



Illustrated Parts Manual

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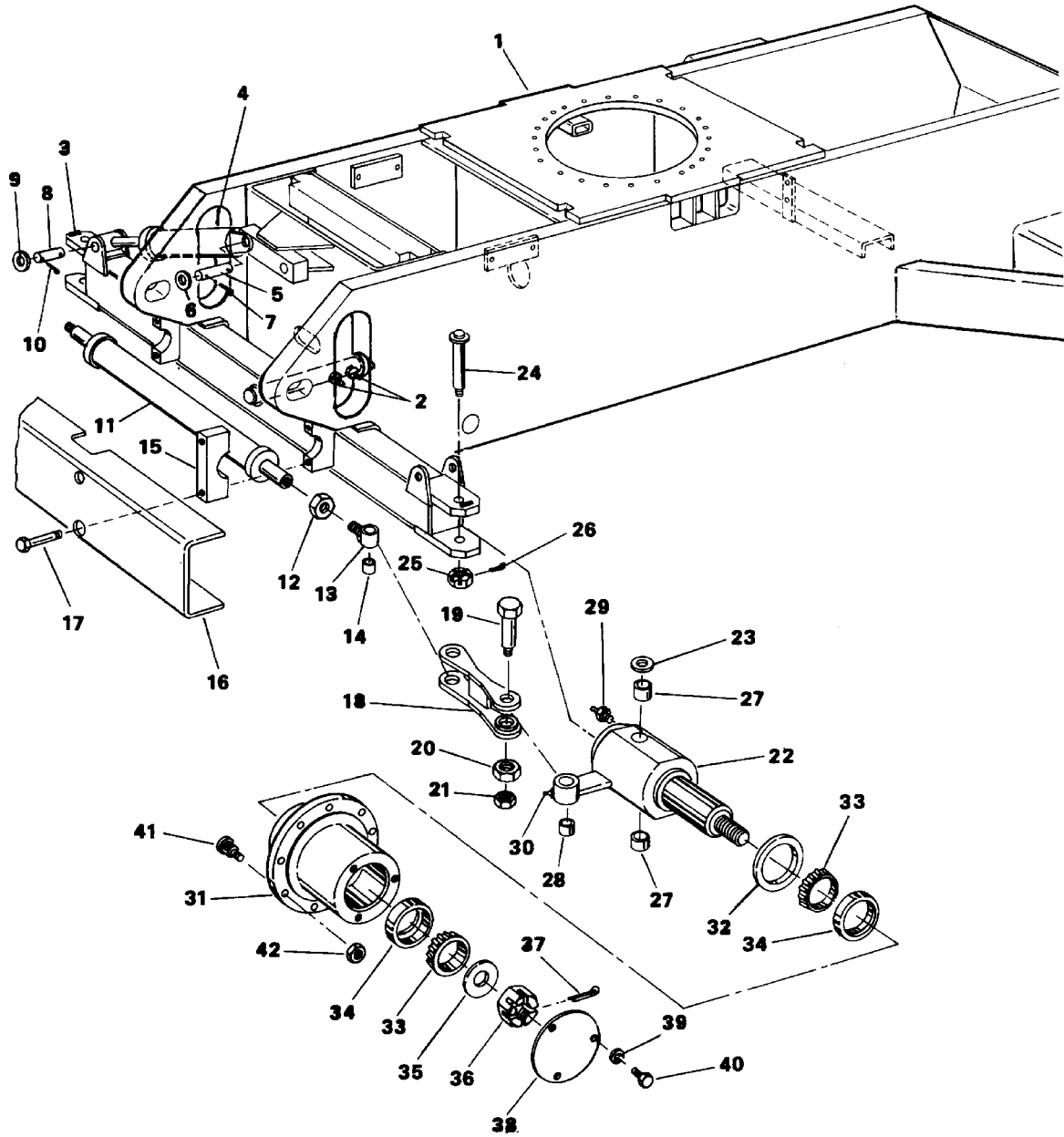
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SECTION
1
FRAME

FIGURE 1-1. FRAME AND STEERING INSTALLATION - 2WD BUILT PRIOR TO MID 1984 (WITH DOUBLE ROD STEER CYLINDER)



SECTION 1 FRAME

FIGURE 1-1. FRAME AND STEERING INSTALLATION - 2WD BUILT PRIOR TO MID 1984 (WITH DOUBLE ROD STEER CYLINDER)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
1	2360226	Frame Weldment	1	
2	2160002	Fitting, Grease	2	
	0960534	Bushing, Bronze	2	
	0236220	OSCILLATING AXLE INSTALLATION	Ref.	B
3	4841884	Axle Beam Weldment	1	
	1120191	Cap Retainer	1	
	0642216	Bolt 3/4"-10NC x 2"	2	
	4762200	Lockwasher 3/4"	2	
4	1681523	Axle Lockout Cylinder Assembly (See Section 5 for Breakdown)	2	
5	3421118	Pin	2	
6	4740103	Washer	4	
7	3450608	Pin, Cotter	4	
8	3420738	Pin	2	
9	4740103	Washer	4	
10	3450608	Pin, Cotter	4	
	0236226	STEERING INSTALLATION (All units prior to serial no. 0308408969, serial nos. 0308408973 thru 0308408998 and serial nos. 0308409000 thru 0308409017.)	Ref.	B
11	1681520	Steering Cylinder Assembly (See Section 5 for Breakdown)	1	
12	3312801	Nut, Hex 1 1/8"-7NC	4	
13	0231964	Tie Rod Assembly	2	
14	0960414	Bushing	1	
15	3200188	Mount, Steer Cylinder	2	
16	1670293	Cover	2	
17	0641830	Bolt 1/2"-13NC x 3 3/4"	4	
18	3010073	Steering Link	2	
19	0630354	Bolt, Special	4	
20	3312605	Lock Nut 1"-8NC	4	
21	3312602	Nut, Jam 1"-8NC (When Equipped)	4	
22	4130143	Spindle - L.H. (Includes Items 27 and 28)	1	
	4130142	Spindle - R.H. (Includes Items 27 and 28)	1	
23	4740247	Washer, Thrust	2	
24	3420871	Pin, King	2	
25	3313003	Nut, Slotted 1 1/4"-7NC	2	
26	3450608	Cotter Pin	2	
27	0960839	Bushing	4	
28	0960414	Bushing	2	
29	2160002	Fitting, Grease	2	
30	2160006	Fitting, Grease	2	
31	2780091	Hub, Weldment	2	
32	3960098	Seal	2	

SECTION 1 FRAME

SECTION
1
FRAME

FIGURE 1-1. FRAME AND STEERING INSTALLATION - 2WD BUILT PRIOR TO MID 1984 (WITH DOUBLE ROD STEER CYLINDER) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
33	0440019	Bearing, Cone	4	
34	0440018	Bearing, Cup	4	
35	4740016	Washer, Hardened	2	
36	3323404	Nut, Slotted 1 1/2"-12NC	2	
37	3450408	Cotter Pin	2	
38	1120032	Cap, Hub	2	
39	4761000	Lockwasher #10	6	
40	0641003	Bolt #10-24NC x 3/8"	6	
41	0630137	Bolt, Wheel Stud	18	
42	3300012	Nut 1/2"-20NC	18	

SECTION 1 FRAME

FIGURE 1-1. FRAME AND STEERING INSTALLATION - 2WD BUILT PRIOR TO MID 1984 (WITH DOUBLE ROD STEER CYLINDER) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

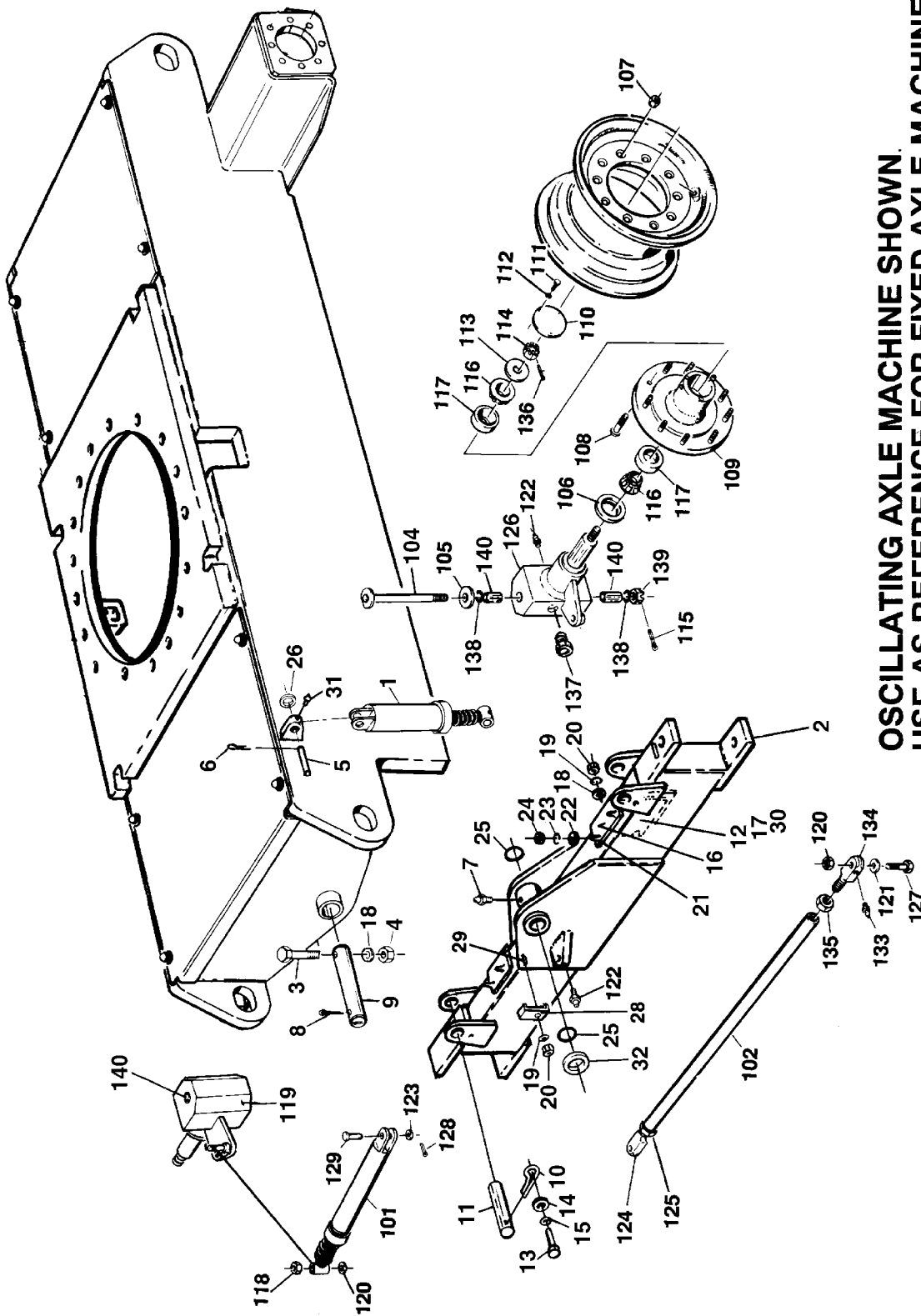
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SECTION 1 FRAME

FIGURE 1-2. FRAME AND STEERING INSTALLATION - 2WD BUILT MID 1984 TO PRESENT (WITH SINGLE ROD STEER CYLINDER)



OSCILLATING AXLE MACHINE SHOWN.
USE AS REFERENCE FOR FIXED AXLE MACHINE

SECTION 1 FRAME

FIGURE 1-2. FRAME AND STEERING INSTALLATION - 2WD BUILT MID 1984 TO PRESENT (WITH SINGLE ROD STEER CYLINDER)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		FRAME WELDMENT OPTIONS	Ref.	
		Fixed Axle Frames:		
	2360234	Mid 1984 to January 1992		
	2360349	January 1992 to Present		
		Oscillating Axle Frames:		
	2360231	40H Built Mid 1984 to March 1985		
	2360236	40H Built March 1985 to January 1992		
	2360348	40H Built January 1992 to Present		
	2360307	40H+6 and 46H		
	0236447	OPTIONAL OSCILLATING FRONT AXLE INSTALLATION - BUILT MID 1984 TO MARCH 1985 (WITH 2 1/2" BORE LOCKOUT CYLINDER)	Ref.	5
	0236868	OPTIONAL OSCILLATING FRONT AXLE INSTALLATION - BUILT MARCH 1985 TO JANUARY 1992 (WITH 3" BORE LOCKOUT CYLINDER)	Ref.	5
	0253092	OPTIONAL OSCILLATING FRONT AXLE INSTALLATION - BUILT JANUARY 1992 TO PRESENT (WITH 3" BORE LOCKOUT CYLINDER)	Ref.	4
1		Axle Lockout Cylinder Assembly (See Section 5 for Breakdown) Options:	2	
	1681536	Built Mid 1984 to March 1985		
	1681572	Built March 1985 to January 1992		
	1682873	Built January 1992 to Present		
2		Front Axle Weldment Options:	1	
	4841999	Built Mid 1984 to March 1985		
	4842691	Built March 1985 to Present		
3	0641636	Bolt 3/8"-16NC x 4 1/2"	1	
4	3311605	Lock Nut 3/8"-16NC	1	
5		Pin (Top) Options:	2	
	3421622	Built Mid 1984 to March 1985		
	3421227	Built March 1985 to Present		
6	3450606	Pin, Cotter	4	
7	2160002	Fitting, Grease	A/R	
8	3451214	Pin, Cotter	1	
9	3421128	Pin, Front Axle	1	
10	3450808	Pin, Cotter	4	
11		Pin (Bottom) Options:	2	
	3421129	Built Mid 1984 to March 1985		
	3421224	Built March 1985 to Present		
12	4070528	Shim, Axle 1/16"	2	
	4070800	Shim, Axle		
	4300034	Stud (Welded on Part)	4	
13	0641406	Bolt 1/4"-20NC x 3/4"	2	
14	4751400	Flatwasher 1/4"	2	
15	4761400	Lockwasher 1/4"	2	
16	4220098	Stop, Axle	2	
17	4300034	Stud (Welded on Part)	2	

SECTION 1 FRAME

SECTION 1 FRAME

FIGURE 1-2. FRAME AND STEERING INSTALLATION - 2WD BUILT MID 1984 TO PRESENT (WITH SINGLE ROD STEER CYLINDER) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION (CONTINUED)	QTY.	REV.
18	4751600	Flatwasher 3/8"	3	
19	4761600	Lockwasher 3/8"	2	
20	3311601	Nut 3/8"-16NC	2	
21	4300048	Stud (Welded on Part)	4	
22	4751800	Flatwasher 1/2"	4	
23	4761800	Lockwasher 1/2"	4	
24	3311801	Nut 1/2"-13NC	4	
25		O-Ring Options:	2	
	Not Required	Built Mid 1984 to March 1985		
	Not Required	Built March 1985 to January 1992		
	3780184	Built January 1992 to Present		
26	4712600	Flatwasher 1" Narrow	4	
27	2540002	Grommet (Not Shown)	6in./15.2cm	
28	1320125	Clamp (Prior to S/N 38704)	1	
29	4300030	Stud (Welded on Part)	2	
30	4070800	Shim, Axle		
31		Fitting, Grease - Straight	4	
	2160002	Fitting, Grease - Straight (Built Mid 1984 to January 1992)		
	2160003	Fitting, Grease - 45° (Built January 1992 to Present)		
32	4740158	Washer, Thrust (Prior to January 1992 Only)	2	
	0236449	STEERING INSTALLATION - STANDARD	Ref.	O
	0252299	STEERING INSTALLATION - CSA	Ref.	A
101	1681562	Steer Cylinder Assembly (See Section 5 for Break-down) (Note: 1681533 Steer Cylinder used Mid 1984 to January 1985. Replace 1681533 with 1681562)	1	
102		Tie-Rod Options:	1	
	3840759	Tie-Rod with RH Threads both ends (Mid 1984 to April 1986)		
	3840863	Tie-Rod with LH and RH Threads (April 1986 to Present)		
103	Not Used			
104		Kingpin Options:	2	
		Standard		
	3421127	1 1/4" Diameter (Mid 1984 to June 1985)		
	3421243	1 1/2" Diameter (June 1985 to February 1994)		
	3422261	1 1/2" Diameter (February 1994 to Present)		
	3421835	CSA		
105		Thrust Bearing Options:	2	
	0440162	Bearing - Used with 1 1/4" Kingpins		
	0440183	Bearing - Used with 1 1/2" Kingpins		
106	3960098	Seal, Hub	2	
107	3300012	Lugnut	18	
108	0630137	Bolt, Wheel	18	
109	2780091	Hub	2	
110	1120032	Cap, Hub	2	

SECTION 1 FRAME

FIGURE 1-2. FRAME AND STEERING INSTALLATION - 2WD BUILT MID 1984 TO PRESENT (WITH SINGLE ROD STEER CYLINDER) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION (CONTINUED)	QTY.	REV.
111	0721003	Screw #10-24NC x 3/8"	6	
112	4761000	Lockwasher #10	6	
113	4740016	Washer, Hardened	2	
114	3323403	Nut, Slotted 1 1/2"-12NF	2	
115	3451012	Pin, Cotter 5/16" x 3"	2	
116	0440019	Cone, Bearing	2	
117	0440018	Cup, Bearing	2	
118	3300175	Locknut	1	
119		Spindle (RH Side) Options (Includes Item 140):	1	
		Standard		
	4130142	Spindle - 1 1/4" Diameter (Mid 1984 to June 1985)		
	4130160	Spindle - 1 1/2" Diameter (June 1985 to Present)		
	4130267	CSA	1	
120	3312602	Nut, Jam 1"-8NC	2	
121	0440091	Bearing, Thrust	3	
122	2160002	Fitting, Grease	3	
123	4712600	Flatwasher 1" Narrow	1	
124	0560605	Block, Tie-Rod (RH Side/RH Threads)	1	
125	3323002	Nut, Jam 1 1/4"-12NF	1	
126		Spindle (RH Side) Options (Includes Item 140):	1	
		Standard		
	4130143	Spindle - 1 1/4" Diameter (Mid 1984 to June 1985)		
	4130161	Spindle - 1 1/2" Diameter (June 1985 to Present)		
	4130268	CSA	1	
127	0630425	Bolt 1"-8NC x 3 3/4"	2	
128	3450606	Pin, Cotter 3/16" x 1 1/2"	1	
129	3431622	Pin, Clevis 1" x 2 3/4"	1	
130	Not Used			
131	Not Used			
132	0100011	Loctite #242 (Not Shown)	A/R	
133		Grease Fitting Options:	2	
	2160002	Straight		
	2160003	45°		
134		Tie-Rod Block (LH Side) Options:	1	
	0560605	(LH Side/RH Threads) (Mid 1984 to April 1986)		
	0560714	(LH Side/LH Threads) (April 1986 to Present)		
135		Jam Nut (1 1/4"-12NF) Options:	1	
	3323002	(RH Threads)		
	3300229	(LH Threads)		
136		Cotter Pin Options:	2	
	3451012	5/16" x 3"		
	3450810	1/4" x 2 1/2"		
137		Valve, Relief Options: (February 1994 to Present)	2	
	4640812	Standard		
	Not Required	CSA		
138		O-Ring Options: (February 1994 to Present)	4	
	3780183	Standard		
	Not Required	CSA		

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FIGURE 1-2. FRAME AND STEERING INSTALLATION - 2WD BUILT MID 1984 TO PRESENT (WITH SINGLE ROD STEER CYLINDER) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION (CONTINUED)	QTY.	REV.
139	3313003	Slotted Nut Options:	2	
	3313403	Standard - Nut 1 1/4"-7NC		
	3323403	Standard - Nut 1 1/2"-6NC		
		Standard - Nut 1 1/2"-12NF		
140		Bushing Options:	2	
		Standard		
	0960839	1 1/4" Kingpins (Mid 1984 to June 1985)		
	0960523	1 1/2" Kingpins (June 1985 to February 1994)		
	0961778	1 1/2" Kingpins (February 1994 to Present)		
	0960523	CSA		

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FIGURE 1-2. FRAME AND STEERING INSTALLATION - 2WD BUILT MID 1984 TO PRESENT (WITH SINGLE ROD STEER CYLINDER) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION (CONTINUED)	QTY.	REV.

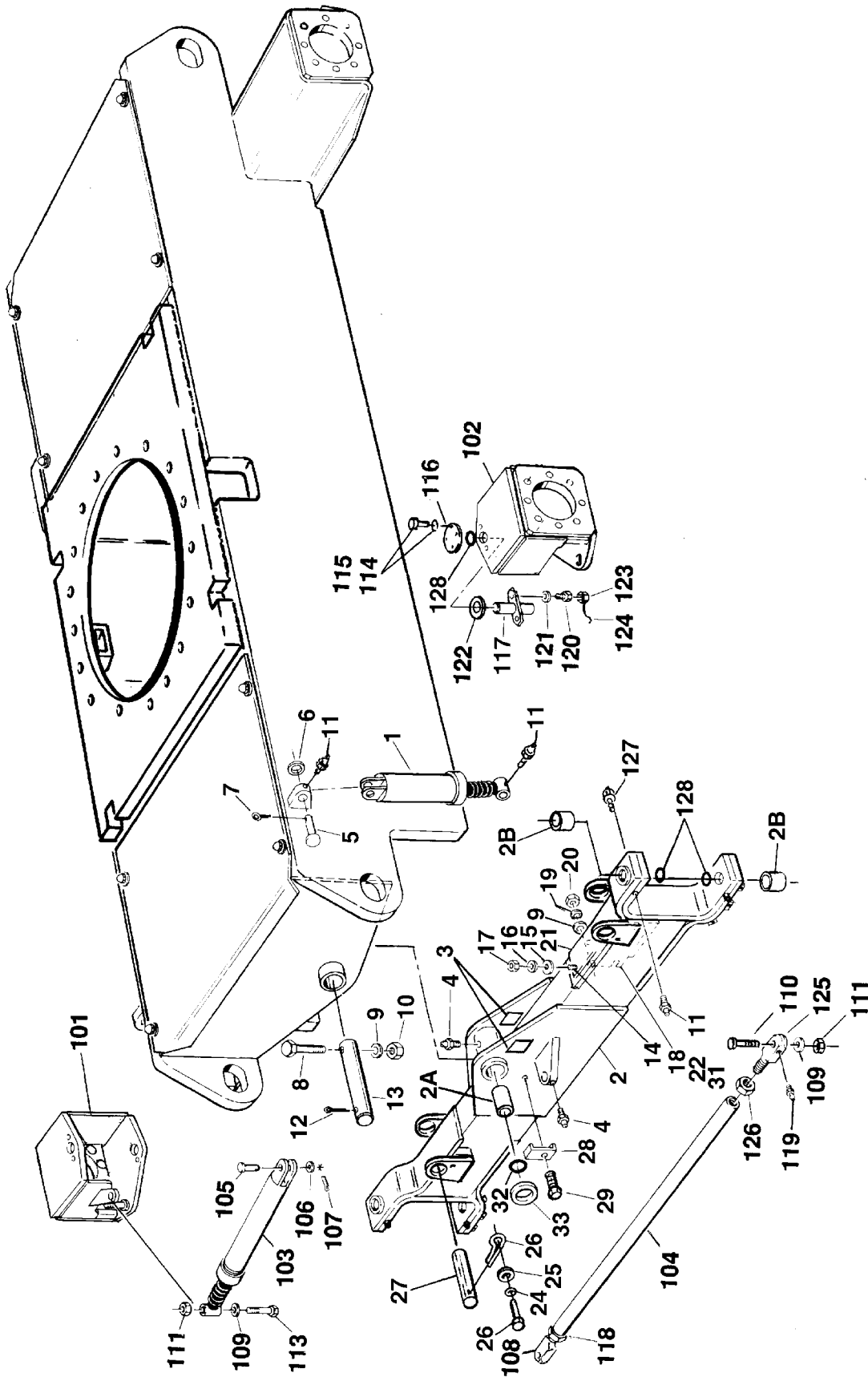
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FIGURE 1-3. FRAME AND STEERING INSTALLATION - 4WD



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FIGURE 1-3. FRAME AND STEERING INSTALLATION - 4WD

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		FRAME WELDMENT OPTIONS	Ref.	
		Fixed Axle Frames:		
	2360233	Mid 1984 to January 1992		
	2360350	January 1992 to Present		
		Oscillating Axle Frames:		
	2360231	40H Built Mid 1984 to March 1985		
	2360236	40H Built March 1985 to January 1992		
	2360348	40H Built January 1992 to Present		
	2360307	40H+6 and 46H		
	0236717	OPTION OSCILLATING FRONT AXLE INSTALLATION - STANDARD CAPACITY BUILT PRIOR TO APRIL 1993	Ref.	E
	0253091	OPTIONAL OSCILLATING FRONT AXLE INSTALLATION - STANDARD CAPACITY BUILT APRIL 1993 TO PRESENT	Ref.	5
	0253093	OPTION OSCILLATING FRONT AXLE INSTALLATION - 800 LBS UNRESTRICTED CAPACITY	Ref.	3
1		Axle Lockout Cylinder Assembly Options (See Section 5 for Breakdown)	2	
	1681557	Cylinder (Prior to March 1985)		
	1681571	Cylinder (March 1985 to April 1993)		
	1682727	Cylinder (April 1993 to Present)		
	1682727	Cylinder (800Lbs. Unrestrict Capacity)		
2		Front Axle Weldment Options:	1	
	4842153	Axle (Prior to April 1993)		
	4842153	Axle (April 1993 to Present)		
	4843698	Axle (800Lbs. Unrestricted Capacity)		
2A		Bushing (Axle Pivot) Options:	2	
	0961003	Bushing (Prior to February 1994)		
	0961771	Bushing (February 1994 to Present)		
	0961003	Bushing (800Lbs. Unrestrict Capacity)		
2B		Bushing (Kingpin Pivot) Options:	4	
	0961029	Bushing (Prior to February 1994)		
	0961073	Bushing (February 1994 to Present)		
	0961029	Bushing (800Lbs. Unrestrict Capacity)		
3	2540002	Grommet	11 in.	
4	2160002	Fitting, Grease - Straight	A/R	
5		Clevis Pin (Top) Options:	2	
	3421622	Pin (Prior to March 1985)		
	3421227	Pin (March 1985 to Present)		
6	4712600	Flatwasher 1"	4	
7	3450606	Pin, Cotter 3/8" x 1 1/2"	4	
8	0641636	Bolt 3/8"-16NC x 4 1/2"	1	
9	4751600	Flatwasher 3/8"	3	
10	3311605	Locknut 3/8"-16NC	1	
11	2160003	Fitting, Grease - 45°	A/R	
12	3451214	Pin, Cotter 3/8" x 3 1/2"	1	
13	3421128	Pin, Front Axle	1	

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FIGURE 1-3. FRAME AND STEERING INSTALLATION - 4WD (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
14		Stud (Welded on Part) Options:	A/R	
	4300048	Prior to S/N 35872		
	4300045	S/N 35872 to Present		
15	4751800	Flatwasher 1/2"	4	
16	4761800	Lockwasher 1/2"	2	
17	3311801	Nut 1/2"-13NC	2	
18	4300030	Stud (Welded on Part)	2	
19	4761600	Lockwasher 3/8"	2	
20	3311601	Nut 3/8"-16NC	2	
21	4220098	Stop, Axle	2	
22	4070528	Shim, Axle 1/16"	A/R	
23	0641406	Bolt 1/4"-20NC x 3/4"	2	
24	4751400	Flatwasher 1/4"	2	
25	4761400	Lockwasher 1/4"	2	
26	3450808	Pin, Cotter 1/4" x 2"	2	
27		Clevis Pin (Bottom) Options:	2	
	3421129	Pin (Prior to March 1985)		
	3421224	Pin (March 1985 to Present)		
28	1320125	Clamp, Hose	1	
29	0641612	Bolt 3/8"-16NC x 1 1/2"	1	
30	0100019	Loctite #271 (Not Shown)	A/R	
31	4070800	Shim, Axle	A/R	
32		O-Ring Options:	2	
	3780184	April 1993 to Present		
	Not Required	800Lbs. Unrestrict Capacity		
33		Washer, Thrust Options:	2	
	4740158	Prior to April 1993		
	Not Required	April 1993 to Present		
	4740158	800Lbs. Unrestrict Capacity		
	0236705	STEERING INSTALLATION - STANDARD MACHINES BUILT PRIOR TO APRIL 1992	Ref.	G
	0251813	STEERING INSTALLATION - STANDARD MACHINES BUILT APRIL 1992 TO PRESENT AND ALL CSA MACHINES	Ref.	B
101		Spindle (RH Side) Options:	1	
	4130152	Spindle (Prior to August 1986)		
	4130170	Spindle (August 1986 to Present)		
102		Spindle (LH Side) Options:	1	
	4130153	Spindle (Prior to August 1986)	1	
	4130171	Spindle (August 1986 to Present)		
103	1681555	Steer Cylinder Assembly (See Section 5 for Breakdown)	1	
104		Tie-Rod Options:	1	
	3840786	Tie-Rod (Prior to April 1986)		
	3840866	Tie-Rod (April 1986 to Present)		
105	3431622	Pin, Clevis	1	
106	4712600	Flatwasher 1" Narrow	1	
107	3450606	Pin, Cotter 3/16" x 1 1/2"	1	
108	0560605	Block, Tie-Rod (RH Side/RH Threads)	1	

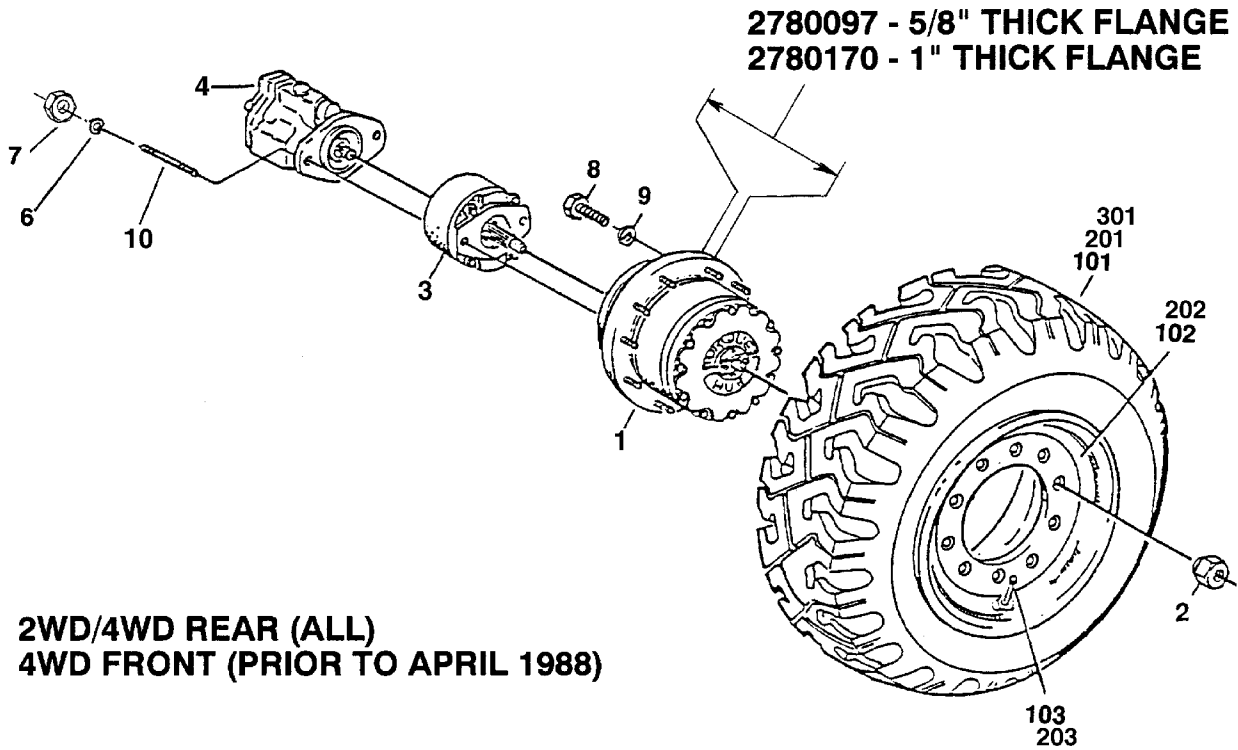
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FIGURE 1-3. FRAME AND STEERING INSTALLATION - 4WD (CONTINUED)

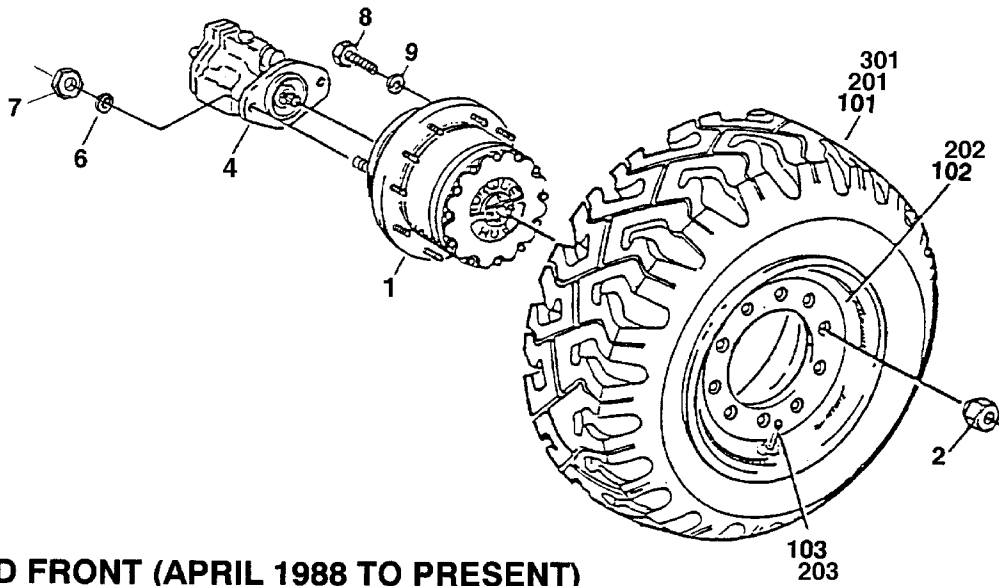
FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
109	0440091	Bearing, Thrust	3	
110	0642628	Bolt 1"-8NC x 3 1/2"	2	
111	3312602	Nut, Jam 1"-8NC	3	
112	0100011	Loctite #242 (Not Shown)	A/R	
113	0630369	Bolt, Special	1	
114	0641404	Bolt 1/4"-20NC x 1/2" (Prior to August 1992)	8	
	4761400	Lockwasher 1/4" (Prior to August 1992)	8	
115	2080026	Tack (August 1992 to Present - When Equipped)	8	
116		Cover Plate Options (When Equipped):	4	
	3530244	Plate (Prior to August 1992)		
	3536410	Plate (August 1992 to Present)		
117		Kingpin Options:	4	
	3421190	Prior to April 1992		
	3422221	April 1992 to Present		
118	3323002	Nut, Jam 1 1/4"-12NF	1	
119		Grease Fitting Options:	A/R	
	2160002	Fitting - Straight		
	2160003	Fitting - 45°		
120	0630083	Bolt	8	
121	4751600	Flatwasher 3/8"	A/R	
122	0440161	Bearing, Thrust	2	
123	1380124	Clip, Retainer (Prior to April 1990)	8	
124	4920096	Wire, Safety	4 Ft.	
125		Tie-Rod Block (LH Side) Options:	1	
	0560605	Block (LH Side/RH Threads) (Prior to April 1986)		
	0560714	Block (LH Side/LH Threads) (April 1986 to Present)		
126		Nut (LH Side) Options:	1	
	3323002	Nut 1 1/4"-12NF (RH Thread) (Prior to April 1986)		
	3300229	Nut 1 1/4"-12NF (LH Thread) (April 1986 to Present)		
127	4640812	Valve, Relief (March 1994 to Present)	4	
128	3780183	O-Ring (March 1994 to Present)	8	

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FIGURE 1-4. TIRES AND WHEEL DRIVE INSTALLATIONS



2WD/4WD REAR (ALL)
4WD FRONT (PRIOR TO APRIL 1988)



4WD FRONT (APRIL 1988 TO PRESENT)

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FIGURE 1-4. TIRES AND WHEEL DRIVE INSTALLATIONS

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		WHEEL DRIVE INSTALLATIONS	Ref.	
		2WD Rear	Ref.	
	0236281	Ford Engine (Prior To September 1991)	Ref.	G
	0238299	Deutz Engine (Prior To September 1991)	Ref.	A
	0236281	Deutz/Ford Engine (September 1991 To Present)	Ref.	6
	0270206	Deutz/Ford Engine (Post Production Alternative)	Ref.	1
		4WD Rear	Ref.	
	0237319	Ford Engine (Prior To March 1992)	Ref.	D
	0237320	Deutz Engine (Prior To March 1992)	Ref.	C
	0237319	Deutz/Ford Engine (March 1992 To Present)	Ref.	5
	0270216	Deutz/Ford Engine (Post Production Alternative)	Ref.	1
		4WD Front	Ref.	
	0237317	Ford Engine (Prior To April 1988)	Ref.	B
	0237318	Deutz Engine (Prior To April 1988)	Ref.	B
	0238840	Ford Engine (April 1988 To October 1989)	Ref.	C
	0238841	Deutz Engine (April 1988 To October 1989)	Ref.	B
	0238840	Deutz/Ford Engine (October 1989 To Present)	Ref.	C
1		Drive Hub Assembly Options:	2	
		2WD Rear		
	2780097	Hub - Prior to May 1989 (See Figure 1-5 for Breakdown)		
	2780170	Hub - May 1989 to Present (See Figure 1-5 for Breakdown)		
		4WD Rear		
	2780097	Hub - Prior to May 1989 (See Figure 1-5 for Breakdown)		
	2780170	Hub - May 1989 to Present (See Figure 1-5 for Breakdown)		
		4WD Front		
	2780097	Hub - Prior to April 1988 (See Figure 1-5 for Breakdown)		
	2780151	Hub/Brake - April 1988 to February 1992 (See Figure 1-6 for Breakdown)		
	2780192	Hub/Brake - February 1992 to Present (See Figure 1-6 for Breakdown)		
2	3300012	Lug, Nut	18	
3		Drive Brake Assembly Options:	2	
		2WD Rear		
	0920027	Brake - Prior to June 1987 (See Figure 1-7 for Breakdown)		
	0920072	Brake - June 1987 to March 1992 (See Figure 1-8 for Breakdown)		
	0920084	Brake - March 1992 to S/N 33476 (See Figure 1-9 for Breakdown)		
	0920110	Brake - S/N 33476 to Present (See Figure 1-9 for Breakdown)		
	0920119	Brake (Mico) (May be used as Alternative)		
		4WD Rear		
	0920027	Brake - Prior to June 1987 (See Figure 1-7 for Breakdown)		

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FIGURE 1-4. TIRES AND WHEEL DRIVE INSTALLATIONS (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
3 (cont'd)	0920072	Brake - June 1987 to March 1992 (See Figure 1-8 for Breakdown)		
	0920084	Brake - March 1992 to S/N 33476 (See Figure 1-9 for Breakdown)		
	0920110	Brake - S/N 33476 to Present (See Figure 1-9 for Breakdown)		
	0920119	Brake (Mico) (May be used as Alternative)		
	0920068	4WD Front Brake - Prior to April 1988 (See Figure 1-10 for Breakdown)		
	0920086	Brake - Service Replacement (See Figure 1-11 for Breakdown)		
4		Drive Motor Assembly Options: (See Figure 1-12 for Breakdown)	2	
		2WD Rear		
	Use 1001096416	Ford Engine - Prior to October 1992 (was p/n 3160080)		
	Use 3160343	Deutz/Ford Engine- October 1992 to Present (was p/n 3160189)		
	Use 1001096415	Deutz Engine- Prior to September 1991 (was p/n 3160118)		
		4WD Rear		
	3160129	Ford Engine - Prior to July 1990		
	Use 1001096415	Deutz/Ford Engine - July 1990 to Present (was p/n 3160118)		
	3160130	Deutz Engine - Prior to July 1990		
		4WD Front		
	3160129	Ford Engine - Prior to July 1990		
3160130	Deutz Engine - Prior to July 1990			
Use 1001096415	Deutz/Ford Engine - July 1990 to Present (was p/n 3160118)			
5	Not Used			
6	4761800	Lockwasher 1/2"	4	
7	3311801	Nut 1/2"-13NC	4	
8	0642016	Bolt 5/8"-11NC x 2"	12	
9	4762000	Lockwasher 1/2"	12	
10		Stud Options:	4	
		2WD Rear		
	4300092	Stud 1/2" x 5 1/2" (Prior to September 1991)		
	4320008	Stud 1/2" x 6 1/8" (September 1991 to March 1992)		
	4300092	Stud 1/2" x 5 1/2" (March 1992 to Present)		
		4WD Rear		
	4300092	Stud 1/2" x 5 1/2" (Prior to March 1992)		
	4320008	Stud 1/2" x 6 1/8" (Prior to March 1992)		
	4300092	Stud 1/2" x 5 1/2" (March 1992 to Present)		
		4WD Front		
4300053	Stud 1/2" x 5" (Prior to April 1988)			

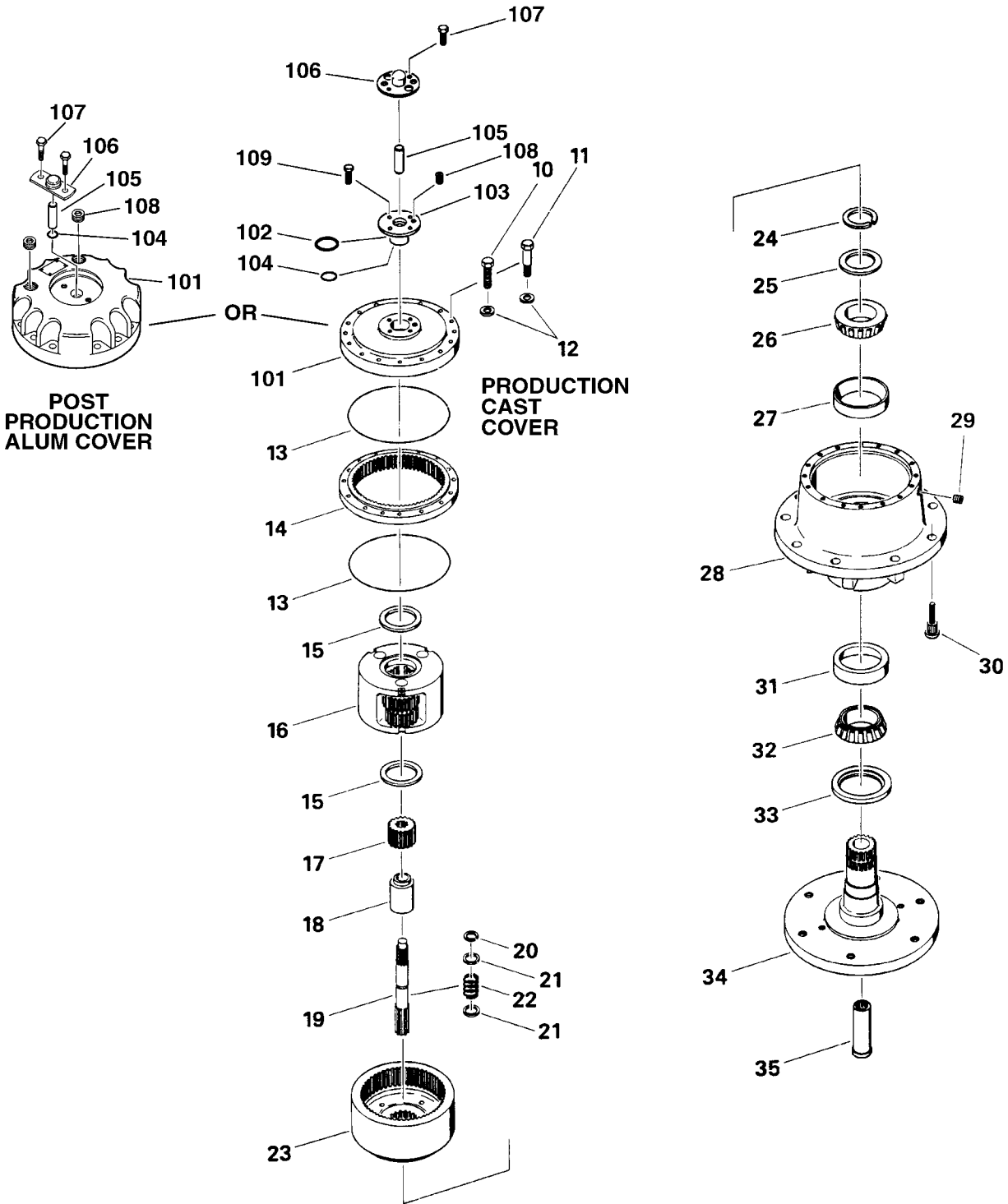
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FIGURE 1-4. TIRES AND WHEEL DRIVE INSTALLATIONS (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		TIRE INSTALLATION OPTIONS:	Ref.	
	0234913	12.5 x 15 Pneumatic (2WD)	Ref.	A
	0235123	12.5 x 15 Foam-Filled (2WD)	Ref.	A
	0236836	12.5 x 15 Pneumatic (4WD)	Ref.	A
	0251085	12.5 x 15 Foam-Filled (4WD)	Ref.	—
	0251855	14 x 17.5 Pneumatic (4WD with Oscillating Axle)	Ref.	—
	0252990	14 x 17.5 Pneumatic (4WD with Fixed Axle)	Ref.	—
	0255769	14 x 17.5 Foam-Filled (4WD with Fixed Axle)	Ref.	—
	0255626	14 x 17.5 Foam-Filled (4WD with Oscillating Axle)	Ref.	—
		Pneumatic Tire and Wheel Assembly Options:		
101	0233657	12.5 x 15 - Goodyear Farm Service Tread		
	0233677	12.5 x 15 - Goodyear Sure-Grip (Left Side)		
	0233678	12.5 x 15 - Goodyear Sure-Grip (Right Side)		
	4520063	Tire - 12.5 x 15 Goodyear Farm Service	1	
	4520196	Tire - 12.5 x 15 Gans (Galaxy)	1	
	4520057	Tire - 12.5 x 15 Goodyear Sure-Grip	1	
	4520197	Tire - 12.5 x 15 OTR	1	
102	4860065	Wheel - 15"	1	
103	4640392	Valve, Air	1	
104	Not Available	Decal - Tire Pressure (Not Shown)	1	
201	0251853	14 x 17.5 (Right Side)		
	0251854	14 x 17.5 (Left Side)		
	4520124	Tire - 14 x 17.5 NHS Lug (Goodyear)	1	
	4520171	Tire - 14 x 17.5 NHS Lug (Gans)	1	
202	4860129	Wheel - 17.5"	1	
203	4640113	Valve	1	
204	1702738	Decal - Tire Pressure (Not Shown)	1	
301		Foam-Filled Tire and Wheel Assembly Options:		
		Note: Assemblies may require ballast/foam filling to manufacture's specifications prior to installing on a machine. Refer to Operation & Safety or Service & Maintenance Manuals. Purchase individual tire and/or rim only if able to foam fill tire & wheel assembly, otherwise, purchase complete assembly.		
	0235126	12.5 x 15 - Goodyear Farm Service Tread		
	0235125	12.5 x 15 - Goodyear Sure-Grip Tread (Right Side)		
	0235124	12.5 x 15 - Goodyear Sure-Grip Tread (Left Side)		
	0255624	14 x 17.5 - Gans NHS Lug (Right Side)		
	0255625	14 x 17.5 - Gans NHS Lug (Left Side)		

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FIGURE 1-5. DRIVE HUB ASSEMBLY



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FIGURE 1-5. DRIVE HUB ASSEMBLY

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		DRIVE HUB ASSEMBLIES:		
	2780097	DRIVE HUB ASSEMBLY - PRIOR TO MAY 1989	Ref.	—
	2780170	DRIVE HUB ASSEMBLY - MAY 1989 TO PRESENT	Ref.	—
1 to 9	Not Used			
10	7000217	Bolt, Hex Head	12	
11	7000214	Bolt, Hex Head - Shoulder	4	
12	4751500	Flatwasher	16	
13	Kit	O-Ring	2	
14	7001988	Gear, Ring	1	
15	7000253	Washer, Thrust	2	
16	7001984	Planet Carrier Assembly	1	
	7001931	Carrier	1	
	7001985	Washer, Thrust	6	
	7001909	Bearing, Needle Roller	96	
	7000263	Spacer	3	
	7001911	Shaft, Planet	3	
	7001987	Gear, Cluster	3	
	7001913	Rollpin	3	
17	7001990	Gear, Input	1	
18	7000252	Spacer, Sun Gear	1	

	7000250	Input Shaft Assembly	1	
19	7000260	Shaft, Input	1	
20	7000261	Ring, Retaining	1	
21	7000263	Spacer	2	
22	7000262	Spring	1	
23	7000246	Gear, Stationary Internal	1	
	7000245	Hub Assembly	1	
24	Kit	Ring, Retaining	1	
25	Kit	Spacer	1	
26	7000257	Bearing, Tapered Roller	1	
27	7000258	Cone, Bearing	1	
28		Hub Options:	1	
	7000259	Prior to May 1989		
	7007601	May 1989 to Present		
29	7000242	Plug, Pipe	1	
30		Stud, Wheel	9	
	0630137	Prior to May 1989		
	7007697	May 1989 to Present		
31		Cone, Bearing Options:	1	
	7000256	Prior to May 1989		
	Kit	May 1989 to Present		
32		Bearing, Tapered Roller Options:	1	
	7000255	Prior to May 1989		
	Kit	May 1989 to Present		
33		Seal Options:	1	
	Kit	Prior to May 1989		
	7001998	May 1989 to Present		

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FIGURE 1-5. DRIVE HUB ASSEMBLY (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
34		Spindle Options:	1	
	7000254	Prior to May 1989		
	7001997	May 1989 to Present		
35	7000206	Coupling, Input	1	
		COVER ASSEMBLY	Ref.	
	See Kit Options	Production Cast Cover	Ref.	
	See Kit Options	Post Production Aluminum Cover	Ref.	
101		Cover Options:	1	
	See Kit Options	Production Cast Cover (was p/n 7000226)		
	See Kit Options	Post Production Aluminum Cover (was p/n 7017091)		
102		O-Ring Options:	1	
	Kit	Production Cast Cover		
	7017070	Post Production Aluminum Cover		
103		Cap, Cover	1	
	Kit	Production Cast Cover		
	Not Required	Post Production Aluminum Cover		
104		O-Ring Options:	1	
	Kit	Production Cast Cover		
	7017095	Post Production Aluminum Cover		
105		Rod, Disconnect Options:	1	
	Kit	Production Cast Cover		
	7017092	Post Production Aluminum Cover		
106		Cap, Disconnect	1	
	Kit	Production Cast Cover		
	7017093	Post Production Aluminum Cover		
107		Bolt Options:	A/R	
	7000216	Production Cast Cover	4	
	7000216	Post Production Aluminum Cover	2	
108		Plug, Pipe Options:	A/R	
	7000243	Production Cast Cover	1	
	7017094	Post Production Aluminum Cover	2	
109		Bolt Options:	A/R	
	Kit	Production Cast Cover		
	Not Required	Post Production Aluminum Cover		

		Kit Options:		
		Prior to May 1989		
	Not Available	Bearing Kit	1	
	2900034	Seal Kit (Includes Items 13, 24, 25 and 33.)	1	
	2900137	Disconnect and Seal Kit (Includes Items 102-106, 109, 13, 24, 25 and 33)	1	
	2900661	Seal Kit (Includes Items 13, 15, 24, 33, 102 and 104)	1	
		May 1989 to Present		
	7010429	Bearing Kit (Includes Items 31 and 32)	1	
	Not Available	Seal Kit	1	

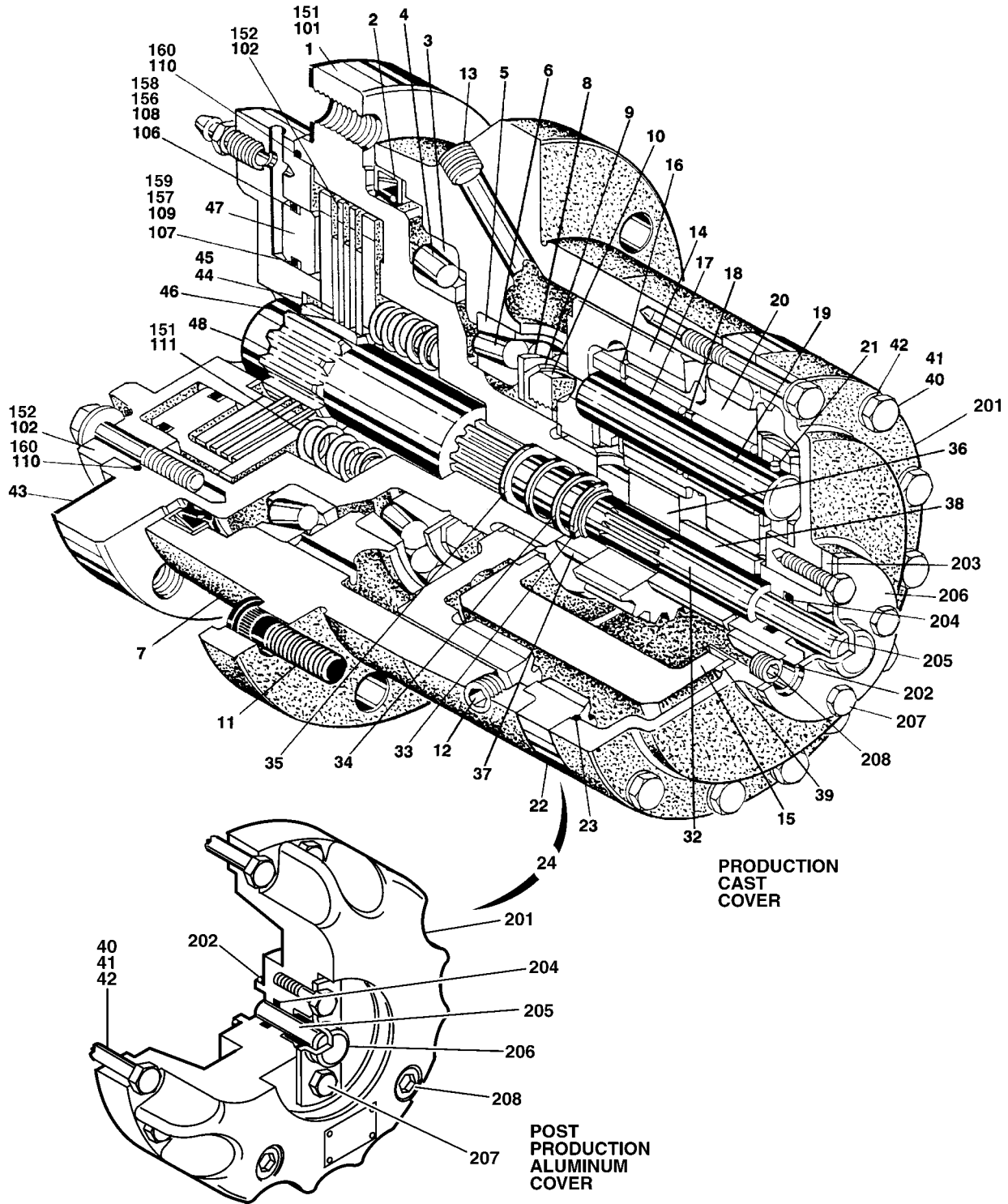
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FIGURE 1-5. DRIVE HUB ASSEMBLY (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	2900137	Disconnect and Seal Kit (102-106, 109, 13, 24, 25 and 33)	1	
	2900137	Production Cast Cover		
	Not Available	Post Production Aluminum Cover (Purchase Individual Parts)		
		Cover Kit Options:	1	
	No Longer Available	Production Cast Cover (Was p/n 7001989)		
	Use 70001111	Aluminum Replacement for Production Cast Cover (Includes 13, 15 (Spacer), 10, 11, 101, 102 & 104-108) (was p/n 7017098 & p/n 7017099)		
	Use 70001111	Post Production Aluminum Cover (Includes 13, 101 & 104-107) (was p/n 7017090)		
	70001111	Replacement Cover Kit		

SECTION 1 FRAME

FIGURE 1-6. DRIVE HUB/BRAKE ASSEMBLY (4WD FRONT)



SECTION 1 FRAME

FIGURE 1-6. DRIVE HUB/BRAKE ASSEMBLY (4WD FRONT)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		DRIVE HUB/BRAKE ASSEMBLY	Ref.	
		Hub/Spindle Assembly	1	
1	See Variable	Brake/Spindle Assembly	1	
2	Kit	Seal	1	
3	7007683	Cup, Bearing	1	
4	7007684	Cone, Bearing	1	
5	7007685	Cup, Bearing	1	
6	7007686	Cone, Bearing	1	
7	7007687	Hub	1	
8	7007688	Washer, Tongued	1	
9	7007689	Lockwasher	1	
10	7007690	Locknut	1	
11	7000241	Stud	9	
12	7000242	Plug, Pipe	2	
13	7007617	Plug, Magnetic	2	
14	7007691	Gear, Internal	1	

	7001984	Carrier Assembly	1	
15	7001931	Carrier	1	
16	7001985	Washer, Thrust	6	
17	7001909	Roller, Needle	96	
18	7000263	Spacer	3	
19	7001911	Shaft, Planet	3	
20	7001987	Gear, Cluster	3	
21	7001913	Pin, Roll (2780151 Hub)	3	
	7010474	Pin, Roll (2780192 Hub)	3	
22	7001988	Gear, Ring	1	
23	Kit	O-Ring	2	

24		Cover Assembly (Includes Items 201-208)	1	
25 to 31	Not Used			

	7000250	Input Shaft Assembly	1	
32	7000260	Shaft, Input	1	
33	7000261	Ring, Retaining	1	
34	7000262	Spring	1	
35	7000263	Spacer	2	
36	7001990	Gear, Input	1	
37	7000252	Spacer, Thrust	1	
38	Not Used			
39	7000253	Washer, Thrust	2	
40	7000217	Bolt	12	
41	7000214	Bolt, Shoulder	4	
42	7007603	Flatwasher	16	
	Kit	Gasket (Not Shown)	1	
43	Kit	Gasket	1	
44	7001922	Washer, Thrust	1	
45	7010459	Ring, Retaining	1	
46 to 47	Not Used			

SECTION 1 FRAME

SECTION 1 FRAME

FIGURE 1-6. DRIVE HUB/BRAKE ASSEMBLY (4WD FRONT) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
48	7010455	Coupling -----	1	
	70001940	Seal Kit - Hub (Includes Items 2, 9, 23, 39, 42, 202 and 204)	1	
	2780151	DRIVE HUB/BRAKE ASSEMBLY (APRIL 1988 TO FEBRUARY 1992)	Ref.	A
	7007681	Brake/Spindle Assembly	1	
101	7010454	Spindle (No longer available due to machining changes - purchase 7010473 as replacement)	1	
102		Brake Assembly Options (No longer available - Purchase 7010473 as replacement):	1	
	7010452	Brake for Hub Model W1BJ4V349 (Prior to Mid 1989)		
	7010453	Brake for Hub Model W1BJ4Y349 (Mid 1989 to February 1992)		
103	7003087	Disc, Stationary	2	
104	7003089	Disc, Rotating	3	
105	7003088	Piston	1	
106	Kit	Ring, Back-Up	1	
107	Kit	Ring, Back-Up	1	
108	Kit	O-Ring	1	
109	Kit	O-Ring	1	
110	Kit	O-Ring	1	
111	7003432	Spring	10	

	2900755	Seal Kit - 7010452 and 7010453 Brake (Includes Items 43 and 106-110)	1	
	2780192	DRIVE HUB/BRAKE ASSEMBLY (FEBRUARY 1992 TO PRESENT)	Ref.	—
	7010473	Brake/Spindle Assembly	1	
151	Not Available	Spindle		
152	Not Available	Brake Assembly	1	
153	Kit	Disc, Stationary	7	
154	Kit	Disc, Rotating	6	
155	Kit	Piston	1	
156	Kit	Ring, Back-up	1	
157	Kit	Ring, Back-up	1	
158	Kit	O-Ring	1	
159	Kit	O-Ring	1	
160	Kit	O-Ring	1	
161	Kit	Spring	8	

	7010476	Seal Kit 7010473 - Brake (Includes Items 156-160)	1	
	7010475	Lining Repair Kit - 7010473 Brake (Includes Items 153, 154 and 156-160)	1	
	7010477	Spring Repair Kit - 7010473 Brake (Includes Items 160 and 161)	1	

SECTION 1 FRAME

FIGURE 1-6. DRIVE HUB/BRAKE ASSEMBLY (4WD FRONT) (CONTINUED)

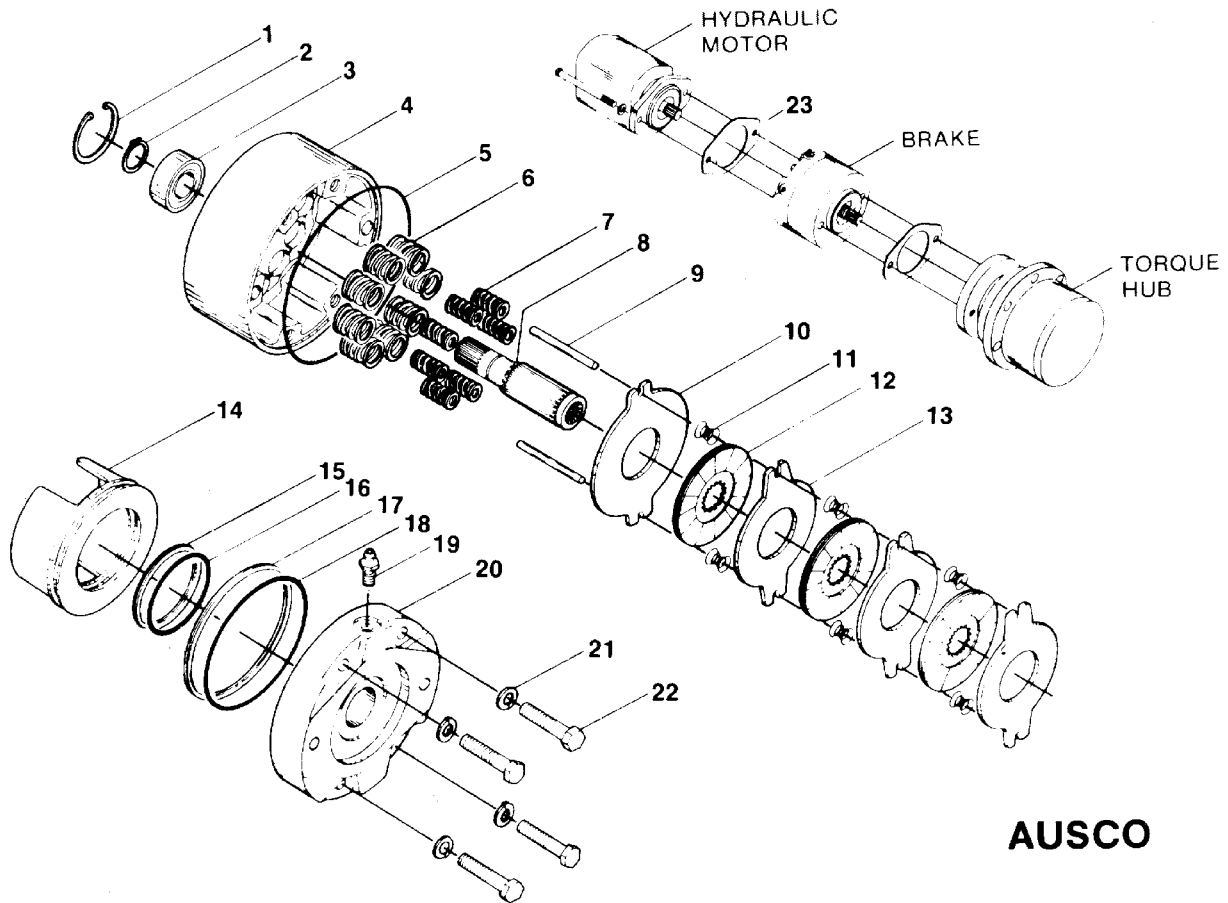
FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	7010478	Piston Repair Kit - 7010473 Brake (Includes Items 155-160)	1	
		COVER ASSEMBLY	Ref.	
	See Kit Options	Production Cast Cover		
	See Kit Options	Post Production Aluminum Cover		
201		Cover Options:	1	
	See Kit Options	Production Cast Cover (was p/n 7000226)		
	See Kit Options	Post Production Aluminum Cover (was p/n 7017091)		
202		O-Ring Options:	1	
	Kit	Production Cast Cover		
	7017070	Post Production Aluminum Cover		
203		Cap, Cover	1	
	7000227	Production Cast Cover		
	Not Required	Post Production Aluminum Cover		
204		O-Ring Options:	1	
	Kit	Production Cast Cover		
	7017095	Post Production Aluminum Cover		
205		Rod, Disconnect Options:	1	
	7000212	Production Cast Cover		
	7017092	Post Production Aluminum Cover		
206		Cap, Disconnect Options:	1	
	7000211	Production Cast Cover		
	7017093	Post Production Aluminum Cover		
207		Bolt Options:	A/R	
	7000220	Production Cast Cover	4	
	7000216	Post Production Aluminum Cover	2	
208		Plug, Pipe Options:	A/R	
	7000243	Production Cast Cover	1	
	7017094	Post Production Aluminum Cover	2	

		Cover Kit Options:	1	
	No Longer Available	Production Cast Cover (Was p/n 7001989)		
	Use 70001111	Aluminum Replacement for Production Cast Cover (Includes 23, 39 (Spacer), 40, 41 (Dowel Pins), 201, 202 & 204-208) (was p/n 7017099)		
	Use 70001111	Post Production Aluminum Cover (Includes 23, 201 & 204-207) (was p/n 7017090)		
	70001111	Replacement Cover Kit		

SECTION 1 FRAME

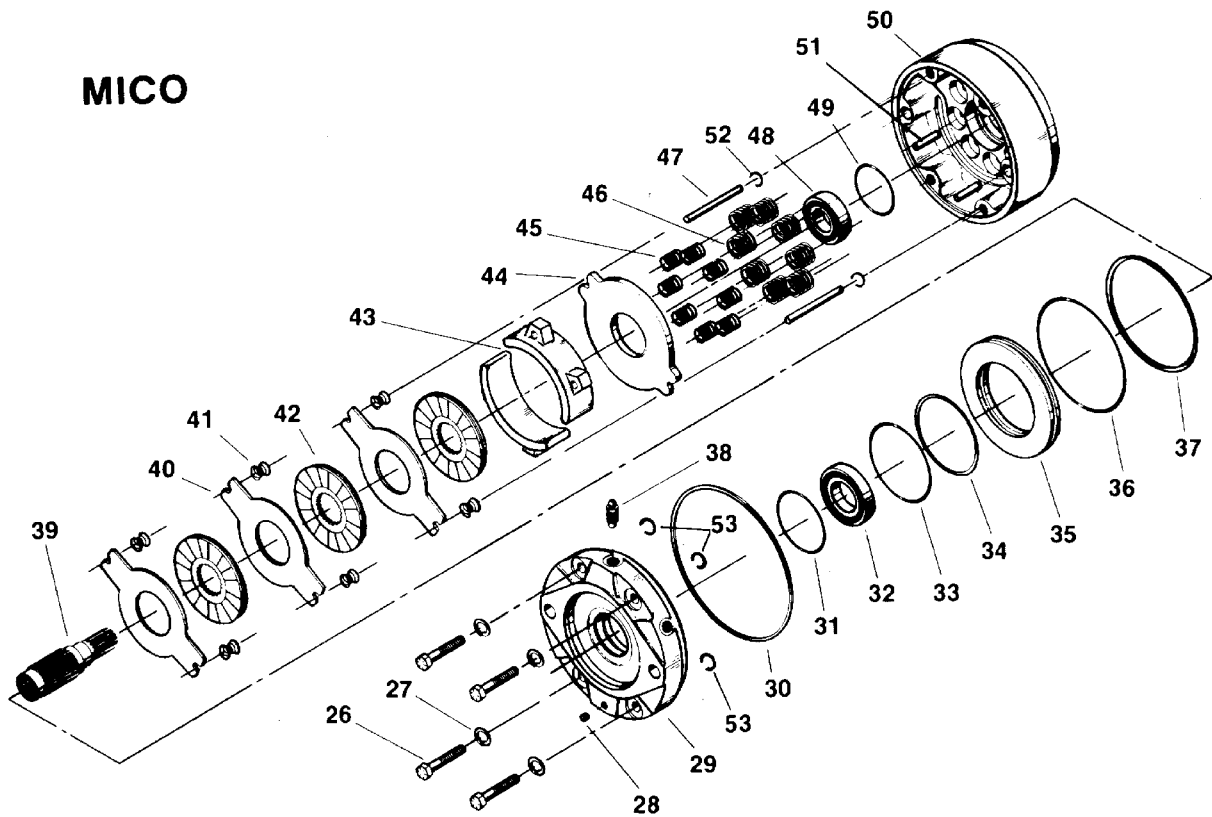
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FIGURE 1-7. BRAKE ASSEMBLY - AUSCO AND MICO



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MICO



SECTION 1 FRAME

FIGURE 1-7. BRAKE ASSEMBLY - AUSCO AND MICO

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0920027	BRAKE ASSEMBLY - AUSCO	Ref.	G
1	Kit	Ring, Retaining	1	
2	Kit	Ring, Retaining	1	
3	7000713	Bearing, Ball	1	
4	7000714	Housing	1	
	7003010	Retainer, Spring	1	
5	7000759	O-Ring	1	
6	7000782	Spring, Compression	8	
7	7000798	Spring, Compression	8	
8	7000716	Shaft	1	
9	7000717	Pin, Torque	2	
10	7000718	Disc, Primary	1	
11	7003006	Spring, Compression	6	
12	7000732	Disc, Rotating	3	
13	7000720	Disc, Stationary	3	
14	7000721	Piston	1	
15	Kit	Ring, Back-Up	1	
16	Kit	O-Ring	1	
17	Kit	Ring, Back-Up	1	
18	Kit	O-Ring	1	
19	7000796	Bleeder	1	
20	7000727	Plate, Power	1	
21	7000729	Lockwasher	4	
22	7000730	Bolt	4	
	7003007	Bolt, Flanged	4	
23	Kit	Gasket	2	
24	Not Used			
25	Not Used			
	2900131	Seal Kit (Includes Items 1,2,15,16,17,18 and 24)	1	
	0920027	BRAKE ASSEMBLY - MICO	Ref.	G
26	7007913	Cap Screw	4	
27	7007912	Lockwasher	4	
28	7007924	Pipe Plug	1	
29	7007975	Cover	1	
30	Kit	Square Ring	1	
31	Kit	O-Ring	1	
32	7007920	Bearing	1	
33	Kit	O-Ring	1	
34	Kit	Back-Up Ring	1	
35	7007923	Piston	1	
36	Kit	O-Ring	1	
37	Kit	Back-Up Ring	1	
38	7007914	Bleeder Screw	1	
39	7007903	Shaft	1	
40	7007908	Disc	3	

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FIGURE 1-7. BRAKE ASSEMBLY - AUSCO AND MICO (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
41	7007916	Spring	6	
42	7007909	Friction Disc	3	
43	7007902	Separator	2	
44	7007907	Disc (Large Diameter)	1	
45	7007906	Spring	8	
46	7007905	Spring	8	
47	7007915	Pin, Dowel	2	
48	7007904	Bearing	1	
49	Kit	Oil Seal	1	
50	7007976	Housing	1	
51	7007901	Spirol Pin	4	
52	Kit	O-Ring	2	
53	Kit	O-Ring	4	
	7007933	Mounting Gasket (Not Shown)	1	
	2900641	Seal Kit (Includes Items 30,31,32,33,34,36,37,49,52 and 53)	1	

SECTION 1 FRAME

FIGURE 1-7. BRAKE ASSEMBLY - AUSCO AND MICO (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

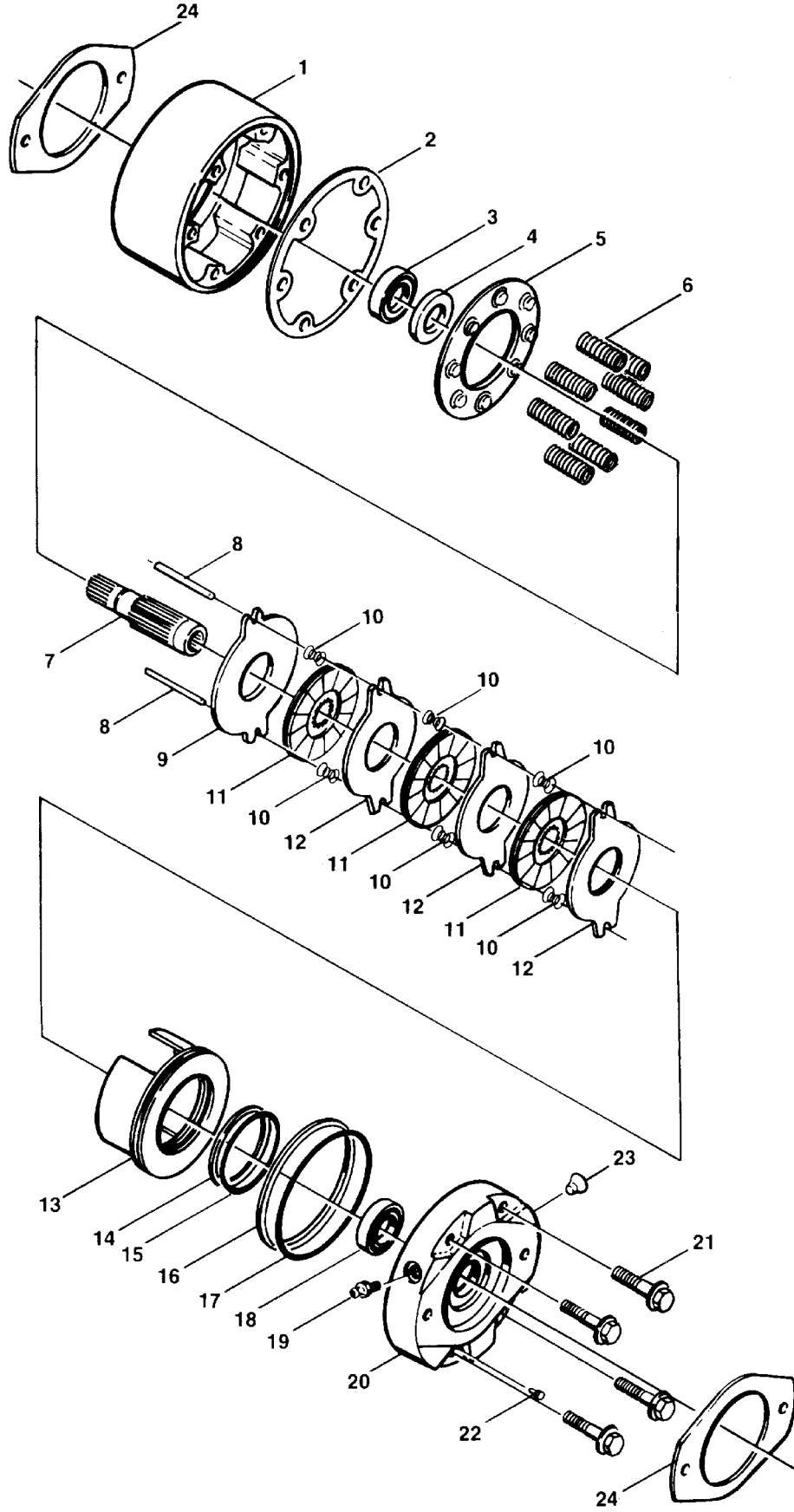
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FIGURE 1-8. BRAKE ASSEMBLY - AUSCO



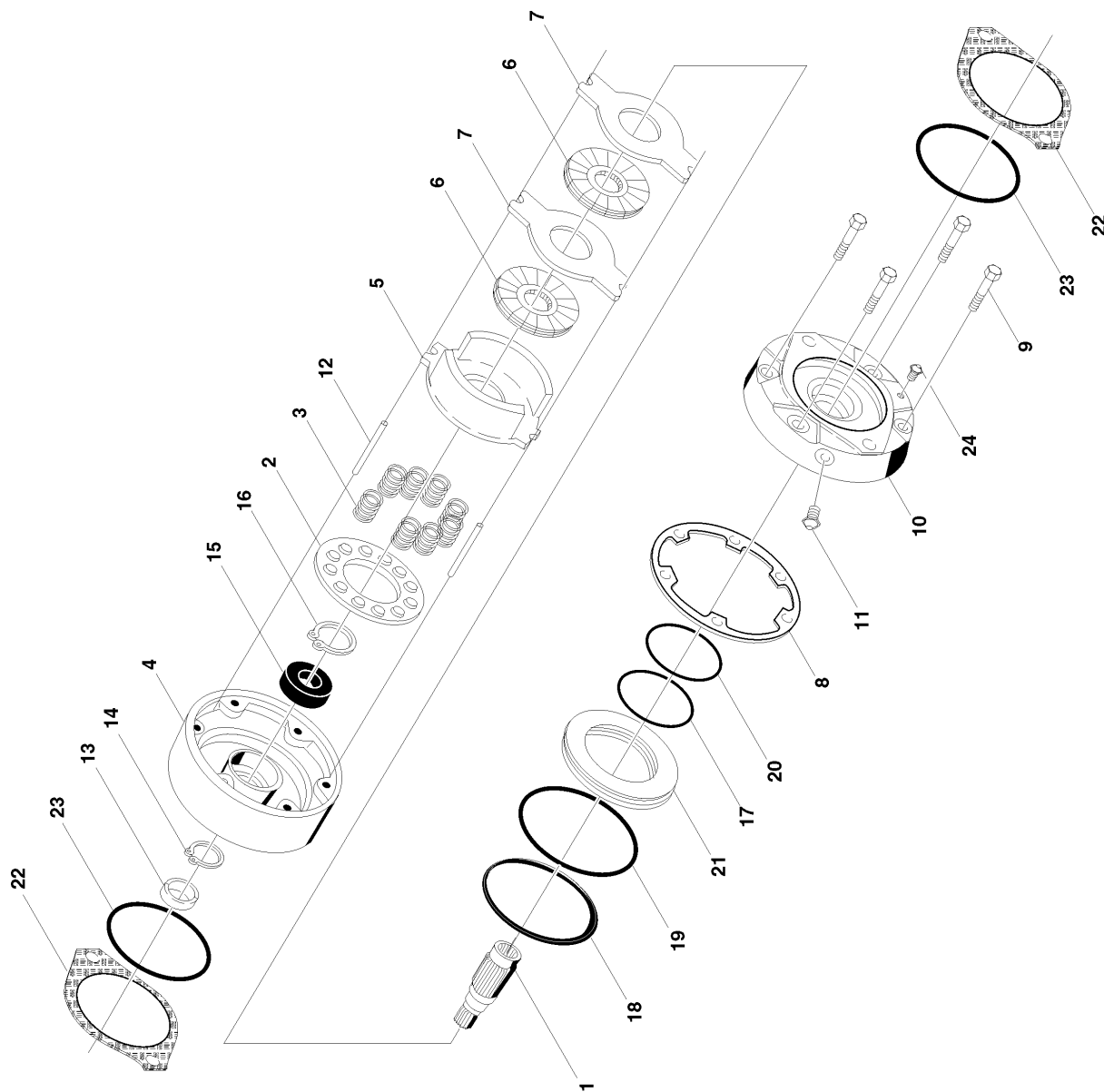
SECTION 1 FRAME

FIGURE 1-8. BRAKE ASSEMBLY - AUSCO

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0920072	BRAKE ASSEMBLY - AUSCO	Ref.	D
1	7003047	Housing	1	
2	Kit	Gasket	1	
3	7003049	Bearing	1	
4	Kit	Seal, Oil	1	
5	7003051	Retainer, Spring	1	
6	7003052	Spring, Compression	8	
7	7003070	Shaft, Splined	1	
8	7000717	Pin, Torque	2	
9	7003054	Disc, Primary	1	
10	7003006	Spring, Separator	6	
11	7003055	Disc, Rotating	3	
12	7003056	Disc, Stationary	3	
13	7003057	Piston	1	
14	Kit	Ring, Backup	1	
15	Kit	O-Ring	1	
16	Kit	Ring, Backup	1	
17	Kit	O-Ring	1	
18	7000760	Bearing	1	
19	7000796	Screw, Bleeder	1	
20	7003071	Plate, Power	1	
21	7003007	Screw	4	
22	7003059	Valve, Pressure	1	
23	7000728	Plug	1	
24	Kit	Gasket	2	
	2900662	Seal Kit (Includes Items 2,4,14,15,16,17 and 24)	1	
	7003069	Gasket Kit (Includes Item 24)	1	

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FIGURE 1-9. BRAKE ASSEMBLY - MICO



SECTION 1 FRAME

FIGURE 1-9. BRAKE ASSEMBLY - MICO

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		BRAKE ASSEMBLY - MICO OPTIONS:	Ref.	
	0920084	Prior to S/N 33476	Ref.	A
	0920110	S/N 33476 to S/N 56536	Ref.	B
1	7011712	Shaft	1	
2		Guide, Spring Options:	1	
	7011717	0920084 Brake (Prior to S/N 33476)		
	7018606	0920110 Brake (S/N 33476 to Present)		
3		Spring Options:	A/R	
	7007979	0920084 Brake (Inner) (Prior to S/N 33476)	6	
	7007980	0920084 Brake (Outer) (Prior to S/N 33476)	6	
	7007970	0920110 Brake (Red) (S/N 33476 to Present)	6	
	7018602	0920110 Brake (Blue) (S/N 33476 to Present)	3	
4		Housing Options:	1	
	7011713	0920084 Brake (Prior to S/N 33476)		
	7018605	0920110 Brake (S/N 33476 to Present)		
5		Return Plate & Separator Assembly Options:	A/R	
	Kit	Return, Plate - 0920084 Brake (Prior to S/N 33476)	1	
	7011715	Separator Assy - 0920084 Brake (Prior to S/N 33476)	2	
	7011714	Pin	4	
	7007983	Separator	2	
	Kit	Return Plate & Separator - 0920110 Brake (S/N 33476 to Present)	1	
6	Kit	Rotor	2	
7	Kit	Stator	2	
8	Kit	Seal, Case	1	
9		Bolt, Washer Head Options:	4	
	7007985	0920084 Brake (Prior to S/N 33476)		
	7018607	0920110 Brake (S/N 33476 to Present)		
10	7007986	Cover	1	
11		Hardware Options:	1	
	7000796	Screw, Bleeder (Prior to S/N 33906)		
	7018609	Plug, Pipe (S/N 33906 to Present)		
12	7007987	Pin, Dowel	2	
13	Kit	Seal, Oil	1	
14	7011716	Ring, Retaining	1	
15	Kit	Bearing	1	
16	7007977	Ring, Retaining	1	
17	Kit	Ring, Back-Up	1	
18	Kit	Ring, Back-Up	1	
19	Kit	O-Ring	1	
20	Kit	O-Ring	1	
21		Piston Options:	1	
	7007923	0920084 Brake (Prior to S/N 33476)		
	7018603	0920110 Brake (S/N 33476 to Present)		
22	7007933	Gasket	2	
23	Kit	O-Ring	2	

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FIGURE 1-9. BRAKE ASSEMBLY - MICO (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
24	7007924	Plug, Pipe -----	1	
	2900766	Seal Kit (Includes Items 8,13,17,18,19,20,22 & 23)	1	
	2900768	Seal Kit (Includes Items 8,13,15,22 & 23)	1	
		Lining Kit Options: (Includes Items 5,6,7,8,22 & 23)	1	
	2900767	0920084 Brake (Prior to S/N 33476)		
	7018608	0920110 Brake (S/N 33476 to Present)		

SECTION 1 FRAME

FIGURE 1-9. BRAKE ASSEMBLY - MICO (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

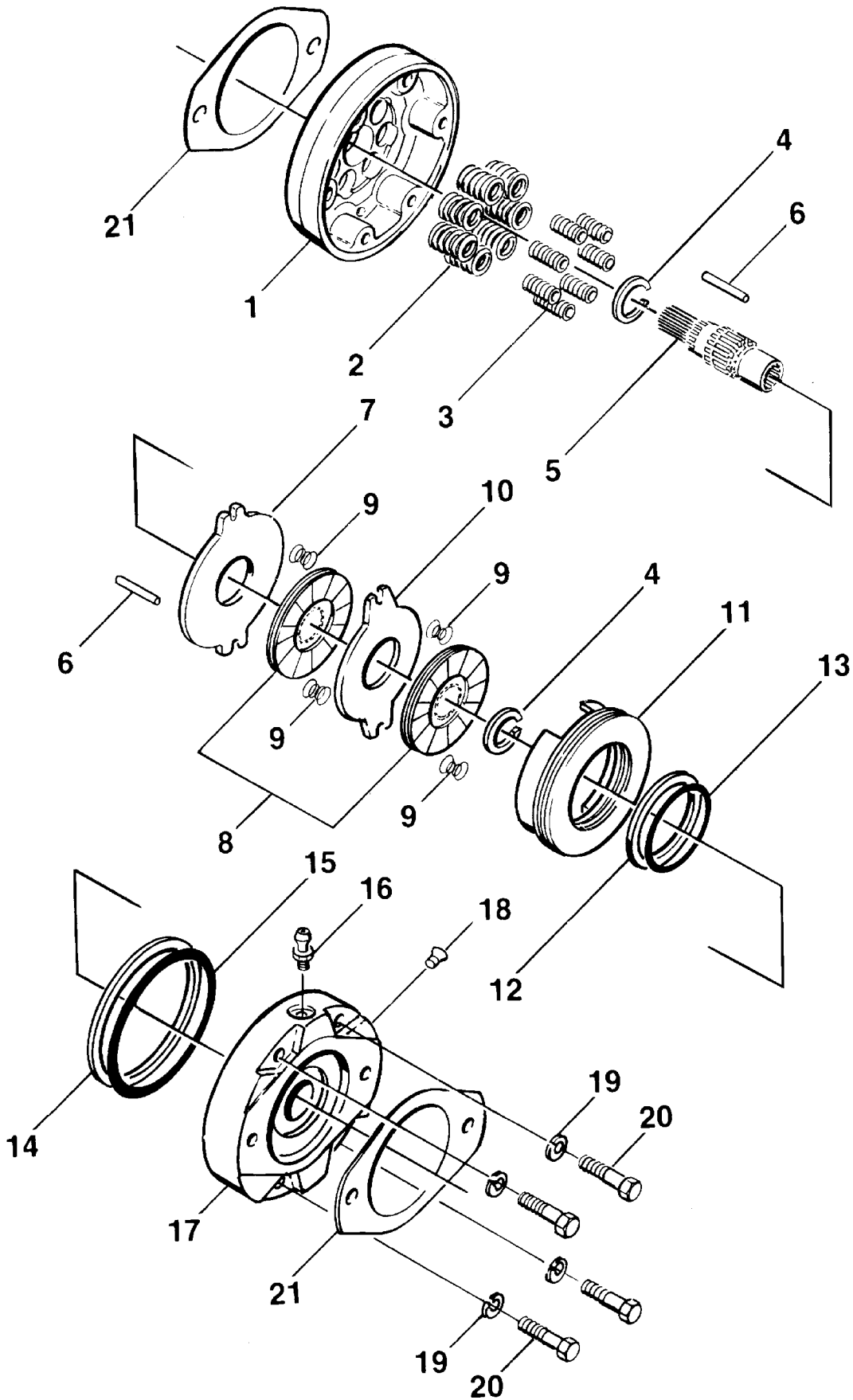
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FIGURE 1-10. BRAKE ASSEMBLY - AUSCO 29479 (4WD FRONT)



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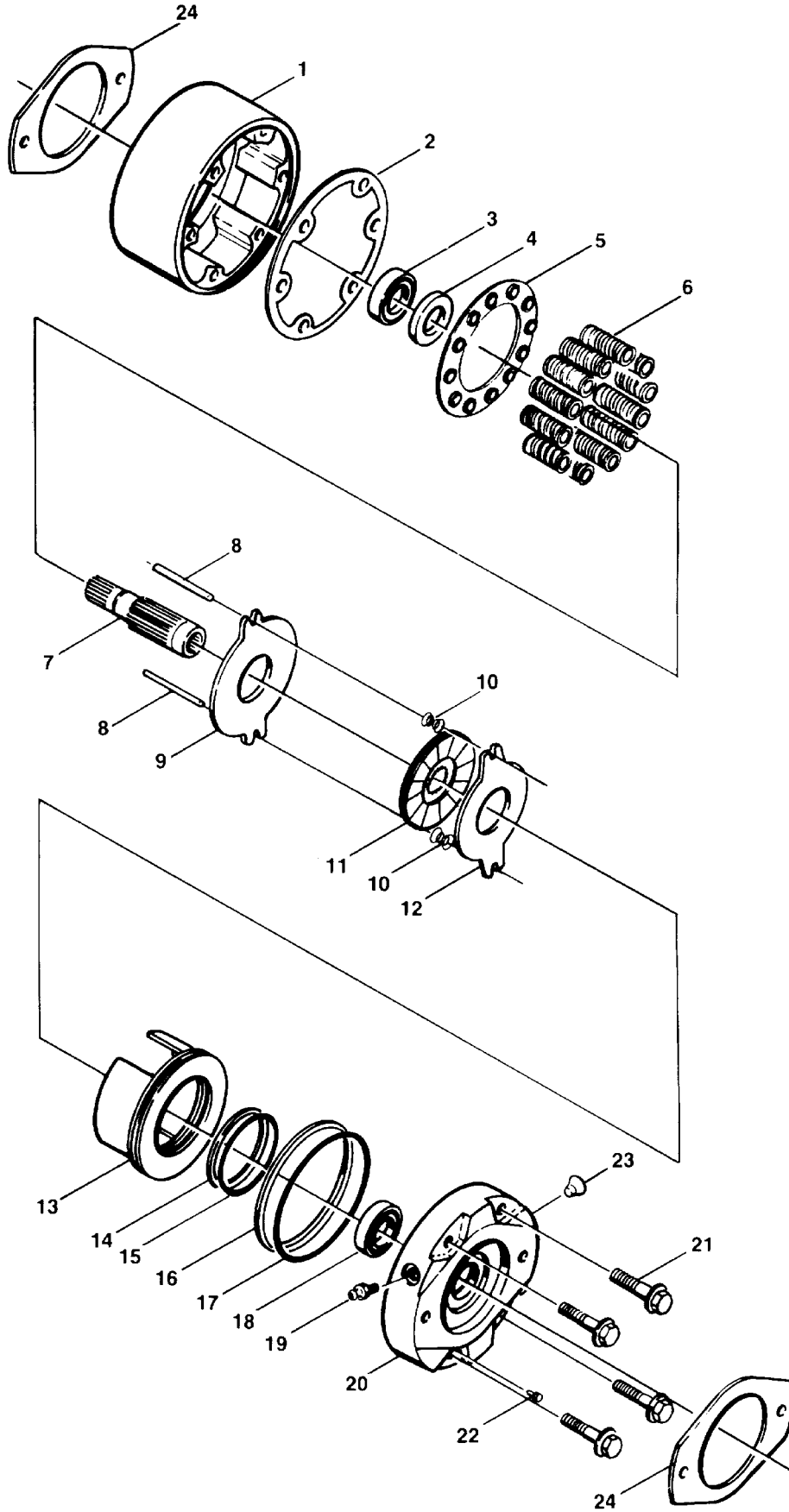
FIGURE 1-10. BRAKE ASSEMBLY - AUSCO 29479 (4WD FRONT)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0920068	BRAKE ASSEMBLY - AUSCO	Ref.	B
1	7003067	Housing	1	
2	7000782	Spring, Compression	7	
3	7000798	Spring, Compression	7	
4	7003060	Ring, Retaining	2	
5	7003061	Shaft, Splined	1	
6	7003062	Pin, Torque	2	
7	7000718	Disc, Primary	1	
8	7000732	Disc, Rotating	2	
9	7003006	Spring, Compression	4	
10	7003063	Disc, Stationary	1	
11	7003064	Piston	1	
12	Kit	Ring, Back-up	1	
13	Kit	O-Ring	1	
14	Kit	Ring, Back-up	1	
15	Kit	O-Ring	1	
16	7000796	Bleeder	1	
17	7003065	Plate, Power	1	
18	7000728	Plug	1	
19	7000729	Lockwasher	4	
20	7003066	Bolt	4	
21	Kit	Gasket	2	

	2900649	Seal Kit (Includes 12,13,14,15 and 21)	1	
	7003069	Gasket Kit (Includes Item 21)	1	

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FIGURE 1-11. BRAKE ASSEMBLY - AUSCO 37845 (4WD FRONT)



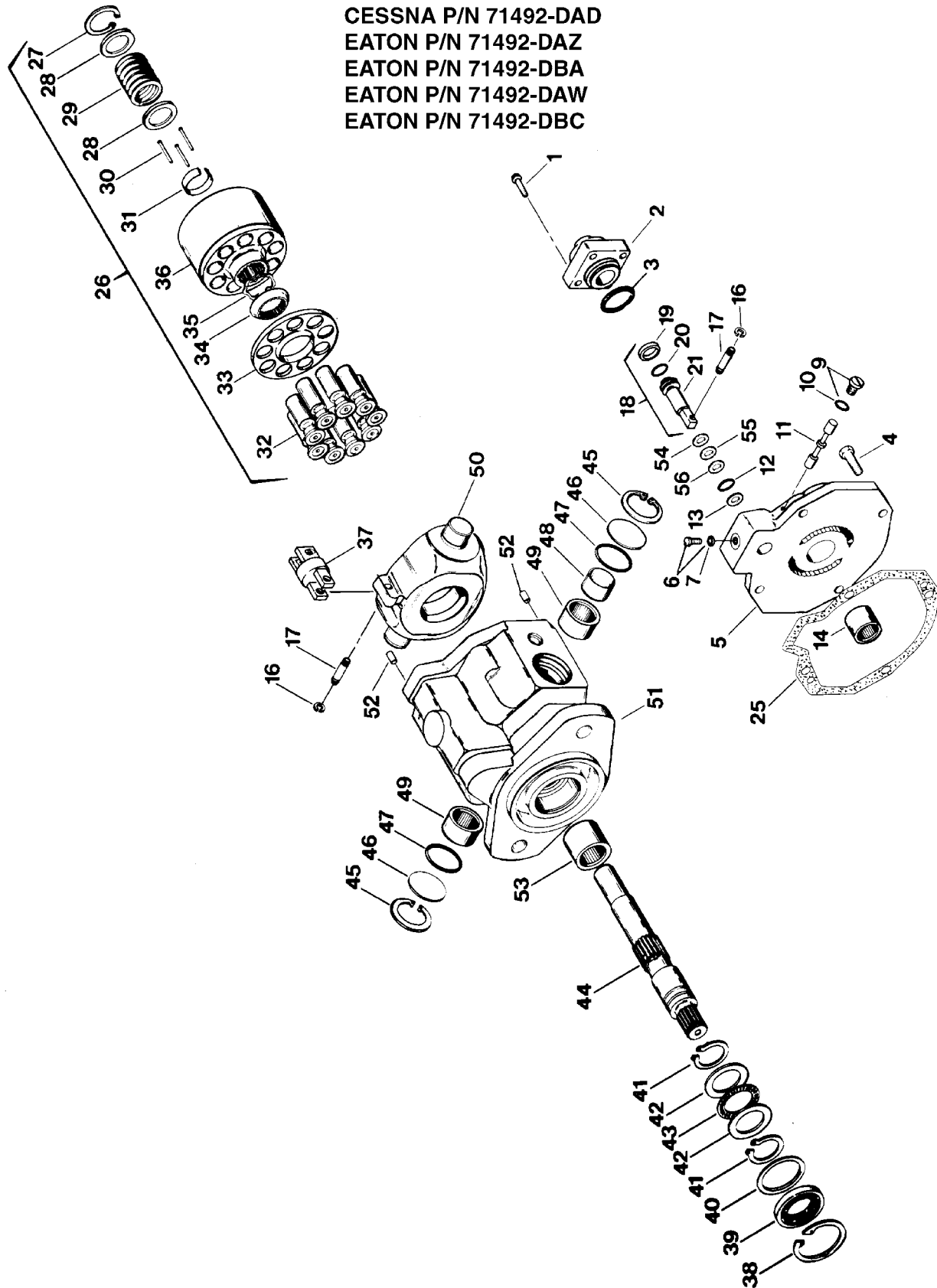
SECTION 1 FRAME

FIGURE 1-11. BRAKE ASSEMBLY - AUSCO 37845 (4WD FRONT)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0920086	BRAKE ASSEMBLY - AUSCO	Ref.	A
1	7003092	Housing	1	
2	Kit	Gasket	1	
3	7003049	Ball Bearing	1	
4	7003050	Oil Seal	1	
5	7003051	Spring Retainer	1	
6	7003052	Compression Spring	12	
7	7003093	Shaft	1	
8	7003094	Torque Pin	2	
9	7003054	Primary Disc	1	
10	7003006	Compression Spring	2	
11	7003055	Rotating Disc	1	
12	7003056	Stationary Disc	1	
13	7003095	Piston	1	
14	Kit	Backup Ring	1	
15	Kit	O-Ring	1	
16	Kit	Backup Ring	1	
17	Kit	O-Ring	1	
18	7000760	Ball Bearing	1	
19	7000796	Bleeder Screw	1	
20	7003096	Power Plate	1	
21	7003007	Hex Screw	4	
22	7003059	Pressure Relief Valve	1	
23	N.S.	Plug, Shipping	1	
24	Kit	Gasket	2	
	2900662	O-Ring Kit (Includes Items 1, 14-17 and 24)	1	
	7003069	Gasket Kit (Includes Item 24)	1	

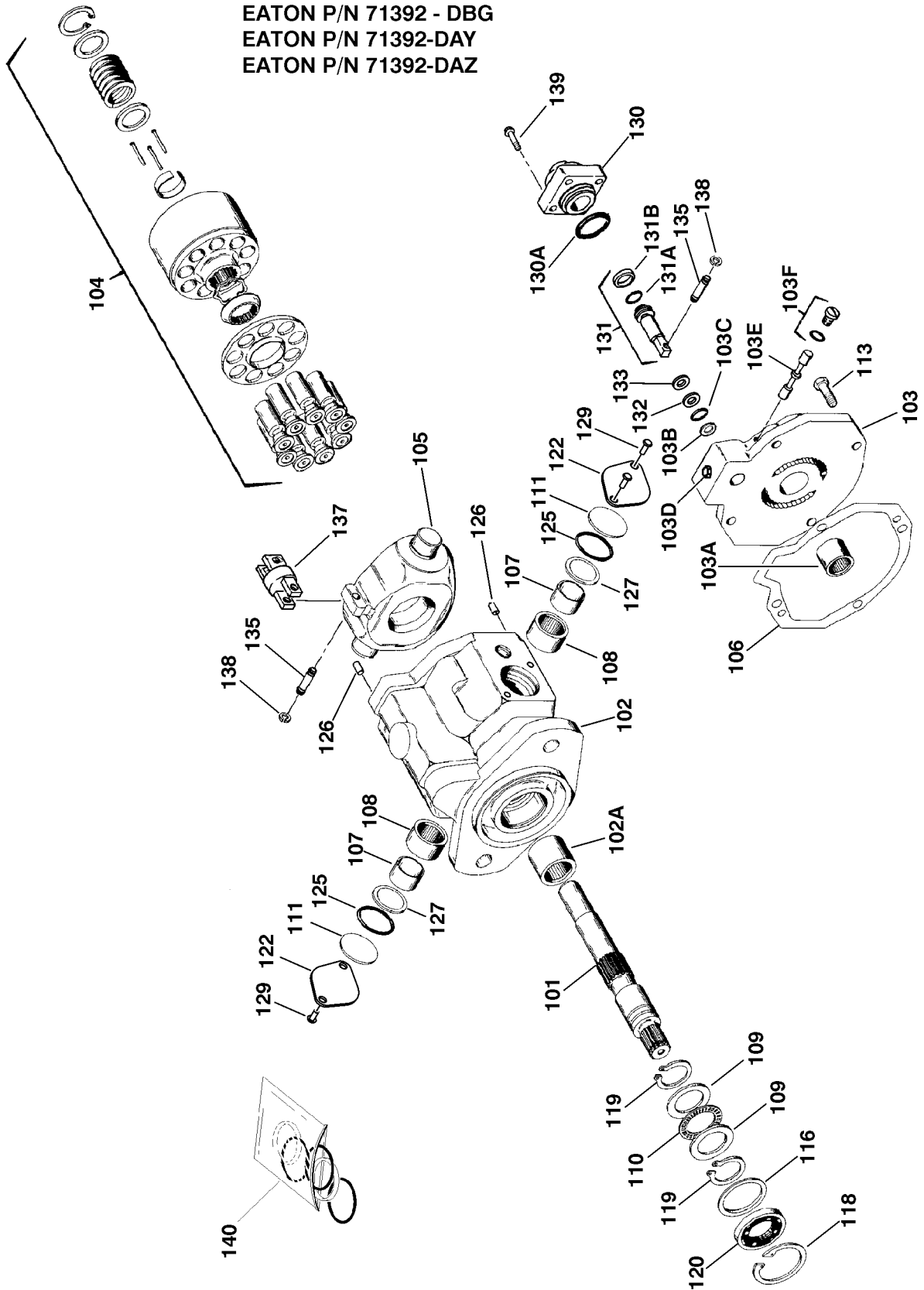
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FIGURE 1-12. DRIVE MOTOR ASSEMBLY



SECTION 1 FRAME

EATON P/N 71392 - DBG
EATON P/N 71392-DAY
EATON P/N 71392-DAZ



SECTION 1 FRAME

FIGURE 1-12. DRIVE MOTOR ASSEMBLY

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		Note: Visually identify the drive motor by Cessna & Eaton part number before ordering replacement parts.	Ref.	
		DRIVE MOTOR ASSEMBLY	Ref.	
	Use 1001096416	Drive Motor Assembly (CESSNA P/N 71492-DAD) (was p/n 3160080)	Ref.	A
	3160129	Drive Motor Assembly (EATON P/N 71492-DAZ)	Ref.	C
	3160130	Drive Motor Assembly (EATON P/N 71492-DBA)	Ref.	B
	Use 1001096415	Drive Motor Assembly (EATON P/N 71492-DAW) (was p/n 3160118)	Ref.	D
	3160189	Drive Motor Assembly (Original Equipment) (EATON P/N 71492-DBC)	Ref.	—
1	7004938	Screw, Cap, Socket Head	4	
2	7004939	Control Piston Housing Assembly (Includes Item 3)	1	
3	Kit	O-Ring	1	
4	7004933	Screw, Cap, Hex Head	4	
5	7004941	Backplate Assembly (Includes Items 5-15)	1	
6	7004942	Plug Assembly (Includes Item 7)	1	
7	Kit	O-Ring	1	
8	Not Used			
9	7004944	Plug Assembly (Shuttle Spool) (Includes Items 8 and 9)	2	
10	Kit	O-Ring (1 Per Plug)	1	
11	7004946	Spool, Shuttle	1	
12	Kit	O-Ring	1	
13	7004918	Washer, Backup	1	
14	7004917	Bearing, Needle	1	
15	Not Used			
16	7004937	Ring, Retaining	4	
17	7004929	Pin, Connector	2	
18	7004948	Control Piston Assembly (Includes Items 19-21)	1	
19	Kit	Ring, Slippery	1	
20	Kit	O-Ring	1	
21	Not Available	Piston, Control	1	
22	Not Used			
23	Not Used			
24	Not Used			
25	Kit	Gasket, Housing	1	
26	7004916	Rotating Kit Assembly (Includes Items 27-36)	1	
27	7004936	Ring, Retaining	1	
28	7004950	Washer, Machined	2	
29	7004951	Spring, Compression	1	
30	7004952	Pin, Loading	3	
31	7004953	Keeper, Pin	1	
32	7004954	Piston, Assembly	9	
33	7004955	Spider	1	
34	7004956	Pivot	1	
35	7004957	Washer, Wave	1	

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FIGURE 1-12. DRIVE MOTOR ASSEMBLY (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
36	Not Available	Block, Piston	1	
37	7004928	Connector, Camplate	1	
38	Kit	Ring, Retaining	1	
39	Kit	Seal, Shaft	1	
40	7004906	Washer	1	
41	Kit	Ring, Retaining	2	
42	7004907	Race, Thrust	2	
43	7004908	Bearing, Thrust	1	
44	7004912	Shaft, Drive	1	
45	Kit	Ring, Retaining	2	
46	7004913	Cover, Trunnion	2	
47	Kit	O-Ring	2	
48	7004911	Race, Inner	1	
49	7004914	Bearing	2	
50	7004927	Camplate	1	
51	7004959	Housing Assembly (Includes Items 52 and 53)	1	
52	7004960	Pin, Roll (1/4" Dia. x 1/2" Long)	2	
53	7004910	Bearing	1	
54	4100027	Spacer, Piston -.092" Options:	A/R	
		Drive Motor (p/n 3160080)	0	
		Drive Motor (p/n 3160129)	0	
		Drive Motor (p/n 3160130)	2	
		Drive Motor (p/n 3160118)	1	
		Drive Motor (p/n 3160189)	0	
55	4100028	Spacer, Piston -.105" Options:	A/R	
		Drive Motor (p/n 3160080)	0	
		Drive Motor (p/n 3160129)	1	
		Drive Motor (p/n 3160130)	0	
		Drive Motor (p/n 3160118)	1	
		Drive Motor (p/n 3160189)	0	
56	4100029	Spacer, Piston -.110" Options:	A/R	
		Drive Motor (p/n 3160080)	0	
		Drive Motor (p/n 3160129)	0	
		Drive Motor (p/n 3160130)	0	
		Drive Motor (p/n 3160118)	0	
		Drive Motor (p/n 3160189)	4	
	2900449	Seal Repair Kit (Includes Items 3,7,10,12, 19,20,25,38,39,41,45 and 47)	1	
		DRIVE MOTOR ASSEMBLIES (Service Replacement)	Ref.	
	3160343	Drive Motor Assembly (EATON P/N 71392-DBG)	Ref.	B
	1001096416	Drive Motor Assembly (EATON P/N 71392-DAY)	Ref.	A
	1001096415	Drive Motor Assembly (EATON P/N 71392-DAZ)	Ref.	A
101	7004912	Shaft, Splined	1	
102	Not Available	Housing	1	
102A	7004910	Bearing	1	
103	70002533	Back Plate Assembly	1	
103A	Not Available	Bearing	1	

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FIGURE 1-12. DRIVE MOTOR ASSEMBLY (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
103B	Use Item 140	Washer	1	
103C	Use Item 140	O-Ring	1	
103D	Not Available	Plug	1	
103E	Not Available	Spool, Shuttle	1	
103F	Not Available	Plug	2	
104	7004916	Rotating Kit Assembly (Sold As An Assembly Only)	1	
105	70002534	Camplate	1	
106	Use Item 140	Gasket	1	
107	7004911	Race, Inner	2	
108	7004914	Bearing, Needle	2	
109	7004907	Race, Thrust	2	
110	7004908	Bearing, Thrust	1	
111	70002535	Cover, Trunnion	2	
112	Not Used			
113	7020323	Bolt	4	
114 to 115	Not Used			
116	7004906	Washer	1	
117	Not Used			
118	Use Item 140	Ring, Retaining	1	
119	Use Item 140	Ring, Retaining	2	
120	Use Item 140	Seal, Shaft	1	
121	Not Used			
122	70002536	Cover	2	
123	Not Used			
124	70002537	Plate, Valve (Not Shown - Located Between Items 102 & 103)	1	
125	Use Item 140	O-Ring	2	
126	70002538	Rollpin	2	
127	70002539	Washer	2	
128	Not Used			
129	70002540	Screw, Pan Head	4	
130	7004939	Housing, Control Piston	1	
130A	Use Item 140	O-Ring	1	
131	70002541	Piston Control	1	
131A	Use Item 140	O-Ring	1	
131B	Use Item 140	Ring, Slipper	1	
132	4100027	Spacer	1	
133	4100028	Spacer	1	
134	Not Used			
135	7004929	Pin, Connector	2	
136	Not Used			
137	7004928	Plate, Connector	2	
138	Use Item 140	Ring, Retaining	2	
139	7004938	Bolt	4	
140	7020347	Seal Kit - Complete (Includes items 103B, 103C, 106,118,119, 120,125,130A, 131A, 131B & 138)	1	

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FIGURE 1-12. DRIVE MOTOR ASSEMBLY (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

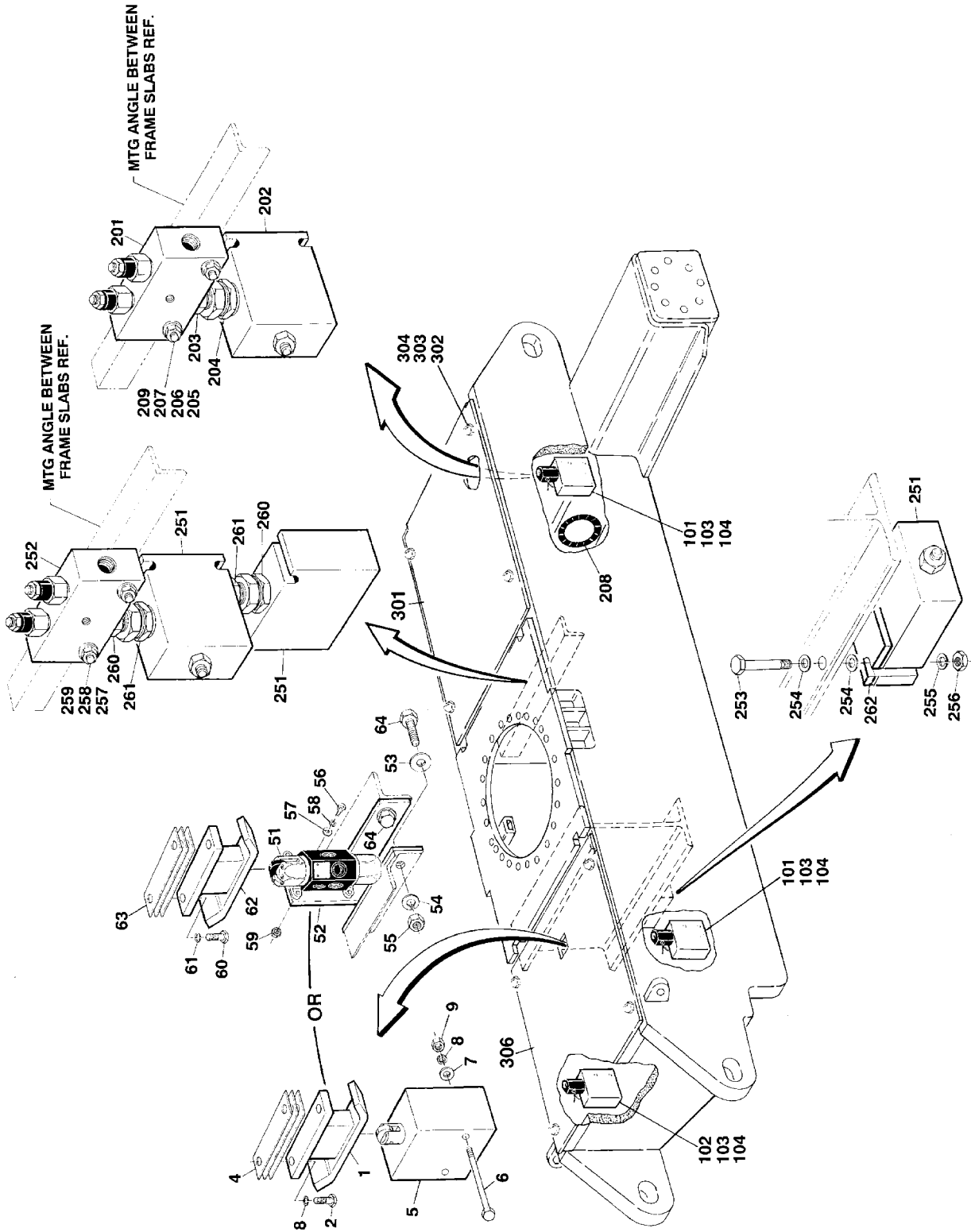
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FIGURE 1-13. VALVES INSTALLATION (FRAME MOUNTED)



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FIGURE 1-13. VALVES INSTALLATION (FRAME MOUNTED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0236404	LOCKOUT VALVE INSTALLATION (OSCILLATING AXLE MACHINES BUILT PRIOR TO APRIL 1993)	Ref.	C
1	1100037	Cam Assembly	1	
2	0641612	Bolt 3/8"-16NC	2	
3	Not Used			
4	4070570	Shim (1/32")	A/R	
	4070571	Shim (1/16")	A/R	
	4070572	Shim (1/8")	A/R	
5	4640485	Valve, Axle Lockout (See Figure 1-14 for Breakdown)	1	
6	0641634	Bolt 3/8"-16NC x 4 1/4"	2	
7	4751600	Flatwasher 3/8"	2	
8	4761600	Lockwasher 3/8"	4	
9	3311601	Nut 3/8"-16NC	2	
	0253095	LOCKOUT VALVE INSTALLATION (OSCILLATING AXLE MACHINES BUILT APRIL 1993 TO PRESENT)	Ref.	—
51	4640668	Axle Lockout Valve Assembly	1	
	7012516	Repair Kit	1	
52	3536181	Bracket, Mounting	1	
53	4751600	Flatwasher 3/8"	4	
54	4761600	Lockwasher 3/8"	6	
55	3311601	Nut 3/8"-16NC	4	
56	3931016	Capscrew, Socket Head #10-24NC x 1"	4	
57	4751000	Flatwasher #10	8	
58	4761000	Lockwasher #10	4	
59	3311001	Nut #10-24NC	4	
60	0641612	Bolt 3/8"-16NC x 1 1/2"	2	
61	4761600	Lockwasher 3/8"	2	
62	1100037	Cam, Lockout	1	
63	4070570	Shim (1/32")	A/R	
	4070571	Shim (1/16")	A/R	
	4070572	Shim (1/8")	A/R	
64	0641608	Bolt 3/8"-16NC x 1"	4	
	0234902	2 WHEEL - 4 WHEEL DRIVE VALVES INSTALLATION (4WD MACHINES BUILT PRIOR TO NOVEMBER 1987)	Ref.	—
101	4640228	Valve	1	
102	4640363	Valve	2	
103	0641520	Bolt 5/16"-18NC x 2 1/2"	6	
104	4761500	Lockwasher 5/16"	6	

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FIGURE 1-13. VALVES INSTALLATION (FRAME MOUNTED) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		COUNTERBALANCE AND FLOW DIVIDER VALVES INSTALLATION - 2WD	Ref.	
	0236405	BUILT PRIOR TO MARCH 1986 (NOT SHOWN)	Ref.	A
	0237436	BUILT MARCH 1986 TO JULY 1987 AND 4WD BUILT PRIOR TO JULY 1987	Ref.	D
	0238489	BUILT JULY 1987 TO PRESENT	Ref.	B
201		Valve, Counterbalance Options:	1	
	4640259	Built Prior to March 1986 (Not Shown)		
	0641540	Bolt 5/16"-18NC x 5" (Not Shown)	2	
	4761500	Lockwasher 5/16" (Not Shown)	2	
	3311501	Nut 5/16"-18NC (Not Shown)	2	
	4751500	Flatwasher 5/16" (Not Shown)	4	
	4640454	Built March 1986 to Present		
	2900789	Seal Kit - Cartridge	2	
202	4640260	Valve, Flow Divider	1	
	Not Available	Cartridge (Vickers/Modular Controls Version)	1	
	7009739	Seal Kit (Vickers/Modular Controls Version)	1	
	7007321	Cartridge (Fluid Controls Version)	1	
	7007323	Seal Kit (Fluid Controls Version)	1	
203	2220435	Fitting, Straight	1	
204	2220594	Fitting, Adapter	1	
205		Hardware Options:	A/R	
	Not Required	Built Prior to March 1986		
	4300033	Built March 1986 to July 1987 and 4WD Built Prior to July 1987 - Stud (Welded on Part)	2	
	0641620	Built July 1987 to Present - Bolt 3/8"-16NC x 2 1/2"	2	
206		Lockwasher Options:	2	
	Not Required	Built Prior to March 1986		
	4761500	Built March 1986 to July 1987 and 4WD Built Prior to July 1987 - Lockwasher 5/16"		
	4761600	Built July 1987 to Present - Lockwasher 3/8"		
207		Nut Options:	2	
	Not Required	Built Prior to March 1986		
	3311501	Built March 1986 to July 1987 and 4WD Built Prior to July 1987 - Nut 5/16"-18NC		
	3311601	Built July 1987 to Present - Nut 3/8"-16NC		
208		Flex-Guard Options:	A/R	
	Not Required	Built Prior to March 1986		
	4060608	Built March 1986 to July 1987 and 4WD Built Prior to July 1987	1 Ft.	
	4060806	Built July 1987 to Present	18 in.	
209		Flatwasher Options:	2	
	Not Required	Built Prior to March 1986		
	4751500	Built March 1986 to July 1987 and 4WD Built Prior to July 1987 - Flatwasher 5/16"		
	4751600	Built July 1987 to Present - Flatwasher 3/8"		

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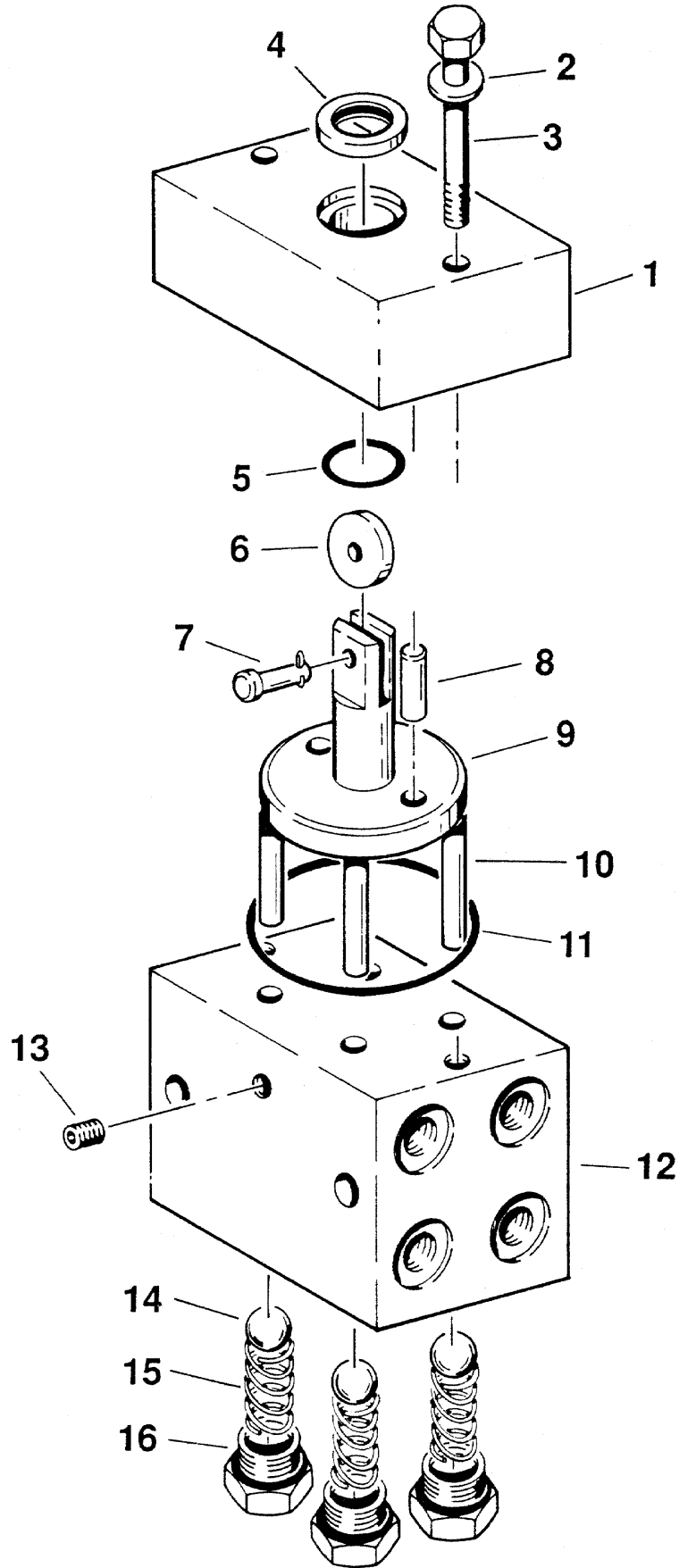
FIGURE 1-13. VALVES INSTALLATION (FRAME MOUNTED) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0238570	COUNTERBALANCE AND FLOW DIVIDER VALVES INSTALLATION - 4WD BUILT JULY 1987 TO PRESENT	Ref.	3
251	4640260	Valve, Flow Divider	3	
	Not Available	Cartridge (Vickers/Modular Controls Version)	1	
	7009739	Seal Kit (Vickers/Modular Controls Version)	1	
	7007321	Cartridge (Fluid Controls Version)	1	
	7007323	Seal Kit (Fluid Controls Version)	1	
252	4640454	Valve, Counterbalance	1	
	2900789	Seal Kit - Cartridge	2	
253		Bolt Options:	2	
	0641528	Bolt 5/16"-18NC x 3 1/2" (Prior to S/N 34095)		
	0641520	Bolt 5/16"-18NC x 2 1/2" (S/N 34095 to Present)		
254	4751500	Flatwasher 5/16"	2	
255	4761500	Lockwasher 5/16"	2	
256	3311505	Locknut 5/16"-18NC (Prior to S/N 34095)	2	
257	0641620	Bolt 3/8"-16NC x 2 1/2"	2	
258	4761600	Lockwasher 3/8"	2	
259	3311601	Nut 3/8"-16NC	2	
260	2220594	Fitting, Adapter	2	
261	2220435	Fitting, Straight	2	
262	3537812	Plate, Valve Mounting (S/N 34095 to Present)	1	
		FRAME SHIELDS INSTALLATION OPTIONS:	Ref.	
	0236242	PRIOR TO MID 1984	Ref.	—
	0236450	MID 1984 TO PRESENT	Ref.	B
301		Shield - Rear	1	
	4060570	Prior to Mid 1984		
	4060586	Mid 1984 to Present		
302	4761400	Lockwasher 1/4"	8	
303	3300151	Nut, Acorn 1/4"-20NC	8	
304	4300031	Stud (Welded on Part)	8	
305	0100011	Loctite #242 (Not Shown)	A/R	
306		Shield - Front	1	
	4060571	Prior to Mid 1984		
	4060585	Mid 1984 to Present		

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FIGURE 1-14. LOCKOUT VALVE ASSEMBLY



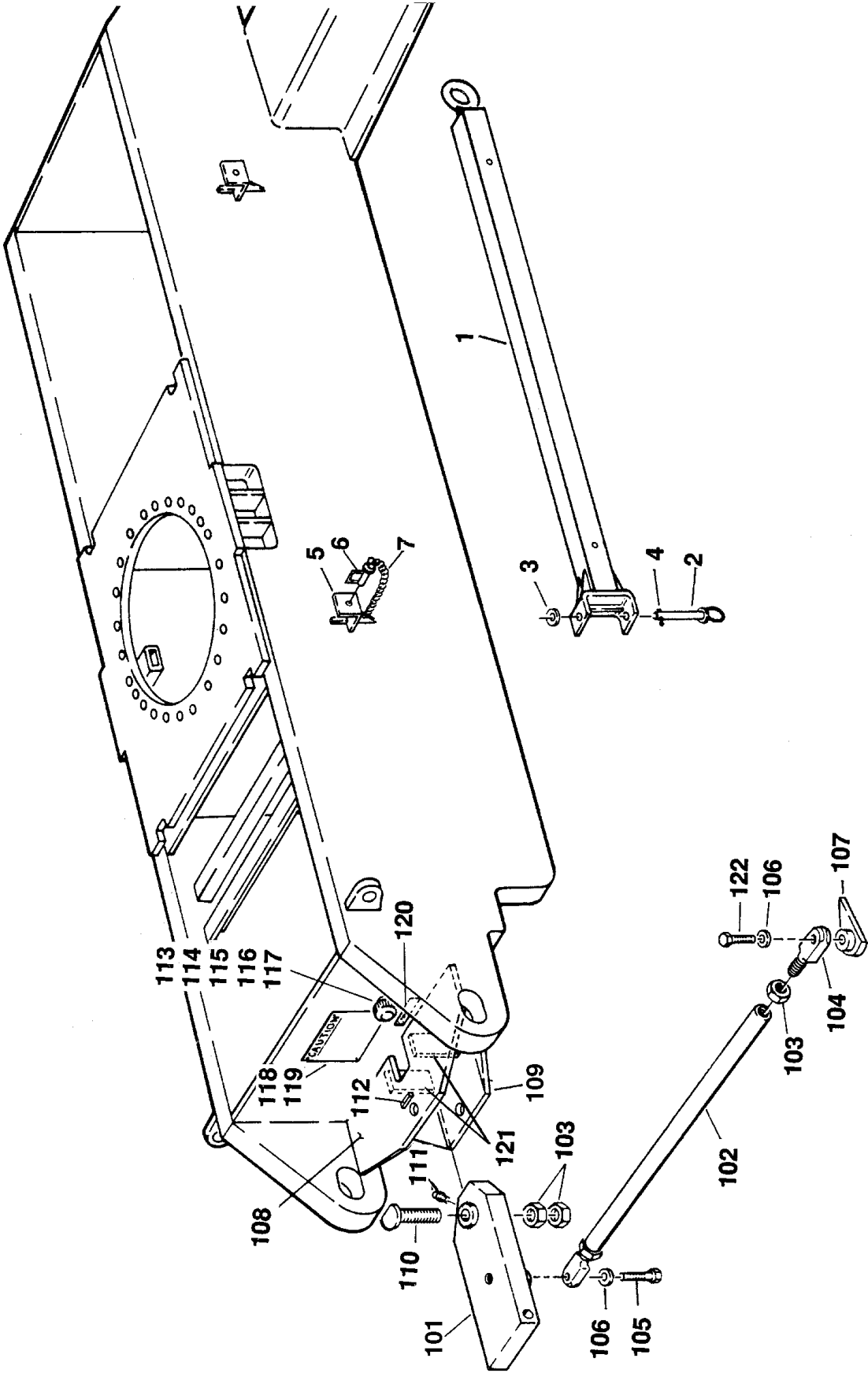
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FIGURE 1-14. LOCKOUT VALVE ASSEMBLY

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640485	LOCKOUT VALVE ASSEMBLY NOTE: OSCILLATING AXLE MACHINES BUILT PRIOR TO APRIL 1993.	Ref. Ref.	A
1	0560679	Block, Top Valve	1	
2	0641518	Bolt 5/16"-18NC x 2 1/4"	2	
3	4761500	Lockwasher 5/16"	2	
4	3960047	Seal, Rod	1	
5	3790116	O-Ring	1	
6	3860037	Roller, Cam	1	
7	3430407	Clevis Pin with Cotter Pin	1	
8	3421284	Pin	2	
9	3840833	Plunger, Rod	1	
10	3840854	Rod	4	
11	3790231	O-Ring	1	
12	0560467	Block, Bottom Valve	1	
13	2200202	Plug	1	
	0100011	Loctite	A/R	
14	0320008	Ball	4	
15	4160078	Spring	4	
16	2180658	Plug	4	

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FIGURE 1-15. TOW PACKAGE INSTALLATION



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FIGURE 1-15. TOW PACKAGE INSTALLATION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		2WD TOW PACKAGE OPTIONS:	Ref.	
	0236581	2WD Without Steering Wheel (Prior to January 1990)		
	0250418	2WD Without Steering Wheel (January 1990 to Present)		
	0236562	2WD With Steering Wheel (Prior to January 1990)		
	0250417	2WD With Steering Wheel (January 1990 to Present)		
		4WD TOW PACKAGE OPTIONS:	Ref.	
	0238195	4WD Without Steering Wheel (Prior to January 1990)		
	0250423	4WD Without Steering Wheel (January 1990 to Present)		
	0238196	4WD With Steering Wheel (Prior to January 1990)		
	0250422	4WD With Steering Wheel (January 1990 to Present)		
	0236568	TOW BAR AND STORAGE INSTALLATION	Ref.	2
1	0232121	Tow Bar Assembly	1	
2	3420447	Pin, Tow	1	
3	4740036	Flatwasher	1	
4	3420372	Pin, Cotter	1	
5	4841065	Mount, Tow Bar	2	
6	3420292	Pin, Hitch	2	
7	1260017	Chain (2 x 8" Length)	16 in.	
		TOW HITCH AND VALVE INSTALLATIONS	Ref.	
	0236560	2WD BUILT PRIOR TO JANUARY 1990	Ref.	B
	0238194	4WD BUILT PRIOR TO JANUARY 1990	Ref.	—
	0250416	2WD BUILT JANUARY 1990 TO PRESENT	Ref.	3
	0250421	4WD BUILT JANUARY 1990 TO PRESENT	Ref.	2
101		Hitch, Tow Options:	1	
	2620025	Prior to January 1990		
	2620035	January 1990 to Present		
102	3840643	Tie-Rod	1	
103		Nut Options:	4	
	3323002	2WD - Nut 1 1/4"-12NF		
	3323023	4WD - Jam Nut 1 1/4"-12NF		
104	1660114	End, Tie-Rod	2	
105	0642628	Bolt 1"-8NC x 3 1/2"	1	
106	4762600	Lockwasher 1"	2	
107	3040382	Lug, Tie-Rod	1	
108	3530016	Plate, Hitch Attach (Top)	1	
109		Plate, Hitch Attach (Bottom) Options:	1	
	3530015	Prior to January 1990		
	3533365	January 1990 to Present		
110	3421151	Pin	1	
111	2160003	Fitting, Grease - 45°	1	
112	2880410	Keystock	1	
113	0641507	Bolt 5/16"-18NC x 7/8"	2	
114	4761500	Lockwasher 5/16"	2	

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FIGURE 1-15. TOW PACKAGE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION (CONTINUED)	QTY.	REV.
115	4751500	Flatwasher 5/16"	2	
116	0900479	Bracket, Valve Mounting	1	
117	4640261	Valve, Selector	1	
118	3820001	Rivet	4	
119		Tow Instruction Decal Options:	1	
	3250840	Decal (Prior to May 1994)		
	1702305	Decal (May 1994 to Present)		
120	3250872	Nameplate - Tow Select	1	
121	2551050	Gusset	2	
122		Bolt Options:	1	
	0642628	1"-8NC x 3 1/2"		
	0642620	1"-8NC x 2 1/2"		

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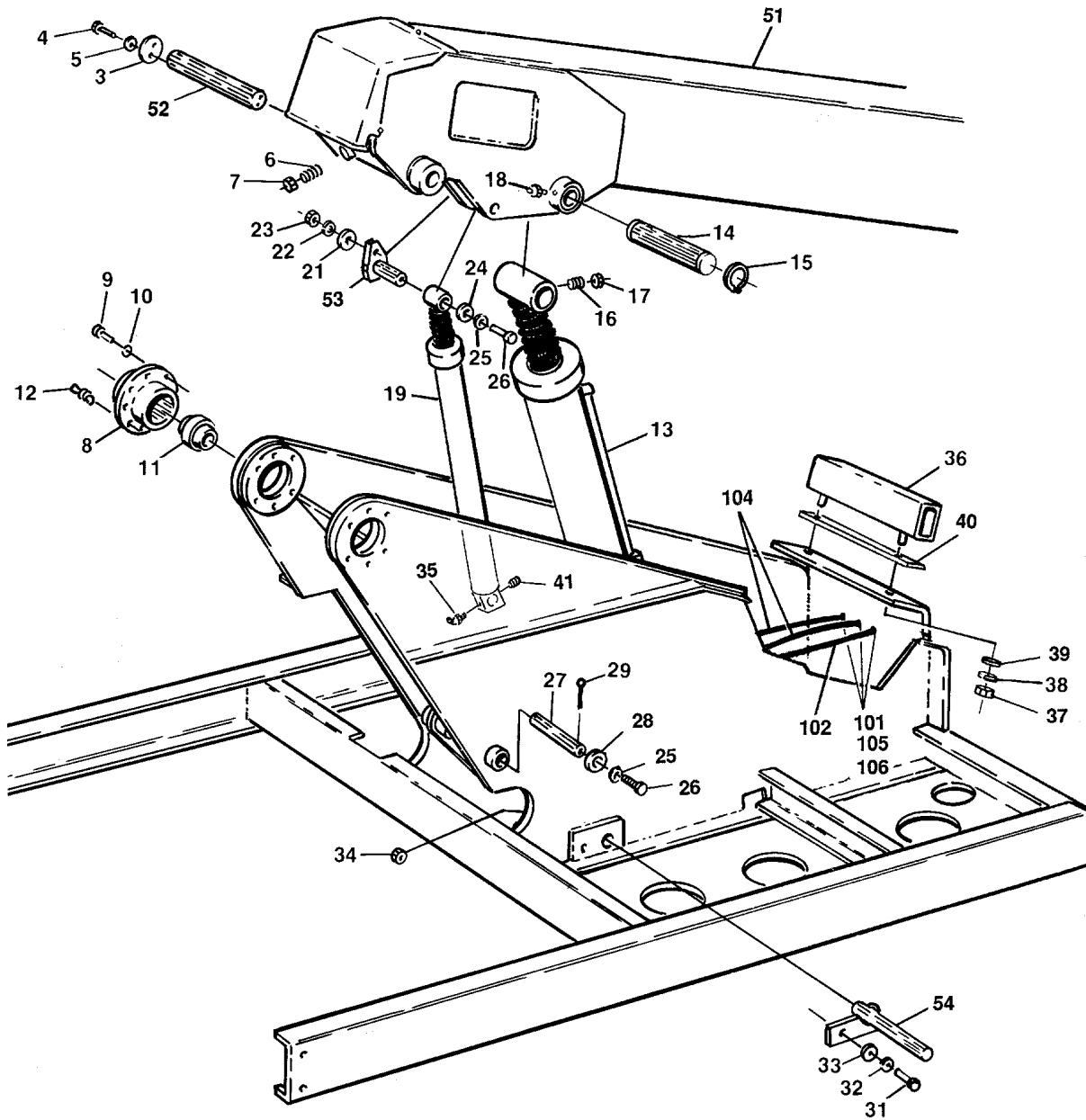
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FIGURE 2-1. TURNTABLE AND BOOMS INSTALLATIONS



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FIGURE 2-1. TURNTABLE AND BOOMS INSTALLATIONS

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		TURNTABLE WELDMENT OPTIONS:	Ref.	
	4620013	Turntable - Prior to April 1989		
	4620041	Turntable - April 1989 to December 1991		
	4620077	Turntable - December 1991 to Present		
	9982449	Turntable - Deutz F3L912 Powered Machines		
		BOOM INSTALLATIONS (STANDARD PARTS)	Ref.	
1	Not Used			
2	Not Used			
3	1120198	Cap, Boom Pivot	2	
4	0681812	Bolt 1/2"-13NC x 1 1/2" Grade 8	4	
	0100019	Loctite #271	A/R	
5	4740171	Washer, Hardened	4	
6	3952020	Setscrew 5/8"-11NC x 2 1/2"	2	
7	3312002	Nut, Jam 5/8"-11NC	2	
8		Boom Pivot Weldment Options:	2	
	4840596	Pivot - Prior to December 1991		
	0961240	Pivot - December 1991 to Present		
9	0681612	Bolt 3/8"-16NC x 1 1/2" Grade 8	6	
10	4740185	Washer, Hardened	6	
11	0440084	Bearing, Spherical	2	
12	2160006	Fitting, Grease	2	
13		Lift Cylinder Assembly Options (See Section 5 for Breakdown)	1	
	1680365	Lift Cylinder (Prior to April 1993)		
	1682697	Lift Cylinder - TUV (April 1993 to Present)		
14	3420656	Pin, Attach (Lift Cylinder Top)	1	
15	3760104	Ring, Retaining	2	
16	3951812	Setscrew 1/2"-13NC x 1 1/2"	1	
17	3311802	Nut, Jam 1/2"-13NC	1	
18	2160002	Fitting, Grease	2	
19		Master Cylinder Assembly Options (See Section 5 for Breakdown)	1	
	1681519	Master Cylinder - Prior to November 1984		
	1681547	Master Cylinder - November 1984 to May 1985		
	1681580	Master Cylinder - May 1985 to Present		
20	Not Used			
21	4751600	Flatwasher 3/8"	1	
22	4761600	Lockwasher 3/8"	1	
23	3311601	Nut 3/8"-16NC	1	
	4300034	Stud (Welded on Part)	1	
24	4740006	Flatwasher, Special - 1 3/4" O.D.	A/R	
	4740331	Flatwasher, Special - 2 1/4" O.D.	A/R	
25	4761600	Lockwasher 3/8"	A/R	
26	0651608	Bolt 3/8"-24NF x 1"	A/R	
	0741608	Screw, Flat Head Countersunk	A/R	

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FIGURE 2-1. TURNTABLE AND BOOMS INSTALLATIONS (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
27		Pin Options (Master Cylinder Lower):	1	
	3420531	Pin - Prior to August 1989		
	3421706	Pin - August 1989 to Present		
28	4740040	Flatwasher - Prior to August 1989	2	
	4740006	Flatwasher - August 1989 to Present	2	
29	3450608	Pin, Cotter - Prior to 1989 Only	2	
30	Not Used			
31	0630399	Bolt, Special	1	
32	4761600	Lockwasher 3/8"	1	
33	4751600	Flatwasher 3/8"	1	
34	3311605	Locknut 3/8"-16NC	1	
35	2160003	Fitting, Grease - 45°	1	
36	4841992	Boom Rest Weldment (When Equipped)	1	
37	3311601	Nut 3/8"-16NC	2	
38	4761600	Lockwasher 3/8"	2	
39	4751600	Flatwasher 3/8"	2	
40	0361751	Bar, Rest	1	
41	2200221	Plug, Pipe	1	
	0236414	BOOM INSTALLATION - STANDARD 2 SECTION WITH STANDARD CONTROLS (PRIOR TO APRIL 1988)	Ref.	J
	0239137	BOOM INSTALLATION - STANDARD 2 SECTION WITH STANDARD CONTROLS (APRIL 1988 TO PRESENT)	Ref.	8
	0239256	BOOM INSTALLATION - STANDARD 2 SECTION WITH HYDRAULIC CONTROLS	Ref.	H
	0237994	BOOM INSTALLATION - EXTEND-A-REACH - 2 SECTION WITH STANDARD CONTROLS	Ref.	H
	0239424	BOOM INSTALLATION - EXTEND-A-REACH 2 SECTION WITH STANDARD CONTROLS (PRIOR TO S/N 36202)	Ref.	7
	0252118	BOOM INSTALLATION - CSA 2 SECTION WITH STANDARD CONTROLS	Ref.	C
	0251814	BOOM INSTALLATION - CSA 2 SECTION WITH HYDRAULIC CONTROLS	Ref.	D
	0238755	BOOM INSTALLATION - 800 LBS. CAPACITY 2 SECTION WITH STANDARD CONTROLS (APRIL 1984 TO PRESENT)	Ref.	F
	0256857	BOOM INSTALLATION - 800 LBS. CAPACITY 2 SECTION WITH HYDRAULIC CONTROLS (S/N 28572 TO PRESENT)	Ref.	A
	0236260	BOOM INSTALLATION - STANDARD 3 SECTION WITH STANDARD CONTROLS (PRIOR TO NOVEMBER 1988)	Ref.	K
	0239136	BOOM INSTALLATION - STANDARD 3 SECTION WITH STANDARD CONTROLS (NOVEMBER 1988 TO S/N 36202)	Ref.	G
	0251086	BOOM INSTALLATION - STANDARD 3 SECTION WITH HYDRAULIC CONTROLS (PRIOR TO S/N 36202)	Ref.	D

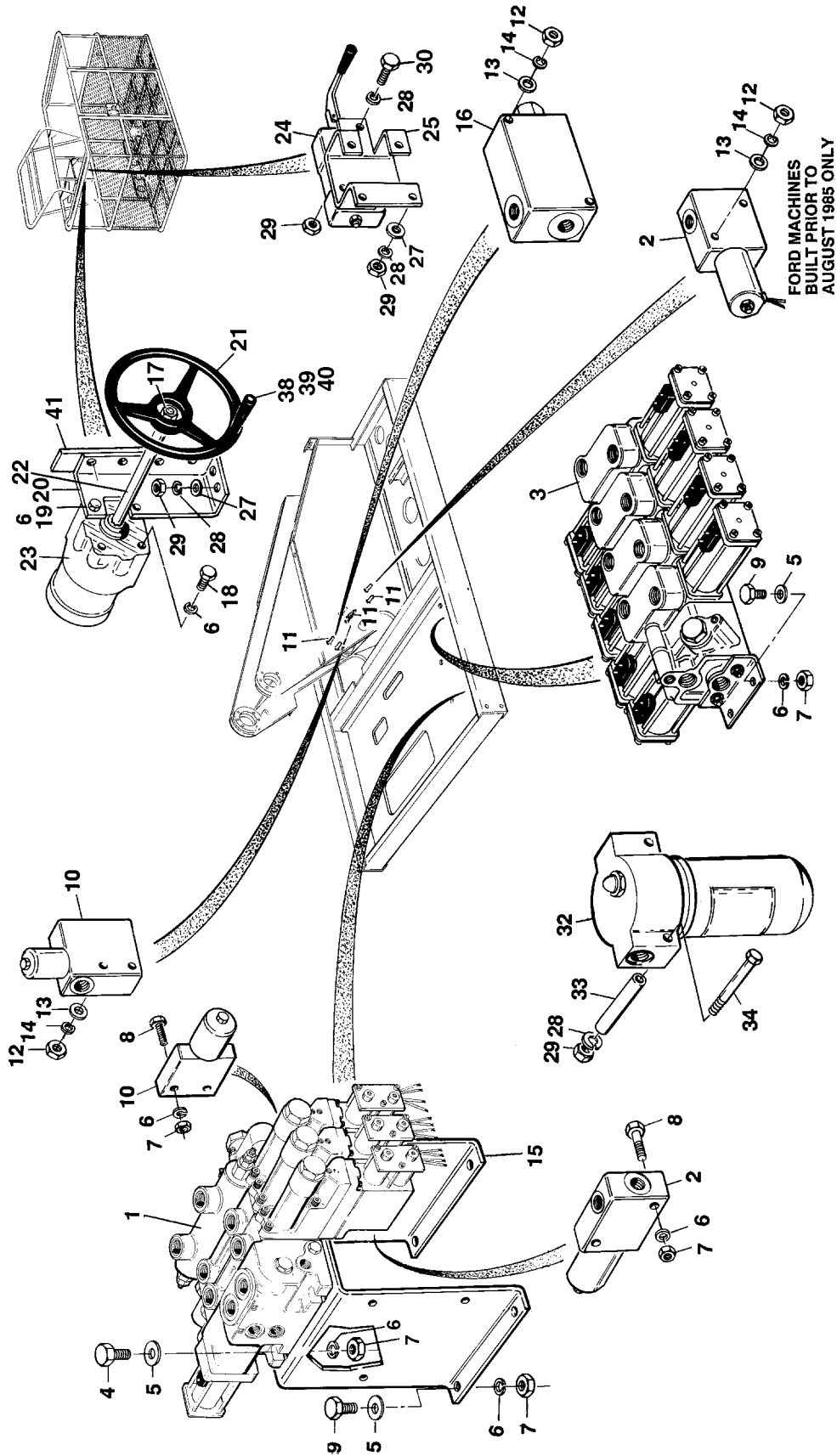
SECTION 2 TURNTABLE

FIGURE 2-1. TURNTABLE AND BOOMS INSTALLATIONS (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
51		Boom Assembly Options: (See Section 3 for Break-down)	1	
		2 Section		
	0800379	Standard Controls		
	0800578	Hydraulic Controls		
	0800504	Extend-A-Reach With Standard Controls		
	0800589	Extend-A-Reach With Standard Controls (Prior to S/N 36202)		
	0800379	CAS - Standard Controls		
	0800578	CAS - Hydraulic Controls		
	0800707	800LBS. Capacity With Standard Controls (April 1984 to Present)		
	0801098	800LBS. Capacity With Hydraulic Controls (S/N 28572 to Present)		
		3 Section		
0800400	Standard Controls			
0800699	Hydraulic Controls (Prior to S/N 36202)			
52		Pin, Boom Pivot Options:	1	
	3420643	Standard		
	3421521	800LBS. Capacity/CSA		
53		Pin Options (Master Cylinder - Top):	1	
		Standard Controls		
	0233449	Pin - Prior to September 1984		
	0236548	Pin - September 1984 to Present		
		Hydraulic Controls		
	0236548	Pin - Prior to August 1989		
	3421586	Pin - August 1989 to Present		
54		Pin (Lift Cylinder Bottom) Options:	1	
	3421083	Standard		
	3421522	800LBS. Capacity/CSA		
	0236487	LUBE LINE INSTALLATION		
101	2220124	Fitting	4	
102	2751032	Hose (44" Length) (To Lift Cylinder)	1	
103	Not Used			
104	2750807	Hose (30" Length) (To T/T Bearing)	2	
105	2160002	Fitting, Grease	3	
106	2180344	Fitting, Adapter	3	

SECTION 2 TURNTABLE

FIGURE 2-2. CONTROL VALVES INSTALLATION - RACINE



SECTION 2 TURNTABLE

FIGURE 2-2. CONTROL VALVES INSTALLATION - RACINE

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		CONTROL VALVES INSTALLATIONS	Ref.	
	0236399	FIXED PLATFORM WITHOUT STEERING WHEEL	Ref.	I
	0236385	ROTATING PLATFORM WITHOUT STEERING WHEEL	Ref.	I
	0236420	FIXED PLATFORM WITH STEERING WHEEL (FORD MACHINES PRIOR TO AUGUST 1985)	Ref.	I
	0236401	FIXED PLATFORM WITH STEERING WHEEL (DEUTZ MACHINES - ALL AND FORD MACHINES BUILT AUGUST 1985 TO PRESENT)	Ref.	I
	0236419	ROTATING PLATFORM WITH STEERING WHEEL (FORD MACHINES PRIOR TO AUGUST 1985)	Ref.	I
	0236400	ROTATING PLATFORM WITH STEERING WHEEL (DEUTZ MACHINES - ALL AND FORD MACHINES BUILT AUGUST 1985 TO PRESENT)	Ref.	I
1	4640367	Proportional Valve Assembly - 3 Section (See Figure 2-3 through 2-6 for Breakdown)	1	
2	4640123	Solenoid Select Valve Assembly (Qty. 1 - Standard/Qty. 2 used on Ford Machines used Prior to August 1985)	A/R	
	7004368	Coil (Hydraforce Version)	A/R	
	7000558	Coil (FPS Version)	A/R	
	7012518	Seal Kit (Hydraforce Version)	A/R	
	7006075	Seal Kit (FPS Version)	A/R	
3		Control Valve Assembly - Bang-Bang Options:	1	
		Without Steering Wheel (See Figure 2-12 for Breakdown)		
	4640246	Fixed Platform		
	4640247	Rotating Platform		
		With Steering Wheel (See Figure 2-13 for Breakdown)		
	4640447	Fixed/Rotating Platform		
4	0641612	Bolt 3/8"-16NC x 1 1/2"	3	
5	4751600	Flatwasher 3/8"	9	
6	4761600	Lockwasher 3/8"	17	
7	3311601	Nut 3/8"-16NC	13	
8	0641616	Bolt 3/8"-16NC x 2"	4	
9	0641610	Bolt 3/8"-16NC x 1 1/4"	6	
10	4640360	Dump Valve Assembly (Qty. 1 Required without Steering Wheel/Qty. 2 with Steering Wheel)	A/R	
	7009745	Coil (Vickers/Modular Controls Version)	1	
	7004368	Coil (Hydraforce Version)	1	
	7004289	Cartridge without Coil (Vickers/Modular Controls Version)	1	
	7010635	Cartridge without Coil - Through 1989 (Hydraforce Version)	1	
	7012910	Cartridge without Coil - 1989 to Present (Hydraforce Version)	1	
	Not Available	Seal Kit (Vickers/Modular Controls Version)	1	
	2900708	Seal Kit - Cartridge (Hydraforce Version)	1	
	7003635	Check Valve (Vickers/Modular Controls Version)	1	

SECTION 2 TURNTABLE

FIGURE 2-2. CONTROL VALVES INSTALLATION - RACINE (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
10 (cont'd)	7009798	Check Valve (Hydraforce Version)	1	
11	4300033	Stud (Welded on Part)	4	
12	3311501	Nut 5/16"-18NC	6	
13	4751500	Flatwasher 5/16"	6	
14	4761500	Lockwasher 5/16"	4	
15	0900886	Bracket, Valve Mounting	1	
16		Flow Divider Assembly Options:	1	
	Not Required	Without Steering Wheel		
	4640151	With Steering Wheel		
17		Nut, Steering Wheel Options:	1	
	Not Required	Without Steering Wheel		
	3300073	With Steering Wheel		
18		Bolt 3/8"-16NC x 3/4" Options:	2	
	Not Required	Without Steering Wheel		
	0641606	With Steering Wheel		
19		Bolt 3/8"-16NC x 1" Options:	2	
	Not Required	Without Steering Wheel		
	0641608	With Steering Wheel		
20		Bracket, Steering Valve Mounting Options:	1	
	Not Required	Without Steering Wheel		
	0901255	With Steering Wheel		
21		Wheel, Steering Options:	1	
	Not Required	Without Steering Wheel		
	4860097	With Steering Wheel		
22		Column, Steering Options:	1	
	Not Required	Without Steering Wheel		
	1460005	With Steering Wheel		
23		Steering Valve Assembly Options: (See Figure 2-17 for Breakdown)	1	
	Not Required	Without Steering Wheel		
	4640408	With Steering Wheel		
24		Manual Rotator Valve Assembly Options: (When Equipped)	1	
	Not Required	Without Steering Wheel		
	4640434	With Steering Wheel		
25		Bracket, Valve Mounting Options:	1	
	Not Required	Without Steering Wheel		
	0901201	With Steering Wheel		
26		Stud Options: (Welded on Part - Not Shown)	A/R	
	Not Required	Without Steering Wheel		
	4300031	With Steering Wheel		
27		Flatwasher 1/4" Options:	A/R	
	Not Required	Without Steering Wheel		
	4751400	With Steering Wheel		
28	4761400	Lockwasher 1/4"	13	
29	3311401	Nut 1/4"-20NC	13	
30		Bolt 1/4"-20NC x 2"	2	
	Not Required	Without Steering Wheel		
	0641416	With Steering Wheel		
31	Not Used			

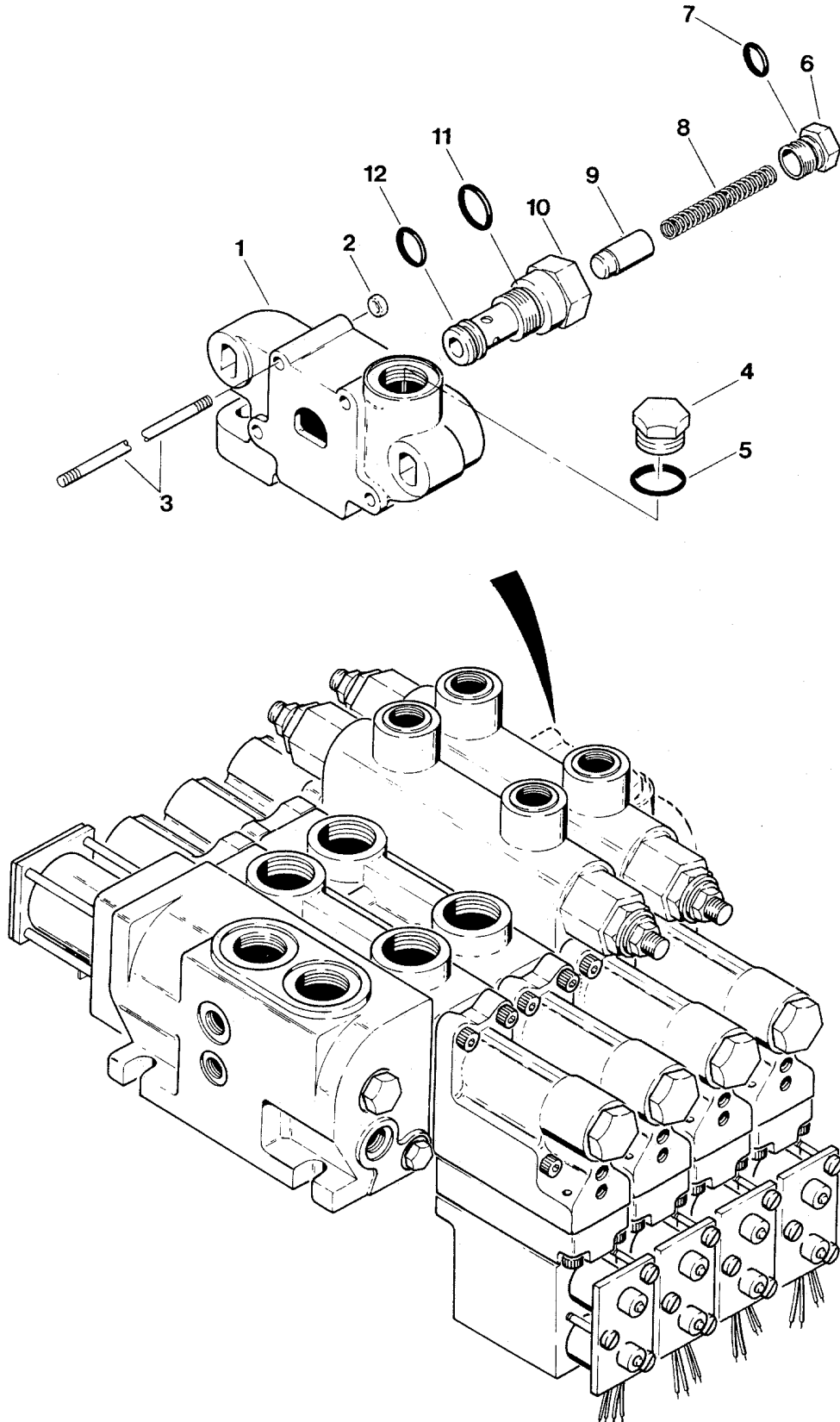
SECTION 2 TURNTABLE

FIGURE 2-2. CONTROL VALVES INSTALLATION - RACINE (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
32	2120078	Filter Assembly	1	
	2120079	Element, Filter	1	
33	4562716	Tube	2	
34	0641440	Bolt 1/4"-20NC x 5"	2	
35 to 37	Not Used			
38		Handle, Steering Wheel	1	
	Not Required	Without Steering Wheel		
	2560066	With Steering Wheel		
39		Screw, Socket Head	1	
	Not Required	Without Steering Wheel		
	3900060	With Steering Wheel		
40		Loctite #242	A/R	
	Not Required	Without Steering Wheel		
	0100011	With Steering Wheel		
41		Bar	1	
	Not Required	Without Steering Wheel		
	0361393	With Steering Wheel		

SECTION 2 TURNTABLE

FIGURE 2-3. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - OUTLET SECTION



SECTION 2 TURNTABLE

FIGURE 2-3. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - OUTLET SECTION

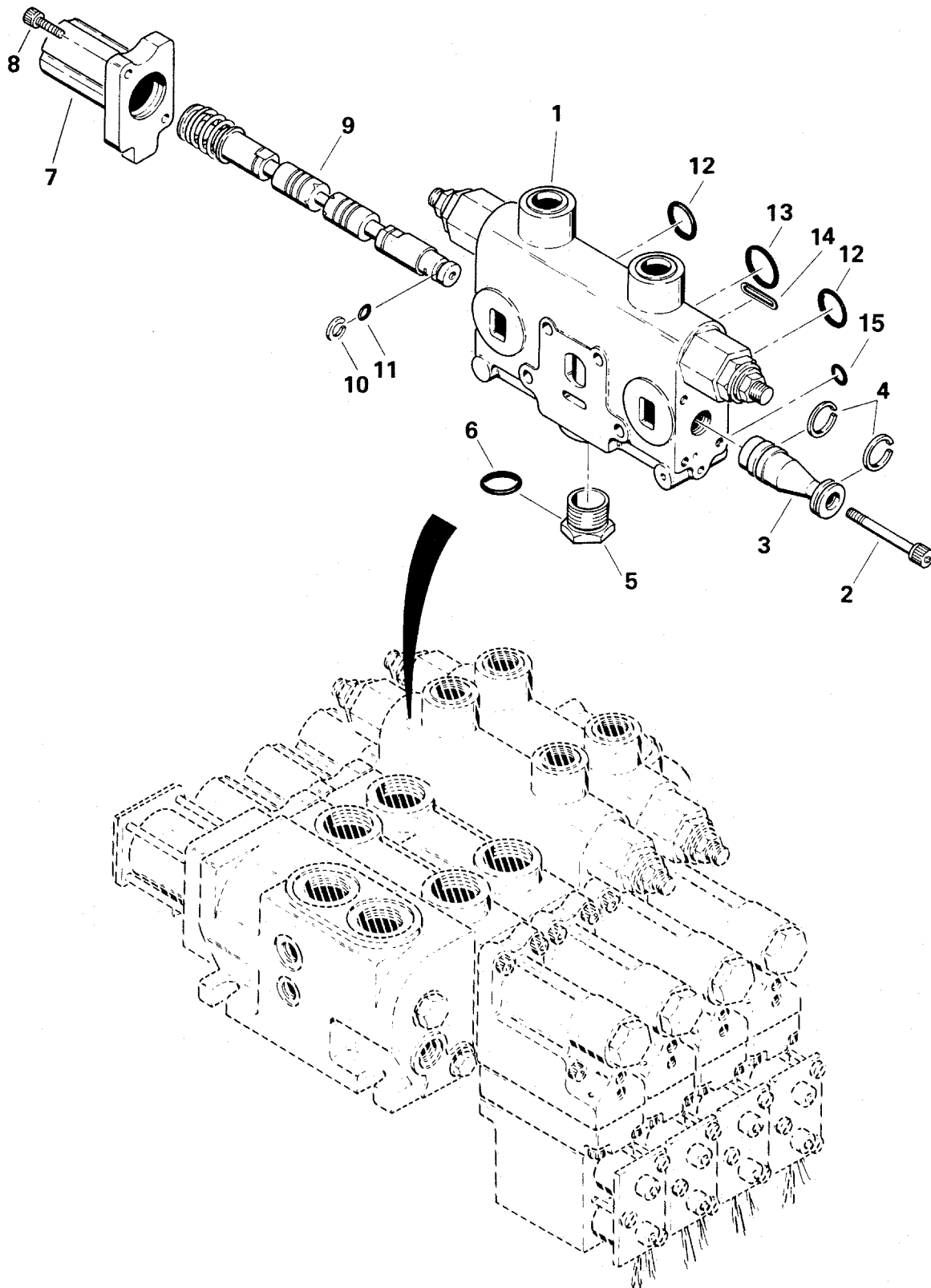
FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640367	RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - OUTLET SECTION	Ref.	—
1	7002368	Outlet Section	Ref.	—
2	7004869	Nut	4	
3	7004870	Stud	4	
4	7004871	Plug	1	
5	Kit	O-Ring	1	

	7004872	Cartridge Assembly, Pilot Pressure	1	
	7002288	Plug and O-Ring Assembly	1	
6	7004873	Plug	1	
7	Kit	O-Ring	1	
8	7004874	Spring	1	
9	7002287	Poppet	1	
10	7004875	Housing	1	
11	Kit	O-Ring	1	
12	Kit	O-Ring	1	

	7004833	Seal Kit (Includes Items 5,7,11 and 12)	1	

SECTION 2 TURNTABLE

FIGURE 2-4. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - WORKING SECTION



SECTION 2 TURNTABLE

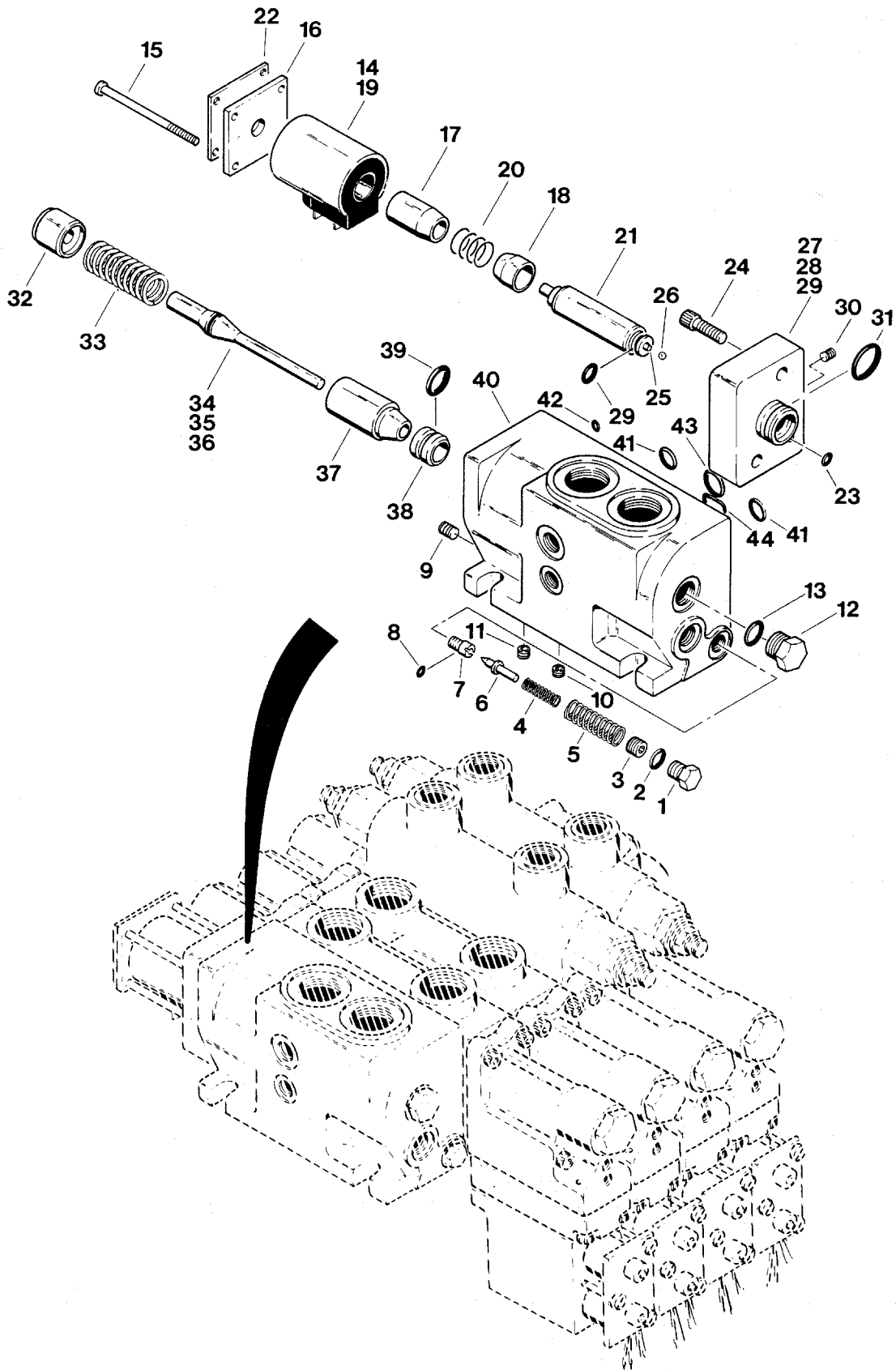
FIGURE 2-4. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - WORKING SECTION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	7004888	LIFT VALVE SECTION (INCLUDING SERVO ASSEMBLY)	Ref.	
	7004886	SWING VALVE SECTION (INCLUDING SERVO ASSEMBLY)	Ref.	
	7004887	DRIVE VALVE SECTION (INCLUDING SERVO ASSEMBLY)	Ref.	
1		Valve Body (Not Serviced - Purchase Complete Assembly)	1	
2	7002391	Screw, Socket Head	1	
3	7004808	Ramp (Supplied with Servo)	Ref.	
4	7002233	Ring (Supplied with Servo)	Ref.	
5	7004802	Plug Assembly	1	
6	Kit	O-Ring	1	
7	7002398	Cap End	1	
8	7002231	Screw, Socket Head	2	
9		Spool (Not Serviced - Purchase Complete Assembly)	1	
10	7002394	Piston Ring	1	
11	Kit	O-Ring	1	
12	Kit	O-Ring	2	
13	Kit	O-Ring	1	
14	Kit	O-Ring	1	
15	Kit	O-Ring	1	

	7004832	Seal Kit - Working Sections	4	

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FIGURE 2-5. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - INLET SECTION



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FIGURE 2-5. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - INLET SECTION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.202
	7002364	INLET VALVE SECTION (DUMP SECTION)	Ref.	
1	7002385	Plug Assembly	1	
	7004848	Plug	1	
2	Kit	O-Ring	1	
3	7002384	Screw, Socket Set	1	
4	7002377	Spring Compression, Helical	1	
5	7002376	Spring, Compression, Helical	1	
6	7002371	Poppet	1	
	7004850	Seat Assembly	1	
7	7004851	Seat	1	
8	Kit	O-Ring	1	
9	7002324	Plug	4	
10	7002326	Orifice, 0.040	1	
11	7002375	Orifice, 0.062	1	
	7002386	Plug Assembly	1	
12	7004853	Plug	1	
13	Kit	O-Ring	1	
14	7000417	Coil, 12 Volt DC	1	
	7004854	Solenoid Assembly	1	
15	7004837	Screw, Slotted, Pan Head	4	
16	7002338	Plate	1	
17	7004824	Sleeve	1	
18	7004835	Sleeve	1	
19	7004836	Case	1	
20	7002334	Spring	1	
21	7004855	Guide, Tube Assembly	1	
	7004838	Tube	1	
	7004839	Plunger	1	
	7004856	Pin and Guide Assembly	1	
	7002340	Guide	1	
	Kit	Packing Preformed, O-Ring	1	
	7004857	Pin and Quad Ring Assembly	1	
	7004841	Pin	1	
	Kit	Quad Ring	1	
	7004858	Cone and O-Ring Assembly	1	
	7004822	Cone	1	
	Kit	Packing, Preformed, O-Ring	1	
	Kit	Packing, Preformed, O-Ring	1	
22	7002327	Nameplate	1	
23	Kit	O-Ring	1	
24	7002374	Screw, Socket Recessed	2	
25	7002319	Pin	1	
26	7002229	Ball	1	
	7002330	Seat Assembly	1	
27	7004823	Seat, Ball	1	
28	Kit	O-Ring	1	
	7004860	End Cap Assembly	1	

SECTION 2 TURNTABLE

SECTION 2 TURNTABLE

**FIGURE 2-5. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - INLET SECTION
(CONTINUED)**

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.202
29	7004861	Cap	1	
30	7002223	Plug	1	
31	Kit	O-Ring	1	
32	7002373	Spacer	1	
33	7002379	Spring	1	
	7004863	Stem Assembly	1	
34	7004864	Stem	1	
35	Kit	O-Ring	1	
36	Kit	Glyd Ring	1	
37	7002372	Poppet	1	
38	7002370	Seat	1	
39	Kit	O-Ring	1	
40	7002360	Housing, Inlet Manifold	1	
41	Kit	O-Ring	2	
42	Kit	O-Ring	1	
43	Kit	O-Ring	1	
44	Kit	O-Ring	1	

	7004833	Seal Kit (Includes Items 2,8,13,21,23,28,31,35,36,39 and 41-44)	1	

SECTION 2 TURNTABLE

FIGURE 2-5. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - INLET SECTION
(CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.202

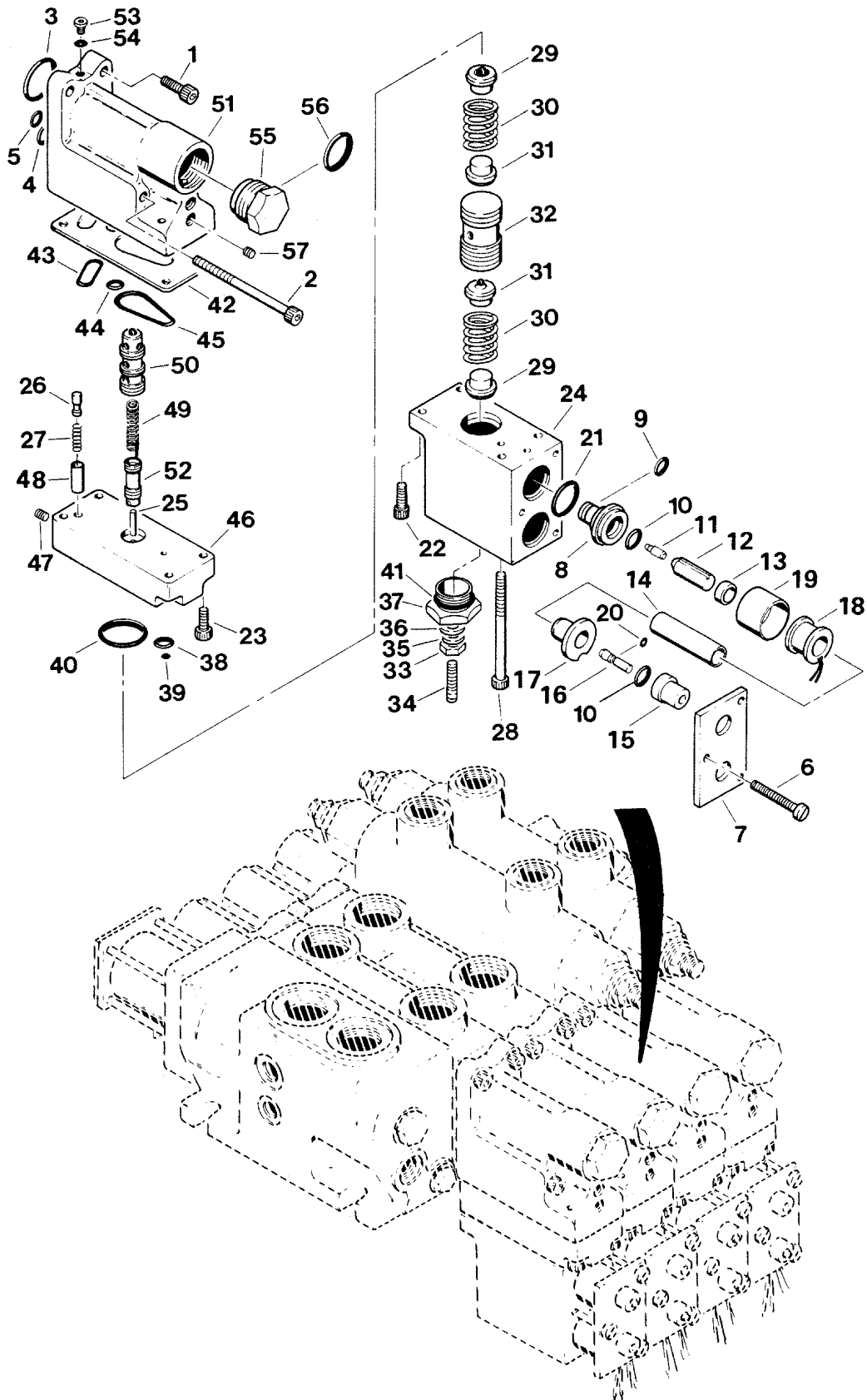
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SECTION 2 TURNTABLE

FIGURE 2-6. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - SERVO SECTION



SECTION 2 TURNTABLE

FIGURE 2-6. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - SERVO SECTION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	7004884	SERVO ASSEMBLY	Ref.	
1	7002231	Screw, Socket Head	2	
2	7004878	Screw, Socket Head	2	
3	Kit	O-Ring	1	
4	Kit	O-Ring	1	
5	Kit	O-Ring	1	
	0100011	Loctite #242	A/R	

	7004883	Nose Cone Assembly (Contains Items 8 thru 14)	2	
6	7002240	Screw, Slotted	3	
7	7002218	Plate	1	

8	7002210	Nose	1	
9	Kit	O-Ring	1	
10	Kit	O-Ring	2	
11	7000423	Poppet	1	
12	7002212	Plunger	1	
13	7002216	Sleeve	1	
14	7002215	Tube	1	
15	7002214	Retainer	1	
16	7002213	Pin	2	
17	7002211	Cover	1	
18	1420003	Coil, 7.5 Volt	2	
19	7002242	Case	2	
20	Kit	O-Ring	2	
21	Kit	Packing, Preformed, O-Ring	2	
22	7002222	Screw, Socket Head (Short)	2	
23	7002228	Screw, Socket Head (Long)	2	
24	7004818	Body, Control	1	
25	7002238	Pin	1	
26	7002220	Spool	1	
27	7002241	Spring, Compression, Helical	1	
28	7002228	Screw, Socket Head	2	
29	7004880	Spring Seat and Ball	2	
30	7002237	Spring, Contour	2	
31	7004881	Spring Seat and Ball	2	
32	7002206	Control Pilot Piston	1	
33	7002224	Nut, Jam	1	
34	7004813	Screw, Cup Point	1	
35	7004812	Washer	1	
36	7004809	Seal	1	
37	7002209	Plug	1	
38	Kit	Packing, Preformed, O-Ring	1	
39	Kit	Packing, Preformed, O-Ring	1	
40	Kit	Packing, Preformed, O-Ring	1	
41	Kit	Packing, Preformed, O-Ring	1	
42	7004815	Seal Plate	1	

SECTION 2 TURNTABLE

SECTION 2 TURNTABLE

**FIGURE 2-6. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - SERVO SECTION
(CONTINUED)**

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
43	Kit	Packing, Preformed, O-Ring	1	
44	Kit	Packing, Preformed, O-Ring	1	
45	Kit	Packing, Preformed, O-Ring	1	
46	7004816	Plate, Adapter	1	
47	7004882	Screw, Socket Head	1	
48	7002217	Spool Stop	1	
49	7002234	Spring, Sleeve and Spool	1	
50	7002203	Sleeve Assembly	1	
51	7004817	Body, Servo	1	
52	7002205	Spool	1	
53	7004814	Plug	1	
54	Kit	O-Ring	1	
55	7002704	Plug	1	
56	Kit	O-Ring	1	
	7004808	Ramp	1	
	7002233	Ring	2	
57	7002223	Plug	2	

	7004831	Seal Kit (Includes Items 3,4,5,9,10,20,21,38-41, 43-45, 54 and 56)	1	

SECTION 2 TURNTABLE

FIGURE 2-6. RACINE PROPORTIONAL CONTROL VALVE ASSEMBLY - SERVO SECTION
(CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

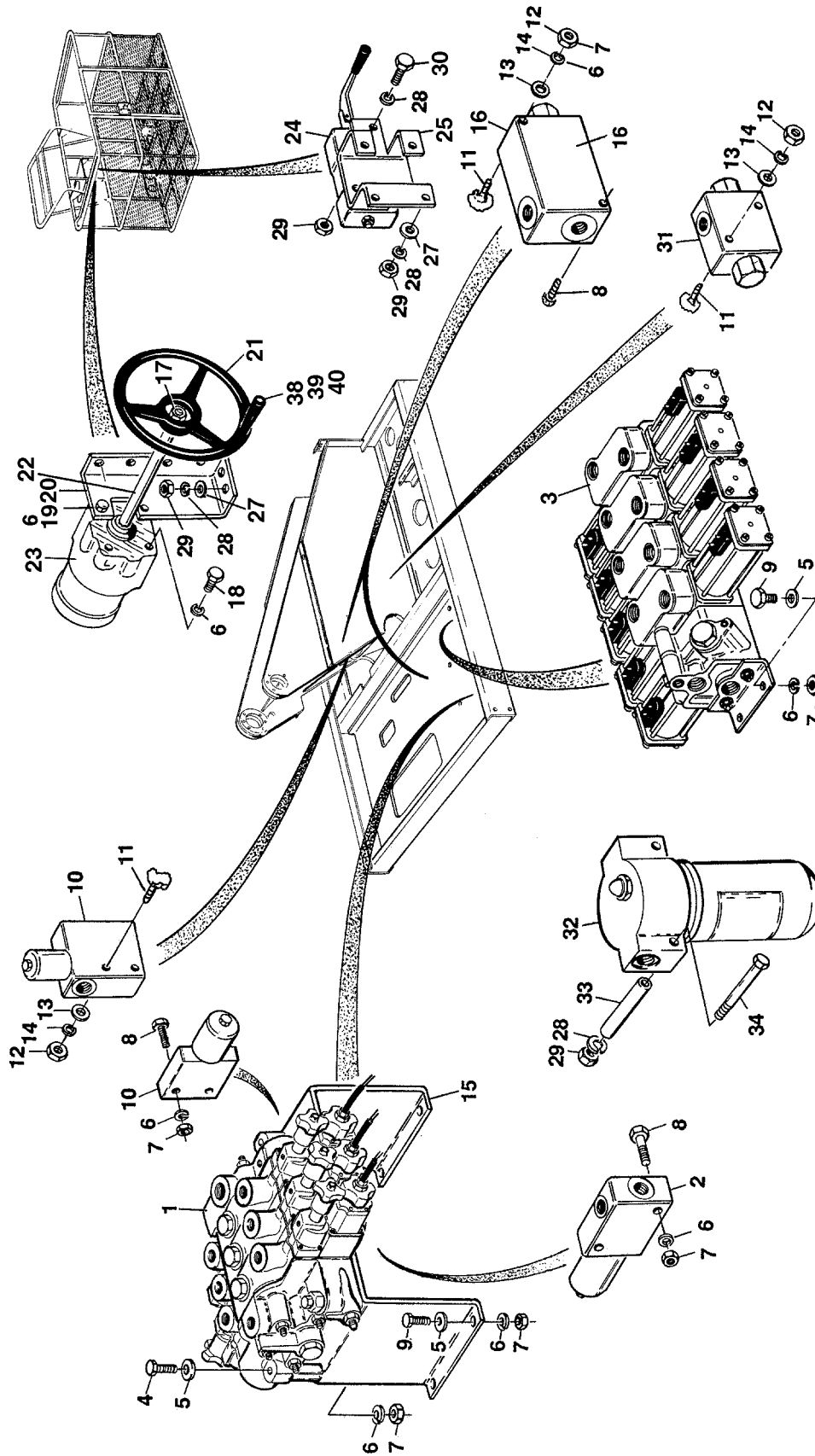
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SECTION 2 TURNTABLE

FIGURE 2-7. CONTROL VALVES INSTALLATION - BERTEA



SECTION 2 TURNTABLE

FIGURE 2-7. CONTROL VALVES INSTALLATION - BERTEA

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		CONTROL VALVES INSTALLATIONS	Ref.	
	0236597	FIXED PLATFORM WITHOUT STEERING WHEEL	Ref.	B
	0236598	ROTATING PLATFORM WITHOUT STEERING WHEEL	Ref.	B
	0236599	FIXED PLATFORM WITH STEERING WHEEL	Ref.	B
	0236600	ROTATING PLATFORM WITH STEERING WHEEL	Ref.	B
1	4640283	Proportional Valve Assembly - 3 Section	1	
		Inlet Section	1	
	7001365	Dump Cartridge Assembly	1	
	7001366	Coil	1	
	7001306	Filter Assembly	1	
	7001354	O-Ring	1	
	7001318	Pilot Pressure Relief Valve	1	
		Working Sections	3	
	7001356	Drive Section	1	
	7001357	Lift Section	1	
	7001358	Swing Section	1	
	7001307	Pilot Valve Assembly (One Per Section)	3	
	7001308	Gasket (One Per Section)	3	
	7001337	Spring, Return (2 Per Section)	6	
	7001345	Spring, Knob Tension (1 Per Section)	3	
	7001305	Seal Kit (O-Rings Between Sections)	4	
	7001359	Outlet Section	1	
2	4640123	Solenoid Select Valve Assembly	1	
	7004368	Coil (Hydraforce Version)	A/R	
	7000558	Coil (FPS Version)	A/R	
	7012518	Seal Kit (Hydraforce Version)	A/R	
	7006075	Seal Kit (FPS Version)	A/R	
3		Control Valve Assembly - Bang-Bang Options:	1	
		Without Steering Wheel (See Figure 2-12 for Breakdown)		
	4640246	Fixed Platform		
	4640247	Rotating Platform		
		With Steering Wheel (See Figure 2-13 for Breakdown)		
	4640447	Fixed/Rotating Platform		
4	0641640	Bolt 3/8"-16NC x 5.00"	3	
5	4751600	Flatwasher 3/8"	9	
6	4761600	Lockwasher 3/8"	19	
7	3311601	Nut 3/8"-16NC	15	
8	0641616	Bolt 3/8"-16NC x 2"	6	
9	0641610	Bolt 3/8"-16NC x 1 1/4"	6	
10	4640360	Dump Valve Assembly (Qty. 1 Required Without Steering Wheel/ Qty. 2 With Steering Wheel)	A/R	
	7009745	Coil (Vickers/Modular Controls Version)	1	
	7004368	Coil (Hydraforce Version)	1	
	7004289	Cartridge Without Coil (Vickers/Modular Controls Version)	1	

SECTION 2 TURNTABLE

SECTION 2 TURNTABLE

FIGURE 2-7. CONTROL VALVES INSTALLATION - BERTEA (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
10 (cont'd)	7010635	Cartridge Without Coil - Through 1989 (Hydraforce Version)	1	
	7012910	Cartridge Without Coil - 1989 to Present (Hydraforce Version)	1	
	Not Available	Seal Kit (Vickers/Modular Controls Version)	1	
	2900708	Seal Kit - Cartridge (Hydraforce Version)	1	
	7003635	Check Valve (Vickers/Modular Controls Version)	1	
	7009798	Check Valve (Hydraforce Version)	1	
11	4300033	Stud (Welded on Part)	6	
12	3311501	Nut 5/16"-18NC	8	
13	4751500	Flatwasher 5/16"	8	
14	4761500	Lockwasher 5/16"	6	
15	0901257	Bracket, Valve Mounting	1	
16	4640151	Valve, Flow Divider	1	
17		Nut, Steering Wheel Options:	1	
	Not Required	Without Steering Wheel		
	3300073	With Steering Wheel		
18		Bolt 3/8"-16NC x 3/4" Options:	2	
	Not Required	Without Steering Wheel		
	0641606	With Steering Wheel		
19		Bolt 3/8"-16NC x 1" Options:	2	
	Not Required	Without Steering Wheel		
	0641608	With Steering Wheel		
20		Bracket, Steering Valve Mounting Options:	1	
	Not Required	Without Steering Wheel		
	0901255	With Steering Wheel		
21		Wheel, Steering Options:	1	
	Not Required	Without Steering Wheel		
	4860097	With Steering Wheel		
22		Column, Steering Options:	1	
	Not Required	Without Steering Wheel		
	1460005	With Steering Wheel		
23		Steering Valve Assembly Options: (See Figure 2-17 for Breakdown)	1	
	Not Required	Without Steering Wheel		
	4640408	With Steering Wheel		
24		Manual Rotator Valve Assembly Options: (When Equipped)	1	
	Not Required	Without Steering Wheel		
	4640434	With Steering Wheel		
25		Bracket, Valve Mounting Options:	1	
	Not Required	Without Steering Wheel		
	0901201	With Steering Wheel		
26		Stud Options: (Welded on Part - Not Shown)	A/R	
	Not Required	Without Steering Wheel		
	4300031	With Steering Wheel		
27		Flatwasher 1/4" Options:	A/R	
	Not Required	Without Steering Wheel		
	4751400	With Steering Wheel		
28	4761400	Lockwasher 1/4"	13	

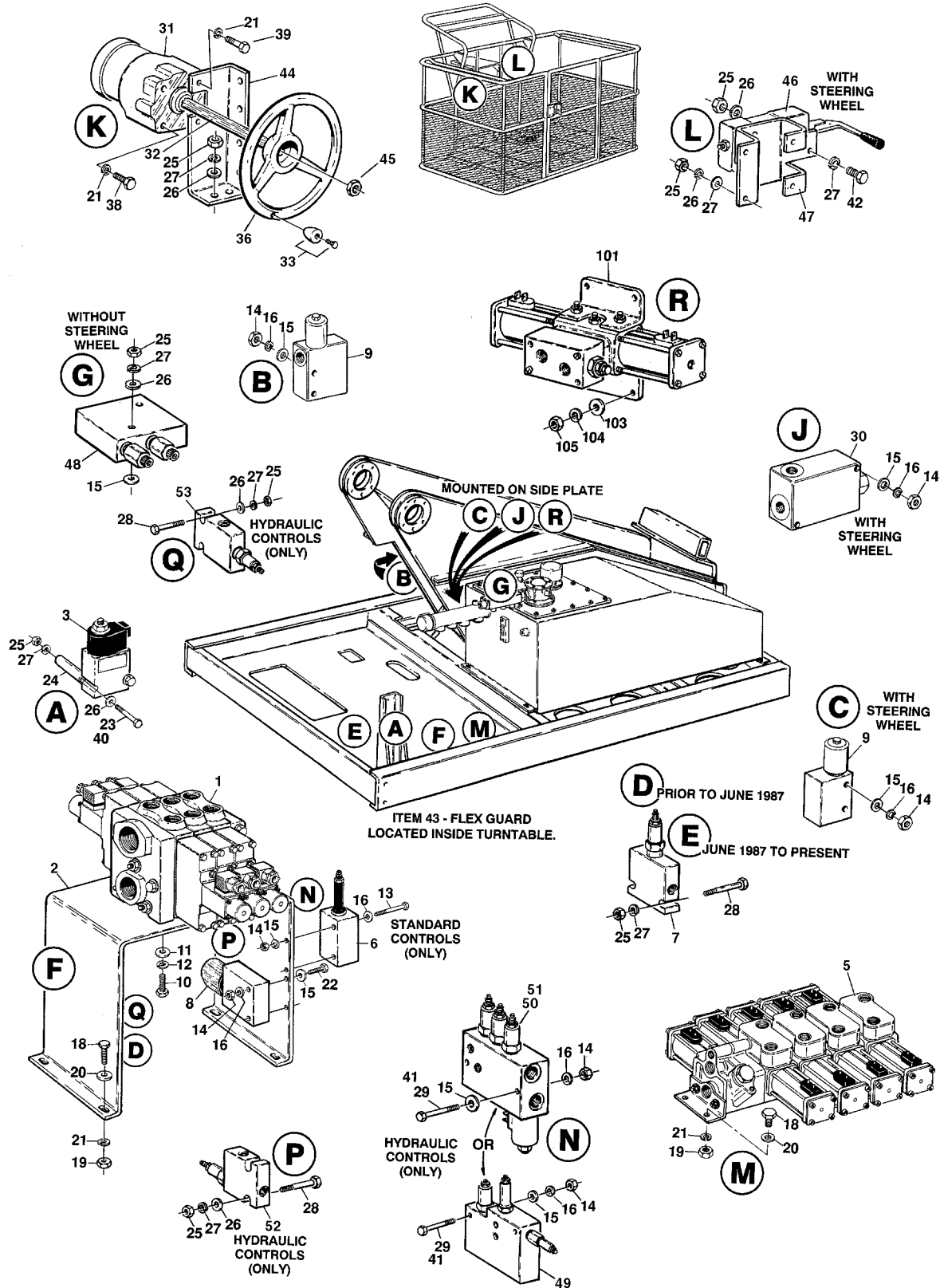
SECTION 2 TURNTABLE

FIGURE 2-7. CONTROL VALVES INSTALLATION - BERTEA (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
29	3311401	Nut 1/4"-20NC	13	
30		Bolt 1/4"-20NC x 2"	2	
	Not Required	Without Steering Wheel		
	0641416	With Steering Wheel		
31	4640035	Valve, Crossover	1	
32	2120078	Filter Assembly	1	
	2120079	Element, Filter	1	
33	4562716	Tube	2	
34	0641440	Bolt 1/4"-20NC x 5"	2	
35 to 37	Not Used			
38		Handle, Steering Wheel	1	
	Not Required	Without Steering Wheel		
	2560066	With Steering Wheel		
39		Screw, Socket Head	1	
	Not Required	Without Steering Wheel		
	3900060	With Steering Wheel		
40		Loctite #242	A/R	
	Not Required	Without Steering Wheel		
	0100011	With Steering Wheel		

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FIGURE 2-8. CONTROL VALVES ASSEMBLY VICKERS VALVES



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FIGURE 2-8. CONTROL VALVES ASSEMBLY VICKERS VALVES

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		CONTROL VALVES INSTALLATIONS	Ref.	
		WITHOUT STEERING WHEEL (STANDRAD CONTROLS)	Ref.	
	0237835	Without Prop Tele/without Rotate/without Steering Wheel/standard Controls	Ref.	L
	0237836	Without Prop Tele/with Rotate/without Steering Wheel/standard Controls	Ref.	L
	0238190	With Prop Tele/without Rotate/without Steering Wheel/standard Controls	Ref.	F
	0238191	With Prop Tele/with Rotate/without Steering Wheel/standard Controls	Ref.	G
		WITH STEERING WHEEL (STANDRAD CONTROLS)	Ref.	
	0237837	With Steering Wheel: Without Prop Tele/without Rotate/with Steering Wheel/standard Controls (Machines Built Prior To September 1991)	Ref.	E
	0252353	With Steering Wheel: Without Prop Tele/without Rotate/with Steering Wheel/standard Controls (Machines Built September 1991 To Present)	Ref.	B
	0237838	With Steering Wheel: Without Prop Tele/with Rotate/with Steering Wheel/standard Controls (Machines Built Prior To September 1991)	Ref.	E
	0252354	With Steering Wheel: Without Prop Tele/with Rotate/with Steering Wheel/standard Controls (Machines Built September 1991 To Present)	Ref.	B
	0238192	With Steering Wheel: With Prop Tele/without Rotate/with Steering Wheel/standard Controls (Machines Built Prior To September 1991)	Ref.	A
	0252350	With Steering Wheel: With Prop Tele/with Rotate/with Steering Wheel/standard Controls (Machines Built September 1991 To Present)	Ref.	—
	0238193	With Steering Wheel: With Prop Tele/with Rotate/with Steering Wheel/standard Controls (Machines Built Prior To September 1991)	Ref.	A
	0252351	With Steering Wheel: With Prop Tele/with Rotate/with Steering Wheel/standard Controls (Machines Built September 1991 To Present)	Ref.	—
		WITHOUT STEERING WHEEL (HYDRAULIC CONTROLS)	Ref.	
	0239242	With Prop Tele/without Steering Wheel/hydraulic Controls	Ref.	M
	0239243	With Prop Tele/with Rotate/without Steering Wheel/ Hydraulic Controls	Ref.	O
1		Control Valve Assembly (Vickers) Options: Without Steering Wheel (Standard Controls)	1	
	4640514	3 Section (Without Prop Tele - Prior to October 1994) (See Figure 2-9 for Breakdown)		
	4640913	3 Section (Without Prop Tele - October 1994 to Present) (See Figure 2-10 for Breakdown)		
	4640524	4 Section (With Prop Tele) (Prior to October 1994)(See Figure 2-9 for Breakdown)		
	4640914	4 Section (With Prop Tele) (October 1994 to Present) (See Figure 2-10 for Breakdown)		

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FIGURE 2-8. CONTROL VALVES ASSEMBLY VICKERS VALVES (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
1 (cont'd)	4640514	With Steering Wheel (Standard Controls) 3 Section (Without Prop Tele) (See Figure 2-9 for Breakdown)		
	4640524	4 Section (With Prop Tele) (See Figure 2-9 for Breakdown)		
	4640561	Without Steering Wheel (Hydraulic Controls) Prior to October 1994 (See Figure 2-9 for Breakdown)		
	4640918	October 1994 to Present (See Figure 2-11 for Breakdown)		
2		Bracket Options:	1	
	0901399	Without Prop Tele		
	4842824	With Prop Tele		
3	4640513	Dump Valve Assembly	A/R	
	7003640	Coil (Vickers/Modular Controls Version)	A/R	
	7004289	Cartridge Less Coil (Vickers/Modular Controls Version)	A/R	
	2900503	Seal Kit (Vickers/Modular Controls Version)	A/R	
	7000645	Coil (Hydraforce Version)	A/R	
	7012910	Cartridge Less Coil (Hydraforce Version)	A/R	
	2900756	Seal Kit (Hydraforce Version)	A/R	
	7022390	Nut	A/R	
	4	Not Used		
5		Control Valve Assembly (Bang-Bang) Options:	1	
		Without Steering Wheel (Standard Controls)		
	4640447	2 Section (0238190 Installation) (See Figure 2-13 for Breakdown)		
	4640246	3 Section (0237835 and 0238491 Installations - Prior to August 1995) (See Figure 2-12 for Breakdown)		
	4640941	3 Section (0237835 & 0238491 Installations - August 1995 to Present) (See Figure 2-12A for Breakdown)		
	4640247	4 Section (0257836 Installation - Prior to June 1995)(See Figure 2-12 for Breakdown)		
	4640940	4 Section (0257836 Installation - June 1995 to Present) (See Figure 2-12A for Breakdown)		
		With Steering Wheel (Standard Controls)		
	4640461	1 Section (See Figure 2-13 for Breakdown)		
	4640447	2 Section (See Figure 2-13 for Breakdown)		
		Without Steering Wheel (Hydraulic Controls)		
	4640571	2 Section (See Figure 2-12 for Breakdown)		
	4640246	3 Section (Prior to August 1995)(See Figure 2-12 for Breakdown)		
	4640941	3 Section (August 1995 to Present) (See Figure 2-12A for Breakdown)		
6		Sequence Valve Assembly Options:	1	
	4640512	Standard Controls		
	Not Required	Hydraulic Controls		

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FIGURE 2-8. CONTROL VALVES ASSEMBLY VICKERS VALVES (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
7		Pressure Reducing Valve Assembly Options: Standard Controls	A/R	
	4640522	Pressure Reducing Valve Assembly	1	
	4640523	Cartridge	1	
	2900698	Seal Kit	1	
8	Not Required	Hydraulic Controls		
	4640123	Solenoid Valve Assembly	1	
	7004368	Coil (Hydraforce Version)	1	
	7012518	Seal Kit (Hydraforce Version)	1	
	7000558	Coil (FPS Version)	1	
	7006075	Seal Kit (FPS Version)	1	
9	4640360	Dump Valve Assembly	A/R	
	7009745	Coil (Vickers/Modular Controls Version)	A/R	
	7004289	Solenoid Cartridge Less Coil (Vickers/Modular Controls Version)	A/R	
	7003635	Check Valve Cartridge (Vickers/Modular Controls Version)	A/R	
	7004368	Coil (Hydraforce Version)	A/R	
	7012910	Solenoid Cartridge Less Coil (1989 to Present) (Hydraforce Version)	A/R	
	7010635	Solenoid Cartridge Less Coil (Prior to 1989) (Hydraforce Version)	A/R	
	7009798	Check Valve Cartridge (Hydraforce Version)	A/R	
10	0641708	Bolt 7/16"-14NC x 1"	3	
11	4751700	Flatwasher 7/16"	3	
12	4761700	Lockwasher 7/16"	3	
13	0641522	Bolt 5/16"-18NC x 2 3/4"	A/R	
14	3311501	Nut 5/16"-18NC	A/R	
15	4751500	Flatwasher 5/16"	A/R	
16	4761500	Lockwasher 5/16"	A/R	
17	4300033	Stud (Welded on Part) (Not Shown)	A/R	
18	0641610	Bolt 3/8"-16NC x 1 1/4"	A/R	
19	3311601	Nut 3/8"-16NC	A/R	
20	4751600	Flatwasher 3/8"	A/R	
21	4761600	Lockwasher 3/8"	A/R	
22	0641516	Bolt 5/16"-18NC x 2"	A/R	
23	0641426	Bolt 1/4"-20NC x 3 1/4"	A/R	
24	4562639	Spacer, Tube	2	
25	3311401	Nut 1/4"-20NC	A/R	
26	4751400	Flatwasher 1/4"	A/R	
27	4761400	Lockwasher 1/4"	A/R	
28	0641418	Bolt 1/4"-20NC x 2 1/4"	4	
29	0641528	Bolt 5/16"-18NC x 3 1/2"	A/R	
30		Flow Divider Assembly Options:		
	Not Required	Without Steering Wheel	0	
	4640151	With Steering Wheel	1	
31		Steering Valve Assembly (See Figure 2-17 for Break-down) Options:		
	Not Required	Without Steering Wheel	0	
	4640408	With Steering Wheel	1	

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FIGURE 2-8. CONTROL VALVES ASSEMBLY VICKERS VALVES (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
32	Not Required	Column, Steering Options: Without Steering Wheel	0	
	1460005	With Steering Wheel	1	
33	Not Required	Handle, Steering Wheel Options: Without Steering Wheel	0	
	2560066	With Steering Wheel	1	
	3900060	Bolt, Shoulder	1	
	0100011	Loctite #242	A/R	
34 to 35	Not Used			
36	Not Required	Wheel, Steering Options: Without Steering Wheel	0	
	4860097	With Steering Wheel	1	
37	Not Used			
38	0641606	Bolt 3/8"-16NC x 3/4"	A/R	
39	0641608	Bolt 3/8"-16NC x 1"	A/R	
40	0641436	Bolt 1/4"-20NC x 4 1/2"	A/R	
41	0641538	Bolt 5/16"-18NC x 4 3/4"	A/R	
42	0641416	Bolt 1/4"-20NC x 2"	A/R	
43	4060804	Flex-Guard (Not Shown - Located on Heat Shield on Engine Side)	4 ft.	
44	Not Required	Bracket Options: Without Steering Wheel	0	
		With Steering Wheel		
	0901393	Bracket (Prior to September 1991)	1	
	0901804	Bracket (September 1991 to Present)	1	
45	Not Required	Nut, Steering Wheel Options: Without Steering Wheel	0	
	3300073	With Steering Wheel	1	
46	Not Required	Rotator Valve Options: Without Steering Wheel	0	
		With Steering Wheel		
	Not Required	Machines Without Rotate	0	
	4640434	Machines With Rotate	1	
47	Not Required	Mounting Bracket Options: Without Steering Wheel	0	
		With Steering Wheel		
	0901201	Bracket, Mounting (Prior to September 1991)	1	
	3533219	Plate, Mounting (September 1991 to Present) (Not Shown)	1	
48		Relief Valve Assembly (Machines Built May 1993 to Present) Options:		
	4640839	Without Steering Wheel	1	
	7012945	Cartridge, Relief	1	
	7010542	Cartridge, Shuttle	1	
	Not Required	With Steering Wheel	0	
		NOTE: USED ON HYDRAULIC MACHINES ONLY	Ref.	
49	4640535	Accessory Valve Assembly (Machines built through 1989) (See Figure 2-15 for Breakdown) Note: 4640535 Accessory Valve is no longer available as a complete assembly. See Figure 2-13 for Individual parts.	1	

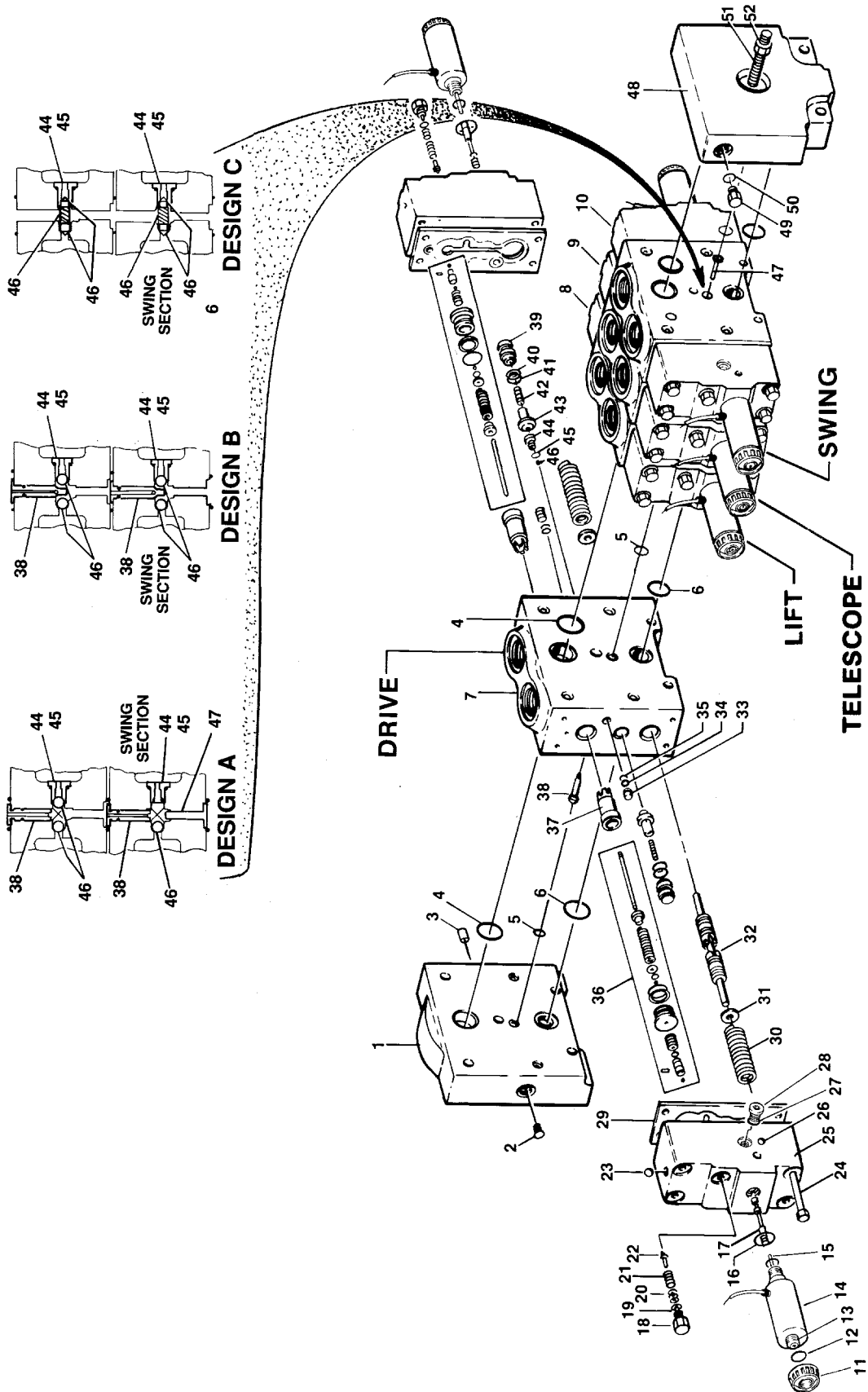
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FIGURE 2-8. CONTROL VALVES ASSEMBLY VICKERS VALVES (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
50	4640580	Accessory Valve Assembly (Machines Built 1990 to September 1991) (See Figure 2-16 for Breakdown) Note: 4640580 Accessory Valve is no longer available as a complete assembly. See Figure 2-14 for Individual parts.	1	
51	4640716	Accessory Valve Assembly (Machines Built September 1991 to Present) (See Figure 2-16 for Breakdown) Note: Complete 4640716 Valves are available. See Figure 2-14 for Individual parts.	1	
52	4640354	Relief Valve Assembly	1	
53	4640362	Pressure Reducing Valve Assembly	1	
	7004278	Cartridge (Vickers/Modular Controls Version)	1	
	7012922	Cartridge (Hydraforce Version)	1	
	0238139	EXTEND-A-REACH VALVE INSTALLATION (40+6 ONLY)	Ref.	A
101	4640519	Control Valve Assembly (See Figure 2-14 for Breakdown)	1	
102	4300038	Stud (Welded on Part)	4	
103	4751500	Flatwasher 5/16"	4	
104	4761500	Lockwasher 5/16"	4	
105	3311501	Nut 5/16"-18NC	4	

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FIGURE 2-9. VICKERS VALVE ASSEMBLIES (PRIOR TO OCTOBER 1994)



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FIGURE 2-9. VICKERS VALVE ASSEMBLIES (PRIOR TO OCTOBER 1994)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640524	VICKERS VALVE ASSEMBLY (4 SECTION) (WITHOUT HYDRAULIC CONTROLS)	Ref.	—
	4640561	VICKERS VALVE ASSEMBLY (4 SECTION) (WITH HYDRAULIC CONTROLS)	Ref.	—
	4640514	VICKERS VALVE ASSEMBLY (3 SECTION) (WITHOUT HYDRAULIC CONTROLS)	Ref.	—
1	7006747	Inlet Body (Without Hydraulic Controls)	1	
	Not Available	Inlet Body (Hydraulic Controls)	1	
2	7006725	Setscrew (Without Hydraulic Controls)	1	
3	7006733	Plug	1	
4	Kit	O-Ring	5	
5	Kit	O-Ring	5	
6	Kit	O-Ring	5	
7	7009350	Working Section - Complete (Drive) (4 Section) (Without Hydraulic Controls)	1	
	7009355	Working Section - Complete (Drive) (4 Section) (Hydraulic Controls)	1	
	7006760	Working Section - Complete (Drive) (3 Section)	1	
8	7006762	Working Section - Complete (Lift) (Without Hydraulic Controls)	1	
	7009356	Working Section - Complete (Lift) (Hydraulic Controls)	1	
9	7009351	Working Section - Complete (Telescope) (4 Section Only) (Without Hydraulic Controls)	1	
	7009357	Working Section - Complete (Telescope) (4 Section Only) (Hydraulic Controls)	1	
10	7006763	Working Section - Complete (Swing) (Without Hydraulic Controls)	1	
	7009358	Working Section - Complete (Swing) (Hydraulic Controls)	1	
11	Use 7012325 & 7020361	Nut, Retaining (was p/n 7009317) (Note: When replacing this nut (7009317) you must order (7012325 & 7020361).	2	
12	Kit	O-Ring	2	
13	7009316	Core Tube (Includes O-Ring)	2	
14	7009315	Coil and Frame	2	
15	7009319	Pin	2	
16	Kit	O-Ring	2	
17	7006744	Spool	2	
18	7006726	Plug, Torque	2	
19	Kit	O-Ring	2	
20	7006728	Shim Kit	2	
21	7006729	Spring	2	
22	7006730	Poppet	2	
23	7006731	Ball	2	
24	7006745	Screw	8	
25		Cap, End (Not Sold Separately)	2	
26	7006746	Ball	2	
27	Kit	O-Ring	2	
28	7009323	Plug	2	
29	Kit	Gasket	2	

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FIGURE 2-9. VICKERS VALVE ASSEMBLIES (PRIOR TO OCTOBER 1994) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
30	7009324	Spring	2	
31	7009325	Retainer	2	
32		Spool (Not Sold Separately)	1	
33	7006757	Seat	2	
34	Kit	Ring, Back-Up	2	
35	Kit	O-Ring	2	
36	7006732	Servo Stem Assembly	2	
37	7006737	Poppet	2	
38	7009321	Retainer (13/16"-2.1cm Length) (Design A)	1	
	7009363	Retainer (1 3/16"-3cm Length) (Design B)	1	
	Not Required	Retainer (Design C)		
	Kit	O-Ring	1	
39	7006752	Retainer	2	
40	Kit	Ring, Back-Up	2	
41	Kit	O-Ring	2	
42	7006773	Spring	2	
43	7006756	Poppet	2	
44	7006771	Plug, Torque	1	
45	Kit	O-Ring	1	
46	7006761	Ball (Design A - All Sections Except Swing)	2	
	7006761	Ball (Design A - Swing Section)	1	
	7006761	Ball (Design B - All Sections)	2	
	7009369	Poppet (Design C - All Sections)	2	
	7009368	Spring (Design C - All Sections)	1	
47	7006777	Pin, Solid (Design A - Swing Section Only)	1	
	Not Required	Pin, Solid (Design B and Design C)		
48	7006780	Cover End	1	
49	7006778	Plug, Torque	1	
50	Kit	O-Ring	1	
51	7009329	Rod, Tie	3	
52	7006782	Nut	6	

	7009330	Seal Kit (Includes Items 4,5,6,12,16,19,27,29,34,35,38, 40,41,45,50 and Servo Stem O-Rings)	4	
	7009395	Seal Kit - Valve Face (Includes Items 4,5 and 6)	5	

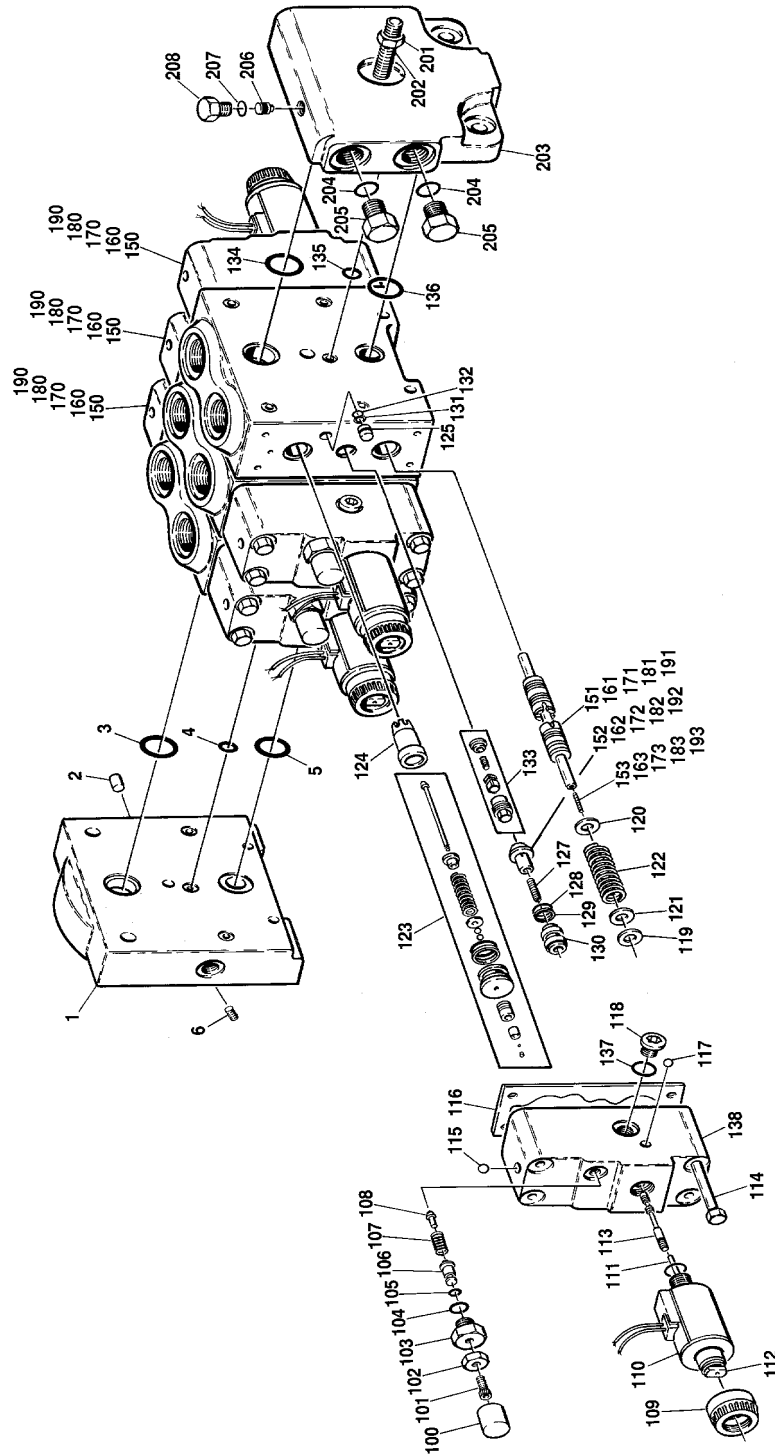
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FIGURE 2-9. VICKERS VALVE ASSEMBLIES (PRIOR TO OCTOBER 1994) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-10. VICKERS VALVE ASSEMBLY - STANDARD CONTROLS (OCTOBER 1994 TO PRESENT)



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FIGURE 2-10. VICKERS VALVE ASSEMBLY - STANDARD CONTROLS (OCTOBER 1994 TO PRESENT)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640913	VICKERS VALVE ASSEMBLY - 3 SECTION	Ref.	—
	4640914	VICKERS VALVE ASSEMBLY - 4 SECTION	Ref.	—
		INLET SECTIONS	Ref.	
1	7006724	Inlet Body	1	
2	7006733	Plug	1	
3	Kit	O-Ring	1	
4	Kit	O-Ring	1	
5	Kit	O-Ring	1	
6	7006725	Setscrew	1	
		WORKING SECTIONS (STANDARD PARTS)	Ref.	
100	Kit	Cap (2 Per Section)	A/R	
101	7012319	Screw (2 Per Section)	A/R	
102	Kit	Nut (2 Per Section)	A/R	
103	Kit	Plug (2 Per Section)	A/R	
104	Kit	Packing (2 Per Section)	A/R	
105	7012322	Packing (2 Per Section)	A/R	
106	Kit	Piston (2 Per Section)	A/R	
107	Kit	Spring (2 Per Section)	A/R	
108	7006730	Poppet (2 Per Section)	A/R	
109	7012325	Nut, Retaining (2 Per Section)	A/R	
110	7012339	Coil (2 Per Section)	A/R	
111	7009319	Pin (2 Per Section)	A/R	
112	7012326	Core Tube Sub Assembly (2 Per Section)	A/R	
113	7012327	Spool	A/R	
114	7006745	Screw (8 Per Section)	A/R	
115	7006731	Ball	A/R	
116	7006748	Gasket	A/R	
117	7006746	Ball	A/R	
118	7009323	Plug (2 Per Section)	A/R	
119	7012330	Shim (A/R Per Section)	A/R	
120	7012329	Retainer (2 Per Section)	A/R	
121	7012328	Shim (A/R Per Section)	A/R	
122	7009324	Spring (2 Per Section)	A/R	
123	7009320	Stem Servo Sub Assembly (2 Per Section)	A/R	
124	7006737	Poppet (2 Per Section)	A/R	
125	7006757	Seat (2 Per Section)	A/R	
126	Not Used			
127	7006773	Spring (2 Per Section)	A/R	
128	Kit	O-Ring (2 Per Section)	A/R	
129	Kit	Back-up (2 Per Section)	A/R	
130	7009398	Retainer (2 Per Section)	A/R	
131	Kit	Back-up Ring (2 Per Section)	A/R	
132	Kit	O-Ring (2 Per Section)	A/R	
133	7012333	Load Sense (2 Per Section)	A/R	
134	Kit	O-Ring (2 Per Section)	A/R	
135	Kit	O-Ring (2 Per Section)	A/R	
136	Kit	O-Ring (5 Per Section)	A/R	

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FIGURE 2-10. VICKERS VALVE ASSEMBLY - STANDARD CONTROLS (OCTOBER 1994 TO PRESENT) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
137	Kit	O-Ring (2 Per Section)	A/R	
138	Not Serviced	Cap, End (2 Per Section)	A/R	
	7009330	Seal Kit (1 Per Section)	A/R	
	7012383	Piston/Spring Kit (Includes 1 each of items 100, 102, 103, 106 and 107) (2 per Section)		
150		#1 WORKING SECTION OPTIONS:	Ref.	
	7012332	Drive (All Models)	Ref.	
151	7012331	Spool	1	
152	7009399	Poppet	2	
153	Not Required			
160		#2 WORKING SECTION OPTIONS:	Ref.	
	7012334	Lift (All Models)	Ref.	
161	7012331	Spool	1	
162	7009397	Poppet	2	
163	Not Required			
		#3 WORKING SECTION OPTIONS:	Ref.	
170	7012335	Swing ("H" and "HX" Models Without Prop. Tele.)	Ref.	
171	7012340	Spool	1	
172	7009399	Poppet	2	
173	7012300	Piston	2	
180	7012358	Telescope ("H" and "HX" Models With Prop. Tele.)	Ref.	
	7012334	Lift ("HA" Models)	Ref.	
181	7012331	Spool	1	
182	7009397	Poppet	2	
183	Not Required			
		#4 WORKING SECTION OPTIONS:	Ref.	
190	Not Required	("H" and "HX" Models Without Prop. Tele.)	Ref.	
	7012359	Swing ("H" and "HX" Models With Prop. Tele.)	Ref.	
	7012335	Swing ("HA" Models)	Ref.	
191	7012340	Spool	1	
192	7009399	Poppet	2	
193	7012300	Piston	2	
		OUTLET SECTION	Ref.	
201	7006782	Nut	6	
202	7009361	Rod, Tie	3	
203	7012337	Cover End	1	
204	Kit	O-Ring	2	
205	7006778	Plug	2	
206	7012338	Setscrew Orifice Sub-Assembly	1	
207	Kit	O-Ring	1	
208	7012336	Plug	1	

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FIGURE 2-10. VICKERS VALVE ASSEMBLY - STANDARD CONTROLS (OCTOBER 1994 TO PRESENT) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

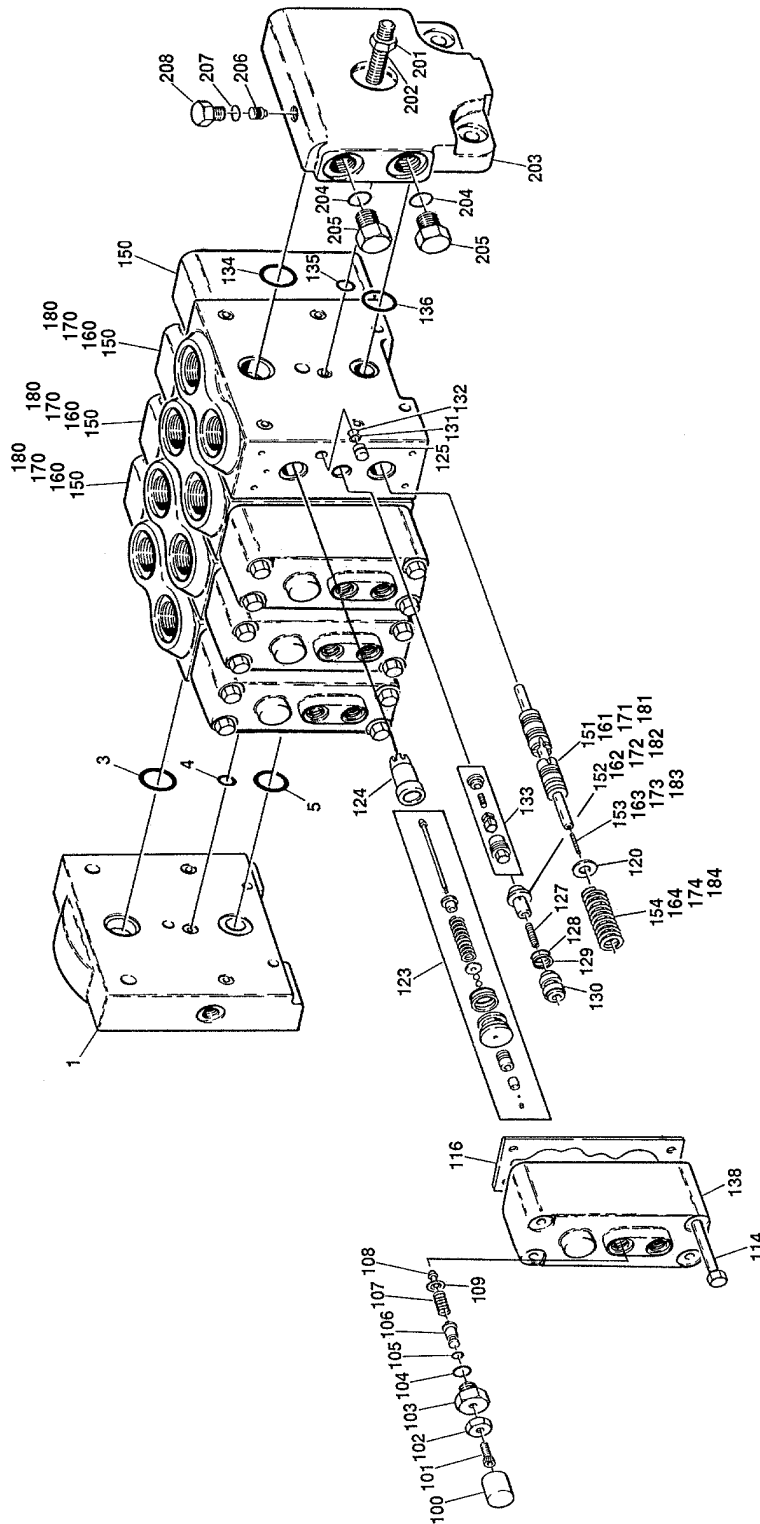
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FIGURE 2-11. VICKERS VALVE ASSEMBLY - HYDRAULIC CONTROLS (OCTOBER 1994 TO PRESENT)



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FIGURE 2-11. VICKERS VALVE ASSEMBLY - HYDRAULIC CONTROLS (OCTOBER 1994 TO PRESENT)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640918	VICKERS VALVE ASSEMBLY - 4 SECTION	Ref.	—
		INLET SECTION	Ref.	
1	7012348	Inlet Body	1	
2	Not Used			
3	Kit	O-Ring	1	
4	Kit	O-Ring	1	
5	Kit	O-Ring	1	
		WORKING SECTIONS (STANDARD PARTS)	Ref.	
100	7012343	Cap (2 Per Section)	A/R	
101	7012342	Screw (2 Per Section)	A/R	
102	7012341	Nut (2 Per Section)	A/R	
103	7012344	Plug (2 Per Section)	A/R	
104	Kit	Packing (2 Per Section)	A/R	
105	7012322	Packing (2 Per Section)	A/R	
106	7012323	Piston (2 Per Section)	A/R	
107	7012346	Spring (2 Per Section)	A/R	
108	7006730	Poppet (2 Per Section)	A/R	
109	7006728	Shim Kit (2 Per Section)	A/R	
110 to 113	Not Used			
114	7012347	Screw (8 Per Section)	A/R	
115	Not Used			
116	Kit	Gasket	A/R	
117 to 119	Not Used			
120	7012349	Retainer (2 Per Section)	A/R	
121 to 122	Not Used			
123	7006732	Stem Servo Sub Assembly (2 Per Section)	A/R	
124	7006737	Poppet (2 Per Section)	A/R	
125	7012350	Plug (2 Per Section)	A/R	
126	Not Used			
127	7006773	Spring (2 Per Section)	A/R	
128	Kit	O-Ring (2 Per Section)	A/R	
129	Kit	Back-up (2 Per Section)	A/R	
130	7012353	Retainer (2 Per Section)	A/R	
131	Kit	Back-up Ring (2 Per Section)	A/R	
132	Kit	O-Ring (2 Per Section)	A/R	
133	7012352	Load Sense (2 Per Section)	A/R	
134	Kit	O-Ring (2 Per Section)	A/R	
135	Kit	O-Ring (2 Per Section)	A/R	
136	Kit	O-Ring (5 Per Section)	A/R	
137	Not Used			
138	Not Serviced	Cap, End (2 Per Section)	A/R	
	7009330	Seal Kit (1 Per Section)	A/R	

SECTION 2 TURNTABLE

FIGURE 2-11. VICKERS VALVE ASSEMBLY - HYDRAULIC CONTROLS (OCTOBER 1994 TO PRESENT) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
150		#1 WORKING SECTION OPTIONS:	Ref.	
	7012356	Drive	Ref.	
151	7012355	Spool	1	
152	7009399	Poppet	2	
153	7012300	Piston	2	
154	7012354	Spring	2	
160		#2 WORKING SECTION OPTIONS:	Ref.	
	7012357	Lift	Ref.	
161	7012331	Spool	1	
162	7009397	Poppet	2	
163	Not Required			
164	7006749	Spring	2	
		#3 WORKING SECTION OPTIONS:	Ref.	
170	7012358	Telescope	Ref.	
171	7012331	Spool	1	
172	7009397	Poppet	2	
173	Not Required			
174	7006749	Spring	2	
		#4 WORKING SECTION OPTIONS:	Ref.	
180	7012359	Swing	Ref.	
181	7012340	Spool	1	
182	7009399	Poppet	2	
183	7012300	Piston	2	
184	7006749	Spring	2	
		OUTLET SECTION	Ref.	
201	7006782	Nut	6	
202	7009329	Rod, Tie	3	
203	7012337	Cover End	1	
204	Kit	O-Ring	2	
205	7006778	Plug	2	
206	7012338	Setscrew Orifice Sub-Assembly	1	
207	Kit	O-Ring	1	
208	7012336	Plug	1	

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SECTION 2 TURNTABLE

FIGURE 2-11. VICKERS VALVE ASSEMBLY - HYDRAULIC CONTROLS (OCTOBER 1994 TO PRESENT) (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

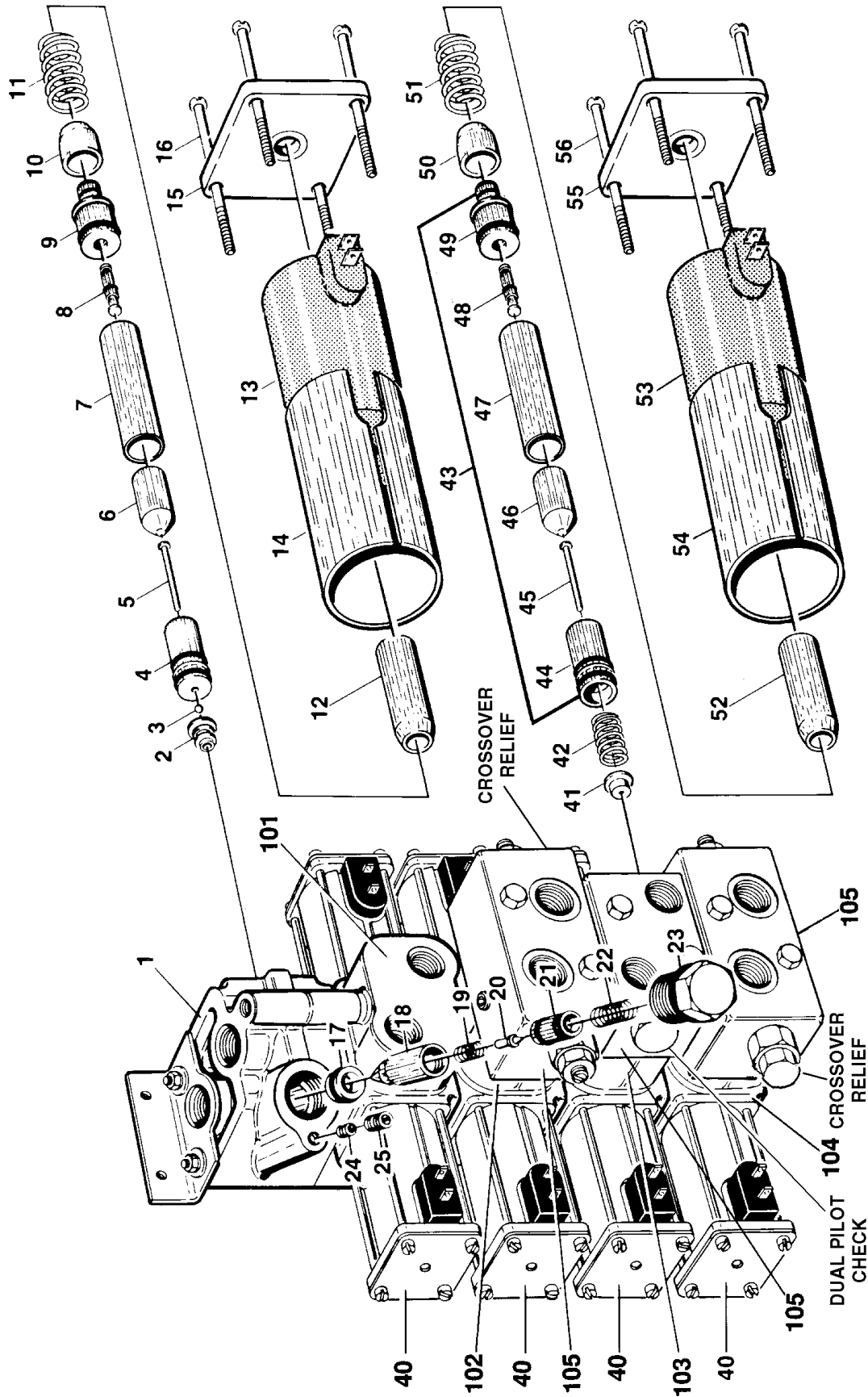
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SECTION 2 TURNTABLE

FIGURE 2-12. CONTROL VALVE ASSEMBLY - BANG-BANG WITH DUMP SECTION



SECTION 2 TURNTABLE

FIGURE 2-12. CONTROL VALVE ASSEMBLY - BANG-BANG WITH DUMP SECTION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640571	VALVE ASSEMBLY - 2 SECTION	Ref.	B
	4640246	VALVE ASSEMBLY - 3 SECTION	Ref.	A
	4640247	VALVE ASSEMBLY - 4 SECTION	Ref.	A
1	7002304	DUMP SECTION	Ref.	
		Solenoid Assembly		
2	7004823	Seat	1	
	7002378	O-Ring	1	
3	7002229	Ball	1	
		Guide Tube Assembly	1	
4	7004822	Cone, Female	1	
	7004840	O-Ring	1	
5	7002346	Pin, Push	1	
6	7004839	Plunger	1	
7	7004838	Tube, Guide	1	
8	7004841	Pin, Push	1	
	7002342	O-Ring	1	
9	7002340	Guide, External Push Pln	1	
	7002337	O-Ring	1	
10	7004834	Sleeve, Inner Flux	1	
11	7002334	Spring	1	
12	7004835	Sleeve, Outer Flux	1	
13	7000417	Coil	1	
14	7004836	Case, Solenoid	1	
15	7002338	Plate, End	1	
	7002327	Nameplate	1	
16	7004837	Screw	4	
17	7002322	Seat	1	
	7004826	O-Ring	1	
		Main Relief (Poppet) Valve	1	
18	7002321	Case, Poppet	1	
19	7002328	Spring	1	
20	7002294	Poppet	1	
21	7002320	Seat, Adjustable	1	
	7004842	O-Ring	1	
22	7002329	Spring	1	
23	7002323	Plug	1	
	7000102	O-Ring	1	
24	7002326	Orifice	1	
25	7002324	Plug	1	
		WORKING SECTIONS (STANDARD PARTS)	Ref.	
40	7004859	Solenoid Assembly (2 Per Section) (Includes Items 43-56)	A/R	
41	7002274	Washer (4640246 and 4640247 Valves) (2 Per Section)	A/R	
42	7002348	Spring (2 Per Section)	A/R	

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FIGURE 2-12. CONTROL VALVE ASSEMBLY - BANG-BANG WITH DUMP SECTION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
43	7004821	Guide Tube Assembly (1 Per Solenoid Assembly)	A/R	
44	7002345	Cone, Female (1 Per Solenoid Assembly)	A/R	
	Kit	O-Ring (1 Per Solenoid Assembly)	A/R	
	Kit	O-Ring (1 Per Solenoid Assembly)	A/R	
45	7002346	Pin, Push (1 Per Solenoid Assembly)	A/R	
46	7002344	Plunger (1 Per Solenoid Assembly)	A/R	
47	7000470	Tube, Guide (1 Per Solenoid Assembly)	A/R	
48	7002341	Pin, Actuator (1 Per Solenoid Assembly)	A/R	
	Kit	Ring, Quad (1 Per Solenoid Assembly)	A/R	
49	7002340	Guide, External Push Pin (1 Per Solenoid Assembly)	A/R	
	Kit	O-Ring (1 Per Solenoid Assembly)	A/R	
50	7002333	Sleeve, Inner Flux (1 Per Solenoid Assembly)	A/R	
51	7002334	Spring (1 Per Solenoid Assembly)	A/R	
52	7002336	Sleeve, Outer Flux (1 Per Solenoid Assembly)	A/R	
53	7000418	Coil (1 Per Solenoid Assembly)	A/R	
54	7002335	Case, Solenoid (1 Per Solenoid Assembly)	A/R	
55	7002338	Plate, End (1 Per Solenoid Assembly)	A/R	
56	7002339	Screw (4 Per Solenoid Assembly)	A/R	
		WORKING SECTION (VARIABLE PARTS)	Ref.	
		Note: Complete Sections listed below include items 40-56 and relief valve assembly when equipped		
101		Section #1 Options:	1	
	7002317	Rotate Section (4640247 Valves)		
	7002315	Steer/Tele Section (4640571 and 4640246 Valves)		
102		Section #2 Options:	1	
	7002315	Steer/Tele Section (4640246 Valves)		
	7011182	Level Section (4640571 and 4640247 Valves)		
103		Section #3 Options:	1	
	Not Required	(4640571 Valves)		
	7002315	Steer/Tele Section (4640246 Valves)		
	7011182	Level Section (4640247 Valves)		
104		Section #4 Options:	1	
	Not Required	(All except 4640247 Valve)		
	7002315	Steer/Tele Section (4640247 Valve Only)		
105		Relief Valve Options:	A/R	
	7000468	Crossover Relief Valve Assembly - 7002315 Steer/Tele Sections) (Due to various suppliers - internal components are no longer field serviceable)		
	7011183	Relief Valve Assembly - 7011182 Level Sections (Due to various suppliers - internal components are no longer field serviceable)	A/R	
	7000414	Seal Kit - Working Section	4	
	7000413	Seal Kit - Dump Section	1	

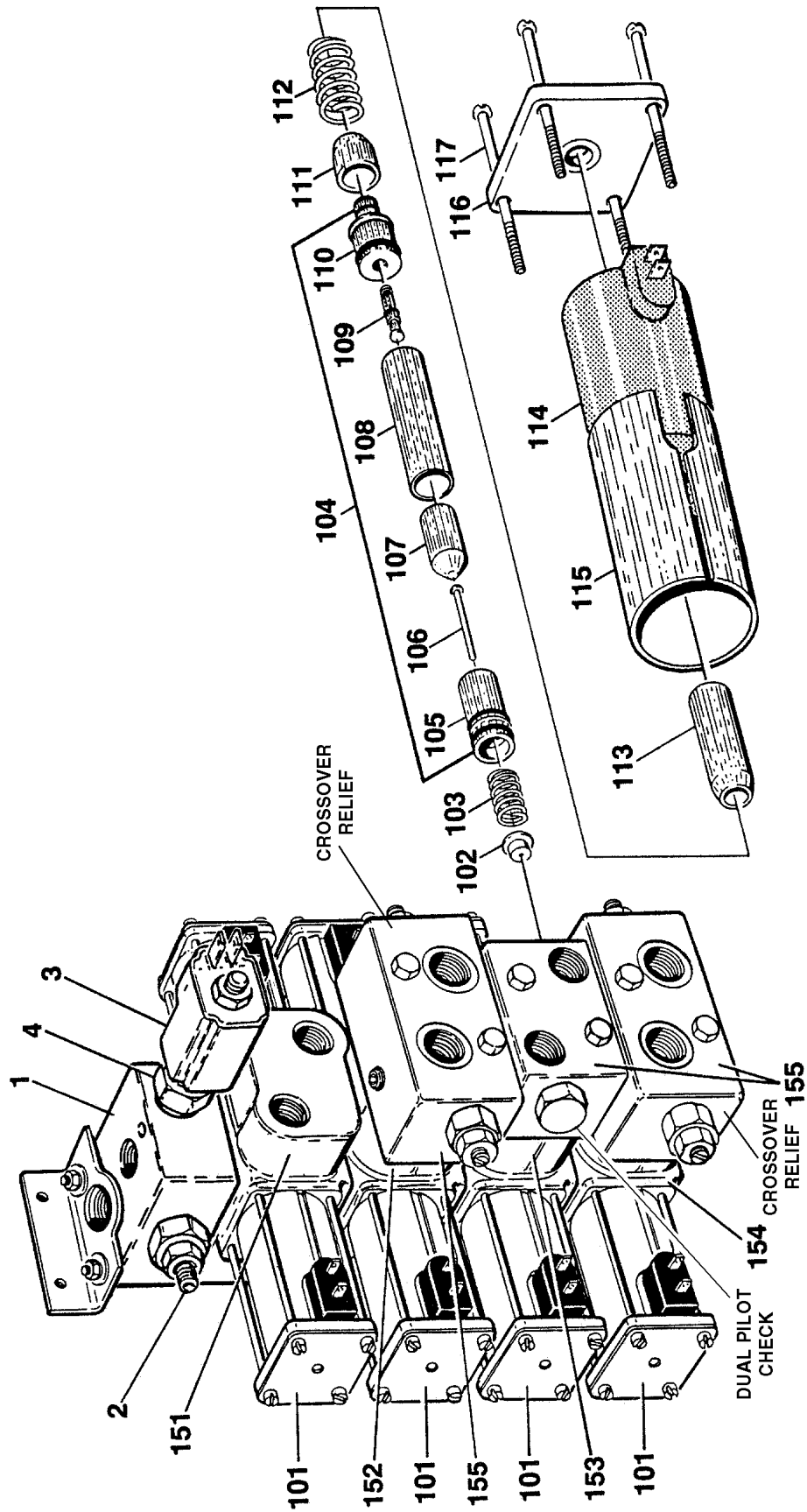
SECTION 2 TURNTABLE

FIGURE 2-12. CONTROL VALVE ASSEMBLY - BANG-BANG WITH DUMP SECTION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-12A.CONTROL VALVE ASSEMBLY- BANG-BANG WITH DUMP SECTION



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FIGURE 2-12. CONTROL VALVE ASSEMBLY- BANG-BANG WITH DUMP SECTION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640941	Valve Assembly - 3 Section	Ref.	—
	4640940	Valve Assembly - 4 Section	Ref.	—
	7004607	Kit, Stacking Section - 4 Section	1	
		DUMP SECTION ASSEMBLY	Ref.	
1	7002447	Dump Section - Complete	1	
2	7002448	Cartridge	1	
	7002449	Seal Kit - 7002448 Cartridge	1	
3	7002450	Coil	1	
4	7002451	Cartridge without Coil	1	
	7011118	Seal Kit - 7002451 Cartridge	1	

	7000448	O-Ring (Between Sections)	2	
		WORKING SECTIONS (STANDARD PARTS)	Ref.	
101	7004859	Solenoid Assembly	2	
102	7003825	Washer	1	
103	7002348	Spring	1	
104	7004821	Guide Tube Assembly	1	
105	7002345	Cone, Female	1	
	Kit	O-Ring	1	
	Kit	O-Ring	1	
106	7002346	Pin, Push	1	
107	7002344	Plunger	1	
108	7000470	Tube, Guide	1	
109	7002341	Pin, Actuator	1	
	Kit	Ring, Quad	1	
110	7002340	Guide, External Push Pin	1	
	Kit	O-Ring	1	
111	7002333	Sleeve, Inner Flux	1	
112	7002334	Spring	1	
113	7002336	Sleeve, Outer	1	
114	7000418	Coil	1	
115	7002335	Case, Solenoid	1	
116	7002338	Plate, End	1	
	7002327	Nameplate	1	
117	7002339	Screw	4	

	7000414	Seal Kit - Working Section (1 Per Section)	2	
		WORKING SECTIONS - COMPLETE (Includes Items 101-117 and Relief Valve Assembly When Equipped)	Ref.	
151		#1 Section Options:	1	
	7002315	Steer (4640941 Valve)		
	7002317	Rotate (4640940 Valve)		
152		#2 Section Options:	1	
	7011182	Level (4640941 Valve)		
	7002315	Steer (4640940 Valve)		

SECTION 2 TURNTABLE

FIGURE 2-12. CONTROL VALVE ASSEMBLY- BANG-BANG WITH DUMP SECTION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
153	7002315 7011182	#3 Section Options: Telescope (4640941 Valve) Level (4640940 Valve)	1	
154	Not Required 7002315	#4 Section Options: (4640941 Valve) Telescope (4640940 Valve)	A/R	
155	7000468 7011183	Relief Valve Options: Crossover Relief Valve Assembly - 7002315 Steer/ Telescope Sections (Due to various supplies internal components are not field serviceable) Check Valve Assembly - 7011182 Level Sections (Due to various suppliers internal components are not field serviceable)	A/R A/R	

SECTION 2 TURNTABLE

FIGURE 2-12. CONTROL VALVE ASSEMBLY- BANG-BANG WITH DUMP SECTION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

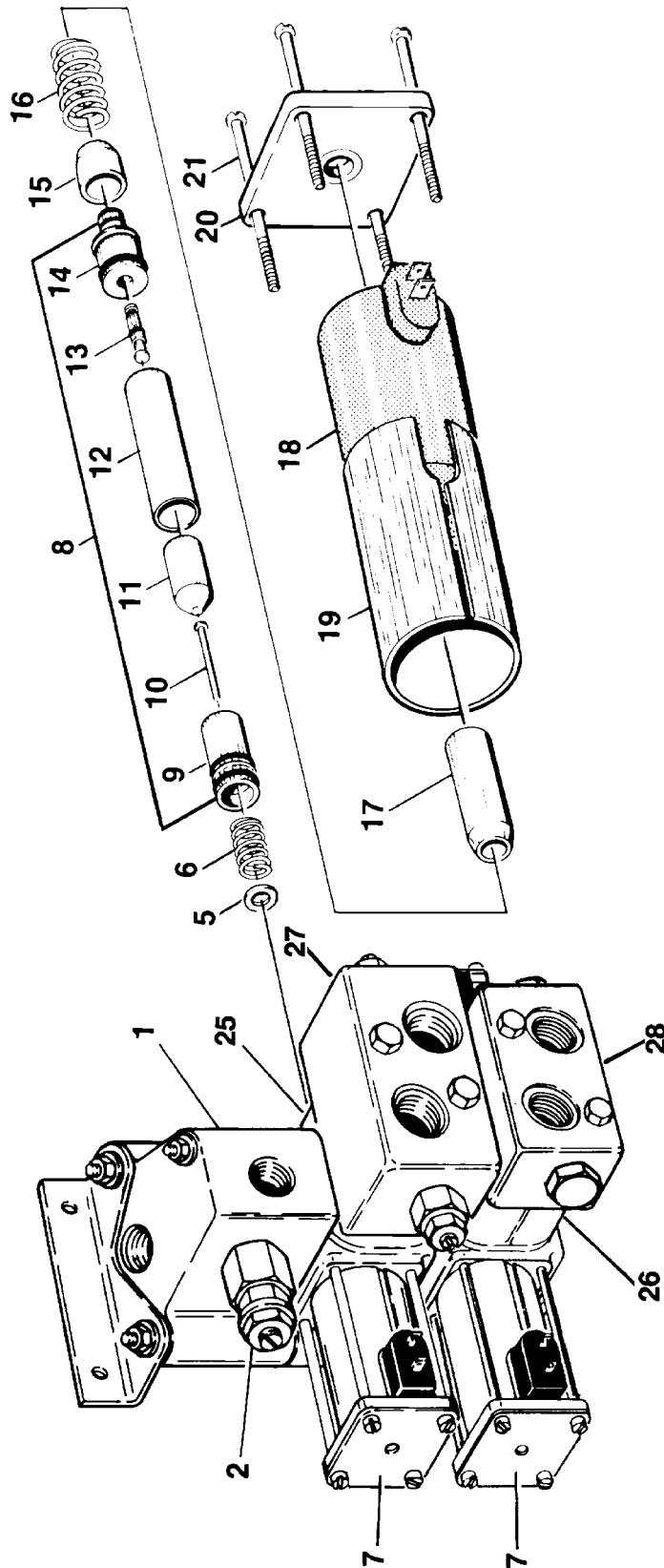
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FIGURE 2-13. CONTROL VALVE ASSEMBLY - BANG-BANG WITH INLET SECTION



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FIGURE 2-13. CONTROL VALVE ASSEMBLY - BANG-BANG WITH INLET SECTION

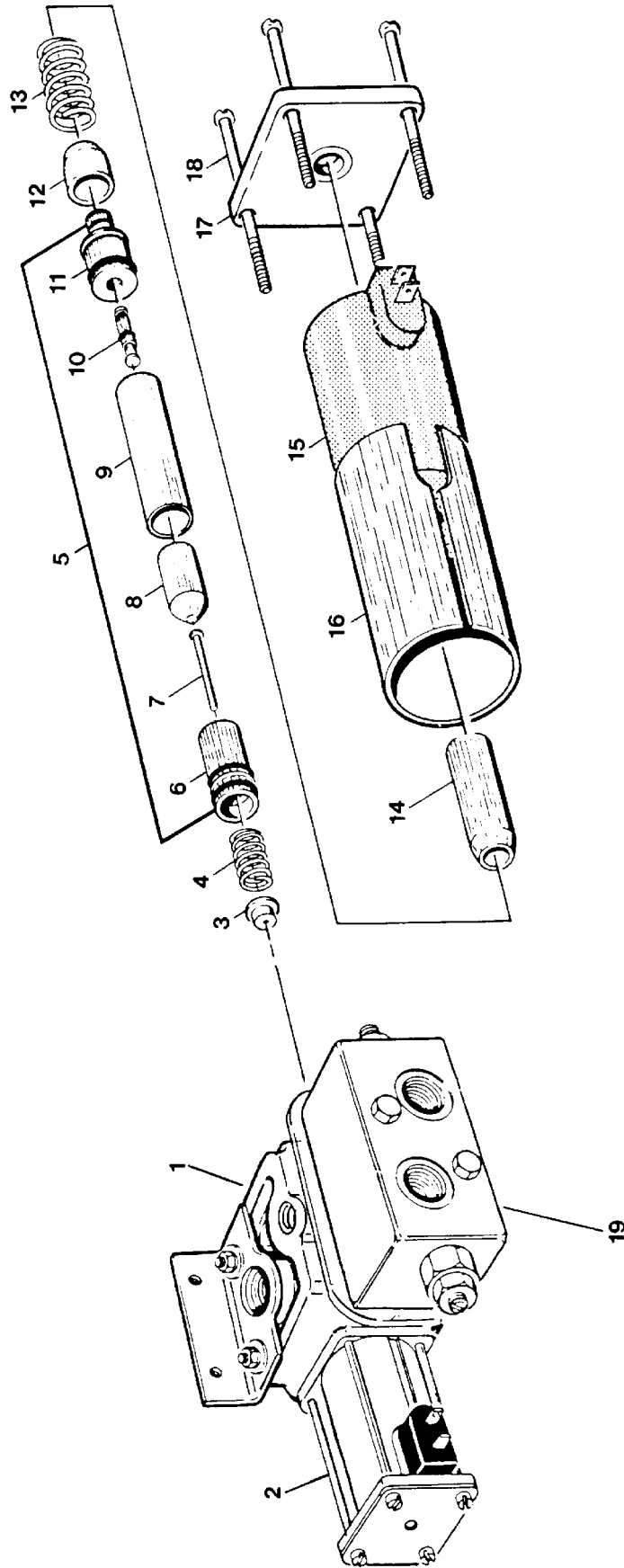
FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640461	VALVE ASSEMBLY - 1 SECTION	Ref.	A
	4640447	VALVE ASSEMBLY - 2 SECTION	Ref.	A
1	4640820	INLET RELIEF SECTION ASSEMBLY	Ref.	
2	7000447	Cartridge	1	
	7000413	Seal Kit - 7002254 Section	1	
3	Not Used			
4	Not Used			
		WORKING SECTIONS ASSEMBLY (STANDARD PARTS)	Ref.	
5	7002274	Washer (2 Per Section)	A/R	
6	7002273	Spring (2 Per Section)	A/R	
7	7004859	Solenoid Assembly (2 Per Section)	A/R	
8	7004821	Guide Tube Assembly (1 Per Solenoid Assembly)	A/R	
9	7002345	Female Cone/O-Ring Assembly (1 Per Solenoid Assembly)	A/R	
10	7002346	Pin, Push (1 Per Solenoid Assembly)	A/R	
11	7002344	Plunger (1 Per Solenoid Assembly)	A/R	
12	7000470	Tube, Guide (1 Per Solenoid Assembly)	A/R	
13	7002341	Actuator Pin/Quad Ring Assembly (1 Per Solenoid Assembly)	A/R	
14	7002340	Pin Guide/O-Ring Assembly (1 Per Solenoid Assembly)	A/R	
15	7002333	Sleeve, Inner Flux (1 Per Solenoid Assembly)	A/R	
16	7002334	Spring (1 Per Solenoid Assembly)	A/R	
17	7002336	Sleeve, Outer Flux (1 Per Solenoid Assembly)	A/R	
18	7000418	Coil (1 Per Solenoid Assembly)	A/R	
19	7002335	Case, Solenoid (1 Per Solenoid Assembly)	A/R	
20	7002338	Plate, End (1 Per Solenoid Assembly)	A/R	
21	7002339	Screw (4 Per Solenoid Assembly)	A/R	

	7000414	Seal Kit - Working Section (1 Per Section)	A/R	
		WORKING SECTIONS (VARIABLE PARTS)	Ref.	
25		Section #1 Options:	1	
	Not Required	4640461 Valve		
	7000466	4640447 Valve (Includes Item 27)		
26		Section #2 Options:	1	
	7002257	4640461 and 4640447 Valves (Includes Item 28)		

		Relief Valve Options:		
27	7000468	Crossover Relief Valve Assembly - 7000466 Section (Due to various suppliers - internal components are no longer field serviceable)	1	
28	7011183	Relief Valve Assembly 7002257 Section (Due to various suppliers - internal components are no longer field serviceable)	1	

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FIGURE 2-14. CONTROL VALVE ASSEMBLY - 1 SECTION BANG-BANG



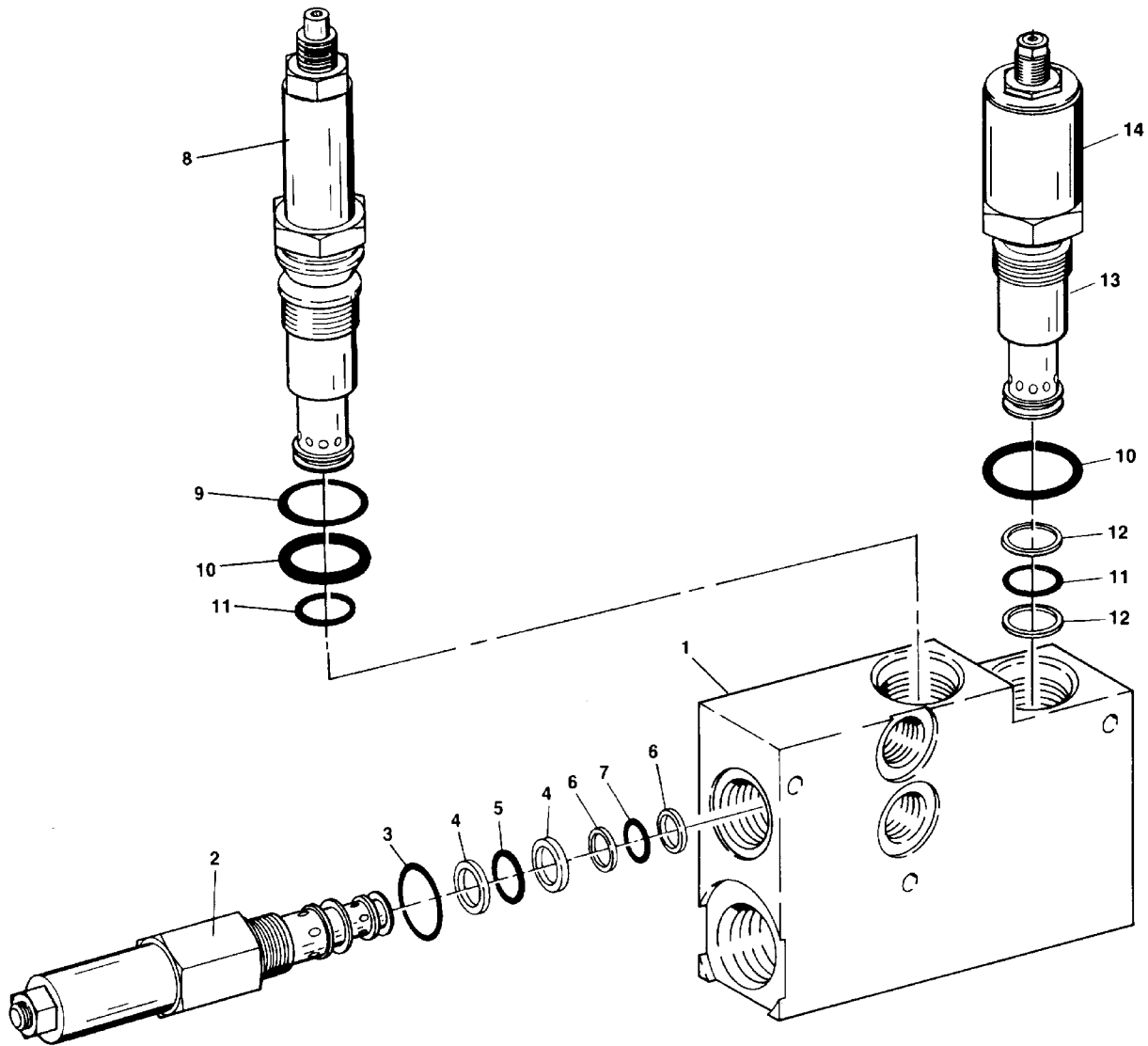
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FIGURE 2-14. CONTROL VALVE ASSEMBLY - 1 SECTION BANG-BANG

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640519	CONTROL VALVE ASSEMBLY - 1 SECTION BANG-BANG	Ref.	—
1	7002315	Telescope Section - Complete	1	
2	7004859	Solenoid Assembly	2	
3	7002274	Washer	1	
4	7002348	Spring	1	
5	7004821	Guide Tube Assembly	1	
6	7002345	Cone, Female	1	
	Kit	O-Ring	1	
	Kit	O-Ring	1	
7	7002346	Pin, Push	1	
8	7002344	Plunger	1	
9	7000470	Tube, Guide	1	
10	7002341	Pin, Actuator	1	
	Kit	Ring, Quad	1	
11	7002340	Guide, External Push Pin	1	
	Kit	O-Ring	1	
12	7002333	Sleeve, Inner Flux	1	
13	7002334	Spring	1	
14	7002336	Sleeve, Outer Flux	1	
15	7000418	Coil	1	
16	7002335	Case, Solenoid	1	
17	7002338	Plate, End	1	
	7002327	Nameplate	1	
18	7002339	Screw	4	
19	7000468	Crossover Relief Valve Block Assembly (Due to various suppliers - internal components are no longer field serviceable)	1	
	7000414	----- Seal Kit - Working Section	1	

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FIGURE 2-15. ACCESSORY VALVE ASSEMBLY (MILLER) HYDRAULIC CONTROLS BUILT THROUGH 1989)



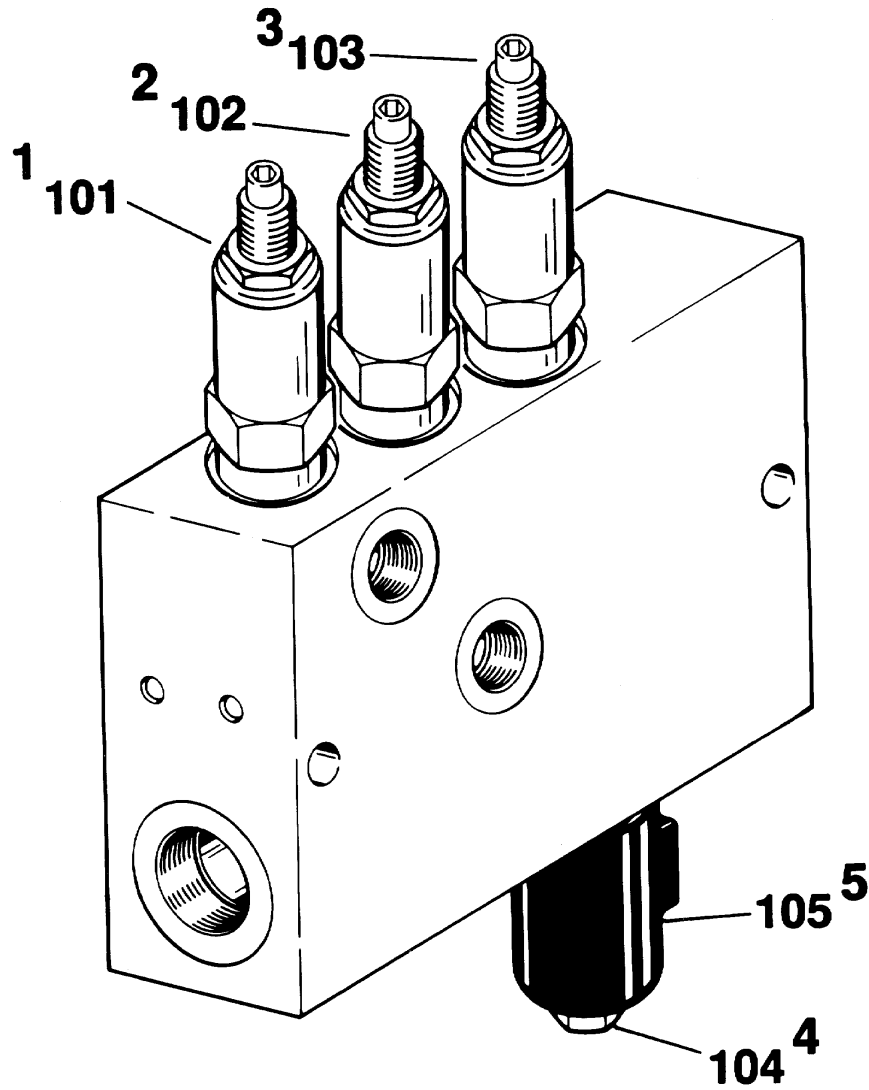
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FIGURE 2-15. ACCESSORY VALVE ASSEMBLY (MILLER) HYDRAULIC CONTROLS BUILT THROUGH 1989)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640535	ACCESSORY VALVE ASSEMBLY (MILLER) (HYDRAULIC CONTROLS MACHINES BUILT THROUGH 1989) NOTE: <u>NOT</u> SOLD AS A COMPLETE ASSEMBLY.	Ref. Ref.	A
1		Body (Not Sold Separately)	1	
2	7009755	Cartridge, Pressure Reducing/Relieving	1	
3	7009759	O-Ring	1	
4	7007760	Ring, Back-Up	2	
5	3790015	O-Ring	1	
6	7009761	Ring, Back-Up	2	
7	3790014	O-Ring	1	
8	7009756	Cartridge, Sequence	1	
9	3790118	O-Ring	1	
10	3790211	O-Ring	2	
11	3790016	O-Ring	2	
12	7009762	Ring, Back-Up	2	
13	7009757	Cartridge, 2-Position	1	
14	7009758	Coil (Includes Nut and Washer)	1	

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FIGURE 2-16. ACCESSORY VALVE ASSEMBLY (HYDRAFORCE) (HYDRAULIC CONTROLS MACHINES BUILT 1990 TO SEPTEMBER 1991)



SECTION 2 TURNTABLE

FIGURE 2-16. ACCESSORY VALVE ASSEMBLY (HYDRAFORCE) (HYDRAULIC CONTROLS MACHINES BUILT 1990 TO SEPTEMBER 1991)

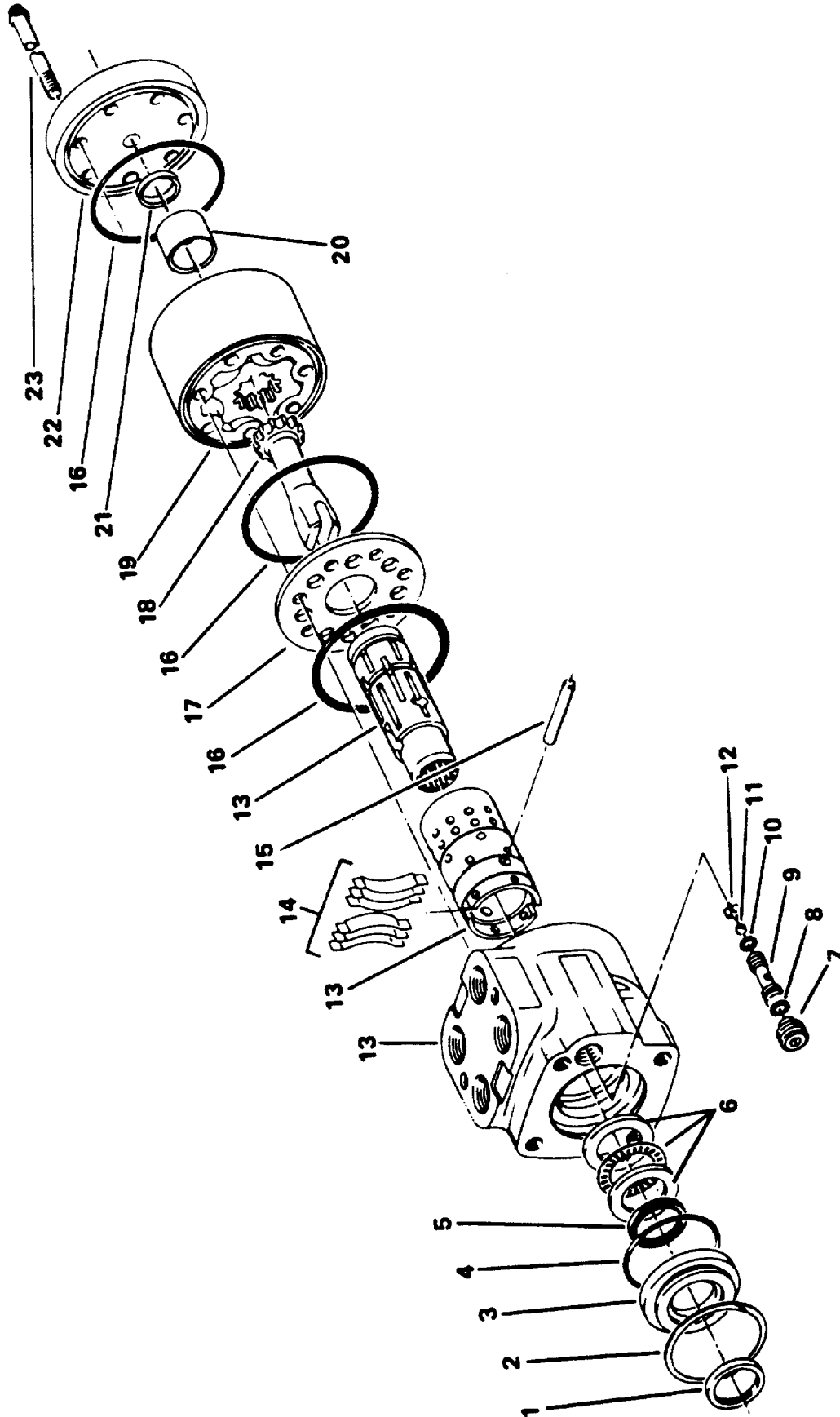
FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640580	ACCESSORY VALVE ASSEMBLY (HYDRAFORCE) (HYDRAULIC CONTROLS MACHINES BUILT 1990 TO SEPTEMBER 1991)	Ref.	—
		Note: Not sold as a complete assembly.	Ref.	
1	7004365	Cartridge - Sequence	1	
2	7004366	Cartridge - Pressure Reducing	1	
3	7004367	Cartridge - Main Relief	1	
4	7004369	Cartridge Less Coil - Dump	1	
5	7004368	Coil	1	

	2900707	Seal Kit (Sequence and Pressure Reducing)	2	
	2900708	Seal Kit (Main Relief)	1	
	2900709	Seal Kit (Dump)	1	
	4640716	ACCESSORY VALVE ASSEMBLY (HYDRAULIC CON- TROLS MACHINES BUILT SEPTEMBER 1991 TO SEP- TEMBER 1991)	Ref.	—
		Note: Refer to P/N stamped on cartridge hex nut for identification.	Ref.	
101	7012506	Cartridge - Sequence (Hydraforce PS10-34A)	1	
	7010552	Cartridge - Sequence (Vickers/Modular Controls PSV7- 10V)	1	
102	7012505	Cartridge - Pressure Reducing (Hydraforce PR10-32A)	1	
	7010553	Cartridge - Pressure Reducing (Vickers/Modular Controls PRV1-10V)	1	
103	7012507	Cartridge - Main Relief (Hydraforce RV50-26A)	1	
	7010554	Cartridge - Main Relief (Vickers/Modular Controls RV5-10V)	1	
104	7004369	Cartridge Less Coil - Dump (Hydraforce SV16-21)	1	
	7004368	Coil (Hydraforce 6352012)	1	
105	7010556	Cartridge w/ Coil-Dump (Vickers/Mod. Controls SV3- 16V)	1	
	7010555	Coil (Vickers/Modular Controls 565966)	1	

	7012509	Seal Kit (Sequence) (Hydraforce Version)	1	
	7010557	Seal Kit (Sequence) (Vickers/Modular Controls Version)	1	
	7012510	Seal Kit (Pressure Reducing) (Hydraforce Version)	1	
	7010558	Seal Kit (Pressure Reducing) (Vickers/Modular Con- trols Version)	1	
	7012511	Seal Kit (Main Relief) (Hydraforce Version)	1	
	7010559	Seal Kit (Main Relief) (Vickers/Modular Controls Ver- sion)	1	
	2900709	Seal Kit (Dump) (Hydraforce Version)	1	
	7010560	Seal Kit (Dump) (Vickers/Modular Controls Version)	1	

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FIGURE 2-17. STEERING VALVE ASSEMBLY



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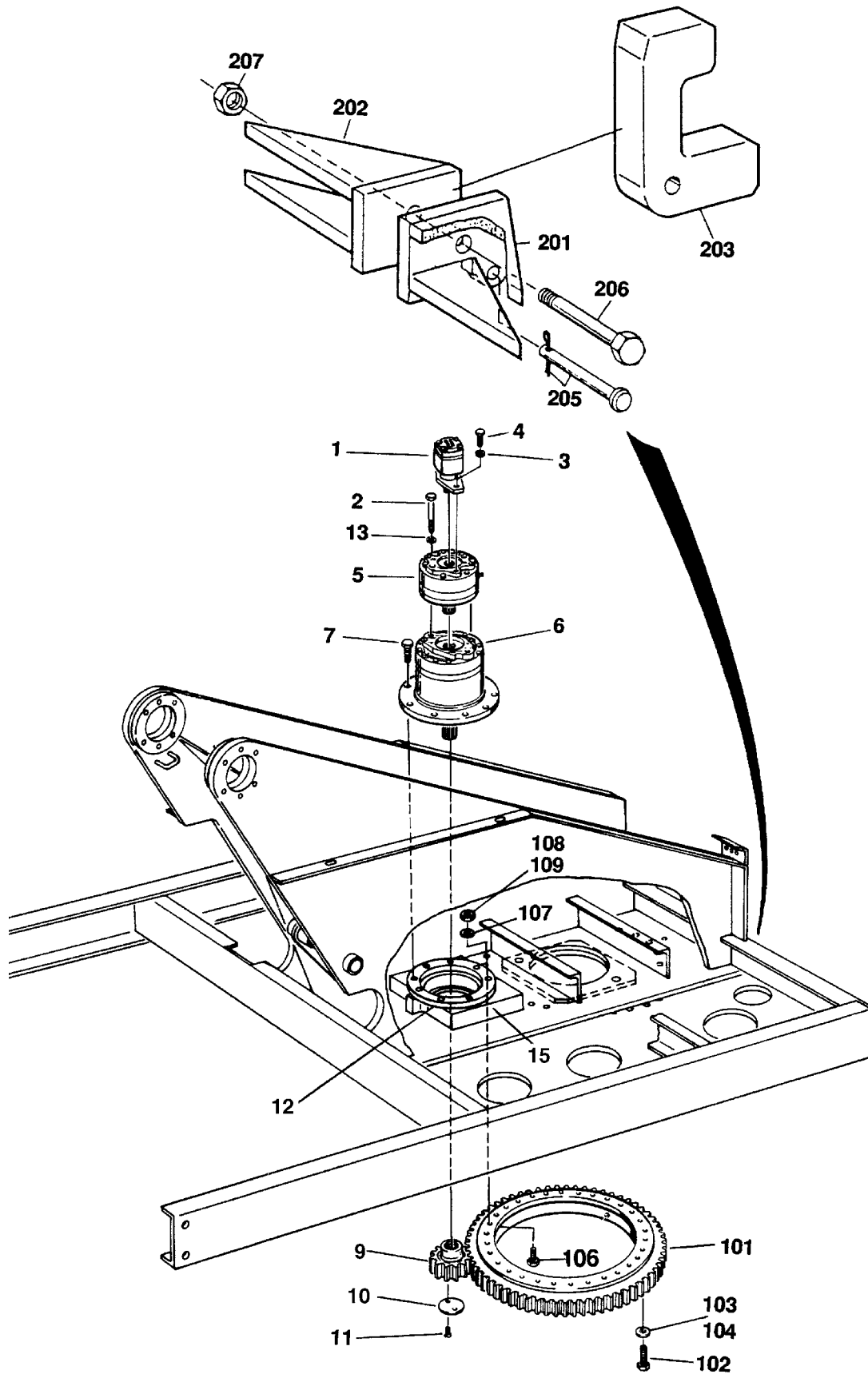
FIGURE 2-17. STEERING VALVE ASSEMBLY

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	4640408	STEER VALVE ASSEMBLY	Ref.	—
1	7000161	Seal	1	
2	7002127	Ring, Retaining	1	
3	7002128	Bushing	1	
4	Kit	Seal	1	
5	Kit	Seal	1	
6	7002171	Kit, Needle Bearing	1	
7	7002131	Setscrew	1	
8	Kit	Seal	1	
9	7002132	Seat, Check Ball	1	
10	Kit	Seal	1	
11	7002134	Ball, Check	1	
12	7002172	Retainer, Check Ball	1	
13	7002173	Control Parts Assembly	1	
14	7002174	Spring, Centering	6	
15	7002163	Pin, Centering	1	
16	Kit	Seal	3	
17	7002138	Plate, Spacer	1	
18	7002175	Drive	1	
19	7002167	Gerotor	1	
20	7002168	Spacer.480	1	
21	7002169	Spacer.140	1	
22	7002142	Cap, End	1	
23	7002170	Bolt	7	

	2900596	Seal Kit (Includes Items 1,4,8,10 and 16)	1	

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FIGURE 2-18. SWING DRIVE, BEARING AND LOCK INSTALLATIONS



SECTION 2 TURNTABLE

FIGURE 2-18. SWING DRIVE, BEARING AND LOCK INSTALLATIONS

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		SWING DRIVE INSTALLATIONS	Ref.	
	0236507	PRIOR TO JANUARY 1992	Ref.	E
	0252501	JANUARY 1992 TO PRESENT	Ref.	2
1	3160094	Swing Motor Assembly (See Figure 2-19 for Breakdown)	1	
2	3931864	Bolt, Socket Head 1/2"-13NC x 4"	2	
3	4761800	Lockwasher 1/2"	2	
4	0641810	Bolt 1/2"-13NC x 1 1/4"	2	
5		Swing Brake Assembly Options:	1	
	0920032	Brake (Prior to April 1992) (See Figure 2-20 for Breakdown)		
	0920083	Brake (April 1992 to S/N 33476) (See Figure 2-21 for Breakdown)		
	0920109	Brake (S/N 33476 to Present) (See Figure 2-21 for Breakdown)		
6	2780055	Swing Hub Assembly (See Figure 2-22 for Breakdown)	1	
7	0641914	Bolt 9/16"-12NC x 1 3/4"	9	
8	0100019	Loctite #271 (Not Shown)	A/R	
9		Gear, Pinion Options:	1	
	2440022	Prior to January 1992		
	2440059	January 1992 to Present		
10		Plate, Retaining Options:	1	
	3501916	Prior to January 1992		
	4740367	January 1992 to Present		
11	0741606	Screw, Flathead Countersunk 3/8"-16NC x 3/4"	2	
12		Plate, Mounting - Torque Hub Options:	1	
	0230976	Prior to January 1992		
	3760302	January 1992 to Present		
13	4740171	Washer, Special	2	
14	0100009	Sealant - RTV #738 (Not Shown)	A/R	
15		Shim Options:	A/R	
	4070142	Shim 1/8" (Located on Side of Mounting Plate) (Prior to January 1992)	A/R	
	4070143	Shim 3/16" (Located on Side of Mounting Plate) (Prior to January 1992)	A/R	
	Not Required	January 1992 to Present		
	0234219	TURNTABLE BEARING INSTALLATION	Ref.	6
101		Bearing Options:	1	
	0440067	Prior to October 1991		
	0440057	October 1991 to S/N 33258		
	0440067	S/N 33258 to Present		
102	0681816	Bolt 1/2"-13NC x 2" (Grade 8)	23	
103	4740003	Washer, Hardened	18	
104	4740144	Washer, Modified	5	
105	0100004	Devcon (Not Shown - Used Prior to January 1992)	A/R	
106	0682018	Bolt 5/8"-11NC x 2 1/4" (Grade 8)	23	

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FIGURE 2-18. SWING DRIVE, BEARING AND LOCK INSTALLATIONS (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
107	4740004	Washer, Hardened	17	
108	3300183	Nut 5/8"-11NC (Grade 8)	23	
109	4740048	Washer, Modified	6	
110	Not Used			
111	0100019	Loctite #271 (Not Shown)	A/R	
112	1300010	Solvent, Chlorinated (Loctite #755) (Not Shown)	A/R	
	0237202	LOCK PIN INSTALLATION	Ref.	B
201	0232282	Support (Left Side) (Prior to January 1992)	1	
202	0232281	Support (Right Side) (Prior to January 1992)	1	
203	3420761	Pin, Locking	1	
204	3420620	Pin, Clevis	1	
205	3420182	Pin, Cotter	1	
206	0642022	Bolt 5/8"-11NC x 2 3/4"	1	
207	3312005	Locknut 5/8"-11NC	1	

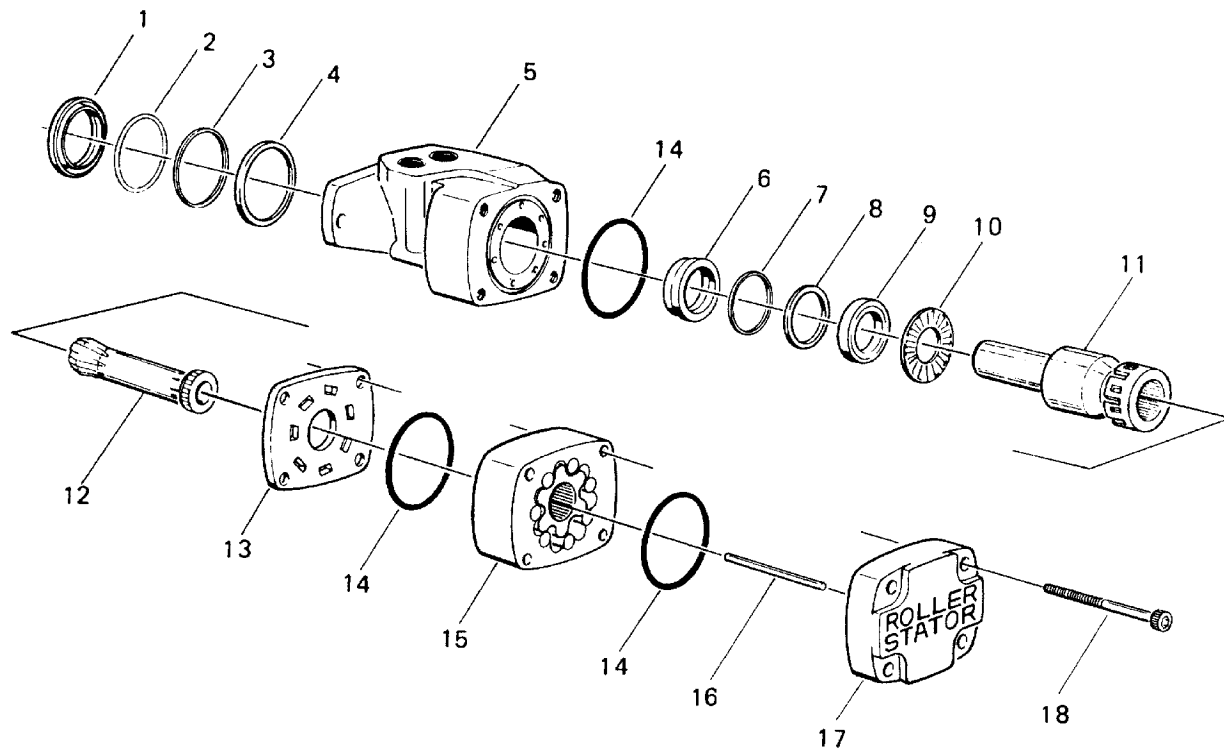
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FIGURE 2-18. SWING DRIVE, BEARING AND LOCK INSTALLATIONS (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-19. SWING MOTOR ASSEMBLY



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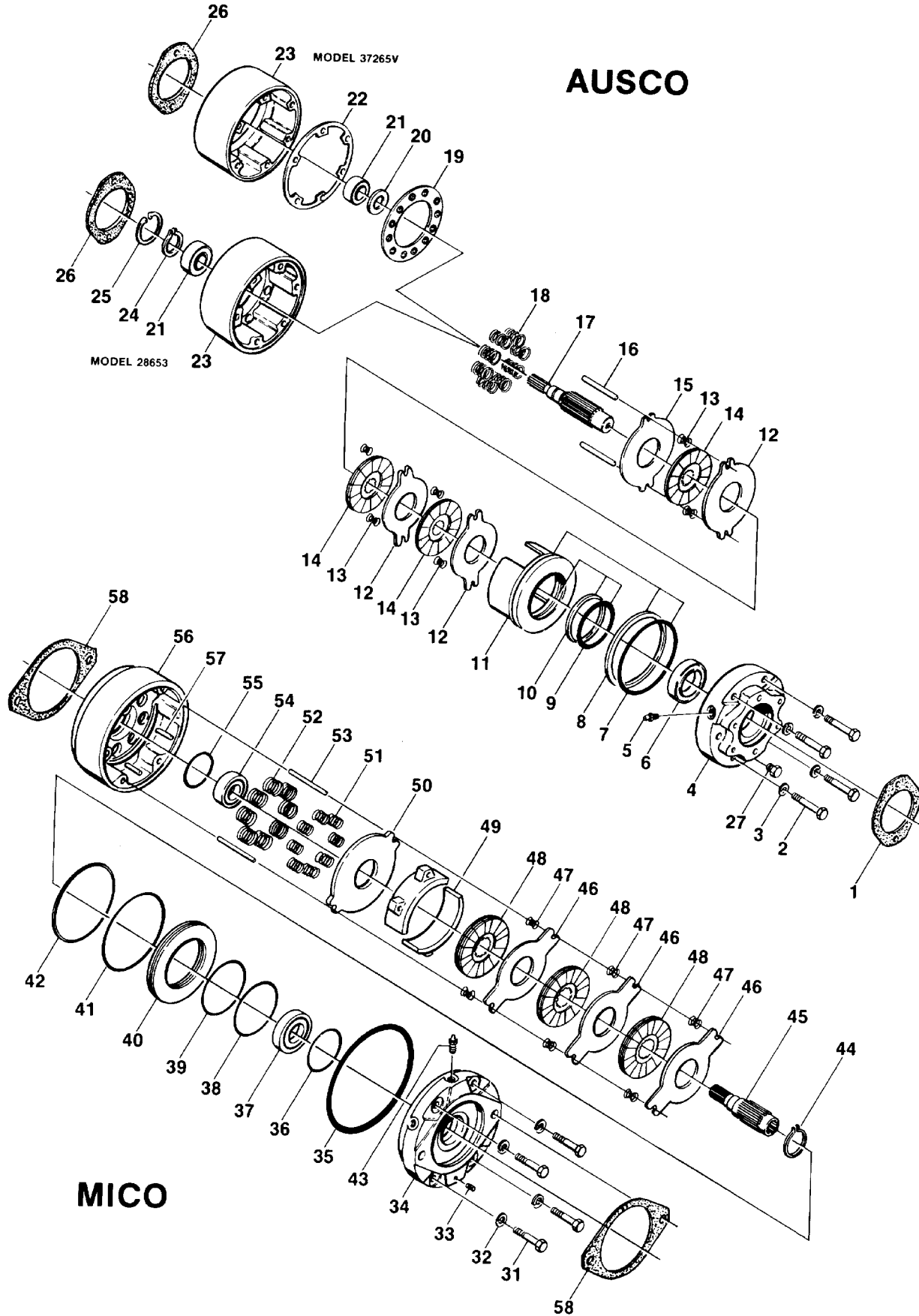
FIGURE 2-19. SWING MOTOR ASSEMBLY

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	3160094	SWING MOTOR ASSEMBLY	Ref.	C
1	Kit	Seal, Dust	1	
2	Kit	Ring, Wire	1	
3	Kit	Shim	1	
4	Kit	Seal	1	
5	7005818	Housing	1	
6	Kit	Carrier, Seal	1	
7	Kit	Shim	1	
8	Kit	Back-up, Leather	1	
9	Kit	Seal, Shaft	1	
10	7005809	Bearing, Thrust	1	
11	7005810	Shaft	1	
12	7005811	Link, Drive	1	
13	7005812	Plate, Wear	1	
14	Kit	Seal	3	
15	7005823	Stator, Roller	1	
16	7005820	Pin, Dowel	1	
17	7005816	Cover, End	1	
18	7005821	Bolt	4	

	2900477	Seal Kit (Consists of Items 1,2,3,4,6,7,8,9 and 14)	1	

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FIGURE 2-20. SWING BRAKE ASSEMBLIES - PRIOR TO APRIL 1992



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FIGURE 2-20. SWING BRAKE ASSEMBLIES - PRIOR TO APRIL 1992

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0920032	SWING BRAKE ASSEMBLY - AUSCO (MODEL 28653)	Ref.	—
	0920032	SWING BRAKE ASSEMBLY - AUSCO (MODEL 37265V)	Ref.	C
		Note: Refer to Model Number stamped on the front of the Housing item 23.	Ref.	
1	Kit	Gasket	1	
2	7000730	Bolt (Model 28653)	4	
	7003007	Bolt, Flanged (Model 37265V)	4	
3	7000729	Lockwasher (Model 28653 Only)	4	
4	7003012	Plate, Power (Model 28653)	1	
	7003091	Plate, Power (Model 37265V)	1	
5	7000796	Bleeder	1	
6	7000760	Bearing, Ball (Model 37265V Only)	1	
7	Kit	O-Ring	1	
8	Kit	Ring, Back-up	1	
9	Kit	O-Ring	1	
10	Kit	Ring, Back-up	1	
11	7000721	Piston (Model 28653)	1	
	7003057	Piston (Model 37265V)	1	
12	7000720	Disc, Stationary (Model 28653)	3	
	7003056	Disc, Stationary (Model 37265V)	3	
13	7003006	Spring, Compression	6	
14	7000732	Disc, Rotating (Model 28653)	3	
	7003055	Disc, Rotating (Model 37265V)	3	
15	7000718	Disc, Primary (Model 28653)	1	
	7003054	Disc, Primary (Model 37265V)	1	
16	7000717	Pin, Torque	2	
17	7003013	Shaft, Splined (Model 28653)	1	
	7003053	Shaft, Splined (Model 37265V)	1	
18	7000798	Spring, Compression (Model 28653)	8	
	7003052	Spring, Compression (Model 37265V)	8	
19	7003051	Retainer, Spring (Model 37265V Only)	1	
20	Kit	Seal, Oil	1	
21	7000713	Bearing, Ball (Model 28653)	1	
	7003049	Bearing, Ball (Model 37265V)	1	
22	Kit	Gasket (Model 37265V Only)	1	
23	7000714	Housing (Model 28653)	1	
	7003090	Housing (Model 37265V)	1	
24	7000712	Ring, Retaining (Model 28653 Only)	1	
25	7000711	Ring, Retaining (Model 28653 Only)	1	
26	Kit	Gasket	1	
27	7003059	Valve, Pressure Relief (Model 37265V Only)	1	
28 to 30	Not Used	-----		
	2900131	Seal Kit (Includes Items 1,7,8,9,10,20,22 and 26)		

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FIGURE 2-20. SWING BRAKE ASSEMBLIES - PRIOR TO APRIL 1992 (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0920032	SWING BRAKE ASSEMBLY - MICO Note: Used Prior to April 1992.	Ref. Ref.	B
31	7007913	Capscrew	4	
32	7007912	Lockwasher	4	
33	7007924	Plug	1	
34	7007928	Cover	1	
35	Kit	Ring, Square	1	
36	Kit	O-Ring	1	
37	Kit	Bearing	1	
38	Kit	O-Ring	1	
39	Kit	Ring, Back-Up	1	
40	7007923	Piston	1	
41	Kit	O-Ring	1	
42	Kit	Ring, Back-Up	1	
43	7007914	Bleeder	1	
44	Kit	Ring, Retaining	1	
45	7007926	Shaft	1	
46	7007908	Disc	3	
47	7007916	Spring	6	
48	7007909	Disc, Friction	3	
49	7007902	Separator	2	
50	7007907	Disc	1	
51	7007906	Spring	8	
52	7007905	Spring	8	
53	7007915	Pin, Dowel	2	
54	Kit	Bearing	1	
55	Kit	O-Ring	1	
56	7007930	Housing	1	
57	7007901	Pin, Spiral	4	
58	7007933	Gasket	1	
	7007934	Gasket	1	

	2900642	Seal Kit (Includes Items 35,36,38,39,41,42,55 and 58 Gaskets)	1	
	7007927	Bearing Kit (Includes Items 36,37,44,54,55 and 58 Gasket)	1	

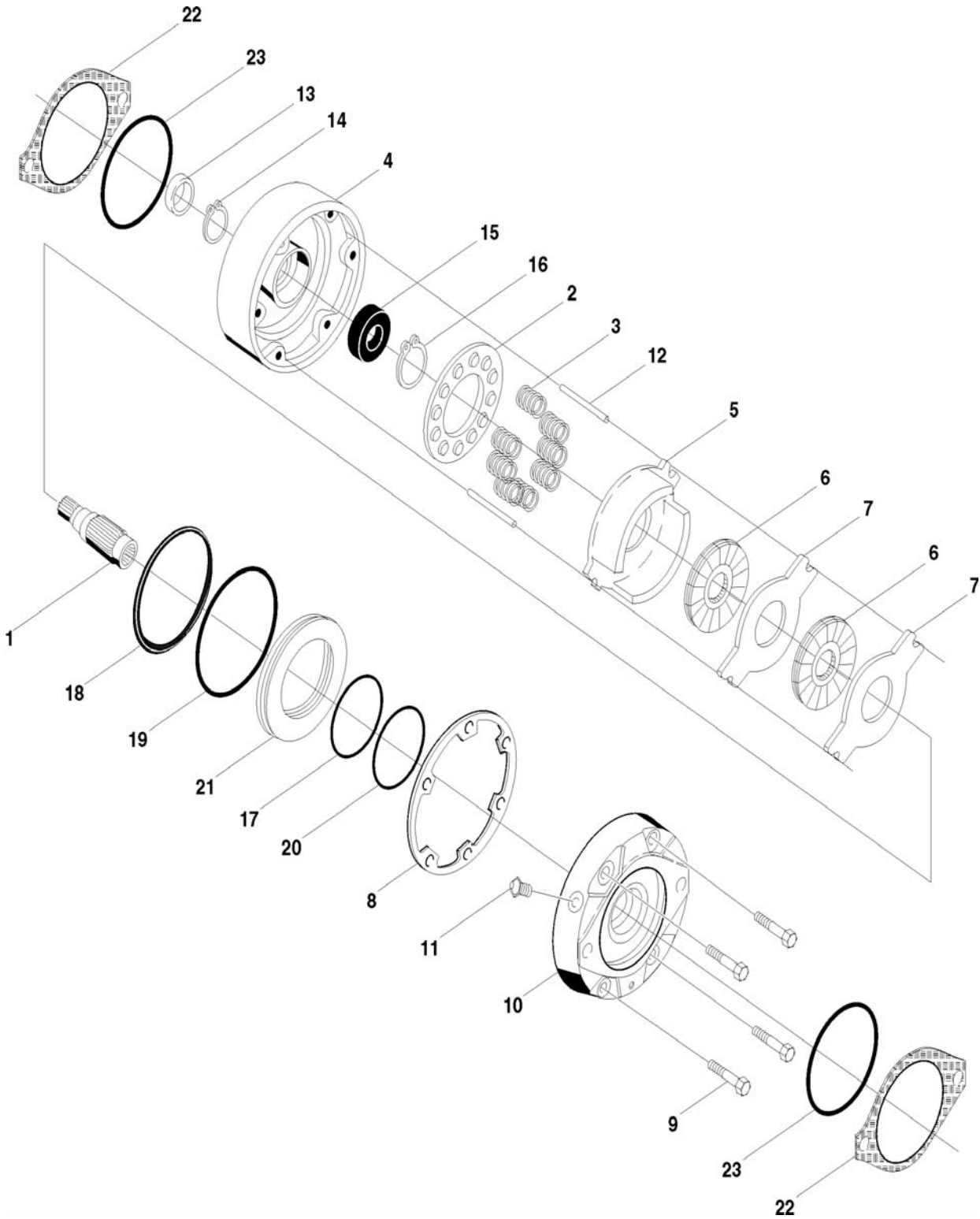
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FIGURE 2-20. SWING BRAKE ASSEMBLIES - PRIOR TO APRIL 1992 (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-21. SWING BRAKE ASSEMBLY - APRIL 1992 TO PRESENT



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FIGURE 2-21. SWING BRAKE ASSEMBLY - APRIL 1992 TO PRESENT

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		SWING BRAKE ASSEMBLY OPTIONS:	Ref.	
	0920083	MACHINES BUILT THROUGH 1992	Ref.	—
	0920083	MACHINES BUILT 1993 TO S/N 33476	Ref.	A
	0920109	S/N 33476 TO PRESENT	Ref.	B
1		Shaft Options:	1	
	7011718	Machines Built Through 1992		
	7011720	Machines Built 1993 to Present		
2		Guide, Spring Options:	1	
	Not Required	Machines Built Through 1992		
	7011717	0920083 Brake (Machines Built 1993 to S/N 33476)		
	7018606	0920109 Brake (S/N 33476 to Present)		
3		Spring Options:	A/R	
	7007979	0920083 Brake (Inner) (Prior to S/N 33476)	6	
	7007980	0920083 Brake (Outer) (Prior to S/N 33476)	6	
	7007970	0920109 Brake (Red) (S/N 33476 to Present)	6	
	7018602	0920109 Brake (Blue) (S/N 33476 to Present)	3	
4		Housing Options:	1	
	7007981	0920083 Brake (Machines Built Through 1992)		
	7011713	0920083 Brake (Machines Built 1993 to S/N 33476)		
	7018605	0920109 Brake (S/N 33476 to Present)		
5		Return Plate & Separator Assembly Options:	A/R	
	Kit	Plate, Return - 0920083 Brake (Prior to S/N 33476)	1	
	7011715	Separator Assy - 0920083 Brake (Prior to S/N 33476)	2	
	7011714	Pin	4	
	7007983	Separator	2	
	Kit	Plate, Return/Separator - 0920109 Brake (S/N 33476 to Present)	1	
6	Kit	Rotor	2	
7	Kit	Stator	2	
8	Kit	Seal, Oil	1	
9		Bolt, Washer Head Options:	4	
	7007985	0920083 Brake (Prior to S/N 33476)		
	7018607	0920109 Brake (S/N 33476 to Present)		
10	7011719	Cover	1	
11		Hardware Options:	1	
	7007914	Screw, Bleeder (Prior to S/N 33906)		
	7018609	Plug, Pipe (S/N 33906 to Present)		
12	7007987	Pin, Dowel	2	
13	Kit	Seal, Oil	1	
14		Ring, Retaining Options:	1	
	Not Required	Machines Built Through 1992		
	7011716	Machines Built 1993 to Present		
15	Kit	Bearing	1	
16	7007977	Ring, Retaining	1	
17	Kit	Ring, Back-Up	1	

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FIGURE 2-21. SWING BRAKE ASSEMBLY - APRIL 1992 TO PRESENT (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
18	Kit	Ring, Back-Up	1	
19	Kit	O-Ring	1	
20	Kit	O-Ring	1	
21		Piston Options:	1	
	7007923	0920083 Brake (Prior to S/N 33476)		
	7018603	0920109 Brake (S/N 33476 to Present)		
22	7007934	Gasket	2	
23	Kit	O-Ring	2	
	2900766	Seal Kit (Includes Items 8,13,17,18,19,20,22 & 23)	1	
	2900768	Bearing Kit (Includes Items 8,13,14,15,16,22 & 23)	1	
		Lining Kit Options:		
	2900767	0920083 Brake (Prior to S/N 33476)		
	7018608	0920109 Brake (S/N 33476 to Present) (Includes Items 5,6,7 & 8)		

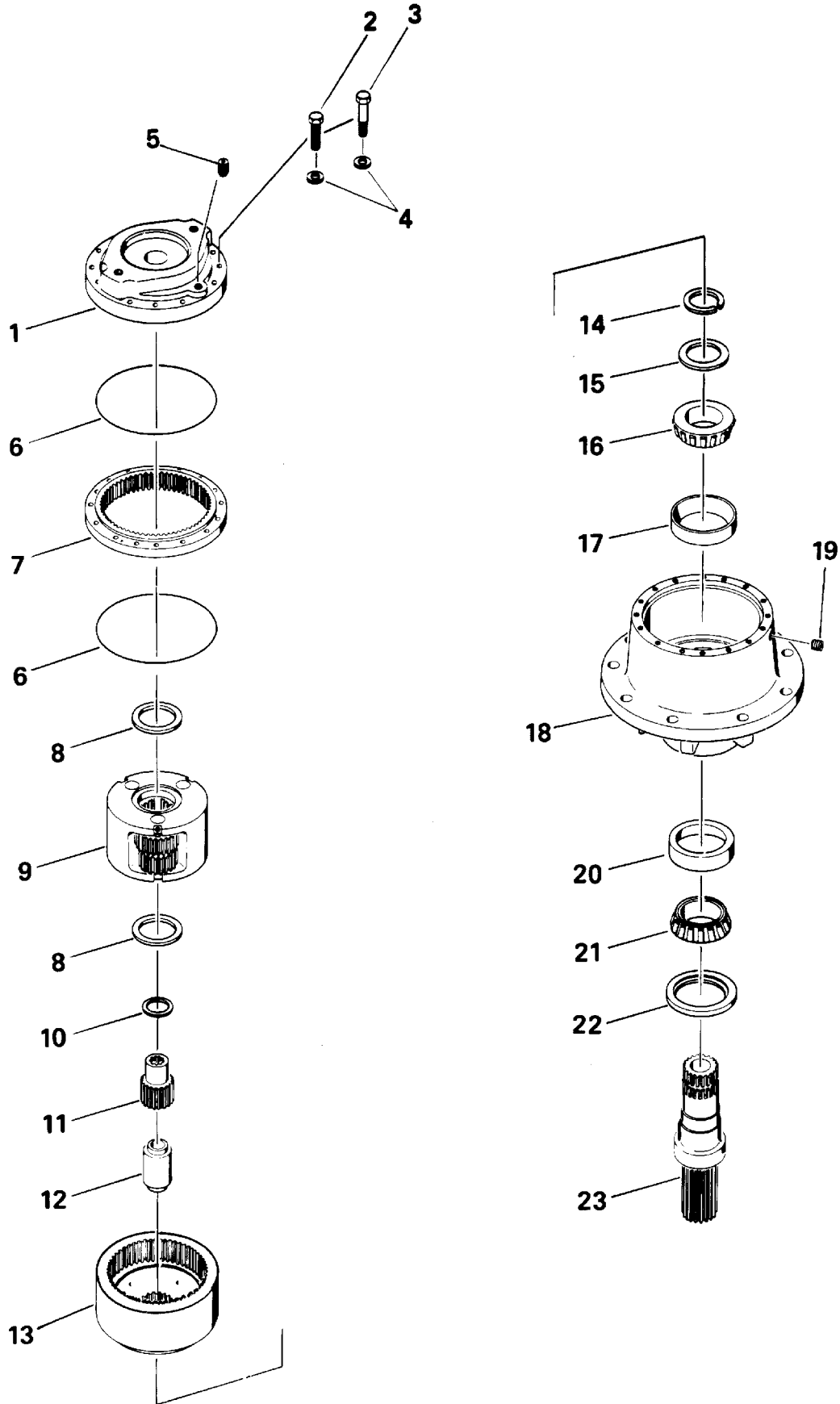
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FIGURE 2-21. SWING BRAKE ASSEMBLY - APRIL 1992 TO PRESENT (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-22. SWING HUB ASSEMBLY



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FIGURE 2-22. SWING HUB ASSEMBLY

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	2780055	SWING HUB ASSEMBLY	Ref.	—
1	7000209	Cover	1	
2	7000217	Bolt, Hex Head	8	
3	7000214	Bolt, Hex Head, Shoulder	4	
4	4751500	Flatwasher	12	

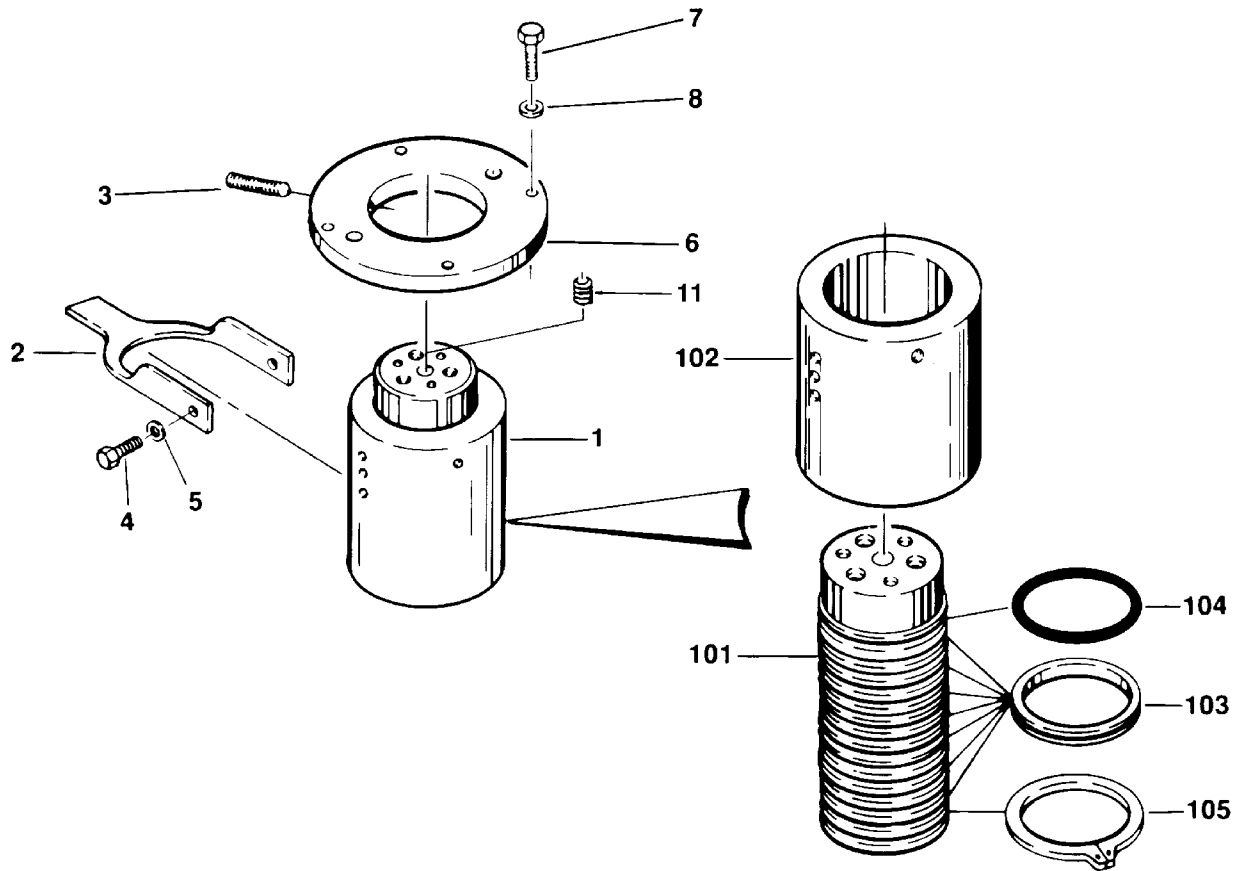
5	7000242	Plug, Pipe	1	
6	Kit	O-Ring	2	
7	7000208	Gear, Ring	1	
8	7000253	Washer, Thrust	2	
9	7000207	Planet Carrier Assembly (No Service Breakdown Parts Purchase Entire Assembly)	1	
10	7000270	Washer, Thrust	1	
11	7000268	Gear, Sun-Input	1	
12	7000269	Spacer, Sun Gear	1	
13	7000246	Gear, Internal	1	

	7000271	Hub Assembly	1	
14	Kit	Ring, Retaining	1	
15	Kit	Spacer	1	
16	7000258	Bearing, Tapered Roller	1	
17	7000257	Cup, Bearing	1	
18	7000210	Hub	1	
19	7000242	Plug, Pipe	1	
20	7000255	Cup, Bearing	1	
21	7000256	Bearing, Tapered Roller	1	
22	Kit	Seal	1	
23	7000233	Shaft, Output	1	

	2900034	Kit, Repair (Includes Items 6,14,15 and 22)	1	

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FIGURE 2-23. ROTARY COUPLING ASSEMBLY AND INSTALLATION



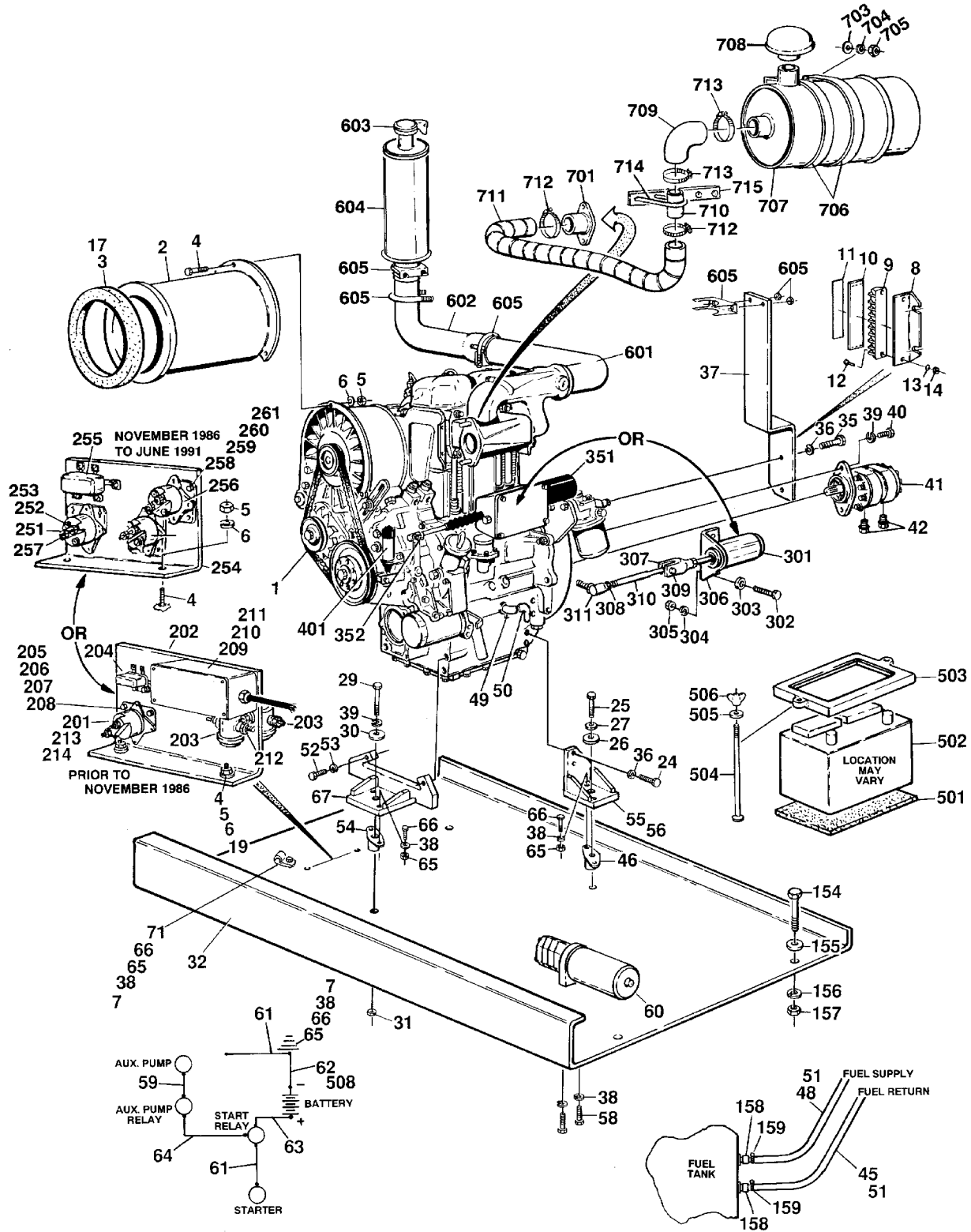
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FIGURE 2-23. ROTARY COUPLING ASSEMBLY AND INSTALLATION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
		ROTARY OIL COUPLING INSTALLATIONS	Ref.	
	0234479	MACHINES WITH RACINE VALVES AND 2 SPEED DRIVE MOTORS	Ref.	I
	0238032	MACHINES WITH VICKERS VALVES BUILT PRIOR TO JANUARY 1991	Ref.	B
	0250611	MACHINES WITH VICKERS VALVES BUILT JANUARY 1991 TO PRESENT)	Ref.	C
1		Oil Coupling Assembly (See Items 101-105 for Breakdown)	1	
	1660154	Machines with Racine Valves Oil Coupling (5 Port)		
	1660160	Machines with Vickers Valves Oil Coupling (6 Port) (Prior to January 1991)		
	1660185	Oil Coupling (6 Port) (January 1991 to Present)		
2	3530403	Plate, Retaining	1	
3	3951820	Setscrew 1/2"-13NC x 2 1/2"	2	
4	0641807	Bolt 1/2"-13NC x 7/8"	2	
5	4761800	Lockwasher 1/2"	2	
6	1440154	Collar	1	
7	0641512	Bolt 5/16"-18NC x 1 1/2"	4	
8	4761500	Lockwasher 5/16"	4	
9	0100011	Loctite #242 (Not Shown)	A/R	
10	0100019	Loctite #271 (Not Shown)	A/R	
11	2200222	Plug, Pipe (Used when not equipped with Collector Ring)	1	
		ROTARY OIL COUPLING ASSEMBLIES	Ref.	
101		Swivel Body Options:	1	
	0620055	Body for 1660154 Coupling		
	0620058	Body for 1660160 Coupling		
	0620106	Body for 1660185 Coupling		
102		Swivel Housing Options:	1	
	2760025	Housing for 1660154 Coupling		
	2760091	Housing for 1660160 and 1660185 Couplings		
103	Kit	T-Seal	7	
104	Kit	O-Ring	1	
105	3760004	Ring, Retaining	1	
	2901146	Seal Kit (Includes Items 103 and 104) (1660154, 1660160 and 1660185 Coupling)	1	
	Use 1660213EX	1660213 Coupling (Was p/n 7013175) Note: Due to complexity of repair, seal kit no longer available. Use rebuilt unit as replacement.	1	

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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION



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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0236477	ENGINE ASSEMBLY - DEUTZ F2L511D (RACINE VALVES - PRIOR TO NOVEMBER 1986)	Ref.	I
	0236462	ENGINE ASSEMBLY - DEUTZ F2L511 CLEAN BURN (RACINE VALVES - PRIOR TO NOVEMBER 1986)	Ref.	I
	0237864	ENGINE ASSEMBLY - DEUTZ F2L511D (VICKERS VALVES - NOVEMBER 1986 TO JUNE 1991)	Ref.	K
	0237866	ENGINE ASSEMBLY - DEUTZ F2L511W - CLEAN BURN (VICKERS VALVE - NOVEMBER 1986 TO JUNE 1991)	Ref.	K
1		Engine Options:	1	
	2000054	Deutz F2L511D		
	2000058	Deutz F2L511W (Clean Burn)		
2	4842008	Air Intake Weldment	1	
3	3960225	Seal, Air Intake	1	
4	0641408	Bolt 1/4"-20NC x 1"	5	
5	3311401	Nut 1/4"-20NC	5	
6	4761400	Lockwasher 1/4"	5	
7	4751600	Flatwasher 3/8" (Not Shown)	4	
8	0901401	Bracket, Mounting - Terminal Strip (Prior to September 1988)	1	
9	4460227	Strip, Terminal (Prior to September 1988)	1	
10	1670414	Cover, Terminal	1	
11	1700821	Decal - Wire Identification	1	
12	0721006	Screw, Machine #10-24NC x 3/4"	2	
13	4761000	Lockwasher #10	2	
14	3311001	Nut #10-24NC	2	
15	Not Used			
16	Not Used			
17	0100001	Adhesive, Weather Strip	A/R	
18	0100020	Sealant, Pipe (Not Shown)	A/R	
19	4751400	Flatwasher 1/4"	2	
20	Not Used			
21	Not Used			
22	Not Used			
23	Not Used			
24	0711014	Bolt, Metric 10mm x 30mm	4	
25	0641724	Bolt 7/16"-14NC x 3"	2	
26	4751700	Flatwasher 7/16"	2	
27	4761700	Lockwasher 7/16"	2	
28	3311701	Nut 7/16"-14NC (Not Shown)	2	
29	0641826	Bolt 1/2"-13NC x 3 1/4"	1	
30	4751800	Flatwasher 1/2"	1	
31	3311801	Nut 1/2"-13NC	1	
32	3509816	Plate, Mounting - Engine	1	
33	Not Used			
34	Not Used			
35	0701014	Bolt, Metric 10mm x 30mm	A/R	
36	4740116	Lockwasher 10mm	A/R	

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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
37		Bracket Options:	1	
	0901221	Racine Machines		
	0901423	Vickers Machines		
38	4761600	Lockwasher 3/8"	A/R	
39	4761800	Lockwasher 1/2"	A/R	
40	0641814	Bolt 1/2"-13NC x 1 3/4"	A/R	
41	3600078	Pump Assembly - Main (See Figure 2-43 for Break-down)	1	
42	2220379	Fitting	2	
43	Not Used			
44	Not Used			
45	2720271	Hose - Fuel Return	66 in.	
46	3200202	Mount, Motor - Rear	2	
47	Not Used			
48	2720015	Hose - Fuel Supply	8 1/2 in.	
49	2200461	Fitting	1	
50	2720145	Hose	1	
51	1320022	Clamp, Hose	2	
52	0630246	Bolt, Metric 14mm x 60mm	2	
53	4740191	Lockwasher, Metric 14mm	2	
54	3200201	Mount, Motor - Front	1	
55	4841994	Bracket, Support - Engine (Rear) (Left Side)	1	
56	4841993	Bracket, Support - Engine (Rear) (Right Side)	1	
57	Not Used			
58	0641606	Bolt 3/8"-16NC x 3/4"	2	
59	1060149	Cable, Battery (Aux. Relay to Aux. Pump)	1	
60		Auxiliary Pump Assembly Options:	1	
		Note: When replacing complete assembly recommend P/N 3600071.		
	3600051	Pump Assembly (Prior to November 1984)		
	7004415	Pump Only	1	
	7004408	Coupling Only	1	
	3600115	Pump Assembly (November 1984 to August 1990)		
	7004412	Coupling Only	1	
	7013755	Motor, Replacement	1	
	3600071	Pump Assembly (August 1990 to June 1991)		
	7004247	Pump Only	1	
	7004249	Coupling Only	1	
	7004248	Motor, Replacement	1	
	7004436	Motor with Bracket	1	
	7012576	Bracket Only	1	
61	1060093	Cable, Battery (Engine to Ground and Start Relay to Starter)	2	
62	1060172	Cable, Battery (Battery to Ground - Prior to September 1988)	1	
63		Battery Cable Options (Battery to Start Relay):	1	
	1060154	Prior to May 1989		
	1060032	May 1989 to Present		
64	1060221	Cable, Battery (Start Relay to Aux. Relay)	1	
65	3311601	Nut 3/8"-16NC	10	

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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
66	0641610	Bolt 3/8"-16NC x 1 1/4"	10	
67	4841965	Bracket, Support - Engine (Front)	1	
68	Not Used			
69	Not Used			
70	Not Used			
71	1320060	Clamp	2	
	0236478	ENGINE INSTALLATION - DEUTZ F2L511D (RACINE VALVES - PRIOR TO NOVEMBER 1986)	Ref.	A
	0236463	ENGINE INSTALLATION - DEUTZ F2L511W CLEAN BURN (RACINE VALVES - PRIOR TO NOVEMBER 1986)	Ref.	A
	0237865	ENGINE INSTALLATION - DEUTZ F2L511D (VICKERS VALVES - NOVEMBER 1986 TO JUNE 1991)	Ref.	—
	0237867	ENGINE INSTALLATION - DEUTZ F2L511W - CLEAN BURN (VICKERS VALVE - NOVEMBER 1986 TO JUNE 1991)	Ref.	—
151	Not Used			
152	Not Used			
153	Not Used			
154	0641622	Bolt 3/8"-16NC x 2 3/4"	4	
155	4751600	Flatwasher 3/8"	8	
156	4761600	Lockwasher 3/8"	4	
157	3311601	Nut 3/8"-16NC	4	
158	2220296	Fitting, Barbed	2	
159	1320022	Clamp	2	
160	0100020	Sealant, Pipe (Not Shown)	A/R	
	0236850	ELECTRICAL PANEL ASSEMBLY (RACINE MACHINES BUILT PRIOR TO NOVEMBER 1986)	Ref.	E
201	3740059	Relay	1	
202	3530425	Plate, Mounting	1	
203	3740002	Relay	2	
204	3740030	Relay, Adlo	1	
205	0641006	Bolt #10-24NC x 3/4"	6	
206	4761000	Lockwasher #10	6	
207	3311001	Nut #10-24NC	6	
208	4751000	Flatwasher #10	6	
209	0060021	Module, Actuator	1	
210	0641406	Bolt 1/4"-20NC x 3/4"	2	
211	4761400	Lockwasher 1/4"	2	
212	3300220	Nut, Special	6	
213	3311001	Nut #10-24NC	3	
214	3310801	Nut #8-32NC	3	

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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0237627	ELECTRICAL PANEL ASSEMBLY (VICKERS MACHINES BUILT NOVEMBER 1986 TO JUNE 1991)	Ref.	F
251	3740059	Relay	1	
252	3321001	Nut #10-32NF	3	
253	3310801	Nut #8-32NC	1	
254	3530425	Plate, Mounting	1	
255		Relay Options:	1	
	3740030	Relay, Adlo (Used Prior to April 1991)		
	3740080	Relay, Sealed (Used April 1991 to June 1991)		
256	3740067	Relay	2	
257	3300220	Nut, Special	6	
258	0641405	Bolt 1/4"-20NC x 5/8"	7	
259	4761400	Lockwasher 1/4"	7	
260	3311401	Nut 1/4"-20NC	7	
261	4711400	Flatwasher 1/4" Narrow	6	
		THROTTLE INSTALLATION - SOLENOID (RACINE VALVES - PRIOR TO NOVEMBER 1985)	Ref.	
301	3740048	Solenoid - Hi-Engine	1	
302	0641406	Bolt 1/4"-20NC x 3/4"	5	
303	4751400	Flatwasher 1/4"	5	
304	4761400	Lockwasher 1/4"	5	
305	3311401	Nut 1/4"-20NC	5	
306	0900708	Bracket, Solenoid Mounting	1	
307	1360112	Clevis	1	
308	3321401	Nut 1/4"-28NF	2	
309	3430406	Pin, Clevis	1	
	3450203	Pin, Cotter	1	
310	4840833	Throttle Arm	1	
311	1660070	Connector, Ball Joint	1	
	0237047	THROTTLE INSTALLATION - ADECO (RACINE VALVES - AFTER NOVEMBER 1985)	Ref.	A
	0237868	THROTTLE INSTALLATION - ADECO (VICKERS VALVES)	Ref.	—
351	0060020	Actuator Assembly (Racine Valves)	1	
	0060024	Actuator Assembly (Vickers Valves)	1	
	7008804	Bellows, Rubber	1	
	7008807	Board, Circuit (Racine Machines)	1	
	7008829	Board, Circuit (Vickers Machines)	1	
	7008821	Motor, Drive	1	
	0901317	Bracket	1	
	0641408	Bolt 1/4"-20NC x 1"	1	
	4751400	Flatwasher 1/4"	2	
	4761400	Lockwasher 1/4"	1	
	3311401	Nut 1/4"-20NC	1	

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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
352	3840829	Extension	1	
	3321401	Nut	1	
	0236526	SHUTDOWN KIT INSTALLATION	Ref.	—
401	2900359	Shutdown Kit	1	
	0251323	BATTERY INSTALLATION	Ref.	B
		Note: Location may vary but components are the same.	Ref.	
501	3980003	Seat, Battery	1	
502	0400003	Battery	1	
503	0400002	Hold-Down, Battery	1	
	2910479	Clips	2	
504	0630370	J-Bolt	2	
505	4711600	Flatwasher 3/8"	2	
506	3300029	Wingnut 3/8"-16NC	2	
507	0961127	Bushing, Snap (Not Shown)	1	
508	1060146	Cable, Battery (September 1988 to June 1995)	1	
	1060147	Cable, Battery (June 1995 to Present))	1	
	0641610	Bolt 3/8"-16NC x 1 1/4" (September 1988 to June 1995)	1	
	4751600	Flatwasher 3/8" (September 1988 to June 1995)	2	
	4761600	Lockwasher 3/8" (September 1988 to June 1995)	1	
	3311601	Nut 3/8"-16NC (September 1988 to June 1995)	1	
	0236472	EXHAUST INSTALLATION	Ref.	B
601	4842013	Exhaust	1	
602	4562713	Tube, Exhaust	1	
603	1120067	Rain Cap	1	
604	3220033	Muffler	1	
605	1320019	Clamp	3	
	0236473	AIR CLEANER INSTALLATION	Ref.	E
701	4840979	Flange	1	
702	4300032	Stud (Welded on Part - Not Shown)	4	
703	4751400	Flatwasher 1/4"	4	
704	4761400	Lockwasher 1/4"	4	
705	3311401	Nut 1/4"-20NC	4	
706	0340002	Band, Mounting	2	
707		Air Cleaner Assembly Options:	1	
	2120087	Air Cleaner (Prior to August 1986)		
	7004214	Element, Air Filter		
	1340020	Air Cleaner (August 1986 to Present)		
	7004214	Element, Air Filter		
708	1120161	Cap, Rain	1	
709	0080039	Elbow, 90° Rubber	1	

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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
710		Intake Tube Options:	1	
	4561598	Tube (Prior to August 1989)		
	4561815	Tube (August 1989 to October 1990)		
	4564475	Tube (October 1990 to Present)		
711	2720178	Hose, Air Duct	3 Ft.	
712	1320031	Clamp, Hose	2	
713	1320016	Clamp, Hose	2	
714	1320021	Clamp, Exhaust	1	
715	0901743	Bracket, Air Hose	1	
	4300038	Stud (Welded on Part)	2	
	4751500	Flatwasher 5/16"	2	
	3311505	Locknut 5/16"-18NC	2	
		ENGINE COMPONENTS	Ref.	
	2000054	Deutz F2L511D	Ref.	
	2000058	Deutz F2L511W (Clean Burn)	Ref.	
	Use 7020023	Filter, Fuel (was p/n 7020249)	1	
	7021870	Filter, Oil (1 ea.)	1	
	7014502	Filter, Oil (Case of 12)	1	
	3120088	Engine Manual	1	

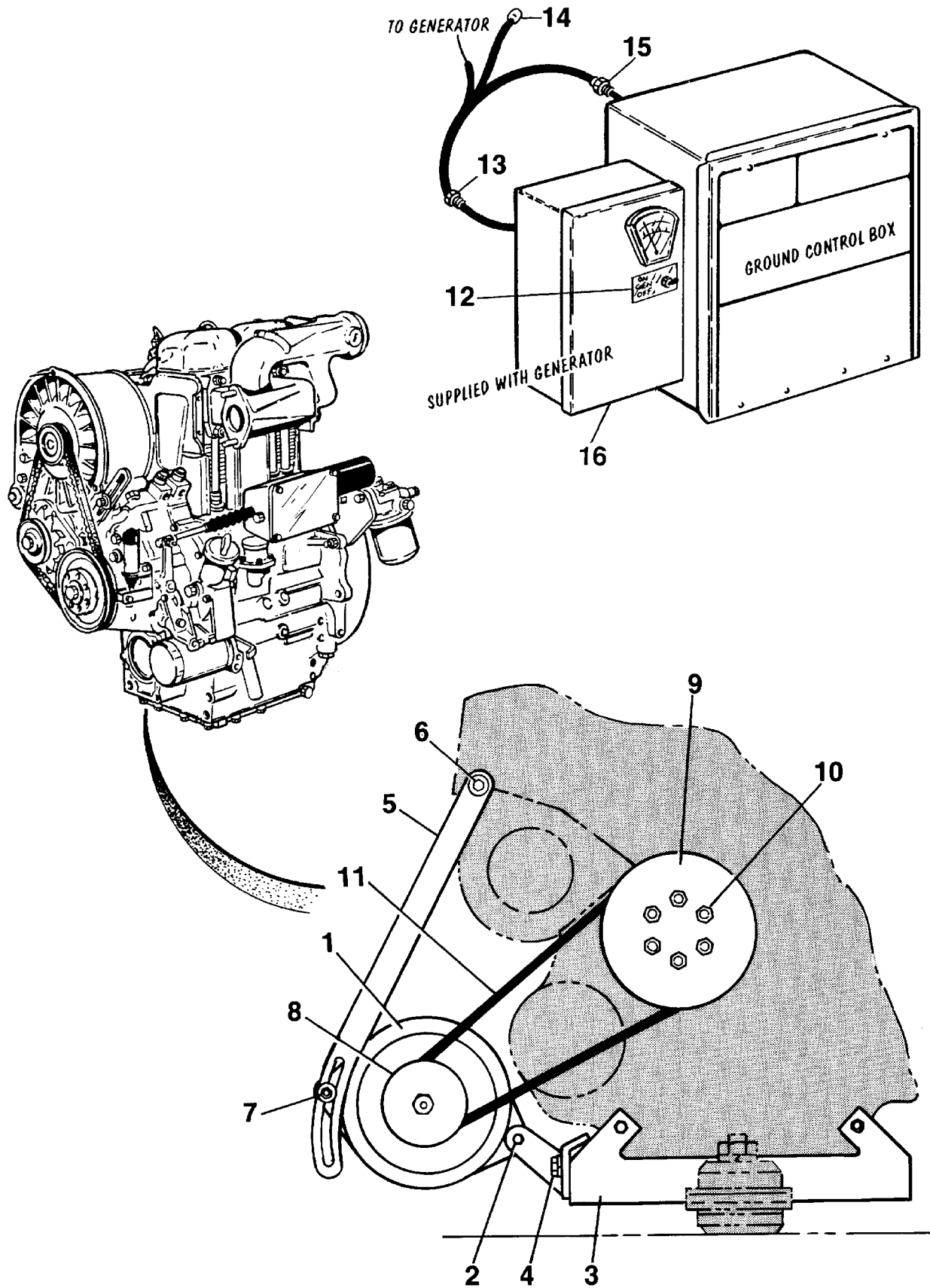
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FIGURE 2-24. DEUTZ F2L511 ENGINE INSTALLATION (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-25. GENERATOR INSTALLATION - DEUTZ F2L511



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FIGURE 2-25. GENERATOR INSTALLATION - DEUTZ F2L511

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
	0236418	GENERATOR INSTALLATION (PRIOR TO JULY 1990)	Ref.	C
	0251188	GENERATOR INSTALLATION (JULY 1990 TO PRESENT)	Ref.	—
1	2460011	Generator and Control Box Assembly	1	
	7012558	Generator Assembly	1	
	7020193	Cable, Generator (Generator to Control Box)	1	
	7026199	Armature	1	
	7020108	Brush	4	
	7020109	Holder, Brush	4	
	7012513	Cap, Brush Holder	4	
	7012514	Fan	1	
	7020110	Bell, Front	1	
	7020111	Bell Rear	1	
	7020190	Bearing	2	
	7003657	Control Box Assembly	1	
		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.		
	4360542	Breaker, Circuit	1	
	2420203	Voltmeter 110V (was p/n 7010699)	1	
		Receptacle Options:		
	4460190	Receptacle, Standard 110V	A/R	
	4460027	Receptacle, Twistlock 110V		
	2920162	Lamp	1	
	7020191	Switch, Toggle	1	
	3520028	Plug, Hole	1	
2	0641508	Bolt 5/16"-18NC x 1"	2	
	4761500	Lockwasher 5/16"	2	
	4751500	Flatwasher 5/16"	2	
	3311501	Nut 5/16"-18NC	2	
3		Bracket Options:	1	
	4340442	Front and Side Bracket (Prior to July 1990)		
	4340600	Front Bracket (July 1990 to present)		
	4843156	Side Bracket (July 1990 to Present)		
4		Hardware Options:		
	0630365	Bolt, Metric 12mm x 65mm (Grade 8.8) (Prior to July 1990)	1	
	0641608	Bolt 3/8"-16NC x 1" (July 1990 to Present)	2	
	4740117	Lockwasher, Metric 12mm (Prior to July 1990)	1	
	4761600	Lockwasher 3/8" (July 1990 to Present)	2	
5		Adjustable Support Options:	1	
	4340444	Prior to July 1990		
	4340599	July 1990 to Present		
6	0641540	Bolt 5/16"-18NC x 5"	1	
	4761500	Flatwasher 5/16"	1	
	3311501	Nut 5/16"-18NC	1	

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FIGURE 2-25. GENERATOR INSTALLATION - DEUTZ F2L511 (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.
7	0641508	Bolt 5/16"-18NC x 1"	1	
	4761500	Lockwasher 5/16"	1	
	3311501	Nut 5/16"-18NC	1	
8	3580100	Pulley, Generator	1	
	2860012	Key, Woodruff	1	
9	3580101	Pulley	1	
10	0700816	Bolt, Metric 8mm x 40mm	8	
	4740118	Lockwasher 8mm	8	
11	0480038	V-Belt	1	
12	3251476	Name tag	1	
13	4460023	Connector, Terminal	1	
14	4460134	Connector, Terminal	1	
	1060012	Cable, Electrical - 12/4	3 ft.	
15	4460071	Connector, Strain Relief	1	
	3300048	Locknut, Conduit	1	
	0960238	Bushing	1	
16	See Item 1	Control Box Assembly	1	
	3910808	Screw, Machine #8-32NC x 1/2"	2	
	4750800	Flatwasher #8	4	
	4760800	Lockwasher #8	2	
	3310801	Nut #8-32NC	2	
17	3740049	Relay (Not Shown - Located in Ground Control Box)	2	
	3911006	Screw, Machine #10-24NC x 1/2"	2	
	4761000	Lockwasher #10	2	
	3311001	Nut #10-24NC	2	

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FIGURE 2-25. GENERATOR INSTALLATION - DEUTZ F2L511 (CONTINUED)

FIG & ITEM #	PART NUMBER	DESCRIPTION	QTY.	REV.

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FIGURE 2-26. DEUTZ F3L912 ENGINE INSTALLATION

