

PARTS MANUAL

**FORTIS®
H40FT, H50FT, H60FT, H70FT
(L177)**

CUSTOMER EDITION

HYSTER

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ABBREVIATIONS QUICK REFERENCE SHEET

Listed below are abbreviations used in parts manuals to denote the following expressions:

TERM	DEFINITION	TERM	DEFINITION
Amp	Amperes	FRE	Freezer Environment
AR	As Required	in.	inches
BDI	Battery Discharge Indicators	LPG	Liquefied Petroleum Gas
BWI	Brush Wear Indicator	MAP	Manifold Absolute Pressure
CE	Communicator End	mm	millimeters
CRE	Corrosive Environment	MSTS	Microprocessor Spark Timing System
D/B	Date Break	NPT	National Pipe Threads
dbA	Decibel "A" Scale	O/S	Oversize
DE	Drive End	PTO	Power Take Off
ECH	Empty Container Handler	RPM	Revolutions per Minute
ECH-3	Empty Container Handler - 3 High Stacking	S/N	Serial Number
ECH-4	Empty Container Handler - 4 High Stacking	TMM	Truck Management Module
ECH-5	Empty Container Handler - 5 High Stacking	UL Type D	Diesel-Powered Safety Rating
ECH-6	Empty Container Handler - 6 High Stacking	UL Type DS	Diesel-Powered Safety Rating
ECH-7	Empty Container Handler - 7 High Stacking	UL Type E	Battery-Powered Safety Rating
ECM	Electronic Control Module	UL Type EE	Battery-Powered Safety Rating
ECN	Engineering Change Notice	UL Type ES	Battery-Powered Safety Rating
EEPROM	Electrically Erasable Programmable Read Only Memory	UL Type G	Gasoline-Powered Safety Rating
EPA	US Environmental Protection Agency	UL Type GS	Gasoline-Powered Safety Rating
EPROM	Electrically Programmable Read Only Memory	UL Type LP	Gas-Powered Safety Rating
		UL Type LPS	LP Gas-Powered Safety Rating
		U/S	Undersize
		UL	Underwriters Laboratory
		V	Volts

HOW TO USE THE ILLUSTRATED PARTS MANUAL

This parts manual describes and illustrates assemblies, subassemblies, and detail parts needed for service replacement.

The different constructions are indicated by keys and footnotes. The callouts correspond to descriptions found on the next page.

HYSTER UNIT CODE D001 NORTH AMERICA 06/2001

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5	BRAKE/ACC
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8	MAST-THREE STAGE
9	MAST-TWO STAGE
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11	

TRANSMISSION HOUSING
⇒ S/N D001H-2628

KEY:
A: Diesel
B: Gasoline and LPG

ITEM	PART NO.	DESCRIPTION	QTY
	2022547	Transmission	1
	2023329	Transmission	1
1	2021670	Case	2
2	2023418	Bearing Cap	4
3	296426	Washer	4
4	293947	Bolt	1
5	2021390	Cover	2
6	1371656	Cotter Pin	2
7	2021915	O-Ring	4
8	2021329	Plug	4
9	2021675	Housing	1
10	2021336	Pin	4
11	287860	Bolt	22
12	292682	Lockwasher	39
13		Hydraulic Pump	1
		⇒ Figure 5-3	
14	2021345	Gasket	1
15	214364	Bolt	8
16	296418	Washer	8
17	2021388	Temperature Switch	1
18	2021389	Breather	1
19	2021383	Dipstick	9
20	292515	Bolt	9
21	136692	Nut	2
22	292527	Bolt	3
23	292531	Capscrew	3
24	292583	Lockwasher	2
25	293637	Bolt	4
26	296420	Washer	4
	996403	Transmission Kit (Includes Item 7)	1
	996405	Transmission Kit (Includes Item 14)	1

This Parts Manual is divided into 11 major sections which are listed above. Quick reference can be made by placing the right thumb on the tab of the desired section, bending the pages to the corresponding tab.

See Service Manual for service procedures.

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HP990004

HOW TO FIND THE DESIRED PART NUMBER

WHEN THE PART NUMBER AND THE NEXT HIGHER ASSEMBLY IS NOT KNOWN:

1. Determine the function and application of the part required. Turn to the Sections Page. Choose the general area of reference most likely to include the part.
2. Turn to the section you chose. Use the Section Table of Contents to determine the assembly which would normally contain the part required. Then locate the part on the assembly breakdown page.

WHEN THE PART NUMBER IS NOT KNOWN AND THE NEXT HIGHER ASSEMBLY IS KNOWN:

3. Determine the assembly the required part is used on. Turn to the Table of Contents (Page i).
4. Locate the assembly the required part is used on and turn to the page indicated for that assembly. Then locate the part on the assembly breakdown page.

WHEN THE PART NUMBER IS KNOWN:

5. Use the Numerical Index (Page 15-1) to find the part number. Turn to the page listed and locate the part as indicated by the item number.

GENERAL:

The assembly breakdowns include part numbers, descriptions, quantities required, keys and footnotes to help in selecting correct parts.

6. Five periods in the PART NO. column (.) indicate that the part is either *Not Serviced Separately* or there is a reference to another figure. A figure reference is denoted by a pointing hand followed by a figure number in the DESCRIPTION column (☞ Figure 10)
7. Keys are used to show two or more similar assemblies, RH and LH assembly parts, etc. Select the appropriate key, "A", "B", "C", "D", or "E" and the corresponding quantity column to find the required parts. Two periods in the QTY column (..) indicate that the part is not used for that assembly.
8. Indented descriptions under the DESCRIPTION column are used to indicate assemblies and subparts of assemblies. In the example on the

previous page, *BEARING CAP* (Item 2) is a subpart of the major assembly *CASE*.

9. Quantities shown are for one assembly. The quantities of the subpart *BEARING CAP* are indicated as two and two. This means two per *CASE* assembly.
10. Serial number breaks identify the most current parts information and are shown as follows:
→ **S/N D001H2628**
Indicates last serial number affected.
S/N D001H2629 →
Indicates the first serial number affected.
S/N D001H1553 ↔ S/N D001H3291
Indicates a range of serial numbers affected.

ECN numbers for pending serial numbers are shown to allow for the inclusion of the most current parts information and are identified as follows:

- **S/N Pending Per ECN 63243**
Indicates a pending serial number for last unit affected.
S/N Pending Per ECN 63243 →
Indicates a pending serial number for first unit affected.

Date breaks are used to indicate when a change occurred but a subsequent serial number break was not recorded. This is an arbitrary date usually based on the ECN release and are identified as follows:

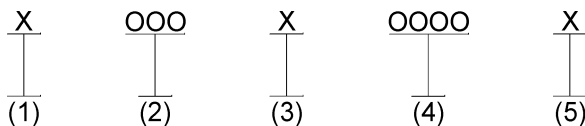
- **D/B 3/00**
Indicates that a change occurred sometime within that month for the item affected.
D/B 3/00 →
Indicates that a change occurred sometime within that month for the item affected.
D/B 3/00 ↔ D/B 4/00
Indicates a range of production dates of the item affected.

Contact your local dealer for Hyster lift trucks for serial number information for items with a ECN or a date break.

ORDERING PARTS:

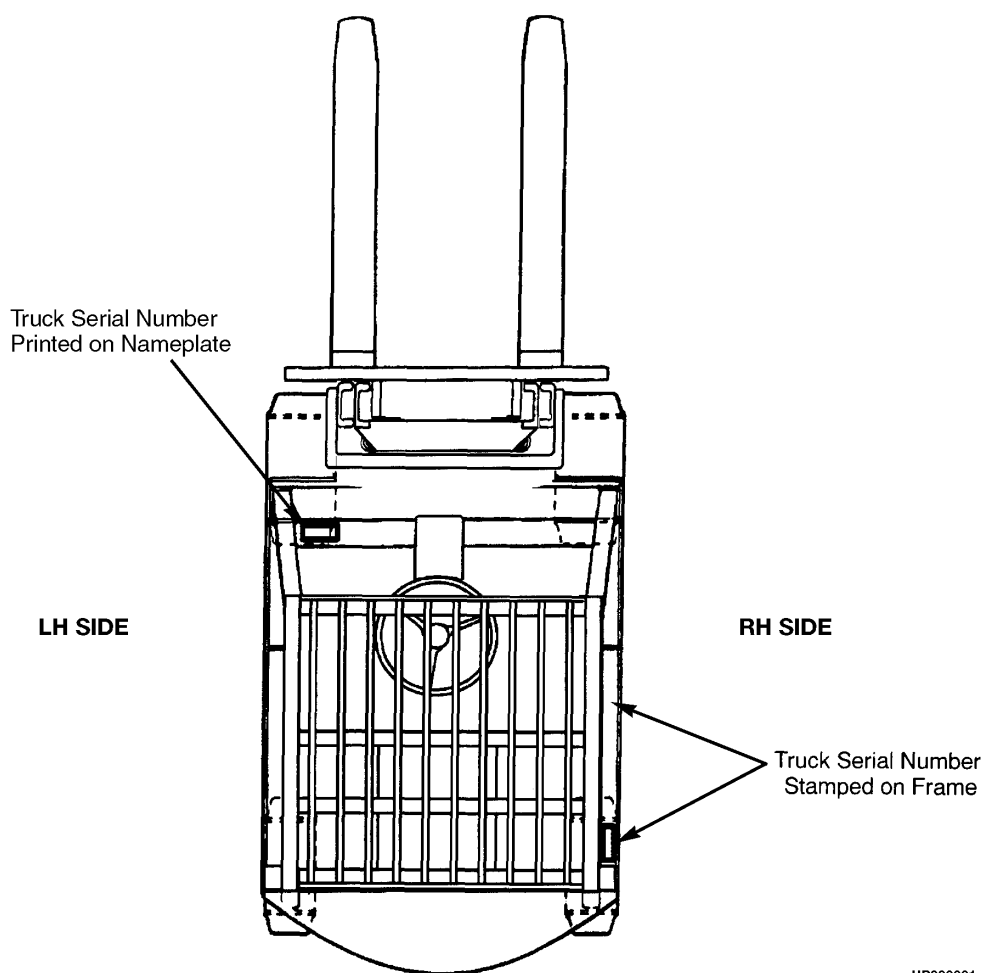
When ordering replacement parts, give the unit serial number, part number, name of part and quantity required.

For any further information on parts, service, or ordering, consult your local dealer for Hyster lift trucks.

IDENTIFICATION OF TRUCK SERIAL NUMBERS

- (1) and (2) The first letter and three numbers indicate the truck unit code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number indicates the production sequence number of the truck.
- (5) The final letter indicates the year of manufacture starting with "A" in 1957, 1980, and 2003.
The letters "I", "O", and "Q" will not be used.

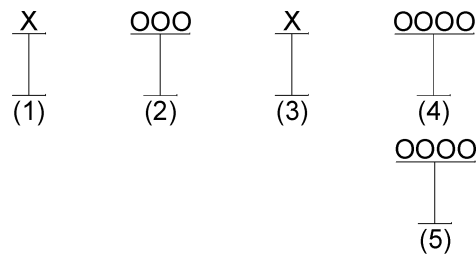
For pending serial numbers contact your local dealer for Hyster lift trucks.



HP990001

Parts referred to in this book as right or left hand parts are in accordance with the illustration above.

IDENTIFICATION OF MAST SERIAL NUMBERS



- (1) and (2) The first letter and number indicates the mast unit code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number indicates the production sequence number of the mast.
- (5) Carriage travel in millimeters stamped just below the serial number.

Mast Group identification consists of mast unit code (1) and (2) plus carriage travel (5).

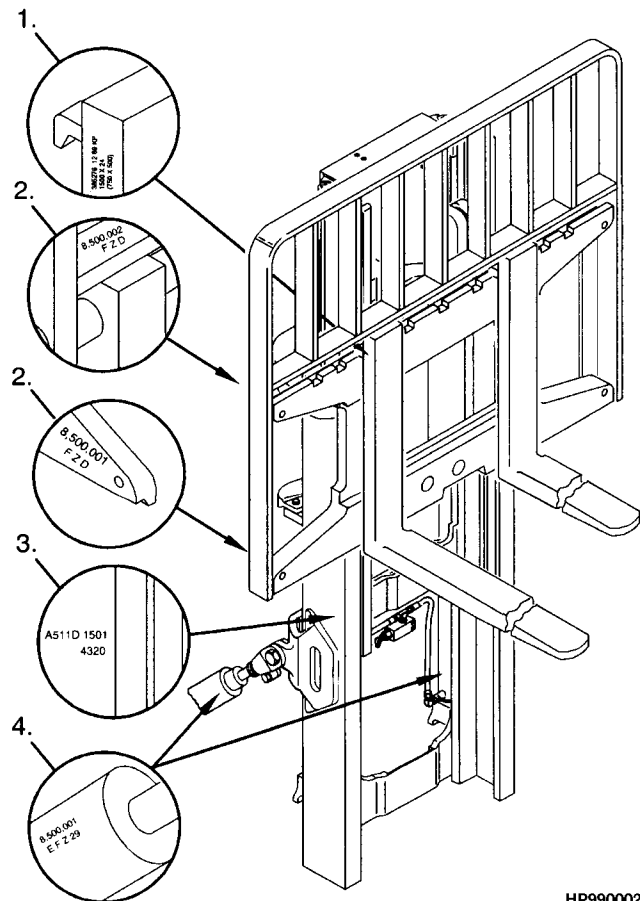
For pending production sequence numbers contact your local dealer for Hyster lift trucks.

LIFT EQUIPMENT IDENTIFICATION

1. Fork part number, capacity rating, plant code letter, and date of manufacture are stamped approximately six inches below the top of most forks.
2. The carriage group number is stamped on the right hand side of the top crossmember (pin type) or on the back of the right hand end of the bottom crossmember (hook type). A date code has two letters in line with or below the carriage group number.
3. The mast identification number has a unit code, a letter indicating the plant of manufacture, and a serial number. Underneath the production sequence number is a four digit number that indicates the carriage travel in millimeters.
4. Tilt and lift cylinder group numbers are stamped on the cylinder shell.

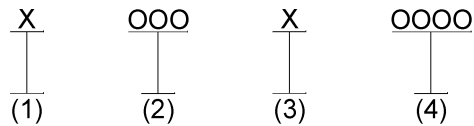
Always refer to the group, serial, or part number when ordering service parts.

Modification of masts and 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.

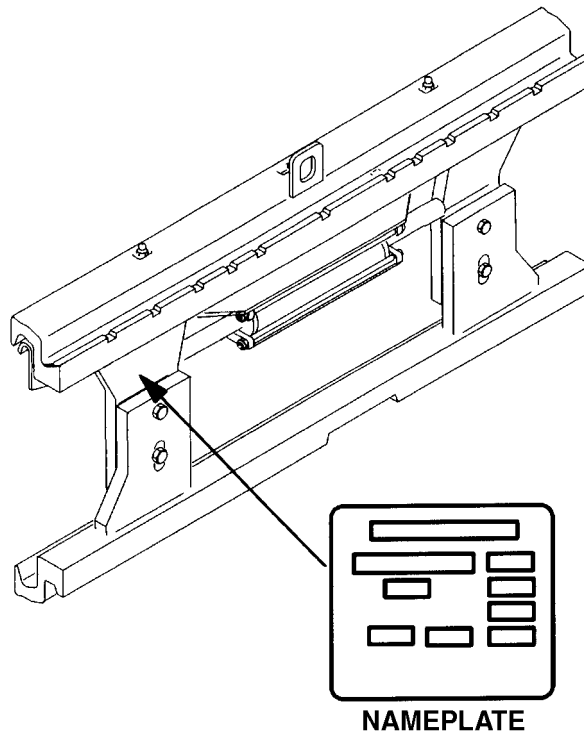


HP990002

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.

PUBLICATIONS

Every new lift truck is provided with an OPERATING MANUAL. This manual has information that the operator must know for inspection and operation of the lift truck.

SERVICE MAINTENANCE MANUALS, which provide service and overhaul procedures, and PARTS

MANUALS with complete replacement part identification, are available at a nominal fee from your Hyster dealer to assist users in effectively maintaining Hyster lift trucks in a safe, useful condition. See the list below for information on ordering specific publications for this model lift truck.

PUBLICATION	HYSTER PART NUMBER
Operating Manual.....	1580499
Service Manual (Complete).....	1599956
Parts Manual.....	1599949

1

FRAME

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FRAME

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WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)	1-52

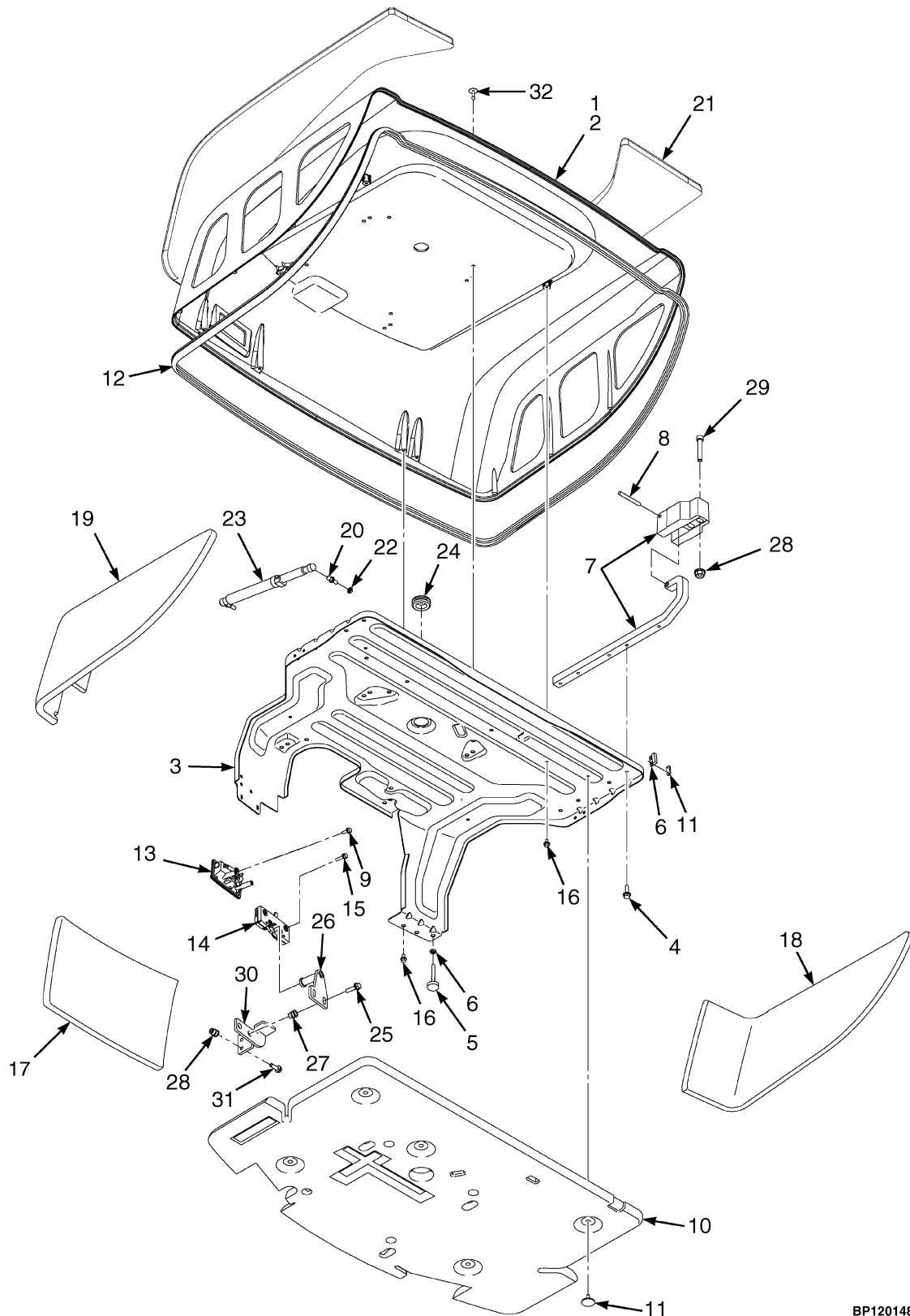
SECTION 1
FRAME

DESCRIPTION	PAGE
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SEMI-SUSPENSION SEAT	
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)	1-56
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 ↔ 7/2006)	1-58
WITH AND WITHOUT ELECTRONIC CONTROLS (7/2006 →)	1-60

NOTES

[illegible]

HOOD ASSEMBLY (FIGURE 1-1) (→ 10/2007)



BP120148

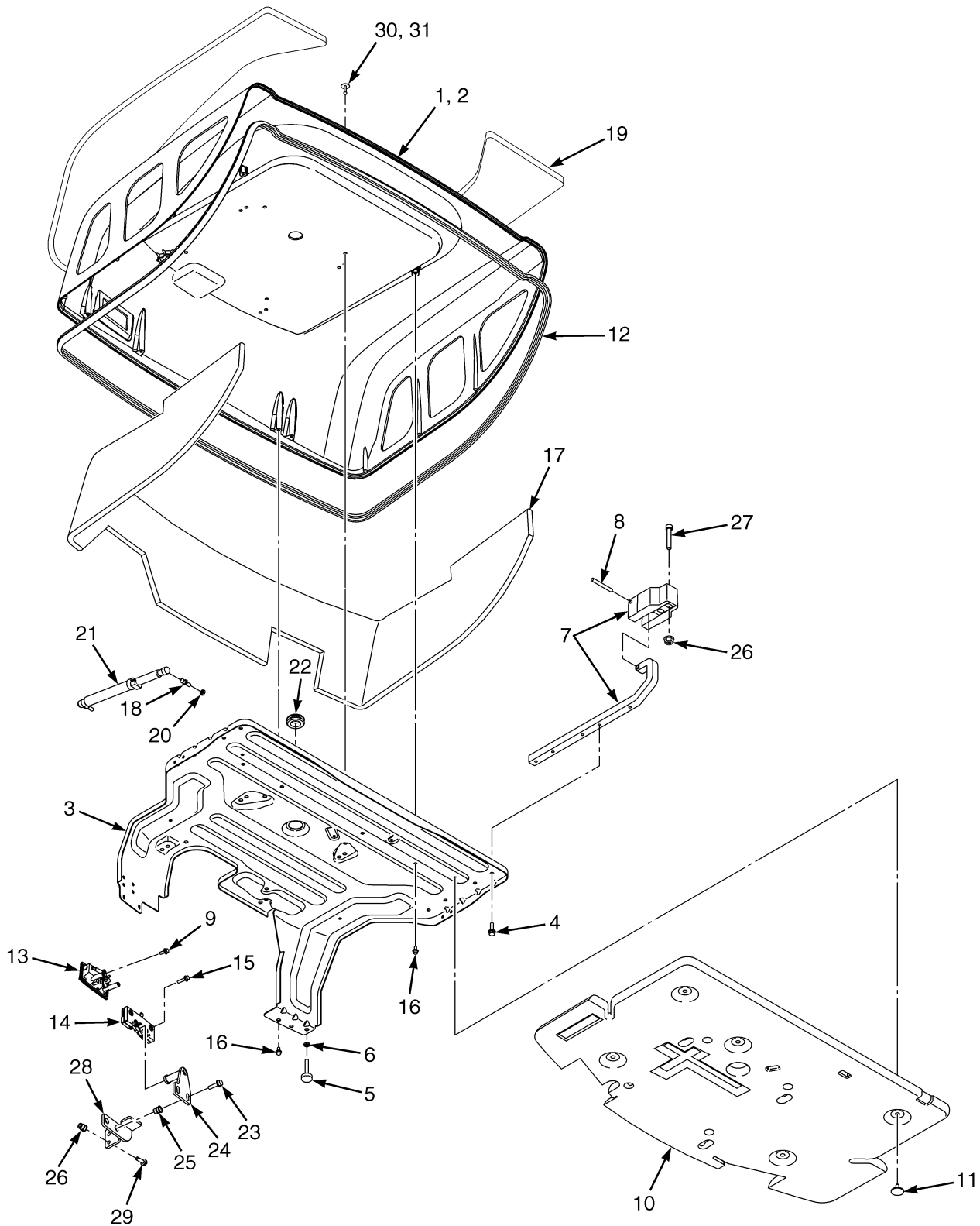
HOOD ASSEMBLY

(→ 10/2007)

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1616772	Hood (Low Noise)	1
1	ab 1616776	Hood (Vented)	1
1	b 1616774	Hood (LPG and Diesel)	1
2	a 1616770	Hood (Low Noise)	1
2	b 1616764	Hood	1
2	ab 1616768	Hood (Vented)	1
3	1544846	Hood Reinforcement	1
4	1510113	Capscrew	10
5	1585581	Bumper (Hood)	2
6	329069	Nut	4
7	1548618	Hinge	2
8	302380	Dowel	2
9	1527876	Capscrew	2
10	1624018	Hood Liner	1
11	1304971	Fastener	4
12	1580652	Seal	1
13	1582287	Handle	1
14	1582286	Latch	1
15	1527878	Capscrew	4
16	1534417	Capscrew	6
17	a 1552010	Hood Liner (Front Panel) (Low Noise)	1
18	a 1552011	Hood Liner (LH Panel) (Low Noise)	1
19	a 1552012	Hood Liner (RH Panel) (Low Noise)	1
20	b 1563369	Ball Stud	4
20	a 1563369	Ball Stud	3
20	a 1606659	Ball Stud	1
21	1595232	Sound Liner	1
22	329069	Nut	2
23	b 1563497	Gas Spring	2
23	a 1610854	Gas Spring (Locking) (Left Hand)	1
23	a 1610853	Gas Spring (Right Hand)	1
24	1561015	Grommet	1
25	1527881	Capscrew	2
26	1584617	Striker Bolt	1
27	1460477	Nut	4
28	1530244	Insert	4
29	296032	Capscrew	4
30	1623905	Bracket	1
31	1583611	Capscrew	2
32	1347045	Fastener	8
33	1531557	Insert	2
	1585592	Plug (Not Illustrated)	1

FOOTNOTES:**a** With Cab**b** With Overhead Guard

HOOD ASSEMBLY (FIGURE 1-2) (10/2007 →)



BP120436

HOOD ASSEMBLY

(10/2007 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	bce 1670049	Hood (Gasoline and LPG)	1
1	bce 1670050	Hood (Vented) (Gasoline and LPG)	1
1	d 1676399	Hood (Vented)	1
1	d 1676397	Hood (Gasoline and LPG)	1
1	d 1676395	Hood (LPG and Diesel)	1
1	d 1676398	Hood (Vented) (Gasoline and LPG)	1
2	a 1616770	Hood (Low Noise)	1
2	b 1616764	Hood	1
2	ab 1616768	Hood (Vented)	1
3	1544846	Hood Reinforcement	1
4	1510113	Capscrew	10
5	1585581	Bumper (Hood)	2
6	329069	Nut	4
7	1548618	Hinge	2
8	302380	Dowel	2
9	1527876	Capscrew	2
10	1624018	Hood Liner	1
11	1304971	Fastener	4
12	1580652	Seal	1
13	1582287	Handle	1
14	1582286	Latch	1
15	1527878	Capscrew	4
16	1534417	Capscrew	6
17	a 1676836	Hood Liner	1
18	b 1563369	Ball Stud	4
18	a 1563369	Ball Stud	3
18	a 1606659	Ball Stud	1
19	1595232	Sound Liner	1
20	329069	Nut	2
21	b 1563497	Gas Spring	2
21	a 1610854	Gas Spring (Locking) (Left Hand)	1
21	a 1610853	Gas Spring (Right Hand)	1
22	1561015	Grommet	1
23	1527881	Capscrew	2
24	c 1584617	Striker Bolt	1
24	d 1674131	Striker Bolt	1
25	1460477	Nut	4
26	1530244	Insert	4
27	296032	Capscrew	4
28	c 1623905	Bracket	1
28	d 1674030	Hood Support	1
29	1583611	Capscrew	2
30	1347045	Fastener	8
31	1531557	Insert	2
	1585592	Plug (Not Illustrated)	1

FOOTNOTES:

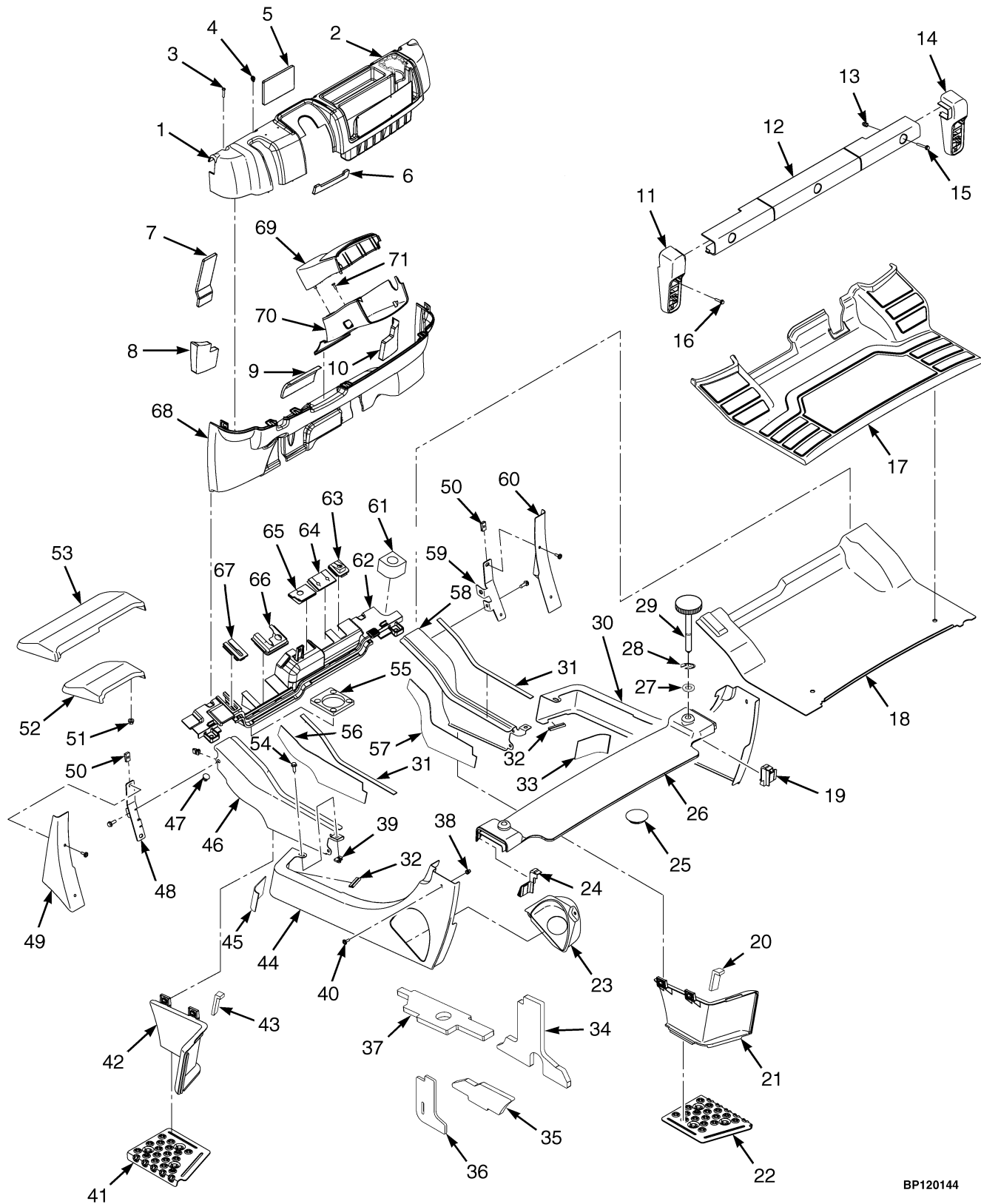
- a** With Cab
- b** With Overhead Guard
- c** → PENDING PER ECN 105290
- d** PENDING PER ECN 105290 →
- e** S/N L177B19392E →

NOTES

[illegible]

FLOORPLATES AND COVERS (FIGURE 1-3)

(→ S/N L177B22303F)



BP120144

FLOORPLATES AND COVERS

(→ S/N L177B22303F)

KEY:**A: With Cab****B: With Overhead Guard**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1517420	Dash Panel (Manual Valve)	1	1
1	1517421	Dash Panel (Electronic Valve)	1	1
2	2070975	Cup Holder	1	1
3	2071261	Capscrew	5	5
4	2065667	Clip	6	6
5	1616484	Sound Liner	1	..
6	1616483	Sound Liner	1	..
7	1616485	Sound Liner	1	..
8	1616480	Sound Liner	1	..
9	1616482	Sound Liner	1	..
10	1616481	Sound Liner	1	..
11	2056822	Tail Light Base (LH)	1	1
12	2069203	Cover (Rear)	..	1
13	1531001	Insert	5	8
14	2056823	Tail Light Base (RH)	1	1
15	1540643	Capscrew	3	3
16	1586495	Capscrew	4	4
17	2071262	Floormat	1	1
18	1573774	Floorplate	1	1
19	2071198	Seal (RH)	1	1
20	1596624	Seal (RH)	1	1
21	1574277	Panel (RH)	1	1
21	2102559	Step Panel (RH)	1	1
22	1544415	Plate (RH)	1	1
23	1517656	Shield (Gasoline and Diesel)	1	1
24	2071197	Seal (LH)	1	1
25	2021395	Cap (LPG)	1	1
26	1547466	Cover	..	1
26	1547467	Seal (LH)	..	1
26	1547468	Seal (RH)	..	1
27	320157	Washer	..	2
28	353206	Retaining Ring	..	2
29	1588247	Screw	..	2
30	1527946	Panel (RH)	1	1
31	1564529	Seal	2	2
32	1582072	Trim Seal	2	2
33	1597058	Damping Sheet (RH Rear Panel)	1	1
34	1609707	Sound Liner	1	..
35	1609709	Sound Liner	1	..
36	1609708	Sound Liner	1	..
37	1609706	Sound Liner (Diesel)	1	..
38	1531558	Insert	6	6
39	1480237	Nut (Gasoline and Diesel)	23	23
39	1480237	Nut (LPG)	21	21
40	1530019	Screw	6	6

FLOORPLATES AND COVERS

(→ S/N L177B22303F)

KEY:
A: With Cab

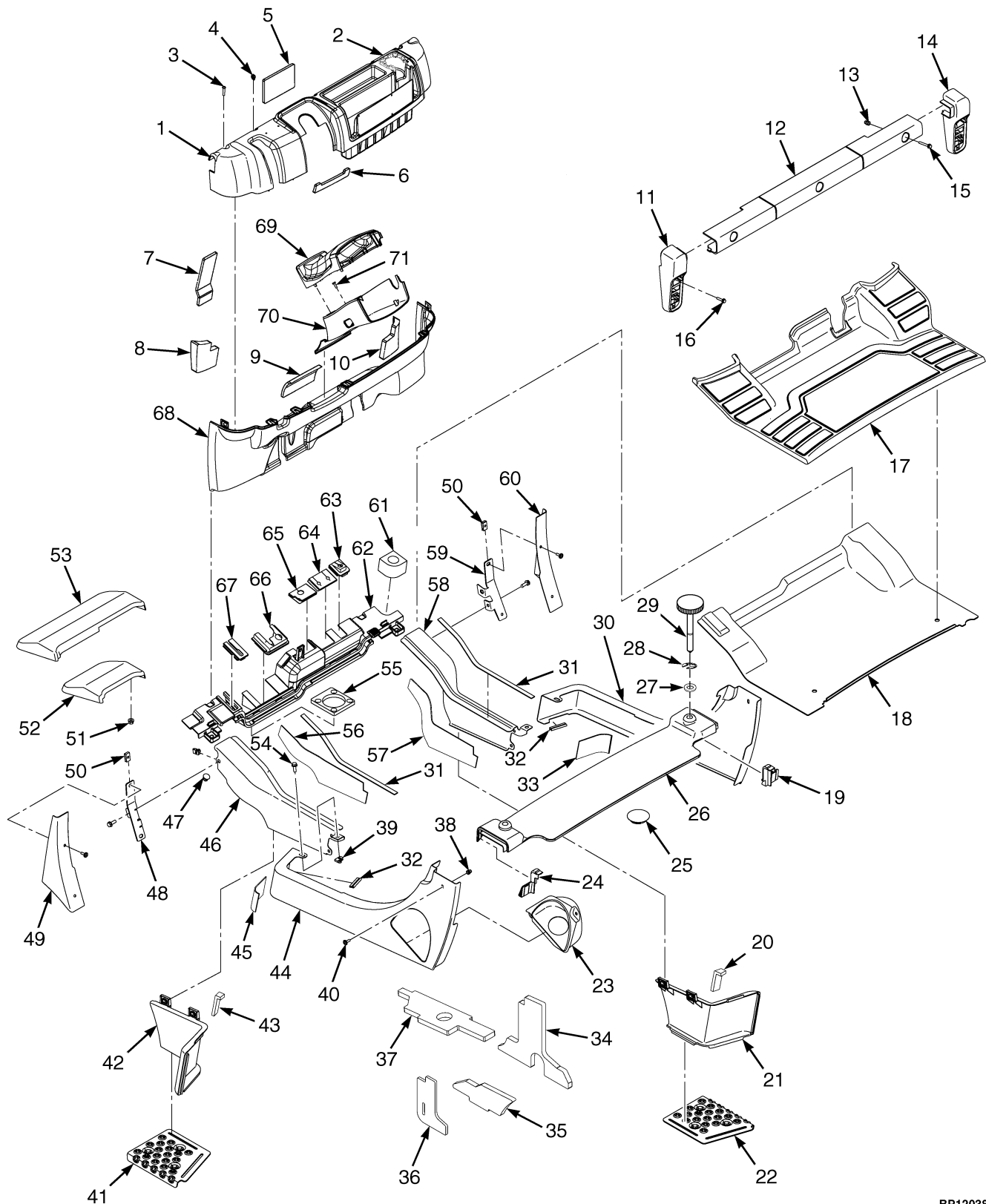
B: With Overhead Guard

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
41	1544413	Plate (LH)	1	1
42	1574275	Panel (LH)	1	1
43	1596625	Seal (LH)	1	1
44	1527939	Panel (Rear) (LH, Gasoline and Diesel)	1	1
44	1527940	Panel (Rear) (LH, LPG)	1	1
45	1597052	Damping Sheet (LH Rear Panel)	1	1
46	1540860	Panel (LH)	1	1
47	1581079	Plug	4	4
48	1590145	Bracket (LH) (Fender Cover)	1	1
49	1563881	Cover (LH) (Fender)	1	1
50	1350215	Nut	4	4
51	1544153	Locknut (Standard Tread, Wide Tread)	4	4
51	1544153	Locknut (Dual Tread)	6	6
52	2069008	Mud Flap (Standard Tread)	2	2
53	2069544	Mud Flap (LH, Wide Tread)	1	1
53	2069545	Mud Flap (RH, Wide Tread)	1	1
53	2069550	Mud Flap (LH, Dual Tread)	1	1
53	2069954	Mud Flap (RH, Dual Tread)	1	1
54	1583611	Capscrew (Gasoline and Diesel)	23	23
54	1583611	Capscrew (LPG)	21	21
55	1579837	Seal (Wet Brake)	1	1
55	1580093	Seal (Dry Brake)	1	1
56	1597051	Damping Sheet (LH Front Panel)	1	1
57	1597070	Damping Sheet (RH Front Panel)	1	1
58	1540870	Panel (RH)	1	1
59	1590147	Bracket (RH) (Fender Cover)	1	1
60	1563883	Cover (RH) (Fender)	1	1
61	1530135	Grommet (RH)	1	1
62	1618992	Plate	1	1
62	1529427	Seal	1	1
63	2069464	Seal	1	..
64	2065799	Seal (Manual Valve)	1	..
64	2065826	Seal (Electronic Valve)	1	..
65	2065798	Seal (Manual Valve)	1	..
65	2065827	Seal (Electronic Valve)	1	..
66	2065797	Seal	1	..
67	2065796	Seal	1	..
68	2071595	Panel (Single Brake Pedal)	1	1
68	2071596	Panel (Dual Brake Pedal)	1	1
69	2065668	Cover (Steering Column) (Upper)	1	1
70	2065666	Cover (Steering Column Lower)	1	1
71	2027655	Screw	2	2

NOTES

[illegible]

FLOORPLATES AND COVERS (FIGURE 1-4) (S/N L177B22304F →)



BP120384

FLOORPLATES AND COVERS

(S/N L177B22304F →)

KEY:**A: With Cab****B: With Overhead Guard**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1517420	Dash Panel (Manual Valve)	1	1
1	1517421	Dash Panel (Electronic Valve)	1	1
2	2070975	Cup Holder	1	1
3	2071261	Capscrew	5	5
4	2065667	Clip	6	6
5	1616484	Sound Liner	1	..
6	1616483	Sound Liner	1	..
7	1616485	Sound Liner	1	..
8	1616480	Sound Liner	1	..
9	1616482	Sound Liner	1	..
10	1616481	Sound Liner	1	..
11	b 2056822	Tail Light Base (LH)	1	1
11	d 2107958	Tail Light Base (LH)	1	1
12	2069203	Cover (Rear)	..	1
13	1531001	Insert	..	8
13	1531001	Insert	5	..
14	b 2056823	Tail Light Base (RH)	1	1
14	d 2107957	Tail Light Base (RH)	1	1
15	1540643	Capscrew	3	3
16	1586495	Capscrew	4	4
17	2071262	Floormat	1	1
18	1573774	Floorplate	1	1
19	2071198	Seal (RH)	1	1
20	1596624	Seal (RH)	1	1
21	a 1574277	Panel (RH)	1	1
21	c 2102559	Step Panel (RH)	1	1
22	1544415	Plate (RH)	1	1
23	1517656	Shield (Gasoline and Diesel)	1	1
24	2071197	Seal (LH)	1	1
25	2021395	Cap (LPG)	1	1
26	1547466	Cover	..	1
26	1547467	Seal (LH)	..	1
26	1547468	Seal (RH)	..	1
27	320157	Washer	..	2
28	353206	Retaining Ring	..	2
29	1588247	Screw	..	2
30	1527946	Panel (RH)	1	1
31	1564529	Seal	2	2
32	1582072	Trim Seal	2	2
33	1597058	Damping Sheet (RH Rear Panel)	1	1
34	1609707	Sound Liner	1	..
35	1609709	Sound Liner	1	..
36	1609708	Sound Liner	1	..
37	1609706	Sound Liner (Diesel)	1	..
38	1531558	Insert	6	6

FLOORPLATES AND COVERS

(S/N L177B22304F →)

KEY:

A: With Cab

B: With Overhead Guard

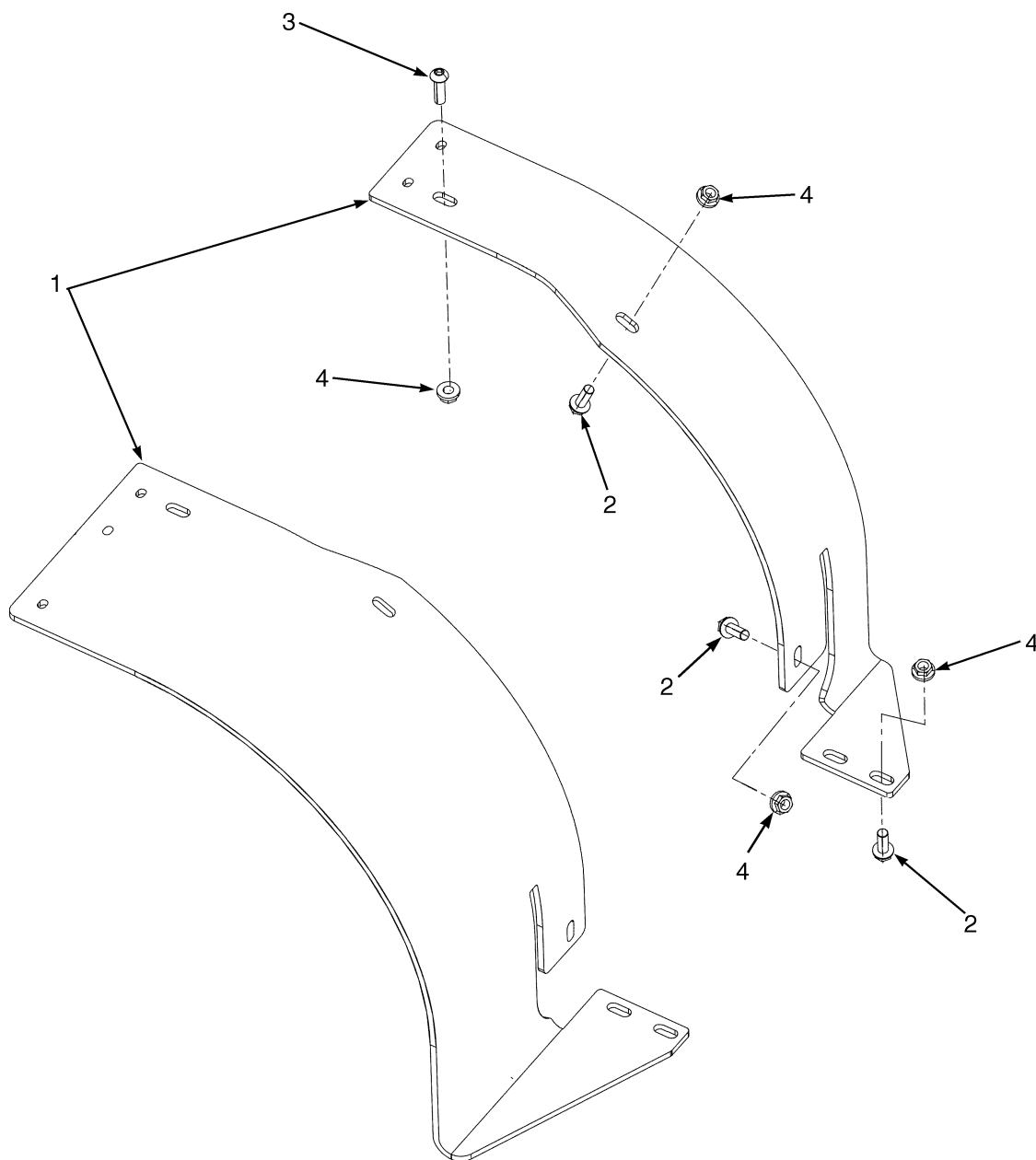
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
39	1480237	Nut (Gasoline and Diesel)	23	23
39	1480237	Nut (LPG)	21	21
40	1530019	Screw	6	6
41	1544413	Plate (LH)	1	1
42	a 1574275	Panel (LH)	1	1
42	c 2102558	Step Panel (LH)	1	1
43	1596625	Seal (LH)	1	1
44	1527939	Panel (Rear) (LH, Gasoline and Diesel)	1	1
44	1527940	Panel (Rear) (LH, LPG)	1	1
45	1597052	Damping Sheet (LH Rear Panel)	1	1
46	1540860	Panel (LH)	1	1
47	1581079	Plug	4	4
48	1590145	Bracket (LH) (Fender Cover)	1	1
49	1563881	Cover (LH) (Fender)	1	1
50	1350215	Nut	4	4
51	1544153	Locknut (Standard Tread, Wide Tread)	4	4
51	1544153	Locknut (Dual Tread)	6	6
52	2069008	Mud Flap (Standard Tread)	2	2
53	2069544	Mud Flap (LH, Wide Tread)	1	1
53	2069545	Mud Flap (RH, Wide Tread)	1	1
53	2069550	Mud Flap (LH, Dual Tread)	1	1
53	2069954	Mud Flap (RH, Dual Tread)	1	1
54	1583611	Capscrew (Gasoline and Diesel)	23	23
54	1583611	Capscrew (LPG)	21	21
55	1579837	Seal (Wet Brake)	1	1
55	1580093	Seal (Dry Brake)	1	1
56	1597051	Damping Sheet (LH Front Panel)	1	1
57	1597070	Damping Sheet (RH Front Panel)	1	1
58	1540870	Panel (RH)	1	1
59	1590147	Bracket (RH) (Fender Cover)	1	1
60	1563883	Cover (RH) (Fender)	1	1
61	1530135	Grommet (RH)	1	1
62	1618992	Plate	1	1
62	1529427	Seal	1	1
63	2069464	Seal	1	..
64	2065799	Seal (Manual Valve)	1	..
64	2065826	Seal (Electronic Valve)	1	..
65	2065798	Seal (Manual Valve)	1	..
65	2065827	Seal (Electronic Valve)	1	..
66	2065797	Seal	1	..
67	2065796	Seal	1	..
68	2071595	Panel (Single Brake Pedal)	1	1
68	2071596	Panel (Dual Brake Pedal)	1	1
69	2098330	Cover (Steering Column Upper)	1	1
70	2065666	Cover (Steering Column Lower) (Lower)	1	1

FLOORPLATES AND COVERS
(S/N L177B22304F →)**KEY:****A:** With Cab**B:** With Overhead Guard

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
71	2027655	Screw	2	2

FOOTNOTES:**a** → PENDING PER ECN 105306**b** → PENDING PER ECN 136110**c** PENDING PER ECN 105306 →**d** PENDING PER ECN 136110 →

FENDER EXTENSIONS (FIGURE 1-5)

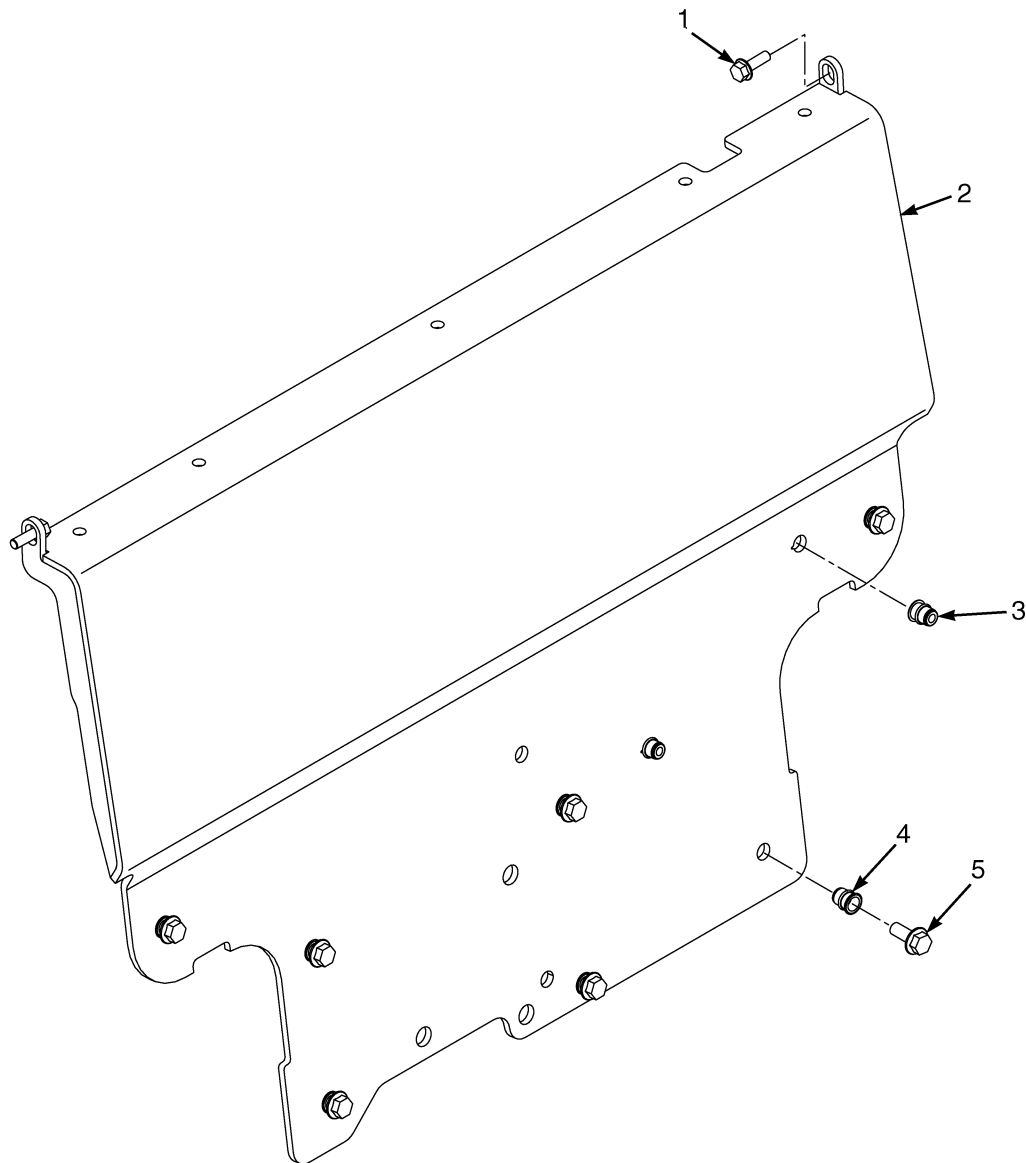


HP120835

FENDER EXTENSIONS

ITEM	PART NO.	DESCRIPTION	QTY
1	1562359	Fender (Wide Width) (LH)	1
1	1562361	Fender (Dual) (LH)	1
1	1562360	Fender (Wide Width) (RH)	1
1	1562362	Fender (Dual) (RH)	1
2	1586630	Capscrew	8
3	2076289	Capscrew	2
4	1586432	Nut	10

COWL MOUNT (FIGURE 1-6)



HP120730

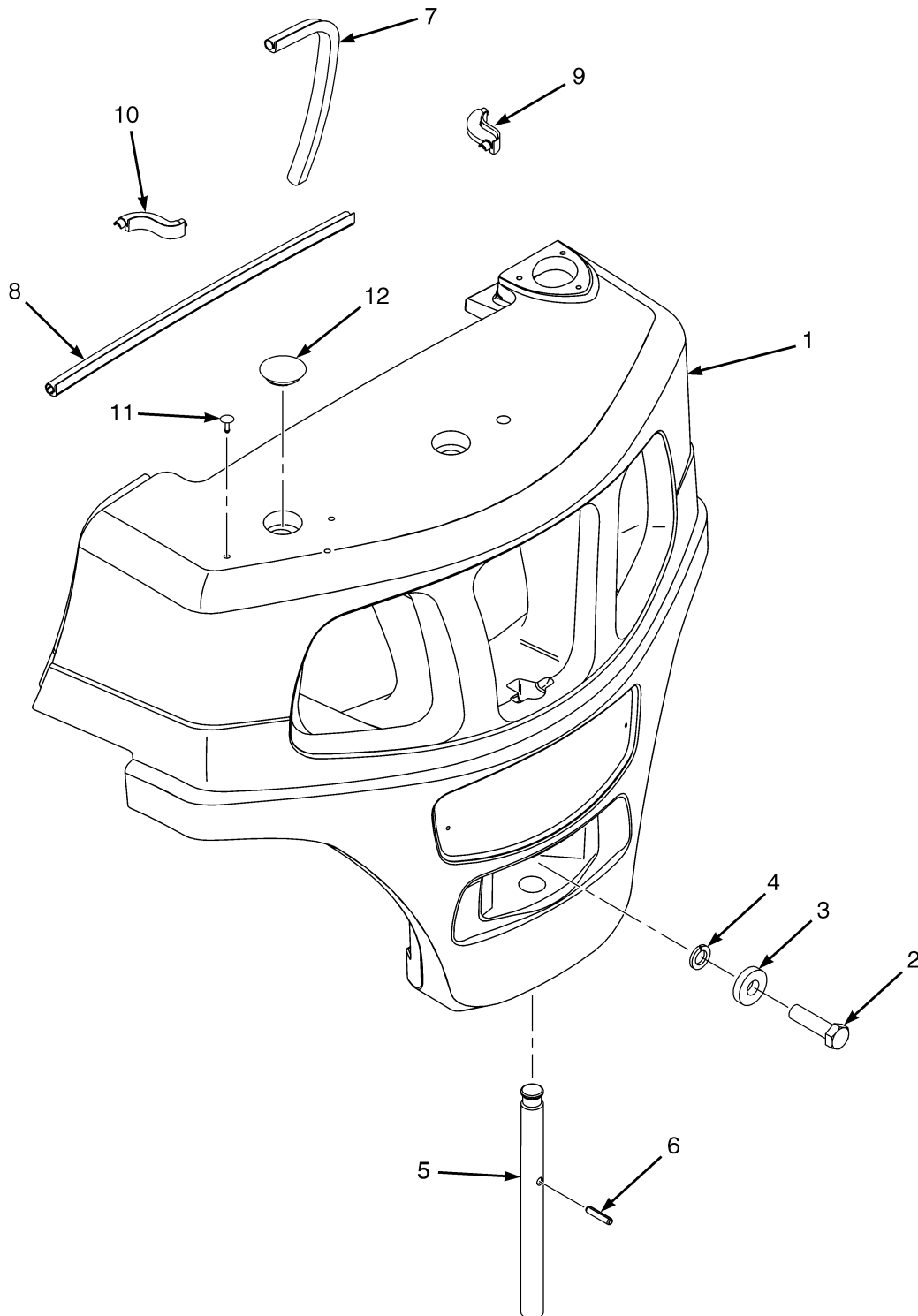
ITEM	PART NO.	DESCRIPTION	QTY
1	1583611	Capscrew	2
2	a 1586815	Cowl	1
2	b 1686711	Cowl	1
3	1530243	Insert	2
4	1640776	Insert	7
4	1581567	Nut (Optional)	7
4	320160	Washer (Optional)	7
5	1605990	Capscrew	7

FOOTNOTES:

a → S/N L177V01662F

b S/N L177V01663F →

COUNTERWEIGHTS (FIGURE 1-7) (→ 4/2007)



HP120833

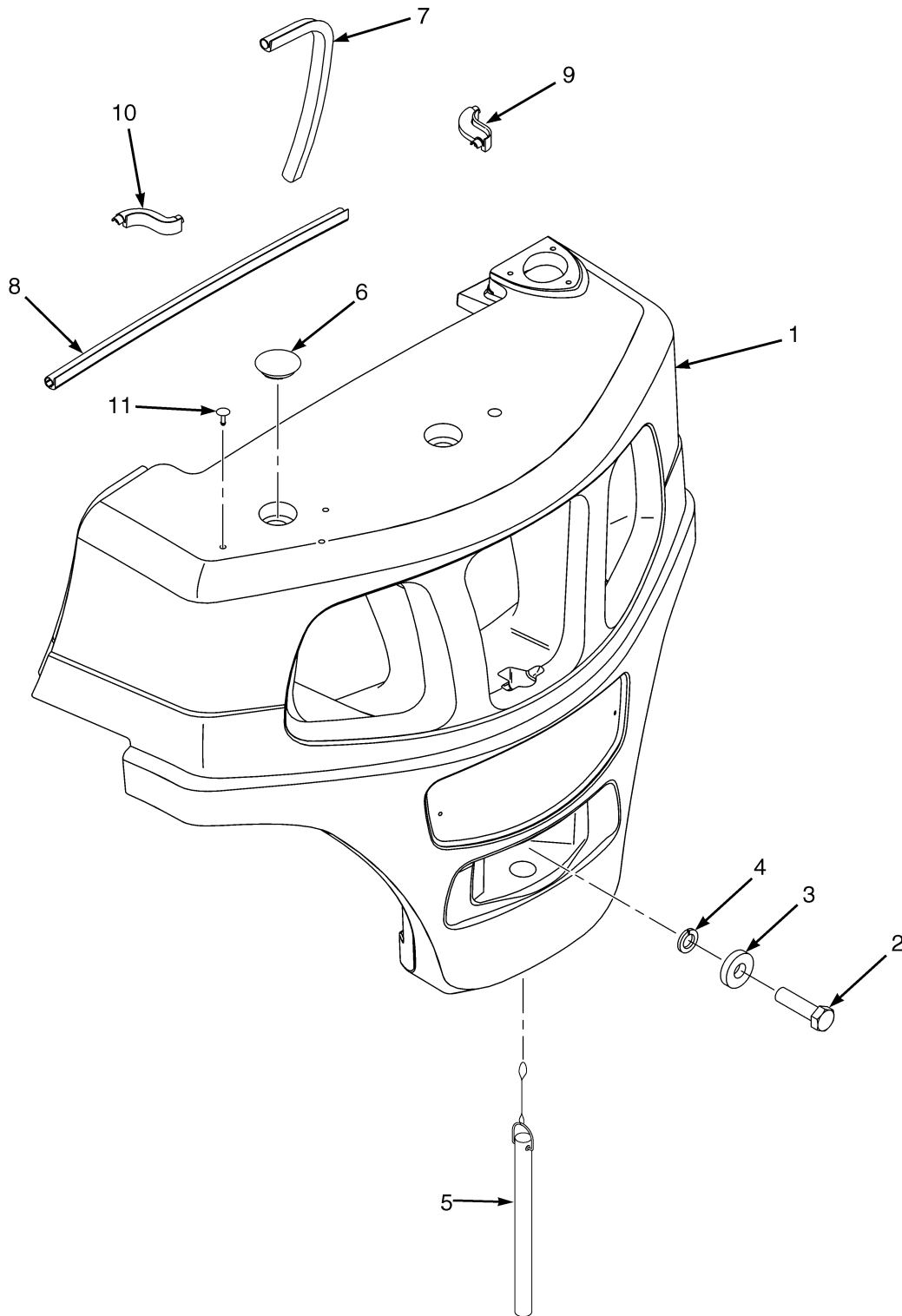
COUNTERWEIGHTS

(→ 4/2007)

ITEM	PART NO.	DESCRIPTION	QTY
1	1533597	Counterweight (H40FT)	1
1	1533598	Counterweight (H50FT)	1
1	1533599	Counterweight (H60FT)	1
1	1533601	Counterweight (H70FT)	1
2	a 292608	Capscrew	1
2	b 292613	Capscrew (6 in.)	1
3	1375214	Washer	1
4	292689	Washer	1
5	1533596	Tow Pin	1
6	302492	Roll Pin	1
7	1590279	Seal (Counterweight)	1
8	1590280	Seal (Counterweight) (Top)	1
9	1590152	Seal (RH)	1
10	1590153	Seal (LH)	1
11	1347045	Fastener	4
12	2021395	Cap	2

FOOTNOTES:**a** H40FT**b** H50-70FT

COUNTERWEIGHTS (FIGURE 1-8) (4/2007 →)



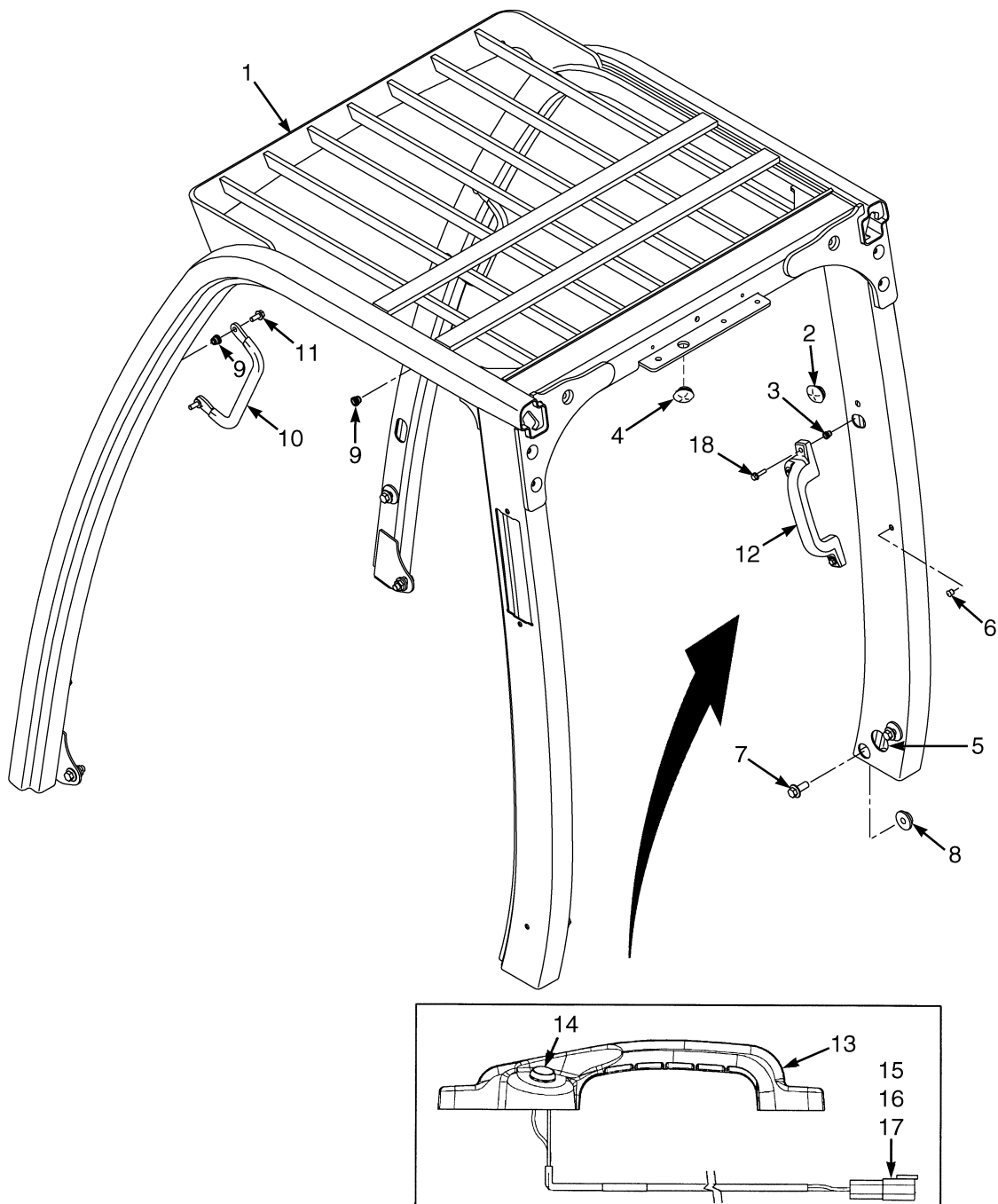
BP120354

COUNTERWEIGHTS

(4/2007 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1649733	Counterweight (H40FT)	1
1	1649734	Counterweight (H50FT)	1
1	1649735	Counterweight (H60FT)	1
1	1649736	Counterweight (H70FT)	1
2	292608	Capscrew (H40FT)	1
2	292613	Capscrew (6 in.) (H50-70FT)	1
3	1375214	Washer	1
4	292689	Washer	1
5	1643947	Tow Pin	1
6	2021395	Cap	1
7	1590279	Seal (Counterweight)	1
8	1590280	Seal (Counterweight)	1
9	1590152	Seal (RH)	1
10	1590153	Seal (LH)	1
11	2098153	Fastener	1

OVERHEAD GUARD (FIGURE 1-9)



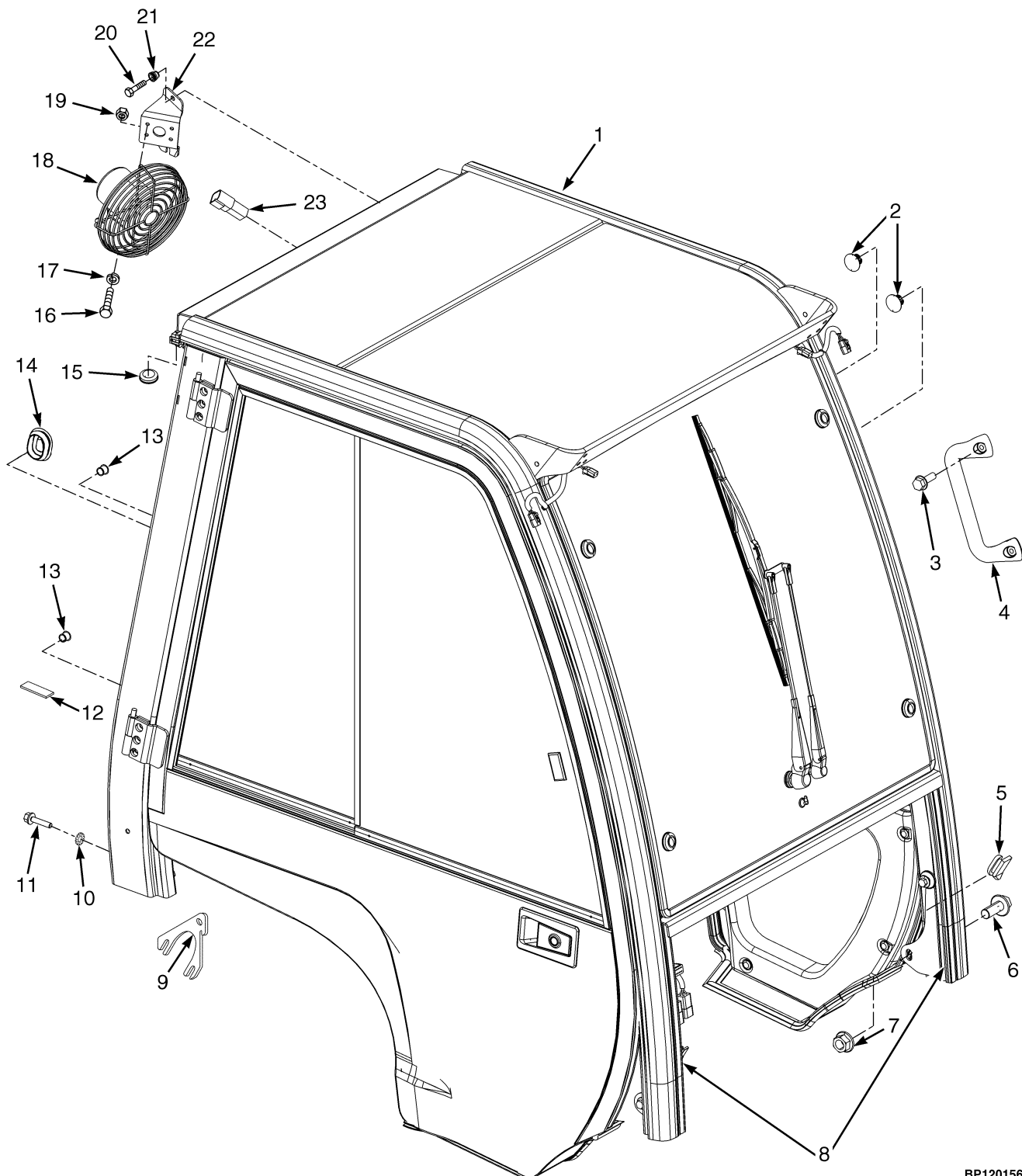
HP120756

OVERHEAD GUARD

ITEM	PART NO.	DESCRIPTION	QTY
1	1599204	Overhead Guard (High)	1
1	1599210	Overhead Guard (Low)	1
2	1558219	Grommet	2
3	1531558	Insert	2
4	1560671	Grommet	1
5	1527395	Grommet	1
6	1494888	Plug	2
7	1527888	Capscrew (M12 x 1.75 x 35)	8
7	1566853	Capscrew (M12 x 1.75 x 40 Optional)	8
8	1528888	Nut (Shoulder)	2
9	1531557	Insert	4
10	1536813	Handle (Grab)	1
11	1583611	Capscrew	2
12	2070223	Handle (RH, Rear)	1
13	2069454	Handle	1
14	1566726	Push Button Switch (Horn)	1
15	1493465	Connector	1
16	1330414	Connector (Secondary Lock)	1
17	1330437	Terminal (Pin)	2
18	1586495	Capscrew	2
	a 1599415	Plug	1

FOOTNOTES:**a** Not Illustrated

CAB ASSEMBLY (FIGURE 1-10)



BP120156

CAB ASSEMBLY**KEY:****A: With Steel Doors****B: With PVC Doors**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	b 1519232	Cab (With Steel Doors)	1	..
1	c 1641493	Cab (With Steel Doors) (☞Figure 1-11, ☞Figure 1-12, ☞Figure 1-16, ☞Figure 1-18, ☞Figure 1-19).....	1	..
1	d 1652722	Cab (With Steel Doors)	1	..
1	1641660	Cab (With PVC Doors) (☞Figure 1-16, ☞Figure 1-18, ☞Figure 1-19, ☞Figure 1-15).....	..	1
2	1574301	Plug	6	8
3	1583611	Capscrew	8	4
4	1536813	Handle (Grab)	1	1
5	1589787	Seal	2	2
6	1527888	Capscrew	8	8
7	1528888	Nut (Shoulder)	2	2
8	1613743	Seal	1	2
9	1636853	Shim	AR	AR
10	296359	Washer	6	6
11	296157	Capscrew	6	6
12	1614686	Strip Seal (LH)	1	1
12	1614687	Strip Seal (RH)	1	1
13	1494888	Plug	4	2
14	1599415	Plug	1	1
15	1560671	Grommet	1	1
16	1565125	Screw	4	..
17	292678	Lockwasher	4	..
18	1359562	Fan	1	..
18	1311213	Fan	1	..
18	1330409	Connector	1	..
18	1330414	Connector (Secondary Lock)	1	..
18	1330437	Terminal (Pin)	2	..
19	1463912	Nut	4	..
20	1583611	Capscrew	2	..
21	1531557	Insert	2	..
22	1613734	Bracket	1	..
23	1351681	Connector	1	1
	a 1636647	Shim	AR	AR
	a 2070996	Grommet	1	1

FOOTNOTES:**a** Not Illustrated**b** → S/N L177B12272D**c** S/N L177B11273D ↔ S/N L177B16119E**d** S/N L177B16120E →

This exploded perspective view illustrates the assembly of a vehicle window. The components are numbered as follows: 1 is the main window frame; 2 is the window glass; 3 is a small rectangular component, likely a drain plug or seal; 4 is a small rectangular component, likely a drain plug or seal; 5 is a small rectangular component, likely a drain plug or seal; 6 is a small rectangular component, likely a drain plug or seal; 7 is a small rectangular component, likely a drain plug or seal; 8 is a small rectangular component, likely a drain plug or seal; 9 is a small rectangular component, likely a drain plug or seal; 10 is a small rectangular component, likely a drain plug or seal; 11 is a small rectangular component, likely a drain plug or seal; 12 is a small rectangular component, likely a drain plug or seal; 13 is a small rectangular component, likely a drain plug or seal; 14 is a small rectangular component, likely a drain plug or seal; 15 is a small rectangular component, likely a drain plug or seal; 16 is a small rectangular component, likely a drain plug or seal; 17 is a small rectangular component, likely a drain plug or seal; 18 is a small rectangular component, likely a drain plug or seal; 19 is a small rectangular component, likely a drain plug or seal; 20 is a small rectangular component, likely a drain plug or seal; 21 is a small rectangular component, likely a drain plug or seal.

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**CAB
LH DOOR**

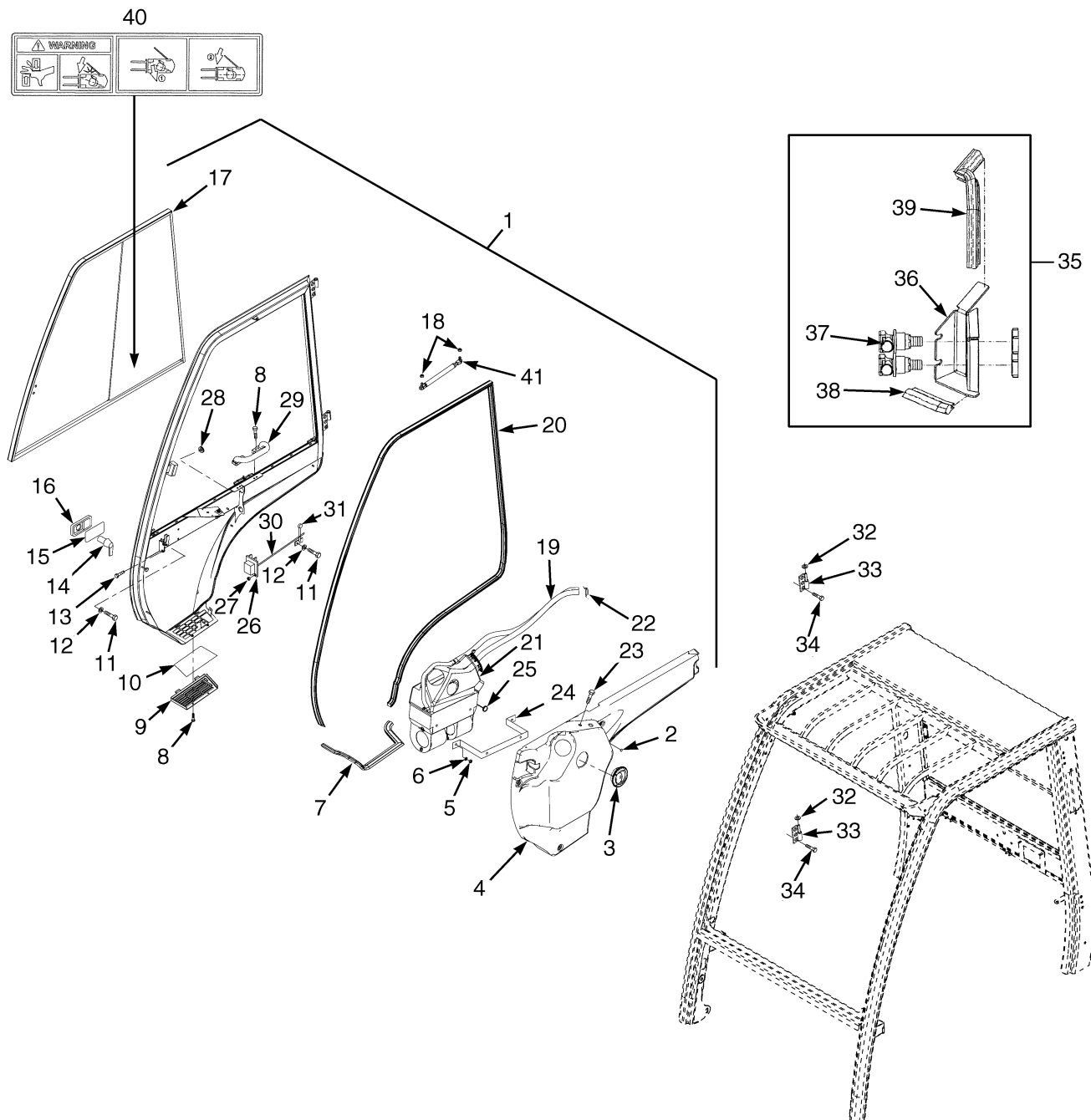
ITEM	PART NO.	DESCRIPTION	QTY
	b 1519232	Cab (With Steel Doors)	1
	d 1641493	Cab (With Steel Doors)	1
	e 1652722	Cab (With Steel Doors)	1
1	1598417	Door (LH)	1
2	c 1598396	Sliding Window	1
2	c 1483226	Latch	1
2	e 1653967	Sliding Window	1
2	e 1653969	Latch	1
2	1639489	Guide	1
3	1598393	Grip (Without Key)	1
4	1598394	Shim	1
5	1598392	Lever	1
6	296229	Capscrew	2
7	1393539	Seal	AR
8	302047	Screw	5
9	320156	Washer	5
10	1393479	Door Handle	1
11	1515337	Seal	AR
12	316835	Nut	2
13	1598390	Plug	2
14	1598395	Window (Door, Lower, LH)	1
15	1598389	Fastener	5
16	c 1598391	Cover (Door, LH)	1
16	e 1653973	Cover (Door, LH)	1
17	1493308	Bolt	12
18	1468312	Washer	2
19	1503958	Hinge (LH)	2
20	1598397	Gas Spring	1
21	1558294	Seal	AR
	a 1598390	Plug	5
	a 1593629	Key (For Cab Door Grip)	2

FOOTNOTES:

a Not Illustrated
b → S/N L177B11272D
c → S/N L177B16119E

d S/N L177B11273D ↔ S/N L177B16119E
e S/N L177B16120E ↔ S/N

CAB (FIGURE 1-12) RH DOOR AND HEATER ASSEMBLY



BP120154

CAB
RH DOOR AND HEATER ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	c 1519232	Cab (With Steel Doors)	1
	e 1641493	Cab (With Steel Doors)	1
	f 1652722	Cab (With Steel Doors)	1
1	d 1598416	Door (RH)	1
1	f 1690932	Door (RH)	1
1	1652426	Door (RH) (Weldment)	1
2	1598389	Fastener	6
3	1598398	Louver	3
4	d 1598407	Cover (Door, RH)	1
4	f 1653972	Cover (Door, RH)	1
5	239503	Nut	2
6	320158	Washer	2
7	1393539	Seal	AR
8	1598399	Screw	6
9	1598401	Bracket	1
10	1598400	Filter	1
11	302047	Screw	6
12	320156	Washer	6
13	296229	Capscrew	2
14	1598411	Lever	1
15	1598394	Shim	1
16	1598393	Grip (Without Key)	1
17	d 1598413	Sliding Window	1
17	d 1483226	Latch	1
17	f 1653970	Sliding Window	1
17	f 1653969	Latch	1
17	1639489	Guide	4
18	316835	Nut	2
19	1623400	Hose	AR
20	1515337	Seal	AR
21	1598404	Heater	1
21	1598675	Heater	1
21	1598674	Hose (.310 mm)	1
21	1598673	Switch (Blower)	1
21	1640800	Knob	1
21	1598672	Valve (Water)	1
21	1598671	Wire Harness	1
21	1623402	Clip	2
22	1393499	Clamp	1
23	1468318	Screw	4
24	1598669	Bracket	1
25	1598390	Plug	5
26	1598412	Lock (RH)	1
27	1598408	Nut	2
28	1579116	Grommet	2
29	1598406	Handle	1
30	1598409	Bar	1
31	1598410	Lever	1
32	1468312	Washer	2
33	1503959	Hinge (RH)	2

CAB

RH DOOR AND HEATER ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
34	1493308	Bolt	12
35	1641494	Bulkhead	1
36	1643584	Bracket	1
37	1598327	Connector (Female)	2
38	1393539	Seal	AR
39	1515337	Seal	AR
40	a 2081868	Label (Electronic Hydraulics)	1
41	1598414	Gas Spring	1
	b 1593629	Key (For Cab Door Grip)	2
	b 1654298	Knob (Water Valve)	1
	bf 1674109	Kit-Repair Sliding Window	1

FOOTNOTES:

a Electronic Hydraulics Only

b Not Illustrated

c → S/N L177B12272D

d → S/N L177B16119E

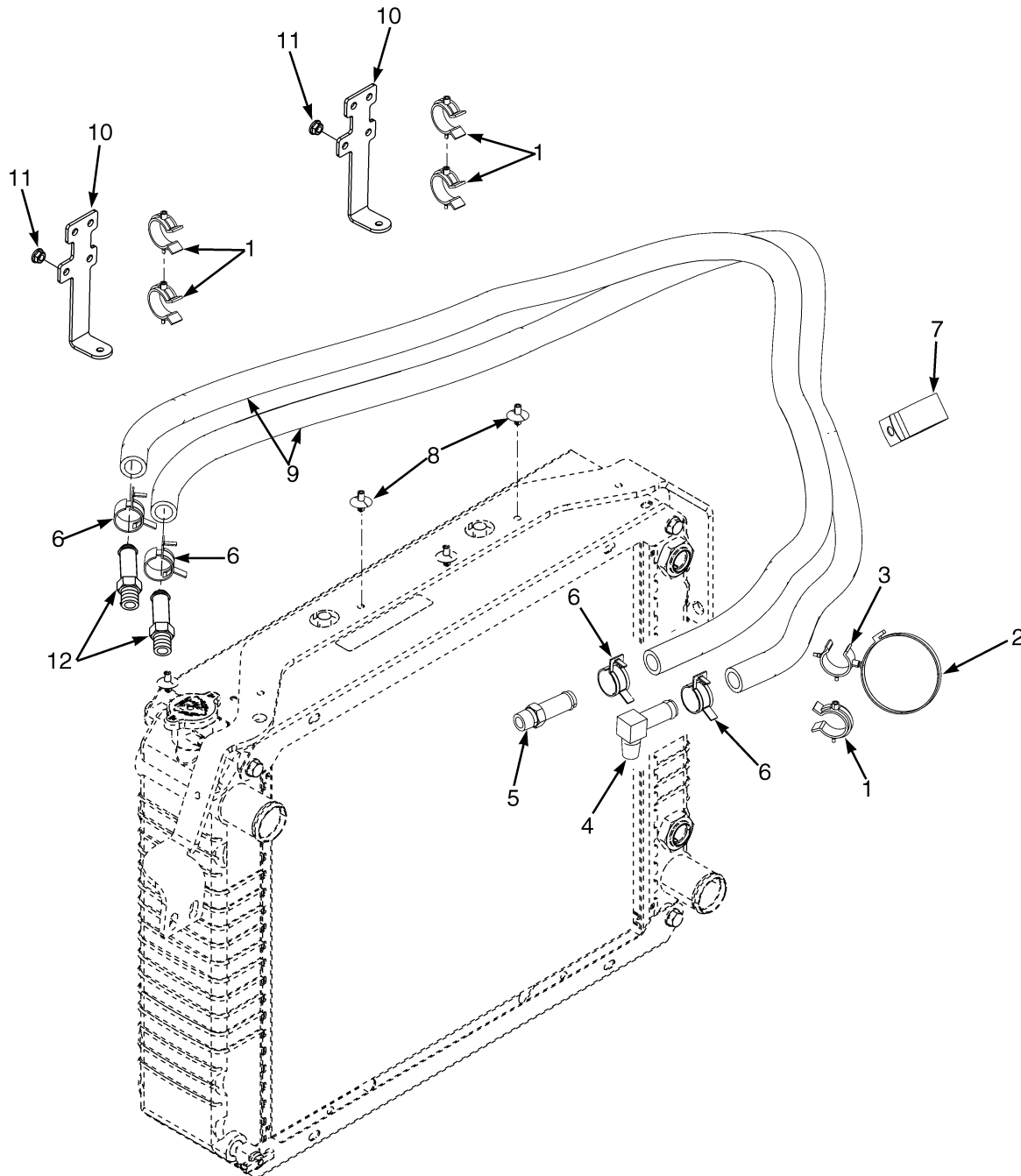
e S/N L177B12273D ↔ S/N L177B16119E

f S/N L177B16120E →

NOTES

[illegible]

HEATER HOSE ARRANGEMENT (FIGURE 1-13) GASOLINE, LPG, AND DIESEL

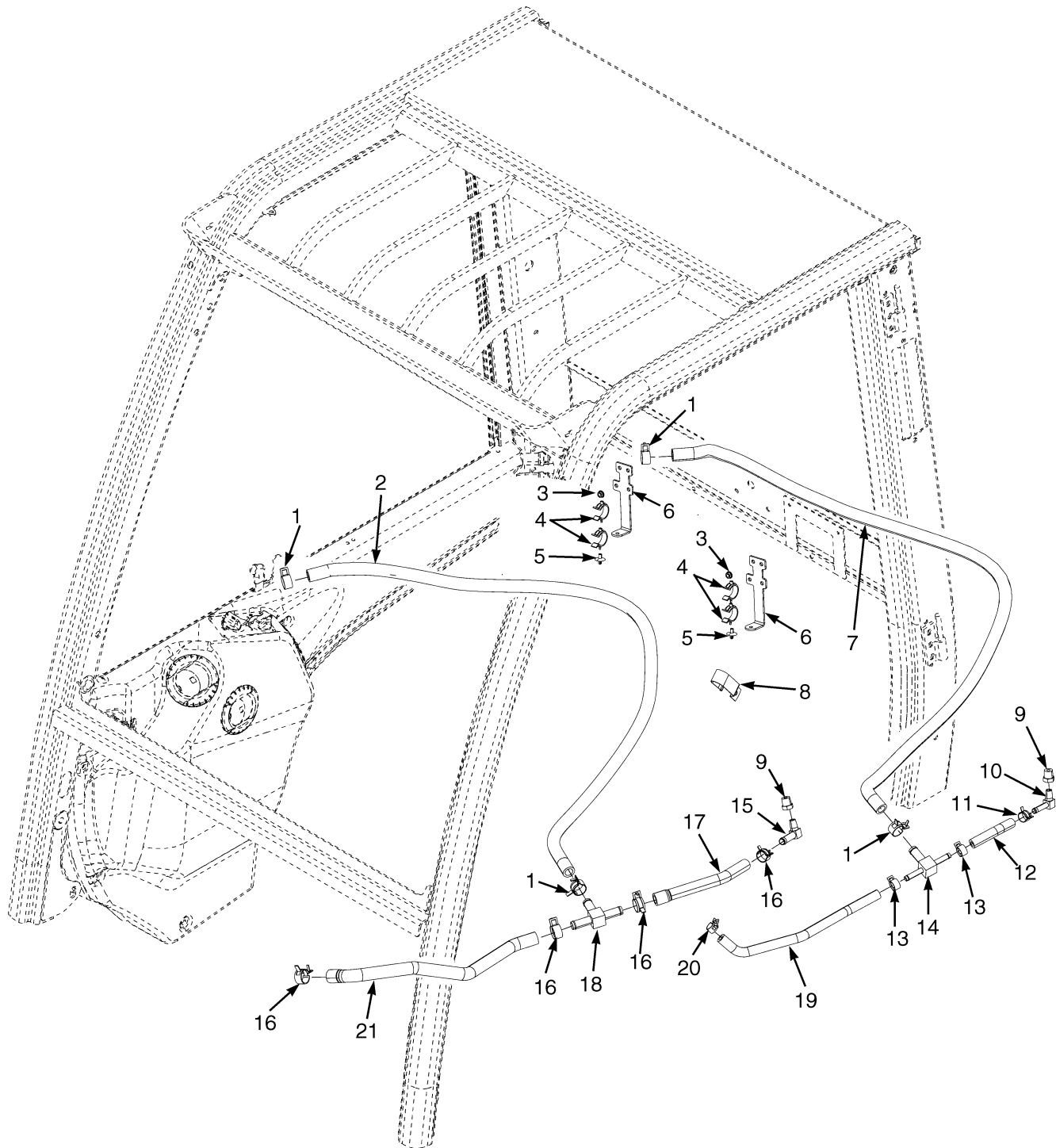


BP000299

HEATER HOSE ARRANGEMENT
GASOLINE, LPG, AND DIESEL**KEY:****A: Mazda Gasoline Engines****B: Mazda LPG Engines (Emission Compliant)****C: GM Gasoline Engines****D: GM LPG Engines**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
1	1569465	Clamp	6	5	5	5
2	1502061	Clamp	1	1	1	1
3	1612617	Clamp	1	1	1	1
4	125305	Fitting	1	1	1	1
5	138710	Fitting	1	1	1	1
6	130845	Clamp	3	4	2	4
6	1501995	Hose Clamp	1	..	..	..
6	1501997	Hose Clamp	..	..	2	..
7	1562648	Clip	1	1	1	1
8	1543842	Clamp	3	2	2	2
9	2071001	Hose	1	..	..	..
9	2071002	Hose	1	..	..	..
9	2071300	Hose	..	1	..	..
9	2070769	Hose	..	1	..	..
9	2070770	Hose	..	..	1	..
9	2075659	Hose	..	..	1	..
9	2070783	Hose	..	..	..	2
10	1588833	Bracket	2	2	2	2
11	1514429	Nut	4	4	4	4
12		Fitting (To Cab)	2	2	2	2

HEATER HOSES AND ATTACHING PARTS (FIGURE 1-14) MAZDA 2007 SERIES LPG ENGINE

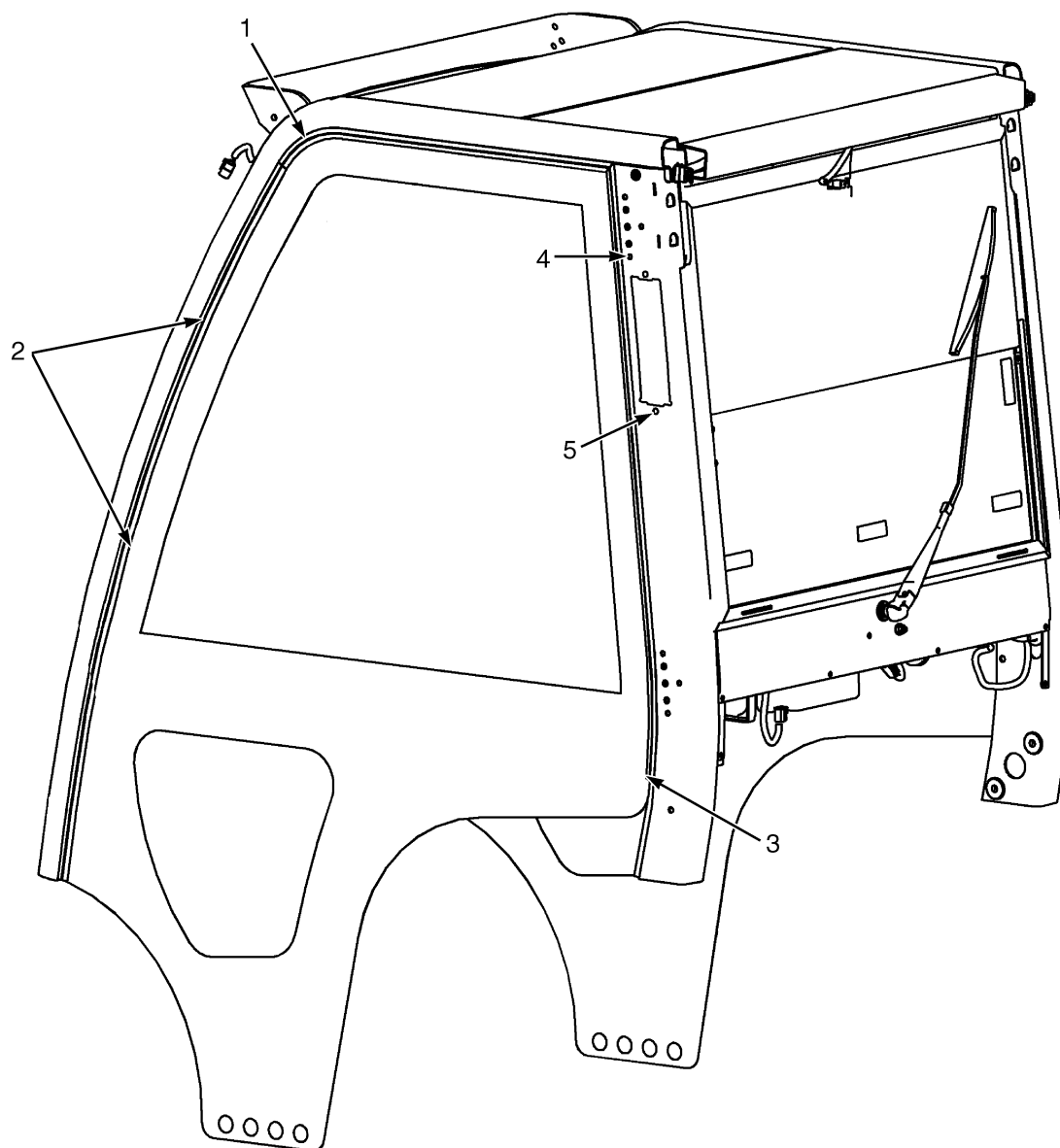


BP120411

**HEATER HOSES AND ATTACHING PARTS
MAZDA 2007 SERIES LPG ENGINE****KEY:****A: Cab With Steel Doors****B: Cab With PVC Doors**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	130845	Clamp	4	..
2	2070769	Hose	1	..
2	1502083	Radiator Hose	..	1
3	1514429	Nut	4	..
4	1569465	Clamp	4	..
5	1543842	Clamp	2	..
6	1588833	Bracket	2	..
7	2071300	Hose	1	..
7	1625311	Radiator Hose	..	1
8	1562648	Clip	1	..
9	63108	Fitting	2	2
10	16788	Fitting	1	1
11	1502007	Hose Clamp	1	1
12	2071303	Radiator Hose	1	..
13	130845	Clamp	2	..
14	366000	Fitting	1	..
15	17353	Fitting	1	1
16	1502005	Hose Clamp	4	2
17	2086921	Hose	1	..
18	1608989	Fitting	1	..
19	2071302	Radiator Hose	1	..
20	1501995	Hose Clamp	1	1
21	2070784	Radiator Hose	1	..

CAB DOORS (FIGURE 1-15) PVC

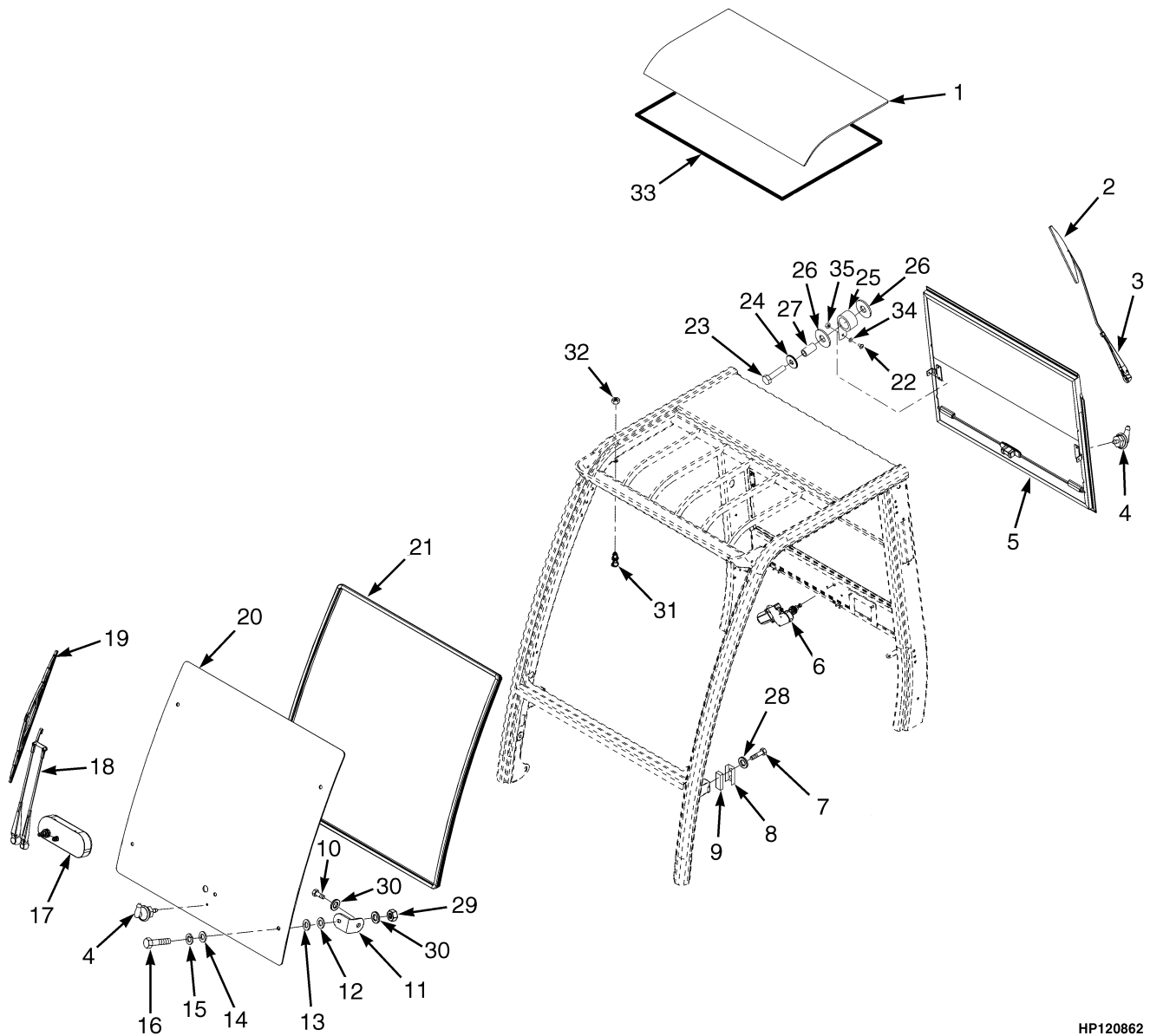


BP120196

CAB DOORS
PVC**KEY:****A: Right Hand****B: Left Hand**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1641660	Cab	1	1
	1627180	Door Pvc	1	..
	1627176	Door Pvc	..	1
1	1627178	Molding (Top) (RH)	1	..
1	1627174	Molding (Top) (LH)	..	1
2	1627179	Molding (Front) (RH)	1	..
2	1627175	Molding (Front) (LH)	..	1
3	1627177	Molding (Back) (RH)	1	..
3	1627173	Molding (Back) (LH)	..	1
4	1363916	Plug	12	12
5	1599415	Plug	1	1
	1627172	Screw (Not Illustrated)	10	10

CAB (FIGURE 1-16) WINDOWS AND WINDOW WIPER SYSTEM



HP120862

CAB

WINDOWS AND WINDOW WIPER SYSTEM

ITEM	PART NO.	DESCRIPTION	QTY
	a 1519232	Cab (With Steel Doors)	1
	b 1641493	Cab (With Steel Doors)	1
	c 1652722	Cab (With Steel Doors)	1
	1641660	Cab (With PVC Doors)	1
1	1598293	Window (Roof)	1
2	1598297	Wiper Blade (Rear)	1
3	1598296	Wiper Arm (Rear)	1
4	1493336	Connector	2
5	1598290	Sliding Window (Rear)	1
5	1615998	Latch (Contains one center, two end latches and springs)	1
5	1615999	Spring	2
5	1615813	Bar	1
6	1598295	Wiper Motor (Rear)	1
6	1645316	Kit-Wiper Motor	1
6	1645317	Kit-Wiper Motor	1
7	1639003	Striker Bolt	2
8	1393541	Guard	2
9	1504953	Block	2
10	1623364	Capscrew	4
11	1598210	Bracket	4
12	1598211	Washer	4
13	1468317	Washer	4
14	1468316	Washer	4
15	1468315	Washer	4
16	1468314	Screw	4
17	1669224	Wiper Motor (Front)	1
17	1645315	Wiper Motor (Kit-Front)	1
18	1598298	Wiper Arm (Front)	1
19	1598299	Wiper Blade (Front)	1
20	1598209	Front Window (Front)	1
20	1667630	Front Window (Front) (Alternate Part)	1
21	1495441	Seal	AR
22	302019	Screw	2
23	1598291	Capscrew	2
24	1558052	Washer	2
25	1598302	Spring	2
26	1598301	Bushing	4
27	1623366	Sleeve	2
28	1571029	Washer	2
29	239503	Nut	4
30	320158	Washer	4
31	1393472	Ball Stud	2
32	316835	Nut	2
33	1623377	Seal	AR
34	296415	Washer	2
35	292667	Nut	2
	1393475	Adhesive	AR
37	1667632	Cover	1

FOOTNOTES:

a → S/N L177B12272D

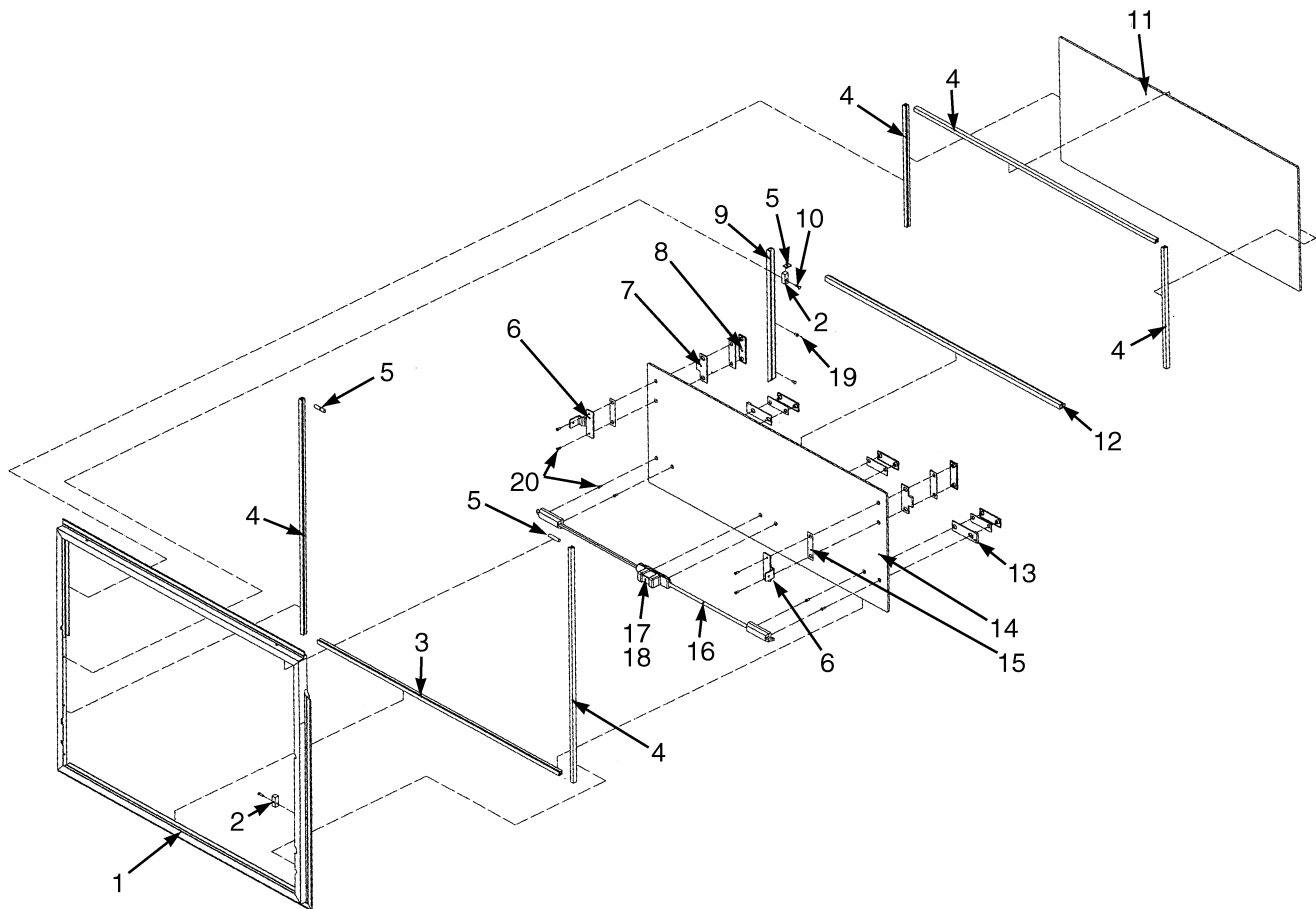
c S/N L177B16120E →

b S/N L177B12273D ↔ S/N L177B16119E

NOTES

[illegible]

CAB (FIGURE 1-17) SLIDING REAR WINDOW

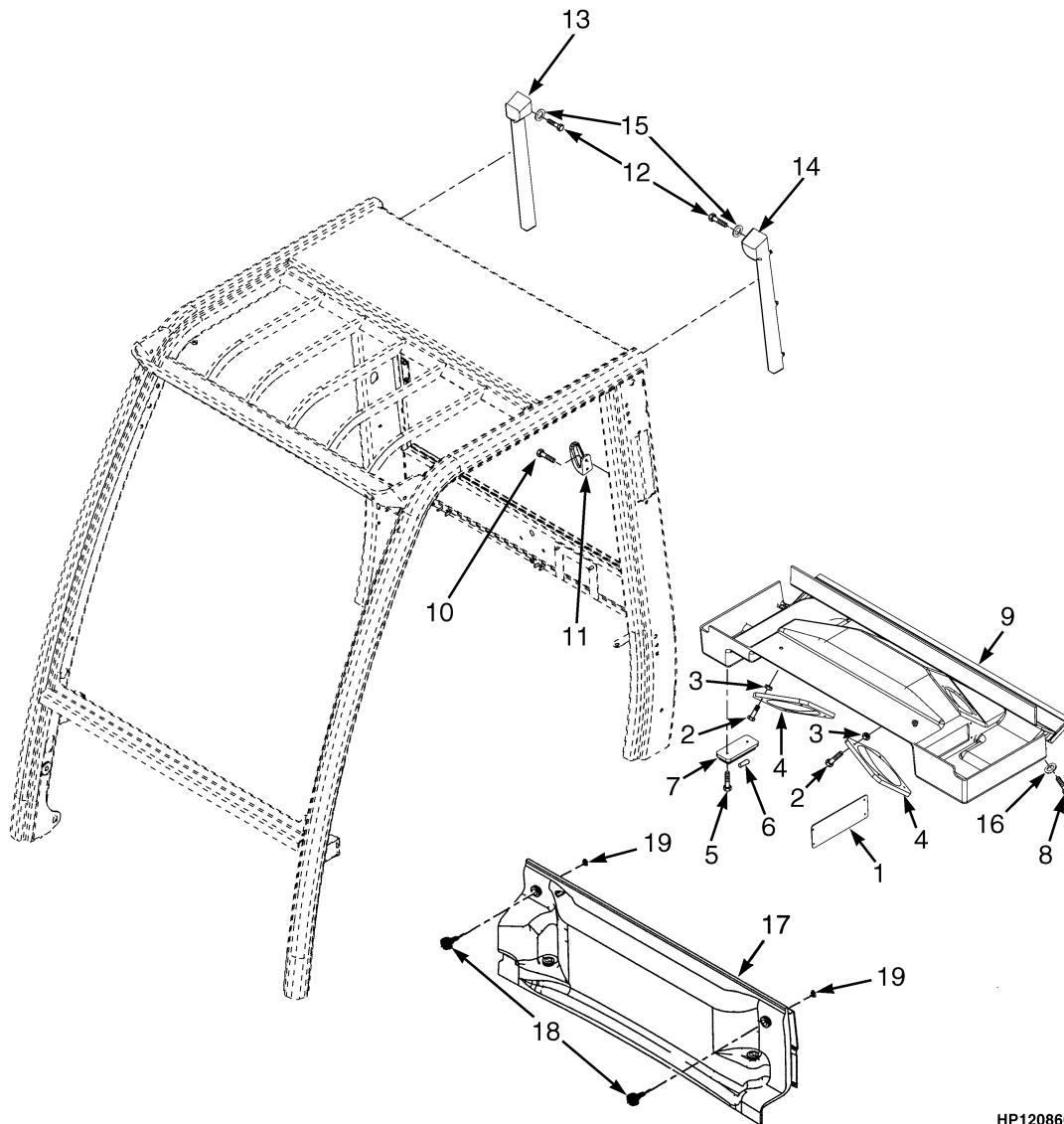


BP120365

CAB
SLIDING REAR WINDOW

ITEM	PART NO.	DESCRIPTION	QTY
	1598290	Sliding Window	1
1	1670441	Frame	1
2	1670443	Bushing	2
3	1670424	Guide	1
4	1641637	Seal	AR
5	1641640	Strip Seal	AR
6	1670427	Stop	2
7	1670428	Pad	2
8	1670429	Plate	2
9	1670442	Rail	1
10	1670421	Screw	2
11	1670425	Glass (Rear Glass)	1
12	1670444	Seal	1
13	1670423	Pad	2
14	1670426	Glass (Sliding Glass)	1
15	1670440	Pad	2
16	1615813	Bar	2
17	1615998	Latch (Contains one center, two end latches and springs)	1
18	1615999	Spring	2
19	1670422	Screw	2
20	1670430	Screw	8

CAB (FIGURE 1-18) INTERIOR PANELS



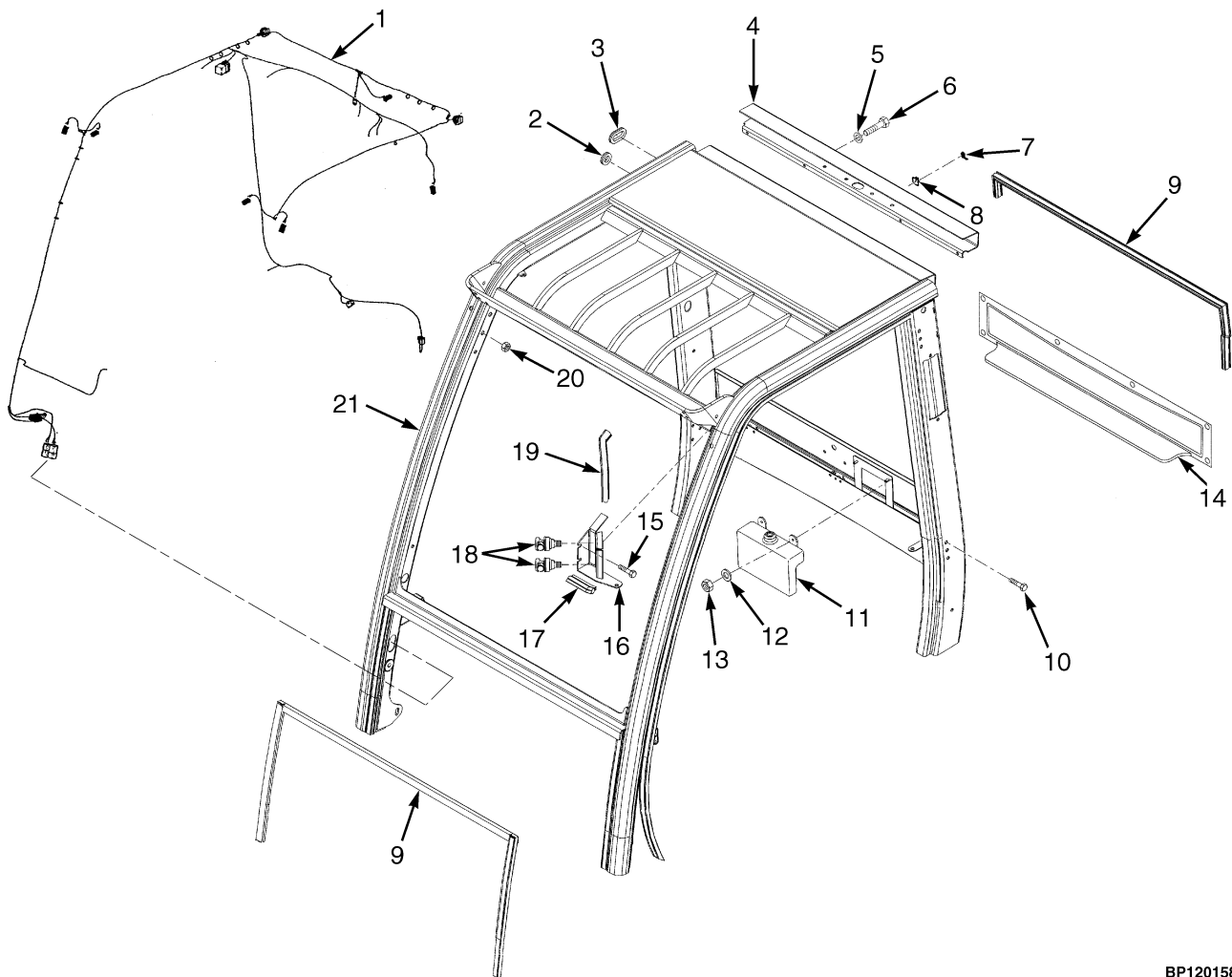
HP120860

**CAB
INTERIOR PANELS**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1519232	Cab (With Steel Doors)	1
	c 1641493	Cab (With Steel Doors)	1
	d 1652722	Cab (With Steel Doors)	1
	1641660	Cab (With PVC Doors)	1
1	1571628	Cover (Radio)	1
2	1468320	Screw	8
3	1598420	Nut	8
4	1598421	Cover (Speakers)	2
5	1468319	Screw	2
6	1393527	Bulb	1
7	1393528	Dome Light	1
8	1623364	Capscrew	4
9	1598422	Headliner	1
10	1623370	Screw	2
11	1393458	Hanger	1
12	1468319	Screw	6
13	1598424	Support (RH)	1
14	1598425	Support (LH)	1
15	296415	Washer	6
16	296419	Washer	4
17	1641054	Cover	1
17	1643685	Cover	1
18	1598427	Capscrew	2
19	1623396	Fastener	2
	a 1468318	Screw	2
	a 1492140	Washer	2

FOOTNOTES:**a** Not Illustrated**b** → S/N L177B12272D**c** S/N L177B12273D ↔ S/N L177B16119E**d** S/N L177B16120E →

CAB (FIGURE 1-19) FRAME AND LIGHT HARNESS



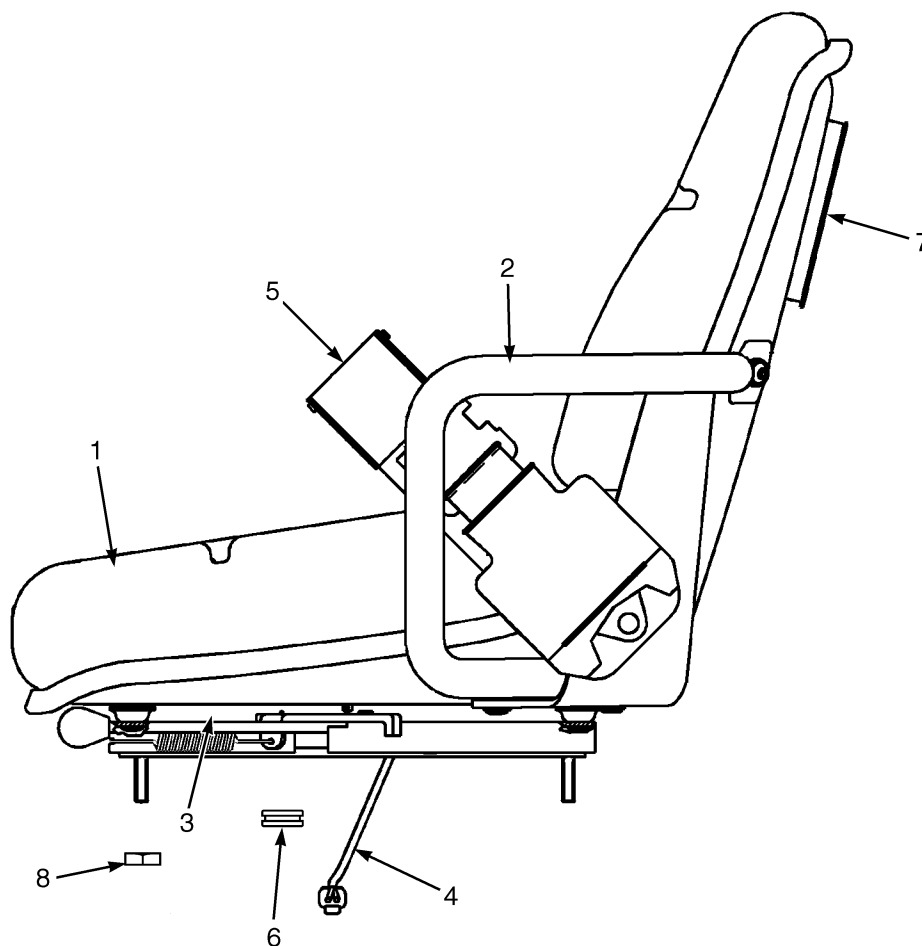
BP120158

**CAB
FRAME AND LIGHT HARNESS**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1519232	Cab (With Steel Doors)	1
	c 1641493	Cab (With Steel Doors)	1
	d 1652722	Cab (With Steel Doors)	1
	1641660	Cab (With PVC Doors)	1
1	1598333	Wire Harness	1
1	2044712	Relay (30 Amp)	1
2	1579116	Grommet	2
3	1598332	Grommet	3
4	1639004	Cover (Cable)	1
5	320158	Washer	4
6	136681	Capscrew	4
7	1558036	Clip	3
8	1393499	Clamp	3
9	1515337	Seal	AR
10	1493308	Bolt	12
11	1598329	Reservoir (Washer Bottle with Pump)	1
12	320156	Washer	7
13	136687	Nut	2
14	1598668	Cover (Rear)	1
15	a 1583611	Capscrew	2
16	a	Heater Hose Bulkhead	1
16	a 1643584	Bracket	1
16	a 1393539	Seal	AR
17	1515337	Seal	AR
18	1598327	Connector (Female)	2
19	1614926	Strip Seal	1
20	1468308	Nut	6
21		Frame	1

FOOTNOTES:**a** With PVC Doors**b** → S/N L177B12272D**c** S/N L177B12273D ↔ S/N L177B16119E**d** S/N L177B16120E ↔ S/N

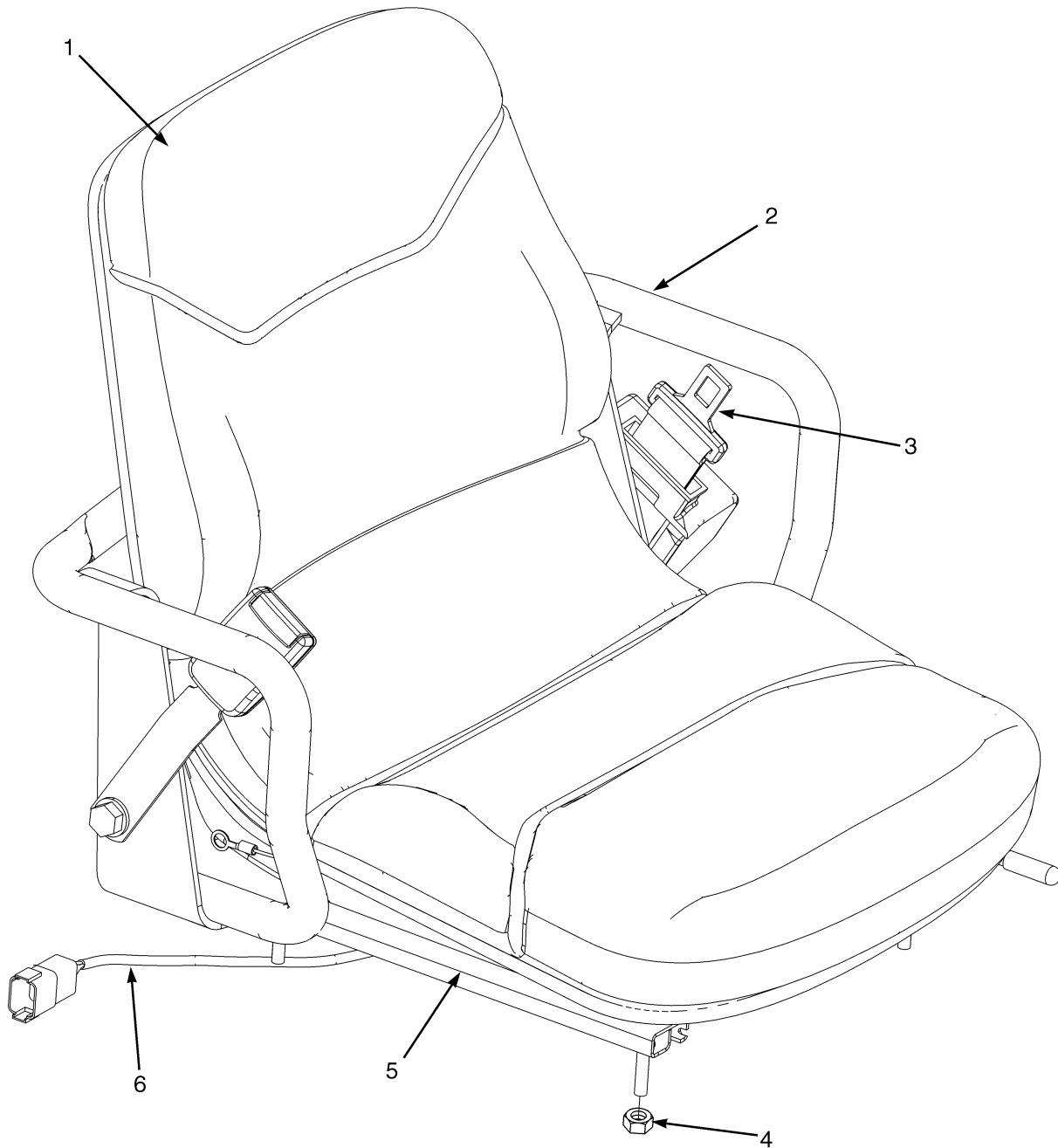
NON-SUSPENSION SEAT (FIGURE 1-20)
WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)



BP120096

NON-SUSPENSION SEAT
WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)

ITEM	PART NO.	DESCRIPTION	QTY
	1585987	Seat-Non Suspension (Vinyl)	1
	1585988	Seat-Non Suspension (Cloth)	1
1	1563351	Kit-Seat Cushion (Vinyl)	1
1	1563222	Kit-Seat Cushion (Cloth)	1
1	1563215	Sensor (Operator Presence) (Not Illustrated)	1
2	1563217	Hip Restraint (RH)	1
2	1563216	Hip Restraint (LH)	1
3	1459173	Kit-Seat Rail	1
4	2089673	Wire Harness	1
5	1470158	Kit-Seat Belt	1
6	392238	Grommet	1
7	1584060	Storage Box	1
8	191941	Nut	4

NON SUSPENSION SEAT (FIGURE 1-21)
WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 →)

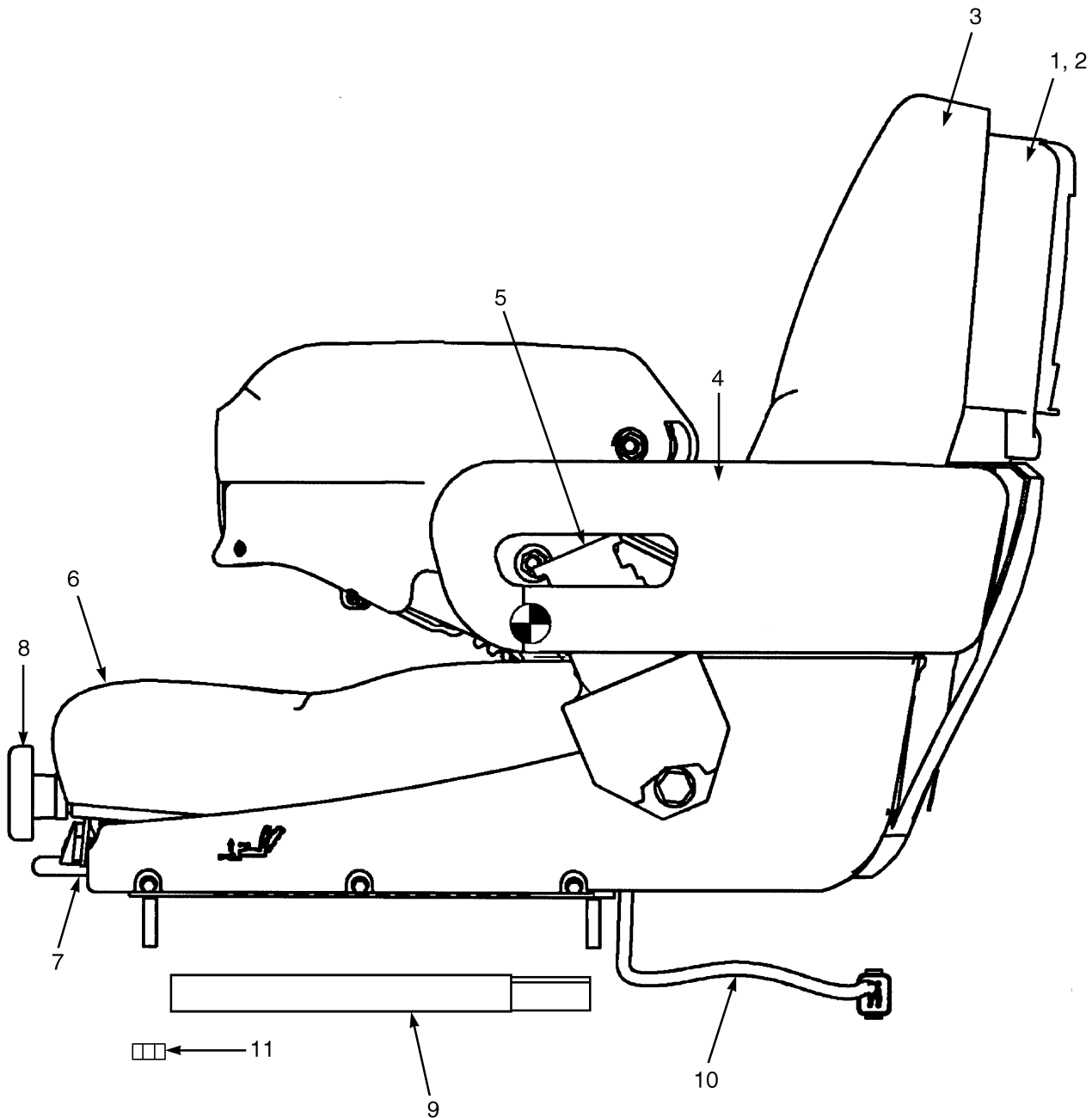
BP120126

NON SUSPENSION SEAT
WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 →)

ITEM	PART NO.	DESCRIPTION	QTY
	a 1593433	Seat-Non Suspension (Vinyl)	1
	b 2102122	Seat-Non Suspension (Vinyl)	1
	1593434	Seat-Non Suspension (Cloth)	1
1	1563351	Kit-Seat Cushion (Vinyl)	1
1	1563222	Kit-Seat Cushion (Cloth)	1
1	1563215	Sensor (Operator Presence) (Not Illustrated)	1
2	1563217	Hip Restraint (RH)	1
2	1563216	Hip Restraint (LH)	1
3	1598504	Kit-Seat Belt	1
4	191941	Nut	4
5	1459173	Kit-Seat Rail	1
6	1591652	Wire Harness	1

FOOTNOTES:**a** → S/N L177V01609F INC. 01633, 01661**b** S/N L177V01610F → EXC. 01633, 01661

SEMI-SUSPENSION SEAT (FIGURE 1-22)
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)



BP120087

SEMI-SUSPENSION SEAT

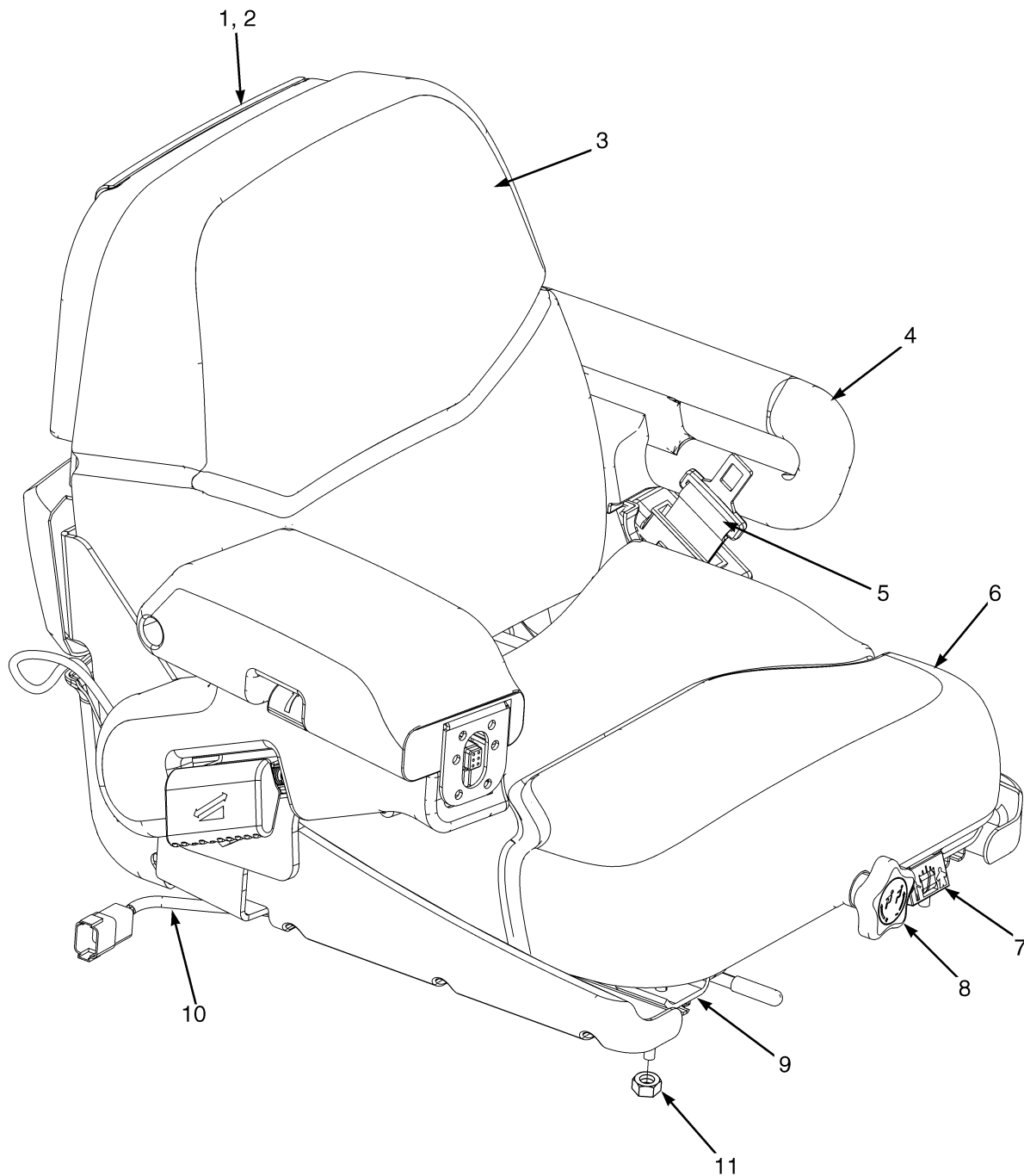
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)

KEY:**A:** Without Arm Controls**B:** With Arm Controls

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1585989	Seat-Semi Suspension (Vinyl)	1	..
1	1585990	Seat-Semi Suspension (Cloth)	1	..
1	1585981	Seat-Semi Suspension (Vinyl)	..	1
1	1585982	Seat-Semi Suspension (Cloth)	..	1
2	1362058	Information Case	1	1
3	1382111	Seat Cushion (Back Cushion) (Vinyl)	1	1
3	1382113	Seat Cushion (Back Cushion) (Cloth)	1	1
4	1563224	Hip Restraint (LH)	1	1
4	1563225	Hip Restraint (RH)	1	..
5	1470158	Kit-Seat Belt	1	1
6	1382112	Seat Cushion (Vinyl)	..	1
6	1382114	Seat Cushion (Cloth)	..	1
7	1483023	Guide	1	1
8	1563227	Knob	1	1
9	1459173	Kit-Seat Rail	1	1
10	2075428	Wire Harness (With Electronic Controls)	..	1
10	2089673	Wire Harness (With Hip Restraints)	1	..
11	191941	Nut	4	4
	a 1563211	Knob (Electronic Control Arm)	..	1
	a 1362049	Kit-Shock Absorber	1	1
	a 1563215	Sensor (Operator Presence)	1	1
	a 1563210	Cap (Electronic Control Arm)	..	1

FOOTNOTES:**a** Not Illustrated

SEMI-SUSPENSION SEAT (FIGURE 1-23) WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 ↔ 7/2006)



BP120128

SEMI-SUSPENSION SEAT

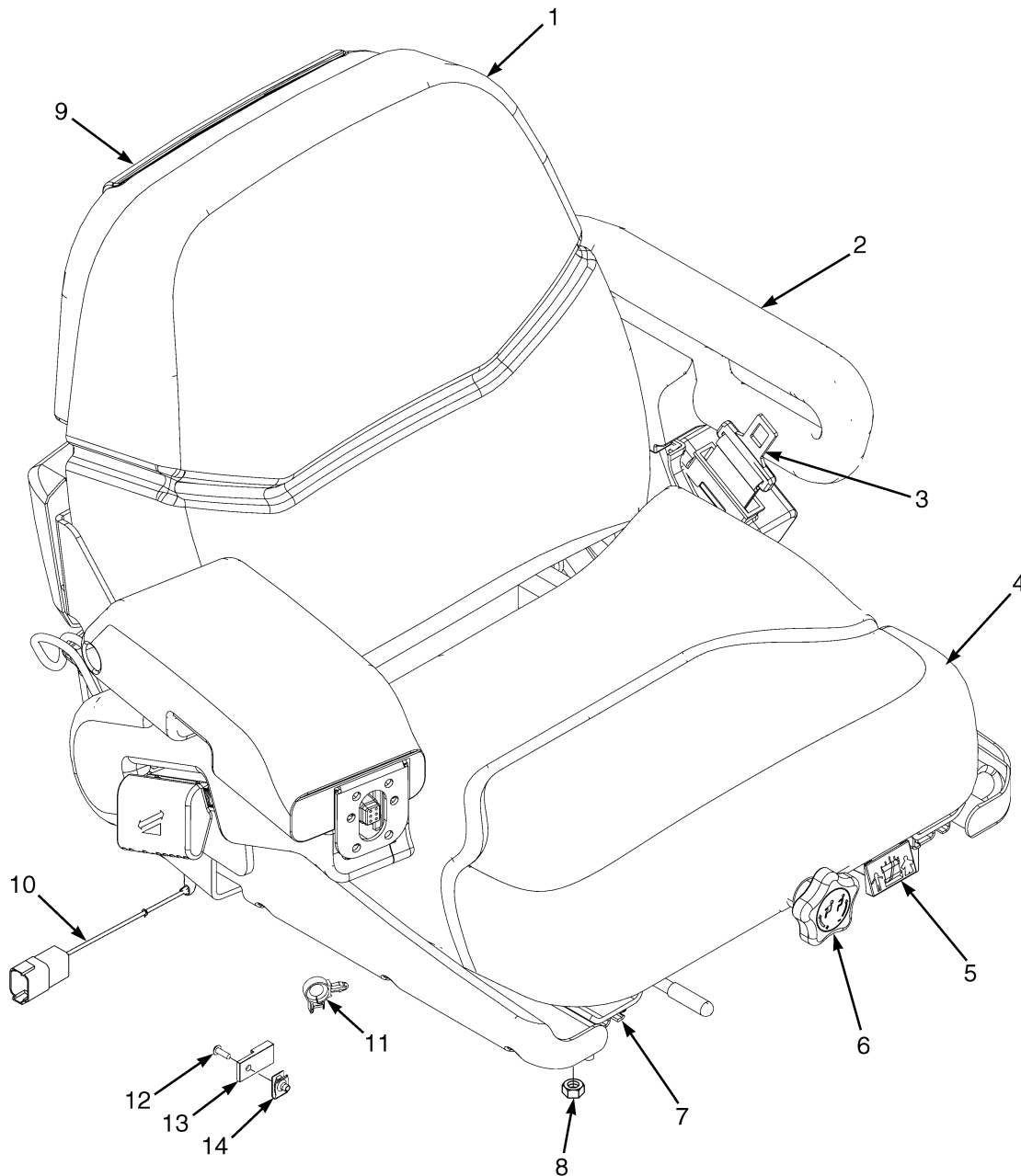
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 ↔ 7/2006)

KEY:**A:** Without Arm Controls**B:** With Arm Controls

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1593435	Seat-Semi Suspension (Vinyl)	1	..
1	1593436	Seat-Semi Suspension (Cloth)	1	..
1	1593427	Seat-Semi Suspension (Vinyl)	..	1
1	1593428	Seat-Semi Suspension (Cloth)	..	1
2	1362058	Information Case	1	1
3	1382111	Seat Cushion (Back Cushion) (Vinyl)	1	1
3	1382113	Seat Cushion (Back Cushion) (Cloth)	1	1
4	1563224	Hip Restraint (LH)	1	1
4	1563225	Hip Restraint (RH)	1	..
5	1598504	Kit-Seat Belt	1	1
6	1382112	Seat Cushion (Vinyl)	1	1
6	1382114	Seat Cushion (Cloth)	1	1
7	1483023	Guide	1	1
8	1563227	Knob	1	1
9	1459173	Kit-Seat Rail	1	1
10	2075428	Wire Harness (With Electronic Controls)	..	1
10	1591652	Wire Harness (With Hip Restraints)	1	..
11	191941	Nut	4	4
	a 1563211	Knob (Electronic Control Arm)	..	1
	a 1362049	Kit-Shock Absorber	1	1
	a 1563215	Sensor (Operator Presence)	1	1
	a 1563210	Cap (Electronic Control Arm)	..	1

FOOTNOTES:**a** Not Illustrated

SEMI-SUSPENSION SEAT (FIGURE 1-24) WITH AND WITHOUT ELECTRONIC CONTROLS (7/2006 →)



BP120290

SEMI-SUSPENSION SEAT

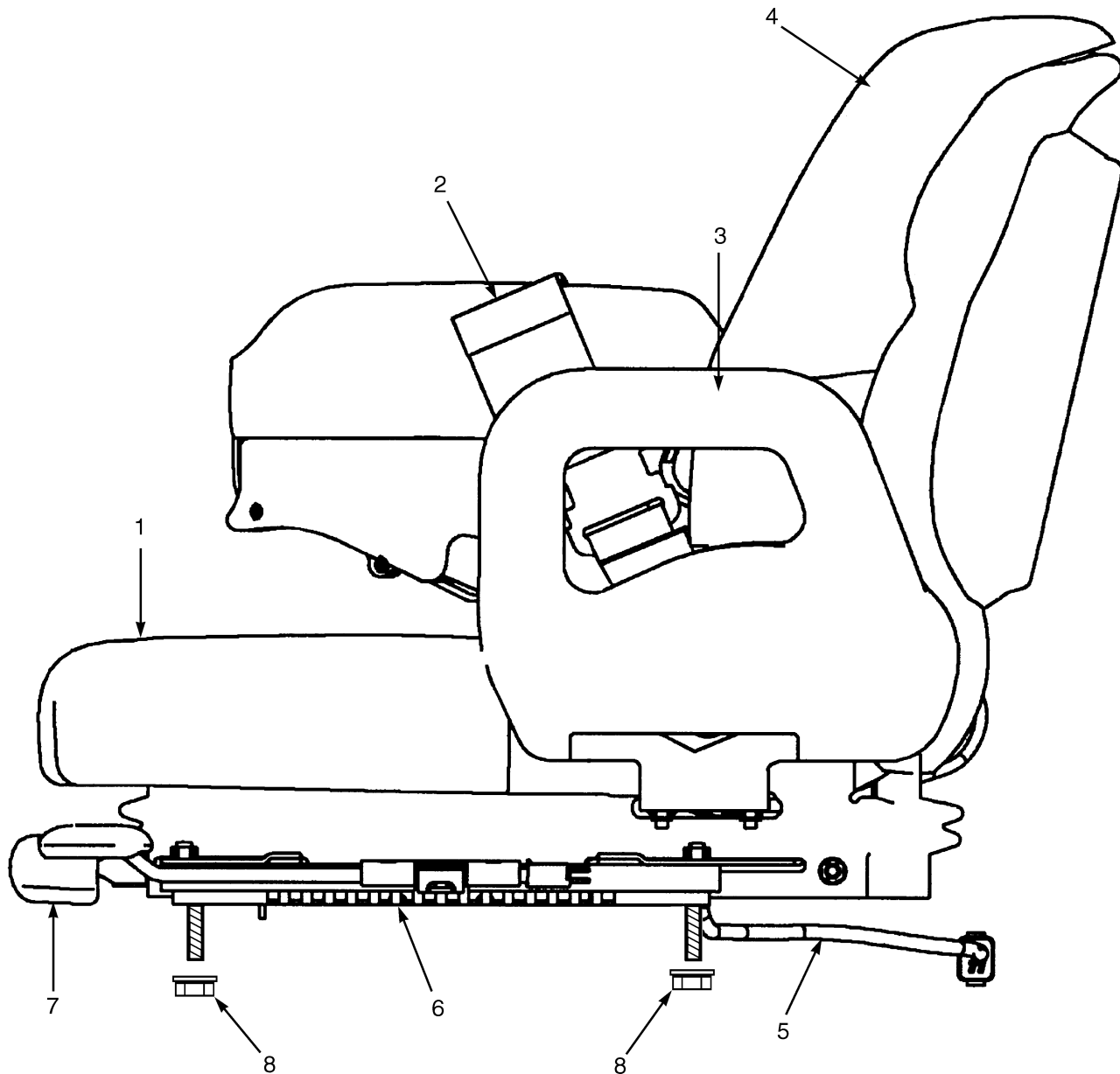
WITH AND WITHOUT ELECTRONIC CONTROLS (7/2006 →)

KEY:**A:** With Hip Restraints**B:** With Electronic Control Arm

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1593435	Seat-Semi Suspension (Vinyl)	1	..
	1593436	Seat-Semi Suspension (Cloth)	1	..
	2085193	Seat-Semi Suspension (Vinyl)	..	1
	2085194	Seat-Semi Suspension (Cloth)	..	1
1	1382111	Seat Cushion (Back Cushion) (Vinyl)	1	1
1	1382113	Seat Cushion (Back Cushion) (Cloth)	1	1
2	1563224	Hip Restraint (LH)	1	1
2	1563225	Hip Restraint (RH)	1	..
3	1598504	Kit-Seat Belt	1	1
4	1382112	Seat Cushion (Vinyl)	1	1
4	1382114	Seat Cushion (Cloth)	1	1
4	1563215	Sensor (Operator Presence)	1	1
5	1483023	Guide	1	1
6	1563227	Knob	1	1
7	1459173	Kit-Seat Rail	1	1
8	191941	Nut	4	4
9	1362058	Information Case	1	1
10	1591652	Wire Harness	1	..
10	1654891	Wire Harness	..	1
11	1500901	Clip	1	1
12	296149	Capscrew	1	1
13	1500912	Clip	1	1
14	1537551	Nut	1	1
	a 1362049	Kit-Shock Absorber	1	1
	a 1647532	Foam	..	1
	a 1563211	Knob (Electronic Control Arm)	..	1

FOOTNOTES:**a** Not Illustrated

FULL SUSPENSION SEAT (FIGURE 1-25)
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)



BP120092

FULL SUSPENSION SEAT

WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01401 ↔ S/N L177B01501)

KEY:

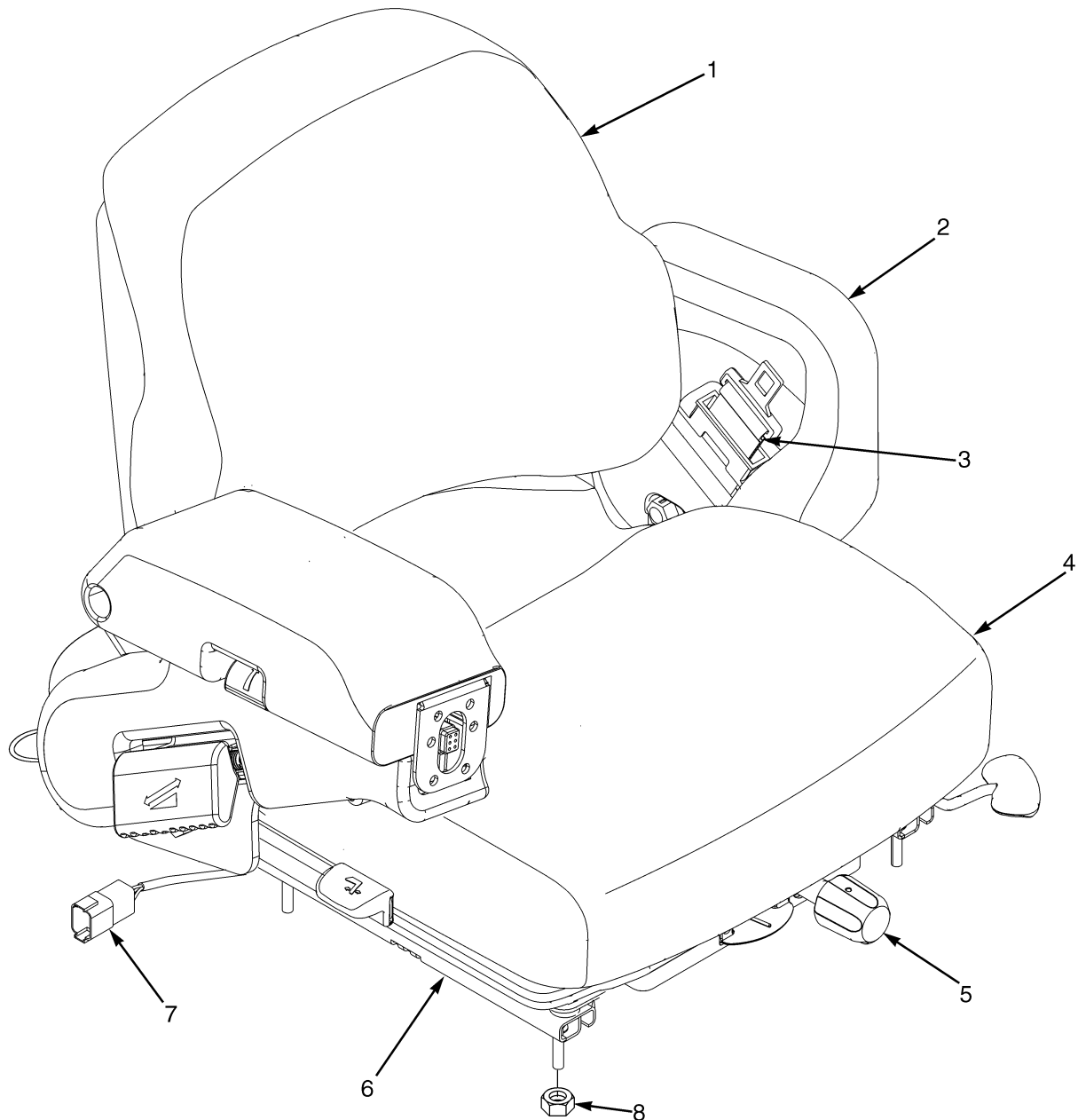
- A:** Full Suspension (Vinyl)
B: Full Suspension (Cloth)
C: Full Suspension (Vinyl with Electronic Control Arm)
D: Full Suspension (Cloth with Electronic Control Arm)

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1585979	Seat-Full Suspension (Vinyl)	1	..	..	..
	1585980	Seat-Full Suspension (Cloth)	..	1	..	..
	1585983	Seat-Full Suspension (Vinyl)	..	..	1	..
	1585984	Seat-Full Suspension (Cloth)	..	..	..	1
1	1563207	Seat Cushion (Vinyl)	1	..	1	..
1	1566453	Seat Cushion (Cloth)	..	1	..	1
2	1470158	Kit-Seat Belt	1	1	1	1
3	1470157	Hip Restraint (LH)	1	1	1	1
3	1470156	Hip Restraint (RH)	1	1	..	..
4	1470152	Seat Cushion (Back Cushion, Vinyl)	1	..	1	..
4	1470153	Seat Cushion (Back Cushion, Cloth)	..	1	..	1
5	2089673	Wire Harness	1	1	..	..
5	2075428	Wire Harness	..	..	1	1
5	1563208	Sensor (Operator Presence)	1	1	1	1 1
6	1470161	Kit-Seat Rail	1	1	1	1
7	1470163	Kit-Weight Adjuster	1	1	1	1
7	1584631	Knob	1	1	1	1
7	1600126	Handle	1	1	1	1
8	191941	Nut	4	4	4	4
	a 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	1	1	1
	a 1563210	Cap (Electronic Control Arm)	..	..	1	1
	a 1563211	Knob (Electronic Control Arm)	..	..	1	1
	a 1467529	Kit-Spring	1	1	1	1
	a 1627639	Weight Adjust Rack	1	1	1	1
	a 1467525	Kit-Bumper	1	1	1	1
	a 1467523	Kit-Boot	1	1	1	1
	a 1467526	Kit-Shaft and Bearing	1	1	1	1
	a 1467524	Kit-Bearing	1	1	1	1
	a 1467527	Kit-Weight Adjuster	1	1	1	1

FOOTNOTES:

- a** Not Illustrated

FULL SUSPENSION SEAT (FIGURE 1-26)
WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 ↔ S/N L177B008481D)



BP120127

FULL SUSPENSION SEAT

WITH AND WITHOUT ELECTRONIC CONTROLS (S/N L177B01501 ↔ S/N L177B008481D)

KEY:

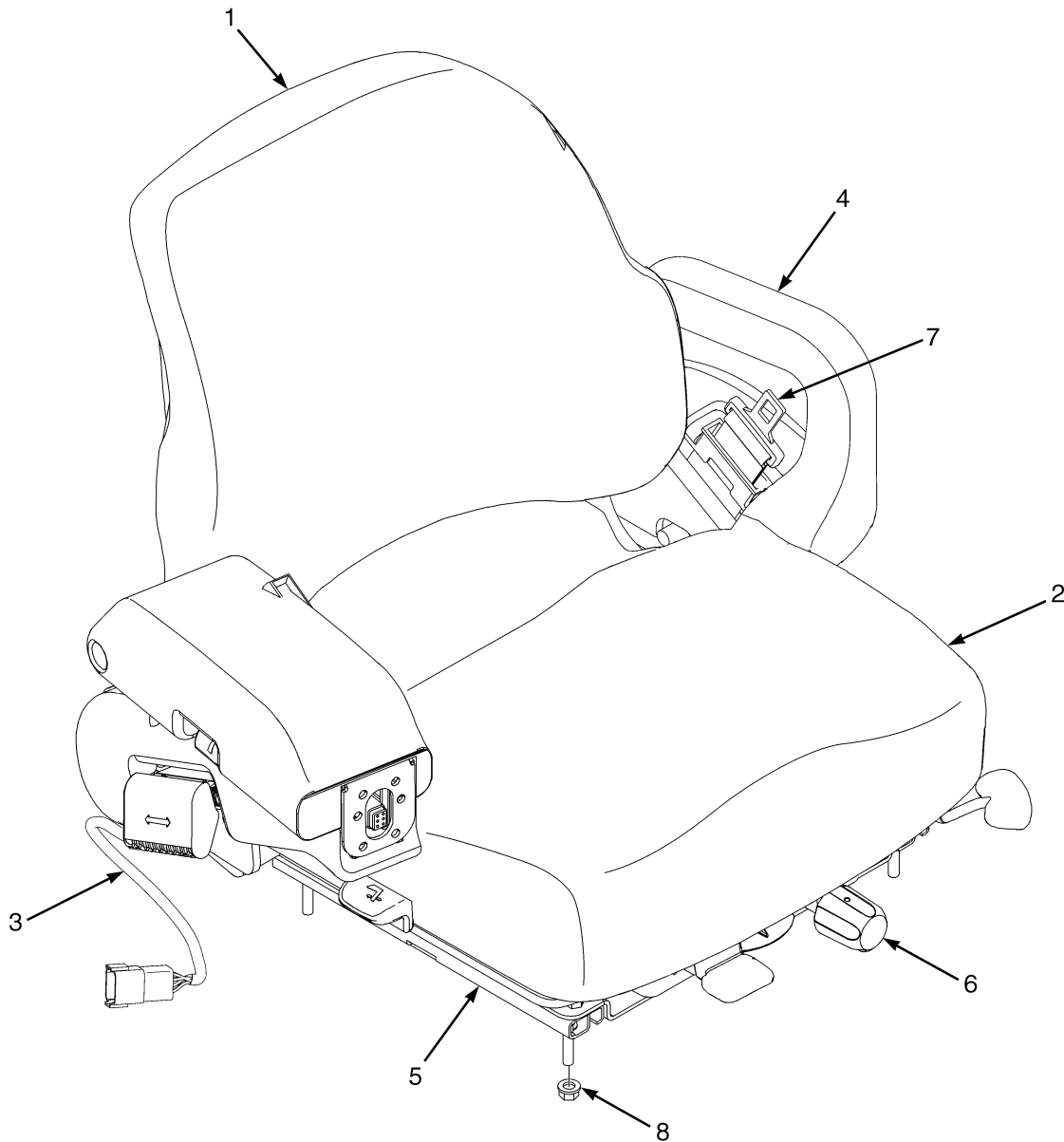
- A:** Full Suspension (Vinyl)
B: Full Suspension (Cloth)
C: Full Suspension (Vinyl with Electronic Control Arm)
D: Full Suspension (Cloth with Electronic Control Arm)

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1593425	Seat-Full Suspension (Vinyl)	1	..	..	..
	1593426	Seat-Full Suspension (Cloth)	..	1	..	..
	1593429	Seat-Full Suspension (Vinyl)	..	..	1	..
	1593430	Seat-Full Suspension (Cloth)	..	..	..	1
1	1470152	Seat Cushion (Back Cushion, Vinyl)	1	..	1	..
1	1470153	Seat Cushion (Back Cushion, Cloth)	..	1	..	1
2	1470157	Hip Restraint (LH)	1	1	1	1
2	1470156	Hip Restraint (RH)	1	1	..	..
3	1598504	Kit-Seat Belt	1	1	1	1
4	1563207	Seat Cushion (Vinyl)	1	..	1	..
4	1566453	Seat Cushion (Cloth)	..	1	..	1
	a 1563208	Sensor (Operator Presence)	1	1	1	1
5	1470163	Kit-Weight Adjuster	1	1	1	1
5	1584631	Knob	1	1	1	1
5	1600126	Handle	1	1	1	1
6	1470161	Kit-Seat Rail	1	1	1	1
7	2089673	Wire Harness	1	1	..	..
7	2075428	Wire Harness	..	..	1	1
8	191941	Nut	4	4	4	4
	a 1647611	Kit-Gas Spring	..	..	1	..
	a 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	1	1	1
	a 1563210	Cap (Electronic Control Arm)	..	..	1	1
	a 1563211	Knob (Electronic Control Arm)	..	..	1	1
	a 1467529	Kit-Spring	1	1	..	..
	a 1627639	Weight Adjust Rack	1	1	..	..
	a 1467525	Kit-Bumper	1	1	..	..
	a 1467523	Kit-Boot	1	1	..	..
	a 1467526	Kit-Shaft and Bearing	1	1	..	..
	a 1467524	Kit-Bearing	1	1	..	..
	a 1467527	Kit-Weight Adjuster	1	1	..	..
	a 1470155	Information Case (Kit)	1	1	..	..

FOOTNOTES:

- a** Not Illustrated

FULL SUSPENSION SEAT (FIGURE 1-27)
WITH AND WITHOUT ELECTRONIC CONTROLS — WITH LIMITED BACK TILT (S/N L177B08482D →)



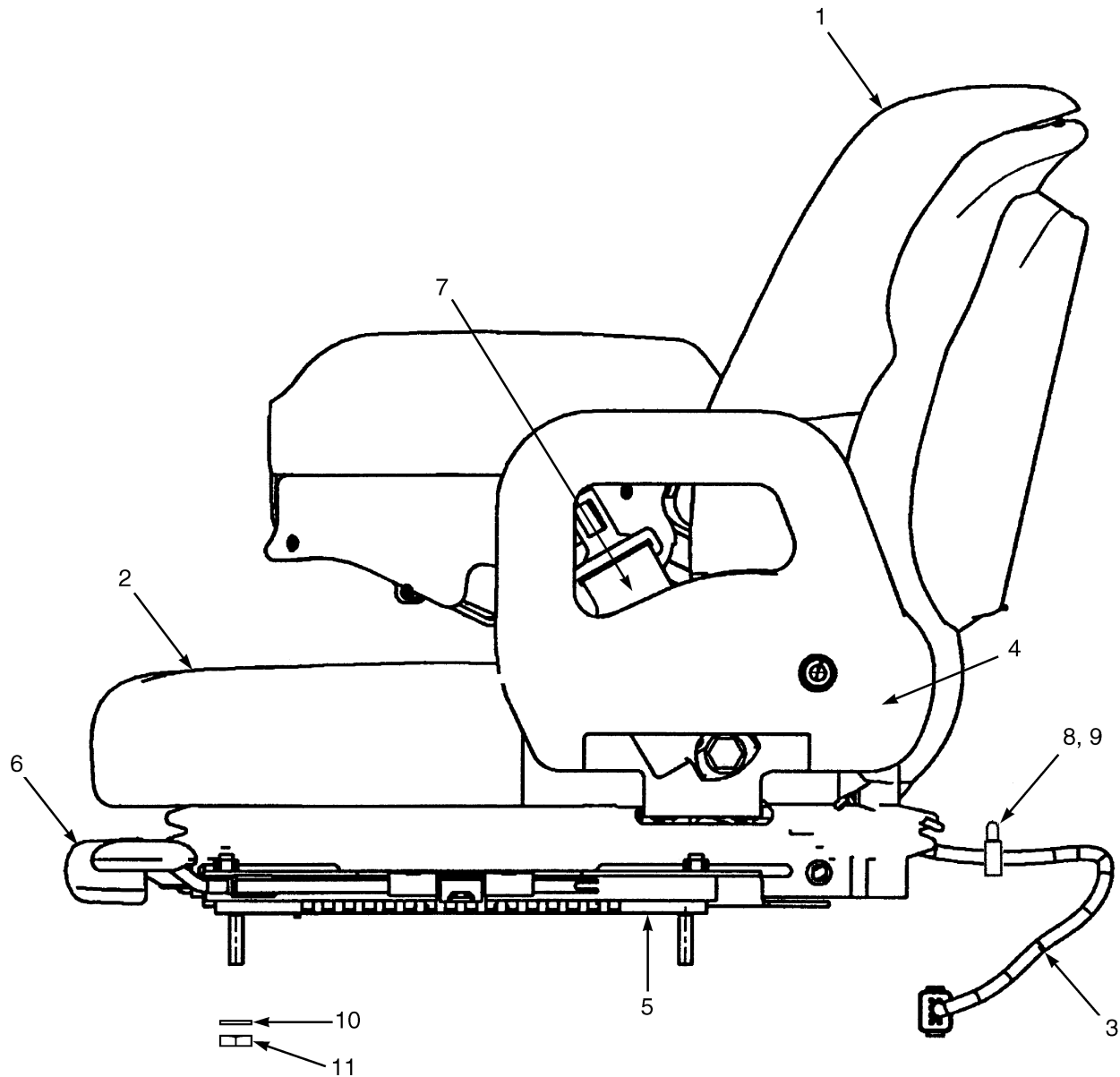
BP120193

FULL SUSPENSION SEAT**WITH AND WITHOUT ELECTRONIC CONTROLS – WITH LIMITED BACK TILT (S/N L177B08482D →)****KEY:****A: With Hip Restraints****B: With Electronic Controls**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	2086298	Seat-Full Suspension (Vinyl)	1	..
	2086299	Seat-Full Suspension (Cloth)	1	..
	2086300	Seat-Full Suspension (Vinyl)	..	1
	2086301	Seat-Full Suspension (Cloth)	..	1
1	1470153	Seat Cushion (Back Cushion, Cloth)	1	..
1	1470152	Seat Cushion (Back Cushion, Vinyl)	..	1
2	1566453	Seat Cushion	1	..
2	1563207	Seat Cushion	..	1
2	1563208	Sensor (Operator Presence)	1	1
3	1591652	Wire Harness	1	..
3	1654891	Wire Harness	..	1
4	1470157	Hip Restraint (LH)	1	1
4	1470156	Hip Restraint (RH)	1	..
5	1470161	Kit-Seat Rail	1	1
6	1470163	Kit-Weight Adjuster	1	1
6	1584631	Knob	1	1
6	1600126	Handle	1	1
7	1598504	Kit-Seat Belt	1	1
8	191941	Nut	4	4
	a 1467529	Kit-Spring	1	1
	a 1684395	Kit-Swivel Seat Full Susp (Alternate Part)	1	1
	a 1627639	Weight Adjust Rack	1	1
	a 1467523	Kit-Boot	1	1
	a 1467527	Kit-Weight Adjuster	1	1
	a 1467526	Kit-Shaft and Bearing	1	1
	a 1467524	Kit-Bearing	1	1
	a 1467525	Kit-Bumper	1	1
	a 1470155	Information Case (Kit)	1	..

FOOTNOTES:**a** Not Illustrated

FULL SUSPENSION SWIVEL SEAT (FIGURE 1-28) WITH AND WITHOUT ELECTRONIC CONTROLS (→ 7/2006)



HP120853

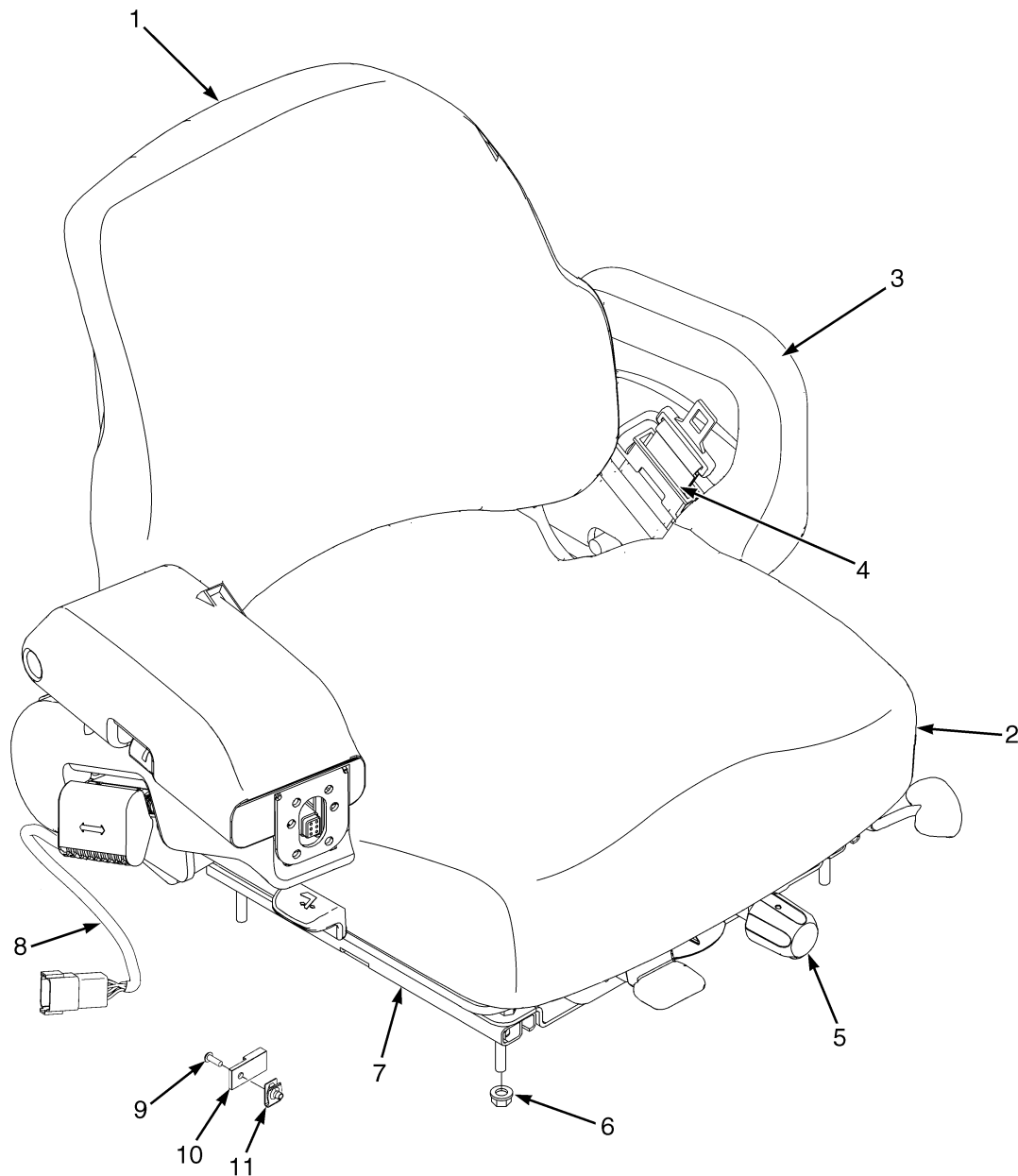
FULL SUSPENSION SWIVEL SEAT WITH AND WITHOUT ELECTRONIC CONTROLS (→ 7/2006)

KEY:

- A:** Full Suspension (Vinyl)
B: Full Suspension (Cloth)
C: Full Suspension (Vinyl with Electronic Control Arm)
D: Full Suspension (Cloth with Electronic Control Arm)

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1593437	Seat-Full Suspension (Vinyl)	1	..	..	..
	1593438	Seat-Full Suspension (Cloth)	..	1	..	..
	1593439	Seat-Full Suspension (Vinyl)	..	..	1	..
	1593440	Seat-Full Suspension (Cloth)	..	..	..	1
1	1470152	Seat Cushion (Back Cushion, Vinyl)	1	..	1	..
1	1470153	Seat Cushion (Back Cushion, Cloth)	..	1	..	1
2	1563207	Seat Cushion (Vinyl)	1	..	1	..
2	1566453	Seat Cushion (Cloth)	..	1	..	1
3	2075428	Wire Harness	..	..	1	1
3	1591652	Wire Harness	1	1	..	..
3	1563208	Sensor (Operator Presence)	1	1	1	1 1
4	1470157	Hip Restraint (LH)	1	1	1	1
5	1470161	Kit-Seat Rail	1	1	1	1
6	1470163	Kit-Weight Adjuster	1	1	1	1
6	1584631	Knob	1	1	1	1
6	1600126	Handle	1	1	1	1
7	1598504	Kit-Seat Belt	1	1	1	1
8	1537551	Nut	1	1	1	1
9	296149	Capscrew	1	1	1	1
10	320158	Washer	4	4	4	4
11	145639	Locknut	4	4	4	4
	b 1470156	Hip Restraint (RH)	1	1	..	..
	b 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	1	1	1
	b 1563210	Cap (Electronic Control Arm)	..	..	1	1
	b 1563211	Knob (Electronic Control Arm)	..	..	1	1
	a 1546689	Lever (Swivel Release)	1	1	1	1
	a 1467529	Kit-Spring	1	1	1	1
	a 1627639	Weight Adjust Rack	1	1	1	1
	a 1467525	Kit-Bumper	1	1	1	1
	a 1467523	Kit-Boot	1	1	1	1
	a 1467526	Kit-Shaft and Bearing	1	1	1	1
	a 1467524	Kit-Bearing	1	1	1	1
	a 1467527	Kit-Weight Adjuster	1	1	1	1
	1470155	Information Case (Kit)	1	1	..	..

FOOTNOTES:**a** Not Illustrated**b** Not Illustrated, included with seat

**FULL SUSPENSION SWIVEL SEAT (FIGURE 1-29)
WITH AND WITHOUT ELECTRONIC CONTROLS (7/2006 →)**

BP120291

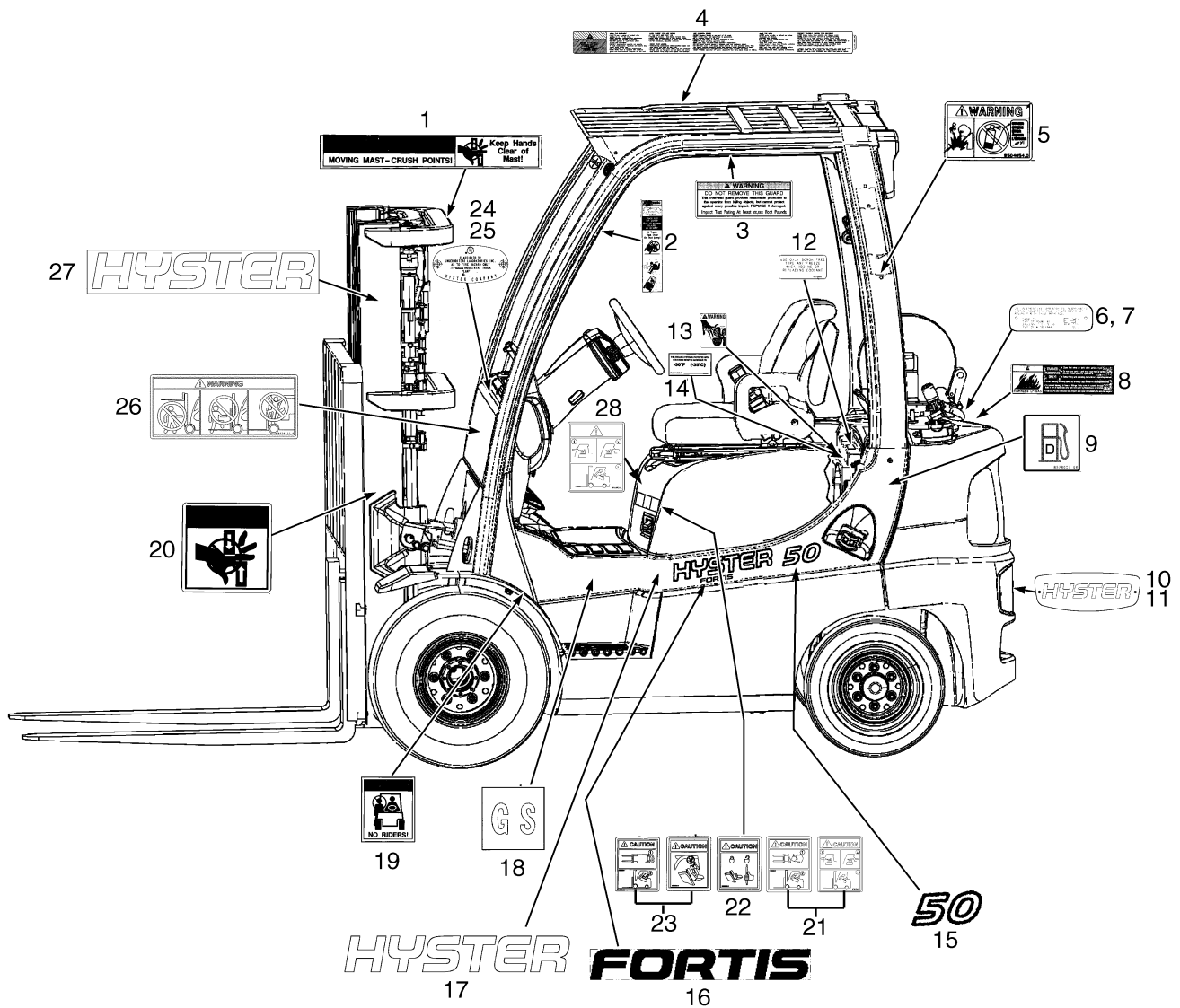
FULL SUSPENSION SWIVEL SEAT **WITH AND WITHOUT ELECTRONIC CONTROLS (7/2006 →)**

KEY:**A: With Hip Restraints****B: With Electronic Controls**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1593437	Seat-Full Suspension (Vinyl)	1	..
	1593438	Seat-Full Suspension (Cloth)	1	..
	2085188	Seat-Full Suspension (Vinyl)	..	1
	2085190	Seat Assy -Full Suspension (Cloth)	..	1
1	1470152	Seat Cushion (Back Cushion, Vinyl)	1	1
1	1470153	Seat Cushion (Back Cushion, Cloth)	1	1
2	1563207	Seat Cushion (Vinyl)	1	1
2	1566453	Seat Cushion (Cloth)	1	1
2	1563208	Sensor (Operator Presence)	1	1
3	1470157	Hip Restraint (LH)	1	1
3	1470156	Hip Restraint (RH)	1	..
4	1598504	Kit-Seat Belt	1	1
5	1470163	Kit-Weight Adjuster	1	..
5	1600126	Handle	1	1
5	1584631	Knob	1	1
6	191941	Nut	4	4
7	1470161	Kit-Seat Rail	1	1
8	1591652	Wire Harness	1	..
8	1654891	Wire Harness	..	1
9	296149	Capscrew	1	1
10	1500912	Clip	1	1
11	1537551	Nut	1	1
	a 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	..
	a 1546689	Lever (Swivel Release)	1	1
	a 1563211	Knob (Electronic Control Arm)	1	1
	a 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	1
	a 1467529	Kit-Spring	1	1
	a 1684395	Kit-Swivel Seat Full Susp (Alternate Part)	1	1
	a 1627639	Weight Adjust Rack	1	1
	a 1467523	Kit-Boot	1	1
	a 1467527	Kit-Weight Adjuster	1	1
	a 1467526	Kit-Shaft and Bearing	1	1
	a 1467524	Kit-Bearing	1	1
	a 1467525	Kit-Bumper	1	1
	a 1470155	Information Case (Kit)	1	..

FOOTNOTES:**a** Not Illustrated

LABELS (FIGURE 1-30) EXTERIOR



HP120855

**LABELS
EXTERIOR**

ITEM	PART NO.	DESCRIPTION	QTY
1	1330919	Label (Mast Warning)	1
2	1330917	Label (Operator Restraint)	2
3	a	Label (Impact Rating)	1
4	2073197	Label (Operator Warning)	1
5	b 2034459	Label (Ether Warning)	1
6	1501258	Nameplate (LP Tank)	1
7	170658	Rivet	4
8	1354171	Label (Flammable LPG)	1
9	2074255	Label (Unleaded Fuel Only)	1
9	2074256	Label (Diesel Fuel Only)	1
10	e 1583609	Plate (Hyster Logo)	1
10	f 1677428	Label (Hyster Logo)	1
11	e 1566951	Fastener	2
12	1375676	Label (Boron-Free Antifreeze)	1
13	1345939	Label (Fan Warning)	2
14	1354165	Label (Antifreeze)	2
15	1586444	Label (Model 40)	2
15	1586447	Label (Model 50)	2
15	1586448	Label (Model 60)	2
15	1586449	Label (Model 70)	2
16	1586439	Label (Fortis)	2
17	1586440	Label (Hyster)	2
18	154065	Label (Type GS)	2
18	154066	Label (Type LPS)	2
18	154067	Label (Type DS)	2
19	1330920	Label (No Riders)	2
20	1335129	Label (Pinch Point)	2
21	d 2075615	Label (Hood Opening)	1
21	c 2076169	Label (Swivel Seat)	1
22	2075418	Label (Locking Gas Spring)	1
23	2074741	Label (Joystick Warning)	1
23	2075418	Label (Locking Gas Spring)	1
24	a	Inspection Plate	1
25	170658	Rivet	2
26	2075656	Label (Mast Warning)	2
27	1562353	Label (Hyster)	2
28	2082679	Label (Electronic Arm Caution)	1
	2109698	Label (Hydraulic Fluid Warning) (Not Illustrated)	1

FOOTNOTES:

- a** Contact Your Local Hyster Dealer
b Diesel Only
c For Vehicles With Swivel Seat Only

- d** LPG Only
e → S/N L177V01522F
f S/N L177V01523F →

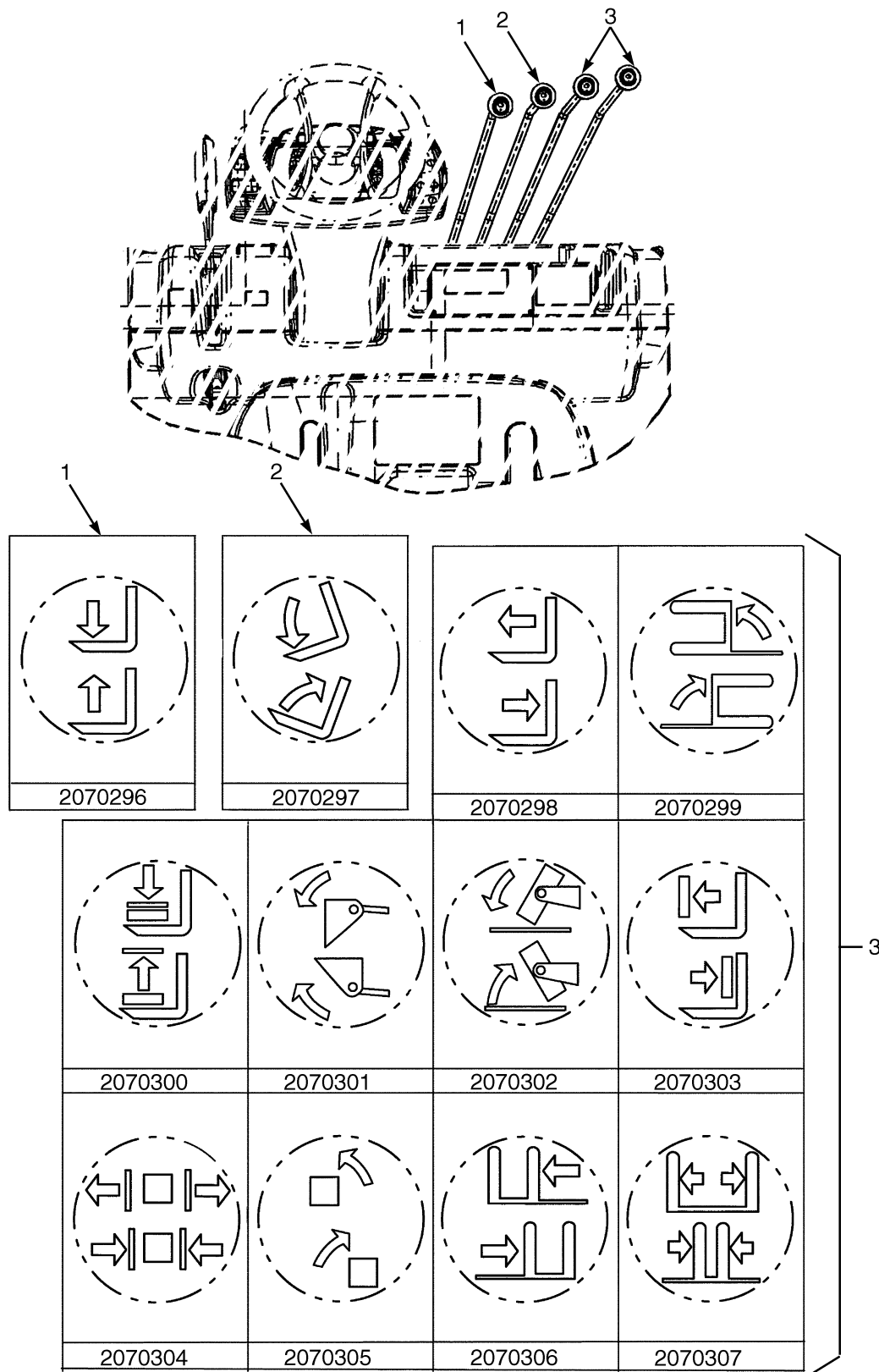
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**LABELS
INTERIOR**

ITEM	PART NO.	DESCRIPTION	QTY
1	b	Nameplate	1
1	170658	Rivet	4
2	1574147	Nameplate (Incomplete Truck Nameplate)	1
3	389688	Nameplate (Plastic Plate)	1
4	1385102	Label (Drive Train Protection)	1
5	a 1589377	Label (Basic Powershift Transmission)	1
6	c 1589397	Label (DuraMatch Transmission)	1
7	1335137	Label (Nameplate Tag)	1
8	1534660	Label (Patents and Trademarks)	1
8	1374549	Label (Radial Tire Warning)	1
10	2074210	Label (Park Brake Warning)	1
11	1324480	Label (Battery Switch)	1

FOOTNOTES:**a** Basic Transmission**c** Electric Transmission**b** Contact Your Local Hyster Dealer

CONTROL LEVER LABELS (FIGURE 1-32)



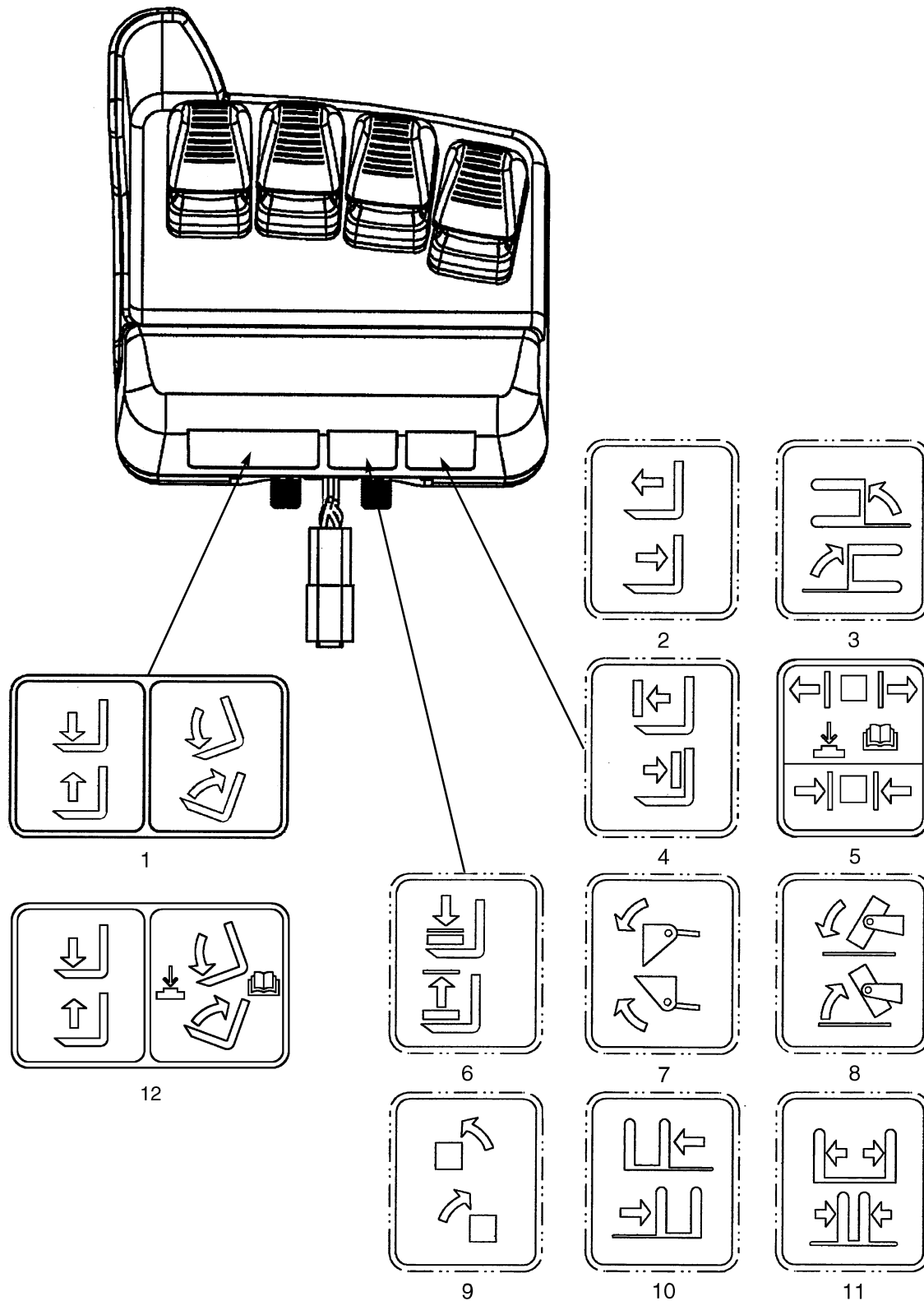
HP120829

CONTROL LEVER LABELS

ITEM	PART NO.	DESCRIPTION	QTY
1	b 2070296	Lens (Lift)	1
2	b 2070297	Lens (Tilt)	1
3	a 2070298	Lens (Reach)	1
3	a 2070299	Lens (Swing)	1
3	a 2070300	Lens (Load Stabilizer)	1
3	a 2070301	Lens (Scoop)	1
3	a 2070302	Lens (Upender)	1
3	a 2070303	Lens (Push/Pull)	1
3	a 2070304	Lens (Clamp)	1
3	a 2070305	Lens (Rotate)	1
3	a 2070306	Lens (Side-Shift)	1
3	a 2070307	Lens (Fork Spread)	1

FOOTNOTES:**a** Optional Function**b** Standard Function

ELECTRONIC LEVER LABELS (FIGURE 1-33) AUXILIARY SINGLE FUNCTION

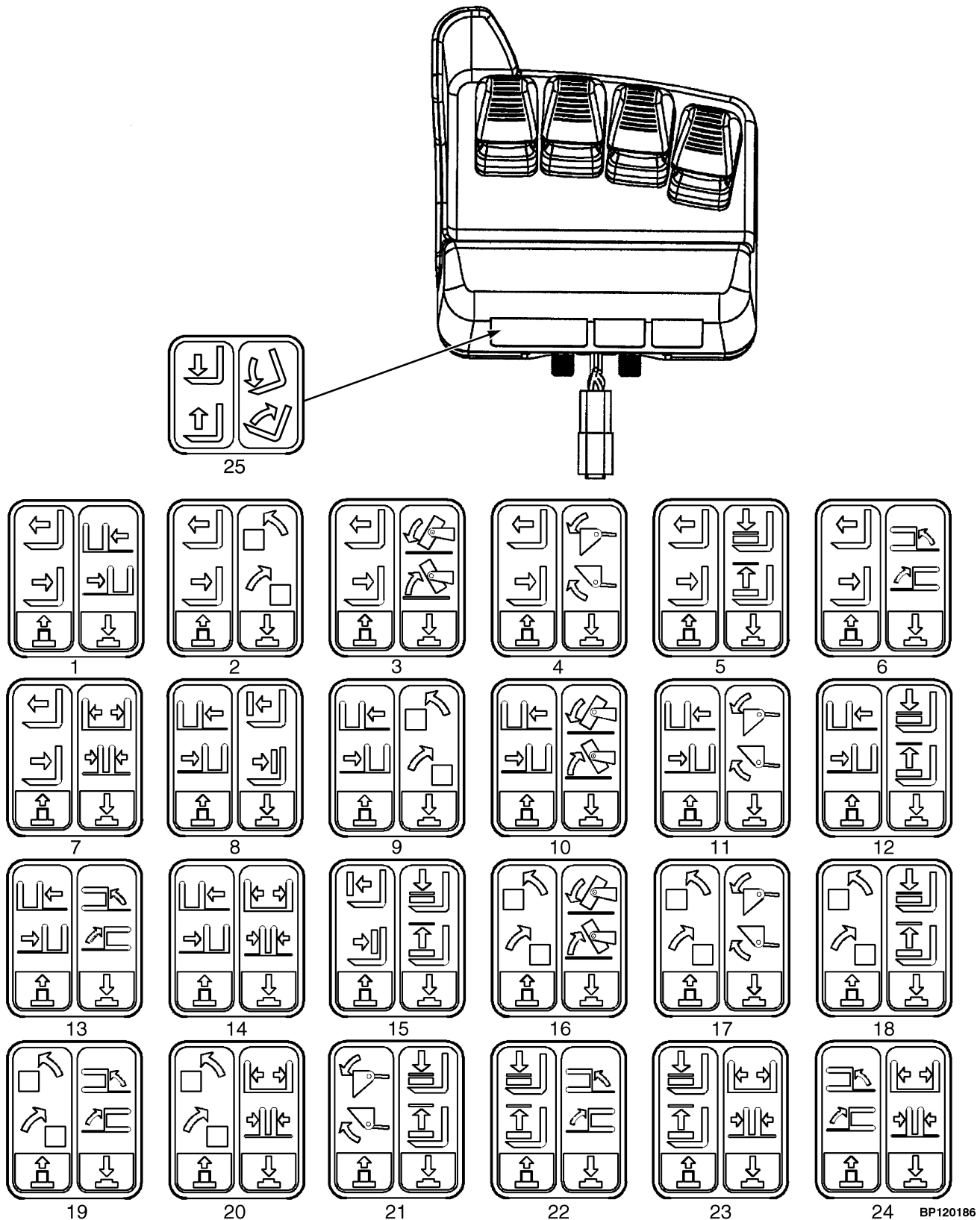


BP120199

**ELECTRONIC LEVER LABELS
AUXILIARY SINGLE FUNCTION**

ITEM	PART NO.	DESCRIPTION	QTY
1	1581055	Label (Hoist and Tilt)	1
2	2073115	Label (Reach)	1
3	2073114	Label (Swing)	1
4	2073118	Label (Push/Pull)	1
5	2085877	Label (Clamp)	1
6	2073116	Label (Load Stabilizer)	1
7	2073117	Label (Scoop)	1
8	2073119	Label (Upender)	1
9	2073121	Label (Rotate)	1
10	2073122	Label (Side-Shift)	1
11	2073123	Label (Fork Spread)	1
12	2085875	Label (Hoist and Tilt with Return to Set Tilt)	1

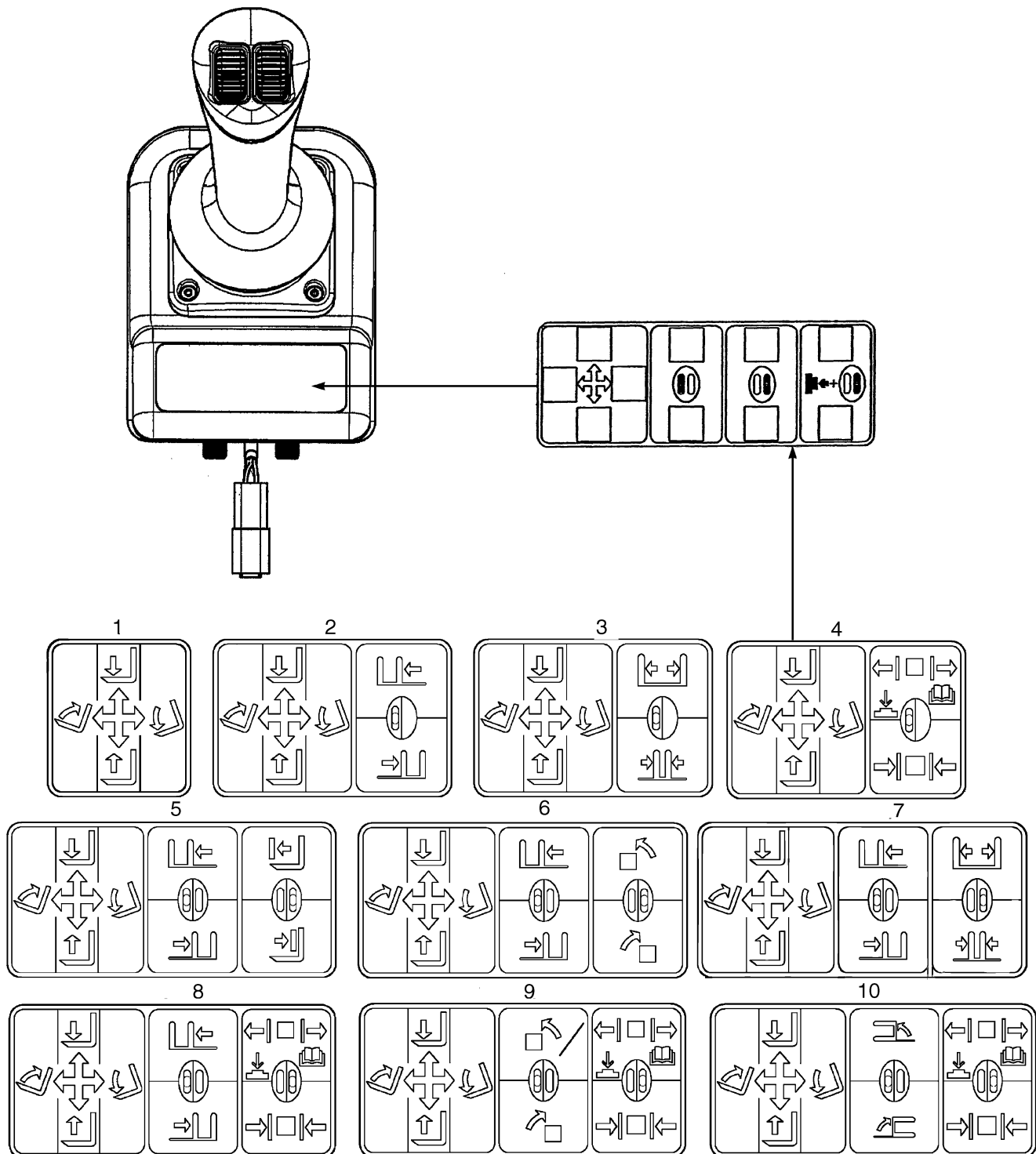
ELECTRONIC LEVER LABELS (FIGURE 1-34) AUXILIARY DUAL FUNCTION



**ELECTRONIC LEVER LABELS
AUXILIARY DUAL FUNCTION**

ITEM	PART NO.	DESCRIPTION	QTY
1	2081229	Label (Reach/Side-Shift)	1
2	2081230	Label (Reach/Rotate)	1
3	2081231	Label (Reach/Upender)	1
4	2081232	Label (Reach/Scoop)	1
5	2081233	Label (Reach/Load Stabilizer)	1
6	2081234	Label (Reach/Swing)	1
7	2081235	Label (Reach/Fork Spread)	1
8	2081236	Label (Side-Shift/Push or Pull)	1
9	2081237	Label (Side-Shift/Rotate)	1
10	2081238	Label (Side-Shift/Upender)	1
11	2081239	Label (Side-Shift/Scoop)	1
12	2081240	Label (Side-Shift/Load)	1
13	2081241	Label (Side-Shift/Swing)	1
14	2081242	Label (Side-Shift/Fork Spread)	1
15	2081243	Label (Push or Pull/Load)	1
16	2081244	Label (Rotate/Upender)	1
17	2081245	Label (Rotate/Scoop)	1
18	2081246	Label (Rotate/Load Stabilizer)	1
19	2081247	Label (Rotate/Swing)	1
20	2081248	Label (Rotate/Fork Spreader)	1
21	2081249	Label (Scoop/Load Stabilizer)	1
22	2081250	Label (Load Stabilizer/Swing)	1
23	2081251	Label (Load Stabilizer/Fork Spread)	1
24	2081252	Label (Swing/Fork Spread)	1
25	1581055	Label (Hoist and Tilt)	1

JOYSTICK LABELS (FIGURE 1-35)

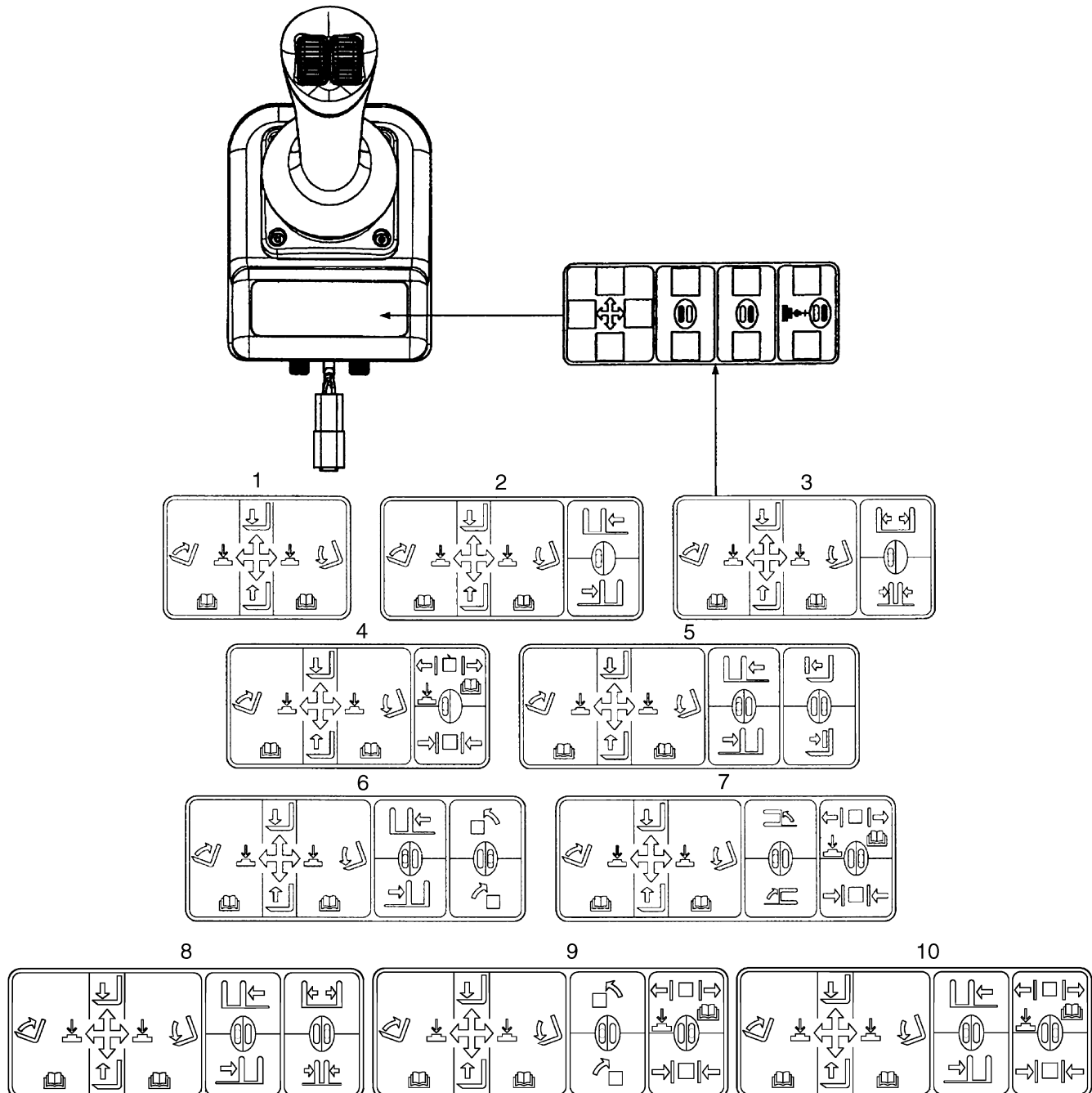


BP120197

JOYSTICK LABELS

ITEM	PART NO.	DESCRIPTION	QTY
1	2086556	Label (Hoist and Tilt)	1
2	2086557	Label (Hoist and Tilt, Side-Shift)	1
3	2086558	Label (Hoist and Tilt, Fork Spread)	1
4	2085878	Label (Hoist and Tilt, Clamp)	1
5	2086560	Label (Hoist and Tilt, Side-Shift, Push/Pull)	1
6	2086561	Label (Hoist and Tilt, Side-Shift, Rotate)	1
7	2086559	Label (Hoist and Tilt, Side-Shift, Fork Spread)	1
8	2085879	Label (Hoist and Tilt, Side-Shift, Clamp)	1
9	2085880	Label (Hoist and Tilt, Rotate, Clamp)	1
10	2085881	Label (Hoist and Tilt, Swing, Clamp)	1

JOYSTICK LABELS (FIGURE 1-36) WITH RETURN TO SET TILT

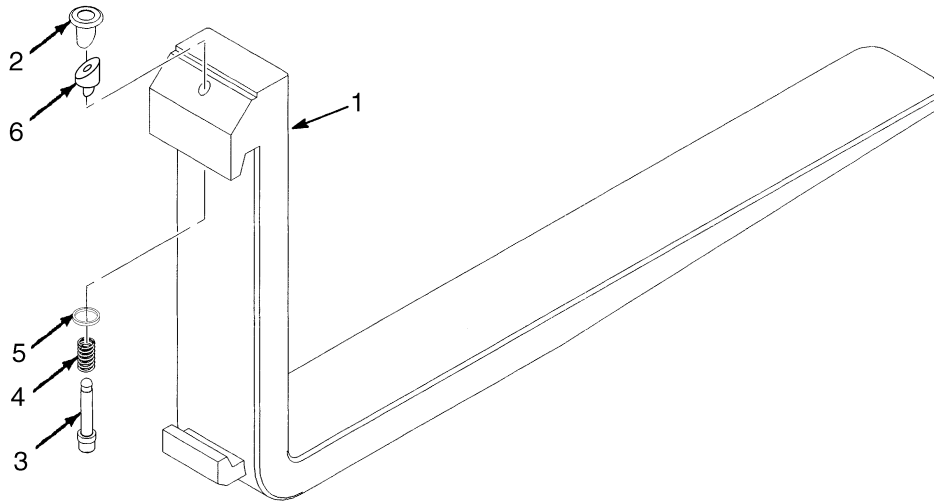


BP120198

**JOYSTICK LABELS
WITH RETURN TO SET TILT**

ITEM	PART NO.	DESCRIPTION	QTY
1	2085882	Label (Hoist and Tilt)	1
2	2085885	Label (Hoist and Tilt, Side-Shift)	1
3	2085886	Label (Hoist and Tilt, Fork Spread)	1
4	2085889	Label (Hoist and Tilt, Clamp)	1
5	2085888	Label (Hoist and Tilt, Side-Shift, Push/Pull)	1
6	2085891	Label (Hoist and Tilt, Side-Shift, Rotate)	1
7	2085893	Label (Hoist and Tilt, Swing, Clamp)	1
8	2085887	Label (Hoist and Tilt, Side-Shift, Fork Spread)	1
9	2085892	Label (Hoist and Tilt, Rotate, Clamp)	1
10	2085890	Label (Hoist and Tilt, Side-Shift, Clamp)	1

FORKS (FIGURE 1-37)



BP290003

KEY:

- A:** Standard Class II (100 mm x 40 mm) (4 in. x 1.5 in.)
B: Polished Full Bottom Taper, Class II (125 mm x 40 mm) (5 in. x 1.5 in.)
C: Standard Class III (125 mm x 50 mm) (5 in. x 2 in.)
D: Polished Full Bottom Taper, Class III (180 mm x 45 mm) (7 in. x 1.8 in.)

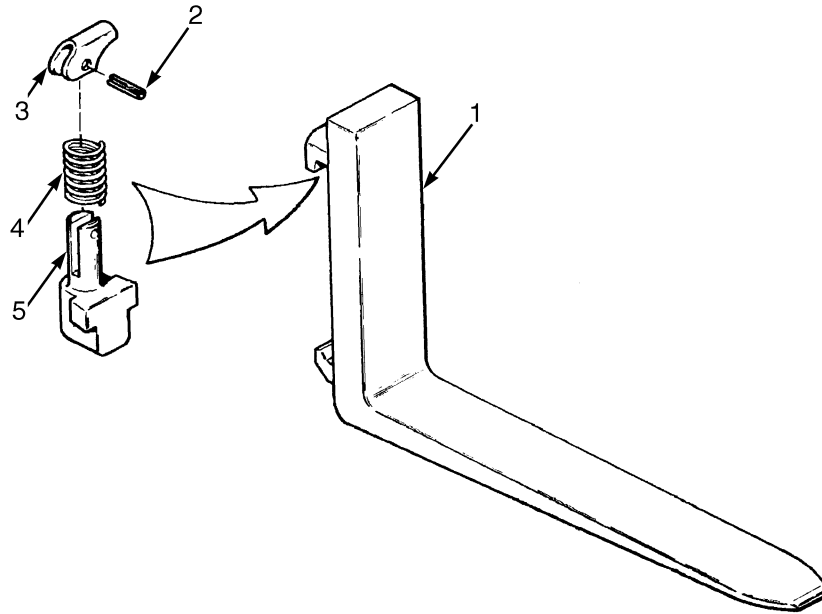
ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
1	384211	Fork (36 in.)	2	..	..	..
1	1308093	Fork (40 in.)	2	..	..	..
1	384213	Fork (42 in.)	2	..	..	..
1	384214	Fork (48 in.)	2	..	..	..
1	384215	Fork (54 in.)	2	..	..	..
1	384216	Fork (60 in.)	2	..	..	..
1	1338087	Fork (36 in.)	..	2	..	..
1	1338088	Fork (42 in.)	..	2	..	..
1	1338089	Fork (48 in.)	..	2	..	..
1	367419	Fork (36 in.)	..	..	2	..
1	367420	Fork (42 in.)	..	..	2	..
1	367421	Fork (48 in.)	..	..	2	..
1	367422	Fork (54 in.)	..	..	2	..
1	367423	Fork (60 in.)	..	..	2	..
1	367424	Fork (72 in.)	..	..	2	..
1	1338097	Fork (42 in.)	..	..	..	2
1	1338098	Fork (47.5 in.)	..	..	..	2
1	1332745	Fork (54 in.)	..	..	..	2
2	1523732	Knob	1	1	1	1
3	1523733	Pin	1	1	..	..
3	1523737	Pin	..	..	1	1
4	1500782	Spring	1	1	..	..

KEY:**A: Standard Class II (100 mm x 40 mm) (4 in. x 1.5 in.)****B: Polished Full Bottom Taper, Class II (125 mm x 40 mm) (5 in. x 1.5 in.)****C: Standard Class III (125 mm x 50 mm) (5 in. x 2 in.)****D: Polished Full Bottom Taper, Class III (180 mm x 45 mm) (7 in. x 1.8 in.)**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
4	1500784	Spring	..	..	1	1
5	a 1477166	Washer	1	1	1	1
6	a 1477167	Wedge Band	1	1	..	..
6	1477237	Wedge Band	..	..	1	1
7	1523734	Pin (Not Illustrated)	1	1	1	1
	1523735	Kit-Latch	2	2	..	..
	1523739	Kit-Latch	..	..	2	2

FOOTNOTES:**a** Refer to Latch Kit Installation Instructions

FORKS (FIGURE 1-38) OPTIONAL



HP120793

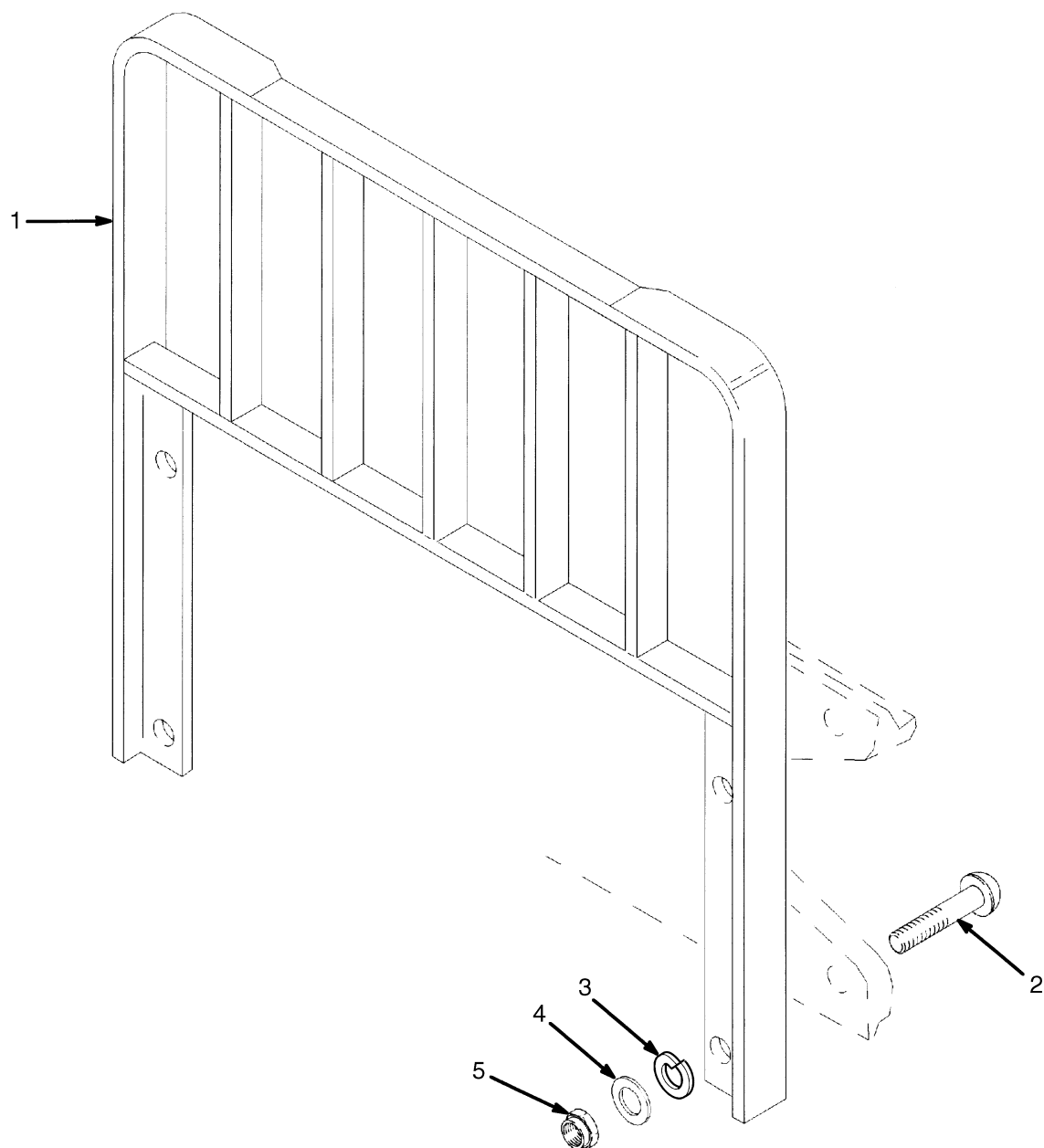
KEY:

- A: 100 mm x 40 mm (4 in. x 1.5 in.) Standard Taper (H40-50FT)
B: 125 mm x 40 mm (5 in. x 1.5 in.) Polished, Full Bottom Taper (H40-50FT)
C: 125 mm x 50 mm (5 in. x 2 in.) Standard Taper (H60-70FT)
D: 180 mm x 45 mm (7 in. x 1.75 in.) Polished, Full Bottom Taper (H60-70FT)

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
1	1378786	Fork (36 in.)	2	..	..	..
1	1378788	Fork (42 in.)	2	..	..	..
1	1378789	Fork (48 in.)	2	..	..	..
1	1378790	Fork (54 in.)	2	..	..	..
1	1378807	Fork (36 in.)	..	2	..	..
1	1378808	Fork (42 in.)	..	2	..	..
1	1378809	Fork (48 in.)	..	2	..	..
1	1378732	Fork (36 in.)	..	..	2	..
1	1378733	Fork (42 in.)	..	..	2	..
1	1378734	Fork (48 in.)	..	..	2	..
1	1378735	Fork (54 in.)	..	..	2	..
1	1378736	Fork (60 in.)	..	..	2	..
1	1378737	Fork (72 in.)	..	..	2	..
1	1381816	Fork (42 in.)	..	..	..	2
1	1381817	Fork (47.5 in.)	..	..	..	2
1	1550764	Fork (54 in.)	..	..	..	2
2	302450	Roll Pin	1	1	1	1
3	1378763	Latch	1	1	1	1
4	1378762	Spring	1	1	1	1
5	1378760	Pin	1	1	..	..
5	1378761	Fork (Pin)	..	..	1	1
	1378765	Kit-Latch (Class II)	1	1	..	..

KEY:**A: 100 mm x 40 mm (4 in. x 1.5 in.) Standard Taper (H40-50FT)****B: 125 mm x 40 mm (5 in. x 1.5 in.) Polished, Full Bottom Taper (H40-50FT)****C: 125 mm x 50 mm (5 in. x 2 in.) Standard Taper (H60-70FT)****D: 180 mm x 45 mm (7 in. x 1.75 in.) Polished, Full Bottom Taper (H60-70FT)**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1378766	Kit-Latch (Class III And IV)	..	..	1	1

LOAD BACKREST EXTENSION (FIGURE 1-39)

HP120836

KEY:**A: For Use With Standard Carriage Only****B: For Use With Integral Side-Shift Carriage Only**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1663467	Load Backrest (1219 mm) (Class III)	1	1
1	1663460	Load Backrest (1067 mm) (Class III)	1	1
1	1663424	Load Backrest (54 in.) (1370 mm) (Class III)	1	1
1	1663443	Load Backrest (1067 mm) (Class II)	1	..
1	1663450	Load Backrest (1219 mm) (Class II)	1	..
1	1663443	Load Backrest (1067 mm) (Class II)	..	1
1	1663450	Load Backrest (1219 mm) (Class II)	..	1
2	2034347	Capscrew	..	4
2	a 1343990	Capscrew	4	4
2	b 1354923	Capscrew	4	4
3	296423	Washer	4	4
4	221771	Washer	4	4
5	300937	Nut	4	4

FOOTNOTES:**a** For Use On 42" Class III, 42" Class II Standard Carriage, And 48" Class II Standard Carriage Only**b** For Use On 48" Class III Only

[illegible]

2

ENGINE ASSEMBLY

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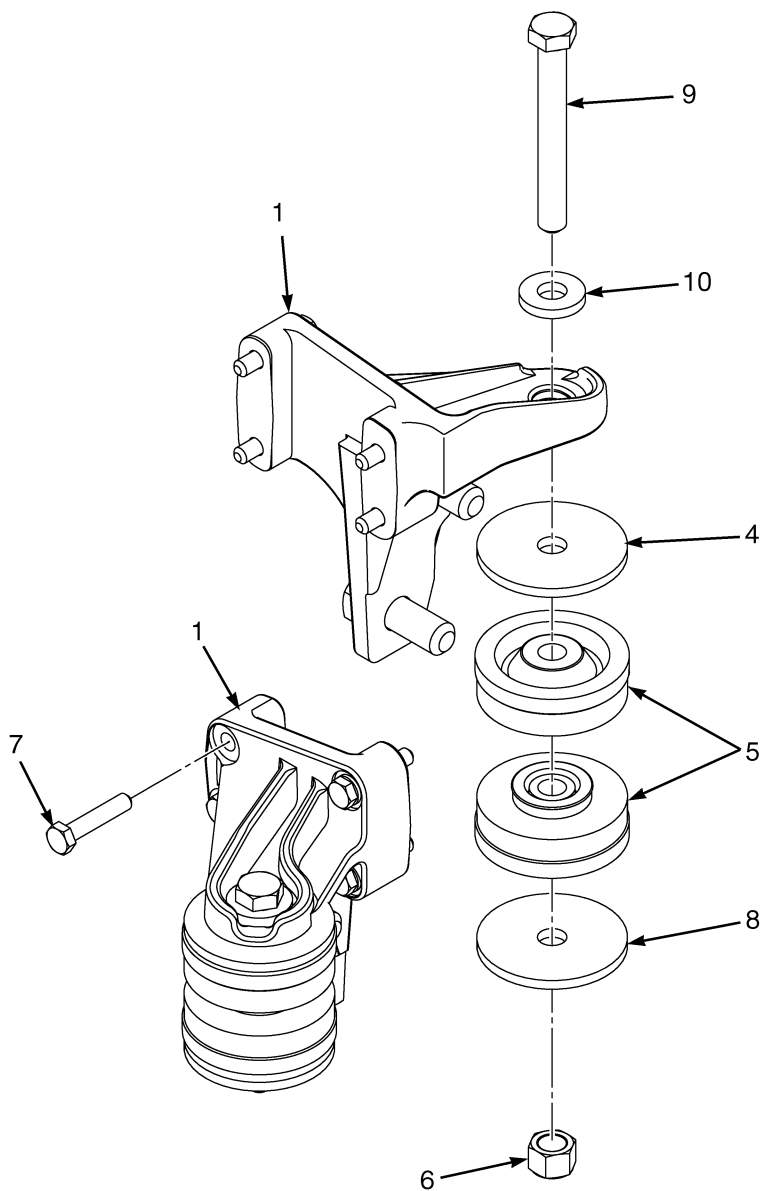
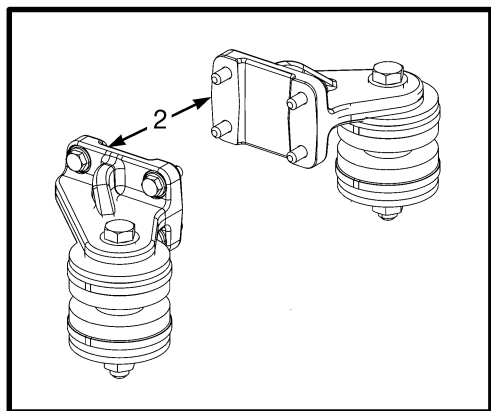
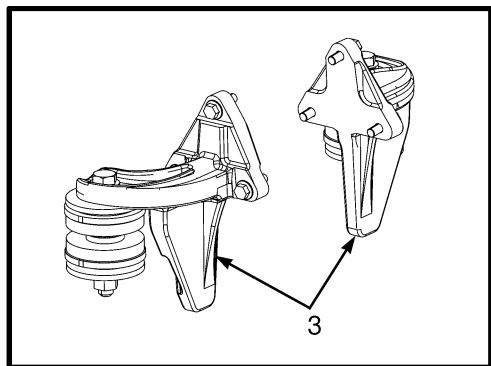
**SECTION 2
ENGINE ASSEMBLY**

DESCRIPTION	PAGE
MAP SENSOR	
MAZDA 2.0L AND 2.2L, LPG - 2007 EMISSION COMPLIANT ENGINES (S/N L177B15512E → 2.0L LPG) (S/N L177B16207E → (2.2L LPG))	2-74
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MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG)) (S/N L177B15512E → 2.0 GAS AND LPG)	2-56
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → 2.0 GAS AND LPG) (S/N L177B16207E → (2.2L LPG))	2-88
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NOTES

[illegible]

ENGINE MOUNTING (FIGURE 2-1)

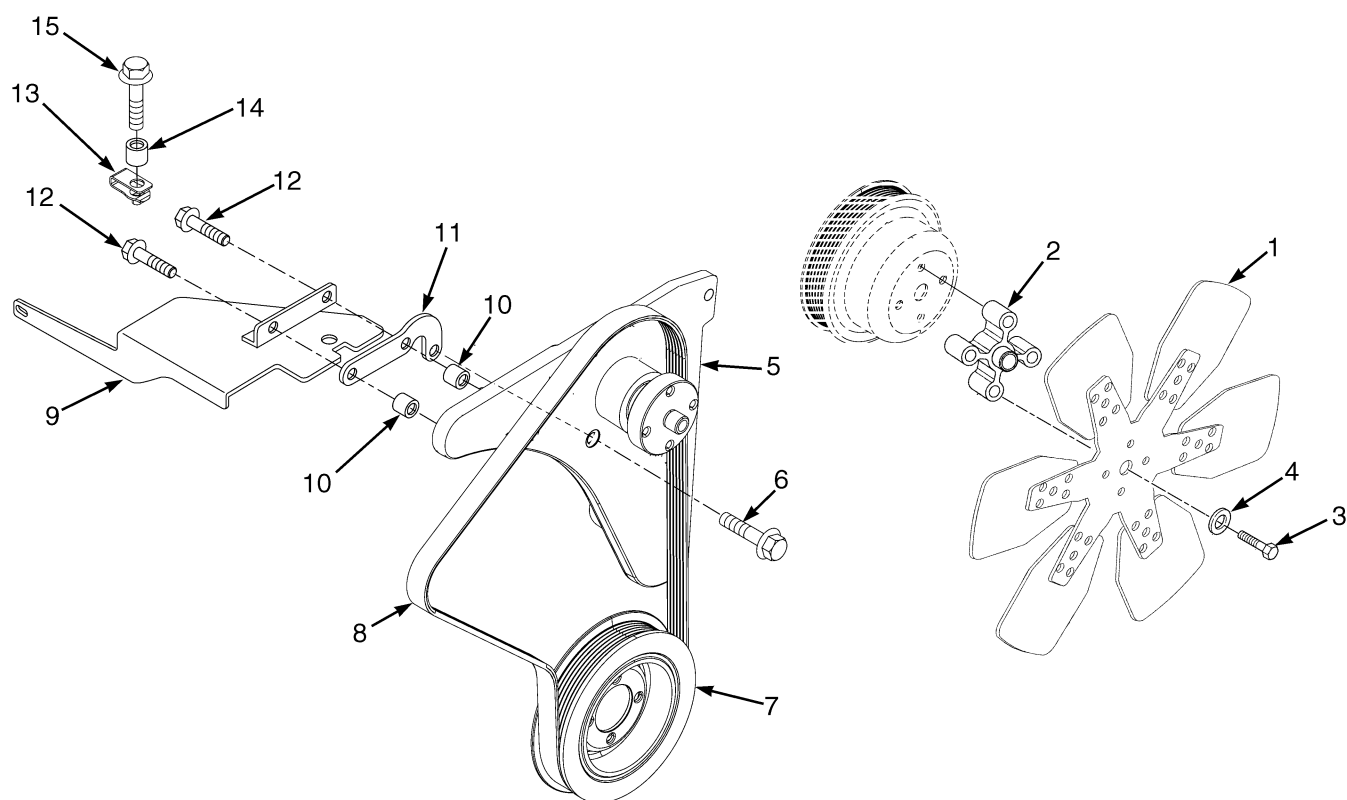


HP091236

ENGINE MOUNTING**KEY:****A: Mazda Engine****B: GM Engine****C: Yanmar Diesel Engine**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	1557478	Mount (RH)	1	..	..
1	1557479	Mount (LH)	1	..	..
2	1557767	Mount	..	..	2
3	1558184	Mount (LH)	..	1	..
3	1558186	Mount (RH)	..	1	..
4	1557737	Washer	4	4	4
5	2069951	Isolator	4	4	4
6	1565453	Nut (Flange)	2	2	4
7	293698	Capscrew	8	6	8
8	1504075	Washer	2	2	4
9	1565150	Bolt (Flange)	2	..	..
9	1565195	Capscrew	..	4	..
9	293630	Capscrew	..	..	4
10	296420	Washer	..	..	8

FAN ASSEMBLY (FIGURE 2-2)



BP090216

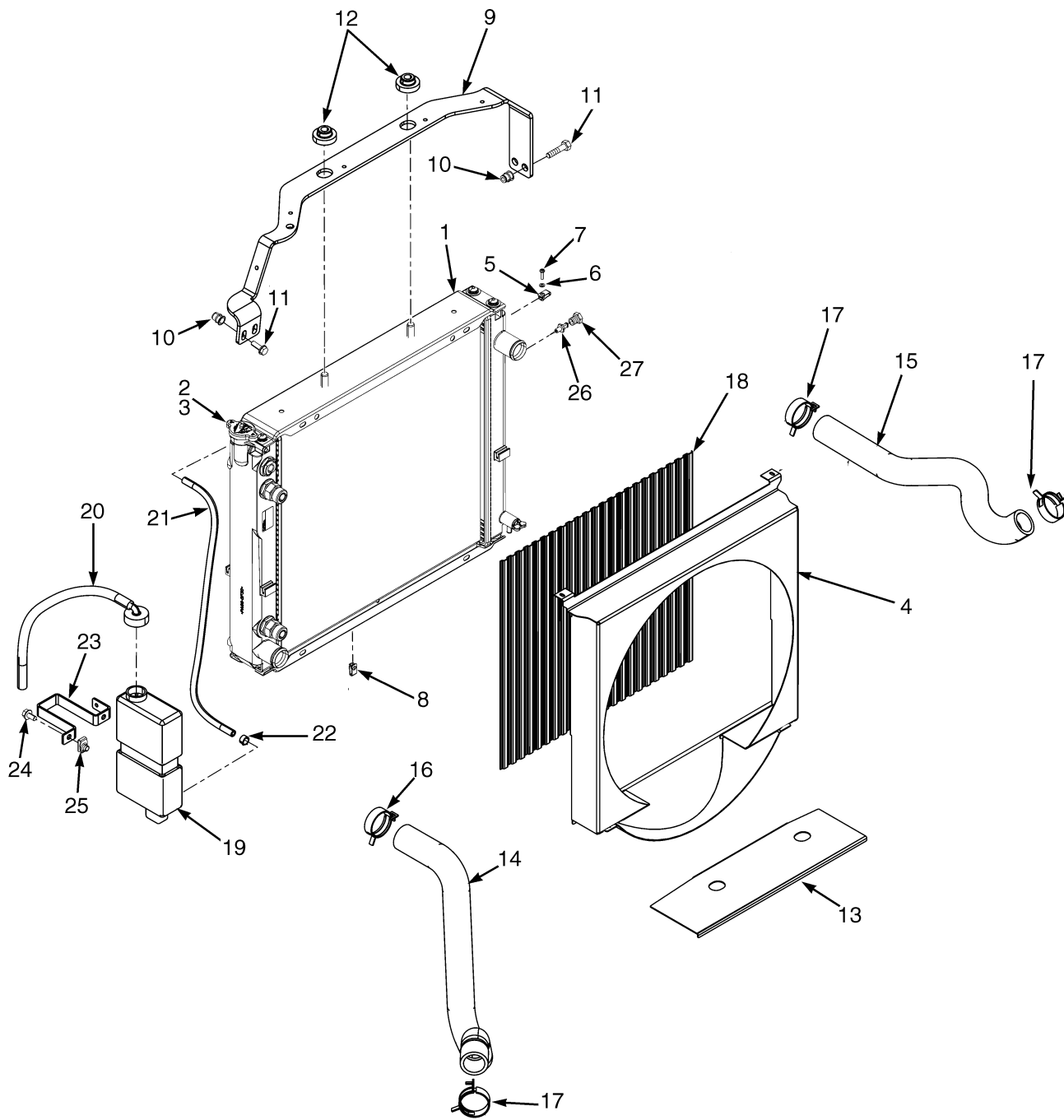
FAN ASSEMBLY**KEY:****A: Mazda Engines****B: GM Engines****C: Yanmar Diesel Engines**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	b 2081311	Fan (Pusher)	..	..	1
1	d 2085570	Fan (Pusher)	..	..	..
1	1375642	Fan	1	1	..
2	1528140	Spacer	1	..	..
2	c 1616049	Spacer	..	1	..
2	e 1539154	Spacer	..	1	1
3	293619	Capscrew	4	..	..
3	c 1566505	Capscrew	..	4	..
3	e 293623	Capscrew	..	4	4
4	296418	Washer	4	4	4
5	c 1618408	Fan Mount	..	1	..
5	e 1616288	Fan Mount	..	1	..
5	e 1542676	Bearing	..	1	..
5	e 1542677	Hub	..	1	..
6	1527880	Capscrew	..	1	..
7	1580793	Crankshaft Pulley	..	1	..
8	2070039	V-Belt (Micro V)	..	1	..
9	a 2084601	Bracket	..	1	..
10	c 2084600	Spacer	..	2	..
11	c 2084599	Bracket	..	1	..
12	1510116	Capscrew	..	2	..
13	a 1480237	Nut	..	1	..
14	a 2084616	Spacer	..	1	..
15	a 1510115	Capscrew	..	1	..
	1632261	Kit-Fan Drive	..	1	..

FOOTNOTES:**a** Gasoline Only**b** → S/N L177B06744D**c** → S/N L177B12346D**d** S/N L177B06745D →**e** S/N L177B12347D →

COOLING SYSTEM (FIGURE 2-3)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SERPENTINE RADIATOR — BASIC POWERSHIFT TRANSMISSION (→ S/N L177B14568E)



HP060039

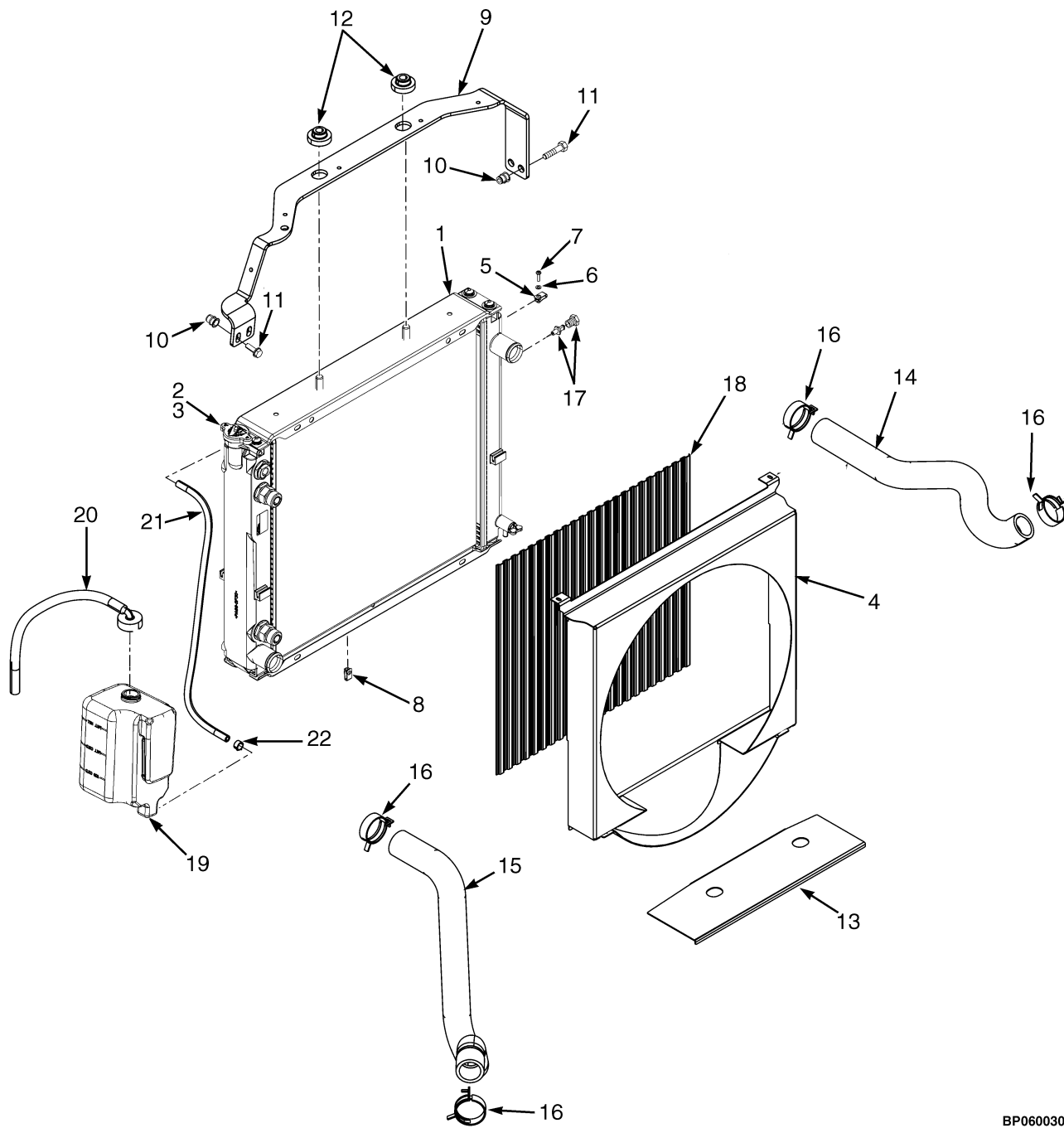
COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SERPENTINE RADIATOR – BASIC POWERSHIFT
TRANSMISSION (→ S/N L177B14568E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2054879	Radiator	1
2	1528495	Drain Plug	1
3	1352140	Radiator Cap	1
4	1593356	Shroud	1
5	1535257	Nut	2
6	320154	Washer	2
7	302023	Screw	2
8	1329271	Clip	2
9	1588508	Bracket (Radiator)	1
10	1530243	Insert	4
11	1583611	Capscrew	4
12	1529787	Isolator	4
13	1565691	Exhaust Shield	1
14	2069698	Radiator Hose (Lower)	1
15	a 2085255	Hose (Upper)	1
15	b 2085041	Radiator Hose (Upper)	1
16	1501999	Hose Clamp	1
17	1527982	Hose Clamp	3
18	1548497	Screen	1
19	1347026	Reservoir	1
20	345455	Outlet	1
20	336550	Bushing	1
20	345453	Outlet (Reservoir)	1
20	345454	Cap	1
20	339735	Hose	1
21	1567674	Hose	1
22	369815	Clamp	2
23	1531167	Bracket	1
24	1527879	Capscrew	2
25	1480237	Nut	2
26	1531404	Sensor (Low Coolant Level)	1
27	c 14385	Fitting	1

FOOTNOTES:**a** Gasoline Engines Only**c** Without Low Coolant Level Sensor**b** LPG Engines Only

COOLING SYSTEM (FIGURE 2-4)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SERPENTINE RADIATOR — BASIC POWERSHIFT TRANSMISSION (S/N L177B14569E →)



BP060030

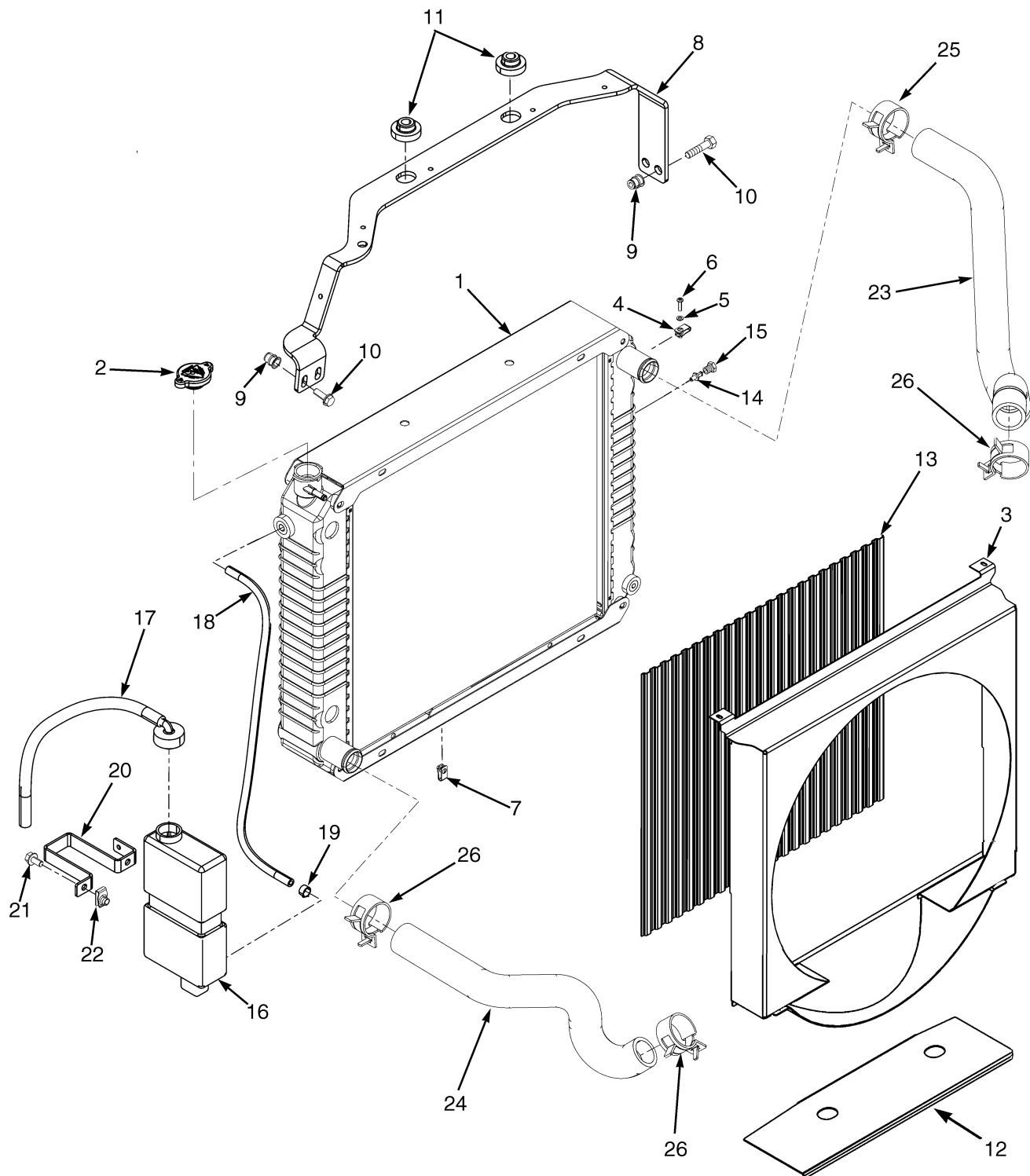
COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SERPENTINE RADIATOR – BASIC POWERSHIFT
TRANSMISSION (S/N L177B14569E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2054879	Radiator	1
2	1528495	Drain Plug	1
3	1352140	Radiator Cap	1
4	1593356	Shroud	1
5	1535257	Nut	2
6	320154	Washer	2
7	302023	Screw	2
8	1329271	Clip	2
9	1588508	Bracket (Radiator)	1
10	1530243	Insert	4
11	1583611	Capscrew	4
12	1529787	Isolator	4
13	1565691	Exhaust Shield	1
14	a 2085255	Hose (Upper)	1
14	b 2085041	Radiator Hose (Upper)	1
15	d 2069698	Radiator Hose (Lower)	1
15	e 2088675	Radiator Hose (Lower)	1
16	369804	Clamp	4
17	1531404	Sensor (Low Coolant Level)	1
17	c 14385	Fitting	1
17	246108	Sealant	AR
18	1548497	Screen	1
19	1633307	Reservoir	1
20	345455	Outlet	1
20	336550	Bushing	1
20	345453	Outlet (Reservoir)	1
20	345454	Cap	1
20	339735	Hose	1
21	1567674	Hose	1
22	369815	Clamp	2

FOOTNOTES:**a** Gasoline Engines Only**b** LPG Engines Only**c** Without Low Coolant Level Sensor**d** → S/N L177B15326E EXC. 05512, 06207**e** S/N L177B15327E →

COOLING SYSTEM (FIGURE 2-5)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — BASIC POWERSHIFT
TRANSMISSION (→ S/N L177B14568E)



HP060037

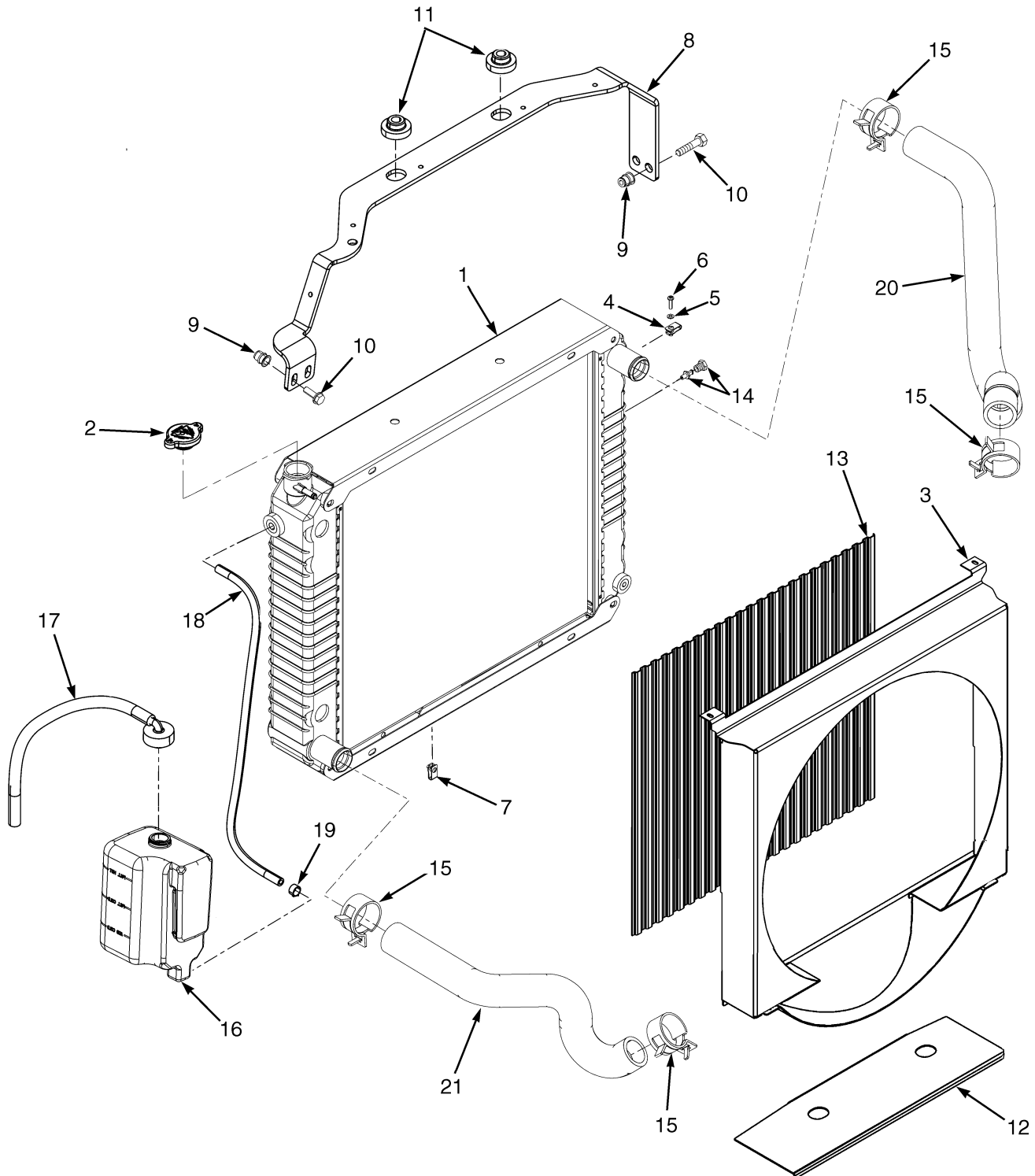
COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – BASIC POWERSHIFT
TRANSMISSION (→ S/N L177B14568E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2056870	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
2	1352140	Radiator Cap	1
3	1565391	Shroud	1
4	1535257	Nut	2
5	320154	Washer	2
6	302023	Screw	2
7	1329271	Clip	2
8	1588507	Bracket (Radiator)	1
9	1530243	Insert	4
10	1583611	Capscrew	4
11	1529787	Isolator	4
12	1565691	Exhaust Shield	1
13	1548497	Screen	1
14	1531404	Sensor (Low Coolant Level)	1
15	b 14385	Fitting	1
16	1347026	Reservoir	1
17	345455	Outlet	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	336550	Bushing	1
17	339735	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	1531167	Bracket	1
21	1527879	Capscrew	2
22	1480237	Nut	2
	a 2085255	Hose (Upper) (Gasoline)	1
23	2085041	Radiator Hose (Upper) (LPG)	1
24	2069698	Radiator Hose (Lower)	1
25	1501999	Hose Clamp	1
26	1527982	Hose Clamp	3

FOOTNOTES:**a** Not Illustrated**b** Without Low Coolant Level Sensor

COOLING SYSTEM (FIGURE 2-6)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — BASIC POWERSHIFT TRANSMISSION (S/N L177B14569E →)



BP060031

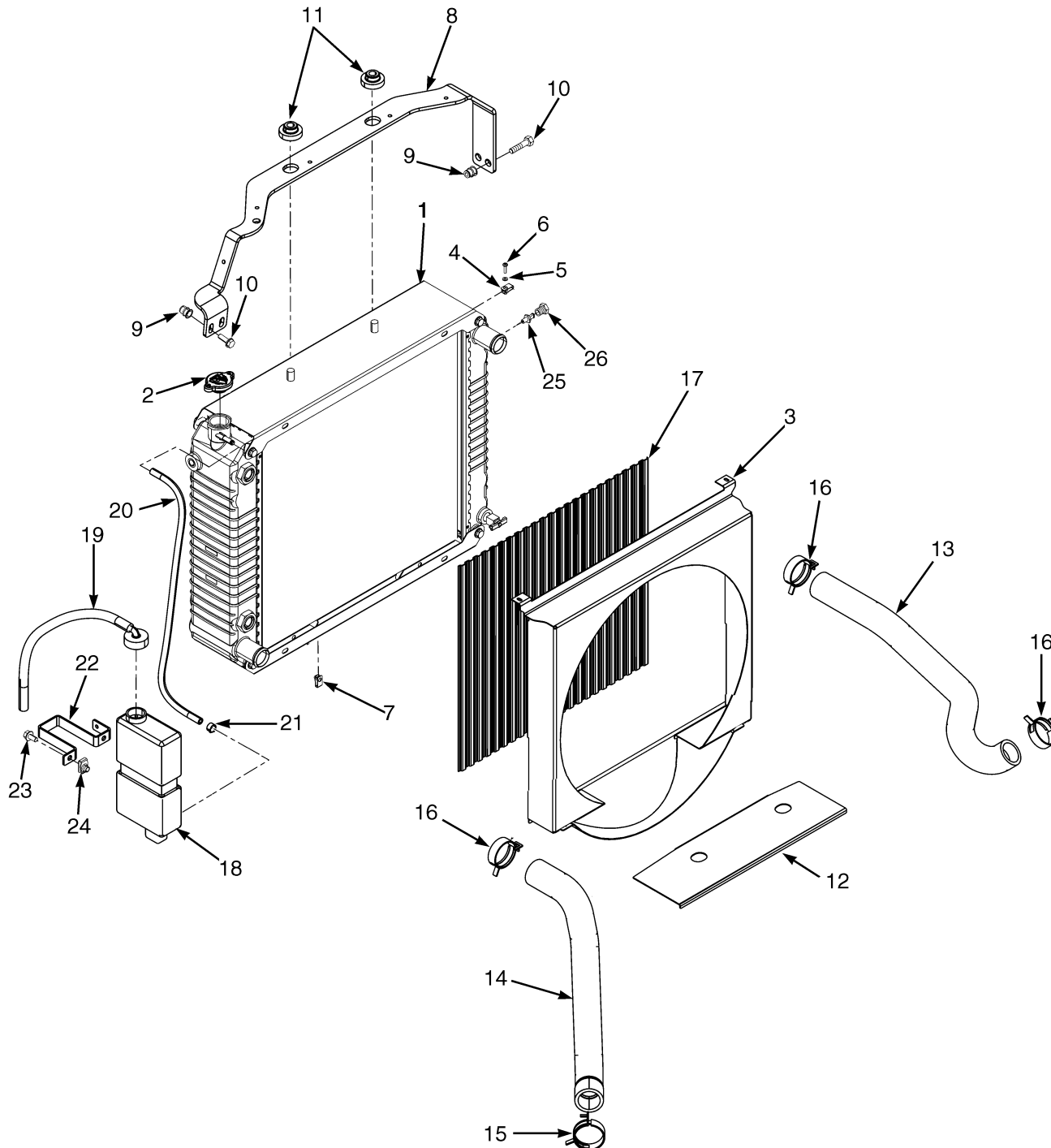
COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – BASIC POWERSHIFT
TRANSMISSION (S/N L177B14569E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2056870	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
2	1352140	Radiator Cap	1
3	1565391	Shroud	1
4	1535257	Nut	2
5	320154	Washer	2
6	302023	Screw	2
7	1329271	Clip	2
8	1588507	Bracket (Radiator)	1
9	1530243	Insert	4
10	1583611	Capscrew	4
11	1529787	Isolator	4
12	1565691	Exhaust Shield	1
13	1548497	Screen	1
14	1531404	Sensor (Low Coolant Level)	1
14	a 14385	Fitting	1
14	246108	Sealant	AR
15	369804	Clamp	4
16	1633307	Reservoir	1
17	345455	Outlet	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	336550	Bushing	1
17	339735	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	2085255	Hose (Upper) (Gasoline)	1
20	2085041	Radiator Hose (Upper) (LPG)	1
21	b 2069698	Radiator Hose (Lower)	1
21	c 2088675	Radiator Hose (Lower)	1

FOOTNOTES:**a** Without Low Coolant Level Sensor**c** S/N L177B15327E → INC. 05512, 06207**b** → S/N L177B15326E EXC. 05512, 06207

COOLING SYSTEM (FIGURE 2-7)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — ELECTRONIC CONTROL TRANSMISSION, WITH INTERNAL OIL COOLER (→ S/N L177B14568E)



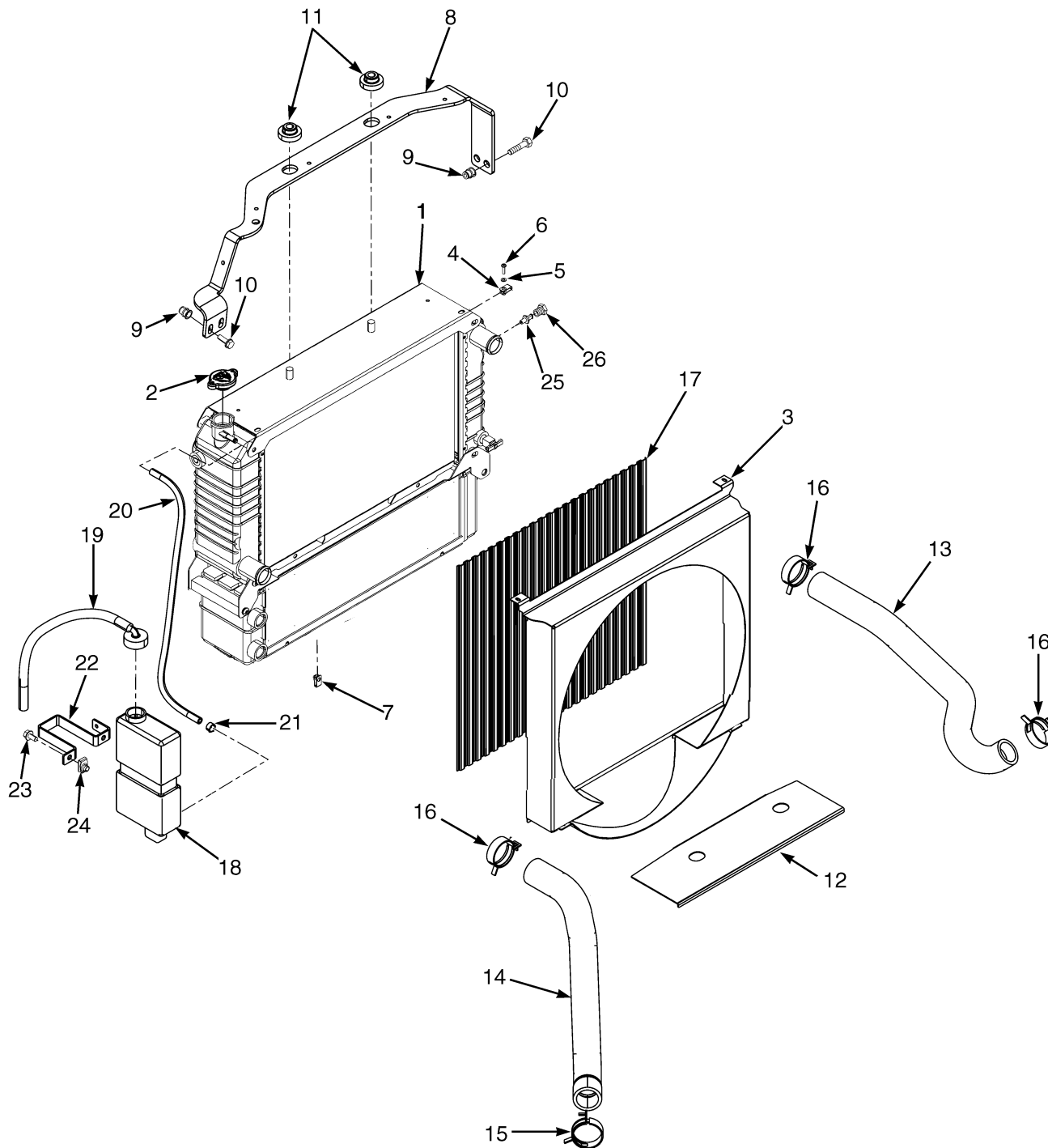
COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – ELECTRONIC CONTROL
TRANSMISSION, WITH INTERNAL OIL COOLER (→ S/N L177B14568E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2071615	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
1		Capscrew	8
2	1352140	Radiator Cap	1
3	1594057	Shroud	1
4	1535257	Nut	2
5	320154	Washer	2
6	302023	Screw	2
7	1551663	Clip	2
8	1585317	Bracket (Radiator)	1
9	1530243	Insert	4
10	1583611	Capscrew	4
11	1529787	Isolator	4
12	1565692	Exhaust Shield	1
13	2085042	Radiator Hose (Upper)	1
14	2069702	Radiator Hose (Lower)	1
15	1501999	Hose Clamp	1
16	1527982	Hose Clamp	3
17	1582078	Screen	1
18	1347026	Reservoir	1
19	345455	Outlet	1
19	336550	Bushing	1
19	345453	Outlet (Reservoir)	1
19	345454	Cap	1
19	339735	Hose	1
20	1567674	Hose	1
21	369815	Clamp	2
22	1531167	Bracket	1
23	1527879	Capscrew	2
24	1480237	Nut	2
25	1531404	Sensor (Low Coolant Level)	1
26	a 14385	Fitting	1

FOOTNOTES:**a** Without Low Coolant Level Sensor

COOLING SYSTEM (FIGURE 2-8)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — ELECTRONIC TRANSMISSION,
WITH EXTERNAL OIL COOLER (→ S/N L177B14568E)



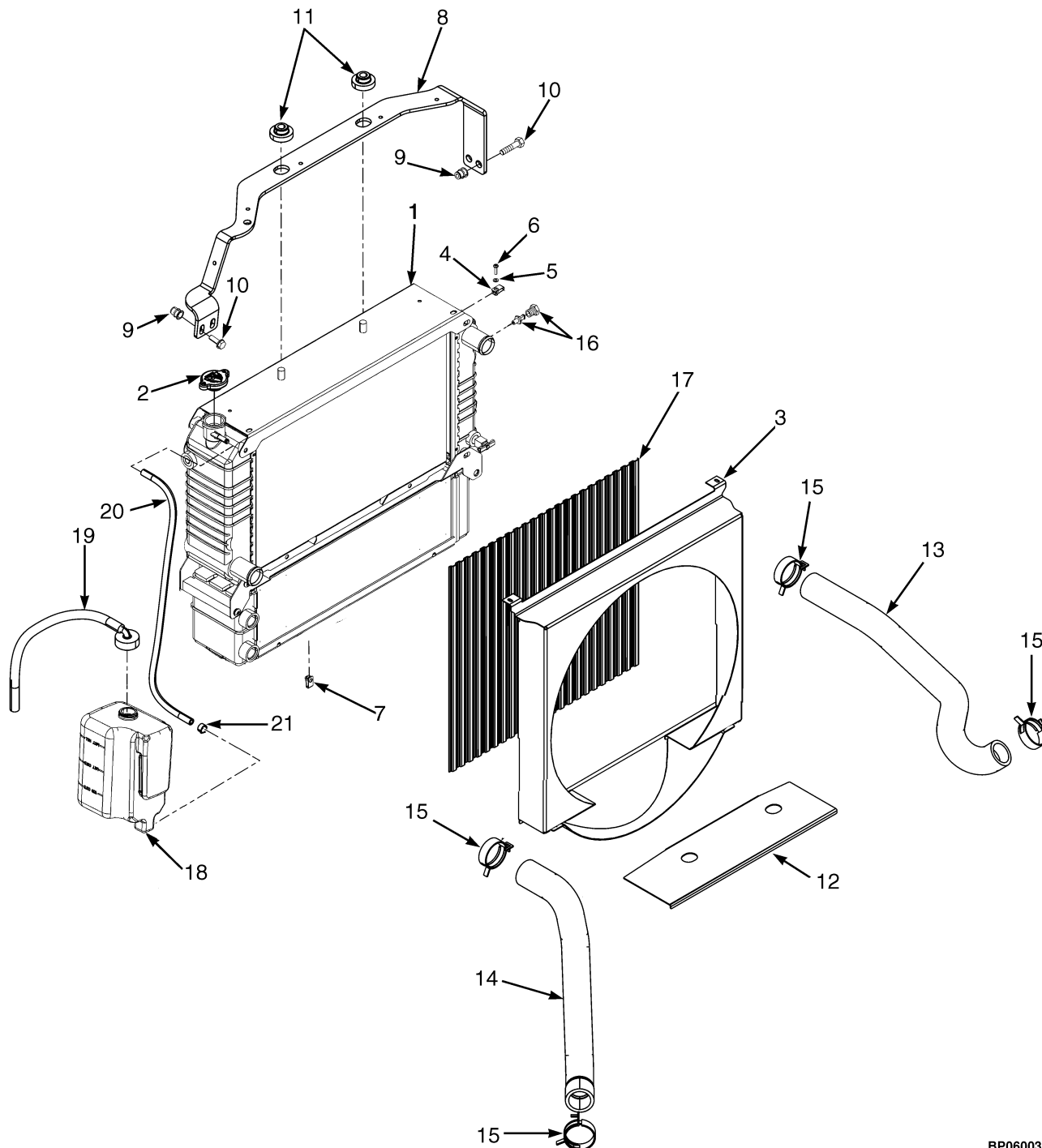
COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – ELECTRONIC TRANSMISSION,
WITH EXTERNAL OIL COOLER (→ S/N L177B14568E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2074789	Radiator	1
1	1590917	Radiator	1
1	1590918	Oil Cooler	1
1	1597765	Washer	4
1	1597766	Screw	4
2	1352140	Radiator Cap	1
3	1582074	Shroud	1
4	1535257	Nut	2
5	320154	Washer	2
6	302023	Screw	2
7	1551663	Clip	2
8	1585317	Bracket (Radiator)	1
9	1530243	Insert	4
10	1583611	Capscrew	4
11	1529787	Isolator	4
12	1565692	Exhaust Shield	1
	a 2085254	Radiator Hose (Upper) (Gasoline)	1
13	2085042	Radiator Hose (Upper) (LPG)	1
14	2069702	Radiator Hose (Lower)	1
15	1501999	Hose Clamp	1
16	1527982	Hose Clamp	3
17	1582078	Screen	1
18	1347026	Reservoir	1
19	345455	Outlet	1
19	336550	Bushing	1
19	345453	Outlet (Reservoir)	1
19	345454	Cap	1
19	339735	Hose	1
20	1567674	Hose	1
21	369815	Clamp	2
22	1531167	Bracket	1
23	1527879	Capscrew	2
24	1480237	Nut	2
25	1531404	Sensor (Low Coolant Level)	1
26	b 14385	Fitting	1

FOOTNOTES:**a** Not Illustrated**b** Without Low Coolant Sensor

COOLING SYSTEM (FIGURE 2-9)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — ELECTRONIC TRANSMISSION,
EXTERNAL OIL COOLER, OR WET BRAKE (S/N L177B14569E →)



BP060032

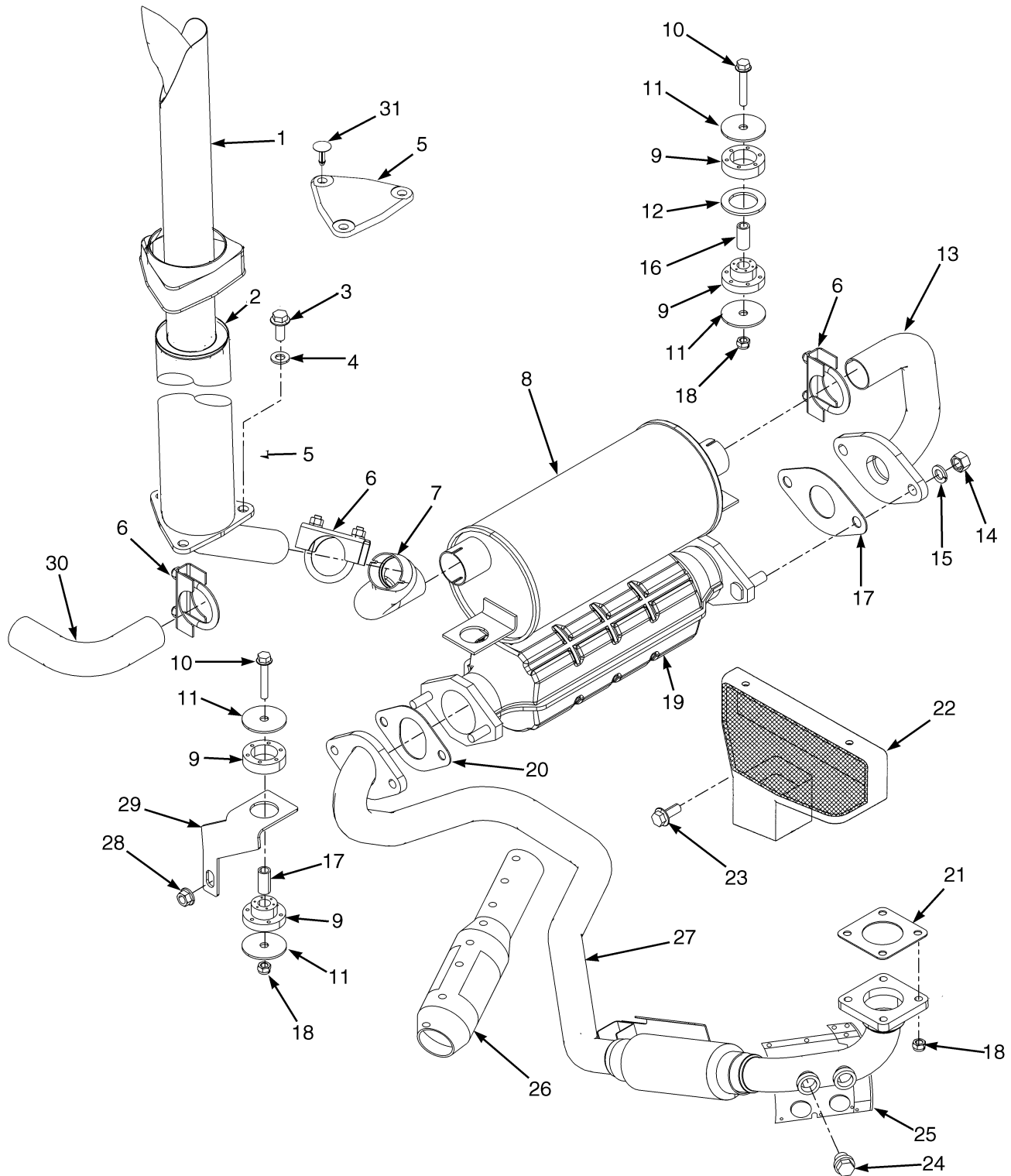
COOLING SYSTEM

**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – ELECTRONIC TRANSMISSION,
EXTERNAL OIL COOLER, OR WET BRAKE (S/N L177B14569E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2074789	Radiator	1
1	1590917	Radiator	1
1	1590918	Oil Cooler	1
1	1597765	Washer	4
1	1597766	Screw	4
2	1352140	Radiator Cap	1
3	1582074	Shroud	1
4	1535257	Nut	2
5	320154	Washer	2
6	302023	Screw	2
7	1551663	Clip	2
8	1588507	Bracket (Radiator)	1
9	1530243	Insert	4
10	1583611	Capscrew	4
11	1529787	Isolator	4
12	1565691	Exhaust Shield	1
13	2085254	Radiator Hose (Upper) (Gasoline)	1
13	2085042	Radiator Hose (Upper) (LPG)	1
14	b 2069702	Radiator Hose (Lower)	1
14	c 2088676	Radiator Hose (Lower)	1
15	369804	Clamp	4
16	1531404	Sensor (Low Coolant Level)	1
16	a 14385	Fitting	1
16	246108	Sealant	AR
17	1582078	Screen	1
18	1633307	Reservoir	1
19	345455	Outlet	1
19	336550	Bushing	1
19	345453	Outlet (Reservoir)	1
19	345454	Cap	1
19	339735	Hose	1
20	1567674	Hose	1
21	369815	Clamp	2

FOOTNOTES:**a** Without Low Coolant Sensor**c** S/N L177B15327E → INC. 05512, 06207**b** → S/N L177B15326E EXC. 05512, 06207

EXHAUST SYSTEM WITH CATALYTIC CONVERTER (FIGURE 2-10)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2006 EMISSION COMPLIANT ENGINES
(→ S/N L177B15326E)



BP090284

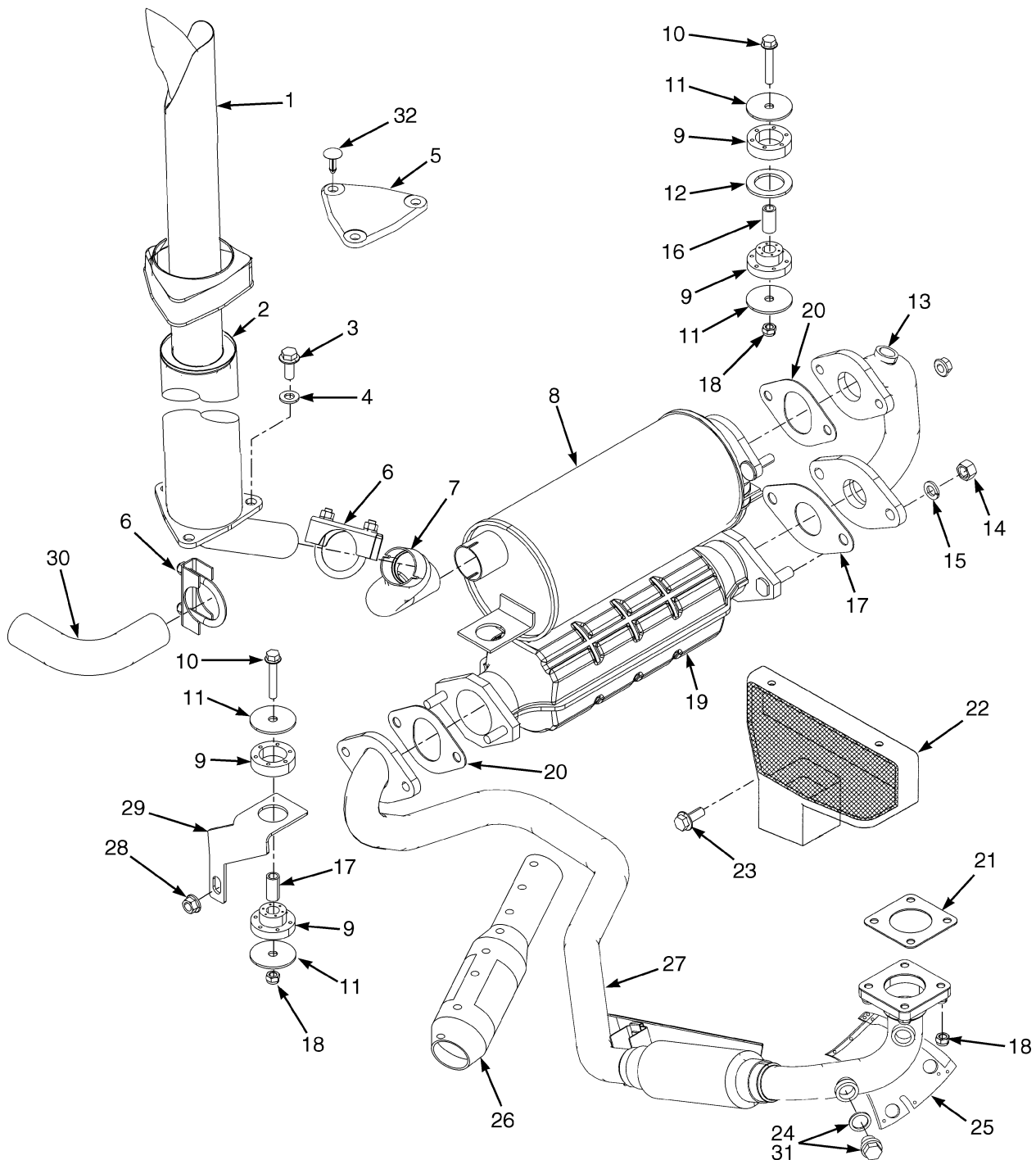
EXHAUST SYSTEM WITH CATALYTIC CONVERTER
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E)

KEY:**A: With Catalytic Converter****B: For Vehicles With Safety Option**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	b 2021394	Cover	1	1
2	c 1646827	Tail Pipe	1	1
3	c 1510117	Capscrew	3	3
4	320159	Washer	3	3
5	1533639	Cover	1	1
6	68968	Clamp	3	3
7	1533863	Exhaust Pipe	1	1
8	2060957	Muffler (Crimped)	1	..
8	2056524	Muffler (Welded)	..	1
9	1528930	Mount	2	2
10	1510115	Capscrew	2	2
11	1528938	Washer	4	4
12	1532585	Washer	1	1
13	1534174	Exhaust Pipe	1	1
14	1469405	Nut	2	2
15	292683	Lockwasher	2	2
16	1649471	Spacer	2	2
17	1469379	Gasket	1	1
17	1677491	Gasket (Alternate Part)	1	1
18	1582222	Locknut	6	6
19	1469342	Converter	1	1
20	1547712	Gasket	1	1
20	1677490	Gasket (Alternate Part)	1	1
21	1528937	Gasket	1	1
21	1338308	Gasket (Alternate Part)	1	1
21	1528937	Gasket (Alternate Part)	1	1
22	a 2084006	Cover (Manifold)	1	1
23	a 1528778	Capscrew	1	1
24	1396518	Plug	1	1
24	1509103	Ring (Copper)	1	1
24	1509104	Plug	1	1
25	a 2084003	Exhaust Wrap	1	1
26	a 2084005	Exhaust Wrap	1	1
27	1542670	Exhaust Pipe	1	1
28	1460477	Nut	2	2
29	1532523	Bracket	1	1
30	b 1589312	Exhaust Pipe	1	1
31	b 1347045	Fastener	1	1

FOOTNOTES:**a** Paper Industry Applications**c** With Overhead Exhaust**b** With Counterweight Exhaust

EXHAUST SYSTEM WITH CATALYTIC CONVERTER (FIGURE 2-11)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →)



BP090339

EXHAUST SYSTEM WITH CATALYTIC CONVERTER
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →)

KEY:**A: With Catalytic Converter****B: For Vehicles With Safety Option**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2021394	Cover	1	1
2	c 1646827	Tail Pipe	1	1
3	c 1510117	Capscrew	3	3
4	320159	Washer	3	3
5	b 1533639	Cover	1	1
6	68968	Clamp	1	1
7	1533863	Exhaust Pipe	1	1
8	2089895	Muffler (Crimped)	1	..
8	2089894	Muffler (Welded)	..	1
9	1528930	Mount	2	2
10	1510115	Capscrew	2	2
11	1528938	Washer	4	4
12	1532585	Washer	1	1
13	1636409	Exhaust Pipe	1	1
14	1469405	Nut	2	2
15	292683	Lockwasher	2	2
16	1649471	Spacer	2	2
17	1469379	Gasket	1	1
17	1677491	Gasket (Alternate Part)	1	1
18	1582222	Locknut	6	6
19	1469342	Converter	1	1
20	1547712	Gasket	2	2
20	1677490	Gasket (Alternate Part)	2	2
21	1528937	Gasket	1	1
21	1338308	Gasket (Alternate Part)	1	1
22	a 2084006	Cover (Manifold)	1	1
23	a 1528778	Capscrew	1	1
24	1396518	Plug	1	1
24	1509103	Ring (Copper)	1	1
24	1509104	Plug	1	1
25	a 2084003	Exhaust Wrap	1	1
26	a 2084005	Exhaust Wrap	1	1
27	d 1651606	Exhaust Pipe	1	1
27	d 1651314	Exhaust Shield	1	1
27	e 1687706	Exhaust Pipe	1	1
27	e 1650662	Exhaust Shield	1	1
28	1460477	Nut	4	4
29	1532523	Bracket	1	1
30	b 1589312	Exhaust Pipe	1	1
31	251979	Lubricant	AR	AR
32	b 1347045	Fastener	1	1

FOOTNOTES:

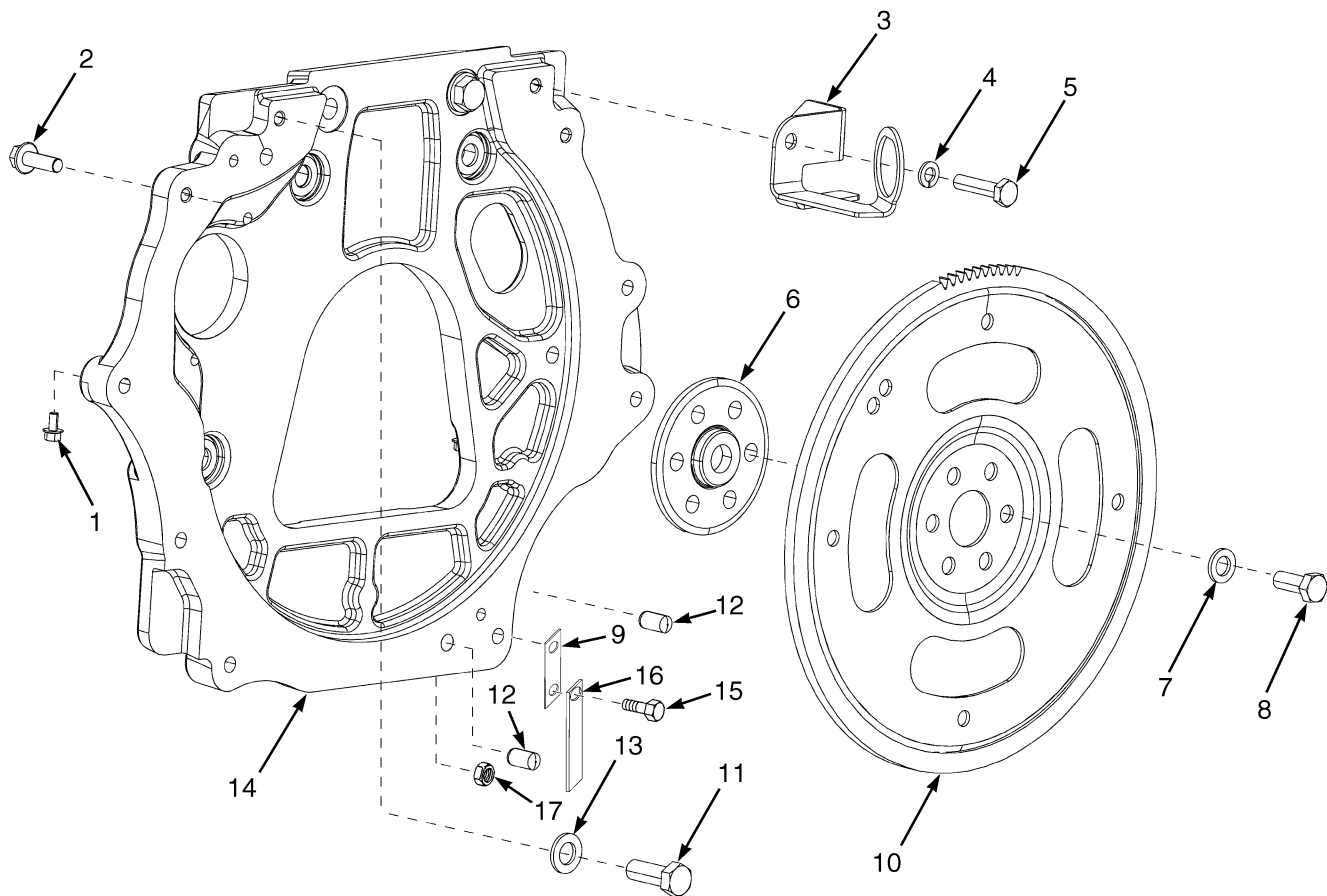
- | | | | |
|----------|-----------------------------|----------|-------------------|
| a | Paper Industry Applications | d | → S/N L177B28223G |
| b | With Counterweight Exhaust | e | S/N L177B28224G → |
| c | With Overhead Exhaust | | |

NOTES

[illegible]

FLYWHEEL AND HOUSING (FIGURE 2-12)

MAZDA 2.0L AND 2.2L — GASOLINE AND LPG (→ S/N L177B11107D)



HP091268

FLYWHEEL AND HOUSING
MAZDA 2.0L AND 2.2L – GASOLINE AND LPG (→ S/N L177B11107D)

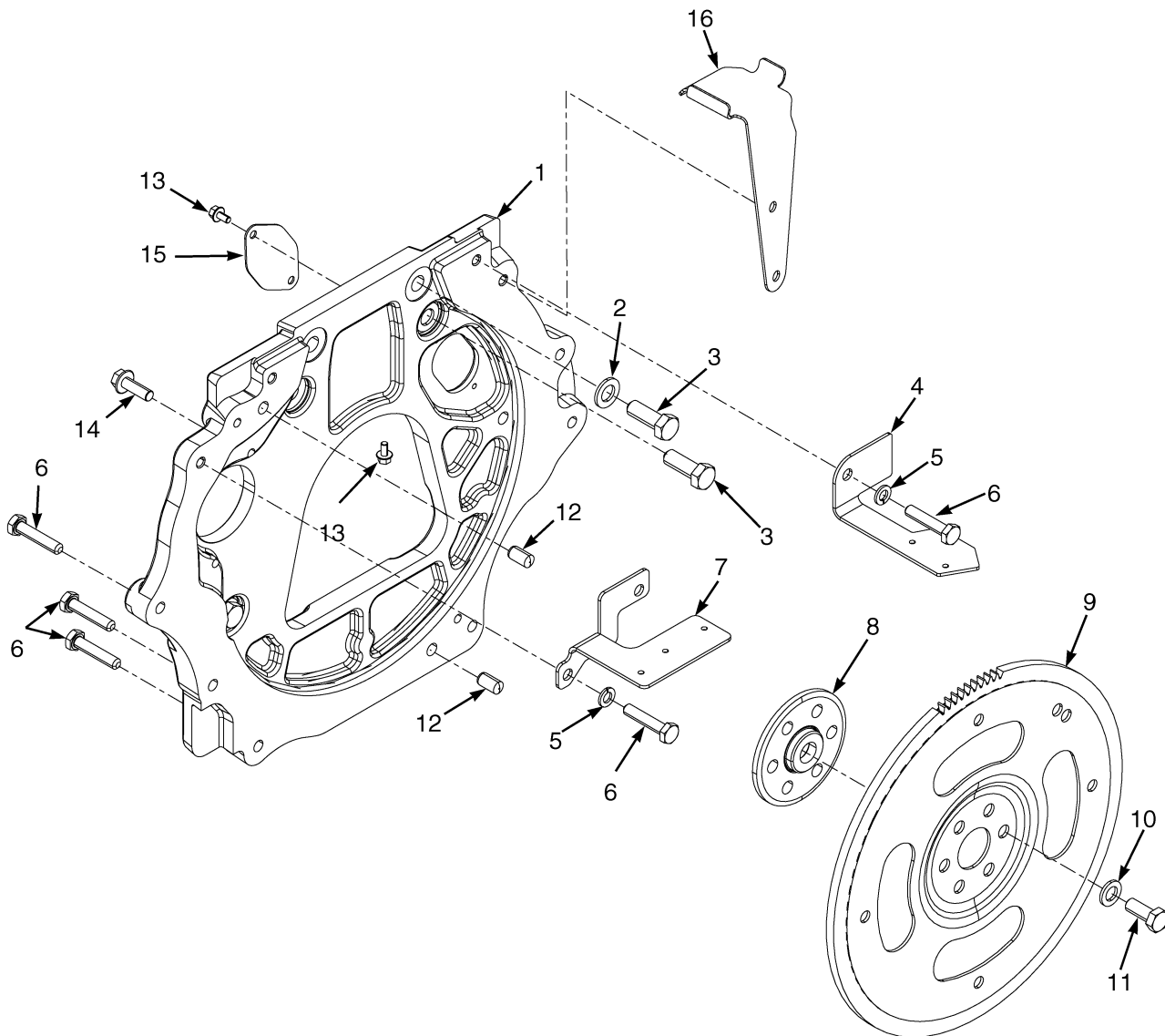
ITEM	PART NO.	DESCRIPTION	QTY
1	1534417	Capscrew	3
2	1527884	Capscrew	2
3	1551608	Bracket	1
4	292682	Lockwasher	10
5	292517	Capscrew	10
6	1506572	Fitting	1
7	296422	Washer	6
8	1528415	Capscrew	6
9	1565832	Bracket	1
10	1605467	Flywheel (With Ring Gear)	1
11	2072918	Capscrew	6
12	303150	Dowel	2
13	296424	Washer	6
14	1553266	Flywheel Housing	1
15	1586013	Capscrew	1
16	216895	Static Strap	1
17	1460477	Nut	1
	a 1625999	Dust Cover (Not Illustrated)	1

FOOTNOTES:

a S/N L177B07132D →

FLYWHEEL AND HOUSING (FIGURE 2-13)

MAZDA 2.0 L AND 2.2 L — GASOLINE AND LPG (S/N L177B11118D →)

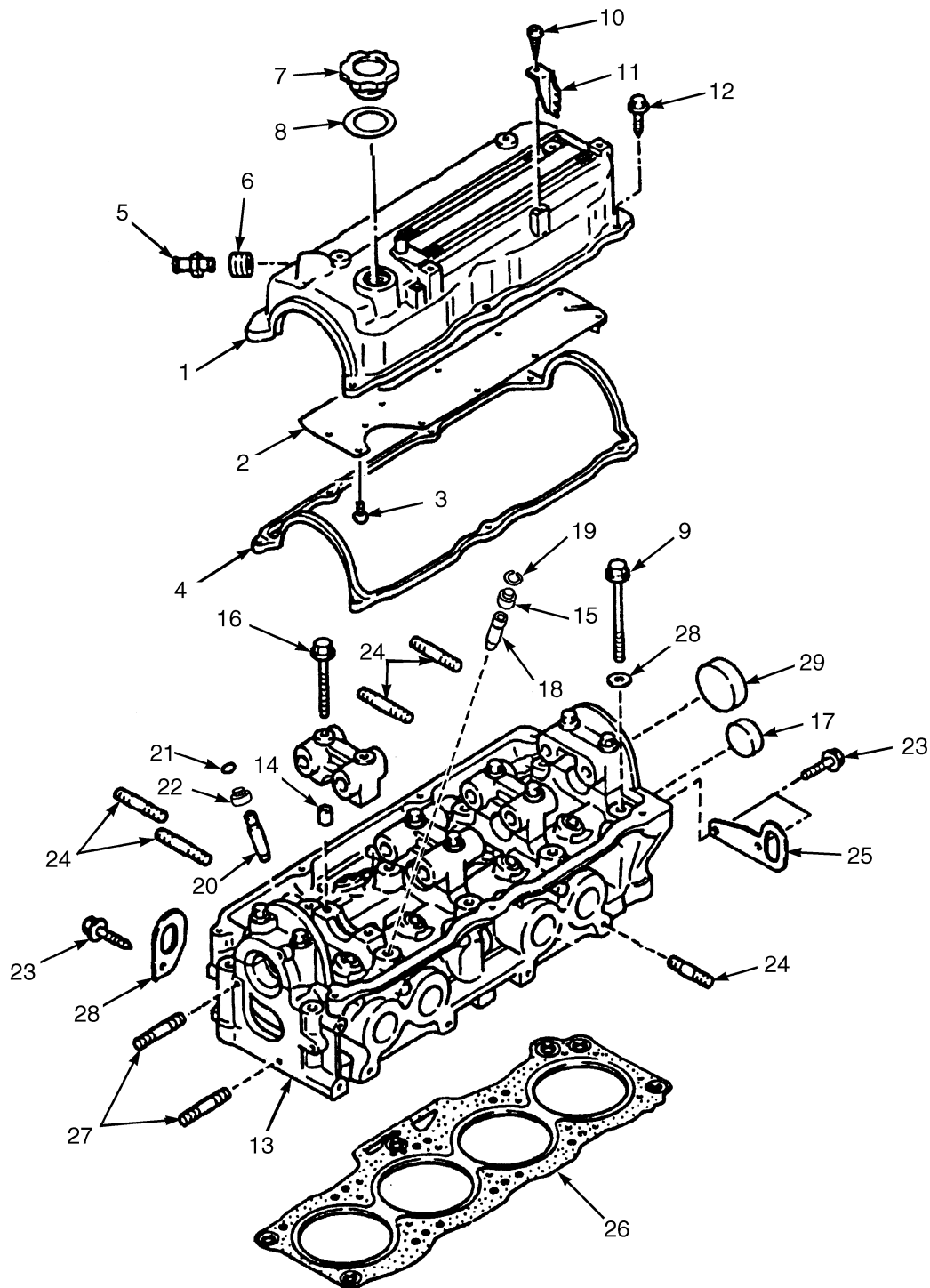


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FLYWHEEL AND HOUSING
MAZDA 2.0 L AND 2.2 L – GASOLINE AND LPG (S/N L177B11118D →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1553266	Flywheel Housing	1
2	296424	Washer	6
3	2072918	Capscrew	6
4	1624727	Bracket	1
5	292682	Lockwasher	10
6	292517	Capscrew	10
7	1623093	Bracket	1
8	1506572	Fitting	1
9	1605467	Flywheel (With Ring Gear)	1
10	296422	Washer	6
11	1528415	Capscrew	6
12	303150	Dowel	2
13	1534417	Capscrew	5
14	1527884	Capscrew	2
15	1625999	Dust Cover	1
16	1658141	Drip Shield (Gasoline)	1

CYLINDER HEAD (FIGURE 2-14)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E 2.2L GAS) (→ S/N L177B16206E 2.2L LPG)
 (S/N L177B15512E → 2.0L GAS AND LPG)



HP000902

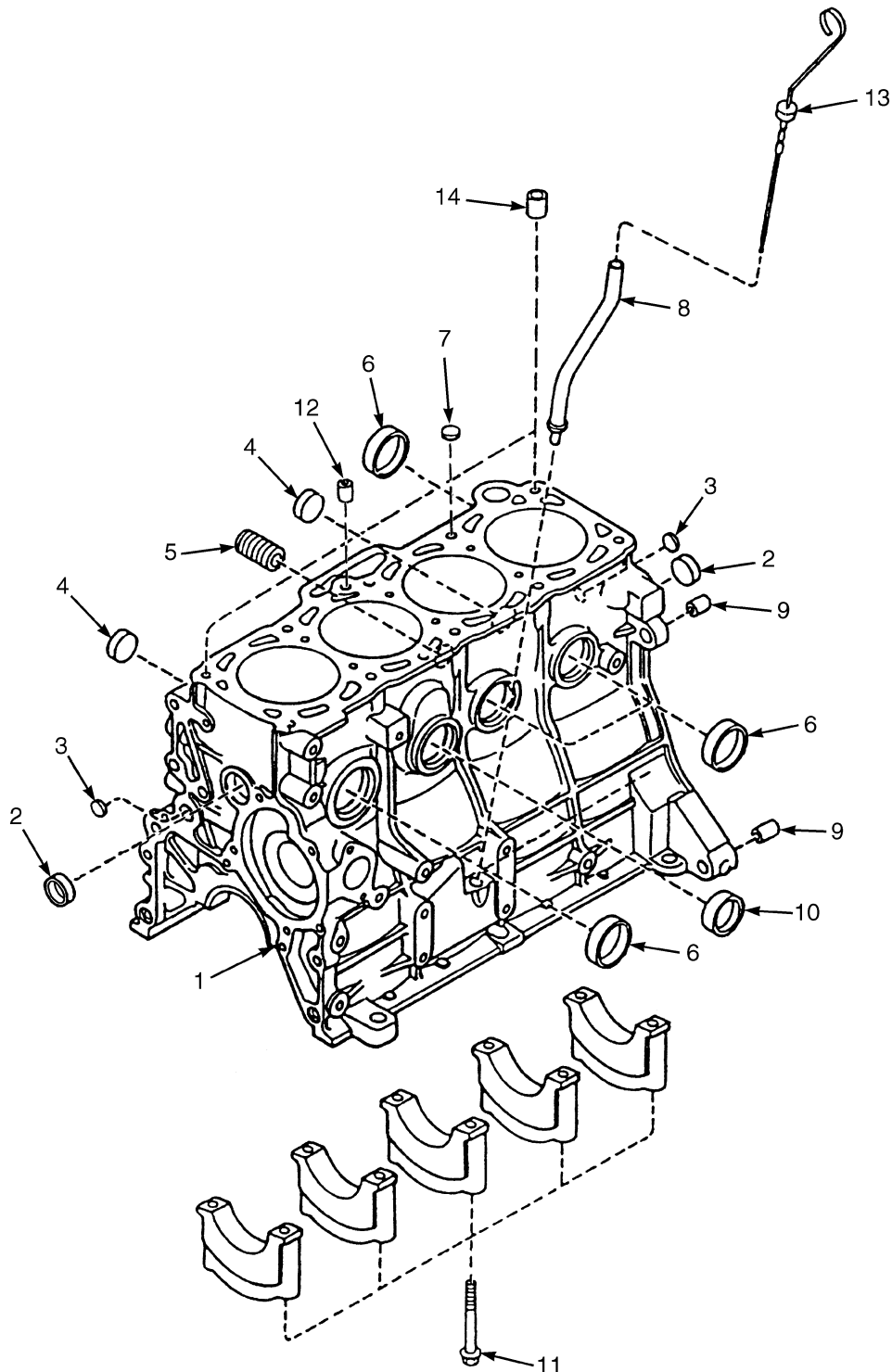
CYLINDER HEAD**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES**

(→ S/N L177B15326E 2.2L GAS) (→ S/N L177B16206E 2.2L LPG)

(S/N L177B15512E → 2.0L GAS AND LPG)

ITEM	PART NO.	DESCRIPTION	QTY
	1587841	Long Block (2.0L, Gasoline)	1
	1587843	Long Block (2.0L, LPG)	1
	1587844	Long Block (2.2L, Gasoline)	1
	1587845	Long Block (2.2L, LPG)	1
1	1360883	Engine Cover (LPG)	1
1	1553693	Engine Cover (Gasoline)	1
2	1360884	Plate	1
3	2022655	Screw	10
4	1360886	Gasket	1
5	1553692	PCV Valve (PCV, Gasoline)	1
5	1360893	PCV Valve (PCV, LPG)	1
5	1360893	PCV Valve (LPG) (Alternate Part)	1
6	1360892	Seal	1
7	1360887	Cap (Oil)	1
8	1360888	Gasket	1
9	1360880	Bolt	10
10	1362000	Screw	2
11	1360885	Bracket	2
12	1362001	Bolt	7
13	1360878	Cylinder Head	1
14	1362002	Pin	10
15	1361719	Seal (Exhaust Valve)	4
16	1361894	Bolt	10
17	1362003	Plug	1
18	1360895	Guide	4
19	1360879	Clip	1
20	1360895	Guide	4
21	1360879	Clip	4
22	1361718	Seal (Inlet Valve)	4
23	1361898	Bolt	2
24	1361897	Stud	20
25	2314973	Hanger	1
26	2045321	Gasket (Cylinder Head)	1
27	1361899	Stud	2
28	1360881	Washer	10
29	1360882	Cap	1

CYLINDER BLOCK (FIGURE 2-15)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E 2.2L GAS) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0L GAS AND LPG)

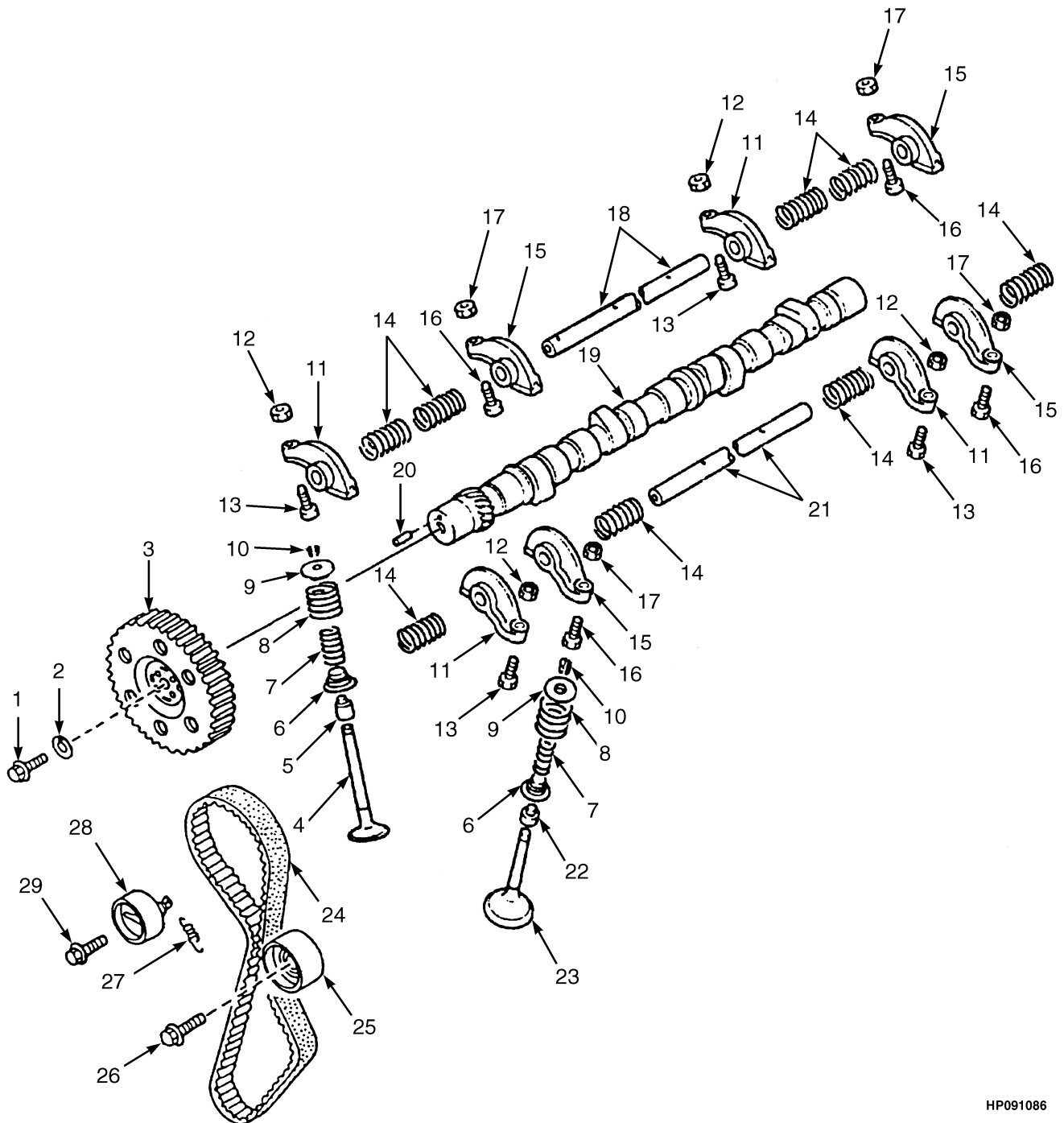


HP091247

CYLINDER BLOCK**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E 2.2L GAS) (→ S/N L177B16206E (2.2L LPG))****(S/N L177B15512E → 2.0L GAS AND LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
	1587841	Long Block (2.0L, Gasoline)	1
	1587843	Long Block (2.0L, LPG)	1
	1587844	Long Block (2.2L, Gasoline)	1
	1587845	Long Block (2.2L, LPG)	1
	1553650	Short Block (2.0L, Gasoline)	1
	1572387	Short Block (2.0L, LPG)	1
	1553652	Short Block (2.2L, Gasoline)	1
	1572388	Short Block (2.2L, LPG)	1
1	1553710	Cylinder Block (2.0L)	1
1	1370744	Cylinder Block (2.2L)	1
2	1362009	Plug	2
3	1361675	Plug	2
4	1362005	Plug	2
5	1360898	Gasket	1
6	1362003	Plug	4
7	2028927	Plug	1
8	1360899	Tube Assy	1
9	1362008	Pin	2
10	1362007	Plug	2
11	1361676	Bolt	10
12	2029081	Plug	1
13	1361677	Dipstick	1
14	1360896	Pin	2

CAMSHAFT AND VALVES (FIGURE 2-16)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0L GAS AND LPG)

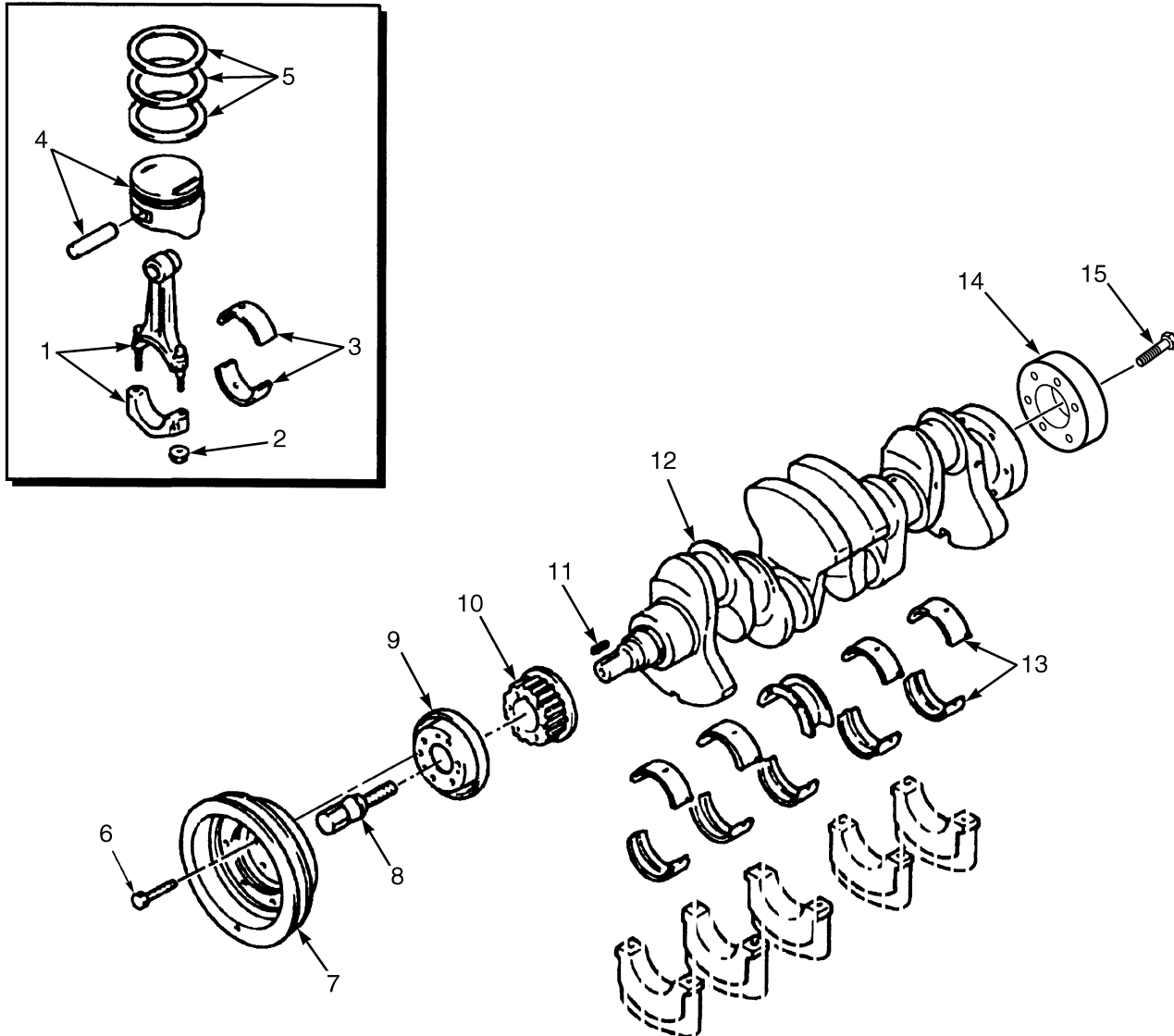


HP091086

CAMSHAFT AND VALVES**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))****(S/N L177B15512E → 2.0L GAS AND LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
	1587841	Long Block (2.0L, Gasoline)	1
	1587843	Long Block (2.0L, LPG)	1
	1587844	Long Block (2.2L, Gasoline)	1
	1587845	Long Block (2.2L, LPG)	1
1	1361736	Bolt	1
2	1361737	Washer	1
3	2029095	Pulley (Camshaft)	1
4	1361720	Inlet Valve (Intake)	4
5	1361718	Seal	4
6	1361724	Valve Seat	8
7	1361723	Spring (Intake Valve)	8
8	1361722	Spring (Exhaust Valve)	8
9	1361721	Valve Seat	8
10	326612	Keeper	16
11	1361726	Rocker Arm	4
12	1361728	Nut	4
13	1361727	Screw	4
14	1361731	Spring	8
15	1361729	Rocker Arm	4
16	1361727	Screw	4
17	1361728	Nut	4
18	1361730	Shaft	1
19	1361734	Camshaft	1
20	1361717	Pin	1
21	1361732	Shaft	1
22	1361719	Seal	4
23	1361725	Exhaust Valve	4
24	1553762	Timing Belt (2.0L)	1
24	2028852	Timing Belt (2.2L)	1
25	2029098	Idler Pulley	1
26	1361884	Bolt	1
27	1553763	Support (2.0L)	1
27	2029096	Spring (2.2L)	1
28	2029097	Belt Tensioner	1
29	1362016	Bolt	1

CRANKSHAFT AND PISTONS (FIGURE 2-17)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0L GAS AND LPG)



HP090487

CRANKSHAFT AND PISTONS**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))****(S/N L177B15512E → 2.0L GAS AND LPG)****KEY:****A: Mazda 2.0L Gasoline Engine****B: Mazda 2.2L Gasoline Engine****C: Mazda 2.0L LPG Engine****D: Mazda 2.2L LPG Engine**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1587841	Long Block (2.0L, Gasoline)	1	..	..	..
	1587843	Long Block (2.0L, LPG)	..	..	1	..
	1587844	Long Block (2.2L, Gasoline)	..	1	..	..
	1587845	Long Block (2.2L, LPG)	..	..	..	1
1	1361694	Rod Assy	4	..	4	..
1	1370746	Rod Assy	..	4	..	4
2	1361695	Nut	2	2	2	2
3	1361703	Piston Rod Bearing (Standard)	1	1	1	1
3	1361704	Piston Rod Bearing (0.25 mm)	1	1	1	1
3	1361705	Piston Rod Bearing (0.50 mm)	1	1	1	1
3	1361706	Piston Rod Bearing (0.75 mm)	1	1	1	1
4	1572593	Piston and Rod (Standard)	..	..	4	..
4	1361714	Piston and Rod (Standard)	4	..	..	..
4	1572597	Piston (0.25 mm)	..	..	4	..
4	1361715	Piston (0.25 mm)	4	..	..	..
4	1572595	Piston (0.50 mm)	..	..	4	..
4	1361716	Piston (0.50 mm)	4	..	..	..
4	1572594	Piston and Rod (Standard)	..	..	..	4
4	1370745	Piston and Rod (Standard)	..	4	..	..
4	1572596	Piston (0.50 mm)	..	..	..	4
4	2029094	Piston (0.50 mm)	..	4	..	..
4	1572598	Piston (0.25 mm)	..	..	..	4
4	2029093	Piston (0.25 mm)	..	4	..	..
5	1495473	Kit-Piston Ring (Standard)	1	1	1	1
5	1495475	Kit-Piston Ring (0.25 mm)	1	1	1	1
5	1495474	Kit-Piston Ring (0.50 mm)	1	1	1	1
6	1361700	Bolt	6	6	6	6
7	1553722	Crankshaft Pulley	1	1	..	..
7	1495472	Pulley	..	..	1	1
8	2045034	Bolt	1	1	..	..
8	1361701	Bolt	..	..	1	1
9	2045033	Plate	1	1	1	1
10	2045030	Pulley	1	1	1	1
11	1361697	Key	1	1	1	1
12	1361696	Crankshaft	1	..	1	..
12	2045029	Crankshaft	..	1	..	1
13	1361710	Kit-Crankshaft Bearing (Standard)	1	1	1	1
13	1361713	Crankshaft Bearing (0.25 mm)	1	1	1	1
13	1361711	Crankshaft Bearing (0.50 mm)	1	1	1	1
13	1361712	Crankshaft Bearing (0.75 mm)	1	1	1	1
14	2021442	Plate	1	1	1	1

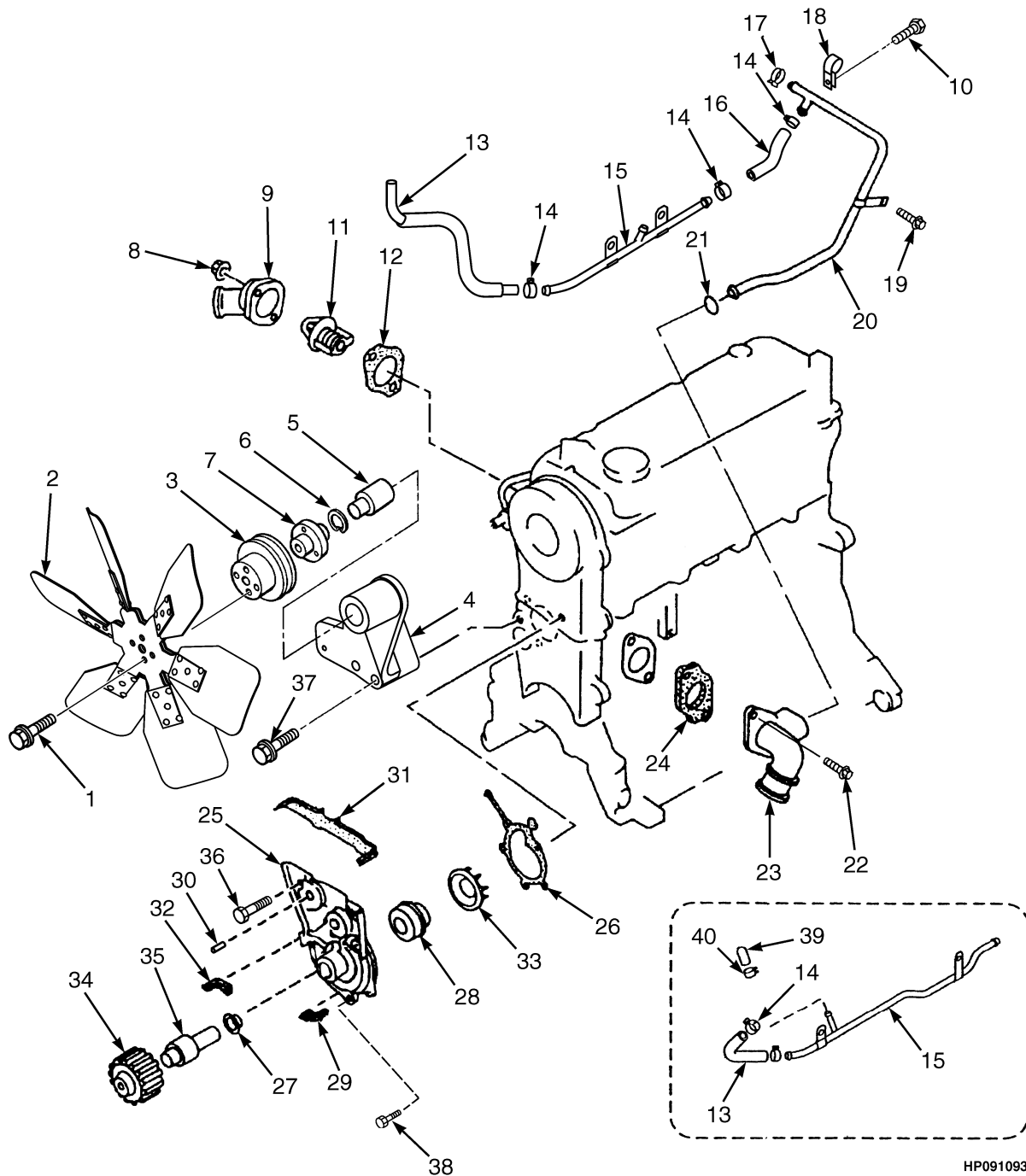
CRANKSHAFT AND PISTONS**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))****(S/N L177B15512E → 2.0L GAS AND LPG)****KEY:****A: Mazda 2.0L Gasoline Engine****B: Mazda 2.2L Gasoline Engine****C: Mazda 2.0L LPG Engine****D: Mazda 2.2L LPG Engine**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
15	2021438	Bolt	1	1	1	1

NOTES

[illegible]

ENGINE COOLING (FIGURE 2-18)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0L GAS AND LPG)



ENGINE COOLING**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2006 EMISSION COMPLIANT ENGINES**

(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))

(S/N L177B15512E → 2.0L GAS AND LPG)

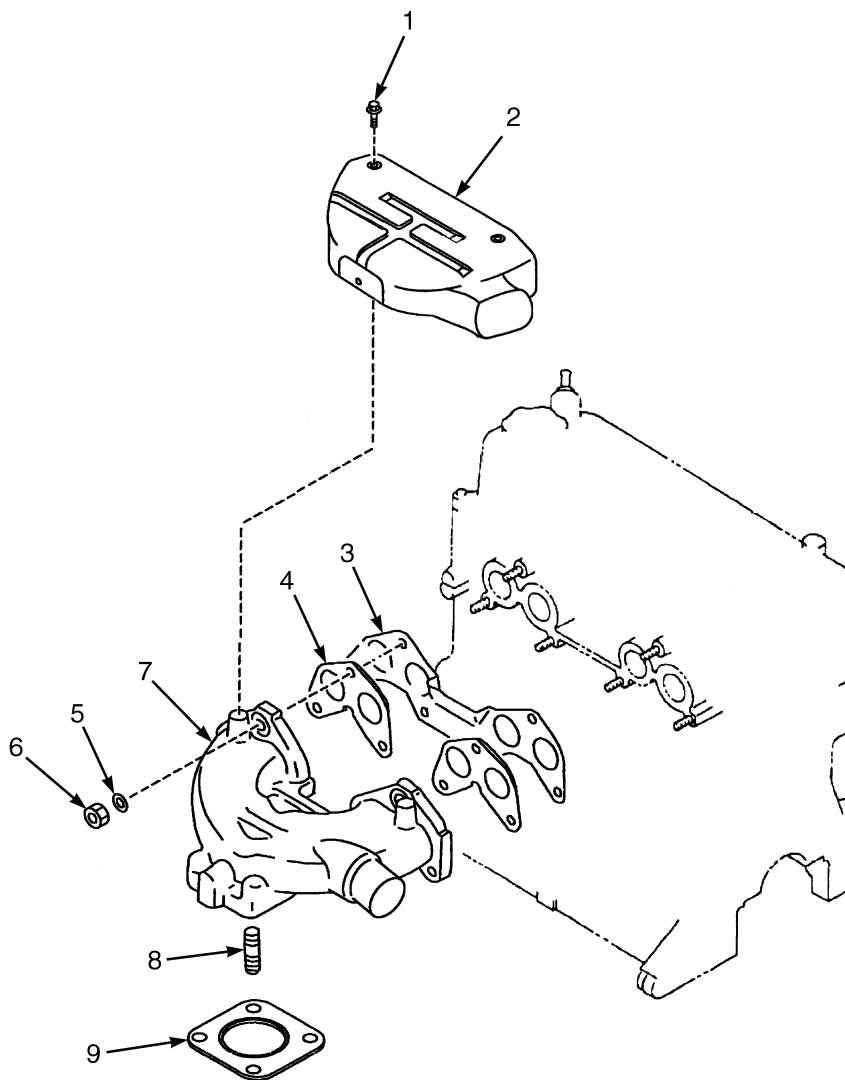
ITEM	PART NO.	DESCRIPTION	QTY
	1587841	Long Block (2.0L Gasoline)	1
	1587843	Long Block (2.0L LPG)	1
	1587845	Long Block (2.2L LPG)	1
	1587844	Long Block (2.2L Gasoline)	1
1	324706	Bolt	4
2	1582389	Fan	1
3	1573179	Fan Pulley	1
4	1573176	Bracket	1
5	2029116	Shaft	1
6	2045025	Clip	1
7		Hub	1
8	326504	Nut	2
9	1361821	Cover	1
10	1361898	Bolt	1
11	1495428	Thermostat	1
11	2082929	Thermostat	1
12	1367191	Gasket	1
13	1553946	Hose Assy (Gasoline)	1
13	1361825	Radiator Hose (LPG)	1
13	1553948	Protector	1
14	1361873	Clamp	4
15	1553945	Pipe (Water Bypass) (Gasoline)	1
15	1361823	Pipe (Water Bypass) (LPG)	1
16	2029108	Radiator Hose	1
17	1361886	Clamp	1
18	1361826	Clip	1
19	2022309	Bolt	1
20	1553943	Pipe (2.0L)	1
20	2045024	Pipe (2.2L)	1
21	1361827	O-Ring	1
22	1361875	Screw	2
23	2029112	Adapter (Intake)	1
24	2029120	Gasket (Inlet)	1
25	2028644	Water Pump	1
26	2028645	Gasket	1
27	2045319	Baffle	1
28	1361814	Seal	1
29	2029106	Seal	1
30	1361880	Stud	1
31	2029107	Seal	1
32	2029105	Seal	1
33		Impeller	1
34		Pulley	1
35		Shaft	1
36	326608	Bolt	2
37	2045026	Screw	3
38	1369914	Bolt	5
39	1361790	Cap (LPG)	1

ENGINE COOLING**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))****(S/N L177B15512E → 2.0L GAS AND LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
40	1495429	Hose Clamp (LPG)	1
	2045036	Kit-Gasket	1

EXHAUST MANIFOLD (FIGURE 2-19)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B15511E (2.0 GAS AND LPG))
 (→ S/N L177B16206E (2.2L LPG))

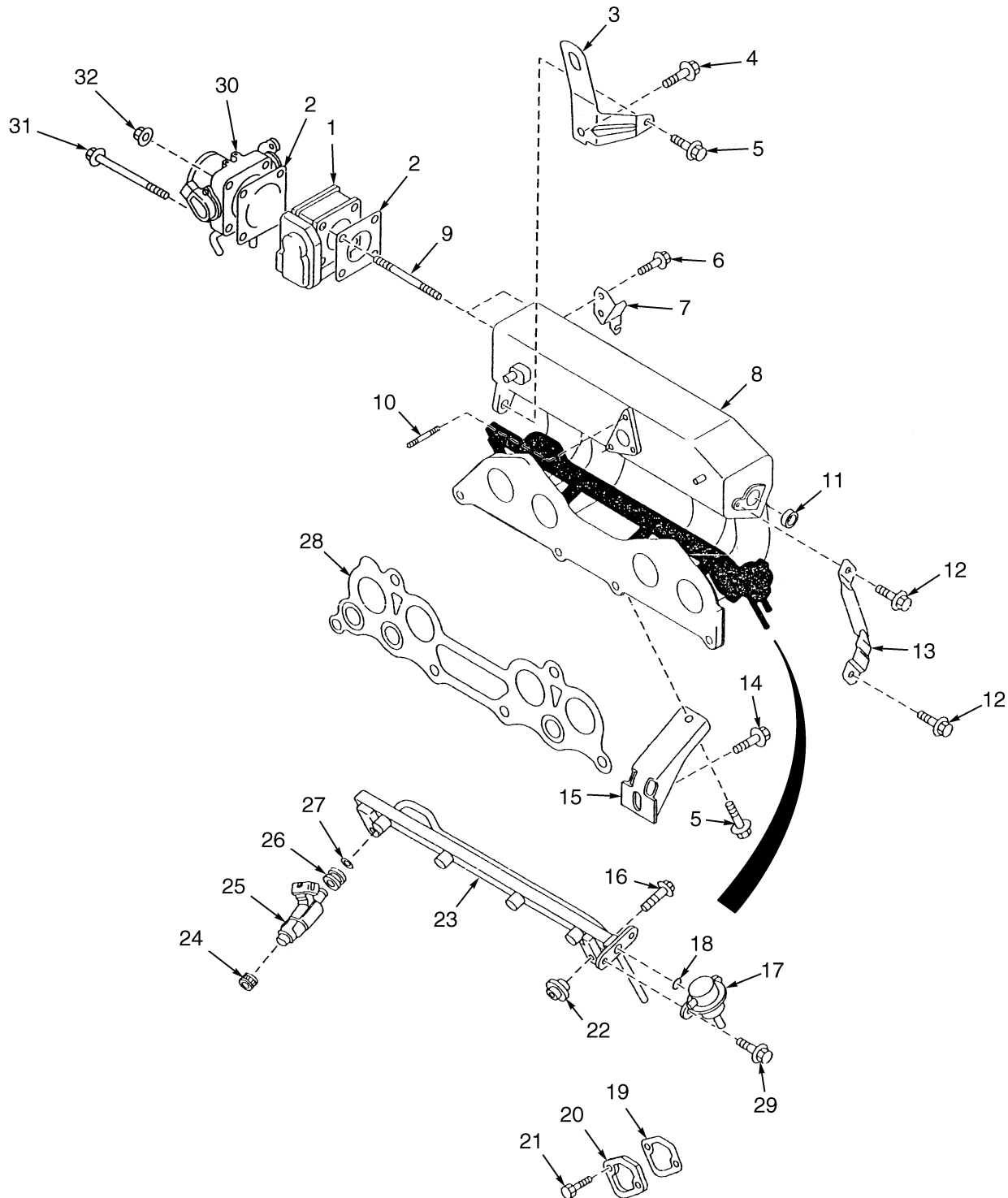


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ITEM	PART NO.	DESCRIPTION	QTY
1	1361898	Bolt	3
2	1370691	Cover	1
3	1361747	Gasket	1
4	1370689	Gasket	2
5	1370690	Washer	6
6	1361746	Nut	6
7	1370688	Exhaust Manifold	1
8	1361745	Stud	4
9	1338308	Gasket	1
9	1528937	Gasket (Alternate Part)	1

ENGINE FUEL SYSTEM AND INTAKE MANIFOLD (FIGURE 2-20)

MAZDA 2.0L AND 2.2L, GASOLINE, 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15326E 2.2L GAS) (→ S/N L177B15511E 2.0L GAS)



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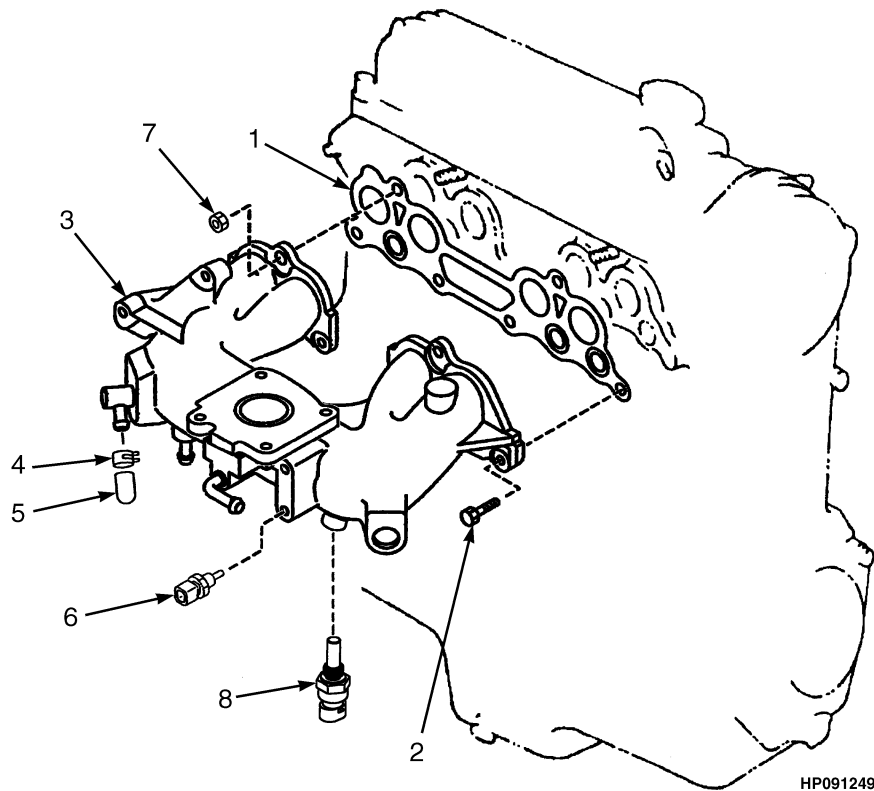
ENGINE FUEL SYSTEM AND INTAKE MANIFOLD

MAZDA 2.0L AND 2.2L, GASOLINE, 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15326E 2.2L GAS)
(→ S/N L177B15511E 2.0L GAS)

ITEM	PART NO.	DESCRIPTION	QTY
1	1553838	Governor	1
2	1553832	Gasket	1
3	1553779	Bracket	1
4	1361881	Bolt	1
5	324706	Bolt	2
6	1368805	Bolt	2
7	1553787	Bracket (Throttle)	1
8	1573014	Intake Manifold	1
9	1553773	Stud	2
10	1553774	Stud	2
11	1362005	Plug	1
12	1366874	Bolt	2
13	1553778	Bracket	1
14	1370675	Bolt	1
15	1553777	Bracket	1
16	1553839	Bolt	2
17	1553840	Pressure Regulator	1
18	1553841	O-Ring	1
19	1361756	Gasket (Fuel Pump)	1
20	1361749	Cover	1
21	1361898	Bolt	2
22	1553830	Insulator	2
23	1553831	Manifold	1
24	1553837	Insulator	4
25	1553833	Injector	4
26	1553834	Grommet	1
27	1553835	O-Ring	1
28	1553776	Gasket	1
29	1361893	Screw	2
30	1553864	Throttle Body	1
31	2066630	Bolt	2
32	326504	Nut	2

INTAKE MANIFOLD (FIGURE 2-21)

**MAZDA 2.0L AND 2.2L LPG — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15511E 2.0L LPG)
(→ S/N L177B16205E (2.2L LPG))**



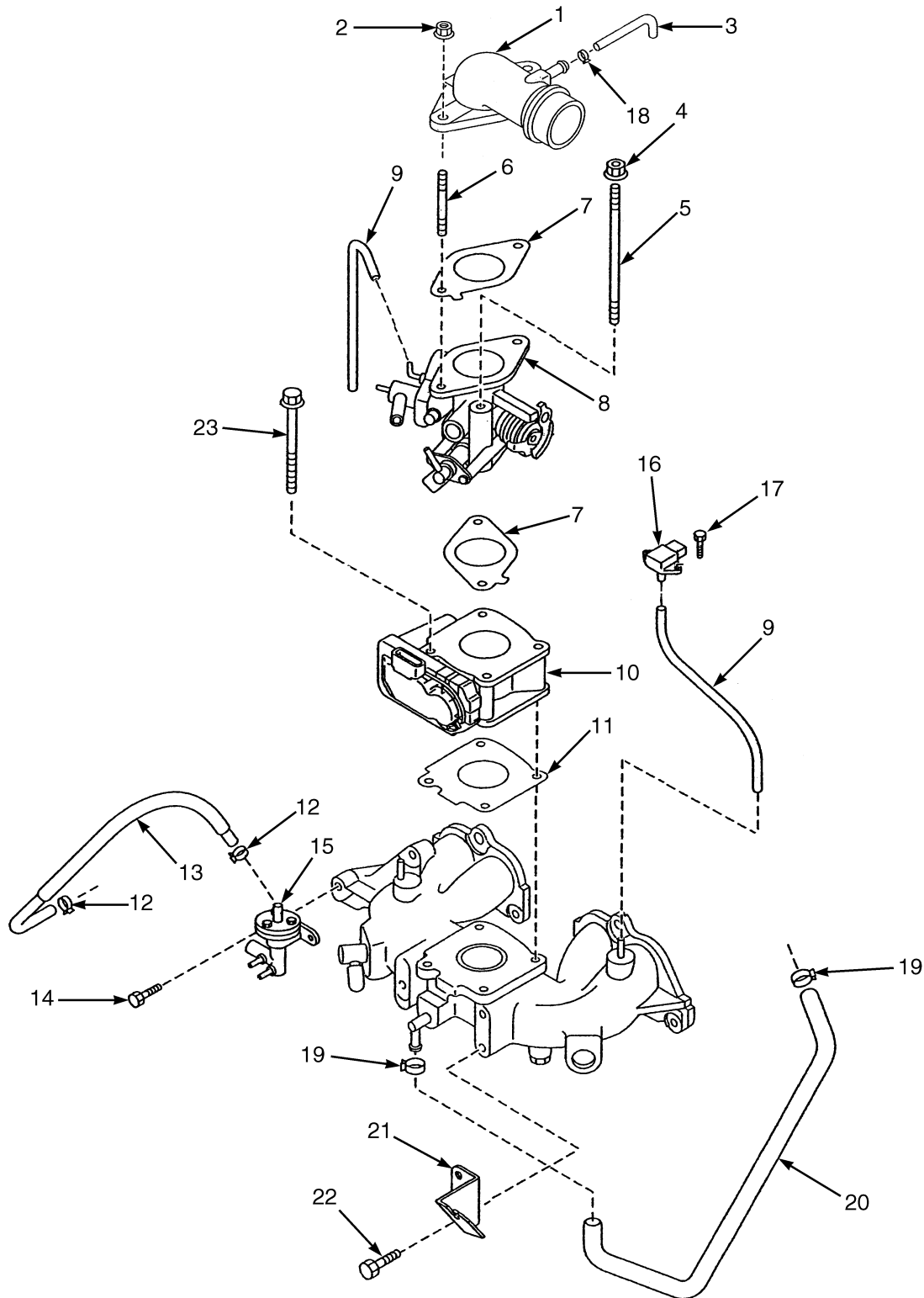
INTAKE MANIFOLD

**MAZDA 2.0L AND 2.2L LPG – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15511E 2.0L LPG)
(→ S/N L177B16205E (2.2L LPG))**

ITEM	PART NO.	DESCRIPTION	QTY
1	1553776	Gasket	1
2	1361885	Bolt	2
3	1573015	Intake Manifold	1
4	1361873	Clamp	1
5	1361741	Cap	1
6	1539962	Sensor (Air Temperature)	1
7	326504	Nut	4
8	1515654	Sensor (Coolant Temperature)	1

EMISSION CONTROL SYSTEM (FIGURE 2-22)

MAZDA 2.0L AND 2.2L LPG — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15511E 2.0L LPG)
(→ S/N L177B16206E (2.2L LPG))



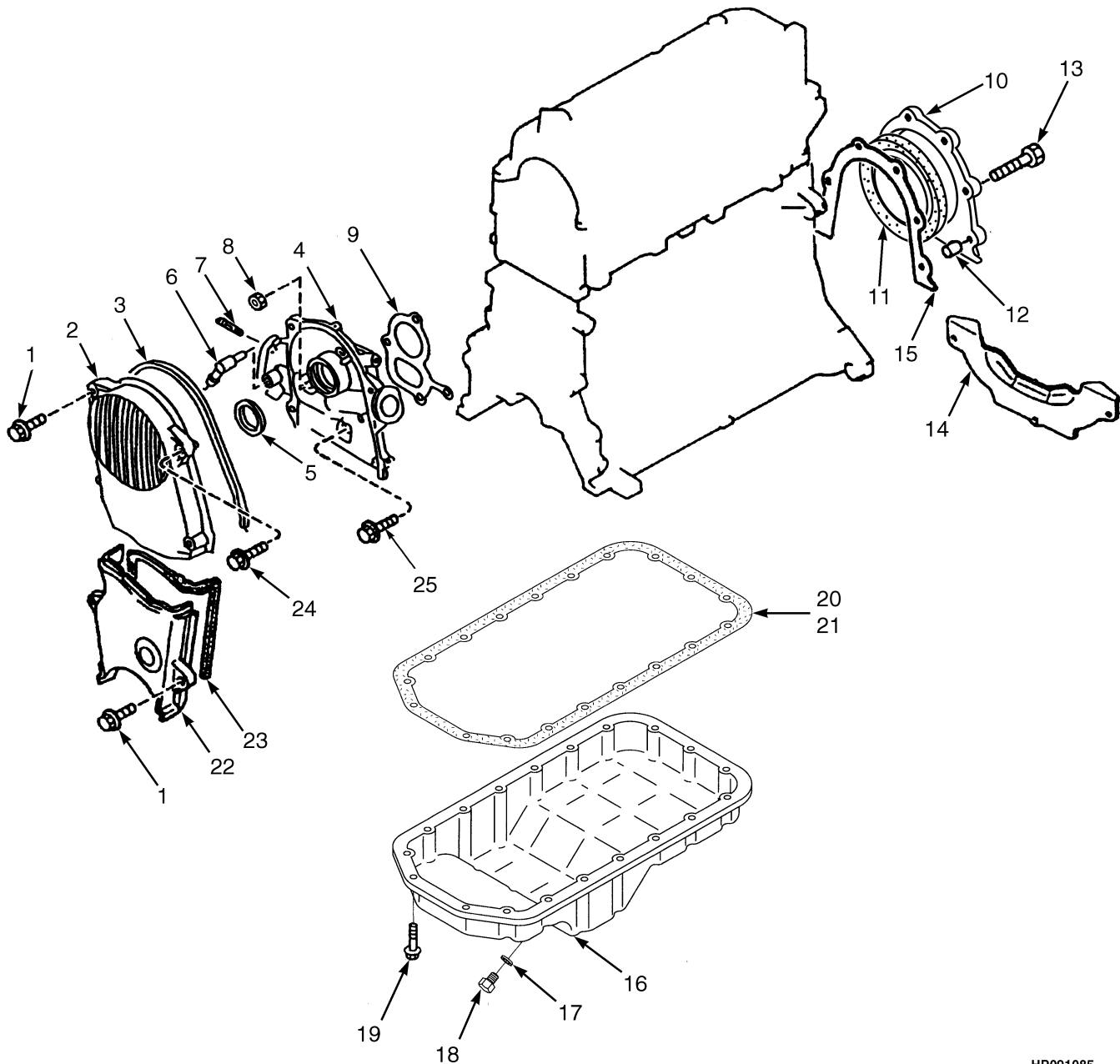
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EMISSION CONTROL SYSTEM

**MAZDA 2.0L AND 2.2L LPG – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15511E 2.0L LPG)
(→ S/N L177B16206E (2.2L LPG))**

ITEM	PART NO.	DESCRIPTION	QTY
1	1573118	Air Duct	1
2	2066629	Nut	2
3	1573562	Hose (Ventilation)	1
4	326504	Nut	2
5	1582323	Stud	2
6	1553774	Stud	2
7	1573117	Gasket	2
8	1573119	Carburetor (☞ Figure 2-26).....	1
8	1616236	Setscrew	1
8	1620009	Injector	1
9	1495413	Hose	1
10	1553838	Governor	1
11	1553832	Gasket	1
12	1553799	Clamp	2
13	1573120	Hose (Fuel)	1
14	1361878	Screw	2
15	1581048	Fuel Filter (LPG Vapor)	1
15	1583593	Kit-Cover	1
15	1581051	Setscrew	1
15	1581050	Screw	3
15	1581052	Fuel Filter (With O-Ring)	1
15	1581049	Spring	1
16	1548352	Sensor (Boost, M.A.P.)	1
17	1582324	Screw	2
18	1361871	Clamp	1
19	1366933	Clamp	2
20	1573564	Hose (PCV)	1
21	1573021	Bracket (Throttle)	1
22	1361898	Bolt	2
23	1582321	Bolt	2
	1374788	Valve (Delay) (Not illustrated) (☞ Figure 2-27).....	1

TIMING GEAR COVER AND OIL PAN (FIGURE 2-23)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0L GAS AND LPG)

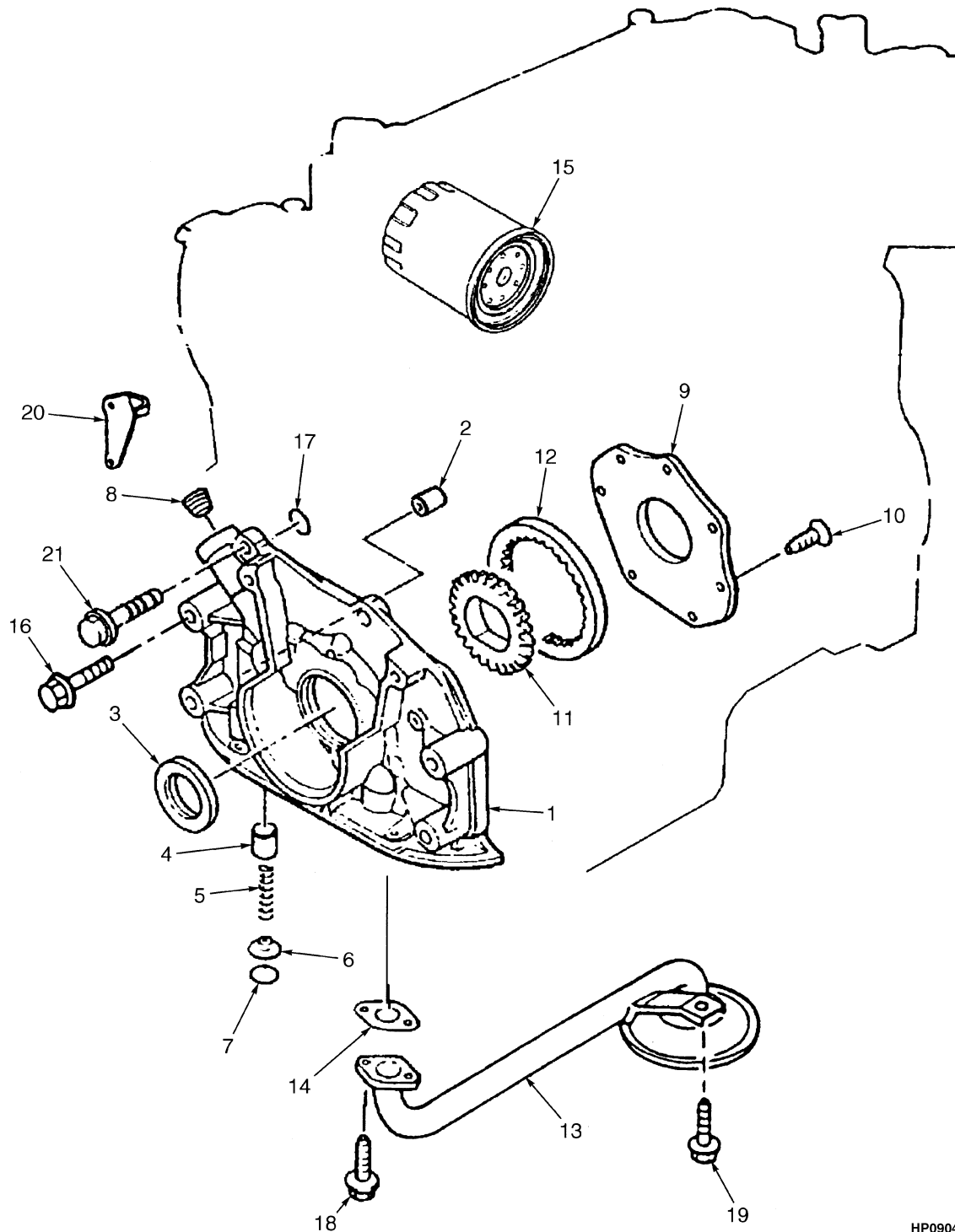


HP091085

TIMING GEAR COVER AND OIL PAN
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0L GAS AND LPG)

ITEM	PART NO.	DESCRIPTION	QTY
	1587841	Long Block (2.0L, Gasoline)	1
	1587843	Long Block (2.0L, LPG)	1
	1587844	Long Block (2.2L, Gasoline)	1
	1587845	Long Block (2.2L, LPG)	1
1	1362001	Bolt	5
2	1553716	Cover (Upper Timing Belt) (2.0L)	1
2	2029084	Cover (Upper Timing Belt) (2.2L)	1
3	1553717	Gasket (2.0L)	1
3	2028854	Gasket (2.2L)	1
4	2051129	Housing (2.2L)	1
4	1553715	Housing (2.0L)	1
5	1361688	Oil Seal	1
6	1361692	Connector	1
7	1362012	Stud	2
8	326504	Nut	1
9	1361679	Gasket	1
10	1361689	Cover	1
11	1361691	Oil Seal (Rear)	1
12	1362010	Pin	2
13	1362011	Bolt	6
14	1371652	Cover	1
15	1361690	Gasket	1
16	1361680	Oil Pan (2.0L)	1
16	2029082	Oil Pan (2.2L)	1
17	1362015	Gasket	1
18	1361681	Drain Plug	1
19	1370736	Capscrew	19
20	1361682	Gasket (Oil Pan)	1
21	1370737	Grease	1
22	2051128	Cover	1
23	2028853	Gasket	1
24	2029086	Bolt	1
25	1369993	Bolt	2
	2045036	Kit-Gasket	1

OIL PUMP AND FILTER (FIGURE 2-24)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES
 (→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))
 (S/N L177B15512E → 2.0 GAS AND LPG)



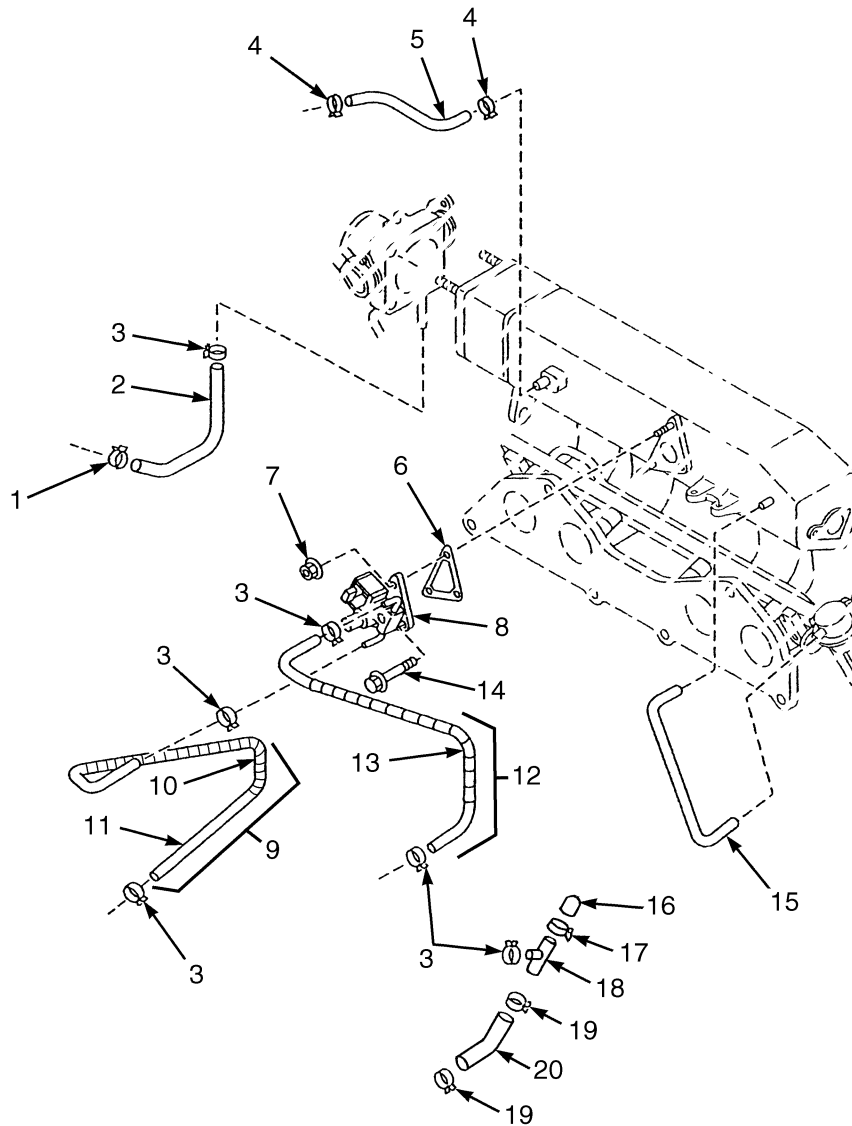
HP090491

OIL PUMP AND FILTER**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B16206E (2.2L LPG))****(S/N L177B15512E → 2.0 GAS AND LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
	1587841	Long Block (2.0L, Gasoline)	1
	1587843	Long Block (2.0L, LPG)	1
	1587844	Long Block (2.2L, Gasoline)	1
	1587845	Long Block (2.2L, LPG)	1
1	1455676	Engine Oil Pump	1
2	1361798	Pin (Timing Indicator)	2
3	1361688	Oil Seal	1
4	1455674	Plunger	1
5	326748	Spring	1
6	326749	Spring Seat	1
7	1361879	Snap Ring	1
8	1495426	Plug	1
9	2029100	Cover	1
10	1455677	Screw	7
11	2029101	Gear	1
12	2029102	Gear	1
13	1361806	Strainer	1
14	1361807	Gasket	1
15	324692	Oil Filter	1
16	1553878	Bolt	2
17	1361801	O-Ring	1
18	1361878	Screw	2
19	1361868	Screw	1
20	1495427	Pin (Top Indicator)	1
21	2029103	Bolt	6

EMISSIONS LINES (FIGURE 2-25)

MAZDA 2.0L AND 2.2L, GASOLINE — 2006 EMISSION COMPLIANT ENGINES
(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B15511E 2.0 GAS)



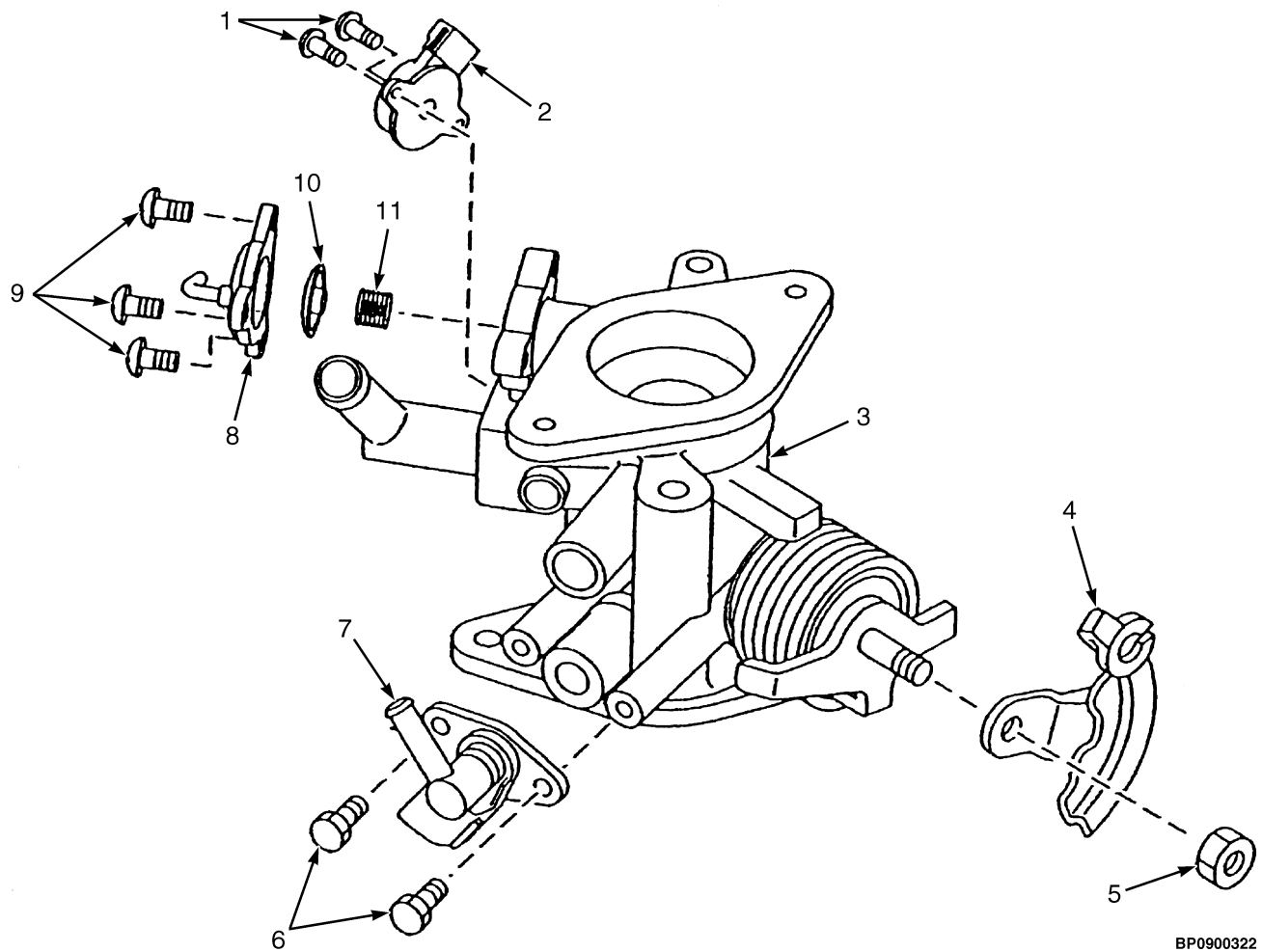
HP091246

EMISSIONS LINES**MAZDA 2.0L AND 2.2L, GASOLINE – 2006 EMISSION COMPLIANT ENGINES****(→ S/N L177B15326E (2.2L GAS)) (→ S/N L177B15511E 2.0 GAS)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1361873	Clamp	1
2	1553867	Radiator Hose	1
3	1495429	Hose Clamp	6
4	1366933	Clamp	2
5	1553868	Hose (PCV)	1
6	1553871	Gasket	1
7	2066629	Nut	2
8	1553870	Valve (Idle Air Control)	1
9	1574101	Hose Assy	1
10	1553829	Support	1
11	1553866	Radiator Hose	1
12	1573561	Cap (Water)	1
13	1553948	Protector	1
14	1362011	Bolt	1
15	1553869	Tube (Vacuum)	1
16	1574098	Cap	2
17	1573568	Clamp	1
18	1574097	Pipe (Air Intake)	1
19	1573567	Clamp	2
20	1574099	Hose (Water) (Water)	1

CARBURETOR (FIGURE 2-26)

MAZDA 2.0L AND 2.2L LPG — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15511E 2.0 LPG)
(→ S/N L177B16206E (2.2L LPG))



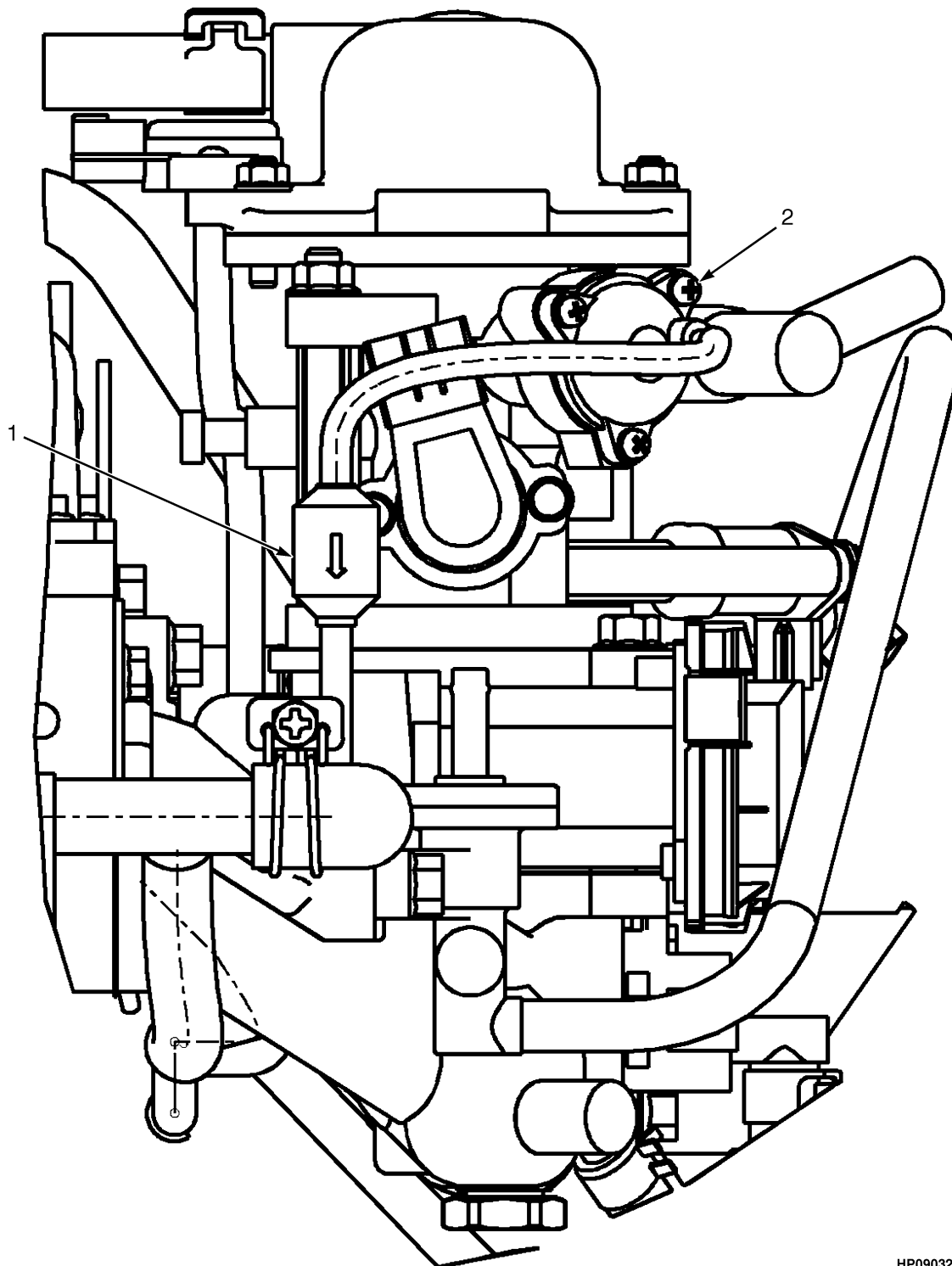
BP0900322

CARBURETOR

**MAZDA 2.0L AND 2.2L LPG – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15511E 2.0 LPG)
(→ S/N L177B16206E (2.2L LPG))**

ITEM	PART NO.	DESCRIPTION	QTY
	1573119	Carburetor (LPG)	1
1	1652216	Screw (Sensor)	2
2	1639791	Sensor (Throttle Position)	1
3		Body	1
4	2051839	Lever (Throttle)	1
5	1652217	Nut	1
6	1616236	Setscrew	1
7	1620009	Injector	1
8	2051836	Cover (Power Valve)	1
9	1652215	Screw (Diaphragm)	3
10	2051834	Diaphragm (Power)	1
11	2051835	Spring (Power)	1

DELAY VALVE (FIGURE 2-27)
MAZDA 2.0L AND 2.2L LPG (→ S/N L177B11511E (2.0L LPG))
(S/N L177B11108D ↔ S/N L177B16206E 2.2L LPG)



HP090323

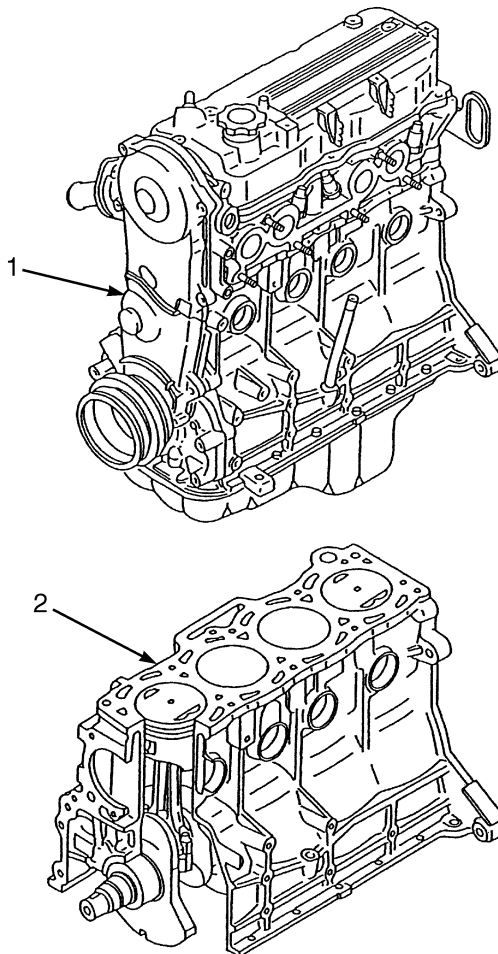
DELAY VALVE

**MAZDA 2.0L AND 2.2L LPG (→ S/N L177B11511E (2.0L LPG))
(S/N L177B11108D ↔ S/N L177B16206E 2.2L LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1374788	Valve (Delay)	1
2	1573119	Carburetor	1

ASSEMBLED ENGINE (FIGURE 2-28)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → 2.0L GAS AND LPG)
(S/N L177B16207E → (2.2L LPG))



BP090335

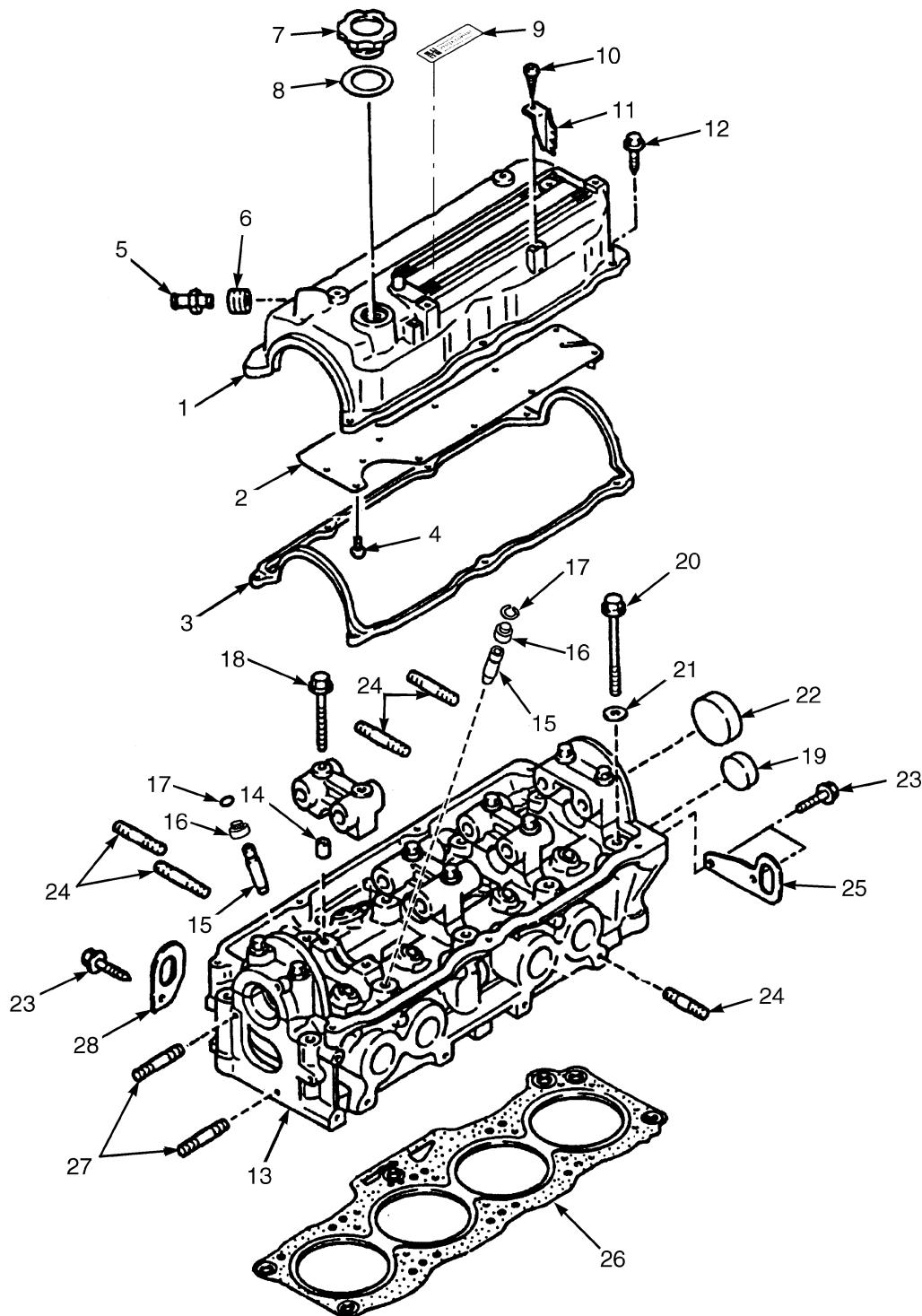
ITEM	PART NO.	DESCRIPTION	QTY
1	1652304	Long Block (Mazda 2.0L, Gasoline)	1
1	1652302	Long Block (Mazda 2.0L, LPG)	1
1	1652306	Long Block (Mazda 2.2L, Gasoline)	1
1	1652305	Long Block (Mazda 2.2L, LPG)	1
2	1553650	Short Block (Mazda 2.0L, Gasoline)	1
2	1572387	Short Block (Mazda 2.0L, LPG)	1
2	1553652	Short Block (Mazda 2.2L, Gasoline)	1
2	1572388	Short Block (Mazda 2.2L, LPG)	1

NOTES

[illegible]

CYLINDER HEAD (FIGURE 2-29)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(→ S/N L177B15327E 2.2L GAS) (S/N L177B15512E → 2.0L GAS AND LPG)
(S/N L177B16207E → 2.2L LPG)



HP091088

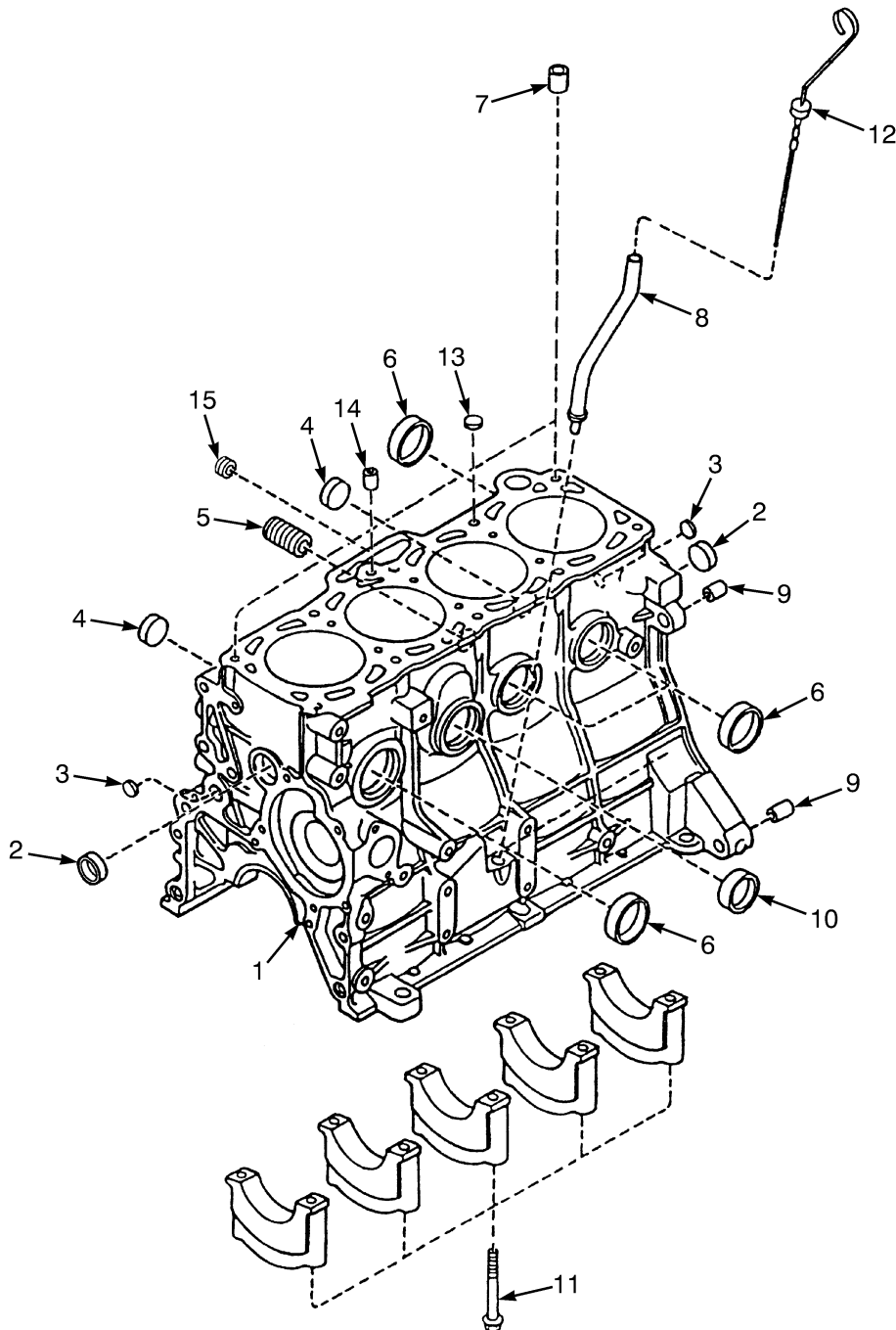
CYLINDER HEAD**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES****(→ S/N L177B15327E 2.2L GAS) (S/N L177B15512E → 2.0L GAS AND LPG)****(S/N L177B16207E → 2.2L LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
	1652304	Long Block (2.0L, Gasoline)	1
	1652302	Long Block (2.0L, LPG)	1
	1652306	Long Block (2.2L, Gasoline)	1
	1652305	Long Block (2.2L, LPG)	1
1	1360883	Engine Cover (LPG)	1
1	1553693	Engine Cover (Gasoline)	1
2	1360884	Plate	1
3	1360886	Gasket	1
4	2022655	Screw	10
5	1553692	PCV Valve	1
6	1360892	Seal	1
7	1360887	Cap	1
8	1360888	Gasket	1
9		Label	1
10	1362000	Screw	2
11	1360885	Bracket	2
12	1362001	Bolt	7
13	1360878	Cylinder Head	1
14	1362002	Pin	10
15	1360895	Guide	8
16	b 1361718	Seal (Inlet)	4
16	a 1361719	Seal (Exhaust)	4
17	1360879	Clip	1
18	1361894	Bolt	10
19	1362003	Plug	1
20	1360880	Bolt	10
21	1360881	Washer	10
22	1360882	Cap	8
23	1361898	Bolt	3
24	1361897	Stud	20
25	2314973	Hanger	1
26	2045321	Gasket (Cylinder Head)	1
27	1361899	Stud	2
28	1360890	Bracket	1

FOOTNOTES:**a** Black**b** Red/Brown

CYLINDER BLOCK (FIGURE 2-30)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))



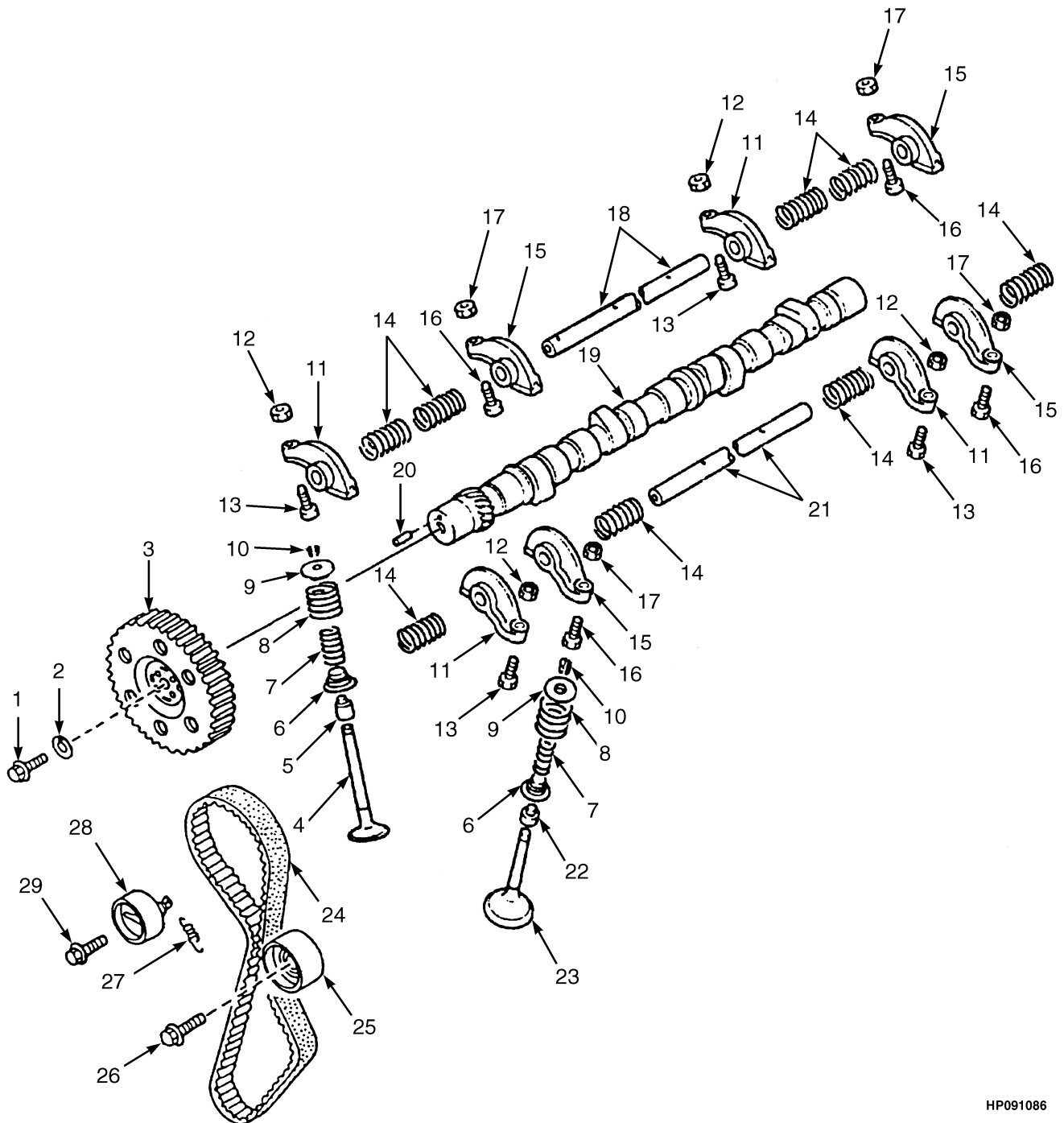
BP090328

CYLINDER BLOCK

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))

ITEM	PART NO.	DESCRIPTION	QTY
	1652304	Long Block (2.0L, Gasoline)	1
	1652302	Long Block (2.0L, LPG)	1
	1652306	Long Block (2.2L, Gasoline)	1
	1652305	Long Block (2.2L, LPG)	1
	1553650	Short Block (2.0L, Gasoline)	1
	1572387	Short Block (2.0L, LPG)	1
	1553652	Short Block (2.2L, Gasoline)	1
	1572388	Short Block (2.2L, LPG)	1
1	1553710	Cylinder Block (2.0L)	1
1	1370744	Cylinder Block (2.2L)	1
2	1362009	Plug	1
3	1361675	Plug	2
4	1362005	Plug	2
5	1360898	Gasket	1
6	1362003	Plug	4
7	1360896	Pin	2
8	1360899	Tube Assy	1
9	1362008	Pin	2
10	1362007	Plug	2
11	1361676	Bolt	10
12	1361677	Dipstick	1
13	2028927	Plug	1
14	2029081	Plug	2
15	1553708	Plug	2

CAMSHAFT AND VALVES (FIGURE 2-31)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
 (S/N L177B15327E → 2.2L GAS) (S/N L177B15512E → (2.0L GAS AND LPG))
 (S/N L177B16207E → (2.2L LPG))



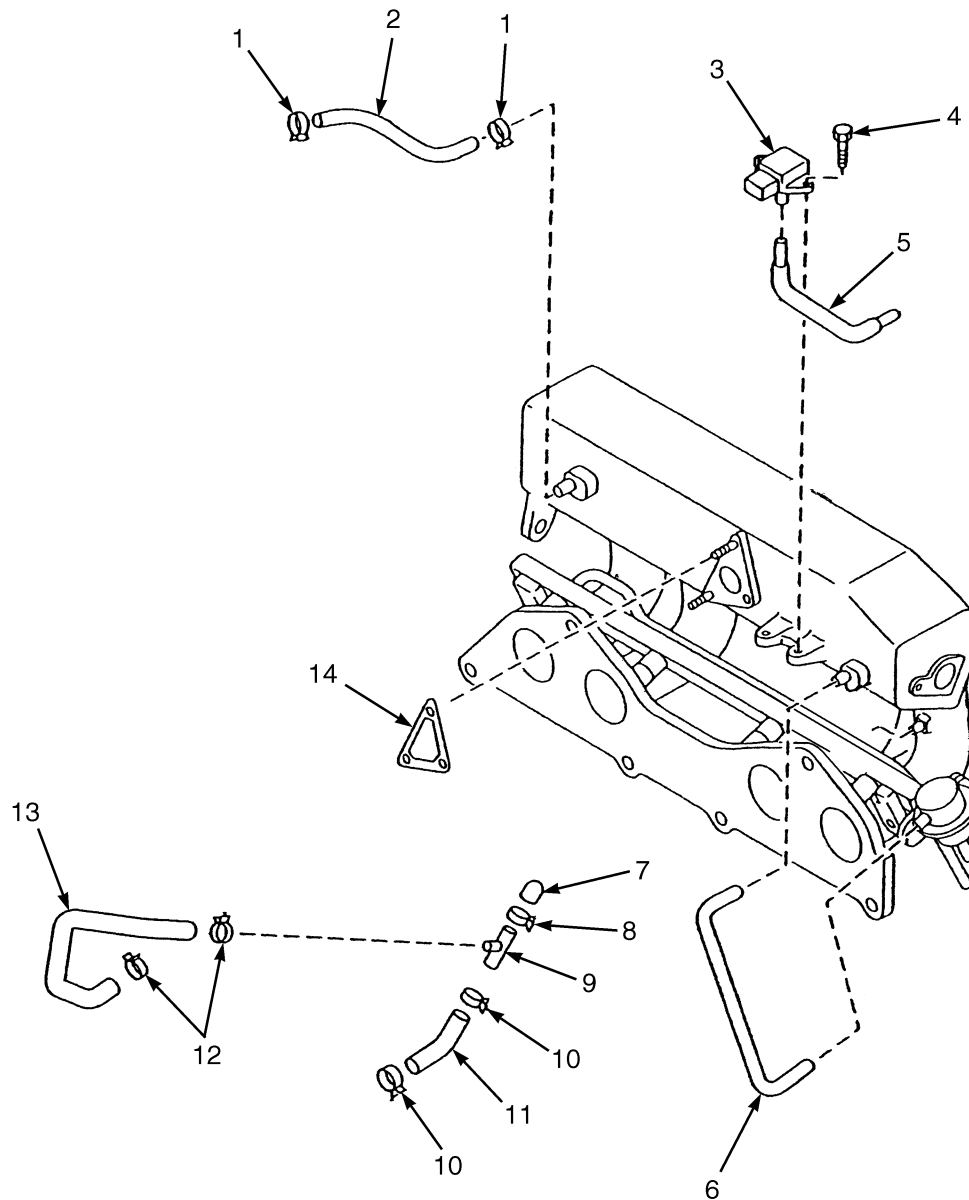
HP091086

CAMSHAFT AND VALVES

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → 2.2L GAS) (S/N L177B15512E → (2.0L GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))

ITEM	PART NO.	DESCRIPTION	QTY
	1652304	Long Block (2.0L, Gasoline)	1
	1652302	Long Block (2.0L, LPG)	1
	1652306	Long Block (2.2L, Gasoline)	1
	1652305	Long Block (2.2L, LPG)	1
1	1361736	Bolt	1
2	1361737	Washer	1
3	2029095	Pulley (Camshaft)	1
4	1361720	Inlet Valve (Intake)	4
5	1361718	Seal	4
6	1361724	Valve Seat	8
7	1361723	Spring (Intake Valve)	8
8	1361722	Spring (Exhaust Valve)	8
9	1361721	Valve Seat	8
10	326612	Keeper	16
11	1361726	Rocker Arm	4
12	1361728	Nut	1
13	1361727	Screw	1
14	1361731	Spring	8
15	1361729	Rocker Arm	4
16	1361727	Screw	1
17	1361728	Nut	1
18	1361730	Shaft	1
19	1361734	Camshaft	1
20	1361717	Pin	1
21	1361732	Shaft	1
22	1361719	Seal	4
23	1361725	Exhaust Valve	4
24	1553762	Timing Belt (2.0L)	1
24	2028852	Timing Belt (2.2L)	1
25	2029098	Idler Pulley	1
26	1361884	Bolt	1
27	1553763	Support (2.0L)	1
27	2029096	Spring (2.2L)	1
28	2029097	Belt Tensioner	1
29	1362016	Bolt	1

EMISSION CONTROL SYSTEM (FIGURE 2-32)
MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15512E → (2.0L GAS)) (S/N L177B15327E → (2.2L GAS))



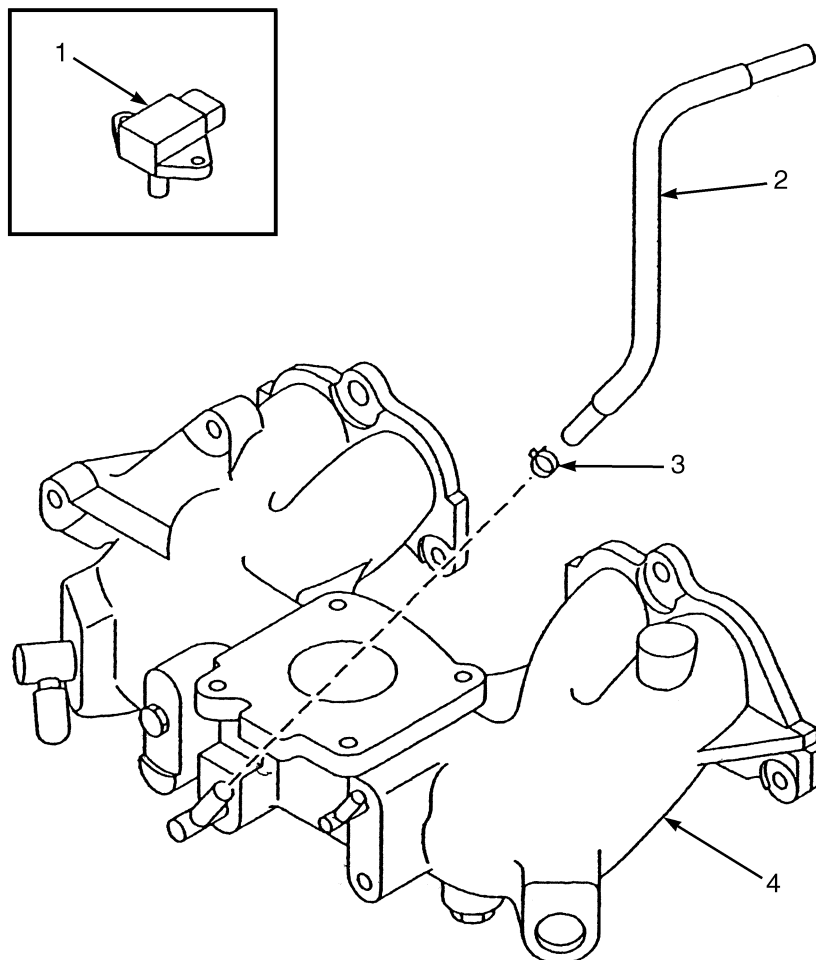
BP090333

EMISSION CONTROL SYSTEM
MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15512E → (2.0L GAS)) (S/N L177B15327E → (2.2L GAS))

ITEM	PART NO.	DESCRIPTION	QTY
1	1366933	Clamp	2
2	1553868	Hose	1
3	1548352	Sensor (Boost, M.A.P.)	1
4	1582324	Screw	2
5	1495413	Hose	1
6	1553869	Tube	1
7	1574098	Cap	1
8	1573568	Clamp	1
9	1574097	Pipe	1
10	1573567	Clamp	2
11	1574099	Hose (Water)	1
12	1495429	Hose Clamp	2
13	1652399	Hose (Water)	1
14	1553871	Gasket	1
	1574096	Tube (Not Illustrated)	1

MAP SENSOR (FIGURE 2-33)

**MAZDA 2.0L AND 2.2L, LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15512E → 2.0L LPG)
(S/N L177B16207E → (2.2L LPG))**



BP090334

ITEM	PART NO.	DESCRIPTION	QTY
1	1548352	Sensor (Boost, M.A.P.)	1
2	1652417	Hose (PCV)	1
3	1361872	Clamp	1
4	a 1652333	Intake Manifold	1
4	b 1687035	Intake Manifold	1

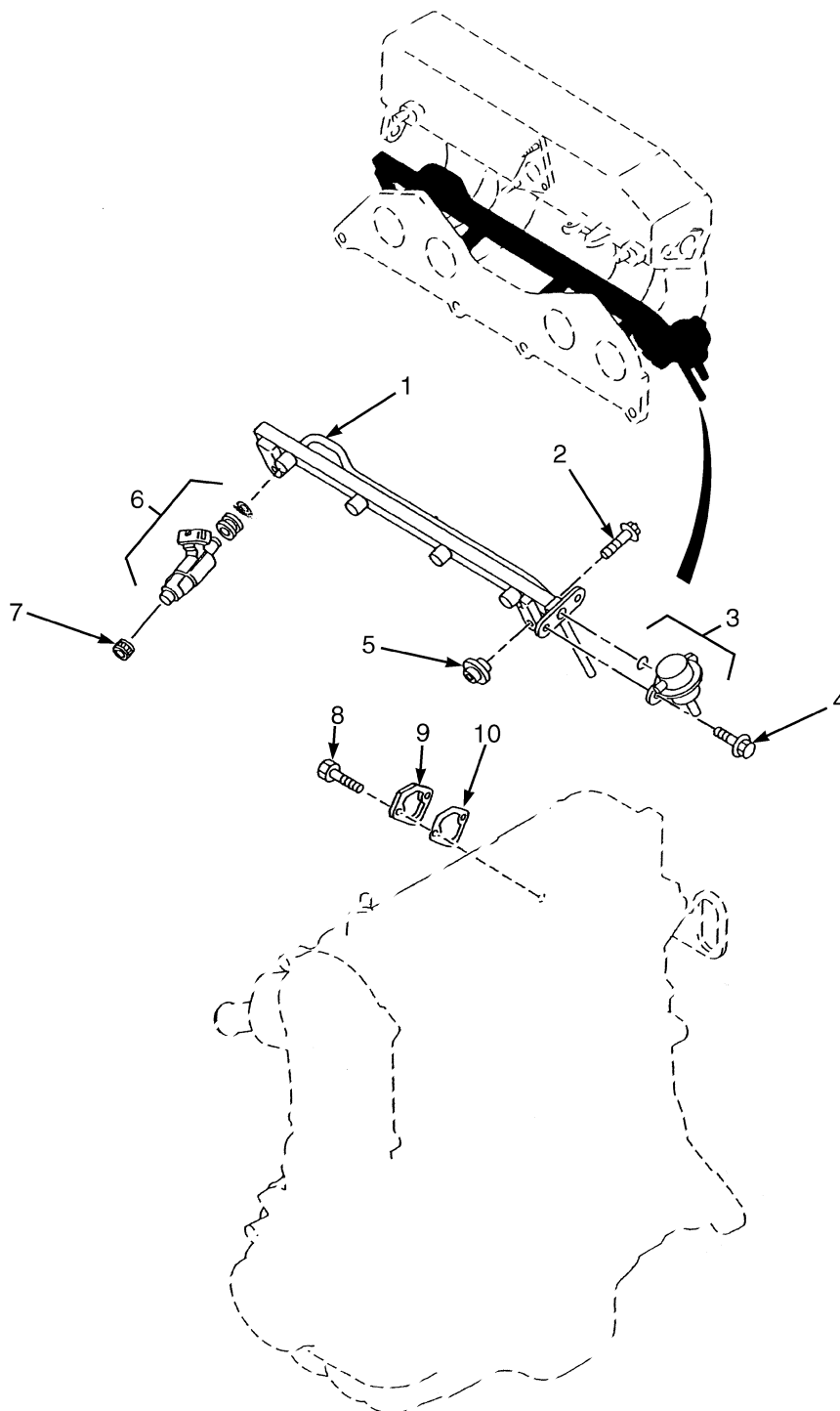
FOOTNOTES:

a → S/N L177V01503F INC. 01695, 01756, 01759,
01819-01820, 01825-01827

b S/N L177V01504F → EXC. 01695, 01756, 01759,
01819-01820, 01825-01827

ENGINE FUEL SYSTEM (FIGURE 2-34)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))



BP090336

KEY:

A: Gasoline

B: LPG

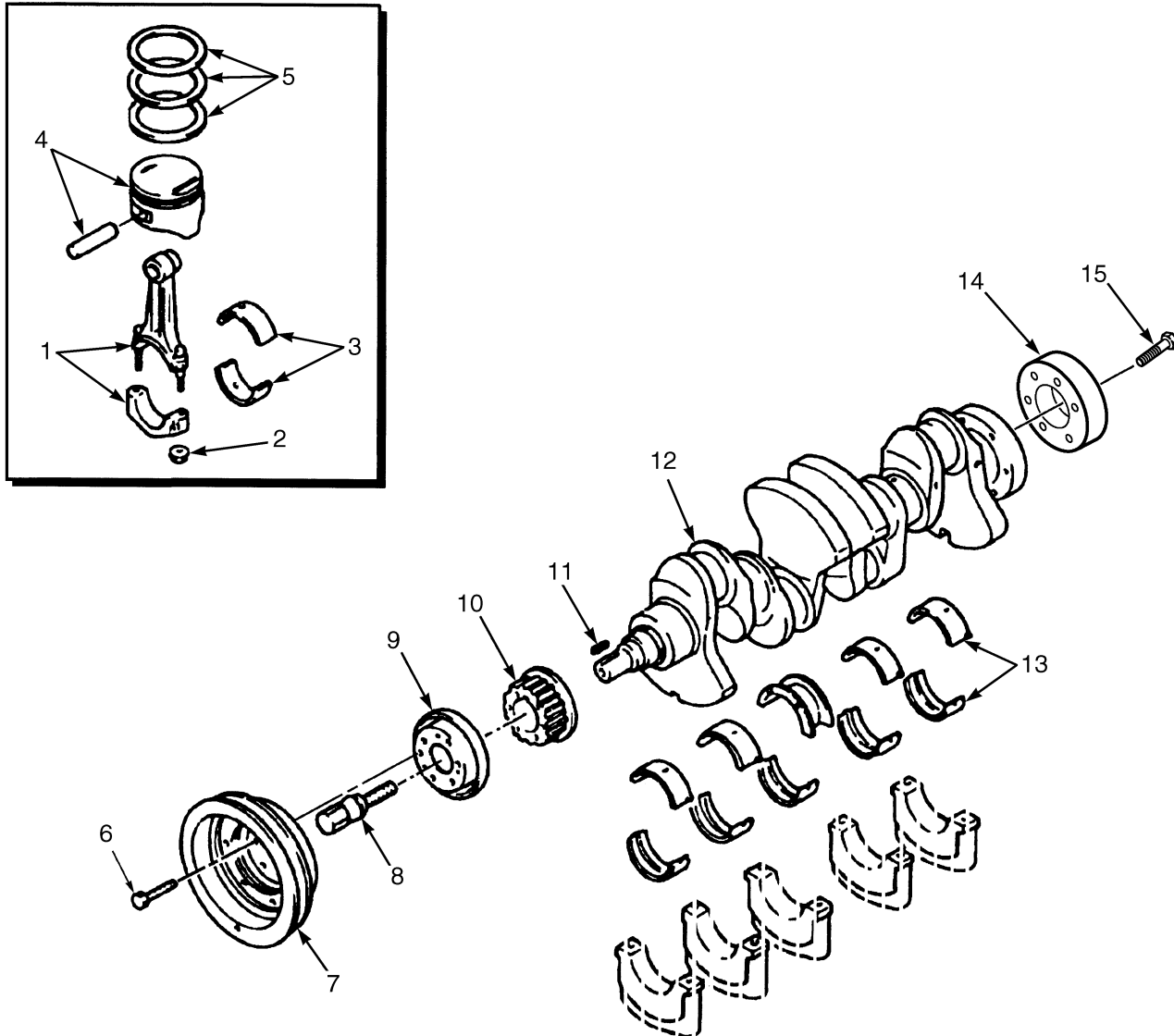
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1553831	Manifold	1	..
2	1553839	Bolt	2	..
3	1553840	Pressure Regulator	1	..
3	1553841	O-Ring	1	..
4	1361893	Screw	2	..
5	1553830	Insulator	2	..
6	1553833	Injector	1	..
6	1553834	Grommet	1	..
6	1553835	O-Ring	1	..
7	1553837	Insulator	4	..
8	1361898	Bolt	2	2
9	1361749	Cover	2	2
10	1361756	Gasket	1	1

NOTES

[illegible]

CRANKSHAFT AND PISTONS (FIGURE 2-35)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))



HP090487

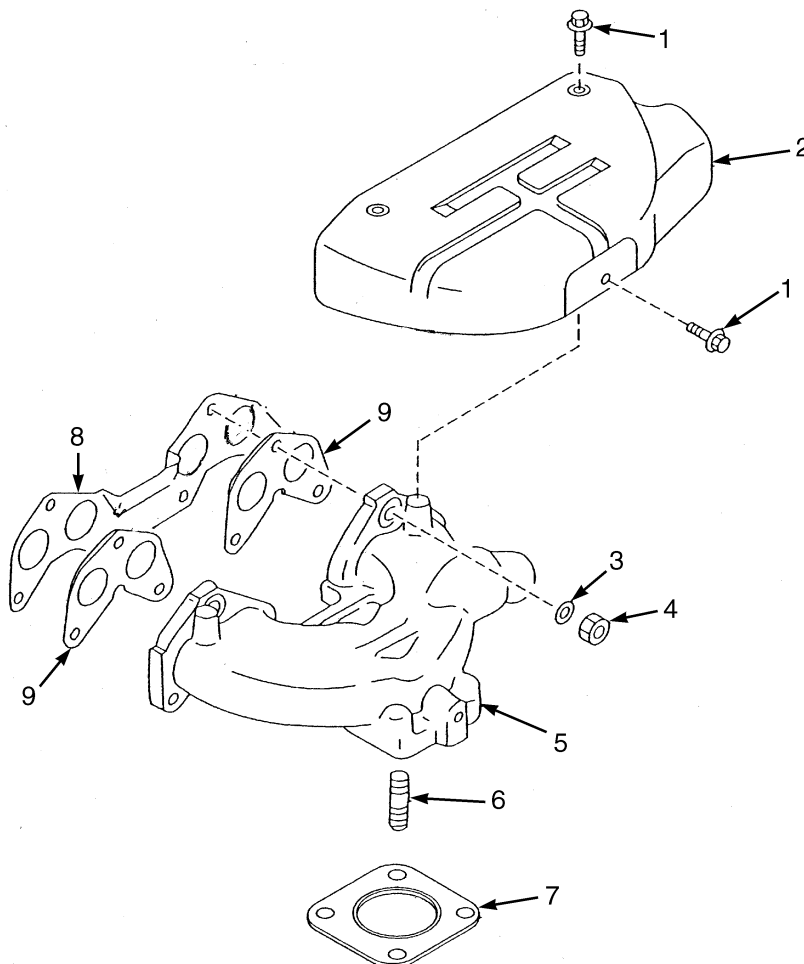
CRANKSHAFT AND PISTONS

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))

KEY:**A: Gasoline****B: LPG**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1652304	Long Block (2.0L, Gasoline)	1	..
	1652302	Long Block (2.0L, LPG)	..	1
	1652306	Long Block (2.2L, Gasoline)	1	..
	1652305	Long Block (2.2L, LPG)	..	1
1	1361694	Rod Assy (2.0L)	4	4
1	1370746	Rod Assy (2.2L)	4	4
2	1361695	Nut	2	2
3	1361703	Piston Rod Bearing (Standard)	1	1
3	1361704	Piston Rod Bearing (0.25 mm)	1	1
3	1361705	Piston Rod Bearing (0.50 mm)	1	1
3	1361706	Piston Rod Bearing (0.75 mm)	1	1
4	1572593	Piston and Rod (Standard) (2.0L)	..	4
4	1361714	Piston and Rod (Standard) (2.0L)	4	..
4	1572597	Piston (0.25 mm) (2.0L)	..	4
4	1361715	Piston (0.25 mm) (2.0L)	4	..
4	1572595	Piston (0.50 mm) (2.0L)	..	4
4	1361716	Piston (0.50 mm) (2.0L)	4	..
4	1572594	Piston and Rod (Standard) (2.2L)	..	4
4	1370745	Piston and Rod (Standard) (2.2L)	4	..
4	1572596	Piston (0.50 mm) (2.2L)	..	4
4	1572598	Piston (0.25 mm) (2.2L)	..	4
4	2029093	Piston (0.25 mm) (2.2L)	4	..
4	2029094	Piston (0.50 mm) (2.2L)	4	..
5	1495473	Kit-Piston Ring (Standard)	1	1
5	1495475	Kit-Piston Ring (0.25 mm)	1	1
5	1495474	Kit-Piston Ring (0.50 mm)	1	1
6	1361700	Bolt	6	6
7	1553722	Crankshaft Pulley	1	..
8	2045034	Bolt	1	..
9	2045033	Plate	1	1
10	2045030	Pulley	1	1
11	1361697	Key	1	1
12	1361696	Crankshaft (2.0L)	1	1
12	2045029	Crankshaft (2.2L)	1	1
13	1361710	Kit-Crankshaft Bearing (Standard)	1	1
13	1361713	Crankshaft Bearing (0.25 mm)	1	1
13	1361711	Crankshaft Bearing (0.50 mm)	1	1
13	1361712	Crankshaft Bearing (0.75 mm)	1	1
14	2021442	Plate	1	1
15	2021438	Bolt	1	1

EXHAUST MANIFOLD (FIGURE 2-36)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
 (S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0 GAS AND LPG))
 (S/N L177B16207E → 2.2L LPG)



BP090330

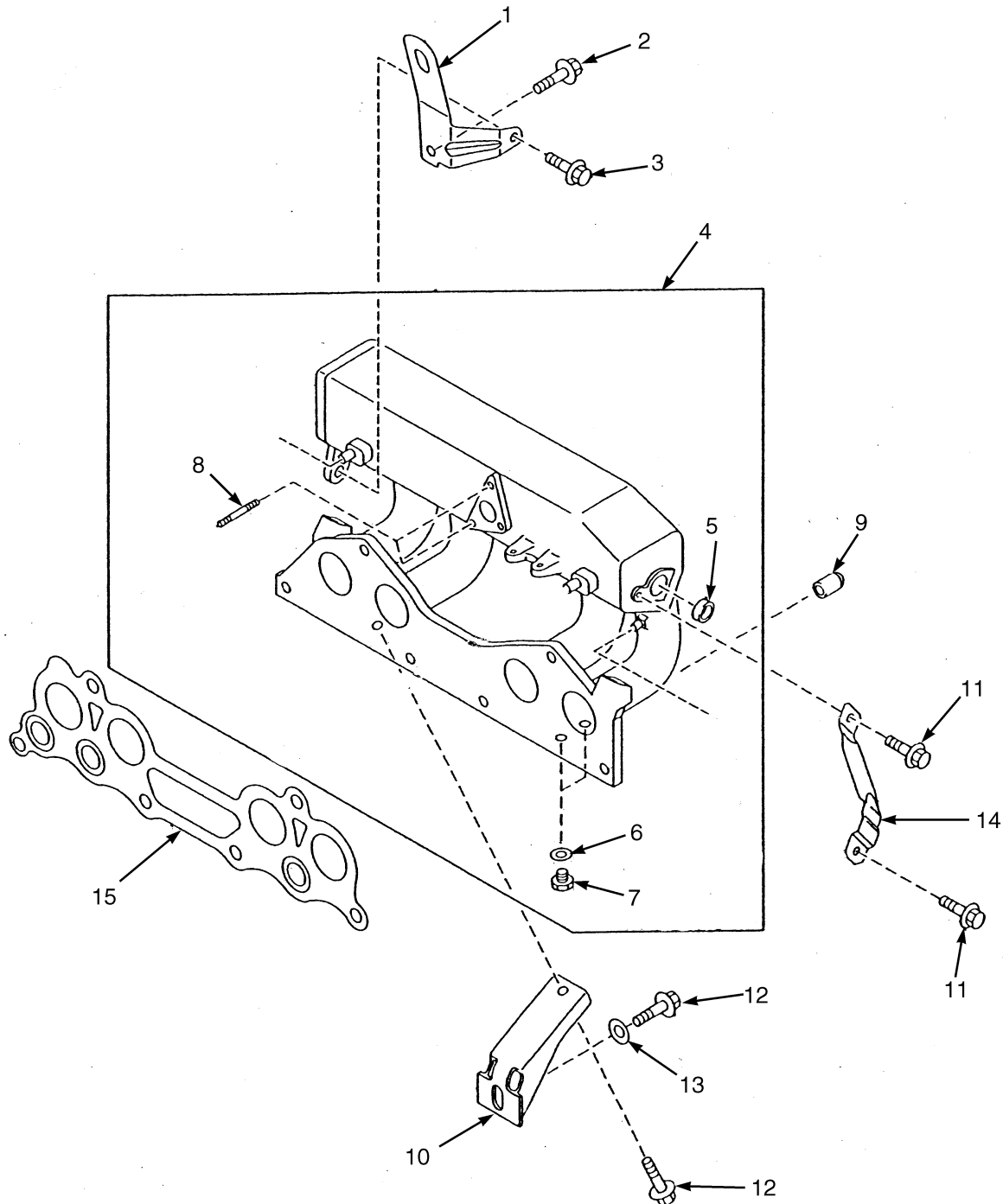
ITEM	PART NO.	DESCRIPTION	QTY
1	1361898	Bolt	3
2	1370691	Cover	1
3	1370690	Washer	6
4	1361746	Nut	6
5	1370688	Exhaust Manifold	1
6	1361745	Stud	4
7	1338308	Gasket	1
7	1528937	Gasket (Alternate Part)	1
8	1361747	Gasket	1
9	1370689	Gasket	2

NOTES

[illegible]

INTAKE MANIFOLD (FIGURE 2-37)

MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → 2.2L GAS) (S/N L177B15512E → 2.0L GAS)



BP090331

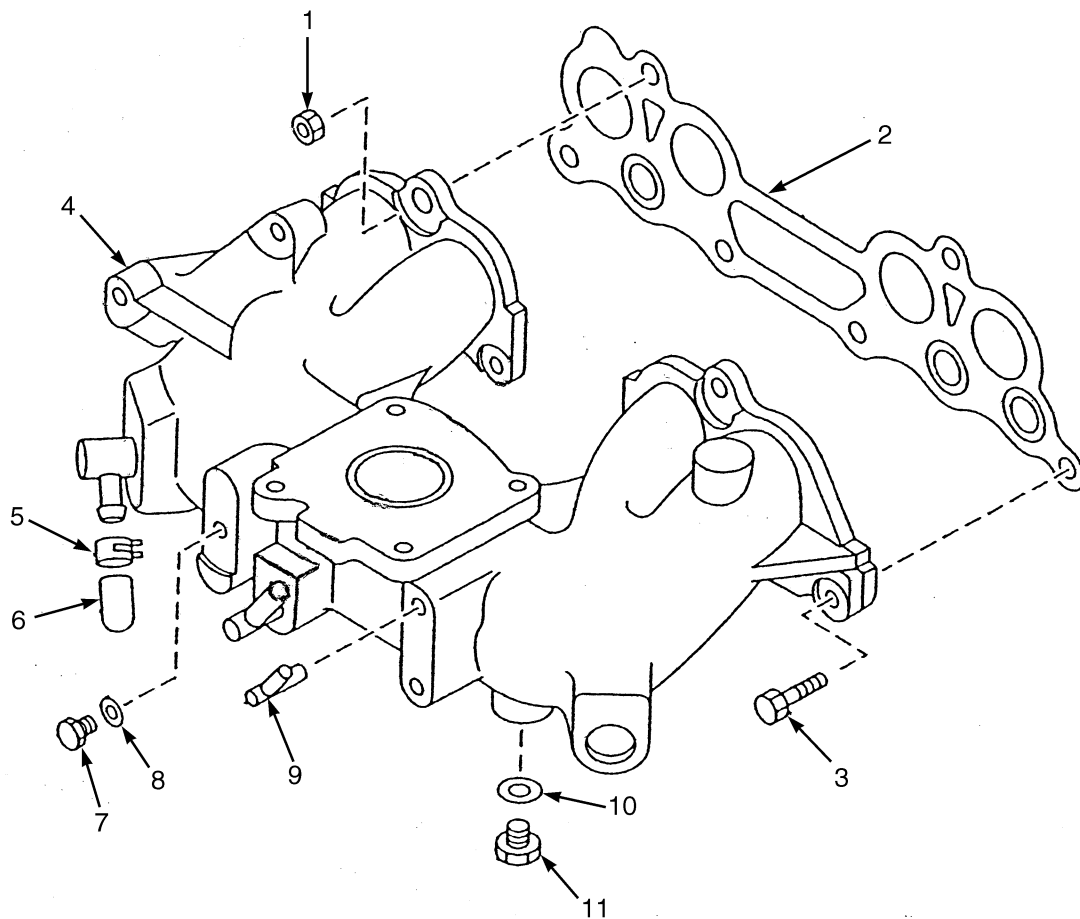
INTAKE MANIFOLD

**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E → 2.2L GAS)
(S/N L177B15512E → 2.0L GAS)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1553779	Bracket	1
2	1361881	Bolt	1
3	324706	Bolt	2
4	1652327	Intake Manifold	1
5	1362005	Plug	1
6	1368743	Seal	2
7	1366902	Bolt	2
8	1553774	Stud	2
9	2023551	Cap	1
10	1553778	Bracket	1
11	1366874	Bolt	2
12	1370675	Bolt	1
13	1652328	Washer	1
14	1553777	Bracket	1
15	1553776	Gasket	1

INTAKE MANIFOLD (FIGURE 2-38)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15512E → 2.0L LPG)
(S/N L177B16207E → (2.2L LPG))



BP090332

INTAKE MANIFOLD

**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15512E → 2.0L LPG)
(S/N L177B16207E → (2.2L LPG))**

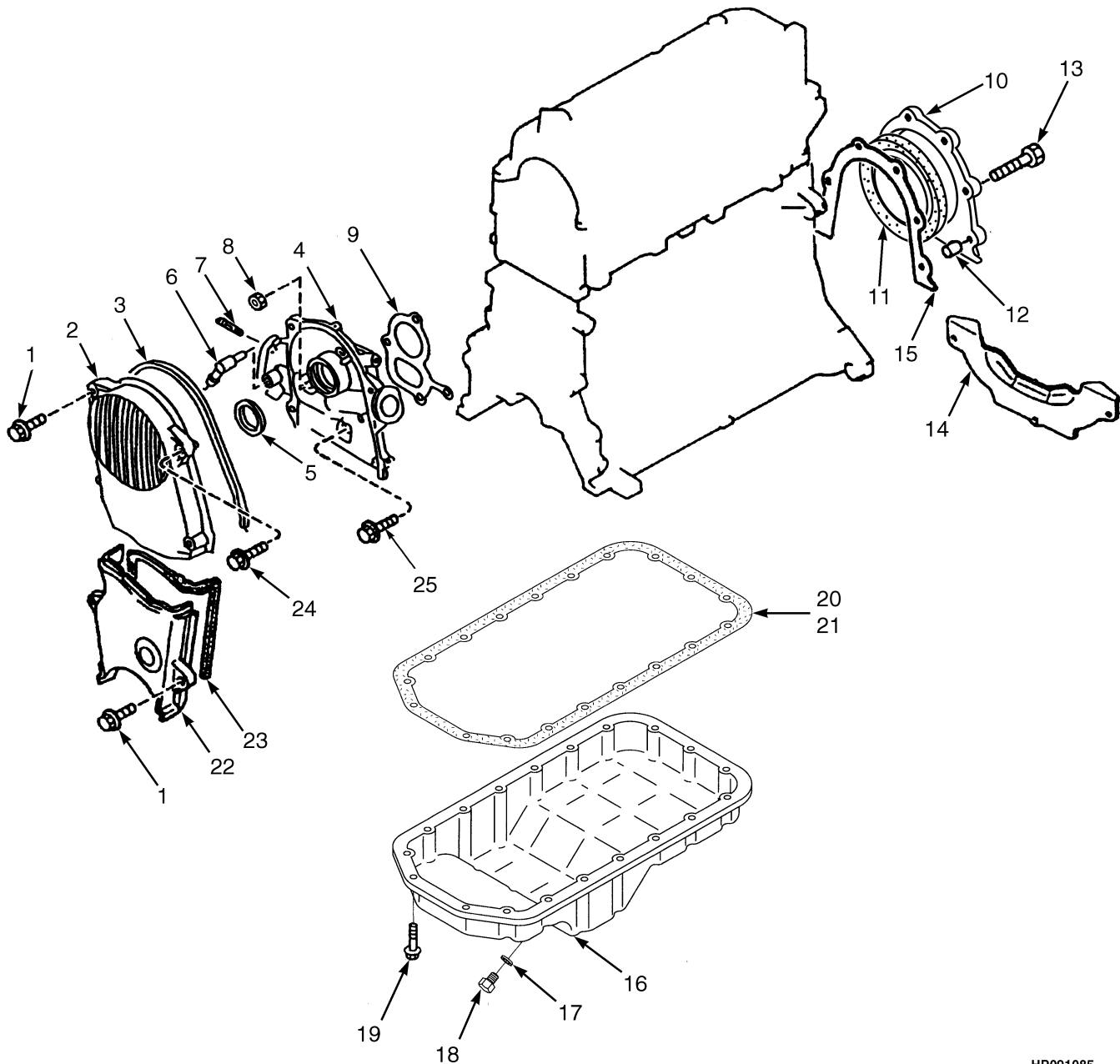
ITEM	PART NO.	DESCRIPTION	QTY
1	326504	Nut	4
2	1553776	Gasket	1
3	1361885	Bolt	2
4	a 1652333	Intake Manifold (LPG)	1
4	b 1687035	Intake Manifold (LPG)	1
5	1361873	Clamp	1
6	1361741	Cap	1
7	1369861	Plug	1
8	1368886	Washer	1
9	1652334	Connector	1
10	1368743	Seal	1
11	1366902	Bolt	1

FOOTNOTES:

a → S/N L177V01503F INC. 01695, 01756, 01759,
01819-01820, 01825-01827

b S/N L177V01504F → EXC. 01695, 01756, 01759,
01819-01820, 01825-01827

TIMING GEAR COVER AND OIL PAN (FIGURE 2-39)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2007 EMISSION COMPLIANT ENGINES
 (S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0 GAS AND LPG))
 (S/N L177B16207E → (2.2L LPG))



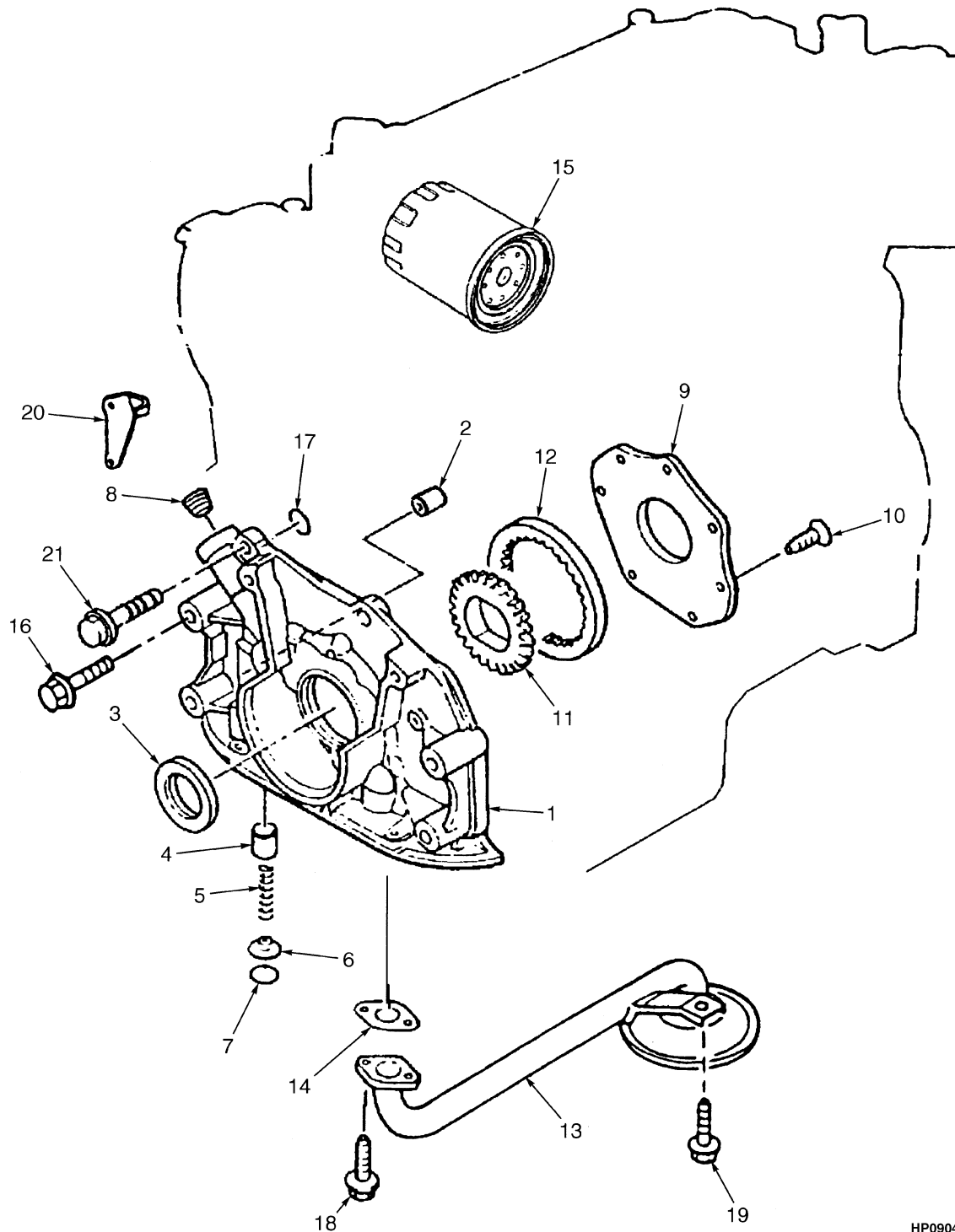
HP091085

TIMING GEAR COVER AND OIL PAN
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0 GAS AND LPG))
(S/N L177B16207E → (2.2L LPG))

ITEM	PART NO.	DESCRIPTION	QTY
	1652304	Long Block (2.0L Gasoline)	1
	1652302	Long Block (2.0L LPG)	1
	1652306	Long Block (2.2L Gasoline)	1
	1652305	Long Block (2.2L, LPG)	1
1	1362001	Bolt	5
2	1553716	Cover (Upper Timing Belt) (2.0L)	1
2	2029084	Cover (Upper Timing Belt) (2.2L)	1
3	1553717	Gasket (2.0L)	1
3	2028854	Gasket (2.2L)	1
4	2051129	Housing (2.2L)	1
4	1553715	Housing (2.0L)	1
5	1361688	Oil Seal	1
6	1361692	Connector	1
7	1362012	Stud	2
8	326504	Nut	2
9	1361679	Gasket	1
10	1361689	Cover	1
11	1361691	Oil Seal (Rear)	1
12	1362010	Pin	2
13	1362011	Bolt	6
14	1371652	Cover	1
15	1361690	Gasket	1
16	1361680	Oil Pan (2.0L)	1
16	2029082	Oil Pan (2.2L)	1
17	1362015	Gasket	1
18	1361681	Drain Plug	1
19	1370736	Capscrew	19
20	1361682	Gasket (Oil Pan)	1
21	1370737	Grease	AR
22	2051128	Cover	1
23	2028853	Gasket	1
24	2029086	Bolt	1
25	1369993	Bolt	2
	2045036	Kit-Gasket	1

OIL PUMP AND FILTER (FIGURE 2-40)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → 2.0 GAS AND LPG)
(S/N L177B16207E → (2.2L LPG))



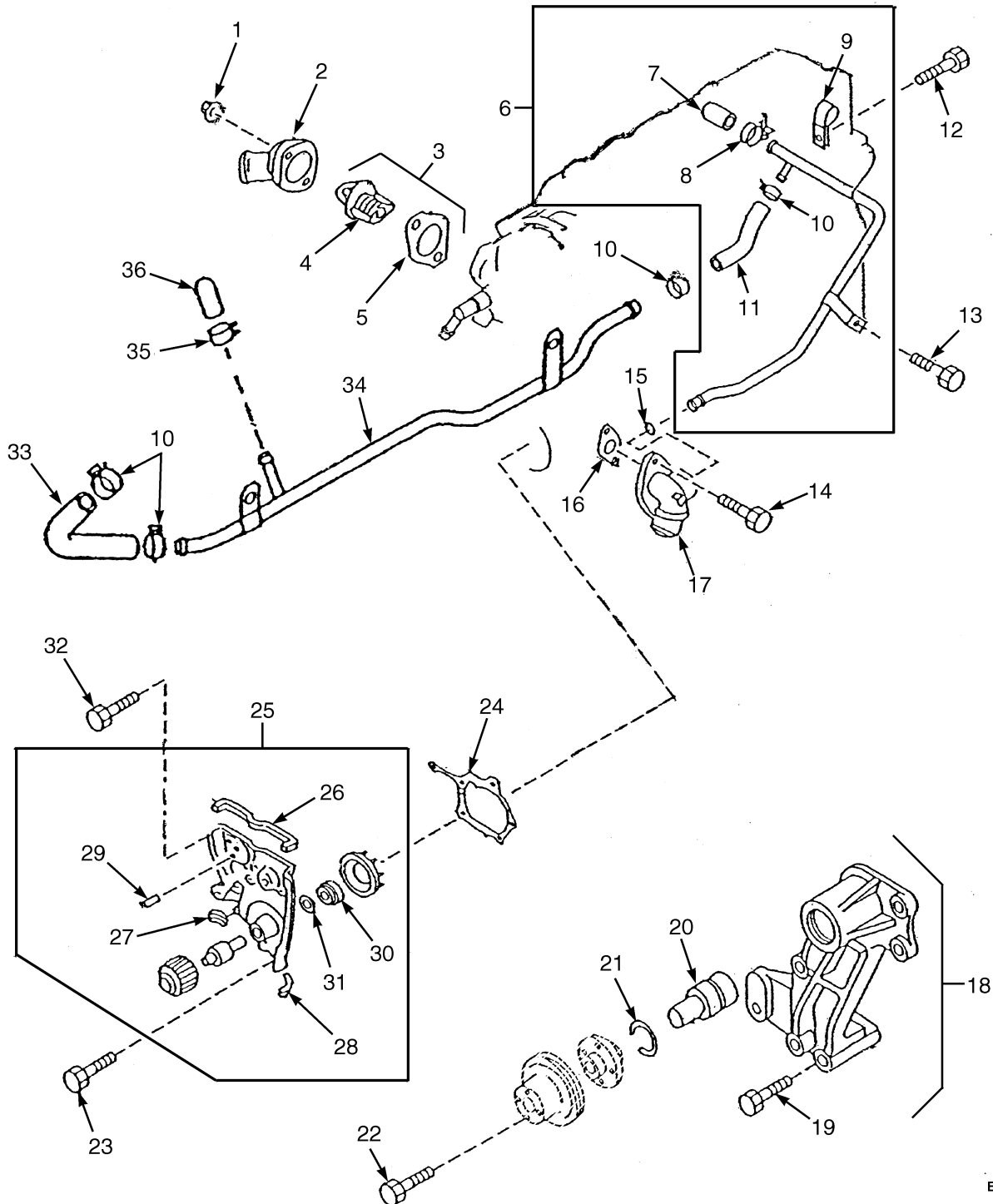
HP090491

OIL PUMP AND FILTER

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → 2.0 GAS AND LPG)
(S/N L177B16207E → (2.2L LPG))

ITEM	PART NO.	DESCRIPTION	QTY
	1652304	Long Block (2.0L, Gasoline)	1
	1652302	Long Block (2.0L, LPG)	1
	1652306	Long Block (2.2L, Gasoline)	1
	1652305	Long Block (2.2L, LPG)	1
1	1455676	Engine Oil Pump	1
2	1361798	Pin (Timing Indicator)	2
3	1361688	Oil Seal	1
4	1455674	Plunger	1
5	326748	Spring	1
6	326749	Spring Seat	1
7	1361879	Snap Ring	1
8	1495426	Plug	1
9	2029100	Cover	1
10	1455677	Screw	7
11	2029101	Gear (Inner)	1
12	2029102	Gear (Outer)	1
13	1361806	Strainer	1
14	1361807	Gasket	1
15	324692	Oil Filter	1
16	1553878	Bolt	2
17	1361801	O-Ring	1
18	1361878	Screw	2
19	1361868	Screw	1
20	1495427	Pin (Top Indicator)	1
21	2029103	Bolt	4

ENGINE COOLING SYSTEM (FIGURE 2-41)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES
 (S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))
 (S/N L177B16207E → 2.2L LPG)

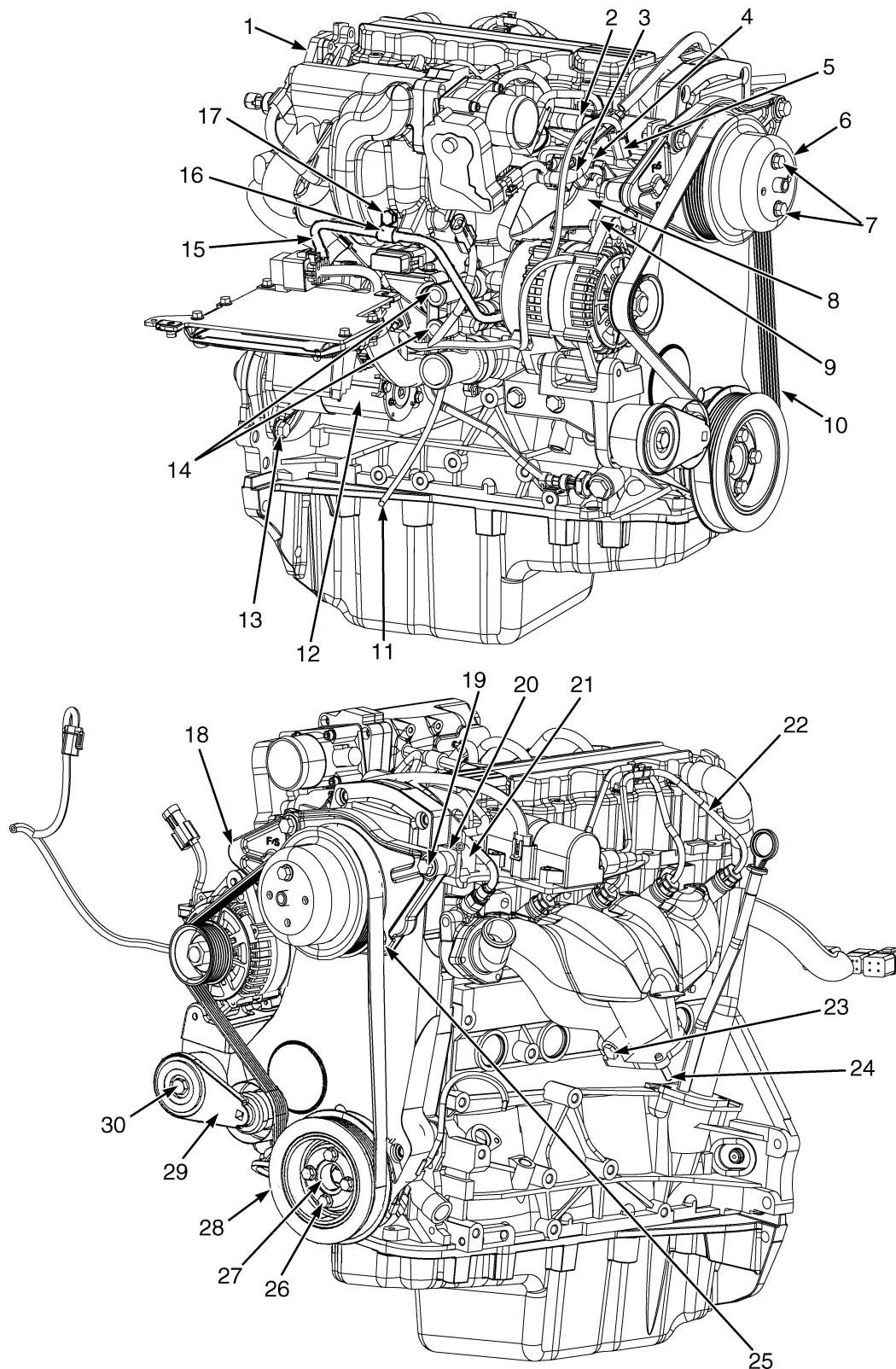


BP090337

ENGINE COOLING SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, 2007 EMISSION COMPLIANT ENGINES****(S/N L177B15327E → (2.2L GAS)) (S/N L177B15512E → (2.0L GAS AND LPG))****(S/N L177B16207E → 2.2L LPG)****KEY:****A: Mazda 2.0L Gasoline****B: Mazda 2.0L LPG****C: Mazda 2.2L Gasoline****D: Mazda 2.2L LPG**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1652302	Long Block	1	..	..	..
	1652304	Long Block	..	1	..	..
	1652305	Long Block	..	..	1	..
	1652306	Long Block	..	..	..	1
1	326504	Nut	2	2	2	2
2	1361821	Cover	1	1	1	1
3	1495428	Thermostat	1	1	1	1
4	2082929	Thermostat	1	1	1	1
5	1367191	Gasket	1	1	1	1
6	1553943	Pipe (Water)	1	1	..	..
6	2045024	Pipe (Water)	..	..	1	1
7	1361836	Cap	1	1	1	1
8	1361886	Clamp	1	1	1	1
9	1361826	Clip	1	1	1	1
10	1361873	Clamp	4	4	4	4
11	2029108	Radiator Hose (Water)	1	1	1	1
12	1361898	Bolt	1	1	1	1
13	2022309	Bolt	1	1	1	1
14	1361875	Screw	2	2	2	2
15	1361827	O-Ring	1	1	1	1
16	2029120	Gasket (Inlet)	1	1	1	1
17	2029112	Adapter	1	1	1	1
18	1573176	Bracket (Fan)	1	1	1	1
19	2045026	Screw	3	3	3	3
20	2029116	Shaft	1	1	3	1
21	2045025	Clip	1	1	1	1
22	324706	Bolt	4	4	4	4
23	1369914	Bolt	5	5	5	5
24	2028645	Gasket	1	1	1	1
25	2078488	Water Pump	1	1	1	1
26	2029107	Seal	1	1	1	1
27	2029102	Gear (Outer)	1	..	1	..
28	2029106	Seal	3	3	3	3
29	1361880	Stud	1	..	1	..
30	1361814	Seal	..	1	..	1
31	1361790	Cap	..	1	..	1
32	2087757	Bolt	1	1	1	1
33	1361825	Radiator Hose	1	1	1	1
34	1361823	Pipe (Water Bypass)	1	1	1	1
35	1495429	Hose Clamp	1	1	1	1
36	1361790	Cap	1	1	1	1

ASSEMBLED ENGINE (FIGURE 2-42) GM 2.4L, GASOLINE AND LPG — SHEET 1 OF 4



BP090369

ASSEMBLED ENGINE
GM 2.4L, GASOLINE AND LPG – SHEET 1 OF 4**KEY:****A: Gasoline****B: LPG**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	b 1501695	Engine Assy-Lpg (GM 2.4L) (2005)	1	1
1	d 1603004	Long Block (GM 2.4L) (2006)	1	1
1	f 1649486	Engine Assy (GM 2.4L) (2007)	1	1
2	1543933	Fitting	1	..
3	168718	Clamp (Worm Screw)	1	..
4	1543900	Hose	1	..
5	1376727	Clamp (Insulated)	2	..
6	c 2085256	Fan Pulley (Fan)	1	1
6	e 2083821	Fan Pulley	1	1
7	293625	Capscrew	4	4
7	a 296418	Washer	4	4
8	2067504	Bracket	1	..
9	1547984	Plate	1	1
10	2070039	V-Belt (Micro V)	1	1
11	1589520	Tube	1	..
12	1548620	Starter	1	1
12	1551845	Solenoid	1	1
12	1551846	Bolt	2	2
13	1510117	Capscrew	3	2
14	1532513	Cap	2	2
15	1589366	Tube	1	..
16	130845	Clamp	2	2
17	1529366	Capscrew	1	1
18	a 1618408	Fan Mount	1	1
18	f 1616288	Fan Mount	1	1
19	1527886	Capscrew	3	3
20	1625323	Bracket Wldmt	1	1
21	1460477	Nut	2	2
22	a 2067623	Kit-Ignition Cable (Spark Plug)	1	1
22	f 2089846	Kit-Ignition Cable (Spark Plug)	1	1
23	1396518	Plug	1	1
23	1509103	Ring (Copper)	1	1
23	1509104	Plug	1	1
24	1567831	Stud (Exhaust)	4	4
25	1527885	Capscrew	2	2
26	1527881	Capscrew	4	4
27	1531254	Spacer (Pulley)	1	1
28	1580793	Crankshaft Pulley	1	1
29	2090303	Belt Tensioner	1	1
30	292521	Capscrew	1	1

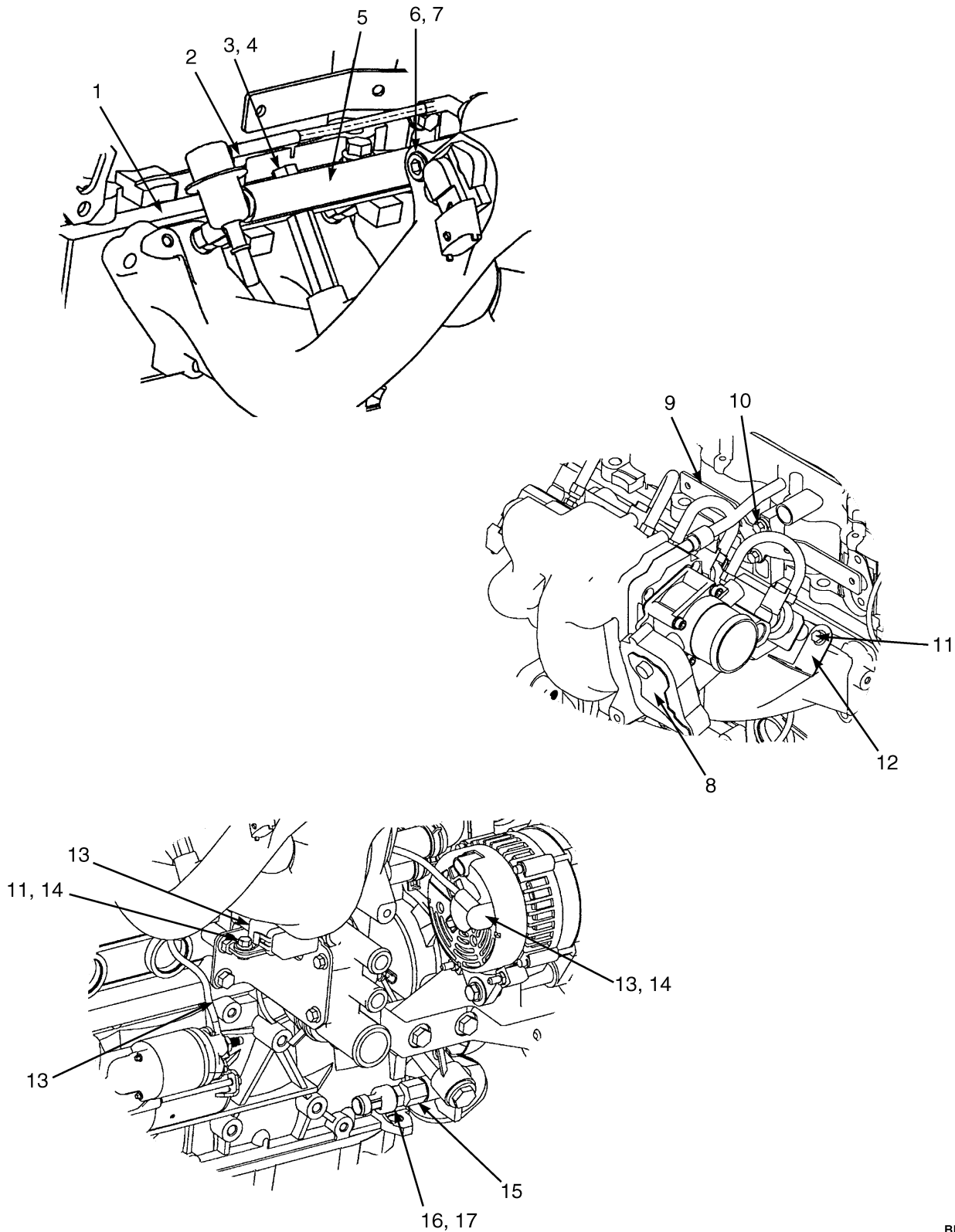
FOOTNOTES:

- | | | | |
|----------|-------------------|----------|--------------------------|
| a | → 1/2007 | d | S/N L177B05907D ↔ 1/2007 |
| b | → S/N L177B05906D | e | S/N L177B12347D → |
| c | → S/N L177B12346D | f | 1/2007 → |

NOTES

[illegible]

ASSEMBLED ENGINE (FIGURE 2-43) GASOLINE AND LPG — GM 2.4L (SHEET 2 OF 4)



BP090148

ASSEMBLED ENGINE
GASOLINE AND LPG – GM 2.4L (SHEET 2 OF 4)**KEY:****A: Gasoline****B: LPG**

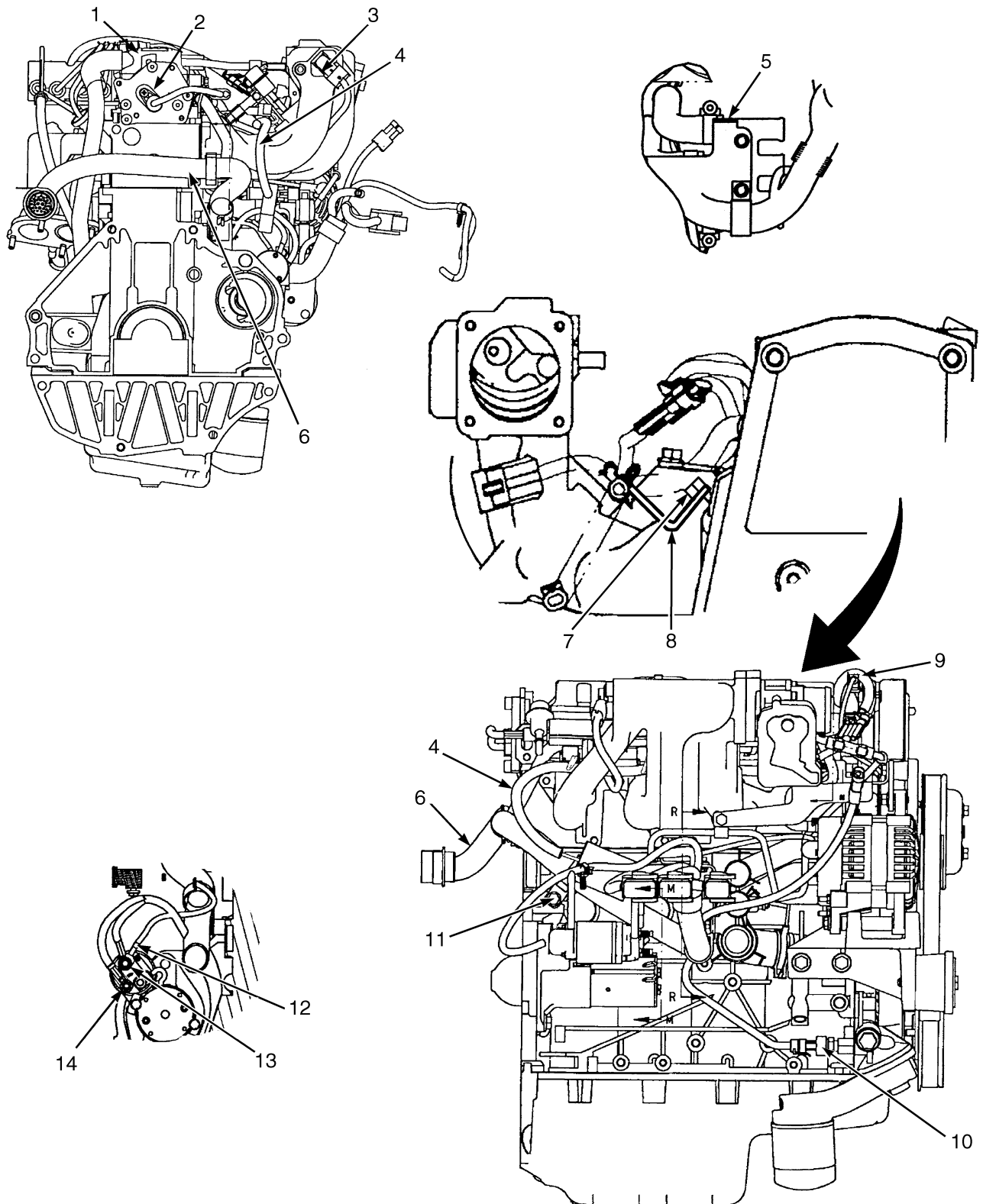
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	a 1501695	Engine Assy-Lpg (GM 2.4L)	1	1
1	b 1603004	Long Block (GM 2.4L)	1	1
1	c 1649486	Engine Assy (GM 2.4L)	1	1
2	1548394	Extension (Fuel Rail)	1	..
3	1554837	Tube	1	..
4	1527881	Capscrew	2	..
5	1548395	Fuel Rail (Gasoline)	1	..
6	1528617	Plug	1	..
7	246108	Sealant	AR	..
8	2056702	Throttle Body (Gasoline) (☞ Figure 3-9).....	1	..
8		LPG Fuel System (☞ Figure 3-10).....	..	1
9	2056355	Bracket	1	1
10	1527876	Capscrew	2	2
11	1534417	Capscrew	3	3
12	1569776	Bracket	1	1
13	2057865	Wire Harness (Alternator, Starter)	1	1
13	148614	E-Ring	1	1
13	148615	E-Ring	1	1
13	1566146	Boot	1	1
13	1543553	Fuse Holder	1	1
13	1454829	Fuse (60 Amp)	1	1
13	1454862	Cover (With Seal)	1	1
13	1520543	Terminal	2	2
13	1454827	Seal	2	2
14	1514429	Nut	5	5
15	1585083	Adapter	1	1
15	1585084	O-Ring	1	1
15	1585085	Retaining Ring	1	1
16	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1	1
17	246108	Sealant	AR	AR

FOOTNOTES:

a → S/N L177B05906D
b S/N L177B05907D ↔ 1/2007

c 1/2007 →

ASSEMBLED ENGINE (FIGURE 2-44) GM 2.4L, GASOLINE AND LPG — SHEET 3 OF 4



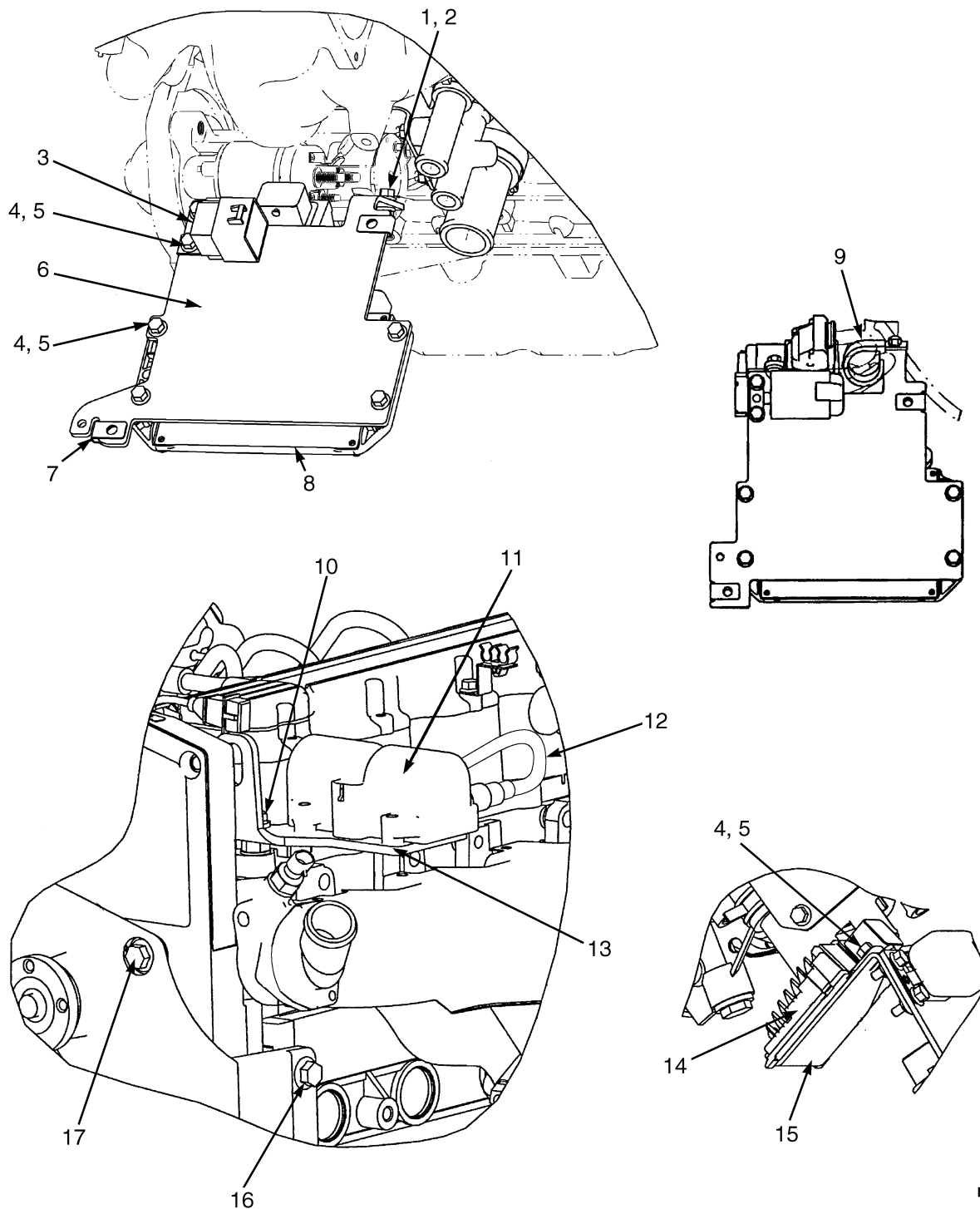
BP090366

ASSEMBLED ENGINE
GM 2.4L, GASOLINE AND LPG – SHEET 3 OF 4**KEY:****A: Gasoline****B: LPG**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	c 1501695	Engine Assy-Lpg (GM 2.4L)	1	1
1	d 1603004	Long Block (GM 2.4L)	1	1
1	e 1649486	Engine Assy (GM 2.4L)	1	1
2	1564587	Sensor (Camshaft Position)	1	1
3	1584472	Sensor (MAP)	1	1
4	1554838	Wire Harness (Injector)	1	1
5	2055232	Bracket	1	1
6	b 2053096	Wire Harness (Engine, GM 2.4L, Gasoline)	1	..
6	e 2089065	Wire Harness (Engine, GM 2.4L, Gasoline)	1	..
6	a 2053099	Wire Harness (Engine, GM 2.4L, LPG)	..	1
6	e 2089064	Wire Harness (Engine, GM 2.4L, LPG)	..	1
7	1534417	Capscrew	3	3
8	1569776	Bracket	1	1
9	2068357	Wire Harness (Ignition Coil)	1	1
10	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1	1
11	1527879	Capscrew	2	2
12	2057865	Wire Harness (Alternator, Starter)	1	1
12	1543553	Fuse Holder	1	1
12	1454829	Fuse (60 Amp)	1	1
12	1454862	Cover (With Seal)	1	1
12	1454827	Seal	2	2
12	1520543	Terminal	2	2
12	1566146	Boot	1	1
12	148615	E-Ring	1	1
12	148614	E-Ring	1	1
13	1514429	Nut	5	5
14	1593335	Nut	1	1

FOOTNOTES:**a** → 1/2007**b** → 12/2006**c** → S/N L177B05906D**d** S/N L177B59070D ↔ 1/2007**e** 1/2007 →

ASSEMBLED ENGINE (FIGURE 2-45) GM 2.4L, GASOLINE AND LPG — SHEET 4 OF 4



BP090367

ASSEMBLED ENGINE

GM 2.4L, GASOLINE AND LPG – SHEET 4 OF 4

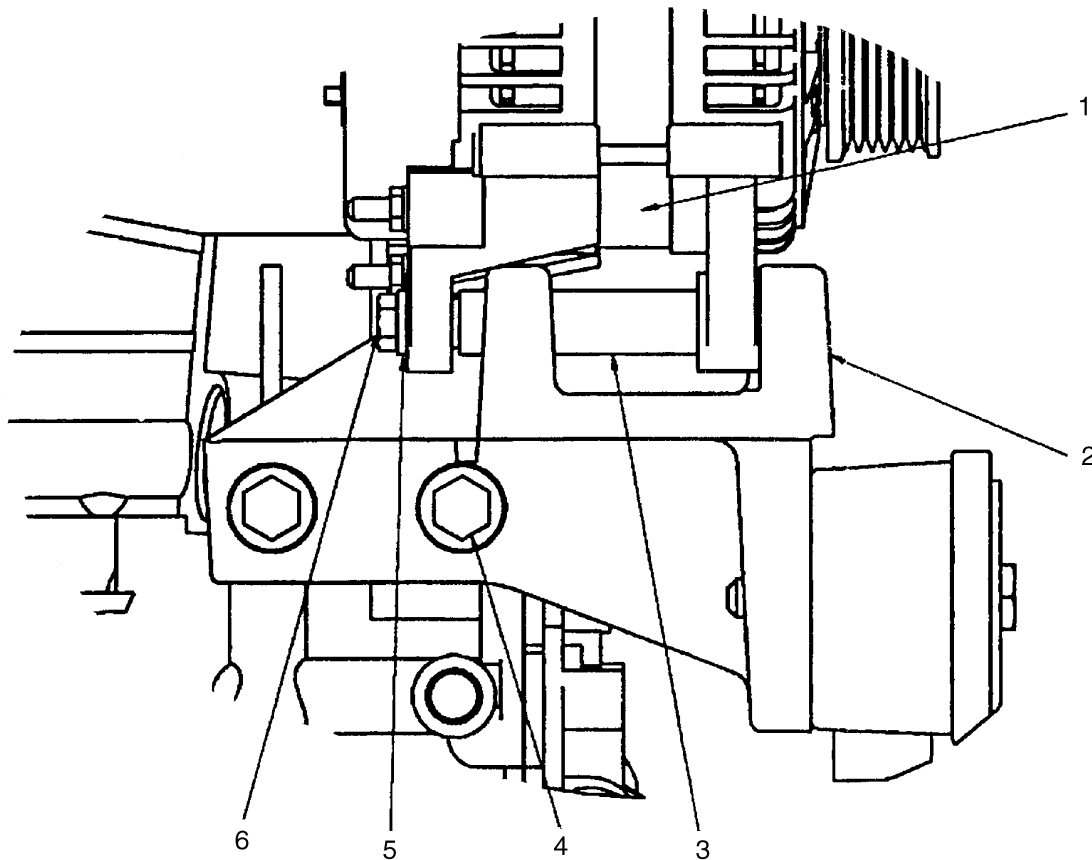
KEY:**A: Gasoline****B: LPG**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	f 1501695	Engine Assy-Lpg (GM 2.4L)	1	1
	c 1603004	Long Block (GM 2.4L)	1	1
	e 1649486	Engine Assy (GM 2.4L)	1	1
1	1527877	Capscrew	1	1
2	1514429	Nut	1	1
3	1330301	Relay (Fuel Pump)	1	1
4	1527877	Capscrew	7	7
5	1514429	Nut	6	6
6	1582162	Plate	1	1
7	1480237	Nut	2	2
8	f 2077555	Engine Control Module	1	..
8	c 2087196	Engine Control Module	1	..
8	d 2089067	Engine Control Module	1	..
8	f 2077554	Engine Control Module	..	1
8	e 2087197	Engine Control Module	..	1
8	d 2089066	Engine Control Module	..	1
9		Clamp (Supplied With Engine)	1	1
10	1460477	Nut	2	2
11	1584523	Ignition Coil	1	1
12	a 2067623	Kit-Ignition Cable (Spark Plug)	1	1
12	e 2089846	Kit-Ignition Cable (Spark Plug)	1	1
13	1536719	Bracket (Coil)	1	1
14	f 2059248	Module (Injector Drive)	1	1
14	b 2082657	Module (Injector Driver)	1	1
15	1582163	Bracket	1	1
16	1510117	Capscrew	2	2
17	1527885	Capscrew	1	1

FOOTNOTES:**a** → 1/2007**b** → S/N L177B05907D**c** S/N L177B05907D ↔ 1/2007**d** S/N L177B14823E →**e** 1/2007 →**f** S/N L177B05906D →

ALTERNATOR AND MOUNTING (FIGURE 2-46)

GM 2.4L — GASOLINE AND LPG



BP090151

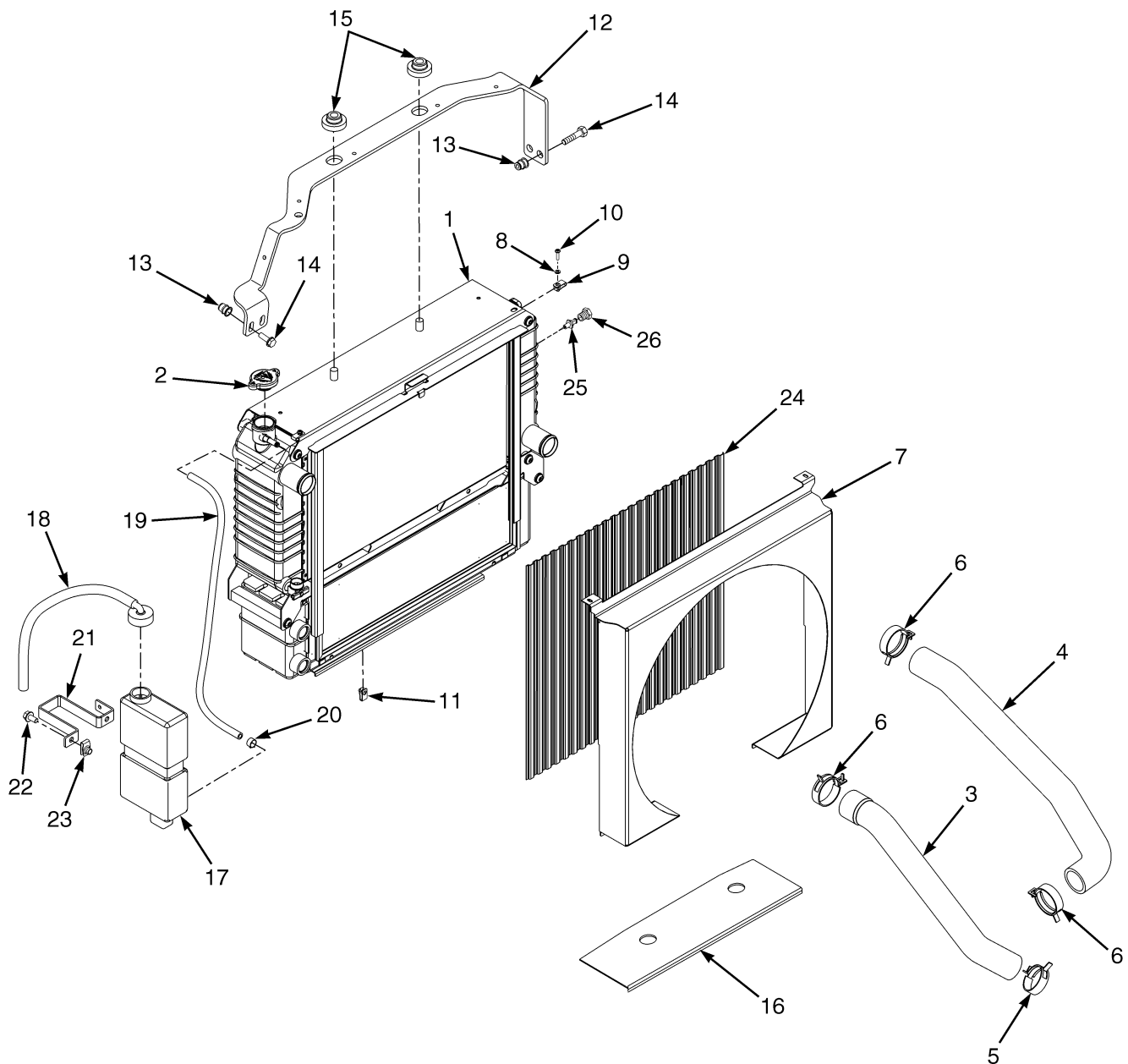
ITEM	PART NO.	DESCRIPTION	QTY
1	1534017	Alternator	1
2	1554816	Bracket	1
3	1554814	Spacer	1
4	1527892	Capscrew	4
5	320157	Washer	1
6	1307994	Capscrew	1

NOTES

[illegible]

COOLING SYSTEM (FIGURE 2-47)

GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — WITH INTERNAL OIL COOLER
(→ S/N L177B14568E)



HP060042

COOLING SYSTEM

GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – WITH INTERNAL OIL COOLER
 (→ S/N L177B14568E)

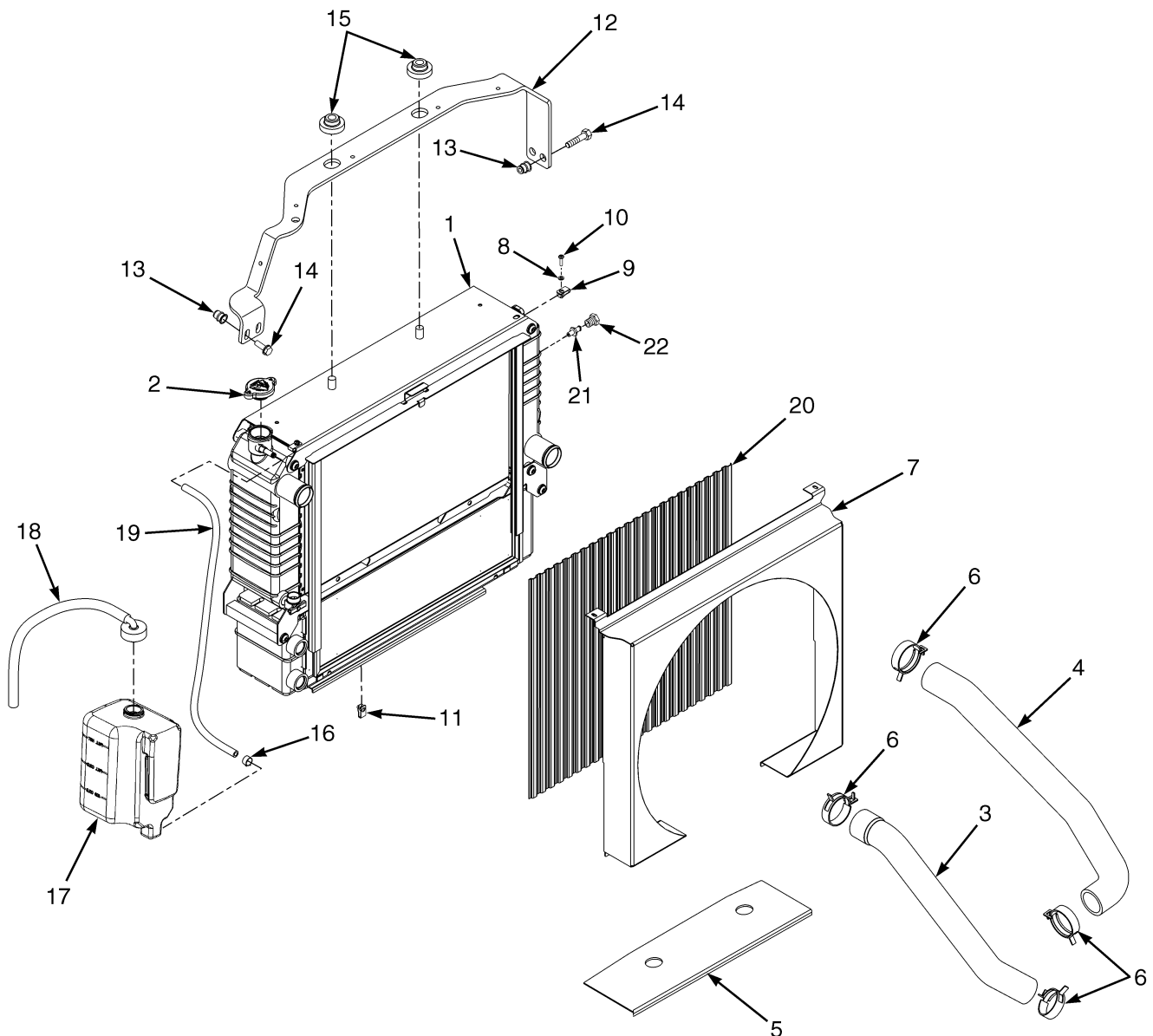
ITEM	PART NO.	DESCRIPTION	QTY
1	2069552	Radiator (3 Row)	1
1	1569079	Drain Valve (w/Thread Wrap)	1
2	1352140	Radiator Cap	1
3	2069698	Radiator Hose (Lower)	1
4	2085041	Radiator Hose (Upper)	1
5	369804	Clamp	4
6	1502001	Hose Clamp	3
7	1626129	Shroud	1
8	320154	Washer	2
9	1535257	Nut	2
10	302023	Screw	2
11	1329271	Clip	2
12	1611852	Bracket	1
13	1530243	Insert	4
14	1583611	Capscrew	4
15	1529787	Isolator	4
16	1565692	Exhaust Shield	1
17	1347026	Reservoir	1
18	345455	Outlet	1
18	336550	Bushing	1
18	345453	Outlet (Reservoir)	1
18	345454	Cap	1
18	339735	Hose	1
19	1567674	Hose	1
20	369815	Clamp	2
21	1531167	Bracket	1
22	1527879	Capscrew	2
23	1480237	Nut	2
24	1582078	Screen	1
25	1531404	Sensor (Low Coolant Level)	1
26	a 14385	Fitting	1

FOOTNOTES:

a Without Low Coolant Level Sensor

COOLING SYSTEM (FIGURE 2-48)

GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — WITH INTERNAL OIL COOLER (S/N L177B14569E →)



BP060049

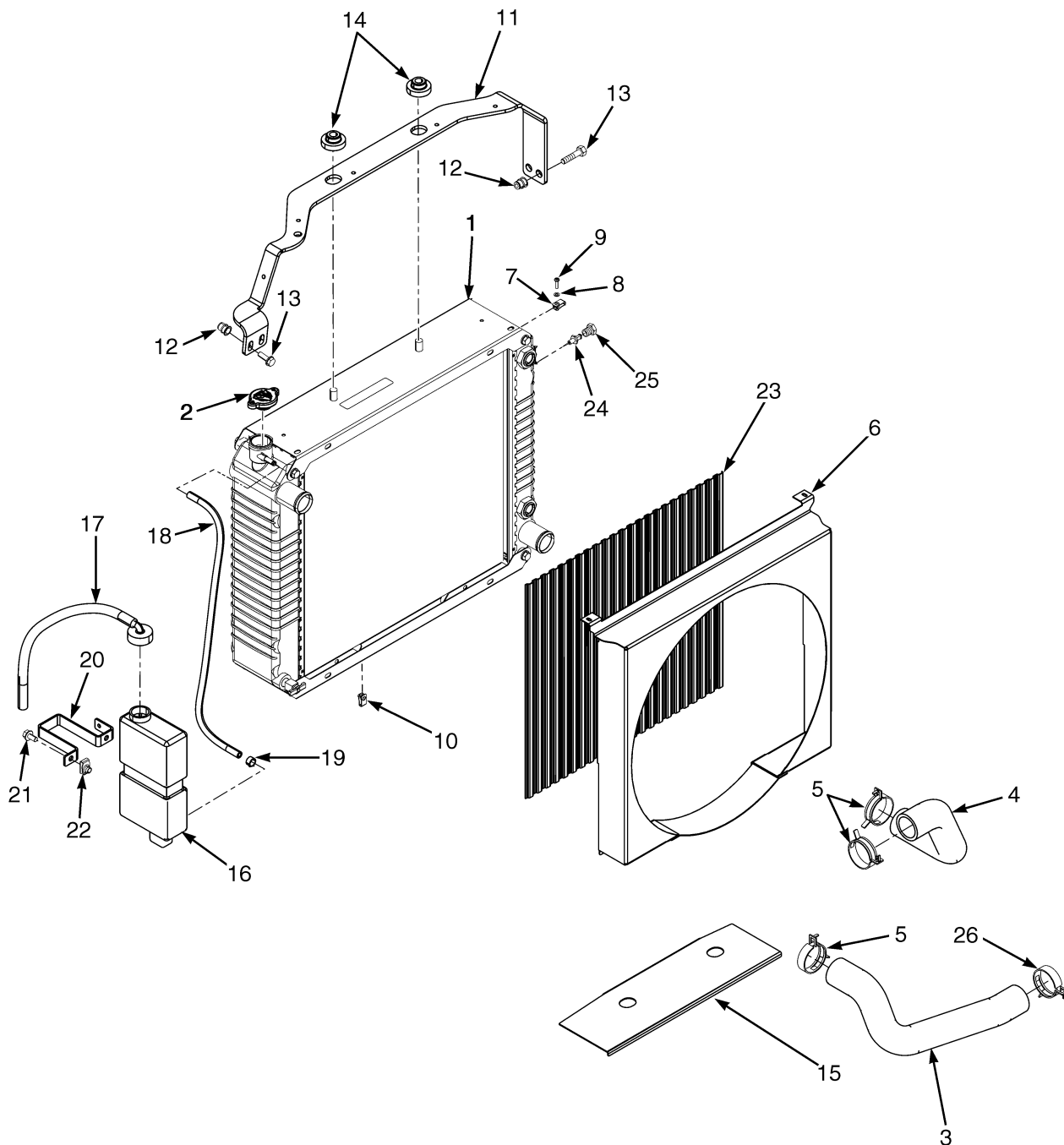
COOLING SYSTEM**GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – WITH INTERNAL OIL COOLER
(S/N L177B14569E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2069552	Radiator (3 Row)	1
1	1569079	Drain Valve (w/Thread Wrap)	1
2	1352140	Radiator Cap	1
3	2069698	Radiator Hose (Lower)	1
4	2085041	Radiator Hose (Upper)	1
5	1565692	Exhaust Shield	1
6	369804	Clamp	4
7	1582076	Shroud	1
8	320154	Washer	2
9	1535257	Nut	2
10	302023	Screw	2
11	1329271	Clip	2
12	1611852	Bracket	1
13	1530243	Insert	4
14	1583611	Capscrew	4
15	1529787	Isolator	4
16	369815	Clamp	2
17	1633307	Reservoir	1
18	345455	Outlet	1
18	336550	Bushing	1
18	345453	Outlet (Reservoir)	1
18	345454	Cap	1
18	339735	Hose	1
19	1567674	Hose	1
20	1582078	Screen	1
21	1531404	Sensor (Low Coolant Level)	1
22	a 14385	Fitting	1

FOOTNOTES:**a** Without Low Coolant Level Sensor

COOLING SYSTEM (FIGURE 2-49)

GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — WITH EXTERNAL OIL COOLER (→ S/N L177B14568E)



COOLING SYSTEM
GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – WITH EXTERNAL OIL COOLER
 (→ S/N L177B14568E)

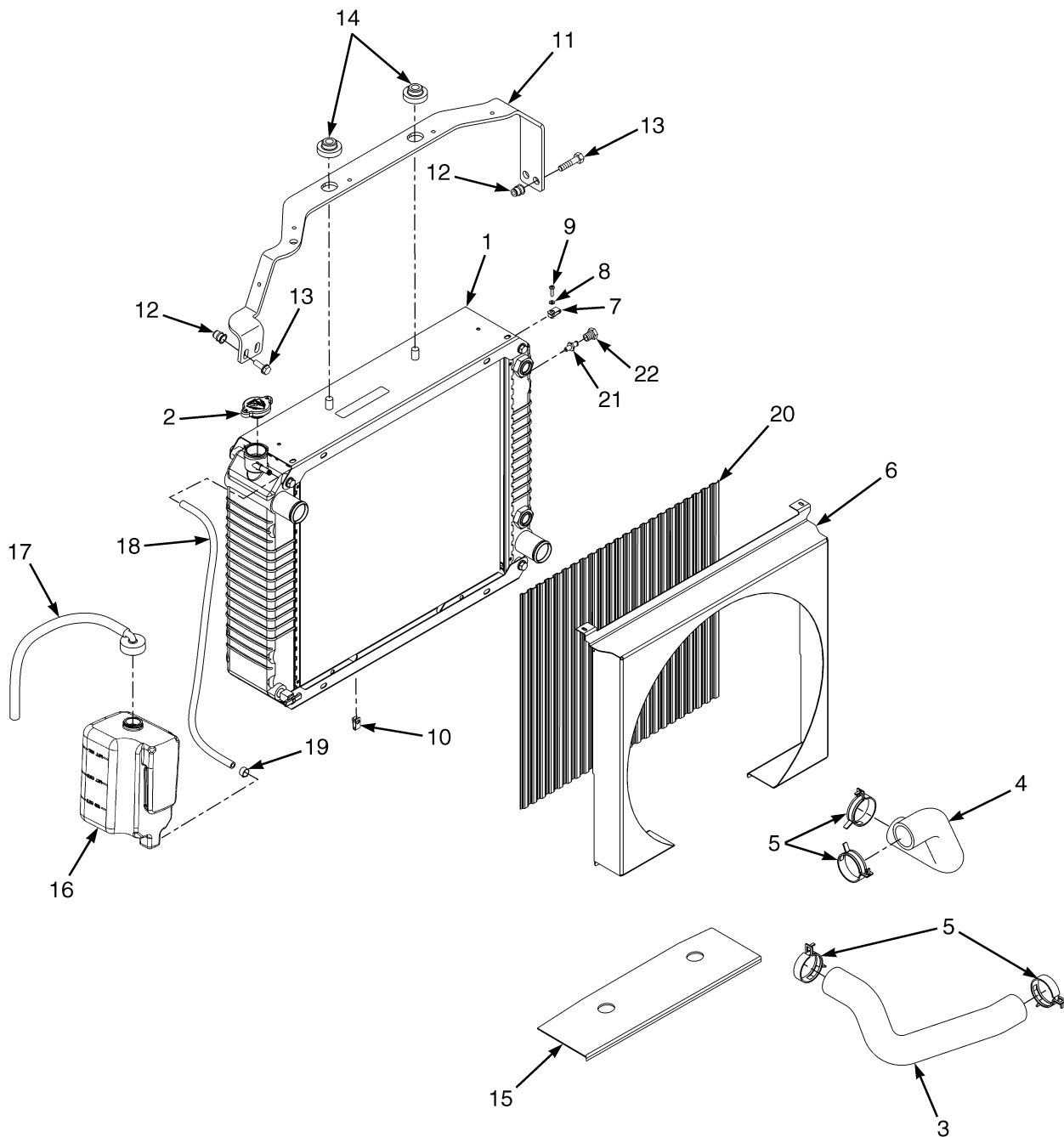
ITEM	PART NO.	DESCRIPTION	QTY
1	2074790	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
1	1590972	Radiator	1
1	1590918	Oil Cooler	1
1	1597765	Washer	4
1	1597766	Screw	4
1	1597763	Drain Valve (Optional)	1
2	1352140	Radiator Cap	1
3	2085103	Radiator Hose (Upper)	1
4	2085268	Radiator Hose (Lower)	1
5	1527982	Hose Clamp	1
6	1502001	Hose Clamp	3
7	1582076	Shroud	1
8	1535257	Nut	2
9	320154	Washer	2
10	302023	Screw	2
11	1551663	Clip	2
12	1611852	Bracket	1
13	1530243	Insert	4
14	1583611	Capscrew	4
15	1529787	Isolator	4
16	1565692	Exhaust Shield	1
17	1347026	Reservoir	1
18	345455	Outlet	1
18	336550	Bushing	1
18	345453	Outlet (Reservoir)	1
18	345454	Cap	1
18	339735	Hose	1
19	1567674	Hose	1
20	369815	Clamp	2
21	1531167	Bracket	1
22	1527879	Capscrew	2
23	1480237	Nut	2
24	1582078	Screen	1
25	1531404	Sensor (Low Coolant Level)	1
26	a 14385	Fitting	1

FOOTNOTES:

a Without Low Coolant Level Sensor

COOLING SYSTEM (FIGURE 2-50)

GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR — WITH EXTERNAL OIL COOLER



BP060048

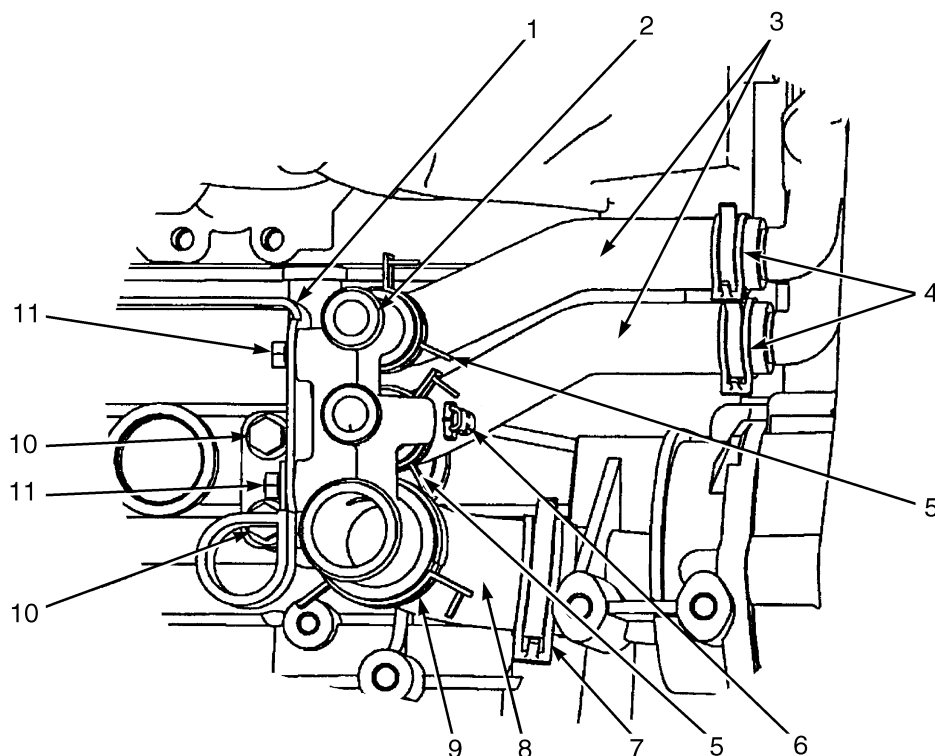
COOLING SYSTEM**GM 2.4L, GASOLINE AND LPG, SQUARE WAVE RADIATOR – WITH EXTERNAL OIL COOLER**

ITEM	PART NO.	DESCRIPTION	QTY
1	2074790	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
1	1590972	Radiator	1
1	1590918	Oil Cooler	1
1	1597765	Washer	4
1	1597766	Screw	4
1	1597763	Drain Valve (Optional)	1
2	1352140	Radiator Cap	1
3	2085104	Radiator Hose (Upper)	1
4	2070072	Radiator Hose (Lower)	1
5	369804	Clamp	3
6	1582076	Shroud	1
7	1535257	Nut	2
8	320154	Washer	2
9	302023	Screw	2
10	1551663	Clip	2
11	1611852	Bracket	1
12	1530243	Insert	4
13	1583611	Capscrew	4
14	1529787	Isolator	4
15	1565692	Exhaust Shield	1
16	1633307	Reservoir	1
17	345455	Outlet	1
17	336550	Bushing	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	339735	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	1582078	Screen	1
21	1531404	Sensor (Low Coolant Level)	1
22	a 14385	Fitting	1

FOOTNOTES:**a** Without Low Coolant Level Sensor

COOLING MANIFOLD AND ATTACHING PARTS (FIGURE 2-51)

GM 2.4L — GASOLINE AND LPG



HP091295

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501695	Engine Assy-Lpg (GM 2.4L)	1
	c 1603004	Long Block (GM 2.4L)	1
	d 1649486	Engine Assy (GM 2.4L)	1
1	2055232	Bracket	1
2	a 1554921	Manifold (Coolant)	1
2	d 1638705	Manifold (Coolant)	1
3	2056732	Hose (Heater)	2
4	a 1502009	Hose Clamp	2
4	d 130845	Clamp	4
5	a 1501997	Hose Clamp	2
5	d 369804	Clamp	2
6	a 15329	Drain Valve (Drain)	1
7	a 1527982	Hose Clamp	1
8	2055298	Radiator Hose (Radiator)	1
9	a 1502001	Hose Clamp	1
10	1527879	Capscrew	2
11	1534417	Capscrew	2

FOOTNOTES:

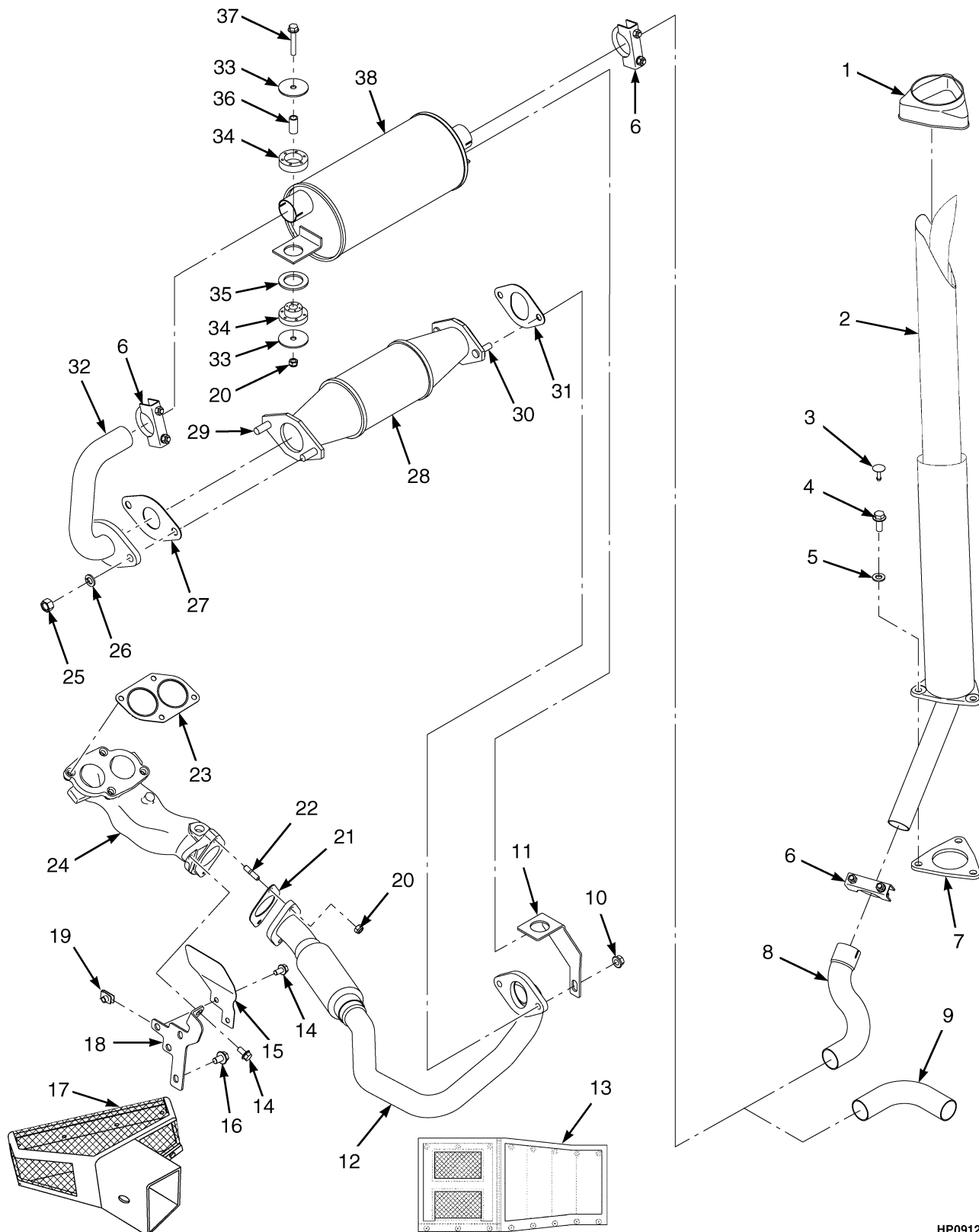
a → 12/2006
b → S/N L177B05906D

c S/N L177B05907D ↔ 12/2006
d 1/2007 →

NOTES

[illegible]

EXHAUST SYSTEM (FIGURE 2-52) GM 2.4L — GASOLINE AND LPG



HP091225

EXHAUST SYSTEM
GM 2.4L – GASOLINE AND LPG**KEY:****A: With Catalytic Converter****B: Without Catalytic Converter****C: With Safety Option**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	2021394	Cover	1	1	1
2	1646827	Tail Pipe	1	1	1
3	1347045	Fastener	1	1	1
4	1510117	Capscrew	1	1	1
5	320159	Washer	1	1	1
6	68968	Clamp	3	3	3
7	1533639	Cover	1	1	1
8	1533863	Exhaust Pipe (Overhead)	1	1	1
9	1589312	Exhaust Pipe (Counterweight)	1	1	1
10	1460477	Nut	2	..	2
11	1532523	Bracket	1	..	1
12	1546731	Exhaust Pipe	1	..	1
12	1566522	Exhaust Pipe (Not Illustrated)	..	1	..
13	a 2084004	Wrap	1	1	1
14	1527879	Capscrew	1	1	..
15	1587069	Exhaust Shield	1	1	..
16	1528778	Capscrew	1	1	..
17	a 1569982	Wrap (Manifold)	1	1	1
18	1587068	Bracket	1	1	..
19	1480237	Nut	1	1	..
20	1582222	Locknut	4	4	4
21	1566528	Gasket	1	1	..
22	1567831	Stud (Exhaust)	2	2	..
23	1582139	Gasket	1	1	..
24	1583713	Adapter	1	1	..
25	1469405	Nut	2	..	2
26	292683	Lockwasher	2	..	2
27	1469379	Gasket	1	..	1
28	2059689	Catalytic Converter	1	..	1
29	1495501	Bolt	2	..	2
30	1495502	Bolt	2	..	2
31	1547712	Gasket	1	..	1
32	1534174	Exhaust Pipe	1	..	..
33	1528938	Washer	4	4	4
34	1528930	Mount	2	2	2
35	1532585	Washer	1	..	..
36	1528934	Spacer	2	2	2
37	1510115	Capscrew	2	2	2
38	2060957	Muffler (Crimped)	1	1	..
38	2056524	Muffler (Welded)	1	1	1

FOOTNOTES:**a** Paper Industry Applications

This exploded view diagram illustrates the components of a front wheel hub assembly. The central component is the hub (4), which features a large central bore and a smaller inner bore (5). Surrounding the hub are various mounting and fastening parts, including a bearing cap (3), a bearing (7), a bearing housing (9), a hub nut (10), a hub bolt (11), a hub pin (12), a hub washer (13), a hub bracket (14), and a hub nut (8). The diagram uses dashed lines to show the assembly sequence and alignment of the parts.

HP091237

FOOTNOTES:

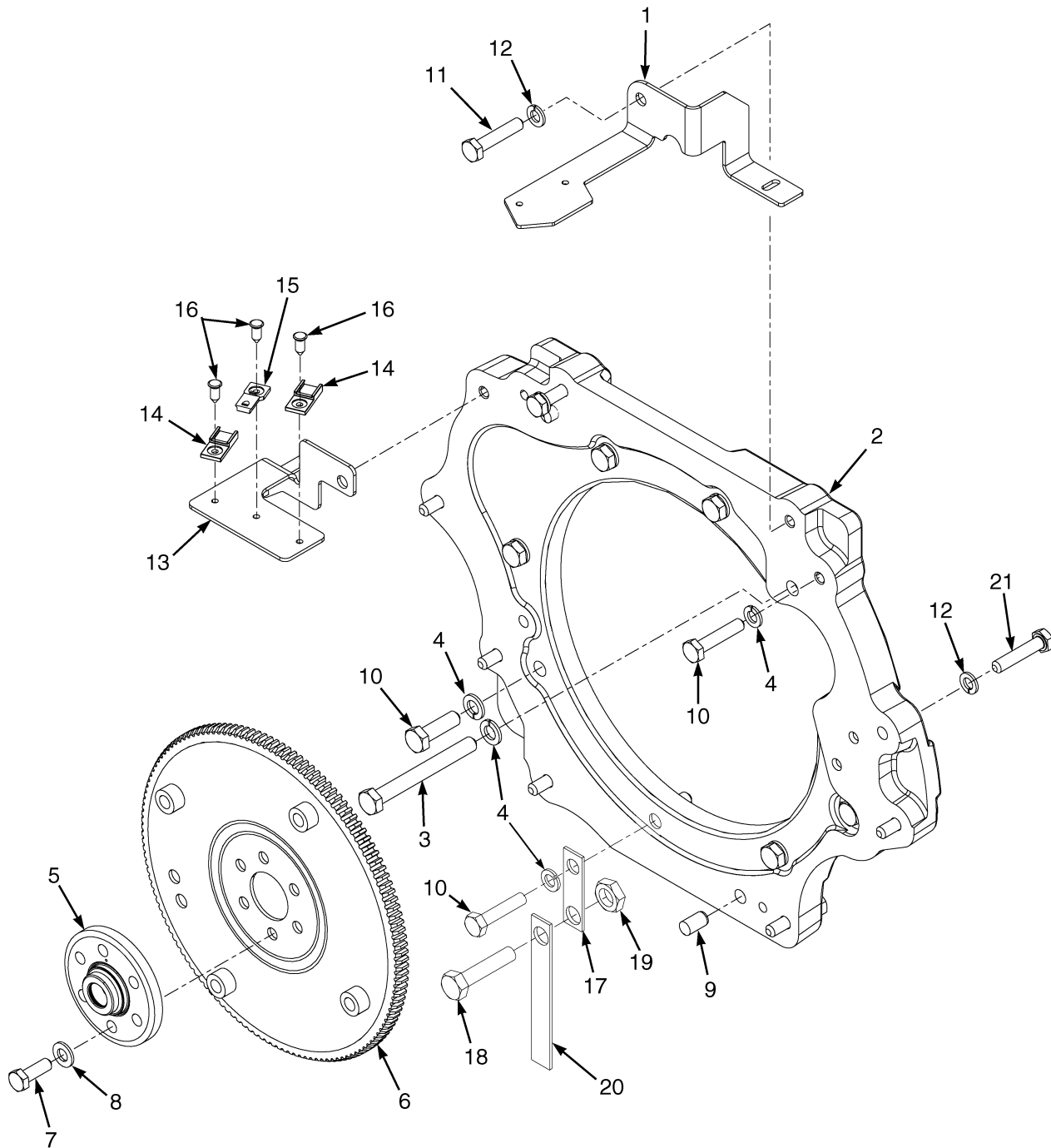
b S/N L177B15746E $\rightarrow$

NOTES

[illegible]

FLYWHEEL AND HOUSING (FIGURE 2-54)

GM 2.4L GASOLINE AND LPG (PENDING PER ECN 10557324 →)



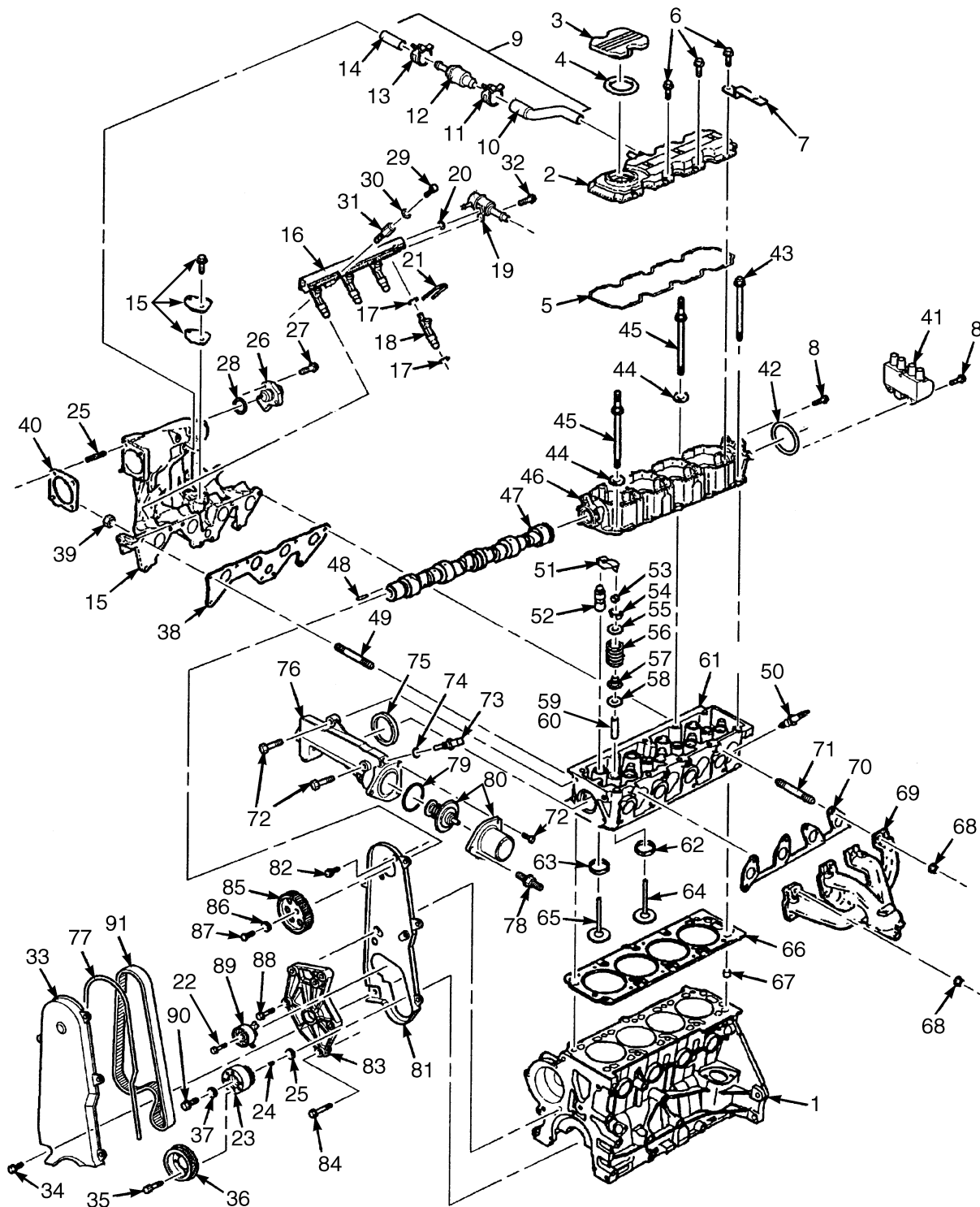
BP080390

FLYWHEEL AND HOUSING
GM 2.4L GASOLINE AND LPG (PENDING PER ECN 10557324 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1653569	Bracket	1
2	1696276	Flywheel Housing	1
3	292539	Capscrew	1
4	292683	Lockwasher	11
5	1588963	Adapter	1
6	1605988	Flywheel	1
7	309740	Capscrew	6
8	296420	Washer	6
9	352406	Dowel	2
10	246001	Capscrew	10
11	292516	Capscrew	4
12	292682	Lockwasher	10
13	1623093	Bracket	1
14	1500912	Clip	2
15	1531480	Clip	1
16	1582464	Fastener	3
17	1565832	Bracket	1
18	1586013	Capscrew	1
19	1460477	Nut	1
20	240072	Static Strap	1
21	292517	Capscrew	6

CAMSHAFT, CYLINDER HEAD AND MANIFOLDS (FIGURE 2-55)

GM 2.4L (→ S/N L177B05989D (LPG)) (→ S/N L177B06541D GAS)



HP091272

CAMSHAFT, CYLINDER HEAD AND MANIFOLDS
GM 2.4L (→ S/N L177B05989D (LPG)) (→ S/N L177B06541D GAS)

ITEM	PART NO.	DESCRIPTION	QTY
1	1501695	Engine Assy-Lpg (GM 2.4L)	1
2	1584492	Cover	1
3	1584493	Cap	1
4	1584495	Seal	1
5	1584497	Gasket	1
6	1593665	Bolt	8
7	1584532	Bracket	1
8	1584490	Screw	8
9	1584266	Hose Assy (PCV)	1
10	1584445	Hose	1
11	1584451	Clamp (RH)	1
12	1584442	Pcv Valve	1
13	1584444	Clamp (LH)	1
14	1584267	Hose	1
15		Cover	1
15		Gasket	1
15	1584465	Intake Manifold	1
15	1597703	Bolt	1
16	1581795	Fuel Rail (LPG) (☞Figure 3-7).....	1
16	1548395	Fuel Rail (Gasoline) (☞Figure 3-3).....	1
16	1597699	Rail	1
17		Seal	2
18	1597701	Injector	4
19	1597702	Regulator	1
20	1597704	Seal	1
21	1597700	Retainer	4
22	1584498	Screw	1
23	1584502	Sprocket	1
24	1584504	Key	1
25	1584505	Spacer	2
26	1584472	Sensor (MAP)	1
27		Bolt	2
28		Seal	1
29		Bolt	4
30		Washer	4
31	1548394	Extension (Fuel Rail)	4
32		Bolt	1
33	1584458	Cover (Timing Belt)	1
34	1584452	Screw	5
35	1584520	Screw	4
36	1580793	Crankshaft Pulley	1
37	1584506	Washer	1
38	1584464	Gasket	1
39		Nut	4
40		Gasket	1
41	1584523	Ignition Coil	1
42	1584488	Seal	1
43	1584206	Bolt	8
44	1584208	Washer	10
45	1584207	Stud	7

CAMSHAFT, CYLINDER HEAD AND MANIFOLDS

GM 2.4L (→ S/N L177B05989D (LPG)) (→ S/N L177B06541D GAS)

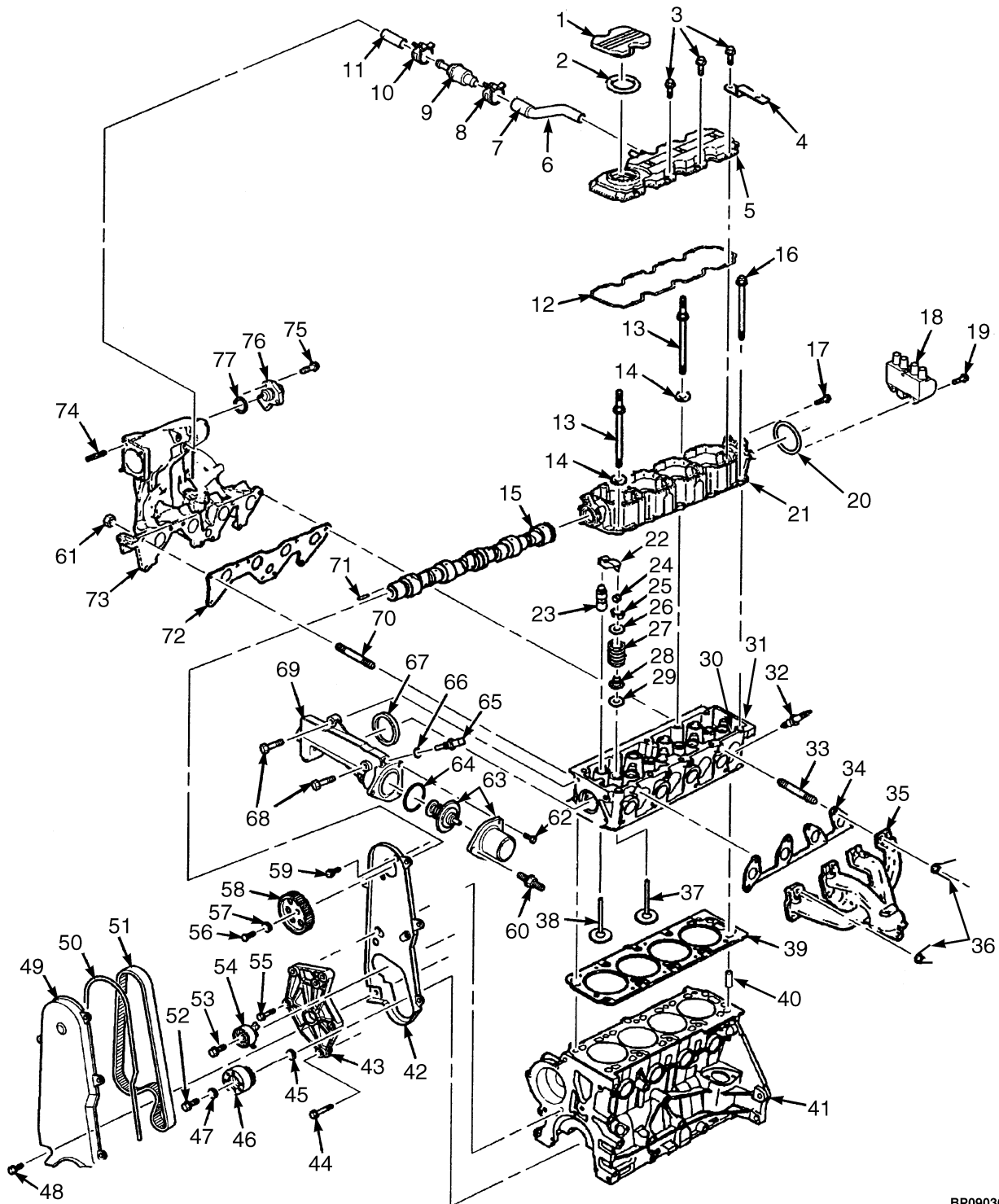
ITEM	PART NO.	DESCRIPTION	QTY
46	1584479	Housing Assembly-Cam Shaft	1
46	1584696	Seal	1
47	1584480	Camshaft	1
48	1584481	Pin	1
49	1584203	Stud	9
50	1584123	Spark Plug	4
51	1584519	Rocker Arm	8
52	1584508	Valve Lifter	8
53	1584511	Valve Seat	8
54	1584202	Valve Stop	16
55	1584201	Retainer	8
56	1584200	Spring	8
57	1584199	Seal	8
58	1584197	Valve Seat	8
59	1584193	Guide	8
60	1593654	Guide (0.25 O/S)	8
61	1584188	Cylinder Head	1
62		Exhaust Valve Seat	4
63		Intake Valve Seat	4
64	1584196	Exhaust Valve	4
65	1584195	Inlet Valve (Intake)	4
66	1584141	Cylinder Head Gasket	1
67	1584182	Pin	4
68	1584474	Nut	8
69	1584478	Exhaust Manifold	1
70	1584475	Gasket	1
71	1584204	Stud	8
72	1584462	Screw	4
73	1584140	Sensor (Engine Coolant)	1
74		Seal	1
75	1584463	Seal	1
76	1584459	Housing	1
77		Seal	1
78	1584460	Stud	1
79	1584122	Seal	1
80	1584121	Thermostat	1
81	1584453	Cover	1
82	302047	Screw	4
83	1584521	Adapter	1
84	1584244	Bolt	2
85	1584491	Sprocket	1
86	1593662	Washer	2
87	1584498	Screw	1
88	1584522	Screw	1
89	1584509	Belt Tensioner	1
90	1584503	Screw	1
91	1584507	Timing Belt	1
a	1584476	Heat Shield (Exhaust Manifold)	1

FOOTNOTES:

- a** Not illustrated

CAMSHAFT, CYLINDER HEAD AND MANIFOLDS (FIGURE 2-56)

GM 2.4L ENGINE (S/N L177B05990D → (LPG)) (S/N L177B06542D → GAS)



BP090362

CAMSHAFT, CYLINDER HEAD AND MANIFOLDS
GM 2.4L ENGINE (S/N L177B05990D → (LPG)) (S/N L177B06542D → GAS)

ITEM	PART NO.	DESCRIPTION	QTY
	bc 1501695	Engine Assy-Lpg (GM 2.4L)	1
	de 1603004	Long Block (GM 2.4L)	1
	f 1649486	Engine Assy (GM 2.4L)	1
1	1584493	Cap	1
2	1584495	Seal	1
3	1593665	Bolt	8
4	1584532	Bracket	1
5	1584492	Cover	1
6	1584266	Hose Assy (PCV)	1
7	1584445	Hose	1
8	1584451	Clamp (RH)	1
9	1584442	Pcv Valve	1
10	1584444	Clamp (LH)	1
11	1584267	Hose	1
12	1584497	Gasket	1
13	1584207	Stud	7
14	1584208	Washer	10
15	1584480	Camshaft	1
16	1584206	Bolt	8
17	1584490	Screw	4
18	1584523	Ignition Coil	1
19	1632227	Bolt	3
20	1584488	Seal	1
21	1584479	Housing Assembly-Cam Shaft	1
21	1584696	Seal	1
22	1584519	Rocker Arm	8
23	1584508	Valve Lifter	8
24	1584511	Valve Seat	8
25	1584202	Valve Stop	16
26	1584201	Retainer	8
27	1584200	Spring	8
28	1584199	Seal	8
29	1584197	Valve Seat (Intake)	8
29	1584198	Rotator (Exhaust)	4
30		Valve (Oil Filter Bypass)	1
31	1584188	Cylinder Head	1
32	1584123	Spark Plug	4
33	1584204	Stud	8
34	1584475	Gasket	1
35	1584478	Exhaust Manifold	1
36	1584474	Nut	8
37	1584196	Exhaust Valve	4
38	1584195	Inlet Valve (Intake)	4
39	1584141	Cylinder Head Gasket	1
40	1584182	Pin	1
41		Cylinder Block	1
41	1584175	Plug	1
42	1584453	Cover	1
43	1584521	Adapter	1
44	1584244	Bolt	2

CAMSHAFT, CYLINDER HEAD AND MANIFOLDS
GM 2.4L ENGINE (S/N L177B05990D → (LPG)) (S/N L177B06542D → GAS)

ITEM	PART NO.	DESCRIPTION	QTY
45	1584505	Spacer	2
46	1584502	Sprocket	1
47	1584506	Washer	1
48	1584452	Screw	5
49	1584458	Cover (Timing Belt)	1
50		Seal	1
51	1584507	Timing Belt	1
52	1584503	Screw	1
53	1584510	Screw	1
54	1584509	Belt Tensioner	1
55	1584522	Screw	1
56	1584498	Screw	1
57	1593662	Washer	2
58	1584491	Sprocket	1
59	302047	Screw	4
60	1584460	Stud	1
61	1584474	Nut	9
62	1584462	Screw	2
63	1584121	Thermostat	1
64	1584122	Seal	1
65	1584140	Sensor (Engine Coolant)	1
66		Seal	1
67	1584463	Seal	1
68	1584462	Screw	2
69	1584459	Housing	1
70	1584203	Stud	9
71	1584481	Pin	1
72	1584464	Gasket	1
73	1584465	Intake Manifold	1
74		Stud	4
75		Bolt	2
76	1584472	Sensor (MAP)	1
77		Seal	1
	1661438	Short Block (GM 2.4L) (☞Figure 2-57).....	1
	1659839	Cylinder Head (Complete)	1
a	1584477	Screw	5
a	1584476	Heat Shield (Exhaust Manifold)	1

FOOTNOTES:

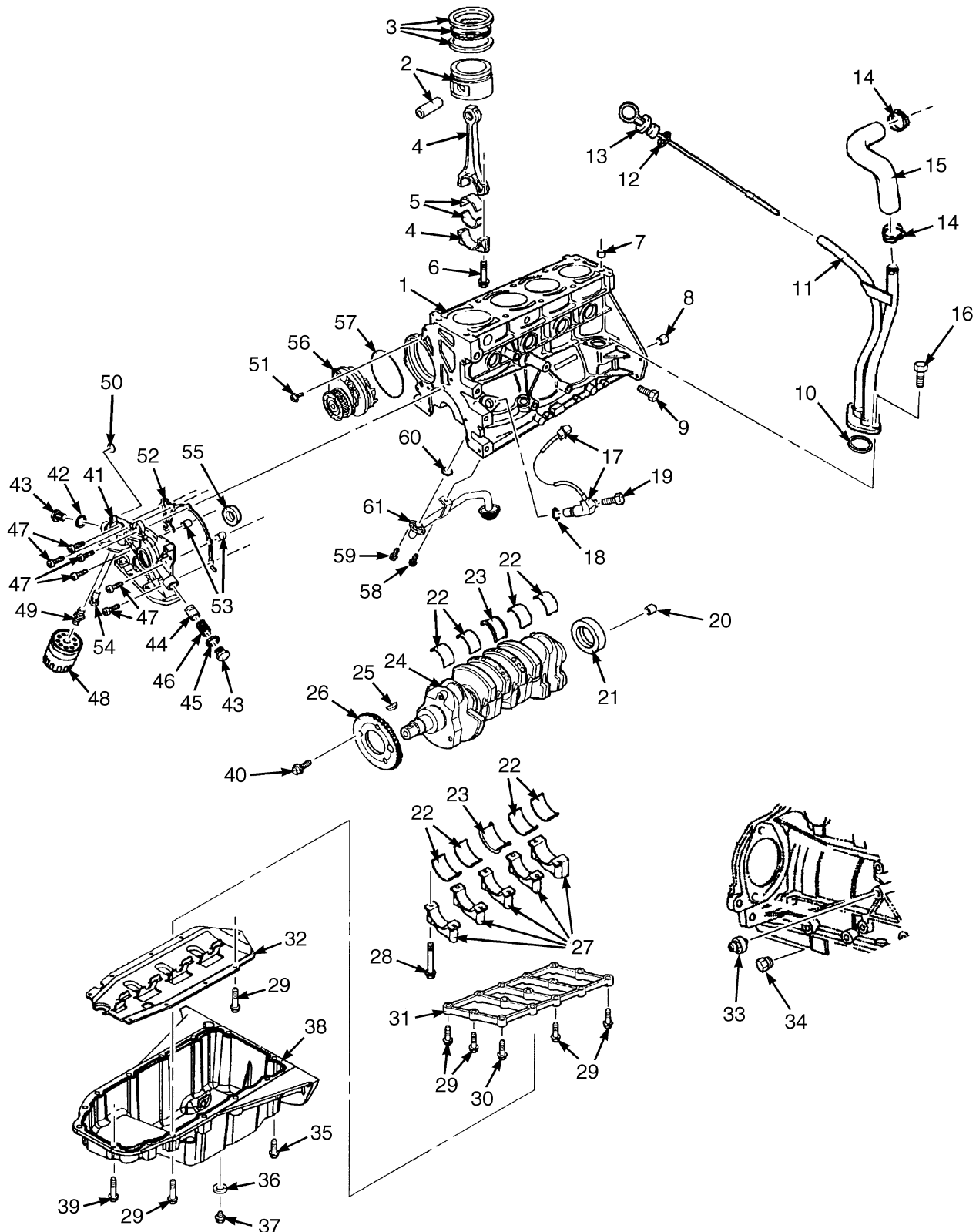
a Not Illustrated
b → S/N L177B05989D LPG
c → S/N L177B06541D Gasoline

d S/N L177B05990D ↔ 12/2006 LPG
e S/N L177B06542D ↔ 12/2006 Gas
f 1/2007 →

NOTES

[illegible]

CRANKSHAFT, PISTONS AND OIL PAN (FIGURE 2-57) GM 2.4L — GASOLINE AND LPG



BP090164

CRANKSHAFT, PISTONS AND OIL PAN
GM 2.4L – GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	de 1501695	Engine Assy-Lpg (GM 2.4L)	1
1	fg 1603004	Long Block (GM 2.4L)	1
1	j 1649486	Engine Assy (GM 2.4L)	1
2	1593657	Kit-Piston Ring (Standard)	4
2	1593659	Kit-Piston Ring (0.25 O/S)	4
3	1593658	Kit-Piston Ring	1
4	1584232	Piston Rod	4
4	1584239	Bolt	2
5	1584248	Piston Rod Bearing (Standard)	4
5	1584662	Kit-Bearing (0.25 O/S)	4
6	1584239	Bolt	8
7	1584182	Pin	4
8	1584183	Pin	2
9		Plug	1
10	1584447	Gasket	1
11	de 1584446	Tube	1
11	ih 1632225	Tube	1
12		Seal	1
13	de 1584265	Indicator	1
13	ih 1632226	Indicator	1
14	1584451	Clamp (RH)	2
15	1584450	Hose	1
16	1584449	Screw	2
17	1584514	Sensor (Crankshaft Position)	1
18		Seal	1
19	1584227	Bolt	4
20		Bearing	1
21	1584533	Seal	1
22	c 1584618	Kit-Crankshaft Bearing (Standard)	4
22	k 1584618	Kit-Crankshaft Bearing (Standard)	1
22	c 1584619	Kit-Bearing (0.25 O/S)	4
22	k 1584619	Kit-Bearing (0.25 O/S)	1
23	c 1593655	Kit-Crankshaft Bearing (Standard)	1
23	c 1593656	Kit-Bearing (0.25 O/S)	1
24	1584209	Crankshaft	1
25	1584504	Key	1
26	1584222	Capacitor	1
27		Cap	4
28	1584178	Screw	10
29	1584243	Bolt	24
30	1593653	Bolt	1
31	1584185	Plate	1
32	1584241	Baffle	1
33	1593661	Sensor (Knock)	1
34	1358026	Plug	1
35	1584242	Bolt	2
36	1597697	Oil Seal	1
37	1597698	Drain Plug	1
38	b 1584240	Oil Pan	1
39	1584244	Bolt	4

CRANKSHAFT, PISTONS AND OIL PAN

GM 2.4L – GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
40	1584227	Bolt	4
41	1584247	Oil Pump	1
42	1584262	Seal	1
43	1584257	Bolt	2
44	1584254	Valve	1
45	1584261	Gasket	1
46	1584255	Spring	1
47	1584245	Bolt	6
48	1584120	Oil Filter	1
49	1584252	Fitting	1
50	1584187	Washer	1
51	1584455	Screw	3
52	1584246	Gasket	2
53	1584184	Pin	1
54	1584256	Valve (Oil Filter Bypass)	1
55	1584260	Seal	1
56	1584456	Water Pump	1
57	1584457	Seal	1
58	1584243	Bolt	1
59	1593660	Bolt	2
60	1584263	Seal	3
61	1584264	Pipe (Oil Pump Suction)	1
	aih 1584251	Cover (Oil Pump)	1
	aih 1584253	Bolt (Oil Pump Cover)	5
	1661438	Short Block (GM 2.4L) (☞Figure 2-56).....	1
65	1584477	Screw	5

FOOTNOTES:

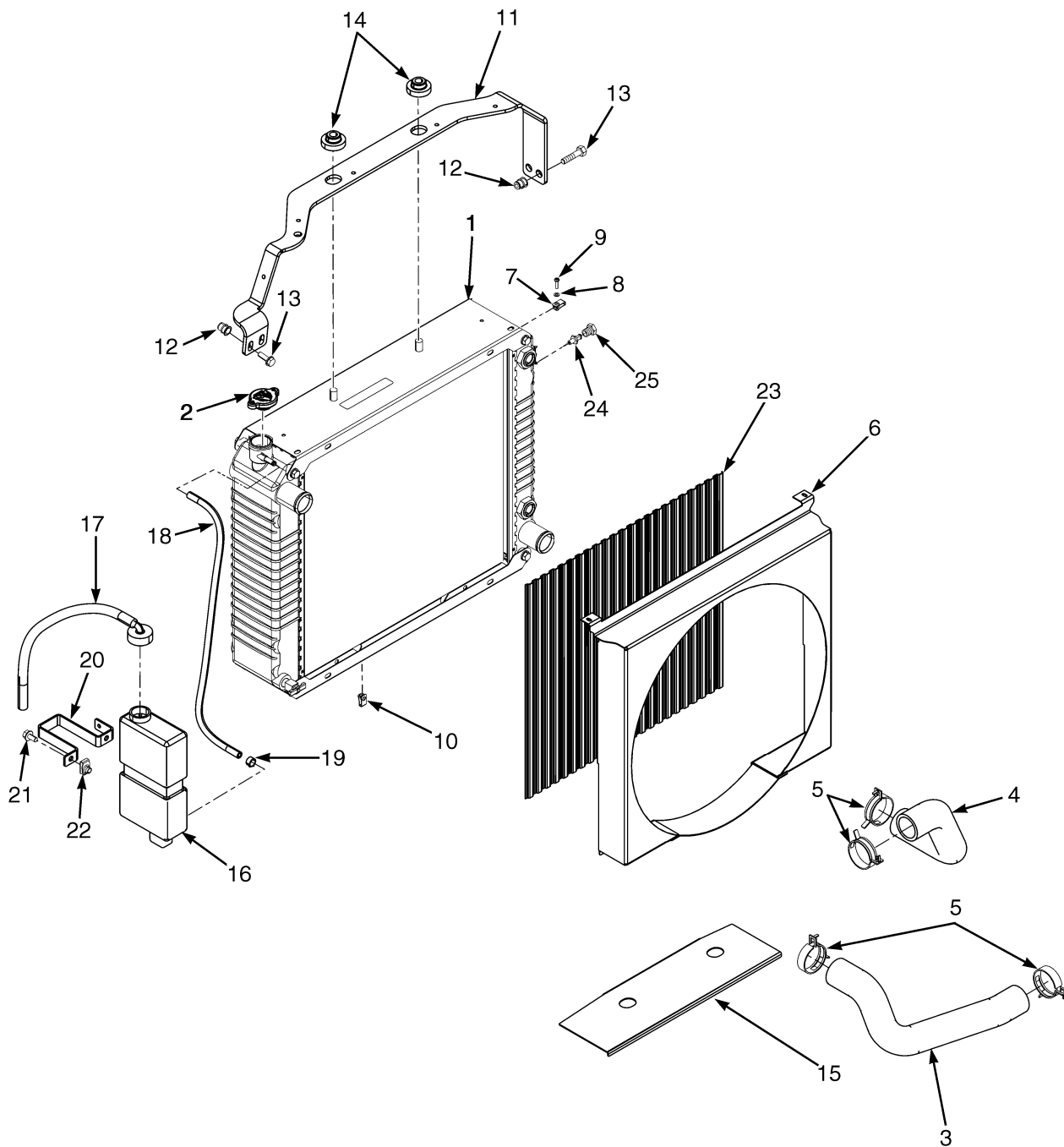
- | | | | |
|----------|-------------------------------|----------|------------------------------------|
| a | Not Illustrated | g | S/N L177B06542D ↔ 12/2006 Gasoline |
| b | Use Oil Pan Sealer 1584138 | h | S/N L177B06542D → (Gasoline) |
| c | → 10/2008 | i | S/N L177B05990D → LPG |
| d | → S/N L177B05989D LPG | j | 1/2007 → |
| e | → S/N L177B06541D (Gasoline) | k | 10/2008 → |
| f | S/N L177B05990D ↔ 12/2007 LPG | | |

NOTES

[illegible]

COOLING SYSTEM (FIGURE 2-58)

YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR — WITH INTERNAL OIL COOLER (→ S/N L177B14568E)



HP060040

COOLING SYSTEM**YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR – WITH INTERNAL OIL COOLER
(→ S/N L177B14568E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2069552	Radiator (3 Row) (3.3L With Basic or Electronic Transmission)	1
1	2089141	Radiator (2-Row) (2.6L With Basic Transmission)	1
1	1569079	Drain Valve (w/Thread Wrap)	1
2	1352140	Radiator Cap	1
3	2085104	Radiator Hose (Upper) (3 Row)	1
3	2087215	Radiator Hose (Upper) (2 Row)	1
4	2070072	Radiator Hose (Lower) (3 Row)	1
4	2087216	Radiator Hose (Lower) (2 Row)	1
5	369804	Clamp	4
6	1625760	Shroud (2 Row)	1
6	1622236	Shroud (3 Row)	1
7	1535257	Nut	2
8	320154	Washer	2
9	302023	Screw	2
10	1329271	Clip	2
11	1588507	Bracket (Radiator) (2 Row)	1
11	1611852	Bracket (3 Row)	1
12	1530243	Insert	4
13	1583611	Capscrew	4
14	1529787	Isolator	4
15	1565691	Exhaust Shield (2 Row)	1
15	1565692	Exhaust Shield (3 Row)	1
16	1347026	Reservoir	1
17	345455	Outlet	1
17	336550	Bushing	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	339735	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	1531167	Bracket	1
21	1527879	Capscrew	2
22	1480237	Nut	2
23	c 1582078	Screen	1
23	b 1548497	Screen	1
23	a 1623471	Screen	1
24	1531404	Sensor (Low Coolant Level)	1
25	d 14385	Fitting	1

FOOTNOTES:**a** 2.6L and 3.3L**b** 2.6L with Basic Transmission**c** 3.3L with Basic Transmission**d** Without Low Coolant Level Sensor

BP060046

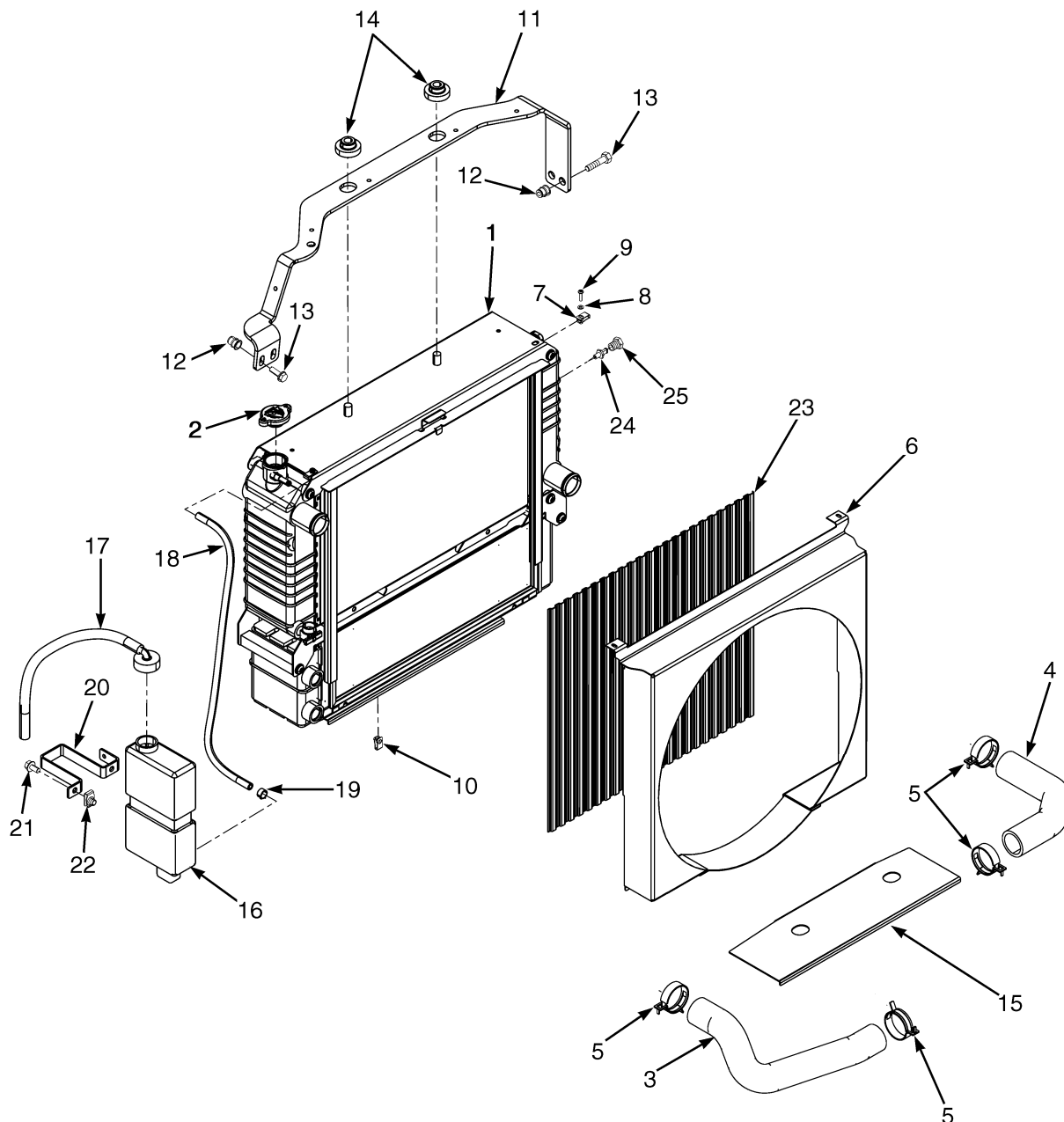
COOLING SYSTEM**YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR – WITH INTERNAL OIL COOLER
(S/N L177B14569E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	c 2069552	Radiator (3 Row)	1
1	b 2089141	Radiator (2-Row)	1
1	1569079	Drain Valve (w/Thread Wrap)	1
2	1352140	Radiator Cap	1
3	c 2085104	Radiator Hose (Upper)	1
3	b 2087215	Radiator Hose (Upper)	1
4	c 2070072	Radiator Hose (Lower)	1
4	b 2087216	Radiator Hose (Lower)	1
5	b 369804	Clamp	4
5	c 1502001	Hose Clamp	4
6	b 1625760	Shroud	1
6	c 1622236	Shroud	1
7	1535257	Nut	2
8	320154	Washer	2
9	302023	Screw	2
10	1329271	Clip	2
11	b 1588507	Bracket (Radiator)	1
11	c 1611852	Bracket	1
12	1530243	Insert	4
13	1583611	Capscrew	4
14	1529787	Isolator	4
15	c 1565692	Exhaust Shield	1
15	b 1565691	Exhaust Shield	1
16	1633307	Reservoir	1
17	345455	Outlet	1
17	336550	Bushing	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	1663877	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	c 1582078	Screen	1
20	b 1548497	Screen	1
20	a 1623471	Screen	1
21	1531404	Sensor (Low Coolant Level)	1
22	d 14385	Fitting	1

FOOTNOTES:**a** 2.6L and 3.3L**b** 2.6L with Basic Transmission**c** 3.3L with Basic Transmission**d** Without Low Coolant Level Sensor

COOLING SYSTEM (FIGURE 2-60)

YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR — WITH EXTERNAL OIL COOLER (→ S/N L177B14568E)



HP060041

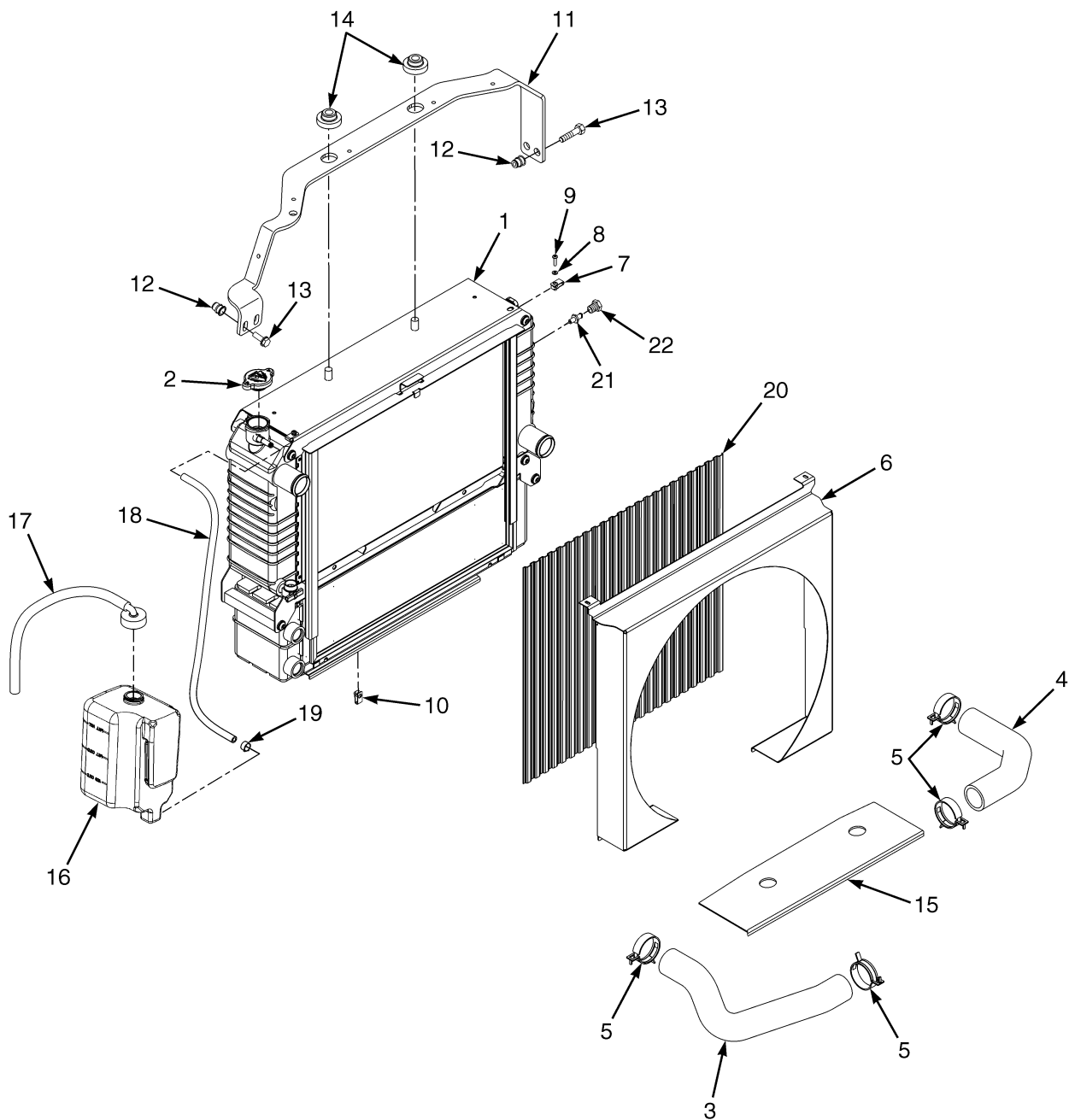
COOLING SYSTEM

YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR – WITH EXTERNAL OIL COOLER
 (→ S/N L177B14568E)

ITEM	PART NO.	DESCRIPTION	QTY
1	2074790	Radiator	1
1	1590972	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
1	1590918	Oil Cooler	1
1	1597765	Washer	4
1	1597766	Screw	4
1	1597763	Drain Valve	1
2	1352140	Radiator Cap	1
3	2085104	Radiator Hose (Upper)	1
4	2069688	Radiator Hose (Lower)	1
5	369804	Clamp	4
6	e 1610900	Shroud	1
6	f 1622272	Shroud	1
7	1535257	Nut	2
8	320154	Washer	2
9	302023	Screw	2
10	1551663	Clip	2
11	1611852	Bracket	1
12	1530243	Insert	4
13	1583611	Capscrew	4
14	1529787	Isolator	4
15	1565692	Exhaust Shield	1
16	1347026	Reservoir	1
17	345455	Outlet	1
17	336550	Bushing	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	339735	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	1531167	Bracket	1
21	1527879	Capscrew	2
22	1480237	Nut	2
23	c 1582078	Screen	1
23	b 1548497	Screen	1
23	af 1623471	Screen	1
24	1531404	Sensor (Low Coolant Level)	1
25	d 14385	Fitting	1

FOOTNOTES:**a** 2.6L and 3.3L**b** 2.6L with Basic Transmission**c** 3.3L with Basic Transmission**d** Without Low Coolant Level Sensor**e** → S/N L177B06744D**f** S/N L177B06745D →

COOLING SYSTEM (FIGURE 2-61)
YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR — WITH EXTERNAL OIL COOLER
(S/N L177B14569E →)



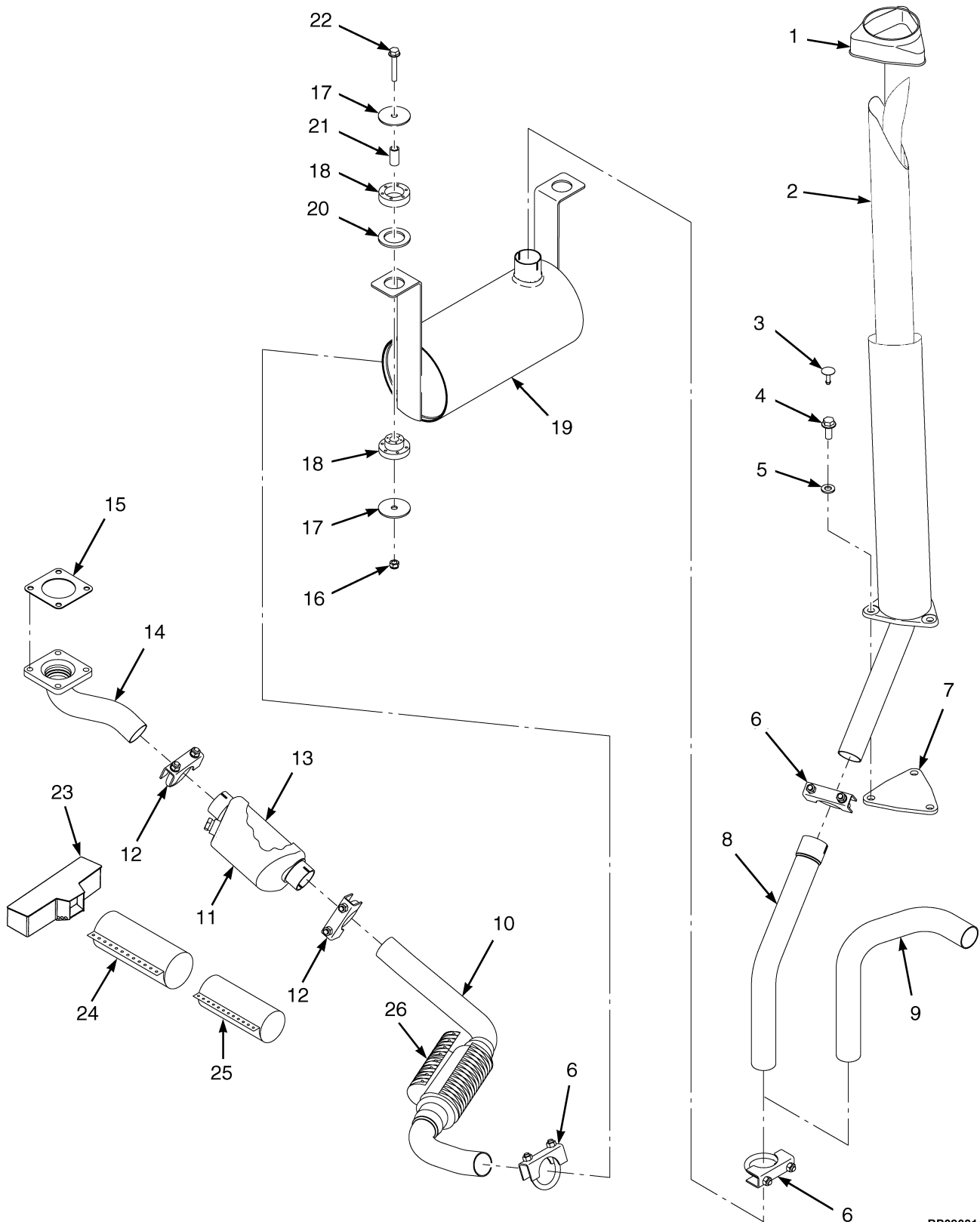
BP060047

COOLING SYSTEM**YANMAR 2.6L AND 3.3L, DIESEL, SQUARE WAVE RADIATOR – WITH EXTERNAL OIL COOLER
(S/N L177B14569E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2074790	Radiator	1
1	1569079	Drain Valve (w/Thread Wrap)	1
1	1590918	Oil Cooler	1
2	1352140	Radiator Cap	1
3	2085104	Radiator Hose (Upper)	1
4	2069688	Radiator Hose (Lower)	1
5	369804	Clamp	4
6	1622272	Shroud	1
7	1535257	Nut	2
8	320154	Washer	2
9	302023	Screw	2
10	1551663	Clip	2
11	1611852	Bracket	1
12	1530243	Insert	4
13	1583611	Capscrew	4
14	1529787	Isolator	4
15	1565692	Exhaust Shield	1
16	1633307	Reservoir	1
17	345455	Outlet	1
17	336550	Bushing	1
17	345453	Outlet (Reservoir)	1
17	345454	Cap	1
17	1663877	Hose	1
18	1567674	Hose	1
19	369815	Clamp	2
20	c 1582078	Screen	1
20	b 1548497	Screen	1
20	a 1623471	Screen	1
21	1531404	Sensor (Low Coolant Level)	1
22	d 14385	Fitting	1

FOOTNOTES:**a** 2.6L and 3.3L**b** 2.6L with Basic Transmission**c** 3.3L with Basic Transmission**d** Without Low Coolant Level Sensor

EXHAUST SYSTEM (FIGURE 2-62) YANMAR 2.6L AND 3.3L — DIESEL



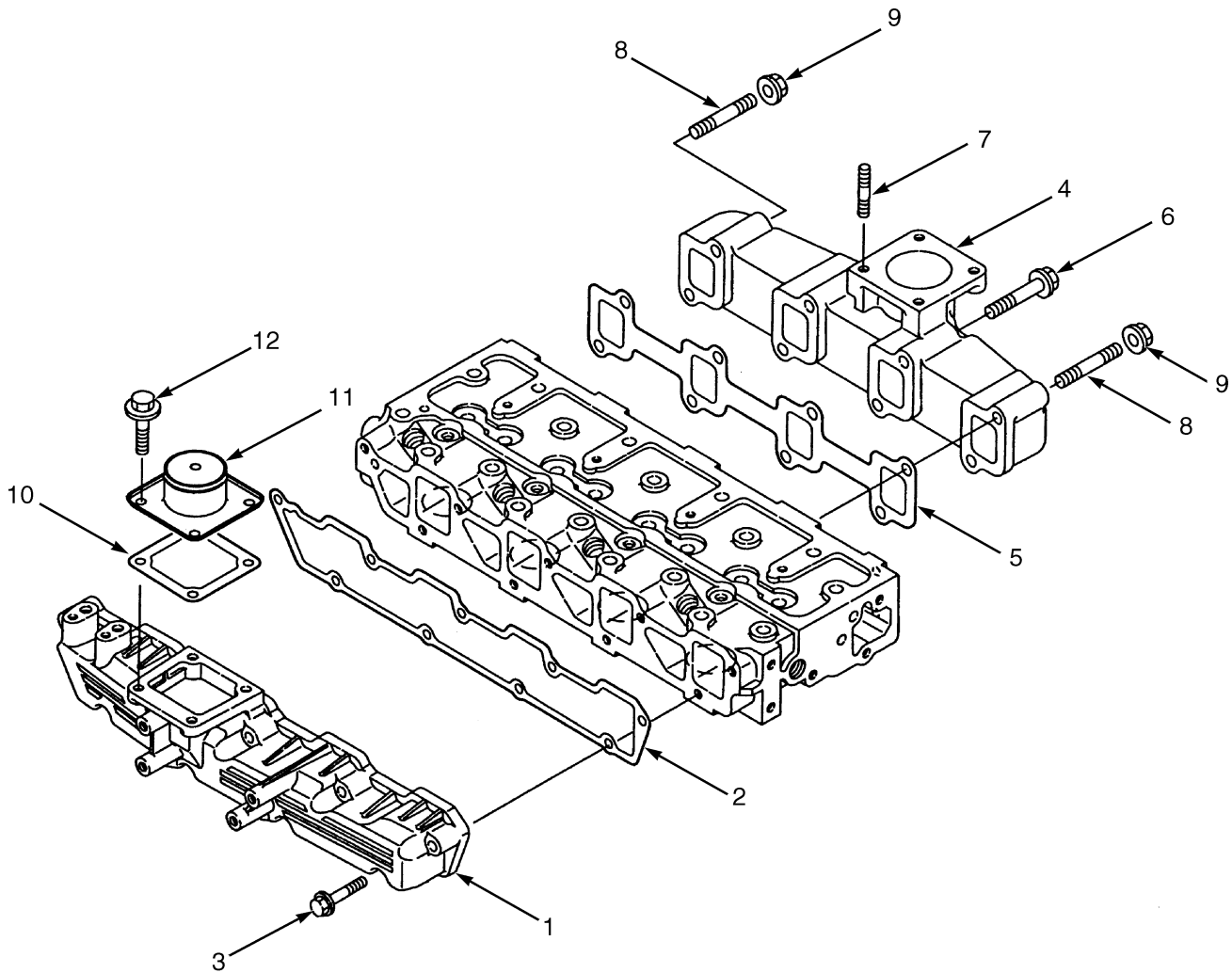
BP090214

EXHAUST SYSTEM
YANMAR 2.6L AND 3.3L – DIESEL**KEY:****A: With Catalytic Converter****B: Without Catalytic Converter**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2021394	Cover	1	1
2	c 1609626	Tail Pipe	1	1
2	d 1646827	Tail Pipe	1	1
3	1347045	Fastener	3	3
4	1510117	Capscrew	3	3
5	320159	Washer	3	3
6	68968	Clamp	3	3
7	1533639	Cover	1	1
8	1567020	Exhaust Pipe (Overhead)	1	1
9	1586967	Exhaust Pipe (Counterweight)	1	1
9	b 1625173	Exhaust Pipe (Diffuser) (Not Illustrated)	1	1
10	1589629	Exhaust Pipe	1	..
10	1589630	Exhaust Pipe (Not Illustrated)	..	1
11	878258	Catalytic Converter (Exhaust)	1	..
12	1391757	Clamp	2	..
13	1391758	Sock (Fiberglass)	1	..
14	1589635	Exhaust Pipe	1	..
15	1532363	Gasket	1	1
16	1582222	Locknut	4	4
17	1528938	Washer	4	4
18	1528930	Mount	2	2
19	2075554	Muffler (Exhaust)	1	1
20	1532585	Washer	2	2
21	1528934	Spacer	2	2
22	1510115	Capscrew	2	2
23	a 2084000	Exhaust Wrap (Manifold)	1	1
24	a 2084002	Wrap (With Snaps)	1	1
25	a 2084001	Wrap (With Snaps)	1	1
26	a 2073024	Wrap (Flex Joint)	1	1

FOOTNOTES:**a** For Paper Industry Applications**b** Used with Safety Option**c** → S/N L177B12956E**d** S/N L177B12957E →

INTAKE AND EXHAUST MANIFOLD (FIGURE 2-63)

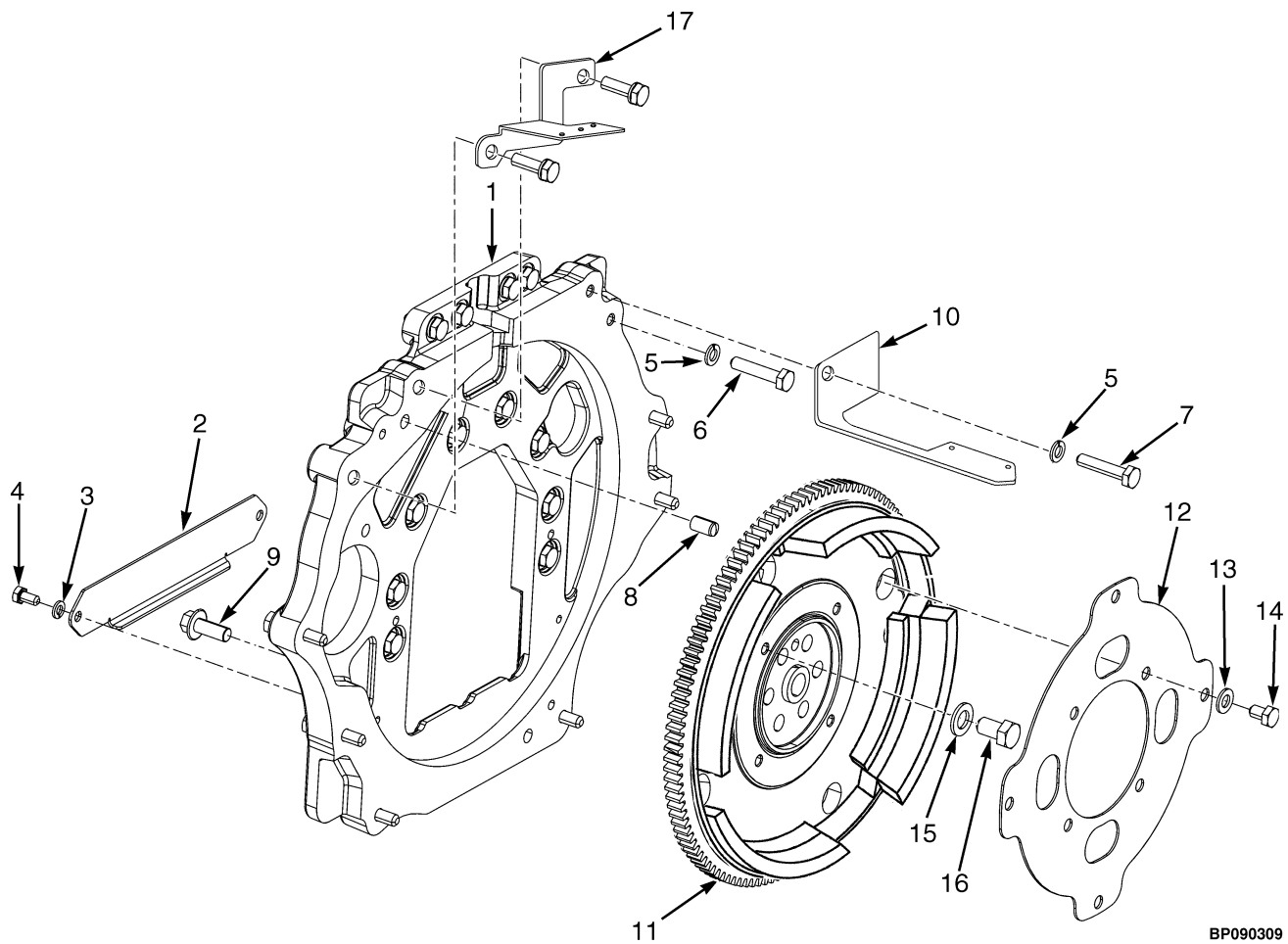


BP090185

**INTAKE AND EXHAUST MANIFOLD
YANMAR 2.6L AND 3.3L – DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599556	Intake Manifold	1
2	1599543	Gasket	1
3	1599475	Bolt	9
4	1599559	Exhaust Manifold	1
5	1599560	Gasket	1
6	1599561	Bolt	9
7	1599562	Stud	4
8	1599563	Stud	2
9	2068378	Nut	2
10	1599565	Gasket	1
11	1599567	Adapter	1
12	1599568	Bolt	4
	1599898	Kit-Gasket (2.6L Engine Complete)	1
	1600085	Kit-Gasket (Complete Engine)	1

FLYWHEEL AND HOUSING (FIGURE 2-64) YANMAR 2.6L AND 3.3L — DIESEL



BP090309

**FLYWHEEL AND HOUSING
YANMAR 2.6L AND 3.3L – DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1553265	Housing	1
2	1522363	Cover	1
3	292681	Lockwasher	2
4	287851	Capscrew	2
5	292682	Lockwasher	22
6	136985	Capscrew	12
7	292517	Capscrew	10
8	303150	Dowel	2
9	1528889	Capscrew	2
10	a 1622886	Bracket	1
10	c 1653569	Bracket	1
11	1615800	Flywheel	1
12	1531806	Flex Plate	1
13	296420	Washer	4
14	293626	Capscrew	4
15	296424	Washer	6
16	1550747	Capscrew	6
17	1623093	Bracket	1
	b 1625999	Dust Cover (Not Illustrated)	1

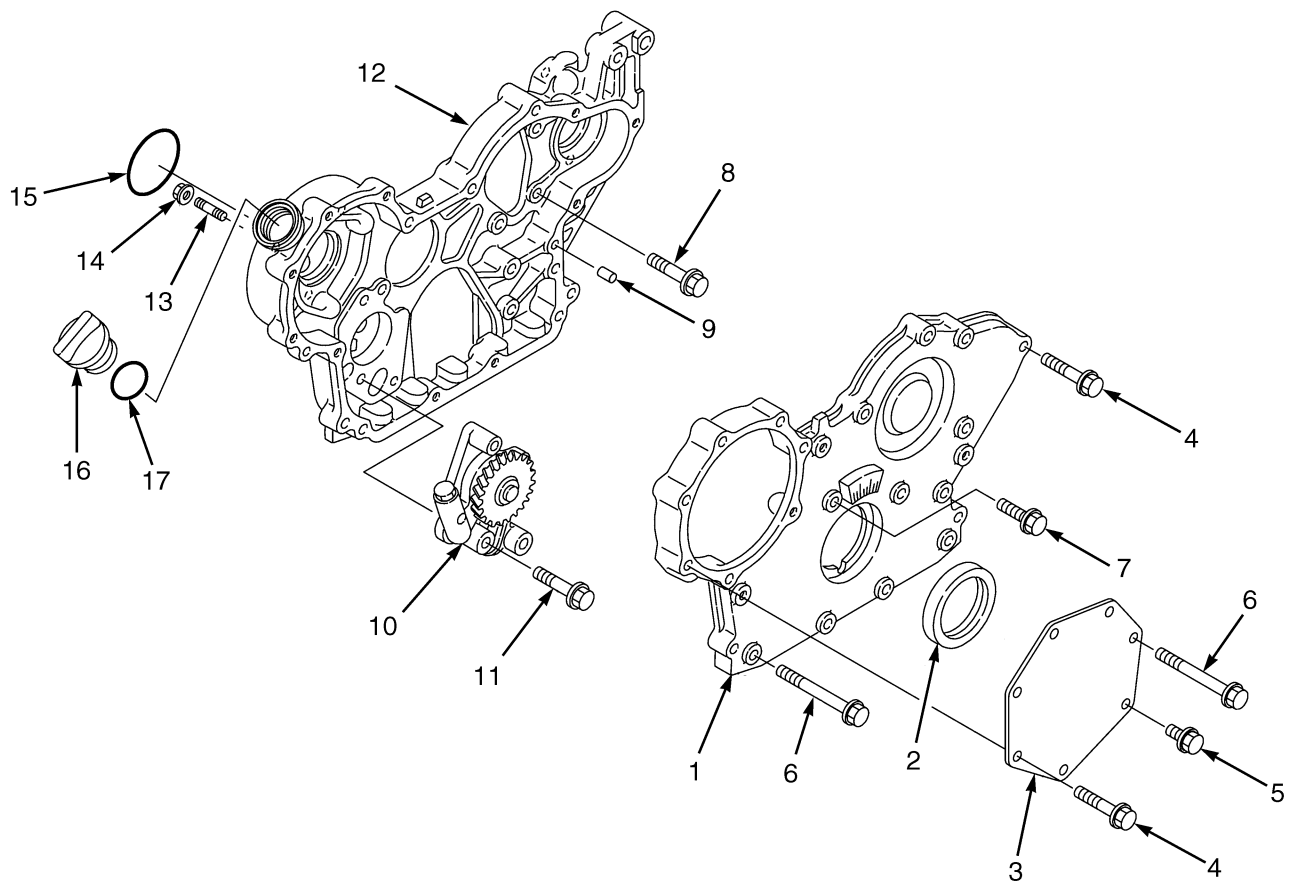
FOOTNOTES:

a → S/N L177B13245E EXC. 03421, 03442, 03446,
03479, 05746, 05792

b S/N L177B07256D →

c S/N L177B13246E → INC. 03421, 03442, 03446,
03479, 05746, 05792

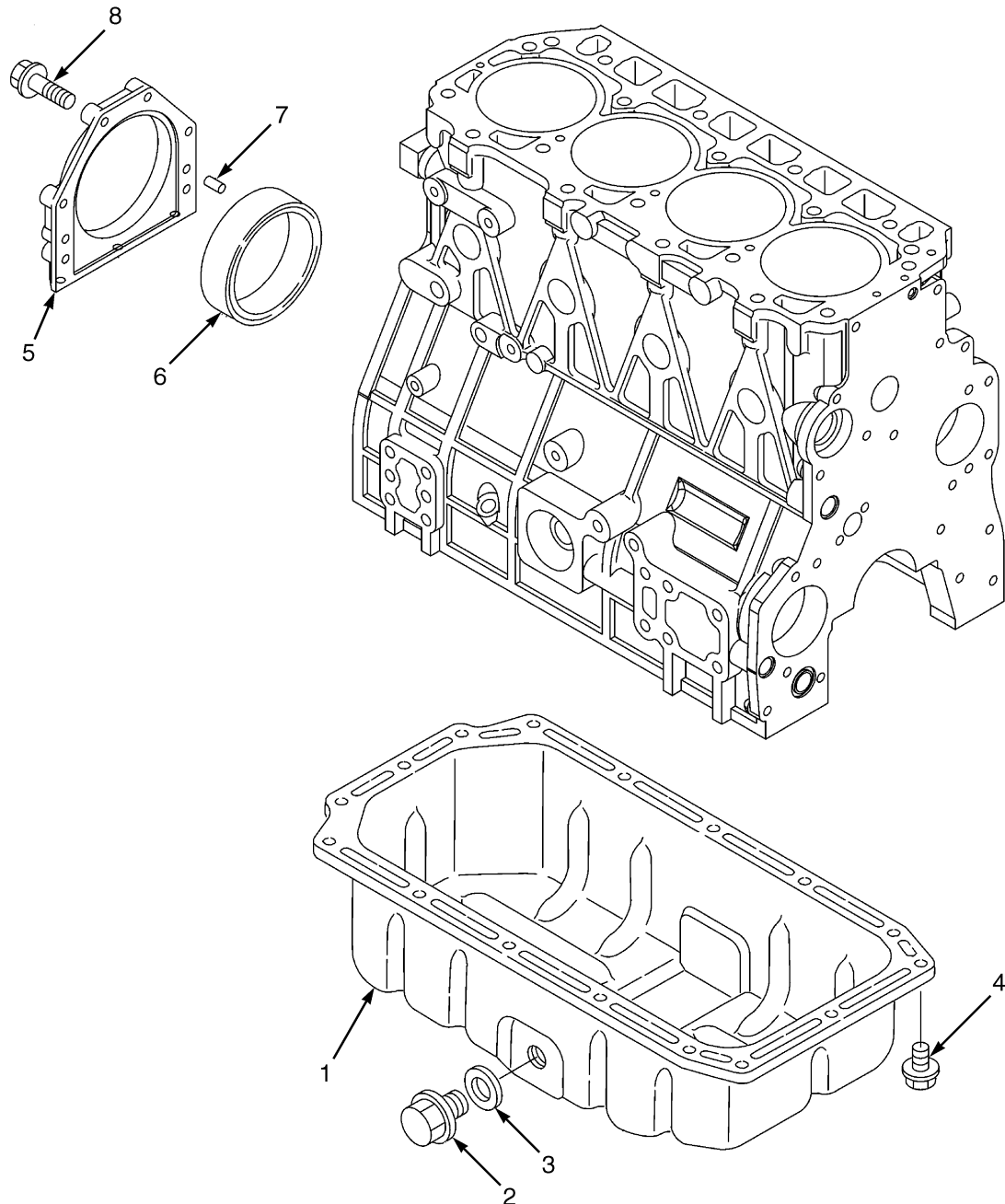
GEAR HOUSING (FIGURE 2-65) YANMAR 2.6L AND 3.3L — DIESEL



BP090182

GEAR HOUSING
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L) (2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599459	Cover	1
2	1599460	Oil Seal	1
3	1599461	Cover	1
4	1599473	Bolt	10
5	1599470	Bolt	1
6	1599476	Bolt	7
7	1599472	Bolt	1
8	1599471	Bolt	3
9	1599458	Pin	4
10	1599466	Engine Oil Pump	1
11	1599475	Bolt	1
12	1599465	Cover	1
13	1599467	Stud	3
14	2068378	Nut	3
15	1599462	O-Ring	1
16	1599463	Cap (Oil Fill)	1
17	1599464	O-Ring	1
	1599478	Gasket (Liquid)	AR
	1600085	Kit-Gasket (Complete Engine)	1
	1599898	Kit-Gasket (2.6L Engine Complete)	1

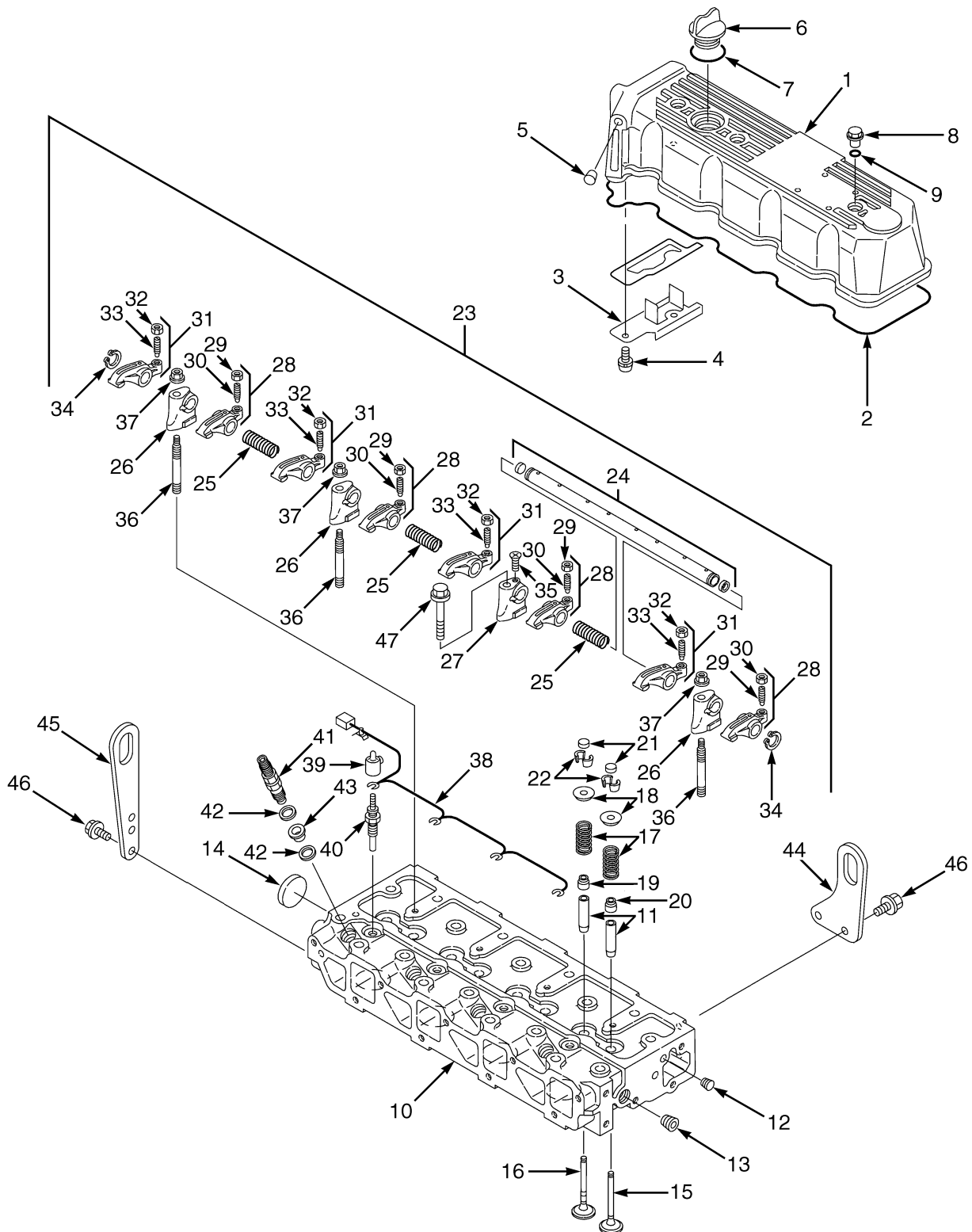
OIL PAN (FIGURE 2-66)
YANMAR 2.6L AND 3.3L — DIESEL

BP090183

OIL PAN
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599479	Oil Pan	1
2	1599480	Drain Plug	1
3	1599481	Oil Seal	1
4	1599448	Bolt	16
5	1599483	Case	1
6	1599484	Oil Seal	1
7	1599458	Pin	2
8	1599485	Bolt	6
	1599478	Gasket (Liquid) (Not Illustrated)	AR
	1600085	Kit-Gasket (Complete Engine)	1
	1599898	Kit-Gasket (2.6L Engine Complete)	1

CYLINDER HEAD (FIGURE 2-67) YANMAR 2.6L AND 3.3L — DIESEL



BP090184

CYLINDER HEAD
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599545	Engine Cover	1
2	1599546	Gasket	1
3	1599547	Plate	1
4	1599548	Screw	2
5	1599549	Plug	1
6	1599463	Cap (Oil Fill)	1
7	1599464	O-Ring	1
8	1599544	Plug	3
9	1599550	O-Ring	3
10	1599488	Cylinder Head (2.6L)	1
10	1600273	Cylinder Head (3.3L)	1
10	1599524	Cylinder Head (2.6L)	1
10	1600274	Cylinder Head (3.3L)	1
11	1599525	Guide	8
12	1599526	Plug	1
13	1599441	Plug	1
14	1599528	Plug	1
15	1599489	Inlet Valve	4
16	1599516	Exhaust Valve	4
17	1599517	Spring	8
18	1599518	Retainer	8
19	1599519	Seal (Exhaust Valve)	4
20	1599520	Seal (Intake Valve)	4
21	1599521	Cap	8
22	1599529	Cotter Pin	8
23	1599530	Support	1
24	1599531	Shaft	1
25	1599532	Spring	3
26	1599533	Support	3
27	1599534	Support	1
28	1599535	Kit-Rocker Arm	4
29	1599536	Screw	1
30	1599537	Nut	1
31	1599538	Kit-Rocker Arm	4
32	1599536	Screw	1
33	1599537	Nut	1
34	1599539	Retaining Ring	2
35	1599540	Screw	1
36	1599541	Stud	3
37	1599542	Nut	3
38	1599553	Connector (Glow Plug)	1
38	2084316	Connector (Glow Plug)	1
39	1599557	Cover	4
40	1599552	Glow Plug	4
41	1599819	Nozzle	1
42	1599523	Gasket	8
43	1599522	Protector	4
44	1599487	Lifting Eye	1

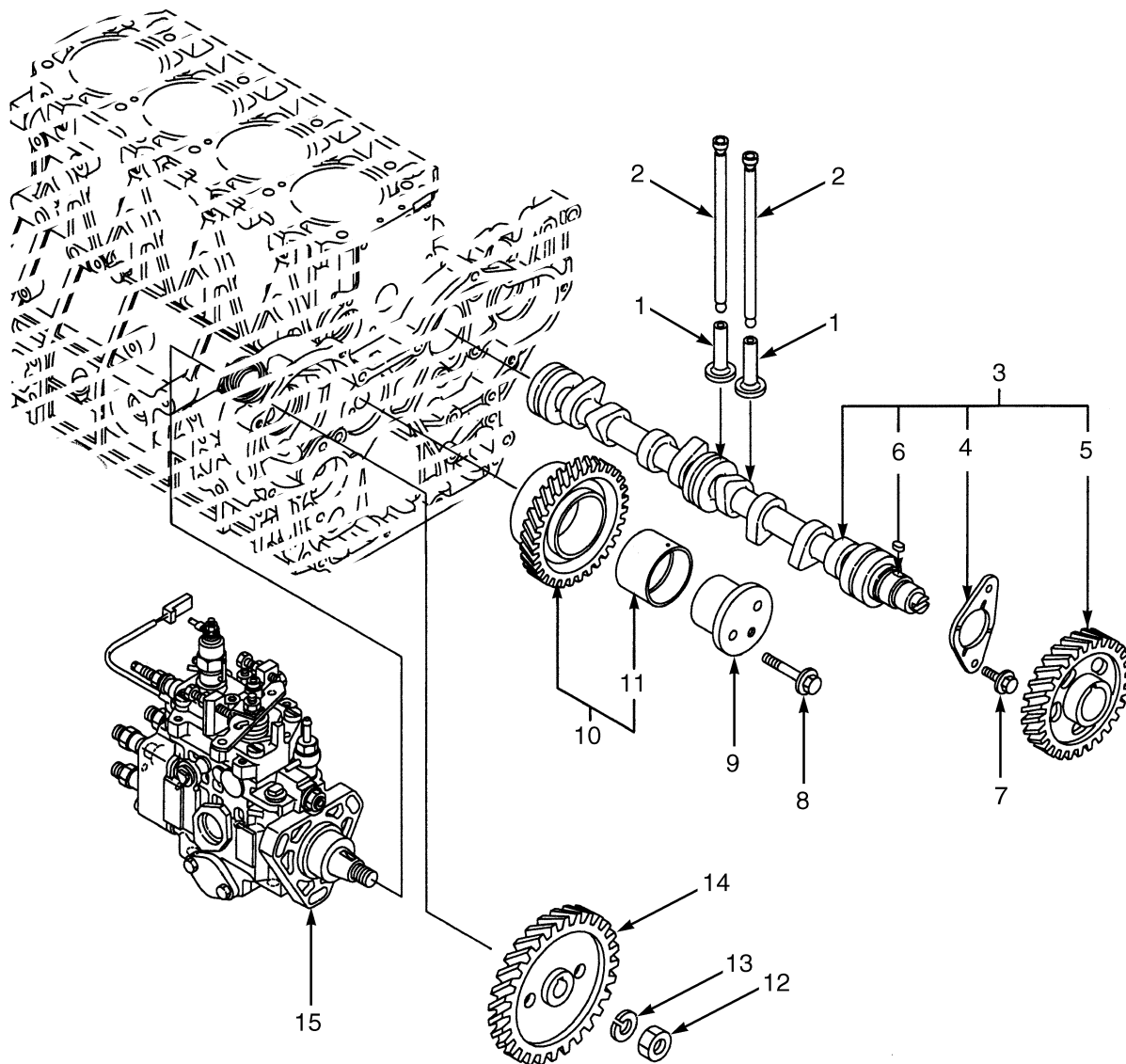
**CYLINDER HEAD
YANMAR 2.6L AND 3.3L – DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
45	1599486	Lifting Eye	1
46	1599470	Bolt	4
47	1599555	Bolt	1
	1600085	Kit-Gasket (Complete Engine) (3.3L)	1
	1599898	Kit-Gasket (2.6L Engine Complete) (2.6L)	1

NOTES

[illegible]

CAMSHAFT AND DRIVE GEAR (FIGURE 2-68) YANMAR 2.6L AND 3.3L — DIESEL

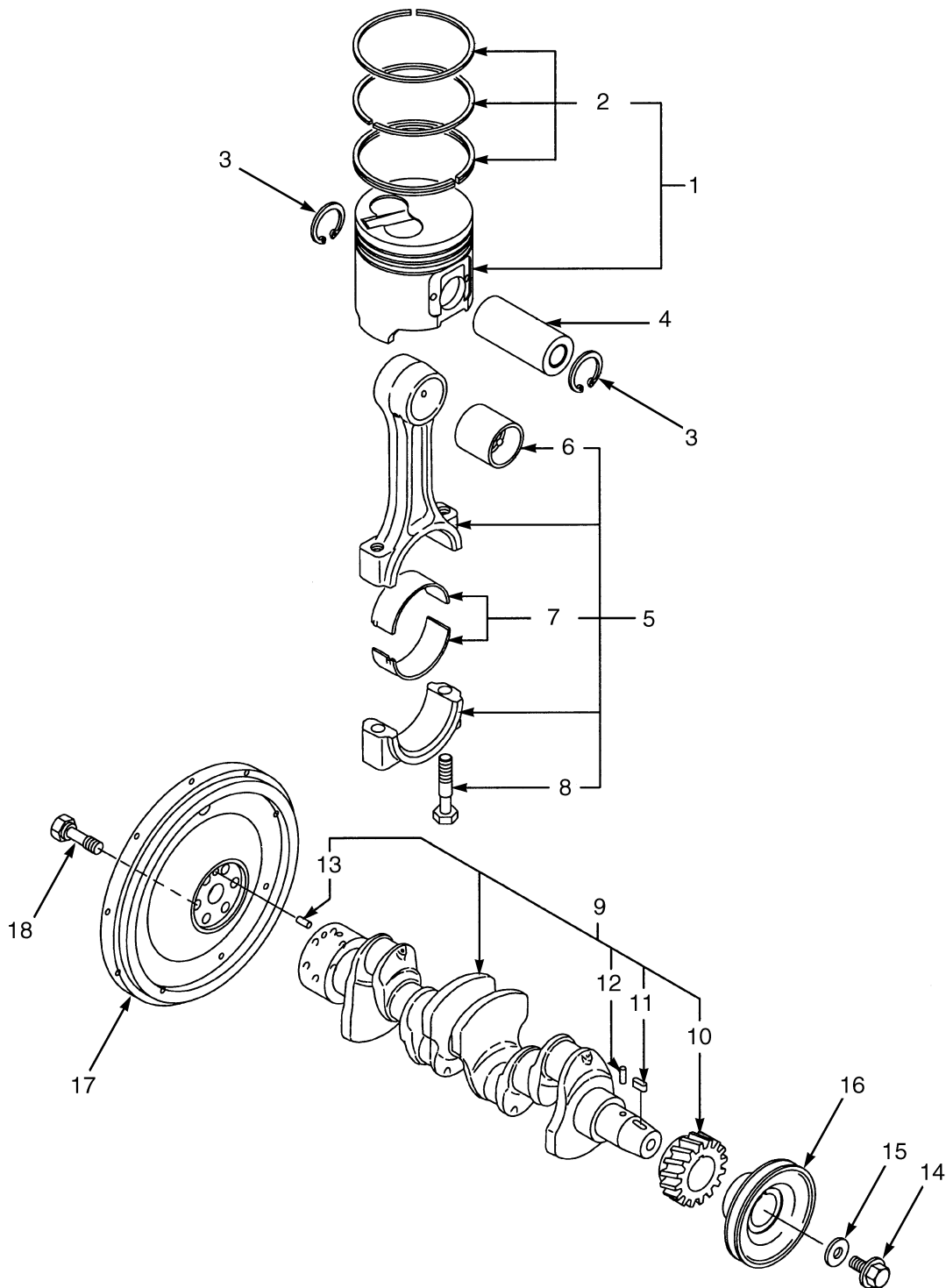


BP090186

**CAMSHAFT AND DRIVE GEAR
YANMAR 2.6L AND 3.3L – DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599569	Tappet	8
2	1599570	Push Rod	8
3	1599571	Camshaft	1
4	1599572	Retainer	1
5	1599573	Gear	1
6	1599574	Key	1
7	1599470	Bolt	2
8	1599579	Bolt	2
9	1599576	Shaft	1
10	1599577	Idler Gear	1
11	1599578	Bushing	1
12	1599582	Locknut	1
13	1599581	Spring Washer	1
14	1599580	Gear	1
15	1599901	Injection Pump (2.6L) (☞ Figure 3-40).....	1
15	1708457	Fuel Pump (Injection 2.6L) (Alternate Part)	1
15	1600084	Injection Pump (3.3L) (☞ Figure 3-40).....	1

CRANKSHAFT AND PISTONS (FIGURE 2-69) YANMAR 2.6L AND 3.3L — DIESEL

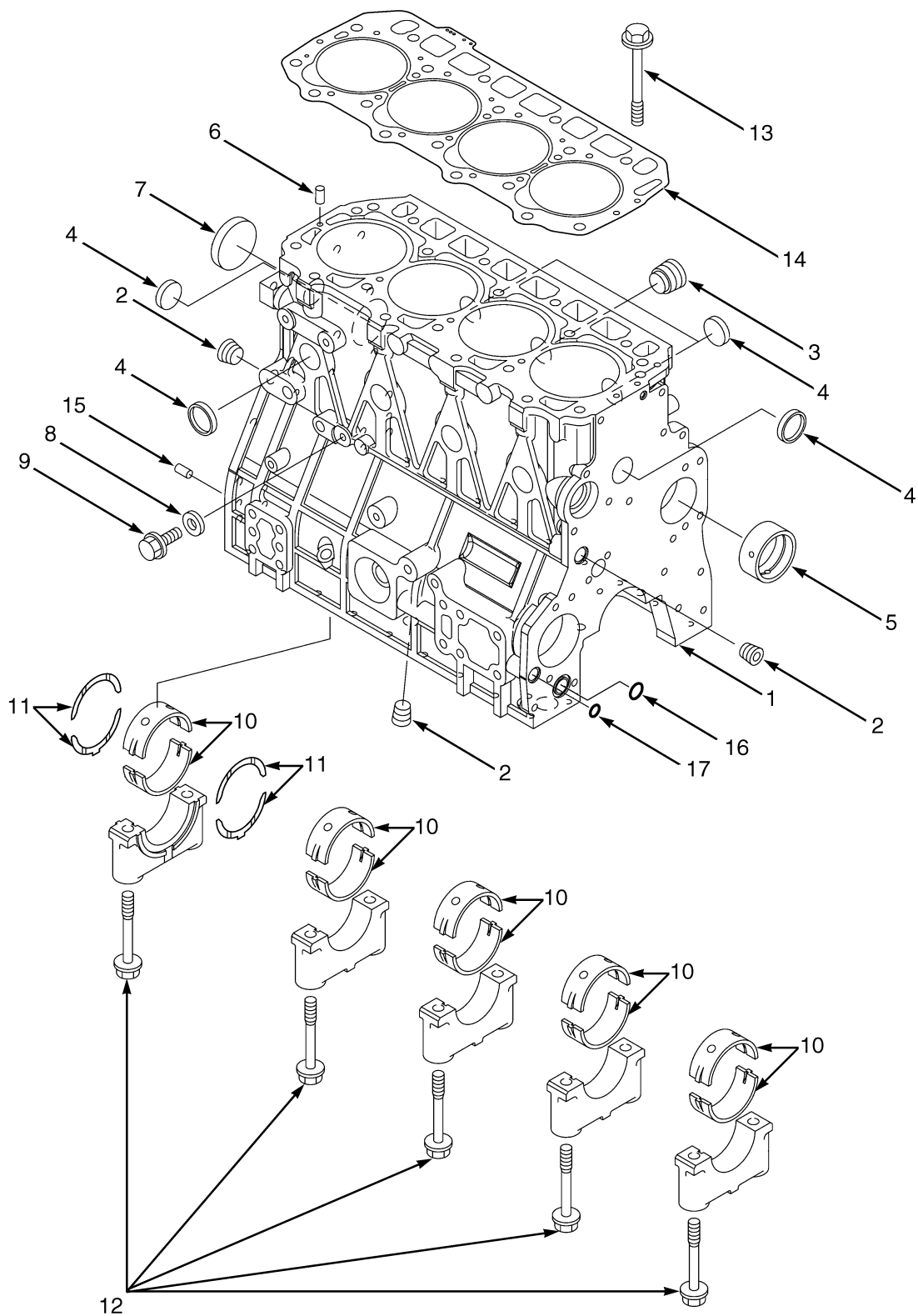


BP090187

CRANKSHAFT AND PISTONS
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599592	Piston (With Standard Rings) (2.6L)	4
1	1600276	Piston (With Standard Rings) (3.3L)	4
1	1599600	Kit-Piston (O/S 0.25 with Rings) (2.6L)	4
1	1600278	Piston (O/S 0.25 with Rings) (3.3L)	4
2	1599593	Kit-Piston Ring (Standard) (2.6L)	1
2	1600277	Kit-Piston Ring (Standard) (3.3L)	1
2	1599601	Kit-Piston Ring (O/S 0.25) (2.6L)	1
2	1600279	Kit-Piston Ring (O/S 0.25) (3.3L)	1
3	1599595	Snap Ring	8
4	1599594	Pin	4
5	1599596	Piston Rod	4
6	1599597	Bushing	1
7	2092550	Piston Rod Bearing (Standard)	1
7	2092551	Bearing (U/S 0.25)	4
8	1599598	Bolt	2
9	1599583	Crankshaft (2.6L)	1
9	1600275	Crankshaft (3.3L)	1
10	1599584	Gear	1
11	1599574	Key	1
12	1599585	Pin	1
13	1599586	Pin	1
14	1599590	Bolt	1
15	1599589	Washer	1
16	1599588	Pulley	1
17	1615800	Flywheel	1
18	1599591	Bolt	6

CYLINDER BLOCK (FIGURE 2-70) YANMAR 2.6 AND 3.3L — DIESEL

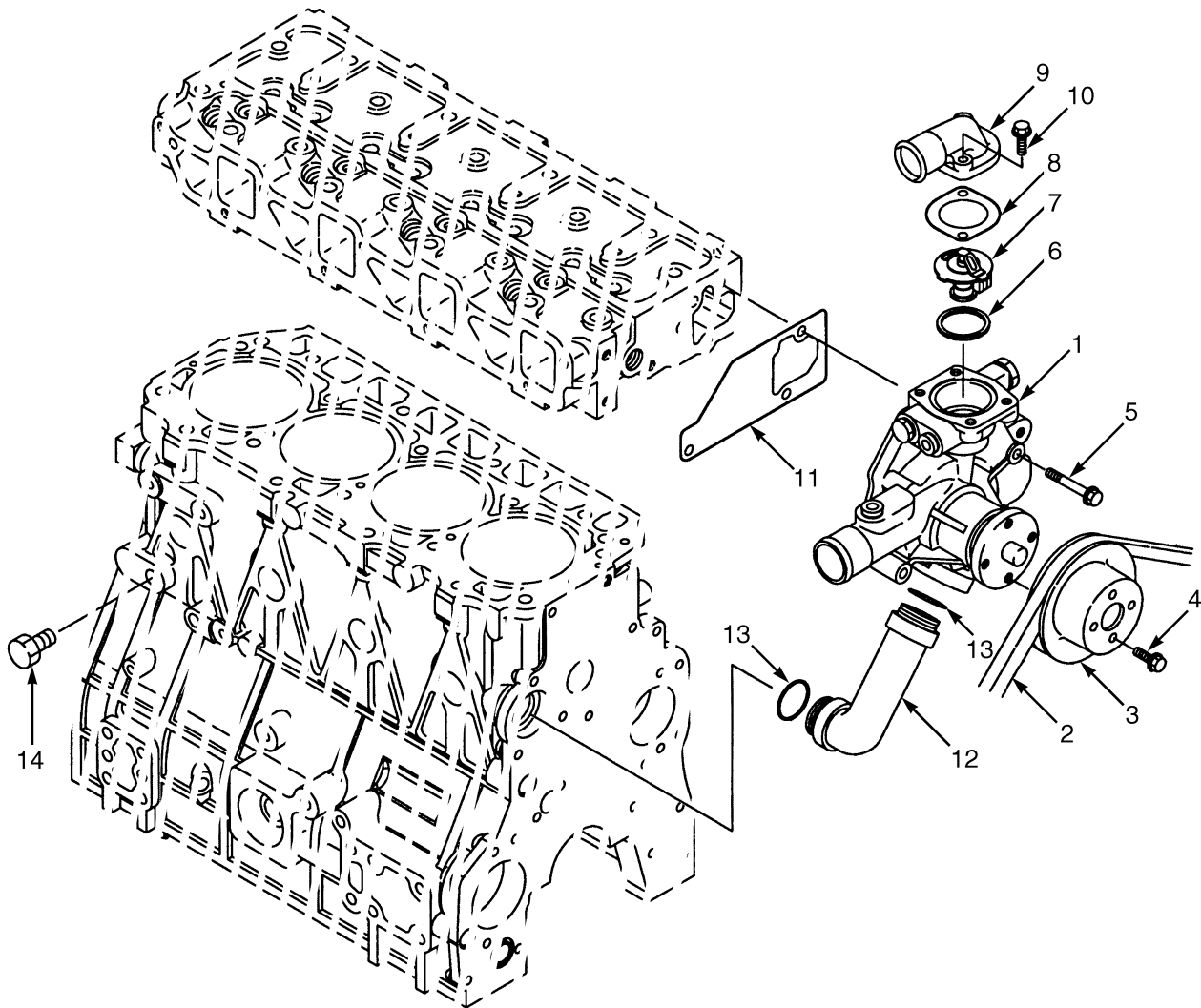


BP090181

CYLINDER BLOCK
YANMAR 2.6 AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599440	Cylinder Block (2.6L)	1
1	1599904	Cylinder Block (3.3L)	1
2	1599441	Plug	3
3	1599442	Plug	1
4	1599451	Plug	8
5	1599444	Bushing	1
6	1599446	Cotter Pin	2
7	1599449	Plug	1
8	1599445	Washer	1
9	1599448	Bolt	1
10	2092548	Kit-Crankshaft Bearing (Standard)	5
10	2092549	Kit-Bearing (U/S 0.25)	5
11	2092552	Thrust Bearing (Standard)	2
11	2092553	Kit-Thrust Bearing (U/S 0.25)	2
12	1599443	Bolt	10
13	1599454	Bolt	18
14	1599455	Cylinder Head Gasket (2.6L)	1
14	1599905	Cylinder Head Gasket (3.3L)	1
15	1599458	Pin	2
16	1599468	O-Ring	1
17	1599469	O-Ring	1
	1600085	Kit-Gasket (Complete Engine)	1
	1599898	Kit-Gasket (2.6L Engine Complete)	1

ENGINE COOLING (FIGURE 2-71) YANMAR 2.6L AND 3.3L — DIESEL

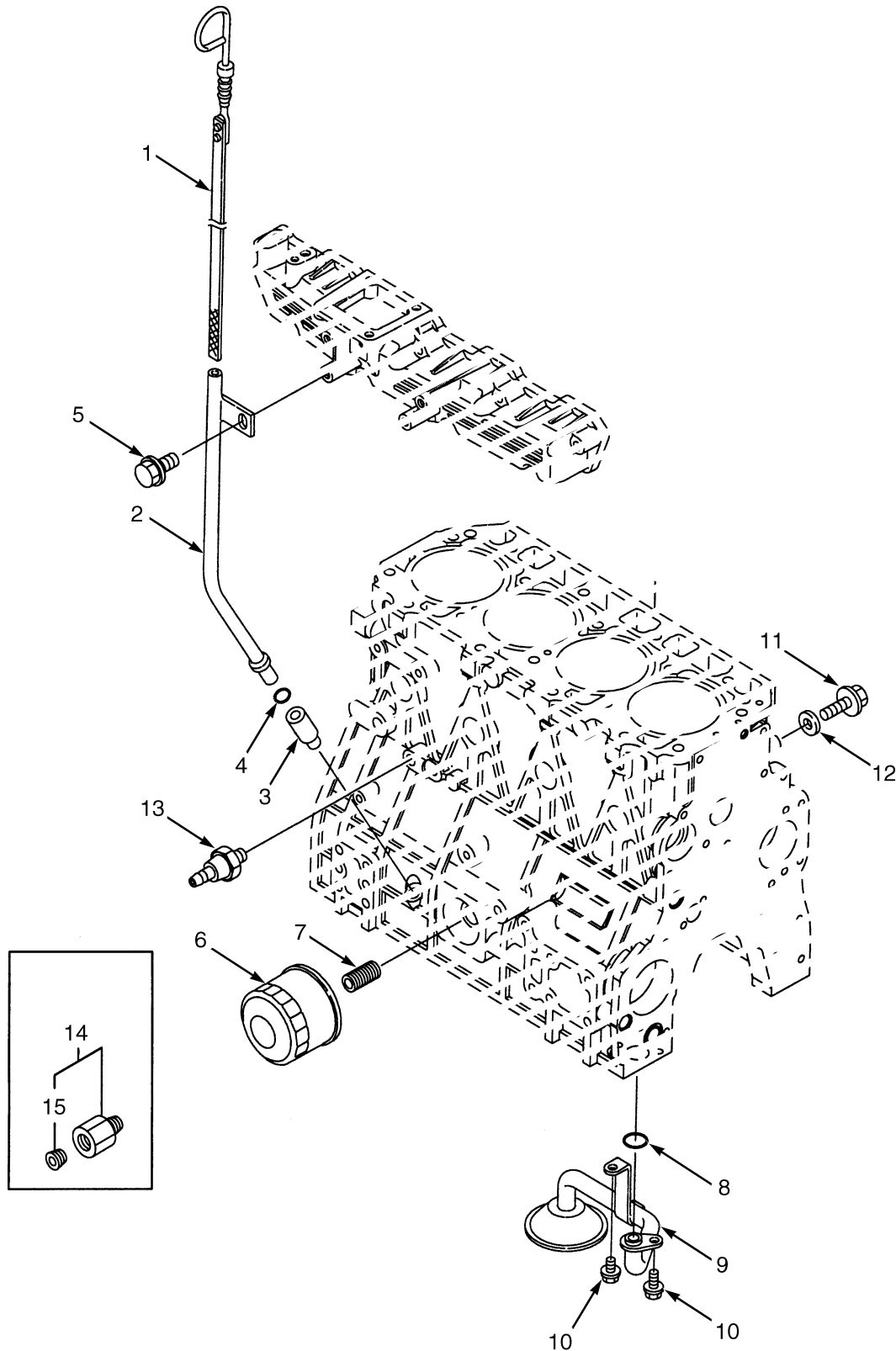


BP090193

ENGINE COOLING
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599804	Water Pump	1
2	1581441	V-Belt	1
3	1616427	Water Pump Pulley	1
4	1599448	Bolt	4
5	1599579	Bolt	3
6	1597709	Gasket	1
7	1599800	Thermostat	1
8	1597710	Gasket	1
9	1599798	Cover	1
10	1599801	Bolt	1
11	1599803	Gasket	1
12	1599797	Pipe	1
13	1599807	O-Ring	2
14	1599802	Drain Plug	2
	1599898	Kit-Gasket (2.6L Engine Complete)	1
	1600085	Kit-Gasket (Complete Engine)	1

LUBRICATION SYSTEM (FIGURE 2-72) YANMAR 2.6L AND 3.3L — DIESEL



BP090188

LUBRICATION SYSTEM
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599604	Dipstick	1
2	1599606	Dipstick Tube	1
3	1599605	Guide	1
4	1599607	O-Ring	1
5	1599470	Bolt	1
6	2077983	Oil Filter	1
7	1599610	Stud	1
8	1599468	O-Ring	1
9	1599611	Pipe	1
10	1599612	Bolt	2
11	1599448	Bolt	1
12	1599445	Washer	1
13	1599613	Pressure Switch (Oil Pressure)	1
14	1599616	Plug (Oil Pressure Sensor)	1
15	1599793	Plug	1
	1599898	Kit-Gasket (2.6L Engine Complete)	1
	1600085	Kit-Gasket (Complete Engine)	1

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

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FUEL SYSTEM**

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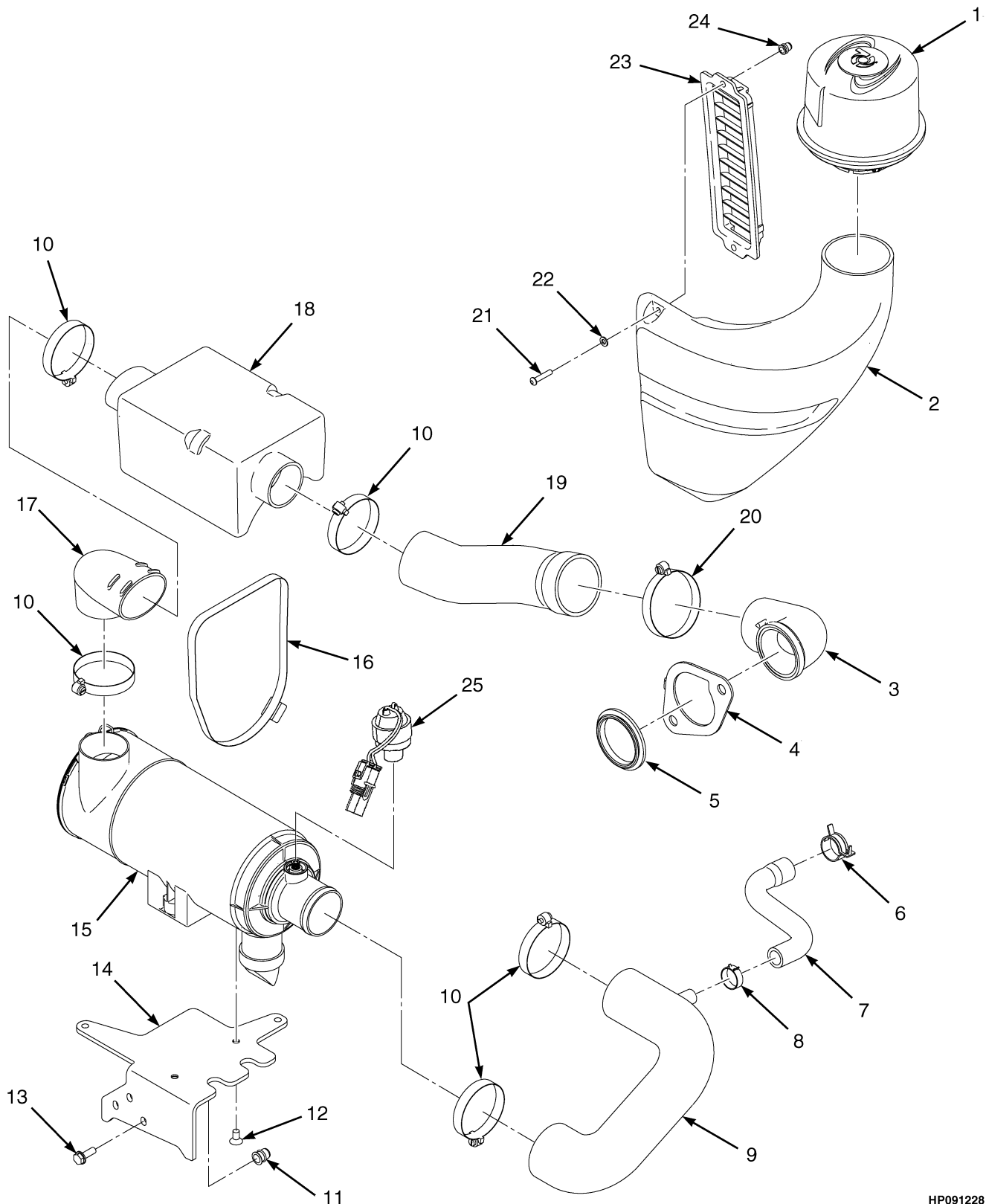
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NOTES

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AIR INTAKE SYSTEM (FIGURE 3-1) GASOLINE AND LPG — GM 2.4L (→ S/N L177B15327E)



HP091228

AIR INTAKE SYSTEM

GASOLINE AND LPG – GM 2.4L (→ S/N L177B15327E)

ITEM	PART NO.	DESCRIPTION	QTY
1	1501888	Pre-Cleaner	1
2	b 1565201	Air Duct	1
2	d 1677793	Air Duct	1
3	1581438	Elbow	1
4	1581439	Retainer	1
5	1502079	Grommet	1
6	1501997	Hose Clamp	1
7	1501887	Hose	1
8	353199	Clamp	1
9	1501837	Hose	1
10	112989	Hose Clamp	5
11	1530243	Insert	3
12	296481	Screw	2
13	1583611	Capscrew	3
14	1582159	Bracket	1
15	1501855	Air Filter (☞ Figure 3-37).....	1
16	1580068	Strap	1
17	1565199	Elbow	1
18	1565200	Silencer	1
19	1565212	Hose	1
20	1394008	Hose Clamp	1
21	2071261	Capscrew	2
22	1506738	Washer	2
23	2067476	Grill	1
24	1531558	Insert	2
25	1529257	Sensor (Air Flow Restriction)	1
	ac 1677833	Screw (Pre-Cleaner Mounting)	3

FOOTNOTES:**a** Not Illustrated**b** → S/N L177V02649F**c** PENDING PER ECN 104609 →**d** S/N L177V02650F →

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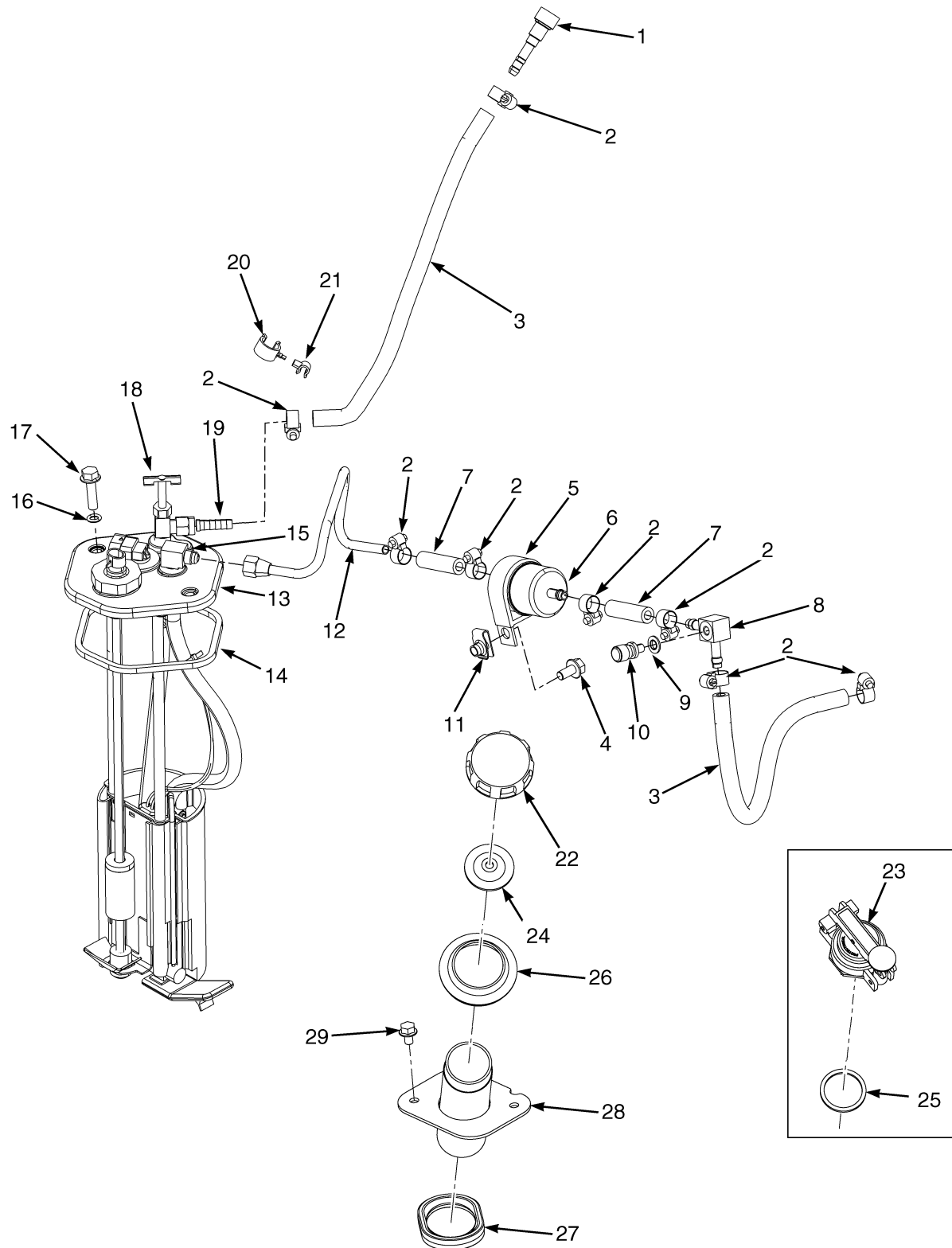
AIR INTAKE SYSTEM

GASOLINE AND LPG – GM 2.4L (S/N L177B19203E →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1501888	Pre-Cleaner	1
2	b 1565201	Air Duct	1
2	c 1677793	Air Duct (Precleaner)	1
3	1581438	Elbow	1
4	1581439	Retainer	1
5	1502079	Grommet	1
6	1501997	Hose Clamp	1
7	1501887	Hose	1
8	353199	Clamp	1
9	2098965	Hose (Clean Air)	1
9	2102914	Hose	1
10	112989	Hose Clamp	7
11	1530243	Insert	3
12	296481	Screw	2
13	1583611	Capscrew	3
14	1582159	Bracket	1
15	1501855	Air Filter (GM 2.4L)	1
16	1580068	Strap	1
17	1565199	Elbow	1
18	1565200	Silencer	1
19	1565212	Hose	1
20	1394008	Hose Clamp	1
21	2071261	Capscrew	2
22	1506738	Washer	2
23	2067476	Grill	1
24	1531558	Insert	2
25	1529257	Sensor (Air Flow Restriction)	1
26	2098964	Hose (Air Intake)	1
27	1661665	Coupler (PCV)	1
28	ac 1677833	Screw (Pre-Cleaner Mounting)	3

FOOTNOTES:**a** Not Illustrated**c** PENDING PER ECN 104609 →**b** → PENDING PER ECN 104609

FUEL SYSTEM (FIGURE 3-3) GM 2.4L — GASOLINE



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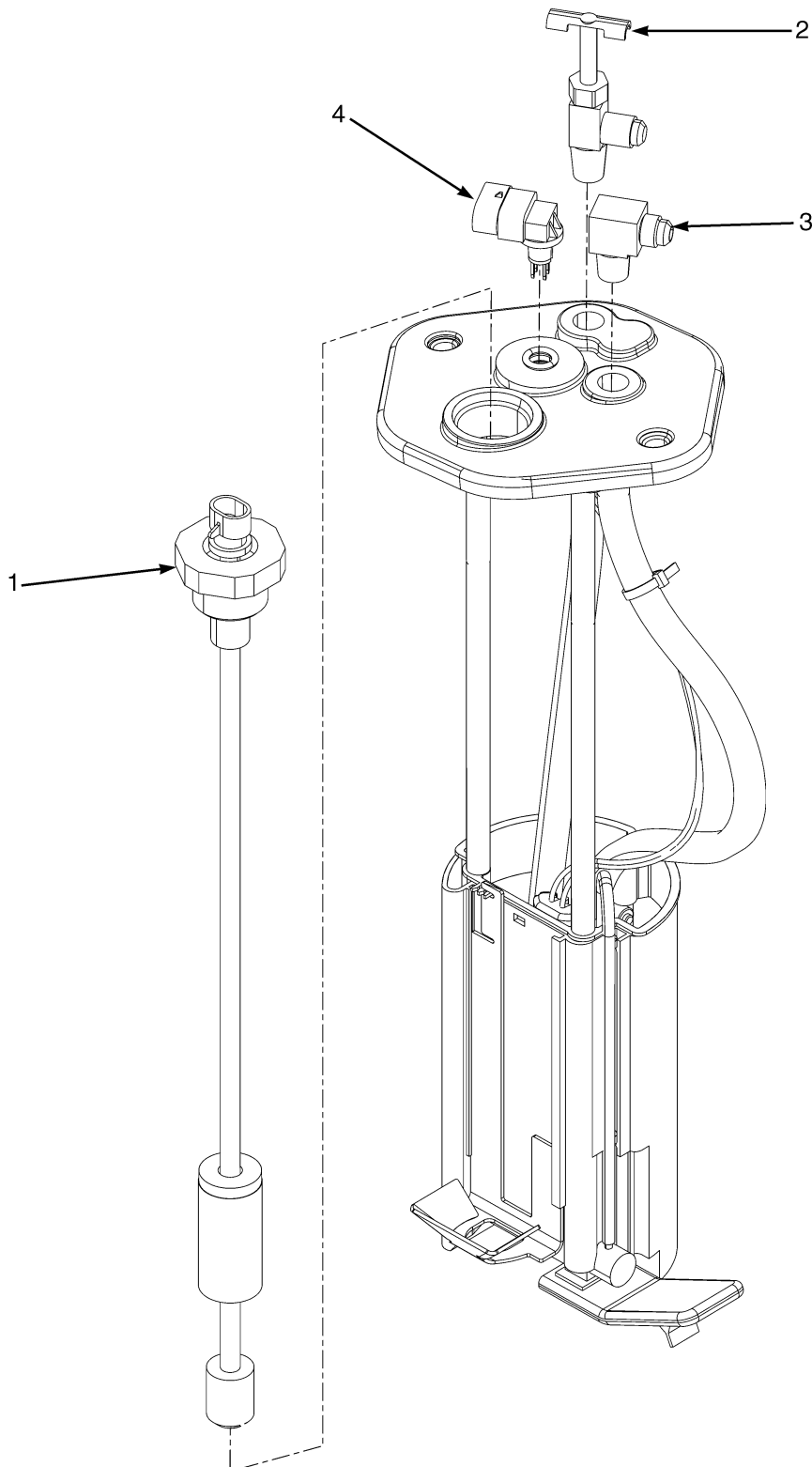
FUEL SYSTEM
GM 2.4L – GASOLINE

ITEM	PART NO.	DESCRIPTION	QTY
1	1544024	Fitting (5/16 Quick Disconnect)	1
2	168718	Clamp (Worm Screw)	8
3	2062586	Hose	2
4	1527879	Capscrew	1
5	1316496	Clamp	1
6	1304950	Fuel Filter	1
7	2062587	Hose	2
8	1547848	Fitting	1
9	1339438	Seal	1
10	1345991	Pressure Valve	1
11	1480237	Nut	1
12	1550600	Tube	1
13	1617572	Fuel Sender (☞ Figure 3-4).....	1
14	1528893	Quad Ring	1
15	21195	Fitting	1
16	353000	O-Ring	2
17	1527881	Capscrew	2
18	43883	Drain Valve (Shut-Off)	1
19	1568998	Fitting	1
20	1543698	Clamp (Swivel)	1
21	1542440	Clamp (Swivel)	1
22	b 2021679	Fuel Cap	1
23	a 1579677	Fuel Cap	1
24	b 2021683	Gasket	1
25	a 2021685	Gasket	1
25	a 325549	Shim (0.020 in.)	1
26	1528608	Grommet	1
27	1528314	Seal	1
28	1564392	Pipe (Fill)	1
29	1529366	Capscrew	2

FOOTNOTES:**a** GS Models Only**b** Standard Models Only

FUEL PUMP AND ATTACHING PARTS (FIGURE 3-4)

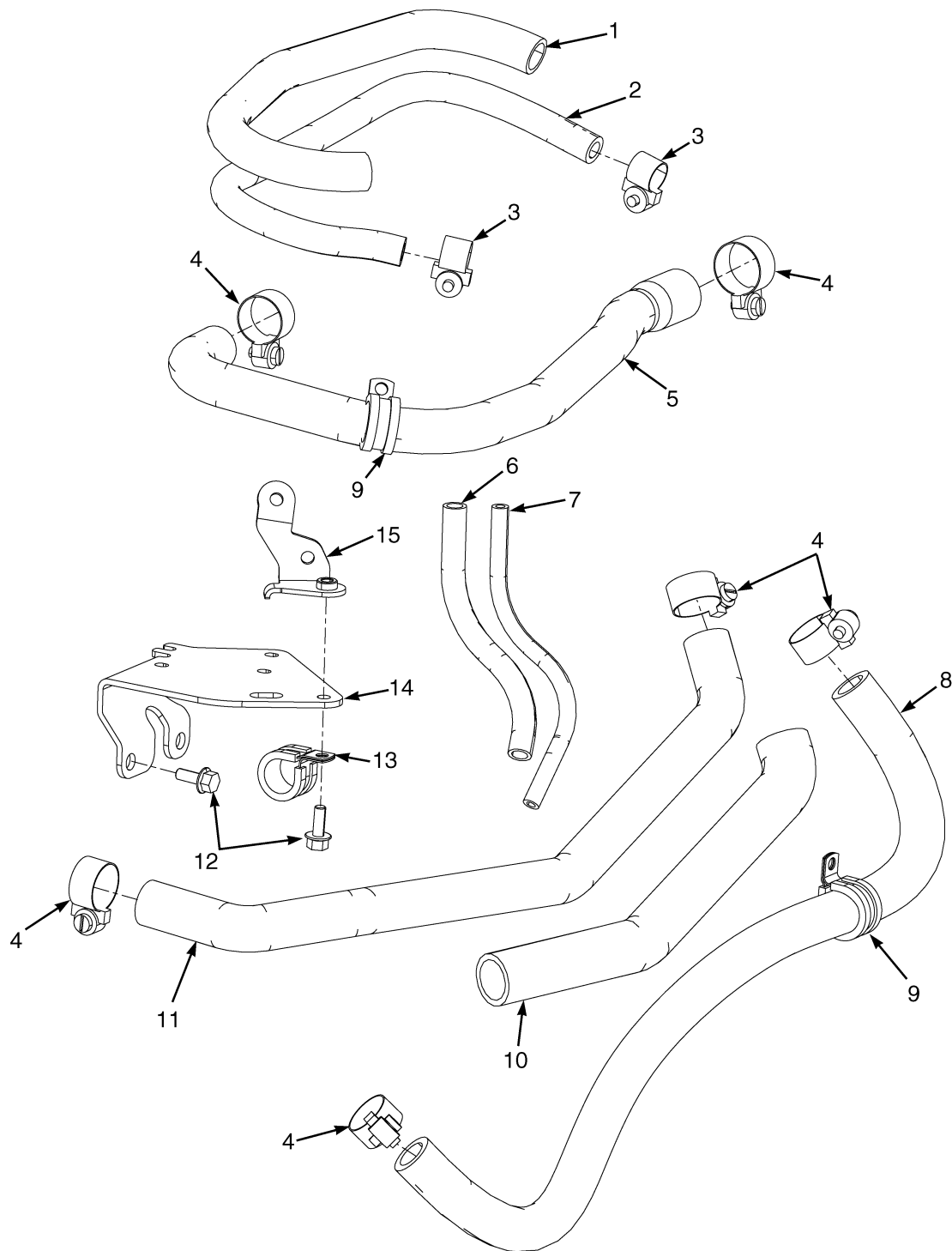
MAZDA 2.0L AND 2.2L/GM 2.4L — GASOLINE



HP130375

ITEM	PART NO.	DESCRIPTION	QTY
	1579400	Fuel Sender	1
1	1501811	Fuel Sender	1
2	43883	Drain Valve (Shut-Off)	1
3	21195	Fitting	1
4	1371149	Connector	1

FUEL SYSTEM HOSES AND ATTACHING PARTS (FIGURE 3-5)
MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15512E → (ENGINE ESSY LPG MAZDA 2.0L W/ECES))

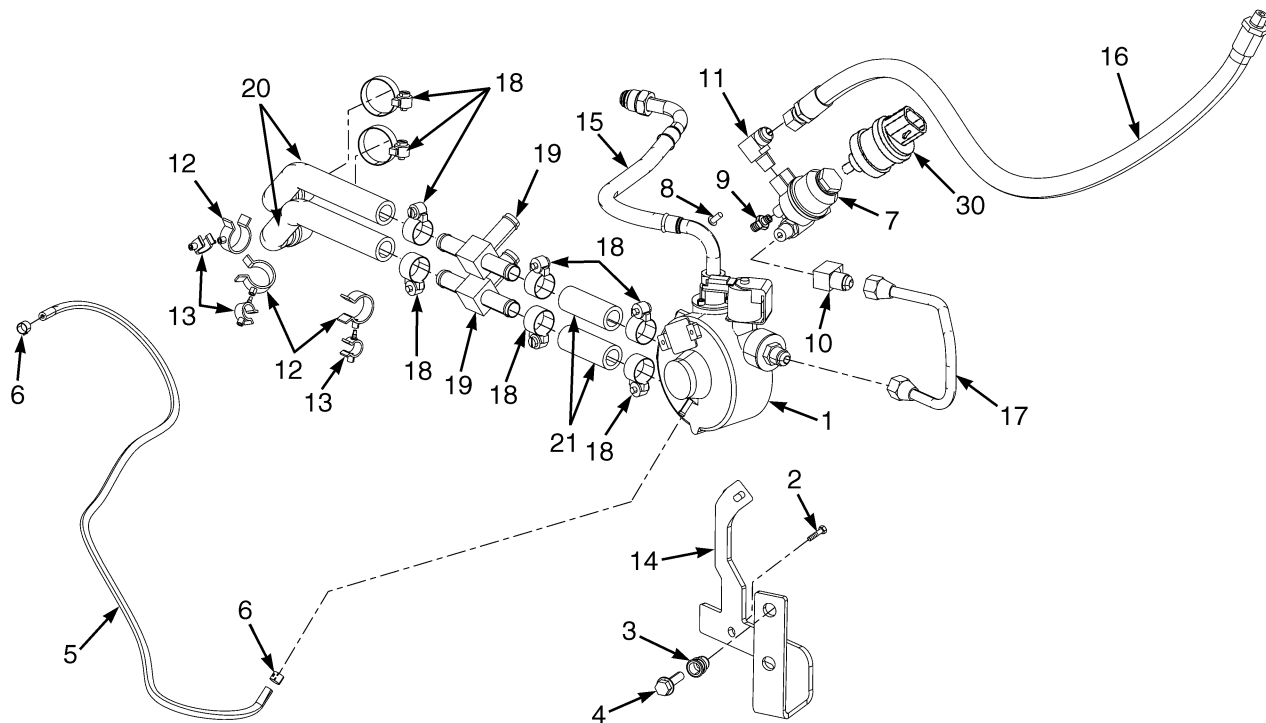
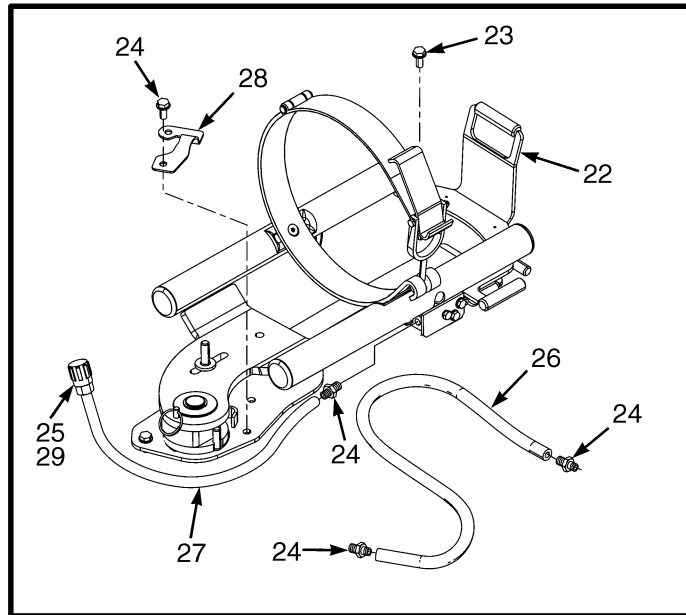


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FUEL SYSTEM HOSES AND ATTACHING PARTS
MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15512E → (ENGINE ESSY LPG MAZDA 2.0L W/ECES))

ITEM	PART NO.	DESCRIPTION	QTY
1	1650780	Conduit	1
2	1650779	Hose (Vacuum Balance)	1
3	1614770	Hose Clamp	2
3	1558198	Hose Clamp (Alternate Part)	1
4	1614771	Hose Clamp	6
4	1582385	Hose Clamp (Worm Type) (Alternate Part)	6
5	1650781	Hose (Fuel)	1
6	1650791	Conduit	1
7	1650785	Hose (Vacuum)	1
8	1650786	Hose (RH) (Cooling) (Cooling)	1
8	1650784	Hose (RH) (Cooling) (Alternate Part)	1
9	1653901	Clamp	2
10	1650786	Hose (RH) (Cooling)	1
10	1653904	Conduit (Alternate Part)	1
11	1650784	Hose (RH) (Cooling) (Cooling)	1
12	1527876	Capscrew	3
12	1558432	Bolt (Alternate Part)	2
13	1653900	Clamp	1
13	1653901	Clamp (Alternate Part)	1
14	1650762	Bracket	1
15	1650789	Bracket	1

FUEL SYSTEM (FIGURE 3-6) GM 2.4L — LPG (→ S/N L177V01401F)



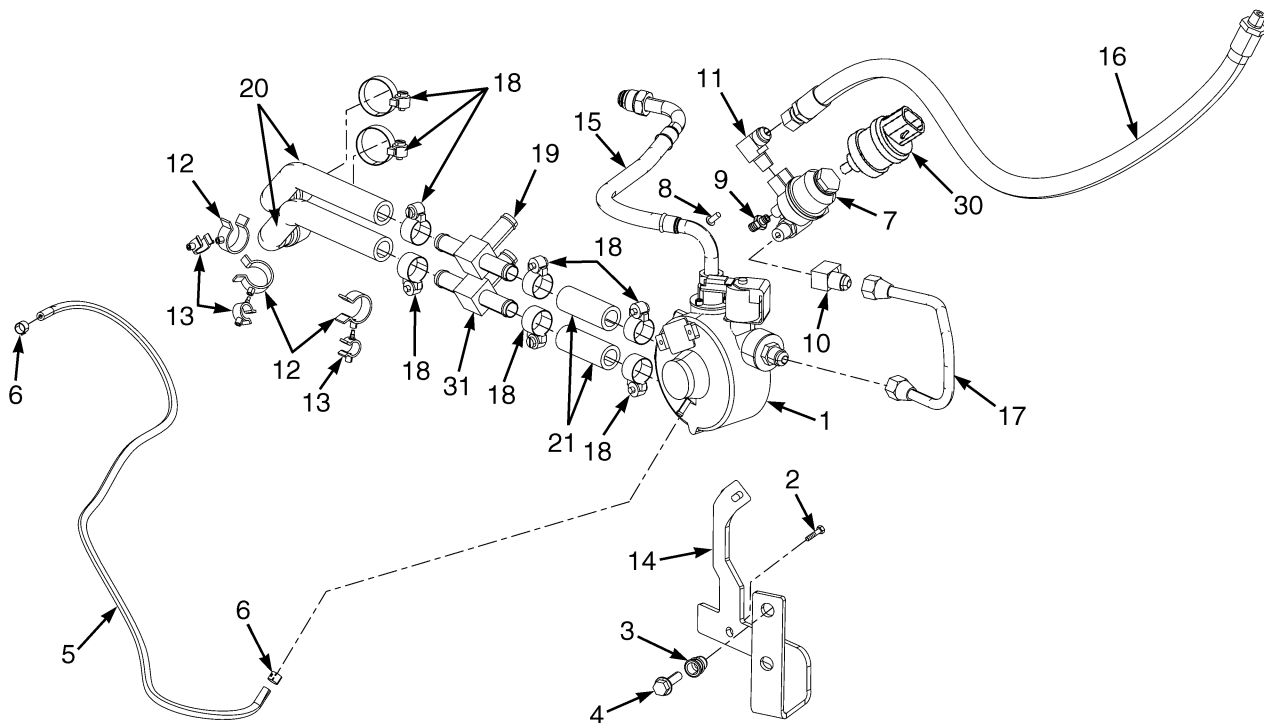
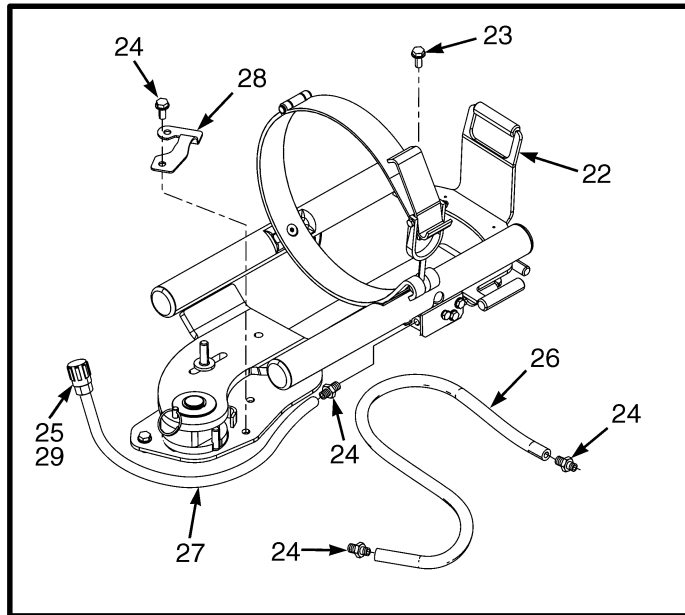
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FUEL SYSTEM
GM 2.4L – LPG (→ S/N L177V01401F)

ITEM	PART NO.	DESCRIPTION	QTY
1	2056762	LPG Converter (☞ Figure 3-8).....	1
2	1529366	Capscrew	1
3	1530243	Insert	2
4	1527881	Capscrew	2
5	1347166	Hose	1
6	366473	Clamp	2
7	f 2070100	Fuel Filter (LPG)	1
7	h 2105803	Fuel Filter (LPG)	1
7	f 1581302	Kit-Filter Element	1
7	h 1689544	Kit-Filter Element	1
8	296152	Capscrew	2
9	16151	Fitting	1
10	14372	Fitting	1
11	14358	Fitting	1
12	1542436	Clamp	3
13	1542439	Clamp (Swivel)	3
14	1578965	Bracket	1
15	2064431	Hose	1
15	1698684	Kit-O-Ring	1
16	2072300	Hose Assy	1
17	2072299	Tube	1
18	a 130845	Clamp	8
18	b 130845	Clamp	4
19	a 366000	Fitting	2
20	a 2072894	Radiator Hose	2
20	b 2072895	Radiator Hose	2
21	a 2070782	Radiator Hose	2
22	e 1519360	Lpg Tank Bracket (EZXchange) (☞ Figure 3-31).....	1
22	g 1615864	Lpg Tank Bracket (EZXchange) (☞ Figure 3-31).....	1
22	i 1649220	Lpg Tank Bracket (Swing Out/Drop Down) (☞ Figure 3-32).....	1
22	d 1582409	Lpg Tank Bracket (Swing Out) (☞ Figure 3-28).....	1
22	i 1649216	Lpg Tank Bracket (Swing Out) (☞ Figure 3-29).....	1
23	1586013	Capscrew	4
24	16134	Fitting	2
25	97999	Fitting	1
26	2072298	Hose Assy	1
27	2058426	Hose Assy	1
28	c 1564061	Bracket	1
29	2071517	Sleeve	1
30	1501970	Pressure Switch (Low Pressure)	1

FOOTNOTES:**a** For Vehicles With Cab**b** For Vehicles With Overhead Guard**c** For Vehicles With Swing Out Bracket**d** → 11/2007**e** → S/N L177B104056D**f** → S/N L177V02219F**g** S/N L177B10405D ↔ 11/2007**h** S/N L177V02220F →**i** 11/2007 →

FUEL SYSTEM (FIGURE 3-7) GM 2.4L — LPG (S/N L177V01401F →)



BP130292

FUEL SYSTEM
GM 2.4L – LPG (S/N L177V01401F →)

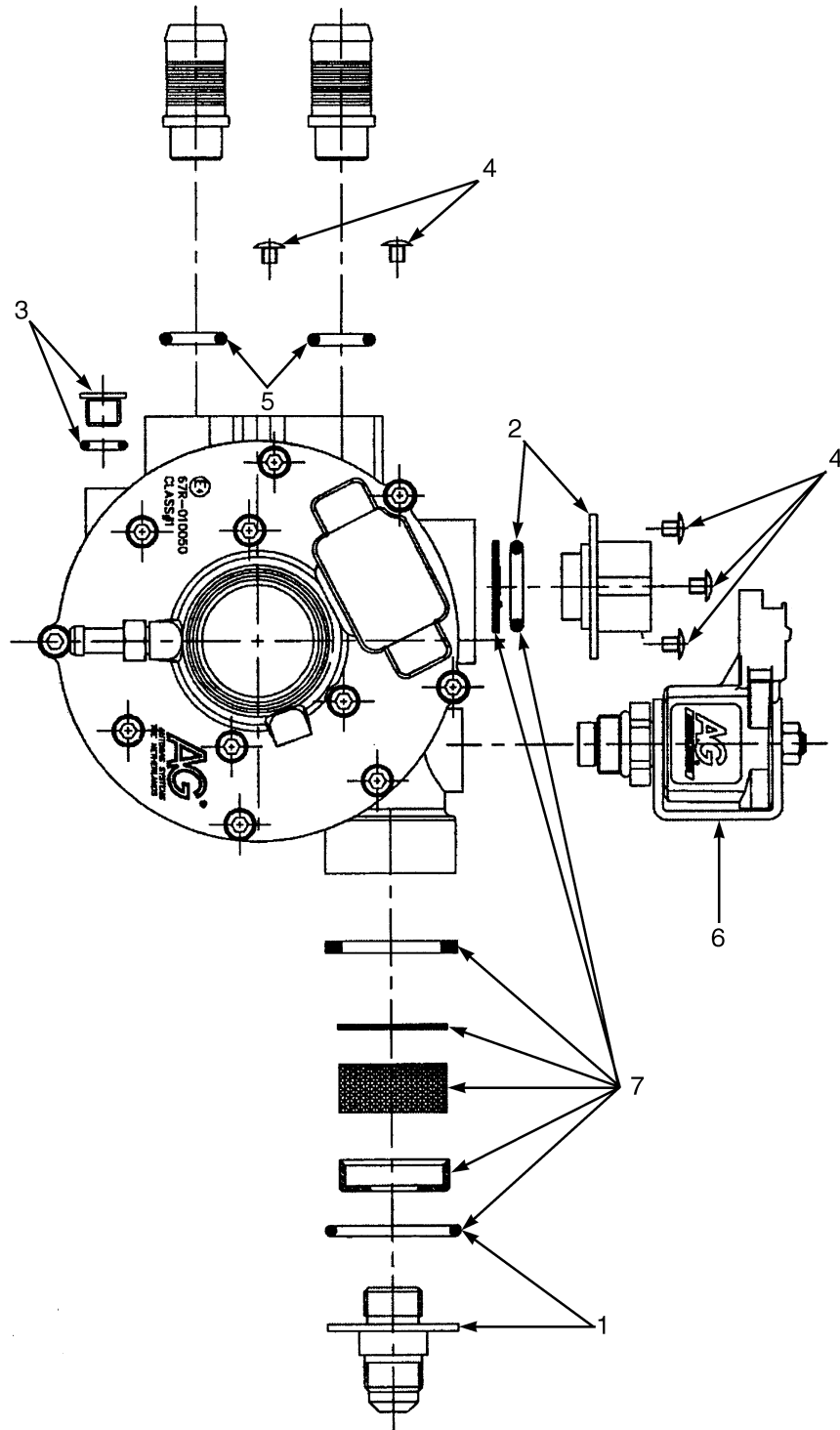
ITEM	PART NO.	DESCRIPTION	QTY
1	2056762	LPG Converter (☞ Figure 3-8).....	1
2	1529366	Capscrew	1
3	1530243	Insert	2
4	1527881	Capscrew	2
5	1347166	Hose	1
6	366473	Clamp	2
7	2105803	Fuel Filter (LPG)	1
7	1689544	Kit-Filter Element	1
8	296152	Capscrew	2
9	16151	Fitting	1
10	14372	Fitting	1
11	14358	Fitting	1
12	1542436	Clamp	3
13	1542439	Clamp (Swivel)	3
14	1578965	Bracket	1
15	2064431	Hose	1
15	1698684	Kit-O-Ring	1
16	2072300	Hose Assy	1
17	2072299	Tube	1
18	a 130845	Clamp	8
18	b 130845	Clamp	4
19	a 366000	Fitting	1
20	a 2072894	Radiator Hose	2
20	b 2072895	Radiator Hose	2
21	a 2070782	Radiator Hose	2
22	f 1519360	Lpg Tank Bracket (EZExchange) (☞ Figure 3-31).....	1
22	g 1615864	Lpg Tank Bracket (EZExchange) (☞ Figure 3-31).....	1
22	h 1649220	Lpg Tank Bracket (Swing Out/Drop Down) (☞ Figure 3-32).....	1
22	e 1582409	Lpg Tank Bracket (Swing Out) (☞ Figure 3-28).....	1
22	h 1649216	Lpg Tank Bracket (Swing Out) (☞ Figure 3-29).....	1
23	1586013	Capscrew	4
24	16134	Fitting	2
25	97999	Fitting	1
26	2072298	Hose Assy	1
27	2058426	Hose Assy	1
28	c 1564061	Bracket	1
29	2071517	Sleeve	1
30	1501970	Pressure Switch (Low Pressure)	1
31	1683422	Fitting	1
	d 246108	Sealant	1
	d 1687376	Sealant (Alternate Part)	1
	d 1687377	Activator (Alternate Part)	1

FOOTNOTES:

- a** For Vehicles With Cab
b For Vehicles With Overhead Guard
c For Vehicles With Swing Out Bracket
d Not Illustrated

- e** → 11/2007
f → S/N L177B104056D
g S/N L177B10405D ↔ 11/2007
h 11/2007 →

FUEL REGULATOR (FIGURE 3-8) LPG — GM 2.4L

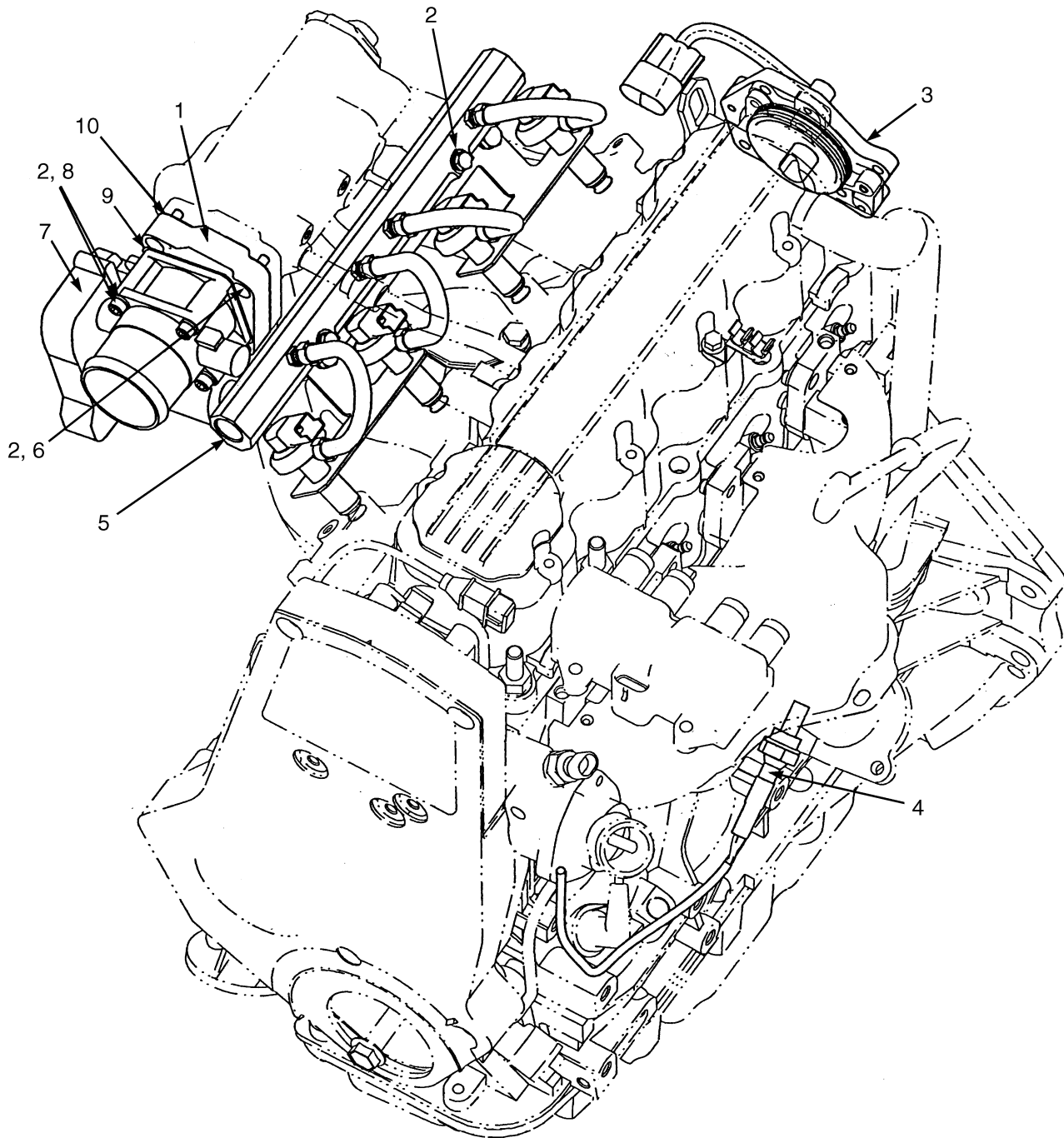


HP130352

FUEL REGULATOR
LPG – GM 2.4L

ITEM	PART NO.	DESCRIPTION	QTY
	2056762	LPG Converter	1
1	1581762	Fitting (Inlet Fitting With O-Ring)	1
2	1581763	Fitting (Outlet Fitting With O-Ring)	1
3	1581764	Drain Plug (With O-Ring)	1
4	1585751	Kit-Screw (Includes 5 Connector Screws)	1
5	1585748	Kit-O-Ring (Includes 2 Coolant Fitting O-Rings)	1
6	1585747	LPG Lock-Off	1
7	1581761	Kit-Filter	1
7		O-Ring	1
7		Plastic Cap	1
7		Foam Filter	1
7		Paper Filter	1
7		Rubber Washer	1
7		Screen	1
	a 1692176	Kit-Repair LPG Converter (Not Illustrated)	1

FOOTNOTES:**a** → S/N L177B14822E

THROTTLE BODY AND ATTACHING PARTS (FIGURE 3-9)
GM 2.4L — GASOLINE

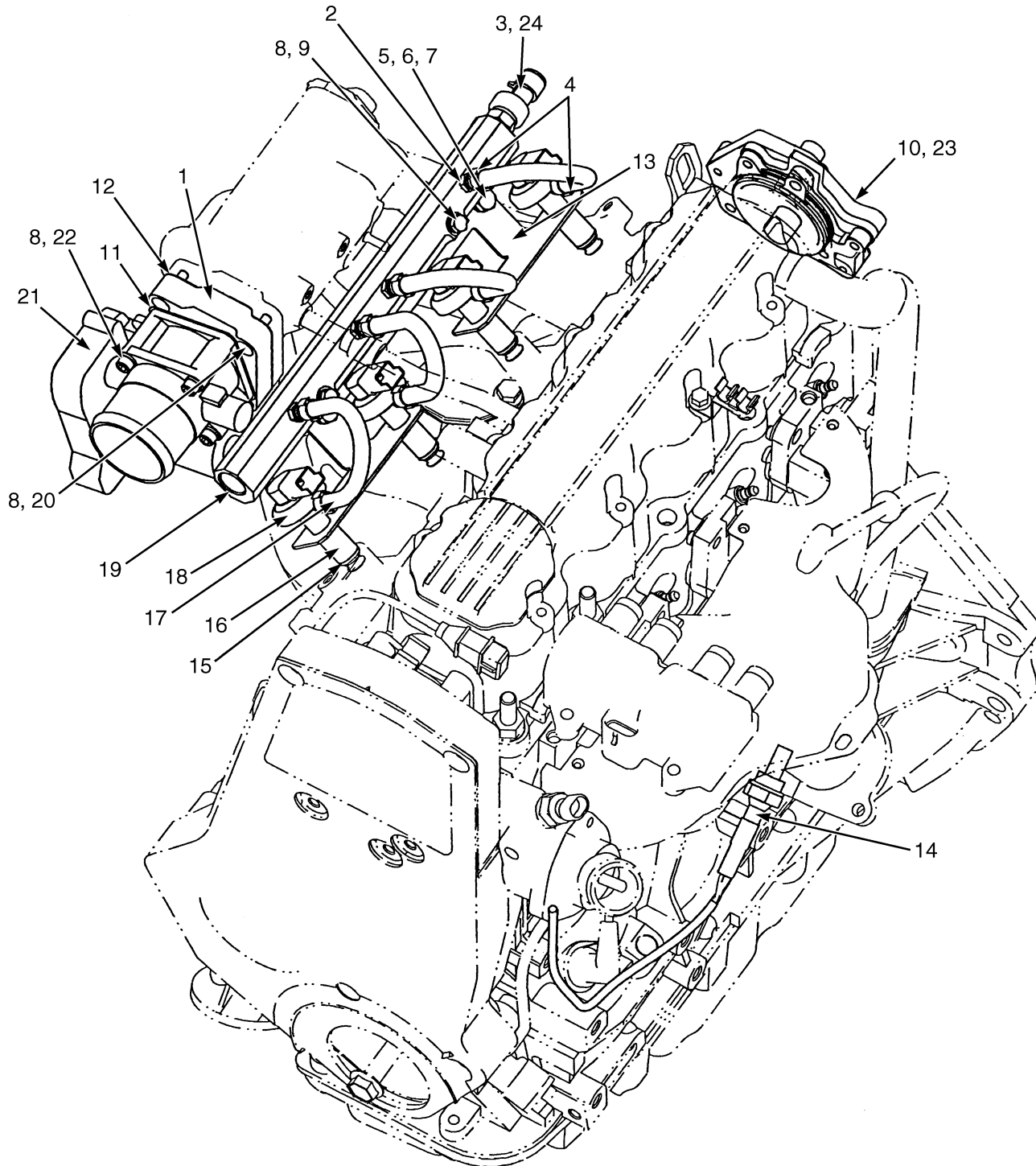
HP130377

THROTTLE BODY AND ATTACHING PARTS
GM 2.4L – GASOLINE

ITEM	PART NO.	DESCRIPTION	QTY
1	1557553	Plate (Throttle Adapter)	1
2	b 1557550	Lockwasher	10
3	1581796	Kit-Sensor	1
3	1564589	Screw	1
3	1564588	O-Ring	1
3	1564587	Sensor (Camshaft Position)	1
3	b 1557550	Lockwasher	1
3	1534417	Capscrew	1
3	1600125	Clamp	1
4	a 1557546	Oxygen Sensor (With Wire Harness)	1
5	1548395	Fuel Rail (Gasoline)	1
5	1597699	Rail	1
5	1597700	Retainer	4
5	1597701	Injector	4
5	1597702	Regulator	1
5	1597703	Bolt	1
5	1597704	Seal	1
6	1557549	Capscrew	4
7	1557547	Throttle Body	1
8	1557548	Capscrew	4
9	1557551	Gasket (Throttle Body)	1
10	1557552	Gasket (Throttle Plate)	1

FOOTNOTES:**a** Located in exhaust System**b** → S/N L177B14822E

THROTTLE BODY AND ATTACHING PARTS (FIGURE 3-10) GM 2.4L — LPG



HP130378

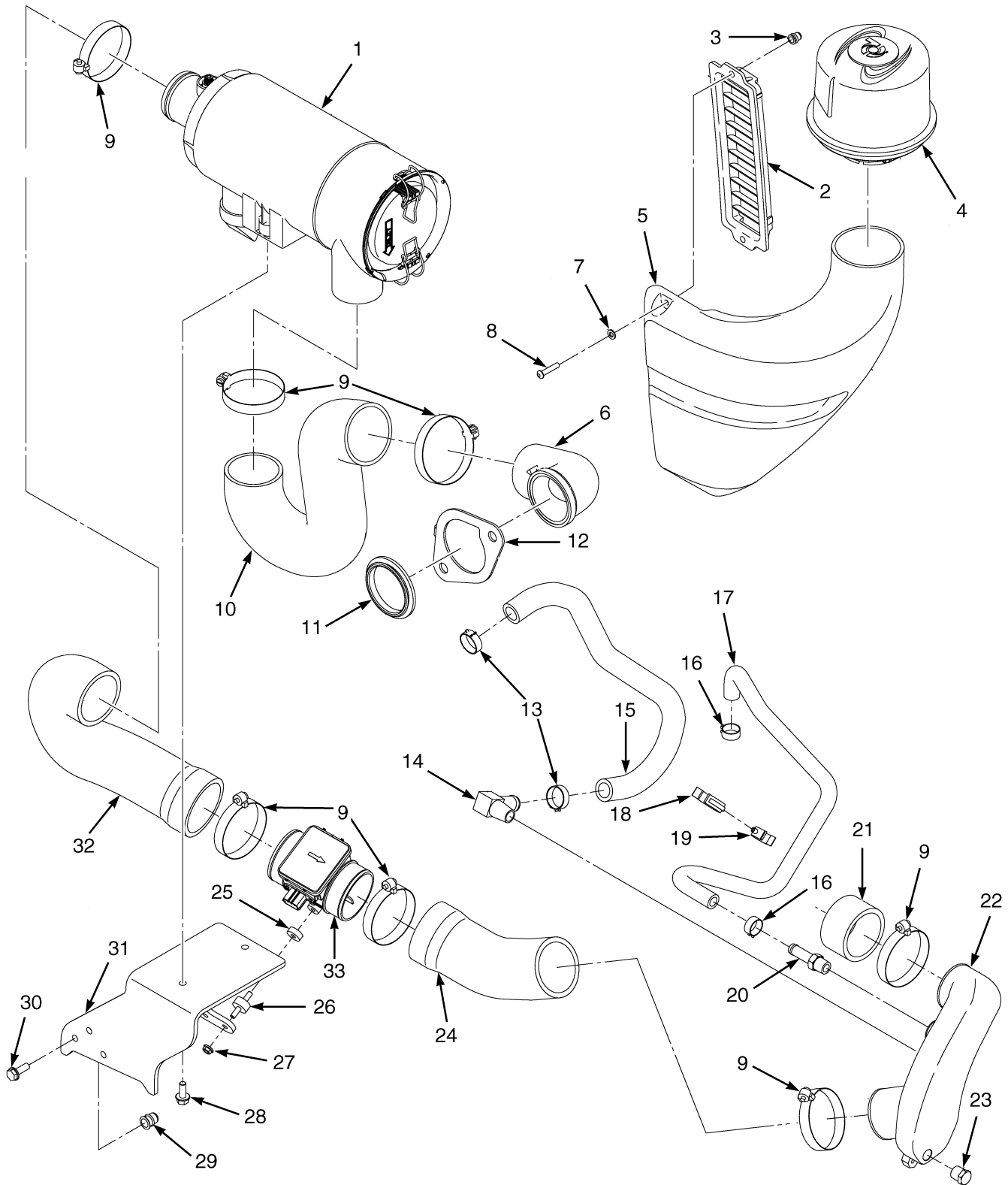
THROTTLE BODY AND ATTACHING PARTS
GM 2.4L – LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	1557553	Plate (Throttle Adapter)	1
2		Fitting	4
3		Plug	1
4	1557566	Hose Clamp	8
5	b 1557558	Lockwasher	2
6	1557559	Capscrew	2
7	1557561	Spacer	2
8	b 1557550	Lockwasher	10
9	1557554	Capscrew	2
10	1581796	Kit-Sensor	1
10	1564589	Screw	1
10	1564588	O-Ring	1
10	1564587	Sensor (Camshaft Position)	1
10	1557550	Lockwasher	1
10	1534417	Capscrew	1
10	1600125	Clamp	1
11	1557551	Gasket (Throttle Body)	1
12	1557552	Gasket (Throttle Plate)	1
13	1557564	Bracket	1
14	a 1557546	Oxygen Sensor (With Wire Harness)	1
15	1557565	O-Ring	4
16	1557563	Adapter (Injector)	4
17	1557562	Hose (LPG Vapor)	4
18	1557560	Injector (LPG)	4
19	1581795	Fuel Rail (LPG)	1
20	1557549	Capscrew	4
21	1557547	Throttle Body	1
22	1557548	Capscrew	4
23	1564586	Plate (Coil Support)	1
24	1632300	Sensor (Fuel Pressure)	1

FOOTNOTES:**a** Located in Exhaust System**b** → S/N L177B14822E

AIR INTAKE SYSTEM (FIGURE 3-11)

MAZDA 2.0L AND 2.2L, GASOLINE — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15326E)



HP091230

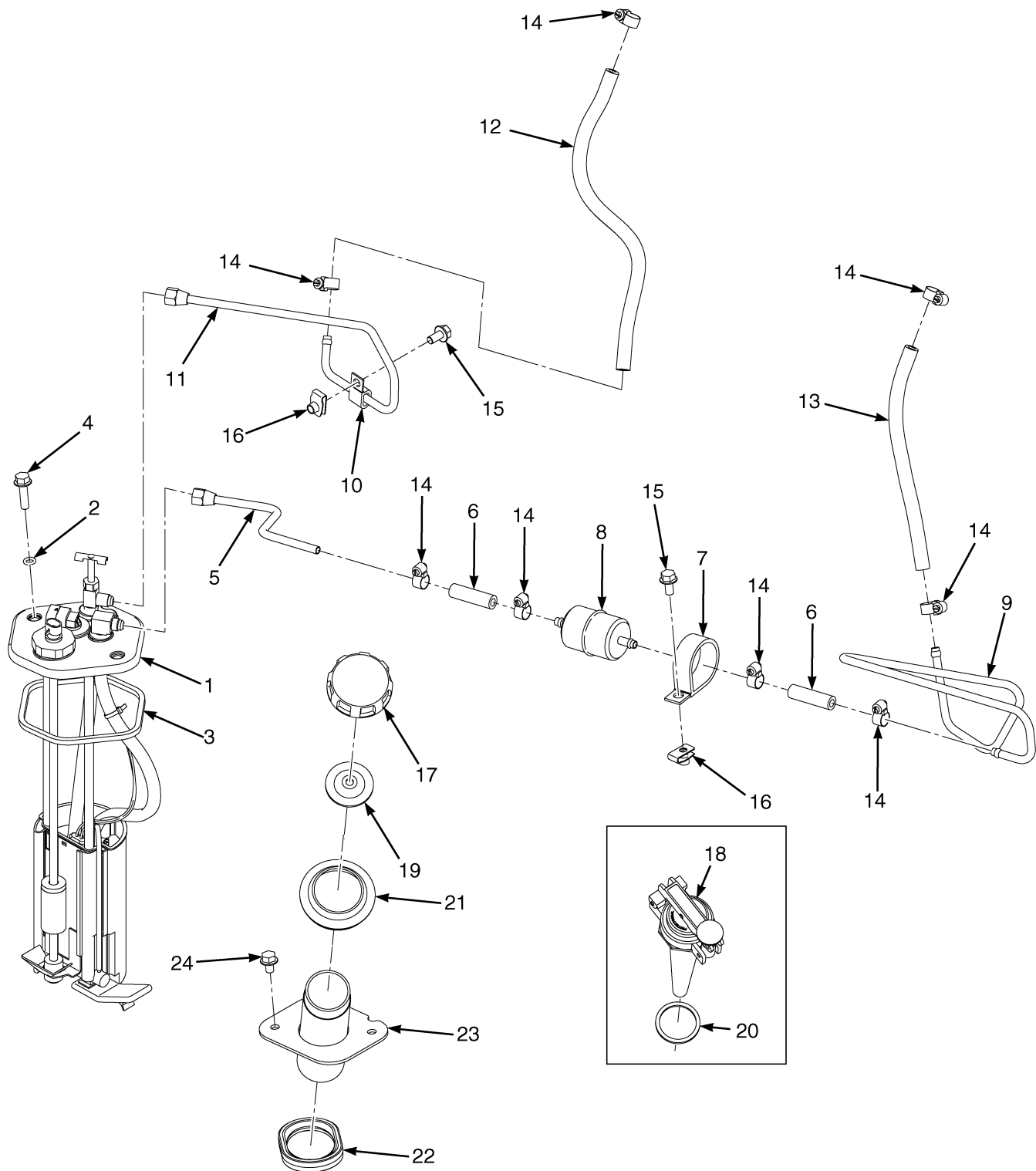
AIR INTAKE SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15326E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2063128	Air Filter (☞ Figure 3-37).....	1
2	2067476	Grill	1
3	1531558	Insert	2
4	1501888	Pre-Cleaner	1
5	b 1565201	Air Duct	1
5	c 1677793	Air Duct (Precleaner)	1
6	1581438	Elbow	1
7	1506738	Washer	2
8	2071261	Capscrew	2
9	1394008	Hose Clamp	8
10	1501841	Hose	1
11	1502079	Grommet	1
12	1581439	Retainer	1
13	353199	Clamp	2
14	201800	Fitting	1
15	2069357	Hose	1
16	1452463	Hose Clamp	2
17	2069356	Hose (PCV)	1
18	1561759	Clamp (Swivel)	1
19	1502053	Clamp (Swivel)	1
20	102919	Fitting	1
21	2057796	Hose	1
22	1580255	Intake Manifold	1
23	14386	Fitting	1
24	1558449	Hose (For 2.2L Engine)	1
24	2075703	Hose (For 2.0L Engine)	1
25	1527563	Spacer	2
26	1527562	Rubber Mount	2
27	1514429	Nut	2
28	1527880	Capscrew	2
29	1530243	Insert	3
30	1583611	Capscrew	3
31	1501665	Bracket Wldmt	1
32	1501838	Hose	1
33	1501629	Sensor (Airflow)	1
34	ac 1677833	Screw (Pre-Cleaner Mounting)	3

FOOTNOTES:**a** Not Illustrated**c** S/N L177F02650F →**b** → S/N L177V02649F

FUEL SYSTEM (FIGURE 3-12)

MAZDA 2.0L AND 2.2L, GASOLINE — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B16206E)



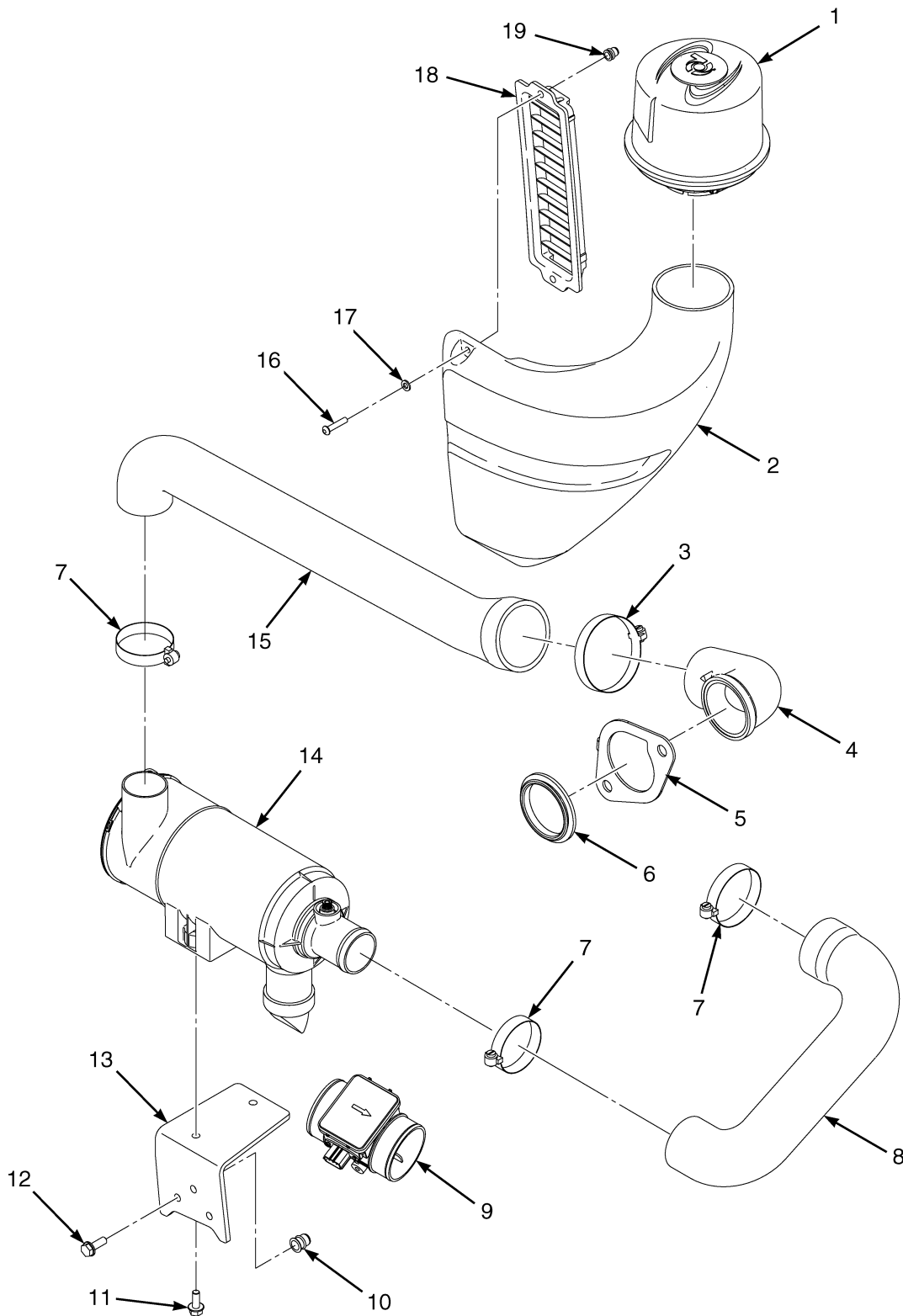
HP130355

FUEL SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B16206E)****KEY:****A: For Use On Standard Models****B: For Use On GS Models**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1579400	Fuel Sender (☞ Figure 3-4).....	1	1
2	353000	O-Ring	2	2
3	1528893	Quad Ring	1	1
4	1527881	Capscrew	2	2
5	1549376	Tube	1	1
6	2062587	Hose	2	2
7	1316496	Clamp	1	1
8	1304950	Fuel Filter	1	1
9	1550602	Tube	1	1
10	187630	Clamp	1	1
11	1547489	Tube	1	1
12	2062586	Hose	1	1
13	2064463	Hose	1	1
14	168718	Clamp (Worm Screw)	8	8
15	1527879	Capscrew	2	2
16	1480237	Nut	2	2
17	2021679	Fuel Cap	1	1
18	1579677	Fuel Cap	..	1
19	2021683	Gasket	1	..
20	2021685	Gasket	..	1
20	325549	Shim (0.020 in.)	..	1
21	1528608	Grommet	1	1
22	1528314	Seal	1	1
23	1564392	Pipe (Fill)	1	1
24	1529366	Capscrew	2	2

AIR INTAKE SYSTEM (FIGURE 3-13)

MAZDA 2.0L AND 2.2L LPG — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15512E)



HP091231

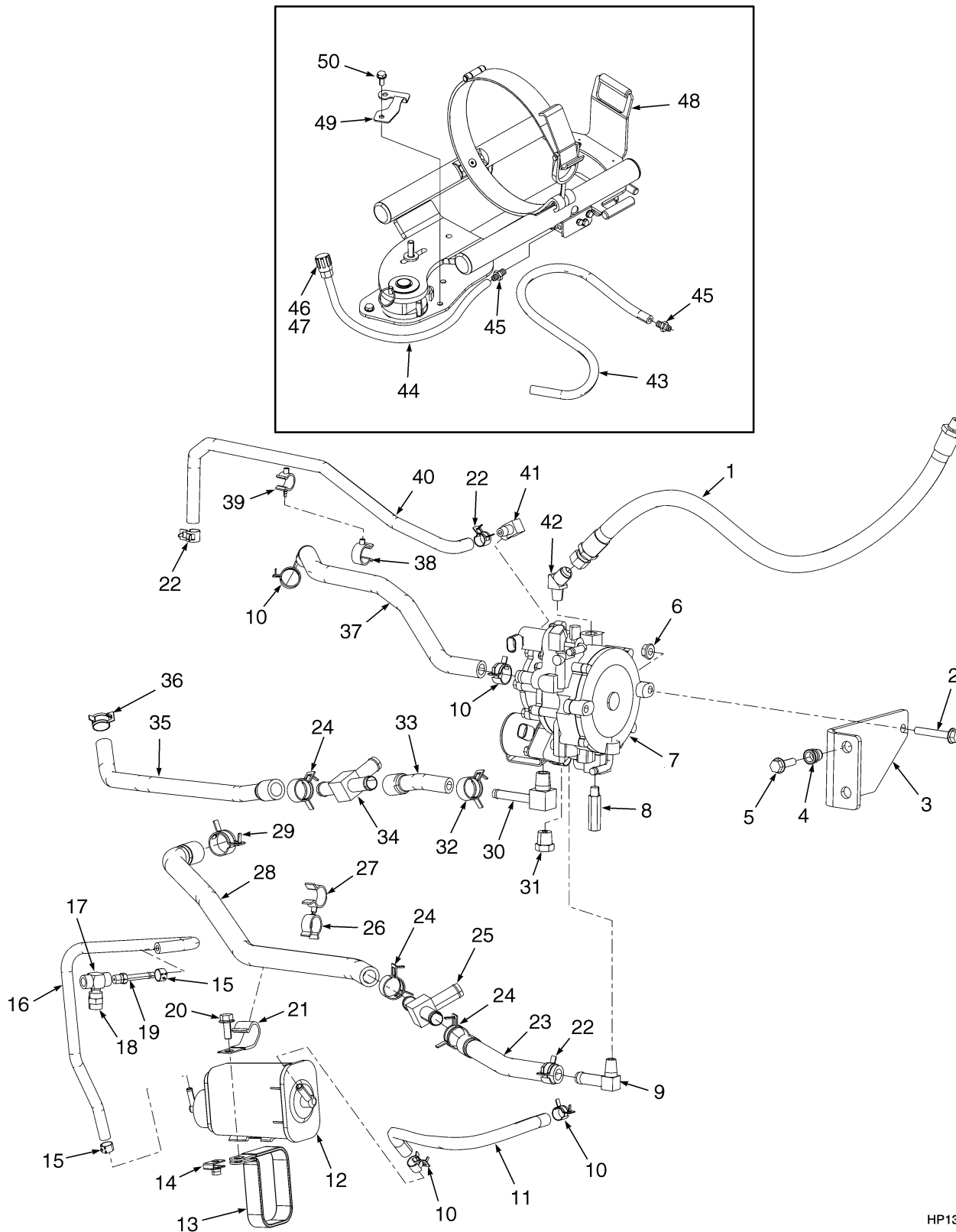
AIR INTAKE SYSTEM**MAZDA 2.0L AND 2.2L LPG – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B15512E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1501888	Pre-Cleaner	1
2	b 1565201	Air Duct	1
2	d 1677793	Air Duct	1
3	1394008	Hose Clamp	1
4	1581438	Elbow	1
5	1581439	Retainer (Elbow)	1
6	1502079	Grommet	1
7	112989	Hose Clamp	3
8	1501835	Hose	1
9	1501629	Sensor (Airflow)	1
10	1530243	Insert	3
11	1527880	Capscrew	2
12	1583611	Capscrew	3
13	1501848	Bracket	1
14	2055193	Air Filter (☞ Figure 3-37).....	1
15	1502034	Hose	1
16	2071261	Capscrew	2
17	1506738	Washer	2
18	2067476	Grill	1
19	1531558	Insert	2
	ac 1677833	Screw (Pre-Cleaner Mounting)	3

FOOTNOTES:**a** Not Illustrated**b** → S/N L177V02649F**c** PENDING PER ECN 104609 →**d** S/N L177V02650F →

FUEL SYSTEM (FIGURE 3-14)

MAZDA 2.0L AND 2.2L LPG — 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B16207E)



HP130356

FUEL SYSTEM**MAZDA 2.0L AND 2.2L LPG – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B16207E)****KEY:****A: With Cab and Steel Door****B: With Overhead Guard or Cab with PVC Door**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2072300	Hose Assy	1	1
2	1510115	Capscrew	2	2
3	1502069	Bracket (Regulator)	1	1
4	1530243	Insert	2	2
5	1527881	Capscrew	2	2
6	1502543	Nut (Flange)	2	2
7	1594144	LPG Regulator	1	1
7	1578553	Setscrew	1	1
7	1616232	Filter	1	1
8	1502058	Fitting	1	1
9	17353	Fitting	1	1
10	1502003	Hose Clamp	4	4
11	260878	Hose	1	1
12	1471694	Resonator	1	1
13	1475409	Clamp	1	1
14	1480237	Nut	1	1
15	369815	Clamp	2	2
16	1502085	Hose	1	1
17	16199	Fitting	1	1
18	16168	Fitting	1	1
19	1502027	Fitting	1	1
20	1527880	Capscrew	1	1
21	1339452	Clamp	1	1
22	1502005	Hose Clamp	3	3
23	2071303	Radiator Hose	1	..
24	130845	Clamp	2	..
25	1608989	Fitting	1	..
26	1502066	Clamp	1	1
27	1502054	Clamp	1	1
28	1625311	Radiator Hose	..	1
28	2070784	Radiator Hose	1	..
29	1502007	Hose Clamp	1	1
30	16788	Fitting	1	1
31	63108	Fitting	2	2
32	1502005	Hose Clamp	4	2
33	2086921	Hose	1	..
34	366000	Fitting	1	..
35	1502083	Radiator Hose	..	1
35	2071302	Radiator Hose	1	..
36	1501995	Hose Clamp	1	1
37	1502081	Hose	1	1
38	1502053	Clamp (Swivel)	1	1
39	1543691	Clamp (Swivel)	1	1
40	1502084	Hose	1	1
41	15971	Fitting	1	1

FUEL SYSTEM

MAZDA 2.0L AND 2.2L LPG – 2006 EMISSION COMPLIANT ENGINES (→ S/N L177B16207E)

KEY:

A: With Cab and Steel Door

B: With Overhead Guard or Cab with PVC Door

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
42	16863	Fitting	1	1
43	2072298	Hose Assy	1	1
44	2058426	Hose Assy	1	1
45	16134	Fitting	2	2
46	2071517	Sleeve	1	1
47	97999	Fitting	1	1
48	b 1519360	Lpg Tank Bracket (EZXchange) (☞Figure 3-31).....	1	1
48	c 1615864	Lpg Tank Bracket (EZXchange)	1	1
48	1582409	Lpg Tank Bracket (Swing Out) (☞Figure 3-28).....	1	1
49	a 1564061	Bracket	1	1
50	1586013	Capscrew	4	4

FOOTNOTES:

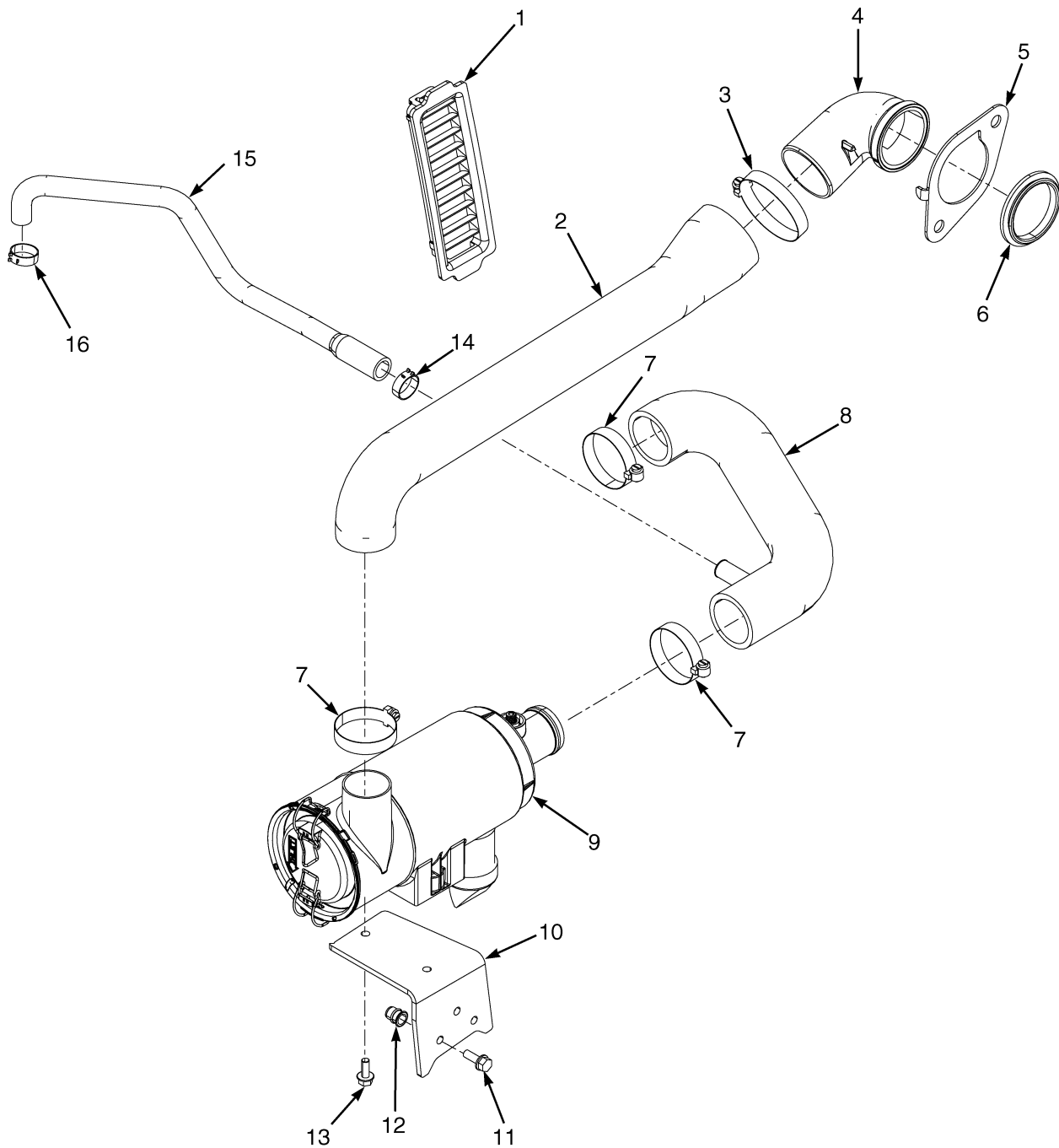
a For Use With Swing Out Bracket Only**c** S/N L177B10457D →**b** → S/N L177B10456D

NOTES

[illegible]

AIR INTAKE SYSTEM (FIGURE 3-15)

MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E →)



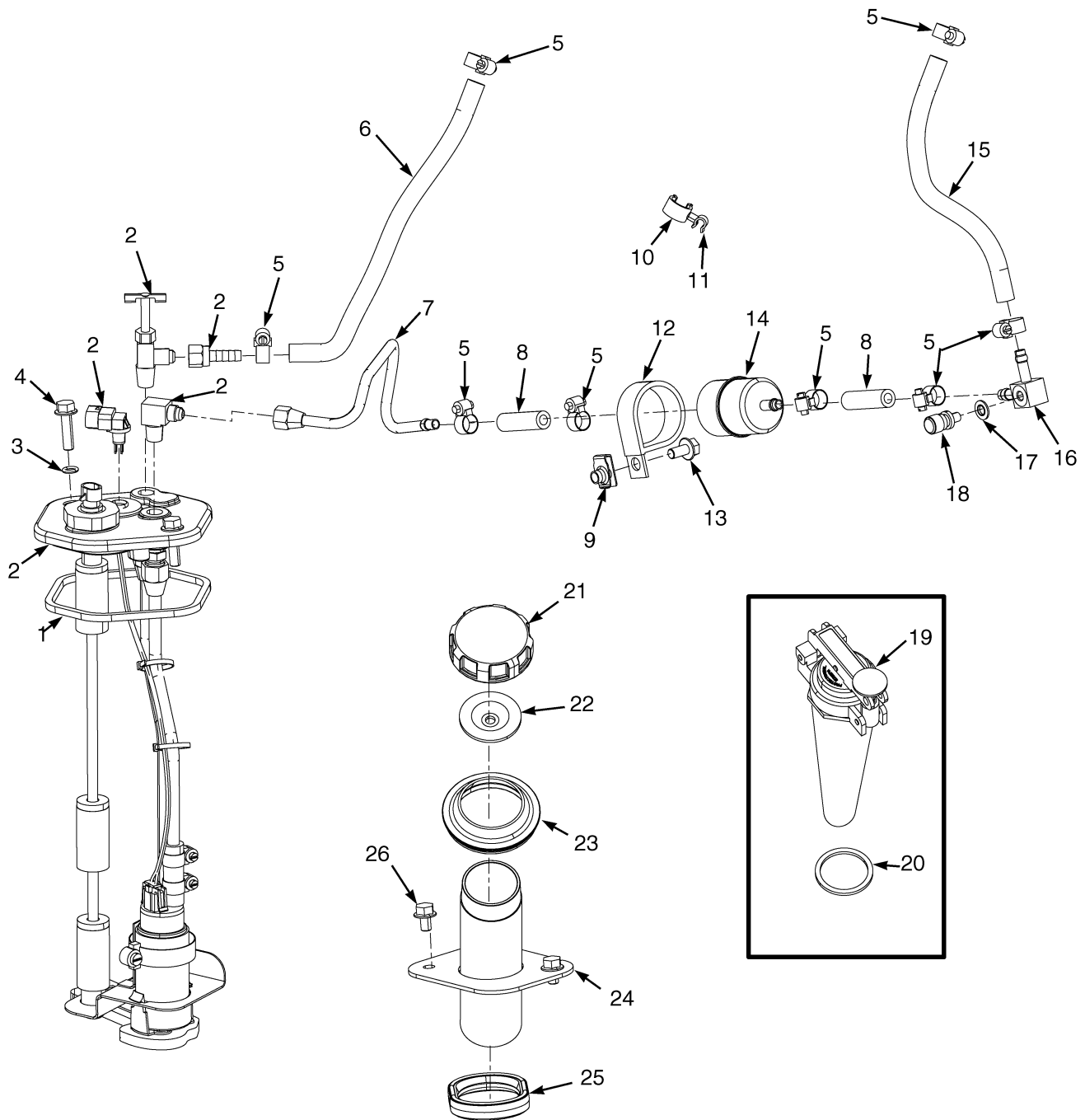
BP130255

AIR INTAKE SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2067476	Grill	1
2	1502034	Hose (Dirty Air)	1
3	1394008	Hose Clamp	1
4	1581438	Elbow (Dirty Air)	1
5	1581439	Retainer	1
6	1502079	Grommet	1
7	112989	Hose Clamp	3
8	2084251	Hose (Clean Air)	1
9	2055193	Air Filter	1
10	1501848	Bracket	1
11	1583611	Capscrew	3
12	1530243	Insert	3
13	1527879	Capscrew	2
14	1452463	Hose Clamp	1
15	1632564	Hose (PCV)	1
16	353199	Clamp	1

FUEL SUPPLY SYSTEM (FIGURE 3-16)

MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15326E →)



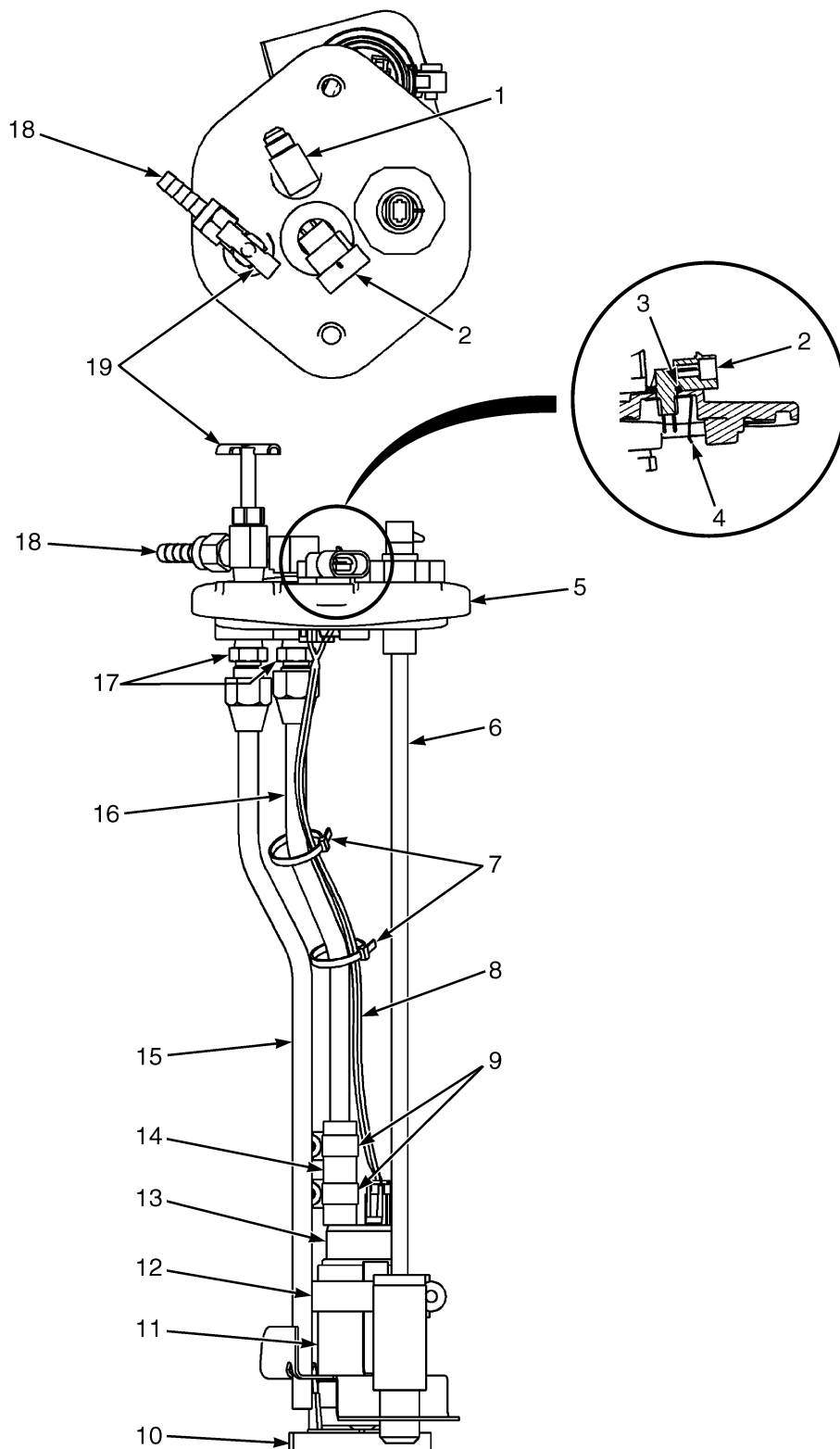
BP130237

FUEL SUPPLY SYSTEM**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15326E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1528893	Quad Ring	1
2	1634894	Fuel Sender (☞ Figure 3-17).....	1
3	353000	O-Ring	2
4	1527881	Capscrew	2
5	168718	Clamp (Worm Screw)	8
6	2076792	Hose	1
7	1550600	Tube	1
8	2062587	Hose	2
9	1480237	Nut	1
10	1543698	Clamp (Swivel)	1
11	1542440	Clamp (Swivel)	1
12	1316496	Clamp	1
13	1527879	Capscrew	1
14	1304950	Fuel Filter	1
15	2072764	Hose	1
16	1547848	Fitting	1
17	1339438	Seal	1
18	1345991	Pressure Valve	1
19	1579677	Fuel Cap	1
20	2021685	Gasket	1
21	1579677	Fuel Cap	1
22	2021685	Gasket	1
23	1528608	Grommet	1
24	1564392	Pipe (Fill)	1
25	1528314	Seal	1
26	1529366	Capscrew	2

FUEL PUMP AND SENDER (FIGURE 3-17)

MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E →)



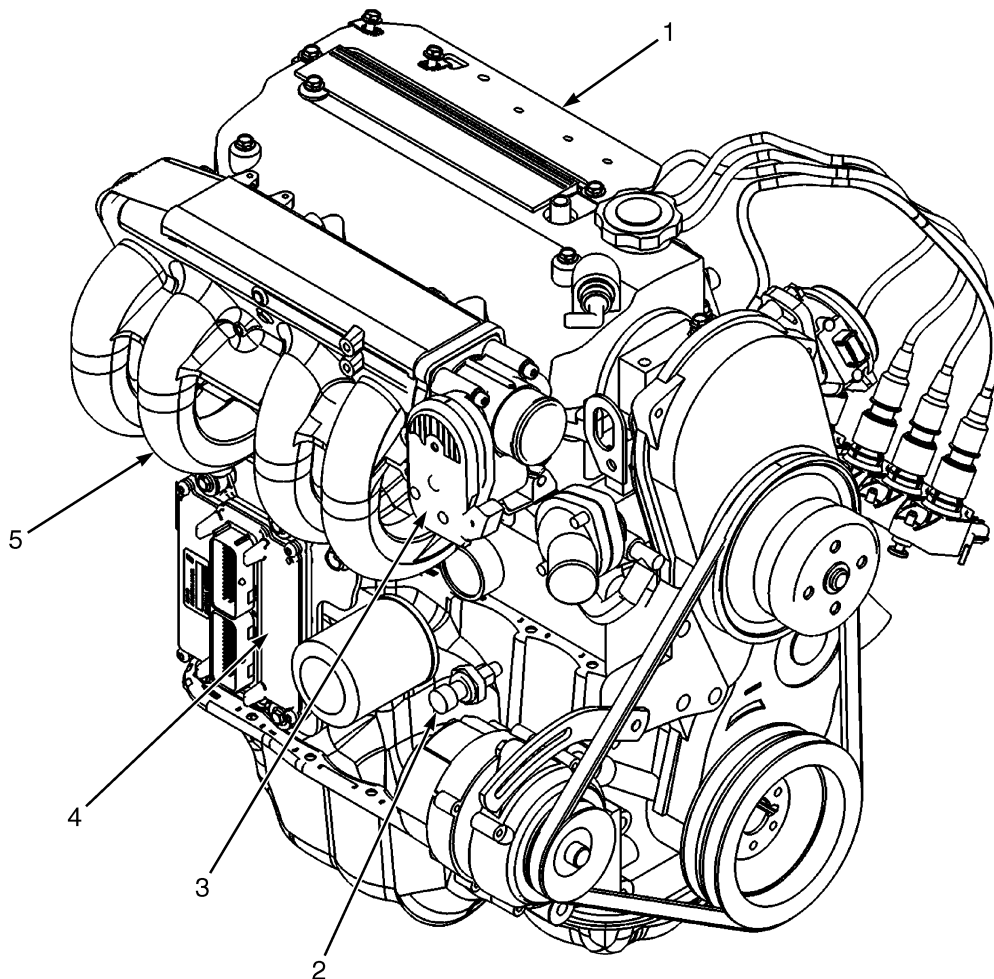
BP130243

FUEL PUMP AND SENDER**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E →)**

ITEM	PART NO.	DESCRIPTION	QTY
	1634894	Fuel Sender	1
1	21195	Fitting	1
2	1371149	Connector	1
3	1330325	O-Ring	1
4	1330326	Nut	1
5	1527311	Cover	1
6	1501811	Fuel Sender	1
7	114312	Strap Clamp	1
8	1632224	Wire Harness (Fuel Pump)	1
9	168718	Clamp (Worm Screw)	2
10	1634456	Strainer	1
11	1644624	Isolator	1
12	369804	Clamp	1
13	1634455	Fuel Pump	1
14	2089368	Hose	1
15	1632179	Tube	1
16	2089239	Tube	1
17	16134	Fitting	2
18	1568998	Fitting	1
19	43883	Drain Valve (Shut-Off)	1

FUEL SYSTEM (FIGURE 3-18)

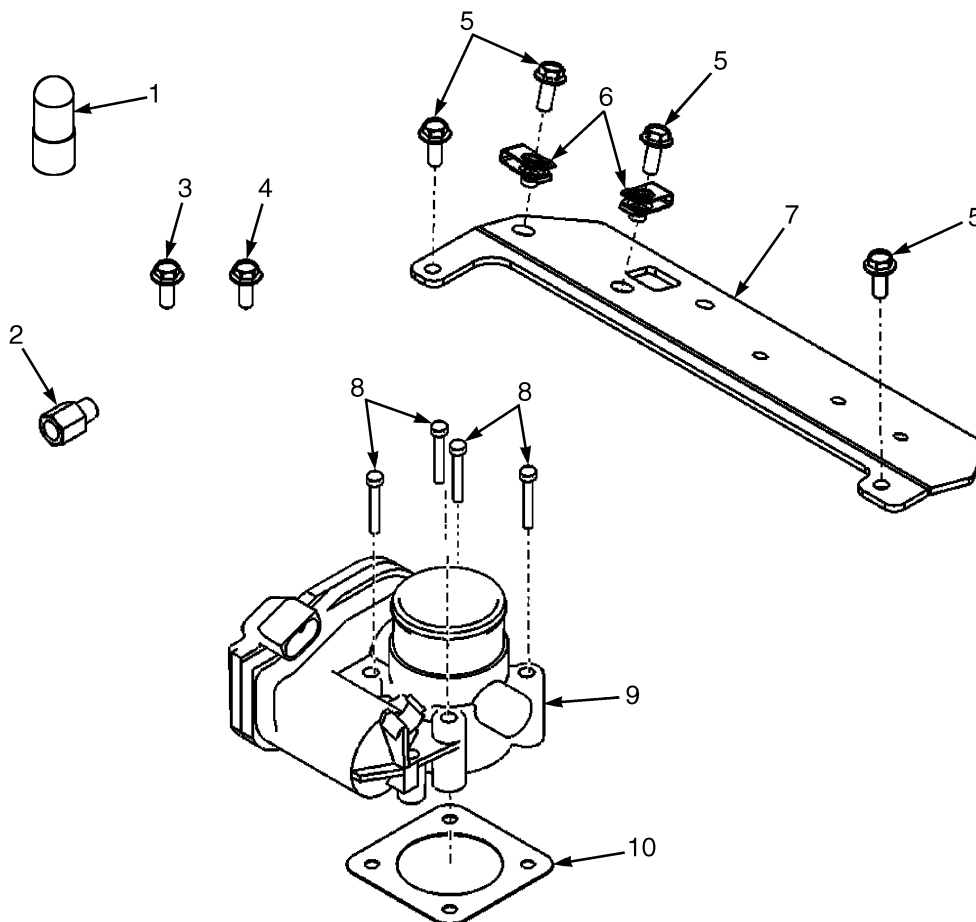
MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15511E →)



BP130249

ITEM	PART NO.	DESCRIPTION	QTY
1	1650507	Bracket (Relay) (☞Figure 3-19).....	1
2	1566654	Pressure Transducer (Engine Oil Pressure Sensor) (☞Figure 4-19).....	1
2	367224	Adapter	1
3	1650404	Throttle Body (☞Figure 3-19).....	1
4	2093596	Electronic Control Module (2.0L, Gasoline) (☞Figure 4-17).....	1
4	2111038	Engine Control Module (2.0L, Gasoline) (Alternate Part)	1
4	2093597	Electronic Control Module (2.2L, Gasoline) (☞Figure 4-17).....	1
4	2111039	Engine Control Module (2.2L, Gasoline) (Alternate Part)	1
5	1515654	Sensor (Coolant Temperature) (☞Figure 4-19).....	1

THROTTLE BODY AND ATTACHING PARTS (FIGURE 3-19)
MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES

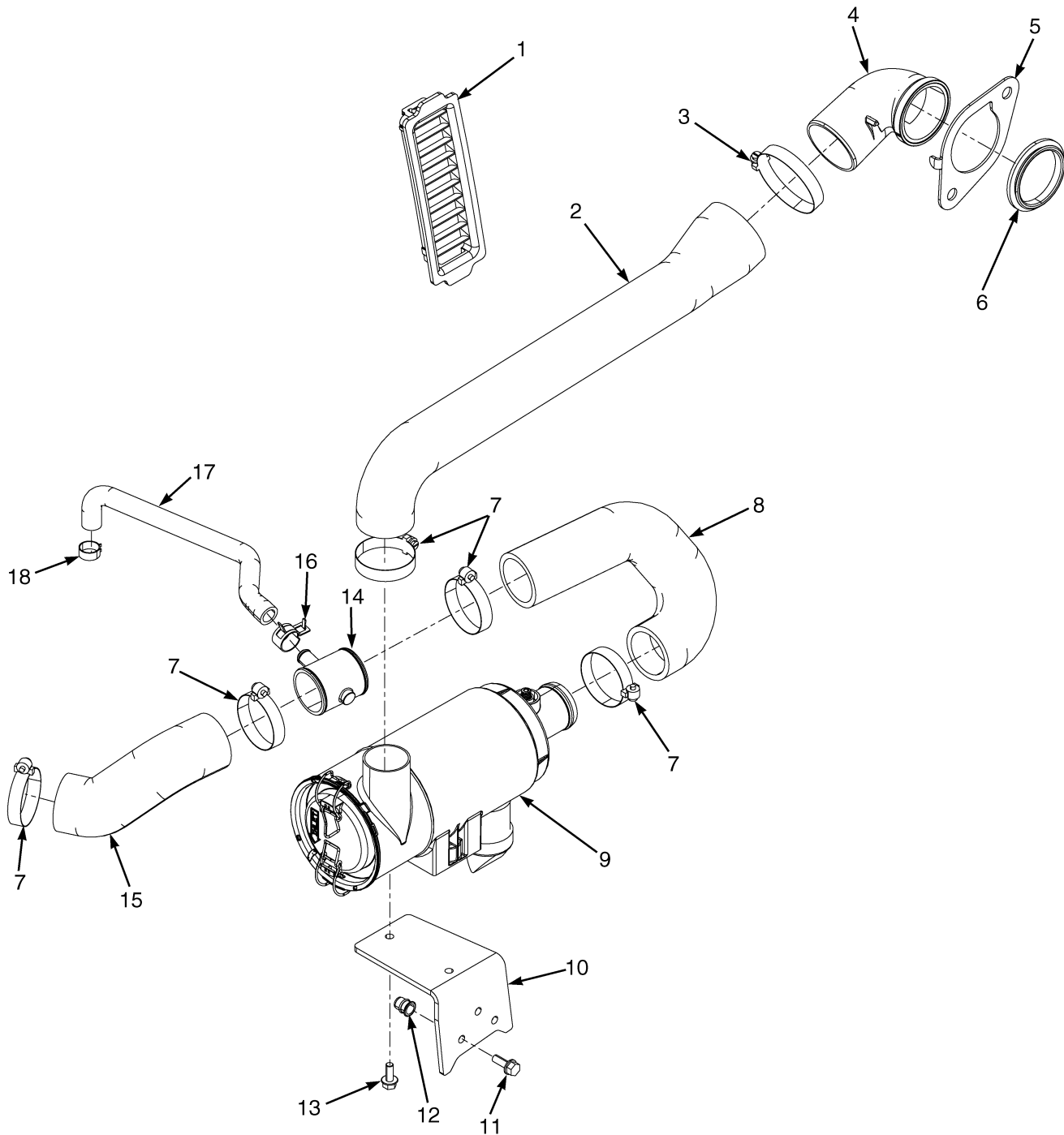


BP130250

ITEM	PART NO.	DESCRIPTION	QTY
1	1655241	Cap (For Unused Manifold Fitting)	1
2	1650506	Adapter	1
3	1650508	Screw	4
4	1650868	Screw	1
5	1558432	Bolt	4
6	1650402	Nut	1
7	1650507	Bracket (Relay)	1
8	1650505	Bolt	4
9	1650404	Throttle Body	1
10	1650504	Gasket (Throttle Body)	1

AIR INTAKE SYSTEM (FIGURE 3-20)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15326E →)



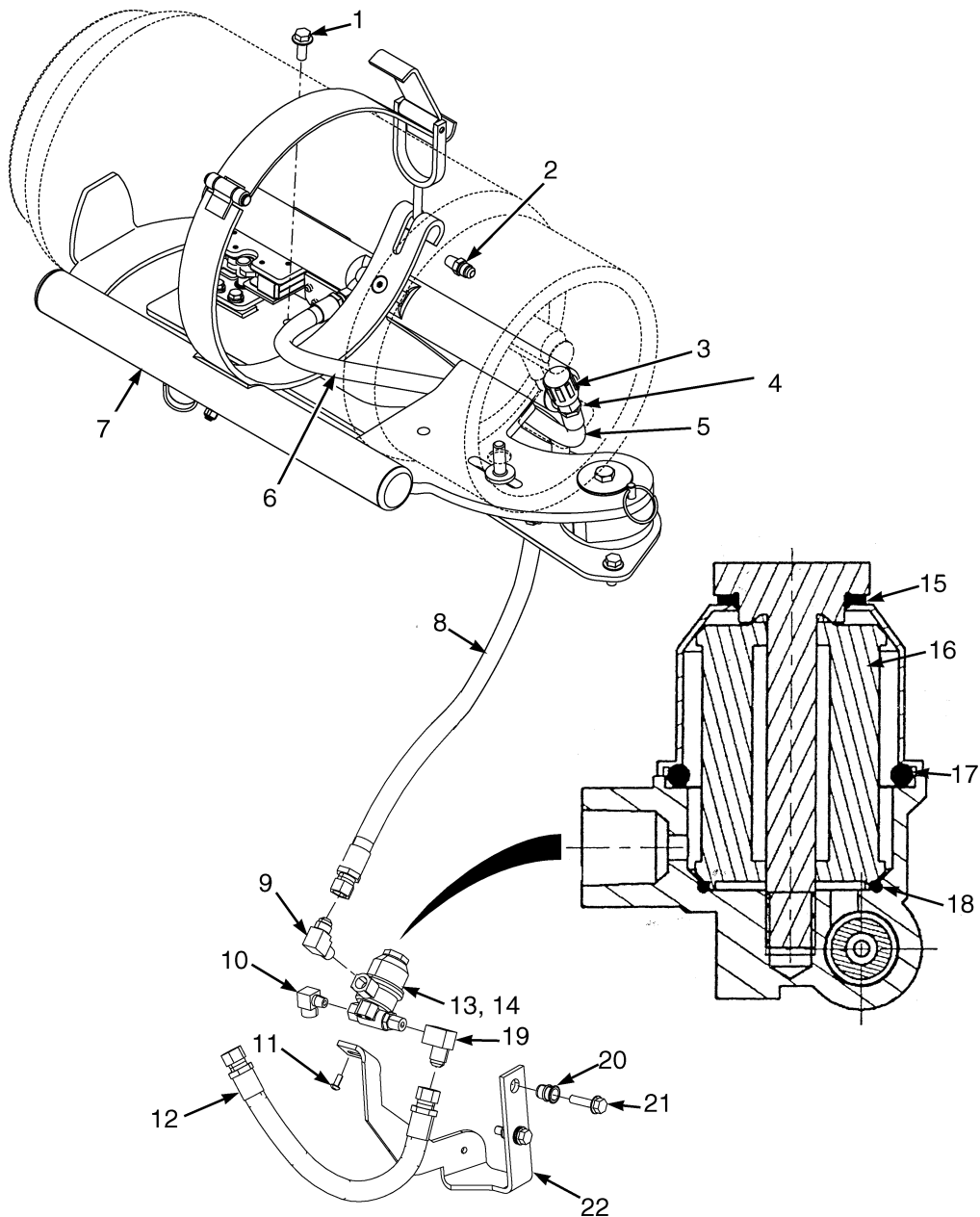
BP130254

AIR INTAKE SYSTEM**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15326E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2067476	Grill (Air Inlet)	1
2	1502034	Hose (Dirty Air)	1
3	1394008	Hose Clamp	1
4	1581438	Elbow (Dirty Air)	1
5	1581439	Retainer	1
6	1502079	Grommet	1
7	112989	Hose Clamp	5
8	2090644	Hose (Clean Air)	1
9	2055193	Air Filter	1
10	1501848	Bracket	1
11	1583611	Capscrew	3
12	1530243	Insert	3
13	1527879	Capscrew	2
14	1640814	Coupler (Clean Air)	1
15	2091231	Hose (Clean Air)	1
16	130845	Clamp	1
17	2091232	Hose (PCV)	1
18	1452463	Hose Clamp	1

FUEL SUPPLY SYSTEM (FIGURE 3-21)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (PENDING PER ECN 104248 →)



BP130239

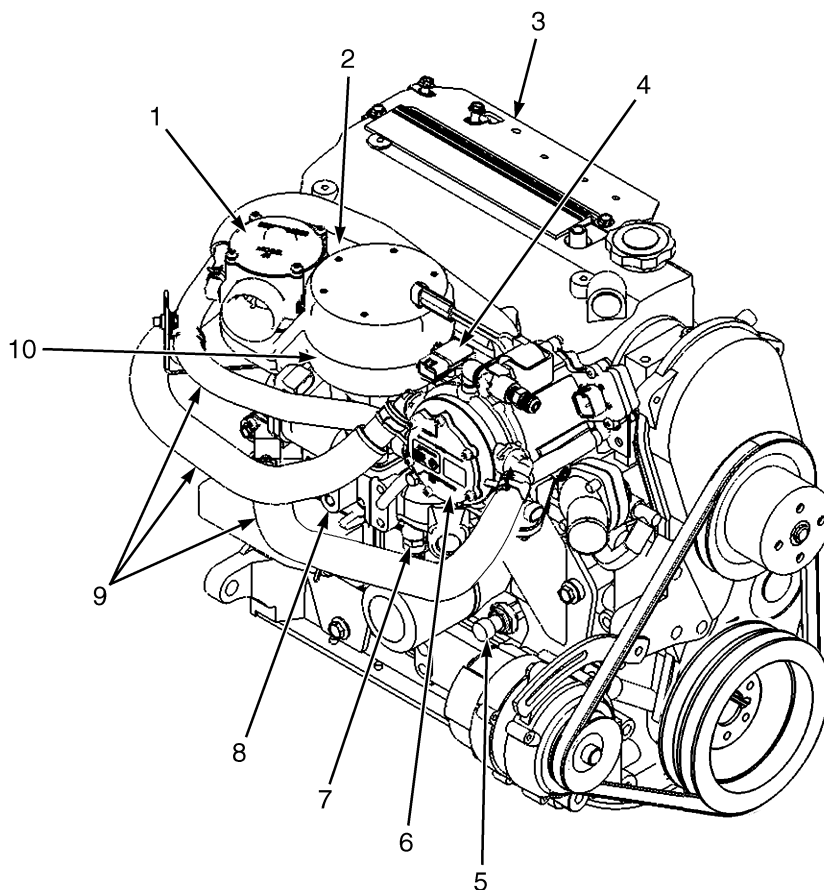
FUEL SUPPLY SYSTEM**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (PENDING PER ECN 104248 →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1586013	Capscrew	4
2	16134	Fitting	1
3	97999	Fitting	1
4	16863	Fitting	1
5	2058426	Hose Assy	1
6	2072298	Hose Assy	1
7	1519360	Lpg Tank Bracket (EZXchange) (☞Figure 3-31).....	1
7	1649220	Lpg Tank Bracket (Swing Out/Drop Down) (☞Figure 3-32).....	1
7	1582409	Lpg Tank Bracket (Swing Out/Drop Down) (☞Figure 3-28).....	1
7	1649216	Lpg Tank Bracket (Swing Out) (☞Figure 3-29).....	1
8	2072300	Hose Assy	1
8	2090418	Hose Assy	1
9	14358	Fitting	1
10	16151	Fitting	1
11	296152	Capscrew	2
12	2090361	Hose Assy	1
13	b 2070100	Fuel Filter (LPG)	1
13	c 2105803	Fuel Filter (LPG)	1
14	b 1581302	Kit-Filter Element	1
14	c 1689544	Kit-Filter Element	1
16	a	Filter Element	1
17	a	O-Ring	1
17	a	Seal	1
18	a	O-Ring	1
19	14372	Fitting	1
20	1530243	Insert	2
21	1527881	Capscrew	2
22	1632257	Bracket	1
	a 246108	Sealant	1
	a 1687376	Sealant	1
	a 1687377	Activator	1

FOOTNOTES:**a** Not Illustrated**c** S/N L177V02220F →**b** → S/N L177V02219F

FUEL SYSTEM (FIGURE 3-22)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15512E →)



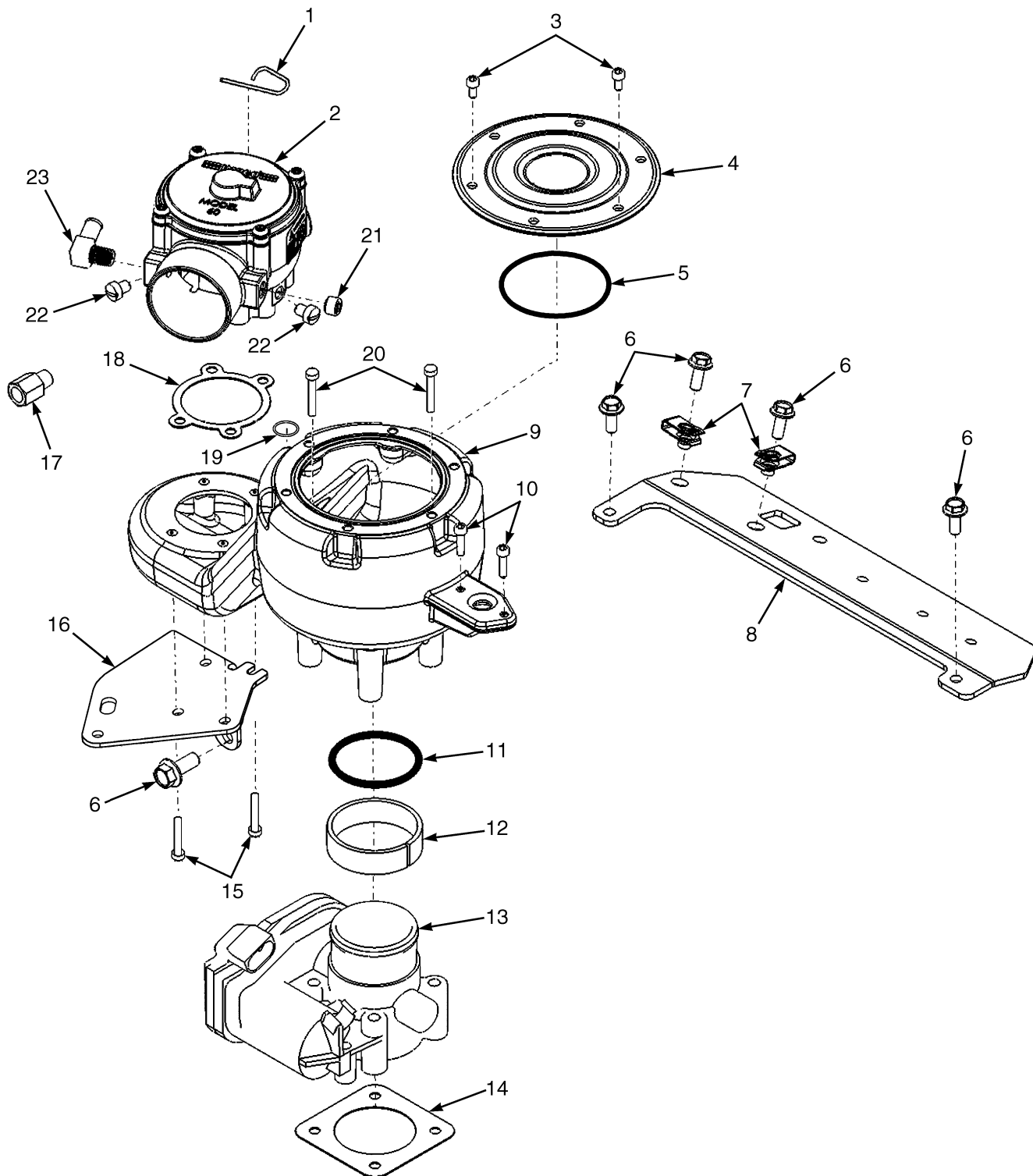
BP130244

ITEM	PART NO.	DESCRIPTION	QTY
1	1650758	Mixer (☞ Figure 3-23).....	1
2	1539962	Sensor (Air Temperature) (☞ Figure 4-20).....	1
3	1650507	Bracket (Relay) (☞ Figure 3-23).....	1
4	1548352	Sensor (Boost, M.A.P.) (Boost) (☞ Figure 4-20).....	1
5	1566654	Pressure Transducer (Engine Oil Pressure Sensor) (☞ Figure 4-20).....	1
5	367224	Adapter	1
5	1682884	Adapter (Alternate Part)	1
6	1650764	Pressure Regulator (EPR) (☞ Figure 3-25).....	1
6	1701813	Pressure Regulator (EPR) (Alternate Part)	1
7	1515654	Sensor (Coolant Temperature) (☞ Figure 4-20).....	1
8	2093578	Electronic Control Module (2.0L, LPG) (☞ Figure 4-18).....	1
8	2109866	Engine Control Module (2.0L, LPG) (Alternate Part)	1
8	2093579	Electronic Control Module (2.2L, LPG) (☞ Figure 4-18).....	1
8	2109867	Engine Control Module (2.2L, LPG) (Alternate Part)	1
9		Hoses	1
10	1650404	Throttle Body (☞ Figure 3-23).....	1

NOTES

[illegible]

MIXER AND THROTTLE BODY ASSEMBLY (FIGURE 3-23)
MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E ↔ 2/2008)



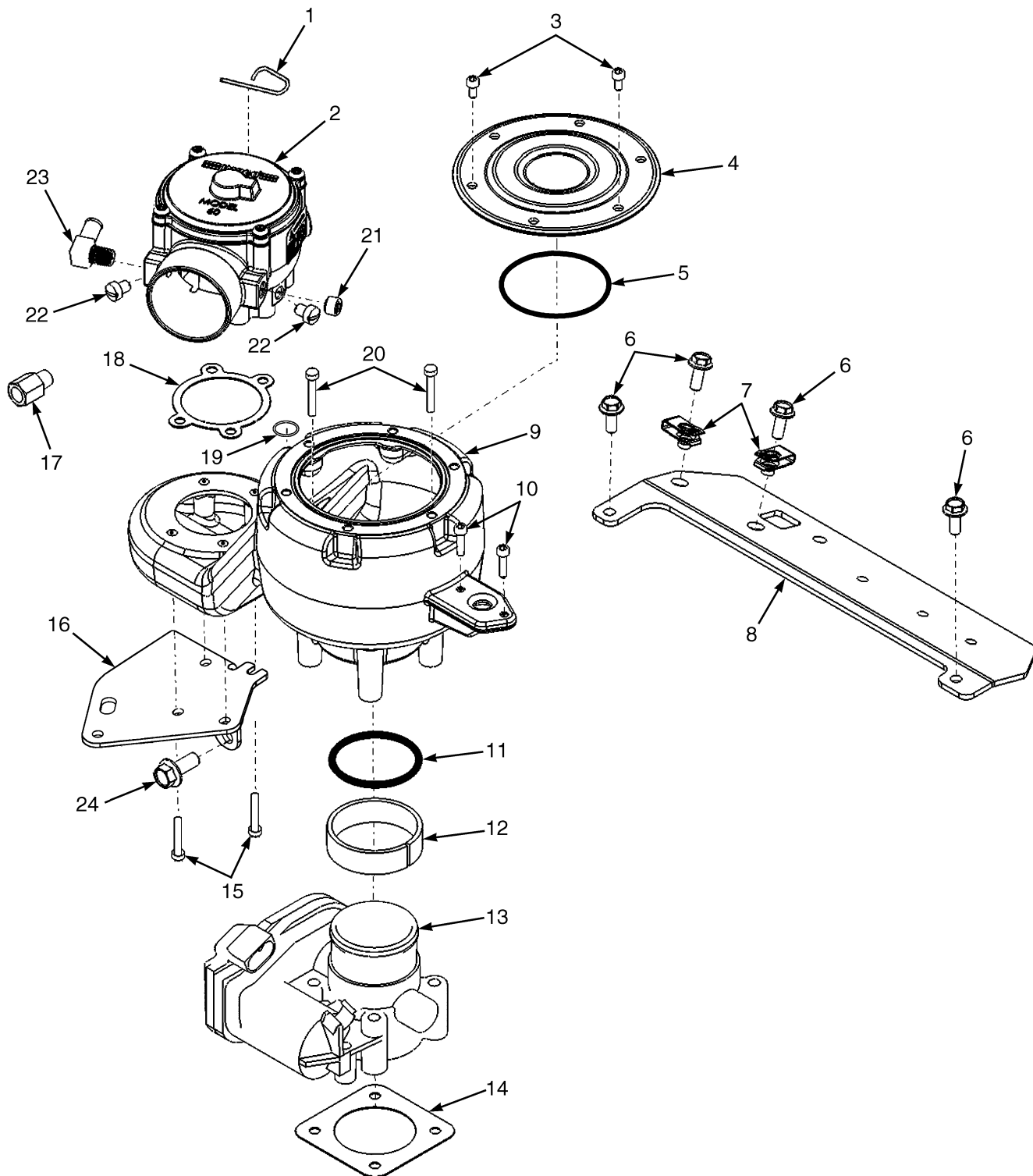
BP130245

MIXER AND THROTTLE BODY ASSEMBLY**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E ↔ 2/2008)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1558161	Pin	1
2	1650758	Mixer	1
3	296508	Screw	6
4	1650760	Cover	1
5	1650400	O-Ring	1
6	1558432	Bolt	6
7	1650402	Nut	2
8	1650507	Bracket (Relay)	1
9	1650761	Adapter	1
10	1558170	Screw	2
11	1650405	O-Ring	1
12	1650407	Sleeve	1
13	1650404	Throttle Body	1
14	1650504	Gasket (Throttle Body)	1
15	1650757	Screw	4
16	1650507	Bracket (Relay)	6
17	1650506	Adapter	1
18	204787	Gasket	1
19	1650403	Seal	1
20	1650401	Screw	4
21	1357749	Plug	1
22	326926	Screw	2
23	1361164	Fitting	1

MIXER AND THROTTLE BODY ASSEMBLY (FIGURE 3-24)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (2/2008 →)

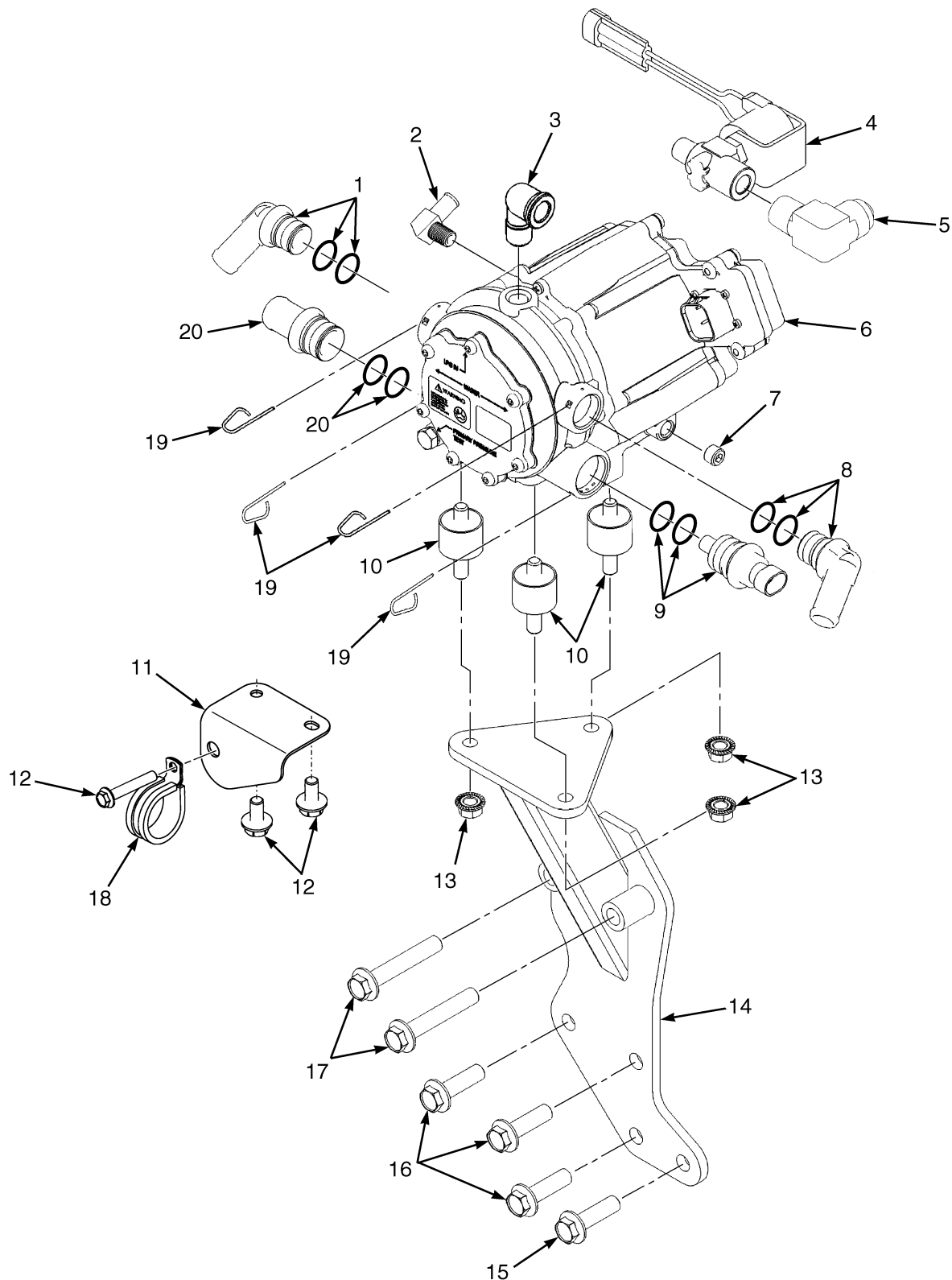


BP130285

MIXER AND THROTTLE BODY ASSEMBLY
MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (2/2008 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1558161	Pin	1
2	1650758	Mixer	1
3	296508	Screw	6
4	1650760	Cover	1
5	1650400	O-Ring	1
6	1558432	Bolt	6
7	1650402	Nut	2
8	1650507	Bracket (Relay)	1
9	1650761	Adapter	1
10	1558170	Screw	2
11	1650405	O-Ring	1
12	1650407	Sleeve	1
13	1650404	Throttle Body	1
14	1650504	Gasket (Throttle Body)	1
15	1650757	Screw	4
16	1650762	Bracket	1
17	1650506	Adapter	1
18	204787	Gasket	1
19	1650403	Seal	1
20	1682881	Screw	4
21	1682882	Plug	1
22	326926	Screw	2
23	1361164	Fitting	1
24	1682883	Screw	1

ELECTRONIC PRESSURE REGULATOR ASSEMBLY (FIGURE 3-25) MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E ↔ 2/2008 (ENGINE ESSY MAZDA 2.2L EGI W/ECES))

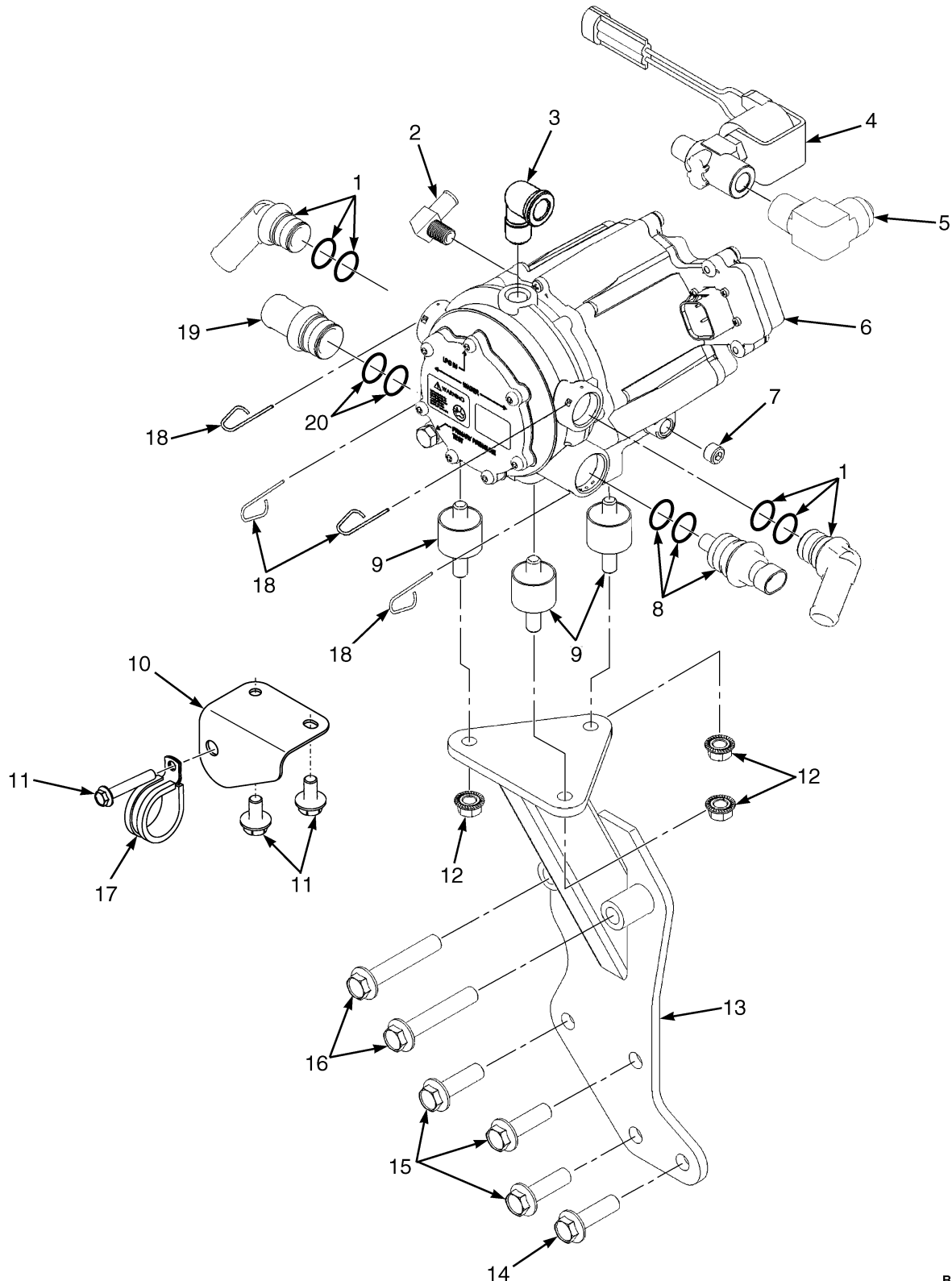


BP130246

ELECTRONIC PRESSURE REGULATOR ASSEMBLY
MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E ↔ 2/2008 (ENGINE ESSY MAZDA 2.2L EGI W/ECES))

ITEM	PART NO.	DESCRIPTION	QTY
1	1558176	Fitting	1
1	1650777	O-Ring	2
2	1361164	Fitting	1
3	1650769	Fitting	1
4	1558187	Lpg Lock-Off	1
5	1650770	Fitting	1
6	1650764	Pressure Regulator	1
6	1650778	Kit-Repair (Electronic Pressure Regulator)	1
7	1357749	Plug	1
8	1650771	Fitting	1
8	1650777	O-Ring	2
9	1672800	Sensor	1
9	1603857	O-Ring	2
10	1650766	Mount (Vibration)	3
11	1654423	Bracket	1
12	1654422	Screw	3
13	1650768	Nut	3
14	1650772	Bracket	1
15	1650767	Screw	1
16	1650870	Screw	3
17	1650773	Screw	2
18	1655235	Clamp	1
19	1558161	Pin	4
20	1650763	Fitting	1
20	1603857	O-Ring	2

ELECTRONIC PRESSURE REGULATOR ASSEMBLY (FIGURE 3-26) MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (2/2008 →)

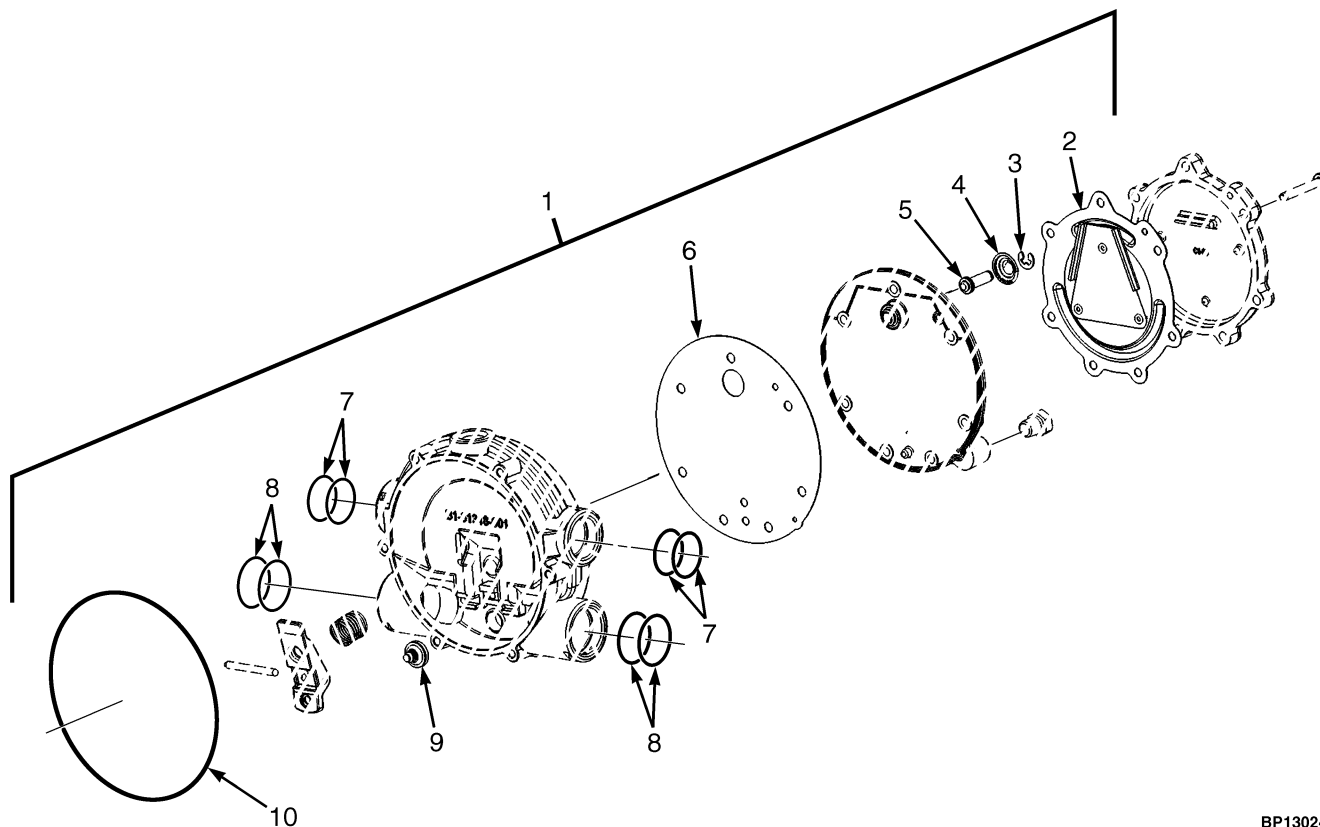


BP130294

ELECTRONIC PRESSURE REGULATOR ASSEMBLY
MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (2/2008 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1558176	Fitting	2
1	1650777	O-Ring	2
2	1361164	Fitting	1
3	1650769	Fitting	1
4	1558187	Lpg Lock-Off	1
4	1697294	Shutoff Valve	1
5	1650770	Fitting	1
6	1650764	Pressure Regulator	1
6	1701813	Pressure Regulator	1
6	1650778	Kit-Repair (Electronic Pressure Regulator) (☞ Figure 3-27).....	1
7	1682882	Plug	1
8	1672800	Sensor	1
8	1603857	O-Ring	2
9	1650766	Mount (Vibration)	3
10	1653902	Bracket	1
11	1654422	Screw	3
12	1650768	Nut	3
13	1650772	Bracket	1
14	1650767	Screw	1
15	1650870	Screw	3
16	1650773	Screw	2
17	1655235	Clamp	1
18	1558161	Pin	4
19	1650763	Fitting	1
19	1603857	O-Ring	2

ELECTRONIC PRESSURE REGULATOR KIT (FIGURE 3-27)
MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B16207E → (ENGINE ESSY MAZDA 2.2L LPG W/ECES))



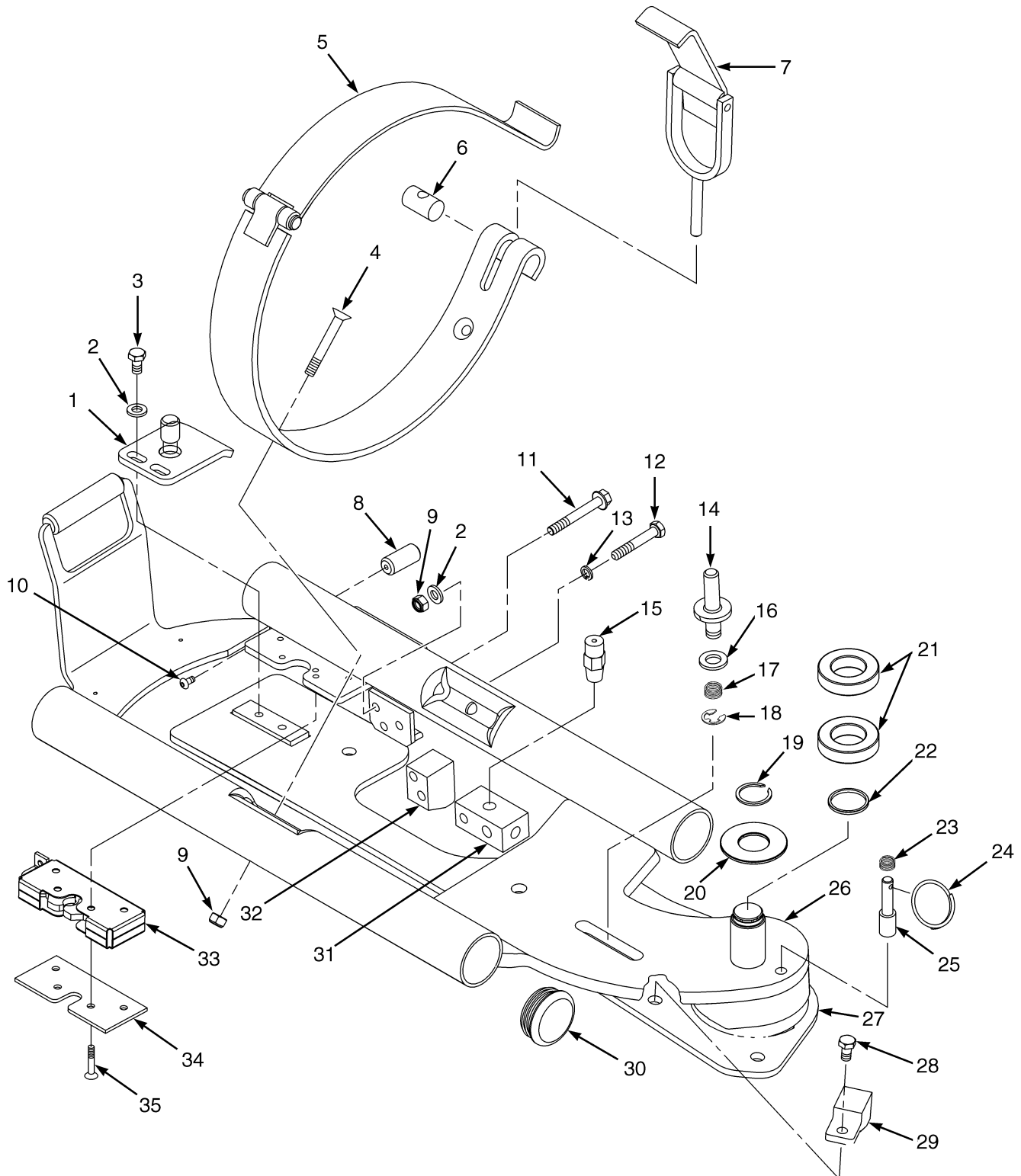
BP130247

ITEM	PART NO.	DESCRIPTION	QTY
1	1650778	Kit-Repair (Electronic Pressure Regulator)	1
2		Diaphragm (Not Serviced Separately)	1
3	1455304	E-Ring (Primary)	1
4		Spring (Not Serviced Separately)	1
5	1458764	Pin (Primary)	1
6	1375033	Gasket (Body Secondary)	1
7		O-Ring (Not Serviced Separately)	4
8	1603857	O-Ring	4
9		Seat (Not Serviced Separately)	1
10		Clamp Plate Seal (Not Serviced Separately)	1

NOTES

[illegible]

LPG BRACKET ASSEMBLY (FIGURE 3-28) SWING OUT BRACKET

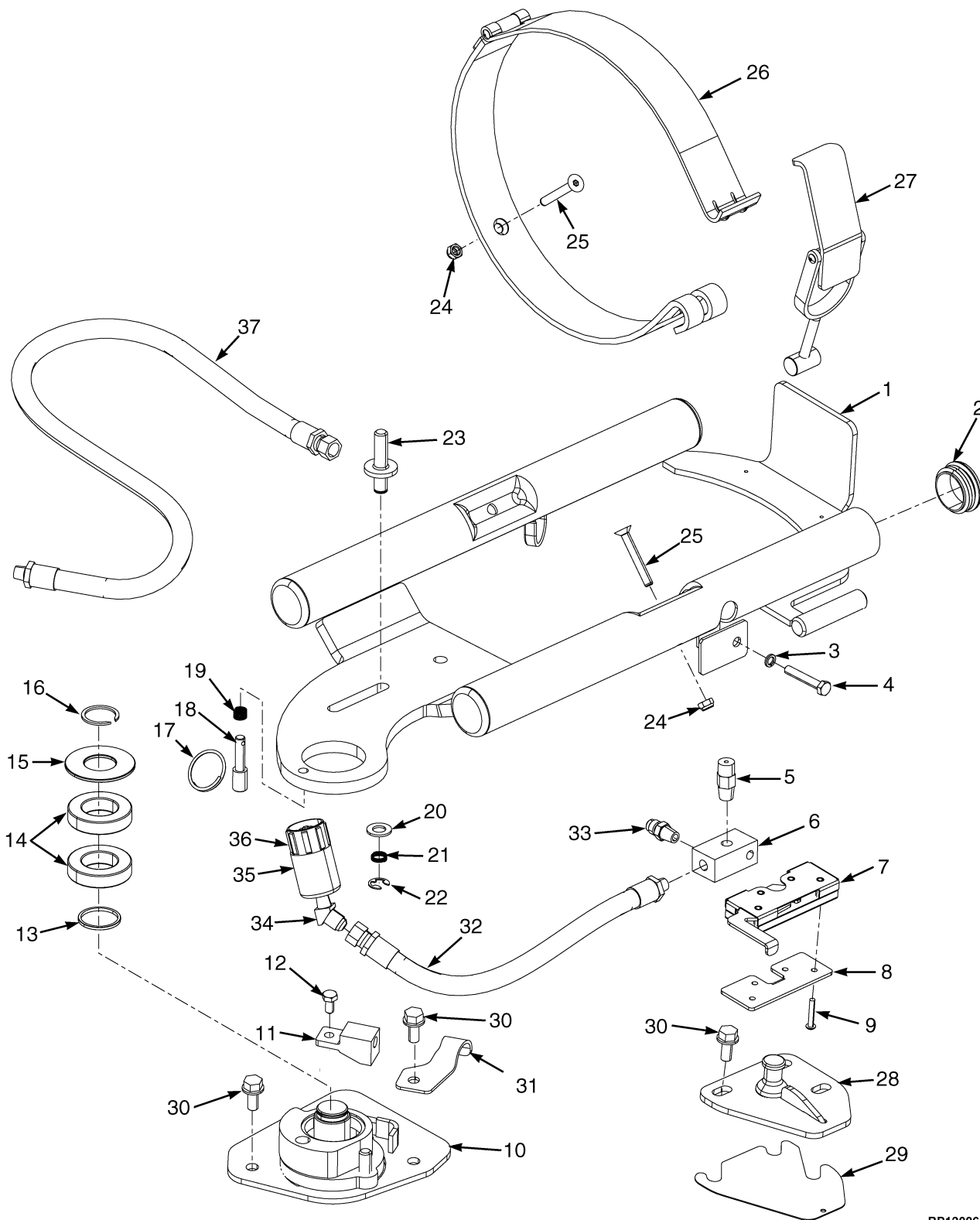


HP130344

**LPG BRACKET ASSEMBLY
SWING OUT BRACKET**

ITEM	PART NO.	DESCRIPTION	QTY
	1582409	Lpg Tank Bracket	1
1	1534649	Pin	1
2	1581556	Washer	2
3	1581885	Capscrew	2
4	1581733	Capscrew	2
5	1613749	Strap	1
6	1613763	Nut (Adjusting)	1
7	1613755	Latch	1
8	1534677	Pin	1
9	1581739	Nut	4
10	1581740	Capscrew	1
11	1585835	Capscrew	2
12	1581583	Capscrew	1
13	1581898	Washer	1
14	1525459	Pin (Alignment)	1
15	101809	Relief Valve	1
16	1581559	Washer	1
17	1528899	Spring	1
18	182118	Retaining Ring	1
19	34507	Snap Ring	1
20	1568839	Washer (Pivot)	1
21	184451	Ball Bearing	2
22	1568853	Thrust Washer	1
23	1528903	Spring	1
24	1534672	Ring	1
25	1534671	Pin	1
26	1582410	Support (Tank)	1
27	1568844	Base Weldment	1
28	1581579	Capscrew	1
29	1525451	Fitting (Bulkhead)	1
30	1398099	Plug	4
31	1534675	Fitting (Bulkhead)	1
32	1534679	Block (Anti-Rattle)	1
33	1517405	Latch	1
34	1534674	Plate	1
35	1581899	Capscrew	4

LPG BRACKET ASSEMBLY (FIGURE 3-29) SWING OUT BRACKET

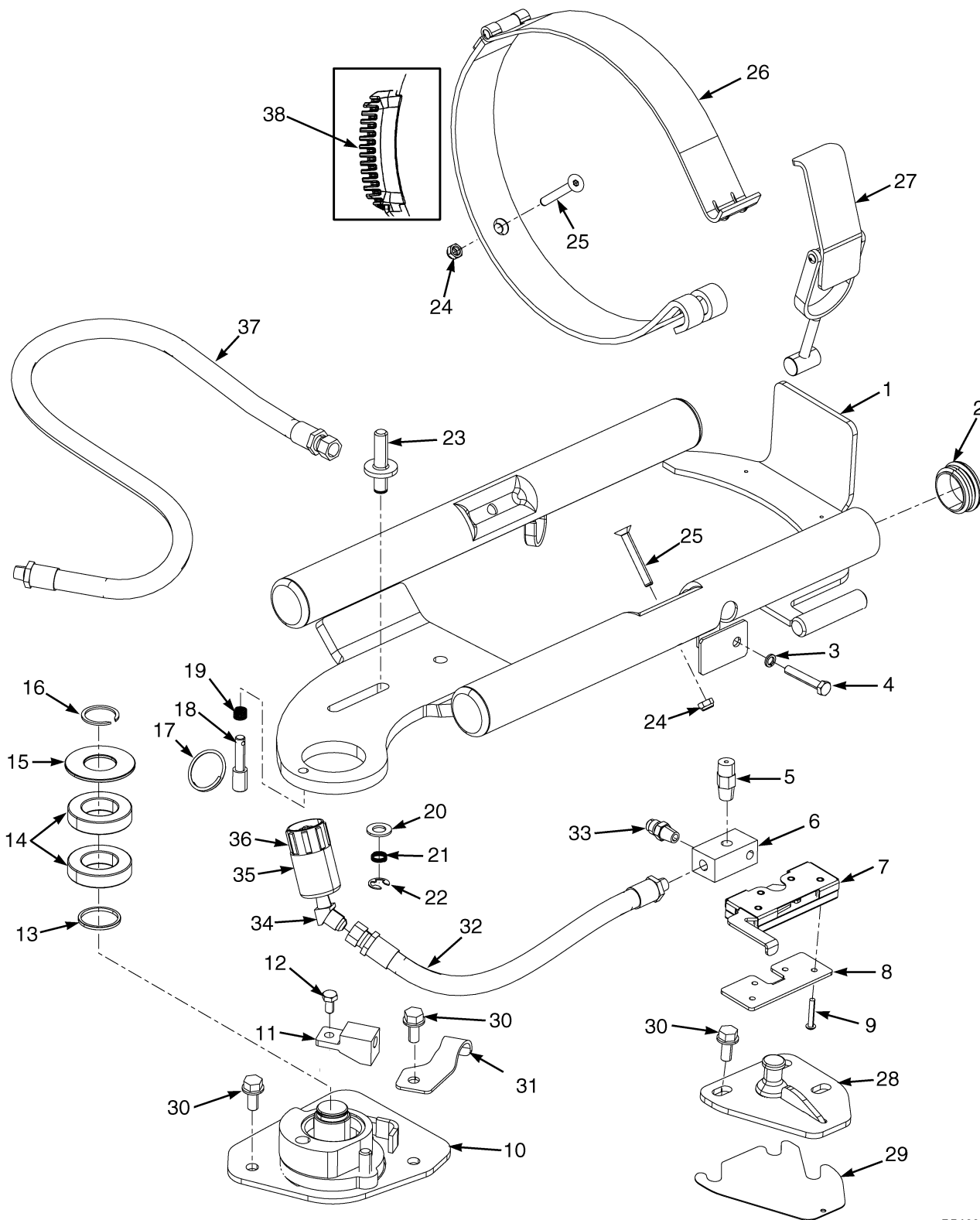


BP130260

**LPG BRACKET ASSEMBLY
SWING OUT BRACKET**

ITEM	PART NO.	DESCRIPTION	QTY
	1649216	Lpg Tank Bracket (Swing Out)	1
1	1649217	Lpg Tank Bracket	1
2		Plug	2
3	1581898	Washer	1
4	1581583	Capscrew	1
5	101809	Relief Valve	1
6	1534675	Fitting	1
7	1656325	Latch	1
8	1649565	Plate	1
9	296156	Capscrew	4
10	1656901	Base	1
11	1525451	Fitting	1
12	1581579	Capscrew	1
13	1568853	Thrust Washer	1
14	184451	Ball Bearing	2
15	1568839	Washer (Pivot)	1
16	34507	Snap Ring	1
17	1534672	Ring	1
18	1534671	Pin	1
19	1528903	Spring	1
20	1581559	Washer	1
21	1528899	Spring	1
22	182118	Retaining Ring	1
23	1525459	Pin (Alignment)	1
24	1581739	Nut	2
25	1581733	Capscrew	2
26	1613749	Strap	1
27	1613755	Latch	1
28	1655300	Striker	1
29	1655328	Shim	1
30	1586013	Capscrew	6
31	1656903	Bracket	1
32	2076168	Hose Assy	1
33	16134	Fitting	1
34	16863	Fitting	1
35	2071517	Sleeve	1
36	97999	Fitting	1
37	2072298	Hose Assy	1

LPG BRACKET ASSEMBLY (FIGURE 3-30) SWING OUT BRACKET



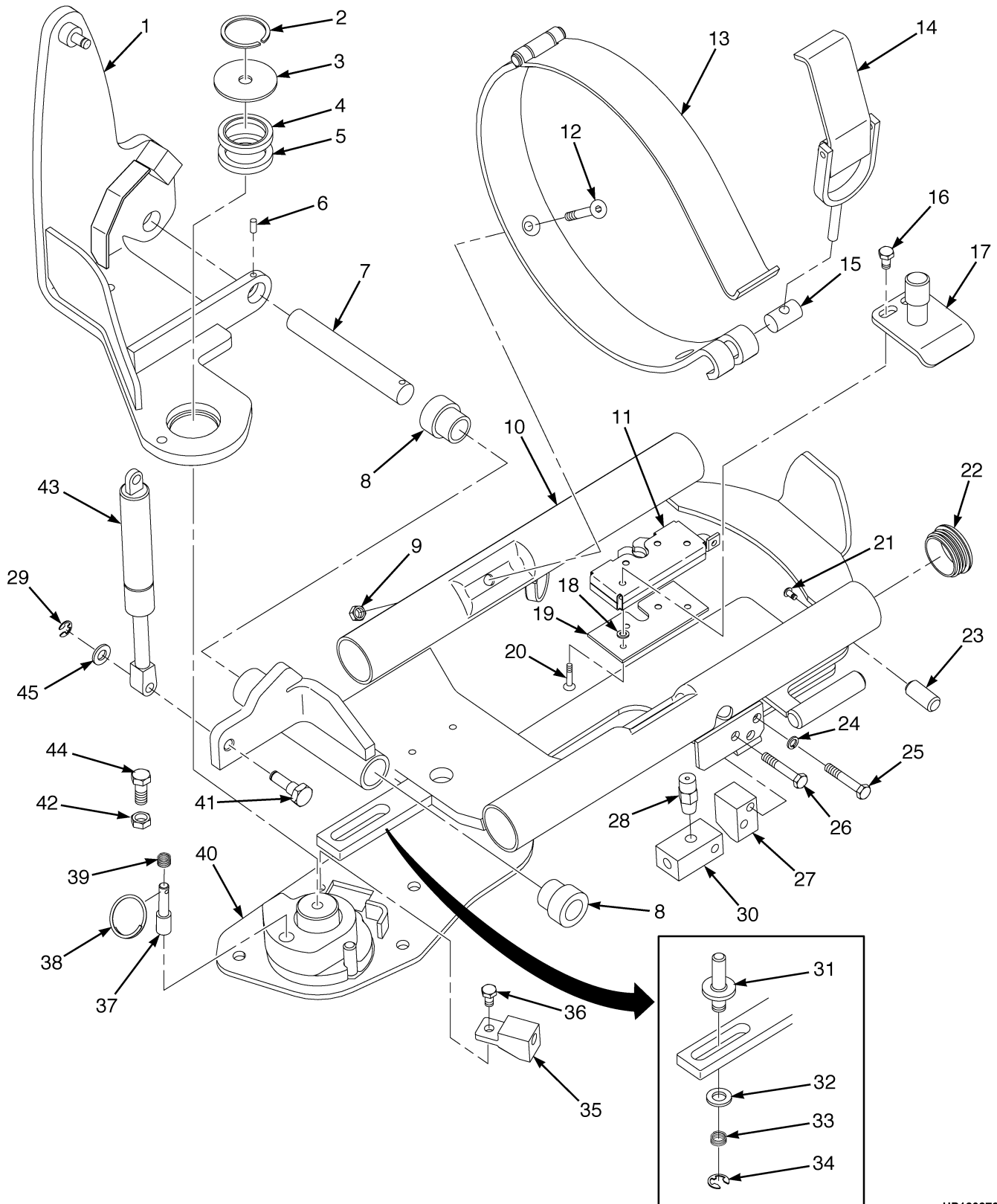
BP130276

**LPG BRACKET ASSEMBLY
SWING OUT BRACKET**

ITEM	PART NO.	DESCRIPTION	QTY
	1649216	Lpg Tank Bracket (Swing Out)	1
1	1649217	Lpg Tank Bracket	1
2		Plug	2
3	1581898	Washer	1
4	1581583	Capscrew	1
5	101809	Relief Valve	1
6	1534675	Fitting	1
7	1656325	Latch	1
8	1649565	Plate	1
9	296156	Capscrew	4
10	1656901	Base	1
11	1525451	Fitting	1
12	1581579	Capscrew	1
13	1568853	Thrust Washer	1
14	184451	Ball Bearing	2
15	1568839	Washer (Pivot)	1
16	34507	Snap Ring	1
17	1534672	Ring	1
18	1615956	Pin	1
19	1528903	Spring	1
20	1581559	Washer	1
21	1528899	Spring	1
22	182118	Retaining Ring	1
23	1525459	Pin (Alignment)	1
23	1684323	Pin (Alignment) (Alternate Part)	1
24	1581739	Nut	2
25	1581733	Capscrew	2
26	1613749	Strap	1
27	1613755	Latch	1
28	1655300	Striker	1
28	1682758	Striker (Alternate Part)	1
29	1655328	Shim	1
30	1586013	Capscrew	6
31	1656903	Bracket	1
32	2076168	Hose Assy	1
33	16134	Fitting	1
34	16863	Fitting	1
35	2071517	Sleeve	1
36	97999	Fitting	1
37	2072298	Hose Assy	1
38	1590389	Bumper	1
	a 246108	Sealant	1
	a 1687376	Sealant (Alternate Part)	1
	a 1687377	Activator (Alternate Part)	1

FOOTNOTES:**a** Not Illustrated

LPG BRACKET ASSEMBLY (FIGURE 3-31) EZXCHANGE



HP130373

**LPG BRACKET ASSEMBLY
EZXCHANGE**

ITEM	PART NO.	DESCRIPTION	QTY
	a 1519360	Lpg Tank Bracket	1
	b 1615864	Lpg Tank Bracket	1
1	a 1517437	Pivot (Intermediate)	1
1	b 1615671	Pivot (Intermediate)	1
2	34507	Snap Ring	1
3	1568839	Washer (Pivot)	1
4	184451	Ball Bearing	2
5	1568853	Thrust Washer (Thrust)	1
6	302468	Roll Pin	1
7	1581887	Shaft	1
8	1581888	Bushing	2
9	1581739	Nut	4
10	a 1517438	Support	1
10	b 1615904	Support	1
11	1517405	Latch	1
12	1581733	Capscrew	2
13	1613749	Strap	1
14	1613755	Latch	1
15	1613763	Nut (Adjustment)	1
16	1581885	Capscrew	2
17	1534649	Pin	1
18	1581556	Washer	4
19	1534674	Plate	1
20	1581899	Capscrew	4
21	1581740	Capscrew	1
22	1398099	Plug	4
23	1534677	Pin	1
24	1581898	Washer	1
25	1585835	Capscrew	2
26	1581583	Capscrew	1
27	1534679	Block (Anti-Rattle)	1
28	101809	Relief Valve	1
29	1525442	E-Ring	2
30	1534675	Fitting (Bulkhead)	1
31	1525459	Pin (Alignment)	1
32	1581559	Washer	1
33	1528899	Spring	1
34	182118	Retaining Ring	1
35	1525451	Fitting (Bulkhead)	1
36	1581579	Capscrew	1
37	a 1534671	Pin	1
37	b 1615956	Pin	1
38	1534672	Ring	1
39	1528903	Spring	1
40	1568844	Base Weldment	1
41	1525478	Pin	1
42	1581848	Nut	1
43	1402414	Gas Spring	1
44	1586022	Capscrew	1
45	1581557	Washer	2

**LPG BRACKET ASSEMBLY
EZXCHANGE**

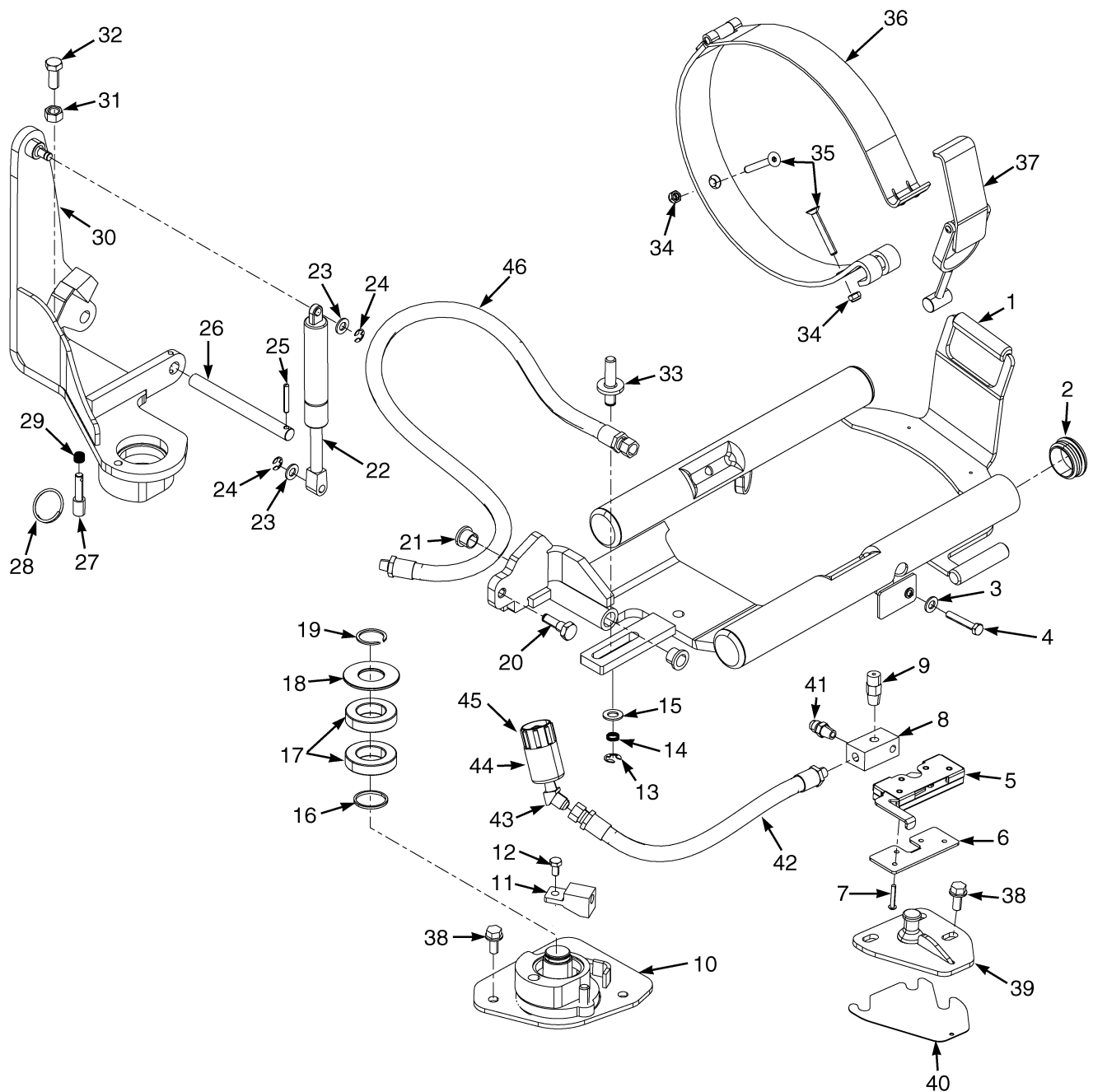
ITEM	PART NO.	DESCRIPTION	QTY
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FOOTNOTES:**a** → S/N L177B10456D**b** S/N L177B10457D →

NOTES

[illegible]

LPG BRACKET ASSEMBLY (FIGURE 3-32) EZXCHANGE



BP130261

**LPG BRACKET ASSEMBLY
EZXCHANGE**

ITEM	PART NO.	DESCRIPTION	QTY
	1649220	Lpg Tank Bracket (Swing Out/Drop Down)	1
1	1649219	Lpg Tank Bracket	1
2		Plug	2
3	1581898	Washer	1
4	1581583	Capscrew	1
5	1656325	Latch	1
6	1649565	Plate	1
7	296156	Capscrew	4
8	1534675	Fitting	1
9	101809	Relief Valve	1
10	1656901	Base	1
11	1525451	Fitting	1
12	1581579	Capscrew	1
13	182118	Retaining Ring	1
14	1581559	Washer	1
15	1528899	Spring	1
16	1568853	Thrust Washer	1
17	184451	Ball Bearing	2
18	1568839	Washer (Pivot)	1
19	34507	Snap Ring	1
20	1525478	Pin	1
21	1581888	Bushing	1
22	1402414	Gas Spring	1
23	1525478	Pin	1
24	1525442	E-Ring	1
25	b 302363	Dowel	1
25	c 302468	Roll Pin	1
26	1581887	Shaft	1
27	1615956	Pin	1
28	1534672	Ring	1
29	1528903	Spring	1
30	1615671	Pivot	1
31	1581848	Nut	1
32	1586022	Capscrew	1
33	1525459	Pin (Alignment)	1
33	1684323	Pin (Alignment) (Alternate Part)	1
34	1581739	Nut	2
35	1581733	Capscrew	2
36	1613749	Strap	1
37	1613755	Latch	1
38	1586022	Capscrew	1
39	1655300	Striker	1
39	1682758	Striker (Alternate Part)	1
40	1655328	Shim	1
41	16134	Fitting	1
42	2076168	Hose Assy	1
43	16863	Fitting	1
44	2071517	Sleeve	1
45	97999	Fitting	1
46	2072298	Hose Assy	1

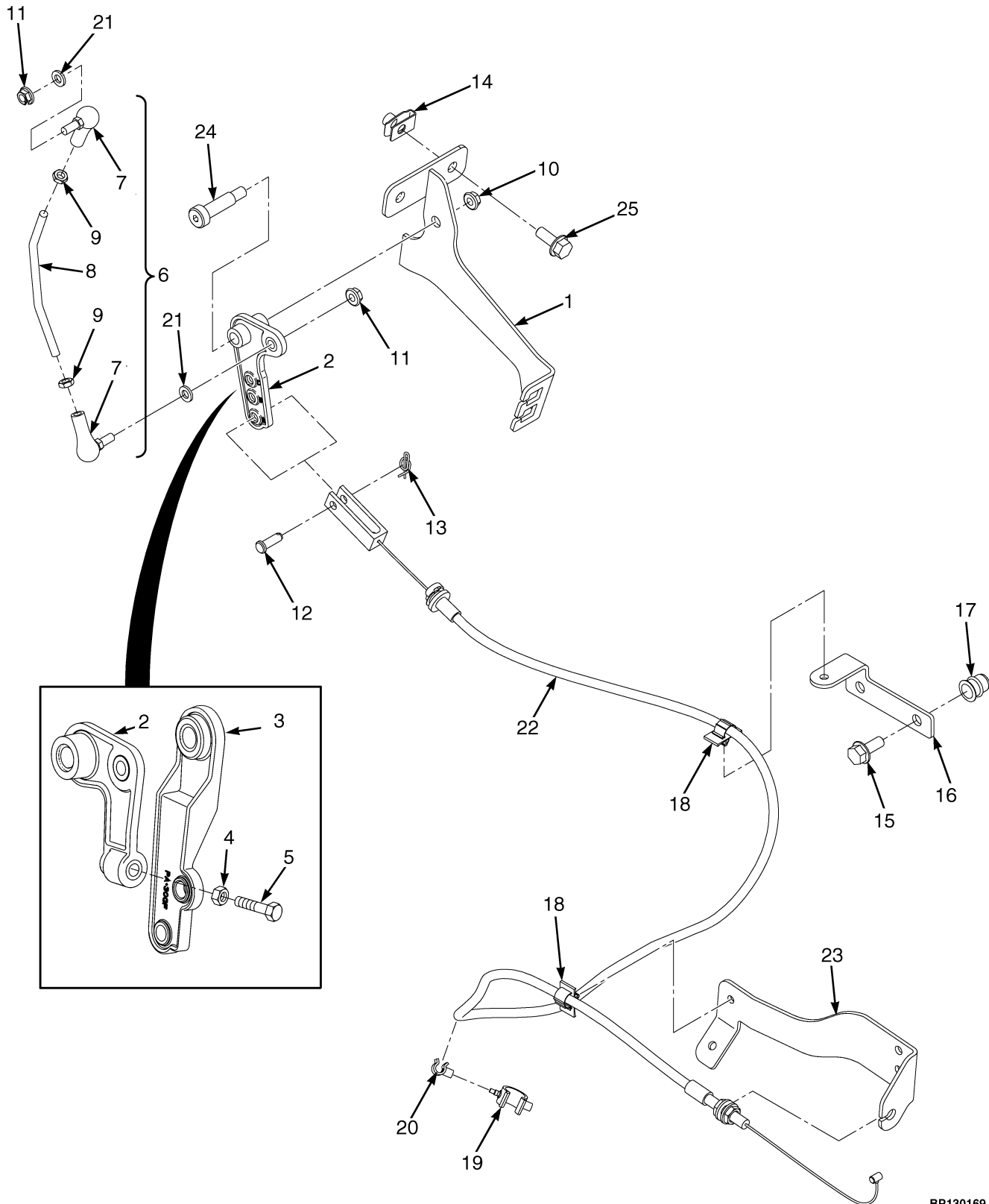
ITEM	PART NO.	DESCRIPTION	QTY
	a 246108	Sealant	1
	a 1687376	Sealant (Alternate Part)	1
	a 1687377	Activator (Alternate Part)	1

a Not Illustrated **c** PENDING PER ECN 104889 →
b PENDING PER ECN 104640 ↔ PENDING PER
 ECN 104889

NOTES

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

THROTTLE CABLE ASSEMBLY (FIGURE 3-33) MAZDA 2.0L AND 2.2L — GASOLINE



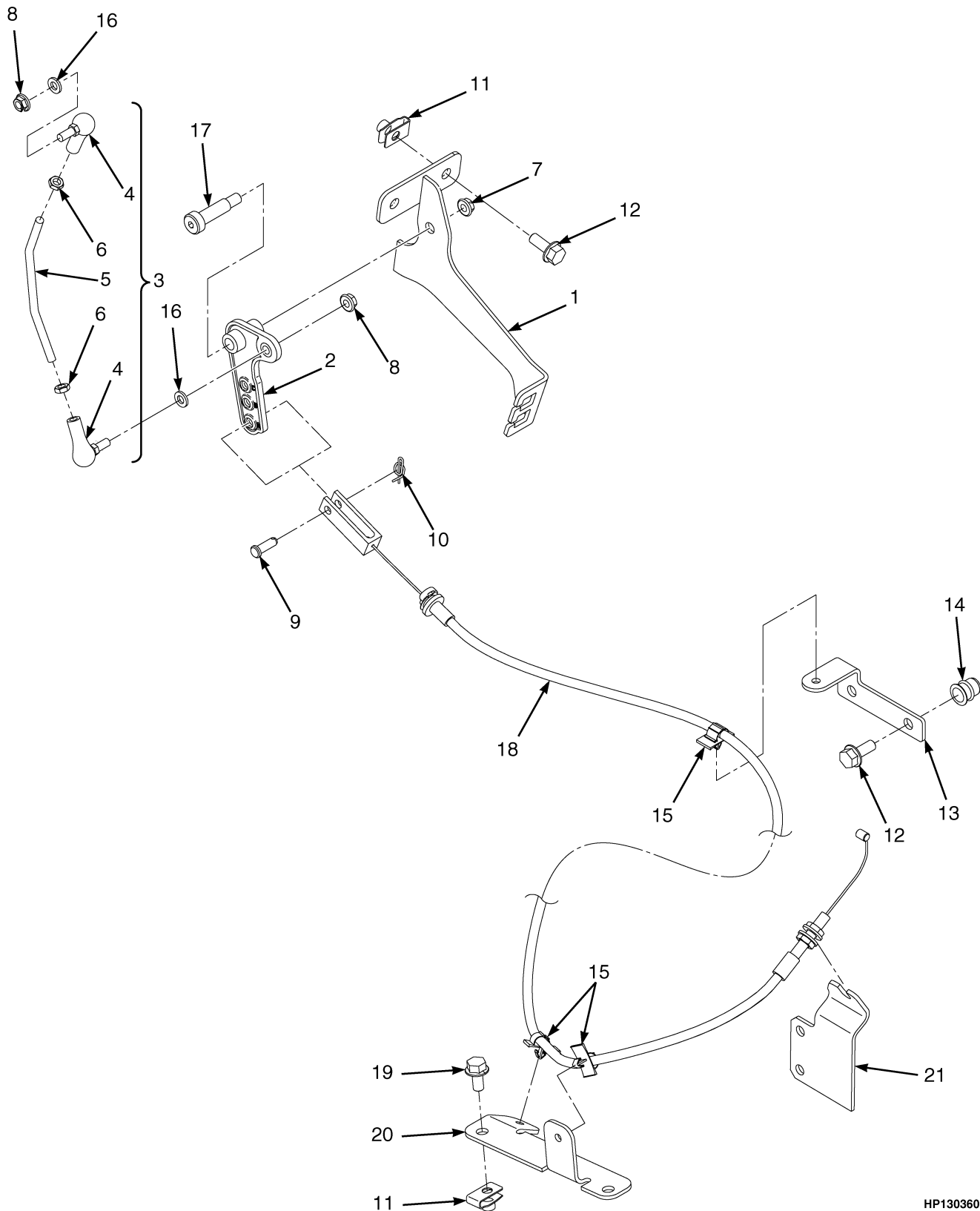
BP130169

**THROTTLE CABLE ASSEMBLY
MAZDA 2.0L AND 2.2L – GASOLINE**

ITEM	PART NO.	DESCRIPTION	QTY
1	1539298	Bracket (Throttle Cable)	1
2	a 1538162	Bellcrank	1
2	b 1565551	Bellcrank	1
3	1565552	Bellcrank	1
4	b 1593334	Nut	1
5	b 302051	Screw	1
6	1538782	Push Rod	1
7	2027949	Ball Joint	2
8	1538490	Push Rod	1
9	2308541	Nut	2
10	302400	Nut	1
11	1514429	Nut	2
12	126	Pin	1
13	1517361	Lockring	1
14	1480237	Nut	2
15	1527880	Capscrew	4
16	1542082	Bracket	1
17	1530243	Insert	2
18	1562088	Clip	2
19	1543691	Clamp (Swivel)	1
20	1542440	Clamp (Swivel)	1
21	320156	Washer	2
22	2067394	Cable	1
23	1569544	Bracket	1
24	1399802	Bolt	1
25	ab 1527879	Capscrew	2

FOOTNOTES:**a** With Basic Power Shift Transmission**b** With Electronic Control Transmission

THROTTLE CABLE ASSEMBLY (FIGURE 3-34) MAZDA 2.0L AND 2.2L — LPG

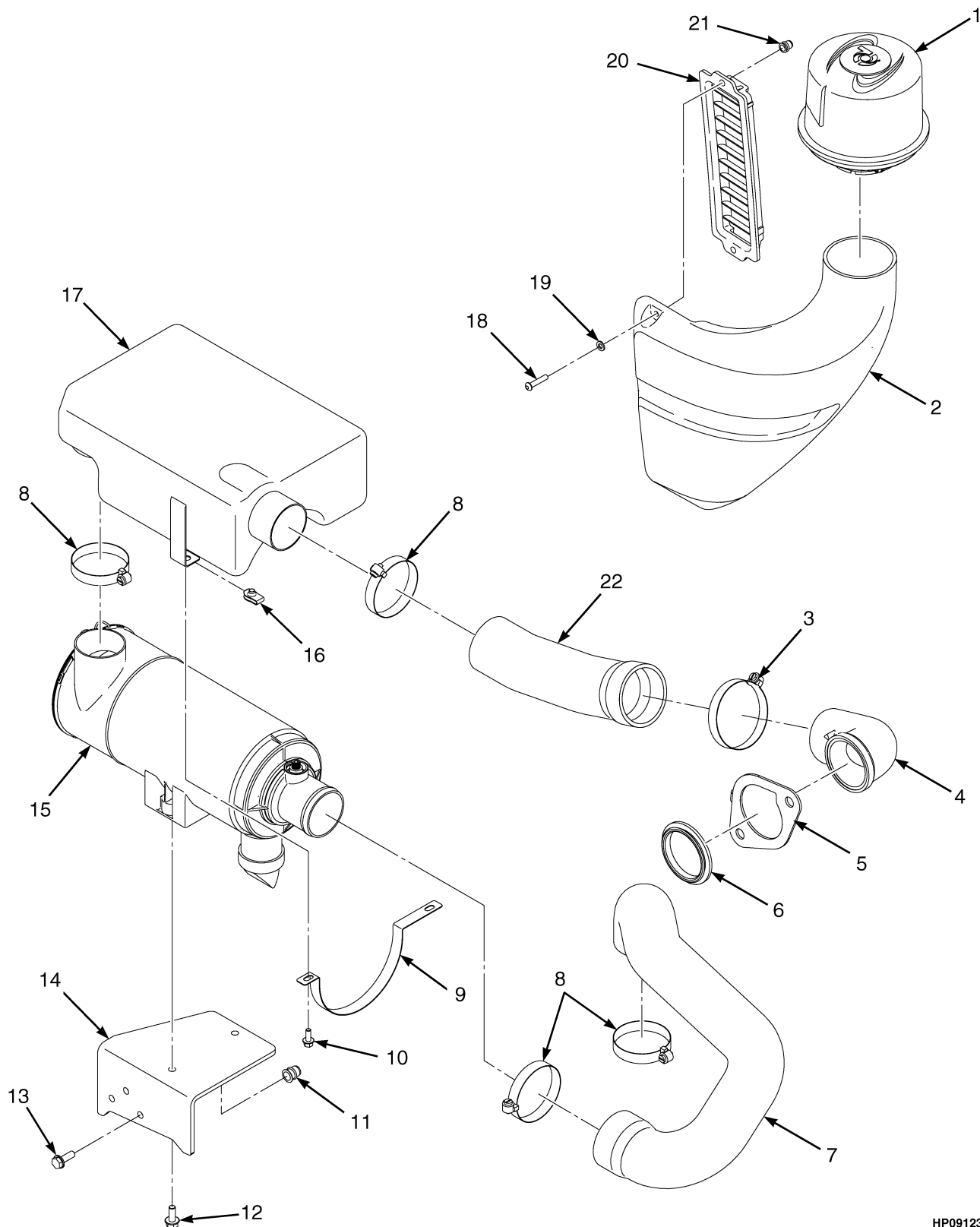


HP130360

THROTTLE CABLE ASSEMBLY
MAZDA 2.0L AND 2.2L – LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	1609374	Bracket (Throttle Cable)	1
2	1538162	Bellcrank	1
3	1538782	Push Rod	1
4	2027949	Ball Joint	2
5	1538490	Push Rod	1
6	2308541	Nut	2
7	302400	Nut	1
8	1514429	Nut	2
9	126	Pin	1
10	1517361	Lockring	1
11	1480237	Nut	4
12	1527880	Capscrew	2
13	1542082	Bracket	1
14	1530243	Insert	2
15	1562088	Clip	3
16	320156	Washer	2
17	1399802	Bolt	1
18	2067395	Throttle Cable	1
19	1527879	Capscrew	4
20	1542555	Bracket	1
21	1535136	Bracket (Throttle Cable)	1

AIR INTAKE SYSTEM (FIGURE 3-35) DIESEL — YANMAR 2.6L AND 3.3L (→ S/N L177B14427E)



HP091232

AIR INTAKE SYSTEM

DIESEL – YANMAR 2.6L AND 3.3L (→ S/N L177B14427E)

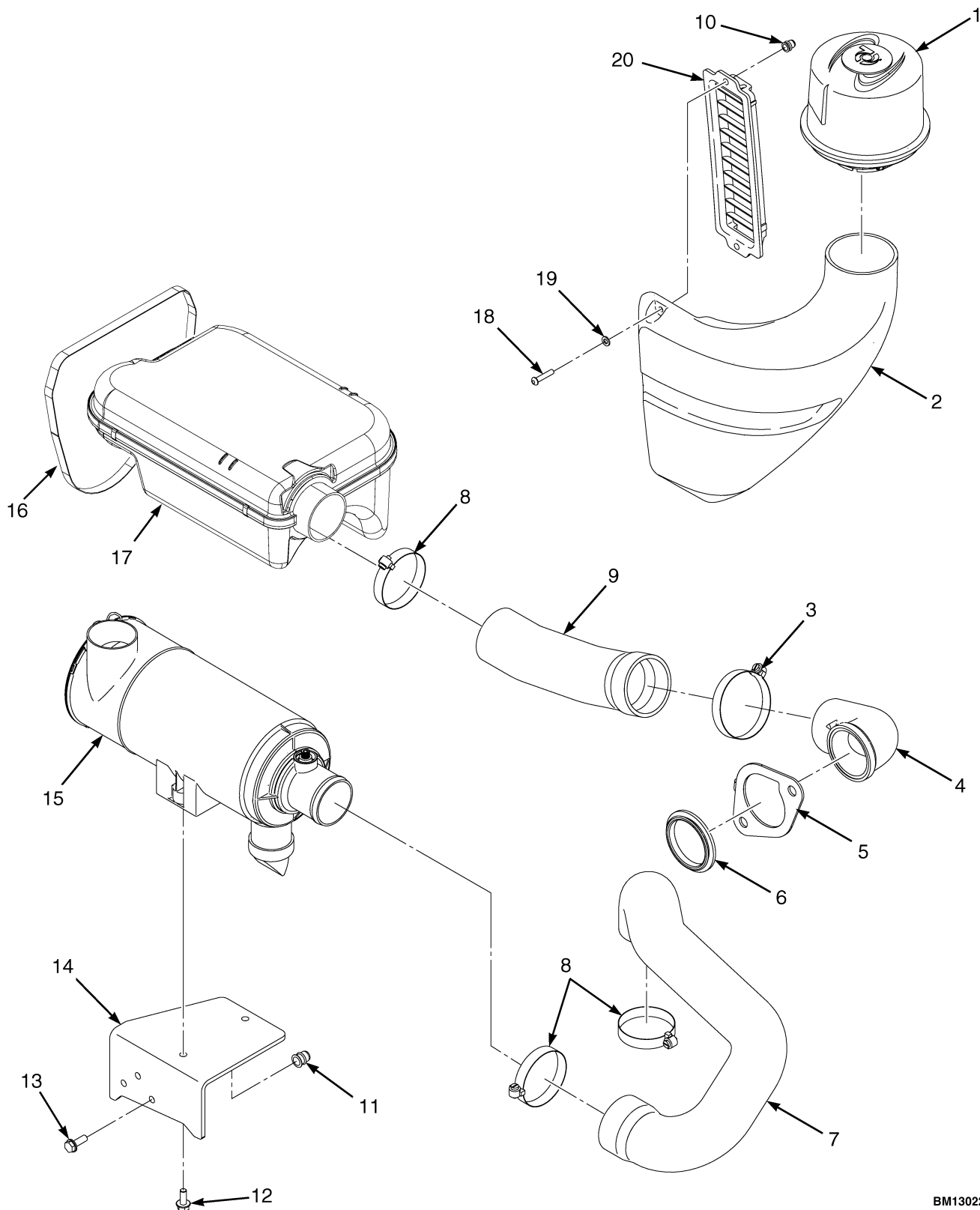
ITEM	PART NO.	DESCRIPTION	QTY
1	1501888	Pre-Cleaner	1
2	d 1565201	Air Duct	1
2	f 1677793	Air Duct	1
3	1394008	Hose Clamp	2
4	1581438	Elbow	1
5	1581439	Retainer (Elbow)	1
6	1502079	Grommet	1
7	2075783	Hose	1
8	112989	Hose Clamp	3
9	1589542	Strap	1
10	1527876	Capscrew	2
11	1530243	Insert	3
12	1527880	Capscrew	2
13	1583611	Capscrew	3
14	1501849	Bracket	1
15	1501855	Air Filter (☞ Figure 3-37).....	1
16	1566420	Nut	2
17	c 2078092	Silencer	1
17	e 2086133	Silencer	1
18	2071261	Capscrew	2
19	1506738	Washer	2
20	2067476	Grill	1
21	1531558	Insert	2
22	1565212	Hose	1
23	ab 1677833	Screw (Pre-Cleaner Mounting)	3

FOOTNOTES:

a Not Illustrated
b → PENDING PER ECN 104609
c → S/N L177B06881D

d → S/N L177B27211F
e S/N L177B06882D →
f S/N L177B27212F →

AIR INTAKE SYSTEM (FIGURE 3-36) DIESEL — YANMAR 2.6L AND 3.3L (S/N L177B14428E →)



BM130224

AIR INTAKE SYSTEM

DIESEL – YANMAR 2.6L AND 3.3L (S/N L177B14428E →)

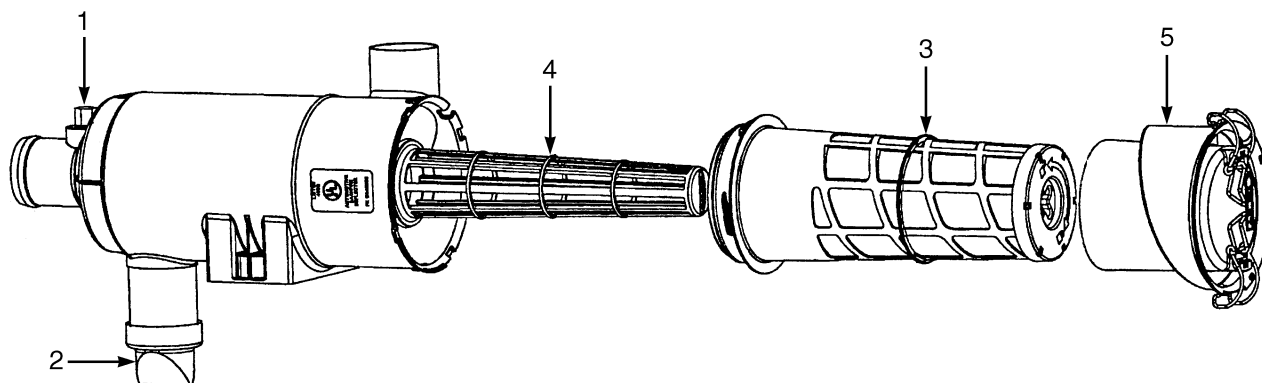
ITEM	PART NO.	DESCRIPTION	QTY
1	1501888	Pre-Cleaner	1
2	c 1565201	Air Duct	1
2	e 1677793	Air Duct	1
3	1394008	Hose Clamp	2
4	1581438	Elbow	1
5	1581439	Retainer (Elbow)	1
6	1502079	Grommet	1
7	2075783	Hose (Clean Air)	1
8	112989	Hose Clamp	3
9	1565212	Hose (Dirty Air)	1
10	1531558	Insert	2
11	1530243	Insert	3
12	1527879	Capscrew	2
13	1583611	Capscrew	3
14	1501849	Bracket	1
15	1501855	Air Filter (☞ Figure 3-37).....	1
16	1636797	Strap	1
17	b 2090086	Silencer	1
17	d 2102226	Silencer	1
17	2092848	Clip	6
17	15871	O-Ring	1
18	2071261	Capscrew	2
19	1506738	Washer	2
20	2067476	Grill	1
21	ad 1677833	Screw (Pre-Cleaner Mounting)	3

FOOTNOTES:

a Not Illustrated
b → S/N L177V01609F
c → S/N L177V02649F

d S/N L177V01610F →
e S/N L177V02650F →

AIR FILTER ASSEMBLY (FIGURE 3-37)



HP091227

KEY:

A: Mazda Engines - Gasoline

B: Mazda Engines - LPG

C: GM Engines - Gasoline and LPG

D: Yanmar Diesel Engines

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	2055193	Air Filter	..	1	..	..
	2063128	Air Filter	1	..	..	..
	a 1501855	Air Filter	..	..	1	1
	b 2105338	Air Filter (Alternate Part)	..	..	1	1
1	141331	Cap	1	1	1	1
2	374923	Valve	1	1	1	1
3	1559418	Filter Element	..	1	..	..
3	1574111	Filter Element	1	..	1	1
4	1559419	Guide (With O-Ring)	..	1	..	..
4	1574260	Liner (With O-Ring)	1	..	1	1
5	1559420	Cover	..	1	..	..
5	a 1574131	Cover	1	..	1	1
5	b 1687933	Cover (Alternate Part)	1	..	1	1
	2095889	Label (Air Filter Installation) (Not Illustrated)	1	1	1	1

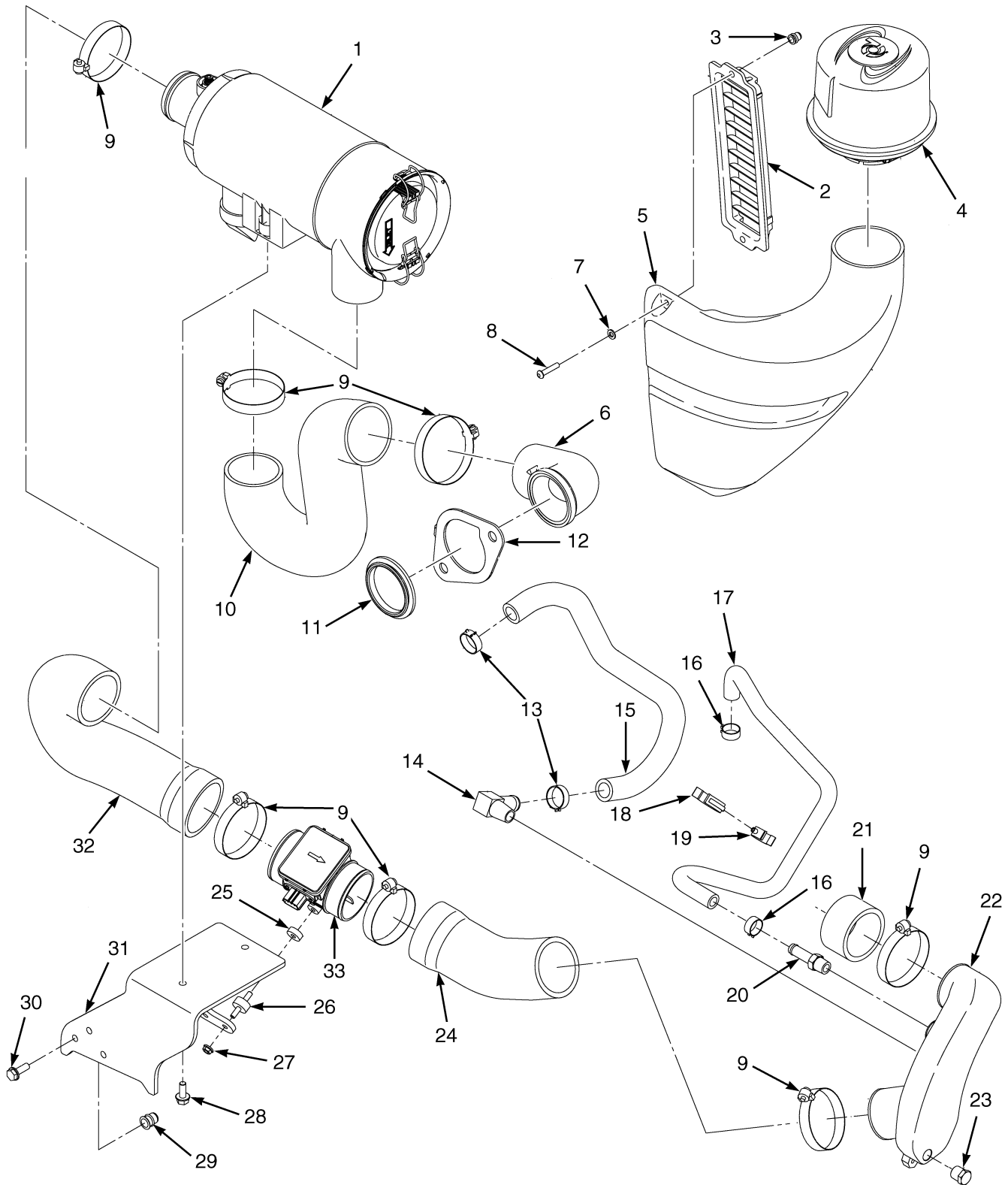
FOOTNOTES:

a → S/N L177B22489F**b** S/N L177B22490F →

NOTES

[illegible]

AIR INTAKE SYSTEM (FIGURE 3-38) PRE-CLEANER AND DUCT — MAZDA 2.0L AND 2.2L



HP091230

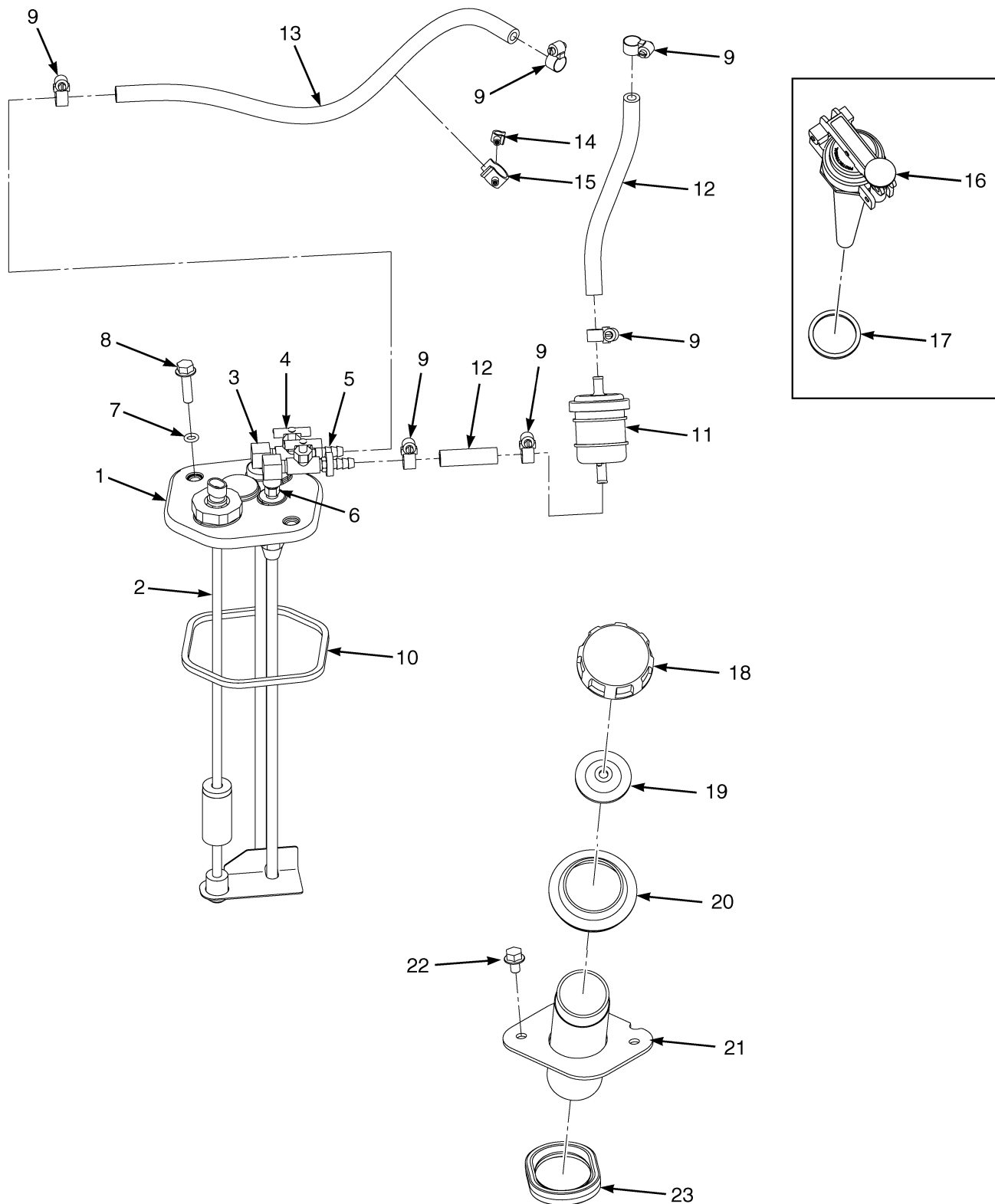
AIR INTAKE SYSTEM

PRE-CLEANER AND DUCT – MAZDA 2.0L AND 2.2L

ITEM	PART NO.	DESCRIPTION	QTY
1	2063128	Air Filter	1
2	2067476	Grill	1
3	1531558	Insert	2
4	1501888	Pre-Cleaner	1
5	b 1565201	Air Duct	1
5	c 1677793	Air Duct (Alternate Part)	1
6	1581438	Elbow	1
7	1506738	Washer	2
8	2071261	Capscrew	2
9	1394008	Hose Clamp	8
10	1501841	Hose	1
11	1502079	Grommet	1
12	1581439	Retainer	1
13	353199	Clamp	2
14	201800	Fitting	1
15	2069357	Hose	1
16	1452463	Hose Clamp	2
17	2069356	Hose (PCV)	1
18	1561759	Clamp (Swivel)	1
19	1502053	Clamp (Swivel)	1
20	102919	Fitting	1
21	2057796	Hose	1
22	1580255	Intake Manifold	1
23	14386	Fitting	1
24	1558449	Hose (For 2.2L Engine)	1
24	2075703	Hose (For 2.0L Engine)	1
25	1527563	Spacer	2
26	1527562	Rubber Mount	2
27	1514429	Nut	2
28	1527880	Capscrew	2
29	1530243	Insert	3
30	1583611	Capscrew	3
31	1501665	Bracket Wldmt	1
32	1501838	Hose	1
33	1501629	Sensor (Airflow)	1
34	ac 1677833	Screw (Pre-Cleaner Mounting)	1

FOOTNOTES:**a** Not Illustrated**c** PENDING PER ECN 104609 →**b** → PENDING PER ECN 104609

FUEL SYSTEM (FIGURE 3-39) YANMAR 2.6L AND 3.3L — DIESEL



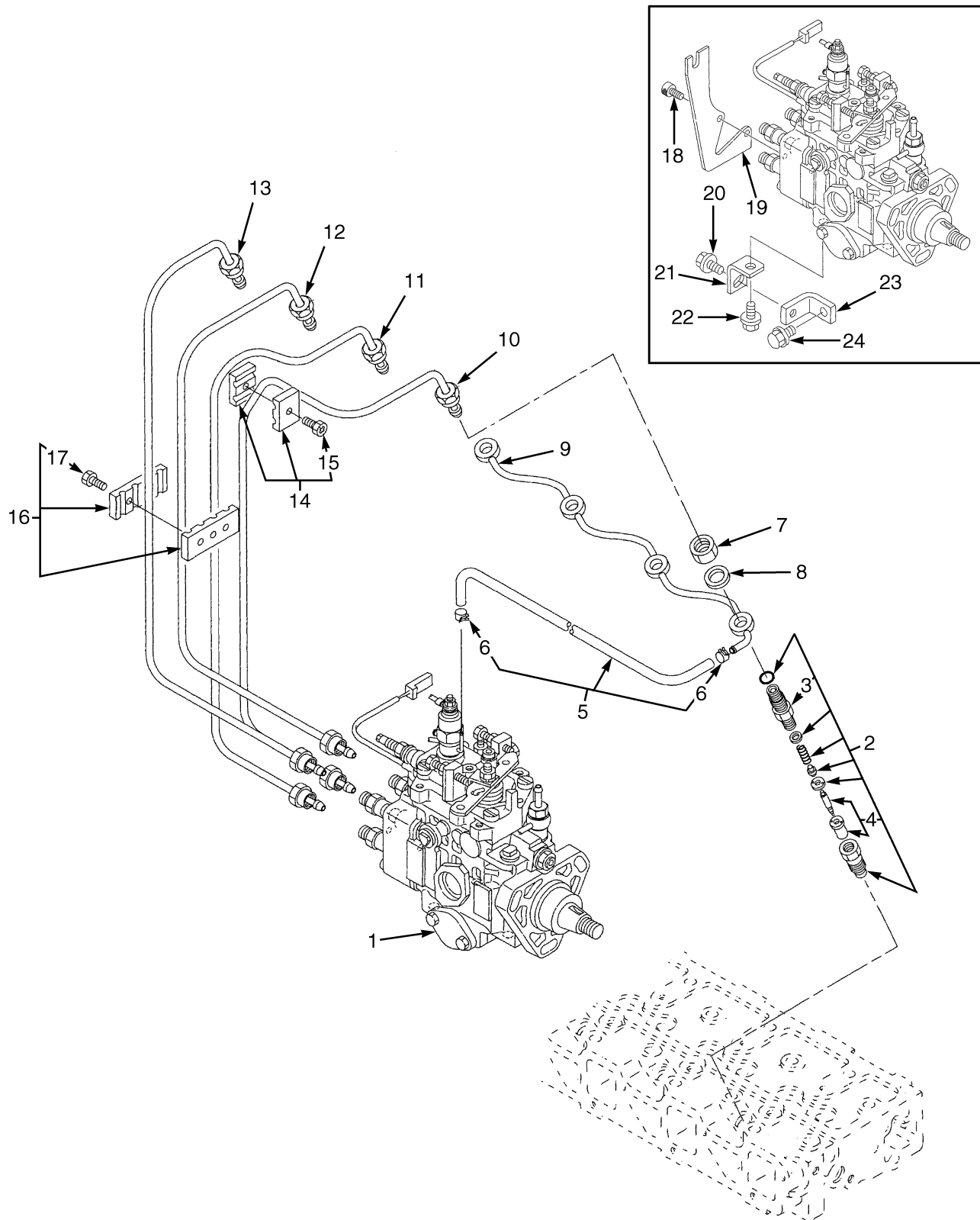
HP130358

FUEL SYSTEM
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
1	1532532	Fuel Sender	1
2	1501811	Fuel Sender	1
3	17650	Fitting	1
4	87446	Drain Valve (Shut-Off)	2
5	309651	Fitting	2
6	16151	Fitting	1
7	353000	O-Ring	2
8	1527881	Capscrew	2
9	168718	Clamp (Worm Screw)	6
10	1528893	Quad Ring	1
11	1304950	Fuel Filter	1
12	1610852	Hose	1
13	260878	Hose	1
14	1542440	Clamp (Swivel)	1
15	1543691	Clamp (Swivel)	1
16	a 1579677	Fuel Cap	1
17	a 2021685	Gasket	1
18	b 2081840	Fuel Cap	1
19	b 2021683	Gasket	1
20	1528608	Grommet	1
21	1564392	Pipe (Fill)	1
22	1529366	Capscrew	2
23	1528314	Seal	1

FOOTNOTES:**a** DS Models Only**b** Standard Models Only

FUEL INJECTION SYSTEM (FIGURE 3-40) YANMAR 2.6L AND 3.3L — DIESEL

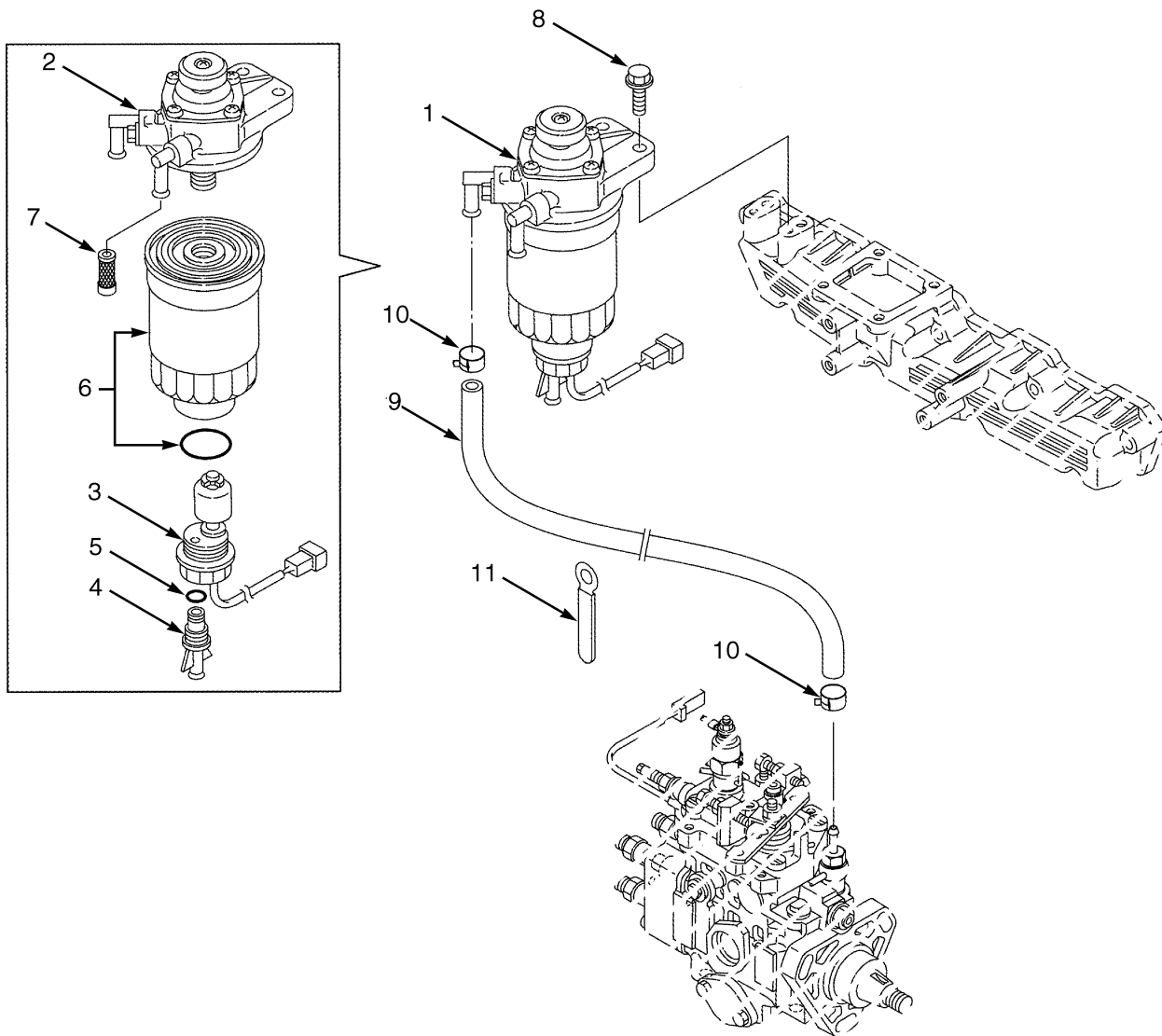


BP090190

**FUEL INJECTION SYSTEM
YANMAR 2.6L AND 3.3L – DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L) (2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599901	Injection Pump (2.6L)	1
1	1708457	Fuel Pump (Injection 2.6L) (Alternate Part)	1
1	1600084	Injection Pump (3.3L)	1
1	1608616	Solenoid (Fuel Shut-Off)	1
1	1608617	O-Ring	1
1	1597644	Solenoid Valve (Cold Start)	1
1	1600093	O-Ring	1
2	1599818	Injector	4
3	1599820	Retainer	1
4	1599819	Nozzle	1
5	1599828	Tube Assy	1
6	1599829	Clamp	2
7	1599832	Nut	4
8	1599831	Gasket	4
9	1599830	Tube Assy (Fuel Return)	1
10	1599827	Tube Assy (#4)	1
11	1599826	Tube Assy (#3)	1
12	1599825	Tube Assy (#2)	1
13	1599824	Tube Assy (#1)	1
14	1599821	Retainer	2
15	1599822	Bolt	1
16	1599823	Retainer	1
17	1599822	Bolt	2
18	1599908	Bolt	2
19	1599907	Bracket	1
20	1599912	Bolt	1
21	1599909	Retainer	1
22	1599911	Bolt	1
23	1599910	Bracket	1
24	1599913	Bolt	1
	1599898	Kit-Gasket (2.6L Engine Complete)	1
	1600085	Kit-Gasket (Complete Engine)	1

FUEL FILTER AND WATER SEPARATOR (FIGURE 3-41) YANMAR 2.6L AND 3.3L — DIESEL

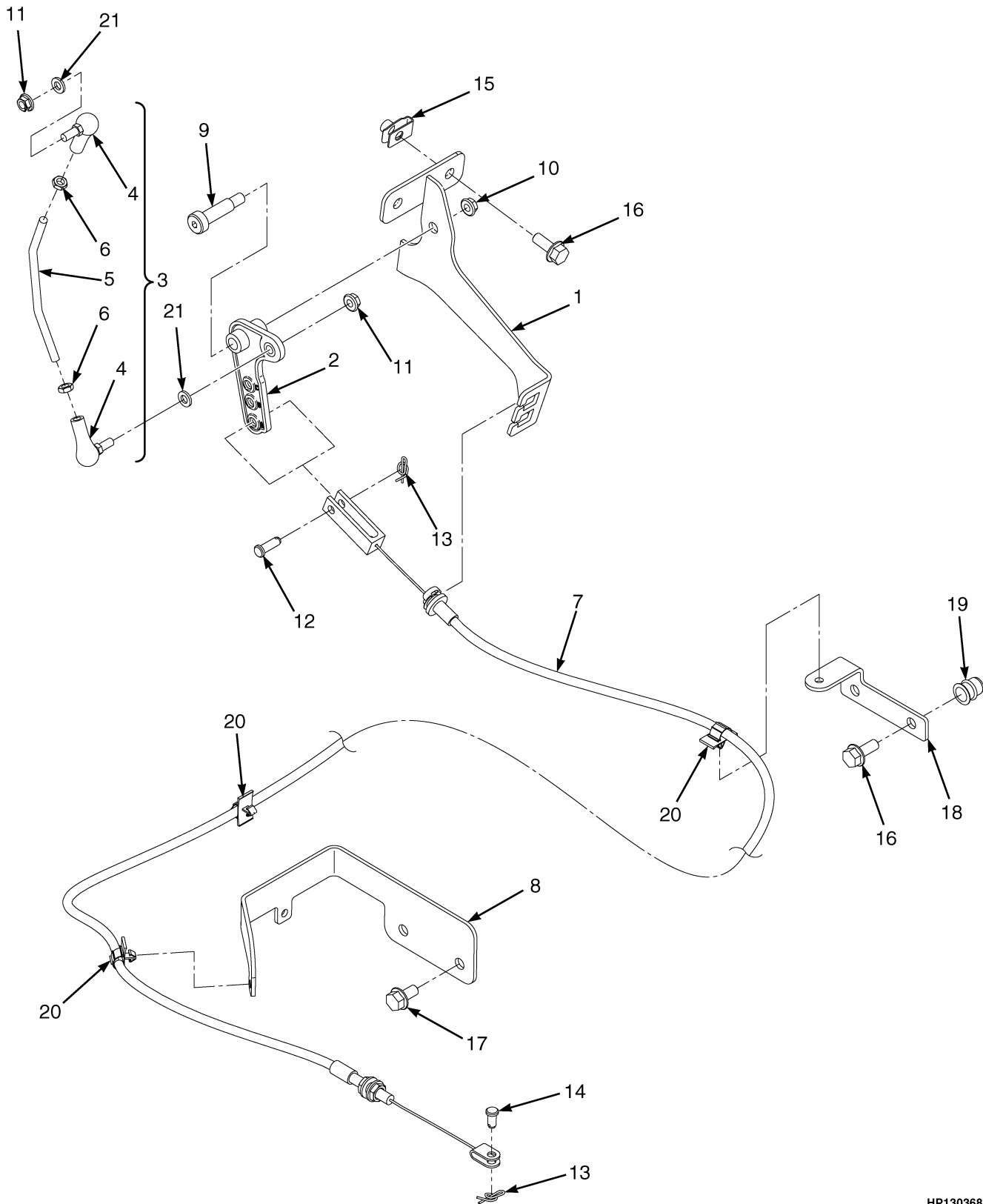


BP090212

**FUEL FILTER AND WATER SEPARATOR
YANMAR 2.6L AND 3.3L – DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
	1501687	Engine Assy-Diesel (Yanmar 2.6L)	1
	1501690	Engine Assy-Diesel (3.3L)	1
1	1599833	Fuel Filter	1
2	1599834	Body	1
3	1599835	Sensor	1
4	1599836	Drain Plug	1
5	1599837	O-Ring	1
6	1330033	Fuel Filter (Cartridge 10 micron)	1
7	1599839	Filter	1
8	1599801	Bolt	2
9	1599841	Tube Assy	1
10	1599842	Clamp	2
11	1599843	Clamp	2

THROTTLE CABLE ASSEMBLY (FIGURE 3-42) YANMAR 2.6L AND 3.3L — DIESEL

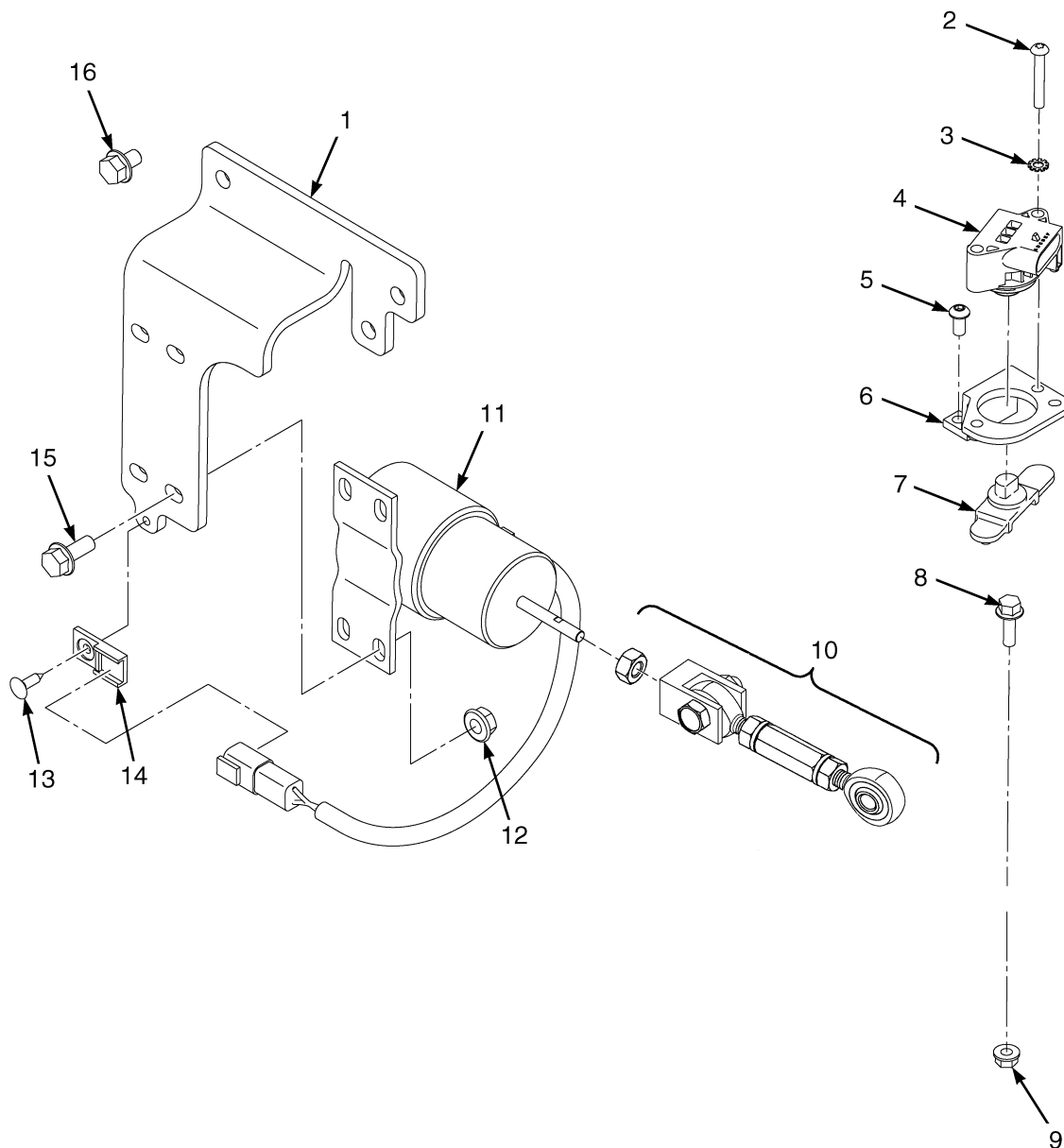


HP130368

THROTTLE CABLE ASSEMBLY
YANMAR 2.6L AND 3.3L – DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
1	1609374	Bracket (Throttle Cable)	1
2	1538162	Bellcrank	1
3	1538782	Push Rod	1
4	2027949	Ball Joint	2
5	1538490	Push Rod	1
6	2308541	Nut	2
7	2067396	Throttle Cable	1
8	1542500	Bracket	1
9	1399802	Bolt	1
10	302400	Nut	1
11	1514429	Nut	2
12	126	Pin	1
13	1517361	Lockring	2
14	128263	Pin	1
15	1480237	Nut	2
16	1527880	Capscrew	2
17	1527879	Capscrew	4
18	1542082	Bracket	1
19	1530243	Insert	2
20	1562088	Clip	3
21	320156	Washer	2

THROTTLE POSITION SENSOR AND ATTACHING PARTS (FIGURE 3-43) YANMAR 2.6L AND 3.3L DIESEL



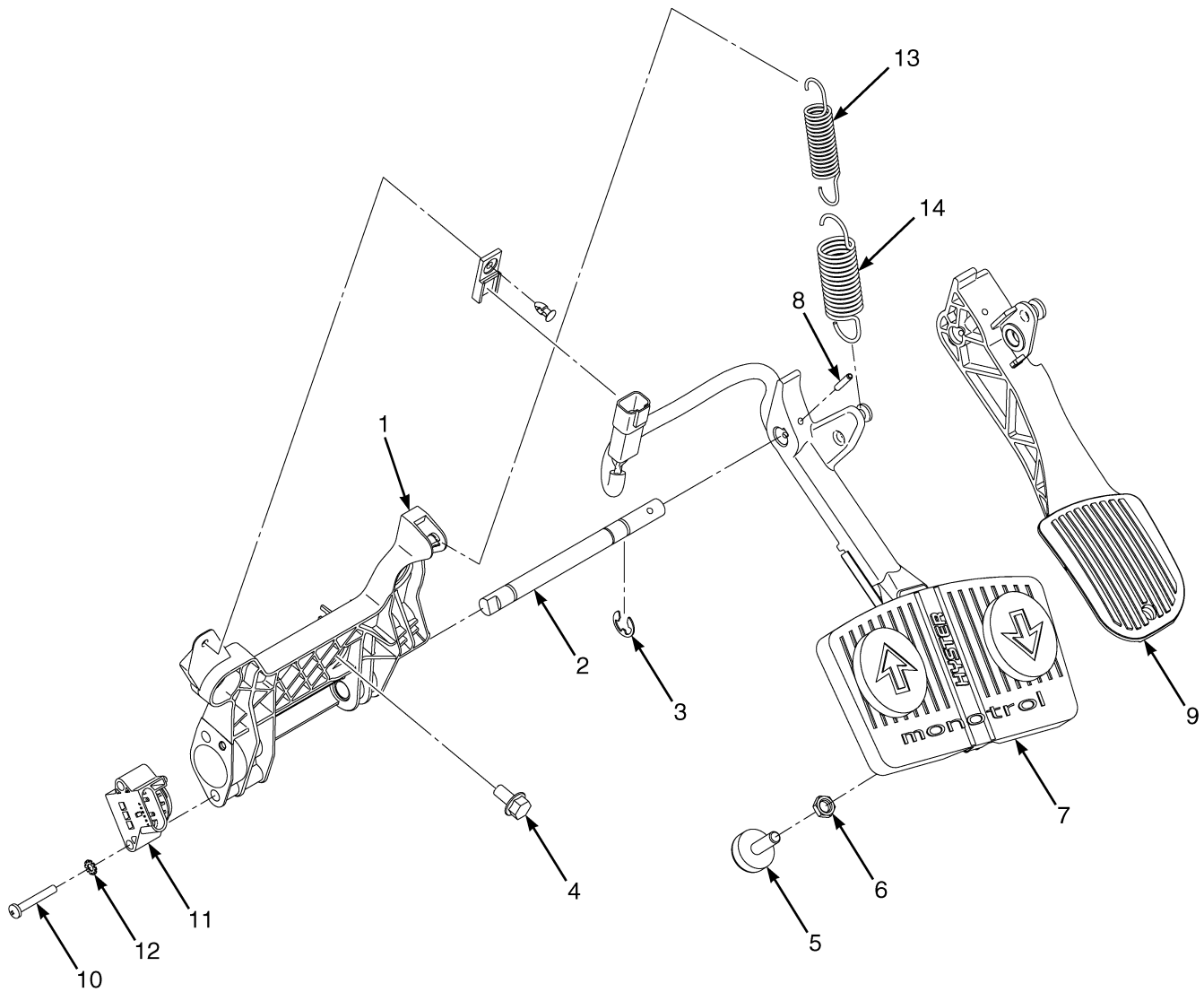
BP130182

THROTTLE POSITION SENSOR AND ATTACHING PARTS
YANMAR 2.6L AND 3.3L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
1	1547550	Bracket (Actuator)	1
2	1553897	Capscrew	2
3	296378	Washer	2
4	2080376	Sensor (Hall Throttle Position)	1
5	293774	Capscrew	2
6	1616491	Bracket	1
7	2078335	Rotor	1
8	1527877	Capscrew	1
9	313805	Nut	1
10	a 1542773	Linkage	1
10	b 1690182	Linkage	1
11	1542772	Actuator (Pull)	1
12	1502543	Nut (Flange)	4
13	1344124	Fastener	1
14	1500912	Clip	1
15	1527880	Capscrew	7
16	1529366	Capscrew	2

FOOTNOTES:**a** → S/N L177V03018G**b** S/N L177V03019G →

THROTTLE PEDAL AND ATTACHING PARTS (FIGURE 3-44)



HP130364

THROTTLE PEDAL AND ATTACHING PARTS

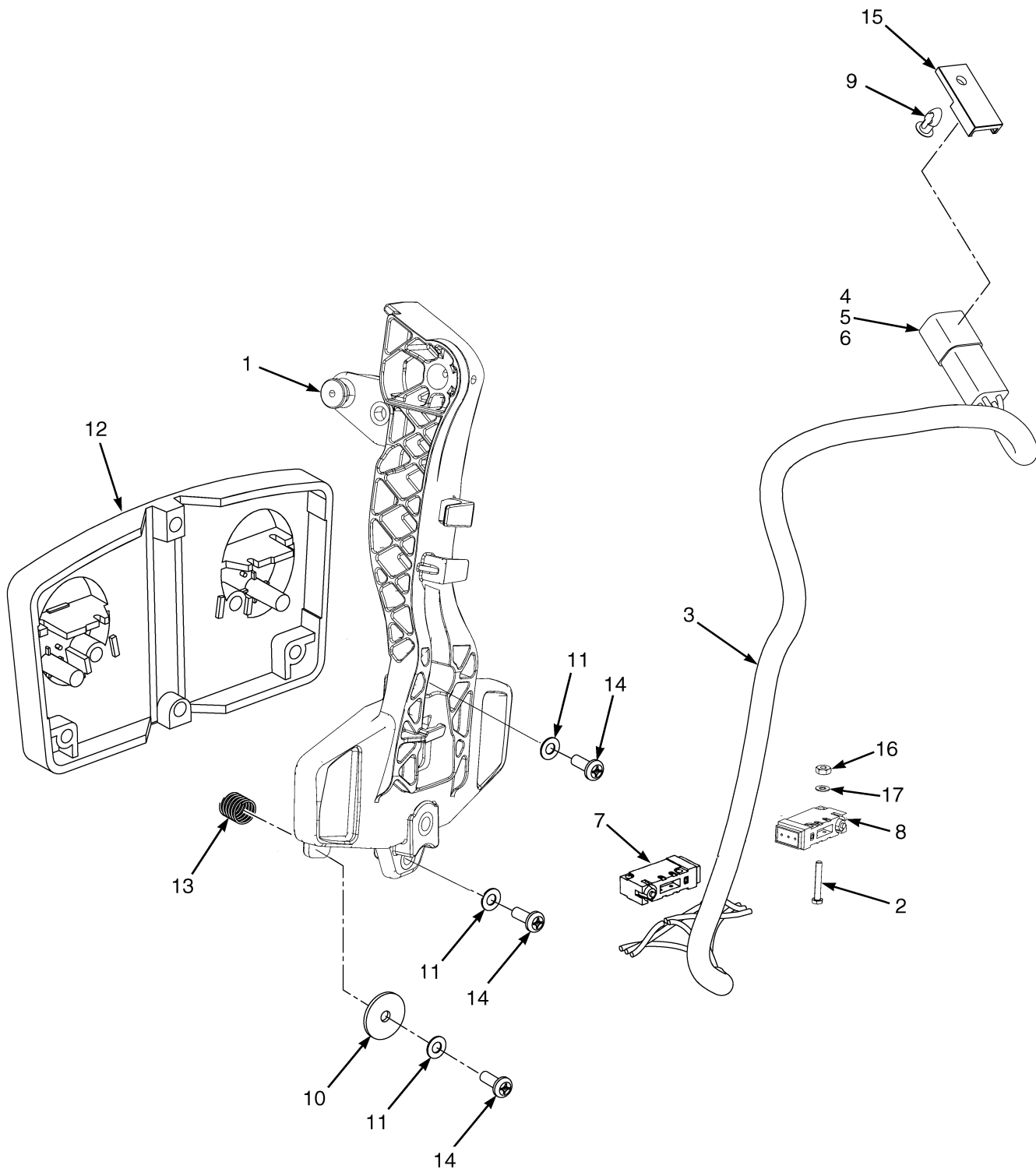
ITEM	PART NO.	DESCRIPTION	QTY
1	d 1538488	Throttle Plate	1
1	e 1654411	Throttle Plate	1
1	1524267	Bushing	1
2	d 1521005	Shaft	1
2	e 1654754	Shaft	1
3	1530971	E-Ring	1
4	1527879	Capscrew	3
5	1530311	Screw (Stop)	1
6	329069	Nut	1
7	1608412	Monotrol Pedal Assembly (☞ Figure 3-45).....	1
8	b 302437	Roll Pin	1
8	c 302443	Roll Pin	1
9	2071181	Pedal (Standard)	1
10	1564752	Capscrew	2
11	2063842	Sensor (Half Throttle Position)	1
12	296378	Washer	2
13	1582301	Spring (Inner)	1
13	a 1582303	Spring (Inner)	1
14	1582300	Spring (Outer)	1
14	a 1582302	Spring (Outer)	1

FOOTNOTES:

- a** For Use With Mazda Engines Only
b For Use With Monotrol Pedal Only
c For Use With Standard Pedal Only

- d** → S/N L177B13612E
e S/N L177B13613E →

MONOTROL PEDAL ASSEMBLY (FIGURE 3-45)



BP130201

MONOTROL PEDAL ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	1608412	Monotrol Pedal Assembly	1
1	2074702	Pedal	1
2	220428	Screw	4
3	2072782	Wire Harness	1
4	1330416	Connector	1
5	1489655	Connector (4 Way)	1
6	1531312	Terminal	4
7		Switch	1
8		Switch	1
9	1582464	Fastener	1
10	362036	Washer	2
11	15931	Lockwasher	4
12	1340470	Pad	1
13	325699	Spring	2
14	16708	Screw	4
15	1500912	Clip	1
16	16865	Nut	4
17	53162	Lockwasher	4

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ELECTRICAL SYSTEM**

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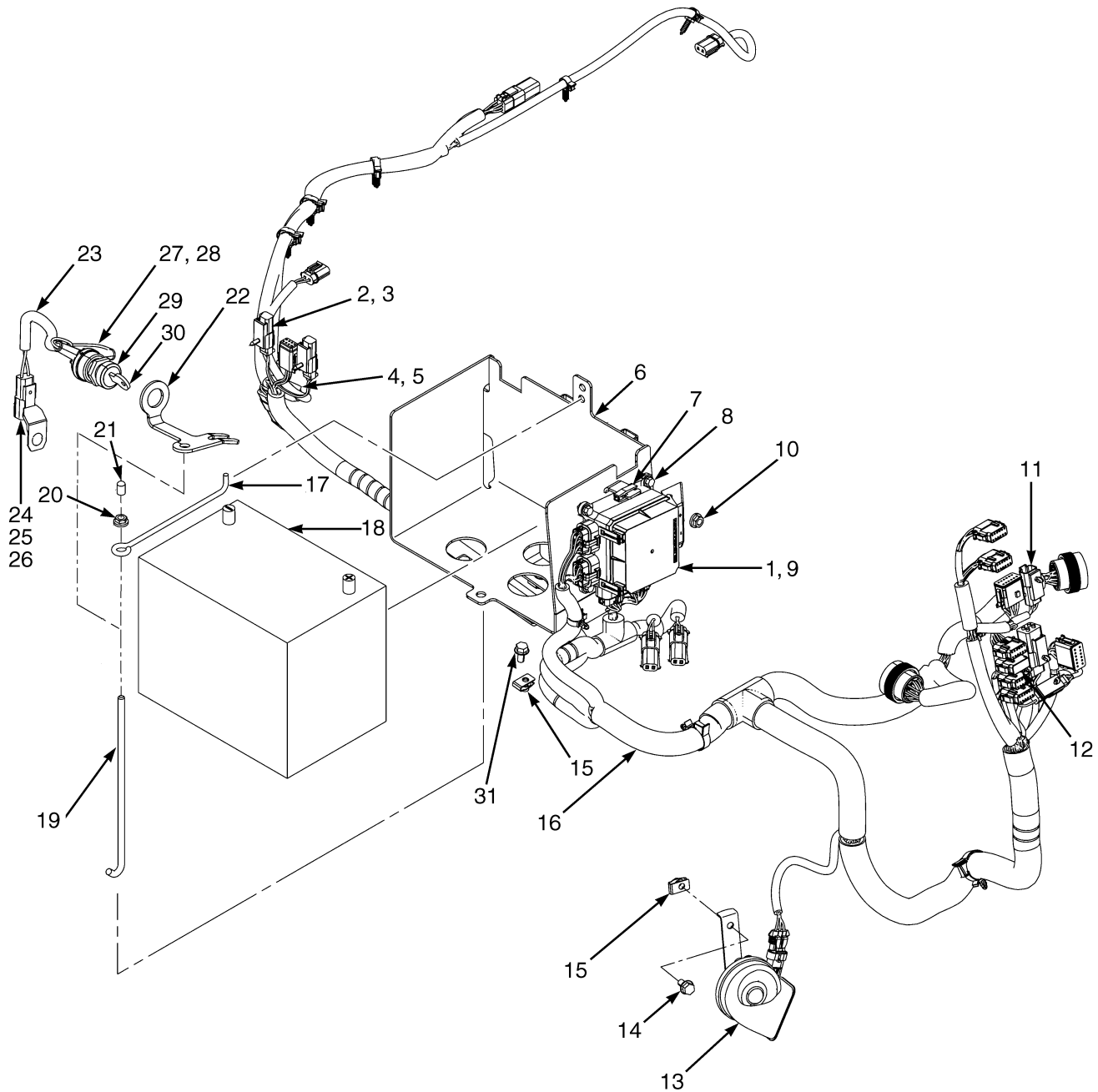
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ELECTRICAL SYSTEM**

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ELECTRICAL SYSTEM (FIGURE 4-1) CHASSIS



HP081625

**ELECTRICAL SYSTEM
CHASSIS**

ITEM	PART NO.	DESCRIPTION	QTY
1	d 2063093	Module (☞ Figure 4-15).....	1
1	n 2090613	Module (☞ Figure 4-16).....	1
2	1582464	Fastener	6
3	1582442	Clip	1
4	1617080	Bracket (Hood Switch)	1
5	1529366	Capscrew	1
5	c 1529366	Capscrew	2
6	h 1616981	Battery Tray	1
6	l 1644560	Battery Tray	1
7	1402883	Fuse Puller	1
8	1534417	Capscrew	4
9	1559928	Seal	1
10	1502543	Nut (Flange)	1
11	1500912	Clip	6
12	a 1593331	Connector	1
13	e 1527264	Horn	1
13	o 1618978	Horn	1
14	1527879	Capscrew	4
15	1480237	Nut	4
16	f 2078879	Wire Harness (Chassis) (Mazda 2.0L and 2.2L) (☞ Figure 4-35).....	1
16	i 2085945	Wire Harness (Chassis) (Mazda 2.0L and 2.2L) (☞ Figure 4-36).....	1
16	m 2090054	Wire Harness (Chassis) (Mazda 2.0L and 2.2L) (☞ Figure 4-37).....	1
16	b 2108124	Wire Harness (Chassis) (Mazda 2.0L and 2.2L) (☞ Figure 4-38).....	1
16	f 2078878	Wire Harness (Chassis) (GM 2.4L) (☞ Figure 4-39).....	1
16	i 2085944	Wire Harness (Chassis) (GM 2.4L) (☞ Figure 4-40).....	1
16	m 2089179	Wire Harness (Chassis) (GM 2.4L)	1
16	b 2108126	Wire Harness (Chassis) (GM 4.3L) (☞ Figure 4-41, ☞ Figure 4-38).....	1
16	f 2078880	Wire Harness (Chassis) (Yanmar 2.6L and 3.3L Diesel) (☞ Figure 4-42).....	1
16	j 2085947	Wire Harness (Chassis) (Yanmar 2.6L and 3.3L Diesel) (☞ Figure 4-43).....	1
17	h 1585529	Link (Battery Hold Down)	1
17	l 1638706	Link (Battery Hold Down)	1
17	1641368	Link (Battery Hold Down) (Alternate Part)	1
18	1383331	Start Battery Wet	1
19	2065745	Link (Battery Hold Down)	1
20	1502543	Nut (Flange)	1
20	296380	Washer (Use above item 17)	1
21	1540805	Cap	1
22	1582337	Bracket	1
23	g 2074320	Wire Harness (Remote Keyswitch)	1
23	k 2058110	Wire Harness (Remote Keyswitch)	1
24	1493465	Connector	1
25	1330414	Connector (Secondary Lock)	2
26	1330437	Terminal (Pin)	2
27	1497433	Ring Terminal	2
28	190383	Boot	2
29	g 254007	Ignition Switch (Key)	1
29	k 2058111	Ignition Switch	1
30	262798	Key Set	1
31	h 1527879	Capscrew	3

**ELECTRICAL SYSTEM
CHASSIS**

ITEM	PART NO.	DESCRIPTION	QTY
31	I 1527880	Capscrew	3

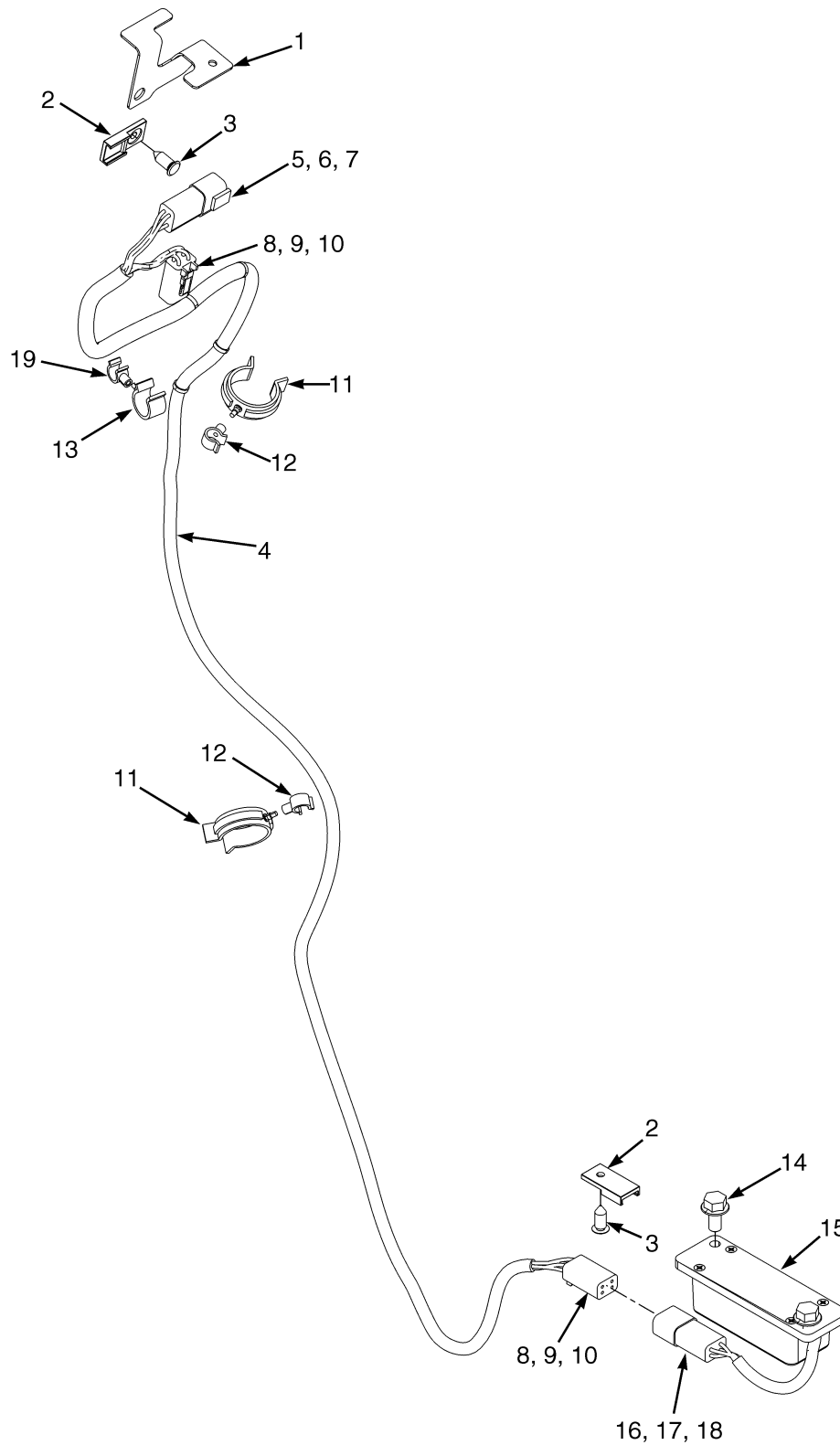
FOOTNOTES:

a	For Use With GM And Mazda Engines Only	i	S/N L177B11118D ↔ 5/2007
b	With Anti-Stall Connector	j	S/N L177B11118D →
c	Yanmar 2.6L and 3.3L Diesel	k	S/N L177B12265D →
d	→ S/N L177B08959D	l	S/N L177B14569E →
e	→ S/N L177B10274D	m	5/2007 →
f	→ S/N L177B11117D	n	S/N L177B08960D →
g	→ S/N L177B12264D	o	S/N L177B10275D →
h	→ S/N L177B14568E		

NOTES

[illegible]

IMPACT SENSOR (FIGURE 4-2)



BP080394

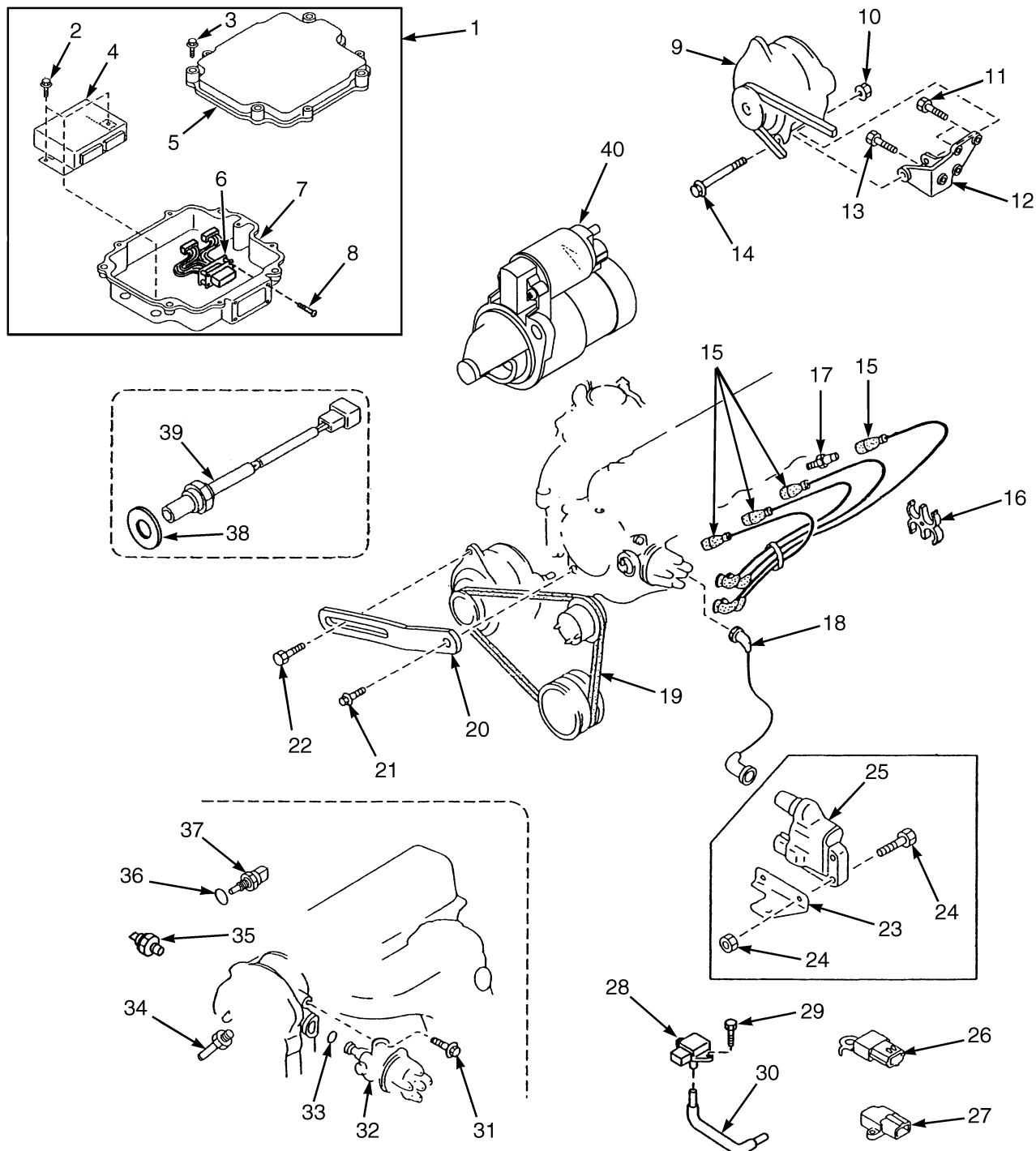
IMPACT SENSOR

ITEM	PART NO.	DESCRIPTION	QTY
1	1535166	Bracket	1
2	1500912	Clip	2
3	1582464	Fastener	2
3	2100710	Fastener (Alternate Part)	1
4	2079281	Wire Harness (Impact Sensor)	1
5	1489655	Connector (4 Way)	1
6	1330416	Connector	1
7	1330437	Terminal (Pin)	4
8	1489656	Connector (4-Way)	2
9	1489657	Connector	2
10	1330438	Terminal (Socket)	8
11	1561759	Clamp (Swivel)	2
12	1542439	Clamp (Swivel)	2
13	1502055	Clamp (Swivel)	1
14	1527879	Capscrew	2
14	287851	Capscrew (Alternate Part)	2
14	320157	Washer (Alternate Part)	2
15	2079843	Sensor (Impact)	1
16	1489655	Connector (4 Way)	1
17	1330416	Connector	1
18	1330433	Terminal	4
19	1502053	Clamp (Swivel)	1

ENGINE ELECTRICAL COMPONENTS (FIGURE 4-3)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2006 EMISSION COMPLIANT ENGINES

(S/N L177B15327E →) (S/N L177B16207E →) (S/N L177B15512E →)



HP091264

ENGINE ELECTRICAL COMPONENTS

**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2006 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)
(S/N L177B16207E →) (S/N L177B15512E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	a	Engine Control Unit	1
2	2045023	Screw	3
3	1362011	Bolt	5
4	a 1554006	Electronic Control Module (2.0L)	1
4	a 1554008	Electronic Control Module (2.2L)	1
5	1613449	Cover	1
6	1573937	Wire Harness (Electronic Control Unit)	1
7	1573938	Box (Electronic Control Unit)	1
8	1585840	Screw	2
9	1450928	Alternator	1
9	1361861	Pulley	1
10	1361890	Nut	1
11	1361891	Bolt	3
12	1361846	Bracket	1
13	1361888	Bolt	1
14	1368844	Bolt	1
15	1362113	Kit-Ignition Cable	1
15	1361840	Cable (Spark Plug)	1
15	1361841	Cable (Spark Plug)	1
15	1361842	Cable (Spark Plug)	1
15	1361843	Cable (Spark Plug)	1
16	1361838	Support	1
17	1361837	Spark Plug	4
18	1553984	Ignition Cable	1
19	1495412	V-Belt	1
20	1361845	Strap	1
21	1361881	Bolt	1
22	326898	Bolt	1
23	1553996	Bracket	1
24	1553997	Setscrew	1
25	1527571	Ignition Coil	1
26	1545443	Condenser	1
27	1545444	Igniter	1
28	1548352	Sensor (Boost, M.A.P.)	1
29	1582324	Screw	2
30	1495413	Hose	1
31	1361895	Bolt	1
32	1554030	Distributor (☞Figure 4-14).....	1
33	1553985	O-Ring	1
34	1361867	Temperature Sender	1
35	2026608	Pressure Switch (Oil)	1
36	b 1368743	Seal	1
37	1539962	Sensor (Air Temperature)	1
38	1368886	Washer	1
39	1556342	Sensor (Oxygen)	1
40	1534424	Starter	1
	c 1527884	Capscrew (Starter Mounting)	2

FOOTNOTES:

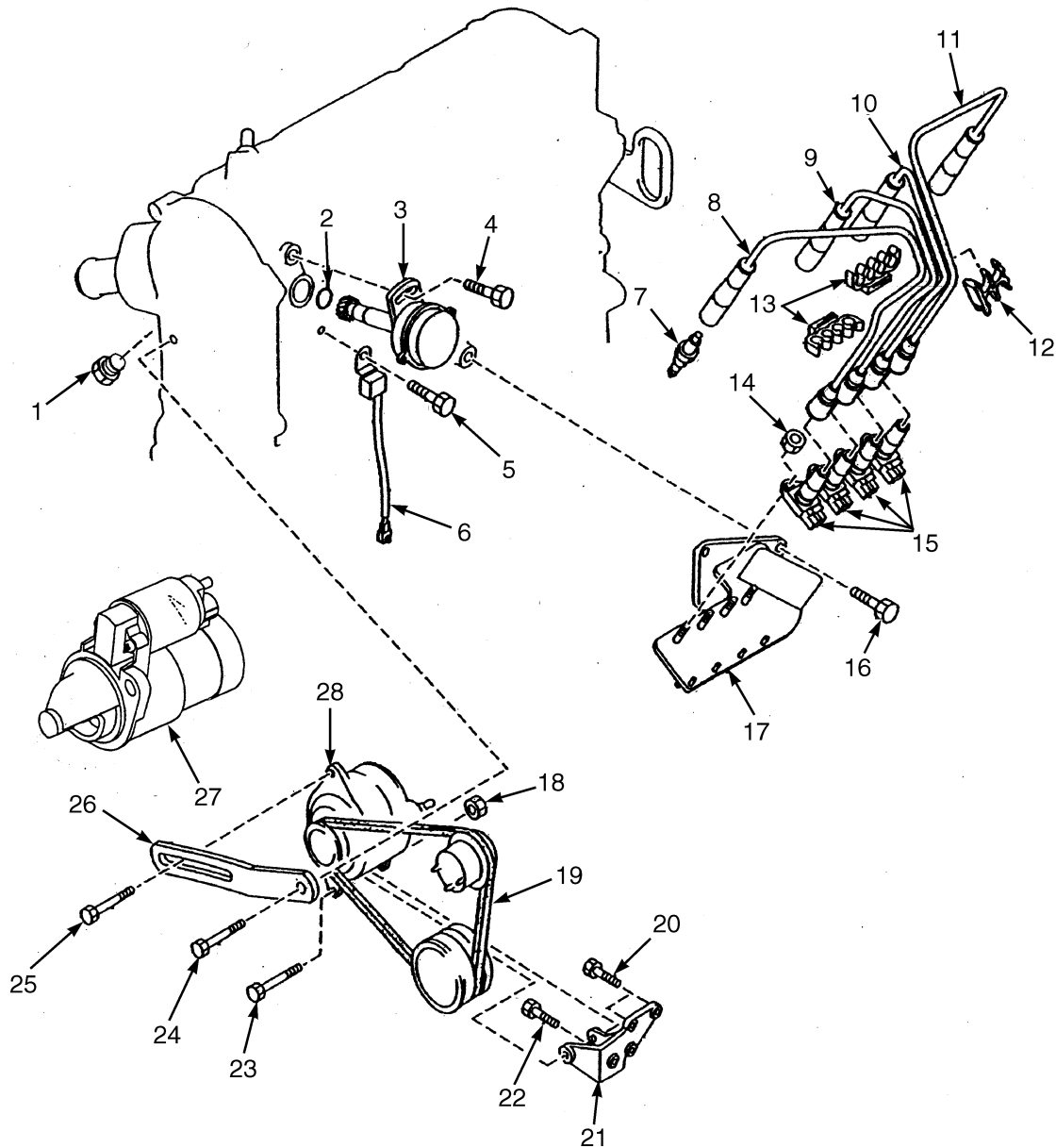
- a** Gasoline
- b** LPG

- c** Not Illustrated

NOTES

[illegible]

ENGINE ELECTRICAL COMPONENTS (FIGURE 4-4)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →) (S/N L177B16207E →) (S/N L177B15512E →)



BP080563

ENGINE ELECTRICAL COMPONENTS

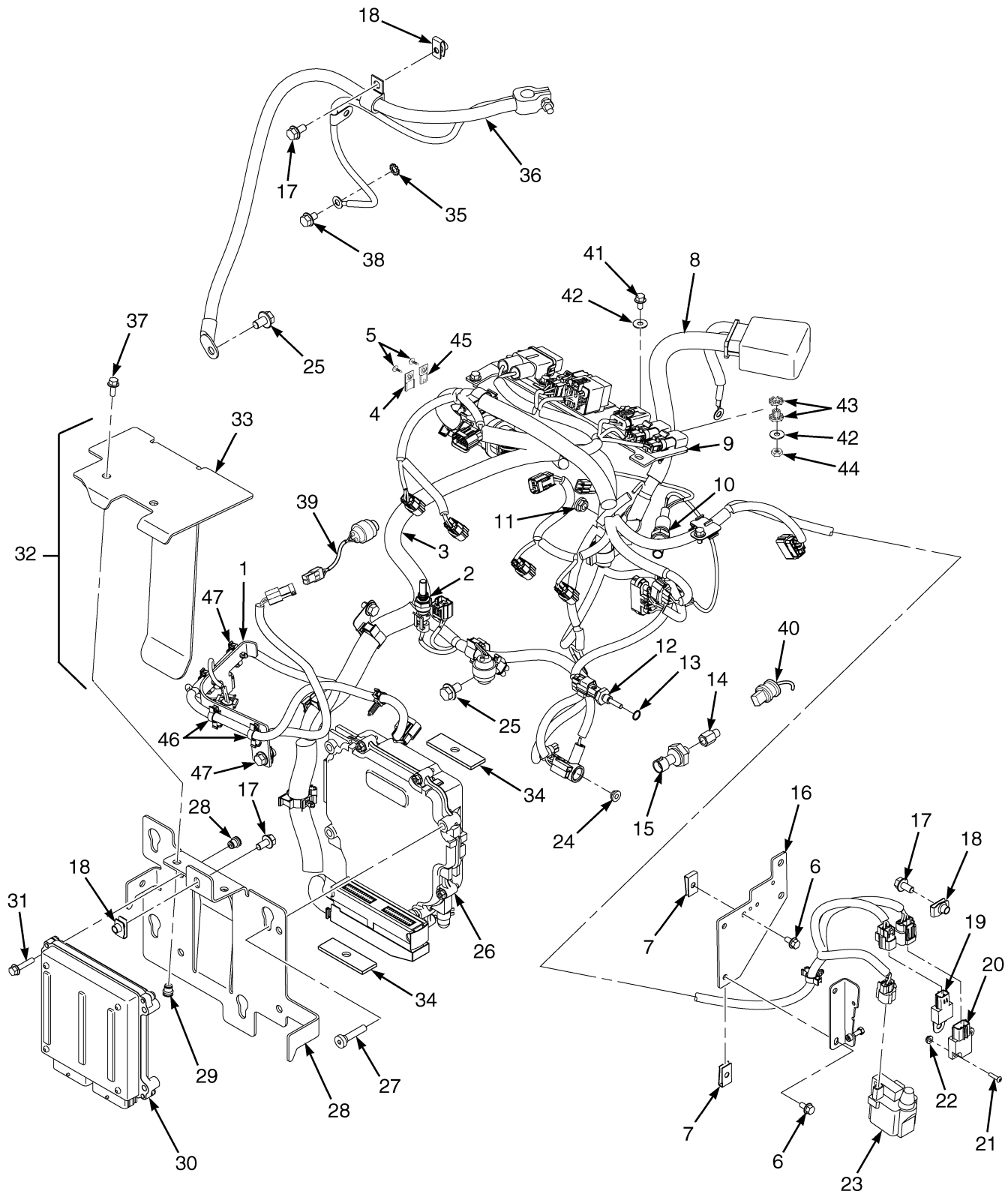
**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)
(S/N L177B16207E →) (S/N L177B15512E →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1654049	Plug	1
2	326850	O-Ring	1
3	1652471	Camshaft Position Sensor	1
4	1361895	Bolt	1
5	1361898	Bolt	1
6	1652473	Condenser	1
7	1361837	Spark Plug	4
8	1652467	Ignition Cable	1
9	1652468	Ignition Cable	1
10	1652469	Ignition Cable	1
11	1652470	Ignition Cable	1
12	1652462	Support (Spark Plug Wires)	1
13	1652461	Support (Spark Plug Wires)	2
14	2066629	Nut	1
15	1652458	Ignition Coil	4
16	1652457	Bolt	2
17	1652459	Bracket (Ignition Coil)	1
18	1361890	Nut	1
19	1495412	V-Belt (2.0L 2700 RPM, G And LP)	1
19	1495412	V-Belt (2.2L 2700 RPM, G And LP)	1
19	2097620	V-Belt (Notched) (2.0L 2700 RPM, GS)	1
19	2088515	V-Belt (Notched) (2.0L 2700 RPM, LPS)	1
20	1361891	Bolt	3
21	1361846	Bracket	1
22	1361888	Bolt	1
23	1368844	Bolt	1
24	1361881	Bolt	1
25	326898	Bolt	1
26	1361845	Strap	1
27	1534424	Starter	1
28	1450928	Alternator (G And LP)	1
28	1394001	Alternator (Sealed) (GS And LPS)	1
	a 1527884	Capscrew (Starter Mounting)	2
	1652460	Kit-Ignition Cable	1

FOOTNOTES:

a Not Illustrated

ENGINE ELECTRICAL SYSTEM (FIGURE 4-5) MAZDA 2.0L AND 2.2L, GASOLINE — SHEET 1 OF 2



HP081636

ENGINE ELECTRICAL SYSTEM
MAZDA 2.0L AND 2.2L, GASOLINE – SHEET 1 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
1	1542403	Bracket	1
2	1515654	Sensor (Coolant Temperature)	1
3	a 2065856	Wire Harness (☞ Figure 4-44).....	1
3	bc 2087190	Wire Harness (☞ Figure 4-45).....	1
3	ef 2091281	Wire Harness (Engine) (☞ Figure 4-46).....	1
4	a 1539086	Lockwasher	1
5	d 1500912	Clip	2
5	a 1539085	Locknut	1
6	d 1582464	Fastener	3
6	1534417	Capscrew	5
7	325182	Nut	6
8	2061383	Battery Cable (Positive)	1
8	2107181	Battery Cable (Positive) (Alternate Part)	1
8	1536304	Boot	1
8	1560091	Boot	1
8	16079	Terminal	1
8	806426	E-Ring	1
8	148792	Terminal	1
9	1561225	Bracket	1
10	1556342	Sensor (Oxygen)	1
11	1502543	Nut (Flange)	5
12	1539962	Sensor (Air Temperature)	1
13	1368886	Washer	1
14	367224	Adapter	1
15	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1
16	1556838	Plate (Coil Mounting)	1
17	1527879	Capscrew	6
18	1480237	Nut	6
19	1545443	Condenser	1
20	1545444	Igniter	1
21	296150	Capscrew	2
22	1549398	Nut	2
23	1527571	Ignition Coil	1
24	1514429	Nut	1
25	1556623	Bolt	2
26	1554006	Electronic Control Module (2.2L)	1
26	1554008	Electronic Control Module (2.0L)	1
27	1581962	Capscrew	4
28	1582138	Bracket	1
29	1531558	Insert	6
30	2065858	Governor Controller	1
31	1586495	Capscrew	4
32	1582238	Shield	1
33	1582101	Drip Shield	1
34	1399323	Pad	1
35	296380	Washer	1
36	2069225	Battery Cable (Negative)	1
36	128408	Clamp	1
36	1564044	E-Ring	1
36	806426	E-Ring	1

ENGINE ELECTRICAL SYSTEM

MAZDA 2.0L AND 2.2L, GASOLINE – SHEET 1 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
36	148789	Terminal	1
37	1527876	Capscrew	7
38	1529366	Capscrew	2
39	1529257	Sensor (Air Flow Restriction)	1
40	1501970	Pressure Switch (Low Pressure)	1
41	302249	Capscrew	1
42	2081289	Washer	2
43	2080790	Isolator	1
44	316825	Nut	1
45	1531480	Clip	1
46	1480237	Nut	2
47	1527879	Capscrew	2

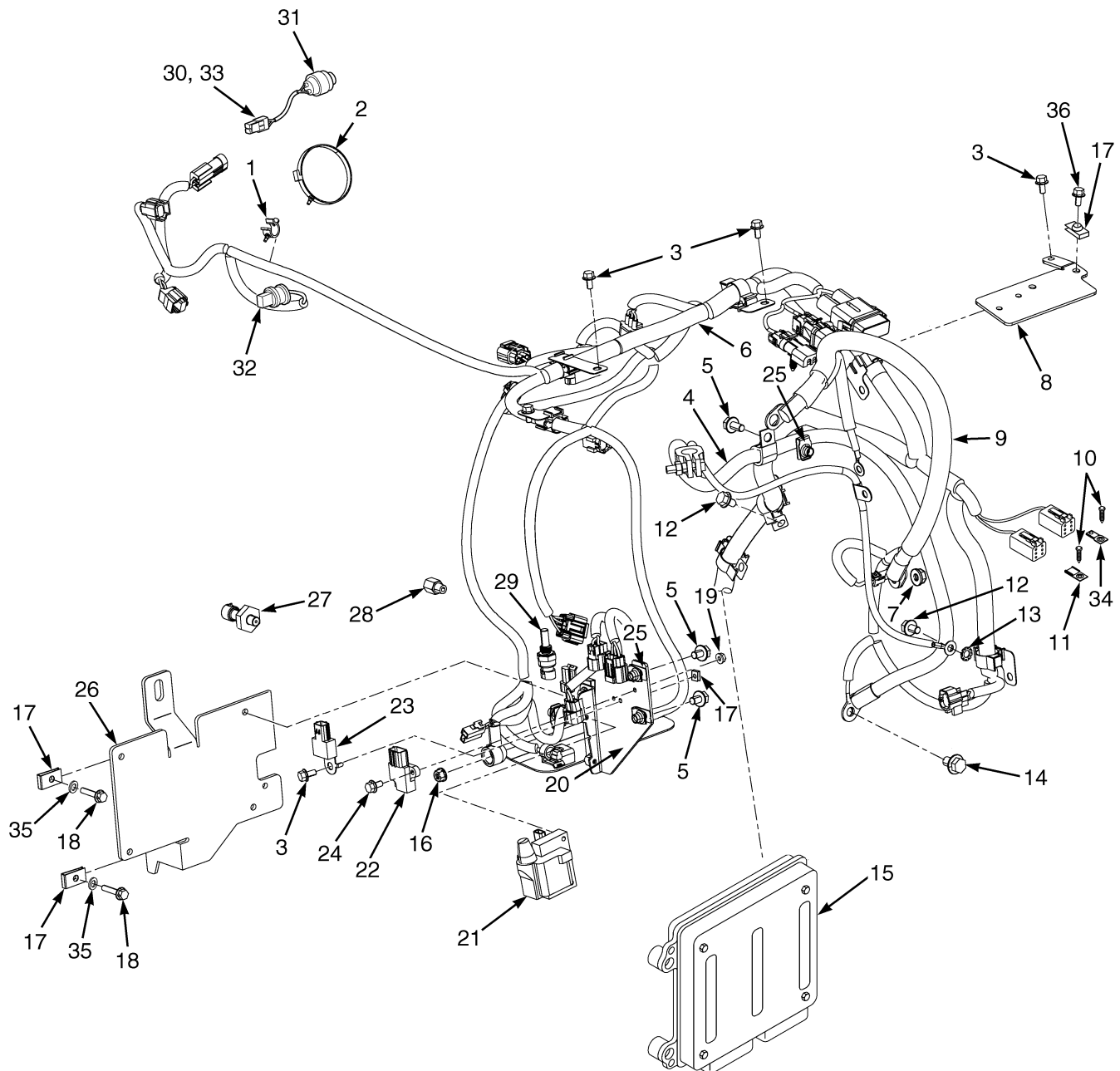
FOOTNOTES:

- | | | | |
|----------|---------------------------------|----------|--------------------------|
| a | → 8/2006 | d | 8/2006 → |
| b | 8/2006 ↔ S/N L177B15326E (2.2L) | e | S/N L177B15327E → (2.2L) |
| c | 8/2006 ↔ S/N L177B15512E (2.0L) | f | S/N L177B15512E → (2.0L) |

NOTES

[illegible]

ENGINE ELECTRICAL SYSTEM (FIGURE 4-6) MAZDA 2.0L AND 2.2L LPG — SHEET 1 OF 2



HP081637

ENGINE ELECTRICAL SYSTEM
MAZDA 2.0L AND 2.2L LPG – SHEET 1 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
1	1542439	Clamp (Swivel)	1
2	1502061	Clamp	1
3	1534417	Capscrew	5
4	2069225	Battery Cable (Negative)	1
4	148789	Terminal	1
4	1564044	E-Ring	1
4	128408	Clamp	1
4	806426	E-Ring	1
5	1527879	Capscrew	4
6	a 2065855	Wire Harness (LPG Mazda Engine) (☞ Figure 4-48).....	1
6	bc 2087189	Wire Harness (LPG Mazda Engine) (☞ Figure 4-49).....	1
6	ef 2090744	Wire Harness (LPG Mazda Engine) (☞ Figure 4-47).....	1
7	1502543	Nut (Flange)	1
8	1560121	Bracket	1
9	2061383	Battery Cable (Positive)	1
9	2107181	Battery Cable (Positive) (Alternate Part)	1
9	148792	Terminal	1
9	16079	Terminal	1
9	806426	E-Ring	1
9	1536304	Boot	1
9	1560091	Boot	1
10	a 1539085	Locknut (Not Illustrated)	1
10	d 1582464	Fastener	2
11	a 1539086	Lockwasher (Not Illustrated)	1
11	d 1500912	Clip	1
12	1529366	Capscrew	2
13	296380	Washer	1
14	1556623	Bolt	1
15	2065857	Engine Control Module (2.0L)	1
15	2070685	Engine Control Module (2.2L)	1
16	1514429	Nut	1
17	325182	Nut	9
18	1581577	Capscrew	4
19	1549398	Nut	2
20	1556838	Plate	1
21	1527571	Ignition Coil	1
22	1545444	Igniter	1
23	1545443	Condenser	1
24	296150	Capscrew	2
25	1480237	Nut	4
26	1581526	Bracket	1
27	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1
28	367224	Adapter	1
28	1682884	Adapter (Alternate Part)	1
29	1515654	Sensor (Coolant Temperature)	1
30	141259	Fitting	1
31	1529257	Sensor (Air Flow Restriction)	1
32	1501970	Pressure Switch (Low Pressure)	1
33	14349	Fitting (Pipe Plug)	1
34	d 1531480	Clip	1

**ENGINE ELECTRICAL SYSTEM
MAZDA 2.0L AND 2.2L LPG – SHEET 1 OF 2**

ITEM	PART NO.	DESCRIPTION	QTY
35	320156	Washer	4
36	1527876	Capscrew	4

FOOTNOTES:

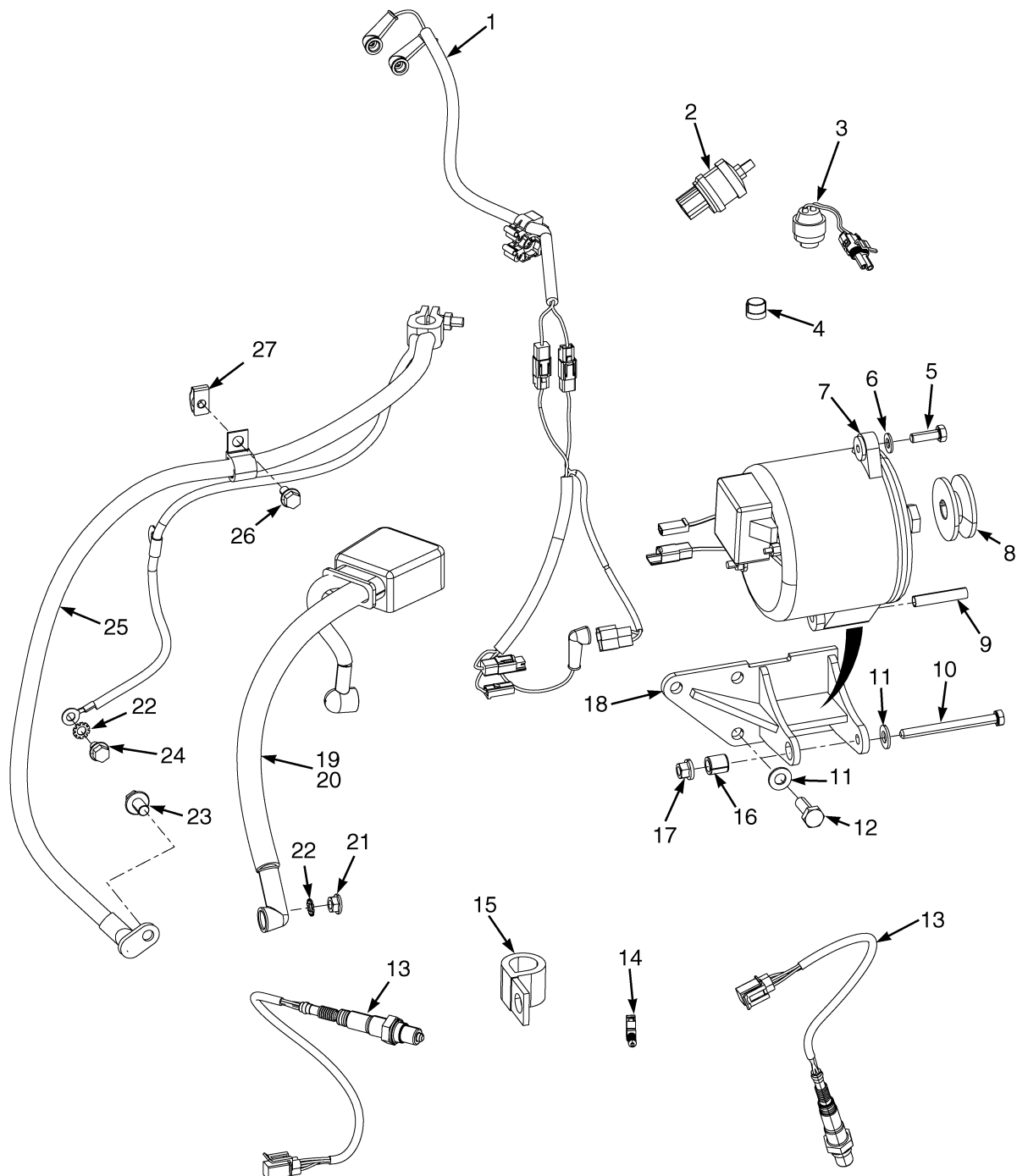
- | | | | |
|----------|---------------------------------|----------|--------------------------|
| a | → 8/2006 | d | 8/2006 → |
| b | 8/2006 ↔ S/N L177B15511E (2.0L) | e | S/N L177B15512E → (2.0L) |
| c | 8/2006 ↔ S/N L177B16206E (2.2L) | f | S/N L177B16207E → (2.2L) |

NOTES

[illegible]

ENGINE ELECTRICAL SYSTEM (FIGURE 4-7)

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SHEET 2 OF 2 — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →) (S/N L177B16207E →) (S/N L177B15512E →)



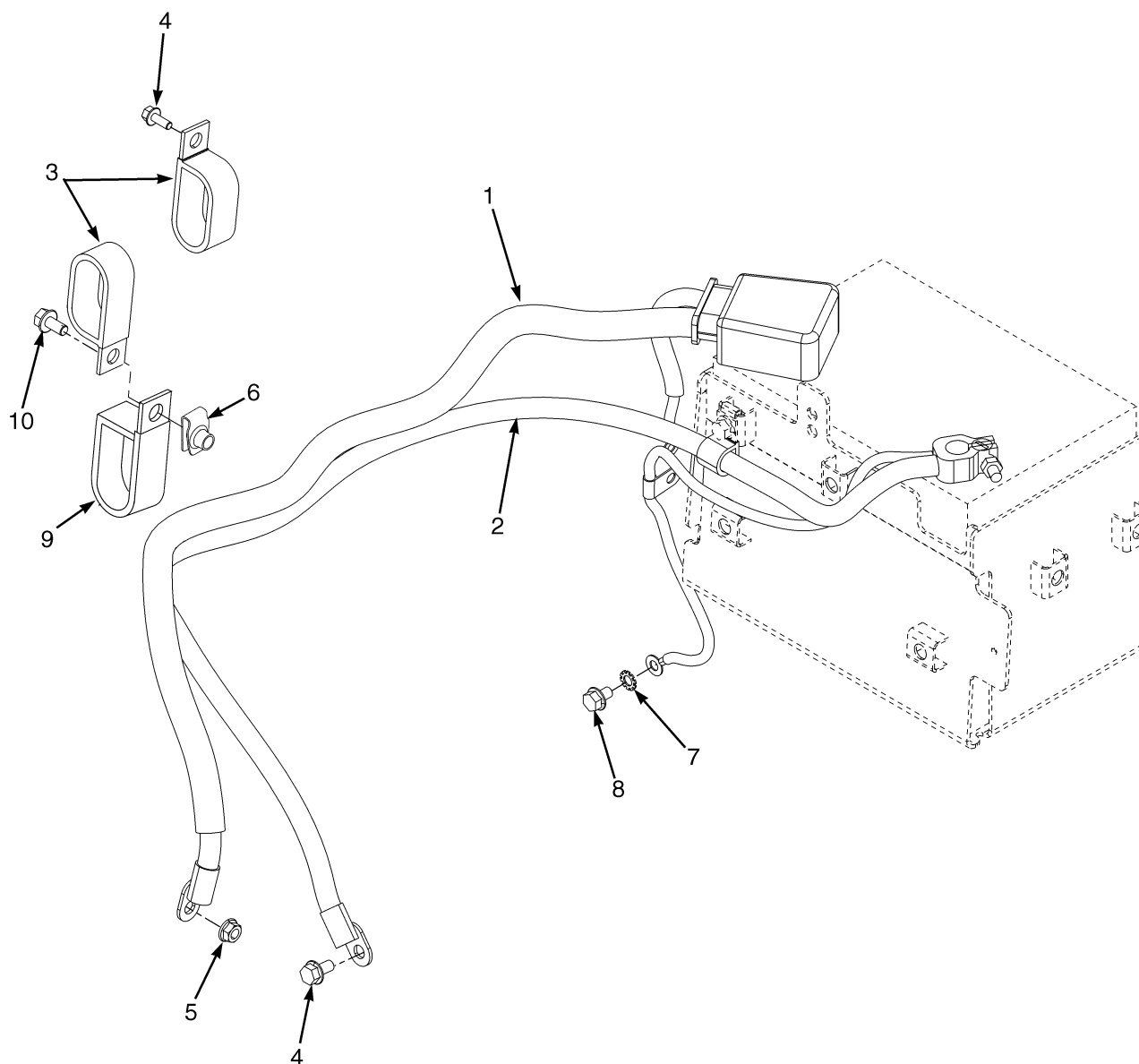
BP080565

ENGINE ELECTRICAL SYSTEM

MAZDA 2.0L AND 2.2L, GASOLINE AND LPG, SHEET 2 OF 2 – 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →) (S/N L177B16207E →) (S/N L177B15512E →)

ITEM	PART NO.	DESCRIPTION	QTY
1	2084812	Wire Harness (Sealed Alternator)	1
2	1501970	Pressure Switch (Low Pressure)	1
3	1529257	Sensor (Air Flow Restriction)	1
4	17829	Fitting	1
5	18497	Capscrew	1
6	18515	Washer	3
7	1450928	Alternator (G And LPG)	1
7	1394001	Alternator (Sealed) (GS And LPS)	1
8	1608928	Pulley	1
9	1537422	Spacer	1
10	346656	Capscrew	1
11	320159	Washer	1
12	1582462	Bolt (Gasoline)	3
12	367323	Capscrew (LPG)	3
13	1646456	Sensor (Oxygen)	2
14	1509888	Clip	3
15	279033	Clamp	1
16	1345014	Sleeve	1
17	1544153	Locknut	1
18	1636794	Bracket Wldmt	1
19	2061383	Battery Cable (Positive) (G And LPG)	1
19	2107181	Battery Cable (Positive) (Alternate Part)	1
19	148792	Terminal	1
19	16079	Terminal	1
19	806426	E-Ring	1
19	1536304	Boot	1
19	204223	Boot	1
19	1566146	Boot	1
20	2074984	Battery Cable (Positive) (GS And LPS)	1
20	148795	Terminal	1
20	16079	Terminal	1
20	806426	E-Ring	1
20	204223	Boot	2
20	1566146	Boot	1
21	1502543	Nut (Flange)	1
22	296380	Washer	2
23	1556623	Bolt	1
24	1529366	Capscrew	1
25	2069225	Battery Cable (Negative)	1
25	148789	Terminal	1
25		Terminal	1
25	1564044	E-Ring	1
25	806426	E-Ring	1
26	1527879	Capscrew	1
27	1480237	Nut (G And LP)	1

BATTERY CABLES (FIGURE 4-8) GM 2.4L — GASOLINE AND LPG



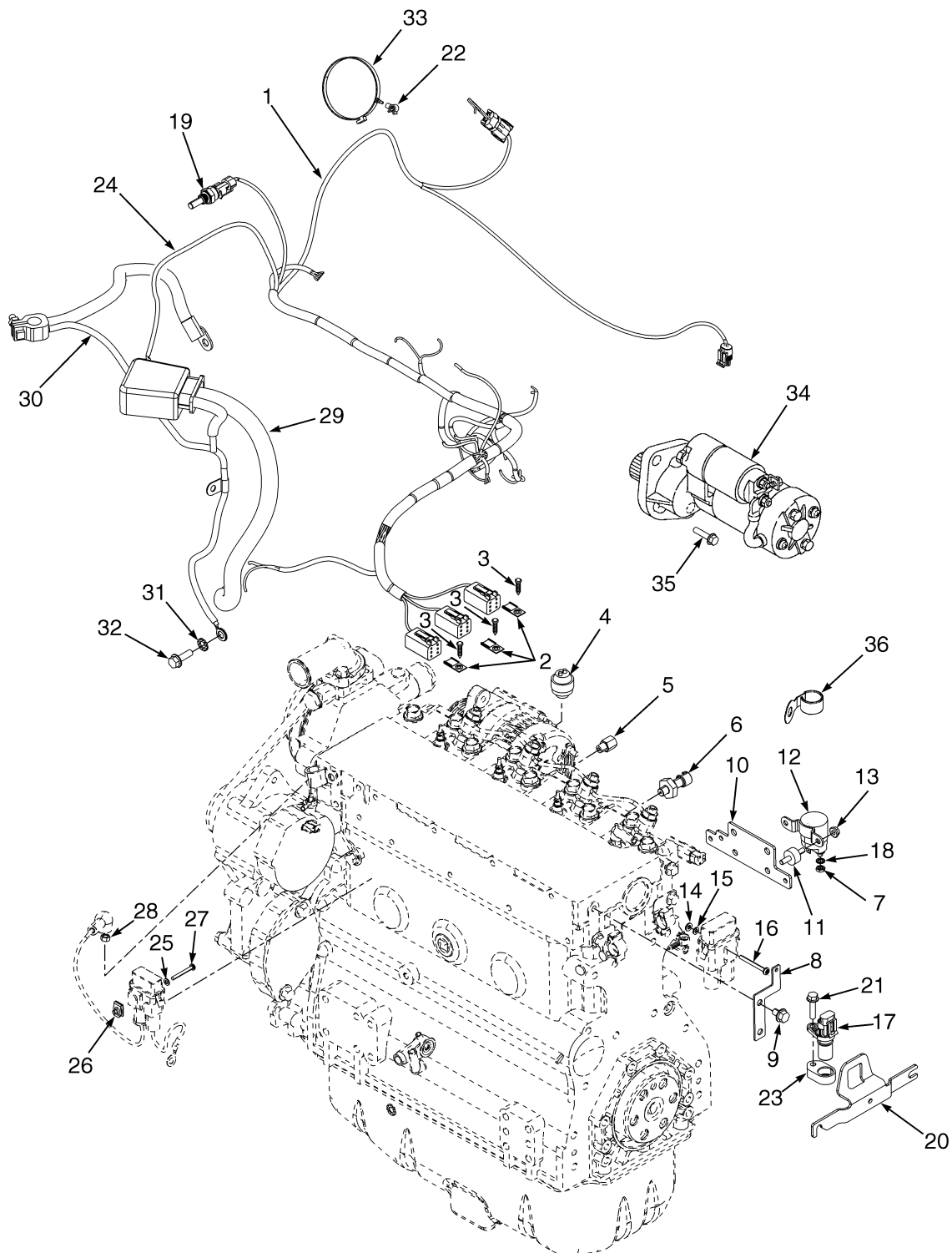
BP080383

BATTERY CABLES
GM 2.4L – GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	a 2061381	Battery Cable (Positive)	1
1	b 2105556	Battery Cable (Positive)	1
1	1536304	Boot	1
1	1560091	Boot	1
1	16079	Terminal	1
1	148792	Terminal	1
1	806426	E-Ring	1
2	2069224	Battery Cable (Negative)	1
2	148789	Terminal	1
2	1564044	E-Ring	1
2	16079	Terminal	1
2	128408	Clamp	1
2	806426	E-Ring	1
3	a 212786	Clamp	2
3	b 251994	Clamp	2
4	a 1527879	Capscrew	3
4	b 1527876	Capscrew	3
5	1502543	Nut (Flange)	1
6	1480237	Nut	1
7	296380	Washer	1
8	1529366	Capscrew	1
9	b 136516	Clamp	1
10	b 1583611	Capscrew	1

FOOTNOTES:**a** → S/N L177V01820F**b** S/N L177V01821F →

ENGINE ELECTRICAL SYSTEM (FIGURE 4-9) YANMAR 2.6L AND 3.3L, DIESEL — WITH OVERHEAD GUARD



HP081653

ENGINE ELECTRICAL SYSTEM

YANMAR 2.6L AND 3.3L, DIESEL – WITH OVERHEAD GUARD

ITEM	PART NO.	DESCRIPTION	QTY
1	a 2060844	Wire Harness (Engine) (☞ Figure 4-54).....	1
1	b 2087191	Wire Harness (Engine) (☞ Figure 4-55).....	1
2	a 1539086	Lockwasher	1
2	b 1500912	Clip	3
3	a 1539085	Locknut	1
3	b 1582464	Fastener	3
4	1529257	Sensor (Air Flow Restriction)	1
5	367224	Adapter	1
6	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1
7	1560678	Nut	2
8	1582150	Bracket	1
9	1529366	Capscrew	2
10	1582151	Bracket	1
11	1527562	Rubber Mount	2
12	1454967	Relay (Glow Plug)	1
13	1514429	Nut	2
14	320152	Washer	1
15	292676	Lockwasher	1
16	302015	Screw	1
17	1541231	Sensor (Input Speed) (Engine RPM)	1
18	296379	Washer	2
19	1515654	Sensor (Coolant Temperature)	1
20	1594055	Bracket	1
21	1527878	Capscrew	1
22	1542439	Clamp (Swivel)	1
23	1591454	Bracket	1
24	2084810	Wire Harness (Alternator) (DS) (☞ Figure 4-58).....	1
24	2065098	Wire Harness (Alternator)	1
24	1454860	Connector Body	1
24	1454829	Fuse (60 Amp)	1
24	1454862	Cover (With Seal)	1
24	1566146	Boot	1
24	1454827	Seal	2
24	1454828	Terminal	2
24	148615	E-Ring	1
25	320154	Washer	1
26	1537551	Nut	1
27	302027	Screw	1
28	136687	Nut	1
29	2066344	Battery Cable (Positive)	1
29	2107181	Battery Cable (Positive) (Alternate Part)	1
29	2047839	Battery Cable (Positive) (DS)	1
29	148792	Terminal	1
29	16079	Terminal	1
29	806426	E-Ring	1
29	1560091	Boot	1
29	1536304	Boot	1
30	2069226	Battery Cable (Negative)	1
30	148789	Terminal	1
30	16079	Terminal	1

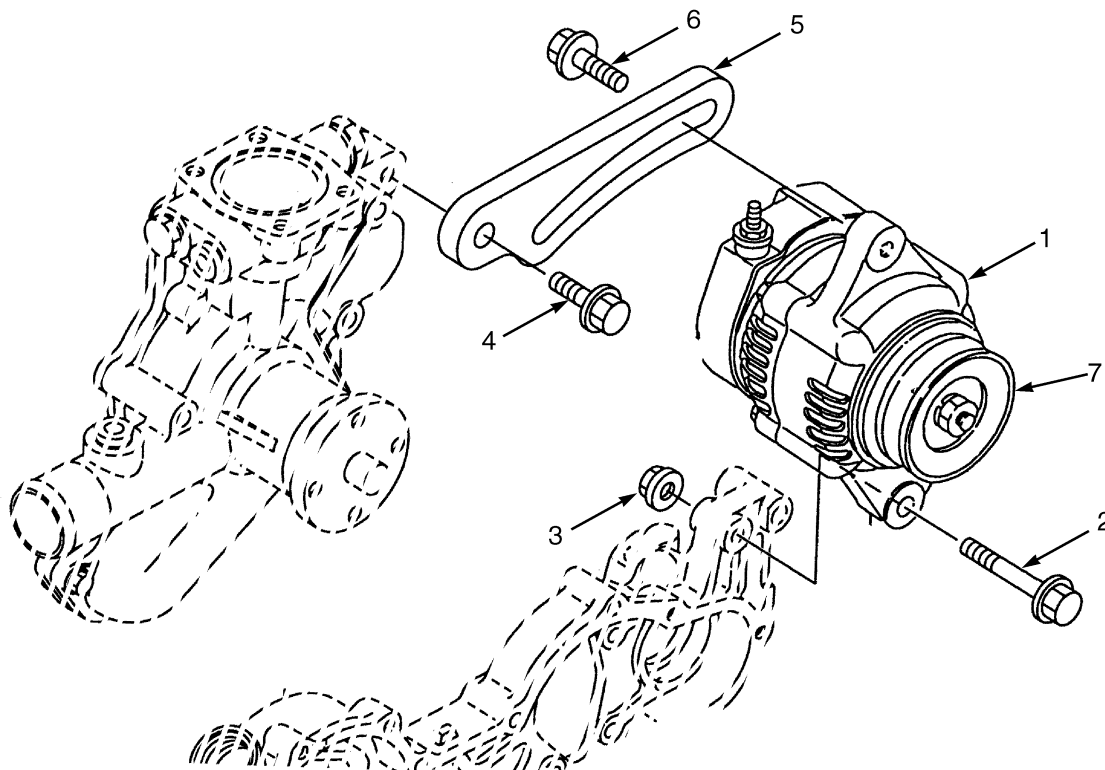
ENGINE ELECTRICAL SYSTEM YANMAR 2.6L AND 3.3L, DIESEL – WITH OVERHEAD GUARD

ITEM	PART NO.	DESCRIPTION	QTY
30	1564044	E-Ring	1
30	128408	Clamp	1
30	806426	E-Ring	1
31	296380	Washer	1
32	1529366	Capscrew	2
33	1502061	Clamp	1
34	1599845	Starter	1
34	1599847	Ball Bearing	1
34	1599848	Ball Bearing	1
34	1599850	Screw	4
34	1599851	Brush	2
34	1599853	Brush Spring	4
34	1599860	Pinion	1
34	1599867	Housing	1
35	1528889	Capscrew	1
36	1599843	Clamp	2

FOOTNOTES:

a → 8/2006

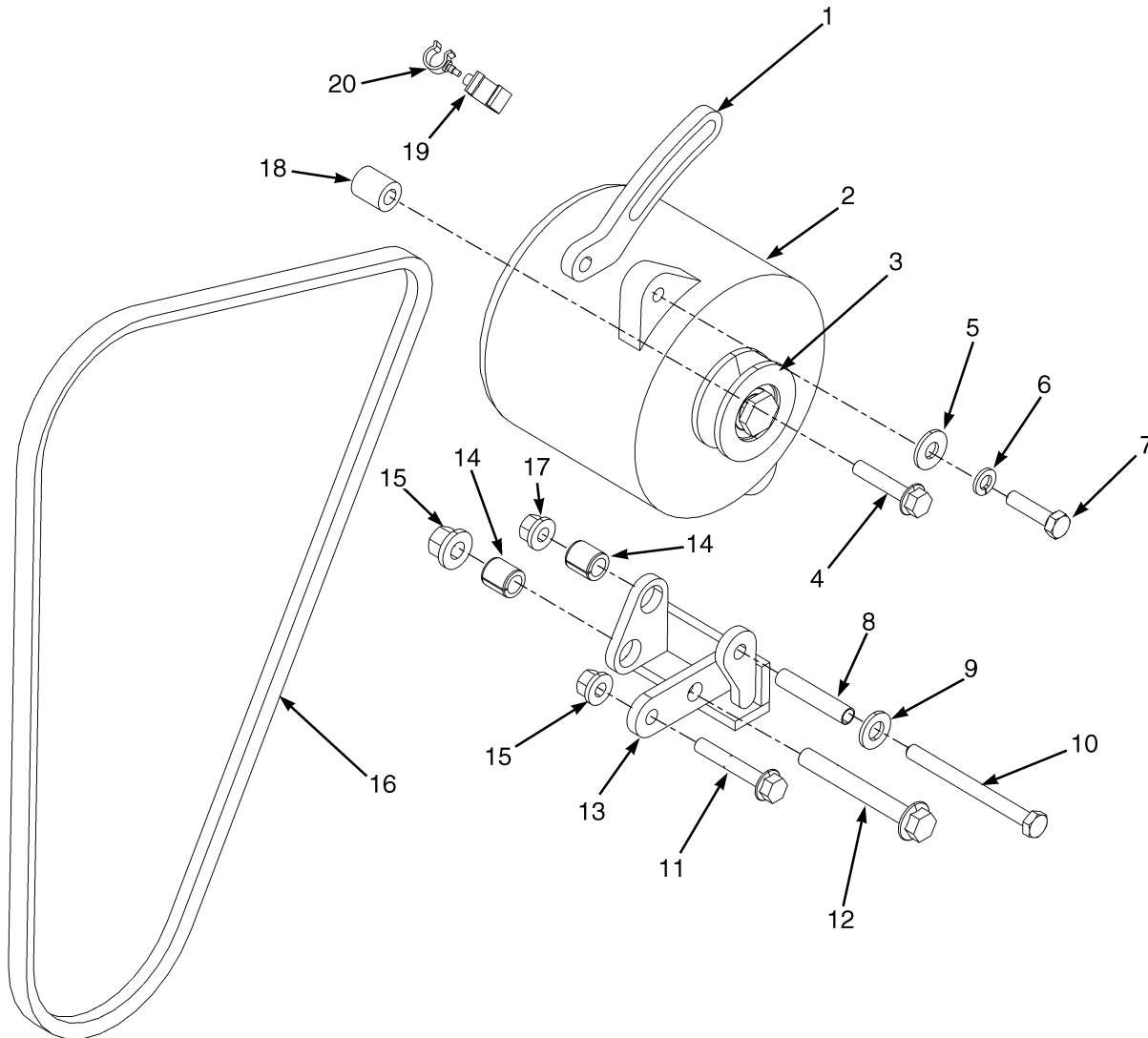
b 8/2006 →

ALTERNATOR AND MOUNTING (FIGURE 4-10)
YANMAR 2.6L AND 3.3L — DIESEL

BP080337

ITEM	PART NO.	DESCRIPTION	QTY
1	1599869	Alternator	1
1	1599873	Ball Bearing	1
1	1599874	Plate	1
1	1599875	Screw	4
1	1599876	Stud	2
1	1599878	Ball Bearing	1
1	1599879	Cover	1
2	1599893	Bolt	1
3	1599894	Nut	1
4	1599897	Bolt	1
5	1599895	Bracket	1
6	1599896	Bolt	1
7	1599870	Pulley	1

SEALED ALTERNATOR AND MOUNTING (FIGURE 4-11) YANMAR 2.6 AND 3.3L

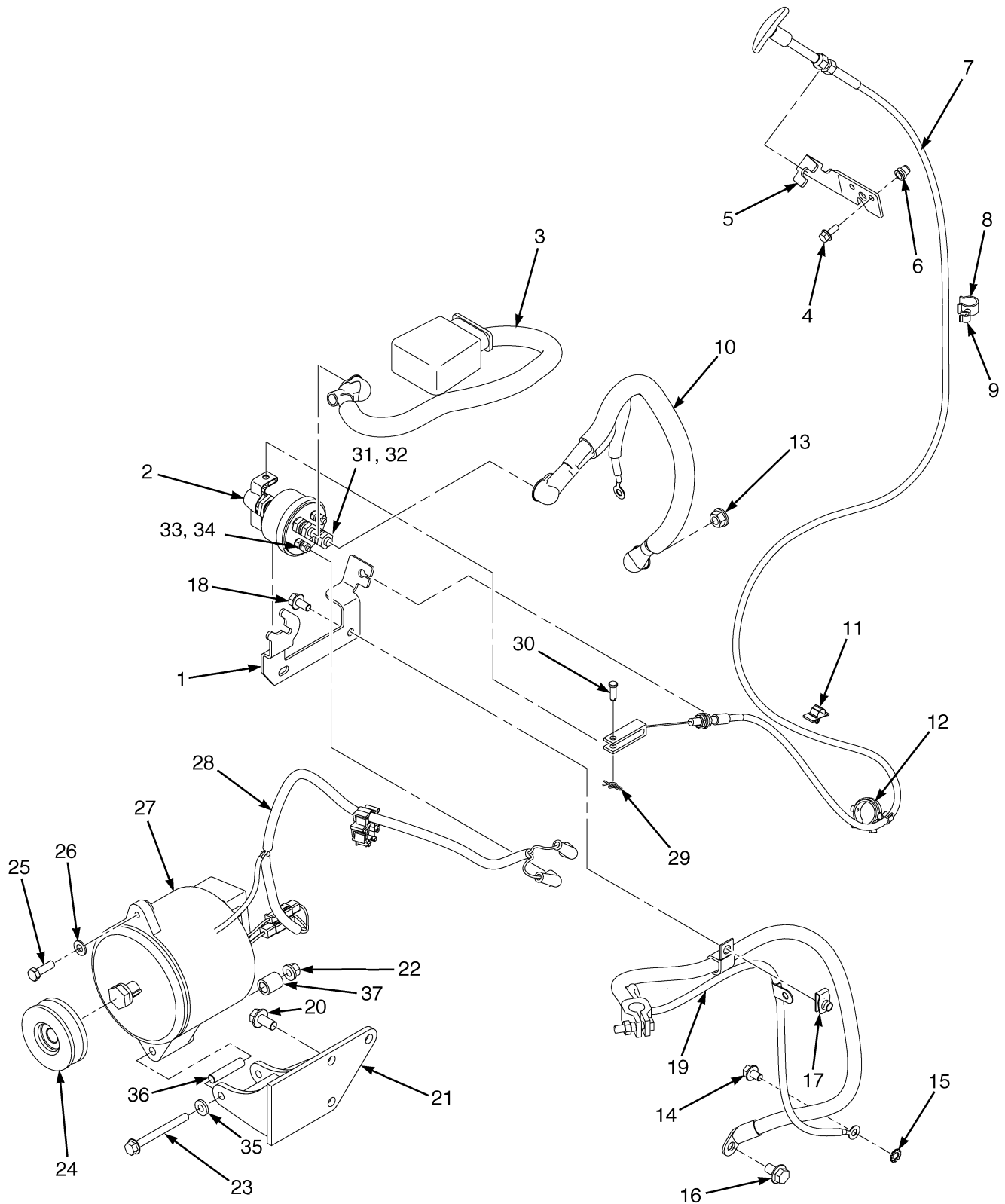


BP080422

**SEALED ALTERNATOR AND MOUNTING
YANMAR 2.6 AND 3.3L**

ITEM	PART NO.	DESCRIPTION	QTY
1	1608865	Strap (Alternator)	1
2	1598645	Alternator (Sealed)	1
3	1608928	Pulley	1
4	1510114	Capscrew	1
5	15175	Lockwasher	1
6	15155	Lockwasher	1
7	18498	Capscrew	1
8	1537422	Spacer	1
9	320159	Washer	1
10	346656	Capscrew	1
11	1510115	Capscrew	1
12	1617600	Capscrew	1
13	1617614	Bracket Wldmt	1
14	1345014	Sleeve	2
15	1544153	Locknut	2
16	2080581	V-Belt	1
17	1544154	Flange	1
18	1615860	Spacer	1
19	1606544	Clamp	1
20	1573549	Clamp	1

ENGINE SAFETY ELECTRICAL SYSTEM (FIGURE 4-12) WITH SEALED ALTERNATOR WIRE HARNESS — MAZDA - GASOLINE AND LPG



HP081652

ENGINE SAFETY ELECTRICAL SYSTEM
WITH SEALED ALTERNATOR WIRE HARNESS – MAZDA - GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	b 1646410	Bracket	1
1	d 1648116	Bracket	1
2	1578660	Switch	1
3	2071501	Battery Cable (Positive)	1
3	1536304	Boot	1
3	1560091	Boot	1
3	148792	Terminal	1
4	1527876	Capscrew	2
5	1565382	Bracket	1
6	1531558	Insert	2
7	2071497	Cable Assy	1
8	1543698	Clamp (Swivel)	2
9	1542440	Clamp (Swivel)	3
10	2071498	Battery Cable (Positive)	1
10	1560091	Boot	2
10	16079	Terminal	1
10	148796	Terminal	1
10	806426	E-Ring	1
11	1562088	Clip	1
12	1569465	Clamp	1
13	1502543	Nut (Flange)	1
14	1529366	Capscrew	1
15	296380	Washer	1
16	1556623	Bolt	1
17	1480237	Nut	2
17	1566420	Nut (Alternate Part)	2
18	1527879	Capscrew	3
18	1527877	Capscrew (Alternate Part)	2
19	2069225	Battery Cable (Negative)	1
19	148789	Terminal	1
19	1564044	E-Ring	1
19	128408	Clamp	1
19	806426	E-Ring	1
20	1582462	Bolt	3
21	a 1578858	Bracket Wldmt	1
21	c 1636794	Bracket Wldmt	1
22	1544153	Locknut	1
23	a 1550767	Capscrew	1
23	c 346656	Capscrew	1
24	a 1394009	Pulley	1
24	c 1608928	Pulley	1
25	18497	Capscrew	1
26	18515	Washer	AR
27	1394001	Alternator (Sealed)	1
28	2084812	Wire Harness (Sealed Alternator) (☞Figure 4-56).....	1
29	1517361	Lockring	1
30	126	Pin	1
31	17407	Nut	2
32	15156	Lockwasher	2
33	15002	Nut	2

ENGINE SAFETY ELECTRICAL SYSTEM
WITH SEALED ALTERNATOR WIRE HARNESS – MAZDA - GASOLINE AND LPG

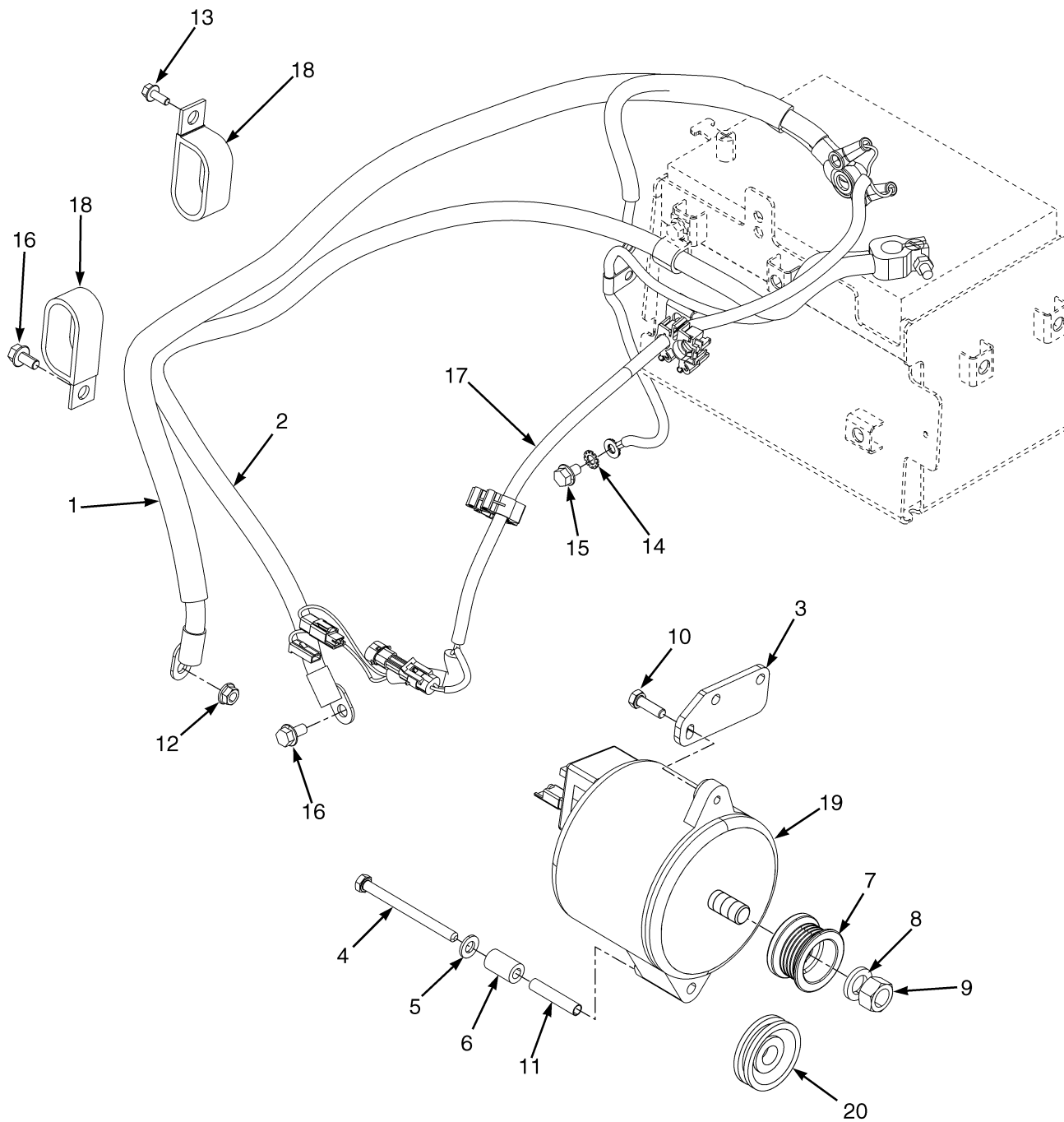
ITEM	PART NO.	DESCRIPTION	QTY
34	15916	Lockwasher	2
35	c 320159	Washer	1
36	c 1537422	Spacer	1
37	c 1345014	Sleeve	1
	c 2088515	V-Belt (Notched) (Not Illustrated)	1

FOOTNOTES:**a** → S/N L177B09304D**b** → S/N L177B14568E**c** S/N B177B09305D →**d** S/N L177B14569E →

NOTES

[illegible]

ENGINE SAFETY ELECTRICAL SYSTEM (FIGURE 4-13) GM 2.4L — GASOLINE AND LPG



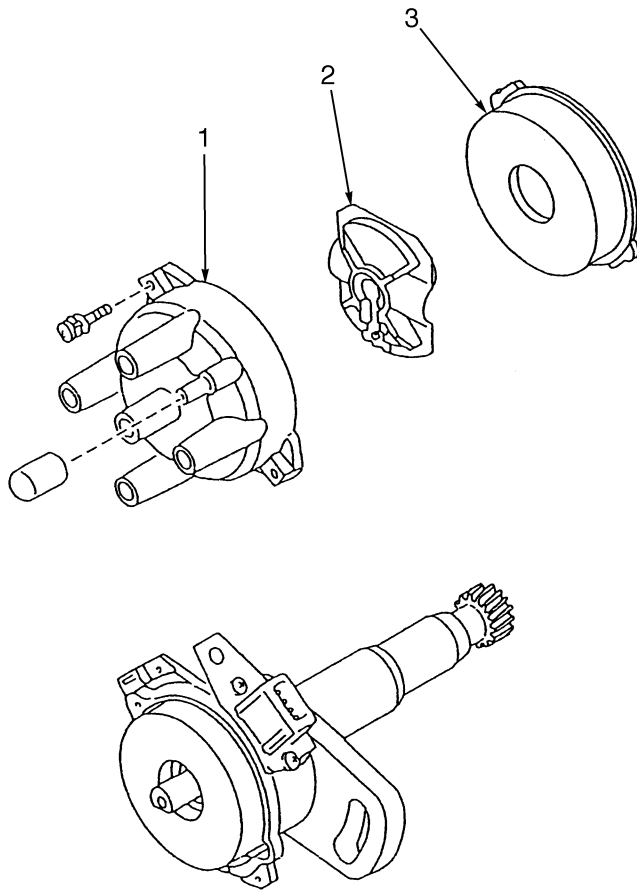
HP081654

ENGINE SAFETY ELECTRICAL SYSTEM
GM 2.4L – GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	2071499	Battery Cable (Positive)	1
1	1560091	Boot	2
1	16079	Terminal	1
1	148796	Terminal	1
1	806426	E-Ring	1
2	2069224	Battery Cable (Negative)	1
2	148789	Terminal	1
2	1564044	E-Ring	1
2	16079	Terminal	1
2	806426	E-Ring	1
2	128408	Clamp	1
3	1532131	Plate	1
4	136750	Capscrew	1
5	261379	Washer	1
6	1554815	Spacer	1
7	1532255	Pulley	1
8	15160	Washer	1
9	15010	Nut	1
10	221457	Capscrew	1
11	1537422	Spacer	1
12	1502543	Nut (Flange)	1
13	1527879	Capscrew	2
14	296380	Washer	1
15	1529366	Capscrew	1
16	1527876	Capscrew	1
17	2094581	Wire Harness (Sealed Alternator) (☞Figure 4-57).....	1
18	212786	Clamp	2
19	1394001	Alternator (Sealed)	1
20	1618226	Pulley (Tensioner)	1

DISTRIBUTOR (FIGURE 4-14)

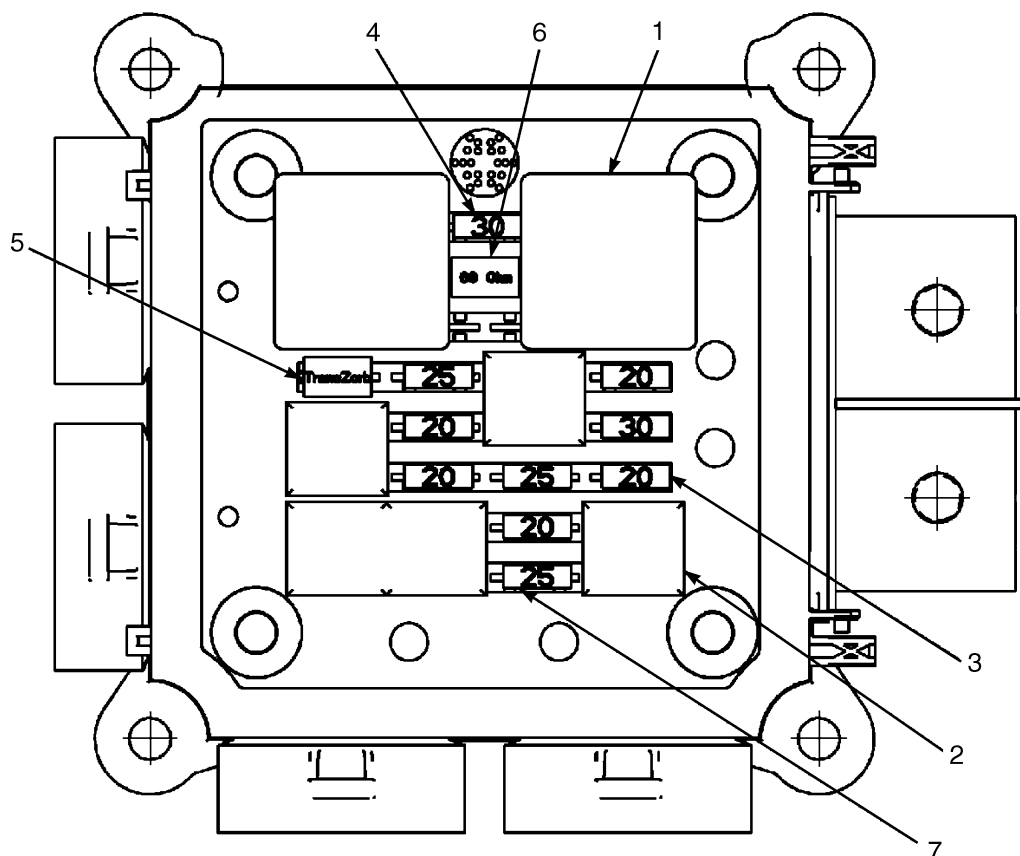
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2006 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →) (S/N L177B16207E →) (S/N L177B15512E →)



YP080539

ITEM	PART NO.	DESCRIPTION	QTY
	1554030	Distributor	1
1	1554033	Distributor Cap	1
2	1554034	Rotor	1
3	1554032	Cover	1

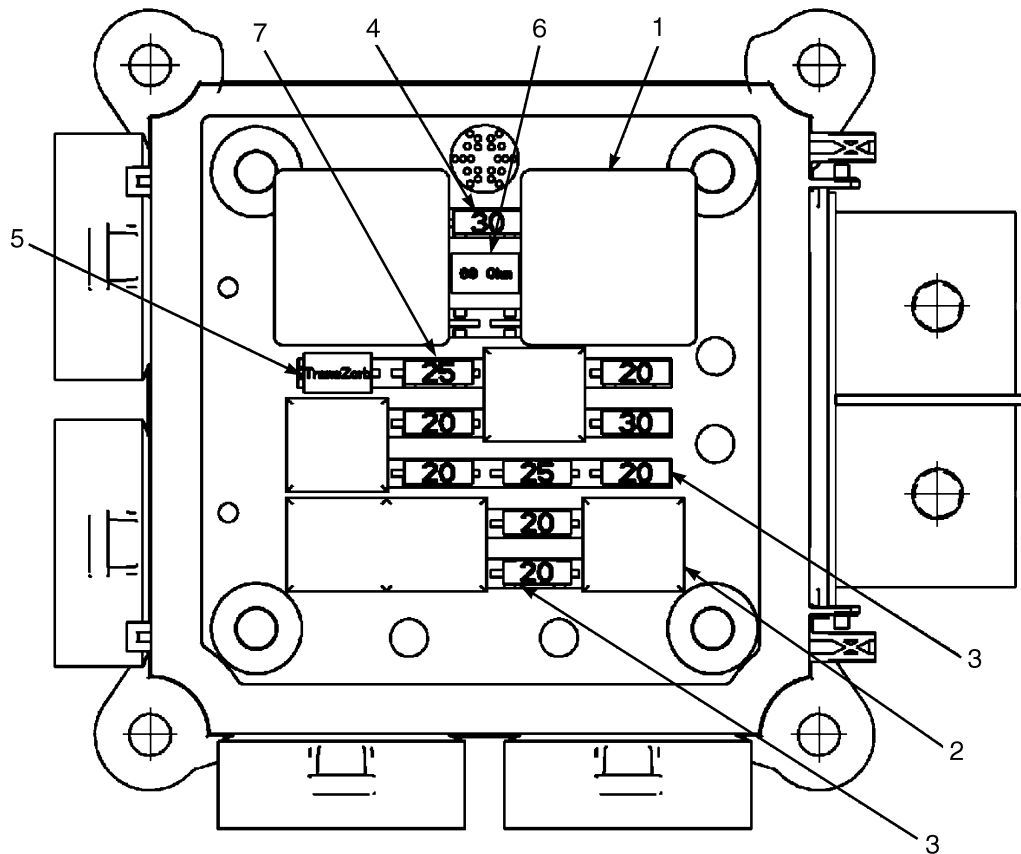
POWER DISTRIBUTION MODULE (FIGURE 4-15)
(→ S/N L177B08959D)



BP080278

ITEM	PART NO.	DESCRIPTION	QTY
	2063093	Module	1
1	2044712	Relay (30 Amp)	2
2	1528315	Relay (20 Amp)	5
3	1528132	Fuse (20 Amp)	5
4	1528133	Fuse (30 Amp)	2
5	1528630	Semiconductor	1
6	1528631	Resistor (68 Ohm, 5 Watt)	1
7	1544255	Fuse (25 Amp)	3

POWER DISTRIBUTION MODULE (FIGURE 4-16) (S/N L177B08960D →)

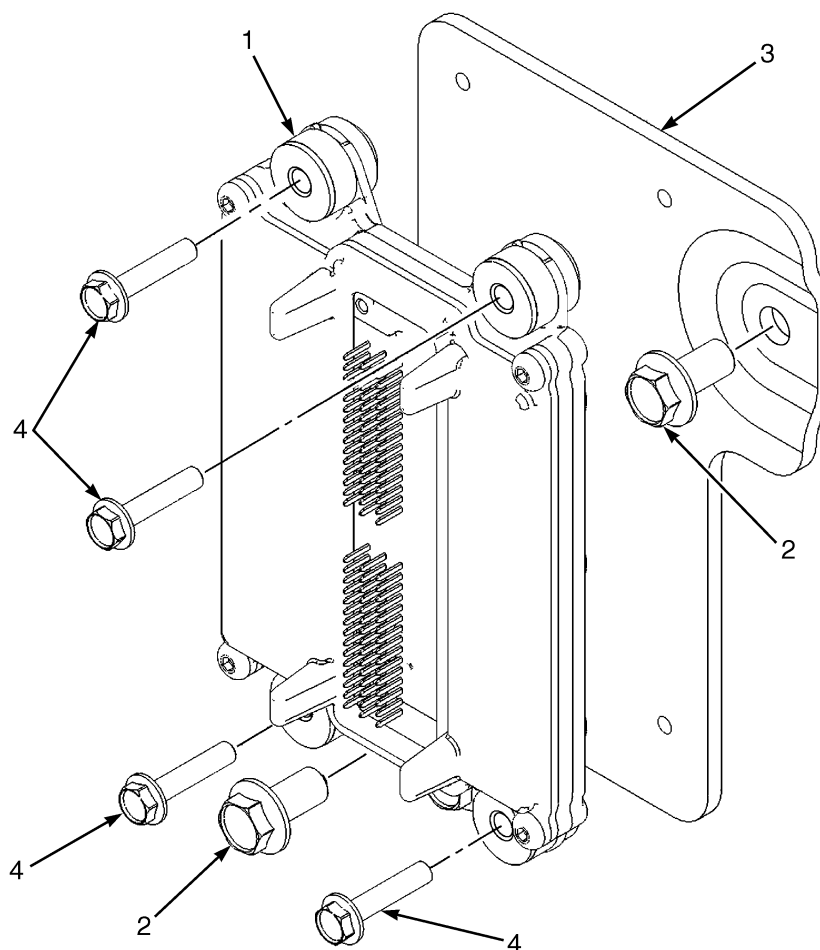


BP080485

ITEM	PART NO.	DESCRIPTION	QTY
	2090613	Module	1
1	2044712	Relay (30 Amp)	2
2	1528315	Relay (20 Amp)	5
3	1528132	Fuse (20 Amp)	6
4	1528133	Fuse (30 Amp)	2
5	1528630	Semiconductor	1
6	1528631	Resistor (68 Ohm, 5 Watt)	1
7	1544255	Fuse (25 Amp)	2

ENGINE CONTROL MODULE (FIGURE 4-17)

**MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)
(S/N L177B16207E →) (S/N L17715512E →)**

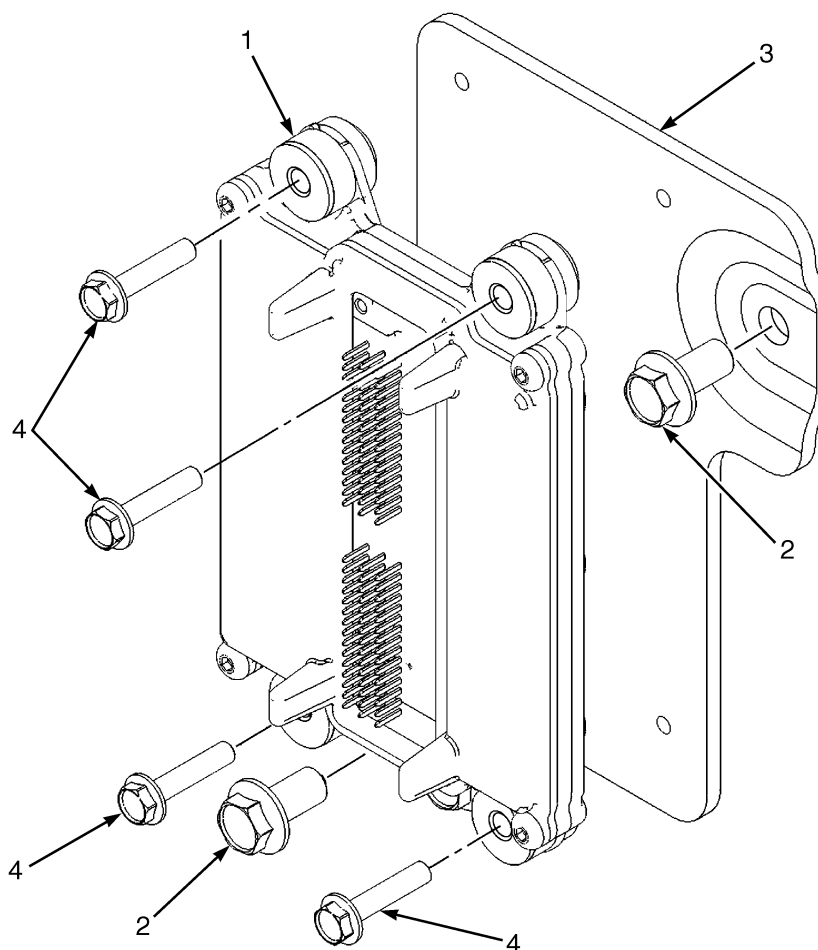


BP080543

ITEM	PART NO.	DESCRIPTION	QTY
1	2093596	Electronic Control Module (2.0L, Gasoline)	1
1	2111038	Engine Control Module (2.0L, Gasoline) (Alternate Part)	1
1	2093597	Electronic Control Module (2.2L, Gasoline)	1
1	2111039	Engine Control Module (2.2L, Gasoline) (Alternate Part)	1
2	1657006	Screw	2
3	1650513	Bracket	1
4	1650514	Screw	4

ENGINE CONTROL MODULE (FIGURE 4-18)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)
(S/N L177B16207E →) (S/N L177B15512E →)

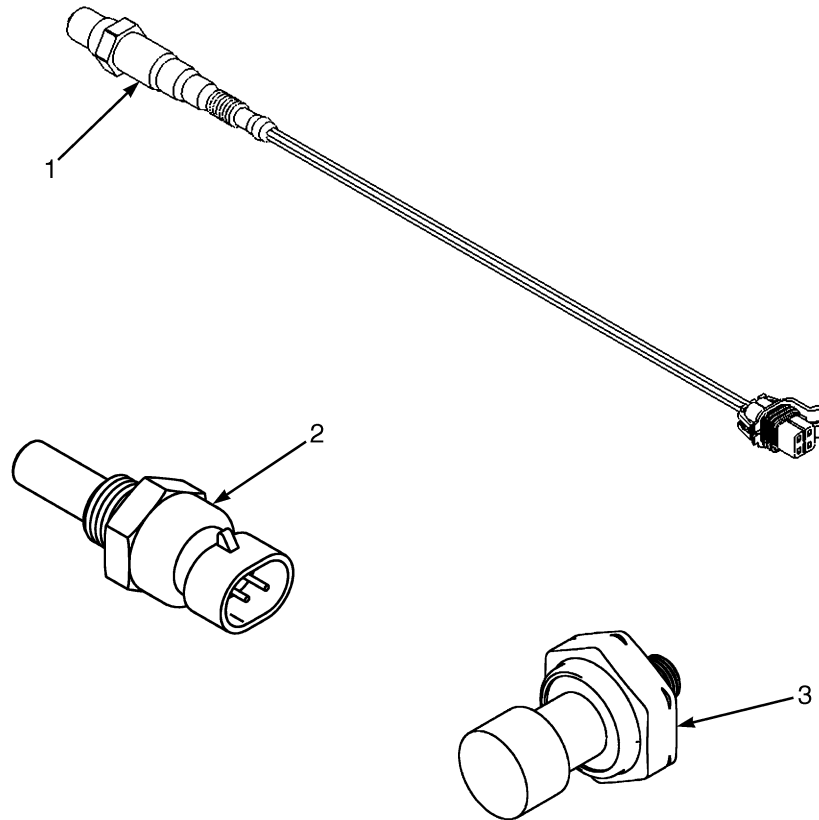


BP080543

ITEM	PART NO.	DESCRIPTION	QTY
1	2093578	Electronic Control Module (2.0L, LPG)	1
1	2109866	Engine Control Module (2.0L, LPG) (Alternate Part)	1
1	2093579	Electronic Control Module (2.2L, LPG)	1
1	2109867	Engine Control Module (2.2L, LPG) (Alternate Part)	1
2	1655237	Screw	2
3	1650513	Bracket	1
4	1650514	Screw	4

FUEL SYSTEM SENSORS (FIGURE 4-19)

**MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)
(S/N L177B16207E →) (S/N L177B15512E →)**

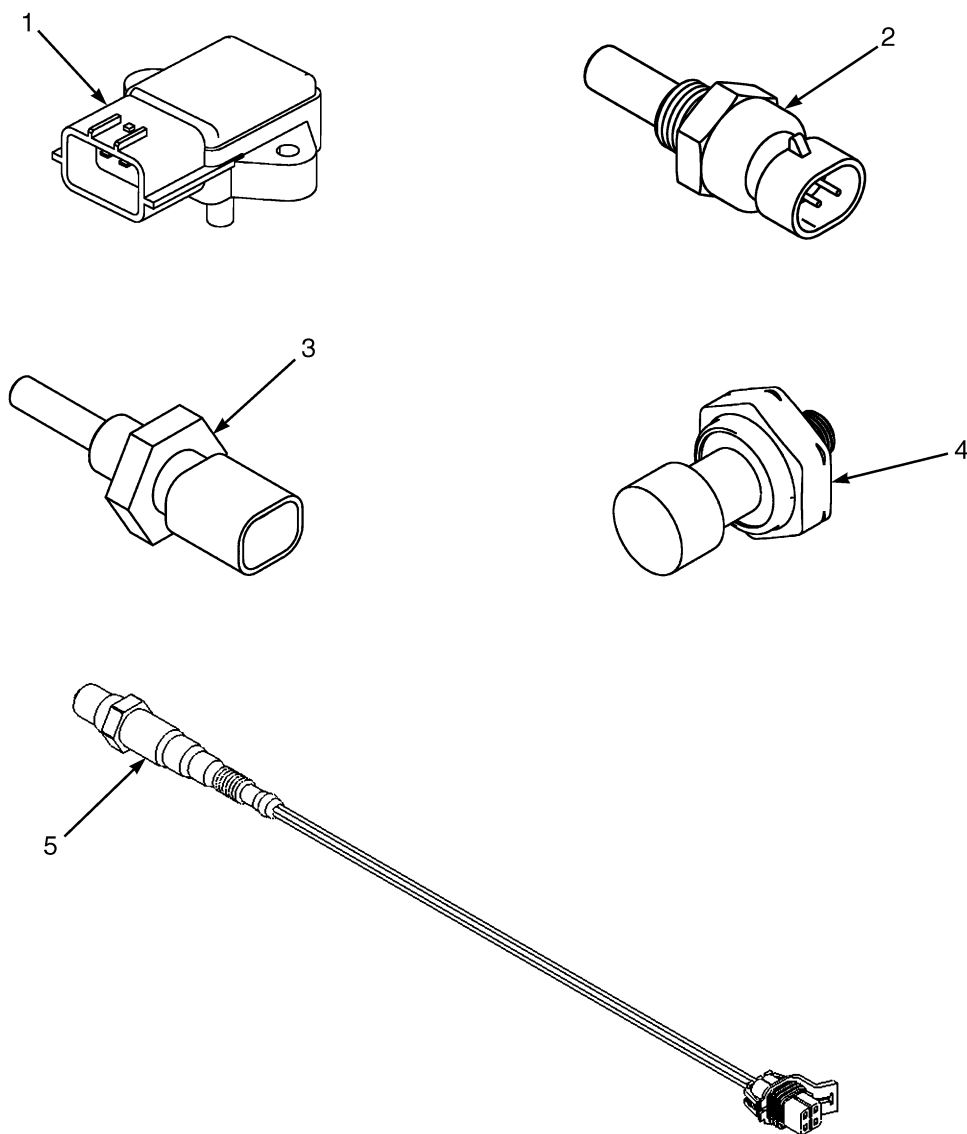


BP130251

ITEM	PART NO.	DESCRIPTION	QTY
1	1646456	Sensor (Oxygen)	2
2	1515654	Sensor (Coolant Temperature)	1
3	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1

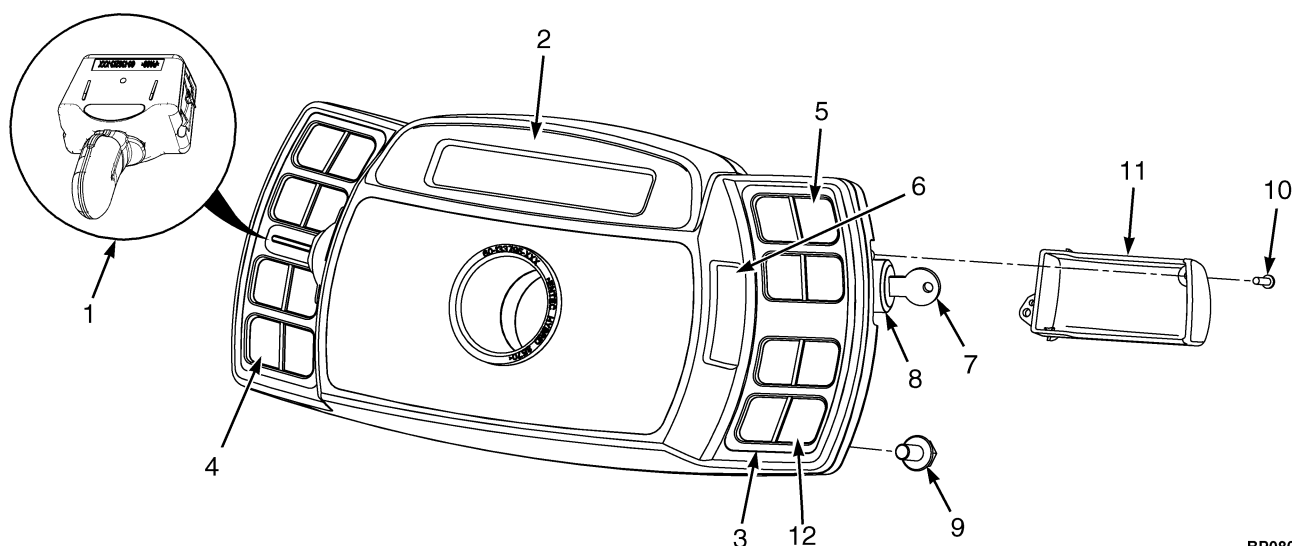
FUEL SYSTEM SENSORS (FIGURE 4-20)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)
(S/N L177B16207E →) (S/N L177B15512E →)



BP080544

ITEM	PART NO.	DESCRIPTION	QTY
1	1548352	Sensor (Boost, M.A.P.) (Boost)	1
2	1539962	Sensor (Air Temperature)	1
3	1515654	Sensor (Coolant Temperature)	1
4	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1
5	1646456	Sensor (Oxygen)	2

INSTRUMENT CLUSTER (FIGURE 4-21)

BP080816

KEY:**A: Standard Ignition Switch - With Cab****B: Standard Ignition Switch - With Overhead Guard**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	d 2060837	Lever (Detent Forward and Reverse)	1	1
1	f 2090110	Lever (Detent Forward and Reverse)	1	1
1	h 2102904	Lever (Detent Forward and Reverse)	1	1
2	2076695	Display	..	1
2	2076696	Display	1	..
3	2066485	Bezel	1	1
4	2069431	Label (Blank) (LH Instrument Cluster)	..	1
4	2066483	Label (LH Instrument Cluster)	1	..
5	a 2066482	Label (RH Display)	1	1
6	2060032	Cover (Display Lever)	1	1
6	e 2060838	Lever (Momentary) (Turn Signal Lever)	1	1
6	g 2090111	Lever (Momentary) (Turn Signal Lever)	1	1
6	h 2102906	Lever (Momentary)	1	1
7	b 1337197	Key Set	1	1
7	b 186304	Key	2	2
8	b 2057948	Ignition Switch (Without Keys)	1	1
8	c 254007	Ignition Switch (Key) (☞ Figure 4-1).....	1	1
8	c 262798	Key Set	1	1
9	1527879	Capscrew	4	4
10	c 1554902	Screw	5	5
11	c 2060033	Cover	1	1
12	2066484	Label (RH Display, All Options)	1	1

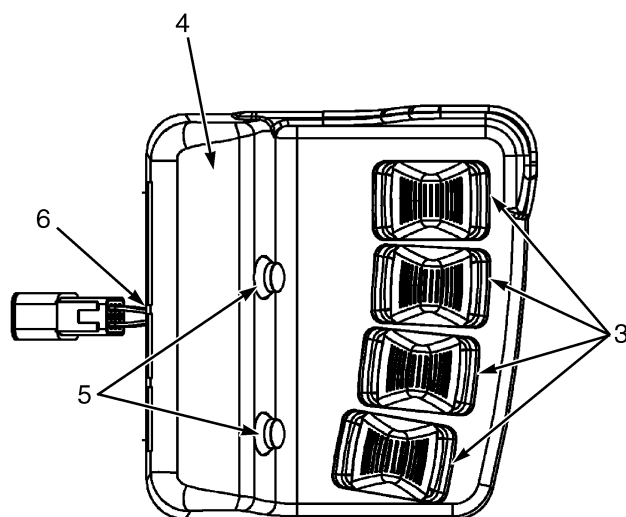
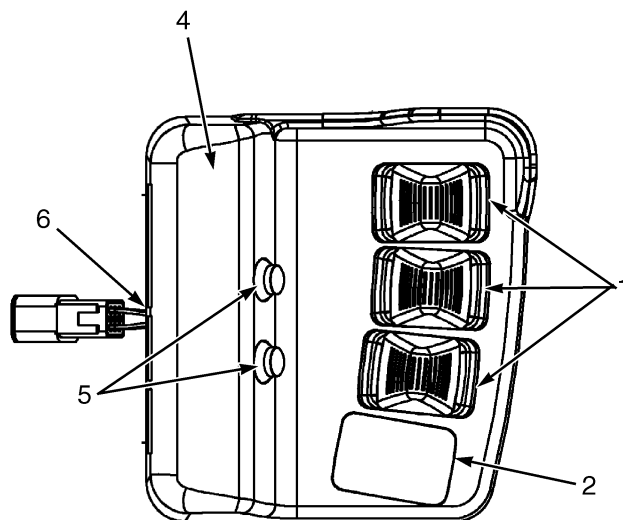
FOOTNOTES:

- a** Remove Panels From Overlay As Required For Truck Configuration.
- b** Start With Key Switch
- c** Start with Push Button and Remote Key Switch
- d** → S/N L177B11272D
- e** → S/N L177B11479D
- f** S/N L177B11273D ↔ S/N L177V01504F
- g** S/N L177B11480D ↔ S/N L177V01504F
- h** S/N L177V01504F →

NOTES

[illegible]

ELECTRONIC CONTROL LEVERS (FIGURE 4-22) MINI-LEVER MODULES — DATE CODE 0724

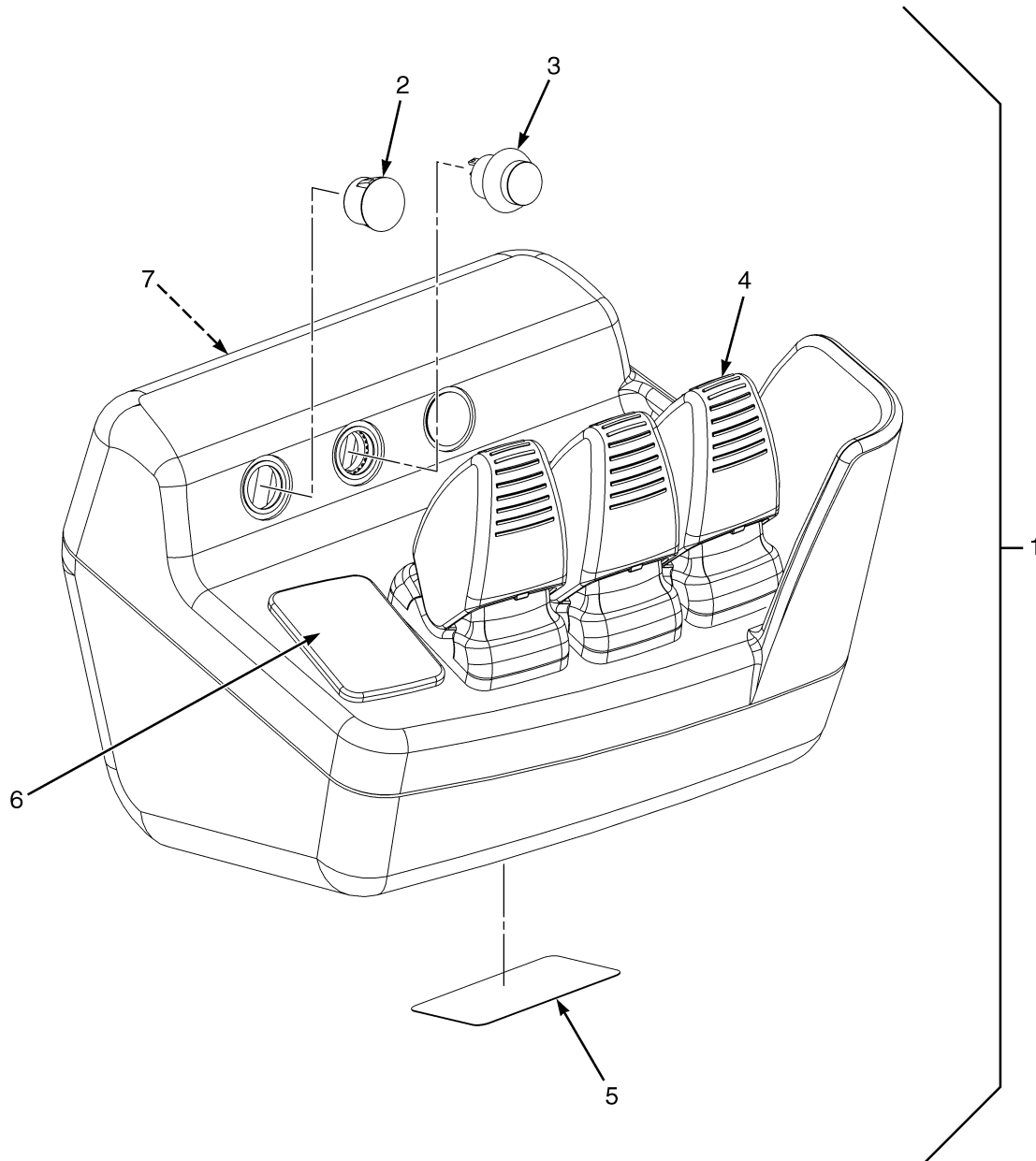


BP150206

**ELECTRONIC CONTROL LEVERS
MINI-LEVER MODULES – DATE CODE 0724****KEY:****A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2064790	Mini-Lever (Plain, 8522697) (Without Clamping)	1	..
1	2075911	Mini-Lever (Clamping, 8528542)	1	..
1	2075913	Mini-Lever (Return To Set Tilt, 8528544)	1	..
1	2075916	Mini-Lever (Clamping and Return To Set Tilt, 8528546)	1	..
1	1683379	Kit-Mini-Lever (Non-Clamping)	AR	..
1	1683398	Kit-Mini-Lever (Clamping)	AR	..
1	1658063	Handle (Mini-Lever)	1	1
2	1598222	Kit-Plug (Mini-Lever Plug)	1	..
3	2064807	Mini-Lever (Plain, 8522700) (Without Clamping)	..	1
3	2075912	Mini-Lever (Clamping, 8528543)	..	1
3	2075914	Mini-Lever (Return To Set Tilt, 8528545)	..	1
3	2075917	Mini-Lever (Clamping And Return To Set Tilt, 8528547)	..	1
3	1683379	Kit-Mini-Lever (Non-Clamping)	..	AR
3	1683398	Kit-Mini-Lever (Clamping)	..	AR
3	1658063	Handle (Mini-Lever)	1	1
4		Label	1	1
5	1598221	Kit-Switch (Interlock Switch)	AR	AR
5	1598223	Kit-Plug (Interlock Switch Plug)	AR	AR
6	1514429	Nut	4	4

ELECTRONIC CONTROL LEVERS (FIGURE 4-23)
MINI-LEVER MODULES (THREE FUNCTION) — DATE CODE 0725 THRU 0743



BP150259

ELECTRONIC CONTROL LEVERS

MINI-LEVER MODULES (THREE FUNCTION) – DATE CODE 0725 THRU 0743

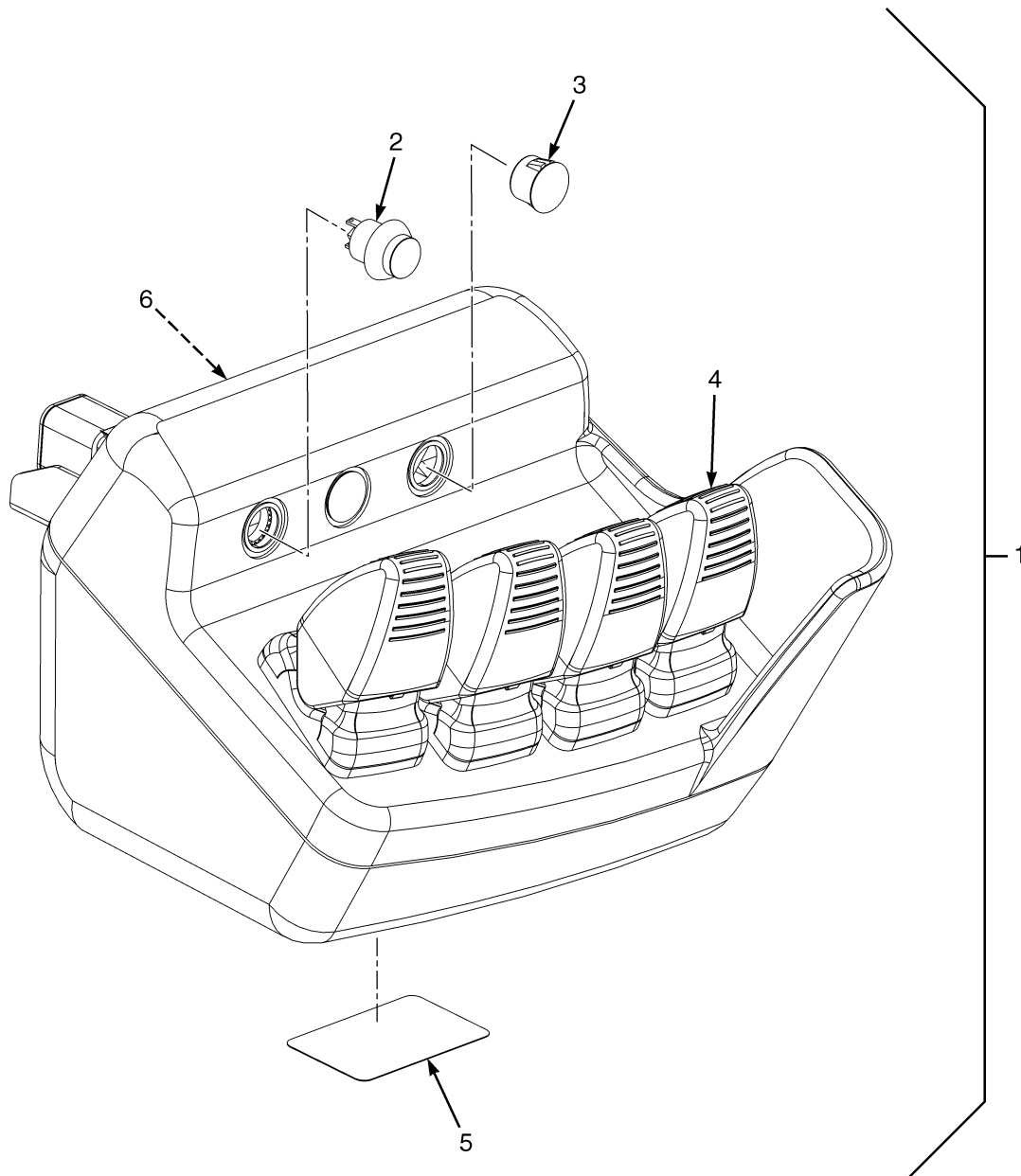
ITEM	PART NO.	DESCRIPTION	QTY
1	2099224	Mini-Lever (Plain, 8542298)	1
	b 1598222	Kit-Plug (Mini-Lever Plug)	1
	c 1598223	Kit-Plug (Interlock Switch Plug)	3
1	2099228	Mini-Lever (Clamping, 8542302)	1
	a 1683398	Kit-Mini-Lever (Clamping)	1
	d 1598221	Kit-Switch (Interlock Switch)	1
	b 1598222	Kit-Plug (Mini-Lever Plug)	1
	c 1598223	Kit-Plug (Interlock Switch Plug)	2
1	2099230	Mini-Lever (Return To Set Tilt, 8542304)	1
	a 1683398	Kit-Mini-Lever (Clamping)	1
	d 1598221	Kit-Switch (Interlock Switch)	1
	b 1598222	Kit-Plug (Mini-Lever Plug)	1
	c 1598223	Kit-Plug (Interlock Switch Plug)	2
1	2099233	Mini-Lever (Clamping and Return To Set Tilt, 8542307)	1
	a 1591185	Kit-Lever (Interlock Mini-Lever)	1
	d 1598221	Kit-Switch (Interlock Switch)	1
	b 1598224	Plug	1
	c 1598223	Kit-Plug (Interlock Switch Plug)	2
2		Plug (Momentary Switch)	AR
3		Momentary Switch	AR
4		Mini-Lever	AR
4	1658063	Handle (Mini-Lever)	1
5		Label (Shows Production Part Number)	1
6	1598224	Plug (Mini-Lever)	1
7		Control Labels ( Figure 1-33,  Figure 1-34).....	1

FOOTNOTES:

- a** Kit Includes: 1 Interlock Rocker (must be used in combination with a Momentary Interlock Switch), 1 Gasket, 4 Screws (parts are NSS)
- b** Kit Includes: 1 Mini-Lever Plug, 1 Gasket (parts are NSS)

- c** Kit Includes: 1 Momentary Interlock Switch Plug, 1 Gasket (parts are NSS)
- d** Kit Includes: 1 Momentary Switch, 1 Lockwasher, 1 Gasket, 1 Nut (parts are NSS)

ELECTRONIC CONTROL LEVERS (FIGURE 4-24)
MINI-LEVER MODULE (FOUR FUNCTION) — DATE CODE 0725 THRU 0743



BP150258

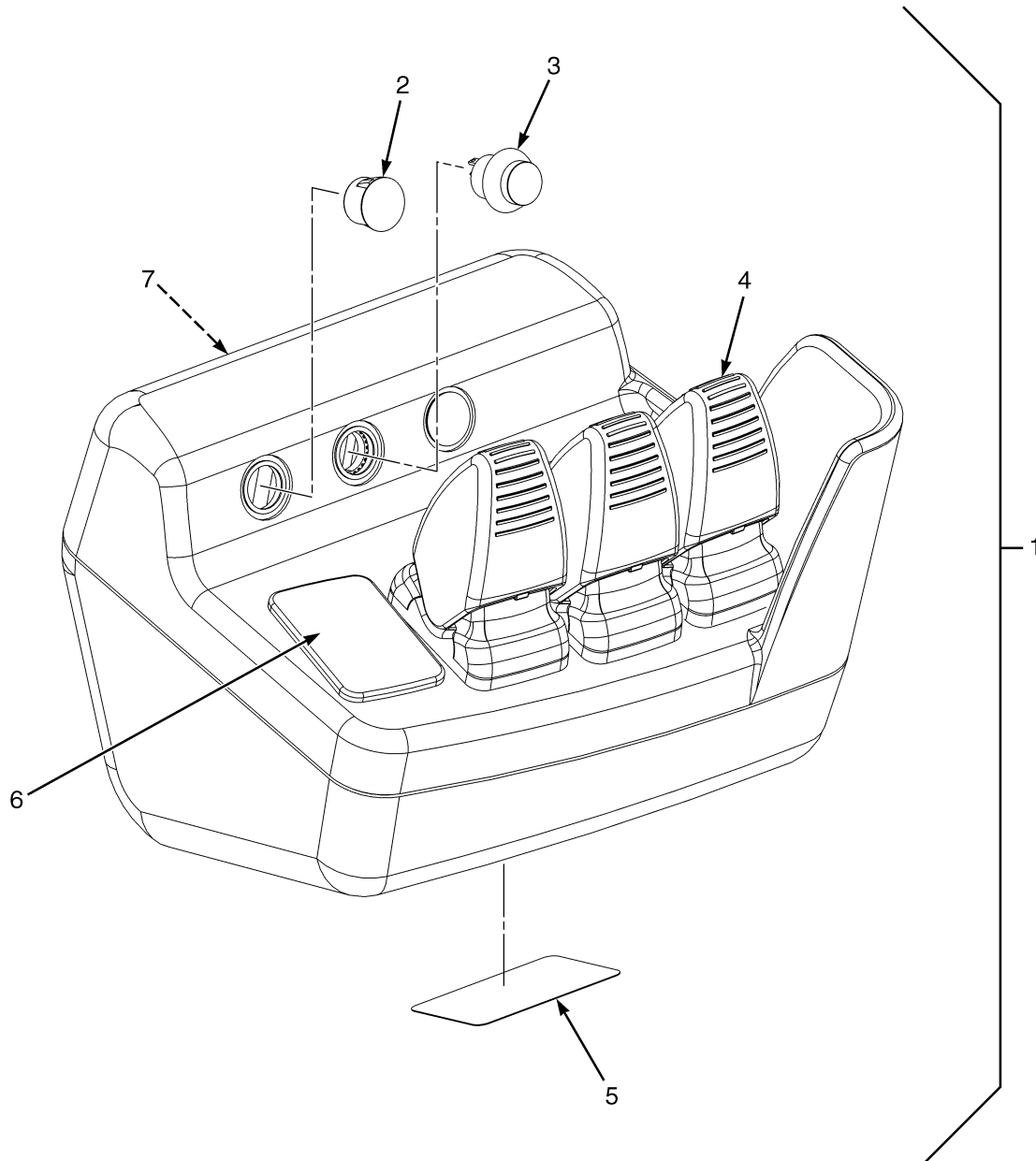
ELECTRONIC CONTROL LEVERS

MINI-LEVER MODULE (FOUR FUNCTION) – DATE CODE 0725 THRU 0743

ITEM	PART NO.	DESCRIPTION	QTY
1	2099225	Mini-Lever (Plain, 8542299)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	3
	d 1683379	Kit-Mini-Lever (Non-Clamping)	3
1	2099229	Mini-Lever (Clamping, 8542303)	1
1	1683379	Kit-Mini-Lever (Non-Clamping)	2
	c 1683398	Kit-Mini-Lever (Clamping)	1
	b 1598221	Kit-Switch (Interlock Switch)	1
1	1598223	Kit-Plug (Interlock Switch Plug)	2
1	2099231	Mini-Lever (Return To Set Tilt, 8542305)	1
	d 1683379	Kit-Mini-Lever (Non-Clamping)	2
1	1683398	Kit-Mini-Lever (Clamping)	1
	c 1598221	Kit-Switch (Interlock Switch)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	2
1	2099234	Mini-Lever (Clamping And Return To Set Tilt, 8542308)	1
	a 1683379	Kit-Mini-Lever (Non-Clamping)	2
	c 1598221	Kit-Switch (Interlock Switch)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	2
2		Momentary Switch	AR
3		Plug (Momentary Switch)	AR
4		Mini-Lever	AR
4	1658063	Handle (Mini-Lever)	1
5		Label	1
6		Control Labels (☞Figure 1-33, ☞Figure 1-34).....	1

FOOTNOTES:

- | | |
|---|--|
| <p>a Kit Includes: 1 Interlock Mini-Lever (must be used in combination with a Momentary Interlock Switch), 1 Gasket, 4 Screws (parts are NSS)</p> <p>b Kit Includes: 1 Momentary Switch Hole Plug, 1 Gasket (parts are NSS)</p> | <p>c Kit Includes: 1 Momentary Switch, 1 Lockwasher, 1 Gasket, 1 Nut (parts are NSS)</p> <p>d Kit Includes: 1 Plain Mini-Lever, 1 Gasket, 4 Screws (parts are NSS)</p> |
|---|--|

**ELECTRONIC CONTROL LEVERS (FIGURE 4-25)
MINI-LEVER MODULES (THREE FUNCTION) — DATE CODE 0744**

BP150259

ELECTRONIC CONTROL LEVERS

MINI-LEVER MODULES (THREE FUNCTION) – DATE CODE 0744

ITEM	PART NO.	DESCRIPTION	QTY
1	2105372	Mini-Lever (8544613)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	3
	b 1598224	Plug	1
	c 1598223	Kit-Plug (Interlock Switch Plug)	3
1	2105376	Mini-Lever (8544617) (With Clamping)	1
	a 1598223	Kit-Plug (Interlock Switch Plug)	1
	d 1598221	Kit-Switch (Interlock Switch)	1
	b 1598224	Plug	1
	c 1689455	Kit-Mini-Lever (Non-Clamping)	2
	1689460	Kit-Mini-Lever (Clamping)	1
1	2105378	Mini-Lever (8544619) (With Return To Set Tilt)	1
	a 1598223	Kit-Plug (Interlock Switch Plug)	2
	d 1598221	Kit-Switch (Interlock Switch)	1
	b 1598224	Plug	1
	c 1689455	Kit-Mini-Lever (Non-Clamping)	2
	1689460	Kit-Mini-Lever (Clamping)	1
1	2105380	Mini-Lever (8544621) (With Clamping and Return to set Tilt)	1
	d 1598221	Kit-Switch (Interlock Switch)	2
	b 1598224	Plug	2
	c 1598223	Kit-Plug (Interlock Switch Plug)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	1
	1689460	Kit-Mini-Lever (Clamping)	2
1	2103849	Mini-Lever (8543799)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	3
	c 1598223	Kit-Plug (Interlock Switch Plug)	3
1	1598224	Plug	1
1	2103853	Mini Lever (8543802) (With Clamping)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	2
	1683398	Kit-Mini-Lever (Clamping)	1
1	d 1598221	Kit-Switch (Interlock Switch)	1
1	c 1598223	Kit-Plug (Interlock Switch Plug)	2
	1598224	Plug	1
1	2103857	Mini Lever (8543807) (Clamping With Return To Set Tilt)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	1
	1683398	Kit-Mini-Lever (Clamping)	2
1	d 1598221	Kit-Switch (Interlock Switch)	2
1	c 1598223	Kit-Plug (Interlock Switch Plug)	1
1	1598224	Plug	2
1	2103855	Mini Lever (8543805) (With Return to Set Tilt)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	2
	1683398	Kit-Mini-Lever (Clamping)	1
1	d 1598221	Kit-Switch (Interlock Switch)	1
1	c 1598223	Kit-Plug (Interlock Switch Plug)	2
1	1598224	Plug	1
2		Plug (Momentary Switch)	AR
3		Momentary Switch	AR
4		Mini-Lever	AR
4	1658063	Handle (Mini-Lever)	1
5		Label (Shows Production Part Number)	1
6	1598224	Plug (Mini-Lever)	1

ELECTRONIC CONTROL LEVERS
MINI-LEVER MODULES (THREE FUNCTION) – DATE CODE 0744

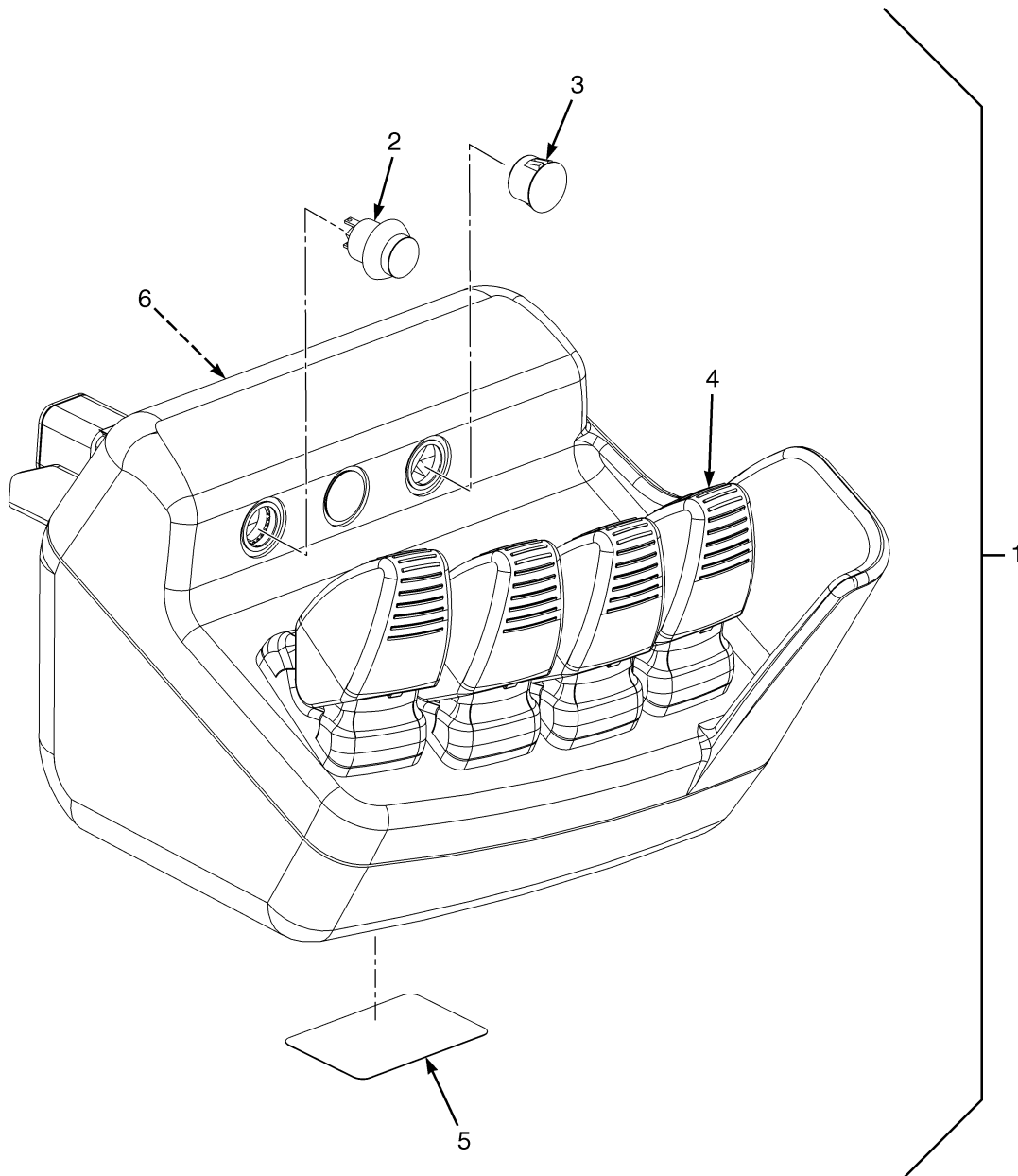
ITEM	PART NO.	DESCRIPTION	QTY
7		Control Labels (☞Figure 1-33, ☞Figure 1-34).....	1

FOOTNOTES:

- | | | | |
|----------|--|----------|---|
| a | Kit Includes: 1 Interlock Rocker (must be used in combination with a Momentary Interlock Switch), 1 Gasket, 4 Screws (parts are NSS) | c | Kit Includes: 1 Momentary Interlock Switch Plug, 1 Gasket (parts are NSS) |
| b | Kit Includes: 1 Mini-Lever Plug, 1 Gasket (parts are NSS) | d | Kit Includes: 1 Momentary Switch, 1 Lockwasher, 1 Gasket, 1 Nut (parts are NSS) |

NOTES

[illegible]

ELECTRONIC CONTROL LEVERS (FIGURE 4-26)
MINI-LEVER MODULE (FOUR FUNCTION) — DATE CODE 0744

BP150258

ELECTRONIC CONTROL LEVERS

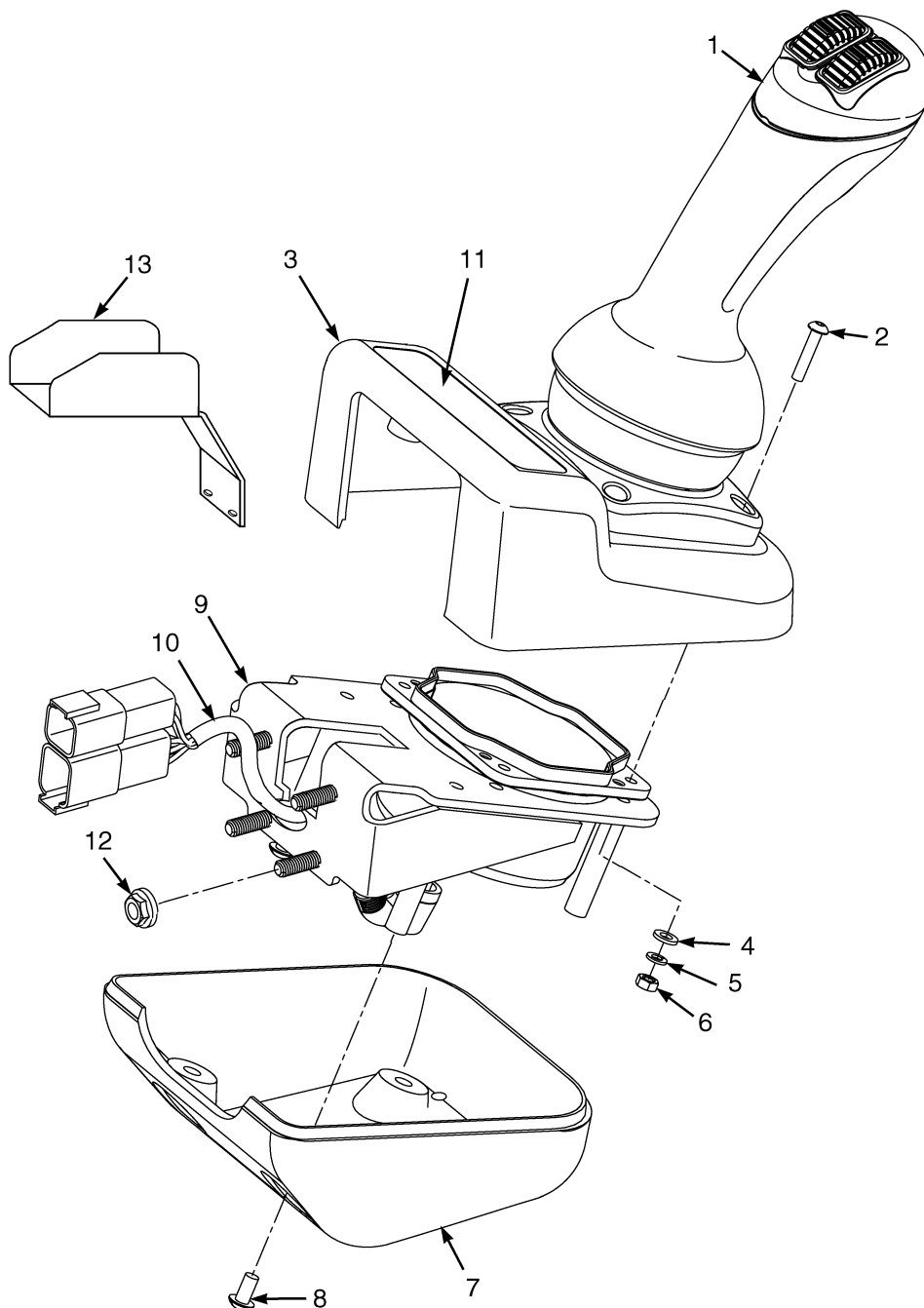
MINI-LEVER MODULE (FOUR FUNCTION) – DATE CODE 0744

ITEM	PART NO.	DESCRIPTION	QTY
1	2105373	Mini-Lever (8544614)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	4
	b 1598223	Kit-Plug (Interlock Switch Plug)	3
1	2105377	Mini-Lever (8544618) (With Clamping)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	3
	1689460	Kit-Mini-Lever (Clamping)	1
	c 1598221	Kit-Switch (Interlock Switch)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	1
1	2105379	Mini-Lever (8544620) (With Return to Set Tilt)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	3
	a 1689460	Kit-Mini-Lever (Clamping)	1
	c 1598221	Kit-Switch (Interlock Switch)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	2
1	2105381	Mini-Lever (8544622) (Clamping and Return to Set Tilt)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	2
	c 1598221	Kit-Switch (Interlock Switch)	2
	b 1598223	Kit-Plug (Interlock Switch Plug)	1
1	1689460	Kit-Mini-Lever (Clamping)	2
1	2103850	Mini Lever (8543800)	1
1	1683379	Kit-Mini-Lever (Non-Clamping)	4
1	b 1598223	Kit-Plug (Interlock Switch Plug)	3
1	2103854	Mini Lever (8543804) (With Clamping)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	3
	1683398	Kit-Mini-Lever (Clamping)	1
	c 1598221	Kit-Switch (Interlock Switch)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	2
1	2103856	Mini Lever (8543806) (With Return to Set Tilt)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	3
	1683398	Kit-Mini-Lever (Clamping)	1
	c 1598221	Kit-Switch (Interlock Switch)	1
	b 1598223	Kit-Plug (Interlock Switch Plug)	2
1	2103858	Mini Lever (8543808) (Clamping with Return to Set Tilt)	1
	1683379	Kit-Mini-Lever (Non-Clamping)	2
	1683398	Kit-Mini-Lever (Clamping)	2
	c 1598221	Kit-Switch (Interlock Switch)	2
	b 1598223	Kit-Plug (Interlock Switch Plug)	1
2		Momentary Switch	AR
3		Plug (Momentary Switch)	AR
4		Mini-Lever	AR
4	1658063	Handle (Mini-Lever)	1
5		Label	1
6		Control Labels (☞ Figure 1-33, ☞ Figure 1-34).....	1

FOOTNOTES:

- a** Kit Includes: 1 Interlock Mini-Lever (must be used in combination with a Momentary Interlock Switch), 1 Gasket, 4 Screws (parts are NSS)
- b** Kit Includes: 1 Momentary Switch Hole Plug, 1 Gasket (parts are NSS)
- c** Kit Includes: 1 Momentary Switch, 1 Lockwasher, 1 Gasket, 1 Nut (parts are NSS)

JOYSTICK (FIGURE 4-27)



BP150080

JOYSTICK**KEY:****A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	b 1585906	Joystick (Without Interlock)	1	..
	f 2085179	Joystick (Without Interlock)	1	..
	h 2093801	Joystick (Without Interlock)	1	..
	a 1585907	Joystick (Without Interlock)	..	1
	e 2085180	Joystick (Without Interlock)	..	1
	g 2093803	Joystick (Without Interlock)	..	1
	c 1585908	Joystick (With Interlock)	1	..
	i 2093804	Joystick (With Interlock)	1	..
	d 1585909	Joystick (With Interlock)	..	1
	j 2093805	Joystick (With Interlock)	..	1
1	b 2075224	Joystick (Without Interlock)	1	..
1	f 2085175	Joystick (Without Interlock)	1	..
1	h 2093806	Joystick (Three Function) (Without Interlock)	1	..
1	a 2075225	Joystick (Without Interlock)	..	1
1	e 2085176	Joystick (Without Interlock)	..	1
1	g 2093807	Joystick (Four Function) (Without Interlock)	..	1
1	c 2075226	Joystick (With Interlock)	1	..
1	i 2093808	Joystick (Three Function) (With Interlock)	1	..
1	c 2075227	Joystick (With Interlock)	..	1
1	j 2093809	Joystick (Four Function) (With Interlock)	..	1
2	1598283	Screw	4	4
3	1550647	Housing (Upper)	1	1
4	320154	Washer	4	4
5	292678	Lockwasher	4	4
6	292667	Nut	4	4
7	1550646	Housing (Lower)	1	1
8	2062718	Capscrew	6	6
9	1552107	Bracket	1	1
10	a 2062070	Wire Harness (Joystick)	1	1
10	k 2084703	Wire Harness (Joystick)	1	1
10	1530960	Connector	1	1
10	1530961	Connector	1	1
10	1550495	Connector	1	1
10	1532904	Connector	1	1
10	1463193	Connector	1	1
11		Label (☞ Figure 1-35, ☞ Figure 1-36).....	1	1
12	1514429	Nut	4	4
13	1579847	Bracket	1	1

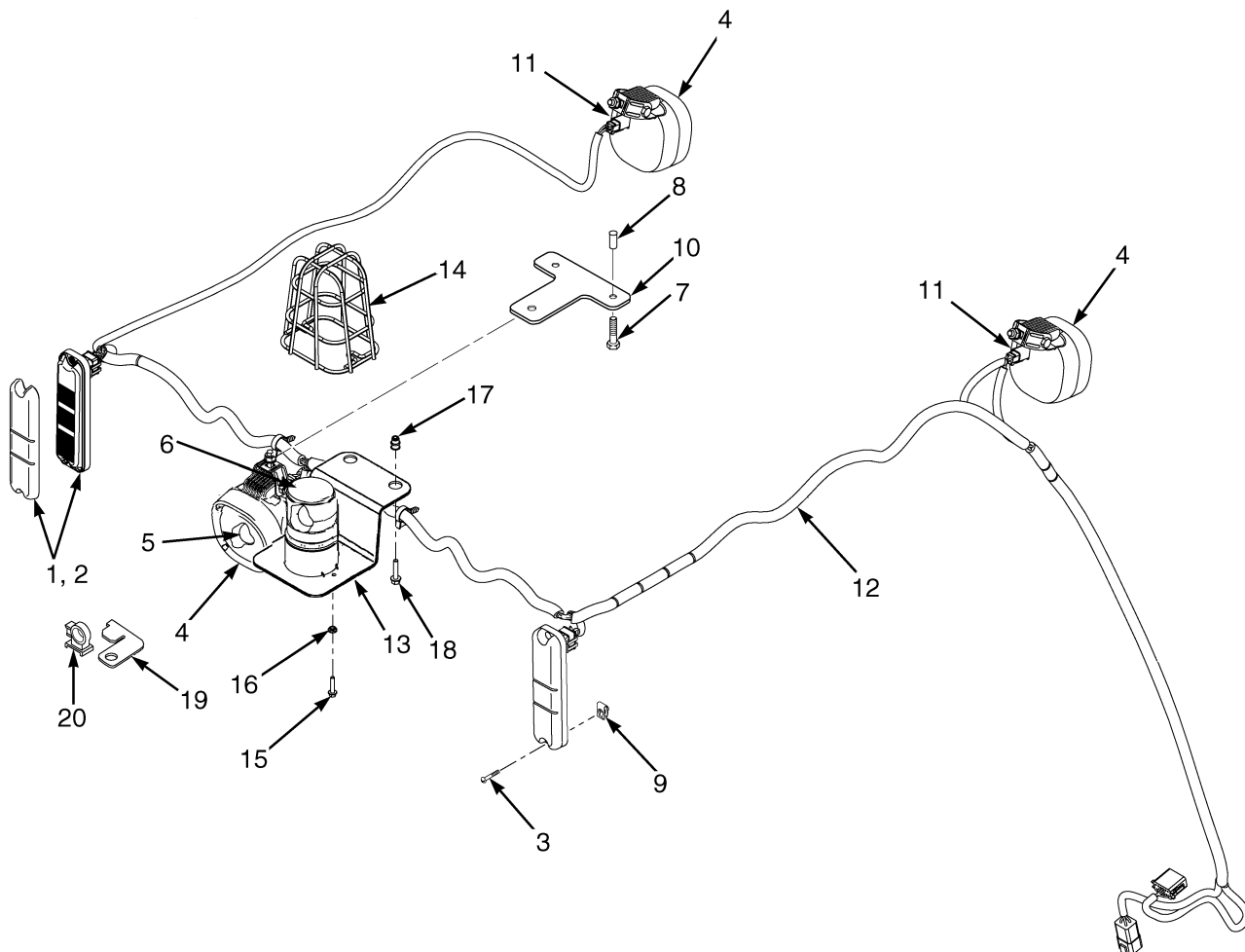
FOOTNOTES:

a	→ S/N L177B06338D	g	S/N L177B08974D →
b	→ S/N L177B08892D	h	S/N L177B09180D →
c	→ S/N L177B10048D	i	S/N L177B10049D →
d	→ S/N L177B10948D	j	S/N L177B10949D →
e	S/N L177B06339D ↔ S/N L177B08973D	k	S/N L177B06339D →
f	S/N L177B08893D ↔ S/N L177B09179D		

NOTES

[illegible]

LIGHTS (FIGURE 4-28) STOP, TAIL, TURN, BACKUP, AND STROBE — WITH CAB



HP081649

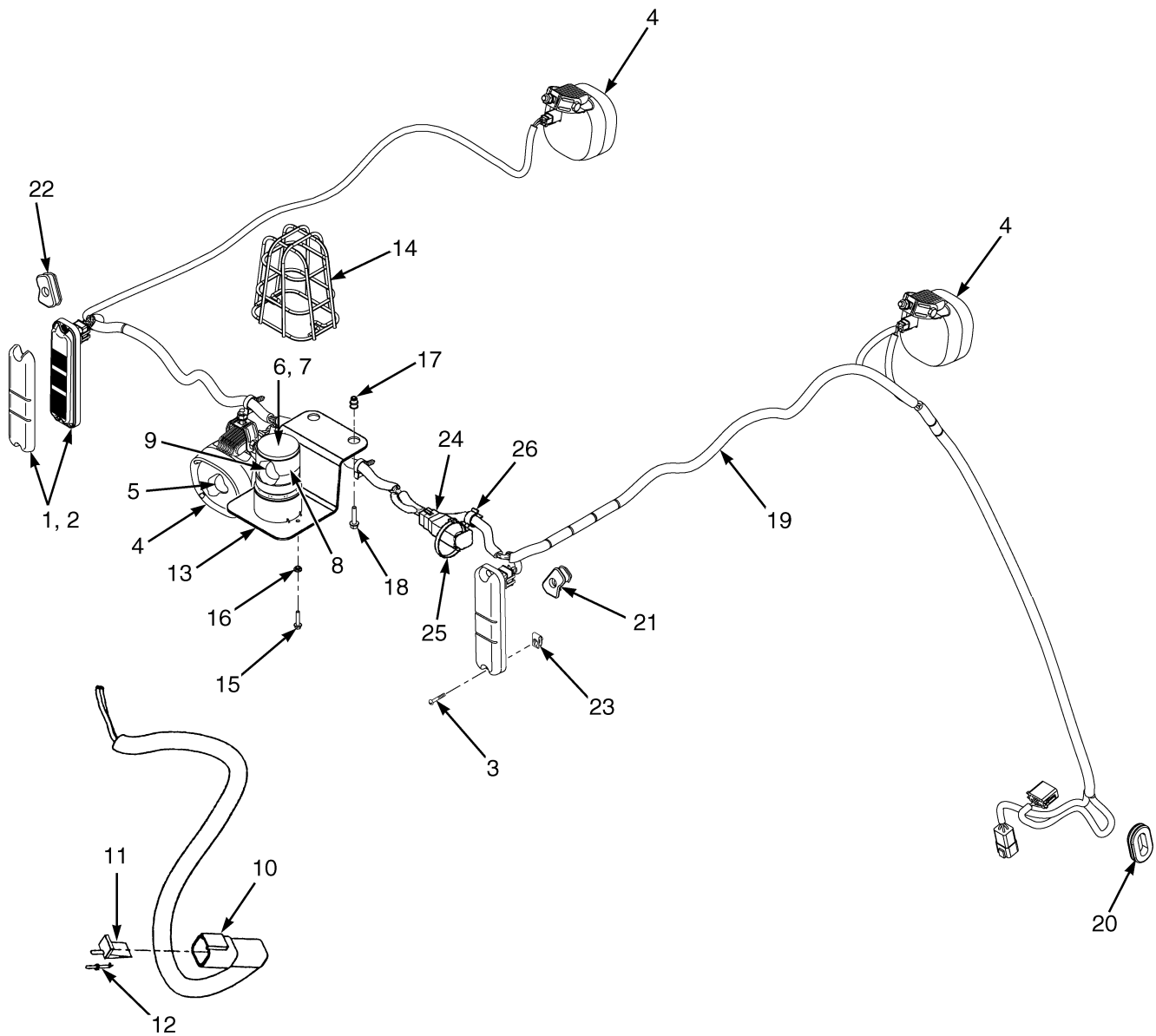
LIGHTS

STOP, TAIL, TURN, BACKUP, AND STROBE – WITH CAB

ITEM	PART NO.	DESCRIPTION	QTY
1	2056824	Brake/Backup Light (Stop, Turn, Tail, And Back-Up)	2
1		Bracket (☞ Figure 1-3).....	2
2	2056826	Reflector (Tail)	2
3	1565125	Screw	4
4	b 2064836	Work Light (Rear)	1
4	d 2098083	Work Light (Rear)	1
4	2107382	Head/Work Light (Rear)	1
4	b 2064837	Work Light (RH Front)	1
4	2098082	Bulb (Halogen)	1
4	d 2098084	Work Light (RH Front)	1
4	2107383	Head/Work Light (RH Front) (LED)	1
4	b 2064838	Work Light (LH Front)	1
4	2098082	Bulb (Halogen)	1
4	d 2098085	Work Light (LH Front)	1
4	2107384	Head/Work Light (LH Front) (LED)	1
5	2098082	Bulb (Halogen)	1
6	c 1581670	Strobe Light (☞ Figure 13-1).....	1
6	e 1654013	Strobe Light Assembly (☞ Figure 13-2).....	1
7	1586495	Capscrew	2
8	1531558	Insert	2
9	1537551	Nut	4
10	1558771	Bracket	1
10	1698541	Bracket (Alternate Part)	1
11	1351682	Connector (End Cap)	2
12	1598333	Wire Harness	1
12	a 2044712	Relay (30 Amp)	1
13	1565076	Bracket Wldmt	1
14	1302024	Guard	1
15	1586759	Capscrew	2
16	1586428	Nut	2
17	1531558	Insert	2
18	1586495	Capscrew	2
19	1532759	Clip	1
20	1532775	Clip	1

FOOTNOTES:**a** Not Illustrated**b** → S/N L177B17908E EXC. 07911, 07970**c** → S/N L177B18988E**d** S/N L177B17909E → INC. 07911, 07970**e** S/N L177B18989E →

LIGHTS (FIGURE 4-29) STOP, TAIL, TURN, BACKUP, AND STROBE — WITH OVERHEAD GUARD



HP081633

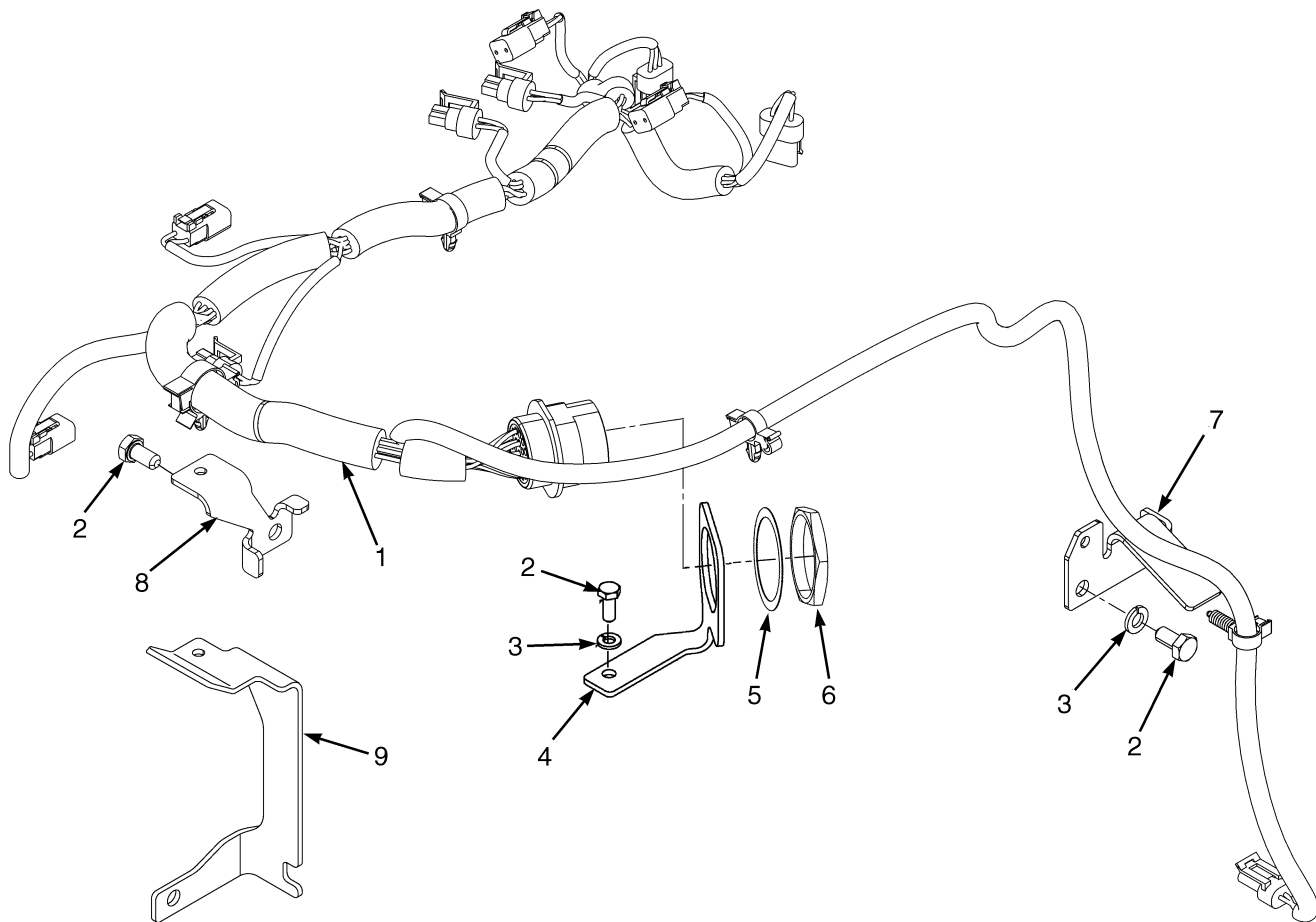
LIGHTS

STOP, TAIL, TURN, BACKUP, AND STROBE – WITH OVERHEAD GUARD

ITEM	PART NO.	DESCRIPTION	QTY
1	2056824	Brake/Backup Light (Stop, Turn, Tail, And Back-Up)	2
1		Tail Light Base (☞ Figure 1-3).....	2
2	2056826	Reflector (Tail)	2
3	1565125	Screw	4
4	b 2064836	Work Light (Rear)	1
4	e 2098083	Work Light (Rear)	1
4	2107382	Head/Work Light (Rear)	1
4	b 2064837	Work Light (RH Front)	1
4	2098082	Bulb (Halogen)	1
4	e 2098084	Work Light (RH Front)	1
4	2107383	Head/Work Light (RH Front) (LED)	1
4	b 2064838	Work Light (LH Front)	1
4	2098082	Bulb (Halogen)	1
4	e 2098085	Work Light (LH Front)	1
4	2107384	Head/Work Light (LH Front) (LED)	1
5	2098082	Bulb (Halogen)	1
6	1581670	Strobe Light	1
7	1382130	Strobe Light	1
8	1526082	Lens (Amber)	1
9	1309775	Strobe Light	1
10	1561559	Connector	1
11	1561755	Connector	1
12	1463138	Terminal	2
13	1565076	Bracket Wldmt	1
14	1302024	Guard	1
15	1586759	Capscrew	2
16	1586428	Nut	2
17	1531001	Insert	2
18	1586495	Capscrew	2
19	a 2073760	Wire Harness (Lights) (☞ Figure 4-61).....	1
19	d 2090084	Wire Harness (Lights) (☞ Figure 4-62).....	1
19	f 2098385	Wire Harness (Lights) (☞ Figure 4-68).....	1
20	1539584	Grommet	1
21	1560447	Grommet (RH Tail Light)	1
22	1560448	Grommet (LH Tail Light)	1
23	1537551	Nut	4
24	c 2095895	Wire Harness	1
24	1514597	Connector	1
24	1514598	Connector	1
24	1484709	Terminal (Pin)	4
24	1634047	Resistor	3
25	d 1644398	Clamp	1
26	d 1606544	Clamp	1

FOOTNOTES:**a** → S/N L177B11224D**b** → S/N L177B17908E EXC. 07911, 07970**c** S/N L177B11225D ↔ 6/2007**d** S/N L177B11225D →**e** S/N L177B17909E → INC. 07911, 07970**f** 6/2007 →

TRANSMISSION ELECTRICAL SYSTEM (FIGURE 4-30)



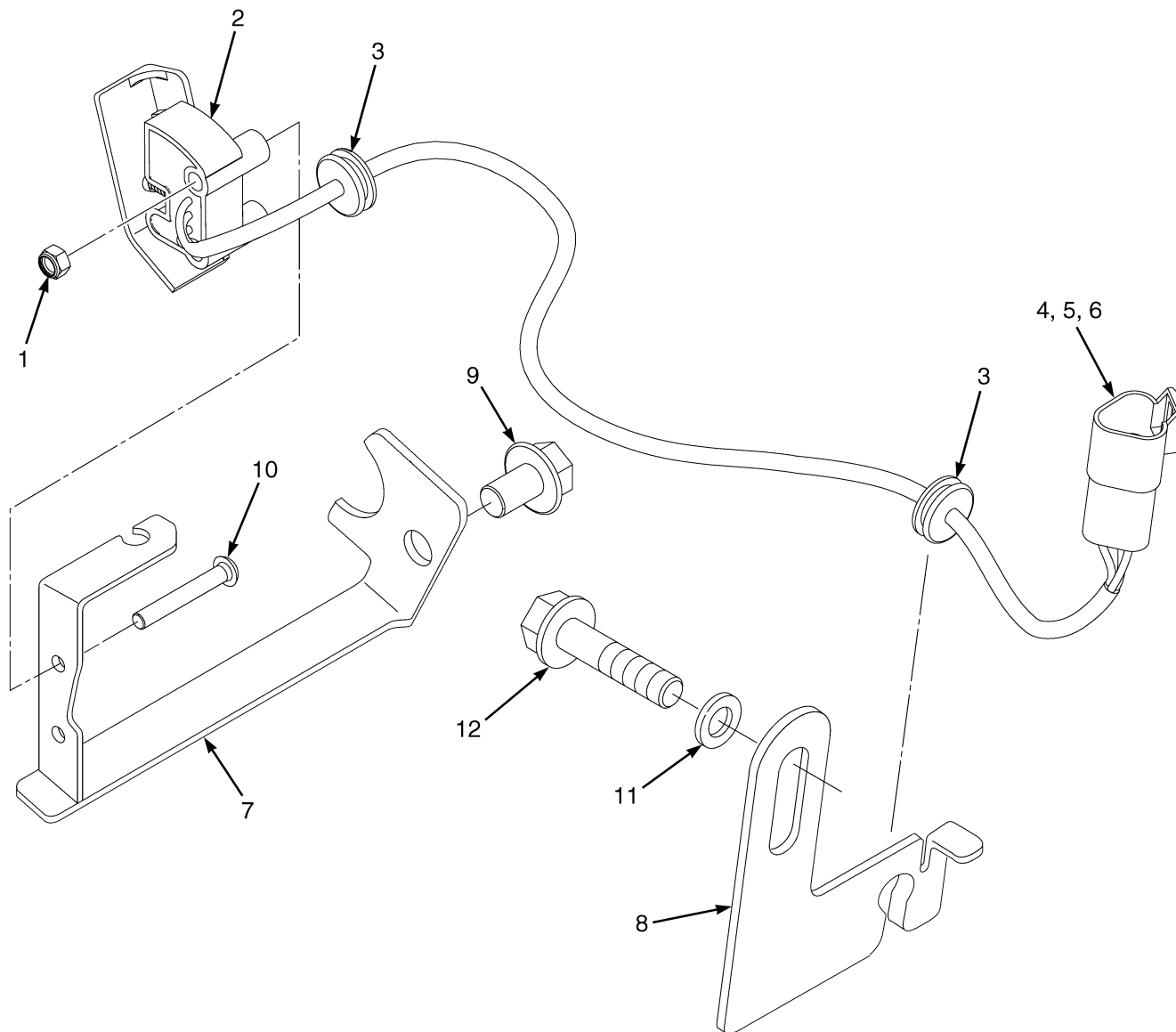
BP080410

TRANSMISSION ELECTRICAL SYSTEM**KEY:****A: Single Speed****B: Dual Speed**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	b 2082323	Wire Harness (Transmission) (☞ Figure 4-63).....	1	..
1	e 2085943	Wire Harness (Transmission) (☞ Figure 4-64).....	1	..
1	a 2075644	Wire Harness (Transmission) (☞ Figure 4-65).....	..	1
1	c 2082324	Wire Harness (Transmission) (☞ Figure 4-65).....	..	1
1	e 2085942	Wire Harness (Transmission) (☞ Figure 4-66).....	..	1
2	287851	Capscrew	2	2
3	292681	Lockwasher	2	2
4	a	Bracket	1	1
5	a 1539086	Lockwasher	1	1
6	a 1539085	Locknut	1	1
7	a 1531519	Bracket	1	1
7	d 1612223	Bracket	1	..
8	1612399	Bracket	..	1
9	1616222	Bracket	1	..

FOOTNOTES:**a** → 8/2006**b** → S/N L177B11117D**c** 8/2006 ↔ S/N L177B11117D**d** 8/2006 →**e** S/N L177B11118D →

MAST ELECTRICAL (FIGURE 4-31)



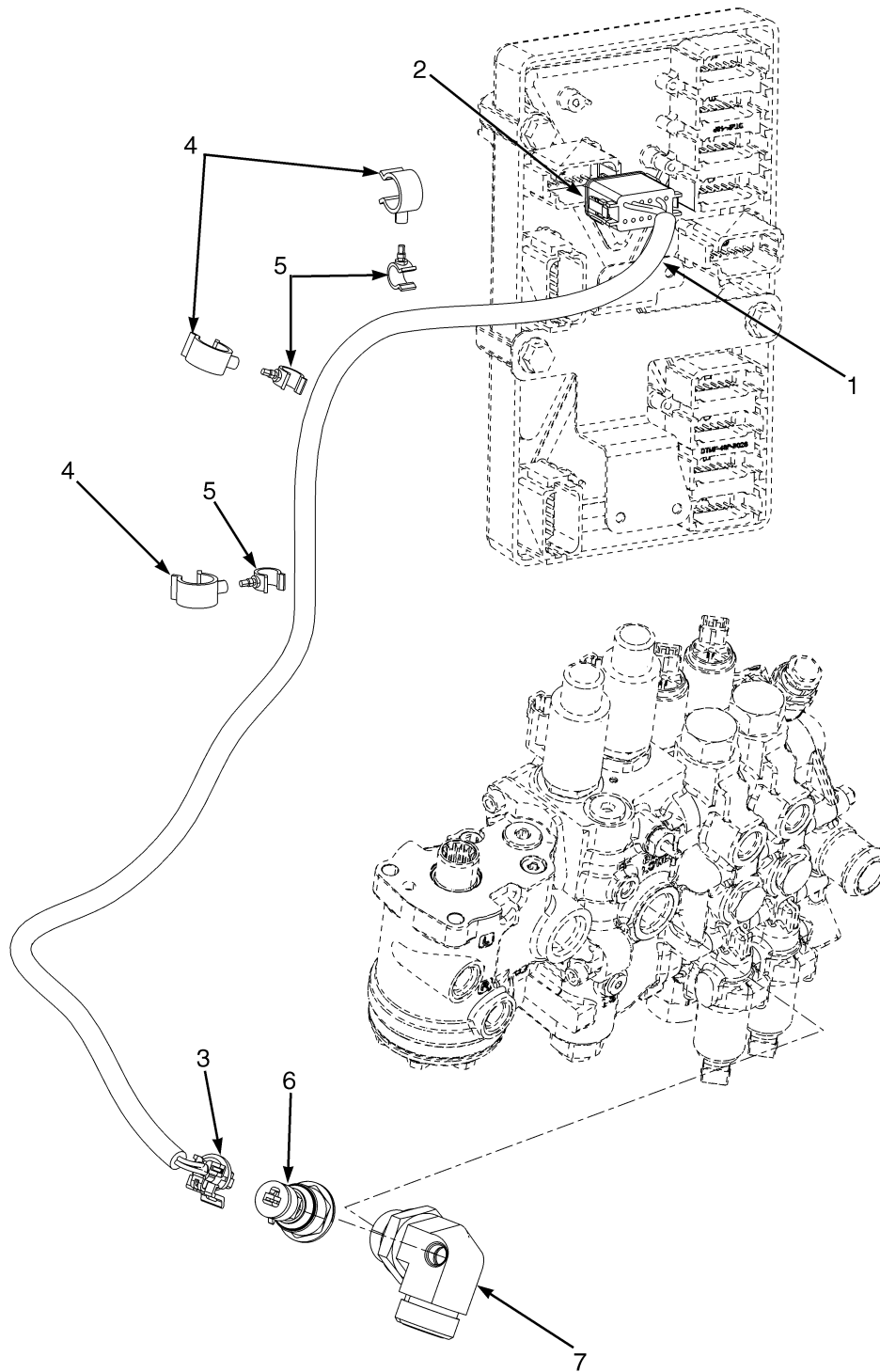
HP081616

ITEM	PART NO.	DESCRIPTION	QTY
1	302398	Locknut	2
2	1589621	Sensor (Mast)	1
3	98644	Grommet	2
4	1493466	Connector	1
5	1330415	Connector	1
6	1330437	Terminal (Pin)	3
7	1592071	Bracket Wldmt	1
8	1595731	Bracket	1
9	1615163	Capscrew	1
10	1553897	Capscrew	2
11	1626478	Washer	1
12	1658075	Capscrew	1

NOTES

[illegible]

LOAD WEIGH ELECTRICAL (FIGURE 4-32)

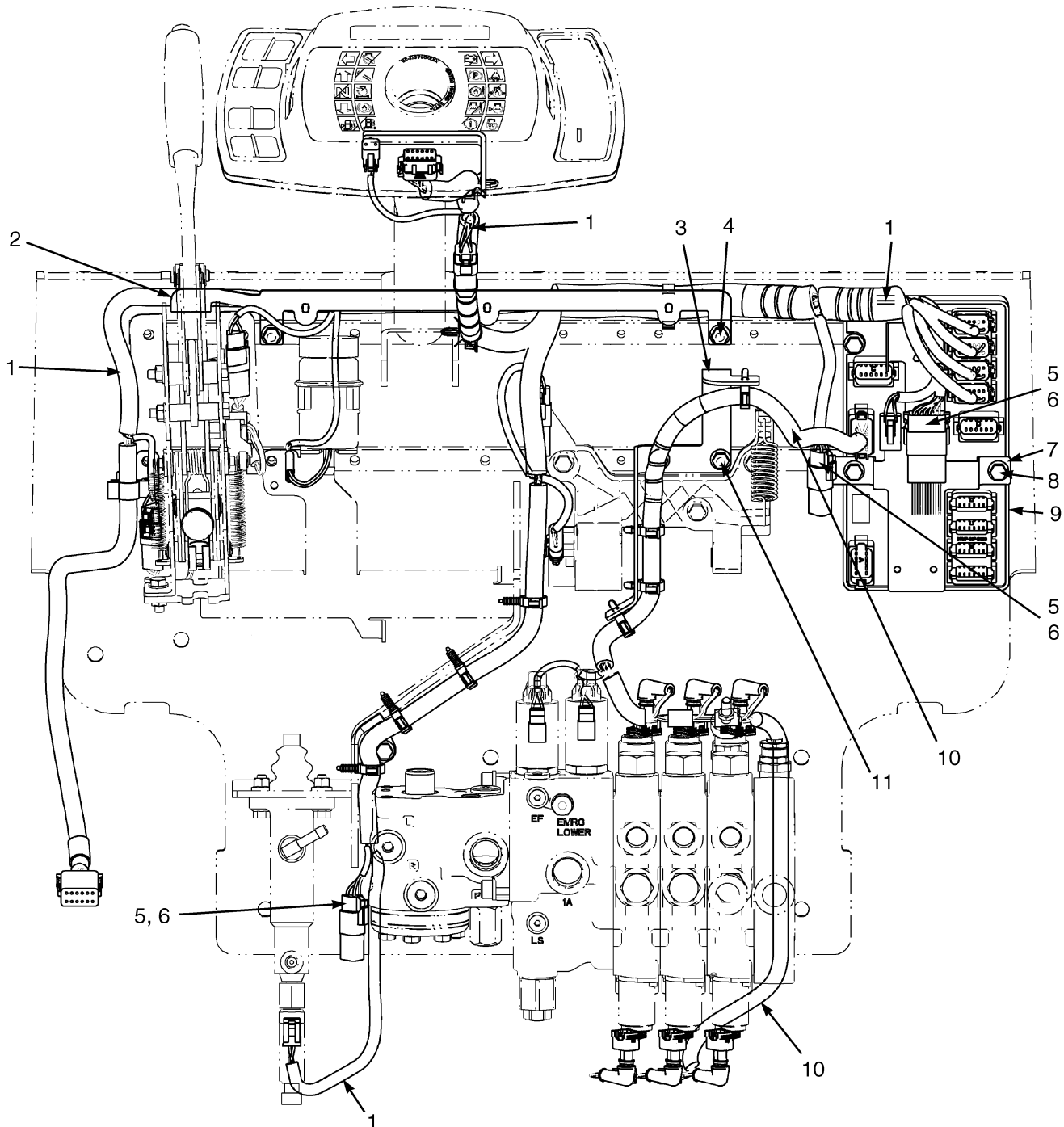


BP080413

LOAD WEIGH ELECTRICAL

ITEM	PART NO.	DESCRIPTION	QTY
1	2079326	Wire Harness (Load Weigh)	1
2	1525565	Connector	1
2	1500913	Connector	1
2	1330438	Terminal (Socket)	3
2	1484377	Plug	9
3	1603021	Connector	1
3	1603236	Connector (Secondary Lock)	1
3	1548517	Terminal (Socket)	3
3	1548519	Seal	3
4	1606544	Clamp	3
5	1573549	Clamp	3
6	1606735	Sensor (Load Sensing)	1
7	1605768	Fitting (Load Weigh Display)	1

COWL ELECTRICAL (FIGURE 4-33) ELECTRO-HYDRAULIC



BP080206

**COWL ELECTRICAL
ELECTRO-HYDRAULIC**

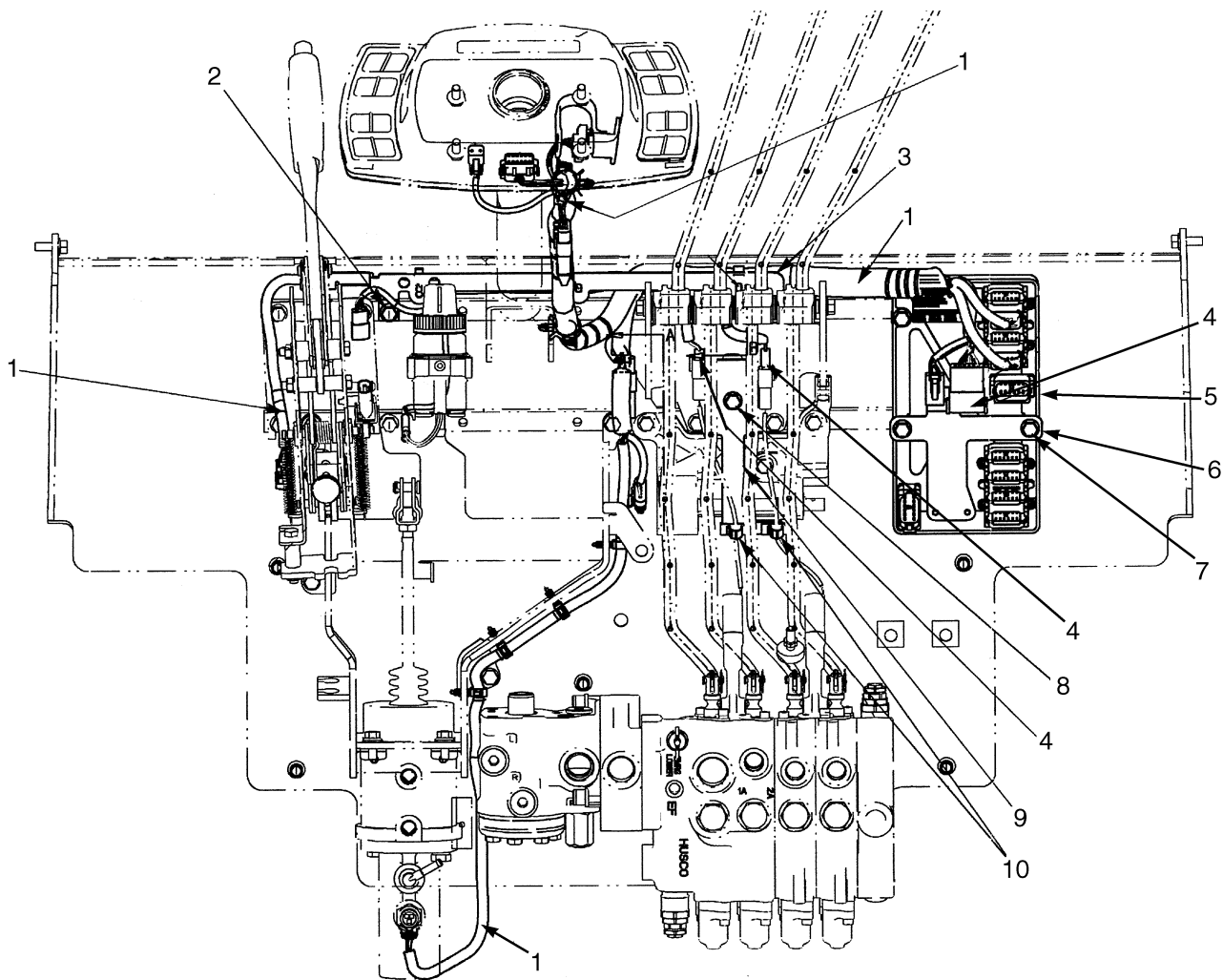
ITEM	PART NO.	DESCRIPTION	QTY
1	d 2070269	Wire Harness (Cowl with Monotrol Pedal) (☞ Figure 4-69).....	1
1	e 2098011	Wire Harness (Cowl With Monotrol Pedal) (☞ Figure 4-69).....	1
1	d 2084829	Wire Harness (Cowl with Forward/Reverse Lever) (☞ Figure 4-70).....	1
1	e 2098012	Wire Harness (Cowl with Forward/Reverse Lever) (☞ Figure 4-70).....	1
2	1600190	Bracket	1
3	1531975	Bracket	1
4	1529366	Capscrew	2
5	1500912	Clip	3
6	1582464	Fastener	3
7	1582465	Bracket	1
8	1510115	Capscrew	3
9	2068340	Vehicle System Manager (VSM) (8525417)	1
9	2068343	Vehicle System Manager (VSM) (8525420)	1
10	a 2058909	Wire Harness (Electronic Control Valve) (☞ Figure 4-60).....	1
10	c 2060198	Wire Harness (Electronic Control Valve) (☞ Figure 4-59).....	1
11	1529366	Capscrew	4
	b 1554902	Screw	2

FOOTNOTES:

- a** Four Function
b Not Illustrated
c Three Function

- d** → PENDING PER ECN 10532201
e PENDING PER ECN 10532201 →

COWL ELECTRICAL (FIGURE 4-34) MANUAL HYDRAULIC — WITH OPERATOR PRESENCE SYSTEM



BP080709

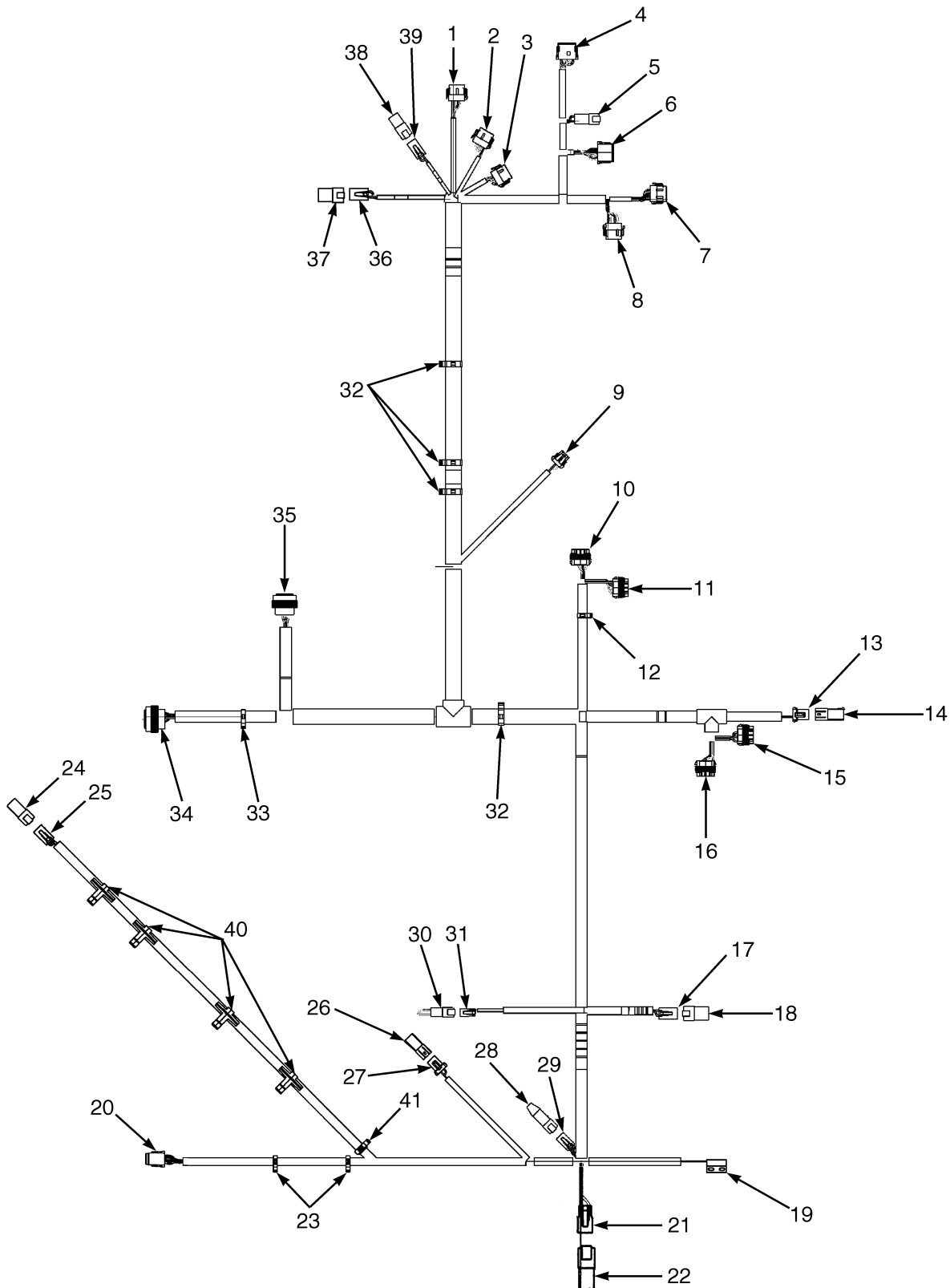
COWL ELECTRICAL

MANUAL HYDRAULIC – WITH OPERATOR PRESENCE SYSTEM

ITEM	PART NO.	DESCRIPTION	QTY
1	b 2070269	Wire Harness (Cowl With Monotrol Pedal) (☞ Figure 4-69).....	1
1	b 2084829	Wire Harness (Cowl with Forward/Reverse Lever) (☞ Figure 4-70).....	1
1	ac 2104701	Wire Harness (Cowl with Monotrol) (☞ Figure 4-72).....	1
1	c 2104702	Wire Harness (Cowl with Forward/Reverse Lever) (☞ Figure 4-71).....	1
2	1529366	Capscrew	2
3	1600190	Bracket	1
4	1500912	Clip (With Monotrol)	4
4	1500912	Clip (Without Forward/Reverse Lever)	3
4	1582464	Fastener (With Monotrol)	4
4	1582464	Fastener (Without Forward/Reverse Lever)	3
5	2068339	Vehicle System Manager (VSM) -8525416	1
5	2068342	Vehicle System Manager (VSM) -8525419	1
6	1582465	Bracket	1
7	1510115	Capscrew	3
8	1528482	Capscrew	1
8	1398062	Nut	1
9	1686719	Bracket	1
10	1562088	Clip	2

FOOTNOTES:**a** With Operator Presence System**c** PENDING PER ECN 10544503 →**b** → PENDING PER ECN 10544503

WIRE HARNESS (FIGURE 4-35) CHASSIS — MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)



HP081621

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
	2078879	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525570	Connector	1
1	1530037	Connector	1
1	1463139	Terminal	9
1	1484377	Plug	4
2		Connector Assembly (Vehicle System Manager)	1
2	1525568	Connector	1
2	1530037	Connector	1
2	1463139	Terminal	7
2	1484377	Plug	5
3		Connector Assembly (Vehicle System Manager)	1
3	1525567	Connector	1
3	1530037	Connector	1
3	1463139	Terminal	9
3	1484377	Plug	3
4		Connector Assembly (Vehicle System Manager)	1
4	1525563	Connector	1
4	1500913	Connector	1
4	1330438	Terminal (Socket)	8
4	1363886	Terminal (Socket)	4
5		Connector Assembly (To Cowl Harness)	1
5	1489655	Connector (4 Way)	1
5	1330416	Connector	1
5	1330437	Terminal (Pin)	4
6		Connector Assembly (To Cowl Harness)	1
6	1493428	Connector (12-Way)	1
6	1500913	Connector	1
6	1330438	Terminal (Socket)	9
6	1484377	Plug	3
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1529046	Connector	1
7	1463139	Terminal	3
7	1484377	Plug	9
8		Connector Assembly (Vehicle System Manager)	1
8	1525569	Connector	1
8	1529046	Connector	1
8	1463139	Terminal	9
8	1484377	Plug	3
9		Connector Assembly (Horn)	1
9	1476064	Connector	1
9	1476109	Connector Lock	1
9	1330355	Terminal	3
9	1330356	Seal	2
9	1476108	Wire Seal	1
10		Connector Assembly (Power Distribution Module)	1
10	1521184	Connector	1
10	1521188	Lock	1
10	1330281	Terminal	5

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
10	1521989	Terminal	1
10	1327164	Seal	2
10	1402888	Seal	1
10	1323579	Seal	5
11		Connector Assembly (Power Distribution Module)	1
11	1521183	Connector	1
11	1521188	Lock	1
11	1330281	Terminal	4
11	1521989	Terminal	3
11	1323579	Seal	7
11	1327164	Seal	1
12	1534828	Clip	1
13		Connector Assembly (Hydraulic Filter)	1
13	1329152	Plug	1
13	1329151	Terminal	1
13	1330281	Terminal	2
13	1402888	Seal	2
14		Connector Assembly (End Cap)	1
14	1329150	Connector	1
14	1329151	Terminal	1
14	1327164	Seal	2
15		Connector Assembly (Power Distribution Module)	1
15	1521185	Connector	1
15	1521188	Lock	1
15	1330281	Terminal	5
15	1521989	Terminal	2
15	1323579	Seal	7
15	1327164	Seal	1
16		Connector Assembly (Power Distribution Module)	1
16	1521186	Connector	1
16	1521188	Lock	1
16	1521989	Terminal	7
16	1323579	Seal	7
16	1327164	Seal	1
17		Connector Assembly (Accessory 2)	1
17	1514602	Connector	1
17	1514603	Connector	1
17	1554359	Terminal	3
17	1330439	Plug	1
18		Connector Assembly (End Cap)	1
18	1514597	Connector	1
18	1330439	Plug	4
19	1572588	Switch	1
20		Connector Assembly (To Seat Harness)	1
20	1541991	Connector	1
20	1541992	Connector	1
20	1463139	Terminal	8
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1
21	1490243	Connector	1

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
21	1330438	Terminal (Socket)	2
22	1351681	Connector (End Cap)	1
23	1402815	Clip	2
24	1351681	Connector (End Cap)	1
25		Connector Assembly (To Back-Up Alarm)	1
25	1490242	Connector	1
25	1490243	Connector	1
25	1330438	Terminal (Socket)	2
26		Connector Assembly (End Cap)	1
26	1329150	Connector	1
26	1329151	Terminal	1
26	1327164	Seal	2
27		Connector Assembly (Coolant Level)	1
27	1329152	Plug	1
27	1329151	Terminal	1
27	1330281	Terminal	2
27	1402888	Seal	2
28	1525577	Connector (With Resistor) (End Cap)	1
29		Connector Assembly (Bus Terminal)	1
29	1489656	Connector (4-Way)	1
29	1489657	Connector	1
29	1330438	Terminal (Socket)	4
30		Connector Assembly (Key Switch)	1
30	1493465	Connector	1
30	1330414	Connector (Secondary Lock)	1
30	1330437	Terminal (Pin)	2
31		Connector Assembly (Key Switch)	1
31	1490242	Connector	1
31	1490243	Connector	1
31	1330438	Terminal (Socket)	2
32	1534282	Clip	1
33	1500899	Clip	1
34		Connector Assembly (To Transmission Harness)	1
34	1502627	Connector (Socket)	1
34	1330438	Terminal (Socket)	17
34	1484377	Plug	6
35		Connector Assembly (To Engine Harness)	1
35	1531501	Connector	1
35	1330438	Terminal (Socket)	8
35	1554359	Terminal	3
35	1484377	Plug	17
35	1330439	Plug	1
36		Connector Assembly (To Lights/Cab Harness)	1
36	1514602	Connector	1
36	1514603	Connector	1
36	1554359	Terminal	4
37		End Cap Assembly	1
37	1514597	Connector	1
37	1330439	Plug	4
38		End Cap Assembly	1

WIRE HARNESS
CHASSIS – MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)

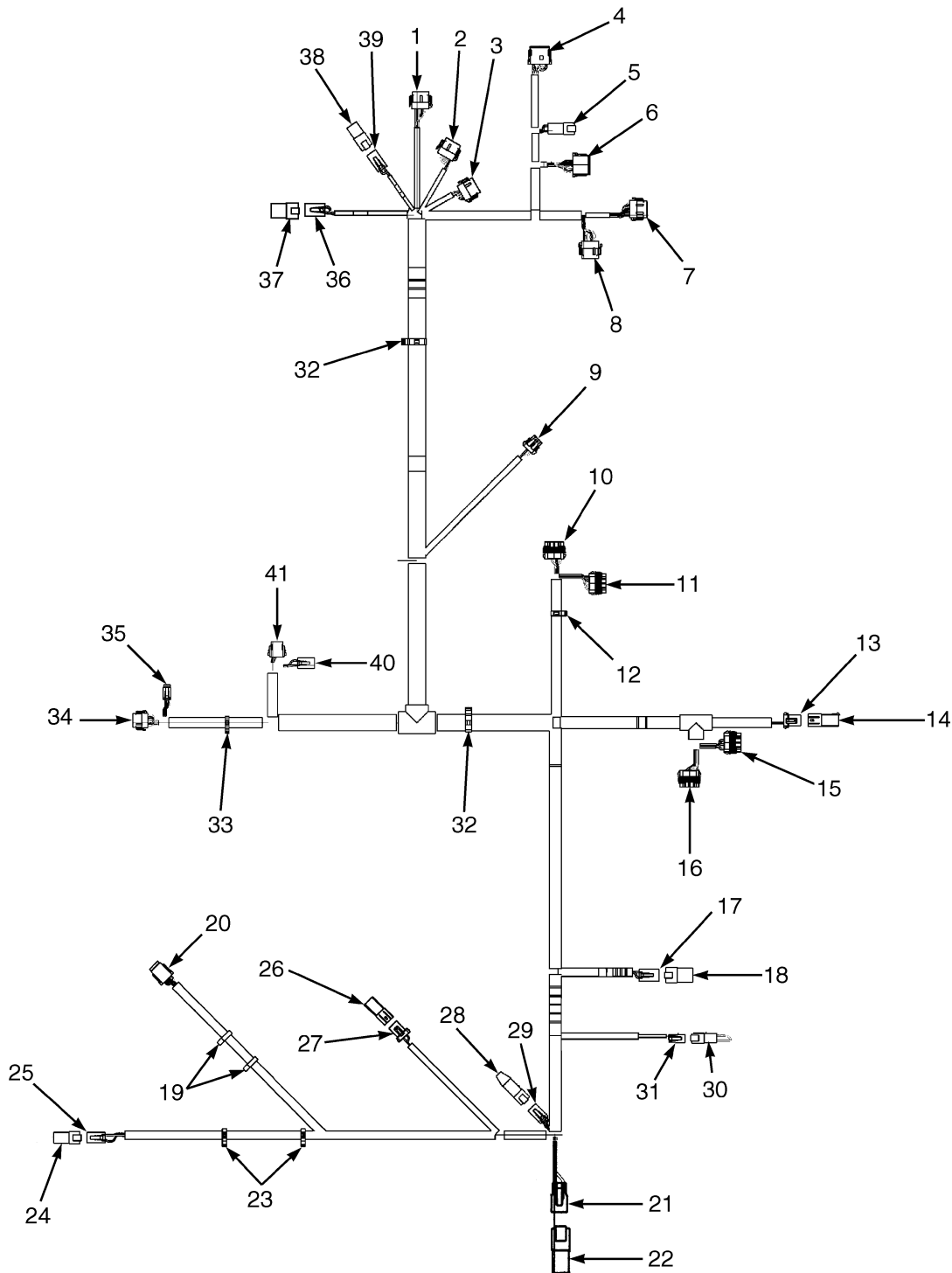
ITEM	PART NO.	DESCRIPTION	QTY
38	1480187	Connector	1
38	1330439	Plug	2
39		Connector Assembly (Accessory 1)	1
39	1545202	Connector	1
39	1546697	Connector	1
39	1554359	Terminal	2
40	1587778	Clip	4
41	1509888	Clip	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-36)

CHASSIS — MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15327E 2.2L GASOLINE ENGINE)
(→ S/N L177B15512E 2.0L LPG ENGINE) (→ S/N L177B16207E 2.2L LPG ENGINE)



BP080505

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15327E 2.2L GASOLINE ENGINE)
(→ S/N L177B15512E 2.0L LPG ENGINE) (→ S/N L177B16207E 2.2L LPG ENGINE)

ITEM	PART NO.	DESCRIPTION	QTY
	2085945	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525570	Connector	1
1	1463139	Terminal	8
1	1484377	Plug	4
1	1530037	Connector	1
2		Connector Assembly (Vehicle System Manager)	1
2	1525568	Connector	1
2	1463139	Terminal	7
2	1484377	Plug	5
2	1530037	Connector	1
3		Connector Assembly (Vehicle System Manager)	1
3	1525567	Connector	1
3	1530037	Connector	1
3	1463139	Terminal	3
3	1484377	Plug	9
4		Connector Assembly (Vehicle System Manager)	1
4	1525563	Connector	1
4	1500913	Connector	1
4	1330438	Terminal (Socket)	8
4	1363886	Terminal (Socket)	4
5		Connector Assembly (Cowl Harness)	1
5	1489655	Connector (4 Way)	1
5	1330416	Connector	1
5	1330437	Terminal (Pin)	4
6		Connector Assembly (Cowl Harness)	1
6	1493428	Connector (12-Way)	1
6	1330438	Terminal (Socket)	9
6	1484377	Plug	3
6	1500913	Connector	1
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1529046	Connector	1
7	1463139	Terminal	9
7	1484377	Plug	3
8		Connector Assembly (Vehicle System Manager)	1
8	1525569	Connector	1
8	1529046	Connector	1
8	1463139	Terminal	9
8	1484377	Plug	3
9		Connector Assembly (Horn)	1
9	1476064	Connector	1
9	1476109	Connector Lock	1
9	1330356	Seal	2
9	1330355	Terminal	3
9	1476108	Wire Seal	1
10		Connector Assembly (Power Distribution Module)	1
10	1521184	Connector	1
10	1521188	Lock	1

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15327E 2.2L GASOLINE ENGINE)
(→ S/N L177B15512E 2.0L LPG ENGINE) (→ S/N L177B16207E 2.2L LPG ENGINE)

ITEM	PART NO.	DESCRIPTION	QTY
10	1323579	Seal	5
10	1327164	Seal	2
10	1330281	Terminal	5
10	1521989	Terminal	1
10	1402888	Seal	1
11		Connector Assembly (Power Distribution Module)	1
11	1521183	Connector	1
11	1521188	Lock	1
11	1323579	Seal	7
11	1327164	Seal	1
11	1330281	Terminal	4
11	1521989	Terminal	3
12	1534828	Clip	1
13		Connector Assembly (Hydraulic Filter)	1
13	1329152	Plug	1
13	1329151	Terminal	1
13	1330281	Terminal	2
13	1402888	Seal	2
14		Connector Assembly (End Cap)	1
14	1329150	Connector	1
14	1327164	Seal	2
14	1329151	Terminal	1
15		Connector Assembly (Power Distribution Module)	1
15	1521185	Connector	1
15	1521188	Lock	1
15	1323579	Seal	7
15	1327164	Seal	1
15	1330281	Terminal	5
15	1521989	Terminal	2
16		Connector Assembly (Power Distribution Module)	1
16	1521186	Connector	1
16	1521188	Lock	1
16	1323579	Seal	7
16	1327164	Seal	1
16	1521989	Terminal	7
17		Connector Assembly (Accessory 2)	1
17	1514602	Connector	1
17	1514603	Connector	1
17	1554359	Terminal	4
18		Connector Assembly (End Cap)	1
18	1514597	Connector	1
18	1330439	Plug	4
19	1402815	Clip	4
20		Connector Assembly (Back-Up Alarm)	1
20	1490242	Connector	1
20	1402813	Clip	1
20	1330438	Terminal (Socket)	2
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15327E 2.2L GASOLINE ENGINE)
(→ S/N L177B15512E 2.0L LPG ENGINE) (→ S/N L177B16207E 2.2L LPG ENGINE)

ITEM	PART NO.	DESCRIPTION	QTY
21	1402813	Clip	1
21	1330438	Terminal (Socket)	2
22	1351681	Connector (End Cap)	1
23	1509888	Clip	2
24	1351681	Connector (End Cap)	1
25		Connector Assembly (Seat Harness)	1
25	1541991	Connector	1
25	1541992	Connector	1
25	1463139	Terminal	8
26		Connector (End Cap)	1
26	1329150	Connector	1
26	1329151	Terminal	1
26	1327164	Seal	2
27		Connector (Coolant Level)	1
27	1329152	Plug	1
27	1329151	Terminal	1
27	1330281	Terminal	2
27	1402888	Seal	2
28	1525577	Connector (With Resistor) (End Cap)	1
29		Connector Assembly (Bus Terminal)	1
29	1489656	Connector (4-Way)	1
29	1489657	Connector	1
29	1330438	Terminal (Socket)	4
30		Connector Assembly (Keyswitch)	1
30	1490242	Connector (End Cap)	1
30	1402813	Clip	1
30	1330438	Terminal (Socket)	2
31		Connector Assembly (Keyswitch)	1
31	1493465	Connector	1
31	1330414	Connector (Secondary Lock)	1
31	1330437	Terminal (Pin)	2
32	1534282	Clip	1
33	1500899	Clip	3
34		Connector Assembly (Transmission Harness)	1
34	1525567	Connector	1
34	1529046	Connector	1
34	1484377	Plug	1
34	1463139	Terminal	11
35		Connector Assembly (Transmission Harness)	1
35	1531973	Connector	1
35	1531974	Connector	1
35	1463139	Terminal	6
36		Connector Assembly (Lights/Cab Harness)	1
36	1514602	Connector	1
36	1514603	Connector	1
36	1554359	Terminal	4
37		Connector Assembly (End Cap)	1
37	1514597	Connector	1
37	1330439	Plug	4

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15327E 2.2L GASOLINE ENGINE)
(→ S/N L177B15512E 2.0L LPG ENGINE) (→ S/N L177B16207E 2.2L LPG ENGINE)

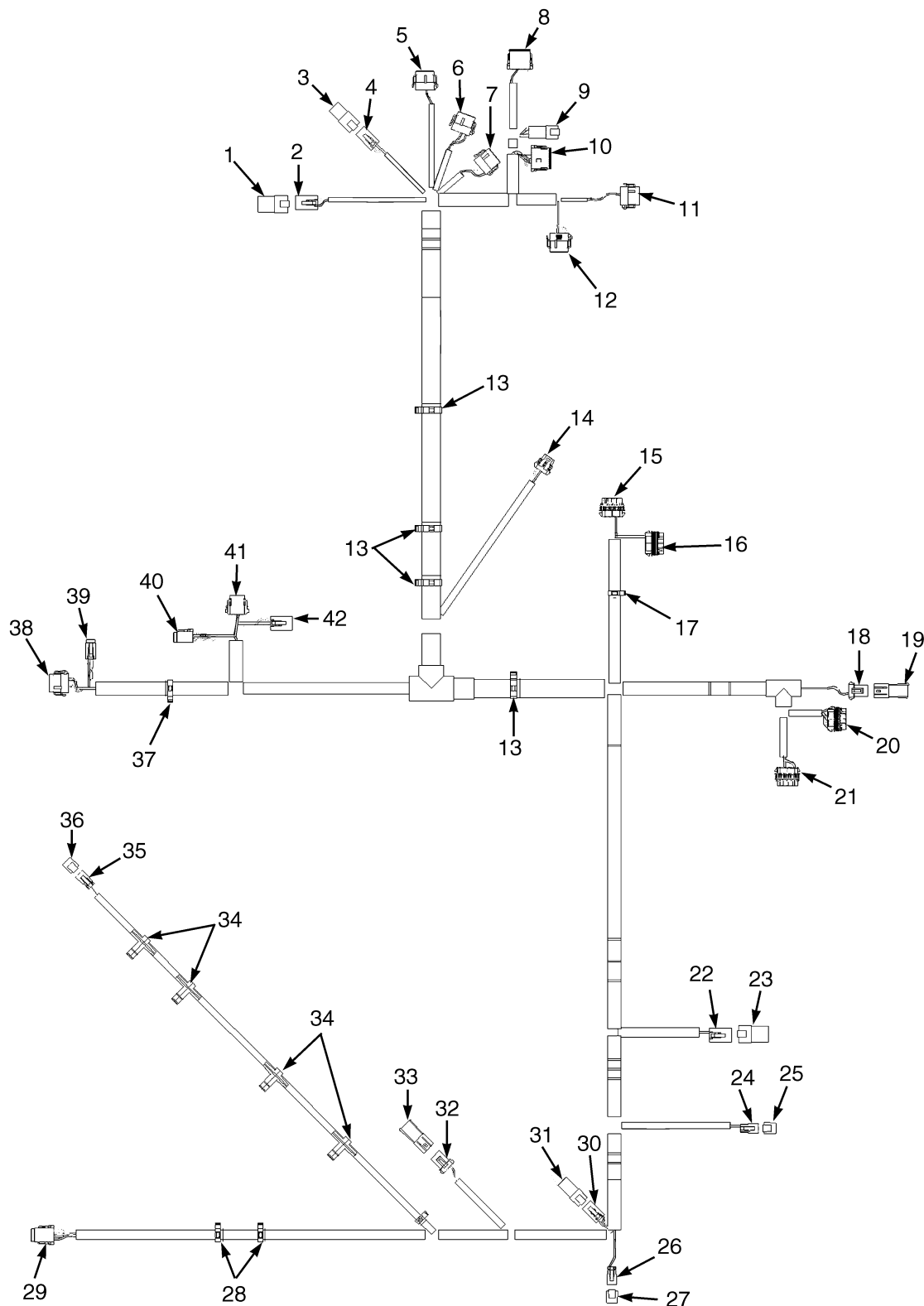
ITEM	PART NO.	DESCRIPTION	QTY
38		Connector Assembly (End Cap)	1
38	1480187	Connector	1
38	1330439	Plug	2
39		Connector Assembly (Accessory 1)	1
39	1545202	Connector	1
39	1554359	Terminal	2
39	1546697	Connector	1
40		Connector Assembly (Engine Harness)	1
40	1514602	Connector	1
40	1514603	Connector	1
40	1330439	Plug	12
40	1554359	Terminal	12
41		Connector Assembly (Engine Harness)	1
41	1502625	Connector	1
41	1502626	Connector	1
41	1330438	Terminal (Socket)	8

NOTES

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WIRE HARNESS (FIGURE 4-37)

CHASSIS — MAZDA 2.0L AND 2.2L (S/N L177B15327E ↔ 10/2008 (2.2L GASOLINE ENGINE))
(S/N L177B16207E ↔ 10/2008 (2.2L LPG ENGINE)) (S/N L177B15512E ↔ 10/2008 (2.0L LPG ENGINE))



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WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B15327E ↔ 10/2008 (2.2L GASOLINE ENGINE))
(S/N L177B16207E ↔ 10/2008 (2.2L LPG ENGINE)) (S/N L177B15512E ↔ 10/2008 (2.0L LPG ENGINE))

ITEM	PART NO.	DESCRIPTION	QTY
	2090054	Wire Harness (Chassis)	1
1		End Cap Assembly	1
1	1514597	Connector	1
1	1554359	Terminal	4
2		Connector Assembly (Lights And Cab Harness)	1
2	1514602	Connector	1
2	1330439	Plug	4
2	1514603	Connector	1
3		End Cap Assembly	1
3	1480187	Connector	1
3	1330439	Plug	2
4		Connector Assembly (ACC 1)	1
4	1545202	Connector	1
4	1546697	Connector	1
4	1554359	Terminal	2
5		Connector Assembly (VSM)	1
5	1525570	Connector	1
5	1530037	Connector	1
5	1463139	Terminal	8
5	1484377	Plug	4
6		Connector Assembly (VSM)	1
6	1525568	Connector	1
6	1530037	Connector	1
6	1463139	Terminal	7
6	1484377	Plug	5
7		Connector Assembly (VSM)	1
7	1525567	Connector	1
7	1530037	Connector	1
7	1463139	Terminal	9
7	1484377	Plug	3
8		Connector Assembly (VSM)	1
8	1525563	Connector	1
8	1500913	Connector	1
8	1330438	Terminal (Socket)	8
8	1363886	Terminal (Socket)	4
9		Connector Assembly (Cowl Harness)	1
9	1489655	Connector (4 Way)	1
9	1330416	Connector	1
9	1330437	Terminal (Pin)	4
10		Connector Assembly (Cowl Harness)	1
10	1493428	Connector (12-Way)	1
10	1500913	Connector	1
10	1330438	Terminal (Socket)	9
10	1484377	Plug	3
11		Connector Assembly (VSM)	1
11	1525567	Connector	1
11	1529046	Connector	1
11	1463139	Terminal	3
11	1484377	Plug	9

WIRE HARNESS

CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B15327E ↔ 10/2008 (2.2L GASOLINE ENGINE))
(S/N L177B16207E ↔ 10/2008 (2.2L LPG ENGINE)) (S/N L177B15512E ↔ 10/2008 (2.0L LPG ENGINE))

ITEM	PART NO.	DESCRIPTION	QTY
12		Connector Assembly (Voltage Switch)	1
12	1525569	Connector	1
12	1529046	Connector	1
12	1463139	Terminal	3
12	1484377	Plug	9
13	1534282	Clip	1
14		Connector Assembly (Horn)	1
14	1476064	Connector	1
14	1476109	Connector Lock	1
14	1330356	Seal	2
14	1330355	Terminal	3
14	1476108	Wire Seal	1
15		Connector Assembly (PDM)	1
15	1521184	Connector	1
15	1521188	Lock	1
15	1323579	Seal	5
15	1327164	Seal	2
15	1330281	Terminal	5
15	1521989	Terminal	1
15	1402888	Seal	1
16		Connector Assembly (PDM)	1
16	1521183	Connector	1
16	1521188	Lock	1
16	1323579	Seal	7
16	1327164	Seal	1
16	1330281	Terminal	4
16	1521989	Terminal	3
17	1534828	Clip	1
18		Connector Assembly (Hydraulic Filter)	1
18	1329152	Plug	1
18	1329151	Terminal	1
18	1330281	Terminal	2
18	1402888	Seal	2
19		End Cap Assembly	1
19	1329150	Connector	1
19	1329151	Terminal	1
19	1327164	Seal	2
20		Connector Assembly (PDM)	1
20	1521185	Connector	1
20	1521188	Lock	1
20	1323579	Seal	7
20	1327164	Seal	1
20	1330281	Terminal	5
20	1521989	Terminal	2
21		Connector Assembly (PDM)	1
21	1521186	Connector	1
21	1521188	Lock	1
21	1323579	Seal	7
21	1327164	Seal	1

WIRE HARNESS

**CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B15327E ↔ 10/2008 (2.2L GASOLINE ENGINE))
(S/N L177B16207E ↔ 10/2008 (2.2L LPG ENGINE)) (S/N L177B15512E ↔ 10/2008 (2.0L LPG ENGINE))**

ITEM	PART NO.	DESCRIPTION	QTY
21	1521989	Terminal	7
22		Connector Assembly (ACC 2)	1
22	1514602	Connector	1
22	1514603	Connector	1
22	1330438	Terminal (Socket)	1
22	1554359	Terminal	3
23		End Cap Assembly	1
23	1514597	Connector	1
23	1330438	Terminal (Socket)	4
24		End Cap Assembly	1
24	1626727	Connector	1
25		Connector Assembly (Hood And Key Switch)	1
25	1490242	Connector	1
25	1490243	Connector	1
25	1330438	Terminal (Socket)	2
26		Connector Assembly (Alternate Horn Button)	1
26	1490242	Connector	1
26	1490243	Connector	1
26	1330438	Terminal (Socket)	2
27		End Cap Assembly	1
27	1626727	Connector	1
28	1509888	Clip	2
29		Connector Assembly (Seat Harness)	1
29	1541991	Connector	1
29	1541992	Connector	1
29	1463139	Terminal	8
30		Connector Assembly (Bus Terminal 2)	1
30	1489656	Connector (4-Way)	1
30	1489657	Connector	1
30	1330438	Terminal (Socket)	4
31		End Cap Assembly	1
31	1525577	Connector (With Resistor)	1
32		Connector Assembly (Coolant Level)	1
32	1329152	Plug	1
32	1329151	Terminal	1
32	1330281	Terminal	2
32	1402888	Seal	2
33		End Cap Assembly	1
33	1329150	Connector	1
33	1329151	Terminal	1
33	1327164	Seal	2
34	1402815	Clip	4
35		Connector Assembly (Back-Up Alarm)	1
35	1490242	Connector	1
35	1490243	Connector	1
35	1330438	Terminal (Socket)	2
36		End Cap Assembly	1
36	1626727	Connector	1
37	1500899	Clip	1

WIRE HARNESS

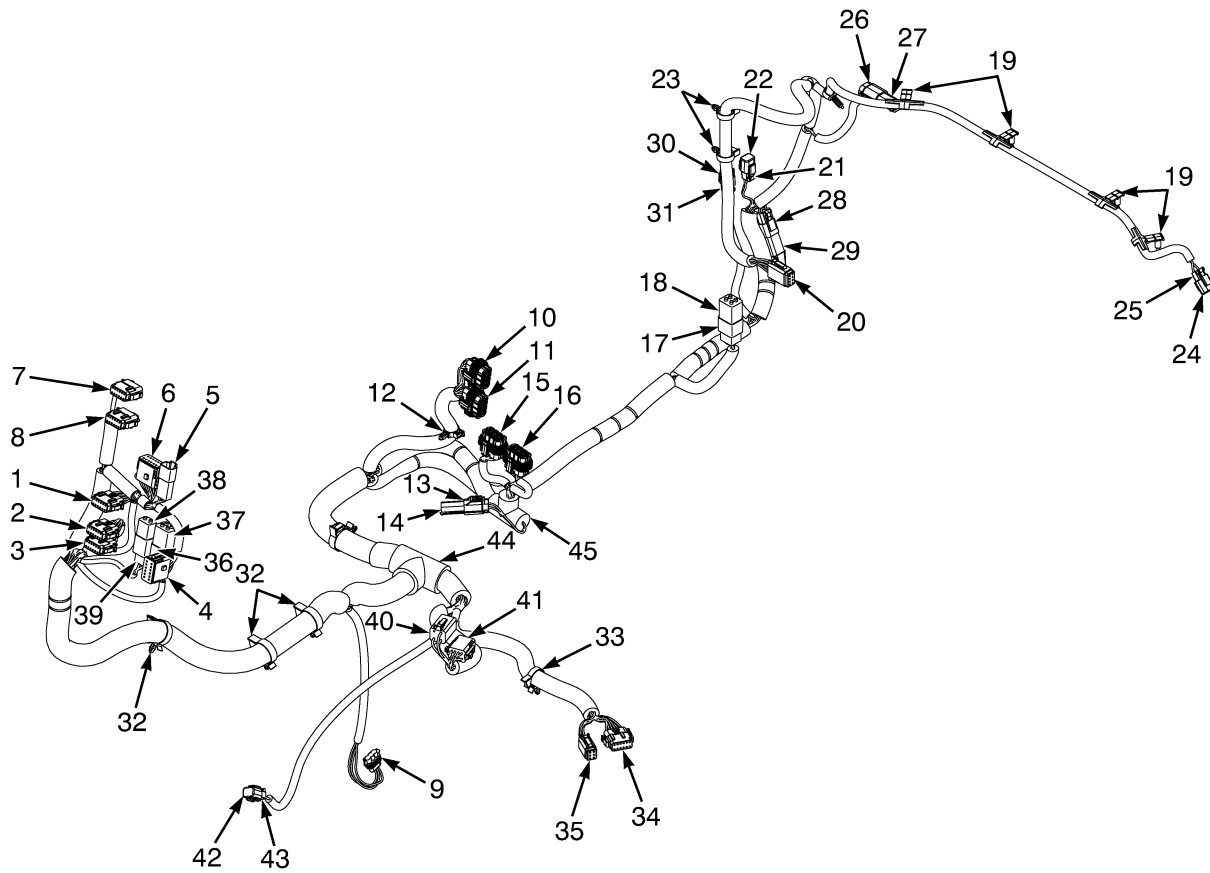
CHASSIS – MAZDA 2.0L AND 2.2L (S/N L177B15327E ↔ 10/2008 (2.2L GASOLINE ENGINE))
(S/N L177B16207E ↔ 10/2008 (2.2L LPG ENGINE)) (S/N L177B15512E ↔ 10/2008 (2.0L LPG ENGINE))

ITEM	PART NO.	DESCRIPTION	QTY
38		Connector Assembly (Transmission Harness)	1
38	1525567	Connector	1
38	1476109	Connector Lock	1
38	1463139	Terminal	11
38	1484377	Plug	1
39		Connector Assembly (Transmission Harness)	1
39	1531973	Connector	1
39	1531974	Connector	1
39	1463139	Terminal	6
40		Connector Assembly (Engine Harness)	1
40	1531973	Connector	1
40	1531974	Connector	1
40	1463139	Terminal	6
41		Connector Assembly (Engine Harness)	1
41	1502625	Connector	1
41	1502626	Connector	1
41	1330438	Terminal (Socket)	8
42		Connector Assembly (Engine Harness)	1
42	1514602	Connector	1
42	1514603	Connector	1
42	1330439	Plug	1
42	1554359	Terminal	3

NOTES

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WIRE HARNESS (FIGURE 4-38) RH CHASSIS — MAZDA (10/2008 →)



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WIRE HARNESS

RH CHASSIS – MAZDA (10/2008 →)

ITEM	PART NO.	DESCRIPTION	QTY
	2108124	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525570	Connector	1
1	1463139	Terminal	8
1	1484377	Plug	4
1	1530037	Connector (Secondary Lock)	1
2		Connector Assembly (Vehicle System Manager)	1
2	1525568	Connector	1
2	1463139	Terminal	1
2	1484377	Plug	5
2	1530037	Connector (Secondary Lock)	1
3		Connector Assembly (Vehicle System Manager)	1
3	1525567	Connector	1
3	1463139	Terminal	9
3	1484377	Plug	3
3	1530037	Connector (Secondary Lock)	1
4		Connector Assembly (Vehicle System Manager)	1
4	1525563	Connector	1
4	1363886	Terminal (Socket)	4
4	1330438	Terminal (Socket)	8
4	1500913	Connector (Secondary Lock)	1
5		Connector Assembly (Cowl Harness)	1
5	1489655	Connector (4 Way)	1
5	1330437	Terminal (Pin)	4
5	1330416	Connector (Secondary Lock)	1
6		Connector Assembly (Cowl Harness)	1
6	1493428	Connector (12-Way)	1
6	1330438	Terminal (Socket)	10
6	1484377	Plug	1
6	1500913	Connector (Secondary Lock)	1
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1484377	Plug	9
7	1463139	Terminal	3
7	1529046	Connector (Secondary Lock)	1
8		Connector Assembly (Vehicle System Manager)	1
8	1525569	Connector	1
8	1463139	Terminal	3
8	1484377	Plug	9
8	1529046	Connector (Secondary Lock)	1
9		Connector Assembly (Horn)	1
9	1476064	Connector	1
9	1330355	Terminal	3
9	1330356	Seal	2
9	1476108	Wire Seal	1
9	1476109	Connector Lock (Secondary Lock)	1
10		Connector Assembly (Power Distribution Module)	1
10	1521184	Connector	1
10	1327164	Seal	1
10	1330281	Terminal	6

WIRE HARNESS

RH CHASSIS – MAZDA (10/2008 →)

ITEM	PART NO.	DESCRIPTION	QTY
10	1521989	Terminal	1
10	1323579	Seal	5
10	1402888	Seal	2
10	1521188	Lock (Secondary Lock)	1
11		Connector Assembly (Power Distribution Module)	1
11	1521183	Connector	1
11	1521989	Terminal	1
11	1330281	Terminal	4
11	1327164	Seal	1
11	1323579	Seal	7
11	1521188	Lock (Secondary Lock)	1
12	1534828	Clip	1
13		Connector Assembly (Hydraulic Filter)	1
13	1329152	Plug	1
13	1330281	Terminal	2
13	1402888	Seal	2
13	1329151	Terminal (Secondary Lock)	1
14		Connector Assembly (End Cap)	1
14	1329150	Connector	1
14	1327164	Seal	2
14	1329151	Terminal (Secondary Lock)	1
15		Connector Assembly (Power Distribution Module)	1
15	1521185	Connector	1
15	1330281	Terminal	5
15	1521989	Terminal	2
15	1327164	Seal	1
15	1323579	Seal	7
15	1327164	Seal	1
15	1521188	Lock (Secondary Lock)	1
16		Connector Assembly (Power Distribution Module)	1
16	1521186	Connector	1
16	1521989	Terminal	7
16	1327164	Seal	1
16	1323579	Seal	7
16	1521188	Lock (Secondary Lock)	1
17		Connector Assembly (Accessory 2)	1
17	1514602	Connector	1
17	1554359	Terminal	3
17	1330439	Plug	1
17	1514603	Connector (Secondary Lock)	1
18		Connector Assembly (End Cap)	1
18	1514597	Connector	1
18	1330439	Plug	4
19	1587778	Clip	4
20		Connector Assembly (Seat Harness)	1
20	1541991	Connector	1
20	1463139	Terminal	8
20	1541992	Connector (Secondary Lock)	1
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1

WIRE HARNESS
RH CHASSIS – MAZDA (10/2008 →)

ITEM	PART NO.	DESCRIPTION	QTY
21	1330438	Terminal (Socket)	2
21	1490243	Connector (Secondary Lock)	1
22	1626727	Connector (End Cap)	1
23	1509888	Clip	2
24	1626727	Connector (End Cap)	1
25		Connector Assembly (Back-Up Alarm)	1
25	1490242	Connector	1
25	1330438	Terminal (Socket)	2
25	1490243	Connector (Secondary Lock)	1
26		Connector Assembly (Coolant Level)	1
26	1329152	Plug	1
26	1330281	Terminal	2
26	1402888	Seal	2
26	1329151	Terminal (Secondary Lock)	1
27		Connector Assembly (End Cap)	1
27	1493428	Connector (12-Way)	1
27	1327164	Seal	2
27	1329151	Terminal (Secondary Lock)	1
28		Connector Assembly (Bus Terminal)	1
28	1489656	Connector (4-Way)	1
28	1330438	Terminal (Socket)	4
28	1489657	Connector (Secondary Lock)	1
29	1531973	Connector (End Cap)	1
30	1626727	Connector (End Cap)	1
31		Connector Assembly (Hood Switch/Key Switch)	1
31	1490242	Connector	1
31	1330438	Terminal (Socket)	1
31	1490243	Connector (Secondary Lock)	1
32	1534282	Clip	4
33	1500899	Clip	1
34		Connector Assembly (Transmission Harness)	1
34	1525567	Connector	1
34	1463139	Terminal	11
34	1484377	Plug	1
34	1529046	Connector (Secondary Lock)	1
35		Connector Assembly (Transmission Harness)	1
35	1531973	Connector	1
35	1463139	Terminal	6
35	1531974	Connector (Secondary Lock)	1
36		Connector Assembly (Lights/Cab Harness)	1
36	1514602	Connector	1
36	1554359	Terminal	4
36	1514603	Connector (Secondary Lock)	1
37		Connector Assembly (End Cap)	1
37	1514597	Connector	1
37	1330439	Plug	4
38		Connector Assembly (End Cap)	1
38	1480187	Connector	1
38	1330439	Plug	2
39		Connector Assembly (Accessory 1)	1

WIRE HARNESS

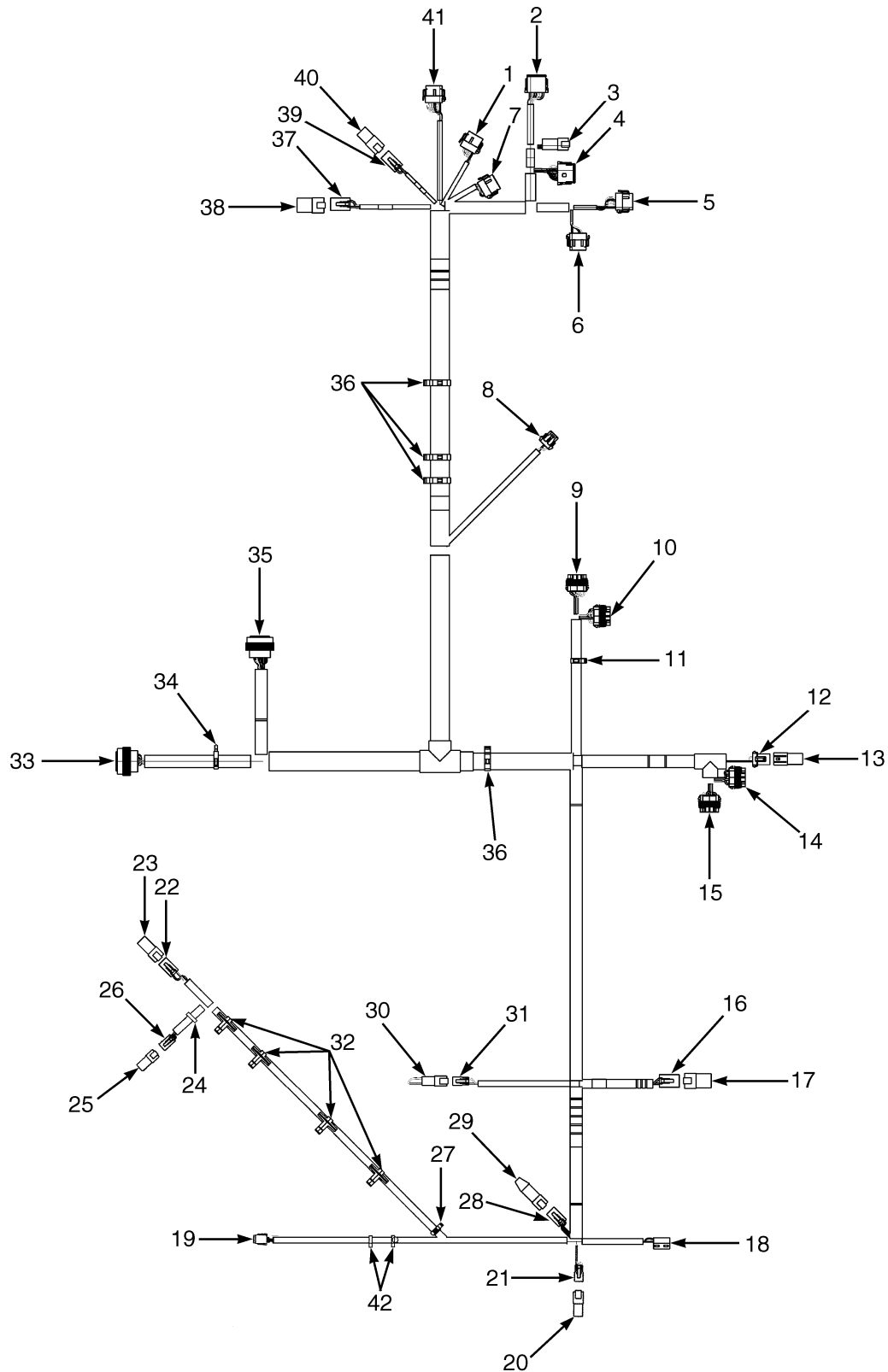
RH CHASSIS – MAZDA (10/2008 →)

ITEM	PART NO.	DESCRIPTION	QTY
39	1545202	Connector	1
39	1554359	Terminal	2
39	1546697	Connector	1
40		Connector Assembly (Engine Harness)	1
40	1514602	Connector	1
40	1554359	Terminal	3
40	1330439	Plug	1
40	1514603	Connector (Secondary Lock)	1
41		Connector Assembly (To Engine Harness)	1
41	1502625	Connector	1
41	1330438	Terminal (Socket)	8
41	1502626	Connector (Secondary Lock)	1
42	1626727	Connector (End Cap)	1
43		Connector Assembly (Hydraulic Solenoid)	1
43	1490242	Connector	1
43	1330438	Terminal (Socket)	1
43	1490243	Connector	1
44	1531492	T-Fitting	1
45	1531490	Conduit	1
46		Connector Assembly (To Engine Harness)	1
46	1541991	Connector	1
46	1463139	Terminal	8
46	1541992	Connector (Secondary Lock)	1
47	1509888	Clip	2

NOTES

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WIRE HARNESS (FIGURE 4-39) CHASSIS — GM 2.4L (→ S/N L177B11117D)



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WIRE HARNESS

CHASSIS – GM 2.4L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
	2078878	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1530037	Connector	1
1	1463139	Terminal	7
1	1484377	Plug	5
2		Connector Assembly (Vehicle System Manager)	1
2	1525563	Connector	1
2	1500913	Connector	1
2	1330438	Terminal (Socket)	8
2	1363886	Terminal (Socket)	4
3		Connector Assembly (To Cowl Harness)	1
3	1489655	Connector (4 Way)	1
3	1330416	Connector	1
3	1330437	Terminal (Pin)	4
4		Connector Assembly (To Cowl Harness)	1
4	1493428	Connector (12-Way)	1
4	1500913	Connector	1
4	1330438	Terminal (Socket)	9
4	1484377	Plug	3
5		Connector Assembly (Vehicle System Manager)	1
5	1525567	Connector	1
5	1529046	Connector	1
5	1463139	Terminal	3
5	1484377	Plug	9
6		Connector Assembly (Vehicle System Manager)	1
6	1525569	Connector	1
6	1529046	Connector	1
6	1463139	Terminal	3
6	1484377	Plug	9
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1530037	Connector	1
7	1463139	Terminal	9
7	1484377	Plug	3
8		Connector Assembly (Horn)	1
8	1476064	Connector	1
8	1476109	Connector Lock	1
8	1330355	Terminal	3
8	1330356	Seal	2
8	1476108	Wire Seal	1
9		Connector Assembly (Power Distribution Module)	1
9	1521184	Connector	1
9	1521188	Lock	1
9	1330281	Terminal	6
9	1521989	Terminal	1
9	1323579	Seal	5
9	1402888	Seal	2
9	1327164	Seal	1
10		Connector Assembly (Power Distribution Module)	1

WIRE HARNESS

CHASSIS – GM 2.4L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
10	1521183	Connector	1
10	1521188	Lock	1
10	1330281	Terminal	4
10	1521989	Terminal	3
10	1323579	Seal	7
10	1327164	Seal	1
11	1534828	Clip	1
12		Connector Assembly (Hydraulic Filter)	1
12	1329152	Plug	1
12	1329151	Terminal	1
12	1330281	Terminal	2
12	1402888	Seal	2
13		Connector Assembly (End Cap)	1
13	1329150	Connector	1
13	1329151	Terminal	1
13	1327164	Seal	2
14		Connector Assembly (Power Distribution Module)	1
14	1521185	Connector	1
14	1521188	Lock	1
14	1330281	Terminal	5
14	1521989	Terminal	3
14	1323579	Seal	8
15		Connector Assembly (Power Distribution Module)	1
15	1521186	Connector	1
15	1521188	Lock	1
15	1521989	Terminal	7
15	1323579	Seal	7
15	1327164	Seal	1
16		Connector Assembly (Accessory 2)	1
16	1514602	Connector	1
16	1514603	Connector	1
16	1554359	Terminal	3
16	1330439	Plug	1
17		Connector Assembly (End Cap)	1
17	1514597	Connector	1
17	1330439	Plug	4
18	1572588	Switch	1
19		Connector Assembly (To Seat Harness)	1
19	1541991	Connector	1
19	1541992	Connector	1
19	1463139	Terminal	8
20	1351681	Connector (End Cap)	1
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1
21	1490243	Connector	1
21	1330438	Terminal (Socket)	2
22		Connector Assembly (To Back-Up Alarm Harness)	1
22	1490242	Connector	1
22	1490243	Connector	1
22	1330438	Terminal (Socket)	2

WIRE HARNESS

CHASSIS – GM 2.4L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
23	1351681	Connector (End Cap)	1
24	1509888	Clip	1
25		Connector Assembly (End Cap)	1
25	1329150	Connector	1
25	1329151	Terminal	1
25	1327164	Seal	2
26		Connector Assembly (Coolant Level)	1
26	1329152	Plug	1
26	1329151	Terminal	1
26	1330281	Terminal	2
26	1402888	Seal	2
27	1509888	Clip	1
28		Connector Assembly (Bus Terminal 2)	1
28	1489656	Connector (4-Way)	1
28	1489657	Connector	1
28	1330438	Terminal (Socket)	4
29	1525577	Connector (With Resistor) (End Cap)	1
30		Connector Assembly (Key Switch)	1
30	1493465	Connector	1
30	1330414	Connector (Secondary Lock)	1
30	1330437	Terminal (Pin)	2
31		Connector Assembly (Key Switch)	1
31	1490242	Connector	1
31	1490243	Connector	1
31	1330438	Terminal (Socket)	2
32	1587778	Clip	4
33		Connector Assembly (To Transmission Harness)	1
33	1502627	Connector (Socket)	1
33	1330438	Terminal (Socket)	17
33	1484377	Plug	6
34	1500899	Clip	1
35		Connector Assembly (To Engine Harness)	1
35	1531501	Connector	1
35	1330438	Terminal (Socket)	9
35	1463139	Terminal	6
35	1554359	Terminal	4
35	1484377	Plug	10
36	1534282	Clip	4
37		Connector Assembly (To Lights/Cab Harness)	1
37	1514602	Connector	1
37	1514603	Connector	1
37	1554359	Terminal	4
38		Connector Assembly (End Cap)	1
38	1514597	Connector	1
38	1330439	Plug	4
39		Connector Assembly (Accessory 1)	1
39	1545202	Connector	1
39	1546697	Connector	1
39	1554359	Terminal	2
40		Connector Assembly (End Cap)	1

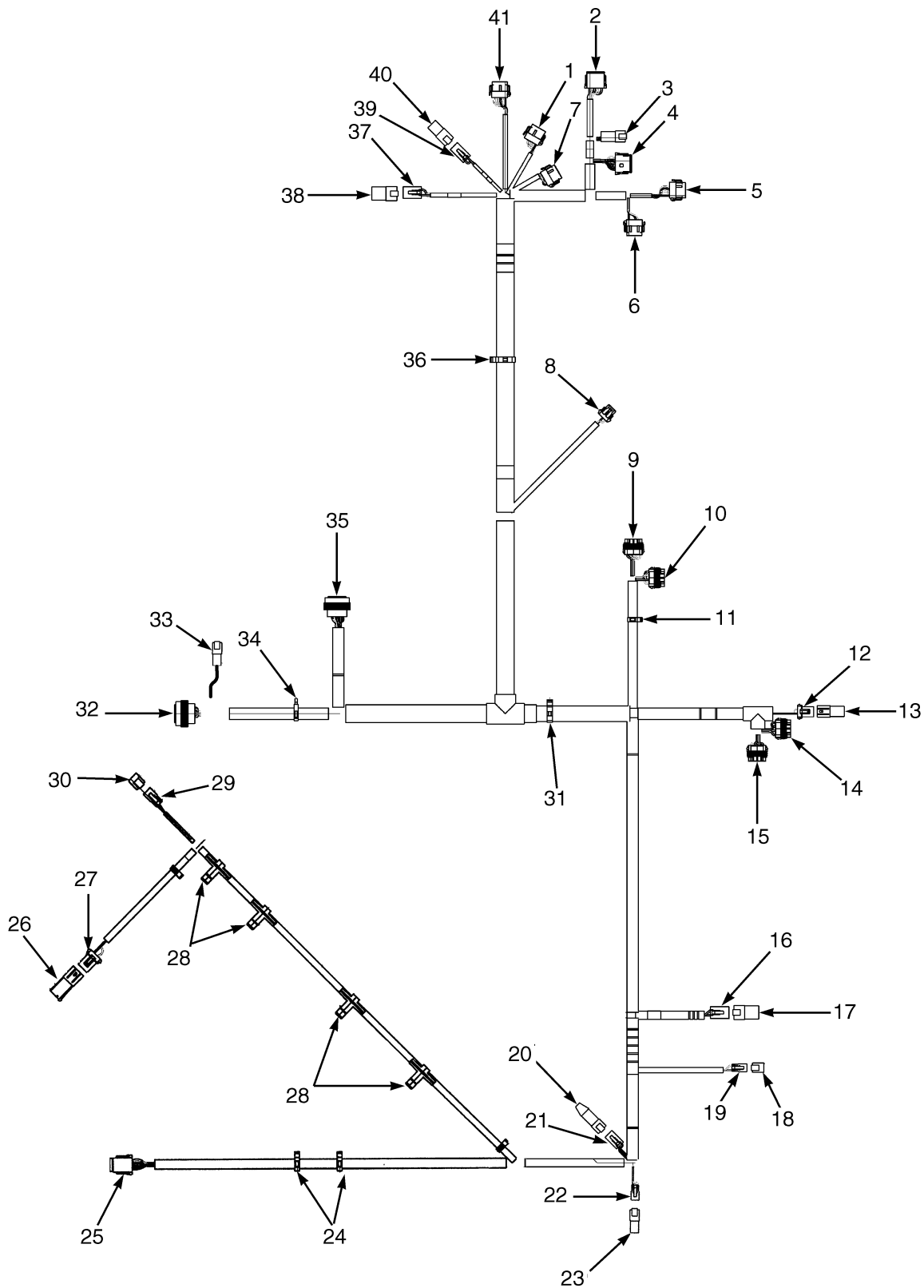
WIRE HARNESS
CHASSIS – GM 2.4L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
40	1480187	Connector	1
40	1330439	Plug	2
41		Connector Assembly (Vehicle System Manager)	1
41	1525570	Connector	1
41	1530037	Connector	1
41	1463139	Terminal	8
41	1484377	Plug	4
42	1402815	Clip	2

NOTES

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WIRE HARNESS (FIGURE 4-40) CHASSIS — GM 2.4L (S/N L177B11118D ↔ 1/2007)



BP080566

WIRE HARNESS

CHASSIS – GM 2.4L (S/N L177B11118D ↔ 1/2007)

ITEM	PART NO.	DESCRIPTION	QTY
	2085944	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1530037	Connector	1
1	1330438	Terminal (Socket)	9
1	1484377	Plug	3
2		Connector Assembly (Vehicle System Manager)	1
2	1525563	Connector	1
2	1500913	Connector	1
2	1330438	Terminal (Socket)	8
2	1363886	Terminal (Socket)	4
3		Connector Assembly (To Cowl Harness)	1
3	1489655	Connector (4 Way)	1
3	1330416	Connector	1
3	1330437	Terminal (Pin)	4
4		Connector Assembly (To Cowl Harness)	1
4	1493428	Connector (12-Way)	1
4	1500913	Connector	1
4	1330439	Plug	3
4	1484377	Plug	3
4	1330438	Terminal (Socket)	9
5		Connector Assembly (Vehicle System Manager)	1
5	1525567	Connector	1
5	1529046	Connector	1
5	1463139	Terminal	3
5	1484377	Plug	9
6		Connector Assembly (Vehicle System Manager)	1
6	1525569	Connector	1
6	1529046	Connector	1
6	1463139	Terminal	3
6	1484377	Plug	9
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1530037	Connector	1
7	1463139	Terminal	9
7	1484377	Plug	3
8		Connector Assembly (Horn)	1
8	1476064	Connector	1
8	1476109	Connector Lock	1
8	1330356	Seal	2
8	1330355	Terminal	3
8	1476108	Wire Seal	1
9		Connector Assembly (Power Distribution Module)	1
9	1521183	Connector	1
9	1521188	Lock	1
9	1323579	Seal	7
9	1327164	Seal	1
9	1330281	Terminal	4
9	1521989	Terminal	3
10		Connector Assembly (Power Distribution Module)	1

WIRE HARNESS

CHASSIS – GM 2.4L (S/N L177B11118D ↔ 1/2007)

ITEM	PART NO.	DESCRIPTION	QTY
10	1521183	Connector	1
10	1521184	Connector	1
10	1521188	Lock	1
10	1323579	Seal	7
10	1327164	Seal	1
10	1330281	Terminal	4
10	1521989	Terminal	3
10	1402888	Seal	2
11	1534828	Clip	1
12		Connector Assembly (Hydraulic Filter)	1
12	1329152	Plug	1
12	1329151	Terminal	1
12	1330281	Terminal	2
12	1402888	Seal	2
13		Connector Assembly (End Cap)	1
13	1329150	Connector	1
13	1329151	Terminal	1
13	1327164	Seal	2
14		Connector Assembly (Power Distribution Module)	1
14	1521185	Connector	1
14	1521188	Lock	1
14	1323579	Seal	8
14	1330281	Terminal	5
14	1521989	Terminal	3
15		Connector Assembly (Power Distribution Module)	1
15	1521186	Connector	1
15	1521188	Lock	1
15	1323579	Seal	7
15	1327164	Seal	1
15	1521989	Terminal	7
16		Connector Assembly (Accessory 2)	1
16	1514602	Connector	1
16	1514603	Connector	1
16	1330439	Plug	1
16	1554359	Terminal	3
17		Connector Assembly (End Cap)	1
17	1514597	Connector	1
17	1330439	Plug	4
18	1626727	Connector (End Cap)	1
19		Connector Assembly (Hood Switch)	1
19	1490242	Connector	1
19	1402813	Clip	1
19	1330438	Terminal (Socket)	2
20	1525577	Connector (With Resistor) (End Cap)	1
21		Connector Assembly (Bus Terminal 2)	1
21	1489656	Connector (4-Way)	1
21	1489657	Connector	1
21	1330438	Terminal (Socket)	4
22		Connector Assembly (Alternate Horn Button)	1
22	1490242	Connector	1

WIRE HARNESS
CHASSIS – GM 2.4L (S/N L177B11118D ↔ 1/2007)

ITEM	PART NO.	DESCRIPTION	QTY
22	1402813	Clip	1
22	1330438	Terminal (Socket)	2
23	1626727	Connector (End Cap)	1
24	1402815	Clip	2
25		Connector Assembly (To Seat Harness)	1
25	1541991	Connector	1
25	1541992	Connector	1
25	1463139	Terminal	8
26		Connector Assembly (End Cap)	1
26	1329150	Connector	1
26	1329151	Terminal	1
26	1327164	Seal	2
27		Connector Assembly (Coolant Level)	1
27	1329152	Plug	1
27	1329151	Terminal	1
27	1330281	Terminal	2
27	1402888	Seal	2
28	1509888	Clip	4
29		Connector Assembly (To Back-Up Alarm)	1
29	1490242	Connector	1
29	1402813	Clip	1
29	1330438	Terminal (Socket)	2
30	1626727	Connector (End Cap)	1
31	1534282	Clip	1
32		Connector Assembly (To Transmission Harness)	1
32	1525567	Connector	1
32	1529046	Connector	11
32	1463139	Terminal	1
33		Connector Assembly (To Transmission Harness)	1
33	1531973	Connector	1
33	1531974	Connector	1
33	1463139	Terminal	6
34	1540944	Clip	1
35		Connector Assembly (To Engine Harness)	1
35	1531501	Connector	1
35	1330438	Terminal (Socket)	1
35	1330439	Plug	1
35	1484377	Plug	11
35	1463139	Terminal	1
36	1540944	Clip	3
37		Connector Assembly (To Lights/Cab Harness)	1
37	1514602	Connector	1
37	1330439	Plug	4
37	1514603	Connector	1
37	1554359	Terminal	4
38	1514597	Connector (End Cap)	1
39		Connector Assembly (Accessory 1)	1
39	1545202	Connector	1
39	1546697	Connector	1
39	1554359	Terminal	2

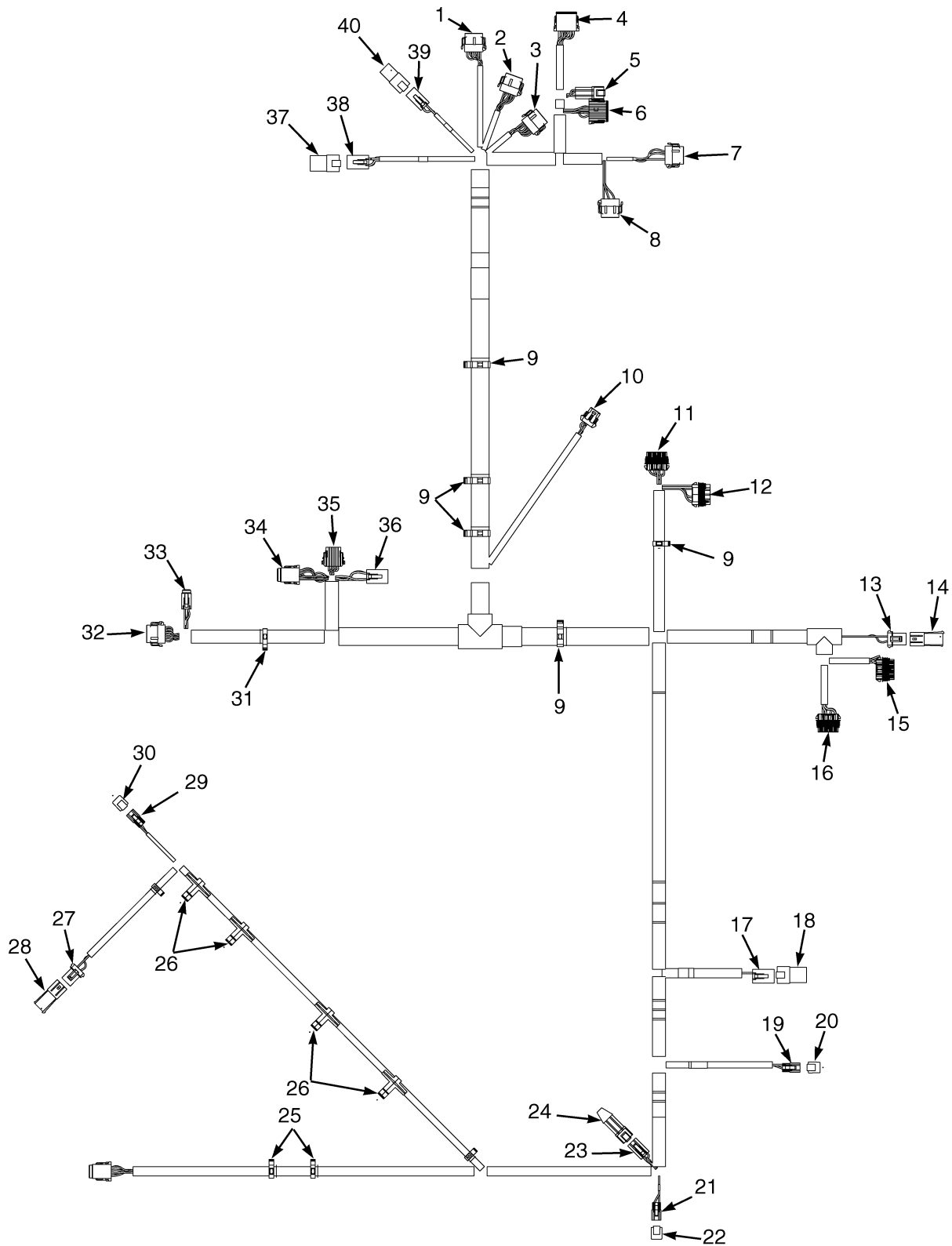
WIRE HARNESS
CHASSIS – GM 2.4L (S/N L177B11118D ↔ 1/2007)

ITEM	PART NO.	DESCRIPTION	QTY
40	1480187	Connector (End Cap)	1
40	1330439	Plug	2
41		Connector Assembly (Vehicle System Manager)	1
41	1525570	Connector	1
41	1530037	Connector	1
41	1463139	Terminal	8
41	1484377	Plug	4

NOTES

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WIRE HARNESS (FIGURE 4-41) CHASSIS — GM 2,4L (1/2007 →)



BP080569

WIRE HARNESS
CHASSIS – GM 2,4L (1/2007 →)

ITEM	PART NO.	DESCRIPTION	QTY
	2089179	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager, VSM)	1
1	1525570	Connector	1
1	1530037	Connector	1
1	1463139	Terminal	8
1	1484377	Plug	4
2		Connector Assembly (Vehicle System Manager, VSM)	1
2	1525568	Connector	1
2	1530037	Connector	1
2	1463139	Terminal	7
2	1484377	Plug	5
3		Connector Assembly (Vehicle System Manager, VSM)	1
3	1525567	Connector	1
3	1530037	Connector	1
3	1463139	Terminal	9
3	1484377	Plug	3
4		Connector Assembly (Vehicle System Manager, VSM)	1
4	1525563	Connector	1
4	1500913	Connector	1
4	1330438	Terminal (Socket)	8
4	1363886	Terminal (Socket)	4
5		Connector Assembly (Cowl Harness)	1
5	1489655	Connector (4 Way)	1
5	1330416	Connector	1
5	1330437	Terminal (Pin)	4
6		Connector Assembly (Cowl Harness)	1
6	1493428	Connector (12-Way)	1
6	1500913	Connector	1
6	1330438	Terminal (Socket)	9
6	1330439	Plug	3
7		Connector Assembly (Vehicle System Manager, VSM)	1
7	1525567	Connector	1
7	1529046	Connector	1
7	1463139	Terminal	3
7	1484377	Plug	9
8		Connector Assembly (Vehicle System Manager, VSM)	1
8	1525569	Connector	1
8	1529046	Connector	1
8	1463139	Terminal	3
8	1484377	Plug	9
9	1534282	Clip	1
10		Connector Assembly (Horn)	1
10	1476064	Connector	1
10	1476109	Connector Lock	1
10	1330356	Seal	2
10	1330355	Terminal	3
10	1476108	Wire Seal	1
11		Connector Assembly (Power Distribution Module, PDM)	1
11	1521184	Connector	1
11	1521188	Lock	1

WIRE HARNESS

CHASSIS – GM 2,4L (1/2007 →)

ITEM	PART NO.	DESCRIPTION	QTY
11	1323579	Seal	5
11	1327164	Seal	1
11	1330281	Terminal	6
11	1521989	Terminal	1
11	1402888	Seal	2
12		Connector Assembly (Power Distribution Module, PDM)	1
12	1521183	Connector	1
12	1521188	Lock	1
12	1323579	Seal	7
12	1327164	Seal	1
12	1330281	Terminal	4
12	1521989	Terminal	3
13		Connector Assembly (Hydraulic Filter)	1
13	1329152	Plug	1
13	1329151	Terminal	1
13	1330281	Terminal	2
13	1402888	Seal	2
14		End Cap	1
14	1329150	Connector	1
14	1329151	Terminal	1
14	1327164	Seal	2
15		Connector Assembly (Power Distribution Module, PDM)	1
15	1521185	Connector	1
15	1521188	Lock	1
15	1323579	Seal	8
15	1330281	Terminal	5
15	1521989	Terminal	3
16		Connector Assembly (Power Distribution Module, PDM)	1
16	1521188	Lock	1
16	1323579	Seal	7
16	1327164	Seal	1
16	1521989	Terminal	7
17		Connector Assembly (Accessory 2)	1
17	1514602	Connector	1
17	1514603	Connector	1
17	1330439	Plug	1
17	1554359	Terminal	3
18		End Cap	1
18	1514597	Connector	1
18	1330439	Plug	4
19		Connector Assembly (Hood And Key Switch)	1
19	1490242	Connector	1
19	1490243	Connector	1
19	1330438	Terminal (Socket)	2
20	1626727	Connector (End Cap)	1
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1
21	1490243	Connector	1
21	1330438	Terminal (Socket)	1
22	1626727	Connector (End Cap)	1

WIRE HARNESS
CHASSIS – GM 2,4L (1/2007 →)

ITEM	PART NO.	DESCRIPTION	QTY
23		Connector Assembly (Bus Terminal 2)	1
23	1489655	Connector (4 Way)	1
23	1489657	Connector	1
23	1330438	Terminal (Socket)	1
24	1525577	Connector (With Resistor) (End Cap)	1
25	1402815	Clip	1
26	1587778	Clip	1
27		Connector Assembly (Coolant Level)	1
27	1329152	Plug	1
27	1329151	Terminal	1
27	1330281	Terminal	2
27	1402888	Seal	2
28		End Cap	1
28	1329150	Connector	1
28	1329151	Terminal	1
28	1327164	Seal	2
29		Connector Assembly (Back-Up Alarm Harness)	1
29	1490242	Connector	1
29	1490243	Connector	1
29	1330437	Terminal (Pin)	2
30	1626727	Connector (End Cap)	1
31	1500899	Clip	1
32		Connector Assembly (Transmission Harness)	1
32	1525567	Connector	1
32	1529046	Connector	1
32	1463139	Terminal	11
32	1484377	Plug	1
33		Connector Assembly (Transmission Harness)	1
33	1493428	Connector (12-Way)	1
33	1531974	Connector	1
33	1463137	Terminal	6
34		Connector Assembly (Engine Harness)	1
34	1541991	Connector	1
34	1541992	Connector	1
34	1463139	Terminal	8
35		Connector Assembly (Engine Harness)	1
35	1502625	Connector	1
35	1502626	Connector	1
35	1330438	Terminal (Socket)	7
35	1484377	Plug	1
36		Connector Assembly (Engine Harness)	1
36	1514602	Connector	1
36	1514603	Connector	1
36	1554359	Terminal	4
37		End Cap	1
37	1514597	Connector	1
37	1330439	Plug	4
38		Connector Assembly (Lights And Cab Harness)	1
38	1514602	Connector	1
38	1514603	Connector	1

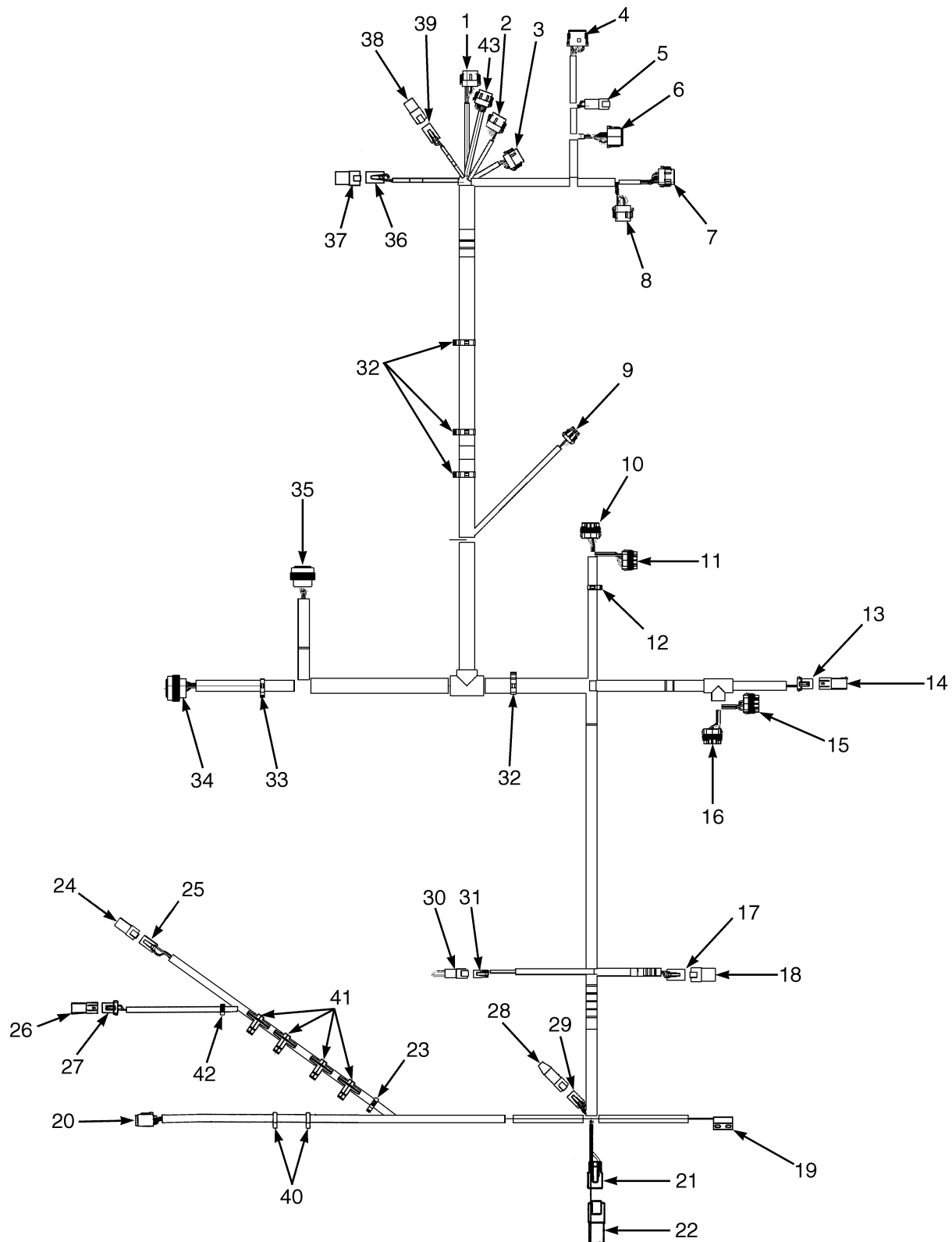
WIRE HARNESS
CHASSIS – GM 2,4L (1/2007 →)

ITEM	PART NO.	DESCRIPTION	QTY
38	1554359	Terminal	4
39		Connector Assembly (Accessories 1)	1
39	1545202	Connector	1
39	1546697	Connector	1
39	1554359	Terminal	2
40		End Cap	1
40	1480187	Connector	1
40	1330439	Plug	2

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-42) CHASSIS — YANMAR 2.6L AND 3.3L, DIESEL (→ 8/2006)



HP081619

WIRE HARNESS

CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (→ 8/2006)

ITEM	PART NO.	DESCRIPTION	QTY
	2078880	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525570	Connector	1
1	1463139	Terminal	8
1	1484377	Plug	4
1	1530037	Connector	1
2		Connector Assembly (Vehicle System Manager)	1
2	1525568	Connector	1
2	1463139	Terminal	9
2	1484377	Plug	3
2	1530037	Connector	1
3		Connector Assembly (Vehicle System Manager)	1
3	1525567	Connector	1
3	1530037	Connector	1
3	1463139	Terminal	9
3	1484377	Plug	3
4		Connector Assembly (Vehicle System Manager)	1
4	1525563	Connector	1
4	1500913	Connector	1
4	1330438	Terminal (Socket)	8
4	1363886	Terminal (Socket)	4
5		Connector Assembly (To Cowl Harness)	1
5	1489655	Connector (4 Way)	1
5	1330416	Connector	1
5	1330437	Terminal (Pin)	4
6		Connector Assembly (To Cowl Harness)	1
6	1493428	Connector (12-Way)	1
6	1330438	Terminal (Socket)	9
6	1484377	Plug	3
6	1500913	Connector	1
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1529046	Connector	1
7	1463139	Terminal	3
7	1484377	Plug	9
8		Connector Assembly (Vehicle System Manager)	1
8	1525569	Connector	1
8	1529046	Connector	1
8	1463139	Terminal	9
8	1484377	Plug	3
9		Connector Assembly (Horn)	1
9	1476064	Connector	1
9	1476109	Connector Lock	1
9	1330356	Seal	2
9	1330355	Terminal	3
9	1476108	Wire Seal	1
10		Connector Assembly (Power Distribution Module)	1
10	1521184	Connector	1
10	1521188	Lock	1
10	1323579	Seal	5

WIRE HARNESS

CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (→ 8/2006)

ITEM	PART NO.	DESCRIPTION	QTY
10	1327164	Seal	2
10	1330281	Terminal	5
10	1521989	Terminal	1
10	1402888	Seal	1
11		Connector Assembly (Power Distribution Module)	1
11	1521183	Connector	1
11	1521188	Lock	1
11	1323579	Seal	7
11	1327164	Seal	1
11	1330281	Terminal	4
11	1521989	Terminal	3
12	1534828	Clip	1
13		Connector Assembly (Hydraulic Filter)	1
13	1329152	Plug	1
13	1329151	Terminal	1
13	1330281	Terminal	2
13	1402888	Seal	2
14		Connector Assembly (End Cap)	1
14	1329150	Connector	1
14	1327164	Seal	2
14	1329151	Terminal	1
15		Connector Assembly (Power Distribution Module)	1
15	1521185	Connector	1
15	1521188	Lock	1
15	1323579	Seal	8
15	1521989	Terminal	2
15	1330281	Terminal	6
16		Connector Assembly (Power Distribution Module)	1
16	1521186	Connector	1
16	1521188	Lock	1
16	1323579	Seal	7
16	1327164	Seal	1
16	1521989	Terminal	7
17		Connector Assembly (Accessory 2)	1
17	1514602	Connector	1
17	1514603	Connector	1
17	1330439	Plug	1
17	1554359	Terminal	3
18		Connector Assembly (End Cap)	1
18	1514597	Connector	1
18	1330439	Plug	4
19	1572588	Switch	1
20		Connector Assembly (To Seat Harness)	1
20	1541991	Connector	1
20	1541992	Connector	1
20	1463139	Terminal	8
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1
21	1490243	Connector	1
21	1330438	Terminal (Socket)	2

WIRE HARNESS

CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (→ 8/2006)

ITEM	PART NO.	DESCRIPTION	QTY
22	1351681	Connector (End Cap)	1
23	1509888	Clip	1
24	1351681	Connector (End Cap)	1
25		Connector Assembly (To Back-Up Alarm)	1
25	1490242	Connector	1
25	1490243	Connector	1
25	1330438	Terminal (Socket)	2
26		Connector Assembly (End Cap)	1
26	1329150	Connector	1
26	1329151	Terminal	1
26	1327164	Seal	2
27		Connector Assembly (Coolant Level)	1
27	1329152	Plug	1
27	1329151	Terminal	1
27	1330281	Terminal	2
27	1402888	Seal	2
28	1525577	Connector (With Resistor) (End Cap)	1
29		Connector Assembly (Bus Terminal)	1
29	1489656	Connector (4-Way)	1
29	1489657	Connector	1
29	1330438	Terminal (Socket)	4
30		Connector Assembly (Key Switch)	1
30	1493465	Connector	1
30	1330414	Connector (Secondary Lock)	1
30	1330437	Terminal (Pin)	2
31		Connector Assembly (Key Switch)	1
31	1490242	Connector	1
31	1490243	Connector	1
31	1330438	Terminal (Socket)	2
32	1534282	Clip	4
33	1500899	Clip	1
34		Connector Assembly (To Transmission Harness)	1
34	1502627	Connector (Socket)	1
34	1330438	Terminal (Socket)	17
34	1484377	Plug	6
35		Connector Assembly (To Engine Harness)	1
35	1531501	Connector	1
35	1330438	Terminal (Socket)	13
35	1330439	Plug	1
35	1484377	Plug	6
35	1554359	Terminal	3
35	1463139	Terminal	6
36		Connector Assembly (To Lights/Cab Harness)	1
36	1514602	Connector	1
36	1514603	Connector	1
36	1554359	Terminal	4
37		End Cap Assembly	1
37	1514597	Connector	1
37	1330439	Plug	4
38		End Cap Assembly	1

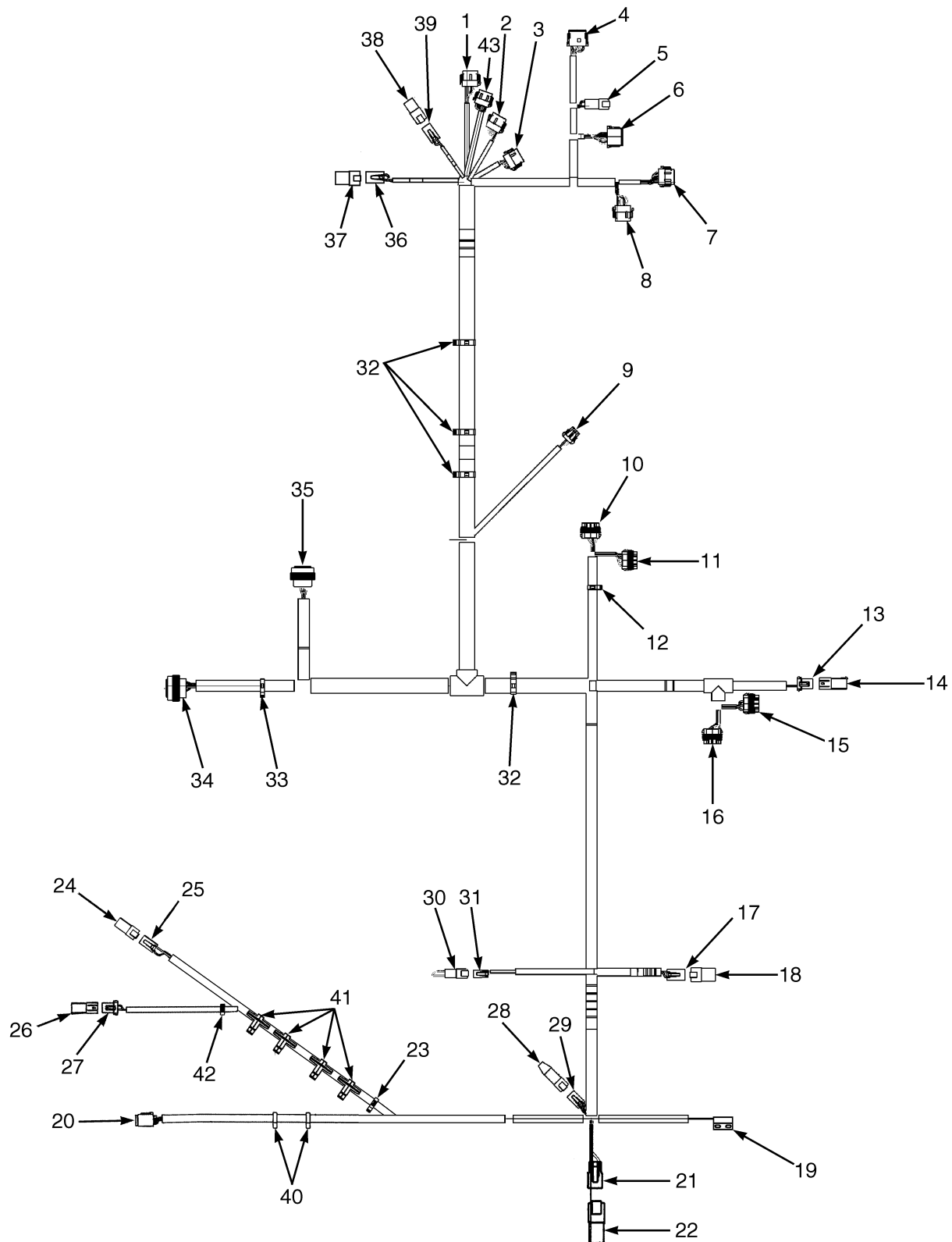
WIRE HARNESS
CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (→ 8/2006)

ITEM	PART NO.	DESCRIPTION	QTY
38	1480187	Connector	1
38	1330439	Plug	2
39		Connector Assembly (Accessory 1)	1
39	1545202	Connector	1
39	1554359	Terminal	2
39	1546697	Connector	1
40	1402815	Clip	2
41	1587778	Clip	4
42	1509888	Clip	2
43		Connector Assembly (Vehicle System Manager)	1
43	1525569	Connector	1
43	1530037	Connector	1
43	1463139	Terminal	11
43	1484377	Plug	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-43) CHASSIS — YANMAR 2.6L AND 3.3L, DIESEL (8/2006 →)



HP081619

WIRE HARNESS

CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (8/2006 →)

ITEM	PART NO.	DESCRIPTION	QTY
	2085947	Wire Harness (Chassis)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525570	Connector	1
1	1463139	Terminal	8
1	1484377	Plug	4
1	1530037	Connector	1
2		Connector Assembly (Vehicle System Manager)	1
2	1525568	Connector	1
2	1463139	Terminal	9
2	1484377	Plug	3
2	1530037	Connector	1
3		Connector Assembly (Vehicle System Manager)	1
3	1525567	Connector	1
3	1529046	Connector	1
3	1463139	Terminal	9
3	1484377	Plug	3
4		Connector Assembly (Vehicle System Manager)	1
4	1525563	Connector	1
4	1500913	Connector	1
4	1330438	Terminal (Socket)	8
4	1363886	Terminal (Socket)	4
5		Connector Assembly (To Cowl Harness)	1
5	1489655	Connector (4 Way)	1
5	1330416	Connector	1
5	1330437	Terminal (Pin)	4
6		Connector Assembly (To Cowl Harness)	1
6	1493428	Connector (12-Way)	1
6	1330438	Terminal (Socket)	9
6	1484377	Plug	3
6	1500913	Connector	1
7		Connector Assembly (Vehicle System Manager)	1
7	1525567	Connector	1
7	1529046	Connector	1
7	1463139	Terminal	3
7	1484377	Plug	9
8		Connector Assembly (Vehicle System Manager)	1
8	1525569	Connector	1
8	1529046	Connector	1
8	1463139	Terminal	9
8	1484377	Plug	3
9		Connector Assembly (Horn)	1
9	1476064	Connector	1
9	1476109	Connector Lock	1
9	1330356	Seal	2
9	1330355	Terminal	3
9	1476108	Wire Seal	1
10		Connector Assembly (Power Distribution Module)	1
10	1521184	Connector	1
10	1521188	Lock	1
10	1323579	Seal	5

WIRE HARNESS

CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (8/2006 →)

ITEM	PART NO.	DESCRIPTION	QTY
10	1327164	Seal	2
10	1330281	Terminal	5
10	1521989	Terminal	1
10	1402888	Seal	1
11		Connector Assembly (Power Distribution Module)	1
11	1521183	Connector	1
11	1521188	Lock	1
11	1323579	Seal	7
11	1327164	Seal	1
11	1330281	Terminal	4
11	1521989	Terminal	3
12	1534828	Clip	1
13		Connector Assembly (Hydraulic Filter)	1
13	1329152	Plug	1
13	1329151	Terminal	1
13	1330281	Terminal	2
13	1402888	Seal	2
14		Connector Assembly (End Cap)	1
14	1329150	Connector	1
14	1327164	Seal	2
14	1329151	Terminal	1
15		Connector Assembly (Power Distribution Module)	1
15	1521185	Connector	1
15	1521188	Lock	1
15	1323579	Seal	8
15	1521989	Terminal	2
15	1330281	Terminal	6
16		Connector Assembly (Power Distribution Module)	1
16	1521186	Connector	1
16	1521188	Lock	1
16	1323579	Seal	7
16	1327164	Seal	1
16	1521989	Terminal	7
17		Connector Assembly (Accessory 2)	1
17	1514602	Connector	1
17	1514603	Connector	1
17	1330439	Plug	1
17	1554359	Terminal	3
18		Connector Assembly (End Cap)	1
18	1514597	Connector	1
18	1330439	Plug	4
19	1402815	Clip	2
20		Connector Assembly (To Seat Harness)	1
20	1541991	Connector	1
20	1541992	Connector	1
20	1463139	Terminal	8
21		Connector Assembly (Alternate Horn Button)	1
21	1490242	Connector	1
21	1490243	Connector	1
21	1330438	Terminal (Socket)	2

WIRE HARNESS

CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (8/2006 →)

ITEM	PART NO.	DESCRIPTION	QTY
22	1626727	Connector (End Cap)	1
23	1509888	Clip	1
24	1626727	Connector (End Cap)	1
25		Connector Assembly (To Back-Up Alarm)	1
25	1490242	Connector	1
25	1490243	Connector	1
25	1330438	Terminal (Socket)	2
26		Connector Assembly (End Cap)	1
26	1329150	Connector	1
26	1329151	Terminal	1
26	1327164	Seal	2
27		Connector Assembly (Coolant Level)	1
27	1329152	Plug	1
27	1329151	Terminal	1
27	1330281	Terminal	2
27	1402888	Seal	2
28	1525577	Connector (With Resistor) (End Cap)	1
29		Connector Assembly (Bus Terminal)	1
29	1489656	Connector (4-Way)	1
29	1489657	Connector	1
29	1330438	Terminal (Socket)	4
30	1626727	Connector (End Cap)	1
31		Connector Assembly (Key Switch)	1
31	1490242	Connector	1
31	1490243	Connector	1
31	1330438	Terminal (Socket)	2
32	1534282	Clip	4
33	1500899	Clip	1
34		Connector Assembly (To Transmission Harness)	1
34	1525567	Connector	1
34	1529046	Connector	1
34	1463139	Terminal	11
34	1484377	Plug	1
35		Connector Assembly (To Transmission Harness)	1
35	1531973	Connector	1
35	1531974	Connector	1
35	1463139	Terminal	6
36		Connector Assembly (To Engine Harness)	1
36	1493428	Connector (12-Way)	1
36	1500913	Connector	1
36	1330438	Terminal (Socket)	11
36	1484377	Plug	1
37		Connector Assembly (To Engine Harness)	1
37	1541991	Connector	1
37	1541992	Connector	1
37	1463139	Terminal	8
38		Connector Assembly (To Engine Harness)	1
38	1514602	Connector	1
38	1514603	Connector	1
38	1330439	Plug	1

WIRE HARNESS

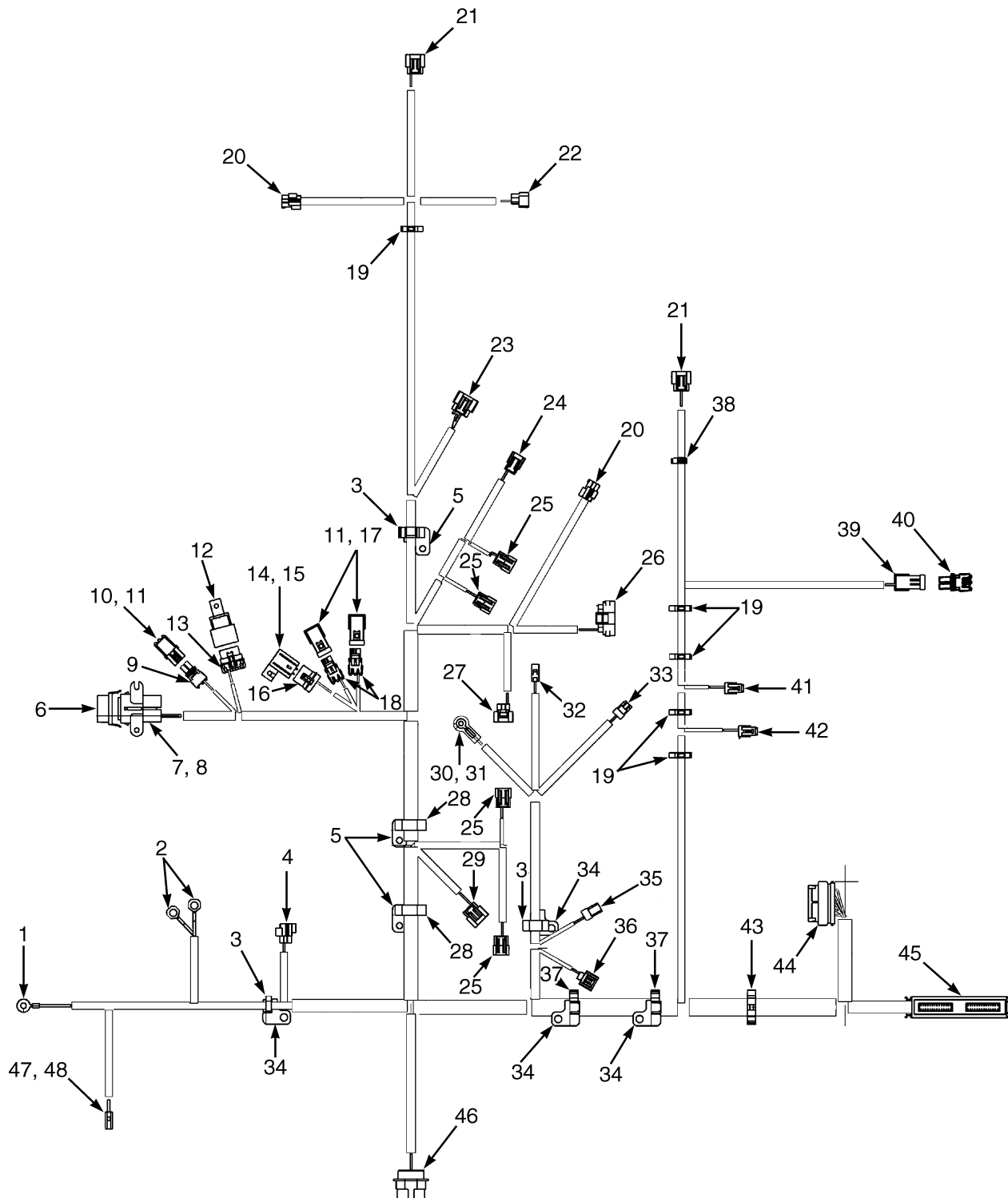
CHASSIS – YANMAR 2.6L AND 3.3L, DIESEL (8/2006 →)

ITEM	PART NO.	DESCRIPTION	QTY
38	1554359	Terminal	3
39		Connector Assembly (To Lights/Cab Harness)	1
39	1514602	Connector	1
39	1514603	Connector	1
39	1554359	Terminal	4
40	1514597	Connector	1
40	1330439	Plug	4
41	1480187	Connector	1
41	1330439	Plug	2
42		Connector Assembly (Accessory 1)	1
42	1545202	Connector	1
42	1554359	Terminal	2
42	1546697	Connector	1
43		Connector Assembly (Vehicle System Manager)	1
43	1525569	Connector	1
43	1530037	Connector	1
43	1463139	Terminal	11
43	1484377	Plug	1
44	1587778	Clip	4
45	1509888	Clip	2

NOTES

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WIRE HARNESS (FIGURE 4-44) GASOLINE ENGINE — MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)



HP081567

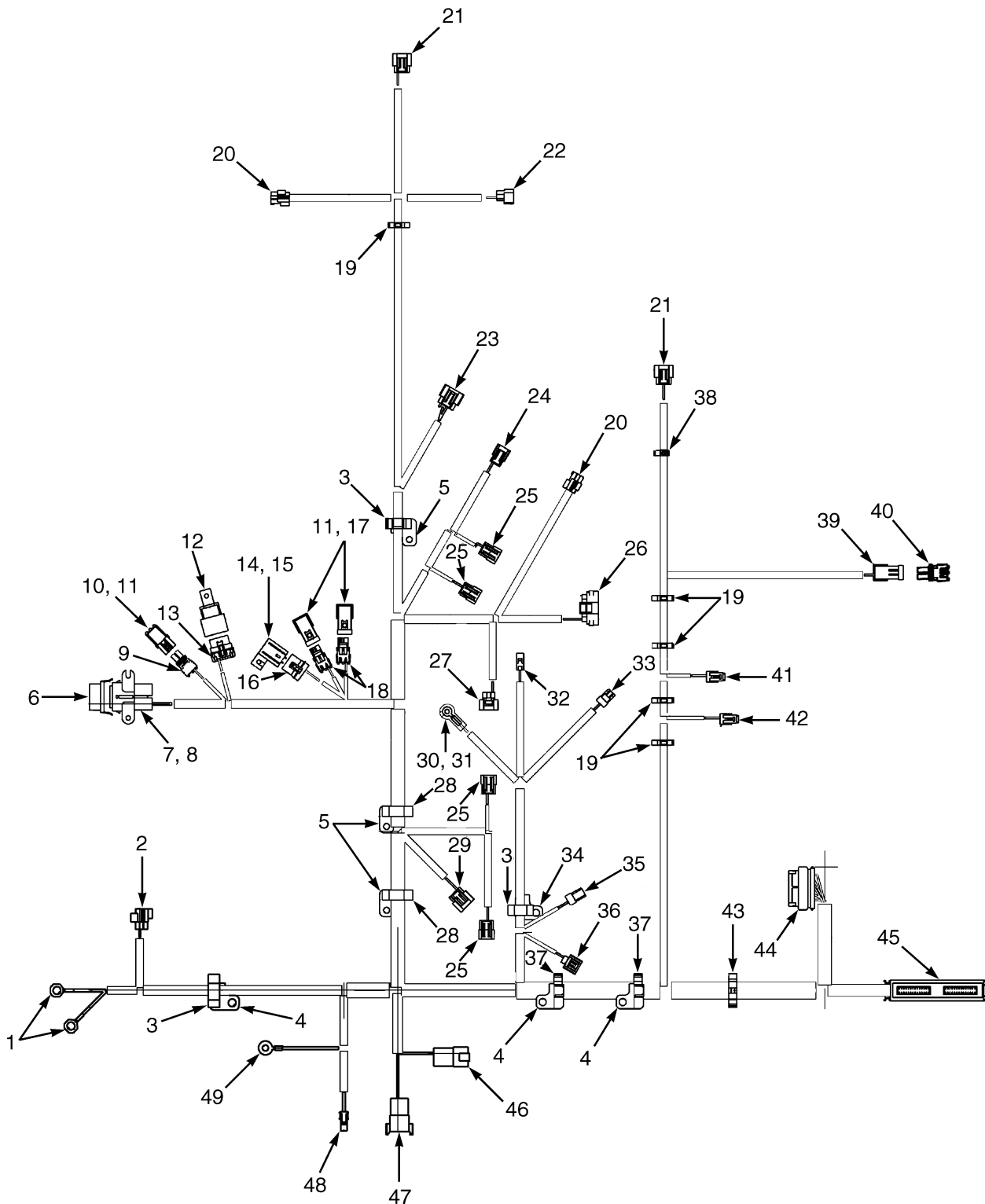
WIRE HARNESS

GASOLINE ENGINE – MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
	2065856	Wire Harness	1
1	1493458	E-Ring (Starter)	1
2	1402890	Ring Terminal (Block Ground)	2
3	1532775	Clip	3
4	1531991	Connector (Oxygen Sensor)	1
5	1532761	Clip	3
6	1454862	Cover (With Seal) (Fuse Holder)	1
7	1543553	Fuse Holder	1
8	1378418	Fuse (50 Amp)	1
9	1547482	Connector (Governor Control Unit Interface)	1
10	1547482	Connector	1
11	1567333	Clip	3
12	1654577	Relay (Shrouded 4 Pin) (Fuel Pump)	1
12	1654579	Clip (Relay)	1
13	1375795	Connector Body	1
14	1330293	Cover (Fuse)	1
15	370647	Fuse (10 Amp)	1
16	1330292	Connector	1
17	1465469	Connector (Electronic Control Unit Test Port)	2
18	1465468	Connector	2
19	1402816	Clip	5
20	1482651	Connector Body (Condensor)	2
21	1531237	Connector Body (Igniter)	2
22	1531239	Connector Body (Coil)	1
23	1531240	Connector Body (Distributor)	1
24	1531235	Connector Body (Pressure Regulator)	1
25	1531238	Connector Body (Fuel Injector)	4
26	1531231	Connector Body (Governor)	1
27	1561518	Connector (Throttle Position Sensor)	1
28	1532777	Clip	2
29	1560441	Connector Body (MAP Sensor)	1
30	1520864	Boot	1
31	129888	E-Ring (Alternator)	1
32	1308259	Connector Body (Alternator)	1
33	1327957	Connector (Oil Sensor)	1
34	1558228	Clip	4
35	1323586	Connector (Coolant Temperature)	1
36	1531233	Connector Body (Coolant Temperature)	1
37	1532778	Clip	2
38	1509888	Clip	1
39	1465469	Connector (Air Filter Restriction Sensor)	1
40	1465468	Connector	1
41	1519611	Connector (Fuel Pump)	1
42	1476077	Connector (Fuel Level Sender)	1
43	1402817	Clip	1
44	1553094	Connector (Electronic Control Unit)	1
45	1547479	Housing (Governor Control Unit)	1
46	1531502	Connector (Chassis Harness)	1
47	1581313	Connector (Starter)	1
48	1581315	Terminal (Starter)	1

WIRE HARNESS (FIGURE 4-45)

GASOLINE ENGINE — MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15326E)



BP080504

WIRE HARNESS**GASOLINE ENGINE – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15326E)**

ITEM	PART NO.	DESCRIPTION	QTY
	2087190	Wire Harness	1
1	1402890	Ring Terminal (Block Ground)	2
2	1531991	Connector (Oxygen Sensor)	1
3	1532775	Clip	3
4	1558228	Clip	3
5	1532761	Clip	3
6	1454862	Cover (With Seal) (Fuse Holder)	1
7	1543553	Fuse Holder	1
8	1378418	Fuse (50 Amp)	1
9	1547482	Connector (GCU Interface)	1
10	1547482	Connector	1
11	1567333	Clip	3
12	1654577	Relay (Shrouded 4 Pin) (Fuel Pump)	1
12	1654579	Clip (Relay)	1
13	1375795	Connector Body	1
14	1330293	Cover (Fuse)	1
15	370647	Fuse (10 Amp)	1
16	1330292	Connector	1
17	1465469	Connector (Engine Control Unit Test Port)	2
18	1465468	Connector	2
19	1402816	Clip	5
20	1482651	Connector Body (Condensor)	2
21	1531237	Connector Body (Igniter)	2
22	1531239	Connector Body (Coil)	1
23	1531240	Connector Body (Distributor)	1
24	1531235	Connector Body (ISCV)	1
25	1531238	Connector Body (Fuel Injector)	4
26	1531231	Connector Body (Governor)	1
27	1561518	Connector (TPS)	1
28	1532777	Clip	2
29	1560441	Connector Body (MAP)	1
30	1520864	Boot	1
31	129888	E-Ring (Alternator)	1
32	1308259	Connector Body (Alternator)	1
33	1327957	Connector (Oil Sensor)	1
34	1558228	Clip	1
35	1323586	Connector (Coolant Temperature)	1
36	1531233	Connector Body (Coolant Temperature)	1
37	1532778	Clip	2
38	1509888	Clip	1
39	1465469	Connector (Air Filter Restriction Sensor)	1
40	1465468	Connector	1
41	1519611	Connector (Fuel Pump)	1
42	1476077	Connector (Fuel Level Sender)	1
43	1402817	Clip	1
44	1553094	Connector (Engine Control Unit)	1
45	1547479	Housing (GCU)	1
46	1514597	Connector (Chassis Harness)	1
46	1514598	Connector	1
47	1330413	Connector (Chassis Harness)	1

WIRE HARNESS**GASOLINE ENGINE – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B15326E)**

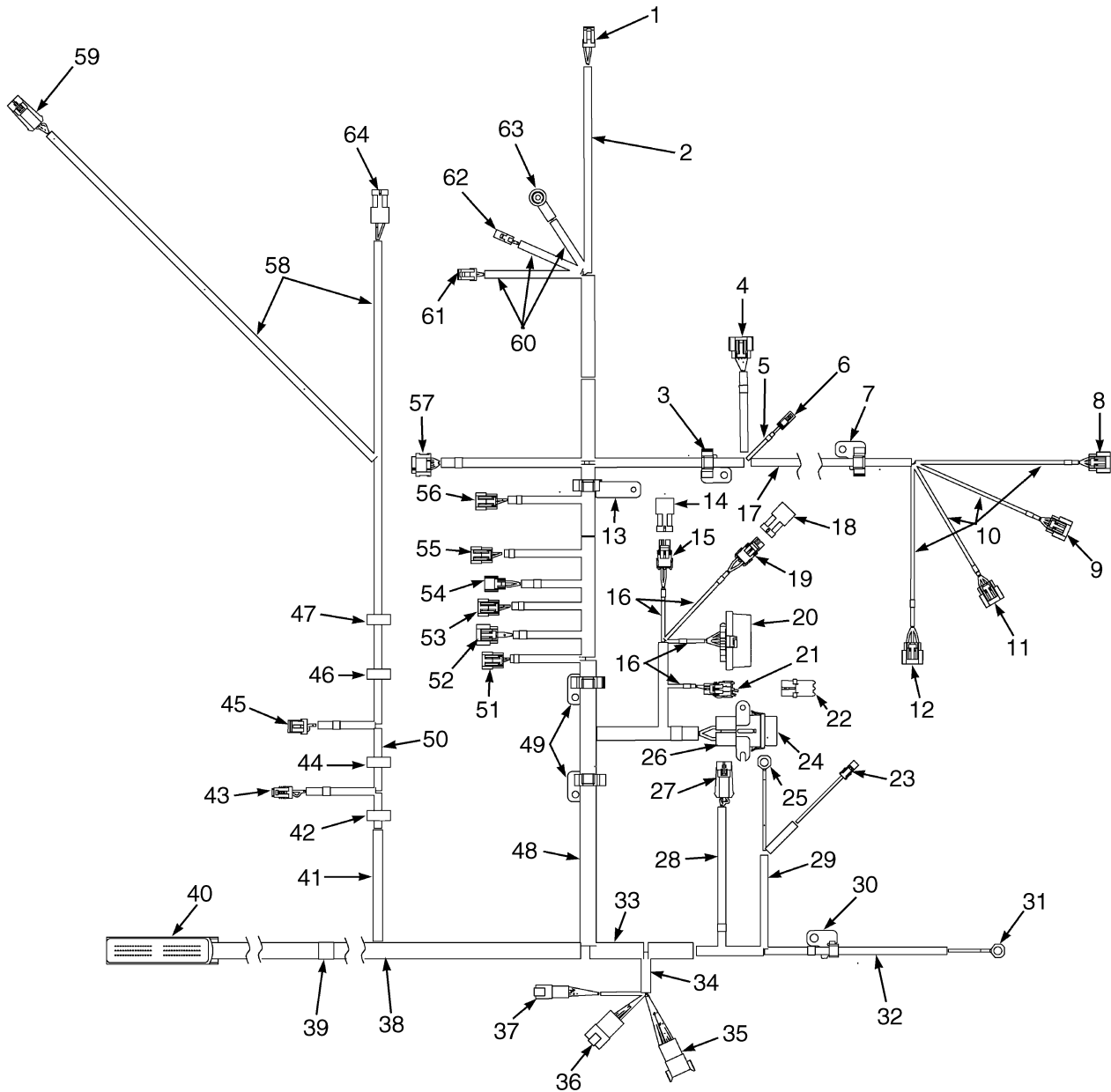
ITEM	PART NO.	DESCRIPTION	QTY
47	1330418	Connector	1
48	1581313	Connector (Starter)	1
49	1493458	E-Ring	1

NOTES

[illegible]

WIRE HARNESS (ENGINE) (FIGURE 4-46)

MAZDA 2.0L AND 2.2L, GASOLINE — 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)



BP080559

WIRE HARNESS (ENGINE)**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)**

ITEM	PART NO.	DESCRIPTION	QTY
	2091281	Wire Harness (Engine)	1
1		Connector Assembly (Engine Coolant Temperature)	1
1	1323586	Connector	1
1	1532571	Terminal	2
2	275494	Conduit	AR
3		Bracket Assembly (Cam Angle Sensor)	1
3	1532761	Clip	1
3	1532775	Clip	1
4		Connector Assembly (Ignition Suppressor)	1
4		Sensor	1
5	275494	Conduit	AR
6		Connector Assembly	1
6		Connector	1
7		Bracket Assembly	1
7	1532761	Clip	1
7	1532775	Clip	1
8		Connector Assembly (Coil)	1
8		Connector	1
9		Connector Assembly (Coil)	1
9		Connector	1
10		Conduit	AR
11		Connector Assembly (Coil)	1
11		Connector	1
12		Connector Assembly (Coil)	1
12		Connector	1
13		Bracket Assembly	1
13	1532761	Clip	1
13	1532775	Clip	1
14		Connector Assembly (ECM Test Port)	1
14	1327164	Seal	2
14	1465469	Connector	1
15		Connector Assembly (ECM Test Port)	1
15	1491818	Seal	2
15	1465468	Connector	1
15	1498420	Terminal	2
15	1504197	Terminal	2
16		Conduit	AR
17	275496	Conduit	AR
18		Connector Assembly	1
18	1327164	Seal	2
18	1465469	Connector	1
19		Connector Assembly	1
19	1491818	Seal	2
19	1465468	Connector	1
19	1504197	Terminal	2
19	1498420	Terminal	2
20		Connector Assembly (Mini-Fuses)	1
20	1327164	Seal	2
20	1327959	Connector	1
20	1330297	Lock	1

WIRE HARNESS (ENGINE)**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)**

ITEM	PART NO.	DESCRIPTION	QTY
20		Clip	1
20	1491818	Seal	4
20	1330281	Terminal	4
20		Cap	1
20	1498420	Terminal	4
21		Connector Assembly (ECM Interface)	1
21		Terminal	1
21		Terminal	1
21		Connector	4
22		Connector Assembly (ECM Interface)	1
22		Spacer	1
22		Cap	1
23		Connector Assembly (Starter)	1
23	1581313	Connector	1
23	1581315	Terminal	1
24	1327164	Seal (Alternator)	1
25	1402890	Ring Terminal (Starter B+)	1
26		Connector Assembly (Alternator)	1
26	1382694	Fuse Connector	2
26	1543553	Fuse Holder	1
26		Terminal	2
27		Connector Assembly (Pre-Catalytic O2 Sensor)	1
27	1476108	Wire Seal	4
27	1498424	Housing	1
27		Lock	1
27		Terminal	4
27	1520513	Clip	1
28		Conduit	AR
29		Conduit	AR
30		Bracket Assembly	1
30	1558228	Clip	1
30	1532774	Clip	1
31	1402890	Ring Terminal (Block Ground)	1
32		Conduit	AR
33	275498	Conduit	AR
34	275497	Conduit	AR
35		Connector Assembly (Chassis Harness)	1
35	1531480	Clip	1
35	1330437	Terminal (Pin)	1
35	1330413	Connector	1
35	1330418	Connector	1
36		Connector Assembly (Chassis Harness)	1
36	1500912	Clip	1
36	1514597	Connector	1
36	1330439	Plug	1
36		Terminal	1
36	1514598	Connector	3
37		Connector Assembly (Chassis Harness)	1
37	1530960	Connector	1
37	1530961	Connector	1

WIRE HARNESS (ENGINE)**MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)**

ITEM	PART NO.	DESCRIPTION	QTY
37	1500912	Clip	1
37	1463138	Terminal	1
38	275498	Conduit	AR
39		Label	1
40		Connector Assembly (ECM)	1
40		Connector	1
40		Cover	1
40		Cam	1
40		Terminal	43
41	275494	Conduit	AR
42	1402816	Clip	1
43		Connector Assembly (Fuel Level)	1
43	1476077	Connector	1
43	1323576	Terminal	2
44	1402816	Clip	1
45	1519611	Connector (Fuel Pump)	1
46	1402816	Clip	1
47	1402816	Clip	1
48	275498	Conduit	AR
49		Connector Assembly (Bracket Assembly)	1
49	1532761	Clip	1
49	1532778	Clip	1
50		Conduit	AR
51		Connector Assembly (Fuel Injector)	1
51		Clip	1
51	1560441	Connector Body	1
52		Connector Assembly (MAP Sensor)	1
52	1560441	Connector Body	1
52	1560441	Connector Body	1
52	1561144	Spacer	AR
53		Connector Assembly (Fuel Injector)	1
53		Clip	1
53	1560441	Connector Body	1
54		Connector Assembly (Intake Air Temperature Sensor)	1
54		Spacer	1
54	1482651	Connector Body	1
55		Connector Assembly (Fuel Injector)	1
55		Clip	1
55	1560441	Connector Body	1
56		Connector Assembly (Fuel Injector)	1
56		Clip	1
56	1560441	Connector Body	1
57		Connector Assembly (Throttle)	1
57	1533810	Seal	6
57	1569973	Connector Body	1
57		Terminal	6
58		Conduit	AR
59		Connector Assembly (Post-Catalytic O2 Sensor)	1
59	1476108	Wire Seal	4
59	1498424	Housing	1

WIRE HARNESS (ENGINE)

MAZDA 2.0L AND 2.2L, GASOLINE – 2007 EMISSION COMPLIANT ENGINES (S/N L177B15327E →)

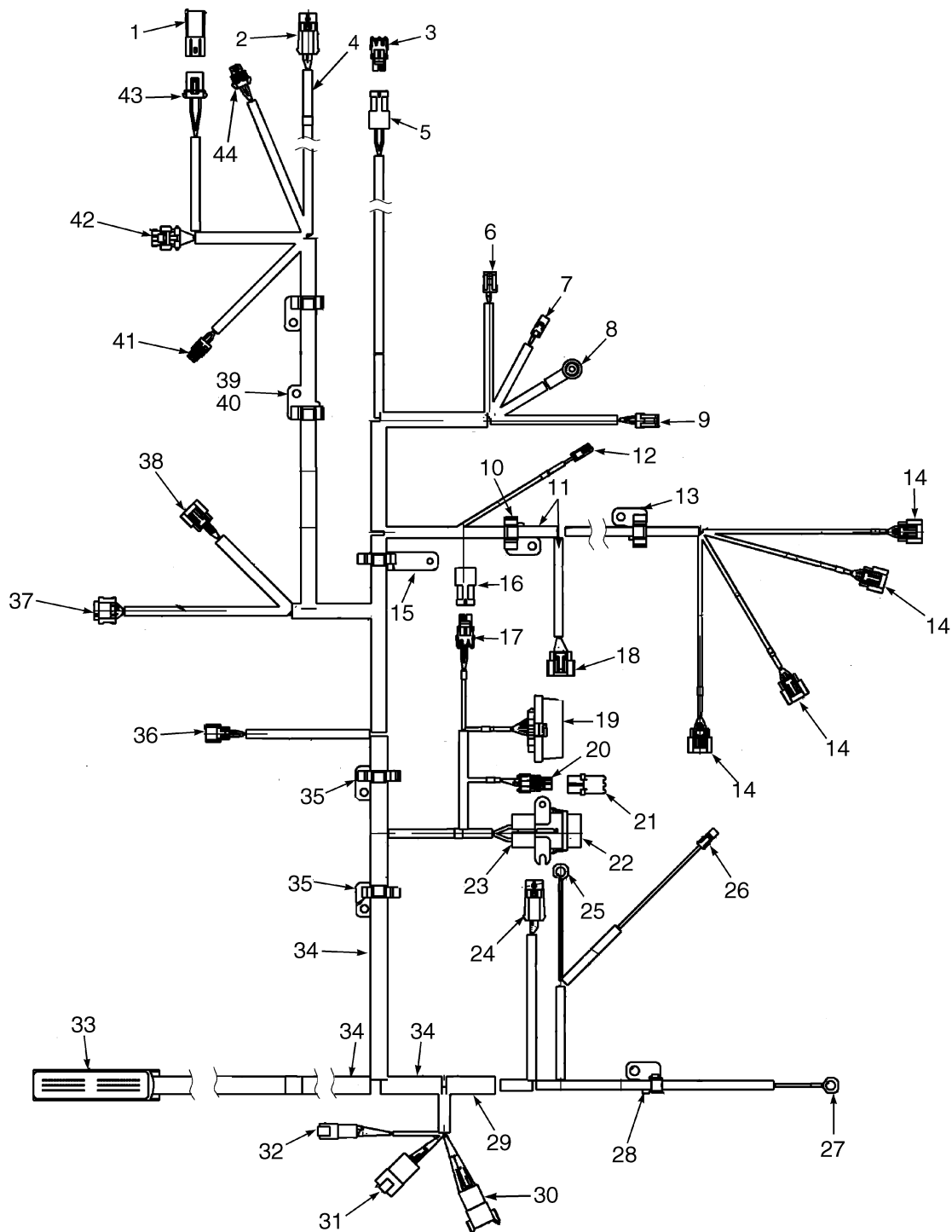
ITEM	PART NO.	DESCRIPTION	QTY
59		Lock	1
59		Terminal	4
59	1520513	Clip	1
60		Conduit	AR
61		Connector Assembly (Oil Pressure Sensor)	1
61	1327957	Connector	1
61	1532571	Terminal	3
62		Connector Assembly (Alternator)	1
62	1308259	Connector Body	1
63		Connector Assembly (Alternator B+)	1
63	1567694	Ring Terminal	1
63		Boot	1
64		Connector Assembly (Air Filter Restriction Sensor)	1
64	1465469	Connector	1
64	1323578	Terminal	2
64		Terminal	2

NOTES

[illegible]

WIRE HARNESS (ENGINE) (FIGURE 4-47)

MAZDA 2.0L AND 2.2L LPG — 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E → 2.2L LPG)
(S/N L177B15512E → 2.0L LPG)



BP080558

WIRE HARNESS (ENGINE)**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E → 2.2L LPG)
(S/N L177B15512E → 2.0L LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
	2090744	Wire Harness (LPG Mazda Engine)	1
1		Connector Assembly (Low Pressure Sensor)	1
1	1329150	Connector	1
1	1392205	Terminal	1
2		Connector Assembly (Post-Catalytic O2 Sensor)	1
2	1476108	Wire Seal	4
2	1498424	Housing	1
2		Lock	1
2		Terminal	4
3		Connector Assembly (Cap)	1
3	1465468	Connector	1
3	1327164	Seal	2
4		Connector Assembly (LPG Shut-Off)	1
4	1539872	Connector	1
4	1330355	Terminal	2
4	1330356	Seal	2
5		Connector Assembly (Air Filter Restriction Sensor)	1
5	1465469	Connector	1
5	1323578	Terminal	2
5		Lock	2
5	1327164	Seal	2
5	1465468	Connector	1
6		Connector Assembly (Oil Pressure Sensor)	1
6	1327957	Connector	1
6	1532571	Terminal	3
7		Connector Assembly (Alternator)	1
7	1308259	Connector Body	1
8		Connector Assembly (Alternator B+)	1
8	1567694	Ring Terminal	1
8		Boot	1
9		Connector Assembly (Engine Coolant Temperature)	1
9	1323586	Connector	1
10		Bracket Assembly	1
10	1532761	Clip	1
10	1532776	Clip	1
10	275496	Conduit	1
11	275496	Conduit	AR
12		Connector Assembly (Ignition Suppressor)	1
12		Connector	1
13		Connector Assembly (Bracket Assembly)	1
13	1532761	Clip	1
13	1532775	Clip	1
14		Connector Assembly (Coil #1)	1
14		Connector Assembly (Coil #2)	1
14		Connector Assembly (Coil #3)	1
14		Connector Assembly (Coil #4)	1
14		Connector	1
14		Terminal	2
14		Terminal	1

WIRE HARNESS (ENGINE)

MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E → 2.2L LPG)
(S/N L177B15512E → 2.0L LPG)

ITEM	PART NO.	DESCRIPTION	QTY
15		Bracket Assembly	1
15	1558226	Clip	1
15	1532778	Clip	1
16		Connector Assembly (ECM Test Port)	1
16	1465469	Connector	1
16	1327164	Seal	2
17		Connector Assembly (ECM Test Port)	1
17	1465468	Connector	1
17	1498420	Terminal	1
17	1504197	Terminal	2
18		Connector Assembly (Distributor)	1
18		Clip	1
18		Sensor	1
19		Connector Assembly (Mini-Fuses)	1
19	1327164	Seal	2
19	1327959	Connector	1
19	1330297	Lock	1
19	1491818	Seal	4
19		Clip	1
19	1641937	Cap	1
19	1330281	Terminal	4
20		Connector Assembly (ECM Interface)	1
20		Connector	1
20		Spacer	1
20		Terminal	4
21		Connector Assembly (Cap)	1
21		Cap	1
21		Terminal	1
22		Connector Assembly (Alternator)	1
22	1497235	Fuse Holder	1
23		Connector Assembly (Alternator)	1
23	1382694	Fuse Connector	1
23	1641943	Fuse Holder	1
23		Terminal	2
24		Connector Assembly (Pre-Catalytic O2 Sensor)	1
24	1476108	Wire Seal	4
24	1498424	Housing	1
24		Lock	1
24		Terminal	4
24	275498	Conduit	AR
25	1402890	Ring Terminal (Starter B+)	1
26		Connector Assembly (Starter)	1
26	1581313	Connector	1
26	1581315	Terminal	1
27	1402890	Ring Terminal (Block Ground)	1
28		Bracket Assembly	1
28	1558228	Clip	1
28	1532774	Clip	1
29	275497	Conduit	AR

WIRE HARNESS (ENGINE)**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E → 2.2L LPG)
(S/N L177B15512E → 2.0L LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
30		Connector Assembly (Chassis Harness)	1
30	1330413	Connector	1
30	1330418	Connector	1
30	1531480	Clip	1
30	1500912	Clip	1
30	1330437	Terminal (Pin)	8
31		Connector Assembly (Chassis Harness)	1
31	1330439	Plug	1
31	1500912	Clip	1
31	1514597	Connector	1
31	1514598	Connector	1
31	1484709	Terminal (Pin)	3
32		Connector Assembly (Chassis Harness)	1
32	1530960	Connector	1
32	1530961	Connector	1
32	1500912	Clip	1
32	1514598	Connector	1
32	1463138	Terminal	6
33		Connector Assembly (ECM)	1
33		Connector	1
33		Cover	1
33		Cam	1
33		Terminal	43
35		Connector Assembly (Bracket Assembly)	2
35	1532761	Clip	1
35	1532778	Clip	1
36		Connector Assembly (Intake Air Temperature Sensor)	1
36	1482651	Connector Body	1
36	1641948	Spacer	1
37		Connector Assembly (Throttle)	1
37	1533810	Seal	6
37	1569973	Connector Body	1
37	1610975	Terminal	6
38		Connector Assembly (MAP Sensor)	1
38	1560441	Connector Body	1
38	1561144	Spacer	1
39	1532761	Clip	1
40	1532776	Clip	1
41		Connector Assembly (Fuel Temperature Sensor)	1
41		Connector	1
41	1323576	Terminal	2
42		Connector Assembly (Electronic Pressure Regulator)	1
42	1641934	Connector	1
42		Contact	5
43		Connector Assembly (LPG Low Pressure)	1
43	1329150	Connector	1
43	1392205	Terminal	2
44		Connector Assembly (LPG Shut-Off)	1
44	1539872	Connector	1

WIRE HARNESS (ENGINE)

**MAZDA 2.0L AND 2.2L LPG – 2007 EMISSION COMPLIANT ENGINES (S/N L177B16207E → 2.2L LPG)
(S/N L177B15512E → 2.0L LPG)**

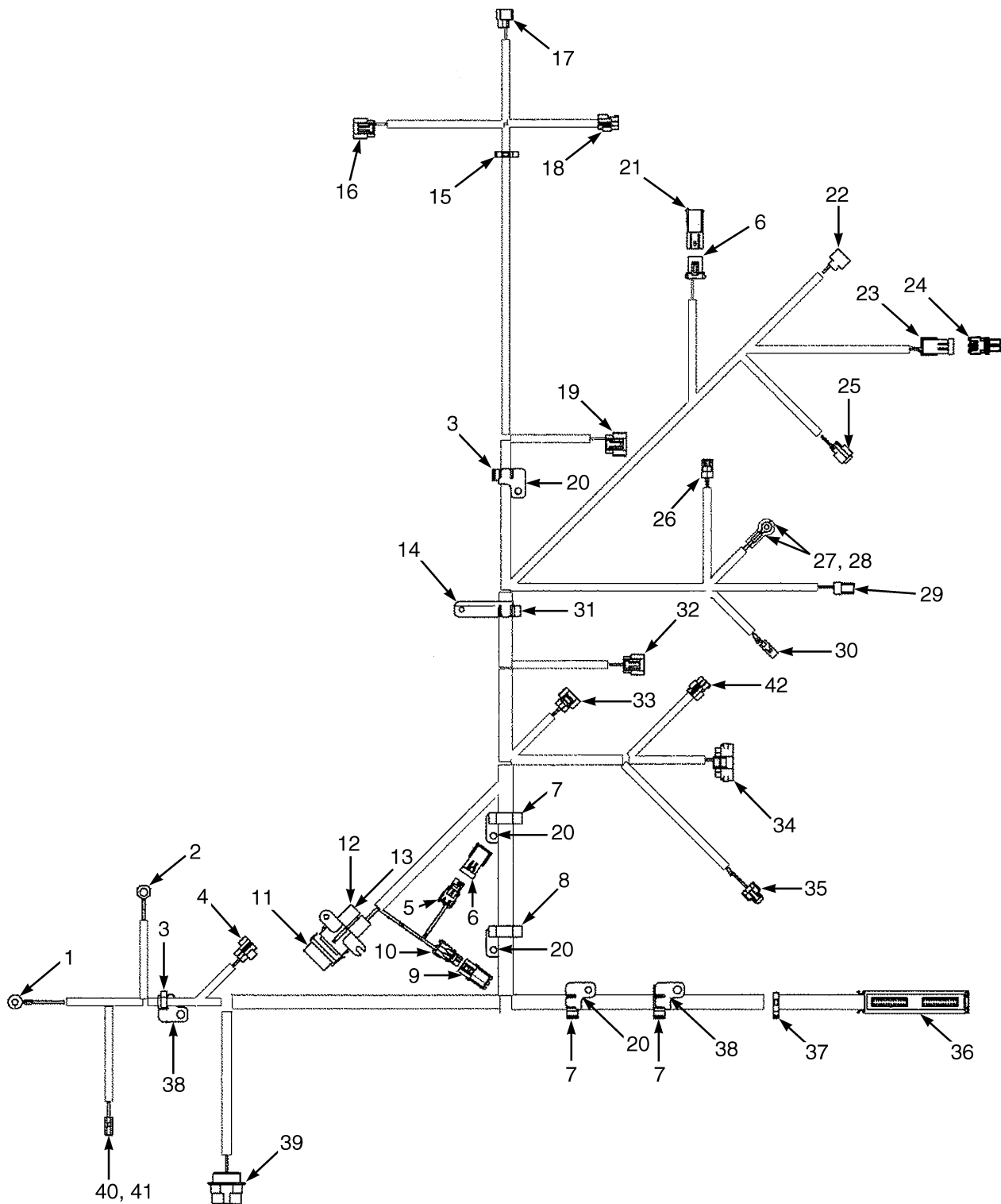
ITEM	PART NO.	DESCRIPTION	QTY
44	1330355	Terminal	1
44	1330356	Seal	2
	1705166	Kit-Connector (ECM Test Port)	1
	1705171	Kit-Connector (Post Catalytic O2 Sensor)	1
	1705172	Kit-Connector (MAP Sensor)	1
	1705173	Kit-Connector (Engine Coolant Temperature)	1
	1705174	Kit-Connector (Intake Air Temperature Sensor)	1
	1705175	Kit-Connector (Air Filter Restriction Indicator)	1
	1705177	Kit-Connector (Oil Pressure Sensor)	1
	1705178	Kit-Connector (Ring Terminal)	1
	1705180	Kit-Connector (Pre-Catalytic O2 Sensor)	1
	1705181	Kit-Connector (Chassis)	1
	1705182	Kit-Connector (Chassis)	1
	1705183	Kit-Connector (Chassis)	1
	1705184	Kit-Connector (Diagnostic)	1
	1705185	Kit-Connector (Starter)	1
	1705187	Kit-Connector (Distributor)	1
	1705188	Kit-Connector (Alternator)	1
	1705189	Kit-Connector (Alternator)	1
	1705191	Kit-Connector (Ignition Coil) (#4)	1
	1705192	Kit-Connector (Ignition Coil) (#3)	1
	1705193	Kit-Connector (Ignition Coil) (#2)	1
	1705194	Kit-Connector (Ignition Coil) (#1)	1
	1705195	Kit-Connector (Throttle)	1
	1705200	Kit-Connector (Mini Fuses)	1
	1705201	Kit-Connector (Fuse)	1

NOTES

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WIRE HARNESS (FIGURE 4-48)

LPG ENGINE — MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)



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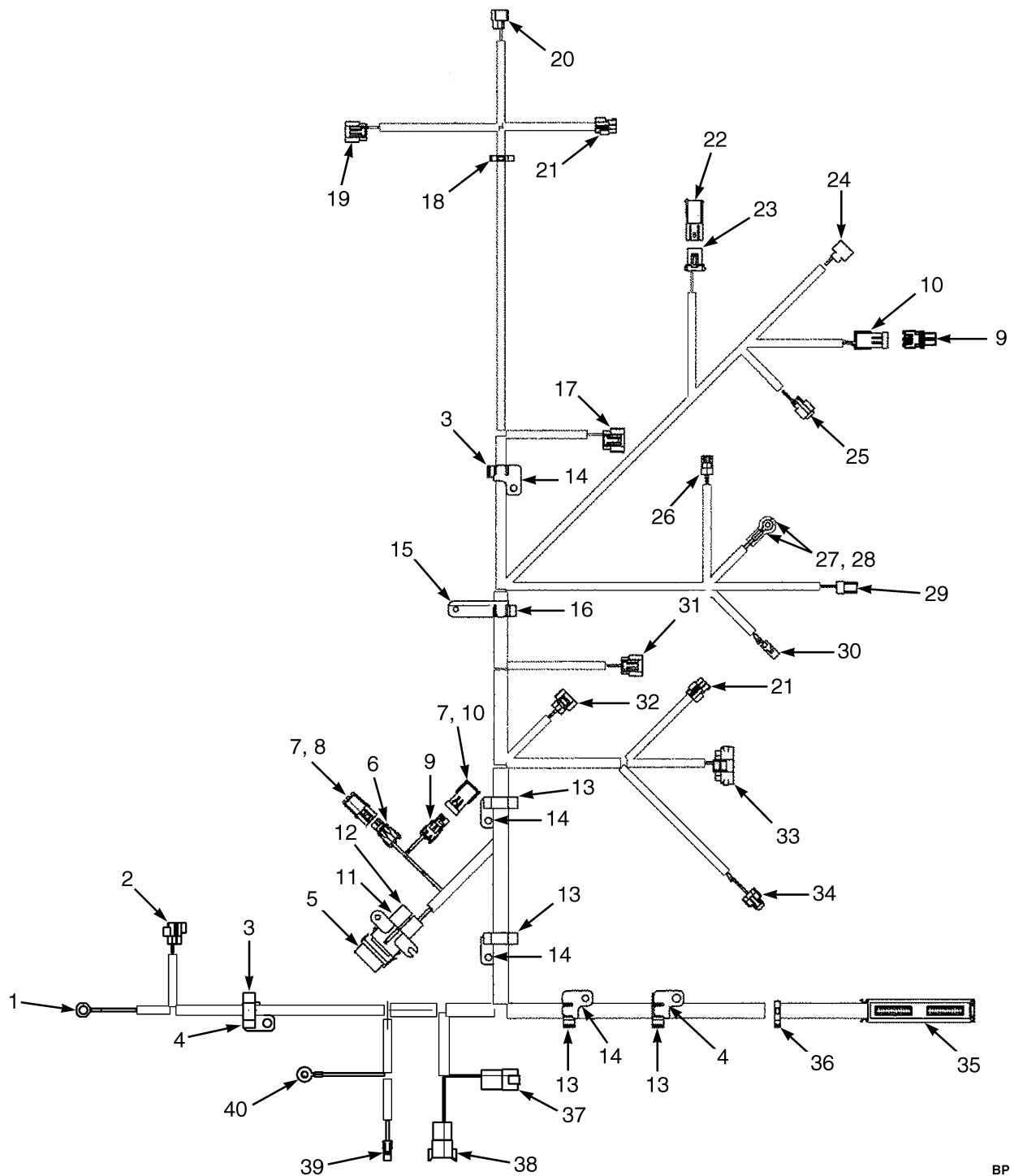
WIRE HARNESS

LPG ENGINE – MAZDA 2.0L AND 2.2L (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
	2065855	Wire Harness (LPG Mazda Engine)	1
1	1493458	E-Ring	1
2	1402890	Ring Terminal	1
3	1532775	Clip	2
4	1561518	Connector (Oxygen Sensor)	1
5	1465468	Connector (Test Port)	2
6	1547482	Connector	2
7	1567333	Clip	2
8	1532777	Clip	4
9	1547482	Connector (Electronic Control Module Interface)	1
10	1378652	Connector	1
11	1454862	Cover (With Seal) (Alternator)	1
12	1378418	Fuse (50 Amp)	1
13	1543553	Fuse Holder	1
14	1558226	Clip	1
15	1402816	Clip	1
16	1531237	Connector Body (Igniter)	1
17	1531239	Connector Body (Coil)	1
18	1482651	Connector Body (Condenser)	1
19	1531240	Connector Body (Distributor)	1
20	1532761	Clip	4
21	1329150	Connector (LPG Low Pressure Switch)	1
22	1474764	Connector Body (Idle LPG Solenoid)	1
23	1465469	Connector (Air Filter Restriction)	1
24	1465468	Connector (Air Filter Restriction Sensor)	1
25	1474763	Connector Body (Main LPG Solenoid)	1
26	1327957	Connector (Oil Pressure Sensor)	1
27	1520864	Boot (Alternator)	1
28	129888	E-Ring	1
29	1323586	Connector (Coolant Temperature)	1
30	1308259	Connector Body (Alternator)	1
31	1532776	Clip	1
32	1560441	Connector Body (MAP Sensor)	1
33	1531991	Connector (Throttle Position Sensor)	1
34	1531231	Connector Body (Governor)	1
35	1482654	Connector Body (Injector)	1
36	1547479	Housing	1
37	1500899	Clip	1
38	1558228	Clip	2
39	1531502	Connector (Chassis Harness)	1
40	1581313	Connector (Starter)	1
41	1581315	Terminal	1
42	1482651	Connector Body (Intake Air Tempertor Sensor)	1

WIRE HARNESS (FIGURE 4-49)

LPG ENGINE — MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B16207E 2.2L)
(S/N L177B11118D ↔ S/N L177B15512E 2.0L)



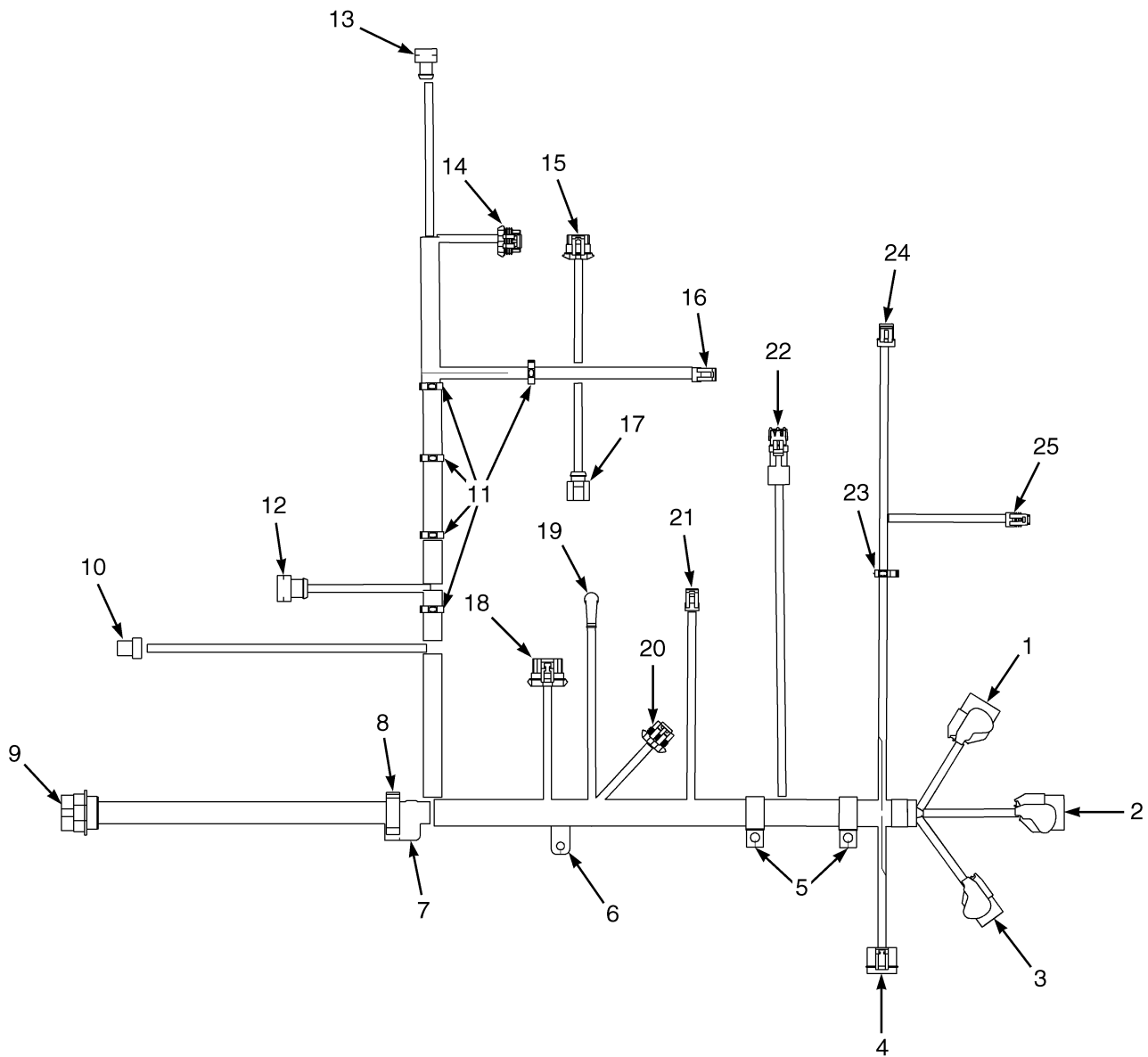
BP080503

WIRE HARNESS

**LPG ENGINE – MAZDA 2.0L AND 2.2L (S/N L177B11118D ↔ S/N L177B16207E 2.2L)
(S/N L177B11118D ↔ S/N L177B15512E 2.0L)**

ITEM	PART NO.	DESCRIPTION	QTY
	2087189	Wire Harness (LPG Mazda Engine)	1
1	1402890	Ring Terminal	1
2	1561518	Connector (Oxygen Sensor)	1
3	1532775	Clip	2
4	1558228	Clip	2
5	1454862	Cover (With Seal) (Alternator)	1
6	1378652	Connector	1
7	1567333	Clip	2
8	1547482	Connector	1
9	1465468	Connector (Air Filter Restriction Sensor)	2
10	1465469	Connector (Air Filter Restriction)	2
11	1378418	Fuse (50 Amp)	1
12	1543553	Fuse Holder	1
13	1532777	Clip	4
14	1532761	Clip	4
15	1558226	Clip	1
16	1532776	Clip	1
17	1531240	Connector Body (Distributor)	1
18	1402816	Clip	1
19	1531237	Connector Body (Igniter)	1
20	1531239	Connector Body (Coil)	1
21	1482651	Connector Body (Condenser)	2
22	1329150	Connector (LPG Low Pressure Switch)	1
23	1329152	Plug	1
24	1474764	Connector Body (Idle LPG Solenoid)	1
25	1474763	Connector Body (Main LPG Solenoid)	1
26	1327957	Connector (Oil Pressure Sensor)	1
27	1520864	Boot (Alternator)	1
28	129888	E-Ring	1
29	1323586	Connector (Coolant Temperature)	1
30	1308259	Connector Body (Alternator)	1
31	1560441	Connector Body (MAP Sensor)	1
32	1531991	Connector (Throttle Position Sensor)	1
33	1531231	Connector Body (Governor)	1
34	1482654	Connector Body (Injector)	1
35	1547479	Housing	1
36	1500899	Clip	1
37	1514597	Connector (Chassis Harness)	1
37	1514598	Connector	1
38	1330413	Connector (Chassis Harness)	1
38	1330418	Connector	1
39	1581313	Connector (Starter)	1
40	1493458	E-Ring	1

WIRE HARNESS (FIGURE 4-50) ENGINE — GM 2.4L, GASOLINE (→ S/N L177B14822E)



BP080409

WIRE HARNESS

ENGINE – GM 2.4L, GASOLINE (→ S/N L177B14822E)

ITEM	PART NO.	DESCRIPTION	QTY
	2053096	Wire Harness (Engine, GM 2.4L, Gasoline)	1
1		Engine Control Unit A	1
2		Engine Control Unit B	1
3		Engine Control Unit C	1
4		Connector Assembly (Latch Relay)	1
4	1330302	Connector	1
4	1330281	Terminal	2
4	1330303	Lock	1
4	1330304	Terminal	2
4	1337391	Seal	1
5	166112	Clamp	2
6	1532758	Clip	1
7	1532759	Clip	1
8	1532779	Clip	1
9		Connector Assembly (Chassis Harness)	1
9	1531502	Connector	1
9	866401	Terminal	4
9	1330433	Terminal	9
9	1463136	Terminal	6
9	1330439	Plug	10
9	1484685	Locknut	1
9	1484686	Washer (Spring)	1
10		Connector Assembly (MAP Sensor)	1
10	1607839	Connector	1
10	1402814	Terminal	4
10	1562649	Seal	4
11	1500899	Clip	5
12		Connector Assembly (Crank Position Sensor)	1
12	1607958	Connector	1
12	1402814	Terminal	3
12	1562649	Seal	3
13		Connector Assembly (Coolant Temperature Sensor)	1
13	1607837	Connector	1
13	1402814	Terminal	2
13	1562649	Seal	2
14		(Connector Assembly) (Oxygen Sensor)	1
14	1330355	Terminal	4
14	1402887	Wire Seal	4
14	1482663	Connector	1
14	1482667	Connector Body	1
15		Connector Assembly (E Throttle)	1
15	1607744	Terminal	1
15	1607744	Terminal	6
15	1607745	Seal	2
15	1607746	Seal	4
16		Connector Assembly (Alternator)	1
16	1323576	Terminal	2
16	1323586	Connector	1
17		Connector Assembly (Ignition Coil)	1
17	1330356	Seal	2

WIRE HARNESS

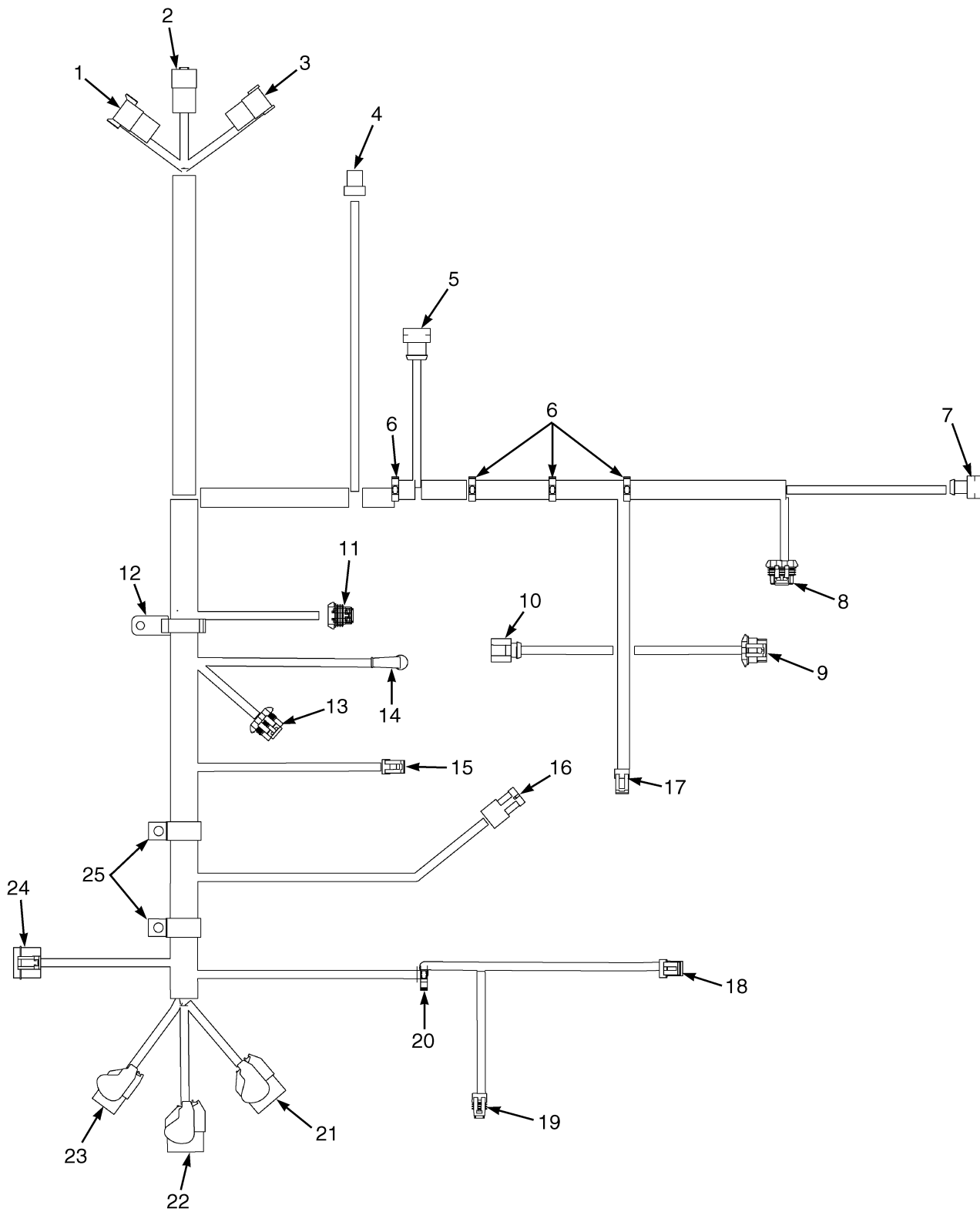
ENGINE – GM 2.4L, GASOLINE (→ S/N L177B14822E)

ITEM	PART NO.	DESCRIPTION	QTY
17	1402887	Wire Seal	3
17	1330355	Terminal	5
17	1531486	Connector	1
18		Connector Assembly (Camshaft Sensor)	1
18	1476109	Connector Lock	1
18	1402887	Wire Seal	3
18	1330355	Terminal	3
18	1476067	Connector	1
19		Terminal (Starter Solenoid)	1
19	129888	E-Ring	1
19	190383	Boot	1
20	1547484	Connector (Fuel Injection Harness)	1
21		Connector Assembly (Oil Pressure Sensor)	1
21	1354237	Terminal	3
21	1402613	Connector	1
22		Connector Assembly (Air Restriction Switch)	1
22	1323578	Terminal	2
22	1402888	Seal	2
22	1465469	Connector	1
22	1465468	Connector	1
23	1500900	Clip	1
24		(Connector Assembly) (Fuel Pump)	1
24	1323576	Terminal	2
24	1519611	Connector	1
25		(Connector Assembly) (Fuel Level Sender)	1
25	1323576	Terminal	2
25	1476077	Connector	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-51) ENGINE — GM 2.4L, GASOLINE (S/N L177B14823E →)



BP080570

WIRE HARNESS

ENGINE – GM 2.4L, GASOLINE (S/N L177B14823E →)

ITEM	PART NO.	DESCRIPTION	QTY
	2089065	Wire Harness (Engine, GM 2.4L, Gasoline)	1
1		Connector Assembly (Chassis Harness)	1
1	1330437	Terminal (Pin)	1
1	1484377	Plug	1
1	1330413	Connector	1
2		Connector Assembly (Chassis Harness)	1
2	1514597	Connector	1
2	866401	Terminal	4
3		Connector Assembly (Chassis Harness)	1
3	1541988	Connector	1
3	1463138	Terminal	8
4		Connector Assembly (NAP/MAT Sensor)	1
4	1607839	Connector	1
4	1402814	Terminal	4
4	1562649	Seal	4
5		Connector Assembly Crankshaft Position Sensor)	1
5	1402814	Terminal	3
5	1562649	Seal	3
5	1607958	Connector	1
6	1500899	Clip	4
7		Connector Assembly (Coolant Temperature)	1
7	1402814	Terminal	2
7	1562649	Seal	2
7	1607958	Connector	1
8		Connector Assembly (Oxygen Sensor)	1
8	1482667	Connector Body	1
8	1330355	Terminal	4
8	1402887	Wire Seal	4
8	1482663	Connector	1
9		Connector Assembly (E-Throttle)	1
9	1607743	Connector	1
9	1607744	Terminal	6
9	1607746	Seal	4
9	1607745	Seal	2
10		Connector Assembly (Ignition Coil)	1
10	1482668	Plug	1
10	1330356	Seal	2
10	1402887	Wire Seal	3
10	1330355	Terminal	5
10	1531486	Connector	1
11		Connector Assembly (Camshaft Sensor)	1
11	1476067	Connector	1
11	1330355	Terminal	3
11	1402887	Wire Seal	3
11	1476109	Connector Lock	1
12	1532758	Clip	1
13		Connector Assembly (Injector Harness)	1
13	1463138	Terminal	1
13	1330355	Terminal	5
13	1402887	Wire Seal	5

WIRE HARNESS

ENGINE – GM 2.4L, GASOLINE (S/N L177B14823E →)

ITEM	PART NO.	DESCRIPTION	QTY
13	1482668	Plug	3
14		Connector Assembly (Starter Solenoid)	1
14	129888	E-Ring	1
14	190383	Boot	1
15		Connector Assembly (Oil Pressure Sensor)	1
15	1402613	Connector	1
15	1354237	Terminal	3
16		Connector Assembly (Air Restriction Sensor)	1
16	1465469	Connector	1
16	1465468	Connector	1
16	1323578	Terminal	2
16	1402888	Seal	2
17		Connector Assembly (Alternator)	1
17	1323586	Connector	1
17	1323576	Terminal	2
18		Connector Assembly (Fuel Pump)	1
18	1519611	Connector	1
18	1323576	Terminal	2
19		Connector Assembly (Fuel Level)	1
19	1476077	Connector	1
19	1323576	Terminal	2
20	1500901	Clip	1
21		Connector Assembly (ECU "A")	1
22		Connector Assembly (ECU "B")	1
23		Connector Assembly (ECU "C")	1
24		Connector Assembly (Latch Relay)	1
24	1461744	Connector Body	1
24	1402904	Terminal	2
24	1375797	Terminal	2
24	1323579	Seal	1
25	166112	Clamp	2

NOTES

[illegible]

The diagram illustrates a cable management system with the following components and connections:

- 1:** A multi-ported device at the top right, with three ports branching out.
- 2:** A connector or plug at the top of the main vertical cable.
- 3:** A connector or plug on the right side of the main vertical cable.
- 4:** A vertical section of the main cable.
- 5:** A connector or plug on the right side of the main vertical cable.
- 6:** The main vertical cable at the bottom.
- 7:** A connector or plug on the right side of the main vertical cable.
- 8:** A connector or plug on the right side of the main vertical cable.
- 9:** A connector or plug on the right side of the main vertical cable.
- 10:** A connector or plug on the left side of the main vertical cable.
- 11:** A connector or plug on the left side of the main vertical cable.
- 12:** A connector or plug on the left side of the main vertical cable.
- 13:** A connector or plug on the left side of the main vertical cable.
- 14:** A connector or plug on the left side of the main vertical cable.
- 15:** A connector or plug on the left side of the main vertical cable.
- 16:** A connector or plug on the left side of the main vertical cable.
- 17:** A connector or plug on the left side of the main vertical cable.
- 18:** A connector or plug on the left side of the main vertical cable.
- 19:** A connector or plug on the left side of the main vertical cable.
- 20:** A connector or plug on the left side of the main vertical cable.
- 21:** A connector or plug on the left side of the main vertical cable.
- 22:** A connector or plug on the left side of the main vertical cable.
- 23:** A connector or plug on the left side of the main vertical cable.

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WIRE HARNESS **ENGINE – GM 2.4L, LPG (→ S/N L177B14822E)**

ITEM	PART NO.	DESCRIPTION	QTY
	2053099	Wire Harness (Engine, GM 2.4L, LPG)	1
1		Peak and Hold Module	1
2		Engine Control Unit	3
3		Connector Assembly (Latch Relay)	1
3	1330302	Connector	1
3	1330281	Terminal	2
3	1330303	Lock	1
3	1330304	Terminal	2
3	1337391	Seal	1
4	166112	Clamp	2
5	1532758	Clip	1
6		Connector Assembly (To Chassis Harness)	1
6	1531502	Connector	1
6	866401	Terminal	4
6	1330433	Terminal	9
6	1463136	Terminal	6
6	1330439	Plug	10
6	1484686	Washer (Spring)	1
6	1484685	Locknut	1
7		Connector Assembly (Injector)	1
7	1607548	Connector	1
7	1607549	Terminal	2
7	1561147	Plug	2
8		Connector Assembly (MAP Sensor)	1
8	1607839	Connector	1
8	1402814	Terminal	4
8	1562649	Seal	4
9	1500899	Clip	4
10		Connector Assembly (Coolant Temperature Sensor)	1
10	1607837	Connector	1
10	1402814	Terminal	2
10	1562649	Seal	2
11		(Connector Assembly) (Oxygen Sensor)	1
11	1330355	Terminal	4
11	1402887	Wire Seal	4
11	1482663	Connector	1
11	1482667	Connector Body	1
12	1500900	Clip	1
13		Connector Assembly (Electronic Throttle)	1
13	1607743	Connector	1
13	1607744	Terminal	6
13	1607746	Seal	4
13	1607745	Seal	2
14		Connector Assembly (Ignition Coil)	1
14	1531486	Connector	1
14	1330356	Seal	2
14	1402887	Wire Seal	3
14	1330355	Terminal	5
15		Connector Assembly (Alternator)	1
15	1323586	Connector	1

WIRE HARNESS

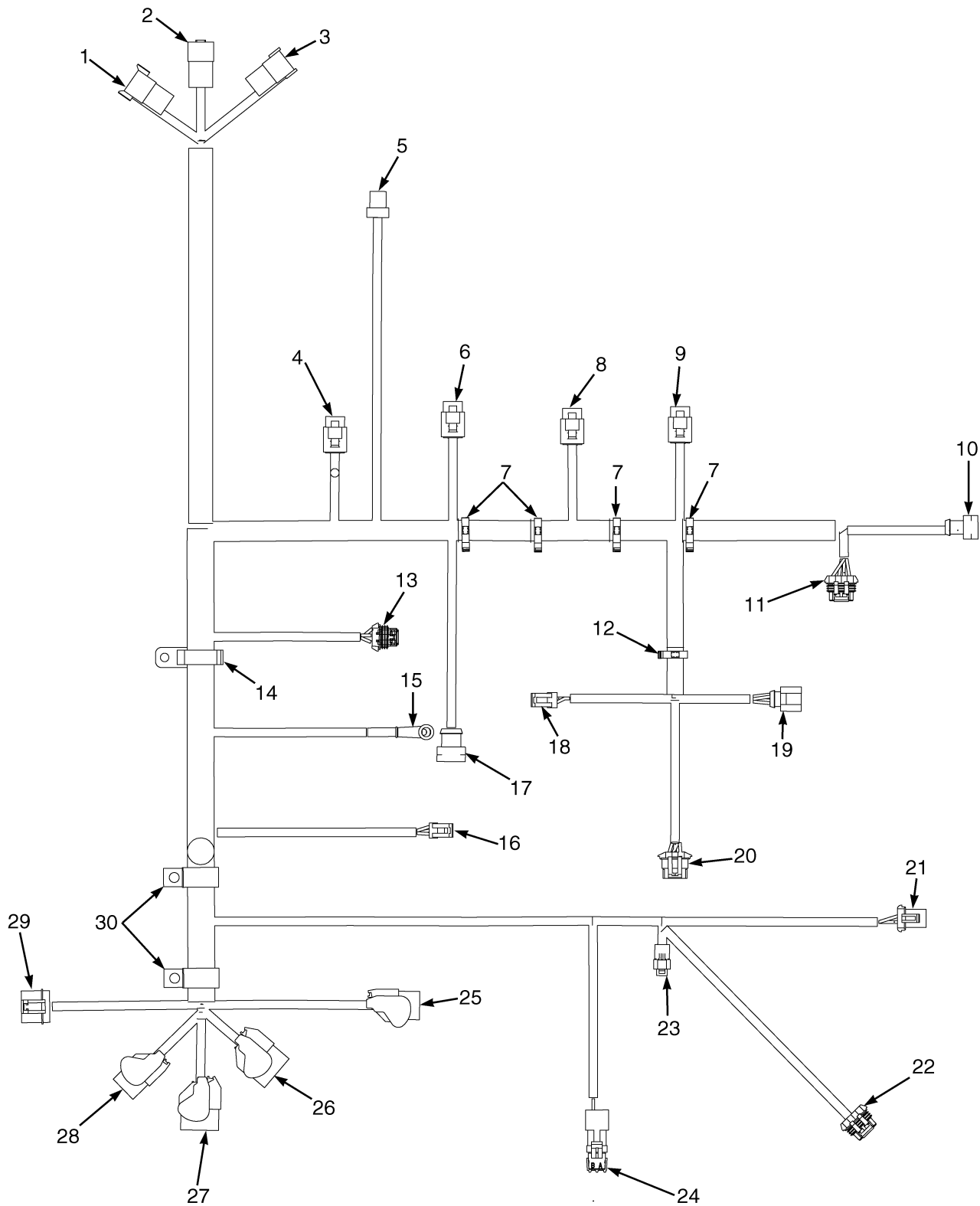
ENGINE – GM 2.4L, LPG (→ S/N L177B14822E)

ITEM	PART NO.	DESCRIPTION	QTY
15	1323576	Terminal	2
16		Connector Assembly (Crankshaft Position Sensor)	1
16	1607958	Connector	1
16	1562649	Seal	3
16	1402814	Terminal	3
17		Connector Assembly (Camshaft Sensor)	1
17	1476067	Connector	1
17	1476109	Connector Lock	1
17	1402887	Wire Seal	3
17	1330355	Terminal	3
18	1532779	Clip	1
19		Terminal (Starter Solenoid)	1
19	129888	E-Ring	1
19	190383	Boot	1
20		Connector Assembly (Oil Pressure Sensor)	1
20	1402613	Connector	1
20	1354237	Terminal	3
21		Connector Assembly (LPG Pressure Switch)	1
21	1329152	Plug	1
21	1329151	Terminal	1
21	1330281	Terminal	2
21	1402888	Seal	2
22		(Connector Assembly) (LPG Lockoff)	1
22	1599337	Connector	1
22	1561146	Terminal	2
23		(Connector Assembly) (Air Restriction Switch)	1
23	1465469	Connector	1
23	1465468	Connector	1
23	1323578	Terminal	2
23	1402888	Seal	2

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-53) ENGINE — GM 2.4L, LPG (S/N L177B14823E →)



BP0080571

WIRE HARNESS

ENGINE – GM 2.4L, LPG (S/N L177B14823E →)

ITEM	PART NO.	DESCRIPTION	QTY
	2089064	Wire Harness (Engine, GM 2.4L, LPG)	1
1		Connector Assembly (Chassis Harness)	1
1	1330413	Connector	1
1	1330437	Terminal (Pin)	1
1	1484377	Plug	1
2		Connector Assembly (Chassis Harness)	1
2	866401	Terminal	4
2	1514597	Connector	1
3		Connector Assembly (Chassis Harness)	1
3	1541988	Connector	1
3	1463138	Terminal	8
4		Connector Assembly (Injector 4)	1
4	1607548	Connector	1
4	1561147	Plug	2
4	1607549	Terminal	2
5		Connector Assembly (NAT/MAP Sensor)	1
5	1607839	Connector	1
5	1402814	Terminal	4
5	1562649	Seal	4
6		Connector Assembly (Injector 3)	1
6	1607548	Connector	2
6	1561147	Plug	2
6	1607549	Terminal	4
7		Clip	1
8		Connector Assembly (Injector 2)	1
8	1607548	Connector	1
8	1561147	Plug	2
8	1607549	Terminal	2
9		Connector Assembly (Injector 1)	1
9	1607548	Connector	1
9	1561147	Plug	2
9	1607549	Terminal	2
10		Connector Assembly (Coolant Temperature Sensor)	1
10	1402814	Terminal	2
10	1562649	Seal	2
10	1607837	Connector	1
11		Connector Assembly (Oxygen Sensor, Pre-Catalytic)	1
11	1482667	Connector Body	1
11	1330355	Terminal	4
11	1402887	Wire Seal	4
11	1482663	Connector	1
12	1500900	Clip	1
13		Connector Assembly (Camshaft Sensor)	1
13	1476067	Connector	1
13	1330355	Terminal	3
13	1402887	Wire Seal	3
13	1476109	Connector Lock	1
14	1532758	Clip	1
15		Connector Assembly (Starter Solenoid)	1
15	129888	E-Ring	1

WIRE HARNESS

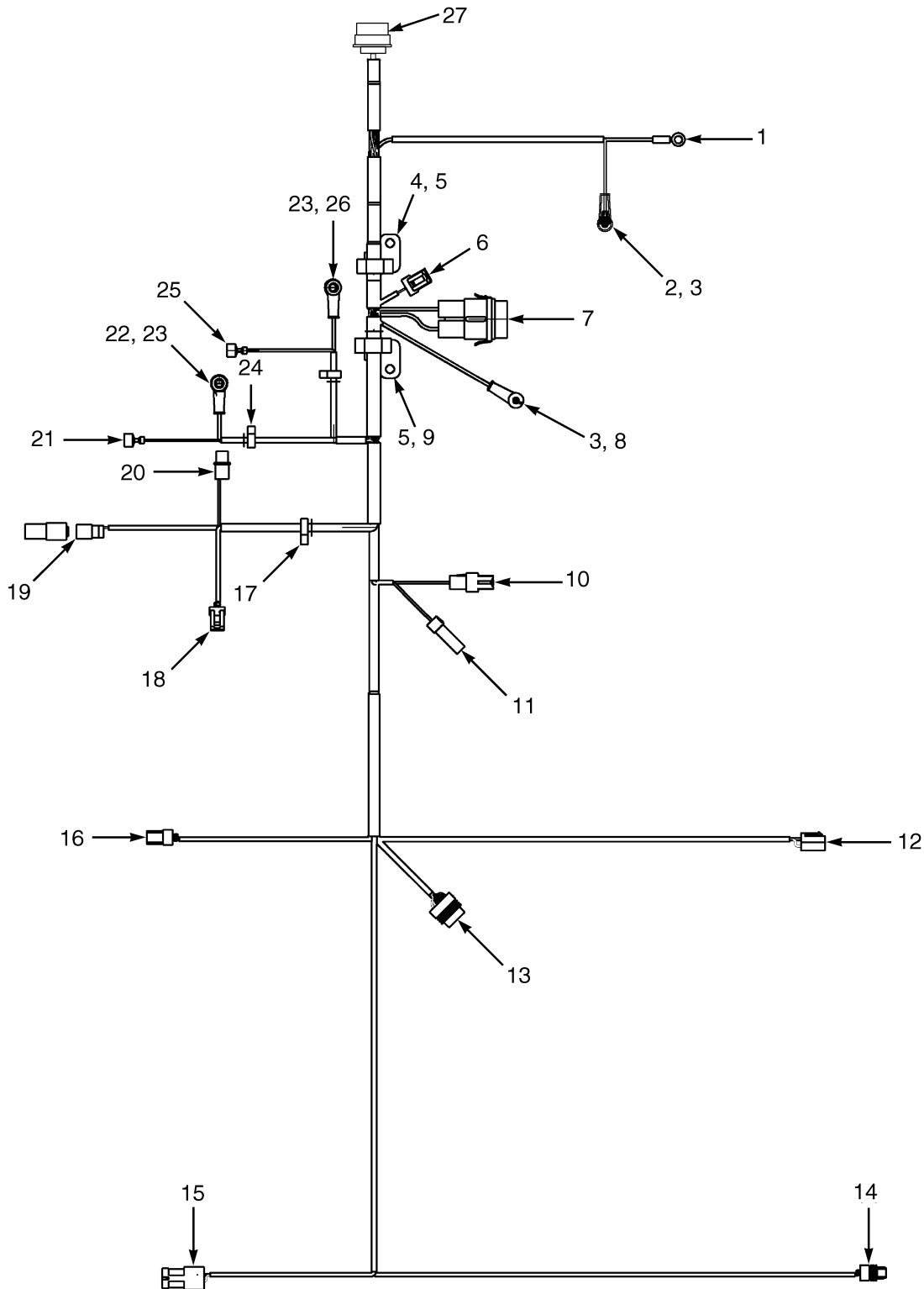
ENGINE – GM 2.4L, LPG (S/N L177B14823E →)

ITEM	PART NO.	DESCRIPTION	QTY
15	190383	Boot	1
16		Connector Assembly (Oil Pressure Sensor)	1
16	1402613	Connector	1
16	1354237	Terminal	3
17		Connector Assembly (Crankshaft Position sensor)	1
17	1402814	Terminal	3
17	1562649	Seal	3
17	1607958	Connector	1
18		Connector Assembly (Alternator)	1
18	1323576	Terminal	2
18	1323586	Connector	1
19		Connector Assembly (E-Throttle)	1
19	1607743	Connector	1
19	1607744	Terminal	6
19	1607746	Seal	4
19	1607745	Seal	2
20		Connector Assembly (Ignition Coil)	1
20	1402613	Connector	12
20	1531486	Connector	1
20	1330355	Terminal	5
20	1402887	Wire Seal	3
20	1330356	Seal	2
21		Connector Assembly (LPG Pressure Switch)	1
21	1329152	Plug	1
21	1402888	Seal	2
21	1330281	Terminal	2
21	1329151	Terminal	1
22		Connector Assembly (Oxygen Sensor, Post Catalytic)	1
22	1482667	Connector Body	1
22	1330355	Terminal	4
22	1402887	Wire Seal	4
22	1482663	Connector	1
23		Connector Assembly (LPG Lockoff)	1
23	1599337	Connector	1
23	1561146	Terminal	2
24		Connector Assembly (Air Restriction Sensor)	1
24	1465469	Connector	1
24	1465468	Connector	1
24	1323578	Terminal	2
24	1402888	Seal	2
25		Connector Assembly (CPS "Peak And Hold")	1
26		Connector Assembly (ECU "A")	1
27		Connector Assembly (ECU "B")	1
28		Connector Assembly (ECU "C")	1
29		Connector Assembly (Latch Relay)	1
29	1461744	Connector Body	1
29	1402904	Terminal	2
29	1375797	Terminal	2
30	166112	Clamp	1
30	1323579	Seal	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-54) ENGINE — YANMAR 2.6L AND 3.3L, DIESEL (→ S/N L177B11117D)



HP081650

WIRE HARNESS

ENGINE – YANMAR 2.6L AND 3.3L, DIESEL (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
	2060844	Wire Harness (Engine)	1
1	1559049	Ring Terminal (Glow Plug)	1
1	190382	Boot	1
2		Connector Assembly (Fuse)	1
2	1454860	Connector Body	1
2	1382695	Fuse Connector	2
2	1382694	Fuse Connector	2
2	1454829	Fuse (60 Amp)	1
2	1454862	Cover (With Seal)	1
3		Connector Assembly (Engine RPM Sensor)	1
3	1546673	Connector	1
3	1323576	Terminal	3
4	1559049	Ring Terminal (Starter Solenoid)	1
4	190382	Boot	1
5	148611	E-Ring (Starter Stud)	1
6		Connector Assembly (Alternator)	1
6	1547368	Connector Body	1
6	1565098	Terminal	2
7	1582484	Connector (Fuel Shut-Off Solenoid)	1
8	1582486	Connector (Cold Start Aid)	1
9	1521328	Terminal (Relay Power To Glow Plugs)	1
9	190383	Boot	1
10	325789	Terminal (Relay Ground)	1
11	1521328	Terminal (Fused Power Positive)	1
11	190383	Boot	1
12	325789	Terminal (Relay Signal)	1
13	1547369	Connector Body (Fuel Filter/Water Separator)	1
14		Connector Assembly (Fuel Level Sensor)	1
14	1476077	Connector	1
14	1323576	Terminal	2
15		Connector Assembly (Throttle Position Sensor)	1
15	1525584	Connector	1
15	1532571	Terminal	6
16		Connector Assembly (Water Temperature Sensor)	1
16	1323586	Connector	1
16	1323576	Terminal	2
17	1465469	Connector (Air Filter Sensor)	1
17	1323578	Terminal	2
17	1402888	Seal	2
17	1498416	Connector	2
18		Connector Assembly (Low Engine Oil Pressure Switch)	1
18	1327957	Connector	1
18	1532571	Terminal	3
19		Connector Assembly (Pull Actuator)	1
19	1330419	Connector	1
19	1330436	Terminal	2
19	1330424	Connector	1
19	1351681	Connector	1
20		Connector Assembly (Engine To Chassis)	1
20	1531502	Connector	1

WIRE HARNESS

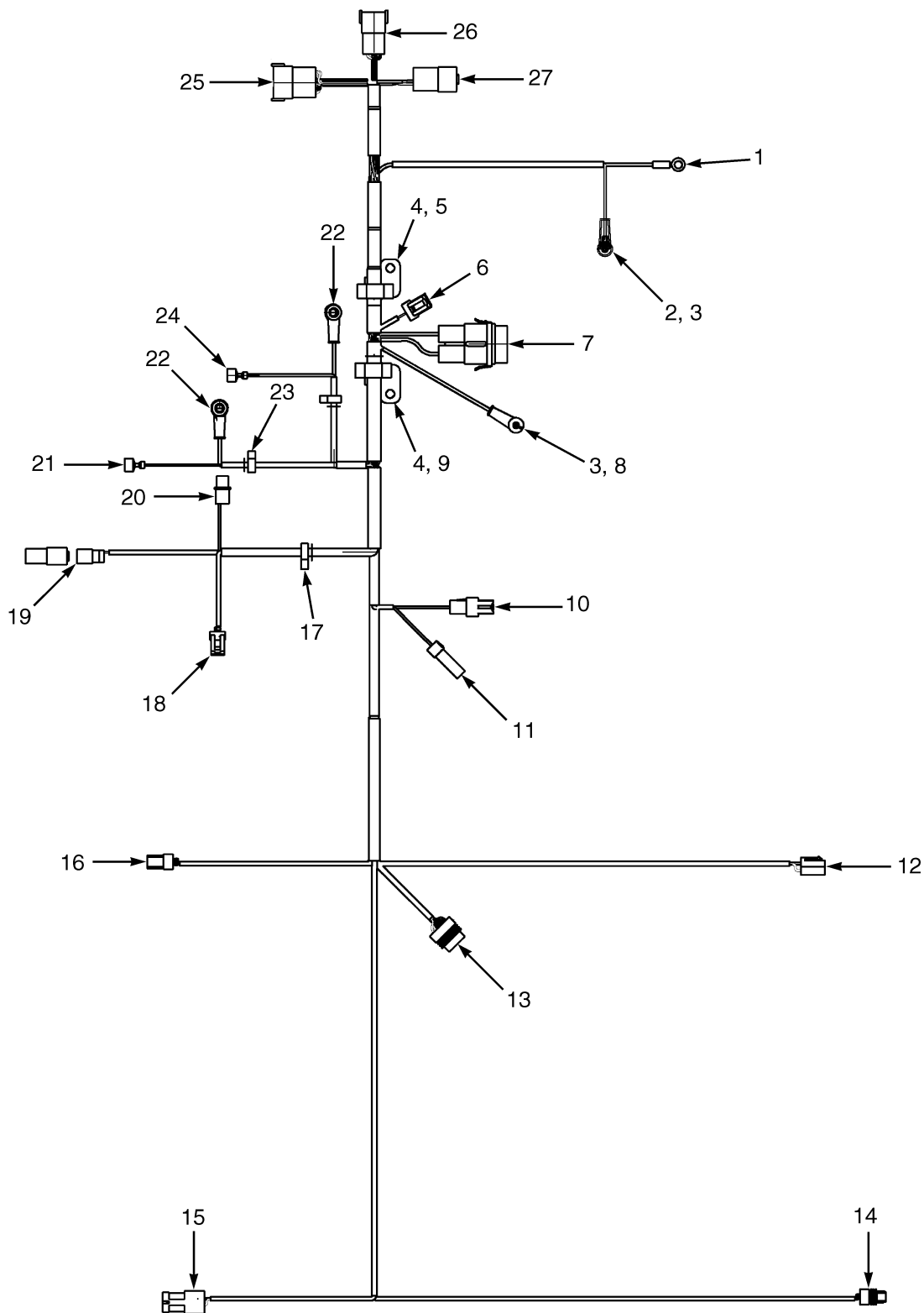
ENGINE – YANMAR 2.6L AND 3.3L, DIESEL (→ S/N L177B11117D)

ITEM	PART NO.	DESCRIPTION	QTY
20	1484709	Terminal (Pin)	3
20	1330437	Terminal (Pin)	19
20	1330439	Plug	7
21	1500901	Clip	1
22	1509888	Clip	2
23	1532776	Clip	2
24	1532761	Clip	2

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-55) ENGINE — YANMAR 2.6L AND 3.3L, DIESEL (S/N L177B11118D →)



BP080672

WIRE HARNESS

ENGINE – YANMAR 2.6L AND 3.3L, DIESEL (S/N L177B11118D →)

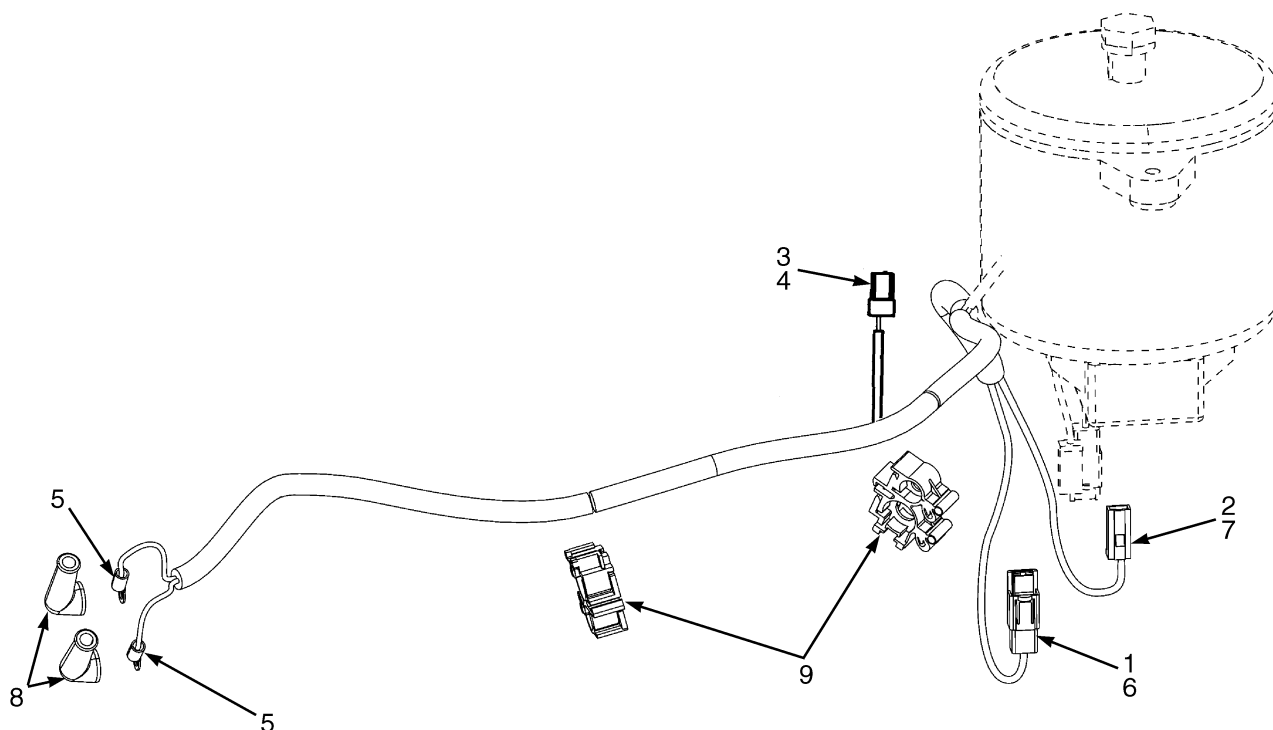
ITEM	PART NO.	DESCRIPTION	QTY
	2087191	Wire Harness	1
1	148611	E-Ring (Starter Stud)	1
2	1382695	Fuse Connector	2
2	1559049	Ring Terminal (Glow Plug)	1
3	190382	Boot	2
4	1559049	Ring Terminal (Starter Solenoid)	1
4	190382	Boot	1
4	1532776	Clip	2
5	1532761	Clip	1
6	1546673	Connector (Engine RPM Sensor)	1
6	1323576	Terminal	3
7		Connector (Fuse 60 Amp)	1
7	1454860	Connector Body	1
7	1382695	Fuse Connector	2
7	1382694	Fuse Connector	2
7	1454829	Fuse (60 Amp)	1
7	1454862	Cover (With Seal)	1
8	148609	E-Ring (Glow Plug)	1
9	1532759	Clip	1
10	1582484	Connector (Fuel Shut-off Solenoid)	1
11	1582486	Connector (Cold Start Aid)	1
12	1547368	Connector Body (Alternator)	1
12	1565098	Terminal	1
13		Throttle Position Sensor	1
13	1525584	Connector (Throttle Position Sensor)	1
13	1532571	Terminal	6
14	1476077	Connector (Fuel Level Sensor)	1
14	1323576	Terminal	2
15		Connector (Air Filter Sensor)	1
15	1465469	Connector	1
15	1323578	Terminal	2
15	1402888	Seal	2
16	1323586	Connector (Water Temperature Sensor)	1
16	1323576	Terminal	2
17	1500901	Clip	1
18	1327957	Connector (Low Engine Oil Pressure Switch)	1
18	1532571	Terminal	3
19	1330419	Connector (Pull Actuator)	1
19	1330436	Terminal	2
19	1330424	Connector	1
19	1351681	Connector	1
20	1547369	Connector Body (Fuel Filter Water Separator)	1
21	1402849	Connector Body (Relay Signal 86)	1
22	1560015	E-Ring	1
22	190383	Boot	1
23	1509888	Clip	2
24	325789	Terminal	2
25		Engine to Chassis	1
25	1500925	Connector	1
25	1330437	Terminal (Pin)	11

WIRE HARNESS

ENGINE – YANMAR 2.6L AND 3.3L, DIESEL (S/N L177B11118D →)

ITEM	PART NO.	DESCRIPTION	QTY
25	1484377	Plug	1
25	1352603	Connector	1
26		Engine to Chassis	1
26	1541988	Connector	1
26	1463138	Terminal	8
26	1541989	Connector	1
27		Engine to Chassis	1
27	1514598	Connector	1
27	1330439	Plug	1
27	1484709	Terminal (Pin)	3
27	1514597	Connector	1

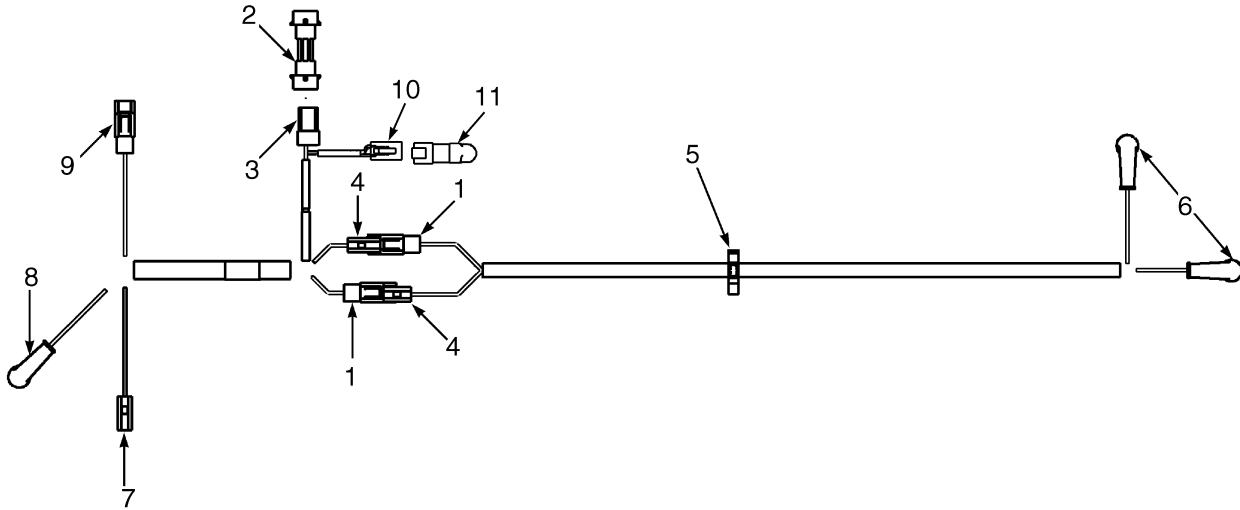
WIRE HARNESS (SEALED ALTERNATOR) (FIGURE 4-56)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — 2007 EMISSION COMPLIANT ENGINES
(S/N L177B15327E →) (S/N L177B16207E →) (S/N L177B15512E →)



HP081641

ITEM	PART NO.	DESCRIPTION	QTY
	2084812	Wire Harness (Sealed Alternator) (Sealed Alternator)	1
1	181045	Connector Body (Alternator Field)	1
2	181046	Connector Body (Alternator Excite)	1
3	1308260	Connector Body (To Engine Harness)	1
4	314773	Terminal (To Engine Harness)	1
5	1582218	E-Ring (Battery Disconnect)	2
6	134810	Terminal (Alternator Field)	1
7	1561117	Terminal (Alternator Excite)	1
8	190383	Boot (Battery Disconnect)	2
9	1579403	Clip	1

WIRE HARNESS (FIGURE 4-57) SEALED ALTERNATOR — GM 2.4L, GASOLINE AND LPG

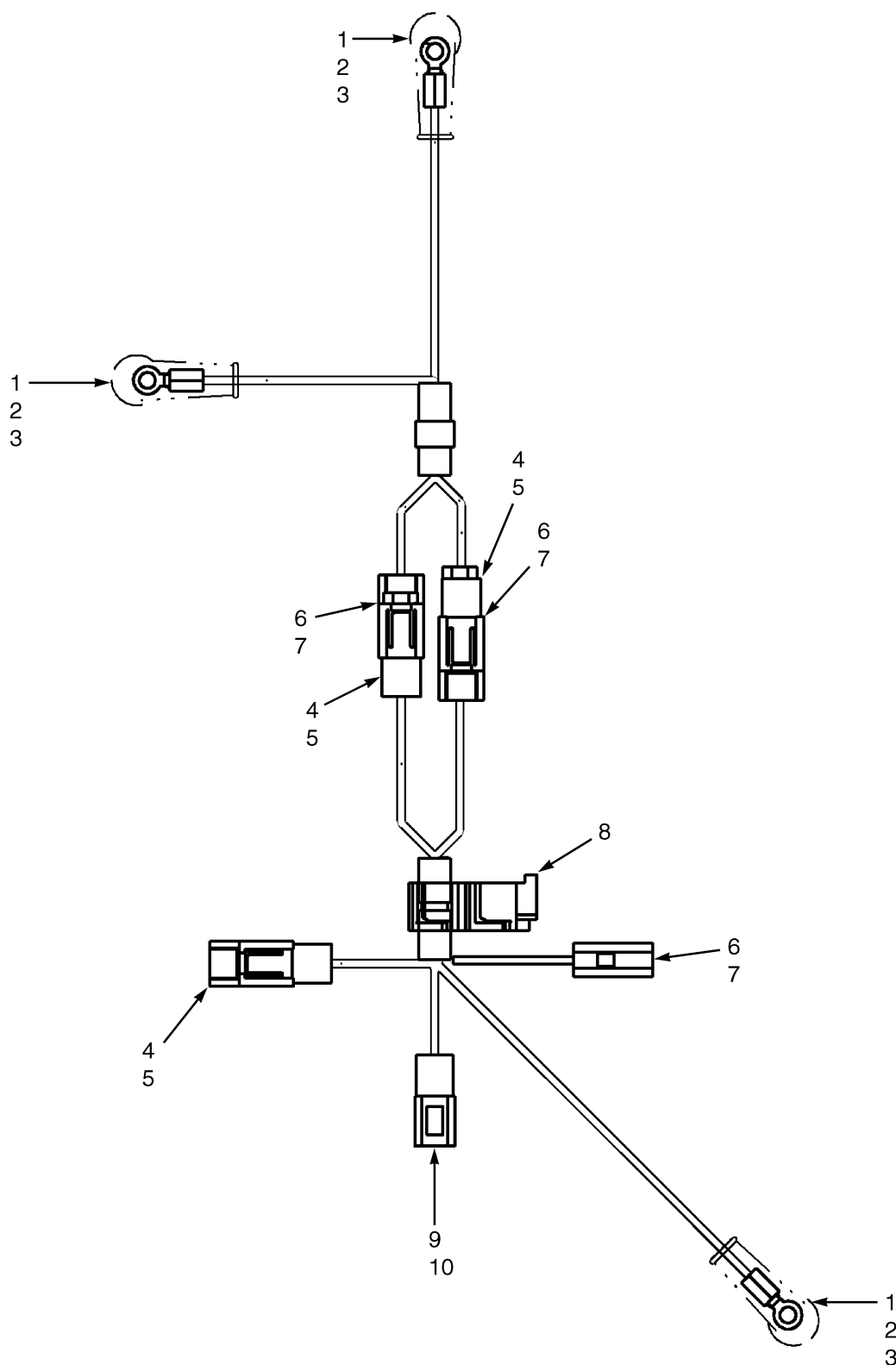


BP080577

ITEM	PART NO.	DESCRIPTION	QTY
	2094581	Wire Harness	1
1		Connector Assembly (To Disconnect Switch Link)	2
1	181045	Connector Body	1
1	134810	Terminal	1
2	1469606	Adapter (To Engine Harness)	1
3		Connector Assembly (To Engine Harness)	1
3	1323586	Connector	1
3	1323576	Terminal	2
4		Connector Assembly (To Disconnect Switch Link)	2
4	181046	Connector Body	1
4	1561117	Terminal	1
5	1402816	Clip	1
6		Connector Assembly (To Disconnect Switch)	2
6	1582218	E-Ring	1
6	190383	Boot	1
6	175944	Heat Shrink	1
7		Connector Assembly (Alternator Excite)	1
7	181046	Connector Body	1
7	1561117	Terminal	1
8		Connector Assembly (Alternator D+)	1
8	1582218	E-Ring	1
8	190383	Boot	1
8	175944	Heat Shrink	1
9		Connector Assembly (Alternator Field)	1
9	181045	Connector Body	1
9	134810	Terminal	1
10		Connector Assembly (Diode Pack)	1

ITEM	PART NO.	DESCRIPTION	QTY
10	1489656	Connector (4-Way)	1
10	1489657	Connector	1
10	1363886	Terminal (Socket)	4
11	2094490	Kit-Diode	1

WIRE HARNESS (FIGURE 4-58) SEALED ALTERNATOR — YANMAR 2.6L AND 3.3L, DIESEL

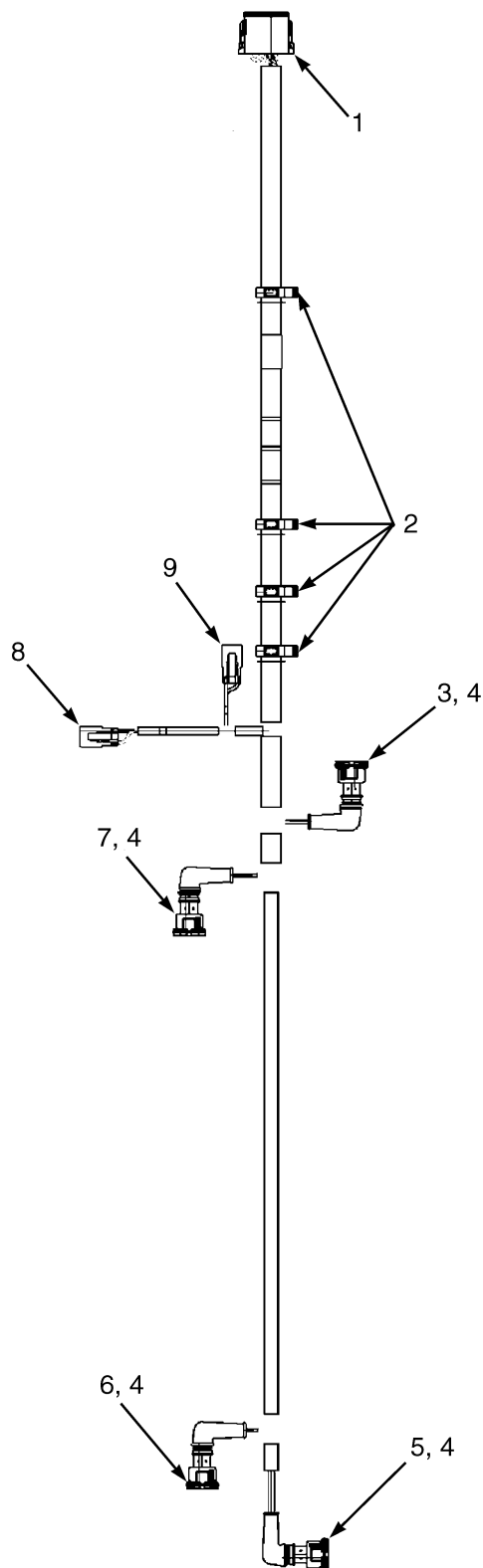


BP080507

WIRE HARNESS
SEALED ALTERNATOR – YANMAR 2.6L AND 3.3L, DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	2084810	Wire Harness (Alternator)	1
1	1582218	E-Ring	3
2	190383	Boot	3
3	175944	Heat Shrink	AR
4	181045	Connector Body	3
5	134810	Terminal	3
6	181046	Connector Body	3
7	1561117	Terminal	3
8	1579403	Clip	1
9	1308260	Connector Body	1
10	314773	Terminal	2

WIRE HARNESS (FIGURE 4-59) ELECTRONIC CONTROL VALVE — THREE FUNCTION

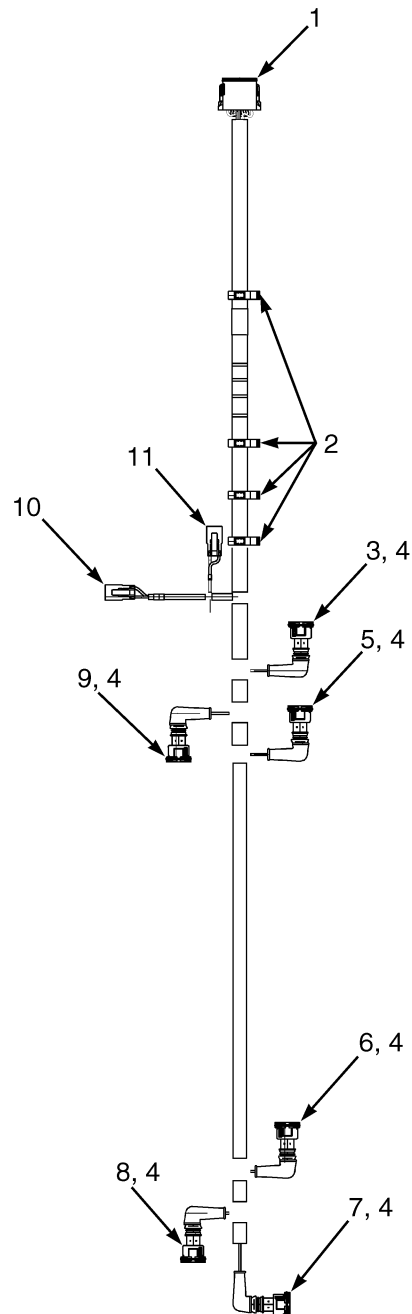


HP081569

WIRE HARNESS

ELECTRONIC CONTROL VALVE – THREE FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	2060198	Wire Harness (Electronic Control Valve)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525564	Connector	1
1	1330438	Terminal (Socket)	9
1	1330439	Plug	3
1	1525564	Connector	1
1	1500913	Connector	1
2	1402815	Clip	4
3		Connector Assembly (2A Tilt)	1
3	1531162	Connector	1
3	1562649	Seal	2
3	1402814	Terminal	2
4	190383	Boot	4
5		Connector Assembly (2B Tilt)	1
5	1531162	Connector	1
5	1562649	Seal	2
5	1402814	Terminal	2
6		Connector Assembly (3B Auxiliary 1)	1
6	1493435	Connector (2-Way)	1
6	1562649	Seal	2
6	1402814	Terminal	2
7		Connector Assembly (3A Auxiliary 1)	1
7	1493435	Connector (2-Way)	1
7	1562649	Seal	2
7	1402814	Terminal	2
8		Connector Assembly (Lift)	1
8	1490242	Connector	1
8	1330438	Terminal (Socket)	2
8	1490243	Connector	1
9		Connector Assembly (Lower)	1
9	1490242	Connector	1
9	1330438	Terminal (Socket)	2
9	1490243	Connector	1

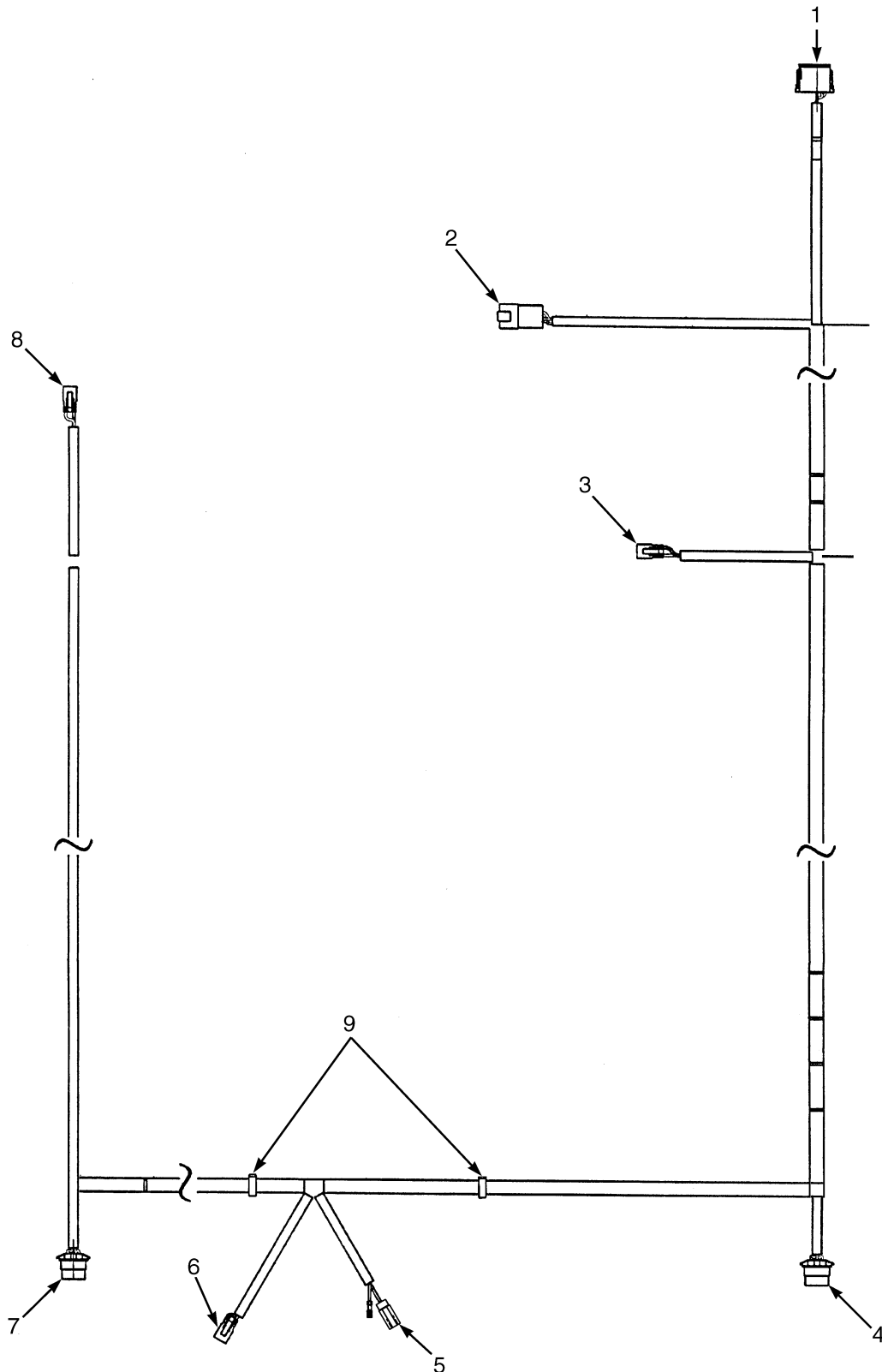
WIRE HARNESS (FIGURE 4-60)
ELECTRONIC CONTROL VALVE — FOUR FUNCTION

HP081568

WIRE HARNESS ELECTRONIC CONTROL VALVE – FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	2058909	Wire Harness (Electronic Control Valve)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525564	Connector	1
1	1330438	Terminal (Socket)	12
1	1500913	Connector	1
2	1402815	Clip	4
3		Connector Assembly (2A Tilt)	1
3	1531162	Connector	1
3	1562649	Seal	2
3	1402814	Terminal	2
4	190383	Boot	6
5	1493447	Connector (4A Auxiliary 2)	1
5	1562649	Seal	2
5	1402814	Terminal	2
6	1493447	Connector (4B Auxiliary 2)	1
6	1562649	Seal	2
6	1402814	Terminal	2
7		Connector Assembly (2B Tilt)	1
7	1531162	Connector	1
7	1562649	Seal	2
7	1402814	Terminal	2
8		Connector Assembly (3B Auxiliary 1)	1
8	1493435	Connector (2-Way)	1
8	1562649	Seal	2
8	1402814	Terminal	2
9		Connector Assembly (3A Auxiliary 1)	1
9	1493435	Connector (2-Way)	1
9	1562649	Seal	2
9	1402814	Terminal	2
10		Connector Assembly (Lift)	1
10	1490242	Connector	1
10	1330438	Terminal (Socket)	2
10	1490243	Connector	1
11		Connector Assembly (Lower)	1
11	1490242	Connector	1
11	1330438	Terminal (Socket)	2
11	1490243	Connector	1

WIRE HARNESS (FIGURE 4-61) LIGHTS — WITH OVERHEAD GUARD (→ S/N L177B11224D)

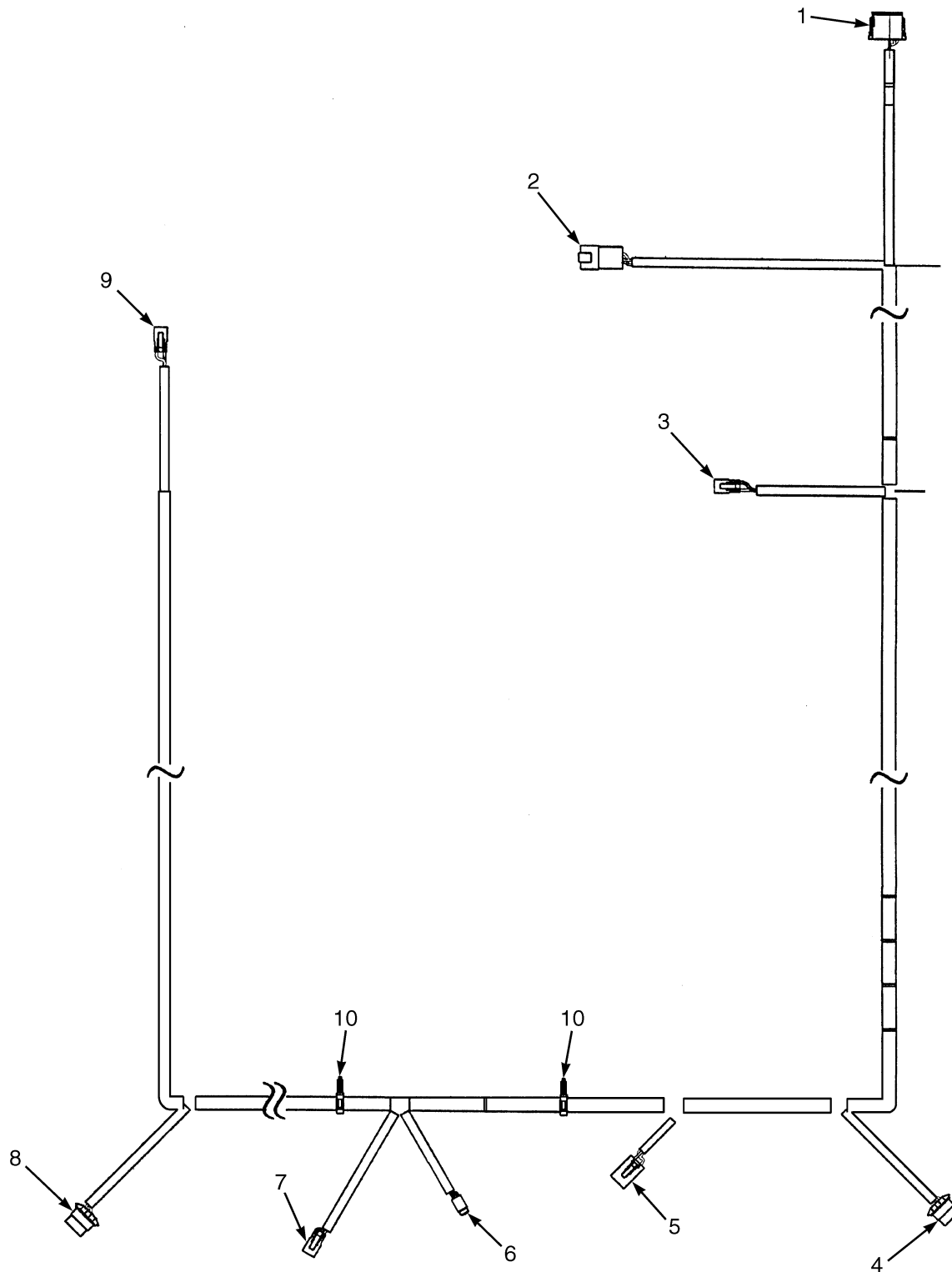


HP081631

WIRE HARNESS
LIGHTS – WITH OVERHEAD GUARD (→ S/N L177B11224D)

ITEM	PART NO.	DESCRIPTION	QTY
	2073760	Wire Harness (Lights) (Lights)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525566	Connector	1
1	1484377	Plug	9
1	1330438	Terminal (Socket)	3
1	1500913	Connector	1
2		Connector Assembly (Chassis Harness)	1
2	1514597	Connector	1
2	1484709	Terminal (Pin)	4
2	1514598	Connector	1
3		Connector Assembly (RH Front Work Lights)	1
3	1490242	Connector	1
3	1363886	Terminal (Socket)	2
3	1490243	Connector	1
4		Connector Assembly (RH Rear Signal Lights)	1
4	1531486	Connector	1
4	1330355	Terminal	4
4	1330356	Seal	1
4	1482668	Plug	2
4	930591	Connector	1
4	1476108	Wire Seal	3
5	1484557	Connector (Strobe Lights)	1
5	1484558	Connector	1
5	1463139	Terminal	2
6		Connector Assembly (Rear Work Lights)	1
6	1490242	Connector	1
6	1363886	Terminal (Socket)	2
6	1490243	Connector	1
7		Connector Assembly (LH Rear Signal Lights)	1
7	1531486	Connector	1
7	1330355	Terminal	4
7	1330356	Seal	1
7	1482668	Plug	2
7	930591	Connector	1
7	1476108	Wire Seal	3
8		Connector Assembly (LH Front Work Lights)	1
8	1490242	Connector	1
8	1363886	Terminal (Socket)	2
8	1490243	Connector	1
9	1509890	Clip	2

WIRE HARNESS (FIGURE 4-62) LIGHTS — WITH OVERHEAD GUARD (S/N L177B11225D →)

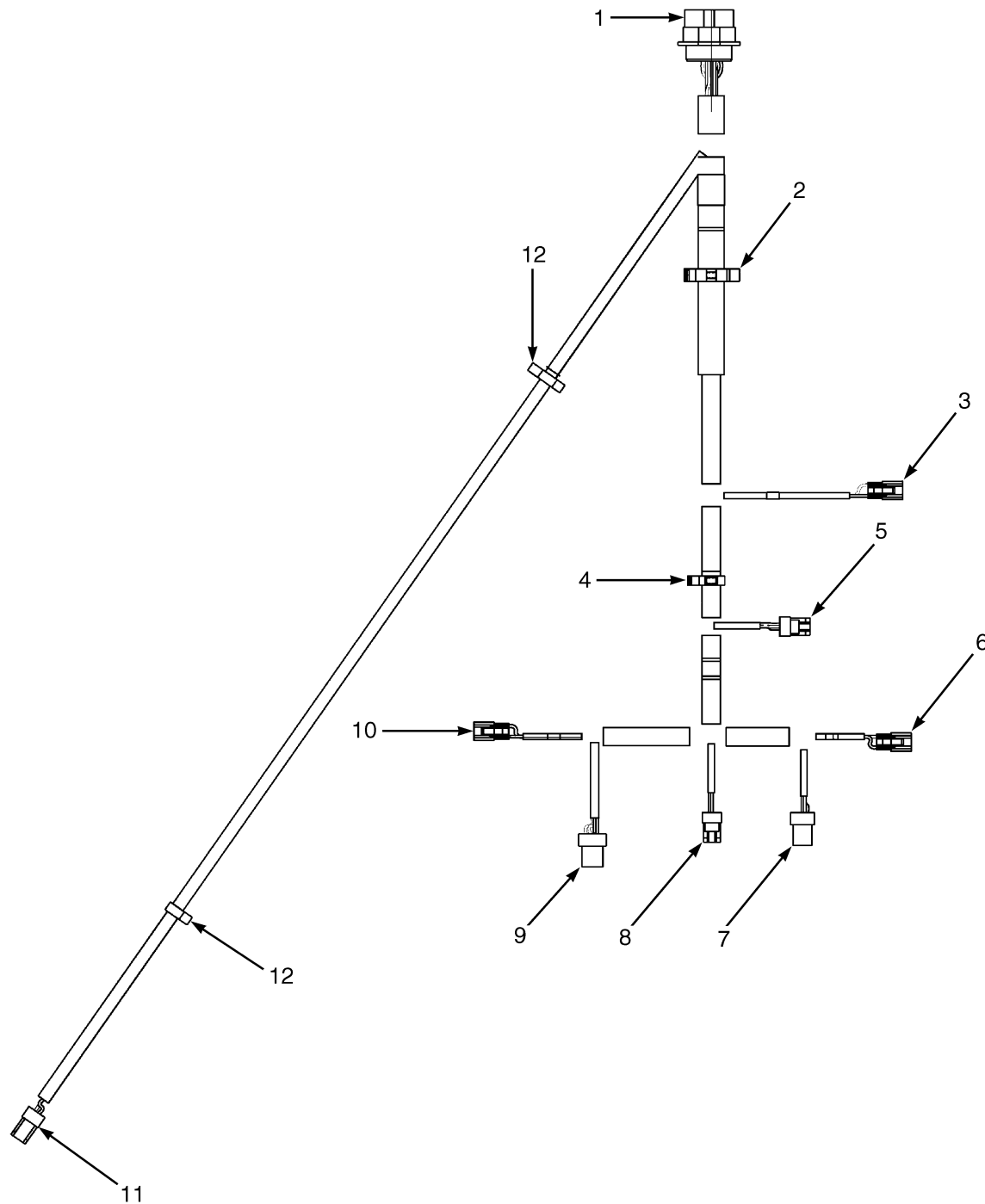


BP080520

WIRE HARNESS **LIGHTS – WITH OVERHEAD GUARD (S/N L177B11225D →)**

ITEM	PART NO.	DESCRIPTION	QTY
	2090084	Wire Harness (Lights)	1
1		Connector Assembly (VSM)	1
1	1525566	Connector	1
1	1484377	Plug	9
1	1330438	Terminal (Socket)	3
1	1500913	Connector	1
2		Connector Assembly (Chassis Harness)	1
2	1514597	Connector	1
2	1484709	Terminal (Pin)	4
2	1514598	Connector	1
3		Connector Assembly (RH Front Work)	1
3	1490242	Connector	1
3	1363886	Terminal (Socket)	2
3	1490243	Connector	1
4		Connector Assembly (RH Rear Signal)	1
4	1531486	Connector	1
4	1330355	Terminal	4
4	1330356	Seal	1
4	1482668	Plug	1
4	930591	Connector	1
4	1476108	Wire Seal	3
5		Connector Assembly (Work Light Resistor)	1
5	1514602	Connector	1
5	1514603	Connector	1
5	1484709	Terminal (Pin)	4
6		Socket Assembly (Strobe)	1
6	1484557	Connector	1
6	1484558	Connector	1
6	1463139	Terminal	2
7		Connector Assembly (Rear Work)	1
7	1490242	Connector	1
7	1363886	Terminal (Socket)	2
7	1490243	Connector	1
8		Connector Assembly (LH Rear Signal)	1
8	1531486	Connector	1
8	1330355	Terminal	4
8	1330356	Seal	1
8	1482668	Plug	2
8	930591	Connector	1
8	1476108	Wire Seal	3
9		Connector Assembly (LH Front Work)	1
9	1490242	Connector	1
9	1363886	Terminal (Socket)	2
9	1490243	Connector	1
10	1509890	Clip	2

WIRE HARNESS (FIGURE 4-63) TRANSMISSION — SINGLE SPEED (→ S/N L177B11117E)



HP081570

WIRE HARNESS **TRANSMISSION – SINGLE SPEED (→ S/N L177B11117E)**

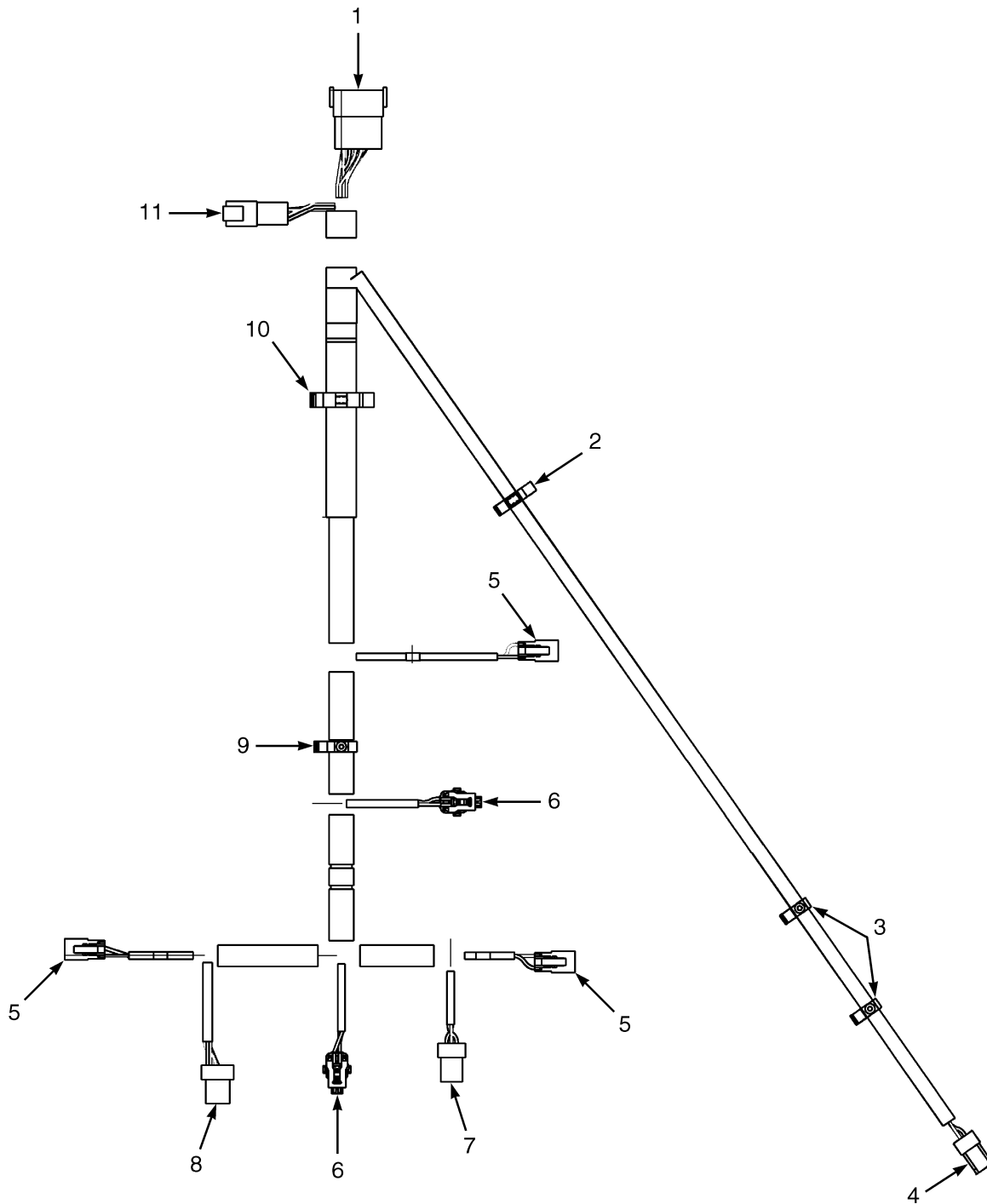
ITEM	PART NO.	DESCRIPTION	QTY
	a 2070731	Wire Harness (Transmission)	1
	b 2082323	Wire Harness (Transmission)	1
1	1500919	Connector (To Chassis)	1
1	1330437	Terminal (Pin)	14
1	a 1330439	Plug	9
1	b 1484377	Plug	9
2	a 1402813	Clip	1
2	b 1509890	Clip	1
3	a 1490242	Connector (Forward Clutch 1)	1
3	a 1330438	Terminal (Socket)	2
3	a 1490243	Connector	1
3	b 1603021	Connector (Forward Clutch 1)	1
3	b 1603236	Connector (Secondary Lock)	1
3	b 1548517	Terminal (Socket)	3
3	b 1548519	Seal	3
4	1402815	Clip	1
5	1327957	Connector (Forward Pressure 1)	1
5	1532571	Terminal	3
6	1490242	Connector (Reverse Clutch 1)	1
6	1330438	Terminal (Socket)	2
6	1490243	Connector	1
7	1546673	Connector (Shaft RPM)	1
7	1323576	Terminal	3
8	a 1327957	Connector (Reverse Pressure 1)	1
8	a 1532571	Terminal	3
9	b 1548517	Terminal (Socket)	3
9	b 1548519	Seal	3
9	b 1603021	Connector (Reverse Pressure 1)	1
9	b 1603236	Connector (Secondary Lock)	1
9	1558156	Connector (Tail Shaft RPM)	1
9	1323576	Terminal	4
10	1490242	Connector (Transmission Check Valve)	1
10	1490243	Connector	1
10	1330438	Terminal (Socket)	2
11	1402868	Connector (Transmission Temperature)	1
11	1323576	Terminal	2
12	1509888	Clip	2

FOOTNOTES:

a → 9/2005

b 9/2005 →

WIRE HARNESS (FIGURE 4-64) TRANSMISSION — SINGLE SPEED (S/N L177B11118D →)

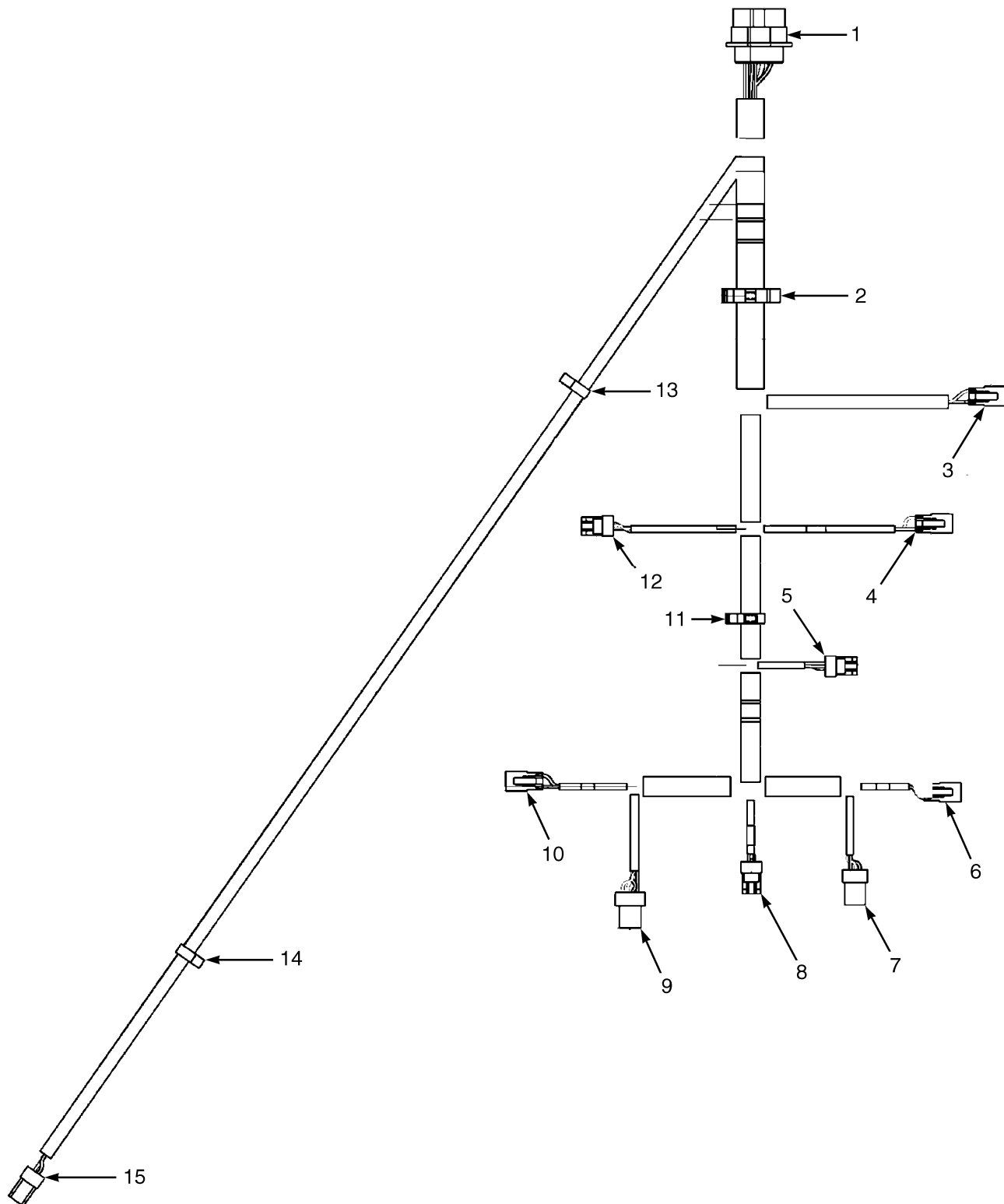


BP080478

WIRE HARNESS
TRANSMISSION – SINGLE SPEED (S/N L177B11118D →)

ITEM	PART NO.	DESCRIPTION	QTY
	2085943	Wire Harness (Transmission)	1
1		Connector Assembly (To RH Chassis Harness)	1
1	1623280	Connector	1
1	1623281	Connector	1
1	1463138	Terminal	10
1	1484377	Plug	2
2	1402816	Clip	1
3	1509888	Clip	2
4		Connector Assembly (Temperature)	1
4	1402868	Connector	1
4	1323576	Terminal	2
5		Connector Assembly (Clutch Forward/Reverse 1)	1
5	1490242	Connector	1
5	1490243	Connector	1
5	1330438	Terminal (Socket)	2
6		Connector Assembly (Forward/Reverse 1 Pressure)	1
6	1603021	Connector	1
6	1603236	Connector (Secondary Lock)	1
6	1548517	Terminal (Socket)	3
6	1548519	Seal	3
7		Connector Assembly (Turbine Shaft RPM)	1
7	1546673	Connector	1
7	1323576	Terminal	3
8		Connector Assembly (Tail Shaft RPM)	1
8	1558156	Connector	1
8	1323576	Terminal	4
9	1509890	Clip	1
10	1402813	Clip	1
11		Connector Assembly (To RH Chassis Harness)	1
11	1530960	Connector	1
11	1530961	Connector	1
11	1463138	Terminal	4
11	1484377	Plug	2

WIRE HARNESS (FIGURE 4-65) TRANSMISSION — DUAL SPEED (→ S/N L177B11117D)



HP081566

WIRE HARNESS **TRANSMISSION – DUAL SPEED (→ S/N L177B11117D)**

ITEM	PART NO.	DESCRIPTION	QTY
	a 2075644	Wire Harness (Transmission)	1
	b 2082324	Wire Harness (Transmission)	1
1		Connector Assembly (To Chassis Harness)	1
1	1500919	Connector	1
1	1330437	Terminal (Pin)	16
1	1330437	Terminal (Pin)	17
1	1330439	Plug	7
1	1484377	Plug	6
2	1402813	Clip	1
3		Connector Assembly (Clutch Forward 2)	1
3	1490243	Connector	1
3	1490242	Connector	1
3	1330438	Terminal (Socket)	2
4		Connector Assembly (Clutch Forward 1)	1
4	1490243	Connector	1
4	1490242	Connector	1
4	1330438	Terminal (Socket)	2
5		Connector Assembly (Forward 1 Pressure)	1
5	1603021	Connector	1
5	1603236	Connector (Secondary Lock)	1
5	1548517	Terminal (Socket)	3
5	1548519	Seal	3
6		Connector Assembly (Clutch Reverse 1)	1
6	1490242	Connector	1
6	1490243	Connector	1
6	1330438	Terminal (Socket)	2
7		Connector Assembly (Turbine Shaft RPM)	1
7	1546673	Connector	1
7	1323576	Terminal	3
8		Connector Assembly (Reverse 1 Pressure)	1
8	1603021	Connector	1
8	1603236	Connector (Secondary Lock)	1
8	1548517	Terminal (Socket)	3
8	1548519	Seal	3
9		Connector Assembly (Tail Shaft RPM)	1
9	1558156	Connector	1
9	1323576	Terminal	4
10		Connector Assembly (Transmission Check Valve)	1
10	1490243	Connector	1
10	1490242	Connector	1
10	1330438	Terminal (Socket)	2
11	1402815	Clip	1
11	1534828	Clip	1
11	1509890	Clip	1
12		Connector Assembly (Forward 2 Pressure)	1
12	1603021	Connector	1
12	1603236	Connector (Secondary Lock)	1
12	1548517	Terminal (Socket)	3
12	1548519	Seal	3
13	1402816	Clip	1

WIRE HARNESS
TRANSMISSION – DUAL SPEED (→ S/N L177B11117D)

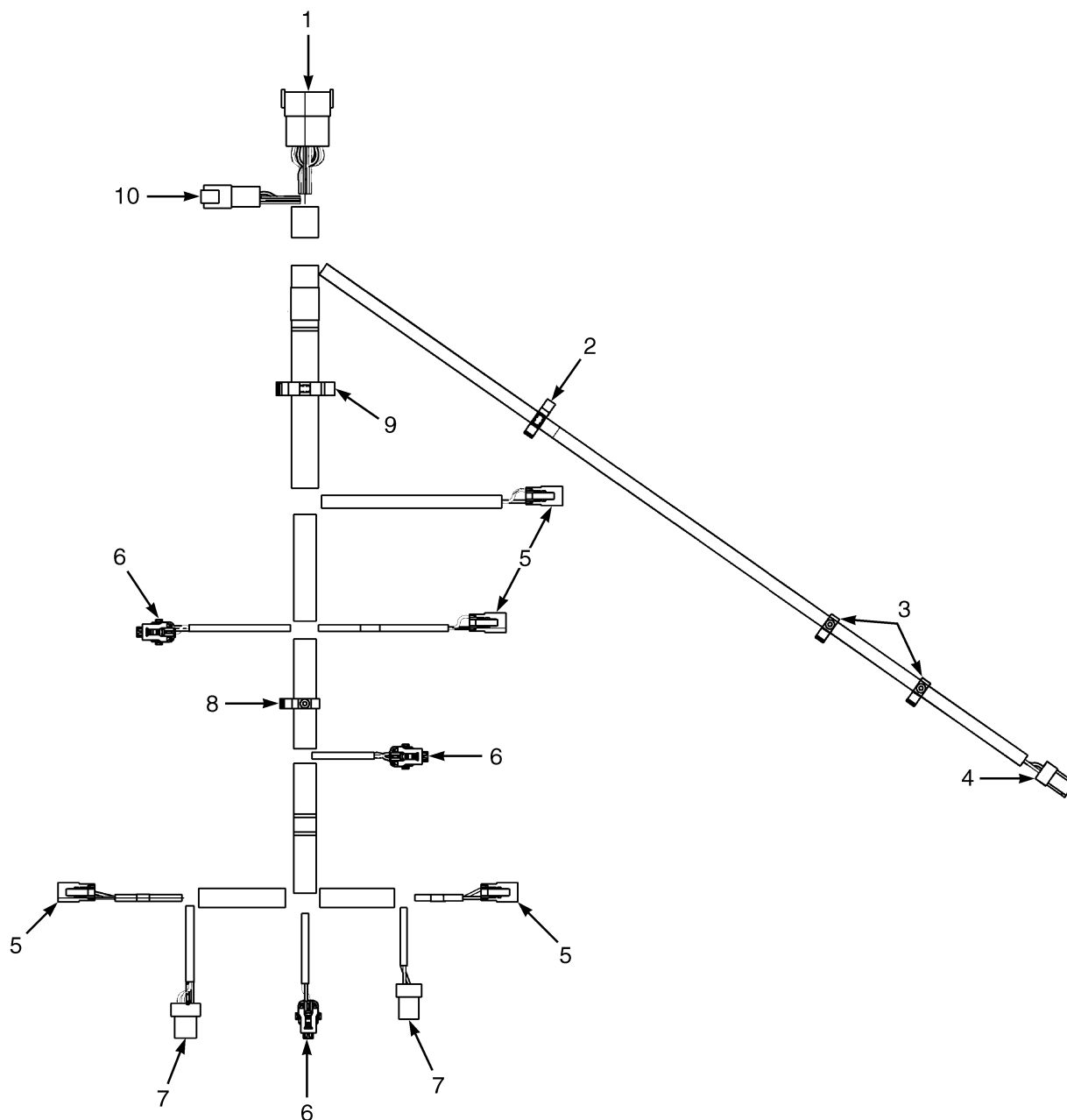
ITEM	PART NO.	DESCRIPTION	QTY
14	1509888	Clip	2
15		Connector Assembly (Transmission Temperature)	1
15	1402868	Connector	1
15	1323576	Terminal	2

FOOTNOTES:**a** → 9/2005**b** 9/2005 →

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-66) TRANSMISSION — DUAL SPEED (S/N L177B11118D →)

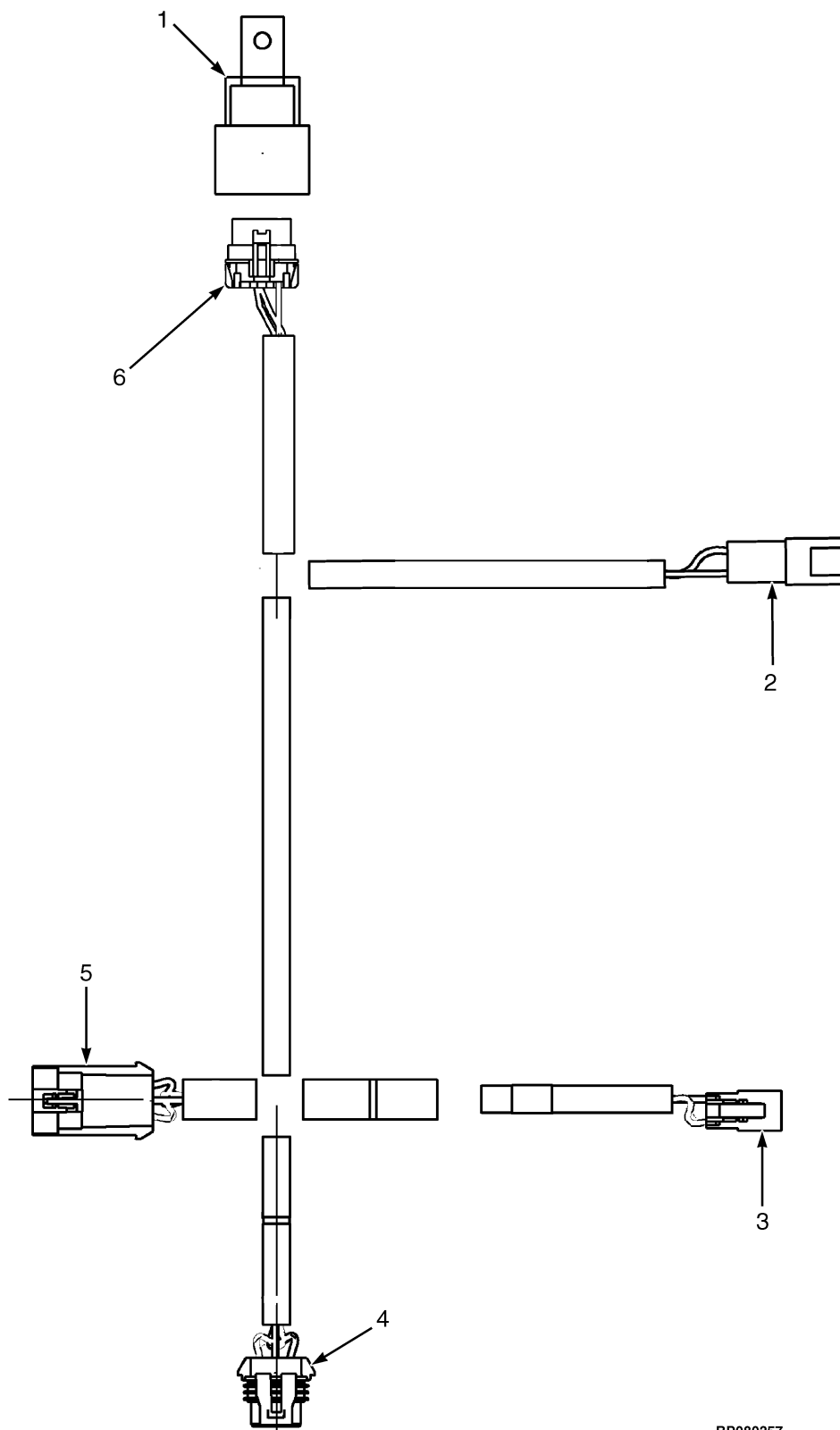


BP080479

WIRE HARNESS
TRANSMISSION – DUAL SPEED (S/N L177B11118D →)

ITEM	PART NO.	DESCRIPTION	QTY
	2085942	Wire Harness (Transmission)	1
1		Connector Assembly (To RH Chassis Harness)	1
1	1623280	Connector	1
1	1623281	Connector	1
1	1463138	Terminal	11
1	1484377	Plug	2
2	1402816	Clip	1
3	1509888	Clip	2
4		Connector Assembly (Temperature)	1
4	1402868	Connector	1
4	1323576	Terminal	2
5		Connector Assembly (Clutch Forward 1, and 2 Reverse 1)	1
5	1490242	Connector	1
5	1490243	Connector	1
5	1330438	Terminal (Socket)	2
6		Connector Assembly (Forward/Reverse 1 Pressure)	1
6	1603021	Connector	1
6	1603236	Connector (Secondary Lock)	1
6	1548517	Terminal (Socket)	3
6	1548519	Seal	3
7		Connector Assembly (Turbine/Tail Shaft RPM)	1
7	1546673	Connector	1
7	1323576	Terminal	3
8	1509890	Clip	1
9	1402813	Clip	1
10		Connector Assembly (To RH Chassis Harness)	1
10	1530960	Connector	1
10	1530961	Connector	1
10	1463138	Terminal	6

WIRE HARNESS (FIGURE 4-67) HYDRAULIC COOLER

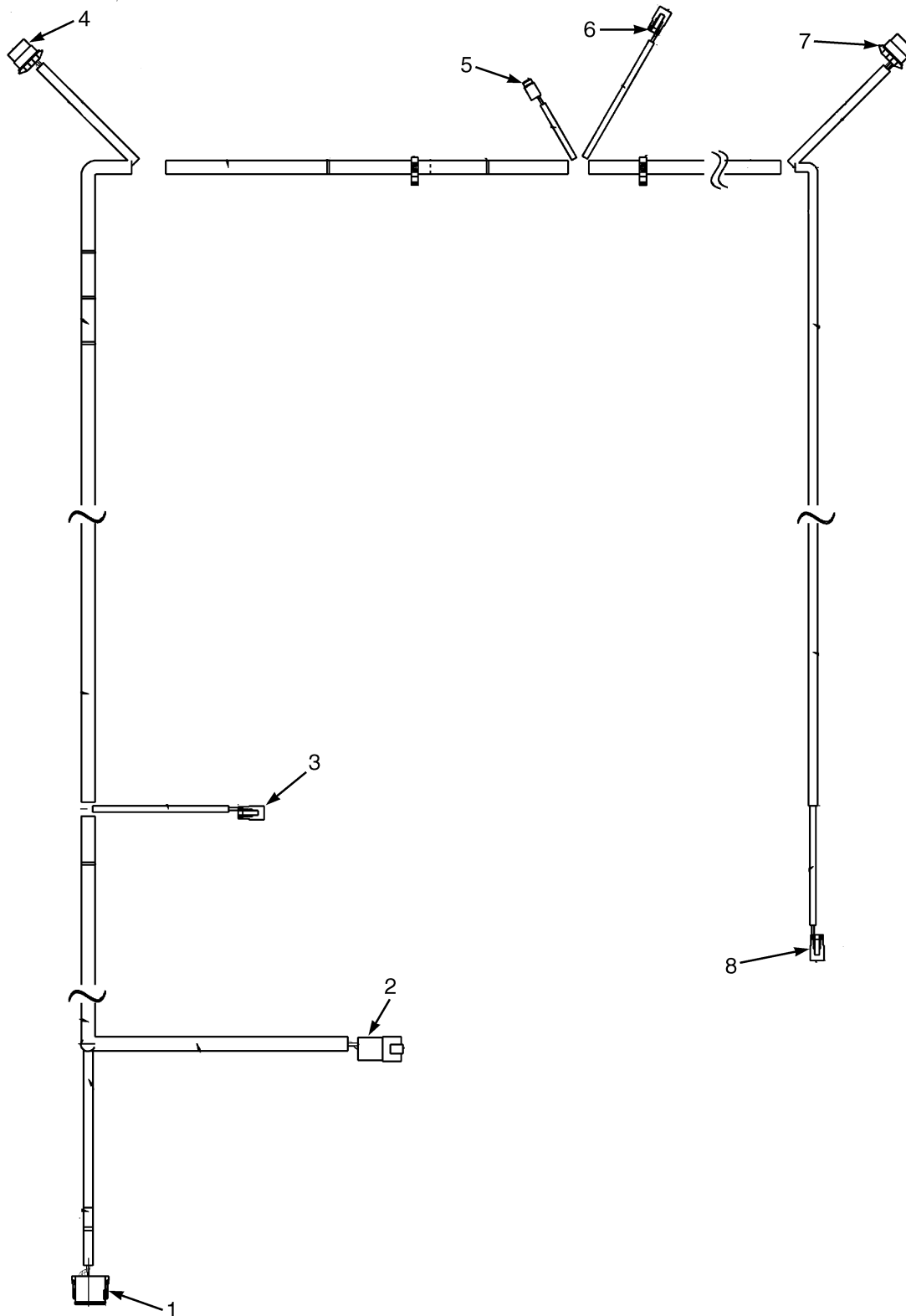


BP080357

**WIRE HARNESS
HYDRAULIC COOLER**

ITEM	PART NO.	DESCRIPTION	QTY
	2090666	Wire Harness	1
1		Hydraulic Oil Cooler Relay Assembly	1
1	1654578	Relay (Latch)	1
1	1654579	Clip (Relay)	1
2		Connector Assembly (Hydraulic Cooler Fan)	1
2	1493465	Connector	1
2	1330414	Connector (Secondary Lock)	1
2	1330437	Terminal (Pin)	2
3		Connector Assembly (Hydraulic Oil Cooler Temperature)	1
3	1490242	Connector	1
3	1490243	Connector	1
3	1330438	Terminal (Socket)	2
4		Connector Assembly (Horn)	1
4	1476064	Connector	1
4	1476109	Connector Lock	1
4	1330355	Terminal	3
4	1330356	Seal	2
4	1476108	Wire Seal	1
5		Connector Assembly (Chassis Harness)	1
5	1595554	Connector	1
5	1476109	Connector Lock	1
5	1482666	Connector Body (Male)	3
5	1330356	Seal	2
5	1476108	Wire Seal	1
6		Connector Assembly (Hydraulic Oil Cooler Relay)	1
6	1461744	Connector Body	1
6	1503088	Lock	1
6	1402888	Seal	4
6	1323579	Seal	4
6	1327164	Seal	1

WIRE HARNESS (FIGURE 4-68) LIGHTS (6/2007 →)

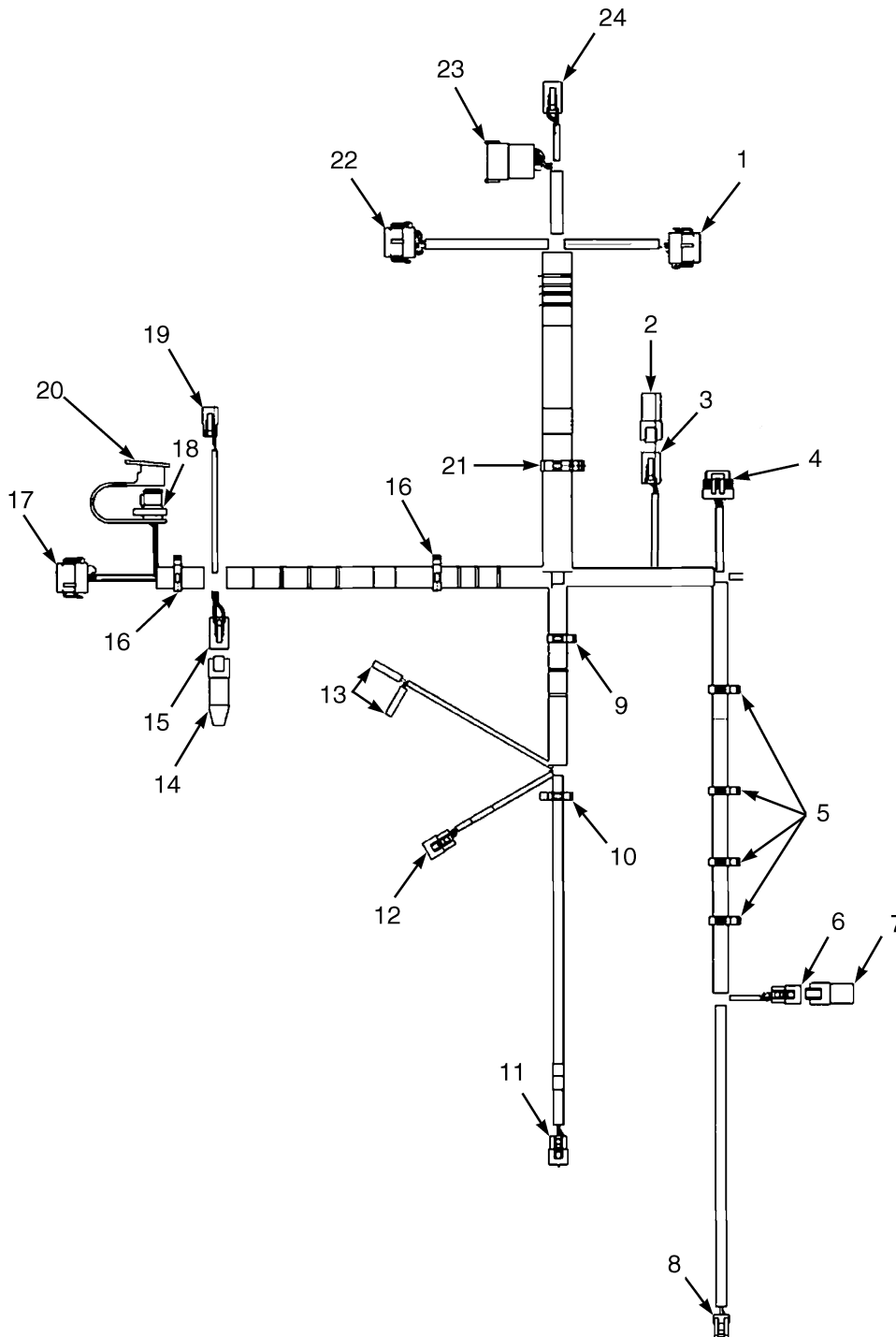


BP080630

**WIRE HARNESS
LIGHTS (6/2007 →)**

ITEM	PART NO.	DESCRIPTION	QTY
	2098385	Wire Harness (Lights)	1
1		Connector Assembly (Vehicle System Management)	1
1	1525566	Connector	1
1	1500913	Connector	1
1	1330438	Terminal (Socket)	3
1	1484377	Plug	9
2		Connector Assembly (RH Chassis)	1
2	1514597	Connector	1
2	1514598	Connector	1
2	1484709	Terminal (Pin)	4
3		Connector Assembly (RH Front Work Light)	1
3	1490242	Connector	1
3	1490243	Connector	1
3	1363886	Terminal (Socket)	2
4		Connector Assembly (RH Rear Signal)	1
4	1531486	Connector	1
4	930591	Connector	1
4	1330355	Terminal	4
4	1330356	Seal	1
4	1482668	Plug	2
4	1476108	Wire Seal	3
5		Connector Assembly (Strobe)	1
5	1484557	Connector	1
5	1484558	Connector	1
5	1463139	Terminal	2
6		Connector Assembly (Rear Work Light)	1
6	1490242	Connector	1
6	1490243	Connector	1
6	1363886	Terminal (Socket)	2
7		Connector Assembly (LH Rear Signal)	1
7	1531486	Connector	1
7	930591	Connector	1
7	1330355	Terminal	4
7	1330356	Seal	1
7	1482668	Plug	2
7	1476108	Wire Seal	3
8		Connector Assembly (LH Front Work Light)	1
8	1490242	Connector	1
8	1490243	Connector	1
8	1363886	Terminal (Socket)	2

WIRE HARNESS (FIGURE 4-69) COWL WITH MONOTROL PEDAL — WITH RETURN TO SET TILT



HP081702

WIRE HARNESS

COWL WITH MONOTROL PEDAL – WITH RETURN TO SET TILT

ITEM	PART NO.	DESCRIPTION	QTY
	a 2070269	Wire Harness	1
	b 2098011	Wire Harness	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1529046	Connector	1
1	1463139	Terminal	10
1	1463139	Terminal	11
1	1484377	Plug	2
1	1484377	Plug	1
2	1525573	Connector (Endcap)	1
3		Connector Assembly (To Monotrol Harness)	1
3	1489656	Connector (4-Way)	1
3	1489657	Connector	1
3	1330438	Terminal (Socket)	4
4		Connector Assembly (Accelerator Pedal)	1
4	1525584	Connector	1
4	1532571	Terminal	6
5	1509890	Clip	4
6		Connector Assembly (To Mast)	1
6	1484397	Connector (3-Way)	1
6	1463194	Connector	1
6	1330438	Terminal (Socket)	3
7	1351682	Connector (End Cap)	1
8		Connector Assembly (Brake Pressure)	1
8	1603021	Connector	1
8	1603236	Connector (Secondary Lock)	1
8	1548517	Terminal (Socket)	3
8	1548519	Seal	3
9	1534828	Clip	1
10	1402816	Clip	1
11		Connector Assembly (Brake Pedal)	1
11	1463194	Connector	1
11	1484397	Connector (3-Way)	1
11	1330438	Terminal (Socket)	3
12		Connector Assembly (Park Brake)	1
12	1463194	Connector	1
12	1484397	Connector (3-Way)	1
12	1330438	Terminal (Socket)	3
13		Connector Assembly (Brake Fluid Sensor)	2
13	1324309	Sleeve	1
13	1324310	Terminal	1
14	1525577	Connector (With Resistor) (End Cap)	1
15		Connector Assembly (Bus Terminal 1)	1
15	1489656	Connector (4-Way)	1
15	1489657	Connector	1
15	1330438	Terminal (Socket)	4
16	1500899	Clip	2
17		Connector Assembly (Display)	1
17	1525567	Connector	1
17	1529046	Connector	1

WIRE HARNESS

COWL WITH MONOTROL PEDAL – WITH RETURN TO SET TILT

ITEM	PART NO.	DESCRIPTION	QTY
17	1463139	Terminal	5
17	1484377	Plug	7
18		Connector Assembly (J1939 Diagnostic)	1
18	1566116	Connector	1
18	1532664	Connector	1
18	1330438	Terminal (Socket)	3
19		Connector Assembly (To Horn)	1
19	1490242	Connector	1
19	1402813	Clip	1
19	1330438	Terminal (Socket)	2
20	1566117	Dust Cap (Diagnostic Connector)	1
21	1534282	Clip	1
22		Connector Assembly (Vehicle System Manager)	1
22	1525570	Connector	1
22	1529046	Connector	1
22	1463139	Terminal	7
22	1484377	Plug	5
23		Connector Assembly (RH Chassis)	1
23	1500925	Connector	1
23	1352603	Connector	1
23	1330437	Terminal (Pin)	9
23	1330437	Terminal (Pin)	10
23	1484377	Plug	3
23	1484377	Plug	2
24		Connector Assembly (RH Chassis)	1
24	1489656	Connector (4-Way)	1
24	1330438	Terminal (Socket)	4
24	1489657	Connector	1

FOOTNOTES:

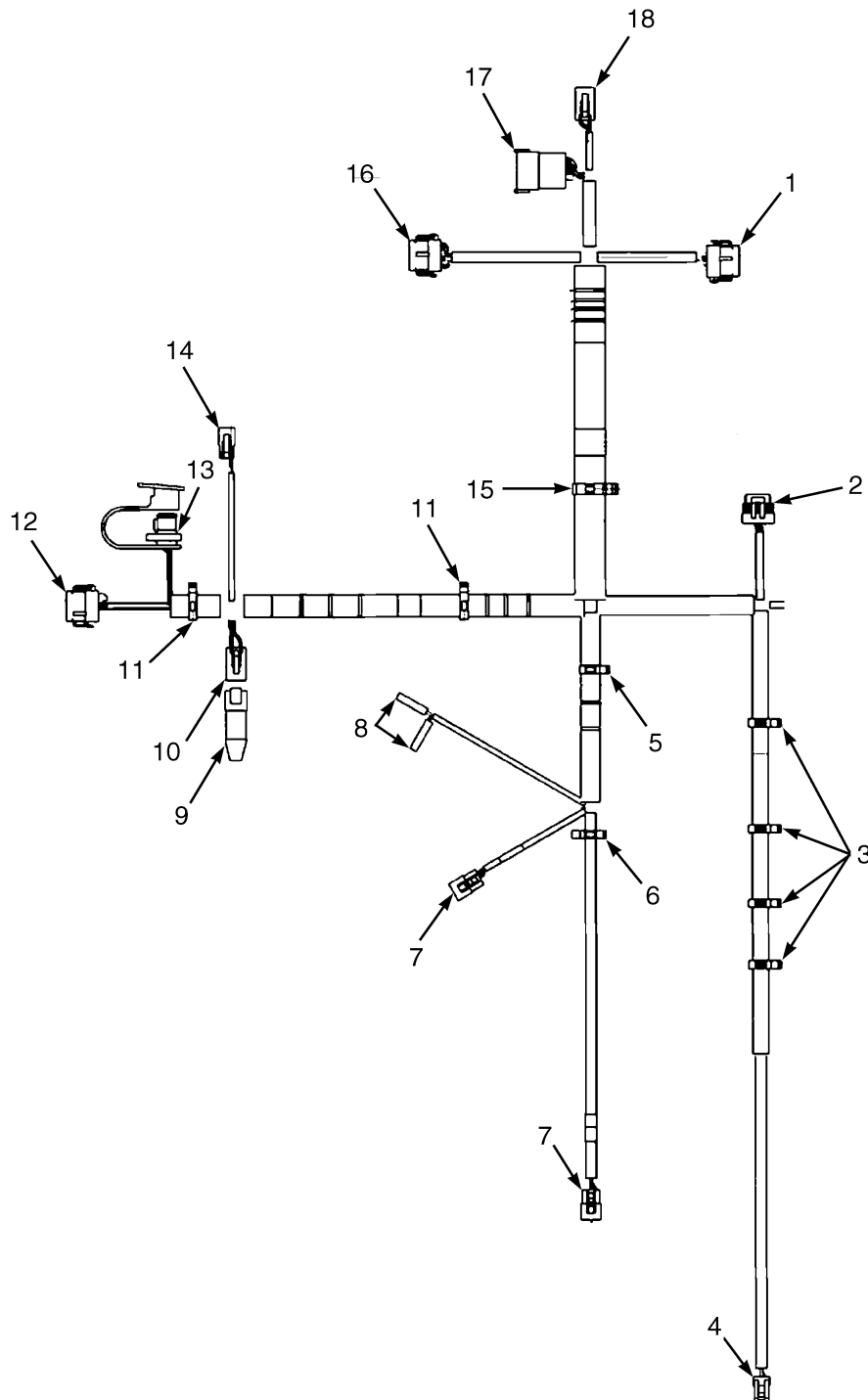
a → PENDING PER ECN 10532201

b PENDING PER ECN 10533201 →

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-70) COWL WITH FORWARD/REVERSE LEVER — WITHOUT RETURN TO SET TILT



BP080443

WIRE HARNESS

COWL WITH FORWARD/REVERSE LEVER – WITHOUT RETURN TO SET TILT

ITEM	PART NO.	DESCRIPTION	QTY
	a 2084829	Wire Harness (Cowl with Forward/Reverse Lever) (Cowl)	1
	b 2098012	Wire Harness (Cowl with Forward/Reverse Lever)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1463139	Terminal	6
1	1463139	Terminal	7
1	1484377	Plug	6
1	1484377	Plug	5
1	1529046	Connector	1
2		Connector Assembly (Accelerator Pedal Sensor)	1
2	1525584	Connector	1
2	1532571	Terminal	6
3	1509888	Clip	4
4		Connector Assembly (Brake Pressure)	1
4	1603021	Connector	1
4	1603236	Connector (Secondary Lock)	1
4	1548517	Terminal (Socket)	3
4	1548519	Seal	3
5	1534828	Clip	1
6	1402816	Clip	1
7		Connector Assembly (Park Brake)	2
7	1484397	Connector (3-Way)	1
7	1463194	Connector	1
7	1330438	Terminal (Socket)	3
8		Connector Assembly (Brake Fluid)	2
8	1324309	Sleeve	1
8	1324310	Terminal	1
9	1525577	Connector (With Resistor) (End Cap)	1
10		Connector Assembly	1
10	1489656	Connector (4-Way)	1
10	1489657	Connector	1
10	1330438	Terminal (Socket)	4
11	1500899	Clip	2
12		Connector Assembly (Display)	1
12	1525567	Connector	1
12	1529046	Connector	1
12	1463139	Terminal	5
12	1484377	Plug	7
13		Connector Assembly (J1939 Diagnostic)	1
13	1566116	Connector	1
13	1532664	Connector	1
13	1330438	Terminal (Socket)	3
13	1566117	Dust Cap	1
14		Connector Assembly (Horn Button)	1
14	1490242	Connector	1
14	1402813	Clip	1
14	1330438	Terminal (Socket)	2
15	1534282	Clip	1
16		Connector Assembly (Vehicle System Manager)	1
16	1525570	Connector	1

WIRE HARNESS

COWL WITH FORWARD/REVERSE LEVER – WITHOUT RETURN TO SET TILT

ITEM	PART NO.	DESCRIPTION	QTY
16	1529046	Connector	1
16	1463139	Terminal	7
16	1484377	Plug	5
17		Connector Assembly (To RH Chassis)	1
17	1500925	Connector	1
17	1352603	Connector	1
17	1330437	Terminal (Pin)	6
17	1330437	Terminal (Pin)	7
17	1484377	Plug	6
17	1484377	Plug	5
18		Connector Assembly (To RH Chassis)	1
18	1489656	Connector (4-Way)	1
18	1489657	Connector	1
18	1330438	Terminal (Socket)	4

FOOTNOTES:

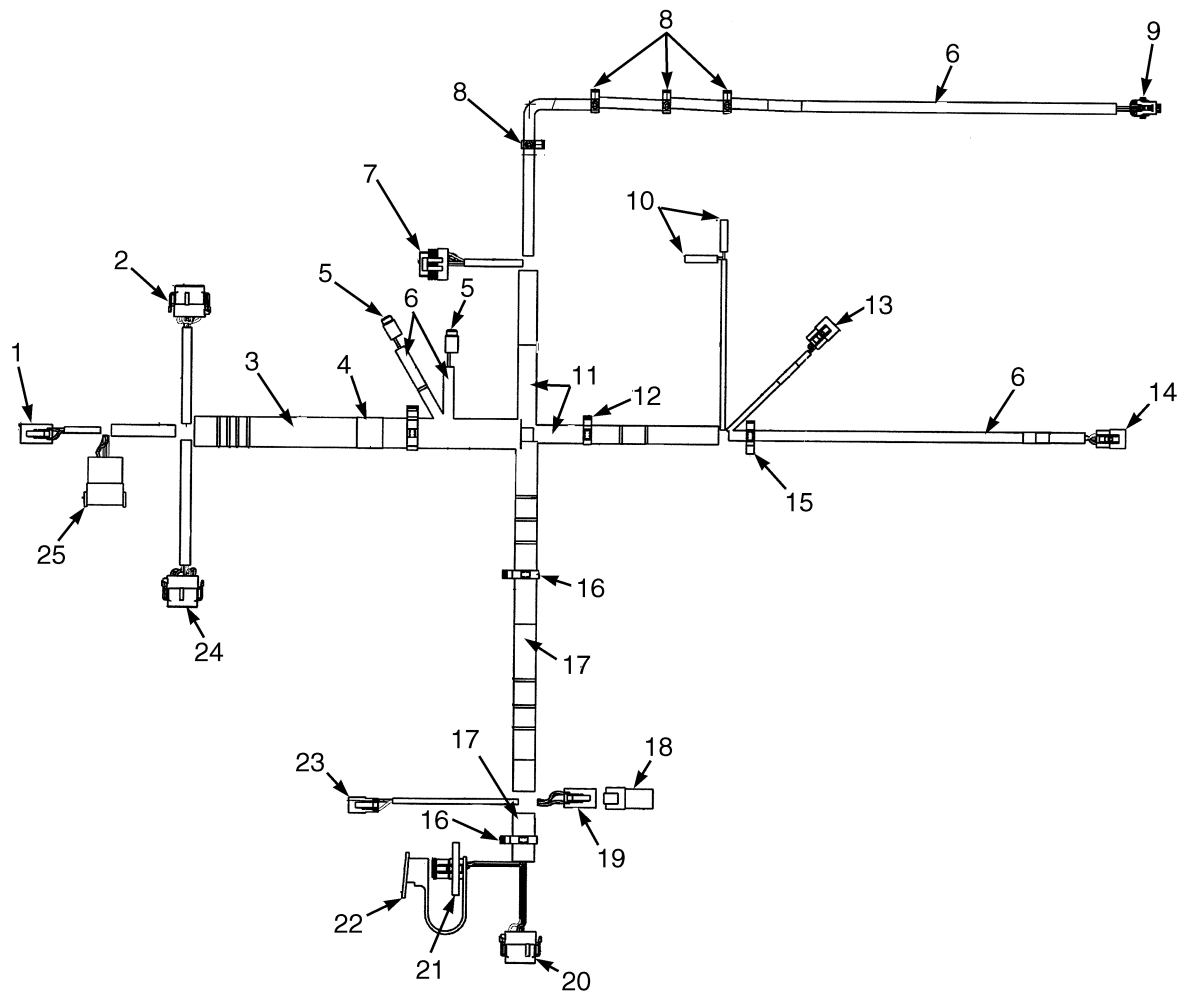
a → PENDING PER ECN 10532201

b PENDING PER ECN 10532201 →

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-71)
COWL WITH FORWARD/REVERSE — MANUAL WITH OPERATOR PRESENCE
(PENDING PER ECN 10544503 →)



BP080711

WIRE HARNESS
COWL WITH FORWARD/REVERSE – MANUAL WITH OPERATOR PRESENCE
(PENDING PER ECN 10544503 →)

ITEM	PART NO.	DESCRIPTION	QTY
	2104702	Wire Harness	1
1		To Right Hand Chassis Harness	1
1	1489656	Connector (4-Way)	1
1	1489657	Connector	1
1	1330438	Terminal (Socket)	4
2		VSM	1
2	1525568	Connector	1
2	1529046	Connector	1
2	1463139	Terminal	8
2	1484377	Plug	4
3	1540388	Conduit	1
4	1534282	Clip	1
5		Hydraulic Lockout Solenoid	2
5	1484557	Connector	1
5	1484558	Connector	1
5	1463139	Terminal	2
6	275493	Conduit	AR
7		Accelerator Pedal Sensor	1
7	1525584	Connector	1
7	1532571	Terminal	6
8	1509888	Clip	4
9		Brake Pressure	1
9	1603021	Connector	1
9	1603236	Connector (Secondary Lock)	1
9	1548517	Terminal (Socket)	3
9	1548519	Seal	3
10		Brake Fluid	2
10	1324310	Terminal	1
10	1324309	Sleeve	1
11	275496	Conduit	AR
12	1534828	Clip	1
13		Park Brake	1
13	1484397	Connector (3-Way)	1
13	1463194	Connector	1
13	1330438	Terminal (Socket)	3
14		Brake Pedal	1
14	1484397	Connector (3-Way)	1
14	1463194	Connector	1
14	1330438	Terminal (Socket)	3
15	1402816	Clip	1
16	1500899	Clip	1
17	275497	Conduit	AR
18	1525577	Connector (With Resistor)	1
19		Bus Terminal	1
19	1489656	Connector (4-Way)	1
19	1489657	Connector	1
19	1330438	Terminal (Socket)	1
20		Display	1
20	1525567	Connector	1

WIRE HARNESS

COWL WITH FORWARD/REVERSE – MANUAL WITH OPERATOR PRESENCE

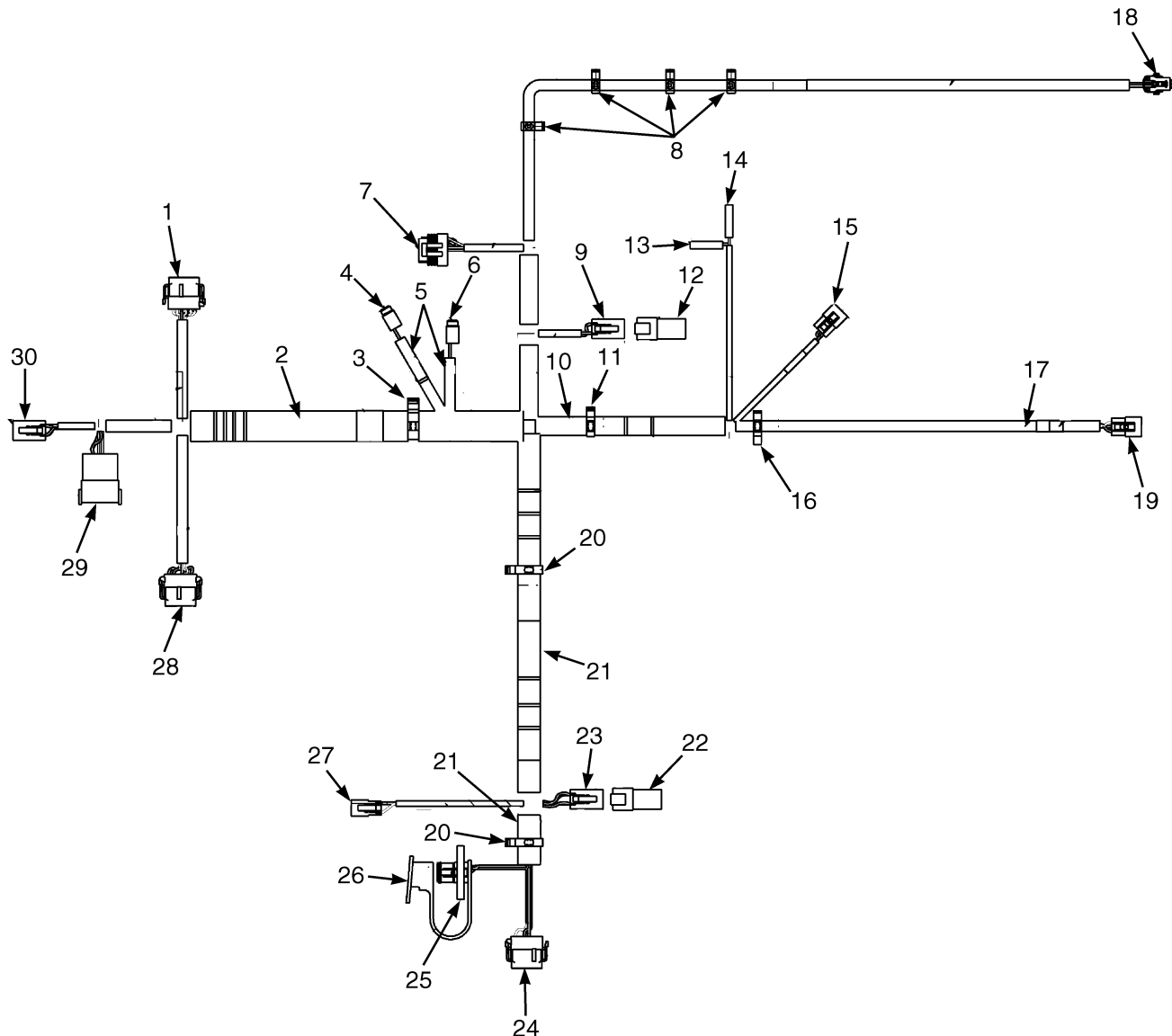
(PENDING PER ECN 10544503 →)

ITEM	PART NO.	DESCRIPTION	QTY
20	1529046	Connector	1
20	1463139	Terminal	5
20	1484377	Plug	7
21		Diagnostic	1
21	1566116	Connector	1
21	1532664	Connector	1
21	1330438	Terminal (Socket)	3
22	1566117	Dust Cap	1
23		Horn Button	1
23	1490242	Connector	1
23	1490243	Connector	1
23	1330438	Terminal (Socket)	2
24		VSM	1
24	1525570	Connector	1
24	1529046	Connector	1
24	1463139	Terminal	7
24	1484377	Plug	5
25		To Right Hand Chassis	1
25	1500925	Connector	1
25	1352603	Connector	1
25	1330437	Terminal (Pin)	7
25	1484377	Plug	5

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-72) COWL WITH MONOTROL PEDAL — WITH HYDRAULIC PUMP SOLENOID (PENDING PER ECN 10544503 →)



BP080757

WIRE HARNESS
COWL WITH MONOTROL PEDAL – WITH HYDRAULIC PUMP SOLENOID
(PENDING PER ECN 10544503 →)

ITEM	PART NO.	DESCRIPTION	QTY
	2104701	Wire Harness	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1529046	Connector	1
1	1463139	Terminal	12
2	1540388	Conduit	AR
3	1534282	Clip	1
4		Connector Assembly (Hydraulic Lockout Solenoid 2)	1
4	1484557	Connector	1
4	1484558	Connector	1
4	1463139	Terminal	2
5	275493	Conduit	AR
6		Connector Assembly	1
6	1484557	Connector	1
6	1484558	Connector	1
6	1463139	Terminal	2
7		Connector Assembly	1
7	1525584	Connector	1
7	1532571	Terminal	6
8	1509888	Clip	4
9		Connector Assembly (To Monotrol Harness)	1
9	1489656	Connector (4-Way)	1
9	1489657	Connector	1
9	1330438	Terminal (Socket)	4
10	275496	Conduit	AR
11	1534828	Clip	1
12		Connector Assembly (Endcap)	1
12	1525573	Connector (Endcap)	1
13		Connector Assembly (Brake Fluid)	1
13	1324310	Terminal	1
13	1324309	Sleeve	1
14		Connector Assembly (Brake Fluid)	1
14	1324310	Terminal	1
14	1324309	Sleeve	1
15		Connector Assembly (Park Brake)	1
15	1484397	Connector (3-Way)	1
15	1463194	Connector	1
15	1330438	Terminal (Socket)	3
16	1402816	Clip	1
17	275493	Conduit	AR
18		Connector Assembly (Brake Pressure)	1
18	1603021	Connector	1
18	1603236	Connector (Secondary Lock)	1
18	1548517	Terminal (Socket)	3
18	1548519	Seal	3
19		Connector Assembly (Brake Pressure)	1
19	1484397	Connector (3-Way)	1
19	1463194	Connector	1
19	1330438	Terminal (Socket)	3

WIRE HARNESS
COWL WITH MONOTROL PEDAL – WITH HYDRAULIC PUMP SOLENOID
(PENDING PER ECN 10544503 →)

ITEM	PART NO.	DESCRIPTION	QTY
20	1500899	Clip	2
21	275497	Conduit	AR
22		Connector Assembly (Endcap with Resister)	1
22	1525577	Connector (With Resistor)	1
23		Connector Assembly (Bus Terminal 1)	1
23	1489656	Connector (4-Way)	1
23	1489657	Connector	1
23	1330438	Terminal (Socket)	4
24		Connector Assembly (Display)	1
24	1525567	Connector	1
24	1529046	Connector	1
24	1463139	Terminal	5
24	1484377	Plug	7
25		Connector Assembly (J1939 Diagnostic)	1
25	1566116	Connector	1
25	1532664	Connector	1
25	1330438	Terminal (Socket)	3
26	1566117	Dust Cap	1
27		Connector Assembly (Horn Button)	1
27	1490242	Connector	1
27	1490243	Connector	1
27	1330438	Terminal (Socket)	2
28		Connector Assembly (Vehicle System Manager)	1
28	1525570	Connector	1
28	1529046	Connector	1
28	1463139	Terminal	7
28	1484377	Plug	5
29		Connector Assembly (To RH Chassis Harness)	1
29	1500925	Connector	1
29	1352603	Connector	1
29	1330437	Terminal (Pin)	7
29	1484377	Plug	5
30		Connector Assembly (To RH Chassis Harness)	1
30	1489656	Connector (4-Way)	1
30	1489657	Connector	1
30	1330438	Terminal (Socket)	4

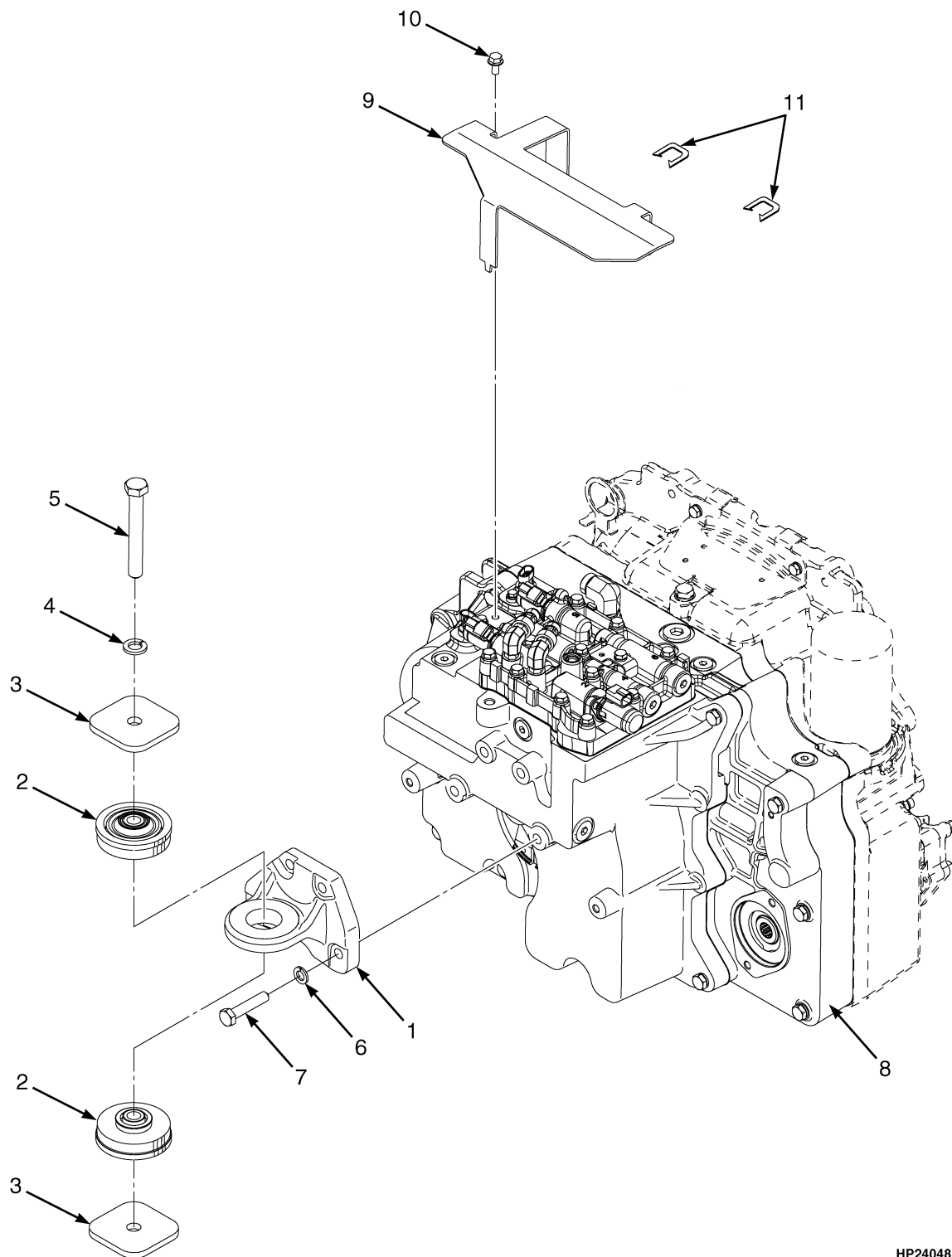
5

TRANSMISSION

**SECTION 5
TRANSMISSION**

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SINGLE SPEED, WET AND DRY BRAKE - SHEET 2 OF 2 (S/N L177B15792E → (DRY BRAKE))	
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TRANSMISSION MOUNT	
SINGLE SPEED - THREE PIECE HOUSING	5-2
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TRANSMISSION MOUNT (FIGURE 5-1) SINGLE SPEED — THREE PIECE HOUSING

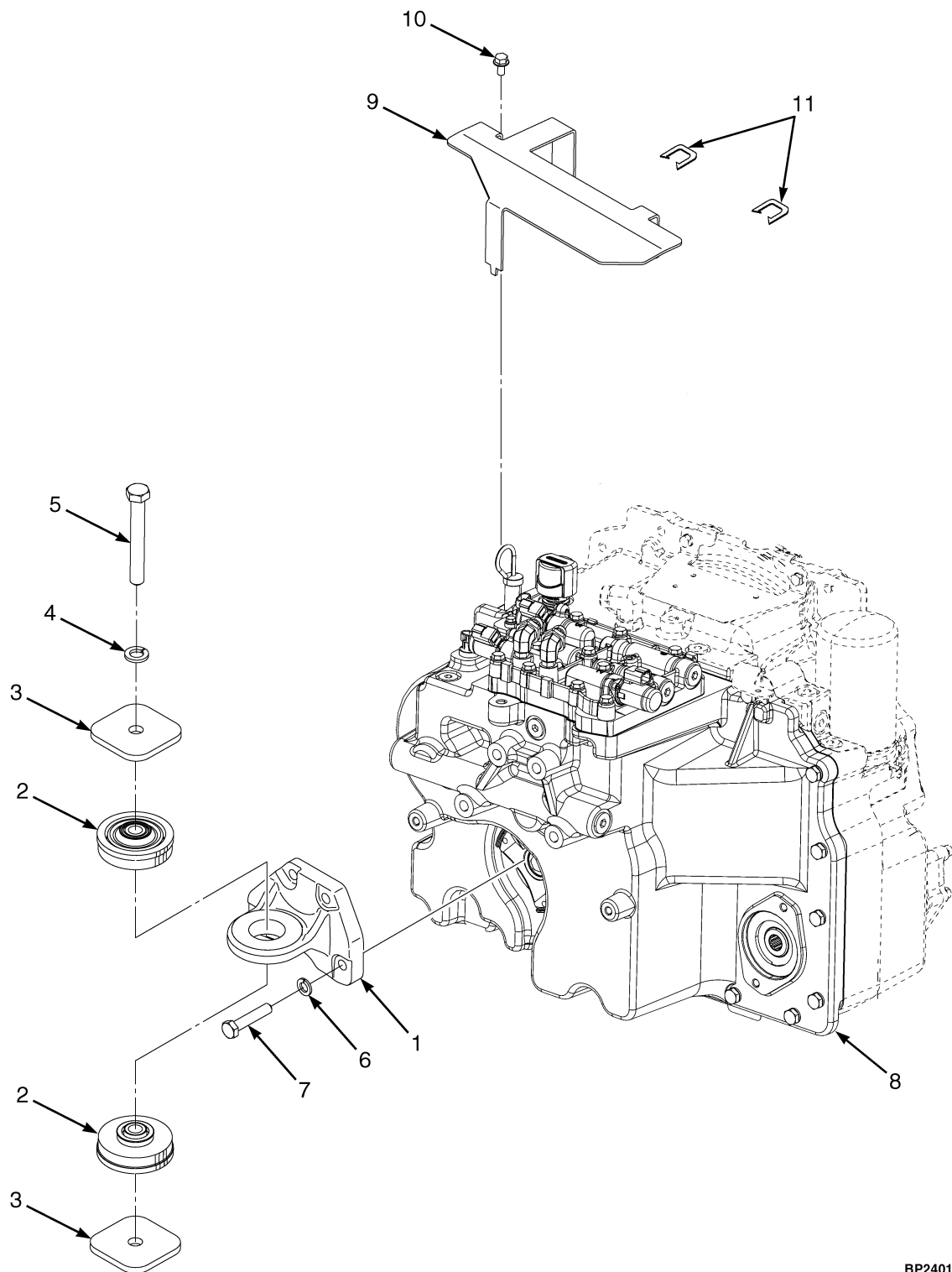


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ITEM	PART NO.	DESCRIPTION	QTY
1	1501274	Bracket	1
2	2070147	Isolator	2
3	1566329	Washer	2
4	292685	Lockwasher	1
5	293697	Capscrew	1
6	292683	Lockwasher	4
7	292531	Capscrew	4
8	a 1550565	Transmission Assy (Single Speed, Dry Brake) (☞ Figure 5-10).....	1
8	c 1632260	Transmission Assy (Single Speed Dry Brake) (☞ Figure 5-12).....	1
8	b 1616478	Transmission Assy (Single Speed Wet Brake) (☞ Figure 5-10).....	1
9	1569768	Shield	1
10	1527879	Capscrew	1
11	1380849	Edge Protector	2

FOOTNOTES:**a** → S/N L177B10029**c** S/N L177B10030 ↔ S/N L177B15791**b** → S/N L177B15745

TRANSMISSION MOUNT (FIGURE 5-2) SINGLE SPEED — TWO PIECE HOUSING

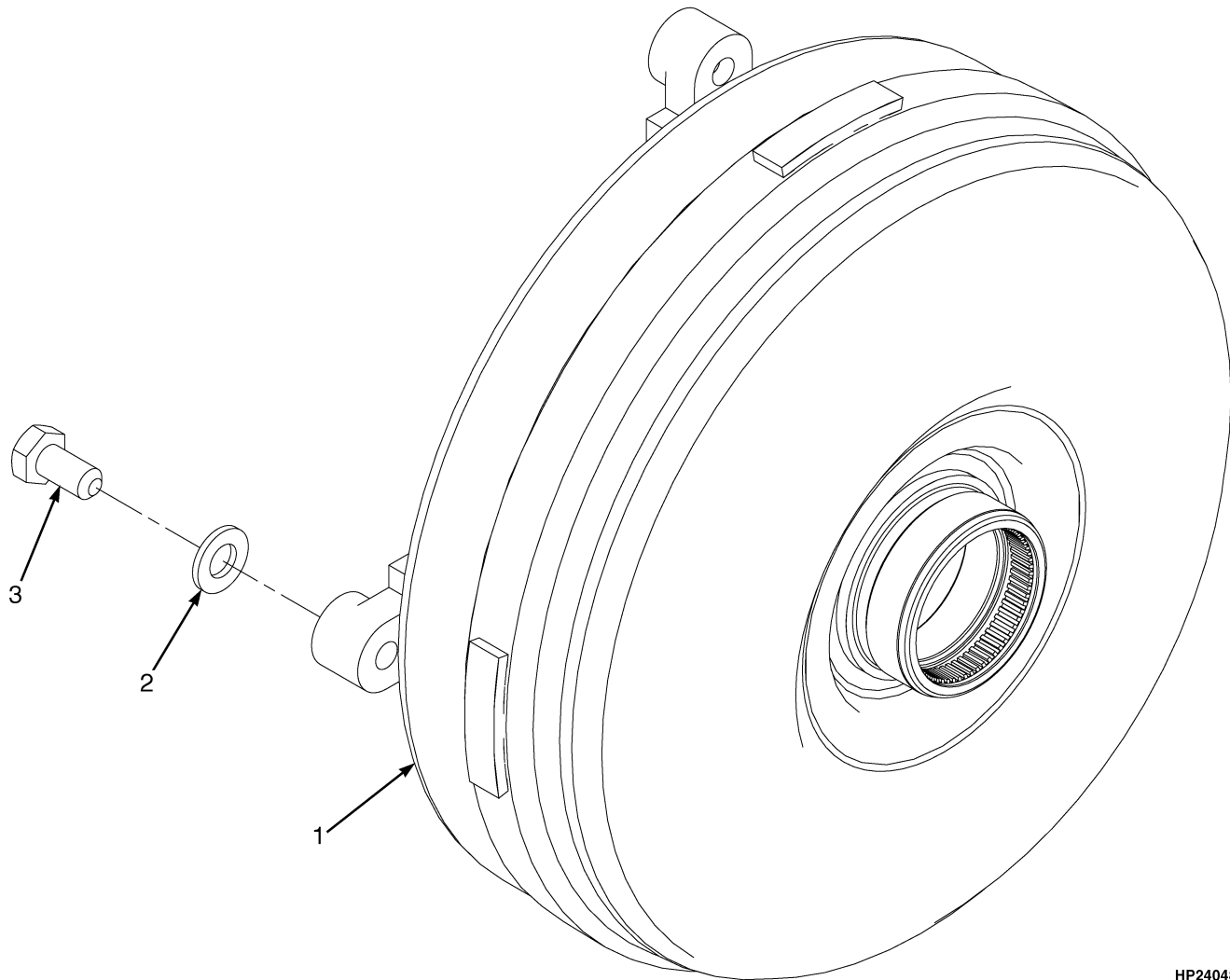


BP240133

**TRANSMISSION MOUNT
SINGLE SPEED – TWO PIECE HOUSING**

ITEM	PART NO.	DESCRIPTION	QTY
1	1501274	Bracket	1
2	2070147	Isolator	2
3	1566329	Washer	2
4	292685	Lockwasher	1
5	293697	Capscrew	1
6	292683	Lockwasher	4
7	292531	Capscrew	4
8	1646871	Transmission Assy (Single Speed Dry Brake)	1
8	1646872	Transmission Assy (Single Speed Wet Brake)	1
8	1703481	Transmission Assy (Single Speed) (☞Figure 5-16, ☞Figure 5-17).....	1
9	1569768	Shield	1
10	1527879	Capscrew	1
11	1380849	Edge Protector	2

TORQUE CONVERTER (FIGURE 5-3)



HP240482

KEY:

A: For Use With Mazda 2.0/2.2L Gasoline and LPG Engines

B: For Use With GM 2.4L Gasoline and LPG Engines

C: For Use With Yanmar 2.6/3.3L Diesel Engines

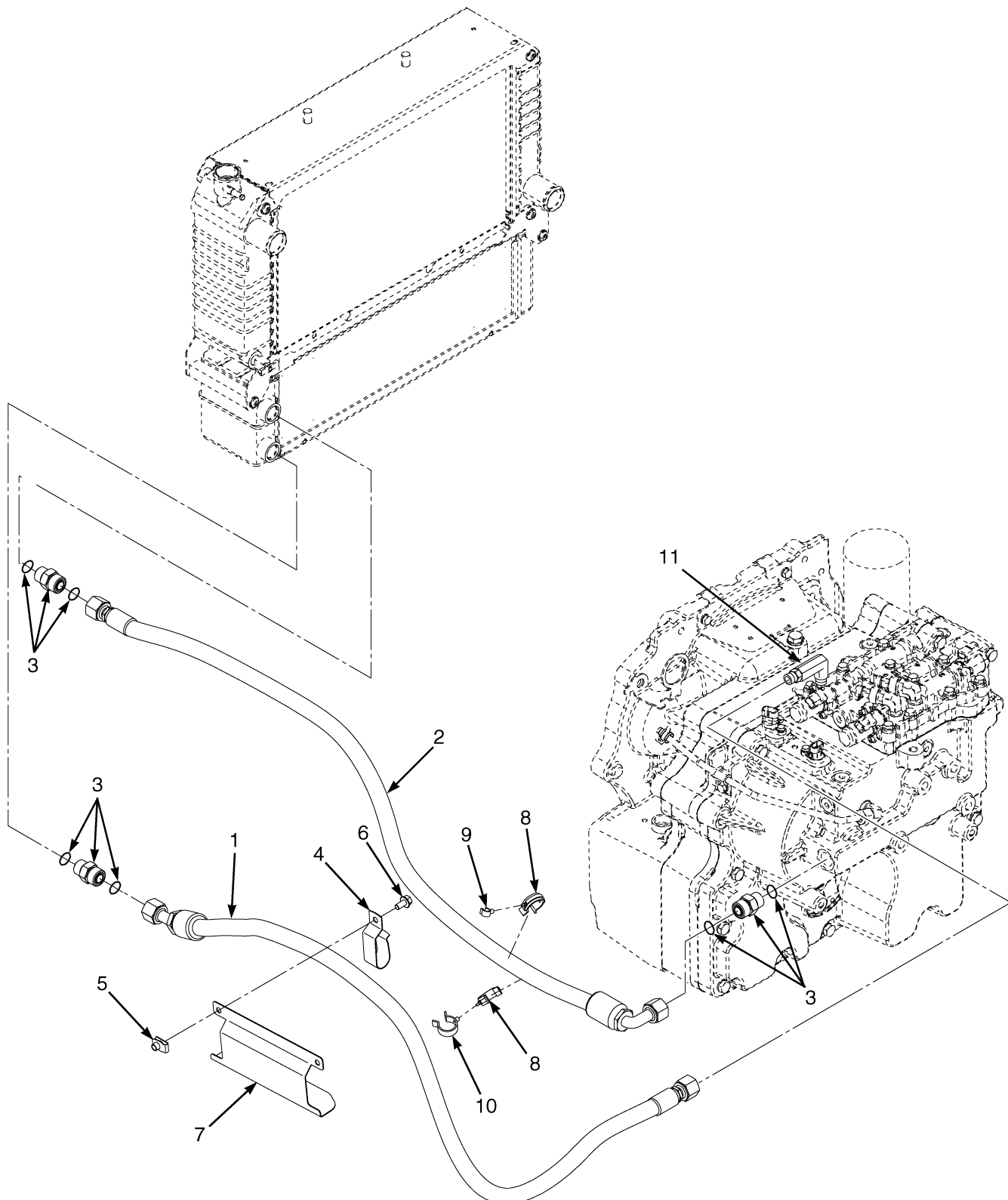
ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	1553122	Torque Converter	1	..	..
1	1553125	Torque Converter	..	1	..
1	1553123	Torque Converter	..	..	1
2	296420	Washer	4	4	4
3	1541921	Capscrew	4	..	4
3	309740	Capscrew	..	4	..

NOTES

This image shows a single page of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

TRANSMISSION COOLING (FIGURE 5-4)

MAZDA 2.0L AND 2.2L/GM 2.4L, GASOLINE AND LPG — SQUARE WAVE WITH EXTERNAL OIL COOLER
(→ PENDING PER ECN 105683)



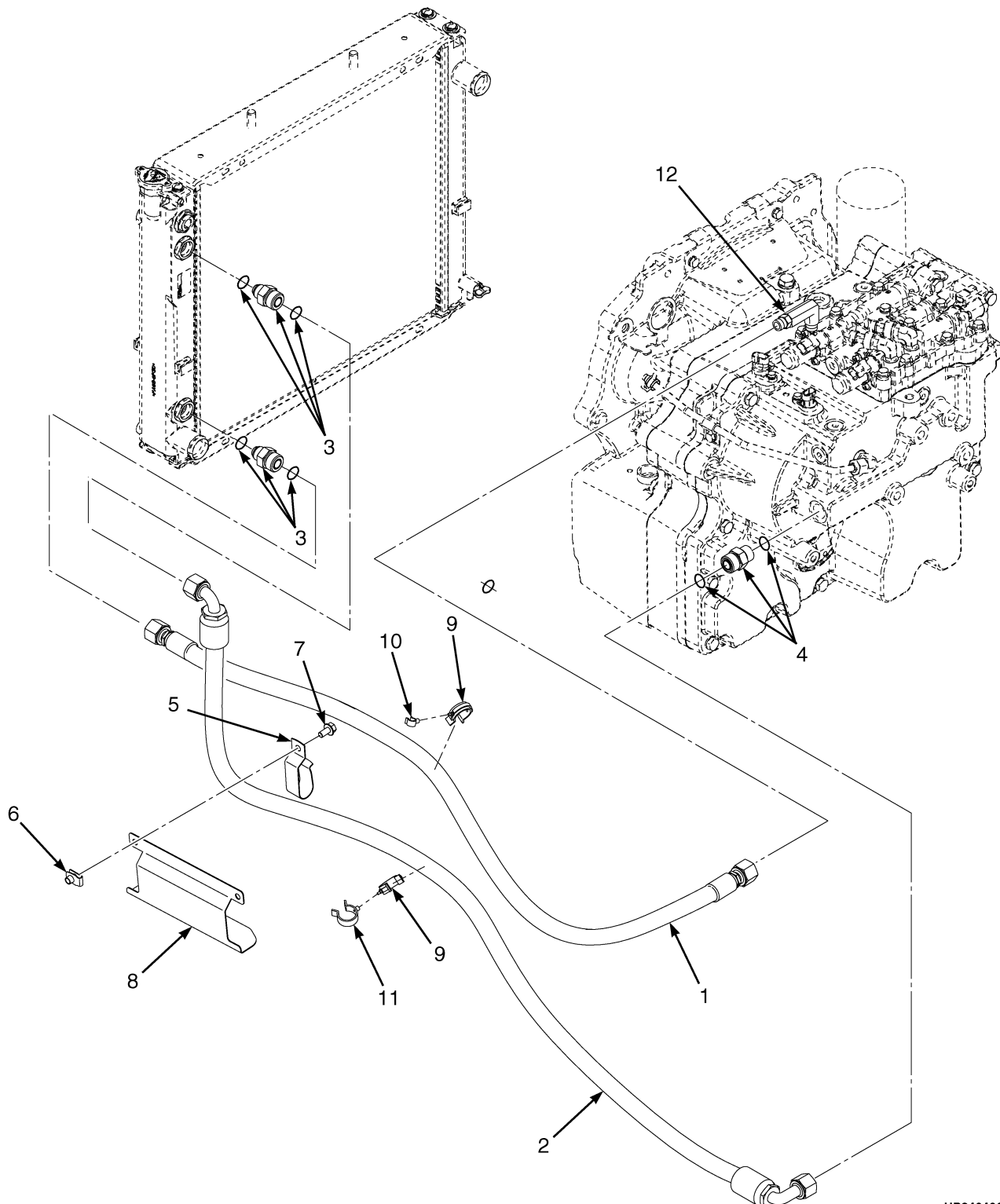
HP240485

TRANSMISSION COOLING

MAZDA 2.0L AND 2.2L/GM 2.4L, GASOLINE AND LPG – SQUARE WAVE WITH EXTERNAL OIL COOLER
 (→ PENDING PER ECN 105683)

ITEM	PART NO.	DESCRIPTION	QTY
1	2095658	Hose Assy	1
2	2095659	Hose Assy	1
3	1486749	Fitting	3
3	16485	O-Ring	3
3	252729	O-Ring	3
4	1562648	Clip	1
5	1480237	Nut	1
6	1527879	Capscrew	1
7	1616979	Heat Shield	1
8	1569465	Clamp	2
9	1561871	Clamp (Swivel)	1
10	1542436	Clamp	1
11	1487067	Fitting	1
11	16485	O-Ring	1
11	252729	O-Ring	1

TRANSMISSION COOLING (FIGURE 5-5)
MAZDA 2.0L AND 2.2L, GASOLINE AND LPG — SERPENTINE AND SQUARE WAVE WITH INTERNAL OIL COOLER (→ PENDING PER ECN 105683)



HP240486

TRANSMISSION COOLING**MAZDA 2.0L AND 2.2L, GASOLINE AND LPG – SERPENTINE AND SQUARE WAVE WITH INTERNAL OIL COOLER (→ PENDING PER ECN 105683)****KEY:****A: With Serpentine Radiator****B: With Square Wave Radiator, Without Air Oil Cooler**

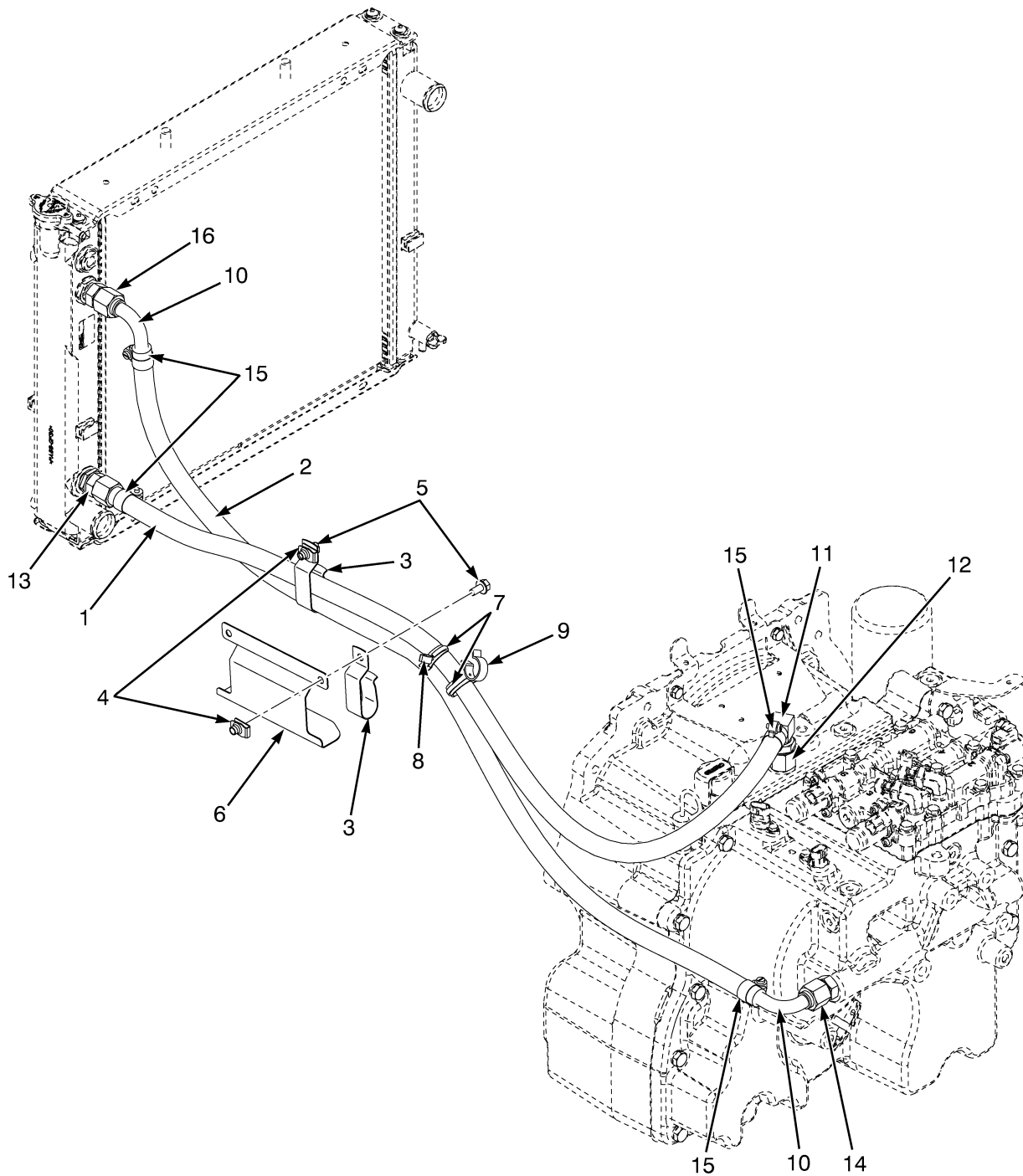
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2095647	Hose Assy	1	1
2	2095652	Hose Assy	1	1
3	a 1565127	Fitting	..	2
3	16484	O-Ring	..	2
3	252729	O-Ring	..	2
4	1486749	Fitting	1	1
4	16485	O-Ring	1	1
4	252729	O-Ring	1	1
5	1562648	Clip	2	2
6	1480237	Nut	2	2
7	1527879	Capscrew	2	2
8	1616979	Heat Shield	1	1
9	1569465	Clamp	2	2
10	1561871	Clamp (Swivel)	1	1
11	1542436	Clamp	1	1
12	1487067	Fitting	1	1
12	16485	O-Ring	1	1
12	252729	O-Ring	1	1

FOOTNOTES:

- a** Fittings And O-Rings Supplied With Serpentine Radiator.

TRANSMISSION COOLING (FIGURE 5-6)

MAZDA 2.0L AND 2.2L, LPG — SERPENTINE AND SQUARE WAVE (PENDING PER ECN 105683 →)



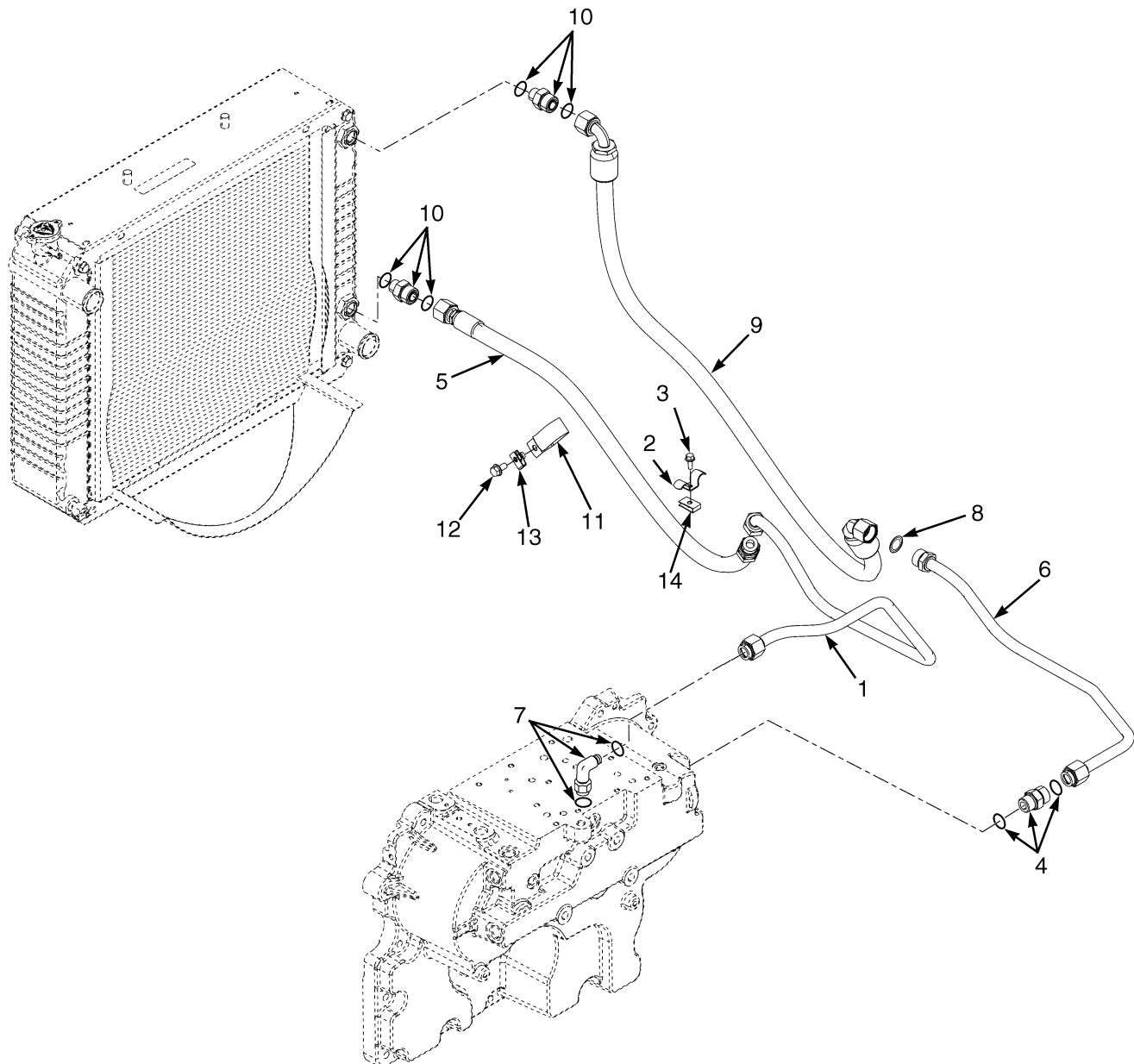
BP240165

TRANSMISSION COOLING**MAZDA 2.0L AND 2.2L, LPG – SERPENTINE AND SQUARE WAVE (PENDING PER ECN 105683 →)****KEY:****A: With square wave radiator****B: With serpentine radiator****C: With Air Cooler**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	2109871	Hose	1	1	1
2	2109870	Hose	1	1	..
2	2110024	Hose	..	..	1
3	1562648	Clip	2	2	2
4	1480237	Nut	2	2	2
5	1527879	Capscrew	2	2	2
6	1616979	Heat Shield	1	1	1
7	1569465	Clamp	2	2	2
8	1561871	Clamp (Swivel)	1	1	1
9	1542436	Clamp	1	1	1
10	2109875	Tube Assy	2	2	1
10	1487165	Fitting	1	1	1
11	222512	Fitting	1	1	1
11	16485	O-Ring	1	1	1
12	1691525	Adapter	1	1	1
13	1673198	Fitting	1	..	..
13	222493	Fitting	1	..	..
13	16484	O-Ring	1	..	..
13	1691916	Fitting	..	1	..
13	17223	Fitting	..	..	2
13	16485	O-Ring	..	..	1
14	1486749	Fitting	1	1	4
15	130845	Clamp	4	4	4
16	1565127	Fitting	1	..	..

TRANSMISSION COOLING (FIGURE 5-7)

YANMAR 2.6L AND 3.3L DIESEL AND GM 2.4L GASOLINE AND LPG — SQUARE WAVE WITH INTERNAL OIL COOLER (→ PENDING PER ECN 105683)



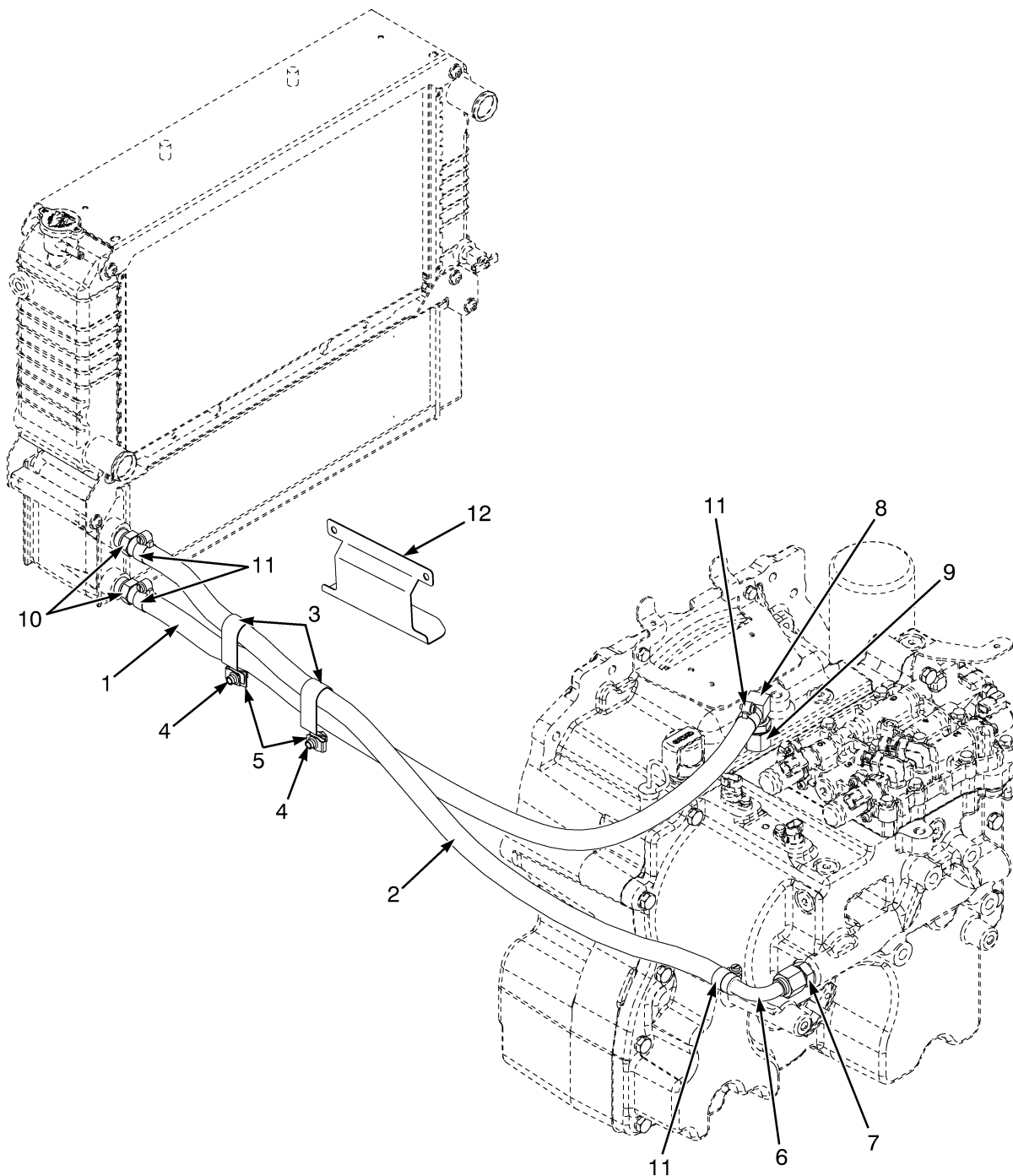
TRANSMISSION COOLING**YANMAR 2.6L AND 3.3L DIESEL AND GM 2.4L GASOLINE AND LPG – SQUARE WAVE WITH INTERNAL OIL COOLER (→ PENDING PER ECN 105683)**

ITEM	PART NO.	DESCRIPTION	QTY
1	ab 2067598	Tube Assy	1
1	cd 2095262	Tube	1
2	1561780	Clip	1
3	1527876	Capscrew	1
4	1486749	Fitting	1
4	16485	O-Ring	1
4	252729	O-Ring	1
5	2070228	Hose Assy	1
5	2095654	Hose Assy	1
5	2095649	Hose Assy (Alternate Part)	1
6	2067597	Tube	1
7	1487067	Fitting	1
7	252729	O-Ring	1
7	16485	O-Ring	1
8	1582449	Sealing Ring	1
9	2075551	Hose Assy	1
9	2095657	Hose Assy	1
9	2095653	Hose Assembly (Alternate Part)	1
10	1565127	Fitting	2
10	16484	O-Ring	2
10	252729	O-Ring	2
11	1562648	Clip	1
12	1527879	Capscrew	1
13	1480237	Nut	1
14	1350215	Nut	1

FOOTNOTES:**a** → S/N L177B15745 (Dry Brake)**b** → S/N L177B15791 (Wet Brake)**c** S/N L177B15746 → (Dry Brake)**d** S/N L177B15792 → (Wet Brake)

TRANSMISSION COOLING (FIGURE 5-8)

YANMAR 2.6L AND 3.3L DIESEL AND GM 2.4L LPG — SQUARE WAVE WITH INTERNAL OIL COOLER
(PENDING PER ECN 105683 →)

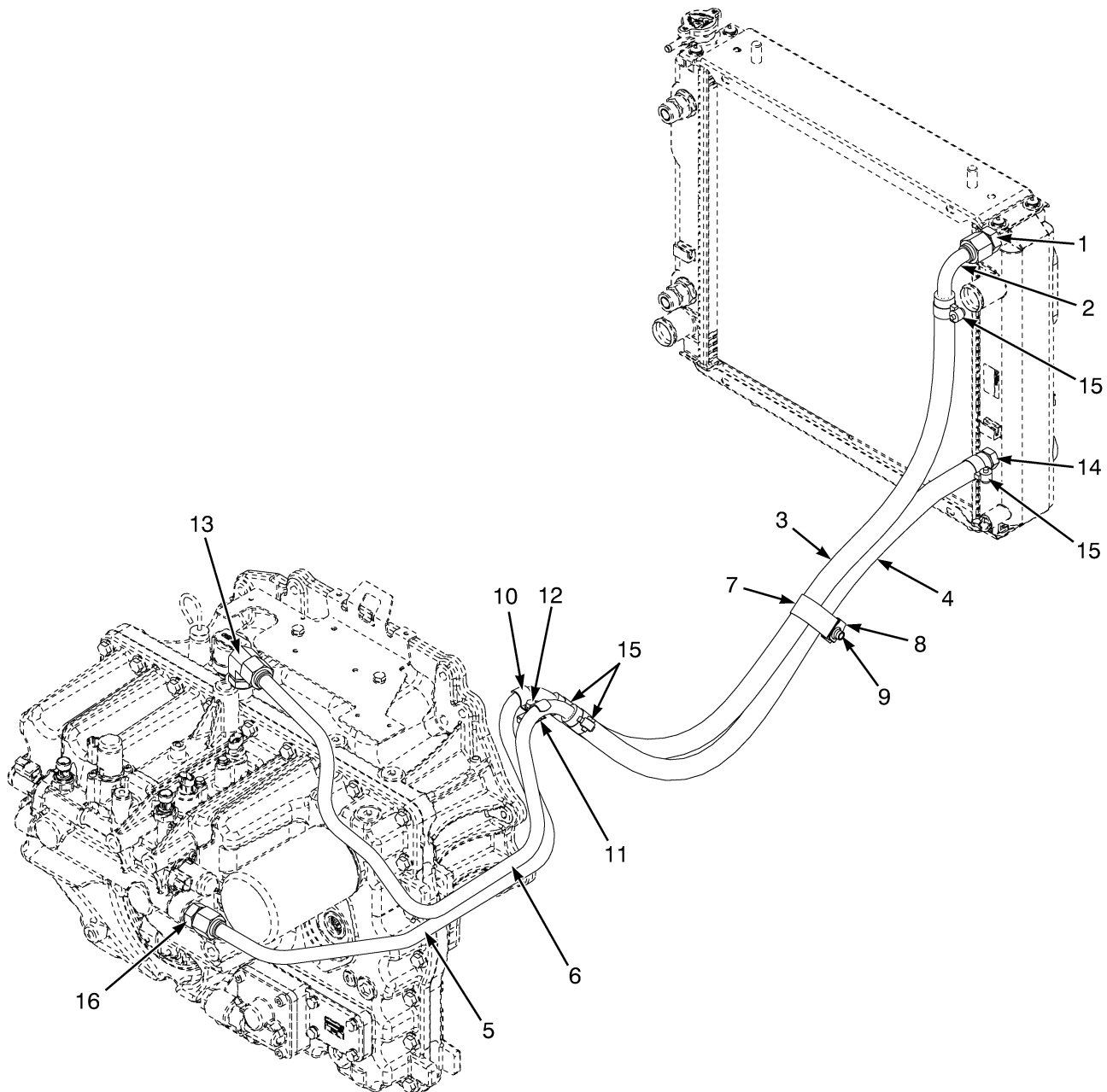


BP240164

TRANSMISSION COOLING
YANMAR 2.6L AND 3.3L DIESEL AND GM 2.4L LPG – SQUARE WAVE WITH INTERNAL OIL COOLER
(PENDING PER ECN 105683 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	2107524	Hose	1
2	2109692	Hose	1
3	1562648	Clip	2
4	1527879	Capscrew	2
5	1480237	Nut	2
6	2109875	Tube Assy	1
6	1487165	Fitting	1
7	1486749	Fitting	1
8	222512	Fitting	1
8	16485	O-Ring	1
9	1691525	Adapter	1
10	17223	Fitting	2
10	16485	O-Ring	1
11	130845	Clamp	4
12	1616979	Heat Shield	1

TRANSMISSION COOLING (FIGURE 5-9)
YANMAR 2.6L AND 3.3L DIESEL AND GM 2.4L LPG — SQUARE WAVE WITHOUT AIR COOLER
(PENDING PER ECN 105683 →)



BP240162

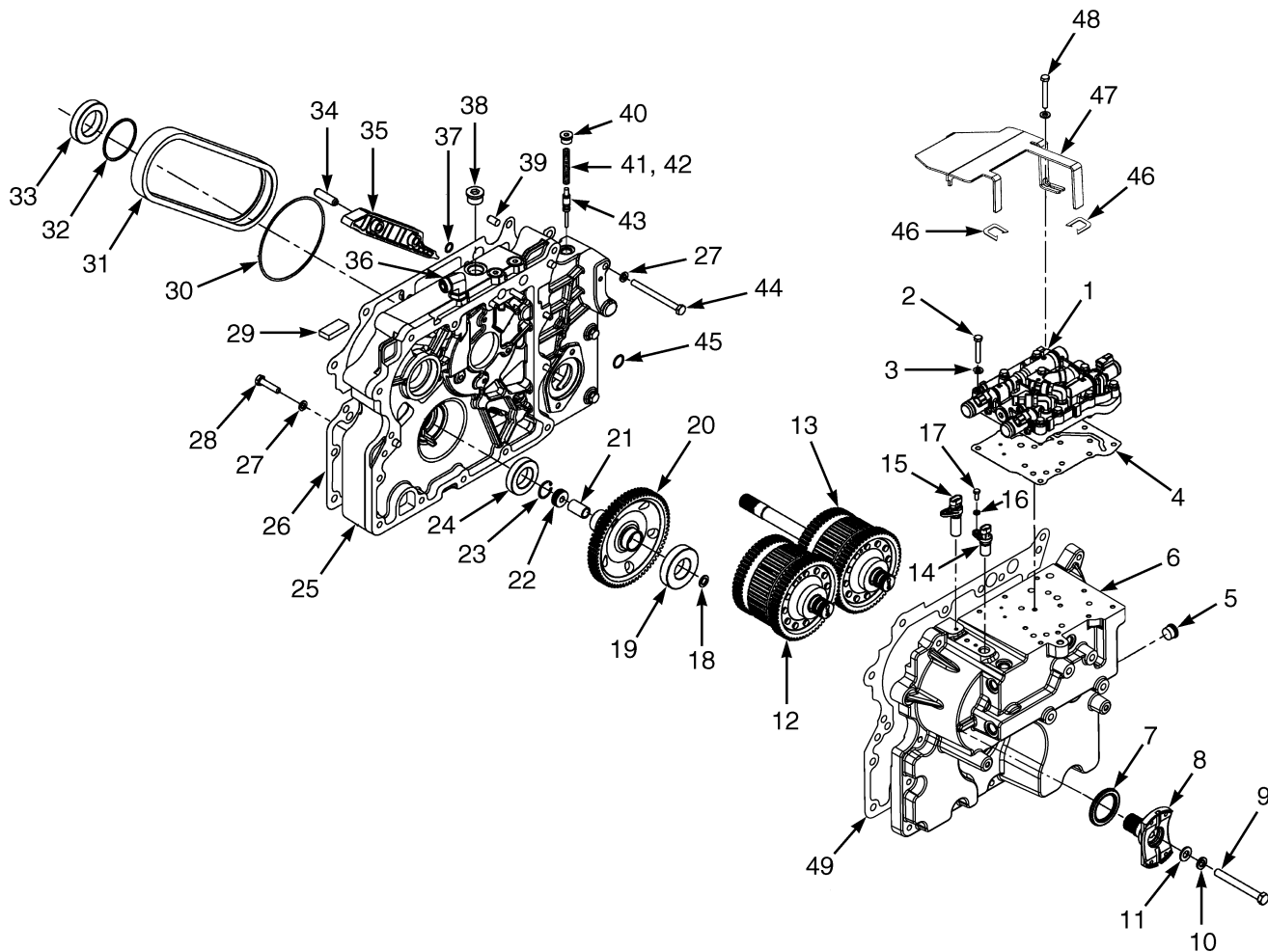
TRANSMISSION COOLING
YANMAR 2.6L AND 3.3L DIESEL AND GM 2.4L LPG – SQUARE WAVE WITHOUT AIR COOLER
(PENDING PER ECN 105683 →)

ITEM	PART NO.	DESCRIPTION	QTY
1	1565127	Fitting	1
2	2109875	Tube Assy	1
2	1487165	Fitting	1
3	2107727	Hose	1
4	2110027	Hose	1
5	2109494	Tube Assy	1
5	1487165	Fitting	1
6	2109495	Tube Assy	1
6	1487165	Fitting	1
7	1562648	Clip	1
8	1480237	Nut	1
9	1527879	Capscrew	1
10	1561780	Clip	1
11	1350215	Nut	1
12	1527877	Capscrew	1
13	1487067	Fitting	1
14	1673198	Fitting	1
14	222493	Fitting	1
14	16484	O-Ring	1
15	130845	Clamp	4
16	1486749	Fitting	1

TRANSMISSION (FIGURE 5-10)

SINGLE SPEED, THREE PIECE HOUSING, WET AND DRY BRAKE — SHEET 1 OF 2

(→ S/N L177B10029D (DRY BRAKE)) (→ S/N L177B15745E (WET BRAKE))



HP240493

TRANSMISSION**SINGLE SPEED, THREE PIECE HOUSING, WET AND DRY BRAKE – SHEET 1 OF 2**

(→ S/N L177B10029D (DRY BRAKE)) (→ S/N L177B15745E (WET BRAKE))

ITEM	PART NO.	DESCRIPTION	QTY
	a 1550565	Transmission Assy (Single Speed, Dry Brake)	1
	b 1616478	Transmission Assy (Single Speed Wet Brake)	1
1	a 1613695	Hydraulic Control Valve (☞ Figure 5-20).....	1
1	c 1611835	Hydraulic Control Valve (☞ Figure 5-20).....	1
2	292509	Capscrew	11
3	320157	Washer	11
4	1570360	Gasket	1
5	233693	Fitting	1
5	16485	O-Ring	1
6	a 1624509	Transmission Housing (Transmission)	1
6	c 1624508	Transmission Housing (Transmisison)	1
7	1547447	Oil Seal	1
8	1550578	Yoke (24 Tooth)	1
9	18595	Capscrew	1
10	15158	Washer	1
11	15135	Washer	1
12	1595421	Clutch Pack (Counter/Reverse) (☞ Figure 5-15).....	1
13	1595420	Clutch Pack (Input/Forward) (☞ Figure 5-14).....	1
14	1541231	Sensor (Input Speed)	1
15	1541232	Sensor (Output Speed)	1
16	292680	Washer	2
17	292500	Capscrew	2
18	86229	Seal	1
19	43208	Ball Bearing	1
20	1585745	Gear (Output)	1
21	1516851	Spacer	1
22	1516849	Nut	1
23	58916	Snap Ring	1
24	44308	Ball Bearing	1
25	1550575	Housing	1
26	1550573	Gasket (Torque Converter Housing to Cover)	1
27	292682	Lockwasher	24
28	292516	Capscrew	4
29	334560	Magnet	1
30	16682	O-Ring	1
31	1494750	Chain (Drive Pump)	1
32	1544218	Sealing Ring	1
33	44310	Ball Bearing	1
34	303100	Roll Pin	4
35	1553270	Snubber	2
36	1487067	Fitting	1
36	252729	O-Ring	1
36	16485	O-Ring	1
37	1553475	O-Ring	1
38	233683	Fitting	1
38	16487	O-Ring	1
39	303150	Dowel	4
40	235691	Fitting	7
41	a 1612918	Spring (Regulator)	1

TRANSMISSION**SINGLE SPEED, THREE PIECE HOUSING, WET AND DRY BRAKE – SHEET 1 OF 2****(→ S/N L177B10029D (DRY BRAKE)) (→ S/N L177B15745E (WET BRAKE))**

ITEM	PART NO.	DESCRIPTION	QTY
42	c 1612917	Spring (Regulator)	1
43	1612916	Spool (Regulator)	1
44	1359458	Capscrew	16
45	1553403	O-Ring	4
46	1380849	Edge Protector	2
47	1569768	Shield	1
48	1527879	Capscrew	1
49	1550576	Gasket (Cover to Transmission Housing)	1
	b 1624414	Baffle	1

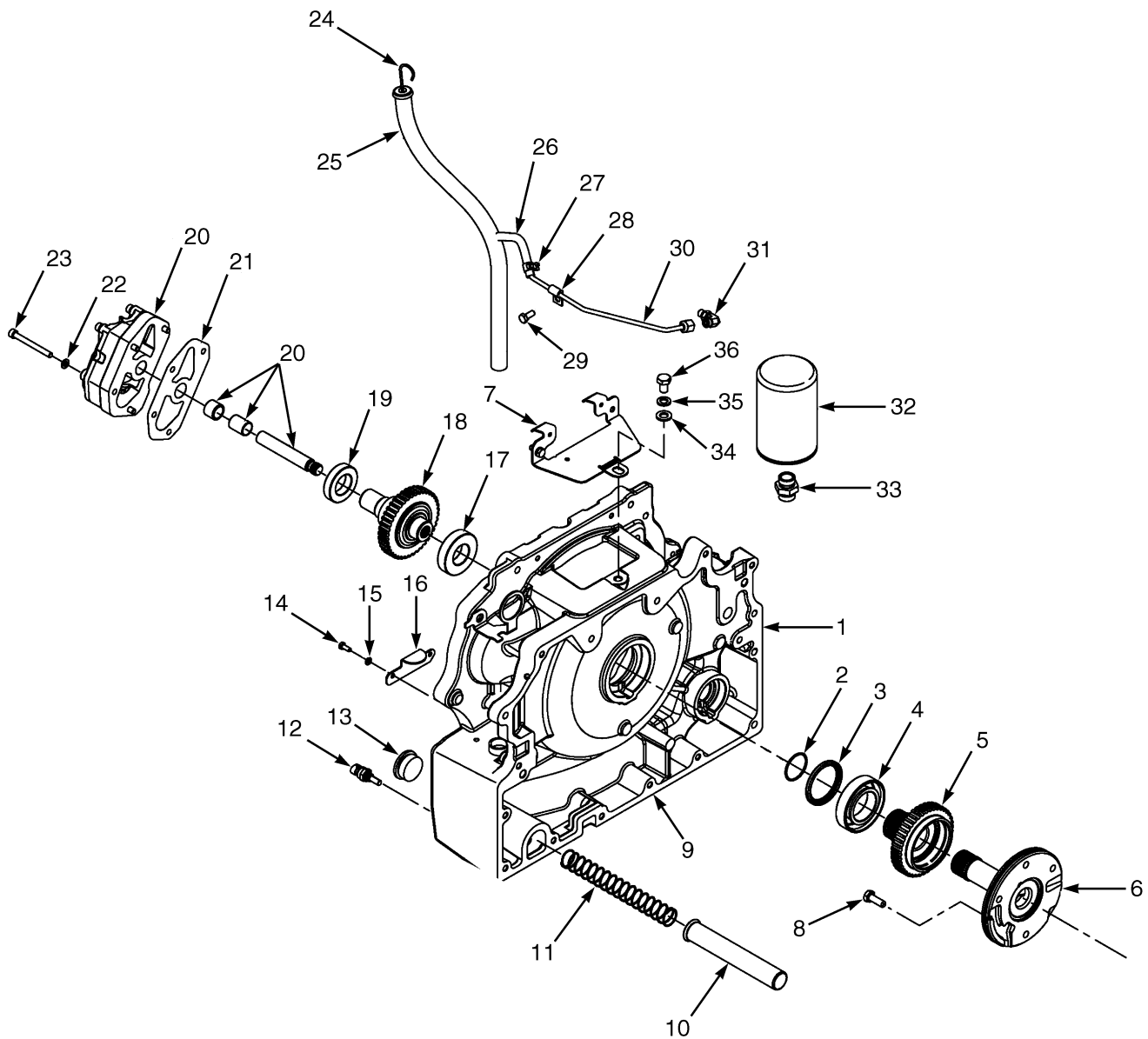
FOOTNOTES:**a** Dry Brakes**c** Wet Brakes**b** Not Illustrated

NOTES

[illegible]

TRANSMISSION (FIGURE 5-11)

SINGLE SPEED, THREE PIECE HOUSING, WET AND DRY BRAKE — SHEET 2 OF 2
(→ S/N L177B10029D (DRY BRAKE)) (→ L177B15745E WET BRAKE)



TRANSMISSION**SINGLE SPEED, THREE PIECE HOUSING, WET AND DRY BRAKE – SHEET 2 OF 2**

(→ S/N L177B10029D (DRY BRAKE)) (→ L177B15745E WET BRAKE)

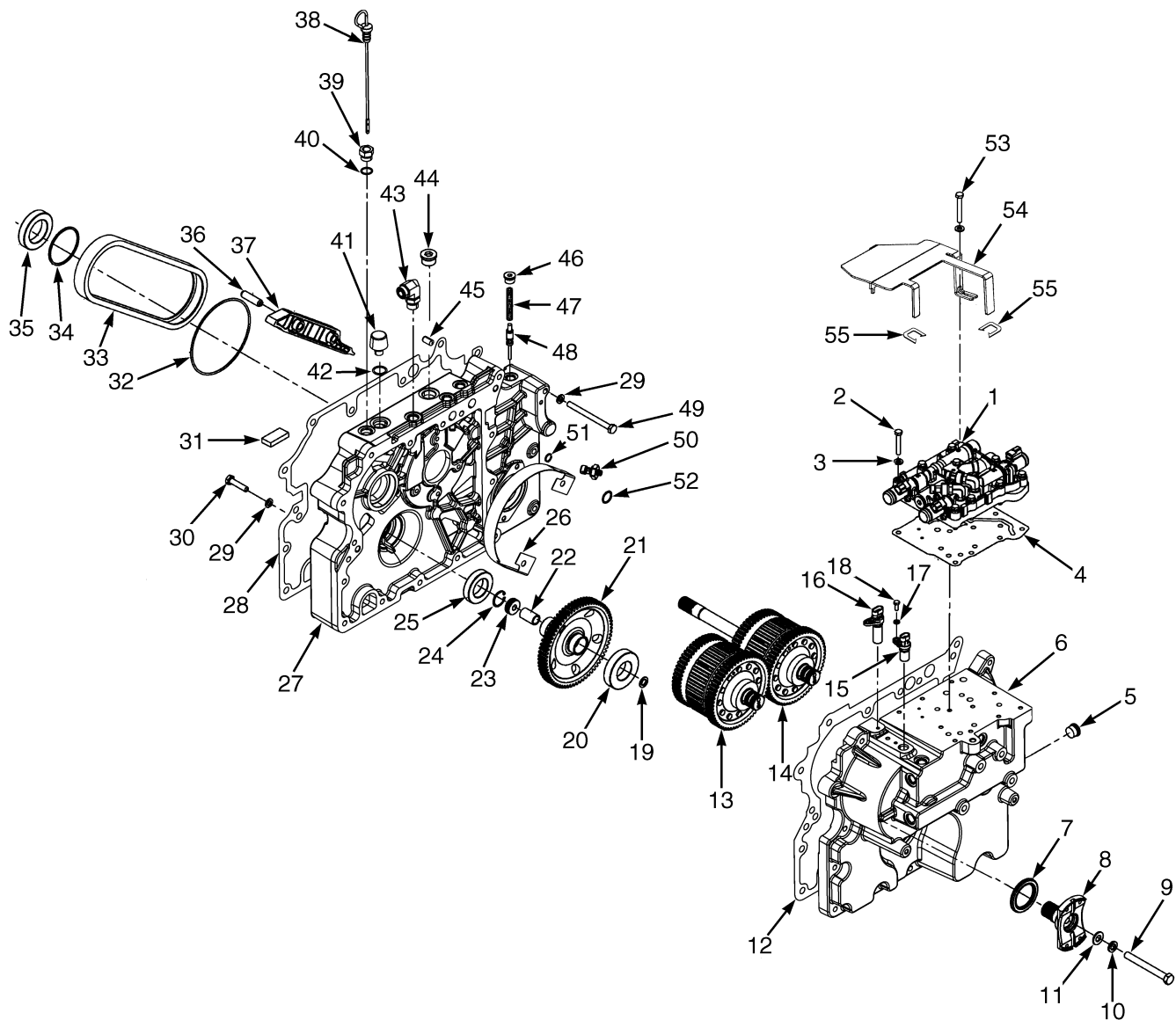
ITEM	PART NO.	DESCRIPTION	QTY
	1550565	Transmission Assy (Single Speed, Dry Brake)	1
	1616478	Transmission Assy (Single Speed Wet Brake)	1
1	1550566	Converter Housing (Torque Convertor)	1
2	145481	O-Ring	1
3	1544217	Oil Seal (Torque Converter)	1
4	1544216	Bearing	1
5	1541556	Sprocket	1
6	1550585	Stator	1
6	1516826	Bushing	1
7	1566169	Cover	1
8	136985	Capscrew	4
9	1550573	Gasket (Torque Converter Housing to Cover)	1
10	1550571	Screen (Suction)	1
11	1550572	Spring (Suction Screen)	1
12	1515654	Sensor (Coolant Temperature)	1
13	188210	Fitting	1
13	16983	O-Ring	1
14	292500	Capscrew	2
15	292680	Washer	2
16	1550567	Cover Plate (Torque Convertor Housing)	1
17	43207	Ball Bearing	1
18	1550574	Sprocket (Driven)	1
19	44307	Ball Bearing	1
20	a 1529894	Pump (20.5 CC/REV)	1
20	b 1552853	Pump (27.0 CC/REV)	1
20	1623836	O-Ring	1
21	1653815	Gasket (Charge Pump)	1
22	292681	Lockwasher	6
23	296022	Capscrew	4
24	1516818	Dipstick	1
25	1566166	Dipstick Tube	1
26	169690	Hose	1
27	1569616	Hose Clamp	2
28	16448	Fitting	1
29	136681	Capscrew	3
30	1566168	Tube	1
31	1487063	Fitting	1
31	16483	O-Ring	1
32	2075558	Transmission Filter	1
33	1558515	Fitting	1
34	320161	Washer	1
35	292683	Lockwasher	1
36	292526	Capscrew	1

FOOTNOTES:**a** Dry Brakes**b** Wet Brakes

TRANSMISSION (FIGURE 5-12)

SINGLE SPEED, THREE PIECE HOUSING, DRY BRAKE — SHEET 1 OF 2

(S/N L177B10030D ↔ S/N L177B15791E)



BP240083

TRANSMISSION
SINGLE SPEED, THREE PIECE HOUSING, DRY BRAKE – SHEET 1 OF 2
(S/N L177B10030D ↔ S/N L177B15791E)

ITEM	PART NO.	DESCRIPTION	QTY
	1632260	Transmission Assy (Single Speed Dry Brake)	1
1	1613695	Hydraulic Control Valve (☞ Figure 5-20).....	1
2	292509	Capscrew	11
3	320157	Washer	11
4	1570360	Gasket	1
5	233693	Fitting	1
5	16485	O-Ring	1
6	1624509	Transmission Housing (Transmission)	1
7	1547447	Oil Seal	1
8	1550578	Yoke (24 Teeth)	1
9	18595	Capscrew	1
10	15158	Washer	1
11	15135	Washer	1
12	1550576	Gasket (Cover to Transmission Housing)	1
13	1595421	Clutch Pack (Counter/Reverse) (☞ Figure 5-15).....	1
14	1595420	Clutch Pack (Input/Forward) (☞ Figure 5-18).....	1
15	1541231	Sensor (Input Speed) (Input Speed)	1
16	1541232	Sensor (Output Speed)	1
17	292680	Washer	2
18	292500	Capscrew	2
19	86229	Seal	1
20	43208	Ball Bearing	1
21	1585745	Gear (Output)	1
22	1516851	Spacer	1
23	1516849	Nut	1
24	58916	Snap Ring	1
25	44308	Ball Bearing	1
26	1624415	Cover (Pump Drive)	1
27	1624503	Housing (Front Cover)	1
28	1550573	Gasket (Torque Converter Housing to Cover)	1
29	292682	Lockwasher	20
30	292516	Capscrew	4
31	334560	Magnet	1
32	16682	O-Ring	1
33	1494750	Chain (Drive Pump)	1
34	1544218	Sealing Ring	1
35	44310	Ball Bearing	1
36	303100	Roll Pin	4
37	1553270	Snubber	2
38	1624401	Dipstick	1
39	1624405	Fitting	1
40	16485	O-Ring	1
41	1632741	Breather	1
42	16486	O-Ring	1
43	1634651	Fitting	1
44	222444	Fitting	1
44	16486	O-Ring	1
45	303150	Dowel	4
46	235691	Fitting	1

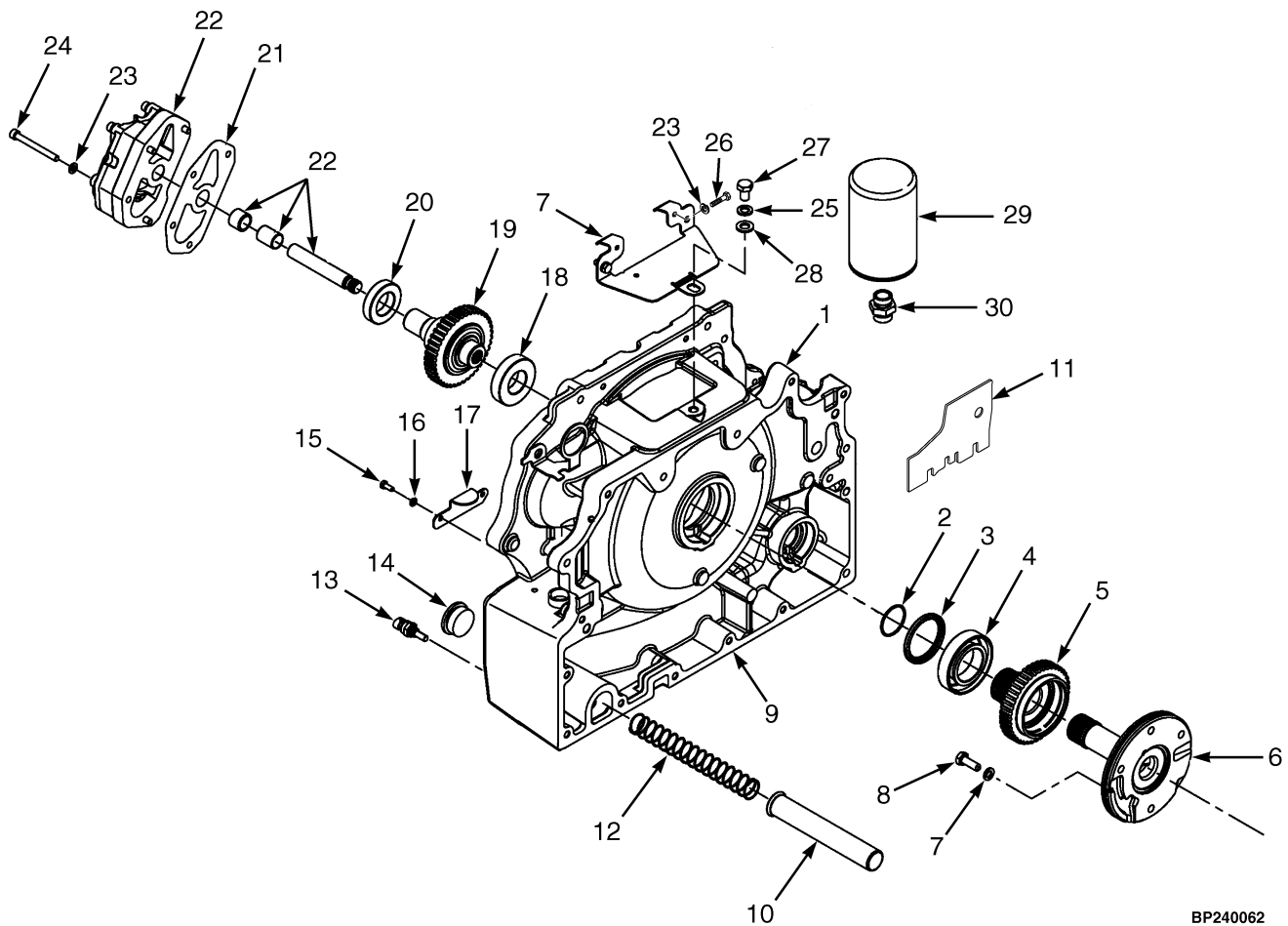
TRANSMISSION**SINGLE SPEED, THREE PIECE HOUSING, DRY BRAKE – SHEET 1 OF 2**
(S/N L177B10030D ↔ S/N L177B15791E)

ITEM	PART NO.	DESCRIPTION	QTY
46	16484	O-Ring	1
47	1612918	Spring (Regulator)	1
48	1612916	Spool (Regulator)	1
49	1359458	Capscrew	16
50	2070263	Pressure Transducer	1
51	1553475	O-Ring	1
52	1553403	O-Ring	4
53	1527879	Capscrew	1
54	1569768	Shield	1
55	1380849	Edge Protector	2

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

TRANSMISSION (FIGURE 5-13)
SINGLE SPEED, THREE PIECE HOUSING, DRY BRAKE — SHEET 2 OF 2
(S/N L177B10030D ↔ S/N L177B15791E)

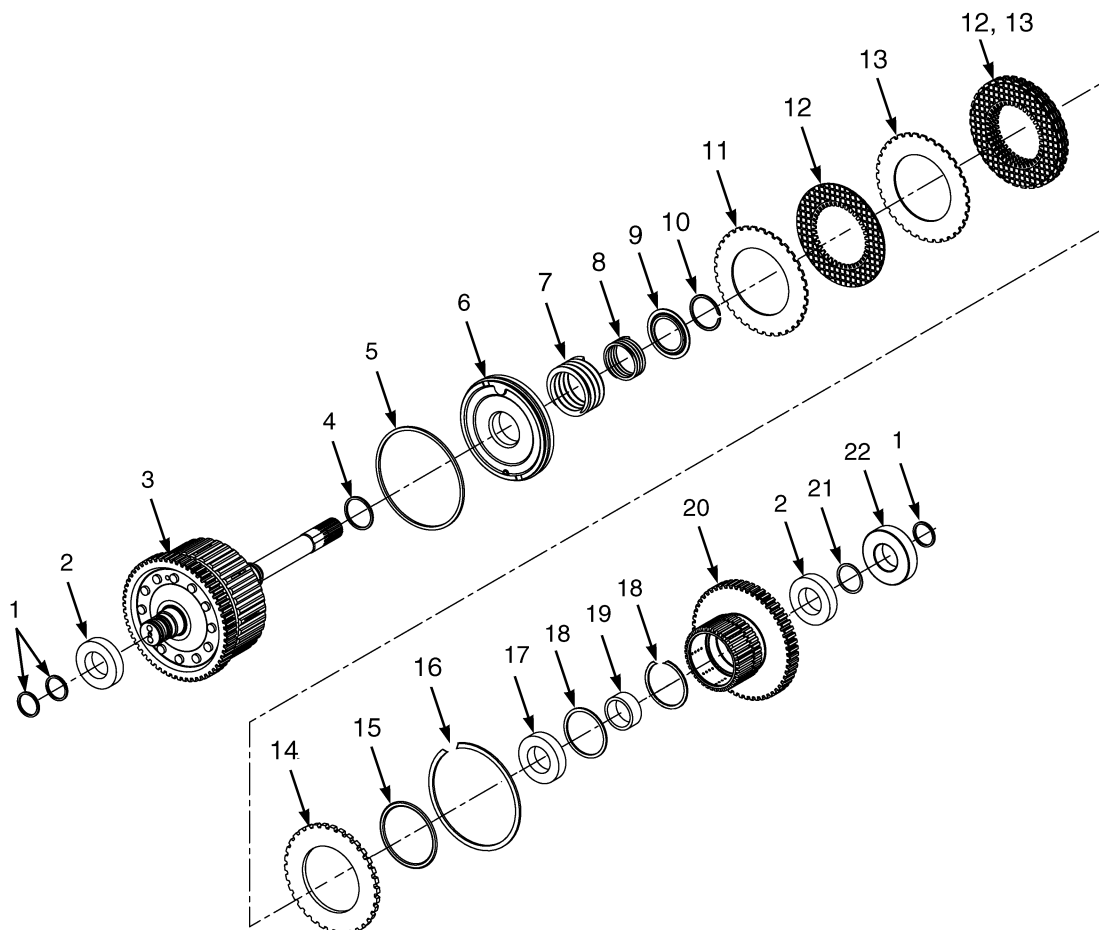


BP240062

TRANSMISSION
SINGLE SPEED, THREE PIECE HOUSING, DRY BRAKE – SHEET 2 OF 2
(S/N L177B10030D ↔ S/N L177B15791E)

ITEM	PART NO.	DESCRIPTION	QTY
	1632260	Transmission Assy (Single Speed Dry Brake)	1
1	1624504	Converter Housing (Torque Converter)	1
2	145481	O-Ring	1
3	1544217	Oil Seal (Torque Converter)	1
4	1544216	Bearing	1
5	1541556	Sprocket	1
6	1550585	Stator	1
6	1516826	Bushing	1
6		Stator	1
7	1566169	Cover	1
8	136985	Capscrew	4
9	1636640	Gasket (Torque Converter Housing To Cover)	1
10	1550571	Screen (Suction)	1
11	1624414	Baffle	1
12	1550572	Spring (Suction Screen)	1
13	1515654	Sensor (Coolant Temperature)	1
14	188210	Fitting	1
15	292500	Capscrew	2
16	292680	Washer	2
17	1550567	Cover Plate (Torque Converter Housing)	1
18	43207	Ball Bearing	1
19	1550574	Sprocket (Driven)	1
20	44307	Ball Bearing	1
21	1653815	Gasket (Charge Pump)	1
22	1529894	Pump	1
22	1623836	O-Ring	1
23	292681	Lockwasher	7
24	296022	Capscrew	4
25	292683	Lockwasher	1
26	136681	Capscrew	3
27	292526	Capscrew	1
28	320161	Washer	1
29	2075558	Transmission Filter (Transmission)	1
30	1558515	Fitting (Transmission Filter)	1

INPUT/FORWARD CLUTCH (FIGURE 5-14) SINGLE SPEED TRANSMISSION (→ S/N L177B134120E)

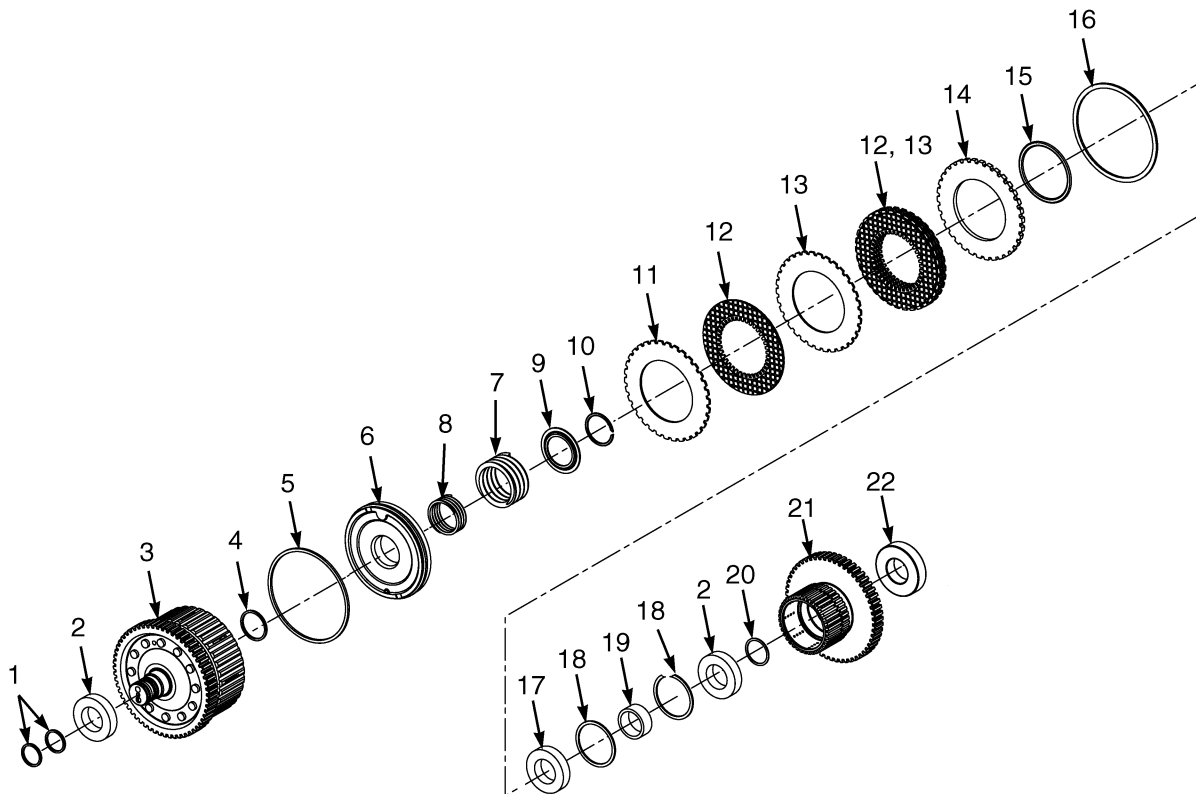


BP240049

INPUT/FORWARD CLUTCH
SINGLE SPEED TRANSMISSION (→ S/N L177B134120E)

ITEM	PART NO.	DESCRIPTION	QTY
	1595420	Clutch Pack (Input/Forward)	1
1		Ring Seal	3
2	1581116	Ball Bearing	2
3	1581104	Shaft	1
4		Ring Seal	1
5		Ring Seal	1
6	1552525	Piston	1
7	1581108	Spring	1
8	1581098	Spring	1
9	1581099	Spring Guide	1
10	1581100	Snap Ring	1
11		Conical Plate	1
12		Friction Plate	5
13		Separator Plate	4
14	1543094	Pressure Plate (5.8 mm)	1
14	1537449	Pressure Plate (6.0 mm)	1
14	1543096	Pressure Plate (5.6 mm)	1
14	1543097	Pressure Plate (5.4 mm)	1
14	1543098	Pressure Plate (5.2 mm)	1
15		O-Ring	1
16	1537450	Snap Ring	1
17	124603	Ball Bearing	1
18	1581107	Snap Ring	2
19	1581117	Spacer	1
20	1595427	Gear	1
21	1581106	Snap Ring	1
22	43207	Ball Bearing	1
	1595426	Kit-Clutch Pack Plates/Seals	1
	1543102	Kit-Clutch Pack Plates	1
	1595425	Kit-Clutch Pack Seals	1

COUNTER/REVERSE CLUTCH (FIGURE 5-15) SINGLE SPEED TRANSMISSION (→ S/N L177B13245E)



BP240051

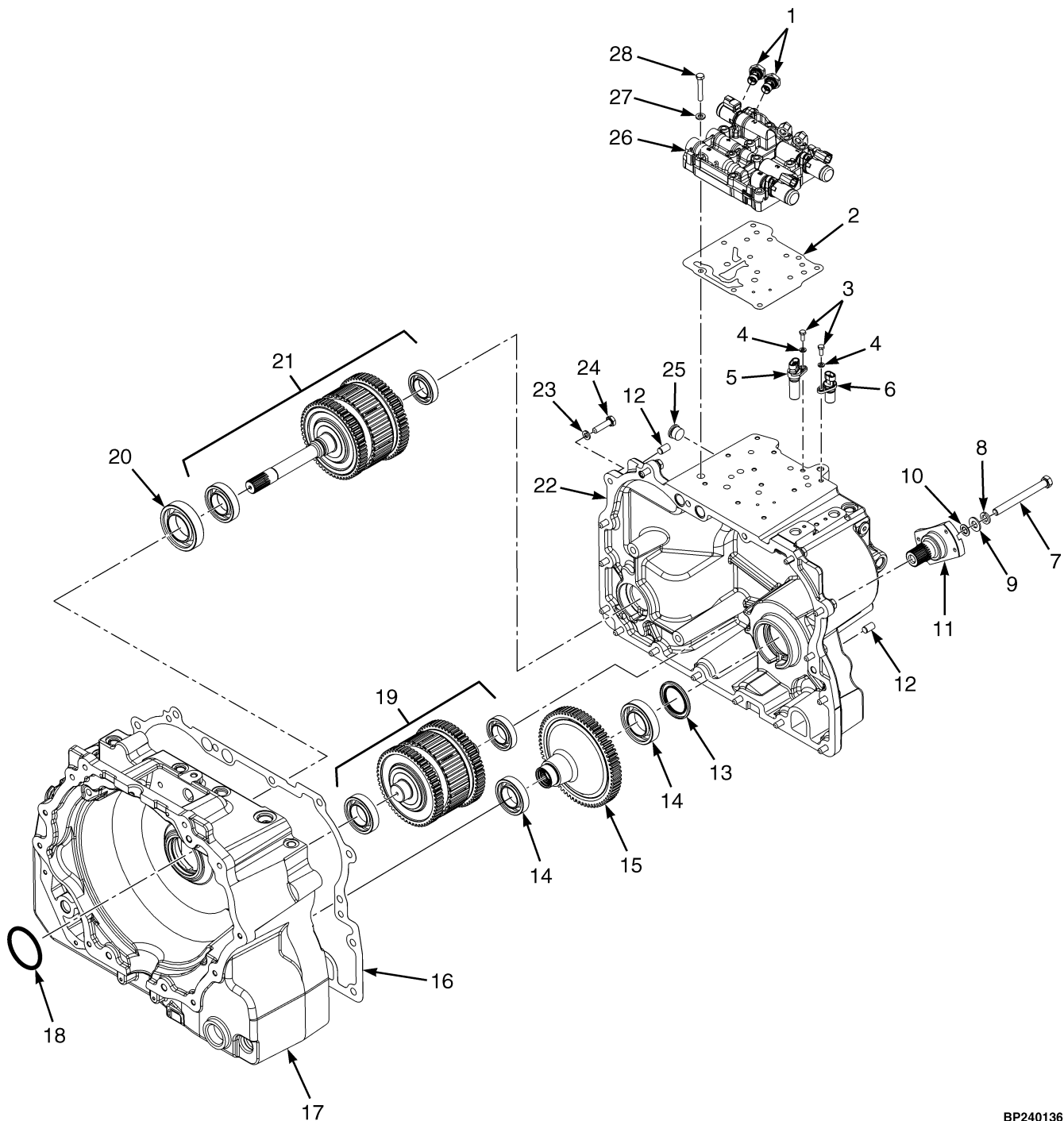
COUNTER/REVERSE CLUTCH
SINGLE SPEED TRANSMISSION (→ S/N L177B13245E)

ITEM	PART NO.	DESCRIPTION	QTY
	1595421	Clutch Pack (Counter/Reverse)	1
1		Seal	2
2	1581116	Ball Bearing	2
3	1581114	Shaft	1
4		Seal	1
5		Seal	1
6	1552525	Piston	1
7	1581108	Spring	1
8	1581098	Spring	1
9	1581099	Spring Guide	1
10	1581100	Snap Ring	1
11		Conical Plate	1
12		Friction Plate	5
13		Separator Plate	4
14	1543094	Pressure Plate (5.8 mm)	1
14	1537449	Pressure Plate (6.0 mm)	1
14	1543096	Pressure Plate (5.6 mm)	1
14	1543097	Pressure Plate (5.4 mm)	1
14	1543098	Pressure Plate (5.2 mm)	1
15		O-Ring	1
16	1537450	Snap Ring	1
17	124603	Ball Bearing	1
18	1581107	Snap Ring	1
19	1581117	Spacer	1
20	1581106	Snap Ring	1
21	1595427	Gear	1
22	43207	Ball Bearing	1
	1595426	Kit-Clutch Pack Plates/Seals	1
	1543102	Kit-Clutch Pack Plates	1
	1595425	Kit-Clutch Pack Seals	1

TRANSMISSION (FIGURE 5-16)

SINGLE SPEED, WET AND DRY BRAKE — SHEET 1 OF 2

(S/N L177B15792E → (T133M0001501, DRY BRAKE)) (S/N L177B15746E → (T134M0001501, WET BRAKE))



BP240136

TRANSMISSION

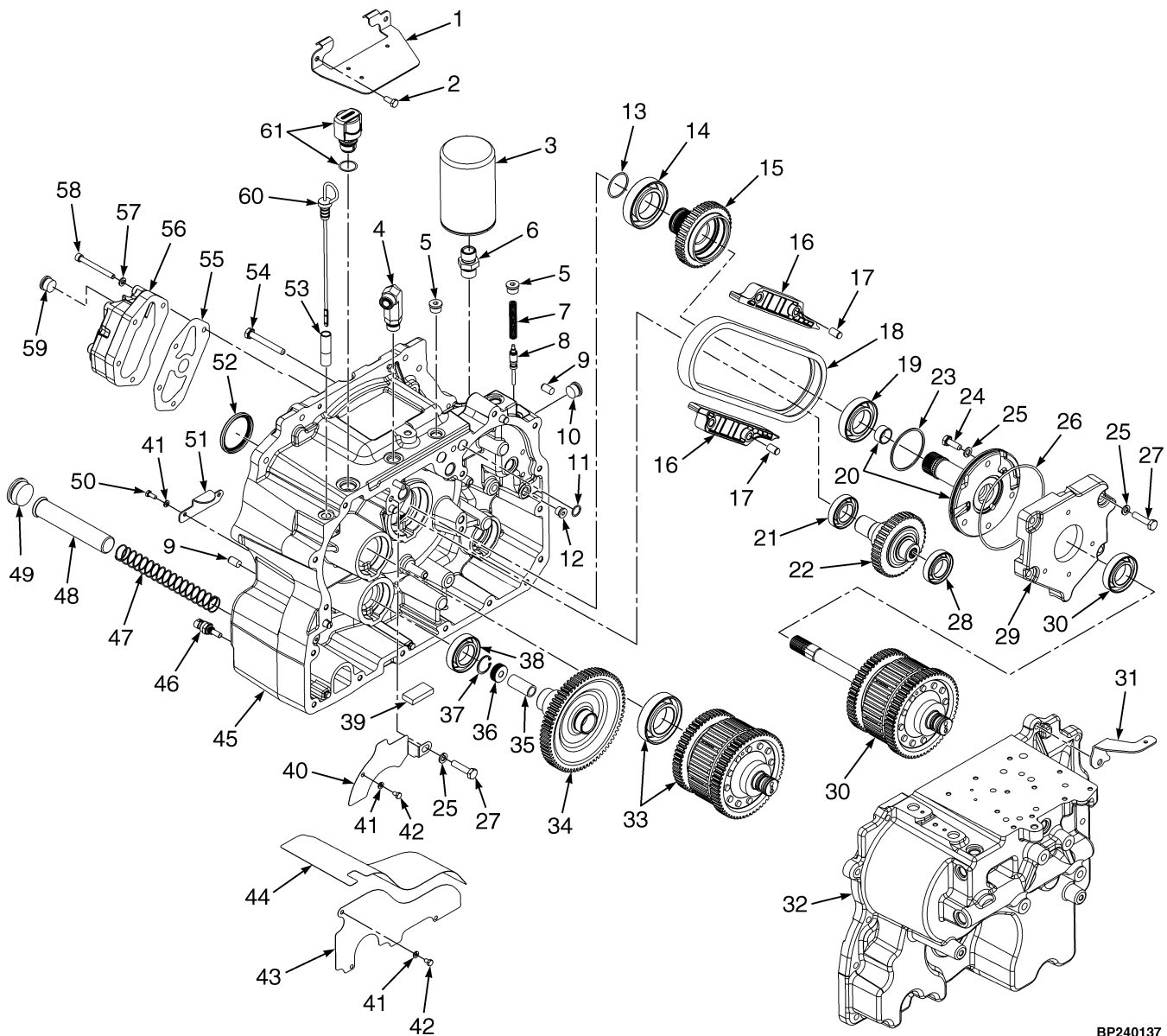
SINGLE SPEED, WET AND DRY BRAKE – SHEET 1 OF 2 (S/N L177B15792E → (T133M0001501, DRY BRAKE))
(S/N L177B15746E → (T134M0001501, WET BRAKE))

ITEM	PART NO.	DESCRIPTION	QTY
	a 1646871	Transmission Assy (Single Speed Dry Brake) (T133, Dry Brake)	1
	a 1646872	Transmission Assy (Single Speed Wet Brake) (T134, Wet Brake)	1
	b 1703481	Transmission Assy (Single Speed) (Dry Brake)	1
	b 1703482	Transmission Assy (Single Speed) (Wet Brake)	1
1	2070263	Pressure Transducer	2
2	1570360	Gasket	1
3	292500	Capscrew	4
4	292680	Washer	8
5	1541231	Sensor (Input Speed) (Transmission Input Speed)	1
6	1541232	Sensor (Transmission Output Speed)	1
7	1654651	Flange Head Capscrew	1
8	15158	Washer	1
9	15135	Washer	1
10	86229	Seal	1
11	1655880	Yoke	1
12	303150	Dowel	4
13	1547447	Oil Seal	1
14	43208	Ball Bearing	2
15	1638791	Gear (Output)	1
16	1636640	Gasket	1
17	1615602	Converter Housing	1
18	1544217	Oil Seal (Torque Converter)	1
19	2093523	Clutch Pack (Counter/Reverse) (☞ Figure 5-19).....	1
19	1581116	Ball Bearing	1
19	43207	Ball Bearing	1
20	1544216	Bearing	1
21	1646880	Clutch Pack (Input/Forward) (☞ Figure 5-18).....	1
21	1581116	Ball Bearing	1
21	124603	Ball Bearing	1
22	1615601	Transmission Housing (Dry Brake)	1
22	1629361	Transmission Housing (Wet Brake)	1
23	292682	Lockwasher	25
24	292515	Capscrew	15
25	233693	Fitting	1
25	16485	O-Ring	1
26	1665205	Valve (Low Pressure) (Dry Brake)	1
26	1665204	Valve (High Pressure) (Wet Brake)	1
27	320157	Washer	11
28	292509	Capscrew	11

FOOTNOTES:**a** → S/N L177V02742F**b** S/N L177V02743F →

TRANSMISSION (FIGURE 5-17)

SINGLE SPEED, WET AND DRY BRAKE — SHEET 2 OF 2 (S/N L177B15792E → (DRY BRAKE))
(S/N L177B15746E → (WET BRAKE))



BP240137

TRANSMISSION

**SINGLE SPEED, WET AND DRY BRAKE – SHEET 2 OF 2 (S/N L177B15792E → (DRY BRAKE))
(S/N L177B15746E → (WET BRAKE))**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1646871	Transmission Assy (Single Speed Dry Brake) (T133, Dry Brake)	1
	b 1646872	Transmission Assy (Single Speed Wet Brake) (T134, Wet Brake)	1
	c 1703481	Transmission Assy (Single Speed) (Dry Brake)	1
	c 1703482	Transmission Assy (Single Speed) (Wet Brake)	1
1	1622888	Cover (Converter Housing)	1
1	1699141	Cover Plate (Converter Housing) (Alternate Part)	1
2	136681	Capscrew	2
3	2075558	Transmission Filter	1
4	1487067	Fitting	1
4	252729	O-Ring	1
4	16485	O-Ring	1
5	235691	Fitting	8
5	16484	O-Ring	1
6	1558515	Fitting	1
7	a 1612917	Spring (System Regulator)	1
8	1612916	Spool (System Regulator)	1
9	303150	Dowel	4
10	233693	Fitting	2
10	16485	O-Ring	1
11	1553403	O-Ring	4
12	222443	Fitting	1
12	16483	O-Ring	1
13	145481	O-Ring	1
14	1544216	Bearing	1
15	1541556	Sprocket (Driving)	1
16	1615804	Snubber	2
17	303100	Roll Pin	4
18	1494750	Chain (Drive Pump)	1
19	44310	Ball Bearing	1
20	1550585	Stator (Support Assy)	1
20	1516826	Bushing	1
21	44307	Ball Bearing	1
22	1550574	Sprocket (Driven)	1
23	1544218	Sealing Ring	1
24	136985	Capscrew	4
25	292682	Lockwasher	4
26	16682	O-Ring	1
27	292616	Capscrew (7 in.)	1
28	44307	Ball Bearing	1
29	1615603	Carrier	1
30	1646880	Clutch Pack (Input/Forward) (☞ Figure 5-18).....	1
30	124603	Ball Bearing	1
31	1652575	Bracket	1
32	1615601	Transmission Housing (Dry Brake)	1
32	1629361	Transmission Housing (Wet Brake)	1
33	2093523	Clutch Pack (Counter/Reverse) (☞ Figure 5-19).....	1
33	43207	Ball Bearing	1
34	1638791	Gear (Output)	1
35	1636645	Spacer	1

TRANSMISSION

**SINGLE SPEED, WET AND DRY BRAKE – SHEET 2 OF 2 (S/N L177B15792E → (DRY BRAKE))
(S/N L177B15746E → (WET BRAKE))**

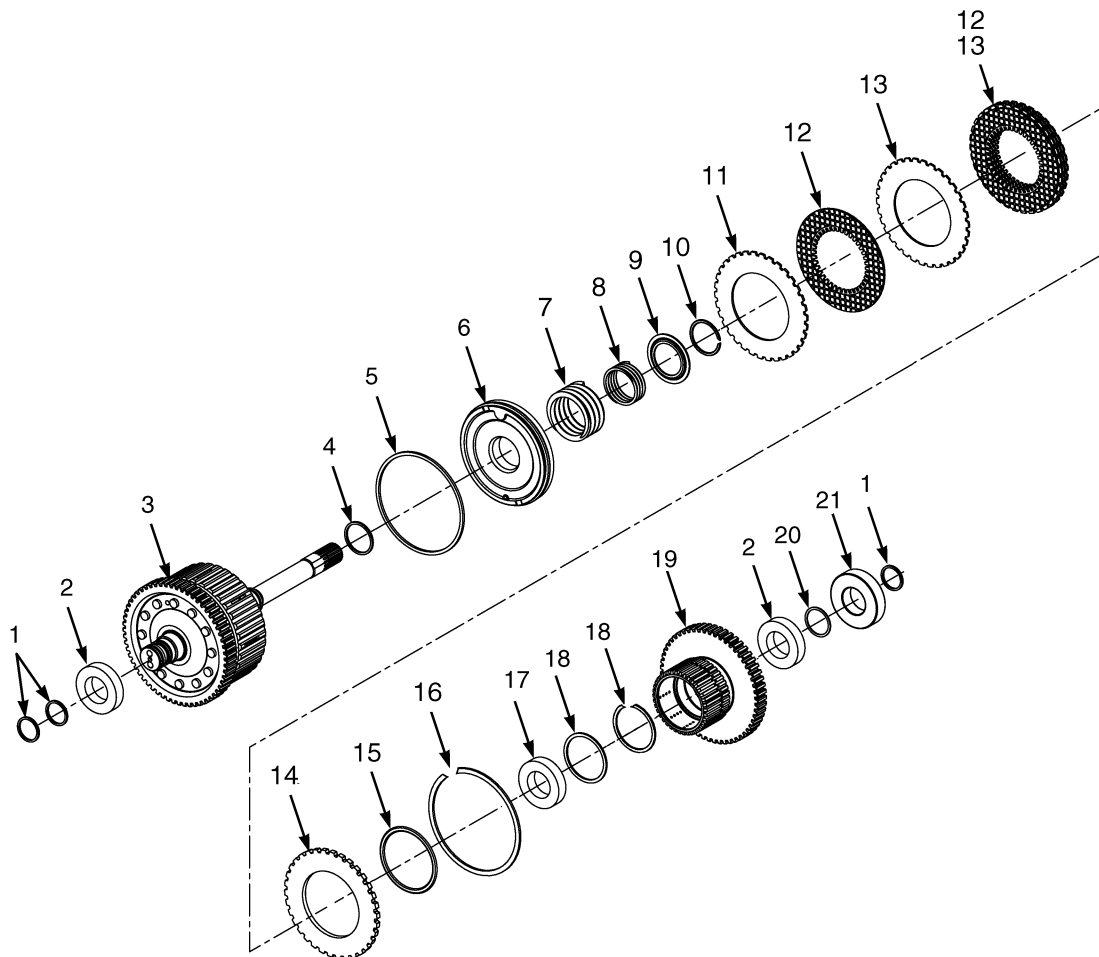
ITEM	PART NO.	DESCRIPTION	QTY
36	1516849	Nut	1
37	58916	Snap Ring	1
38	44308	Ball Bearing	1
39	334560	Magnet	1
40	1624408	Shield (Upper) (Oil)	1
41	292680	Washer	8
42	148962	Capscrew	4
43	1627453	Shield (Lower) (Oil)	1
44	1622887	Baffle	1
45	1615602	Converter Housing	1
46	1515654	Sensor (Coolant Temperature)	1
47	1550572	Spring (Suction Screen)	1
48	1627465	Screen (Suction)	1
49	188210	Fitting	1
49	16983	O-Ring	1
50	292500	Capscrew	4
51	1550567	Cover Plate	1
52	1544217	Oil Seal (Torque Converter)	1
53	1624406	Dipstick Tube	1
54	292522	Capscrew	2
55	1653815	Gasket (Charge Pump)	1
56	1529894	Pump (Charge, Dry Brake)	1
56	1623836	O-Ring	1
56	1552853	Pump (Charge, Wet Brake)	1
56	1623836	O-Ring	1
57	292681	Lockwasher	6
58	296022	Capscrew	4
59	235691	Fitting	1
59	16484	O-Ring	1
60	1624401	Dipstick	1
61	1632741	Breather	1
61	16486	O-Ring	1

FOOTNOTES:**a** Used on wet brake application only.**c** S/N L177V02743F →**b** → S/N L177V03742F

NOTES

[illegible]

INPUT/FORWARD CLUTCH (FIGURE 5-18) SINGLE SPEED TRANSMISSION (S/N L177B13421E →)

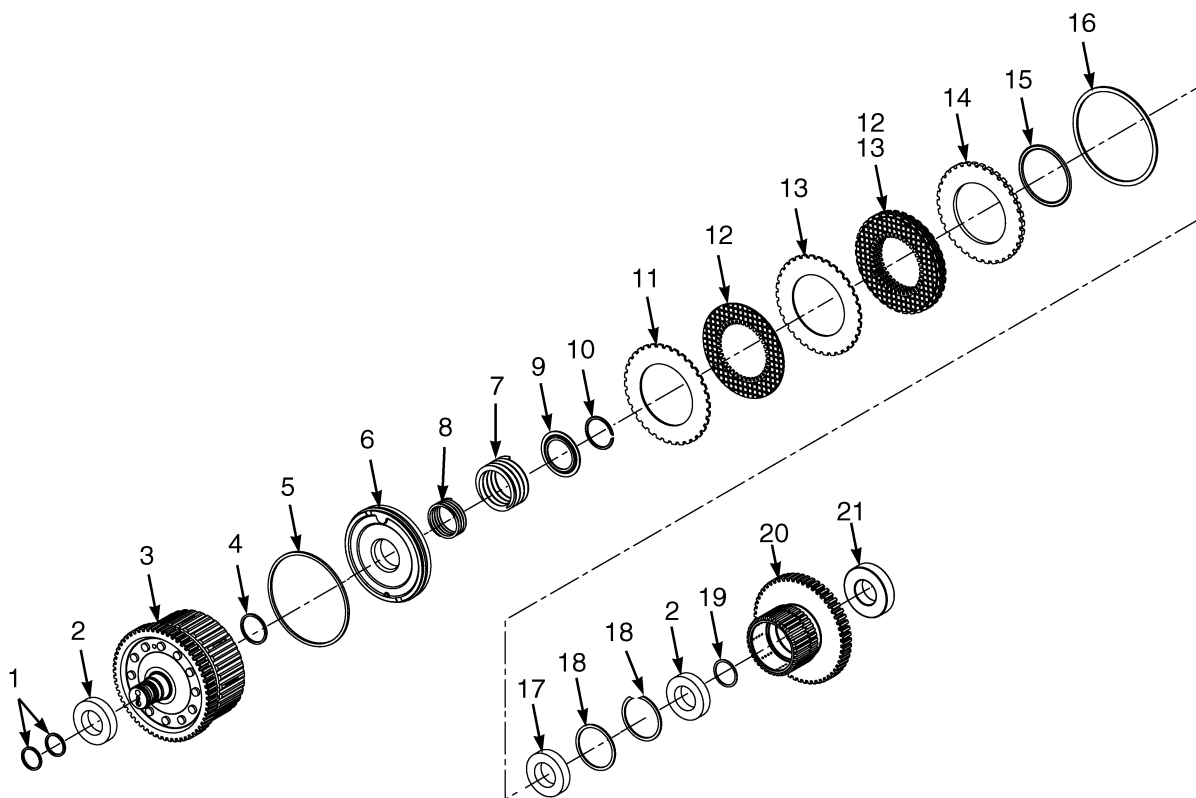


BP240098

INPUT/FORWARD CLUTCH
SINGLE SPEED TRANSMISSION (S/N L177B13421E →)

ITEM	PART NO.	DESCRIPTION	QTY
	1646880	Clutch Pack (Input/Forward)	1
1		Ring Seal	3
2	1581116	Ball Bearing	2
3	1581104	Shaft	1
4		Ring Seal	1
5		Ring Seal	1
6	2085129	Piston	1
7	1581108	Spring	1
8	1581098	Spring	1
9	1581099	Spring Guide	1
10	1581100	Snap Ring	1
11		Conical Plate	1
12		Friction Plate	5
13		Separator Plate	4
14	1537449	Pressure Plate (6.0 mm)	1
15		O-Ring	1
16	1537450	Snap Ring	1
17	124603	Ball Bearing	1
18	1581107	Snap Ring	2
19	1595427	Gear	1
19	2095533	Clutch Gear (Alternate Part)	1
20	1581106	Snap Ring	1
20	1537459	Snap Ring (Alternate Part)	1
21	43207	Ball Bearing	1
	1543102	Kit-Clutch Pack Plates	1
	1595425	Kit-Clutch Pack Seals	1

COUNTER/REVERSE CLUTCH (FIGURE 5-19) SINGLE SPEED TRANSMISSION (S/N L177B13246E →)

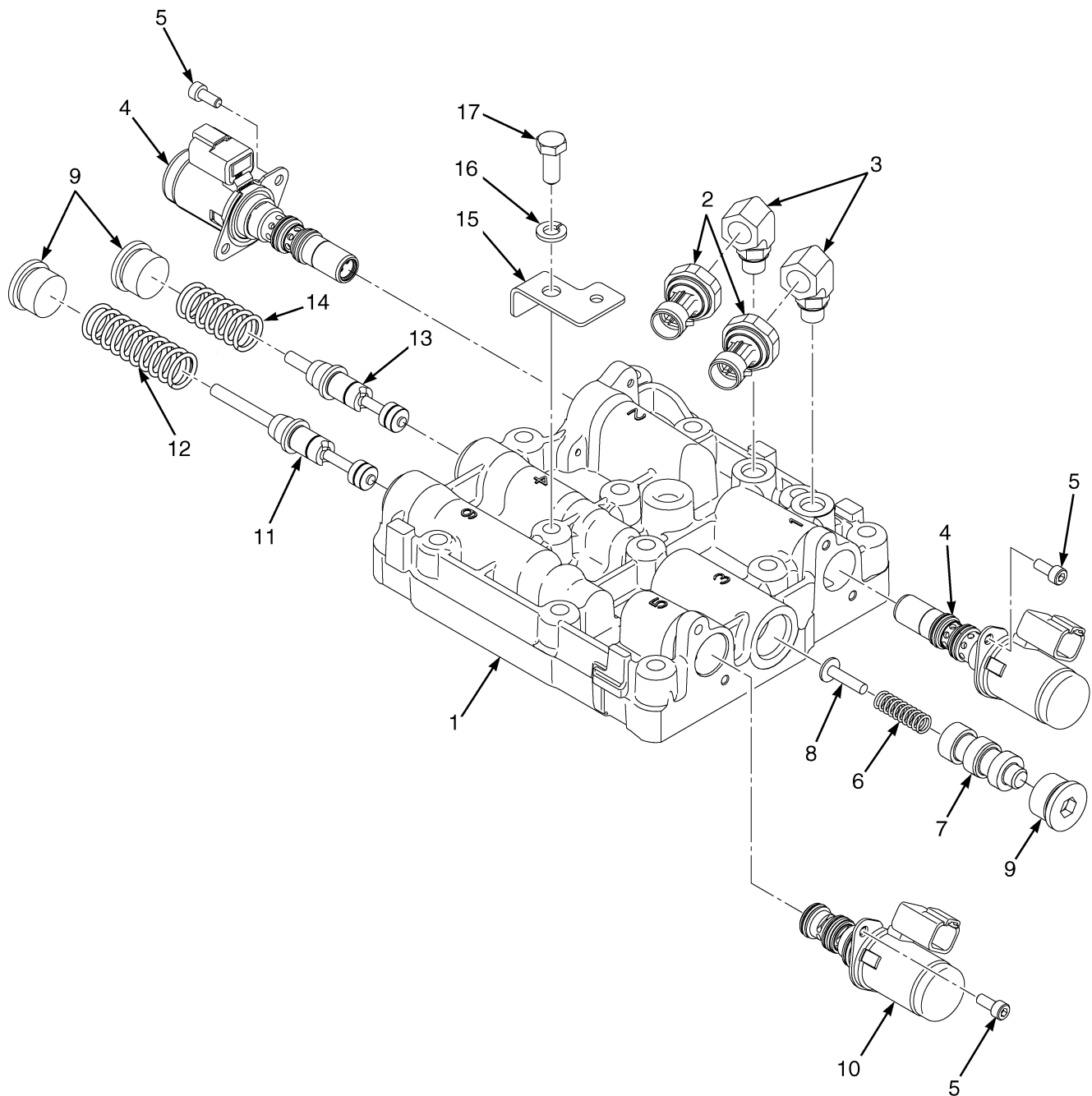


BP240099

COUNTER/REVERSE CLUTCH
SINGLE SPEED TRANSMISSION (S/N L177B13246E →)

ITEM	PART NO.	DESCRIPTION	QTY
	2093523	Clutch Pack (Counter/Reverse)	1
1		Seal	2
2	1581116	Ball Bearing	2
3	1581114	Shaft	1
4		Seal	1
5		Seal	1
6	2085129	Piston	1
7	1581108	Spring	1
8	1581098	Spring	1
9	1581099	Spring Guide	1
10	1581100	Snap Ring	1
11		Conical Plate	1
12		Friction Plate	5
13		Separator Plate	4
14	1543094	Pressure Plate (5.8 mm)	1
15		O-Ring	1
16	1537450	Snap Ring	1
17	124603	Ball Bearing	1
18	1581107	Snap Ring	1
19	1581106	Snap Ring	1
19	1537459	Snap Ring (Alternate Part)	1
20	2095533	Clutch Gear	1
21	43207	Ball Bearing	1
	2085125	Kit-Drive Plate Torque Conv	1
	2085126	Kit-Seal	1
	2085127	Kit-Repair	1

CONTROL VALVE (FIGURE 5-20)
TRANSMISSION (→ S/N L177B19874E (HIGH PRESSURE IDLE))
(→ S/N L177B19274E (LOW PRESSURE IDLE))



BP240046

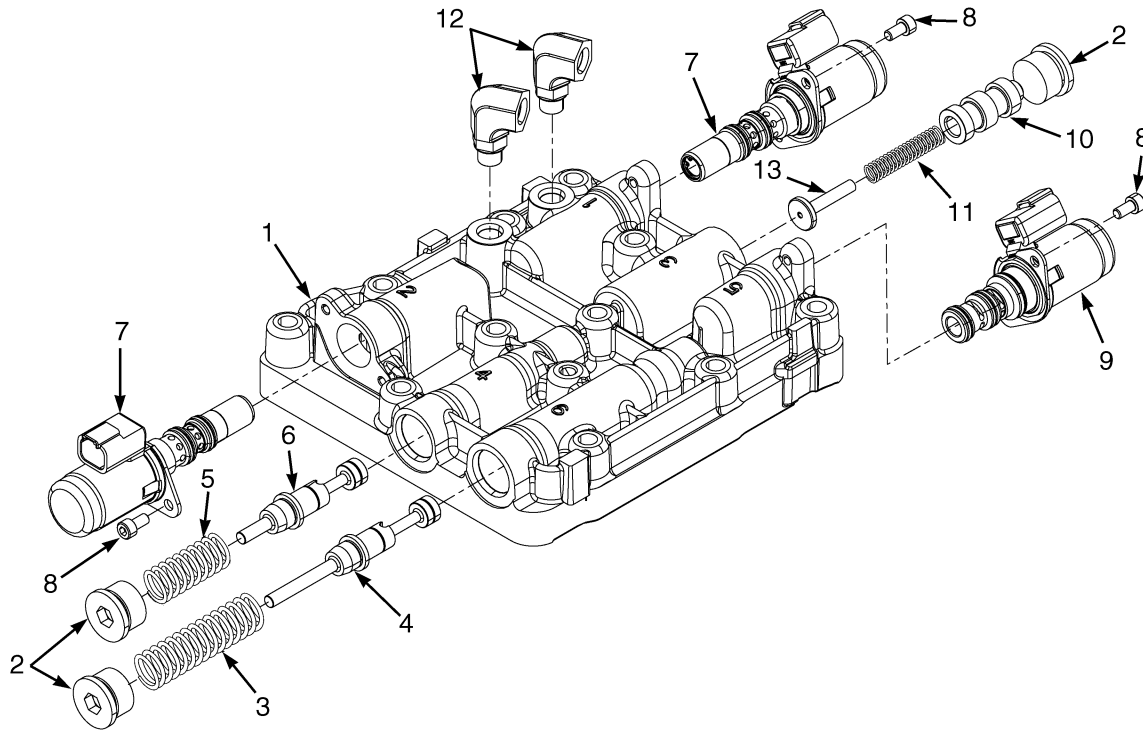
CONTROL VALVE
TRANSMISSION (→ S/N L177B19874E (HIGH PRESSURE IDLE))
(→ S/N L177B19274E (LOW PRESSURE IDLE))

ITEM	PART NO.	DESCRIPTION	QTY
	a 1613695	Hydraulic Control Valve	1
	b 1611835	Hydraulic Control Valve	1
1		Body	1
2	2070263	Pressure Transducer	2
3	1545546	Fitting	2
3	16481	O-Ring	2
4	1530722	Solenoid Valve	2
4	1650819	Kit-Seal	1
5	293742	Screw	6
6	1590866	Return Spring	1
7	1590865	Spool (Cut-Off)	1
8	1590839	Spool (Stop)	1
9	233693	Fitting	3
9	16485	O-Ring	3
10	1520660	Solenoid	1
11	1613470	Spool (Torque Convertor Regulator)	1
12	1550561	Spring (Torque Convertor Regulator)	1
13	1544759	Spool (Torque Convertor Regulator)	1
14	1514138	Spring (Torque Convertor Regulator)	1
15	1562310	Clip	1
16	292681	Lockwasher	1
17	136681	Capscrew	1

FOOTNOTES:**a** (Dry Brake)**b** (Wet brake)

CONTROL VALVE ASSEMBLY (FIGURE 5-21)

(S/N L177B19875E → (HIGH PRESSURE IDLE)) (S/N L177B19275E → (LOW PRESSURE IDLE))



BP240127

ITEM	PART NO.	DESCRIPTION	QTY
	a 1665205	Valve (Low Pressure)	1
	b 1665204	Valve (High Pressure)	1
1		Body	1
2	233693	Fitting	3
2		Plug	1
2	16485	O-Ring	1
3	1550561	Spring	1
4	a 1610746	Spool	1
4	b 1613470	Spool	1
5	1514138	Spring	1
6	1544759	Spool	1
7	1660500	Solenoid Valve	2
7	1650819	Kit-Seal	1
8	293741	Capscrew	6
9	1520660	Solenoid	1
10	1590865	Spool (Cut-Off)	1
11	1590866	Return Spring	1
12	1545546	Fitting	2
13	1590839	Spool (Stop)	1

FOOTNOTES:

a (Dry Brake)

b (Wet brake)

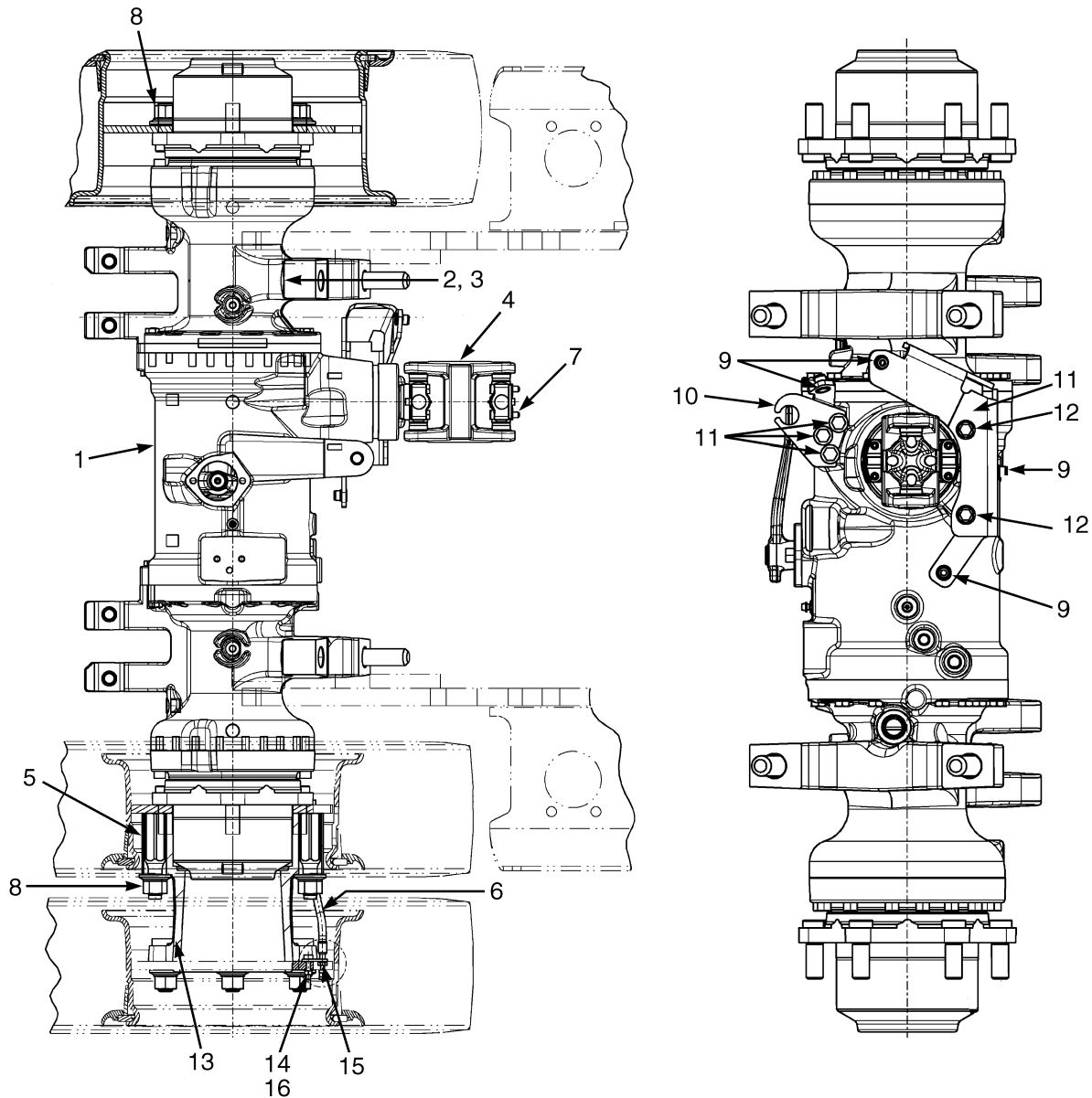
6

DRIVE AXLE

**SECTION 6
DRIVE AXLE**

DESCRIPTION	PAGE
AXLE HOUSING	
WET BRAKE	6-4
BEVEL GEAR	
WET BRAKE	6-6
DIFFERENTIAL	
DRY BRAKE	6-22
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WET BRAKE	6-8
DRIVE AXLE AND ATTACHING PARTS	
WET BRAKE	6-2
DRIVE AXLE ASSEMBLY	
DRY BRAKE	6-16
DRIVE TIRE AND WHEEL	
PNEUMATIC RADIAL	6-26
SINGLE	6-24
WIDE TREAD	6-25
DUAL DRIVE WHEELS AND TIRES	6-28
PARKING BRAKE	
WET BRAKE	6-10
WET BRAKES	6-12
WHEEL HUB	
WET BRAKE	6-14

DRIVE AXLE AND ATTACHING PARTS (FIGURE 6-1) WET BRAKE



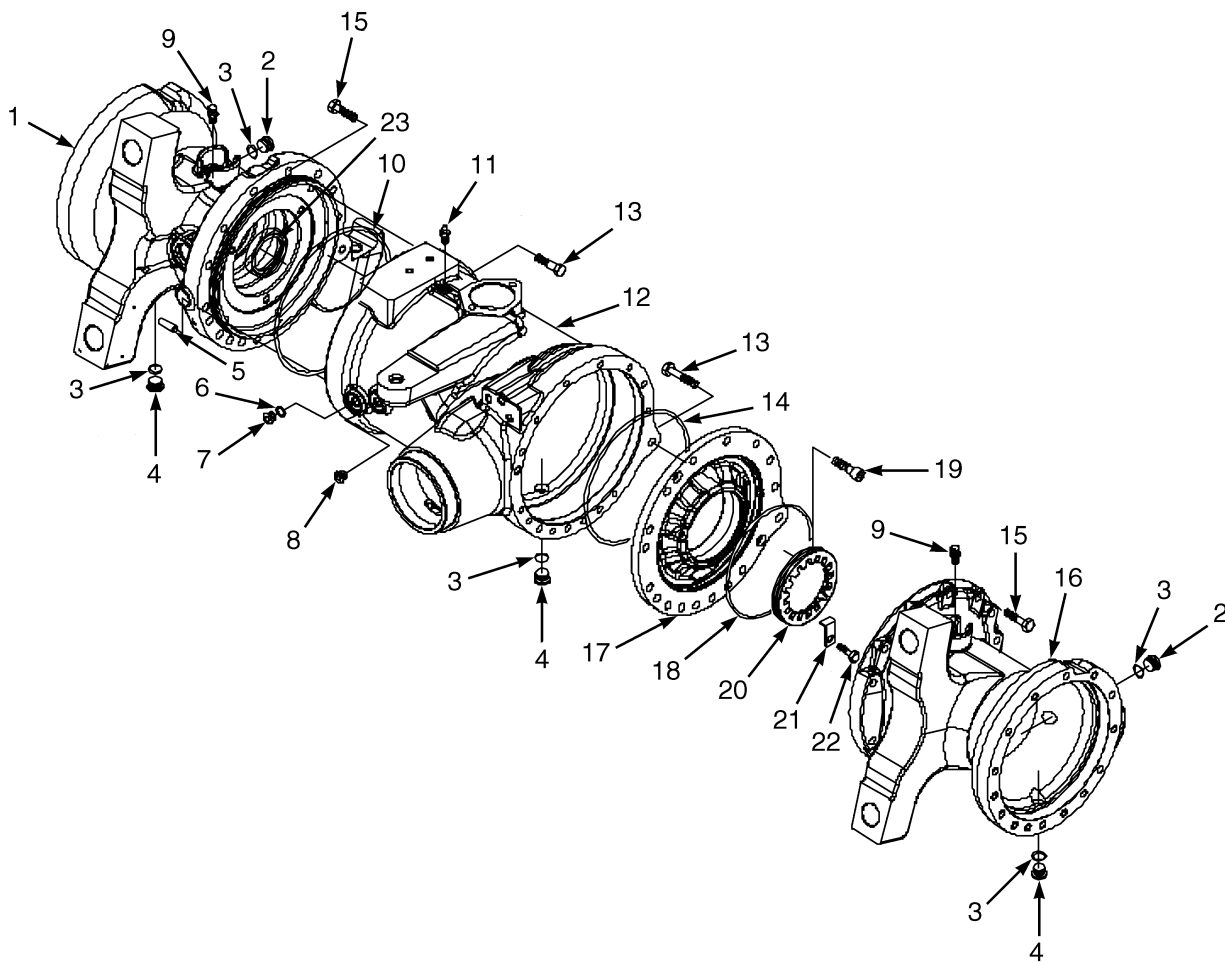
BP070074

**DRIVE AXLE AND ATTACHING PARTS
WET BRAKE****KEY:****A: Single Wheel****B: Dual Wheel**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	b 1539245	Drive Axle (14.52 Overall Ratio)	1	1
1	a 1539246	Drive Axle (17.82 Overall Ratio)	1	1
1	c 2070734	Drive Axle (12.79 Overall Ratio)	1	1
2	296434	Washer	4	4
3	226430	Capscrew	4	4
4	1600539	Drive Shaft	1	1
4	1566462	Universal Joint	2	2
4	1611535	Coupling	1	1
5	1545401	Stud	..	12
6	1583169	Extension	..	2
7	293616	Capscrew	8	8
8	1537133	Wheel Nut	6	12
9	d 1527884	Capscrew	3	3
9	1530243	Insert	4	4
10	d 1580213	Plate	1	1
10	e 1657226	Plate (Cable Mount)	1	1
11	e 1510117	Capscrew	3	3
12	1612234	Bracket	1	1
13	e 1527879	Capscrew	2	2
13	e 1637398	Clip	2	2
14	1613386	Wheel Hub	..	2
14	1613383	Hub	..	1
14	1532337	Wheel Stud	..	6
15	1584690	Bracket	..	2
16	136687	Nut	..	2
17	292680	Washer	..	2

FOOTNOTES:**a** GM 2.4L, Yanmar 3.3L**b** Mazda Engine 2.0/2.2L, GM 2.4L, Yanmar 2.6L**c** Yanmar 3.3L**d** → S/N L177B24983F EXC. 07927**e** S/N L177B24984F → INC. 07927

AXLE HOUSING (FIGURE 6-2) WET BRAKE

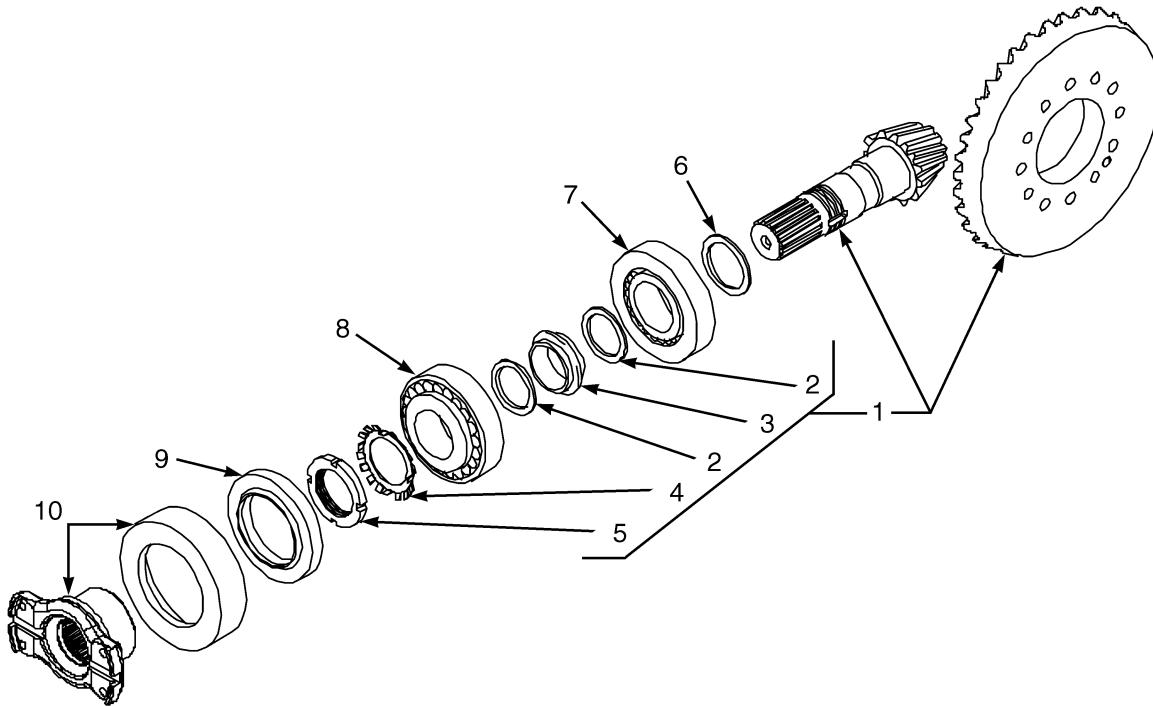


BP070063

**AXLE HOUSING
WET BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
	1539245	Drive Axle (14.52 Overall Ratio)	1
	1539246	Drive Axle (17.82 Overall Ratio)	1
	2070734	Drive Axle (12.79 Overall Ratio)	1
1	1589789	Drive Axle Housing (LH)	1
2	1589792	Plug (Fluid Check And Fill)	2
3	1589791	O-Ring	5
4	1589792	Plug (Fluid Drain)	3
5	1589793	Pin	2
6	1589794	Washer	1
7	1589795	Plug	1
8	1589797	Plug	1
9	1557392	Breather	2
10	1589798	O-Ring	1
11	1557383	Breather	1
12	1589799	Valve Section	1
13	1589807	Bolt	2
14	1589801	O-Ring	1
15	1589806	Bolt	30
16	1589803	Drive Axle Housing (RH)	1
17	1589804	Support Plate	1
18	1589805	O-Ring	1
19	1589808	Capscrew	2
20	1589811	Nut	1
21	1589812	Plate (Locking)	1
22	1589813	Bolt	1
23	1589814	Sealing Ring	1

BEVEL GEAR (FIGURE 6-3) WET BRAKE

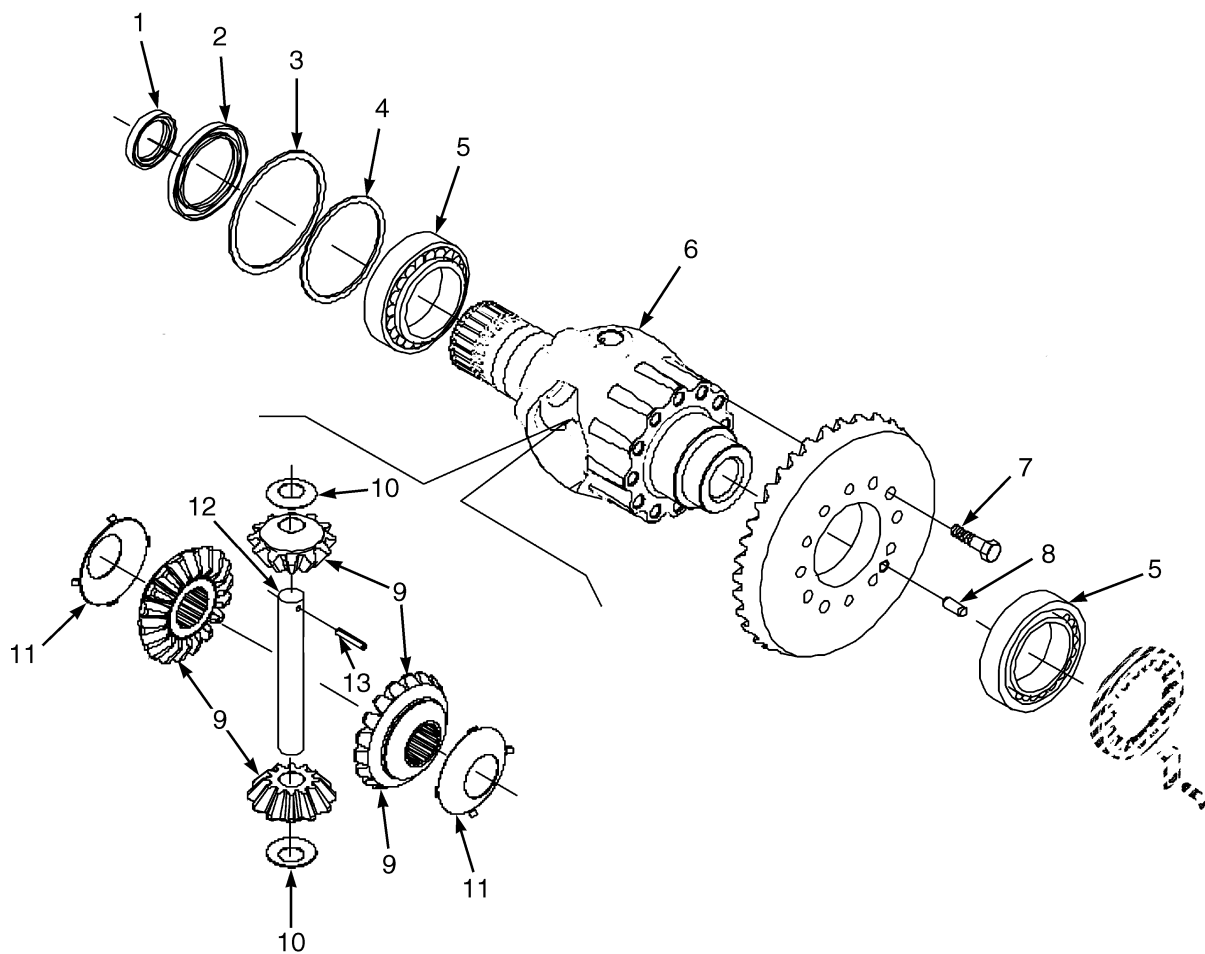


BP070020

**BEVEL GEAR
WET BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
	1539245	Drive Axle (14.52 Overall Ratio)	1
	1539246	Drive Axle (17.82 Overall Ratio)	1
	2070734	Drive Axle (12.79 Overall Ratio)	1
1	1590206	Kit-Gear and Pinion (14.52 Overall Ratio)	1
1	1589815	Kit-Gear and Pinion (17.82 Overall Ratio)	1
1	1590204	Kit-Gear and Pinion (12.79 Overall Ratio)	1
2	1589816	Washer	2
3	1589817	Spacer	1
4	1589818	Washer	1
5	1589819	Nut	1
6	1589820	Shim (2.0 mm)	AR
6	1589821	Shim (2.1 mm)	AR
6	1589822	Shim (2.2 mm)	AR
6	1589823	Shim (2.3 mm)	AR
6	1589824	Shim (2.4 mm)	AR
6	1589825	Shim (2.5 mm)	AR
6	1589826	Shim (2.6 mm)	AR
6	1589827	Shim (2.7 mm)	AR
6	1589828	Shim (2.8 mm)	AR
7	1589829	Bearing	1
8	1589830	Bearing	1
9	1589831	Sealing Ring	1
10	1589832	Flange (Input)	1

DIFFERENTIAL (FIGURE 6-4) WET BRAKE

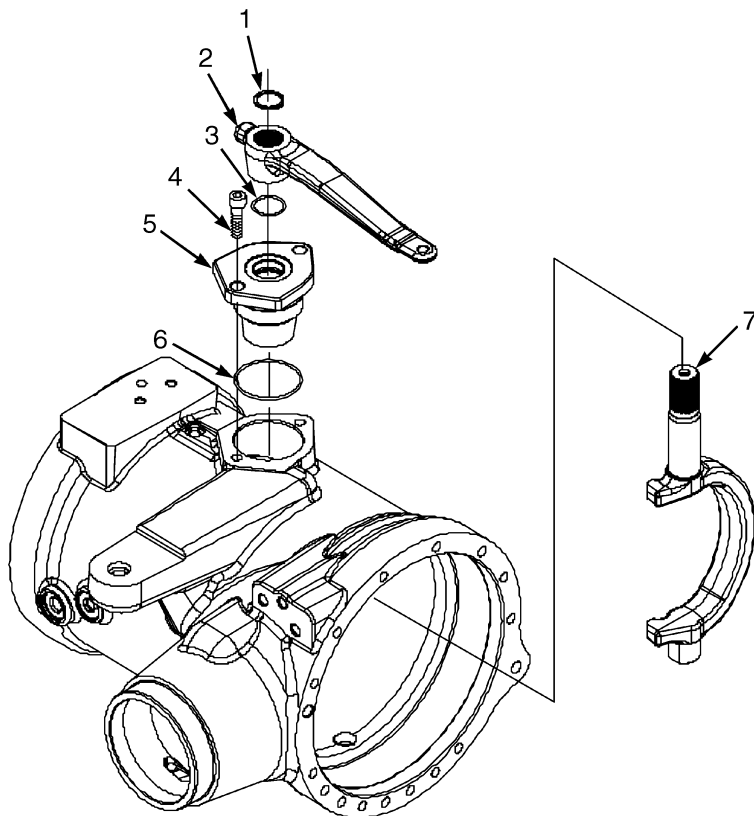


BP070022

**DIFFERENTIAL
WET BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
	1539245	Drive Axle (14.52 Overall Ratio)	1
	1539246	Drive Axle (17.82 Overall Ratio)	1
	2070734	Drive Axle (12.79 Overall Ratio)	1
1	1589833	Sealing Ring	1
2	1589834	Sealing Ring	1
3	1610522	Spacer	1
4	1589835	Shim (0.5 mm)	AR
4	1589836	Shim (0.3 mm)	AR
4	1589837	Shim (0.1 mm)	AR
4	1589838	Shim (0.05 mm)	AR
5	1557445	Bearing	2
6	1589839	Differential Housing	1
7	1589840	Bolt	12
8	1589841	Pin	1
9	1589842	Gear Set	1
10	1589843	Thrust Washer	2
11	1589844	Thrust Washer	2
12	1589845	Drive Shaft	1
13	1589846	Dowel	1

PARKING BRAKE (FIGURE 6-5) WET BRAKE

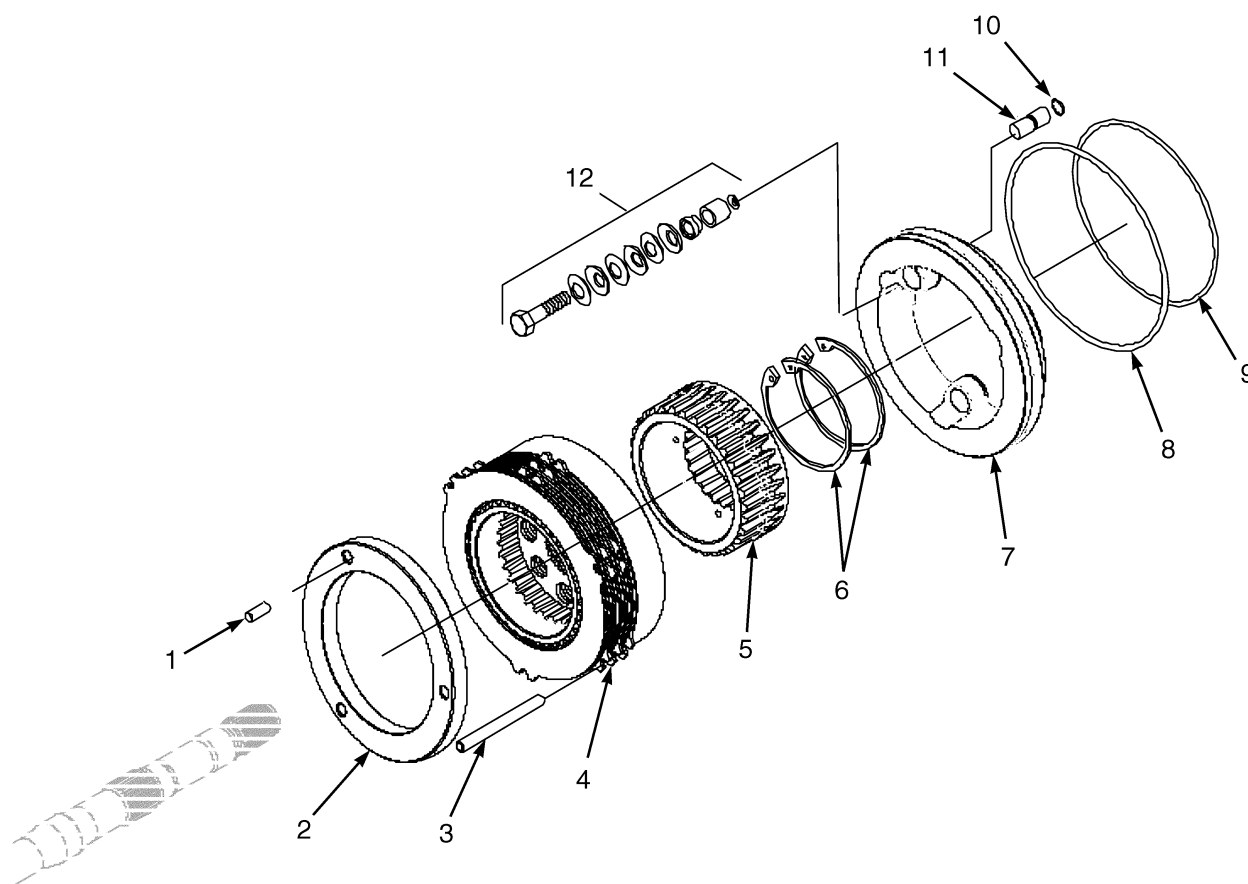


BP070023

ITEM	PART NO.	DESCRIPTION	QTY
	1539245	Drive Axle (14.52 Overall Ratio)	1
	1539246	Drive Axle (17.82 Overall Ratio)	1
	2070734	Drive Axle (12.79 Overall Ratio)	1
1	1589847	Snap Ring	1
2	1589848	Parking Brake Lever	1
3	1589849	O-Ring	1
4	1589850	Bolt	2
5	1589851	Flange	1

ITEM	PART NO.	DESCRIPTION	QTY
6	1589852	O-Ring	1
7	1589853	Shaft	1

WET BRAKES (FIGURE 6-6)

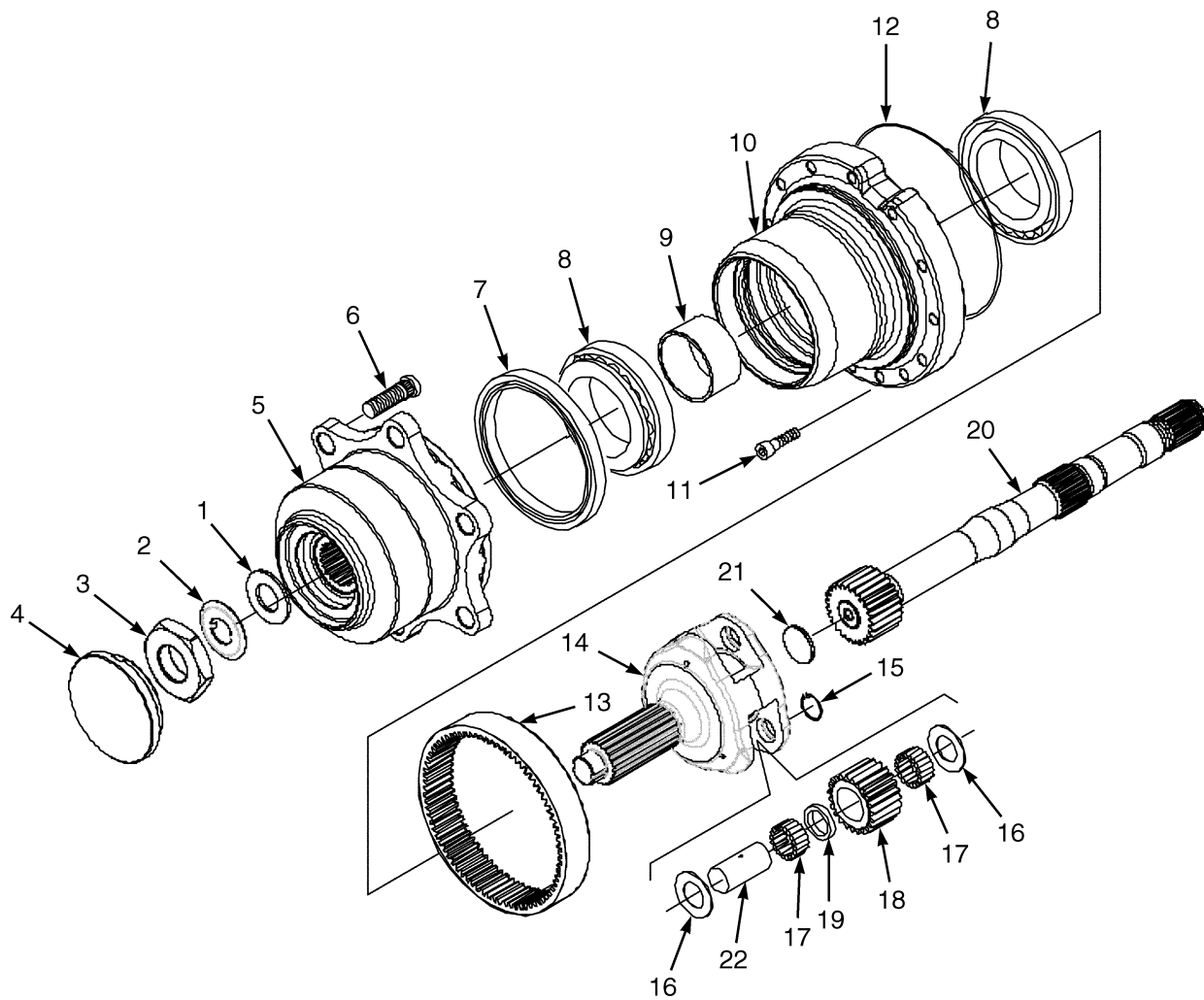


BP070024

WET BRAKES

ITEM	PART NO.	DESCRIPTION	QTY
	1539245	Drive Axle (14.52 Overall Ratio)	1
	1539246	Drive Axle (17.82 Overall Ratio)	1
	2070734	Drive Axle (12.79 Overall Ratio)	1
1	1610516	Pin	3
2	1610521	Drive Plate	1
3	1589854	Pin	3
4	1610506	Brake Assembly	1
5	1610512	Hub (Spline)	1
6	1610514	Snap Ring	2
7	1589856	Piston	1
8	1589857	O-Ring	1
9	1610508	O-Ring	1
10	1589860	O-Ring	2
11	1589861	Pin	2
12	1610510	Kit-Self Adjusting	1

WHEEL HUB (FIGURE 6-7) WET BRAKE

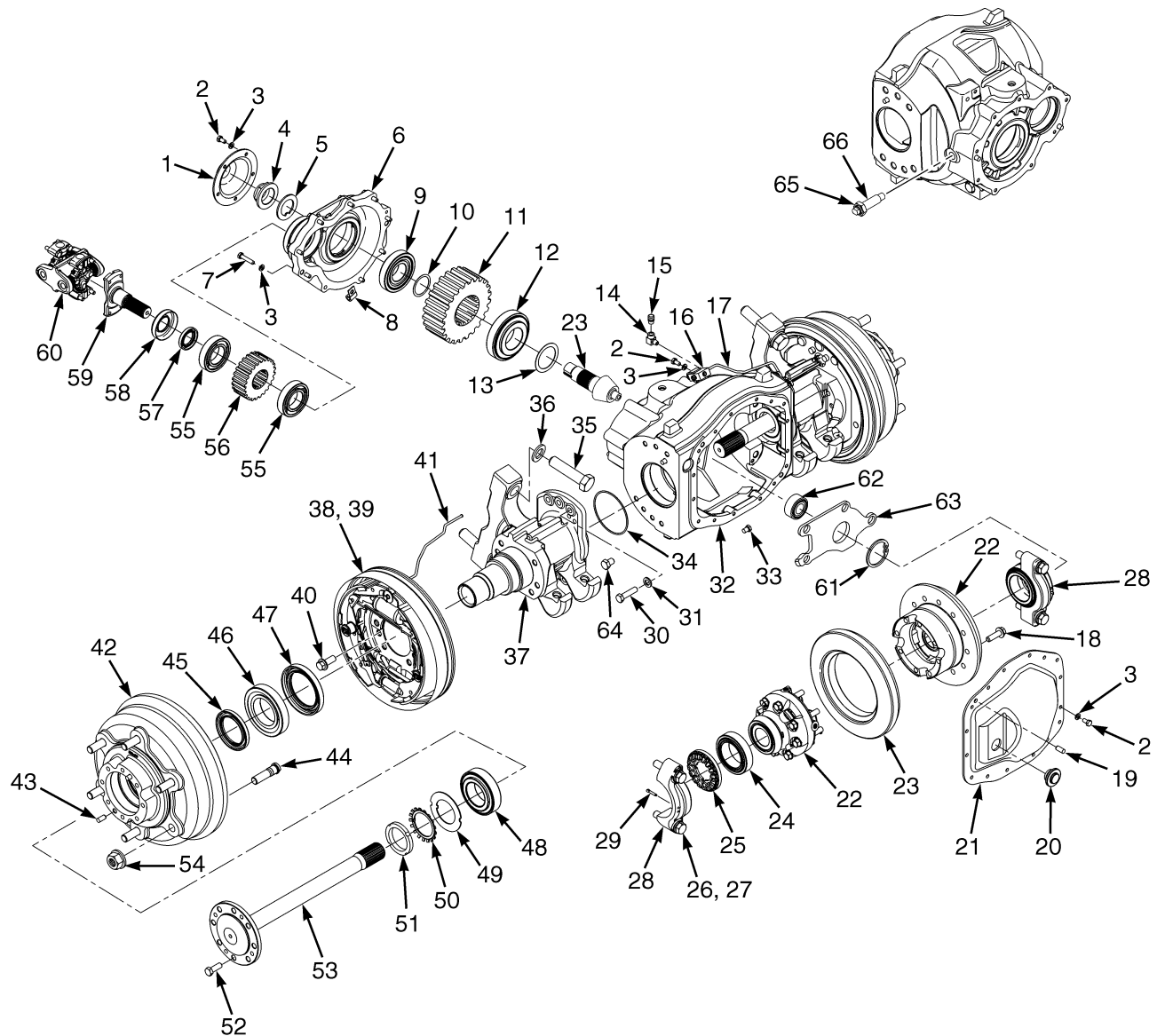


BP0700025

**WHEEL HUB
WET BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
	1539245	Drive Axle (14.52 Overall Ratio)	1
	1539246	Drive Axle (17.82 Overall Ratio)	1
	2070734	Drive Axle (12.79 Overall Ratio)	1
1	1613375	Washer	2
2	1613376	Thrust Washer	2
3	1613377	Nut	2
4	1613378	Plug	2
5	1589867	Wheel Hub	2
6	1589868	Stud	6
7	1613379	Sealing Ring	2
8	1589870	Bearing	4
9	1613380	Spacer	2
10	1589872	Support	2
11	1589873	Bolt	30
12	1589874	O-Ring	2
13	1589875	Ring Gear	2
14	1589876	Carrier	2
15	1613381	Snap Ring	6
16	1589878	Thrust Washer	12
17	1589879	Needle Bearing	28
18	1589880	Gear	6
19	1589881	Spacer	6
20	1589886	Axle Shaft (RH)	1
20	1589887	Axle Shaft (LH)	1
21	1613382	Washer	2
22	1589924	Shaft	6

DRIVE AXLE ASSEMBLY (FIGURE 6-8) DRY BRAKE



BP070082

**DRIVE AXLE ASSEMBLY
DRY BRAKE**

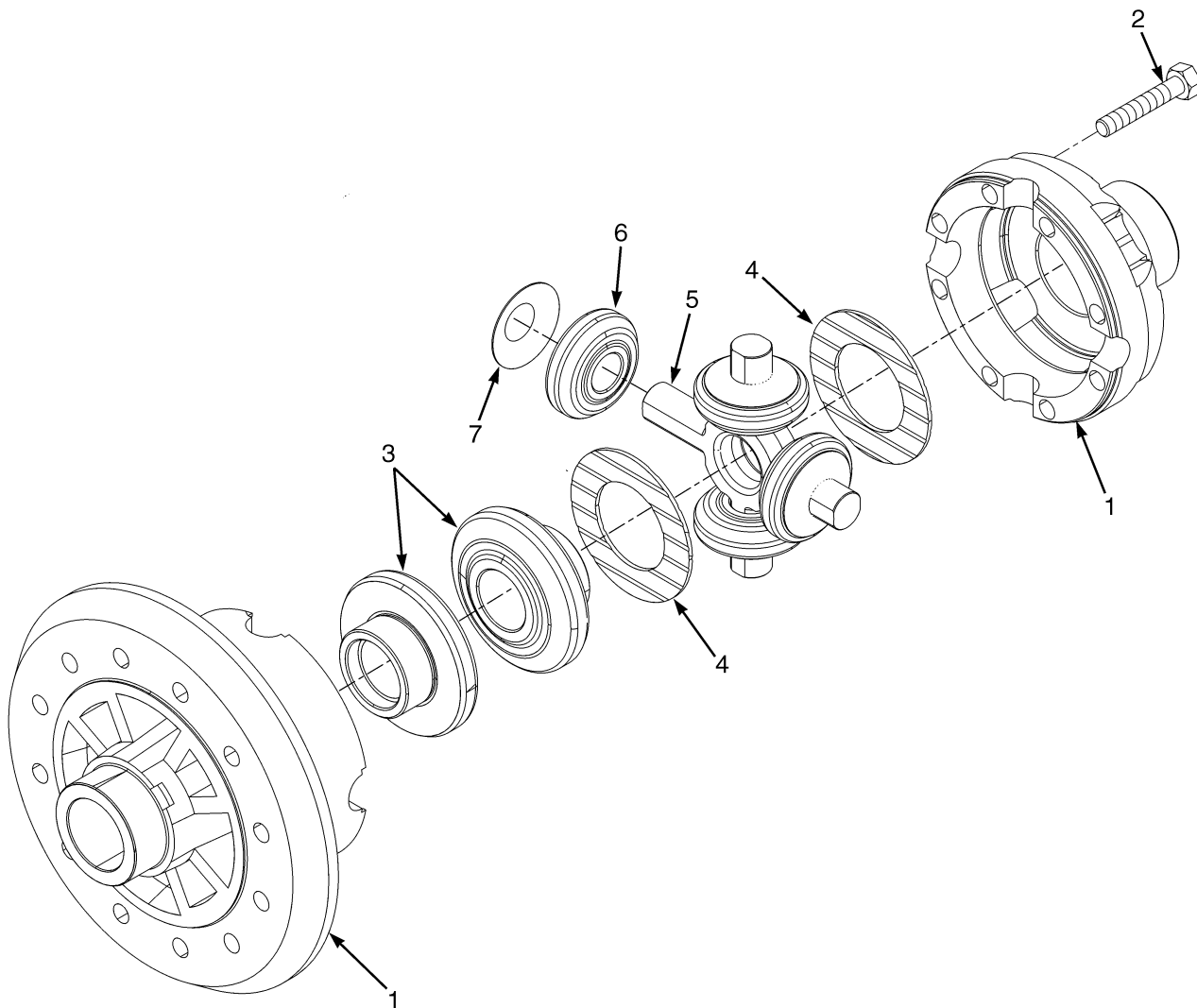
ITEM	PART NO.	DESCRIPTION	QTY
	c 1532729	Drive Axle (2.17 Gear Ratio)	1
	c 2105822	Drive Axle (2.17 Gear Ratio) (Alternate Part)	1
	b 1532730	Drive Axle (2.48 Gear Ratio)	1
	b 2105823	Drive Axle (2.48 Gear Ratio) (Alternate Part)	1
1	1516536	Cover (Pinion)	1
2	287851	Capscrew	20
3	292681	Lockwasher	29
4	2026861	Nut	1
5	1530588	Washer	1
6	1516535	Housing (Drop Box)	1
7	292508	Capscrew	9
8	2075120	Clamp	1
9	2022352	Bearing Set	1
10	1516335	Shim (0.19 in.)	AR
10	1516331	Shim (0.004 in.)	AR
10	1516332	Shim (0.005 in.)	AR
10	1516333	Shim (0.007 in.)	AR
10	1516334	Shim (0.009 in.)	AR
11	1517576	Gear (2.17 Gear Ratio)	1
11	1516526	Gear (2.49 Gear Ratio)	1
12	2028862	Bearing Set	1
13	1520755	Shim (1.00 mm) (0.01 in.)	AR
13	1569912	Shim (0.20 mm) (0.002 in.)	AR
13	1569913	Shim (0.25 mm) (0.0025 in.)	AR
13	1520752	Shim (0.30 mm) (0.003 in.)	AR
13	1569914	Shim (0.35 mm) (0.0035 in.)	AR
13	1520753	Shim (0.40 mm) (0.004 in.)	AR
13	1569915	Shim (0.45 mm) (0.0045 in.)	AR
13	1520754	Shim (0.50 mm) (0.005 in.)	AR
14	16151	Fitting	1
15	21420	Breather	1
16	1641351	Fitting	1
16	1618311	Bracket	1
17	2063265	Tube Assy (LH)	1
18	2029436	Bolt	14
19	302385	Dowel	5
20	1516075	Plug	1
21	1532735	Cover (Center)	1
22	2067962	Differential (☞ Figure 6-9).....	1
23	2067965	Gear and Pinion (Hypoid)	1
23		Pinion	1
23		Hypoid Gear	1
24	1375488	Bearing Set	2
25	1652926	Retainer	2
26	a 293692	Capscrew	4
27	a 296426	Washer	4
28	a	Bearing Cap	2
29	234038	Dowel	4
30	293686	Capscrew	14
31	296426	Washer	14

DRIVE AXLE ASSEMBLY DRY BRAKE

ITEM	PART NO.	DESCRIPTION	QTY
32	1532732	Housing (Center)	1
32	1656333	Drive Axle Housing (Center) (Alternate Part)	1
33	234038	Dowel	4
34	2027828	O-Ring	2
35	226430	Capscrew	4
36	296422	Washer	4
37	ef 1503681	Hanger (RH)	1
37	hi 1641525	Hanger (RH)	1
37	ef 1503680	Hanger (LH)	1
37	hi 1644700	Hanger (LH)	1
38	1579454	Brake Assembly (LH) (☞ Figure 8-5).....	1
39	1579455	Brake Assembly (RH) (☞ Figure 8-5).....	1
40	1327246	Bolt	16
41	2063264	Tube Assy (RH)	1
42	d 1532335	Hub	2
42	g 1634451	Hub	2
42	d 1532339	Hub	1
42	g 1614672	Hub	1
43	302385	Dowel	2
44	1532337	Wheel Stud	6
45	2028621	Oil Seal	1
46	1375492	Bearing (Tapered)	1
46	2027662	Bearing Set (Tapered) (Optional)	1
47	2027817	Oil Seal	1
48	1375486	Bearing (Tapered)	1
48	2027663	Bearing Set (Tapered) (Optional)	1
49	1515219	Washer (Wheel Bearing)	2
50	2027756	Lockwasher	2
51	2028145	Nut	2
52	293646	Capscrew	20
53	1532708	Axle Shaft	2
54	1537133	Wheel Nut	12
55	1523479	Ball Bearing	2
56	1517578	Gear (2.17 Gear Ratio)	1
56	1516530	Gear (2.48 Gear Ratio)	1
57	1522377	Oil Seal	1
58	1516534	Dust Cover	1
59	1517673	Shaft	1
60	1547757	Drive Shaft	1
60	1566461	Coupling	1
60	1566462	Universal Joint	2
60	293616	Capscrew	8
61	320264	Snap Ring	1
62	135158	Bearing	1
63	1512561	Support	1
64	1521809	Drain Plug	1
65	296137	Nut	1
66	1583732	Thrust Screw	1

FOOTNOTES:

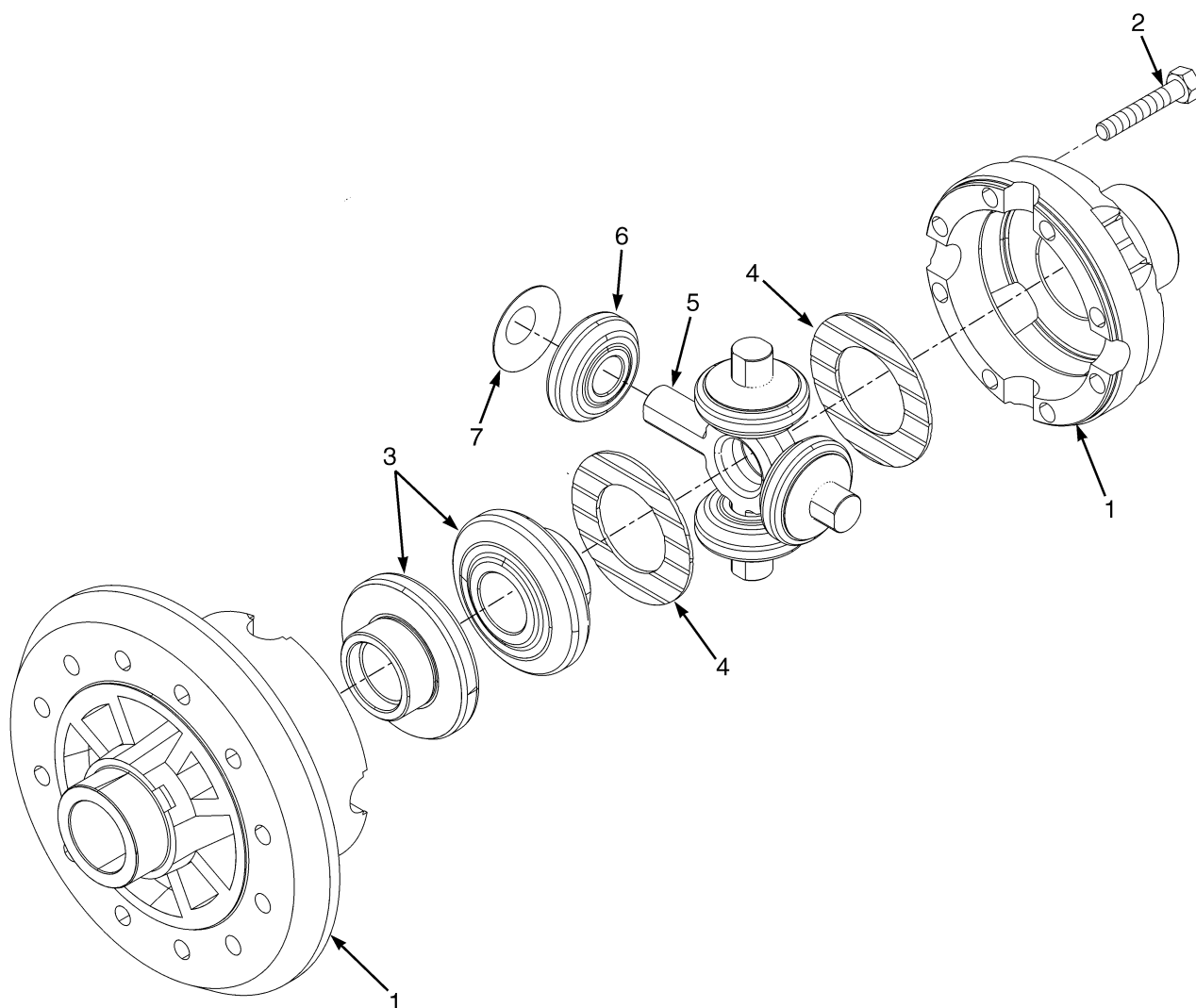
- | | | | |
|----------|--|----------|--|
| a | Included With Center Housing | f | → S/N L177B14792E INC. 15715-15753 (2.17 Axle) |
| b | Mazda 2.0/2.2L, GM 2.4L, Yanmar 2.6L | g | S/N L177B09550D → |
| c | Yanmar 3.3L | h | S/N L177B14790E → EXC. 15704-15753 (2.48 Axle) |
| d | → S/N L177B09549D | i | S/N L177B14793E → EXC. 15715-15753 (2.17 Axle) |
| e | → S/N L177B14789E INC. 15704-15753 (2.48 Axle) | | |

**DIFFERENTIAL (FIGURE 6-9)
DRY BRAKES**

BP070055

**DIFFERENTIAL
DRY BRAKES**

ITEM	PART NO.	DESCRIPTION	QTY
	2067962	Differential	1
1		Case Set	1
2	1565327	Bolt	8
3		Gear (Side)	2
4		Washer (Side)	2
5	2029383	Spider	1
6		Gear (Pinion)	4
7		Washer (Pinion)	4
	1606532	Kit-Gear	1
	1565324	Kit-Washer	1

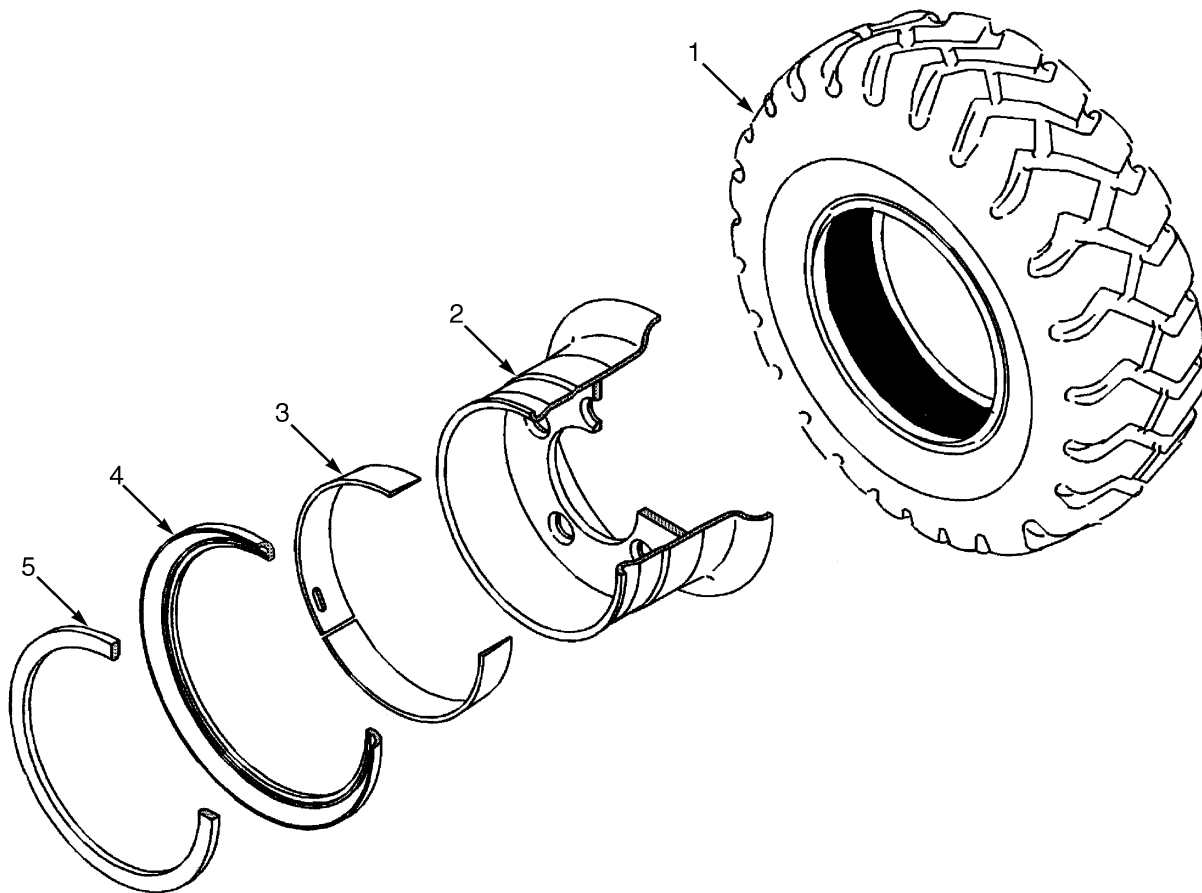
DIFFERENTIAL (FIGURE 6-10)
DRY BRAKE

BP070055

**DIFFERENTIAL
DRY BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
	2067962	Differential	1
1		Case Set	1
2	1565327	Bolt	8
3		Gear (Side)	2
4		Washer (Side)	2
5	2029383	Spider	1
6		Gear (Pinion)	4
7		Washer (Pinion)	4
	1606532	Kit-Gear	1
	1565324	Kit-Washer	1

DRIVE TIRE AND WHEEL (FIGURE 6-11) SINGLE



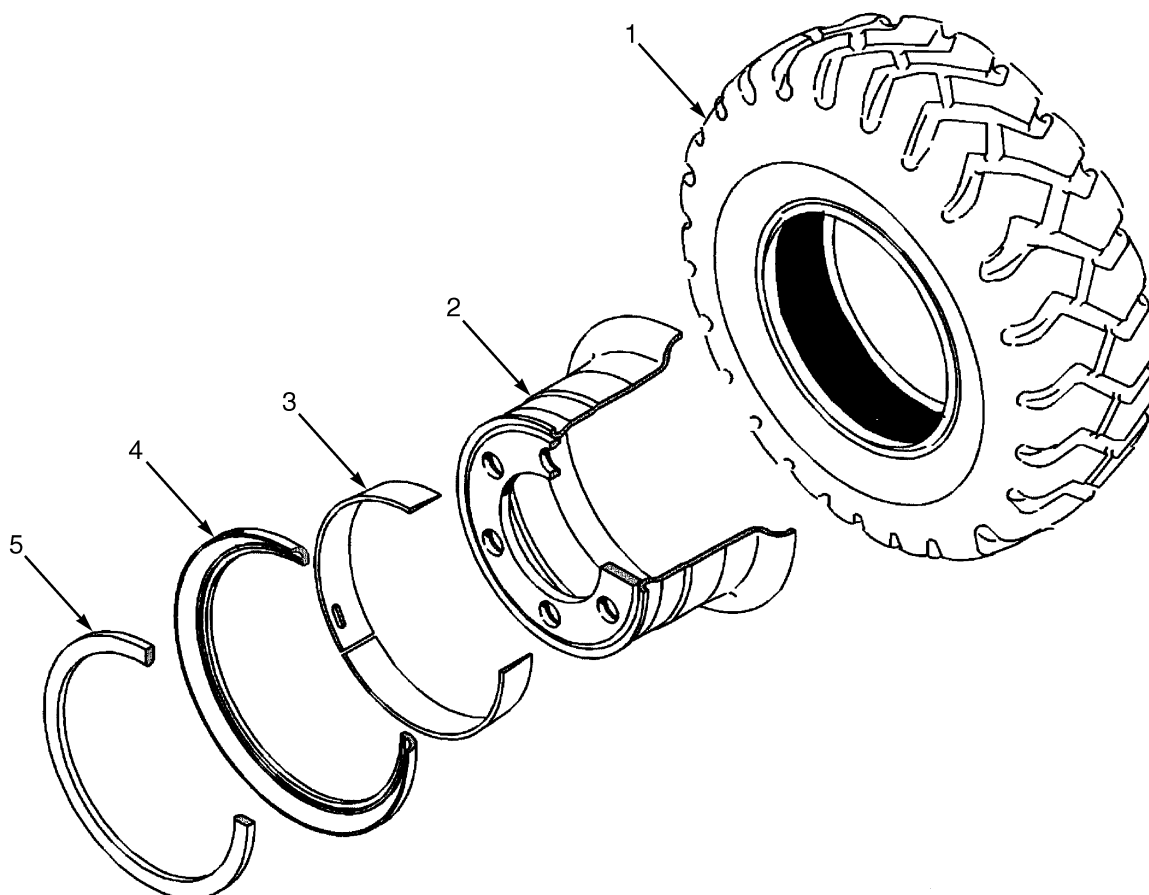
BP070012

KEY:

A: 7.00 X 12 14 Pneumatic (H40-50)

B: 28 X 9 15 Pneumatic (H40-70)

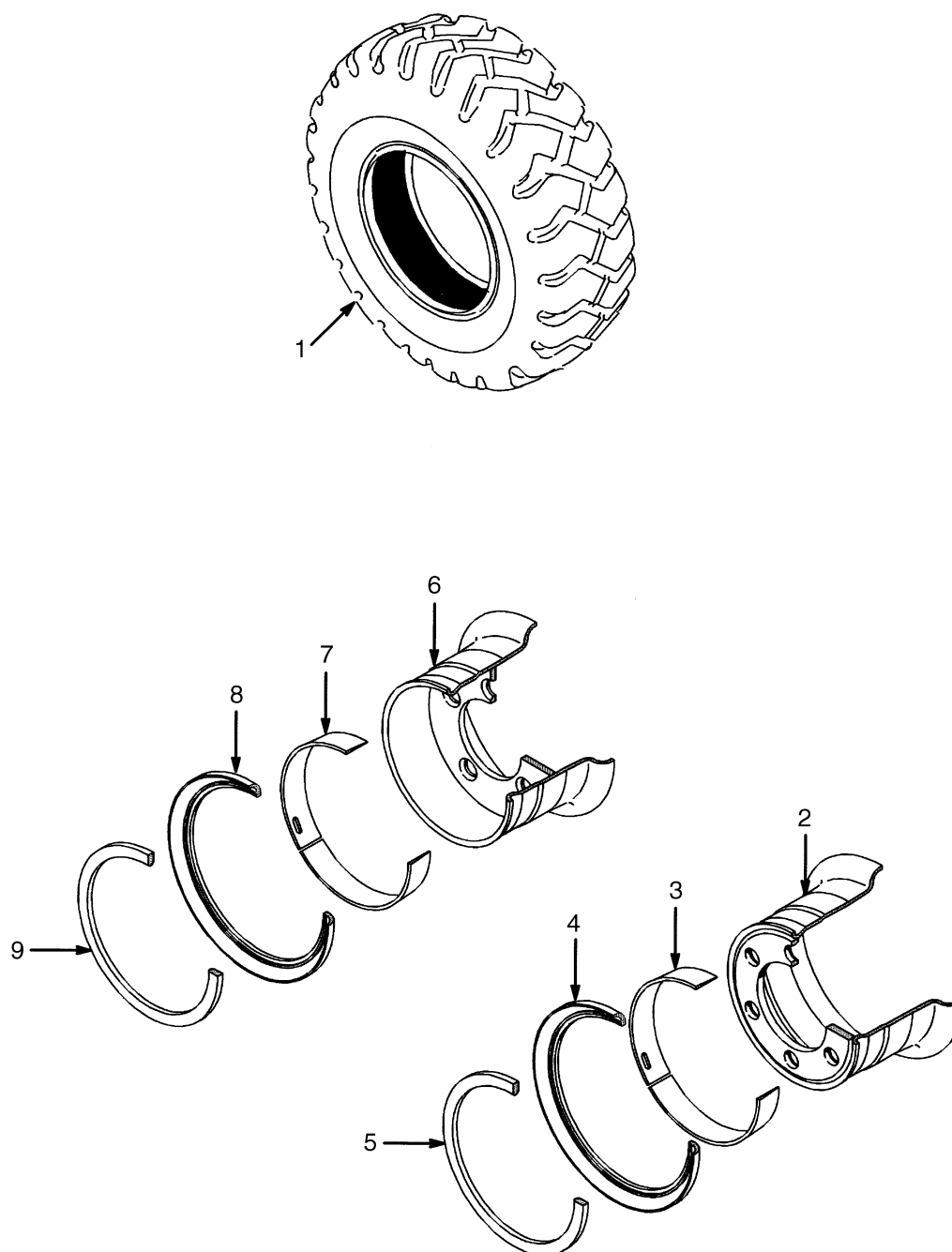
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1543060	Tire (Trell)	2	..
1	1543070	Tire (Monarch) (Solid)	2	..
1	1654009	Tire (Monarch) (Solid) (Alternate Part)	2	..
1	1543061	Tire (Trell)	..	2
1	1543071	Tire (Monarch) (Solid)	..	2
1	1603485	Tire (Non-Marking)	2	..
1	1603486	Tire (Non-Marking)	..	2
2	2070073	Rim	2	..
2	2070074	Wheel Assy	..	2
3	1584694	Wedge Band	1	..
3	1584695	Wedge Band	..	1
4	161890	Wheel Side Ring	1	..
4	160653	Wheel Side Ring	..	1
5	161889	Wheel Lock Ring	1	..
5	980542	Wheel Lock Ring	..	1

DRIVE TIRE AND WHEEL (FIGURE 6-12)
WIDE TREAD

BP070013

KEY:**A: 7.00 x 12 14 (H40-50)****B: 28 x 9-15 14 (H40-70)**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1543060	Tire (Trell) (Pneumatic)	2	..
1	1543070	Tire (Monarch) (Solid Pneumatic)	2	..
1	1654009	Tire (Monarch) (Solid Pneumatic) (Alternate Part)	2	..
1	1543061	Tire (Trell) (Pneumatic)	..	2
1	1543071	Tire (Monarch) (Solid Pneumatic)	..	2
1	1603485	Tire (Non-Marking)	2	..
1	1603486	Tire (Non-Marking)	..	2
2	2070075	Rim	2	..
2	2070076	Wheel Assy	..	2
3	1584694	Wedge Band	1	..
3	1584695	Wedge Band	..	1
4	161890	Wheel Side Ring	1	..
4	160653	Wheel Side Ring	..	1
5	161889	Wheel Lock Ring	1	..
5	980542	Wheel Lock Ring	..	1

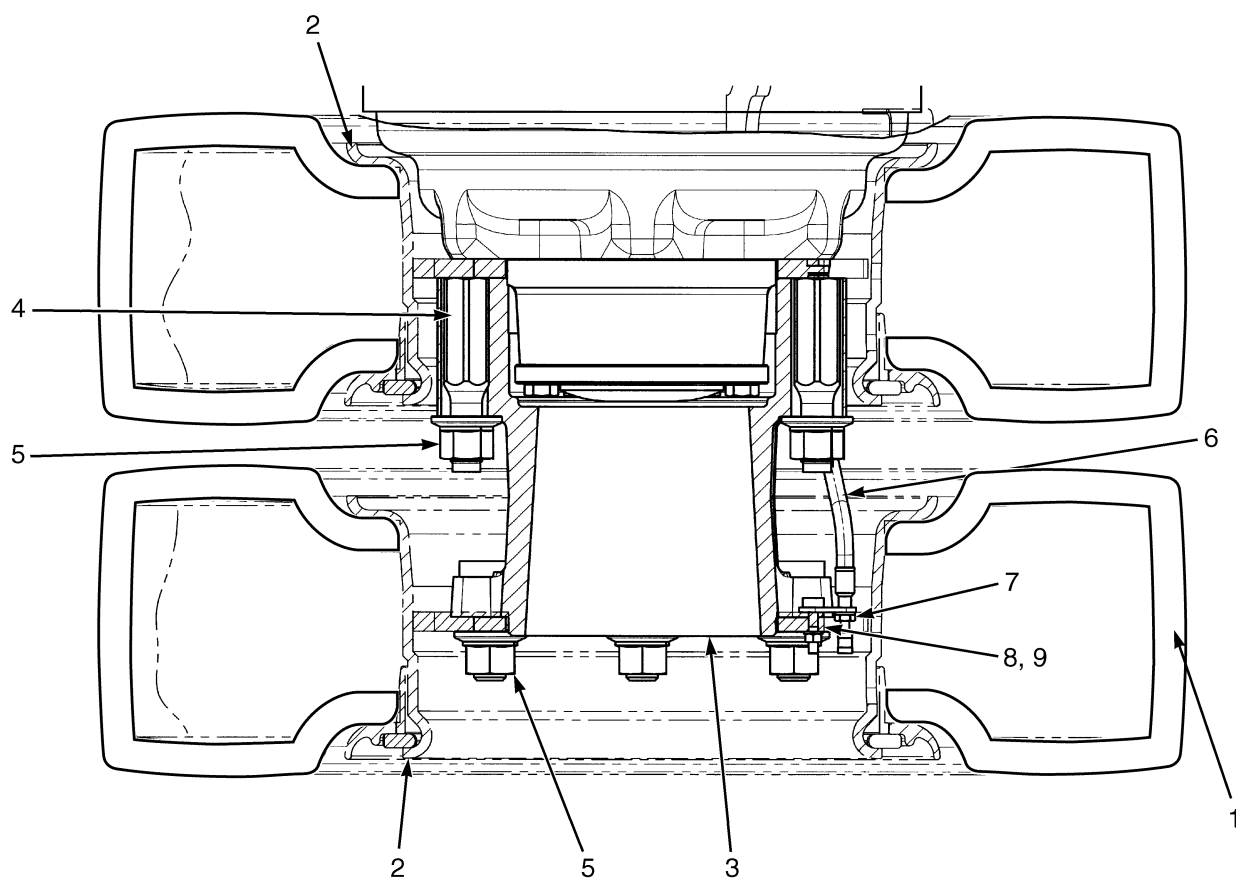
DRIVE TIRE AND WHEEL (FIGURE 6-13)
PNEUMATIC RADIAL

BP070014

**DRIVE TIRE AND WHEEL
PNEUMATIC RADIAL****KEY:****A: 7.00 R12 Pneumatic Radial (H40-50)****B: 225/75 R15 Pneumatic Radial (H40-70)**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1471829	Pneumatic Tire (Michelin XZM)	2	..
1	1471591	Tubeless Bead Seal	1	..
1	1358179	Pneumatic Tire	1	..
1	1471922	Tubeless Bead Seal Valve	1	..
1	1471835	Pneumatic Tire	..	2
1	1462617	Tire Flap	..	1
1	1358183	Pneumatic Tire (Michelin XZM)	..	1
1	1471922	Tubeless Bead Seal Valve	..	1
2	2070073	Rim	2	..
2	2070075	Rim (Wide Tread)	2	..
3	1584694	Wedge Band	1	..
4	161890	Wheel Side Ring	1	..
5	161889	Wheel Lock Ring	1	..
6	2070074	Wheel Assy	..	2
6	2070076	Wheel Assy (Wide Tread)	..	2
7	1584695	Wedge Band	..	1
8	160653	Wheel Side Ring	..	1
9	980542	Wheel Lock Ring	..	1

DUAL DRIVE WHEELS AND TIRES (FIGURE 6-14)



HP070054

DUAL DRIVE WHEELS AND TIRES

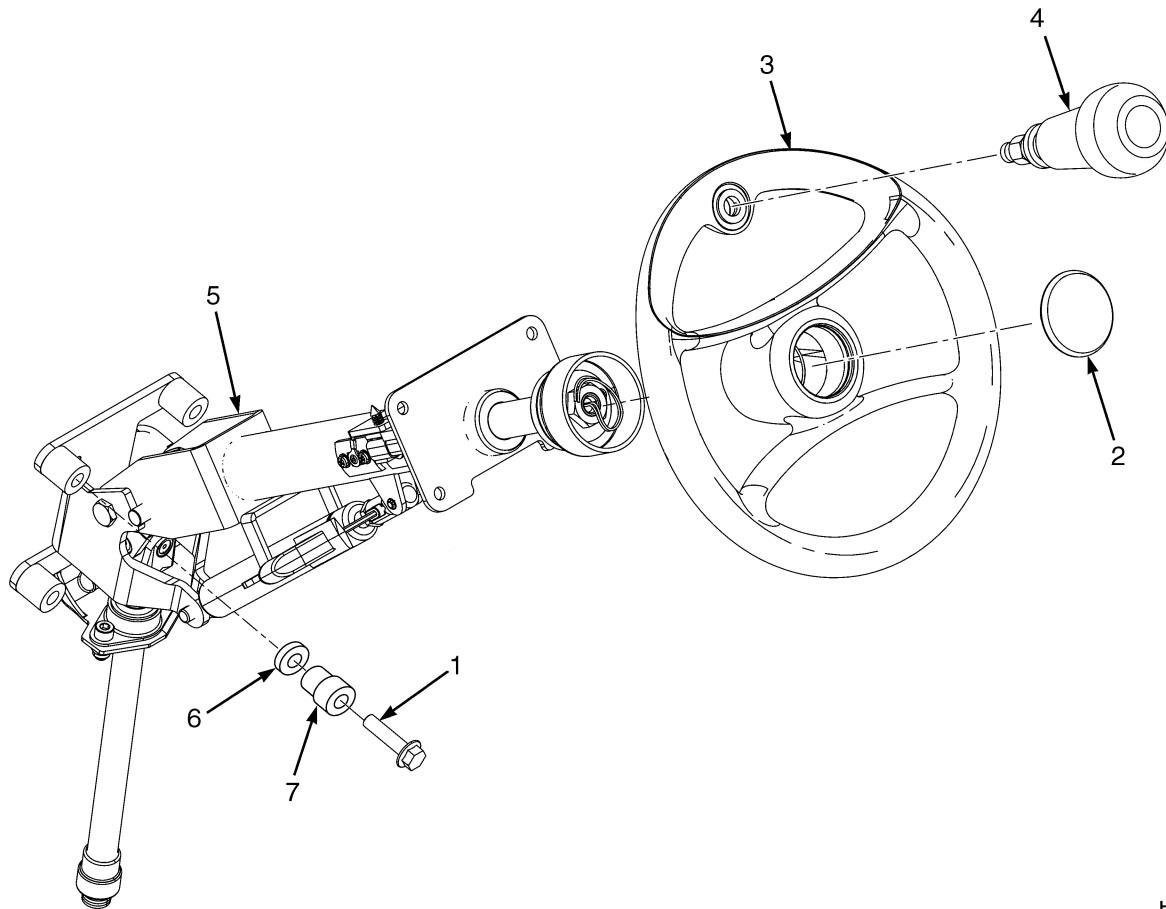
ITEM	PART NO.	DESCRIPTION	QTY
1	1543070	Tire (Monarch) (Solid Pneumatic)	4
1	1654009	Tire (Monarch) (Solid Pneumatic) (Alternate Part)	4
1	1543060	Tire (Trell) (Pneumatic)	4
1	1603485	Tire (Non-Marking)	4
2	2075454	Rim (Lemerz)	4
2	161889	Wheel Lock Ring	1
2	1584694	Wedge Band	1
2	161890	Wheel Side Ring	1
3	1613386	Wheel Hub	2
3	1532337	Wheel Stud	6
3	1613383	Hub	1
4	1545401	Stud	12
5	1537133	Wheel Nut	12
6	1583169	Extension	2
7	1584690	Bracket	2
8	136687	Nut	2
9	292680	Washer	2

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SECTION 7
STEERING SYSTEM

DESCRIPTION	PAGE
STEER AXLE	7-10
STEER CYLINDER	7-12
STEER TIRES AND WHEELS	
H40-50FT	7-14
H40-70FT	7-16
STEERING COLUMN AND ATTACHING PARTS	7-2
STEERING COLUMN ASSEMBLY	7-4
STEERING CONTROL UNIT	7-6
STEERING LINES	7-8

STEERING COLUMN AND ATTACHING PARTS (FIGURE 7-1)



HP220446

ITEM	PART NO.	DESCRIPTION	QTY
1	1512403	Capscrew	4
2	b 1450503	Horn Button	1
3	1551839	Steering Wheel (Without Spinner Knob)	1
3	1531563	Steering Wheel (With Spinner Knob)	1
4	1586109	Knob	1
5	c 1544566	Steering Column (Gasoline and LPG) (☞ Figure 7-2).....	1
5	d 1657962	Steering Column (Gasoline and LPG) (☞ Figure 7-2).....	1
5	c 1606891	Steering Column (Diesel) (☞ Figure 7-2).....	1
5	d 1657959	Steering Column (Diesel) (☞ Figure 7-2).....	1
6	a 2079369	Isolator	8
7	a 1606750	Spacer	4

FOOTNOTES:

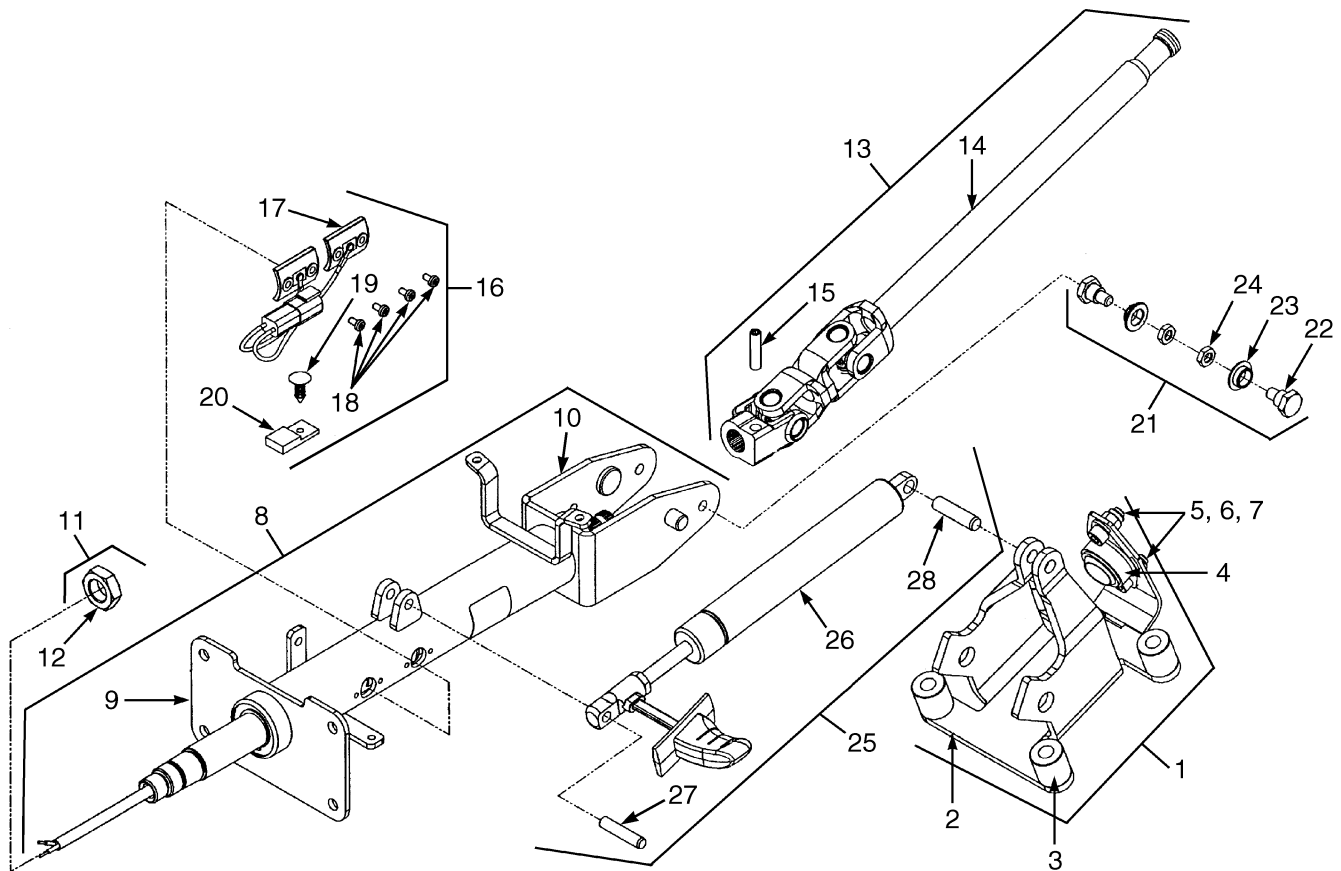
- a** For Vehicles With Diesel Engines Only
b Service with Horn Replacement Kit 1642089

- c** → 2/2007
d 2/2007 →

NOTES

[illegible]

STEERING COLUMN ASSEMBLY (FIGURE 7-2)



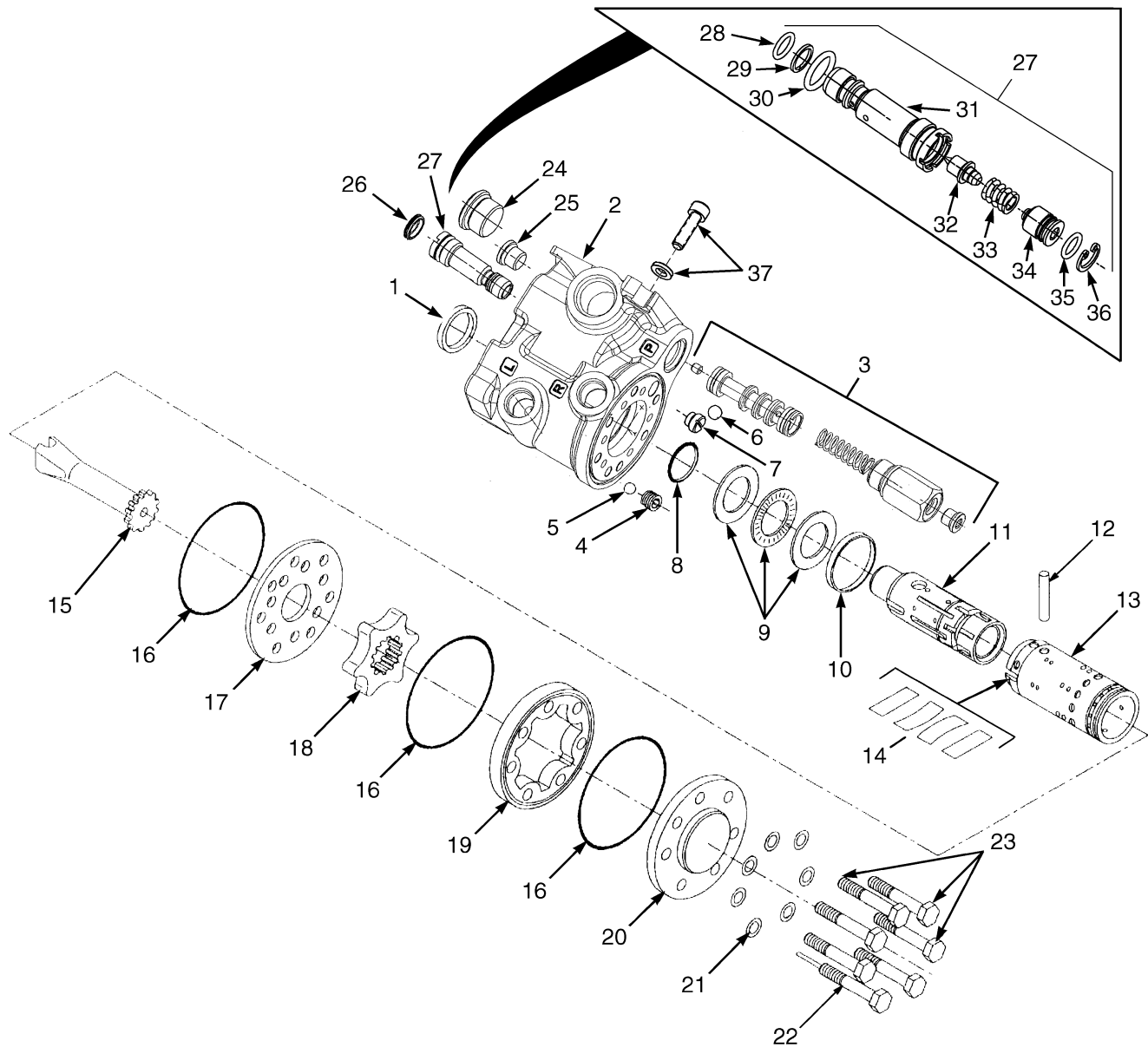
HP220445

STEERING COLUMN ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	a 1544566	Steering Column (Gasoline and LPG)	1
	b 1657962	Steering Column (Gasoline and LPG)	1
	a 1606891	Steering Column (Diesel)	1
	b 1657959	Steering Column (Diesel)	1
1	1562509	Kit-Support	1
1	b 1647530	Kit-Support	1
2		Support	1
3		Spacer	4
4		Joint	1
5		Nut	2
6		Washer	2
7		Screw	2
8	a 1562489	Kit-Shaft (Upper)	1
8	b 1647528	Kit-Shaft (Upper)	1
9		Shaft Assembly (Upper)	1
10		Housing Assembly	1
11	1562492	Kit-Nut	1
12		Nut	2
13	1562493	Kit-Shaft (Lower)	1
14		Shaft Assembly (Lower)	1
15		Pin	1
16	1562496	Kit-Contact	1
17		Contact Assembly (Horn)	1
18		Screw	4
19		Fastener	1
20		Connector	1
21	1562501	Kit-Pivot (Lower)	1
22		Bolt (Pivot)	2
23		Bushing	2
24		Nut	2
25	1562505	Kit-Gas Spring	1
26		Gas Spring	1
27		Pin	1
28		Pin	1

FOOTNOTES:**a** → 2/2007**b** 2/2007 →

STEERING CONTROL UNIT (FIGURE 7-3)

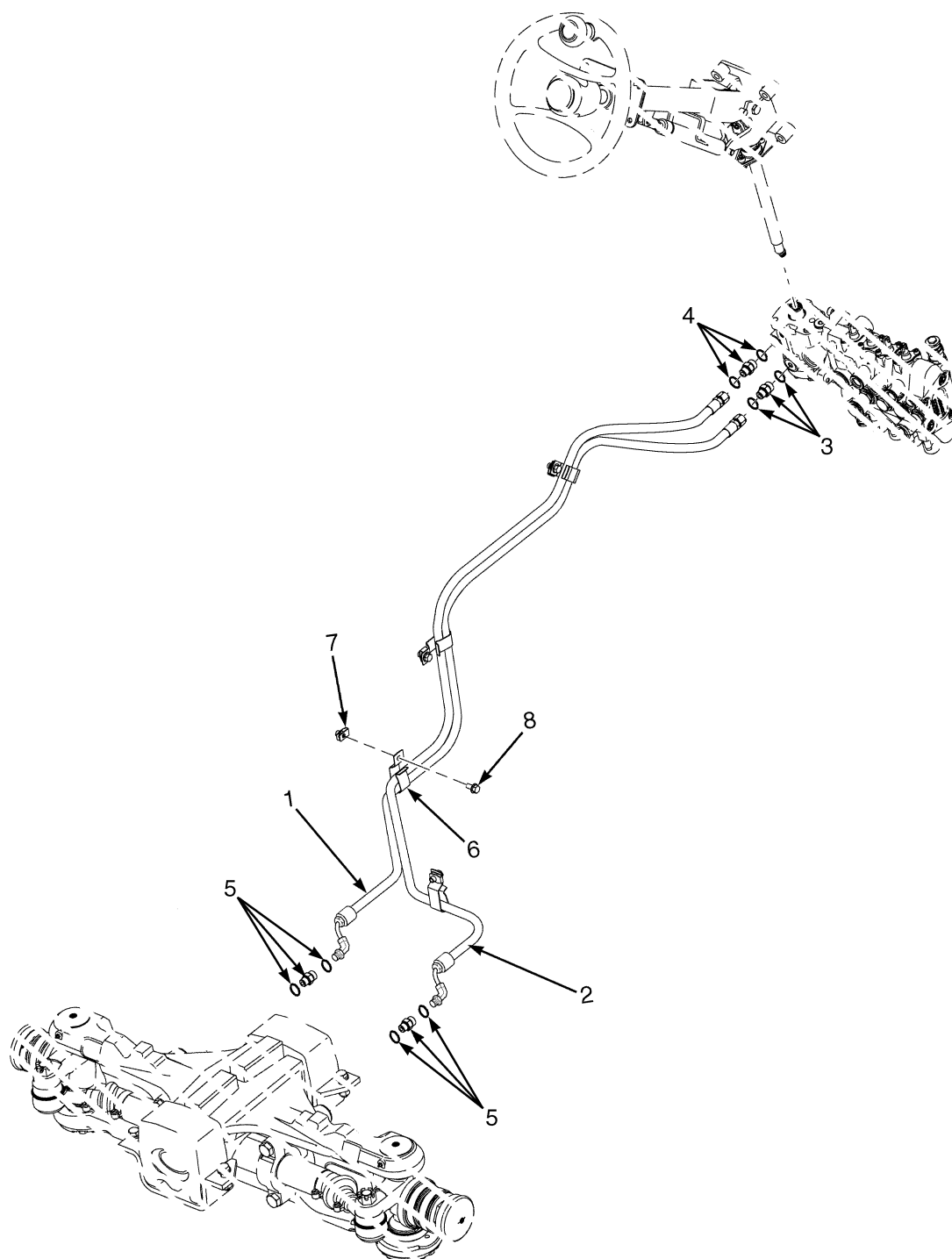


BP220056

STEERING CONTROL UNIT

ITEM	PART NO.	DESCRIPTION	QTY
	2063117	Steering Control Unit (H40-60FT)	1
	2063118	Steering Control Unit (H70FT)	1
1		Dust Seal	1
2		Housing	1
3		Relief Valve	1
4		Bushing	1
5		Check Ball	1
6		Check Ball	1
7		Seat	1
8		O-Ring	1
9		Bearing Set	1
10		Ring	1
11		Spool	1
12		Pin	1
13		Sleeve	1
14		Spring Set	1
15		Shaft	1
16		O-Ring	3
17		Plate	1
18		Gear Set	1
19		Gear Ring	1
20		Cover	1
21		Washer	7
22		Special Screw	2
23		Capscrew	5
24		Priority Valve Plug	1
25		Diagnostic Plug (Supply Pressure)	1
26		Cap	1
27		System Relief Valve	1
28		O-Ring	1
29		Back-Up Ring	1
30		O-Ring	1
31		Cartridge	1
32		Seat	1
33		Spring	1
34		Plug	1
35		Anti-Tamper Ring	1
36		Snap Ring	1
37	1581858	Kit-Capscrew	1
38	1579908	Kit-Seal	1

STEERING LINES (FIGURE 7-4)



HP220443

STEERING LINES

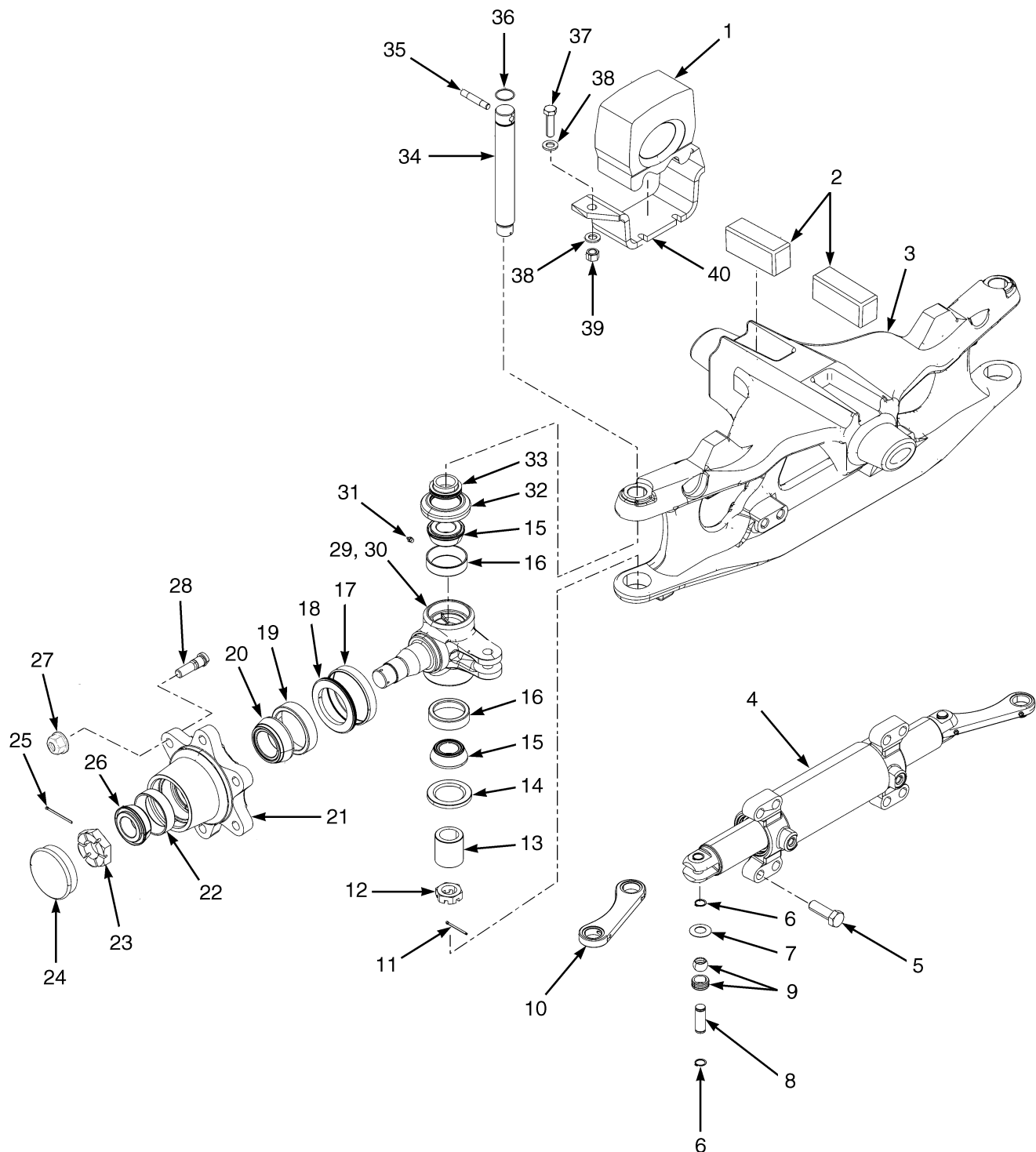
ITEM	PART NO.	DESCRIPTION	QTY
1	b 2073016	Hose Assy (H40-60FT)	1
1	d 2103497	Hose Assy (H40-60FT)	1
1	b 2072903	Hose Assy (H70FT)	1
1	d 2104069	Hose Assy (H70FT) (Alternate Part)	1
2	b 2072902	Hose Assy (H40-60FT)	1
2	d 2104068	Hose Assy (H40-60FT) (Alternate Part)	1
2	b 2073017	Hose Assy (H70FT)	1
2	d 2104070	Hose Assy (H70FT) (Alternate Part)	1
3	b 1516201	Fitting	1
3	d 1516201	Fitting (Alternate Part)	2
3	265787	O-Ring	1
3	16484	O-Ring	1
4	b 1486742	Fitting	1
4	d 1486742	Fitting (Alternate Part)	..
4	265787	O-Ring	1
4	16484	O-Ring	1
5	1487063	Fitting	2
5	265787	O-Ring	2
5	1527813	O-Ring	2
6	b 1544157	Clip	6
6	d 1544157	Clip (Alternate Part)	5
7	1480237	Nut	6
8	1527879	Capscrew	6
	ac 1692507	Mounting Plate (Alternate Part)	1
	ae 110322	Clamp	1
	ae 203230	Clamp	1
	ac 1360386	Clamp (Alternate Part)	1
	ac 287816	Capscrew (Alternate Part)	2
	ac 313805	Nut (Alternate Part)	2

FOOTNOTES:

a Not Illustrated
b → S/N L177V02397F
c S/N L177V02398F ↔ 10/2008

d S/N L177V02398F →
e 10/2008 →

STEER AXLE (FIGURE 7-5)

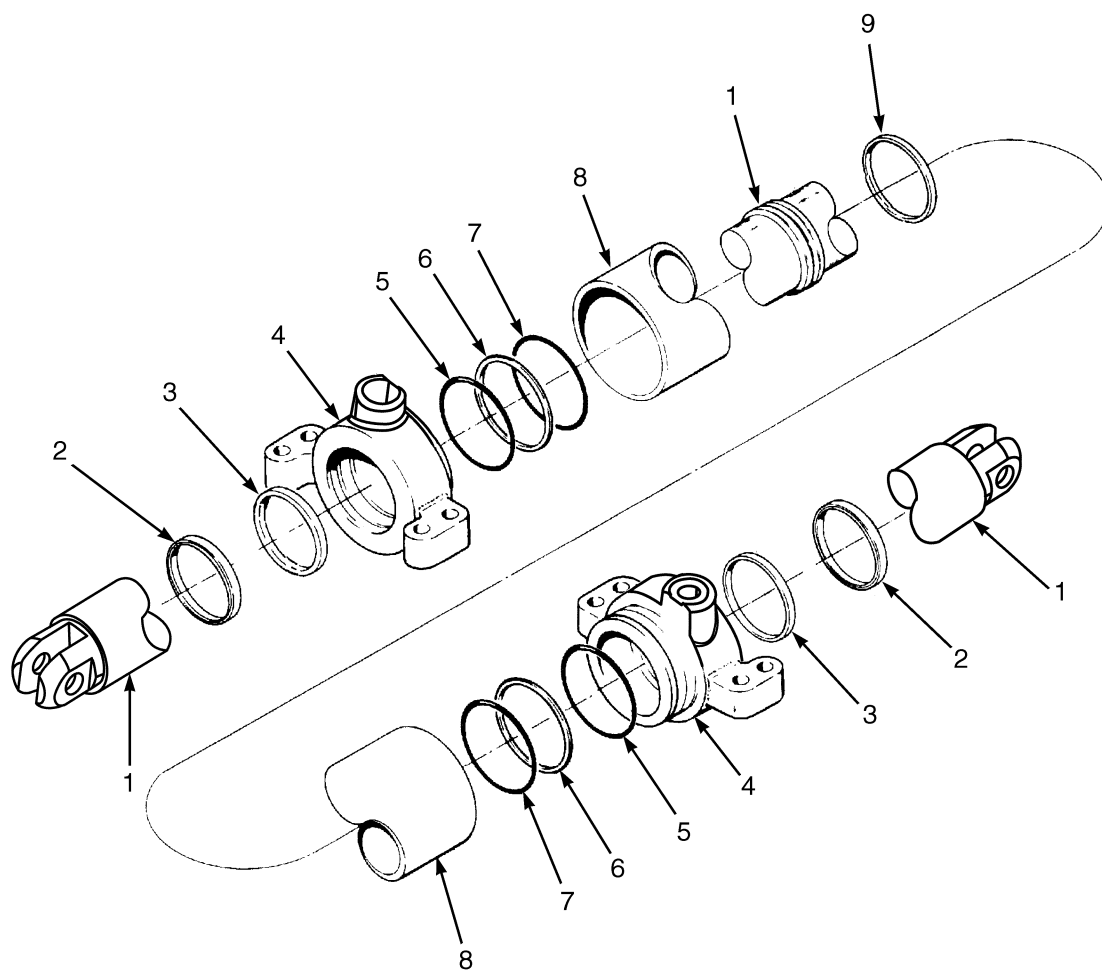


HP220442

STEER AXLE

ITEM	PART NO.	DESCRIPTION	QTY
1	1525354	Rubber Mount	2
2	1388838	Rubber Mount	2
3	1537400	Steering Axle	1
4	2071096	Steering Cylinder (☞ Figure 7-6).....	1
5	293686	Capscrew	8
6	58903	Snap Ring	8
7	300752	Spherical Washer	8
8	1568271	Pin	4
9	300751	Bushing	4
10	381298	Tie Rod	2
11	15225	Cotter Pin	2
12	249289	Nut	2
13	300766	Sleeve	2
14	98525	Oil Seal	2
15	156194	Bearing Cup	4
16	156195	Bearing Cone	4
17	164639	Wear Sleeve	2
18	44542	Seal	2
19	163970	Bearing Cup	2
20	30273	Bearing Cone	2
21	1537667	Hub	2
22	317075	Bearing Cup	2
23	1383777	Nut	2
24	69029	Cap	2
25	15227	Cotter Pin	2
26	317076	Bearing Cone	2
27	1517836	Wheel Nut	12
28	1502276	Wheel Stud	12
29	1310599	Spindle (LH)	1
30	1315425	Spindle (RH)	1
31	13957	Grease Fitting	6
32	264973	Seal	2
33	300767	Spacer	2
34	300765	King Pin	2
35	226986	Pin	2
36	39352	O-Ring	2
37	293648	Capscrew	4
38	320161	Washer	8
39	300937	Nut	4
40	1543254	Plate	2

STEER CYLINDER (FIGURE 7-6)

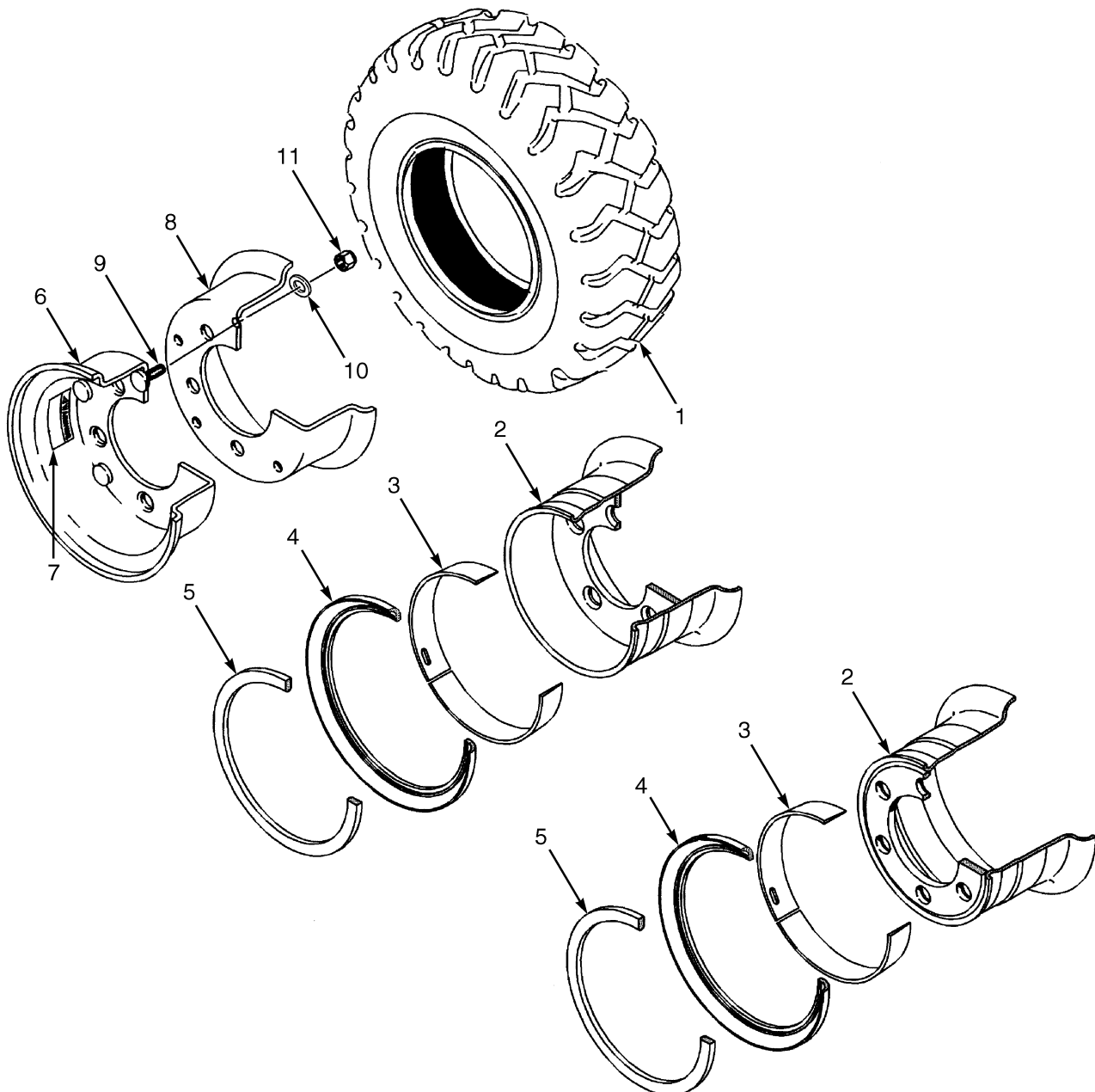


BP220070

STEER CYLINDER

ITEM	PART NO.	DESCRIPTION	QTY
	2071096	Steering Cylinder	1
1	375634	Cylinder Rod	1
2	2071094	Rod Wiper	2
3	1380092	Rod Seal	2
4	1561008	End Cap	1
5	268619	O-Ring	2
6	147973	Back-Up Ring	2
7	118358	O-Ring	2
8	375635	Tube Wldmt-Cylinder	1
9	2044371	Piston Seal	1
	1566700	Kit-Seal	1

STEER TIRES AND WHEELS (FIGURE 7-7) H40-50FT

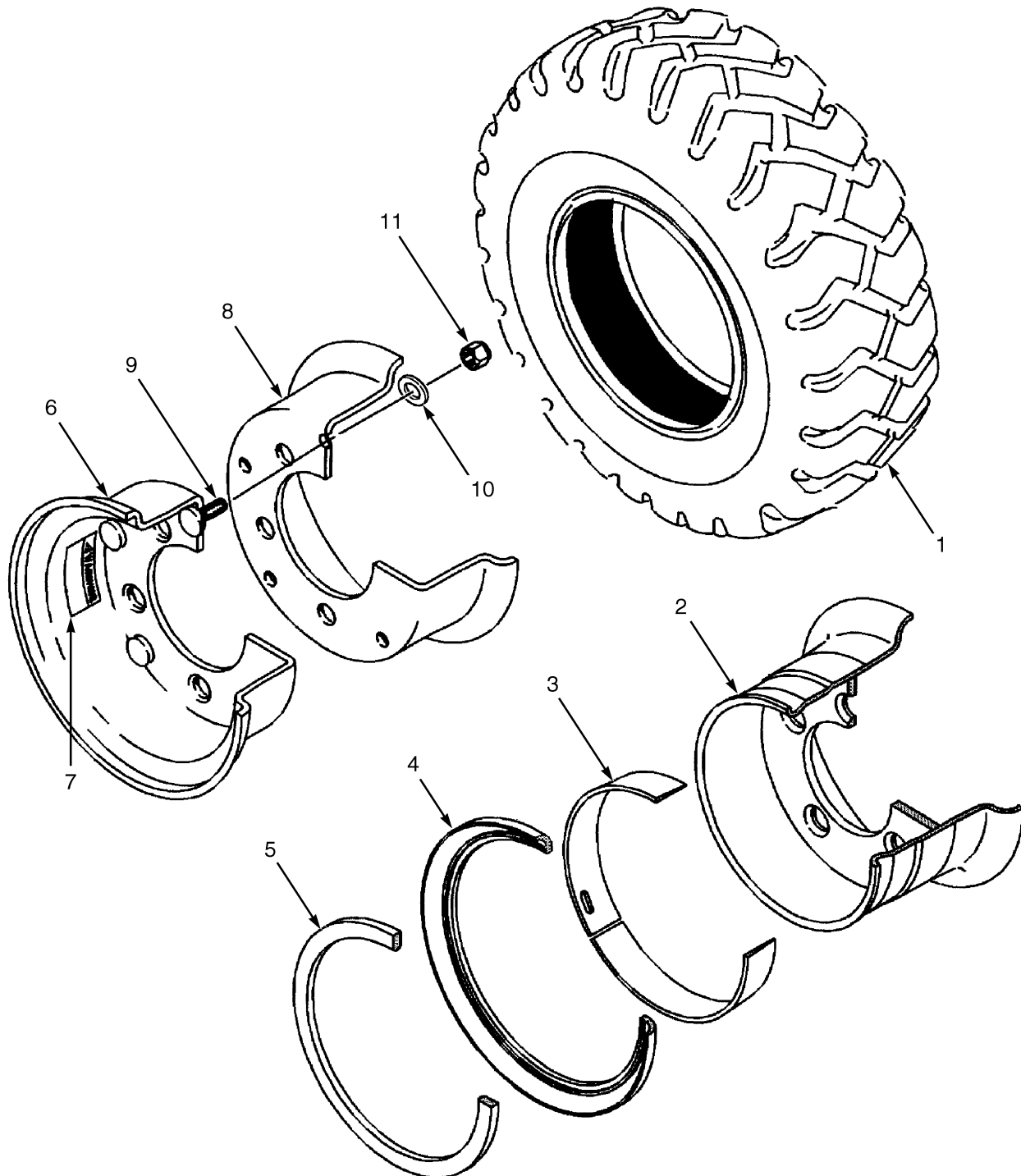


BP220065

STEER TIRES AND WHEELS
H40-50FT**KEY:****A: 6.00 x 9.00 Pneumatic****B: 6.00 x 9 Radial****C: 6.00 x 9-12 PR**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	1543059	Tire	..	..	2
1	1543069	Tire	2	..	..
1	1688697	Solid Pneumatic Tire (Alternate Part)	2	..	..
1	1603489	Tire (Non-Marking)	2	..	..
1	1471837	Pneumatic Tire	..	2	..
1	1358177	Pneumatic Tire (Michelin XZM)	..	2	..
1	1462615	Tubeless Bead Seal	..	1	..
1	1471921	Tubeless Bead Seal Valve	..	1	..
2	2070081	Rim	2	2	..
2	2070083	Rim	2	2	..
3	1584693	Wedge Band	1	1	..
4	161885	Wheel Side Ring	1	1	..
5	161884	Wheel Lock Ring	1	1	..
6	2092535	Wheel Assy	..	..	2
6		Outer Wheel	..	..	1
7	288638	Label (Warning)	..	..	2
8		Inner Wheel	..	..	1
9	2021575	Wheel Stud	..	..	12
10	292683	Lockwasher	..	..	12
11	303119	Nut	..	..	12

STEER TIRES AND WHEELS (FIGURE 7-8) H40-70FT



BP220066

STEER TIRES AND WHEELS
H40-70FT**KEY:****A: 6.50 x 10 Pneumatic****B: 6.50 R10 Radial****C: 6.50 x 10-12 Two Piece Wheel**

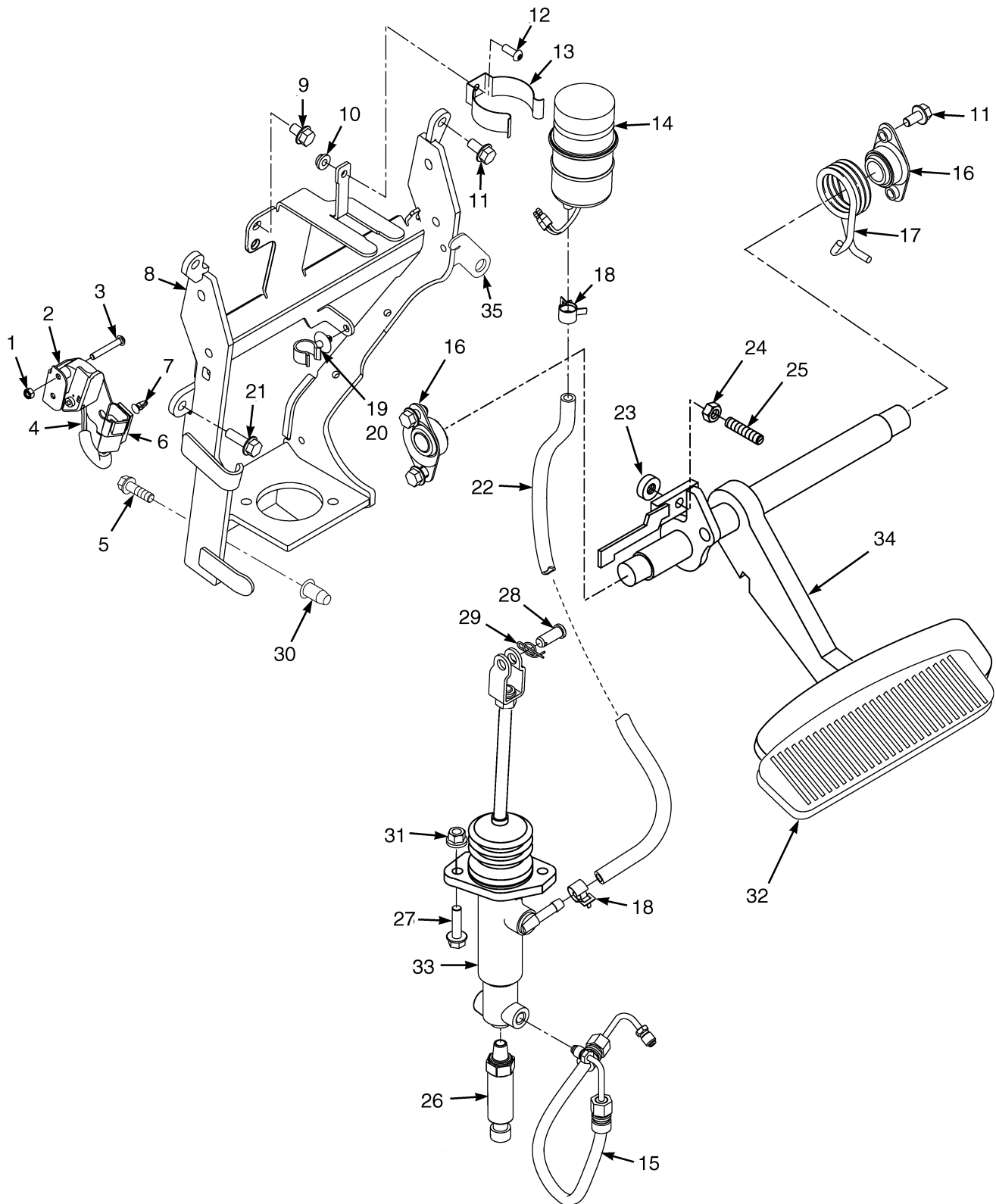
ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	1539636	Solid Pneumatic Tire	2	..	..
1	1544234	Solid Pneumatic Tire (6.50x10/5.0) (Alternate Part)	2	..	..
1	1544232	Pneumatic Tire (6.50 x 10-12PR)	..	..	2
1	1603490	Tire (Non-Marking 6.50x10/5.0)	2	..	..
1	1471832	Pneumatic Tire (6.5 R10 Pneu Radial)	..	2	..
1	1462616	Tubeless Bead Seal	..	1	..
1	1358178	Pneumatic Tire (Michelin XZM 6.50 R10)	..	1	..
1	1471922	Tubeless Bead Seal Valve	..	1	..
2	2067044	Rim	2	2	..
3	1580427	Wedge Band	1	1	..
4	1580426	Wheel Side Ring	1	1	..
5	161894	Wheel Lock Ring	1	1	..
6	2092536	Wheel Assy	..	..	2
6		Outer Wheel	..	..	2
7	288638	Label (Warning)	..	..	2
8		Inner Wheel	..	..	2
8	288638	Label (Warning)	..	..	2
9	2027618	Wheel Stud	..	..	12
10	292685	Lockwasher	..	..	12
11	292600	Nut	..	..	12

[illegible]

**SECTION 8
BRAKE SYSTEM**

DESCRIPTION	PAGE
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BRAKE LINKAGE (FIGURE 8-1) SINGLE PEDAL — DRY BRAKE

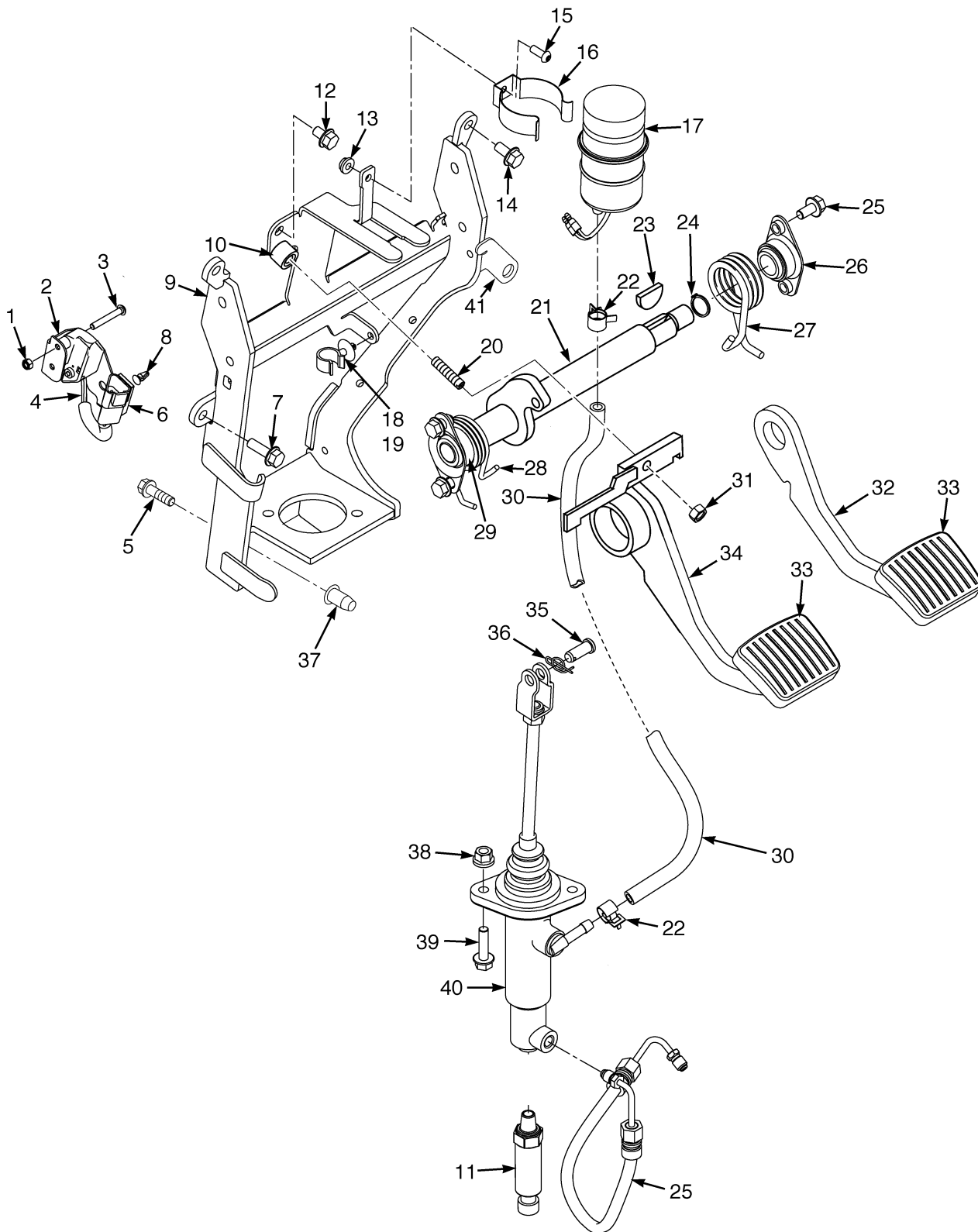


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**BRAKE LINKAGE
SINGLE PEDAL – DRY BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
1	302398	Locknut	2
2	1531567	Bracket (Inching Sensor)	1
3	1553897	Capscrew	2
4	1547849	Sensor (Brake Position)	1
5	1586627	Capscrew	2
6	1500912	Clip	1
7	1564526	Clip (Key Hole)	1
8	1570290	Bracket Wldmt	1
9	1529366	Capscrew	1
10	1514429	Nut	1
11	1527879	Capscrew	6
12	1510126	Screw (Button Head)	1
13	2021353	Holder	1
14	2314223	Reservoir	1
14	2021341	Cap	1
14	2077604	Tank	1
14	2021343	Packing	1
15	2059937	Hose Assy (Brake)	1
16	1585575	Bushing	2
17	1568075	Spring (RH)	1
18	1502003	Hose Clamp	2
19	1543842	Clamp	1
20	1543698	Clamp (Swivel)	1
21	1583611	Capscrew	2
22	1531569	Hose (Brake Feed)	1
23	1556475	Bumper	1
24	239503	Nut	1
25	1534871	Bolt	1
26	1590033	Transducer	1
27	1527881	Capscrew	2
28	1375391	Pin (Rod End)	1
29	1351689	Lockring	1
30	1530243	Insert	2
31	1544153	Locknut	2
32	1570298	Rubber Pad	1
33	1536724	Master Cylinder (☞ Figure 8-6).....	1
34	1568243	Pedal	1
35	1594950	Bracket	1
	2093224	Label (Brake Fluid Warning) (Not Illustrated)	1

BRAKE LINKAGE (FIGURE 8-2) DUAL PEDAL — DRY BRAKE

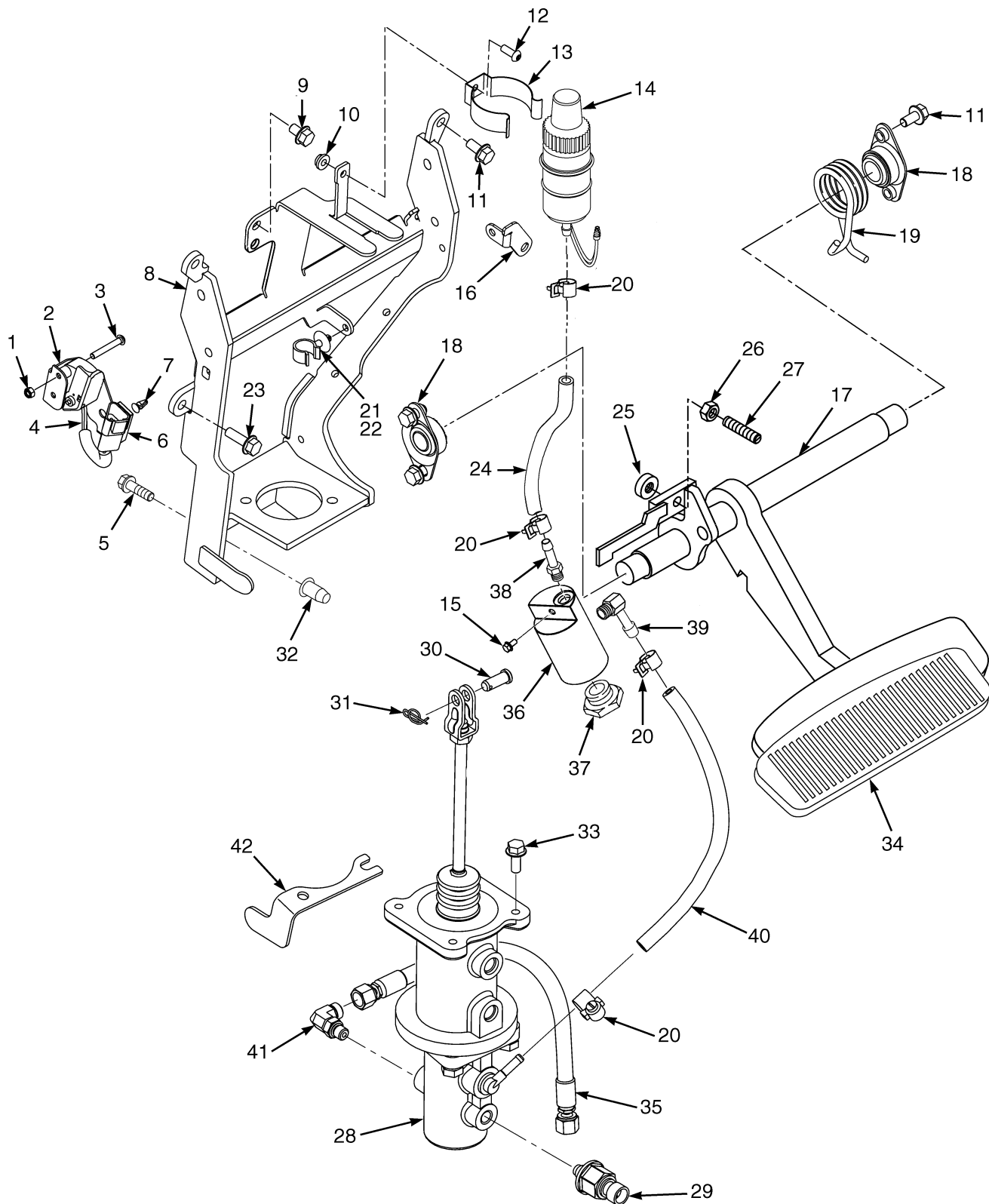


HP040422

**BRAKE LINKAGE
DUAL PEDAL – DRY BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
1	302398	Locknut	2
2	1531567	Bracket (Inching Sensor)	1
3	1553897	Capscrew	2
4	1547849	Sensor (Brake Position)	1
5	1586627	Capscrew	2
6	1500912	Clip (Connector)	1
7	1583611	Capscrew	2
8	1564526	Clip (Key Hole) (Key Hole)	1
9	1570290	Bracket Wldmt	1
10	1556475	Bumper	1
11	1590033	Transducer	1
12	1529366	Capscrew	1
13	1514429	Nut	1
14	1527879	Capscrew	6
15	1510126	Screw (Button Head)	1
16	2021353	Holder	1
17	2314223	Reservoir	1
17	2021341	Cap	1
17	2077604	Tank	1
17	2021343	Packing	1
18	1543698	Clamp (Swivel)	1
19	1543842	Clamp	1
20	1534871	Bolt	1
21	1568253	Crank	1
22	1502003	Hose Clamp	2
23	206	Woodruff Key	1
24	12929	Snap Ring	1
25	2059937	Hose Assy (Brake)	1
26	1585575	Bushing	2
27	1568076	Spring (RH)	1
28	1568077	Spring (LH)	1
29	244540	Bushing	2
30	1531569	Hose (Brake Feed)	1
31	239503	Nut	1
32	1568256	Brake Pedal (RH)	1
33	1570300	Pad	2
34	1568245	Brake Pedal (LH)	1
35	1375391	Pin (Rod End)	1
36	1351689	Lockring	1
37	1530243	Insert	2
38	1544153	Locknut	2
39	1527881	Capscrew	2
40	1536724	Master Cylinder (☞ Figure 8-6).....	1
41	1594950	Bracket	1
	2093224	Label (Brake Fluid Warning) (Not Illustrated)	1

BRAKE LINKAGE (FIGURE 8-3) SINGLE PEDAL — WET BRAKE



HP040417

**BRAKE LINKAGE
SINGLE PEDAL – WET BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
1	302398	Locknut	2
2	1531567	Bracket	1
3	1553897	Capscrew	2
4	1547849	Sensor (Brake Position)	1
5	1586627	Capscrew	2
6	1500912	Clip	1
7	1564526	Clip (Key Hole)	1
8	1639075	Bracket Wldmt	1
9	1529366	Capscrew	1
10	1514429	Nut	1
11	1527879	Capscrew	6
12	1510126	Screw (Button Head)	1
13	2021353	Holder	1
14	1646439	Reservoir	1
14	2077604	Tank	1
14	d 1646557	Diaphragm	1
14	i 1645381	Diaphragm	1
14	1646397	Cap	1
15	1527876	Capscrew	1
16	1594950	Bracket	1
17	1641558	Pedal	1
18	1585575	Bushing	2
19	1568075	Spring (RH)	1
20	166857	Clamp	4
20	b 168718	Clamp (Worm Screw)	4
21	1543842	Clamp	1
22	1543698	Clamp (Swivel)	1
23	1583611	Capscrew	2
24	2092888	Hose (Upper Brake Feed)	1
25	1556475	Bumper	1
26	239503	Nut	1
27	1534871	Bolt	1
28	e 1573675	Brake Booster (☞Figure 8-7).....	1
28	f 2096079	Master Cylinder (☞Figure 8-7).....	1
28	c 2110224	Master Cylinder	1
28	g 1569527	Master Cylinder (Boosted) (☞Figure 8-7).....	1
28	h 1703607	Master Cylinder	1
29	1590033	Transducer	1
30	1375391	Pin (Rod End)	1
31	1351689	Lockring	1
32	1530243	Insert	2
33	1527880	Capscrew	4
34	1570298	Rubber Pad	1
35	2083955	Hose Assy (Lower Brake Feed)	1
36	2092613	Cylinder Block	1
37	233683	Fitting	1
37	16487	O-Ring	1
38	222491	Fitting	1
38	16481	O-Ring	1
39	222509	Fitting	1

BRAKE LINKAGE SINGLE PEDAL – WET BRAKE

ITEM	PART NO.	DESCRIPTION	QTY
39	16481	O-Ring	1
40	117989	Hose	1
41	1487058	Fitting	1
41	16481	O-Ring	1
41	1527813	O-Ring	1
42	a 1670905	Bracket	1

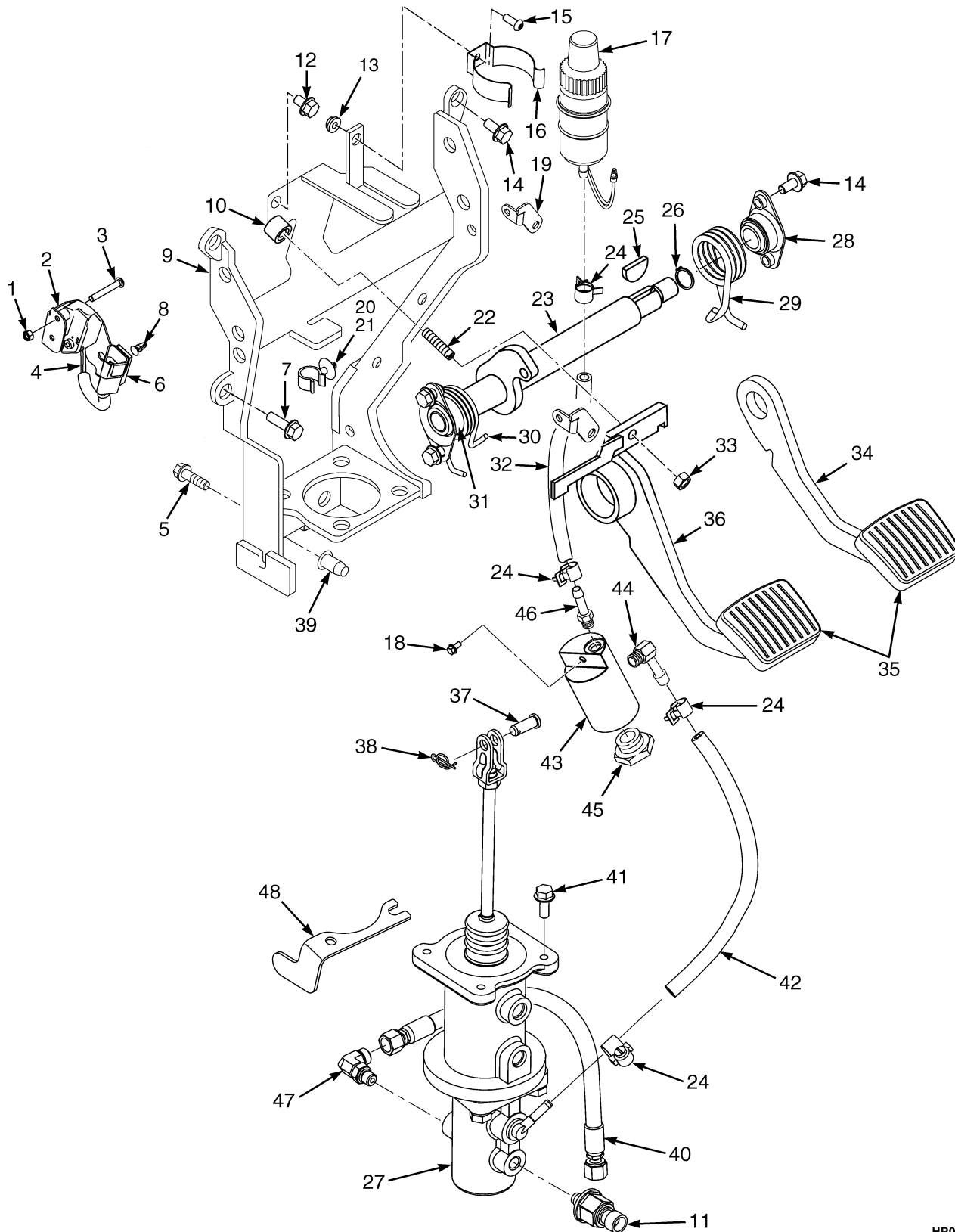
FOOTNOTES:

- | | | | |
|----------|--------------------------|----------|--|
| a | Not Required | f | S/N L177B13169E ↔ PENDING PER ECN 105811 |
| b | Optional | g | S/N L177B16712E → |
| c | → PENDING PER ECN 105811 | h | PENDING PER ECN 105811 → |
| d | → S/N L177B11900D | i | S/N L177B11901D → |
| e | → S/N L177B13168E | | |

NOTES

[illegible]

BRAKE LINKAGE (FIGURE 8-4) DUAL PEDAL — WET BRAKE



HP040418

**BRAKE LINKAGE
DUAL PEDAL – WET BRAKE**

ITEM	PART NO.	DESCRIPTION	QTY
1	302398	Locknut	2
2	1531567	Bracket	1
3	1553897	Capscrew	2
4	1547849	Sensor (Brake Position)	1
5	1586627	Capscrew	2
6	1500912	Clip (Connector)	1
7	1583611	Capscrew	2
8	1564526	Clip (Key Hole) (Key Hole)	1
9	1639075	Bracket Wldmt	1
10	1556475	Bumper	1
11	1590033	Transducer	1
12	1529366	Capscrew	1
13	1514429	Nut	1
14	1527879	Capscrew	6
15	1510126	Screw (Button Head)	1
16	2021353	Holder	1
17	1646439	Reservoir	1
17	2077604	Tank	1
17	d 1646557	Diaphragm	1
17	h 1645381	Diaphragm	1
17	1646397	Cap	1
18	1527876	Capscrew	1
19	1594950	Bracket	1
20	1543698	Clamp (Swivel)	1
21	1543842	Clamp	1
22	1534871	Bolt	1
23	1579028	Crank	1
24	166857	Clamp	4
24	b 168718	Clamp (Worm Screw)	4
25	206	Woodruff Key	1
26	12929	Snap Ring	1
27	e 1573675	Brake Booster	1
27	f 2096079	Master Cylinder	1
27	c 2110224	Master Cylinder	1
27	1569527	Master Cylinder (Boosted)	1
27	g 1703607	Master Cylinder	1
28	1585575	Bushing	2
29	1568076	Spring (RH)	1
30	1568077	Spring (LH)	1
31	244540	Bushing	2
32	2092888	Hose (Upper Brake Feed)	1
33	239503	Nut	1
34	1568256	Brake Pedal (RH)	1
35	1570300	Pad	2
36	1639801	Brake Pedal (LH)	1
37	1375391	Pin (Rod End)	1
38	1351689	Lockring	1
39	1530243	Insert	2
40	2076656	Hose Assy (Brake)	1
41	1527880	Capscrew	4

BRAKE LINKAGE DUAL PEDAL – WET BRAKE

ITEM	PART NO.	DESCRIPTION	QTY
42	2083955	Hose Assy (Lower Brake Feed)	1
43	2092613	Cylinder Block	1
44	222509	Fitting	1
44	16481	O-Ring	1
45	1569616	Hose Clamp	2
45	233683	Fitting	1
45	16487	O-Ring	1
46	222491	Fitting	1
46	16481	O-Ring	1
47	1487058	Fitting	1
47	16481	O-Ring	1
47	1527813	O-Ring	1
48	a 1670905	Bracket	1

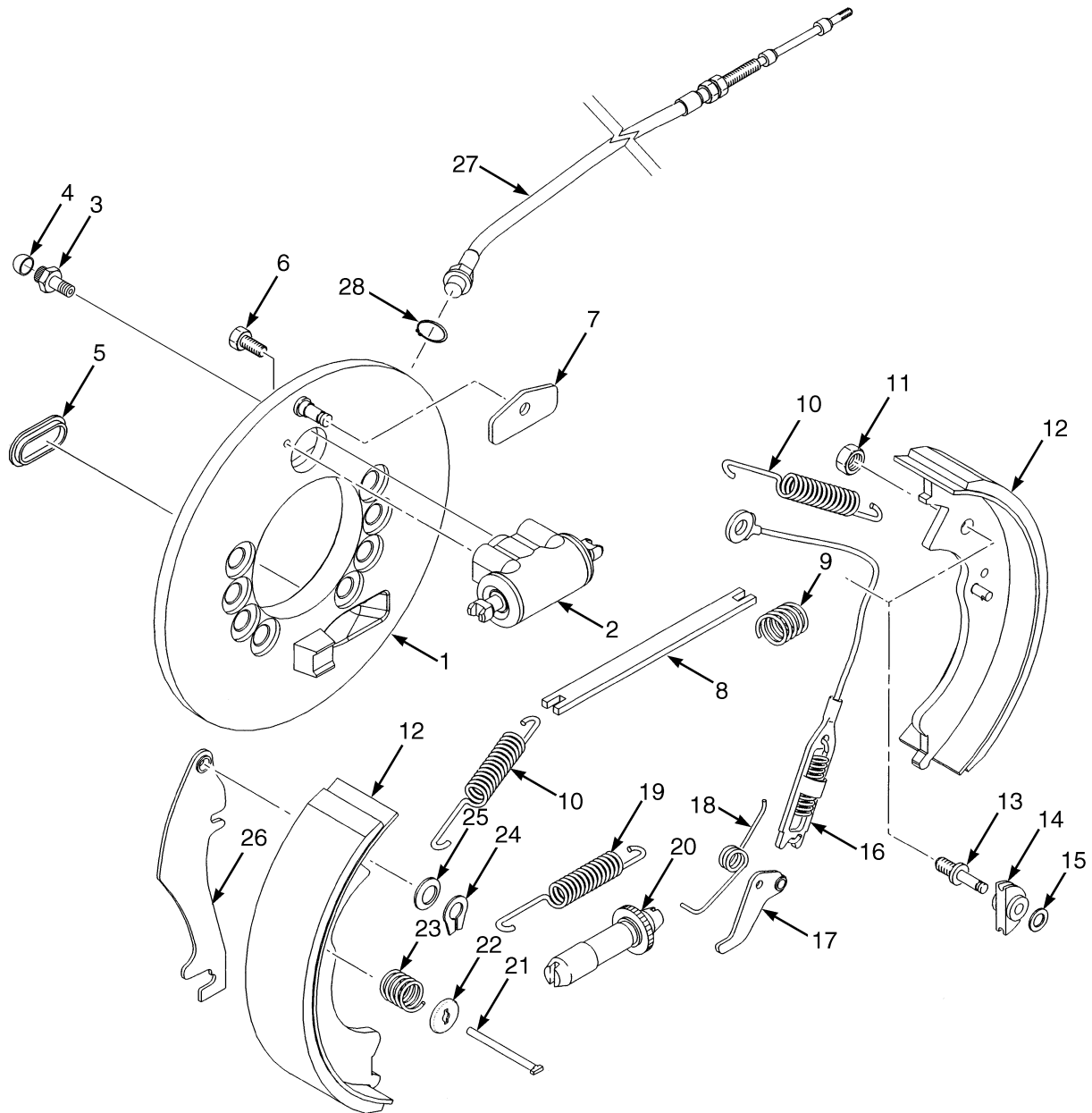
FOOTNOTES:

- | | | | |
|----------|--------------------------|----------|--|
| a | Not Required | e | → S/N L177B13168E |
| b | Optional | f | S/N L177B13169E ↔ PENDING PER ECN 105811 |
| c | → PENDING PER ECN 105811 | g | PENDING PER ECN 105811 → |
| d | → S/N L177B11900D | h | S/N L177B11901D → |

NOTES

[illegible]

BRAKE ASSEMBLY (FIGURE 8-5) DRY BRAKE



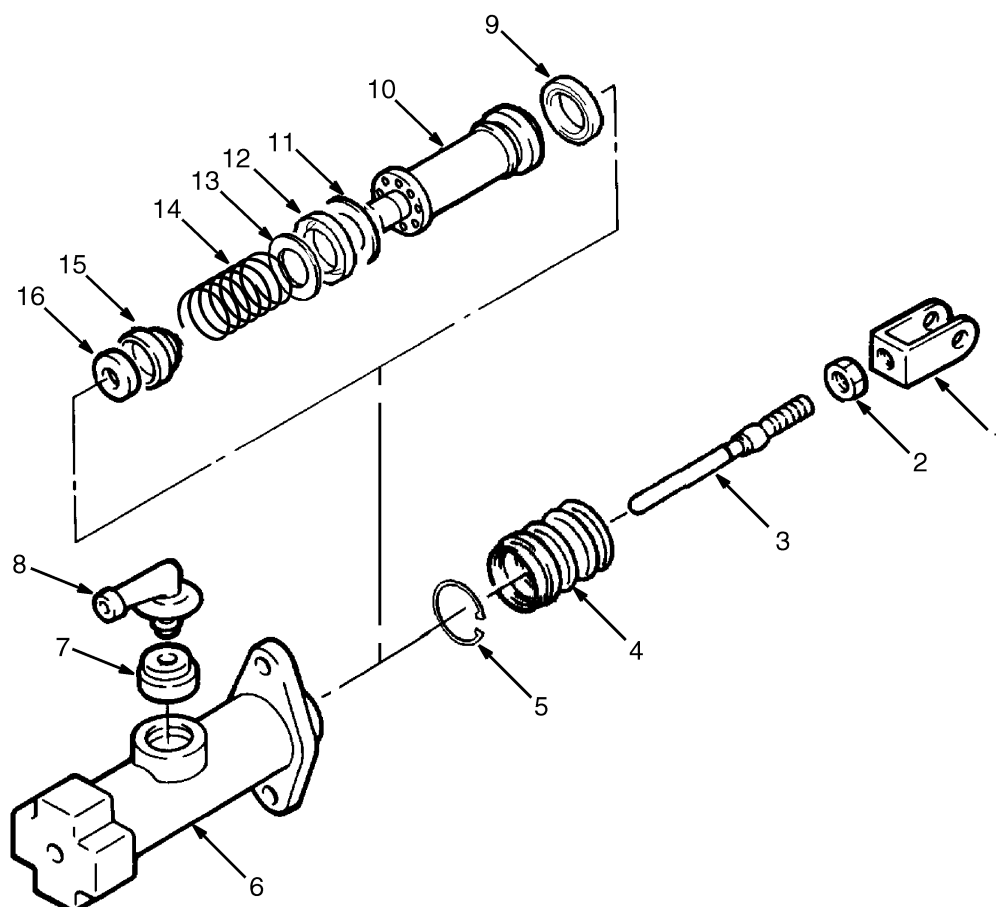
BP040047

**BRAKE ASSEMBLY
DRY BRAKE****KEY:****A: RH****B: LH**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1579455	Brake Assembly (With Cable and Dust Shield)	1	..
	1579454	Brake Assembly (With Cable and Dust Shield)	..	1
	1606086	Brake Assembly (Without Cable)	1	..
	1606085	Brake Assembly (Without Cable)	..	1
1	1606088	Backplate	1	..
1	1606087	Backplate	..	1
2	1565290	Wheel Cylinder	1	1
2	1334647	Kit-Repair Wheel Cylinder	1	1
3	1361503	Bleeder Screw	1	1
4	1361504	Cap	1	1
5	1334642	Cover	1	1
6	1565303	Bolt	2	2
7	2037343	Wear Plate	1	1
8	1360796	Bracket	1	..
8	1361507	Strut	..	1
9	1360797	Spring	1	1
10		Spring	1	1
11		Nut	1	1
12	1565314	Kit-Brake Shoe	1	..
12	1565313	Kit-Brake Shoe	..	1
13		Pin	1	1
14	1334644	Sheave	1	1
15	1361500	Washer	1	1
16		Cable and Spring Assembly	1	1
17	2037518	Lever	1	..
17	2037517	Lever	..	1
18		Spring	1	1
19	2037340	Spring	1	1
20	1600492	Adjuster	1	..
20	1600491	Adjuster	..	1
21	2037323	Pin	1	1
22	2037341	Cup	1	1
23		Spring	1	1
24	1338916	Retainer	1	1
25	1338917	Washer	1	1
26		Park Brake Lever	1	1
27	1565305	Parking Brake Cable	1	..
27	1600493	Parking Brake Cable	..	1
28	1361502	Snap Ring	1	1
	1565316	Kit-Spring	1	1
	1565310	Kit-Adjuster (RH)	1	..
	1565309	Kit-Adjuster (LH)	..	1
	1565311	Kit-Repair Parking Brake (LH)	..	1
	1565312	Kit-Park Brake (RH)	1	..

**BRAKE ASSEMBLY
DRY BRAKE****KEY:****A: RH****B: LH**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1565315	Kit-Hold Down	1	1

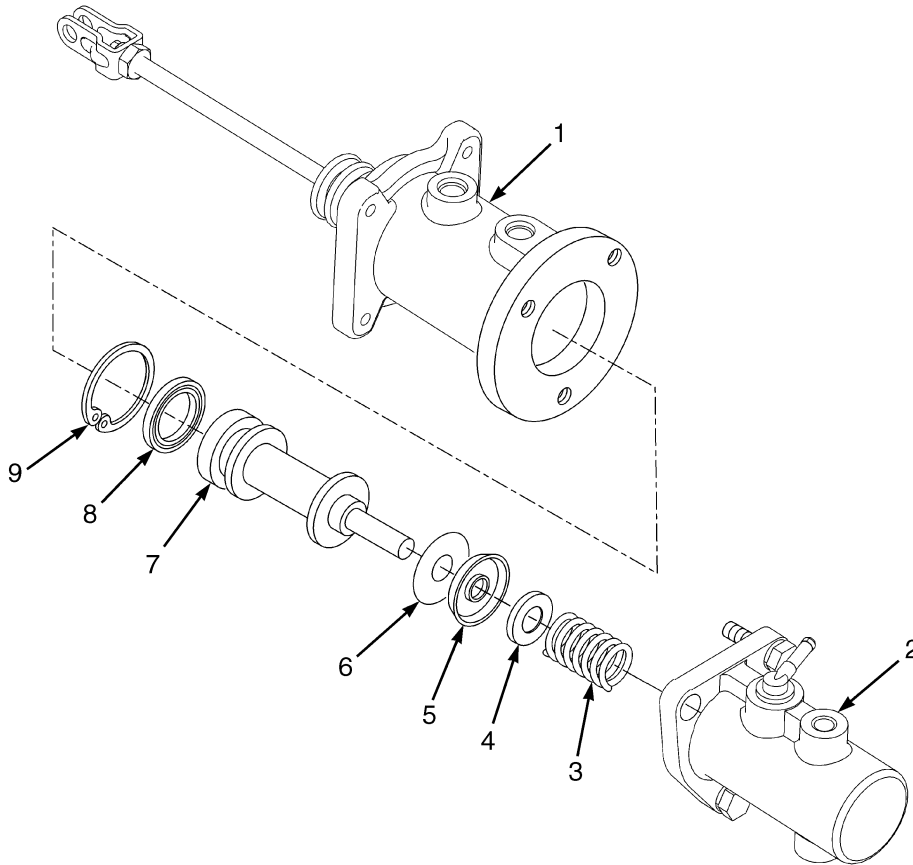
BRAKE MASTER CYLINDER ASSEMBLY (FIGURE 8-6)
DRY BRAKE

BP040123

ITEM	PART NO.	DESCRIPTION	QTY
	1536724	Master Cylinder	1
1	2041520	Yoke	1
2	1566142	Nut	1
3	1566141	Push Rod	1
4		Boot	1
5		Snap Ring	1
6		Housing	1
7	1566144	Gasket	1
8	1566143	Fitting	1
9		Seal	1
10		Piston	1
11		Spacer	1
12		Piston Cup	1
13		Retainer	1
14		Spring	1
15		Check Valve	1
16		Valve Seat	1
	1566131	Kit-Repair Master Cylinder	1

BRAKE MASTER CYLINDER ASSEMBLY (FIGURE 8-7)

WET BRAKE



BP040065

KEY:

A: 1573675

B: 2096079 and 2110224

C: 1569527 and 1703607

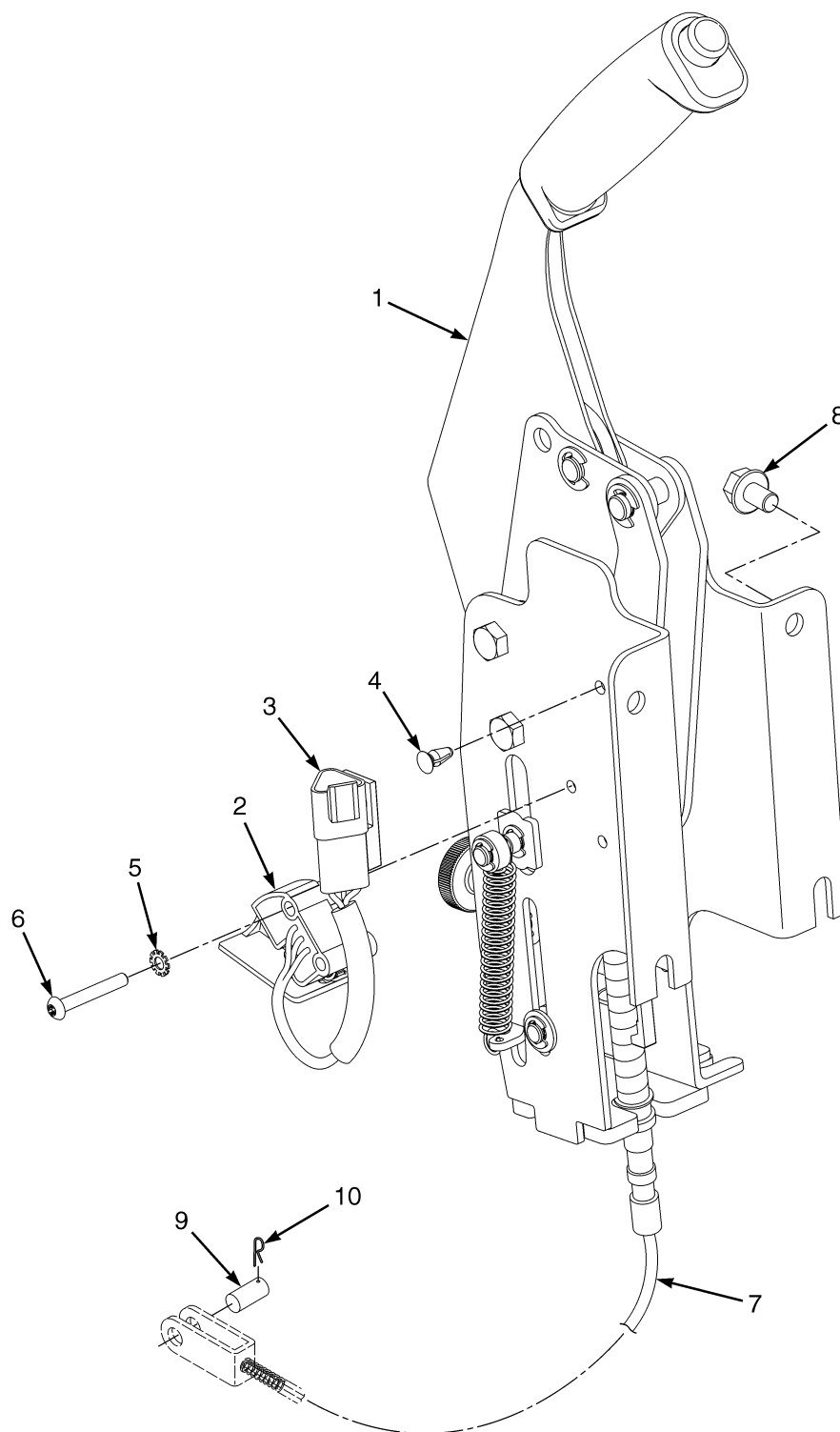
ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
	b 1573675	Brake Booster (31.75 Bore)	1	..	..
	c 2096079	Master Cylinder (31.75 Bore)	..	1	..
	e 2110224	Master Cylinder	1	1	..
	d 1569527	Master Cylinder (38.1 Bore)	..	..	1
	e 1703607	Master Cylinder	..	..	1
1	1670332	Brake Booster	..	1	1
1	1692229	Kit-Repair Brake Booster	..	1	1
2	1670333	Master Cylinder	1	1	..
2	1670334	Master Cylinder ..	..	..	1
2		Housing	1	1	1
3		Spring	1	1	1
4		Retainer	1	1	1
5		Seal (Pressure)	1	1	1
6		Washer	1	1	1
7		Piston	1	1	1
8		Seal (Retaining)	1	1	1
9		Snap Ring	1	1	1

KEY:**A: 1573675****B: 2096079 and 2110224****C: 1569527 and 1703607**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
	a 1596179	Kit-Repair Master Cylinder (31.75 Bore)	1	1	..
	1596180	Kit-Repair Minor-Master Cyl (31.75 Bore)	1	1	..
	a 1620023	Kit-Repair Major-Master Cyl (38.1 Bore)	..	..	1
	1620024	Kit-Repair Minor-Master Cyl (38.1 Bore)	..	..	1

FOOTNOTES:**a** Includes Minor Repair Kit.**b** → S/N L177B131268E**c** S/N L177B13169E ↔ S/N L177B16711E**d** S/N L177B16712E →**e** PENDING PER ECN 105811 →

PARK BRAKE ASSEMBLY (FIGURE 8-8)



HP040419

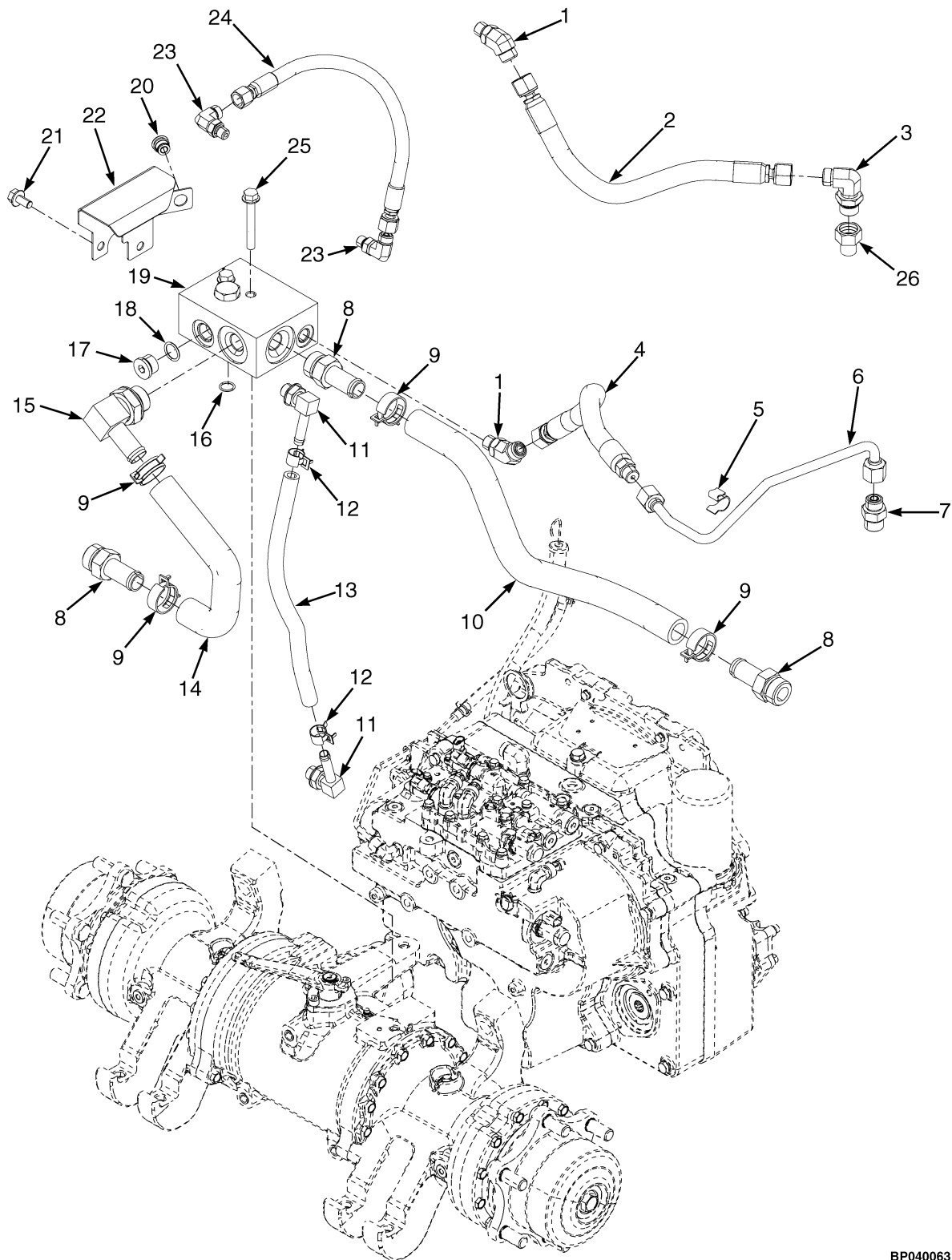
PARK BRAKE ASSEMBLY**KEY:****A: Without Cab - Dry Brakes****B: With Cab - Dry Brakes****C: Without Cab - Wet Brakes****D: With Cab - Wet Brakes**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1544466	Parking Brake Lever	1	..	..	..
	1548181	Parking Brake Lever	..	1	..	..
	a 1612215	Parking Brake Lever	..	..	1	..
	c 1654317	Parking Brake Lever	..	..	1	..
	b 1612216	Parking Brake Lever	..	..	..	1
	c 1654315	Parking Brake Lever	..	..	..	1
1	1528799	Parking Brake Lever	1	..	..	..
1	1548032	Parking Brake Lever	..	1	..	..
1	1613021	Parking Brake	..	..	1	..
1	1614848	Parking Brake	..	..	..	1
2	1547849	Sensor (Brake Position)	1	1	1	1
3	1500912	Clip	1	1	1	1
4	1564526	Clip (Key Hole)	1	1	1	1
5	296378	Washer	2	2	2	2
6	1553897	Capscrew	2	2	2	2
7	a 2082685	Parking Brake Cable	..	..	1	1
7	c 2097830	Parking Brake Cable	..	..	1	1
7	1600493	Parking Brake Cable (LH)	1	1	..	..
7	1565305	Parking Brake Cable (RH)	1	1	..	..
8	1529366	Capscrew	4	4	4	4
9	a 133683	Pin	..	..	1	1
9	c 240724	Pin	..	..	1	1
10	a 1530010	Lockring	..	..	1	1
10	c 1530010	Lockring	..	..	1	1

FOOTNOTES:**a** → S/N L177B24983F**c** S/N L177B24984F →**b** → S/N L177B24983F EXC. 07927

BRAKE COOLING SYSTEM (FIGURE 8-9)

SINGLE AND DUAL PEDAL — WET BRAKE (→ S/N L177B15746E (WET AXLE 2 PIECE XSMN))



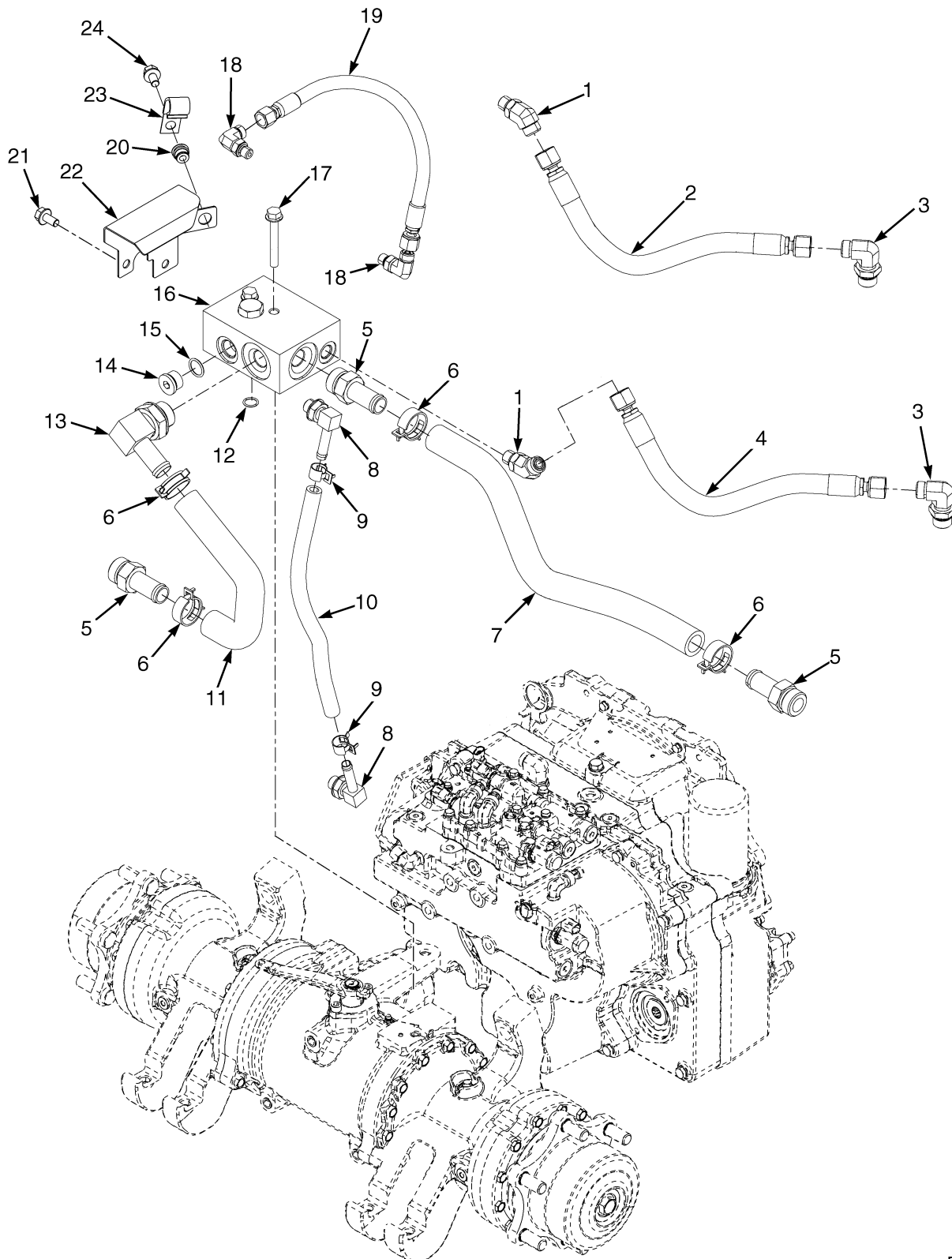
BP040063

BRAKE COOLING SYSTEM **SINGLE AND DUAL PEDAL – WET BRAKE (→ S/N L177B15746E (WET AXLE 2 PIECE XSMN))**

ITEM	PART NO.	DESCRIPTION	QTY
1	1516199	Fitting	2
1	16483	O-Ring	2
1	265787	O-Ring	2
2	2082235	Hose Assy	1
3	1487061	Fitting	1
3	265787	O-Ring	1
3	16484	O-Ring	1
4	2083929	Hose Assy	1
5	1612097	Clip	1
6	2083930	Tube	1
7	1486742	Fitting	1
7	265787	O-Ring	1
7	16483	O-Ring	1
8	17758	Fitting	3
8	16486	O-Ring	2
9	1502009	Hose Clamp	4
10	2083931	Hose	1
11	17221	Fitting	2
11	16483	O-Ring	1
11	265731	O-Ring	1
12	1569616	Hose Clamp	2
13	2083928	Hose	1
14	2072897	Hose	1
15	17775	Fitting	2
15	16486	O-Ring	2
16	265731	O-Ring	1
17	222443	Fitting	1
18	16483	O-Ring	1
19	2083971	Manifold	1
19	1616055	O-Ring	1
19	2045627	Plug	1
19	1517909	O-Ring	1
19	1616054	Check Valve	1
19	1517906	Kit-Seal	1
20	1531557	Insert	1
21	1527879	Capscrew	2
22	1588577	Bracket	1
23	1487058	Fitting	2
23	16481	O-Ring	2
23	1527813	O-Ring	2
24	2083955	Hose Assy	1
25	1510116	Capscrew	2
26	77186	Fitting	1
26	16487	O-Ring	1

BRAKE COOLING SYSTEM (FIGURE 8-10)

SINGLE AND DUAL PEDAL — WET BRAKE (S/N L177B15792E → (DRY AXEL 2 PIECE XSMN))



BP040094

BRAKE COOLING SYSTEM
SINGLE AND DUAL PEDAL – WET BRAKE (S/N L177B15792E → (DRY AXEL 2 PIECE XSMN))

ITEM	PART NO.	DESCRIPTION	QTY
1	1516199	Fitting	2
1	16483	O-Ring	2
1	265787	O-Ring	2
2	2095227	Hose Assy	1
3	1487061	Fitting	2
3	265787	O-Ring	1
3	16484	O-Ring	1
4	2095228	Hose Assy	1
5	17758	Fitting	3
5	16486	O-Ring	2
6	1502009	Hose Clamp	4
7	2083931	Hose	1
8	17221	Fitting	2
8	16483	O-Ring	1
8	265731	O-Ring	1
9	1569616	Hose Clamp	2
10	2083928	Hose	1
11	2072897	Hose	1
12	265731	O-Ring	1
13	17775	Fitting	2
13	16486	O-Ring	2
14	222443	Fitting	1
15	16483	O-Ring	1
15	1616054	Check Valve	1
16	2083971	Manifold	1
16	1616055	O-Ring	1
16	2045627	Plug	1
16	1517909	O-Ring	1
16	1517906	Kit-Seal	1
17	1510116	Capscrew	2
18	1487058	Fitting	2
18	16481	O-Ring	2
18	1527813	O-Ring	2
19	2083955	Hose Assy	1
20	1531557	Insert	1
21	1527879	Capscrew	2
22	1588577	Bracket	1
23	325804	Clamp	1
24	1613324	Capscrew	1

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**SECTION 9
HYDRAULIC SYSTEM**

DESCRIPTION	PAGE
AUXILIARY ONE AND TWO	
MANUAL CONTROL VALVE - THREE AND FOUR FUNCTION (→ S/N L177B17861E (3 FUNCTION LOW RELIEF)) (→ S/N L177B18169E (4 FUNCTION LOW RELIEF)) (→ S/N L177B18729E (3 FUNCTION HIGH RELIEF)) (→ S/N L177B18808E (4 FUNCTION HIGH RELIEF))	9-40
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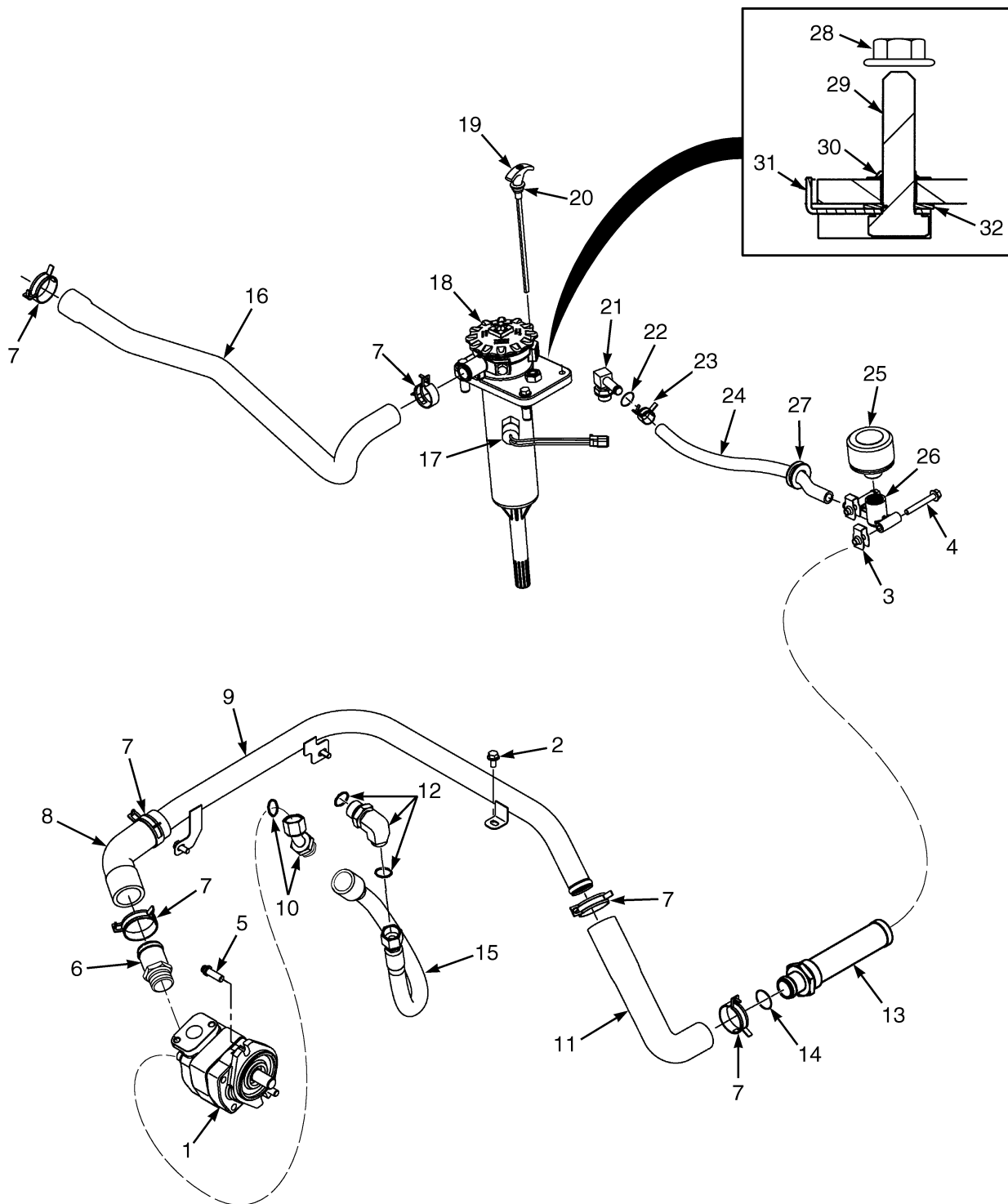
SECTION 9
HYDRAULIC SYSTEM

DESCRIPTION	PAGE
VALVE ASSEMBLY, LIFT AND TILT	
MANUAL CONTROL VALVE - THREE AND FOUR	
FUNCTION (→ S/N L177B18729E (3 FUNCTION HIGH RELIEF))	
(→ S/N L177B17862E (3 FUNCTION LOW RELIEF))	
(→ S/N L177B18169E (4 FUNCTION LOW RELIEF))	
(→ S/N L177B18808E (4 FUNCTION HIGH RELIEF))	9-34
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(S/N L177B18730E ↔ PENDING PER ECN 105530 (3 FUNCTION HIGH RELIEF)))	
(S/N L177B18170E ↔ PENDING PER ECN 105530 (4 FUNCTION LOW RELIEF))	
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NOTES

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HYDRAULIC SUPPLY AND RETURN (FIGURE 9-1)



BP150201

HYDRAULIC SUPPLY AND RETURN

ITEM	PART NO.	DESCRIPTION	QTY
1	b 2067800	Gear Pump (☞Figure 9-2).....	1
1	bi 2067801	Gear Pump (☞Figure 9-2).....	1
1	bo 2098695	Gear Pump (☞Figure 9-2).....	1
1	a 2074230	Gear Pump (☞Figure 9-2).....	1
1	ag 2074211	Gear Pump (☞Figure 9-2).....	1
1	am 2098694	Gear Pump (☞Figure 9-2).....	1
1	c 2067802	Gear Pump (☞Figure 9-2).....	1
1	ch 2067803	Gear Pump (☞Figure 9-2).....	1
1	cn 2098693	Gear Pump (☞Figure 9-2).....	1
2	1527879	Capscrew	3
3	1393879	Nut	2
4	1510116	Capscrew	2
5	1564515	Capscrew	2
6	1568199	Adapter (Suction)	1
6	16482	O-Ring	1
7	369804	Clamp	6
8	2069005	Hose (Pump Suction)	1
9	ef 2068947	Tube Assy (Suction)	1
9	kl 2095146	Tube Assy (Suction)	1
10	1486749	Fitting	1
10	252729	O-Ring	1
10	16485	O-Ring	1
11	2061778	Hose	1
12	1487069	Fitting	1
12	252729	O-Ring	1
12	16486	O-Ring	1
13	1624904	Strainer	1
14	16984	O-Ring	1
15	2070114	Hose Assy (Gear Pump to Hydraulic Control Valve)	1
16	j 2076408	Hose Assy (Third Function)	1
16	p 2104944	Hose Assy (Third Function)	1
16	j 2085958	Hose Assy (Fourth Function)	1
16	p 2104945	Hose Assy (Fourth Function)	1
17	d 2068337	Pressure Switch	1
18	1544975	Hydraulic Filter (☞Figure 9-4).....	1
19	2060751	Dipstick	1
20	1580682	O-Ring	1
21	222510	Fitting	1
22	16484	O-Ring	1
23	1502007	Hose Clamp	1
24	127918	Hose	1
25	1582161	Breather	1
25	16486	O-Ring (Not Illustrated)	1
26	1582160	Adapter (Breather)	1
27	1527395	Grommet	1
28	1502543	Nut (Flange)	4
29	132861	Capscrew	4
30	1639704	Seal	4
31	1637158	Retainer	4
32	1624189	Retainer	4

HYDRAULIC SUPPLY AND RETURN

ITEM	PART NO.	DESCRIPTION	QTY
	1528481	Plug (With O-Ring) (Not Illustrated - Fits in bottom of hydraulic tank)	1

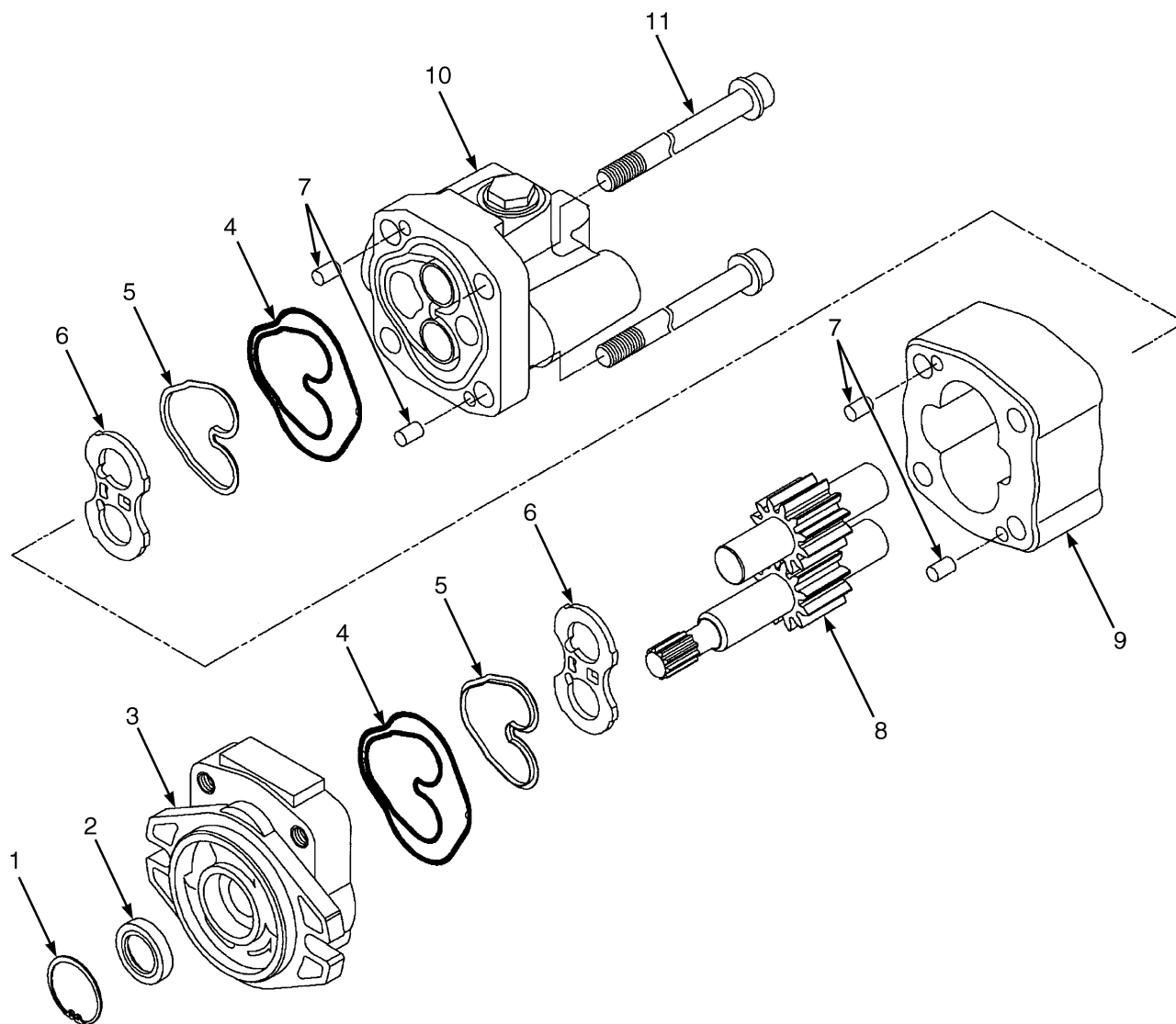
FOOTNOTES:

a	For Use With GM Engines	i	→ S/N L177B22938F
b	For Use With Mazda Engines	j	→ S/N L177V01589F
c	For Use With Yanmar Diesel Engines	k	S/N L177B15746E → (Wet Brake)
d	With Electronic Monitoring Package	l	S/N L177B15792E → (Dry Brake)
e	→ S/N L177B15745E (Wet Brake)	m	S/N L177B19935E →
f	→ S/N L177B15791E (Dry Brake)	n	S/N L177B20272E →
g	→ S/N L177B19934E	o	S/N L177B22939F →
h	→ S/N L177B20271E	p	S/N L177V01590F →

NOTES

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GEAR PUMP (FIGURE 9-2)



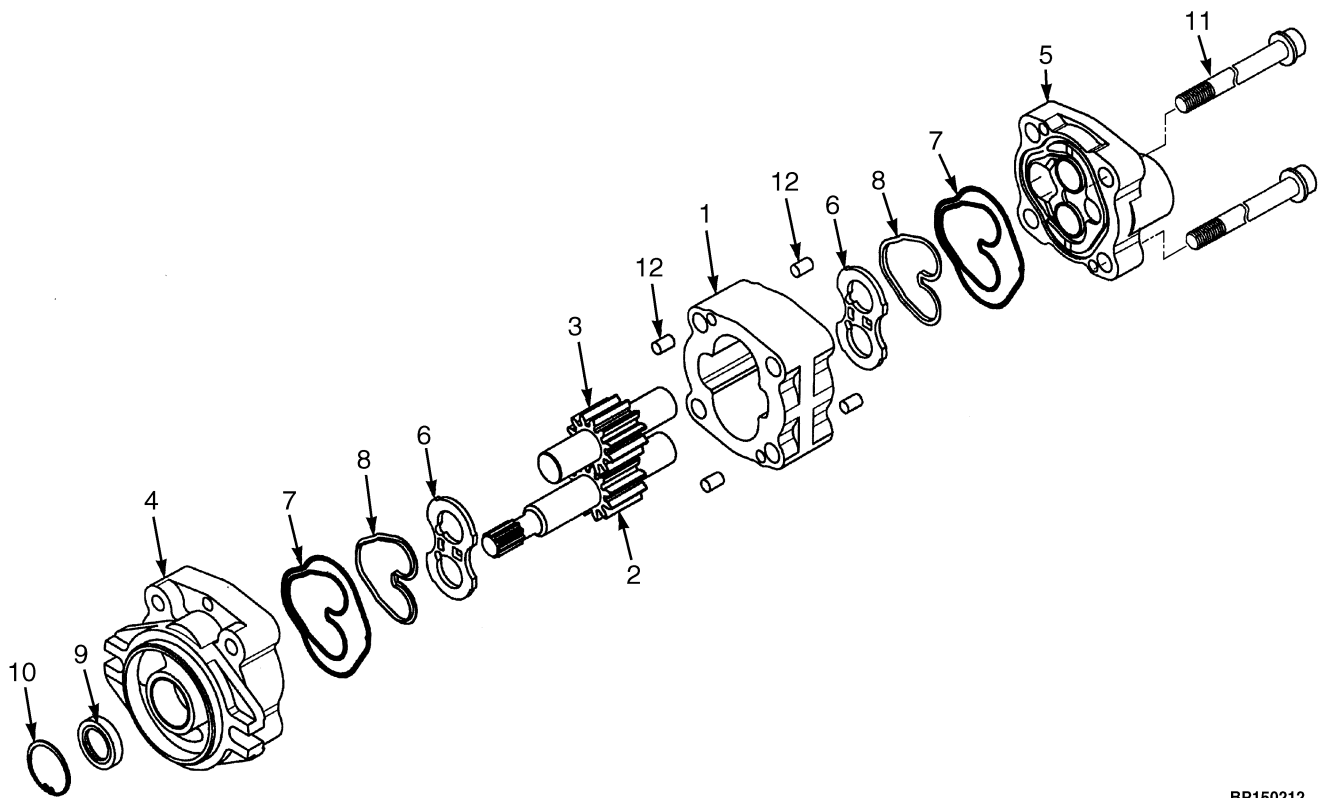
BP150098

GEAR PUMP**KEY:****A: Mazda****B: GM****C: Yanmar**

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
	a 2067801	Gear Pump (H70FT)	1	..	..
	b 2067800	Gear Pump (H40-60FT)	1	..	..
	a 2074211	Gear Pump (H70FT)	..	1	..
	b 2074230	Gear Pump (H40-60FT)	..	1	..
	a 2067803	Gear Pump (H70FT)	..	..	1
	b 2067802	Gear Pump (H40-60FT)	..	..	1
1		Snap Ring	1	1	1
2		Oil Seal	1	1	1
3	a 1578664	Flange	1	1	1
3	b 1581536	Flange	1	1	1
4		Back-Up Seal	2	2	2
5		Plate Seal	2	2	2
6	1578673	Side Plate	2	2	2
7	1578672	Dowel	4	4	4
8	1581537	Gear Set	1	..	..
8	1584987	Gear Set	..	1	..
8	1581534	Gear Set	..	..	1
8		Drive Gear	1	1	1
8		Driven Gear	1	1	1
9		Gear Plate	1	1	1
10	a 1578665	Cover	1	1	1
10	b 1581535	Cover	1	1	1
11	1578671	Screw	4	4	..
11	1578693	Screw	..	..	4
	1465140	Kit-Seal	1	1	1

FOOTNOTES:**a** High Pressure**b** Low Pressure

GEAR PUMP ASSEMBLY (FIGURE 9-3)



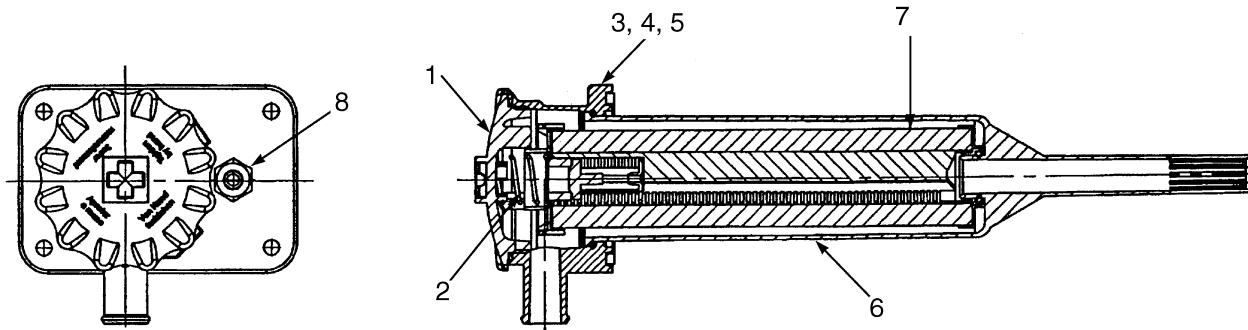
BP150212

GEAR PUMP ASSEMBLY**KEY:****A:** 24.0 Liter per Minute**B:** 25.7 Liter per Minute**C:** 29.4 Liter per Minute

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
	c 2098695	Gear Pump	1	..	..
	a 2098694	Gear Pump	..	1	..
	b 2098693	Gear Pump	..	..	1
1		Gear Plate	1	..	..
1		Gear Plate	..	1	..
1		Gear Plate	..	..	1
2		Drive Gear	1	..	..
2		Drive Gear	..	1	..
2		Drive Gear	..	..	1
3		Driven Gear	1	..	..
3		Driven Gear	..	1	..
3		Driven Gear	..	..	1
4	1581536	Flange	1	1	1
5	1578665	Cover	1	1	1
6	1578673	Side Plate	2	2	2
7		Plate Seal	2	2	2
8		Back-Up Ring	2	2	2
9		Oil Seal	1	1	1
10		Snap Ring	1	1	1
11	1578671	Screw	4	4	..
11	1578693	Screw	..	..	4
12	1578672	Dowel	4	4	4
	1581537	Gear Set	1	..	..
	1584987	Gear Set	..	1	..
	1581534	Gear Set	..	..	1
	1465140	Kit-Seal	1	1	1

FOOTNOTES:**a** S/N L177B19935E →**c** S/N L177B22939F →**b** S/N L177B20272E →

HYDRAULIC FILTER (FIGURE 9-4)



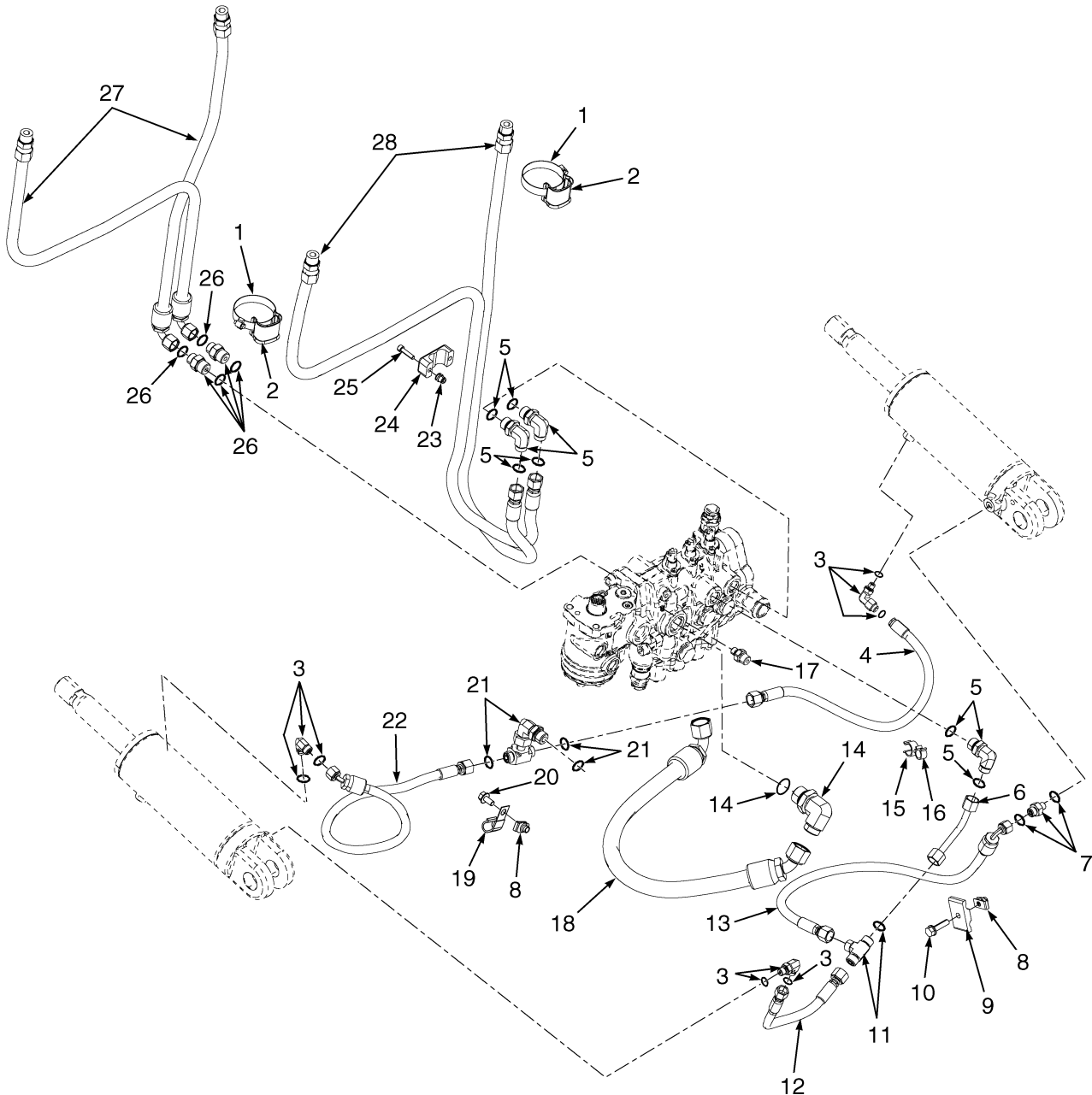
BP150095

ITEM	PART NO.	DESCRIPTION	QTY
	1544975	Hydraulic Filter	1
1	1705820	Cap (Hydraulic Filter)	1
1	1570338	Filter Head	1
1	1705548	O-Ring	1
1	1570339	Filter Head	1
2	1570340	Spring	1
3	1570342	Filter Head	1
3	1570343	Filter Head	1
4	16481	O-Ring	2
4	1705548	O-Ring	1
4	209457	Quad Ring	1
5	14191	O-Ring	1
5	16481	O-Ring	1
6	1570347	Filter Can	1
6	1570348	Ring	1
6	1570346	Filter Can	1
7	2070611	Hydraulic Filter	1
7	1705548	O-Ring	1
8	1568182	Fitting	1
8	1570352	Plug	1
	1705720	Kit-Filter Element	1
	1570337	Kit-Seal	1
	1705723	Kit-Seal	1

NOTES

[illegible]

HYDRAULIC HOSES (FIGURE 9-5) LIFT, TILT, AND AUXILIARY



HP150984

**HYDRAULIC HOSES
LIFT, TILT, AND AUXILIARY****KEY:****A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1481229	Clamp	2	2
2	1477996	Hose Clamp	2	2
3	1487058	Fitting	3	3
3	1527813	O-Ring	3	3
3	16481	O-Ring	3	3
4	2075630	Hose Assy	1	1
5	1487061	Fitting (Electronic Valve)	3	3
5	265787	O-Ring	1	1
5	16484	O-Ring	1	1
5	abcd 1487061	Fitting (Manual Valve)	1	1
5	265787	O-Ring	1	1
5	16484	O-Ring	1	1
5	efgh 1516201	Fitting (Manual Valve)	1	1
5	265731	O-Ring	1	1
5	16484	O-Ring	1	1
6	2074327	Tube Assy (Electronic Valve)	1	1
6	abcd 2074327	Tube Assy (Manual Valve)	1	1
6	efgh 2095230	Tube Assy (Manual Valve)	1	1
7	1486737	Fitting	1	1
7	16481	O-Ring	1	1
7	1527813	O-Ring	1	1
8	1480237	Nut	2	2
9	1359620	Clamp	1	1
10	1586627	Capscrew	1	1
11	1522425	Fitting	1	1
11	265787	O-Ring	1	1
12	2074326	Hose Assy	1	1
13	2077092	Hose Assy	1	1
14	1487069	Fitting	1	1
14	252729	O-Ring	1	1
15	1502055	Clamp (Swivel)	1	1
16	1502059	Clamp	1	1
17	2061646	Fitting (Diagnostic)	1	1
18	2070148	Hose Assy	1	1
19	325804	Clamp	1	1
20	1527879	Capscrew	1	1
21	1488464	Fitting	1	1
21	265787	O-Ring	3	3
22	2074325	Hose Assy	1	1
23	1531558	Insert	2	..
24	1360386	Clamp	1	..
25	293796	Capscrew	2	..
26	1486742	Fitting	2	2
26	265787	O-Ring	2	2
26	16484	O-Ring	2	2

HYDRAULIC HOSES LIFT, TILT, AND AUXILIARY

KEY:

A: Three Function

B: Four Function

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
27	2065051	Hose Assy	1	..
27	2065052	Hose Assy	..	1
28	2073495	Hose Assy	1	..
28	2073496	Hose Assy	..	1

FOOTNOTES:

a → S/N L177B17861E (Three Function Low Relief)

b → S/N L177B18169E (Four Function Low Relief)

c → S/N L177B18729E (Three Function High Relief)

d → S/N L177B18808E (Four Function High Relief)

e S/N L177B17862E → (Three Function Low Relief)

f S/N L177B18170E → (Four Function Low Relief)

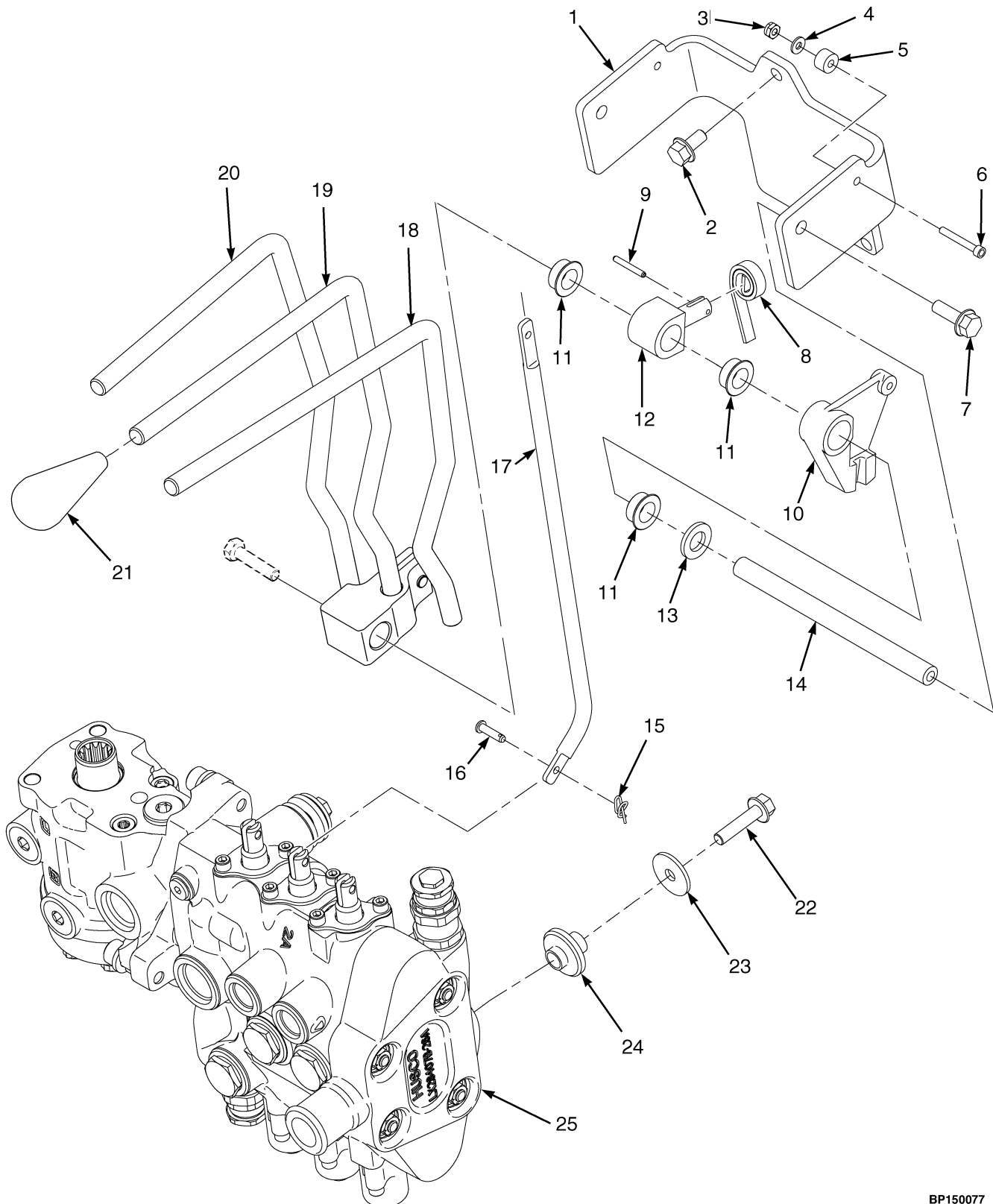
g S/N L177B18730E → (Three Function High Relief)

h S/N L177B18809E → (Four Function High Relief)

NOTES

[illegible]

HAND LEVERS (FIGURE 9-6) THREE FUNCTION — WITH DETENTED LEVERS



BP150077

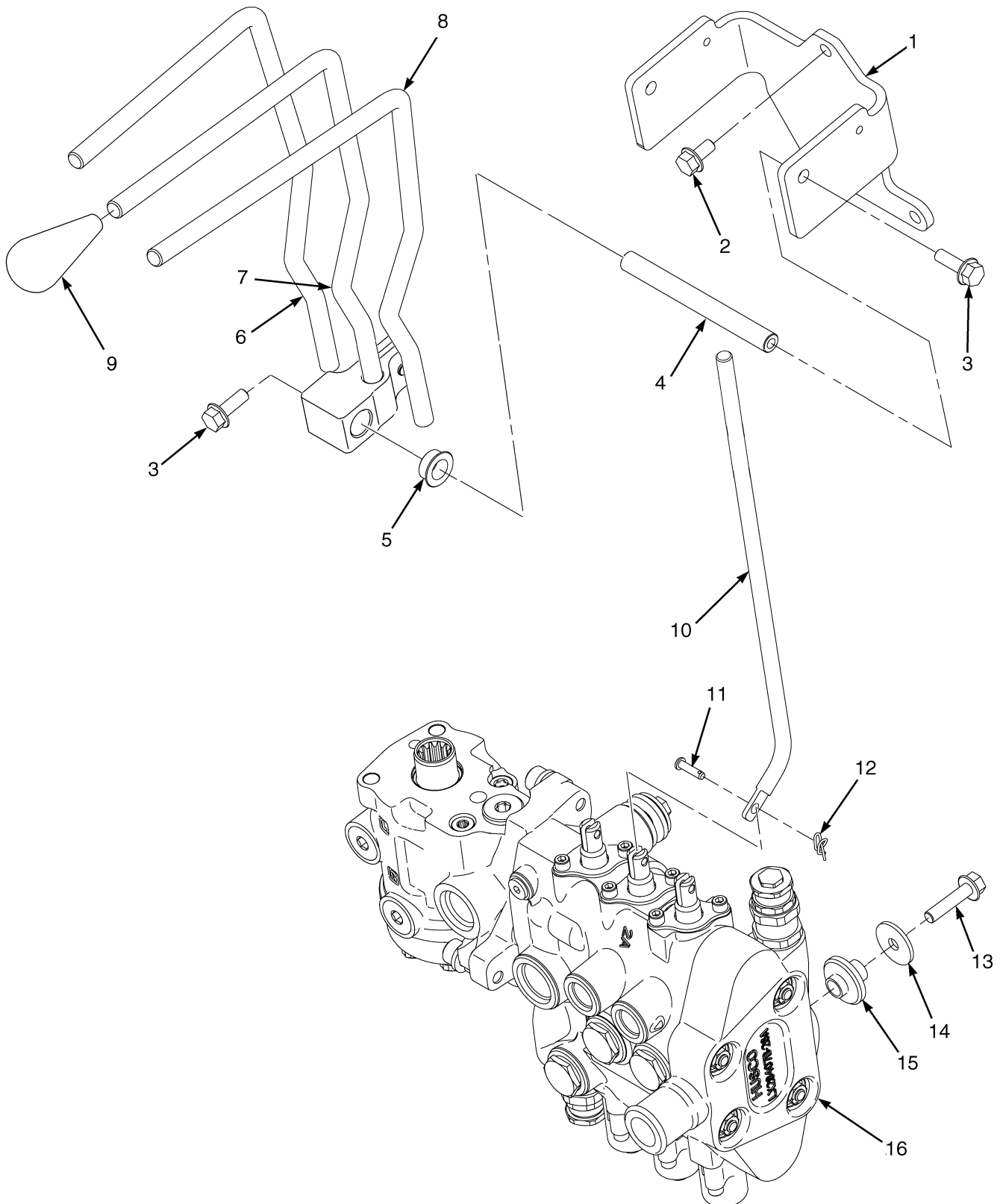
HAND LEVERS

THREE FUNCTION – WITH DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	c 1578454	Bracket	1
1	f 1670194	Bracket	1
2	1527879	Capscrew	3
3	c 230882	Locknut	1
3	f 316834	Nut	1
4	c 197067	Washer	2
4	f 320165	Washer	1
5	c 1528339	Spacer	1
5	f 1670677	Plate	1
6	c 18094	Capscrew	1
6	f 1527878	Capscrew	1
7	1583611	Capscrew	2
8	175861	Spring	1
9	302428	Roll Pin	1
10	1542546	Lever	2
11	1564747	Bushing	10
12	306113	Pin (Selector)	1
13	320161	Washer	3
14	c 1528328	Shaft	1
14	f 1670195	Shaft (Pivot)	1
15	1517361	Lockring	6
16	309109	Pin	6
17	c 1517394	Link	3
17	f 1662420	Link	3
18	c 2083706	Lever (Auxiliary One And Two)	1
18	f 2099398	Lever (Auxiliary One and Two)	1
19	c 2083702	Lever (Tilt)	1
19	f 2099394	Lever (Tilt)	1
20	c 2083701	Lever (Lift)	1
20	f 2099393	Lever (Lift)	1
21	1517395	Knob	3
22	1586627	Capscrew	3
23	1346752	Washer	3
24	2063991	Isolator	3
25	a 2064895	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
25	d 2095079	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
25	g 2105870	Hydraulic Control Valve (Manual) (H40-60FT)	1
25	b 2064899	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
25	e 2095083	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
25	g 2105874	Hydraulic Control Valve (Manual) (H70FT)	1

FOOTNOTES:**a** → S/N L177B17861E**b** → S/N L177B18729E**c** → S/N L177B26281F**d** S/N L177B17862E ↔ PENDING PER ECN 105530**e** S/N L177B18730E ↔ PENDING PER ECN 105530**f** S/N L177B26282F →**g** PENDING PER ECN 105530 →

HAND LEVERS (FIGURE 9-7) THREE FUNCTION — WITHOUT DETENTED LEVERS



BP150076

HAND LEVERS

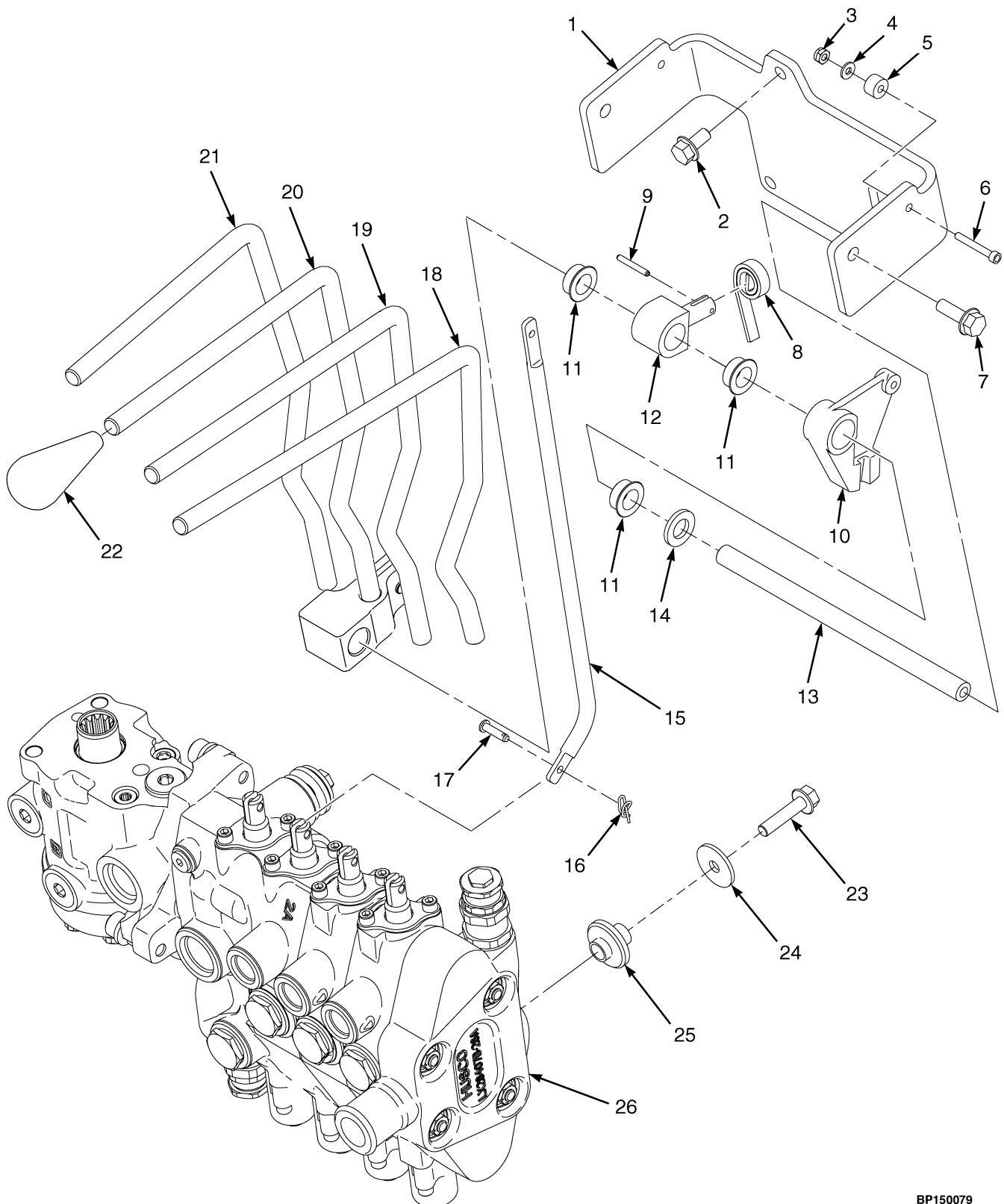
THREE FUNCTION – WITHOUT DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	c 1578453	Bracket	1
1	f 1656383	Bracket	1
1	i 1665746	Bracket	1
2	1527879	Capscrew	3
3	1583611	Capscrew	2
4	c 1528327	Shaft	1
4	g 1670292	Shaft	1
5	1564747	Bushing	6
6	c 2083701	Lever (Lift)	1
6	h 2099393	Lever (Lift)	1
7	c 2083702	Lever (Tilt)	1
7	g 2099394	Lever (Tilt)	1
8	c 2083703	Lever (Auxiliary One)	1
8	g 2099395	Lever (Auxiliary One)	1
9	1517395	Knob	3
10	c 1517394	Link	3
10	f 1643709	Link	3
10	i 1662420	Link	3
11	309109	Pin	6
12	1517361	Lockring	6
13	1586627	Capscrew	3
14	1346752	Washer	3
15	2063991	Isolator	3
16	a 2064895	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
16	d 2095079	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
16	j 2105870	Hydraulic Control Valve (Manual) (H40-60FT)	1
16	b 2064899	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
16	e 2095083	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
16	j 2105874	Hydraulic Control Valve (Manual) (H70FT)	1

FOOTNOTES:

a	→ S/N L177B17862E	f	S/N L177B26281F ↔ 9/2007
b	→ S/N L177B18730E	g	S/N L177B26282F →
c	→ S/N L177B26281F	h	S/N L177B17863E →
d	S/N L177B17862E ↔ PENDING PER ECN 105530	i	9/2007 →
e	S/N L177B18731E ↔ PENDING PER ECN 105530	j	PENDING PER ECN 105530 →

HAND LEVERS (FIGURE 9-8) FOUR FUNCTION — WITH DETENTED LEVERS



BP150079

HAND LEVERS

FOUR FUNCTION – WITH DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	c 1619997	Bracket	1
1	f 1656385	Bracket	1
1	h 1665748	Bracket	1
2	1527879	Capscrew	3
3	c 230882	Locknut	1
3	g 316834	Nut	1
4	c 197067	Washer	2
4	g 320156	Washer	1
5	c 1528339	Spacer	1
5	g 1670677	Plate	1
6	c 18094	Capscrew	1
6	g 1527878	Capscrew	1
7	1583611	Capscrew	2
8	175861	Spring	1
9	302428	Roll Pin	1
10	1542546	Lever	2
11	1564747	Bushing	12
12	306113	Pin (Selector)	1
13	c 1528329	Shaft	1
13	g 1670196	Shaft	1
14	320161	Washer	3
15	c 1517394	Link	4
15	f 1643709	Link	4
15	h 1662420	Link	4
16	1517361	Lockring	8
17	309109	Pin	8
18	c 2083705	Lever (Auxiliary Two And Three)	1
18	g 2099397	Lever (Auxiliary Two and Three)	1
19	c 2083703	Lever (Auxiliary One)	1
19	g 2099395	Lever (Auxiliary One)	1
20	c 2083702	Lever (Tilt)	1
20	g 2099394	Lever (Tilt)	1
21	c 2083701	Lever (Lift)	1
21	g 2099393	Lever (Lift)	1
22	1517395	Knob	4
23	1586627	Capscrew	3
24	1346752	Washer	3
25	2063991	Isolator	3
26	a 2064897	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
26	d 2095081	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
26	i 2105872	Hydraulic Control Valve (Manual) (H40-60FT)	1
26	b 2064901	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
26	e 2095085	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
26	i 2105876	Hydraulic Control Valve (Manual) (H70FT)	1

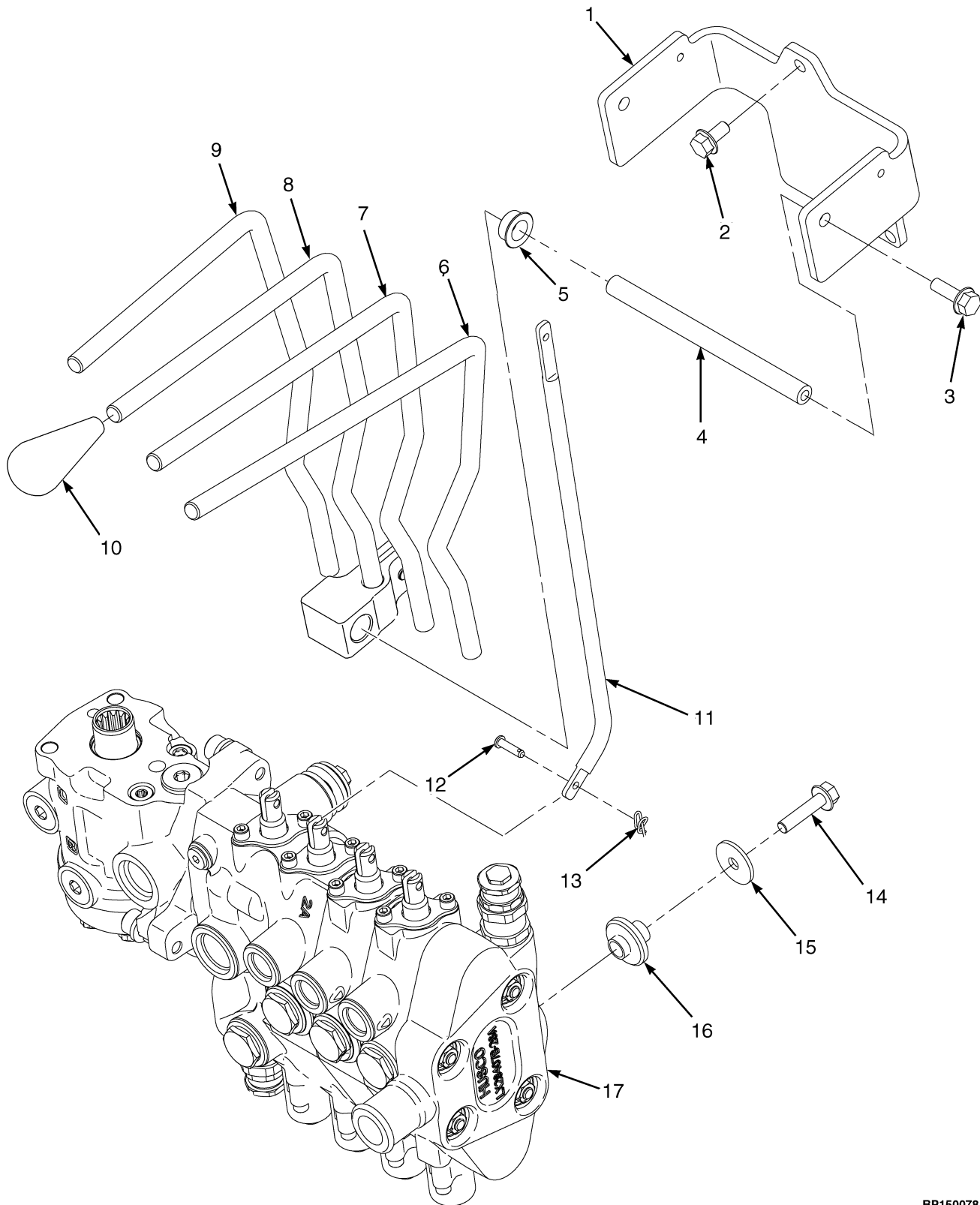
FOOTNOTES:

- a** → S/N L177B18169E
- b** → S/N L177B18808E
- c** → S/N L177B26281F
- d** S/N L177B18170E ↔ PENDING PER ECN
105530
- e** S/N L177B18809E ↔ PENDING PER ECN
105530
- f** S/N L177B26282F ↔ 9/2007
- g** S/N L177B26282F →
- h** 9/2007 →
- i** PENDING PER ECN 105530 →

NOTES

[illegible]

HAND LEVERS (FIGURE 9-9) FOUR FUNCTION — WITHOUT DETENTED LEVERS



BP150078

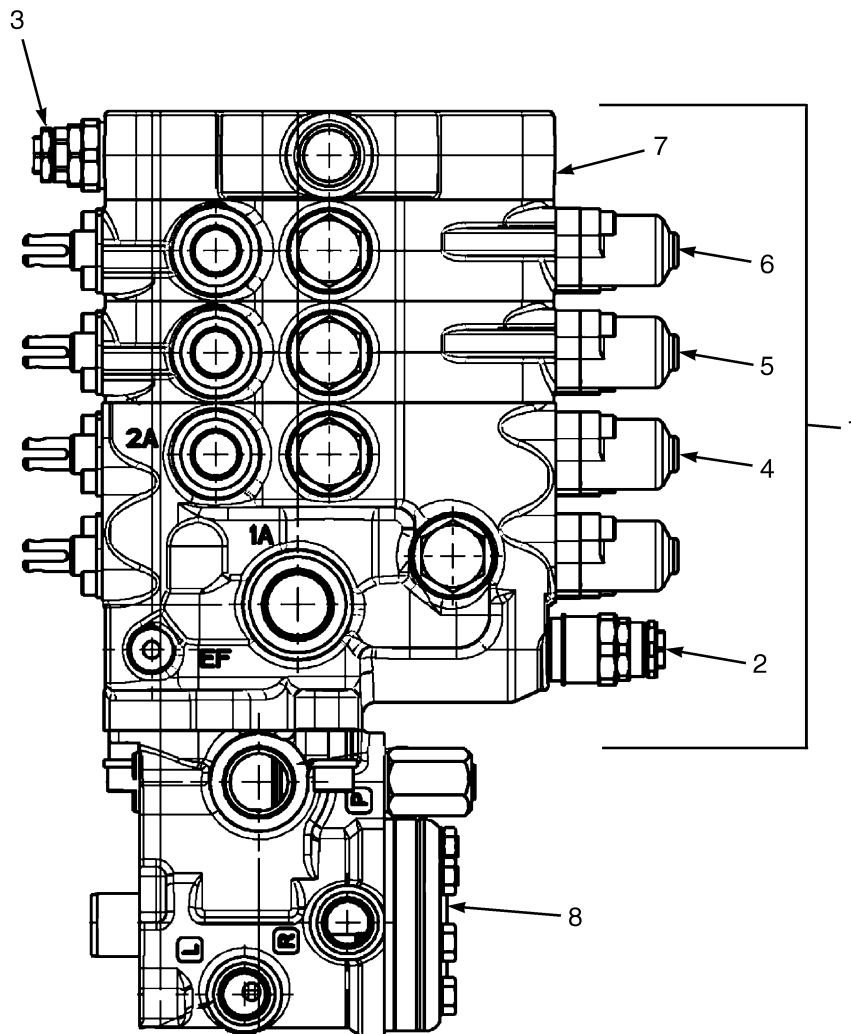
HAND LEVERS

FOUR FUNCTION – WITHOUT DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	c 1578454	Bracket	1
1	f 1665747	Bracket	1
2	1527879	Capscrew	3
3	1583611	Capscrew	2
4	c 1528328	Shaft	1
4	f 1670293	Shaft	1
5	1564747	Bushing	8
6	c 2083704	Lever (Auxiliary Two)	1
6	f 2099396	Lever (Auxiliary Two)	1
7	c 2083703	Lever (Auxiliary One)	1
7	f 2099395	Lever (Auxiliary One)	1
8	c 2083702	Lever (Tilt)	1
8	f 2099394	Lever (Tilt)	1
9	c 2083701	Lever (Lift)	1
9	f 2099393	Lever (Lift)	1
10	1517395	Knob	4
11	c 1517394	Link	4
11	f 1662420	Link	4
12	309109	Pin	8
13	1517361	Lockring	8
14	1586627	Capscrew	3
15	1346752	Washer	3
16	2063991	Isolator	3
17	a 2064897	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
17	d 2095081	Hydraulic Control Valve (Manual) (H40-60FT) (☞Figure 9-10).....	1
17	g 2105872	Hydraulic Control Valve (Manual) (H40-60FT)	1
17	b 2064901	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
17	e 2095085	Hydraulic Control Valve (Manual) (H70FT) (☞Figure 9-10).....	1
17	g 2105876	Hydraulic Control Valve (Manual) (H70FT)	1

FOOTNOTES:**a** → S/N L177B18169E**b** → S/N L177B18808E**c** → S/N L177B26281F**d** S/N L177B18170E ↔ PENDING PER ECN
105530**e** S/N L177B18809E ↔ PENDING PER ECN
105530**f** S/N L177B26282F →**g** PENDING PER ECN 105530 →

CONTROL VALVE ASSEMBLY (FIGURE 9-10) MANUAL CONTROL — THREE AND FOUR FUNCTION



BP140045

CONTROL VALVE ASSEMBLY
MANUAL CONTROL – THREE AND FOUR FUNCTION**KEY:****A: H40-60FT****B: H70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a 2064895	Hydraulic Control Valve (Manual) (3 Function)	1	..
	e 2095079	Hydraulic Control Valve (Manual) (3 Function)	1	..
	I 2105870	Hydraulic Control Valve (Manual) (3 Function)	1	..
	b 2064897	Hydraulic Control Valve (Manual) (4 Function)	1	..
	f 2095081	Hydraulic Control Valve (Manual) (4 Function)	1	..
	I 2105872	Hydraulic Control Valve (Manual (4 Function))	1	..
	c 2064899	Hydraulic Control Valve (Manual) (3 Function)	..	1
	g 2095083	Hydraulic Control Valve (Manual) (3 Function)	..	1
	I 2105874	Hydraulic Control Valve (Manual) (3 Function)	..	1
	d 2064901	Hydraulic Control Valve (Manual) (4 Function)	..	1
	h 2095085	Hydraulic Control Valve (Manual) (4 Function)	..	1
	I 2105876	Hydraulic Control Valve (Manual) (4 Function)	..	1
1	a 2064885	Hydraulic Control Valve (3 Function)	1	..
1	1580146	Kit-Seal (Three Function)	1	..
1	e 2095088	Hydraulic Control Valve 3 Function)	1	..
1	I 2105879	Hydraulic Control Valve (3 Function)	1	..
1	1670434	Kit-Seal (Three Function)	1	..
1	b 2064886	Hydraulic Control Valve 4 Function)	1	..
1	1580148	Kit-Seal (Four Function)	1	..
1	f 2095089	Hydraulic Control Valve (4 Function)	1	..
1	I 2105880	Hydraulic Control Valve (4 Function)	1	..
1	1670054	Kit-Seal (Four Function)	1	..
1	c 2064887	Hydraulic Control Valve (3 Function)	..	1
1	1580146	Kit-Seal (Three Function)	..	1
1	g 2095090	Hydraulic Control Valve (3 Function)	..	1
1	I 2105881	Hydraulic Control Valve (3 Function)	..	1
1	1670434	Kit-Seal (Three Function)	..	1
1	d 2064888	Hydraulic Control Valve (4 Function)	..	1
1	1580148	Kit-Seal (Four Function)	..	1
1	h 2095091	Hydraulic Control Valve (4 Function)	..	1
1	I 2105882	Hydraulic Control Valve (4 Function)	..	1
1	1670054	Kit-Seal (Four Function)	..	1
2	1578747	Relief Valve (3100 PSI) (Main Relief)	1	..
2	1578748	Relief Valve (3400 PSI Main Relief)	..	1
2	1580097	Kit-Seal	1	1
3	1578707	Relief Valve (2250 PSI) (Secondary)	1	1
3	1580131	Kit-Seal	1	1
4	abcd 1578743	Valve Section (Lift and Tilt) (☞Figure 9-12).....	1	1
4	efgh 1670464	Valve Section (Lift and Tilt) (☞Figure 9-13).....	1	1
4	I 1702420	Valve Section (Lift And Tilt)	1	1
5	ac 1578744	Valve Section (3 Function) (☞Figure 9-15).....	1	1
5	mj 1670463	Valve Section (3 Function) (☞Figure 9-16).....	1	1
6	bd 1578745	Valve Section (4 Function) (☞Figure 9-15).....	1	1
6	ki 1670462	Valve Section (4 Function) (☞Figure 9-16).....	1	1
7	1578746	Valve Section (☞Figure 9-17).....	1	1

CONTROL VALVE ASSEMBLY
MANUAL CONTROL – THREE AND FOUR FUNCTION**KEY:****A:** H40-60FT**B:** H70FT

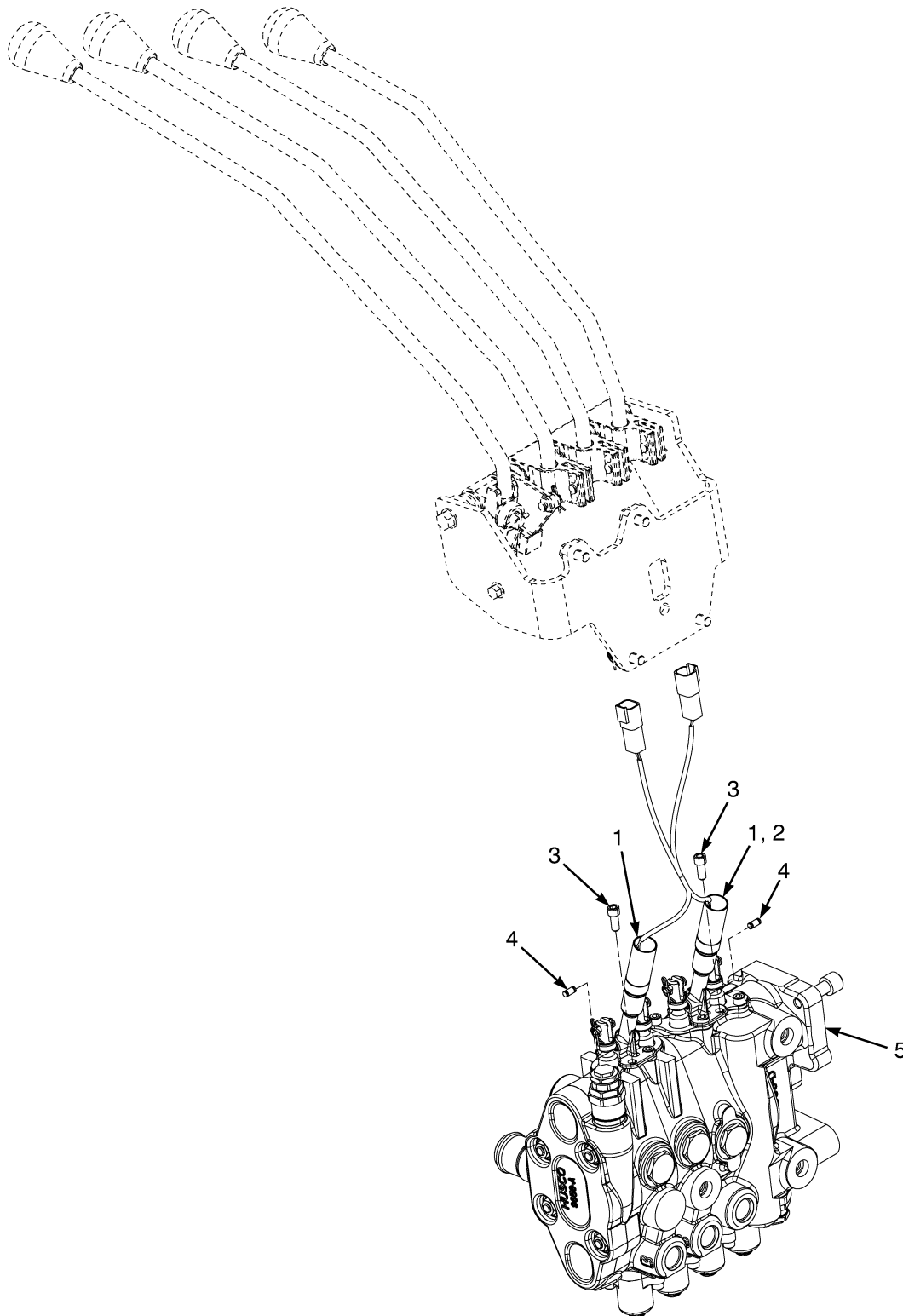
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
8	2063117	Steering Control Unit	1	..
8	2063118	Steering Control Unit	..	1

FOOTNOTES:

a	→ S/N L177B17862E	h	S/N L177B18809E ↔ PENDING PER ECN 105530
b	→ S/N L177B18170E	i	S/N L177B18809E →
c	→ S/N L177B18729E	j	S/N L177B18730E →
d	→ S/N L177B18808E	k	S/N L177B18170E →
e	S/N L177B17863E ↔ PENDING PER ECN 105530	l	PENDING PER ECN 105530 →
f	S/N L177B18171E ↔ PENDING PER ECN 105530	m	S/N L177B17862E →
g	S/N L177B18731E ↔ PENDING PER ECN 105530		

NOTES

[illegible]

CONTROL VALVE LOCKOUT GROUP (FIGURE 9-11)
MANUAL CONTROL VALVE (S/N L177V03025G →)

BP140133

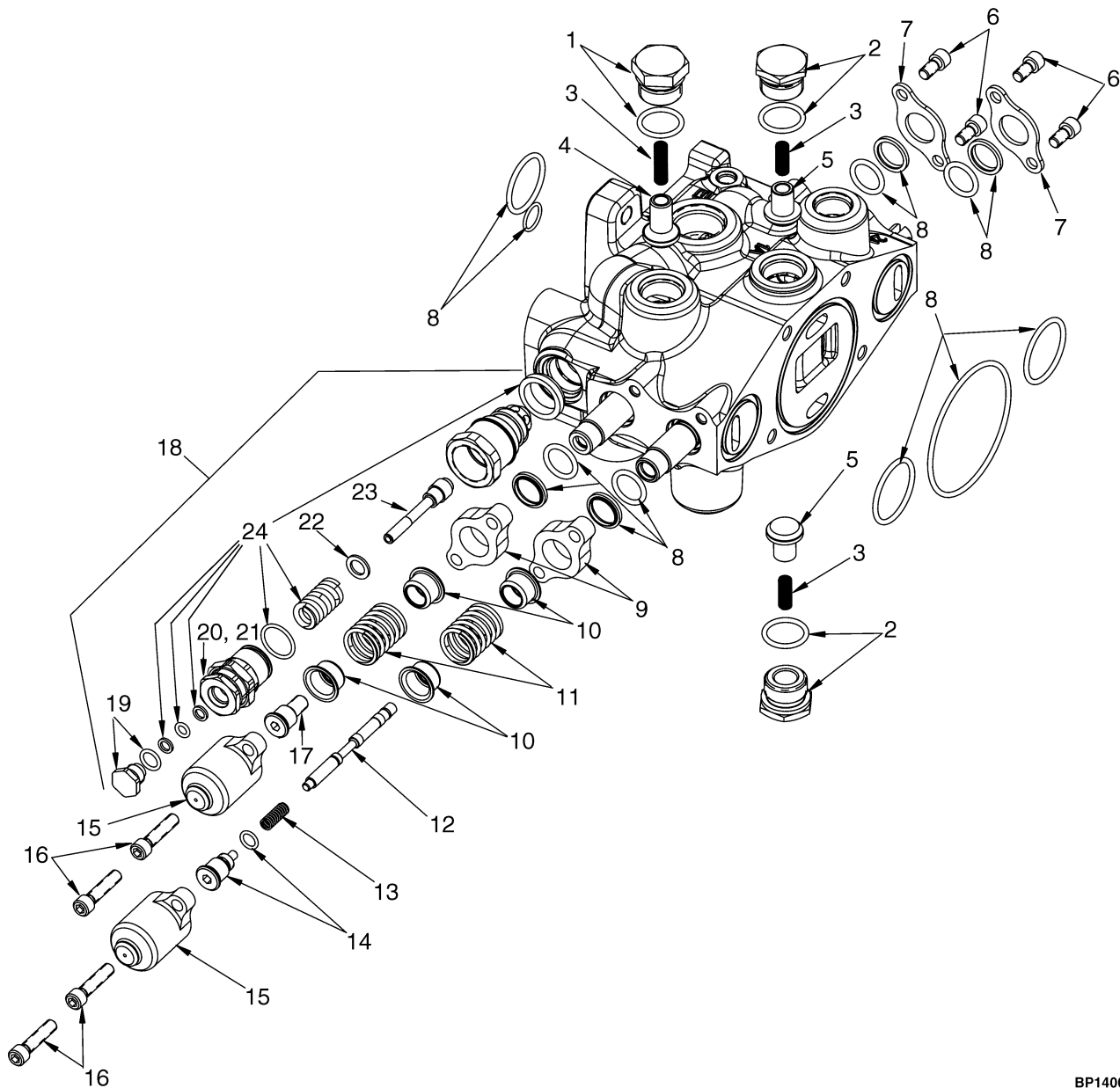
CONTROL VALVE LOCKOUT GROUP
MANUAL CONTROL VALVE (S/N L177V03025G →)**KEY:****A: 3 Function****B: 4 Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1683529	Solenoid (Assembly)	1	2
2	1683621	Solenoid (Assembly)	1	..
3	18748	Capscrew	4	4
4	1670413	Needle Roller	3	4
5		Manual Control Valve (☞ Figure 9-10).....	1	1

VALVE ASSEMBLY, LIFT AND TILT (FIGURE 9-12)

MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION

(→ S/N L177B18729E (3 FUNCTION HIGH RELIEF)) (→ S/N L177B17862E (3 FUNCTION LOW RELIEF))
(→ S/N L177B18169E (4 FUNCTION LOW RELIEF)) (→ S/N L177B18808E (4 FUNCTION HIGH RELIEF))



BP140046

VALVE ASSEMBLY, LIFT AND TILT**MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION**

(→ S/N L177B18729E (3 FUNCTION HIGH RELIEF)) (→ S/N L177B17862E (3 FUNCTION LOW RELIEF))
 (→ S/N L177B18169E (4 FUNCTION LOW RELIEF)) (→ S/N L177B18808E (4 FUNCTION HIGH RELIEF))

ITEM	PART NO.	DESCRIPTION	QTY
	1578743	Valve Section (Lift and Tilt)	1
1	1578713	Plug	2
2	1578940	Plug	1
3	77442	Spring	3
4	1578943	Poppet	1
5	77443	Poppet	2
6	16706	Screw	4
7	188515	Plate	2
8	1670445	Kit-Seal (Lift and Tilt)	1
9		Seal Plate	2
10	320289	Spring Seat	2
11	1581860	Spring	2
12	1581861	Piston	1
13	341462	Spring	1
14	386015	Spool End	1
15	1560681	Cap	2
16	1578705	Capscrew	4
17	1581859	Spool End	1
18	1578747	Relief Valve (3100 PSI) (Main Relief) (H40-60FT)	1
18	1578748	Relief Valve (3400 PSI Main Relief) (H70FT)	1
19		Plug	1
20		Screw	1
21		Nut	1
22		Washer	1
23		Poppet	1
24	1580097	Kit-Seal (H40-60FT)	1
24	1580131	Kit-Seal (H70FT)	1

VALVE ASSEMBLY, LIFT AND TILT (FIGURE 9-13)

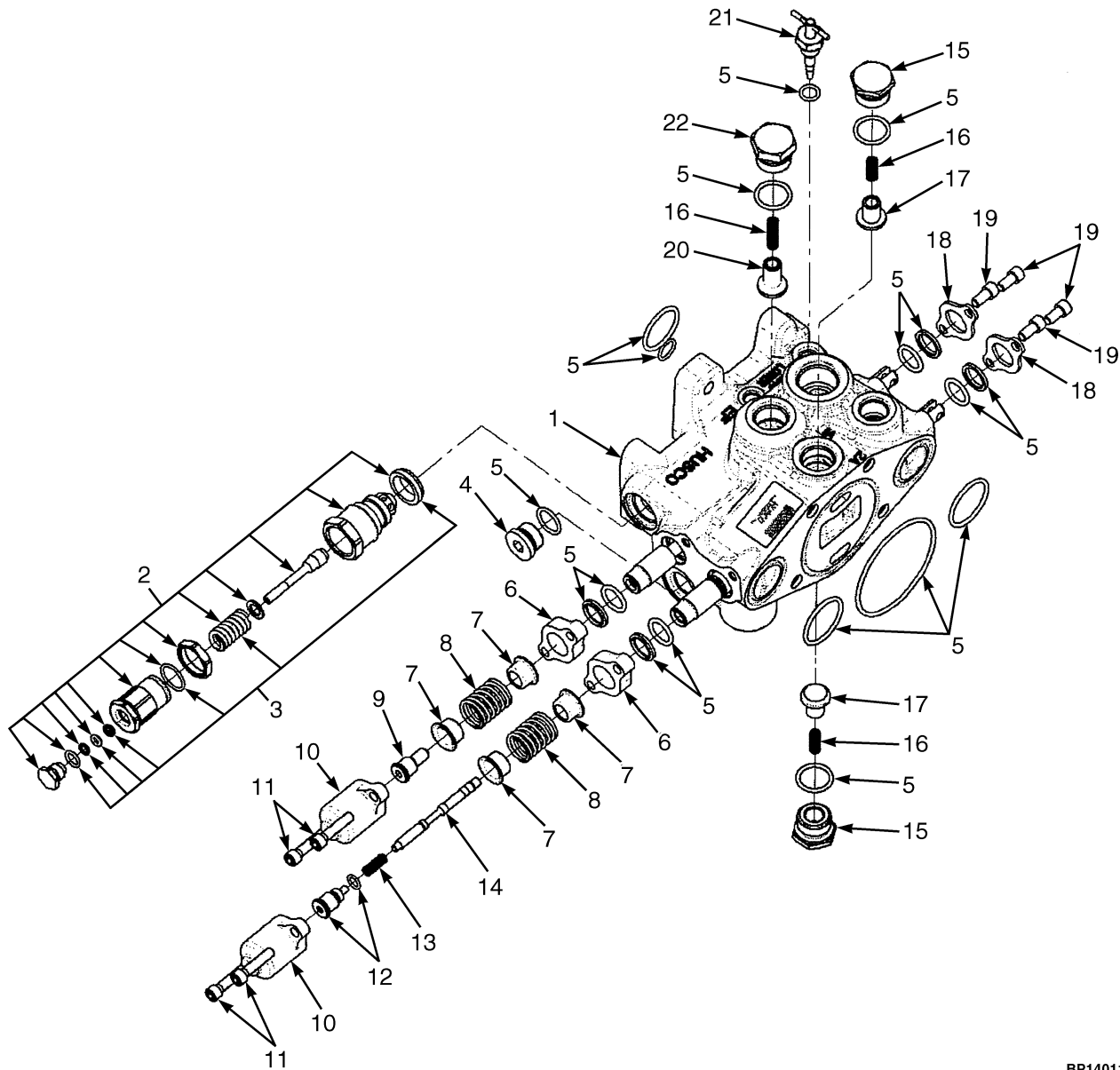
MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION

(S/N L177B17862E ↔ PENDING PER ECN 105530 (3 FUNCTION LOW RELIEF))

(S/N L177B18730E ↔ PENDING PER ECN 105530 (3 FUNCTION HIGH RELIEF))

(S/N L177B18170E ↔ PENDING PER ECN 105530 (4 FUNCTION LOW RELIEF))

(S/N L177B18809E ↔ PENDING PER ECN 105530 (4 FUNCTION HIGH RELIEF))



BP140111

VALVE ASSEMBLY, LIFT AND TILT**MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION**

(S/N L177B17862E ↔ PENDING PER ECN 105530 (3 FUNCTION LOW RELIEF))

(S/N L177B18730E ↔ PENDING PER ECN 105530 (3 FUNCTION HIGH RELIEF))

(S/N L177B18170E ↔ PENDING PER ECN 105530 (4 FUNCTION LOW RELIEF))

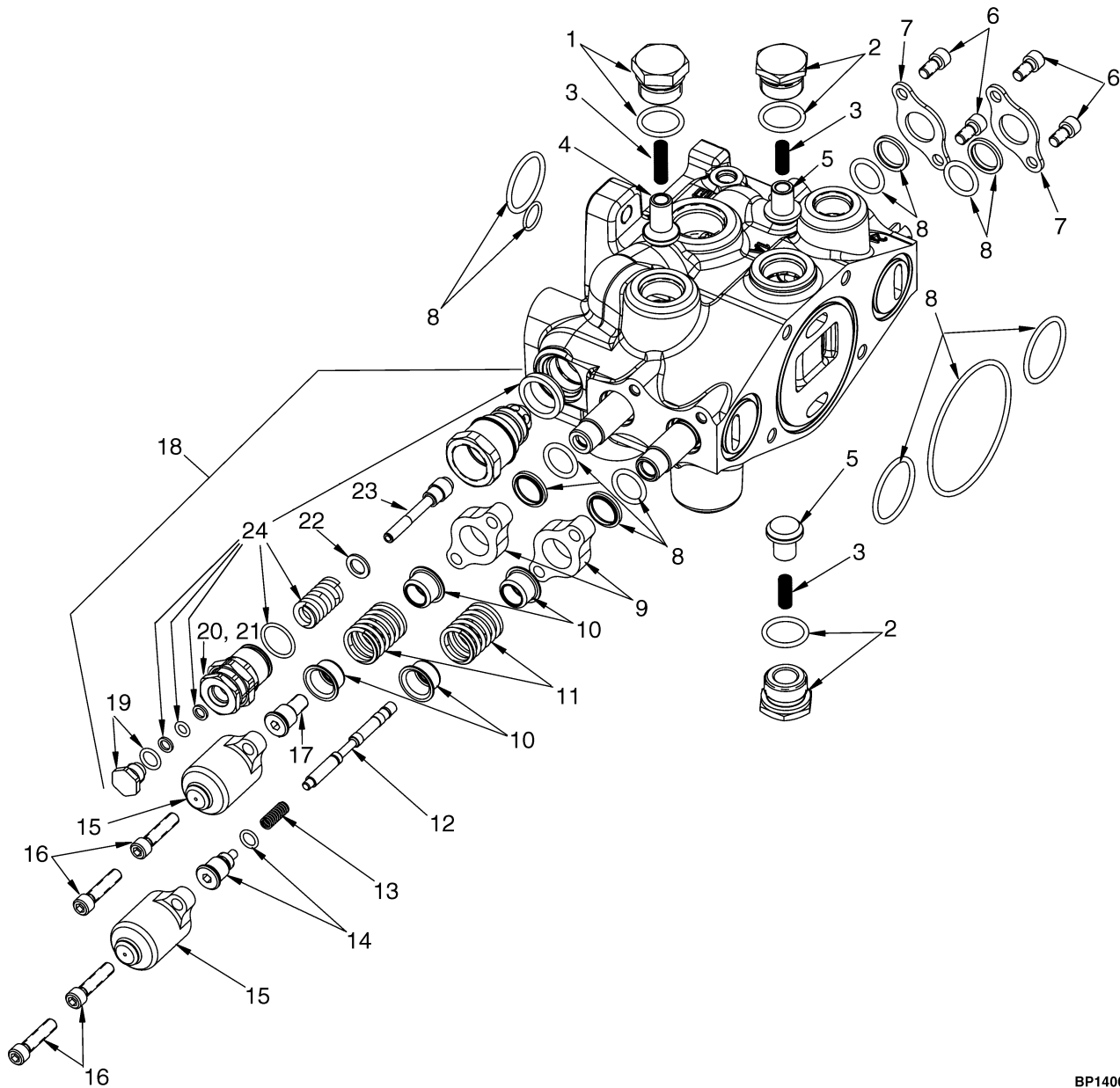
(S/N L177B18809E ↔ PENDING PER ECN 105530 (4 FUNCTION HIGH RELIEF))

KEY:**A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1670464	Valve Section (Lift and Tilt)	1	1
2	1578747	Relief Valve (3100 PSI) (Main Relief)	1	1
2	1578748	Relief Valve (3400 PSI Main Relief)	1	1
2	1580694	Plug	1	1
2	1580697	Screw	1	1
2	1580698	Nut	1	1
2	1580695	Washer	1	1
2	1580696	Poppet	1	1
3	1580097	Kit-Seal	1	1
4	1569602	Plug	1	1
5	1670445	Kit-Seal (Lift and Tilt)	1	1
6		Seal Plate	2	2
7	320289	Spring Seat	4	4
8	1581860	Spring	2	2
9	1581859	Spool End	1	1
10	1560681	Cap	2	2
11	1578705	Capscrew	4	4
12	386015	Spool End	1	1
13	341462	Spring	1	1
14	1581861	Piston	1	1
15	1578713	Plug	1	1
16	77442	Spring	3	3
17	77443	Poppet	2	2
18	188515	Plate	2	2
19	16706	Screw	4	4
20	1578943	Poppet	1	1
21	1670522	Kit-Valve (Manual)	1	1
22	1578940	Plug	1	1
	1670054	Kit-Seal (Four Function)	..	1
	1670434	Kit-Seal (Three Function)	1	..

VALVE ASSEMBLY, LIFT AND TILT (FIGURE 9-14)

MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION (PENDING PER ECN 105530 →)



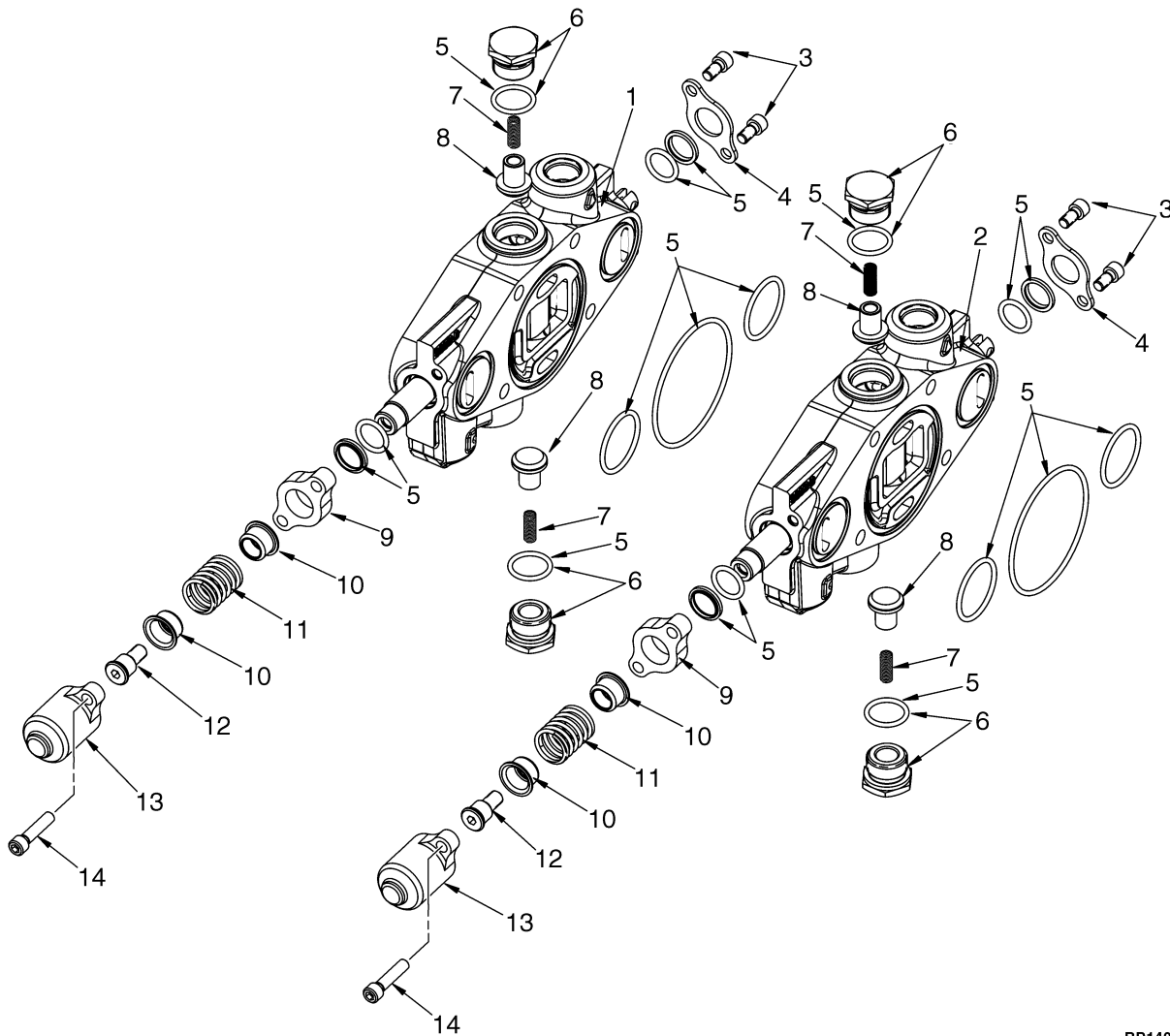
BP140046

VALVE ASSEMBLY, LIFT AND TILT
MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION (PENDING PER ECN 105530 →)

ITEM	PART NO.	DESCRIPTION	QTY
	1702420	Valve Section (Lift And Tilt)	1
1	1578713	Plug	2
2	1578940	Plug	1
3	77442	Spring	3
4	1578943	Poppet	1
5	77443	Poppet	2
6	16706	Screw	4
7	188515	Plate	2
8	1670522	Kit-Valve (Manual)	1
9	1560682	Plate	2
10	320289	Spring Seat	4
11	1581860	Spring	2
12	1581861	Piston	1
13	341462	Spring	1
14	386015	Spool End	1
15	1560681	Cap	2
16	1578705	Capscrew	4
17	1581859	Spool End	1
18	1578747	Relief Valve (3100 PSI) (Main Relief) (Low Relief)	1
18	1578748	Relief Valve (3400 PSI Main Relief) (High Relief)	1
19	1580694	Plug	1
20	1580697	Screw	1
21	1580698	Nut	1
22	1580695	Washer	1
23	1580696	Poppet	1
24	1580097	Kit-Seal	1

AUXILIARY ONE AND TWO (FIGURE 9-15) MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION

(→ S/N L177B17861E (3 FUNCTION LOW RELIEF)) (→ S/N L177B18169E (4 FUNCTION LOW RELIEF))
(→ S/N L177B18729E (3 FUNCTION HIGH RELIEF)) (→ S/N L177B18808E (4 FUNCTION HIGH RELIEF))



BP140047

AUXILIARY ONE AND TWO**MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION**

(→ S/N L177B17861E (3 FUNCTION LOW RELIEF)) (→ S/N L177B18169E (4 FUNCTION LOW RELIEF))
 (→ S/N L177B18729E (3 FUNCTION HIGH RELIEF)) (→ S/N L177B18808E (4 FUNCTION HIGH RELIEF))

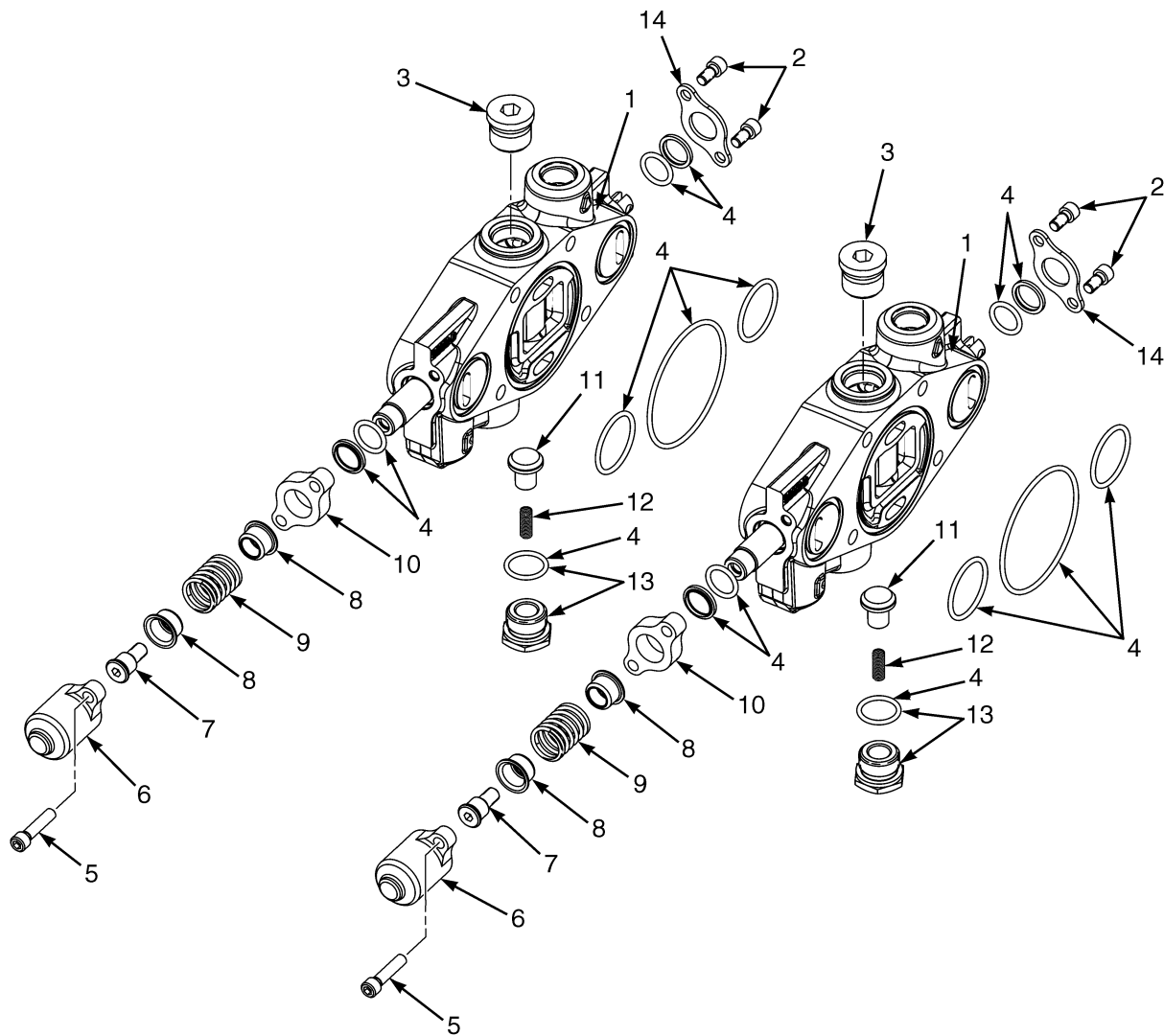
KEY:**A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1578744	Valve Section	1	1
2	1578745	Valve Section	..	1
3	16706	Screw	2	2
4	188515	Plate	1	1
5	1580147	Kit-Seal (Auxiliary One, Two and Three Sections)	1	1
6	1578713	Plug	2	2
6	77441	Plug	2	2
7	77442	Spring	2	2
8	77443	Poppet	2	2
9		Seal Plate	1	1
10	320289	Spring Seat	1	1
11	1581860	Spring	1	1
12	1581859	Spool End	1	1
13	1560681	Cap	1	1
14	1578705	Capscrew	2	2

AUXILIARY ONE AND TWO (FIGURE 9-16)

MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION

(S/N L177B17862E → (3 FUNCTION LOW RELIEF)) (S/N L177B18170E → (4 FUNCTION LOW RELIEF))
(S/N L177B18730E → (3 FUNCTION HIGH RELIEF)) (S/N L177B18809E → (4 FUNCTION HIGH RELIEF))



BP140119

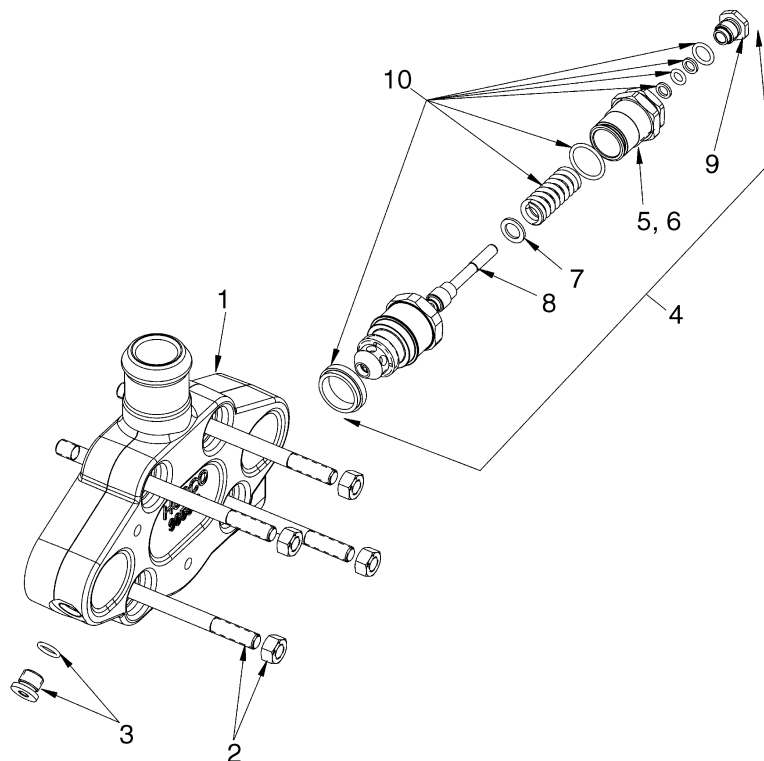
AUXILIARY ONE AND TWO**MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION**

(S/N L177B17862E → (3 FUNCTION LOW RELIEF)) (S/N L177B18170E → (4 FUNCTION LOW RELIEF))
 (S/N L177B18730E → (3 FUNCTION HIGH RELIEF)) (S/N L177B18809E → (4 FUNCTION HIGH RELIEF))

KEY:**A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1670463	Valve Section	1	1
1	1670462	Valve Section	1	1
2	16706	Screw	2	4
3	1578714	Plug	1	1
4	1580147	Kit-Seal (Auxiliary One, Two and Three Sections)	1	1
5	1578705	Capscrew	2	4
6	1560681	Cap	1	2
7	1581859	Spool End	1	2
8	320289	Spring Seat	2	4
9	1581860	Spring	1	2
10	1560682	Plate	1	2
11	77443	Poppet	1	2
12	77442	Spring	1	2
13	1578713	Plug	1	2
14	188515	Plate	1	2
	1670434	Kit-Seal (Three Function)	1	..
	1670054	Kit-Seal (Four Function)	..	1

OUTLET SECTION (FIGURE 9-17) MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION



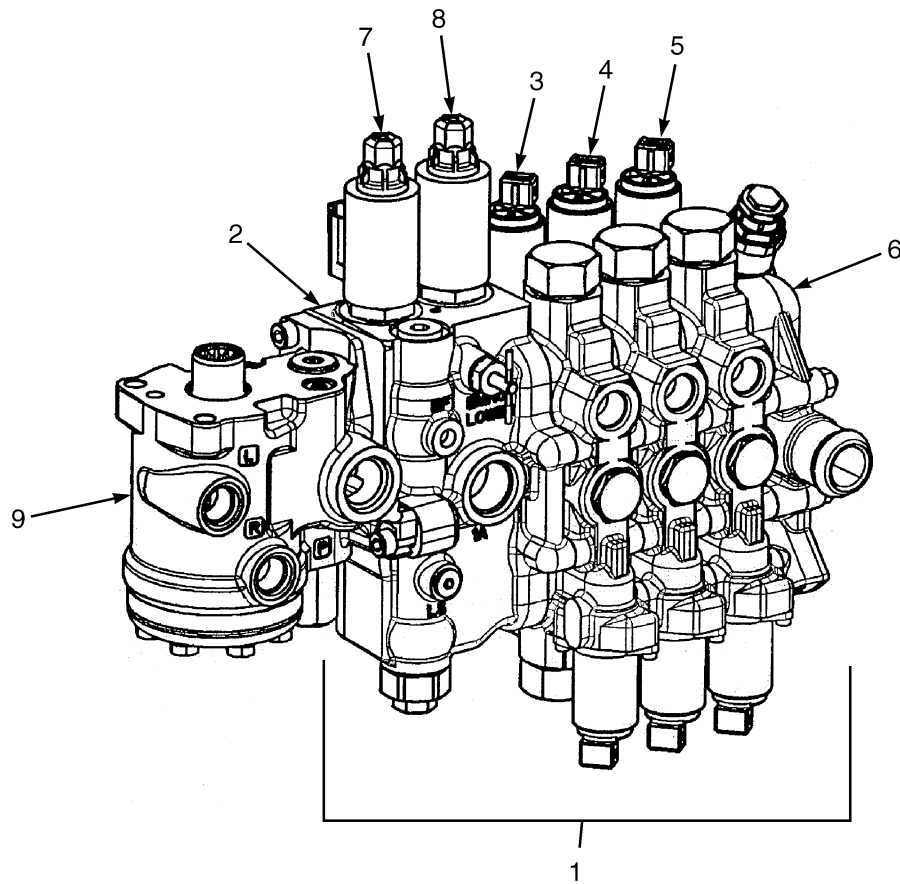
BP140048

ITEM	PART NO.	DESCRIPTION	QTY
1	1578746	Valve Section	1
2	1580155	Kit-Tie Rod (Three Function)	1
2	1580156	Kit-Tie Rod (Four Function)	1
2	15055	Nut	4
3	1578712	Plug	1
3	204128	Plug	1
4	1578707	Relief Valve (2250 PSI) (Secondary)	1
5		Nut	1
6		Screw	1
7		Washer	1
8		Poppet	1
9		Plug	1
10	1580131	Kit-Seal	1

NOTES

[illegible]

HYDRAULIC CONTROL VALVE (FIGURE 9-18)
ELECTRONIC CONTROL — THREE AND FOUR FUNCTION (→ S/N L177B18807E)



BP140053

HYDRAULIC CONTROL VALVE

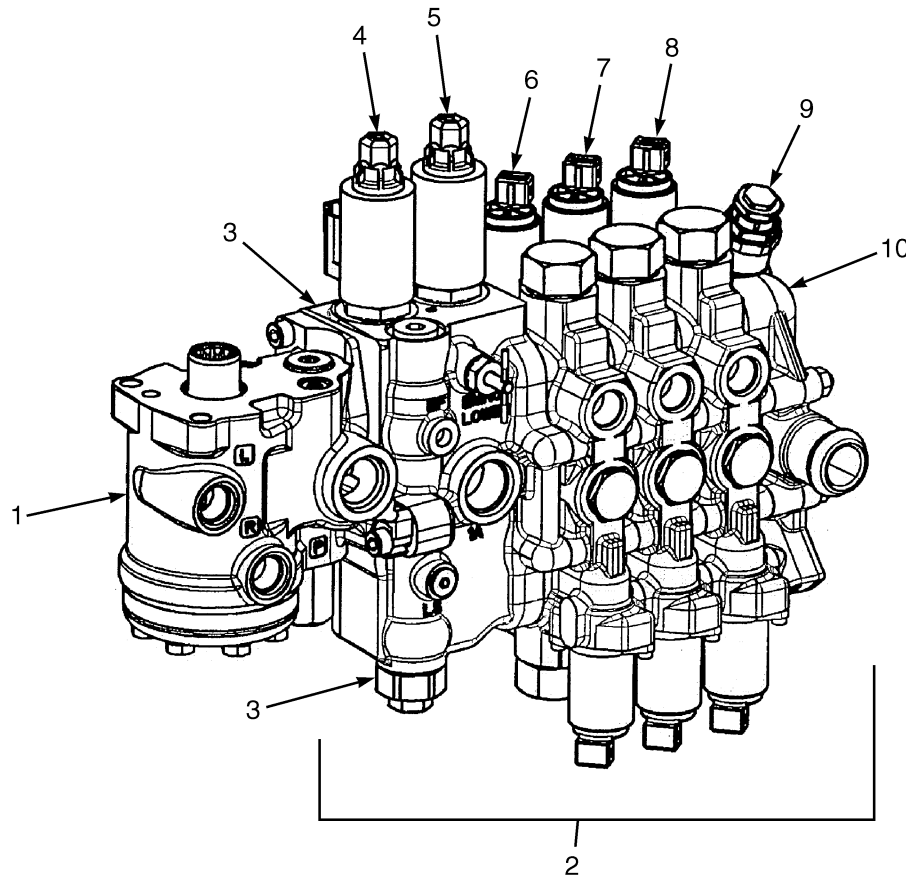
ELECTRONIC CONTROL – THREE AND FOUR FUNCTION (→ S/N L177B18807E)

KEY:**A:** H40-60FT**B:** H70FT

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	c 2064848	Hydraulic Control Valve	1	..
	c 2064851	Hydraulic Control Valve	..	1
	a 2064859	Hydraulic Control Valve	1	..
	a 2064862	Hydraulic Control Valve	..	1
1	c 2064845	Hydraulic Control Valve (Electronic)	1	..
1	c 2064849	Hydraulic Control Valve (Electronic)	..	1
1	a 2064857	Hydraulic Control Valve (Electronic)	1	..
1	a 2064860	Hydraulic Control Valve (Electronic)	..	1
2	1578701	Valve Section (Lift and Lower) (☞Figure 9-20).....	1	..
2	1578700	Valve Section (Lift and Lower) (☞Figure 9-20).....	..	1
3	1578702	Valve Section (Tilt) (☞Figure 9-23).....	1	1
4	c 1578703	Valve Section (Aux. 1) (☞Figure 9-24).....	1	1
5	a 1578741	Valve Section (Aux. 2) (☞Figure 9-25).....	1	1
6	1578704	Valve Section (Outlet) (☞Figure 9-26).....	1	1
7	1590113	Poppet Valve (Lift) (☞Figure 9-22).....	1	1
8	1590114	Poppet Valve (Lower) (☞Figure 9-22).....	1	1
9	2063117	Steering Control Unit (☞Figure 7-3).....	1	..
9	2063118	Steering Control Unit (☞Figure 7-3).....	..	1
	b 1579908	Kit-Seal	1	1
	b 2063991	Isolator	3	3
	b 1586627	Capscrew	3	3
	b 1346752	Washer	3	3

FOOTNOTES:**a** Four Function**c** Three Function**b** Not Illustrated

HYDRAULIC CONTROL VALVE (FIGURE 9-19)
ELECTRONIC VALVE ASSEMBLY — THREE AND FOUR FUNCTION (S/N L177B18806E →)



BP140112

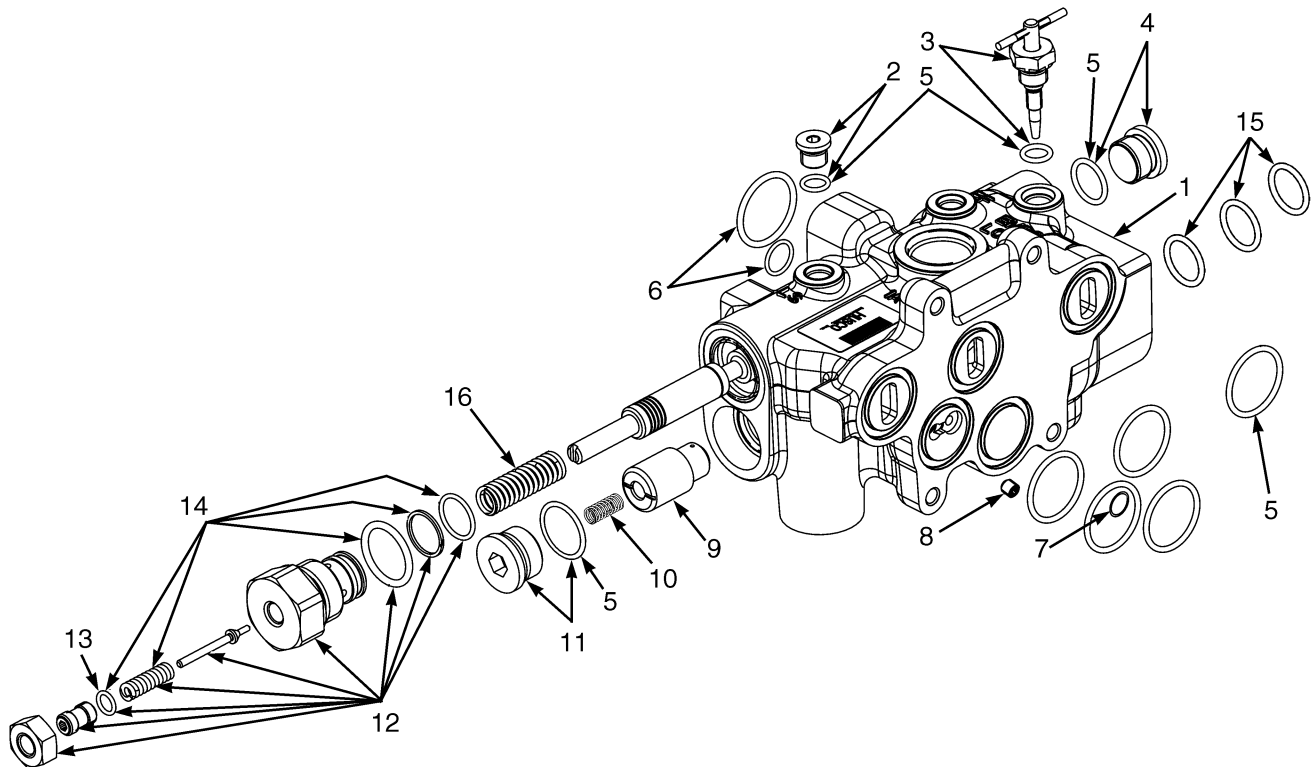
HYDRAULIC CONTROL VALVE

ELECTRONIC VALVE ASSEMBLY – THREE AND FOUR FUNCTION (S/N L177B18806E →)

KEY:**A:** Three Function Valve, Low Relief**B:** Four Function Valve, Low Relief**C:** Three Function Valve, High Relief**D:** Four Function Valve, High Relief

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	2095423	Hydraulic Control Valve	1	..	..	..
	2095425	Hydraulic Control Valve	..	1	..	..
	2095427	Hydraulic Control Valve	..	..	1	..
	2095429	Hydraulic Control Valve	..	..	..	1
1	2063117	Steering Control Unit	1	1	..	..
1	2063118	Steering Control Unit	..	..	1	1
2	2095432	Hydraulic Control Valve (Electronic)	1	..	..	..
2	2095433	Hydraulic Control Valve (Electronic)	..	1	..	..
2	2095434	Hydraulic Control Valve (Electronic)	..	..	1	..
2	2095435	Hydraulic Control Valve (Electronic)	..	..	..	1
3	1664485	Valve Section (Inlet) (☞ Figure 9-21).....	1	1	..	..
3	1578706	Relief Valve (Main)	1	1	..	..
3	1664486	Valve Section (Inlet) (☞ Figure 9-21).....	..	..	1	1
3	1578753	Relief Valve (Main)	..	..	1	1
4	1590113	Poppet Valve (☞ Figure 9-22).....	1	1	1	1
5	1590114	Poppet Valve (☞ Figure 9-22).....	1	1	1	1
6	1578702	Valve Section (Tilt) (☞ Figure 9-23).....	1	1	1	1
7	1578703	Valve Section (Aux. 1) (☞ Figure 9-24).....	1	1	1	1
8	1578741	Valve Section (Aux. 2) (☞ Figure 9-25).....	..	1	..	1
9	1578707	Relief Valve (2250 PSI) (Secondary) (☞ Figure 9-26).....	1	1	1	1
10	1578704	Valve Section (Outlet) (☞ Figure 9-26).....	1	1	1	1
	1578909	Kit-Seal	1	..	1	..
	1578908	Kit-Seal	..	1	..	1
	1578715	Kit-Tie Rod	1	..	1	..
	1580151	Kit-Tie Rod	..	1	..	1

VALVE ASSEMBLY, LIFT AND LOWER (FIGURE 9-20)
ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION
(→ S/N L177B18806E EXC. 08807, 09603, 08238, 08262)

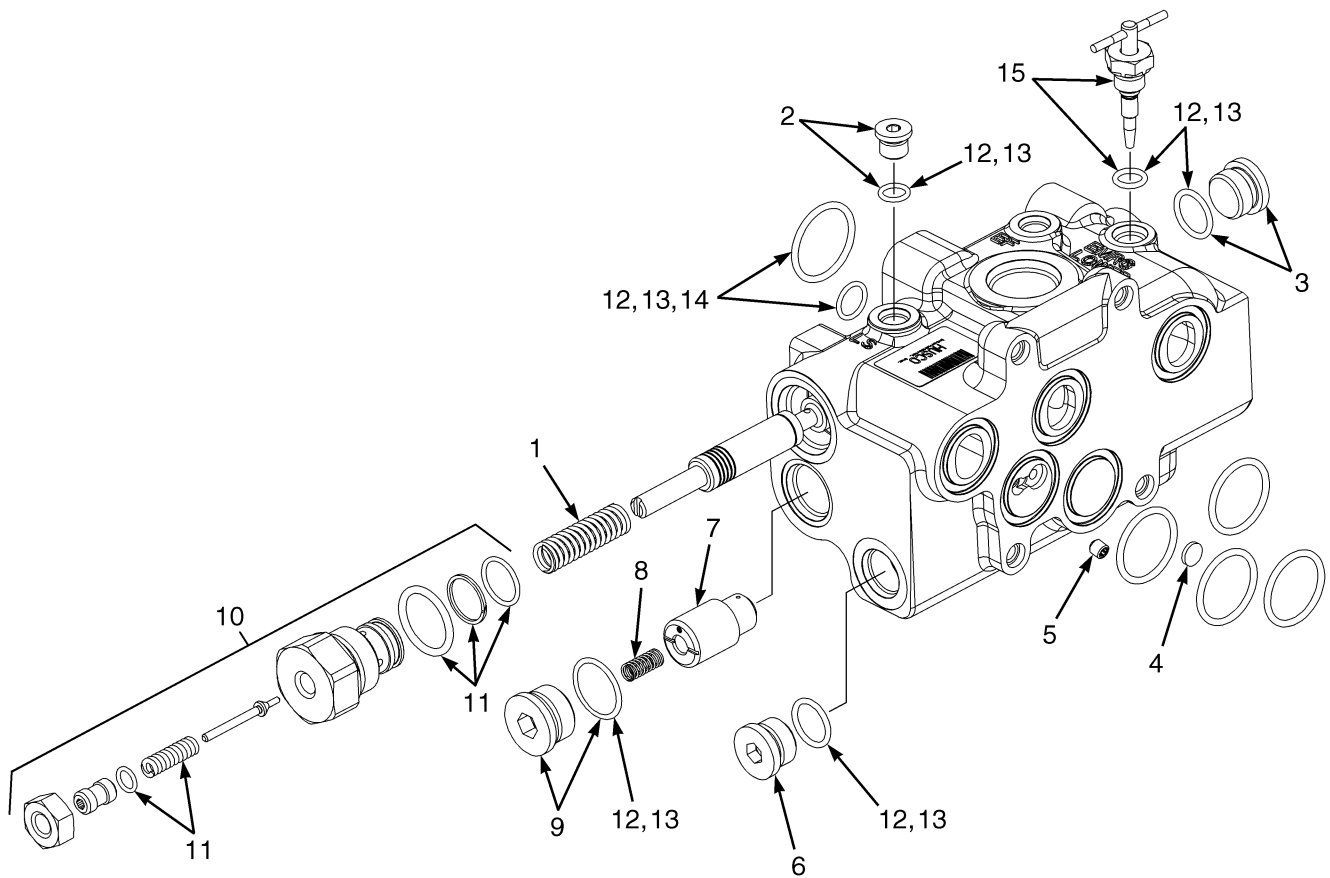


HP140018

VALVE ASSEMBLY, LIFT AND LOWER
ELECTRONIC CONTROL VALVE – THREE AND FOUR FUNCTION
 (→ S/N L177B18806E EXC. 08807, 09603, 08238, 08262)

ITEM	PART NO.	DESCRIPTION	QTY
1	1578701	Valve Section (Lift and Lower) (H40-60FT)	1
1	1578700	Valve Section (Lift and Lower) (H70FT)	1
2	1578712	Plug	1
2	204128	Plug	1
3	1581862	Kit-Valve (Manual Lowering)	1
4	1569602	Plug	1
5	1578904	Kit-Seal (Inlet)	1
6	1578911	Kit-Seal (Steering Control Unit Interface)	1
7	1578875	Shuttle Valve	1
8	1578888	Setscrew	1
9	1586280	Poppet	1
10	1578876	Spring	1
11	1578714	Plug	1
12	1578706	Relief Valve (Main) (H40-60FT)	1
12	1578753	Relief Valve (Main) (H70FT)	1
12	1580749	Screw	1
13	16480	O-Ring	1
14	1580132	Kit-Relief Valve	1
15	1586279	Kit-Seal (Electro Hydraulic Poppet Valve)	AR
16	1578881	Spring	1

HYDRAULIC CONTROL VALVE (FIGURE 9-21) ELECTRONIC VALVE INLET SECTION — THREE AND FOUR FUNCTION (S/N L177B18807E → INC. 08807, 09603, 08238, 08262)



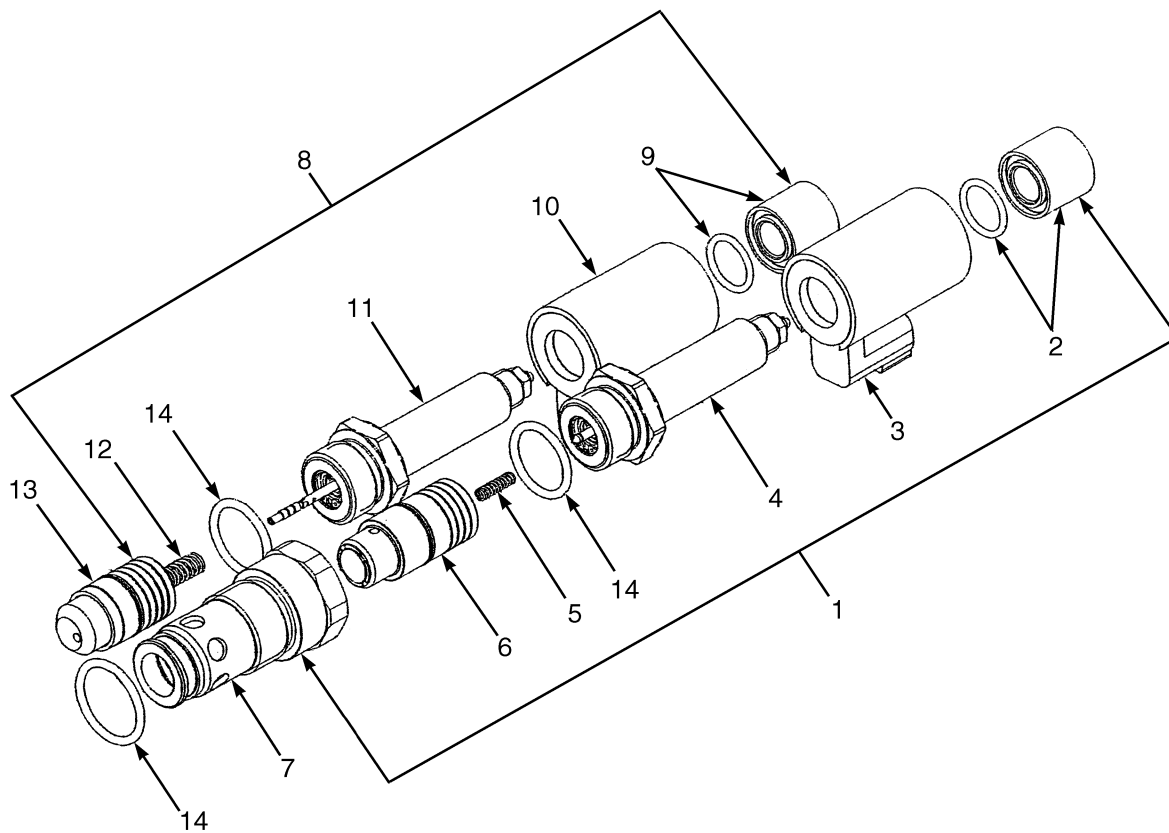
BP140113

HYDRAULIC CONTROL VALVE
ELECTRONIC VALVE INLET SECTION – THREE AND FOUR FUNCTION
 (S/N L177B18807E → INC. 08807, 09603, 08238, 08262)

KEY:**A: 3 Function Valve****B: 4 Function Valve**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1664485	Valve Section (Inlet)	1	..
	1664486	Valve Section (Inlet)	..	1
1	1578881	Spring	1	1
2	1578712	Plug	1	1
3	1629210	Plug	1	1
4	1578875	Shuttle Valve	1	1
5	1578888	Setscrew	1	1
6	1569602	Plug	1	1
7	1586280	Poppet	1	1
8	1578876	Spring	1	1
9	1578714	Plug	1	1
10	1578706	Relief Valve (Main)	1	..
10	1578753	Relief Valve (Main)	..	1
11	1580132	Kit-Relief Valve	1	1
12	1578909	Kit-Seal	1	1
13	1578904	Kit-Seal (Inlet)	1	1
14	1578911	Kit-Seal (Steering Control Unit Interface)	1	1
15	1581862	Kit-Valve (Manual Lowering)	1	1

HYDRAULIC CONTROL VALVE (FIGURE 9-22) ELECTRO HYDRAULIC POPPET VALVES — LIFT AND LOWER



BP140055

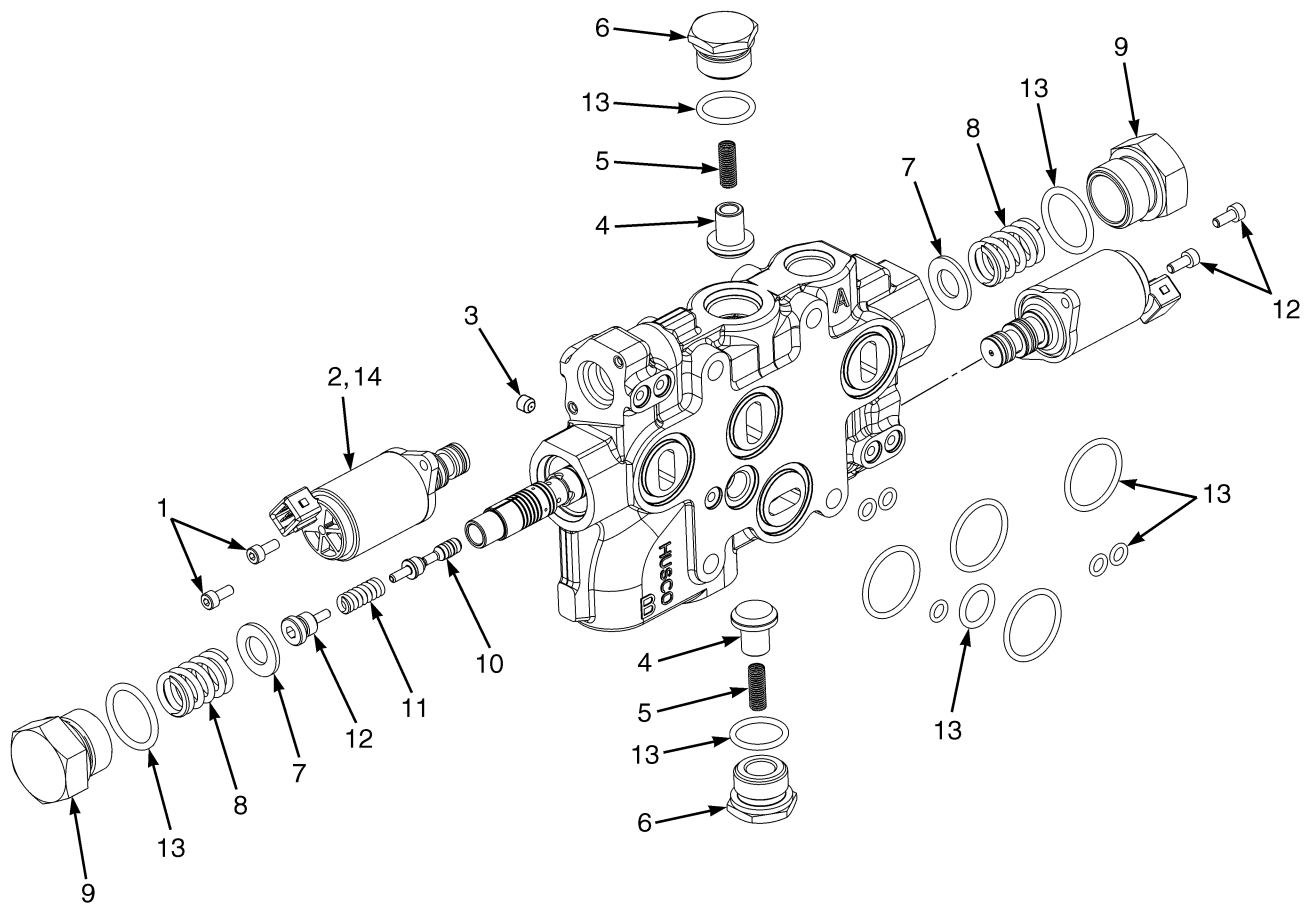
HYDRAULIC CONTROL VALVE

ELECTRO HYDRAULIC POPPET VALVES – LIFT AND LOWER

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1590114	Poppet Valve (Lower)	1
1	b 1699589	Poppet Valve (Lower)	1
2	1629163	Nut	1
3	1578710	Coil	1
4	1578918	Tube Assy (Solenoid)	1
5	1578934	Spring	1
6	a 1586021	Poppet	1
6	b 1699591	Poppet Valve	1
7	1586020	Sleeve	1
8	1590113	Poppet Valve (Lift)	1
9	1629163	Nut	1
10	1578710	Coil	1
11	1586019	Tube Assy (Solenoid)	1
12	1586017	Spring	1
13	1586016	Poppet	1
14	1586279	Kit-Seal (Electro Hydraulic Poppet Valve)	1

FOOTNOTES:**a** → PENDING PER ECN 10532211**b** PENDING PER ECN 10532211 →

HYDRAULIC CONTROL VALVE (FIGURE 9-23) ELECTRONIC VALVE TILT SECTION — THREE AND FOUR FUNCTION

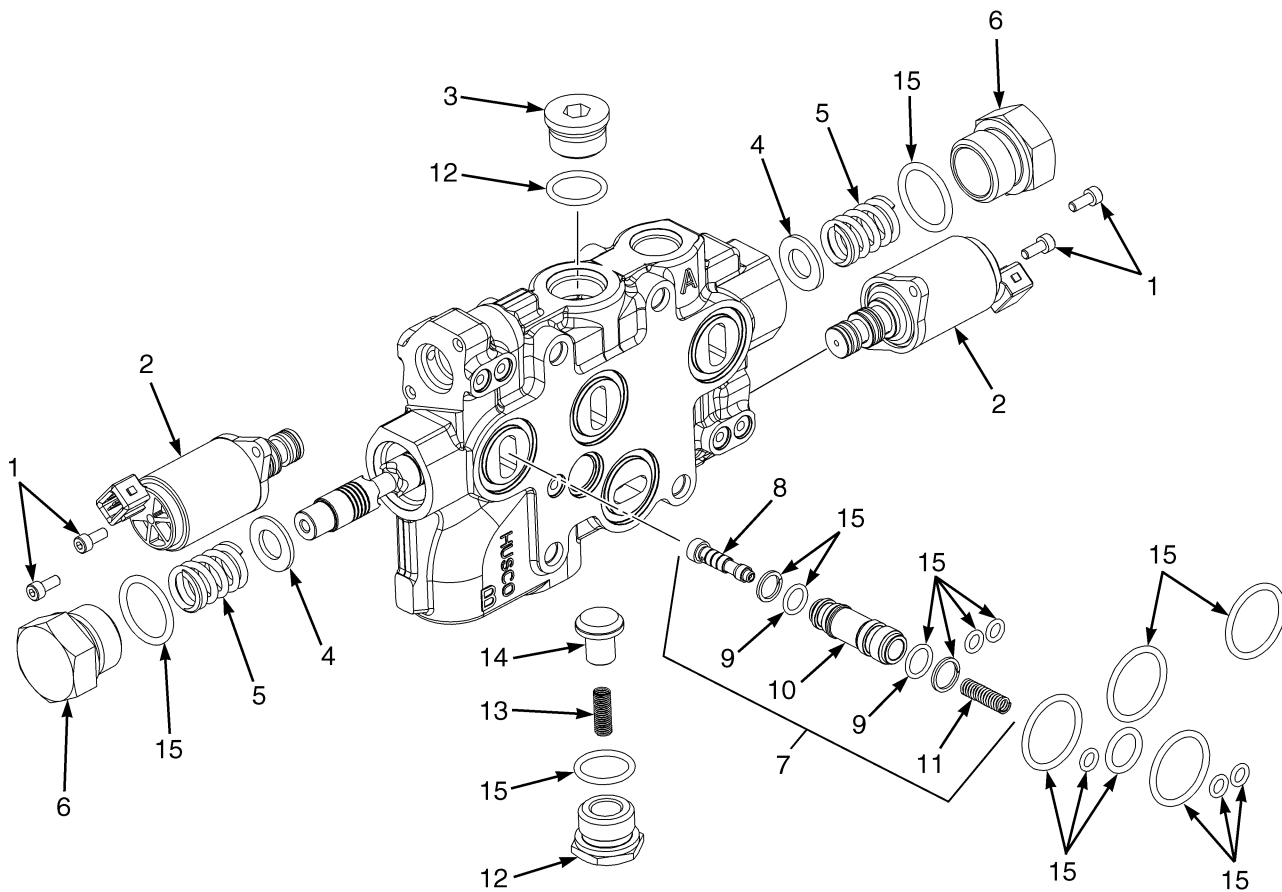


BP140114

HYDRAULIC CONTROL VALVE
ELECTRONIC VALVE TILT SECTION – THREE AND FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	1578702	Valve Section (Tilt)	1
1	1664395	Capscrew	4
2	1578711	Valve	2
3	1578887	Setscrew	1
4	77443	Poppet	2
5	77442	Spring	2
6	1578713	Plug	2
7	1578883	Washer	2
8	1578882	Spring	2
9	1578889	Plug	2
10	1580099	Piston and Rod	1
11	1580759	Spring	1
12	1580760	Spool End	1
13	1578905	Kit-Seal (Tilt)	1
14	1578912	Kit-Seal (Pressure Reducing Valve)	1

HYDRAULIC CONTROL VALVE (FIGURE 9-24) ELECTRONIC VALVE AUXILIARY ONE SECTION — THREE AND FOUR FUNCTION

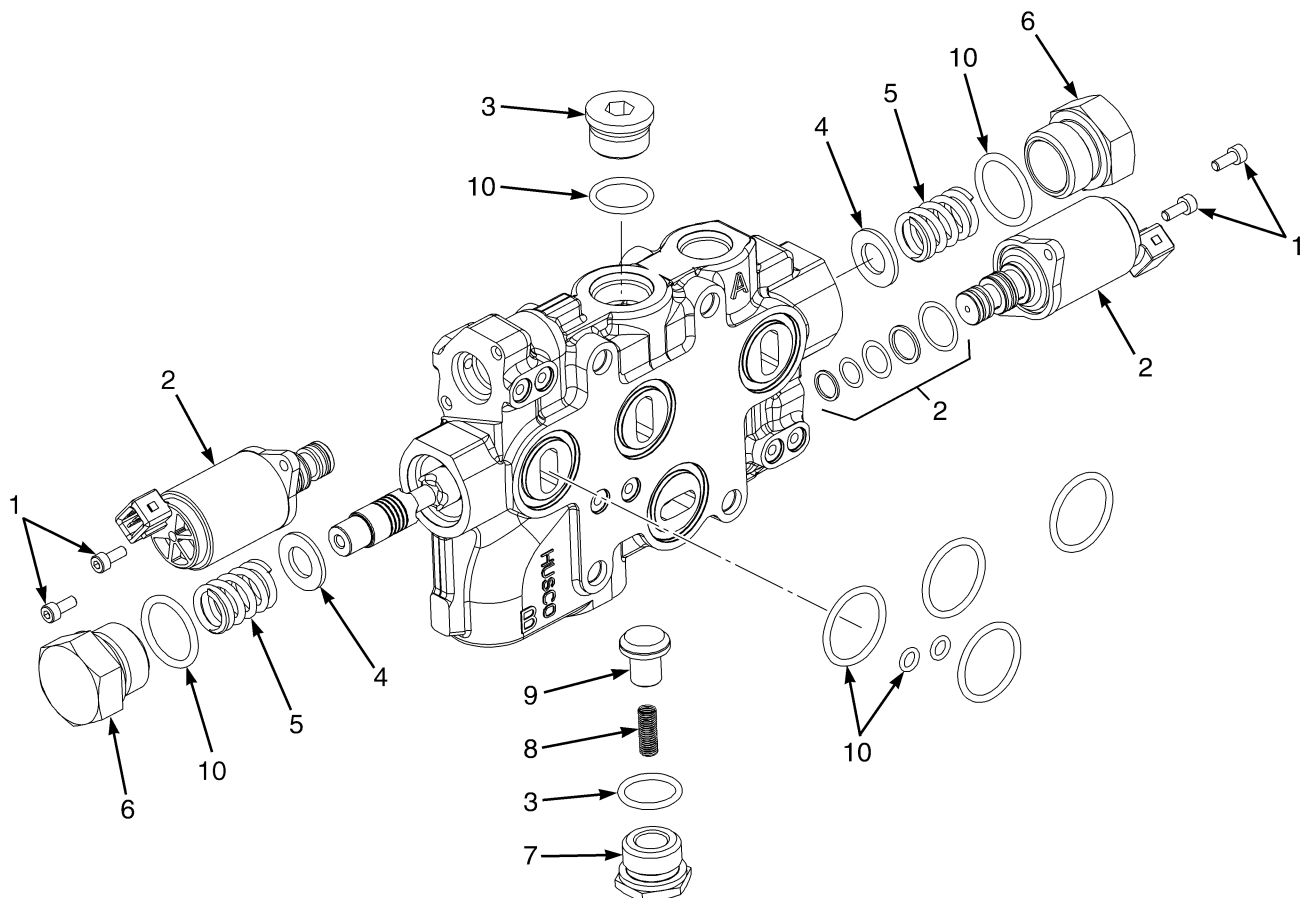


BP140115

HYDRAULIC CONTROL VALVE
ELECTRONIC VALVE AUXILIARY ONE SECTION – THREE AND FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	1578703	Valve Section (Aux. 1)	1
1	1664395	Capscrew	4
2	1578711	Valve	2
2	1578912	Kit-Seal (Pressure Reducing Valve)	1
3	1578714	Plug	1
4	1578883	Washer	2
5	1578882	Spring	2
6	1578889	Plug	2
7	1578718	Cartridge Valve	1
8		Spool	1
9	266519	O-Ring	1
10	1629166	Sleeve	1
11	1578886	Spring	1
12	1578713	Plug	1
13	77442	Spring	2
14	77443	Poppet	2
15	1578906	Kit-Seal (Auxiliary One Section)	1

HYDRAULIC CONTROL VALVE (FIGURE 9-25) ELECTRONIC VALVE AUXILIARY TWO SECTION — FOUR FUNCTION

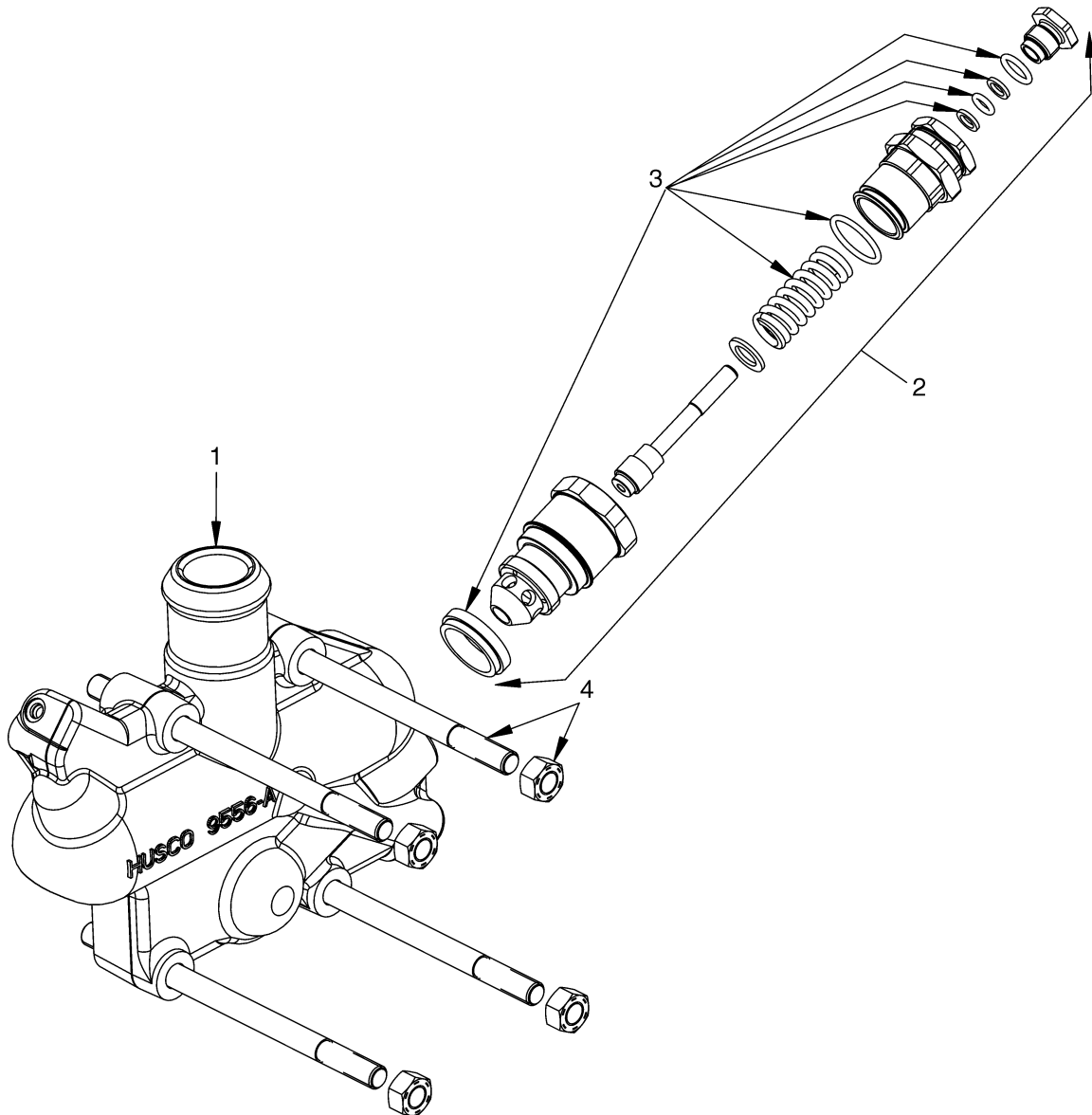


BP140116

**HYDRAULIC CONTROL VALVE
ELECTRONIC VALVE AUXILIARY TWO SECTION – FOUR FUNCTION**

ITEM	PART NO.	DESCRIPTION	QTY
	1578741	Valve Section (Aux. 2)	1
1	1578878	Capscrew	4
2	1578711	Valve	2
2	1578912	Kit-Seal (Pressure Reducing Valve)	1
3	1578714	Plug	1
4	1578883	Washer	2
5	1578882	Spring	2
6	1578889	Plug	2
7	1578713	Plug	1
8	77442	Spring	2
9	77443	Poppet	2
10	1578907	Kit-Seal (Auxiliary Two Section)	1

HYDRAULIC CONTROL VALVE (FIGURE 9-26)
ELECTRONIC VALVE OUTLET SECTION — THREE AND FOUR FUNCTION
(→ PENDING PER ECN 10532215)

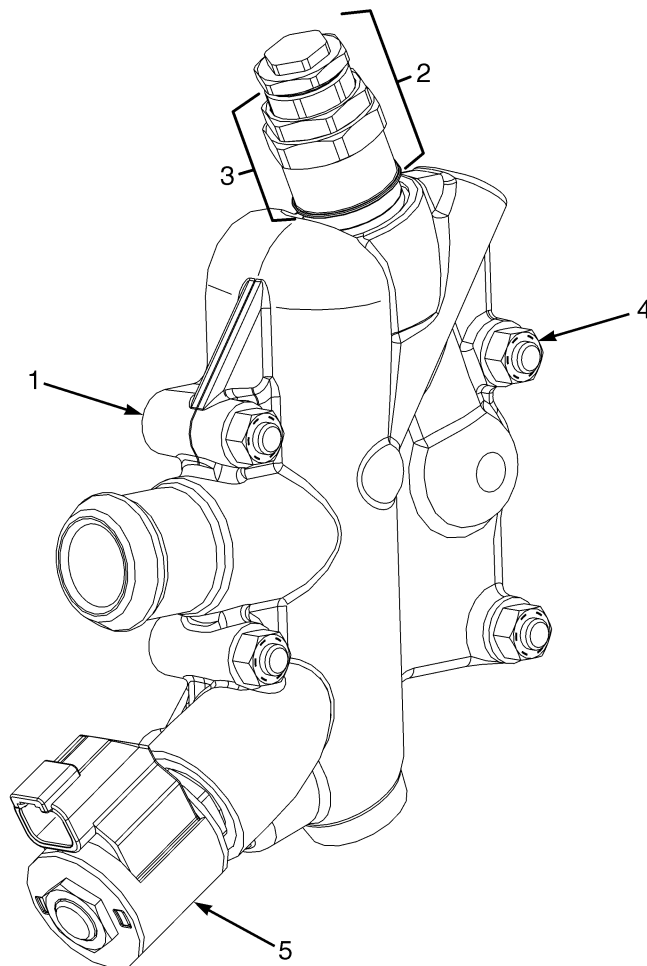


BP140075

HYDRAULIC CONTROL VALVE
ELECTRONIC VALVE OUTLET SECTION – THREE AND FOUR FUNCTION
(→ PENDING PER ECN 10532215)

ITEM	PART NO.	DESCRIPTION	QTY
1	1578704	Valve Section (Outlet)	1
2	1578707	Relief Valve (2250 PSI) (Secondary)	1
3	1580131	Kit-Seal	1
4	1578715	Kit-Tie Rod (Three Function)	1
4	1580151	Kit-Tie Rod (Four Function)	1
4	15055	Nut	4

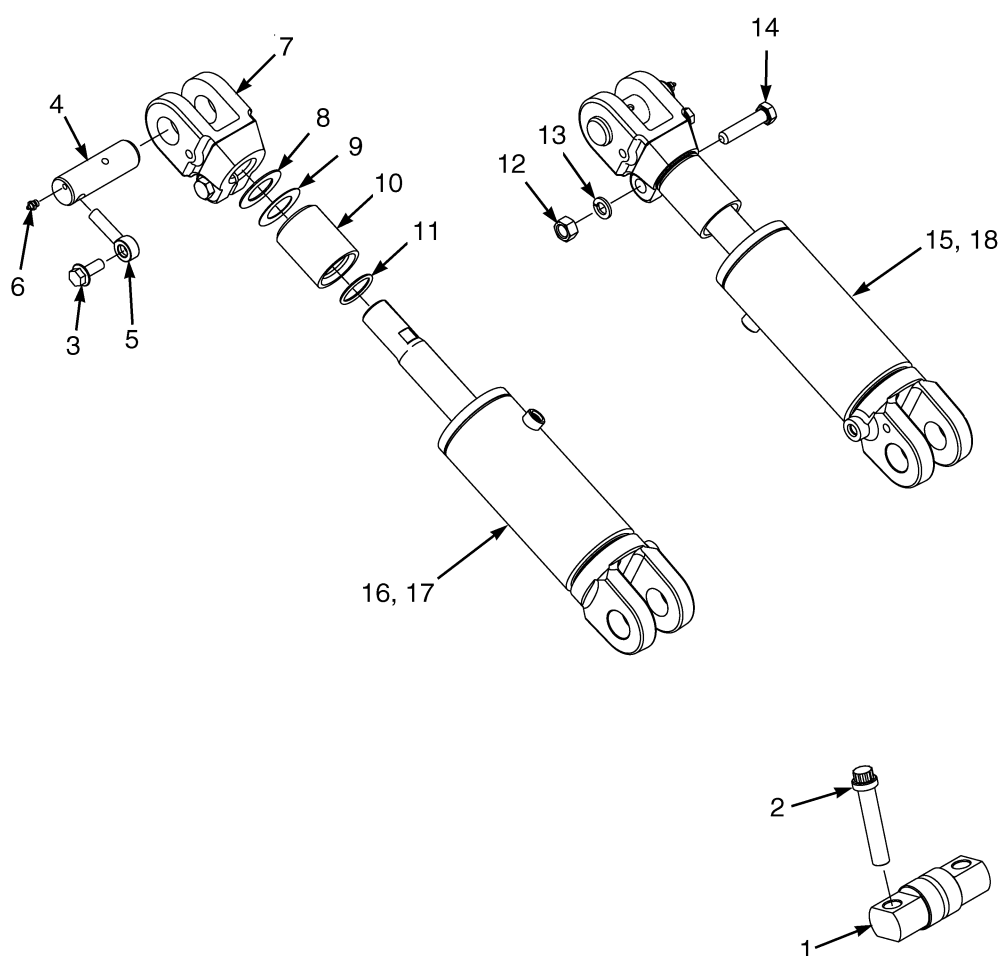
OUTLET SECTION (FIGURE 9-27)
ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION (PENDING PER ECN 10532215 →)



BP140167

ITEM	PART NO.	DESCRIPTION	QTY
1	1708262	Valve Section (Outlet)	1
2	1708054	Relief Valve	1
3	1580131	Kit-Seal	1
4	1578715	Kit-Tie Rod (Three Function)	1
4	1580151	Kit-Tie Rod (Four Function)	1
5	1678165	Solenoid Valve	1

TILT CYLINDER AND MAST INSTALLATION (FIGURE 9-28)



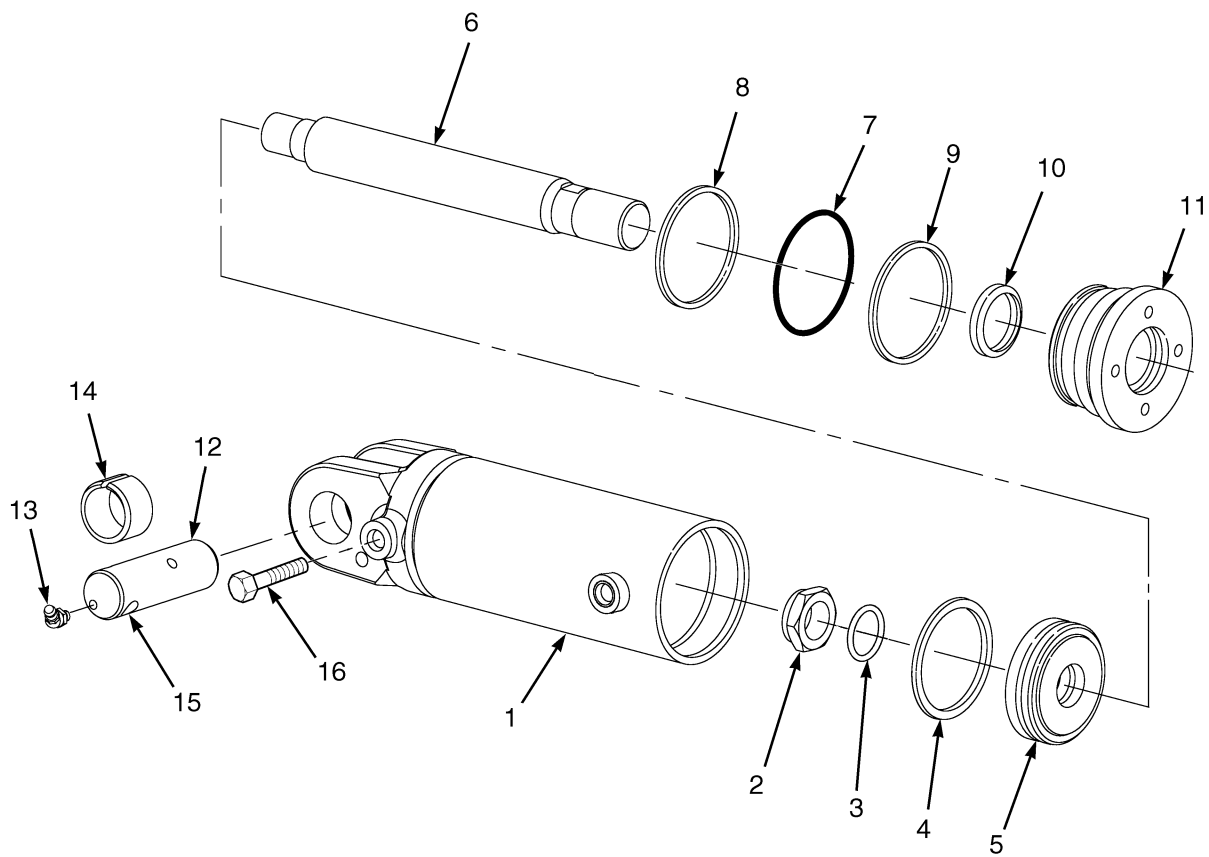
HP150985

TILT CYLINDER AND MAST INSTALLATION**KEY:****A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1514269	Pin (Mast Mounting)	2	2
2	1520290	Capscrew	4	4
3	1586013	Capscrew	2	2
4	1533493	Pin	4	4
5	1533494	Pin	2	2
6	16041	Grease Fitting	2	2
7	bcd 1544118	Rod End	2	..
7	a 1544120	Rod End	2	..
7	bcd 1544119	Rod End	..	2
7	a 1544121	Rod End	..	2
8	cd 134675	Shim	4	..
8	cd 142247	Shim	..	4
9	cd 1325119	Shim	4	..
9	cd 1325120	Shim	..	4
10	d 1544122	Spacer	2	..
10	c 192877	Spacer	2	..
10	d 1544123	Spacer	..	2
10	c 1544124	Spacer	..	2
11	cd 55434	O-Ring	4	..
11	cd 60563	O-Ring	..	4
12	1581848	Nut	2	2
12	1581849	Nut (Alternate Part)	2	2
13	1581564	Lockwasher	2	2
14	1597381	Capscrew	2	2
14	1581592	Capscrew (Alternate Part)	2	2
15	2069187	Tilt Cylinder (RH) (☞Figure 9-29).....	1	..
16	2069188	Tilt Cylinder (LH) (☞Figure 9-29).....	1	..
17	2069186	Tilt Cylinder (LH) (☞Figure 9-30).....	..	1
18	2069189	Tilt Cylinder (RH) (☞Figure 9-30).....	..	1

FOOTNOTES:**a** 10° Forward/6° Back**b** 6° Forward/10° Back**c** 6° Forward/5° Back**d** 6° Forward/6° Back

TILT CYLINDERS (FIGURE 9-29) H40-50FT

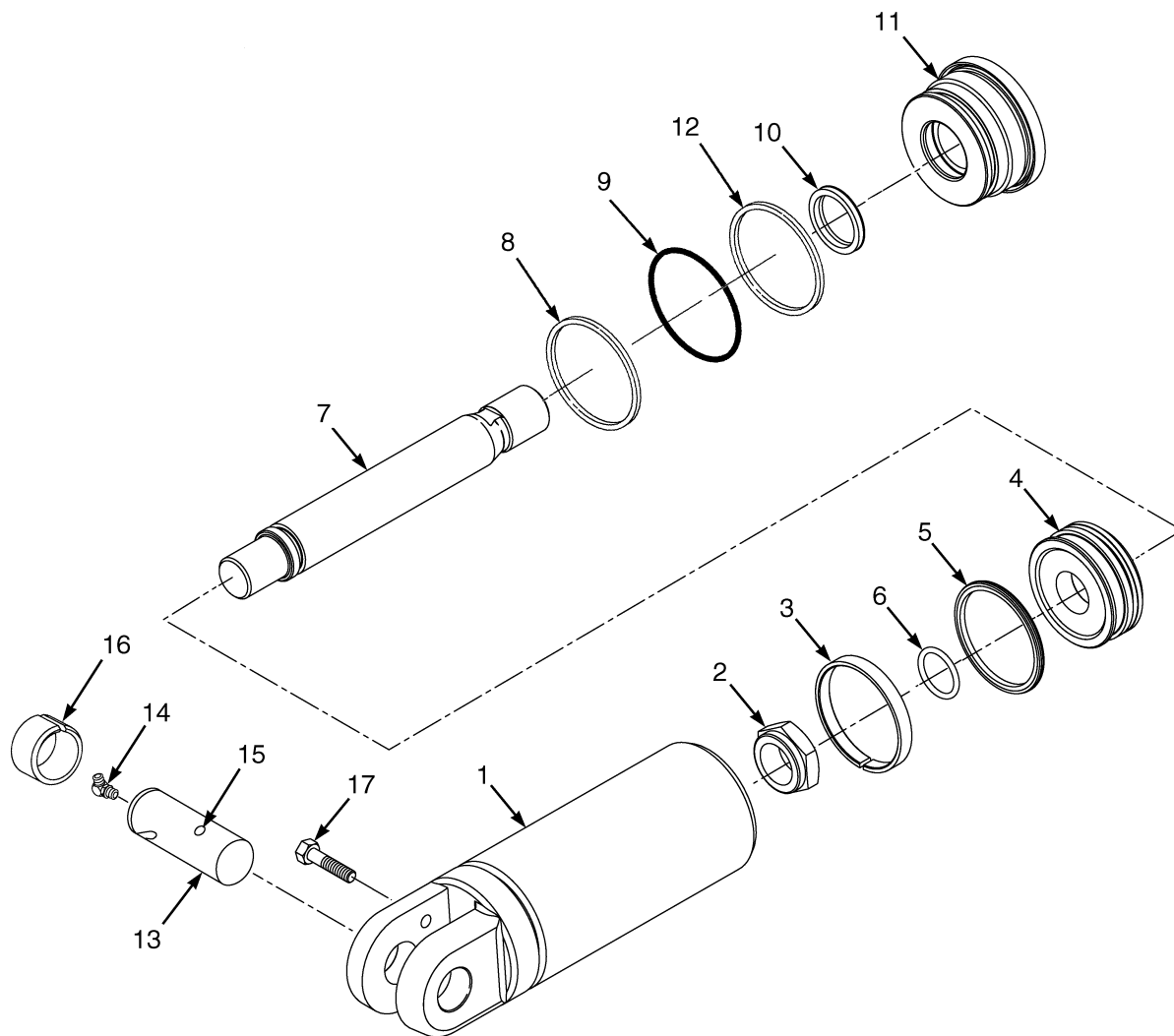


HP150974

**TILT CYLINDERS
H40-50FT**

ITEM	PART NO.	DESCRIPTION	QTY
	2069187	Tilt Cylinder (RH)	1
	2069188	Tilt Cylinder (LH)	1
1	2076537	Tube Wldmt-Cylinder (RH)	1
1	2076541	Tube Wldmt-Cylinder (LH)	1
2	2302899	Locknut	1
3	39374	O-Ring	1
4	2044370	Piston Seal	1
5	1338741	Piston	1
6	2076539	Cylinder Rod	1
7	46388	O-Ring	1
8	154375	Back-Up Ring	1
9	1381082	Rod Seal	1
10	1383062	Rod Wiper	1
11	1338744	Gland	1
12	1533493	Pin	2
13	16040	Grease Fitting	2
14	300982	Bushing	2
15	1533494	Pin	1
16	1586013	Capscrew	1
	1492644	Kit-Seal	1

TILT CYLINDERS (FIGURE 9-30) H60-70FT



BP150082

**TILT CYLINDERS
H60-70FT**

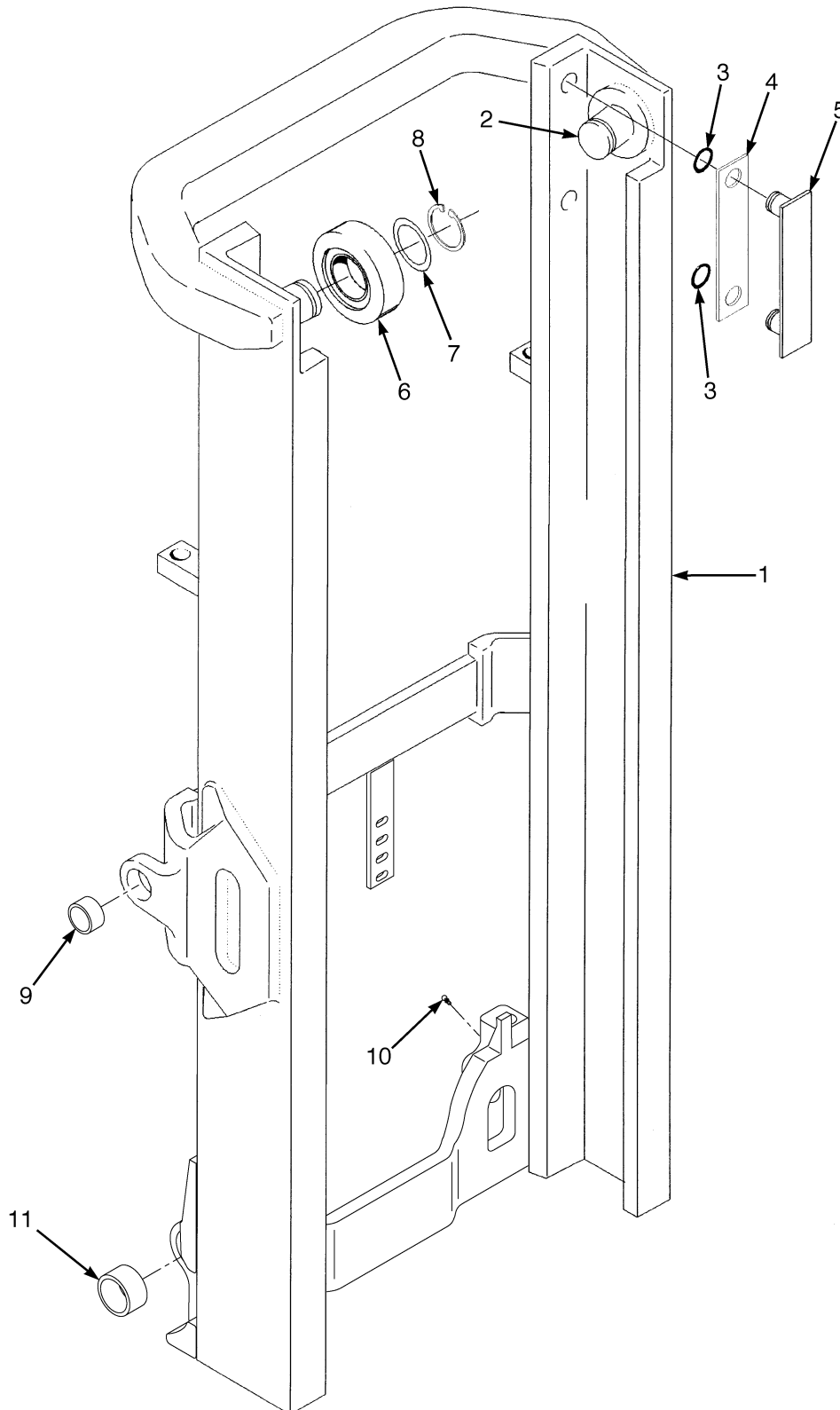
ITEM	PART NO.	DESCRIPTION	QTY
	2069186	Tilt Cylinder (LH)	1
	2069189	Tilt Cylinder (RH)	1
1	2076536	Tube Wldmt-Cylinder (RH)	1
1	2076540	Tube Wldmt-Cylinder (LH)	1
2	2070018	Locknut	1
3	199852	Wear Ring	1
4	1381078	Piston	1
5	2044371	Piston Seal	1
6	237812	O-Ring	1
7	2076538	Cylinder Rod	1
8	268619	O-Ring	1
9	147973	Back-Up Ring	1
10	1383063	Rod Wiper	1
11	1527520	Gland	1
12	1381083	Rod Seal	1
13	1533493	Pin	1
14	16040	Grease Fitting	1
15	1533494	Pin	1
16	300982	Bushing	1
17	1586013	Capscrew	1
	1527719	Kit-Seal	1

[illegible]

SECTION 10
MAST-TWO STAGE LIMITED FREE-LIFT

DESCRIPTION	PAGE
CARRIAGE	
TWO STAGE LIMITED FREE-LIFT	10-16
HEADER HOSES	
TWO STAGE LIMITED FREE-LIFT	10-14
INNER MAST	
TWO STAGE LIMITED FREE-LIFT	10-4
MAIN LIFT	
TWO STAGE LIMITED FREE-LIFT	10-6
MAIN LIFT CYLINDERS	
TWO STAGE LIMITED FREE-LIFT	10-10
OUTER MAST	
TWO STAGE LIMITED FREE-LIFT	10-2

OUTER MAST (FIGURE 10-1) TWO STAGE LIMITED FREE-LIFT



HP171372

**OUTER MAST
TWO STAGE LIMITED FREE-LIFT****D507**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D507 3252
	Mast Assy	2054714
1	Outer Mast	1524755

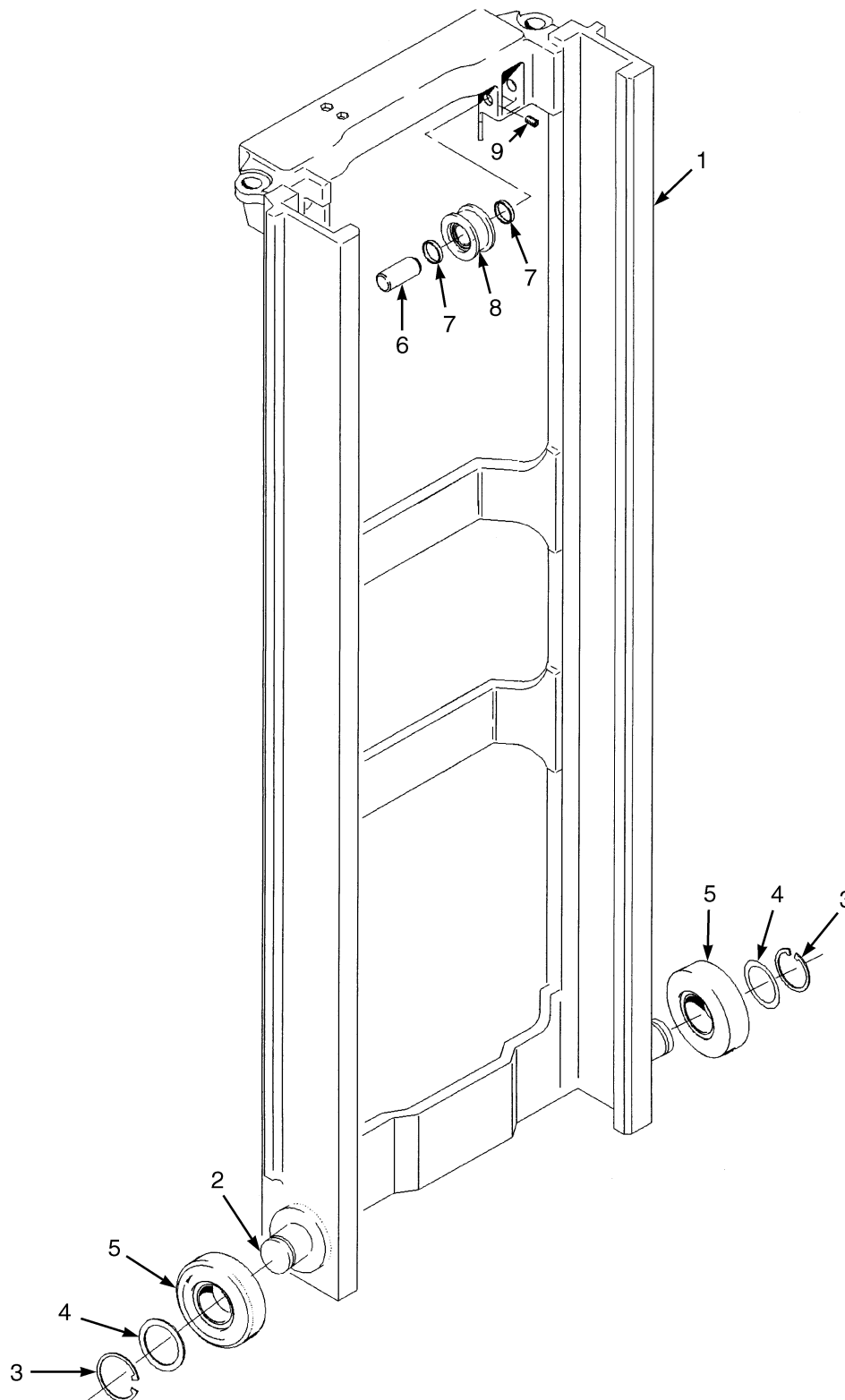
D562

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3159 mm (124.4 in.)
	Mast Group Number	D562 3159
	Mast Assy	2054754
1	Outer Mast	1524756

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Outer Mast	1
2	1345216	Stubshaft	2
3	104506	O-Ring	4
4	131716	Shim (0.020 in.)	AR
5	215211	Wear Strip	2
6	1333396	Load Roller	2
7	129387	Shim (0.020 in.)	AR
8	58901	Snap Ring	2
9	300982	Bushing	2
10	16001	Grease Fitting	2
11	1502811	Bushing	2

FOOTNOTES:**a** Refer to Table

INNER MAST (FIGURE 10-2) TWO STAGE LIMITED FREE-LIFT



HP290008

**INNER MAST
TWO STAGE LIMITED FREE-LIFT****D507**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D507 3252
	Mast Assy	2054714
1	Inner Mast	1524798

D562

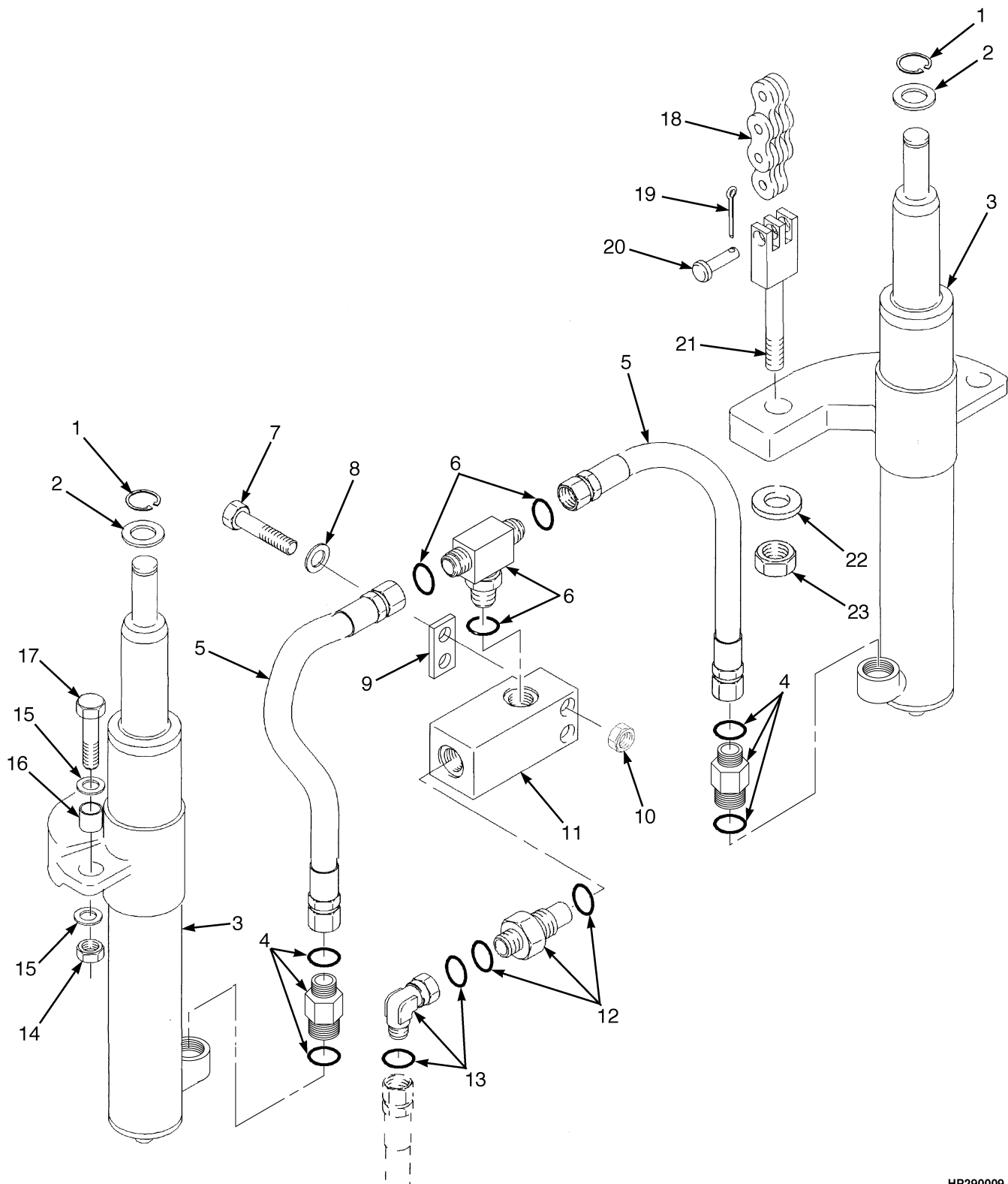
ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3159 mm (124.4 in.)
	Mast Group Number	D562 3159
	Mast Assy	2054754
1	Inner Mast	1524799

KEY:**A:** H40-50FT**B:** H60-70FT

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a	Mast Assy	1	1
1	a	Inner Mast	1	1
2	1345216	Stubshaft	2	2
3	58901	Snap Ring	2	2
4	129387	Shim (0.020 in.)	AR	AR
5	1333396	Load Roller	2	2
6	1368656	Pin	2	2
7	1378691	Spacer	4	4
8	1379685	Chain Sheave	2	..
8	1379684	Chain Sheave	..	2
8	1378698	Chain Sheave	1	..
8	1378694	Chain Sheave	..	1
8	37752	Snap Ring	1	1
8	1378699	Ball Bearing	1	1
9	302462	Roll Pin	2	2

FOOTNOTES:**a** Refer to Table

MAIN LIFT (FIGURE 10-3) TWO STAGE LIMITED FREE-LIFT



HP290009

**MAIN LIFT
TWO STAGE LIMITED FREE-LIFT****D507**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D507 3252
18	Chain	223389

D562

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3159 mm (124.4 in.)
	Mast Group Number	D562 3159
18	Chain	1342384

KEY:**A: H40-50FT, D507-3252mm****B: H60-70FT, D562-3159mm**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	131358	Snap Ring	2	2
2	1333382	Washer (0.060 in.)	2	2
2	1354915	Washer (0.010 in.)	AR	AR
2	1354916	Washer (0.030 in.)	AR	AR
2	1354917	Washer (0.060 in.)	AR	AR
3		Main Lift Cylinders (☞ Figure 10-4).....	2	2
4	2062686	Hyd Velocity Fuse	2	..
4	2062687	Hyd Velocity Fuse	..	2
4	16485	O-Ring	1	1
4	252729	O-Ring	1	1
5	1481097	Hose Assy	2	2
6	1532650	Fitting	1	1
6	16485	O-Ring	1	1
6	252729	O-Ring	2	2
7	1581836	Capscrew	2	2
8	1581556	Washer	2	2
9	1354913	Side Plate	1	1
10	1581566	Nut	2	2
11	1379687	Housing (Lowering Control)	1	1
12	2062651	Lowering Control Valve	1	..
12	2062652	Lowering Control Valve	..	1
12	16982	O-Ring	1	1
12	252729	O-Ring	1	1
13	1486773	Fitting	1	1
13	252729	O-Ring	2	2
14	1581849	Nut	2	2

MAIN LIFT TWO STAGE LIMITED FREE-LIFT

KEY:

A: H40-50FT, D507-3252mm

B: H60-70FT, D562-3159mm

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
15	1581852	Washer	4	4
16	323090	Spacer	2	2
17	1581829	Capscrew	2	2
18	a	Chain	2	2
19	15211	Cotter Pin	2	2
20	1514866	Pin	2	2
21	1369357	Chain Anchor	2	..
21	1369356	Chain Anchor	..	2
22	297649	Ring	2	2
23	161003	Nut	2	2

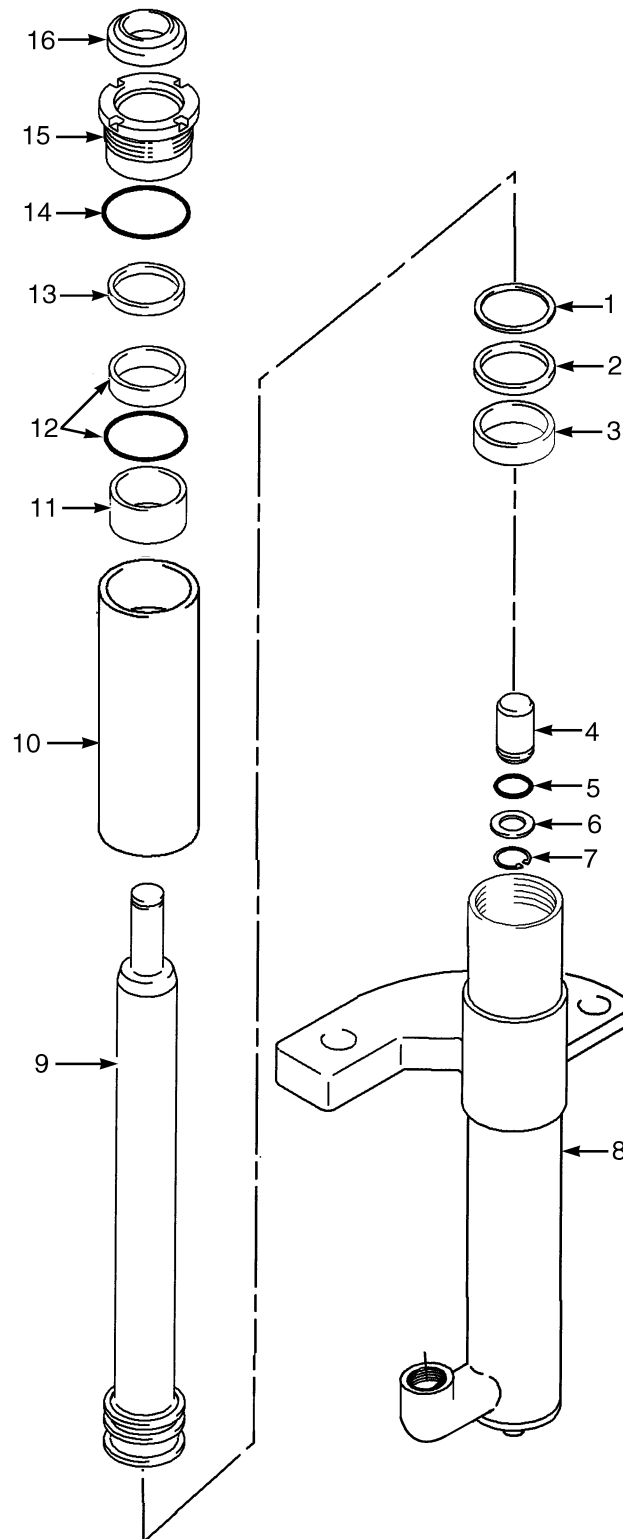
FOOTNOTES:

a Refer to Table

NOTES

[illegible]

MAIN LIFT CYLINDERS (FIGURE 10-4) TWO STAGE LIMITED FREE-LIFT



BP170293

**MAIN LIFT CYLINDERS
TWO STAGE LIMITED FREE-LIFT****LEFT HAND**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D507 3252
	Cylinder Group Number	8517709
	Cylinder Assy	2064142
1	Tube Wldmt- Cylinder	2064202
9	Cylinder Rod	1355158

RIGHT HAND

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D507 3252
	Cylinder Group Number	8517759
	Cylinder Assy	2064166
1	Tube Wldmt- Cylinder	2064239
9	Cylinder Rod	1355158

LEFT HAND

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D562 3159
	Cylinder Group Number	8518010
	Cylinder Assy	2064353
1	Tube Wldmt- Cylinder	2064279
9	Cylinder Rod	1355371

MAIN LIFT CYLINDERS TWO STAGE LIMITED FREE-LIFT RIGHT HAND

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D562 3159
	Cylinder Group Number	8518060
	Cylinder Assy	2064370
1	Tube Wldmt- Cylinder	2064315
9	Cylinder Rod	1355371

KEY:

A: H40-50FT, D507-3252mm

B: H60-70FT, D562-3159mm

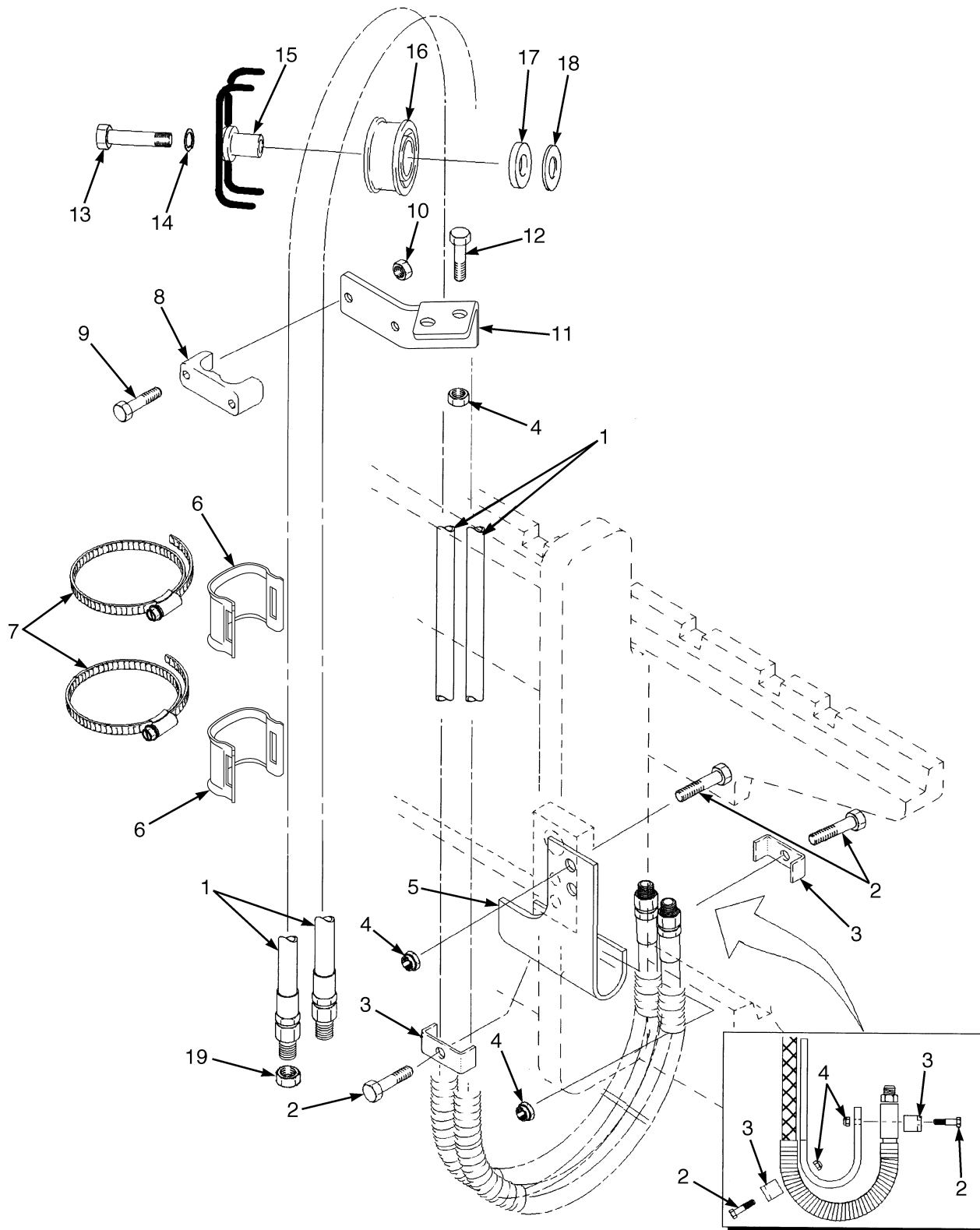
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	b	Cylinder Assy	1	1
1	b	Tube Wldmt-Cylinder	1	1
2	2013075	Rod Seal	1	..
2	334156	Rod Seal	..	1
3	1356750	Wear Ring	1	..
3	1356751	Wear Ring	..	1
4	257913	Check Valve	1	1
5	190580	O-Ring	1	1
6	297531	Washer	1	1
7	187388	Snap Ring	1	1
8	638246	Back-Up Ring	1	..
8	335012	Back-Up Ring	..	1
9	b	Cylinder Rod	1	1
10	1355711	Spacer	..	1
11	d 322902	Wear Ring	1	1
12	1356749	Rod Seal	1	1
12	1381095	Rod Seal	1	1
13	322824	Back-Up Ring	1	1
14	59229	O-Ring	..	1
14	92861	O-Ring	1	..
15	c 1355496	Gland	1	..
15	d 2091257	Gland	1	..
15	c 1355713	Gland	..	1
15	d 2091259	Gland	..	1
16	1319668	Rod Wiper	1	1
	a 322824	Back-Up Ring	1	1
	a 322902	Wear Ring	1	1
	1355276	Kit-Seal	1	..

**MAIN LIFT CYLINDERS
TWO STAGE LIMITED FREE-LIFT****KEY:****A:** H40-50FT, D507-3252mm**B:** H60-70FT, D562-3159mm

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1499111	Kit-Seal	..	1

FOOTNOTES:**a** Not Illustrated**b** Refer to Table**c** → 3/2007**d** 3/2007 →

HEADER HOSES (FIGURE 10-5) TWO STAGE LIMITED FREE-LIFT



HP171373

**HEADER HOSES
TWO STAGE LIMITED FREE-LIFT****D507**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3252 mm (128.0 in.)
	Mast Group Number	D507 3252
1	Hose Assy (H40-50FT)	2065138

D562

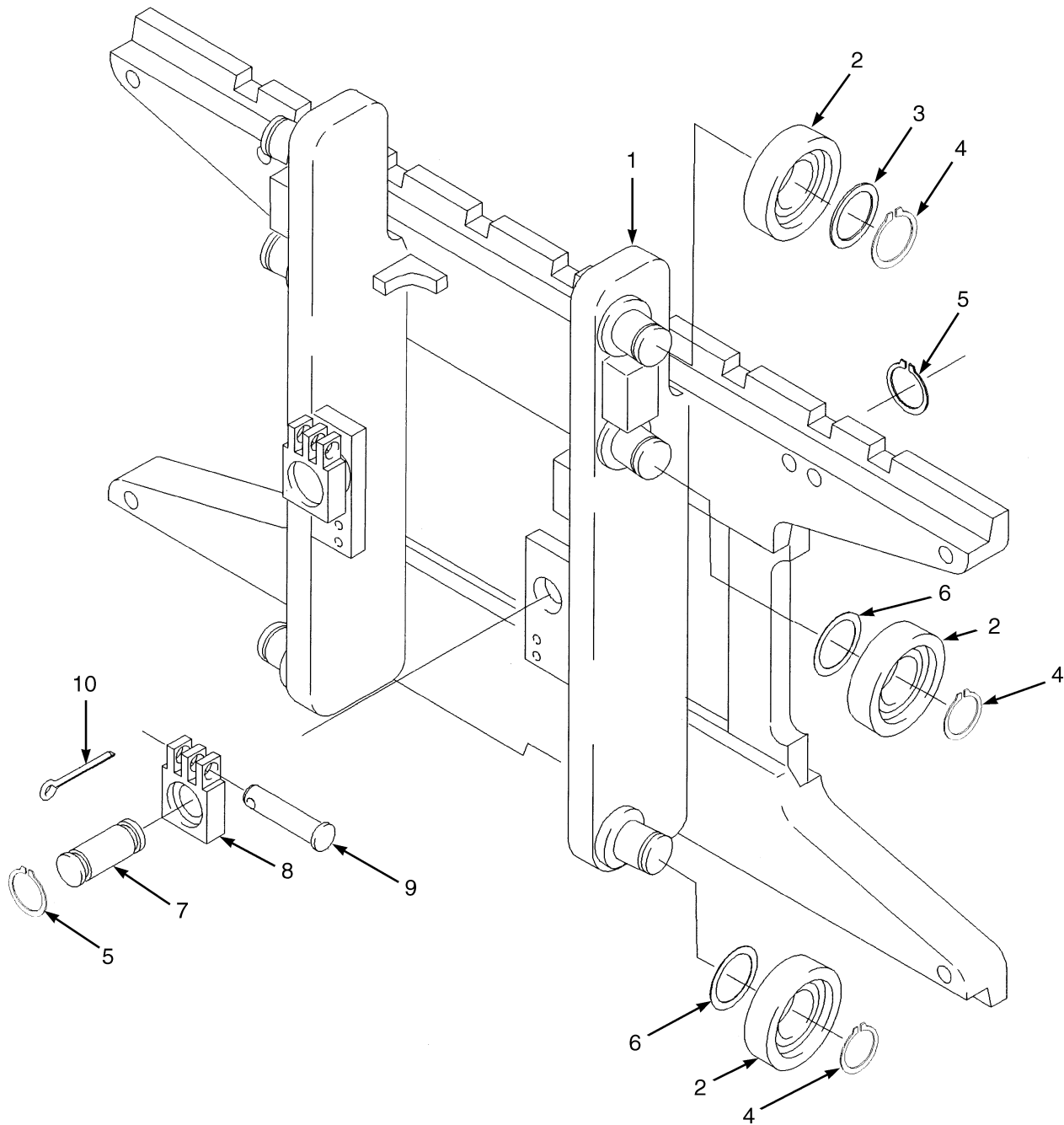
ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3159 mm (124.4 in.)
	Mast Group Number	D562 3159
1	Hose Assy (H60-70FT)	2065139

KEY:**A:** Three Function**B:** Four Function

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	a	Hose Assy (H40-50FT)	2	4
2	1581582	Capscrew	4	8
3	1345348	Clamp	2	4
4	1581566	Nut	6	12
5	1345412	Bracket (RH)	1	..
5	1345413	Bracket (LH)	1	1
6	1477996	Hose Clamp	3	6
7	1481229	Clamp	1	2
8	1360386	Clamp	1	2
9	1581834	Capscrew	2	4
10	1581565	Nut	2	4
11	1354919	Bracket (RH)	1	..
11	1354921	Bracket (LH)	1	1
12	1581836	Capscrew	2	4
13	1581830	Capscrew	1	2
14	1581564	Lockwasher	1	2
15	1360548	Stubshaft	1	2
16	1494017	Hose Sheave	1	2
17	1360549	Spacer	1	2
18	1345190	Washer	1	2
19	1529015	Fitting	2	4

FOOTNOTES:**a** Refer to Table

CARRIAGE (FIGURE 10-6) TWO STAGE LIMITED FREE-LIFT



HP290013

CARRIAGE
TWO STAGE LIMITED FREE-LIFT**KEY:****A:** H40-50FT D507-3252 mm**B:** H60-70FT D562-3159 mm

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1343846	Carriage	1	..
	1477647	Carriage	..	1
1	1338616	Carriage Wldmt	1	..
1	1477930	Carriage Wldmt	..	1
1	1345264	Stubshaft	6	6
2	1345219	Load Roller (4.36/4.35 in.)	6	6
2	1393132	Load Roller (Optional)	6	6
2	1395175	Load Roller (Optional)	6	6
3	366116	Spacer	2	2
4	12891	Snap Ring	6	6
5	131358	Snap Ring	4	4
6	1345263	Shim (0.020 in.)	AR	AR
7	1353408	Pin	2	2
8	1369345	Chain Anchor (Dual Hole)	2	..
8	1504010	Chain Anchor (Single Hole) (Optional)	2	..
8	1369344	Chain Anchor (Dual Hole)	..	2
8	1504012	Chain Anchor (Single Hole) (Optional)	..	2
9	1514866	Pin	2	2
10	15211	Cotter Pin	2	2
	a 386422	Snap Ring	6	6

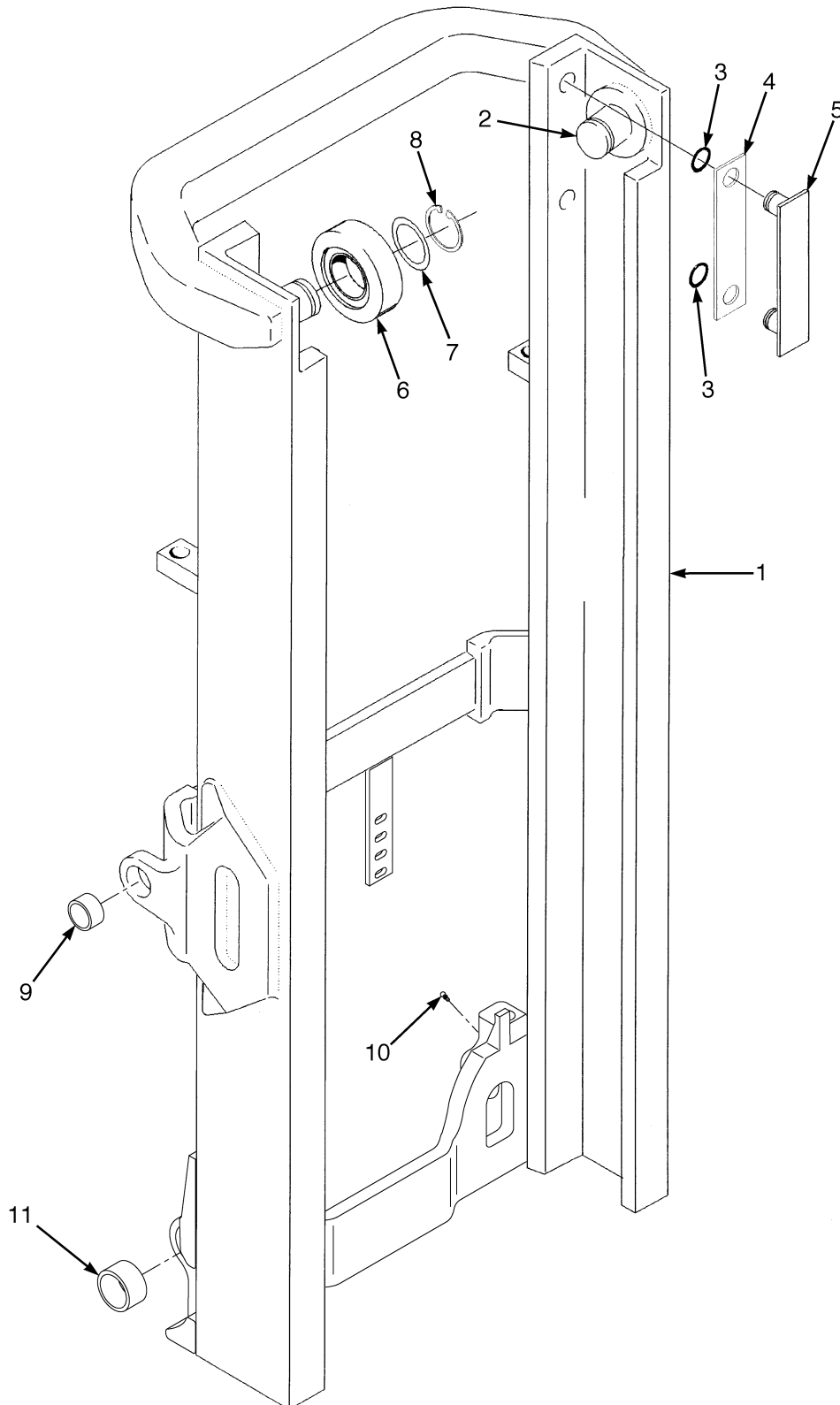
FOOTNOTES:**a** Not Illustrated

[illegible]

SECTION 11
MAST-TWO STAGE FULL FREE-LIFT

DESCRIPTION	PAGE
CARRIAGE	
TWO STAGE FULL FREE-LIFT	11-22
FREE-LIFT	
TWO STAGE FULL FREE-LIFT	11-12
FREE-LIFT CYLINDER	
TWO STAGE FULL FREE-LIFT	11-15
HEADER HOSES	
TWO STAGE FULL FREE-LIFT	11-18
INNER MAST	
TWO STAGE FULL FREE-LIFT	11-4
MAIN LIFT	
TWO STAGE FULL FREE-LIFT	11-6
MAIN LIFT CYLINDER	
LEFT HAND - TWO STAGE FULL FREE-LIFT	11-10
RIGHT HAND - TWO STAGE FULL FREE-LIFT	11-8
OUTER MAST	
TWO STAGE FULL FREE-LIFT	11-2

OUTER MAST (FIGURE 11-1) TWO STAGE FULL FREE-LIFT



HP290004

**OUTER MAST
TWO STAGE FULL FREE-LIFT****D509**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
	Mast Assy	2065580
1	Outer Mast	1524755

D564

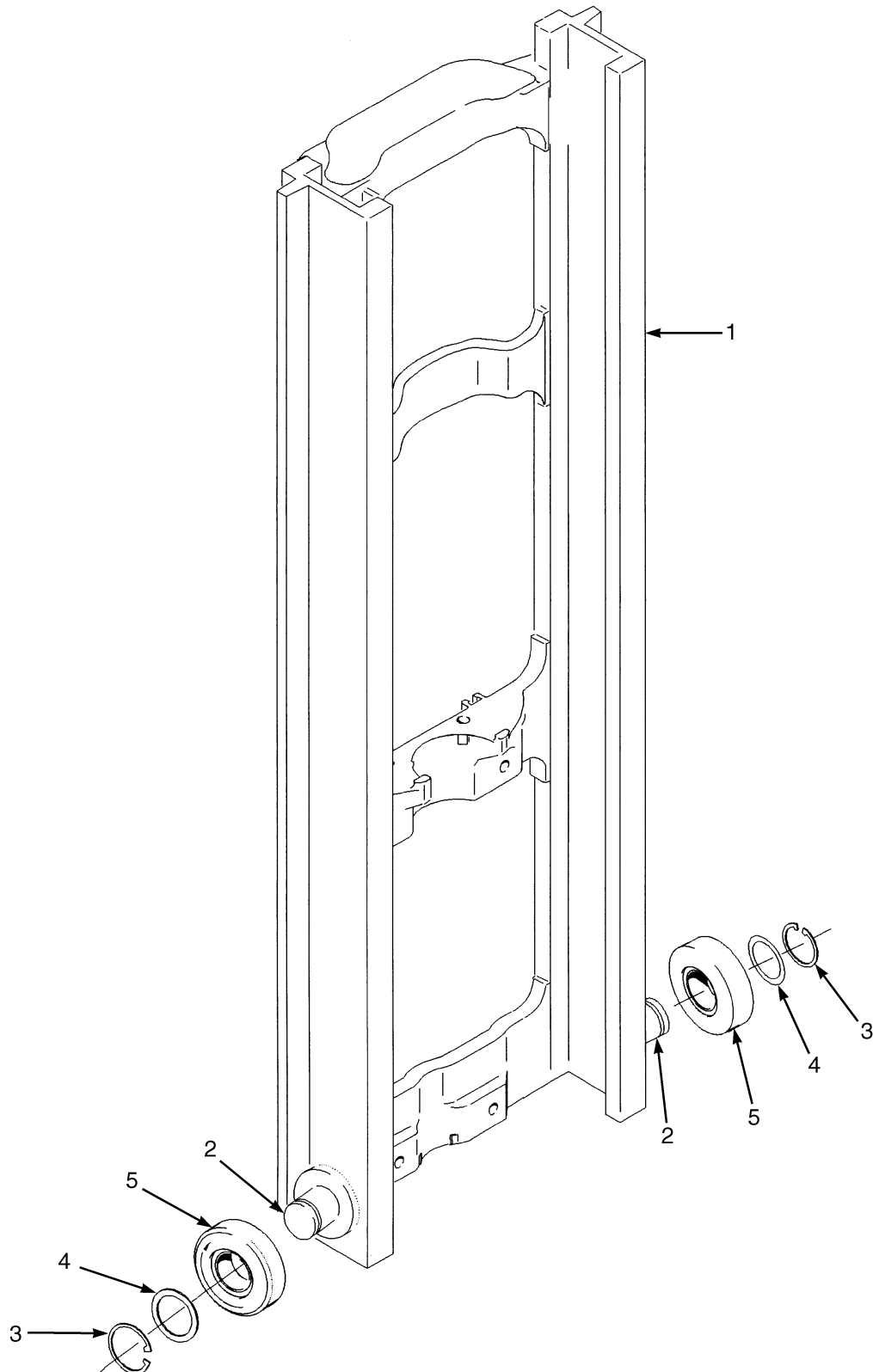
ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
	Mast Assy	2065522	2065526
1	Outer Mast	1524755	1524757

KEY:**A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a	Mast Assy	1	1
1	a	Outer Mast	1	1
2	1345216	Stubshaft	2	2
3	104506	O-Ring	4	4
4	131716	Shim (0.020 in.)	4	4
5	215211	Wear Strip	2	2
6	1333396	Load Roller	2	2
7	129387	Shim (0.020 in.)	AR	AR
8	58901	Snap Ring	2	2
9	300982	Bushing	2	2
10	16001	Grease Fitting	2	2
11	1502811	Bushing	2	2

FOOTNOTES:**a** Refer to Table

INNER MAST (FIGURE 11-2) TWO STAGE FULL FREE-LIFT



HP290005

**INNER MAST
TWO STAGE FULL FREE-LIFT****D509**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
	Mast Assy	2065580
1	Inner Mast	1342477

D564

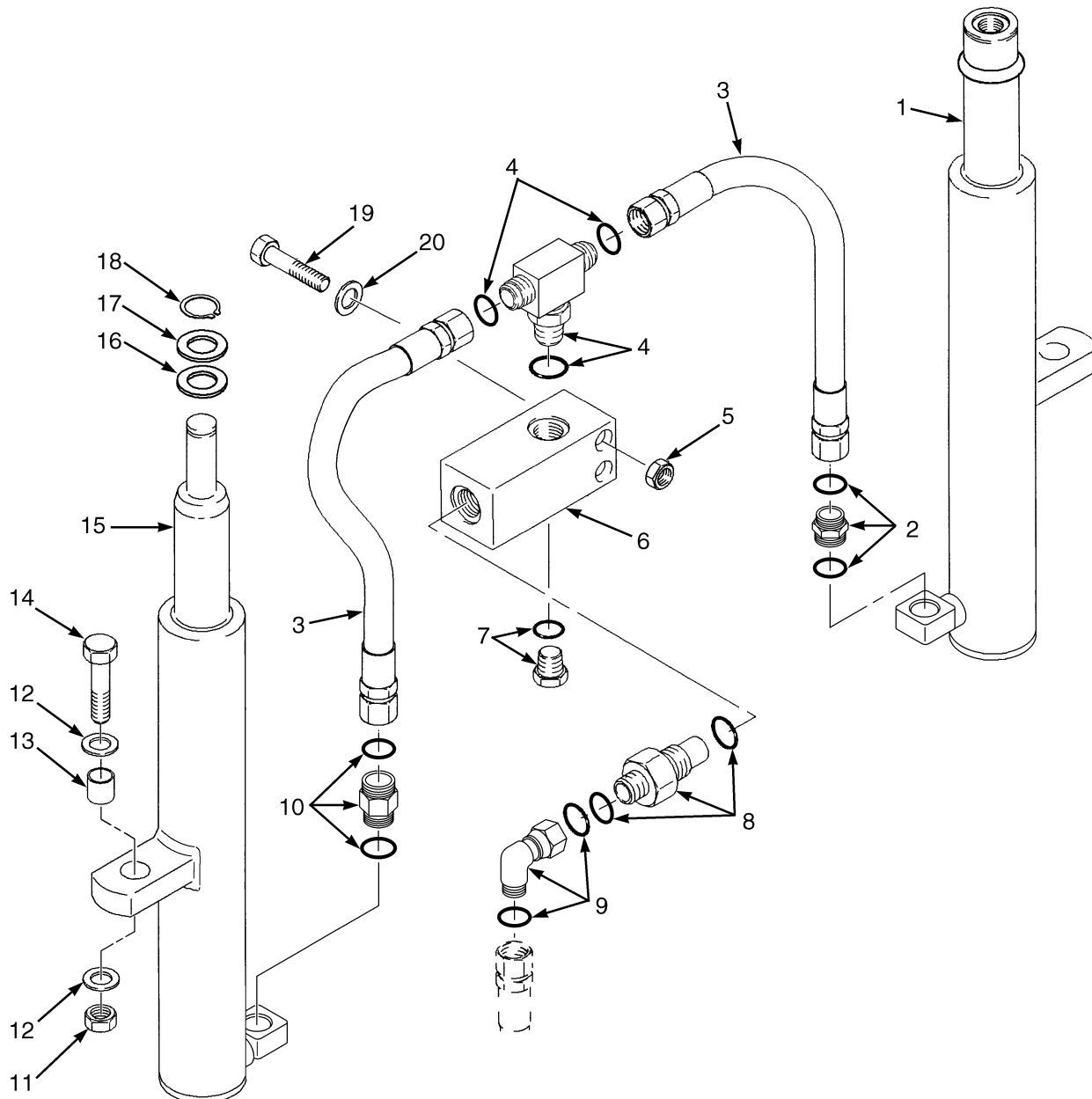
ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
	Mast Assy	2065522	2065526
1	Inner Mast	1342477	1342479

KEY:**A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a	Mast Assy	1	1
1	a	Inner Mast	1	1
2	1345216	Stubshaft	2	2
3	58901	Snap Ring	2	2
4	129387	Shim (0.020 in.)	AR	AR
5	1333396	Load Roller	2	2

FOOTNOTES:**a** Refer to Table

MAIN LIFT (FIGURE 11-3) TWO STAGE FULL FREE-LIFT

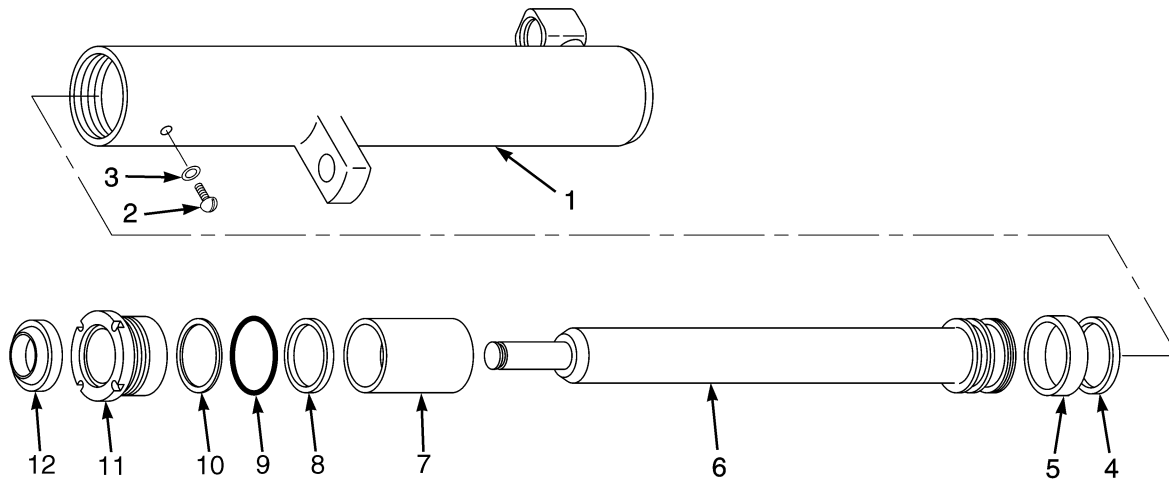


HP290006

**MAIN LIFT
TWO STAGE FULL FREE-LIFT**

ITEM	PART NO.	DESCRIPTION	QTY
1		Main Lift Cylinder (LH) (☞ Figure 11-5).....	1
2	1486749	Fitting	1
2	16485	O-Ring	1
2	252729	O-Ring	1
3	1481097	Hose Assy	2
4	1532650	Fitting	1
4	16485	O-Ring	1
4	252729	O-Ring	2
5	1581566	Nut	2
6	1379687	Housing (Lowering Control)	1
7	14603	Plug	1
7	16486	O-Ring	1
8	2062652	Lowering Control Valve (H60-70FT D564-3060 and 3260 mm)	1
8	2062651	Lowering Control Valve (H40-50FT D509-3262 mm)	1
8	280154	O-Ring	1
8	252729	O-Ring	1
9	1486773	Fitting	1
9	252729	O-Ring	2
10	2062687	Hyd Velocity Fuse (H60-70FT D564-3060 and 3260 mm)	1
10	2062686	Hyd Velocity Fuse (H40-50FT D509-3262 mm)	1
10	16485	O-Ring	1
10	252729	O-Ring	1
11	1581849	Nut	2
12	1581852	Washer	4
13	323090	Spacer	2
14	1581829	Capscrew	2
15		Main Lift Cylinder (RH) (☞ Figure 11-4).....	1
16	1354915	Washer (0.010 in.)	AR
16	1354916	Washer (0.030 in.)	AR
16	1354917	Washer (0.060 in.)	AR
17	1333382	Washer (0.060 in.)	1
18	131358	Snap Ring	1
19	1581835	Capscrew	2
20	1581556	Washer	2

MAIN LIFT CYLINDER (FIGURE 11-4) RIGHT HAND — TWO STAGE FULL FREE-LIFT



HP171367

MAIN LIFT CYLINDER RIGHT HAND – TWO STAGE FULL FREE-LIFT

D509

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
	Cylinder Group Number	8518609
	Cylinder Assy	2058651
1	Tube Wldmt- Cylinder	2058536
6	Cylinder Rod	1358940

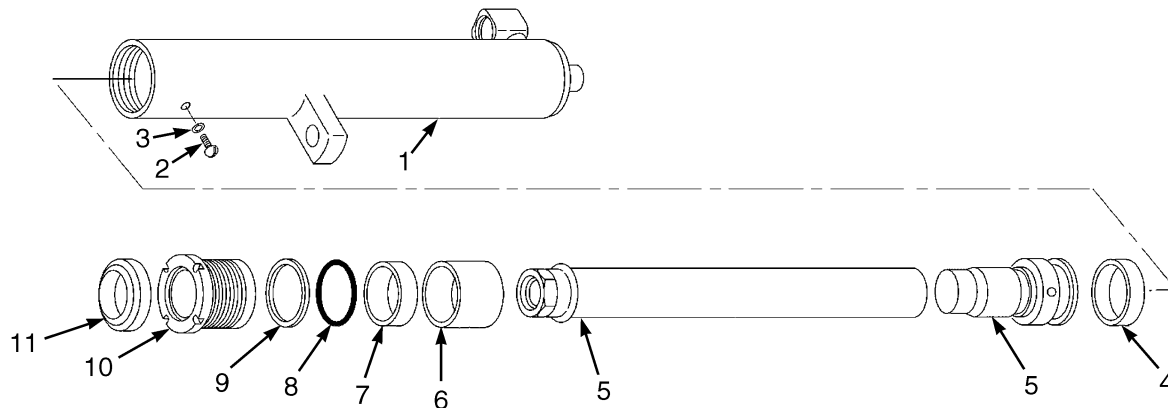
**MAIN LIFT CYLINDER
RIGHT HAND – TWO STAGE FULL FREE-LIFT****D564**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
	Cylinder Group Number	8518659	8518661
	Cylinder Assy	2060422	2060424
1	Tube Wldmt- Cylinder	2058536	2058538
6	Cylinder Rod	1358940	1358942

ITEM	PART NO.	DESCRIPTION	QTY
	b	Cylinder Assy	1
1	b	Tube Wldmt-Cylinder	1
2	295649	Screw	1
3	190887	Sealing Ring	1
4	1356748	Piston Ring	1
5	1356747	Wear Ring	1
6	b	Cylinder Rod	1
7	2073159	Spacer (H60-70FT Models Only)	1
8	1356749	Rod Seal	1
9	59229	O-Ring	1
10	147972	Back-Up Ring	1
11	2091259	Gland	1
12	1319668	Rod Wiper	1
	a 322824	Back-Up Ring	1
	a 322902	Wear Ring	1
	1496922	Kit-Seal	1

FOOTNOTES:**a** Not Illustrated**b** Refer to Table

MAIN LIFT CYLINDER (FIGURE 11-5) LEFT HAND — TWO STAGE FULL FREE-LIFT



HP171366

MAIN LIFT CYLINDER LEFT HAND – TWO STAGE FULL FREE-LIFT

D509

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
	Cylinder Group Number	8518509
	Cylinder Assy	2058619
1	Tube Wldmt- Cylinder	2058500
5	Cylinder Rod	1355929

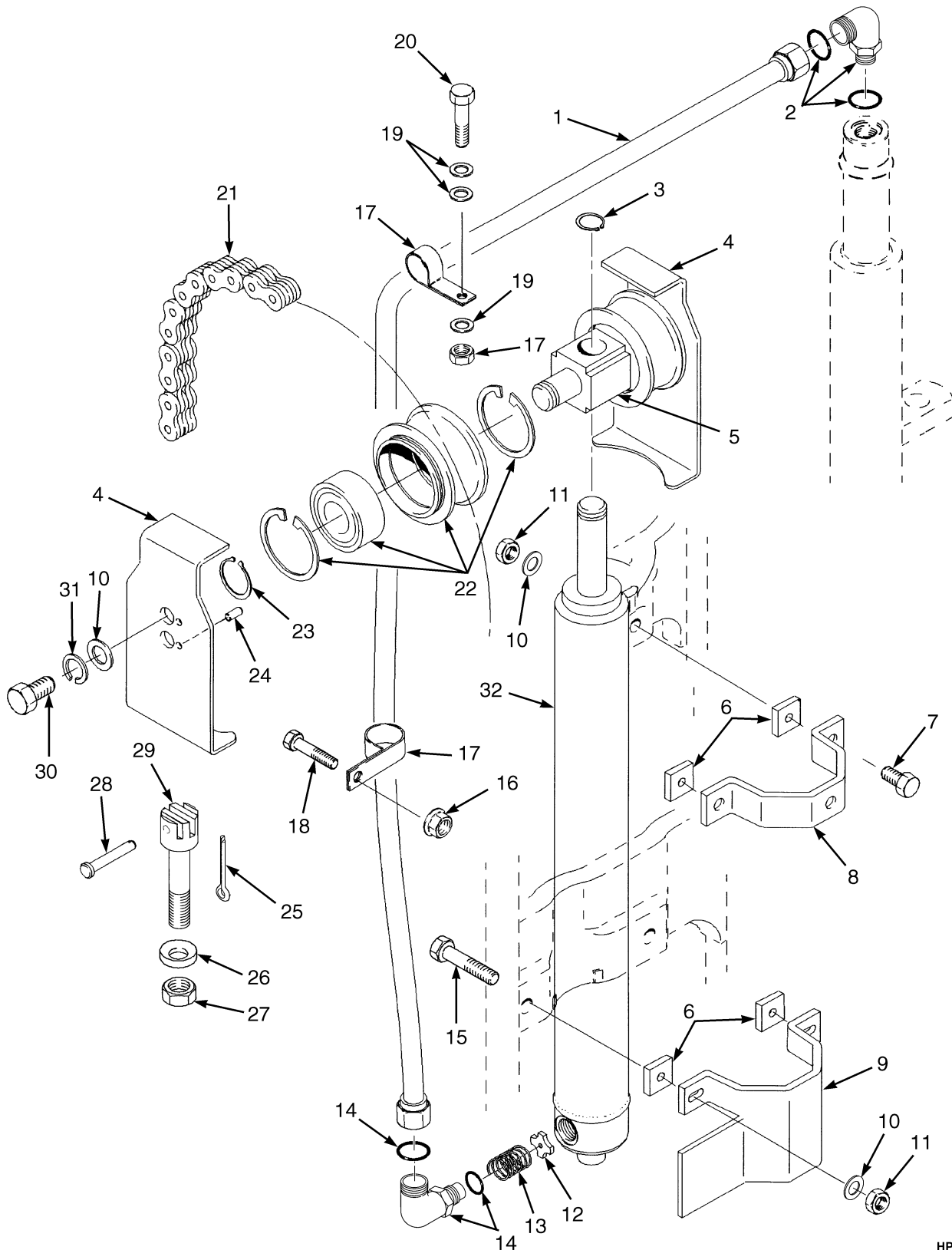
MAIN LIFT CYLINDER
LEFT HAND – TWO STAGE FULL FREE-LIFT**D564**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
	Cylinder Group Number	8518559	8518561
	Cylinder Assy	2058823	2058825
1	Tube Wldmt- Cylinder	2058500	2058502
5	Cylinder Rod	1355929	1355941

ITEM	PART NO.	DESCRIPTION	QTY
	a	Cylinder Assy	1
1	a	Tube Wldmt-Cylinder	1
2	295649	Screw	1
3	190887	Sealing Ring	1
4	1356747	Wear Ring	1
5	a	Cylinder Rod	1
5	1355930	Cylinder Rod (D564-3060 mm, D509-3262 mm)	1
5	1355936	Cylinder Rod (D564-3260 mm)	1
5	2064464	Piston	1
6	2073159	Spacer (H60-70FT Models Only)	1
7	1356749	Rod Seal	1
8	59229	O-Ring	1
9	147972	Back-Up Ring	1
10	2091259	Gland	1
11	1319668	Rod Wiper	1
	322824	Back-Up Ring	1
	322902	Wear Ring	1
	1496922	Kit-Seal	1

FOOTNOTES:**a** Refer to Table

FREE-LIFT (FIGURE 11-6) TWO STAGE FULL FREE-LIFT



HP290007

**FREE-LIFT
TWO STAGE FULL FREE-LIFT****D509**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
1	Tube Assy	1481742
21	Chain	180177

D564

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
1	Tube Assy	1481742	1481744
21	Chain	1342377	1342117

KEY:**A: H40-50FT****B: H60-70FT**

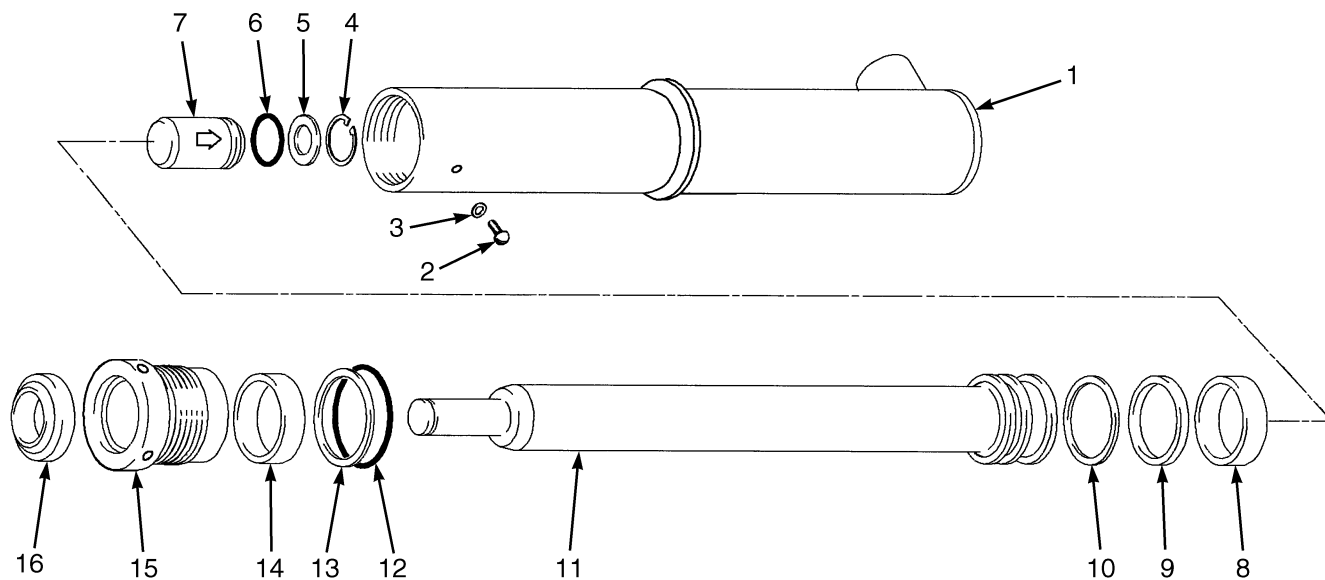
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	a	Tube Assy	1	1
2	1481090	Fitting	1	1
2	16485	O-Ring	1	1
2	244167	O-Ring	1	1
3	131358	Snap Ring	1	1
4	1395285	Chain Guard	2	2
5	1378690	Crosshead	1	1
6	1354902	Spacer	..	4
7	1581828	Capscrew	..	2
7	1581827	Capscrew	2	..
8	1465504	Tie Down	1	1
9	1354967	Bracket Wldmt	1	1
10	1581559	Washer	6	6
11	1581849	Nut	4	4
12	356505	Washer (Special)	1	1
13	154355	Spring	1	1
14	1481096	Fitting	1	1
14	244167	O-Ring	1	1
14	16485	O-Ring	1	1
15	1581832	Capscrew	2	2
16	1581567	Nut	2	..
17	178119	Clamp	2	2
18	1581587	Capscrew	1	1

FREE-LIFT **TWO STAGE FULL FREE-LIFT**

KEY:**A:** H40-50FT**B:** H60-70FT

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
19	1581557	Washer	3	3
20	1581841	Capscrew	1	1
21	a	Chain	2	2
22	1379683	Chain Sheave Assembly (Assembly)	..	2
22	1379682	Chain Sheave Assembly (Assembly)	2	..
22	1378693	Chain Sheave	..	1
22	1378692	Chain Sheave	1	..
22	37752	Snap Ring	1	1
22	1378699	Ball Bearing	1	1
23	304526	Snap Ring	3	3
24	302461	Roll Pin	2	2
25	15211	Cotter Pin	2	2
26	297649	Ring	2	2
27	161003	Nut	2	2
28	1514866	Pin	2	2
29	1369356	Chain Anchor	..	2
29	1369357	Chain Anchor	2	..
30	1581590	Capscrew	2	2
31	1581564	Lockwasher	2	2
32		Free-Lift Cylinder (☞ Figure 11-7).....	1	1

FOOTNOTES:**a** Refer to Table

FREE-LIFT CYLINDER (FIGURE 11-7)
TWO STAGE FULL FREE-LIFT

HP171368

FREE-LIFT CYLINDER
TWO STAGE FULL FREE-LIFT**D509**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
	Cylinder Group Number	8514559
	Cylinder Assy	2053796
1	Tube Wldmt- Cylinder	2058213
11	Cylinder Rod	1356569

FREE-LIFT CYLINDER TWO STAGE FULL FREE-LIFT

D564

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
	Cylinder Group Number	8518709	8518711
	Cylinder Assy	2058326	2058328
1	Tube Wldmt- Cylinder	2058252	2063691
11	Cylinder Rod	1356688	1356694

KEY:

A: H40-50FT D509-3262 mm

B: H60-70FT D564-3260 mm, D564-3060 mm

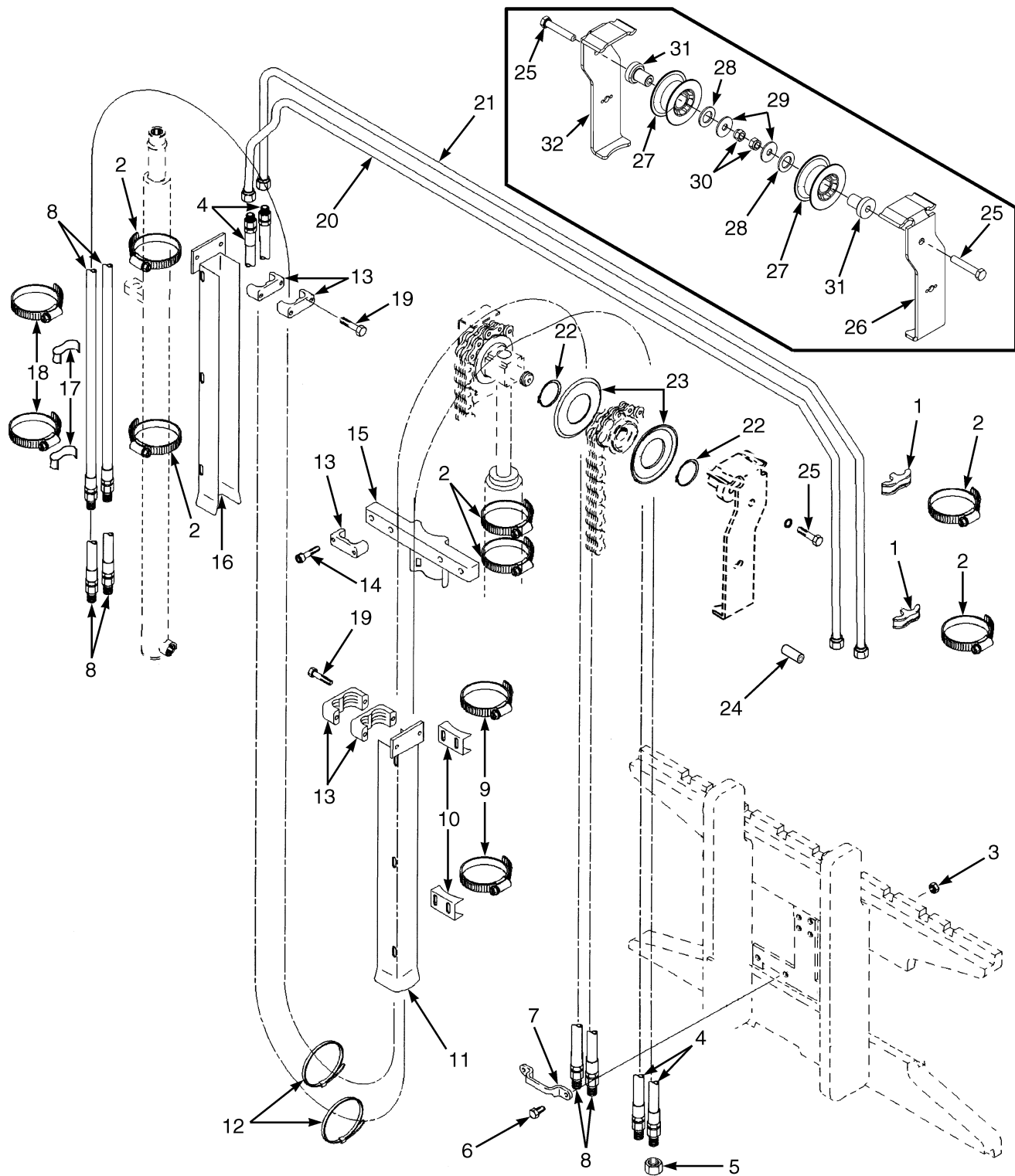
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	b	Cylinder Assy	1	1
1	b	Tube Wldmt-Cylinder	1	1
2	1361302	Screw	1	1
3	190887	Sealing Ring	1	1
4	187388	Snap Ring	1	1
5	297531	Washer	1	1
6	39348	O-Ring	..	1
6	190580	O-Ring	1	..
7	257913	Check Valve	1	1
8	636941	Wear Ring	..	1
8	1358972	Wear Ring	1	..
9	309062	Rod Seal	..	1
9	2013088	Rod Seal	1	..
10	637565	Back-Up Ring	..	1
10	2013089	Back-Up Ring	1	..
11	b	Cylinder Rod	1	1
12	15880	O-Ring	..	1
12	90263	O-Ring	1	..
13	164840	Back-Up Ring	..	1
13	147973	Back-Up Ring	1	..
14	1358970	Rod Seal	1	1
15	1356661	Gland (D564-3060 mm)	..	1
15	1355713	Gland (D564-3260 mm, D509-3262 mm)	1	1
16	2013099	Rod Wiper	1	1
	a 322824	Back-Up Ring	1	1
	a 322902	Wear Ring	1	1
	1356662	Kit-Seal	..	1
	1358969	Kit-Seal	1	..

FOOTNOTES:

a Not Illustrated

b Refer to Table

HEADER HOSES (FIGURE 11-8) TWO STAGE FULL FREE-LIFT



HP020340

**HEADER HOSES
TWO STAGE FULL FREE-LIFT****D509**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS
		3262 mm (128.4 in.)
	Mast Group Number	D509 3262
4	Hose Assy (To Side-Shift)	2065211
8	Hose Assy (To Mast)	2065241
16	Hose Guard (LH)	1365517
20	Tube Assy	2065030
21	Tube Assy	2065001

D564

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS	
		3060 mm (120.5 in.)	3260 mm (128.3 in.)
	Mast Group Number	D564 3060	D564 3260
4	Hose Assy (To Side-Shift)	2065211	2065213
8	Hose Assy (To Mast)	2065241	2065243
16	Hose Guard (LH)	1365517	1365520
20	Tube Assy	2065030	2065032
21	Tube Assy	2065001	2065003

KEY:**A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1353530	Hose Clamp	2	2
2	1360507	Clamp	8	8
3	1581566	Nut	2	4
4	a	Hose Assy (To Side-Shift)	2	2
5	1529015	Fitting	2	4
6	1581581	Capscrew	2	4
7	1643405	Hose Clamp	1	2
8	a	Hose Assy (To Mast)	..	2
9	1360508	Clamp	2	2
10	1345423	Clamp	2	2
11	1481232	Hose Guard (RH)	1	1
12	137852	Strap Clamp	1	2
13	1360386	Clamp	3	6

HEADER HOSES TWO STAGE FULL FREE-LIFT

KEY:

A: Three Function

B: Four Function

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
14	1581741	Capscrew	2	4
15	1354918	Bracket	1	1
16	a	Hose Guard (LH)	1	1
17	1477996	Hose Clamp	..	2
18	1617657	Clamp	..	2
19	1581842	Capscrew	4	8
20	a	Tube Assy	1	1
21	a	Tube Assy	1	1
22	1345204	Snap Ring	2	4
23	1345199	Hose Guide	2	4
24	302461	Roll Pin	2	4
25	1581830	Capscrew	1	2
26	1395292	Bracket	..	1
27	1494017	Hose Sheave	1	2
28	1581560	Washer	1	2
29	1345190	Washer	1	2
30	1581849	Nut	1	2
31	1396406	Stubshaft	1	2
32	1395291	Bracket	1	1

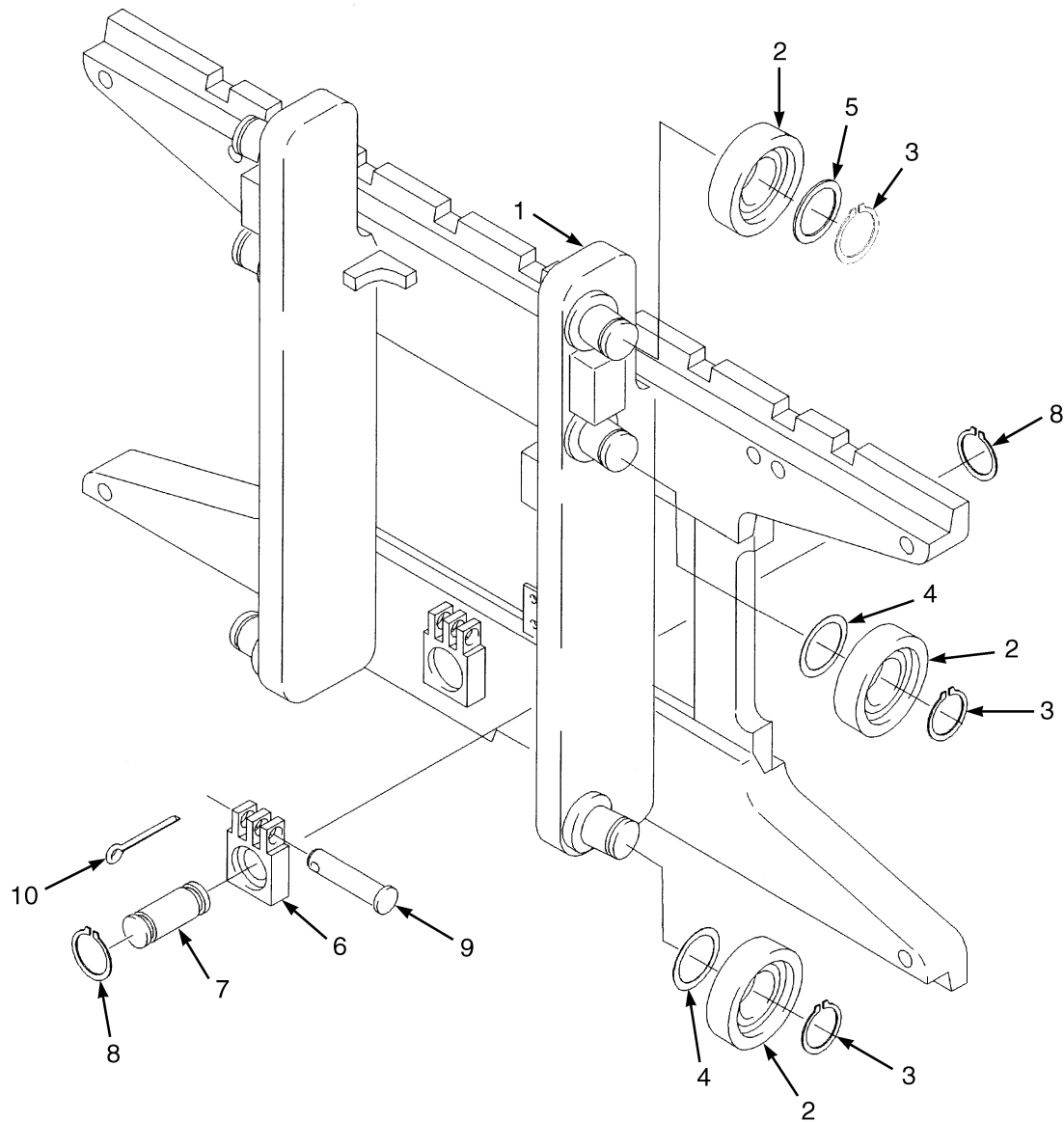
FOOTNOTES:

a Refer to Table

NOTES

[illegible]

CARRIAGE (FIGURE 11-9) TWO STAGE FULL FREE-LIFT



HP290012

CARRIAGE
TWO STAGE FULL FREE-LIFT**KEY:****A: H40-50FT D509****B: H60-70FT D564**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1343844	Carriage	1	..
	1477683	Carriage	..	1
1	1345239	Carriage Wldmt	1	..
1	1477932	Carriage Wldmt	..	1
1	1345264	Stubshaft	6	6
2	1345219	Load Roller (4.36/4.35 in.)	6	6
2	1393132	Load Roller (Optional)	6	6
2	1395175	Load Roller (Optional)	6	6
3	12891	Snap Ring	6	6
4	1345263	Shim (0.020 in.)	AR	AR
5	366116	Spacer	2	2
6	1369345	Chain Anchor (Dual Hole)	2	..
6	1504010	Chain Anchor (Single Hole) (Optional)	2	..
6	1369344	Chain Anchor (Dual Hole)	..	2
6	1504012	Chain Anchor (Single Hole) (Optional)	..	2
7	317735	Pin	2	2
8	131358	Snap Ring	4	4
9	1514866	Pin	2	2
10	15211	Cotter Pin	2	2
	a 386422	Snap Ring	6	6

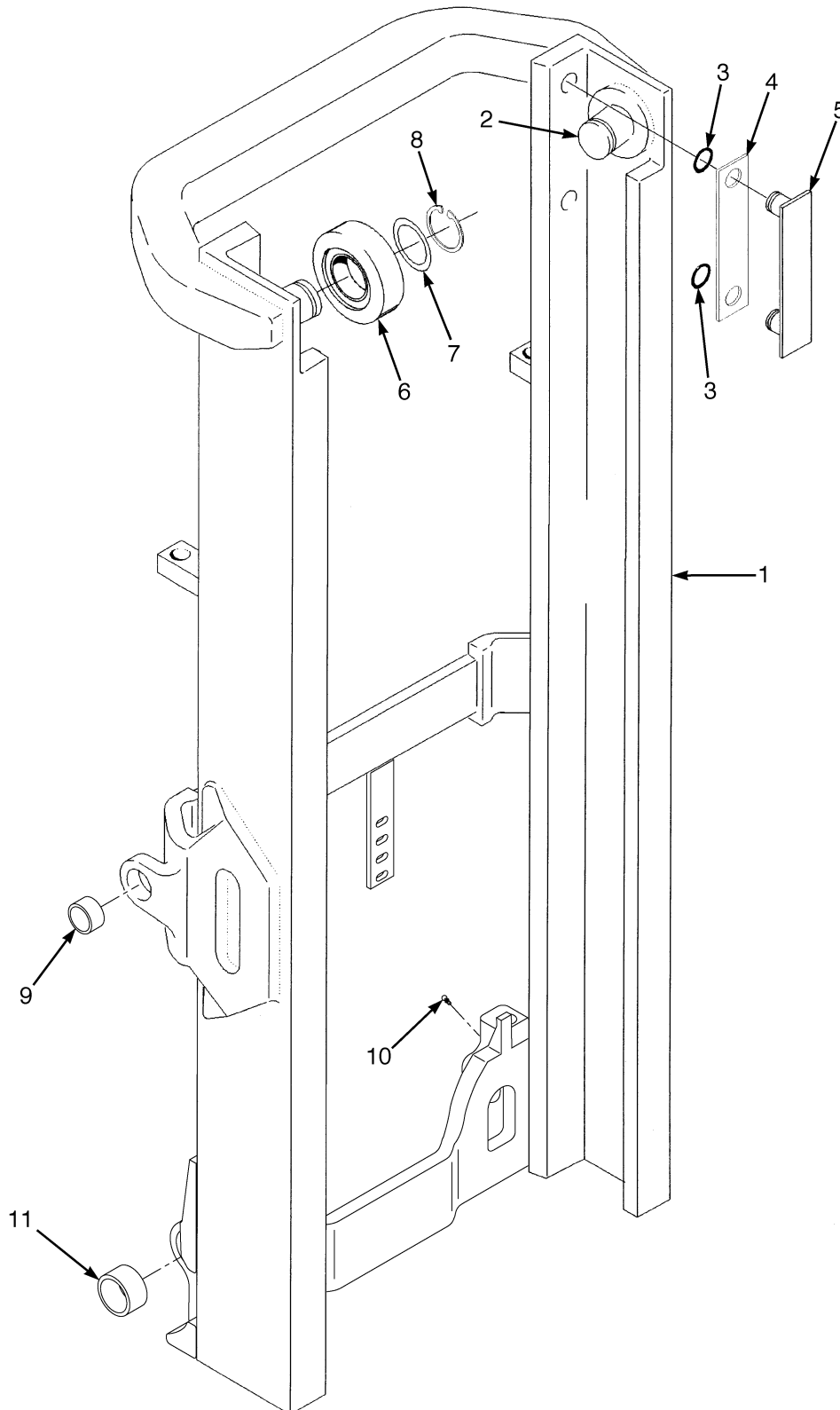
FOOTNOTES:**a** Not Illustrated

[illegible]

SECTION 12
MAST-THREE STAGE FULL FREE-LIFT

DESCRIPTION	PAGE
CARRIAGE	
THREE STAGE FULL FREE-LIFT	12-26
FREE-LIFT	
THREE STAGE FULL FREE-LIFT	12-16
FREE-LIFT CYLINDER	
THREE STAGE FULL FREE-LIFT	12-19
HEADER HOSES	
THREE STAGE FULL FREE-LIFT	12-22
INNER MAST	
THREE STAGE FULL FREE-LIFT	12-6
INTERMEDIATE MAST	
THREE STAGE FULL FREE-LIFT	12-4
MAIN LIFT	
THREE STAGE FULL FREE-LIFT	12-8
MAIN LIFT CYLINDERS	
THREE STAGE FULL FREE-LIFT	12-12
OUTER MAST	
THREE STAGE FULL FREE-LIFT	12-2

OUTER MAST (FIGURE 12-1) THREE STAGE FULL FREE-LIFT



HP290019

**OUTER MAST
THREE STAGE FULL FREE-LIFT****H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
	Mast Assy	2065448	2065454	2065456	2065458	2065464
1	Outer Mast	1524751	1524754	1524755	1524757	1524760

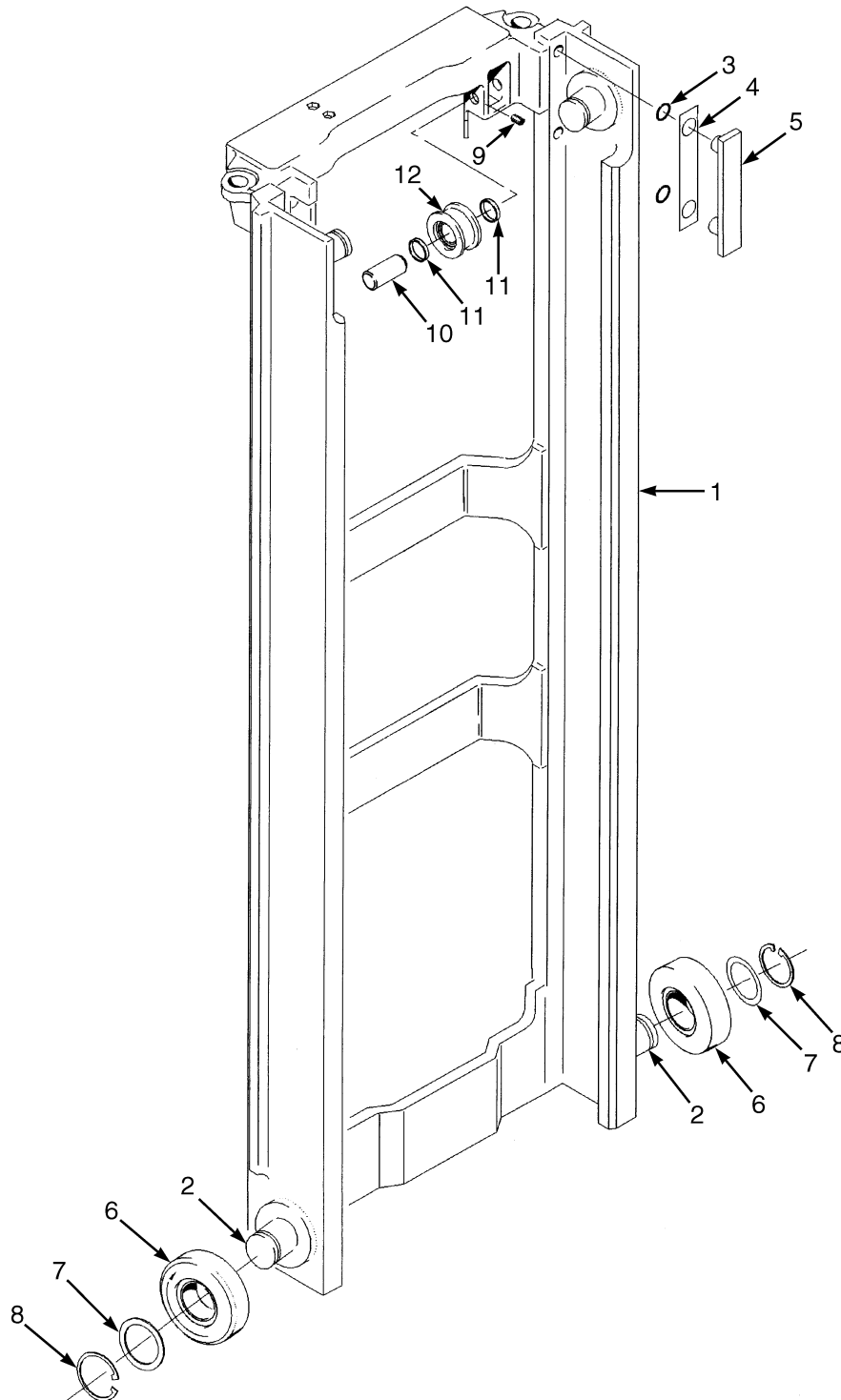
H60-70FT

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
	Mast Assy	2065396	2065398	2065405	2065411
1	Outer Mast	1524755	1524757	1524761	1524764

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Outer Mast	1
2	1345216	Stubshaft	2
3	104506	O-Ring	4
4	131715	Shim (0.007 in.)	AR
4	131716	Shim (0.020 in.)	AR
5	215211	Wear Strip	2
6	1333396	Load Roller	2
7	129387	Shim (0.020 in.)	AR
8	58901	Snap Ring	2
9	300982	Bushing	2
10	16001	Grease Fitting	2
11	1502811	Bushing	2

FOOTNOTES:**a** Refer to Table

INTERMEDIATE MAST (FIGURE 12-2) THREE STAGE FULL FREE-LIFT



HP290018

**INTERMEDIATE MAST
THREE STAGE FULL FREE-LIFT****H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
	Mast Assy	2065448	2065454	2065456	2065458	2065464
1	Intermediate Mast	1524831	1524834	1524835	1524836	1524839

H60-70FT

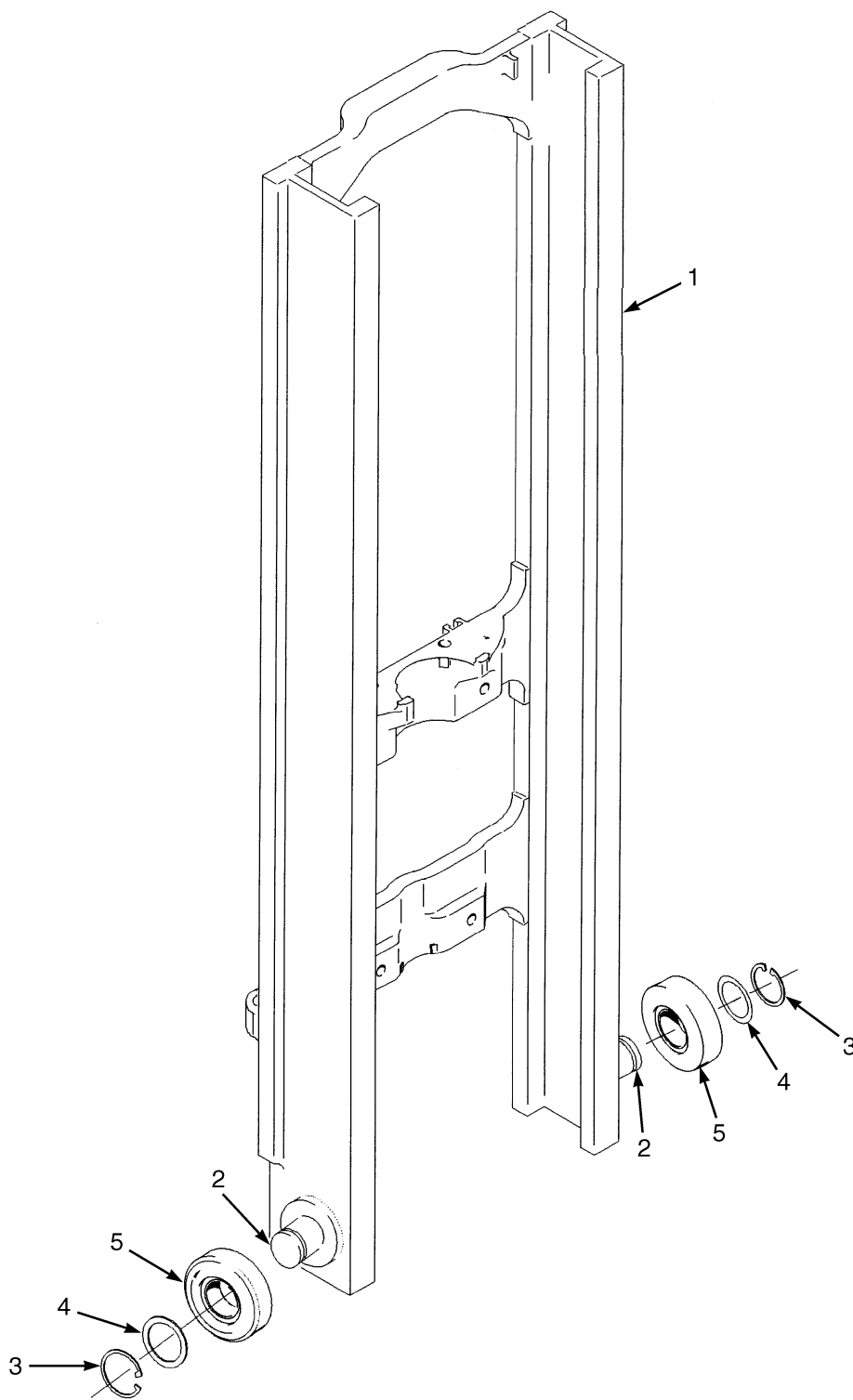
ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
	Mast Assy	2065396	2065398	2065405	2065411
1	Intermediate Mast	1524835	1524836	1524840	1524843

KEY:**A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a	Mast Assy	1	1
1	a	Intermediate Mast	1	1
2	1345216	Stubshaft	2	2
3	104506	O-Ring	4	4
4	131716	Shim (0.020 in.)	AR	AR
5	215211	Wear Strip	2	2
6	1333396	Load Roller	4	4
7	129387	Shim (0.020 in.)	AR	AR
8	58901	Snap Ring	4	4
9	302462	Roll Pin	2	2
10	1368656	Pin	2	2
11	1378691	Spacer	4	4
12	1379685	Chain Sheave	2	..
12	1379684	Chain Sheave	..	2
12	1378698	Chain Sheave	1	..
12	1378694	Chain Sheave	..	1
12	1378699	Ball Bearing	1	1
12	37752	Snap Ring	1	1

FOOTNOTES:**a** Refer to Table

INNER MAST (FIGURE 12-3) THREE STAGE FULL FREE-LIFT



HP290017

**INNER MAST
THREE STAGE FULL FREE-LIFT****H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
	Mast Assy	2065448	2065454	2065456	2065458	2065464
1	Inner Mast	1381354	1381357	1381358	1381359	1381362

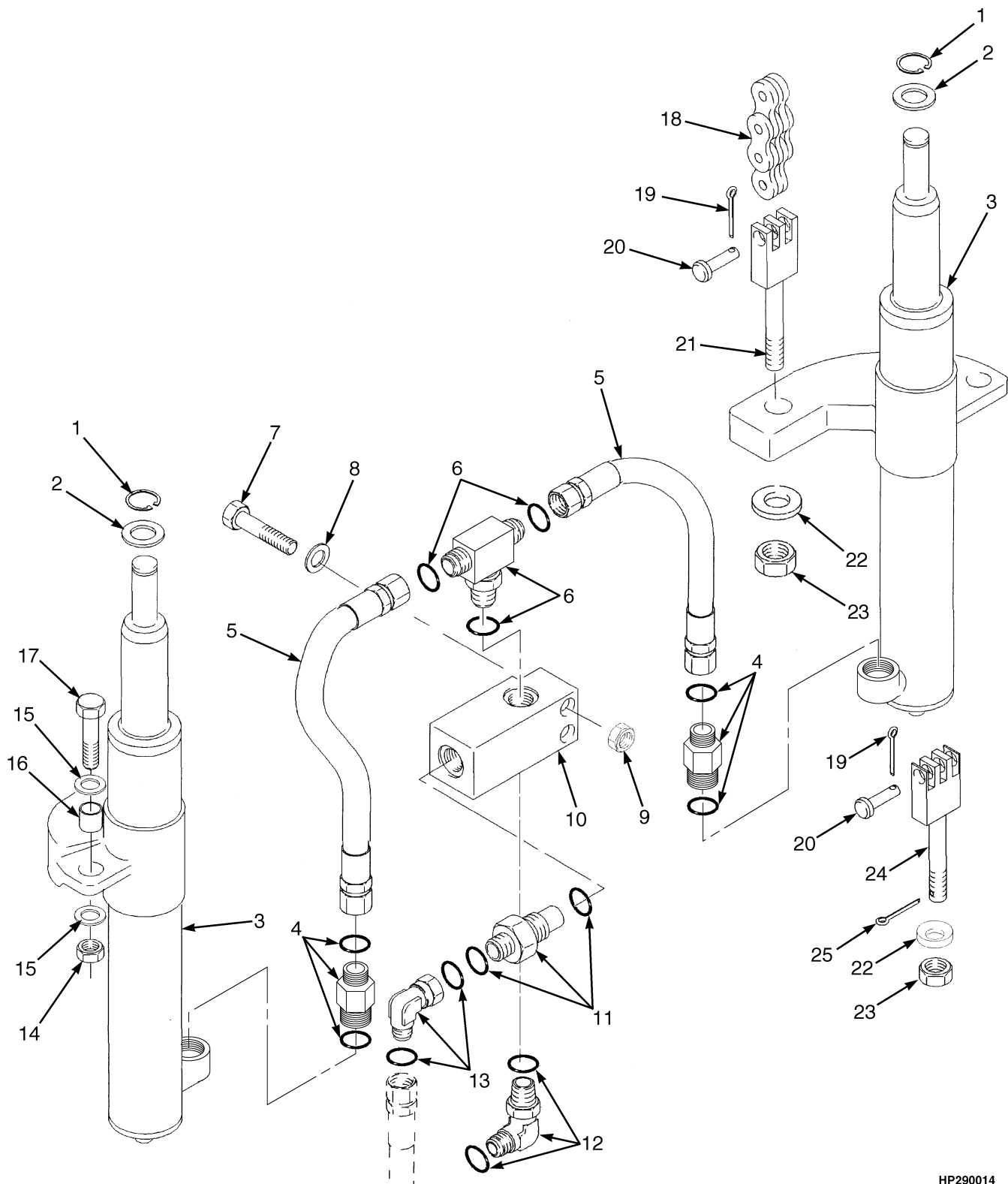
H60-70FT

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
	Mast Assy	2065396	2065398	2065405	2065411
1	Inner Mast	1381358	1381359	1381363	1381366

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Inner Mast	1
2	1345216	Stubshaft	2
3	58901	Snap Ring	2
4	129387	Shim (0.020 in.)	AR
5	1333396	Load Roller	2

FOOTNOTES:**a** Refer to Table

MAIN LIFT (FIGURE 12-4) THREE STAGE FULL FREE-LIFT



HP290014

**MAIN LIFT
THREE STAGE FULL FREE-LIFT****H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
18	Chain	182343	135634	337174	129361	135588

H60-70FT

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
18	Chain	1342124	1342384	1342387	1342132

KEY:**A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	131358	Snap Ring	2	2
2	1333382	Washer (0.060 in.)	2	2
2	1354915	Washer (0.010 in.)	AR	AR
2	1354916	Washer (0.030 in.)	AR	AR
2	1354917	Washer (0.060 in.)	AR	AR
3		Main Lift Cylinders (☞ Figure 12-5).....	2	2
4	2062686	Hyd Velocity Fuse	2	..
4	2062687	Hyd Velocity Fuse	..	2
4	16485	O-Ring	1	1
4	252729	O-Ring	1	1
5	1481097	Hose Assy	2	2
6	1532650	Fitting	1	1
6	16485	O-Ring	1	1
6	252729	O-Ring	2	2
7	1581835	Capscrew	2	2
8	1581556	Washer	2	2
9	1581566	Nut	2	2
10	1333392	Housing	1	1
11	2062651	Lowering Control Valve	1	..
11	2062652	Lowering Control Valve	..	1
11	280154	O-Ring	1	1
11	252729	O-Ring	1	1
12	1480747	Fitting	1	1
12	16486	O-Ring	1	1
12	244167	O-Ring	1	1
13	1486773	Fitting	1	1

MAIN LIFT **THREE STAGE FULL FREE-LIFT**

KEY:**A:** H40-50FT**B:** H60-70FT

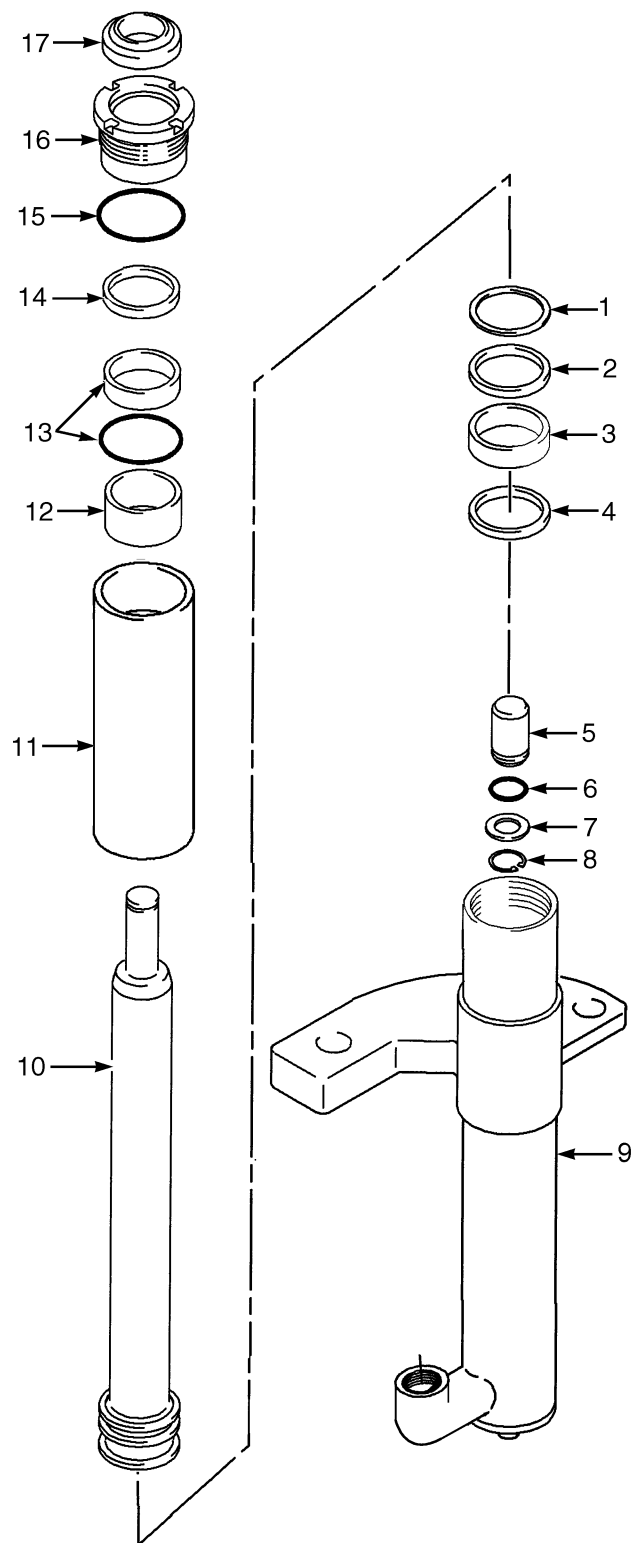
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
13	252729	O-Ring	2	2
14	1581849	Nut	2	2
15	1581852	Washer	4	4
16	323090	Spacer	2	2
17	1581829	Capscrew	2	2
18	a	Chain	1	1
19	15211	Cotter Pin	2	2
20	1514866	Pin	2	2
21	1369357	Chain Anchor	2	..
21	1369356	Chain Anchor	..	2
22	297649	Ring	2	2
23	161003	Nut	2	2
24	1365140	Chain Anchor	2	..
24	1333329	Chain Anchor	..	2
25	15223	Cotter Pin	2	2

FOOTNOTES:**a** Refer to Table

NOTES

[illegible]

MAIN LIFT CYLINDERS (FIGURE 12-5) THREE STAGE FULL FREE-LIFT



BP170294

**MAIN LIFT CYLINDERS
THREE STAGE FULL FREE-LIFT****LEFT HAND (H40-50FT)**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
	Cylinder Group Number	8518205	8518208	8518209	8518210	8518213
	Cylinder Assy	2064640	2064643	2064644	2064645	2064648
9	Tube Wldmt- Cylinder	2064607	2064610	2064611	2064612	2064615
10	Cylinder Rod	1355587	1355599	1355603	1355607	1355620
11	Spacer	----	----	----	1355610	1355610

RIGHT HAND (H40-50FT)

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
	Cylinder Group Number	8518255	8518258	8518259	8518260	8518263
	Cylinder Assy	2064673	2064676	2064677	2064678	2064681
9	Tube Wldmt- Cylinder	2073082	2073083	2073084	2073085	2073086
10	Cylinder Rod	1355587	1355599	1355603	1355607	1355620
11	Spacer	----	----	----	----	1355610

LEFT HAND (H60-70FT)

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
	Cylinder Group Number	8518309	8518310	8518314	8518317
	Cylinder Assy	2064710	2064711	2064715	2064718
9	Tube Wldmt- Cylinder	2064563	2064564	2064568	2064571
10	Cylinder Rod	1355745	1355749	1355762	1355775
11	Spacer	----	2073087	2077818	2077818

MAIN LIFT CYLINDERS
THREE STAGE FULL FREE-LIFT
RIGHT HAND (H60-70FT)

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
	Cylinder Group Number	8518359	8518360	8518364	8518367
	Cylinder Assy	2064735	2064736	2064740	2064743
9	Tube Wldmt- Cylinder	2064587	2064588	2064592	2064595
10	Cylinder Rod	1355745	1355749	1355762	1355775
11	Spacer	----	2073087	2077818	2077818

KEY:**A: H40-50FT****B: H60-70FT**

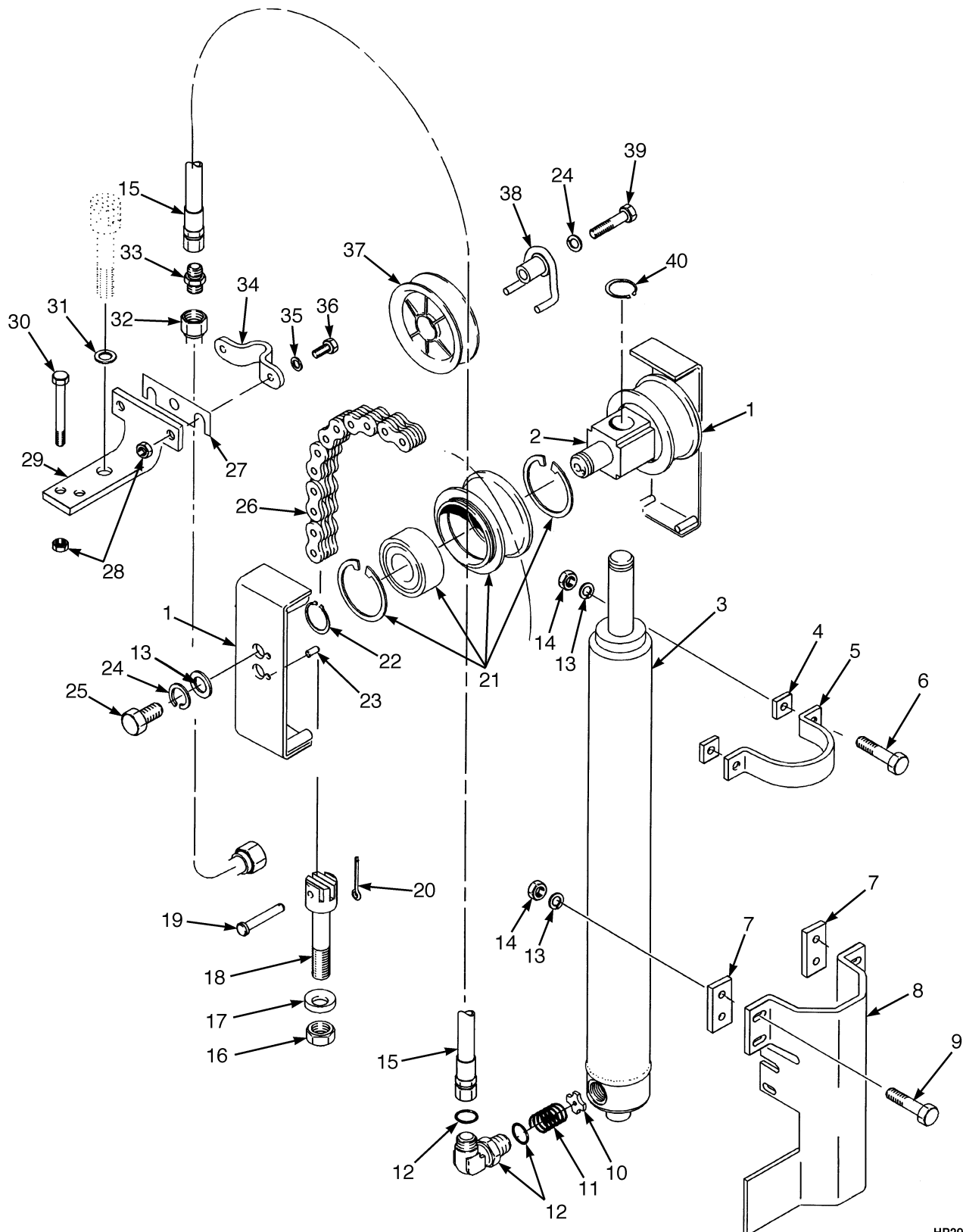
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	b	Cylinder Assy	1	1
1	638246	Back-Up Ring	1	..
1	335012	Back-Up Ring	..	1
2	2013075	Rod Seal	1	..
2	334156	Rod Seal	..	1
3	1356750	Wear Ring	1	..
3	1356751	Wear Ring	..	1
4	1360127	Piston Ring	1	..
4	1356748	Piston Ring	..	1
5	257913	Check Valve	1	1
6	190580	O-Ring	1	1
7	297531	Washer	1	1
8	187388	Snap Ring	1	1
9	b	Tube Wldmt-Cylinder	1	1
10	b	Cylinder Rod	1	1
11	b	Spacer	1	1
12	d 322902	Wear Ring	1	1
13	1356749	Rod Seal	1	..
13	1381095	Rod Seal	..	1
14	d 322824	Back-Up Ring	1	1
15	92861	O-Ring	1	..
15	59229	O-Ring	..	1
16	c 1355496	Gland	1	..
16	d 2091257	Gland	1	..
16	c 1355713	Gland	..	1
16	d 2091259	Gland	..	1
17	1319668	Rod Wiper	1	1
	a 322824	Back-Up Ring	1	1

**MAIN LIFT CYLINDERS
THREE STAGE FULL FREE-LIFT****KEY:****A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a 322902	Wear Ring	1	1
	1355497	Kit-Seal	1	..
	1355714	Kit-Seal	..	1

FOOTNOTES:**a** Not Illustrated**c** → 3/2007**b** Refer to Table**d** 3/2007 →

FREE-LIFT (FIGURE 12-6) THREE STAGE FULL FREE-LIFT



HP290015

**FREE-LIFT
THREE STAGE FULL FREE-LIFT****H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
15	Hose Assy	2084650	2084653	2084654	2084655	2084658
26	Chain	197345	180177	161029	180029	180057
32	Tube Assy	2075925	2075928	2075929	2075930	2075933

H60-70FT

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
15	Hose Assy	2084570	2084571	2084575	2084578
26	Chain	1342116	1342118	1342123	1342384
32	Tube Assy	2075929	2075930	2075934	2075937

KEY:**A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1395285	Chain Guard	2	2
2	1378690	Crosshead	1	1
3		Free-Lift Cylinder (☞ Figure 12-7).....	1	1
4	1354902	Spacer	..	2
5	1465504	Tie Down	1	1
6	1581827	Capscrew	2	..
6	1581828	Capscrew	..	2
7	1354903	Spacer	..	2
8	b 1354962	Bracket Wldmt	1	1
8	c 1702706	Bracket	1	1
9	1581832	Capscrew	4	4
10	356505	Washer (Special)	1	1
11	154355	Spring	1	1
12	1481095	Fitting	1	1
12	16485	O-Ring	1	1
12	280154	O-Ring	1	1
13	1581559	Washer	8	8
14	1581849	Nut	6	6
15	a	Hose Assy	1	1
16	161003	Nut	4	4

FREE-LIFT THREE STAGE FULL FREE-LIFT

KEY:

A: H40-50FT

B: H60-70FT

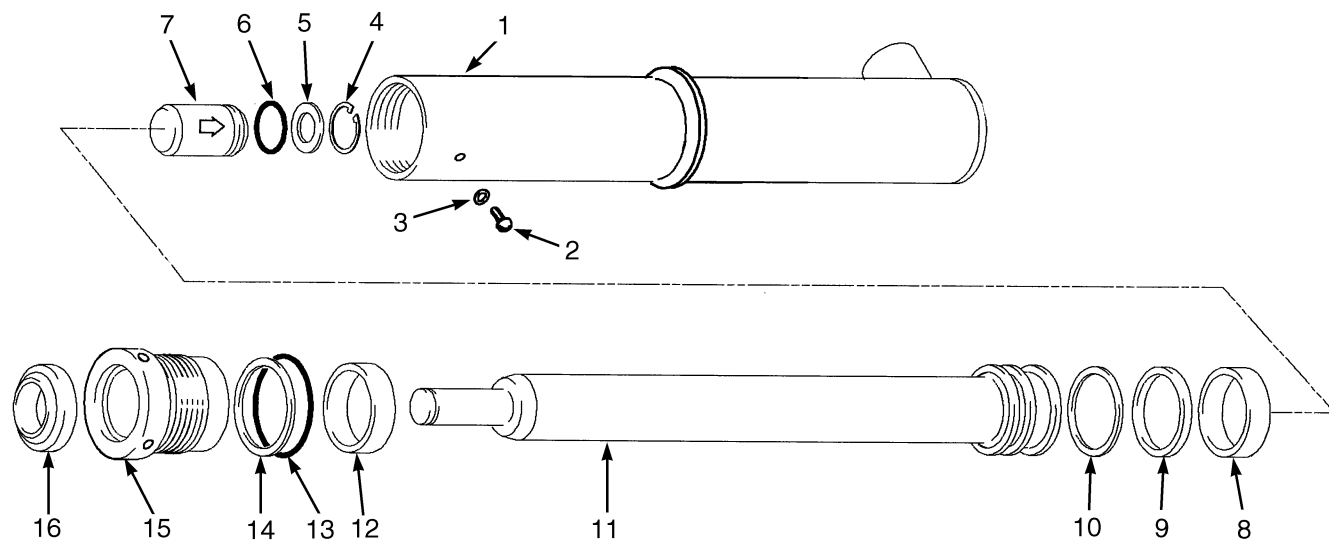
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
17	297649	Ring	4	4
18	1369357	Chain Anchor	2	..
18	1369356	Chain Anchor	..	2
19	1514866	Pin	4	4
20	15211	Cotter Pin	4	4
21	1379682	Chain Sheave Assembly	2	..
21	1379683	Chain Sheave Assembly	..	2
21	1378692	Chain Sheave	1	..
21	1378693	Chain Sheave	..	1
21	37752	Snap Ring	1	1
21	1378699	Ball Bearing	1	1
22	304526	Snap Ring	2	2
23	302461	Roll Pin	2	2
24	1581564	Lockwasher	3	3
25	1581590	Capscrew	2	2
26	a	Chain	1	2
27	325616	Spacer	AR	AR
28	1581566	Nut	4	4
29	1550298	Bracket	1	1
30	1581836	Capscrew	2	2
31	1581850	Washer	1	1
32	a	Tube Assy	1	1
33	1522442	Fitting	1	1
33	280154	O-Ring	1	1
33	244167	O-Ring	1	1
34	1345401	Clamp	1	1
35	1581556	Washer	2	2
36	1581581	Capscrew	2	2
37	1343989	Hose Sheave	1	1
37	1354901	Bushing	1	1
38	1360534	Stubshaft	1	1
39	1581829	Capscrew	1	1
40	131358	Snap Ring	1	1

FOOTNOTES:

a Refer to Table

c PENDING PER ECN 105839 →

b → PENDING PER ECN 105839

FREE-LIFT CYLINDER (FIGURE 12-7)
THREE STAGE FULL FREE-LIFT

HP171369

FREE-LIFT CYLINDER
THREE STAGE FULL FREE-LIFT**H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
	Cylinder Group Number	8514556	8514559	8514560	8514562	8514565
	Cylinder Assy	2053795	2053796	2053797	2053798	2053799
1	Tube Wldmt- Cylinder	2058210	2058213	2058214	2058216	2058219
11	Cylinder Rod	1356560	1356569	1356572	1356578	1371631

FREE-LIFT CYLINDER
THREE STAGE FULL FREE-LIFT
H60-70FT

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
	Cylinder Group Number	8518711	8518713	8518718	8518721
	Cylinder Assy	2058328	2058330	2058335	2058338
1	Tube Wldmt- Cylinder	2063691	2058254	2058256	2064753
11	Cylinder Rod	1356694	1356065	1356080	1356089

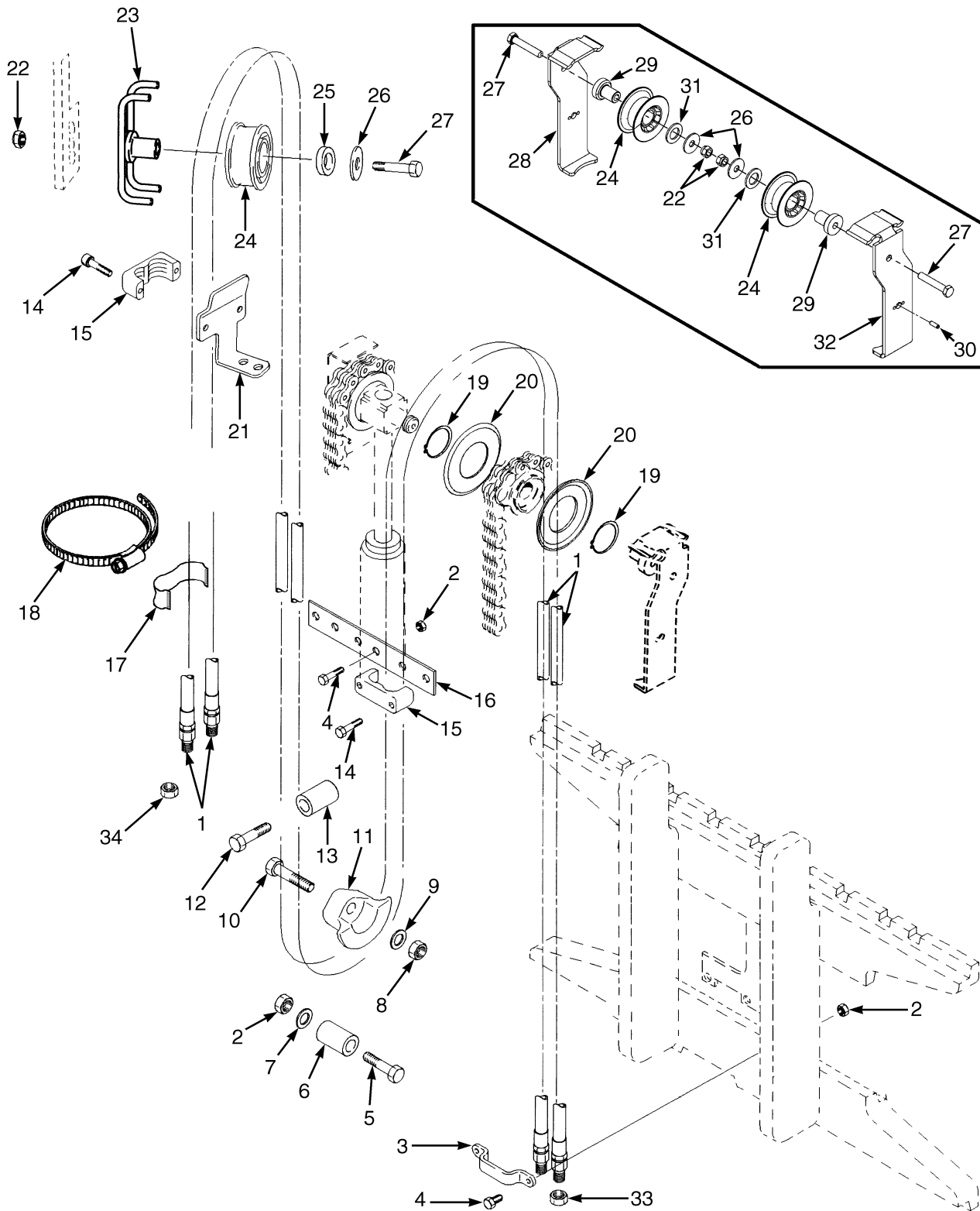
KEY:**A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a	Cylinder Assy	1	1
1	a	Tube Wldmt-Cylinder	1	1
2	1361302	Screw	1	1
3	190887	Sealing Ring	1	1
4	187388	Snap Ring	1	1
5	297531	Washer	1	1
6	39348	O-Ring	1	..
6	190580	O-Ring	..	1
7	257913	Check Valve	1	1
8	1358972	Wear Ring	1	..
8	636941	Wear Ring	..	1
9	2013088	Rod Seal	1	..
9	309062	Rod Seal	..	1
10	2013089	Back-Up Ring	1	..
10	637565	Back-Up Ring	..	1
11	a	Cylinder Rod	1	1
12	1358970	Rod Seal	1	1
13	90263	O-Ring	1	..
13	15880	O-Ring	..	1
14	147973	Back-Up Ring	1	..
14	164840	Back-Up Ring	..	1
15	1356292	Gland	1	..
15	1356661	Gland	..	1
16	2013099	Rod Wiper	1	1
	1358969	Kit-Seal	1	..
	1356662	Kit-Seal	..	1

FOOTNOTES:

- a** Refer to Table

HEADER HOSES (FIGURE 12-8) THREE STAGE FULL FREE-LIFT



HP020342

**HEADER HOSES
THREE STAGE FULL FREE-LIFT****H40-50FT**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
	Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
1	Hose Assy	2065121	2065124	2065125	2065161	2065164

H60-70FT

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS			
		4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
	Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
1	Hose Assy	2065125	2065161	2065165	2065168

KEY:**A: Three Function****B: Four Function**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	a	Hose Assy	2	4
2	1581566	Nut	5	10
3	1643405	Hose Clamp	1	2
4	1581581	Capscrew	4	10
5	1581835	Capscrew	1	2
6	1354961	Spacer	1	2
7	1581851	Washer	1	2
8	1581567	Nut	1	2
9	1581558	Washer	1	2
10	1581588	Capscrew	1	2
11	1348246	Hose Guide (RH)	1	1
11	1348247	Hose Guide (LH)	..	1
12	1581831	Capscrew	1	2
13	1360538	Tube Assy	1	2
14	1581842	Capscrew	4	8
15	1360386	Clamp	2	4
16	1353464	Plate	1	1
17	1477996	Hose Clamp	1	2
18	1617657	Clamp	1	2
19	1345204	Snap Ring	2	4
20	1345199	Hose Guide	2	4
21	1354906	Bracket (RH)	1	1
21	1354907	Bracket (LH)	..	1
22	1390182	Nut	2	4
23	1362387	Stubshaft	1	2
24	1494017	Hose Sheave	2	4

**HEADER HOSES
THREE STAGE FULL FREE-LIFT****KEY:****A: Three Function****B: Four Function**

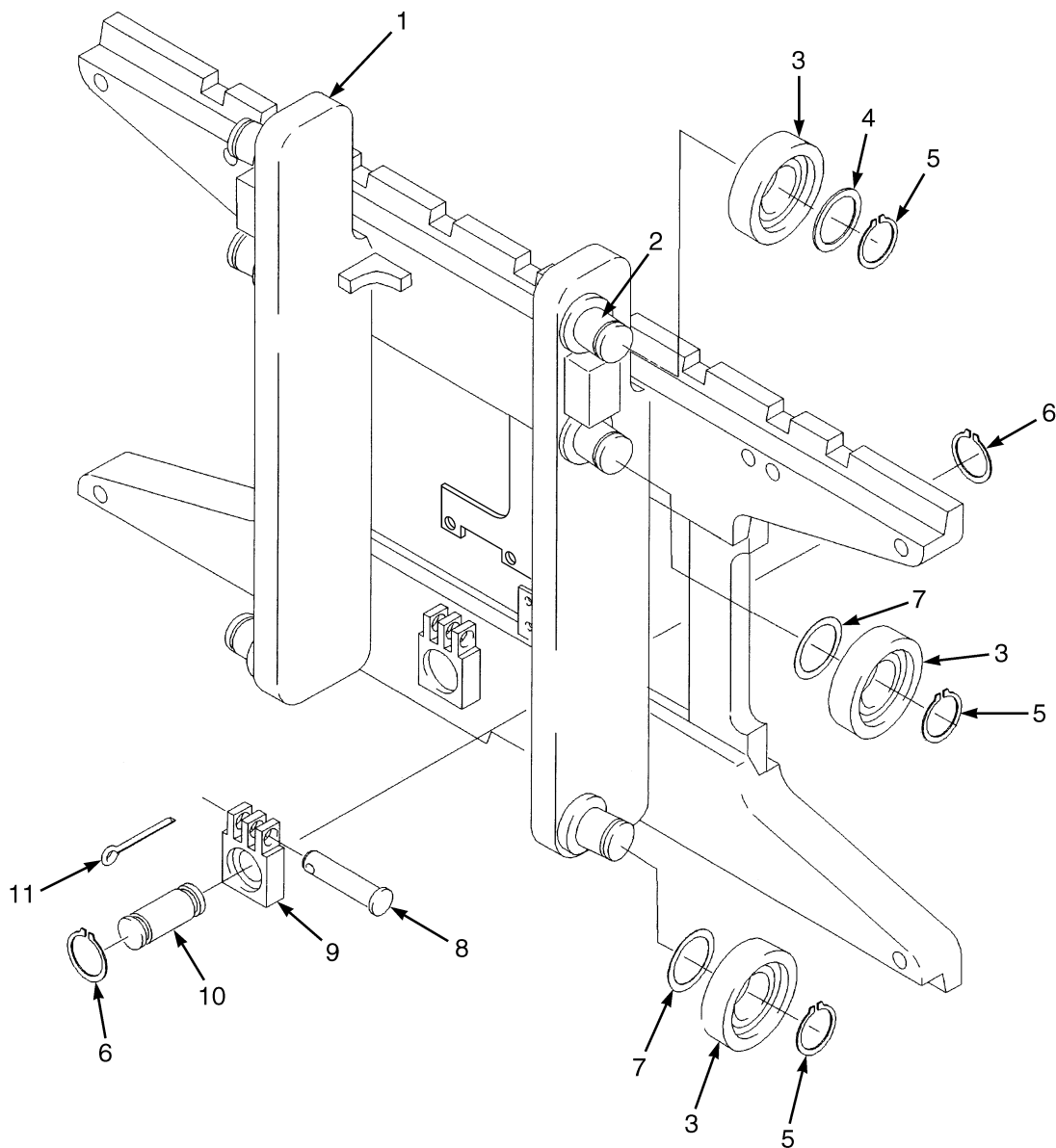
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
25	1360549	Spacer	1	2
26	1345190	Washer	2	4
27	1581830	Capscrew	2	4
28	1395291	Bracket (RH Hose Guard)	1	1
29	1396406	Stubshaft	1	2
30	302461	Roll Pin	1	2
31	1581560	Washer	1	2
32	1395292	Bracket (LH Hose Guard)	..	1
33	1529015	Fitting	2	4
34	1566564	Cap	1	2

FOOTNOTES:**a** Refer to Table

NOTES

[illegible]

CARRIAGE (FIGURE 12-9) THREE STAGE FULL FREE-LIFT



HP290016

CARRIAGE
THREE STAGE FULL FREE-LIFT**KEY:****A: H40-50FT****B: H60-70FT**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1379459	Carriage (42 in)	1	..
	1477680	Carriage	..	1
1	1381560	Carriage Wldmt (42 in)	1	..
1	1477931	Carriage Wldmt	..	1
2	1345216	Stubshaft	6	6
3	1333399	Load Roller	6	6
3	1393142	Load Roller (Optional)	6	6
3	1395174	Load Roller (Optional)	6	6
3	1395176	Load Roller (Optional)	6	6
4	366115	Spacer	2	2
5	58901	Snap Ring	6	6
5	a 1374797	Snap Ring (Optional)	6	6
6	131358	Snap Ring	4	4
7	129387	Shim (0.020 in.)	AR	AR
8	1514866	Pin (Chain Anchor)	2	2
9	1369345	Chain Anchor (Dual Hole)	2	..
9	1504010	Chain Anchor (Single Hole) (Optional)	2	..
9	1369344	Chain Anchor (Dual Hole)	..	2
9	1504012	Chain Anchor (Single Hole) (Optional)	..	2
10	317735	Pin	2	2
11	15211	Cotter Pin	2	2

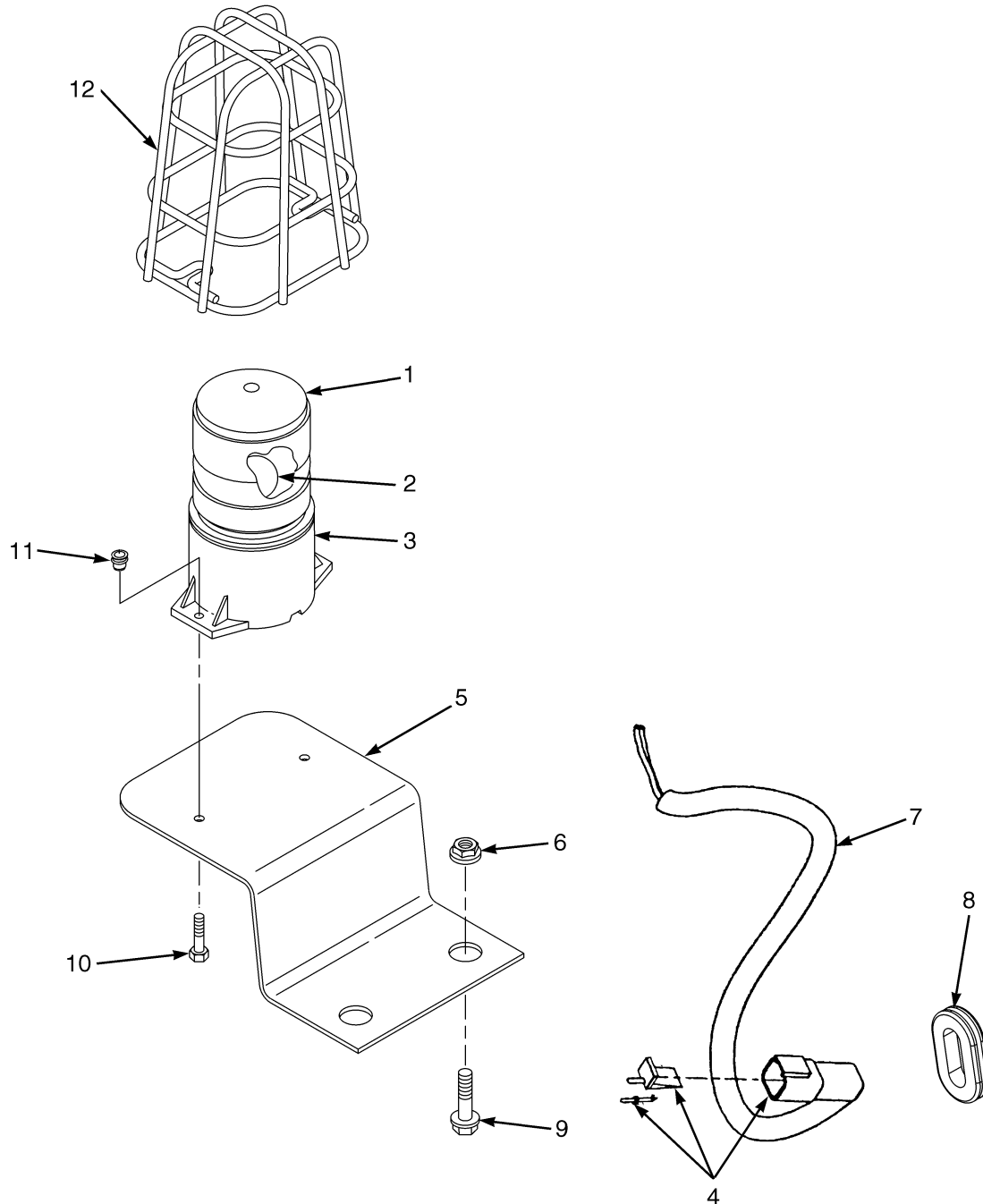
FOOTNOTES:**a** Not Illustrated

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SECTION 13
OPTIONS

DESCRIPTION	PAGE
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GM LPG REGULATOR DRAIN KIT	13-32
INTEGRAL SIDE-SHIFT ASSEMBLY	
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TWO STAGE FULL FREE-LIFT	13-20
TWO STAGE LIMITED FREE-LIFT	13-16
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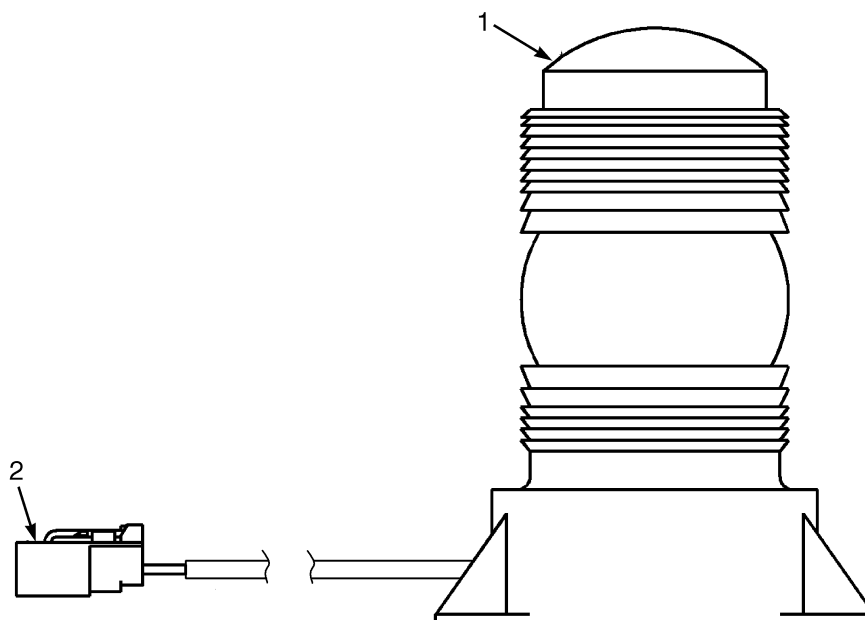
STROBE LIGHT (FIGURE 13-1) (→ S/N L177B18988E)



BP000283

STROBE LIGHT
(→ S/N L177B18988E)

ITEM	PART NO.	DESCRIPTION	QTY
1	1581670	Strobe Light	1
1	1382130	Strobe Light	1
2	1309775	Strobe Light	1
3	1526082	Lens (Amber)	1
4	1463138	Terminal	2
4	1561755	Connector	1
4	1561559	Connector	2
5	1565076	Bracket Wldmt	1
6	1586428	Nut	2
7	2073760	Wire Harness (Lights)	1
8	1539584	Grommet	1
9	1586759	Capscrew	2
10	1586495	Capscrew	2
11	1531001	Insert	2
12	1302024	Guard	1

STROBE LIGHT (FIGURE 13-2)
LED (S/N L177B18989E →)

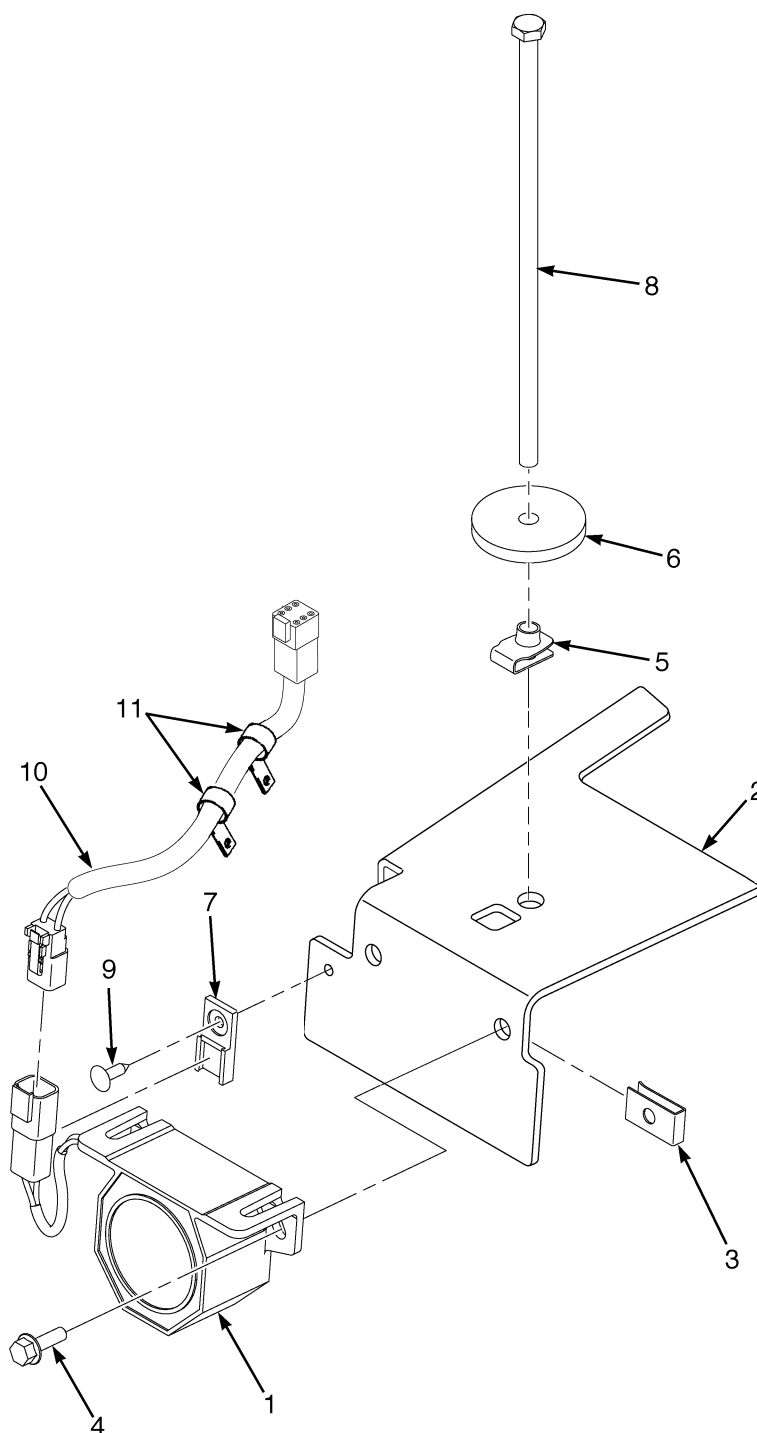
BP000363

ITEM	PART NO.	DESCRIPTION	QTY
	1654013	Strobe Light Assembly	1
1	1652290	Strobe Light (LED)	1
2	1463138	Terminal	2
2	1561559	Connector	1
2	1561755	Connector	1

NOTES

[illegible]

BACK-UP ALARM (FIGURE 13-3)



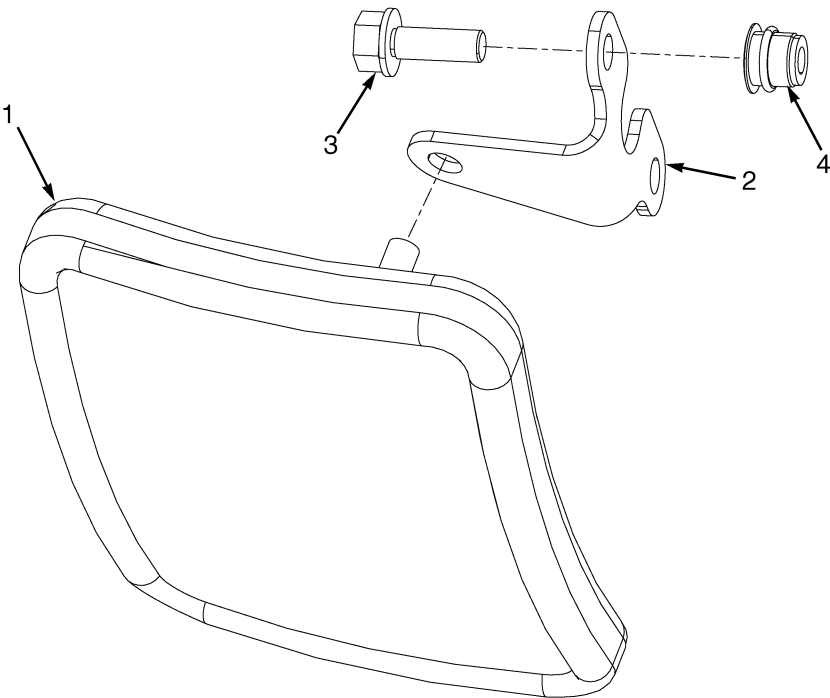
HP000897

BACK-UP ALARM

ITEM	PART NO.	DESCRIPTION	QTY
1	2064929	Back-Up Alarm (82-102 dbA)	1
2	1589195	Bracket	1
3	1350215	Nut	2
4	1527877	Capscrew	2
5	1480237	Nut	1
6	1547756	Washer	1
7	1500912	Clip	1
8	1543982	Capscrew	1
9	1582464	Fastener	1
10	b 2078883	Wire Harness (Back-Up Alarm) (To RH Chassis) (2-Pin Connector)	1
10	1402923	Connector	1
10	1330417	Connector	1
10	1490242	Connector	1
10	1490243	Connector	1
10	1330437	Terminal (Pin)	2
10	1330438	Terminal (Socket)	2
10	1330439	Plug	4
10	a 2070771	Wire Harness (Back-Up Alarm) (To RH Chassis) (6-Pin Connector)	1
10	1493465	Connector	1
10	1330414	Connector (Secondary Lock)	1
10	1490242	Connector	1
10	1490243	Connector	1
10	1330437	Terminal (Pin)	1
10	1330438	Terminal (Socket)	2
11	1509888	Clip	2

FOOTNOTES:**a** → S/N L177B01500C**b** S/N L177B01501C →

**MIRRORS (FIGURE 13-4)
WITH CAB**

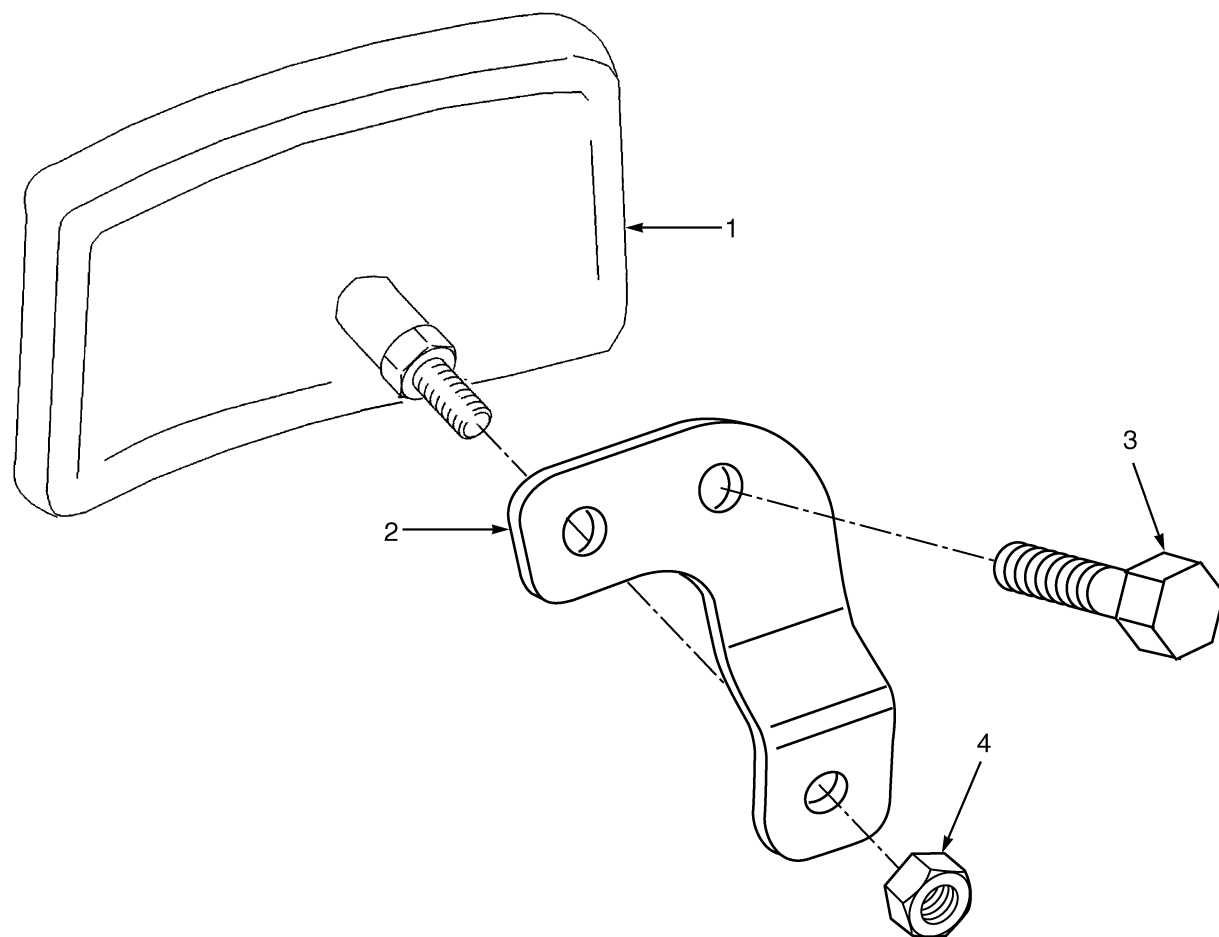


HP000896

ITEM	PART NO.	DESCRIPTION	QTY
1	1301286	Mirror	2
2	1579412	Bracket	2
3	1583611	Capscrew	4
4	1531557	Insert	4

NOTES

[illegible]

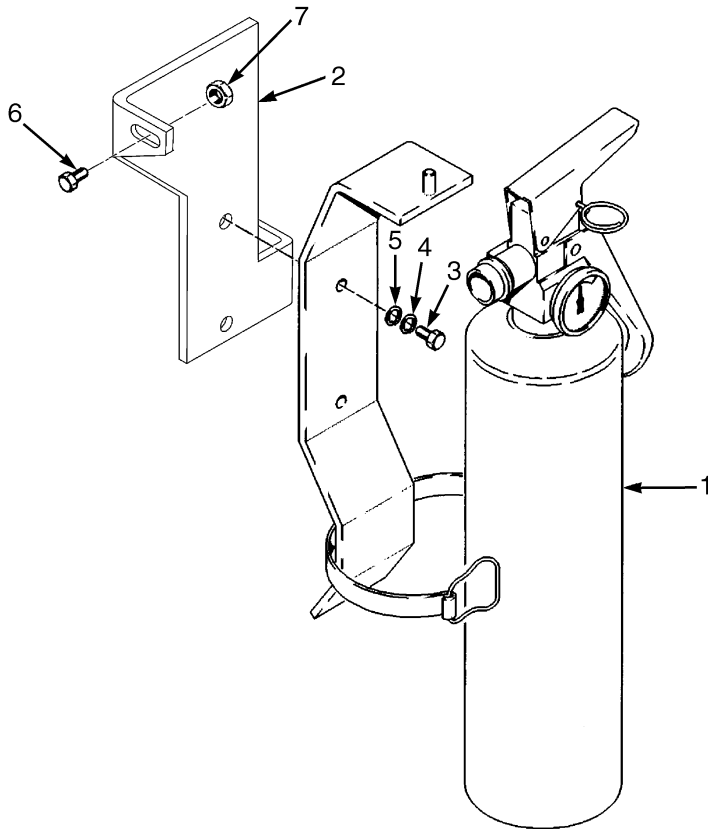
**MIRRORS (FIGURE 13-5)
WITH OVERHEAD GUARD**

HP000895

**MIRRORS
WITH OVERHEAD GUARD**

ITEM	PART NO.	DESCRIPTION	QTY
1	1301286	Mirror	2
2	1656215	Bracket (RH) (RH)	1
2	1656216	Bracket (LH) (LH)	1
3	1583611	Capscrew	4
4	1586430	Nut	4

FIRE EXTINGUISHER (FIGURE 13-6)



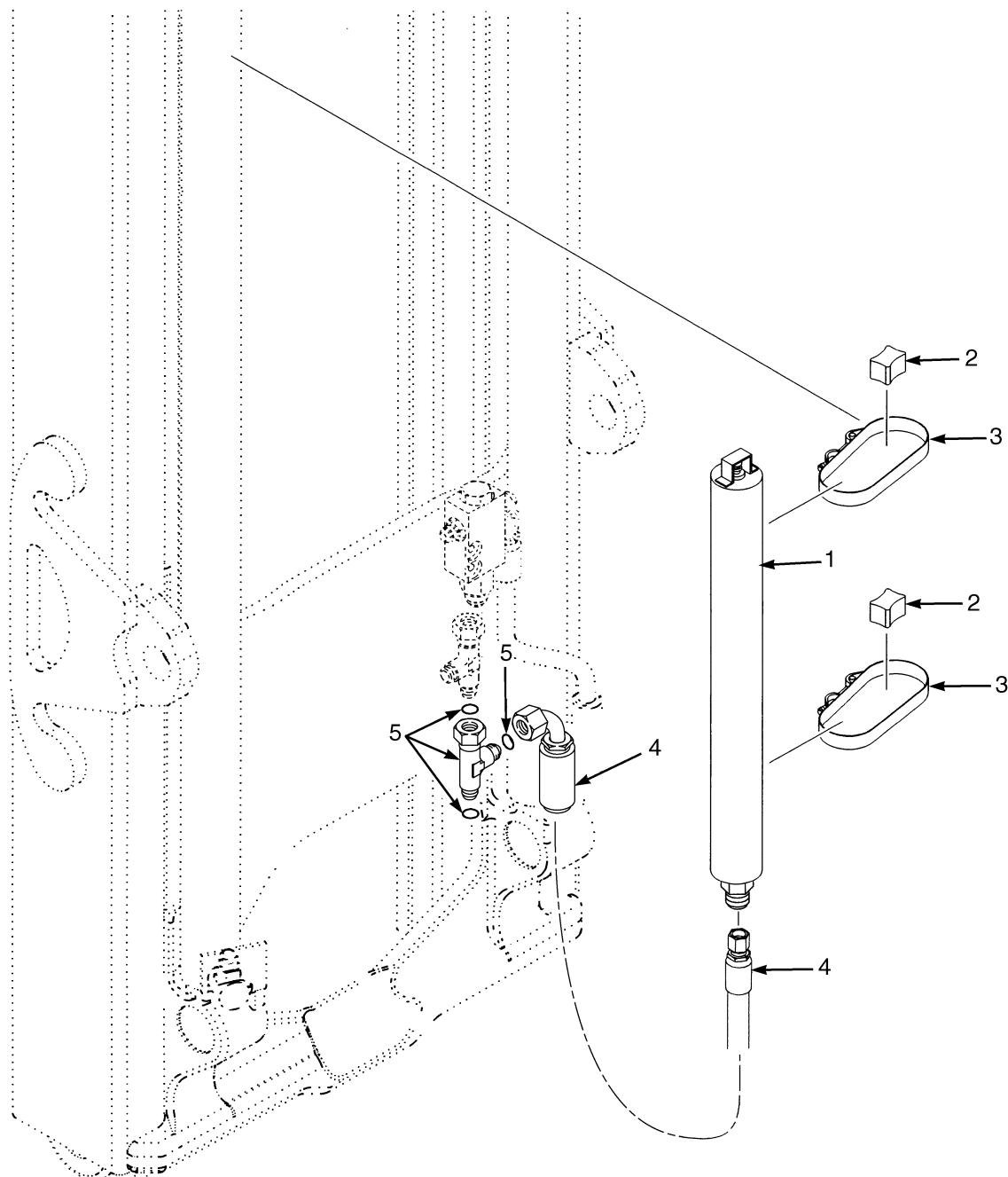
BP000252

ITEM	PART NO.	DESCRIPTION	QTY
1	146540	Fire Extinguisher Assembly	1
1		Fire Extinguisher	1
1	1561749	Bracket	1
2	1582141	Bracket	1
3	296507	Screw	2
4	292679	Washer	2
5	320155	Washer	2
6	1583611	Capscrew	1
7	1502543	Nut (Flange)	1

NOTES

[illegible]

ACCUMULATOR AND ATTACHING PARTS (FIGURE 13-7)

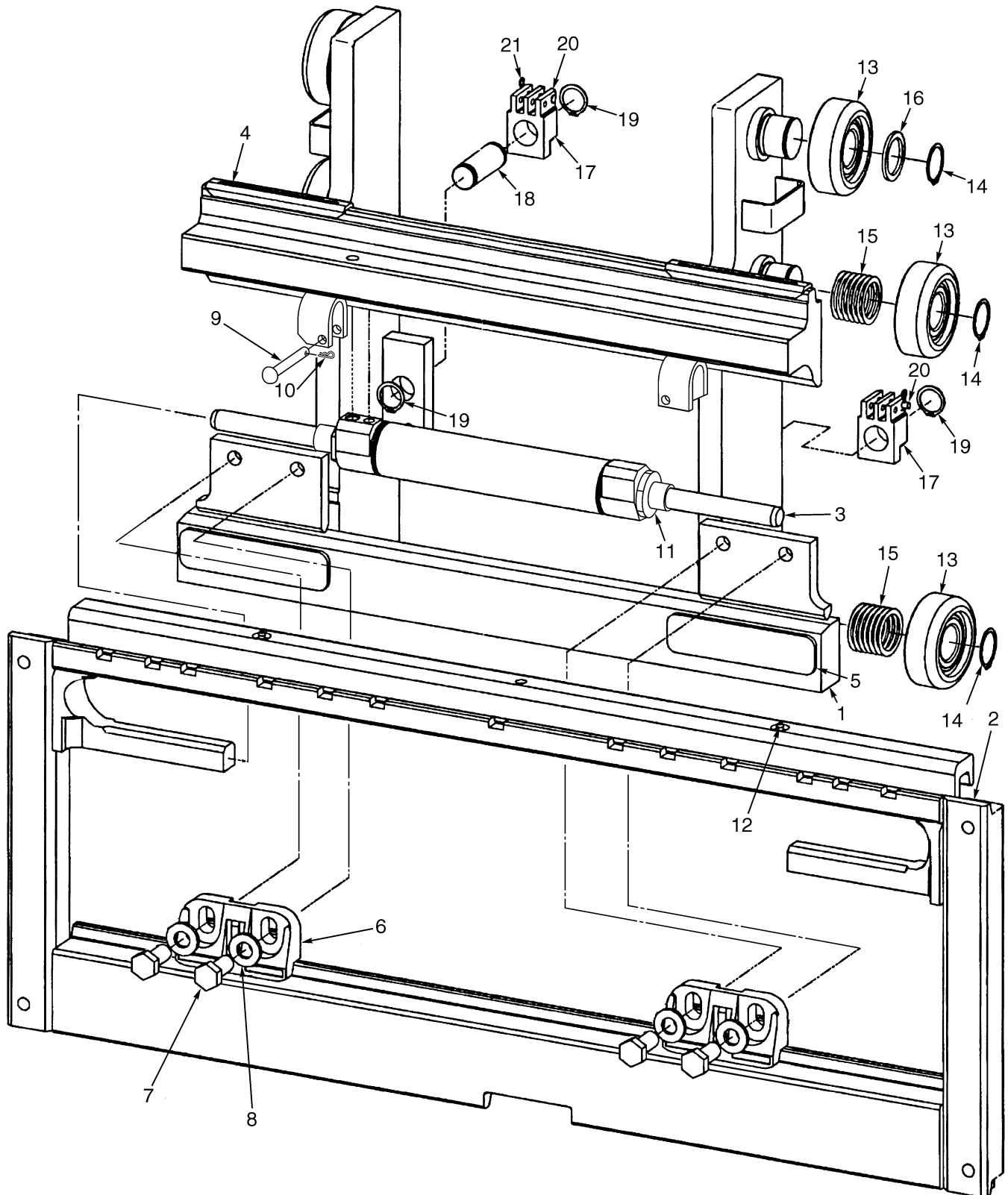


HP000908

ACCUMULATOR AND ATTACHING PARTS

ITEM	PART NO.	DESCRIPTION	QTY
1	1465897	Accumulator	1
2	1609864	Spacer	2
3	1611564	Clamp	2
4	2073766	Hose Assy	1
5	1487096	Fitting	1
5	252729	O-Ring	3

INTEGRAL SIDE-SHIFT ASSEMBLY (FIGURE 13-8) TWO STAGE LIMITED FREE-LIFT



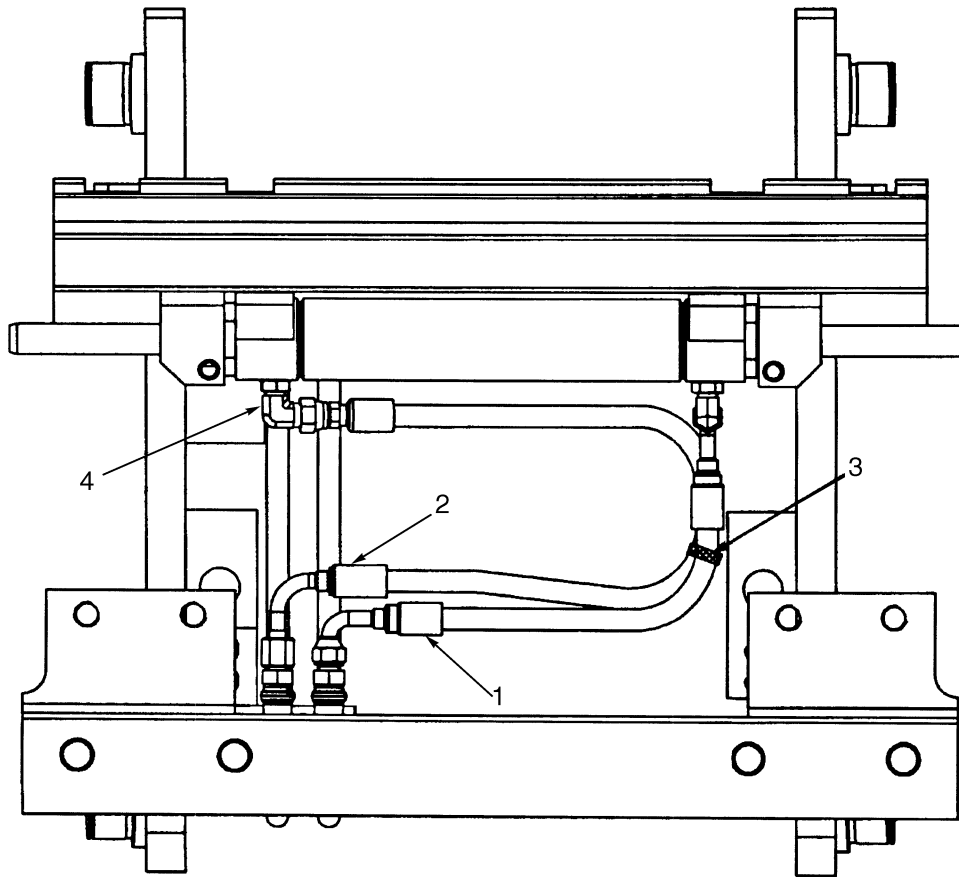
HP020343

**INTEGRAL SIDE-SHIFT ASSEMBLY
TWO STAGE LIMITED FREE-LIFT****KEY:****A: H40-50FT D507****B: H60-70FT D562**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1486182	Side-Shift Carriage (42 in.)	1	..
	1486185	Side-Shift Carriage (48 in.)	1	..
	1477981	Side-Shift Carriage (42 in.)	..	1
	1477982	Side-Shift Carriage (48 in.)	..	1
1	1489002	Carriage Wldmt (Inner) (42 in., 48 in.)	1	..
1	1477849	Frame (Inner)	..	1
2	1489011	Carriage Wldmt (Outer) (42 in.)	1	..
2	1489012	Frame (Outer) (48 in.)	1	..
2	1488975	Carriage Wldmt (Outer) (42 in.)	..	1
2	1488976	Carriage Wldmt (Outer) (48 in.)	..	1
3	2043528	Sideshift Cylinder (Assembly) (☞ Figure 13-13).....	1	..
3	2043529	Sideshift Cylinder (Assembly) (☞ Figure 13-13).....	..	1
4	2043531	Bearing (Upper)	2	..
4	2043532	Bearing (Upper)	..	2
5	2043533	Bearing (Lower)	2	..
5	2043534	Bearing (Lower)	..	2
6	2043530	Hook (Lower)	2	2
7	226458	Capscrew	4	4
8	296426	Washer	4	4
9	1401746	Pin	2	2
10	18832	Cotter Pin	2	2
11	1498326	Shim	3	3
12	16041	Grease Fitting	2	2
13	1345219	Load Roller (4.36/4.35 in.)	6	6
14	12891	Snap Ring	6	6
14	a 386422	Snap Ring (Optional)	6	6
15	1345263	Shim (0.020 in.)	28	28
16	366116	Spacer	2	2
17	1369344	Chain Anchor (Dual Hole)	..	2
17	1504012	Chain Anchor (Single Hole) (Optional)	..	2
17	1369345	Chain Anchor (Dual Hole)	2	..
17	1504010	Chain Anchor (Single Hole) (Optional)	2	..
18	1353408	Pin	2	2
18	317735	Pin (48 in.)	2	..
19	131358	Snap Ring	4	4
20	1514866	Pin	2	2
21	15211	Cotter Pin	2	2

FOOTNOTES:**a** Not Illustrated

INTEGRAL SIDE-SHIFT HYDRAULIC HOSES (FIGURE 13-9) TWO STAGE LIMITED FREE-LIFT



BP000004

KEY:

A: H40-50FT

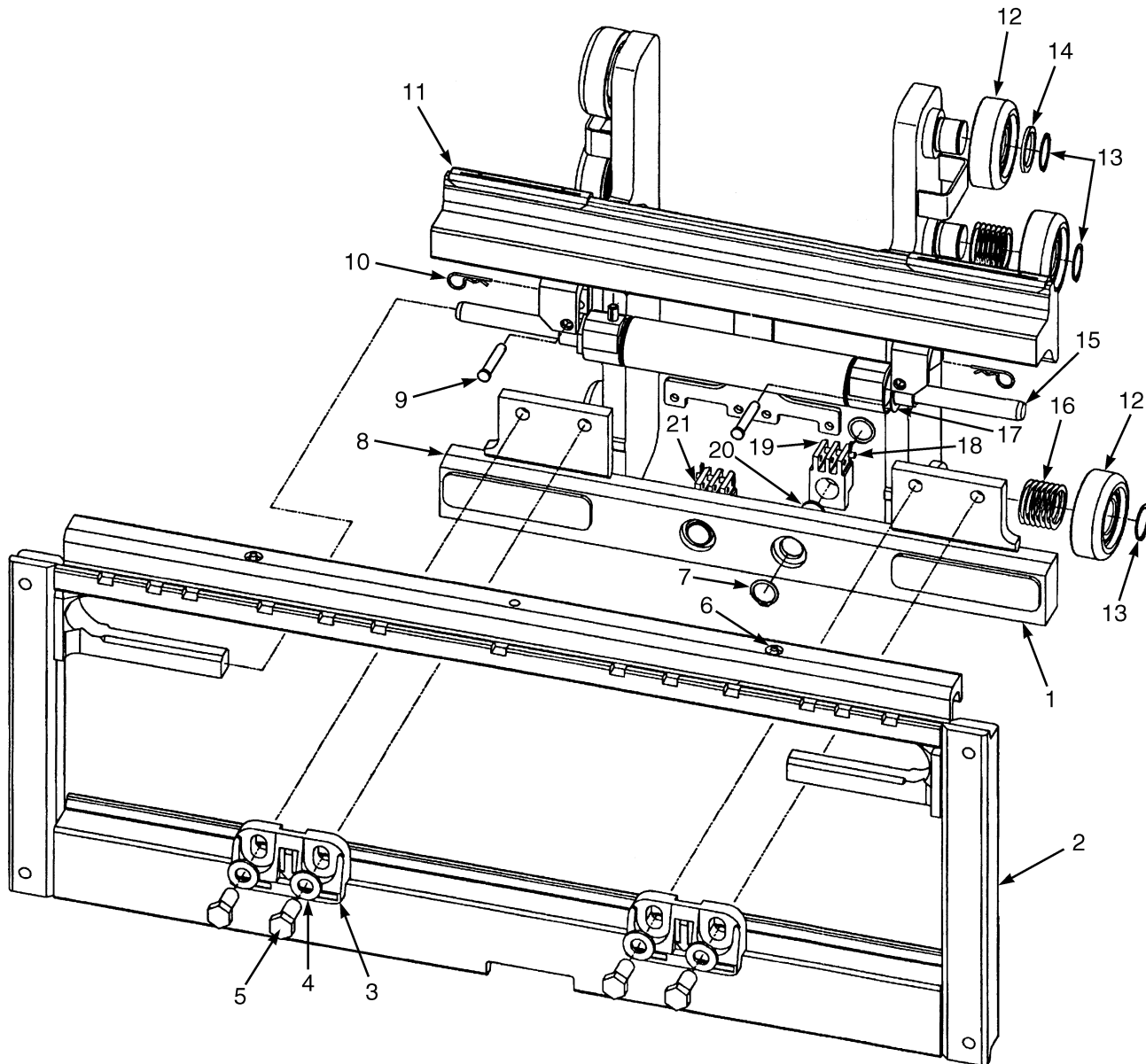
B: H60-70FT

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2067822	Hose Assy	1	..
1	2065672	Hose Assy	..	1
2	2065670	Hose Assy	1	..
2	2065671	Hose Assy	..	1
3	114312	Strap Clamp	1	1
4	1487063	Fitting	2	2
4	1527813	O-Ring	1	1
4	265787	O-Ring	1	1

NOTES

[illegible]

INTEGRAL SIDE-SHIFT ASSEMBLY (FIGURE 13-10) TWO STAGE FULL FREE-LIFT



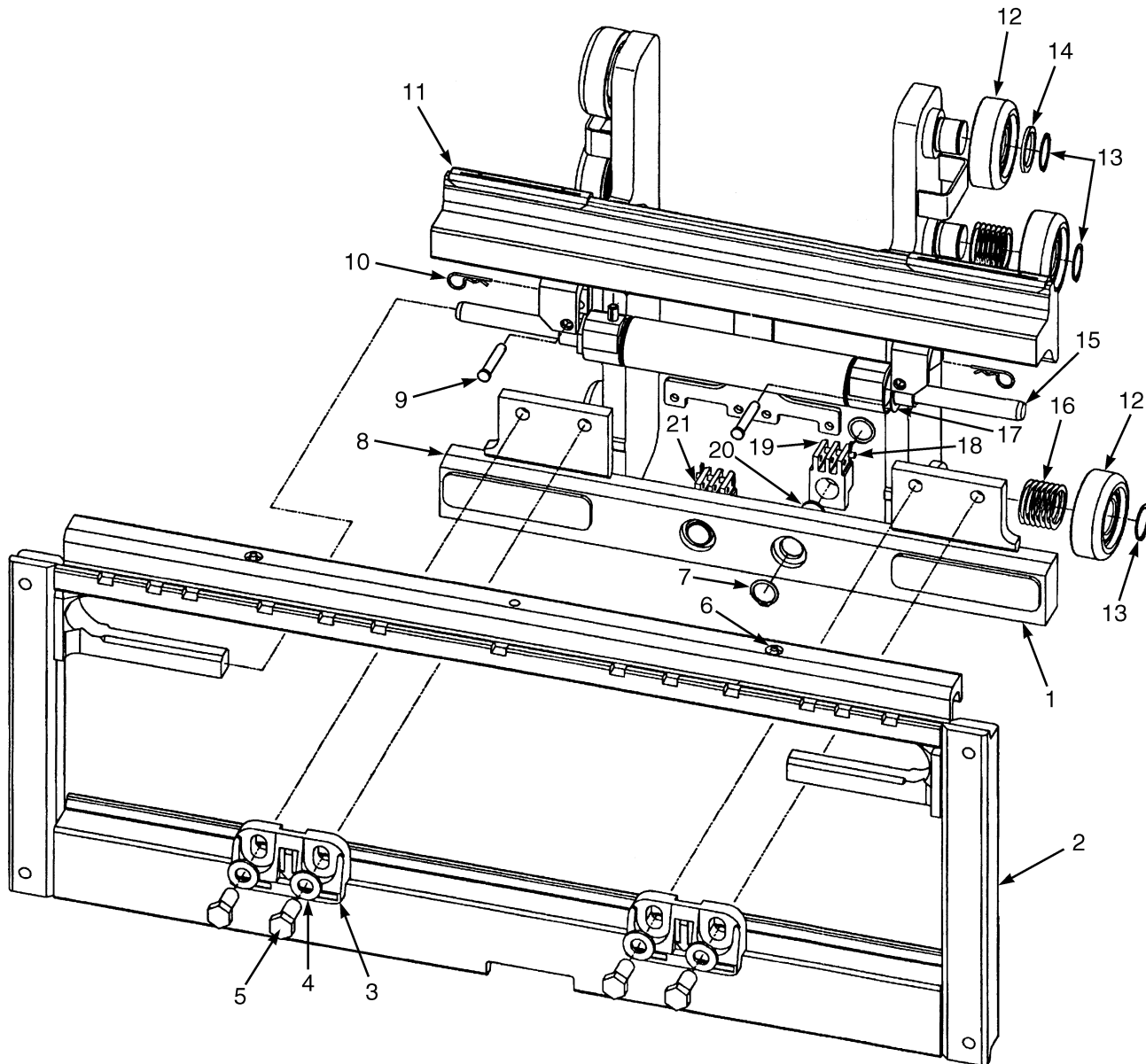
HP020344

**INTEGRAL SIDE-SHIFT ASSEMBLY
TWO STAGE FULL FREE-LIFT****KEY:****A: H40-50FT D509****B: H60-70FT D564**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1486183	Side-Shift Carriage (42 in.)	1	..
	1486186	Side-Shift Carriage (48 in.)	1	..
	1477944	Side-Shift Carriage (42 in.)	..	1
	1477946	Side-Shift Carriage (48 in.)	..	1
1	1489003	Carriage Wldmt (Inner) (42 in., 48 in.)	1	..
1	1477938	Frame (Inner) (42 in., 48 in.)	..	1
2	1489011	Carriage Wldmt (Outer) (42 in.)	1	..
2	1489012	Frame (Outer) (48 in.)	1	..
2	1488975	Carriage Wldmt (Outer) (42 in.)	..	1
2	1488976	Carriage Wldmt (Outer) (48 in.)	..	1
3	2043530	Hook (Lower)	2	2
4	296426	Washer	4	4
5	226458	Capscrew	4	2
6	16041	Grease Fitting	2	2
7	131358	Snap Ring	4	4
8	2043533	Bearing (Lower)	2	..
8	2043534	Bearing (Lower)	..	2
9	1401746	Pin	2	2
10	18832	Cotter Pin	2	2
11	2043531	Bearing (Upper)	2	..
11	2043532	Bearing (Upper)	..	2
12	1345219	Load Roller (4.36/4.35 in.)	6	6
13	12891	Snap Ring	6	6
13	a 386422	Snap Ring (Optional)	6	6
14	366116	Spacer	2	2
15	2043528	Sideshift Cylinder (Assembly) (☞ Figure 13-13).....	1	..
15	2043529	Sideshift Cylinder (Assembly) (☞ Figure 13-13).....	..	1
16	1345263	Shim (0.020 in.)	28	28
17	1498326	Shim	3	3
18	1514866	Pin	2	2
19	1369345	Chain Anchor (Dual Hole)	2	..
19	1504010	Chain Anchor (Single Hole) (Optional)	2	..
19	1369344	Chain Anchor (Dual Hole)	..	2
19	1504012	Chain Anchor (Single Hole) (Optional)	..	2
20	317735	Pin	2	2
21	15211	Cotter Pin	2	2

FOOTNOTES:**a** Not Illustrated

INTEGRAL SIDE-SHIFT ASSEMBLY (FIGURE 13-11) THREE STAGE FULL FREE-LIFT



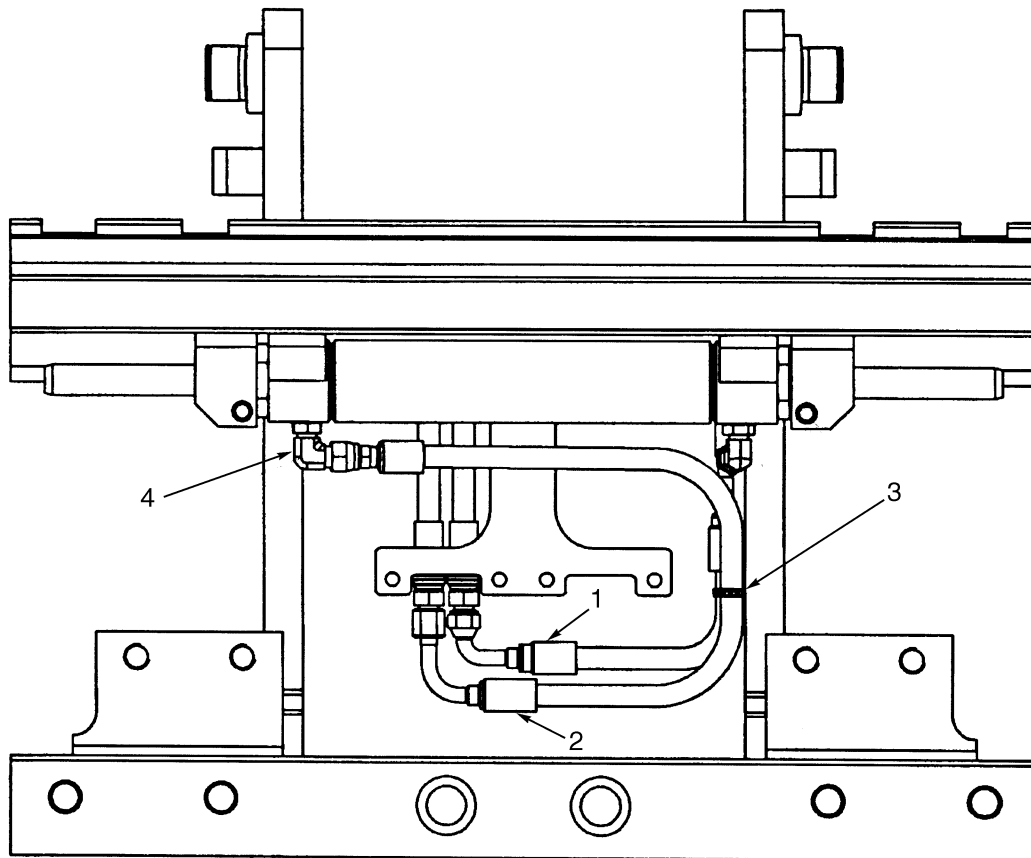
HP020344

**INTEGRAL SIDE-SHIFT ASSEMBLY
THREE STAGE FULL FREE-LIFT****KEY:****A: H40-50FT D508****B: H60-70FT D563**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1486184	Side-Shift Carriage (42 in.)	1	..
	1486187	Side-Shift Carriage (48 in.)	1	..
	1477945	Side-Shift Carriage (42 in.)	..	1
	1477947	Side-Shift Carriage (48 in.)	..	1
	1477949	Side-Shift Carriage (54 in.)	..	1
1	1489004	Carriage Wldmt (Inner) (42 in., 48 in.)	1	..
1	1477939	Carriage Wldmt (Inner) (42 in., 48 in.)	..	1
1	1477941	Carriage Wldmt (Inner) (54 in.)	..	1
2	1489011	Carriage Wldmt (Outer) (42 in.)	1	..
2	1489012	Frame (Outer) (48 in.)	1	..
2	1488975	Carriage Wldmt (Outer) (42 in.)	..	1
2	1488976	Carriage Wldmt (Outer) (48 in.)	..	1
2	1517606	Frame (Outer) (54 in.)	..	1
3	2043530	Hook (Lower)	2	2
4	1581854	Washer	4	4
5	1581833	Capscrew	4	4
6	16041	Grease Fitting	2	2
7	131358	Snap Ring	4	4
8	2043533	Bearing (Lower)	2	..
8	2043534	Bearing (Lower)	..	2
9	1401746	Pin	2	2
10	18832	Cotter Pin	2	2
11	2043531	Bearing (Upper)	2	..
11	2043532	Bearing (Upper)	..	2
12	1333399	Load Roller	6	6
13	58901	Snap Ring	6	6
14	366115	Spacer	2	2
15	2043528	Sideshift Cylinder (Assembly) (☞ Figure 13-13).....	1	..
15	2043529	Sideshift Cylinder (Assembly) (☞ Figure 13-13).....	..	1
16	129387	Shim (0.020 in.)	28	28
17	1498326	Shim	3	3
18	1514866	Pin	2	2
19	1369345	Chain Anchor (Dual Hole)	2	..
19	1504010	Chain Anchor (Single Hole) (Optional)	2	..
19	1369344	Chain Anchor (Dual Hole)	..	2
19	1504012	Chain Anchor (Single Hole) (Optional)	..	2
20	317735	Pin	2	2
21	15211	Cotter Pin	2	2
	a 1374797	Snap Ring	6	6
	a 1345216	Stubshaft	6	6

FOOTNOTES:**a** Not Illustrated

INTEGRAL SIDE-SHIFT HYDRAULIC HOSES (FIGURE 13-12) TWO AND THREE STAGE FULL FREE-LIFT



BP000003

KEY:

A: H40-50FT

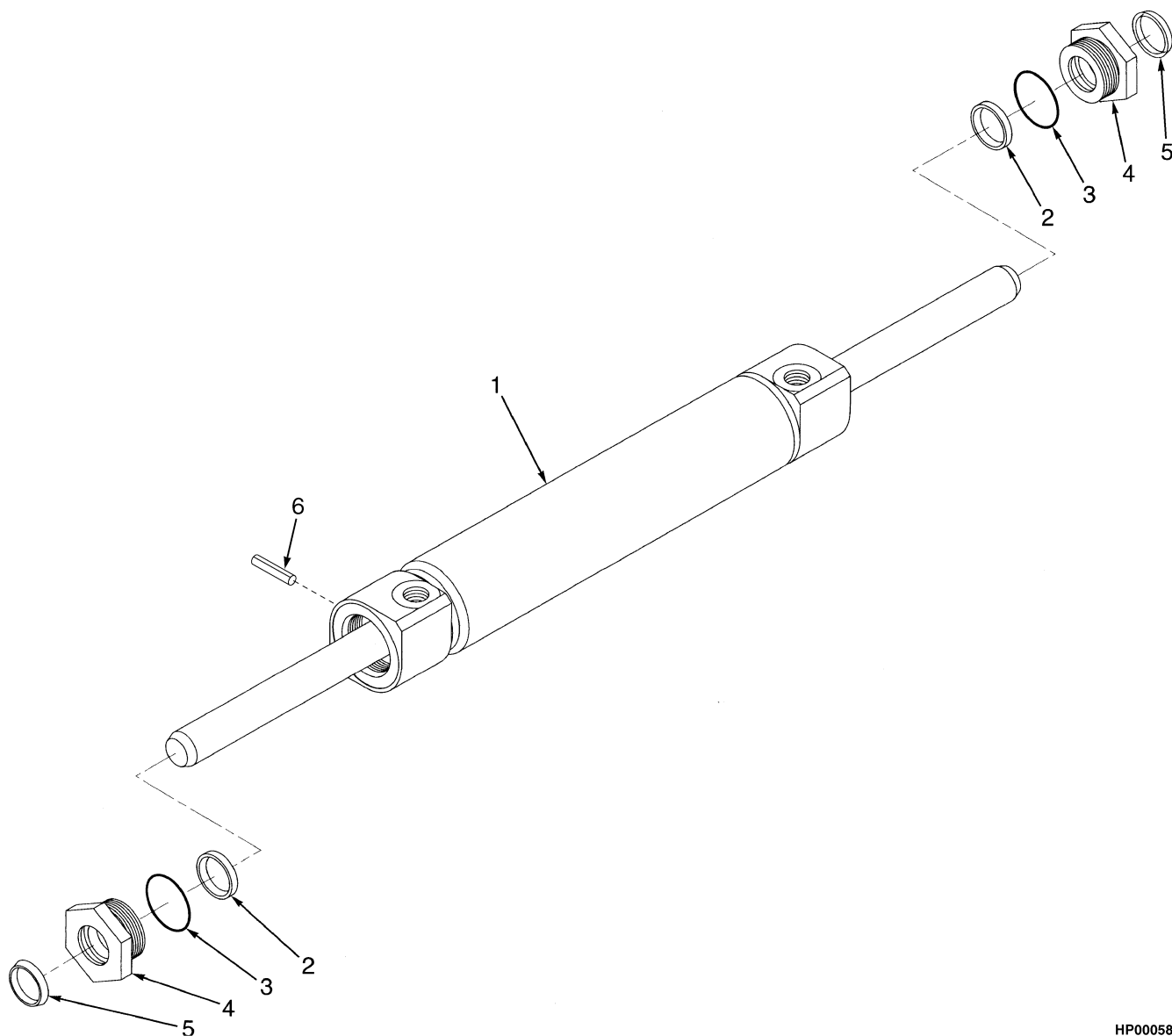
B: H60-70FT

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2065675	Hose Assy	1	..
1	2065674	Hose Assy	..	1
2	2065671	Hose Assy	1	..
2	2065670	Hose Assy	..	1
3	114312	Strap Clamp	1	1
4	1487063	Fitting	2	2
4	1527813	O-Ring	1	1
4	265787	O-Ring	1	1

NOTES

[illegible]

INTEGRAL SIDE-SHIFT CYLINDER (FIGURE 13-13)

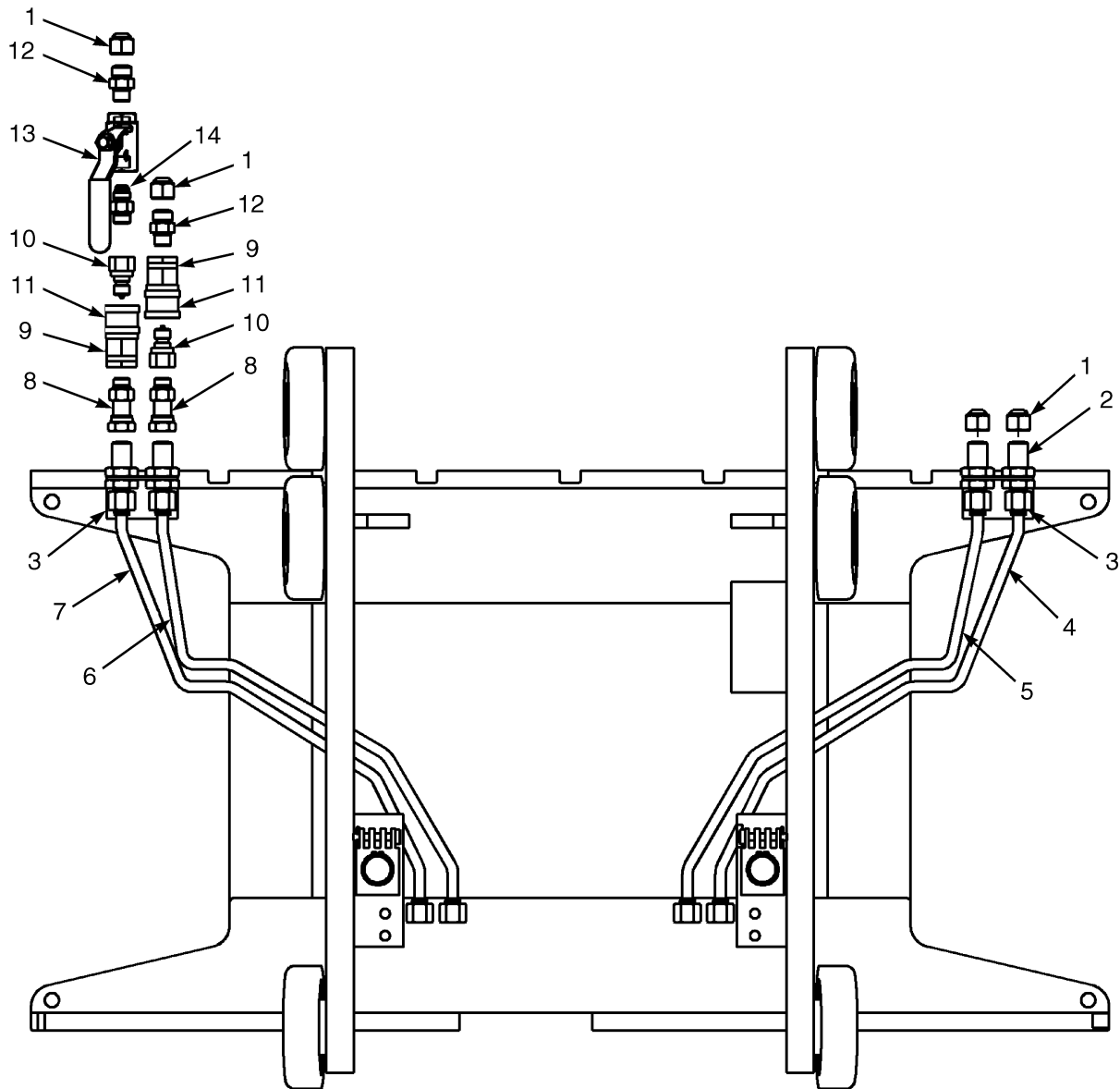


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INTEGRAL SIDE-SHIFT CYLINDER

ITEM	PART NO.	DESCRIPTION	QTY
	2043528	Sideshift Cylinder (Assembly) (H40-50FT)	1
	2043529	Sideshift Cylinder (Assembly) (H60-70FT)	1
1	1489016	Sideshift Cylinder	1
2	1489037	Rod Seal	2
3	1489035	O-Ring	2
4	1498325	Retainer	2
5	1489039	Rod Wiper	2
6	302487	Roll Pin	1
	1503096	Kit-Seal	1

AUXILIARY TUBE EXTENSIONS (FIGURE 13-14) TWO STAGE LIMITED FREE-LIFT



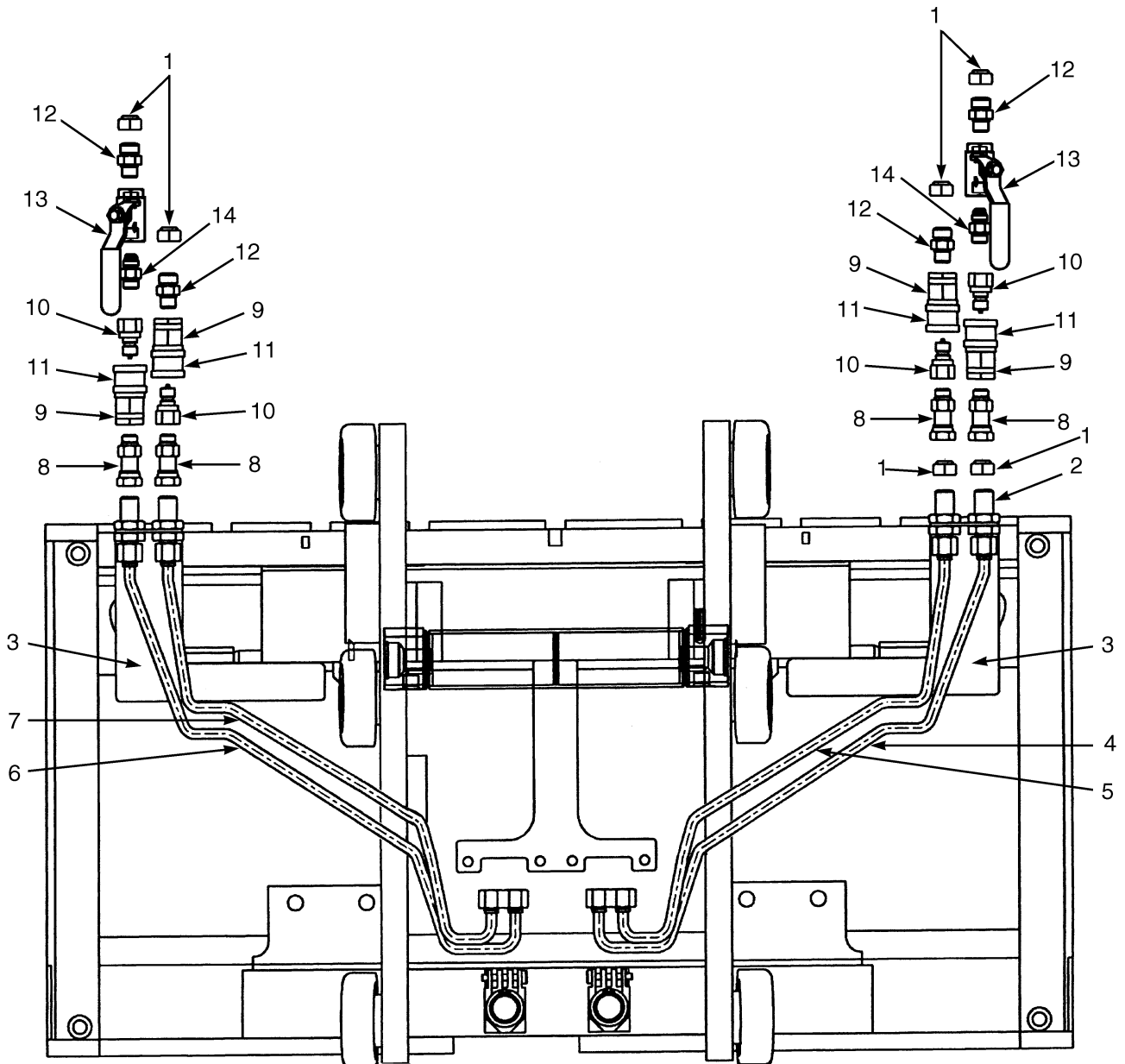
BP000291

**AUXILIARY TUBE EXTENSIONS
TWO STAGE LIMITED FREE-LIFT****KEY:****A: D507, Three Function****B: D507, Four Function****C: D562, Three Function****D: D562, Four Function**

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
1	1529015	Fitting	2	2	2	2
2	1528573	Fitting	2	2	2	2
2	265787	O-Ring	4	4	4	4
3	a 1549717	Bracket	1	..	..	..
3	a 1549718	Bracket	..	1	..	..
3	a 1549723	Bracket	..	..	1	..
3	a 1549724	Bracket	..	..	..	1
3	cd 1550070	Bracket	1	1	1	1
3	ce 1696635	Bracket	1	1	1	1
3	ce 1527879	Capscrew	2	2	2	2
4	2079327	Tube Assy	1	..	..	..
4	2079331	Tube Assy	..	..	1	..
5	2079328	Tube Assy	1	..	..	..
5	2079332	Tube Assy	..	..	1	..
6	2079329	Tube Assy	..	1	..	..
6	2079333	Tube Assy	..	..	..	1
7	2079330	Tube Assy	..	1	..	..
7	2079334	Tube Assy	..	..	..	1
8	b 1549715	Fitting	2	2	2	2
8	b 265787	O-Ring	2	2	2	2
8	b 1527813	O-Ring	2	2	2	2
9	b 1483663	Quick Disconnect Fitting	2	2	2	2
10	b 1483664	Fitting	2	2	2	2
11	b 1483661	Dust Cap	2	2	2	2
12	b 1486740	Fitting	2	2	2	2
12	b 1527813	O-Ring	2	2	2	2
12	b 265787	O-Ring	2	2	2	2
13	2081418	Drain Valve	1	1	1	1
14	16540	Connector	1	1	1	1
14	16483	O-Ring	1	1	1	1

FOOTNOTES:**a** Used With Integral Side-Shift**b** Used With Quick Disconnect Only**c** Used With Standard Carriage**d** → PENDING PER ECN 104450**e** PENDING PER ECN 104450 →

AUXILIARY TUBE EXTENSIONS (FIGURE 13-15) TWO AND THREE STAGE FULL FREE-LIFT



BP000295

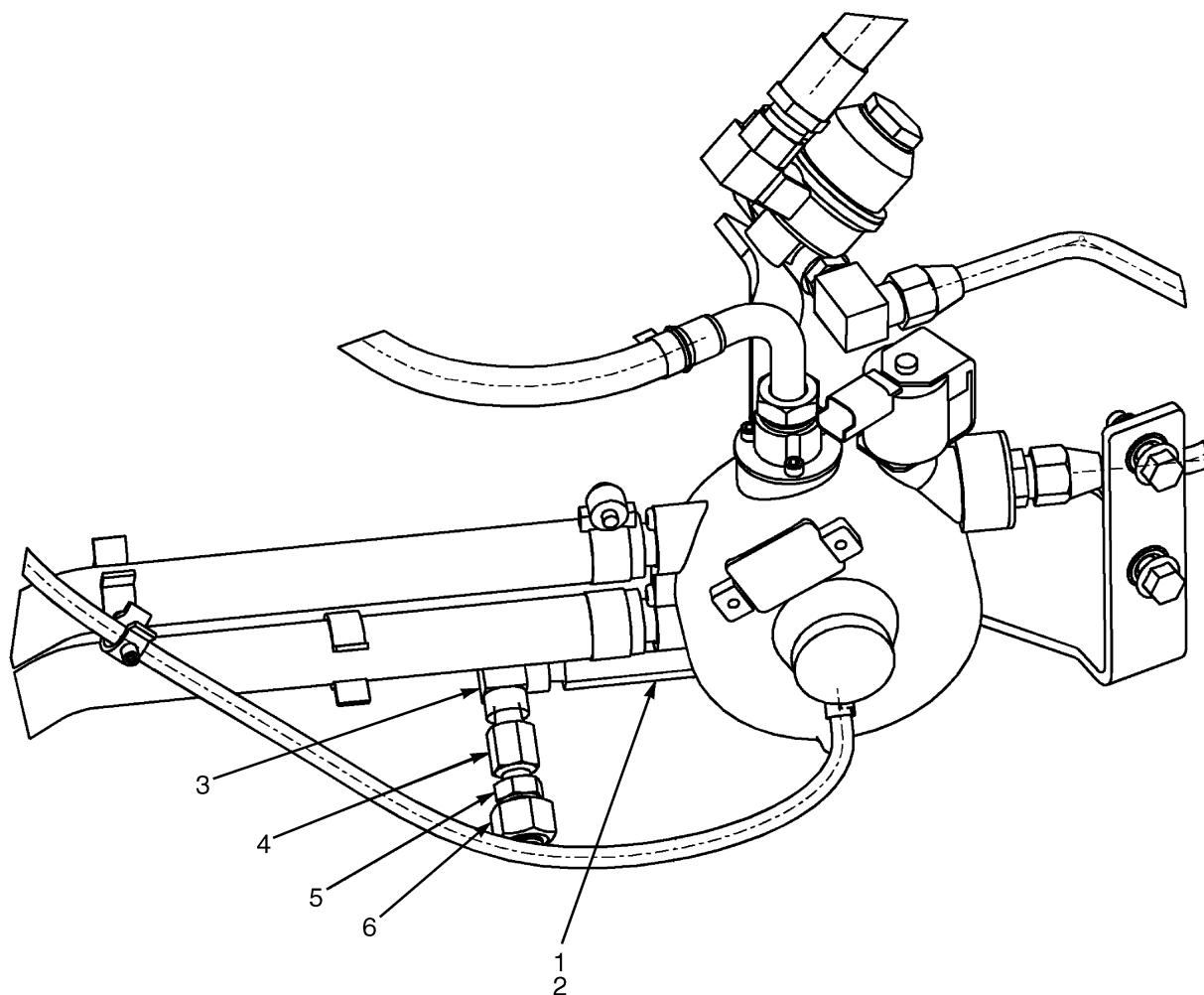
**AUXILIARY TUBE EXTENSIONS
TWO AND THREE STAGE FULL FREE-LIFT****KEY:****A:** D508, D509 Three Function, Class 2**B:** D508, D509 Four Function, Class 2**C:** D563, D564 Three Function, Class 3**D:** D563, D564 Four Function, Class 3

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
1	1529015	Fitting	2	4	2	4
2	d 1528573	Fitting	2	4	2	4
3	ce 1550070	Bracket (LH)	1	1	1	1
3	cg 1696635	Bracket (LH)	1	1	1	1
3	a 1549717	Bracket (RH)	1	1	..	..
3	a 1549718	Bracket (LH)	..	1	..	..
3	a 1549723	Bracket (RH)	..	..	1	1
3	a 1549724	Bracket (LH)	..	..	..	1
3	cf 1527879	Capscrew	2	2	2	2
4	2079985	Tube Assy (RH)	1	1	..	..
4	2079989	Tube Assy (RH)	..	..	1	1
5	2079986	Tube Assy (RH)	1	1	..	..
5	2079990	Tube Assy (RH)	..	..	1	1
6	2079987	Tube Assy (LH)	..	1	..	..
6	2079991	Tube Assy (LH)	..	..	..	1
7	2079988	Tube Assy (LH)	..	1	..	..
7	2079992	Tube Assy (LH)	..	..	..	1
8	b 1549715	Fitting	2	4	2	4
8	b 1527813	O-Ring	2	4	2	4
8	b 265787	O-Ring	2	4	2	4
9	b 1483663	Quick Disconnect Fitting	2	4	2	4
10	b 1483664	Fitting	2	4	2	4
11	b 1483661	Dust Cap	2	4	2	4
12	b 1486740	Fitting	2	4	2	4
12	b 1527813	O-Ring	1	1	1	1
12	b 265787	O-Ring	1	1	1	1
13	b 2081418	Drain Valve	1	2	1	2
14	16540	Connector	1	2	1	2
14	16483	O-Ring	1	1	1	1

FOOTNOTES:

a Used With Integral Sideshift Carriage
b Used With Quick Disconnect Only
c Used With Standard Carriage
d Without Quick Disconnect

e → PENDING PER ECN 104450
f PENDING PER ECN 104445 →
g PENDING PER ECN 104450 →

GM LPG REGULATOR DRAIN KIT (FIGURE 13-16)

BP000396

GM LPG REGULATOR DRAIN KIT

ITEM	PART NO.	DESCRIPTION	QTY
	1664940	Kit-Service (GM LPG regulator Drain GM2.4L and 4.32)	1
1	1652140	Fitting	1
2	16481	O-Ring	1
3	69392	Fitting	1
4	28584	Fitting	1
5	1488404	Fitting	1
6	1529014	Fitting	1
7	a 273338	Thread Sealant	1

FOOTNOTES:**a** Not Shown

[illegible]

SECTION 14
FIELD CONVERSION KITS

DESCRIPTION	PAGE
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SWIVEL SEAT KITS

DESCRIPTION	PART NUMBER
Kit-Swivel Seat Full Susp (Vinyl w/o E-Hyd Controls)	1587556
Kit-Swivel Seat Full Susp (Cloth w/o E-Hyd Controls)	1587557
Kit-Swivel Seat Full Susp	1587558
Kit-Swivel Seat Full Susp	1587559

WEATHER PROTECTION KITS

DESCRIPTION	PART NUMBER
Kit-Front Screen W Wiper	1616498
Kit-Top Screen	1616501
Kit-Rear Screen	1650489
Kit-Door	1650490
Kit-Heater	1659013

COOLING REPAIR KITS

DESCRIPTION	PART NUMBER
Kit-Repair	1651176
Kit-Repair	1652379

BRAKE PEDAL CONVERSION KITS

DESCRIPTION	PART NUMBER
Kit-Dual Brake Pedal	1601231
Kit-Dual Brake Pedal	1601232
Kit-Brake (Single to Dual Pedal Inch Brake)	1705412

DIRECTIONAL CONTROL CONVERSION

DESCRIPTION	PART NUMBER
Kit-Fwd/Rev Lever to Monotrol	1625467
Kit-Monotrol to Fwd/Rev Lever	1583198

RETURN TO SET TILT KITS

DESCRIPTION	PART NUMBER
Kit-Return to Set Tilt 3 Way	1627949
Kit-Return to Set Tilt 4 Way	1627954
Kit-Return to Set Tilt 3 Way	1627956
Kit-Return to Set Tilt 4 Way	1627957

MINI LEVER CONVERSION KIT

DESCRIPTION	PART NUMBER
Kit-Mini Lever Conv 3 Way (without Clamp to 3 Way with Clamp)	a1585281
Kit-Mini Lever Conv 3 Way (With Clamp to 3 Way Without Clamp)	a1607685
Kit-E-Hyd Valve 3 to 4 Way (Mini Lever 3 way w/o clamp to 4 way w/o clamp)	a1605316
Kit-E-Hyd Valve 3 to 4 Way (Mini Lever 3 way w/o clamp to 4 way with clamp)	a1605317
Kit-Mini Lever Conv 4 Way (With Clamp to 4 Way Without Clamp)	a1635699

FOOTNOTES:

a Kits require software that must be dealer installed, See Kit Drawing for instructions.

HYDRAULIC CONTROL CONVERSIONS

DESCRIPTION	PART NUMBER
Kit-Manual Lever Conv 3 Way (without Clamp to 3 Way with Clamp)	f1584061
Kit-Manual Lever Conv 3 Way (without Clamp to 3 Way with Clamp)	k1677913
Kit-Hyd Valve 3 to 4 Way (3 Way without Clamping to 4 Way without Clamping)	bcde1605318
Kit (3 Way without Clamping to 4 Way without Clamping)	ghij1670819
Kit-Manual Lever Conv 3 Way (Without Clamping to Four Way Without Clamping)	k1677919
Kit-Hyd Valve 3 to 4 Way (3 Way without Clamping to 4 Way with Clamping)	bcde1605319
Kit (3 Way without Clamping to 4 Way with Clamping)	ghij1670822
Kit-Manual Lever Conv 3 Way (Without Clamping to Four Way With Clamping)	k1677916
Kit-Mini Lever Conv 3 Way (without Clamp to 3 Way with Clamp)	a1585281
Kit-E-Hyd Valve 3 to 4 Way (Mini Lever 3 way w/o clamp to 4 way w/o clamp)	a1605316
Kit-E-Hyd Valve 3 to 4 Way (Mini Lever 3 way w/o clamp to 4 way with clamp)	a1605317
Kit-Mini Lever to Joystick (Three Function without Clamping to Three Function)	a1585525
Kit-Mini Lever Conv 3 Way (With Clamp to 3 Way Without Clamp)	a1607685
Kit-Mini Lever to Joystick (Three Function without Clamp to Three Function with Clamp Attachment)	a1626738
Kit-Mini Lever Conv 4 Way (With Clamp to 4 Way Without Clamp)	a1635699
Kit-Mini Lever TO Joystick (Four Function without Clamp to Four Function with Clamp Attachment)	1684097

FOOTNOTES:

- a** This kit requires software that must be dealer installed. Dealer needs to obtain a new Configuration Data File (CDF) from Aftermarket Services. The CDF should be ordered from the Software Resources page of HYPASS Online. See Service Gram LD00018.
- b** → S/N L177B17861E (Three Function Valve with Low Relief)
- c** → S/N L177B18169E (Four Function Valve with Low Relief)
- d** → S/N L177B18729E (Three Function Valve with High Relief)
- e** → S/N L177B18808E (Four Function Valve with High Relief)
- f** → S/N L177B26281F
- g** S/N L177B17862E ↔ S/N L177B28281F (Three Function Valve with Low Relief)
- h** S/N L177B18170E ↔ S/N L177B28281F (Four Function Valve with Low Relief)
- i** S/N L177B18730E ↔ S/N L177B28281F (Three Function Valve with High Relief)
- j** S/N L177B18890E ↔ S/N L177B28281F (Four Function Valve with High Relief)
- k** S/N L177B26282F →

**HEADER HOSE CONVERSION KITS
TWO STAGE LIMITED FREE-LIFT****THREE TO FOUR FUNCTION**

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS	
	3159 mm (124.4 in.)	3252 mm (128.0 in.)
Mast Group Number	D562 3159	D507 3252
Kit-Hose Group 3 to 4 Way	1584978	1584975

TWO TO FOUR FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS	
	3159 mm (124.4 in.)	3252 mm (128.0 in.)
Mast Group Number	D562 3159	D507 3252
Kit-Hose Group 2 to 4 Way	1584979	1584976

TWO TO THREE FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS	
	3159 mm (124.4 in.)	3252 mm (128.0 in.)
Mast Group Number	D562 3159	D507 3252
Kit-Hose Group 2 to 3 Way	1584977	1584974

**HEADER HOSE CONVERSION KITS
TWO STAGE FULL FREE-LIFT****THREE TO FOUR FUNCTION**

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS		
	3060 mm (120.5 in.)	3260 mm (128.3 in.)	3262 mm (128.4 in.)
Mast Group Number	D564 3060	D564 3260	D509 3262
Kit-Hose Group 3 to 4 Way	1585074	1585077	1585074

TWO TO FOUR FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS		
	3060 mm (120.5 in.)	3260 mm (128.3 in.)	3262 mm (128.4 in.)
Mast Group Number	D564 3060	D564 3260	D509 3262
Kit-Hose Group 2 to 4 Way	1585075	1585078	1585075

TWO TO THREE FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS		
	3060 mm (120.5 in.)	3260 mm (128.3 in.)	3262 mm (128.4 in.)
Mast Group Number	D564 3060	D564 3260	D509 3262
Kit-Hose Group 2 to 3 Way	1585073	1585076	1585073

**HEADER HOSE CONVERSION KITS
THREE STAGE FULL FREE-LIFT — H40-50FT****THREE TO FOUR FUNCTION**

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS				
	4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
Kit-Hose Group 3 to 4 Way	1585187	1585190	1585193	1585196	1585199

TWO TO FOUR FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS				
	4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
Kit-Hose Group 2 to 4 Way	1585188	1585191	1585194	1585197	1585200

TWO TO THREE FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS				
	4310 mm (169.7 in.)	4760 mm (187.4 in.)	4910 mm (193.3 in.)	5060 mm (199.2 in.)	5510 mm (216.9 in.)
Mast Group Number	D508 4310	D508 4760	D508 4910	D508 5060	D508 5510
Kit-Hose Group 2 to 3 Way	1585186	1585189	1585192	1585195	1585198

HEADER HOSE CONVERSION KITS

THREE STAGE FULL FREE-LIFT — H60-70FT

THREE TO FOUR FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS			
	4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
Kit-Hose Group 3 to 4 Way	1585193	1585196	1585202	1585205

TWO TO FOUR FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS			
	4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
Kit-Hose Group 2 to 4 Way	1585194	1585197	1585203	1585206

TWO TO THREE FUNCTION

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS			
	4568 mm (179.8 in.)	4718 mm (185.7 in.)	5318 mm (209.4 in.)	5768 mm (227.1 in.)
Mast Group Number	D563 4568	D563 4718	D563 5318	D563 5768
Kit-Hose Group 2 to 3 Way	1585192	1585195	1585201	1585204

AUXILIARY TUBE EXTENSION KITS

DESCRIPTION	PART NUMBER
Kit-Quick Disconnect Fitting	1550257
Kit-Aux Tube Extension (Three Function, Class II Std Carriage, 2 LFL, 40-55)	1606597
Kit-Aux Tube Extension (Four Function, Class II, Std Carriage, 2 LFL, 40-55)	1606598
Kit-Aux Tube Extension (Three Function, Class III, Std Carriage, 2 LFL, 60-70)	1606599
Kit-Aux Tube Extension (Four Function, Class III, Std Carriage, 2 LFL, 60-70)	1606600
Kit-Aux Tube Extension (Three Function, Class II, Side-Shift Carriage, 2 LFL, 40-55)	1606601
Kit-Aux Tube Extension (Four Function, Class II, Side-Shift Carriage, 2 LFL, 40-55)	1606602
Kit-Aux Tube Extension (Three Function, Class III, Side-Shift Carriage, 2 LFL, 60-70)	1606603
Kit-Aux Tube Extension (Four Function, Class III, Side-Shift Carriage, 2 LFL, 60-70)	1606604
Kit-Aux Tube Extension (Three Function, Class II, Std Carriage, 2 and 3 FFL, 40-55)	1550261

AUXILIARY TUBE EXTENSION KITS (CONTINUED)

DESCRIPTION	PART NUMBER
Kit-Aux Tube Extension (Four Function, Class II, Std Carriage, 2 and 3 FFL, 40-55)	1550262
Kit-Aux Tube Extension (Three Function, Class III, Std Carriage, 2 and 3 FFL, 60-70)	1550263
Kit-Aux Tube Extension (Four Function, Class III, Std Carriage, 2 and 3 FFL, 60-70)	1550264
Kit-Aux Tube Extension (Three Function, Class II, Side-Shift Carriage, 2 and 3 FFL, 40-55)	1550265
Kit-Aux Tube Extension (Four Function, Class II, Side-Shift Carriage, 2 and 3 FFL, 40-55)	1550266
Kit-Aux Tube Extension (Three Function, Class III, Side-Shift Carriage, 2 and 3 FFL, 60-70)	1550267
Kit-Aux Tube Extension (Four Function, Class III, Side-Shift Carriage, 2 and 3 FFL, 60-70)	1550268

LIGHT KITS

DESCRIPTION	PART NUMBER
Kit-Light (Halogen Front Drive/Rear Work Light, with Harness and Overhead Guard)	1583707
Kit-Light (Front Drive/Rear Work lights, w/o Harness, with Overhead Guard)	1583708
Kit-Light (Strobe -Flash Tube with Other Lights and Overhead Guard, with Harness)	1583709
Kit-Light (Strobe, Flash Tube with Other Lights and Overhead Guard, w/o Harness)	1583710
Kit-Light (Brake/Tail/Back-up Lights with Harness, with Overhead Guard)	1583711
Kit-Light (Brake/Tail/Back-up Lights w/o Harness with Overhead Guard)	1583712
Kit-Strobe Light (Amber Strobe with Cab)	1625728
Kit-Light (LED Strobe with other lights for Overhead Guard, w/o Harness)	1655205
Kit-Light (LED Strobe w/o Other Lights for Overhead Guard with Harness)	1655204
Kit-Strobe Light (Amber Strobe LED Light with Cab)	1655298

TREAD CONVERSION KITS

DESCRIPTION	PART NUMBER
Kit-Wide Tread (7.00x12 P Monarch Tires)	1617916
Kit-Wide Tread (28x9P Monarch or 225/75 Radial Tire)	1617917
Kit-Single to Dual Drive Wheel (7.00 x 12 Pnue Tires)	1618087
Kit-Single to Dual Drive Wheel (7.00 x 12 Solid Tires)	1618088

ADD ON OPTION KITS

DESCRIPTION	PART NUMBER
Kit-Air Intake W Pre-Cleaner	1583815
Kit-Powertrain Protection (English - US Language)	1585854
Kit-Accumulator	1585425

ADD ON OPTION KITS (CONTINUED)

DESCRIPTION	PART NUMBER
Kit-Fire Extinguisher (Without Cab)	1580126
Kit-Fire Extinguisher (With Cab)	1635618
Kit-Back-Up Alarm	1612229
Kit-Back-Up Alarm	1612230
Kit-Back-Up Alarm	1612231
Kit-Back-Up Alarm	1612232
Kit-Back-Up Alarm	1612233
Kit-Keyswitch to Pushbutton (Pushbutton Start with Remote Key Switch)	1624521
Kit-Push-Button to Keyswitch	1624518
Kit-Impact Monitoring (With Immediate Shutdown)	1629135
Kit-Electronic Monitoring	1629208
Kit-Impact Monitoring (With 30 Second Shutdown)	1637768
Kit-Load Weight on Display (Use with E-Hydraulics Only)	1618217
Kit-Radiator Screen	1660061
Kit-Service	1652150
Kit-Red Seat Belt	1636120
Kit	1670584
Kit	1670585

HYDRAULIC OIL COOLER KITS

DESCRIPTION	PART NUMBER
Kit-Oil Cooler (3rd Function)	1689549
Kit-Oil Cooler (4th Function)	1689550

FORK ASSEMBLY KITS

DESCRIPTION	PART NUMBER
Kit-Latch	1686665

MISCELLANEOUS CONVERSION KITS

DESCRIPTION	PART NUMBER
Kit-Mini Lever Conv 4 Way	1703633

**SECTION 15
NUMERICAL INDEX**

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	8-5	1	316834	9-19	3		2-115	5	326504	2-45	8
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	8-11	1	316835	1-31	12		4-25	11		2-51	7
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	3-75	7		1-43	32		4-36	35		2-55	8
	3-91	10	317075	7-11	22	320160	1-20	4		2-85	1
302428	9-19	9	317076	7-11	26	320161	5-25	34		2-87	8
	9-23	9	317735	11-23	7		5-31	28		2-91	1
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302443	3-95	8		13-17	18		9-19	13	326612	2-39	10
302450	1-88	2		13-21	20		9-23	14		2-71	10
302461	11-14	24		13-23	20	320165	9-19	4	326748	2-57	5
	11-20	24	320152	4-29	14	320264	6-18	61		2-89	5
	12-18	23	320154	2-11	6	320289	9-35	10	326749	2-57	6
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302468	3-65	6		2-19	5		9-43	8		4-15	25
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	9-37	13		3-27	2		2-15	19		4-35	19
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	2-105	18		1-15	28		2-133	19		4-189	7
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	2-133	17	366000	1-39	14		3-31	15		4-205	7
	2-135	17		3-15	19	370647	4-135	15	980542	6-24	5
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1310599	7-11	29		4-88	15		4-211	8		4-130	10
1311213	1-29	18		4-88	16		4-215	10		4-130	11
1315425	7-11	30		4-94	15		4-219	13		4-130	14
1316496	3-9	5		4-94	16		4-219	14		4-130	16
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1319668	10-12	16		4-100	10	1325120	9-67	9		4-141	18
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1323576	4-143	43		4-105	9		4-82	15		4-147	5
	4-149	41		4-106	10		4-82	16		4-148	16
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	4-158	24		4-106	15		4-88	10		4-203	6
	4-158	25		4-111	9		4-88	11	1327246	6-18	40
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	4-166	23		4-170	18		4-118	11		4-130	14
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	4-95	33		2-105	11		4-157	4		4-87	9
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	4-177	19		4-83	35		4-125	31		4-220	25
1330433	4-9	18		4-87	4		4-125	34		4-220	27
	4-157	9		4-87	6		4-125	35		4-220	30
	4-165	6		4-88	20		4-129	4		13-7	10
1330436	4-173	19		4-89	21		4-129	6		13-7	10
	4-177	19		4-89	29		4-130	21	1330439	4-82	17
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1391757	2-141	12		3-65	22		4-108	42		4-89	27
1391758	2-141	13	1399323	4-17	34		4-113	24		4-94	15
1392205	4-147	1	1399802	3-73	24		4-119	25		4-94	18
	4-149	43		3-75	17		4-126	40		4-95	32
1393132	10-17	2		3-91	9		4-130	19		4-100	10
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1393458	1-49	11		13-23	9		4-193	4		4-105	9
1393472	1-43	31	1402414	3-65	43		4-197	11		4-106	12
1393475	1-43			3-69	22	1402816	4-135	19		4-107	26
1393479	1-31	10	1402613	4-158	21		4-137	19		4-112	10
1393499	1-33	22		4-162	15		4-143	42		4-112	12
	1-51	8		4-166	20		4-143	44		4-113	27
1393527	1-49	6		4-170	16		4-143	46		4-118	11
1393528	1-49	7		4-170	20		4-143	47		4-118	13
1393539	1-31	7	1402813	4-88	20		4-153	15		4-119	27
	1-33	7		4-89	21		4-155	18		4-124	10
	1-34	38		4-89	30		4-180	5		4-124	13
	1-51	16		4-112	19		4-195	2		4-125	27
1393541	1-43	8		4-113	22		4-197	13		4-130	10
1393879	9-5	3		4-113	29		4-201	2		4-130	13
1394001	4-15	28		4-193	2		4-207	10		4-131	27
	4-25	7		4-195	10		4-211	6		4-158	22
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	4-39	19		4-201	9		4-219	16		4-166	21
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	3-7	20		4-211	14		4-137	43		4-170	21
	3-25	9	1402814	4-157	10	1402849	4-177	21		4-170	24
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	3-79	3		4-161	7	1402883	4-5	7		4-137	1
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1394009	4-35	24		4-165	10		4-158	17		4-142	31
1395174	12-27	3		4-166	16		4-158	18		4-148	25
1395175	10-17	2		4-169	5		4-161	8		4-148	27
	11-23	2		4-169	10		4-161	10		4-153	2
1395176	12-27	3		4-170	17		4-161	11		4-155	1
1395285	11-13	4		4-185	3		4-161	13	1402904	4-162	24
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1395291	11-20	32		4-185	6		4-165	14	1402923	13-7	10
	12-24	28		4-185	7		4-166	17	1450503	7-2	2
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	3-35	14	1462617	6-27	1		4-105	7		4-219	1
	3-43	18	1463136	4-157	9		4-106	19		4-219	4
	3-83	16		4-165	6		4-107	35		4-219	6
1454827	2-97	13	1463137	4-119	33		4-108	41		4-220	24
	2-99	12	1463138	4-69	12		4-111	5		4-220	28
	4-29	24		4-143	37		4-111	6	1463193	4-63	10
1454828	4-29	24		4-149	32		4-111	7	1463194	4-207	6
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	2-99	12		4-161	13		4-113	32		4-207	12
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	4-177	7		4-195	1		4-114	41		4-215	14
1454860	4-29	24		4-195	11		4-117	1		4-219	15
	4-173	2		4-201	1		4-117	2		4-219	19
	4-177	7		4-201	10		4-117	3	1463912	1-29	19
1454862	2-97	13		13-3	4		4-117	7	1465140	9-9	
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	4-173	2		4-82	20		4-123	7		4-141	19
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1455304	3-56	3		4-87	3		4-125	35		4-148	17
1455674	2-57	4		4-87	7		4-126	43		4-153	5
	2-89	4		4-87	8		4-129	1		4-153	24
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	2-93	21		4-99	7		4-208	22		4-155	10
	2-101	10		4-99	8		4-211	1		4-158	22
	2-115	10		4-100	20		4-211	1		4-162	16
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	12-17	5	1469606	4-180	2	1475409	3-31	13		4-129	9
1465897	13-15	1	1470152	1-63	4	1476064	4-81	9		4-158	18
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	1-65			1-67	1		4-94	14		4-166	17
	1-67			1-69	1		4-99	9		4-169	13
	1-69			1-71	1		4-105	8		4-203	4
	1-71		1470153	1-63	4		4-111	8		4-203	5
1467524	1-63			1-65	1		4-117	10	1477166	1-87	5
	1-65			1-67	1		4-123	9	1477167	1-87	6
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	1-71			1-65	2		4-137	42	1477932	11-23	1
1467526	1-63			1-67	4		4-143	43	1477938	13-21	1
	1-65			1-69			4-158	25	1477939	13-23	1
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	1-65		1470161	1-63	6		4-117	10		10-15	6
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	1-71			1-69	5		4-142	27	1480187	4-84	38
1468308	1-51	20		1-71	7		4-143	59		4-90	38
1468312	1-31	18	1470163	1-63	7		4-147	2		4-93	3
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1468315	1-43	15		1-69	6		4-189	7		4-114	40
1468316	1-43	14		1-71	5		4-191	4		4-120	40
1468317	1-43	13	1471591	6-27	1		4-191	8		4-126	38
1468318	1-33	23	1471694	3-31	12		4-203	4		4-132	41
	1-49		1471829	6-27	1		4-203	5	1480237	1-11	39
1468319	1-49	5	1471832	7-17	1		4-205	4		1-11	39
	1-49	12	1471835	6-27	1		4-205	7		1-16	39
1468320	1-49	2	1471837	7-15	1	1476109	4-81	9		1-16	39
1469342	2-25	19	1471921	7-15	1		4-87	9		2-9	13
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	2-115	19		4-170	22		4-94	12		4-189	1
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	2-137	22	1482667	4-157	14		4-99	1		4-193	1
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	3-37	9		4-170	22		4-99	7		4-201	1
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	4-17	18		4-191	4		4-105	5		4-208	22
	4-18	46		4-191	8		4-105	6		4-208	23
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	4-25	27		4-205	7		4-107	33		4-211	1
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	5-15	13	1483661	13-29	11		4-111	6		4-215	2
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1481090	11-13	2		1-65			4-117	7	1484397	4-207	6
1481095	12-17	12		1-69			4-117	8		4-207	11
1481096	11-13	14		1-71			4-119	32		4-207	12
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	12-9	5		4-81	1		4-123	2		4-215	14
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	10-15	7		4-81	3		4-123	6		4-219	19
1481232	11-19	11		4-81	6		4-123	7	1484557	4-189	5
1481742	11-13	1		4-81	7		4-123	8		4-191	6
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	4-149	36		4-87	3		4-129	3		4-191	6
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	4-155	21		4-87	8		4-129	8		4-219	4
1482654	4-153	35		4-89	34		4-131	34		4-219	6
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1486183	13-21		1488975	13-17	2	1489657	4-9	9		4-187	11
1486184	13-23			13-21	2		4-83	29		4-189	3
1486185	13-17			13-23	2		4-89	29		4-189	6
1486186	13-21		1488976	13-17	2		4-95	30		4-189	8
1486187	13-23			13-21	2		4-101	28		4-191	3
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1486740	13-29	12	1489002	13-17	1		4-112	21		4-191	9
	13-31	12	1489003	13-21	1		4-119	23		4-193	3
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	4-125	31		4-131	36	1495501	2-115	29		4-9	2
	4-130	21	1493435	4-185	6	1495502	2-115	30		4-17	5
	4-131	25		4-185	7	1496922	11-9			4-21	11
	4-131	31		4-187	8		11-11			4-29	2
	4-185	8		4-187	9	1497235	4-148	22		4-77	5
	4-185	9	1493447	4-187	5	1497433	4-5	27		4-79	4
	4-187	10		4-187	6	1498325	13-27	4		4-79	4
	4-187	11	1493458	4-135	1	1498326	13-17	11		4-142	36
	4-189	3		4-138	49		13-21	17		4-143	37
	4-189	6		4-153	1		13-23	17		4-149	30
	4-189	8		4-155	40	1498416	4-173	17		4-149	31
	4-191	3	1493465	1-27	15	1498420	4-141	15		4-149	32
	4-191	7		4-5	24		4-141	19		8-3	6
	4-191	9		4-83	30		4-142	20		8-5	6
	4-193	3		4-89	31		4-148	17		8-7	6
	4-193	6		4-107	30	1498424	4-142	27		8-11	6
	4-193	10		4-125	30		4-143	59		8-21	3
	4-195	5		4-203	2		4-147	2		13-7	7
	4-197	3		13-7	10		4-148	24	1500913	4-75	2
	4-197	4	1493466	4-72	4	1499111	10-13			4-81	4
	4-197	6	1494017	10-15	16	1500782	1-86	4		4-81	6
	4-197	10		11-20	27	1500784	1-87	4		4-87	4
	4-201	5		12-23	24	1500899	4-83	33		4-87	6
	4-203	3	1494750	5-21	31		4-89	33		4-93	8
	4-205	3		5-27	33		4-95	37		4-93	10
	4-205	6		5-39	18		4-101	33		4-99	4
	4-205	8	1494888	1-27	6		4-107	34		4-99	6
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	4-220	27	1495412	4-11	19		4-125	33		4-105	4
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	13-7	10		4-15	19		4-153	37		4-111	4
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	4-141	19		2-73	5		4-157	11		4-117	6
	4-142	20		4-11	30		4-161	6		4-123	4
	4-148	19	1495426	2-57	8		4-165	9		4-123	6
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	1-34	34	1495428	2-45	11		4-220	20		4-185	1
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	4-87	6		2-73	12	1500901	1-61	11		4-205	1
	4-93	10		2-91	35		4-162	20	1500919	4-193	1
	4-99	6	1495441	1-43	21		4-174	21		4-197	1
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1501665	3-25	31		3-7	7	1502059	9-15	16	1503959	1-33	33
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1501687	2-143			3-7	1		4-21	2		11-23	6
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	2-155			3-79	1	1502079	3-5	5		13-23	19
	2-157			3-83	4		3-7	5	1504012	10-17	8
	2-159		1501970	3-15	30		3-25	11		11-23	6
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1501837	3-5	9		9-5	23		4-119	35		4-95	28
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1501848	3-29	13	1502034	3-29	15	1502627	4-83	34		4-113	28
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	4-193	12		2-101	2		4-189	2		10-17	9
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	4-207	5		8-7	10		4-106	16		1-51	17
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	9-27	13	1520753	6-17	13		4-94	15		4-112	10
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	9-27	11		4-137	30		4-100	10		4-118	12
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	9-27	10	1521183	4-82	11		4-105	9		4-124	11
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1517606	13-23	2		4-87	10		4-118	16	1523479	6-18	55
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1524835	12-5	1	4-111	5	1525573	4-207	2			3-13	12
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1524836	12-5	1	4-113	32	1525577	4-83	28			4-18	37
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1524843	12-5	1	4-123	3		4-112	20			4-39	16
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	4-39	13		3-85	8		3-27	21		4-81	8
	4-47	9		8-3	27		3-37	23		4-87	7
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	5-5	10	1527884	2-31	2	1528617	2-97	6		4-89	34
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	5-15	12		6-3	9		4-42	6		4-99	8
	5-17	4	1527885	2-93	25	1528778	2-25	23		4-101	34
	5-19	9		2-101	17		2-27	23		4-105	5
	5-22	48	1527886	2-93	19		2-115	16		4-105	6
	5-28	53	1527888	1-27	7	1528799	8-21	1		4-111	5
	6-3	13		1-29	6	1528888	1-27	8		4-111	6
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	8-7	11	1527940	1-12	44	1528893	3-9	14		4-119	32
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	9-5	2	1527982	2-11	17	1528899	3-59	17		4-129	7
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	2-111	14		2-109	13	1531167	2-11	23	1531486	4-158	17
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	8-25	20	1532513	2-93	14		4-155	14	1534017	2-102	1
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	9-15	23		4-215	7		4-153	31	1534417	1-5	16
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	4-21	19	1551663	2-19	7		2-87	3		2-73	6
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1578660	4-35	2		9-61	7		9-61	6		9-37	3
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1589851	6-10	5	1590866	5-47	6	1593658	2-129	3		3-21	5
1589852	6-11	6		5-48	11	1593659	2-129	2	1597700	2-121	21
1589853	6-11	7	1590917	2-21	1	1593660	2-130	59		3-21	5
1589854	6-13	3		2-23	1	1593661	2-129	33	1597701	2-121	18
1589856	6-13	7	1590918	2-21	1	1593662	2-122	86		3-21	5
1589857	6-13	8		2-23	1		2-126	57	1597702	2-121	19
1589860	6-13	10		2-109	1	1593665	2-121	6		3-21	5
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1589867	6-15	5		2-137	1	1594055	4-29	20		3-21	5
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1589870	6-15	8	1590972	2-109	1	1594144	3-31	7		3-21	5
1589872	6-15	10		2-111	1	1594950	8-3	35	1597709	2-161	6
1589873	6-15	11		2-137	1		8-5	41	1597710	2-161	8
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1589875	6-15	13	1591454	4-29	23		8-11	19		2-111	1
1589876	6-15	14	1591652	1-55	6	1595232	1-5	21		2-137	1
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1589887	6-15	20	1592071	4-72	7		5-27	13	1597766	2-21	1
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1616768	1-5	2	1623402	1-33	21		4-118	22	1634651	5-27	43
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2081868	1-34	40	2084575	12-17	15		2-15		2087197	2-101	8
2082235	8-23	2	2084578	12-17	15		2-17	20	2087215	2-133	3
2082323	4-71	1	2084599	2-9	11	2085256	2-93	6		2-135	3
	4-193		2084600	2-9	10	2085268	2-109	4	2087216	2-133	4
2082324	4-71	1	2084601	2-9	9	2085570	2-9	1		2-135	4
	4-197		2084616	2-9	14	2085875	1-79	12	2087757	2-91	32
2082657	2-101	14	2084650	12-17	15	2085877	1-79	5	2088515	4-15	19
2082679	1-73	28	2084653	12-17	15	2085878	1-83	4		4-36	
2082685	8-21	7	2084654	12-17	15	2085879	1-83	8	2088675	2-13	15
2082929	2-45	11	2084655	12-17	15	2085880	1-83	9		2-17	21
	2-91	4	2084658	12-17	15	2085881	1-83	10	2088676	2-23	14
2083701	9-19	20	2084703	4-63	10	2085882	1-85	1	2089064	2-99	6
	9-21	6	2084810	4-29	24	2085885	1-85	2		4-169	
	9-23	21		4-183		2085886	1-85	3	2089065	2-99	6
	9-27	9	2084812	4-25	1	2085887	1-85	8		4-161	
2083702	9-19	19		4-35	28	2085888	1-85	5	2089066	2-101	8
	9-21	7		4-179		2085889	1-85	4	2089067	2-101	8
	9-23	20	2084829	4-77	1	2085890	1-85	10	2089141	2-133	1
	9-27	8		4-79	1	2085891	1-85	6		2-135	1
2083703	9-21	8		4-211		2085892	1-85	9	2089179	4-5	16
	9-23	19	2085041	2-11	15	2085893	1-85	7		4-117	
	9-27	7		2-13	14	2085942	4-71	1	2089239	3-39	16
2083704	9-27	6		2-15	23		4-201		2089368	3-39	14
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2090086	3-79	17	2093806	4-63	1	2097830	8-21	7	2102122	1-55	
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2090418	3-45	8	2094581	4-39	17	2098082	4-67	4	2102904	4-47	1
2090613	4-5	1		4-180			4-67	4	2102906	4-47	6
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2090666	4-203			9-29			4-69	4	2103849	4-57	1
2090744	4-21	6	2095081	9-23	26		4-69	5	2103850	4-61	1
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2091231	3-43	15		9-29			4-69	4	2103854	4-61	1
2091232	3-43	17	2095083	9-19	25	2098084	4-67	4	2103855	4-57	1
2091257	10-12	15		9-21	16		4-69	4	2103856	4-61	1
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2091259	10-12	15	2095085	9-23	26		4-69	4	2103858	4-61	1
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2092536	7-17	6	2095146	9-5	9	2098694	9-5	1		4-215	
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2092551	2-157	7	2095262	5-15	1	2098964	3-7	26	2105372	4-57	1
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2092553	2-159	11	2095425	9-49		2099224	4-53	1	2105376	4-57	1
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2093224	8-3		2095435	9-49	2	2099233	4-53	1	2105556	4-27	1
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NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

