

GRADALL®

Illustrated Parts Manual

Models
522D
524D

SN 0277001

P/N - 9138-4001

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JLG®

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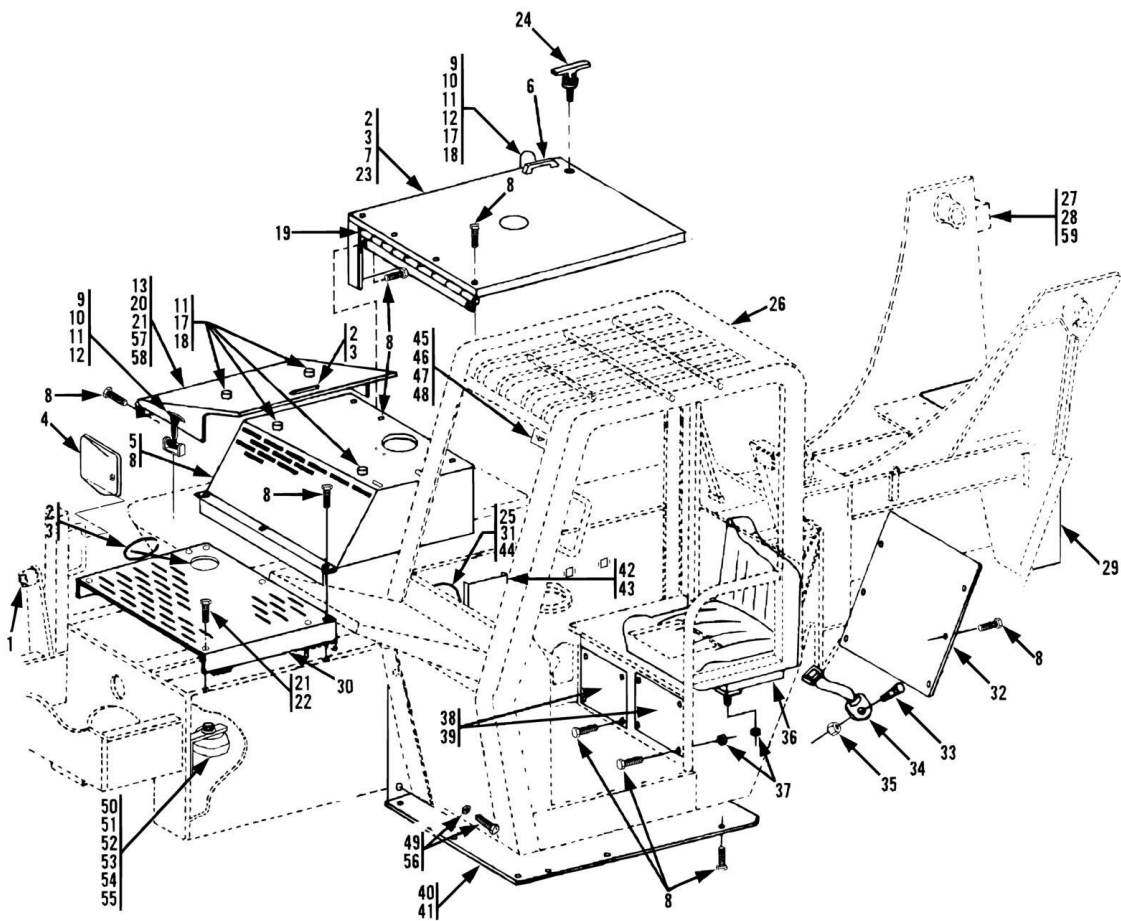
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SECTION 1 - CHASSIS AND ATTACHING PARTS

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SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-1. FRAME SHROUDING AND TRIM (SN 0277001 to Present)



SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-1. FRAME SHROUDING AND TRIM (SN 0277001 to Present)

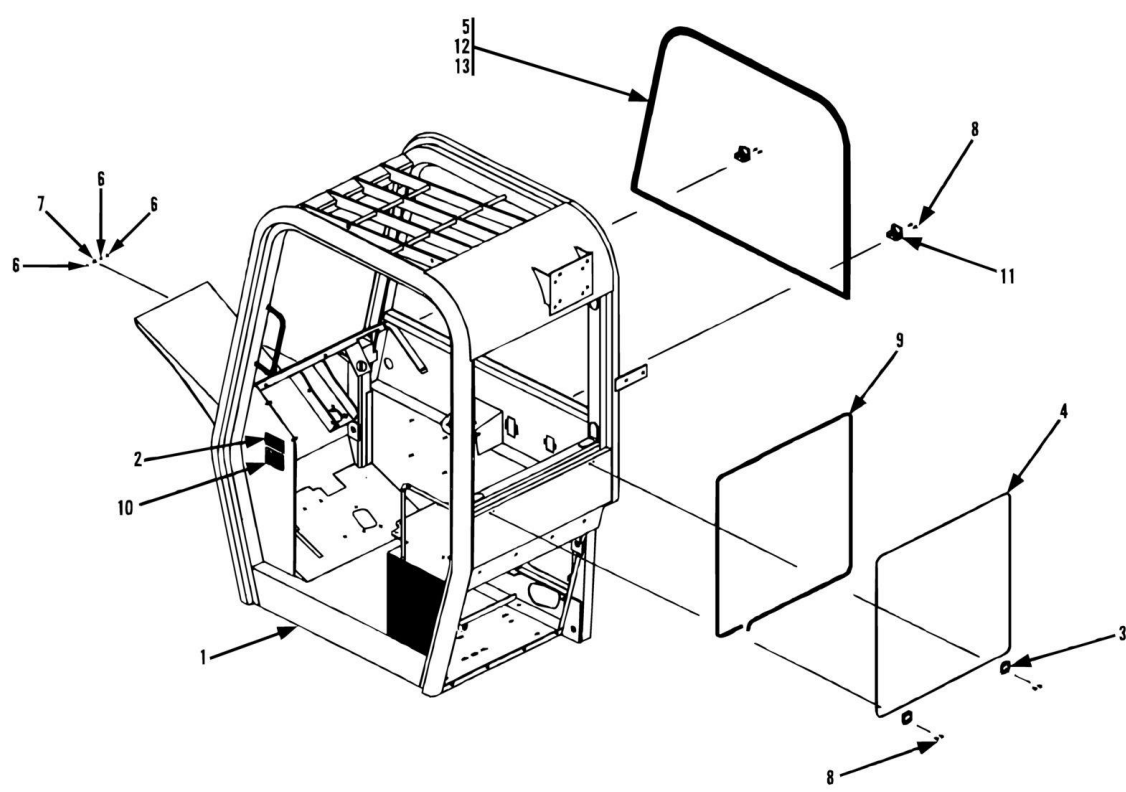
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91386004	Ref	FRAME WELDMENT	
	14404645	AR	T-9 METAL PROTECTANT, (12oz)	
	14404646	AR	METAL PROTECTANT, (1 gal)	
1	91143051	2	BUSHING	
2	90206196	64 in	TRIM-LOK, (pre-packaged in 25ft lengths)	
3		Ref	ADHESIVE	
4	83683291	1	MIRROR	
5	91386001	1	RADIATOR COVER	
6	91123172	1	GRAB HANDLE	
7	90200755	24 in	WEATHER STRIP, (pre-packaged in 35ft rolls)	
8	77143003	45	WHIZ-LOCK SCREW, 5/16-18X5/8	
9	90207458	3	DRAW LATCH	
10	88301193	12	ROUND HD MACHINE SCREW, #10-32X1/2	
11	88551007	17	LOCKWASHER, #10	
12	88501613	6	HEX NUT, #10-32	
13	91086175	1	TANK COVER	
14	91366006	1	HOSE GUARD, NOT SHOWN, (located under dash panel, beneath steering column)	
15	85941016	1	SUPPORT CLAMP, (use with item 14, not shown)	
16	77143006	2	WHIZ- LOCK NUT, 5/16-18, (use with item 14, not shown)	
17	91083173	5	RUBBER HD SCREW BUMPER	
18	88501612	5	HEX NUT, #10-24	
19	91141218	1	HINGE	
20	88521604	2	HEX LOCK NUT, #8-32	
21	88561003	9	FLAT WASHER, 5/16	
22	91123124	4	WHIZ-LOCK SCREW, 5/16-18X1/2	
23	91386011	1	ENGINE COVER	
24	91303021	1	T-HANDLE	
25	88501616	2	HEX NUT, 1/4-20	
26		Ref	OPEN CAB ASSEMBLY, (See OPEN CAB for Breakdown)	
27	91403574	1	BACK-UP ALARM	
28	88201016	2	HEX HD CAPSCREW, 5/16-18x1/2, GR5	
29	91083289	1	COUNTER WEIGHT PLATE	
30	91371001	1	DECK COVER	
31	88302125	2	ROUND HD MACHINE SCREW, 1/4-20X5/8	
32	91141436	1	REAR CAB COVER	
33	88201050	2	HEX HD CAPSCREW, 7/16-14X1, GR5	
34	91033029	1	SEAT BELT, (not used with optional seat)	
35	88501007	2	HEX NUT, 7/16-14	
36	91033485	1	SEAT W/ARMREST, (std)	
36	91124107	1	SLIDE ADJ KIT, (used with std seat)	
36	91043237	1	GRAMMER SEAT, (opt)	
36	88201020	4	HEX HD CAPSCREW, 5/16-18X1, GR5, (use with opt seat)	
37	77143006	8	WHIZ-LOCK NUT, 5/16-18	
38	91081475	1	HEATER COVER PLATE	
39	91141329	1	VALVE ACCESS COVER	
40	91361005	1	BELLY PAN	
41	91083533	10	FENDER WASHER, 1-1/2, OD	
42	91033102	1	MANUAL HOLDER	
43	77143013	4	WHIZ-LOCK NUT, 1/4-20	

SECTION 1 - CHASSIS AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
44	91163087	2	LOAD CHART BRACKET	
45	91033320	1	TILT GAGE	
46	88204912	1	HEX HD CAPSCREW, 1/4-20X1, GR5	
47	88561107	1	FLAT WASHER, 1/4	
48	88521204	1	HEX LOCKNUT, 1/4-20	
49	77383118	4	HARDENED WASHER, 7/8	
50	91143357	1	HORN, (includes items 51 & 52)	
51	91144439	1	HORN BRACKET	
52		Ref	NUT	
53	77133177	3	HEX HD CAPSCREW, 5/16-18X1-3/8, GR5	
54	77133168	3	CLAMP SET	
55	77133140	3	COVER PLATE	
56	83201158	4	HEX HD CAPSCREW, 7/8-9X1-3/4, (torque to 450/475 ft lbs)	
57	85211088	2	RUBBER BUMPER	
58	88301073	2	ROUND HD MACHINE SCREW, #8-32X3/4	
59	86683122	1	TIEWRAP	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-2. (91143261) OPEN CAB (SN 0277001 to Present)



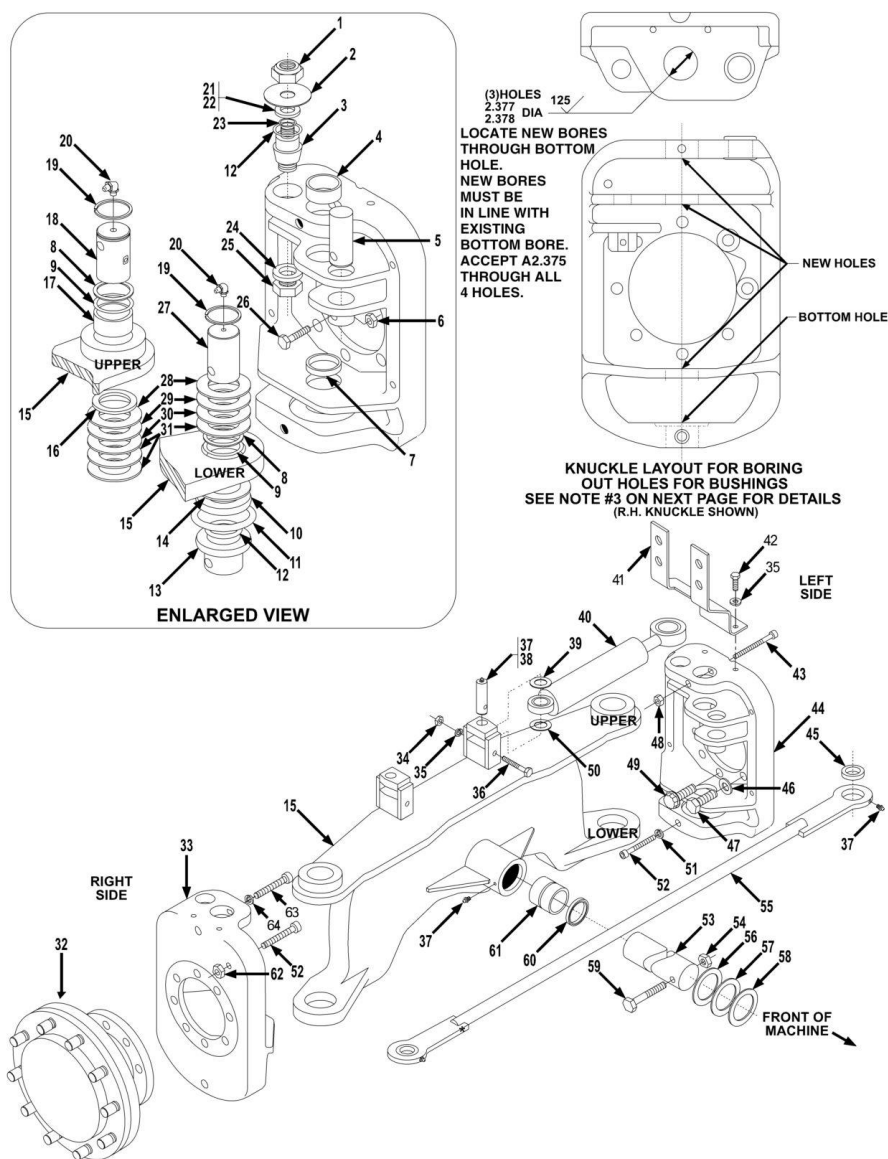
SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-2. (91143261) OPEN CAB (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143261	Ref	OPEN CAB ASSY (includes all items)	
1	91144429	1	CAB WELDMENT	
2	91144430	1	SERIAL TAG	
3	91334003	2	WINDOW CLIP, FLAT	
4	91164092	1	REAR WINDOW	
5	91164088	1	RH SIDE WINDOW	
6	91164086	3	HOLE PLUG, .313	
7	91164087	1	HOLE PLUG, .750	
8	91334004	8	SCREW, #10-32x1	
9	80264032	9.5 ft	SEAL	
10	91164094	1	ROPS WARNING	
11	91334005	2	WINDOW CLIP	
12	91164089	AR	POWER BOND	
13	91164090	AR	HI VISCOSITY URETHANE	

SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-3. REAR AXLE AND ATTACHING PARTS (SN 0277001 to Present)



NOTE #1: Cylinder base end must be free to rotate. Shim steer cylinder base end as required to maintain a total max. gap of 1/16in.

NOTE #2: Shim bottom knuckles as required to maintain no more than 1/32in movement. Shim top knuckles as required to maintain no more than 1/16in gap. Must have a minimum of one shim.

NOTE #3: All machines, Prior to SN 0277194, need to bore Steering Knuckles to use items 4 & 7. See diagram on previous page.

NOTE #4: All machines, Prior to SN 0277194, may have to use items 63 & 64 in place of items 43 & 48. See engineering print that comes with Steering Knuckle Kit for details

NOTE #5: See OPTION SECTION for details on the Rear Axle Advantage Kit

SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-3. REAR AXLE AND ATTACHING PARTS (SN 0277001 to Present)

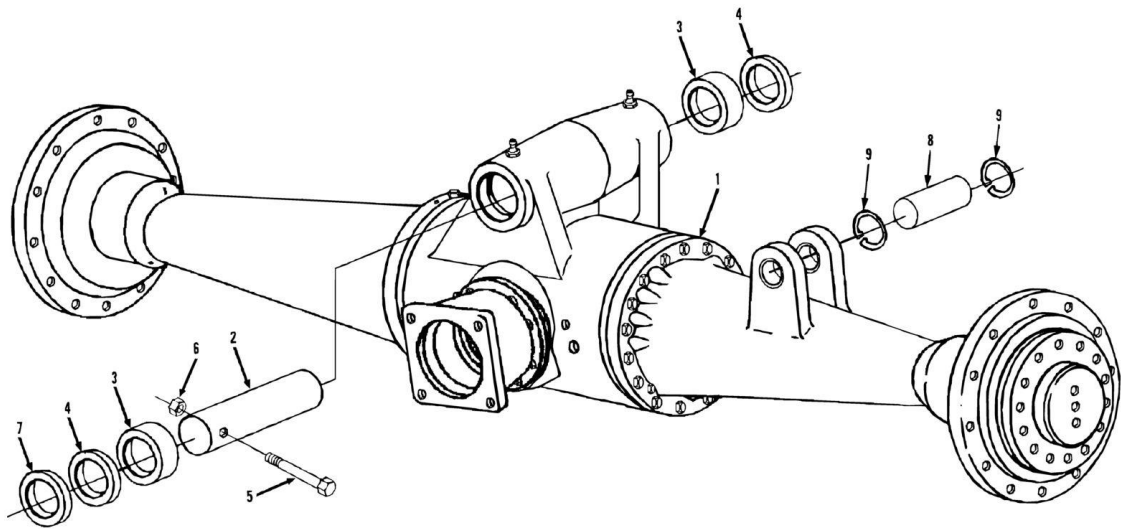
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91035240	1	STEERING KNUCKLE KIT (includes items 2, 4, 7 thru 14, 16 thru 23, 27 thru 31, 43, 48, 51, two of item 52, 63 & 64, one kit does both sides)	
	91045152	AR	STEERING CYLINDER PIN KIT (includes one each of items 1, 2, 3, 12 21 thru 25, one kit needed for each side)	
1	88521312	2	HEX LOCK NUT, 3/4-10, (torque to 160-175 ft lbs)	
2	91081415	2	DIRT SHIELD	
3	91041481	2	STEERING CYLINDER PIN	
4	91121239	2	BUSHING	
5	91041439	2	TIE ROD PIN	
6	88521306	2	LOCK NUT, 3/8-16	
7	91121240	4	BUSHING	
8	91123030	4	BACK-UP RING	
9	88591032	4	O-RING	
10	91123027	2	BUSHING	
11	91123029	2	O-RING	
12	88591104	4	O-RING	
13	91121091	2	THRUST BUSHING	
14	91041733	AR	SHIM, (.032 thick)	
15	91166012	1	REAR AXLE WELDMENT, (includes items 10, 17 & 61)	
16	86921268	2	LIP SEAL	
17	91123028	2	BUSHING	
18	91081693	2	UPPER KING PIN	
19	88581323	4	RETAINING RING	
20	88671022	4	LUBE FITTING, 90, 1/8	
21	91041732	2	SPACER	
22	91041438	AR	SPACER	
23	88591019	2	O-RING	
24	91041459	2	WASHER	
25	88501416	2	HEX JAM NUT, 1-14, (torque to 225-250 ft lbs)	
26	83201140	2	HEX HD CAPSCREW, 3/8-16X2-3/4, GR8	
27	91141424	2	LOWER KING PIN	
28	91041449	AR	SHIM, (.060 thick, see note #2)	
29	91041450	AR	SHIM, (.0478 thick, see note #2)	
30	91041451	AR	SHIM, (.106 thick, see note #2)	
31	91041596	AR	SHIM, (.0359 thick, see note #2)	
32		Ref	DRIVE HUB, 524D ONLY, (See DRIVE TRAIN SECTION for Breakdown)	
32		Ref	NON DRIVE HUB, 522D ONLY, (See DRIVE TRAIN SECTION for Breakdown)	
33	91120004	1	R.H. STEERING KNUCKLE, (see note #3)	
34	88501006	2	HEX NUT, 3/8-16	
35	88551011	6	LOCKWASHER, 3/8	
36	83201144	2	HEX HD CAPSCREW, 3/8-16X5-3/4, GR8	
37	88671001	6	LUBE FITTING, STRAIGHT, 1/8	
38	91081695	2	STEERING CYLINDER PIVOT PIN	
39	91041598	AR	SHIM, (.060 thick, see note #1)	
40		Ref	STEERING CYLINDER ASSY, (See DRIVE TRAIN SECTION for Breakdown)	
41	91081523	1	L.H. TUBE SUPPORT, 524D ONLY	
41	91081522	1	R.H. TUBE SUPPORT, 524D ONLY	

SECTION 1 - CHASSIS AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
42	88201035	4	HEX HD CAPSCREW, 3/8-16X1, GR5	
43	88211121	2	SOCKET HD CAPSCREW, 1/2-13X6-1/2, GR8, (see note #4)	
44	91120003	1	L.H. STEERING KNUCKLE, (see note #3)	
45	91043247	2	SELF-ALIGNING BUSHING	
46	86681572	12	HARDENED WASHER, 3/4	
47	83201006	12	HEX HD CAPSCREW, 3/4-10X2, GR8, (torque to 270-290 ft lbs)	
48	88521208	2	HEX LOCKNUT, 1/2-13, (see note #4)	
49	91043222	4	CAPSCREW 12PT, 3/410X2, GR8, (torque to 270-290 ft lbs)	
50	90201918	AR	SHIM, (10 ga, see note #1)	
51	88551153	2	LOCK WASHER, 5/8	
52	88212321	4	SOCKET HD CAPSCREW, 5/8-11X3-3/4, GR8	
53	91081177	1	REAR AXLE MOUNTING PIN	
54	85101098	1	HEX NUT, 1-1/4-7	
55	91166063	1	TIE ROD, (includes item 45)	
56	91031009	AR	SHIM, (.0598 thick)	
57	91081691	AR	SHIM, (.1046 thick)	
58	90206846	AR	SHIM, (.1345 thick)	
59	90020247	1	HEX HD CAPSCREW, 1-1/4-7X6, GR5	
60	24601570	2	LIP SEAL	
61	91123031	2	BUSHING	
62	88501110	2	HEX NUT, 5/8-11	
63	88211117	2	SOCKET HD CAPSCREW, 1/2-13X4-1/2, GR8, (see note #4)	
64	88551109	2	LOCKWASHER, (hi collar), 1/2, (see note #4)	

SECTION 1 - CHASSIS AND ATTACHING PARTS

FIGURE 1-4. FRONT AXLE MOUNTING (SN 0277001 to Present)



SECTION 1 - CHASSIS AND ATTACHING PARTS

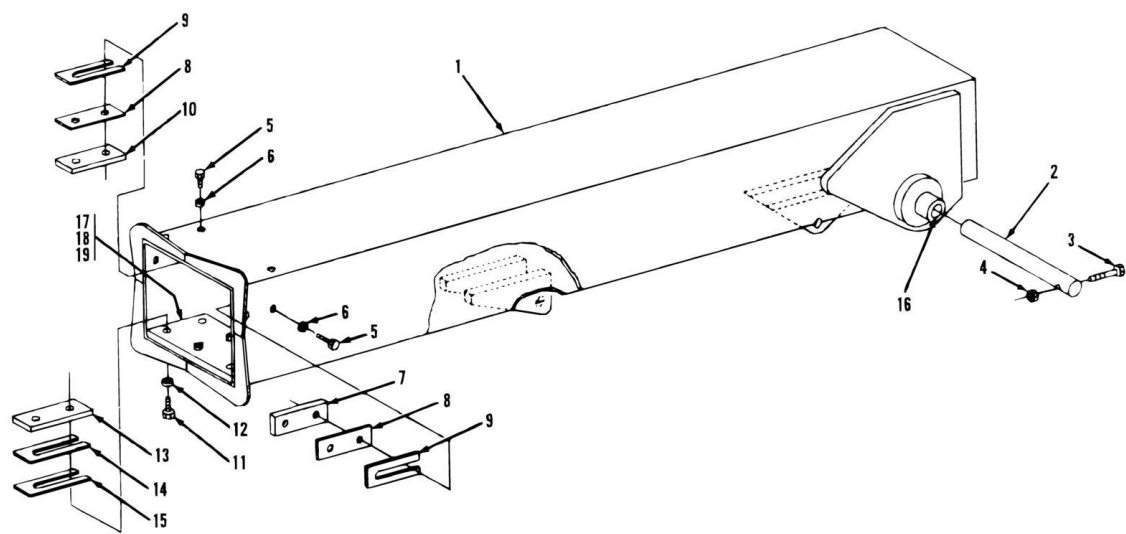
FIGURE 1-4. FRONT AXLE MOUNTING (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	FRONT AXLE (See DRIVE TRAIN SECTION for Breakdown)	
2	91081176	1	FRONT SWAY PIN	
3	90205891	2	SPACER	
4	91031014	1	SHIM WASHER	
5	83201172	1	HEX HD CAPSCREW, 1-8X5, GR8	
6	88521016	1	HEX LOCKNUT, 1-8	
7	91083480	1	SHIM WASHER	
8	91403225	1	PIN	
9	90028935	2	RETAINING RING	

SECTION 2 - BOOM

SECTION 2 - BOOM

FIGURE 2-1. 2 SECTION BOOM (STD) FIRST BOOM SECTION (SN 0277001 to Present)



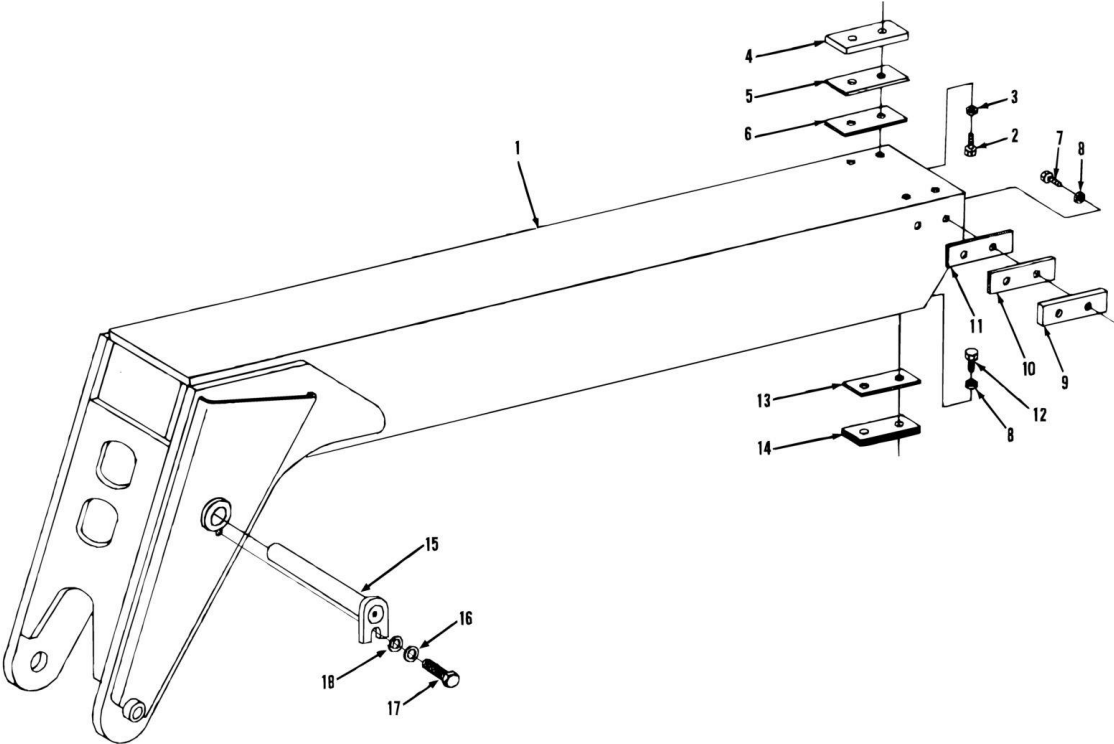
SECTION 2 - BOOM

FIGURE 2-1. 2 SECTION BOOM (STD) FIRST BOOM SECTION (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91086101	1	FIRST BOOM SECTION	
2	91081148	1	PIN	
3	88201107	1	HEX HD CAPSCREW, 5/8-11X5	
4	88501010	1	HEX NUT, 5/8-11	
5	88201532	8	HEX HD CAPSCREW, 3/8-24X3/4, GR5	
5	88201533	AR	HEX HD CAPSCREW, 3/8-24X7/8, GR5	
6	90027470	8	HARDENED FLATWASHER, 3/8	
7	91033186	2	BEARING PAD	
8	91031236	4	SPACER	
9	90205870	4	SHIM	
10	91033189	2	BEARING PAD	
11	88201568	4	HEX HD CAPSCREW, 1/2-20X2, GR5	
11	88201569	AR	HEX HD CAPSCREW, 1/2-20X2-1/4, GR5	
12	90027471	4	HARDENED FLATWASHER, 1/2	
13	91083063	2	BEARING PAD	
14	91081172	2	SPACER	
15	91081171	2	SHIM	
16	91083298	2	BUSHING	
17	91081397	1	BEARING PLATE	
18	88201607	2	HEX HD CAPSCREW, 3/4-16X1-1/4, GR5	
19	90027473	2	WASHER	

SECTION 2 - BOOM

FIGURE 2-2. 2 SECTION BOOM (STD) SECOND BOOM SECTION (SN 0277001 to Present)



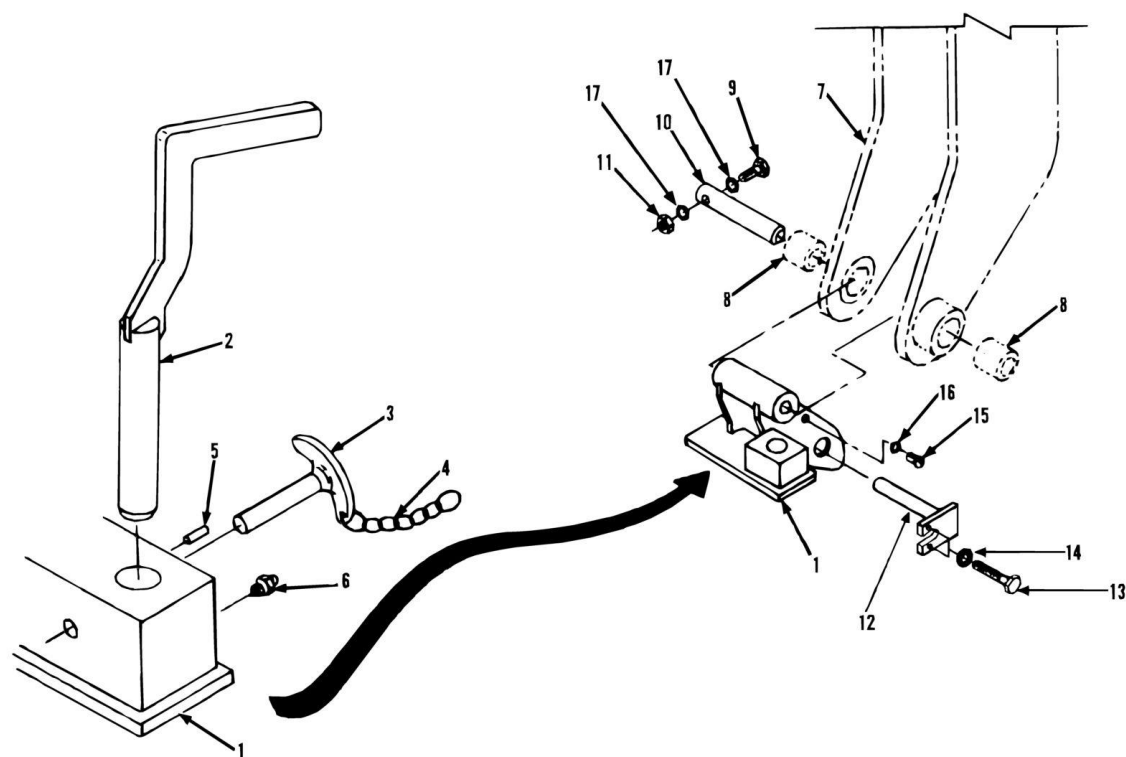
SECTION 2 - BOOM

FIGURE 2-2. 2 SECTION BOOM (STD) SECOND BOOM SECTION (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91086102	1	SECOND BOOM SECTION	
2	88201564	4	HEX HD CAPSCREW, 1/2-20X1, GR5	
3	90027471	4	HARDENED WASHER	
4	91083297	2	BEARING PAD	
5	91081447	2	SPACER	
6	91081448	AR	SHIM	
7	88201532	4	HEX HD CAPSCREW, 3/8-24X3/4, GR5	
7	88201533	AR	HEX HD CAPSCREW, 3/8-24X7/8, GR5	
8	90027470	8	HARDENED FLAT WASHER	
9	91033186	2	BEARING PAD	
10	91031236	2	SPACER	
11	90205870	AR	SHIM	
12	88201537	4	HEX HD CAPSCREW, 3/8-24X1-3/4, GR5	
13	91081457	2	SPACER	
14	91083307	2	BEARING PAD	
15	91146052	1	PIN WELDMENT	
16	88551013	1	LOCKWASHER, 1/2	
17	88201065	1	HEX HD CAPSCREW, 1/2-13 x 1	
18	83621283	1	SPECIAL WASHER	

SECTION 2 - BOOM

FIGURE 2-3. (91085049) QUICK SWITCH OPTION (SN 0277001 to Present)



SECTION 2 - BOOM

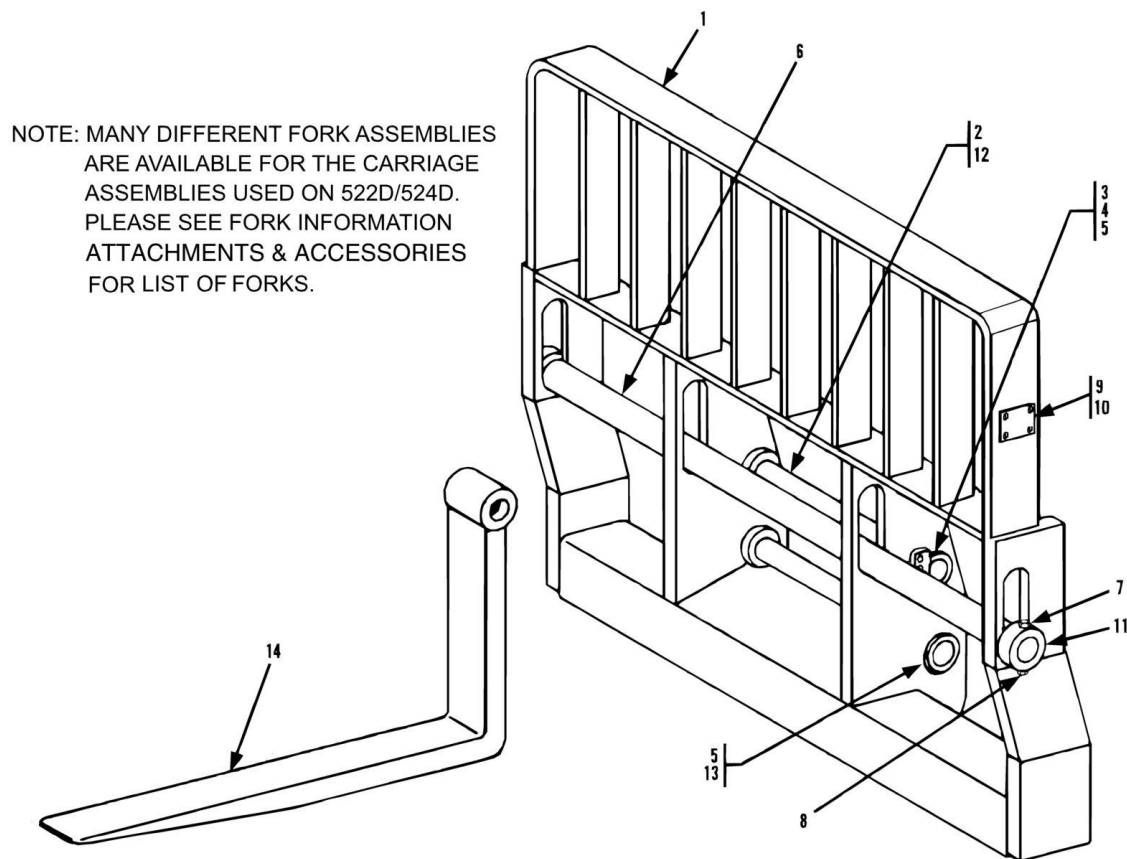
FIGURE 2-3. (91085049) QUICK SWITCH OPTION (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085049	Ref	QUICK SWITCH OPTION (includes 91085091 plus items 9,10, & 11)	
	91085091	1	QUICK SWITCH ASSY (includes items 1 thru 6, 15 & 16)	
1	91086152	1	QUICK SWITCH WELDMENT	
2	91086151	1	PLUNGER WELDMENT	
3	90207902	1	QUICK RELEASE PIN	
4	91033038	1	JACK CHAIN, 5IN LONG, SIZE 12	
5	88631509	1	ROLL PIN, 1/4INX2	
6	88671008	1	LUBE FITTING, STRAIGHT, 1/4-28	
7		Ref	SECOND BOOM SECTION (See 2 SECTION BOOM (STD) SECOND BOOM SECTION)	
8	91031136	2	BUSHING	
9	91121308	1	HEX HD CAPSCREW, 5/8-11X5, GR5	
10	91041365	1	PIN	
11	91121309	1	HEX NUT, 5/8-11	
12	91166062	1	TILT CYLINDER PIN	
13	83201123	2	HEX HD CAPSCREW, 1/2-13X1, GR8	
14	88561111	2	WASHER, 1/2	
15	88301193	1	ROUND HD MACHINE SCREW, #10-32X1/2	
16	88561105	1	FLATWASHER, #10	
17	91121310	2	WASHER, 5/8	

SECTION 3 - ATTACHMENTS

SECTION 3 - ATTACHMENTS

FIGURE 3-1. (91085033) CARRIAGE ASSEMBLY (SN 0277001 to Present)



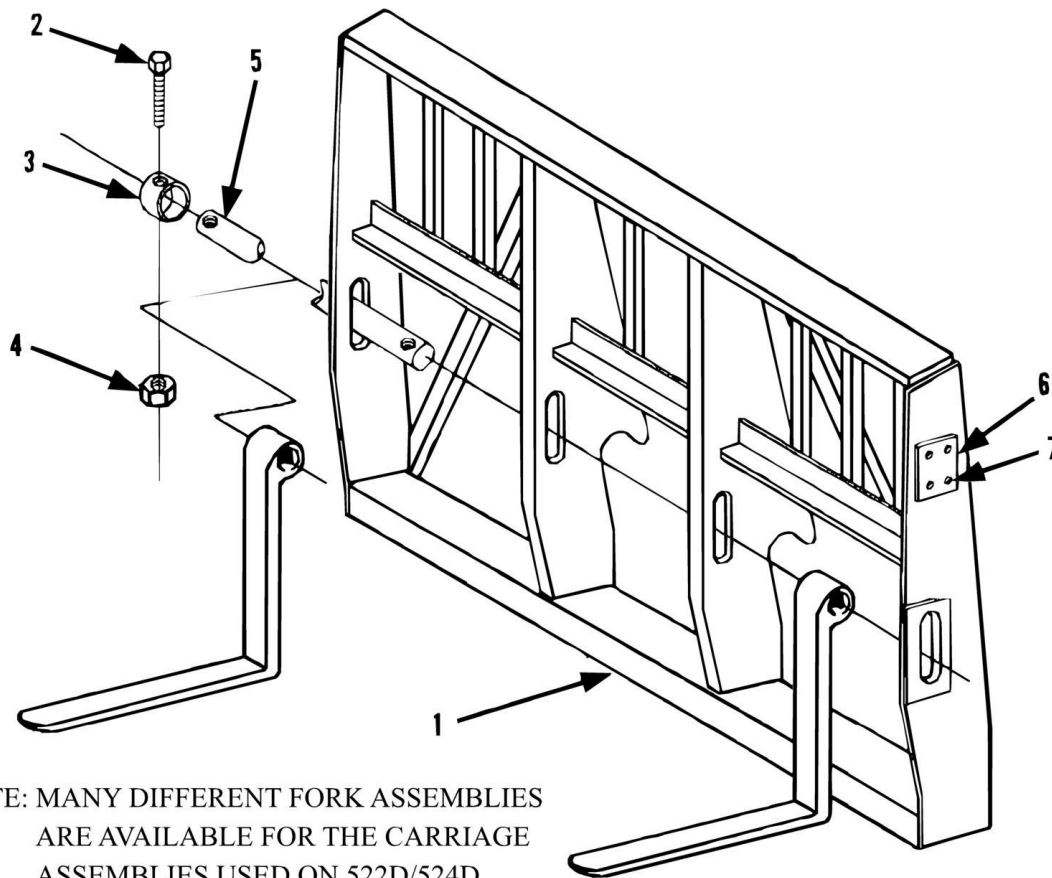
SECTION 3 - ATTACHMENTS

FIGURE 3-1. (91085033) CARRIAGE ASSEMBLY (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085033	Ref	CARRIAGE ASSY, (includes items 1 thru 14)	
1	91086116	1	CARRIAGE	
2	91081369	1	HEAD PIN	
3	91081368	1	RETAINER BAR	
4	88201066	2	HEX HD CAPSCREW, 1/2-13X1-1/4, GR5	
5	88551013	2	LOCKWASHER, 1/2	
6	90451058	1	FORK PIN	
7	88201105	2	HEX HD CAPSCREW, 5/8-11X4, GR5	
8	88521310	2	HEX LOCKNUT, 5/8-11	
9	90153001	1	SERIAL NUMBER PLATE	
10	88341022	4	DRIVE SCREW, #10X3/8	
11	90200003	2	COLLAR	
12	91121124	1	SLEEVE	
13	90207046	Ref	TILT PIN	
14	90453002	2	FORK	
14	90600390	2	CUBING FORK	

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FIGURE 3-2. (90455051) & (90455052) Q.S. CARRIAGE ASSEMBLIES (SN 0277001 to Present)



NOTE: MANY DIFFERENT FORK ASSEMBLIES
ARE AVAILABLE FOR THE CARRIAGE
ASSEMBLIES USED ON 522D/524D.
PLEASE SEE FORK INFORMATION
ATTACHMENTS & ACCESSORIES FOR LIST OF
FORKS.

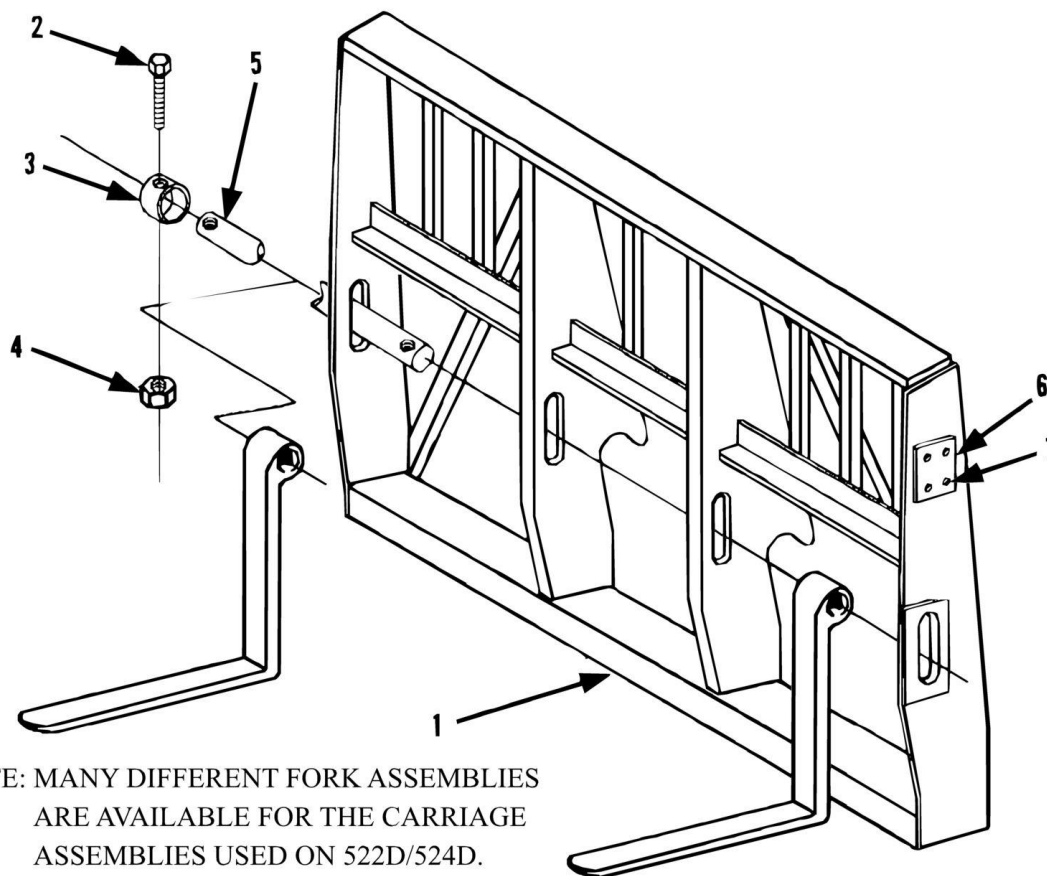
SECTION 3 - ATTACHMENTS

FIGURE 3-2. (90455051) & (90455052) Q.S. CARRIAGE ASSEMBLIES (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90455051	1	48IN CARRIAGE ASSY, (Includes all items)	
1	90456009	1	48IN CARRIAGE WELDMENT	
2	88201105	2	HEX HD CAPSCREW, 5/8-11X4, GR5	
3	90200003	2	COLLAR	
4	88521310	2	HEX LOCKNUT, 5/8-11	
5	90451058	1	FORK PIN	
6	90153001	1	SERIAL NUMBER PLATE	
7	88341022	4	DRIVE SCREW, #10X3/8	

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FIGURE 3-3. (90455051) & (90455052) Q.S. CARRIAGE ASSEMBLIES (SN 0277001 to Present)



NOTE: MANY DIFFERENT FORK ASSEMBLIES
ARE AVAILABLE FOR THE CARRIAGE
ASSEMBLIES USED ON 522D/524D.
PLEASE SEE FORK INFORMATION
ATTACHMENTS & ACCESSORIES
FOR LIST OF FORKS.

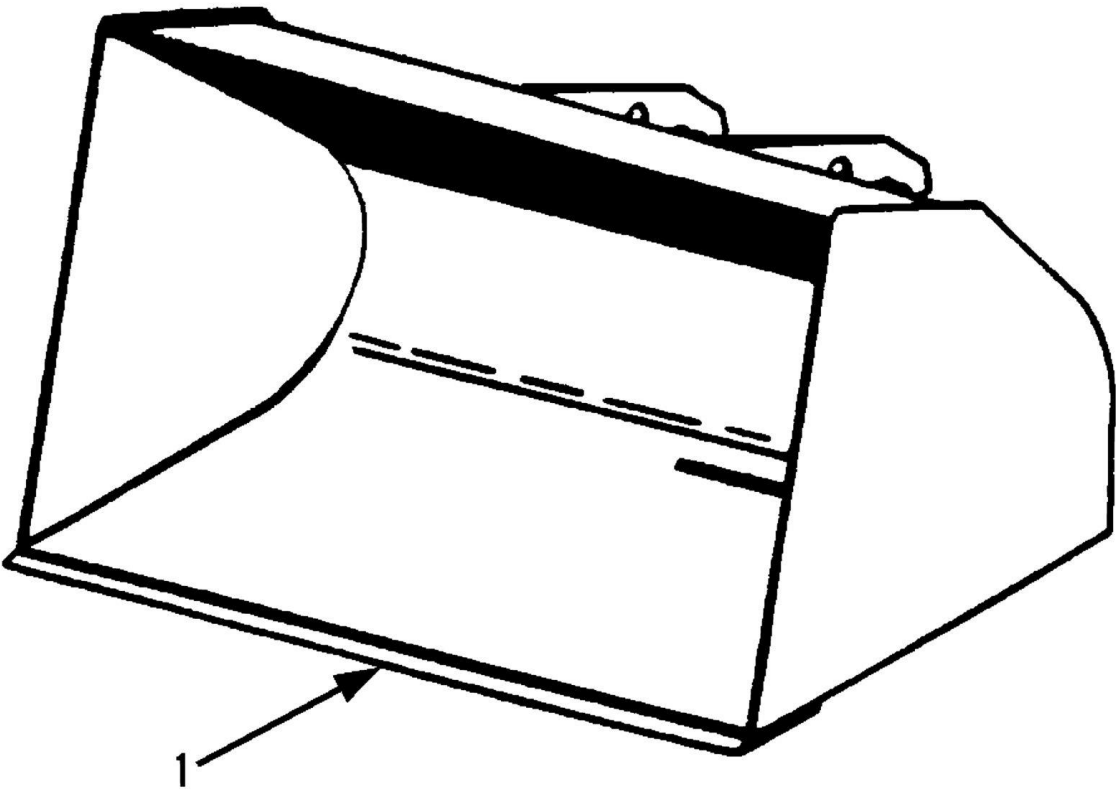
SECTION 3 - ATTACHMENTS

FIGURE 3-3. (90455051) & (90455052) Q.S. CARRIAGE ASSEMBLIES (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90455052	1	66IN CARRIAGE ASSY, (includes all items)	
1	90456010	1	66IN CARRIAGE WELDMENT	
2	88201105	2	HEX HD CAPSCREW, 5/8-11X4, GR5	
3	90200003	2	COLLAR	
4	88521310	2	HEX LOCKNUT, 5/8-11	
5	90402478	1	FORK PIN	
6	90153001	1	SERIAL NUMBER PLATE	
7	88341022	4	DRIVE SCREW, #10X3/8	

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FIGURE 3-4. BUCKETS (SN 0277001 to Present)



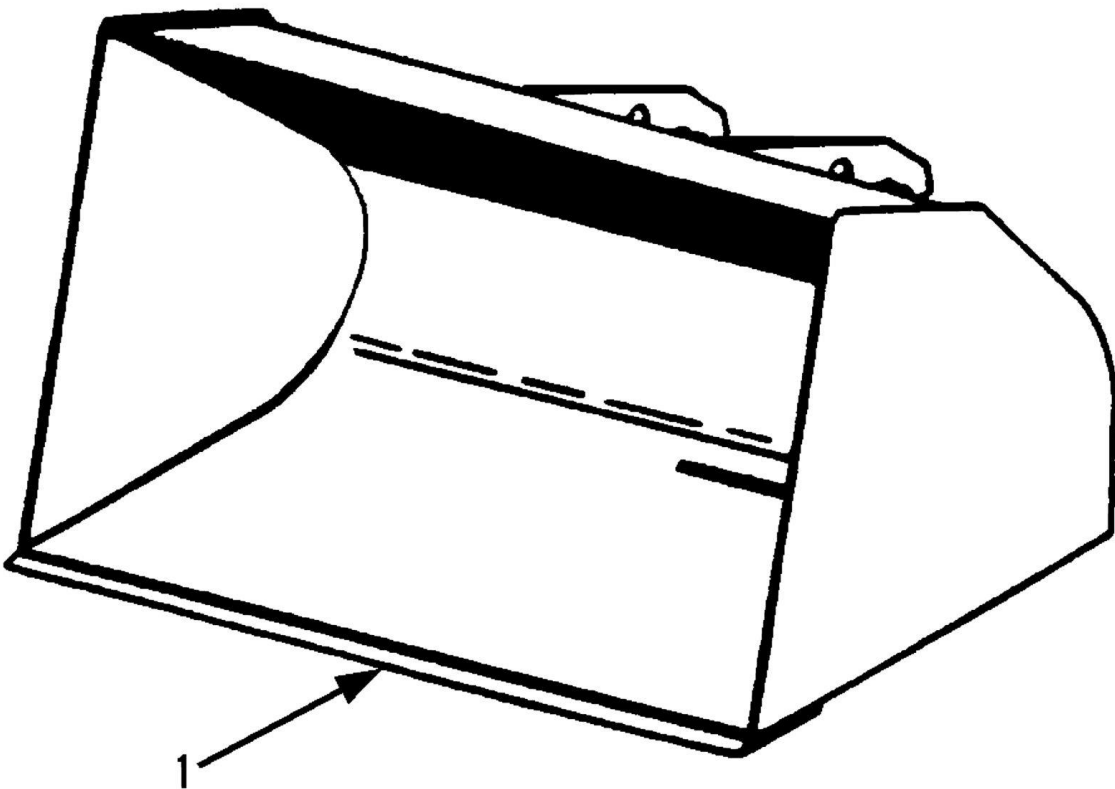
SECTION 3 - ATTACHMENTS

FIGURE 3-4. BUCKETS (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	90455049	1	60IN BUCKET (3/4 yard capacity)	

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FIGURE 3-5. BUCKETS (SN 0277001 to Present)



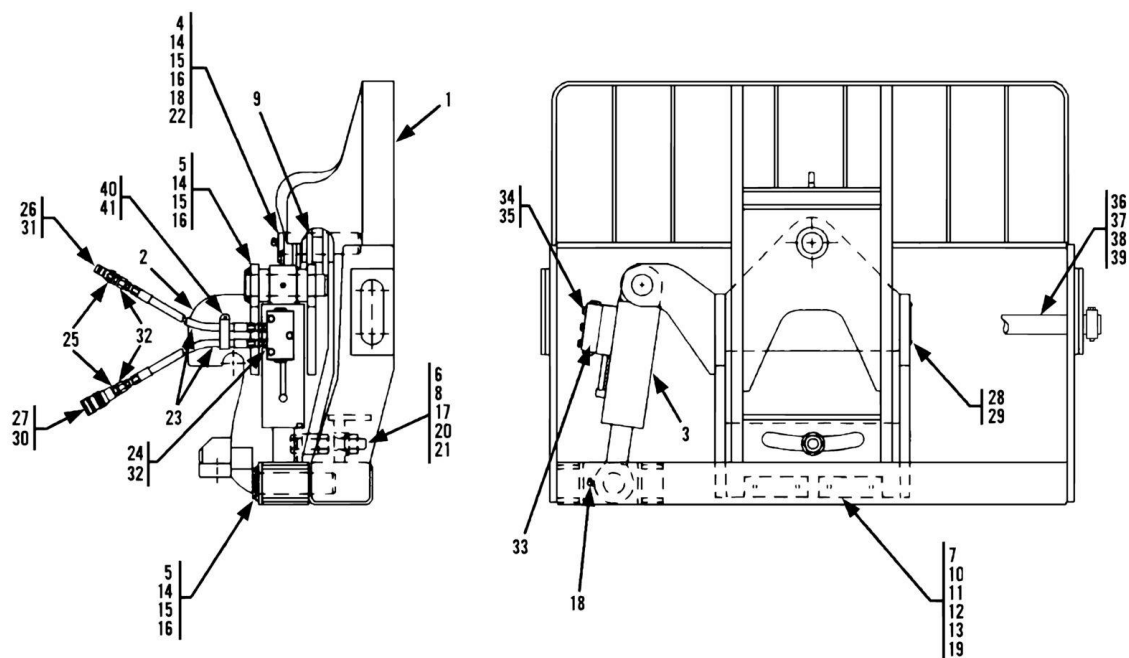
SECTION 3 - ATTACHMENTS

FIGURE 3-5. BUCKETS (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	9055-5020	1	74IN BUCKET (1-1/4 yard capacity)	

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FIGURE 3-6. (91305016) 66IN SLOPE PILER CARRIAGE (SN 0277001 to Present)



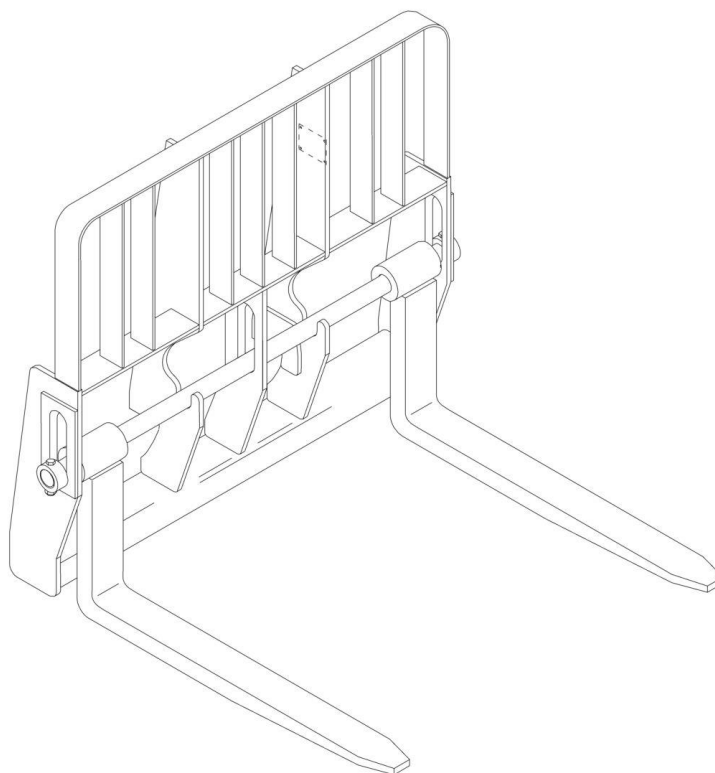
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FIGURE 3-6. (91305016) 66IN SLOPE PILER CARRIAGE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91305016	Ref	66IN SLOPE PILER CARRIAGE, (includes all items)	
1	91306030	1	CARRIAGE WELDMENT	
2	91086122	1	ADAPTER WELDMENT	
3		Ref	SWAY CYLINDER, (See OPTIONAL EQUIPMENT SECTION for Breakdown)	
4	91083248	1	BUSHING	
5	3423263	2	PIN	
6	90204007	1	TUBE	
7	91033186	2	BEARING PAD	
8	91081577	1	TAP BOLT	
9	91081594	1	THRUST WASHER	
10	90205870	AR	SHIM	
11	91031236	2	SPACER	
12	88201535	4	HEX HD CAPSCREW, 3/8-24X1-1/4, GR5	
13	88201534	4	HEX HD CAPSCREW, 3/8-24X1, GR5	
14	91081313	3	KEEPER PLATE	
15	88201065	6	HEX HD CAPSCREW, 1/2-13X1, GR5	
16	88551013	6	LOCKWASHER, 1/2	
17	88521016	1	HEX LOCKNUT, 1-8	
18	88671022	2	LUBE FITTING, 90, 1/8	
19	88561109	4	FLAT WASHER, 3/8	
20	88501016	1	HEX NUT, 1-8	
21	05101441	1	WASHER, 1-1/16	
22	91081622	1	PIN	
23	84716434	2	HOSE ASSY	
24	83661316	2	CONNECTOR	
25	88661010	2	CONNECTOR, (Prior to SN 2005283-01)	
25	88662018	2	CONNECTOR, (SN 2005283-01 to Present)	
26	91163138	1	MALE QUICK DISCONNECT, (Prior to SN 2005283-01)	
26	91403414	1	MALE QUICK DISCONNECT, (SN 2005283-01 to Present)	
27	91163139	1	FEMALE QUICK DISCONNECT, (Prior to SN 2005283-01)	
27	91403413	1	FEMALE QUICK DISCONNECT, (SN 2005283-01 to Present)	
28	88341022	4	DRIVE SCREW, #10X3/8	
29	90153001	1	SERIAL NUMBER PLATE	
30	91043125	1	DUST PLUG	
31	91043126	1	DUST CAP	
32	88662105	2	ELBOW, 90, (swivel nut)	
33		Ref	DUAL P.O. CHECK VALVE, (See OPTIONAL EQUIPMENT SECTION for Breakdown)	
34	88201040	3	HEX HD CAPSCREW, 3/8-16X2-1/4, GR5	
35	88551011	3	LOCKWASHER, 3/8	
36	91301083	1	FORK PIN	
37	90200003	2	COLLAR	
38	88201105	2	HEX HD CAPSCREW, 5/8-11X4, GR5	
39	88521310	2	LOCKNUT, 5/8-11	
40	84521062	1	SUPPORT CLAMP	
41	77143015	1	WHIZ-LOCK NUT, 3/8-16	

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FIGURE 3-7. FORK INFORMATION



NOTE: FORKS RATED LESS THAN THE ATTACHMENT OR MACHINE'S CAPACITY DECREASE CAPACITY OF THE ATTACHMENT OR MACHINE TO THAT OF THE FORKS. FORKS RATED MORE THAN THE ATTACHMENT OR MACHINE'S CAPACITY DO NOT INCREASE ATTACHMENT OR MACHINE'S CAPACITY.

NOTE: PLEASE CONSULT THE GRADALL PARTS DEPARTMENT TO DETERMINE THE CORRECT FORKS APPLICABLE TO YOUR SPECIFIC CARRIAGE ASSEMBLY AND APPLICATION.

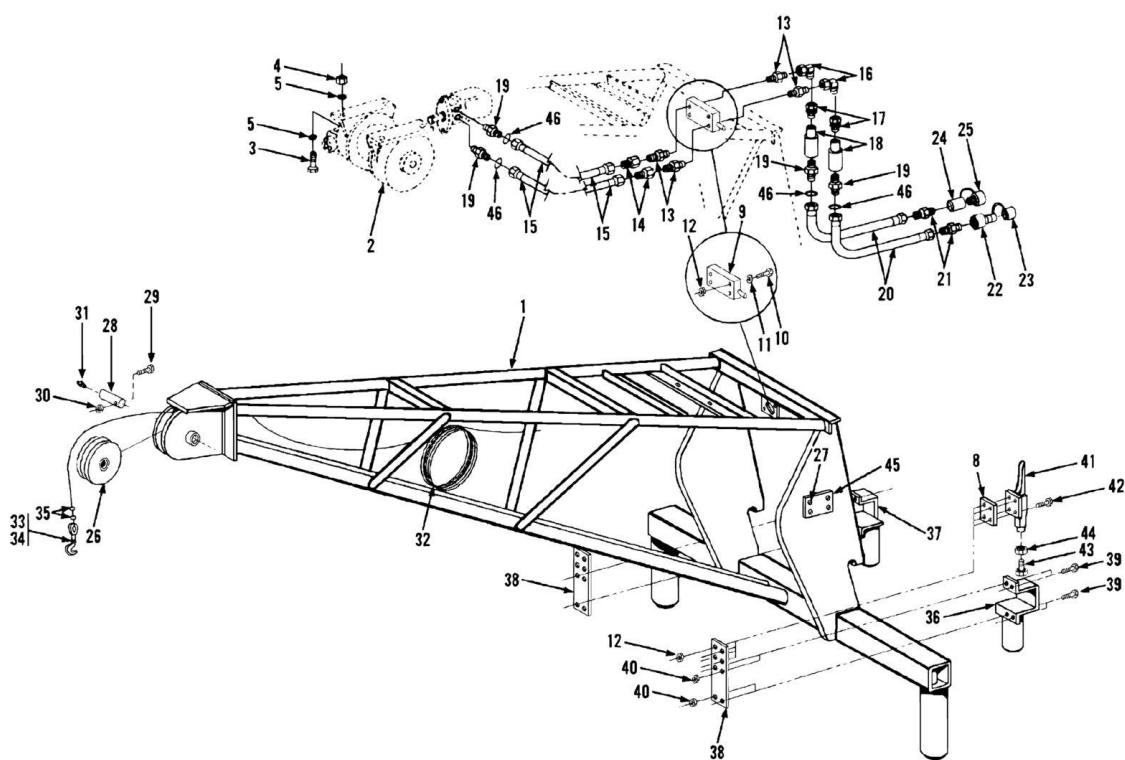
SECTION 3 - ATTACHMENTS

FIGURE 3-7. FORK INFORMATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90600390	2	48IN CUBING FORK, 2X2, 3000 lbs, (B, C and D series)	
	90601819	2	48IN PALLET FORK, 1-3/4X6, 9000 lbs, (B, C and D series)	
	90453002	2	48IN PALLET FORK, 2X4, 8000 lbs, (B, C and D series)	
	90553005	2	48IN PALLET FORK, 2X6, 10,000 lbs, (B, C and D series)	
	90553008	2	48IN PALLET FORK, 1-3/4X4, 5000 lbs, (used on 6ft swing mast only, P/N 90455047)	
	90601015	2	60IN PALLET FORK, 2X6, 10,000 lbs, (B, C and D series)	
	91163269	2	60IN PALLET FORK, 2X6, 11,300 lbs, (B, C and D series)	
	90453045	2	60IN PALLET FORK, 2X6, 11,300 lbs, (used on 6ft swing mast only, P/N 90455054)	
	90553018	2	72IN PALLET FORK, 2X6, 10,000 lbs, (B, C and D series)	
	91123132	2	72IN PALLET FORK, 2X6, 10,000 lbs, (B, C and D series)	
	90600832	2	48IN PALLET FORK, 2-1/4X8, 16,000 lbs, (used on the 542, 552, & 554)	
	90601873	2	48IN PALLET FORK, 2-1/4X7, 15,000 lbs, (used on the 542, 552, & 554)	
	90600833	2	60IN PALLET FORK, 2-1/4X8, 16,000 lbs, (used on the 542, 552 & 554)	
	90601219	2	60IN PALLET FORK, 2-1/2X8, 16,000 lbs, (used on the 542, 552 & 554)	
	90601874	2	60IN PALLET FORK, 2-1/4X7, 15,000 lbs, (used on the 542, 552 & 554)	
	H0453002	2	96IN PALLET FORK, 2X6, 7500 lbs loaded center, (B, C and D series)	
	90553018	2	72IN PALLET FORK, 2X6, 10,000 lbs, (B, C and D series)	

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FIGURE 3-8. (90455012) TRUSS BOOM W/WINCH (SN 0277001 to Present)



SECTION 3 - ATTACHMENTS

FIGURE 3-8. (90455012) TRUSS BOOM W/WINCH (SN 0277001 to Present)

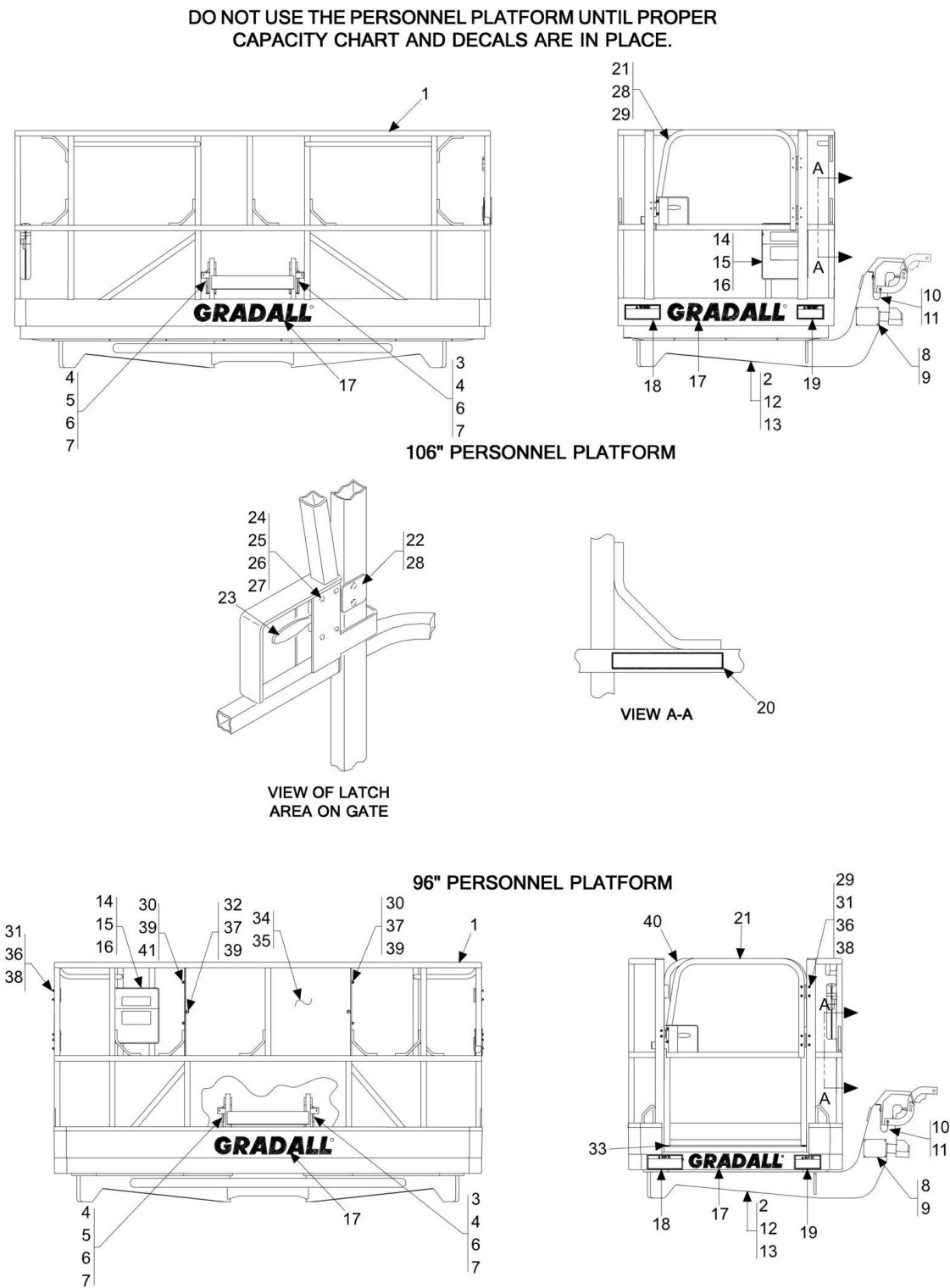
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90455012	1	TRUSS BOOM ASSY W/WINCH, (includes all items)	
1	90801353	1	TRUSS BOOM WELDMENT	
2		Ref	WINCH W/MOTOR, (See OPTIONAL EQUIPMENT SECTION for Breakdown)	
3	88201096	4	HEX HD CAPSCREW, 5/8-11X1-3/4, GR5	
4	88501010	4	HEX NUT, 5/8-11	
5	88561113	8	FLAT WASHER, 5/8	
8	90451047	2	SPACER	
9		Ref	CROSSOVER VALVE, (See OPTIONAL EQUIPMENT SECTION for Breakdown)	
10	88201027	2	HEX HD CAPSCREW, 5/16-18X2-3/4, GR5	
11	88561108	2	FLAT WASHER, 5/16	
12	88501005	10	HEX NUT, 5/16-18	
13	83451104	4	ADAPTER	
14	90029935	2	TUBE REDUCER, 7/8X3/4	
15	90205121	2	HOSE ASSY	
16	88662107	2	ELBOW, 90, (swivel nut)	
17	90453016	2	ADAPTER	
18	90207880	2	FLOW LIMITER	
19	88662019	4	CONNECTOR, (includes item 46)	
20	84717644	2	HOSE ASSY	
21	88661013	2	MALE CONNECTOR, 1/2X1/2, (Prior to SN 2005283-01)	
21	88662006	2	CONNECTOR, (includes 88591205 o-ring), (SN 2005283-01 to Present)	
22	91163138	1	MALE TIP COUPLER, (Prior to SN 2005283-01)	
22	91403414	1	MALE TIP COUPLER, (SN 2005283-01 to Present)	
23	91043126	1	DUST CAP	
24	91163139	1	FEMALE COUPLER, (Prior to SN 2005283-01)	
24	91403413	1	FEMALE COUPLER, (SN 2005283-01 to Present)	
25	91043125	1	DUST PLUG	
26	90403056	1	SHEAVE	
27	88341022	4	DRIVE SCREW, #10X3/8	
28	90402948	1	PIN	
29	88201073	1	HEX HD CAPSCREW, 1/2-13X3, GR5	
30	88501008	1	HEX NUT, 1/2-13	
31	88671001	1	LUBE FITTING, STRAIGHT, 1/8	
32	90207882	1	WIRE ROPE, 3/8IN DIAMETER	
33	91403448	1	SWIVEL HOOK	
34	90026965	1	THIMBLE	
35	90028990	2	WIRE ROPE CLIP	
36	90602905	1	SLIDER BRACKET	
37	90602904	1	SLIDER BRACKET	
38	90403437	2	SLIDER BAR	
39	88201036	8	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
40	88501006	8	HEX NUT, 3/8-16	
41	90207884	2	LOCKING CLAMP	
42	88201021	8	HEX HD CAPSCREW, 5/16-18X1-1/4, GR5	
43	88201035	2	HEX HD CAPSCREW, 3/8-16X1, GR5	
44	88501106	2	HEAVY HEX JAM NUT, 3/8-16	
45	90153001	1	SERIAL NO PLATE	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
46	88591206	4	O-RING	

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FIGURE 3-9. (90555024) PERSONNEL PLATFORM ASSEMBLY (SN 0277706 to Present)



SECTION 3 - ATTACHMENTS

FIGURE 3-9. (90555024) PERSONNEL PLATFORM ASSEMBLY (SN 0277706 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	NOTE: DO NOT USE THE PERSONNEL PLATFORM UNTIL PROPER CAPACITY CHART AND DECALS ARE IN PLACE.	
1	90555024	1	PERSONNEL PLATFORM ASSY, (includes all items)	
		Ref	106IN PERSONNEL PLATFORM, (includes items 21 thru 29)	
	90553034	1	96IN PERSONNEL PLATFORM, (includes items 21 thru 27 & 29 thru 41)	
2	90556020	1	ADAPTER SUPPORT	
3	91146053	1	L.H. SUPPORTBRACKET	
4	91141350	2	PIN	
5	91146054	1	R.H. SUPPORT BRACKET	
6	88631449	2	ROLL PIN, 1/8X1-1/2	
7	91043221	2	DETENT PIN	
8	90553033	1	SERIAL NUMBER PLATE	
9	88341022	4	DRIVE SCREW, #10X3/8	
10	91033039	2	CHAIN CONNECTION	
11	91033038	24 in	CHAIN	
12	86081050	8	HEX HD CAPSCREW, 5/8-11X1-1/2	
13	88551015	8	LOCKWASHER, 5/8	
14	91403230	1	MANUAL HOLDER	
15	77143013	4	WHIZ-LOCK NUT, 1/4-20	
16	90554001	1	PERSONNEL WORK PLATFORM MANUAL	
17	80903009	3	GRADALL DECAL, (106in platform)	
17	77333053	3	GRADALL DECAL, (96in platform)	
18	90553026	1	WARNING DECAL	
19	90553031	1	WARNING DECAL	
20	90553032	AR	LANYARD DECAL	
21	90554006	1	GATE	
22	90554007	1	LATCH PLATE	
23	90554008	1	LATCH	
24	90554009	4	ROUND HD SCREW	
25	90554010	4	HEX NUT, #10-24	
26	90554011	4	WASHER, #10	
27	90554012	4	WASHER	
28	90554013	10	BLIND FASTENER	
29	90554014	2	HINGE	
30	0641524	4	HEX HD CAPSCREW, 5/16-18X3	
31	2080063	16	NYLON LOCK NUT, 1/4-20	
32	2080064	14	NYLON LOCKNUT, 5/16-18	
33	3520072	5	CAP PLUG	
34	3573363	1	GUARD PLATE	
35	3641438	1	BENT RAIL	
36	3911428	16	ROUND HD SCREW, 1/4-20X3/4	
37	3911528	12	ROUND HD SCREW, 5/16-18X3/4	
38	4711400	16	WASHER, 1/4	
39	4711500	32	WASHER, 5/16	
40	4846528	1	BASKET END WELDMENT	
41	3311501	2	HEXNUT, 5/16-18	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

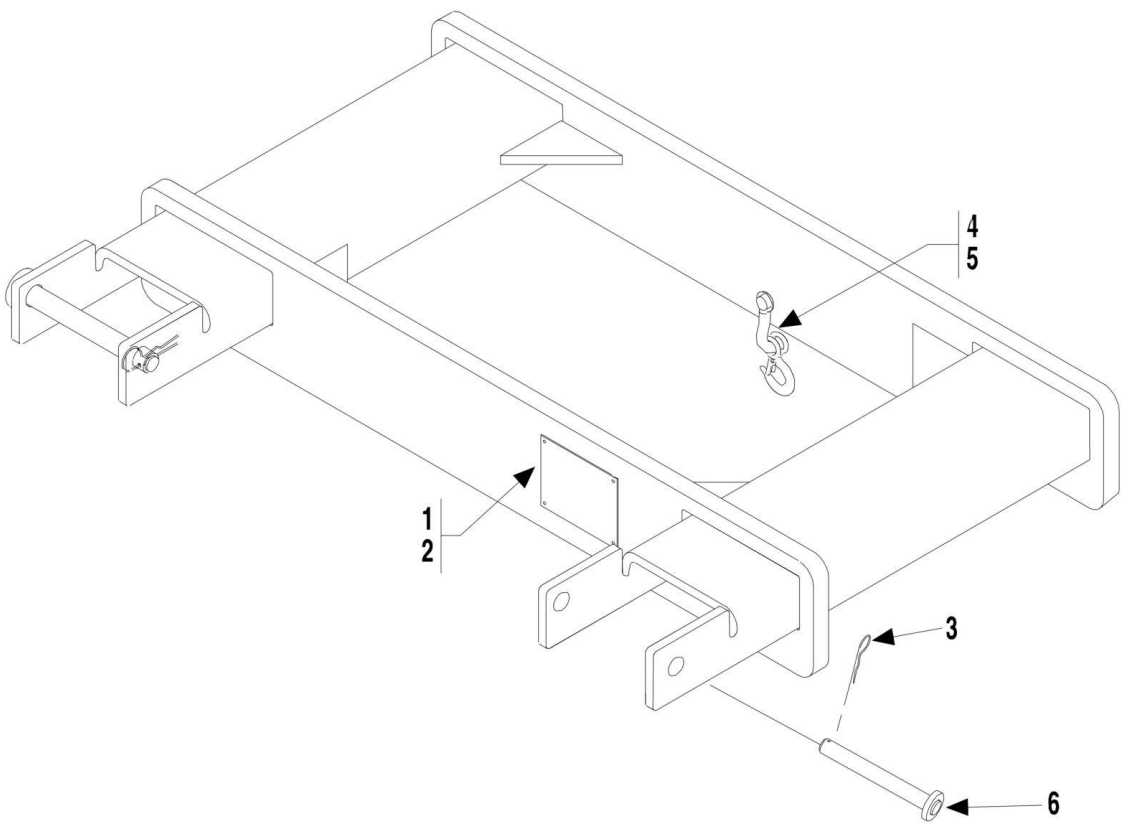
SECTION 3 - ATTACHMENTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	Note	Ref	NOTE: WHEN BUYING THE PERSONNEL PLATFORM ASSEMBLY FOR FIELD INSTALLATION, BE SURE TO ALSO ORDER THE FOLLOWING.	
	91383078	1	CAPACITY CHART- PERSONNEL PLATFORM, (3 section)	
	91383077	1	CAPACITY CHART- PERSONNEL PLATFORM, (2 section)	
	90555025	1	DECAL KIT, (includes all items listed below)	
	90554001	1	PERSONNEL PLATFORM MANUAL	
	91384011	1	GRADALL MATERIAL HANDLER SAFETY MANUAL	
	90553026	1	WARNING DECAL	
	90553027	1	WARNING DECAL	
	90553028	1	WARNING DECAL	
	24604172	1	GRADALL/EMI OPERATOR ORIENTATION VIDEO	
	91334037		OPERATOR'S MANUAL	

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FIGURE 3-10. (90553036) CRANE HOOK (SN 0277701 to Present)

**NOTE: PALLET/LUMBER FORKS OF AN
APPROPRIATE LOAD RATING
MUST BE USED.**



SECTION 3 - ATTACHMENTS

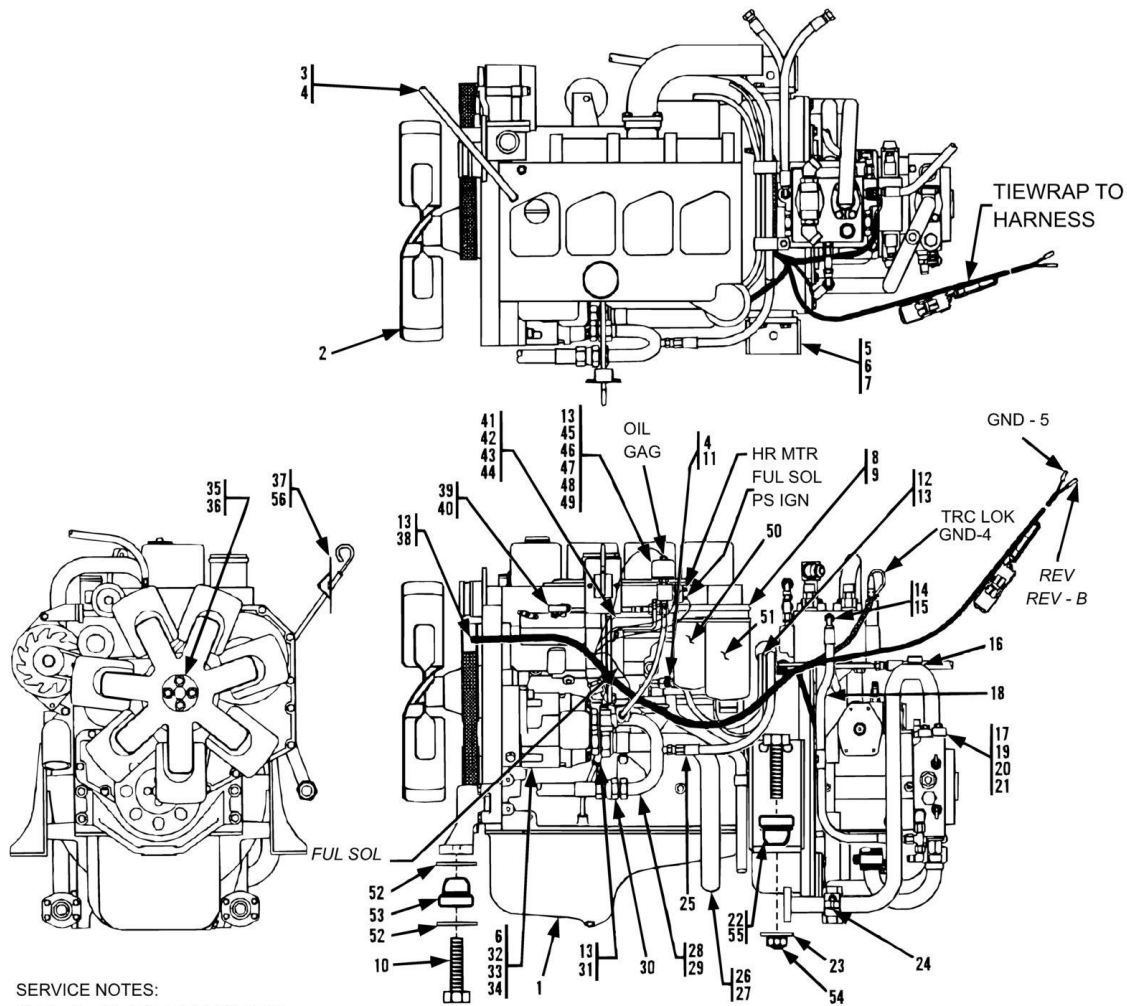
FIGURE 3-10. (90553036) CRANE HOOK (SN 0277701 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90553036	1	CRANE HOOK, (includes all items)	
1	90153001	1	SN ATTACHMENT PLATE	
2	88341022	4	DRIVE SCREW, 3/8	
3	90554078	2	HAIRPIN CLIP, .162X3.43	
4	90554079	1	CLEVIS CONNECTOR	
5	90554080	1	HOOK	
6	90554081	2	PIN	

SECTION 4 - ENGINE AND ATTACHING PARTS

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-1. (91085130) ENGINE LEFT SIDE VIEW (SN 0277001 through 0277085)



SERVICE NOTES:

- 1). Use Loctite 242, P/N 1440-3364, on all bolt & fitting threads except pipe threads.
- 2). Use Loctite pipe sealant, P/N 1440-4082, on all pipe threads.
- 3). Add 12 qts. of oil, P/N 1440-3420, to crankcase.

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-1. (91085130) ENGINE LEFT SIDE VIEW (SN 0277001 through 0277085)

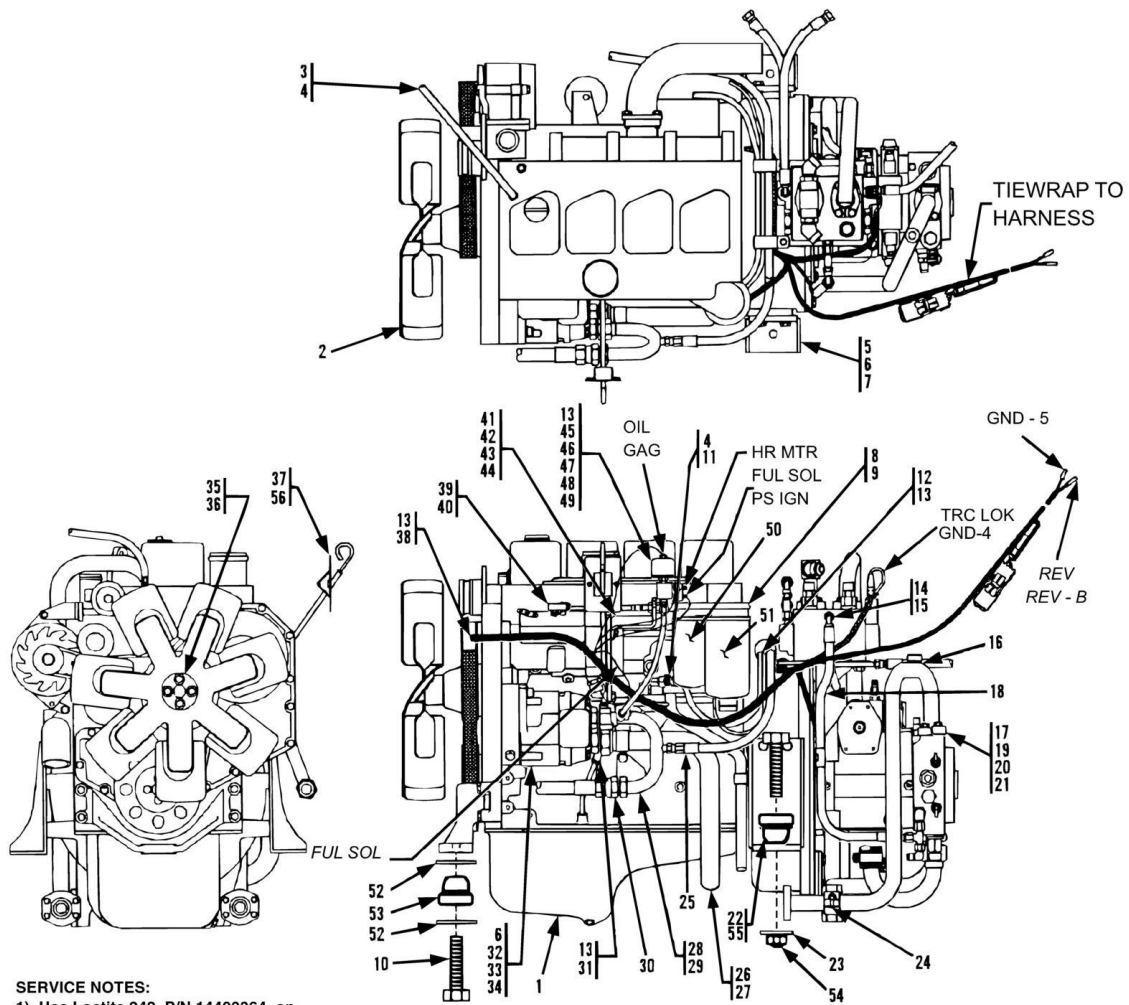
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085053		CUMMINS ENGINE FILTER KIT, (includes all items)	
	91084001		OIL FILTER ELEMENT	
	77383202		PRIMARY FUEL, FILTER ELEMENT	
	77383203		SECONDARY FUEL, FILTER ELEMENT	
	91083218		FUEL FILTER	
	90206262		AIR FILTER ELEMENT	
	91085130	Ref	ENGINE ASSY (includes items on ENGINE LEFT SIDE VIEW except items 10, 22, 23 & 52 thru 55 and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING)	
1	91083012	1	CUMMINS ENGINE, 4B3.9C	
2	91303056	1	FAN ASSY	
3	86883106	2	HOSE CLAMP	
4	Bulk	78 in	FUEL LINE HOSE, 5/16	
5	91336004	2	REAR ENGINE MOUNTING BRACKET	
6	83191010	10	LOCKWASHER, M12	
7	83191032	8	HEX HD CAPSCREW, M12x1.75x35 (torque to 58-68 ft lbs)	
8	91083404	1	THROTTLE CABLE	
9	90028977	1	YOKE END	
10	91083338	1	HEX HD CAPSCREW, M16X2X120	
11	90030271	1	HOSE NIPPLE	
12	Bulk	56 in	FUEL LINE HOSE, 7/32	
13	90027187	6	TIE WRAP	
14	91083306	1	STRAIGHT THREAD CONNECTOR (includes o-ring)	
14	88591206	1	O-RING	
15	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
16	91143055	1	TUBE ASSY	
17	91083106	1	O-RING	
18	77133447	1	HOSE ASSY	
19	84712738	2	SPLIT FLANGE CLAMP	
20	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2, GR8	
21	88551012	4	LOCKWASHER, 7/16	
22	91333003	2	SHOCK MOUNT	
23	91331002	2	SPECIAL WASHER	
24	90205792	1	CUSHION CLAMP	
25	84717934	1	HOSE ASSY	
26	88662011	1	CONNECTOR (includes o-ring)	
26	88591210	1	O-RING	
27	91083144	1	SUCTION TUBE	
28	88662010	1	CONNECTOR (includes o-ring)	
28	88591209	1	O-RING	
29	91323023	1	TUBE ASSY	
30	84717851	1	HOSE ASSY	
31	Bulk	10 in	SPLIT FLEX LOOM, 1/2IN ID	
32	83191057	2	HEX SOCKET HD CAPSCREW, M12x1.75x80 (torque to 50-60 ft lbs)	
33		Ref	MAIN PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
34	90027471	2	HARD WASHER	
35	83191041	4	HEX HD CAPSCREW, M8X1.25X70	
36	88561108	4	FLAT WASHER, 5/16	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
37	91146101	1	DIPSTICK WELDMENT	
38	91123166	1	ENGINE WIRING HARNESS	
39	90027908	1	BALL JOINT	
40	88501613	1	HEX NUT, #10-32	
41	91081243	1	THROTTLE CABLE BRACKET	
42	88201005	2	HEX HD CAPSCREW, 1/4-20X1, GR5	
43	88551009	2	LOCKWASHER, 1/4	
44	88501616	2	HEX NUT, 1/4-20	
45	24741047	1	PRESSURE SWITCH	
46	91143315	1	OIL PRESSURE SENDER	
47	91081388	1	TAPPED BAR	
48	86883075	2	TUBE FITTING	
49	Bulk	18 in	NYLON TUBE, 3/8IN	
50	77383202	1	PRIMARY FUEL FILTER	
51	77383203	1	SECONDARY FUEL FILTER	
52	91081158	2	SPECIAL WASHER	
53	91333002	1	SHOCK MOUNT	
54	88521214	2	LOCKNUT, 7/8-9	
55	77321274	2	HEX HD CAPSCREW, 7/8-9X5	
56	91124125	1	DIPSTICK	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-2. (91085130) ENGINE LEFT SIDE VIEW (SN 0277086 through 0277119)



SERVICE NOTES:

- 1). Use Loctite 242, P/N 14403364, on all bolt & fitting threads except pipe threads.
- 2). Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
- 3). Add 12 qts. of oil, P/N 14403420, to crankcase.

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-2. (91085130) ENGINE LEFT SIDE VIEW (SN 0277086 through 0277119)

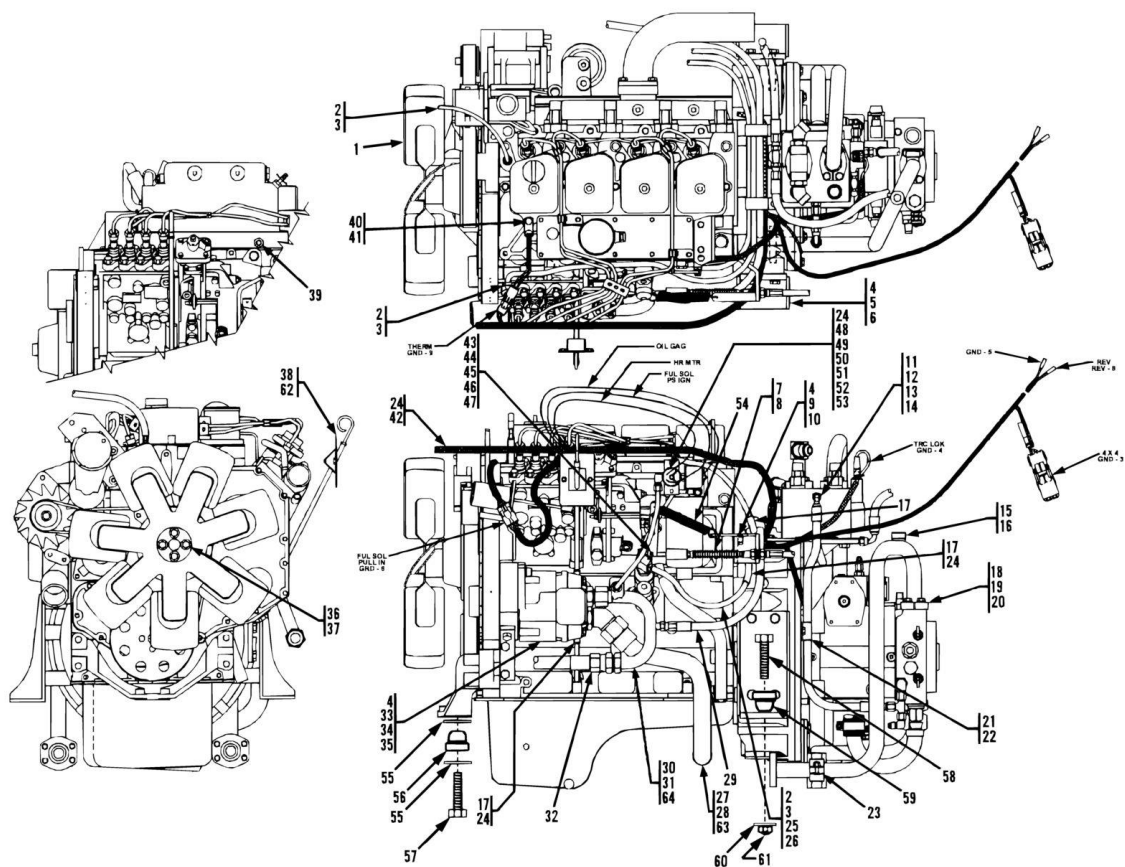
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085053		CUMMINS ENGINE FILTER KIT, (includes all items)	
	91084001		OIL FILTER ELEMENT	
	77383202		PRIMARY FUEL, FILTER ELEMENT	
	77383203		SECONDARY FUEL, FILTER ELEMENT	
	91083218		FUEL FILTER	
	90206262		AIR FILTER ELEMENT	
	91085130	Ref	ENGINE ASSY (includes items on ENGINE LEFT SIDE VIEW except items 10, 22, 23 & 52 thru 55 and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING)	
1	91083012	1	CUMMINS ENGINE, 4B3.9C	
2	91303056	1	FAN ASSY	
3	86883106	2	HOSE CLAMP	
4	Bulk	78 in	FUEL LINE HOSE, 5/16	
5	91336004	2	REAR ENGINE MOUNTING BRACKET	
6	83191010	10	LOCKWASHER, M12	
7	83191032	8	HEX HD CAPSCREW, M12x1.75x35 (torque to 58-68 ft lbs)	
8	91083404	1	THROTTLE CABLE	
9	90028977	1	YOKE END	
10	91083338	1	HEX HD CAP SCREW, M16x2x120	
11	90030271	1	HOSE NIPPLE	
12	Bulk	56 in	FUEL LINE HOSE, 7/32	
13	90027187	6	TIE WRAP	
14	91083306	1	STRAIGHT THREAD CONNECTOR (includes o-ring)	
14	88591206	1	O-RING	
15	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
16	91143055	1	TUBE ASSY	
17	91083106	1	O-RING	
18	77133447	1	HOSE ASSY	
19	84712738	2	SPLIT FLANGE CLAMP	
20	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2, GR8	
21	88551012	4	LOCKWASHER, 7/16	
22	91333003	2	SHOCK MOUNT	
23	91331002	2	SPECIAL WASHER	
24	90205792	1	CUSHION CLAMP	
25	84717934	1	HOSE ASSY	
26	88662011	1	CONNECTOR (includes o-ring)	
26	88591210	1	O-RING	
27	91083144	1	SUCTION TUBE	
28	88662010	1	CONNECTOR (includes o-ring)	
28	88591209	1	O-RING	
29	91323023	1	TUBE ASSY	
30	84717851	1	HOSE ASSY	
31	Bulk	10 in	SPLIT FLEX LOOM, 1/2IN ID	
32	83191057	2	HEX SOCKET HD CAPSCREW, M12x1.75x80 (torque to 50-60 ft lbs)	
33		Ref	MAIN PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
34	90027471	2	HARD WASHER	
35	83191041	4	HEX HD CAPSCREW, M8X1.25X70	
36	88561108	4	FLAT WASHER, 5/16	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
37	91146101	1	DIPSTICK WELDMENT	
38	91333013	1	ENGINE WIRING HARNESS	
39	90027908	1	BALL JOINT	
40	88501613	1	HEX NUT, #10-32	
41	91081243	1	THROTTLE CABLE BRACKET	
42	88201005	2	HEX HD CAPSCREW, 1/4-20X1, GR5	
43	88551009	2	LOCKWASHER, 1/4	
44	88501616	2	HEX NUT, 1/4-20	
45	24741047	1	PRESSURE SWITCH	
46	91143315	1	OIL PRESSURE SENDER	
47	91081388	1	TAPPED BAR	
48	86883075	2	TUBE FITTING	
49	Bulk	18 in	NYLON TUBE, 3/8IN	
50	77383202	1	PRIMARY FUEL FILTER	
51	77383203	1	SECONDARY FUEL FILTER	
52	91081158	2	SPECIAL WASHER	
53	91333002	1	SHOCK MOUNT	
54	88521214	2	LOCKNUT, 7/8-9	
55	77321274	2	HEX HD CAPSCREW, 7/8-9X5	
56	91124125	1	DIPSTICK	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-3. (91385003) EPA ENGINE LEFT SIDE VIEW (SN 0277120 through 0277338)



SERVICE NOTES:

1. Use Loctite, P/N 14403364, on all bolt & fitting threads except pipe threads.
2. Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
3. Add 12 qts. of oil, P/N 14403420, to crankcase.

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-3. (91385003) EPA ENGINE LEFT SIDE VIEW (SN 0277120 through 0277338)

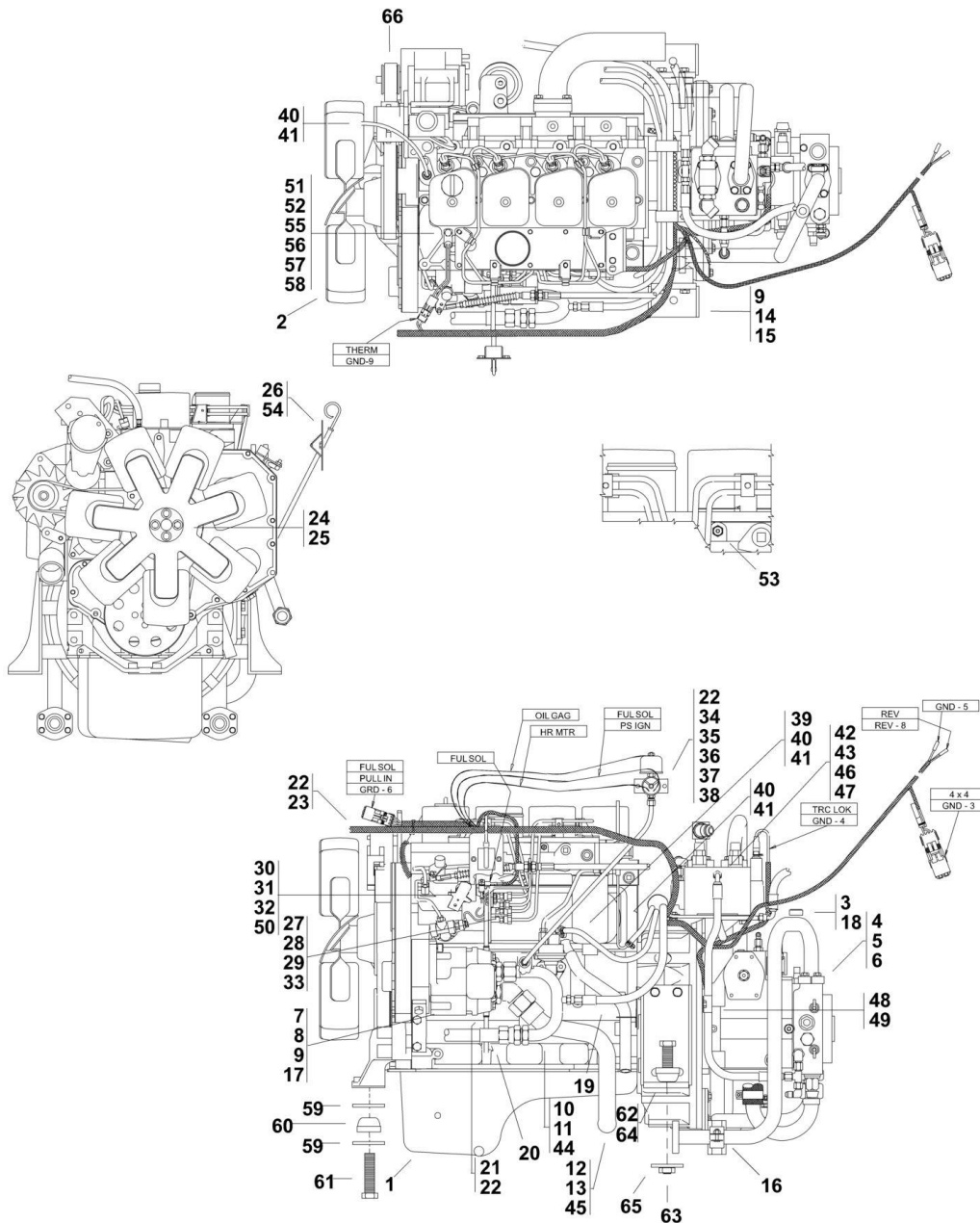
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91375002		ENGINE FILTER KIT, (includes all items)	
	90206262		AIR FILTER	
	91083218		FUEL FILTER	
	77383303		FUEL FILTER	
	91084001		LUBE FILTER	
	91385003	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW except items 55 thru 61, and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING)	
	91383001	1	CUMMINS ENGINE - B3.9C 80HP	
1	91303056	1	FAN ASSY	
2	Bulk	132 in	FUEL LINE HOSE, 5/16	
3	86883106	4	HOSE CLAMP	
4	83191010	12	LOCKWASHER, M12	
5	91336004	2	REAR ENGINE MOUNTING BRACKET	
6	83191032	8	HEX HD CAPSCREW, M12X1.75X35, (torque to 58-68 ft lbs)	
7	91163260	1	ACCELERATOR CABLE	
8	90027684	1	YOKE END	
9	91166075	1	THROTTLE CABLE BRACKET	
10	83191004	2	HEX HD CAPSCREW, M12X1.75X30	
11	77133447	1	HOSE ASSY	
12	91083306	1	CONNECTOR, (includes item 14)	
13	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
14	88591206	1	O-RING	
15	91143055	1	TUBE ASSY	
16	91083106	1	O-RING	
17	Bulk	16 in	SPLIT FLEX LOOM, 1/2IN ID	
18	84712738	2	SPLIT FLANGE CLAMP	
19	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2IN, GR5	
20	88551012	4	LOCKWASHER, 7/16	
21	85941017	1	SUPPORT CLAMP	
22	88561109	1	FLAT WASHER, 3/8	
23	90205792	1	CUSHION CLAMP	
24	90027187	6	TIE WRAP	
25	90030271	1	HOSE NIPPLE	
26	86983649	1	ELBOW, 90, 1/4 PIPE	
27	91323022	1	SUCTION TUBE	
28	88662090	1	ELBOW, 45,(includes item 63)	
29	84717934	1	HOSE ASSY	
30	91323023	1	TUBE ASSY	
31	88662010	1	CONNECTOR, (includes item 64)	
32	84717851	1	HOSE ASSY	
33		Ref	MAIN PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
34	83191057	2	HEX SOCKET HD CAPSCREW, M12X1.75X80	
35	90027471	2	HARD WASHER	
36	83191041	4	HEX HD CAPSCREW, M8X1.25X70	
37	88561108	4	FLATWASHER, 5/16	
38	91146101	1	DIP-STICK WELDMENT	
39	91363029	1	ATOMIZER, 1/8	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
40	91365014	1	QUICK START THERMOSTAT ASSY, (includes the following four items)	
40	80963058	1	SHROUD	
40	80963065	2	CABLE SEAL, GREEN	
40	80963069	2	MALEPIN TERMINAL	
40	91363031	1	THERMOSTAT	
41	83191038	1	HEX HD CAPSCREW, M10X1.50X20	
42	91333013	1	WIRING HARNESS, ENGINE	
43	91161323	1	THROTTLE BAR	
44	83191035	2	SOCKET HD SCREW, M6X1.00X16	
45	83191012	2	LOCKWASHER, M6	
46	91143345	1	BALL SOCKET	
47	91143344	1	OVER TRAVEL	
48	24741047	1	PRESSURE SWITCH	
49	91143315	1	OIL PRESSURE SENDER	
50	91081388	1	TAPPED BAR	
51	86883075	1	TUBE FITTING	
52	Bulk	18 in	NYLON TUBE, 3/8IN	
53	86883074	1	TUBE FITTING, 90	
54	91163259	1	THROTTLE SPRING	
55	91081158	2	SPECIAL WASHER	
56	91333002	1	SHOCK MOUNT	
57	91083338	1	HEX HD CAPSCREW, M16X2X120	
58	77321274	2	HEX HD CAPSCREW, 7/8-9X5	
59	91333003	2	SHOCK MOUNT	
60	91331002	2	SPECIAL WASHER	
61	88521214	2	HEX LOCKNUT, 7/8-9	
62	91124125	1	DIPSTICK	
63	88591210	1	O-RING	
64	88591209	1	O-RING	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-4. (91385020) EPA ENGINE LEFT SIDE VIEW (SN 0277339 to Present)



CAUTION

Pay close attention to Serial Number of machine when ordering Engine Filter Kits.

SERVICE NOTES:

1. Use Loctite, P/N 14403364, on all bolt & fitting threads except pipe threads.
2. Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
3. Add 12 qts. of oil, P/N 14403420, to crankcase.

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-4. (91385020) EPA ENGINE LEFT SIDE VIEW (SN 0277339 to Present)

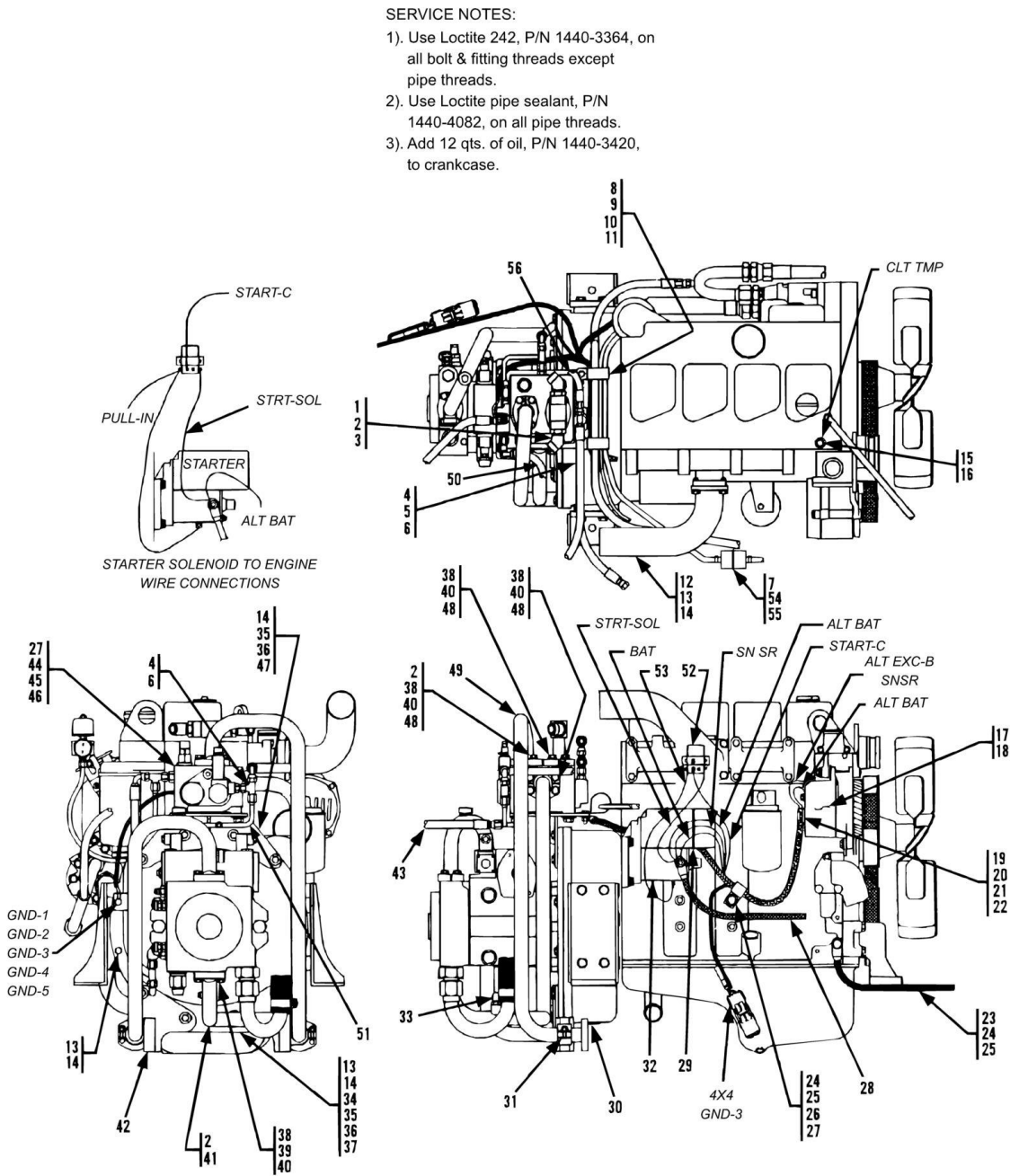
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91375002		ENGINE FILTER KIT, (includes all items) (SN 0277120 through 0277594)	
	90206262		AIR FILTER	
	91083218		FUEL FILTER	
	77383303		FUEL FILTER	
	91084001		LUBE FILTER	
	91335033		ENGINE FILTER KIT, (includes all items) (SN 0277595 to Present)	
	91084001		OIL FILTER ELEMENT	
	77383303		FUEL FILTER ELEMENT	
	91083218		FUEL FILTER	
	91403103		AIR FILTER SAFETY ELEMENT	
	91403102		AIR FILTER	
	91385020	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW except items 59 thru 65 and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING)	
1	91333031	1	CUMMINS ENGINE, B3.9C80HP	
2	91303056	1	FAN ASSY	
3	91143055	1	TUBE ASSY	
4	84712738	2	SPLIT FLANGE CLAMP	
5	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2	
6	88551012	4	LOCKWASHER, 7/16	
7		Ref	MAIN PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
8	83191057	2	SOCKET HD CAPSCREW, M12X1.75X80	
9	83191010	10	LOCKWASHER, M12	
10	91323023	1	TUBE ASSY	
11	88662010	1	CONNECTOR, (includes item 44)	
12	91323022	1	SUCTION TUBE	
13	88662090	1	ELBOW, 45, (includes item 45)	
14	91336004	2	REAR ENGINE MOUNTING BRACKET	
15	83191032	8	HEX HD CAPSCREW, M12X1.75X35	
16	90205792	1	CUSHION CLAMP	
17	90027471	2	HARD WASHER	
18	91083106	1	O-RING	
19	84717934	1	HOSE ASSY	
20	84717851	1	HOSE ASSY	
21	Bulk	10 in	1/2, ID SPLITFLEX LOOM	
22	90027187	4	TIE WRAP	
23	91333013	1	ENGINE WIRING HARNESS	
24	83191041	4	HEX HD CAPSCREW, M8X1.25X70	
25	88561108	4	FLAT WASHER, 5/ 16	
26	91146101	1	DIPSTICK WELDMENT	
27	88201003	2	HEX HD CAPSCREW, 1/4-20X3/4, GR5	
28	88551009	2	LOCKWASHER, 1/4	
29	88501616	2	HEX NUT, 1/4-20	
30	83683246	1	BALL JOINT TERMINAL	
32	91163260	1	ACCELERATOR CABLE	
33	91331020	1	THROTTLE CABLE BRACKET	
34	24741047	1	PRESSURE SWITCH	
35	91143315	1	OIL PRESSURE SENDER	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
36	91081388	1	TAPPED BAR	
37	86883075	2	TUBE FITTING	
38	Bulk	18 in	3/8, NYLON TUBE	
39	90030271	1	HOSE NIPPLE	
40	Bulk	114 in	FUEL LINE HOSE, 5/16	
41	86883106	4	HOSE CLAMP	
42	77133447	1	HOSE ASSY	
43	91083306	1	STRAIGHT THREAD CONNECTOR	
44	88591209	1	O-RING	
45	88591210	1	O-RING	
46	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
47	88591206	1	O-RING	
48	85941017	1	SUPPORT CLAMP	
49	88561109	1	FLAT WASHER, 3/8	
50	90027684	1	YOKE END	
51	91365014	1	QUICK START THERMOSTAT ASSY, (includes items 55 thru 58)	
52	83191038	1	HEX HD CAPSCREW, M10X1.5X20	
53	91363029	1	ATOMIZER, 1/8	
54	91124125	1	DIPSTICK	
55	91363031	1	THERMOSTAT	
56	80963058	1	SHROUD CONNECTOR, 2-WIRE	
57	80963069	2	MALE PIN TERMINAL	
58	80963065	2	CABLE SEAL	
59	91081158	2	REBOUND WASHER	
60	91333002	1	SHOCK MOUNT	
61	91083338	1	HEX HD CAPSCREW, M16X120	
62	77321274	2	HEX HD CAPSCREW, 7/8-9X5	
63	88521214	2	HEX LOCKNUT, 7/8-9	
64	91333003	2	SHOCK MOUNT	
65	91331002	2	REBOUND WASHER	
66	91084162	1	FAN BELT	
		Ref	NOTE: ONLY ITEMS WITH PARTS NUMBER ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-5. (91085130) ENGINE RIGHT SIDE VIEW (SN 0277001 through 0277085)



SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-5. (91085130) ENGINE RIGHT SIDE VIEW (SN 0277001 through 0277085)

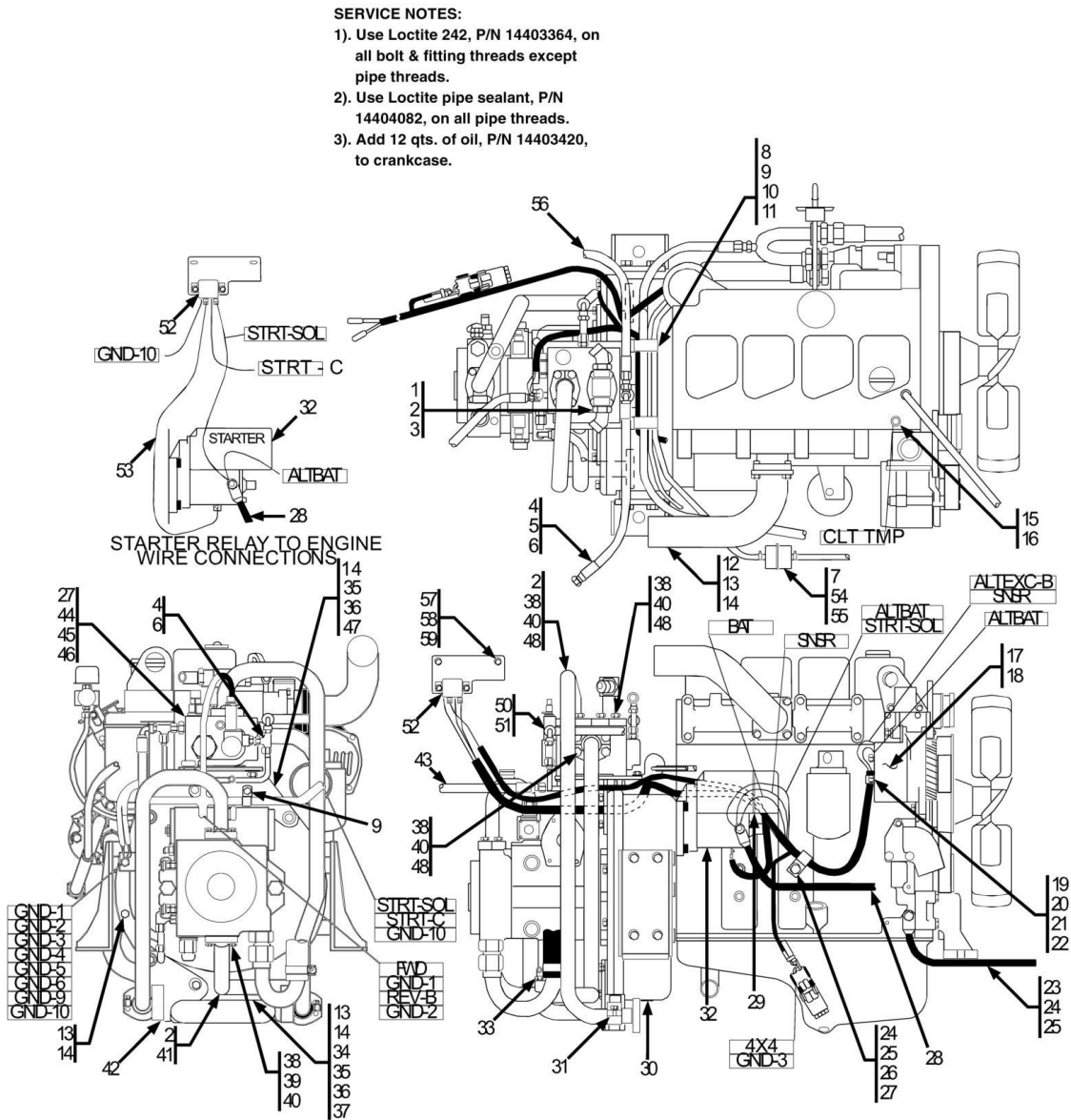
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91083266	1	TUBE ASSY	
2	91083106	4	O-RING	
3	88662421	2	ELBOW 45, (includes o-ring)	
3	88591207	1	O-RING	
4	88662224	2	SWIVEL NUT BRANCH TEE, 3/8IN TUBE	
5	84717889	1	HOSE ASSY	
6	88662005	2	CONNECTOR (includes o-ring)	
6	88591204	2	O-RING	
7	Bulk	11 in	3/8IN HOSE	
8	88201020	2	HEX HD CAP SCREW, 5/16-18x1 GR5	
9	24861170	2	SUPPORT CLAMP	
10	88521205	2	HEXNUT, 5/16-18	
11	90028660	2	SUPPORT CLAMP	
12	91086055	1	EXHAUST TUBING	
13	83191021	9	HEX HD CAPSCREW, M10X1.5X30	
14	83191013	16	LOCKWASHER, M10	
15	91143314	1	WATER TEMP SENDER	
16	88711385	1	REDUCER BUSHING, 1/2x1/8	
17	91083504	1	REGULATOR (supplied w/alternator)	
18	91083503	1	ALTERNATOR (includes regulator)	
19	83191007	1	HEX HD CAPSCREW, M8X1.25X16	
20	85941016		SUPPORT CLAMP, 1/2IN ID	
21	88561108	1	FLAT WASHER, 5/ 16	
22	83191011	1	LOCKWASHER, M-8	
23	91083481	1	NEGATIVE BATTERY CABLE	
24	83191004	2	HEX HD CAPSCREW, M12X1.75X30	
25	83191010	2	LOCKWASHER, M12	
26	91143122	1	SUPPORT CLAMP, 5/8IN	
27	88561111	3	FLAT WASHER, 1/2	
28	91083482	1	POSITIVE BATTERY CABLE	
29	90027187	1	TIE WRAP	
30	88711284	1	HEX SOCKET PIPE PLUG, 3/4	
31	90205792	1	CUSHION CLAMP	
32	91083456	1	STARTER (loctite and torque mounting screws to 32 ft-lb)	
33	88662064	1	ELBOW, 90, (includes o-ring)	
33	88591204	1	O-RING	
34	83191005	2	HEX HD CAPSCREW, M10X1.5X45	
35	88561109	7	FLAT WASHER, 3/8	
36	83191006	5	HEX HD CAPSCREW, M10X1.5X40	
37	91336003	1	TUBE SUPPORT	
38	88551012	16	LOCKWASHER, 7/16	
39	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2	
40	84712738	8	SPLIT FLANGE CLAMP	
41	91163201	1	TUBE ASSY	
42	91086131	1	TUBE SUPPORT	
43	84719142	1	HOSE ASSY	
44		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
45	88201065	2	HEX HD CAP SCREW, 1/2-13X1, GR5	
46	88551013	2	LOCKWASHER, 1/2	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
47	91146058	1	FLOW DIVIDER BRACKET	
48	83201155	12	HEX HD CAPSCREW, 7/16-14x1-1-3/4	
49	91333004	1	TUBE ASSY	
50	84718185	1	HOSE ASSY	
51	91163098	1	FLOW DIVIDER TUBE	
52	90402427	1	STARTER SOLENOID (relay)	
53	90205205	1	JUMPER WIRE	
54	91083218	1	FUEL STRAINER	
55	83483497	2	HOSE CLAMP	
56	84719141	1	HOSE ASSY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-6. (91085130) ENGINE RIGHT SIDE VIEW (SN 0277086 through 0277119)



SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-6. (91085130) ENGINE RIGHT SIDE VIEW (SN 0277086 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91083266	1	TUBE ASSY	
2	91083106	4	O-RING	
3	88662421	2	ELBOW, 45, (includes o-ring)	
3	88591207	1	O-RING	
4	88662224	2	SWIVEL NUT BRANCH TEE, 3/8IN TUBE	
5	84717889	1	HOSE ASSY	
6	88662005	2	CONNECTOR (includes o-ring)	
6	88591204	2	O-RING	
7	Bulk	11 in	3/8IN HOSE	
8	88201020	2	HEX HD CAP SCREW, 5/16-18x1 GR5	
9	24861170	3	SUPPORT CLAMP	
10	88521205	2	HEX NUT, 5/16-18	
11	90028660	2	SUPPORT CLAMP	
12	91086055	1	EXHAUST TUBING	
13	83191021	9	HEX HD CAPSCREW, M10X1.5X30	
14	83191013	16	LOCK WASHER, M10	
15	91143314	1	WATER TEMP SENDER	
16	88711385	1	REDUCER BUSHING, 1/2x1/8	
17	91083504	1	REGULATOR (supplied w/alternator)	
18	91083503	1	ALTERNATOR (includes regulator)	
19	83191007	1	HEX HD CAPSCREW, M8X1.25X16	
20	85941016	1	SUPPORT CLAMP, 1/2IN ID	
21	88561108	1	FLAT WASHER, 5/ 16	
22	83191011	1	LOCKWASHER, M-8	
23	91083481	1	NEGATIVE BATTERY CABLE	
24	83191004	2	HEX HD CAPSCREW, M12X1.75X30	
25	83191010	2	LOCKWASHER, M12	
26	91143122	1	SUPPORT CLAMP, 5/8IN	
27	88561111	3	FLAT WASHER, 1/2	
28	91083482	1	POSITIVE BATTERY CABLE	
29	90027187	1	TIE WRAP	
30	88711284	1	HEX SOCKET PIPE PLUG, 3/4	
31	90205792	1	CUSHION CLAMP	
32	91083456	1	STARTER (loctite and torque mounting screws to 32 ft-lb)	
33	88662064	1	ELBOW, 90, (includes o-ring)	
33	88591204	1	O-RING	
34	83191005	2	HEX HD CAPSCREW, M10X1.5X45	
35	88561109	7	FLAT WASHER, 3/8	
36	83191006	5	HEX HD CAPSCREW, M10X1.5X40	
37	91336003	1	TUBE SUPPORT	
38	88551012	16	LOCKWASHER, 7/16	
39	83201135	4	HEX HD CAP SCREW, 7/16-14x1-1/2	
40	84712738	8	SPLIT FLANGE CLAMP	
41	91163201	1	TUBE ASSY	
42	91086131	1	TUBE SUPPORT	
43	84719142	1	HOSE ASSY	
44		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
45	88201065	2	HEX HD CAP SCREW, 1/2-13X1, GR5	
46	88551013	2	LOCKWASHER, 1/2	

SECTION 4 - ENGINE AND ATTACHING PARTS

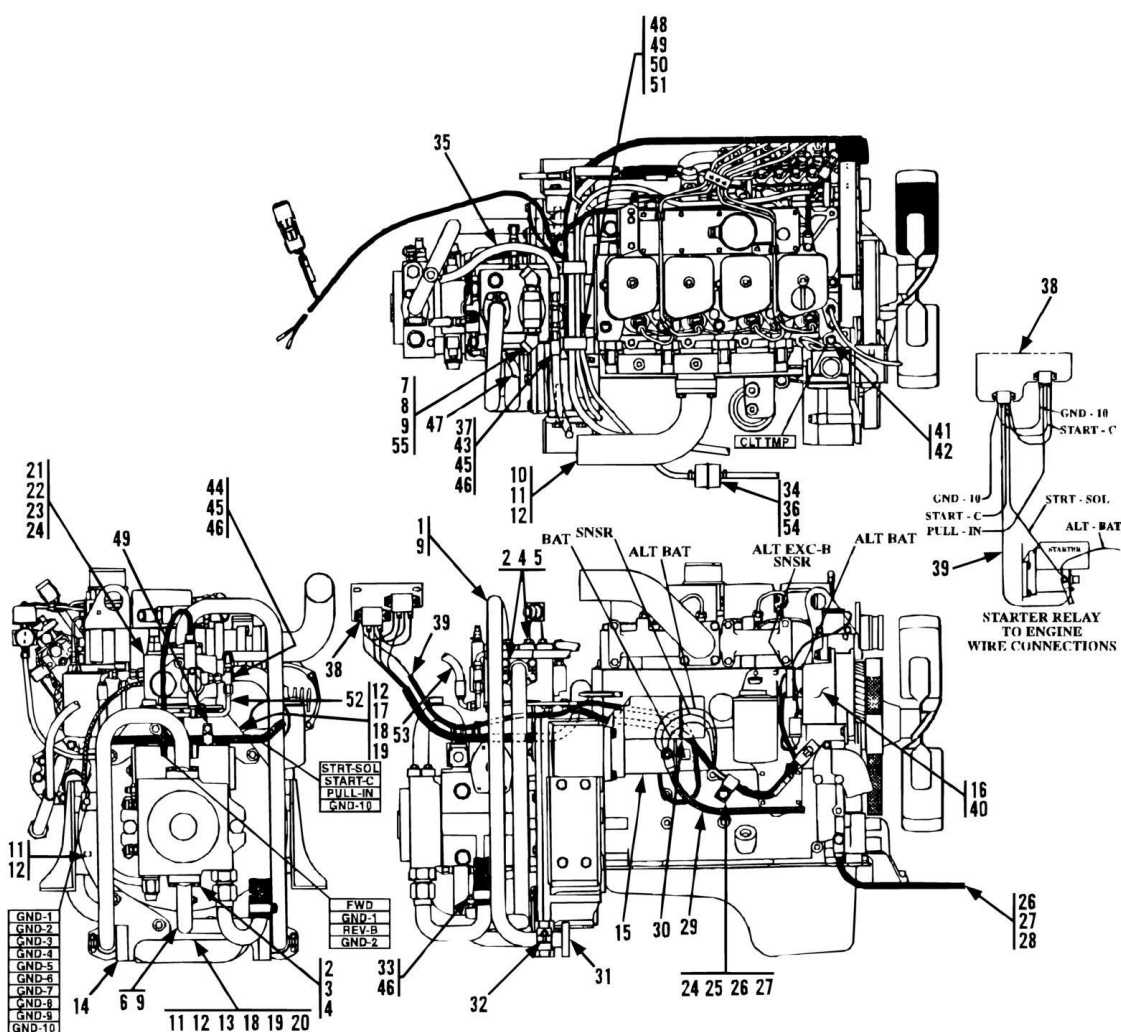
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
47	91146058	1	FLOW DIVIDER BRACKET	
48	83201155	12	HEX HD CAPSCREW, 7/16-14x1-1-3/4	
49	91333004	1	TUBE ASSY	
50	84718185	1	HOSE ASSY	
51	91163098	1	FLOW DIVIDER TUBE	
52	91335011	1	STARTER RELAY ASSY(includes the following)	
52	77383377	1	RELAY	
52	91331014	1	RELAY MOUNTING PLATE	
52	88211028	2	SOCKET HD CAPSCREW, #10-24x1/2 GR8	
52	88501612	2	HEX NUT, #10-24	
52	88561105	2	FLATWASHER, #10	
52	88551007	2	LOCK WASHER, #10	
53	91363066	1	JUMPER WIRE	
54	91083218	1	FUEL STRAINER	
55	83483497	2	HOSE CLAMP	
56	84719141	1	HOSE ASSY	
57	88201001	2	HEX HD CAPSCREW, 1/4-20X1/2, GR5	
58	88561107	2	FLATWASHER, 1/4	
59	88551009	2	LOCKWASHER, 1/4	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-7. (91385003) EPA ENGINE RIGHT SIDE VIEW (SN 0277120 through 0277338)

SERVICE NOTES:

- 1). Use Loctite 242, P/N 14403364, on all bolt & fitting threads except pipe threads.
- 2). Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
- 3). Add 12 qts. of oil, P/N 14403420, to crankcase.



SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-7. (91385003) EPA ENGINE RIGHT SIDE VIEW (SN 0277120 through 0277338)

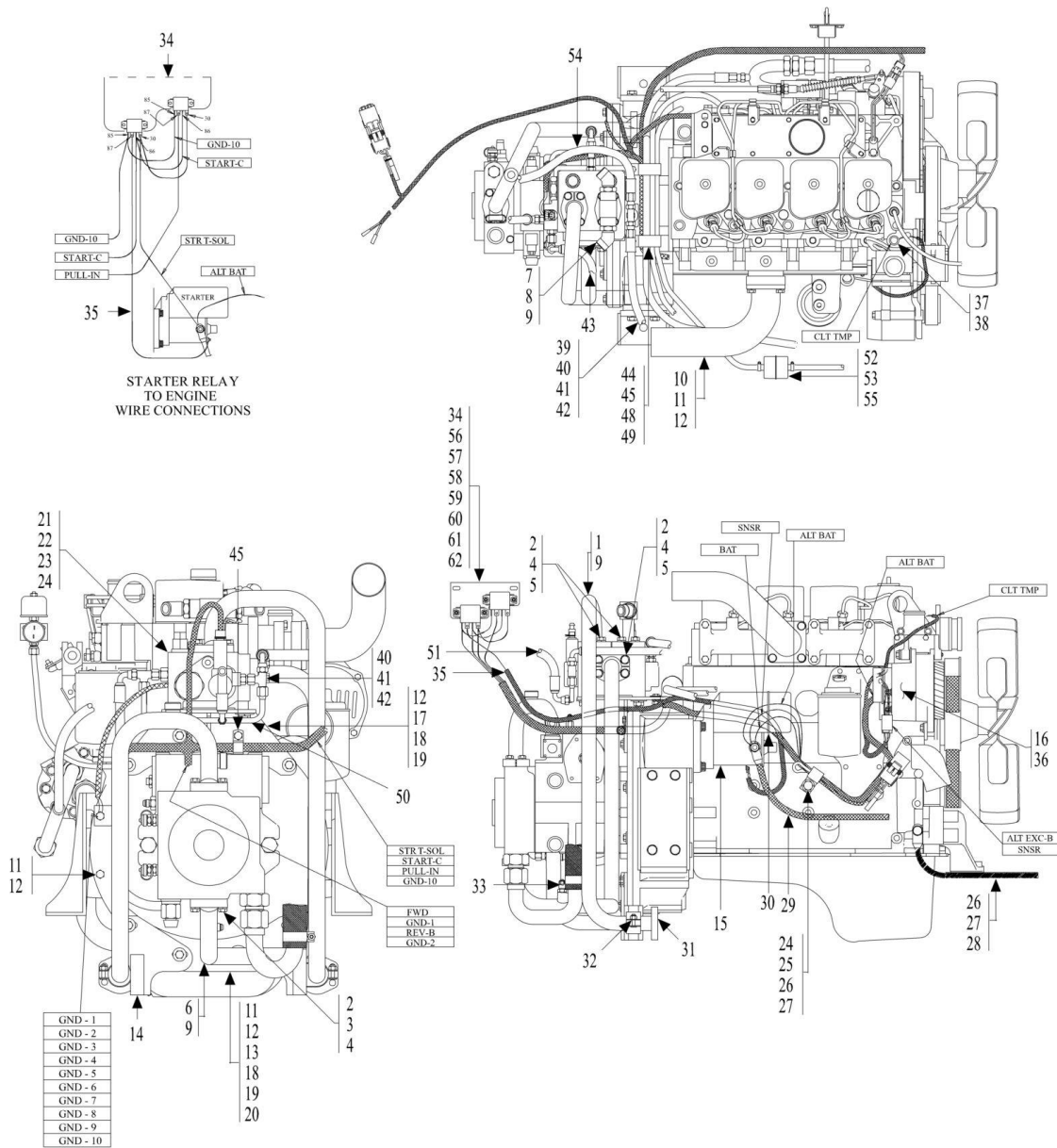
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385003	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW except items 55 thru 61, and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING)	
	91383001	1	CUMMINS ENGINE- B3.9C 80HP	
1	91333004	1	TUBE ASSY	
2	84712738	8	SPLIT FLANGE CLAMP	
3	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2, GR8	
4	88551012	16	LOCKWASHER, 7/ 16	
5	83201155	12	HEX HD CAPSCREW, 7/16-14X1-3/4, GR8	
6	91163201	1	TUBE ASSY	
7	91083266	1	TUBE ASSY	
8	88662421	2	ELBOW, 45, (includes item 55)	
9	91083106	4	O-RING	
10	91086055	1	EXHAUST TUBING	
11	83191021	9	HEX HD CAP SCREW, M10X1.5X30, GR8	
12	83191013	16	LOCKWASHER, M10	
13	91336003	1	TUBE SUPPORT	
14	91086131	1	TUBE SUPPORT	
15	91083456	1	STARTER	
16	91083503	1	ALTERNATOR, (includes item 40)	
17	91146058	1	FLOW DIVIDER BRACKET	
18	83191006	5	HEX HD CAP SCREW, M10X1.5X40, GR8	
19	88561109	7	FLATWASHER, 3/8	
20	83191005	2	HEX HD CAP SCREW, M10X1.5X45, GR8	
21		Ref	TRACTION LOCK VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
22	88201065	2	HEX HD CAP SCREW, 1/2-13X1, GR5	
23	88551013	2	LOCKWASHER, 1/2	
24	88561111	3	FLATWASHER, 1/2	
25	91143122	1	SUPPORT CLAMP, 5/8	
26	83191004	2	HEX HD CAP SCREW, M12X1.75X30, GR8	
27	83191010	2	LOCKWASHER, M12	
28	91083481	1	NEGATIVE BATTERY CABLE	
29	91083482	1	POSITIVE BATTERY CABLE	
30	90027187	1	TIE WRAP	
31	88711284	1	HEX SOCKET PIPE PLUG, 3/4	
32	90205792	1	CUSHION CLAMP	
33	88662064	1	ELBOW, 90, (includes item 46)	
34	83483497	2	HOSE CLAMP	
35	84719141	1	HOSE ASSY	
36	Bulk	11 in	HOSE, 5/16IN	
37	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
38	91345008	1	STARTER RELAY ASSY, (includes the following seven items)	
38	77383377	2	SOLENOID RELAY	
38	88211028	4	SOCKET HD CAPSCREW, #10-24X1/2, GR8	
38	88501612	4	HEX NUT, #10-24	
38	88551007	4	LOCKWASHER, #10	
38	88561105	4	FLATWASHER, #10	
38	91331014	1	RELAY MOUNTING PLATE	
38	91373009	1	JUMPER WIRE	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
39	91363066	1	JUMPER WIRE	
40	91083504	1	REGULATOR, (supplied with alternator)	
41	91143314	1	WATER TEMPERATURE SENDER	
42	88711385	1	REDUCER BUSHING	
43	84717889	1	HOSE ASSY	
44	88662224	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
45	88662005	2	CONNECTOR, (includes item 46)	
46	88591204	3	O-RING	
47	84718185	1	HOSE ASSY	
48	90028660	2	SUPPORT CLAMP	
49	24861170	3	SUPPORT CLAMP	
50	88201020	2	HEX HD CAPSCREW, 5/16-18X1, GR5	
51	88521205	2	HEX LOCKNUT, 5/16-18	
52	91163098	1	FLOW DIVIDER TUBE	
53	84719142	1	HOSE ASSY	
54	91083218	1	FUEL FILTER	
55	88591207	2	O-RING	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-8. (91385020) EPA ENGINE RIGHT SIDE VIEW (SN 0277339 to Present)



SERVICE NOTES:

1. Use Loctite, P/N 14403364, on all bolt & fitting threads except pipe threads.
2. Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
3. Add 12 qts. of oil, P/N 14403420, to crankcase.

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FIGURE 4-8. (91385020) EPA ENGINE RIGHT SIDE VIEW (SN 0277339 to Present)

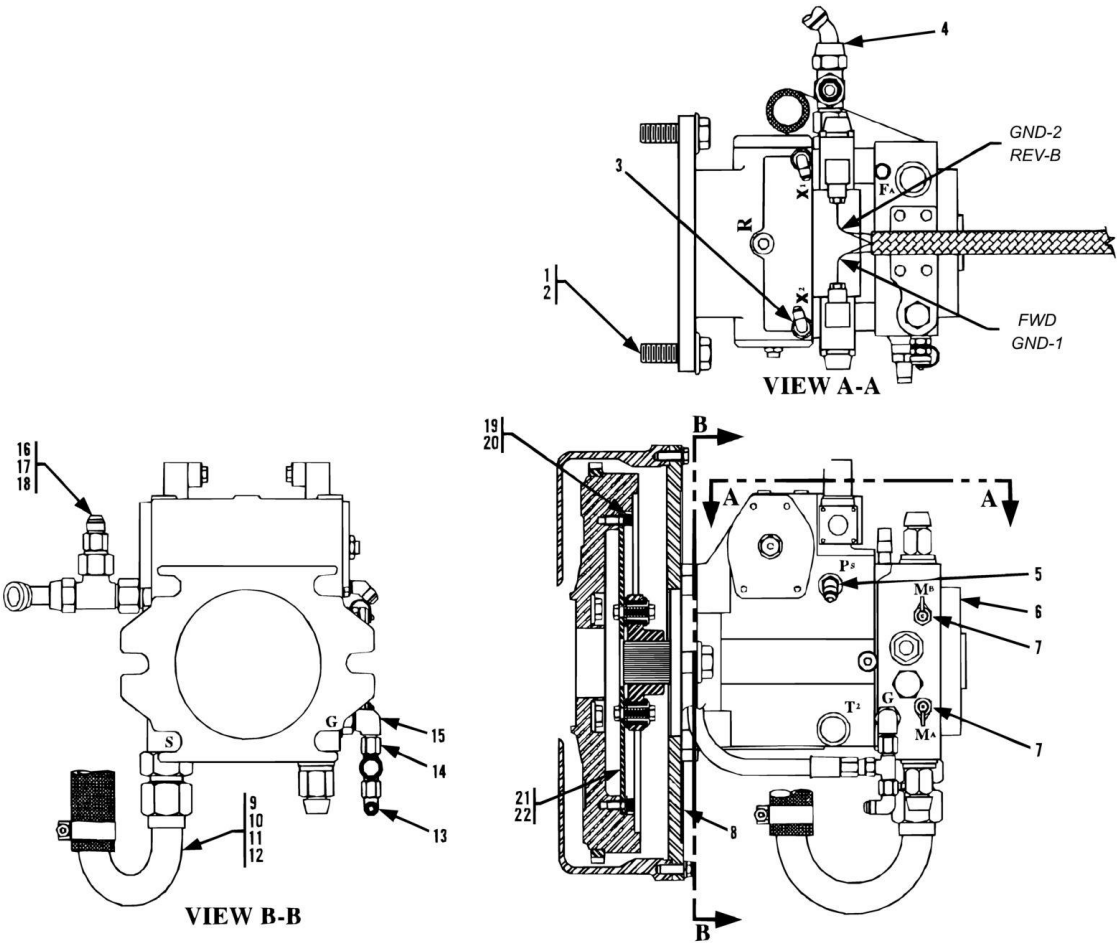
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385020	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW except items 59 thru 65 and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING)	
1	91333004	1	TUBE ASSY	
2	84712738	2	SPLIT FLANGE CLAMP	
3	83201135	4	HEX HD CAP SCREW,7/16-14X1-1/2	
4	88551012	4	LOCKWASHER,7/ 16	
5	83201155	12	HEX HD CAPSCREW,7/16-14x1-3/4	
6	91163201	1	TUBE ASSY	
7	91083266	1	TUBE ASSY	
8	88662421	2	ELBOW, 45, (includes item 46)	
9	91083106	4	O-RING	
10	91086055	1	EXHAUST TUBING	
11	83191021	9	HEX HD CAPSCREW, M10X1.5X30	
12	83191013	16	LOCKWASHER,M10	
13	91336003	1	TUBE SUPPORT	
14	91086131	1	TUBE SUPPORT	
15	91083456	1	STARTER	
16	91083503	1	ALTERNATOR,(includes item 36)	
17	91146058	1	FLOW DIVIDER BRACKET	
18	83191006	5	HEX HD CAPSCREW, M10X1.5X40	
19	88561109	7	FLAT WASHER,3/8	
20	83191005	2	HEX HD CAPSCREW, M10X1.5X45	
21		Ref	TRACTION LOCK VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
22	88201065	2	HEX HD CAPSCREW,1/2-13X1,GR5	
23	88551013	2	LOCKWASHER,1/2	
24	88561111	3	FLAT WASHER,1/2	
25	91143122	1	SUPPORTCLAMP, 5/8	
26	83191004	2	HEX HD CAPSCREW, M12X1.75X30	
27	83191010	2	LOCKWASHER,M12	
28		Ref	NEGATIVE BATTERY CABLE, (See ELECTRICAL SECTION for Breakdown)	
29		Ref	POSITIVE BATTERY CABLE, (See ELECTRICAL SECTION for Breakdown)	
30	90027187	1	TIE WRAP	
31	88711284	1	HEX SOCKET PIPE PLUG, 3/4	
32	90205792	1	CUSHION CLAMP	
33	88662064	1	ELBOW, 90, (includes item47)	
34	91345008	1	STARTER RELAY ASSY, (includes items 56 thru 62)	
35	91363066	1	JUMPER WIRE	
36	91083504	1	REGULATOR	
37	91143314	1	WATER TEMPERATURE SENDER	
38	88711385	1	REDUCER BUSHING	
39	84717889	1	HOSE ASSY	
40	88662224	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
41	88662005	2	CONNECTOR, (includes item 47)	
42	88591204	1	O-RING	
43	84718185	1	HOSE ASSY	
44	90028660	2	SUPPORT CLAMP	
45	24861170	3	SUPPORT CLAMP	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
46	88591207	2	O-RING	
47	88591204	3	O-RING	
48	88201020	2	HEX HD CAPSCREW, 5/16-18X1, GR5	
49	88521205	2	HEX LOCKNUT,5/16-18	
50	91163098	1	FLOW DIVIDER TUBE	
51	84719142	1	HOSE ASSY	
52	91083218	1	FUEL STRAINER	
53	83483497	2	HOSE CLAMP	
54	84719141	1	HOSE ASSY	
55	Bulk	1 in	5/16 HOSE	
56	77383377	2	RELAY	
57	91331014	1	RELAY MOUNTING PLATE	
58	88211028	4	SOCKET HD CAP SCREW, #10-24X1/2, GR8	
59	88501612	4	HEX NUT,#10-24	
60	88561105	4	FLATWASHER,#10	
61	88551007	4	LOCKWASHER,#10	
62	91373009	1	JUMPER WIRE	

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FIGURE 4-9. (91085130) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277001 through 0277085)



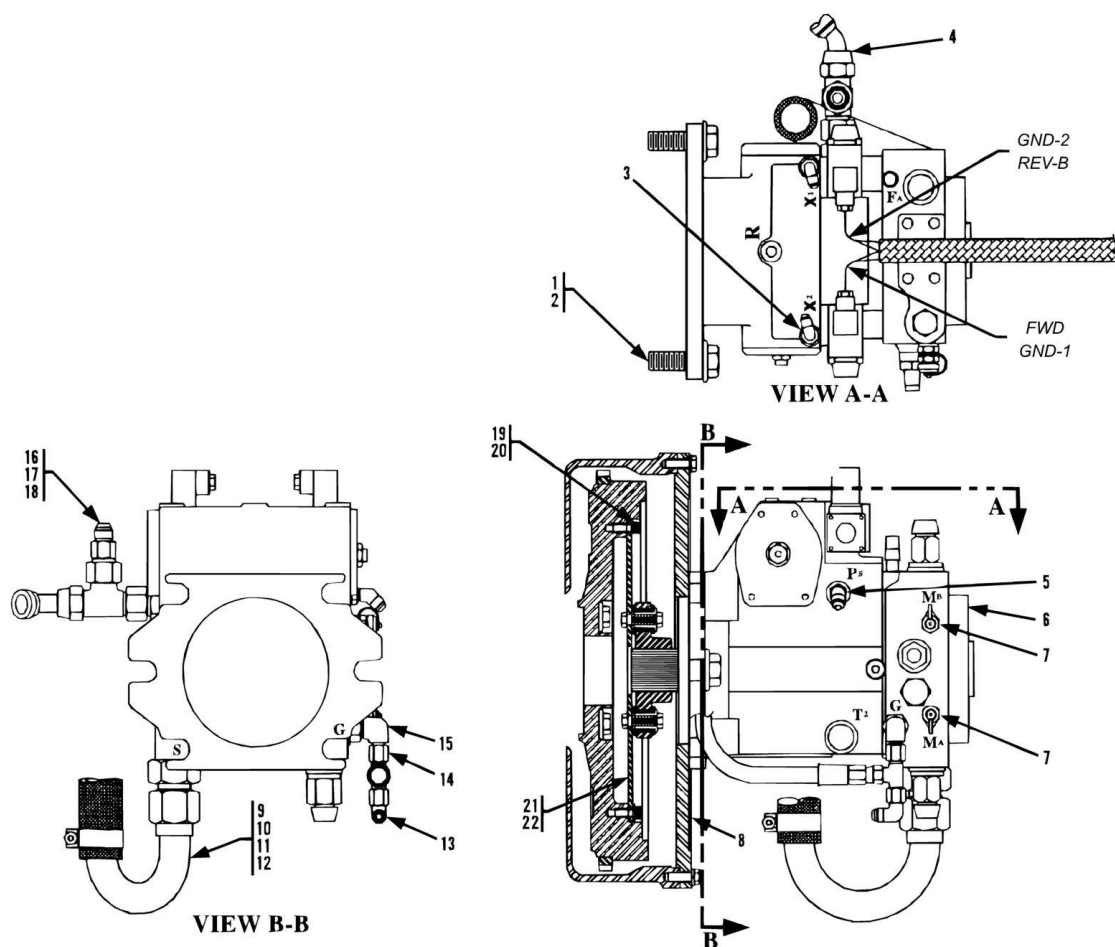
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-9. (91085130) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277001 through 0277085)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5 (torque to 240-265 ft lbs)	
2	88551016	2	LOCKWASHER, 3/4	
3	90027906	2	ELBOW 90	
4	84717839	1	HOSE ASSY	
5	88662084	1	ELBOW 45, (includes o-ring)	
5	88591204	1	O-RING	
6		Ref	HYDROSTATIC TRANS PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
7	91053020	2	TEST COUPLING	
8	91083019	1	PUMP MT AND FLYWHEEL COUPLING, (includes items 21 & 22)	
9	90028695	2	BAND CLAMP	
10	91083246	1	HOSE	
11	91083536	1	INTAKE TUBE	
12	88662011	1	CONNECTOR, (includes o-ring)	
12	88591210	1	O-RING	
13	88662105	1	ELBOW 90, (swivel nut)	
14	88662239	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
15	91083222	1	STRAIGHT THREAD 90, REDUCER CONNECTOR, (includes o-ring)	
15	88591207	1	O-RING	
16	88662242	1	SWIVEL NUT BRANCH TEE, 3/4IN TUBE	
17	83651133	1	REDUCER WITH ADAPTOR	
18	88662008	1	CONNECTOR, (includes o-ring)	
18	88591207	1	O-RING	
19	88211068	8	SOCKET HD CAPSCREW, 3/8-16x5/8 GR8 (torque to 40-45 ft lbs)	
20	88551011	8	LOCKWASHER, 3/8	
21	91344048	1	PUMP MOUNT PLATE	
22	91084312	1	COUPLING ASSY, (bolts included)	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-10. (91085130) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277086 through 0277119)



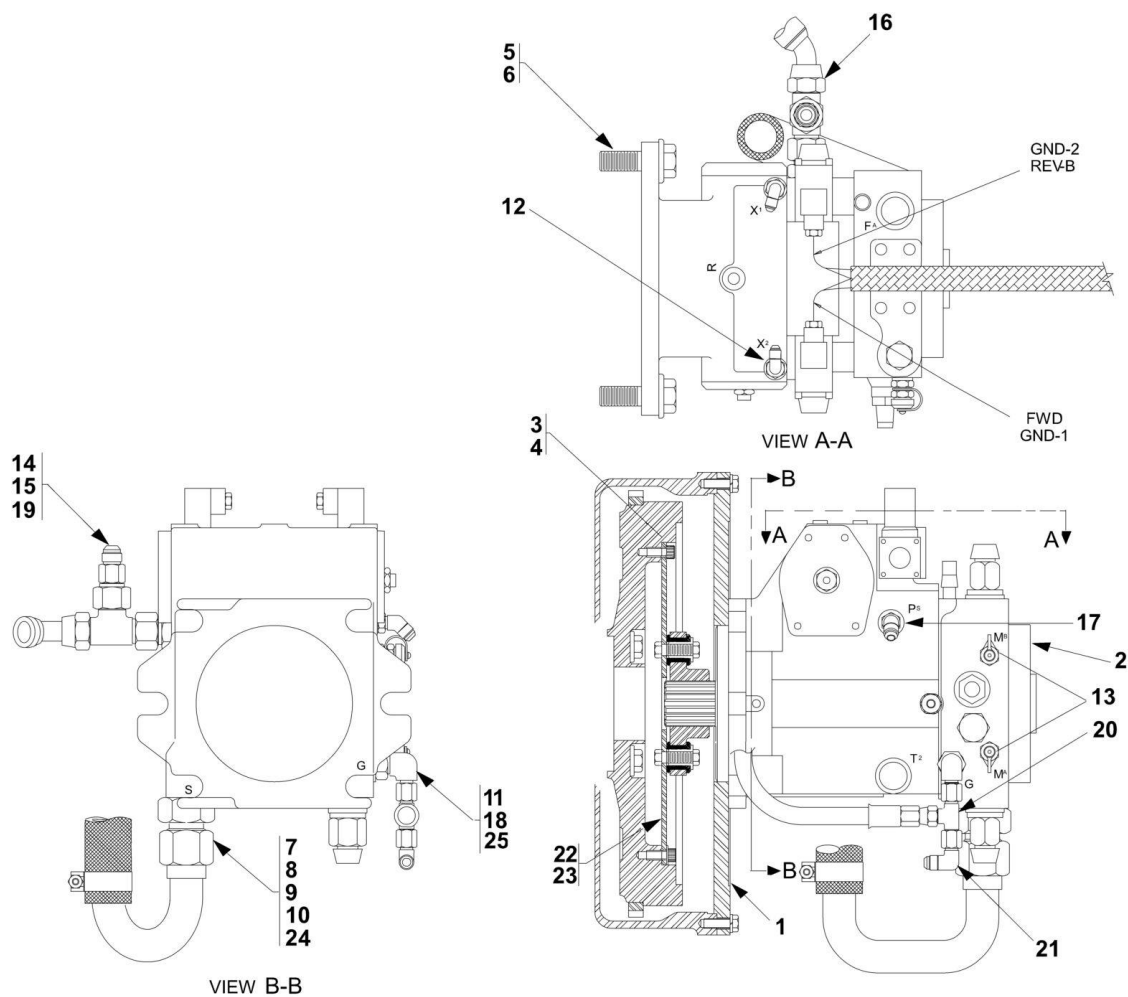
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-10. (91085130) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277086 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5, (torque to 240-265 ft lbs)	
2	88551016	2	LOCKWASHER, 3/4	
3	90027906	2	ELBOW, 90	
4	84717839	1	HOSE ASSY	
5	88662084	1	ELBOW 45, (includes o-ring)	
5	88591204	1	O-RING	
6		Ref	HYDROSTATIC TRANS PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
7	91053020	2	TEST COUPLING	
8	91083019	1	PUMP MT AND FLYWHEEL COUPLING, (includes items 21 & 22)	
9	90028695	2	BAND CLAMP	
10	91083246	1	HOSE	
11	91083536	1	INTAKE TUBE	
12	88662011	1	CONNECTOR, (includes o-ring)	
12	88591210	1	O-RING	
13	88662105	1	ELBOW 90, (swivel nut)	
14	88662239	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
15	91083222	1	STRAIGHT THREAD 90, REDUCER CONNECTOR, (includes o-ring)	
15	88591207	1	O-RING	
16	88662242	1	SWIVEL NUT BRANCH TEE, 3/4IN TUBE	
17	83651133	1	REDUCER WITH ADAPTOR	
18	88662008	1	CONNECTOR, (includes o-ring)	
18	88591207	1	O-RING	
19	88211068	8	SOCKET HD CAPSCREW, 3/8-16x5/8 GR8, (torque to 40-45 ft lbs)	
20	88551011	8	LOCKWASHER, 3/8	
21	91344048	1	PUMP MOUNT PLATE	
22	91084312	1	COUPLING ASSY, (bolts included)	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-11. (91385003) EPA ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277120 through 0277338)



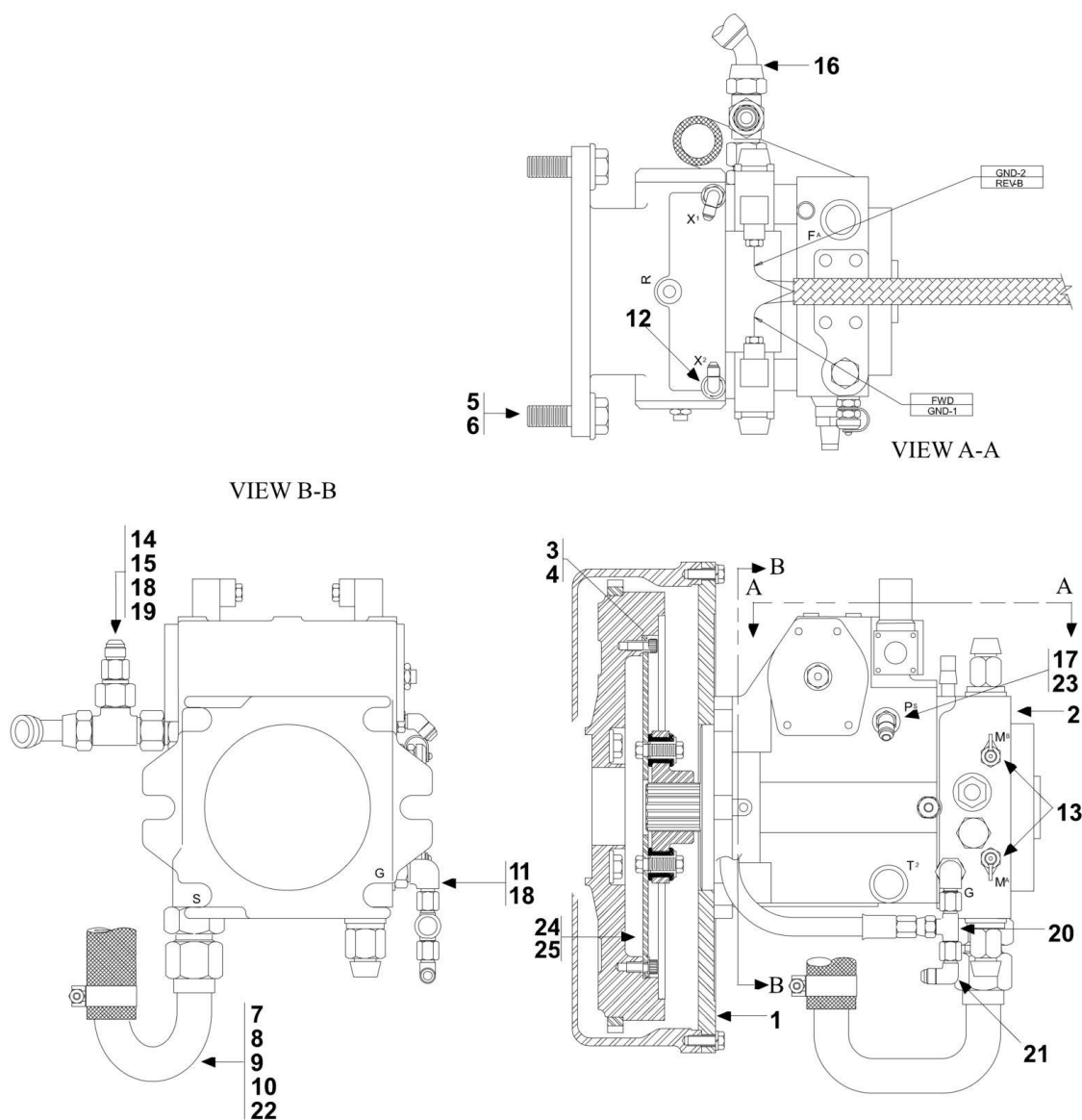
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-11. (91385003) EPA ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277120 through 0277338)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385003	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW except 55 thru 61, and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING.)	
1	91383001	1	CUMMINS ENGINE - B3.9C80HP	
2	91083019	1	PUMP MT AND FLYWHEEL COUPLING, (includes items 21 & 22)	
		Ref	HYDROSTATIC TRANS PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
3	88211068	8	SOCKET HD CAPSCREW, 3/8-16X5/8, GR8, (torque to 40-45 ft lbs)	
4	88551011	8	LOCKWASHER, 3/8	
5	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5, (torque to 240-265 ft lbs)	
6	90027473	2	LOCK WASHER, 3/4	
7	88662011	1	CONNECTOR, (includes item 24)	
8	91083536	1	INTAKE TUBE	
9	91083246	1	HOSE	
10	90028695	2	BAND CLAMP	
11	91083222	1	STRAIGHT THREAD, 90, REDUCER, (includes item 25)	
12	90027906	2	ELBOW, 90	
13	91053020	2	TEST COUPLING	
14	88662242	1	SWIVEL NUT BRANCH TEE, 3/4 TUBE	
15	83651133	1	REDUCER WITH ADAPTOR	
16	84717839	1	HOSE ASSY	
17	88662084	1	ELBOW, 45, (includes item 18)	
18	88591204	1	O-RING	
19	88662008	1	CONNECTOR, (includes item 25)	
20	88662239	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
21	88662105	1	ELBOW, 90, (swivel nut)	
22	91344048	1	PUMP MOUNT PLATE	
23	91084312	1	COUPLING ASSY, (bolts included)	
24	88591210	1	O-RING	
25	88591207	2	O-RING	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-12. (91385020) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277339 to Present)



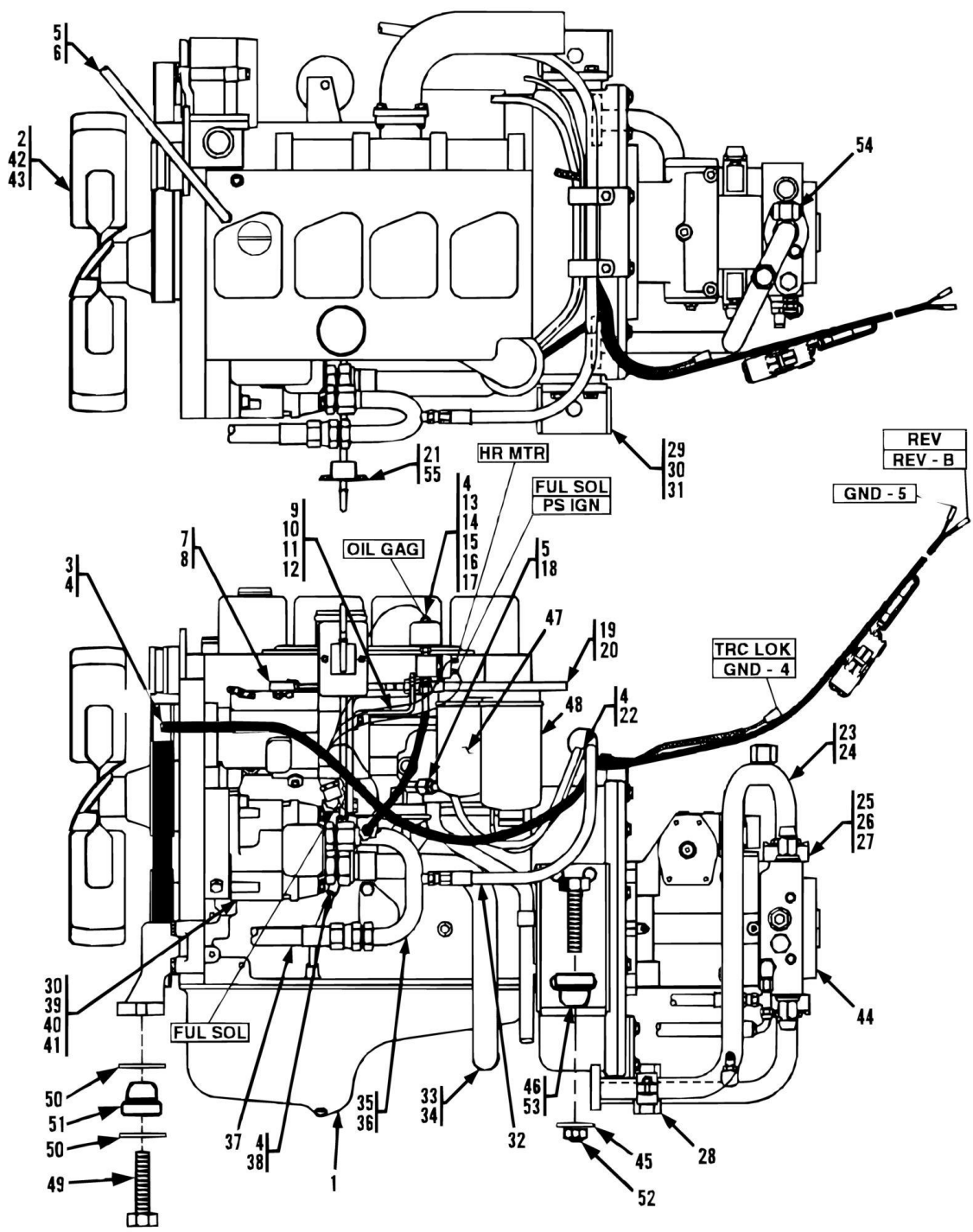
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-12. (91385020) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING (SN 0277339 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385020	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW except 59 thru 65 and all items on ENGINE RIGHT SIDE VIEW and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING.)	
1	91083019	1	PUMP MOUNT AND FLYWHEEL COUPLING, (includes items 24 & 25)	
2		Ref	HYDROSTATIC TRANS PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
3	88211068	8	SOCKET HD CAPSCREW, 3/8-16X5/8, GR8	
4	88551011	8	LOCKWASHER, 3/8	
5	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5	
6	90027473	2	LOCKWASHER, 3/4	
7	88662011	1	CONNECTOR, (includes item 22)	
8	91083536	1	INTAKE TUBE	
9	91083246	1	HOSE	
10	80633030	2	BAND CLAMP	
11	91083222	1	STRAIGHT THREAD, 90, REDUCER CONNECTOR	
12	90027906	2	STRAIGHT THREAD, 90, ELBOW	
13	91053020	2	TEST COUPLING	
14	88662242	1	SWIVEL NUT RUN TEE, 3/4 TUBE	
15	83651133	1	REDUCER W/ADAPTER	
16	84717839	1	HOSE ASSY	
17	88662084	1	ELBOW, 45, (includes item 23)	
18	88591207	2	O-RING	
19	88662008	1	CONNECTOR, (includes item 18)	
20	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
21	88662105	1	ELBOW, 90, (swivel nut)	
22	88591210	1	O-RING	
23	88591204	1	O-RING	
24	91344048	1	PUMP MOUNT PLATE	
25	91084312	1	COUPLING ASSY, (bolts included)	

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FIGURE 4-13. (91095029) ENGINE LEFT SIDE VIEW - 522D (SN 0277001 through 0277085)



SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-13. (91095029) ENGINE LEFT SIDE VIEW - 522D (SN 0277001 through 0277085)

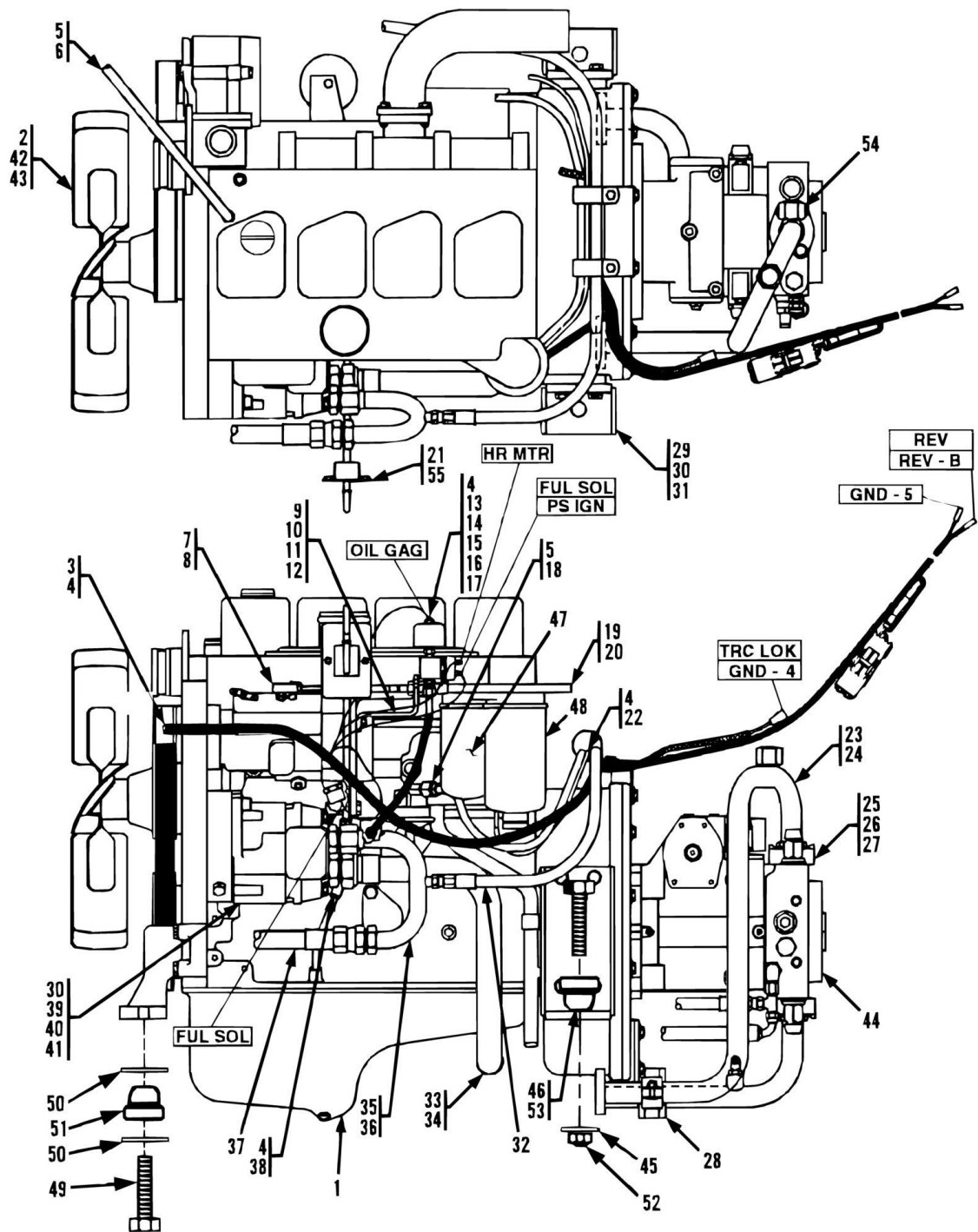
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085053		ENGINE FILTER KIT, (includes all items)	
	91084001		OIL FILTER ELEMENT	
	77383202		PRIMARY FUEL, FILTER ELEMENT	
	77383203		SECONDARY FUEL, FILTER ELEMENT	
	91083218		FUEL FILTER	
	90206262		AIR FILTER ELEMENT	
	91095029	Ref	ENGINE ASSY (includes all items on ENGINE LEFT SIDE VIEW - 522D except 45, 46 & 49 thru 53, and all items on ENGINE RIGHT SIDE VIEW - 522D and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	91083012	1	CUMMINS ENGINE	
2	91303056	1	FAN ASSY	
3	91123166	1	WIRING HARNESS(engine)	
4	90027187	6	TIE WRAP	
5	Bulk	78 in	FUEL LINE HOSE, 5/16	
6	86883106	2	HOSE CLAMP	
7	90027908	1	BALL JOINT	
8	88501613	1	HEX NUT, #10-32	
9	91081243	1	THROTTLE CABLE BRACKET	
10	88201005	2	HEX HD CAPSCREW, 1/4-20 x 1	
11	88551009	2	LOCKWASHER, 1/4	
12	88501616	2	HEX NUT 1/4-20	
13	24741047	1	PRESSURE SWITCH	
14	91143315	1	OIL PRESSURE SENDER	
15	91081388	1	TAPPED BAR	
16	86883075	2	TUBE FITTING	
17	Bulk	18 in	NYLON TUBE, 3/8	
18	90030271	1	HOSE NIPPLE	
19	91083404	1	THROTTLE CABLE	
20	90028977	1	YOKE END	
21	91146101	1	DIP-STICK WELDMENT	
22	Bulk	56 in	FUEL LINE HOSE, 7/32	
23	91143055	1	TUBE ASSY	
24	91083106	1	O-RING	
25	84712738	2	SPLIT FLANGE CLAMP	
26	83201135	4	HEX HD CAPSCREW, 7/16-14 x 1 1/2	
27	88551012	4	LOCKWASHER, 7/16	
28	90205792	1	CUSHION CLAMP	
29	91336004	2	REAR ENGINE MOUNTING BRACKET	
30	83191010	10	LOCKWASHER, M12	
31	83191032	8	HEX HD CAPSCREW, M12x 1.75 x35	
32	84717934	1	HOSE ASSY	
33	91083144	1	SUCTION TUBE	
34	88662011	1	CONNECTOR (includes o-ring)	
34	88591210	1	O-RING	
35	91323023	1	TUBE ASSY	
36	88662010	1	CONNECTOR (includes o-ring)	
36	88591209	1	O-RING	
37	84717851	1	HOSE ASSY	
38	Bulk	10 in	SPLIT FLEX LOOM, 1/2 ID	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
39		Ref	MAIN PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
40	83191057	2	HEX SOCKET HD CAPSCREW, M12X1.75X80	
41	90027471	2	HARDENED WASHER	
42	83191041	4	HEX HD CAPSCREW, M8 x 1.25 x 70	
43	88561108	4	WASHER, 5/16	
44		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
45	91331002	2	SPECIAL WASHER	
46	91333002	1	SHOCK MOUNT	
47	77383202	1	PRIMARY FUEL FILTER ELEMENT	
48	77383203	1	SECONDARY FUEL FILTER ELEMENT	
49	91083338	1	HEX HD CAPSCREW, M16X2X120	
50	91081158	2	SPECIAL WASHER	
51	91333003	1	SHOCK MOUNT	
52	88521214	2	LOCKNUT, 7/8-9	
53	77321274	2	HEX HD CAPSCREW, 7/8-9X5	
54	84714006	2	ORS CAP	
55	91124125	1	DIPSTICK	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-14. (91095029) ENGINE LEFT SIDE VIEW - 522D (SN 0277086 through 0277119)



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FIGURE 4-14. (91095029) ENGINE LEFT SIDE VIEW - 522D (SN 0277086 through 0277119)

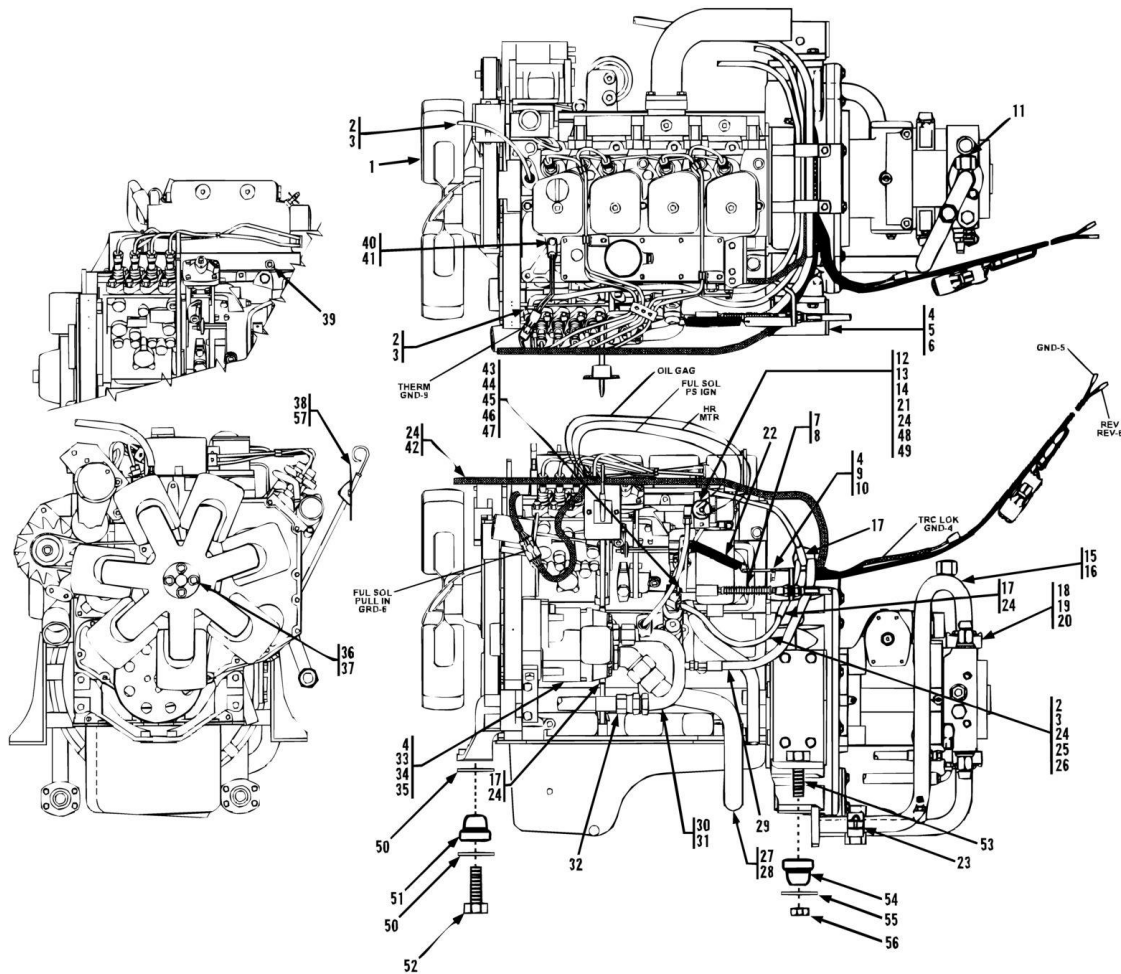
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085053		ENGINE FILTER KIT, (includes all items)	
	91084001		OIL FILTER ELEMENT	
	77383202		PRIMARY FUEL, FILTER ELEMENT	
	77383203		SECONDARY FUEL, FILTER ELEMENT	
	91083218		FUEL FILTER	
	90206262		AIR FILTER ELEMENT	
	91095029	Ref	ENGINE ASSY (includes all items on ENGINE LEFT SIDE VIEW - 522D except 45, 46 & 49 thru 53, all items on ENGINE RIGHT SIDE VIEW - 522D except items 46, 47 & 48 and all items on ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	91083012	1	CUMMINS ENGINE	
2	91303056	1	FAN ASSY	
3	91333013	1	WIRING HARNESS (engine)	
4	90027187	6	TIE WRAP	
5	Bulk	78 in	FUEL LINE HOSE, 5/16	
6	86883106	2	HOSE CLAMP	
7	90027908	1	BALL JOINT	
8	88501613	1	HEX NUT, #10-32	
9	91081243	1	THROTTLE CABLE BRACKET	
10	88201005	2	HEX HD CAPSCREW, 1/4-20 x 1	
11	88551009	2	LOCKWASHER, 1/4	
12	88501616	2	HEX NUT 1/4-20	
13	24741047	1	PRESSURE SWITCH	
14	91143315	1	OIL PRESSURE SENDER	
15	91081388	1	TAPPED BAR	
16	86883075	2	TUBE FITTING	
17	Bulk	18 in	NYLON TUBE, 3/8	
18	90030271	1	HOSE NIPPLE	
19	91083404	1	THROTTLE CABLE	
20	90028977	1	YOKE END	
21	91146101	1	DIP-STICK WELDMENT	
22	Bulk	56 in	FUEL LINE HOSE, 7/32	
23	91143055	1	TUBE ASSY	
24	91083106	1	O-RING	
25	84712738	2	SPLIT FLANGE CLAMP	
26	83201135	4	HEX HD CAPSCREW, 7/16-14 x 1 1/2	
27	88551012	4	LOCKWASHER, 7/6	
28	90205792	1	CUSHION CLAMP	
29	91336004	2	REAR ENGINE MOUNTING BRACKET	
30	83191010	10	LOCKWASHER, M12	
31	83191032	8	HEX HD CAPSCREW, M12x 1.75 x35	
32	84717934	1	HOSE ASSY	
33	91083144	1	SUCTION TUBE	
34	88662011	1	CONNECTOR (includes o-ring)	
34	88591210	1	O-RING	
35	91323023	1	TUBE ASSY	
36	88662010	1	CONNECTOR (includes o-ring)	
36	88591209	1	O-RING	
37	84717851	1	HOSE ASSY	
38	Bulk	10 in	SPLIT FLEX LOOM, 1/2 ID	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
39		Ref	MAIN PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
40	83191057	2	HEX SOCKET HD CAPSCREW, M12X1.75X80	
41	90027471	2	HARDENED WASHER	
42	83191041	4	HEX HD CAPSCREW, M8 x 1.25 x 70	
43	88561108	4	WASHER, 5/16	
44		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
45	91331002	2	SPECIAL WASHER	
46	91333002	1	SHOCK MOUNT	
47	77383202	1	PRIMARY FUEL FILTER ELEMENT	
48	77383203	1	SECONDARY FUEL FILTER ELEMENT	
49	91083338	1	HEX HD CAPSCREW, M16X2X120	
50	91081158	2	SPECIAL WASHER	
51	91333003	1	SHOCK MOUNT	
52	88521214	2	LOCKNUT, 7/8-9	
53	77321274	2	HEX HD CAPSCREW, 7/8-9X5	
54	84714006	2	ORS CAP	
55	91124125	1	DIPSTICK	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-15. (91395001) EPA ENGINE LEFT SIDE VIEW - 522D (SN 0277120 to Present)



CAUTION

Pay close attention to Serial Number of machine when ordering Engine Filter Kits.

SERVICE NOTES:

- 1). Use Loctite 242, P/N 14403364, on all bolt & fitting threads except pipe threads.
- 2). Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
- 3). Add 12 qts. of oil, P/N 14403420, to crankcase.

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FIGURE 4-15. (91395001) EPA ENGINE LEFT SIDE VIEW - 522D (SN 0277120 to Present)

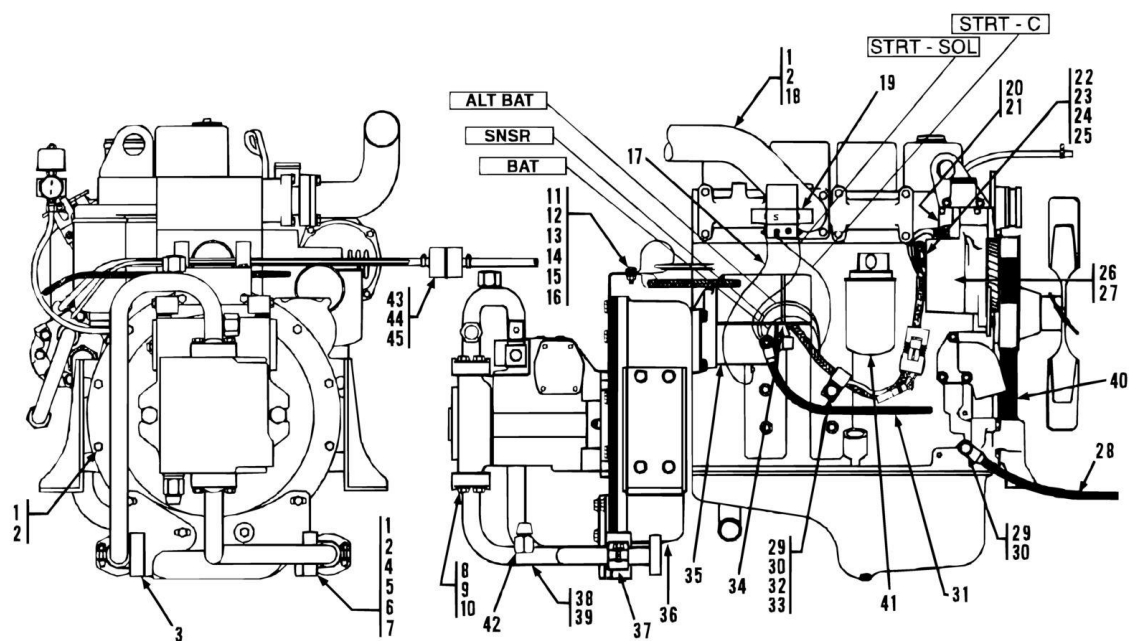
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91375002		ENGINE FILTER KIT (includes all items) (SN 0277120 through 0277594)	
	90206262		AIR FILTER	
	91083218		FUEL FILTER	
	77383303		FUEL FILTER	
	91084001		LUBE FILTER	
	91335033		ENGINE FILTER KIT, (includes all items) (SN 0277595 to Present)	
	91084001		OIL FILTER ELEMENT	
	77383303		FUEL FILTER ELEMENT	
	91083218		FUEL FILTER	
	91403103		AIR FILTER SAFETY ELEMENT	
	91403102		AIR FILTER	
	91395001	Ref	ENGINE ASSY (includes all items on ENGINE LEFT SIDE VIEW - 522D except items 50 thru 56, all items on ENGINE RIGHT SIDE VIEW - 522D except items 34, 35 & 36 and all items on ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
	91383001	1	CUMMINS ENGINE - B3.9C 80HP	
1	91303056	1	FAN ASSY	
2	Bulk	132 in	FUEL LINE HOSE, 5/16	
3	86883106	4	HOSE CLAMP	
4	83191010	12	LOCKWASHER, M12	
5	91336004	2	REAR ENGINE MOUNTING BRACKET	
6	83191032	8	HEX HD CAPSCREW, M12X1.75X35 (torque to 58-68 ft lbs)	
7	91163260	1	ACCELERATOR CABLE	
8	90027684	1	YOKE END	
9	91166075	1	THROTTLE CABLE BRACKET	
10	83191004	2	HEX HD CAPSCREW, M12X1.75X30	
11	84714006	2	ORS CAP	
12	91081388	1	TAPPED BAR	
13	86883075	1	TUBE FITTING	
14	Bulk	18 in	NYLON TUBE, 3/8IN	
15	91083106	1	O-RING	
16	91143055	1	TUBE ASSY	
17	Bulk	16 in	SPLIT FLEX LOOM, 1/2IN ID	
18	84712738	2	SPLIT FLANGE CLAMP	
19	83201135	4	HEX HD CAP SCREW, 7/16-14x1-1/2IN, GR8	
20	88551012	4	LOCKWASHER, 7/ 16	
21	86883074	1	TUBE FITTING, 90	
22	91163259	1	THROTTLE SPRING	
23	90205792	1	CUSHION CLAMP	
24	90027187	6	TIE WRAP	
25	90030271	1	HOSE NIPPLE	
26	86983649	1	ELBOW, 90, 1/4 PIPE	
27	91323022	1	SUCTION TUBE	
28	88662090	1	ELBOW, 45, (includes o-ring)	
28	88591210	1	O-RING	
29	84717934	1	HOSE ASSY	
30	91323023	1	TUBE ASSY	
31	88662010	1	CONNECTOR, (includes o-ring)	
31	88591209	1	O-RING	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
32	84717851	1	HOSE ASSY	
33		Ref	MAIN PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
34	83191057	2	HEX SOCKET HD CAPSCREW, M12X1.75X80	
35	90027471	2	HARD WASHER	
36	83191041	4	HEX HD CAP SCREW, M8x1.25x70	
37	88561108	4	STANDARD WASHER, 5/16	
38	91146101	1	DIP-STICK WELDMENT	
39	91363029	1	ATOMIZER, 1/8	
40	91365014	1	QUICK START THERMOSTAT ASSY, (includes the following four items)	
40	80963058	1	SHROUD	
40	80963065	2	CABLE SEAL, GREEN	
40	80963069	2	MALE PIN TERMINAL	
40	91363031	1	THERMOSTAT	
41	83191038	1	HEX HD CAP SCREW, M10x1.50x20	
42	91333013	1	WIRING HARNESS, ENGINE	
43	91161323	1	THROTTLE BAR	
44	83191035	2	SOCKET HD SCREW, M6X1.00X16	
45	83191012	2	LOCKWASHER, M6	
46	91143345	1	BALL SOCKET	
47	91143344	1	OVER TRAVEL	
48	24741047	1	PRESSURE SWITCH	
49	91143315	1	OIL PRESSURE SENDER	
50	91081158	2	SPECIAL WASHER	
51	91333002	1	SHOCK MOUNT	
52	91083338	1	HEX HD CAP SCREW, M16X2X120	
53	77321274	2	HEX HD CAP SCREW, 7/8-9X5	
54	91333003	2	SHOCK MOUNT	
55	91331002	2	SPECIAL WASHER	
56	88521214	2	LOCKNUT, 7/8-9	
57	91124125	1	DIPSTICK	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 4-16. (91095029) ENGINE RIGHT SIDE VIEW - 522D (SN 0277001 through 0277085)



SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-16. (91095029) ENGINE RIGHT SIDE VIEW - 522D (SN 0277001 through 0277085)

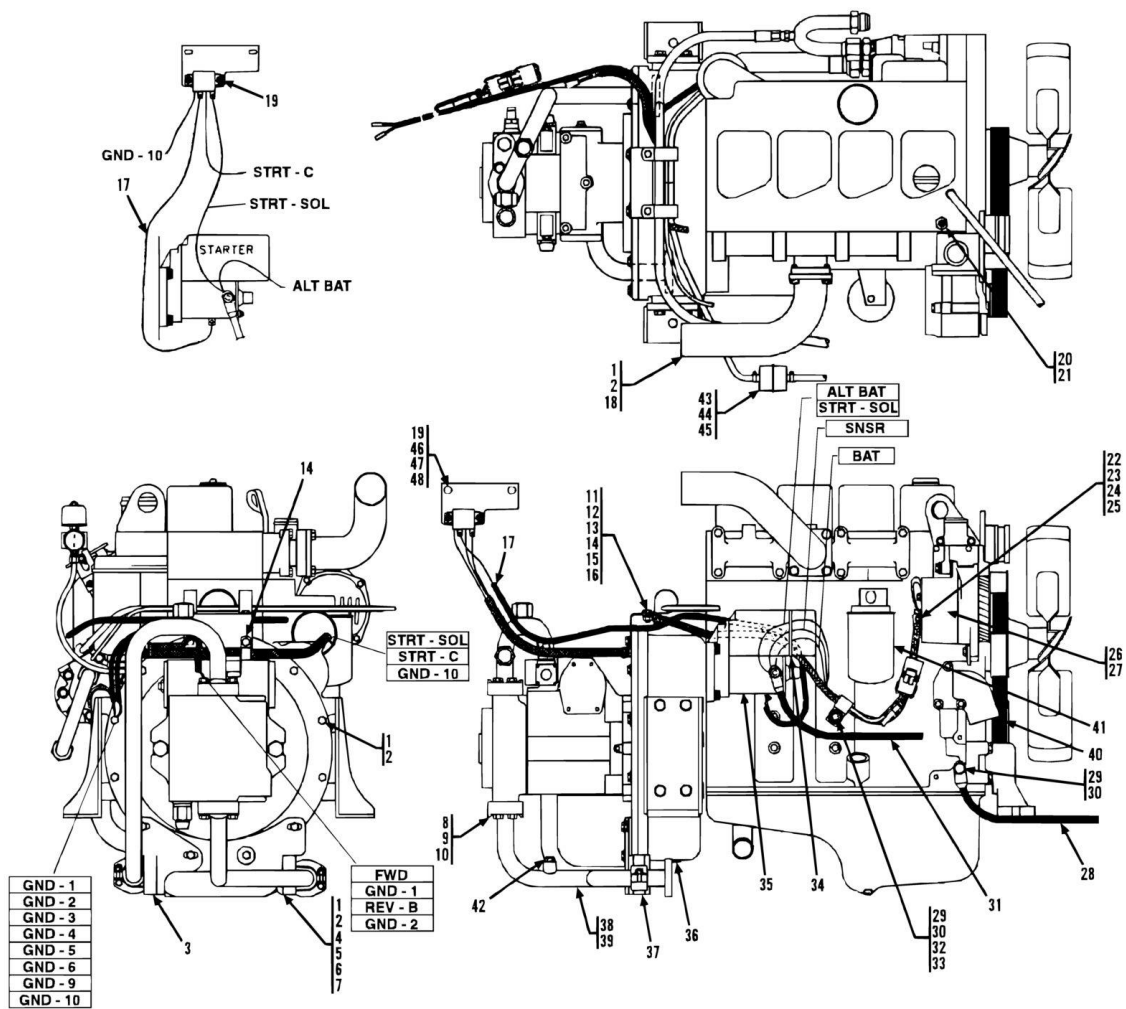
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91095029	Ref	ENGINE ASSY (includes all items on ENGINE LEFT SIDE VIEW - 522D except 45, 46 & 49 thru 53, and all items on ENGINE RIGHT SIDE VIEW - 522D and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	83191021	13	HEX HD CAPSCREW, M10 x 1.5 x 30	
2	83191013	16	LOCKWASHER, M10	
3	91086131	1	TUBE SUPPORT	
4	91336003	1	TUBE SUPPORT	
5	88561109	3	WASHER, 3/8	
6	83191006	1	HEX HD CAPSCREW, M10 x 1.5 x 40	
7	83191005	2	HEX HD CAPSCREW, M10 x 1.5 x 45	
8	84712738	2	SPLIT FLANGE CLAMP	
9	83201135	4	HEX HD CAPSCREW, 7/16-14 x 1-1/2	
10	88551012	4	LOCKWASHER, 7/ 16	
11	88551010	2	LOCKWASHER, 5/ 16	
12	90028660	2	INSULATED HOSE CLIP	
13	88501005	2	HEXNUT, 5/16-18	
14	24861170	2	SUPPORT CLAMP	
15	88201018	2	HEX HD CAPSCREW, 5/16-18 x3/4	
16	91091001	1	CLAMP SUPPORT	
17	90205205	1	JUMPER WIRE	
18	91086055	1	EXHAUST TUBING	
19	90402427	1	STARTER RELAY	
20	91143314	1	WATER TEMPERATURE SENDER	
21	88711385	1	REDUCER BUSHING	
22	88561108	1	WASHER, 5/ 16	
23	83191011	1	LOCKWASHER, M8	
24	83191007	1	HEX HD CAPSCREW, M8 x 1.25 x 16	
25	85941016	1	SUPPORT CLAMP	
26	91083503	1	ALTERNATOR (includes item 27)	
27	91083504	1	REGULATOR	
28	91083481	1	NEGATIVE BATTERY CABLE	
29	83191004	2	HEX HD CAPSCREW, M12x 1.75 x30	
30	83191010	2	LOCKWASHER, M12	
31	91083482	1	POSITIVE BATTERY CABLE	
32	88561111	1	WASHER, 1/2	
33	91143122	1	SUPPORT CLAMP	
34	90027187	1	TIE WRAP	
35	91083456	1	STARTER (torque mounting screws to 35 ft lbs)	
36	88711284	1	PIPE PLUG, 3/4	
37	90205792	1	CUSHION CLAMP	
38	91393003	1	TUBE ASSY	
39	91083106	1	O-RING	
40	91084162	1	FAN/ALTERNATOR BELT	
41	91084001	1	OIL FILTER ELEMENT	
42	88661384	1	HEX PLUG, 3/8 TUBE	
43	91083218	1	FUEL FILTER	
44	83483497	2	HOSE CLAMP	
45	Bulk	11 in	FUEL LINE HOSE, 3/8	

SECTION 4 - ENGINE AND ATTACHING PARTS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-17. (91095029) ENGINE RIGHT SIDE VIEW - 522D (SN 0277086 through 0277119)



SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-17. (91095029) ENGINE RIGHT SIDE VIEW - 522D (SN 0277086 through 0277119)

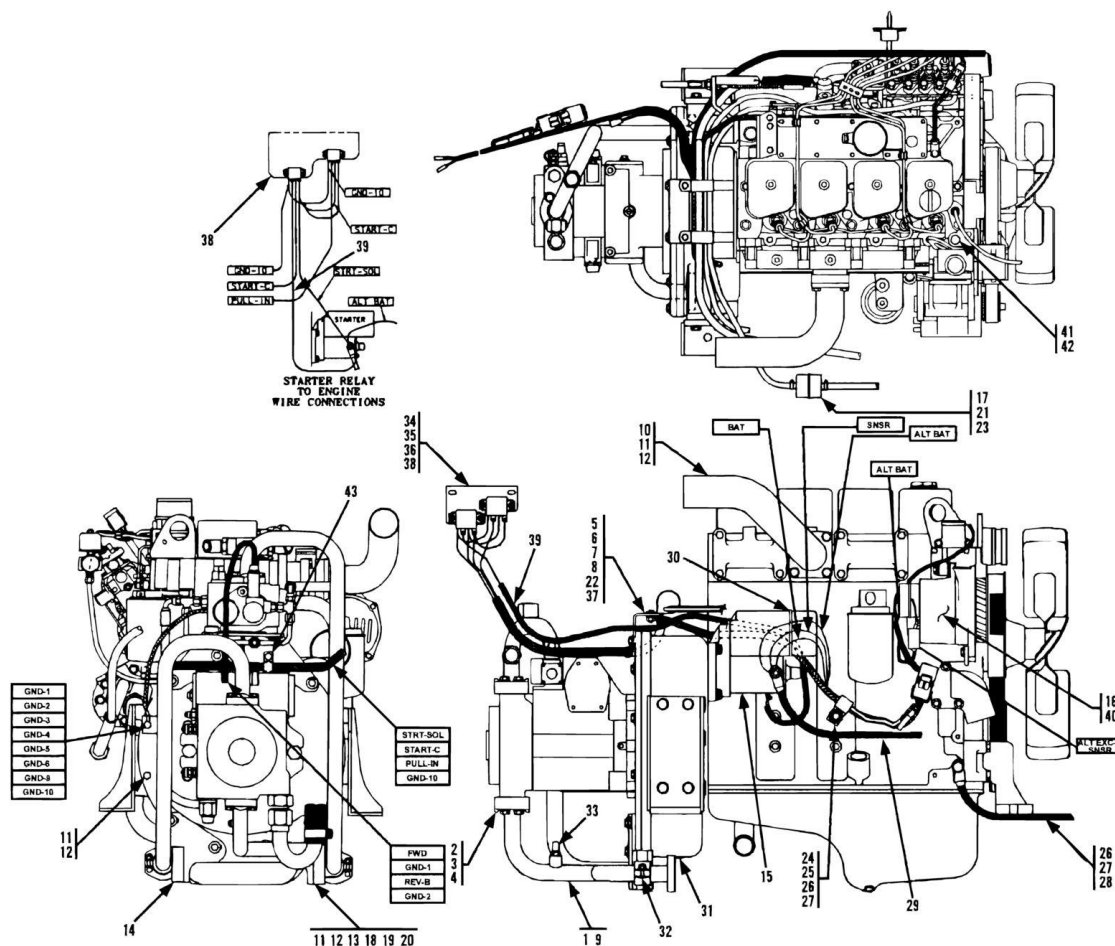
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91095029	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW - 522D except items 45, 46, all items on ENGINE RIGHT SIDE VIEW - 522D except items M 46, 47 & 48 and all items on ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	83191021	13	HEX HD CAP SCREW, M10X1.5X30	
2	83191013	16	LOCK WASHER, M10	
3	91086131	1	TUBE SUPPORT	
4	91336003	1	TUBE SUPPORT	
5	88561109	3	WASHER, 3/8	
6	83191006	1	HEX HD CAPSCREW, M10X1.5X40	
7	83191005	2	HEX HD CAPSCREW, M10X1.5X45	
8	84712738	2	SPLIT FLANGE CLAMP	
9	83201135	4	HEX HD CAPSCREW, 7/16-14X1-1/2	
10	88551012	4	LOCKWASHER, 7/ 16	
11	88551010	2	LOCKWASHER, 5/ 16	
12	90028660	2	INSULATED HOSE CLIP	
13	88501005	2	HEX NUT, 5/16-18	
14	24861170	3	SUPPORT CLAMP	
15	88201018	2	HEX HD CAPSCREW, 5/16-18X3/4	
16	91091001	1	CLAMP SUPPORT	
17	91363022	1	JUMPER WIRE	
18	91086055	1	EXHAUST TUBING	
19	91335011	1	STARTER RELAY ASSY, (includes the following items)	
19	77383377	1	RELAY	
19	91331014	1	RELAY MOUNTING PLATE	
19	88211028	2	SOCKET HD CAPSCREW, #10-24X1/2, GR8	
19	88501612	2	HEX NUT, #10-24	
19	88561105	2	FLATWASHER, #10	
19	88551007	2	LOCKWASHER, #10	
20	91143314	1	WATER TEMPERATURE SENDER	
21	88711385	1	REDUCER BUSHING	
22	88561108	1	WASHER, 5/16	
23	83191011	1	LOCKWASHER, M8	
24	83191007	1	HEX HD CAPS CREW, M8X1.25X16	
25	85941016	1	SUPPORT CLAMP	
26	91083503	1	ALTERNATOR, (includes item 27)	
27	91083504	1	REGULATOR	
28	91083481	1	NEGATIVE BATTERY CABLE	
29	83191004	2	HEX HD CAPSCREW, M12X1.75X30	
30	83191010	2	LOCKWASHER, M12	
31	91083482	1	POSITIVE BATTERY CLAMP	
32	88561111	1	WASHER, 1/2	
33	91143122	1	SUPPORT CLAMP	
34	90027187	1	TIE WRAP	
35	91083456	1	STARTER, (torque mounting screws to 35 ft lbs)	
36	88711284	1	PIPE PLUG, 3/4	
37	90205792	1	CUSHION CLAMP	
38	91393003	1	TUBE ASSY	
39	91083106	1	O-RING	
40	91084162	1	FAN/ALTERNATOR BELT	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
41	91084001	1	OIL FILTER ELEMENT	
42	88661384	1	HEX PLUG, 3/8 TUBE	
43	91083218	1	FUEL FILTER	
44	83483497	2	HOSE CLAMP	
45	Bulk	11 in	FUEL LINE HOSE, 3/8	
46	88201001	2	HEX HD CAP SCREW, 1/4-20X1/2, GR5	
47	88561107	2	FLATWASHER, 1/4 2	
48	88551009	2	LOCKWASHER, 1/4	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 4-18. (91395001) EPA ENGINE RIGHT SIDE VIEW - 522D (SN 0277120 to Present)



SERVICE NOTES:

- 1). Use Loctite 242, P/N 14403364, on all bolt & fitting threads except pipe threads.
- 2). Use Loctite pipe sealant, P/N 14404082, on all pipe threads.
- 3). Add 12 qts. of oil, P/N 14403420, to crankcase.

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-18. (91395001) EPA ENGINE RIGHT SIDE VIEW - 522D (SN 0277120 to Present)

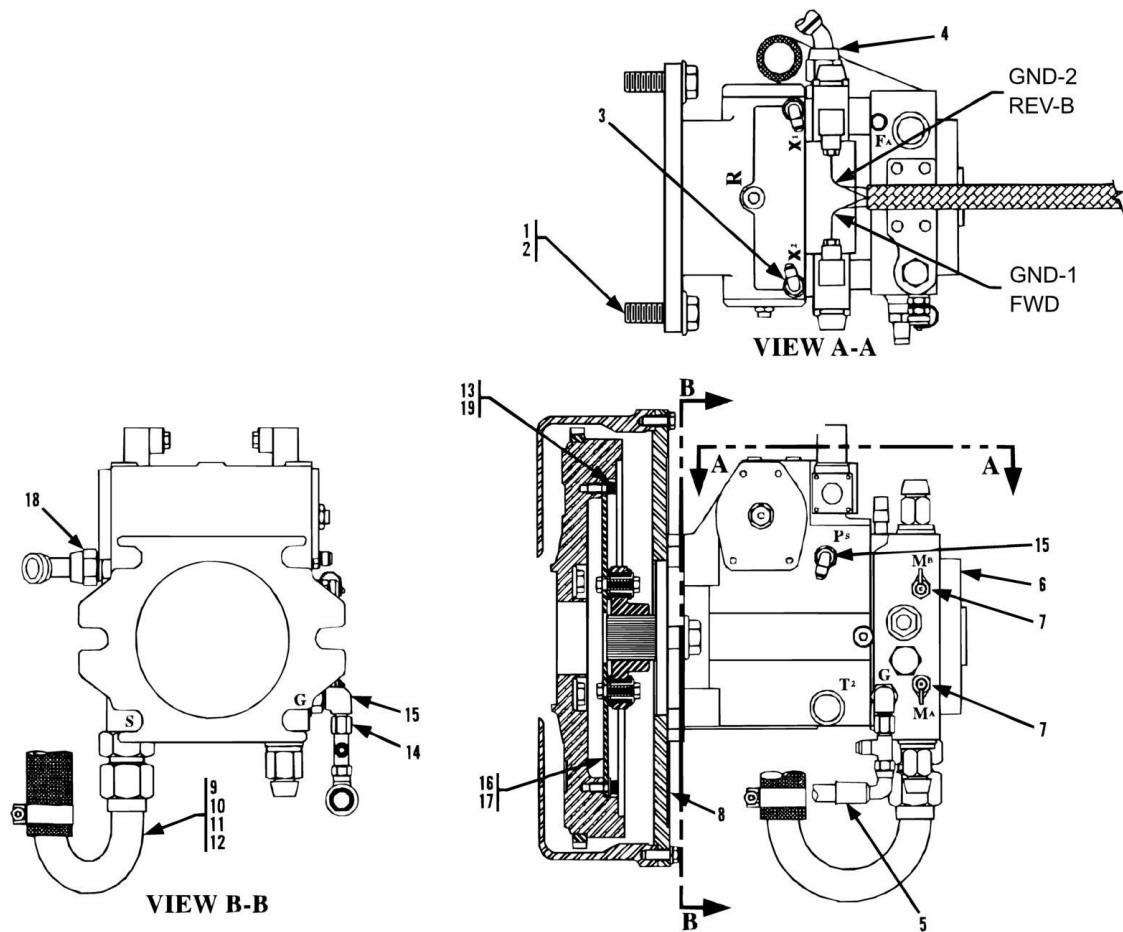
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91395001	Ref	ENGINE ASSY (includes all items on ENGINE LEFT SIDE VIEW - 522D except items 50 thru 56, all items on ENGINE ENGINE RIGHT SIDE VIEW - 522D except items 34, 35 & 36 and all items on ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	91393003	1	TUBE ASSY	
2	84712738	2	SPLIT FLANGE CLAMP	
3	83201135	4	HEX HD CAP SCREW, 7/16-14X1-1/2, GR8	
4	88551012	4	LOCKWASHER, 7/16	
5	88201018	2	HEX HD CAP SCREW, 5/16-18X3/4, GR5	
6	88501005	2	HEX NUT, 5/16-18	
7	91091001	1	CLAMP SUPPORT	
8	88551010	2	LOCKWASHER, 5/16	
9	91083106	1	O-RING	
10	91086055	1	EXHAUST TUBING	
11	83191021	13	HEX HD CAP SCREW, M10X1.5X30, GR8	
12	83191013	16	LOCKWASHER, M10	
13	91336003	1	TUBE SUPPORT	
14	91086131	1	TUBE SUPPORT	
15	91083456	1	STARTER	
16	91083503	1	ALTERNATOR (includes item 40)	
17	91083218	1	FUEL FILTER	
18	83191006	1	HEX HD CAPSCREW, M10X1.5X40, GR8	
19	88561109	3	WASHER, 3/8	
20	83191005	2	HEX HD CAPSCREW, M10X1.4X45, GR8	
21	83483497	2	HOSE CLAMP	
22	90028660	2	SUPPORT CLAMP	
23	Bulk	11 in	HOSE, 5/16	
24	88561111	1	WASHER, 1/2	
25	91143122	1	SUPPORT CLAMP, 5/8	
26	83191004	2	HEX HD CAPSCREW, M12X1.75X30, GR8	
27	83191010	2	LOCKWASHER, M10	
28	91083481	1	NEGATIVE BATTERY CABLE	
29	91083482	1	POSITIVE BATTERY CABLE	
30	90027187	1	TIE WRAP	
31	88711284	1	PIPE PLUG, 3/4	
32	90205792	1	CUSH ON CLAMP	
33	88661384	1	HEX PLUG, 3/8 TUBE	
34	88201001	2	HEX HD CAPSCREW, 1/4-20X1/2, GR5	
35	88561107	2	FLATWASHER, 1/4	
36	88551009	2	LOCKWASHER, 1/4	
37	24861170	3	SUPPORT CLAMP	
38	91345008	1	STARTER RELAY ASSY (includes the following seven items)	
38	77383377	2	SOLENOID RELAY	
38	88211028	4	HEX HD CAPSCREW, #10-24X1/2, GR5	
38	88501612	4	HEX NUT	
38	88551007	4	LOCKWASHER	
38	88561105	4	WASHER	
38	91331014	1	RELAY MOUNTING PLATE	
38	91373009	1	JUMPER WIRE	
39	91363066	1	JUMPER WIRE	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
40	91083504	1	REGULATOR (supplied with alternator)	
41	91143314	1	WATER TEMPERATURE SENDER	
42	88711385	1	REDUCER BUSHING	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 4-19. (91095029) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D (SN 0277001 through 0277085)



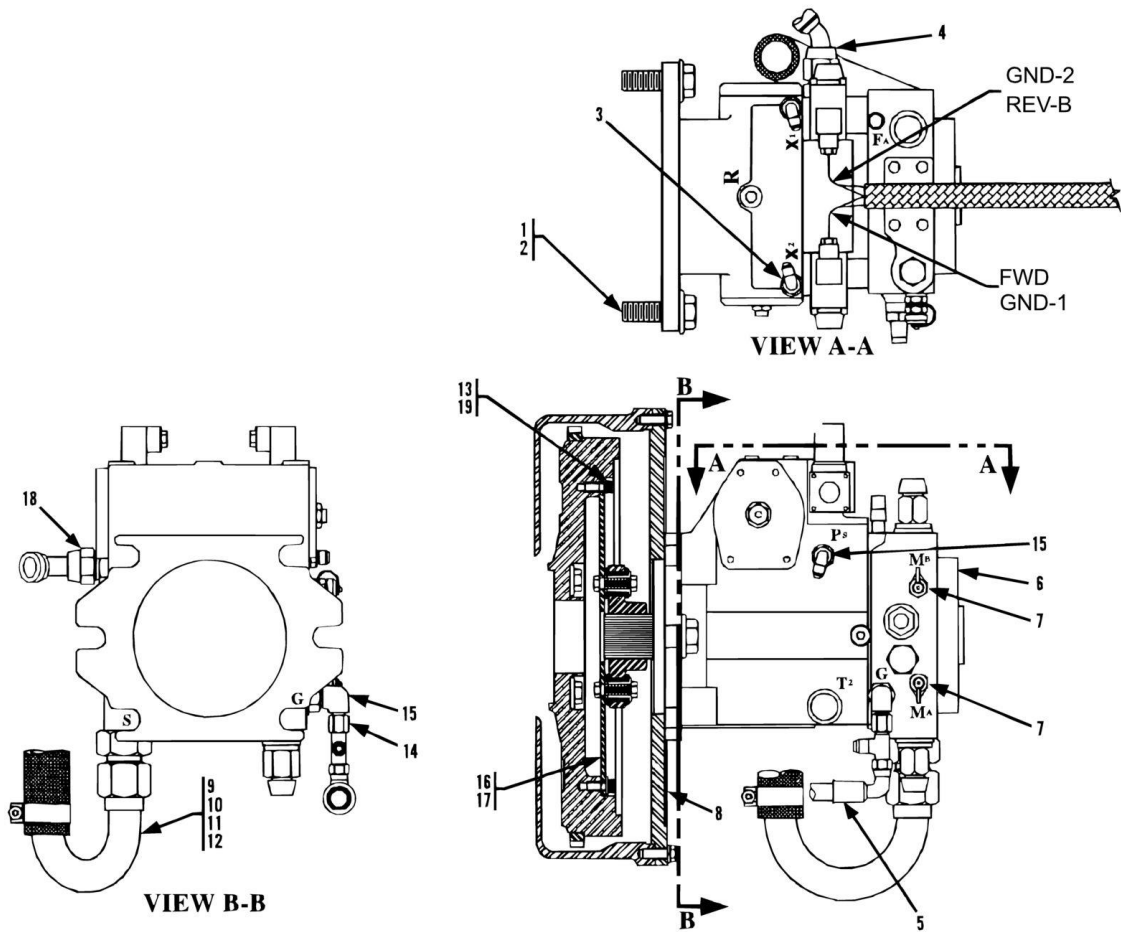
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-19. (91095029) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D (SN 0277001 through 0277085)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91095029	Ref	ENGINE ASSY, (includes all items on ENGINE RIGHT SIDE VIEW - 522D except 45, 46 & 49 thru 53, and all items on pages ENGINE LEFT SIDE VIEW - 522D AND ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5 (torque to 240-265 ft lbs)	
2	88551016	2	LOCKWASHER, 3/4	
3	90027906	2	ELBOW 90	
4	84717839	1	HOSE ASSY	
5	84717852	1	HOSE ASSY	
6		Ref	HYDRO STATIC TRANS PUMP, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
7	91053020	2	TEST COUPLING, (includes viton o-ring)	
7	91054002	2	VITON O-RING	
8	91083019	1	PUMP MT AND FLY WHEEL COUPLING, (includes items 16 & 17)	
9	90028695	2	BAND CLAMP	
10	91083246	1	HOSE	
11	91083536	1	INTAKE TUBE	
12	88662011	1	CONNECTOR, (includes o-ring)	
12	88591210	1	O-RING	
13	88551011	8	LOCKWASHER, 3/8	
14	88662239	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
15	91083222	1	STRAIGHT THREAD 90 REDUCER CONNECTOR, (includes o-ring)	
15	88591207	1	O-RING	
16	91344048	1	PUMP MOUNT PLATE	
17	91084312	1	COUPLING ASSY, (bolts included)	
18	88662008	1	CONNECTOR, (includes o-ring)	
18	88591207	1	O-RING	
19	88211068	8	SOCKET HD CAPSCREW, 3/8-16x5/8 GR8, (torque to 40-45 ft lbs)	

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FIGURE 4-20. (91095029) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D (SN 0277086 through 0277119)



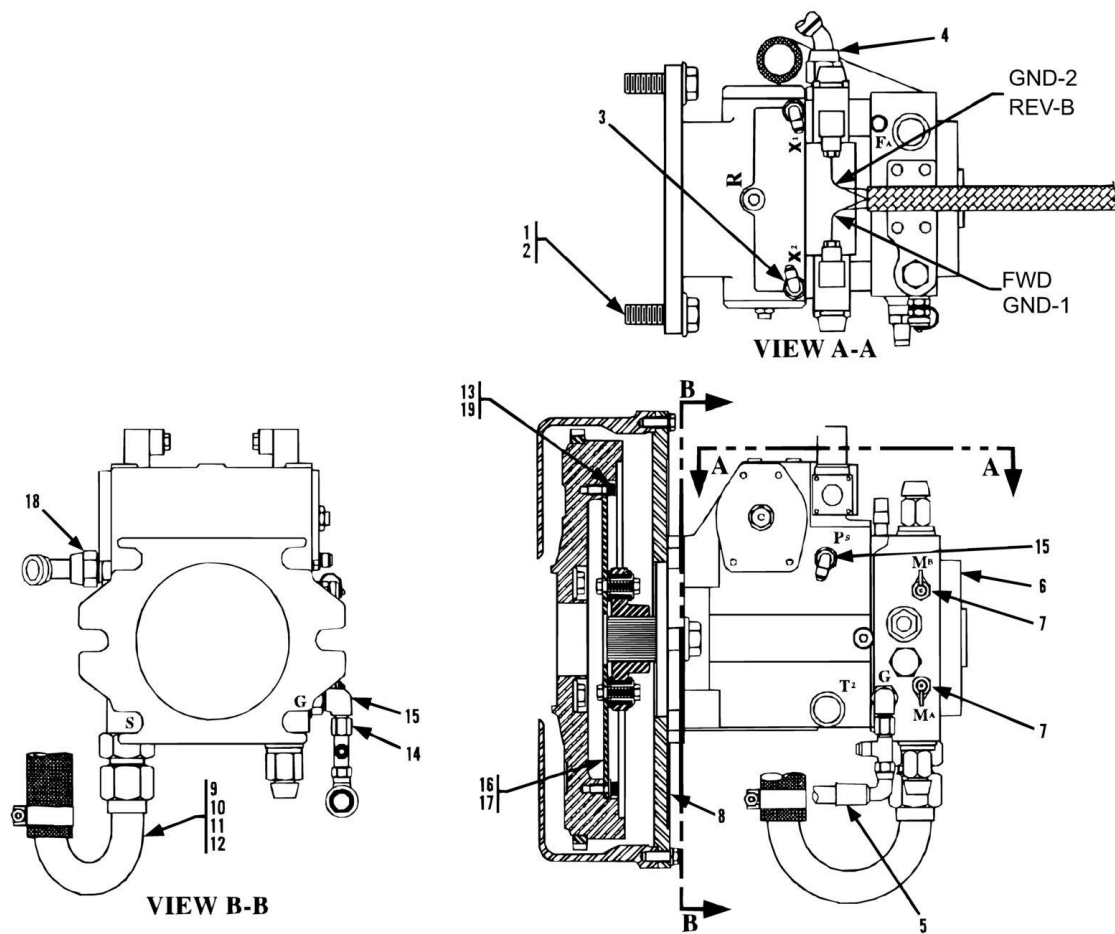
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-20. (91095029) ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D (SN 0277086 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91095029	Ref	ENGINE ASSY, (includes all items on ENGINE RIGHT SIDE VIEW - 522D except 45, 46 & 49 thru 53, and all items on ENGINE LEFT SIDE VIEW - 522D AND ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5, (torque to 240-265 ft lbs)	
2	88551016	2	LOCKWASHER, 3/4	
3	90027906	2	ELBOW 90	
4	84717839	1	HOSE ASSY	
5	84717852	1	HOSE ASSY	
6		Ref	HYDRO STATIC TRANS.PUMP, (See HYDRAULIC COMPONENT SECTION for Breakdown)	
7	91053020	2	TEST COUPLING, (includes viton o-ring)	
7	91054002	2	VITON O-RING	
8	91083019	1	PUMP MT AND FLY WHEEL COUPLING, (includes items 16 & 17)	
9	90028695	2	BAND CLAMP	
10	91083246	1	HOSE	
11	91083536	1	INTAKE TUBE	
12	88662011	1	CONNECTOR, (includes o-ring)	
12	88591210	1	O-RING	
13	88551011	8	LOCKWASHER, 3/8	
14	88662239	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
15	91083222	1	STRAIGHT THREAD 90, REDUCER CONNECTOR, (includes o-ring)	
15	88591207	1	O-RING	
16	91344048	1	PUMP MOUNT PLATE	
17	91084312	1	COUPLING ASSY, (bolts included)	
18	88662008	1	CONNECTOR, (includes o-ring)	
18	88591207	1	O-RING	
19	88211068	8	SOCKET HD CAP SCREW, 3/8-16x5/8 GR8, (torque to 40-45 ft lbs)	

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FIGURE 4-21. (91395001) EPA ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D (SN 0277120 to Present)



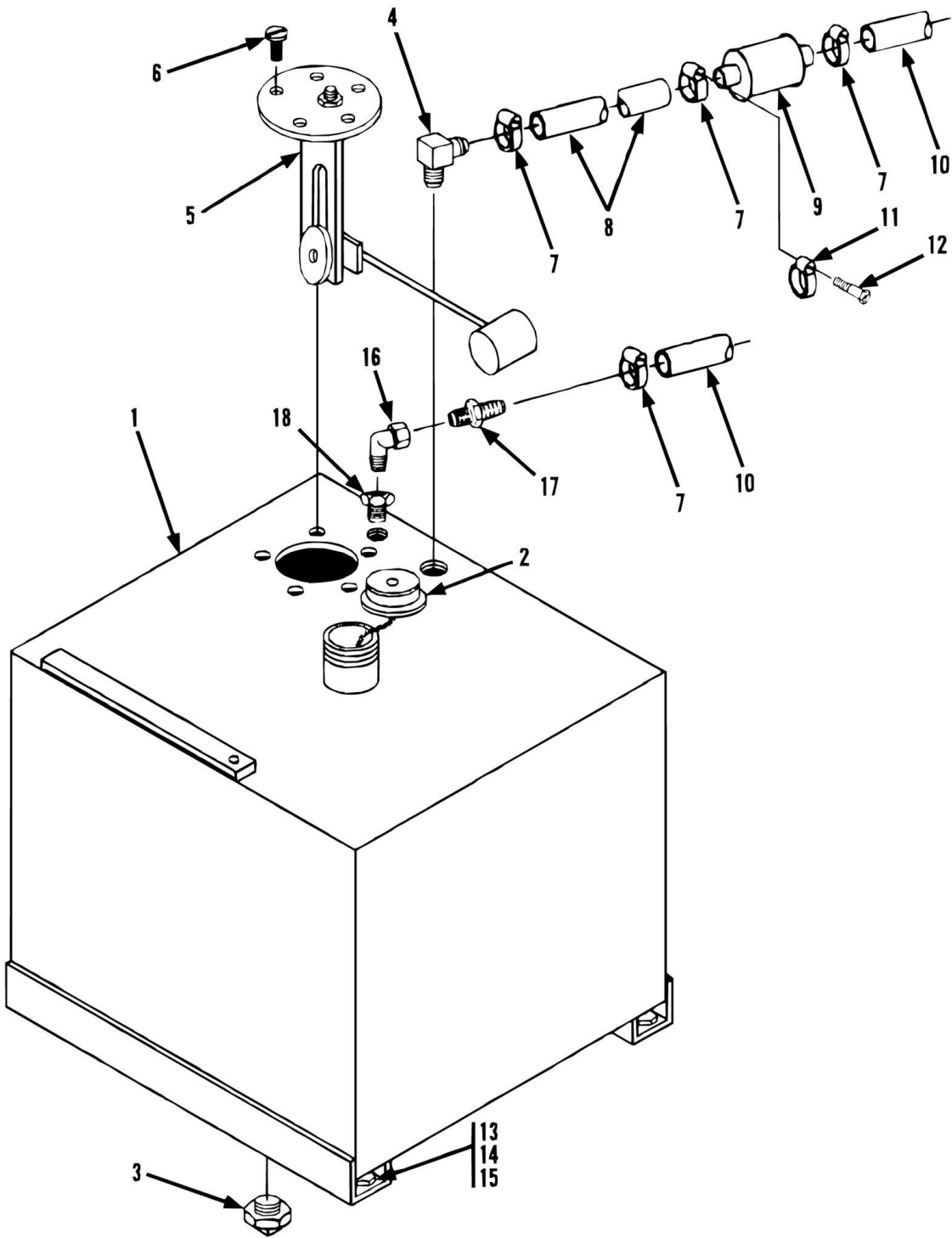
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-21. (91395001) EPA ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91395001	Ref	ENGINE ASSY, (includes all items on ENGINE LEFT SIDE VIEW - 522D except items 50 thru 56, and all items on ENGINE RIGHT SIDE VIEW 522D and ENGINE PUMP MOUNT AND FLYWHEEL HOUSING - 522D)	
1	88201112	2	HEX HD CAPSCREW, 3/4-10X2-1/4, GR5, (torque to 240-265 ft lbs)	
2	90027473	2	LOCK WASHER, 3/4	
3	90027906	2	ELBOW, 90	
4	84717839	1	HOSE ASSY	
5	84717852	1	HOSE ASSY	
6		Ref	HYDRO STATIC TRANS.PUMP, (See HYDRAULIC COMPONENT SECTION for Breakdown)	
7	91053020	2	TEST COUPLING, (includes viton o-ring)	
7	91054002	2	VITON O-RING	
8	91083019	1	PUMP MT AND FLY WHEEL COUPLING, (includes items 16 & 17)	
9	80633030	2	BAND CLAMP	
10	91083246	1	HOSE	
11	91083536	1	INTAKE TUBE	
12	88662011	1	CONNECTOR, (includes o-ring)	
12	88591210	1	O-RING	
13	88551011	8	LOCKWASHER, 3/8	
14	88662239	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
15	91083222	1	STRAIGHT THREAD 90, REDUCER CONNECTOR, (includes o-ring)	
15	88591207	1	O-RING	
16	91344048	1	PUMP MOUNT PLATE	
17	91084312	1	COUPLING ASSY, (bolts included)	
18	88662008	1	CONNECTOR (includes o-ring)	
18	88591207	1	O-RING	
19	88211068	8	SOCKET HD CAPSCREW, 3/8-16x5/8 GR8, (torque to 40-45 ft lbs)	

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FIGURE 4-22. (91155016) FUEL TANK AND LINES (SN 0277001 to Present)



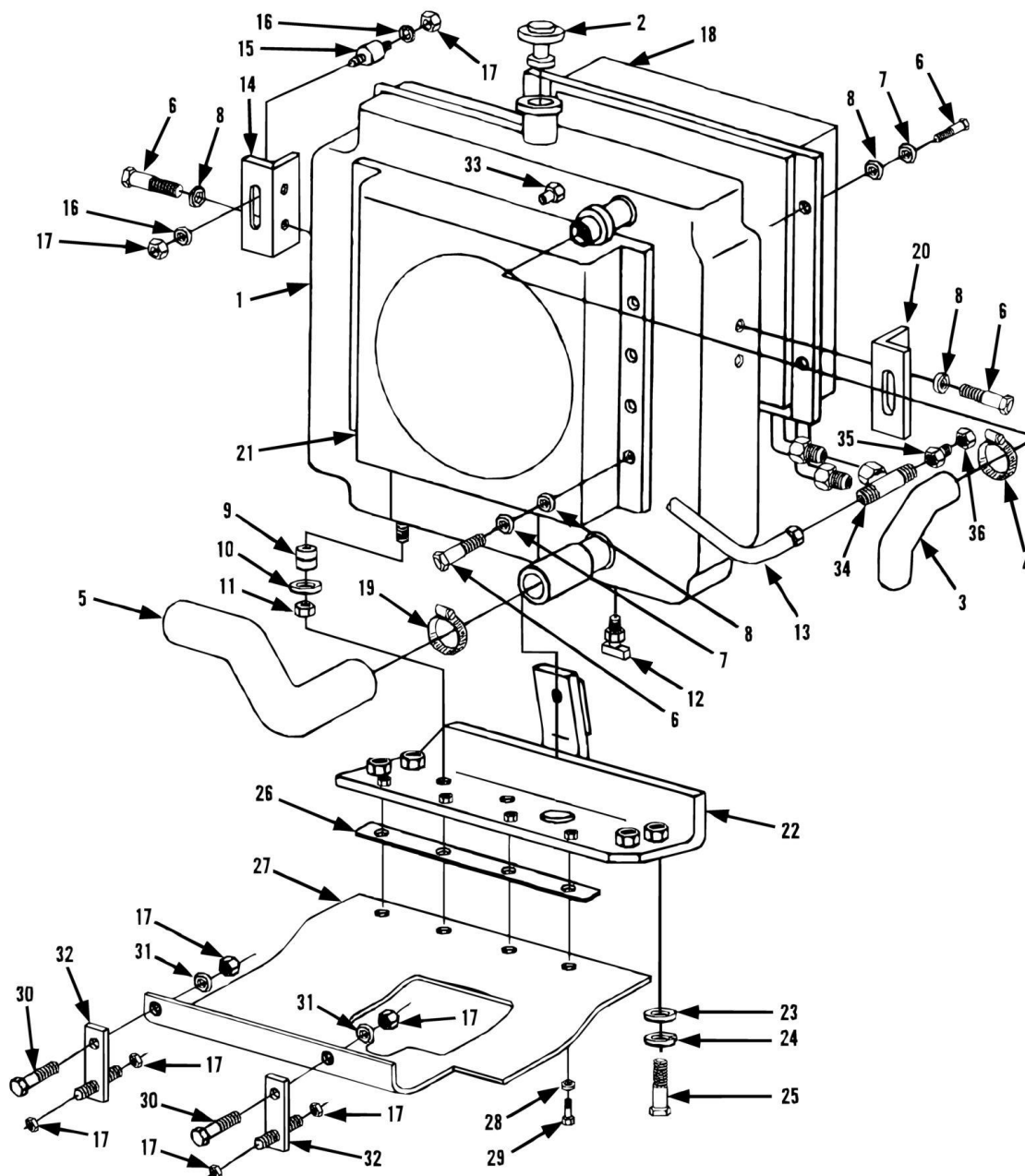
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-22. (91155016) FUEL TANK AND LINES (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91155016	1	FUEL TANK ASSY (includes items 1 thru 6)	
1	91153031	1	FUEL TANK (includes items 2 & 3)	
2	86541381	1	FUEL TANK CAP (w/chain)	
3	88711283	1	HEX SOCKET PIPE PLUG, 1/2	
4	84712746	1	HOSE NIPPLE, 90, 1/2X3/8	
5	91143316	1	FUEL SENDER	
6	91083491	5	GASKETED SCREW, 10-32	
7	83483497	4	HOSE CLAMP	
8	Bulk	11 in	FUEL LINE HOSE, 3/8IN ID	
9	91083218	1	FUEL FILTER	
10	Bulk	60 in	FUEL LINE HOSE, 5/16IN ID	
11	90028660	1	SUPPORT CLAMP	
12	91123124	1	WHIZ-LOK SCREW, 5/16-18X1/2	
13	88201095	4	HEX HD CAPSCREW, 5/8-11X1-1/2, GR5	
14	88561008	4	WASHER, 5/8	
15	88551015	4	LOCKWASHER, 5/8	
16	88712011	1	STREET ELBOW, 90, 1/8	
17	88741805	1	HOSE NIPPLE	
18	88711385	1	REDUCING BUSHING, 1/2X1/8	

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FIGURE 4-23. (91085139) RADIATOR ASSEMBLY (SN 0277001 to Present)



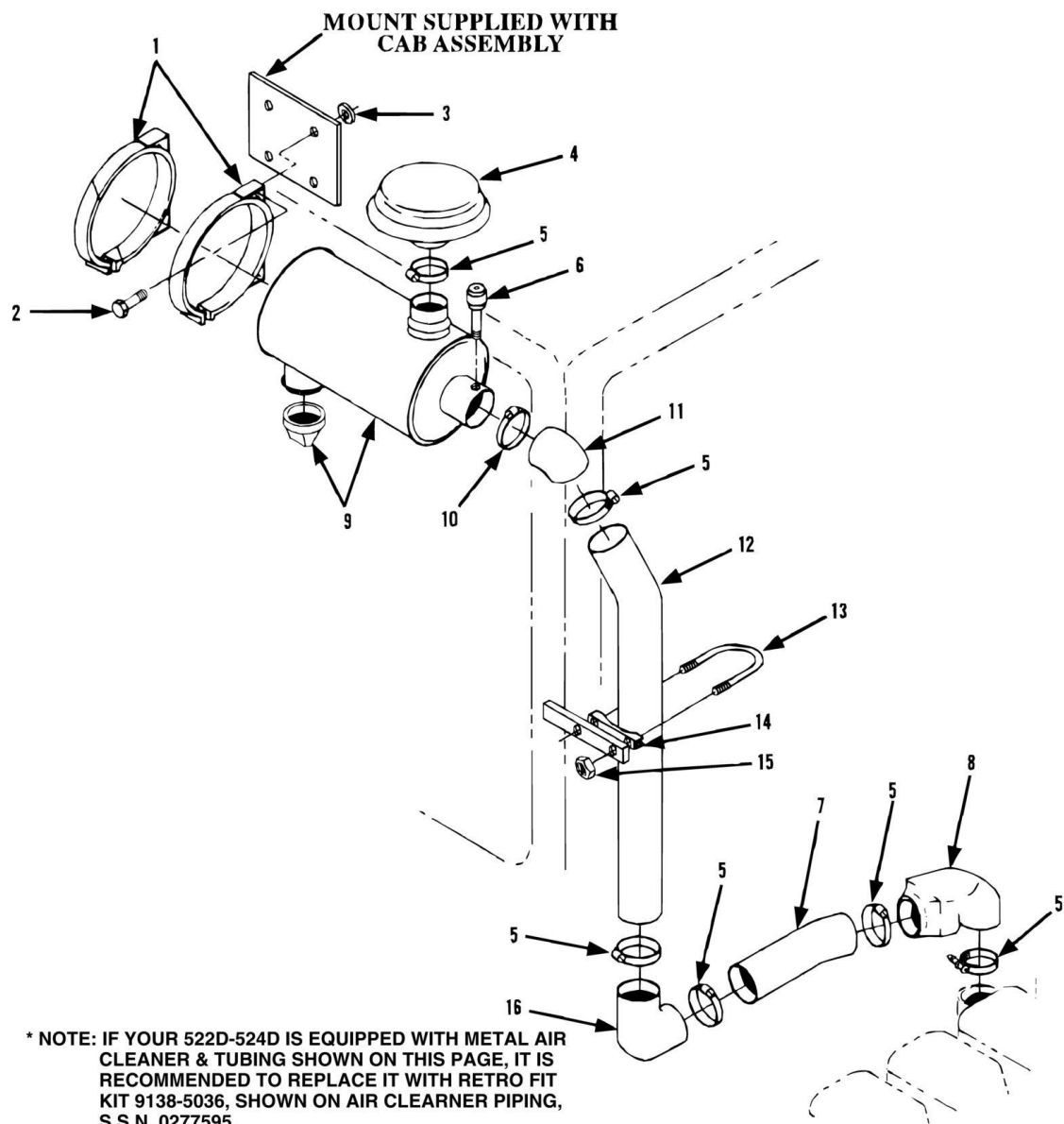
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-23. (91085139) RADIATOR ASSEMBLY (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085139	Ref	RADIATOR ASSY (includes items 1,2,3, one of item 4, 5 thru 8,12,13, 14, 18, one of item 19, 20, 21 & 33 thru 36)	
1	91143269	1	RADIATOR (includes item 2)	
2	91084198	1	RADIATOR CAP, 15 PSI	
3	91083094	1	UPPER RADIATOR HOSE	
4	85071128	2	HOSE CLAMP	
5	91083364	1	LOWER RADIATOR HOSE	
6	88201016	16	HEX HD CAPSCREW, 5/16-18x1/2, GR5	
7	88561003	12	WASHER, 5/16	
8	88551010	16	LOCKWASHER, 5/16	
9	83683308	2	SHOCK MOUNT	
10	90205918	2	WASHER	
11	88521206	2	HEX LOCKNUT, 3/8- 6	
12	84521056	1	DRAIN COCK	
13	84719109	1	HOSE ASSY	
14	91081181	1	MOUNTING BRACKET	
15	91033137	2	SHOCK MOUNT	
16	88561003	4	FLAT WASHER, 5/16	
17	77143006	10	HEX LOCKNUT, 5/16-18	
18	91083573	1	OIL COOLER	
19	86883327	2	HOSE CLAMP	
20	91081541	1	MOUNTING BRACKET	
21	91083085	1	RADIATOR SHROUD	
22	91086174	1	RADIATOR MOUNT	
23	88561006	4	FLAT WASHER, 1/2	
24	88551013	4	LOCKWASHER, 1/2	
25	88201067	4	HEX HD CAPSCREW, 1/2-13x1-1/2 GR5	
26	91301086	1	FLAT BAR	
27	91123168	1	DUST SHIELD (524D)	
27	91303057	1	DUST SHIELD (522D)	
28	88561003	4	WASHER	
29	88201021	4	HEX HD CAPSCREW, 5/16-18X1-1/4, GR5	
30	88201020	2	HEX HD CAPSCREW, 5/16-18X1, GR5	
31	91083533	2	FENDER WASHER	
32	91081654	2	BAR	
33	90030271	1	FITTING	
34	88662227	1	SWIVEL NUT BRANCH TEE, 3/4 TUBE	
35	88661345	1	REDUCER ADAPTER	
36	88661408	1	NUT	

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FIGURE 4-24. AIR CLEANER PIPING (SN 0277001 through 0277594)



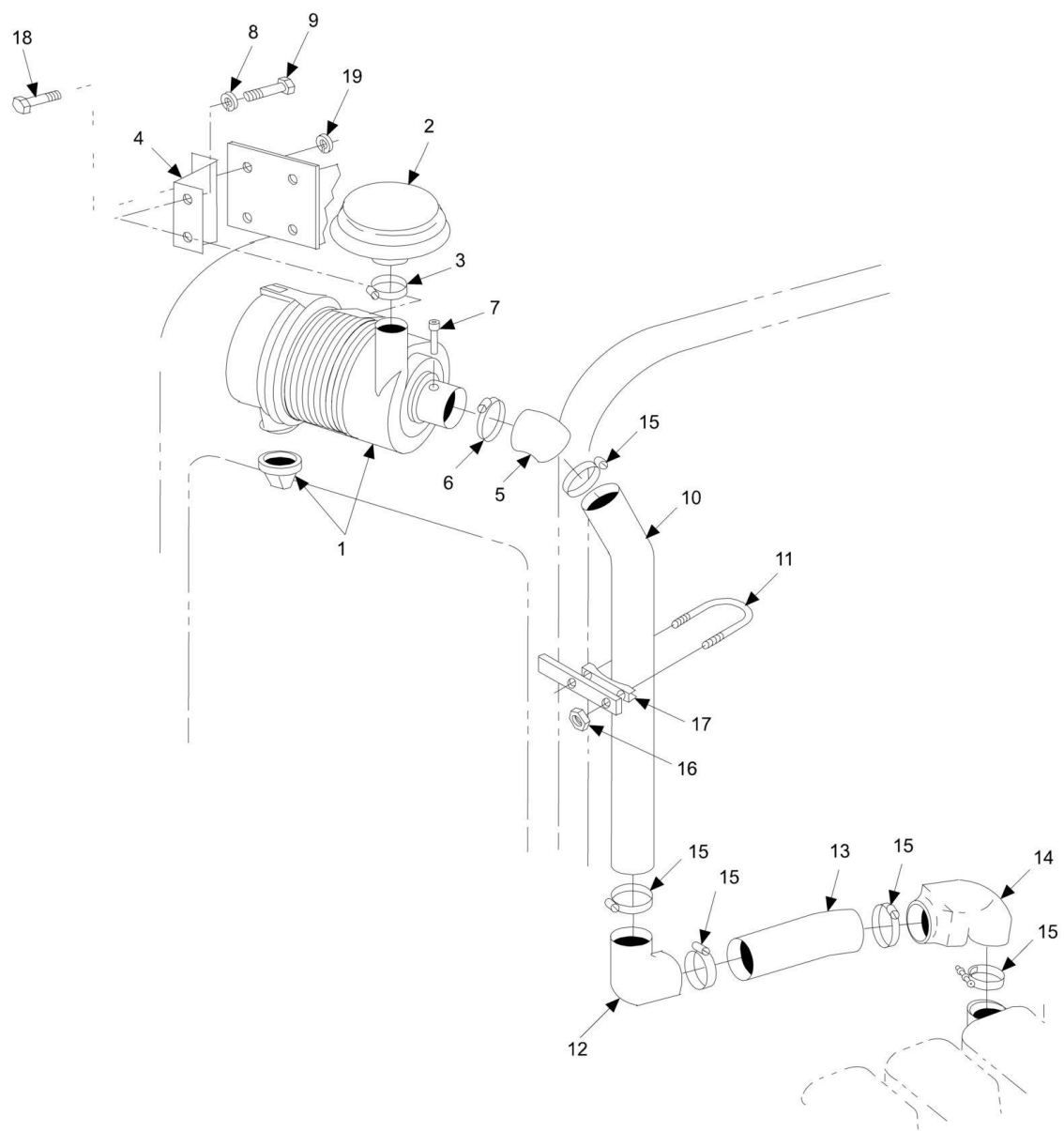
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-24. AIR CLEANER PIPING (SN 0277001 through 0277594)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	77103138	2	MOUNTING Band	
2	88201018	4	HEX HD CAPSCREW, 3/8-16x3/4, GR5	
3	88551010	4	LOCKWASHER, 3/8IN	
4	91033028	1	INLET CAP	
5	91163129	6	HOSE CLAMP	
6	77383154	1	SERVICE INDICATOR	
7	91083124	1	AIR INTAKE TUBE	
8	91083126	1	AIR INTAKE ELBOW	
9		Ref	AIR CLEANER, METAL HOUSING, (See ENGINE PUMP MOUNT AND FLYWHEEL HOUSING for Breakdown)	
10	91163137	1	HOSE CLAMP	
11	91083129	1	REDUCING ELBOW	
12	91143353	1	AIR INTAKE TUBE	
13	24921332	1	MUFFLER CLAMP, (includes items 14 & 15)	
14		Ref	BRIDGE	
15		Ref	NUT	
16	91083128	1	90, AIR INTAKE ELBOW	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 4-25. AIR CLEANER PIPING (SN 0277595 to Present)



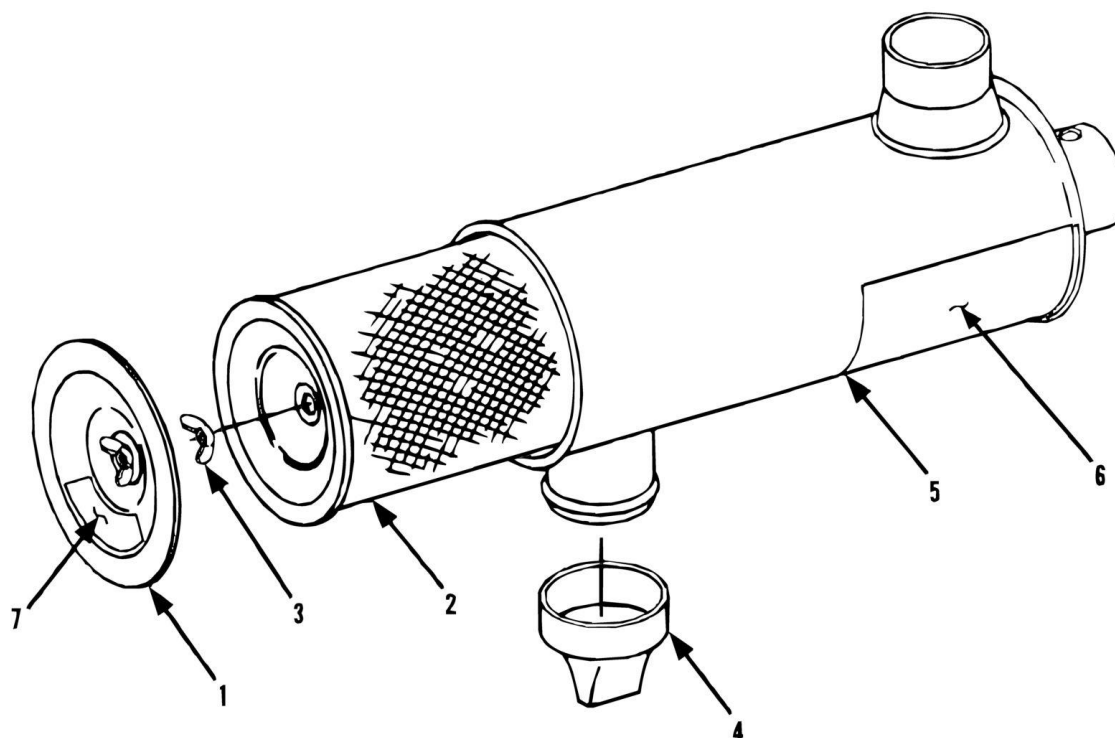
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-25. AIR CLEANER PIPING (SN 0277595 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91385036	1	RETRO FIT KIT, (includes items 1, 2, 5 thru 10, 18 and the following two items)	
	91381025	1	AIR CLEANER SUPPORT	
	88561003	2	FLATWASHER, 5/16	
2	91403512	Ref	7IN AIR CLEANER, VINYL HOUSING, (See ENGINE PUMP MOUNT AND FLYWHEEL HOUSING for Breakdown)	
3		1	AIR INLET HOOD, (includes item 3)	
4		Ref	CLAMP	
5	91381024	1	AIR CLEANER SUPPORT	
6	91083128	1	REDUCING ELBOW	
7	91163129	1	BAND CLAMP	
8	83671475	1	SERVICE INDICATOR	
9	88551010	2	LOCKWASHER, 5/16	
10	83191028	2	HEX HD CAP SCREW, M8x1.25x25	
11	91343023	1	UPPER INTAKE TUBE	
12	24921332	1	MUFFLER CLAMP, (includes items 16 & 17)	
13	91083128	1	90, AIR INTAKE ELBOW	
14	91083124	1	AIR INTAKE TUBE	
15	91083126	1	AIR INTAKE ELBOW	
16	91163129	5	BAND CLAMP	
17	88201018	Ref	NUT	
18		Ref	BRIDGE	
19		2	HEX HD CAPSCREW, 5/16-18 x 3/4, GR5	
	88551010	2	LOCKWASHER, 5/16	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 4-26. (90205663) AIR CLEANER (SN 0277001 through 0277594)



*** NOTE: IF YOUR MACHINE IS EQUIPPED WITH THE METAL AIR CLEANER SHOWN ON THIS PAGE, IT IS RECOMMENDED TO REPLACE IT WITH RETRO FIT KIT 91385036, SHOWN ON AIR CLEANER PIPING, S.S.N. 0277595.**

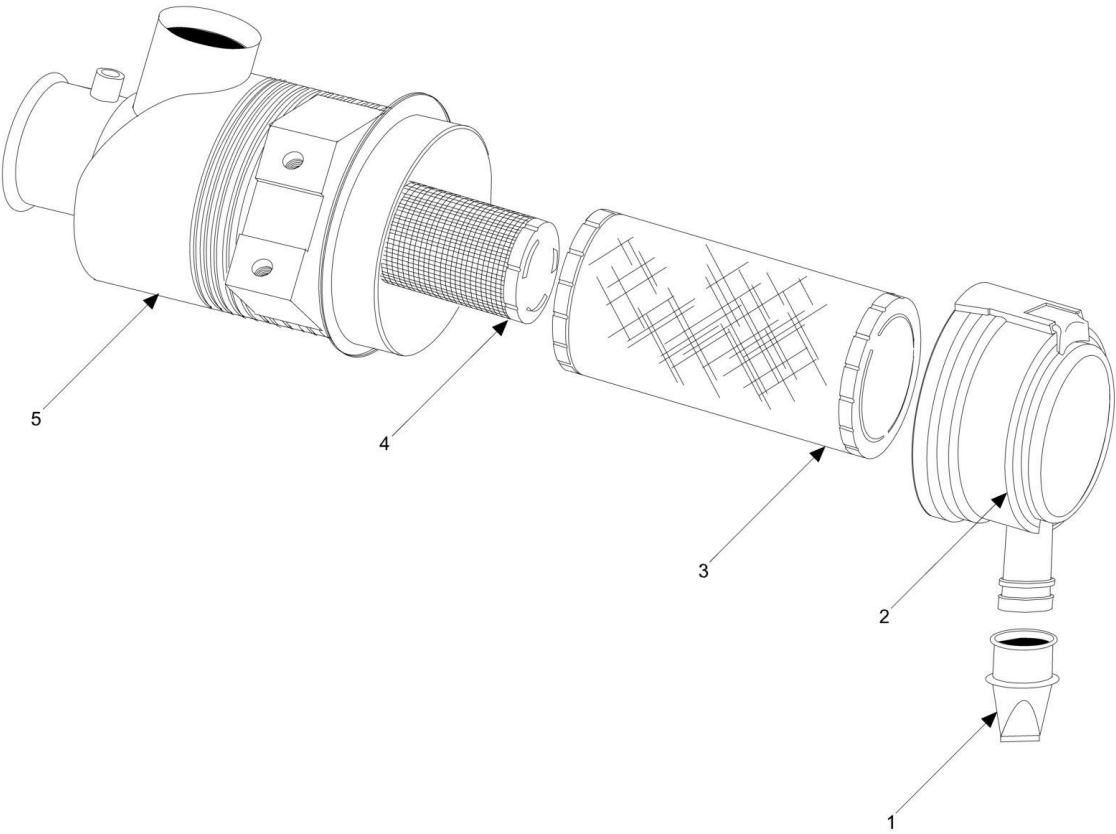
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-26. (90205663) AIR CLEANER (SN 0277001 through 0277594)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90205663	1	AIR CLEANER, (includes items 1 thru 5)	
1	90206606	1	COVER W/NUT	
2	90206262	1	ELEMENT	
3	90201414	1	WING NUT W/SEAL	
4	90200807	1	VACUATOR	
5		Ref	BODY, METAL HOUSING, (not sold separately order P/N 90205663)	
6	91333017	1	AIR CLEANER DECAL	
7	91333024	1	AIR FILTER DECAL	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-27. (91383065) 7IN AIR CLEANER (SN 0277595 to Present)



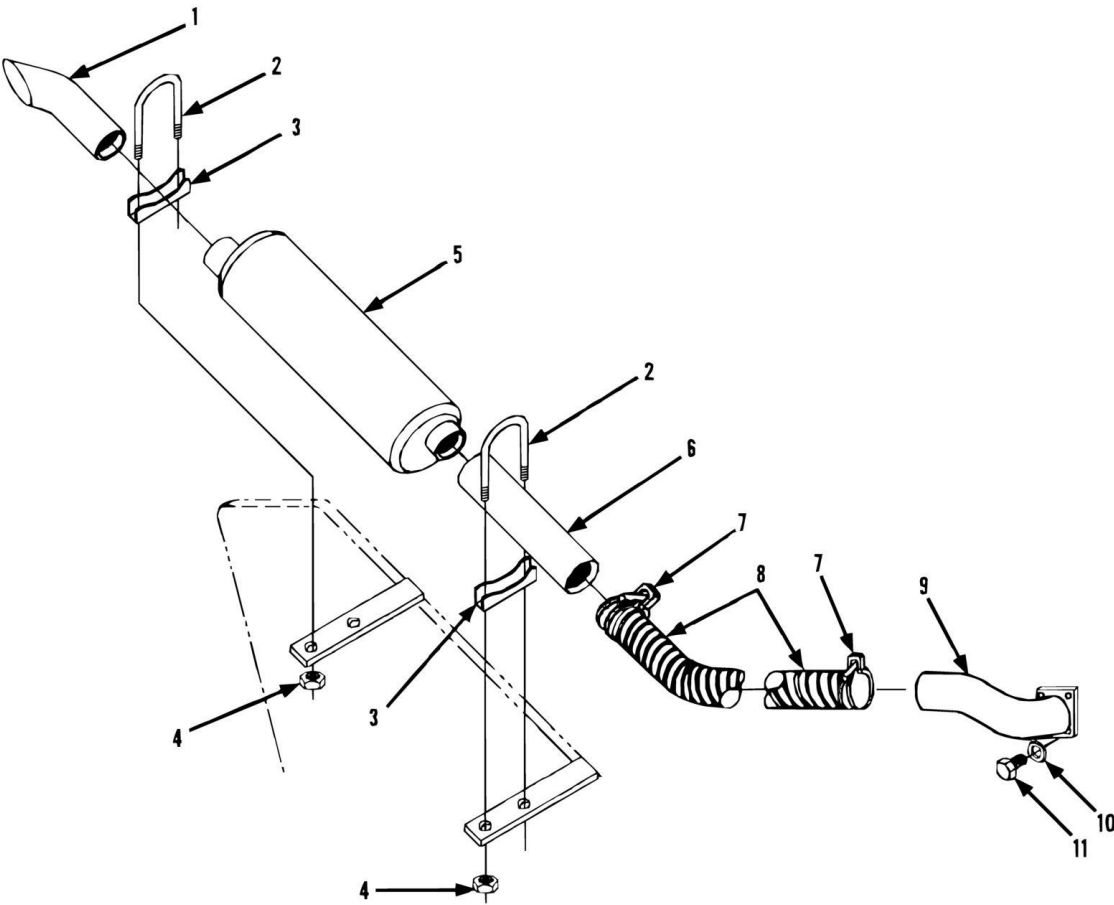
SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-27. (91383065) 7IN AIR CLEANER (SN 0277595 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91383065	1	7IN AIR CLEANER (includes all items)	
1	80274006	1	VACUATOR VALVE	
2	91384010	1	COVER ASSEMBLY	
3	91403102	1	FILTER ELEMENT	
4	91403103	1	SAFETY ELEMENT	
5		Ref	BODY, VINYL HOUSING (not sold separately order P/N 91383065)	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 4 - ENGINE AND ATTACHING PARTS

FIGURE 4-28. EXHAUST SYSTEM (SN 0277001 to Present)



SECTION 4 - ENGINE AND ATTACHING PARTS

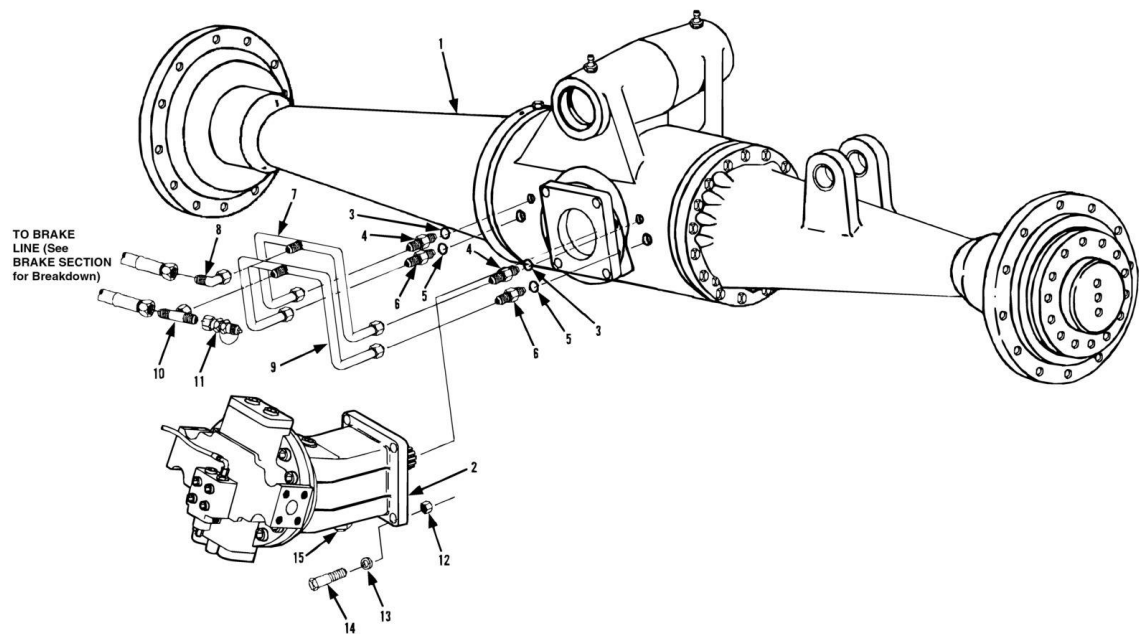
FIGURE 4-28. EXHAUST SYSTEM (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91083560	1	TAIL PIPE	
2	83683175	2	MUFFLER CLAMP (includes items 3 & 4)	
3		Ref	BRIDGE	
4		Ref	NUT	
5	91083250	1	MUFFLER	
6	91123165	1	EXHAUST PIPE	
7	91163268	2	FLEX PIPE CLAMP	
8	91043150	1	FLEXIBLE TUBING	
9	91086055	1	EXHAUST TUBE	
10	83191013	4	LOCKWASHER, M10	
11	83191021	4	HEX HD CAPSCREW, M10X1.5X30	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 5 - DRIVE TRAIN

SECTION 5 - DRIVE TRAIN

FIGURE 5-1. (91085110) FRONT AXLE ASSEMBLY - 524D AND (91095020) FRONT AXLE ASSEMBLY
- 522D (SN 0277001 to Present)



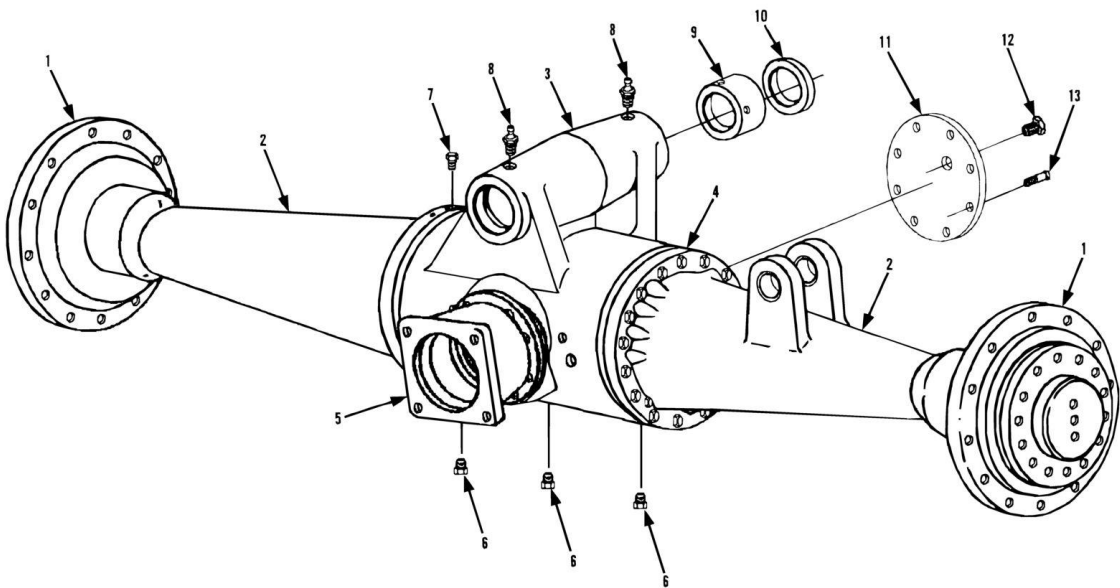
SECTION 5 - DRIVE TRAIN

FIGURE 5-1. (91085110) FRONT AXLE ASSEMBLY - 524D AND (91095020) FRONT AXLE ASSEMBLY - 522D (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085110	1	FRONT AXLE ASSY - 524D (includes items 1 thru 15)	
	91095020	1	FRONT AXLE ASSY - 522D (includes items 1 thru 5)	
1		Ref	FRONT AXLE (See FRONT AXLE for Breakdown)	
2		Ref	FRONT DRIVE MOTOR (See HYDRAULIC COMPONENT SECTION for Breakdown)	
3	88591205	2	O-RING	
4	88662006	2	CONNECTOR (includes item 3)	
5	88591204	2	O-RING	
6	88662005	2	CONNECTOR (includes item 5)	
7	91123130	1	PARK BRAKE TUBE LINE	
8	88662106	1	ELBOW, 90 (swivel nut)	
9	91123127	1	SERVICE BRAKE TUBE LINE	
10	88662224	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
11	91143172	1	MINI CHECK VALVE	
12	77383580	4	HIGH NUT, 3/4-16, (torque nuts to 265-290 ft lbs)	
13	90027473	4	HARD WASHER, 3/4	
14	88201616	4	HEX HD CAPSCREW, 3/4-16X3-1/2, GR5	
15	88662194	1	HEX SOCKET HD PLUG, (includes o-ring)	
15	88591206	1	O-RING	

SECTION 5 - DRIVE TRAIN

FIGURE 5-2. (91123119) FRONT AXLE (SN 0277001 to Present)



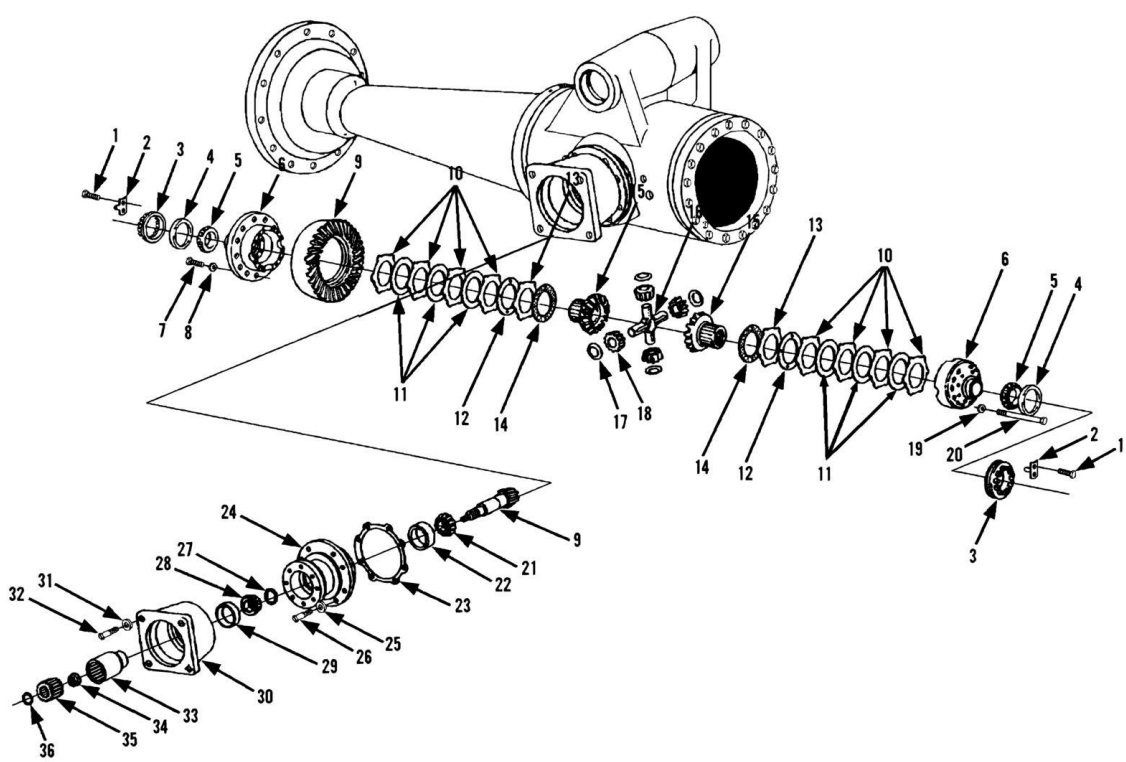
SECTION 5 - DRIVE TRAIN

FIGURE 5-2. (91123119) FRONT AXLE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91123119	1	FRONT AXLE (includes all items on pages 6-2, 6-3, 6-4 & 6-5)	
		Ref	WHEEL FLANGE ASSY (See AXLE SHAFT AND WHEEL FLANGE ASSEMBLY for Breakdown)	
2		Ref	LEFT AND RIGHT HOUSING ASSY (See LEFT/RIGHT HOUSING ASSEMBLY for Breakdown)	
3	91144326	1	CENTER HOUSING ASSY (includes item 9)	
4		Ref	BRAKE ASSY (See BRAKE ASSEMBLY for Breakdown)	
5		Ref	CARRIER ASSY (See CARRIER ASSEMBLY for Breakdown)	
6	91144327	3	DRAIN PLUG	
7	91144328	1	VENT PLUG	
8	91144329	2	LUBE FITTING	
9	91084046	2	BUSHING	
10	91084047	2	TRUNNION OIL SEAL	
11	91141511	1	COVER	
12	88711284	1	LEVEL PLUG	
13	91144332	8	CAPSCREW, M8X1.25X16.0	

SECTION 5 - DRIVE TRAIN

FIGURE 5-3. CARRIER ASSEMBLY (SN 0277001 to Present)



SECTION 5 - DRIVE TRAIN

FIGURE 5-3. CARRIER ASSEMBLY (SN 0277001 to Present)

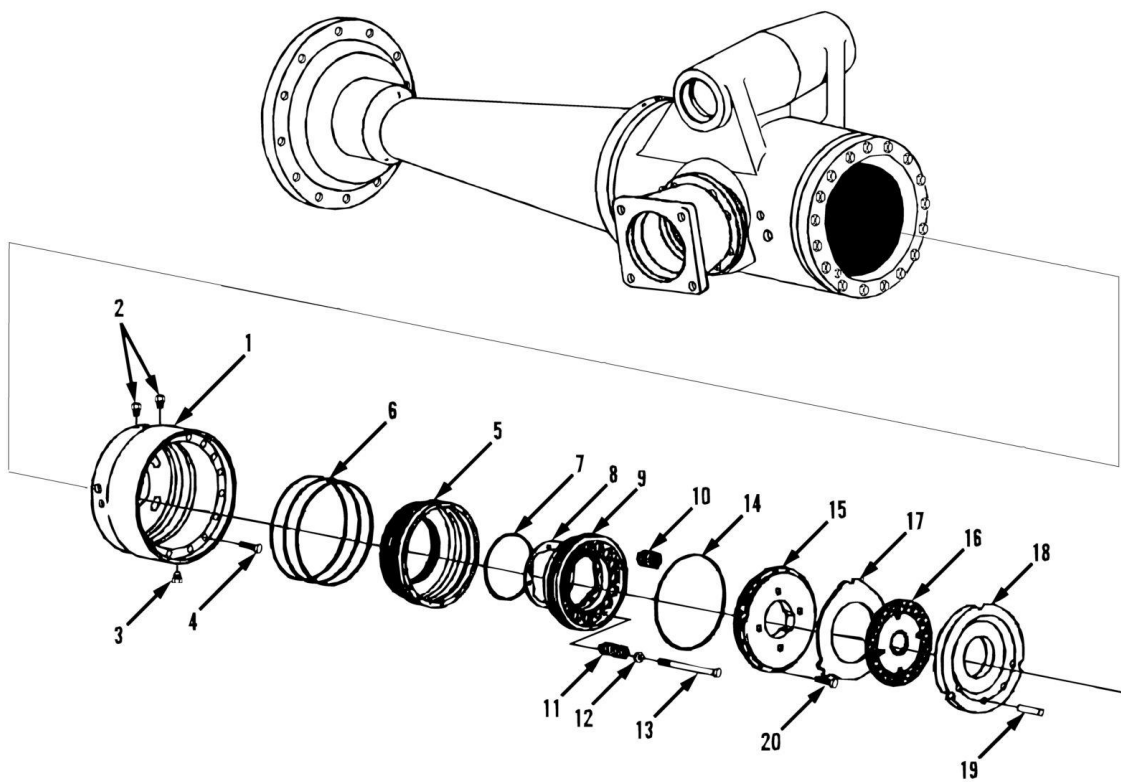
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	Note: Only items with part numbers are available for service.	
	91144382	Ref	LIMITED SLIP PLATE STACK KIT (includes items 10, 11, 12, 13 & 14)	
	91144383	Ref	PINION CAGE SHIM KIT (includes item 23)	
	91144384	Ref	DRIVE PINION SHIM KIT (includes item 27)	
	91144385	Ref	LIMITED SLIP SHIM KIT (includes item 12)	
1	91144386	4	CAPSCREW	
2	91144387	2	ADJUSTER RING LOCK	
3	91144388	2	ADJUSTER RING	
4	83073828	2	BEARING CUP	
5	91144389	2	BEARING CONE	
6	91144390	1	DIFFERENTIAL CASE	
7	91144391	12	CAPSCREW, M10X1.0X30.0	
8	83483584	12	WASHER	
9	91144392	1	SPIRAL GEAR AND PINION	
10	Kit	8	DRIVE FRICTION DISC (included in 91144382 kit)	
11	Kit	6	DRIVEN FRICTION DISC (included 91144382 kit)	
12	Kit	2	SHIM (0.33) (included in shim kit)	
12	Kit	2	SHIM (0.38) (included in shim kit)	
12	Kit	2	SHIM (0.25) (included in shim kit)	
12	Kit	2	SHIM (0.13) (included in shim kit)	
13	Kit	2	COMPRESSION DISC (included in 91144382 kit)	
14	Kit	2	THRUSTWASHER (included in 91144382 kit)	
15	91144393	2	SIDE GEAR	
16	91144394	1	SPIDER	
17	91144395	4	THRUSTWASHER	
18	91144396	4	PINION GEAR	
19	83483584	12	WASHER	
20	91144397	12	CAPSCREW, M10X1.5X80.0	
21	90207204	1	BEARING CONE	
22	90200440	1	BEARING CUP	
23	Kit	4	SHIM (0.05) (included in shim kit)	
23	Kit	2	SHIM (0.125) (included in shim kit)	
23	Kit	3	SHIM (0.20) (included in shim kit)	
23	Kit	1	SHIM (0.50) (included in shim kit)	
24	91144398	1	PINION CAGE ASSY (includes items 22 & 29)	
25	91144399	8	WASHER	
26	91144400	8	CAPSCREW, M12X1.75X40.0	
27	Kit	1	SHIM (1.20) (included in shim kit)	
27	Kit	1	SHIM (1.25) (included in shim kit)	
27	Kit	1	SHIM (1.30) (included in shim kit)	
27	Kit	1	SHIM (1.35) (included in shim kit)	
27	Kit	1	SHIM (1.40) (included in shim kit)	
27	Kit	1	SHIM (1.45) (included in shim kit)	
27	Kit	1	SHIM (1.50) (included in shim kit)	
28	91144401	1	BEARING CONE	
29	91144402	1	BEARING CUP	
30	91144403	1	MOTOR ADAPTER FLANGE	
31	83483584	8	WASHER	
32	91144404	8	CAPSCREW, .3750-16UNC-2AX1.25	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
33	91144405	1	DRIVEN SLEEVE	
34	91144406	1	PINION NUT, M24X1.5	
35	91144407	1	DRIVE SLEEVE	
36	91144408	1	SNAP RING	

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FIGURE 5-4. BRAKE ASSEMBLY (SN 0277001 to Present)



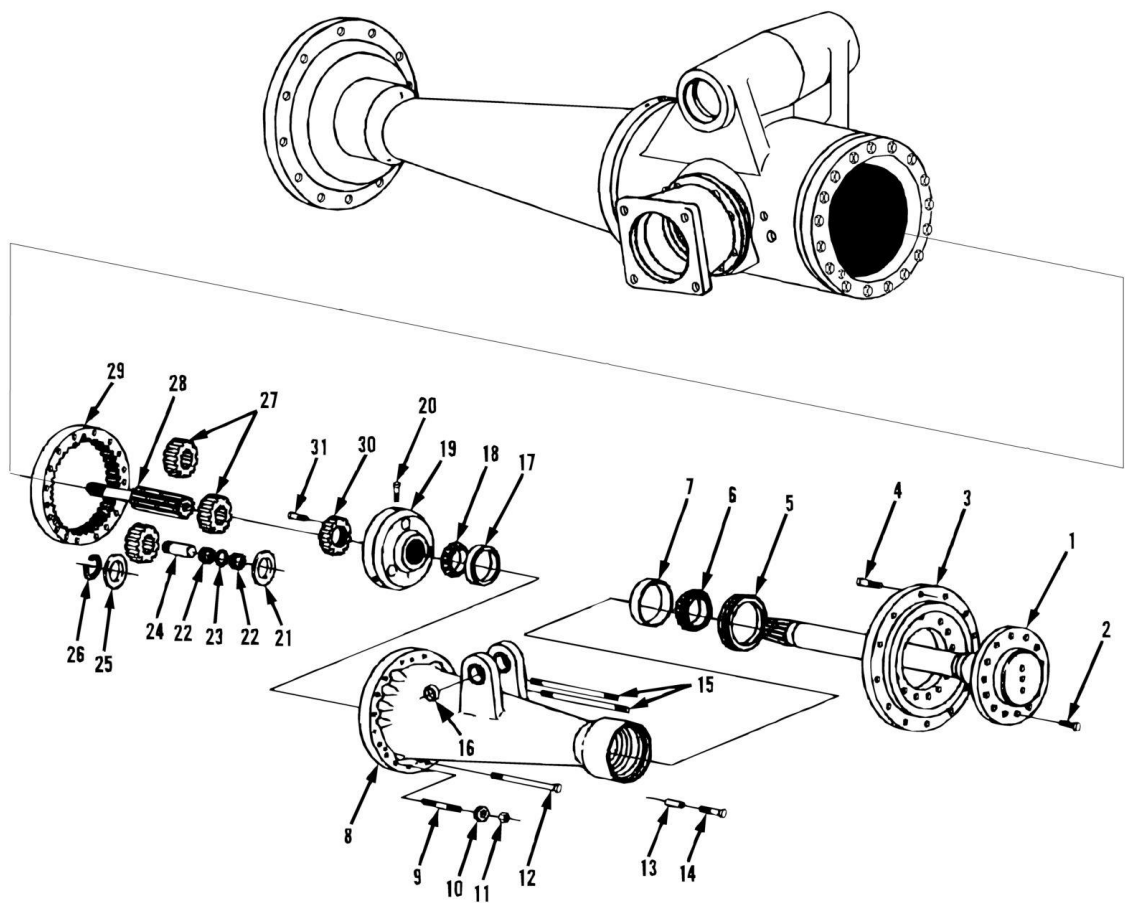
SECTION 5 - DRIVE TRAIN

FIGURE 5-4. BRAKE ASSEMBLY (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91144442	Ref	BRAKE SEAL KIT (includes items 6, 7, & 14), (services both sides)	
	91144369	Ref	BRAKE PISTON PLATE KIT (includes items 15, 16, 17 & 18), (services one side)	
	91144370	Ref	BRAKE PLATE AND SEAL KIT (includes items 6, 7, 14, 15, 16, 17 & 18), (services one side)	
	91144371	Ref	PISTON BRAKE SHIM KIT (includes item 8), (services one side)	
	91144372	1	BRAKE HOUSING (right side only - left side included in center housing)	
2	91144373	4	HYDRAULIC LINE BLEEDER	
3		Ref	DRAIN PLUG (See FRONT AXLE for Breakdown)	
4	91144374	3	CAPSCREW - RIGHT SIDE ONLY, M8X1.25X40.0	
5	91124094	2	BRAKE PISTON AND PLATE ASSY (includes items 6, 7, 9, 10, 14, 15, & 20)	
6	Kit	6	O-RING	
7	Kit	2	O-RING	
8	Kit	8	SHIM (0.075) (included in shim kit)	
8	Kit	8	SHIM (0.125) (included in shim kit)	
8	Kit	8	SHIM (0.255) (included in shim kit)	
8	Kit	8	SHIM (0.555) (included in shim kit)	
9	91144376	2	BRAKE PISTON	
10	91144377	24	SPRING	
11	91144378	16	SPRING	
12	86881421	16	WASHER	
13	91144379	16	RETURN SPRING BOLT	
14	Kit	2	O-RING	
15	Kit	2	BRAKE ACTUATING PLATE	
16	Kit	8	FRICTION DISC	
17	Kit	8	STATIONARY DISC	
18	Kit	2	BRAKE REACTION PLATE	
19	91144380	6	BRAKE DISC LOCKPIN	
20	91144381	42	CAPSCREW, M6X1.0X12.0 (allen)	
		Ref	NOTE: QUANTITIES SHOWN ARE FOR BOTH SIDES.	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 5-5. (91144339) (91144337) LEFT/RIGHT HOUSING ASSEMBLY (91144333) (91144335) AXLE SHAFT AND WHEEL FLANGE ASSEMBLY (SN 0277001 to Present)



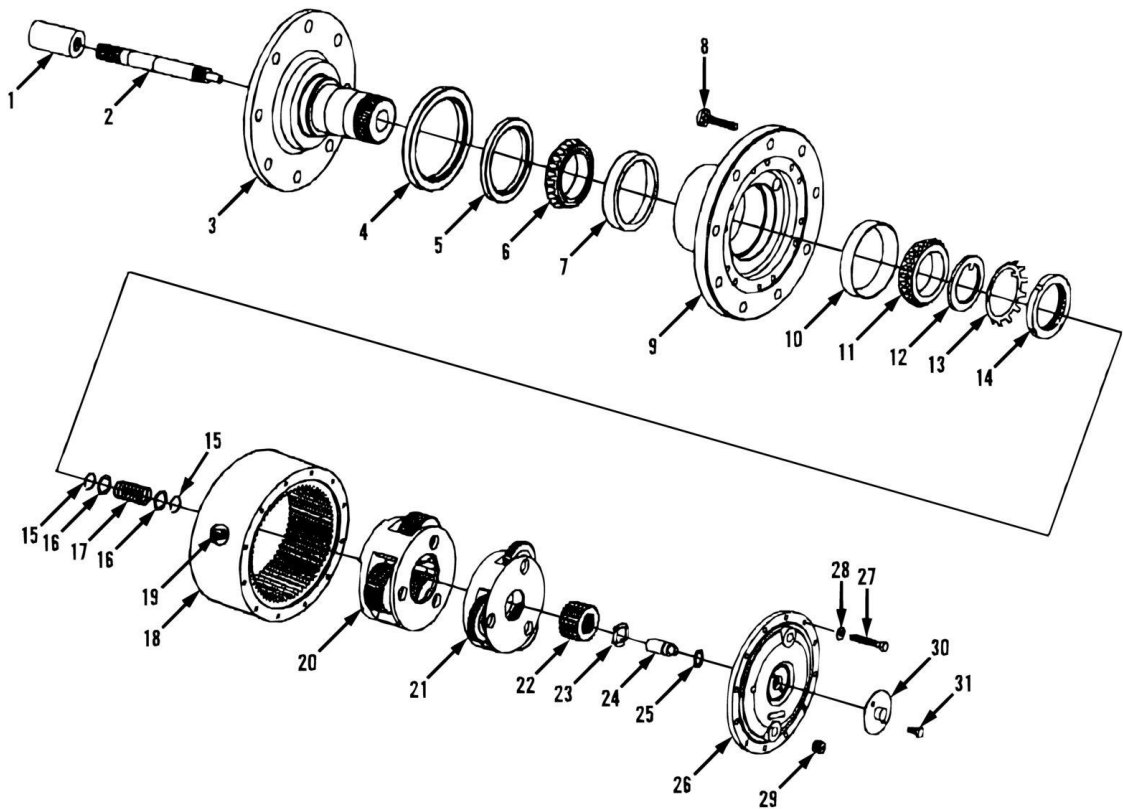
SECTION 5 - DRIVE TRAIN

FIGURE 5-5. (91144339) (91144337) LEFT/RIGHT HOUSING ASSEMBLY (91144333) (91144335) AXLE SHAFT AND WHEEL FLANGE ASSEMBLY (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91144333	2	AXLE SHAFT ASSY (includes items 2, 3, 4 & 5)	
2	91144334	28	CAPSCREW, M20X1.5X50.0	
3	91144335	2	WHEEL FLANGE ASSY (includes item 4)	
4	90203543	24	WHEEL BOLT	
5	91144336	2	SHAFT OIL SEAL	
6	86984451	2	BEARING CONE	
7	86984452	2	BEARING CUP	
8	91144337	1	HOUSING ASSY - RIGHT SIDE (shown) (includes items 7, 16 & 17)	
8	91144338	Ref	RING GEAR AND HOUSING ASSY - RIGHT SIDE (shown) (includes items 7, 16, 17 & 29)	
8	91144339	1	HOUSING ASSY - LEFT SIDE (not shown) (includes items 7 & 17)	
8	91144340	Ref	RING GEAR AND HOUSING ASSY - LEFT SIDE (not shown) (includes items 7, 17 & 29)	
9	91144341	4	SET SCREW	
10	91144342	32	WASHER	
11	91144343	8	NUT, M14X1.5-6H	
12	91144344	14	CAPSCREW - RIGHT SIDE, M14X1.5X212.0	
12	91144345	14	CAPSCREW - LEFT SIDE, M14X1.5X120.0	
13	91144346	2	SPACER - 19mm	
13	91144347	4	SPACER - 26mm	
14	91144348	4	CAPSCREW - USE W/26mm SPACER, M14x1.5x85 (position at 7 & 5 o'clock)	
14	91144349	2	CAPSCREW - USE W/19mm SPACER, M14x1.5x78 (position at 12 o'clock)	
15	91144350	2	STUD - RIGHT SIDE, M14X1.5X232.0	
15	91144351	2	STUD - LEFT SIDE, M14X1.5X112.0	
16	91144352	2	BUSHING	
17	91144353	2	BEARING CUP	
18	91144354	2	BEARING CONE	
19	91144355	2	SPIDER ASSY (includes items 20 & 24)	
20	91144356	6	CAPSCREW, M10X23.0	
21	91144357	6	THRUSTWASHER	
22	91144358	6	KIT ROLLER	
23	91144359	6	SPACER	
24	91144360	6	PLANETARY PINION SHAFT	
25	91144361	6	WASHER	
26	91144362	6	SNAP RING	
27	91144363	6	PLANETARY PINION	
28	91144364	1	SUN GEAR (287.0mm) - RIGHT SIDE (shown)	
28	91144365	1	SUN GEAR (247.0mm) - LEFT SIDE (not shown)	
29	91144366	2	RING GEAR	
30	91144367	2	ADJUSTING NUT	
31	91144368	2	CAPSCREW (adjusting nut lock)	
		Ref	NOTE: QUANTITIES SHOWN ARE FOR BOTH SIDES.	

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FIGURE 5-6. (91123145) REAR STEERING AXLE DRIVE HUB - 524D (SN 0277001 to Present)



BEARING LOCKNUT TOOL - 9114-4325

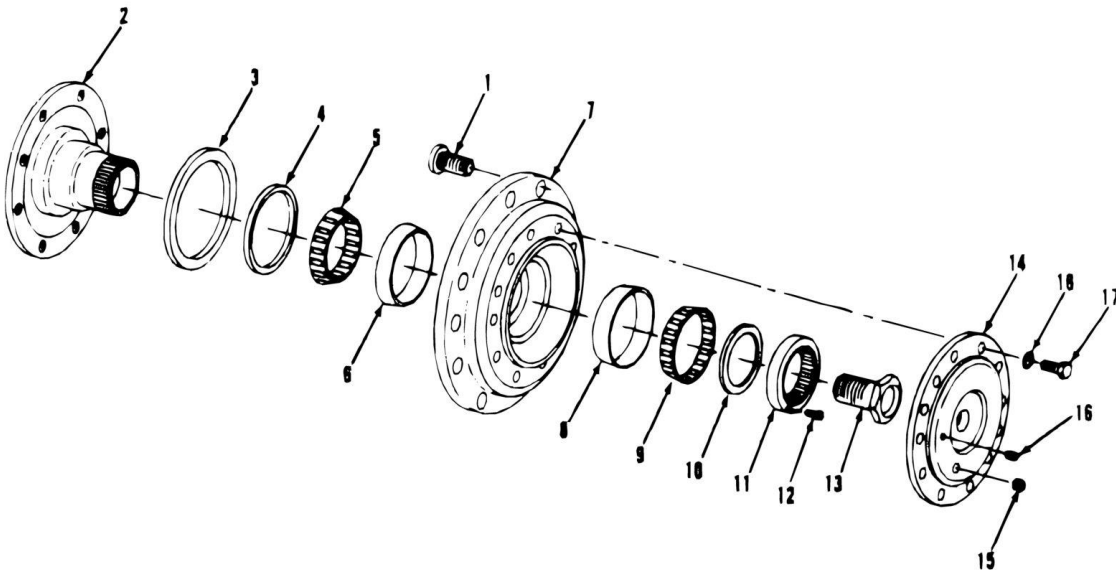
SECTION 5 - DRIVE TRAIN

FIGURE 5-6. (91123145) REAR STEERING AXLE DRIVE HUB - 524D (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91123145	1	REAR DRIVE HUB (includes all items)	
1	91124001	1	COUPLING, 8IN	
2	91124113	1	INPUT SHAFT	
3	91124114	1	SPINDLE	
4	91124007	1	BOOT SEAL	
5	91124004	1	OIL SEAL	
6	91124010	1	BEARING CONE	
7	91124009	1	BEARING CUP	
8	91044311	12	WHEEL BOLT	
9	91144178	1	HUB	
10	91144179	1	BEARING CUP	
11	91144180	1	BEARING CONE	
12	91144181	1	THRUSTWASHER	
13	91144182	1	LOCKWASHER	
14	91144183	1	BEARING LOCKNUT	
15	91124014	2	RETAINING RING	
16	91034390	2	THRUSTWASHER	
17	91144175	1	DISENGAGE SPRING	
18	91144184	1	REAR GEAR	
19	91044101	1	MAGNETIC PLUG	
20	91144185	1	SECONDARY CARRIER ASSY	
21	91144186	1	PRIMARY CARRIER ASSY	
22	91144187	1	PRIMARY SUN GEAR	
23	91044105	1	THRUSTWASHER	
24	91044106	1	PLUNGER	
25	91044107	1	O-RING	
26	91144188	1	COVER	
27	91144189	12	HEX HD BOLT, GR8	
28	91124027	12	FLATWASHER	
29	91124028	1	PIPE PLUG	
30	91124024	1	DISENGAGE COVER	
31	91124025	2	HEX HD BOLT	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	
		Ref	QUANTITIES SHOWN ARE FOR ONE HUB ASSEMBLY ONLY.	

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FIGURE 5-7. (91093006) REAR STEERING AXLE NON-DRIVE HUB - 522D (SN 0277001 to Present)



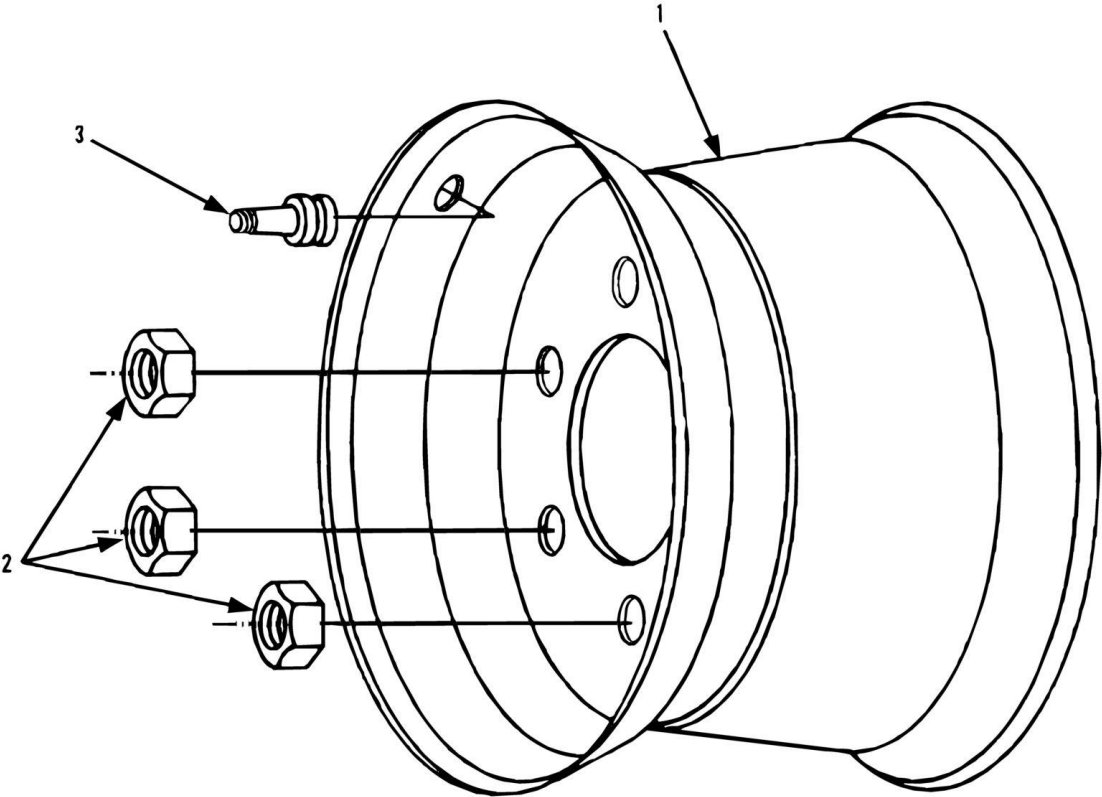
SECTION 5 - DRIVE TRAIN

FIGURE 5-7. (91093006) REAR STEERING AXLE NON-DRIVE HUB - 522D (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91093006	1	NON-DRIVING HUB ASSY (includes all items)	
1	91044311	12	WHEEL BOLT	
2	91094008	1	OUTPUT SHAFT	
3	91124007	1	SEAL BOOT	
4	91124004	1	OIL SEAL	
5	91124010	1	BEARING CONE	
6	91124009	1	BEARING CUP	
7	91124008	1	HUB	
8	91124005	1	BEARING CONE	
9	91124006	1	BEARING CUP	
10	91124011	1	THRUSTWASHER	
11	91094004	1	SPLINED SPACER	
12	91094015	1	LOCKSCREW	
13	91094003	1	LOCKNUT	
14	91094001	1	COVER	
15	91124016	1	MAGNETIC PLUG	
16	91124028	1	PIPE PLUG	
17	91094013	12	HEX HD BOLT	
18	91124027	12	WASHER	

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FIGURE 5-8. WHEELS AND TIRES (SN 0277001 to Present)



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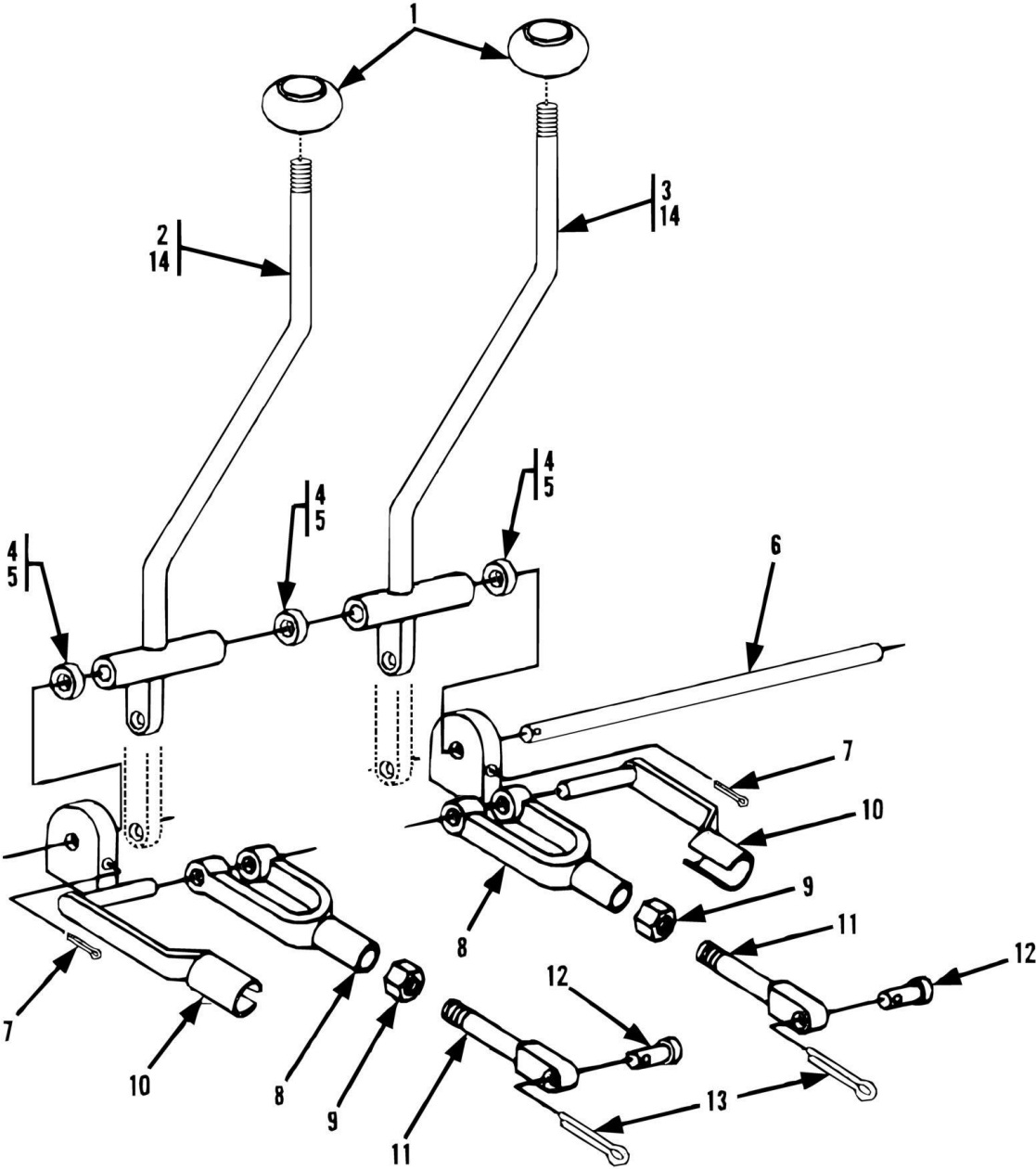
FIGURE 5-8. WHEELS AND TIRES (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91125002	1	R.H. TIRE ASSY (includes items 1, 3 & 4)	
	91125003	1	L.H. TIRE ASSY (includes items 1, 3 & 4)	
2	91043298	1	WHEEL	
3	91043146	12	LUG NUT	
4	91083385	1	VALVE	
	91033104	1	TUBE (not illustrated)	

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SECTION 6 - CONTROLS

FIGURE 6-1. TILT AND SWAY (SN 0277001 to Present)



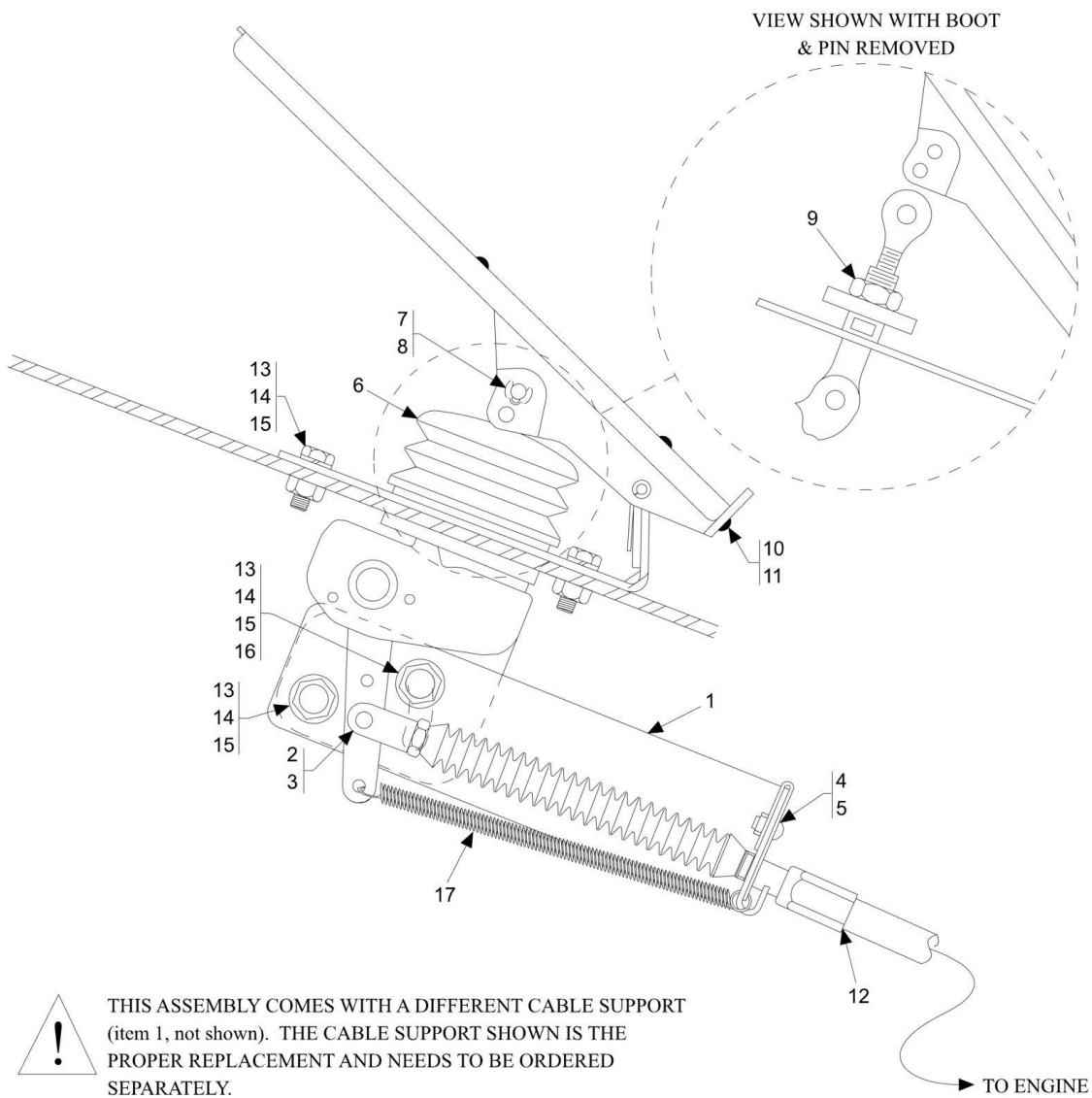
SECTION 6 - CONTROLS

FIGURE 6-1. TILT AND SWAY (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385008	1	SWAY LEVER ASSY (includes items 1, 2 and two of item 14)	
	91385009	1	TILT LEVER ASSY (includes items 1, 3 and two of item 14)	
1	90200638	2	KNOB	
2	91386006	1	SWAY LEVER WELDMENT	
3	91386007	1	TILT LEVER WELDMENT	
4	90028662	3	WAVE BEND WASHER	
5	88561113	9	FLATWASHER, 5/8	
6	91081354	1	SHAFT	
7	88631338	1	COTTER PIN, 3/16X1-3/4	
8	88821004	2	YOKE END	
9	88501406	2	HEX JAM NUT, 3/8-24	
10	90027987	2	SPRING CLEVIS	
11	91086081	2	ROD LINKAGE	
12	90021552	2	CLEVIS PIN	
13	88631301	2	COTTER PIN, 1/16X1/2	
14	91083136	4	BUSHING	

SECTION 6 - CONTROLS

FIGURE 6-2. (91143342) ACCELERATOR PEDAL ASSEMBLY (SN 0277001 through 0277119)



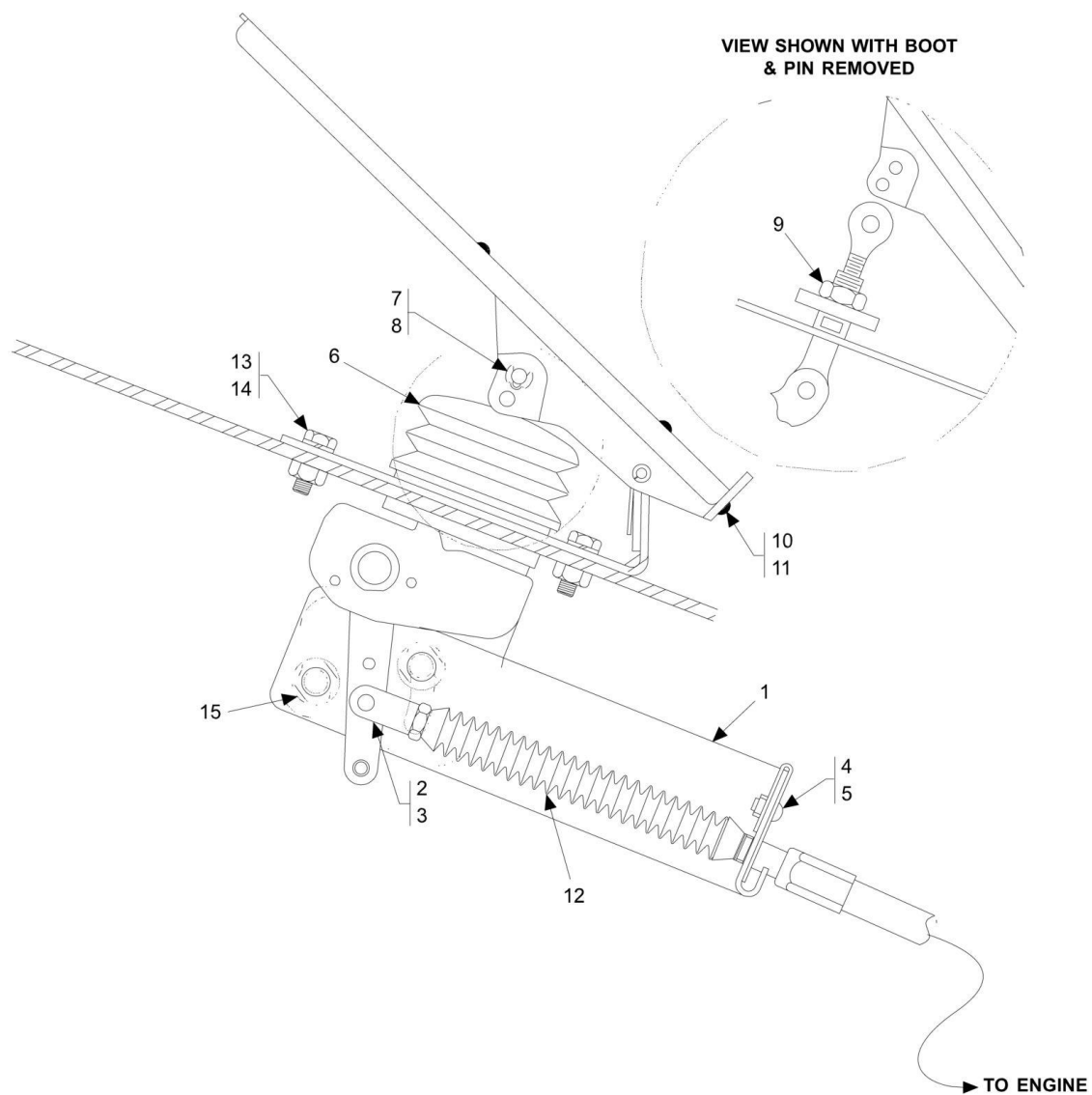
SECTION 6 - CONTROLS

FIGURE 6-2. (91143342) ACCELERATOR PEDAL ASSEMBLY (SN 0277001 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143342	1	ACCELERATOR PEDAL ASSY, (includes items 2 thru 11)	
	91144432	1	CABLE ATTACH KIT, (includes items 2 thru 5)	
	91144197	1	BOOT KIT, (includes items 6 thru 9)	
	91144433	1	HEEL REST KIT, (includes items 10 & 11)	
1	91121210	1	THROTTLE CABLE SUPPORT	
2	Kit	1	CLEVIS	
3	Kit	1	PIN	
3	Kit	1	HAIRPIN COTTER, (not shown)	
4	Kit	1	LOCK PLATE	
5	Kit	1	CAPSCREW	
6	Kit	1	BOOT	
7	Kit	1	PIN	
8	Kit	1	HAIRPIN COTTER	
9	Kit	1	JAM NUT	
10	Kit	1	HEEL REST	
11	Kit	2	SCREW, (self tap)	
12		Ref	THROTTLE CABLE, (See ENGINE ATTACHING PART SECTION for Breakdown)	
13	88201003	5	HEX HD CAPSCREW, 1/4-20X3/4, GR5	
14	88551009	5	LOCKWASHER, 1/4	
15	88501004	5	HEX NUT, 1/4-20	
16	88561107	1	FLATWASHER, 1/4	
17	90207801	1	SPRING	
12		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 6-3. (91143342) ACCELERATOR PEDAL ASSEMBLY (SN 0277120 to Present)



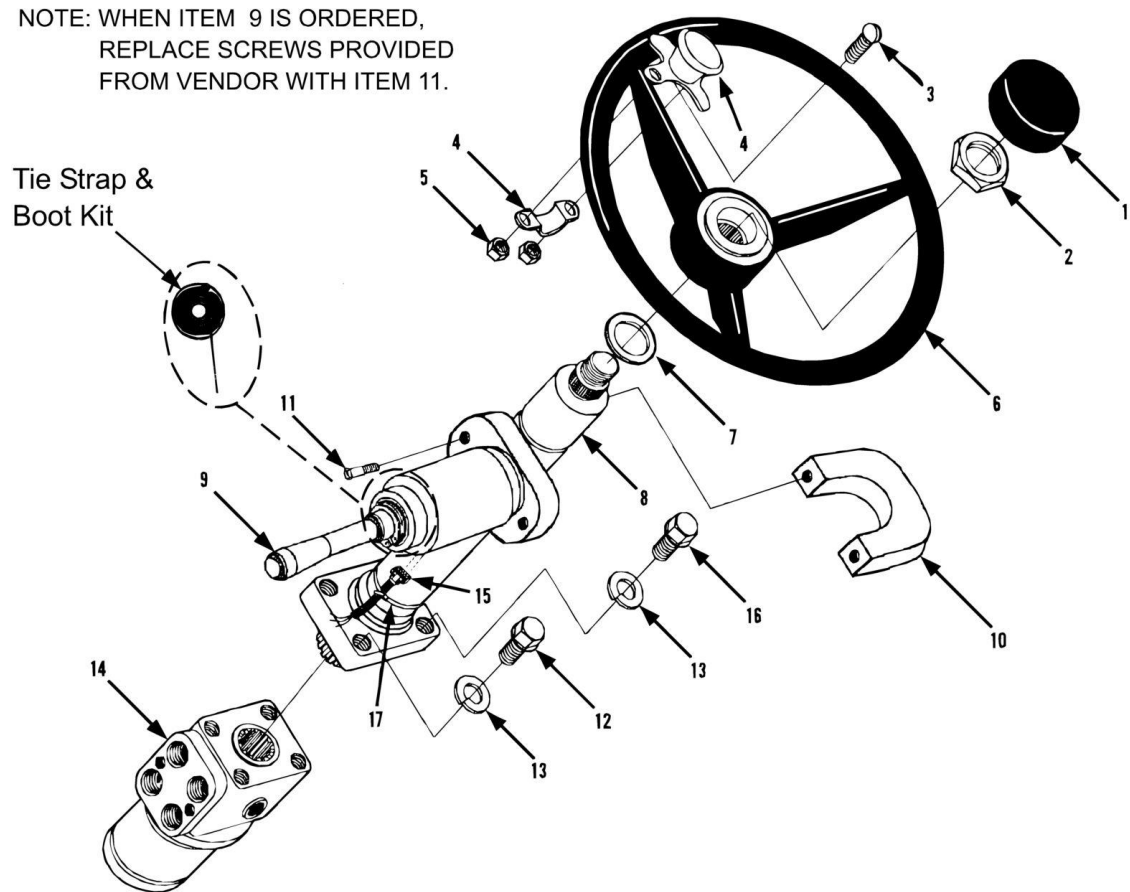
SECTION 6 - CONTROLS

FIGURE 6-3. (91143342) ACCELERATOR PEDAL ASSEMBLY (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143342	1	ACCELERATOR PEDAL ASSY, (includes items 1 thru 11 & 15)	
	91144431	1	CABLE SUPPORT KIT, (includes items 1 & 15)	
	91144432	1	CABLE ATTACH KIT, (includes items 2 thru 5)	
	91144197	1	BOOT KIT, (includes items 6 thru 9)	
	91144433	1	HEEL REST KIT, (includes items 10 & 11)	
1	Kit	1	THROTTLE CABLE SUPPORT	
2	Kit	1	CLEVIS	
3	Kit	1	PIN	
3	Kit	1	HAIRPIN COTTER, (not shown)	
4	Kit	1	LOCK PLATE	
5	Kit	1	CAPSCREW	
6	Kit	1	BOOT	
7	Kit	1	PIN	
8	Kit	1	HAIRPIN COTTER	
9	Kit	1	JAM NUT	
10	Kit	1	HEEL REST	
11	Kit	2	SCREW, (self tap)	
12		Ref	THROTTLE CABLE, (See ENGINE AND ATTACHING PART SECTION for Breakdown)	
13	88201003	3	HEX HD CAPSCREW, 1/4-20X3/4, GR5	
14	88551009	3	LOCKWASHER, 1/4	
15	Kit	2	FLANGE NUT	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 6-4. STEERING COLUMN AND ATTACHING PARTS (SN 0277001 to Present)



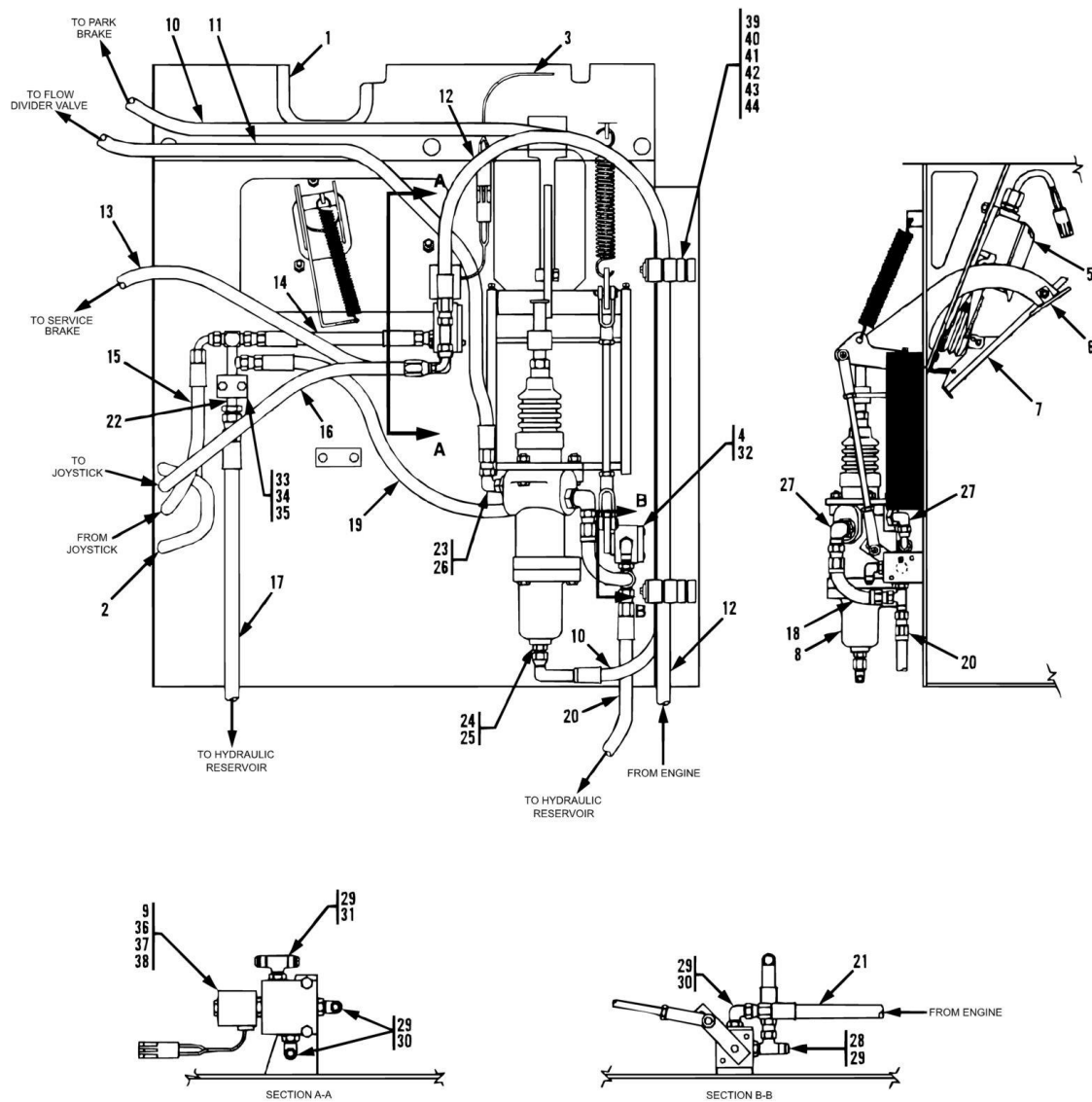
SECTION 6 - CONTROLS

FIGURE 6-4. STEERING COLUMN AND ATTACHING PARTS (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91144190	Ref	STEERING CONTROL UNIT SEAL KIT	
	91144448	1	TIE STRAP AND BOOT KIT	
1	91333043	1	STEERING CAP	
2	91144191	1	STEERING WHEEL NUT	
3	88301311	2	FLAT HD MACHINE SCREW, 1/4-20X1	
4	90202230	1	SPINNER KNOB	
5	88501616	2	HEX NUT, 1/4-20	
6	90600273	1	STEERING WHEEL	
7	91144192	1	WASHER	
8	91163012	1	STEERING COLUMN, (includes items 2 & 7)	
9	91363025	1	F/N/R SHIFTER, (includes item 10)	
10	91144458	1	CLAMP SET	
11	83191059	2	HEX HD CAPSCREW, M5X0.8, (torque to 30-35 in lbs)	
12	88201035	2	HEX HD CAPSCREW, 3/8-16X1	
13	88551011	4	LOCKWASHER, 3/8	
14	91123126	1	STEERING CONTROL UNIT	
15		Ref	DASH WIRING HARNESS, (See ELECTRICAL SECTION for Breakdown)	
16	88201033	2	HEX HD CAPSCREW, 3/8-16X3/4, GR5	
17	86683122	1	TIE WRAP	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 6-5. FLOORPLATE COMPONENTS (SN 0277001 to Present)



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FIGURE 6-5. FLOORPLATE COMPONENTS (SN 0277001 to Present)

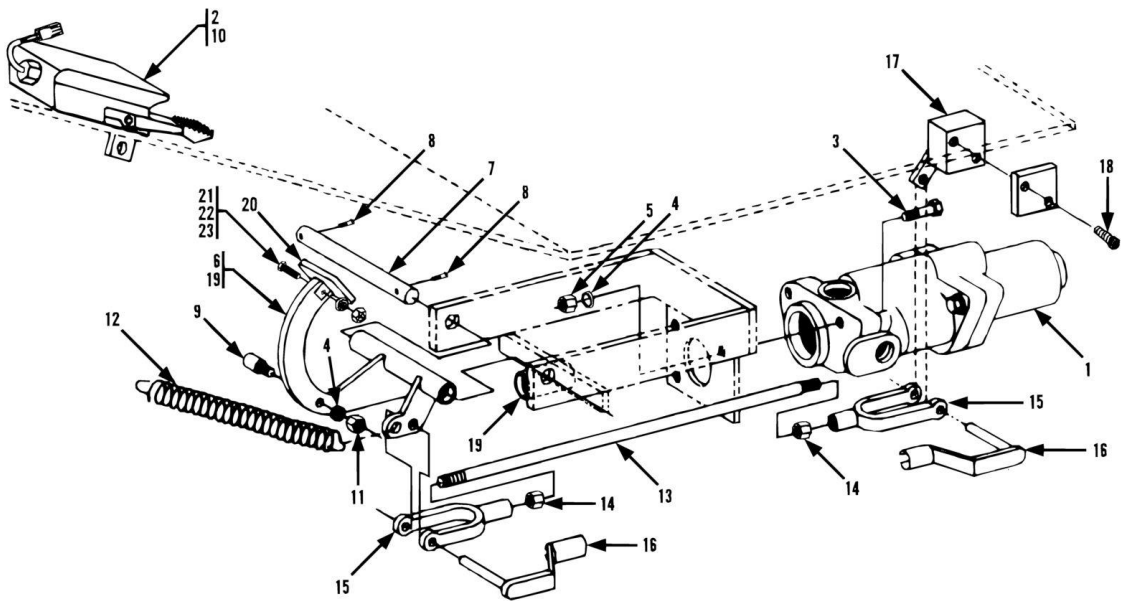
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	90206195	11 in	TRIM-LOK (pre-packaged in 25ft lengths)	
2	90206199	8 in	TRIM-LOK (pre-packaged in 25ft lengths)	
3		Ref	DASH HARNESS (See ELECTRICAL SECTION for Breakdown)	
4		Ref	INCHING VALVE (See HYDRALIC COMPONENET SECTION for Breakdown)	
5		Ref	FOOT SWITCH (See FLOORPLATE COMPONENT for Breakdown)	
6		Ref	BRAKE PEDAL AND LINKAGE (See FLOORPLATE COMPONENTS for Breakdown)	
7		Ref	ACCELERATOR PEDAL ASSY (See ACCELERATOR PEDAL ASSEMBLY for Breakdown)	
8		Ref	BRAKE VALVE (See HYDRAULIC COMPONANT SECTION for Breakdown)	
9		Ref	SOLENOID VALVE (See HYDRAULIC COMPONENT SECTION for Breakdown)	
10		Ref	HOSE ASSY (See BRAKE SECTION for Breakdown)	
11	84717641	1	HOSE ASSY	
12	84717304	Ref	HOSE ASSY	
13		Ref	HOSE ASSY (See BRAKE SECTION for Breakdown)	
14	84718689	1	HOSE ASSY	
15		Ref	HOSE ASSY (see HYDRAULIC CIRCUITS SECTION for Breakdown)	
16		Ref	HOSE ASSY (See HYDRAULIC CIRCUITS SECTION for Breakdown)	
17		Ref	HOSE ASSY (See HYDRAULIC CIRCUIT SECTION item 3 for Breakdown)	
18	84717893	1	HOSE ASSY	
19	84718688	1	HOSE ASSY	
20		Ref	HOSE ASSY (See HYDRAULIC CIRCUITS SECTION item 15 for Breakdown)	
21		Ref	HOSE ASSY (See HYDRAULIC CIRCUITS SECTION for Breakdown)	
22	91163109	1	HYDRAULIC TUBE	
23	88662105	1	ELBOW - 90, (swivel nut)	
24	83633002	1	STRAIGHT THREAD CONNECTOR	
25	90207856	1	COPPER GASKET	
26	91083306	1	STRAIGHT THREAD CONNECTOR	
27	91083310	2	ELBOW - 90	
28	88662139	1	BRANCH TEE (includes item 29)	
29	88591204	5	O-RING	
30	88662064	3	ELBOW - 90, (includes item 29)	
31	88662152	1	BRANCH TEE (includes item 29)	
33	91033138	1	TUBE CLAMP	
34	77133498	1	CLAMP COVER	
35	77133499	2	HEX HD CAPSCREW, 5/16-18x1-1/4 GR8	
36	88201008	2	HEX HD CAPSCREW, 1/4-20X1-3/4	
37	88561107	2	FLAT WASHER, 1/4	
38	88551009	2	LOCKWASHER, 1/4	
39	77133168	2	CLAMP SET	
40	77133389	2	STACK BOLT	
41	77133136	2	CLAMP SET	
42	77133390	2	SAFETY CLIP	
43	77133137	2	COVER PLATE	

SECTION 6 - CONTROLS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
44	88201023	2	HEX HD CAPSCREW, 5/16-18x1-3/4 GR5	

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FIGURE 6-6. BRAKE AND INCHING LINKAGE (SN 0277001 to Present)



SECTION 6 - CONTROLS

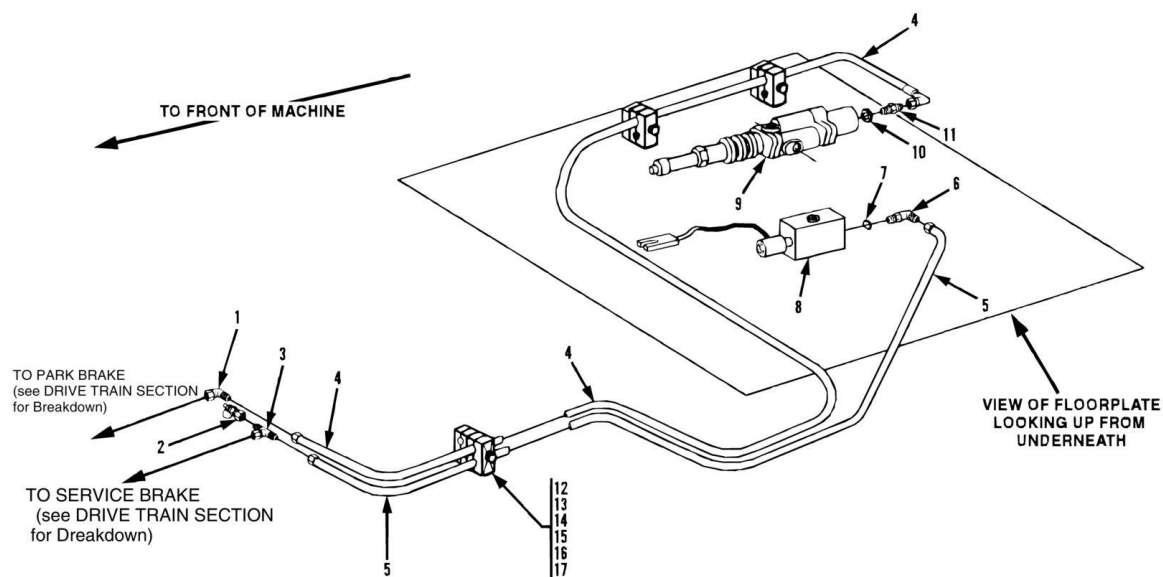
FIGURE 6-6. BRAKE AND INCHING LINKAGE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	BRAKE VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	91163093	1	FOOT SWITCH (524D only)	
3	88201022	3	HEX HD CAPSCREW, 5/16-18X1-1/2, GR5	
4	88551010	4	LOCKWASHER, 5/16	
5	88501005	3	HEX NUT 5/16-18	
6	91146108	1	BRAKE PEDAL	
7	90200284	1	SHAFT	
8	88441001	2	SQUARE HD CAPSCREW, 1/4-20X1/2	
9	91083312	1	CAM ROLLER	
10	88261017	3	SOCKET BUTTON HD CAPSCREW, 1/4-20x7/8 (524D only)	
11	88501405	1	HEX JAM NUT, 5/16-24	
12	91043214	1	SPRING	
13	91081332	1	LINKAGE ROD	
14	88501406	2	HEX JAM NUT, 3/8-24	
15	88821004	2	YOKE END	
16	90027987	2	CLEVIS PIN	
17		Ref	INCHING VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
18	8821-2228	1	SOCKET HD CAPSCREW, 5/16-18X1-1/4	
19	91083136	4	BUSHING	
20	91146102	1	PEDAL WELDMENT	
21	88201022	1	HEX HD CAPSCREW, 5/16-18X1-1/2 GR5	
22	88551010	1	LOCKWASHER, 5/16	
23	88501005	1	HEX NUT, 5/16-18	

SECTION 7 - BRAKES

SECTION 7 - BRAKES

FIGURE 7-1. SERVICE/PARKING BRAKE LINES (SN 0277001 to Present)



SECTION 7 - BRAKES

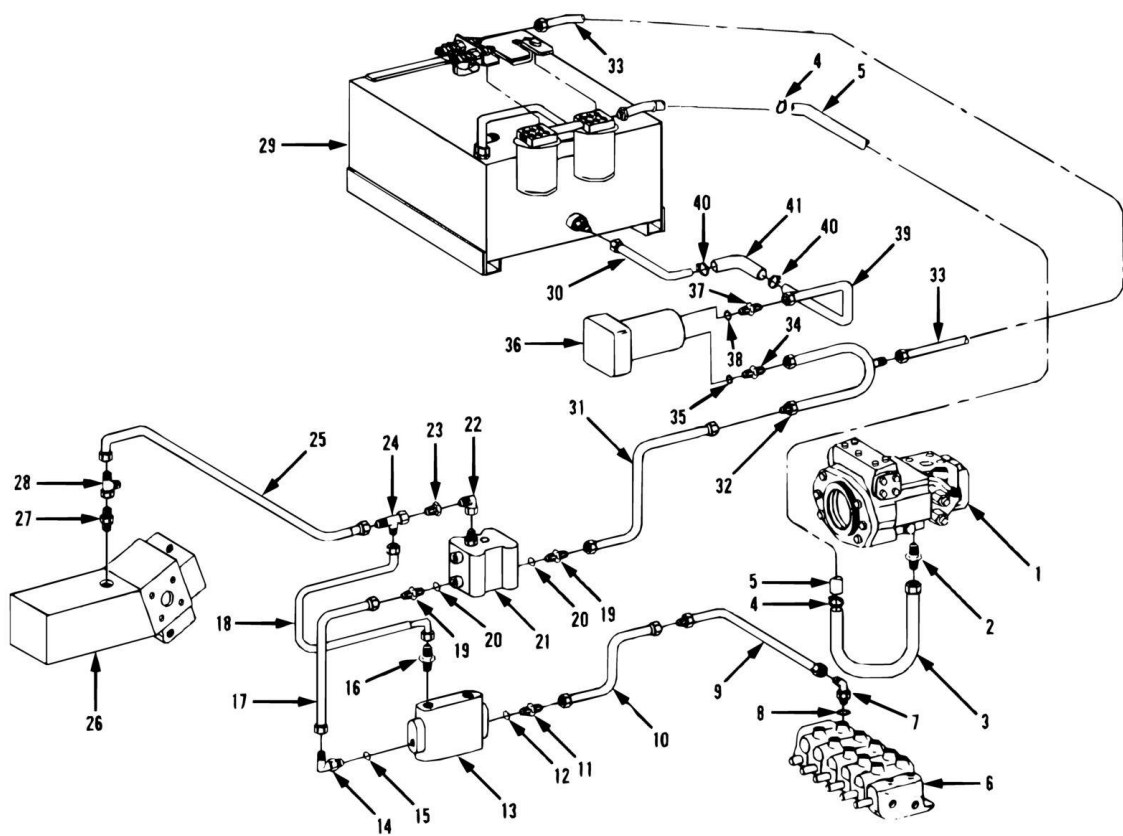
FIGURE 7-1. SERVICE/PARKING BRAKE LINES (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	84719115 84718759	Ref	ELBOW, 90, (swivel nut) (See DRIVE TRAIN SECTION for Breakdown)	
2		Ref	TEST FITTING (See DRIVE TRAIN SECTION for Breakdown)	
3		Ref	SWIVEL NUT BRANCH TEE, 3/8 TUBE (See DRIVE TRAIN SECTION for Breakdown)	
4		1	HOSE ASSY	
5		1	HOSE ASSY	
6		Ref	ELBOW, 90, (includes item 7) (See CONTROLS SECTION for Breakdown)	
7		Ref	O-RING (See CONTROLS SECTION for Breakdown)	
8		Ref	SOLENOID VALVE ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
9		Ref	BRAKE VALVE ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
10		Ref	COPPER GASKET (See CONTROLS SECTION for Breakdown)	
11		Ref	STRAIGHT THREAD CONNECTOR (See CONTROLS SECTION for Breakdown)	
12	77133137	1	COVER PLATE	
13	91213002	1	CLAMP SET	
14	77323029	1	CLAMP SET	
15	88201023	1	HEX HD CAPSCREW, 5/16-18x1-3/4 GR5	
16	77133306	1	STACK BOLT	
17	77133390	1	SAFETY CLIP	

SECTION 8 - HYDRAULIC CIRCUITS

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-1. OIL SUPPLY AND PRESSURE LINES (SN 0277001 through 0277119)



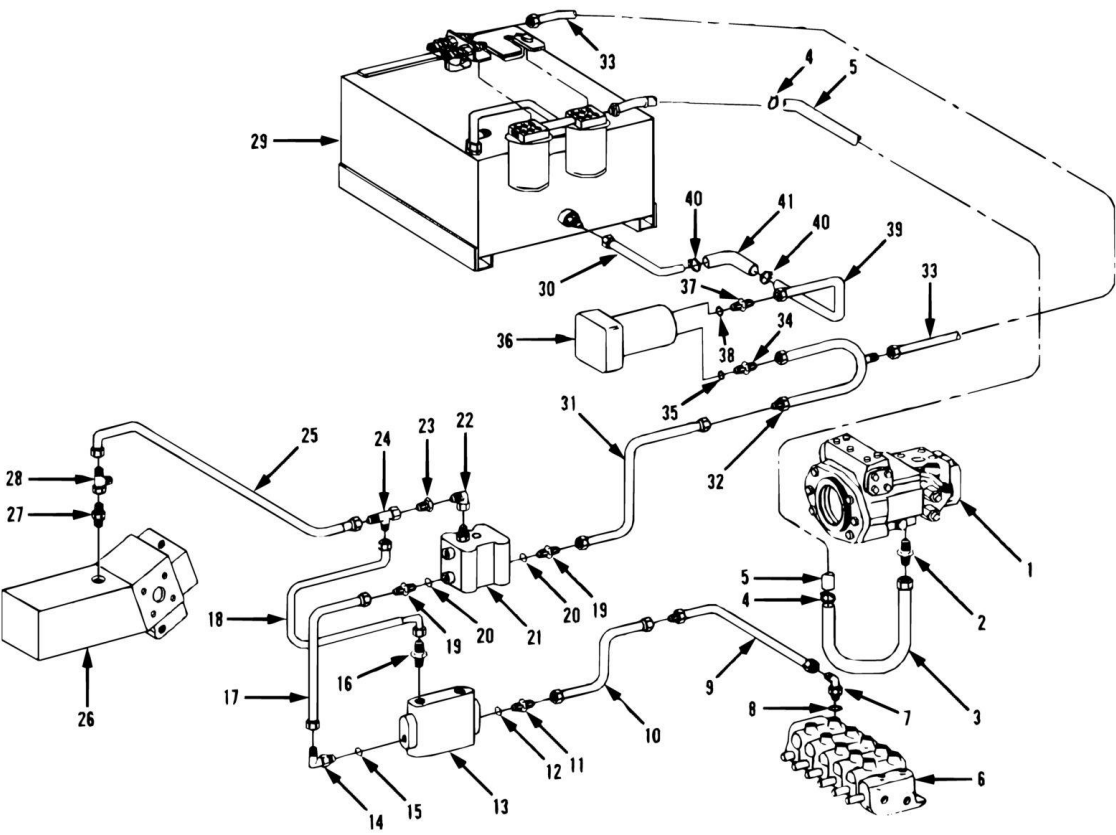
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FIGURE 8-1. OIL SUPPLY AND PRESSURE LINES (SN 0277001 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDROSTATIC TRANSMISSION, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662011	1	STR THREAD CONNECTOR (includes o-ring)	
2	88591210	1	O-RING	
3	91083536	1	INTAKE TUBE	
4	90028695	2	BAND CLAMP	
5	91083246	1	HOSE ASSY	
6		Ref	MAIN CONTROL VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
7	88662067	1	ELBOW, 90, (includes item 8)	
8	88591207	1	O-RING	
9	91083232	1	TUBE ASSY	
10	84719038	1	HOSE ASSY	
11	88662025	1	CONNECTOR (includes item 12)	
12	88591209	1	O-RING	
13		Ref	PRIORITY FLOW CONTROL VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
14	88662061	1	ELBOW, 90, (includes item 15)	
15	88591209	1	O-RING	
16	83661316	1	STR THREAD CONNECTOR	
17	91083293	1	TUBE ASSY	
18	84717803	1	HOSE ASSY	
19	88662008	2	CONNECTOR (includes item 20)	
20	88591207	2	O-RING	
21		Ref	FLOW DIVIDER VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
22	88662106	1	ELBOW, 90, (swivel nut)	
23	86883469	1	REDUCER	
24	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
25	84717832	1	HOSE ASSY	
26		Ref	FRT DRIVE MOTOR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
27	91053426	1	ADAPTER (includes o-ring)	
27	88591207	1	O-RING	
28	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
29		Ref	HYDRAULIC RESERVOIR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
30	91083145	1	SUCTION TUBE	
31	84717851	1	HOSE ASSY	
32	91323023	1	TUBE ASSY	
33	84717934	1	HOSE ASSY	
34	88662010	1	CONNECTOR (includes item 35)	
35	88591209	1	O-RING	
36		Ref	MAIN HYDRAULIC PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
37	88662011	1	CONNECTOR (includes item 38)	
38	88591210	1	O-RING	
39	91083144	1	SUCTION TUBE	
40	90028482	2	HOSE CLAMP	
41	77133166	1	SUCTION HOSE	

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FIGURE 8-2. OIL SUPPLY AND PRESSURE LINES (SN 0277120 to Present)



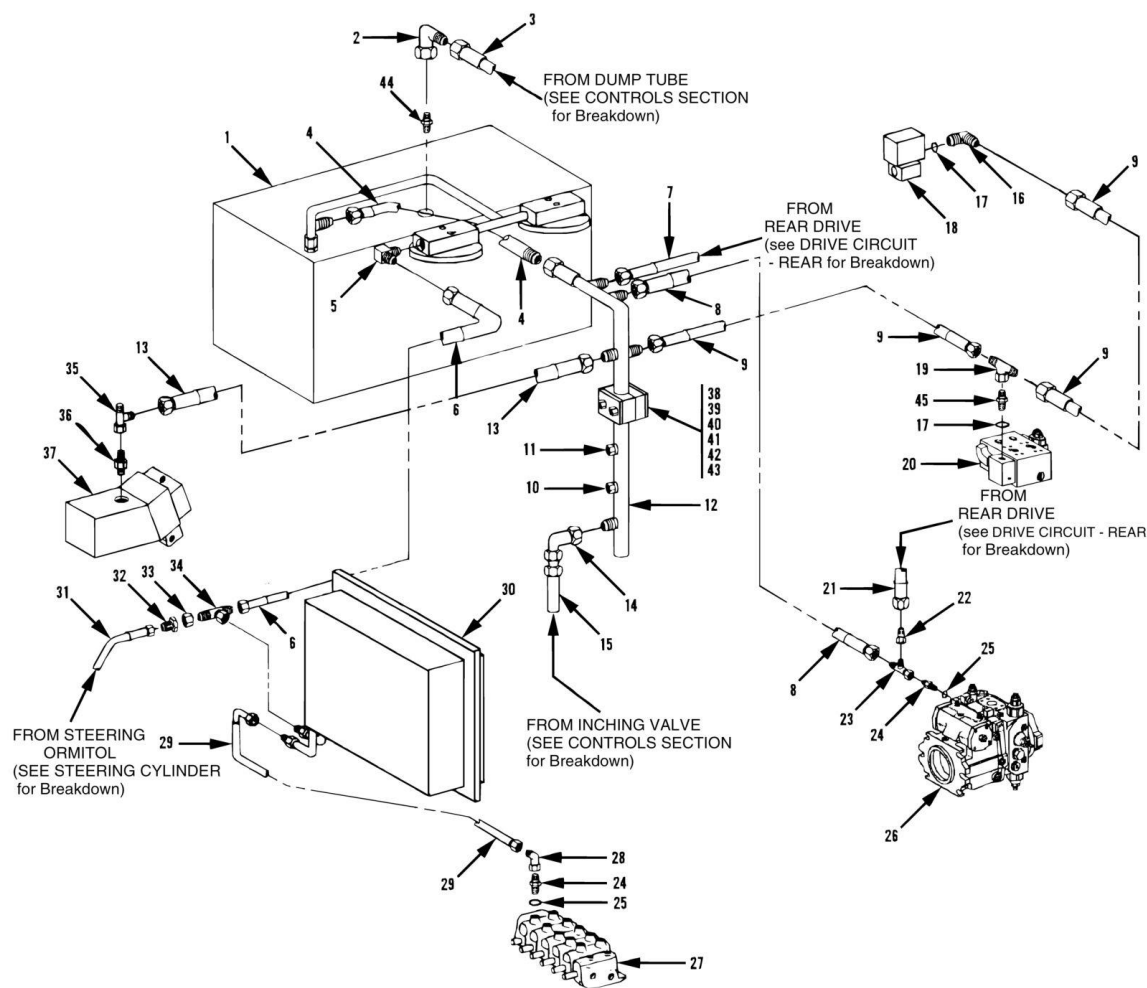
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-2. OIL SUPPLY AND PRESSURE LINES (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDROSTATIC TRANSMISSION, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662011	1	STR THREAD CONNECTOR (includes o-ring)	
2	88591210	1	O-RING	
3	91083536	1	INTAKE TUBE	
4	90028695	2	BAND CLAMP	
5	91083246	1	HOSE ASSY	
6		Ref	MAIN CONTROL VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
7	88662067	1	ELBOW, 90, (includes item 8)	
8	88591207	1	O-RING	
9	91083232	1	TUBE ASSY	
10	84719038	1	HOSE ASSY	
11	88662025	1	CONNECTOR (includes item 12)	
12	88591209	1	O-RING	
13		Ref	PRIORITY FLOW CONTROL VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
14	88662061	1	ELBOW, 90, (includes item 15)	
15	88591209	1	O-RING	
16	83661316	1	STR. THREAD CONNECTOR	
17	91083293	1	TUBE ASSY	
18	84717803	1	HOSE ASSY	
19	88662008	2	CONNECTOR (includes item 20)	
20	88591207	2	O-RING	
21		Ref	FLOW DIVIDER VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
22	88662106	1	ELBOW, 90, (swivel nut)	
23	86883469	1	REDUCER	
24	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
25	84717832	1	HOSE ASSY	
26		Ref	FRT. DRIVE MOTOR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
27	91053426	1	ADAPTER (includes o-ring)	
27	88591207	1	O-RING	
28	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
29		Ref	HYDRAULIC RESERVOIR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
30	91083145	1	SUCTION TUBE	
31	84717851	1	HOSE ASSY	
32	91323023	1	TUBE ASSY	
33	84717934	1	HOSE ASSY	
34	88662010	1	CONNECTOR (includes item 35)	
35	88591209	1	O-RING	
36		Ref	MAIN HYDRAULIC PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
37	88662090	1	ELBOW - 45, (includes item 38)	
38	88591210	1	O-RING	
39	91323022	1	SUCTION TUBE	
40	90028482	2	HOSE CLAMP	
41	77133166	1	SUCTION HOSE	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-3. DUMP CIRCUIT (SN 0277001 through 0277085)



⚠ SEE MISCELLANEOUS SECTION FOR DETAILS ON CLAMPS SETS AND CUSHION CLAMPS

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FIGURE 8-3. DUMP CIRCUIT (SN 0277001 through 0277085)

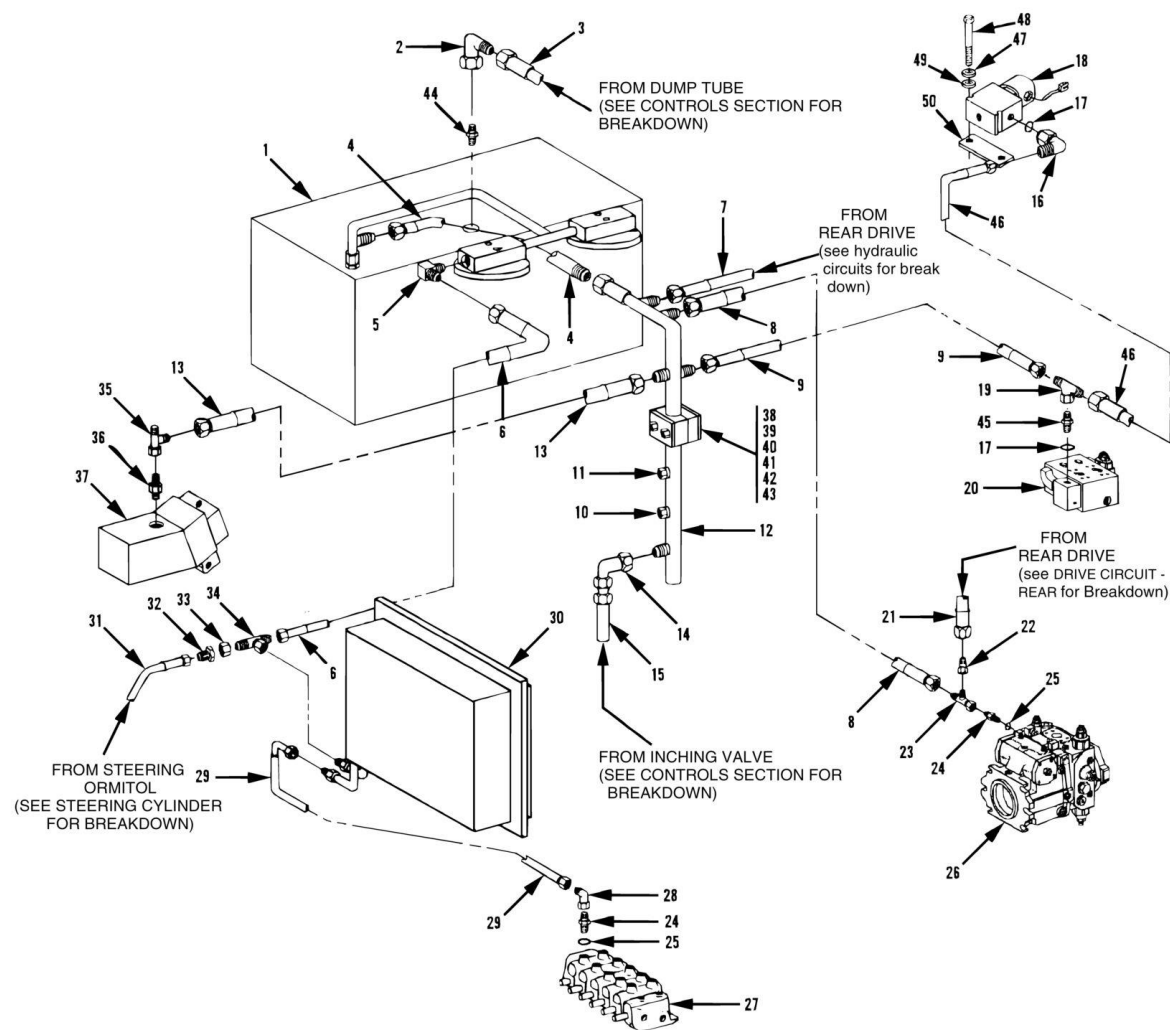
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDRAULIC RESERVOIR (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662106	1	ELBOW, 90, (swivel nut)	
3	84718164	1	HOSE ASSY	
4	84719071	1	HOSE ASSY	
5	83623032	1	ELBOW, 90	
6	84717872	1	HOSE ASSY	
7	84719069	1	HOSE ASSY	
8	84717839	1	HOSE ASSY	
9	84717889	2	HOSE ASSY	
10	88661364	1	HEX CAP, 3/8 TUBE	
11	88661362	1	HEX CAP, 1/4 TUBE	
12	91123149	1	DRAIN TUBE ASSY	
13	84717911	1	HOSE ASSY	
14	88662105	1	ELBOW, 90, (swivel nut)	
15	84716719	1	HOSE ASSY	
16	88662064	1	CONNECTOR (includes item 17)	
17	88591204	2	O-RING	
18		Ref	SOLENOID VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
19	88662224	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
20		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
21	84719070	1	HOSE ASSY	
22	83651133	1	REDUCER WITH ADAPTOR	
23	88662242	1	SWIVEL NUT RUN TEE, 3/4 TUBE	
24	88662008	2	CONNECTOR (includes item 25)	
25	88591207	2	O-RING	
26		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
27		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
28	88662108	1	ELBOW - 90, (swivel nut)	
29	84719110	1	HOSE ASSY	
30		Ref	OIL COOLER ASSY (See ENGINE AND ATTACHING PARTS SECTION for Breakdown)	
31		Ref	HOSE ASSY (See STEERING CYLINDER item 22 for details)	
32	88661345	1	TUBE END REDUCER, 3/4X3/8	
33	88661408	1	NUT	
34	88662227	1	SWIVEL NUT BRANCH TEE, 3/4 TUBE	
35	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
36	91053426	1	STRAIGHT THREAD ADAPTOR (includes o-ring)	
36	88591207	1	O-RING	
37		Ref	FRONT DRIVE MOTOR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
38	77133053	1	CLAMP SET	
39	77133052	1	COVER PLATE	
40	88201010	2	HEX HD CAPSCREW, 1/4-20x2-1/4 GR5	
41	88501004	2	HEX NUT, 1/4-20	
42	88551009	2	LOCKWASHER, 1/4	
43	88561107	2	FLATWASHER, 1/4	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
44	88661013	1	MALE CONNECTOR	
45	88662005	1	CONNECTOR (includes item 17)	

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FIGURE 8-4. DUMP CIRCUIT (SN 0277086 to Present)



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FIGURE 8-4. DUMP CIRCUIT (SN 0277086 to Present)

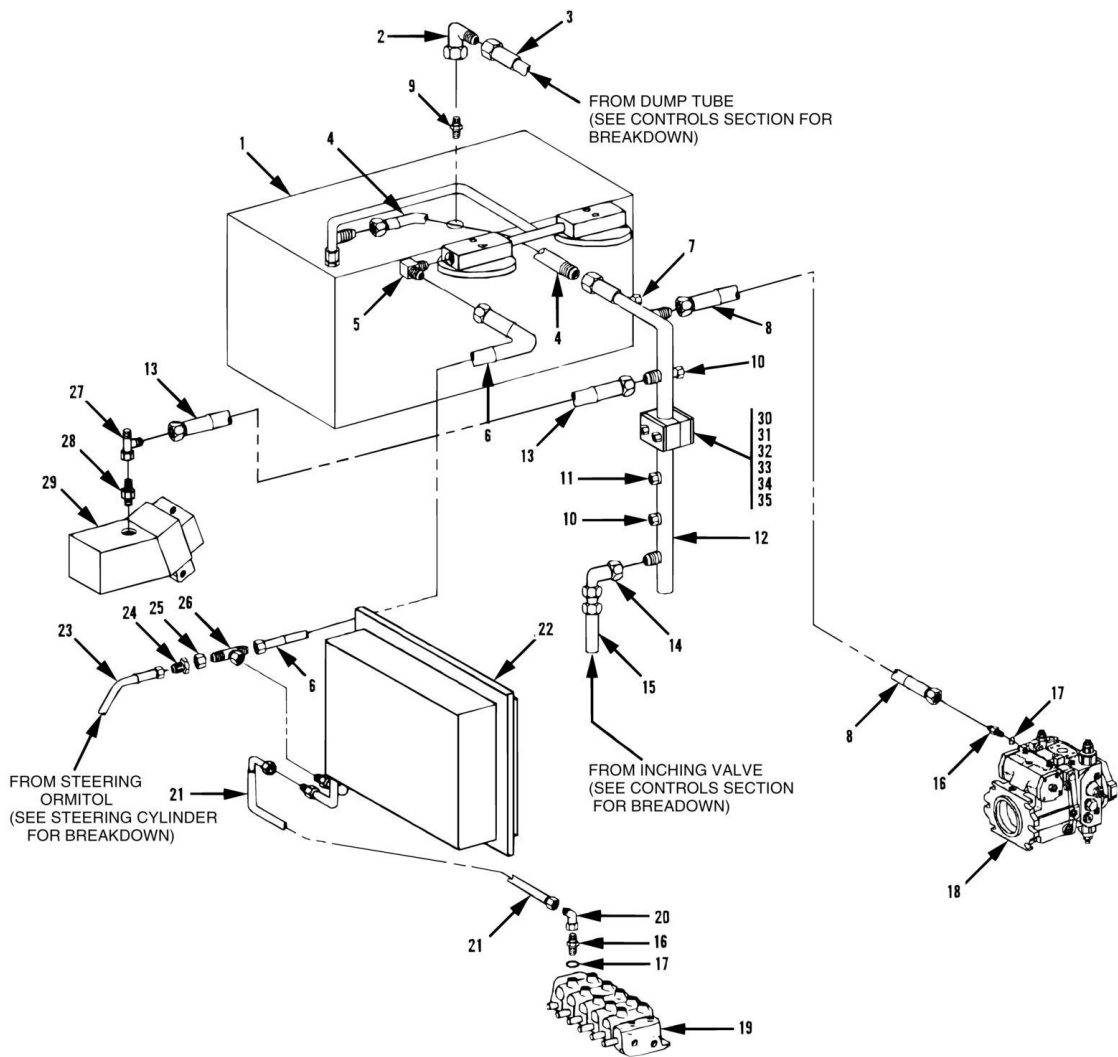
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDRAULIC RESERVOIR (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662106	1	ELBOW, 90, (swivel nut)	
3	84718164	1	HOSE ASSY	
4	84719071	1	HOSE ASSY	
5	83623032	1	ELBOW, 90	
6	84717872	1	HOSE ASSY	
7	84719069	1	HOSE ASSY	
8	84717839	1	HOSE ASSY	
9	84717889	1	HOSE ASSY	
10	88661364	1	HEX CAP, 3/8 TUBE	
11	88661362	1	HEX CAP, 1/4 TUBE	
12	91123149	1	DRAIN TUBE ASSY	
13	84717911	1	HOSE ASSY	
14	88662105	1	ELBOW, 90, (swivel nut)	
15	84716719	1	HOSE ASSY	
16	88662064	1	ELBOW - 90, (includes item 17)	
17	88591204	2	O-RING	
18		Ref	SOLENOID VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
19	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
20		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
21	84719070	1	HOSE ASSY	
22	83651133	1	REDUCER WITH ADAPTOR	
23	88662242	1	SWIVEL NUT RUN TEE, 3/4 TUBE	
24	88662008	2	CONNECTOR (includes item 25)	
25	88591207	2	O-RING	
26		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
27		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
28	88662108	1	ELBOW - 90, (swivel nut)	
29	84719110	1	HOSE ASSY	
30		Ref	OIL COOLER ASSY (See ENGINE AND ATTACHING PARTS SECTION for Breakdown)	
31		Ref	HOSE ASSY (See STEERING CYLINDER item 22 for details)	
32	88661345	1	TUBE END REDUCER, 3/4X3/8	
33	88661408	1	NUT	
34	88662227	1	SWIVEL NUT BRANCH TEE, 3/4 TUBE	
35	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
36	91053426	1	STRAIGHT THREAD ADAPTOR (includes o-ring)	
36	88591207	1	O-RING	
37		Ref	FRONT DRIVE MOTOR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
38	77133053	1	CLAMP SET	
39	77133052	1	COVER PLATE	
40	88201010	2	HEX HD CAPSCREW, 1/4-20x2-1/4 GR5	
41	88501004	2	HEX NUT, 1/4-20	
42	88551009	2	LOCKWASHER, 1/4	
43	88561107	2	FLATWASHER, 1/4	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
44	88661013	1	MALE CONNECTOR	
45	88662005	1	CONNECTOR (includes item 17)	
46	84719141	1	HOSE ASSY	
47	88551009	2	LOCKWASHER, 1/4	
48	88201008	2	HEX HD CAPSCREW, 1/4-20X1-3/4, GR5	
49	88561001	2	FLATWASHER, 1/4	
50	91031040	1	MOUNTING BAR	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-5. DUMP CIRCUIT (SN 0277001 to Present)



SEE MISCELLANEOUS FOR DETAILS ON
CLAMPS SETS AND CUSHION CLAMPS

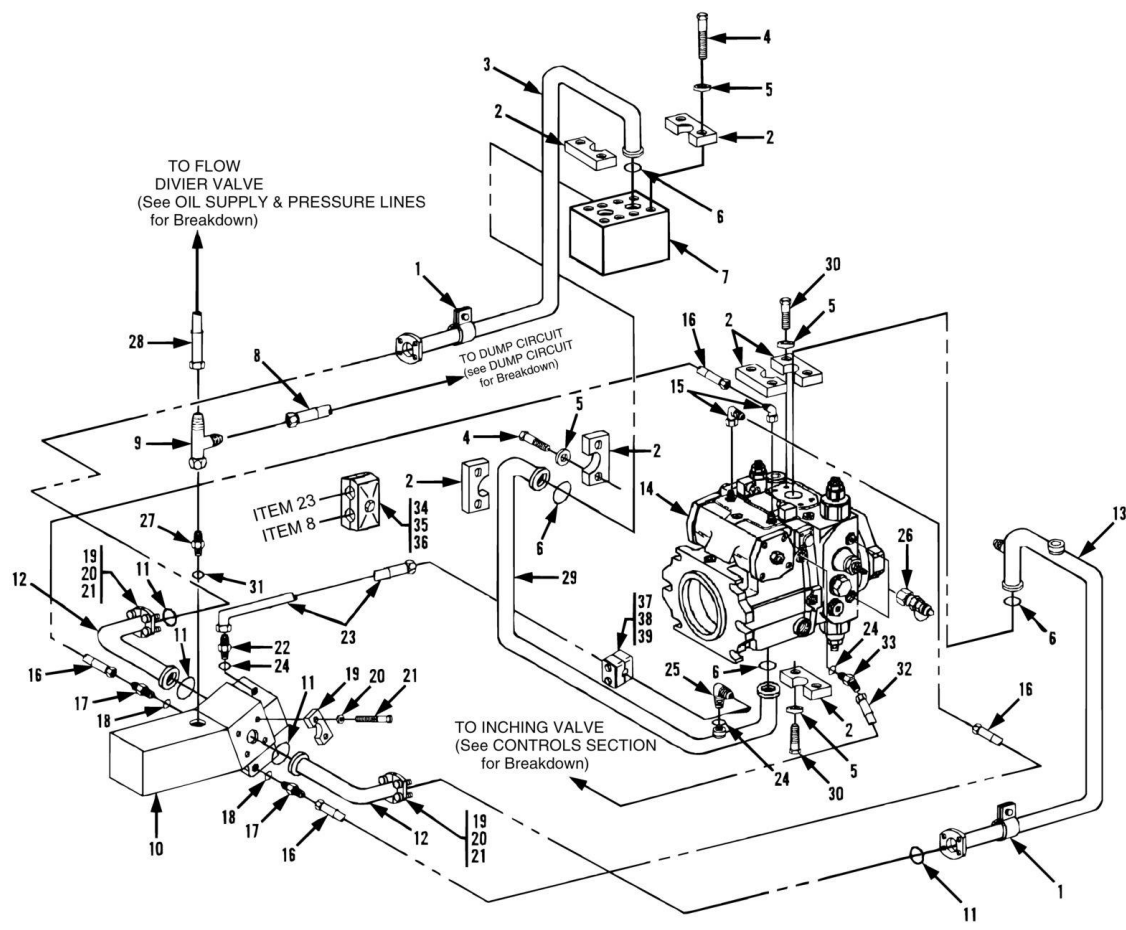
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-5. DUMP CIRCUIT (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDRAULIC RESERVOIR (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662106	1	ELBOW, 90, (swivel nut)	
3	84718164	1	HOSE ASSY	
4	84719071	1	HOSE ASSY	
5	83623032	1	ELBOW, 90	
6	84717872	1	HOSE ASSY	
7	88661365	1	HEX CAP, 1/2 TUBE	
8	84717839	1	HOSE ASSY	
9	88661013	1	MALE CONNECTOR	
10	88661364	2	HEX CAP, 3/8 TUBE	
11	88661362	1	HEX CAP, 1/4 TUBE	
12	91123149	1	DRAIN TUBE ASSY	
13	84717911	1	HOSE ASSY	
14	88662105	1	ELBOW, 90, (swivel nut)	
15	84716719	1	HOSE ASSY	
16	88662008	2	CONNECTOR (includes item 25)	
17	88591207	2	O-RING	
18		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
19		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
20	88662108	1	ELBOW - 90, (swivel nut)	
21	84719110	1	HOSE ASSY	
22		Ref	OIL COOLER ASSY (See ENGINE AND ATTACHING PARTS SECTION for Breakdown)	
23		Ref	HOSE ASSY (See STEERING CYLINDER item 22 for details)	
24	88661345	1	TUBE END REDUCER, 3/4X3/8	
25	88661408	1	NUT	
26	88662227	1	SWIVEL NUT BRANCH TEE, 3/4 TUBE	
27	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
28	91053426	1	STRAIGHT THREAD ADAPTOR (includes o-ring)	
28	88591207	1	O-RING	
29		Ref	FRONT DRIVE MOTOR ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
30	77133053	1	CLAMP SET	
31	77133052	1	COVER PLATE	
32	88201010	2	HEX HD CAPSCREW, 1/4-20x2-1/4 GR5	
33	88501004	2	HEX NUT, 1/4-20	
34	88551009	2	LOCKWASHER, 1/4	
35	88561107	2	FLATWASHER, 1/4	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-6. DRIVE CIRCUIT - FRONT (SN 0277001 to Present)



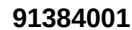
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-6. DRIVE CIRCUIT - FRONT (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	90205792	2	CUSHION CLAMP	
2	84712738	8	SPLIT FLANGE CLAMP	
3	91333004	1	TUBE ASSY	
4	83201155	8	HEX HD CAPSCREW, 7/16-14x1-3/4, GR8	
5	88551012	16	LOCKWASHER, 7/16	
6	91083106	4	O-RING	
7		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
8	84717911	1	HOSE ASSY	
9	88662239	1	SWIVEL NUT RUN TEE, 3/8 TUBE	
10		Ref	FRONT DRIVE MOTOR (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
11	91083339	4	O-RING	
12	84718657	2	HOSE ASSY	
13	91143055	1	TUBE ASSY	
14		Ref	HYDROSTATIC TRANSMISSION PUMP (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
15	90027906	2	ELBOW, 90, (includes item 24)	
16	84718861	2	HOSE ASSY	
17	88662003	2	CONNECTOR (includes item 18)	
18	88591202	2	O-RING	
19	84712739	8	SPLIT FLANGE CLAMP	
20	88551013	16	LOCKWASHER, 1/2	
21	83201120	16	HEX HD CAPSCREW, 1/2-13x1-3/4, GR5	
22	88662017	1	CONNECTOR (includes item 24)	
23	84717983	1	HOSE ASSY	
24	88591204	5	O-RING	
25	88662064	1	ELBOW, 90, (includes item 24)	
26	91053020	2	TEST COUPLING	
27	91053426	1	STRAIGHT THREAD ADAPTER (includes item 31)	
28	84717832	1	HOSE ASSY	
29	91163201	1	TUBE ASSY	
30	83201135	8	HEX HD CAPSCREW, 7/16-14x1-1/2, GR8	
31	88591207	1	O-RING	
32	84717344	1	HOSE ASSY	
33	88662084	1	ELBOW - 45, (includes item 24)	
34	77133140	2	COVER PLATE	
35	77133177	2	HEX HD CAPSCREW, 5/16-18x1-3/8	
36	91083240	2	CLAMP SET	
37	77133497	1	CLAMP SET	
38	77133498	1	COVER PLATE	
39	77133499	2	HEX HD CAPSCREW, 1/4-20x1-5/16	

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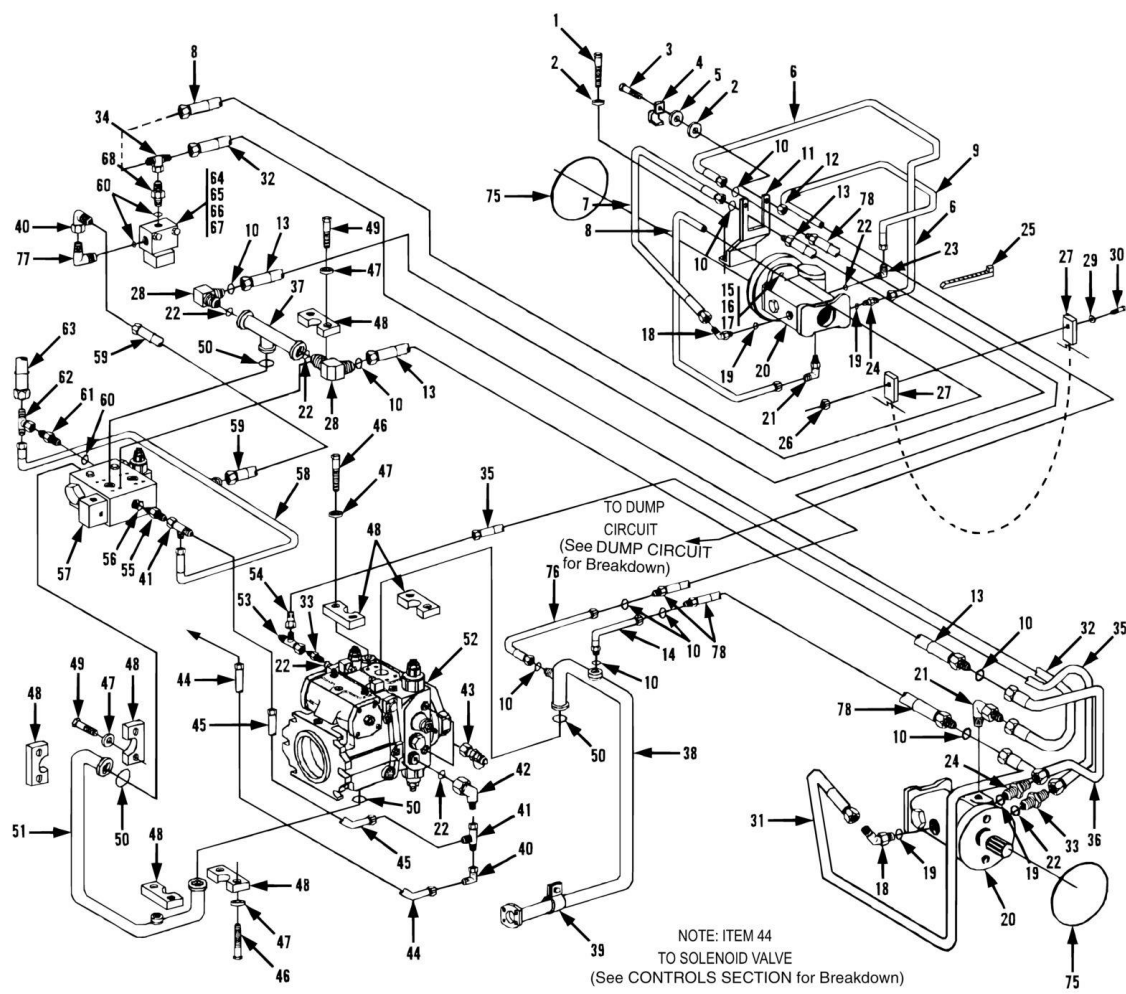
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-7. DRIVE CIRCUIT - FRONT (SN 0277001 to Present)

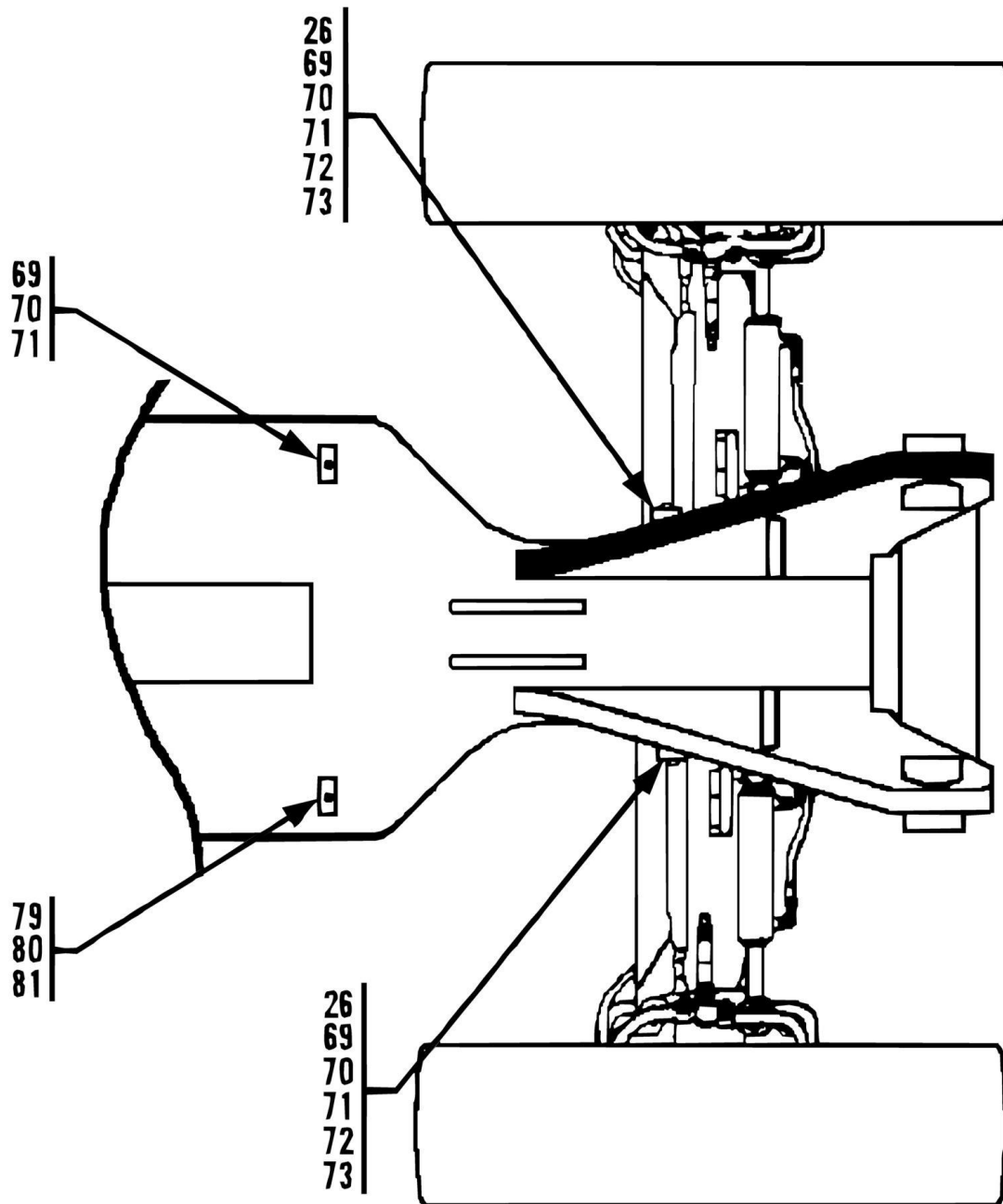
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDROSTATIC TRANSMISSION ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	83201135	8	HEX HD CAPSCREW, 7/16-14X1-1/2, GR8	
3	88551012	8	LOCKWASHER, 7/16	
4	84712738	4	FLANGE HALF	
5	91083222	1	ELBOW, 90, (includes item 23)	
6	88662239	2	SWIVEL NUT RUN TEE, 3/8 TUBE	
7	91143055	1	TUBE ASSY	
8	90205792	2	CUSHION CLAMP	
9	84714006	2	CAP	
10	84718861	2	HOSE ASSY	
11	90027906	2	ELBOW, 90, (includes o-ring)	
11	88591204	2	O-RING	
12	84718657	2	HOSE ASSY	
13	91083339	4	O-RING	
14	88662003	2	CONNECTOR (includes item 25)	
15		Ref	FRONT DRIVE MOTOR, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
16	84717852	1	HOSE ASSY	
17	91053426	1	STRAIGHT THREAD ADAPTER (includes item 23)	
18	84717344	1	HOSE ASSY	
19	84717911	1	HOSE ASSY	
20	84717832	1	HOSE ASSY	
21	91393003	1	TUBE ASSY	
22	84717304	1	HOSE ASSY	
23	88591207	2	O-RING	
24	91083106	2	O-RING	
25	88591202	2	O-RING	
26	84712739	8	FLANGE HALF	
27	88551013	16	LOCKWASHER, 1/2	
28	83201120	16	HEX HD CAPSCREW, 1/2-13X1-3/4, GR5	
29	88662084	1	ELBOW - 45, (includes o-ring)	
29	88591204	1	O-RING	
30	91053020	2	STAUFF TEST COUPLING	
31	88661384	1	HEX PLUG, 3/8 TUBE	
32	77133140	2	COVER PLATE	
33	77133177	2	HEX HD CAPSCREW, 5/16-18X1-3/8	
34	91083240	2	CLAMP SET	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-8. DRIVE CIRCUIT - REAR (SN 0277001 through 0277085)



REAR DRIVE HOSE CLAMP LOCATIONS



SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-8. DRIVE CIRCUIT - REAR (SN 0277001 through 0277085)

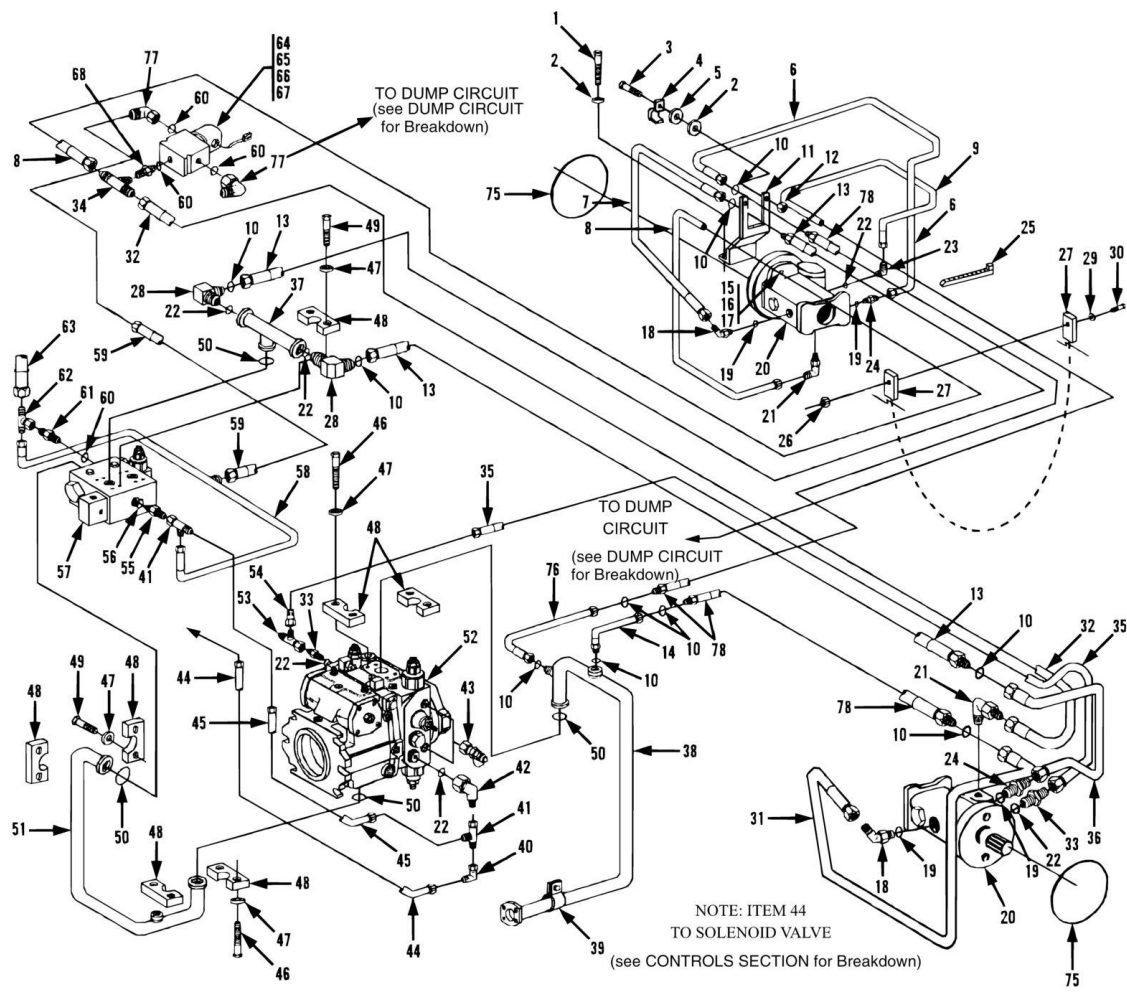
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	88201035	4	HEX HD CAPSCREW, 3/8-16X1, GR5	
2	88551011	8	LOCKWASHER, 3/8	
3	88201036	4	HEX HD CAPSCREW, 3/8-16x1-1/4 GR5	
4	91081201	4	TUBE CLAMP	
5	90027470	4	HARDENED WASHER, 3/8	
6	91083465	1	TUBE ASSY	
7	91083466	1	TUBE ASSY	
8	84719037	1	HOSE ASSY	
9	84719069	1	HOSE ASSY	
10	88591508	10	O-RING	
11	91081522	1	R.H. TUBE SUPPORT	
11	91081523	1	L.H. TUBE SUPPORT	
12	88501006	4	HEX NUT, 3/8-16	
13	84717878	2	HOSE ASSY	
14	91083191	1	TUBE ASSY	
15	91123092	4	STUD	
16	90027471	4	HARD WASHER	
17	91083449	4	HEX NUT, 1/2-13	
18	88662425	2	ELBOW, 45, (includes item 19)	
19	88591209	4	O-RING	
20		Ref	REAR DRIVE MOTOR (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
21	91085064	2	RESTRICTOR	
22	88591207	6	O-RING	
23	88662087	1	ELBOW, 45, (includes item 22)	
24	88662306	2	CONNECTOR (includes item 19)	
25		Ref	NYLON TIE	
26	88501005	2	HEX NUT, 5/16-18	
27	91303049	2	HOSE SUPPORT (one each side)	
28	88662421	2	ELBOW, 45, (includes item 22)	
29	88561108	4	FLAT WASHER, 5/16	
30	88201018	2	HEX HD CAPSCREW, 5/16-18x3/4 GR5	
31	91083464	1	TUBE ASSY	
32	84719036	1	HOSE ASSY	
33	88662008	2	CONNECTOR (includes item 22)	
34	88662222	1	BRANCH TEE (includes item 60)	
35	84719070	1	HOSE ASSY	
36	91083463	1	TUBE ASSY	
37	91083266	1	TUBE ASSY	
38	91143055	1	TUBE ASSY	
39	90205792	1	CUSHION CLAMP	
40	88662105	1	ELBOW - 90, (swivel nut)	
41	88662239	2	SWIVEL NUT RUN TEE, 3/8 TUBE	
42	91083222	1	REDUCING CONNECTOR (includes item 22)	
43	91053020	2	TEST COUPLING	
44	84717304	1	HOSE ASSY	
45	77133447	1	HOSE ASSY	
46	83201135	8	HEX HD CAPSCREW, 7/16-14X1-1/2	
47	88551012	16	LOCKWASHER, 7/16	
48	84712738	8	SPLIT FLANGE CLAMP	

SECTION 8 - HYDRAULIC CIRCUITS

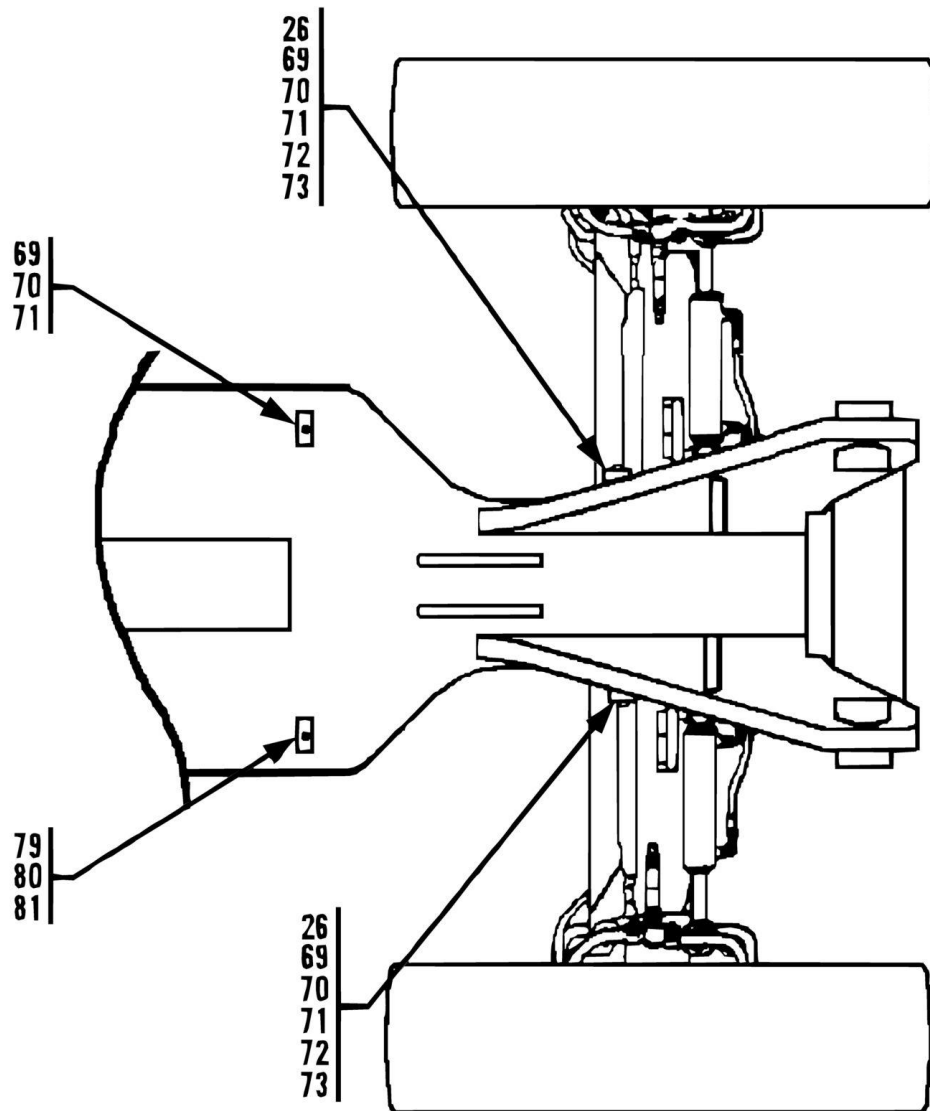
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
49	83201155	8	HEX HD CAPSCREW, 7/16-14X3/4	
50	91083106	4	O-RING	
51	91163201	1	TUBE ASSY	
52		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
53	88662242	1	SWIVEL NUT RUN TEE, 3/4 TUBE	
54	83651133	1	REDUCER W/ADAPTOR	
55	91083306	1	CONNECTOR (includes item 56)	
56	88591206	1	O-RING	
57		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
58	91163098	1	TUBE ASSY	
59	84719142	1	HOSE ASSY	
60	88591204	5	O-RING	
61	88662005	1	CONNECTOR (includes item 60)	
62	88662224	1	SWIVEL NUT BRANCH TEE, 3/8 TUBE	
63	84718185	1	HOSE ASSY	
64		Ref	SOLENOID VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
65	88561001	2	FLAT WASHER, 3/16	
66	88201008	2	HEX HD CAPSCREW, 1/4-20x1-3/4 GR5	
67	88551009	2	LOCKWASHER, 1/4	
68	88662017	1	CONNECTOR (includes item 60)	
69	77133279	3	CLAMPSET	
70	88201023	3	HEX HD CAPSCREW, 5/16-18x1-3/4 GR5	
71	77133137	3	COVER PLATE	
72	77133390	2	SAFETY CLIP	
73	77133306	2	STACK BOLT	
74	80933140	2	CLAMP SET	
75	90023155	2	O-RING	
76	91083194	1	TUBE ASSY	
77	88662064	2	ELBOW, 90, (includes item 60)	
78	84717824	2	HOSE ASSY	
79	77133053	1	CLAMP SET	
80	77133052	1	COVER PLATE	
81	77133209	2	HEX HD CAPSCREW, 1/4-20X1-3/8	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-9. DRIVE CIRCUIT - REAR (SN 0277086 to Present)



REAR DRIVE HOSE CLAMP LOCATIONS



SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-9. DRIVE CIRCUIT - REAR (SN 0277086 to Present)

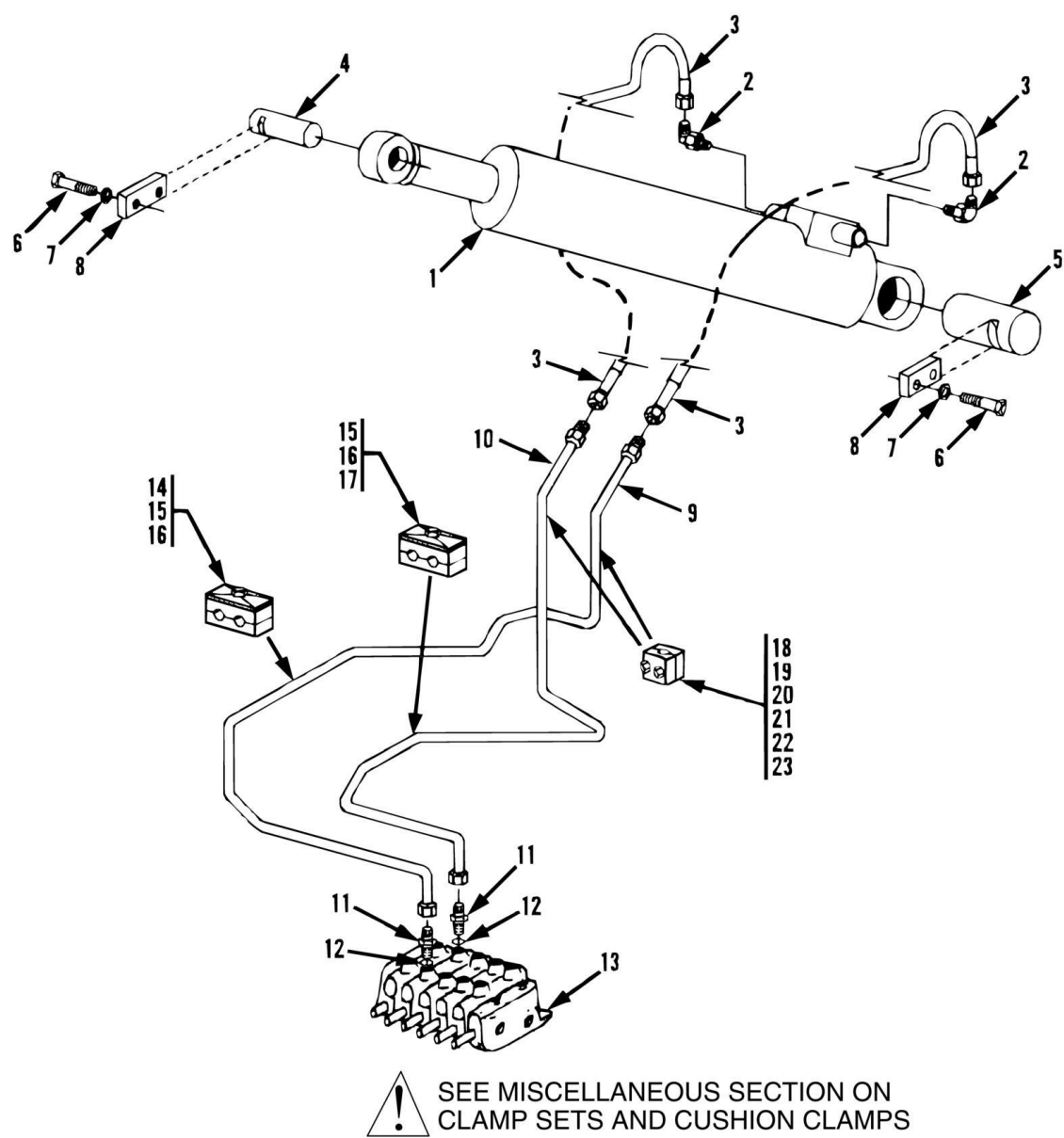
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	88201035	4	HEX HD CAPSCREW, 3/8-16X1, GR5	
2	88551011	8	LOCKWASHER, 3/8	
3	88201036	4	HEX HD CAPSCREW, 3/8-16x1-1/4 GR5	
4	91081201	4	TUBE CLAMP	
5	90027470	4	HARDENED WASHER, 3/8	
6	91083465	1	TUBE ASSY	
7	91083466	1	TUBE ASSY	
8	84719037	1	HOSE ASSY	
9	84719069	1	HOSE ASSY	
10	88591508	10	O-RING	
11	91081522	1	R.H. TUBE SUPPORT	
11	91081523	1	L.H. TUBE SUPPORT	
12	88501006	4	HEX NUT, 3/8-16	
13	84717878	2	HOSE ASSY	
14	91083191	1	TUBE ASSY	
15	91123092	4	STUD	
16	90027471	4	HARD WASHER	
17	91083449	4	HEX NUT, 1/2-13	
18	88662425	2	ELBOW, 45, (includes item 19)	
19	88591209	4	O-RING	
20		Ref	REAR DRIVE MOTOR (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
21	91085064	2	RESTRICTOR	
22	88591207	6	O-RING	
23	88662087	1	ELBOW, 45, (includes item 22)	
24	88662306	2	CONNECTOR (includes item 19)	
25		Ref	NYLON TIE	
26	88501005	2	HEX NUT, 5/16-18	
27	91303049	2	HOSE SUPPORT (one each side)	
28	88662421	2	ELBOW, 45, (includes item 22)	
29	88561108	4	FLAT WASHER, 5/16	
30	88201018	2	HEX HD CAPSCREW, 5/16-18x3/4 GR5	
31	91083464	1	TUBE ASSY	
32	84719036	1	HOSE ASSY	
33	88662008	2	CONNECTOR (includes item 22)	
34	88662222	1	BRANCH TEE (includes item 60)	
35	84719070	1	HOSE ASSY	
36	91083463	1	TUBE ASSY	
37	91083266	1	TUBE ASSY	
38	91143055	1	TUBE ASSY	
39	90205792	1	CUSHION CLAMP	
40	88662105	1	ELBOW - 90, (swivel nut)	
41	88662239	2	SWIVEL NUT RUN TEE, 3/8 TUBE	
42	91083222	1	REDUCING CONNECTOR (includes item 22)	
43	91053020	2	TEST COUPLING	
44	84717304	1	HOSE ASSY	
45	77133447	1	HOSE ASSY	
46	83201135	8	HEX HD CAPSCREW, 7/16-14X1-1/2	
47	88551012	16	LOCKWASHER, 7/16	
48	84712738	8	SPLIT FLANGE CLAMP	

SECTION 8 - HYDRAULIC CIRCUITS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
49	83201155	8	HEX HD CAPSCREW, 7/16-14X3/4	
50	91083106	4	O-RING	
51	91163201	1	TUBE ASSY	
52		Ref	HYDROSTATIC TRANSMISSION (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
53	88662242	1	SWIVEL NUT RUN TEE, 3/4 TUBE	
54	83651133	1	REDUCER W/ADAPTOR	
55	91083306	1	CONNECTOR (includes item 56)	
56	88591206	1	O-RING	
57		Ref	TRACTION LOCK VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
58	91163098	1	TUBE ASSY	
59	84719142	1	HOSE ASSY	
60	88591204	5	O-RING	
61	88662005	1	CONNECTOR (includes item 60)	
62	88662224	1	SWI EL NUT BRANCH TEE, 3/8 TUBE	
63	84718185	1	HOSE ASSY	
64		Ref	SOLENOID VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
65	88561001	2	FLAT WASHER, 3/16	
66	88201008	2	HEX HD CAPSCREW, 1/4-20x1-3/4 GR5	
67	88551009	2	LOCKWASHER, 1/4	
68	88662017	1	CONNECTOR (includes item 60)	
69	77133279	3	CLAMPSET	
70	88201023	3	HEX HD CAPSCREW,5/16-18x1-3/4 GR5	
71	77133137	3	COVER PLATE	
72	77133390	2	SAFETY CLIP	
73	77133306	2	STACK BOLT	
74	80933140	2	CLAMP SET	
75	90023155	2	O-RING	
76	91083194	1	TUBE ASSY	
77	88662064	2	ELBOW, 90, (includes item 60)	
78	84717824	2	HOSE ASSY	
79	77133053	1	CLAMP SET	
80	77133052	1	COVER PLATE	
81	77133209	2	HEX HD CAPSCREW, 1/4-20X1-3/8	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-10. LIFT CYLINDER (SN 0277001 to Present)



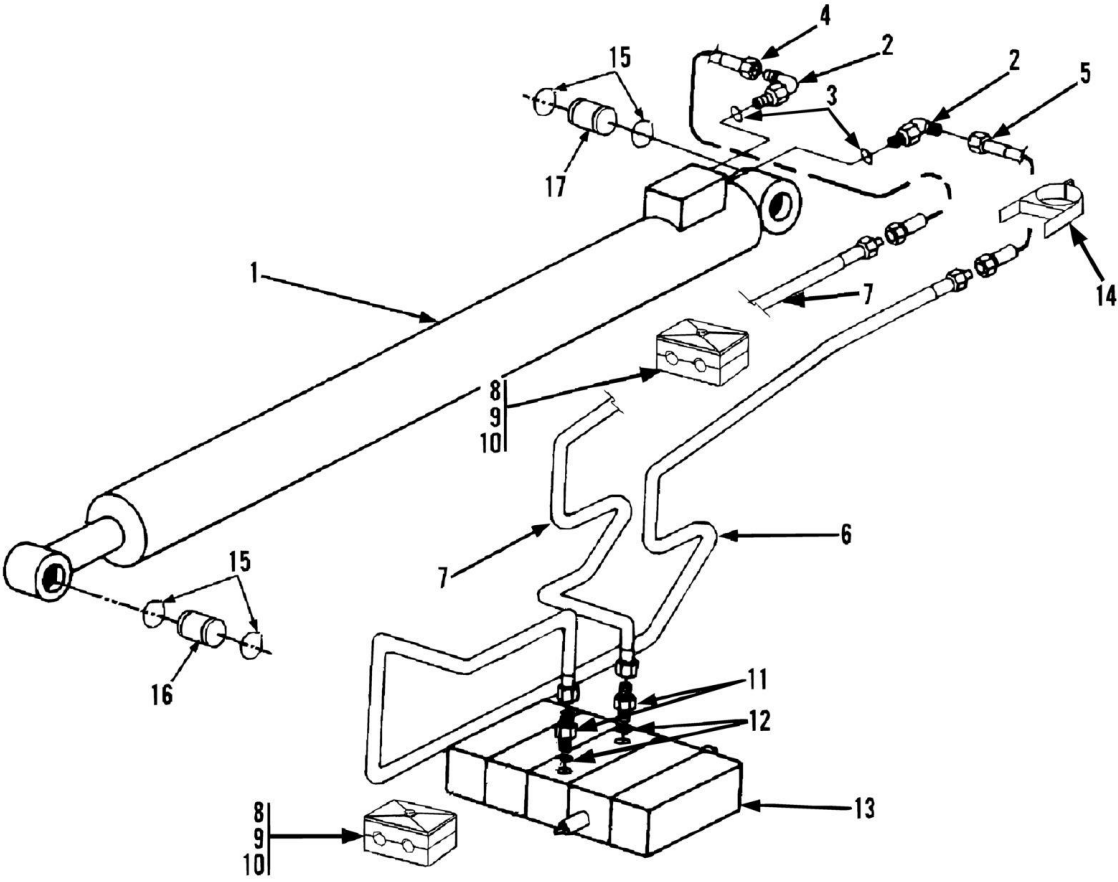
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-10. LIFT CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	LIFT CYLINDER ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	91083050	2	HYDRAULIC SWIVEL	
3	84717860	2	HOSE ASSY	
4	91081432	1	PIN	
5	91081433	1	PIN	
6	88201065	4	HEX HD CAPSCREW, 1/2-13X1, GR5	
7	88551013	4	LOCKWASHER, 1/2	
8	91081313	2	KEEPER PLATE	
9	91083224	1	TUBE ASSY	
10	91083225	1	TUBE ASSY	
11	88662007	2	CONNECTOR (includes item 12)	
12	88591206	2	O-RING	
13		Ref	MAIN HYDRAULIC CONTROL VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
14	77133139	1	CLAMP SET	
15	77133140	2	COVER PLATE	
16	77133177	2	HEX HD CAPSCREW, 5/16-18	
17	91083240	1	Clamp Set	
18	77133497	2	CLAMP SET	
19	77133498	2	COVER PLATE	
20	88201009	4	HEX HD CAPSCREW, 1/4-20X2, GR5	
21	88561002	4	FLAT WASHER, 1/4	
22	88551009	4	LOCK WASHER, 1/4	
23	88501004	4	HEX NUT, 1/4-20	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-11. CROWD CYLINDER (SN 0277001 to Present)



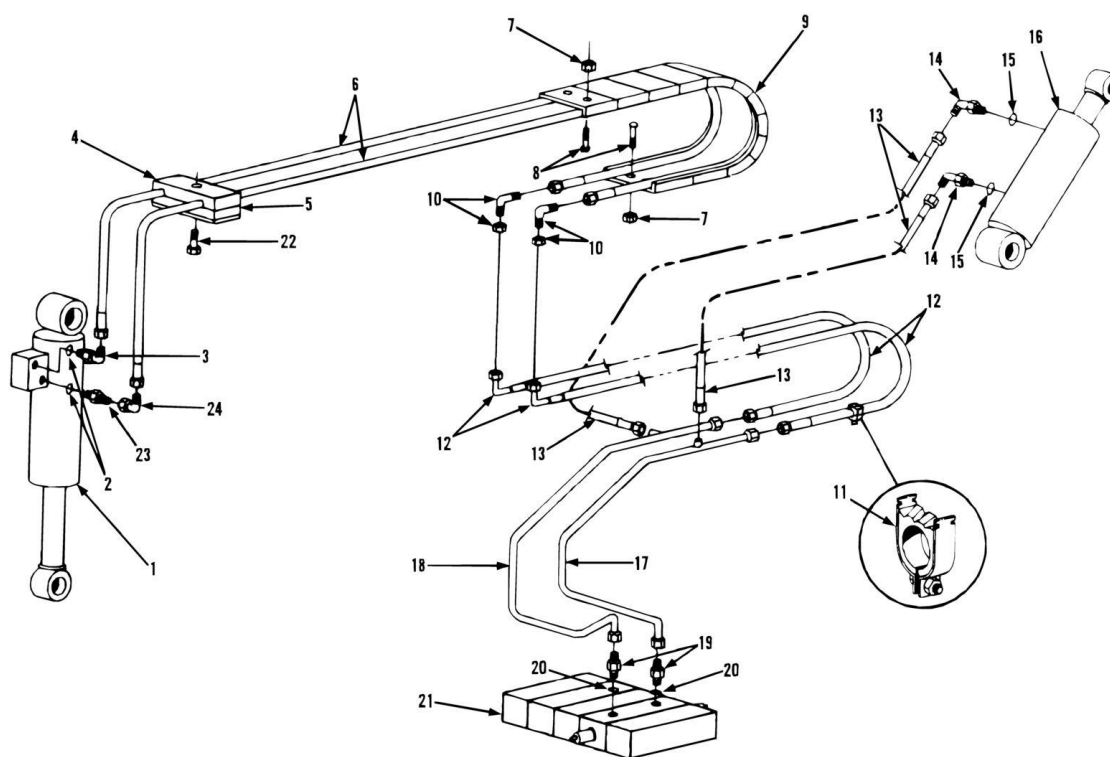
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-11. CROWD CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	HYDRAULIC CYLINDER ASSY CROWD (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662065	2	ELBOW, 90, (includes item 3)	
3	88591205	2	O-RING	
4	84717885	1	HOSE ASSY	
5	84717884	1	HOSE ASSY	
6	91083226	1	TUBE ASSY	
7	91083230	1	TUBE ASSY	
8	77133139	2	CLAMP SET	
9	77133140	2	COVER PLATE	
10	77133177	2	HEX HD CAPSCREW	
11	88662007	2	CONNECTOR (includes item 12)	
12	88591206	2	O-RING	
13		Ref	MAIN HYDRAULIC CONTROL VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
14	90207464	2	CUSHION CLAMP	
15	88581140	4	RETAINING RING	
16	91081437	1	CROWD CYLINDER PIN	
17	91081438	1	CROWD CYLINDER PIN	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-12. TILT AND TILT COMPENSATING CYLINDER (SN 0277001 to Present)



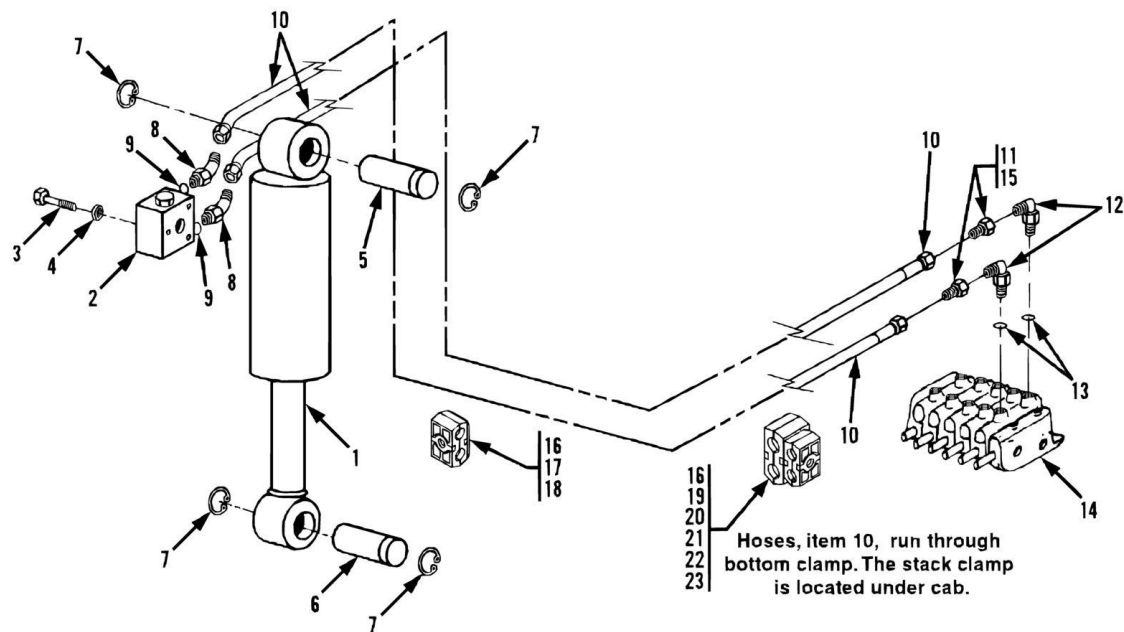
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-12. TILT AND TILT COMPENSATING CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	TILT CYLINDER ASSY, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88591207	2	O-RING	
3	91053450	1	STR THREAD ELBOW, 90	
4	77133139	1	CLAMP SET	
5	77133140	1	COVER PLATE	
6	84717886	2	HOSE ASSY	
7	88521205	4	HEX LOCKNUT, 5/16-18	
8	88411036	4	ROUND HD CARRIAGE BOLT, 5/16-18X3/4	
9	91083290	1	HOSE CARRIER	
10	90027179	2	BULK HEAD FITTING, (includes item 11)	
11	90207463	4	CUSHION CLAMP	
12	84717563	2	HOSE ASSY	
13	84717859	2	HOSE ASSY	
14	88662065	2	ELBOW, 90, (includes item 15)	
15	88591205	2	O-RING	
16		Ref	COMPENSATING CYLINDER ASSY, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
17	91083227	1	TUBE ASSY	
18	91083228	1	TUBE ASSY	
19	88662019	2	CONNECTOR, (includes item 20)	
20	88591206	2	O-RING	
21		Ref	MAIN CONTROL VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
22	77133177	1	HEX HD CAPSCREW, 5/16-18X1-3/8, GR5	
23	91053426	1	CONNECTOR	
24	88662105	1	ELBOW, 90, (swivel nut)	

SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-13. SWAY CYLINDER (SN 0277001 to Present)



 SEE MISCELLANEOUS SECTION ON CLAMP SETS AND CUSHION CLAMPS

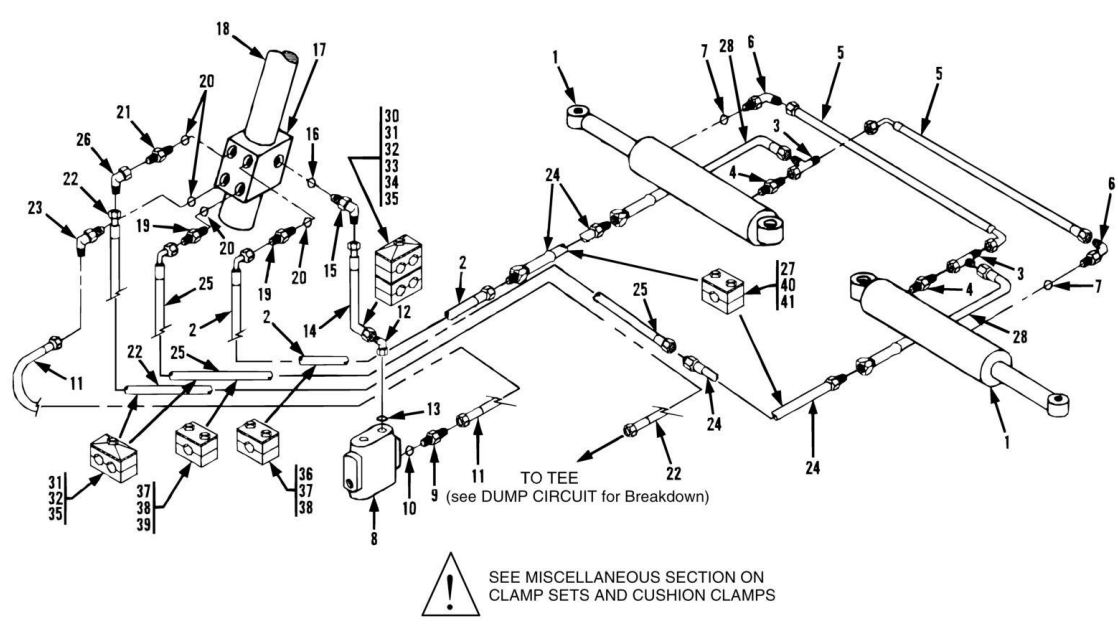
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-13. SWAY CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	SWAY CYLINDER (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2		Ref	SWAY CYLINDER VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
3	88201040	3	HEX HD CAPSCREW, 3/8-16x2-1/4, GR5 (torque to 30-35 ft lbs)	
4	88551011	3	LOCKWASHER, 3/8	
5	91403226	1	PIN	
6	90207352	1	PIN	
7	90028935	4	RETAINING RING	
8	88662082	2	ELBOW, 45, (includes item 9)	
9	88591012	2	O-RING	
10	84719040	2	HOSE ASSY	
11	88661341	2	TUBE-END REDUCER, 1/2x1/4	
12	88662059	2	ADAPTER, 90, 5/8-1/2 (includes item 13)	
13	88591206	2	O-RING	
14		Ref	MAIN HYDRAULIC CONTROL VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
15	88661406	2	NUT (used with item 11)	
16	77133168	5	CLAMP SET	
17	77133140	3	COVER PLATE	
18	77133177	3	HEX HD CAPSCREW, 5/16-18X1-3/8	
19	77133389	2	STACK BOLT	
20	77133390	2	SAFETY CLIP	
21	77133136	2	CLAMP SET	
22	77133137	2	COVER PLATE	
23	88201023	2	HEX HD CAPSCREW, 5/16-18X1-3/4, GR5	

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FIGURE 8-14. STEERING CYLINDER (SN 0277001 to Present)



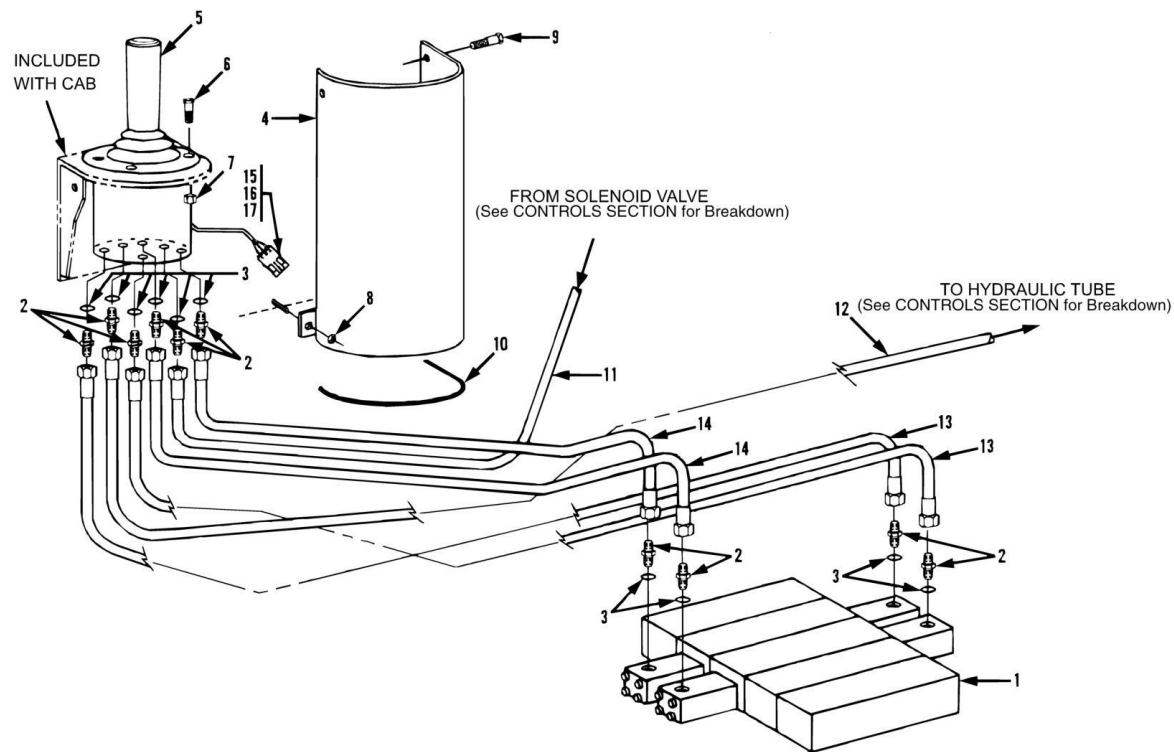
SECTION 8 - HYDRAULIC CIRCUITS

FIGURE 8-14. STEERING CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	STEERING CYLINDER (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	84719056	1	HOSE ASSY	
3	88662240	2	SWIVEL NUT RUN TEE, 1/2 TUBE	
4	88662026	2	CONNECTOR (includes o-ring)	
4	88591015	2	O-RING	
5	84718202	2	HOSE ASSY	
6	88662064	2	ELBOW, 90, (includes item 7)	
7	88591204	2	O-RING	
8		Ref	PRIORITY FLOW CONTROL VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
9	88662019	1	CONNECTOR (includes item 10)	
10	88591206	1	O-RING	
11	84717854	1	HOSE ASSY	
12	88662062	1	ELBOW, 90, (includes item 13)	
13	88591202	1	O-RING	
14	84718439	1	HOSE ASSY	
15	88662062	1	ELBOW, 90, (includes item 16)	
16	88591202	1	O-RING	
17		Ref	STEERING ORBITROL (See CONTROLS SECTION for Breakdown)	
18		Ref	STEERING COLUMN (See CONTROLS SECTION for Breakdown)	
19	88662006	2	CONNECTOR (includes item 20)	
20	88591205	4	O-RING	
21	88662018	1	CONNECTOR (includes item 20)	
22	84718415	1	HOSE ASSY	
23	88662065	1	ELBOW, 90, (includes item 20)	
24	91143354	2	TUBE ASSY	
25	84719042	1	HOSE ASSY	
26	88662105	1	SWIVEL NUT ELBOW, 90	
27	77133499	8	HEX HD CAPSCREW, 1/4-20X1-5/16	
28	90022042	2	HOSE ASSY	
29	77133029	1	CLAMP SET	
30	91213002	1	CLAMP SET	
31	77323029	2	CLAMP SET	
32	88201023	2	HEX HD CAPSCREW, 5/16-18x1-3/4	
33	77133306	1	STACK BOLT	
34	77133390	1	SAFETY CLIP	
35	77133137	2	COVER PLATE	
36	77133893	1	CLAMP SET	
37	77133052	3	COVER PLATE	
38	77133209	6	HEX HD CAPSCREW, 1/4-20X1-3/8	
39	77133073	2	CLAMP SET	
40	91033138	4	CLAMP SET	
41	77133498	4	COVER PLATE	

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FIGURE 8-15. JOYSTICK CIRCUIT (SN 0277001 to Present)



SECTION 8 - HYDRAULIC CIRCUITS

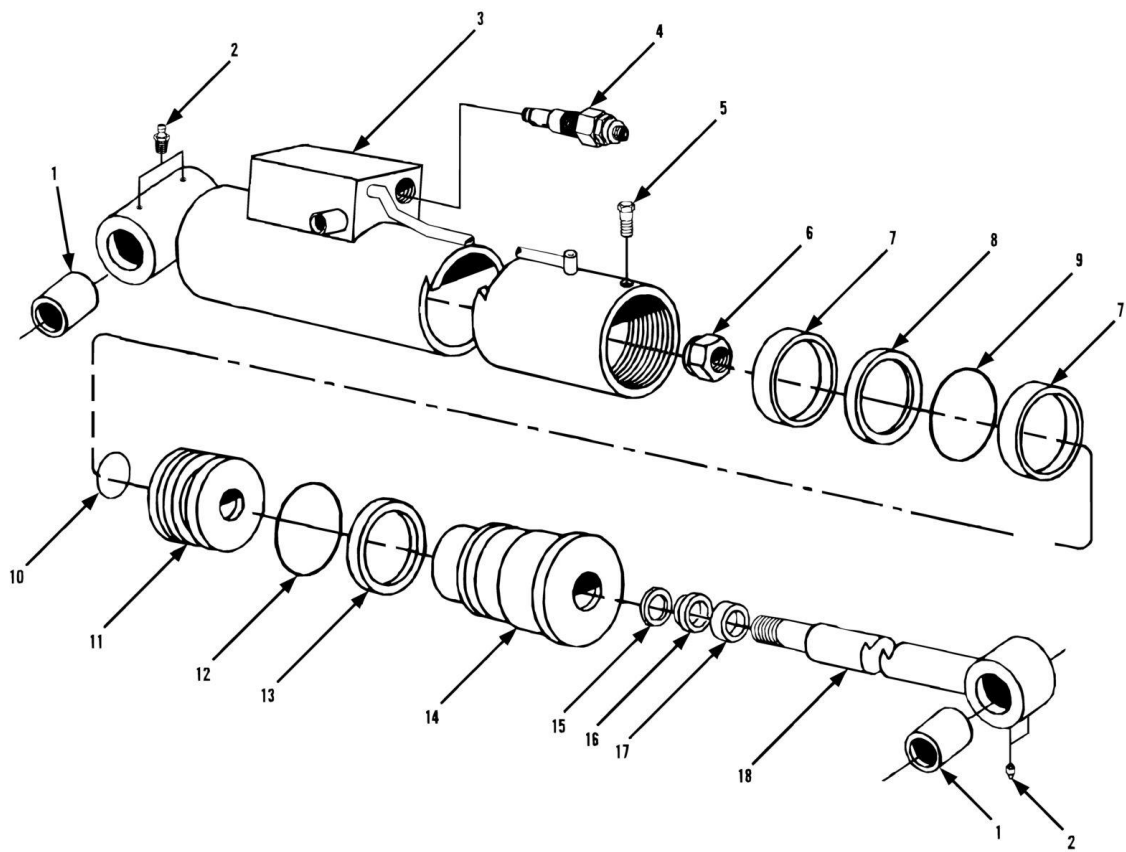
FIGURE 8-15. JOYSTICK CIRCUIT (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	MAIN HYDRAULIC CONTROL VALVE ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662005	10	CONNECTOR (includes item 3)	
3	88591204	10	O-RING	
4	911D6047	1	COVER	
5		Ref	JOYSTICK (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
6	88261017	4	SOCKET BUTTON HD CAPSCREW, 1/4-20X7/8, GR5	
7	88521304	4	LOCKNUT, 1/4-20	
8	77143006	2	WHIZ LOCKNUT, 5/16-18	
9	77143003	2	WHIZ-LOC SCREW, 5/16-18x5/8	
10	90206199	AR	TRIM LOK	
11	84718736	1	HOSE ASSY	
12	84718735	1	HOSE ASSY	
13	84717458	2	HOSE ASSY	
14	84717519	2	HOSE ASSY	
15	80963060	1	WEATHER PACK SHROUD	
16	80963069	3	MALE PIN TERMINAL	
17	91143187	3	CABLE SEAL	

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SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-1. (91083469) LIFT CYLINDER - IOWA (SN 0277001 to Present)



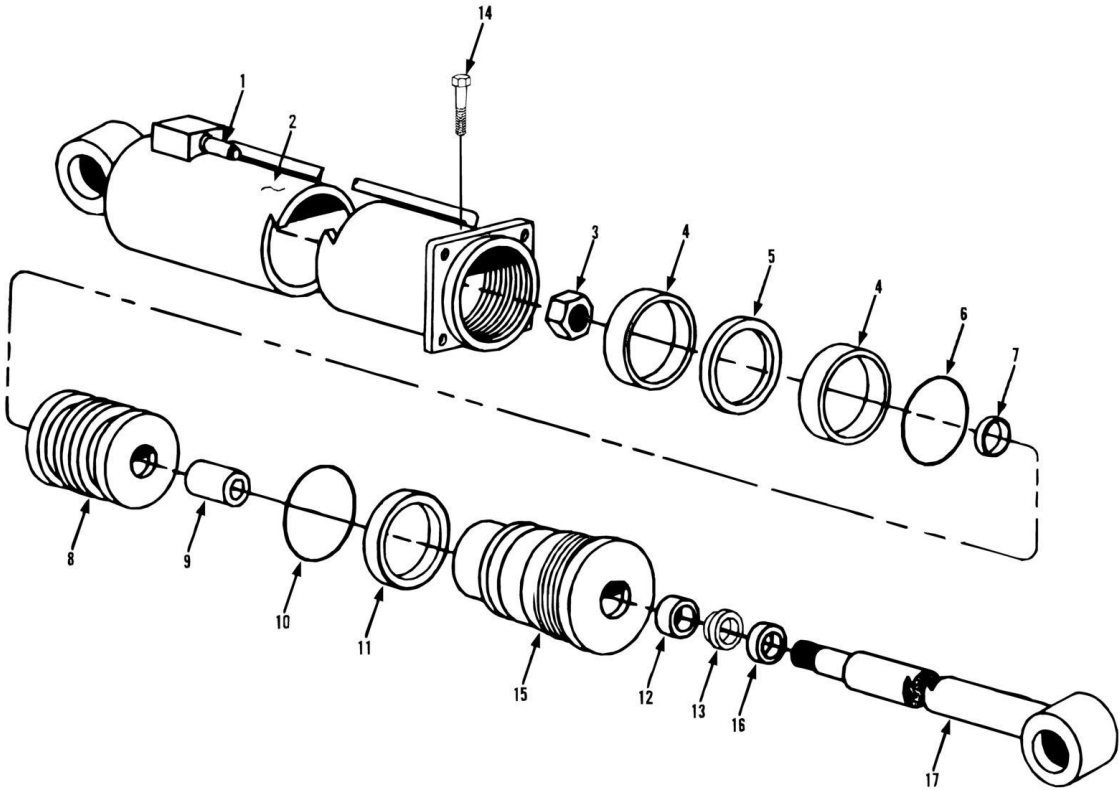
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-1. (91083469) LIFT CYLINDER - IOWA (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083469	1	LIFT CYLINDER ASSY (includes all items)	
	91084307	1	SEAL KIT (includes items 7 thru 10, 12, 13 & 15 thru 17)	
1	91124080	4	BUSHING	
2	91144128	4	GREASE FITTING	
3	91384002	1	CASE ASSY	
4	91084347	1	COUNTER BALANCE VALVE	
4	91034276	1	COUNTER BALANCE VALVE SEAL KIT	
5	91144017	1	CAPSCREW, #8X32X.375	
6	91034153	1	LOCKNUT (lubricate and torque to 1400-1500 ft lbs)	
7	Kit	2	WEAR RING	
8	Kit	1	PISTON SEAL	
9	Kit	1	O-RING	
10	Kit	1	O-RING	
11	91034139	1	PISTON	
12	Kit	1	O-RING	
13	Kit	1	BACK-UP RING	
14	91384003	1	CYLINDER HEAD	
15	Kit	1	STEP SEAL	
16	Kit	1	U-CUP	
17	Kit	1	WIPER	
18	91384004	1	ROD ASSY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-2. (91083468) CROWD CYLINDER (SN 0277001 to Present)



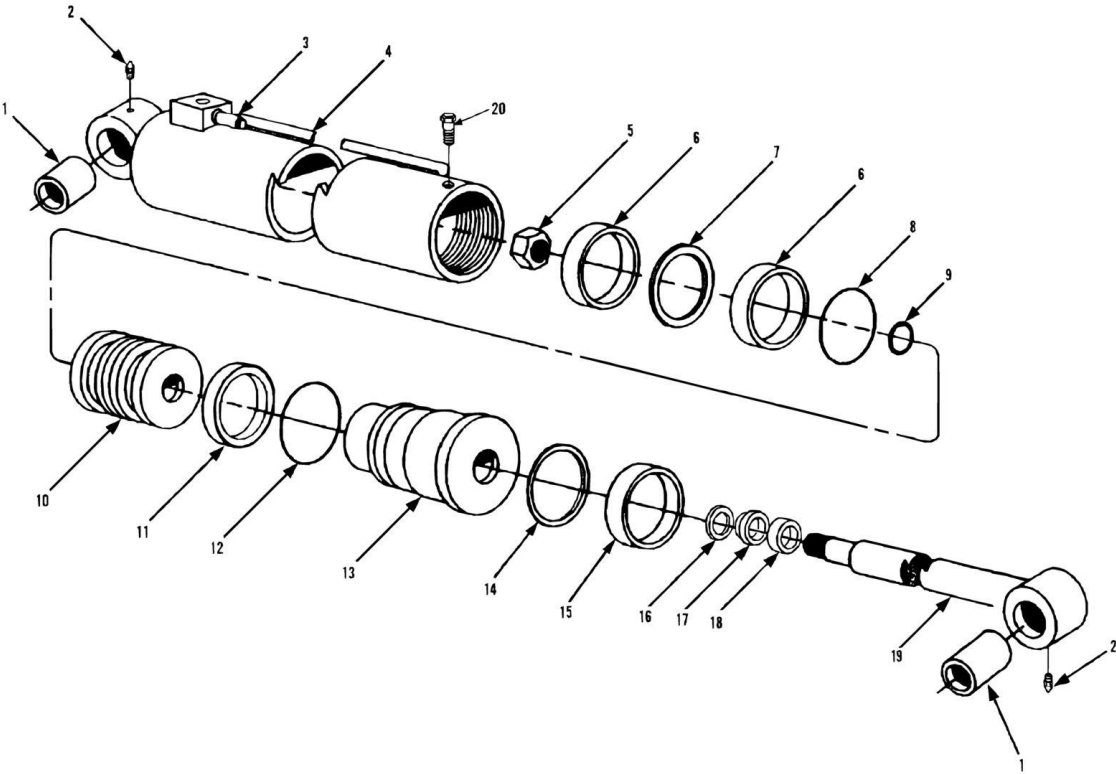
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-2. (91083468) CROWD CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083468	1	CROWD CYLINDER ASSY (includes all items)	
	91084306	Ref	SEAL KIT, (includes items 4 thru 7, 10 thru 13 & 16)	
1	91084347	1	COUNTER BALANCE VALVE	
2	91084348	1	CASE ASSY	
3	91204460	1	LOCKNUT (torque to 200-250 ft lbs)	
4	Kit	2	WEAR RING	
5	Kit	1	PISTON SEAL	
6	Kit	1	O-RING	
7	Kit	1	O-RING	
8	91084349	1	PISTON	
9	91084350	1	SPACER	
10	Kit	1	O-RING	
11	Kit	1	BACKUP	
12	Kit	1	STEP SEAL	
13	Kit	1	U-CUP	
14	91144017	1	CAPSCREW	
15	91084351	1	HEAD	
16	Kit	1	WIPER	
17	91084352	1	SHAFT ASSY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-3. (91083513) TILT CYLINDER - IOWA (SN 0277001 to Present)



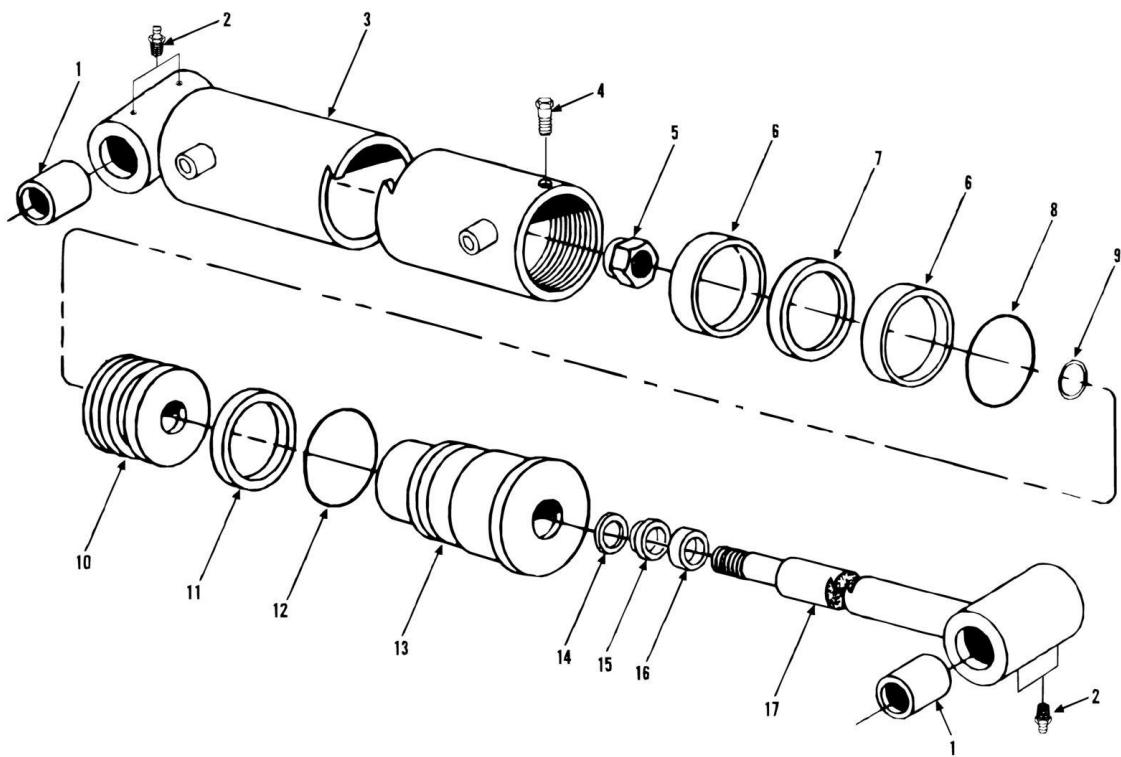
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-3. (91083513) TILT CYLINDER - IOWA (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083513	1	TILT CYLINDER ASSY (includes all items)	
	91084370	1	SEAL KIT (includes items 6 thru 9, 11, 12 & 16 thru 18)	
1	91404352	2	BUSHING	
2	91144128	2	GREASE FITTING	
3	91083473	1	COUNTER BALANCE VALVE	
3	91034276	1	COUNTER BALANCE VALVE SEAL KIT	
4	91124076	1	CASE ASSY	
5	91064017	1	LOCKNUT (torque to 650-750 ft lbs)	
6	Kit	2	WEAR RING	
7	Kit	1	SEAL	
8	Kit	1	O-RING	
9	Kit	1	O-RING	
10	91044274	1	PISTON	
11	Kit	1	BACK-UP RING	
12	Kit	1	O-RING	
13	91084371	1	GLAND	
14	91084372	1	SNAP RING	
15	91084373	1	WEAR RING	
16	Kit	1	STEP SEAL	
17	Kit	1	U-CUP	
18	Kit	1	WIPER	
19	91124078	1	SHAFT ASSY	
20	91124096	1	SELF TAPPING SCREW, #10-24	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 9-4. (91083470) COMPENSATING CYLINDER (SN 0277001 to Present)



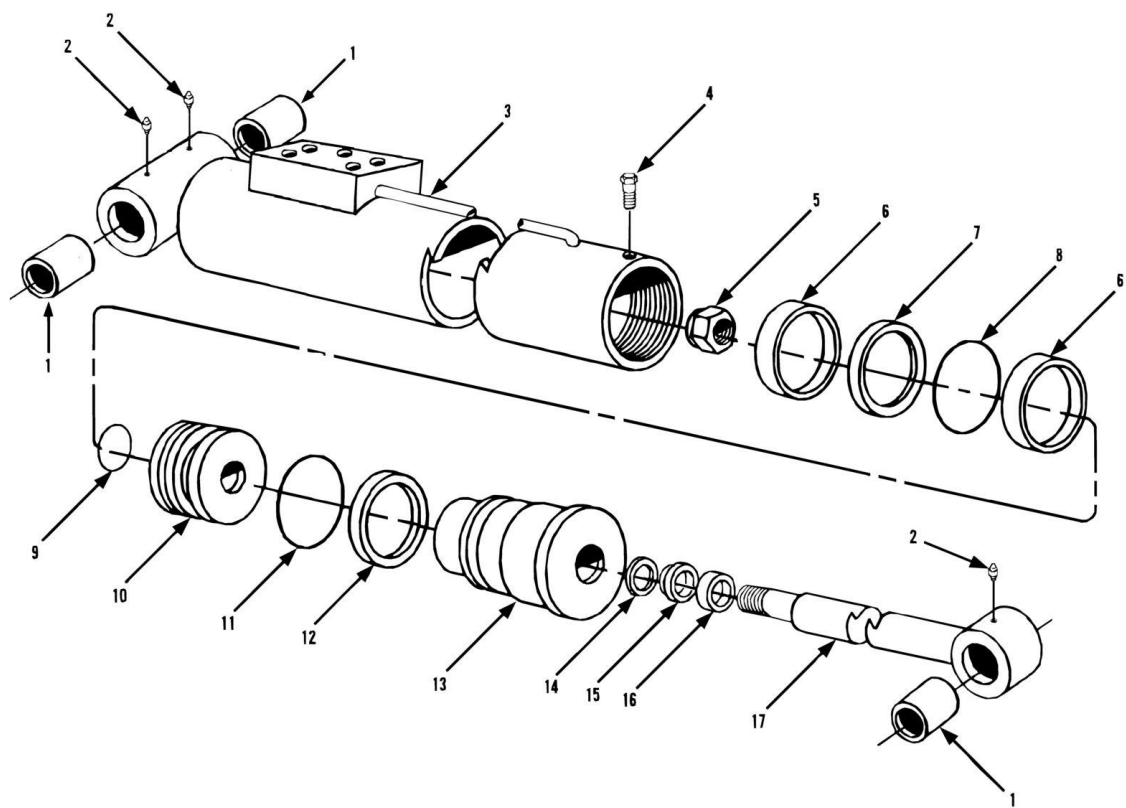
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-4. (91083470) COMPENSATING CYLINDER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083470	1	COMPENSATING CYLINDER ASSY (includes all items)	
	91034339	1	SEAL KIT (includes items 6 thru 9, 11, 12 & 14 thru 16)	
1	91144080	4	BUSHING	
2	91144128	4	GREASE FITTING	
3	91124079	1	CASE ASSY	
4	91144017	1	CAPSCREW, #8X32X.375	
5	91034153	1	LOCKNUT (lubricate and torque to 1175-1275 ft lbs)	
6	Kit	2	WEAR RING	
7	Kit	1	PISTON SEAL	
8	Kit	1	O-RING	
9	Kit	1	O-RING	
10	91034139	1	PISTON	
11	Kit	1	BACK-UP RING	
12	Kit	1	O-RING	
13	91124081	1	CYLINDER HEAD	
14	Kit	1	STEP SEAL	
15	Kit	1	U-CUP	
16	Kit	1	WIPER	
17	91124082	1	ROD ASSY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 9-5. (91123133) SWAY CYLINDER - IOWA (SN 0277001 to Present)



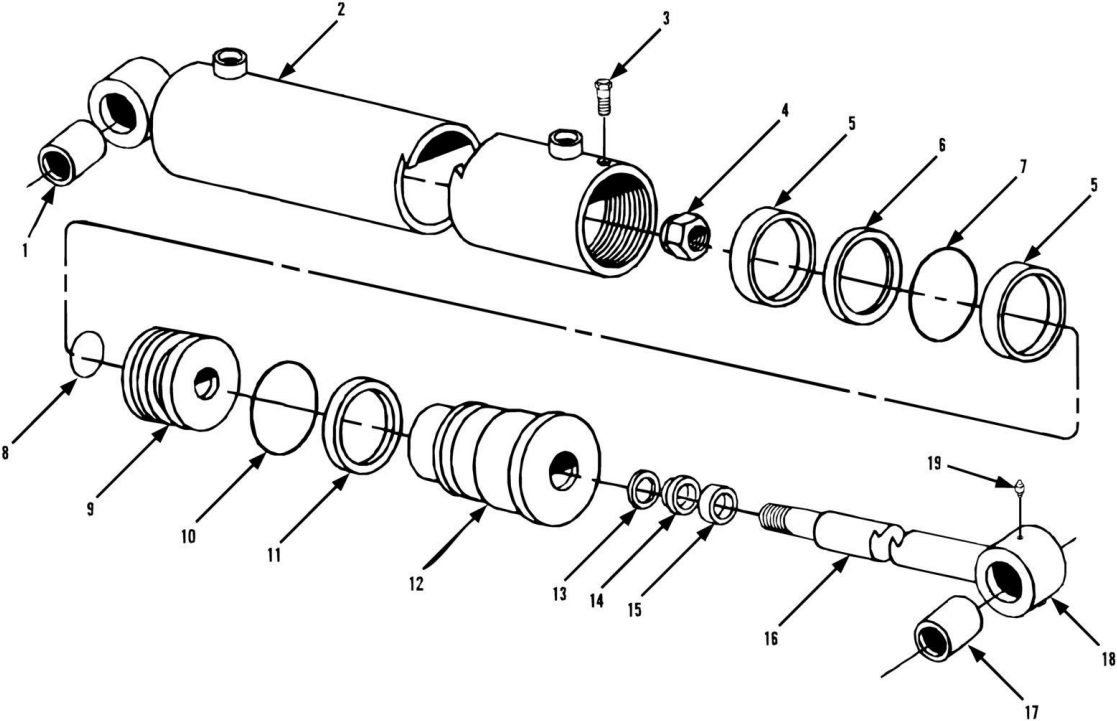
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FIGURE 9-5. (91123133) SWAY CYLINDER - IOWA (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91123133	1	SWAY CYLINDER ASSY, (includes all items)	
	91084308	1	SEAL KIT, (includes items 6 thru 9, 11, 12 & 14 thru 16)	
1	91404352	3	BUSHING	
2	91144128	3	LUBE FITTING	
3	91124095	1	CASE ASSY	
4	91124096	1	SELF-TAPPING SCREW	
5	91034156	1	LOCKNUT, (lubricate and torque to 350-400 ft lbs)	
6	91124097	2	WEAR RING	
7	91124098	1	PISTON SEAL	
8	91124099	1	O-RING	
9	91124100	1	O-RING	
10	91124084	1	PISTON	
11	91204465	1	O-RING	
12	91204466	1	BACK-UP RING	
13	91124085	1	CYLINDER HEAD	
14	91124101	1	STEP SEAL	
15	91124102	1	U-CUP	
16	91124103	1	WIPER	
17	91124104	1	ROD ASSY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 9-6. (91083532) STEERING CYLINDER - IOWA (SN 0277001 to Present)



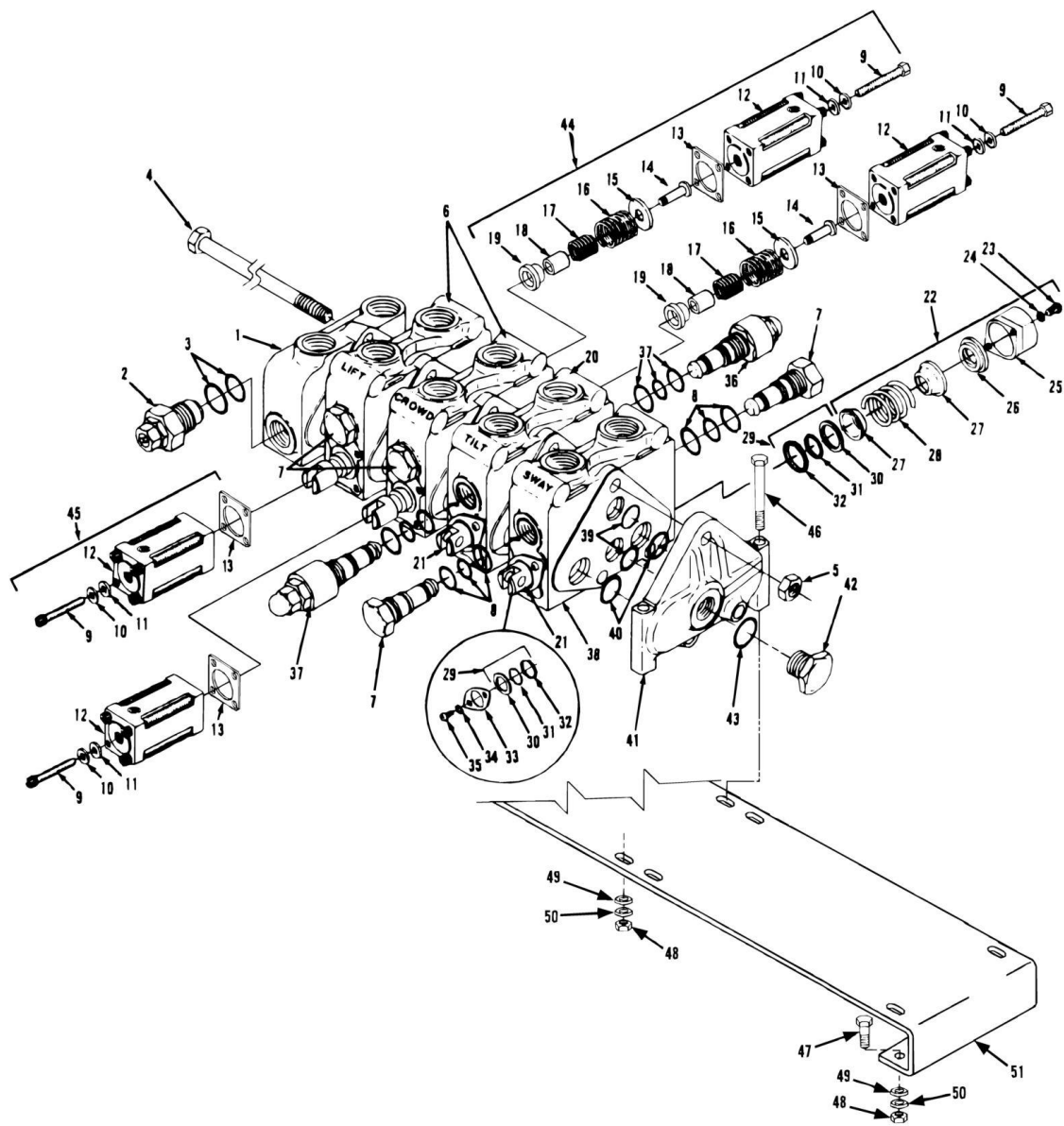
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FIGURE 9-6. (91083532) STEERING CYLINDER - IOWA (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083532	2	STEERING CYLINDER ASSY (includes all items)	
	91084305	1	SEAL KIT (includes items 5 thru 8, 10, 11 & 13 thru 15)	
1	91124087	1	BUSHING	
2	91124088	1	CASE ASSY	
3	91124096	1	SELF-TAPPING SCREW	
4	91204460	1	LOCKNUT (lubricate and torque to 350-370 ft lbs)	
5	Kit	2	WEAR RING	
6	Kit	1	PISTON SEAL	
7	Kit	1	O-RING	
8	Kit	1	O-RING	
9	91124089	1	PISTON	
10	Kit	1	O-RING	
11	Kit	1	BACK-UP RING	
12	91124090	1	CYLINDER HEAD	
13	Kit	1	STEP SEAL	
14	Kit	1	U-CUP	
15	Kit	1	WIPER	
16	91124108	1	ROD ASSY	
17	91043246	1	BUSHING	
18	91144128	1	GREASE FITTING	
19		Ref	HEX HD PLUG, 1/8-27 NPT	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 9-7. (91083417) MAIN HYDRAULIC CONTROL VALVE ASSEMBLY (SN 0277001 to Present)



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FIGURE 9-7. (91083417) MAIN HYDRAULIC CONTROL VALVE ASSEMBLY (SN 0277001 to Present)

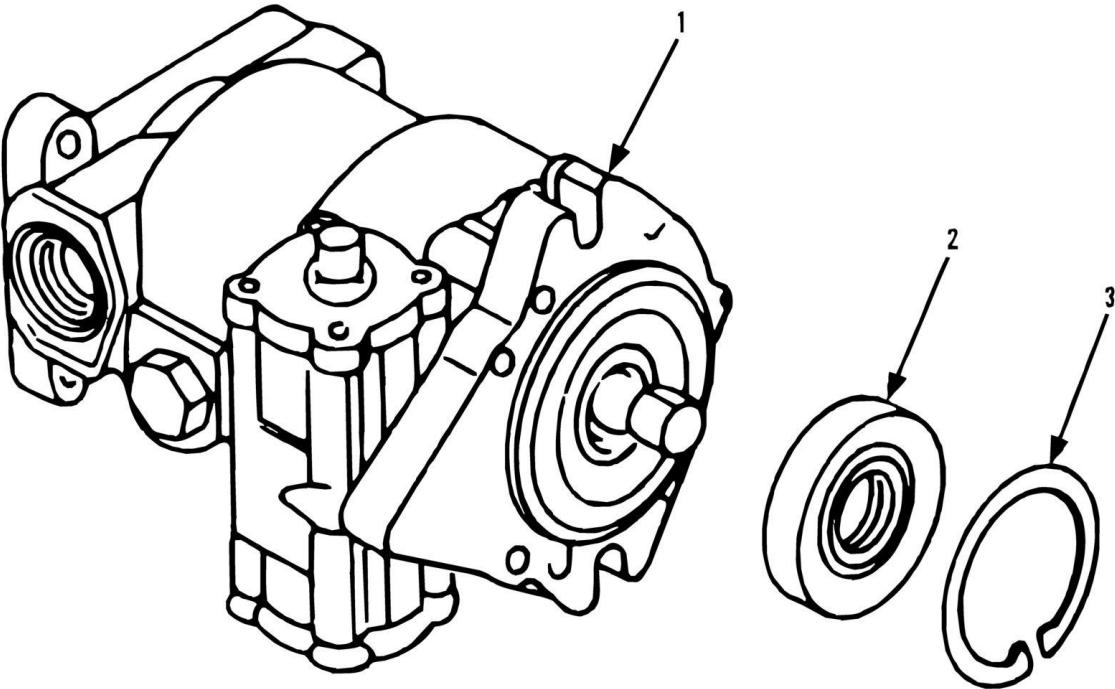
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083417	1	MAIN HYDRAULIC CONTROL VALVE ASSY (includes all items)	
	91084019	1	STUD KIT (includes items 4 & 5)	
	91084015	5	VALVE SECTION SEAL KIT (includes items 39 & 40)	
1	91084008	1	L.H. END COVER ASSY (includes items 2 & 3)	
2	91084009	1	MAIN RELIEF (includes item 3)	
3	91084206	1	O-RING (inner)	
3	91084207	1	O-RING (outer)	
4	Kit	3	STUD	
5	Kit	3	NUT	
6	91084277	2	VALVE SECTION ASSY (Hoist and Crowd) (includes two of item 7, plus items 9 thru 19)	
7	91084010	6	LOAD CHECK PLUG (includes item 8)	
8	91084202	6	LOAD CHECK PLUG SEAL KIT (one required per check plug)	
9	91084230	16	SOCKET HEAD CAPSCREW, 1/4-20x3	
10	91084231	16	LOCKWASHER, 1/4	
11	91084232	4	BEARING PLATE	
12	91084229	4	BONNET	
13	91084233	4	SEAL	
14	91084234	2	SPUD POSITIONER	
15	91084235	2	WASHER	
16	91084236	2	SPRING	
17	91084237	2	SPRING	
18	91084238	2	STOP SLEEVE	
19	91084239	2	STOP COLLAR	
20	91084012	1	VALVE SECTION ASSY (Tilt) (includes items 21, 22, 29 & 33, plus two of item 36)	
21	91084013	2	SPOOL	
22	91084004	2	SPOOL POSITIONER (includes items 23 thru 29)	
23		Ref	SCREW	
24		Ref	WASHER	
25		Ref	BONNET	
26		Ref	SPOOL COLLAR	
27		Ref	SPRING COLLAR	
28		Ref	SPRING	
29	91084005	4	SPOOL SEAL KIT (includes items 30, 31 & 32)	
30	Kit	4	RETAINER	
31	Kit	4	WASHER	
32	Kit	4	SEAL	
33	91084006	2	SPOOL RETAINER (includes items 34 & 35)	
34		Ref	WASHER	
35		Ref	SCREW	
36	91084199	2	RELIEF-2800 PSI (includes one of item 38)	
37	91084201	2	RELIEF SEAL KIT (one required per relief)	
37	91084200	AR	RELIEF SERVICE KIT, NOT ILLUSTRATED (includes relief poppet and piston ring)	
38	91084014	1	VALVE SECTION ASSY (Sway) (includes 2 of item 7, plus items 21, 22, 29 & 33)	
39	Kit	2	PRESSURE SEAL	
40	Kit	2	PRESSURE SEAL	
41	91084278	1	R.H. END COVER ASSY (includes item 42)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
42	91084279	1	PLUG (includes item 43)	
43		Ref	O-RING	
44	91094024	2	HYDRAULIC REMOTE POSITIONER (includes items 9 thru 19)	
45	91094023	2	HYDRAULIC REMOTE POSITIONER (includes items 9 thru 13)	
46	88201028	3	HEX HD CAPSCREW, 5/16-18X3, GR5	
47	88201020	4	HEX HD CAPSCREW, 5/16-18X1, GR5	
48	88501005	7	HEX NUT, 5/16-18	
49	88551010	7	LOCKWASHER, 5/16	
50	88561003	7	FLAT WASHER, 5/16	
51	91381009	1	VALVE SUPPORT (partially illustrated)	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 9-8. (91083401) REAR DRIVE MOTOR (SN 0277001 to Present)



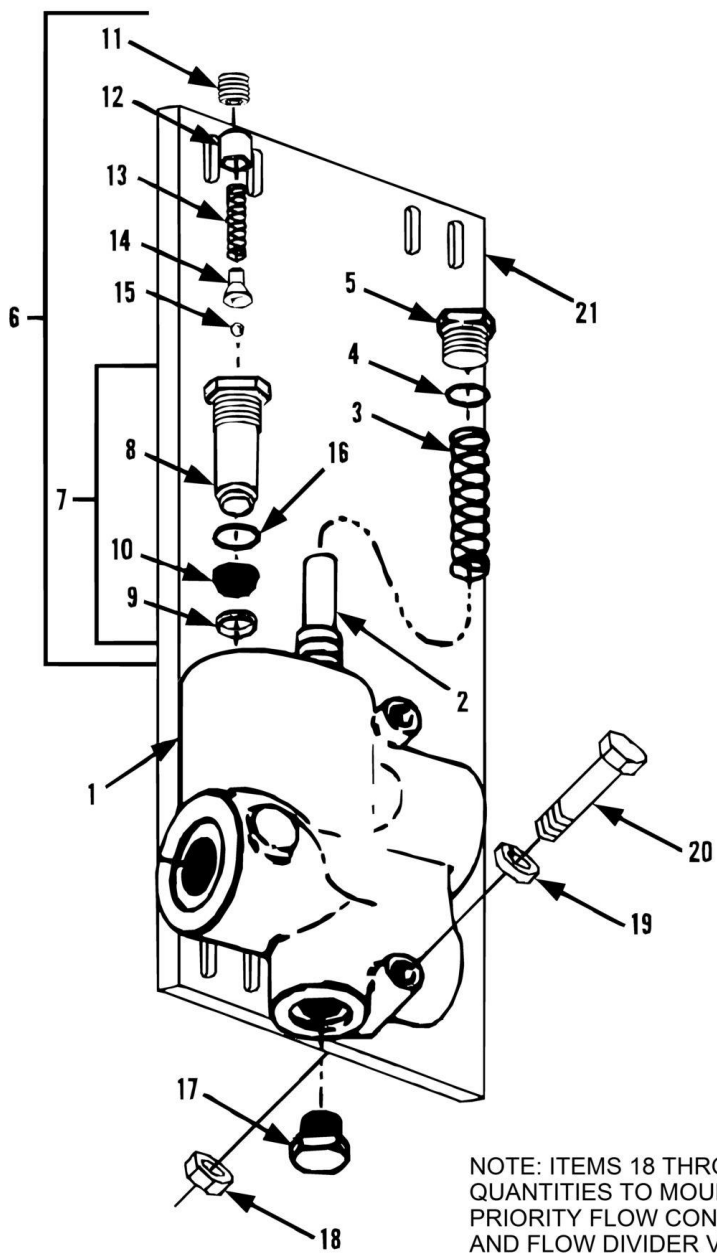
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-8. (91083401) REAR DRIVE MOTOR (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91083401	1	REAR DRIVE MOTOR (includes all items)	
2	91084214	1	LIP SEAL	
3	91084215	2	RETAINING RING	

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FIGURE 9-9. (91033240) PRIORITY FLOW CONTROL VALVE (SN 0277001 to Present)



NOTE: ITEMS 18 THROUGH 20 INCLUDE
QUANTITIES TO MOUNT BOTH
PRIORITY FLOW CONTROL VALVE
AND FLOW DIVIDER VALVE
SHOWN ON HYDRAULIC COMPONENT FOR BREAKDOWN

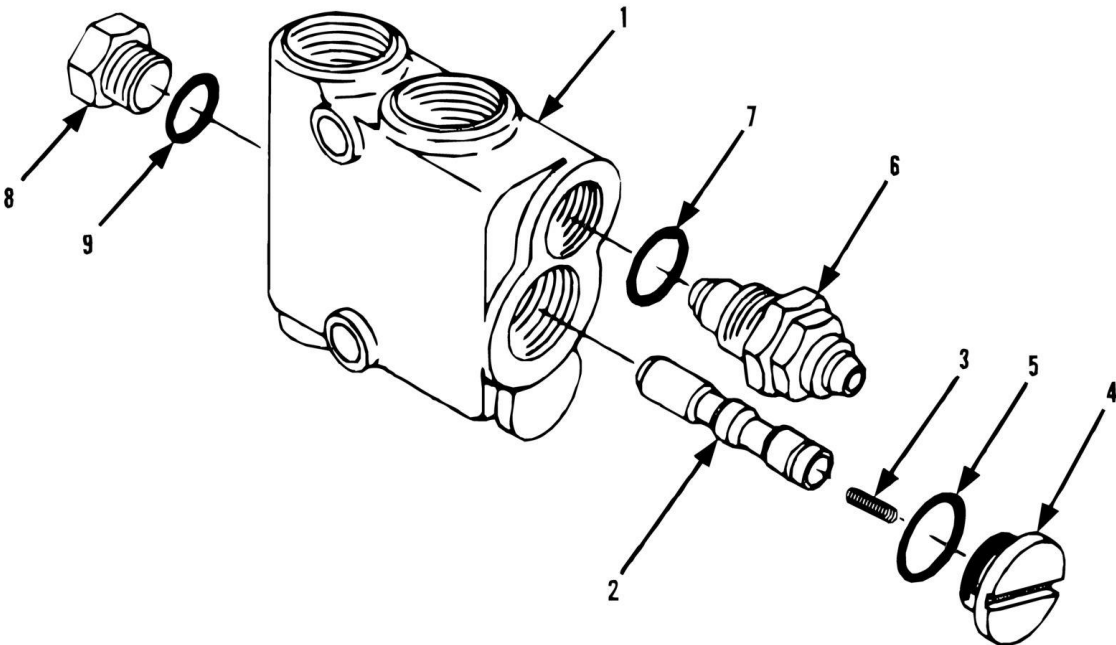
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-9. (91033240) PRIORITY FLOW CONTROL VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91033240	1	PRIORITY FLOW CONTROL VALVE ASSY (includes all items) (2500 PSI relief setting)	
1	90206548	1	HOUSING (includes item 2)	
2	90206549	1	SPOOL	
3	90206550	1	SPRING	
4	88591206	1	O-RING	
5	90206552	1	PLUG	
6	90206553	1	RELIEF CARTRIDGE (includes items 7 thru 16)	
7	90206554	1	RELIEF VALVE SUB BODY (includes items 8 thru 10)	
8	90206555	1	BODY	
9	90206556	1	RING	
10	90206557	1	SCREEN	
11	90206558	1	RELIEF VALVE ADJUSTING SCREW	
12	90206559	1	SPRING GUIDE	
13	90206560	1	SPRING	
14	90206561	1	BALL HOLDER	
15	90216562	1	BALL	
16	88591205	1	O-RING	
17	90206564	1	PLUG	
18	88501005	4	HEX NUT, 5-16	
19	88551010	4	LOCKWASHER, 5/16	
20	88201029	4	HEX HD CAPSCREW, 5/16-18X3-1/4, GR5	
21	91121264	1	BRACKET	

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FIGURE 9-10. (91083521) FLOW DIVIDER VALVE (SN 0277001 to Present)



NOTE: SEE HYDRAULIC COMPONENT SECTION FOR BREAKDOWN ITEMS 18 THROUGH 20 FOR MOUNTING HARDWARE.

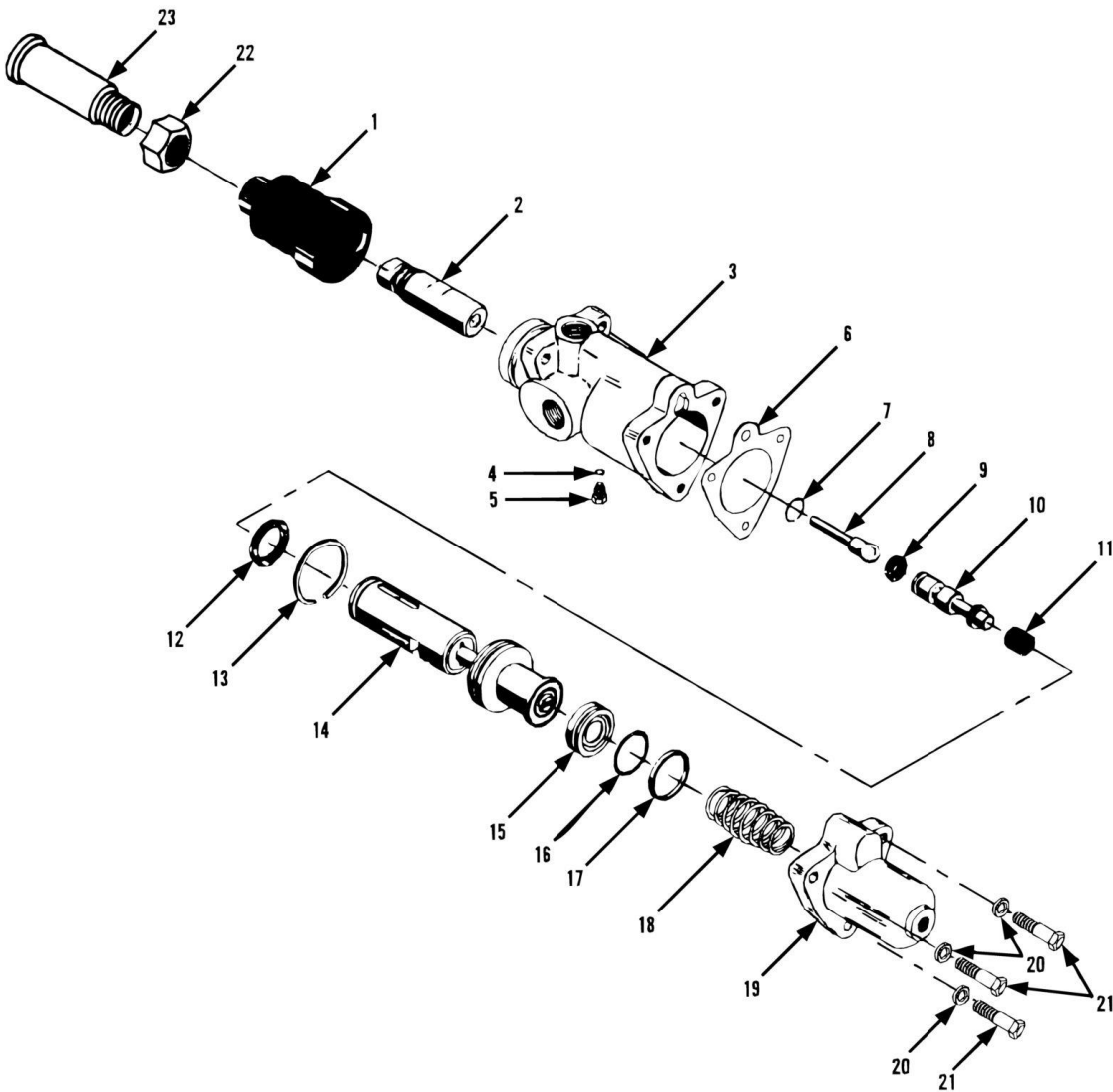
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-10. (91083521) FLOW DIVIDER VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91083521	1	FLOW DIVIDER VALVE - 625 PSI (includes all items)	
2	91084155	1	SPOOL	
3	91084156	1	SPRING	
4	91084160	1	PLUG (includes item 5)	
5	91084158	1	O-RING	
6	91084159	1	RELIEF (includes item 7)	
7		Ref	O-RING	
8	91084157	1	PLUG (includes item 9)	
9	91084161	1	O-RING	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-11. (91143201) BRAKE VALVE (SN 0277001 to Present)



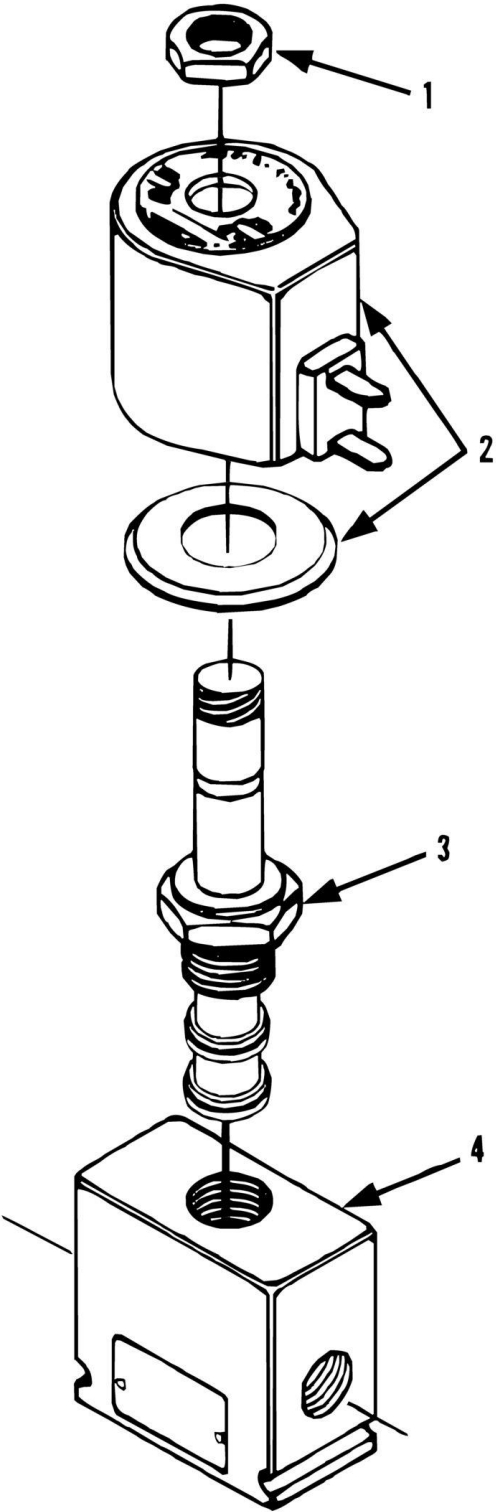
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-11. (91143201) BRAKE VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143201	1	POWER BRAKE VALVE (includes items 1 thru 21)	
	91084043	1	REPAIR KIT (includes items 1, 4, 6, 9, 12, 13, 15, 16 & 17)	
1	91084042	1	BOOT	
2		Ref	PRESSURE REGULATING SPRING ASSY	
3		Ref	HOUSING	
4	Kit	1	O-RING	
5		Ref	CAPSCREW	
6	Kit	1	GASKET	
7		Ref	RETAINING RING	
8		Ref	PUSH ROD	
9	Kit	1	CUP	
10		Ref	SPOOL (not available for service, order 9114-3201)	
11		Ref	SPRING	
12	Kit	1	CUP	
13	Kit	1	PISTON RING	
14		Ref	SLEEVE AND PISTON ASSY	
15	Kit	1	PISTON AND POPPET ASSY	
16	Kit	1	O-RING	
17	Kit	1	RING SEAL	
18		Ref	SPRING	
19		Ref	END CAP	
20		Ref	LOCKWASHER	
21		Ref	HEX HD CAPSCREW	
22	88501408	1	HEX JAM NUT, 1/2-20	
23	91081445	1	PUSH ROD	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-12. (91043446) SOLENOID VALVE (SN 0277001 to Present)



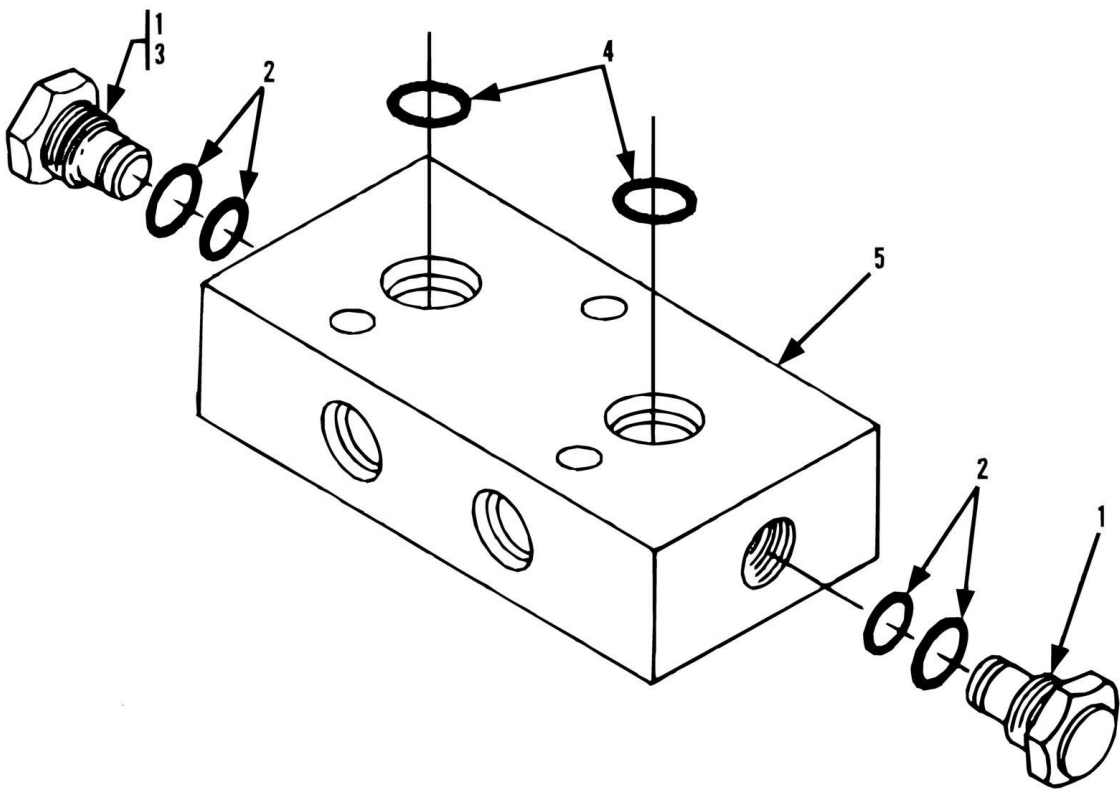
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-12. (91043446) SOLENOID VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91043446	1	3-WAY SOLENOID VALVE(includes all items)	
1	90208066	1	NUT	
2	91144158	1	COIL	
3	91144159	1	CORE ASSY (3-way, 2-position)	
4	80934035	1	VALVE BODY	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-13. (91163027) SWAY CYLINDER VALVE (SN 0277001 to Present)



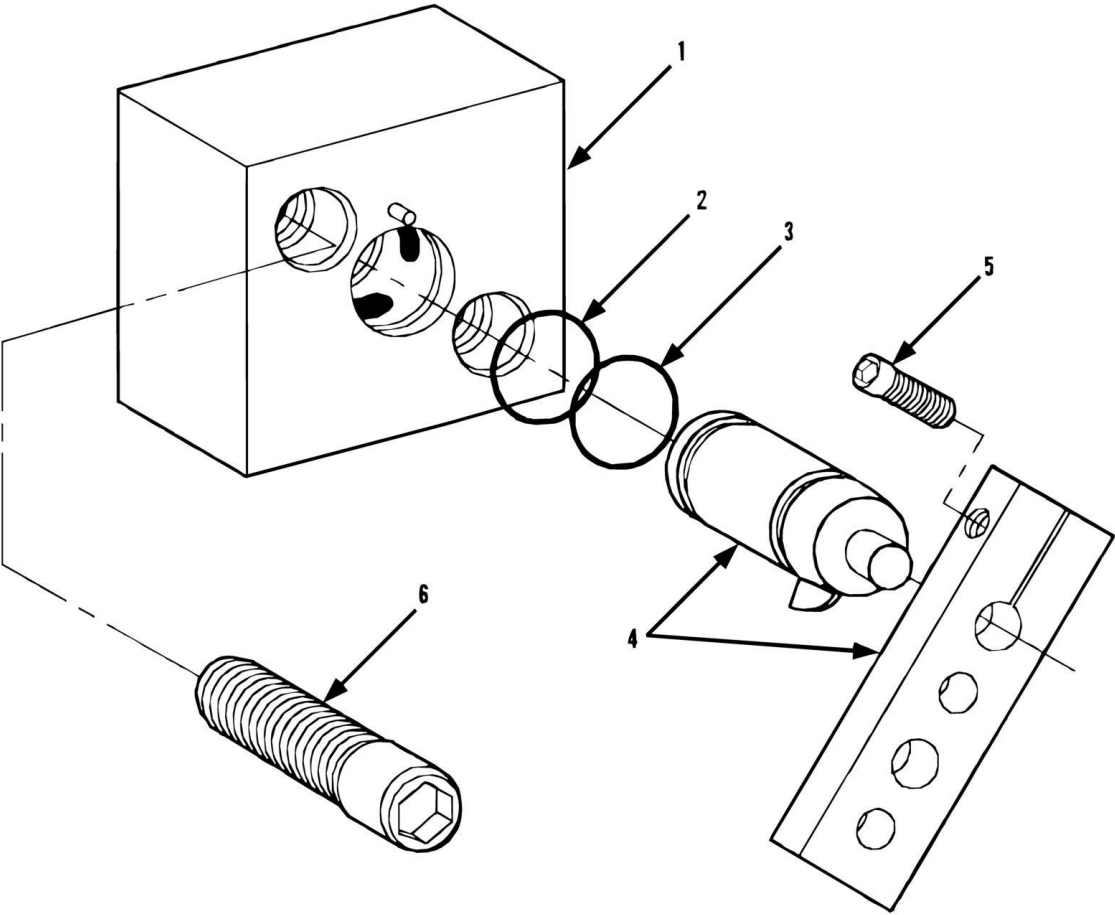
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-13. (91163027) SWAY CYLINDER VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91163027	1	SWAY CYLINDER VALVE ASSY (includes items 1, 2, 3 & 5)	
1	91164061	2	VALVE CARTRIDGE	
2	91164056	2	VALVE SEAL KIT	
3	91164062	1	PISTON	
4	88591012	2	O-RING	
5		Ref	VALVE BODY (not sold separately, order P/N 91163027)	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-14. (91143140) INCHING VALVE (SN 0277001 to Present)



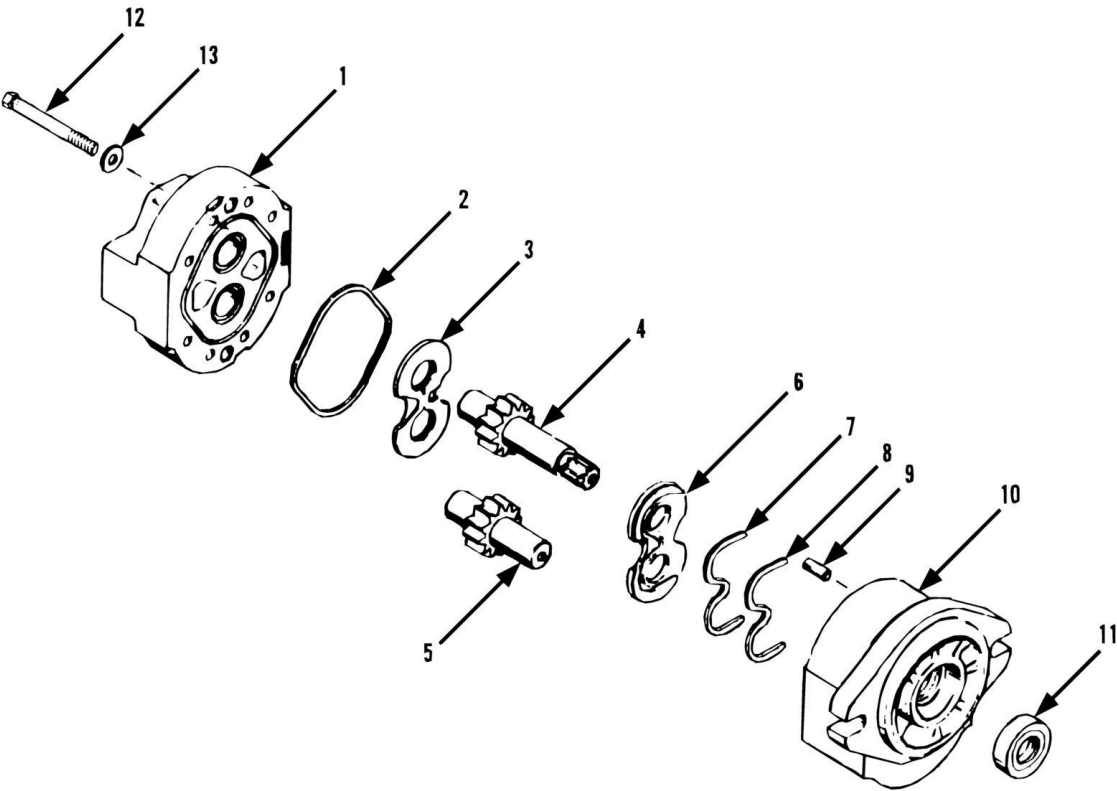
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-14. (91143140) INCHING VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91143140	1	INCHING VALVE (includes all items)	
2	80934423	1	O-RING	
3	80934202	1	O-RING	
4		Ref	ACTIVATING LEVER	
5		Ref	SOCKET HD CAPSCREW	
6	8821-2228	1	SOCKET HD CAPSCREW	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-15. (91083296) MAIN HYDRAULIC PUMP (SN 0277001 to Present)



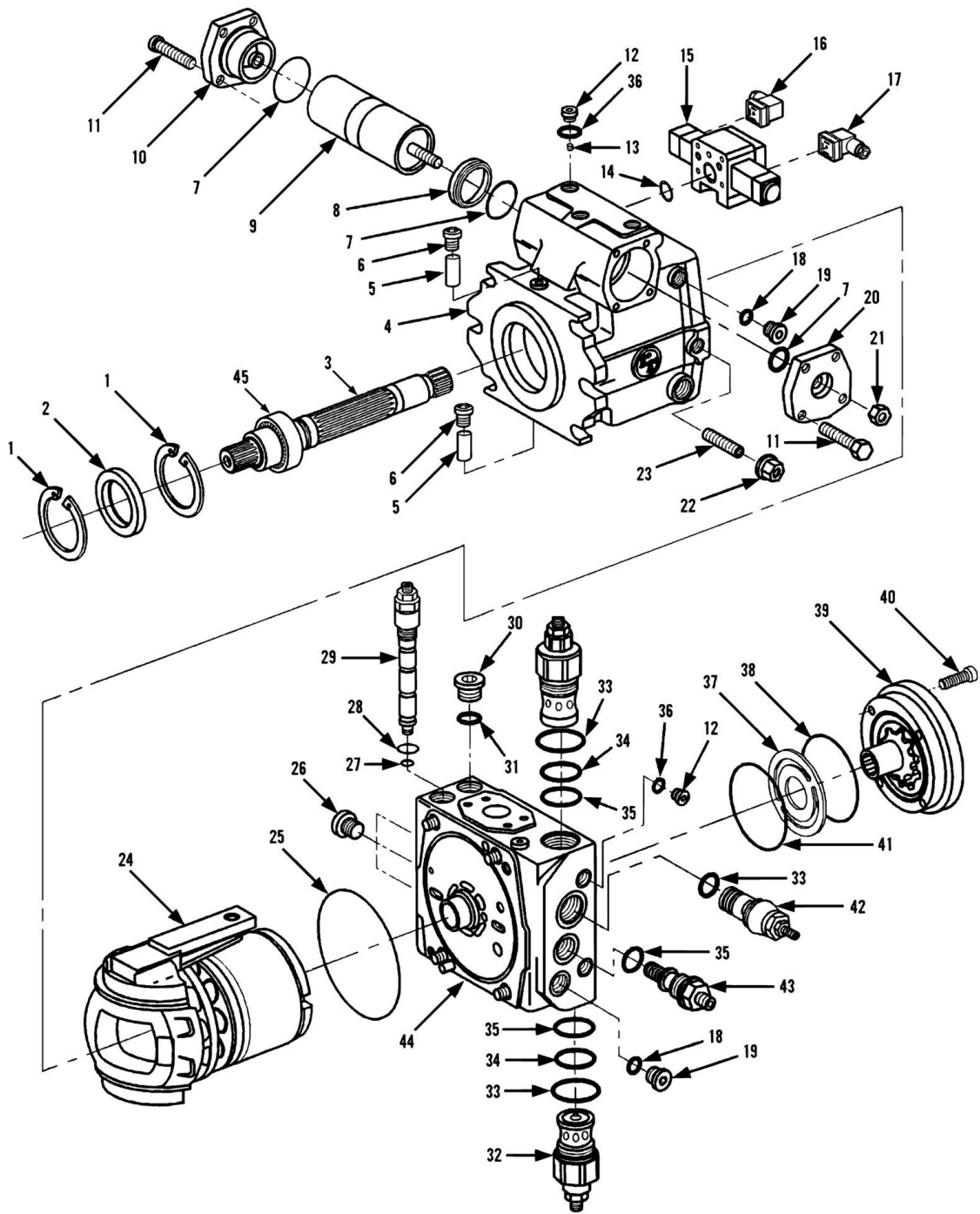
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-15. (91083296) MAIN HYDRAULIC PUMP (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083296	1	MAIN HYDRAULIC PUMP (includes all items)	
	91084218	1	SEAL KIT (includes items 2, 3, 6, 7, 8 & 11)	
1	91084144	1	REAR COVER	
2	91084137	1	SEAL	
3	91084138	1	THRUST PLATE	
4	91084146	1	DRIVE GEAR	
5	91084145	1	DRIVEN GEAR	
6	91084139	1	WEAR PLATE	
7	91084140	1	SEAL	
8	91084142	1	SEAL SPACER	
9	91084143	2	DOWEL PIN	
10	91084147	1	BODY	
11	91084141	1	SHAFT SEAL	
12	91084135	8	HEX HD CAPSCREW	
13	91084136	8	FLATWASHER	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-16. (91083499) HYDROSTATIC TRANSMISSION PUMP (SN 0277001 to Present)



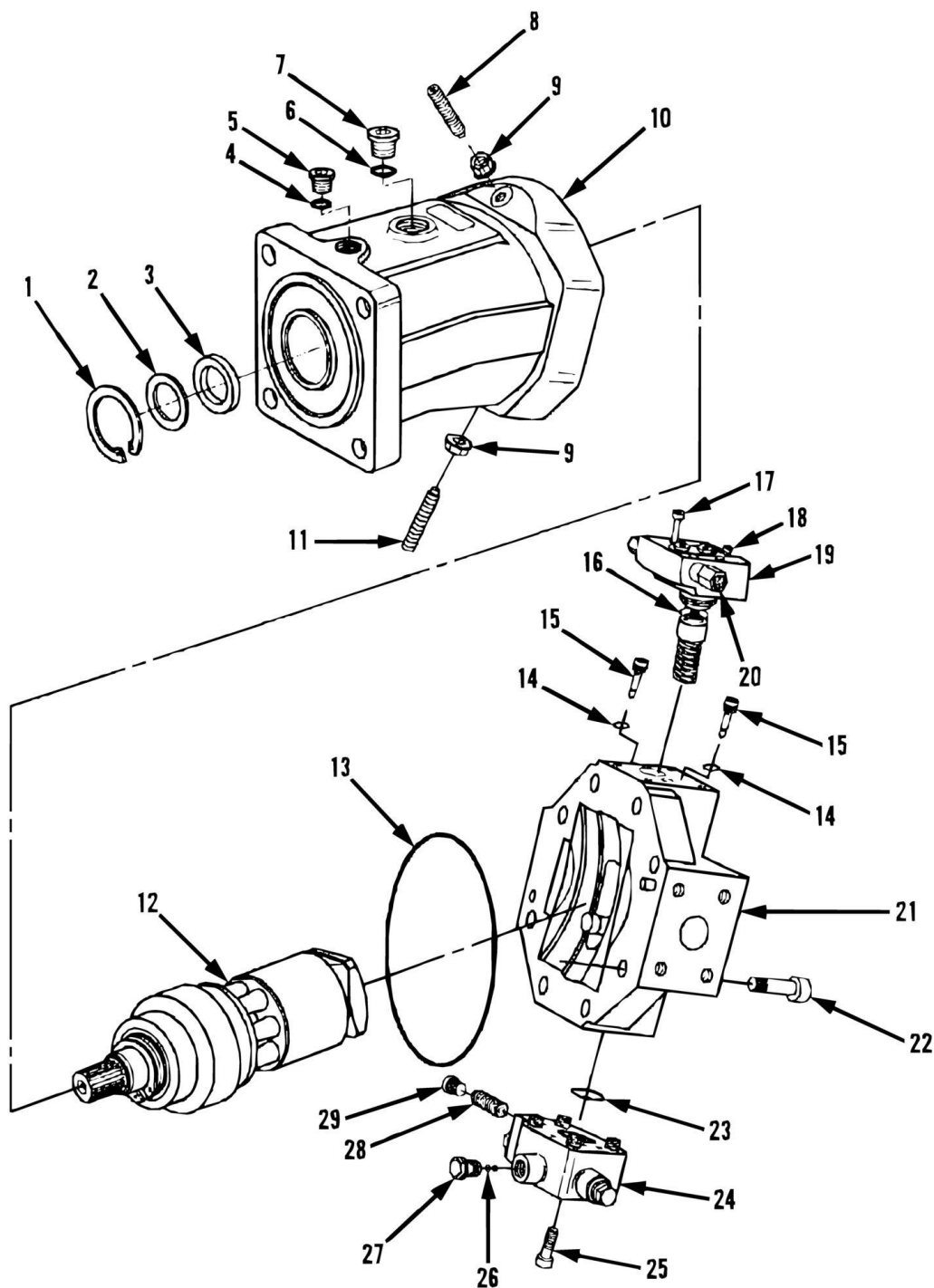
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-16. (91083499) HYDROSTATIC TRANSMISSION PUMP (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083499	1	HYDROSTATIC TRANSMISSION PUMP (includes all items)	
	91084317	AR	SEAL KIT (includes items 2, 6, 7, 14, 15, 22, 25, 27, 28, 31, 32, 33, 34, 35, 36, 38 & 41 plus additional items not illustrated)	
1	80934052	2	SNAP RING	
2	91084389	1	SHAFT SEAL	
3	91084318	1	SHAFT ASSY	
4	91084319	1	HOUSING ASSY	
5	91084320	2	PIN	
6	Kit	4	PLUG	
7	Kit	4	O-RING	
8	91084321	2	BUSHING	
9	91084322	1	STROKING PISTON ASSY	
10	91084323	1	STROKING PISTON COVER KIT (includes items 7 & 11)	
11	80934077	8	CAPSCREW, M8X20	
12	80934084	5	PLUG (includes item 36)	
13	91144093	2	STROKING ORIFICE	
14	Kit	1	O-RING	
15	91084324	1	DA CONTROL ASSY (includes items 16 & 17)	
16	91084038	1	HERSHMAN CONNECTOR (black)	
17	91084039	1	HERSHMAN CONNECTOR (gray)	
18		Ref	O-RING	
19	80934082	2	PLUG (includes item 18)	
20	91084325	1	STROKING PISTON COVER KIT (includes items 7 & 11)	
21	91144094	1	JAM NUT	
22	Kit	1	SEAL NUT	
23	91144095	1	ECCENTRIC SCREW	
24	91084326	1	ROTARY GROUP ASSY	
25	Kit	1	O-RING	
26	91084327	3	PLUG	
27	Kit	1	O-RING	
28	Kit	1	O-RING	
29	91084328	1	POR ASSY (includes items 27 & 28)	
30	80934340	1	PLUG (includes item 31)	
31	Kit	1	O-RING	
32	91084032	2	RELIEF VALVE (includes one each of items 33 thru 35)	
33	Kit	3	O-RING	
34	Kit	2	O-RING	
35	Kit	3	O-RING	
36	Kit	5	O-RING	
37	91084329	1	WEAR PLATE	
38	Kit	1	O-RING	
39	91084330	1	CHARGE PUMP ASSY (includes items 37, 38, 40 & 41)	
40	91084331	4	CAPSCREW, M12X35	
41	Kit	1	O-RING	
42	91144099	1	DA CARTRIDGE ASSY	
43	91144098	1	CHARGE PRESSURE RELIEF VALVE (includes item 35)	
44	91084332	1	PORT BLOCK ASSY (includes items 25, 26, 27, 28 & 29)	
45	91084390	1	ROLLER BEARING	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-17. (91163044) FRONT DRIVE MOTOR (SN 0277001 to Present)



FOR OUR APPLICATION THIS DRIVE
MOTOR IS UTILIZED IN A 180 DEGREE
INVERSION.

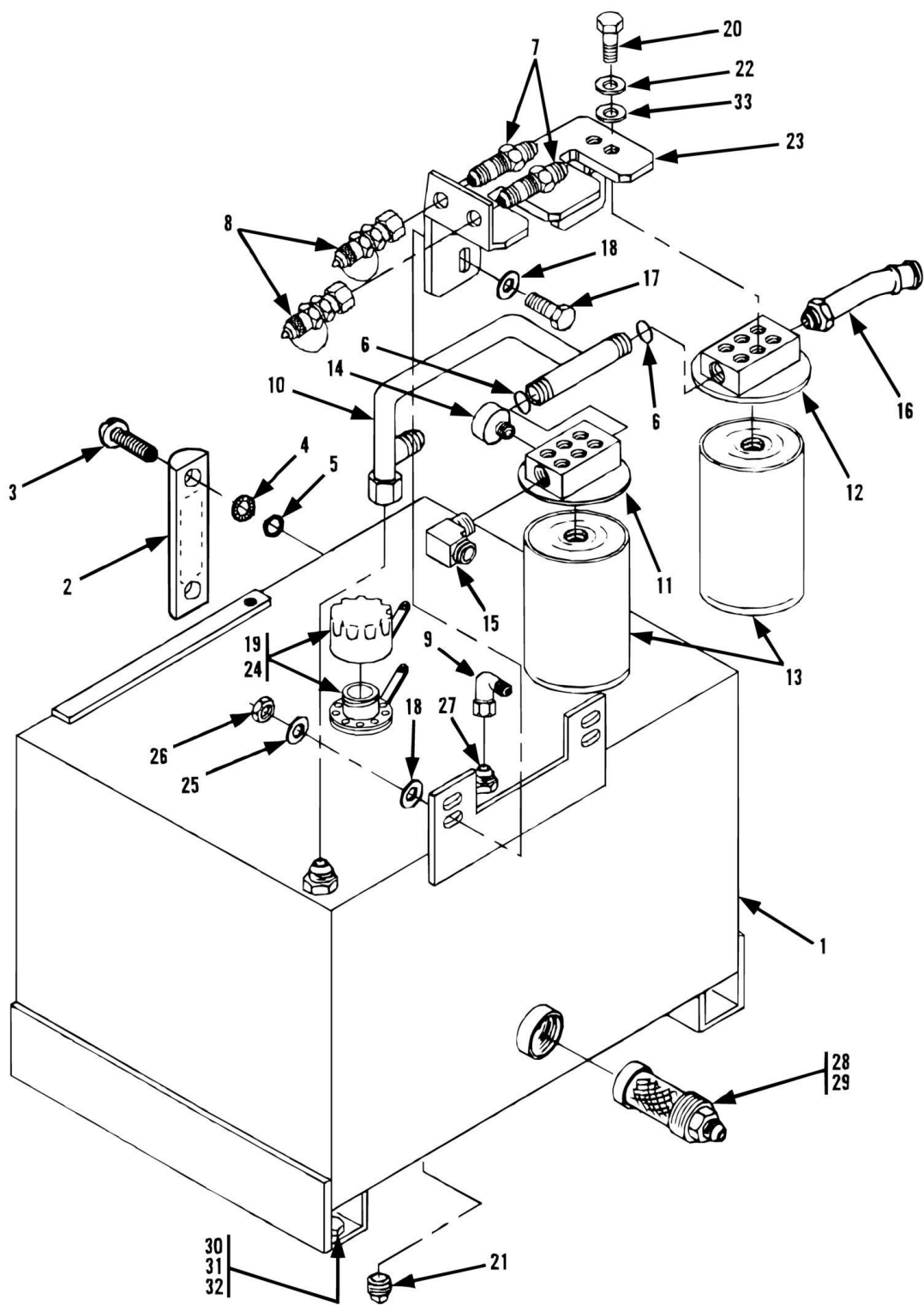
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-17. (91163044) FRONT DRIVE MOTOR (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91163044	1	FRONT DRIVE MOTOR ASSY (includes all items)	
	91094025	AR	SEAL KIT (includes items 3,4, 6, 9, 13, 14, 16, 18 & 23)	
1	91094026	1	SNAP RING	
2	91094027	1	SHIM	
3	Kit	1	SHAFT SEAL	
4	Kit	1	O-RING	
5	91094028	1	PLUG (includes item 5)	
6	Kit	1	O-RING	
7	91094029	1	PLUG (includes item 6)	
8	80914241	1	STOP SCREW, M12X90	
9	Kit	2	SEAL NUT	
10	91094030	1	HOUSING	
11	91094031	1	STOP SCREW, M12X80	
12	91094032	1	ROTARY GROUP	
13	Kit	1	O-RING	
14	Kit	6	O-RING	
15	80914235	2	CHECK VALVE KIT (includes o-rings)	
16	Kit	1	O-RING	
17	80934080	4	CAPSCREW	
18	Kit	1	SEAL NUT	
19	91094033	1	DA1 CONTROL KIT (includes items 16, 17, 18 & 20)	
20	91144248	2	FITTING	
21	91094034	1	REAR COVER ASSY (includes item 22)	
22	91094035	8	CAPSCREW, M16X45	
23	Kit	1	O-RING	
24	91164017	1	FLUSHING VALVE ASSY (includes items 23, 25, 26, 27 & 29)	
25	91094037	4	CAPSCREW, M8X50	
26	91094038	1	FLUSHING ORIFICE	
27	91094039	1	PLUG	
28	83924123	1	SWIVEL TIME ORIFICE	
29	91094040	2	PLUG	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-18. (91125069) HYDRAULIC RESERVOIR AND FILTER (SN 0277001 to Present)



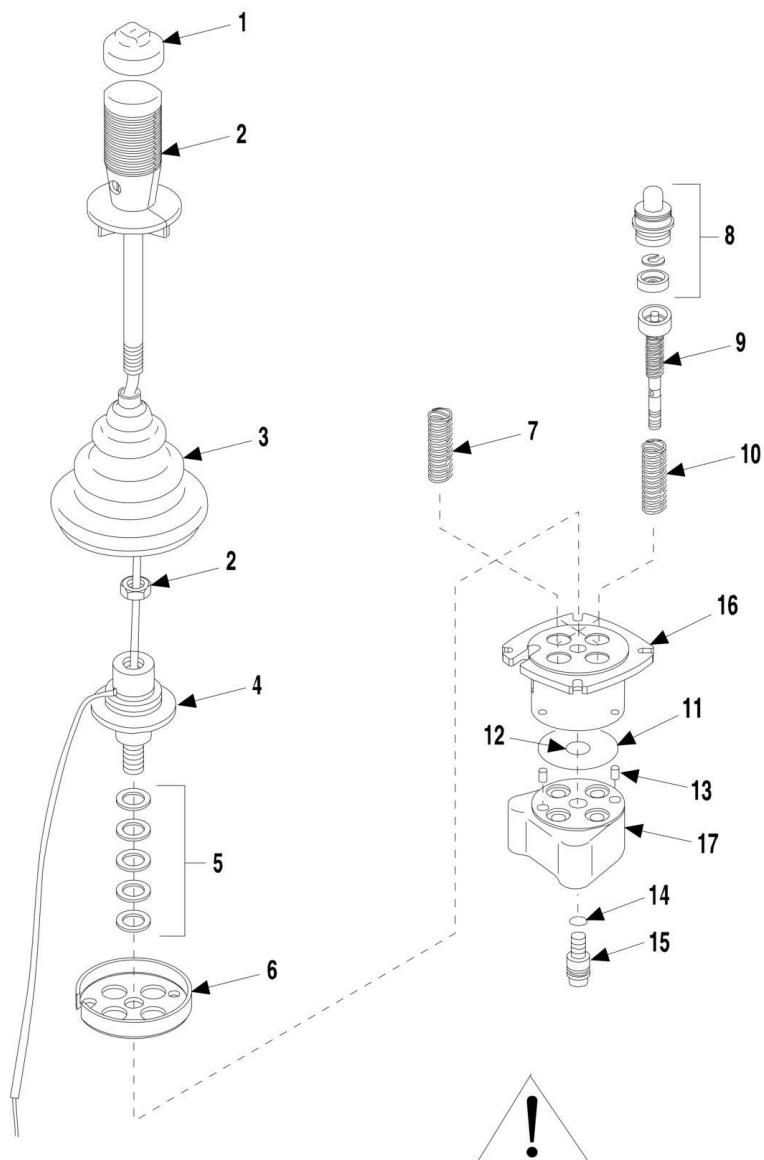
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-18. (91125069) HYDRAULIC RESERVOIR AND FILTER (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91125069	1	HYDRAULIC RESERVOIR ASSY (includes all items except 30, 31 & 32)	
1	91143133	1	HYDRAULI COIL TANK (includes item 21)	
2	91083070	1	FLUID LEVEL GAUGE (includes items 3, 4 & 5)	
3		Ref	ROUND HD SCREW, PORTED	
4		Ref	LOCKWASHER	
5		Ref	O-RING	
6	88591210	2	O-RING	
7	88661084	2	BULK HEAD UNION, 9/16-18x3/8 TUBE	
8	91143172	2	MINI CHECK COUPLING	
9	88662106	1	ELBOW, 90, (swivel nut)	
10	91123150	1	TUBE ASSY	
11	91143218	1	RETURN FILTER (includes one of item 13 & item 14)	
12	91083518	1	SUCTION FILTER (includes one of item 13)	
13	91143144	2	FILTER ELEMENT	
14	91084022	1	COLOR CODED GAUGE	
15	83623032	1	ELBOW, 90	
16	91083519	1	BEADED INSERT, 45	
17	88201036	4	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
18	88561004	8	WASHER, 3/8	
19	91333023	6	SLOTTED HEX WASHER HD MACHINE SCREW, #10-32X1/2IN	
20	88201020	4	HEX HD CAPSCREW, 5/16-18X1, GR5	
21		Ref	PLUG	
22	88561003	4	WASHER, 5/16	
23	91161210	1	FILTER SUPPORT	
24	91083069	1	FILLER BREATHER	
25	88551011	4	LOCKWASHER, 3/8	
26	88501006	4	HEX NUT, 3/8-16	
27	88661013	1	MALE CONNECTOR	
28	91083301	1	TANK FILTER	
29	91083200	1	STRAIGHT CONNECTOR	
30	88551015	4	LOCKWASHER, 5/8	
31	88201095	4	HEX HD CAPSCREW, 5/8-11X1-1/2, GR5	
32	88561008	4	FLAT WASHER, 5/8	
33	88551010	4	LOCKWASHER, 5/16	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-19. (91303037) JOYSTICK ASSEMBLY (SN 0277001 to Present)



NOTE: THE BOSCH REXROTH CORPORATION JOYSTICK HANDLE SWITCH IS NOT A FIELD SERVICEABLE COMPONENT. ANY ATTEMPT BY NON-FACTORY AUTHORIZED PERSONNEL TO REPAIR OR REPLACE THE SWITCH WILL VOID THE WARRANTY AND CAN RESULT IN A JOYSTICK MALFUNCTION.

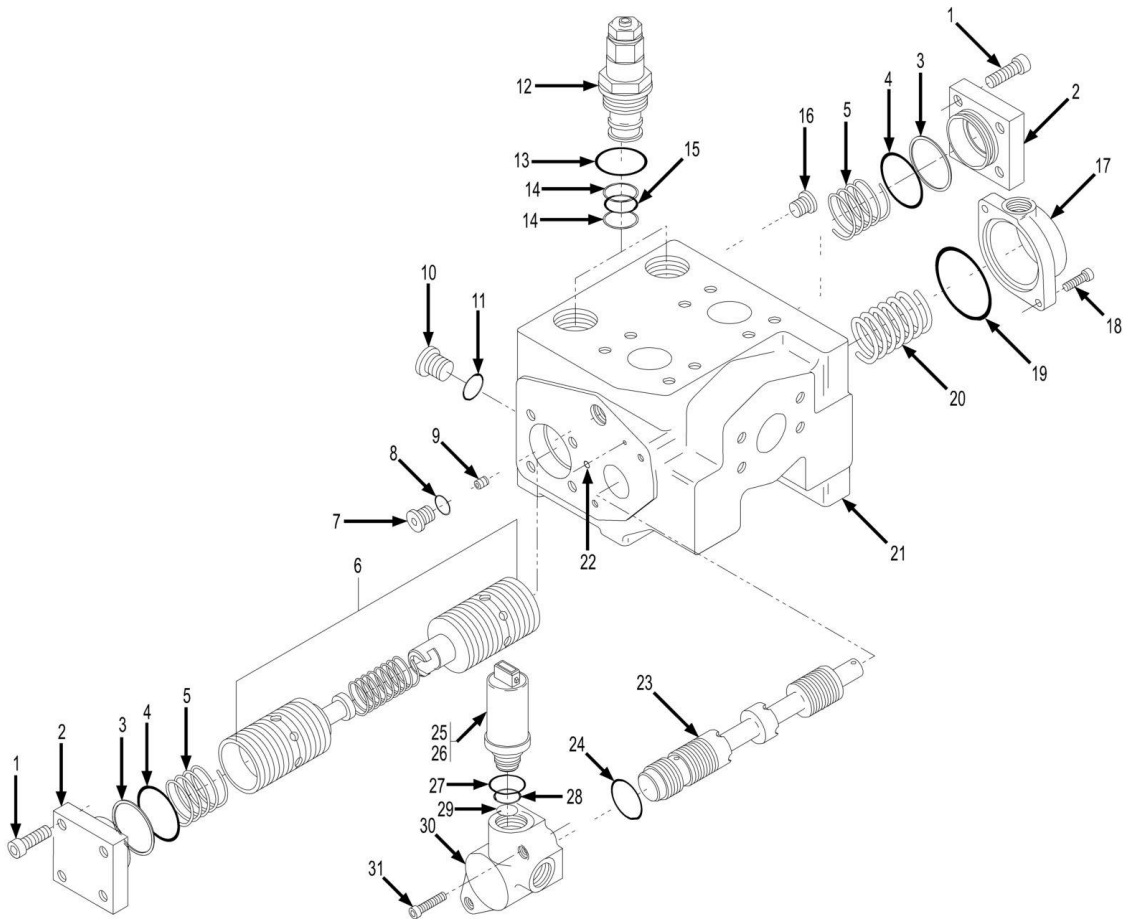
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-19. (91303037) JOYSTICK ASSEMBLY (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91303037	1	JOYSTICK ASSY, (includes all items)	
	91404326	1	SEAL KIT, (includes items 11 thru 15)	
1	80934658	1	CAP	
2	80934656	1	HANDLE GRIP KIT	
3	80934241	1	BOOT	
4	80264140	1	CARDAN KIT, (includes item 5)	
5	Kit	AR	SHIM	
6	91304026	1	RETAINING PLATE	
7	91504029	1	STANDARD SPRING, (pack of two), (ports 2 & 4)	
8	80934498	4	PLUNGER AND GUIDE KIT	
9	91404327	4	REGULATING KIT	
10	91504028	1	HEAVY SPRING, (pack of two), (ports 1 & 3)	
11	Kit	1	O-RING	
12	Kit	1	O-RING	
13	Kit	2	PIN	
14	Kit	1	O-RING	
15	Kit	1	SCREW	
16		Ref	UPPER BODY	
17		Ref	LOWER BODY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 9-20. (91083459) TRACTION LOCK VALVE (SN 0277001 to Present)



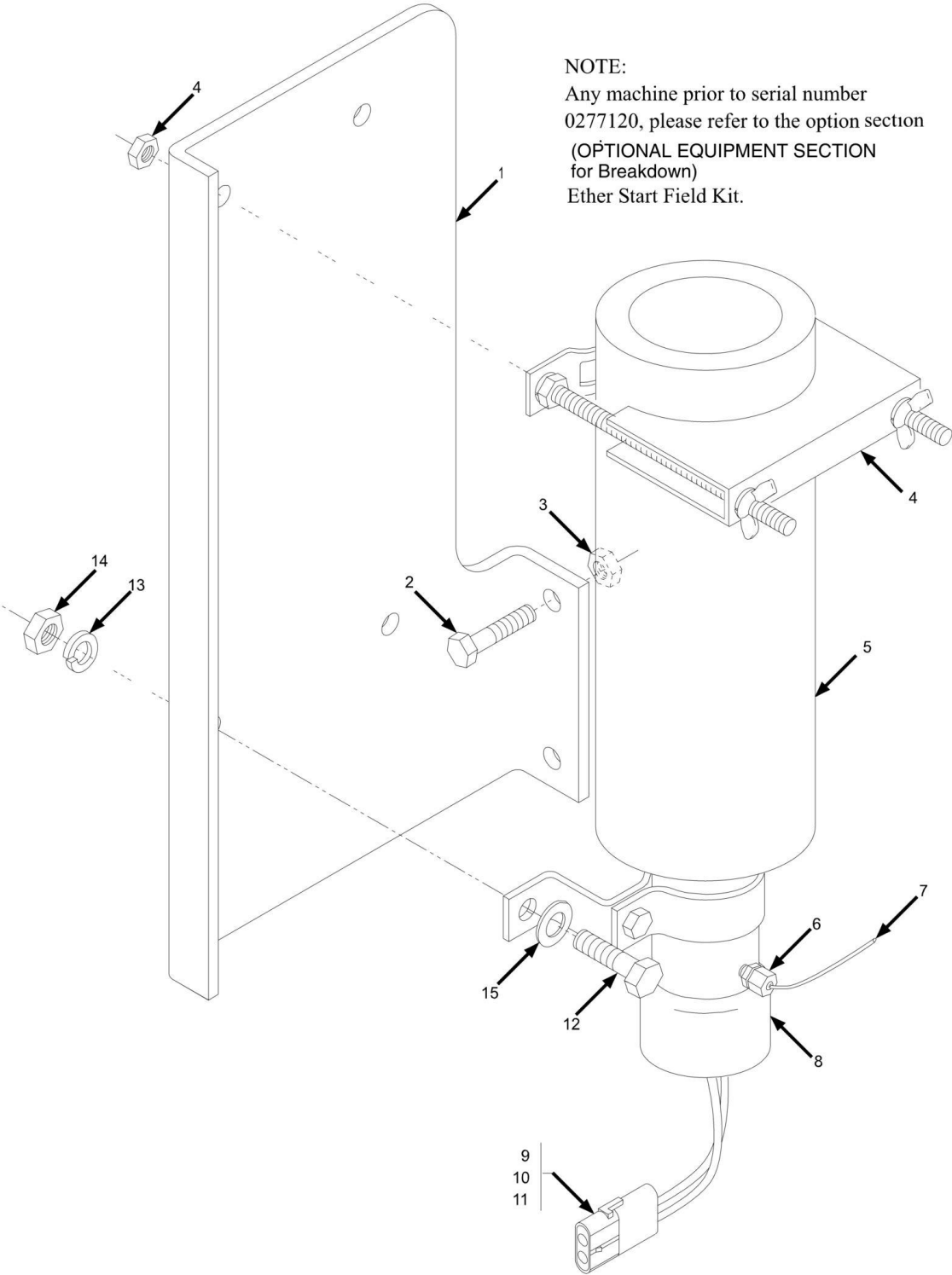
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-20. (91083459) TRACTION LOCK VALVE (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083459	1	TRACTION LOCK VALVE (includes all items)	
	91084284	Ref	SEAL KIT (includes items 3, 4, 8, 11, 13 thru 16, 19, 22, 24, 27, 28 & 29)	
1	91084285	8	HEX HD CAPSCREW, M10X30	
2	91084286	2	COVER	
3	91084287	2	BACK-UP RING	
4	91084288	2	O-RING	
5	91084289	2	SPRING	
6		Ref	SPOOL (not sold separately, order P/N 9108-3459)	
7	91084298	1	PLUG (includes item 8)	
8	91144011	1	O-RING	
9	91084299	1	ORIFICE	
10	91084290	2	PLUG (includes item 11)	
11	91144009	2	O-RING	
12	91084362	2	RELIEF VALVE CARTRIDGE (set at 5800 PSI) (includes items 13, 14 & 15)	
13	83814056	2	O-RING	
14	91144010	4	BACK-UP RING	
15	83814054	2	O-RING	
16	91084363	1	PLUG	
17	91084292	1	COVER	
18	91084291	2	HEX HD CAPSCREW, M6X16	
19	91084293	1	O-RING	
20	91084294	1	SPRING	
21		Ref	VALVE BODY (not sold separately, order P/N 9108-3459)	
22	91084303	1	O-RING	
23		Ref	SPOOL (not sold separately, order P/N 9108-3459)	
24	91084300	1	O-RING	
25	91084302	1	SOLENOID VALVE (include items 27, 28 & 29)	
26	91144015	1	CONNECTOR	
27	91144012	1	O-RING	
28	91144013	1	O-RING	
29	91144014	1	O-RING	
30	91084301	1	COVER	
31	80934205	2	HEX HD CAPSCREW, M6X30	

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FIGURE 9-21. (91335020) QUICK START CYLINDER AND VALVE ASSEMBLY (SN 0277120 to Present)



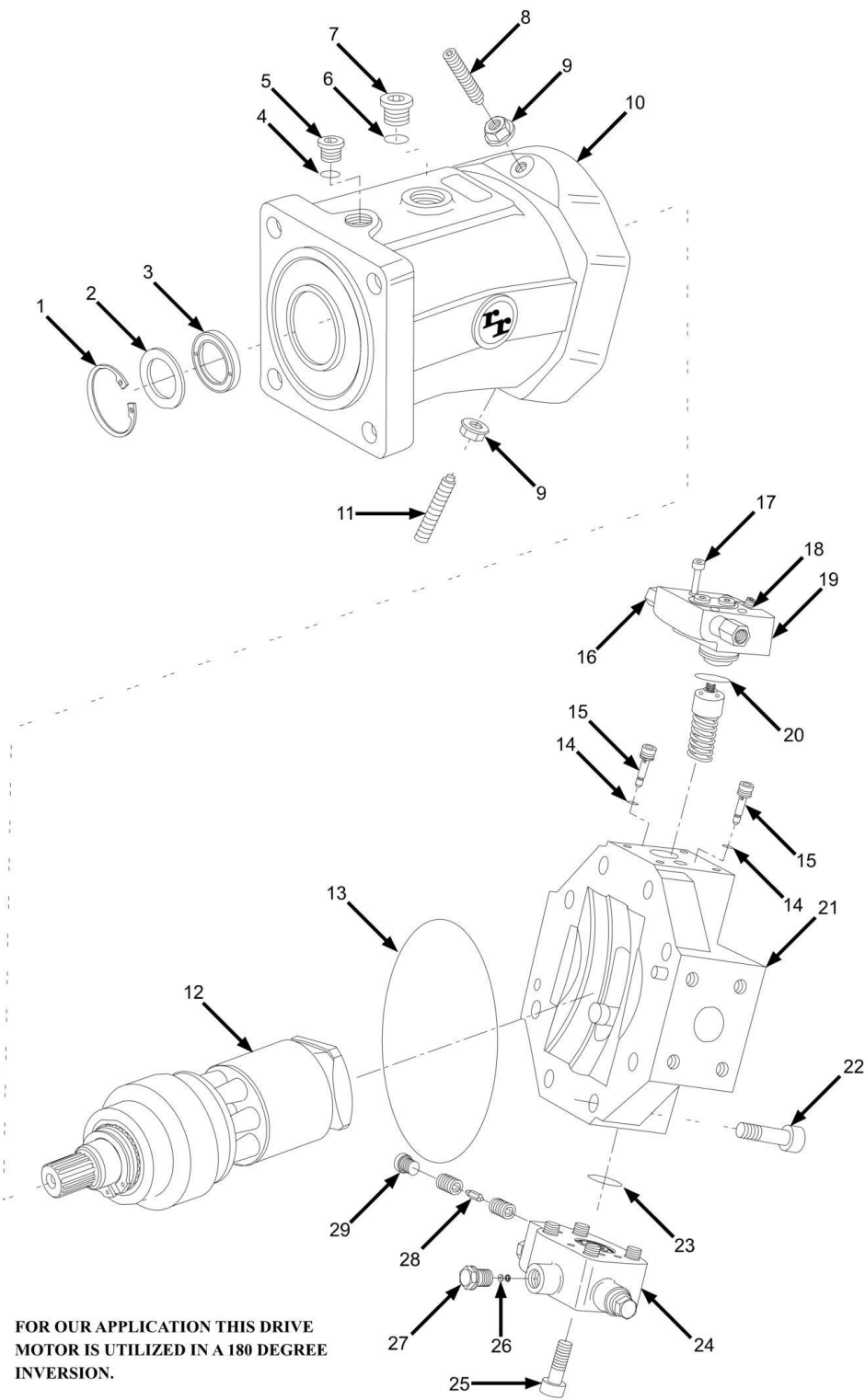
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-21. (91335020) QUICK START CYLINDER AND VALVE ASSEMBLY (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91335020	1	QUICK START CYLINDER AND VALVE ASSY, (includes all items except 2 & 3)	
1	91331018	1	MOUNTING BRACKET	
2	88201035	2	HEX HD CAPSCREW, 3/8-16X1, GR5	
3	77143015	2	WHIZ-LOK NUT, 3/8-16	
4	91363027	1	CYLINDER CLAMP	
5	83953028	1	CYLINDER	
6	91363026	1	VALVE FITTING, STRAIGHT	
7	91363028	1	NYLON TUBE	
8	91363030	1	VALVE	
9	80963058	1	SHROUD CONNECTOR, 2 - WIRE	
10	80963069	2	MALE PIN TERMINAL	
11	80963065	2	CABLE SEAL	
12	88201003	2	HEX HD CAPSCREW, 1/4-20X3/4, GR5	
13	88551009	2	LOCKWASHER, 1/4	
14	88501004	2	HEX NUT, 1/4-20	
15	88561107	2	FLATWASHER, 1/4	

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FIGURE 9-22. (91093016) FRONT DRIVE MOTOR (SN 0277001 to Present)



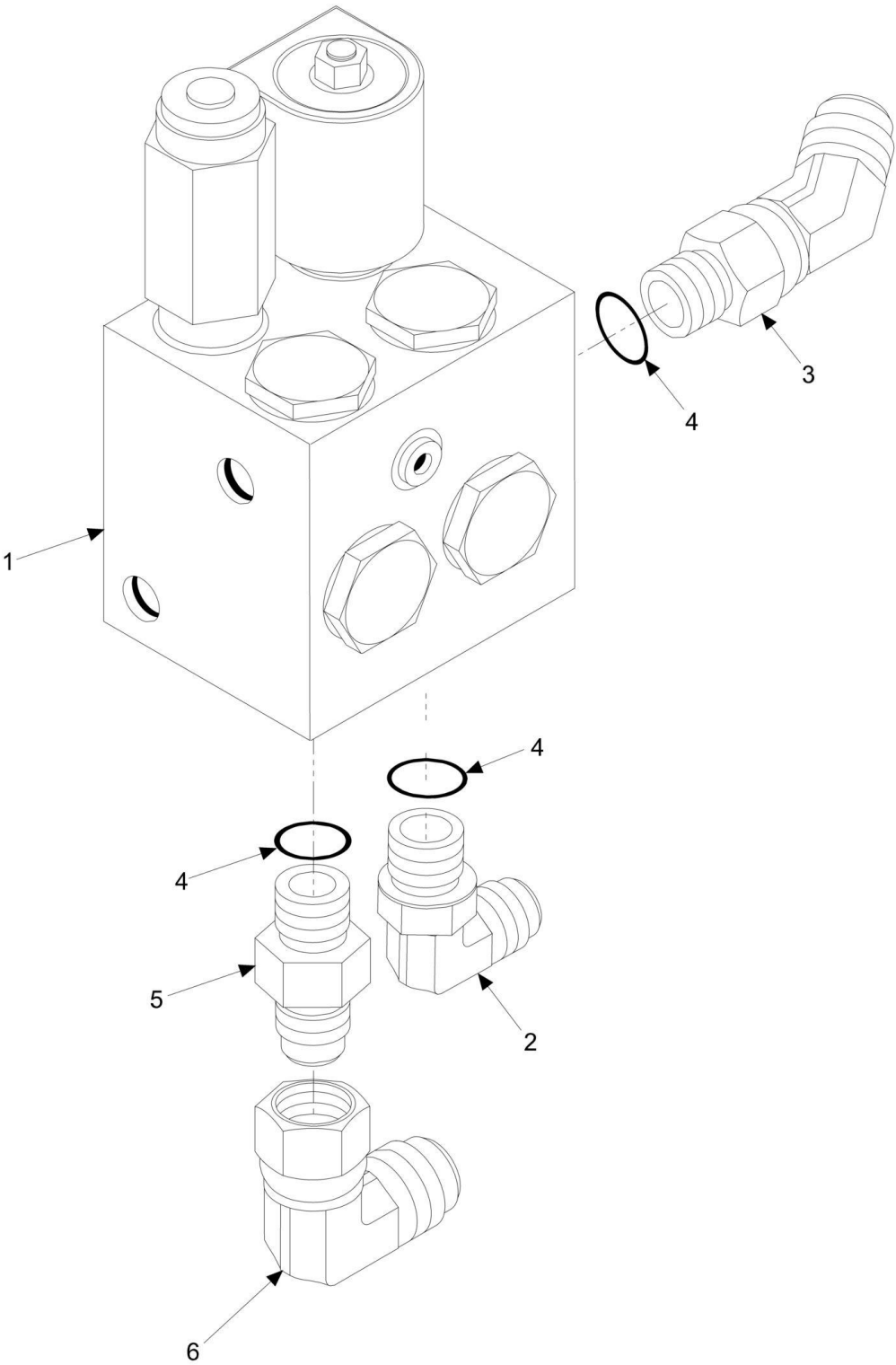
SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-22. (91093016) FRONT DRIVE MOTOR (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91093016	1	FRONT DRIVE MOTOR ASSY (includes all items)	
	91094025	AR	SEAL KIT (includes items 3, 4, 6, 9, 13, 14, 18, 20 & 23)	
1	91094026	1	SNAP RING	
2	91094027	1	SHIM	
3	Kit	1	SHAFT SEAL	
4	Kit	1	O-RING	
5	91094028	1	PLUG (includes item 5)	
6	Kit	1	O-RING	
7	91094029	1	PLUG (includes item 6)	
8	91384008	1	STOP SCREW, M12x100	
9	Kit	2	SEAL NUT	
10	91094030	1	HOUSING	
11	91094031	1	STOP SCREW, M12X80	
12	91094032	1	ROTARY GROUP	
13	Kit	1	O-RING	
14	Kit	6	O-RING	
15	80914235	2	CHECK VALVE KIT (includes o-rings)	
16	91144248	2	FITTING	
17	80934080	4	CAPSCREW	
18	Kit	1	SEAL NUT	
19	91094033	1	DA1 CONTROL KIT (includes items 16, 17, 18 & 20)	
20	Kit	1	O-RING	
21	91094034	1	REAR COVER ASSY (includes item 22)	
22	91094035	8	CAPSCREW, M16X45	
23	Kit	1	O-RING	
24	91164017	1	FLUSHING VALVE ASSY (includes items 23, 25, 26, 27 & 29)	
25	91384009	4	CAPSCREW, M8X50	
26	91094038	1	FLUSHING ORIFICE	
27	91094039	1	PLUG	
28	83924157	1	SWIVEL TIME ORIFICE	
29	91094040	2	PLUG NOTE	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 9 - HYDRAULIC COMPONENTS

FIGURE 9-23. (91365028) OPTIONAL STABILIZER VALVE ASSY (SN 0277539 to Present)



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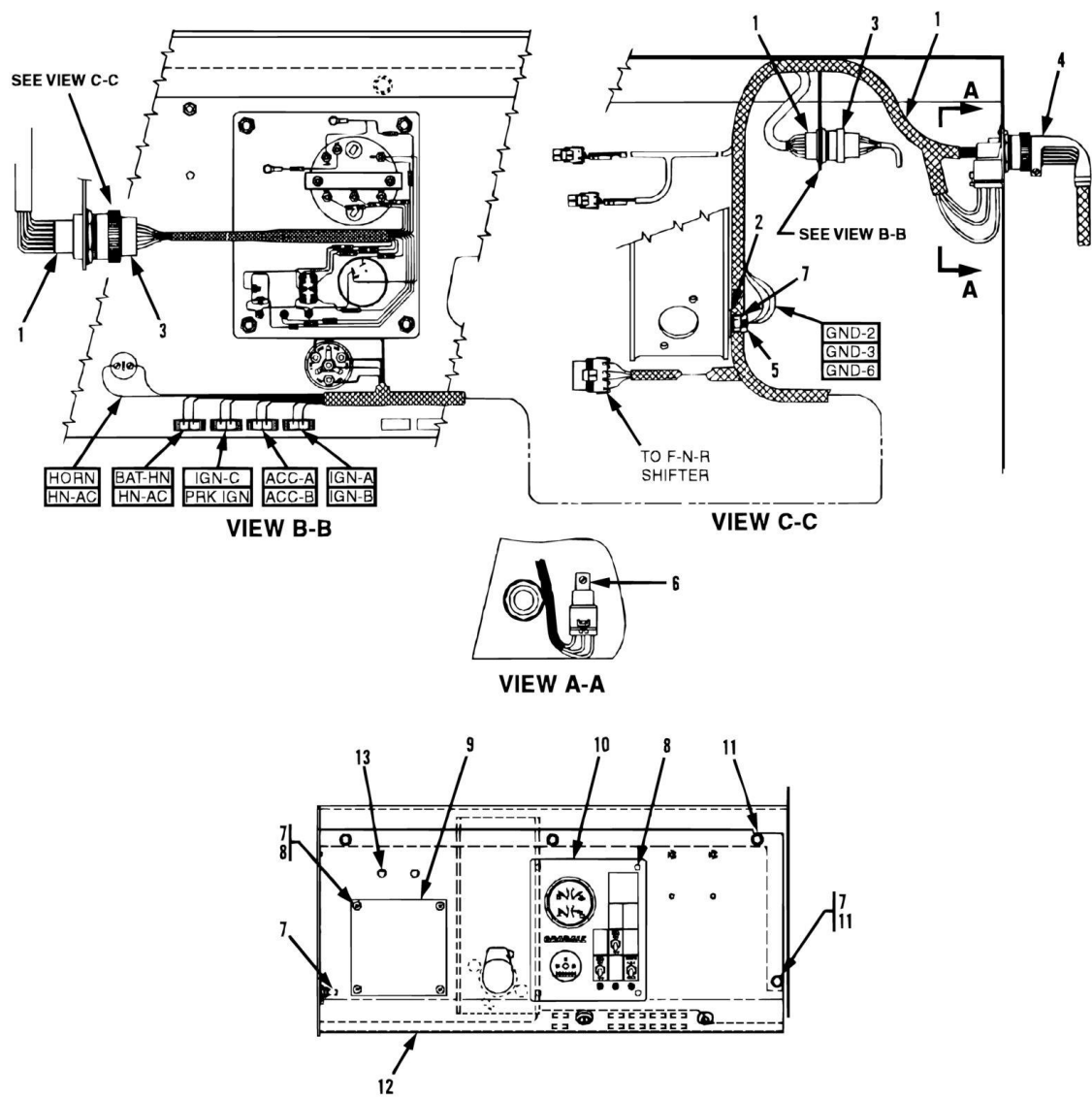
FIGURE 9-23. (91365028) OPTIONAL STABILIZER VALVE ASSY (SN 0277539 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91365028	1	STABILIZER VALVE ASSY, (includes all items)	
	91113003	1	STABILIZER VALVE, (includes items 1-4)	
1		Ref	VALVE BODY, (not sold separately, order P/N 9111-3003)	
2	88662065	1	ELBOW, 90, (includes item 4)	
3	88662085	1	ELBOW, 45, (includes item 4)	
4	88591205	3	O-RING	
5	88662006	1	CONNECTOR, (includes item 4)	
6	88662106	1	ELBOW, 90, (swivel nut)	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

SECTION 10 - ELECTRICAL

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FIGURE 10-1. DASH PANEL (SN 0277001 through 0277119)



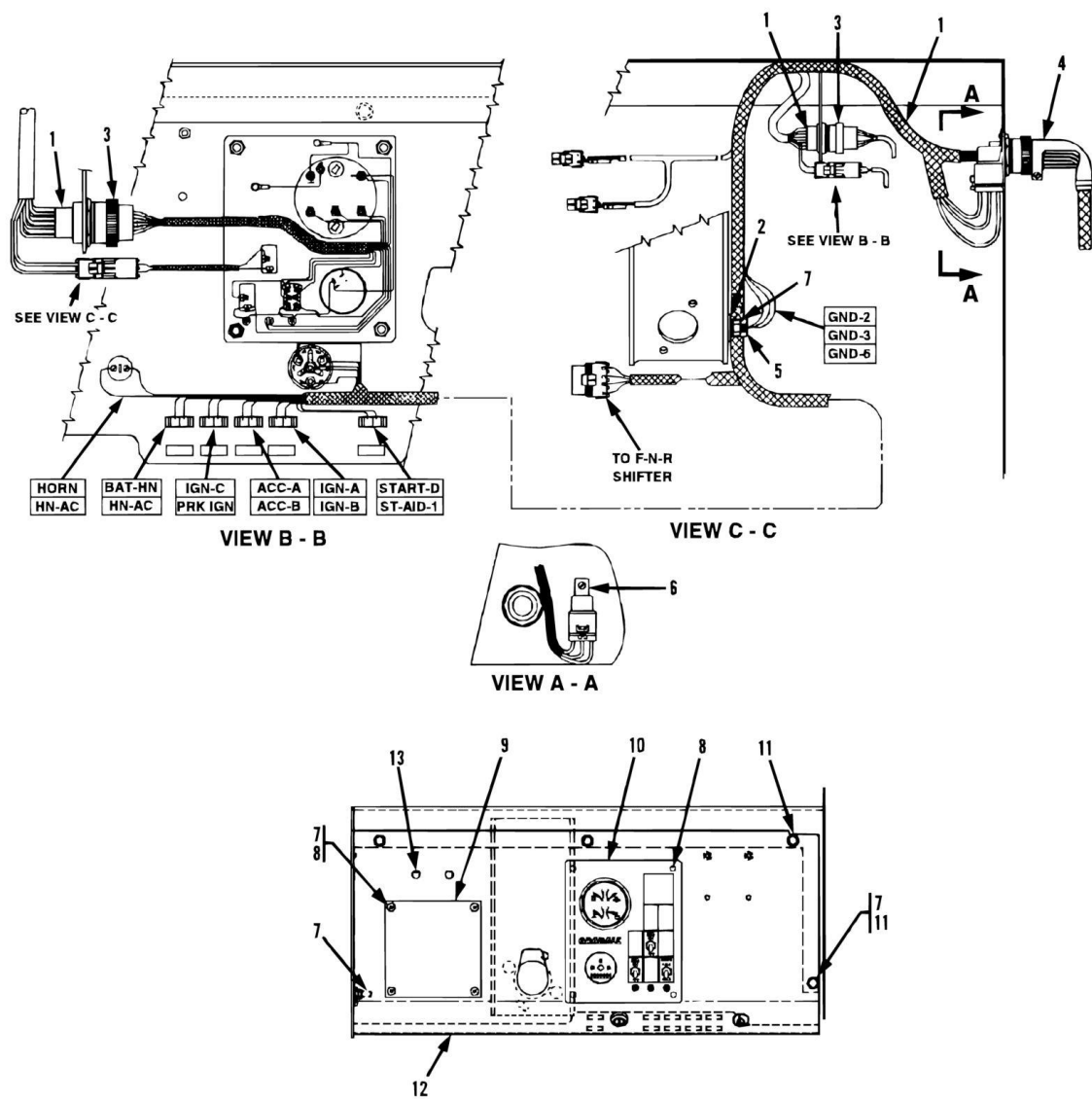
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FIGURE 10-1. DASH PANEL (SN 0277001 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	DASH HARNESS ASSY (See DASH HARNESS ASSEMBLY for Breakdown)	
2	88561003	1	FLAT WASHER, 1/2	
3		Ref	GAUGE PANEL WIRING HARNESS (See GAUGE PANEL ASSEMBLY for Breakdown)	
4		Ref	ENGINE WIRING HARNESS (See ENGINE WIRING HARNESS for Breakdown)	
5	24861170	1	CLAMP	
6	88321029	1	SELF-TAPPING SCREW, #10-24x3/8	
7	77143006	7	WHIZ-LOC NUT, 5/16-18	
8	88261022	8	SOCKET BUTTON HD CAPSCREW, 5/16-18x3/4	
9	91141480	1	COVER	
10		Ref	GAUGE PANEL ASSY (See GAUGE PANEL ASSEMBLY for Breakdown)	
11	77143003	4	WHIZ-LOC SCREW, 5/16-18X5/8	
12	91361008	1	DASH PANEL	
13	91093031	2	NYLON HOLE PLUG	

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FIGURE 10-2. DASH PANEL (SN 0277120 to Present)



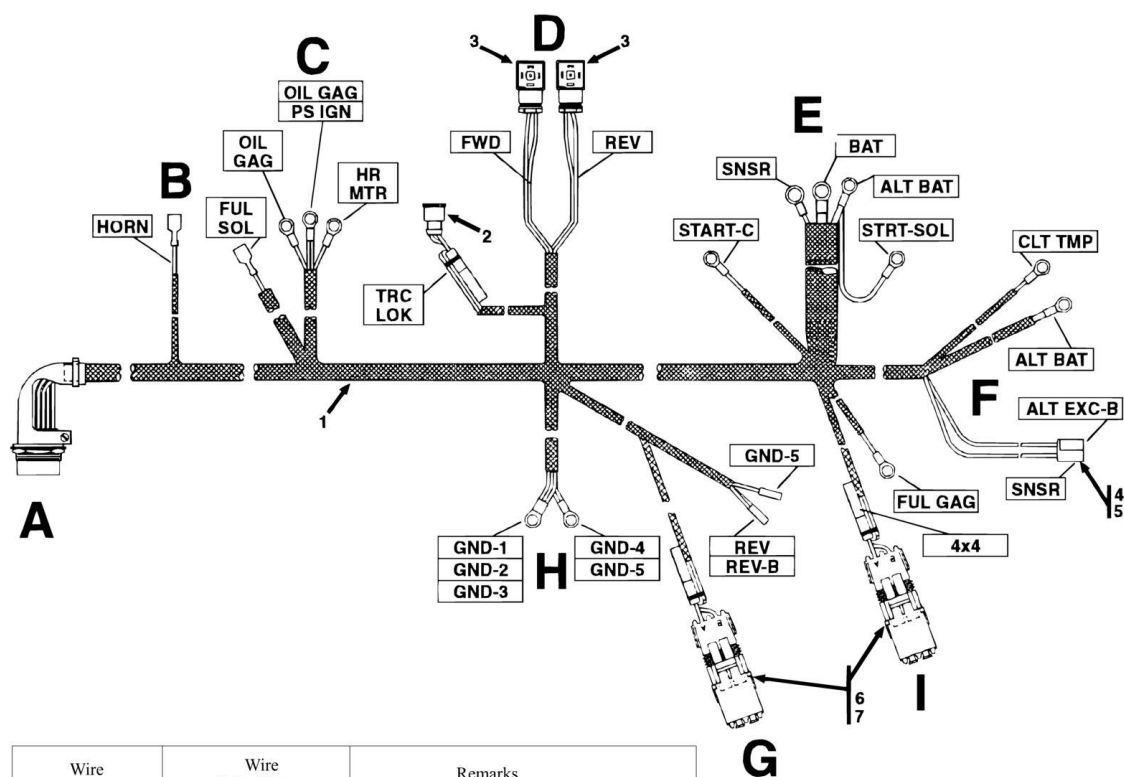
SECTION 10 - ELECTRICAL

FIGURE 10-2. DASH PANEL (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1		Ref	DASH HARNESS ASSY (See DASH HARNESS ASSEMBLY for Breakdown)	
2	88561003	1	FLAT WASHER, 1/2	
3		Ref	GAUGE PANEL WIRING HARNESS (See GAUGE PANEL ASSEMBLY for Breakdown)	
4		Ref	ENGINE WIRING HARNESS (See ENGINE WIRING HARNESS for Breakdown)	
5	24861170	1	CLAMP	
6	88321029	1	SELF-TAPPING SCREW, #10-24x3/8	
7	77143006	7	WHIZ-LOC NUT, 5/16-18	
8	88261022	8	SOCKET BUTTON HD CAPSCREW, 5/16-18x3/4	
9	91141480	1	COVER	
10		Ref	GAUGE PANEL ASSY (See GAUGE PANEL ASSEMBLY for Breakdown)	
11	77143003	4	WHIZ-LOC SCREW, 5/16-18X5/8	
12	91361008	1	DASH PANEL	
13	91093031	2	NYLON HOLE PLUG	

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FIGURE 10-3. (91123166) ENGINE WIRING HARNESS (SN 0277001 through 0277085)



Wire Designation	Wire Color/Stripe	Remarks
BAT	RED	ALT.(BAT.)TO IGN.SW.(BAT.)
HR MTR	BLU/RED	OIL PRESS. SW. TO HR. METER
HORN	VIOLET/YELO	HORN
FUL GAG	BLU/BLK	FUEL GAUGE
START-C	VIOLET/RED	STATER RELAY
ALT EXC-B	ORNG/YELO	ALTERNATOR EXCITER (ALT. PLUG)
PS IGN	BLU/BRN	OIL PRESS. SW.
OIL GAG	BLU/VIOLET	OIL PRESS. GAUGE
CLT TMP	BRN/YELO	WATER TEMP. GAUGE
REV	BRN/WHITE	FWD/REV VALVE
4X4	BRN	FWD/REV VALVE
TRC LOK	BRN/GREY	4X4 VALVE
FUL SOL	VIOLET	TRACTION LOCK VALVE
REV-B	BLU	FUEL SOLENOID
SN SR	RED/BLK	BACKUP ALARM
ALTBAT	RED/WHITE	SNSR (ALT. PLUG)
GND-1	BLK	ALT RNTR TO STARTER BAT. POST
GND-2	BLK	FWD/REV VALVE TO GROUND
GND-3	BLK	FWD/REV VALVE TO GROUND
GND-4	BLK	4X4 VALVE TO GROUND
GND-5	BLK	TRACTION LOCK VLV TO GROUND
STRT-SOL	RED/VIOLET	BACKUP ALARM TO GROUND
		ALT BAT TO STARTER SOLENOID

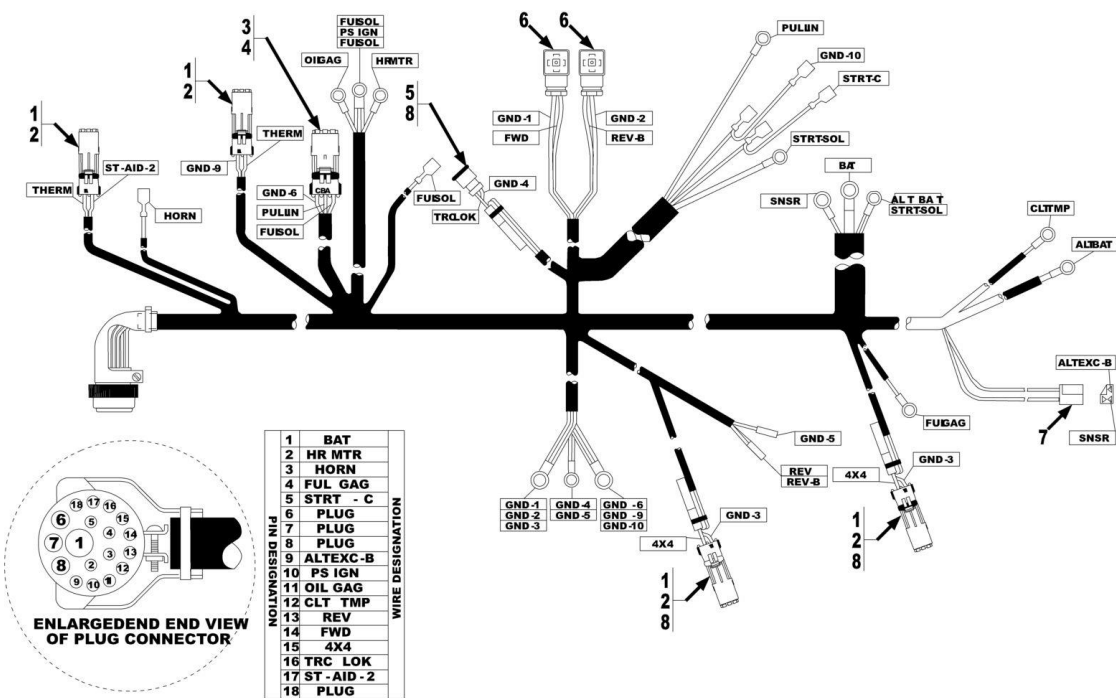
SECTION 10 - ELECTRICAL

FIGURE 10-3. (91123166) ENGINE WIRING HARNESS (SN 0277001 through 0277085)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91123166	1	ENGINE WIRING HARNESS (includes all items)	
2	91083440	1	ELECTRICAL CONNECTOR	
3	91084038	2	RECEPTACLE	
4	83683254	1	3 CONTACT PLUG (includes item 5)	
5	90026803	3	PIN	
6	80963057	2	TOWER	
7	80963058	2	SHROUD	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE SERVICE.	

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FIGURE 10-4. (91333013) ENGINE WIRING HARNESS (SN 0277086 to Present)



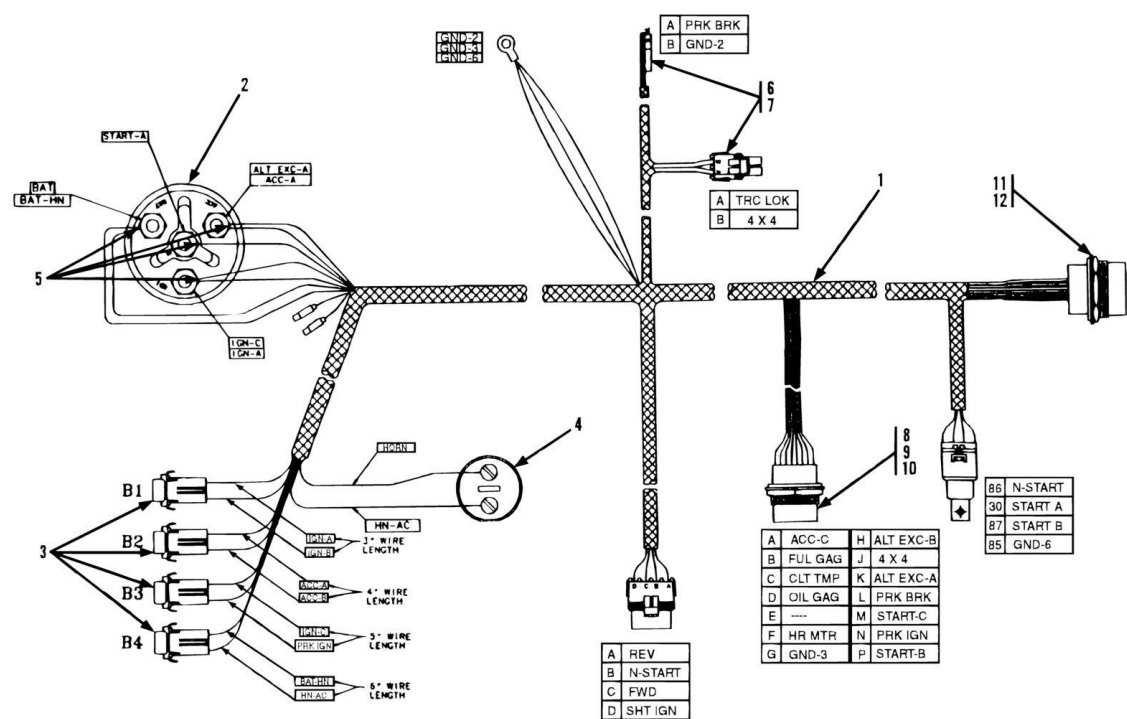
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FIGURE 10-4. (91333013) ENGINE WIRING HARNESS (SN 0277086 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91333013	1	ENGINE WIRING HARNESS (includes all items)	
2	80963058	4	WEATHER PACK SHROUD	
3	80963059	1	WEATHER PACK TOWER	
4	80963060	1	WEATHER PACK SHROUD	
5	91083440	1	SOLENOID CONNECTOR	
6	91084039	2	PLUG CONNECTOR	
7	83683254	1	CONTACT PLUG (includes conn)	
7	90026803	1	CONNECTOR	
8	91363021	3	MOLDED DIODE	

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FIGURE 10-5. (91145092) DASH HARNESS ASSEMBLY (SN 0277001 through 0277119)



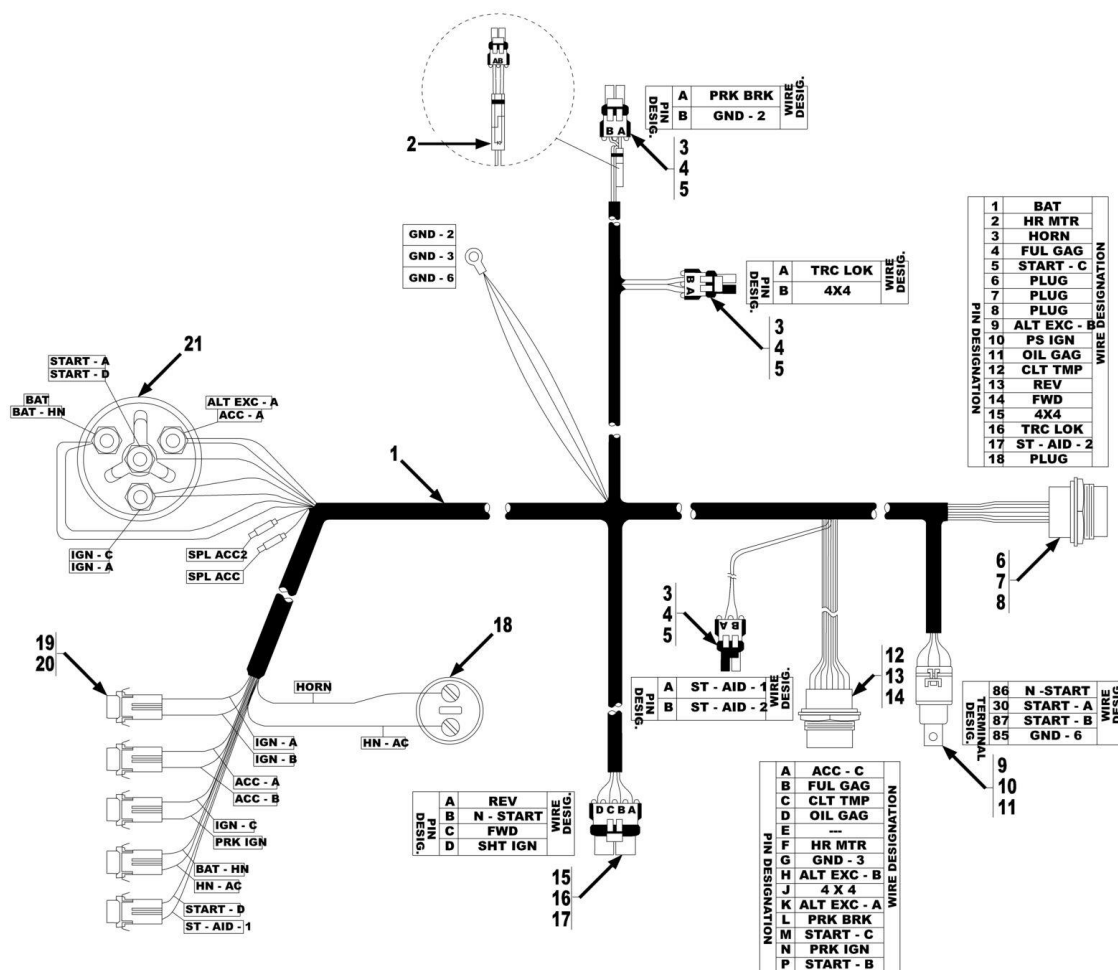
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FIGURE 10-5. (91145092) DASH HARNESS ASSEMBLY (SN 0277001 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91145092	1	DASH HARNESS ASSY (includes all items)	
1	91143349	1	DASH HARNESS (includes items 6 thru 12)	
2	91033317	1	IGNITION SWITCH	
3	77363268	4	15 AMP FUSE	
4	24771004	1	HORN BUTTON	
5	91143108	4	SNAP-IN FUSE	
6	80963057	2	TOWER	
7	80963068	4	FEMALE PIN TERMINALS	
7	80963066	6	CABLE SEALS	
8	77363264	1	PANEL NUT	
9	77363263	1	LOCKWASHER	
10	77363225	1	RECEPTACLE	
11	83481286	1	PANEL NUT	
12	83481285	1	LOCKWASHER	

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FIGURE 10-6. (91365013) DASH HARNESS ASSEMBLY (SN 0277120 to Present)



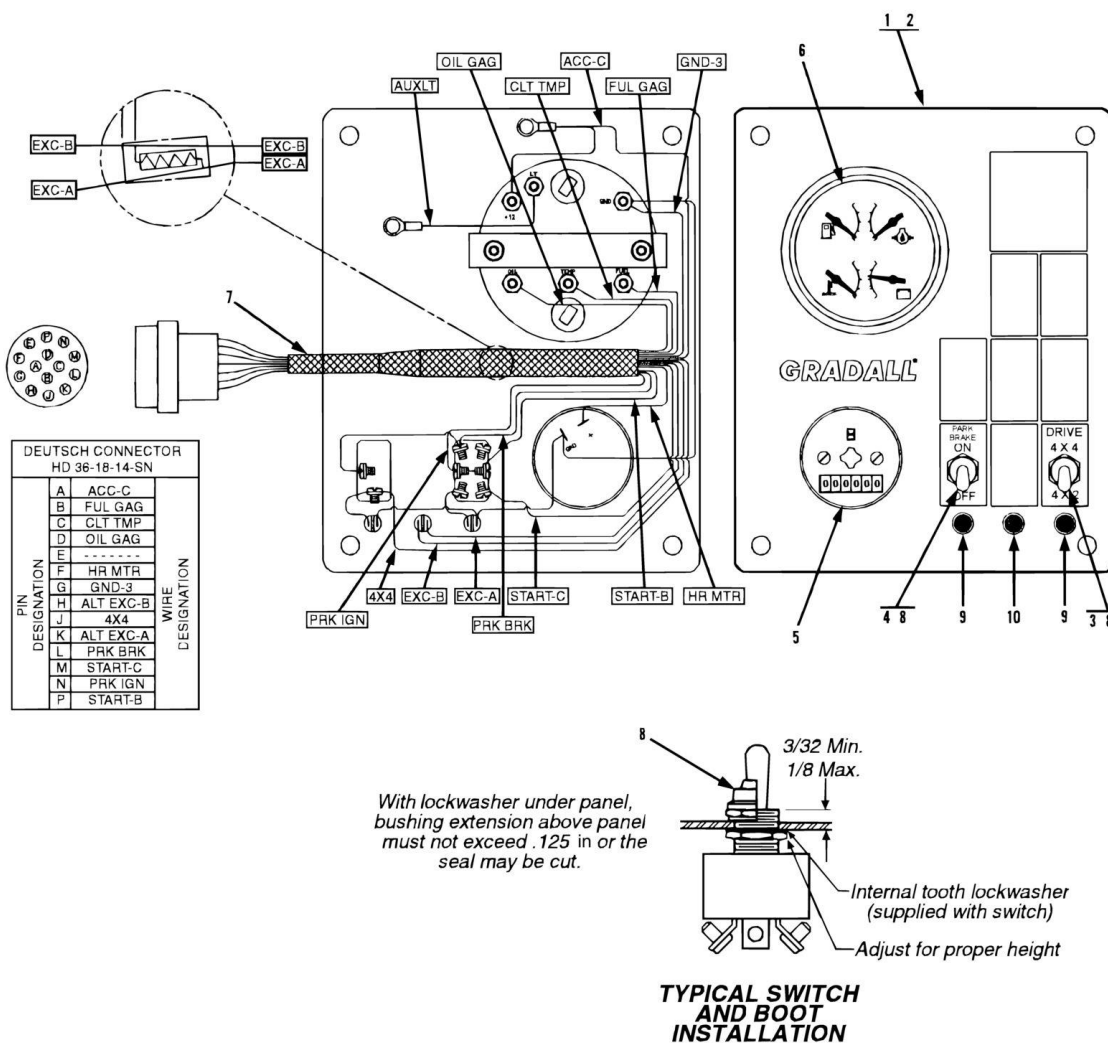
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FIGURE 10-6. (91365013) DASH HARNESS ASSEMBLY (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91365013	1	DASH HARNESS ASSY (includes all items)	
1	91363035	1	DASH HARNESS (includes items 2 thru 17 & 19)	
2	91363021	1	MOLDED DIODE	
3	80963057	3	Tower	
4	80963068	6	FEMALE PIN TERMINAL	
5	91364009	6	CABLE SEAL	
6	91364010	1	RECEPTACLE CONNECTOR	
7	83481286	1	PANEL NUT	
8	83481285	1	LOCKWASHER	
9	91363054	1	RELAY	
10	91364011	1	CONNECTOR	
11	91364012	4	TERMINAL END	
12	77363225	1	RECEPTACLE CONNECTOR	
13	77363264	1	PANEL NUT	
14	77363263	1	LOCKWASHER	
15	91364013	1	CONNECTOR	
16	91364014	4	FEMALE PIN TERMINAL	
17	80963065	4	CABLE SEAL	
18	24771004	1	HORN BUTTON	
19	91143108	5	SNAP-IN FUSE HOLDER	
20	77363268	5	15 AMP FUSE	
21	91033317	1	IGNITION SWITCH	
21	77384578	1	KEY	

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FIGURE 10-7. (91143331) GAUGE PANEL ASSEMBLY (SN 0277001 through 0277119)



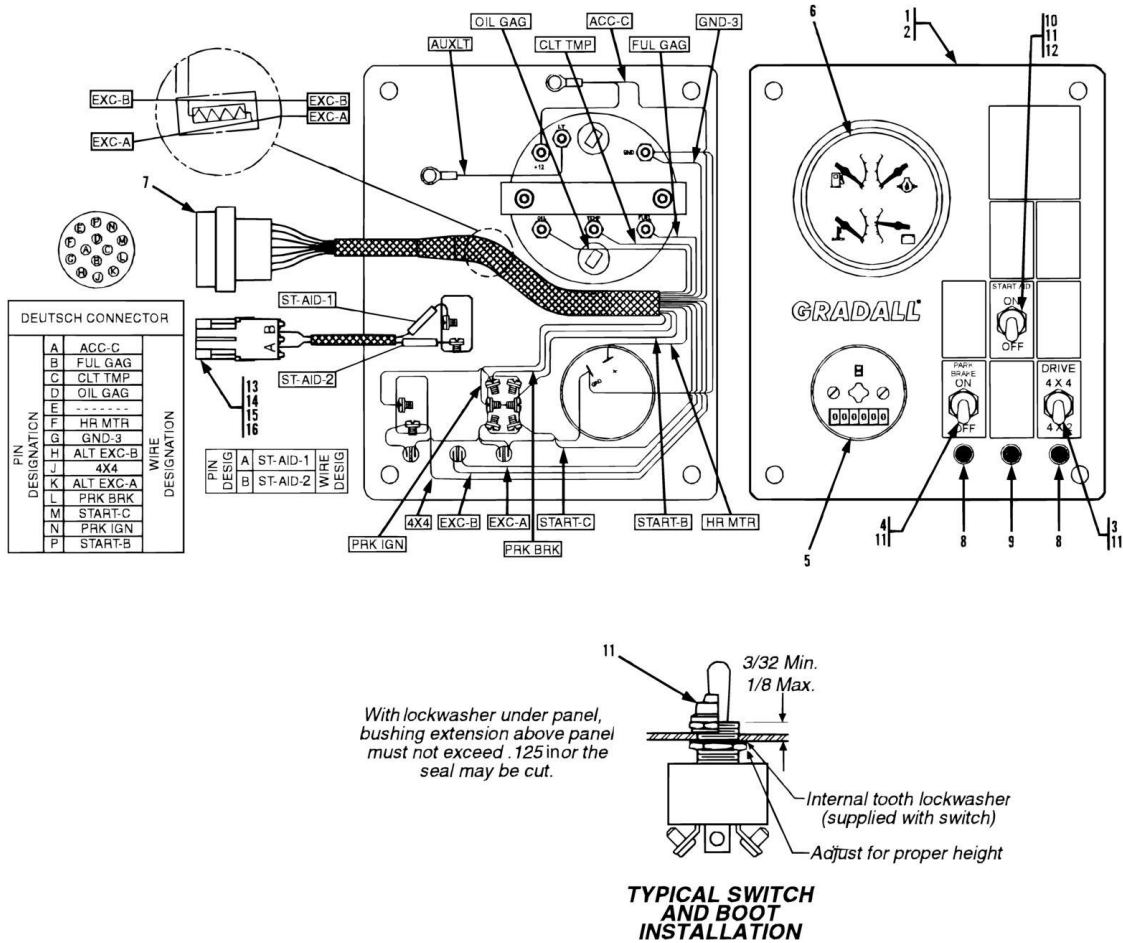
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FIGURE 10-7. (91143331) GAUGE PANEL ASSEMBLY (SN 0277001 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91143331	1	GAUGE PANEL (includes all items)	
	91364004	1	PANEL ASSY (includes front and back plates, acrylic lens and std labels)	
2	91364005	1	RUBBER BOOT	
3	77383467	1	TOGGLE SWITCH	
4	91143114	1	PARK BRAKE SWITCH	
5	91364006	1	HOURMETER	
6	91364007	1	4-IN-1 GAUGE (oil, fuel, temp, volts)	
7	91364008	1	WIRE HARNESS	
8	77383470	2	BOOT	
9	91143128	2	AMBER INDICATOR LIGHT	
10	91143127	1	RED INDICATOR LIGHT	

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FIGURE 10-8. (91365012) GAUGE PANEL ASSEMBLY (SN 0277120 to Present)



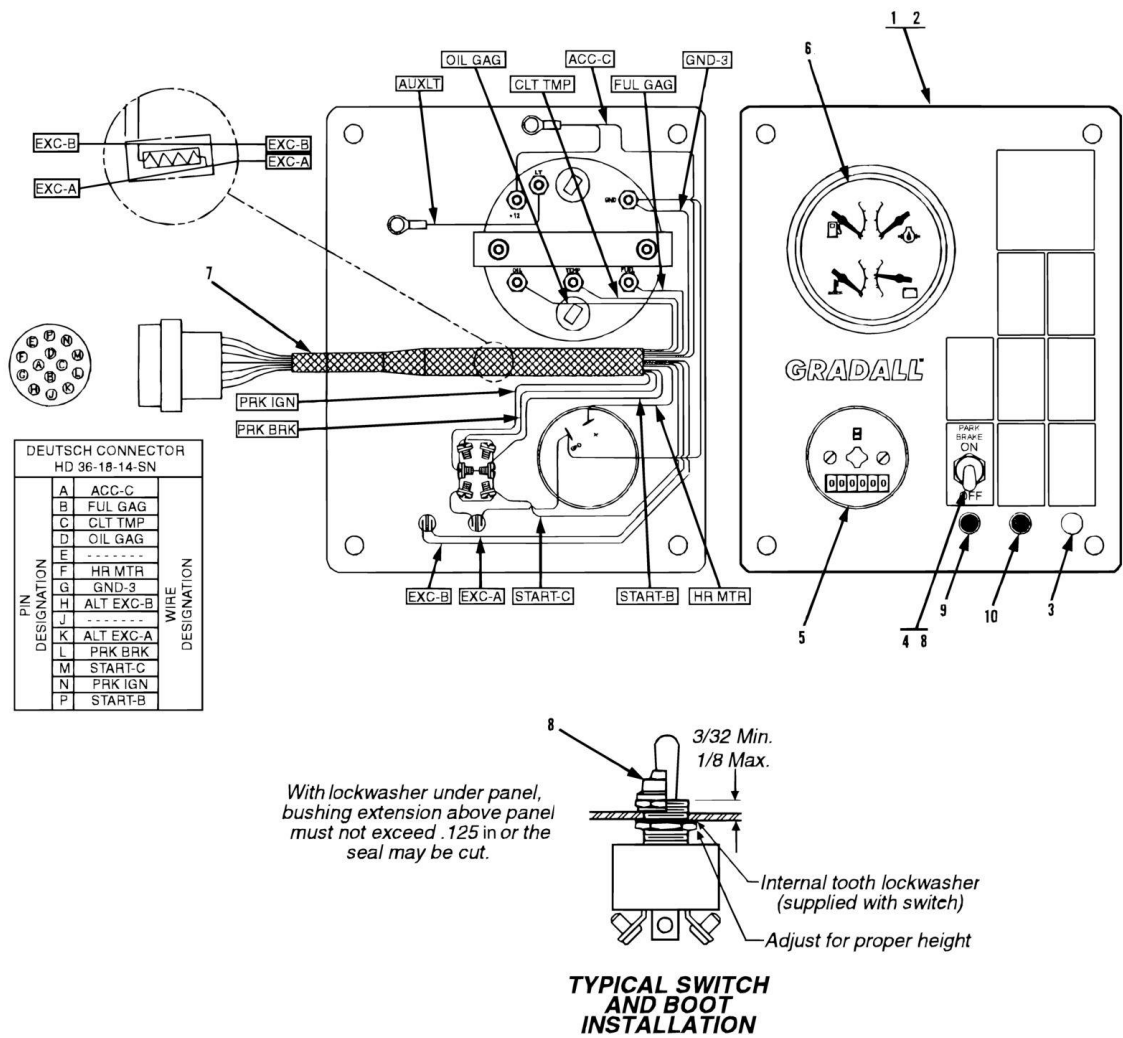
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FIGURE 10-8. (91365012) GAUGE PANEL ASSEMBLY (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91365012	1	GAUGE PANEL ASSY (includes all items)	
	91143331	1	GAUGE PANEL(includes all items except one of item 10 & 11 thur 14)	
1	91364004	1	PANEL ASSY (includes front and back plates, acrylic lens and std labels)	
2	91364005	1	RUBBER BOOT	
3	77383467	1	TOGGLE SWITCH	
4	91143114	1	PARK BRAKE SWITCH	
5	91364006	1	HOURLMETER	
6	91364007	1	4-IN-1 GAUGE (oil, fuel, temp, volts)	
7	91364008	1	WIRE HARNESS	
8	91143128	2	AMBER INDICATOR LIGHT	
9	91143127	1	RED INDICATOR LIGHT	
10	91123181	1	TOGGLE SWITCH	
11	77383470	3	BOOT	
12	91123176	1	START AID DECAL	
13	91363034	1	START AID HARNESS (includes items 12, 13 & 14)	
14	91364009	2	CABLE SEAL	
15	80963058	1	CONNECTOR	
16	80963069	2	MALE PIN TERMINAL	

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FIGURE 10-9. (91093037) GAUGE PANEL ASSEMBLY (SN 0277001 through 0277119)



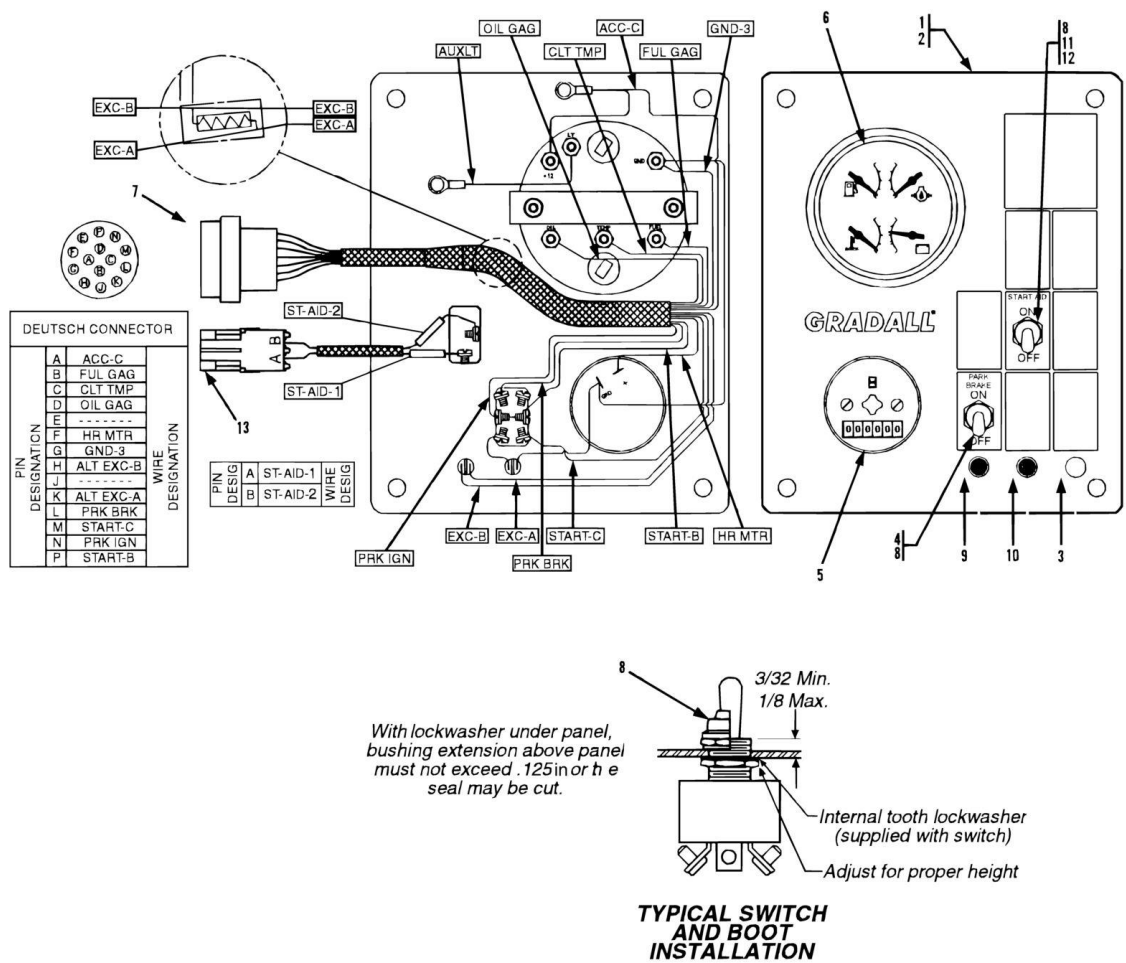
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FIGURE 10-9. (91093037) GAUGE PANEL ASSEMBLY (SN 0277001 through 0277119)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91093037	1	GAUGE PANEL (includes all items)	
	91364004	1	PANEL ASSY (includes front and back plates, acrylic lens and std labels)	
2	91364005	1	RUBBER BOOT	
3	91093030	1	NYLON HOLE PLUG	
4	91143114	1	PARK BRAKE SWITCH	
5	91364006	1	HOURMETER	
6	91364007	1	4-IN-1 GAUGE (oil, fuel, temp, volts)	
7	91364008	1	WIRE HARNESS	
8	77383470	1	BOOT	
9	91143128	1	AMBER INDICATOR LIGHT	
10	91143127	1	RED INDICATOR LIGHT	

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FIGURE 10-10. (91395002) GAUGE PANEL ASSEMBLY (SN 0277120 to Present)



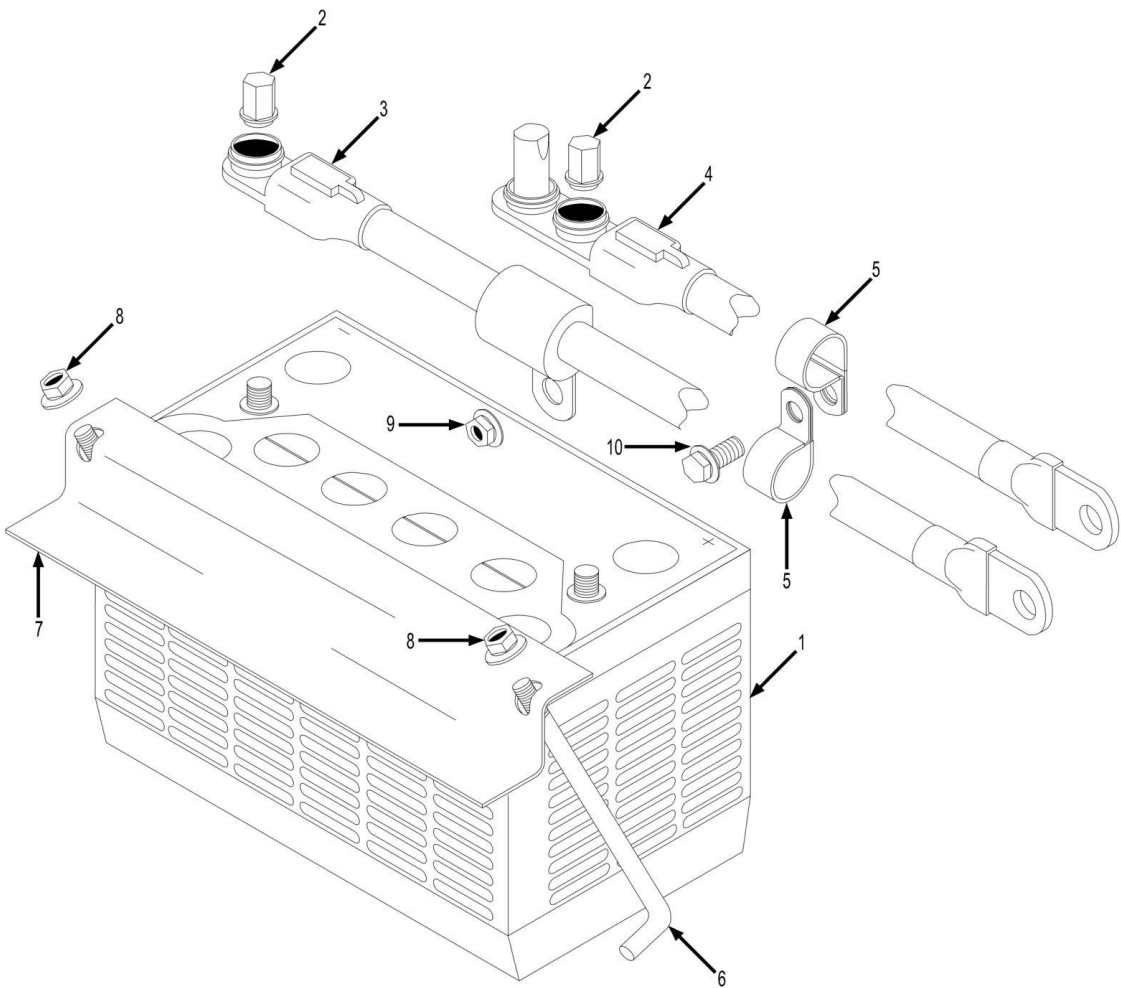
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FIGURE 10-10. (91395002) GAUGE PANEL ASSEMBLY (SN 0277120 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91395002	1	GAUGE PANEL ASSY (includes all items)	
	91093037	1	GAUGE PANEL (includes all items except one of item 10, 11, 12 & 13)	
1	91364004	1	PANEL ASSY (includes front and back plates, acrylic lens and std labels)	
2	91364005	1	RUBBER BOOT	
3	91093030	1	NYLON HOLE PLUG	
4	91143114	1	PARK BRAKE SWITCH	
5	91364006	1	HOURLMETER	
6	91364007	1	4-IN-1 GAUGE (oil, fuel, temp, volts)	
7	91364008	1	WIRE HARNESS	
8	77383470	2	BOOT	
9	91143128	1	AMBER INDICATOR LIGHT	
10	91143127	2	RED INDICATOR LIGHT	
11	91123181	1	TOGGLE SWITCH	
12	91123176	1	START AID DECAL	
13	91363034	1	START AID HARNESS (includes the following items)	
13	80963058	1	SHROUD	
13	80963069	2	PIN TERMINALS	
13	91364009	2	CABLE SEALS	

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FIGURE 10-11. BATTERY AND CABLES (SN 0277001 to Present)



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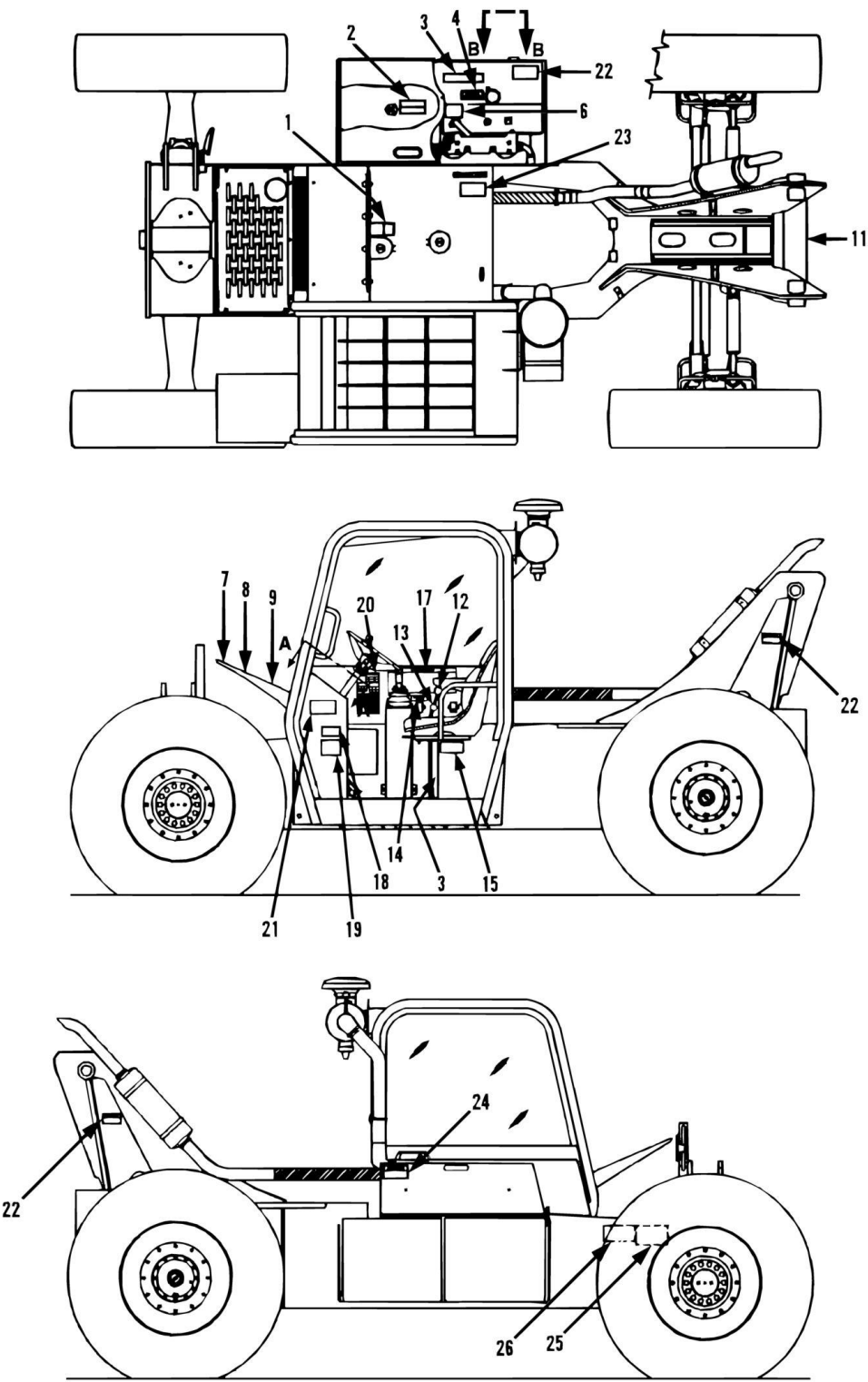
FIGURE 10-11. BATTERY AND CABLES (SN 0277001 to Present)

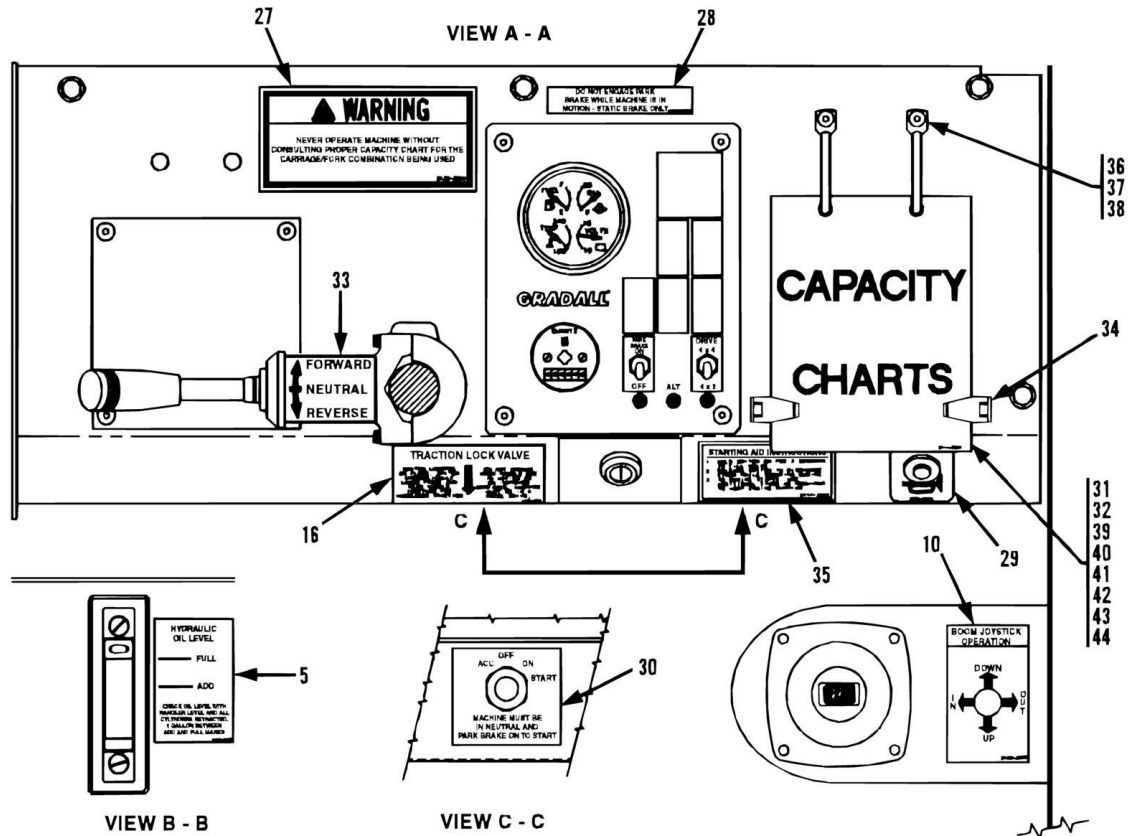
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	80973021	1	BATTERY, (12 volt, 1000 CCA), TOP STUD, 3/8-16 UNC THREAD, BCI GROUP 31	
2	77383567	2	BATTERY POST TERMINAL	
3	91083481	1	NEGATIVE BATTERY CABLE	
4	91083482	1	POSITIVE BATTERY CABLE	
5	85941017	4	SUPPORT CLAMP	
6	91081640	2	HOLD DOWN STUD	
7	91141429	1	BATTERY HOLD DOWN	
8	77143006	2	WHIZ LOCKNUT, 5/16-18	
9	77143015	1	WHIZ LOCKNUT, 3/8-16	
10	77143003	2	WHIZ LOCK SCREW, 5/16-18X5/8	
	14403416	AR	DI-ELECTRIC GREASE (add to caps of jump terminals on battery cables)	

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SECTION 11 - MISCELLANEOUS

FIGURE 11-1. CAB AND FRAME DECALS (SN 0277001 to Present)





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FIGURE 11-1. CAB AND FRAME DECALS (SN 0277001 to Present)

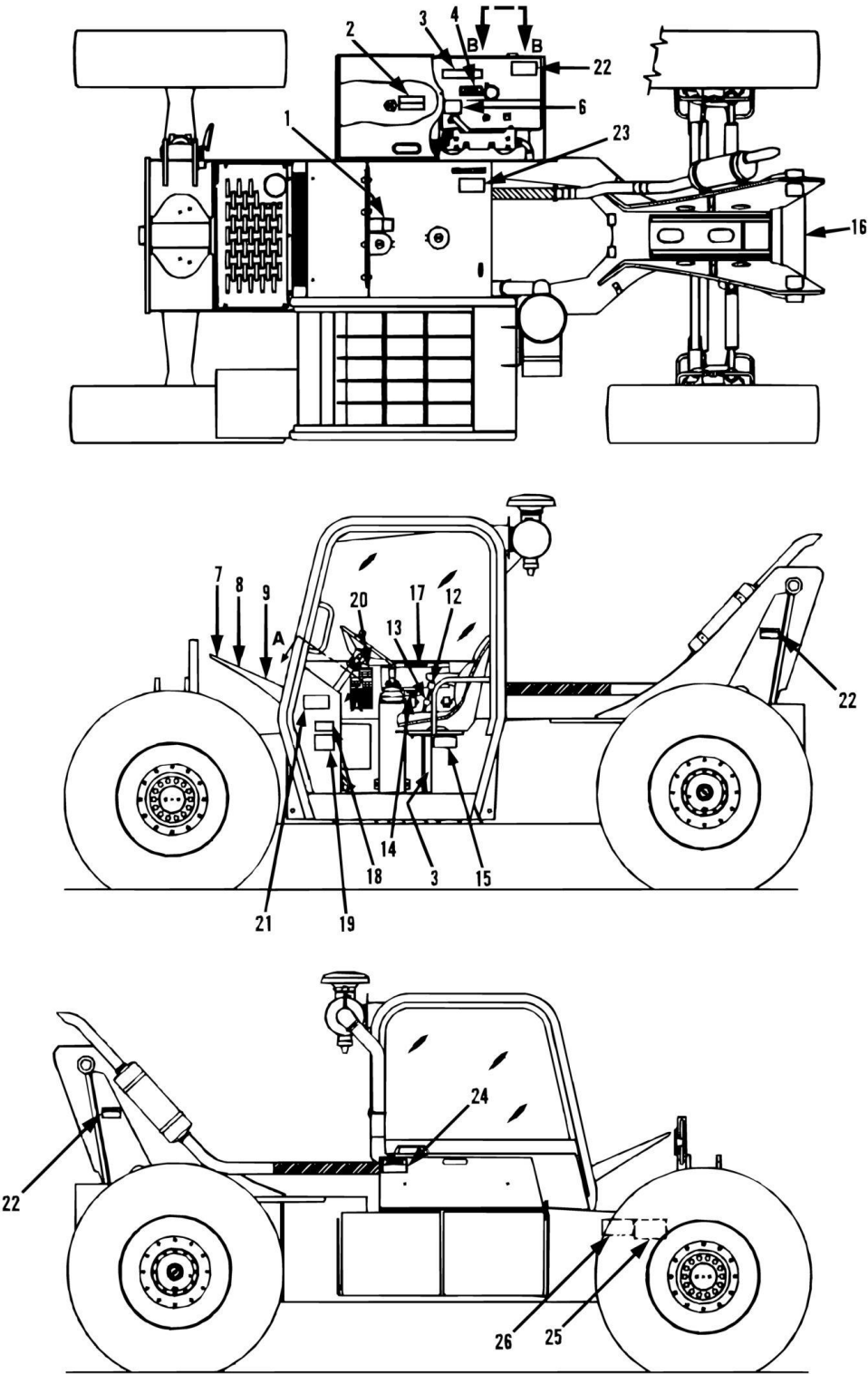
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085133	1	524D DECAL KIT, WHITE (std) (includes all items except 18 thru 20, 31, 32, 34 thru 43 and all items except items 4 thru 7) (SN 0277001 through 0277594)	
	91385035	1	524D DECAL KIT, WHITE (std) (includes all items except 18 thru 20, 31, 32, 34 thru 43, and all items except items 4 thru 7) (SN 0277595 to Present)	
1	80603026	1	CAUTION DECAL	
2	91143286	1	WARNING PLATE	
3	91083492	2	OIL WARNING DECAL	
4	91143288	1	HYDRAULIC OIL PLATE	
5	91163130	1	OIL LEVEL DECAL	
6	91143162	1	TEST PORT DECAL	
7	80603022	1	DANGER DECAL	
8	90553027	1	WARNING DECAL	
9	91333028	1	SERVICE INSTRUCTION DECAL (SN 0277001 through 0277594)	
9	91333044	1	SERVICE INSTRUCTION DECAL (SN 0277595 to Present)	
10	91303047	1	BOOM OPR DECAL	
11	83641675	1	GRADALL DECAL (white)	
12	91083317	1	TILT DECAL	
13	91083318	1	SWAY DECAL	
14	91143292	1	DIPSTICK DECAL	
15	77333027	1	MADE IN USA DECAL	
16	91083314	1	TRACTION DECAL	
17	90553028	1	WARNING DECAL	
18	91144430	1	SERIAL TAG	
19	91164094	1	ROPS WARNING DECAL	
20	91383003	1	SERIAL NO AND ATTACHING PLATE (on inside of cab std)	
20	91383002	1	SERIAL NO AND ATTACHING PLATE (on inside of cab opt)	
21	91143283	1	WARNING DECAL	
22	91143282	3	WARNING DECAL	
23	91143280	1	WARNING DECAL	
24	91143281	1	WARNING DECAL	
25	91143285	1	INSTRUCTION DECAL	
26	91143284	1	WARNING DECAL	
27	91323030	1	WARNING DECAL	
28	91143182	1	PARK BRAKE DECAL	
29	91033089	1	HORN DECAL	
30	91143120	1	INSTRUMENT PANEL DECAL	
31	91163184	1	CAPACITY CHART COVER	
32	91383009	1	CAPACITY CHART (2 section boom, std)	
32	91383007	1	CAPACITY CHART (3 section boom, opt)	
32	91383008	1	CAPACITY CHART (3 section boom, opt)	
33	91163028	1	SHIFTER DECAL	
34	91363070	2	HINGED CLAMP	
35	91143202	1	INSTRUCTION DECAL	
36	91163087	2	LOAD CHART BRACKET	
37	88302125	2	RD HD MACHINE SCREW, 1/4-20x5/8	
38	88501616	2	HEX NUT, 1/4-20	
39	91383027	1	LOAD CHART-SLOP PILER (std)	
39	91383016	1	LOAD CHART-SLOP PILER (opt)	

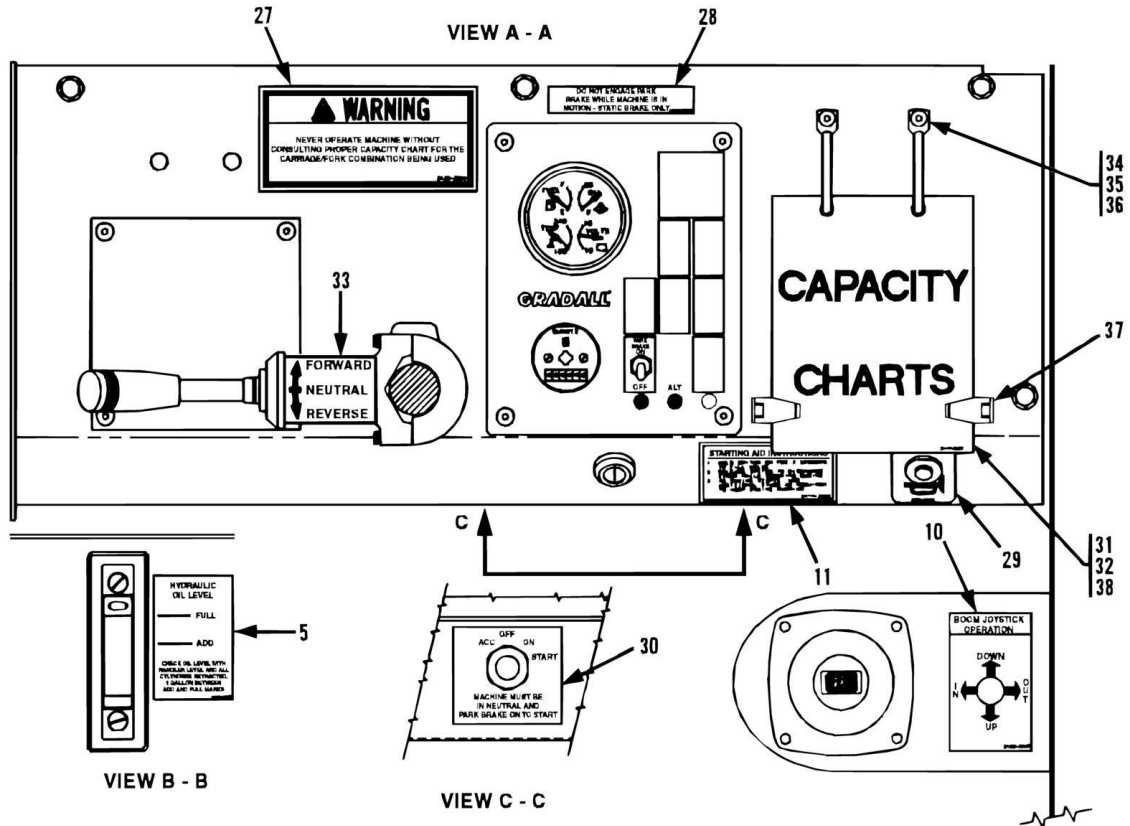
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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
40	91383010	1	LOAD CHART-STD CARRIAGE W/WINCH (2 section boom, std)	
41	91383036	1	LOAD CHART-6FT MAST (std)	
41	91383028	1	LOAD CHART-6FT MAST (opt)	
42	91383035	1	LOAD CHART-100, SWING CARRIAGE (std)	
42	91383020	1	LOAD CHART-100, SWING CARRIAGE (opt)	
43	91383029	1	LOAD CHART-10FT TRUSS BOOM (opt)	
44	91383077	1	LOAD CHART - PERSONNEL PLATFORM, (std)	
44	91383078	1	LOAD CHART - PERSONNEL PLATFORM, (opt)	

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FIGURE 11-2. CAB AND FRAME DECALS (SN 0277001 to Present)





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FIGURE 11-2. CAB AND FRAME DECALS (SN 0277001 to Present)

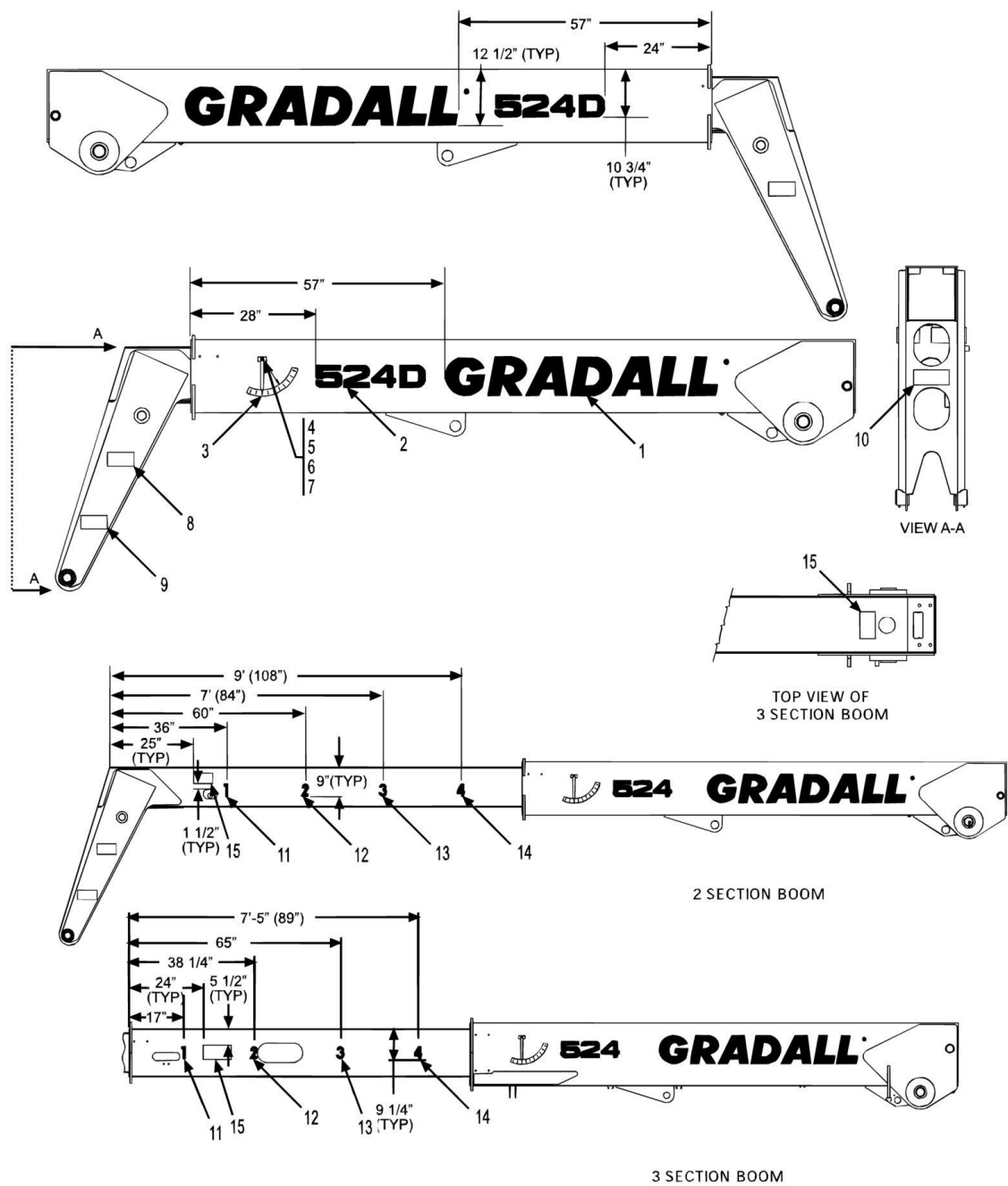
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91095032	1	522D DECAL KIT, WHITE (std) (includes all items except items 11, 18 thru 20, 31, 32, 34 thru 37 and all items except items 4 thru 7) (SN 0277001 through 0277594)	
	91395017	1	522D DECAL KIT, WHITE (std) (includes all items except items 11, 18 thru 20, 31, 32, 34 thru 37 and all items except items 4 thru 7) (SN 0277595 to Present)	
1	80603026	1	CAUTION DECAL	
2	91143286	1	WARNING PLATE	
3	91083492	2	OIL WARNING DECAL	
4	91143288	1	HYDRAULIC OIL PLATE	
5	91163130	1	OIL LEVEL DECAL	
6	91143162	1	TEST PORT DECAL	
7	80603022	1	DANGER DECAL	
8	90553027	1	WARNING DECAL	
9	91333028	1	SERVICE INSTRUCTION DECAL (SN 0277001 through 0277594)	
9	91333044	1	SERVICE INSTRUCTION DECAL (SN 0277595 to Present)	
10	91303047	1	BOOM OPR DECAL	
11	91143202	1	INSTRUCTION DECAL	
12	91083317	1	TILT DECAL	
13	91083318	1	SWAY DECAL	
14	91143292	1	DIPSTICK DECAL	
15	77333027	1	MADE IN USA DECAL	
16	83641675	1	GRADALL DECAL (white)	
17	90553028	1	WARNING DECAL	
18	91144430	1	SERIAL TAG	
19	91164094	1	ROPS WARNING DECAL	
20	91393001	1	SERIAL NO AND ATTACHING PLATE (on inside of cab std)	
20	91393002	1	SERIAL NO AND ATTACHING PLATE (on inside of cab opt)	
21	91143283	1	WARNING DECAL	
22	91143282	3	WARNING DECAL	
23	91143280	1	WARNING DECAL	
24	91143281	1	WARNING DECAL	
25	91143285	1	INSTRUCTION DECAL	
26	91143284	1	WARNING DECAL	
27	91323030	1	WARNING DECAL	
28	91143182	1	PARK BRAKE DECAL	
29	91033089	1	HORN DECAL	
30	91143120	1	INSTRUMENT PANEL DECAL	
31	91163184	1	CAPACITY CHART COVER	
32	91383009	1	CAPACITY CHART (2 section boom, std)	
32	91383007	1	CAPACITY CHART (3 section boom, opt)	
32	91383008	1	CAPACITY CHART (3 section boom, opt)	
32	91383010	1	LOAD CHART STD CARRIAGE W/WINCH (std)	
32	91383027	1	LOAD CHART-SLOPE PILER (std)	
32	91383016	1	LOAD CHART-SLOPE PILER (opt)	
32	91383035	1	LOAD CHART-100, SWING CARRIAGE (std)	
32	91383020	1	LOAD CHART-100, SWING CARRIAGE (opt)	
32	91383029	1	LOAD CHART-10FT TRUSS BOOM (opt)	
32	91383036	1	LOAD CHART-6FT MAST (std)	
32	91383028	1	LOAD CHART-6FT MAST (opt)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
33	91163028	1	SHIFTER DECAL	
34	91163087	2	LOAD CHART BRACKET	
35	88302125	2	RD HD MACHINE SCREW, 1/4-20x5/8	
36	88501616	2	HEX NUT, 1/4-20	
37	91363070	2	HINGED CLAMP	
38	91383078	1	LOAD CHART - PERSONNEL PLATFORM, (opt)	
38	91383077	1	LOAD CHART - PERSONNEL PLATFORM, (std)	

SECTION 11 - MISCELLANEOUS

FIGURE 11-3. BOOM DECALS (SN 0277001 to Present)



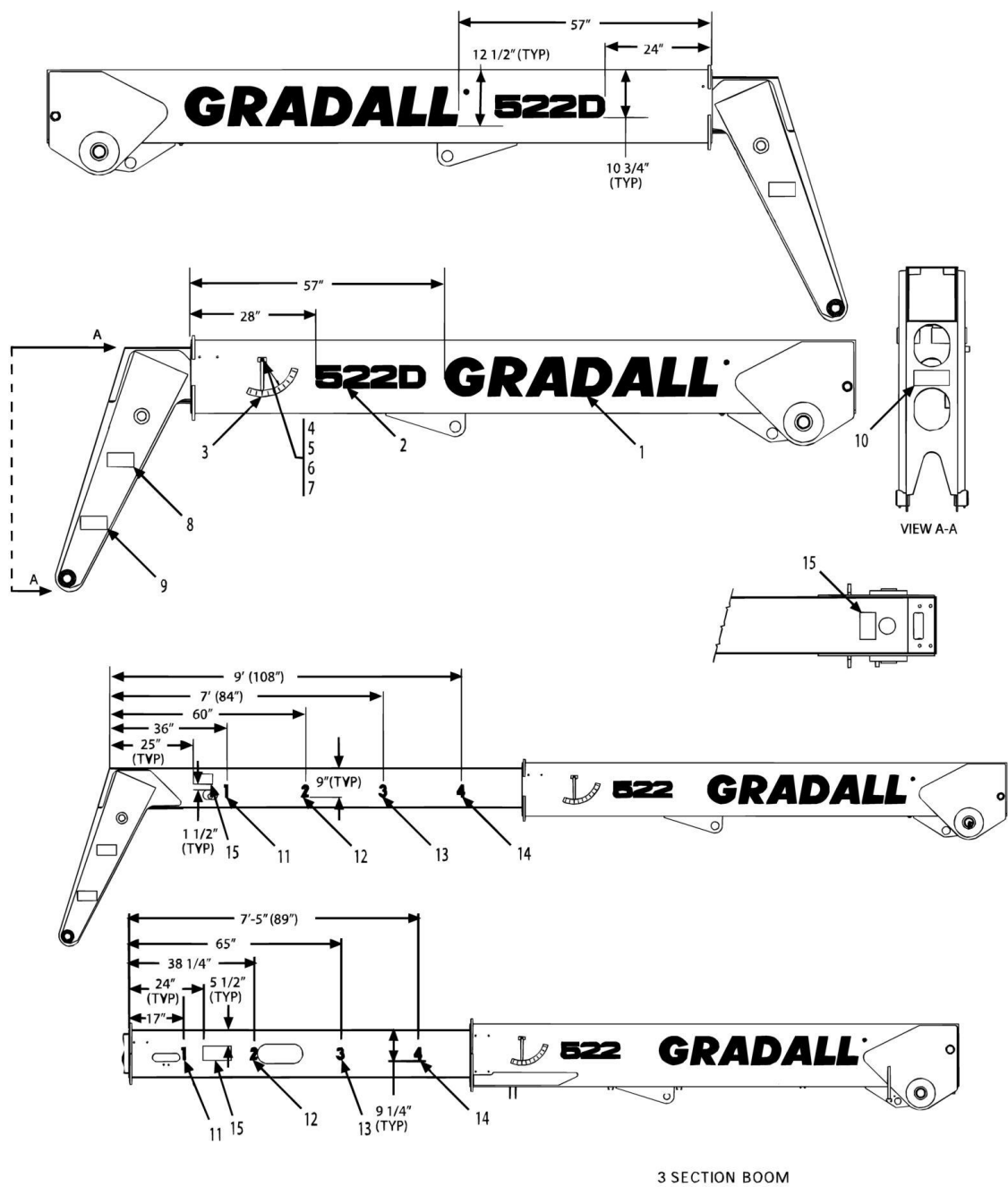
SECTION 11 - MISCELLANEOUS

FIGURE 11-3. BOOM DECALS (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085133	1	524D DECAL KIT, WHITE (std) (includes all items except 18 thru 20, 31, 32, 34 thru 43 and all items except items 4 thru 7) (SN 0277001 through 0277594)	
	91385035	1	524D DECAL KIT, WHITE (std) (includes all items except 18 thru 20, 31, 32, 34 thru 43, and all items except items 4 thru 7) (SN 0277595 to Present)	
1	91123037	2	GRADALL DECAL, WHITE (std)	
1	91123038	2	GRADALL DECAL, BLACK (opt)	
2	91083561	2	"524D" DECAL, WHITE (std)	
2	91083562	2	"524D" DECAL, BLACK (opt)	
3	91003031	1	BOOM ANGLE DECAL, WHITE	
4	90200445	1	PENDULUM	
5	90200688	1	BEARING	
6	90026491	1	SHOULDER BOLT, 1/4-20	
7	91333036	1	SPECIAL WASHER	
8	91143282	2	WARNING DECAL	
9	91143290	1	WARNING DECAL	
10	90553026	1	WARNING DECAL	
11	91003016	1	"1" DECAL, WHITE (std)	
11	91043134	1	"1" DECAL, BLACK (opt)	
12	91003018	1	"2" DECAL, WHITE (std)	
12	91043135	1	"2" DECAL, BLACK (opt)	
13	91123042	1	"3" DECAL, WHITE (std)	
13	91123043	1	"3" DECAL, BLACK (opt)	
14	91003020	1	"4" DECAL, WHITE (std)	
14	91043136	1	"4" DECAL, BLACK (opt)	
15	80603037	3	WARNING DECAL	
		Ref	NOTE: STANDARD DECALS ARE WHITE. OPTIONAL DECALS ARE BLACK. ONLY STANDARD DECALS ARE INCLUDED IN THE 91085133 & 91385035 DECAL KIT.	

SECTION 11 - MISCELLANEOUS

FIGURE 11-4. BOOM DECALS (SN 0277001 to Present)



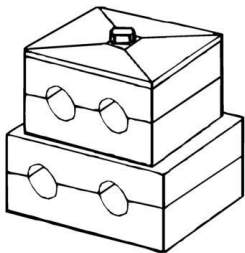
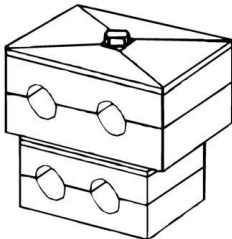
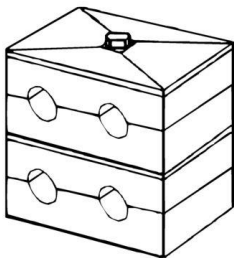
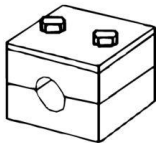
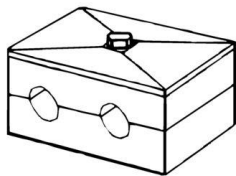
SECTION 11 - MISCELLANEOUS

FIGURE 11-4. BOOM DECALS (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91095032	1	522D DECAL KIT, WHITE, (std), (includes all items except items 11, 18 thru 20, 31, 32, 34 thru 37 and all items except items 4 thru 7) (SN 0277001 through 0277594)	
	91395017	1	522D DECAL KIT, WHITE, (std), (includes all items except items 11, 18 thru 20, 31, 32, 34 thru 37, and all items except items 4 thru 7) (SN 0277595 to Present)	
1	91123037	2	GRADALL DECAL, WHITE, (std)	
1	91123038	2	GRADALL DECAL, BLACK, (opt)	
2	91093035	2	"522D" DECAL, WHITE, (std)	
2	91093036	2	"522D" DECAL, BLACK, (opt)	
3	91003031	1	BOOM ANGLE DECAL, WHITE	
4	90200445	1	PENDULUM	
5	90200688	1	BEARING	
6	90026491	1	SHOULDER BOLT, 1/4-20	
7	91333036	1	SPECIAL WASHER	
8	91143282	2	WARNING DECAL	
9	91143290	1	WARNING DECAL	
10	90553026	1	WARNING DECAL	
11	91003016	1	"1" DECAL, WHITE, (std)	
11	91043134	1	"1" DECAL, BLACK, (opt)	
12	91003018	1	"2" DECAL, WHITE, (std)	
12	91043135	1	"2" DECAL, BLACK, (opt)	
13	91123042	1	"3" DECAL, WHITE, (std)	
13	91123043	1	"3" DECAL, BLACK, (opt)	
14	91003020	1	"4" DECAL, WHITE, (std)	
14	91043136	1	"4" DECAL, BLACK, (opt)	
15	80603037	3	WARNING DECAL	
		Ref	NOTE: STANDARD DECALS ARE WHITE. OPTIONAL DECALS ARE BLACK. ONLY STANDARD DECALS ARE INCLUDED IN THE 91085133 & 91385035 DECAL KIT.	

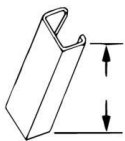
SECTION 11 - MISCELLANEOUS

FIGURE 11-5. CUSHION CLAMPS AND CLAMP SETS (SN 0277001 to Present)



AVAILABLE
ANCHOR CHANNELS

Part No.	A
9020-6085	4
9020-6086	5
9020-6087	8-1/2
9020-6088	7
9020-6089	3
9020-6090	4-1/2
9020-6091	3-1/2
9020-6092	10
9104-1246	7-1/2
9100-1053	11
9102-1094	1-1/2
8092-1048	15
8092-1062	22
8387-1035	30-47/64
8064-1044	12
9104-1801	6-1/4
9114-1375	2



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FIGURE 11-5. CUSHION CLAMPS AND CLAMP SETS (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
		Ref	CAB SIDE OF FRAME	
	77133168		CLAMP SET	
	77133140		COVER PLATE	
	77133177		HHCS, 5/16-18x1-3/8	
	77133140		COVER PLATE	
	77133177		HHCS, 5/16-18	
	77133139		CLAMP SET	
	77133140		COVER PLATE	
	77133177		HHCS, 5/16-18x1-3/8	
	91213002		CLAMP SET	
	77323029		CLAMP SET	
	88201023		HHCS, 5/16-18x1-3/4 GR5	
	77133306		STACK BOLT	
	77133390		SAFETY CLIP	
	77133137		COVER PLATE	
	77133073		CLAMP	
	77133052		COVER PLATE	
	77133209		HHCS, 1/4-20x1-3/8	
	77133497		CLAMP	
	77133498		COVER PLATE	
	88201009		HHCS, 1/4-20x2, GR5	
	88561002		FLAT WASHER, 1/4	
	88551009		LOCKWASHER, 1/4	
	88501004		HEX NUT, 1/4-20	
	77133168		CLAMP SET	
	77133140		COVER PLATE	
	77133177		HHCS, 5/16-18x1-3/8	
	77133136		CLAMP SET	
	77133306		STACK BOLT	
	77133390		SAFETY CLIP	
	77133133		CLAMP SET	
	77133134		COVER PLATE	
	88201024		HHCS, 5/16-18x2 GR5	
	90205792		CUSHION CLAMP	
	91083216		CUSHION CLAMP	
	91083217		CUSHION CLAMP	
	77323029		HOSE CLAMP	
	77133390		SAFETY CLIP	
	77133306		STACK BOLT	
	77133279		CLAMP SET	
	77133137		COVER PLATE	
	88201023		HHCS, 5/16-18x1-3/4	
	77133306		STACK BOLT	
	77133390		SAFETY CLIP	
	80933140		CLAMP SET	
	91033138		CLAMP SET	
	77133498		COVER PLATE	
	77133499		HHCS, 1/4-20x1-5/16	
		Ref	TANK SIDE OF FRAME	
	77133168		CLAMP SET	

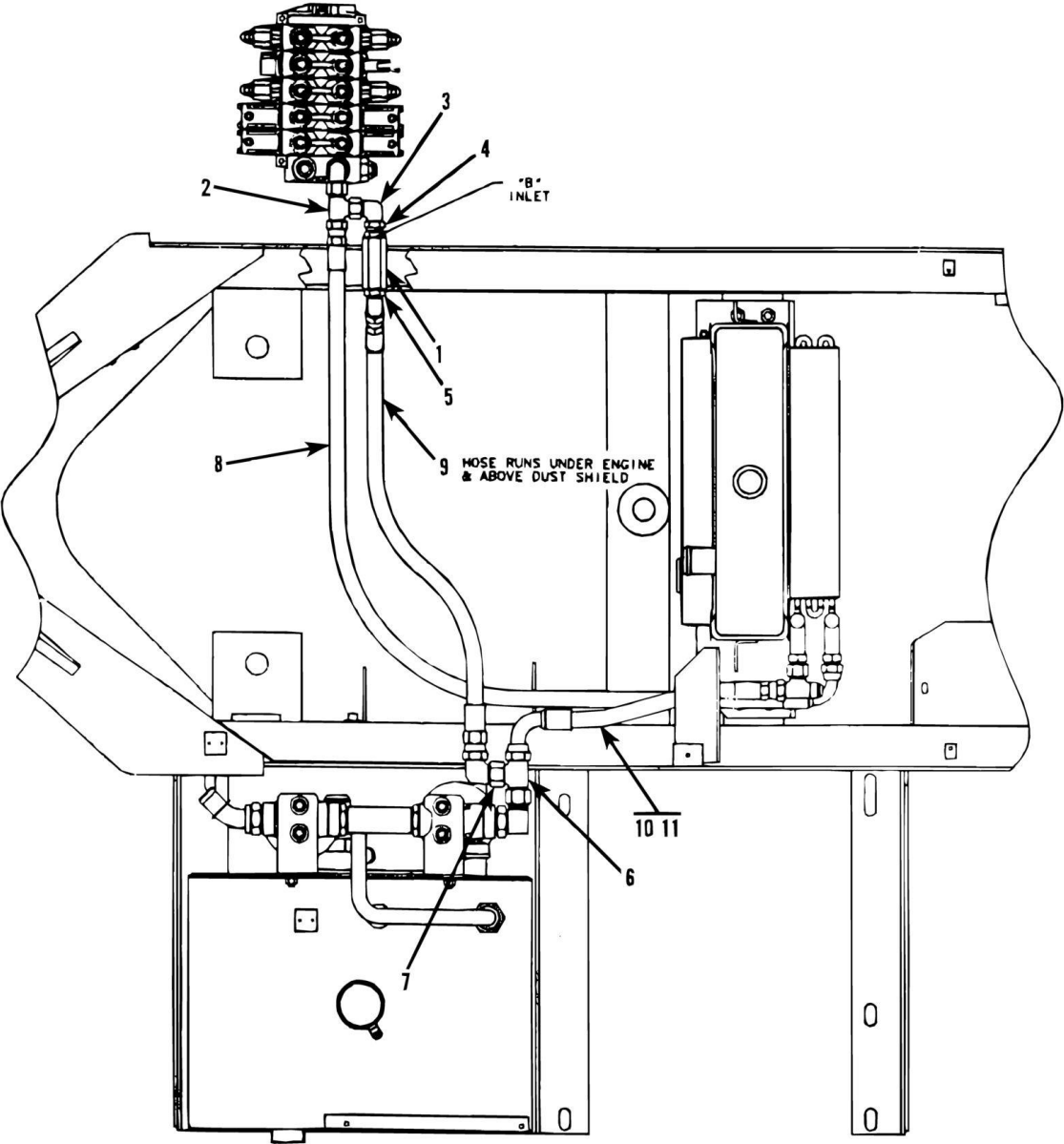
SECTION 11 - MISCELLANEOUS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	77133140		COVER PLATE	
	77133177		HHCS, 5/16-18x1-3/8	
	90205792		CUSHION CLAMP	
	77133053		CLAMP SET	
	77133052		COVER PLATE	
	77133209		HHCS, 1/4-20x1-3/8	
	77133497		CLAMP SET	
	77133498		COVER PLATE	
	77133499		HHCS, 1/4-20x1-5/16	
	77133053		CLAMP SET	
	77133052		COVER PLATE	
	88201010		HHCS, 1/4-20x2-1/4 GR5	
	88501004		HEX NUT, 1/4-20	
	88551009		LOCKWASHER, 1/4	
	88561107		FLAT WASHER, 1/4	
	77133279		CLAMP SET	
	88201023		HHCS, 5/16-18x1-3/4 GR5	
	77133137		COVER PLATE	
	77133279		CLAMP SET	
	77133306		STACK BOLT	
	88201023		HHCS, 5/16-18x1-3/4 GR5	
	77133279		CLAMP SET	
	77133137		COVER PLATE	
	77133390		SAFETY CLIP	
	91033138		CLAMP SET	
	77133498		COVER PLATE	
	77133499		HHCS, 1/4-20x1-5/16	
	77133279		CLAMP SET	
	77133137		COVER PLATE	
	88201023		HHCS, 5/16-18x1-3/4	
	77133306		STACK BOLT	
	77133390		SAFETY CLIP	
	80933140		CLAMP SET	
	77133497		CLAMP	
	77133498		COVER PLATE	
	88201009		HHCS, 1/4-20x2, GR5	
	88561002		FLATWASHER, 1/4	
	88551009		LOCKWASHER, 1/4	
	88501004		HEX NUT, 1/4-20	
	91083216		CUSHION CLAMP	

SECTION 12 - OPTIONAL EQUIPMENT

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-1. (91125056) INLINE BYPASS



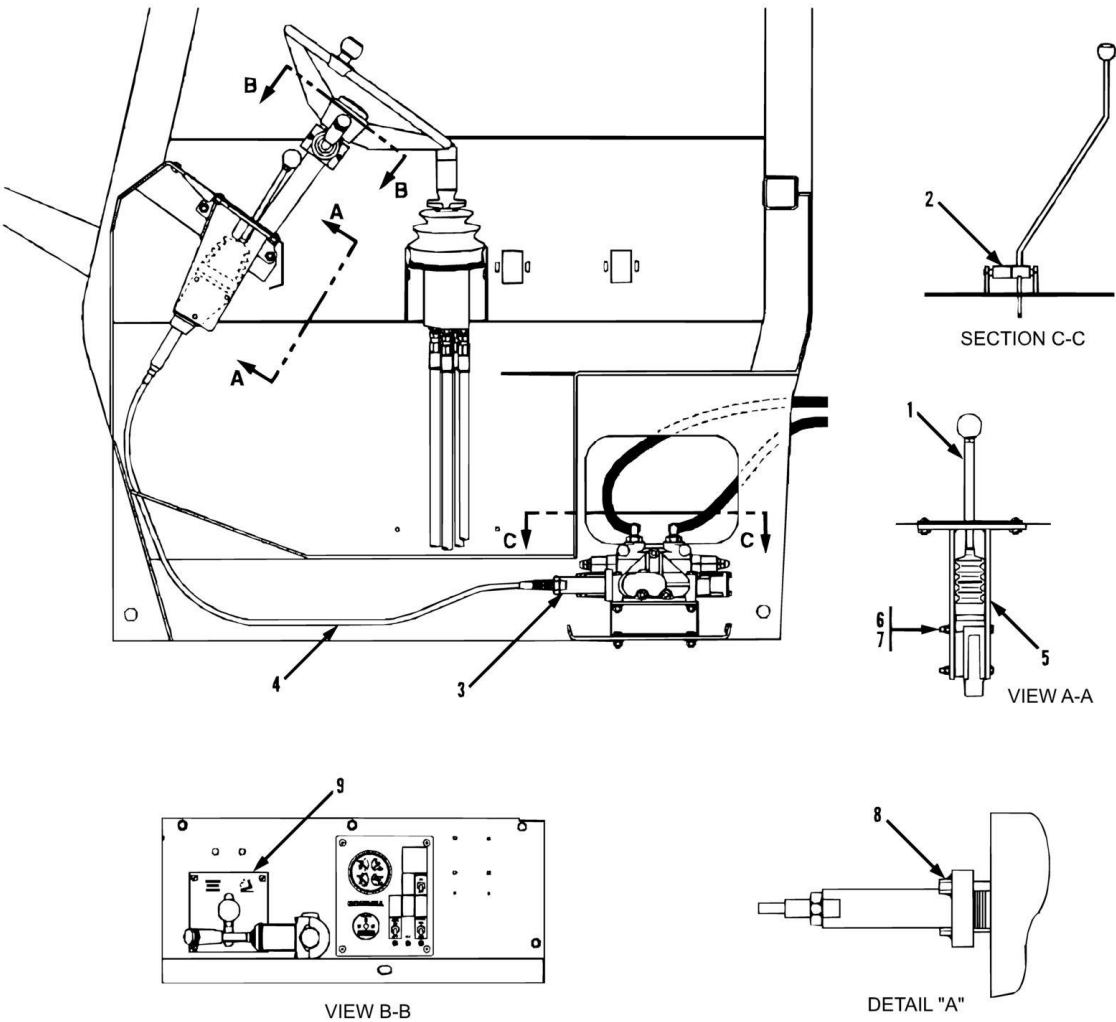
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-1. (91125056) INLINE BYPASS

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91125056	1	INLINE BYPASS (includes all items)	
1	91163191	1	INLINE VALVE	
2	88662242	1	SWIVEL NUT RUN TEE, 3/4 TUBE	
3	88662108	1	ELBOW, 90, (swivel nut)	
4	91163121	1	STRAIGHT THREAD ADAPTER, (includes o-ring)	
4	88591207	1	O-RING	
5	88662087	1	ELBOW, 45, (includes o-ring)	
5	88591207	1	O-RING	
6	88662244	1	SWIVEL NUT RUN TEE, 1IN TUBE	
7	88662110	1	ELBOW, 90, (swivel nut)	
8	84717906	1	HOSE ASSY (included in standard machine assy)	
9	84718925	1	HOSE ASSY	
10	84718926	1	HOSE ASSY	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-2. (91365001) L.H. TILT ASSEMBLY



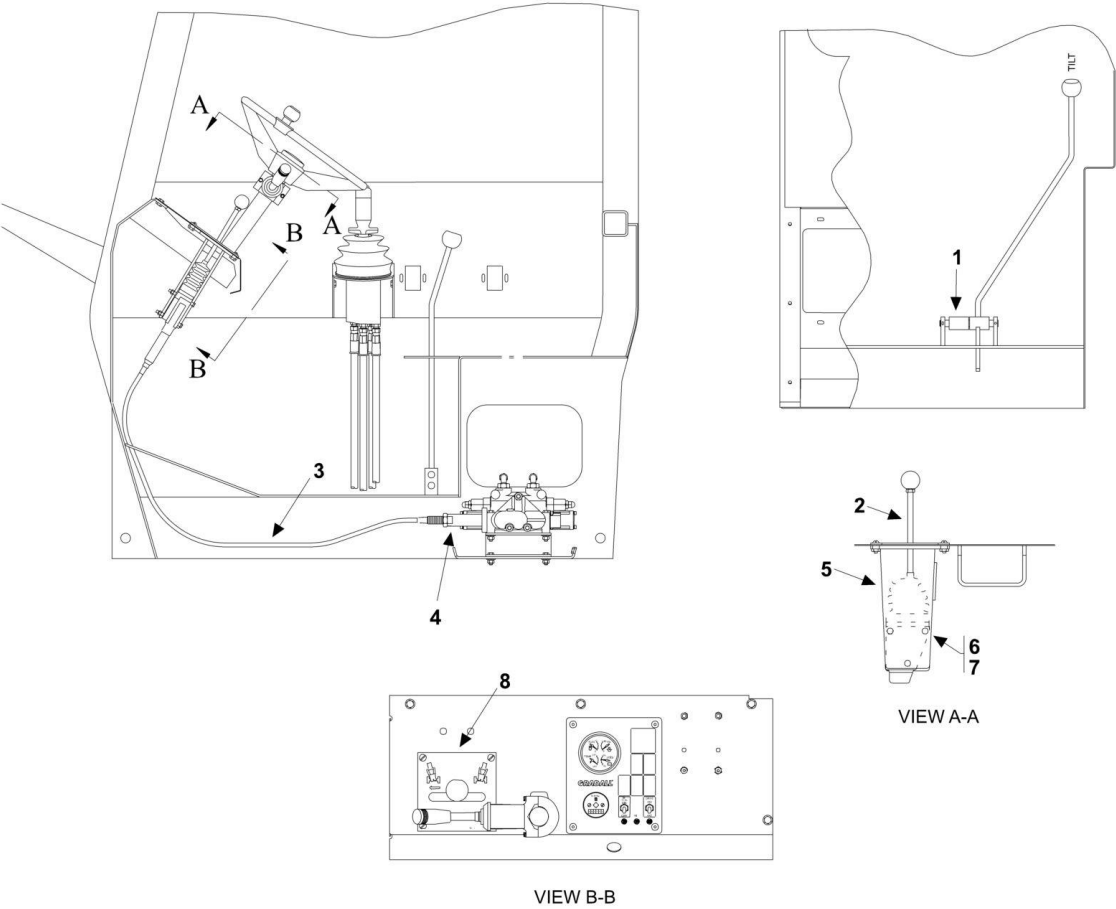
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-2. (91365001) L.H. TILT ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91365001	1	L.H. TILT ASSEMBLY	
1	91303019	1	REMOTE VALVE CONTROL	
2	91301020	1	SPACER	
3	91123062	1	CABLE ADAPTER BONNET	
4	91363043	1	CONTROL CABLE	
5	91366007	1	LEVER BRACKET	
6	88201012	3	HEX HD CAPSCREW, 1/4-20X2-3/4, GR5	
7	88521304	3	HEX LOCKNUT, 1/4-20	
8	88211044	2	SOCKET HEAD CAPSCREW, 1/4-20x1-1/2, GR8	
9	91363040	1	TILT GUIDE PLATE	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-3. (91125081) L.H. SWAY ASSEMBLY



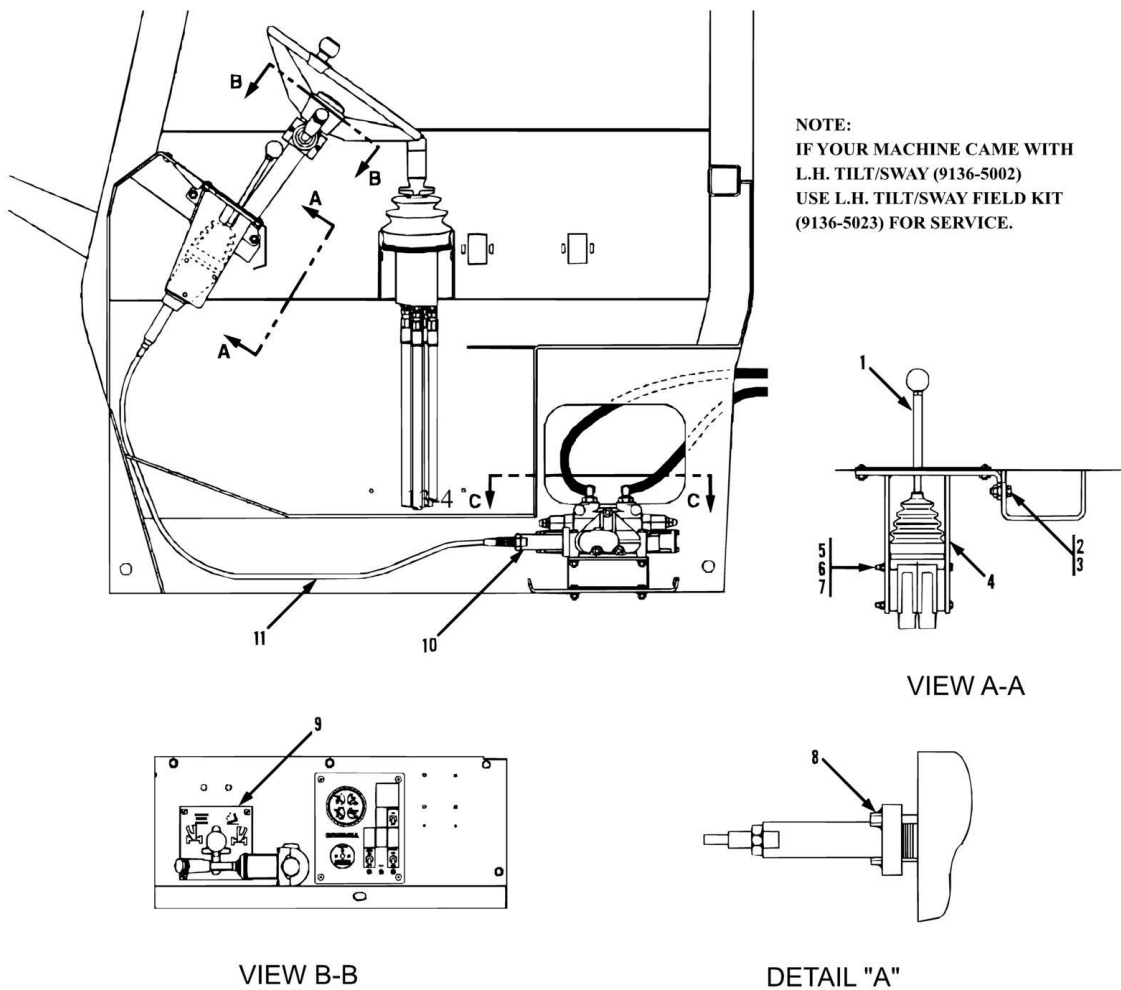
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-3. (91125081) L.H. SWAY ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91125081	Ref	L.H. SWAY ASSEMBLY (includes all items)	
1	91301020	1	SPACER	
2	91303019	1	REMOTE VALVE CONTROL	
3	91363043	1	CONTROL CABLE	
4	91123062	1	CABLE ADAPTER BONNET	
5	91146119	1	LEVER BRACKET	
6	88201012	3	HEX HEAD CAPSCREW, 1/4-20X2-3/4, GR5	
7	88521304	3	LOCKNUT, 1/4-20	
8	91143371	1	GUIDE PLATE	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-4. (91365023) L.H. TILT/ SWAY FIELD KIT



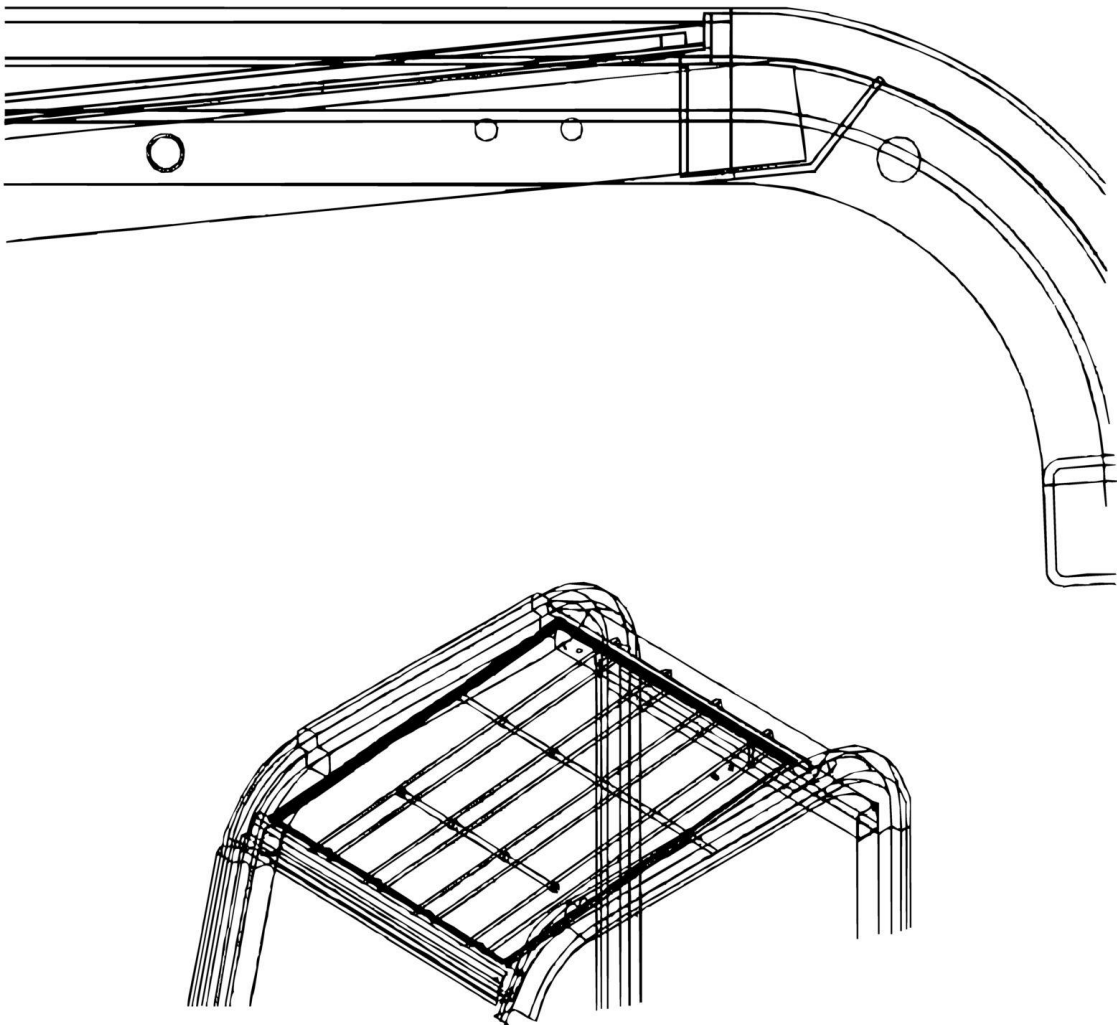
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-4. (91365023) L.H. TILT/ SWAY FIELD KIT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91365023	1	L.H. TILT/SWAY FIELD KIT (includes all items)	
	91335013	1	REMOTE VALVE CONTROL ASSY (includes items 1, 4 thru 7, & 11)	
1	91083107	1	REMOTE VALVE CONTROL	
1	91084282	1	KNOB	
1	91084359	1	BOOT	
2	88201035	2	HEX HEAD CAPSCREW, 3/8-16x1, GR5	
3	88551011	2	LOCKWASHER, 3/8	
4	91366008	1	LEVER BRACKET	
5	11002410	3	HEX HEAD CAPSCREW, 1/4-28X4-1/2	
6	88501404	3	HEX JAM NUT, 1/4-28	
7	88551009	3	LOCKWASHER, 1/4	
8	88211044	4	SOCKET HEAD CAPSCREW, 1/4-20x1-1/2, GR8	
9	91363041	1	TILT/SWAY GUIDE PLATE	
10	91123062	2	CABLE ADAPTER BONNET	
11	91363043	2	CONTROL CABLE	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-5. (91363019) OVERHEAD WINDOW



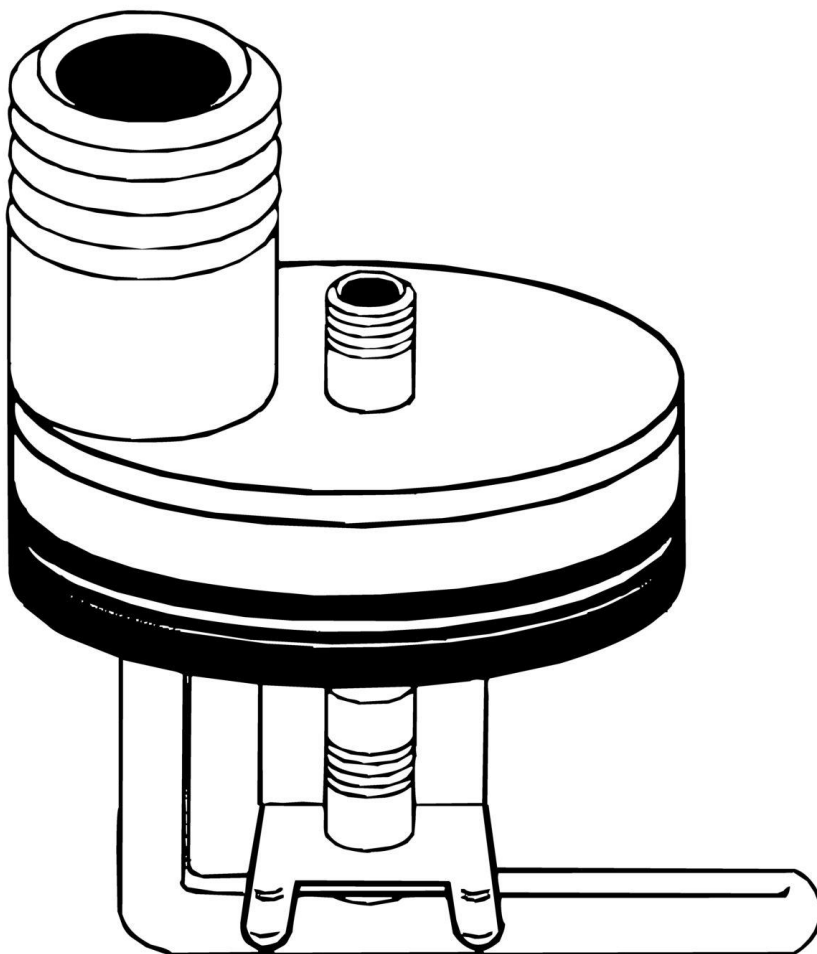
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-5. (91363019) OVERHEAD WINDOW

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	9136-3019	1	OVERHEAD WINDOW	

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FIGURE 12-6. (91043353) ENGINE BLOCK HEATER



REPLACES FROST PLUG ON RIGHT SIDE OF ENGINE.

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-6. (91043353) ENGINE BLOCK HEATER

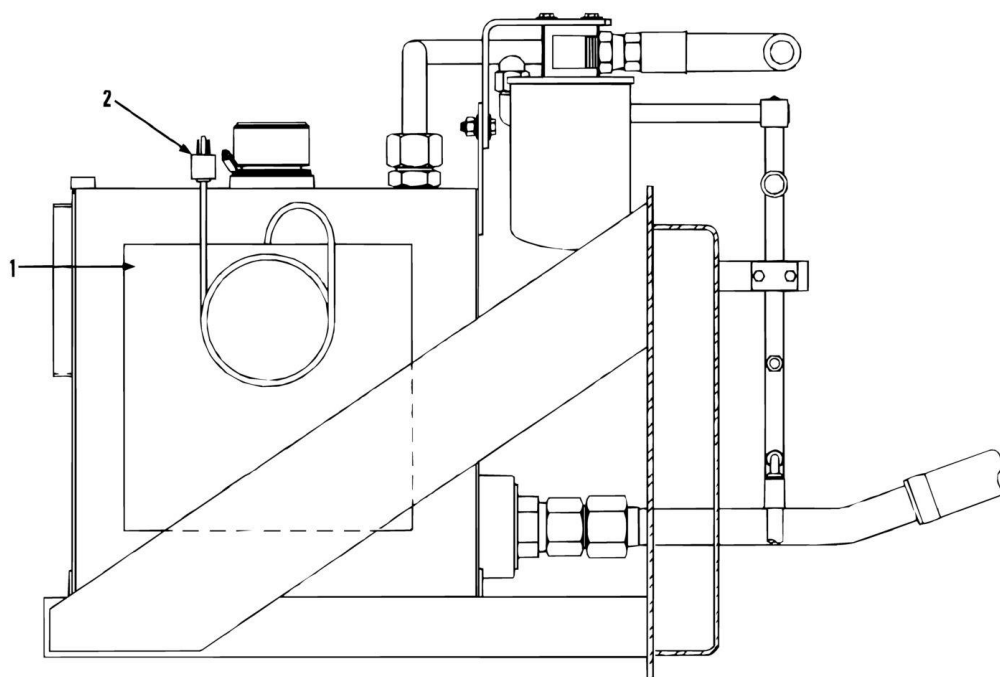
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	9104-3353	1	BLOCK HEATER	

SECTION 12 - OPTIONAL EQUIPMENT

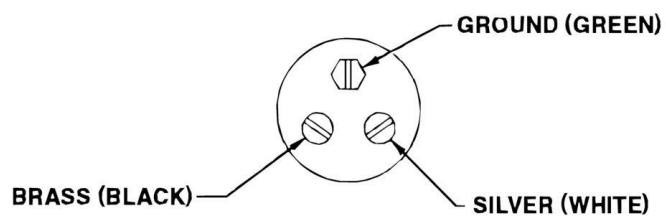
FIGURE 12-7. (91085073) HYDRAULIC RESERVOIR HEATER INSTALLATION



1. INSTALL BLANKET AFTER PAINT ONLY.
2. BLANKET TO BE INSTALLED ON HYDRAULIC TANK WALL, BETWEEN HYDRAULIC TANK AND FUEL TANK.
3. POSITION BLANKET AS CLOSE TO CENTER OF TANK AS POSSIBLE.
4. STOW AWAY ELECTRICAL CORD BETWEEN TANKS.



SECTION VIEW THRU FRAME SHOWING INSIDE WALL OF HYDRAULIC TANK



SECTION 12 - OPTIONAL EQUIPMENT

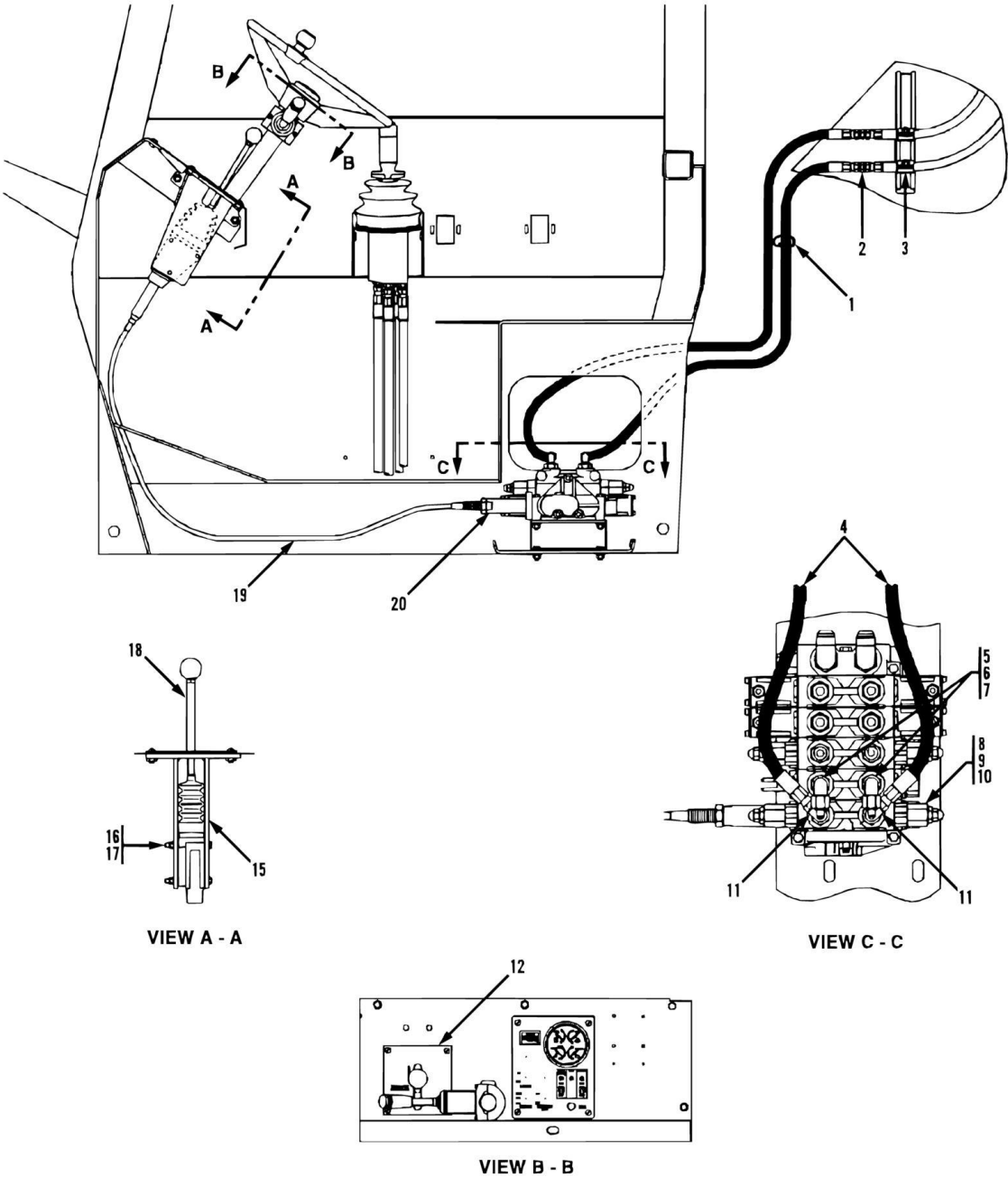
FIGURE 12-7. (91085073) HYDRAULIC RESERVOIR HEATER INSTALLATION

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085073	1	HYDRAULIC RESERVOIR HEATER (includes all items)	
1	91083574	1	HEATING BLANKET	
2	91083430	1	PLUG	

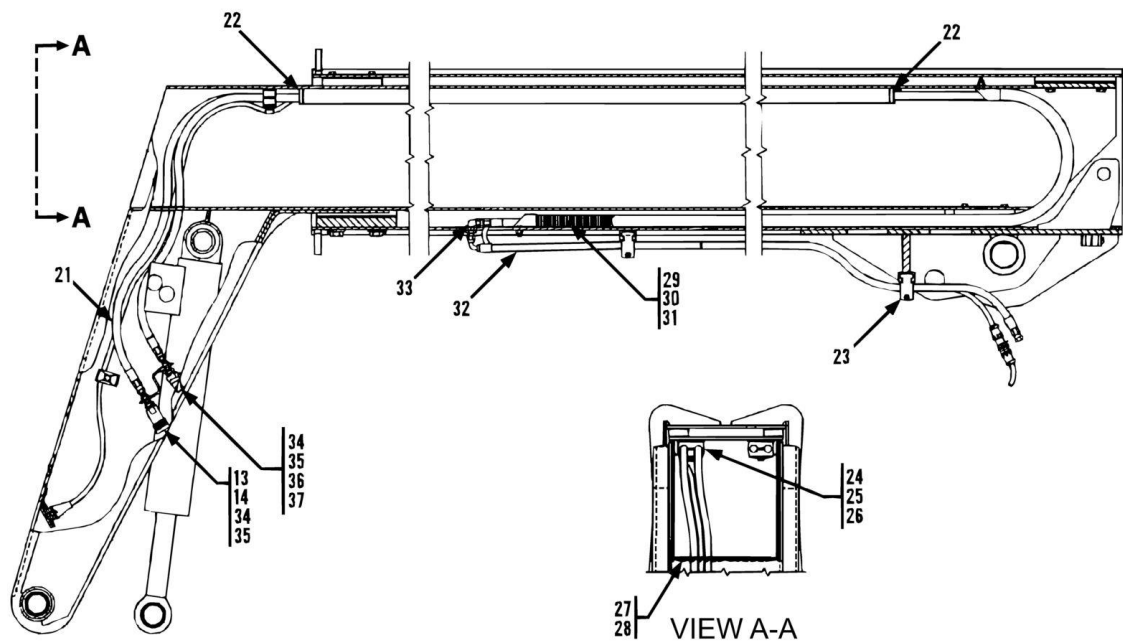
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-8. (9138-5018) AUXILIARY HYDRAULICS FIELD KIT 2 SECTION BOOM ONLY

NOTE: IF YOUR MACHINE CAME WITH AUXILIARY HYDRAULICS (9108-5123)
USE AUXILIARY HYDRAULICS FIELD KIT (9138-5018) FOR SERVICE.



SECTION 12 - OPTIONAL EQUIPMENT



NOTE: IF YOUR MACHINE CAME WITH AUXILIARY HYDRAULICS (9108-5123)
USE AUXILIARY HYDRAULICS FIELD KIT (9138-5018) FOR SERVICE.

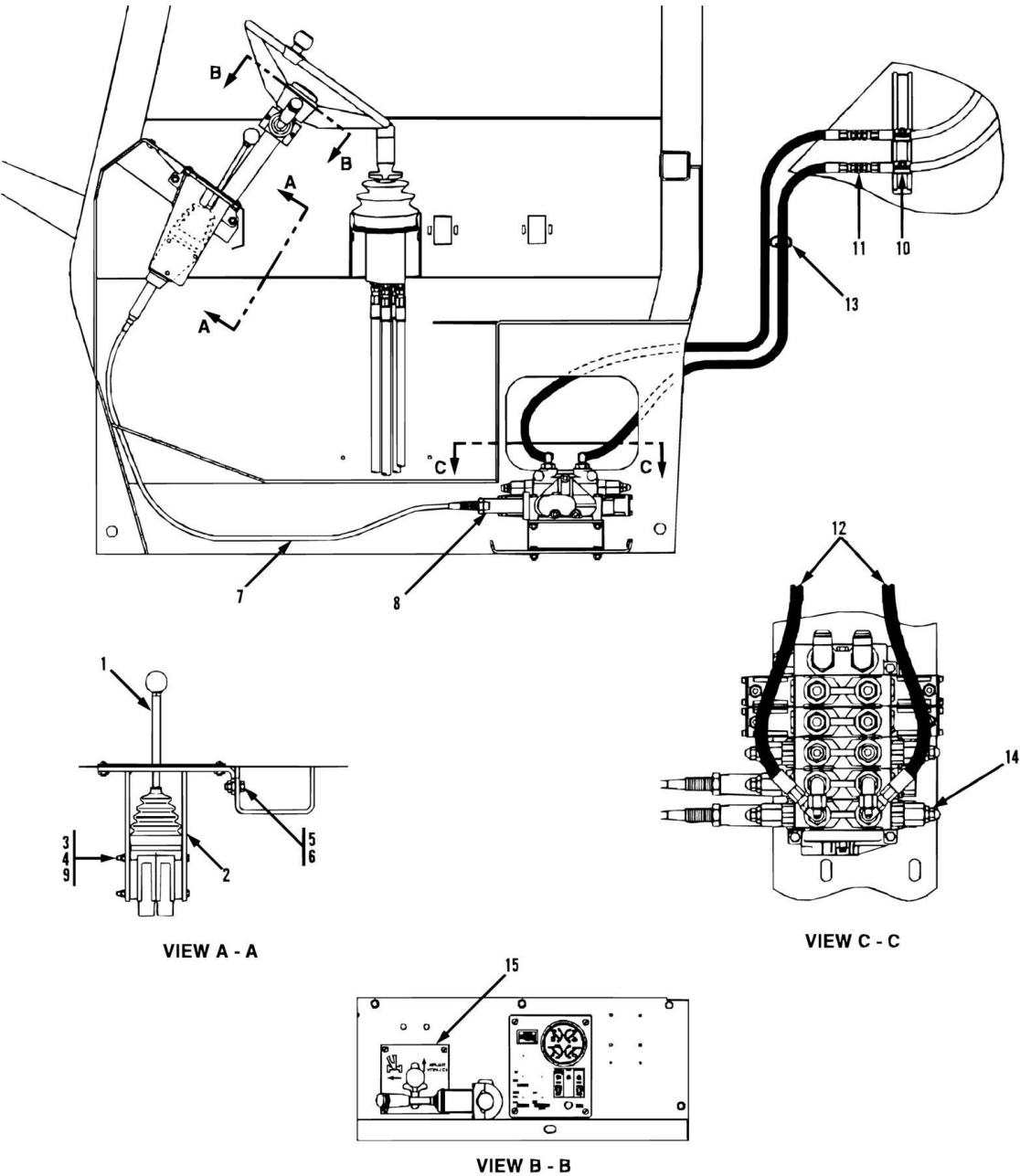
SECTION 12 - OPTIONAL EQUIPMENT

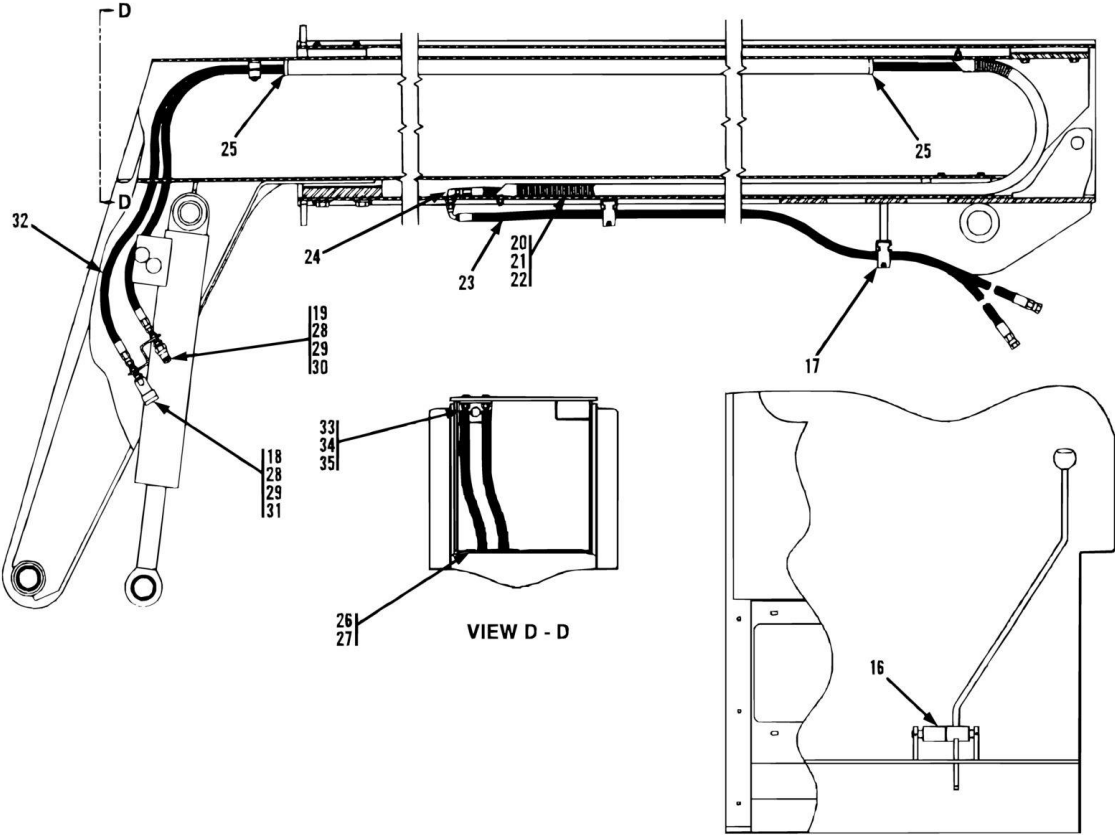
FIGURE 12-8. (91385018) AUXILIARY HYDRAULICS FIELD KIT 2 SECTION BOOM ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385018	1	AUX HYDRAULICS FIELD KIT, (2 section boom), (includes all items)	
	91345010	1	REMOTE VALVE CONTROL ASSY, (includes items 15 thru 19)	
1	90027187	10	TIE WRAP	
2	88661065	2	UNION, 1/2 TUBE	
3	90207463	2	CUSHION CLAMP, 3/4	
4	84718026	2	HOSE ASSY	
5	91083343	2	ELBOW-90, (includes o-ring)	
5	88591206	2	O-RING	
6	88661348	2	TUBE END REDUCER, 5/8X3/4	
7	88661407	2	TUBE NUT	
8	91084280	1	VALVE SECTION ASSY, (includes items 21, 22, 29, 33, two of 91084281 relief 1500 psi, and item 37 on HYDRAULIC COMPONENTS SECTION)	
9	91084203	1	STUD KIT, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
10	91084015	1	SEAL KIT, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
11	91083310	2	STRAIGHT ELBOW, 90	
12	91363045	1	GUIDE PLATE	
13	90204245	1	FEMALE HYDRAULIC COUPLER	
14	91043125	1	DUST PLUG	
15	91366007	1	LEVER BRACKET	
16	88201012	3	HEX HEAD CAPSCREW, 1/4-20X2-3/4, GR5	
17	88521304	3	HEX LOCKNUT, 1/4-20	
18	91303019	1	REMOTE VALVE CONTROL	
19	91363043	1	CONTROL CABLE	
20	91123062	1	CABLE ADAPTER BONNET	
21	84718032	2	HOSE ASSY	
22	90206194	8 in	TRIM-LOCK, (sold in 25ft lengths)	
23	90207463	4	CUSHION CLAMP, 3/4	
24	77133139	1	CLAMP SET	
25	77133140	1	COVER PLATE	
26	77133177	1	HEX HEAD CAPSCREW, 5/16-18X1-3/8	
27	14402248	AR	3M-ADHESIVE	
28	90206199	28 in	TRIM-LOCK, (sold in 25ft lengths)	
29	91083290	1	HOSE CARRIER	
30	88411037	4	ROUND HEAD CARRIAGE BOLT, 5/16-18X1	
31	88521205	4	HEX LOCKNUT, 5/16-18	
32	84717563	2	HOSE ASSY	
33	90027179	2	ELBOW, 90	
34	91123061	2	BULK HEAD FITTING	
35	88712305	2	REDUCING BUSHINGS, 1/2X1/4	
36	90204244	1	MALE HYDRAULIC COUPLER	
37	91043126	1	DUST CAP	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-9. (9108-5124) AUXILIARY HYDRAULICS AND L.H. SWAY ASSY 2 SECTION BOOM ONLY





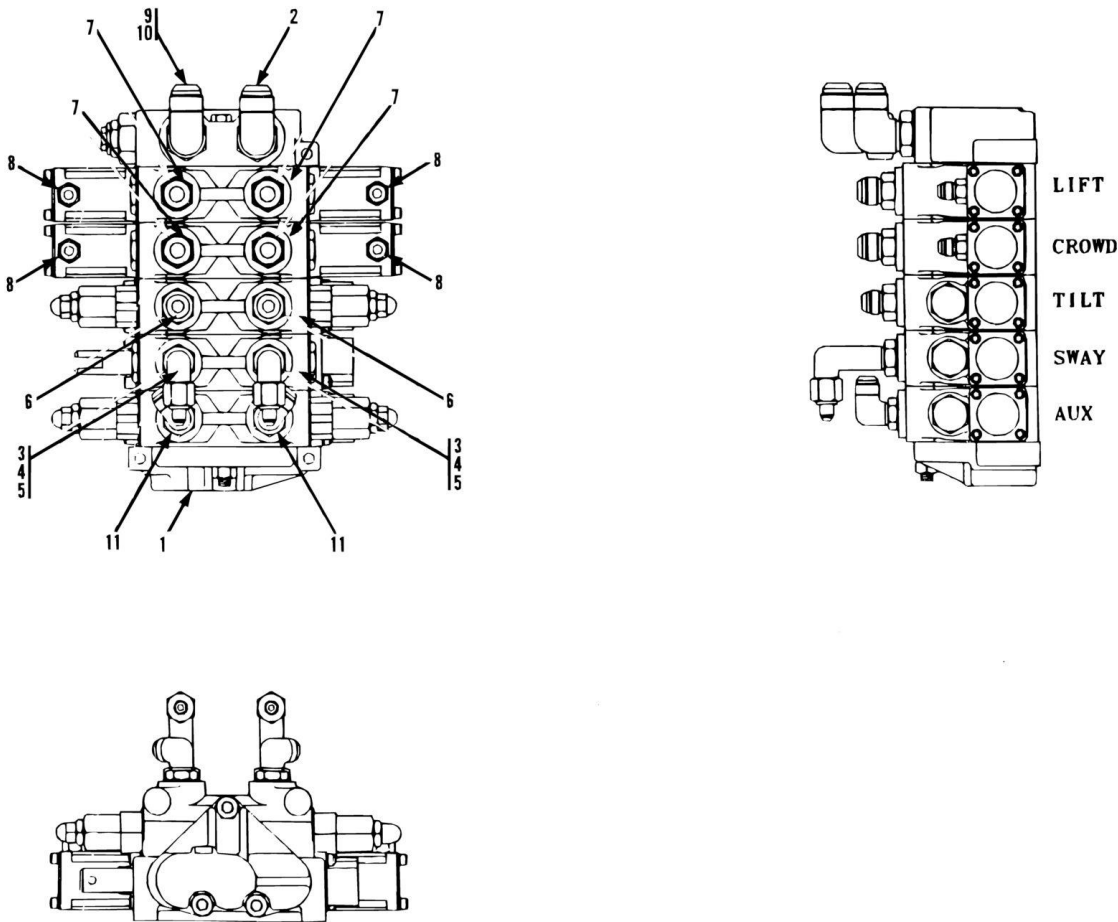
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-9. (91085124) AUXILIARY HYDRAULICS AND L.H. SWAY ASSY 2 SECTION BOOM ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085124	1	AUX HYD AND L.H. SWAY ASSY (includes all items)	
1	91083107	1	REMOTE VALVE CONTROL	
1	91084282	1	KNOB	
1	91084359	1	BOOT	
2	91366008	1	LEVER BRACKET	
3	11002410	3	HEX HD CAPSCREW, 1/4-28X4-1/2	
4	88501404	3	HEX NUT, 1/4-28	
5	88201035	2	HEX HD CAPSCREW, 3/8-16X1, GR5	
6	88551011	2	LOCKWASHER, 3/8	
7	91363043	2	CONTROL CABLE	
8	91123062	2	CABLE ADAPTER BONNET	
9	88551009	3	LOCKWASHER, 1/4	
10	90207463	2	CUSHION CLAMP	
11	88661065	2	UNION, 1/2 TUBE	
12	84718026	2	HOSE ASSY	
13	90027187	10	TIE WRAP	
14		Ref	MAIN CONTROL VALVE ASSY (See (91085129) MAIN CONTROL VALVE ASSY for Breakdown)	
15	91363044	1	GUIDE PLATE	
16	91301020	1	SPACER	
17	90207463	4	CUSHION CLAMP	
18	91043125	1	DUST PLUG	
19	91043126	1	DUST CAP	
20	91083290	1	HOSE CARRIER	
21	88411037	4	CARR BOLT, 5/16-18X1	
22	88521205	4	LOCKNUT, 5/16-18	
23	84717563	2	HOSE ASSY	
24	90027179	2	ELBOW, 90	
25	90206194	AR	TRIM LOK	
26	14402248	AR	3M	
27	90206199	AR	TRIM LOK	
28	91123061	2	BULKHEAD FITTING	
29	88712305	2	PIPE BUSHING	
30	90204244	1	MALE HYDRAULIC COUPLER	
31	90204245	1	FEMALE HYDRAULIC COUPLER	
32	84718032	2	HOSE ASSY	
33	77133139	1	CLAMP SET	
34	77133140	1	COVER PLATE	
35	77133177	1	HEX HD CAPSCREW, 5/16-18X1-3/8	

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FIGURE 12-10. (91085129) MAIN CONTROL VALVE ASSY



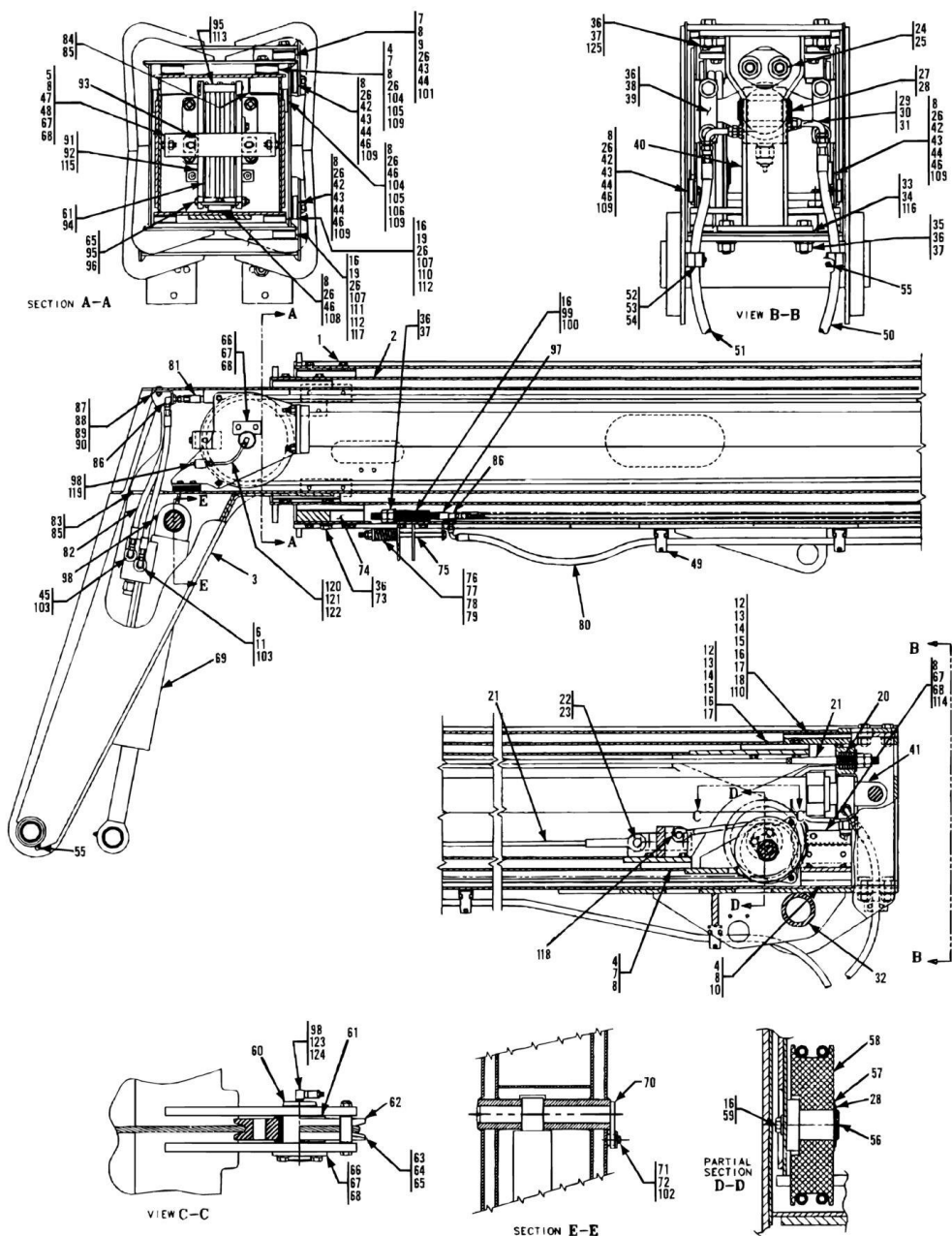
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-10. (91085129) MAIN CONTROL VALVE ASSY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91085129	1	MAIN CONTROL VALVE ASSY	
		Ref	MAIN CONTROL VALVE (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662067	1	ELBOW, 90, (includes o-ring)	
2	88591207	1	O-RING	
3	91083343	2	LONG ELBOW, 90	
4	88661348	2	TUBE END REDUCER, 5/8X3/4	
5	88661407	2	NUT	
6	88662019	2	CONNECTOR (includes o-ring)	
6	88591206	2	O-RING	
7	88662007	4	CONNECTOR (includes o-ring)	
7	88591206	4	O-RING	
8	88662005	4	CONNECTOR (includes o-ring)	
8	88591204	4	O-RING	
9	88662008	1	CONNECTOR (includes o-ring)	
9	88591207	1	O-RING	
10	88662108	1	ELBOW, 90, (swivel nut)	
11	91083310	2	STR THD ELBOW, 90	

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FIGURE 12-11. (91385002) 3 SECTION BOOM ASSEMBLY



NOTE: ADD BEARING PAD SHIMS & SPACERS AS REQUIRED TO SHIM BOOM TO WITHIN 1/16" OF A TIGHT FIT. AMOUNTS OF SHIMS CAN VARY AT EACH SHIM POINT. WHENEVER A SHIM IS USED WITH A PAD, A SPACER MUST BE INSERTED BETWEEN PAD AND SHIM. NO PADS SHALL SIT DIRECTLY ON SLOTTED SURFACE OF SHIMS.

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-11. (91385002) 3 SECTION BOOM ASSEMBLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385002	1	3 SECTION BOOM ASSY	
1	91086140	1	BOOM WELDMENT (1st)	
2	91086141	1	BOOM WELDMENT (2nd)	
3	91086142	1	BOOM WELDMENT (3rd)	
4	91123019	6	BEARING PAD, 5/8x6IN	
5	91121122	1	GUIDE BAR	
6	91053426	1	CONNECTOR (includes item 103)	
7	88201535	8	HEX HD CAPSCREW, 3/8-24x1-1/4, GR5 (lubricate and torque to 32-37 ft lbs)	
8	88561109	42	FLAT WASHER, 3/8	
9	88201536	AR	HEX HD CAPSCREW, 3/8-24x1-1/2, GR5 (lubricate and torque to 32-37 ft lbs)	
10	88201538	4	HEX HD CAPSCREW, 3/8-24x2IN, GR5	
11	88662105	1	SWIVEL NUT, 90, ELBOW	
12	91083297	4	BEARING PAD, 1/2x8IN	
13	91081447	4	SPACER (.132 thick)	
14	91121081	6	SHIM (.06 thick)	
15	88201565	6	HEX HD CAPSCREW, 1/2-20x1-1/4, GR5 (lubricate and torque to 68-78 ft lbs)	
16	90027471	21	HARDENED FLAT WASHER, 1/2 (lubricate and torque to 68-78 ft lbs)	
17	88201566	AR	HEX HD CAPSCREW, 1/2-20x1-1/2, GR5 (lubricate and torque to 68-78 ft lbs)	
18	88201563	AR	HEX HD CAPSCREW, 1/2-20x7/8, GR5 (lubricate and torque to 68-78 ft lbs)	
19	88201564	AR	HEX HD CAPSCREW, 1/2-20x1IN, GR5 (lubricate and torque to 68-78 ft lbs)	
20	91123018	2	SPRING	
21	91083431	2	EXTENSION CABLE, 1/2	
22	91121080	1	EXTENSION CABLE PIN	
23	88581310	2	RETAINING RING EXTERNAL	
24	91121079	2	SPECIAL WASHER, 7/8 (torque lock nut to 100-110 ft/lbs Use no loctite on cable nuts)	
25	88501314	4	HEX NUT, 7/8-14 (torque lock nuts to 100-110 ft/lbs Use no loctite on cable nuts)	
26	14404793	AR	UNION 76 MEGAPLEX GREASE	
27	91121041	1	CROWD CYL PIN	
28	88581320	3	RETAINING RING EXTERNAL	
29	86561308	2	ADAPTER	
30	91123022	2	ADAPTER (includes item 31)	
31	88591205	1	O-RING	
32	91083298	2	BUSHING	
33	91121023	2	SHIM	
34	91121024	2	SHIM	
35	83201039	4	HEX HD CAPSCREW, 3/4-10x2-1/2, GR8	
36	90027473	15	HARDENED WASHER, 3/4 (torque lock nut to 100-110 ft/lbs Use no loctite on cable nuts)	
37	88501012	10	HEAVY HEX NUT, 3/4-10 (lubricate and torque to 340-365 ft lbs) (torque lock nut to 100-110 ft/lbs Use no loctite on cable nuts)	
38	91121066	2	CROWD CYLINDER RETAINER	
39	83201017	4	HEX HD CAPSCREW, 3/4-10x2-3/4, GR8 (lubricate and torque to 340-365 ft lbs)	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
40	91126010	1	CROWD CYLINDER MOUNTING BRACKET	
41	91085080	1	CROWD CYLINDER (SN 0277001 through 0277154)	
41	91123152	AR	SEAL KIT, (not shown)	
41	91385016	1	CROWD CYLINDER -FOR SERVICE ONLY (SN 0277155 to Present)	
41	91333029	AR	SEAL KIT, (not shown)	
42	91033186	8	BEARING PAD, 1/2x6IN	
43	91031236	10	SPACER	
44	90205870	24	SHIM	
45	91053450	1	FITTING (includes item 103)	
46	88201532	22	HEX HD CAPSCREW, 3/8-24x3/4, GR5 (lubricate and torque to 32-37 ft lbs)	
47	88501006	2	HEX NUT, 3/8-16	
48	91123136	2	BRASS HEX HD CAPSCREW, 3/8-16x1IN	
49	90207463	8	CUSHION CLAMP, 3/4IN ID	
50	84717863	1	HOSE ASSEMBLY	
51	84717862	1	HOSE ASSEMBLY	
52	77133893	2	STAUFF CLAMP SET	
53	77133052	2	STAUFF COVER PLATE	
54	77133209	4	HEX HD CAPSCREW, 1/4-20X1-3/8	
55	88671001	4	LUBE FITTING, 1/8	
56	91081326	1	HOSE REEL SUPPORT	
57	90203040	1	THRUST WASHER	
58	91123016	1	HOSE SHEAVE	
59	83201123	3	HEX HD CAPSCREW, 1/2-13x1IN, GR8 (lubricate and torque to 68-78 ft lbs)	
60	91121197	1	RETRACT SHEAVE PIN	
61	91041451	5	THRUST WASHER	
62	91125031	1	RET SHEAVE ASSEMBLY	
63	91121056	2	RETAINER ROLLER	
64	88201043	2	HEX HD CAPSCREW, 3/8-16x3IN, GR5	
65	88521306	3	THIN LOCKNUT, 3/8-16	
66	86641158	2	PIN KEEPER	
67	88201034	8	HEX HD CAPSCREW, 3/8-16X7/8, GR5	
68	88551011	8	LOCKWASHER, 3/8	
69	91083513	1	TILT CYLINDER	
70	91146052	1	PIN WELDMENT	
71	88201065	1	HEX HD CAPSCREW, 1/2-13x1IN, GR5	
72	83621283	1	SPECIAL WASHER	
73	88201608	2	HEX HD CAPSCREW, 3/4-16x1-1/2, GR5	
74	91121022	1	BEARING PLATE	
75	91126008	2	HOSE TAKE-UP WELD	
76	91123054	2	COMPRESSION SPRING	
77	91121134	2	SPRING RETAINER	
78	88501008	2	HEX NUT, 1/2-13	
79	88501108	2	HEX JAM NUT, 1/2-13	
80	84718280	2	HOSE ASSEMBLY	
81	84718281	2	HOSE ASSEMBLY	
82	84717896	2	HOSE ASSEMBLY	
83	90206199		TRIM-LOCK, 13IN	
84	90206194		TRIM-LOCK, 3.5FT	
85	14402248	AR	3M-ADHESIVE	

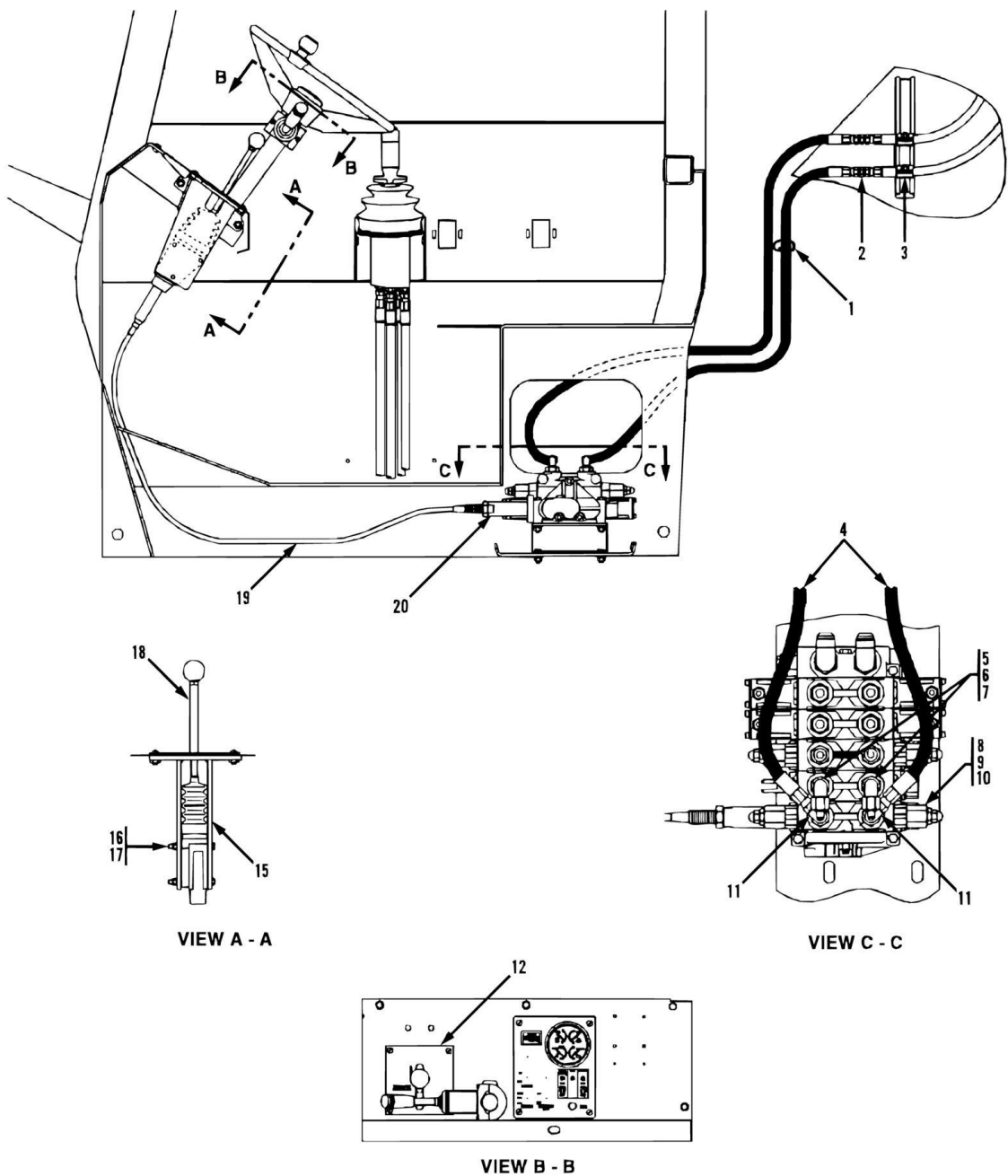
SECTION 12 - OPTIONAL EQUIPMENT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
86	90027179	4	90, BULKHEAD FITTING	
87	91121125	1	BULKHEAD BRACKET	
88	88201020	2	HEX HEAD CAPSCREW, 5/16-18x1IN, GR5	
89	88551010	2	LOCKWASHER, 5/16	
90	88501005	2	HEX NUT, 5/16-18	
91	91126009	1	EXTEND CABLE BRACKET	
92	88521208	4	HEAVY LOCKNUT, 1/2-13	
93	91121196	1	EXTEND CABLE PIN	
94	91125030	2	EXTEND SHEAVE ASSEMBLY	
95	91121045	2	RETAINER ROLLER	
96	83201073	1	HEX HEAD CAPSCREW, 3/8-16x4-1/2, GR8	
97	91083432	1	RETRACTION CABLE (includes item 118)	
98	14404595	AR	UNION 76 MEGAPLEX GREASE	
99	91081087	1	CABLE ADJUSTMENT BLOCK (lubricate and torque to 68-78 ft lbs)	
100	83201026	4	HEX HD CAPSCREW, 1/2-13x1-1/2, GR8 (lubricate and torque to 68-78 ft lbs)	
101	91033185	2	BEARING PAD, 3/4x6IN	
102	88551013	1	LOCKWASHER, 1/2	
103	88591207	2	O-RING	
104	91121083	4	SPACER	
105	91121082	8	SHIM	
106	91123021	2	BEARING PAD, 1/2-x6IN	
107	91083063	4	BEARING PAD, 5/8x8IN	
108	91033187	1	BEARING PAD, 5/8x3-1/4	
109	88201534	4	HEX HD CAPSCREW, 3/8-24x1IN, GR5 (lubricate and torque to 32-37 ft lbs)	
110	88201562	6	HEX HD CAPSCREW, 1/2-20x3/4, GR5 (lubricate and torque to 68-78 ft lbs)	
111	88201568	4	HEX HEAD CAPSCREW, 1/2-20x2IN, GR5 (lubricate and torque to 68-78 ft lbs)	
112	91081172	4	SPACER	
113	88201046	1	HEX HEAD CAPSCREW, 3/8-16x3-3/4, GR5	
114	91126071	1	HOSE GUARD	
115	88561111	4	WASHER, 1/2	
116	91121157	2	SHIM	
117	91081171	2	SHIM	
118	88631337	1	COTTER PIN, 3/16x1-1/2	
119	88671002	2	LUBE FITTING	
120	86881276	2	90, TUBE FITTING	
121	86881273	2	STRAIGHT TUBE FITTING	
122	72088049	20 in	NYLON TUB FITTING, 1/4	
123	91033445	1	LUBE FITTING	
124	88712011	1	90, ELBOW	
125	83201038	4	HEX HD CAPSCREW, 3/4-10x2-1/4, GR8	

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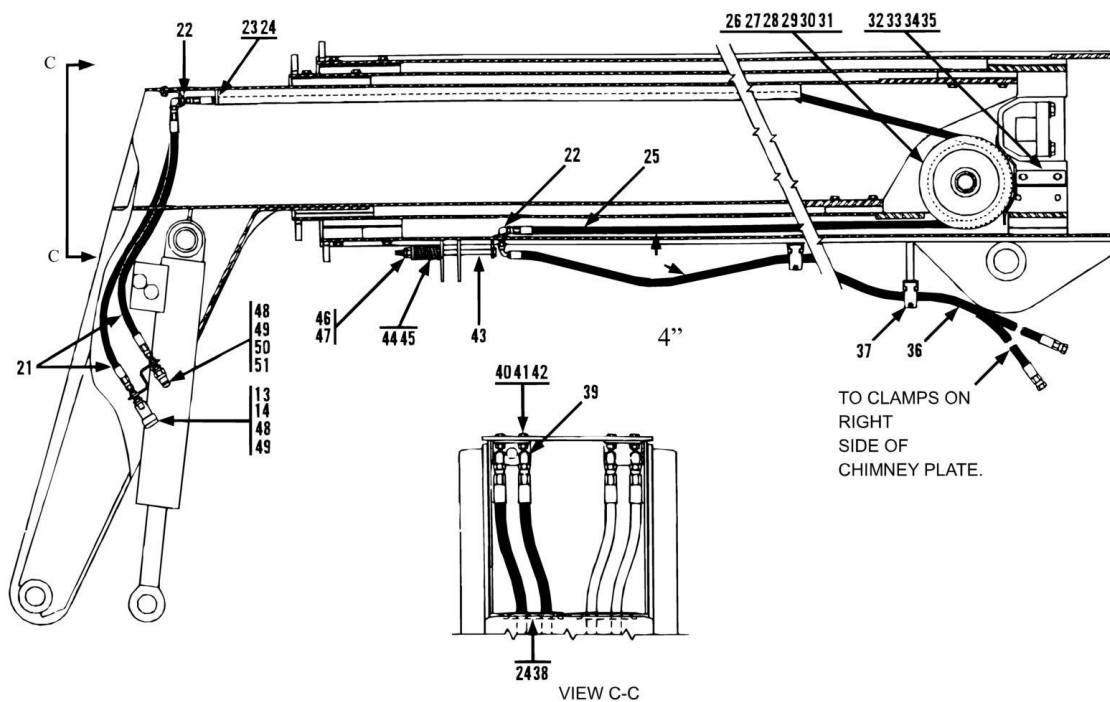
FIGURE 12-12. (9138-5019) AUXILIARY HYDRAULICS FIELD KIT 3 SECTION BOOM

NOTE: IF YOUR MACHINE CAME WITH AUXILIARY HYDRAULICS ASSY (9108-5126)
USE AUXILIARY HYDRAULICS FIELD KIT (9138-5019) FOR SERVICE.



SECTION 12 - OPTIONAL EQUIPMENT

NOTE: IF YOUR MACHINE CAME WITH AUXILIARY HYDRAULICS ASSY (9108-5126)
USE AUXILIARY HYDRAULICS FIELD KIT (9138-5019) FOR SERVICE.



SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-12. (91385019) AUXILIARY HYDRAULICS FIELD KIT 3 SECTION BOOM

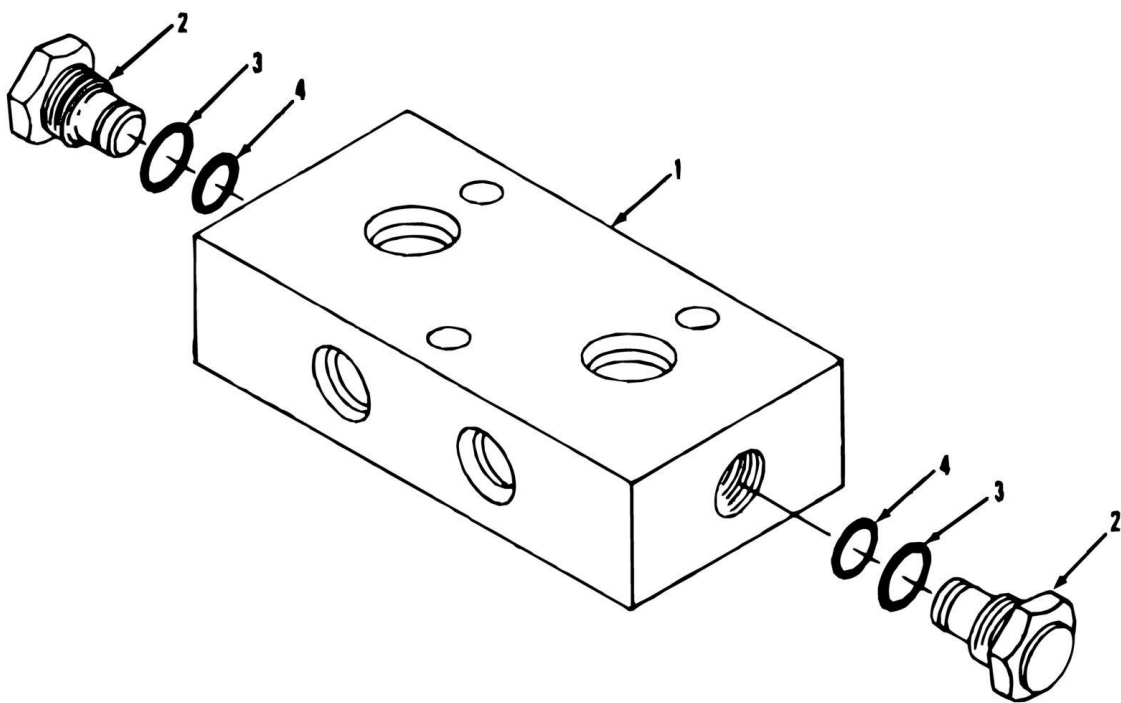
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385019	1	AUX HYDRAULICS FIELD KIT, (3 section boom, include all items)	
	91345010	1	REMOTE VALVE CONTROL ASSY, (includes items 15 thru 19)	
1	90027187	10	TIE WRAP	
2	88661065	2	UNION 1/2 TUBE	
3	90207463	2	CUSHION CLAMP, 3/4	
4	84718026	2	HOSE ASSY	
5	91083343	2	LONG ELBOW, 90	
6	88661348	2	TUBE END REDUCER	
7	88661407	2	TUBE NUT	
8	91084280	1	VALVE SECTION ASSY, (includes items 21, 22, 29, 33, two of 91084281 relief - 1500 psi, and item 37 HYDRAULIC COMPONENTS SECTION)	
9	91084203	1	STUD KIT, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
10	91084015	1	SEAL KIT, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
11	91083310	2	ELBOW, 90	
12	91363045	1	GUIDE PLATE	
13	90204245	1	FEMALE HYDRAULIC COUPLER	
14	91043125	1	DUST PLUG	
15	91366007	1	LEVER BRACKET	
16	88201012	3	HEX HD CAPSCREW, 1/4-20X2-3/4, GR5	
17	88521304	3	HEX LOCKNUT, 1/4-20	
18	91303019	1	REMOTE VALVE CONTROL	
19	91363043	1	CONTROL CABLE	
20	91123062	1	CABLE ADAPTER BONNET	
21	84718041	2	HOSE ASSY	
22	90027179	4	BULKHEAD FITTING, 90	
23	90206194	AR	TRIM-LOK	
24	14402248	AR	3M ADHESIVE	
25	84718281	2	HOSE ASSY	
26	91123016	1	AUX HOSE SHEAVE	
27	91081326	1	HOSE REEL SUPPORT	
28	90203040	1	THRUST WASHER	
29	88581320	1	RETAINING RING EXT	
30	83201123	3	HEX HD CAPSCREW, 1/2-13X1	
31	90027471	3	HARDENED FLATWASHER, 1/2	
32	91126080	1	HOSE GUARD	
33	88201034	2	HEX HD CAPSCREW, 3/8-16X7/8, GR5	
34	88551011	2	LOCKWASHER, 3/8	
35	88561109	2	FLATWASHER, 3/8	
36	84718280	2	HOSE ASSY	
37	90207463	8	CUSHION CLAMP	
38	90206199	AR	TRIM-LOK, (13IN)	
39	91121125	1	BULK HEAD BRACKET	
40	88551010	2	LOCKWASHER, 5/16	
41	88201019	2	HEX HD CAPSCREW, 5/16-18X7/8, GR5	
42	88501005	2	HEX NUT, 5/16-18	
43	91126008	2	HOSE TAKE UPWELD	
44	91123054	2	COMPRESSION SPRING	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
45	91121134	2	SPRING RETAINER	
46	88501008	2	HEX NUT, 1/2-13	
47	88501108	2	HEX JAM NUT, 1/2-13	
48	91123061	2	BULK HEAD FITTING	
49	88712305	2	PIPE BUSHING, 1/2X1/4	
50	90204244	1	MALE HYDRAULIC COUPLER	
51	91043126	1	DUST CAP	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-13. (91083262) DUAL P.O. CHECK VALVE



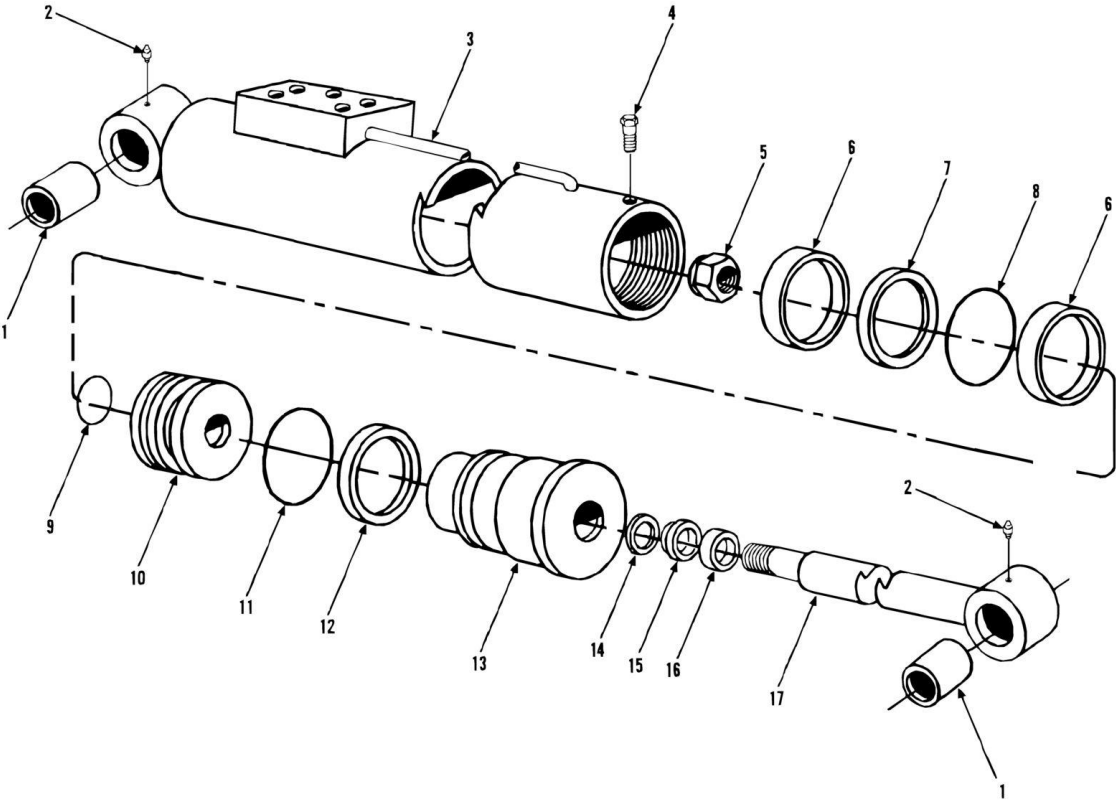
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-13. (91083262) DUAL P.O. CHECK VALVE

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91083262	1	DUAL P.O. CHECK VALVE ASSY (includes all items)	
	91044002	Ref	SEAL KIT (includes items 3 & 4)	
		Ref	BODY	
2	77133248	2	CHECK VALVE (includes items 3 & 4)	
3	91084227	2	O-RING	
4	91084228	2	O-RING	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 12-14. (91083471) SLOPE PILER CARRIAGE SWAY CYLINDER



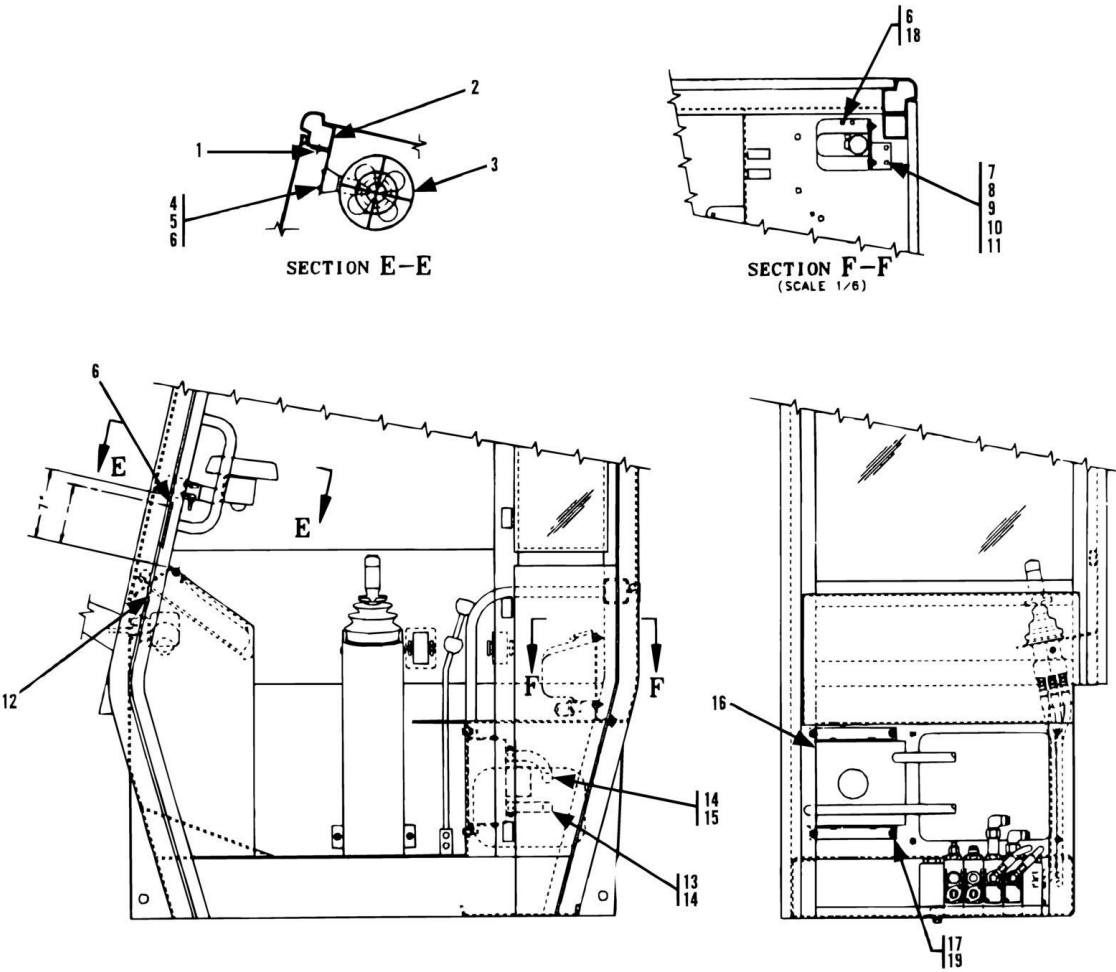
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-14. (91083471) SLOPE PILER CARRIAGE SWAY CYLINDER

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91083471	1	SLOPE PILER CARRIAGE SWAY CYLINDER ASSY (includes all items)	
	91084308	1	SEAL KIT (includes items 6 thru 9, 11, 12, & 14 thru 16)	
1	91404352	2	BUSHING	
2	91144128	2	GREASE FITTING	
3	91124083	1	CASE ASSY	
4	91144017	1	CAPSCREW, #8X32X.375	
5	91034156	1	LOCKNUT (lubricate and torque to 350-400 ft lbs)	
6	Kit	2	WEAR RING	
7	Kit	1	PISTON SEAL	
8	Kit	1	O-RING	
9	Kit	1	O-RING	
10	91124084	1	PISTON	
11	Kit	1	O-RING	
12	Kit	1	BACK-UP RING	
13	91124085	1	CYLINDER HEAD	
14	Kit	1	STEP SEAL	
15	Kit	1	U-CUP	
16	Kit	1	WIPER	
17	91124086	1	ROD ASSY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 12-15. (91345003) CAB ENCLOSURE INSTALLATION (SN 0277001 to Present)



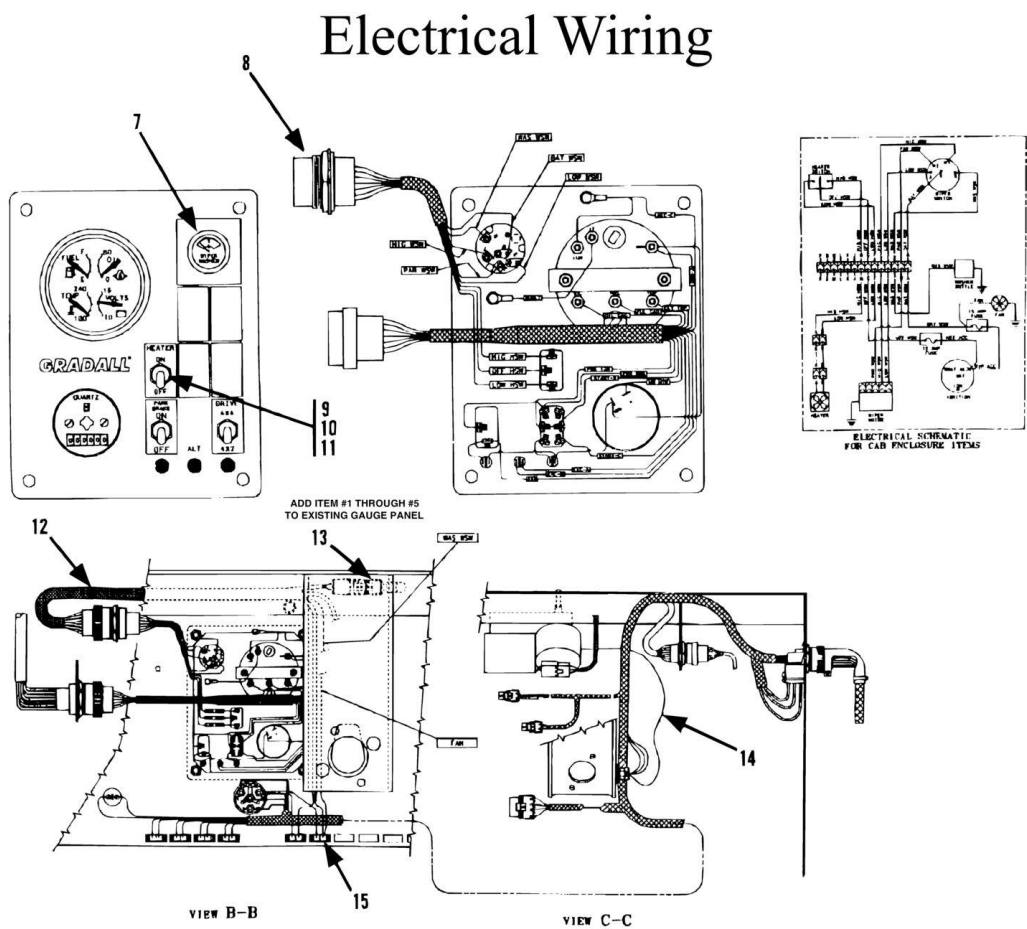
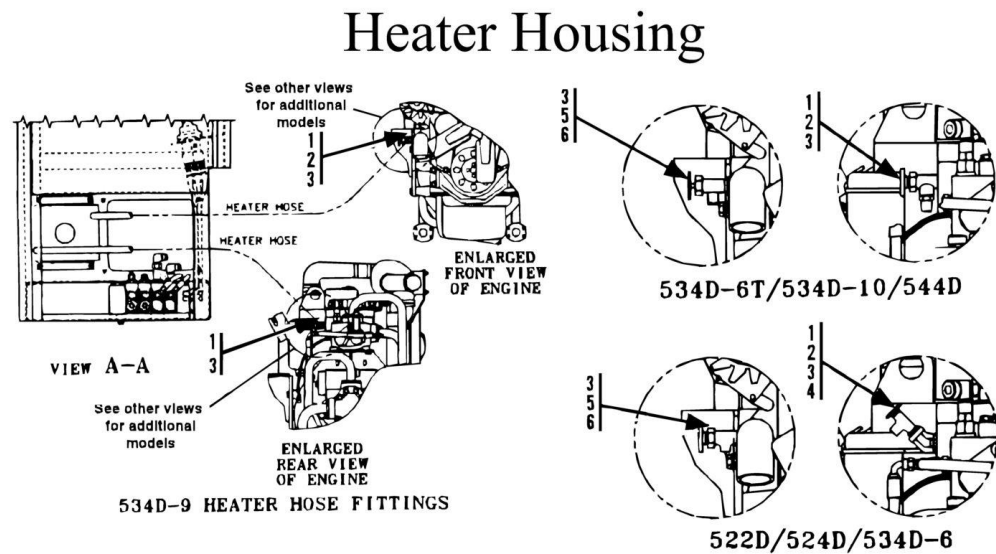
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-15. (91345003) CAB ENCLOSURE INSTALLATION (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91345003	1	CAB ENCLOSURE INSTALLATION, (includes all items CAB ENCLOSURE INSTALLATION, plus 91143267 Cab Enclosure Kit)	
	91143267	1	CAB ENCLOSURE KIT,(See CAB ENCLOSURE KIT and CAB ENCLOSURE KIT - GLASS for Breakdown)	
1	90027319	2	SELF-TAPPING SCREW, 1/4-20X1	
2	91081499	1	MOUNTING ANGLE	
3	90200680	1	FAN	
4	88211030	4	HEX SOCKET HD CAPSCREW, #10-24X3/4IN, GR8	
5	77143017	4	WHIZ-LOCK NUT, #10-24	
6	90029955	3	RUBBER MOUNT	
7	88501004	6	HEX NUT, 1/4-20	
8	88561009	6	LOCKWASHER, 1/4	
9	88201003	6	HEX HD CAPSCREW, 1/4-20X3/4, GR5	
10	91146099	1	BOTTLE MOUNTING BRACKET	
11	83683085	1	WASHER BOTTLE	
12	86683480	1	BUTT CONNECTOR	
13	90206169	1	HEATER HOSE	
14	86683193	2	HOSE CLAMP	
15	91141459	1	HEATER HOSE	
16	91125106	1	HEATER ASSY, (includes the following)	
16	91043429	1	HEATER	
16	82033996	6 in	FLEX LOOM	
16	80963057	1	TOWER	
16	80963068	2	FEMALE PIN TERMINAL	
16	80963067	2	CABLE SEALS	
16	88201003	4	HEX HD CAPSCREW, 1/4-20X3/4, GR5	
16	88551009	4	LOCKWASHER, 1/4	
16	91031521	2	HEATER MOUNTING BRACKET	
17	77143006	4	WHIZ-LOCK NUT	
18	77163102	1	INSUL. FEMALE SPADE 16-14 GA	
19	77143004	4	WHIZ-LOCK SCREW	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-16. (91345003) CAB ENCLOSURE INSTALLATION (SN 0277001 to Present)



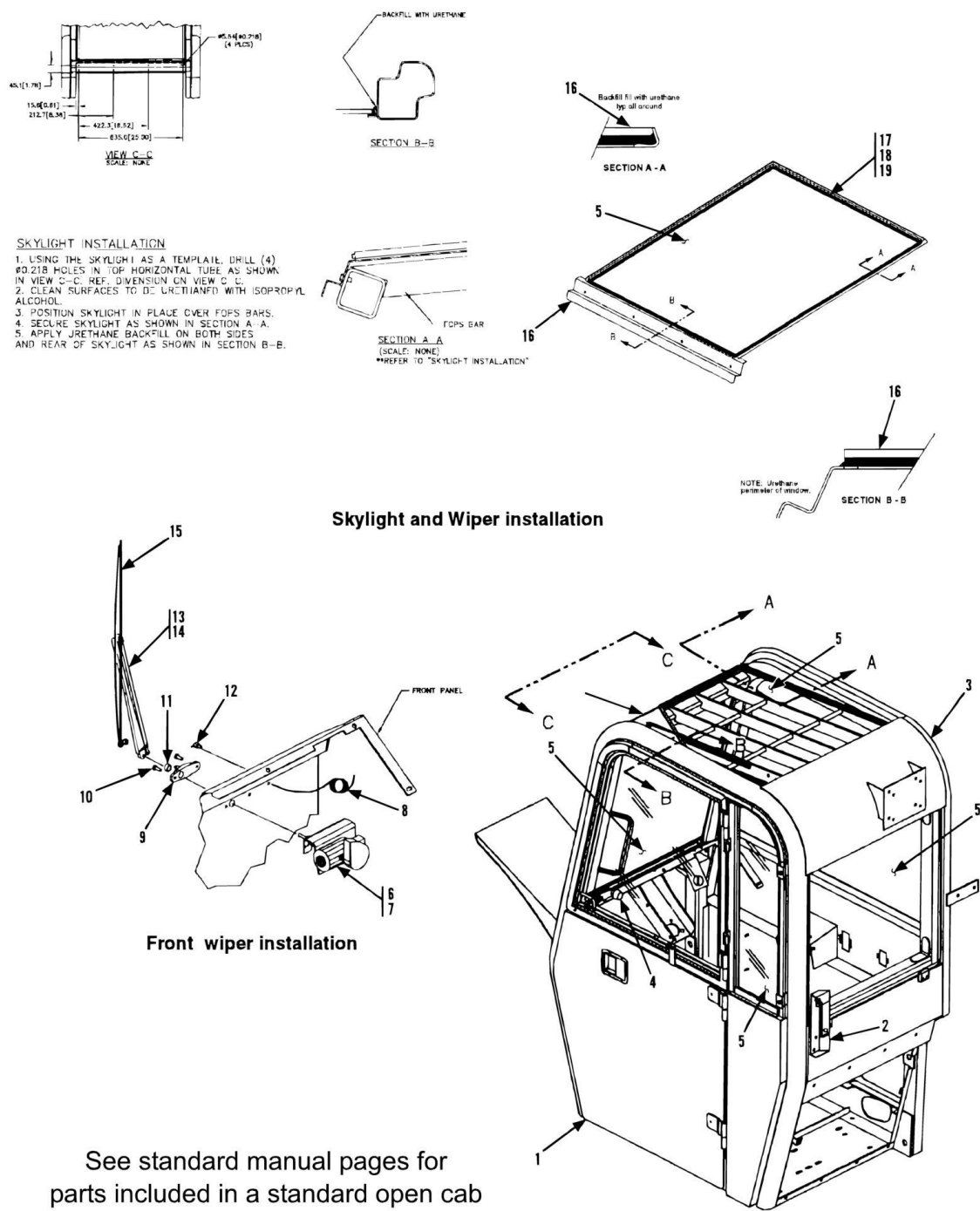
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-16. (91345003) CAB ENCLOSURE INSTALLATION (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91345003	1	CAB ENCLOSURE INSTALLATION (includes all items on CAB ENCLOSURE INSTALLATION, plus 91143267 Cab Kit)	
	91143267	1	CAB ENCLOSURE KIT (See CAB ENCLOSURE KIT and CAB ENCLOSURE KIT - GLASS for Breakdown)	
1	91083155	1	TRUCK VALVE (qty of two needed for use on the 534D-9)	
2	77383540	1	COOLANT RESTRICTOR ORIFICE	
3	86683193	2	CLAMP	
4	88712034	1	STREET ELBOW, 45, 1/2	
5	88711383	1	PIPE BUSHING, 1/2X3/8	
6	24641328	1	SHUT OFF VALVE	
7	80963101	1	WIPER AND WASHER SWITCH	
8	91143333	1	WIPER-WASHER-HEATER HARNESS	
9	77383744	1	HEATER SWITCH	
10	77383470	1	BOOT	
11	91143361	1	HEATER DECAL	
12	91133335	1	WIPER-HEATER OPTION HARNESS	
13	91123182	1	HEATER HARNESS	
14	91361018	1	JUMPER WIRE	
15	77363268	2	15-AMP FUSE	
		Ref	NOTE: QUANTITIES LISTED ARE USED PER MODEL.	
		Ref	SEE ILLUSTRATION FOR CORRECT HOSE FITTINGS USED ON DIFFERENT MODELS.	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-17. (91143267) CAB ENCLOSURE KIT (SN 0277001 to Present)



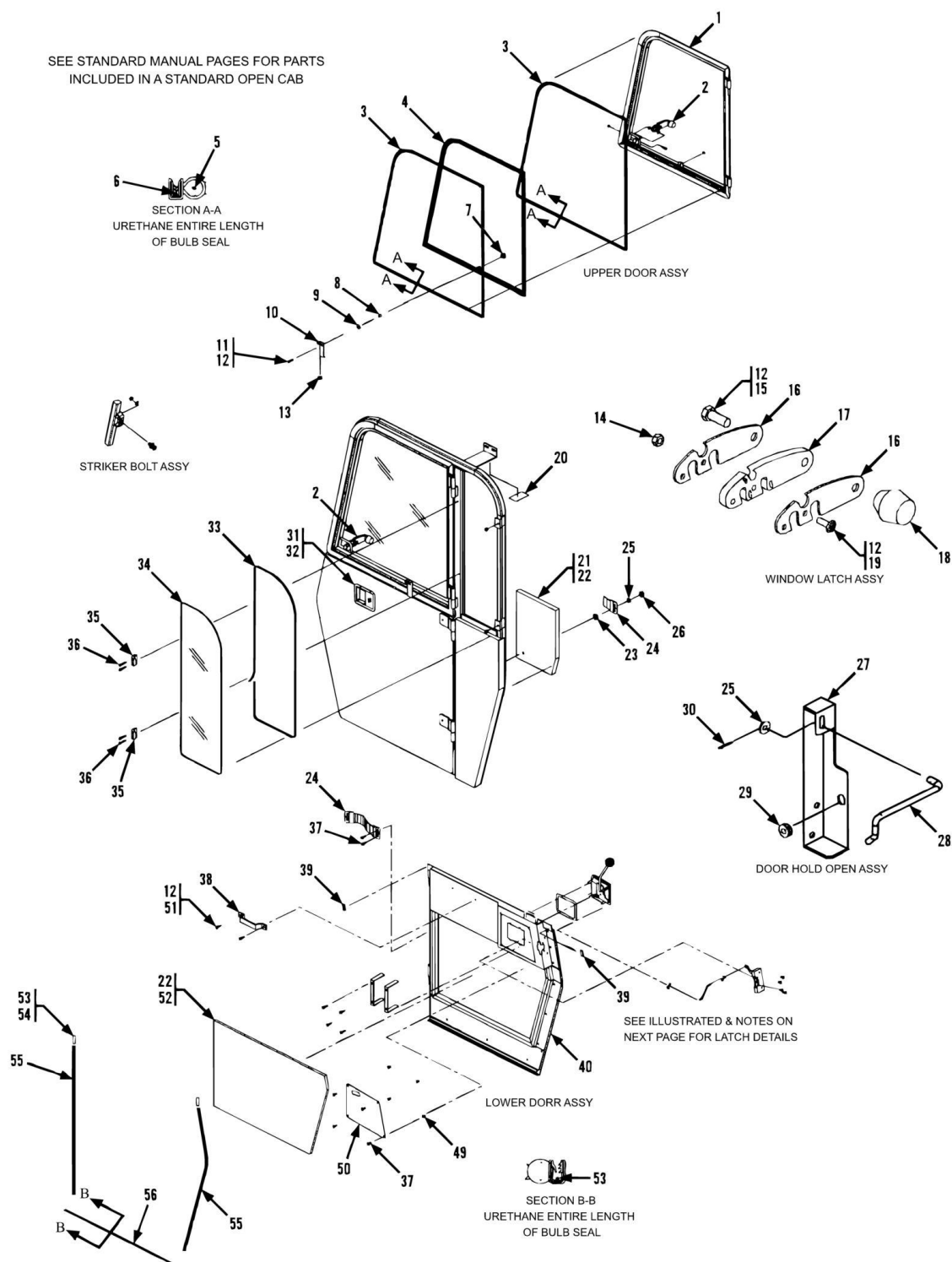
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-17. (91143267) CAB ENCLOSURE KIT (SN 0277001 to Present)

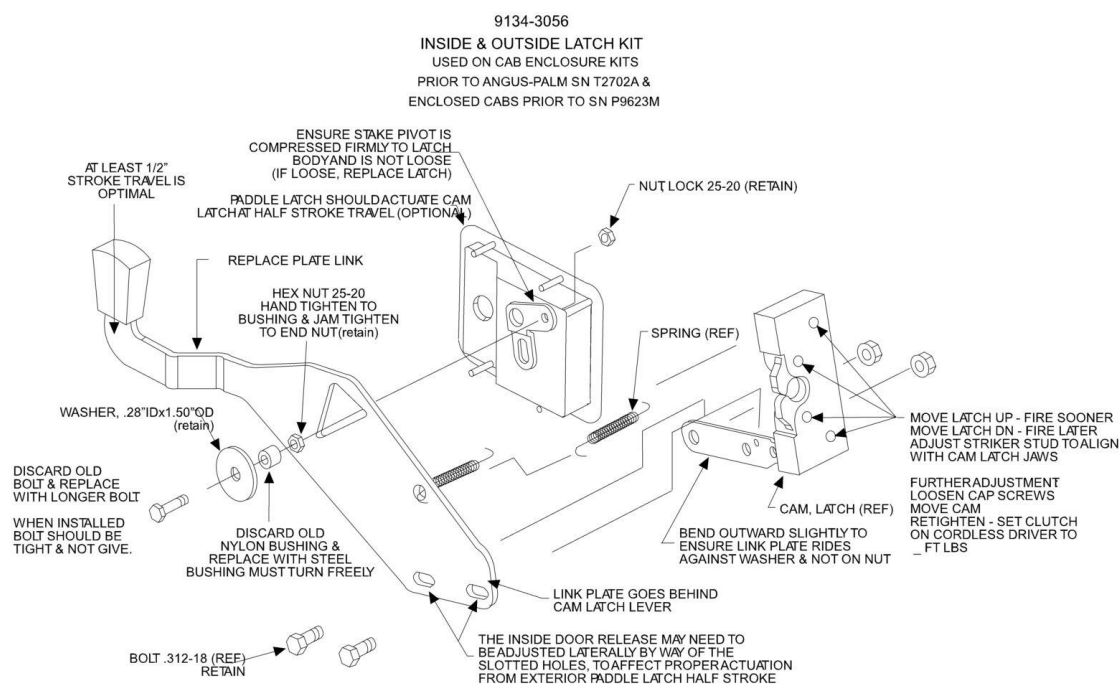
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143267	1	CAB ENCLOSURE KIT (includes all items CAB ENCLOSURE KIT and CAB ENCLOSURE KIT - GLASS)	
1		Ref	L.H. SIDE ASSY (See CAB ENCLOSURE KIT for Breakdown)	
2		Ref	DOOR HOLD OPEN ASSY (See CAB ENCLOSURE KIT for Breakdown)	
3	91334016	1	FOAM HEADLINER (inside cab)	
4		Ref	WINDOW LATCH ASSY (See CAB ENCLOSURE KIT for Breakdown)	
5		Ref	CAB GLASS (See CAB ENCLOSURE KIT - GLASS for Breakdown)	
6	91334008	1	WIPER MOTOR (includes item 7)	
7	91144478	1	SHAFT AND PIVOT ASSY	
8	91334029	10 ft	WASHER HOSE, .156X344	
9	91334026	1	WIPER ARM ADAPTER	
10	80384207	2	HEX SCREW, .25-28X.75, GR5	
11	91334035	1	SPACER	
12	91334019	1	WET ARM SPACER	
13	91334022	1	WIPER ARM KIT	
14	91334023	1	WIPER ARM	
15	91334025	1	WIPER BLADE	
16	91363019	1	SKYLIGHT ASSY (includes items 16 thru 19)	
17	91164090	AR	HI VISCOSITY BLACK URETHANE	
18	91164089	AR	GLAS PREP, POWER BOND	
19	91344009	1	SKYLIGHT FRAME WELDMENT	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-18. (91143267) CAB ENCLOSURE KIT (SN 0277001 to Present)



SECTION 12 - OPTIONAL EQUIPMENT

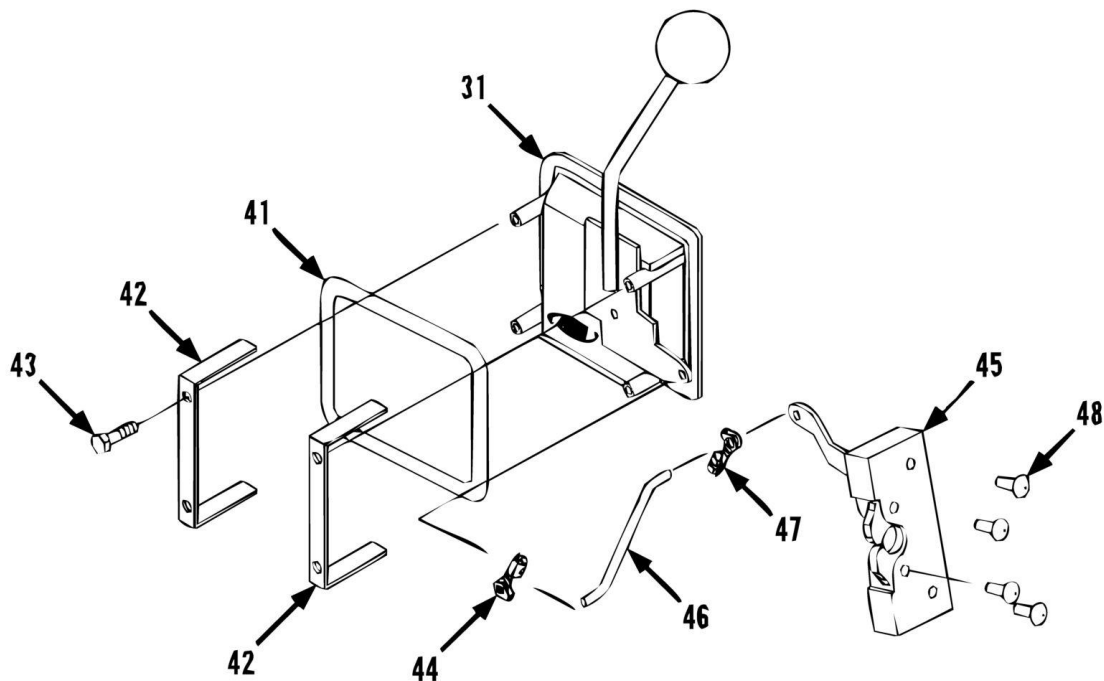


- 1) Remove door stiffener cover and mounting hardware.
- 2) Remove inside door release mounting hardware, including
 - (1) .25-20x1.00 screw, (1) .28 ID x 1.00 OD washer, (1) nylon bushing, (2) .406 ID x 1.25 OD washers, (2) .312-18 lock nut, (1) plate, door link, and (1) .25-20 lock nut.
- 3) Install new inside door release hardware as shown.
- 4) Reverse spring attachment as shown.
- 5) Replace door stiffener cover and hardware.

SECTION 12 - OPTIONAL EQUIPMENT

NOTE: IF YOUR CAB ENCLOSURE CONTAINS THE LATCH ASSY, (shown left), IT IS RECOMMENDED TO UPDATE TO CURRENT STYLE, (shown below), BY ORDERING LATCH RETRO FIT KIT, 9114-4469, (see parts list for details).

PADDLE LATCH INSTALLATION
USED ON CAB ENCLOSURE KITS WITH
ANGUS-PALM STARTING SN T2702A &
ENCLOSED CABS STARTING SN P9623M



SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-18. (91143267) CAB ENCLOSURE KIT (SN 0277001 to Present)

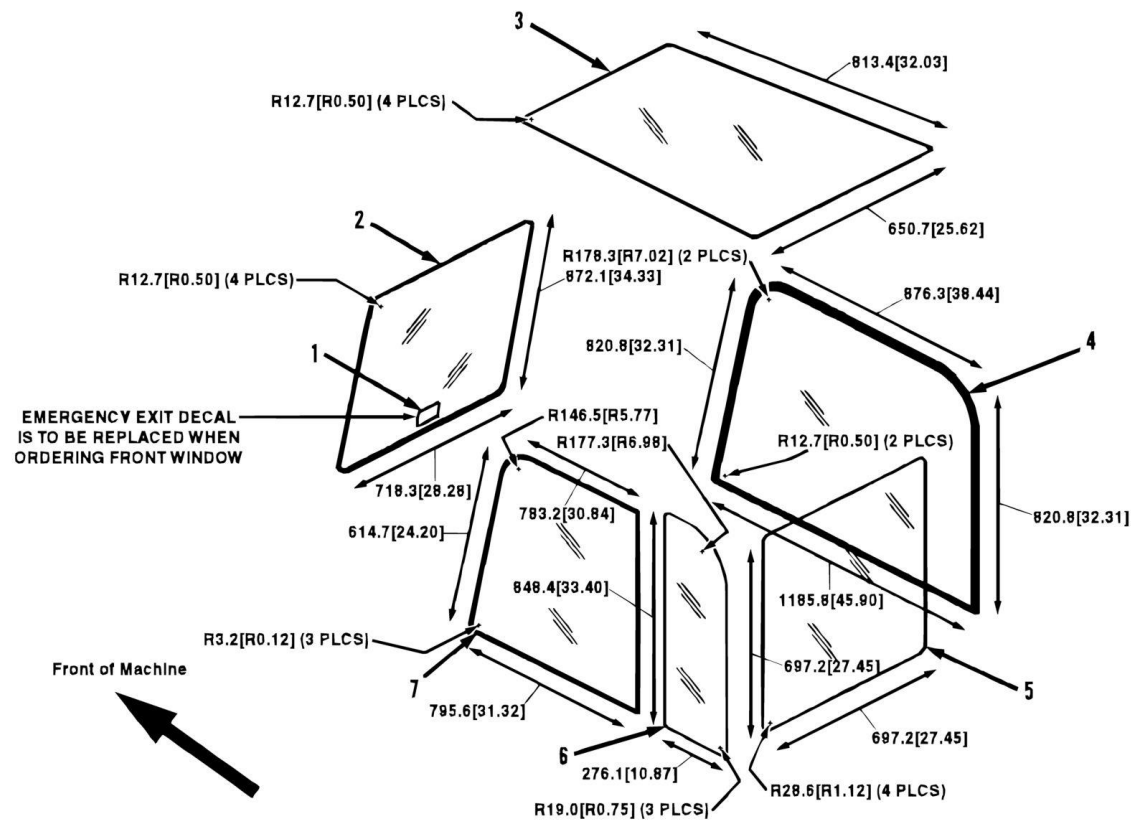
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143267	1	CAB ENCLOSURE KIT, (includes all items CAB ENCLOSURE KIT and CAB ENCLOSURE KIT - GLASS)	
	91144469	1	LATCH RETRO FIT KIT, (includes items 31, 41 thru 48 & 50)	
	91334007	1	L.H. SIDE ASSY, (includes all items CAB ENCLOSURE KIT)	
	91344010	1	UPPER DOOR ASSY, (includes items 1 thru 13)	
	91344011	1	LOWER DOOR ASSY, (includes items 24, 31, 32, & 37 thru 56)	
	91334012	1	DOOR HOLD OPEN ASSY, (includes items 27 thru 30)	
1	91344012	1	UPPER FRAME ASSY, (painted)	
2	91344013	1	WINDOW LATCH ASSY, (includes items 14 thru 19 and item 12 as required)	
3	80264091	21.5 in	BULB SEAL, 90	
4		Ref	GLASS, (See CAB ENCLOSURE KIT - GLASS for Breakdown)	
5	91344014	0.17 ft	FOAM, .438X.375	
6	91334034	AR	BLACK URETHANE	
7	80264084	1	GROMMET, .51X1.06	
8	91344015	1	BUSHING	
9	80264082	1	WASHER	
10	91344016	1	DOOR ANGLE	
11	91344017	2	SCREW, .25-20X1.25	
12	91344018	AR	LOCTITE, BLUE	
13	91344019	1	GROMMET, .375X.875	
14	91344020	1	NUT, .25-20, GR5	
15	91344021	1	BOLT, .375-16X1.00	
16	91344022	2	STEEL LATCH	
17	91344023	1	POLYURETHANE LATCH	
18	80264108	1	KNOB	
19	91344024	1	SCREW, .25X1.00	
20	91144435	1	CAB KIT SERIAL TAG	
21	91344025	1	FOAM, L.H. SIDE PANEL	
22	91344026	AR	ADHESIVE, HIGH PERFORMANCE	
23	91334018	2	LOCKNUT, .375-16	
24	91344027	1	DOOR STRAP	
25	91334033	3	FLAT WASHER, .375X.88	
26	91334018	2	LOCKNUT, .375-16	
27	91344028	1	DOOR HOLD BRACKET WELD	
28	91344029	1	DOOR HOLD OPEN ROD	
29	91344019	1	GROMMET, .375X.875	
30	91344030	1	COTTER PIN, 1/8X.75	
31	91484028	1	PADDLE LATCH, (see illustration and notes at top of page)	
32	80964051	1	DOOR KEY, #510, (old style latch)	
32	91144470	1	DOOR KEY, CH 751, (new style latch)	
33	91344031	7.5 ft	BULB SEAL, 1/4 CLIP	
34		Ref	GLASS, (See CAB ENCLOSURE KIT - GLASS for Breakdown)	
35	80264033	2	WINDOW CLIP	
36	80264034	4	SCREW, #10-32X1.50	
37	91344043	6	SCREW, .25-20X.625	
38	91344032	1	GRAB HANDLE, (inside)	
39	91344033	0.25 in	FOAM, PSA 3/16X5/8	
40	91484030	1	LOWER DOOR WELDMENT	
41	91484029	1 ft	BULB SEAL	

SECTION 12 - OPTIONAL EQUIPMENT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
42	91484034	2	MOUNTING BRACKET	
43	80384191	4	SCREW, 10-24X.5	
44	80384187	1	ROD RETAINER CLIP	
45	91484036	1	CAM LATCH	
46	91484035	1	LINKAGE ROD	
47	80384185	1	ROD RETAINER CLIP	
48	80264074	4	SCREW, .25-20X.75	
49	80264046	4	NUT, .25-20	
50	91484031	1	CENTER STIFFENER COVER	
51	91164096	2	SCREW, .25-20X.75	
52	91344047	1	LOWER DOOR FOAM	
53	91344046	AR	BLACK URETHANE	
54	91344045	2	VINYL CAP	
55	91484024	6 ft	BULB SEAL	
56	80264091	2.5 ft	BULB SEAL	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-19. (91143267) CAB ENCLOSURE KIT - GLASS (SN 0277001 to Present)



See standard manual pages for
parts included in a standard open cab

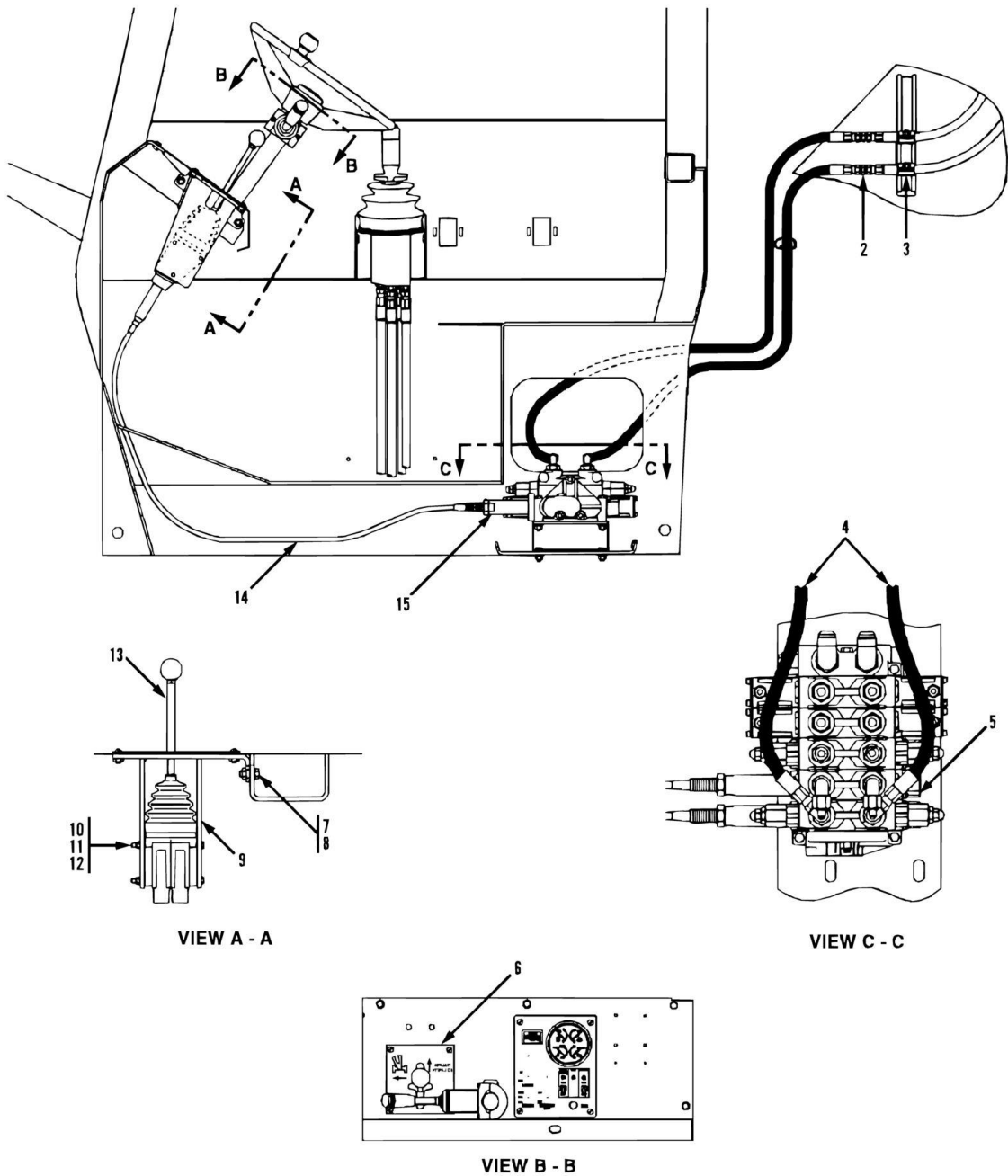
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-19. (91143267) CAB ENCLOSURE KIT - GLASS (SN 0277001 to Present)

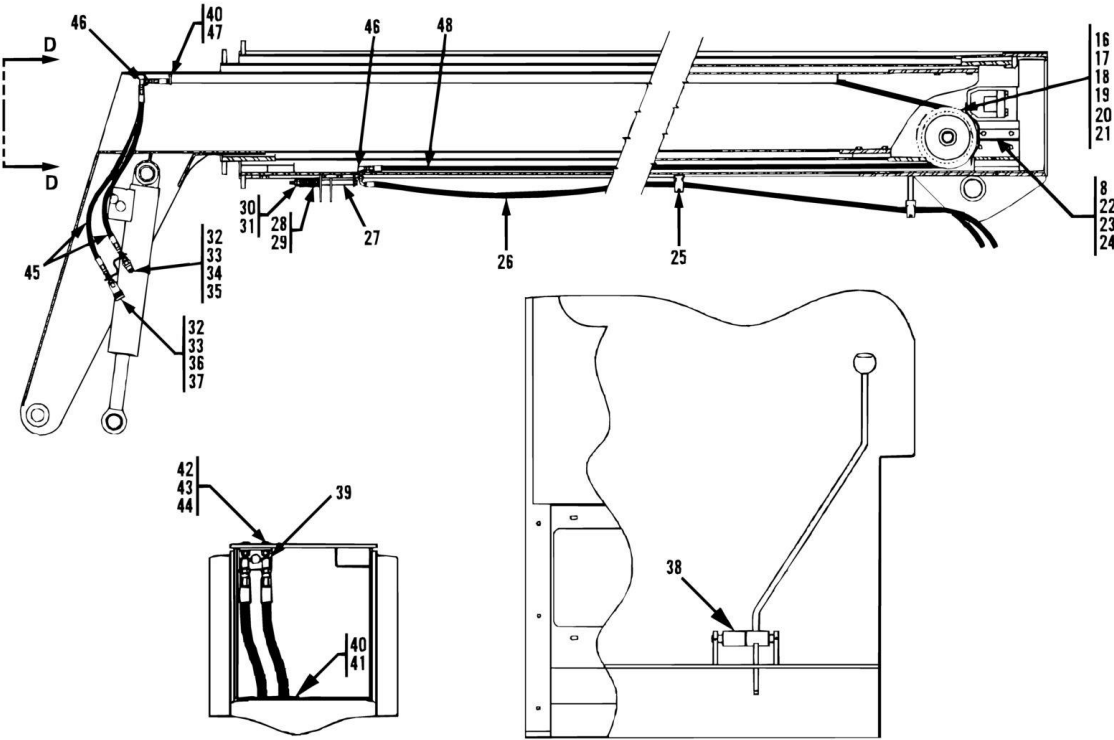
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91143267	1	CAB ENCLOSURE KIT (includes all items on CAB ENCLOSURE KIT and CAB ENCLOSURE KIT - GLASS)	
1	91344006	1	EMERGENCY EXIT DECAL (needs replaced each time front window is ordered)	
2	91164099	1	FRONT WINDOW - 6.4(0.25) THICK STD LT GREEN TINT - LAMINATED SAFETY GLASS 73% LIGHT TRANS #4 EDGE	
3	91164102	1	SKYLIGHT WINDOW - 6.4(0.25) THICK STD LT GREEN TINT - LAMINATED SAFETY GLASS 73% LIGHT TRANS #4 EDGE	
4	91164088	1	R.H. SIDE WINDOW - 6.4(0.25) THICK STD LT GREEN TINT - TEMPERED SAFETY GLASS 73% LIGHT TRANS #4 EDGE	
5	91164092	1	REAR WINDOW - 6.4(0.25) THICK STD LT GREEN TINT - LAMINATED SAFETY GLASS 73% LIGHT TRANS #4 EDGE	
6	91164101	1	L.H. SIDE WINDOW - 6.4(0.25) THICK STD LT GREEN TINT - TEMPERED SAFETY GLASS 73% LIGHT TRANS #4 EDGE	
7	91164100	1	UPPER DOOR GLASS - 6.4(0.25) THICK STD LT GREEN TINT - TEMPERED SAFETY GLASS 73% LIGHT TRANS #4 EDGE	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-20. (91085127) AUXILIARY HYDRAULICS AND L.H. SWAY ASSY 3 SECTION BOOM ONLY



SECTION 12 - OPTIONAL EQUIPMENT



VIEW D - D

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-20. (91085127) AUXILIARY HYDRAULICS AND L.H. SWAY ASSY 3 SECTION BOOM ONLY

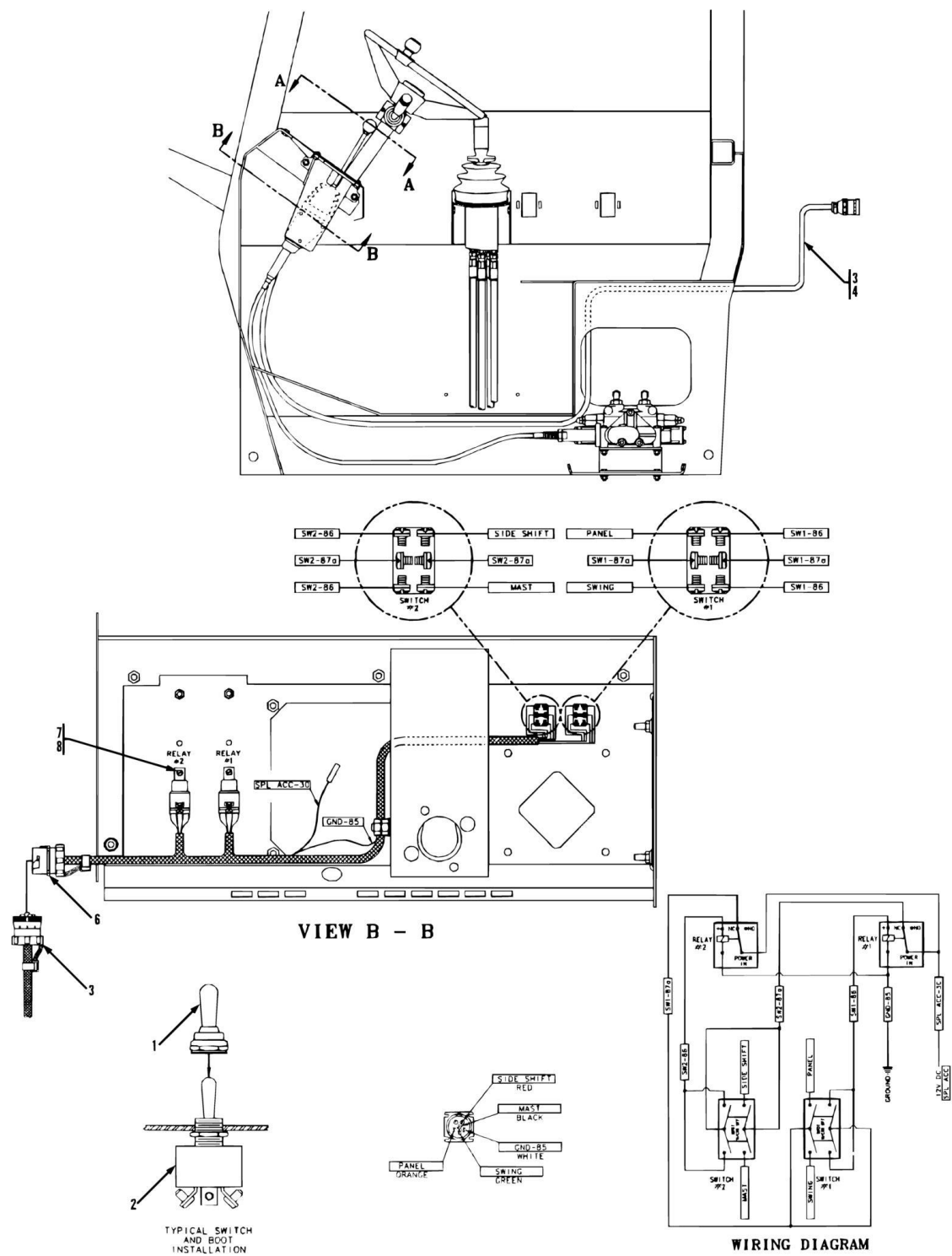
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	90027187	10	TIE WRAP	
2	88661065	2	UNION, 1/2, TUBE	
3	90207463	2	CUSHION CLAMP	
4	84718062	2	HOSE ASSY	
5		Ref	CONTROL VALVE ASSY (See MAIN CONTROL VALVE ASSY for Breakdown)	
6	91363044	1	GUIDE PLATE	
7	88201035	2	HEX HEAD CAPSCREW, 3/8-16x1, GR5	
8	88551011	4	LOCKWASHER, 3/8	
9	91366008	1	LEVER BRACKET	
10	11002410	3	HEX HEAD CAPSCREW, 1/4-28X4-1/2	
11	88501404	3	HEX JAM NUT, 1/4-28	
12	88551009	3	LOCKWASHER, 1/4	
13	91083107	1	REMOTE VALVE CONTROL	
13	91084282	1	KNOB	
13	91084359	1	BOOT	
14	91363043	2	CONTROL CABLE	
15	91123062	2	CABLE ADAPTER BONNET	
16	91123016	1	AUXILIARY HOSE SHEAVE	
17	91081326	1	HOSE REEL SUPPORT	
18	90203040	1	THRUST WASHER	
19	88581320	1	RETAINING RING EXTERNAL	
20	83201123	3	HEX HEAD CAPSCREW, 1/2-13x1	
21	90027471	3	HARDEN FLATWASHER, 1/2	
22	91126080	1	HOSE GUARD	
23	88201034	2	HEX HEAD CAPSCREW, 3/8-16x7/8-GR5	
24	88561109	2	FLATWASHER, 3/8	
25	90207463	8	CUSHION CLAMP	
26	84718280	2	HOSE ASSY	
27	91126008	2	HOSE TAKE-UP WELD	
28	91123054	2	COMPRESSION SPRING	
29	91121134	2	SPRING RETAINER	
30	88501008	2	HEX NUT, 1/2-13	
31	88501108	2	HEAVY HEX JAM NUT, 1/2-13	
32	91123061	2	BULK HEAD FITTING	
33	88712305	2	REDUCING BUSHING	
34	90204244	1	MALE HYDRAULIC COUPLER	
35	91043126	1	DUST CAP	
36	90204245	1	FEMALE HYDRAULIC COUPLER	
37	91043125	1	DUST PLUG	
38	91301020	1	SPACER	
39	91121125	1	BULK HEAD BRACKET	
40	14402248	AR	3M ADHESIVE	
41	90206199	13 in	TRIM-LOCK (pre-packaged in 25ft lengths)	
42	88551010	2	LOCKWASHER, 5/16	
43	88201019	2	HEX HEAD CAPSCREW, 5/16-18x7/8, GR5	
44	88501005	2	HEX NUT, 5/16-18	
45	84718041	2	HOSE ASSY	
46	90027179	4	BULKHEAD FITTING, 90	
47	90206194	3.5 in	TRIM-LOCK (pre-packaged in 25ft lengths)	

SECTION 12 - OPTIONAL EQUIPMENT

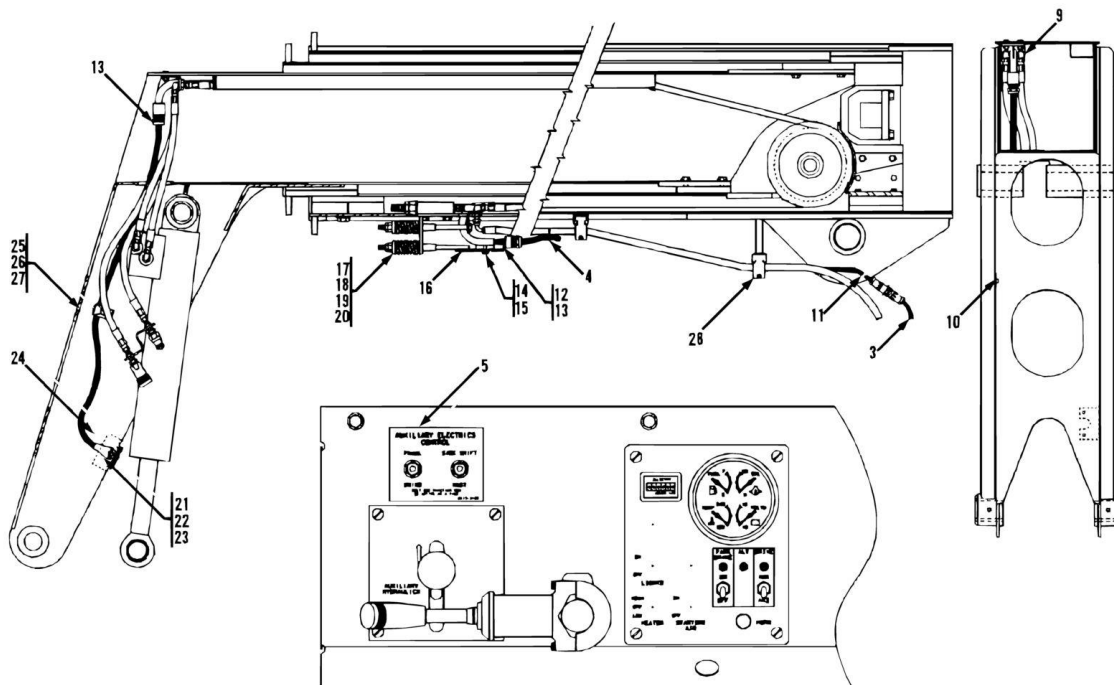
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
48	84718281	2	HOSE ASSY	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-21. (91085128) AUXILIARY HYDRAULICS ASSEMBLY W/ELECTRICS 3 SECTION BOOM ONLY



SECTION 12 - OPTIONAL EQUIPMENT



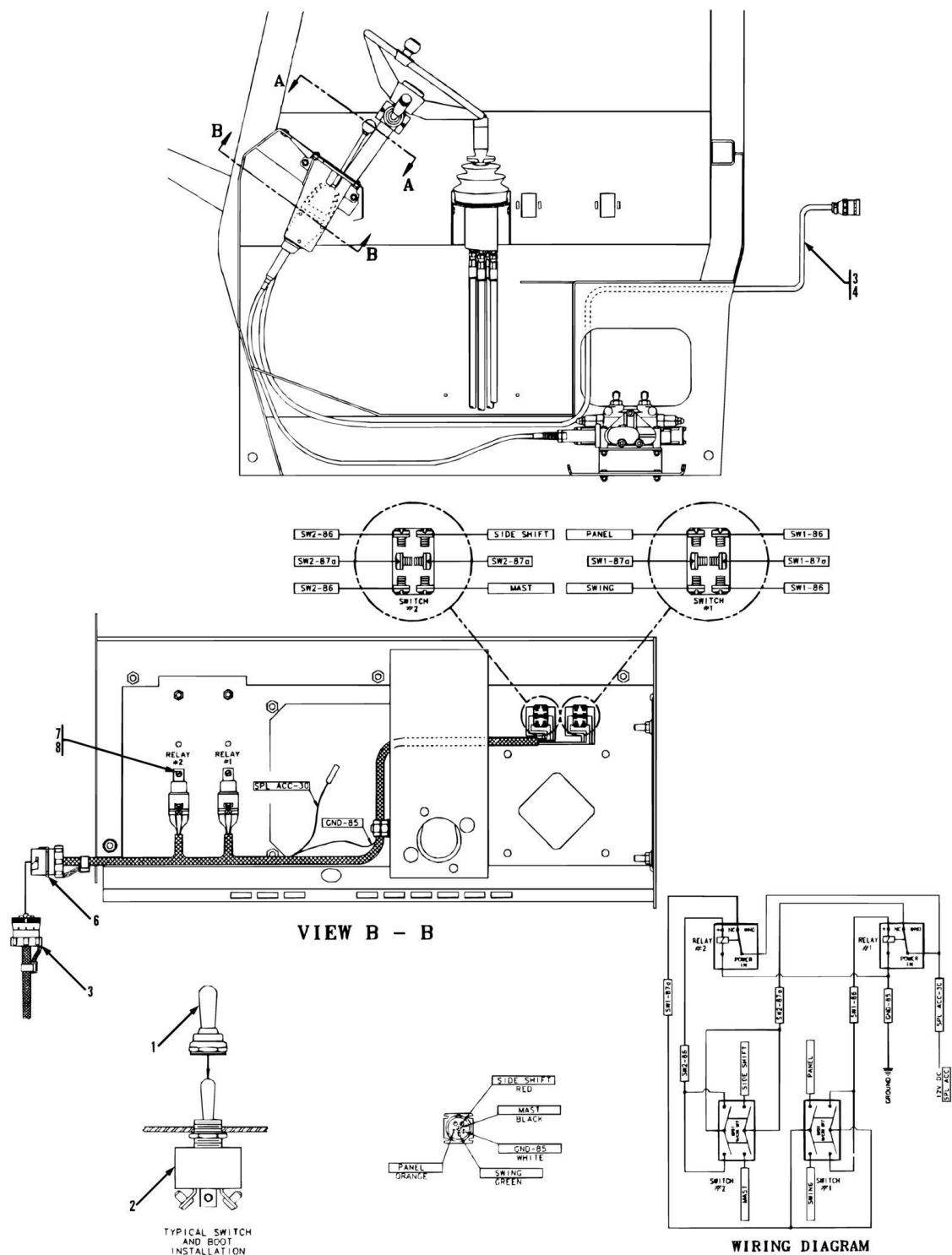
SECTION 12 - OPTIONAL EQUIPMENT

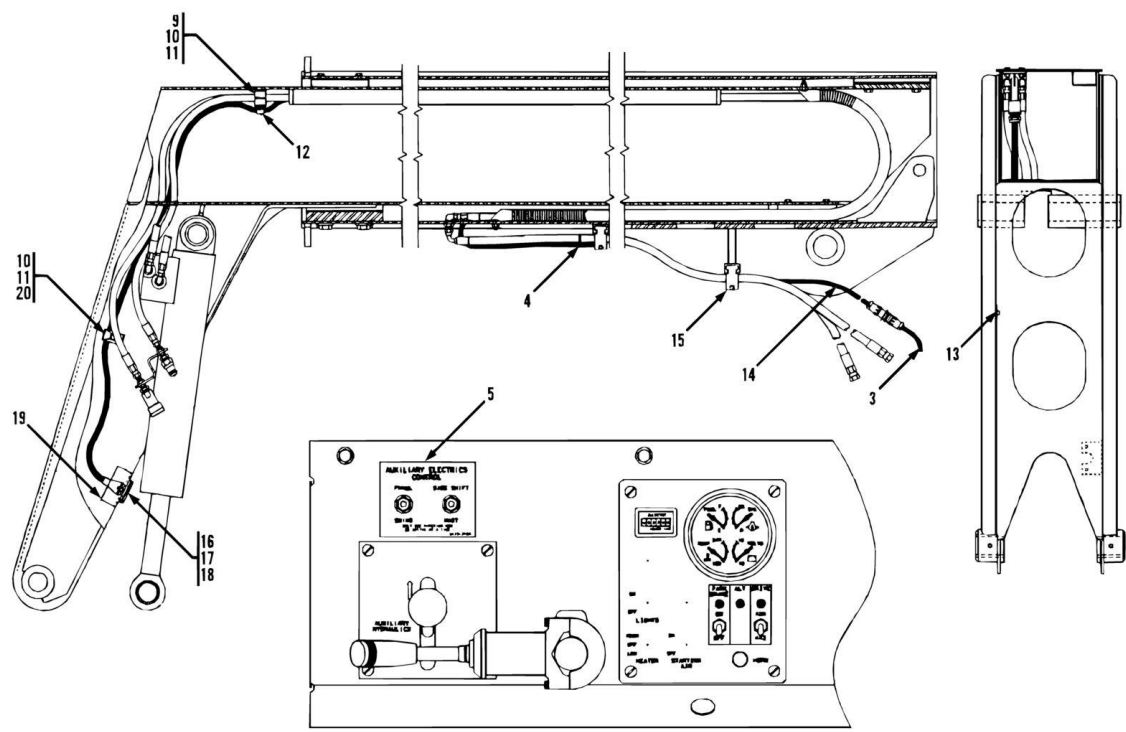
FIGURE 12-21. (91085128) AUXILIARY HYDRAULICS ASSEMBLY W/ELECTRICS 3 SECTION BOOM ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085128	Ref	AUXILIARY ELECTRICS ASSY 3 SECTION BOOM ONLY (includes all items)	
1	77383470	2	SWITCH BOOT	
2	77163204	2	TOGGLE SWITCH	
3	91143105	1	AUXILIARY FRAME HARNESS	
4	90027187	22	NYLON TIE	
5	91123155	1	DECAL	
6	91123154	1	AUXILIARY DASH HARNESS	
7	88301088	2	ROUND HEAD CAPSCREW, 10-24x3/8	
8	88561105	2	FLATWASHER	
9	91126029	1	HOSE AND CABLE SUPPORT	
10	77133141	1	BASE PLATE	
11	91083551	1	AUXILIARY BOOM HARNESS	
12	91123055	2	STRAIN RELIEF FITTING	
13	91126031	1	CABLE TAKE-UP WELDMENT	
14	88201017	2	HEX HEAD CAPSCREW, 5/16-18x5/8, GR5	
15	88551010	2	LOCKWASHER, 5/16	
16	91126032	1	CABLE TAKE-UP SUPPORT	
17	91123054	1	COMPRESSION SPRING	
18	91121134	1	SPRING RETAINER	
19	88501008	1	HEX NUT, 1/2-13	
20	88501108	1	HEX NUT, 1/2-13	
21	90207661	1	6 CONTACT SOCKET	
22	88201005	2	HEX HEAD CAPSCREW, 1/4-20x1, GR5	
23	88521304	2	HEX LOCKNUT, 1/4-20	
24	91121283	1	RECEPTICAL BRACKET	
25	77133168	1	CLAMP SET, 1/2	
26	77133140	1	COVER PLATE	
27	77133177	1	HEX BOLT	
28	91083216	4	CUSHION CLAMPS	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-22. (9108-5125) AUXILIARY HYDRAULICS ASSEMBLY W/ELECTRICS 2 SECTION BOOM ONLY





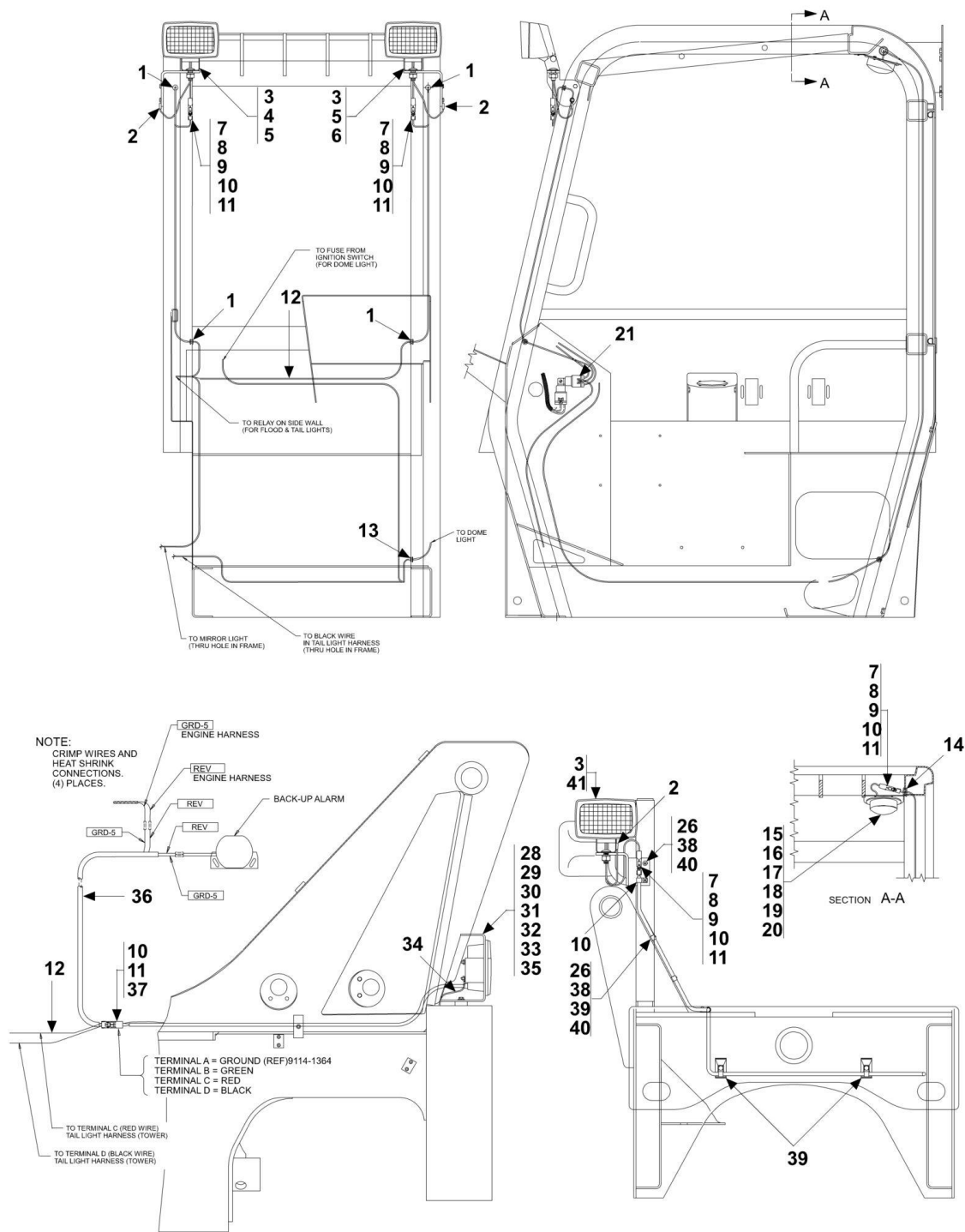
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-22. (91085125) AUXILIARY HYDRAULICS ASSEMBLY W/ELECTRICS 2 SECTION BOOM ONLY

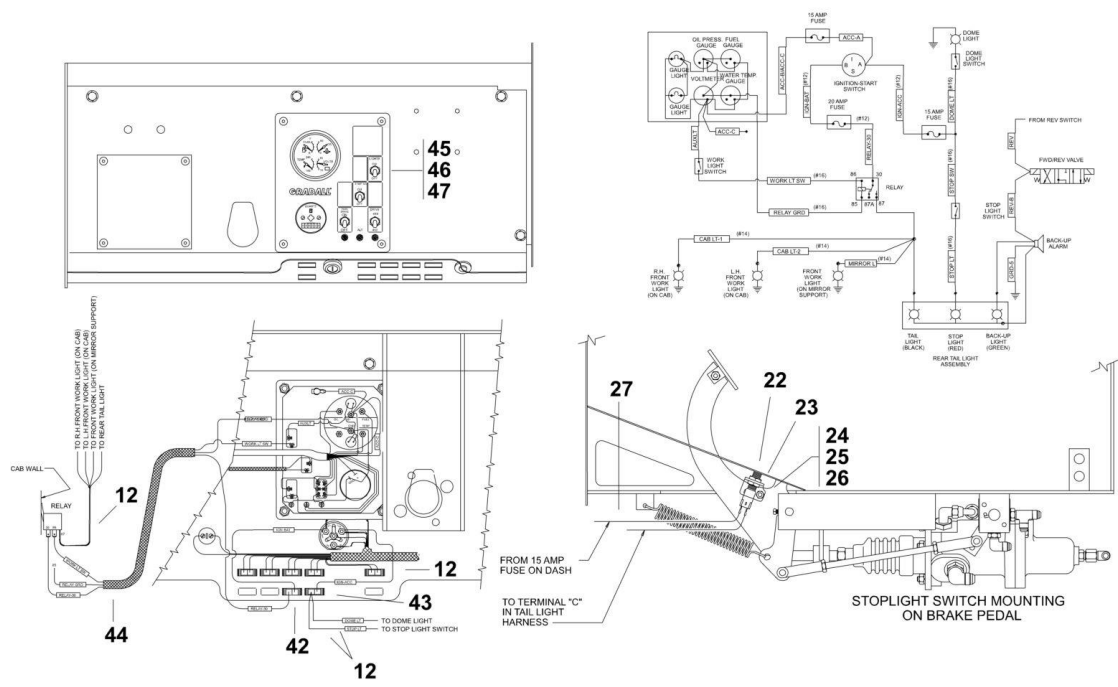
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91085125	Ref	AUXILIARY ELECTRICS ASSEMBLY (includes all items)	
1	77383470	2	SWITCH BOOT	
2	77163204	2	TOGGLE SWITCH	
3	91143105	1	AUXILIARY FRAME HARNESS	
4	90027187	22	NYLON TIE	
5	91123155	1	DECAL	
6	91123154	1	AUXILIARY DASH HARNESS	
7	88301088	2	ROUND HEAD CAPSCREW, 10-24x3/8	
8	88561105	2	FLATWASHER	
9	77133139	1	CLAMP SET	
10	77133140	2	COVER PLATE	
11	77133177	2	HEX BOLT	
12	85941016	1	SUPPORT CLAMP	
13	77133141	1	BASE PLATE	
14	91123163	1	AUXILIARY BOOM HARNESS	
15	91083216	2	CUSHION CLAMP	
16	90207661	1	6 CONTACT SOCKET	
17	88201005	2	HEX HEAD CAPSCREW, 1/4-20x1, GR5	
18	88521304	2	HEX LOCKNUT, 1/4-20	
19	91121283	1	RECEPTICAL BRACKET	
20	77133168	1	CLAMP SET, 1/2	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-23. (91385004) WORK LIGHT PACKAGE



SECTION 12 - OPTIONAL EQUIPMENT



SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-23. (91385004) WORK LIGHT PACKAGE

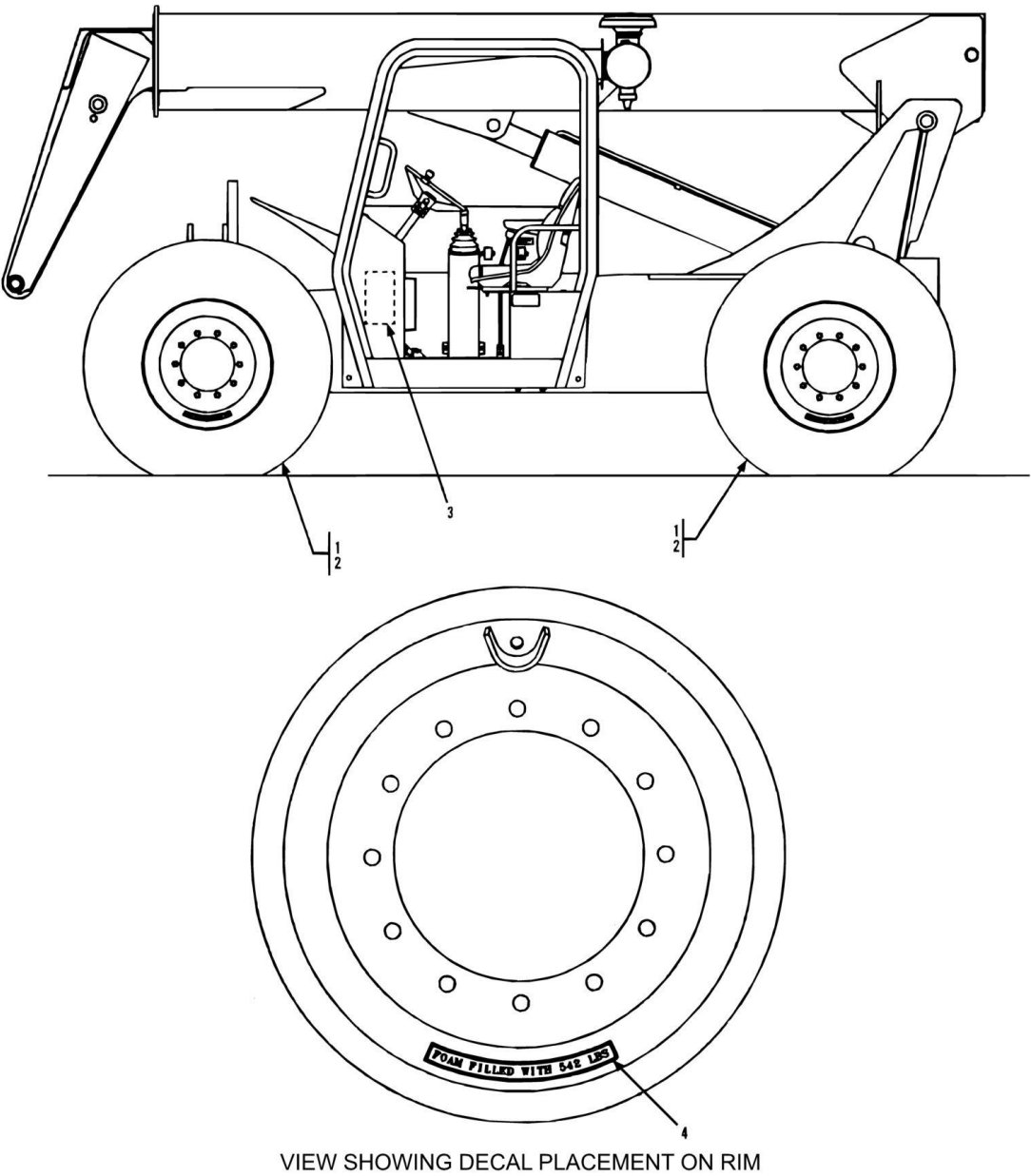
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385004	1	WORK LIGHT PACKAGE, (includes all items)	
1	90027214	4	RUBBER GROMMET	
2	86883260	3	EYELET	
3	80963050	3	UTILITY FLOOD LIGHT	
4	91361001	1	R.H. LIGHT SUPPORT	
5	90027319	4	DR AND TAP SCREW, 1/4-20X1	
6	91361002	1	L.H. LIGHT SUPPORT	
7	80963055	4	W PACK CONNECTOR, (tower)	
8	80963056	4	W PACK CONNECTOR, (shroud)	
9	80963068	4	W PACK CONNECTOR, (female pin)	
10	80963069	8	W PACK CONNECTOR, (male pin)	
11	80963066	12	W PACK CONNECTOR, (cable seal)	
12	91363008	1	LIGHT HARNESS	
13	91033425	1	RUBBER GROMMET	
15	24861167	1	INTERIOR LIGHT	
16	91361003	1	MOUNTING BRACKET	
17	88321022	2	SELF TAPPING SCREW, #8-32X3/8	
18	90029955	1	RUBBER GROMMET	
19	89981036	3	PAN HD SCREW, #8-32X3/8	
20	88501610	3	HEX NUT, #8-32	
21	77383410	1	RELAY	
22	91143117	1	STOPLIGHT SWITCH	
23	91141512	1	TAB	
24	88201002	1	HEX HD CAPSCREW, 1/4-20X5/8, GR5	
25	88561107	1	FLATWASHER, 1/4	
26	88551009	6	LOCKWASHER, 1/4	
27		Ref	WIRE LOOM, (use on all wires)	
28	91121145	1	TAIL LIGHT HOUSING	
29	91121146	1	TAIL LIGHT BRACKET	
30	91365045	1	TAIL LIGHT ASSEMBLY, (includes the following seven items)	
30	91123065	1	TAIL LIGHT	
30	86661147	38 in	WIRE, 16 GAUGE, (black)	
30	86661149	38 in	WIRE, 16 GAUGE, (green)	
30	86661152	38 in	WIRE, 16 GAUGE, (red)	
30	86683480	3	BUTT CONNECTOR	
30	82033996	45 in	WIRE LOOM	
30	86683122	2	TIE WRAP	
31	88201018	2	HEX HD CAPSCREW, 5/16-18X3/4, GR5	
32	88561108	2	FLATWASHER, 5/16	
33	88551010	2	LOCKWASHER, 5/16	
34	91141364	1	JUMPER WIRE	
35	90207220	1	MOUNTING BAR	
36	91363087	1	TAIL LIGHT HARNESS	
37	80963062	1	W PACK CONNECTOR, (shroud)	
38	83661336	5	WELD STUD, 1/4-20X5/8	
39	86621230	6	SUPPORT CLAMP	
40	88501004	5	HEX NUT, 1/4-20	
41	91361004	1	LIGHT SUPPORT	
42	77363302	1	FUSE, 20 AMP	
43	77363268	1	FUSE, 15 AMP	

SECTION 12 - OPTIONAL EQUIPMENT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
44	91363073	1	WORK LIGHT DASH HARNESS	
45	77383467	1	LIGHT SWITCH	
46	77383470	1	BOOT	
47	91363009	1	LIGHTS ON/OFF DECAL	

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FIGURE 12-24. (91385005) FOAM TIRE 2 SECTION BOOM ONLY



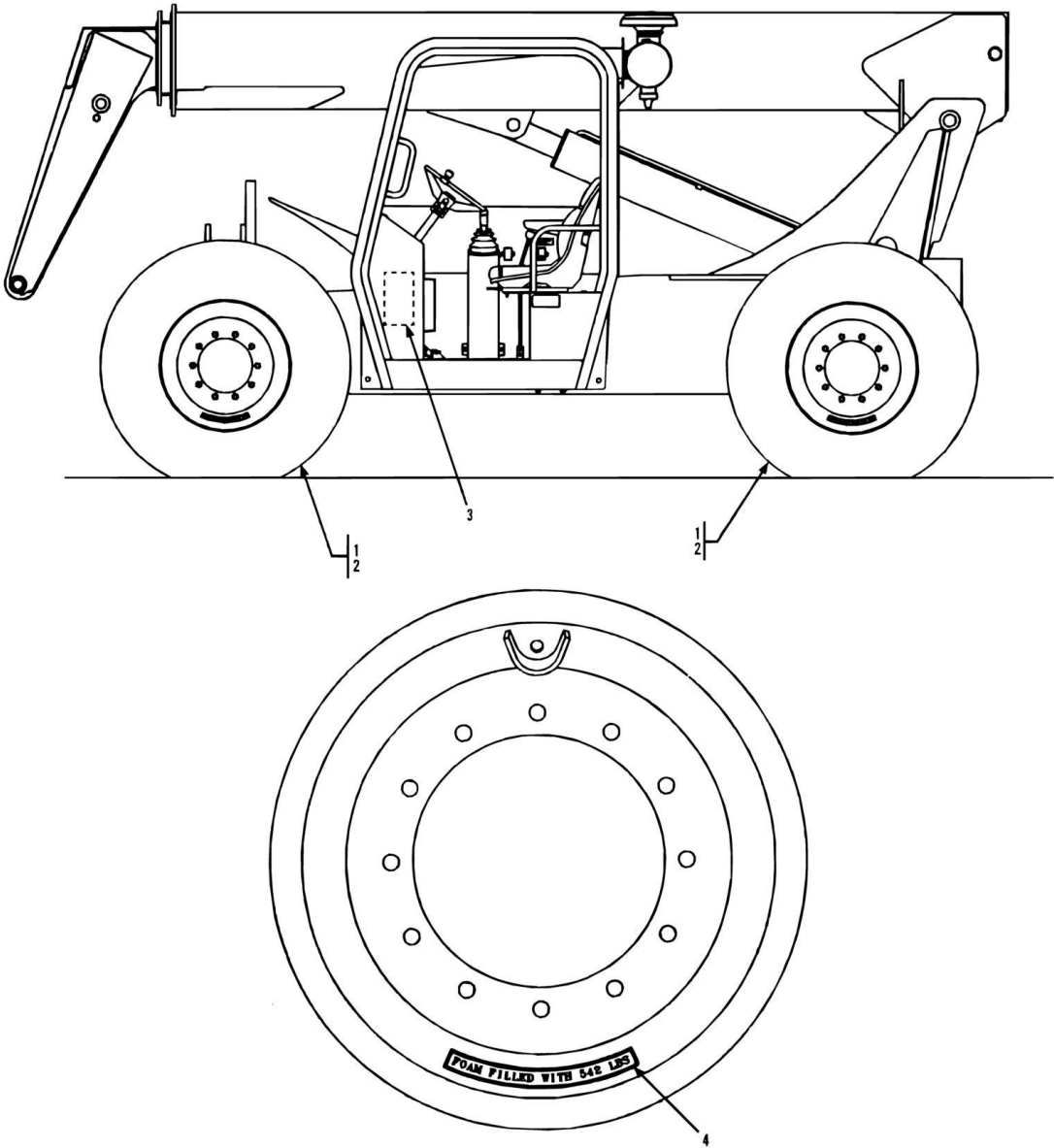
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-24. (91385005) FOAM TIRE 2 SECTION BOOM ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385005	1	FOAM TIRE OPTION	
1	91035247	2	FOAM FILLED TIRE ASSEMBLY	
2	91035248	2	FOAM FILLED TIRE ASSEMBLY	
3	91383005	1	SN AND ATTACHMENT PLATE	
4	91123160	4	TIRE DECAL	

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-25. (91385006) FOAM TIRE 3 SECTION BOOM OPTION ONLY



VIEW SHOWING DECAL PLACEMENT ON RIM

SECTION 12 - OPTIONAL EQUIPMENT

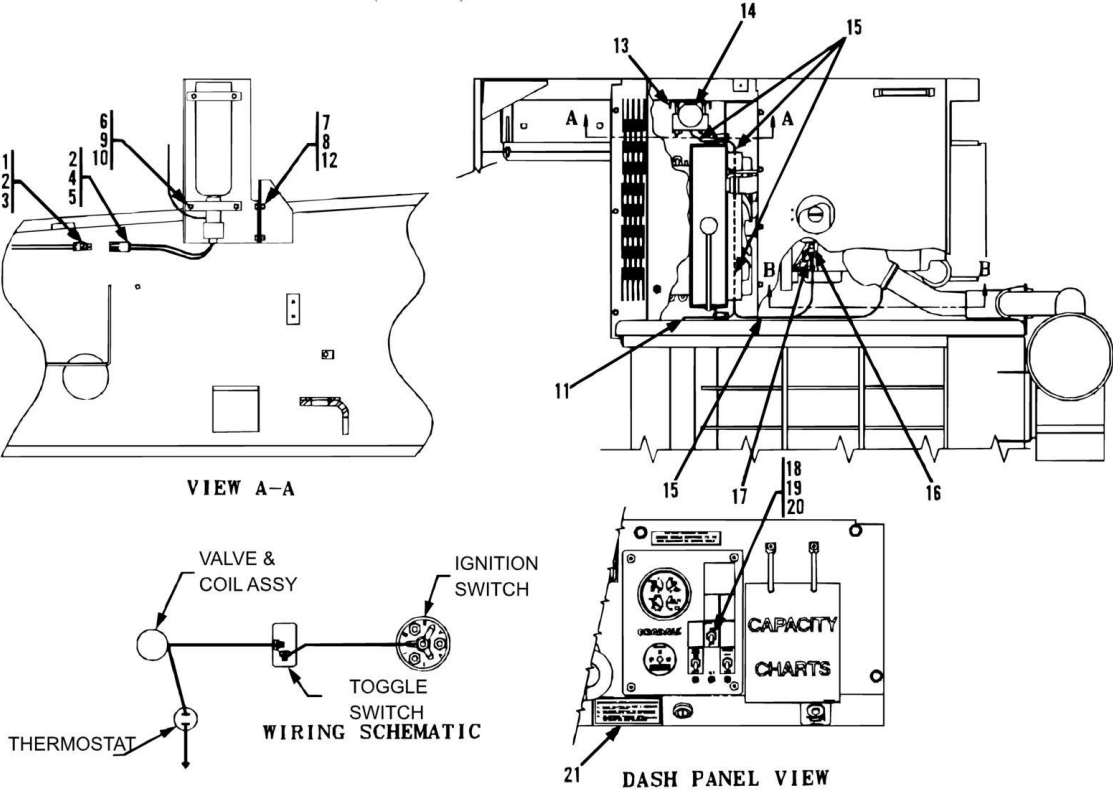
FIGURE 12-25. (91385006) FOAM TIRE 3 SECTION BOOM OPTION ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385006	1	FOAM TIRE OPTION	
1	91035247	2	FOAM FILLED TIRE ASSEMBLY	
2	91035248	2	FOAM FILLED TIRE ASSEMBLY	
3	91383006	1	SN AND ATTACHMENT PLATE	
4	91123160	4	TIRE DECAL	

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FIGURE 12-26. (91335023) ETHER START FIELD KIT

NOTE: IF YOUR MACHINE CAME WITH ETHER START OPTION (9133-5005)
USE ETHER START FIELD KIT (9133-5023) FOR SERVICE.



SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-26. (91335023) ETHER START FIELD KIT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91335023	1	ETHER START FIELD KIT (includes all items)	
1	80963057	1	TOWER	
2	80963065	4	CABLE SEAL	
3	80963068	2	FEMALE PIN TERMINAL	
4	80963058	1	SHROUD CONNECTOR 2-WAY	
5	80963069	2	MALE PIN TERMINAL	
6	88551009	2	LOCKWASHER, 1/4	
7	88201035	2	HEX HD CAPSCREW, 3/8-18x1, GR5	
8	88501006	2	HEX NUT, 3/8-16	
9	88201005	2	HEX HD CAPSCREW, 1/4-20X1, GR5	
10	88501004	2	HEX NUT, 1/4-20	
11	77163117	1	RUBBER GROMMET	
12	88551011	2	LOCKWASHER, 3/8	
13	91331018	1	MOUNTING BRACKET	
14	91143362	1	QUICK START KIT	
15	90027187	4	TIE WRAP	
16	83191038	1	HEX HD CAPSCREW, M10X1.50X20	
17	77383576	1	WIRE CONNECTOR	
18	91123181	1	TOGGLE SWITCH	
19	77383470	1	BOOT	
20	91123176	1	START AID DECAL	
21	91143202	1	INSTRUCTION DECAL	

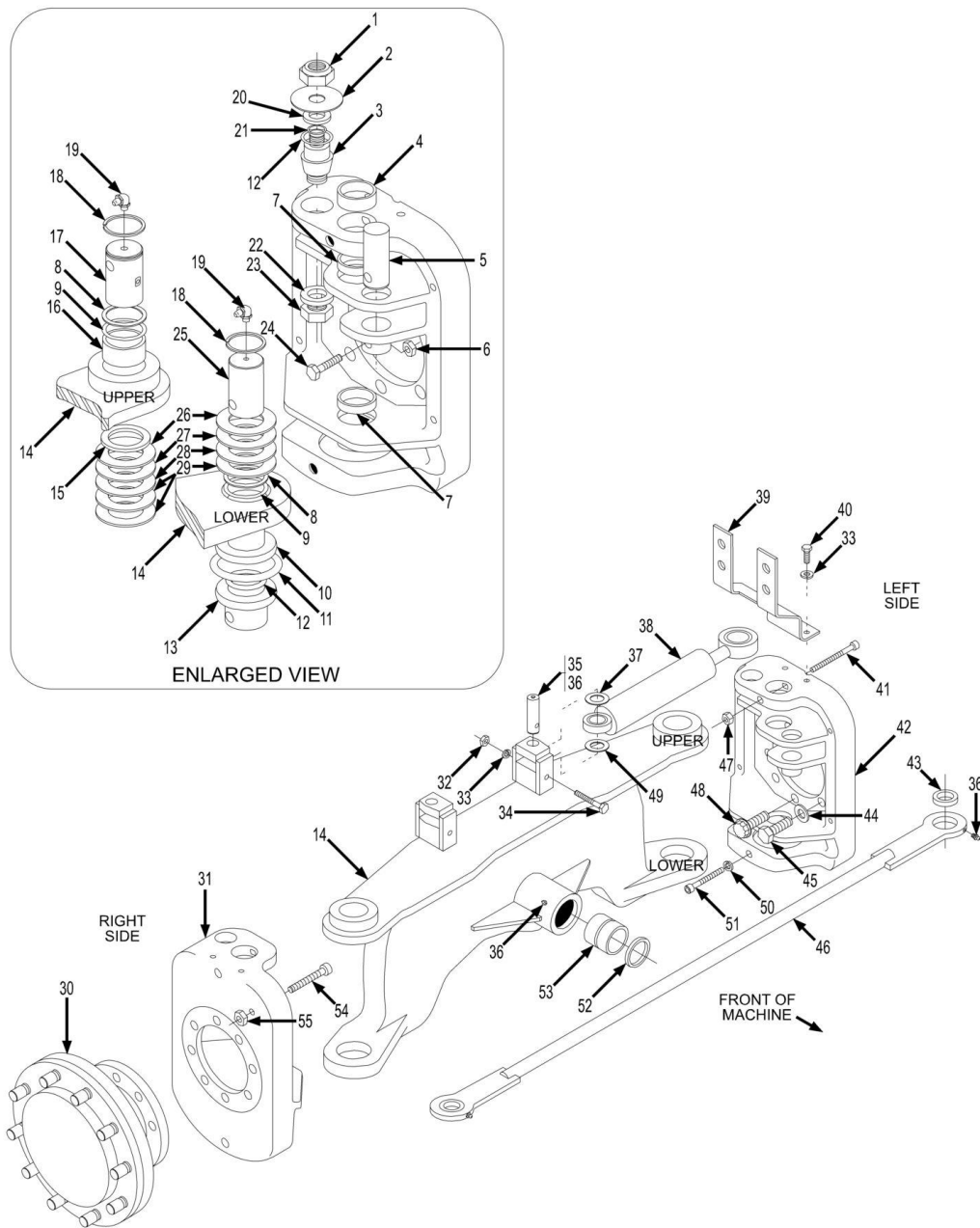
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-27. FOR SERVICE ONLY

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SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-28. (91335026) REAR AXLE ADVANTAGE KIT FOR SERVICE ONLY



NOTE #1: Customer to use existing wheel hubs & hardware, drive motors, drive motor tube assemblies, and drain line hoses or order separately if replacement is required.

NOTE #2: Cylinder base end must be free to rotate. Shim steer cylinder base end as required to maintain a total max. gap of 1/16".

NOTE #3: Shim bottom knuckles as required to maintain no more than 1/32" movement. Shim top knuckles as required to maintain no more than 1/16" gap. Must have a minimum of one shim.

SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-28. (91335026) REAR AXLE ADVANTAGE KIT FOR SERVICE ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91335026	Ref	REAR AXLE ADVANTAGE KIT STEERING CYLINDER ASSY (includes all items except 30, 44, 45 & 48)	
1	88521312	2	HEX LOCKNUT, 3/4-10 (torque to 160-175 ft lbs)	
2	91081415	2	DIRT SHIELD	
3	91041481	2	STEERING CYLINDER PIN (knuckle end)	
4	91121239	2	BUSHING	
5	91041439	2	TIE ROD PIN	
6	88521306	2	LOCKNUT, 3/8-16	
7	91121240	4	BUSHING	
8	91123030	4	BACK-UP RING	
9	88591032	4	O-RING	
10	91123027	2	BUSHING (lower)	
11	91123029	2	O-RING	
12	88591104	4	O-RING	
13	91121091	2	THRUST BUSHING	
14	91166012	1	REAR AXLE WELDMENT (includes items 10, 16 & 53)	
15	86921268	2	LIP SEAL	
16	91123028	2	BUSHING (upper)	
17	91081693	2	UPPER KING PIN	
18	88581323	4	RETAINING RING	
19	88671022	4	LUBE FITTING, 30, 1/8	
20	91041732	AR	SPACER	
21	88591019	2	O-RING	
22	91041459	2	WASHER	
23	88501416	2	HEX JAM NUT, 1-14 (torque to 225-250 ft lbs)	
24	83201140	2	HEX HD CAPSCREW, 3/8-16X2-3/4, GR8	
25	91141424	2	LOWER KING PIN	
26	91041596	AR	SHIM (20 gauge, see note #3)	
27	91041449	AR	SHIM (.060 thick, see note #3)	
28	91041450	AR	SHIM (.0478 thick, see note #3)	
29	91041451	AR	SHIM (.106 thick, see note #3)	
30		Ref	DRIVE HUB (use existing hubs, See CHASSIS AND ATTACHING PARTS SECTION, DRIVE TRAIN SECTION for Breakdown)	
36	88671001	6	LUBE FITTING, STRAIGHT, 1/8	
37	91041508	AR	SHIM (.060 thick see note #2)	
38		Ref	STEERING CYLINDER ASSY (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
39	91081523	1	L.H. TUBE SUPPORT	
39	91081522	1	R.H. TUBE SUPPORT	
40	88201035	4	HEX HD CAPSCREW, 3/8-16X1, GR5	
41	88211121	2	SOCKET HD CAPSCREW, 1/2-13X6-1/2, GR8	
42	91120003	1	L.H. STEERING KNUCKLE	
43	91043247	2	SELF-ALIGNING BUSHING	
44		Ref	HARDENED WASHER, 3/4 (use existing hardware, See CHASSIS AND ATTACHING PARTS SECTION for Breakdown)	
45		Ref	HEX HD CAPSCREW, 3/4-10X2 (use existing hardware, See CHASSIS AND ATTACHING PARTS for Breakdown)	
46	91166063	1	TIE ROD (includes item 43)	
47	88521208	2	HEX LOCKNUT, 1/2	
48		Ref	CAPSCREW 12PT., 3/4-10X2, GR8 (use existing hardware, See CHASSIS AND ATTACHING PARTS for Breakdown)	

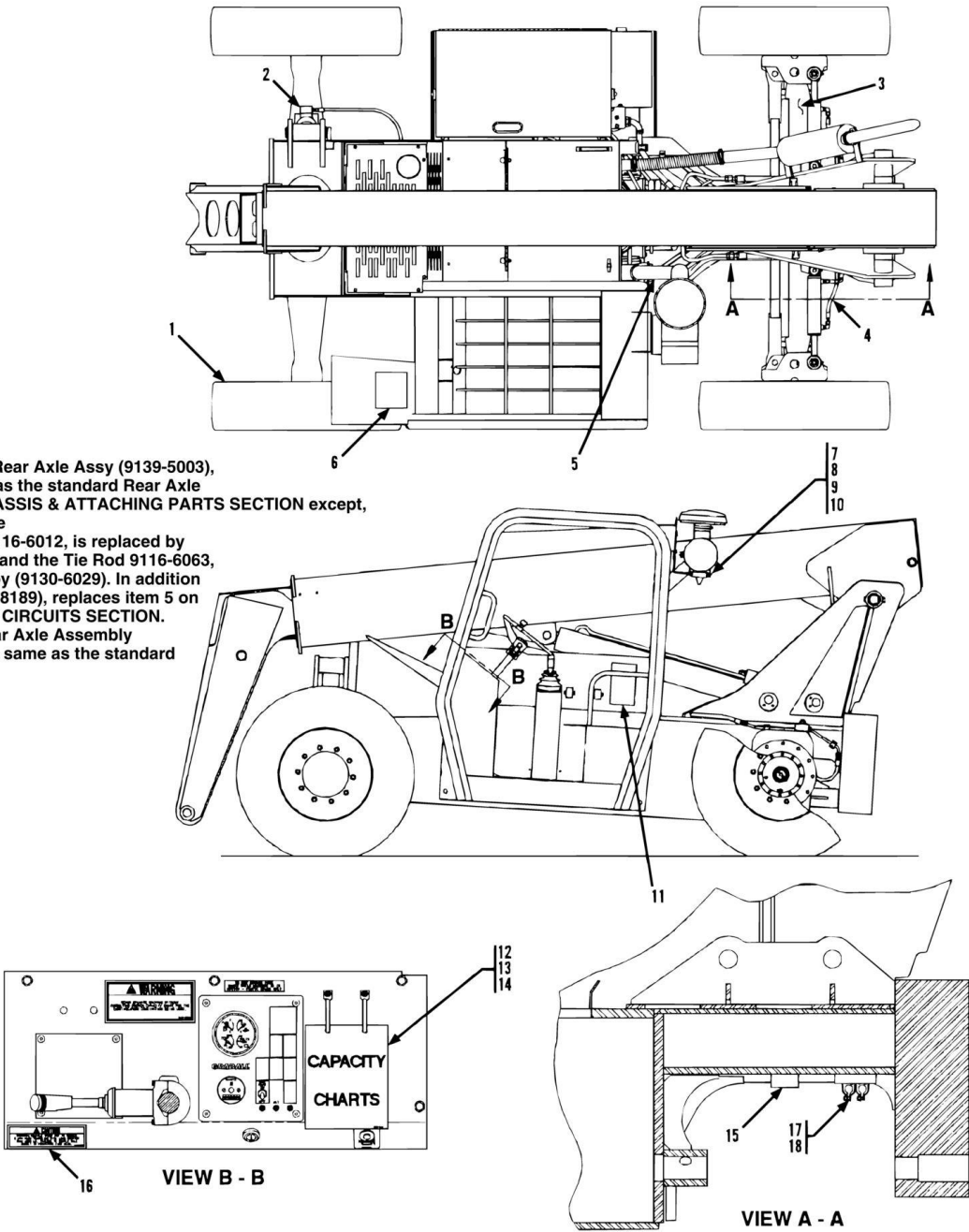
SECTION 12 - OPTIONAL EQUIPMENT

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
49	90201918	AR	SHIM (10 gauge, see note #2)	
50	88551153	2	LOCKWASHER, 5/8	
51	88212321	2	SLOT HD CAPSCREW, 5/8-11X3-3/4, GR8	
52	24601570	2	LIP SEAL	
53	91123031	2	BUSHING	
54	88212321	2	SOCKET HD CAPSCREW, 5/8-11X3-3/4, GR8	
55	88501110	2	HEAVY HEX JAM NUT, 5/8-11	

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FIGURE 12-29. (91395004) LOW PROFILE MACHINE PACKAGE 522D

NOTE:
The Lo-Pro Rear Axle Assy (9139-5003),
is the same as the standard Rear Axle
Assy on CHASSIS & ATTACHING PARTS SECTION except,
the Rear Axle
Weldment 9116-6012, is replaced by
(9130-6010), and the Tie Rod 9116-6063,
is replaced by (9130-6029). In addition
item 4 (8471-8189), replaces item 5 on
HYDRAULIC CIRCUITS SECTION.
All other Rear Axle Assembly
parts are the same as the standard
machine.



SECTION 12 - OPTIONAL EQUIPMENT

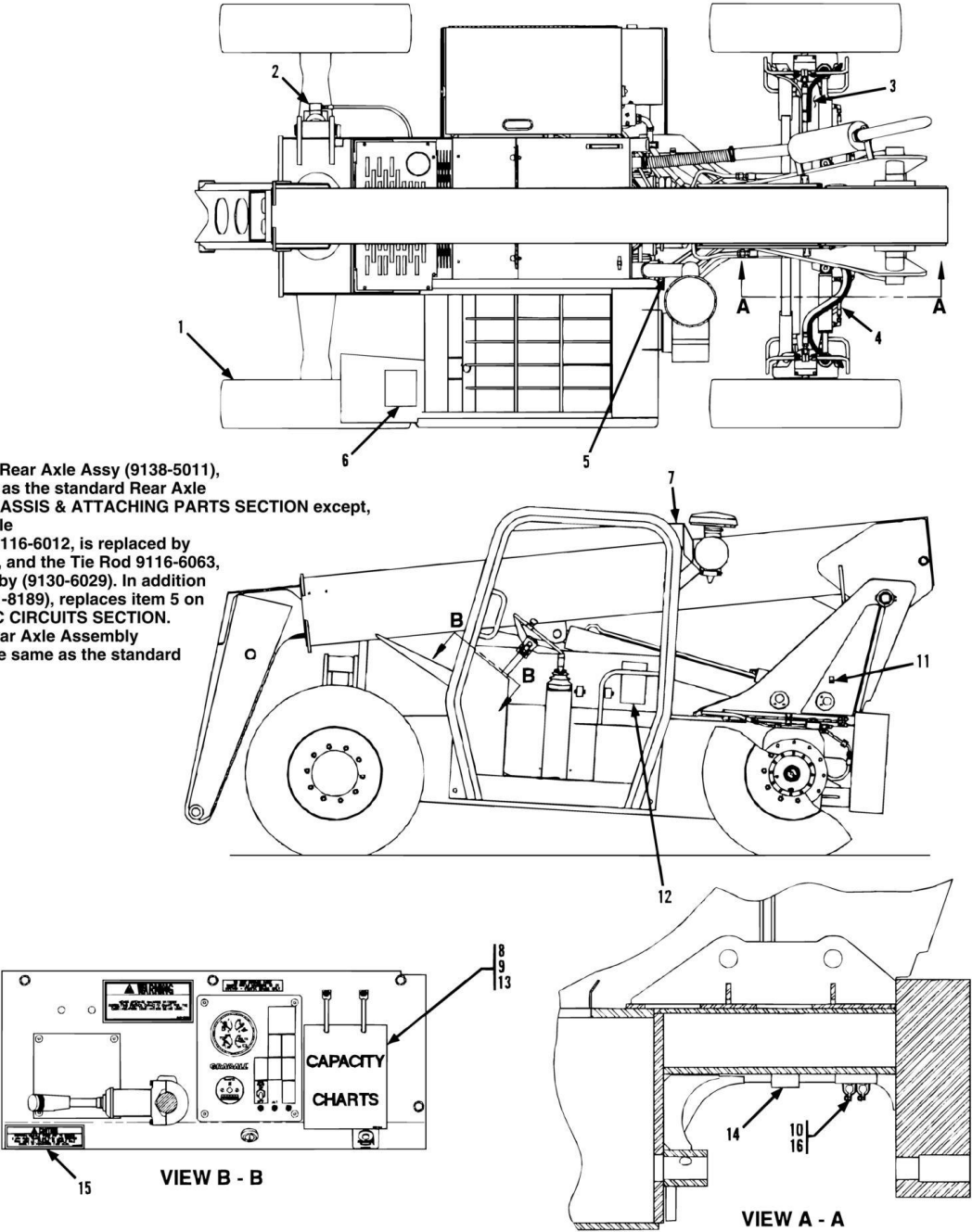
FIGURE 12-29. (91395004) LOW PROFILE MACHINE PACKAGE 522D

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91395004	1	LOW PROFILE MACHINE PACKAGE, (includes all items)	
1	91095026	4	TIRE ASSY, (includes the following)	
1	86983643	1	TIRE	
1	91093018	1	RIM	
1	91093019	1	VALVE	
2		Ref	SWAY CYLINDER, (See LOW PROFILE SWAY CYLINDER - IOWA for Breakdown)	
3	91395003	1	REAR AXLE ASSY, (see note)	
4	84718189	2	HOSE ASSY, (see note)	
5	91383017	1	AIR INTAKE TUBE	
6	91383030	1	SERVICE INSTRUCTION PLATE	
7	91381012	1	AIR CLEANER BRACKET	
8	88201018	4	HEX HD CAPSCREW, 5/16-18X3/4, GR5	
9	88501005	4	HEX NUT, 5/16-18	
10	88551010	4	LOCKWASHER, 5/16	
11	91393005	1	SN ATTACHMENT PLATE	
12	91383025	1	CAPACITY CHART, (opt)	
13	91383037	1	LOAD CHART 6FT MAST, (opt)	
14	91383038	1	LOAD CHART SLOPE PILER, (opt)	
15	91091002	2	STOP BLOCK	
16	91393004	1	CAUTION DECAL	
17	90206090	1	ANCHOR CHANNEL	
18	90207463	2	CUSHION CLAMP	

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FIGURE 12-30. (91385010) LOW PROFILE MACHINE PACKAGE 524D

NOTE:
The Lo-Pro Rear Axle Assy (9138-5011), is the same as the standard Rear Axle Assy on CHASSIS & ATTACHING PARTS SECTION except, the Rear Axle Weldment 9116-6012, is replaced by (9130-6010), and the Tie Rod 9116-6063, is replaced by (9130-6029). In addition item 4 (8471-8189), replaces item 5 on HYDRAULIC CIRCUITS SECTION. All other Rear Axle Assembly parts are the same as the standard machine.



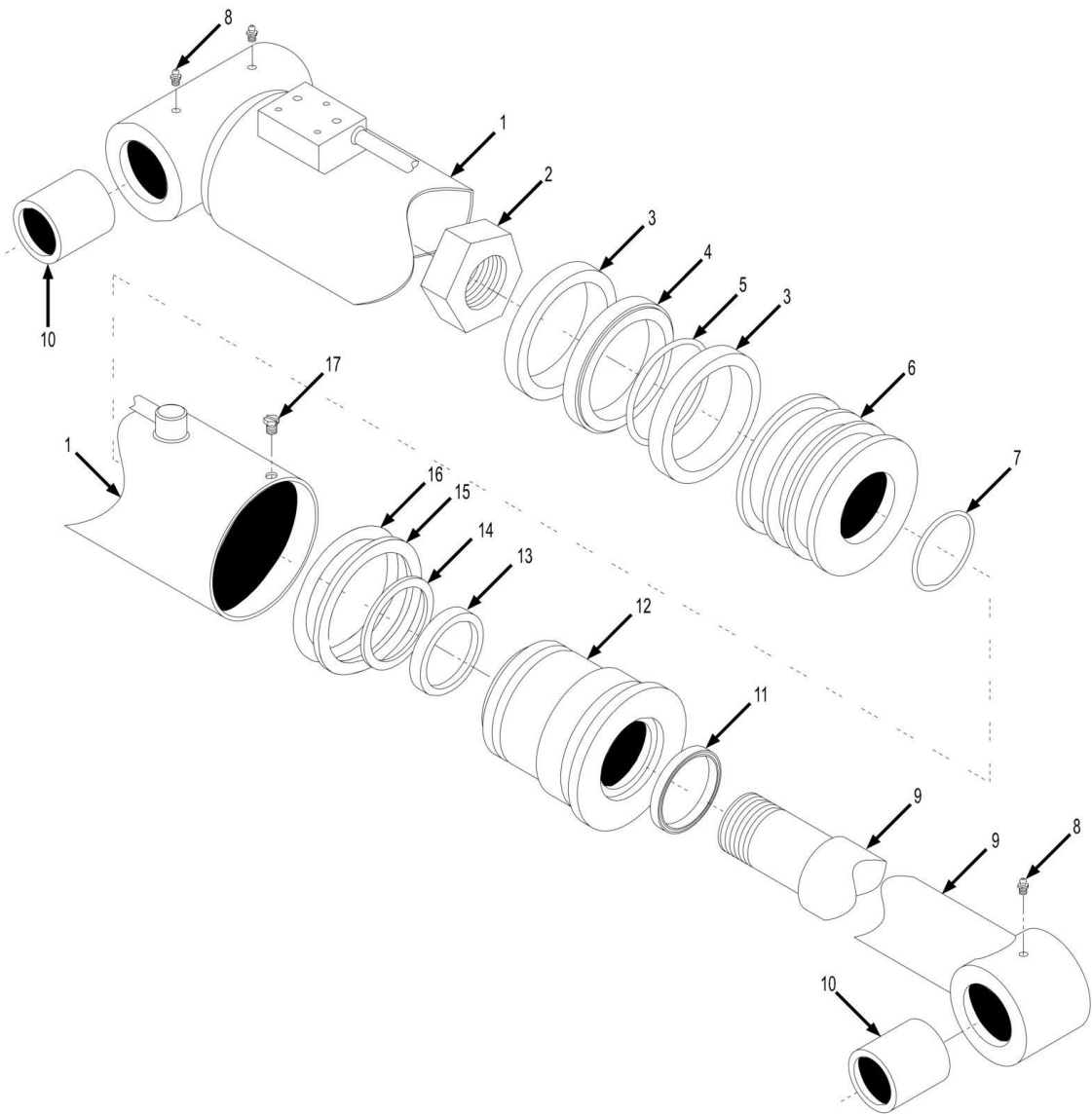
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-30. (91385010) LOW PROFILE MACHINE PACKAGE 524D

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385010	1	LOW PROFILE MACHINE PACKAGE, (includes all items)	
1	91095026	4	TIRE ASSY, (includes the following)	
1	86983643	1	TIRE	
1	91093018	1	WHEEL ASSY	
1	91093019	1	VALVE	
2		Ref	SWAY CYLINDER, (See LOW PROFILE SWAY CYLINDER - IOWA for Breakdown)	
3	91385011	1	REAR AXLE ASSY, (see note)	
4	84718189	2	HOSE ASSY, (see note)	
5	91383017	1	AIR INTAKE TUBE	
6	91383030	1	SERVICE INSTRUCTION PLATE	
7	91381026	1	AIR CLEANER BRACKET	
8	91383037	1	LOAD CHART 6FT MAST, (opt)	
9	91383038	1	LOAD CHART SLOPE PILER, (opt)	
10	90206090	1	ANCHOR CHANNEL	
11	90207514	2	TAPPED BAR	
12	91383026	1	SN ATTACHMENT PLATE	
13	91383025	1	CAPACITY CHART, (opt)	
14	91091002	2	STOP BLOCK	
15	91383019	1	CAUTION DECAL	
16	90207463	2	CUSHION CLAMP	

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FIGURE 12-31. (91383015) LOW PROFILE SWAY CYLINDER - IOWA



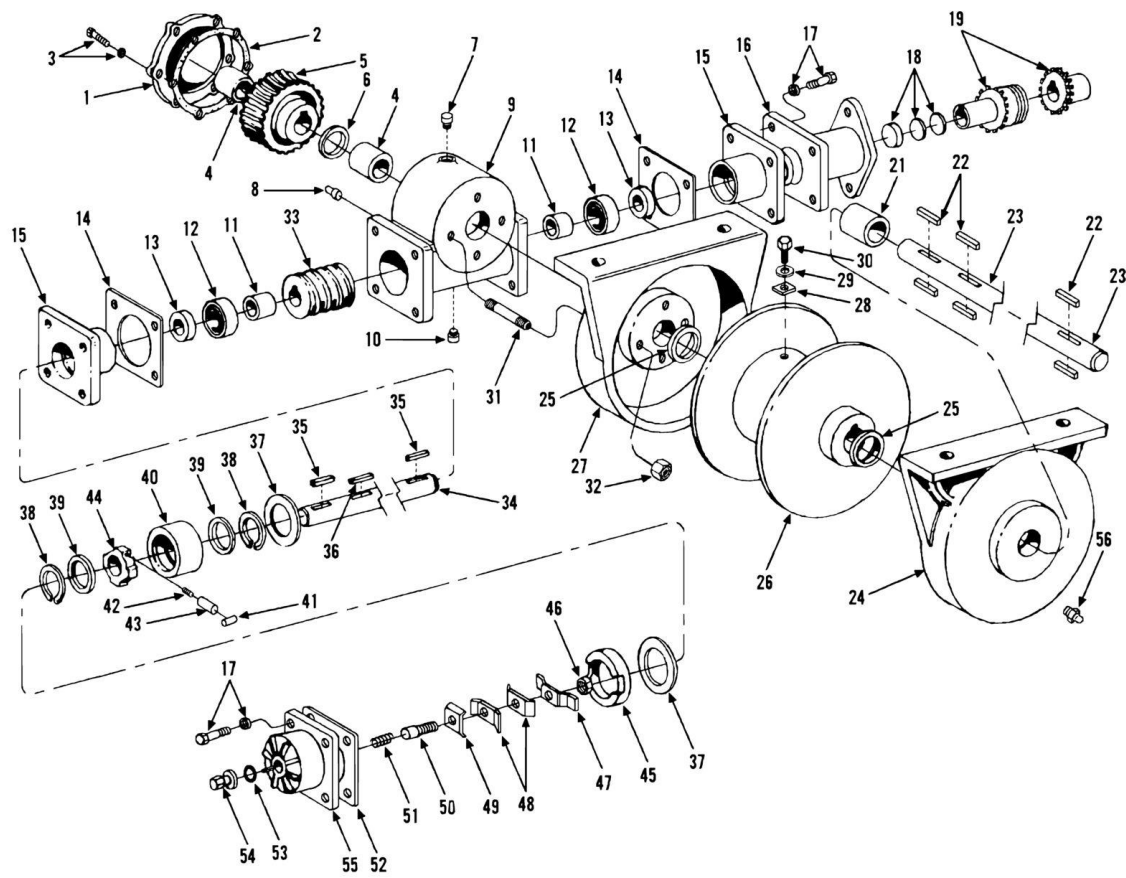
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-31. (91383015) LOW PROFILE SWAY CYLINDER - IOWA

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91383015	1	SWAY CYLINDER ASSY (includes all items)	
	91084308	1	SEAL KIT (includes items 3 thru 5, 7, 11 & 13 thru 16)	
1	91384006	1	CASE ASSY	
2	91034156	1	LOCKNUT (lubricate and torque to 350-400 ft lbs)	
3	Kit	2	WEAR RING	
4	Kit	1	PISTON SEAL	
5	Kit	1	O-RING	
6	91124084	1	PISTON	
7	Kit	1	O-RING	
8	91144128	3	LUB FITTING	
9	91384007	1	ROD ASSY	
10	91404352	3	BUSHING	
11	Kit	1	WIPER	
12	91124085	1	CYLINDER HEAD (torqueto 100-400 ft lbs)	
13	Kit	1	U-CUP	
14	Kit	1	STEP SEAL	
15	Kit	1	BACK-UP RING	
16	Kit	1	O-RING	
17	91124096	1	SELF-TAPPING SCREW	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 12-32. (90453050) TRUSS BOOM WINCH (SN 0277001 to Present)



SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-32. (90453050) TRUSS BOOM WINCH (SN 0277001 to Present)

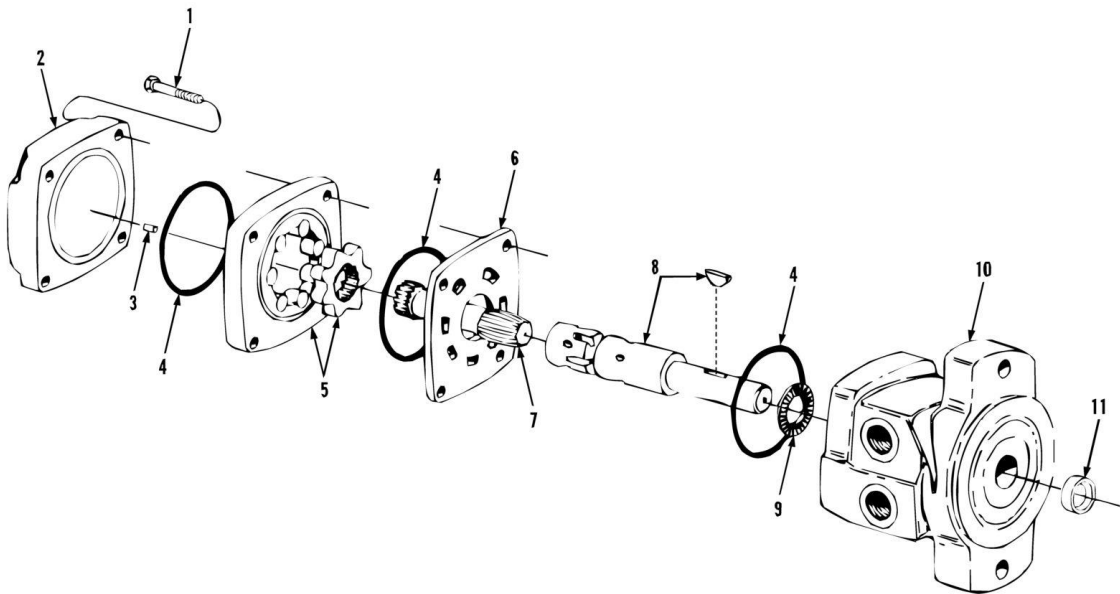
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90453050	1	TRUSS BOOM WINCH, (includes all items on this page and on WINCH MOTOR)	
1	90208147	1	GEAR CASE COVER	
2	90208171	1	GEAR CASE GASKET	
3	88201035	6	HEX HD CAPSCREW, 3/8-16X1, GR5	
3	88551011	6	LOCKWASHER, 3/8	
4	90208154	2	BUSHING	
5	90208150	1	WORM GEAR	
6	90208174	1	BUSHING	
7	90208168	1	OIL FILL PLUG	
8	90208185	1	OIL LEVEL PLUG	
9	90208142	1	GEAR CASE	
10	90208186	1	OIL DRAIN PLUG	
11	90208156	2	COLLAR	
12	90208183	2	BEARING	
13	90208189	2	OIL SEAL	
14	90208170	2	BEARING HUB GASKET	
15	90208188	2	BEARING HUB	
16	90208180	1	MOTOR MOUNT ADAPTER	
17	88201037	12	HEX HD CAPSCREW, 3/8-16X1-1/2, GR5	
17	88551011	8	LOCKWASHER, 3/8	
18	90208187	AR	COUPLER SPACER	
19	90208181	1	COUPLER WINCH SHAFT	
21	90208153	1	LOCK SEAT BUSHING	
22	90208152	6	CABLE DRUM SHAFT KEY	
23	90208148	1	CABLE DRUM SHAFT	
24	91404384	1	LOCK SEAT	
25	90208173	2	WASHER	
26	90208145	1	CABLE DRUM	
27	90208143	1	LOCK SEAT	
28	90208169	1	WIRE ROPE LOCK	
29	88551011	1	LOCKWASHER, 3/8	
30	88201036	1	HEX HD CAPSCREW, 3/8-16X1-1/4, GR5	
31	90208155	4	STUD BOLT, 1/2-13X1-1/2	
32	88501008	4	HEX NUT, 1/2-13	
33	90208151	1	WORM	
34	90208149	1	WORM SHAFT	
35	90208176	2	WORM SHAFT KEY	
36	90208177	1	WORM SHAFT KEY	
37	90208164	2	BRAKE LINING	
38	90208184	2	LOCK RING, (V.C. type)	
39	90208175	2	SEAL	
40	90208158	1	BRAKE HOUSING	
41	90208163	1	ROLLER	
42	90208179	1	BRAKE DRUM HOUSING	
43	90208162	1	SPRING SEAT	
44	90208159	1	BRAKE DRUM	
45	90208157	1	BRAKE PLATE	
46	88501006	1	HEX NUT, 3/8-16	
47	90208165	1	BRAKE PLATE	

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ITEM	PART NUMBER	QTY	DESCRIPTION	REV
48	90208166	2	BRAKE PLATE	
49	90208167	1	FIXING PLATE	
50	90208160	1	ADJUSTING BOLT	
51	90208178	1	SPRING	
52	90208190	1	BRAKE COVER GASKET	
53	90208172	1	O-RING	
54	90208161	1	ADJUSTING NUT	
55	90208146	1	BRAKE DRUM	
56	88671001	1	LUBE FITTING, STRAIGHT, 1/8	

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FIGURE 12-33. (90207879) WINCH MOTOR (SN 0277001 to Present)



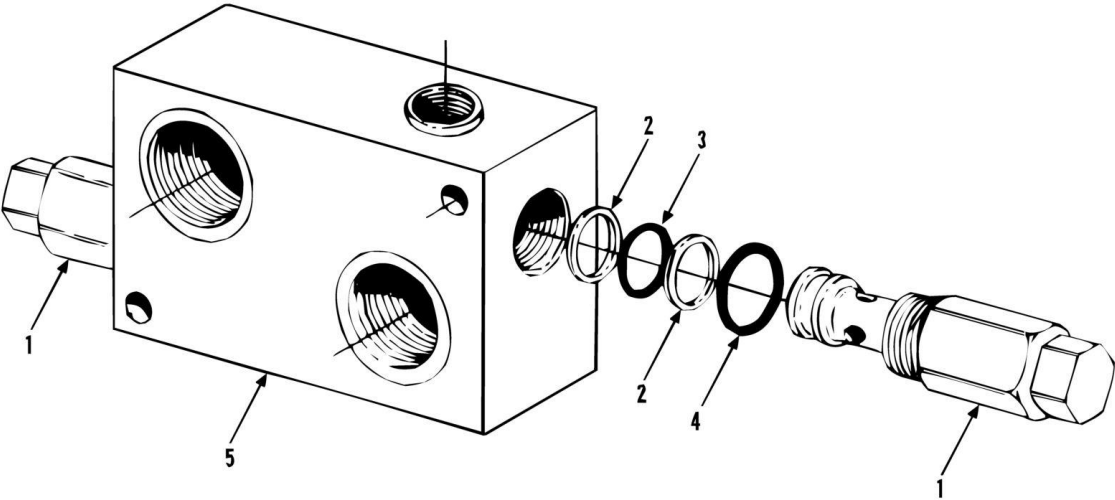
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-33. (90207879) WINCH MOTOR (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	90207879	1	WINCH MOTOR, (includes all items)	
	90208212	1	SHAFT SEAL KIT, (includes items 4 & 11)	
1	83201057	4	HEX HD CAPSCREW, 3/8-16X2, GR8	
2	90208203	1	END COVER	
3	90208204	1	PIN	
4	Kit	3	SEAL	
5	90208206	1	ROLLER-STATOR ASSY	
6	90208207	1	WEAR PLATE	
7	90208208	1	DRIVE LINK	
8	90208209	1	SHAFT	
9	90208210	1	THRUST BEARING	
10	90208211	1	FRONT HOUSING	
11	Kit	1	SHAFT SEAL	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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FIGURE 12-34. (90602706) CROSSOVER VALVE (SN 0277001 to Present)



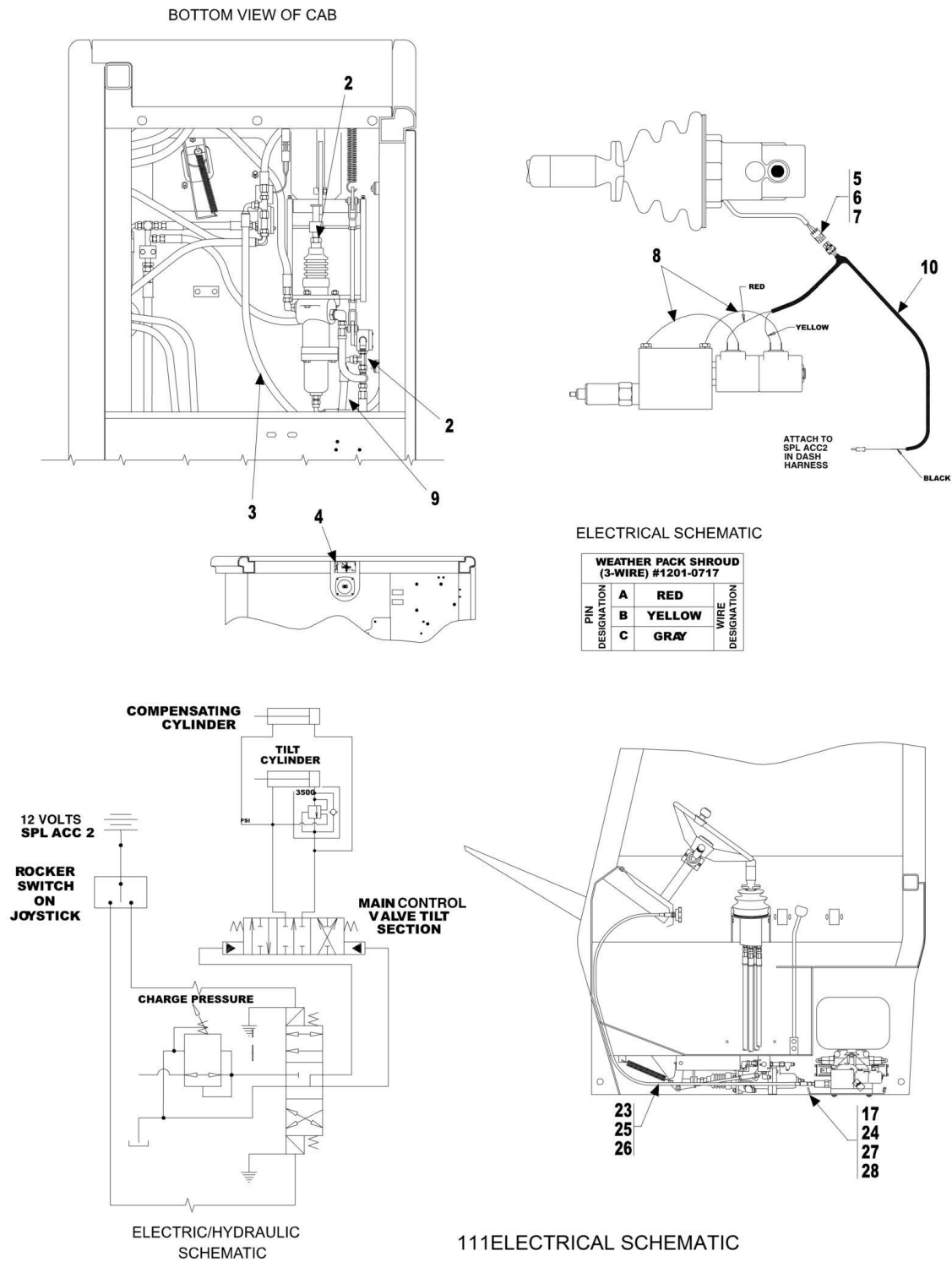
SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-34. (90602706) CROSSOVER VALVE (SN 0277001 to Present)

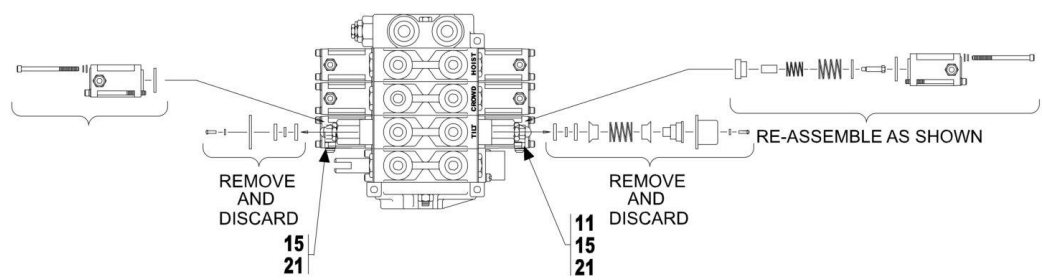
ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	90602706	1	CROSSOVER RELIEF VALVE, (includes all items)	
2	90203440	2	RELIEF CARTRIDGE, (includes items 2 thru 4)	
3	90203437	4	BACKUP RING, (2/cartridge)	
4	90203438	2	O-RING, (1/cartridge)	
5	90203439	2	O-RING, (1/cartridge)	
		Ref	BODY	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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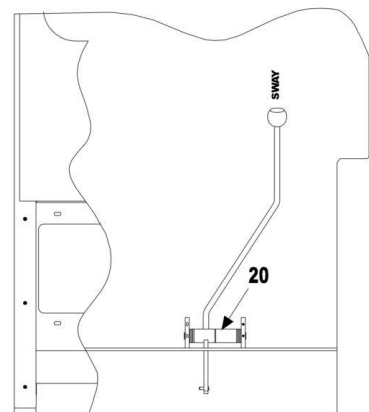
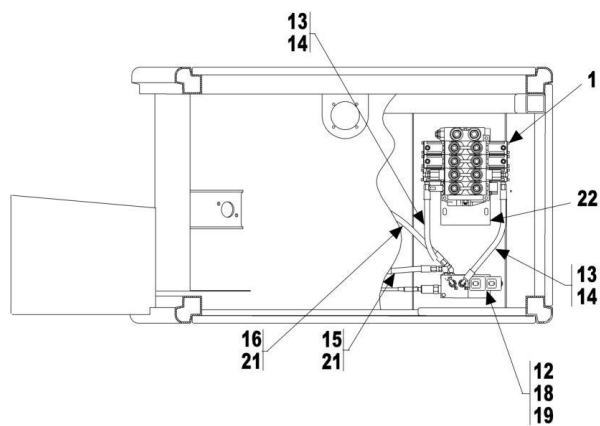
FIGURE 12-35. (91385013) ADJUSTABLE TILT ON JOYSTICK (SN 0277001 to Present)



SECTION 12 - OPTIONAL EQUIPMENT



VALVE POSITIONER CONVERSION FROM
MANUAL TO HYDRAULIC ACTUATION



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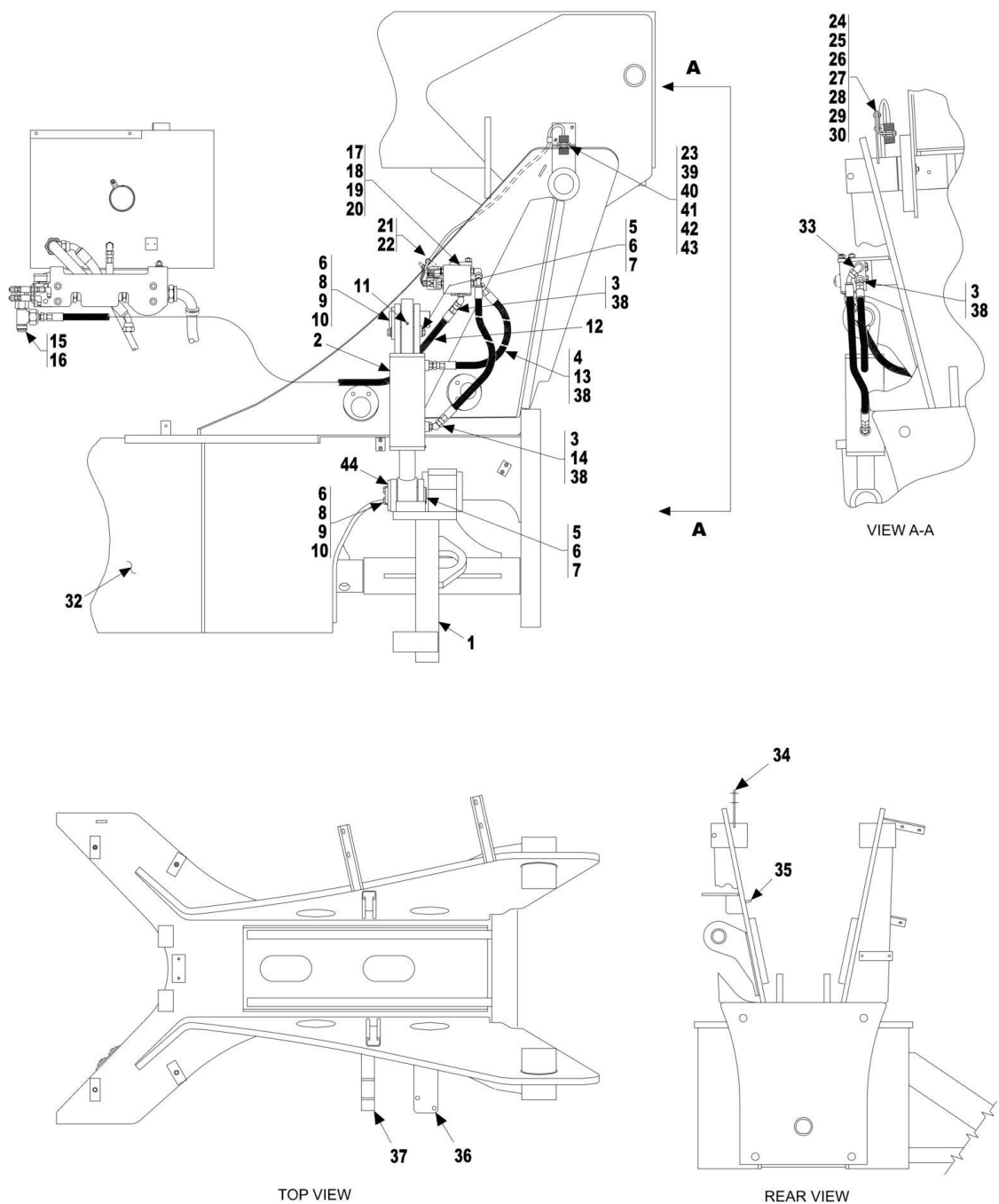
SECTION 12 - OPTIONAL EQUIPMENT

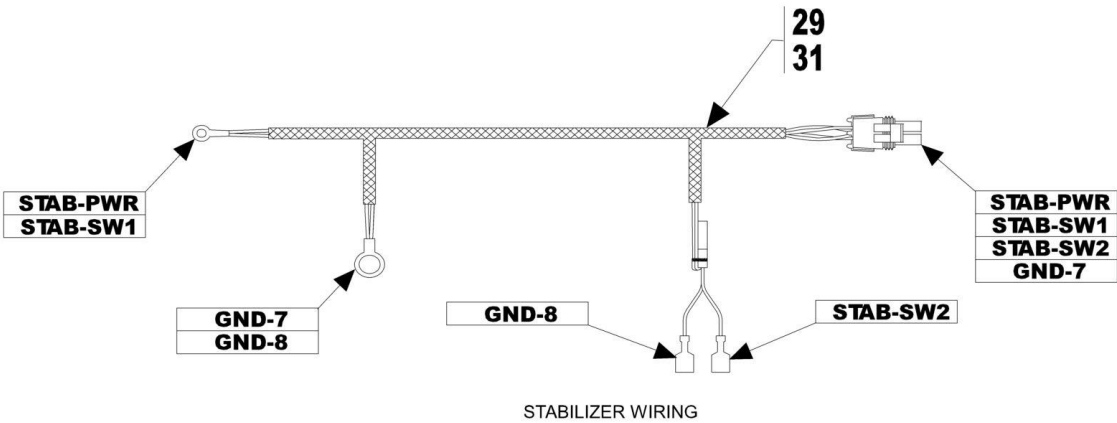
FIGURE 12-35. (91385013) ADJUSTABLE TILT ON JOYSTICK (SN 0277001 to Present)

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
1	91385013	1 Ref	ADJUSTABLE TILT ON JOYSTICK, (includes all items) CONTROL VALVE ASSY, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
2	88662239	2	SWIVEL NUT RUN TEE, 3/8 TUBE	
3	84719166	1	HOSE ASSY	
4	91303041	1	BOOM CONTROL DECAL	
5	80963060	1	W. PACK CONNECTOR, (shroud)	
6	90963069	3	W. PACK CONNECTOR, (male pin)	
7	91143187	3	W. PACK CONNECTOR, (cable seal)	
8	90207719	2	JUMPER WIRE-GREEN	
9	84719165	1	HOSE ASSY	
10	91083490	1	JOYSTICK HARNESS	
11	91123075	1	HYD VALVE POSITIONER KIT	
12	91163236	1	COMBINATION VALVE	
13	84719163	2	HOSE ASSY	
14	88662005	2	CONNECTOR, (includes item 21)	
15	88662064	3	ELBOW, 90, (includes item 21)	
16	88662084	1	ELBOW, 45, (includes item 21)	
17	88201019	2	HEX HD CAPSCREW, 5/16-18X7/8, GR5	
18	88201015	2	HEX HD CAPSCREW, 1/4-20X3-1/2, GR5	
19	88551009	2	LOCKWASHER, 1/4	
20	91301020	1	SPACER	
21	88591204	6	O-RING	
22	91381015	1	VALVE SUPPORT	
23	91163242	1	PANEL MOUNT FLEXIBLE SHAFT	
24	91361019	1	MOUNTING PLATE	
25	91363055	1	CONTROL KNOB	
26	91363056	1	CONTROL DECAL	
27	88551010	2	LOCKWASHER, 5/16	
28	88561003	2	FLATWASHER, 5/16	

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FIGURE 12-36. (91385025) STABILIZER OPTION 3 SECTION BOOM ONLY





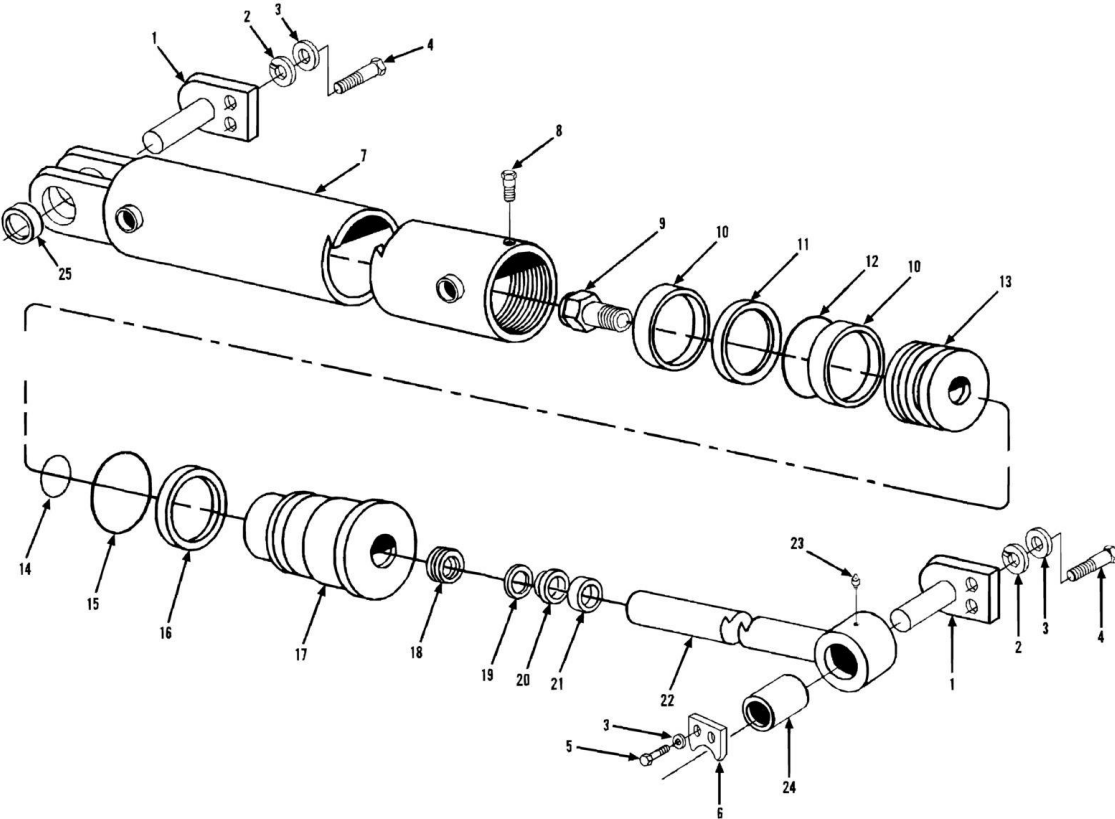
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FIGURE 12-36. (91385025) STABILIZER OPTION 3 SECTION BOOM ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91385025	1	STABILIZER OPTION, (includes all items)	
1	91166013	1	REAR AXLE WELDMENT, (includes item 44)	
2		Ref	STABILIZER CYLINDER, (See STABILIZER CYLINDER 3 SECTION BOOM ONLY for Breakdown)	
3	88662085	3	ELBOW, 45, (includes item 38)	
4	88662006	1	CONNECTOR, (includes item 38)	
5	91161269	2	KEEPER	
6	88561111	6	FLATWASHER, 1/2	
7	88201065	2	HEX HD CAPSCREW, 1/2-13X1, GR5	
8	91166062	2	PIN WELDMENT	
9	88201066	4	HEX HD CAPSCREW, 1/2-13X1-1/4, GR5	
10	88551013	4	LOCKWASHER, 1/2	
11	88671001	1	LUBE FITTING, STRAIGHT, 1/8	
12	84718287	1	HOSE ASSY	
13	84717556	1	HOSE ASSY	
14	84718631	1	HOSE ASSY	
15	88662244	1	SWIVEL NUT BRANCH TEE, 1 TUBE	
16	91033230	1	TUBE END REDUCER	
17	83201073	2	HEX HD CAPSCREW, 3/8-16X4-1/2, GR5	
18	88551011	2	LOCKWASHER, 3/8	
19	88501006	2	HEX NUT, 3/8-16	
20		Ref	STABILIZER VALVE, (See HYDRAULIC COMPONENTS SECTION for Breakdown)	
21	86621230	2	SUPPORT CLAMP	
22	77143006	2	WHIZ-LOCKNUT, 5/16	
23	91365037	1	STABILIZER SENSOR ASSY, (includes items 39 thru 43)	
24	91141260	1	BRACKET	
25	88301093	2	ROUND HD MACHINE SCREW, #10-24X3/4	
26	88551007	2	LOCKWASHER, #10	
27	88561001	4	FLATWASHER, 3/16	
28	91043199	2	SQUARE NUT	
29	90027187	8	TIE WRAP	
30	90021705	1	SUPPORT CLAMP	
31	91363081	1	STABILIZER HARNESS	
32	91386008	1	FRAME WELDMENT, (includes items 34 thru 37)	
33	88662065	1	ELBOW, 90, (includes item 38)	
34	91381027	1	BRACKET	
35	85051384	2	WELD STUD, 5/16-18X1	
36	91336012	1	STABILIZER VALVE BRACKET	
37	91161083	1	STABILIZER LUG	
38	88591205	5	O-RING	
39	91143155	1	PROXIMITY SENSOR SWITCH	
40	80963062	1	WEATHERPACK SHROUD, (4 WIRE)	
41	80963069	4	MALE PIN TERMINAL	
42	80963066	4	CABLE SEALS	
43	91053419	1	TIE WRAP	
44	91163019	2	BUSHING	

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FIGURE 12-37. (91163045) STABILIZER CYLINDER 3 SECTION BOOM ONLY



SECTION 12 - OPTIONAL EQUIPMENT

FIGURE 12-37. (91163045) STABILIZER CYLINDER 3 SECTION BOOM ONLY

ITEM	PART NUMBER	QTY	DESCRIPTION	REV
	91163045	1	STABILIZER CYLINDER, (includes all items except 1 thru 5)	
	91144005	Ref	SEAL KIT, (includes items 10, 11, 12, 14, 15, 16, 18, 19 & 20)	
1	91166062	2	CYLINDER PIN	
2	88551013	4	LOCKWASHER, 1/2	
3	88561111	6	FLATWASHER, 1/2	
4	88201066	4	HEX HD CAPSCREW, 1/2-13X1-1/4, GR5	
5	88201065	2	HEX HD CAPSCREW, 1/2-13X1, GR5	
6	91161269	2	PIN KEEPER	
7	91164028	1	CASE ASSY	
8	91124096	1	CAPSCREW	
9	91064017	1	LOCKNUT	
10	Kit	2	WEAR RING	
11	Kit	1	PISTON SEAL	
12	Kit	1	O-RING	
13	91044033	1	PISTON	
14	Kit	1	O-RING	
15	Kit	1	O-RING	
16	Kit	1	BACK-UP RING	
17	91144034	1	CYLINDER HEAD	
18	Kit	1	WEAR RING	
19	Kit	1	STEP SEAL	
20	Kit	1	U-CUP	
21	91124103	1	WIPER	
22	91164029	1	SHAFT ASSY	
23	91144128	1	GREASE FITTING	
24	91164030	1	BUSHING	
25	91164031	1	BUSHING	
		Ref	NOTE: ONLY ITEMS WITH PART NUMBERS ARE AVAILABLE FOR SERVICE.	

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