

PARTS MANUAL

**HR45-25, -27, -31, -36L, -40LS, -40S,
-45LSX
(B227)**

CUSTOMER EDITION

HYSTER

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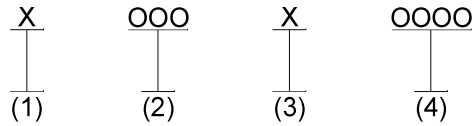
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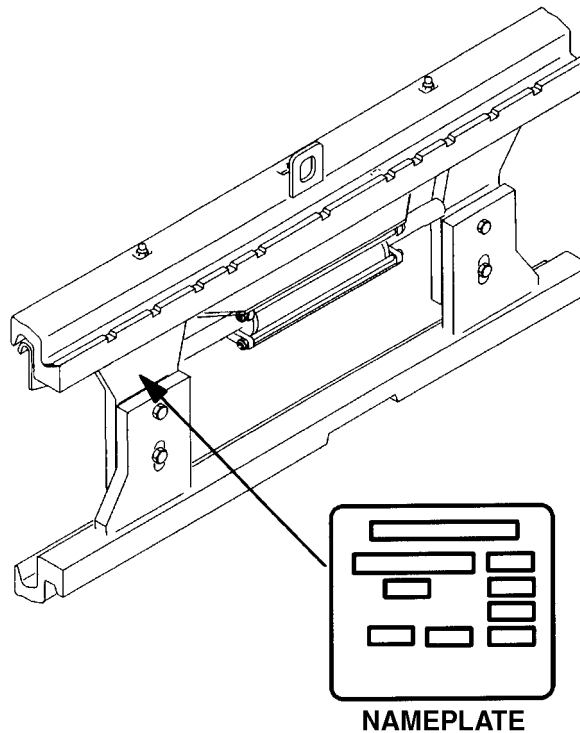
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IDENTIFICATION OF ATTACHMENT AND SIDE-SHIFT CARRIAGE SERIAL NUMBERS



- (1) and (2) The first letter and three numbers indicate the attachment unit code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number indicates the production sequence number.
- For pending production sequence numbers contact your local dealer for Hyster lift trucks.



HP990003

Side-shift carriages and attachments have nameplates. Use the serial number found on the nameplate to identify the attachment.

Always refer to the group, serial, or part number when ordering service parts.

Modifications of attachments and side-shift carriages by SPED (Special Products Engineering Department) are identified by a model prefix code beginning with the letter "S". Contact your dealer for Hyster lift trucks for information on these assemblies.

CHASSIS BOX
STANDARD AND R/RS – LEFT HAND

ITEM	PART NO.	DESCRIPTION	QTY
1	1468879	Housing	1
1	1549300	Frame (LH QSM)	1
2	1468880	Grill	1
3	320157	Washer	14
4	136681	Capscrew	14
5	293780	Lockwasher	14
6	1468884	Grill	1
7	1488545	Washer	10
8	1468886	Bolt	20
9	1468887	Step	2
10	1468888	Bolt	9
11	1475742	Step	1
12	1527450	Rail	1
13	1468893	Nut	18
14	1468894	Bolt	18
15	1468895	Mirror	1
16	1468896	Bracket	1
17	287854	Capscrew	2
18	1468898	Plate	1
19	1468899	Bolt	4
20	1468900	Catch	4
21	1468901	Fitting	4
22	1468902	Grill	1

**HYDRAULIC MOTOR SUPPORT
SLIDING CAB – L/LS/LSX**

ITEM	PART NO.	DESCRIPTION	QTY
1	1475875	Support	1
2	1470991	Motor	1
2	1475036	Kit-Seal	1
3	1470888	Fitting	2
4	1470558	Bolt	2
5	292683	Lockwasher	2
6	1470995	Spacer	1
7	1470996	Pinion	1
8	1470997	Spacer	1
9	1469265	Bolt	1
10	293780	Lockwasher	1
11	1471000	Flange	1
12	1471001	Bearing	1
13	1471002	Ring	1
14	293647	Capscrew	3
15	1468174	Nut	3
16	1471005	Bearing	4
17	1471006	Washer	2
18	1471007	Spacer	4
19	1471008	Pinion	2
20	1471009	Pin	2
21	1468941	Nut	2
22	1471011	Plate	2
23	293779	Lockwasher	4
24	292501	Capscrew	4

**DOORS AND STORAGE COVERS
WIDE CAB**

ITEM	PART NO.	DESCRIPTION	QTY
	1527456	Door (LH)	1
	1527455	Door (RH)	1
1	1476398	Lock (RH)	1
1	1469065	Lock (LH)	1
2	1469062	Handle	2
3	1488167	Sliding Window (RH)	1
3	1488185	Window (LH)	1
4	1476395	Glass (RH)	1
4	1475946	Glass (LH)	1
5	1527457	Catch	2
6	1488168	Door (RH)	1
6	1488187	Frame (LH)	1
7	1469069	Lockring	8
8	1488163	Pin	4
9	1469067	Strap (110 mm)	2
9	1527730	Strap (120 mm)	2
9	1592036	Strap (130 mm)	2
10	1488164	Pin	4
11	1469084	Hinge	2
12	1488166	Lockring	8
13	1469061	Cylinder Assy	2
14	1488160	Protector	2
15	1488161	Catch	2
16	1488169	Information Case	1
17	1488170	Gas Spring	1
18	1488172	Bracket	1
19	1488173	Hinge	3
20	1488174	Cover	1
21	1488176	Door	1
22	1488178	Cover	1
23	1488179	Cover	1
24	1488180	Cover	1
25	1488181	Door	1
26	1488182	Screw	3
27	1488183	Controller	1
28	1469058	Fitting	4
29	1488184	Washer	4
30	1469071	Link	4
31	1618059	Strip Seal (Per Foot)	9
32	1469060	Hinge (LH)	2

**AIR CONDITIONER
SLIDING CAB – PRESSURIZED**

ITEM	PART NO.	DESCRIPTION	QTY
1	1488021	V-Belt	1
2	1488022	Compressor	1
3	1488023	Tensioner	1
4	1488024	Bracket	1
5	1488025	Support	1
6	1558583	Hose	1
7	1558584	Hose	1
8	1558585	Hose	1
9	1488029	Thermostat	1
10	1488030	Shutoff Valve	1
11	1488031	Housing	1
12	1488032	Housing	2
13	1488033	Cooler	2
14	1488034	Radiator	2
15	1488035	Fan	2
16	1488036	Seal	1
17	1488037	Housing	2
18	1488038	Deflector	2
19	1488039	Bracket	2
20	1488040	Grill (Round)	3
21	1488041	Grill (Rectangular)	1
22	1488042	Condenser	1
23	1488043	Grill	1
24	1488044	Seal	1
25	1488045	Tube	1
26	1488046	Tube	1
27	1488047	Reservoir	1
28	1488048	Valve	1
29	1488049	Valve	1
30	1488050	Grommet	1
31	1588839	Plug	1
32	1488052	Lock	4
33	1558586	Fan	2
34	1488054	Grill	1
35	1488056	Valve	1
36	1488057	Bracket	1
37	1488058	Air Conditioner	1
38	1488060	Condenser	1
39	1488061	Hose	1
40	1558587	Grill	2
41	1558588	Cover	1
42	1558590	Wire Harness	2
43	1558592	Cover	1

**INSTRUMENT PANEL
L/LS/LSX – PRESSURIZED**

ITEM	PART NO.	DESCRIPTION	QTY
1	1488353	Instrument Panel	1
2	1488355	Support	1
3	1488354	Radio	1
4	1488356	Support	1
5	1527497	Seal	1
6	1527498	Sleeve	1
7	1469272	Switch	1
8	1558598	Support	1
9	1468906	Warning Light	1
9	1542521	Bulb	1
10	1551428	Housing	1
11	1468890	Warning Light	1
11	1542521	Bulb	2
12	1551435	Switch	1
13	1468917	Gauge	1
13	1542521	Bulb	2
14	1520169	Switch (Park Brake)	1
15	1468923	Instrument Cluster	1
15	1542521	Bulb	2
16	1526102	Speed Meter (Tachometer)	1
16	1526103	Connector	1
16	1526104	Pin	10
17	1488361	Bracket	1
18	1468972	Armrest	1
19	1488362	Lever	1
20	1520482	Instrument Panel	1
21	1488364	Chain	1
22	1488365	Frame	1
23	1488366	Bearing	2
24	1468978	Cylinder Assy	1
25	1550544	Hook	1
26	1468997	Spring	1
27	1468996	Pin	1
28	1488368	Lever	1
29	1488369	Support	1
30	1469263	Ignition Switch and Key	1
31	1551429	Switch	2
32	1551433	Switch	2
33	1469048	Socket	10
34	1469049	Socket	8
35	1551436	Switch (Test)	1
36	1488373	Cover	5
37	1527500	Button	1
37	1496898	Switch (with Support)	1
37	1496899	Knob	1
38	1551434	Switch (Warning)	1
39	1469264	Switch	1
40	1520212	Range Selector (Dampening)	1
41	1520209	Switch (Boom Extension)	1
42	1589906	Switch (Stabilizer)	1

**SECTION 3
ENGINE(S)**

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ENGINE COMPONENTS

ITEM	PART NO.	DESCRIPTION	QTY
	1553218	Engine Assy-Diesel	1
1	1553225	Fuel Filter (Fuel)	1
2	1553226	Starter	1
3	1553227	Injection Pump	1
4	1553228	Dipstick	1
5	1553229	Injector	6
6	1512631	Alternator	1
7	1469718	V-Belt	1
8	1553231	Plug	1
9	1553232	Water Pump	1
10	1513490	Kit-Repair Water Pump (Water Pump)	1
11	1553234	Oil Filter	1
12	1553235	Drain Plug	1
13	1553236	Seal	1
14	1553237	Thermostat	1
15	1553238	Oil Pump	1
16	1553239	Kit-Coolant Check	1
17	1469727	Filter (Coolant)	1

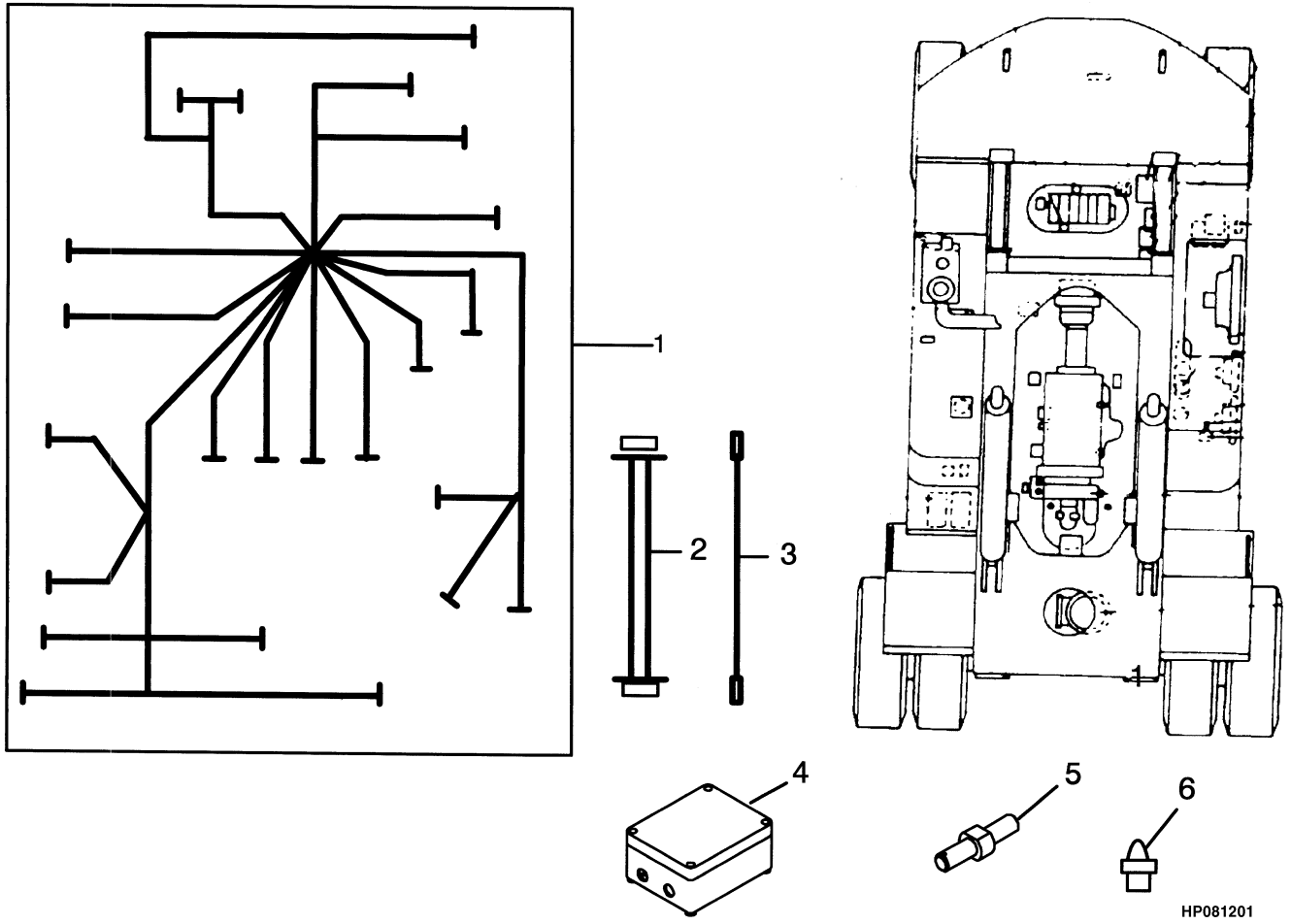
ENGINE INTAKE COOLING

ITEM	PART NO.	DESCRIPTION	QTY
1	1553575	Sleeve	4
2	1553576	Hose Clamp	16
3	1553577	Hose (Inlet)	1
4	1553578	Clamp	4
5	1553579	Hose (Outlet)	1
6	1553580	Sleeve	4
7	1553581	Hose (Turbo Outlet)	1
8	1553582	Hose (Engine Outlet)	1
9	1553583	Flange	1
10	136681	Capscrew	4
11	320157	Washer	8
12	1468223	Nut	4
13	293780	Lockwasher	4
14	1468115	Nut	4
15	1560070	Support	1
16	1469265	Bolt	4

RADIATOR FITTINGS
HYDRAULICS AND BRAKE COOLING

ITEM	PART NO.	DESCRIPTION	QTY
1	1470796	Cooler	1
2	1469803	Isolator	2
3	1468893	Nut	8
4	287854	Capscrew	2
5	1470804	Fitting	2
6	1468338	Fitting	3
7	1468638	Fitting	2
8	1468080	Fitting	2
9	1469787	Fitting	1
10	1470814	Switch	2
11	1469674	Fitting	1
12	1468078	Fitting	3
13	1468265	Fitting	1
14	1470379	O-Ring	2
15	1469200	Fitting	1
16	1472621	Isolator	2
17	1470797	Support	2
18	1470798	Seal (2,80 mm)	1
19	1469841	Fitting	2
20	1468135	Fitting	1
21	1482441	Valve	1
22	1468095	Fitting	1
23	1468337	Fitting	1
24	1482444	Valve	1

**WIRE HARNESS (FIGURE 4-2)
MAIN FRAME — L/LS/LSX**



HP081201

ITEM	PART NO.	DESCRIPTION	QTY
1	1551357	Wire Harness (Frame)	1
2	1558241	Wire Harness (Cabin)	1
3	1470935	Cable	1
4	1470936	Box	1
5	1469129	Sensor	1
6	1470939	Connector	1

LIGHTS
L/LS/LSX (→ S/N B227O01510)

ITEM	PART NO.	DESCRIPTION	QTY
1	1558247	Fender	1
1	1592031	Protection Tube (LH)	1
2	1558248	Fender	1
2	1592032	Protection Tube (RH)	1
3	136985	Capscrew	20
4	1468893	Nut	22
5	1468907	Washer	14
6	1475879	Cowl	1
7	136681	Capscrew	5
8	1468952	Washer	5
9	1544678	Light	2
10	1468912	Light	2
11	1468913	Lamp	2
12	1468914	Connector	2
13	1468915	Turn Signal Light	2
14	1468916	Lamp	2
15	1468262	Nut	6
16	1468918	Light (With Cable Assembly) (LH)	1
16	1567137	Light (Rear)	1
16	1567138	Lens	1
17	1468919	Light (With Cable Assembly) (RH)	1
17	1567137	Light (Rear)	1
17	1567138	Lens	1
18	2072354	Capscrew	8
19	1468921	Nut	10
20	1468916	Lamp	4
21	1468362	Bulb	2
22	1468924	Light	2
23	1468925	Lamp	2
24	1468926	Bolt	6
25	1468374	Light	2
26	1468375	Bulb	2
27	1468929	Horn	1
28	1468930	Plate	1
29	1468931	Isolator	2
30	1475882	Light	2
31	1472159	Support	2
32	1472166	Support	2
33	1472167	Mirror	2
34	292504	Capscrew	8
35	1469191	Washer	8
36	1472204	Nut	8
37	1472165	Bolt	8
38	1468907	Washer	8
39	1470955	Nut	8
40	1471112	Washer	7
41	1471101	Nut	7
42	1488162	Grill (Upper)	1
43	1468901	Fitting	2
44	1558249	Support	1

**INTERIOR COWLING
WIDE FIXED CAB**

ITEM	PART NO.	DESCRIPTION	QTY
1	1527453	Steering Control Unit	1
2	1470366	Valve	1
3	1469841	Fitting	1
4	1488091	Bracket	1
5	1469829	Fitting	3
6	1488092	Housing	1
7	1521162	Switch	1
8	1488094	Protector	1
9	1488095	Steering Column	1
9	1619042	Steering Wheel	1
9	1539031	Gas Spring	1
10	1470377	Selector	1
11	1468374	Light	2
12	1488107	Bracket	1
13	1488108	Isolator	1
14	1488111	Cover	1
15	1488112	Dome Light	1
16	1488113	Loudspeaker	2
17	1488115	Dome Light	1
18	1469837	Fitting	1
19	1488116	Seal	1
20	1470379	O-Ring	1
21	1488159	Support (RH)	1
22	1520166	Switch	1
23	1520168	Switch	3
24	1488158	Adhesive	1
25	1520168	Switch	1
26	1488117	Switch	1
27	1551368	Switch	1
28	1469048	Socket	3
29	1469049	Socket	3
30	1488123	Horn	1
31	1488155	Tube	4
32	1488124	Isolator	1
33	1488125	Isolator	1
34	1488126	Isolator	1
35	1488127	Cover	10
36	1488128	Isolator	1
37	1488149	Isolator	1
38	1488154	Plate	1
39	1488157	Plate	1
40	1488146	Antenna	1
41	1488156	Wire Harness	1
42	1488129	Isolator	1
43	1488130	Isolator	1
44	1488131	Plate	1
45	1488132	Plate	1
46	1488133	Plate	1
47	1488134	Floormat	1
48	1488135	Protector	1

ITEM	PART NO.	DESCRIPTION	QTY
1	1492663	Start Battery Wet	2
2	1469825	Strip	2
3	1469826	Bracket	2
4	1469827	Link	2
5	1468223	Nut	10
6	320157	Washer	3
7	1469830	Cable	1
8	1469831	Cable	1
9	1469832	Cable	1
10	1492666	Strip	1
11	1469834	Relay	1
12	1469835	Isolator	4
13	1469836	Relay	1
14	1468921	Nut	4
15	1468931	Isolator	2
16	2072354	Capscrew	2
17	1469840	Washer	1
18	1593335	Nut	2
19	1492665	Bracket	1

PUMP DRIVE AND SHAFT

ITEM	PART NO.	DESCRIPTION	QTY
1	16085	Capscrew	7
2	15158	Washer	7
3	1389150	Sleeve	1
4	1389151	Tube	1
5	1389152	Piston Ring	1
6	1389153	Snap Ring	1
7	1389154	Washer	1
8	1389155	Bearing (Front)	1
8	1389156	Bearing (Rear)	1
9	1456013	Sealing Ring	1
10	1389169	Gear (Auxiliary)	2
11	330532	Seal	1
12	1389158	Sealing Ring	1
13	1389159	Baffle	1
14	1389160	Piston Rod Bearing	1
15	1390046	Shaft	1
16	1389164	Screw	6
17	15158	Washer	6
18	1389165	Snap Ring	3
19	1311661	Bearing	3
20	1389166	Support	3
21	1389167	Gear (Pump)	3
22	1389168	Gear (Impeller)	1
23	330534	Snap Ring	1

**CLUTCH
LOW SPEED**

ITEM	PART NO.	DESCRIPTION	QTY
1	1389234	Bearing (First Clutch)	1
2	1389235	Ring	1
3	1389236	Spacer	1
4	1392494	Bearing Cup (Front)	1
5	330623	Kit-Clutch Pack Plates	1
6	1389228	Piston Seal (Piston)	1
7	1389239	Piston	1
8	1389177	Friction Disk	9
9	1389176	Separator Plate	9
10	1389224	Backplate	1
11	1389174	Snap Ring	1
12	1391127	Washer	1
13	1389218	Retaining Ring	1
14	1566656	Spring	1
15	348486	Ring	1
16	1391133	Spacer	1
17	1389219	Bearing	1
18	330612	Ring	1
19	1389220	Bearing	1
20	1391134	Thrust Washer	1
21	1389245	Bearing (Rear)	1
22	1389246	Stud	4
23	79976	O-Ring	1
24	1389247	Shim (0,102 mm)	AR
24	1389248	Shim (0,178 mm)	AR
24	1389249	Shim (0,254 mm)	AR
24	1389250	Shim (0,508 mm)	AR
25	177948	Lockwasher	4
26	221710	Nut	4
27	1389125	Plug	2
28	1389253	Cap (Rear)	1
29	1556985	Piston Ring	1
30	1391629	Gear (First Speed)	1
31	1391630	Shaft	1
32	1391631	Gear (Third Speed, Driven) (Third Speed)	1

**HYDRAULIC CONTROL VALVE
HYDRAULIC INCHING**

ITEM	PART NO.	DESCRIPTION	QTY
1	1390054	Valve	1
2	382308	Spring	3
3	1390003	Spool	1
4	235691	Fitting	3
5	16484	O-Ring	3
6	1390004	Spool	2
7	384349	Spool	2
8	1326290	Spring	1
9	235691	Fitting	1
10	16484	O-Ring	1
11	1470131	Spring	1
12	330666	Plug	1
13	384348	Spool	1
14	16485	O-Ring	1
15	233693	Fitting	1
16	1391634	Gasket	1
17	1315573	Stop	1
18	1390007	Screw	2

DIFFERENTIAL AND PARK BRAKE

ITEM	PART NO.	DESCRIPTION	QTY
1	1483784	Differential Carrier	1
2	1483787	Screw	4
3	132451	Washer	4
4	15316	Fitting	1
5	1499056	Kit-Shim	AR
6	1483801	Bearing Cup	1
7	1483791	Bearing Cup	1
8	.....	Park Brake Assembly	1
9	1355346	Pin	4
10	1483802	Ring (LH)	1
11	1483790	Ring	1
12	280582	Screw	1
13	132476	Nut	1
14	1483786	Pin	4
15	272252	Washer	4
16	132465	Lock	2
17	1470319	Ball	2
18	1499055	Bearing Cone	1
19	79482	Bearing Cone	1
20	1483744	Cage	1
21	1499048	Bearing Cup	1
22	1470308	Washer	1
23	1483799	Case	1
24	329420	Capscrew (Short)	4
25	1499066	Bolt (Long)	8
26	86007	Washer	4
27	1483792	Bearing Cone	1
28	1483800	Bearing Cone	1
29	1483797	Pinion	4
30	1303550	Thrust Washer	4
31	1483796	Gear	2
32	1309868	Thrust Washer	2
33	1328669	Spider	1
34	1374555	Screw	16
35	1374550	Nut	16
36	86007	Washer	16
37	1499070	Gear and Pinion	1
38	1483783	Bearing	1
39	163874	Lockring	1
40	1483741	Locknut	1
41	1470320	Case	1
42	1473722	Flange	1
43	176134	Gasket	1
44	1473611	Adapter	1
45	1314255	Oil Seal	1
46	296442	Washer	8
47	293654	Capscrew	8
48	1473719	Brake Disk (Brake)	1
49	1508585	Bolt	8
50	221354	Locknut	8
51	88587	Washer	8

COOLING CIRCUIT DRIVE AXLE
HR45-25, HR45-31, HR45-40S

KEY:

A: HR45-25

B: HR45-31, HR45-40S

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1470067	Hose	2	2
2	1471970	Hose	2	2
3	1480481	Hose	1	1
4	1482325	Hose .....	..	1
4	1480481	Hose	1	..
5	1470068	Fitting	2	2
6	1469682	Fitting	1	1
7	1468093	Fitting	1	1
8	1468638	Fitting	1	1
9	1469674	Fitting	1	1
10	1468132	Fitting	1	..
10	1468094	Fitting	1	..
11	1468133	Fitting .....	..	1
12	1470629	Oil Reservoir (☞Figure 8-7).....	1	1
13	1470455	Filter (☞Figure 8-11).....	1	1

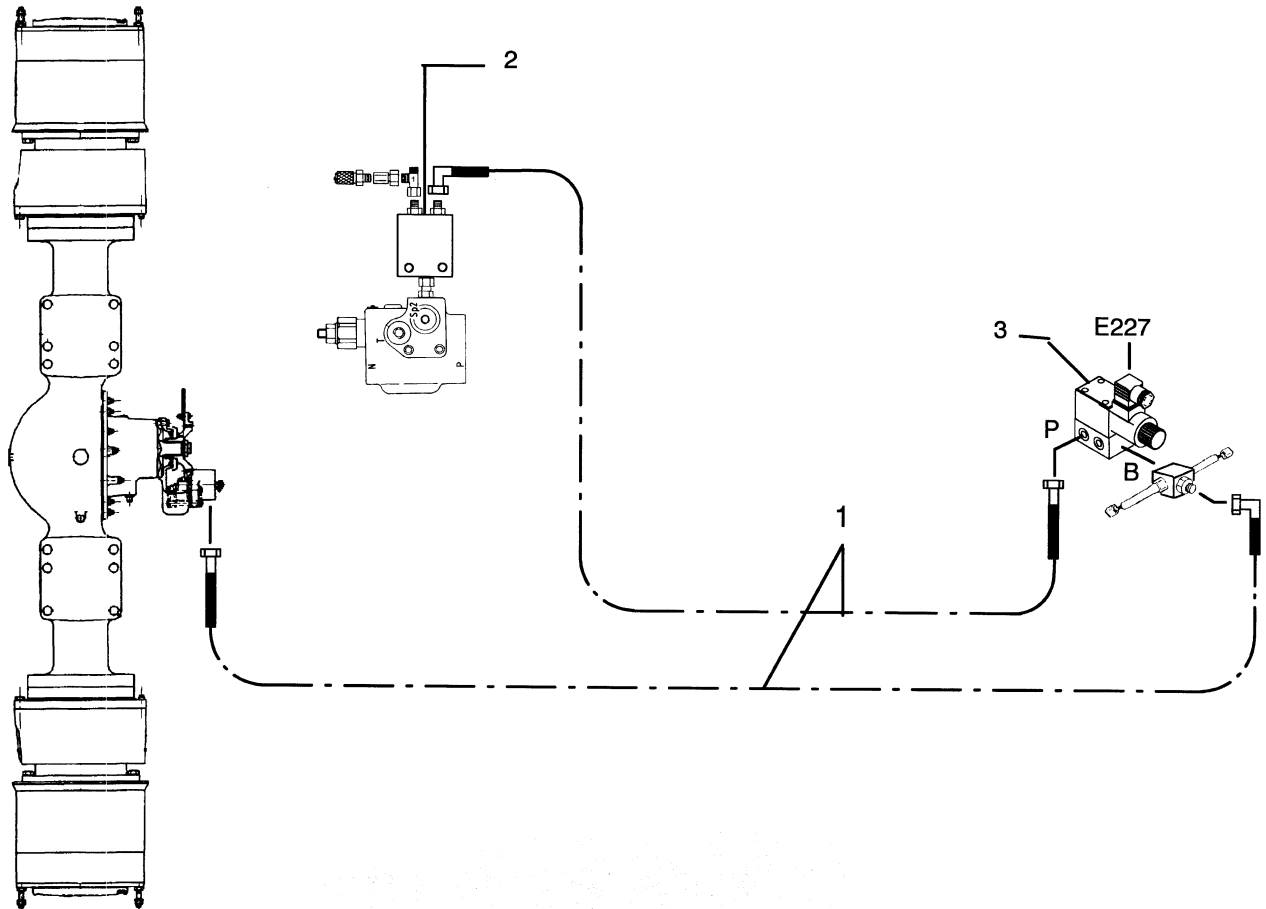
**STEER AXLE MOUNTING
STANDARD**

ITEM	PART NO.	DESCRIPTION	QTY
1	1588838	Steering Cylinder	1
1	a 1550809	Steering Cylinder	1
2	1550810	Kit-Seal	1
3	1550549	Tie Rod	2
4	1470080	Pin	4
5	1470066	Bolt	2
6	316828	Nut	2
7	1502349	Spherical Bearing	4
8	1470071	Cam	4
9	1468169	Grease Fitting	4
10	1468175	Cover	10
11	1470079	Bolt	4
12	1470082	Bushing	3
13	1468636	Bolt	4
14	320162	Washer	4
15	1470085	Plate	2
16	1470086	Pin	1
17	1470088	Pin	1
18	1470078	Lockring	2
19	1470090	Fitting	2
20	1470091	Fitting	1
21	1502801	Clamp	2
22	1502802	Boot	2
23	1550550	Clamp	2
24	1550551	Nameplate	8
25	1472339	Rivet	8
26	1550554	Frame (☞ Figure 7-5).....	1
27	1468885	Washer	4

FOOTNOTES:

- a** Used with 18.00 X 33 Wheels

PARK BRAKE CIRCUIT (FIGURE 8-12)
L/LS/LSX



HP040352

ITEM	PART NO.	DESCRIPTION	QTY
1	1470438	Hose	2
2	1470999	Valve	1
3	1675287	Solenoid Valve (☞ Figure 8-8).....	1

OIL RESERVOIR

ITEM	PART NO.	DESCRIPTION	QTY
1	1470621	Fuel Cap	1
2	1470624	Seal	1
3	1470556	Fitting	1
4	1469198	Plug	1
5	1475742	Step	1
6	1468893	Nut	12
7	1468894	Bolt	9
8	1470603	Gauge	1
9	1470623	Bolt	4
10	1469330	Seal	4
11	1470615	Gauge	1
12	1470618	Cover	1
13	293779	Lockwasher	6
14	1469334	Bolt	1
15	1476421	Washer	3
16	1470655	Cover	1
17	1468899	Bolt	4
18	1470649	Catch	2
19	1468973	Nut	4
20	1470647	Chain	1
21	1470635	Cotter Pin	1
22	1470633	Rod	1
22	1469146	Sensor	4
23	1470634	Washer	1
24	1470636	Hose	1
25	1470670	Clamp	2
26	1469191	Washer	3
27	1469683	Cotter Pin	2
28	1470637	Pin	1
29	1468262	Nut	2
30	136985	Capscrew	3
31	1468907	Washer	2
32	1477273	Step	1
32	1559071	Box	1
33	1468895	Mirror	1
34	1468896	Bracket	1
35	1527450	Rail	1
36	1468223	Nut	8
37	287854	Capscrew	2
38	1559070	Reservoir	1
39	287854	Capscrew	5
40	388049		
	292682	Lockwasher	2

BOOM CIRCUIT
HR45-25, HR45-31, HR45-40S

ITEM	PART NO.	DESCRIPTION	QTY
1	1470422	Pipe	1
2	1470423	Pipe	1
3	1470424	Pipe	1
4	1470425	Pipe	2
5	1470426	Pipe	2
6	1470427	Pipe	1
7	1470428	Pipe	1
8	1470429	Block	2
9	1470430	Fitting	2
10	1470431	Fitting	1
11	1470432	Block	1
12	1470433	Bolt	8
13	1470381	Bolt	24
14	1470435	Hose	1
15	1470436	Hose	2
16	1470437	Hose	2
17	1470438	Hose	2
18	15866	O-Ring	16
19	292656	Nut	40
20	1470383	Bolt	24
21	1470442	Hose	4
22	296027	Capscrew	8
23	61056	O-Ring	10
24	1470445	Hose	4
25	1470446	Bolt	24
26	1470447	Nut	24
27	1468260	Bracket	8
28	293799	Capscrew	8
29	1470388	Flange	14
30	296003	Screw	14
31	1468108	Nut	22
32	1470453	Flange	24
33	1470676	Flange	24
34	.....	Valve	2
35	1470584	Hydraulic Control Valve (☞Figure 9-26).....	1

CONTROL VALVE AND ATTACHING PARTS
L/LS/LSX

ITEM	PART NO.	DESCRIPTION	QTY
1	1468243	Plug	1
2	1468244	Bracket	1
3	296043	Capscrew	4
4	296027	Capscrew	8
5	1470524	Fitting	4
6	1470526	Pressure Switch	2
7	15866	O-Ring	4
8	61056	O-Ring	2
9	1470528	Flange	1
10	1470529	Valve	1
11	1468203	Bolt	8
12	1470531	Fitting	1
13	1470532	Fitting	1
14	1470533	Block	1
15	2089053	Capscrew	4
16	1469198	Plug	1
17	1469147	Fitting	5
18	1469132	Fitting	6
19	1470538	Fitting	1
20	1470540	Fitting	2
21	1468080	Fitting	2
22	1470539	Seal	2
23	1469791	Fitting	1
24	1470544	Fitting	1
25	1470676	Flange	2
26	1468652	Plug	2
27	1470450	Fitting	2
28	1470550	Block	1
29	1468265	Fitting	4
30	1469786	Fitting	1
31	1469144	Seal	2
32	1471198	Fitting	1
33	1471203	Fitting	1
34	1470444	Fitting	1
35	1470508	Fitting	1
36	1471201	Fitting	1
37	1471034	Fitting	1
38	1468097	Fitting	2
39	1470986	Fitting	1
40	1470865	Fitting	2
41	1468135	Fitting	1
42	1469787	Fitting	1
43	1470547	Fitting	1

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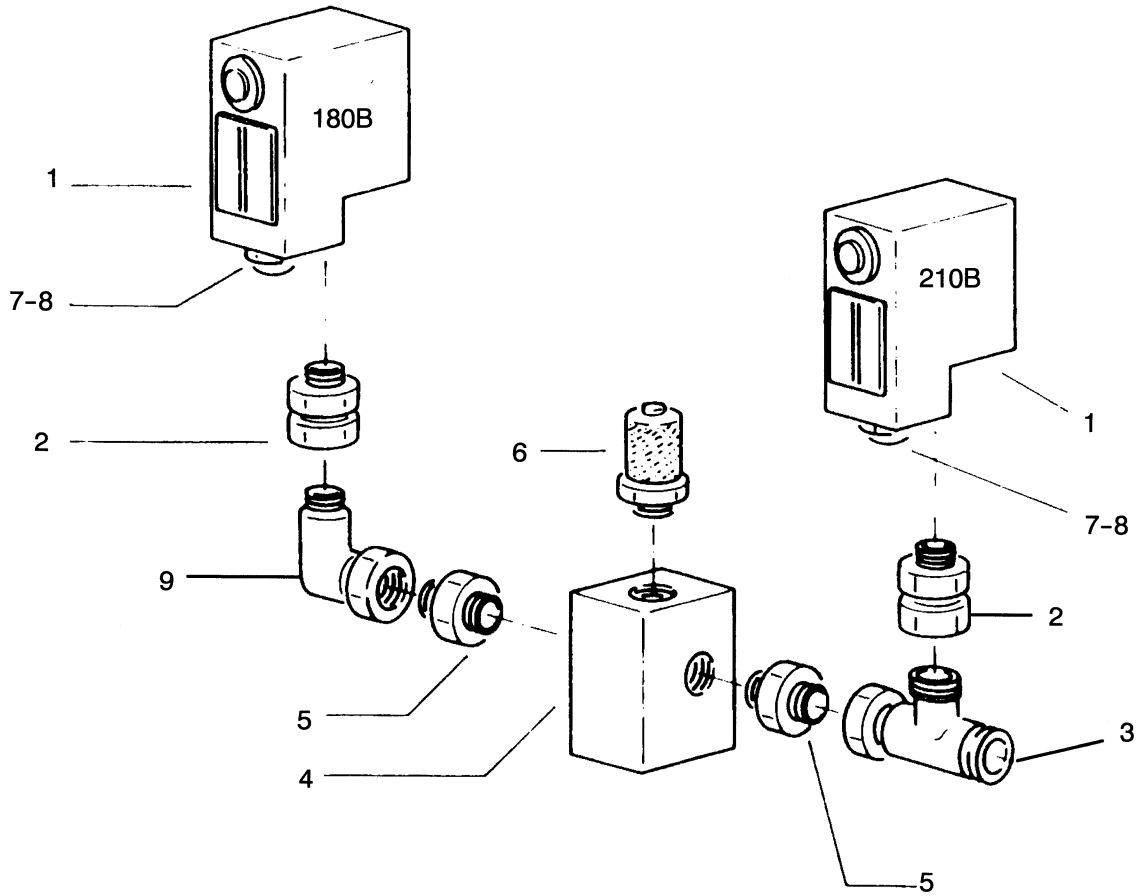
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SPREADER VALVE

ITEM	PART NO.	DESCRIPTION	QTY
	1487917	Valve (Spreader)	1
1	1562030	Cover	1
2	1470481	Cover	1
3	1470513	Spring	1
4	1470479	Ball	2
5	1470507	Seat Assy	1
6	1470518	Spring	1
7	1470519	Bolt	2
8	1470486	Guide	2
9	1470521	Damper	2
10	1470487	Spring	1
11	1470489	Bolt	1
12	1470488	Nut	1
13	1470522	Kit-Seal	1
14	1470523	Spring	1
15	1470495	Kit-Seal	1

LOAD SENSING SWITCH (FIGURE 9-37)



HP150835

ITEM	PART NO.	DESCRIPTION	QTY
1	1520303	Switch	2
2	1470596	Fitting	2
3	1470531	Fitting	1
4	1470598	Block	1
5	1469837	Fitting	2
6	1468247	Fitting	1
7	1470601	Gland	2
8	1470602	Fitting	2
9	1470508	Fitting	1

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BOOM

**HYDRAULIC TUBING TELESCOPING
BOOM 9 FT. 6 IN. – HR45-25, HR45-31, HR45-40S**

ITEM	PART NO.	DESCRIPTION	QTY
1	1470483	Tube	1
2	1470497	Hose	1
3	15866	O-Ring	2
4	1470938	Bolt	4
5	1468643	O-Ring	1
6	1478653	EPROM	4
7	1470383	Bolt	8
8	292656	Nut	8
9	1468265	Fitting	2
10	1469141	Fitting	3
11	1605724	Block	1
12	1479727	Fitting	1
13	1468080	Fitting	1
14	1470458	Hose	1
15	1471076	Hose	1
16	1472432	Hose	1
17	1470872	Hose	1
18	1470561	Seal	1
19	1469147	Fitting	1
20	1524167	Fitting	1
21	1470492	Nozzle	1

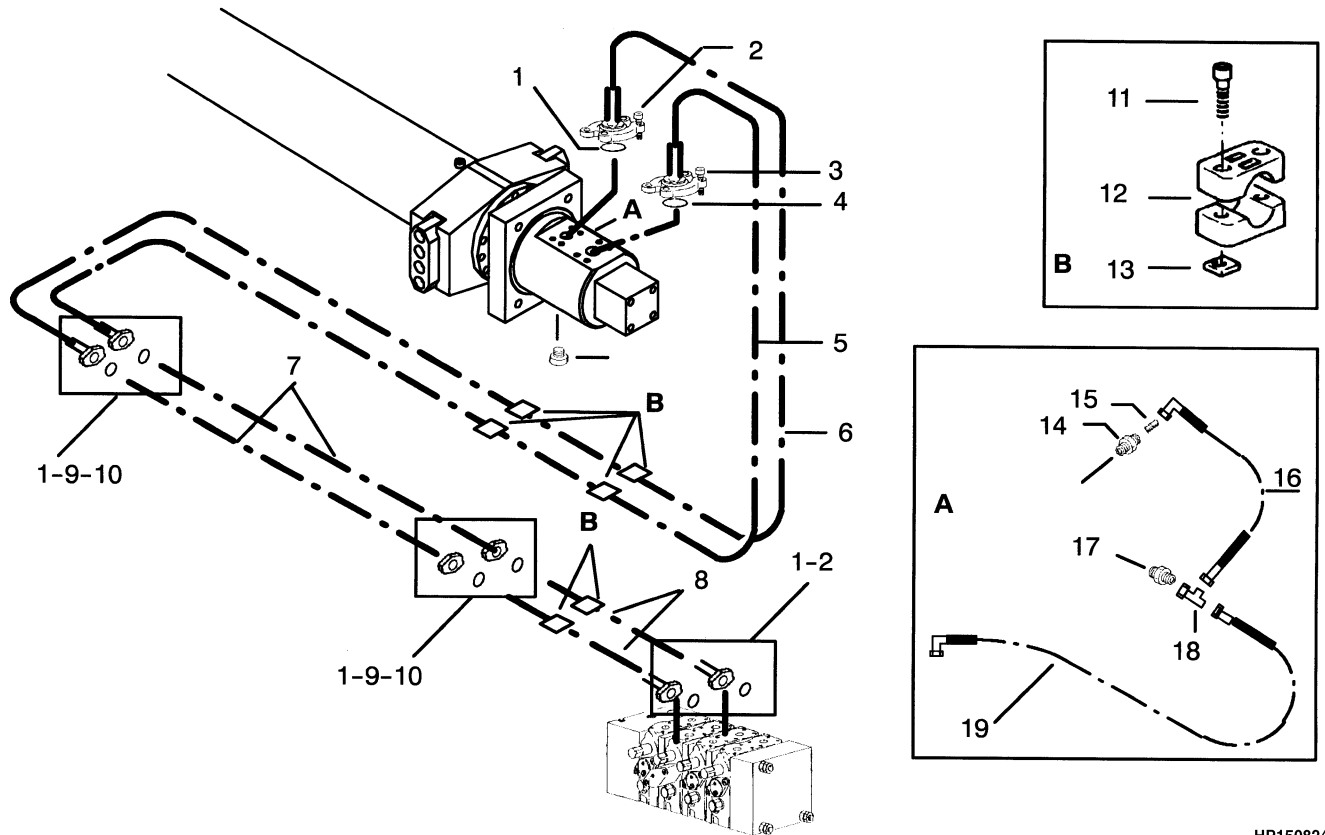
SLIDING BLOCKS
RS/LS

ITEM	PART NO.	DESCRIPTION	QTY
1	1468210	Wear Pad	4
2	1468216	Shim	12
3	292548	Screw	8
4	1527911	Stop	2
5	1468237	Bolt	19
6	1468168	Washer	25
7	292545	Capscrew	8
8	1468218	Washer	24
9	1468274	Nut	24
10	1527912	Stop	1
11	1527870	Support	6
12	1468280	Retainer	6
13	1468284	Bolt	36
14	1470116	Grease Fitting	10
15	1468292	Shim	6
16	1468175	Cover	10
17	1527868	Wear Plate	2

11

L/LS/LSX BOOM

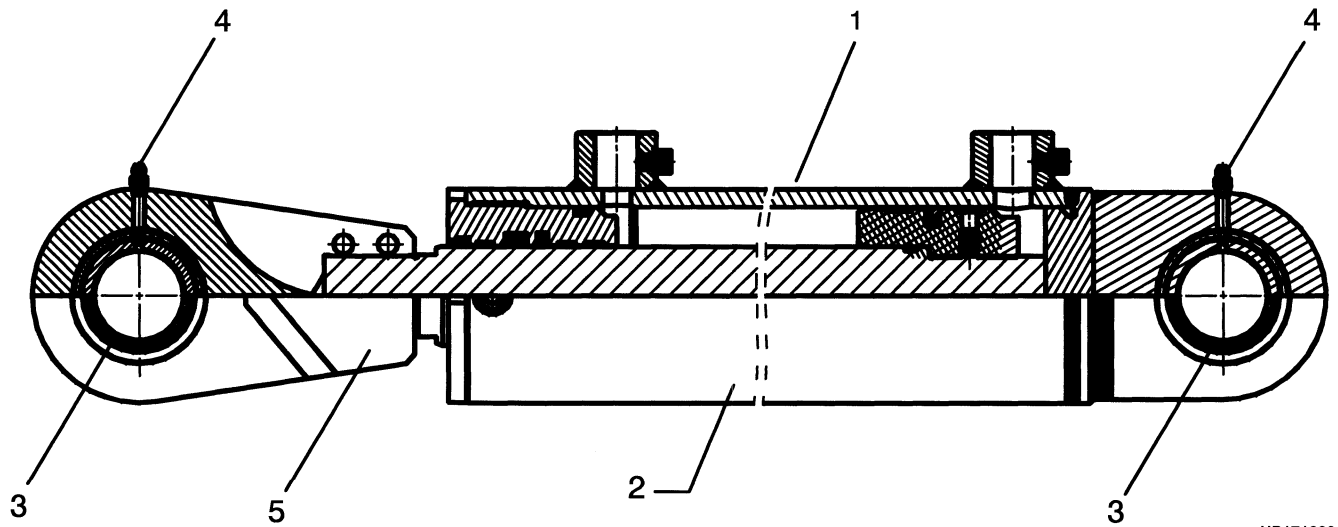
**TELESCOPING CIRCUIT (FIGURE 11-6)
LSX**



HP150824

ITEM	PART NO.	DESCRIPTION	QTY
1	15866	O-Ring	7
2	1470381	Bolt	12
3	2089173	Capscrew	4
4	1468643	O-Ring	1
5	1470482	Tube	1
6	1470483	Tube	1
7	1470484	Hose	2
8	1470485	Tube	2
9	1470383	Bolt	16
10	292656	Nut	16
11	296000	Capscrew	12
12	1470388	Flange	6
13	1468108	Nut	12
14	1470491	Fitting	1
15	1470492	Nozzle	1
16	1470458	Hose	1
17	1470494	Fitting	1
18	1468080	Fitting	1
19	1468654	Hose	1

DAMPING CYLINDER (FIGURE 11-12)



HP171328

ITEM	PART NO.	DESCRIPTION	QTY
1	1468273	Cylinder Assy	1
2	1468378	Kit-Seal	1
3	1468379	Gasket	2
4	1468169	Grease Fitting	2
5	1605570	Rod End (163 mm)	1
5	1605571	Rod End (215 mm)	1

ITEM	PART NO.	DESCRIPTION	QTY
1	1468064	Body	1
2	1468065	Bolt	2
3	1468066	Solenoid Valve	1
4	293799	Capscrew	4
5	1468068	Hose	1
6	1468069	Hose	1
7	1468076	Fitting	2
8	1468077	Fitting	1
9	1468078	Fitting	1
10	1468079	Plug	1
11	1468080	Fitting	1
12	1468081	Fitting	1
13	1468082	Kit-Seal	1
14	1468083	Solenoid	1
	a 1468150	Collar	10

FOOTNOTES:

a Not Illustrated

WINCH CIRCUIT

ITEM	PART NO.	DESCRIPTION	QTY
1	1470380	Hose	2
2	15866	O-Ring	8
3	1470381	Bolt	16
4	1470484	Hose	2
5	1470467	Hose	1
6	1471077	Tube	2
7	1471079	Tube	1
8	1471088	Tube	1
9	1470383	Bolt	16
10	292656	Nut	16
11	1468637	Fitting	1
12	1471089	Fitting	1
13	1468150	Collar	12
14	1470388	Flange	6
15	296003	Screw	12
16	1471090	Nut	4
17	1470062	Support	2
18	1468262	Nut	4
19	1471091	Bolt	1
20	1471092	Plate	1
21	1471093	Flange	1
22	1471094	Plate	1
23	296011	Capscrew	1
24	1468283	Bracket	2
25	1468278	Hose	1
26	1468081	Fitting	1
27	1470824	Hose	1
28	1528163	Hose	1
29	1528165	Block	1
30	1470091	Fitting	1
31	1528167	Hose	1

WINCH REDUCTION GEAR

ITEM	PART NO.	DESCRIPTION	QTY
	1471131	Reducer	1
1	296024	Capscrew	10
2	1469135	Seal	6
3	1471137	Plug	6
4	1471138	Fitting	1
5	1332805	O-Ring	1
6	1471141	Disk	1
7	1471147	Gear	1
8	1471148	Gear	1
9	1471149	Housing	1
10	1471150	Nut	1
11	1471151	Bearing	2
12	1471152	Spacer	1
13	1471153	Spacer	1
14	1471154	Spacer	1
15	1471155	Nut	1
16	1471156	Seal	1
17	1471157	Retaining Ring	4
18	1471158	Gear	4
19	1471159	Hub	1
20	1390949	Retaining Ring	1
21	1471151	Bearing	2
22	1471162	Plug	1
23	1471163	Flange	1
24	1471164	Spacer	1
25	1471165	Disk	7
26	1471161	Disk	8
27	1471167	Shaft	1
28	1471168	Needle Bearing	2
29	1471169	Bearing	1
30	1471170	Coupling	1
31	1471171	Back-Up Ring	1
32	1471172	Seal	1
33	1471173	Spacer	1
34	1471174	Back-Up Ring	1
35	1471175	Seal	1
36	1471176	Seal	1
37	1471177	Back-Up Ring	1
38	1471178	Piston	1
39	1471179	Spring	20
40	1471180	Plate	1
41	1471181	Back-Up Ring	1
42	1471182	O-Ring	1
43	1471183	Back-Up Ring	1
44	1471184	Seal	1

SECTION 13 CONTAINER HANDLER-ELME (B665)

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**ROTATOR MOTOR AND TRANSMISSION ASSEMBLY
B665**

ITEM	PART NO.	DESCRIPTION	QTY
1	6996252	Hydraulic Motor	1
2	6996287	Bolt	2
3	6996288	Key	1
4	.....	Rotator Valve	1
5	293650	Capscrew	12
6	6996291	Transmission Assy	2
7	6996290	Breather (Gearbox)	1
8	6996289	Breather (Brake)	1
9	6996292	Pinion	1
10	6990277	Washer	1
11	6990278	Lockplate	1
12	6996294	Bolt	3

**ROTATOR ASSEMBLY
WITH POWER PILE SLOPE**

ITEM	PART NO.	DESCRIPTION	QTY
1	.....	Transmission (Rotator)	2
2	6990281	Cover Plate	2
3	6996014	Bolt	8
4	6990282	Rotator (Top)	1
5	6996297	Ring (Slewing)	1
6	.....	Hydraulic Cylinder Assembly	2
7	6990283	Beam	2
8	6990284	Carriage	1
9	6996298	Bolt	60
10	6996299	Washer	120
11	6996191	Nut	120
12	6996300	Bolt	60
13	1332284	Pin	8
14	1332285	Spacer	8
15	320181	Washer	8
16	302408	Locknut	8
17	6990288	Pad	8
18	6990295	Plate	4
19	6996014	Bolt	12
20	6996028	Roll Pin	8
21	1329442	Bushing	2
22	6990312	Wear Pad	8
22	6996422	Bolt (Brass)	16
23	6990313	Pin	2
23	6990314	Spacer	2
23	6996423	Bushing	2
23	6996424	Bushing	2
24	302402	Locknut	2
24	6996425	Bolt	2

**HYDRAULIC SYSTEM
WITHOUT POWER PILE SLOPE**

ITEM	PART NO.	DESCRIPTION	QTY
1	6996144	Hose Assy	2
2	.....	Extension Cylinder	2
3	6996143	Hose Assy	4
4	6996141	Hose Assy	2
5	6996142	Hose Assy	2
6	6996342	Hose Assy	1
7	6996343	Hose Assy	1
8	6996344	Hose Assy	1
9	.....	Main Valve Assembly	1
10	6996345	Hose Assy	2
11	6996346	Hose	1
12	6996347	Hose Assy	1
13	6996348	Hose Assy	1
14	6996349	Hose Assy	1
15	6996350	Hose Assy	1
16	6996351	Hose	1
17	6996352	Hose Assy	1
18	6996137	Hose Assy	1
19	6996353	Hose Assy	1
20	6996354	Hose Assy	1
21	6996355	Hose Assy	1
22	.....	Side-Shift Cylinder	2
23	6996406	Hose Assy	2
24	6996356	Hose Assy	2
25	6990270	Body	2
26	.....	Valve Assembly (Rotation)	1
27	.....	Transmission (Rotator)	2
28	6996357	Hose Assy	1
29	6996358	Hose Assy	1

**ROTATOR MOTOR
COMER**

ITEM	PART NO.	DESCRIPTION	QTY
	1523840	Rotator	1
1	1524063	Brake Disk (Brake)	5
2	1524064	Spring	8
3	1524065	Hydraulic Motor	1
4	1524066	Snap Ring	3
5	12891	Snap Ring	2
6	1524068	Snap Ring	1
7	1524069	Snap Ring	2
8	1524070	Snap Ring	1
9	1524071	Snap Ring	1
10	1524072	Seal	1
11	1524073	Back-Up Ring	1
12	1524074	Back-Up Ring	1
13	1524075	O-Ring	1
14	1524076	O-Ring	1
15	1524077	O-Ring	1
16	1476981	O-Ring	1
17	1524078	O-Ring	2
18	1524079	O-Ring	1
19	1476993	Bearing	1
20	1476986	Bearing	1
21	1553589	Shaft	1
22	1530194	Fitting	1
23	1530196	Fitting	1
24	1530195	Breather	2

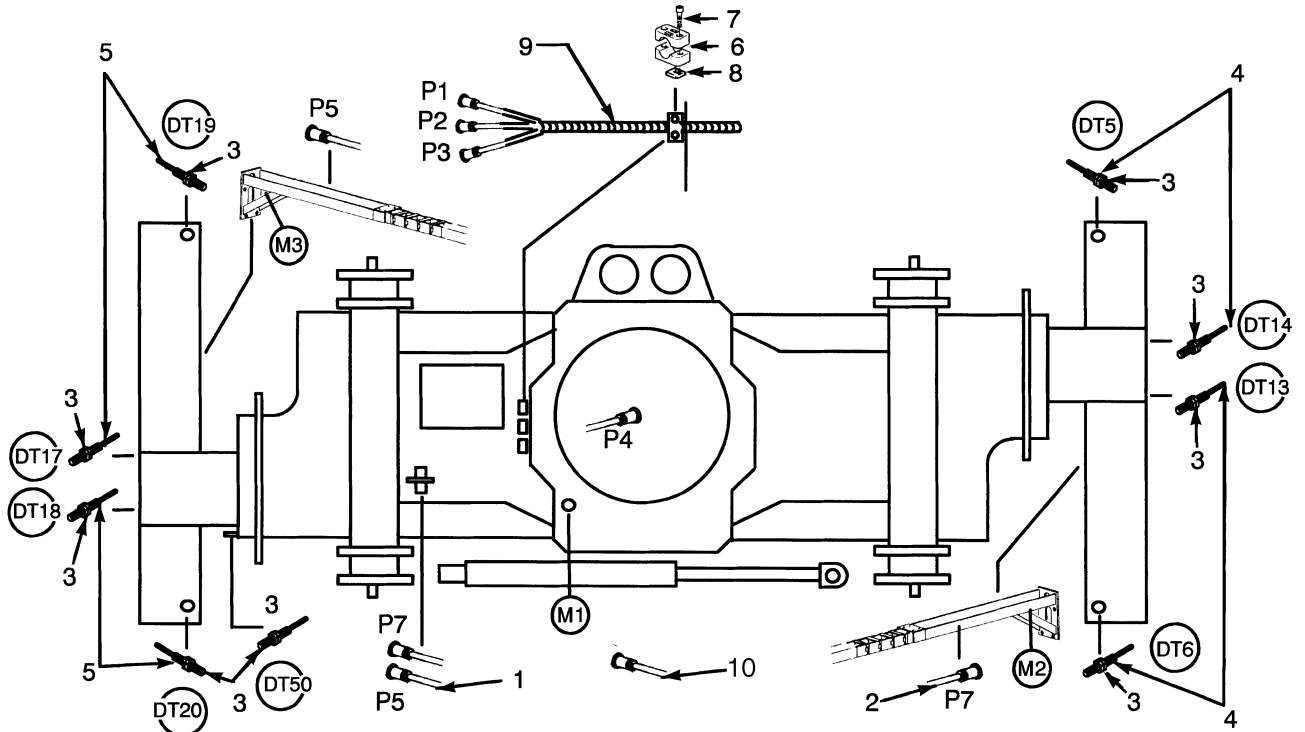
**REDUCING GEAR
DYNAMIC OIL**

ITEM	PART NO.	DESCRIPTION	QTY
	1524083	Gear (Housing)	1
1	1524090	Seal	1
2	1524091	O-Ring	1
3	1524092	Bearing	1
4	1524093	Bearing	1
5	1523837	O-Ring	1

TRANSMISSION TELESCOPING MOTOR

ITEM	PART NO.	DESCRIPTION	QTY
	1475050	Motor	1
1	1476986	Bearing	1
2	1476987	O-Ring	1
3	1476993	Bearing	1
4	1477002	Shaft	1
5	1476965	Bushing	1
6	1477024	Cover	1
7	1477027	Ring	1
8	1476974	O-Ring	2
9	1477029	Ring Gear	1
10	1477032	Pinion	1
11	1477033	Gear	1
12	1477034	Cover	1
13	1470446	Bolt	8
14	1476981	O-Ring	1
15	1470078	Lockring	1
16	1477035	Snap Ring	2
17	1477037	Bearing	1
18	1477038	Spacer	1
19	1477039	O-Ring	1
20	1477040	O-Ring	1
21	.....	Housing	1
22	.....	Key	1
23	.....	Pinion	1
24	1531754	Fitting	2
25	1531756	Fitting	1
26	1531755	Tube	1
27	1471137	Plug	1
	1531586	Drain Plug (Not Illustrated)	1
	1531753	Plate (Not Illustrated)	1
	1477042	Kit-Seal	1

**WIRE HARNESS (FIGURE 14-21)
SENSORS**



HP020210

ITEM	PART NO.	DESCRIPTION	QTY
1	1475018	Cable	1
2	1475019	Cable	1
3	1469129	Sensor	9
4	1475020	Wire Harness	1
5	1475021	Wire Harness	1
6	1468260	Bracket	2
7	296011	Capscrew	1
8	1468285	Nut	2
9	1475022	Wire Harness	1

**HYDRAULIC SYSTEM
TELESCOPING**

ITEM	PART NO.	DESCRIPTION	QTY
1	1527767	Solenoid Valve	1
2	1469199	Support	1
3	293758	Capscrew	4
4	1476765	Check Valve	2
5	1469129	Sensor	1
6	1476766	Hose	2
7	1470822	Hose	2
8	1469787	Fitting	2
9	1470666	Fitting	2
10	1468078	Fitting	6
11	1468135	Fitting	2
12	1468080	Fitting	2
13	1472937	Hose	2
14	1527769	Bolt	2
15	1520299	Coil	1
16	1469133	Seal	1
17	1476772	Plug	4
18	1476508	Socket	1
19	1469315	Relay	1

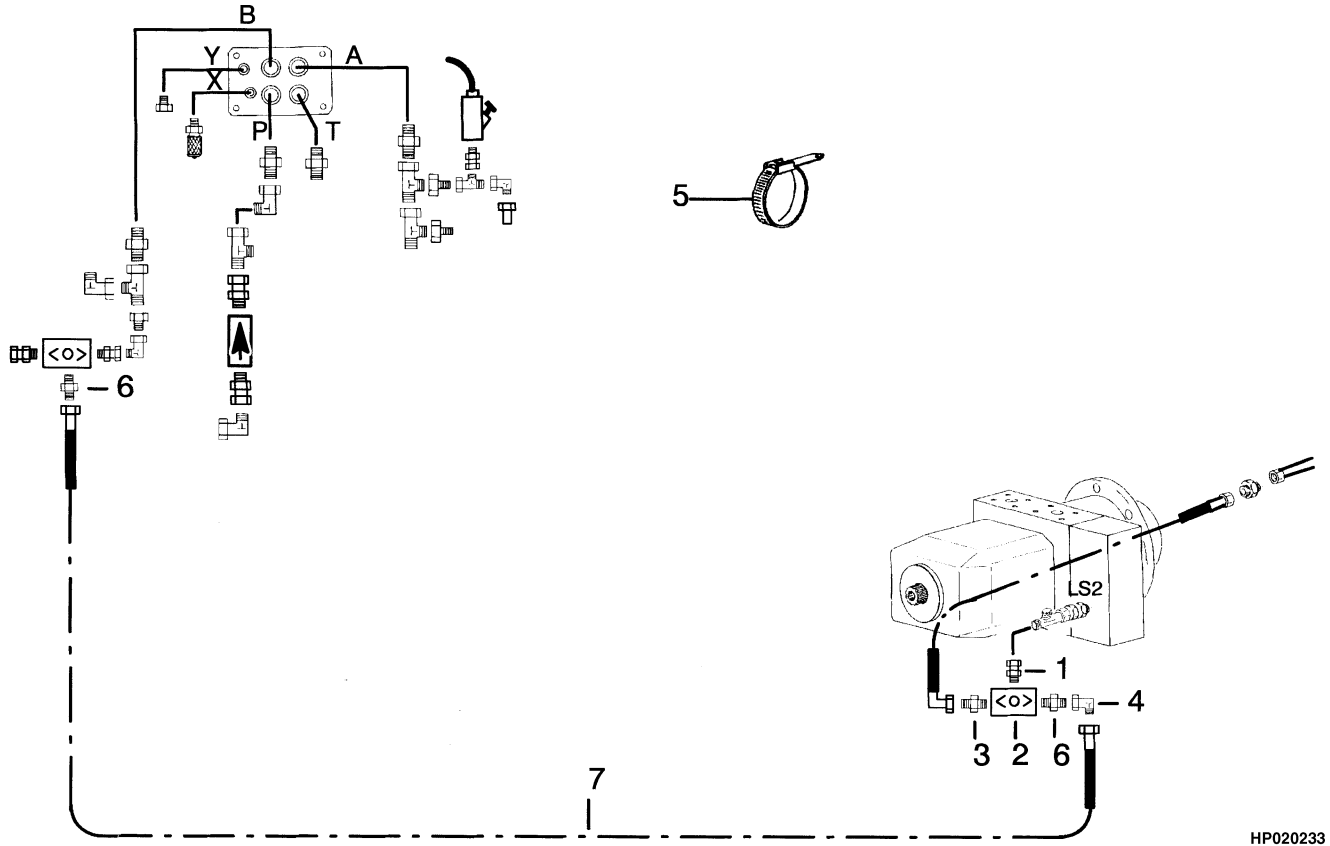
CYLINDER POWER PILE SLOPE

ITEM	PART NO.	DESCRIPTION	QTY
1	1476872	Cylinder	4
1	1476873	Kit-Seal	1
1	1533566	Piston Rod	1
1	1533567	Rod End	1
1	1533568	Nut	1
1	1533569	Piston	1
1	1391500	Bushing	1
2	1476873	Kit-Seal	4
3	1476874	Pin	8
4	1476875	Plate	8
5	1471127	Bolt	24
6	1468635	Washer	24
7	1476876	Fitting	3
8	1476877	Fitting	5

**HYDRAULIC CONTROL CIRCUIT
HR45-40LS**

ITEM	PART NO.	DESCRIPTION	QTY
1	1477347	Hose	1
2	1468076	Fitting	1
3	1477348	Hose	1
4	1477349	Valve	1
5	1468223	Nut	4
6	1477350	Hose	1
7	1468102	Hose	1
8	1469822	Hose	3
9	1468637	Fitting	1
10	1468133	Fitting	2
11	1472568	Clamp	15
12	1477351	Regulator	1
13	1470541	Plug	1
14	1470450	Fitting	2
15	1472961	Fitting	1
16	1469845	Fitting	1

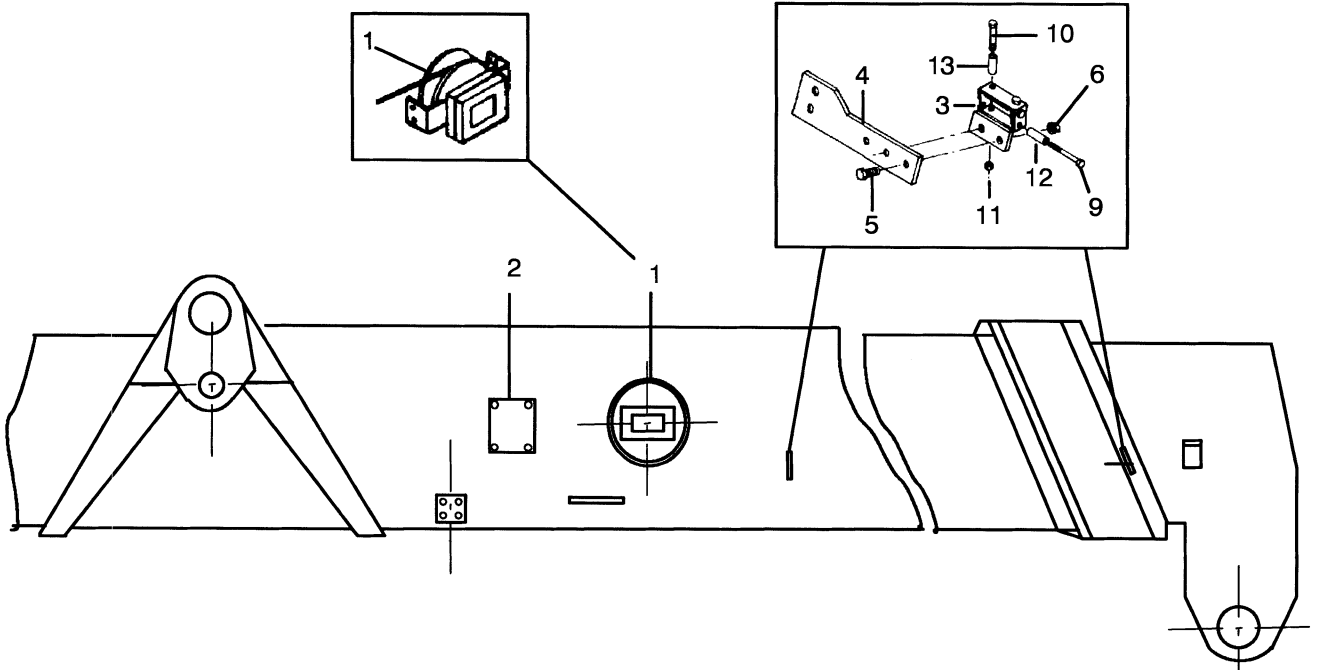
**HYDRAULIC SUPPLY CIRCUIT (FIGURE 15-8)
HR45-40S**



HP020233

ITEM	PART NO.	DESCRIPTION	QTY
1	1470596	Fitting	1
2	1477391	Selector	1
3	1469837	Fitting	2
4	1469200	Fitting	1
5	1468152	Collar	10
6	1468265	Fitting	2
7	1477218	Hose	1

CABLE WINDER (FIGURE 16-2)



HP020239

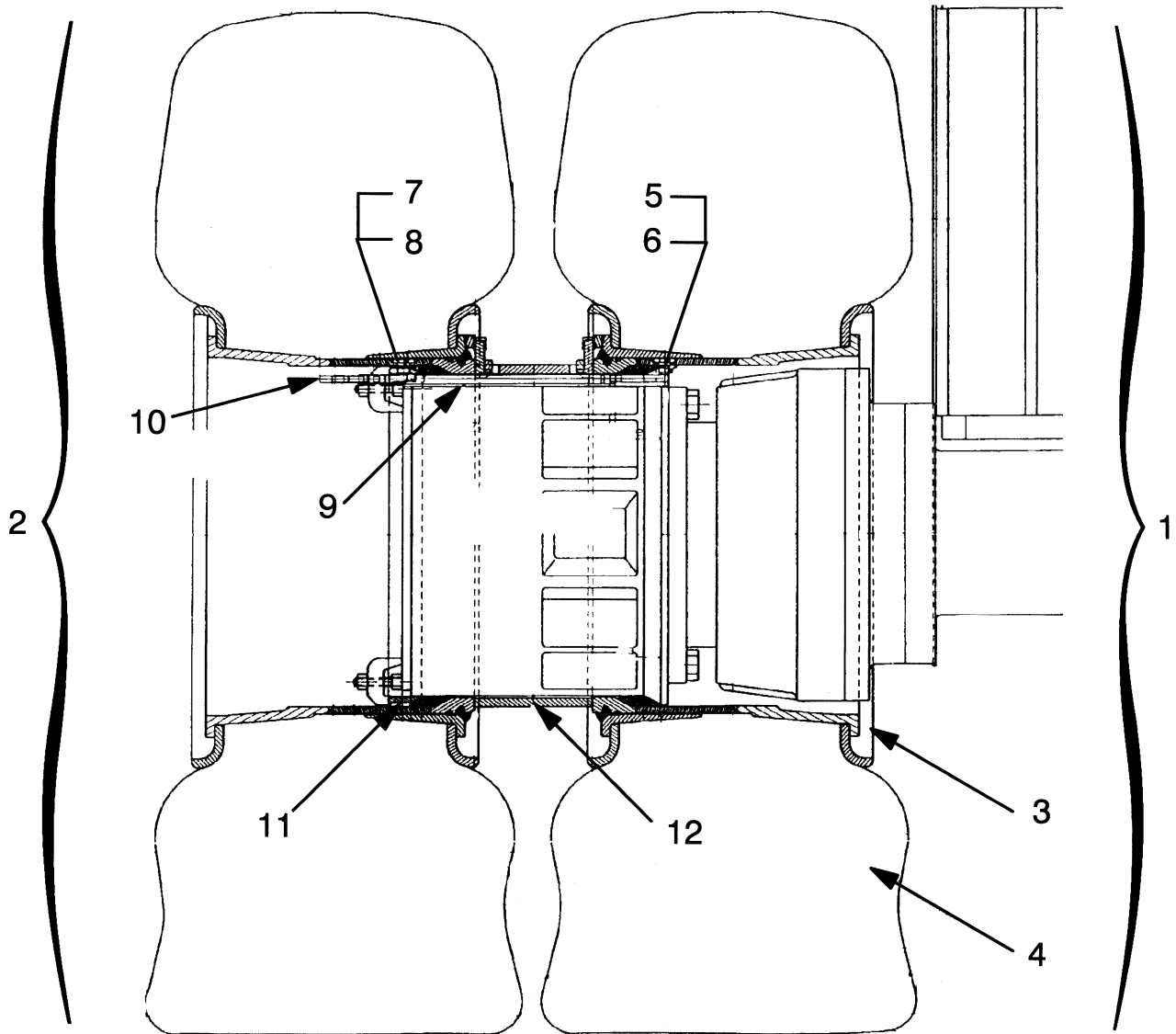
ITEM	PART NO.	DESCRIPTION	QTY
1	1478617	Cable Reel	1
1	1544679	Printed Circuit Board	1
1	1544680	Potentiometer	1
1	1544681	Spring	1
2	1478618	Sensor	1
3	1478619	Support	2
4	1478620	Plate	2
5	287854	Capscrew	4
6	1468893	Nut	4
	a 1470575	Fitting	2
	a 1478608	Fitting	2
9	1478621	Screw	4
10	1478622	Screw	4
11	1472204	Nut	4
12	1478623	Spacer	4
13	1478624	Spacer	4

FOOTNOTES:

a Not Illustrated

ITEM	PART NO.	DESCRIPTION	QTY
11	1497308	Ring	2
12	1480647	Spacer	2

DRIVE TIRE AND WHEEL (FIGURE 17-9)
18 X 25 BRIDGESTONE — HR45-36L, HR45-40LS



HP000733

ITEM	PART NO.	DESCRIPTION	QTY
		Wheel and Tire (18 x 25)	1
1	1480671	Wheel Assy (Inner) (Inner)	2
2	1480672	Wheel Assy (Outer) (Outer)	2
3	1470328	Rim	4
4	1480673	Tire	4
5	1470330	Socket	2
6	1470331	Valve	2
7	1470332	Socket	2
8	1470333	Valve	2
9	1470334	Extension	2
10	1480641	Extension	2
11	1497309	Ring	2
12	1470337	Spacer	2

TOOL KIT

ITEM	PART NO.	DESCRIPTION	QTY
1	1471072	Kit-Tool	1
2	Hammer	1
3	Pump	1
4	Grease	1
5	Clamp	50
6	Square	1
7	Handle	1
8	Screw Driver	1
9	Channel Lock Pliers	1
10	1534525	Connector	1
11	Allen Wrench Set	1
12	Wrench Set	1
13	Wrench	1
14	Socket	1
15	Socket	1
16	Needle Nose Pliers	1
17	Screw Driver (Philips)	1
18	Locking Wrench	1
19	Opened and Boxed End Wrench	1
20	Extension	1
	a 1591602	Life Hammer	1

FOOTNOTES:**a** Not Illustrated

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	15-17	5	1468217	10-6	1		10-19	5		14-63	18
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	11-4	1		14-31	20	1468240	10-11	1	1468260	9-25	27
1468202	10-5	2		14-37	3		11-17	1		10-11	21
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