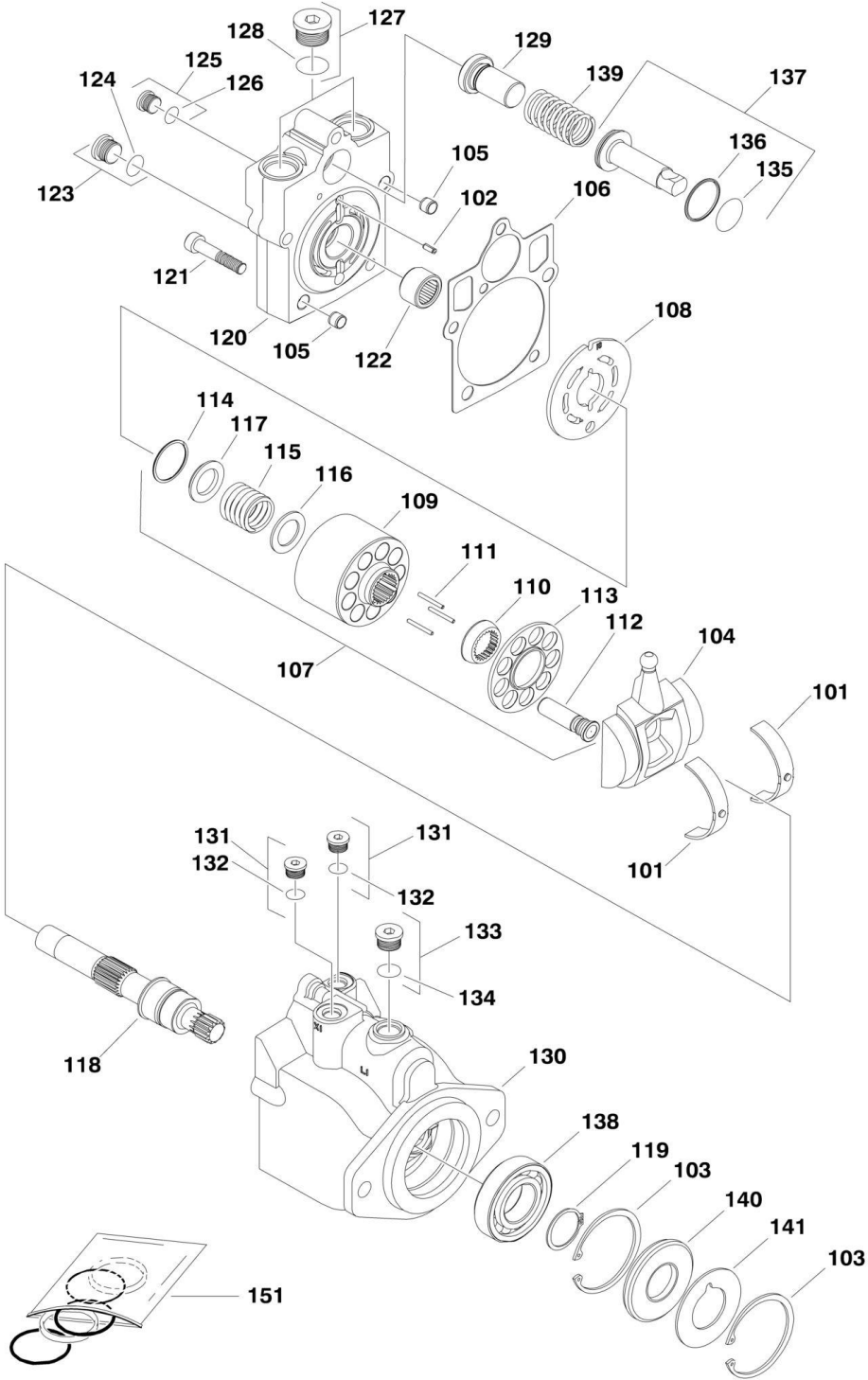
SECTION 1 - FRAME

FIGURE 1-9. DRIVE MOTOR ASSEMBLY - 2WD

VICKERS



SAUER-DANFOSS



SECTION 1 - FRAME

FIGURE 1-9. DRIVE MOTOR ASSEMBLY - 2WD

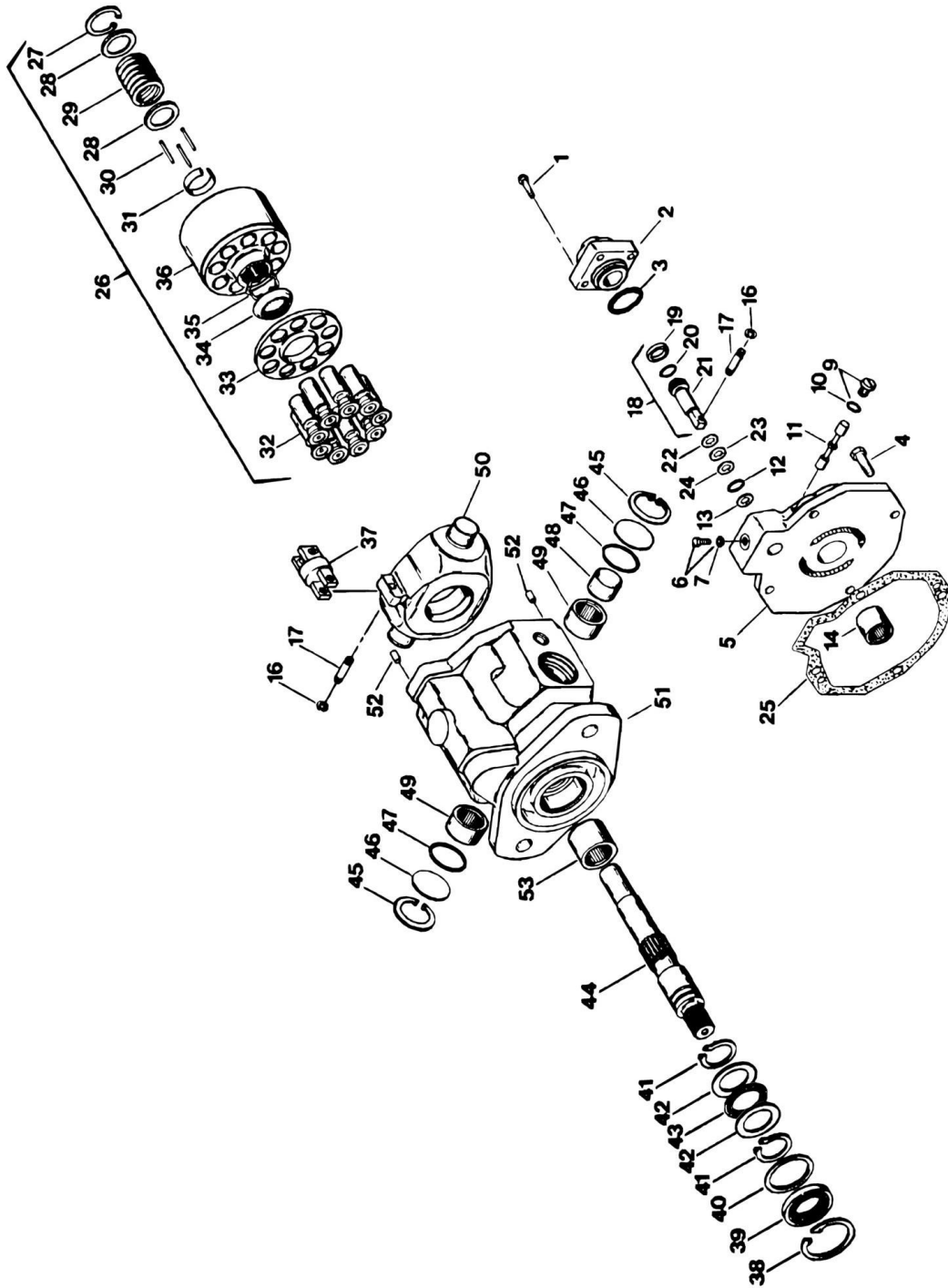
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3160132	Ref	DRIVE MOTOR ASSEMBLY - VICKERS	B
1	7006766	1	Yoke	
2	7006767	1	Roll Pin	
3	7006768	1	Spherical Seat	
4	7006769	1	Spring Seat	
5	7006774	1	Yoke Spring	
6	7006776	1	Yoke Stop	
7	2900659	1	Gasket	
8	7006786	1	Housing	
9	7006787	6	Washer	
10	7006788	6	Screw	
11	7006789	4	Screw	
12	Kit	1	Shim (Included with Item 18)	
13	7006790	1	Retaining Ring	
14	7006796	1	Shaft	
15	7006791	2	Bearing	
16	7006792	2	Pintle Bearing	
17	2900659	2	O-Ring	
18	7006794	1	Shim Kit (Includes Item 12)	
19	7006795	2	Cover	
20	7006719	1	Bearing	
21	7006797	1	Piston	
22	7006798	1	Piston Rod	
23	7006703	1	Plug	
24	2900659	1	O-Ring	
25	7009300	4	Screw	
26	7009301	1	Control Block	
27	2900659	1	Gasket	
28	2900659	1	O-Ring	
29	2900659	1	Back-up Ring	
30	7009305	1	Retaining Ring	
31	7009306	1	Valve Block	
32	7006706	1	Pin	
33	7009307	2	Pin	
34	7009308	1	Shaft	
35	7006717	9	Piston and Shoes	
36	7006716	1	Shoe Plate	
37	7006715	1	Spherical Washer	
38	7006714	1	Pin, Retainer	
39	7006713	3	Pin	
40	7006712	1	Cylinder, Block	
41	7006711	1	Spring Washer	
42	7006710	1	Spring	
43	7006709	1	Spring Washer	
44	7009309	1	Retaining Ring	
45	7006707	1	Bearing Spacer Kit	
46	7009310	1	Wafer Plate	
47	7006704	1	Bearing S/A	
	2900659	1	Seal Kit (Includes 7, 14, 17, 24, 27, 28 & 29)	
	1001096405	Ref	DRIVE MOTOR KIT - SAUER-DANFOSS	2

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001096406	Ref	DRIVE MOTOR ASSEMBLY - SAUER-DANFOSS	A
101	7022302	2	Bearing	
102	7007446	1	Pin	
103	7007438	2	Ring, Retaining	
104	70000794	1	Swashplate	
105	See Note	2	Dowel Locator (Note: Not Available for Purchase)	
106	Item 51	1	Gasket	
107	7027740	1	Cylinder Block Kit (Includes Items 110-117)	
108	7024862	1	Plate, Valve	
109	7027740		Cylinder Block	
110	70000856	1	Guide, Slipper Retainer	
111	7021275	3	Pin, Slipper Hold Down	
112	7024865	9	Piston Assembly	
113	70000857	1	Retainer, Slipper	
114	7022311	1	Ring, Retaining	
115	7024867	1	Spring	
116	7024868	1	Washer	
117	7022314	1	Retainer, Spring	
118	7023910	1	Shaft	
119	7007439	1	Ring, Retaining	
120	70000795	1	Cap, End - Axial	
121	7022368	5	Screw	
122	7021249	1	Bearing, Needle	
123	7022321	1	Plug (Includes Item 124)	
124	7022322	1	O-Ring	
125	7007420	1	Plug (Includes Item 126)	
126	7021256	1	O-Ring	
127	7007419	2	Plug (Includes Item 128)	
128	7007418	2	O-Ring	
129	Not Available	1	Seat, Spring	
130	See Note	1	Housing (Note: Not Available - Purchase Complete Motor).	
131	7007420	2	Plug (Items Item 132)	
132	7021256	2	O-Ring	
133	7022321	1	Plug (Items Item 134)	
134	7022322	1	O-Ring	
135	7022324	1	O-Ring	
136	7022325	1	Ring, Seal	
137	7024871	1	Piston, Servo	
138	7007437	1	Bearing	
139	7022326	1	Spring	
140	7007459	1	Seal, Lip	
141	7022371	1	Washer, Support	
151	7022328	1	Seal Kit (Includes Items 106, 124, 126, 128, 132, 134, 135, 136 & 140)	

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FIGURE 1-10. DRIVE MOTOR ASSEMBLY - 4WD



SECTION 1 - FRAME

FIGURE 1-10. DRIVE MOTOR ASSEMBLY - 4WD

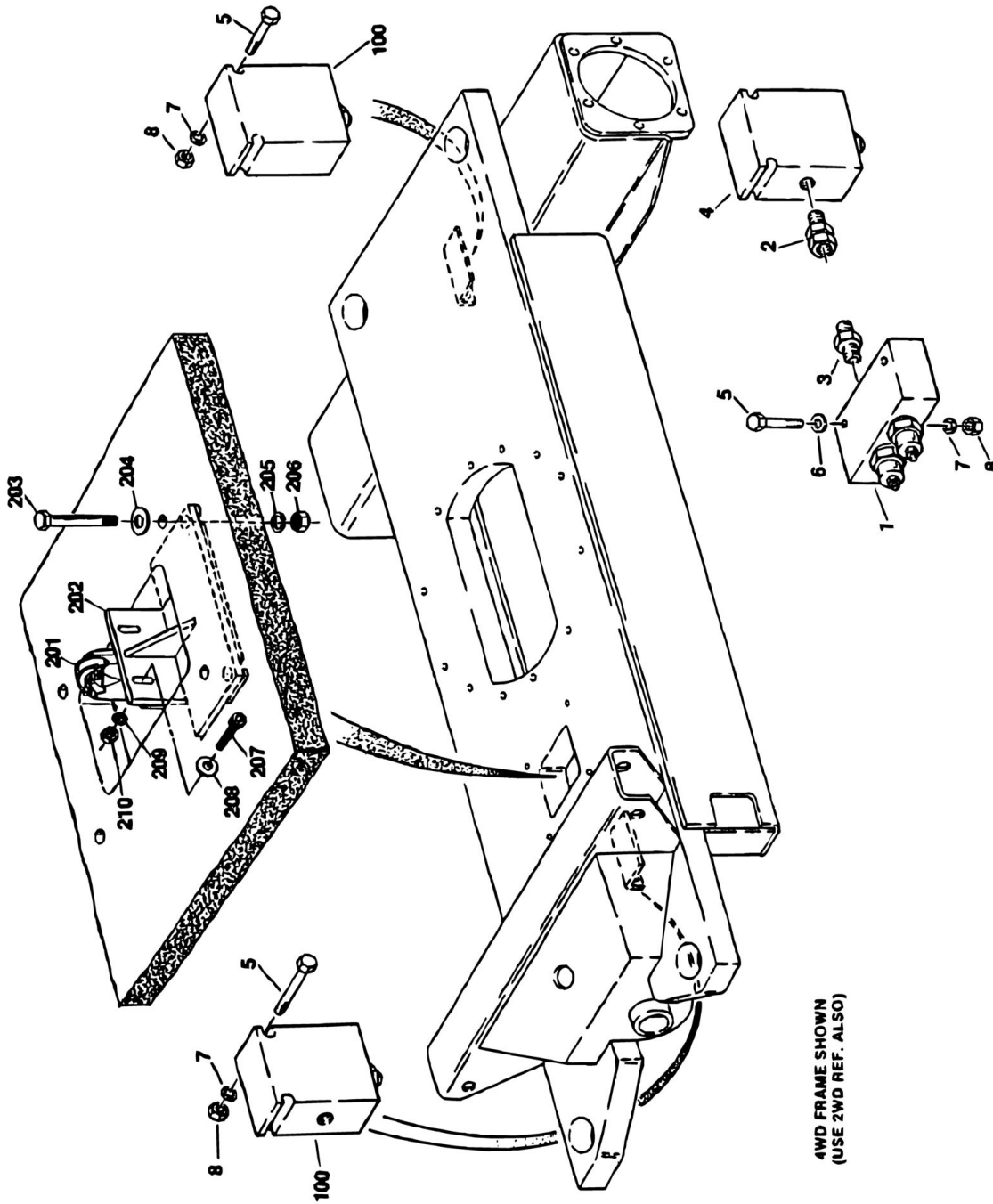
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3160130	Ref	DRIVE MOTOR ASSEMBLY - 4WD	A
1	7004938	4	Screw, Cap, Socket Head	
2	7004939	1	Control Piston Housing Assembly (Includes Item 3)	
3	Kit	1	O-Ring	
4	7004933	4	Screw, Cap, Hex Head	
5	7004941	1	Backplate Assembly (Includes Items 6-14)	
6	7004942	1	Plug Assembly (Includes Item 7)	
7	Kit	1	O-Ring	
9	7004944	2	Plug Assembly (Shuttle Spool) (Includes Items 8 & 9)	
10	Kit	1	O-Ring (1 Per Plug)	
11	7004946	1	Spool, Shuttle	
12	Kit	1	O-Ring	
13	7004918	1	Washer, Backup	
14	7004917	1	Bearing, Needle	
16	7004937	4	Ring, Retaining	
17	7004929	2	Pin, Connector	
18	7004948	1	Control Piston Assembly (Includes Items 19-21)	
19	Kit	1	Ring, Slippery	
20	Kit	1	O-Ring	
21	Not Available	1	Piston, Control	
22	4100027	AR	Spacer, Piston - .092in	
23	4100028	AR	Spacer, Piston - .105in	
24	4100029	AR	Spacer, Piston - .110in	
25	Kit	1	Gasket, Housing	
26	7004916	1	Rotating Kit Assembly (Includes Items 27-36)	
27	7004936	1	Ring, Retaining	
28	7004950	2	Washer, Machined	
29	7004951	1	Spring, Compression	
30	7004952	3	Pin, Loading	
31	7004953	1	Keeper, Pin	
32	7004954	9	Piston, Assembly	
33	7004955	1	Spider	
34	7004956	1	Pivot	
35	7004957	1	Washer, Wave	
36	Not Available	1	Block, Piston	
37	7004928	1	Connector, Camplate	
38	Kit	1	Ring, Retaining	
39	Kit	1	Seal, Shaft	
40	7004906	1	Washer	
41	Kit	2	Ring, Retaining	
42	7004907	2	Race, Thrust	
43	7004908	1	Bearing, Thrust	
44	7004912	1	Shaft, Drive	
45	Kit	2	Ring, Retaining	
46	7004913	2	Cover, Trunnion	
47	Kit	2	O-Ring	
48	7004911	1	Race, Inner	
49	7004914	2	Bearing	
50	7004927	1	Camplate	
51	7004959	1	Housing Assembly (Includes Items 52 & 53)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
52	7004960	2	Pin, Roll (1/4in Dia x 1/2in Long)	
53	7004910		Bearing	
	2900449		Seal Repair Kit (Includes Items 3, 7, 10, 12, 19, 20, 25, 38, 39, 41, 45 & 47).	

SECTION 1 - FRAME

FIGURE 1-11. VALVES INSTALLATION (FRAME MOUNTED)



4WD FRAME SHOWN
(USE 2WD REF. ALSO)

SECTION 1 - FRAME

FIGURE 1-11. VALVES INSTALLATION (FRAME MOUNTED)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	VALVES INSTALLATION (FRAME MOUNTED)	
	1281132	Ref	2WD (Standard Parts)	C
	1280931	Ref	4WD (Standard Parts)	C
1	4640529	1	Counterbalance Valve Assembly	
1	4640729	2	Cartridge, Valve	
1	7004293	2	Seal Kit - 4640729 Cartridge	
2	2220594	1	Fitting Straight Swivel	
3	2220435	1	Fitting, Straight	
4	4640260	1	Flow Divider Valve Assembly	
5	0641620	AR	Bolt 3/8in-16NC x 2 1/2in	
6	4751600	AR	Flatwasher 3/8in	
7	4761600	AR	Lockwasher 3/8in	
8	3311601	AR	Nut 3/8in-16NC	
		Ref	DRIVE VALVES INSTALLATION (MACHINES WITH VICKERS VALVE) (VARIABLE PARTS)	
	0239963	Ref	2WD (No Variable Parts Not Required)	A
	0238845	Ref	4WD	C
100		Ref	Flow Divider Valve Assembly Options:	
100	4640260	2	Flow Divider Machines Built (Prior to March 1992)	
100	Not Available	1	Cartridge (Vickers/Modular Controls Version)	
100	7009739	1	Seal Kit (Vickers/Modular Controls Version)	
100	7007321	1	Cartridge (Fluid Controls Version)	
100	7007323	1	Seal Kit (Fluid Controls Version)	
100	4640671	2	Flow Divider Machines Built (March 1992 to Present)	
100	7010510	1	Cartridge (Vickers/Modular Controls Version)	
100	7009739	1	Seal Kit (Vickers/Modular Controls Version)	
100	70003445	1	Cartridge (Fluid Controls Version) (was p/n 7007322)	
100	7007323	1	Seal Kit (Fluid Controls Version)	
	0251310	Ref	OSCILLATION LOCKOUT VALVE INSTALLATION	D
201	4640668	1	Lockout Valve Assembly	
201	7012516	1	Repair Kit - 4640668 Valve	
202	4843742	1	Mounting Weldment	
203	0641620	2	Bolt 3/8in-16NC x 2 1/2in	
204	4751600	4	Flatwasher 3/8in	
205	4761600	2	Lockwasher 3/8in	
206	3311601	2	Nut 3/8in-16NC	
207	3931016	4	Bolt, Socket Head #10-24NC x 1in	
208	4751000	8	Flatwasher #10	
209	4761000	4	Lockwasher #10	
210	3311001	4	Nut #10-24NC	

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FIGURE 1-12. TOW PACKAGE INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	TOW PACKAGE INSTALLATION (STANDARD PARTS)	
1	3323002	2	Nut, Jam 1 1/4in-12NF	
2	2880410	1	Keystock 1/4in x 1 1/4in	
3	0900479	1	Bracket, Valve Mounting	
4	4640261	1	Select Valve Assembly	
5	0641507	2	Bolt 5/16in-18NC x 7/8in	
6	4751500	2	Flatwasher 5/16in	
7	4761500	2	Lockwasher 5/16in	
8	2160001	1	Fitting, Grease - 90	
9	3250872	1	Nameplate - Tow Select	
10	3250840	1	Nameplate - Instructions	
11	3820001	8	Rivet	
12	0361651	2	Bar	
13	3532649	1	Plate	
14	3420292	1	Pin, Quick Release	
15	1260017	8 in/20cm	Chain	
	0238882	Ref	TOW PACKAGE INSTALLATION- 2WD 6FT-6IN/2M FRAME WITHOUT STOP BLOCKS (VARIABLE PARTS)	A
101	2620029	1	Hitch	
102	3040379	2	Lug	
103	3421246	1	Pin, Hitch	
104	0642234	1	Bolt 3/4in-10NC x 4 1/4in	
105	4740032	4	Washer, Special	
106	4762200	2	Lockwasher	
107		Ref	Nut (Use Standard Nut)	
108	0642220	1	Bolt 3/4in-10NC x 2 1/2in	
109	3322202	2	Nut 3/4in-16NF	
110	1360122	2	End, Rod	
111	3840941	1	Tie-Rod	
112	0360016	1	Tow Bar Assembly (See Items 301-305 for Breakdown)	
	0251060	Ref	TOW PACKAGE INSTALLATION- 2WD 6FT-6IN/2M FRAME WITH STOP BLOCKS (VARIABLE PARTS)	A
151	2620029	1	Hitch	
152	4340597	1	Support, Tow Hitch	
153	3421151	1	Pin, Hitch	
154	0630432	1	Bolt, Special	
155	4712200	2	Flatwasher, 3/4in Narrow	
157	3312202	1	Nut, Jam 3/4in-10NC	
158	0642216	1	Bolt 3/4in-10NC x 2in	
159	3322202	2	Nut, Jam 3/4in-16NF	
160	1360122	2	End, Rod	
161	3841065	1	Tie-Rod	
162	0361891	1	Tow Bar Assembly (See Items 351-355 for Breakdown)	
163	0560898	2	Block, Stop	
164	2551292	2	Gusset	
		Ref	TOW PACKAGE INSTALLATIONS - 2WD 5FT-9IN/11.75M FRAME (VARIABLE PARTS)	
	0239948	Ref	With Ball Hitch	B
	0256746	Ref	With Pental Hook	-
201	2620029	1	Hitch	

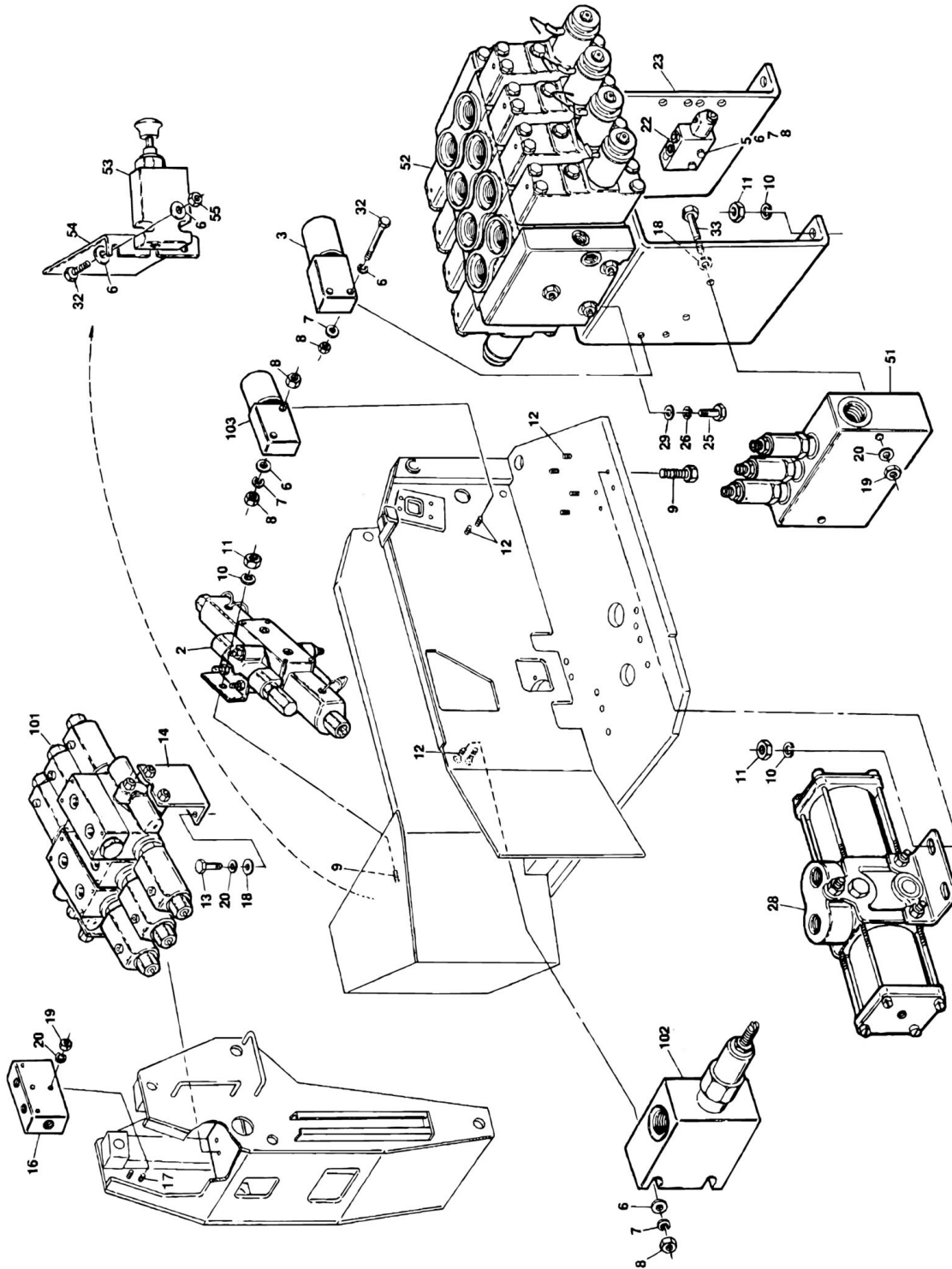
SECTION 1 - FRAME

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
202	4340575	1	Plate, Hitch Support	
203	3421151	1	Pin	
204	0630424	1	Bolt, Special	
205	4740032	2	Washer, Special	
206	4762200	1	Lockwasher 3/4in	
207	3312202	1	Nut, Jam 3/4in-10NC	
208	0642216	1	Bolt 3/4in-10NC x 2in	
209	3322202	2	Nut, Jam 3/4in-16NF	
210	1360122	2	End, Rod	
211	3841005	1	Tie-Rod	
212		Ref	Tow Bar Assembly Options:	
212	0360016	1	Tow Bar with Ball Hitch (See Items 301-305 for Breakdown)	
212	0361891	1	Tow Bar with Pental Hook (See Items 351-355 for Breakdown)	
213		Ref	Fitting, Grease - 1/8in NPT45 Options:	
213	Not Required	0	With Ball Hitch	
213	2160003	1	With Pental Hook	
		Ref	TOW PACKAGE INSTALLATION - 4WD FRAME (VARIABLE PARTS)	
	0252053	Ref	With Oscillating Axle	-
	0256207	Ref	With Fixed Axle	-
251	2620034	1	Hitch	
252		Ref	Plate, Hitch Support Options:	
252	4340625	2	With Oscillating Axle	
252	4340575	2	With Fixed Axle	
253		Ref	Pin, Hitch Options:	
253	3421246	1	With Oscillating Axle	
253	3421151	1	With Fixed Axle	
254	0642636	1	Bolt 1in-8NC x 4 1/2in	
255	4712600	3	Flatwasher 1in	
256	4562346	1	Spacer, Tube	
257	3312605	1	Locknut 1in-8NC	
258	0642628	1	Bolt 1in-8NC x 3 1/2in	
259	3323002	2	Nut, Jam 1 1/4in-12NF	
260	1660114	2	End, Rod	
261	3841137	1	Tie-Rod	
262	0360016	1	Tow Bar Assembly (See Items 301-305 for Breakdown)	
263	3040520	1	Lug, Tie-Rod	
	0360016	Ref	TOW BAR ASSEMBLY (BALL HITCH)	I
301	1660009	1	Coupling, Hitch	
302	3420352	1	Pin, Towing	
303	4752600	1	Flatwasher 1in	
304	3420158	1	Hairpin	
305	1260135	AR	Chain	
	0361891	Ref	TOW BAR ASSEMBLY (PENTAL HOOK)	-
351	9981834	1	Lug, Hitch	
352	3420352	1	Pin, Towing	
353	4752600	1	Flatwasher 1in	
354	3420158	1	Hairpin	
355	1260017	AR	Chain	

SECTION 2 - TURNTABLE

SECTION 2 - TURNTABLE

FIGURE 2-1. CONTROL VALVES INSTALLATIONS - VICKERS (FORD GAS AND DEUTZ DIESEL)



SECTION 2 - TURNTABLE

FIGURE 2-1. CONTROL VALVES INSTALLATIONS - VICKERS (FORD GAS AND DEUTZ DIESEL)

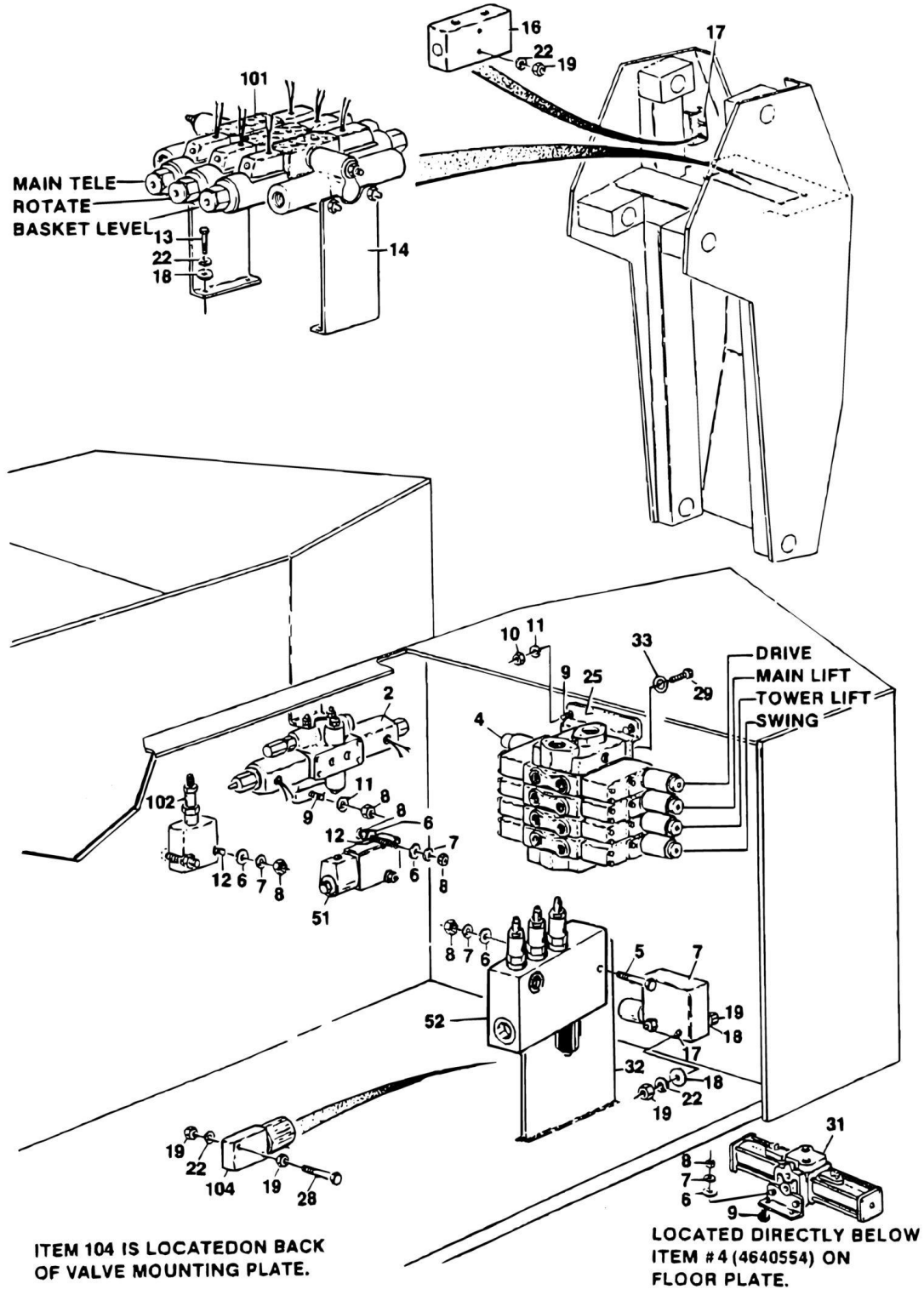
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONTROL VALVES INSTALLATION (STANDARD PARTS)	
1	4640716	1	Accessory Valve Assembly (See ACCESSORY VALVE ASSEMBLY for Breakdown)	
2	4640375	1	Valve Assembly - FPS (Steer) (See VALVE ASSEMBLY - FPS (STEER) for Breakdown)	
3	4640543	1	Solenoid Valve Assembly	
3	7009745	1	Coil (Vickers/Modular Controls Version)	
3	7004368	1	Coil (Hydraforce Version)	
5	0641420	AR	Bolt 1/4in-20NC x 2 1/2in	
6	4751400	AR	Flatwasher 1/4in	
7	4761400	AR	Lockwasher 1/4in	
8	3311401	AR	Nut 1/4in-20NC	
9	4300034	8	Stud (Welded on Part)	
10	4761600	8	Lockwasher 3/8in	
11	3311601	8	Nut 3/8in-16NC	
12	4300098	AR	Stud (Welded on Part)	
13	0641506	4	Bolt 5/16in-18NC x 3/4in	
14	0901455	2	Bracket, Valve Mounting	
16	4640150	1	Valve, Check	
17	4300073	2	Stud (Welded on Part)	
18	4751500	6	Flatwasher 5/16in	
19	3311501	4	Nut 5/16in-18NC	
20	4761500	8	Lockwasher 5/16in	
22	4640360	1	Solenoid Dump Valve Assembly	
22	7010637	1	Seal Kit	
22	7003647	1	Coil (Vickers/Modular Controls Version)	
22	7004368	1	Coil (Hydraforce Version)	
22	7004289	1	Cartridge (Vickers/Modular Controls Version)	
22	7010635	1	Cartridge (Hydraforce Version)	
22	7003635	1	Valve, Check (Vickers/Modular Controls Only)	
23	0901399	1	Bracket, Valve Mounting	
25	0641708	3	Bolt 7/16in-14NC x 1in	
26	4761700	3	Lockwasher 7/16in	
28	4640570	1	Valve Assembly - Single Stack Bang-Bang (See VALVE ASSEMBLY - SINGLE STACK BANG-BANG for Breakdown)	
29	4751700	3	Flatwasher 7/16in	
31	0641424	2	Bolt 1/4in-20NC x 3in	
32	0641416	4	Bolt 1/4in-20NC x 2in	
33	0641528	2	Bolt 5/16in-18NC x 3 1/2in	
52		Ref	Control Valve Assembly (Vickers) Options:	
52	4640554	1	Control Valve Assembly (Vickers) (Prior to October 1994) (See CONTROL VALVE ASSEMBLY (VICKERS) for Breakdown)	
52	4640914	1	Control Valve Assembly (Vickers) (October 1994 to Present) (See CONTROL VALVE ASSEMBLY - (VICKERS) for Breakdown)	
53	4640866	1	Valve, 2-Way Manual (October 1994 to Present Only)	
53	2900708	1	Seal Kit - Cartridge	
53	7012959	1	Knob	
54	0902051	1	Bracket, Decal	
55	3311405	2	Locknut 1/4in-20NC	
		Ref	CONTROL VALVE INSTALLATION (VARIABLE PARTS)	

SECTION 2 - TURNTABLE

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0239541	Ref	With Rotate and Without Noise Reduction Package Built Through 1992	C
	0239542	Ref	Without Rotate and Without Noise Reduction Package Built Through 1992	C
	0253206	Ref	With Rotate and With Noise Reduction Package Built (1993 to Present)	C
	0253207	Ref	Without Rotate and Without Noise Reduction Package Built (1993 to Present)	C
101		Ref	Valve Assembly - FPS Options (See VALVE ASSEMBLY - FPS for Breakdown)	
101	4640556	1	Machines with Rotate 3 Stack Valve	
101	4640555	1	Machines without Rotate 2 Stack Valve	
102		Ref	Pressure Reducing Valve Assembly Options:	
102	4640522	1	Valve Used Through 1992	
102	4640523	1	Cartridge	
102	2900698	1	Seal Kit - 4640523 Cartridge	
102	Not Required	0	Valve (Not Required) (1993 to Present)	
103		Ref	Selector Valve Assembly	
103	4640123	1	Valve Used Through 1992	
103	7004368	1	Coil Hydraforce Version	
103	7000558	1	Coil (FPS Version)	
103	7012518	1	Seal Kit (Hydraforce Version)	
103	7006075	1	Seal Kit (FPS Version)	
103	4640758	1	Valve Used (1993 to Present)	
103	7012906	1	Coil	
103	7012907	1	Seal Kit	
104	4060806	7 ft/2m	Shield, Flex Trim (Not Shown)	

SECTION 2 - TURNTABLE

FIGURE 2-2. CONTROL VALVES INSTALLATIONS - VICKERS (ELECTRIC MACHINES)



SECTION 2 - TURNTABLE

FIGURE 2-2. CONTROL VALVES INSTALLATIONS - VICKERS (ELECTRIC MACHINES)

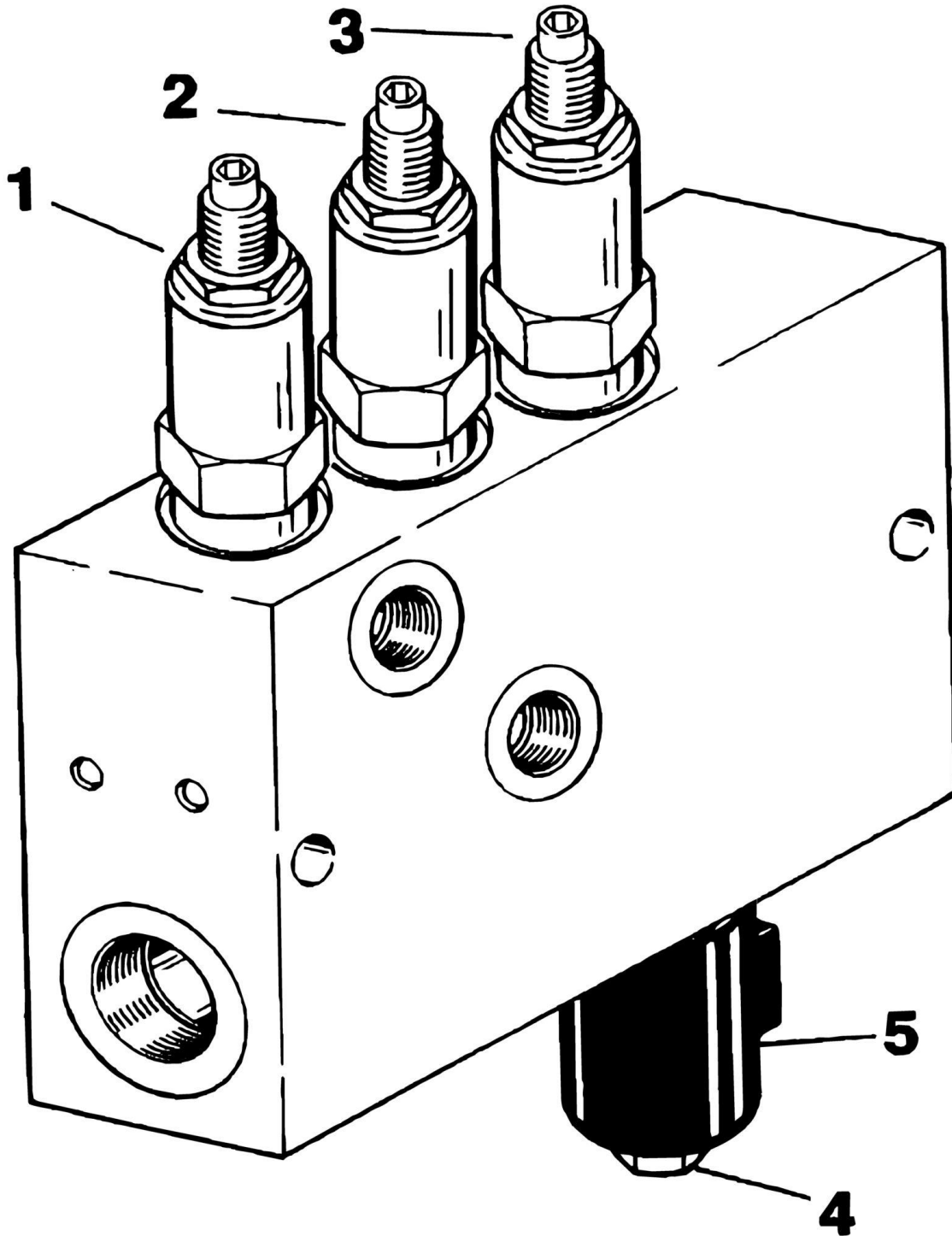
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONTROL VALVES INSTALLATION (STANDARD PARTS)	
2	4640375	1	Valve Assembly - FPS (Steer) (See VALVE ASSEMBLY - FPS (STEER) for Breakdown)	
4		Ref	Control Valve Assembly Options (Vickers):	
4	4640554	1	Control Valve Assembly Options (Vickers) (Prior to October 1994) (See CONTROL VALVE ASSEMBLY (VICKERS) for Breakdown)	
4	4640914	1	Control Valve Assembly Options (Vickers) (October 1994 to Present) (See CONTROL VALVE ASSEMBLY - (VICKERS) for Breakdown)	
5	0641426	2	Bolt 1/4in-20NC x 3 1/4in	
6	4751400	AR	Flatwasher 1/4in	
7	4761400	AR	Lockwasher 1/4in	
8	3311401	AR	Nut 1/4in-20NC	
9	4300034	AR	Stud (Welded on Part)	
10	4761600	10	Lockwasher 3/8in	
11	3311601	6	Nut 3/8in-16NC	
12	4300042	AR	Stud (Welded on Part)	
13	0641506	4	Bolt 5/16in-18NC x 3/4in	
14	0901455	2	Bracket, Valve Mounting	
16	4640150	1	Valve, Check	
17	4300073	AR	Stud (Welded on Part)	
18	4751500	AR	Flatwasher 5/16in	
19	3311501	AR	Nut 5/16in-18NC	
22	4761500	AR	Lockwasher 5/16in	
24	4640360	1	Solenoid Dump Valve Assembly	
24	7010637	1	Seal Kit	
24	7003647	1	Coil (Vickers/Modular Controls Version)	
24	7004368	1	Coil (Hydraforce Version)	
24	7004289	1	Cartridge (Vickers/Modular Control Version)	
24	7010635	1	Cartridge (Hydraforce Version)	
24	7003635	1	Valve, Check (Vickers/Modular Controls Only)	
25	0901489	1	Bracket, Valve Mounting	
28	0641524	2	Bolt 5/16in-18NC x 3in	
29	0641708	3	Bolt 7/16in-14NC x 1in	
31	4640570	1	Valve Assembly - Single Stack Bang-Bang (See VALVE ASSEMBLY - SINGLE STACK BANG-BANG for Breakdown)	
32	3533508	1	Plate, Valve Mounting	
33	4761700	3	Lockwasher 7/16in	
51	4640543	1	Solenoid Valve Assembly	
51	7009745	AR	Coil (Vickers/Modular Controls Version)	
51	7004368	AR	Coil (Hydraforce Version)	
52	4640716	1	Accessory Valve Assembly	
52	See Note		Note: 4640716 Accessory Valve is no longer available as a complete assembly. See ACCESSORY VALVE ASSEMBLY for Individual parts.	
		Ref	CONTROL VALVE INSTALLATION (VARIABLE PARTS)	
	0238897	Ref	Electric Machines with Rotate Built Through 1992	G
	0253229	Ref	Electric Machines with Rotate Built (1993 to Present)	A
	0238899	Ref	Electric Machines without Rotate Built Through 1992	G
	0253230	Ref	Electric Machines without Rotate Built (1993 to Present)	A

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
101		Ref	Valve Assembly - FPS Options (See VALVE ASSEMBLY - FPS for Breakdown)	
101	4640555	1	Without Rotate (2 Stack)	
101	4640556	1	With Rotate (3 Stack)	
102	4640533	1	Pilot Valve Assembly	
102	7010529	1	Cartridge	
102	2900698	1	Seal Kit - 7010529 Cartridge	
104		Ref	Selector Valve Assembly Options:	
104	4640123	1	Valve (Electric Machines Built Through 1992)	
104	7004368	1	Coil (Hydraforce Version)	
104	7000558	1	Coil (FPS Version)	
104	7012518	1	Seal Kit (Hydraforce Version)	
104	7006075	1	Seal Kit (FPS Version)	
104	4640758	1	Valve (Electric Machines Built 1993 to Present)	
104	7012906	1	Coil	
104	7012907	1	Seal Kit	

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FIGURE 2-3. ACCESSORY VALVE ASSEMBLY



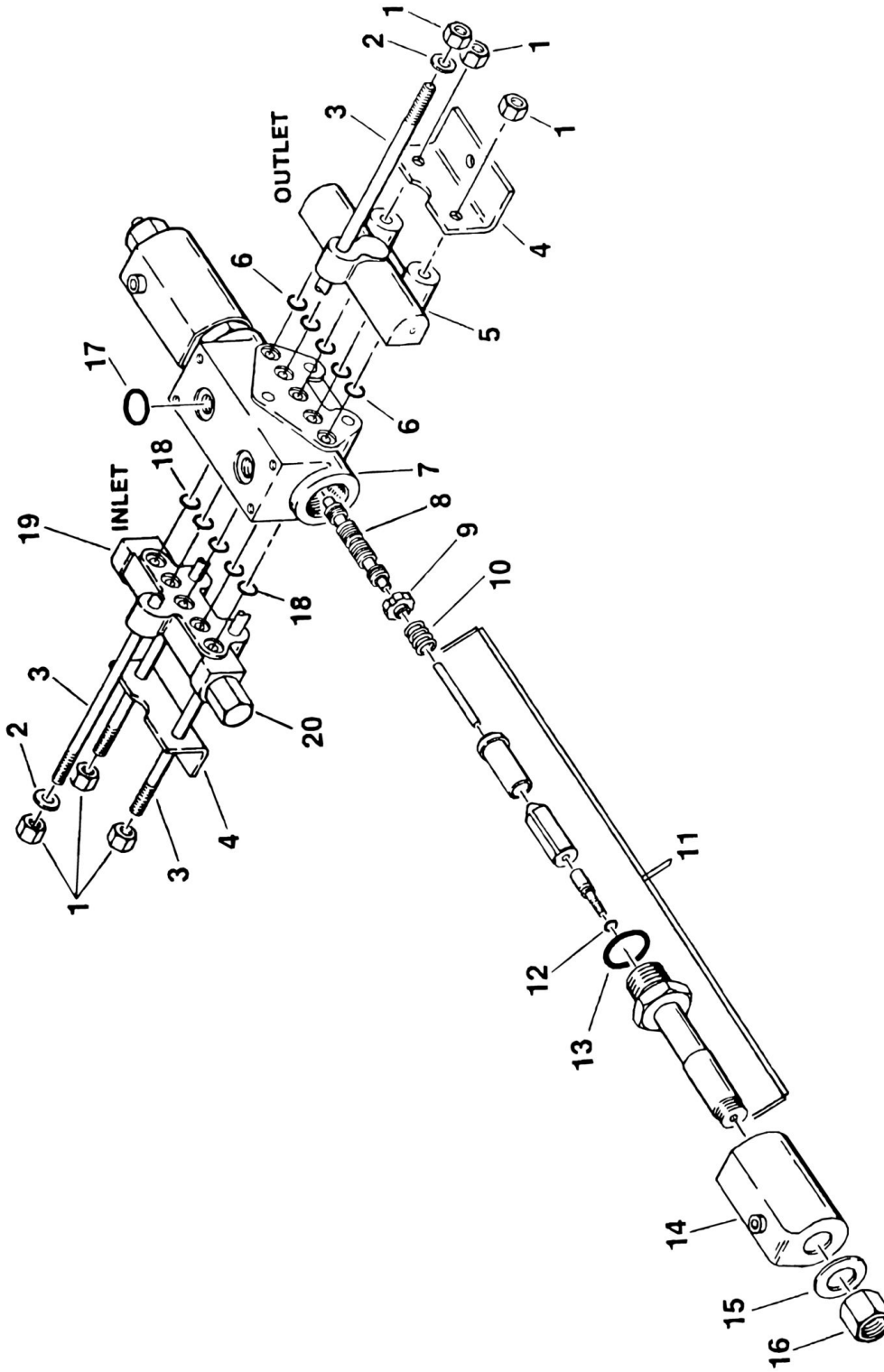
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FIGURE 2-3. ACCESSORY VALVE ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4640716	Ref	ACCESSORY VALVE ASSEMBLY	-
		Ref	Note: Refer to P/N stamped on cartridge hex nut for identification.	
1		Ref	Cartridge - Sequence Options:	
1	7012506	1	Hydraforce PS10-34A	
1	7010552	1	Vickers/Modular Controls PSV7-10V	
2		Ref	Cartridge - Pressure Reducing Options:	
2	7012505	1	Hydraforce PR10-32A	
2	7010553	1	Vickers/Modular Controls PRV1-10V	
3		Ref	Cartridge - Main Relief Options:	
3	7012507	1	Hydraforce RV50-26A	
3	7010554	1	Vickers/Modular Controls RV5-10V	
4		Ref	Cartridge - Dump Options:	
4	7004369	1	Cartridge Less Coil (Hydraforce SV16-21)	
4	7010556	1	Cartridge with Coil (Vickers/Modular Controls SV3-16V)	
5		Ref	Coil Options:	
5	7004368	1	Hydraforce 6352012	
5	7010555	1	Vickers/Modular Controls 565966	
		Ref	Seal Kit - Sequence Options:	
	7012509	1	Hydraforce Version	
	7010557	1	Vickers/Modular Controls Version	
		Ref	Seal Kit - Pressure Reducing Options:	
	7012510	1	Hydraforce Version	
	7010558	1	Vickers/Modular Controls Version	
		Ref	Seal Kit - Main Relief Options:	
	7012511	1	Hydraforce Version	
	7010559	1	Vickers/Modular Controls Version	
		Ref	Seal Kit - Dump Options:	
	2900709	1	Hydraforce Version	
	7010560	1	Vickers/Modular Controls Version	

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FIGURE 2-4. VALVE ASSEMBLY - FPS (STEER)



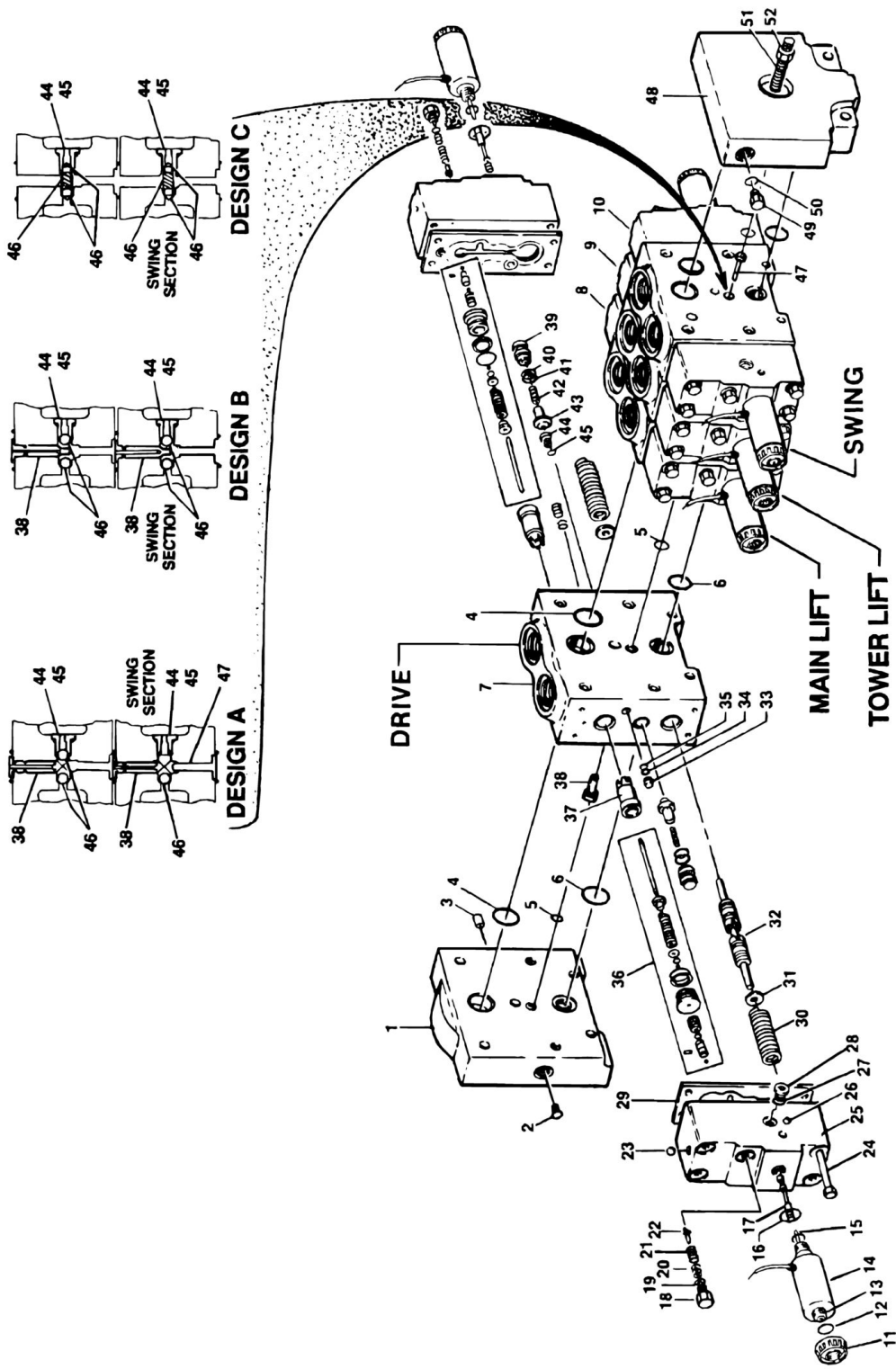
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FIGURE 2-4. VALVE ASSEMBLY - FPS (STEER)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4640375	Ref	VALVE ASSEMBLY - FPS (STEER)	C
1	7000585	6	Nut	
2	7000586	2	Washer	
3	7006043	3	Rod, Tie	
4	7006039	2	Bracket, Mounting	
5	7000600	1	Section, Valve - Outlet	
6	Kit	5	O-Ring	
7	7006041	1	Section, Valve - Complete (Includes Items 8-16)	
8	N.S.S.	1	Spool (Not Sold Separately)	
9	7006037	2	Retainer, Spring	
10	7006036	2	Spring	
11	7006034	2	Tube Assembly	
12	Kit	2	O-Ring	
13	Kit	2	O-Ring	
14	4640049	2	Coil, Solenoid	
15	N.S.S.	1	Nameplate (Not Sold Separately)	
16	7006033	2	Nut	
17	Kit	2	O-Ring	
18	Kit	5	O-Ring	
19	7006040	1	Section, Valve - Inlet (Includes Items 20)	
20	7006053	1	Relief, Inlet	
	7000549	4	Seal Kit - Single Section (Includes Items 12, 13, 17 & 18)	
	7006047	1	Seal Kit - Standard Outlet (Includes Item 6.)	
	7000550	1	Seal Kit - Inlet Relief	

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FIGURE 2-5. CONTROL VALVE ASSEMBLY (VICKERS) (PRIOR TO OCTOBER 1994)



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FIGURE 2-5. CONTROL VALVE ASSEMBLY (VICKERS) (PRIOR TO OCTOBER 1994)

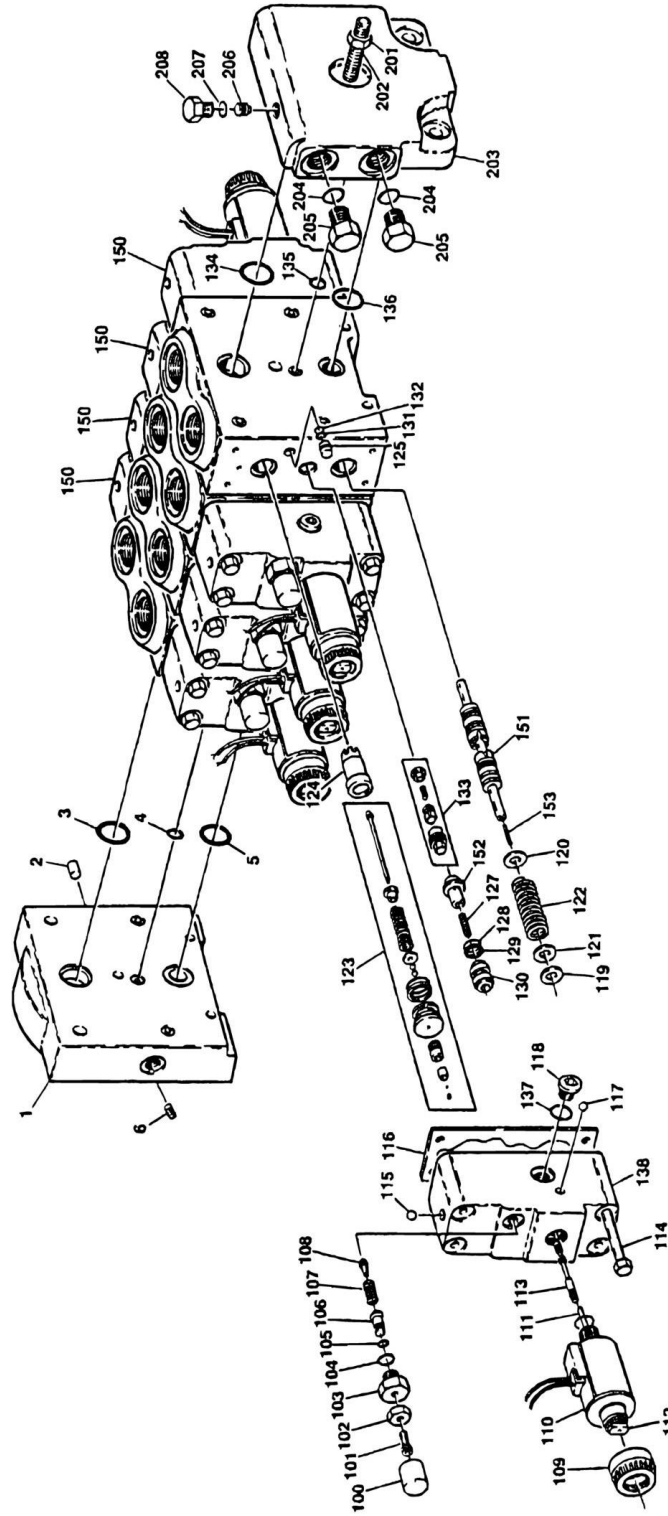
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4640554	Ref	CONTROL VALVE ASSEMBY (VICKERS) (PRIOR TO OCTOBER 1994)	A
1	7006724	1	Inlet Body	
2	7006725	1	Setscrew	
3	7006733	1	Plug	
4	Kit	1	O-Ring	
5	Kit	5	O-Ring	
6	Kit	1	O-Ring	
7	7006760	1	Working Section - Complete (Drive) (Includes Items 11-47)	
8	7009327	1	Working Section - Complete (Main Lift) (Includes Items 11-47)	
9	7009327	1	Working Section - Complete (Tower Lift) (Includes Items 11-47)	
10	7006763	1	Working Section - Complete (Swing) (Includes Items 11-47)	
11	7012325 & 7020361	8	Nut, Retaining (was p/n 7009317) (Note: When replacing this nut (7009317) you must order (7012325 & 7020361).	
12	Kit	8	O-Ring (2 Per Section)	
13	7009316	8	Core Tube (Includes O-Ring) (2 Per Section)	
14	7009315	8	Coil and Frame (2 Per Section)	
15	7009319	8	Pin (2 Per Section)	
16	Kit	8	O-Ring (2 Per Section)	
17	7006744	8	Spool (2 Per Section)	
18	7006726	8	Plug, Torque (2 Per Section)	
19	7006727	8	O-Ring (2 Per Section)	
20	7006728	8	Shim Kit (2 Per Section)	
21	7006729	8	Spring (2 Per Section)	
22	7006730	8	Poppet (2 Per Section)	
23	7006731	8	Ball (2 Per Section)	
24	7006745	32	Screw (8 Per Section)	
25	N.S.S.	8	Cap, End (Not Sold Separately) (2 Per Section)	
26	7006746	8	Ball (2 Per Section)	
27	Kit	8	O-Ring (2 Per Section)	
28	7009323	8	Plug (2 Per Section)	
29	7006748	8	Gasket (2 Per Section)	
30	7009324	8	Spring (2 Per Section)	
31	7009325	8	Retainer (2 Per Section)	
32	N.S.S.	4	Spool (Not Sold Separately) (1 Per Section)	
33	7006757	8	Seat (2 Per Section)	
34	Kit	8	Ring, Back-Up (2 Per Section)	
35	Kit	8	O-Ring (2 Per Section)	
36	7009320	8	Servo Stem Assembly (2 Per Section)	
37	7006737	8	Poppet (2 Per Section)	
38	7009321	4	Retainer (13/16in-2.1cm length) (Design A) (1 Per Section)	
38	7009363	4	Retainer (1 3/16in-3cm Length) (Design B) (1 Per Section)	
38	Not Required	0	Retainer (Design C)	
38	Kit	4	O-Ring (1 Per Section)	
39	7006752	8	Retainer (2 Per Section)	
40	Kit	8	Ring, Back-Up (2 Per Section)	
41	Kit	8	O-Ring (2 Per Section)	
42	7006773	8	Spring (2 Per Section)	
43	7006756	6	Poppet (Drive and Swing Sections) (2 Per Section)	
43	7009328	2	Poppet (Lift Sections) (2 Per Section)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
44	7006771	8	Plug, Torque (2 Per Section)	
45	Kit	8	O-Ring (2 Per Section)	
46	7006761	6	Ball (Design A - All Sections Except Swing) (2 Per Section)	
46	7006761	4	Ball (Design A - Swing Section) (4 Per Section)	
46	7006761	8	Ball (Design B - All Sections) (8 Per Section)	
46	7009369	8	Poppet (Design C - All Sections) (8 Per Section)	
46	7009368	4	Spring (Design C - All Sections) (4 Per Section)	
47	7006777	1	Pin, Solid (Design A - Swing Section Only)	
47	Not Required	0	Pin, Solid (Design B and Design C)	
48	7006780	1	Cover, End	
49	7006778	1	Plug, Torque	
50	Kit	1	O-Ring	
51	7009329	3	Rod, Tie	
52	7006782	6	Nut	
	7009330		Seal Kit (Includes Items 4, 5, 6, 12, 16, 27, 34, 35, 38, 40, 41, 45, 50 and Servo Stem O-Rings)	
	7009395	5	Seal Kit - Valve Face (Includes Items 4, 5 & 6)	

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FIGURE 2-6. CONTROL VALVE ASSEMBLY - (VICKERS) (OCTOBER 1994 TO PRESENT)



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FIGURE 2-6. CONTROL VALVE ASSEMBLY - (VICKERS) (OCTOBER 1994 TO PRESENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4640914	Ref	VICKERS VALVE ASSEMBLY - 4 SECTION	-
		Ref	Inlet Section	
1	7006724	1	Inlet Body	
2	7006733	1	Plug	
3	Kit	1	O-Ring	
4	Kit	1	O-Ring	
5	Kit	1	O-Ring	
6	7006725	1	Setscrew	
		Ref	Working Sections (Standard Parts)	
100	Kit	AR	Cap (2 Per Section)	
101	7012319	AR	Screw (2 Per Section)	
102	Kit	AR	Nut (2 Per Section)	
103	Kit	AR	Plug (2 Per Section)	
104	Kit	AR	Packing (2 Per Section)	
105	7012322	AR	Packing (2 Per Section)	
106	Kit	AR	Piston (2 Per Section)	
107	Kit	AR	Spring (2 Per Section)	
108	7006730	AR	Poppet (2 Per Section)	
109	7012325	AR	Nut, Retaining (2 Per Section)	
110	7012339	AR	Coil (2 Per Section)	
111	7009319	AR	Pin (2 Per Section)	
112	7012326	AR	Core Tube Sub Assembly (2 Per Section)	
113	7012327	AR	Spool	
114	7006745	AR	Screw (8 Per Section)	
115	7006731	AR	Ball	
116	Kit	AR	Gasket	
117	7006746	AR	Ball	
118	7009323	AR	Plug (2 Per Section)	
119	7012330	AR	Shim (AR Per Section)	
120	7012329	AR	Retainer (2 Per Section)	
121	7012328	AR	Shim (AR Per Section)	
122	7009324	AR	Spring (2 Per Section)	
123	7009320	AR	Stem Servo Sub Assembly (2 Per Section)	
124	7006737	AR	Poppet (2 Per Section)	
125	7006757	AR	Seat (2 Per Section)	
127	7006773	AR	Spring (2 Per Section)	
128	Kit	AR	O-Ring (2 Per Section)	
129	Kit	AR	Back-up (2 Per Section)	
130	7009398	AR	Retainer (2 Per Section)	
131	Kit	AR	Back-up Ring (2 Per Section)	
132	Kit	AR	O-Ring (2 Per Section)	
133	7012333	AR	Load Sense (2 Per Section)	
134	Kit	AR	O-Ring (2 Per Section)	
135	Kit	AR	O-Ring (2 Per Section)	
136	Kit	AR	O-Ring (5 Per Section)	
137	Kit	AR	O-Ring (2 Per Section)	
138	Not Serviced	AR	Cap, End (2 Per Section)	
	7009330	AR	Seal Kit (1 Per Section)	
	7012383	AR	Piston/Spring Kit (Includes 1 each of items 100, 102, 103, 106 & 107) (2 Per Section)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
150		Ref	Working Section Options:	
150	7012332	Ref	Drive	
150	7012334	Ref	Lift	
150	7012334	Ref	Lift	
150	7012335	Ref	Swing	
151		Ref	Spool Options:	
151	7012331	1	Spool for Drive and Lift Sections	
151	7012340	1	Spool for Swing Section	
152		Ref	Poppet Options:	
152	7009399	2	Poppet for Drive and Swing Sections	
152	7009397	2	Poppet for Lift Sections	
153		Ref	Piston Options:	
153	Not Required	0	Piston for Drive and Lift Sections	
153	7012300	2	Piston for Swing Section	
		Ref	Outlet Section	
201	7006782	6	Nut	
202	7009361	3	Rod, Tie	
203	7012337	1	Cover End	
204	Kit	2	O-Ring	
205	7006778	2	Plug	
206	7012338	1	Setscrew Orifice Sub-Assembly	
207	Kit	1	O-Ring	
208	7012336	1	Plug	

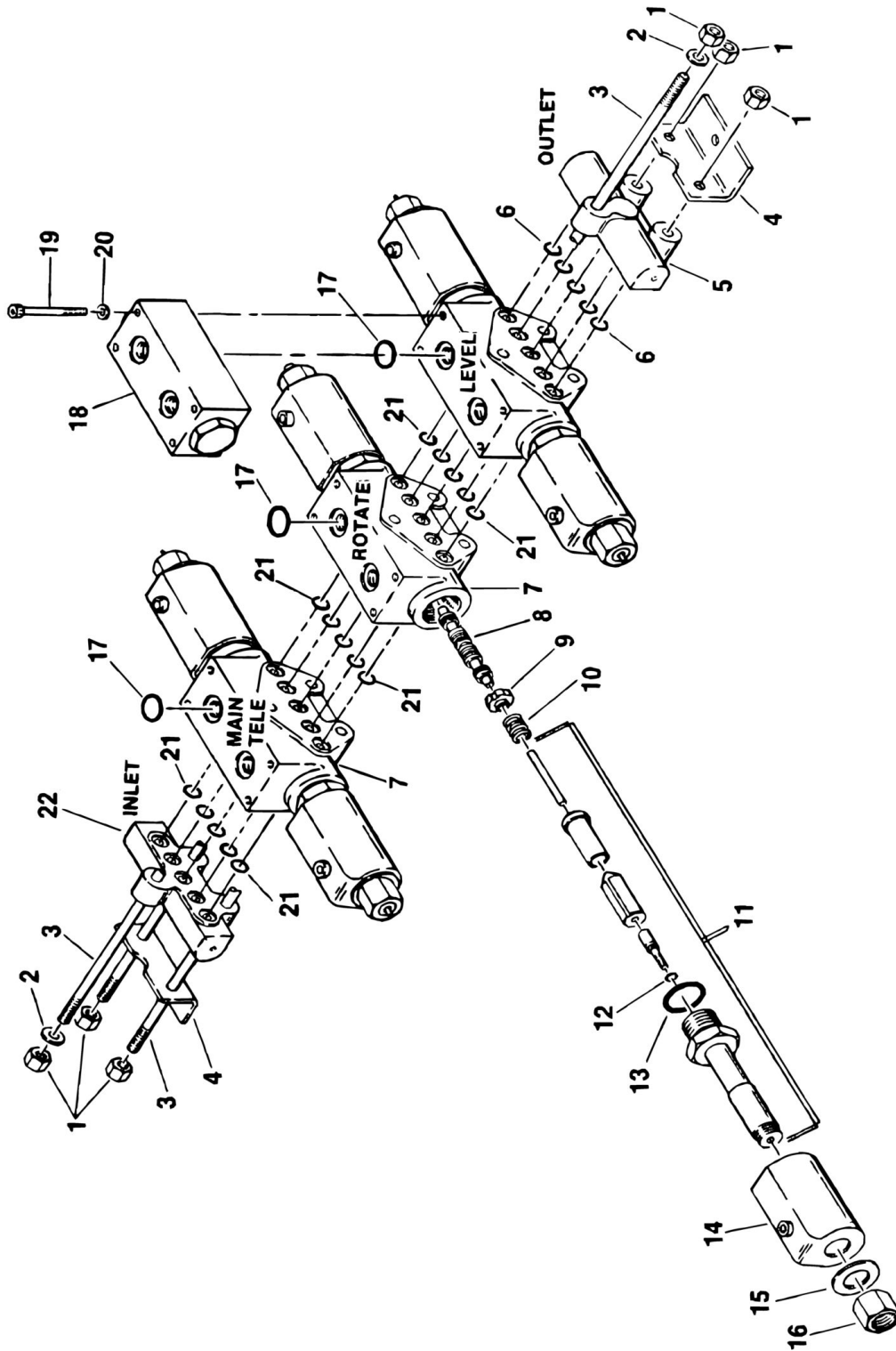
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FIGURE 2-7. VALVE ASSEMBLY - SINGLE STACK BANG-BANG

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4640570	Ref	VALVE ASSEMBLY - SINGLE STACK BANG-BANG	-
1	7004894	1	Drive Section - Complete (Includes Items 2-18)	
2	7003825	2	Seat, Washer	
3	7002348	2	Spring	
4	7003828	2	Nameplate	
	7004896	2	Solenoid Assembly (Includes Items 5-18)	
5	7002339	8	Screw (4 Per Assembly)	
6	7002338	2	Plate, End (1 Per Assembly)	
7	7000418	2	Coil (1 Per Assembly)	
8	7002335	2	Case, Solenoid (1 Per Assembly)	
9	7002336	2	Sleeve, Outer Flux (1 Per Assembly)	
10	7002334	2	Spring (1 Per Assembly)	
11	7002333	2	Sleeve, Inner Flux (1 Per Assembly)	
12	7004821	2	Guide Tube Assembly (Includes Items 13-18) (1 Per Assembly)	
13	7000470	2	Tube, Guide (1 Per Assembly)	
14	7002344	2	Plunger (1 Per Assembly)	
15	7002346	2	Pin, Push (1 Per Assembly)	
16	7003830	2	Cone Assembly (1 Per Assembly)	
16	7002345	2	Cone (1 Per Assembly)	
16	Kit	2	O-Ring 11/16in OD (1 Per Assembly)	
16	Kit	2	O-Ring 3/4in OD (1 Per Assembly)	
17	7003831	2	Pin and Guide Assembly (1 Per Assembly)	
17	7002340	2	Guide (1 Per Assembly)	
17	Kit	2	O-Ring 11/16in OD (1 Per Assembly)	
18	7003829	2	Pin Assembly (1 Per Assembly)	
18	Kit	2	Seal, Pin (1 Per Assembly)	
	7002347	1	O-Ring 3/4in OD (Use Between Sections - Not Shown)	
	7000448	1	O-Ring 1 1/16in OD (Use Between Sections - Not Shown)	
	7000437	4	Seal Kit - Valve Section	

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FIGURE 2-8. VALVE ASSEMBLY - FPS



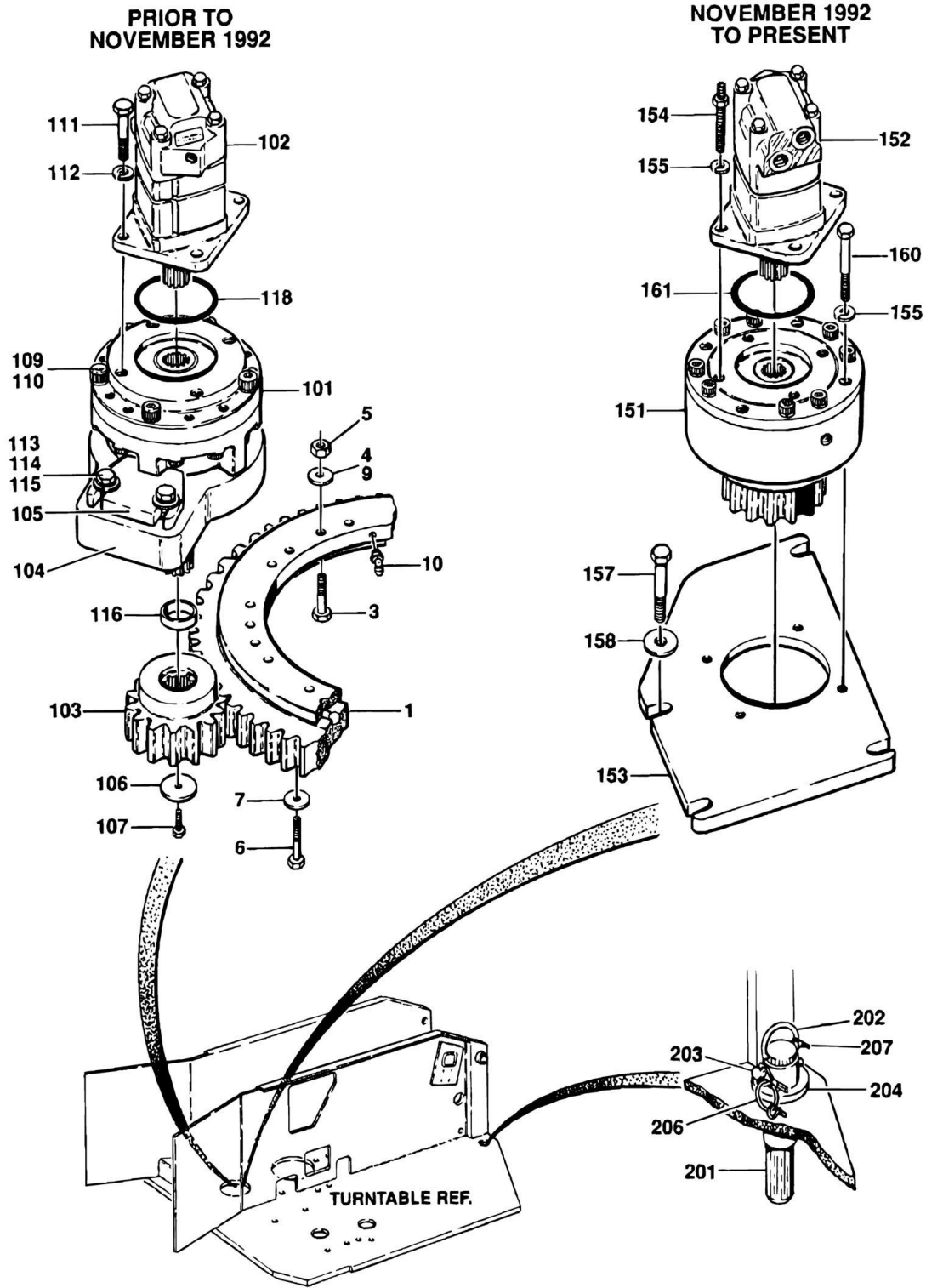
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FIGURE 2-8. VALVE ASSEMBLY - FPS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	VALVE ASSEMBLY - FPS	
	4640544	Ref	4 STACK (Machines with Stepper Valves and Rotate)	C
	4640556	Ref	3 STACK (Machines with Stepper Valves and without Rotate/Machines with Vickers Valves and with Rotate)	C
	4640555	Ref	2 STACK (Machines with Vickers Valves and without Rotate)	C
1	7000585	6	Nut	
2	7000586	2	Washer	
3		Ref	Rod, Tie Options:	
3	7006002	3	4 Stack	
3	7006059	3	3 Stack	
3	7006061	3	2 Stack	
4	7006039	2	Bracket, Mounting	
5	7006058	1	Section, Valve - Outlet	
5	7006055	1	Plug, Closed Center (Not Shown)	
6	Kit	5	O-Ring	
7		Ref	Valve Section - Complete Options (Includes 8-16)	
7	7006063	1	Section, Valve - Complete (Main Lift - 4 Stack Used on Stepper Valve Machines)	
7	7006041	3	Section, Valve - Complete (Main Tele, Rotate and Level - 4 Stack Used on Stepper Valve Machines)	
7	7006041	3	Section, Valve - Complete (Main Lift, Main Tele and Level - 3 Stack Used on Stepper Valve Machines)	
7	7006041	3	Section, Valve - Complete (Main Tele, Level and Rotate - 3 Stack Used on Vickers Valve Machines)	
7	7006041	3	Section, Valve - Complete (Main Tele and Level - 2 Stack Used on Vickers Valve Machines)	
8	Not Available	AR	Spool (1 per Valve Section)	
9	7006037	AR	Retainer, Spring (2 per Valve Section)	
10	7006036	AR	Spring (2 per Valve Section)	
11	7006034	AR	Tube Assembly (2 per Valve Section)	
12	Kit	AR	O-Ring (2 per Valve Section)	
13	Kit	AR	O-Ring (2 per Valve Section)	
14	4640049	AR	Coil, Solenoid (2 per Valve Section)	
15	Not Available	AR	Nameplate (2 per Valve Section)	
16	7006033	AR	Nut (2 per Valve Section)	
17	Kit	AR	O-Ring (2 per Valve Section)	
18	7006060	1	Port Block Attachment (Level Section Only)	
19	Kit	4	Bolt	
20	Kit	4	Washer	
21	Kit	AR	O-Ring (5 per Stack)	
22		Ref	Inlet Valve Section Options:	
22	7006056	1	Inlet Valve Section (1987-1991) (Without Relief Cartridge)	
22	7006074	1	Inlet Valve Section (1992 to Present) (With Relief Valve)	
	7000549	AR	Seal Kit - Single Section (Includes 12, 13, 17 & 21)	
	7006062	1	Seal Kit - Standard Outlet (Includes Item 6)	
	7000581		Seal Kit - Level Section Port Block (Includes Item 17 and Check Valves O-Rings)	

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FIGURE 2-9. TURNTABLE, BEARING AND SWING DRIVE INSTALLATION



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FIGURE 2-9. TURNTABLE, BEARING AND SWING DRIVE INSTALLATION

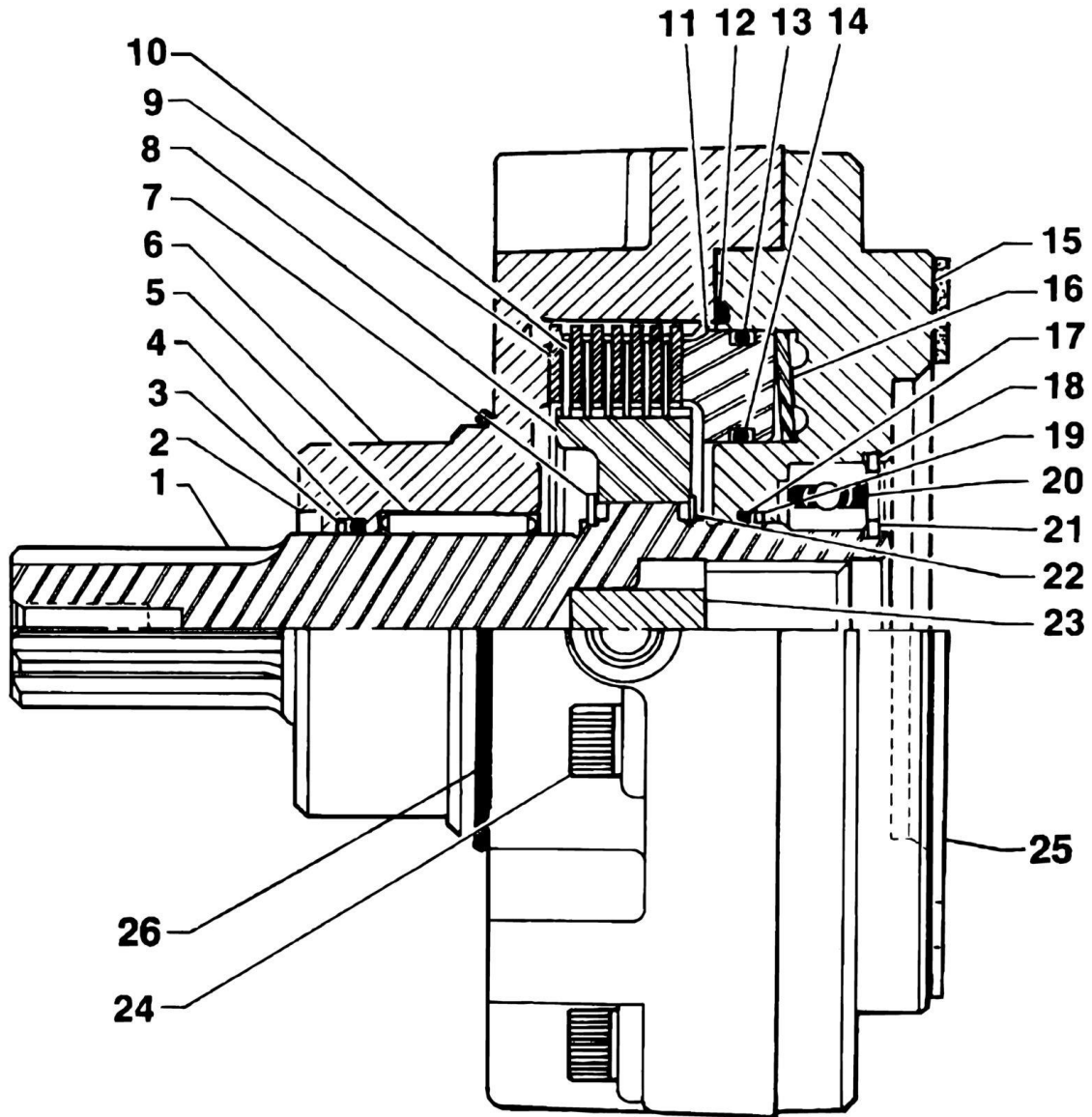
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	TURNTABLE OPTIONS	
		Ref	Ford and Deutz Powered Machines:	
	4620051	Ref	6ft-6in/2m Wide Machines Built through 1992	
	4620079	Ref	6ft-6in/2m Wide Machines Built (1993 to Present)	
	4620105	Ref	6ft-6in/2m Wide Machines with 12in x 16.5in Tires	
	4620064	Ref	6ft-6in/2m Wide Machines Built through 1992 and with 2:1 Counterweighting	
	4620080	Ref	6ft-6in/2m Wide Machines with Built (1993 to Present) and with 2:1 Counterweighting	
	4620080	Ref	5ft-9in/1.75m Wide Machines	
	4620080	Ref	All Australian Machines	
		Ref	Electric Machines:	
	4620056	Ref	6ft-6in/2m Wide Machines Built (Prior to December 1992)	
	4620082	Ref	6ft-6in/2m Wide Machines Built (December 1992 to Present)	
	4620042	Ref	5ft-9in/1.75m Wide Machines	
		Ref	TURNTABLE BEARING INSTALLATION	
	0238511	Ref	Machines with 8.75in & 9.5in Tires	B
	0250860	Ref	Machines with 8.75in & 9.5in Tires	B
	0255117	Ref	Machines with 12in Tires	-
		Ref	Bearing Kit (was p/n 0440067) Options (Kit Includes Bearing and Mounting Hardware):	
1	2915083	1	Machines with 8.75in & 9.5in Tires	
1	2915084	1	Machines with 12in Tires	
2	3538437	1	Spacer, Bearing (Machines with 12in Tires Only)	
3	0682020	14	Bolt 5/8in-11NC x 2 1/2in (Grade 8)	
4	4740004	11	Washer, Hardened	
5	3300183	14	Nut 5/8in-11NC (Grade 8)	
6	0681820	12	Bolt 1/2in-13NC x 2 1/2in (Grade 8) (8.75in x 9.5in Tires)	
6	0681844	12	Bolt 1/2in-13NC x 5 1/2in (Grade 8) (12in Tires)	
7	4740003	12	Washer, Hardened	
9	4740048	3	Washer, Special	
10	2160001		Fitting, Grease - 90	
	0100019	AR	Loctite #271	
	0100004	AR	Devcon (Not Required on Machines with Milled Frame and Turntable)	
	0238523	Ref	SWING DRIVE INSTALLATION - MACHINES BUILT THROUGH 1992	E
101	0920074	1	Swing Brake Assy (See SWING BRAKE ASSEMBLY for Breakdown)	
102	3160147	1	Swing Motor Assy (See SWING MOTOR ASSEMBLY for Breakdown)	
103	2440056	1	Pinion	
104	0080148	1	Adapter	
105	0560793	1	Block, Clamp	
106	4740018	1	Washer	
107	0641608	1	Bolt 3/8in-16NC x 1in	
109	3931856	4	Bolt, Socket Head 1/2in-13NC x 3 1/2in	
110	4740189	4	Lockwasher 1/2in Hi-Collar	
111	0641810	4	Bolt 1/2in-13NC x 1 1/4in	
112	4761800	4	Lockwasher 1/2in	
113	0641610	2	Bolt 3/8in-16NC x 1 1/4in	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
114	4761600	2	Lockwasher 3/8in	
115	4751600	2	Flatwasher 3/8in	
116	4563923	1	Spacer	
118	3790045	1	O-Ring	
	0100011	AR	Loctite #242	
	0100020	AR	Sealant, Pipe	
		Ref	SWING DRIVE INSTALLATION - MACHINES BUILT (1993 TO PRESENT)	
	0252578	Ref	Machines Built (1993 to May 1994)	D
	0255010	Ref	Machines Built (May 1994 to Present)	-
151		Ref	Swing Brake Assembly Options:	
151	0920089		Brake Used (1993 to May 1994)	
151	7012570	1	Seal Kit - 0920089 Brake (Includes Seals, O-Rings, 1 Back-up Rings and Retaining Ring)	
151	7012571	1	Rebuild Kit - 0920089 Brake (Includes 7012570 Seal Kit, Inner and Outer Discs and Pressure Plate)	
151	0920095		Brake Used (May 1994 to Present)	
151	7012651		Seal Kit - 0920095 Brake (Includes Seals, O-Rings, 1 Back-up Rings and Retaining Ring)	
151	7012650	1	Rebuild Kit - 0920095 Brake (Includes 7012651 Seal Kit, Inner and Outer Discs and Pressure Plate)	
152	3160183	1	Swing Motor Assy (See SWING MOTOR ASSEMBLY for Breakdown)	
153	3535607	1	Plate, Mounting	
154	4300107	4	Stud 1/2in-13NC x 2in (1993 to May 1994 Only)	
154	3311801	4	Nut 1/2in-13NC	
155		Ref	Lockwasher 1/2in Options:	
155	4761800	8	Lockwasher 1/2in (1993 to May 1994)	
155	4740252	8	Lockwasher 1/2in (May 1994 to Present)	
157	0642014	4	Bolt 5/8in-11NC x 1 3/4in	
158	4740004	4	Washer, Hardened	
160		Ref	Bolt Options:	
160	0641830	4	Bolt (1993 to May 1994)	
160	0641834	4	Bolt (May 1994 to Present)	
161	3790155	1	O-Ring	
	0100019	AR	Loctite #271	
	0100021	AR	Primer	
		Ref	TURNTABLE LOCK INSTALLATION	
	0238164	Ref	Machines with 8.75in & 9.5in Tires	B
	0255148	Ref	Machines with 12in Tires	-
201		Ref	Pin, Lock Options:	
201	3421452	1	Machines with 8.75in & 9.5in Tires	
201	3422414	1	Machines with 12in Tires	
202	3760215	1	D-Ring	
203	3421453	1	Snap-Pin	
204		Ref	Bushing (Welded on Part)	
204	4842998	1	Machines with 8.75in & 9.5in Tires	
204	0961945	1	Machines with 12in Tires	
206	3760170	1	Ring, Quick Release	
207	1260017	6 in/15cm	Chain	

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FIGURE 2-10. SWING BRAKE ASSEMBLY



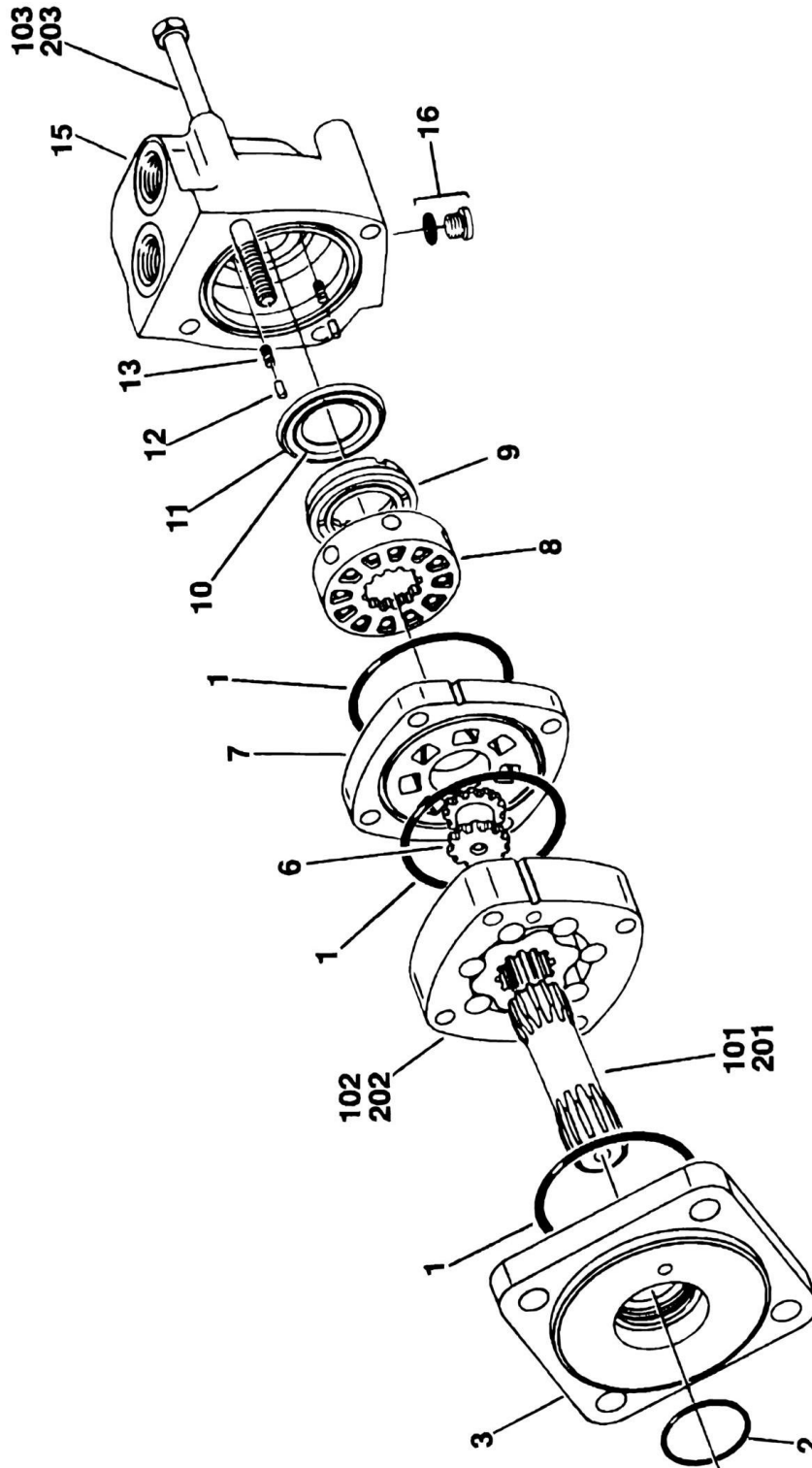
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FIGURE 2-10. SWING BRAKE ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0920074	Ref	SWING BRAKE ASSEMBLY (MACHINES BUILT THROUGH 1992)	B
		Ref	Note: For Service Parts on Machines Built (1993 to Present) refer to Turntable, Bearing and Swing Drive Installation	
1	7007960	1	Shaft	
2	Kit	1	Seal, Oil	
3	Kit	1	Ring, Back-up (Units Built through 1989 only)	
4	Kit	1	Ring, Quad	
5	7007956	1	Bearing, Needle	
6	7007955	1	Plate, Cover	
7		Ref	Ring, Retaining Options:	
7	7007954	1	Machines Built through 1989	
7	7007991	1	Machines Built (1990 to Present)	
8		Ref	Spline, Outer Options:	
8	7007953	1	Machines Built through 1989	
8	7007992	1	Machines Built (1990 to Present)	
9	7007952	7	Stator	
10	7007951	6	Rotor	
11	7007950	1	Piston	
12	Kit	1	O-Ring	
13	Kit	1	O-Ring	
14	Kit	1	O-Ring	
15	7007946	1	Plate, Pressure	
16	7007945	1	Spring, Belleville	
17	Kit	1	Ring, Quad	
18	7007943	1	Ring, Retaining	
19	Kit	1	Ring, Back-up (Units Built through 1989 only)	
20	7007941	1	Bearing	
21	7007940	1	Ring, Retaining	
22	7007939	1	Ring, Retaining (Units Built through 1989 only)	
23	7007938	1	Pin, Dowel (Units Built through 1989 only)	
24		Ref	Bolt, Socket Head Options:	
24	7007937	8	Machines Built through 1989	
24	7007993	8	Machines Built (1990 to Present)	
25	Kit	1	Gasket	
26	Kit	1	O-Ring	
	2900774	1	Seal Kit (Includes Items 2, 3, 4, 12, 13, 14, 17, 19, 25 & 26)	

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FIGURE 2-11. SWING MOTOR ASSEMBLY



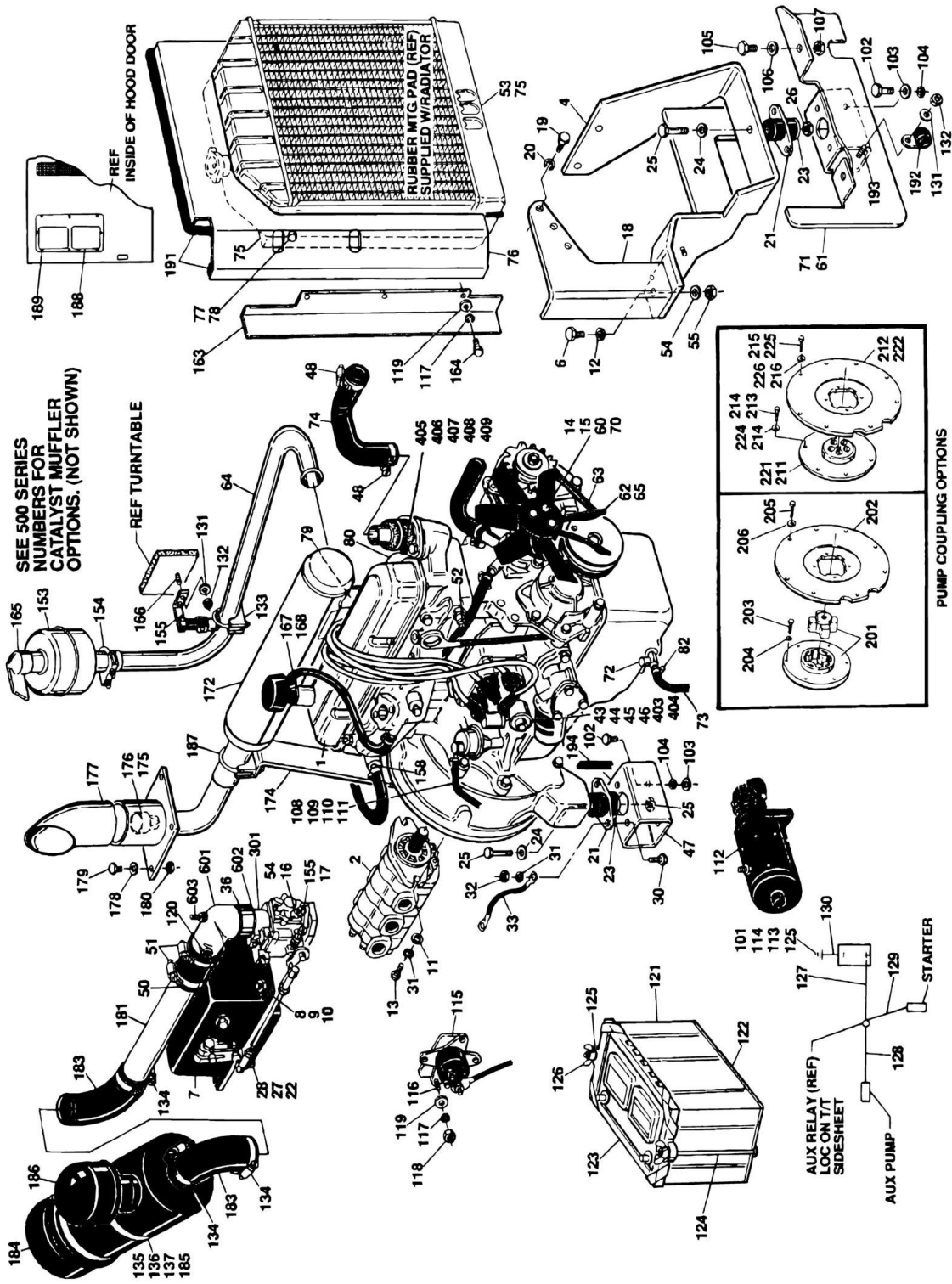
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FIGURE 2-11. SWING MOTOR ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	SWING MOTOR ASSEMBLY	
1	Kit	3	Seal	
2	Kit	1	O-Ring	
3	7009984	1	Flange, Mounting	
6	7009905	1	Drive, Valve	
7	7009983	1	Plate, Valve	
8	7009927	1	Valve	
9	7009909	1	Ring, Balance	
10	Kit	1	Seal, Face - Inner	
11	Kit	1	Seal, Face - Outer	
12	7009912	2	Pin	
13	7009913	2	Spring	
15	7009930	1	Housing, Valve	
16	7002157	1	Plug Assembly	
16	Kit	1	O-Ring	
	7009987	1	Seal Kit (Includes Items 1, 2, 10, 11 & 16 O-Ring)	
	3160147	Ref	SWING MOTOR ASSEMBLY (MACHINES BUILT THROUGH 1992) (VARIABLE PARTS)	-
101	7009903	1	Drive	
102	7009985	1	Geroler	
103	7009986	4	Bolt	
	3160183	Ref	SWING MOTOR ASSEMBLY (MACHINES BUILT 1993 TO PRESENT) (VARIABLE PARTS)	-
201	7009988	1	Drive	
202	7009989	1	Geroler	
203	7009990	4	Bolt	

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FIGURE 2-12. FORD ENGINE INSTALLATION - WITH DISTRIBUTORLESS IGNITION SYSTEM



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FIGURE 2-12. FORD ENGINE INSTALLATION - WITH DISTRIBUTORLESS IGNITION SYSTEM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	FORD ENGINE INSTALLATION - WITH DISTRIBUTORLESS IGNITION SYSTEM	
		Ref	See SPECIAL OPTIONS SECTION for Ford VSG-413 used (August 1998 to Present)	
		Ref	FORD ENGINE ASSEMBLY (STANDARD PARTS)	
1		Ref	Engine - Ford VSG-411 Options:	
1	2000109	1	Engine - Ford (March 1990 to August 1992) (Industrial Flywheel)	
1	2000117	1	Engine - Ford (August 1992 to October 1994) (Automotive Flywheel and Bosch Alternator)	
1	2000129	1	Engine - Ford (October 1994 to March 1995) (Automotive Flywheel and Prestolite Alternator)	
1	2000130	1	Engine - Ford (March 1995 to July 1995) (Automotive Flywheel and Prestolite Alternator)	
1	2000135	1	Engine - Ford (July 1995 to Present) (Automotive Flywheel and Prestolite Alternator)	
2		Ref	Pump Assembly Options:	
2	3600152	1	Pump Assembly (Vickers)	
2	2900660	1	Shaft Seal Kit (Vickers)	
2	3600200	1	Pump Assembly (Barnes) (1 each of fittings p/n's 2220376 & 2210014 are required when replacing Vickers pump with Barnes pump) (See PUMP ASSEMBLY - BARNES (FORD AND DEUTZ POWERED MACHINES) for Breakdown)	
4		Ref	Bracket, Engine Mounting - Front Options:	
4	4843416	1	Bracket, Engine Mounting - Front (Prior to February 1992)	
4	4843497	1	Bracket, Engine Mounting - Front (February 1992 to Present)	
5	3533445	1	Plate, Mounting - Governor and Carburetor	
6	0641812	1	Bolt 1/2in-13NC x 1 1/2in	
7	2500005	1	Governor, Precision	
8	0641410	4	Bolt 1/4in-20NC x 1 1/4in	
9	4761400	5	Lockwasher 1/4in	
10	3311401	5	Nut 1/4in-20NC	
11	4740185	2	Washer, Hardened	
12	4761800	1	Lockwasher 1/2in	
13	0641610	2	Bolt 3/8in-16NC x 1 1/4in	
14	0700814	3	Bolt, Metric 8mm x 30mm	
15	4831900	3	Lockwasher, Metric 8mm	
16	4300090	2	Stud	
17	3321501	2	Nut 5/16in-24NF	
18	3533291	1	Plate	
19	0701014	AR	Bolt, Metric 10mm x 30mm	
19	0701012	AR	Bolt, Metric 10mm x 25mm	
20	4832000	7	Lockwasher, Metric 10mm	
21	3200318	3	Mount, Engine	
22	3911012	2	Screw, Machine #10-24NC x 3/4in	
23	4740273	3	Washer, Snubbing	
24	4751700	6	Flatwasher 7/16in	
25	0641728	AR	Bolt 7/16in-14NC x 3 1/2in	
25	0641724	AR	Bolt 7/16in-14NC x 3in	
26	3311705	3	Locknut 7/16in-14NC	
27	4761000	2	Lockwasher #10	
28	3311001	2	Nut #10-24NC	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
30	0641608	6	Bolt 3/8in-16NC x 1in	
31	4761600	8	Lockwasher 38in	
32	3311601	6	Nut 3/8in-16NC	
33	1060221	1	Cable, Battery (Engine to Ground)	
36	0080182	1	Adapter, Carburetor	
37	3841049	1	Rod, Throttle	
38	3321401	2	Nut, Jam 1/4in-20NC	
39	1660157	2	Balljoint	
43	4360037	1	Switch, Oil Pressure	
44	2220273	1	Fitting, Reducer	
45	2180360	1	Fitting, Tee	
46	2420131	1	Sender, Oil Pressure	
47	4564591	2	Tube, Mounting	
48	1320014	4	Clamp, Hose	
50	2720341	1	Hose, Air Cleaner	
51	1320058	1	Clamp, Hose	
52	2420130	1	Sender, Temperature	
53	3620027	1	Radiator	
54	4751800	1	Flatwasher 1/2in	
55	3311801	1	Nut 1/2in-13NC	
	0250645	Ref	FORD ENGINE ASSEMBLY (WITHOUT NOISE REDUCTION PACKAGE - MACHINES BUILT THROUGH 1992) (VARIABLE PARTS)	H
60	4031713	3	Bolt, Metric Socket Head 6mm x 45mm	
61	4843560	1	Mount, Engine - Front	
62	2060016	1	Fan	
63	4240096	1	Strap, Fan	
64	4564682	1	Tube, Exhaust	
65	0080168	1	Adapter, Fan	
		Ref	FORD ENGINE ASSEMBLY (WITH NOISE REDUCTION)	
	0252775	Ref	MACHINES BUILT (1993 TO JULY 1995)	F
	0255762	Ref	MACHINES BUILT (JULY 1995 TO PRESENT)	A
70	2060019	1	Fan Kit	
71	4844133	1	Mount, Engine - Front	
72	4640750	1	Valve, Oil Drain	
73	2750532	18	Hose, Low Pressure	
		in/46cm		
74	2720264	1	Hose, Radiator - Upper	
75	2680402	1	Shroud, Radiator	
76	3536015	1	Plate, Baffle	
77	3941005	10	Screw, Self-Tapping #10 x 5/8in	
78	4761000	10	Lockwasher #10	
79	4565830	1	Tube, Exhaust	
80	3100073	1	Manifold, Exhaust (January 1993 to March 1995 Only)	
81	2720042	1	Hose	
82	1320032	3	Clamp, Hose	
		Ref	FORD ENGINE INSTALLATION (STANDARD PARTS)	
101	3311601	3	Nut 3/8in-16NC	
102	0641807	6	Bolt 1/2in-13NC x 7/8in	
103	4751800	6	Flatwasher 1/2in	
104	4761800	6	Lockwasher 1/2in	
105	0630403	2	Bolt, Carriage 7/16in-14NC x 1 1/2in	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
106	4751700	2	Flatwasher 7/16in	
107	3311705	2	Locknut 7/16in-14NC	
108	2180104	1	Fitting, Nipple	
109	2220273	1	Bushing, Reducer	
110	1320022	2	Clamp	
111	2720058	9 ft/2.75m	Hose, Fuel Line	
112		Ref	Auxiliary Pump Assembly Options - Vendors Vary:	
112	3600050	1	John S. Barnes Brand Pump Version:	
112	7004248	1	Motor (Bosch or Prestolite)	
112	7004249	1	Coupling	
112	7010923	1	Pump	
112	3600050	1	Stone Industries Brand Pump Version:	
112	7000482	1	Motor	
112	7004412	1	Coupling	
112	7004414	1	Pump	
112	3600208	1	Fenner Fluid Power Brand Pump Version:	
112	7013710	1	Motor	
112	7013711	1	Coupling	
112	7013712	1	Pump	
113	4761600	3	Lockwasher 3/8in	
114	0641612	3	Bolt 3/8in-16NC x 1 1/2in	
115	3740067	1	Relay	
116	4300081	2	Stud (Welded on Part)	
117	4761000	2	Lockwasher #10	
118	3311001	2	Nut #10-24NC	
119	4751000	2	Flatwasher #10	
120	3520046	1	Plug, Tapered	
121	0400003	1	Battery	
122	3980003	1	Seat, Battery	
123	0400002	1	Hold-Down, Battery	
123	2910479	1	Replacement Clip Kit for 0400002	
124	0236768	2	Rod, Hold-down	
125	4751600	4	Flatwasher 3/8in	
126	3300029	2	Wingnut 3/8in-16NC	
127	1060172	1	Cable, Battery (Battery to Aux Relay)	
128	1060149	1	Cable, Battery (Aux Relay to Aux Pump)	
129	1060103	1	Cable, Battery (Aux Relay to Starter)	
130	1060046	1	Cable, Battery (Battery to Ground)	
131	4751500	2	Flatwasher 5/16in	
132	3311505	1	Locknut 5/16in-18NC	
133	1320026	1	Clamp, Muffler	
134	1320031	5	Clamp, Hose	
135	4300068	4	Stud (Welded on Part)	
136	4761400	4	Lockwasher 1/4in	
137	3311401	4	Nut 1/4in-20NC	
	0250646	Ref	FORD ENGINE INSTALLATION (WITHOUT NOISE REDUCTION PACKAGE - BUILT THROUGH 1992) (VARIABLE PARTS)	E
153	3220076	1	Muffler	
154	1320020	1	U-Clamp	
155	0901387	1	Bracket, Exhaust	
156	4843654	1	Tube, Air Intake	
158	2220314	1	Fitting, Barbed	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
159	2720354	1	Elbow	
160	1340051	1	Air Cleaner Assembly	
160	7012661	1	Element, Filter	
161	0340016	2	Band, Air Cleaner	
162	1120370	1	Cap, Air Inlet	
163	4060741	1	Shield	
164	3911008	3	Screw, Machine #10-24NC x 1/2in	
165	1120218	1	Cap, Rain - Exhaust	
166	4300038	2	Stud (Welded on Part)	
167	2720042	15	Hose, Heater	
		in/38cm		
168	1320032	2	Clamp, Hose	
	0252776	Ref	FORD ENGINE INSTALLATION (WITHOUT NOISEREDUCTION PACKAGE - BUILT 1993 TO JULY 1995)	C
	0254843	Ref	EXHAUST INSTALLATION (WITH NOISE REDUCTION PACKAGE - BUILT 1993 TO JULY 1995)	-
	0255763	Ref	EXHAUST INSTALLATION (WITH NOISE REDUCTION PACKAGE - BUILT JULY 1995 TO PRESENT)	2
172	3220084	1	Muffler	
174	0901858	1	Bracket, Muffler	
175	4565829	1	Tube, Exhaust	
176	3220083	1	Arrestor, Spark	
177	4844209	1	Stack, Exhaust	
178	4751400	4	Flatwasher 1/4in	
179	0641406	4	Bolt 1/4in-20NC x 3/4in	
180	3311405	4	Locknut 1/4in-20NC	
181	4844211	1	Intake, Air	
183	0080046	1	Elbow	
184	1340020	1	Air Cleaner Assembly	
184	7004214	1	Element, Filter	
185	0340002	2	Band, Mounting - Air Cleaner	
186	1120161	1	Cap, Air Inlet	
187	1320026	1	Clamp, Muffler	
188	3536021	1	Plate, Inlet Adapter	
189	3820001	8	Rivet	
190	3960483	15	Seal	
		in/38cm		
191	3960418	5 ft/1.5m	Seal	
192	1320131	1	Clamp	
193	0641508	1	Bolt 5/16in-18NC x 1in	
194	4060807	4 in/9cm	Hose Protection, Trim Flex (SN 32166 to Present)	
	0239972	Ref	PUMP COUPLING INSTALLATION - LOVEJOY WITH INDUSTRIAL FLYWHEEL (PRIOR TO AUGUST 1992)	-
201	1660176	1	Coupling	
201	Not Available	1	Disc, Coupling	
201	Not Available	1	Hub, Coupling	
202	0080169	1	Adapter, Pump	
203	0641510	6	Bolt 5/16in-18NC x 1 1/4in	
204	4761500	6	Lockwasher 5/16in	
205	0641610	8	Bolt 3/8in-16NC x 1 1/4in	
206	4761600	8	Lockwasher 3/8in	
	0250595	Ref	PUMP COUPLING INSTALLATION - HAYES WITH INDUSTRIAL FLYWHEEL (PRIOR TO AUGUST 1992)	-

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
211	1660182	1	Coupling (Note: Coupling Internal Spines must be lubed with Lithium based grease prior to Installation.)	
212	0080169	1	Adapter, Pump	
213	0641507	6	Bolt 5/16in-18NC x 7/8in	
214	4761500	6	Lockwasher 5/16in	
215	0641610	8	Bolt 3/8in-16NC x 1 1/4in	
216	4761600	8	Lockwasher 3/8in	
	3020021	AR	Grease, Coupling	
	0252807	Ref	PUMP COUPLING INSTALLATION - HAYES WITH AUTOMOTIVE FLYWHEEL (AUGUST 1992 TO PRESENT)	-
221	1660206	1	Coupling (Note: Coupling, Internal Spines must be lubed with Lithium based grease prior to Installation.)	
222	0080169	1	Adapter, Pump	
223	0700808	6	Bolt, Metric 8mm x 16mm	
224	4831900	6	Lockwasher, Metric 8mm	
225	0641610	8	Bolt 3/8in-16NC x 1 1/2in	
226	4761600	8	Lockwasher 3/8in	
	3020021	AR	Grease, Coupling	
		Ref	ENGINE COMPONENTS	
301	7000892	1	Carburetor - Ford VSG-411	
301	7019933	1	Rebuild Kit - Carburetor (All Models) (was p/n 7000878)	
301	7012577	1	Fitting, Carburetor Vacuum Line	
301	7012578	1	Carburetor Vacuum Line Assembly	
301	7027607	1	Gasket, Carburetor (Bottom)	
301	7024321	1	Gasket, Carburetor (Top)	
301	70000163	1	Needle, Spring Load Fuel Valve	
301	7027646	2	Gasket, Carburetor	
301	7023471	1	Float Assembly	
301	7000894	1	Choke, Automatic	
301	7000877	1	Fuel Shut-Off - Has Wire Connection	
301	7000884	1	Fuel Shut-Off - Has Terminal Post	
301	7022174	1	Filter, Fuel	
301	7019939	1	Filter, Fuel	
301	2120112	1	Separator, Fuel	
301	7019666	1	Pump, Fuel	
301	7025153	1	Gasket, Fuel Pump	
301	7012564	1	Engine Wiring Harness	
301		Ref	Alternator Options:	
301	7000893		Alternator - Bosch Version	
301	7019670		Alternator - Prestolite Version (was p/n 7012653)	
301	7019670		Alternator - Leese Nuville Version	
301	7019934	1	Belt, Alternator	
301	7019935	1	Pulley, Alternator	
301	7019936	1	Pulley, Crankshaft	
301	7019951	1	Pump, Water	
301	7019937	1	Pulley, Water Pump	
301	7019938	1	Outlet, Water	
301	7019942	1	Hose, Water Pump/Intake Inlet	
301	7019950	1	Thermostat, 160	
301	7019941	1	Hose, Radiator (Upper)	
301	7019943	1	Hose, Radiator (Lower)	
301	7019945	1	Hose, Bypass	

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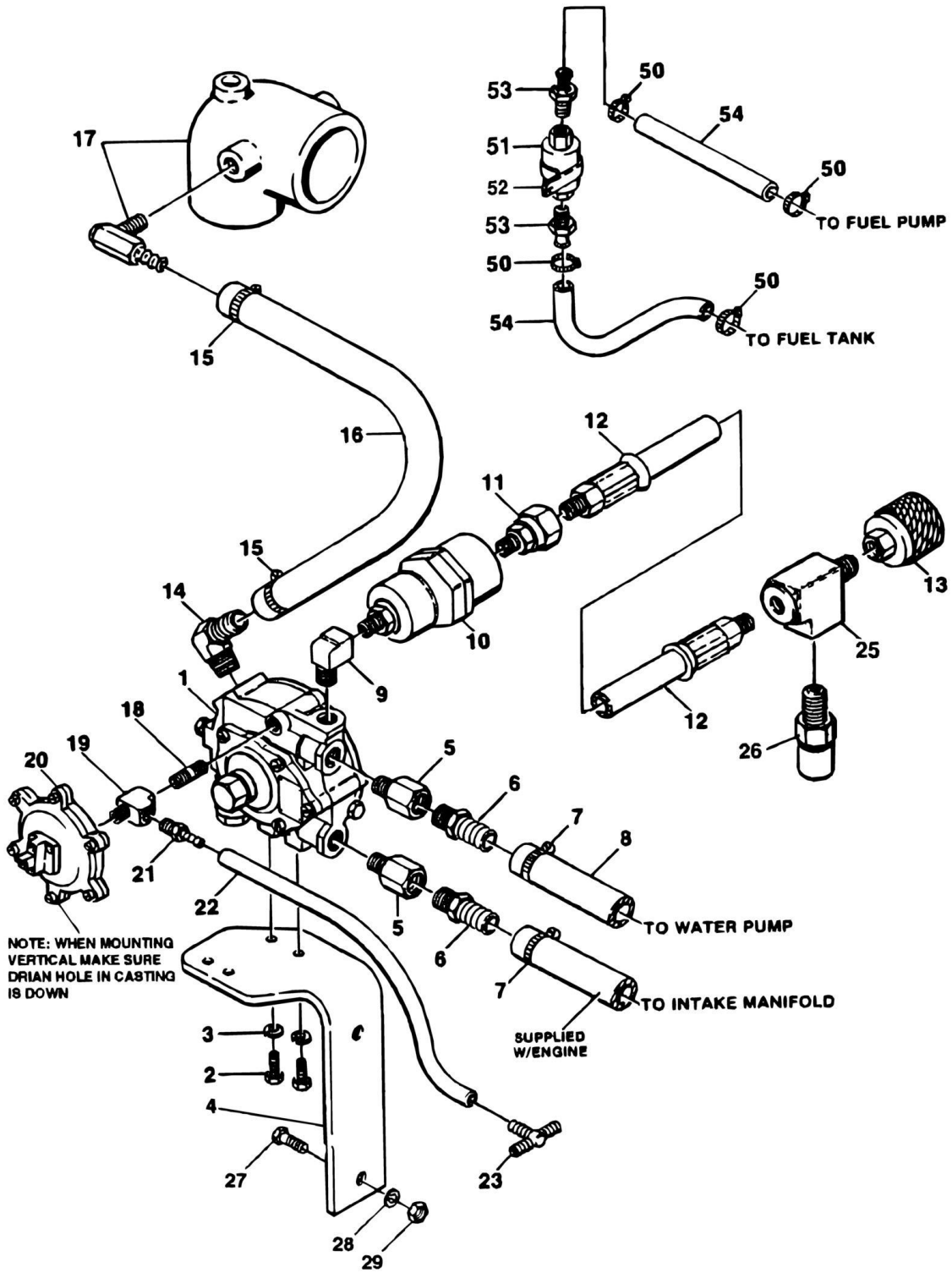
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
301	7019959	1	Dipstick	
301	7019960	1	Tube, Dipstick	
301	7019917	1	Pump, Oil	
301	7014500	1	Oil Filter (Case of 12)	
301	7022173	1	Oil Filter (Individual Filter)	
301	7019949	1	Oil Filter (Individual Filter)	
301	7019667		Cap, Oil Filler	
301	7019668	1	Starter	
301	7023670	1	Control, Ignition (was p/n 7019665)	
301	7019954		Harness, Ignition Module Patch	
301		Ref	Spark Plug Wire Set Options:	
301	7019989	1	Machines Built Through 1999 (Clip-on Style)	
301	7019989	1	#1 Plug Wire (was p/n 7019955)	
301	7019989	1	#2 Plug Wire (was p/n 7019956)	
301	7019989	1	#3 Plug Wire (was p/n 7019957)	
301	7019989	1	#4 Plug Wire (was p/n 7019958)	
301	7022176	AR	Machines Built (2000 to Present) (Push-on Style)	
301	7022103	1	#1 Plug Wire	
301	7022101	1	#2 Plug Wire	
301	7022102	1	#3 Plug Wire	
301	7022104	1	#4 Plug Wire	
301		Ref	Coil Options:	
301	7019987	1	Machines Built Through 1999 (Wires Clip On)	
301	7019998	1	Machines Built (2000 to Present) (Wires Push On)	
301	7016602	1	Flywheel	
301	7019919	1	Gear, Ring (Flywheel)	
301	7022180	1	Gear, Ring (132 Teeth) (Flywheel)	
301	7019944	1	Block Assembly, 11-Stud Terminal (Located on Rear of Engine)	
301	7019946	1	Flange, Exhaust Pipe	
301	7019947	1	Gasket, Exhaust Pipe Flange	
301	7019948	1	Manifold, Exhaust Outlet	
301	70000929	1	Sensor, Crankshaft	
	7014680	1	Main Components Kit (Includes 1 each of Carburetor, Fuel and Water Pumps, Bosch Alternator, Starter, and Ignition Control)	
	7014687		Main Components Kit (Includes 1 each of Carburetor, 1 Fuel and Water Pumps, Prestolite Alternator, Starter and Ignition Control)	
	7014681	1	Engine Kit (Includes Hoses, Gasket Set, Thermostat, V-Belt and Coil)	
		Ref	Tune-up Kit Options (Includes Oil and Fuel Filters, Plugs and Ignition Wire Set)	
	7014682	1	Machines Built Through 1999	
	7023668	1	Machines Built (2000 to Present)	
	7022172	1	Machines Built (2000 to Present)	
	0252625	Ref	OPTIONAL ENGINE DISTRESS INSTALLATION	5-E
403	2180360	1	Fitting, Tee	
404	4360182	1	Switch, Oil Pressure	
405	0080200	1	Fitting, Adapter	
406	3960423	1	Gasket	
407	0700819	2	Bolt, Metric 8mm x 55mm	
408	4831900	2	Lockwasher 8mm	
409	4360157	1	Switch, Water Temperature	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0252045	Ref	OPTIONAL CATALYST EXHAUST INSTALLATION (NOT SHOWN) (PRIOR TO APRIL 1994)	A
501	3220081	1	Muffler, Catalyst	
502	4565298	1	Tube, Exhaust 90	
503	4565297	1	Tube, Exhaust (Manifold to Venturi)	
504	1320020	3	Clamp, Exhaust	
505	4564711	1	Tube, Exhaust (Catalyst to Muffler)	
506	3220076	1	Muffler	
507	1320026	1	Clamp, Exhaust	
	0254840	Ref	OPTIONAL CATALYST EXHAUST INSTALLATION (NOT SHOWN) (APRIL 1994 TO PRESENT)	2-B
551	3220081	1	Muffler, Catalyst	
552	4566519	1	Tube, Exhaust 90	
553		Ref	Tube, Exhaust (Manifold to Venturi) Options:	
553	4566518	1	Tube, Exhaust (Manifold to Venturi) (Prior to April 1999)	
553	4567819	1	Tube, Exhaust (Manifold to Venturi) (April 1999 to Present)	
554	1320020	5	Clamp, Muffler	
555	4564711	1	Tube, Exhaust (Catalyst to Muffler)	
556	3220076	1	Muffler, Spark Arrester	
557	1320026	1	Clamp, Muffler	
558	1120218	1	Cap, Rain	
559	3520034	4	Plug, Hole (Located on Item 556)	
560	0641406	2	Bolt 1/4in-20NC x 3/4in	
561	4751400	2	Flatwasher 1/4in	
562	3311405	2	Locknut 1/4in-20NC	
	0251050	Ref	AIR HORN INSTALLATION - STANDARD GAS	-
		Ref	Note: See Dual Fuel Installation for Dual Fuel and Straight LP Machines.	
601	0080175	1	Adapter, Air Horn	
602	3960388	1	Gasket	
603	3840979	1	Rod, Adapter	

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FIGURE 2-13. DUAL FUEL INSTALLATION (FORD DISTRIBUTORLESS IGNITION)



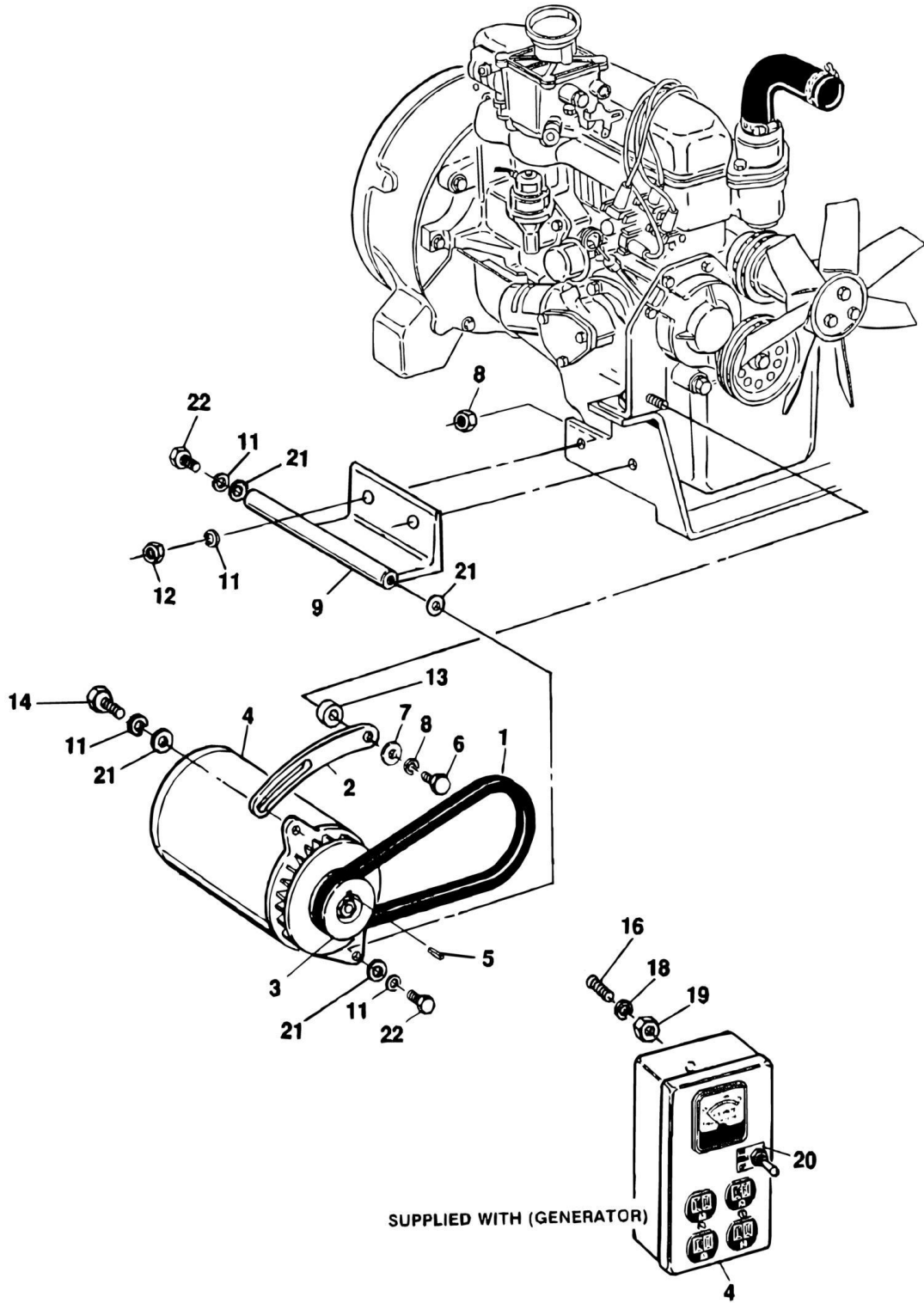
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FIGURE 2-13. DUAL FUEL INSTALLATION (FORD DISTRIBUTORLESS IGNITION)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1281296	Ref	DUAL FUEL INSTALLATION (FORD DISTRIBUTORLESS IGNITION - MARCH 1990 TO PRESENT)	H
1	3720011	1	Regulator	
1	7017516	1	Kit, Rebuilding	
2	0641405	2	Bolt 1/4in-20NC x 5/8in	
3	4761400	2	Lockwasher 1/4in	
4	0901664	1	Bracket (Prior to August 1995)	
4	0902184	1	Bracket (August 1995 to Present)	
5	2220364	2	Fitting, Adapter	
6	2180535	2	Fitting, Barbed	
7	1320032	4	Clamp	
8	2720042	32	Hose	
		in/82cm		
9	2220648	1	Fitting, 90	
10	2120077	1	Filterlock	
11	2180418	1	Fitting, Swivel	
12	2720149	1	Hose	
13	2180387	1	Fitting, Tank	
14	2220675	1	Fitting, 90 Barbed	
15	1320017	2	Clamp	
16	2720112	2 ft/61cm	Hose	
17	0080167	1	Adapter	
17	3960388	1	Gasket	
18	2180104	1	Fitting, Nipple	
19	2180360	1	Fitting, Tee	
20	4360188	1	Switch, Vacuum	
21	2180536	1	Fitting, Barbed	
22		Ref	Hose (Supplied With Engine)	
23	2180623	1	Fitting, Tee	
25	2220290	1	Fitting, Tee	
26	2180389	1	Fitting, Pressure Relief	
27	0641608	2	Bolt 3/8in-16NC x 1in	
28	4761600	2	Lockwasher 3/8in	
29	3311601	2	Nut 3/8in x 16NC	
	0250939	Ref	DUAL FUEL INSTALLATION	F
50	1320022	4	Clamp	
51	4640391	1	Valve, Gas Lock	
52	1320095	1	Clamp, Mounting	
53	2220315	2	Fitting, Barbed	
54	2720058	6 ft/1.8m	Hose, Fuel Line	
	0251728	Ref	STRAIGHT LP GAS INSTALLATION	E
	2901184	1	Blanking Plate Kit (Cover Fuel Pump Location) (Not	

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FIGURE 2-14. GENERATOR INSTALLATION - 110V (FORD) (OPTIONAL)



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FIGURE 2-14. GENERATOR INSTALLATION - 110V (FORD) (OPTIONAL)

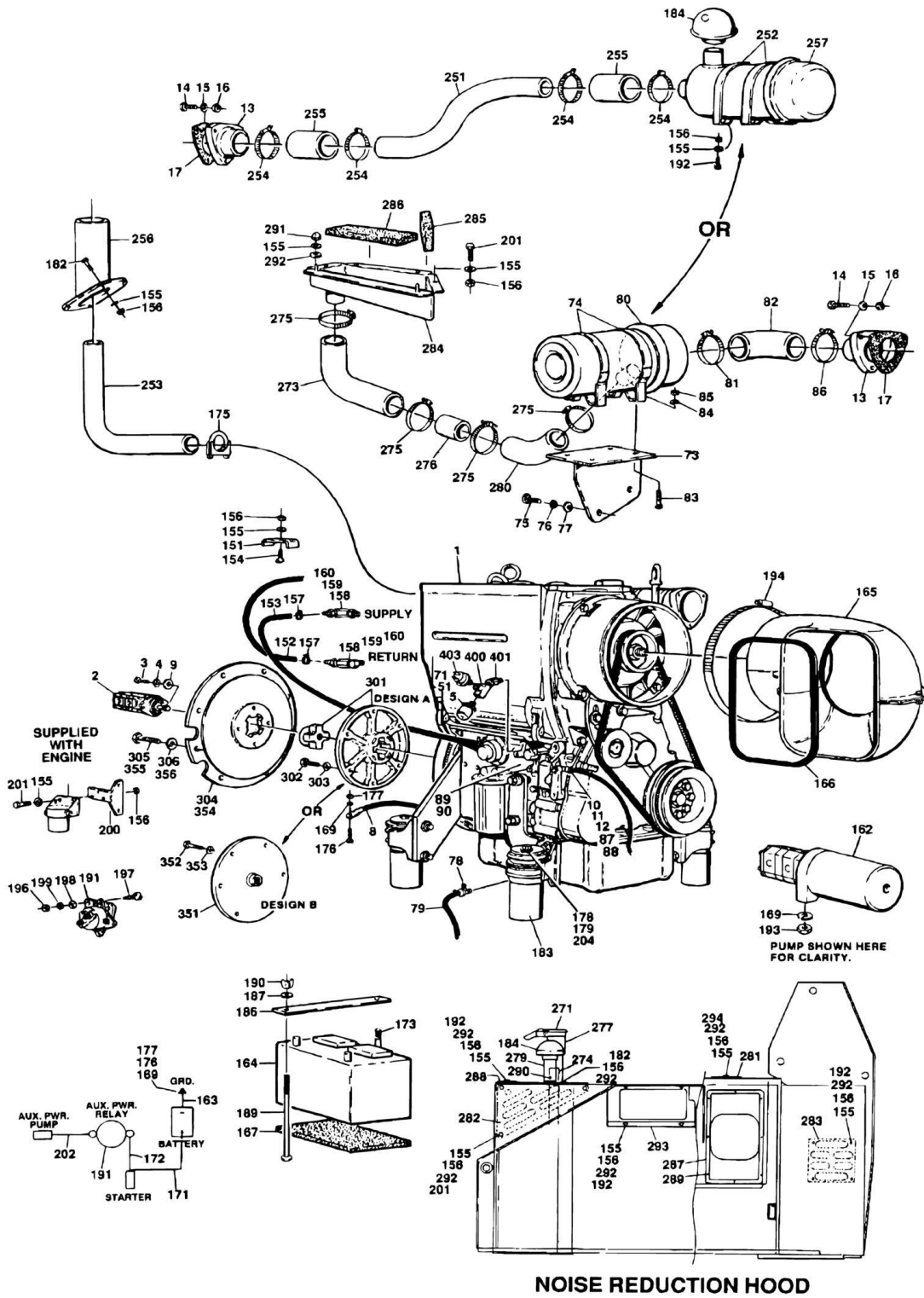
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	GENERATOR INSTALLATION (STANDARD PARTS)	
1	2460011	1	Generator Assembly with Control Box	
1	3580134	1	Pulley	
1	7012558	1	Generator Assembly Only	
1	7020108	4	Brush	
1	7020109	4	Holder, Brush	
1	7012513	4	Caps, Brush Holder	
1	7012514	1	Fan	
1	7020193	1	Cord, Power	
1	7026199	1	Armature	
1	7020110	1	End Bell, Front	
1	7020111	1	End Bell, Rear	
1	7020190	2	Bearing	
1	7003657	1	Control Box Assembly	
		Ref	Note: Replacement 110V Control Box comes with 2 std Receptacles p/n 4460190. Optional Industrial Twist Lock Receptacles p/n 4460027 must be ordered separately.	
1	2420203	1	Voltmeter	
1	4360542	1	Breaker, Circuit	
1	4460190	2	Receptacle	
1	2920162	1	Lamp	
1	7020191	1	Switch, Toggle	
1	3520028	1	Plug, Hole	
2	4340569	1	Support, Adjustable	
4	2860012	1	Key, Woodruff	
5	4751500	AR	Flatwasher 5/16in	
6	4761500	AR	Lockwasher 5/16in	
7	4761600	AR	Lockwasher 3/8in	
8	3311601	2	Nut 3/8in-16NC	
9	0641508	1	Bolt 5/16in-18NC x 1in	
10	0721006	2	Bolt #10-24NC x 3/4in	
11	3251476	1	Nametag	
12	4751000	2	Flatwasher #10	
13	4761000	2	Lockwasher #10	
14	3311001	2	Nut #10-24NC	
15	1060268	10 ft/3m	Cable, Electrical - 12/3	
	0239739	Ref	GENERATOR INSTALLATION (MACHINES BUILT PRIOR TO MAY 1991) (VARIABLE PARTS)	C
51	0480056	1	V-Belt	
52	3311501	1	Nut 5/16in-18NC	
53	4843156	1	Bracket, Mounting - Generator	
54	0641609	2	Bolt 3/8in-16NC x 1 1/8in	
55	4300031	2	Stud (Welded on Part)	
56	4761400	2	Lockwasher 1/4in	
57	3311401	2	Nut 1/4in-20NC	
58	0901584	1	Bracket, Control Box	
	0251950	Ref	GENERATOR INSTALLATION (MACHINES BUILT MAY 1991 TO PRESENT) (VARIABLE PARTS)	5
71	0480057	1	V-Belt	
72	0641511	1	Bolt 5/16in-18NC x 1 3/8in	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
73	0901774	1	Bracket, Mounting - Generator	
74	0961247	1	Bushing	
75	4751600	4	Flatwasher 3/8in	
76	0681610	2	Bolt 3/8in-16NC x 1 1/4in Grade 8	

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FIGURE 2-15. DEUTZ ENGINE INSTALLATION



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FIGURE 2-15. DEUTZ ENGINE INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	DEUTZ ENGINE ASSEMBLY (STANDARD PARTS)	
1		Ref	Engine - Deutz F2L-1011 Diesel Options:	
1	2000106	1	Engine - Deutz F2L-1011 Diesel (Prior to August 1995)	
1	2000137	1	Engine - Deutz F2L-1011 Diesel (August 1995 to Present)	
2		Ref	Pump Assembly Options:	
2	3600152	1	Pump Assembly (Vickers)	
2	2900660	1	Shaft Seal Kit (Vickers)	
2	3600200	1	Pump Assembly (Barnes) (1 each of fittings p/n's 2220376 & 2210014 are required when replacing Vickers pump with Barnes pump) (See PUMP ASSEMBLY - BARNES (FORD AND DEUTZ POWERED MACHINES) for Breakdown)	
3	0641509	2	Bolt 5/16in-18NC x 1 1/8in	
4	4761500	2	Lockwasher 5/16in	
5	2180730	1	Fitting, Special	
8	1060221	1	Cable, Battery (Engine to Ground)	
9	4751500	2	Flatwasher 5/16in	
10		Ref	Adapter, Throttle Options:	
10	0080172	1	Adapter, Throttle (Prior to September 1995)	
10	4460302	1	Adapter, Throttle (September 1995 to Present)	
11	3450203	1	Pin, Cotter 1/16in x 3/4in	
12		Ref	Component Options:	
12	3951003	1	Setscrew #10-24NC x 3/8in (Prior to September 1995)	
12	0902244	1	Bracket, Throttle (September 1995 to Present)	
13	0080177	1	Adapter Weldment	
14	3311501	3	Nut 5/16in-18NC	
15	4761500	3	Lockwasher 5/16in	
16	0641512	3	Bolt 5/16in-18NC x 1 1/2in	
17	3960407	1	Gasket, Intake Adapter	
	0250828	Ref	DEUTZ ENGINE ASSEMBLY (MACHINES WITHOUT NOISE REDUCTION PACKAGE WERE BUILT THROUGH 1992) (VARIABLE PARTS)	B
51	2420131	1	Sender, Oil Pressure	
	0252777	Ref	DEUTZ ENGINE ASSEMBLY (MACHINES WITH NOISE REDUCTION PACKAGE WERE BUILT 1993 TO PRESENT) (VARIABLE PARTS)	G
71	2420110	1	Sender, Oil Pressure	
73	0901838	1	Bracket, Air Cleaner	
74	0340002	2	Band, Air Cleaner	
75	0701010	2	Bolt, Metric 10mm x 20mm	
76	4832000	2	Lockwasher 10mm	
77	4711600	1	Flatwasher 3/8in	
78	4640751	1	Valve, Oil Drain	
79	2750532	18	Hose, Low Pressure	
		in/46cm		
80	1340020	1	Air Cleaner Assembly	
80	7004214	1	Element	
81	1320016	2	Clamp, Hose	
82	0080039	1	Adapter, Elbow	
83	0641408	4	Bolt 1/4in-20NC x 1in	
84	4761400	4	Lockwasher 1/4in	
85	3311401	4	Nut 1/4in-20NC	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
86	1320022	1	Clamp	
87	4711400	1	Lockwasher 1/4in	
88	0641512	2	Bolt 6mm x 10mm	
89	2180104	1	Fitting, Nipple	
90	2200261	1	Fitting, Coupling	
		Ref	DEUTZ ENGINE INSTALLATION (STANDARD PARTS)	
151	1320041	1	Clamp	
152	2720271	7 ft/2m	Line, Fuel Return	
153	2720058	6 ft/1.8m	Line, Fuel Supply	
154	4300032	AR	Stud (Welded on Part)	
155	4761400	AR	Lockwasher 1/4in	
156	3311401	AR	Nut 1/4in-20NC	
157	1320022	4	Clamp	
158	2220317	1	Fitting, Barbed	
158	2220536	1	Fitting, Barbed	
159	2220063	1	Fitting, 90 Swivel	
159	2220273	2	Fitting, Reducer	
160	4420001	AR	Tape, Sealant	
162		Ref	Auxiliary Pump Assembly Options - Vendors Vary:	
162	3600050	1	John S. Barnes Brand Pump Version:	
162	7004248	1	Motor (Bosch or Prestolite)	
162	7004249	1	Coupling	
162	7010923	1	Pump	
162	3600050	1	Stone Industries Brand Pump Version:	
162	7000482	1	Motor	
162	7004412	1	Coupling	
162	7004414	1	Pump	
162	3600208	1	Fenner Fluid Power Brand Pump Version:	
162	7013710	1	Motor	
162	7013711	1	Coupling	
162	7013712	1	Pump	
163	1060046	1	Cable, Battery (Battery to Ground)	
164	0400075	1	Battery	
165		Ref	Scoop, Air Intake Options:	
165	1840005	1	Scoop, Air Intake (Prior to April 1995)	
165	1840011	1	Scoop, Air Intake (April 1995 to Present)	
166	3960389	51 in/1.3m	Seal, Rubber Grip	
167	3980007	1	Seat, Battery	
169	4761600	4	Lockwasher 3/8in	
171	1060154	1	Cable, Battery (Battery to Starter)	
172	1060054	1	Cable, Battery (Starter to Auxiliary Power Relay)	
173	0641628	1	Bolt 3/8in-16NC x 3 1/2in	
175	1320019	AR	Clamp, Exhaust	
176	4300034	2	Stud (Welded on Parts)	
177	3311601	2	Nut 3/8in-16NC	
178	0641856	3	Bolt 1/2in-13NC x 7in	
179	4761800	4	Lockwasher 1/2in	
182	0641406	4	Bolt 1/4in-20NC x 3/4in	
183	0080178	4	Adapter, Engine Mounting	
184	1120161	1	Cap, Air Inlet	
186	0361810	1	Holddown, Battery	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
187	4751600	2	Flatwasher 3/8in	
189	0236768	1	Rod, Holddown	
190	3300029	2	Wingnut 3/8in-16NC	
191	3740067	1	Solenoid	
192	4300031	AR	Stud (Welded on Part)	
193	0641614	2	Bolt 3/8in-16NC x 1 3/4in	
194	1320059	1	Clamp (Prior to March 1995)	
196	3311001	2	Nut #10-24NC	
197	4300081	2	Stud (Welded on Parts)	
198	4751000	2	Flatwasher #10	
199	4761000	2	Lockwasher #10	
200	0901361	1	Bracket, Fuel Filter	
201	0641408	2	Bolt 1/4in-20NC x 1in (Prior to September 1995)	
201	0641418	2	Bolt 1/4in-20NC x 2 1/4in (September 1995 to Present)	
202	1060093	1	Cable, Battery (Auxiliary Relay to Auxiliary Pump)	
203	0100011	AR	Loctite	
204	0641852	1	Bolt 1/2in-13NC x 6 1/2in	
	0250829	Ref	DEUTZ ENGINE INSTALLATION (MACHINES WITHOUT NOISE REDUCTION PACKAGE WERE BUILT THROUGH 1992) (VARIABLE PARTS)	E
		Ref	Note: See SPECIAL OPTIONS SECTION for Optional Exhaust Systems.	
251	4564655	1	Tube, Air Inlet	
252	0340002	2	Band, Air Cleaner	
253	4564656	1	Tube, Exhaust	
254	1320031	4	Clamp, Hose	
255	2720351	1 ft/.3m	Hose, Rubber	
256	4843620	1	Snorkel Weldment	
257	1340020	1	Air Cleaner Assembly	
257	7004214	1	Element	
	0252778	Ref	DEUTZ ENGINE INSTALLATION (MACHINE WITH NOISE REDUCTION PACKAGE WERE BUILT 1993 TO PRESENT) (VARIABLE PARTS)	F
		Ref	Note: See SPECIAL OPTIONS SECTION for Optional Exhaust Systems.	
271	1120405	1	Cap, Rain	
273	2720334	1	Hose	
274	4565719	1	Tube, Exhaust	
275	1320016	4	Clamp	
276	4565270	4	Tube	
277	Not Available	1	Snorkel, Exhaust	
279	4565718	1	Tube, Extension	
280	0080046	1	Adapter, Tube	
281	1670639	1	Cover, Base Plate	
282	1670638	1	Cover, Hood Support	
283	1670616	1	Cover, Side	
284	4844132	1	Intake Box Weldment	
285	2820048	1	Foam, Acoustical	
286	2820049	1	Foam, Acoustical	
287	3536248	1	Plate	
288	1670321	1	Plate, Adapter	
289	3820019	8	Rivet	
290	3941406	2	Screw, Self-Tapping 1/4inx 3/4in	

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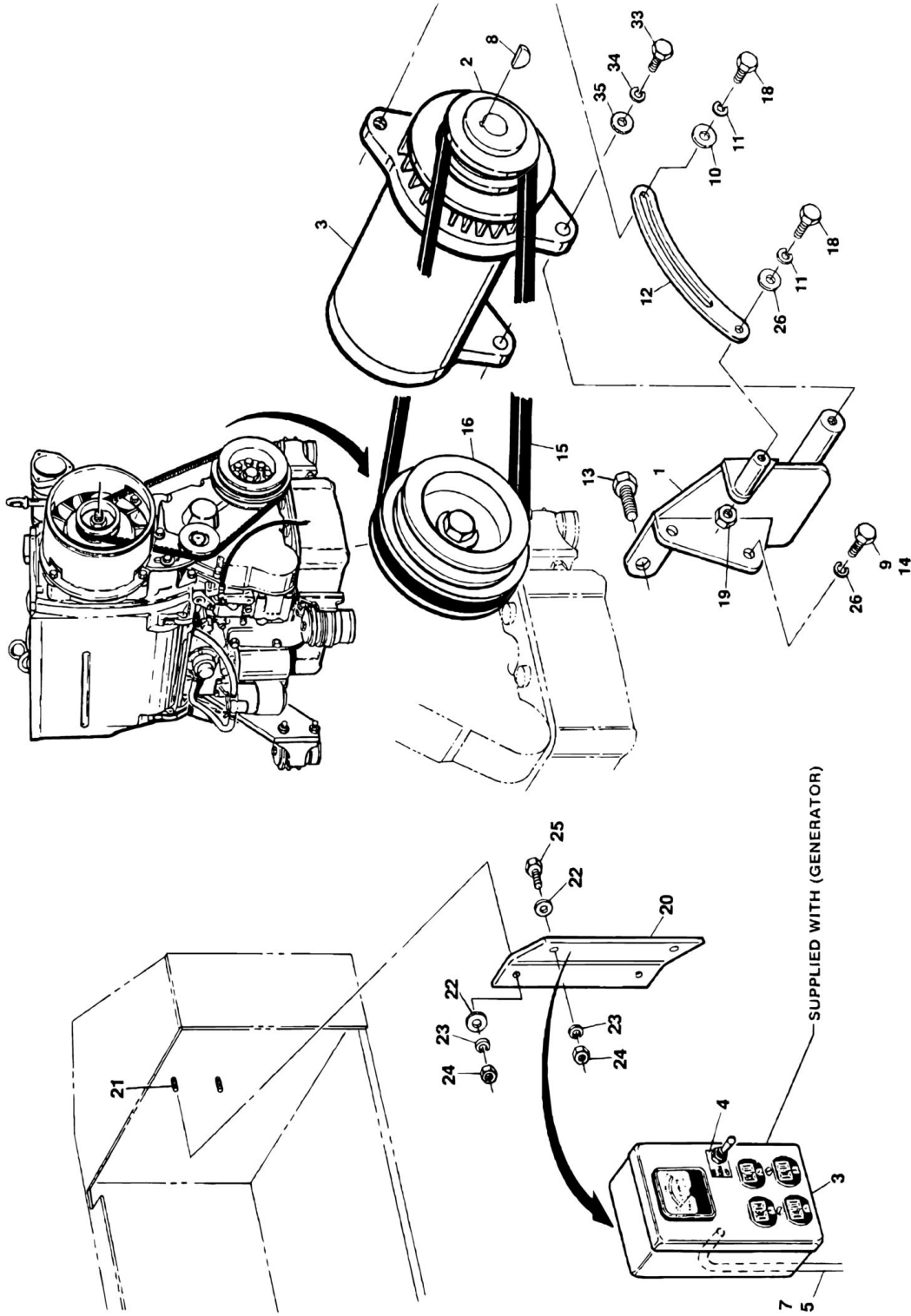
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
291	3300151	2	Nut, Acorn	
292	4751400	21	Flatwasher 1/4in	
293	3536132	1	Plate, Baffle	
294	0641412	2	Bolt 1/4in-20NC x 1 1/2in	
	0239972	Ref	COUPLING INSTALLATION - LOVEJOY OPTION	-
301	1660176	1	Coupling, Lovejoy	
302	0641510	6	Bolt 5/16in-18NC x 1 1/4in	
303	4761500	6	Lockwasher 5/16in	
304	0080163	1	Plate, Adapter	
305	0641610	8	Bolt 3/8in-16NC x 1 1/4in	
306	4761600	8	Lockwasher 3/8in	
	0250595	Ref	COUPLING INSTALLATION - HAYES OPTION	-
351	1660182	1	Coupling, Hayes 9Note: Coupling Internal Spines must be lubed with Lithium based grease prior to installation.)	
352	0700810	6	Bolt, Metric 8mm x 20mm	
353	4831900	6	Lockwasher, Metric 8mm	
354	0080163	1	Plate, Adapter	
355	0641610	8	Bolt 3/8in-16NC x 1 1/4in	
356	4761600	8	Lockwasher 3/8in	
	0251537	Ref	OPTIONAL ENGINE DISTRESS INSTALLATION	D
	0251682	Ref	OPTIONAL ENGINE SHUTDOWN INSTALLATION	-
400	2180360	1	Fitting, Tee	
401		Ref	Fitting Options:	
401	2180749	1	Fitting, 45 (Engine Distress)	
401	2180693	1	Fitting, Nipple (Engine Shutdown)	
401	2220318	1	Fitting, 90 (Engine Shutdown)	
403	4360065	1	Switch, Pressure	
		Ref	ENGINE COMPONENTS	
		Ref	Engine 2000106	
	7000693	1	Muffler - Deutz F2L1011	
	7000699	1	Seal, Exhaust (Doughnut)	
	7012598	1	Fuel Filter	
	7012599	2	Injector, Fuel	
	7012698	1	Fuel Pump - Main	
	7016331	1	Oil Filter	
	7012626	1	Starter	
	7020465	1	Cap, Oil Filler	
	3600213	1	Pump, Drive (was p/n 7012572)	
	3520078	1	Plug (was p/n 7012573)	
	1670680	1	Cover, Timing Chain (was p/n 7012574)	
	7012575	1	Pulley, Crankshaft	
	7016308	1	Ring, Air Intake	
	7019607	1	Shutdown Device (was p/n 7016359)	
	7020414	1	V-Belt	
	7020437	1	Flywheel	
	7020496	1	Gear, Ring (Flywheel)	
	7020456	1	Dipstick	
	7014683	1	Oil Change and Gasket Kit (Includes Fuel Line Washer, or Plug Washer, Oil Filter, Fuel Filter Injector Tip Gasket and Valve Cover Gasket)	
		Ref	Engine 2000137	
	7020417	1	Alternator	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	7000693	1	Muffler - Deutz F2L1011	
	7000699	1	Seal, Exhaust (Doughnut)	
	8320270	1	Fuel Filter (was p/n 7016328)	
	7012599	1	Pump, Fuel Injector	
	7020426	1	Injector, Fuel	
	7020425	1	Nozzle, Injector	
	7020424	1	Gasket, Injector Tip	
	7016309	1	Washer, Sealing (Copper)	
	7024413	1	Fuel Pump - Main	
	7020411	1	Gasket, Lift	
	7016332	1	Starter (was p/n 7016678)	
	7020465	1	Cap, Oil Filler	
	7020467	1	Pump, Oil	
	7016331	1	Oil Filter	
	7019607	1	Shutdown Device (was p/n 7016359)	
	7020414	1	V-Belt	
	7020027	1	Flywheel/Ring Gear Assembly	
	7020477	1	Gear, Ring (Flywheel)	
	7020434	1	Dipstick	
	7020429	1	Gasket, Vale Cover	
		Ref	Gasket, Head Options:	
	70003160	1	1 Notch	
	70003161	1	2 Notch	
	70003162	1	3 Notch	
	7020404	1	Washer, Oil Pan	
	7020406	1	Ring, Sealing	
	70001138	2	Mounting, Motor (Rear)	
	70001136	1	Mounting Kit, Motor (Front - LH)	
	70001137	1	Mounting Kit, Motor (Front - RH)	

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FIGURE 2-16. GENERATOR INSTALLATION 110 VOLT (DEUTZ) (OPTIONAL)



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FIGURE 2-16. GENERATOR INSTALLATION 110 VOLT (DEUTZ) (OPTIONAL)

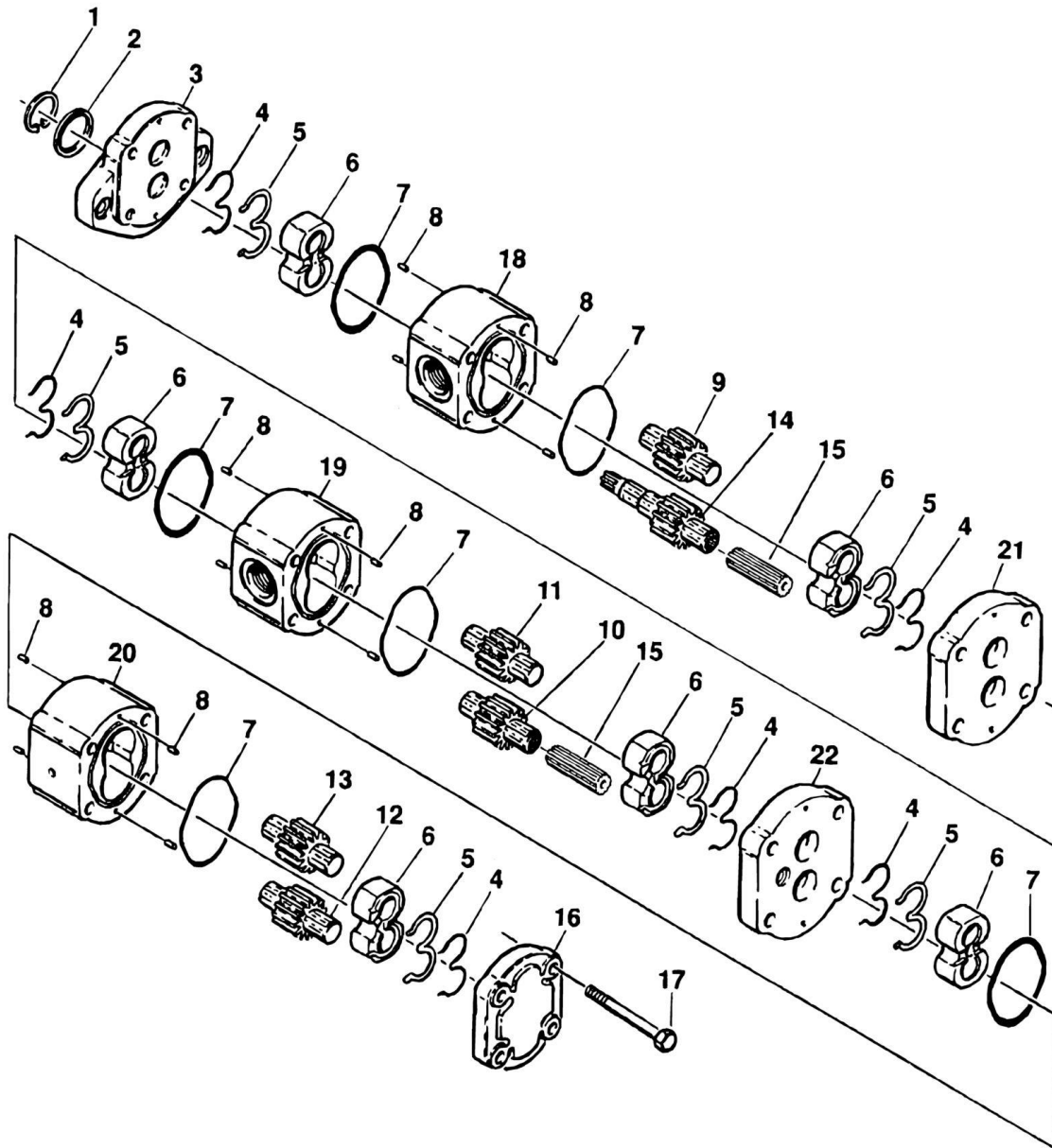
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0251880	Ref	GENERATOR INSTALLATION - 110 VOLT (DEUTZ)	9
1	4843410	1	Bracket, Mounting - Generator	
3	2460011	1	Generator Assembly with Control Box	
3	3580134	1	Pulley	
3	7012558	1	Generator Assembly Only	
3	7020108	4	Brush	
3	7020109	4	Holder, Brush	
3	7012513	4	Caps, Brush Holder	
3	7012514	1	Fan	
3	7020193	1	Cord, Power	
3	7026199	1	Armature	
3	7020110	1	End Bell, Front	
3	7020111	1	End Bell, Rear	
3	7020190	2	Bearing	
3	7003657	1	Control Box Assembly	
		Ref	Note: Replacement 110V Control Box comes with 2 std Receptacles p/n 4460190. Optional Industrial Twist Lock Receptacles p/n 4460027 must be ordered separately.	
3	2420203	1	Voltmeter	
3	4360542	1	Breaker, Circuit	
3	4460190	2	Receptacle	
3	2920162	1	Lamp	
3	7020191	1	Switch, Toggle	
3	3520028	1	Plug, Hole	
4	3251476	1	Nametag - Generator On/Off	
5	1060515	1	Cable, Electrical - 12/4 (was p/n 1060012)	
7	4460023	1	Terminal, Connector	
8	2860012	1	Key, Woodruff	
9	0100011	AR	Loctite	
10	4751500	1	Flatwasher 5/16in	
11	4761500	2	Lockwasher 5/16in	
12	0361815	1	Arm, Adjustment	
13	0701414	1	Bolt, Metric 14mm x 30mm	
14	0701012	2	Bolt, Metric 10mm x 25mm	
15	0480059	1	V-Belt	
16	3580158	1	Pulley	
18	0681510	2	Bolt 5/16in-18NC x 1 1/4in	
19	3311501	1	Nut 5/16in-18NC	
20	0901584	1	Bracket, Mounting - Control Box	
21	4300068	2	Stud (Welded on Part)	
22	4751400	4	Flatwasher 1/4in	
23	4761400	6	Lockwasher 1/4in	
24	3311401	4	Nut 1/4in-20NC	
25	0641406	2	Bolt 1/4in-20NC x 3/4in	
26	4812000	2	Flatwasher, Metric 10mm	
27	2180730	1	Fitting, Adapter (Prior to October 1, 1992 Only)	
28	2180749	1	Fitting, 45	
29	2180537	1	Fitting, Nipple (Prior to SN 23307)	
29	2180730	1	Fitting, Adapter (SN 23307 to Present)	
30	2180360	1	Fitting, Tee (Prior to SN 23307)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
31	2200261	1	Fitting, Coupling (Prior to SN 23307)	
32	4360037	1	Switch, Oil Pressure	
33	0681610	2	Bolt 3/8in-16NC x 1 1/4in	
34	4761600	2	Lockwasher 3/8in	
35	4751600	2	Flatwasher 3/8in	

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FIGURE 2-17. PUMP ASSEMBLY - BARNES (FORD AND DEUTZ POWERED MACHINES)



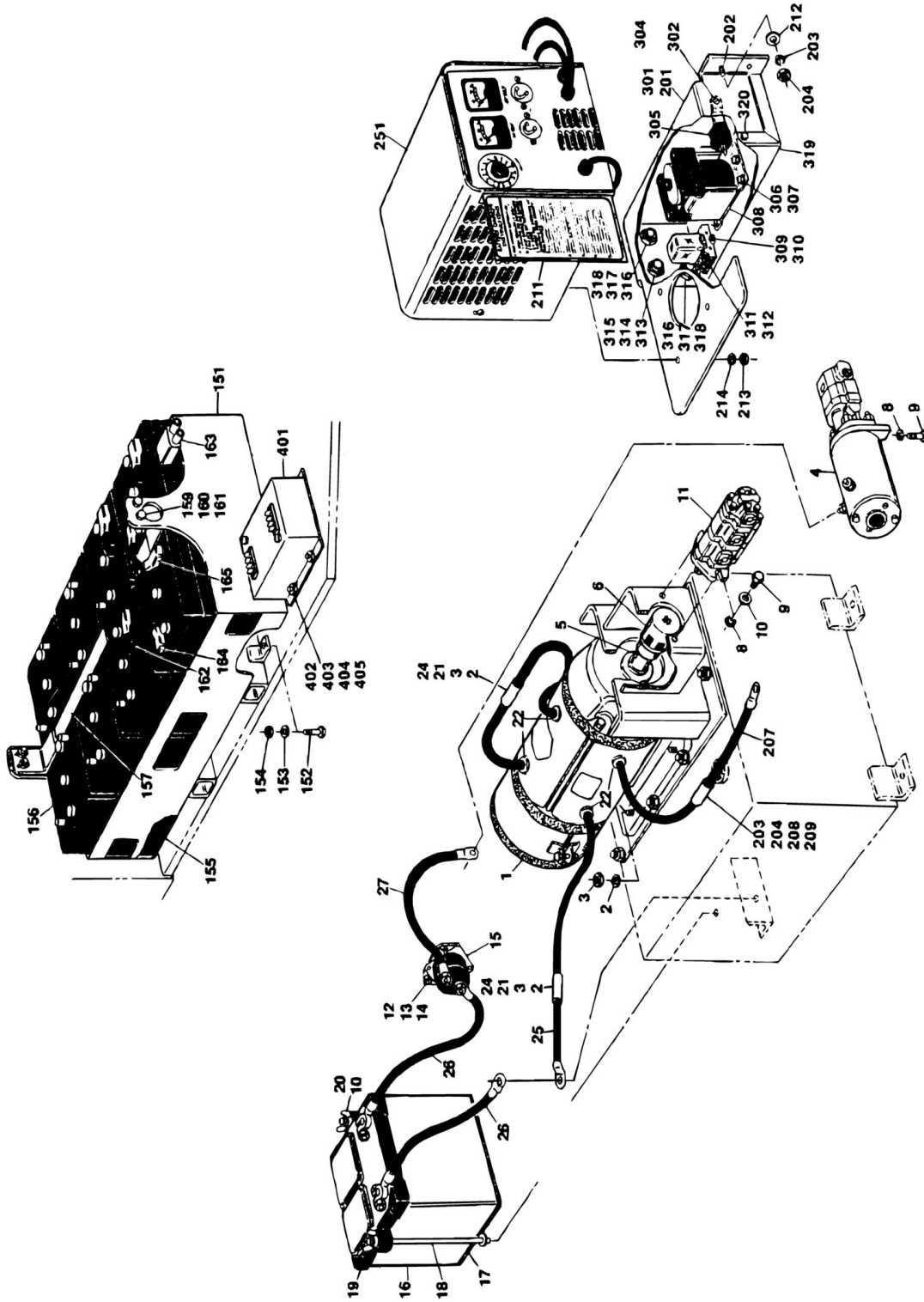
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FIGURE 2-17. PUMP ASSEMBLY - BARNES (FORD AND DEUTZ POWERED MACHINES)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3600200	Ref	PUMP ASSEMBLY - BARNES (FORD AND DEUTZ POWERED MACHINES)	
1	7010955	1	Ring, Retaining	
2	Kit	1	Seal, Shaft	
3	7010964	1	Flange, Mounting	
4	Kit	6	Ring, Backup	
5	Kit	6	E-Seal	
6	7010957	6	Bearing	
7	Kit	6	O-Ring	
8	7010959	12	Pin, Dowel	
9	7010980	1	Gear, Idler (Section 1)	
10	7010981	1	Gear, Idler	
11	7010982	1	Gear, Idler	
12	7010976	1	Gear, Idler (Section 3)	
13	7010954	1	Gear, Idler	
14	7010979	1	Gear, Drive	
15	7010965	2	Coupling	
16	7010960	1	Cover, End	
17	7010966	4	Bolt	
18	7010967	1	Housing (Section 1)	
19	7010968	1	Housing (Section 2)	
20	7010969	1	Housing (Section 3)	
21	7010970	1	Plate, Distance (Section 2)	
22	7010971	1	Plate, Distance (Section 3)	
	7010962	1	Seal Kit (Includes Items 2, 4, 5 & 7)	

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FIGURE 2-18. ELECTRIC POWERED MACHINES COMPONENTS INSTALLATION



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FIGURE 2-18. ELECTRIC POWERED MACHINES COMPONENTS INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: See SPECIAL OPTIONS SECTION for U/L and 440VAC Machines.	
	0258465	Ref	MOTOR AND PUMP INSTALLATION (STANDARD PARTS)	G
1		Ref	Motor, Electric Options:	
1	3160145	1	Flex Coupling Mount (Used Prior to November 1989)	
1	3160153	1	Direct Mount (Used November 1989 to Present)	
1	7012588	8	Brush (3160153 Motor)	
1	7012589	8	Spring (3160153 Motor)	
2	4761500	6	Lockwasher 5/16in	
3	3311501	6	Nut 5/16in-18NC	
4		Ref	Auxiliary Pump Assembly (Vendors Vary):	
4	3600050	1	John S. Barnes Version:	
4	7004248	1	Motor	
4	7004249	1	Coupling	
4	7010923	1	Pump	
4	3600050	1	Stone Industries Version:	
4	7000482	1	Motor	
4	7004412	1	Coupling	
4	7004414	1	Pump	
4	3600208	1	Fenner Fluid Power Version:	
4	7013710	1	Motor	
4	7013711	1	Coupling	
4	7013712	1	Pump	
5	2880416	1	Key (Used Prior to November 1989 Only)	
6	1660166	1	Coupling, Flex (Used Prior to November 1989 Only)	
8	4761600	4	Lockwasher 3/8in	
9	0641610	4	Bolt 3/8in-16NC	
10	4751600	4	Flatwasher 3/8in	
11		Ref	Pump Assembly Options:	
11	3600142	1	Pump Assembly - Vickers (Not Field Serviceable)	
11	2900660	1	Shaft Seal Kit - Vickers	
11	3600201	1	Pump Assembly - Barnes (1 each of fittings p/n's 2220376 & 2210014 are required when replacing Vickers Pump with Barnes Pump) (See PUMP ASSEMBLY - BARNES (ELECTRIC POWERED MACHINES) for Breakdown)	
12	4300032	2	Stud (Welded on Part)	
13	4761400	2	Lockwasher 1/4in	
14	3311401	2	Nut 1/4in-20NC	
15	3740067	1	Relay	
16	0400003	1	Battery	
17	3980003	1	Seat, Battery	
18	0236768	2	Rod, Hold-down	
19	0400002	1	Hold-Down, Battery	
19	2910479	1	Replacement Clip Kit for 0400002	
20	3300029	2	Wingnut 3/8in-16NC	
21	0641504	2	Bolt 5/16in-18NC x 1/2in	
22	0100009	AR	Silicone RTV	
24	2820030	12 in/30cm	Tubing, Heat Shrink	
25	1060221	1	Cable, Battery (Motor to Ground)	
26	1060146	2	Cable, Battery (Negative to Ground and Positive to Relay)	

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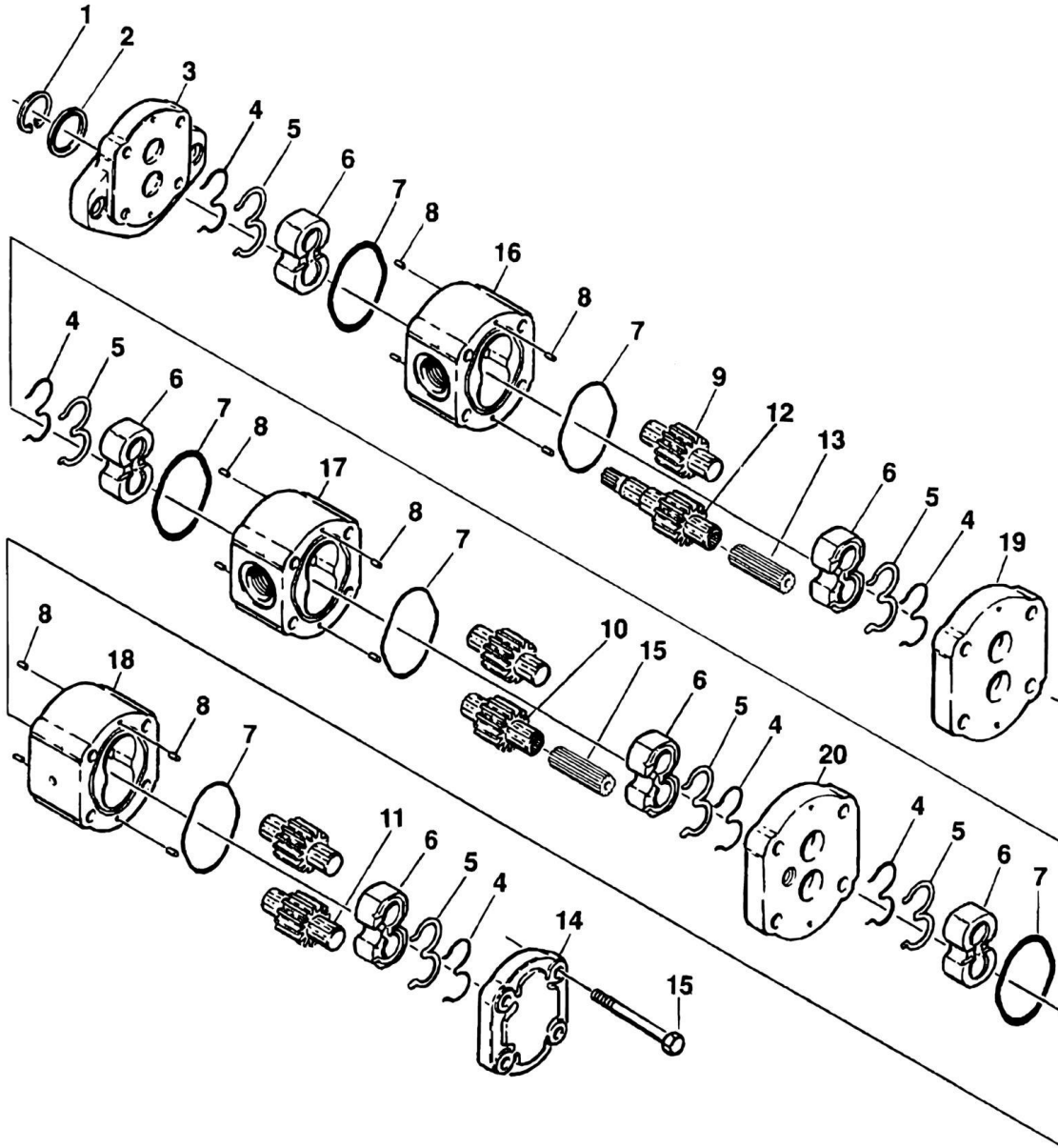
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
27	1060133	1	Cable, Battery (Relay to Aux Pump)	
	0238522	Ref	BATTERIES INSTALLATION (MACHINES BUILT PRIOR TO NOVEMBER 1991)	C
101		Ref	Tray Weldment Options:	
101	4843427	1	Tray Weldment (January 1990 through November 1991)	
101	4842925	1	Tray Weldment (Prior to January 1990)	
102	0641612	2	Bolt 3/8in-16NC x 1 1/2in	
103	4761600	2	Lockwasher 3/8in	
104	3311601	2	Nut 3/8in - 16NC	
105	3980003	8	Seat, Battery	
106		Ref	Battery Options:	
106	0400067	8	Battery (Wet) (Standard Equipment)	
106	0400113	8	Battery (Dry) (Optional)	
107	0236768	3	Rod, Hold-down	
108	4740273	3	Washer, Special	
109	3300029	3	Wingnut 3/8in-16NC	
110	1060084	7	Cable, Battery	
111	1060277	1	Cable Assembly	
112	0840016	16	Boot, Terminal	
113	0100001	AR	Adhesive	
	0252482	Ref	BATTERIES INSTALLATION (MACHINES BUILT NOVEMBER 1991 TO PRESENT)	-
151	4844054	1	Tray Weldment	
152	0641612	2	Bolt 3/8in-16NC x 1 1/2in	
153	4761600	2	Lockwasher 3/8in	
154	3311601	2	Nut 3/8in-16NC	
155	3980018	1	Seat, Battery	
156		Ref	Battery Options:	
156	0400055	8	Battery (Wet) (Standard Equipment)	
156	0400107	8	Battery (Dry) (Optional)	
157	0362075	1	Bar, Tee	
158	0181554	2	Angle, Retaining	
159	0641408	4	Bolt 1/4in-20NC x 1in	
160	3311405	4	Locknut 1/4in-20NC	
161	4751400	4	Flatwasher 1/4in	
162	1060352	7	Cable, Battery	
163	1060277	1	Cable Assembly	
164	0840031	8	Boot, Terminal	
165	0840032	8	Boot Terminal	
		Ref	BATTERY CHARGER INSTALLATION (STANDARD PARTS)	
201	0239003	1	Contactor Box Assembly (See Items 301-320 for Breakdown)	
202	4300038	4	Stud (Welded on Part)	
203	4761500	5	Lockwasher 5/16in	
204	3311501	5	Nut 5/16in-18NC	
206	1060276	1	Cable Assembly (Contactor to Batteries to Ground)	
207	1060197	1	Cable, Battery (Motor to Contactor)	
208	0641504	1	Bolt 5/16in-18NC x 1/2in	
209	2820030	12	Tubing, Heat Shrink	
		in/30cm		
211	3252163	1	Nameplate - Instruction	
212	4751500	4	Flatwasher 5/16in	
213	3311401	4	Nut 1/4in-20NC	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
214	4761400	4	Lockwasher 1/4in	
		Ref	BATTERY CHARGER INSTALLATION (Variable parts)	
	0238619	Ref	Battery Charger Installation (Variable Parts) (Prior to November 1991)	C
	0252481	Ref	Battery Charger Installation (Variable Parts) (November 1991 to Present)	C
251		Ref	Battery Charger Assembly Options (See BATTERY CHARGER ASSEMBLY (ELECTRIC POWERED MACHINE) for Breakdown)	
251	0400068	1	Battery Charger Assembly (Prior to November 1991)	
251	0400077	1	Battery Charger Assembly (November 1991 to Present)	
	0239003	Ref	CONTACTOR BOX ASSEMBLY	B
301	0901477	1	Bracket	
302	3911012	1	Screw, Machine #10-24NC x 3/4in	
303	4761000	1	Lockwasher #10	
304	3311001	1	Nut #10-24NC	
305	3740049	1	Relay	
306	0641403	4	Bolt 1/4in-20NC x 3/8in	
307	4761400	4	Lockwasher 1/4in	
308	3740064	1	Contactactor	
309	4760600	2	Lockwasher #6	
310	3910608	2	Screw, Machine #6-32NC x 1/2in	
311	4120002	1	Socket, Relay	
312	3740035	1	Relay - DPDT	
313	4460052	1	Connector, Strain Relief	
314	3300047	1	Locknut, Conduit	
315	0960239	1	Bushing	
316	4460051	2	Connector, Strain Relief	
317	3300048	2	Locknut, Conduit	
318	0960238	2	Bushing	
319	1670471	1	Cover	
320	3941003	2	Screw, Self-Tapping #10-24NC x 3/8in	
	0250775	Ref	CONVERTOR INSTALLATION (STANDARD PARTS ON MACHINES BUILT APRIL 1990 TO PRESENT)	B
401	1600119	1	Convertor Assembly	
402	0721014	4	Bolt #10-24NC x 1 3/4in	
403	4761000	4	Lockwasher #10	
404	3311001	4	Nut #10-24NC	
405	4751000	4	Flatwasher #10	

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FIGURE 2-19. PUMP ASSEMBLY - BARNES (ELECTRIC POWERED MACHINES)



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FIGURE 2-19. PUMP ASSEMBLY - BARNES (ELECTRIC POWERED MACHINES)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3600201	Ref	PUMP ASSEMBLY - BARNES (ELECTRIC POWERED MACHINES)	
1	7010955	1	Ring, Retaining	
2	Kit	1	Seal, Shaft	
3	7010956	1	Flange, Mounting	
4	Kit	6	Ring, Backup	
5	Kit	6	E-Seal	
6	7010957	6	Bearing	
7	Kit	6	O-Ring	
8	7010959	12	Pin, Dowel	
9	7010954	3	Gear, Idler	
10	7010975	1	Gear, Idler (Section 1)	
11	7010976	1	Gear, Idler (Section 3)	
12	7010977	2	Gear, Drive	
13	7010965	2	Coupling	
14	7010960	1	Cover, End	
15	7010972	4	Bolt	
16	7010958	1	Housing (Section 1)	
17	7010974	1	Housing (Section 2)	
18	7010969	1	Housing (Section 3)	
19	7010970	1	Plate, Distance (Section 2)	
20	7010971	1	Plate, Distance (Section 3)	
	7010962	1	Seal Kit (Includes Items 2, 4, 5 & 7)	

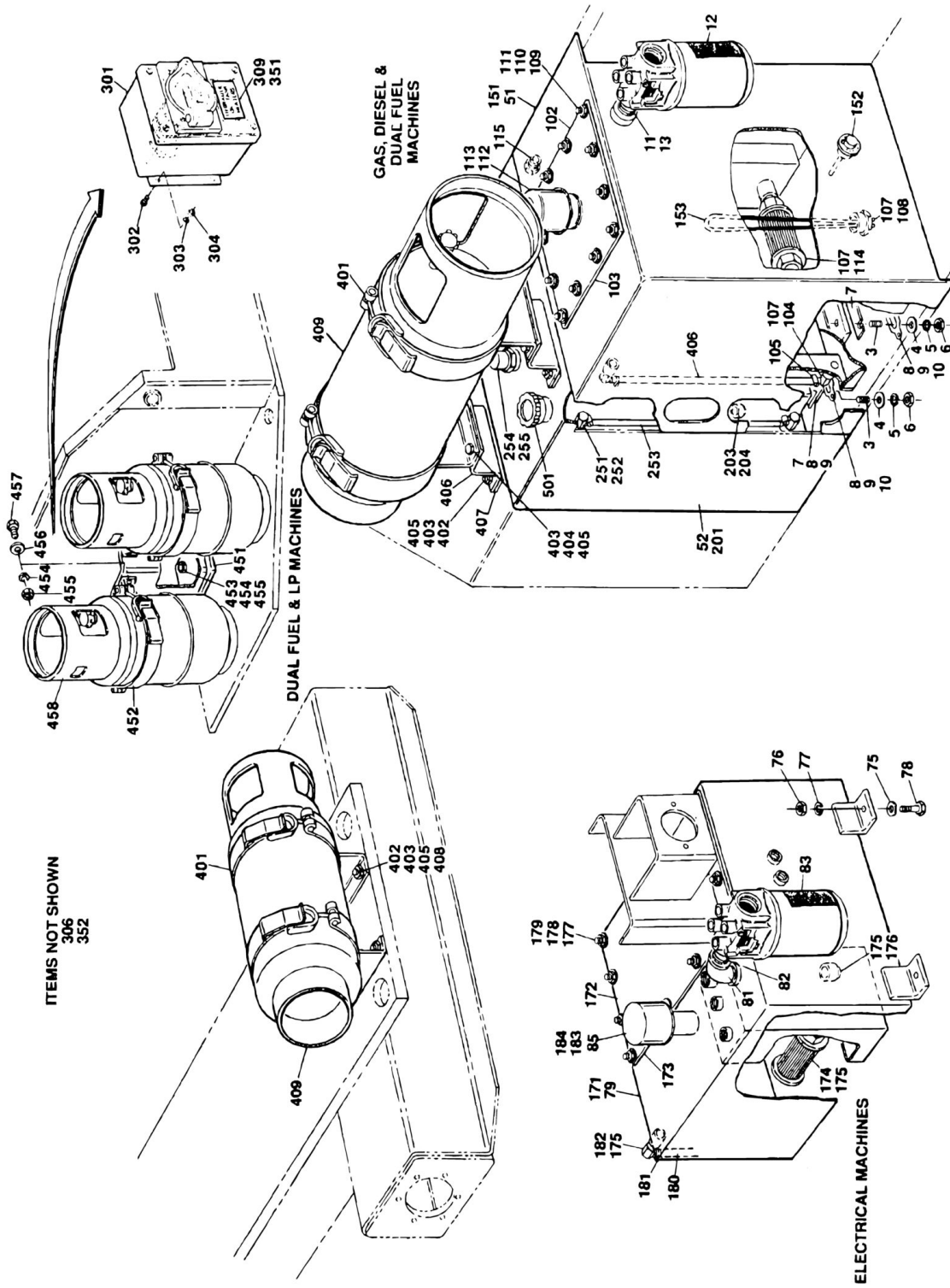
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FIGURE 2-20. BATTERY CHARGER ASSEMBLY (ELECTRIC POWERED MACHINE)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	BATTERY CHARGER ASSEMBLY	
	0400068	Ref	Manual Timer (Prior to November 1991)	-
	0400077	Ref	Automatic Timer (November 1991 to Present)	-
1	7005955	1	Case Assembly	
2	7005956	1	Transformer Assembly	
3	7005957	2	Heat Sink Assembly	
4	7005958	4	Diode	
5	7005959	2	Ammeter	
8	7005928	1	Capacitor	
9	7005935	3	Bushing	
10	7005960	2	Bushing	
11	7005937	1	Cord Set, AC	
12	7005961	1	Cord Set, 12VDC	
13	7005962	1	Auxiliary Relay Cable Assembly 48VDC	
14	7005963	2	Fuse Assembly	
51		Ref	Timer Options:	
51	7005951	1	Timer (Manual Timer - Prior to November 1991)	
51	7005941	1	Knob (Manual Timer - Prior to November 1991)	
51	7005969	1	Timer (Automatic Timer - November 1991 to Present)	

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FIGURE 2-21. TANKS INSTALLATION



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FIGURE 2-21. TANKS INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	FUEL AND HYDRAULIC TANKS INSTALLATION (GAS, DUAL FUEL, LP ONLY AND DIESEL)	
		Ref	Note: For Electric Machines See Items 75-85.	
	0238534	Ref	Tanks With Sight Level Gages and Without Heaters	3
	0239334	Ref	Tanks With Mechanical Fuel Level Gage/Hydraulic Sight Level Gage and Without Heaters	3
	0238977	Ref	Tanks With Sight Level Gages and With Heaters	3
	0255603	Ref	Tanks With Low Fuel Indicator and 10 Micron Return Filter	2
	0239437	Ref	Tanks for LP Only Machines	2-B
3	4300078	8	Stud (Welded on Part)	
4	4751500	8	Flatwasher 5/16in	
5	4761500	8	Lockwasher 5/16in	
6	3311501	8	Nut 5/16in-18NC	
7	4070679	4	Shim 1/16in- 1.6mm	
8	4070410	AR	Shim 1/16in- 1.6mm	
9	4070411	AR	Shim 1/8in- 3.2mm	
10	4070412	AR	Shim 3/16in-4.8mm	
11	2180644	1	Fitting, Nipple	
12		Ref	Filter Assembly Options:	
12	2120109	1	Filter Assembly (Standard - 25 Micron)	
12	2120110	1	Element, Filter - 25 Micron	
12	2120151	1	Filter Assembly (Optional - 10 Micron)	
12	2120129	1	Element, Filter - 10 Micron	
13	0100020	AR	Sealant, Pipe	
14	1340046	AR	Breather (Not Shown) (SN 32921 to Present)	
51		Ref	Hydraulic Tank Assembly Options (See Items 101-153 for Breakdown):	
51	4400289	1	Tanks Without Heaters	
51	4400253	1	Tanks With Heaters	
52		Ref	Fuel Tank Assembly (See Items 201-255 for Breakdown)	
52	4400239	1	Tanks With Sight Level Gages and Without Heaters	
52	0239331	1	Tanks With Mechanical Fuel Level Gage/Hydraulic Sight Level Gage and Without Heaters	
52	4400239	1	Tanks With Sight Level Gages and With Heaters	
52	4400379	1	Tanks With Low Fuel Indicator and 10 Micron Return Filter	
52	0239437	1	Tanks for LP Only Machines (Filler Panel) (Not Shown)	
52		Ref	Hardware to Install Filler Panel:	
52	3300151	2	Nut, Acorn 1/4in-20NC (Not Shown)	
52	4300031	2	Stud (Welded on Part) (Not Shown)	
52	4761400	2	Lockwasher 1/4in (Not Shown)	
	0238465	Ref	HYDRAULIC TANK INSTALLATION (ELECTRIC MACHINES)	F
		Ref	Note: See SPECIAL OPTIONS SECTION - Options for Electric U/L Machines.	
75	4751500	3	Flatwasher 5/16in	
76	3311501	3	Nut 5/16in-18NC	
77	4761500	3	Lockwasher 5/16in	
78	0641512	3	Bolt 5/16in-18NC x 1 1/2in	
79	4400241	1	Hydraulic Tank Assembly (See Items 171-185 for Breakdown)	
81	2200447	1	Fitting, 90	
82	2180644	1	Fitting, Nipple	
83	2120109	1	Filter Assembly	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
83	2120110	1	Element, Filter	
84	0100020	AR	Sealant, Pipe	
85	1340046	1	Breather	
		Ref	HYDRAULIC TANK ASSEMBLY	
	4400289	Ref	Tank without Heaters	B
	4400253	Ref	Tank with Heaters	A
102	1670446	1	Lid, Tank	
103	3960369	1	Gasket, Lid	
104	2180467	2	Fitting, 90	
105	1320022	2	Clamp	
106	4562516	19 in/48cm	Tube, Sight	
107	0100020	AR	Sealant, Pipe	
108	3520022	1	Plug, Magnetic	
109	4751400	12	Flatwasher 1/4in	
110	4761400	12	Lockwasher 1/4in	
111	3311401	12	Nut 1/4in-20NC	
112	1340045	1	Cap, Fill	
113	4740338	6	Washer, Sealing	
114	2120106	1	Filter, Suction	
115	2220242	1	Fitting, Plug	
151		Ref	Tank Weldment Options:	
151	4400276	1	Tank without Heaters	
151	4400254	1	Tank with Heaters	
152		Ref	Element, Heater Options:	
152	Not Required	0	Tank without Heaters	
152	2580018	1	Tank with Heaters	
153		Ref	Controller, Thermostat	
153	Not Required	0	Tank without Heaters	
153	1600043	1	Tank with Heaters	
	4400241	Ref	HYDRAULIC TANK ASSEMBLY - ELECTRIC MACHINES	D
171	4400242	1	Tank Weldment	
172	3532064	1	Lid, Tank	
173	3960372	1	Gasket, Lid	
174	2120120	1	Filter, Suction	
175	0100020	AR	Sealant, Pipe	
176	3520022	1	Plug, Magnetic	
177	4751400	12	Flatwasher 1/4in	
178	4761400	12	Lockwasher 1/4in	
179	3311401	12	Nut 1/4in-20NC	
180	4562516	8 in/20cm	Tube, Sight	
181	1320022	2	Clamp	
182	2180467	2	Fitting, 90	
183	4740338	6	Washer, Sealing	
184	1340047	1	Fill Cap/Breather	
		Ref	FUEL TANK ASSEMBLY (STANDARD PARTS)	
201		Ref	Tank Weldment Options:	
201	4400240	1	Standard Tank	
201	4400380	1	Tank with Low Level Indicator	
202	Not Required	0	Not Required	
203	2200052	1	Plug, Pipe	
204	0100020	AR	Sealant, Pipe	

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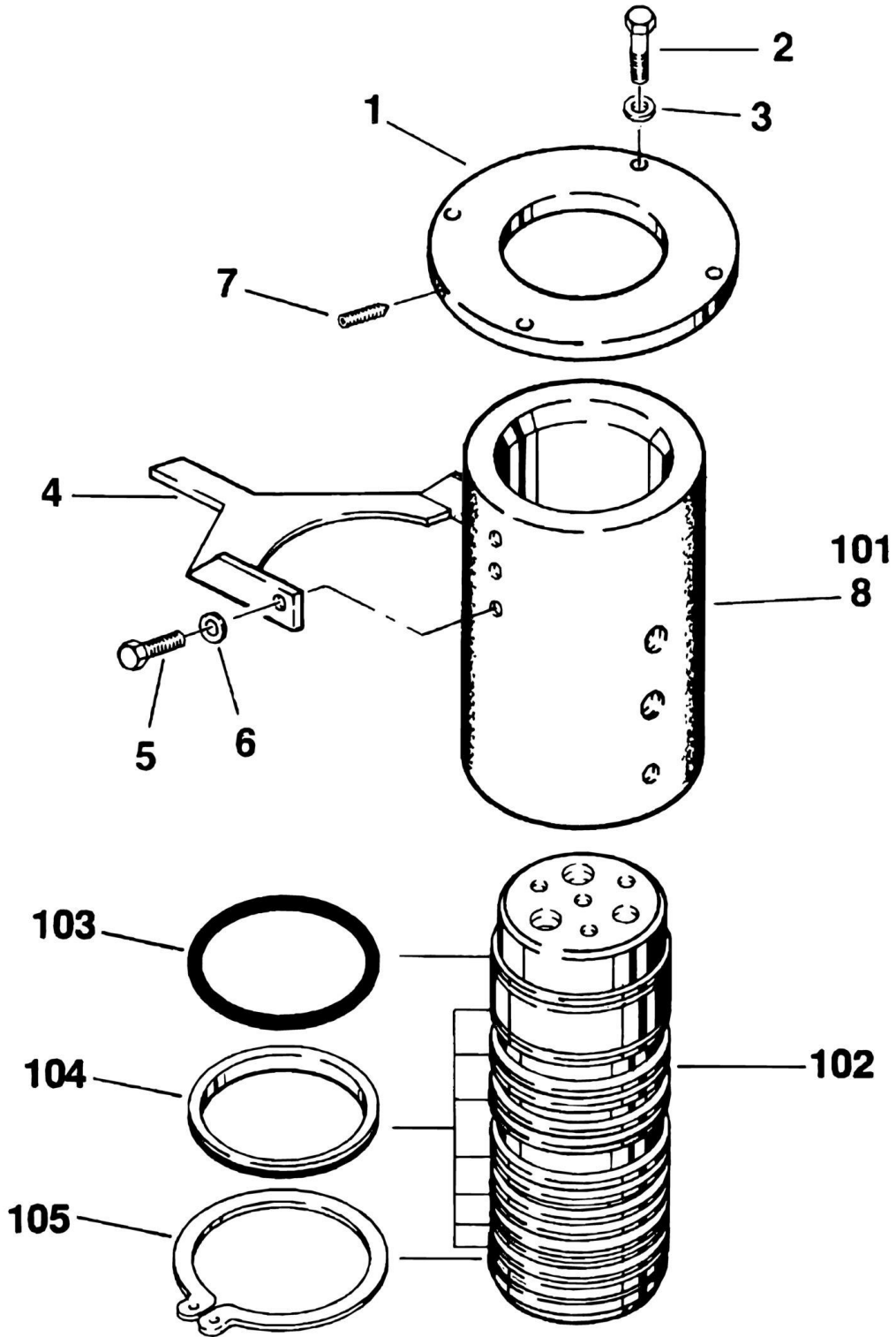
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4400239	Ref	FUEL TANK ASSEMBLY - WITH SIGHT LEVEL GAGE (VARIABLE PARTS)	A
	4400379	Ref	FUEL TANK ASSEMBLY - WITH SIGHT GAGE AND LOW LEVEL INDICATOR KIT (VARIABLE PARTS)	-
251	2180467	2	Fitting, 90	
252	1320022	2	Clamp	
253	4562516	8 in/20cm	Tube, Sight	
254	Not Required	0	Not Required	
255	Not Required	0	Not Required	
	0239331	Ref	FUEL TANK ASSEMBLY - WITH MECHANICAL GAGE (VARIABLE PARTS)	A
251 to 253	Not Required	0	Not Required	
254	2180043	1	Coupling	
255	2420002	1	Gage, Mechanical	
		Ref	OPTIONAL COLD WEATHER PACKAGE INSTALLATION (GAS AND DIESEL MACHINES)	
	0250439	Ref	Ford Engine	B
	0256384	Ref	Deutz Engine	-
301	0231756	1	Junction Box Assembly	
302	4300031	4	Stud (Welded on Part)	
303	4761400	4	Lockwasher 1/4in	
304	3311401	4	Nut 1/4in-20NC	
306	2580001	1	Heater, Battery (Not Shown)	
309	3251243	1	Decal	
351		Ref	Nameplate - Heaters Options:	
351	3251228	1	Ford Engine	
351	3251228	1	Deutz Engine	
352		Ref	Heater Kit - Engine Coolant Options (Not Shown):	
352	2580026	1	Ford Engine	
352	2901111	1	Deutz Engine (Cold Start Kit - Not Shown)	
353	0700808	1	Bolt, Metric (Not Shown) (Use to Bolts on E.T.S. Switch on Deutz Machines Only)	
354	4761500	1	Lockwasher (Not Shown) (Use to Bolts on E.T.S. Switch on Deutz Machines Only)	
		Ref	LP TANK INSTALLATION (DUAL FUEL AND STRAIGHT LP ONLY MACHINES)	
	0250990	Ref	LP Tank Installation (Dual Fuel and Straight LP Only Machines) (April 1990 to Present)	B
401	1320023	2 pr	Clamp, LP Tank	
402	4300034	8	Stud (Welded on Part)	
403	4751600	16	Flatwasher 3/8in	
404	0641608	4	Bolt 3/8in-16NC x 1in	
405	3311605	12	Locknut 3/8in-16NC	
406	0901701	2	Bracket, Tank	
407	4070744	1	Shim - 1/4in	
408	4751800	4	Flatwasher 1/2in	
409		Ref	Tank Options:	
409	4400164	2	LP Tank - 20 Lb (Liquid Withdrawal)	
409	4400281	2	LP Tank - Aluminum 33.5lb (Liquid Withdrawal) (Was p/n 4400040)	
409	4400421	2	LP Tank - Steel 33.5lb (Liquid Withdrawal)	
409	4400275	2	LP Tank - Aluminum 43.5lb (Liquid Withdrawal) (Was p/n 4400038)	
409	4400420	2	LP Tank - Steel 43.5lb (Liquid Withdrawal)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0238585	Ref	LP Tank Installation (Dual Fuel and Straight LP Only Machines) (Prior to April 1990)	C
451	4842919	1	Bracket, Mounting	
452	1320023	1 pr	Clamp, LP Tank	
453	4300034	4	Stud (Welded on Part)	
454	4761600	8	Lockwasher 3/8in	
455	3311601	8	Nut 3/8in-16NC	
456	4751600	4	Flatwasher 3/8in	
457	0641608	4	Bolt 3/8in-16NC x 1in	
458		Ref	LP Tank Options:	
458	4400164	2	LP Tank - 20 Lb (Liquid Withdrawal)	
458	4400040	2	LP Tank - 33.5 Lb (Liquid Withdrawal)	
458	4400275	2	LP Tank - 43.5lb (Liquid Withdrawal)	
458	4400038	2	LP Tank - 43.5 Lb (Vapor Withdrawal)	
		Ref	FUEL CAP ASSEMBLY	
	0236285	Ref	Fuel Cap Assembly (Prior to June 1995)	5-E
	0255823	Ref	Fuel Cap Assembly (June 1995 to SN 30382)	2-B
	0257365	Ref	Fuel Cap Assembly with Standard Cap (SN 30382 to Present)	1
	0257366	Ref	Fuel Cap Assembly with Locking Red Cap (SN 30382 to Present)	1
	0258626	Ref	Fuel Cap Assembly with Locking Blue Cap (SN 30382 to Present)	1
501		Ref	Cap, Fill Options:	
501	1120314	1	Cap, Fill (Prior to SN 30382)	
501	1120314	1	Cap, Fill with Standard Cap (SN 30382 to Present)	
501	1120367	1	Cap, Fill with Locking Red Cap (SN 30382 to Present)	
501	1120512	1	Cap, Fill with Locking Blue Cap (SN 30382 to Present)	

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FIGURE 2-22. ROTARY OIL COUPLING INSTALLATION



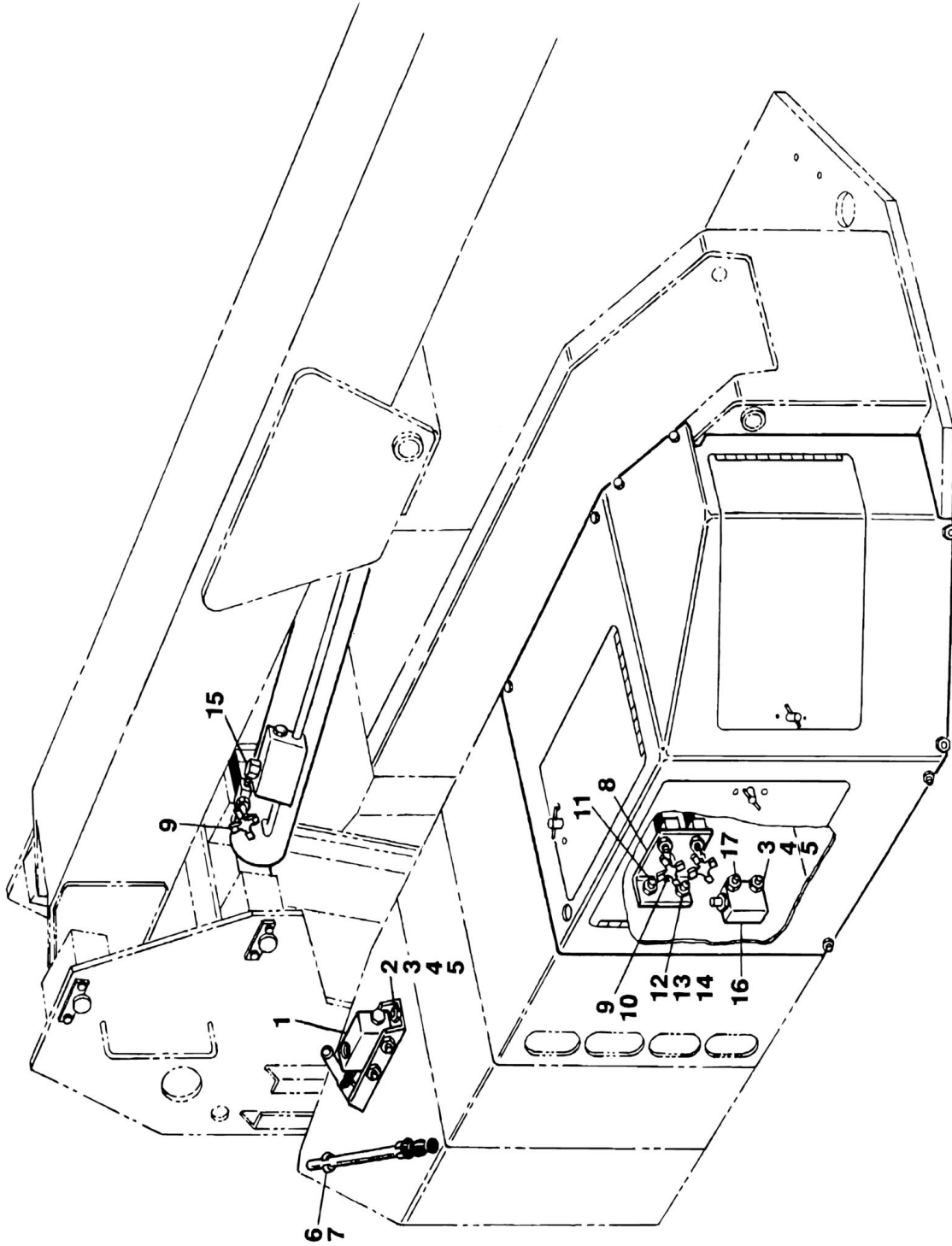
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FIGURE 2-22. ROTARY OIL COUPLING INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0238615	Ref	ROTARY OIL COUPLING INSTALLATION	A
1	1440154	1	Collar	
2	0641512	4	Bolt 5/16in-18NC x 1 1/2in	
3	4761500	4	Lockwasher 5/16in	
4	3530403	1	Plate, Retaining	
5	0641807	2	Bolt 1/2in-13NC x 7/8in	
6	4761800	2	Lockwasher 1/2in	
6	0100003	AR	Loctite TL277-41	
7	3951820	2	Setscrew 1/2in-13NC x 7/8in	
7	0100011	AR	Loctite #242	
8	1660160	1	Coupling Assembly (Includes Items 101-105)	
	1660160	Ref	COUPLING ASSEMBLY	A
101	2760091	1	Housing, Swivel	
102	0620058	1	Body, Swivel	
103	Kit	7	O-Ring	
104	Kit	1	T-Seal	
105	3760004	1	Ring, Retaining	
		Ref	Seal Kit Options:	
	2901146	1	1660154, 1660160 & 1660185 Couplings (Includes Items 103 & 105)	
	1660213EX	1	1660213 Couplings (was p/n 7013175)	
		Ref	Note: Due to complexity of repair, seal kit no longer available. Use rebuilt unit as replacement.	

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FIGURE 2-23. OPTIONAL MANUAL DESCENT INSTALLATION



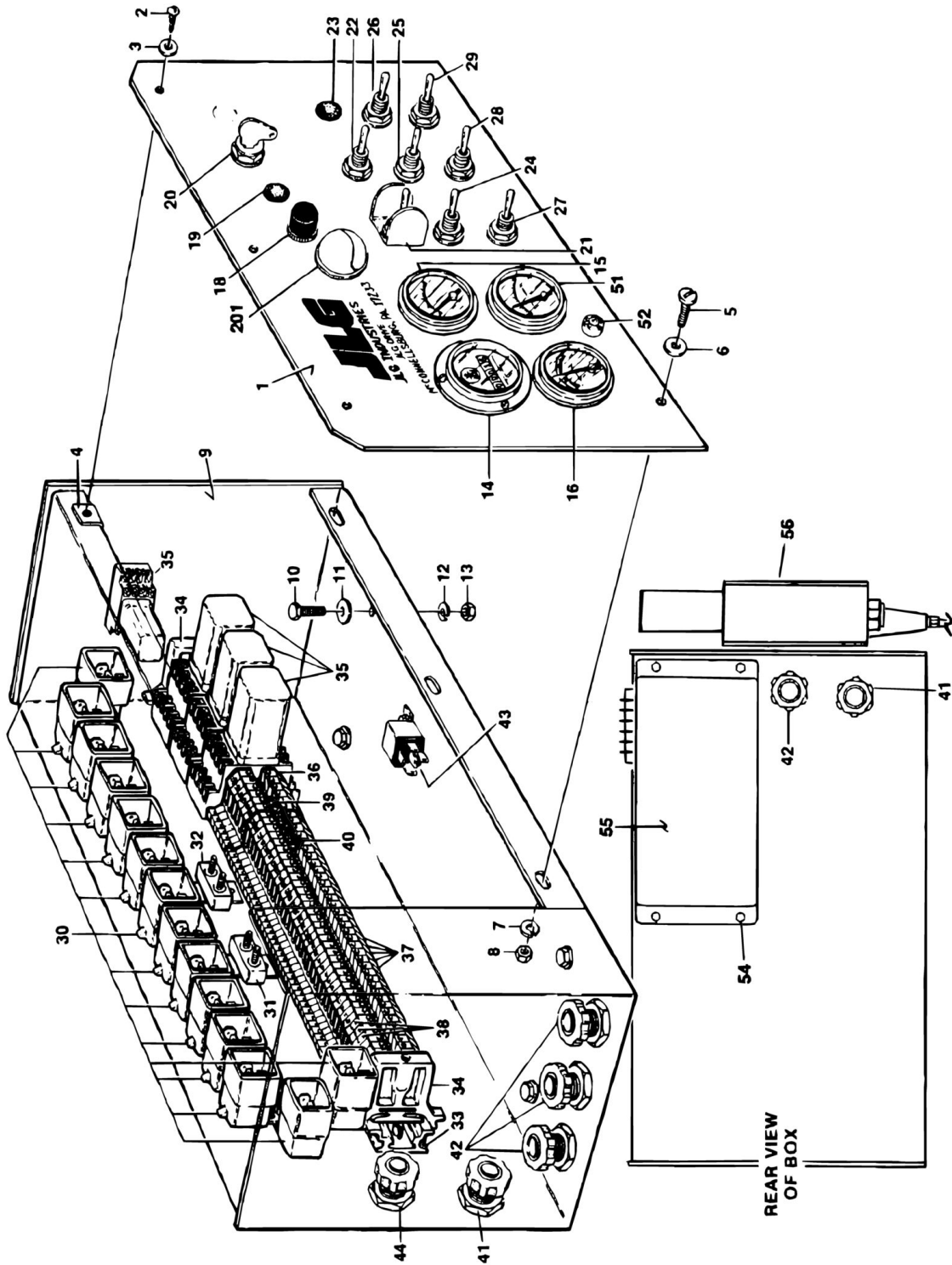
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FIGURE 2-23. OPTIONAL MANUAL DESCENT INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0251953	Ref	OPTIONAL MANUAL DESCENT INSTALLATION	C
1	3600179	1	Hand Pump Assembly	
1	2900779	1	Seal Kit	
1	7010652	1	Handle	
1	3600179	1	Pump, w/o Handle (was p/n 7016673)	
1	0902425	1	Cover (Not Shown) (SN 34879 to Present)	
2	4300038	2	Stud (Welded on Part)	
3	4751500	4	Flatwasher 5/16in	
4	4761500	4	Lockwasher 5/16in	
5	3311501	4	Nut 5/16in-18NC	
6	1380136	2	Clip, Gripper	
7	3941003	2	Screw, Self-Tapping #10 x 3/8in	
8	0901763	1	Bracket, Valve Mounting	
9	4640005	3	Valve, Manual	
10	2900062	2	Mounting Kit - Valve	
11	4300068	2	Stud (Welded on Part)	
12	4751400	2	Flatwasher 1/4in	
13	4761400	2	Lockwasher 1/4in	
14	3311401	2	Nut 1/4in-20NC	
15	2220820	1	Fitting, Straight	
16	4640521	1	Valve Assembly	
16	4640771	1	Cartridge	
16	2900770	1	Seal Kit - 4640771 Cartridge	
17	4300078	2	Stud (Welded on Part)	

SECTION 2 - TURNTABLE

FIGURE 2-24. GROUND CONTROL BOX INSTALLATION (GAS/DIESEL MACHINES)



SECTION 2 - TURNTABLE

FIGURE 2-24. GROUND CONTROL BOX INSTALLATION (GAS/DIESEL MACHINES)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	GROUND CONTROL BOX ASSEMBLY	
	0860830	Ref	Gas Machines Built (Prior to October 1994)	C
	0860956	Ref	Gas Machines Built (October 1994 to Present)	-
	0860723	Ref	Diesel Machines	E
1		Ref	Lid Options:	
1	3252044	1	Lid Used (Prior to May 1994)	
1	3252383	1	Lid Used May (1994 to Present)	
1	4420037	38 in/1m	Strip, Rubber (Not Shown)	
2	0750806	2	Screw, Self-Tapping #8 x 3/4in	
3	4740120	2	Washer, Fiber	
4	3300177	2	Nut, Tinnerman	
5	3911412	3	Screw, Round Head 1/4in-20NC x 3/4in	
6	4751400	3	Flatwasher 1/4in	
7	4761400	3	Lockwasher 1/4in	
8	3311401	3	Nut 1/4in-20NC	
9	0860645	1	Box	
10	0641405	4	Bolt 1/4in-20NC x 5/8in	
11	4751400	4	Flatwasher 1/4in	
12	4761400	4	Lockwasher 1/4in	
13	3311401	4	Nut 1/4in-20NC	
14	2420009	1	Hourmeter	
15	2420129	1	Voltmeter	
16		Ref	Gage, Oil Pressure Options:	
16	2420128	1	Gage, Oil Pressure (0-80 PSI)	
16	2420111	1	Gage, Oil Pressure (0-100 PSI)	
18	4360274	1	Switch, Push Button	
18	3790015	1	O-Ring	
19	3520028	1	Plug, Hole	
20	4360284	1	Switch, Key (Master Switch)	
20	7010698	1	Key, Replacement	
20	4360267	1	Block, Contact - SPST - N.O.	
20	4360281	3	Block, Contact - N.O.	
21	4360199	1	Switch, Toggle (Ignition)	
21	4360141	1	Guard, Switch	
21	3790012	1	O-Ring	
22	4360202	1	Switch, Toggle (Platform Rotate)	
22	3790012	1	O-Ring	
23	3520028	1	Plug, Hole	
24	4360202	1	Switch, Toggle (Tower Lift)	
24	3790012	1	O-Ring	
25	4360202	1	Switch, Toggle (Main Lift)	
25	3790012	1	O-Ring	
26	4360202	1	Switch, Toggle (Swing)	
26	3790012	1	O-Ring	
27	4360202	1	Switch, Toggle (Tower Tele)	
27	3790012	1	O-Ring	
28	4360202	1	Switch, Toggle (Main Tele)	
28	3790012	1	O-Ring	
29	4360200	1	Switch, Toggle (Auxiliary Power)	
29	3790012	1	O-Ring	

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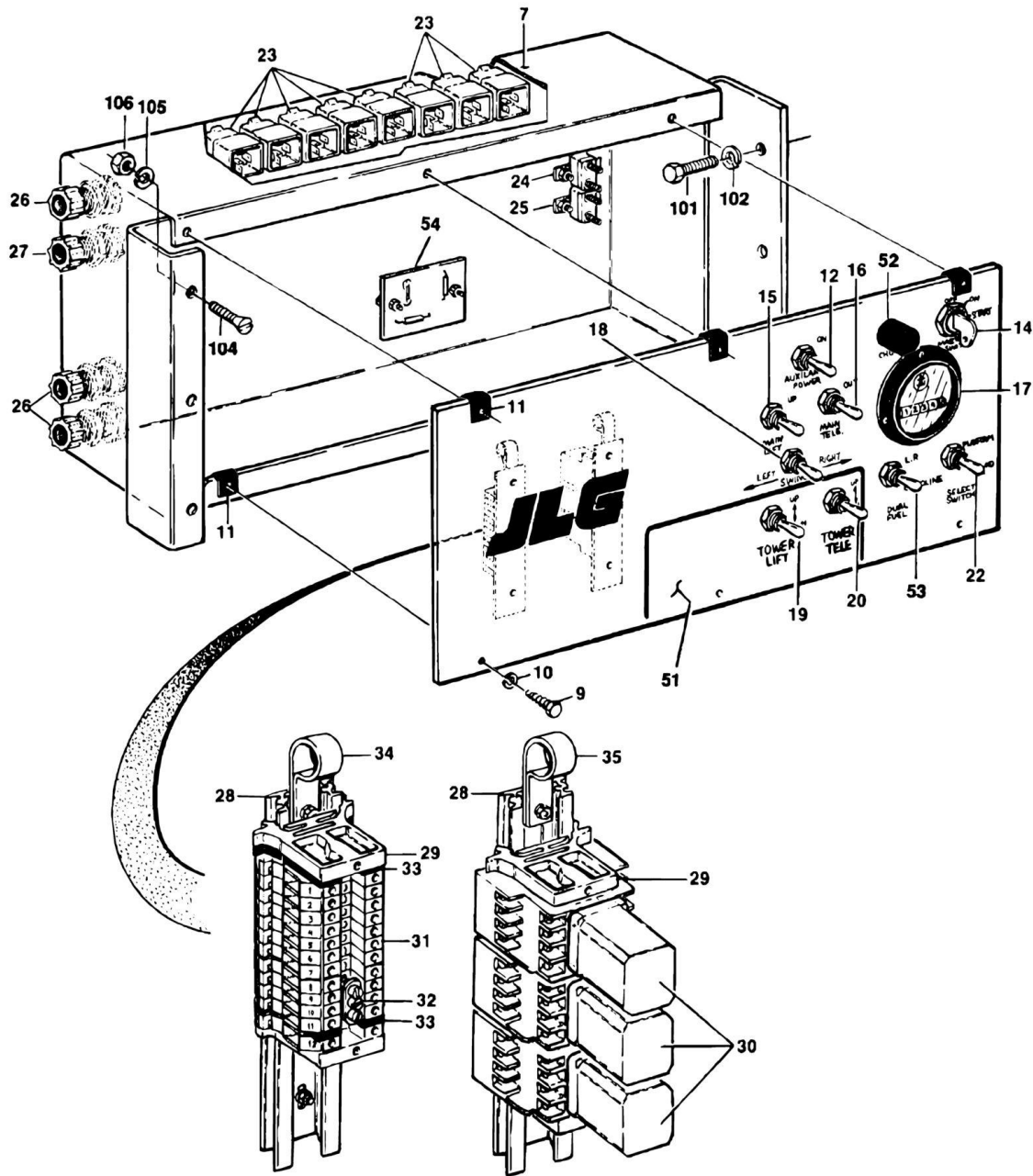
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
30	3740049	15	Relay - SPDT	
30	3311001	11	Nut #10-24NC	
30	4761000	11	Lockwasher #10	
30	4751000	11	Flatwasher #10	
31	4360216	1	Switch, Circuit Breaker - 30 Amp	
32	4360232	1	Switch, Circuit Breaker - 15 Amp	
33	3640711	1	Rail (16 5/8in - 42cm Length)	
33	3910606	2	Screw #6-32NC x 3/8in	
33	4750600	2	Flatwasher #6	
33	4760600	2	Lockwasher #6	
33	3310601	2	Nut #6-32NC	
34	4460299	2	Stop, Terminal	
35	3740058	AR	Relay - 4PDT	
35	4120013	AR	Base, Relay	
35	3740063	AR	Spring	
36	4460300	2	Barrier, Terminal	
37	4460298	45	Block, Terminal	
38	4460301	1	Marker, Terminal	
39	4460308	1	Bar, Buss (2 Position)	
39	4460305	2	Screw	
39	4460306	2	Washer	
39	4460307	2	Sleeve	
40	4460311	1	Bar, Buss	
40	4460305	5	Screw	
40	4460306	5	Washer	
40	4460307	5	Sleeve	
41	4460071	1	Connector, Strain Relief	
41	0960238	1	Bushing	
41	3300048	1	Nut, Conduit	
42	4460051	3	Connector, Strain Relief	
42	0960238	3	Bushing	
42	3300048	3	Nut, Conduit	
43	3740077	1	Relay, Bosch	
43	3311001	1	Nut #10-24NC	
43	4761000	1	Lockwasher #10	
43	4751000	1	Flatwasher #10	
44		Ref	Connector, Strain Relief Options:	
44	4460051	1	Connector, Strain Relief (Prior to SN 27513)	
44	4460244	1	Connector, Strain Relief (SN 27513 to Present)	
44	0960238	1	Bushing	
44	3300048	1	Nut, Conduit	
51		Ref	Gage Options:	
51	2420127	1	Gas Machines - Gage, Water Temperature	
51	2420125	1	Diesel Machines - Gage, Oil Temperature	
51	3990001	2	Diode - 3.5 Amp	
52		Ref	Breaker, Circuit Options:	
52	3520026	1	Plug, Hole (Gas Machines)	
52	4360212	1	Breaker, Circuit (Diesel Machines)	
53		Ref	Switch, Toggle Options:	
53	3520026	1	Plug, Hole (Standard Gas and Diesel Machines)	
53	4360201	1	Switch, Toggle (Dual Fuel Machines)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
54	3311001	AR	Nut #10-24NC	
54	4761000	AR	Lockwasher #10	
54	4751000	AR	Flatwasher #10	
55		Ref	Controller, Engine Options:	
55	1600117	1	Gas Machines	
55	Not Required	0	Diesel Machines	
55		Ref	Harness, Engine (Not Shown)	
55	4921282	1	Gas Machines	
55	Not Required	0	Diesel Machines	
56		Ref	Actuator, Adeco Throttle Options:	
56	Not Required	0	Gas Machines	
56	0060023	1	Actuator, Adeco Throttle (Diesel Machines)	
56	7008829	1	PC Board	
56	7008821	1	Motor	
56	7008828	1	Cable	
		Ref	GROUND CONTROL BOX INSTALLATION	
	0253622	Ref	Gas Machines with Bosch Alternator	
	0255153	Ref	Gas Machines with Prestolite Alternator	
	0251837	Ref	Diesel Machines	
101	0641408	4	Bolt 1/4in-20NC x 1in	
102	4751400	4	Flatwasher 1/4in	
103	3311405	4	Locknut 1/4in-20NC	
		Ref	OPTIONAL PANEL LIGHTS INSTALLATION	
201	2420024	1	Light, Panel (Optional)	

SECTION 2 - TURNTABLE

FIGURE 2-25. GROUND CONTROL BOX INSTALLATION (ELECTRIC MACHINES)



TERMINAL STRIPS SHOWN REVERSED FOR CLARITY

SECTION 2 - TURNTABLE

FIGURE 2-25. GROUND CONTROL BOX INSTALLATION (ELECTRIC MACHINES)

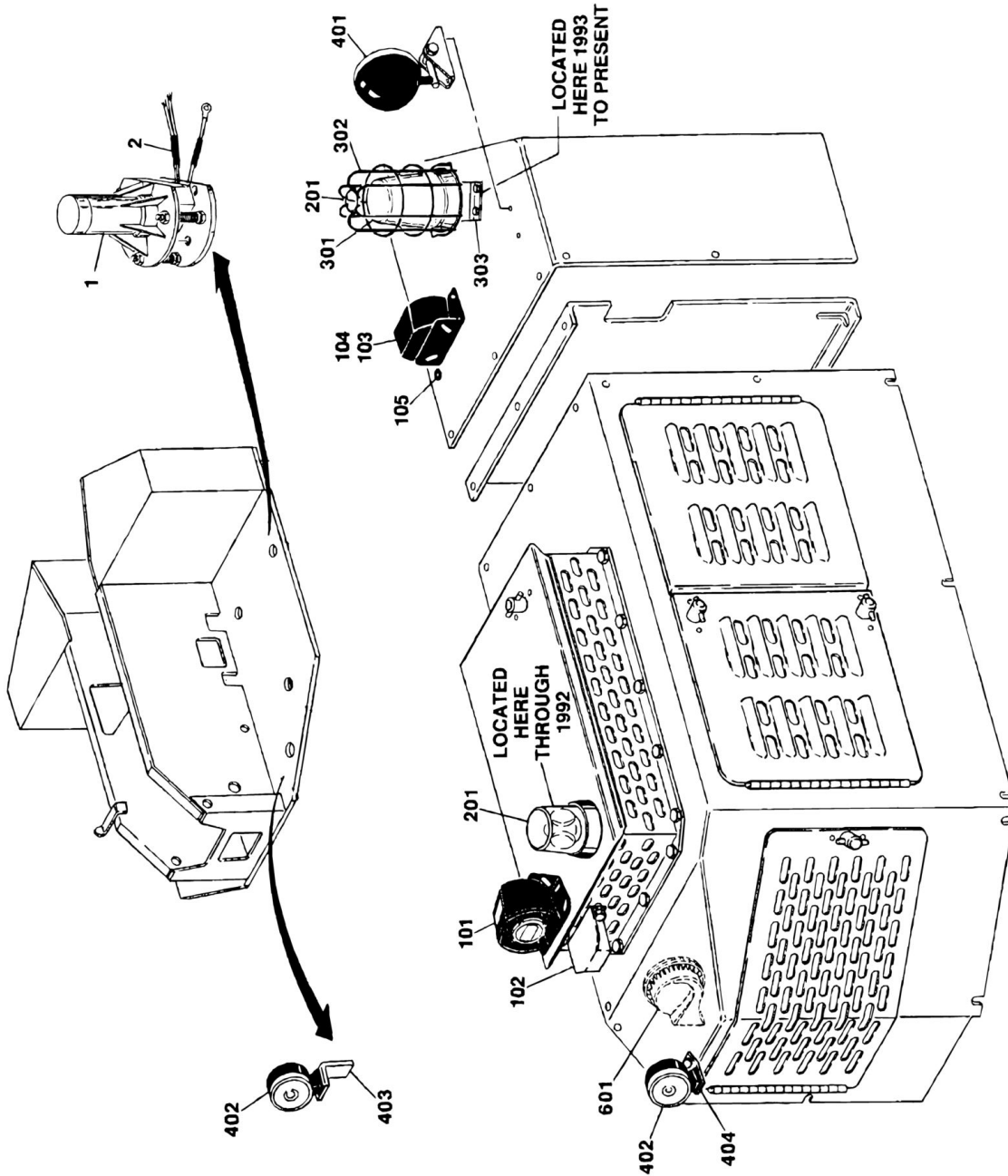
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	GROUND CONTROL BOX ASSEMBLY	
	0250610	Ref	Electric Machines	B
7	4842906	1	Control Box Weldment	
9	0750806	2	Screw, Self-Tapping #8 x 3/4in	
10	4760800	2	Lockwasher #8	
11	3300177	2	Nut, Tinnerman	
12	4360200	1	Switch, Toggle (Auxiliary Power)	
14	4360003	1	Switch, Key (Master Switch)	
14	2860002	1	Key, Replacement	
15	4360202	1	Switch, Toggle (Main Lift)	
16	4360202	1	Switch, Toggle (Main Tele)	
17	2420009	1	Hourmeter	
18	4360202	1	Switch, Toggle (Swing)	
19	4360202	1	Switch, Toggle (Tower Lift)	
20	4360202	1	Switch, Toggle (Tower Tele)	
22	4360201	1	Switch, Toggle (Select Switch)	
23	3740049	AR	Relay - SPDT	
23	3311001	1	Nut #10-24NC	
23	4761000	1	Lockwasher #10	
24	4360216	1	Switch, Circuit Breaker - 30 Amp	
24	3311001	1	Nut #10-24NC	
24	4761000	1	Lockwasher #10	
25	4360232	1	Switch, Circuit Breaker - 15 Amp	
25	3311001	1	Nut #10-24NC	
25	4761000	1	Lockwasher #10	
26	4460051	1	Connector, Strain Relief	
26	0960238	1	Bushing	
26	3300048	1	Nut, Conduit	
27	4460071	1	Connector, Strain Relief	
27	0960238	1	Bushing	
27	3300048	1	Nut, Conduit	
28	3640555	2	Rail	
28	3910606	2	Screw #6-32NC x 3/8in	
28	4750600	2	Flatwasher #6	
28	4760600	2	Lockwasher #6	
28	3310601	2	Nut #6-32NC	
29	4460299	2	Stop, Terminal	
30	3740058	AR	Relay - 4PDT	
30	4120013	AR	Base, Relay	
30	3740063	AR	Spring	
31	4460298	12	Block, Terminal	
31	4460301	1	Marker, Terminal	
32	4460309	1	Bar, Buss (3 Position)	
32	4460305	3	Screw	
32	4460306	3	Washer	
32	4460307	3	Sleeve	
33	4460300	2	Barrier, Terminal	
34	1320044	1	Clamp	
35	1320130	1	Clamp	
51	Not Available	1	Panel, Front	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
52	4360274	1	Switch, Push Button (Run)	
53	3520028	1	Plug, Hole	
		Ref	GROUND CONTROL BOX INSTALLATION	
	0250608	Ref	Electric Machines	
101	0641406	3	Bolt 1/4in-20NC x 3/4in	
102	4711400	3	Flatwasher 1/4in Narrow	
104	0741405	3	Screw, Countersunk 1/4in-20NC x 5/8in	
105	4761400	3	Lockwasher 1/4in	
106	3311001	3	Nut 1/4in-20NC	

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FIGURE 2-26. TILT INDICATOR, LIGHTS AND ALARMS INSTALLATIONS (TURNTABLE MOUNTED)



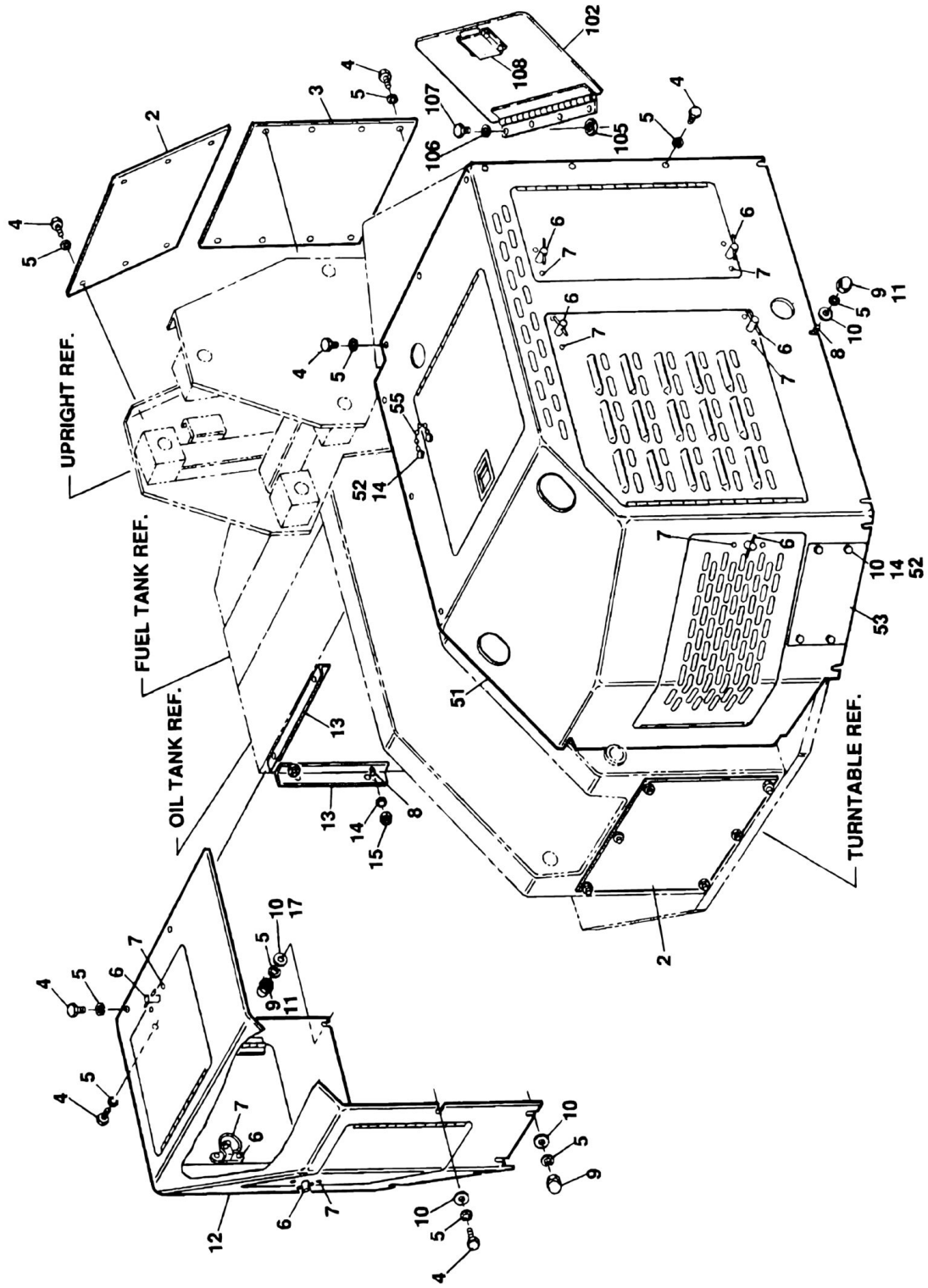
SECTION 2 - TURNTABLE

FIGURE 2-26. TILT INDICATOR, LIGHTS AND ALARMS INSTALLATIONS (TURNTABLE MOUNTED)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0252052	Ref	3 TILT INDICATOR INSTALLATION	A
1	4360280	1	Tilt Indicator	
1	4300106	2	Drive Screw	
2	2820022	6 in/15cm	Tubing, Vinyl	
	0251070	Ref	ALARMS INSTALLATION (OPTIONAL - MAY 1990 TO OCTOBER 1992) (VARIABLE PARTS)	A
103	0140024	1	Alarm, Horn	
		Ref	ALARMS INSTALLATION (OPTIONAL - OCTOBER 1992 TO PRESENT) (VARIABLE PARTS)	
	0253609	Ref	Travel Alarm	
104	0140032	1	Alarm, Horn	
105	2590016	1	Grommet	
		Ref	BEACON LIGHT INSTALLATION (OPTIONAL)	
	0238864	Ref	Amber Beacon (Gas/Diesel Machines)	
	0238865	Ref	Red Beacon (Gas/Diesel Machines)	
	0238868	Ref	Amber Beacon (Electric Machines)	
	0238869	Ref	Red Beacon (Electric Machines)	
201		Ref	Light, Beacon Options:	
201	2920009	1	Light, Beacon (Red)	
201	2920018	1	Light, Beacon (Amber - Standard Machines)	
		Ref	STROBE LIGHT INSTALLATION (OPTIONAL)	A
	0253607	Ref	Amber Beacon	
	0253608	Ref	Red Beacon	
301		Ref	Light, Strobe Options:	
301	2920109	1	Light, Strobe (Red)	
301	2920105	1	Light, Strobe (Amber)	
302	4060829	1	Guard, Light	
303	3536597	1	Bracket, Mounting	
303	2540016	2	Grommet	
		Ref	HEADLIGHT AND TAILLIGHT INSTALLATION (OPTIONAL)	
	0239619	Ref	12VDC Lights - Machines Built Through 1992	C
	0254940	Ref	12VDC Lights - Machines Built (1993 to Present)	2
401		Ref	Headlight Components:	
401		Ref	Headlight Options:	
401	2920001	2	Headlight (Prior to SN 40415)	
401	2920001	2	Headlight (SN 40415 to Present)	
401	3311501	2	Nut 5/16in-18NC (Prior to 1993)	
401	4761500	2	Lockwasher 5/16in (Prior to 1993)	
401	4300038	2	Stud (Welded on Part) (Prior to 1993)	
401	3941406	4	Screw, Self-Tap 1/4in x 3/4in (1993 to Present)	
401	4761400	4	Lockwasher 1/4in (1993 to Present)	
401	4751400	4	Flatwasher 1/4in (1993 to Present)	
402	2920019	2	Taillight Components	
402	0641404	6	Bolt 1/4in-20NC x 1/2in	
402	3311405	6	Locknut 1/4in-20NC	
403	0181386	AR	Angle (Prior to October 1990)	
404	0181592	2	Angle (October 1990 through 1992)	
	0252096	Ref	HORN INSTALLATION (STANDARD ELECTRIC MACHINES)	-
601	0140001	1	Horn (Attached at Steer Valve)	

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FIGURE 2-27. HOODS INSTALLATION (GAS/DIESEL MACHINES BUILT THROUGH 1992)



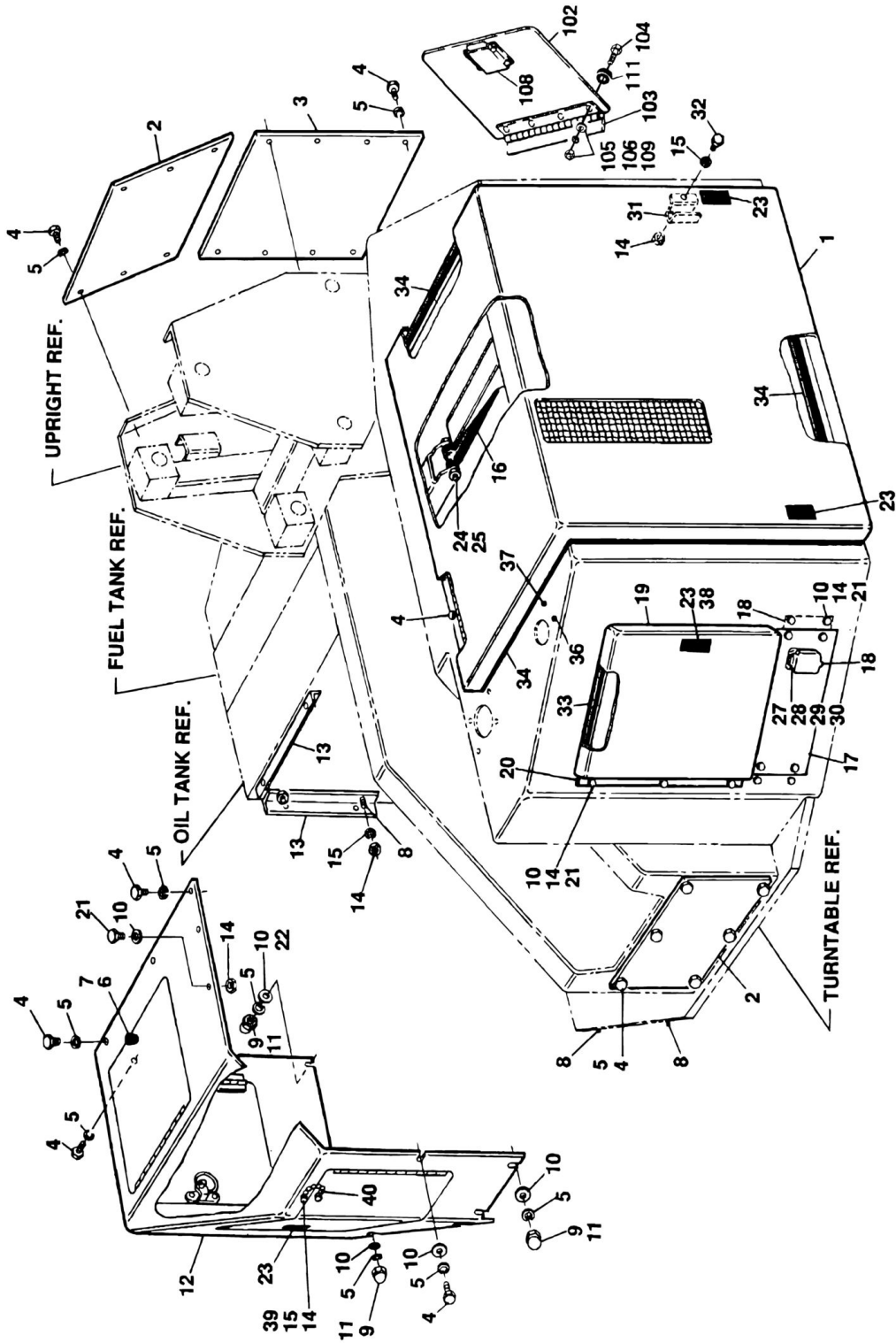
SECTION 2 - TURNTABLE

FIGURE 2-27. HOODS INSTALLATION (GAS/DIESEL MACHINES BUILT THROUGH 1992)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HOODS INSTALLATION	
	0250907	Ref	Ford Gas Machines	C
	0250849	Ref	Deutz Diesel Machines	B
		Ref	Note: Replacement Decals Must Be Ordered Separately - See DECALS SECTION.	
2	3532202	2	Plate, Cover	
3	3532260	1	Plate, Cover	
4	3941406	33	Screw, Self-Tapping 1/4in x 3/4in	
5	4761400	4	Lockwasher 1/4in	
6	2940048	AR	Latch	
7	3820019	AR	Rivet	
8	4300031	15	Stud (Welded on Part)	
9	3300151	9	Nut, Acorn 1/4in-20NC	
10	4751400	17	Flatwasher 1/4in	
11	0100011	AR	Loctite #242	
12	4843204	1	Hood (Left Side)	
13	0181396	2	Angle, Mounting	
14	3311405	AR	Locknut 1/4in-20NC	
15	4711400	AR	Flatwasher 1/4in Narrow	
16	0641408	2	Bolt 1/4in-20NC x 1in	
17	4300032	4	Stud (Welded on Part)	
51		Ref	Hood (Right Side) Options:	
51	4843647	1	Ford Gas Machines	
51	4843601	1	Deutz Diesel Machines	
52	0641406	AR	Bolt 1/4in-20NC x 3/4in	
53		Ref	Door Panel Options:	
53	4843648	1	Ford Gas Machines	
53	Not Required	0	Deutz Diesel Machines	
54		Ref	Latch Options:	
54	2940045	1	Ford Gas Machines (Flush Mount)	
54	2940048	1	Deutz Diesel Machines (Turn Knob)	
55		Ref	Chain Options:	
55	1260017	1	Ford Gas Machines	
55	Not Required	0	Deutz Diesel Machines	
	1281340	Ref	GROUND CONTROL BOX COVER INSTALLATION (STANDARD PARTS)	F
102	1780245	1	Door	
103	2600157	1	Hinge	
105	3311405	4	Locknut 1/4in-20NC	
106	4751400	8	Flatwasher 1/4in	
107	0641405	4	Bolt 1/4in-20NC x 5/8in	
108	2940057	1	Latch, Sliding	

SECTION 2 - TURNTABLE

FIGURE 2-28. HOODS INSTALLATION (GAS/DIESEL MACHINES BUILT 1993 TO PRESENT)



SECTION 2 - TURNTABLE

FIGURE 2-28. HOODS INSTALLATION (GAS/DIESEL MACHINES BUILT 1993 TO PRESENT)

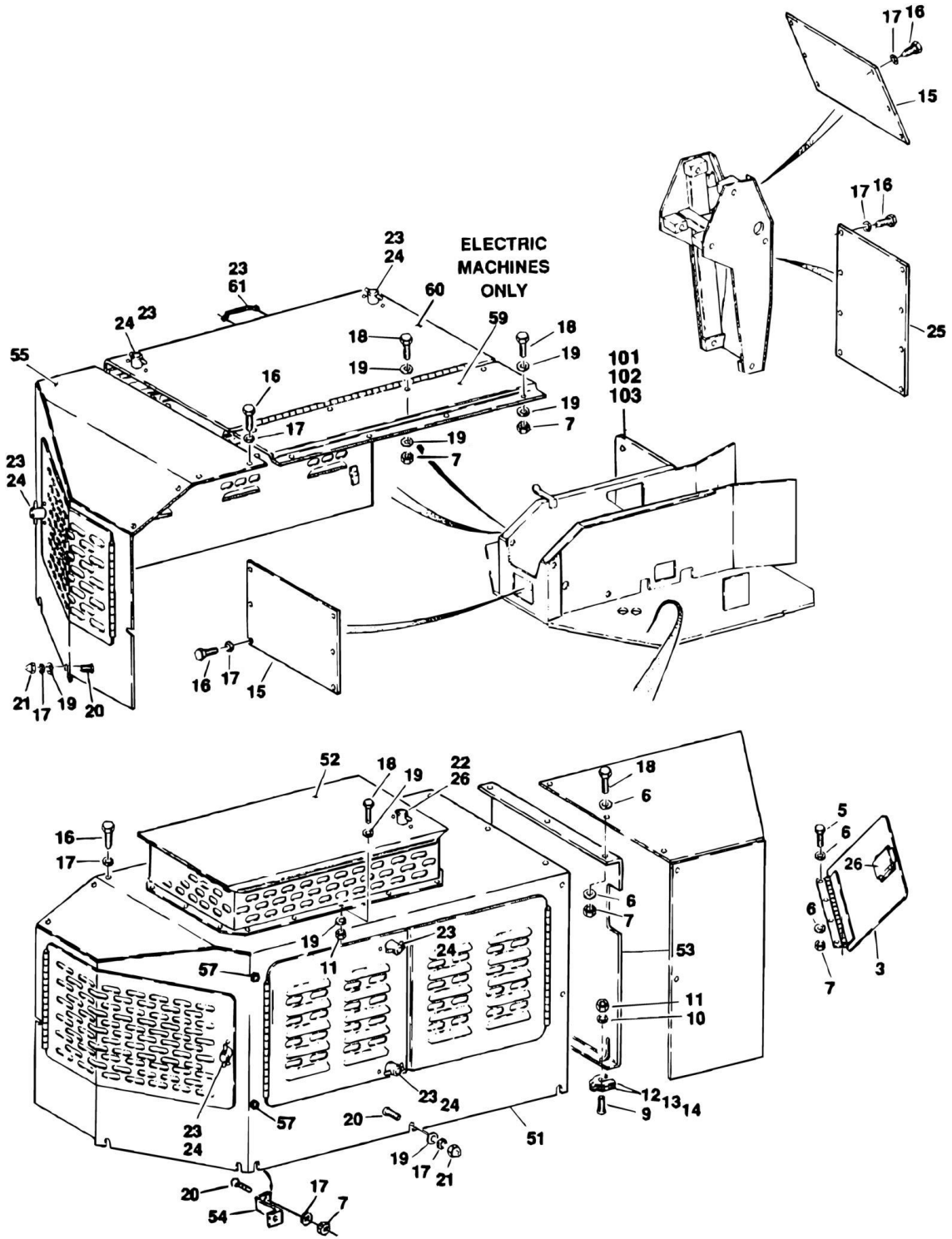
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0252774	Ref	HOODS INSTALLATION	F-6
		Ref	Note: Replacement Decals Must Be Ordered Separately - See DECALS SECTION.	
1	4844130	1	Hood (Right Side)	
2	3532202	2	Plate, Cover	
3	3532260	1	Plate, Cover	
4	3941406	32	Screw, Self-Tapping 1/4in x 1/2in	
5	4761400	36	Lockwasher 1/4in	
6	2940051	1	Latch, Slam	
8	4300031	6	Stud (Welded on Part)	
9	3300151	4	Nut, Acorn 1/4in-20NC	
10	4751400	55	Flatwasher 1/4in	
11	0100011	AR	Loctite #242	
12	4844210	1	Hood (Left Side)	
13	0181396	2	Angle, Mounting	
14	3311405	24	Locknut 1/4in-20NC	
15	4711400	4	Flatwasher 1/4in	
16	4160110	2	Spring, Gas	
17	3536017	1	Plate, Filler	
18	4220153	2	Stop, Door	
19	4843945	1	Door	
20	4070798	1	Shim	
21	0641408	4	Bolt 1/4in-20NC x 1in	
22	4300032	2	Stud (Welded on Part)	
23		Ref	Latch	
23	2940113	5	Latch (Was p/n 2940042) (Prior to SN 33711)	
23	2940113	5	Latch (SN 33711 to Present)	
25	3311505	4	Locknut 5/16in-18NC	
26	1670612	1	Cover, Access (110 Volt)	
27	3910812	4	Bolt #10-24NC x 1in	
28	4760800	4	Lockwasher #10	
29	4750800	4	Flatwasher #10	
30	3310801	4	Nut #10-24NC	
31	4060832	2	Shield, Seal	
33	3960417	5 ft/1.5m	Seal, Door	
34	3960418	15 ft/4.6m	Seal	
35	0100040	AR	Sealant	
36	3520054	1	Plug, Hole 7/16in-11mm	
37	3520034	4	Plug, Hole 5/16in-8mm	
38	2940070	1	Pawl, Latch (Prior to SN 22711)	
39	0641406	14	Bolt 1/4in-20NC x 3/4in	
40	1260017	6 in/15cm	Chain	
	1281340	Ref	GROUND CONTROL BOX COVER INSTALLATION	H
102	1780245	1	Door	
103	2600157	1	Hinge	
104	0641406	4	Screw, 1/4in-20NC x 3/4in	
105	3311401	4	Nut, 1/4in-20NC	
106	4751400	16	Flatwasher 1/4in	
108	2940057	1	Latch, Sliding	
109	4761400	4	Lockwasher 1/4in	

SECTION 2 - TURNTABLE

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
111	0940083	2	Bumper	

SECTION 2 - TURNTABLE

FIGURE 2-29. HOODS INSTALLATION (ELECTRIC MACHINES)



SECTION 2 - TURNTABLE

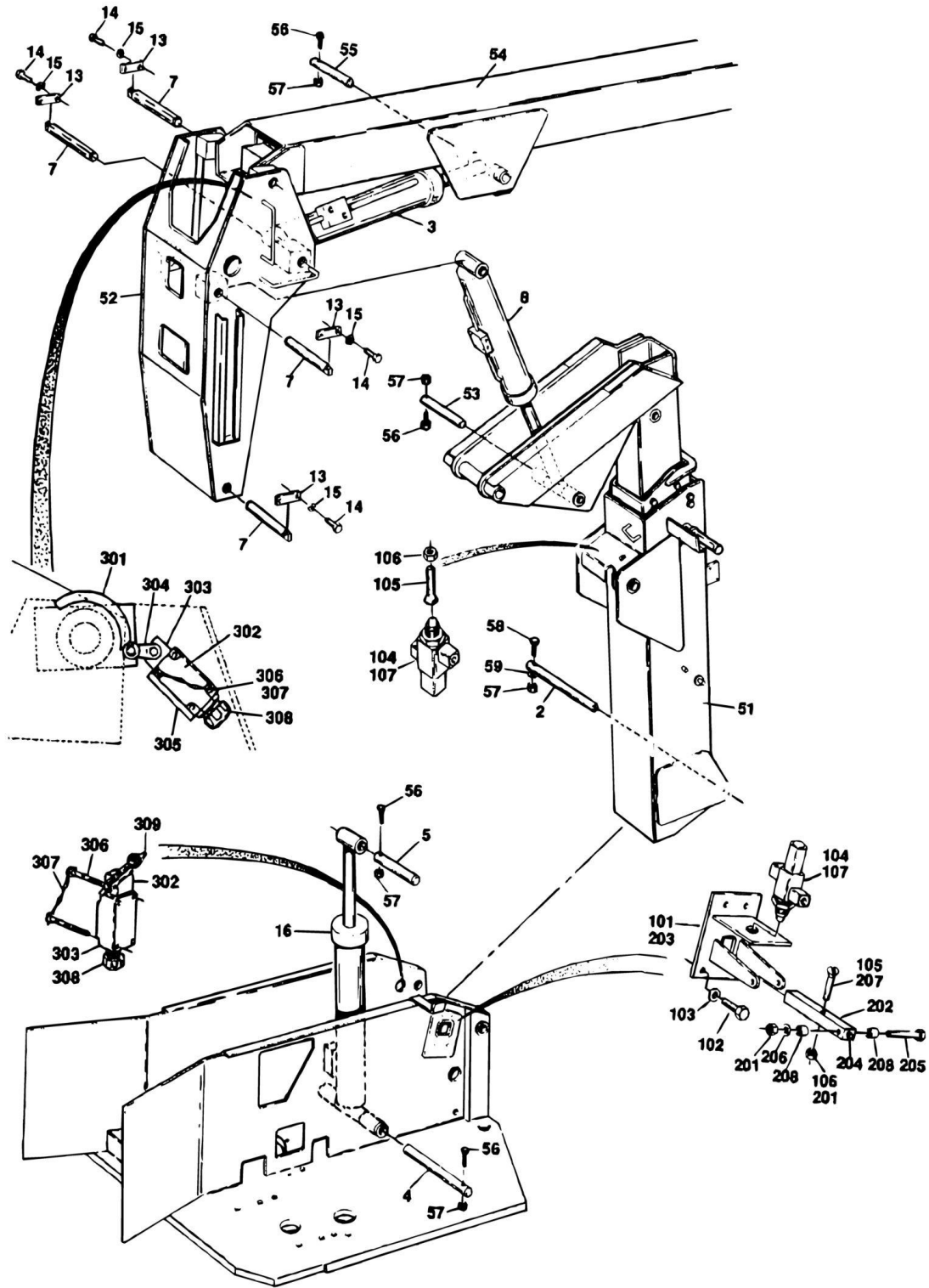
FIGURE 2-29. HOODS INSTALLATION (ELECTRIC MACHINES)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HOODS INSTALLATION	
	0252480	Ref	Electric Machines	A
		Ref	Note: Replacement Decals Must Be Ordered Separately - See DECALS SECTION.	
3	4842885	1	Door Weldment	
4	2940057	1	Latch, Sliding	
5	0641406	4	Bolt 1/4in-20NC x 3/4in	
6	4711400	AR	Flatwasher 1/4in Narrow	
7	3311405	AR	Locknut 1/4in-20NC	
9	4300073	2	Stud (Welded on Part)	
10	4751500	2	Flatwasher 5/16in	
11	3311505	2	Locknut 5/16in-18NC	
12	4070410	AR	Shim 1/16in-16.6mm Thickness	
13	4070411	AR	Shim 1/8in-3.2mm Thickness	
14	4070412	AR	Shim 3/16in-4.8mm Thickness	
15	3532202	2	Plate, Cover	
16	3941406	AR	Screw, Self-Tapping 1/4in x 3/4in	
17	4761400	AR	Lockwasher 1/4in	
18	0641408	AR	Bolt 1/4in-20NC x 1in	
19	4751400	AR	Flatwasher 1/4in	
20	4300031	AR	Stud (Welded on Part)	
21	3300151	AR	Nut, Acorn 1/4in-20NC	
22	2940050	1	Latch	
23	3820019	AR	Rivet	
24	2940048	AR	Latch	
25	3532260	1	Plate, Cover	
26	3820012	2	Rivet	
51	4842964	1	Hood (Right Side)	
52	4842961	1	Ventilator	
53	3532212	1	Plate, Mounting - Valves Options	
54	Not Required	0	Bracket, Hood	
55	4842965	1	Hood (Left Side)	
56	Not Required	0	Angle, Mounting	
57	Not Required	0	Bumper, Door	
58	Not Required	0	Panel, Filler	
59		Ref	Panel Options:	
59	3533638	1	Door, Access	
59	3534432	2	Frame, Hood/Door Frame	
60	4844055	AR	Cover, Battery	
61	2560003	1	Handle, Hood (Electric Machines Only)	
	0239470	Ref	COUNTERWEIGHT COVER INSTALLATION (ELECTRIC MACHINES ONLY)	-
101	3533031	1	Cover	
102	3900161	4	Screw, Lag 3/8in x 1 1/4in	
103	4751600	4	Flatwasher 3/8in	

SECTION 3 - BOOM

SECTION 3 - BOOM

FIGURE 3-1. BOOMS AND LIMIT SWITCHES INSTALLATIONS



SECTION 3 - BOOM

FIGURE 3-1. BOOMS AND LIMIT SWITCHES INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0238987	Ref	BOOMS INSTALLATION (STANDARD PARTS)	H
2	3421481	1	Pin, Pivot	
3	1681840	1	Lift Cylinder Assembly - Main Boom (See CYLINDER SECTION for Breakdown)	
4	3421480	1	Pin, Attach	
5	3421482	1	Pin, Attach	
7	3421478	4	Pin, Pivot	
8	1681962	1	Level Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
13	3531946	4	Plate, Retainer	
14	0641508	8	Bolt 5/16in-18NC x 1in	
15	4761500	8	Lockwasher 5/16in	
16	1681960	1	Lift Cylinder Assembly - Tower Boom (See CYLINDER SECTION for Breakdown)	
51	0800567	1	Boom Assembly - Tower Boom (See TOWER BOOM ASSEMBLIES for Breakdown)	
52	4843804	1	Upright Weldment	
53	3421483	1	Pin, Attach	
54	0800572	1	Boom Assembly - Main Boom (See MAIN BOOM ASSEMBLY for Breakdown)	
55	3421780	1	Pin, Attach	
56	0641522	4	Bolt 5/16in-18NC x 2 3/4in	
57	3311505	5	Locknut 5/16in-18NC	
58	0641544	1	Bolt 5/16in-18NC x 5 1/2in	
59	4751500	2	Flatwasher 5/16in	
	0238988	Ref	HORIZONTAL CUT-OUT VALVES INSTALLATION	D
101	0239015	1	Valve Actuator Assembly (See Items 201-208 for Breakdown)	
102	0641609	4	Bolt 3/8in-16NC x 1 1/8in	
103	4751600	4	Flatwasher 3/8in	
104	4640310	2	Valve, Check	
104	7012649	1	Seal Kit (1 Per Valve)	
105	0630427	1	Screw, Flathead 1/2in-13NC x 2 1/2in	
105	0630415	1	Screw, Flathead 3/8in-16NC x 1 3/4in	
106	3311805	1	Locknut 1/2in-13NC	
106	3311605	1	Locknut 3/8in-16NC	
107	0100003	AR	Loctite	
	0239015	Ref	HYDRAULIC VALVE ACTUATOR ASSEMBLY	C
201	3311605	2	Locknut 3/8in-16NC	
202	0361630	1	Bar, Mounting	
203	4843037	1	Plate, Mounting	
204	2160003	1	Fitting, Grease	
205	0641620	1	Bolt 3/8in-16NC x 2 1/2in	
206	4751600	1	Flatwasher 3/8in	
207	0630415	1	Screw, Flathead 3/8in-16NC x 1 3/4in	
208	4563996	2	Spacer, Tube	
	0251926	Ref	ABOVE HORIZON LIMIT SWITCH INSTALLATION	B
301	1100064	1	Cam	
302	4360277	2	Switch, Limit	
303	4360236	2	Head, Actuator	
304	4360278	1	Arm and Roller Assembly	
305	0901773	1	Bracket (Prior to SN 28606)	

SECTION 3 - BOOM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
306	3900168	4	Screw, Socket Head	
307	4920140	2	Lockwire	
308	4460237	2	Connector, Strain Relief	
309	4360237	1	Arm and Roller Assembly	

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FIGURE 3-2. MAIN BOOM ASSEMBLY

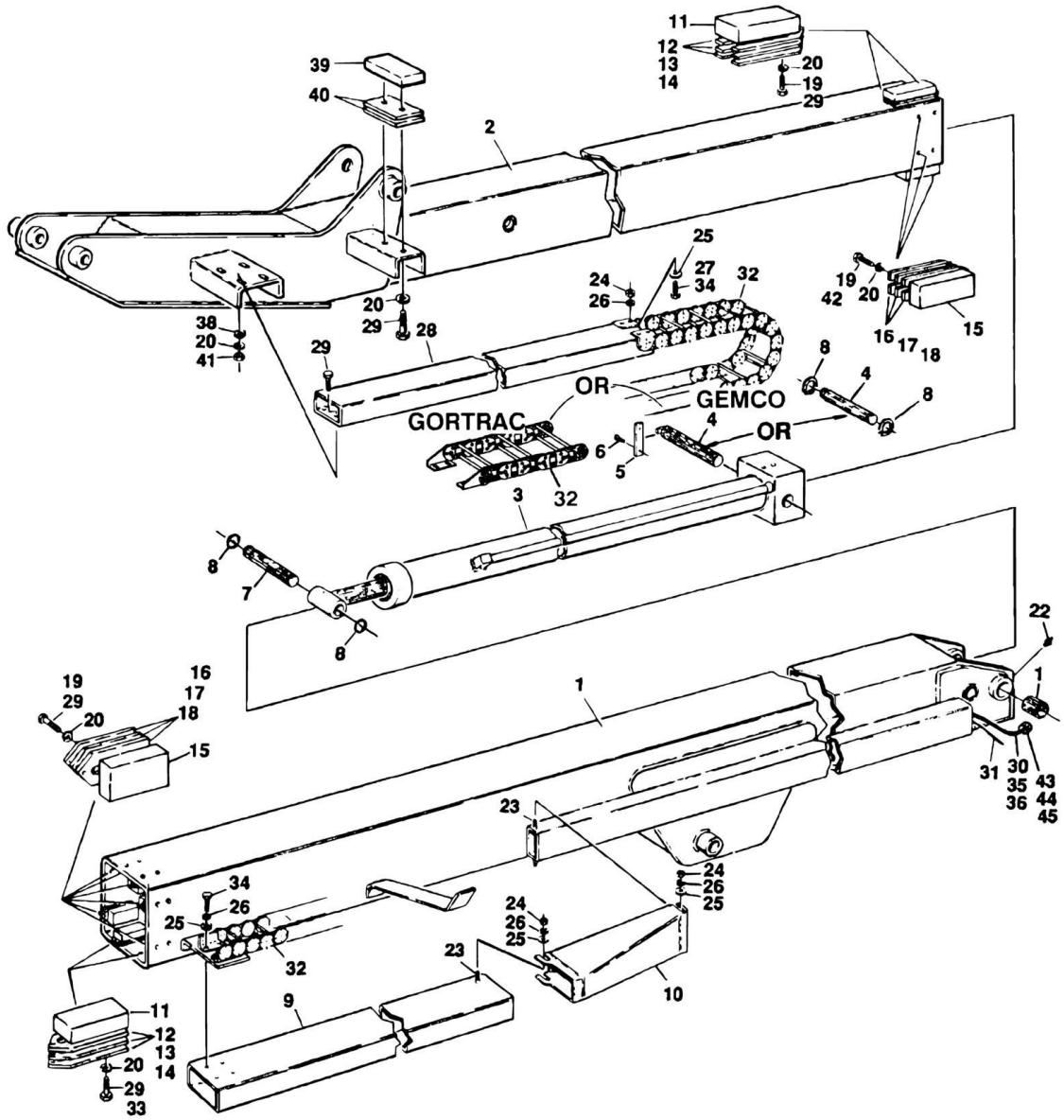


FIGURE 3-2. MAIN BOOM ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0800572	Ref	MAIN BOOM ASSEMBLY	13
1	0800573	1	Base Weldment	
1	0961597	2	Bushing, Pivot	
2	0800714	1	Fly Weldment Options:	
3	1682492	1	Telescope Cylinder Assembly Options (See CYLINDER SECTION for Breakdown):	
4		Ref	Pin, Attach Options:	
4	3421493	1	Pin, Attach (Prior to February 1992)	
4	3421771	1	Pin, Attach (February 1992 to Present)	
5	3532054	1	Plate, Retainer (Machines Built Prior to February 1992 Only)	
6	0641506	2	Bolt 5/16in-18NC x 3/4in (Machines Built Prior to February 1992 Only)	
7	3421492	1	Pin, Attach	
8	3760133	AR	Ring, Retaining	
9	4843076	1	Tube, Hose	
10	1670576	1	Cover, Hose	
11	3340473	4	Pad, Wear	
12	4070676	AR	Shim - 1/8in	
13	4070677	AR	Shim - 1/16in	
14	4070678	AR	Shim - 1/32in	
15	3340552	12	Pad, Wear	
16	4070670	AR	Shim - 1/32in	
17	4070671	AR	Shim - 1/16in	
18	4070672	AR	Shim - 1/8in	
19	0641607	16	Bolt 3/8in-16NC x 7/8in	
20	4761600	46	Lockwasher 3/8in	
22	2160007	2	Fitting, Grease	
23	4300031	4	Stud (Welded on Part)	
24	3311405	8	Locknut 1/4in-20NC	
25	4751400	16	Flatwasher 1/4in	
26	4761400	16	Lockwasher 1/4in	
27	0641406	4	Bolt 1/4in-20NC x 3/4in (Prior to May 1988 Only)	
28	4843068	1	Cover, Hose	
29	0641608	22	Bolt 3/8in-16NC x 1in	
30	1060516	70 ft/21.4m	Cable, Ground - 16/30 (was p/n 1060229)	
31	4921063	1	Harness - 110 Volt	
32		Ref	Carrier Options:	
		Ref	Note: Original Equipment Power Track may have been replaced with a Service Replacement. Visually identify the power track before ordering parts.	
32		Ref	Power Track Repair Components	
32	1180179	1	Gemco Replacement Parts	
32	7006187	AR	Powertrack - One Foot Section	
32	7006151	2 Pair	Mounting Feet	
32	7006152	AR	Pin Kit (Includes 1 pin, 1 Retaining Ring & 4 Washers)	
32		Ref	Gortrac Replacement Parts	
32	1001119695	1	Gortrac Replacement Parts	
32	70003153	AR	Powertrack - 1 Section Repair Kit	
32	70003154	2 Pair	Power Track - Bracket Kit	
33	0641609	6	Bolt 3/8in-16NC x 1 1/8in	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
34	0641405	8	Bolt 1/4in-20NC x 5/8in	
35	1060018	40 ft/12.2m	Cable, Electrical - 16/10	
36	1060515	70 ft/21.4m	Cable, Electrical - 12/4 (was p/n 1060012)	
38	4751600	12	Flatwasher 3/8in	
39	0560923	1	Block	
40	4070559	AR	Shim	
41	3311605	8	Locknut 3/8in-16NC	
42	0641606	4	Bolt 3/8in-16NC x 3/4in	
43	4460052	1	Connector	
44	3300047	1	Nut, Conduit	
45	0960239	1	Bushing	
	0100019	AR	Loctite #271	
	0253425	Ref	LIMIT SWITCH INSTALLATION - 1/2 METER DRIVE CUTOUT (ITALIAN SPEC) (NOT SHOWN)	3-A
	4360277	1	Switch, Limit	
	4360236	1	Head, Switch	
	4360278	1	Roller and Arm Assembly	
	4460052	1	Connector, Strain Relief	
	0362186	1	Cam, Bar (Prior to SN 30078)	
	0362612	1	Cam, Bar (SN 30078 to Present)	
	1060300	45 ft/13.7m	Cable, Electrical - 16/3	

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FIGURE 3-3. TOWER BOOM ASSEMBLIES

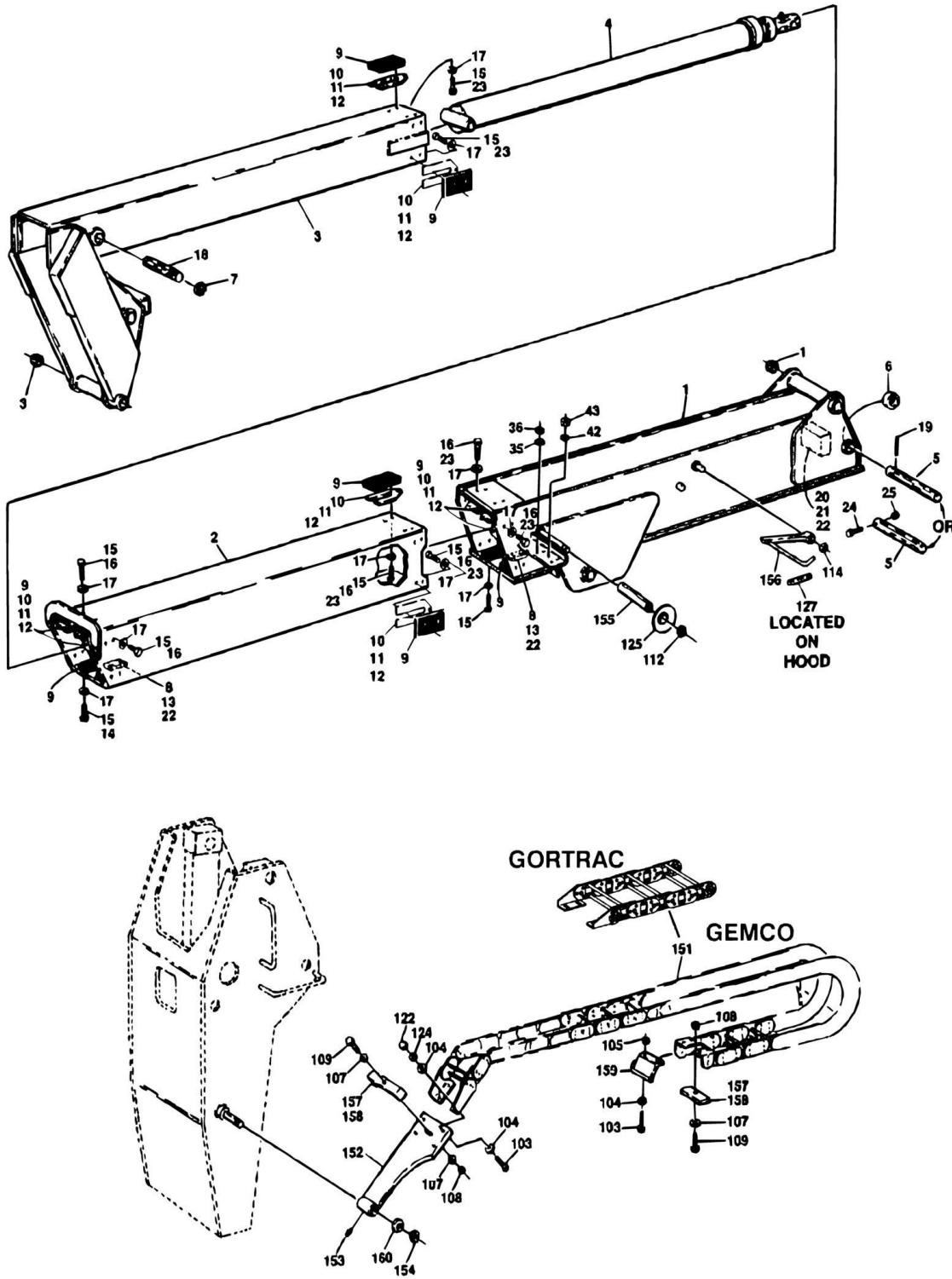


FIGURE 3-3. TOWER BOOM ASSEMBLIES

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0800567	Ref	TOWER BOOM ASSEMBLY	F
1	0800566	1	Base Weldment	
1	0961029	2	Bushing, Bronze	
2	0800532	1	Mid Weldment	
3	0800701	1	Fly Weldment	
3	0961029	2	Bushing, Bronze	
4	1681980	1	Telescope Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
5	3421991	1	Pin, Attach (Lower)	
6	0961268	2	Bushing, Spacer	
7	3760255	2	Ring, Retaining	
8	3531908	2	Plate, Stop	
9	3340550	32	Pad, Wear	
10	4070670	AR	Shim 1/32in	
11	4070854	AR	Shim 5/64in	
12	4070855	AR	Shim 1/8in	
13	0641807	4	Bolt 1/2in-13NC x 7/8in	
14	0100019	AR	Loctite #271 (Not Shown)	
15	0641607	32	Bolt 3/8in-16NC x 7/8in	
16	0641608	16	Bolt 3/8in-16NC x 1in	
17	4761600	64	Lockwasher 3/8in	
18	3421992	1	Pin, Attach (Upper)	
19	3421475	1	Pin, Grooved (Machines Built Prior to October 1991)	
20	0361645	1	Bar, Stop	
21	0641812	2	Bolt 1/2in-13NC x 1 1/2in	
22	4761800	6	Lockwasher 1/2in	
23	0641609	16	Bolt 3/8in-16NC x 1 1/8in	
24	0641522	1	Bolt 5/16in-18NC x 2 3/4in (Machines Built October 1991 to Present)	
25	3311505	1	Locknut 5/16in-18NC (Machines Built October 1991 to Present)	
	0251524	Ref	LOWER CARRIER INSTALLATION	B
103	0641408	4	Bolt 1/4in-20NC x 1in	
104	4751400	16	Flatwasher 1/4in	
105	3311405	4	Locknut 1/4in-20NC	
107	4751600	6	Flatwasher 3/8in	
108	3311605	4	Locknut 3/8in-16NC	
109	0641616	2	Bolt 3/8in-16NC x 2in	
112	3760254	1	Ring, Retainer	
114	3300246	1	Nut, Push 1/2in	
122	3300151	4	Nut, Acorn 1/4in-20NC	
123	0630407	4	Screw, Cap Button 1/4in-20NC x 5/8in	
124	4761400	4	Lockwasher 1/4in	
125	1760131	1	Disc	
126	0741408	2	Screw, Machine 1/4in-20NC x 1in	
151		Ref	Carrier Options:	
		Ref	Note: Original Equipment Power Track may have been replaced with a Service Replacement. Visually identify the power track before ordering parts.	
151		Ref	Power Track Repair Components	
151	1180178	1	Gemco Replacement Parts	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
151	7006139	AR	Powertrack - One Foot Section	
151	7006151	2 Pair	Mounting Feet	
151	7006152	AR	Pin Kit (Includes 1 pin, 1 Retaining Ring & 4 Washers)	
151	1001119694	1	Gortrac Replacement Parts	
151	70003151	AR	Powertrack - 1 Section Repair Kit	
151	70003152	2 Pair	Power Track - Bracket Kit	
152	4843803	1	Plate, Mounting	
153	2160006	1	Fitting, Grease	
154	3760140	1	Ring, Retaining	
155	4564034	1	Roller, Tube	
156	4843071	1	Bracket	
157	1320152	2	Hose, Clamp	
158	2820031	18 in/46cm	Shrink, Heat	
159	4843075	1	Shield, Hose	
160	4740067	1	Washer, Thrust	

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FIGURE 3-4. BOOM WIPERS INSTALLATION

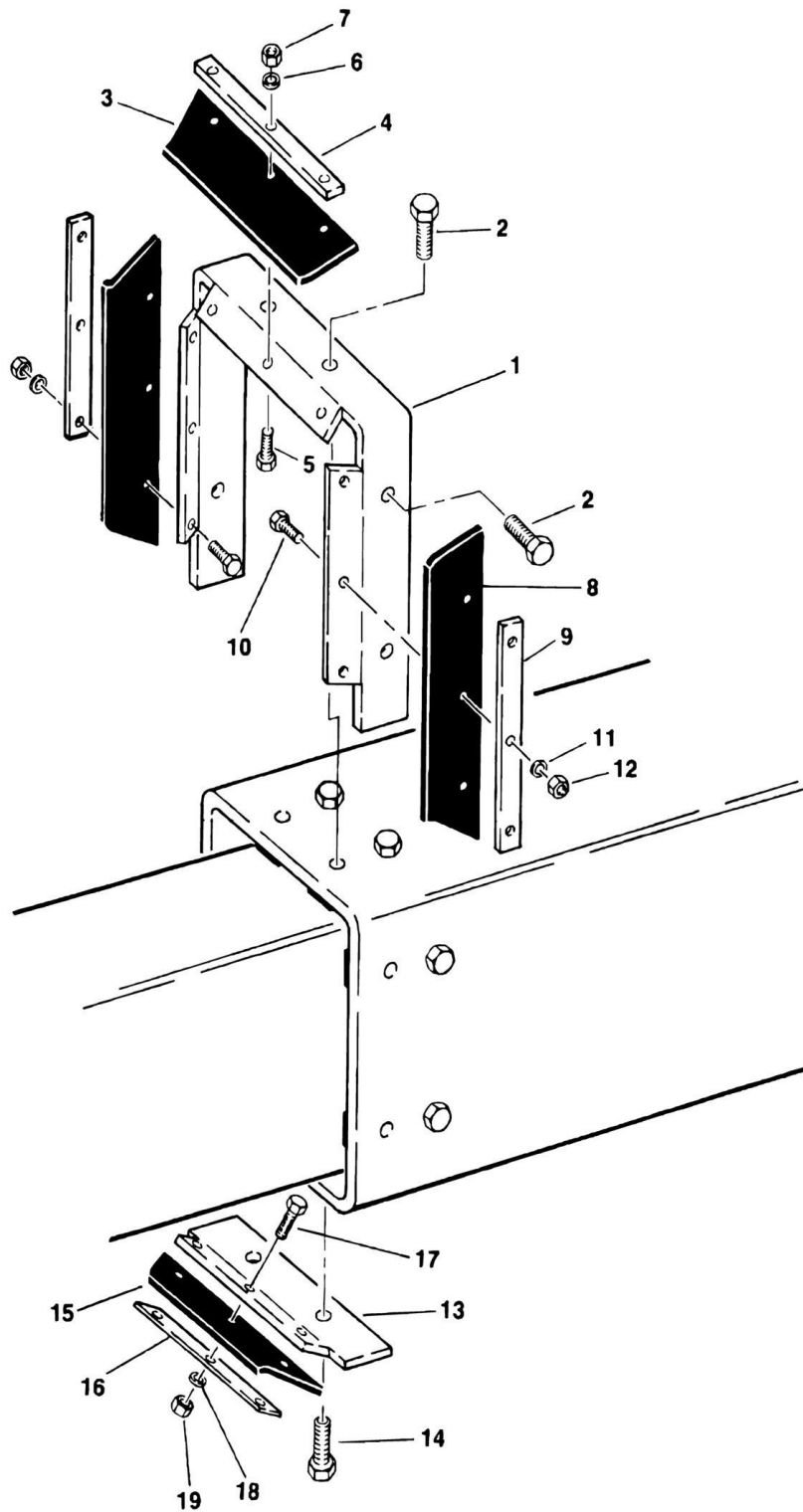


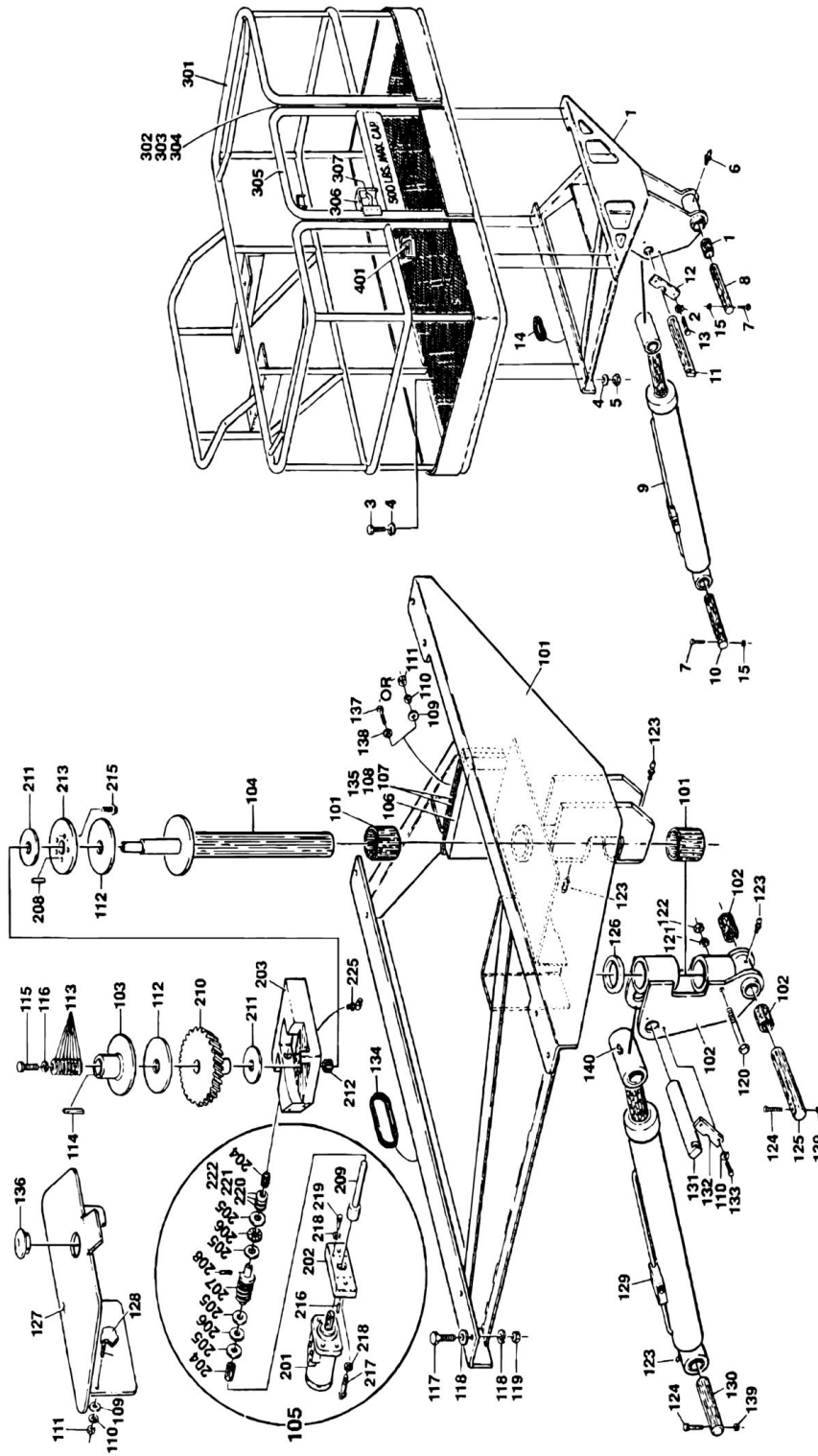
FIGURE 3-4. BOOM WIPERS INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0238888	Ref	BOOM WIPERS INSTALLATION	B
1	2660065	1	Holder, Boom Wiper (Top and Side)	
2	0641608	6	Bolt 3/8in-16NC x 1in (Replaces Standard Wear Pad Bolts)	
3	0540070	1	Blade, Wiper (Top)	
4	4280188	1	Retainer	
5	0641407	3	Bolt 1/4in-20NC x 7/8in	
6	4761400	3	Lockwasher 1/4in	
7	3311401	3	Nut 1/4in-20NC	
8	0540071	2	Blade, Wiper (Side)	
9	4280260	1	Retainer	
10	0641407	3	Bolt 1/4in-20NC x 7/8in	
11	4761400	3	Lockwasher 1/4in	
12	3311401	3	Nut 1/4in-20NC	
13	2660066	1	Holder, Boom Wiper (Bottom)	
14	0641610	2	Bolt 3/8in-16NC x 1 1/4in (Replaces Standard Wear Pad Bolts)	
15	0540072	1	Blade, Wiper (Bottom)	
16	4280188	1	Retainer	
17	0641407	3	Bolt 1/4in-20NC x 7/8in	
18	4761400	3	Lockwasher 1/4in	
19	3311401	3	Nut 1/4in-20NC	

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FIGURE 4-1. STANDARD PLATFORM AND FOOTSWITCH INSTALLATION



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FIGURE 4-1. STANDARD PLATFORM AND FOOTSWITCH INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0238727	Ref	FIXED SUPPORT INSTALLATION	6
1	4842978	1	Support Weldment	
1	0961257	2	Bushing, Bronze	
2	4761500	2	Lockwasher 5/16in	
3	0681610	8	Bolt 3/8in-16NC x 1 1/4in (Grade 8)	
4	4751600	16	Flatwasher 3/8in	
5	3300143	8	Locknut 3/8in-16NC	
6	2160002	1	Fitting, Grease	
7	0641522	2	Bolt 5/16in-18NC x 2 3/4in	
8	3421490	1	Pin, Nose	
9		Ref	Platform Level Cylinder Assembly (See CYLINDER SECTION for Breakdown)	
9	1681866	1	Platform Level Cylinder Assembly (Prior to January 1990)	
9	1682178	1	Platform Level Cylinder Assembly (January 1990 to October 1992)	
9	1682793	1	Platform Level Cylinder Assembly (October 1992 to SN 33104) (TUV Style)	
9	1683526	1	Platform Level Cylinder Assembly (TUV Style) (SN 33105 to Present)	
10	3421491	1	Pin, Attach (Lower)	
11	3421494	1	Pin, Attach (Upper)	
12	3532054	1	Plate, Retainer	
13	0641506	2	Bolt 5/16in-18NC x 3/4in	
14	4060804	10	Shield, Hose	
		in/26cm		
15	3311505	2	Locknut 5/16in-18NC	
	0238568	Ref	ROTATING SUPPORT INSTALLATION	14
101	4843636	1	Support Weldment	
101	0961259	2	Bushing, Bronze	
102		Ref	Pivot Attach Weldment Options:	
102	0238540	1	Pivot Attach Weldment (Prior to October 1992)	
102	0253730	1	Pivot Attach Weldment (October 1992 to Present) (TUV Style Cylinders)	
102	0961257	2	Bushing, Bronze	
103	1120299	1	Cap	
104	4842915	1	Shaft Weldment	
105	0235238	1	Rotator Assembly (See Item 201-225 for Breakdown)	
106	0361675	1	Block, Stop	
107	4070705	AR	Shim 1/8in	
108	4070706	AR	Shim 1/16in	
109	4751500	2	Flatwasher 5/16in	
110	4761500	4	Lockwasher 5/16in	
111	3311501	2	Nut 5/16in-18NC	
112	3340454	2	Pad, Brake	
113	4160026	8	Washer, Bellville	
114	2880404	1	Key, Square	
115	0652014	1	Bolt 5/8in-18NF x 1 3/4in	
116	4752000	1	Flatwasher 5/8in	
117	0681610	8	Bolt 3/8in-16NC x 1 1/4in	
118	4751600	16	Flatwasher 3/8in	
119	3300143	8	Locknut 3/8in-16NC	

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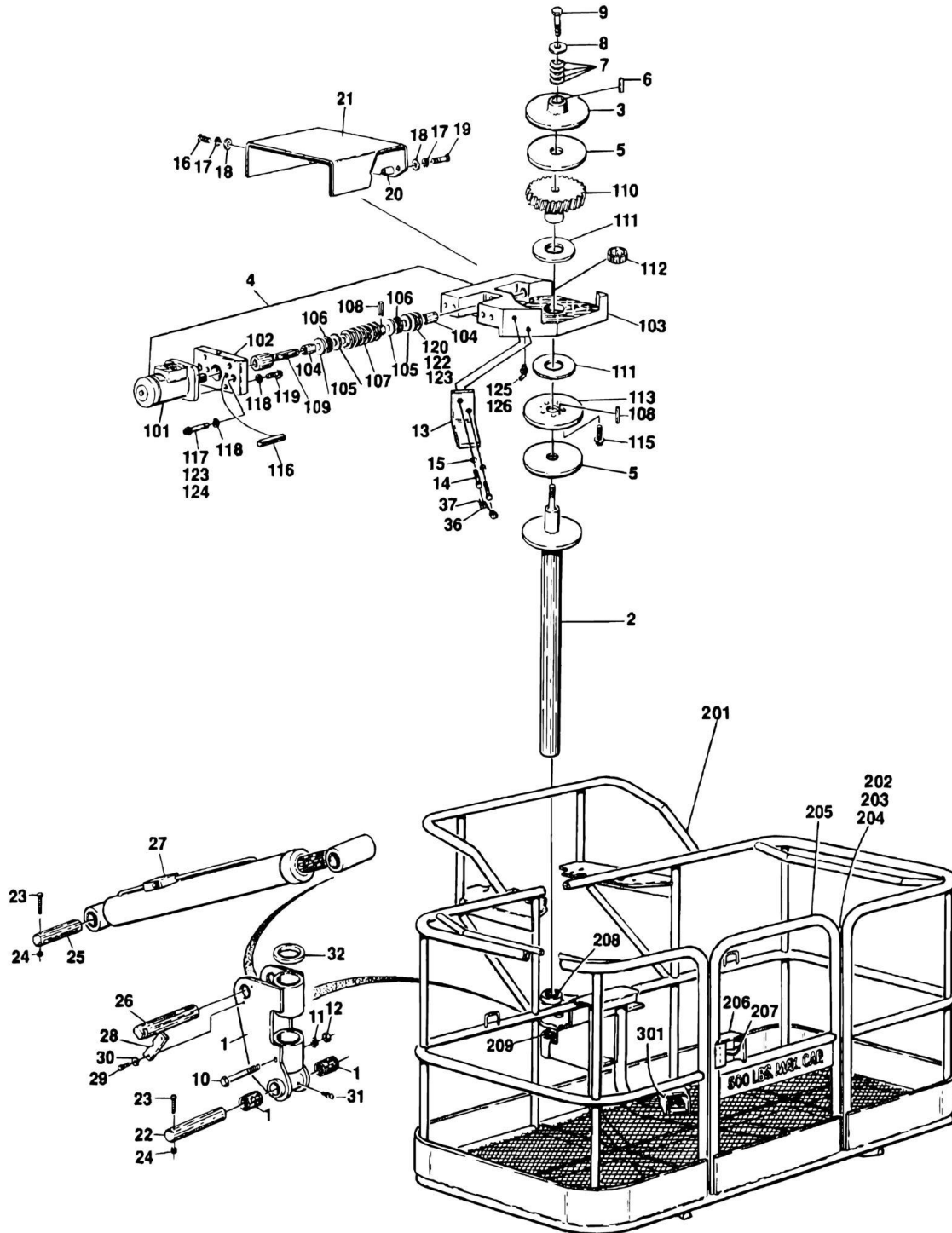
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
120	0641836	1	Bolt 1/2in-13NC x 4 1/2in	
121	4751800	1	Flatwasher 1/2in	
122	3311805	1	Locknut 1/2in-13NC	
123	2160002	4	Fitting, Grease	
124	0641522	2	Bolt 5/16in-18NC x 2 3/4in	
125	3421490	1	Pin, Attach	
126	4740158	1	Washer, Thrust	
127	1670451	1	Cover, Rotator	
128	4300038	2	Stud (Welded on Part)	
129		Ref	Platform Level Cylinder Assembly Options (See CYLINDER SECTION for Breakdown)	
129	1682178	1	Platform Level Cylinder Assembly (Prior to October 1992)	
129	1682793	1	Platform Level Cylinder Assembly (October 1992 to SN 33104) (TUV Style)	
129	1683526	1	Platform Level Cylinder Assembly (TUV Style) (SN 33105 to Present)	
130	3421491	1	Pin, Attach (Lower)	
131	3421494	1	Pin, Attach (Upper)	
132	3532054	1	Plate, Retainer	
133	0641506	2	Bolt 5/16in-18NC x 3/4in	
134	4060804	10	Shield, Hose (1/2in Flexguard)	
		in/26cm		
135	4070707	AR	Shim 1/32in	
136	3520035	1	Plug	
137	0641816	2	Bolt 1/2in-13NC x 2in	
138	4761800	2	Lockwasher 1/2in	
139	3311505	2	Locknut 5/16in-18NC	
140	2160001	1	Fitting, Grease	
	0235238	Ref	ROTATOR ASSEMBLY	E
		Ref	Note: For Machines Built Prior to September 1991 refer to Service Information Bulletin #91-5 for required upgrade.	
201	3160083	1	Rotator Motor Assy (See ROTATOR MOTOR ASSEMBLY for Breakdown)	
202	0080099	1	Adapter, Motor	
203	2760064	1	Housing, Gear	
204	0440134	2	Bearing, Sleeve	
205	4740199	4	Washer, Thrust	
206	0440120	2	Bearing, Thrust	
207	2440043	1	Gear, Worm	
208	3440816	4	Rollpin 1/4in x 1in	
209	0080098	1	Adapter, Motor to Worm Gear	
210	2440044	1	Gear, Worm	
211	4740256	2	Washer, Thrust	
212	0440135	1	Bearing, Sleeve	
213	1760068	1	Disc, Brake	
215	3931010	5	Bolt, Socket Head #10-24NC x 5/8in	
216	3441228	2	Rollpin 3/8in x 1 3/4in	
217	3931620	2	Bolt, Socket Head 3/8in-16NC x 1 1/4in	
218	4761600	6	Lockwasher 3/8in	
219	3931612	4	Bolt, Socket Head 3/8in-16NC x 3/4in	
220	4070585	AR	Shim .010	
221	4070586	AR	Shim .005	
222	4070587	AR	Shim .002	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
223	0100019	AR	Loctite #271 (Not Shown)	
224	0100021	AR	Primer (Not Shown)	
225	2160001	1	Fitting, Grease - 90	
226	3020025	AR	Grease (Not Shown)	
		Ref	PLATFORM WELDMENTS	
		Ref	Note: Replacement Decals Must Be Ordered Separately - See DECALS SECTION.	
301		Ref	Standard Platform Options:	
301	3510308	1	76cm x 122cm Platform	
301	3510309	1	76cm x 152.4cm Platform	
301	3510310	1	76cm x 183cm Platform	
		Ref	Standard Platform Components	
302	2600143	2	Pin, Hinge	
303	3311805	2	Locknut 1/2in-13NC	
304	2160006	2	Fitting, Grease	
305		Ref	Door Weldment Options:	
305	1780224	1	Door Weldment (Prior to October 1990)	
305	1780250	1	Door Weldment (October 1990 to Present)	
306	2940006	1	Latch, Door	
307	2560010	1	Handle	
	0237963	Ref	FOOTSWITCH INSTALLATION	F
401	0641408	3	Bolt 1/4in-20NC x 1in	
401	3311405	3	Locknut 1/4in-20NC	
401	4740362	3	Washer, Fender	
401	4360031	1	Footswitch	
401	7000625	2	Block, Contact	
401	4460071	1	Connector, Strain Relief	

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FIGURE 4-2. LOW MOUNT PLATFORM AND FOOTSWITCH INSTALLATIONS



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FIGURE 4-2. LOW MOUNT PLATFORM AND FOOTSWITCH INSTALLATIONS

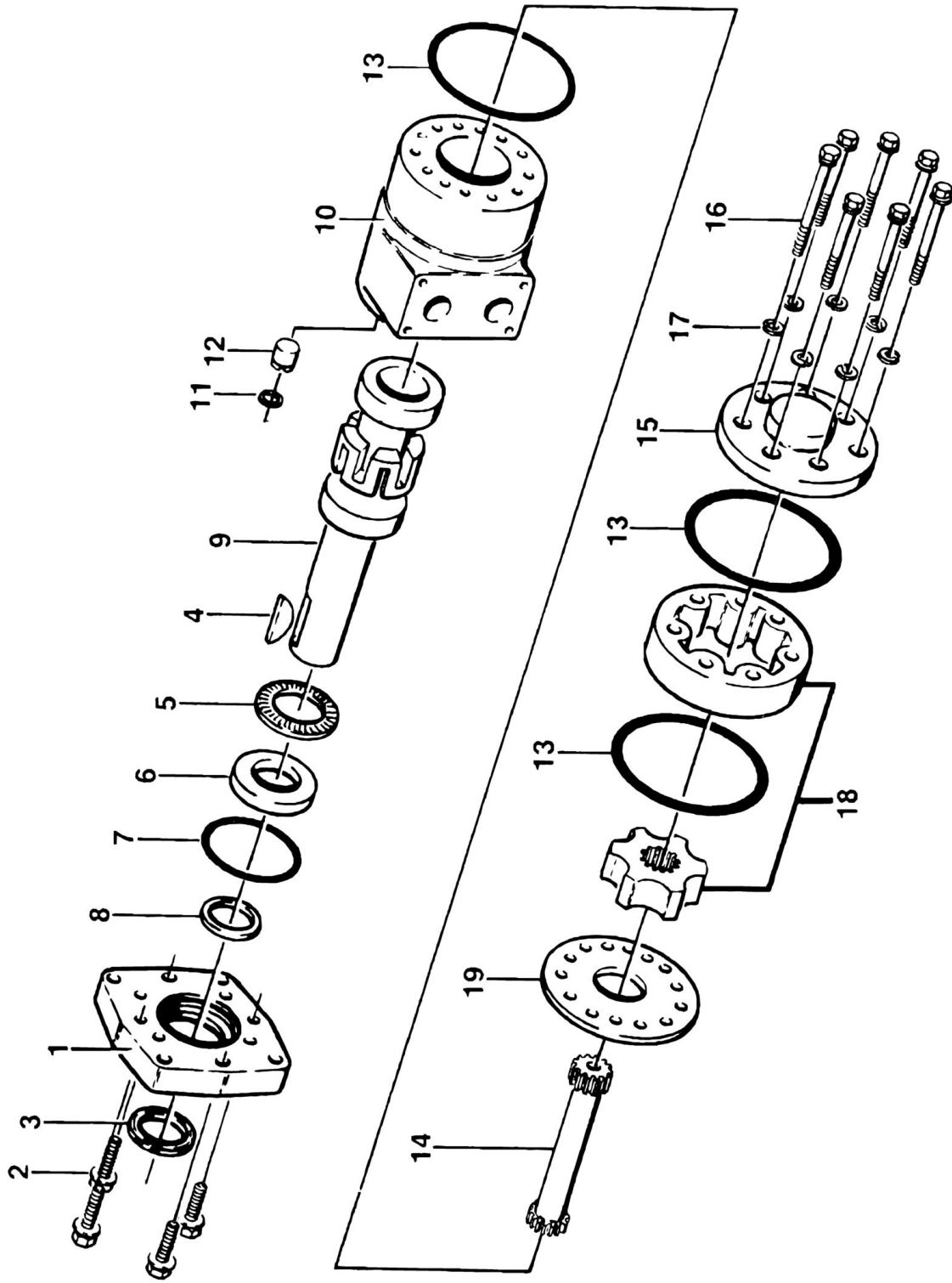
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	SUPPORT INSTALLATION	
	0250593	Ref	With Rotating Platform	9
	0251252	Ref	With Fixed Platform (Not Shown)	B
1	0238540	1	Pivot Attach Weldment	
1	0961257	2	Bushing, Bronze	
2		Ref	Shaft Weldment Options:	
2	4040215	1	With Rotating Platform	
2	4564579	1	With Fixed Platform	
3	1120299	1	Cap (Rotating Platform Only)	
4	0235238	1	Rotator Assembly (See Item 101-126 for Breakdown) (Rotating Platform Only)	
5	3340454	2	Pad, Brake (Rotating Platform Only)	
6	2880404	1	Key (Rotating Platform Only)	
7	4160026	8	Washer, Belleville (Rotating Platform Only)	
8	4752000	1	Flatwasher 5/8in (Rotating Platform Only)	
9	0652014	1	Bolt 5/8in-18NF x 1 3/4in (Rotating Platform Only)	
10	0641836	1	Bolt 1/2in-13NC x 4 1/2in	
11	4751800	3	Flatwasher 1/2in	
12	3311805	1	Locknut 1/2in-13NC	
13	0901756	1	Bracket (Rotating Platform Only)	
14	0641811	2	Bolt 1/2in-13NC x 1 3/8in (Rotating Platform Only)	
15	4761800	2	Lockwasher 1/2in (Rotating Platform Only)	
16	0641404	1	Bolt 1/4in-20NC x 1/2in (Rotating Platform Only)	
17	4761400	2	Lockwasher 1/4in (Rotating Platform Only)	
18	4751400	2	Flatwasher 1/4in (Rotating Platform Only)	
19	0641408	1	Bolt 1/4in-20NC x 1in (Rotating Platform Only)	
20	4562083	1	Tube, Spacer (Rotating Platform Only)	
21	1670630	1	Cover (Rotating Platform Only)	
22	3421490	1	Pin, Nose	
23	0641522	2	Bolt 5/16in-18NC x 2 3/4in	
24	3311505	2	Locknut 5/16in-18NC	
25	3421491	1	Pin, Attach (Lower)	
26	3421494	1	Pin, Attach (Upper)	
27		Ref	Platform Level Cylinder Assy (See CYLINDER SECTION for Breakdown)	
27	1682178	1	Platform Level Cylinder Assy (Prior to October 1992)	
27	1682793	1	Platform Level Cylinder Assy (October 1992 to SN 33104) (TUV Style)	
27	1683526	1	Platform Level Cylinder Assy (TUV Style) (SN 33105 to Present)	
28	3532054	1	Plate, Retainer	
29	0641506	2	Bolt 5/16in-18NC x 3/4in	
30	4761500	2	Lockwasher 5/16in	
31	2160002	3	Fitting, Grease	
32	4740158	1	Washer, Thrust	
33	4220137	2	Bar, Stop (Fixed Platform Only)	
34	1320160	1	Clamp (Fixed Platform Only) (Not Shown)	
35	3520035	1	Plug (Fixed Platform Only)	
36	1380137	1	Clip Retainer (Rotating Platform Only)	
37	4920986	1 ft/.3m	Wire, Mechanics (Rotating Platform Only)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0235238	Ref	ROTATOR ASSEMBLY:	E
		Ref	Note: For Machines Built Prior to September 1991 refer to Service Information Bulletin #91-5 for required upgrade.	
101	3160083	1	Rotator Motor Assy (See ROTATOR MOTOR ASSEMBLY for Breakdown)	
102	0080099	1	Adapter, Motor	
103	2760064	1	Housing, Gear	
104	0440134	2	Bearing, Sleeve	
105	4740199	4	Washer, Thrust	
106	0440120	2	Bearing, Thrust	
107	2440043	1	Gear, Worm	
108	3440816	4	Rollpin 1/4in x 1in	
109	0080098	1	Adapter, Motor to Worm Gear	
110	2440044	1	Gear, Worm	
111	4740256	2	Washer, Thrust	
112	0440135	1	Bearing, Sleeve	
113	1760068	1	Disc, Brake	
115	3931010	5	Bolt, Socket Head #10-24NC x 5/8in	
116	3441228	2	Rollpin 3/8in x 1 3/4in	
117	3931620	2	Bolt, Socket Head 3/8in-16NC x 1 1/4in	
118	4761600	6	Lockwasher 3/8in	
119	3931612	4	Bolt, Socket Head 3/8in-16NC x 3/4in	
120	4070585	AR	Shim .010	
121	4070586	AR	Shim .005	
122	4070587	AR	Shim .002	
123	0100019	AR	Loctite #271	
124	0100021	AR	Primer	
125	2160001	1	Fitting, Grease - 90	
126	3020025	AR	Grease	
		Ref	PLATFORM WELDMENTS	
		Ref	Note: Replacement Decals Must Be Ordered Separately - See DECALS SECTION.	
201		Ref	Low Mount Platform Options:	
201	3510376	1	76cm x 122cm Platform	
201	3510377	1	76cm x 152.4cm Platform	
201	3510378	1	76cm x 183cm Platform	
		Ref	Standard Platform Components	
202	2600143	2	Pin, Hinge	
203	3311805	2	Locknut 1/2in-13NC	
204	2160006	2	Fitting, Grease	
205	1780254	1	Door Weldment	
206	2940006	1	Latch, Door	
207	2560010	1	Handle	
208	0961450	1	Bushing, Bronze (Top)	
209	0961259	1	Bushing, Bronze (Bottom)	
	0237963	Ref	FOOTSWITCH INSTALLATION	F
301	0641408	3	Bolt 1/4in-20NC x 1in	
301	3311405	3	Locknut 1/4in-20NC	
301	4740362	3	Washer, Fender 1/4in	
301	4360031	1	Footswitch	
301	7000625	2	Block, Contact	
301	4460071	1	Connector, Strain Relief	

SECTION 4 - PLATFORM

FIGURE 4-3. ROTATOR MOTOR ASSEMBLY



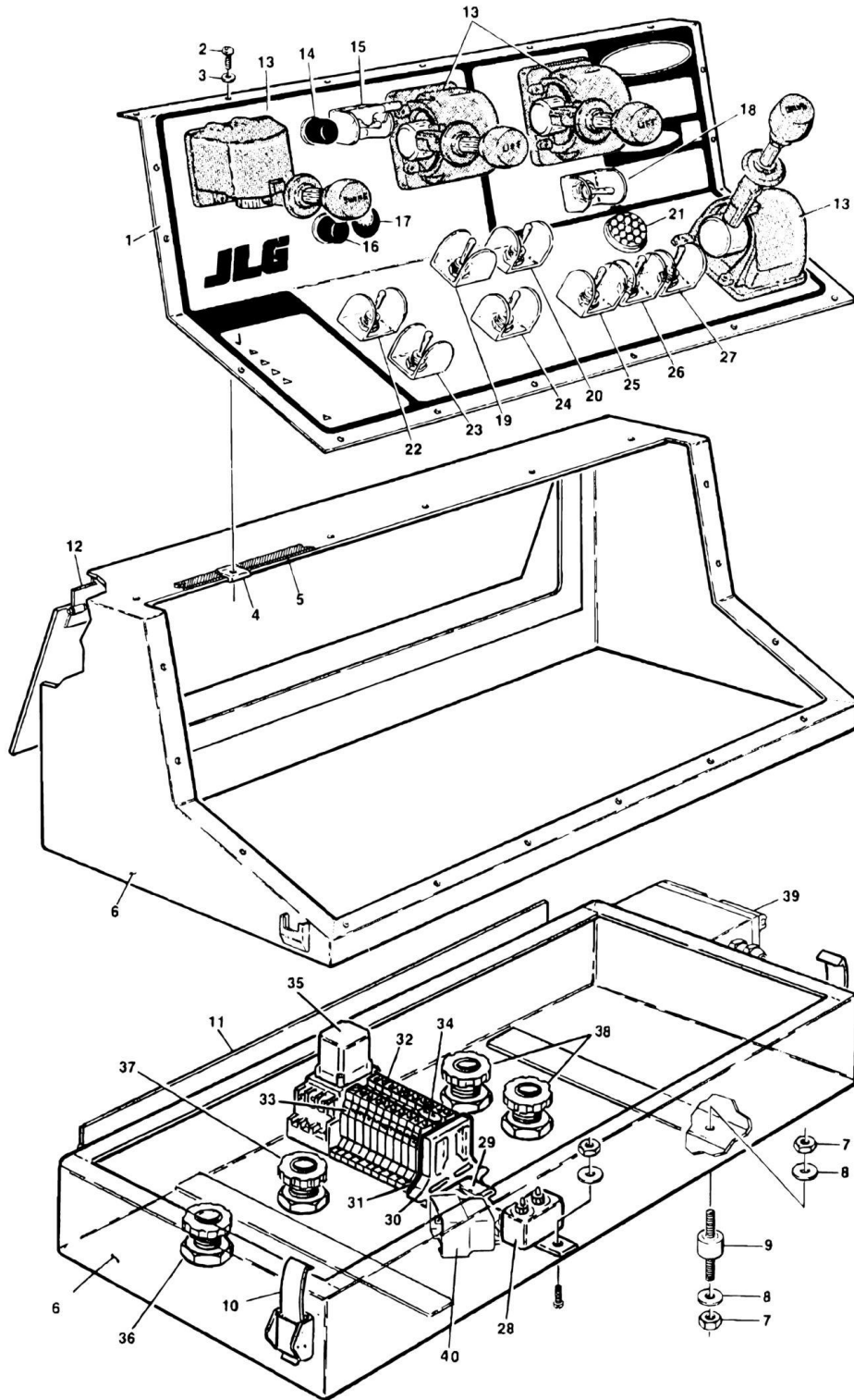
SECTION 4 - PLATFORM

FIGURE 4-3. ROTATOR MOTOR ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3160083	Ref	ROTATOR MOTOR ASSEMBLY	A
1	7002105	1	Flange, Mounting	
2	7002123	4	Screw, Cap	
3	Kit	1	Seal, Dust	
4	7002104	1	Key, Woodruff	
5	7002111	1	Bearing, Thrust Needle	
6	7002117	1	Thrust, Bearing Race	
7	Kit	1	Seal, O-Ring	
8	Kit	1	Seal, Pressure	
9	7002116	1	Shaft, Output	
10	7002103	1	Housing	
11	Kit	1	Seal	
12	7009992	1	Plug, Housing	
13	Kit	3	Seal, O-Ring	
14	7002112	1	Drive	
15	7002107	1	Cap, End	
16	7002100	7	Screw, Cap	
17	7000166	7	Lockwasher	
18	7002125	1	Gerotor Sub-Assembly	
19	7002110	1	Plate, Spacer	
		Ref	Seal Kit Options (Includes Items 3, 7, 8, 11 & 13):	
	2900455	1	Rotator P/N 1011009007	
	2900733	1	Rotator P/N's 1011009008 & 1011009009	
		Ref	Note: Identify by P/N stamped on nameplate located on Item 10.	

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FIGURE 4-4. CONSOLE BOX ASSEMBLY (ELECTRIC MACHINES)



SECTION 4 - PLATFORM

FIGURE 4-4. CONSOLE BOX ASSEMBLY (ELECTRIC MACHINES)

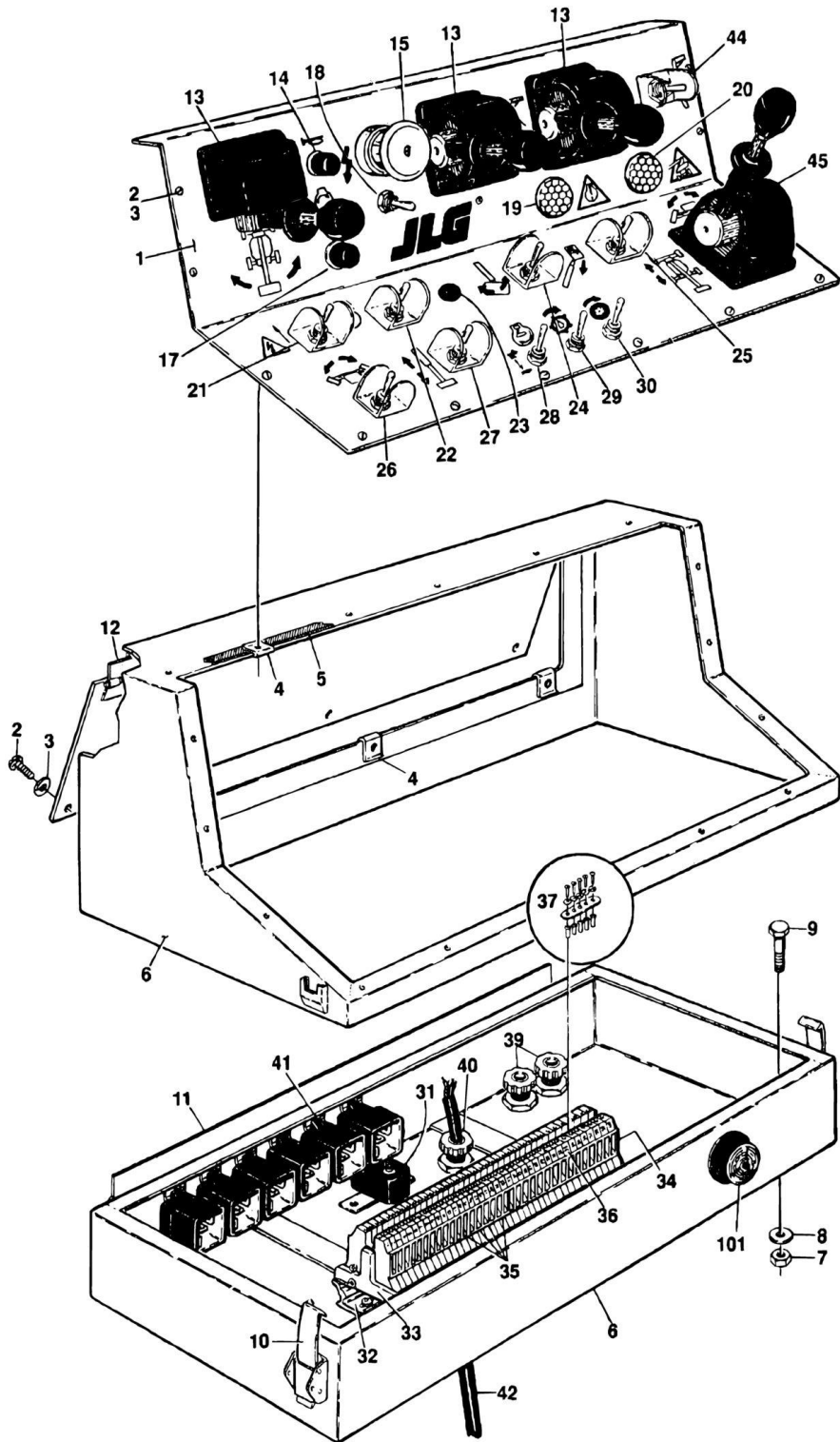
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONSOLE BOX ASSEMBLY - PQ CONTROLLERS AND VICKERS VALVES	
	0250607	Ref	All Electric Machines Built To Present	E
	0254439	Ref	Receptacle Installation	2
1		Ref	Lid Options:	
1	3251894	1	Lid (Prior to May 1994)	
1	3252392	1	Lid (May 1994 to Present)	
2	0751006	18	Screw, Pan Head #10-24NC x 3/4in	
3	4740120	18	Washer, Nylon	
4	3300177	18	Nut, Tinnerman	
5	4420038	3 1/4 ft	Tape, Insulation	
5	0100001	AR	Adhesive	
6	0860538	1	Box, Control Includes Items 10-12	
7	3311505	AR	Nut 5/16in-18NC	
8	4751500	8	Flatwasher 5/16in	
9	4320002	AR	Stud, Mounting	
9	0641508	AR	Bolt 5/16in-18NC x 1in	
10	2940052	2	Latch	
11	2600132	1	Hinge (Top to Bottom)	
12	2600105	1	Hinge (Access Door)	
13	1600094	4	Controller, PQ (Note: Refer to JLG Manual 3120351 for more information)	
13	7003737	4	Electrical Assembly	
14	4360274	1	Switch, Push Button (Horn)	
14	3790015	1	O-Ring	
15	4360199	1	Switch, Toggle (Ignition)	
15	3790012	1	O-Ring	
15	4360141	1	Guard, Switch	
16	4360274	1	Switch, Push Button (Start) (Gas, Diesel and Dual Fuel Only)	
16	3790015	1	O-Ring	
16	3520026	1	Plug, Hole (Electric)	
17	3520026	1	Plug, Hole	
18	4360202	1	Switch, Toggle (Tower Tele)	
18	4060229	1	Shield	
18	3790012	1	O-Ring	
19	4360202	1	Switch, Toggle (Rotate)	
19	4060229	1	Shield	
19	3790012	1	O-Ring	
20	4360202	1	Switch, Toggle (Level)	
20	4060229	1	Shield	
20	3790012	1	O-Ring	
21	2920015	1	Lamp (Chassis Out of Level)	
22		Ref	Switch, Toggle Options (Auxiliary Power):	
22	4360200	1	Switch, Toggle (Prior to October 1991)	
22	4360229	1	Switch, Toggle (October 1991 to Present)	
22	4060229	1	Shield	
22	3790012	1	O-Ring	
23	4360202	1	Switch, Toggle (Steer)	
23	4060229	1	Shield	
23	3790012	1	O-Ring	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
24	4360202	1	Switch, Toggle (Main Tele)	
24	4060229	1	Shield	
24	3790012	1	O-Ring	
25	4360199	1	Switch, Toggle (High Engine) (Gas, Diesel and Dual Fuel Only)	
25	3790012	1	O-Ring	
26	4360199	1	Switch, Toggle (Pump Volume)	
26	3790012	1	O-Ring	
27	4360199	1	Switch, Toggle (Wheel Motor Speed)	
27	3790012	1	O-Ring	
28	4360209	1	Breaker, Circuit - 20 Amp	
28	3910608	1	Screw #6-32NC x 1/2in	
28	4750600	1	Flatwasher #6	
28	4760600	1	Lockwasher #6	
28	3310601	1	Nut #6-32NC	
29	3640555	1	Rail, Mounting	
29	3910608	2	Screw, Round Head #6-32NC x 1/2in	
29	4750600	2	Flatwasher #6	
29	4760600	2	Lockwasher #6	
29	3310601	2	Nut #6-32NC	
30	4460299	2	Stop, Terminal Strip	
31	4460300	1	Barrier, Terminal End	
32	4460298	10	Block, Terminal	
33	4460301	1	Strip, Marking	
34	4460309	1	Bar, Buss	
34	4460305	3	Screw, Terminal Block	
34	4460306	3	Washer, Terminal Block	
34	4460307	3	Sleeve, Terminal Block	
35	3440058	1	Relay	
35	4120013	1	Socket, Relay	
35	3740063	1	Spring	
36	4460052	1	Connector	
36	0960239	1	Bushing	
36	3300047	1	Nut	
37	4460051	1	Connector	
37	0960238	1	Bushing	
37	3300048	1	Nut	
38	4460052	2	Connector	
38	0960238	2	Bushing	
38	3300048	2	Nut	
39	0860038	1	Box, Receptacle	
39	Not Available	1	Receptacle	
39	3900294	4	Screw, Self-Tapping #10-16NC x 1in	
39	4761000	4	Lockwasher #10	
39	Not Available	1	Shield, Weatherproof	
39	1060514	70 ft/21.3m	Cable, Electric - 12/3 (Was p/n 1060268)	
40	3740049	1	Relay - SPDT	
40	1060309	8 ft	Cable, Control 12/4 (To Footswitch)	
	1281056	Ref	OPTIONAL LIGHTS SWITCH INSTALLATION (NOT SHOWN)	C
	4360199	1	Switch, Toggle (Located on Front of Item 6)	

SECTION 4 - PLATFORM

FIGURE 4-5. CONSOLE BOX ASSEMBLY (GAS, DIESEL AND DUAL FUEL MACHINES PRIOR TO JANUARY 1993)



SECTION 4 - PLATFORM

FIGURE 4-5. CONSOLE BOX ASSEMBLY (GAS, DIESEL AND DUAL FUEL MACHINES PRIOR TO JANUARY 1993)

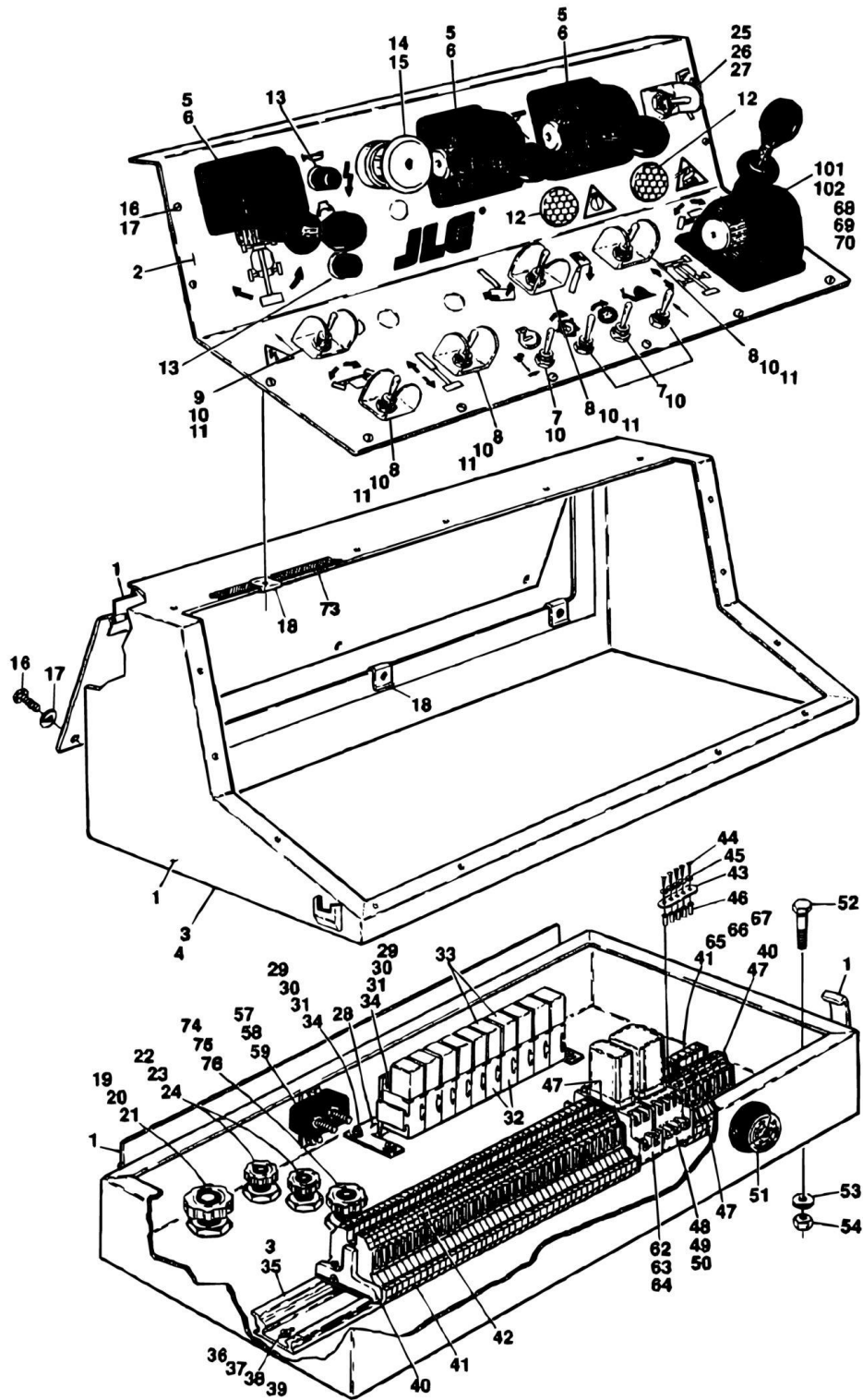
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONSOLE BOX ASSEMBLY - PQ CONTROLLERS AND VICKERS VALVES (GAS, DIESEL AND DUAL FUEL MACHINES PRIOR TO JANUARY 1993)	
	0860686	Ref	2WS	G
	0860706	Ref	4WS	D
1	3252043	1	Lid (International Symbols)	
2	0751006	18	Screw, Pan Head #10-24NC x 3/4in	
3	4740120	18	Washer, Nylon	
4	3300177	18	Nut, Tinnerman	
5	4420038	3 1/4 ft	Tape, Insulation	
5	0100001	AR	Adhesive	
6	0860538	1	Box, Control Includes Items 10-12	
7	3311505	AR	Nut 5/16in-18NC	
8	4751500	8	Flatwasher 5/16in	
9	4320002	AR	Stud, Mounting	
9	0641508	AR	Bolt 5/16in-18NC x 1in	
10	2940052	2	Latch	
11	2600132	1	Hinge (Top to Bottom)	
12	2600105	1	Hinge (Access Door)	
13	1600094	3	Controller, PQ (Note: Refer to JLG Manual 3120351 for more information)	
13	7003737	3	Electrical Assembly	
14	4360274	1	Switch, Push Button (Horn)	
14	3790015	1	O-Ring	
15	4360132	1	Switch, Push-Pull (Emergency Stop)	
15	4360131	1	Lens, Red Switch (Emergency Stop)	
15	4360108	1	Block, Contact	
17	4360274	1	Switch, Push Button (Start)	
17	3790015	1	O-Ring	
18	4360200	1	Switch, Toggle (Glow Plugs - Optional)	
18	3790012	1	O-Ring	
18	3521872	1	Nameplate - Glow Plug (Optional)	
19	2920015	1	Lamp (Engine Distress)	
19	2920029	1	Bulb	
20	2920015	1	Lamp (Chassis Out of Level)	
20	2920029	1	Bulb	
21	4360200	1	Switch, Toggle (Auxiliary Power)	
21	4060229	1	Shield	
21	3790012	1	O-Ring	
22	4360199	1	Switch, Toggle (Lights - Optional)	
22	3790012	1	O-Ring	
23	3520028	1	Plug, Hole	
24	4360202	1	Switch, Toggle (Rotate)	
24	4060229	1	Shield	
24	3790012	1	O-Ring	
25	4360202	1	Switch, Toggle (Level)	
25	4060229	1	Shield	
25	3790012	1	O-Ring	
26	4360202	1	Switch, Toggle (Steer)	

SECTION 4 - PLATFORM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
26	4060229	1	Shield	
26	3790012	1	O-Ring	
27	4360202	1	Switch, Toggle (Main Tele)	
27	4060229	1	Shield	
27	3790012	1	O-Ring	
28	4360199	1	Switch, Toggle (Engine Speed)	
28	3790012	1	O-Ring	
29	4360199	1	Switch, Toggle (Pump Volume)	
29	3790012	1	O-Ring	
30	4360199	1	Switch, Toggle (Wheel Motor Speed)	
30	3790012	1	O-Ring	
31	4360209	1	Breaker, Circuit - 20 Amp	
31	3910608	1	Screw #6-32NC x 1/2in	
31	4750600	1	Flatwasher #6	
31	4760600	1	Lockwasher #6	
31	3310601	1	Nut #6-32NC	
32	3640500	1	Rail, Mounting	
32	3910608	2	Screw, Round Head #6-32NC x 1/2in	
32	4750600	2	Flatwasher #6	
32	4760600	2	Lockwasher #6	
32	3310601	2	Nut #6-32NC	
33	4460299	2	Stop, Terminal Strip	
34	4460300	1	Barrier, Terminal End	
35	4460298	42	Block, Terminal	
36	4460301	1	Strip, Marking	
37	4460311	1	Bar, Buss	
37	4460305	3	Screw, Terminal Block	
37	4460306	3	Washer, Terminal Block	
37	4460307	3	Sleeve, Terminal Block	
39	4460244	2	Connector	
39	0960238	2	Bushing	
39	3300048	2	Nut	
40	4460071	1	Connector	
40	0960238	1	Bushing	
40	3300048	1	Nut	
41	3740049	AR	Relay - SPDT	
41	3311001	AR	Nut #10-24NC	
41	4761000	AR	Lockwasher #10	
42	1060309	8 ft	Cable, Control 12/4 (To Footswitch)	
44	4360202	1	Switch, Toggle (Tower Tele)	
44	4060229	1	Shield	
44	3790012	1	O-Ring	
45		Ref	Controller, PQ - Drive Options:	
45	1600094	1	2WS Machines Controller, PQ (Note: Refer to JLG Manual 3120351 for more information)	
45	7003737	1	Electrical Assembly - 1600094 Controller	
45	1600134	1	4WS Machines Controller, PQ (Note: Refer to JLG Manual 3120351 for more information)	
45	7003796	1	Electrical Assembly - 1600134 Controller	
	0253077	Ref	TILT ALARM INSTALLATION	-
101	0140026	1	Alarm	

SECTION 4 - PLATFORM

FIGURE 4-6. CONSOLE BOX ASSEMBLY (GAS, DIESEL AND DUAL FUEL MACHINES JANUARY 1993 TO PRESENT)



SECTION 4 - PLATFORM

FIGURE 4-6. CONSOLE BOX ASSEMBLY (GAS, DIESEL AND DUAL FUEL MACHINES JANUARY 1993 TO PRESENT)

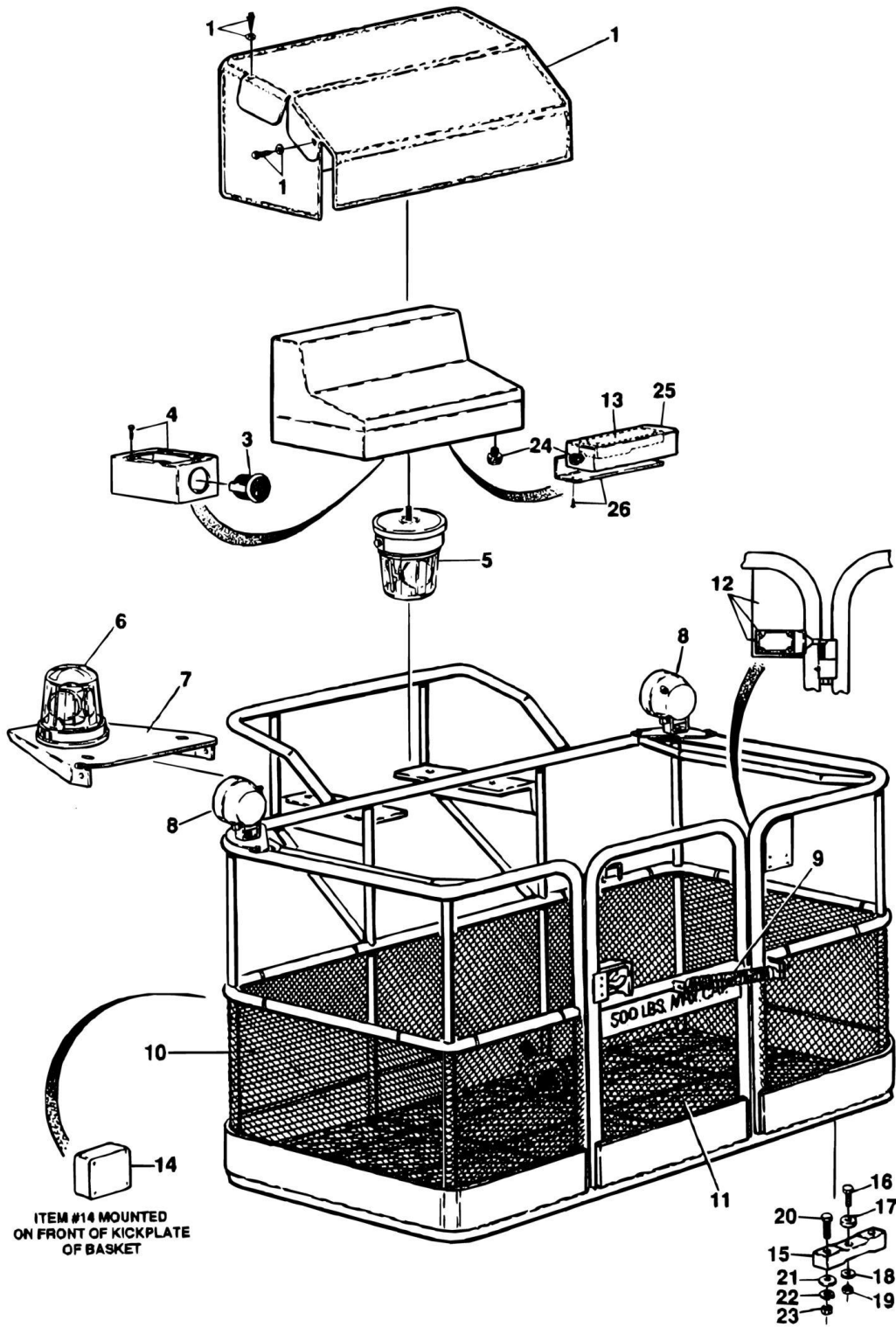
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONSOLE BOX ASSEMBLY - PQ CONTROLLERS AND VICKERS VALVE	
	0860825	Ref	2WS	B
	0860826	Ref	4WS	B
1	0860739	1	Box Weldment	
1	2940052	2	Latch	
1	2600132	1	Hinge (Top to Bottom)	
1	2600105	1	Hinge (Access Door)	
1	3531023	1	Plate, Backing	
2		Ref	Decal/Lid Plate Options:	
2	3252224	1	Lid (International Symbols) (January 1993 to May 1994)	
2	3252382	1	Lid (International Symbols) (May 1994 to November 1994)	
2	3538392	1	Plate, Lid (November 1994 to Present)	
2	1702402	1	Decal, Console (November 1994 to Present)	
3	4420008	6 ft/2.5m	Tape, Insulation	
4	0100001	AR	Adhesive	
5	1600141	3	Controller Assembly Options (Note: Refer to JLG Manual 3120351 for more information):	
5	7011907	3	Electric Assembly	
6	2560112	3	Knob	
7	4360199	4	Switch, Toggle	
8	4360202	4	Switch, Toggle	
9	4360200	1	Switch, Toggle	
10	3790012	9	O-Ring	
11	4060229	5	Shield	
12	2920015	2	Lamp	
12	2920029	2	Bulb	
13	4360274	2	Switch, Push Button	
14	4360289	1	Switch, Emergency Stop	
14	7012611	1	Head, Mushroom	
14	7012612	1	Boot	
15	4360282	1	Block, Contact	
16	0751006	21	Screw, Pan Head #10-24NC x 3/4in	
17	4740120	21	Washer, Nylon	
18	3300177	21	Nut, Tinnerman	
19	4460386	1	Connector, Strain Relief	
20	0960905	1	Bushing, Insulating	
21	3300147	1	Nut, Conduit	
22	4460052	1	Connector	
23	0960239	1	Bushing, Insulating	
24	3300047	1	Nut, Conduit	
25	4360202	1	Switch, Toggle	
26	3790012	1	O-Ring	
27	4060229	1	Shield	
28	0901796	1	Bracket	
29	4751000	8	Flatwasher #10	
30	4761000	8	Lockwasher #10	
31	3311001	8	Nut #10-24NC	
32	3740085	AR	Socket, Micro Switch	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
33	3740086	AR	Relay, Micro Switch	
34	3911012	8	Screw #10-24NC x 3/4in	
35	3640752	1	Track	
36	3910608	2	Screw, Round Head #6-32NC x 1/2in	
37	4750600	2	Flatwasher #6	
38	4760600	2	Lockwasher #6	
39	3310601	2	Nut #6-32NC	
40	4460299	2	Stop, Terminal Strip	
41	4460298	54	Block, Terminal	
42	4460301	1	Strip, Marking	
43	4460311	2	Bar, Buss	
44	4460305	10	Screw, Terminal Block	
45	4460306	10	Washer, Terminal Block	
46	4460307	10	Sleeve, Terminal Block	
47	4460300	3	Barrier, Terminal	
48	4120013	1	Socket, Relay	
49	3740058	1	Relay	
50	3740063	1	Spring, Relay	
51	0140019	1	Alarm	
52	0641508	4	Bolt 5/16in-18NC x 1in	
53	4751500	8	Flatwasher 5/16in	
54	3311505	4	Locknut 5/16in-18NC	
56	3560034	8	Plug, Hole (Not Shown)	
57	4761000	1	Lockwasher #10	
58	3311001	1	Nut #10-24NC	
59	4360232	1	Breaker, Circuit - 15Amp	
62	4120012	1	Socket, Relay	
63	3740057	1	Relay	
64	3740066	1	Spring, Relay	
65	4460404	10	Strip, Terminal #8	
66	4460405	32	Strip, Terminal #9	
67	4460423	2	Strip, Terminal #7	
68	0720803	16	Screw, Machines #8-32NC x 3/8in	
69	4750800	16	Flatwasher #8	
70	4760800	16	Lockwasher #8	
73	4420037	14 ft/4m	Tape, Insulation	
74	4460071	1	Connector, Strain Relief	
75	3300048	1	Locknut, Conduit	
76	0960238	1	Bushing	
101		Ref	Controller Options:	
101	1600141	1	2WS Controller	
101	7011907	1	Electric Assembly	
101	1600140	1	4WS Controller	
101	7011907	1	Electrical Assembly	
102		Ref	Knob Options:	
102	2560112	1	2WS	
102	Not Required	0	4WS	
		Ref	OPTIONAL COMPONENTS (NOT SHOWN)	
	4360200	1	Switch, Toggle (Glow Plugs - Diesel Machines Option)	
	4360199	1	Switch, Toggle (Worklights Option)	

SECTION 4 - PLATFORM

FIGURE 4-7. OPTIONAL COMMON PLATFORM MOUNTED COMPONENTS



SECTION 4 - PLATFORM

FIGURE 4-7. OPTIONAL COMMON PLATFORM MOUNTED COMPONENTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CONSOLE BOX COVER INSTALLATION	
	0252054	Ref	Black Vinyl	2
	0251203	Ref	Yellow Vinyl	2
	0252848	Ref	CLEAR PLEXI-GLASS	-
	0253634	Ref	Metal	-
1	1670607	1	Cover Options:	
1	1670607	1	Cover (Black Vinyl)	
1	1670526	1	Cover (Yellow Vinyl)	
1	1670641	1	Cover, Plexi-Glass (Not Shown)	
1	Not Available		Cover (Metal - Not Shown) (Purchase Individual Pieces)	
1	1670674	1	Cover, Top	
1	1670676	1	Cover, Hinged Mid	
1	1670677	1	Cover, Bottom	
1	3252369	1	Nameplate - Caution/Danger	
1	3941406	4	Screw, Self-Tapping 1/4inx20	
1	4751400	4	Flatwasher 1/4in	
1	0901842	1	Bracket (Right Side) (Use with Plexi-Glass Cover Only)	
1	0901843	1	Bracket (Left Side) (Use with Plexi-Glass Cover Only)	
		Ref	BATTERY CAPACITY GAGE INSTALLATION ELECTRIC MACHINES	
	0238951	Ref	Gage Installation - Standard	
	0239195	Ref	Gage Installation - With Interrupt	
3		Ref	Gage Options:	
3	2420075	1	Gage - Battery Capacity	
3	2420049	1	Gage - Battery Capacity with Interrupt	
4	0860530	1	Box, Mounting	
		Ref	BEACON LIGHT OPTIONS	
	0252210	Ref	Beacon Mounted Under Console	3
	0252211	Ref	Beacon Mounted Under Console	3
5		Ref	Beacon Options:	
5	2920009	Ref	Beacon (Red)	
5	2920018	Ref	Beacon (Amber)	
5		Ref	Beacon Mounted in Front of Console	
5	0238864	Ref	Amber Beacon (Gas/Diesel Machines)	
5	0238865	Ref	Red Beacon (Gas/Diesel Machines)	
5	0238868	Ref	Amber Beacon (Electric Machines)	
5	0238869	Ref	Red Beacon (Electric Machines)	
6		Ref	Beacon Options:	
6	2920009	Ref	Beacon (Red)	
6	2920018	Ref	Beacon (Amber)	
7	0901449	Ref	Bracket, Mounting	
		Ref	WORKLIGHT INSTALLATIONS (OPTIONAL)	
	2900068	Ref	Worklight Installations (Prior To November 1992)	F
	0253987	Ref	Worklight Installations (November 1992 To Present)	C
8		Ref	Floodlight Options:	
8	2920013	2	Floodlight (Electric/Gas/Diesel Machines)	
8	2920111	2	Halogen Light (Electric/Gas/Diesel Machines) (Uses P/N 3536089 Mounting Plate)	
	0250143	Ref	SELF-CLOSING GATE INSTALLATION (WELDED-ON)	A
	0256829	Ref	SELF-CLOSING GATE INSTALLATION (BOLT-ON)	A

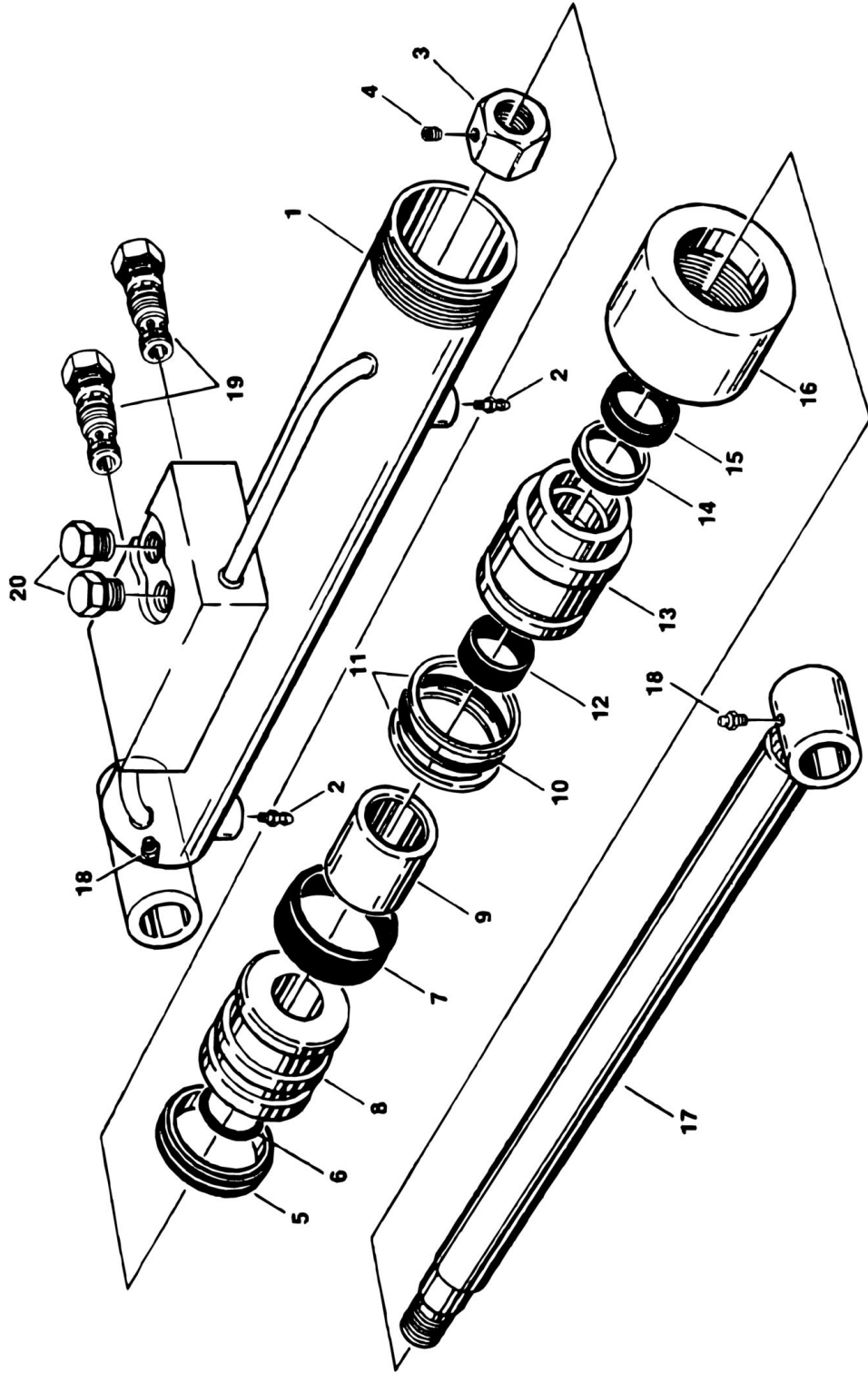
SECTION 4 - PLATFORM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
9	4160028	1	Spring	
9	0900232	1	Bracket (Door Mounted) (Welded-On Models)	
9	0901056	1	Bracket (Platform Mounted) (Welded-On Models)	
9	4220007	1	Stop, Door	
9	0630515	2	Eyebolt (Bolted-On Model)	
9	3300151	2	Nut, Acorn (Bolted-On Model)	
		Ref	MESH TO MIDRAIL INSTALLATION	
	0253846	Ref	Mesh to Midrail Installation (Low Mount Platform)	-
	0254130	Ref	Mesh To Midrail Installation (Standard 30in X 60in Platform)	-
	0254796	Ref	Mesh To Midrail Installation (Standard 30in X 48in Platform)	-
10		Ref	Mesh (Sides) Options:	
10	0480083	2	Mesh (Sides) (Low-Mount Platform)	
10	0480086	2	Mesh (Sides) (Standard 30in x 60in Platform)	
10	0480088	1	Mesh (Sides) (Standard 30in x 48in Platform)	
11	0480084	1	Mesh (Door)	
		Ref	SAFE LOAD INDICATOR SYSTEM INSTALLATION (FRENCH SPEC)	
	1692979	Ref	Safe Load Indicator System Installation (Prior to June 1997)	A
	0251921	Ref	Safe Load Indicator System Installation (June 1997 to March 1998)	A
	0258040	Ref	Safe Load Indicator System Installation (March 1998 to Present)	4
12		Ref	Safe Load Indicator System Kit Options:	
12	1692405	1	Safe Load Indicator System Kit (Prior to March 1998)	
12	2901557	1	Safe Load Indicator System Kit (March 1998 to Present)	
13		Ref	Amplifier	
14		Ref	Box, Junction	
15		Ref	Cell, Load (Front of Basket)	
15	1692959	2	Spacer (Rear of Basket)	
16	0641820	1	Bolt 1/2in-13NC x2 1/2in	
17	1692980	1	Spacer	
18	4751800	1	Flatwasher 1/2in	
19	3311805	1	Locknut 1/2in-13NC	
20	0641616	2	Bolt 3/8in-16NC x 2in	
21	4751600	2	Flatwasher 3/8in	
22	4761600	2	Lockwasher 3/8in	
23	3311601	2	Nut 3/8in-16NC	
24	4460071	1	Connector, Strain Relief	
24	0960238	1	Bushing	
24	3300048	1	Nut, Conduit	
25	0860619	1	Box	
25	3911012	4	Screw #10-24NC	
25	4751000	8	Flatwasher #10	
25	4761000	4	Lockwasher #10	
26	3533904	1	Lid	
26	0750806	4	Screw, Self-Tapping #8 x 3/4in	
26	4740120	4	Washer, Nylon	
26	3300177	4	Nut, Tinnerman	
26	4420008	75.8 cm	Tape, Insulating	

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FIGURE 5-1. AXLE LOCKOUT CYLINDER ASSEMBLY



SECTION 5 - CYLINDER

FIGURE 5-1. AXLE LOCKOUT CYLINDER ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1682406	Ref	AXLE LOCKOUT CYLINDER ASSEMBLY	B
1	1682407	1	Barrel	
2	3900175	2	Setscrew 1/4in-28NF x 3/4in	
2	3960416	2	Seal, Thread	
2	3321401	2	Nut 1/4in-28NF	
		Ref	Note: Replace existing bleeders with these components when ordering parts.	
3	3300273	1	Nut	
4	3900170	1	Setscrew	
4	0100035	AR	Compound, Locking	
4	0100038	AR	Primer, Locking	
5	Kit	1	Seal, Piston	
6	Kit	1	O-Ring	
7	Kit	1	Ring, Wear	
8	3480120	1	Piston	
9	4563647	1	Tube, Spacer	
10	Kit	1	O-Ring	
11	Kit	1	Ring, Back-up	
12	Kit	1	Ring, Wear	
13	1680892	1	Head	
14	Kit	1	Seal, Rod	
15	Kit	1	Seal, Wiper	
16	1120179	1	Retainer	
16	0100011	AR	Loctite	
17	1681787	1	Rod	
18	2160002	1	Fitting, Grease	
19	4640438	2	Cartridge, Check Valve	
19	2900770	2	Seal Kit -Cartridge	
20	2220885	2	Plug	
	2900381	1	Seal Kit (Includes Items 5-7, 10-12 & 14-15)	

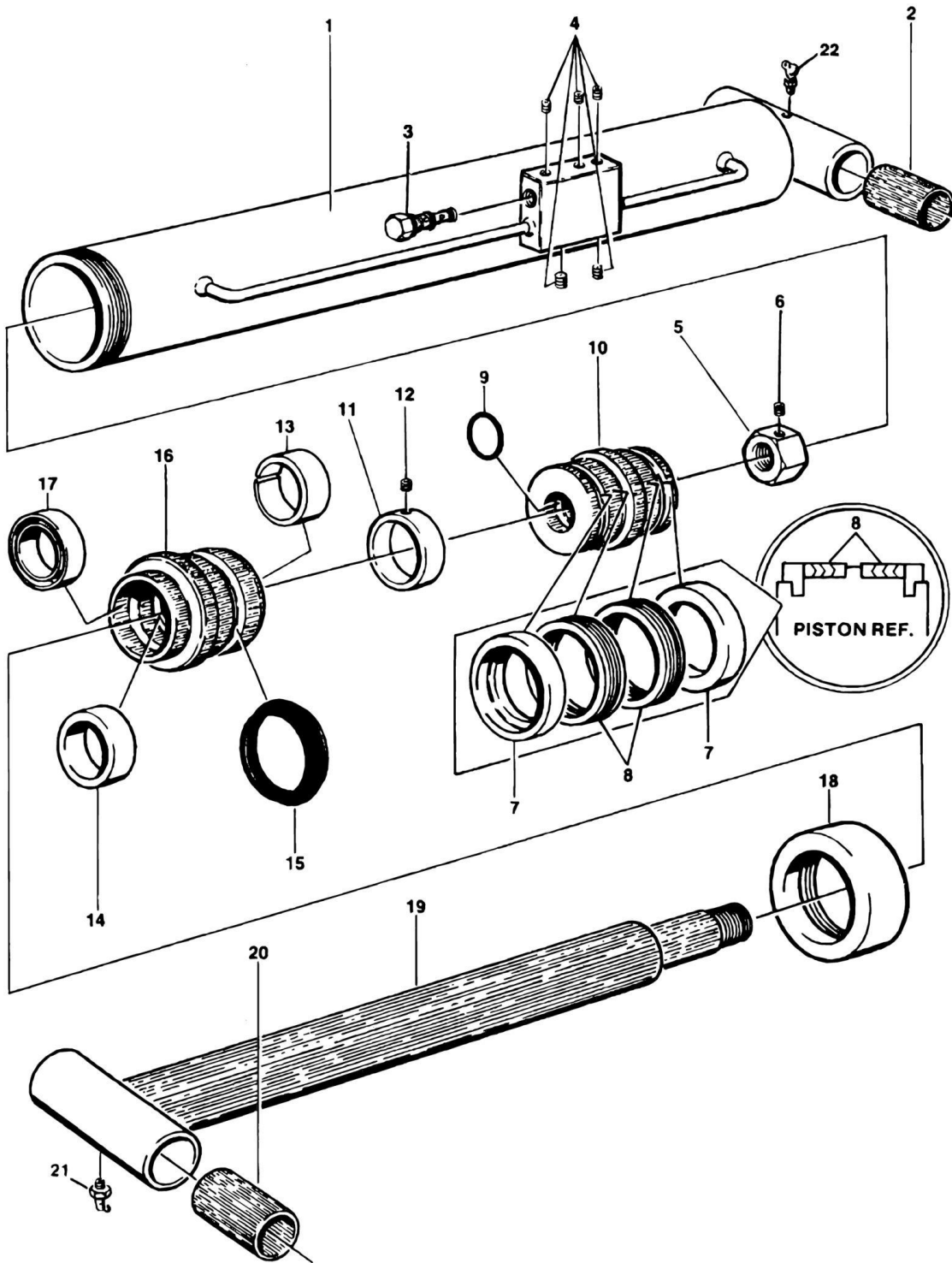
SECTION 5 - CYLINDER

FIGURE 5-2. LEVEL CYLINDER ASSEMBLY (TOWER BOOM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1681962	Ref	LEVEL CYLINDER ASSEMBLY (TOWER BOOM)	E
1	1681962	1	Barrel Assembly	
2	0960946	2	Bushing, Bronze	
3	4640509	1	Valve	
3	2900792	1	Seal Kit - 4640509 Valve	
4	2200202	2	Plug 1/4in	
4	2200201	4	Plug 1/8in	
4	0100020	AR	Sealant	
5	3300281	1	Nut, Hex	
5	0100011	AR	Loctite #242	
5	0100038	AR	Primer, Locking	
6	3900170	1	Setscrew 3/8in-16NC x 3/8in	
6	0100011	AR	Loctite	
7	Kit	2	Ring, Guidelock	
8	Kit	2	Seal	
9	Kit	1	O-Ring	
10	3480102	1	Piston	
11	4563828	1	Spacer	
12	3900141	1	Setscrew 1/4in-20NC x 3/8in	
12	0100011	AR	Loctite	
13	Kit	1	Ring, Wear	
14	Kit	1	Seal	
15	Kit	1	T-Seal	
16	1681843	1	Head	
17	Kit	1	Ring, Wiper	
18	1120336	1	Cap	
18	0100011	AR	Loctite	
19	1681848	1	Rod Assembly	
20	0960946	2	Bushing, Bronze	
21	2160003	2	Fitting, Grease	
22	4640509	1	Valve	
22	2900792	1	Seal Kit - 4640509 Valve	
	2901102	1	Seal Kit (Includes Items 7, 8, 9, 13, 14, 15 & 17)	

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FIGURE 5-3. LIFT CYLINDER ASSEMBLY (MAIN BOOM)



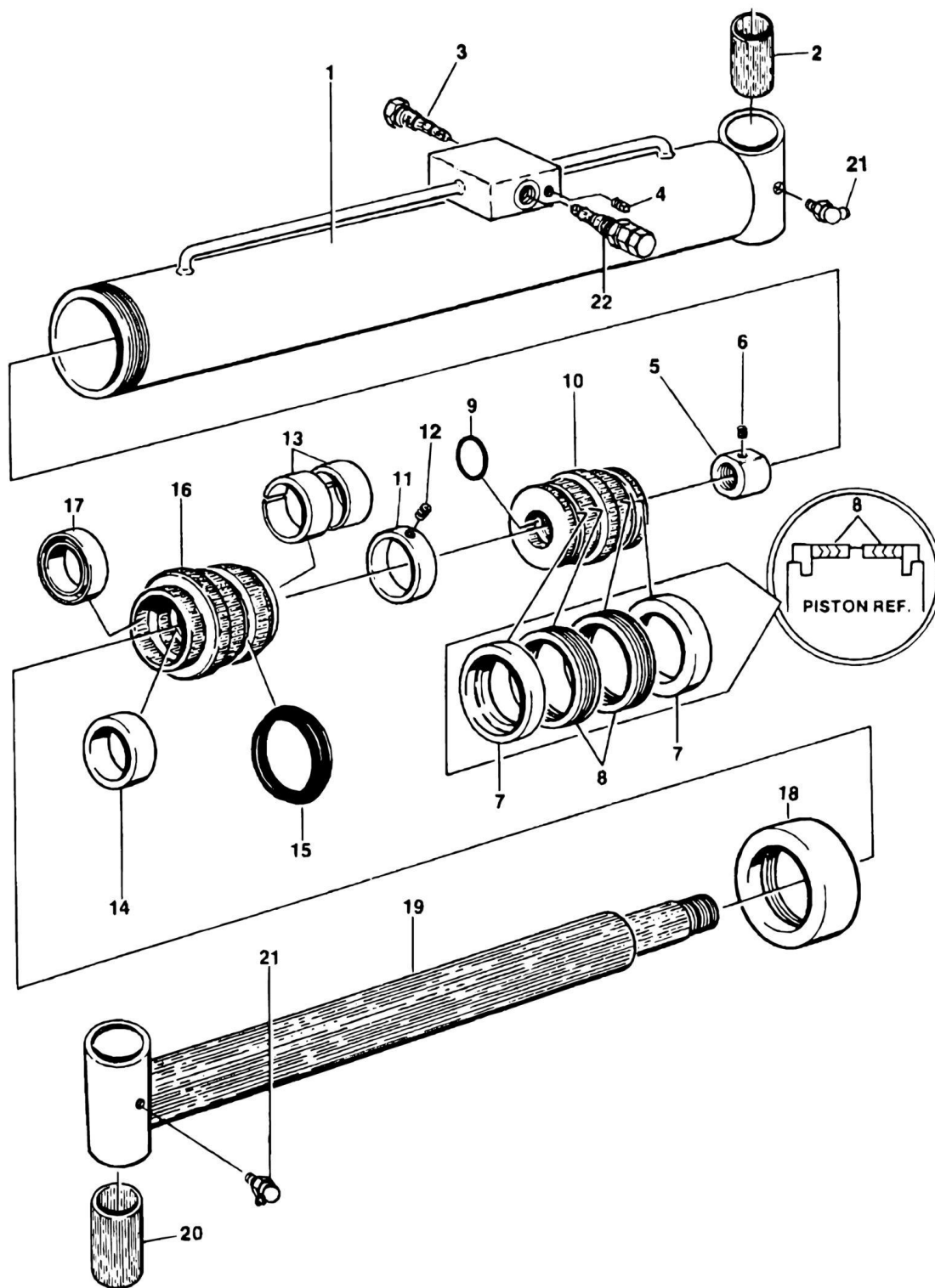
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FIGURE 5-3. LIFT CYLINDER ASSEMBLY (MAIN BOOM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1681840	Ref	LIFT CYLINDER ASSEMBLY (MAIN BOOM)	I
1	1681844	1	Barrel Assembly	
2	0960946	2	Bushing, Bronze	
3	4640634	1	Valve, Holding	
3	2900792	1	Seal, Kit - 4640634 Valve	
4	2200202	1	Plug 1/4 (Prior to SN 27346)	
4	2200222	1	Plug 1/4 (SN 27346 to Present)	
4	2200213	4	Plug 3/8 (Prior to SN 27346)	
4	2200233	4	Plug 3/8 (SN 27346 to Present)	
4	2180448	1	Fitting, Orifice (.062) (MO Port) (Prior to SN 27346)	
4	2180380	1	Fitting, Orifice (.062) (MO Port) (SN 27346 to Present)	
4	0100034	AR	Loctite	
4	0100020	AR	Sealant	
5	3300281	1	Nut, Hex	
6	3900170	1	Setscrew 3/8in-16NC x 3/8in	
6	0100011	AR	Loctite #242	
6	0100038	AR	Primer, Locking	
7	Kit	2	Ring, Guidelock	
8	Kit	2	Seal	
9	Kit	1	O-Ring	
10	3480102	1	Piston	
11	4563769	1	Spacer	
12	3900141	1	Setscrew 1/4in-20NC x 3/8in	
12	0100011	AR	Loctite	
13	Kit	1	Ring, Wear	
14	Kit	1	Seal	
15	Kit	1	T-Seal	
16	1681843	1	Head	
17	Kit	1	Ring, Wiper	
18	1120340	1	Cap	
18	0100011	AR	Loctite	
19	1681841	1	Rod Assembly	
20	0960946	2	Bushing, Bronze	
21	2160001	1	Fitting, Grease - 90	
22	2160003	1	Fitting, Grease - 45	
	2901102	1	Seal Kit (Includes Items 7, 8, 9, 13, 14, 15 & 17)	

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FIGURE 5-4. LIFT CYLINDER ASSEMBLY (TOWER BOOM)



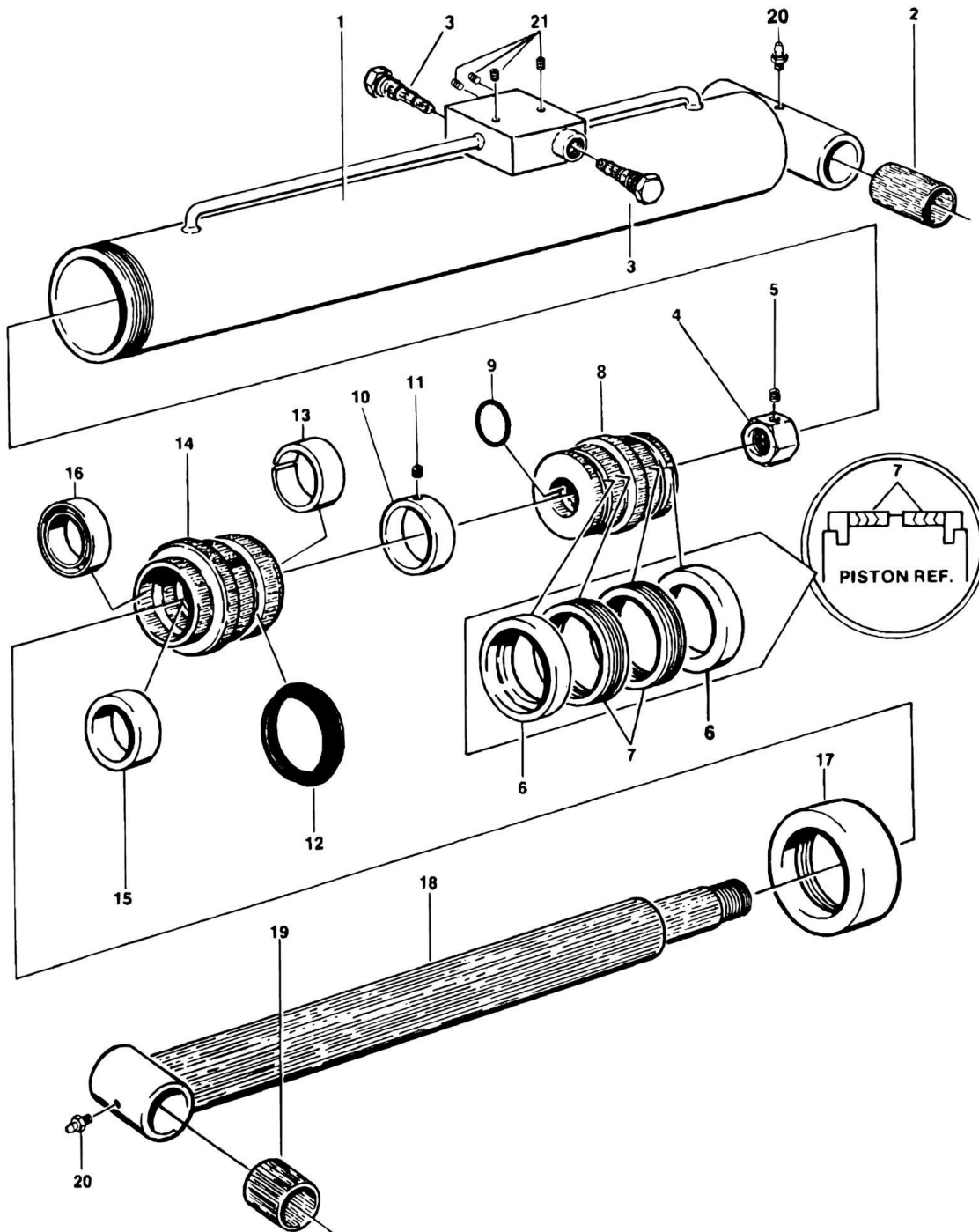
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FIGURE 5-4. LIFT CYLINDER ASSEMBLY (TOWER BOOM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1681960	Ref	LIFT CYLINDER ASSEMBLY (TOWER BOOM)	E
1	1681961	1	Barrel Assembly	
2	0960946	2	Bushing, Bronze	
3	4640509	1	Valve	
3	2900792	1	Seal Kit - 4640509 Valve	
4	2200202	2	Plug 1/4in	
4	2200201	4	Plug 1/8in	
4	0100020	AR	Sealant	
5	3300283	1	Nut, Hex	
5	0100011	AR	Loctite #242	
5	0100038	AR	Primer, Locking	
6	3900170	1	Setscrew 3/8in-16NC x 3/8in	
6	0100011	AR	Loctite	
7	Kit	2	Ring, Guidelock	
8	Kit	2	Seal	
9	Kit	1	O-Ring	
10	3480102	1	Piston	
11	4563769	1	Spacer	
12	3900141	1	Setscrew 1/4in-20NC x 3/8in	
12	0100011	AR	Loctite	
13	Kit	1	Ring, Wear	
14	Kit	1	Seal	
15	Kit	1	T-Seal	
16	1681843	1	Head	
17	Kit	1	Ring, Wiper	
18	1120340	1	Cap	
18	0100035	AR	Loctite	
19	1681841	1	Rod Assembly	
20	0960946	2	Bushing, Bronze	
21	2160001	1	Fitting, Grease - 90	
21	2160003	1	Fitting, Grease - 45	
22	4640605	1	Valve, Vented	
22	2900792	1	Seal Kit - 4640605 Valve	
	2901102	1	Seal Kit (Includes Items 7, 8, 9, 13, 14, 15 & 17)	

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FIGURE 5-5. PLATFORM LEVEL CYLINDER ASSEMBLY (MAIN BOOM) (PRIOR TO OCTOBER 1992)



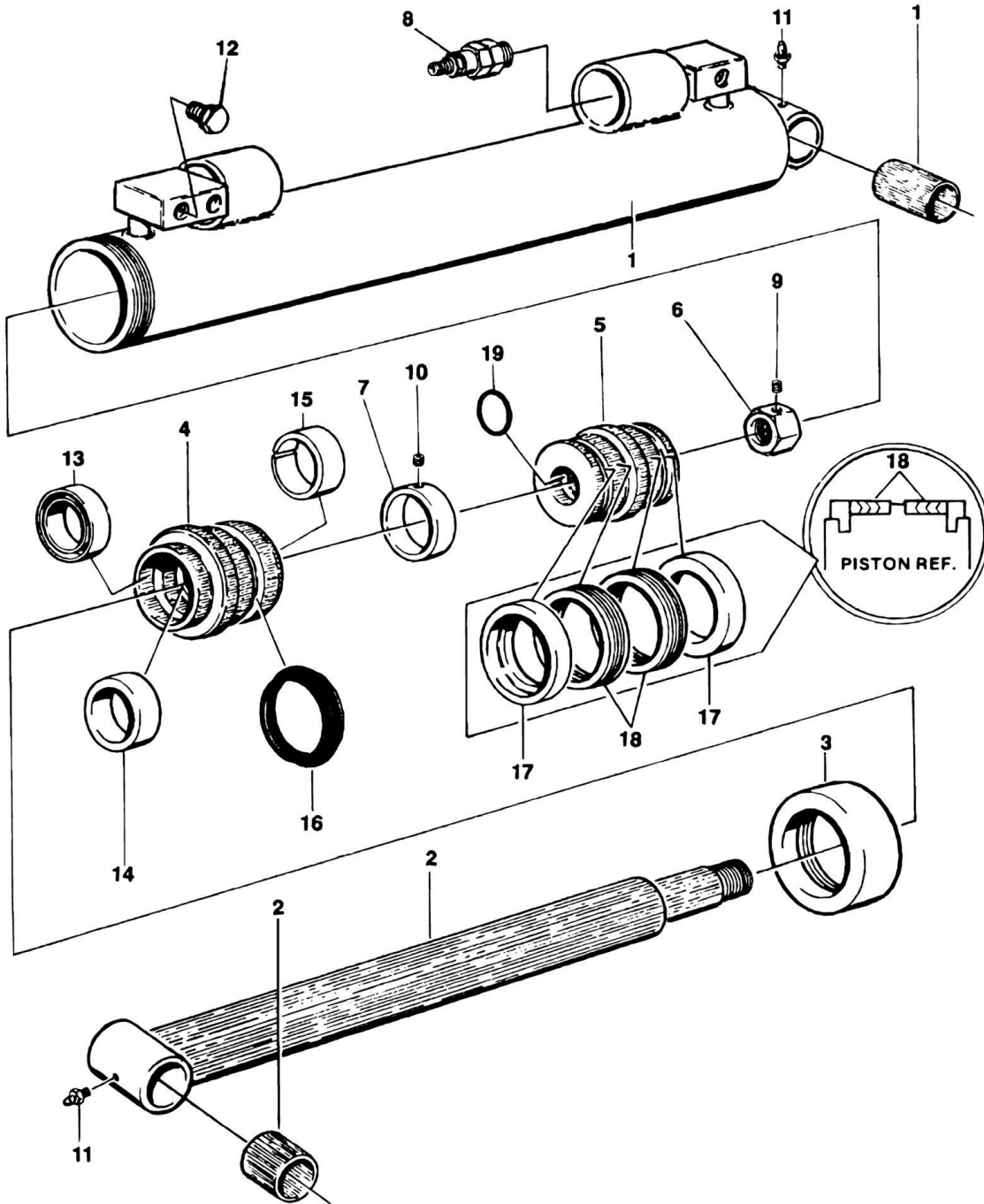
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FIGURE 5-5. PLATFORM LEVEL CYLINDER ASSEMBLY (MAIN BOOM) (PRIOR TO OCTOBER 1992)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM LEVEL CYLINDER ASSEMBLY (MAIN BOOM)	
	1682178	Ref	Platform Level Cylinder Assembly (Main Boom) Prior to October 1992	C
1	1681869	1	Barrel Assembly	
2	0960613	2	Bushing, Bronze	
3	4640509	2	Valve	
3	2900792	1	Seal Kit - 4640509 Valve	
4	3300284	1	Nut, Hex	
4	0100011	AR	Loctite #242	
4	0100038	AR	Primer, Locking	
5	3900170	1	Setscrew 3/8in-16NC x 3/8in	
5	0100011	AR	Loctite #242	
6	Kit	2	Lok-Ring	
7	Kit	2	Seal, Piston	
8	3480141	1	Piston	
9	Kit	1	O-Ring	
10	4563771	1	Spacer, Tube	
11	3900141	1	Setscrew 1/4in-20NC x 3/8in	
11	0100011	AR	Loctite	
12	Kit	1	T-Seal	
13	Kit	1	Ring, Wear	
14	1681847	1	Head	
15	Kit	1	Seal, Rod	
16	Kit	1	Wiper, Rod	
17	1120336	1	Cap	
17	0100035	AR	Loctite	
18	1682177	1	Rod Assembly	
19	0961254	2	Bushing, Bronze	
20	2160002	2	Fitting, Grease	
21	2200202	2	Plug 1/4in	
21	2200201	2	Plug 1/8in	
21	0100020	AR	Sealant, Pipe	
	2901103	1	Seal Kit (Includes Items 6, 7, 9, 12, 13, 15 & 16.)	
		Ref	Note: Refer to number stamped on barrel for identification.	

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FIGURE 5-6. PLATFORM LEVEL CYLINDER ASSEMBLY (MAIN BOOM) (OCTOBER 1992 TO PRESENT)



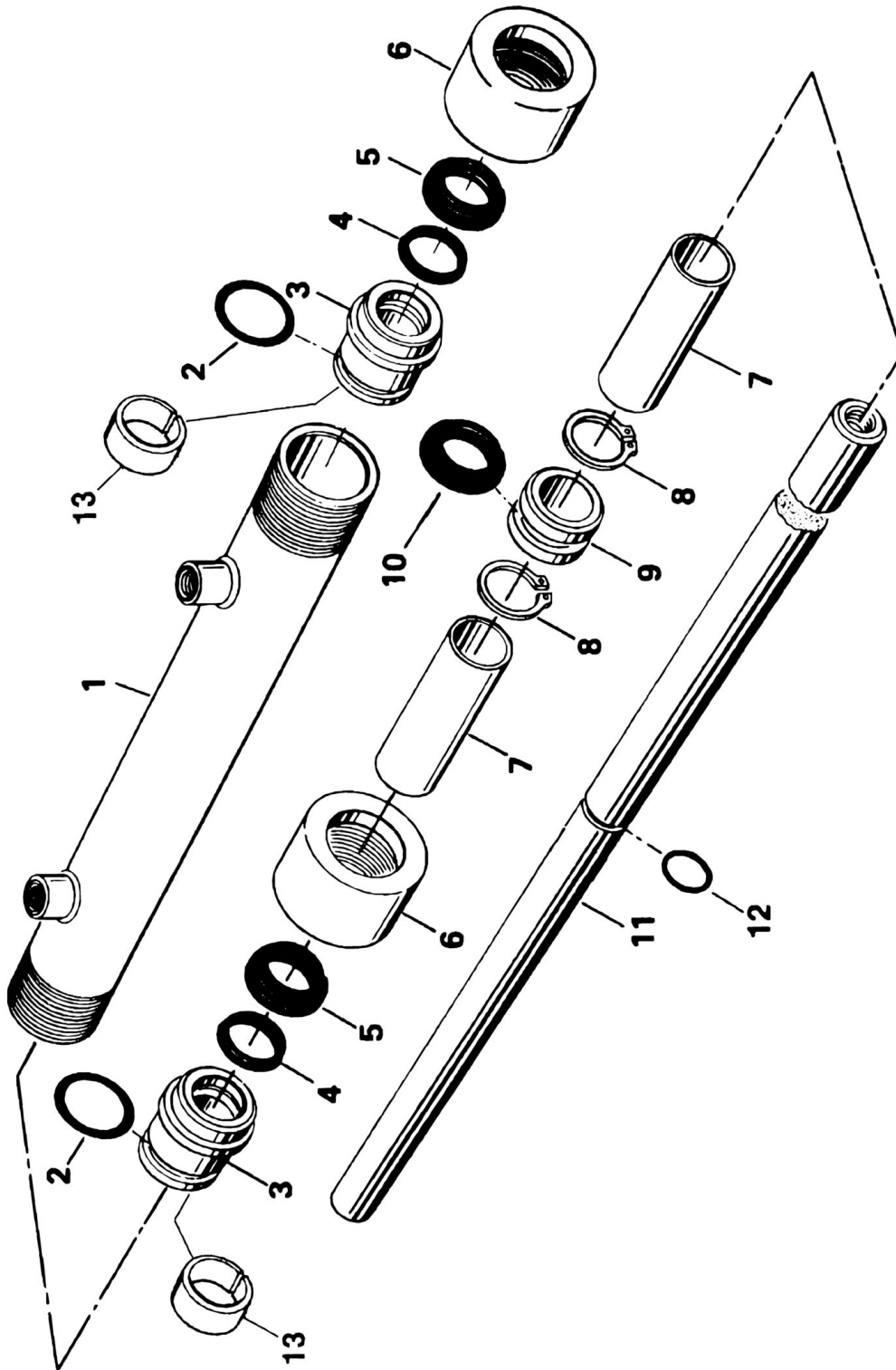
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FIGURE 5-6. PLATFORM LEVEL CYLINDER ASSEMBLY (MAIN BOOM) (OCTOBER 1992 TO PRESENT)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	PLATFORM LEVEL CYLINDER ASSEMBLY (MAIN BOOM)	
	1682793	Ref	Platform Level Cylinder Assembly (Main Boom) October 1992 to SN 33104	A
	1683526	Ref	Platform Level Cylinder Assembly (Main Boom) (SN 33105 to Present)	A-1
1		Ref	Barrel Weldment (Machine Built) (Prior to SN 33105)	
1	1682794	1	Barrel Weldment October 1992 to SN 33104	
1	1683525	1	Barrel Weldment (Machine Built) (SN 33105 to Present)	
1	0960613	2	Bushing, Bronze	
2	1682177	1	Rod Weldment	
2	0961254	2	Bushing, Bronze	
3	1120336	1	Cap	
3	0100035	AR	Loctite #222	
4	1681847	1	Head	
5	3480141	1	Piston	
6	3300284	1	Nut, Hex	
6	0100011	AR	Loctite #242	
6	0100038	AR	Primer, Loctite	
7	4563771	1	Spacer	
8	4640634	2	Cartridge, Vented Valve	
8	2900770	2	Seal Kit - 4640634 Valve (1 Per Cartridge)	
9	3900170	1	Setscrew 3/8in-16NC x 3/8in	
10	3900141	1	Setscrew 1/4in-20NC x 3/8in	
10	0100011	AR	Loctite #242	
11	2160002	2	Fitting, Grease	
12	2220885	2	Plug, O-Ring	
13	Kit	1	Wiper, Rod	
14	Kit	1	Seal, Rod	
15	Kit	1	Ring, Wear	
16	Kit	1	T-Seal	
17	Kit	2	Ring, Lock	
18	Kit	2	Seal	
19	Kit	1	O-Ring	
	2901103	1	Seal Kit - Cylinder (Includes Items 13-19)	

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FIGURE 5-7. STEER CYLINDER ASSEMBLY (2WD - DOUBLE ACTING ROD)



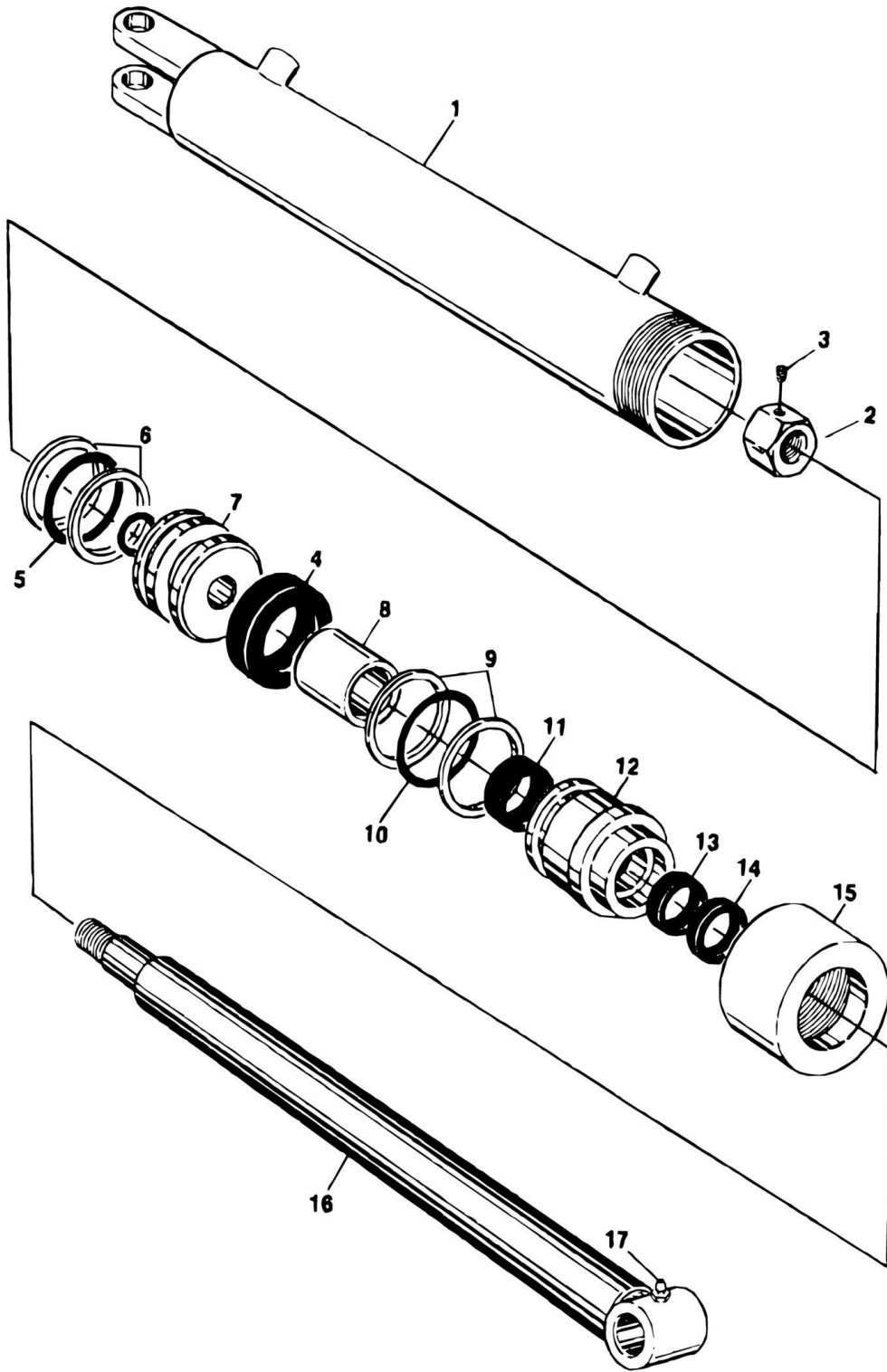
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FIGURE 5-7. STEER CYLINDER ASSEMBLY (2WD - DOUBLE ACTING ROD)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	STEER CYLINDER ASSEMBLY (2WD - DOUBLE ROD)	
	1681814	Ref	Steer Cylinder Assembly (2WD - Double Rod) (Prior to SN 31941)	A
	1683511	Ref	Steer Cylinder Assembly (2WD - Double Rod) (SN 31941 to Present)	2-B
1	1680654	1	Barrel	
2	Kit	2	O-Ring	
3		Ref	Head Options	
3	1120229	2	Head (Prior to SN 31941)	
3	1682364	2	Head (SN 31941 to Present)	
4	Kit	2	Seal	
5	Kit	2	Seal, Wiper	
6		Ref	Head, Retainer	
6	1120228	2	Head, Retainer (Prior to SN 31941)	
6	1120387	2	Head, Retainer (SN 31941 to Present)	
6	0100011	AR	Nylock	
7	4563681	2	Spacer, Tube	
8	3760141	2	Ring, Retaining	
9	3480098	1	Piston	
10	Kit	1	T-Seal	
11	3840561	1	Rod	
12	Kit	1	O-Ring	
13		Ref	Ring, Wear Options:	
13	Not Required	0	Ring, Wear (Prior to SN 31941)	
13	Kit	2	Ring, Wear (SN 31941 to Present)	
		Ref	Repair Kit Options:	
	2900099	1	Kit (Includes Item 2, 4, 5, 10 & 12) (Prior to SN 31941)	
	2901178	1	Kit (Includes Items 2, 4, 5, 10, 12 & 13) (Was p/n 2901508) (SN 31941 to Present)	

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FIGURE 5-8. STEER CYLINDER ASSEMBLY (2WD SINGLE ACTING ROD)



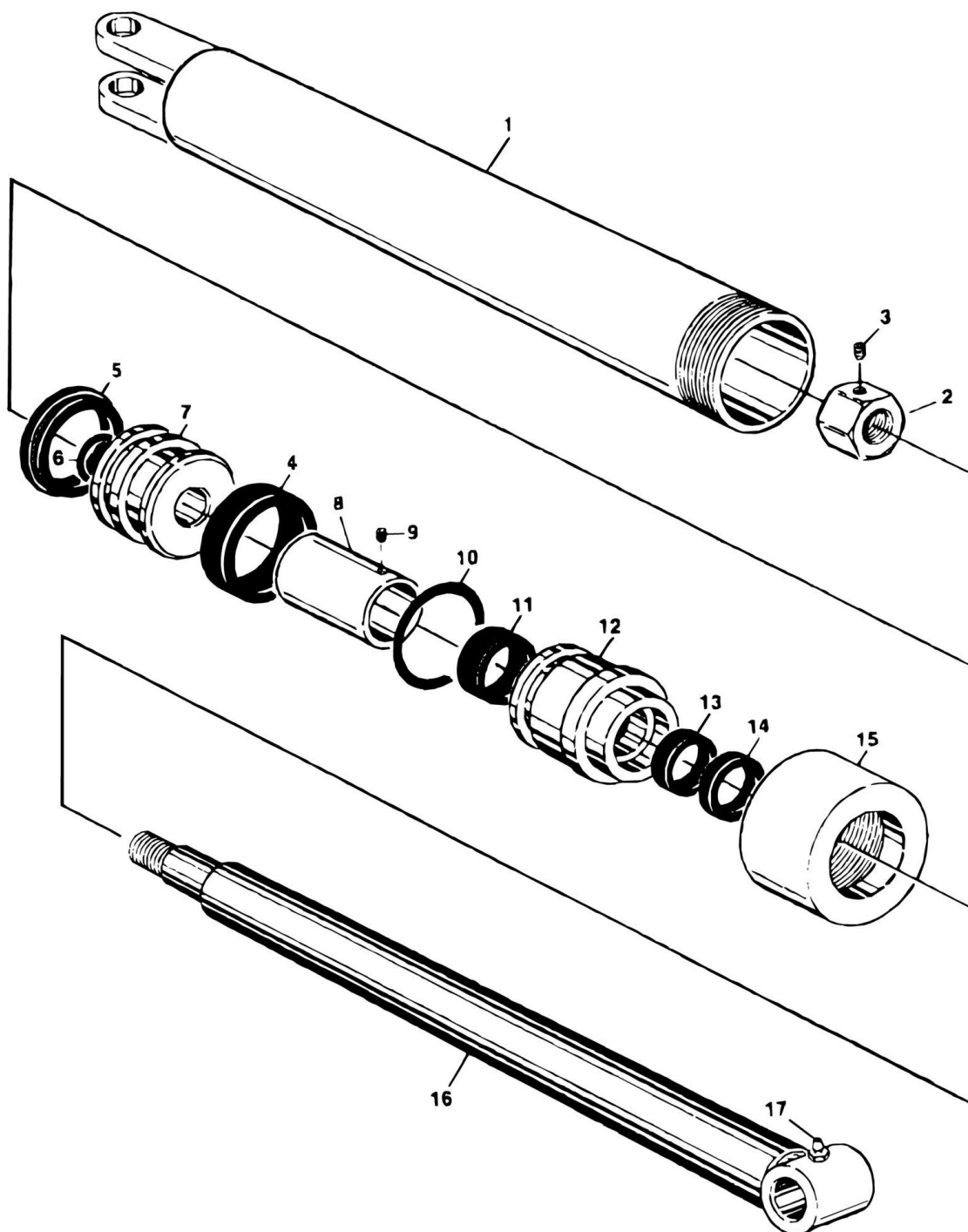
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FIGURE 5-8. STEER CYLINDER ASSEMBLY (2WD SINGLE ACTING ROD)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1682020	Ref	STEER CYLINDER ASSEMBLY - 2WD SINGLE ROD	C
1	1682084	1	Barrel	
2	3300273	1	Nut, Hex	
2	0100011	AR	Loctite #242	
2	0100038	AR	Primer, Locking	
3	3900170	2	Setscrew 3/8in-16NC x 3/8in	
3	0100011	AR	Nyloc	
4	Kit	2	Ring, Wear	
5	Kit	1	T-Seal	
6	Kit	1	O-Ring	
7	3480120	1	Piston	
8	4564134	1	Spacer	
9	3760176	2	Ring	
10	Kit	1	O-Ring	
11	Kit	1	Ring, Wear	
12	1680892	1	Head, Cylinder	
13	Kit	1	Seal, Rod	
14	Kit	1	Wiper, Rod	
15	1120179	1	Cap	
15	0100038	AR	Loctite #222	
16	1680739	1	Rod	
17	2160002	1	Fitting, Grease	
	2901119	1	Kit, Seal (Includes Items 4, 5, 6, 9, 10, 11, 13 & 14)	

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FIGURE 5-9. STEER CYLINDER ASSEMBLY (4WD)



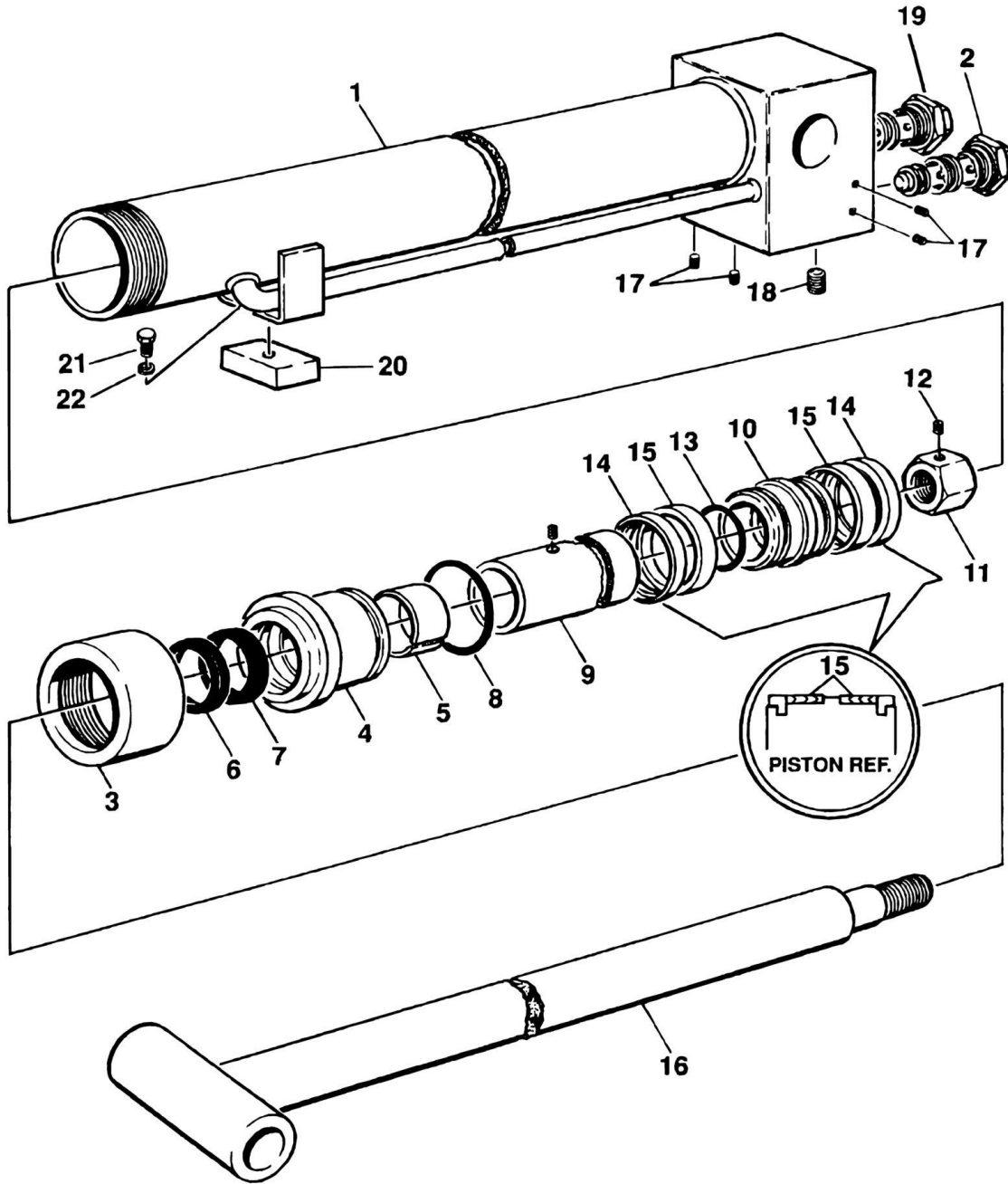
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FIGURE 5-9. STEER CYLINDER ASSEMBLY (4WD)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1681892	Ref	STEER CYLINDER ASSEMBLY (4WD)	B
1	1681413	1	Barrel	
2	3300273	1	Nut	
2	0100011	AR	Loctite #242	
2	0100038	AR	Primer, Locking	
3	3900170	1	Setscrew 3/8in-16NC x 3/8in	
3	0100011	AR	Nyloc	
4	Kit	1	Ring, Wear	
5	Kit	1	Seal	
6	Kit	1	O-Ring	
7	3480134	1	Piston	
8	4563864	1	Spacer	
9	3900141	1	Setscrew 1/4in-20NC x 3/8in	
9	0100011	1	Loctite #242	
10	Kit	1	O-Ring	
11	Kit	1	Ring, Wear	
12	1681344	1	Head, Cylinder	
13	Kit	1	Seal, Rod	
14	Kit	1	Wiper, Rod	
15	1120108	1	Cap	
15	0100035	AR	Loctite #222	
16	1681411	1	Rod	
17	2160006	1	Fitting, Grease (Prior to SN 27513)	
17	2160002	1	Fitting, Grease (SN 27513 to Present)	
	2901123	1	Kit, Seal (Includes Items 4, 5, 6, 9, 10, 11, 13 & 14)	

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FIGURE 5-10. TELESCOPE CYLINDER ASSEMBLY - MAIN BOOM



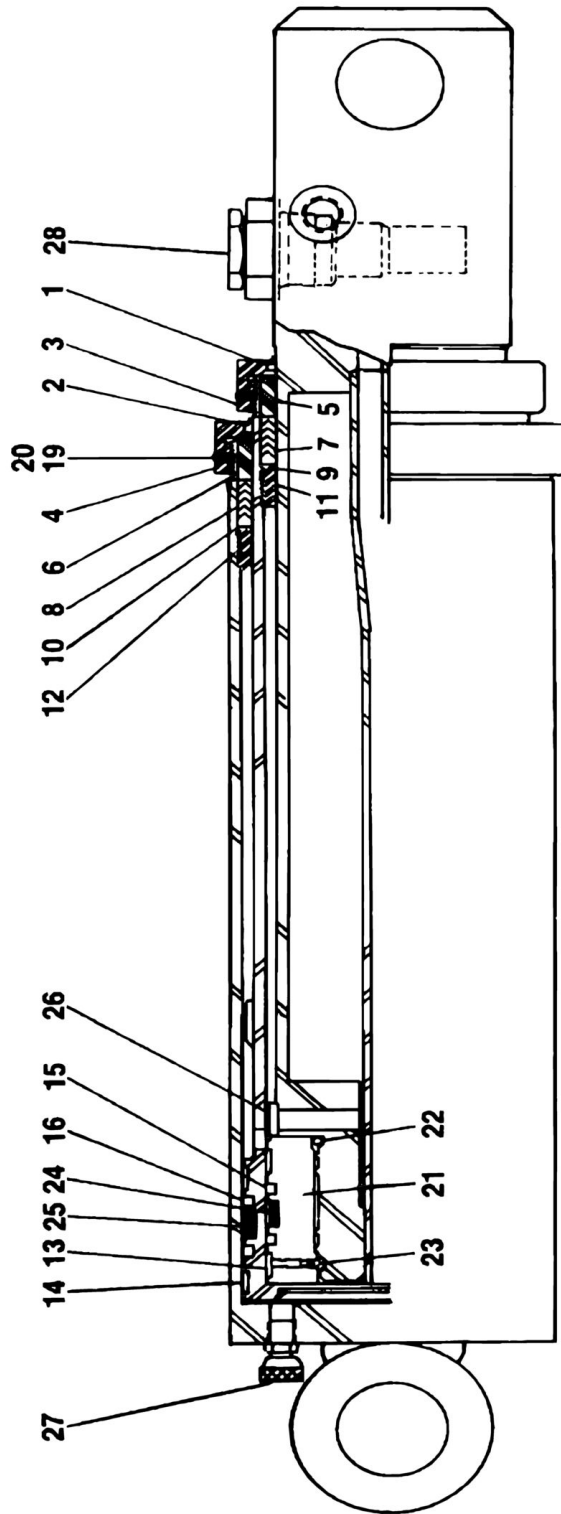
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FIGURE 5-10. TELESCOPE CYLINDER ASSEMBLY - MAIN BOOM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1682492	Ref	TELESCOPE CYLINDER ASSEMBLY (MAIN BOOM) (JUNE 1991 TO PRESENT)	A
1	1682493	1	Barrel Assembly	
2	4640634	1	Valve, Vented Counterbalance	
2	2900770	1	Seal Kit - Cartridge Valve	
3	1120108	1	End Cap	
3	0100035	AR	Loctite #222	
4	1681283	1	Head	
5	Kit	1	Ring, Wear	
6	Kit	1	Seal, Wiper	
7	Kit	1	Seal, Rod	
8	Kit	1	O-Ring	
9	4563330	1	Spacer, Tube	
9	3951603	2	Setscrew 3/8in-16NC x 3/8in	
9	0100011	AR	Loctite #242	
10	3480092	1	Piston	
11	3300286	1	Nut, Hex	
11	0100011	AR	Loctite #242	
11	0100038		Primer	
12	3900170	1	Setscrew 3/8in-16NC x 3/8in	
13	Kit	1	O-Ring	
14	Kit	2	Ring, Guidelock	
15	Kit	2	Seal, Piston	
16	1681883	1	Rod Assembly	
17	2180527	4	Plug 1/16in	
18	2200222	2	Plug 1/4in	
18	0100020	AR	Sealant, Pipe	
19	4640495	1	Valve, Counterbalance	
19	2900770	1	Seal Kit - Cartridge Valve	
20	3340545	1	Pad, Wear (May 1994 to Present Only)	
21	0641604	1	Bolt 3/8in-16NC x 1/2in	
22	4761600	1	Lockwasher 3/8in	
	2900396	1	Seal Kit (Includes Items 5, 6, 7, 8, 13, 14 & 15)	

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FIGURE 5-11. TELESCOPE CYLINDER ASSEMBLY (TOWER BOOM)



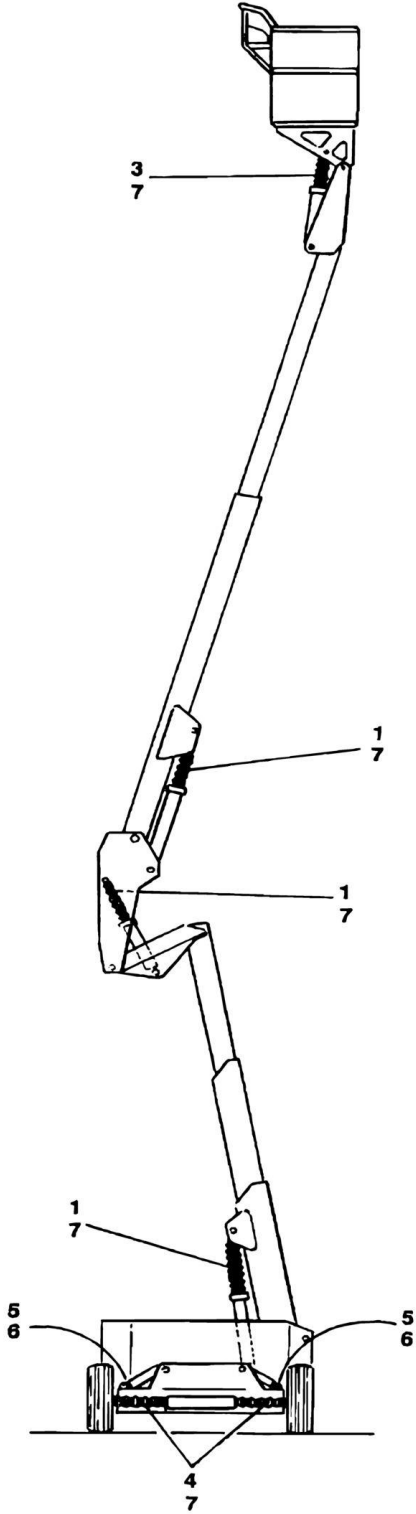
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FIGURE 5-11. TELESCOPE CYLINDER ASSEMBLY (TOWER BOOM)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1681980	Ref	TELESCOPE CYLINDER ASSEMBLY - TOWER BOOM	-
1	Kit	1	Ring, Wiper	
2	Kit	1	Ring, Wiper	
3	7009564	1	Nut, Packing	
4	7009563	1	Nut, Packing	
5	7009562	1	Ring, Bearing	
6	7009561	1	Ring, Bearing	
7	Kit	1	Packing Assembly	
8	Kit	1	Packing Assembly	
9	7009558	1	Spring, Wave	
10	7009557	1	Spring, Wave	
11	7009556	1	Ring, Stop	
12	7009555	1	Ring, Stop	
13	7009554	2	Bearing, Piston	
14	7009553	2	Bearing, Piston	
15	7009552	2	Ring, Piston	
16	7009551	2	Ring, Piston	
19	7009550	2	Ball, Nylon	
20	7009549	2	Setscrew 1/4in-20NC	
21	7009548	1	Piston	
22	Kit	2	O-Ring	
23	7009546	1	Setscrew	
24	Kit	1	Seal, O-Ring Piston	
25	Kit	1	Seal, O-Ring Piston	
26		Ref	Pin	
27	7009537	1	Release, Air	
28	4640509	1	Valve, Holding	
28	2900792	1	Seal Kit - 4640509 Valve	
28	7009569	1	Plunger Assembly	
28	7009568	1	1st Sleeve Assembly	
28	7009567	1	Cylinder, Main	
	2900693	1	Seal Kit (Includes Items 1, 2, 7, 8, 22, 24 & 25)	

SECTION 5 - CYLINDER

FIGURE 5-12. CYLINDER BELLOWS INSTALLATION (OPTIONAL)



SECTION 5 - CYLINDER

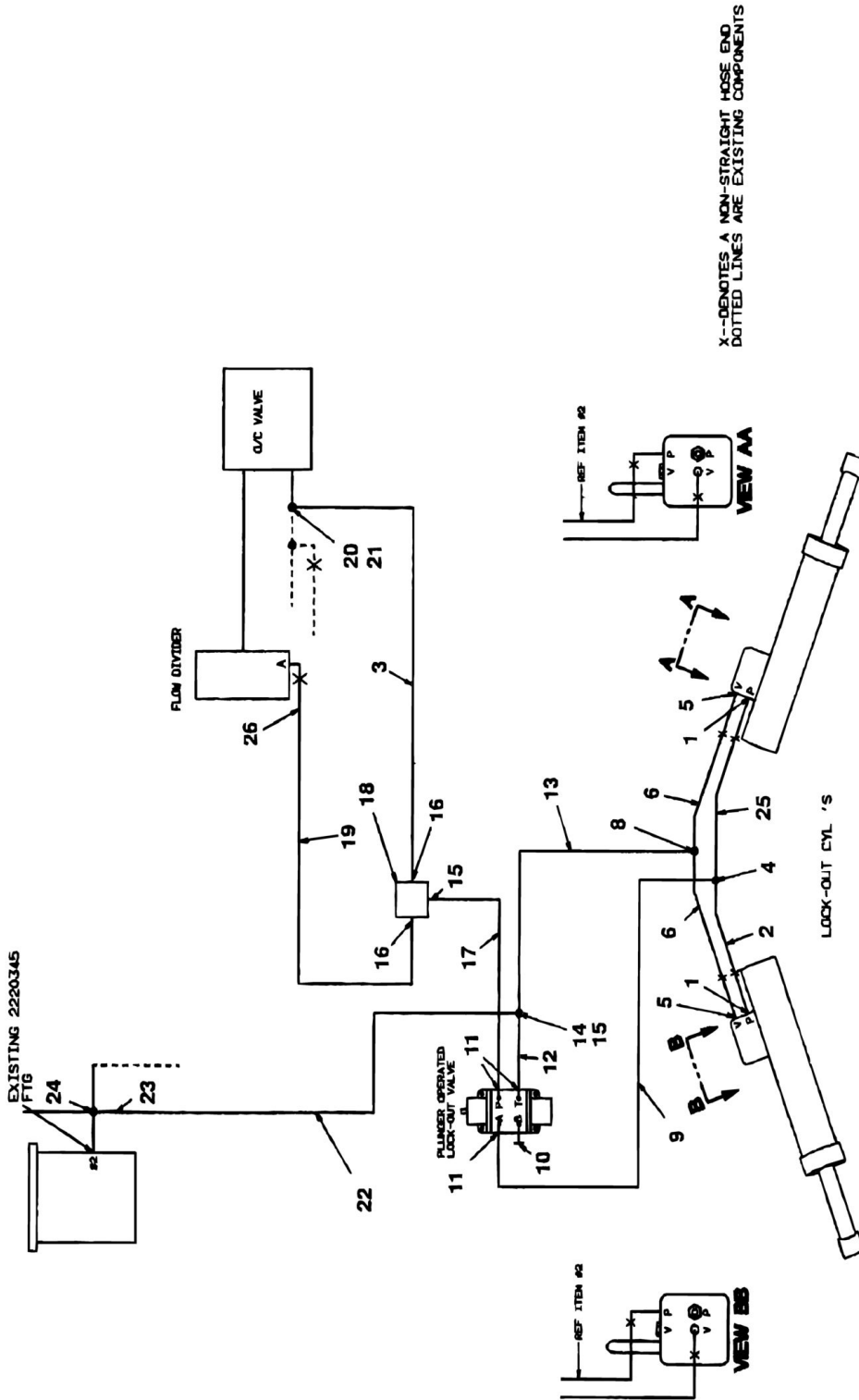
FIGURE 5-12. CYLINDER BELLOWS INSTALLATION (OPTIONAL)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CYLINDER BELLOWS INSTALLATION (OPTIONAL)	
	0238887	Ref	2WD 6ft-6in/2M Machines with Fixed Axle	C
	0238950	Ref	2WD 6ft-6in/2M Machines with Oscillating Axle	C
	0239000	Ref	2WD 5ft-9in/1.75M Machines with Fixed Axle	C
	0238889	Ref	2WD 5ft-9in/1.75M Machines with Oscillating Axle	C
	0239000	Ref	4WD Machines with Fixed Axle	C
	0238999	Ref	4WD Machines with Oscillating Axle	C
1	0460093	3	Bellows (With Zipper) (Tower Lift, Main Lift and Slave Cylinders)	
3	0460084	1	Bellows (With Zipper) (Slave Cylinder)	
4		Ref	Bellows (With Zipper) (Steer Cylinder) Options:	
4	0460082	2	2WD 6ft-6in/2M Machines	
4	0460075	2	2WD 5ft-9in/1.75M Machines	
4	0460075	2	4WD Machines	
5		Ref	Bellows (With Zipper) (Lockout Cylinder)	
5	Not Required	0	Fixed Axle	
5	0460083	2	Oscillating Axle	
6	1320037	2	Clamp, Worm Gear (3in- 4 1/8in Dia) (Oscillating Axle Machines Only)	
7	1320122	6	Clamp, Worm Gear (5 1/8in - 6in Dia)	

SECTION 6 - HYDRAULIC

SECTION 6 - HYDRAULIC

FIGURE 6-1. HYDRAULIC DIAGRAM - AXLE LOCKOUT



SECTION 6 - HYDRAULIC

FIGURE 6-1. HYDRAULIC DIAGRAM - AXLE LOCKOUT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HYDRAULIC DIAGRAM - AXLE LOCKOUT WITH SWIVEL	
	2791844	Ref	2m Wide Machines	D-5
	2791978	Ref	1.75m Wide Machines	B
1	2220582	2	Fitting, Straight	
2		Ref	Hose Options:	
2	2750899	1	2m Wide Machines	
2	2751014	1	1.75m Wide Machines	
3	2750900	1	Hose	
4	222504	1	Fitting, Tee	
5		Ref	Fitting Options:	
5	2220371	2	Straight - 2m Wide Machines	
5	2751014	2	90 - 1.75m Wide Machines	
6		Ref	Hose Options:	
6	2750990	2	2m Wide Machines	
6	2751138	2	1.75m Wide Machines	
8		Ref	Fitting, Tee Options:	
8	2220635	1	2m Wide Machines	
8	2220490	1	1.75m Wide Machines	
9		Ref	Hose Options:	
9	2751394	1	2m Wide Machines	
9	2751014	1	1.75m Wide Machines	
10	2220235	1	Fitting, Plug	
11	2220466	3	Fitting, 90	
12	2751394	1	Hose	
13		Ref	Hose Options:	
13	Not Required	0	2m Wide Machines	
13	2750785	1	1.75m Wide Machines	
14	2220587	1	Fitting, Tee	
15	2220414	2	Fitting, Straight	
16	2220416	2	Fitting, 90	
17	2751021	1	Hose	
18	4640013	1	Valve, Shuttle	
19	2750902	1	Hose	
20	2220618	1	Fitting, Reducer	
21	2220385	1	Fitting, Tee	
22	2750910	1	Hose	
23	2220619	1	Fitting, Reducer	
24	2220385	1	Fitting, Tee	
25		Ref	Hose Options:	
25	2750899	1	2m Wide Machines	
25	2751412	1	1.75m Wide Machines	
26	2220415	1	Fitting, Straight	
	0100020	AR	Sealant	

SECTION 6 - HYDRAULIC

FIGURE 6-2. DRIVE HYDRAULIC DIAGRAM (2WD WITH SWIVEL)

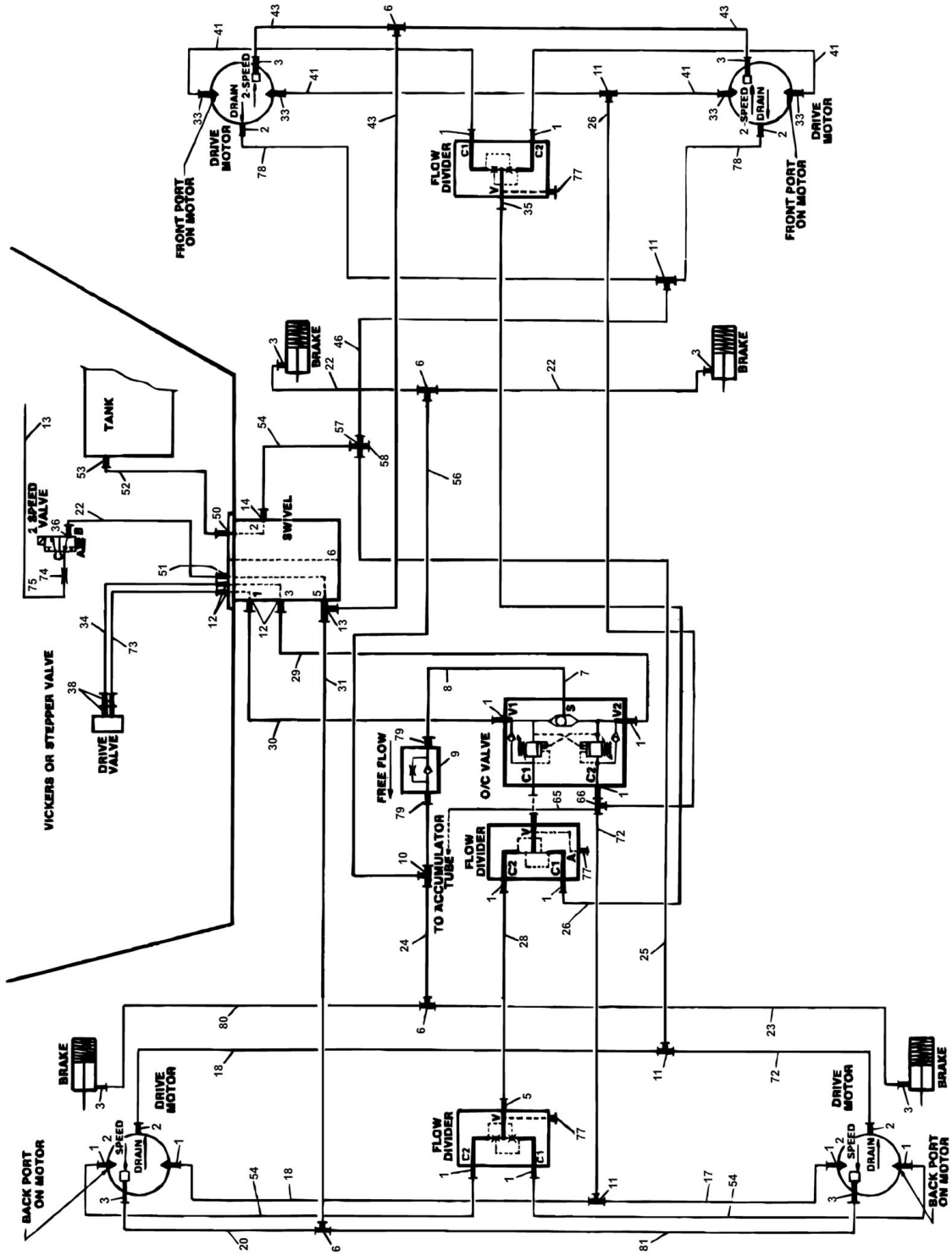
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	DRIVE HYDRAULIC DIAGRAM (2WD WITH SWIVEL)	
	2791976	Ref	Gas and Diesel Machines	B
	2791391	Ref	Electric Machines	F
2	4640780	1	Valve, Check	
3	2220500	2	Fitting, 45 (Electric Machines)	
3	2220386	1	Fitting, 90 (Gas and Diesel)	
3	2220471	1	Fitting, Long 90 (Gas and Diesel)	
4	2220811	2	Fitting, Reducer (Electric Machine)	
4	2220375	2	Fitting, Straight (Gas and Diesel)	
5	2220346	4	Fitting, Straight	
8	2220375	5	Fitting, Straight	
9	2220609	1	Fitting, Reducer	
10	2220582	1	Fitting, Straight	
11	2220909	1	Fitting, Orifice (.015)	
13	2220472	1	Fitting, 90	
14	2220800	4	Fitting, Straight	
15	2220374	2	Fitting, Straight	
16	2220466	3	Fitting, 90	
17	2220362	2	Fitting, Tee	
18	2751492	2	Hose (Electric Machines)	
18	2750927	1	Hose 52in (Gas and Diesel Machines)	
18	2750757	1	Hose 36in (Gas and Diesel Machines)	
19	2751013	1	Hose	
21	2750972	1	Hose	
22	2220345	2	Fitting, Straight	
23	2750929	1	Hose	
24	2750976	2	Hose	
26	2751502	2	Hose	
27	2220414	2	Fitting, Straight	
28	2751015	2	Hose	
29	2751018	1	Hose (Electric Machines)	
29	2750889	1	Hose (Gas and Diesel)	
30	2220415	2	Fitting, Straight	
31	2750889	1	Hose	
32	2750928	2	Hose	
33	2750777	1	Hose	
34	2751021	1	Hose	
36	2220679	1	Fitting, Tee (Electric Machines)	
36	2220659	1	Fitting, Straight (Gas and Diesel Machines)	
37	2220386	1	Fitting, 90 (Electric Machines Only)	
38	2751010	1	Hose	
40	2200222	2	Plug (Electric Machines)	
40	2200102	2	Plug (Gas and Diesel Machines)	
41	2220504	2	Fitting, Tee	
43	2751018	1	Hose (Electric Machines)	
43	2751427	1	Hose (Gas and Diesel Machines)	
45	2220605	2	Fitting, Tee	
47	2220618	1	Fitting, Reducer	
48	2751502	2	Hose	
49	2220236	1	Plug	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0100020	AR	Sealant	

SECTION 6 - HYDRAULIC

FIGURE 6-3. DRIVE HYDRAULIC DIAGRAM (4WD WITH SWIVEL)



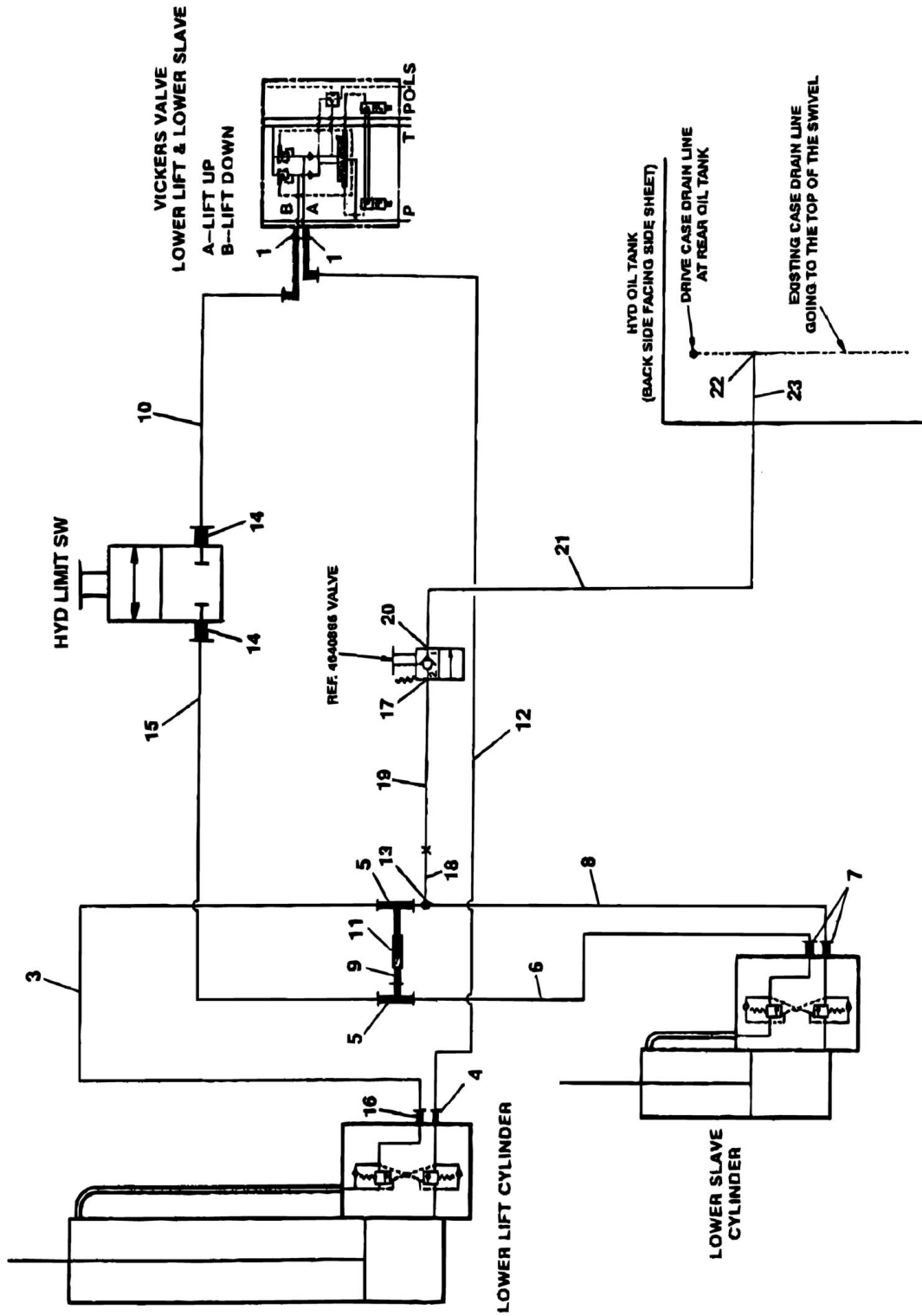
SECTION 6 - HYDRAULIC

FIGURE 6-3. DRIVE HYDRAULIC DIAGRAM (4WD WITH SWIVEL)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791971	Ref	DRIVE HYDRAULIC DIAGRAM (4WD WITH SWIVEL)	C
1	2220375	13	Fitting, Straight	
2	2220596	4	Fitting, 90	
3	2220415	8	Fitting, Straight	
5	2220800	1	Fitting, Straight	
6	2220504	4	Fitting, Tee	
10	2220711	1	Fitting	
11	2220362	4	Fitting, Tee	
12	2220346	4	Fitting, Straight	
13	2220684	1	Fitting, Tee	
14	2220345	1	Fitting, Swivel	
17	2750791	1	Hose	
18	2750976	2	Hose	
19	2751412	1	Hose	
20	2750889	1	Hose	
22	2751899	3	Hose	
23	2751017	1	Hose	
24	2751409	1	Hose	
25	2750777	1	Hose	
26	2750759	2	Hose	
28	2751490	1	Hose	
29	2751494	1	Hose	
30	2750968	1	Hose	
31	2751021	1	Hose	
33	2220366	4	Fitting, 90	
34	2750927	1	Hose	
35	2220367	1	Fitting, 90	
36	2220472	1	Fitting, 90	
38	2220375	1	Fitting, Straight	
41	2750766	4	Hose	
43	2751026	3	Hose	
45	2750773	2	Hose	
46	2750762	1	Hose	
50	2220345	1	Fitting, Straight	
51	2220417	1	Fitting, Straight	
52	2750972	1	Hose	
53	2220659	1	Fitting, 90	
54	2750928	3	Hose	
56	2750756	1	Hose	
57	2220469	1	Fitting, Cross	
58	2220619	1	Fitting, Reducer	
66 to 71	2220385	1	Fitting, Tee	
72	2750929	2	Hose	
73	2750757	1	Hose	
74	2220582	1	Fitting	
75	2220909	1	Fitting, Orifice (.015)	
77	2220235	3	Fitting	
78	4100026	2	Sleeve, Nylon	
80	2751010	1	Hose	
81	2750889	1	Hose	

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FIGURE 6-4. LIFT AND LEVEL (TOWER BOOM) HYDRAULIC DIAGRAM



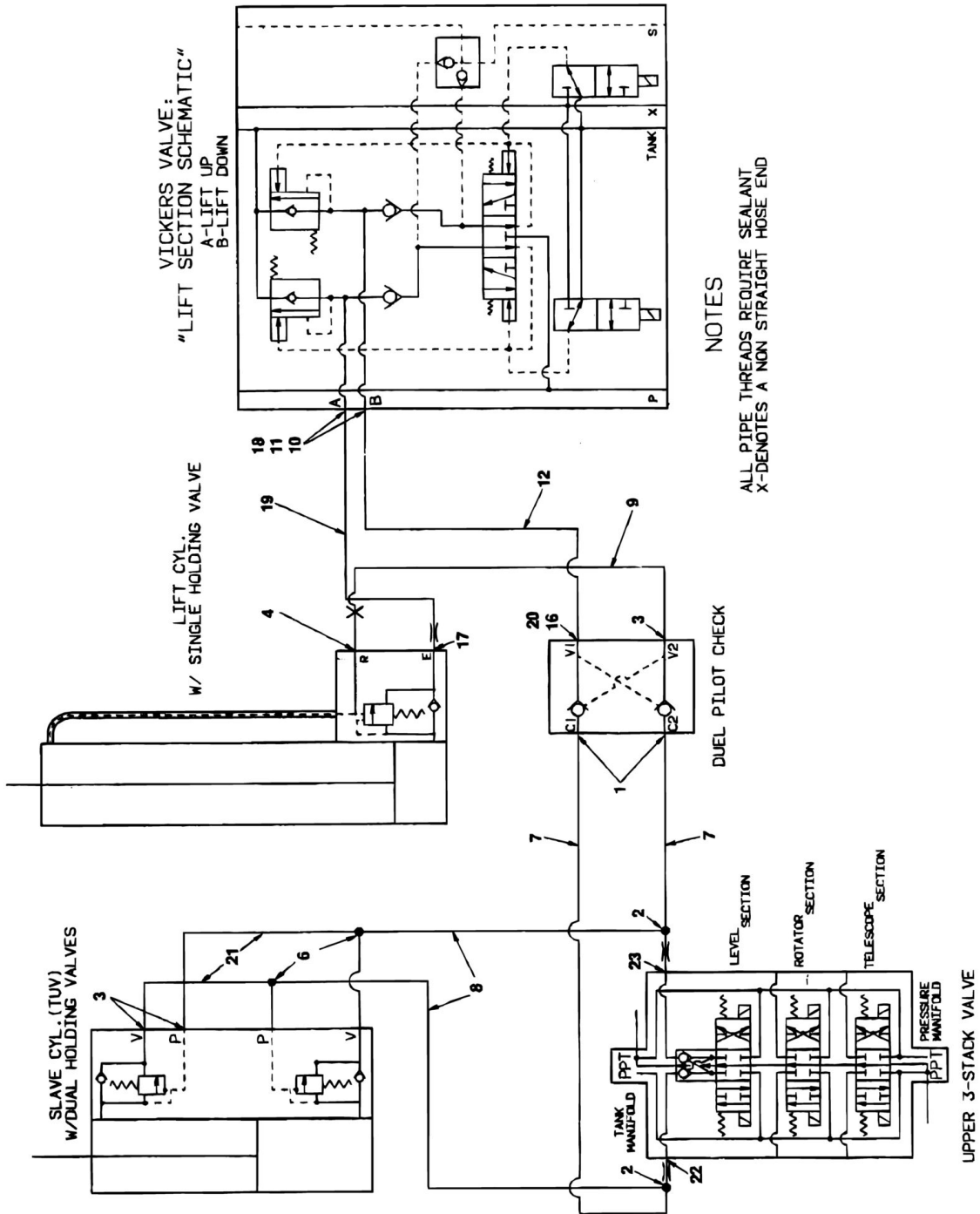
SECTION 6 - HYDRAULIC

FIGURE 6-4. LIFT AND LEVEL (TOWER BOOM) HYDRAULIC DIAGRAM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	LIFT AND LEVEL (TOWER BOOM) HYDRAULIC DIAGRAM	
	2791487	Ref	Gas and Diesel Machines	D
	2791387	Ref	Electric Machines	E
1	2220577	2	Fitting, Straight	
3	2750991	1	Hose	
4	2220343	1	Fitting, Straight (Gas and Diesel Machines)	
4	2180423	1	Fitting, Orifice (.078) (Electric Machines)	
4	2180548	1	Fitting, Modified Straight (Electric Machines)	
5	2220604	2	Fitting, Tee	
6	2751163	1	Hose	
7	2220399	2	Fitting, Straight	
8	2751164	1	Hose	
9	2200283	1	Fitting, Coupling	
10	2751133	1	Hose	
11	4640160	1	Valve, Relief	
12	2751110	1	Hose	
13	2220635	1	Fitting, Tee (Gas and Diesel Machines)	
14	2220703	2	Fitting, 90	
15	2750911	1	Hose	
16	2220343	1	Fitting, Straight	
17	2220582	1	Fitting, Straight (Gas and Diesel Machines)	
18	2220609	1	Fitting, Reducer (Gas and Diesel Machines)	
19	2750891	1	Hose (Gas and Diesel Machines)	
20	2220472	1	Fitting, 90 (Gas and Diesel Machines)	
21	2751899	1	Hose (Gas and Diesel Machines)	
22	2220385	1	Fitting, Tee (Gas and Diesel Machines)	
23	2220618	1	Fitting, Reducer (Gas and Diesel Machines)	
	0100020	AR	Sealant, Pipe	
	2901310	1	Resynchronizing Kit (Standard January 1995 to Present)	

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FIGURE 6-5. LIFT AND SLAVE (MAIN BOOM) HYDRAULIC DIAGRAM



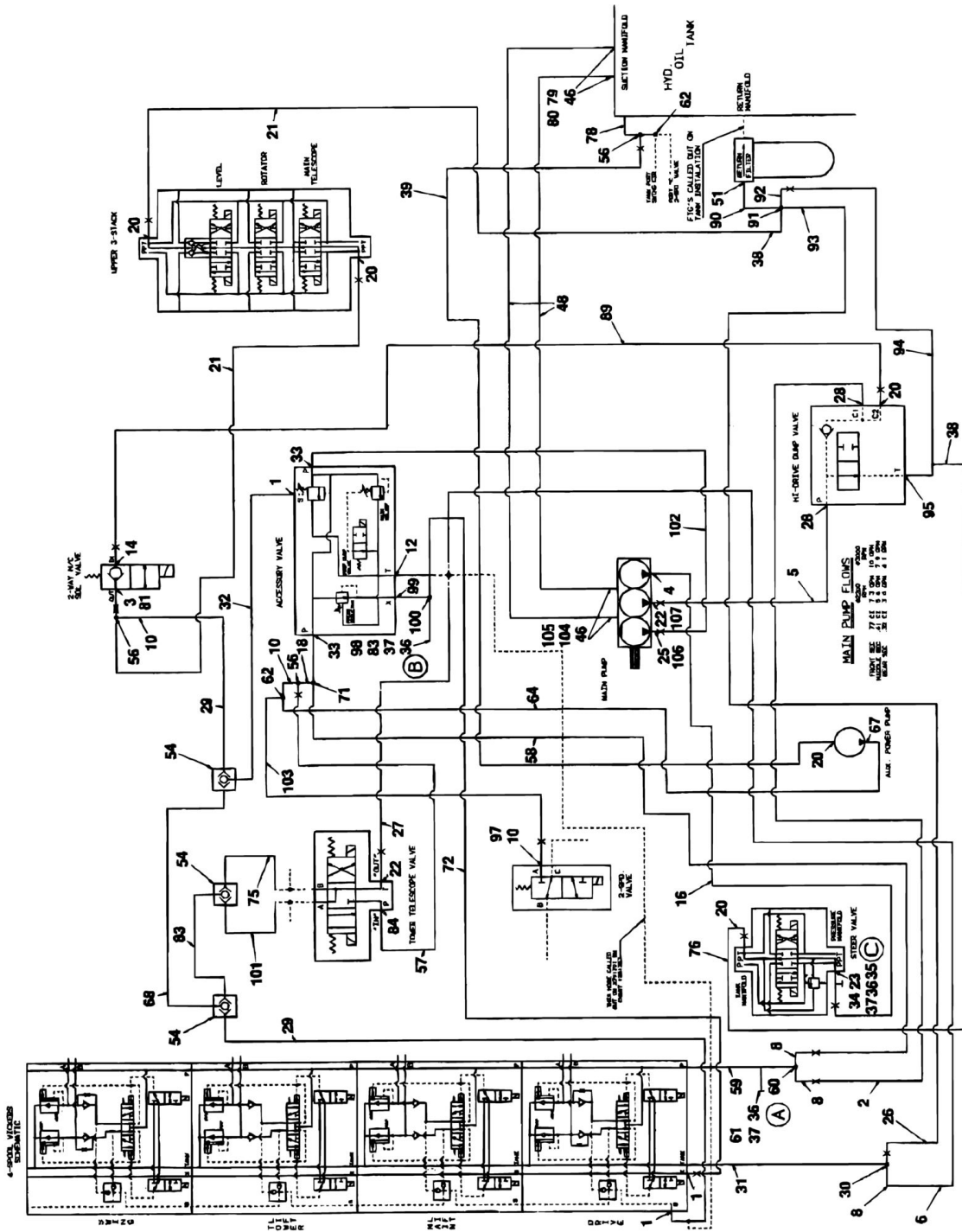
SECTION 6 - HYDRAULIC

FIGURE 6-5. LIFT AND SLAVE (MAIN BOOM) HYDRAULIC DIAGRAM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	LIFT AND SLAVE (MAIN BOOM) HYDRAULIC DIAGRAM	
	2792009	Ref	Gas and Diesel Machines	-
	2792011	Ref	Electric Machines	B
1	2220371	2	Fitting, Straight	
2	2220579	2	Fitting, Tee	
3	2220473	3	Fitting, 90	
4	2180548	1	Fitting, Modified (Gas and Diesel Machines)	
4	2180448	1	Fitting, Orifice (.062) (Gas and Diesel Machines) (Prior to SN 27346)	
4	2180380	1	Fitting, Orifice (.062) (Gas and Diesel Machines) (SN 27346 to Present)	
4	2220343	1	Fitting, Straight (Electric Machines)	
6	2220899	2	Fitting, Tee	
7	2751113	2	Hose	
8	2751161	2	Hose	
9	2750910	1	Hose	
10	2220501	2	Fitting, Reducer (Gas and Diesel Machines Only)	
11	2220221	2	Fitting, Reducer	
12	2751912	1	Hose (Gas and Diesel Machines)	
12	2751911	1	Hose (Electric Machines)	
16	2220472	1	Fitting, 90	
17	2220585	1	Fitting, 90 (Gas and Diesel Machines)	
17	2180630	1	Fitting, 90 Modified (Electric Machines)	
17	2180631	1	Fitting, Orifice (.062) (Electric Machines)	
18	2220609	2	Fitting, Reducer (Gas and Diesel Machines)	
18	2220582	2	Fitting, Straight (Electric Machines)	
19	2751911	1	Hose (Gas and Diesel Machines)	
19	2751912	1	Hose (Electric Machines)	
20	2220654	1	Fitting, 90	
21	2750918	2	Hose	
22	2220473	1	Fitting, 90 (Gas and Diesel Machines)	
22	2180480	1	Fitting, Modified Straight (Electric Machines)	
22	2180724	1	Fitting, Orifice (Electric Machines)	
23	2220371	1	Fitting, Straight (Gas and Diesel Machines)	
23	2180480	1	Fitting, Modified Straight (Electric Machines)	
23	2180615	1	Fitting, Orifice (.047) (Electric Machines)	

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FIGURE 6-6. PUMP HYDRAULIC DIAGRAM (GAS AND DIESEL MACHINES)



SECTION 6 - HYDRAULIC

FIGURE 6-6. PUMP HYDRAULIC DIAGRAM (GAS AND DIESEL MACHINES)

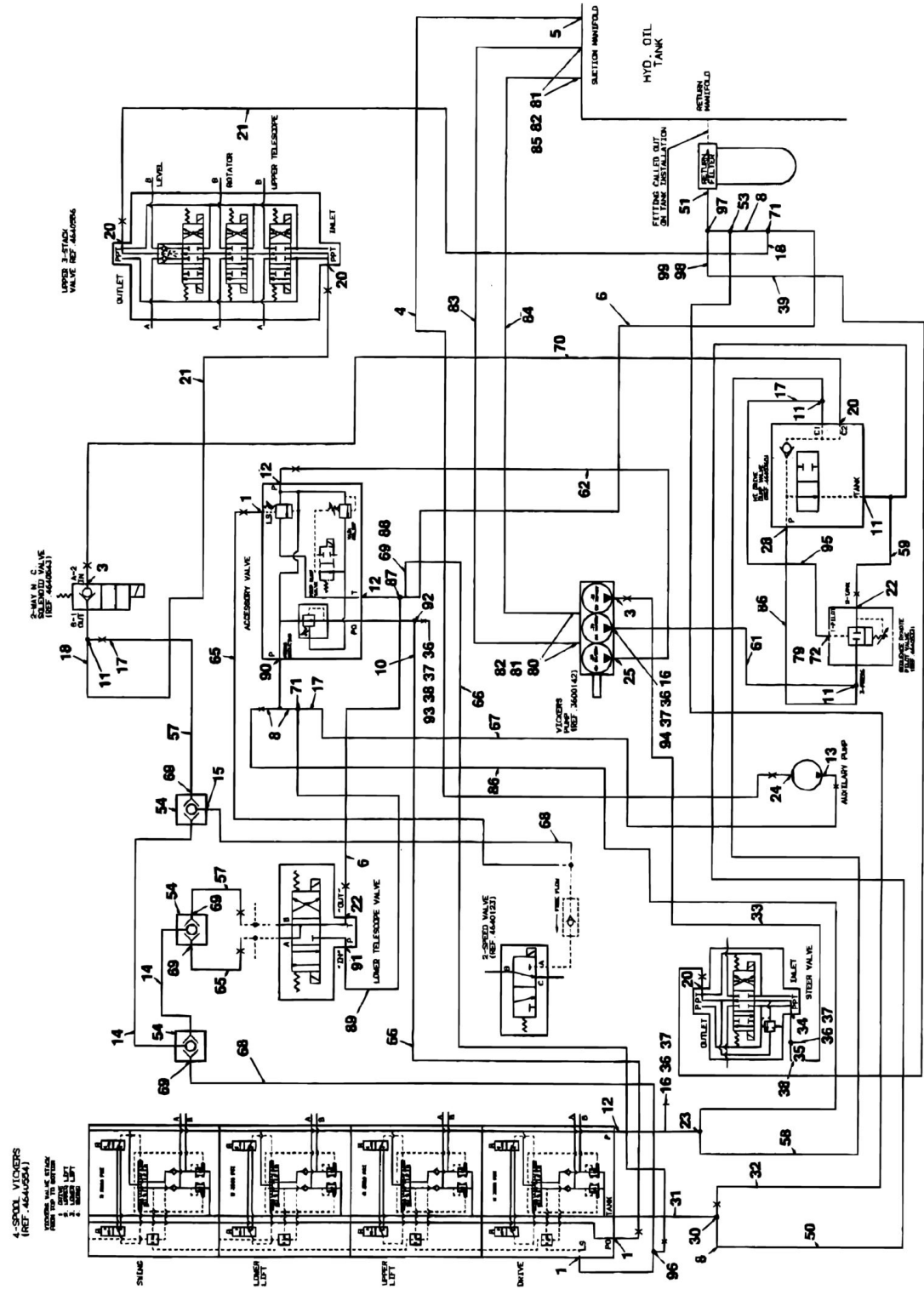
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791977	Ref	HYDRAULIC DIAGRAM - PUMP (GAS AND DIESEL MACHINES)	B
1	2220582	3	Fitting, Straight	
2	2750972	1	Hose	
3	2180479	1	Fitting, Straight (Modified)	
4	2220372	1	Fitting, Straight	
5	2751467	1	Hose	
6	2750970	1	Hose	
8	2220622	3	Fitting, Reducer	
10	2220609	4	Fitting, Reducer	
12	2220375	1	Fitting, Straight	
14	2220628	1	Fitting, 90	
16	2751004	1	Hose	
18	2220619	1	Fitting, Reducer	
20	2220371	5	Fitting, Straight	
21	2751165	2	Hose	
22	2220373	1	Fitting, Straight	
23	2220399	1	Fitting	
25	4640744	1	Valve, Check	
26	2751341	1	Hose	
27	2750968	1	Hose	
28	2220596	2	Fitting, 90	
29	2751015	2	Hose	
30	2220682	1	Fitting, Tee	
31	2220435	1	Fitting, Straight	
32	2750900	1	Hose	
33	2220366	2	Fitting, 90	
34	2220052	1	Fitting, Swivel	
35	2220752	1	Fitting, Tee	
36	2220428	3	Fitting, Coupling	
37	2220429	3	Cap, Dust	
38	2220773	2	Fitting, 90	
39	2750991	1	Hose	
46	1320033	8	Clamp	
48	2720343	138 in/3.5m	Hose (2 Lengths 69in Each)	
51	2220275	1	Fitting, Reducer	
54	4640574	3	Valve, Shuttle	
56	2220635	3	Fitting, Tee	
57	2750990	1	Hose	
58	2750928	1	Hose	
59	2220451	1	Fitting, Straight	
60	2180663	1	Fitting, Modified Tee	
61	2220820	1	Fitting, 90	
62	2220605	2	Fitting, Tee	
64	2751021	1	Hose	
67	2220582	1	Fitting, Straight	
68	2751020	1	Hose	
71	2220385	1	Fitting, Tee	
72	2751010	1	Hose	
75	2750902	1	Hose	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
76	2750916	1	Hose	
78	2220703	1	Fitting, Nipple	
79	2220377	2	Fitting, Modified	
80	2210003	2	Fitting, Straight Barbed	
81	2180682	1	Fitting, Orifice (.109)	
83	2751394	2	Hose	
84	2220473	1	Fitting, 90	
89	2751002	1	Hose	
90	2220403	1	Fitting, Straight	
91	2180642	1	Fitting, Modified Tee	
92	2220624	1	Fitting, Reducer	
93	2220710	1	Fitting, Reducer	
94	2750757	1	Hose	
95	2180491	1	Fitting, Modified	
97	4640780	1	Valve, Check	
98	2220414	1	Fitting	
99	2220727	1	Fitting	
100	2220584	1	Fitting, Tee	
101	2750901	1	Hose	
102	2750759	1	Hose	
103	2751017	1	Hose	
104	2220376	2	Fitting	
105	2210014	2	Fitting	
106	2220810	1	Fitting	
107	2220374	1	Fitting	
	0100020	AR	Sealant, Thread	

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FIGURE 6-7. PUMP HYDRAULIC DIAGRAM (ELECTRIC MACHINES)



SECTION 6 - HYDRAULIC

FIGURE 6-7. PUMP HYDRAULIC DIAGRAM (ELECTRIC MACHINES)

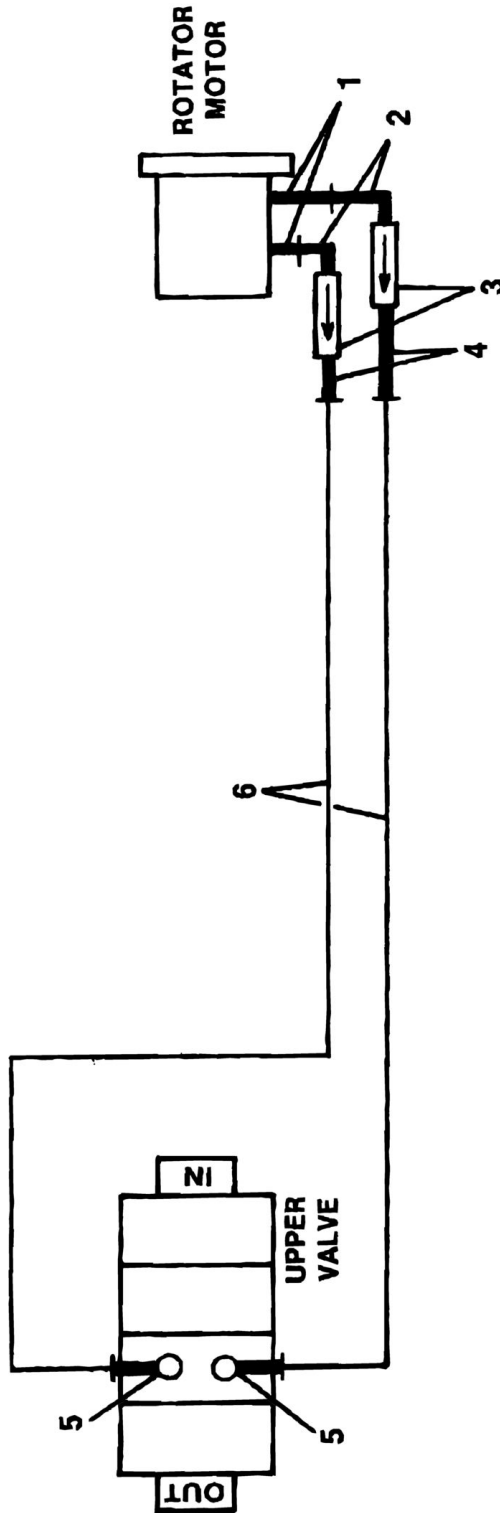
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791607	Ref	HYDRAULIC DIAGRAM - PUMP (ELECTRIC MACHINES)	C
1	2220582	3	Fitting, Straight	
3	2220372	2	Fitting, Straight	
4	2751003	1	Hose	
5	2220703	1	Fitting, 90	
6	2750970	2	Hose	
8	2220622	4	Fitting, Reducer	
10	2220609	1	Fitting, Reducer	
11	2220602	4	Fitting, Tee	
12	2220375	3	Fitting, Straight	
13	2220472	1	Fitting, 90	
14	2220261	2	Fitting, Nipple	
15	2220414	1	Fitting, Straight	
16	2220820	2	Fitting, 90	
17	2220618	3	Fitting, Reducer	
18	2220619	2	Fitting, Tee	
20	2220371	4	Fitting, Straight	
21	2751165	2	Hose	
22	2220373	2	Fitting, Straight	
23	2180325	1	Fitting, Modified Tee	
24	2220473	1	Fitting, 90	
25	4640744	1	Valve, Check	
28	2220596	1	Fitting, 90	
30	2220682	1	Fitting, Tee	
31	2220435	1	Fitting, Straight	
32	2750834	1	Hose	
33	2750910	1	Hose	
34	2220052	1	Fitting, Straight	
35	2220752	1	Fitting, Tee	
36	2220428	4	Fitting, Coupling	
37	2220429	4	Cap, Dust	
38	2220399	2	Fitting, Straight	
39	2750990	1	Hose	
50	2750976	1	Hose	
51	2220696	1	Fitting, Reducer	
53	2220700	1	Fitting, Tee	
54	4640013	3	Valve, Shuttle	
57	2750889	2	Hose	
58	2750763	1	Hose	
59	2750977	1	Hose	
61	2751502	1	Hose	
62	2750972	1	Hose	
65	2751018	2	Hose	
66	2751412	2	Hose	
67	2751017	1	Hose	
68	2751020	2	Hose	
69	2220416	5	Fitting, 90	
70	2751003	1	Hose	
71	2220385	2	Fitting, Tee	
72	2180540	1	Fitting, Modified Straight	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
79	2180660	1	Fitting, Orifice (.047)	
80	2220408	2	Fitting, Straight	
81	2210005	4	Fitting, Barbed	
82	1320030	4	Clamp	
83	2720292	23 in	Hose, Suction	
84	2720298	18 in	Hose, Suction	
85	2220356	2	Fitting, 45	
86	2750757	2	Hose	
87	2180325	1	Fitting, Modified	
88	2220909	1	Fitting, Modified	
89	2750968	1	Hose	
90	2220695	1	Fitting, Tee	
91	2220600	1	Fitting	
92	2220606	1	Fitting, Tee	
93	2751851	1	Hose	
94	2180491	1	Fitting, Modified	
95	2751010	1	Hose	
96	2220605	1	Fitting	
97	2220681	1	Fitting	
98	2220621	1	Fitting	
99	2220507	1	Fitting	
	0100020	AR	Sealant	

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FIGURE 6-8. ROTATION HYDRAULIC DIAGRAM



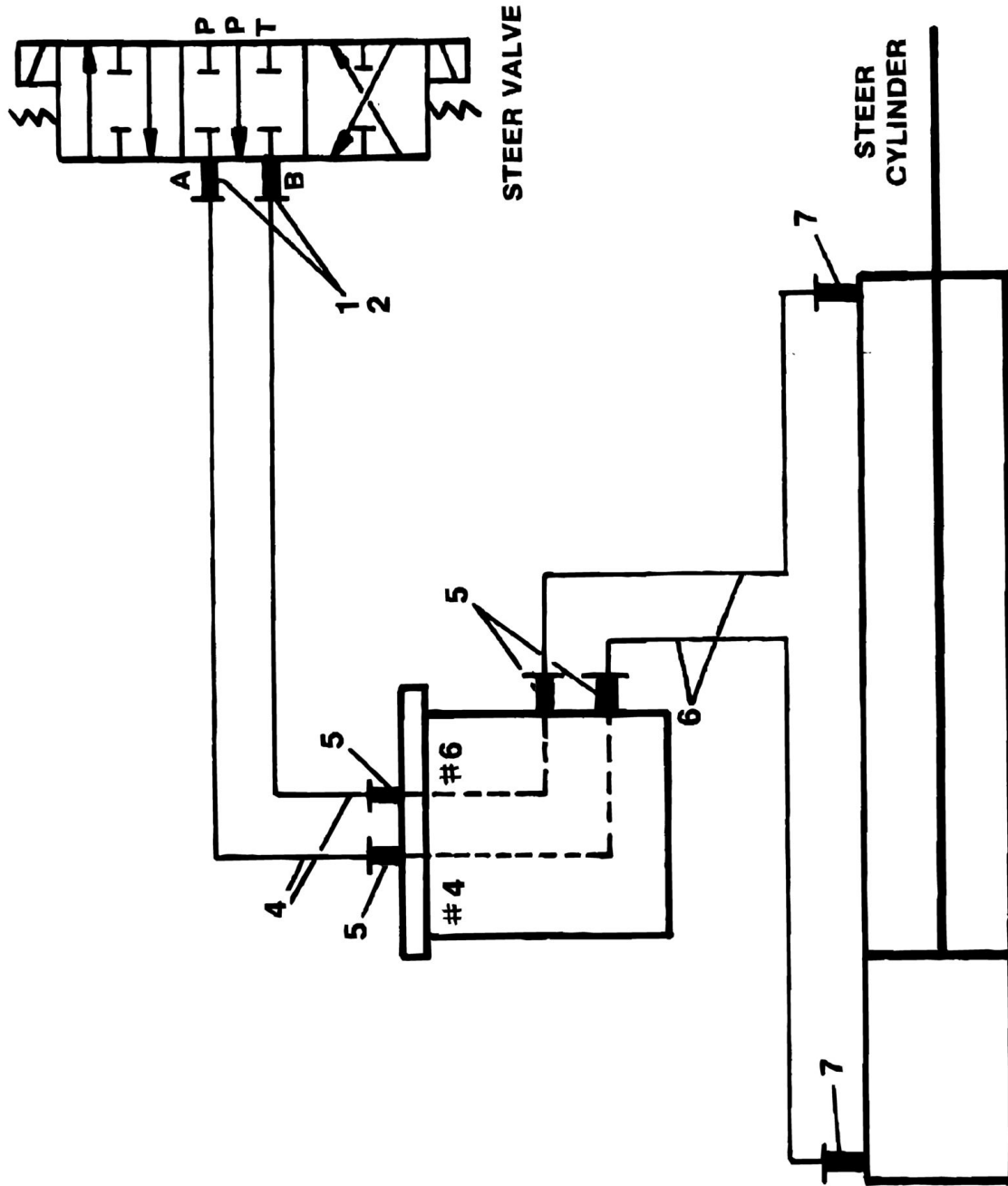
SECTION 6 - HYDRAULIC

FIGURE 6-8. ROTATION HYDRAULIC DIAGRAM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791361	Ref	HYDRAULIC DIAGRAM - ROTATION	-
1	2220816	2	Fitting, Adapter	
2	2220261	2	Fitting, Nipple	
3	4640383	2	Valve, Restrictor	
4	2220416	2	Fitting, 90	
5	2220582	2	Fitting, Straight	
6	2751897	2	Hose	
	0100020	AR	Sealant	

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FIGURE 6-9. STEER WITH SWIVEL HYDRAULIC DIAGRAM



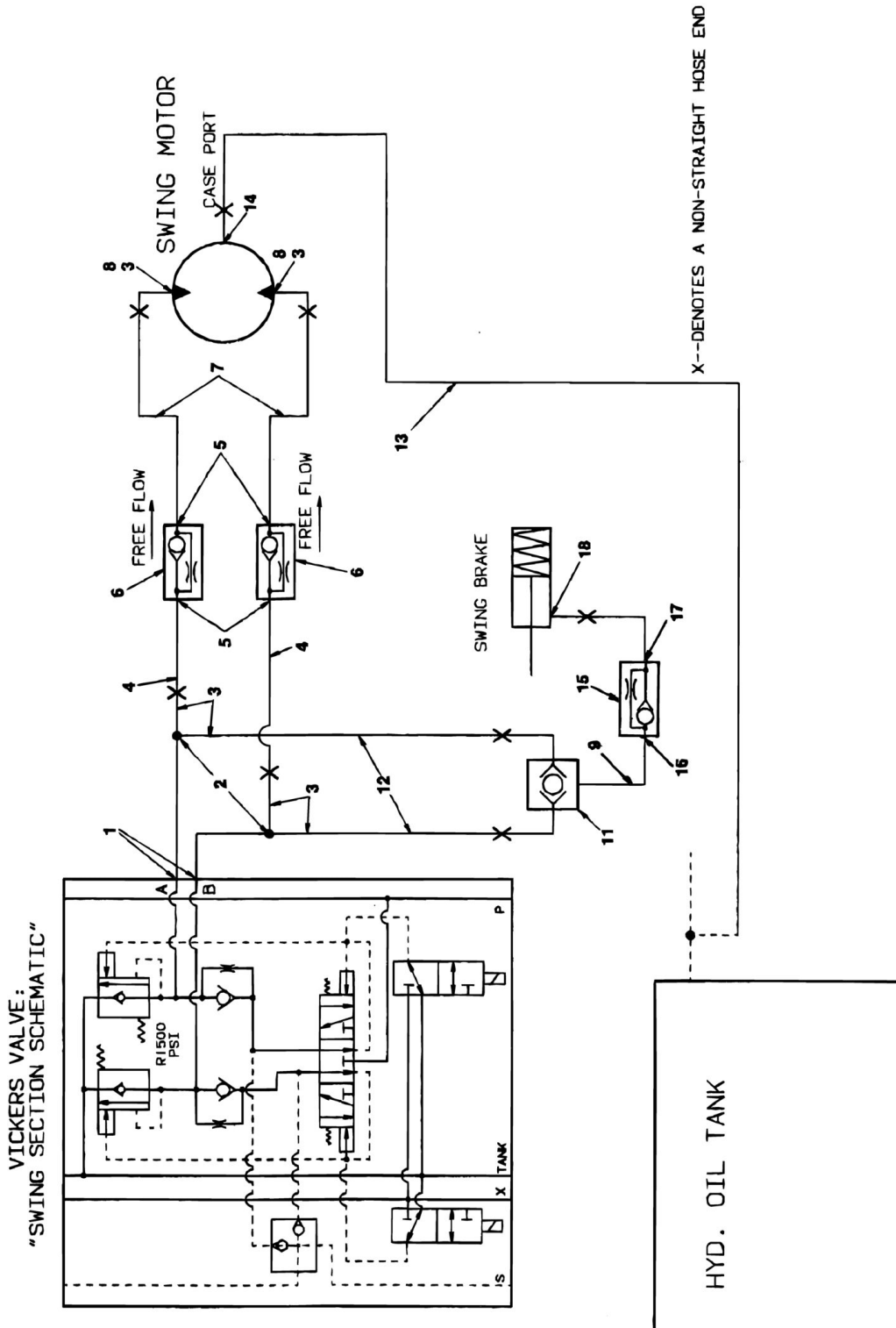
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FIGURE 6-9. STEER WITH SWIVEL HYDRAULIC DIAGRAM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	HYDRAULIC DIAGRAM - STEER WITH SWIVEL	
	2791383	Ref	2WD 6ft-6in Wide Machines with Fixed Axle	B
	2791473	Ref	2WD 5ft-9in Wide Machines With Fixed Axle	-
	2791382	Ref	2WD 6ft-6in Wide Machines With Oscillating Axle	B
	2791474	Ref	2WD 5ft-9in Wide Machines With Oscillating Axle	-
	2791397	Ref	4WD 6ft-6in Wide Machines With Oscillating Axle	A
1	2180699	2	Fitting, 90 Modified (2WD 6ft-6in Wide Machines)	
2	2180660	2	Orifice (.0469) (2WD 6ft-6in Wide Machines)	
2	0100011	AR	Loctite	
2	2220472	2	Fitting, 90 (2WD 5ft-9in Wide Machines and all 4WD)	
4	2750899	2	Hose (4WD)	
4	2750760	2	Hose (2WD)	
5	2220414	4	Fitting, Straight	
6	2751428	2	Hose (2WD with Fixed Axle)	
6	2751026	2	Hose (2WD with Fixed oscillating Axle)	
6	2750756	2	Hose (4WD - All Machines)	
7	2220414	2	Fitting, Straight (2WD with Fixed Axle)	
7	2220416	2	Fitting, 90 (2WD With Oscillating Axle and all 4WD)	
	0100020	AR	Sealant	

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FIGURE 6-10. SWING HYDRAULIC DIAGRAM



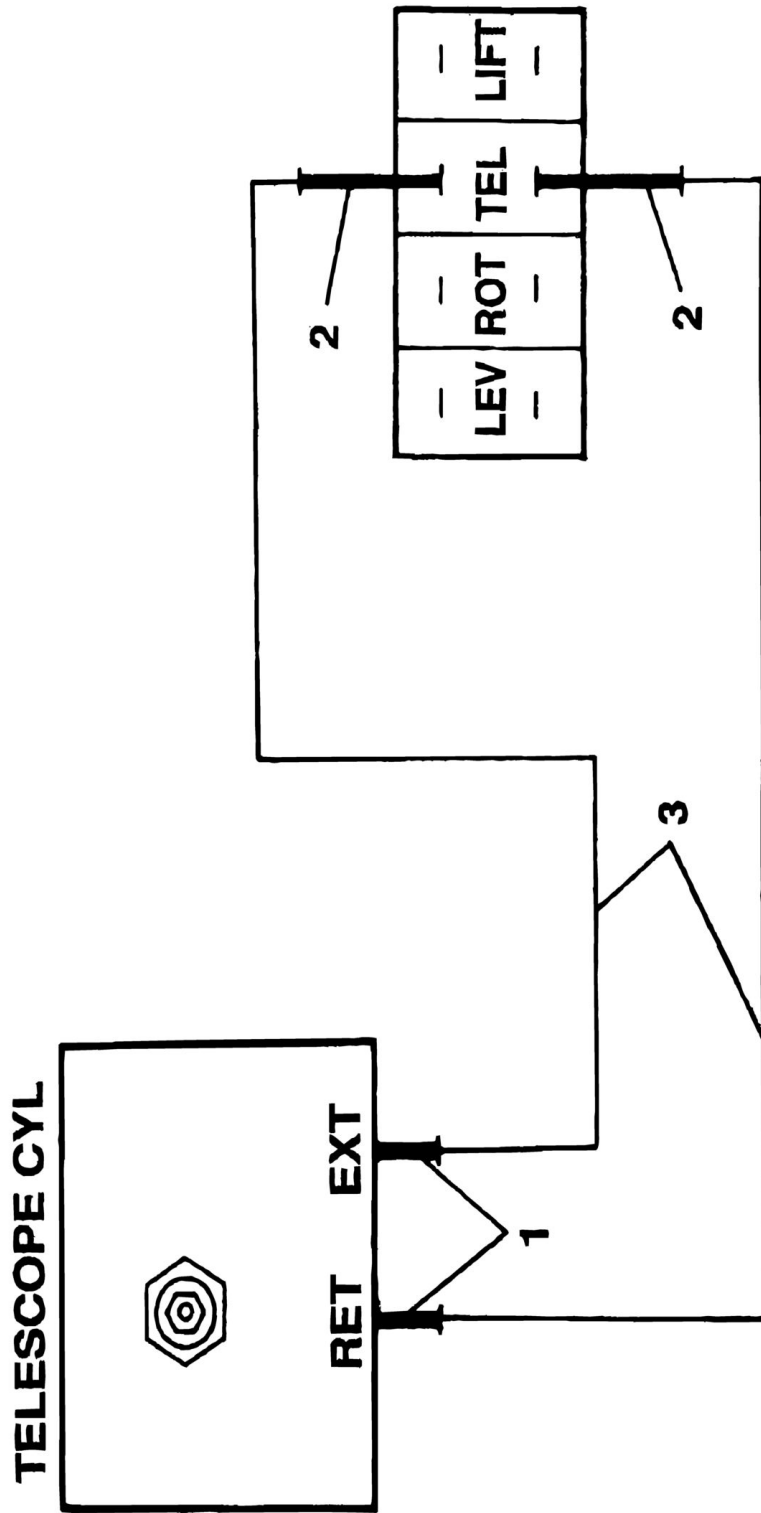
SECTION 6 - HYDRAULIC

FIGURE 6-10. SWING HYDRAULIC DIAGRAM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	SWING HYDRAULIC DIAGRAM	
	2791964	Ref	Gas and Diesel Machines	A
	2791965	Ref	Electric Machines	C
1	2220221	2	Fitting, Reducer	
2	2220606	2	Fitting, Tee	
3	2220609	6	Fitting, Reducer	
4	2752436	2	Hose (Electric Machines)	
4	2752435	2	Hose (Gas and Diesel Machines)	
5	2220415	5	Fitting, Straight	
6	4640752	2	Valve, Restrictor (Electric Machines)	
6	4640778	2	Valve, Restrictor (Gas and Diesel Machines)	
7	2752445	2	Hose	
8	2220497	2	Fitting, Straight	
9	2752437	1	Hose	
11	4640574	1	Valve, Shuttle	
12	2752433	2	Hose	
13	2750899	1	Hose (Electric Machines)	
13	2752437	1	Hose (Gas and Diesel Machines)	
14	2220415	1	Fitting, Straight (Electric Machines)	
14	2220466	1	Fitting, 90 (Gas and Diesel Machines)	
15	4640213	1	Valve, Restrictor (.015)	
16	2220414	1	Fitting, Straight	
17	2220261	1	Fitting, Straight	
18	2220110	1	Fitting, 90	

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FIGURE 6-11. TELESCOPE (MAIN BOOM) HYDRAULIC DIAGRAM



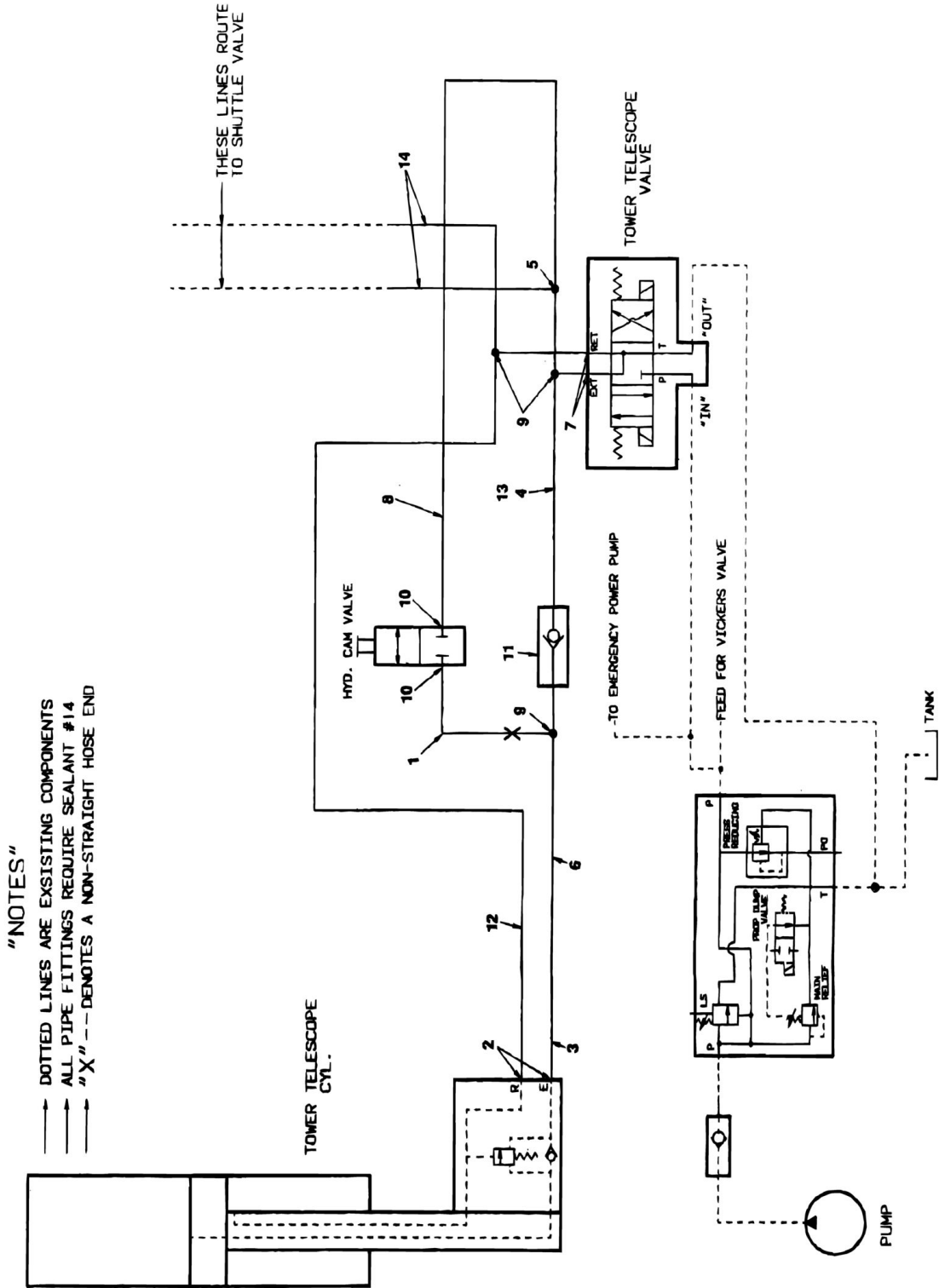
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FIGURE 6-11. TELESCOPE (MAIN BOOM) HYDRAULIC DIAGRAM

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791370	Ref	TELESCOPE (MAIN BOOM) HYDRAULIC DIAGRAM	A
1	2220416	2	Fitting, 90	
2	2220582	2	Fitting, Straight	
3	2750889	2	Hose	
	0100020	AR	Sealant	

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FIGURE 6-12. TELESCOPE (TOWER BOOM) HYDRAULIC DIAGRAM (GAS AND DIESEL MACHINES)



"NOTES"

- DOTTED LINES ARE EXISTING COMPONENTS
- ALL PIPE FITTINGS REQUIRE SEALANT #14
- "X" --- DEMOTES A NON-STRAIGHT HOSE END

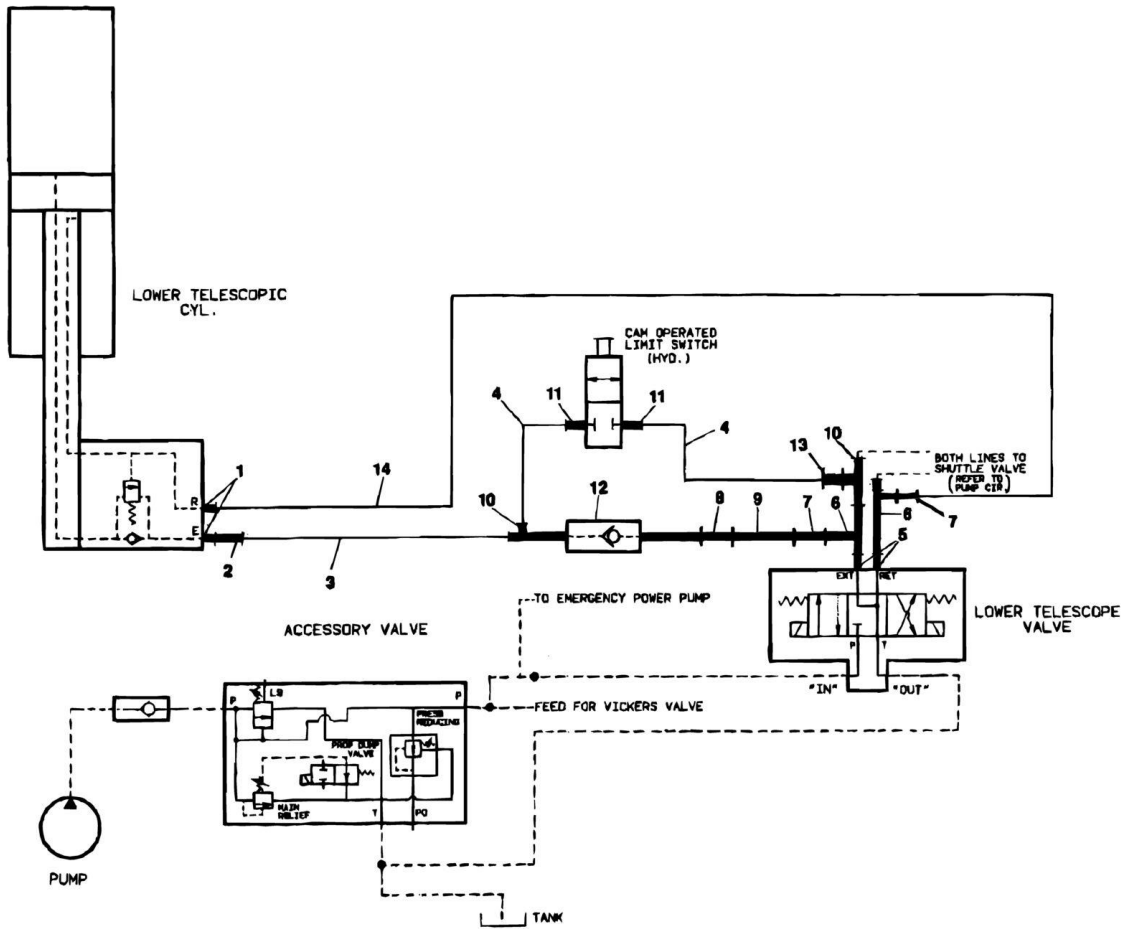
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FIGURE 6-12. TELESCOPE (TOWER BOOM) HYDRAULIC DIAGRAM (GAS AND DIESEL MACHINES)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791489	Ref	TELESCOPE (TOWER BOOM) HYDRAULIC DIAGRAMS	D
1	2751006	1	Hose	
2	2220473	2	Fitting, 90	
3	2220507	1	Fitting, 90	
4	2220741	1	Fitting	
5	2220635	1	Fitting, Tee	
6	2751111	1	Hose	
7	2220446	2	Fitting	
8	2751155	1	Hose	
9	2220604	3	Fitting, Tee	
10	2220703	2	Fitting, 90	
11	4640037	1	Valve, Check	
12	2750911	1	Hose	
13	2220280	1	Fitting, Nipple	
14	2220609	2	Fitting, Reducer	
	0100020	AR	Sealant, Pipe	

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FIGURE 6-13. TELESCOPE (TOWER BOOM) HYDRAULIC DIAGRAM (ELECTRIC MACHINES)



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FIGURE 6-13. TELESCOPE (TOWER BOOM) HYDRAULIC DIAGRAM (ELECTRIC MACHINES)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	2791419	Ref	HYDRAULIC DIAGRAM - TELESCOPE - TOWER BOOM (ELECTRIC MACHINES)	D
1	2220473	2	Fitting, 90	
2	2220507	1	Fitting, 90	
3	2750916	1	Hose	
4	2751834	2	Hose	
5	2220446	2	Fitting	
6	2220604	2	Fitting, Tee	
7	2220619	2	Fitting, Reducer	
8	2220741	2	Fitting, Adapter	
9	2220280	1	Fitting, Nipple	
10	2220608	2	Fitting, Tee	
11	2220703	2	Fitting, 90	
12	4640037	1	Valve, Check	
13	2220609	1	Fitting, Reducer	
14	2750911	1	Hose	
	0100020	AR	Sealant	

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FIGURE 6-14. HYDRAULIC DIAGRAM LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Information on diagrams not shown is available from JLG Service/Parts Departments.	
		Ref	Axle Lockout Hydraulic Diagrams:	
	2791844	Ref	2m Wide Machines	
	2791978	Ref	1.75 Wide Machines	
		Ref	Brake With Pressure Reducing Valve Hydraulic Diagrams:	
	2791547	Ref	2WD Prior to January 1992	
	2791547	Ref	4WD September 1989 to August 1992	
	4640522	Ref	Valve, Pressure Reducing	
	4640523	Ref	Cartridge	
	2900698	Ref	Seal Kit	
		Ref	Drive Hydraulic Diagrams - Vickers Valves:	
		Ref	With Swivel:	
	2791391	Ref	2WD 6ft-6in Wide Machines (Kohler and Electric Machines)	
	2791485	Ref	2WD 6ft-6in Wide Machines (Ford and Deutz Machines Built Through 1992)	
	2791976	Ref	2WD 6ft-6in Wide Machines (Ford and Deutz Machines Built 1993 to Present)	
	2792057	Ref	2WD 5ft-9in Wide Machines (Electric Machines)	
	2791888	Ref	2WD 5ft-9in Wide Machines (Ford and Deutz Machines Built Through 1992)	
	2791975	Ref	2WD 5ft-9in Wide Machines (Ford and Deutz Machines Built 1993 to Present)	
	2791375	Ref	4WD 6ft-6in Wide Machines (Built Through 1992)	
	1280923	Ref	4WD 6ft-6in Wide Machines (Built Through 1992)	
	2791971	Ref	4WD 6ft-6in Wide Machines with 8.75in & 9.5in Tires (Built 1993 to Present)	
	1281915	Ref	4WD 6ft-6in Wide Machines with 8.75in & 9.5in Tires (Built 1993 to Present)	
	2792173	Ref	4WD 6ft-6in Wide Machines with 12.5in Tires (Built 1993 to Present)	
	1281915	Ref	4WD 6ft-6in Wide Machines with 12.5in Tires (Built 1993 to Present)	
		Ref	Without Swivel:	
	2791392	Ref	2WD 6ft-6in Wide Machines (Kohler and Electric Machines)	
	2791486	Ref	2WD 6ft-6in Wide Machines (Ford and Deutz Machines)	
	2791378	Ref	4WD 6ft-6in Wide Machines (Ford and Deutz Machines)	
	1280924	1	4WD 6ft-6in Wide Machines (Ford and Deutz Machines)	
		Ref	Lift And Level (Tower Boom) Hydraulic Diagrams:	
	2791387	Ref	Vickers Valves and Hydraulic Boom Limit Switches (Electric Machines)	
	2791487	Ref	Vickers Valves and Hydraulic Boom Limit Switches (Ford and Deutz Machines)	
		Ref	Lift and Slave (Main Boom) Hydraulic Diagrams:	
	2791390	Ref	Vickers Valves (Kohler and Electric Machines Built Prior to October 1992)	
	2792011	Ref	Vickers Valves and TUV Cylinders (Kohler and Electric Machines Built October 1992 to Present)	
	2791488	Ref	Vickers Valves (Ford and Deutz Machines Built Prior to October 1992)	
	2792009	Ref	Vickers Valves and TUV Cylinders (Ford and Deutz Machines Built October 1992 to Present)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Manual Descent Hydraulic Diagrams:	
	2791846	Ref	Domestic Option	
	0251953	Ref	Japanese Standard	
		Ref	Pump Hydraulic Diagrams - Vickers Valves:	
	2791674	Ref	Ford and Deutz Machines (Through 1992)	
	2791977	Ref	Ford and Deutz Machines (1993 to Present)	
	2791607	Ref	Electric Machines	
	2791361	Ref	Rotate Hydraulic Diagram	
	2791701	Ref	Sequence Line Hydraulic Diagram (Ford Machines)	
	1281353	Ref	Sequence Line Hydraulic Diagram (Ford Machines)	
		Ref	Steer Hydraulic Diagrams:	
		Ref	With Swivel:	
	2791383	Ref	2WD 6ft-6in Wide Machines with Fixed Axle	
	128026	Ref	2WD 6ft-6in Wide Machines with Fixed Axle	
	2791382	Ref	2WD 6ft-6in Wide Machines with Oscillating Axle	
	128026	Ref	2WD 6ft-6in Wide Machines with Oscillating Axle	
	2791473	Ref	2WD 5ft-9in Wide Machines with Fixed Axle	
	128026	Ref	2WD 5ft-9in Wide Machines with Fixed Axle	
	2791474	Ref	2WD 5ft-9in Wide Machines with Oscillating Axle	
	128026	Ref	2WD 5ft-9in Wide Machines with Oscillating Axle	
	2791397	Ref	4WD 6ft-6in Wide Machines with 8.75in & 9.5in Tires	
	2792172	Ref	4WD 6ft-6in Wide Machines with 12in Tires	
		Ref	Without Swivel:	
	2791381	Ref	2WD 6ft-6in Wide Machines with Fixed Axle	
	128025	Ref	2WD 6ft-6in Wide Machines with Fixed Axle	
	2791380	Ref	2WD 6ft-6in Wide Machines with Oscillating Axle	
	128025	Ref	2WD 6ft-6in Wide Machines with Oscillating Axle	
	2791471	Ref	2WD 5ft-9in Wide Machines with Fixed Axle	
	128025	Ref	2WD 5ft-9in Wide Machines with Fixed Axle	
	2791472	Ref	2WD 5ft-9in Wide Machines with Oscillating Axle	
	128025	Ref	2WD 5ft-9in Wide Machines with Oscillating Axle	
	2791396	Ref	4WD 6ft-6in Wide Machines	
		Ref	Swing Hydraulic Diagrams:	
	2791389	Ref	Electric Machines Through 1992	
	2791965	Ref	Electric Machines Built 1993 to Present	
	2791491	Ref	Ford and Deutz Machines Built Through 1992	
	2791964	Ref	Ford and Deutz Machines Built 1993 to Present	
	2791370	Ref	Telescope (Main Boom) Hydraulic Diagram	
		Ref	Telescope (Tower Boom) Hydraulic Diagrams:	
	2791419	Ref	Electric Machines	
	2791489	Ref	Ford and Deutz Machines	
		Ref	Tow Hydraulic Diagrams:	
	2791789	Ref	2WD 2m Wide Machines without Stop Blocks	
	2791788	Ref	2WD 1.75m Wide Machines without Stops Blocks	
	2791295	Ref	2WD 2m Wide Machines with Stop Blocks	
	2791764	Ref	4WD 1.75m Wide Machines	

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FIGURE 7-1. ELECTRICAL DIAGRAM LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Diagrams not shown are available from the JLG Service Department.	
	4931797	Ref	ACCESSORY VALVE WIRING DIAGRAM	A
		Ref	ALARMS WIRING DIAGRAM OPTIONS	
		Ref	Machines Built Prior to October 1992:	
	4932595	Ref	Motion Alarm Wiring Diagram	A
	1281985	Ref	Motion Alarm Wiring Diagram	A
	3740049	1	Relay	
	3990010	2	Diode - 6 Amp	
	4931947	Ref	Travel/Back-up/Swing/Descent Wiring Diagram	G
	1281985	Ref	Travel/Back-up/Swing/Descent Wiring Diagram	G
	3740049	1	Relay	
		Ref	Machines Built October 1992 to Present:	
	4932639	Ref	Motion Alarm Wiring Diagram	2
	3740049	1	Relay	
	3990010	2	Diode 6 Amp	
	1060341	8 ft	Cable, Electrical - 16/2	
	0253077	Ref	Tilt Alarm Wiring Diagram	-
	0140026	1	Alarm	
	4932490	Ref	AUSTRALIAN WIRING MODIFICATION	B
	4931735	Ref	BATTERY CAPACITY INDICATOR WIRING DIAGRAM	B
		Ref	BEACON LIGHT WIRING DIAGRAM	
	4931740	Ref	Gas and Diesel Machines	A
	4931703	Ref	Electric Machines	B
	4931942	Ref	BEACON/STROBE LIGHT WIRING DIAGRAM - ELECTRIC MACHINES	5
	0253345	Ref	CONTACTOR BOX WIRING DIAGRAM	B
		Ref	DRIVE CUT-OUT WIRING DIAGRAMS	
	4932315	Ref	Dutch and German Spec	
	4932514	Ref	Italian Spec (Prior to SN 29214)	
	0253425	Ref	Italian Spec (Prior to SN 29214)	
	4932574	Ref	Italian Spec (SN 29214 to Present)	
	0253425	Ref	Italian Spec (SN 29214 to Present)	
		Ref	DUAL FUEL WIRING DIAGRAM	
	4360201	1	Switch, Toggle (Select)	
	4921305	1	Harness, Dual Fuel	
		Ref	ENGINE DISTRESS / SHUTDOWN WIRING DIAGRAMS:	
	0251537	Ref	Engine Distress Wiring Diagram - Deutz Machines	D
	1281525	Ref	Engine Distress Wiring Diagram - Deutz Machines	D
	4921361	1	Harness	
	4360065	1	Switch, Pressure	
	0252625	Ref	Engine Distress Wiring Diagram - Ford Machines	5-E
	2920026	1	Light	
	4360182	1	Switch, Oil Pressure	
	4360157	1	Switch, Water Temperature	
	3740049	1	Relay	
	2920029	1	Bulb	
	0251682	Ref	Engine Shutdown Wiring Diagram - Deutz Machines	-
	3740049	1	Relay	

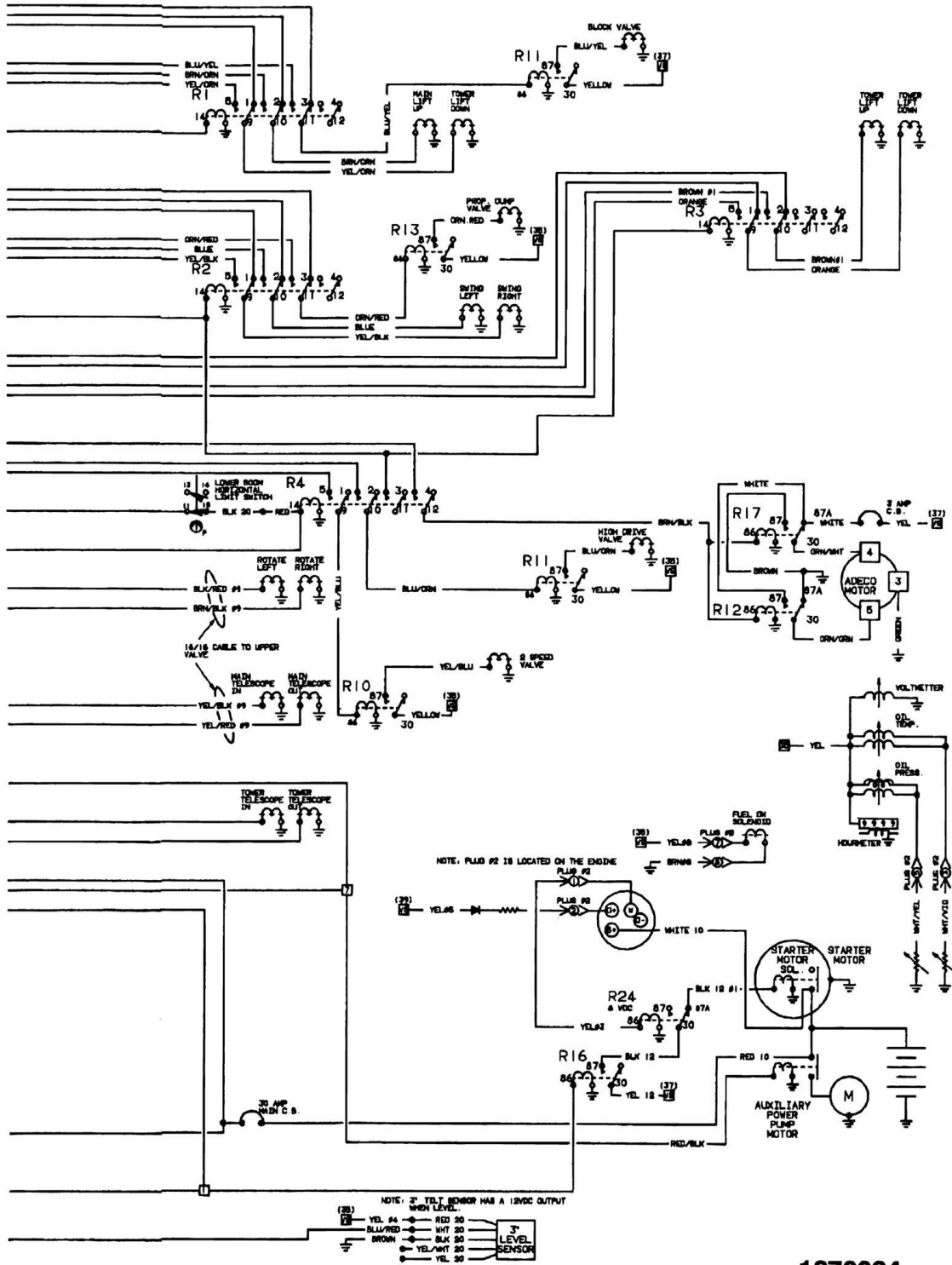
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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	4360065	1	Switch, Pressure	
	4932492	Ref	FRENCH SPEC WIRING DIAGRAM (PRIOR TO JANUARY 1997)	
		Ref	GENERATOR WIRING DIAGRAM - 110V	
	4931945	Ref	Deutz	A
	4931934	Ref	Ford	C-4
	3990001	1	Diode - 3.5 Amp (Deutz)	
	3990010	4	Diode - 6 Amp (Ford)	
	3740049	2	Relay, Bosch	
	4360294	1	Breaker, Circuit (Deutz)	
	4460027	1	Receptacle, Twist Lock (Ford)	
	4931913	Ref	HEADLIGHT/TAILLIGHT WIRING DIAGRAM	A-2
	4931998	Ref	HEATERS WIRING DIAGRAM	
	1060016	AR	Cable, Electrical - 16/3	
	1060515	AR	Cable, Electrical - 12/4 (was p/n 1060012)	
		Ref	LOAD SENSING WIRING DIAGRAM (FRENCH SPEC)	
	4932340	Ref	Load Sensing Wiring Diagram (French Spec) Prior to March 1998	
	4933007	Ref	Load Sensing Wiring Diagram (French Spec) March 1998 to Present	
	0251619	Ref	PANEL LIGHTS WIRING DIAGRAM	A
	1281525	Ref	PANEL LIGHTS WIRING DIAGRAM	A
	2920024	3	Light, Panel	
		Ref	PLATFORM WIRING DIAGRAMS OPTIONS	
	4932313	Ref	2WS Machines (Built Prior to January 1993)	D-F
	1281523	Ref	2WS Machines (Built Prior to January 1993)	D-F
	4932368	Ref	4WS Machines (Built Prior to January 1993)	D-F
	1281523	Ref	4WS Machines (Built Prior to January 1993)	D-F
	4932582	Ref	2WS Machines (Built Prior to January 1993)	2-A
	1281968	Ref	2WS Machines (Built Prior to January 1993)	2-A
	4932583	Ref	4WS Machines (Built Prior to January 1993)	1-A
	1281968	Ref	4WS Machines (Built Prior to January 1993)	1-A
	3990010	AR	Diode - 6 Amp	
	1540002	1	Capacitor - 1000mf 25V (April 1990 to Present)	
	1060515	8 ft/2.4m	Cable, Electrical - 12/4 (was p/n 1060012)	
	4931793	Ref	Electric Machines (Standard)	C
	3990010	3	Diode - 6 Amp	
	1060012	7 ft/2.1m	Cable, Electrical - 12/4 (Standard)	
		Ref	PLATFORM WORKLIGHT WIRING DIAGRAM OPTIONS:	
	2900068	Ref	Machines Built Prior to November 1992	F
	0253987	Ref	Machines Built November 1992 to Present	C
	2920095	2	Worklight	
		Ref	STANDARD WIRING DIAGRAMS	
	4932392	Ref	Deutz Machines	G
	4921265	1	Engine and Valve Harness	
	3990010	5	Diode - 6 Amp	
	3730095	1	Resistor 7.5 Ohm 10 Watt	
	1060016	20 ft	Cable, Electrical - 16/3	
	4932596	Ref	Ford Machines Prior to October 1994	-
	4932759	Ref	Ford Machines October 1994 to Present	B
	1060016	20 ft	Cable, Electrical - 16/3	
	3990010	6	Diode - 6 Amp	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3730095	1	Resistor 7.5 Ohm 10 Watt	B
	4921282	1	Harness Only (SN 33459 to Present)	
	4931967	Ref	Electric Machines	
	3990010	9	Diode - 6 Amp	
	3730095	1	Resistor 7.5 Ohm 10 Watt	
	4921193	1	Harness - Motor and Valves	
	1060300	20 ft/6.1m	Cable, Electrical - 16/13	

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SECTION 8 - DECALS

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FIGURE 8-1. DECALS INSTALLATIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	DECAL INSTALLATION	
	0252080	Ref	Gas and Diesel Machines (Brown)	10E
	0252248	Ref	Gas and Diesel Machines (Black and White)	J
2	1701504	1	Decal - Hydraulic	
4	1701529	4	Decal - Arrow	
5	1701518	6	Decal - Crushing	
8	1700584	1	Decal - Patent	
10	Not Available	1	Nameplate - Serial Number	
12	1701500	4	Decal - Lift Up/Down	
13	3820001	4	Rivet	
14		Ref	Decal - Stripes Options:	
14	1700431	55	Brown Decals (Prior to September 1995)	
		ft/16.8m		
14	1701703	55	Brown Decals (September 1995 to Present)	
		ft/16.8m		
14	1701334	55	Black Decals	
		ft/16.8m		
15		Ref	Decal - JLG Options:	
15	1700981	2	Brown Decals	
15	1701196	2	Black Decals (Prior to September 1995)	
15	1701321	2	Black Decals (September 1995 to Present)	
16		Ref	Decal - 45HA Options:	
16	1701469	2	Brown Decals	
16	1701549	2	Black Decals	
17		Ref	Decal - JLG Lift Options:	
17	1701441	2	Brown Decals	
17	1701550	2	Black Decals	
18	0860520	1	Box, Manual Storage	
18	3311405	4	Locknut 1/4in-20NC	
18	4751400	4	Flatwasher 1/4in	
19	1060279	1	Lanyard	
19	0641408	1	Bolt 1/4in-20NC x 1in	
19	4751400	2	Flatwasher 1/4in	
19	3311405	1	Locknut 1/4in-20NC	
20	1701509	1	Decal - Manual	
20	3251569	1	Nameplate - Handbook Location	
21	0961127	1	Bushing	
21	0100010	AR	Loctite	
22	1701502	1	Decal - High Hydraulic Fluid	
23	3251813	1	Decal - USA	
24	1701522	1	Nameplate - Caution "Fan Blade"	
25		Ref	Decal - JLG Options:	
25	1701376	1	Brown Decals	
25	1701548	1	Black Decals	
26	1701555	4	Decal - Tire Pressure	
27	1701503	1	Decal - Low Hydraulic Fluid	
28	4420052	19 ft/5.8m	Tape, Safety - Black/Yellow	
29		Ref	Decal - Model 45HA Options:	
29	1701469	1	Brown Decals	
29	1701549	1	Black Decals	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
30	Not Available	1	Decal - Bar Code	
31	1702300	4	Decal - Tie Down	
		Ref	Decal Kit Options:	
	2900996	1	Australian Spec	
	Not Available		All Other Spec	
		Ref	DECALS INSTALLATION - OPTIONS	
51		Ref	Decal - Fuel Options:	
51	1701542	1	Gasoline Petro	
51	1701505	1	Diesel	
51	1701543	1	LP Gas	
52	1700818	1	Decal - Liquid Withdrawal (LP Gas Only)	
53	3251028	1	Decal - Cautions (LP Gas Only)	
		Ref	DECALS INSTALLATION - COUNTRY SPEC	
	0257308	Ref	Australian Spec	3
	0252749	Ref	Dutch Spec	-
	0252082	Ref	French Spec	3
	0252247	Ref	German/Austrian	C
	0252748	Ref	Italian Spec	A
	0253288	Ref	Spanish	C
	0252081	Ref	UK English	D
101		Ref	Decal - Ground Control Options:	
101	1700037	1	Australian Spec	
101	1701616	1	Dutch Spec	
101	1701515	1	French Spec	
101	1693285	1	German/Austrian	
101	1701599	1	Italian Spec	
101	1701789	1	Spanish	
101	1700037	1	UK English	
102		Ref	Nameplate - Footswitch Options:	
102	3251766	1	Australian Spec	
102	1703518	1	Dutch Spec	
102	1693292	1	French Spec	
102	1693294	1	German/Austrian	
102	1701600	1	Italian Spec	
102	1701791	1	Spanish Spec	
102	3251766	1	UK English Spec	
103		Ref	Decal - Attention Options:	
103	1702280	1	Australian Spec	
103	1701574	1	Dutch Spec	
103	1701572	1	French Spec	
103	1701573	1	German/Austrian	
103	1701571	1	Italian Spec	
103	1701796	1	Spanish Spec	
103	1701460	1	UK English Spec (Prior to May 1994)	
103	1702280	1	UK English Spec (May 1994 to Present)	
104		Ref	Decal - Caution Options:	
104	1690696	1	Australian Spec	
104	Not Required	0	Dutch Spec	
104	1693286	1	French Spec	
104	1693288	1	German/Austrian	
104	1701601	1	Italian Spec	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
104	1701794	1	Spanish Spec	
104	1690696	1	UK English Spec	
105		Ref	Decal - Caution Options:	
105	1690697	1	Australian Spec	
105	1701567	1	Dutch Spec	
105	1701577	1	French Spec (Prior to SN 29214)	
105	1701649	1	French Spec (SN 29214 to Present)	
105	1690697	1	German/Austrian	
105	1690697	1	Italian Spec	
105	1690697	1	Spanish Spec	
105	1690697	1	UK English Spec	
106		Ref	Decal - Caution Options:	
106	1691483	1	Australian Spec	
106	1701596	1	Dutch Spec	
106	1693289	1	French Spec	
106	1693291	1	German/Austrian	
106	1701602	1	Italian Spec	
106	1701798	1	Spanish Spec	
106	1691483	1	UK English Spec	
107		Ref	Decal - Important Options:	
107	1702265	1	Australian Spec	
107	1702268	1	Dutch Spec	
107	1702270	1	French Spec	
107	1702267	1	German/Austrian	
107	1702269	1	Italian Spec	
107	1702266	1	Spanish Spec	
107	1702265	1	UK English Spec	
108		Ref	Decal - Lanyard Attach Options:	
108	1704277	2	Australian Spec (SN 34839 to Present)	
108	1702612	2	Australian Spec (Prior to SN 34839)	
108	Not Required	0	All Other Specs	
109		Ref	Decal - Safe Working Load Options:	
109	1703677	1	Australian Spec (SN 34839 to Present)	
109	Not Required	0	Australian Spec (Prior to SN 34839)	
109	Not Required	0	All Other Specs	
110		Ref	Decal - Danger (Electrocution Hazard) Options:	
110	1703665	1	Australian Spec (SN 34839 to Present)	
110	Not Required	0	Australian Spec (Prior to SN 34839)	
110	Not Required	0	All Other Specs	
111		Ref	Decal - Maintenance Options:	
111	1703663	1	Australian Spec (SN 34839 to Present)	
111	Not Required	0	Australian Spec (Prior to SN 34839)	
111	Not Required	0	All Other Specs	
112		Ref	Decal - Caution (Safety Harness) Options:	
112	1703664	1	Australian Spec (SN 34839 to Present)	
112	Not Required	0	Australian Spec (Prior to SN 34839)	
112	Not Required	0	All Other Specs	
	0253554	Ref	DECALS INSTALLATION (AUSTRALIAN SPEC PRIOR TO JANUARY 1997 ONLY)	C
201	1702958	1	Nameplate - Important	
202	3820001	4	Rivet	
203	1701818	2	Decal - Access Forbidden	

SECTION 8 - DECALS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	0251953	Ref	DECAL INSTALLATION - MANUAL DESCENT	D
301	1701560	1	Decal - Manual Descent	
302	1701428	1	Decal - Tag #1 (Prior to July 1993 Only)	
303	1701494	1	Decal - Tag #2	
304	1701426	1	Decal - Tag #3	
305	1701463	1	Decal - Tag #4	
	0257169	Ref	DECALS INSTALLATION - CE	2
401	Not Available	1	Nameplate - Serial Number	
402	1703488	4	Decal - Maximum Tire Load	
403	1702928	1	Decal - CE	

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

FIGURE 9-1. MODELS 45HA GAS AND DIESEL MACHINES WITH VICKERS VALVES STANDARD PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: The following list will service fleets of machines (built to current production per date on the front cover) with emergency repair parts which can be installed in the field. Parts from the list should be replaced when inventory is depleted to keep service parts stock supplied. For further information, contact your JLG dealer or the JLG Industries Parts Department.	
		Ref	STANDARD PARTS	
	7012906	1	Coil, (for fleets of 1 to 10)	
	7012906	1	Coil, (for fleets of 10 to 20)	
	7012906	1	Coil, (for fleets of 20 of more)	
	4640049	1	Coil, (for fleets of 1 to 10)	
	4640049	1	Coil, (for fleets of 10 to 20)	
	4640049	1	Coil, (for fleets of 20 of more)	
	7012339	1	Coil, (for fleets of 1 to 10)	
	7012339	1	Coil, (for fleets of 10 to 20)	
	7012339	1	Coil, (for fleets of 20 of more)	
	7000418	1	Coil, (for fleets of 1 to 10)	
	7000418	1	Coil, (for fleets of 10 to 20)	
	7000418	1	Coil, (for fleets of 20 of more)	
	7004214	12	Element, Air Cleaner, (for fleets of 1 to 10)	
	7004214	12	Element, Air Cleaner, (for fleets of 10 to 20)	
	7004214	12	Element, Air Cleaner, (for fleets of 20 of more)	
	2120110	4	Element, Hydraulic Oil, (for fleets of 1 to 10)	
	2120110	8	Element, Hydraulic Oil, (for fleets of 10 to 20)	
	2120110	12	Element, Hydraulic Oil, (for fleets of 20 of more)	
	1340046	1	Breather, Hydraulic Oil, (for fleets of 1 to 10)	
	1340046	1	Breather, Hydraulic Oil, (for fleets of 10 to 20)	
	1340046	1	Breather, Hydraulic Oil, (for fleets of 20 of more)	
	4360284	1	Switch, Key, (for fleets of 1 to 10)	
	4360284	1	Switch, Key, (for fleets of 10 to 20)	
	4360284	1	Switch, Key, (for fleets of 20 of more)	
	7010698	1	Key, Replacement, (for fleets of 1 to 10)	
	7010698	1	Key, Replacement, (for fleets of 10 to 20)	
	7010698	1	Key, Replacement, (for fleets of 20 of more)	
	4360267	1	Block, Contact, (for fleets of 1 to 10)	
	4360267	1	Block, Contact, (for fleets of 10 to 20)	
	4360267	1	Block, Contact, (for fleets of 20 of more)	
	4360281	1	Block, Contact, (for fleets of 1 to 10)	
	4360281	1	Block, Contact, (for fleets of 10 to 20)	
	4360281	1	Block, Contact, (for fleets of 20 of more)	
	4360199	1	Switch, Toggle, (for fleets of 1 to 10)	
	4360199	1	Switch, Toggle, (for fleets of 10 to 20)	
	4360199	1	Switch, Toggle, (for fleets of 20 of more)	
	4360202	1	Switch, Toggle, (for fleets of 1 to 10)	
	4360202	1	Switch, Toggle, (for fleets of 10 to 20)	
	4360202	1	Switch, Toggle, (for fleets of 20 of more)	
	4360200	1	Switch, Toggle, (for fleets of 1 to 10)	
	4360200	1	Switch, Toggle, (for fleets of 10 to 20)	
	4360200	1	Switch, Toggle, (for fleets of 20 of more)	

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	3740049	1	Relay, (for fleets of 1 to 10)	
	3740049	1	Relay, (for fleets of 10 to 20)	
	3740049	1	Relay, (for fleets of 20 of more)	
	4360216	1	Breaker, Circuit, (for fleets of 1 to 10)	
	4360216	1	Breaker, Circuit, (for fleets of 10 to 20)	
	4360216	1	Breaker, Circuit, (for fleets of 20 of more)	
	4360232	1	Breaker, Circuit, (for fleets of 1 to 10)	
	4360232	1	Breaker, Circuit, (for fleets of 10 to 20)	
	4360232	1	Breaker, Circuit, (for fleets of 20 of more)	
	3740058	1	Relay, (for fleets of 1 to 10)	
	3740058	1	Relay, (for fleets of 10 to 20)	
	3740058	1	Relay, (for fleets of 20 of more)	
	70003151	2	Powertrack - 1 Foot Section, (for fleets of 1 to 10)	
	70003151	2	Powertrack - 1 Foot Section, (for fleets of 10 to 20)	
	70003151	2	Powertrack - 1 Foot Section, (for fleets of 20 of more)	
	2940006	1	Latch, Platform Door, (for fleets of 1 to 10)	
	2940006	1	Latch, Platform Door, (for fleets of 10 to 20)	
	2940006	1	Latch, Platform Door, (for fleets of 20 of more)	
	7011907	1	Electrical Assembly - 1600141 Controller, (for fleets of 1 to 10)	
	7011907	1	Electrical Assembly - 1600141 Controller, (for fleets of 10 to 20)	
	7011907	1	Electrical Assembly - 1600141 Controller, (for fleets of 20 of more)	
	7003751	1	Potentiometer - 1600141 Controller, (for fleets of 1 to 10)	
	7003751	1	Potentiometer - 1600141 Controller, (for fleets of 10 to 20)	
	7003751	1	Potentiometer - 1600141 Controller, (for fleets of 20 of more)	
	3740086	1	Relay, (for fleets of 1 to 10)	
	3740086	1	Relay, (for fleets of 10 to 20)	
	3740086	1	Relay, (for fleets of 20 of more)	
	4360274	1	Switch, Push Button, (for fleets of 1 to 10)	
	4360274	1	Switch, Push Button, (for fleets of 10 to 20)	
	4360274	1	Switch, Push Button, (for fleets of 20 of more)	
	4360289	1	Switch, Emergency Stop, (for fleets of 1 to 10)	
	4360289	1	Switch, Emergency Stop, (for fleets of 10 to 20)	
	4360289	1	Switch, Emergency Stop, (for fleets of 20 of more)	
	3990010	2	Diode - 6 Amp, (for fleets of 1 to 10)	
	3990010	2	Diode - 6 Amp, (for fleets of 10 to 20)	
	3990010	2	Diode - 6 Amp, (for fleets of 20 of more)	

SECTION 9 - RECOMMENDED SERVICE PARTS STOCK

FIGURE 9-2. MODELS 45HA GAS AND DIESEL MACHINES WITH VICKERS VALVES VARIABLE PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: The following list will service fleets of machines (built to current production per date on the front cover) with emergency repair parts which can be installed in the field. Parts from the list should be replaced when inventory is depleted to keep service parts stock supplied. For further information, contact your JLG dealer or the JLG Industries Parts Department.	
		Ref	VARIABLE PARTS	
	7022174	1	Filter, Fuel (Ford Machines), (for fleets of 1 to 10)	
	7022174	1	Filter, Fuel (Ford Machines), (for fleets of 10 to 20)	
	7022174	1	Filter, Fuel (Ford Machines), (for fleets of 20 of more)	
	7012598	1	Filter, Fuel (Deutz Machines), (for fleets of 1 to 10)	
	7012598	1	Filter, Fuel (Deutz Machines), (for fleets of 10 to 20)	
	7012598	1	Filter, Fuel (Deutz Machines), (for fleets of 20 of more)	
	4360201	1	Switch, Toggle (With Dual Fuel), (for fleets of 1 to 10)	
	4360201	1	Switch, Toggle (With Dual Fuel), (for fleets of 10 to 20)	
	4360201	1	Switch, Toggle (With Dual Fuel), (for fleets of 20 of more)	
	4360212	1	Breaker, Circuit (Deutz Machines), (for fleets of 1 to 10)	
	4360212	1	Breaker, Circuit (Deutz Machines), (for fleets of 10 to 20)	
	4360212	1	Breaker, Circuit (Deutz Machines), (for fleets of 20 of more)	
	7014500	1 case	Engine Oil Filters (Ford Machines), (for fleets of 1 to 10)	
	7014500	1 case	Engine Oil Filters (Ford Machines), (for fleets of 10 to 20)	
	7014500	1 case	Engine Oil Filters (Ford Machines), (for fleets of 20 of more)	
	7014502	1 case	Engine Oil Filters (Deutz Machines), (for fleets of 1 to 10)	
	7014502	1 case	Engine Oil Filters (Deutz Machines), (for fleets of 10 to 20)	
	7014502	1 case	Engine Oil Filters (Deutz Machines), (for fleets of 20 of more)	
	1693405	1	Relay, Timer (French Spec), (for fleets of 1 to 10)	
	1693405	1	Relay, Timer (French Spec), (for fleets of 10 to 20)	
	1693405	1	Relay, Timer (French Spec), (for fleets of 20 of more)	
	2900838	1	U.S. Standards Fastener Kit, (for fleets of 1 to 10)	
	2900838	1	U.S. Standards Fastener Kit, (for fleets of 10 to 20)	
	2900838	1	U.S. Standards Fastener Kit, (for fleets of 20 of more)	
	7014676	1	U.S. Standards Tool Kit, (for fleets of 1 to 10)	
	7014676	1	U.S. Standards Tool Kit, (for fleets of 10 to 20)	
	7014676	1	U.S. Standards Tool Kit, (for fleets of 20 of more)	
	4360277	1	Switch, Limit, (for fleets of 1 to 10)	
	4360277	1	Switch, Limit, (for fleets of 10 to 20)	
	4360277	1	Switch, Limit, (for fleets of 20 of more)	

SECTION 10 - SPECIAL OPTIONS

SECTION 10 - SPECIAL OPTIONS

FIGURE 10-1. SPECIAL OPTIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	Note: This list is to accommodate machines ordered with special equipment. Options may not be applicable to all models. For more specific parts information contact JLG Parts Department.	
		Ref	MISCELLANEOUS SPECIAL OPTIONS	
		Ref	Airline Installations	
	0252473	Ref	1/2in Standard	
	1281733	Ref	1/2in Standard	
	0252474	Ref	3/4in Standard	
	1281733	Ref	3/4in Standard	
	0251042	Ref	Bubble Level Installation (At Platform)	
	2420038	1	Gage, Level	
	0256789	Ref	Camera Mount Assembly	
	0251619	Ref	Console Panel Light Installation	
	0256384	Ref	Cold Weather Package (Deutz Engine Machines)	
		Ref	Country Spec Installations	
	0253352	Ref	Australian Spec	
	0252747	Ref	Dutch Spec	
	0252250	Ref	French Spec	
	0252251	Ref	German/Austrian Spec	
	0252746	Ref	Italian Spec	
	0253287	Ref	Spanish Spec	
	0252249	Ref	UK English Spec	
		Ref	Decal Installations	
		Ref	Decal - Biodegradable Hydraulic Fluid Options:	
	1702788	1	All except German Spec	
	1703479	1	German Spec Only	
	1704174	1	Decal - Biodegradable Synthetic Hydraulic Fluid Options:	
	1704174	1	All except German Spec	
	1704175	1	German Spec Only	
	0257733	1	Decal Installation - Warning Stripes	
		Ref	ELECTRICAL CONNECTOR KITS	
	1001148902	Ref	Amp Connector Kit	
	1001148903	Ref	Deutsch DT Connector Kit	
	1001148904	Ref	Deutsch HD Connector Kit	
	1001148905	Ref	Packard Connector Kit	
	1001148906	Ref	Various Connector Kit	
	0250815	Ref	Engine Heater Installation (Ford Engine Machines)	
		Ref	Exhaust Options (Deutz Machines):	
	0254362	Ref	Purifier Installation	
	3220086	Ref	Purifier	
		Ref	Spark Arrester Installation Options:	
	0254073	Ref	Spark Arrester Installation (Prior to April 1994)	
	0254839	Ref	Spark Arrester Installation (April 1994 to Present)	
		Ref	Filter Kits:	
	Not Available		Ford Engine	
		Ref	Deutz Engine	
	1001110987	1	Combined Filter Kit (Hydraulic/Air and Fuel/Engine Oil)	
	1001109676	1	Hydraulic/Air Filter	

SECTION 10 - SPECIAL OPTIONS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	1001110136	1	Engine - Fuel/Engine Oil Filter	
		Ref	Fixed Axle Conversion Kit (Converts Oscillating Axle to Fixed Axle)	
	0251649	Ref	2WD 6ft-6in Wide Frame	
	0253234	Ref	2WD 5ft-9in Wide Frame	
	0251273	Ref	4WD	
	4060959	Ref	Footswitch Shield	
	0258780	Ref	Ford VSG-413 Engine Assembly and Installation	
	0258779	Ref	Ford VSG-413 Engine Assembly and Installation	
	0258781	Ref	Ford VSG-413 Exhaust Installation	
	0250666	Ref	Fork Truck Tubes Installation	
	0251048	Ref	Fuel Indicator Installation (At Platform)	
	0239085	Ref	Glow Plug Installation (Kubota Engine Machines)	
	1280972	Ref	Glow Plug Installation (Kubota Engine Machines)	
	0251664		Oil Cooler Installation	
	0256436	Ref	Pipe Rack Installation	
	0254439	Ref	Platform Receptacle Installation	
	0253558	Ref	Platform Receptacle Mounting Plate Installation (Australian Spec)	
	0256956	Ref	Platform Step Installation	
	0250509	Ref	Power Tool Installation	
	0252890	Ref	Power Track Installation - 8in Wide	
	1281458	Ref	Power Track Installation - 8in Wide	
	0800788	Ref	Tower Boom Assembly	
	0800790	Ref	Main Boom Assembly	
	1281293	Ref	Main Boom Assembly	
	0253904	Ref	Tool Tray Installation	
	2660088	Ref	Tray	
		Ref	Tools for Service	
	7002828	1	Wire Stripper	
	7002821	1	Wire Crimper (To install wire ends to wires)	
	7002823	1	Pin/Socket Extractor - Universal (To Remove Pins/Sockets from Connectors)	
	4460467	1	Extractor - 16-18 Gauge (For Removal of Pin/Sockets from Deutsch Connectors)	
	4460510	1	Extractor - 12-14 Gauge (For Removal of Pin/Sockets from Deutsch Connectors)	
	7002822	1	Screwdriver, Potentiometer (To Adjust Drive Controllers)	
	7016654	1	Screwdriver, Magnetic	
	7004275	1	Seal Installation Tool - 1in	
	7004276	1	Seal Installation Tool - 1 1/2in	
	7002826	1	Seal Installation Tool - 2in	
	7016655	1	Wire Rope Sheave Gauge	
	7014676	1	Tool Kit - U.S. Standards	
	2900838	1	Fastener Kit - U.S. Standards	
	0257728	Ref	Tube Rack Installation	
	0252479	Ref	Weld Leads Installation	
	1281733	Ref	Weld Leads Installation	

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