

PARTS MANUAL

**FORTIS®
H135FT, H155FT
(H006)**

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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FRAME

ELECTRICAL SYSTEM

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	2021675	Plug	1
9	2021336	Housing	4
10	287860	Pin	22
11	292682	Lockwasher	39
12	292682	Hydraulic Pump	1
13		⇒ Figure 5-3	1
14	2021345	Gasket	8
15	214364	Bolt	8
16	296418	Washer	1
17	2021388	Temperature Switch	1
18	2021389	Breather	9
19	2021383	Dipstick	9
20	292515	Bolt	2
21	136692	Nut	3
22	292527	Cap screw	3
23	292531	Lockwasher	4
24	292583	Lockwasher	4
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 14-1) 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.

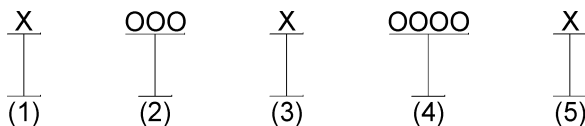
Contact your local dealer for Hyster lift trucks for serial number information for items with a ECN or a date break.

ORDERING PARTS:

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

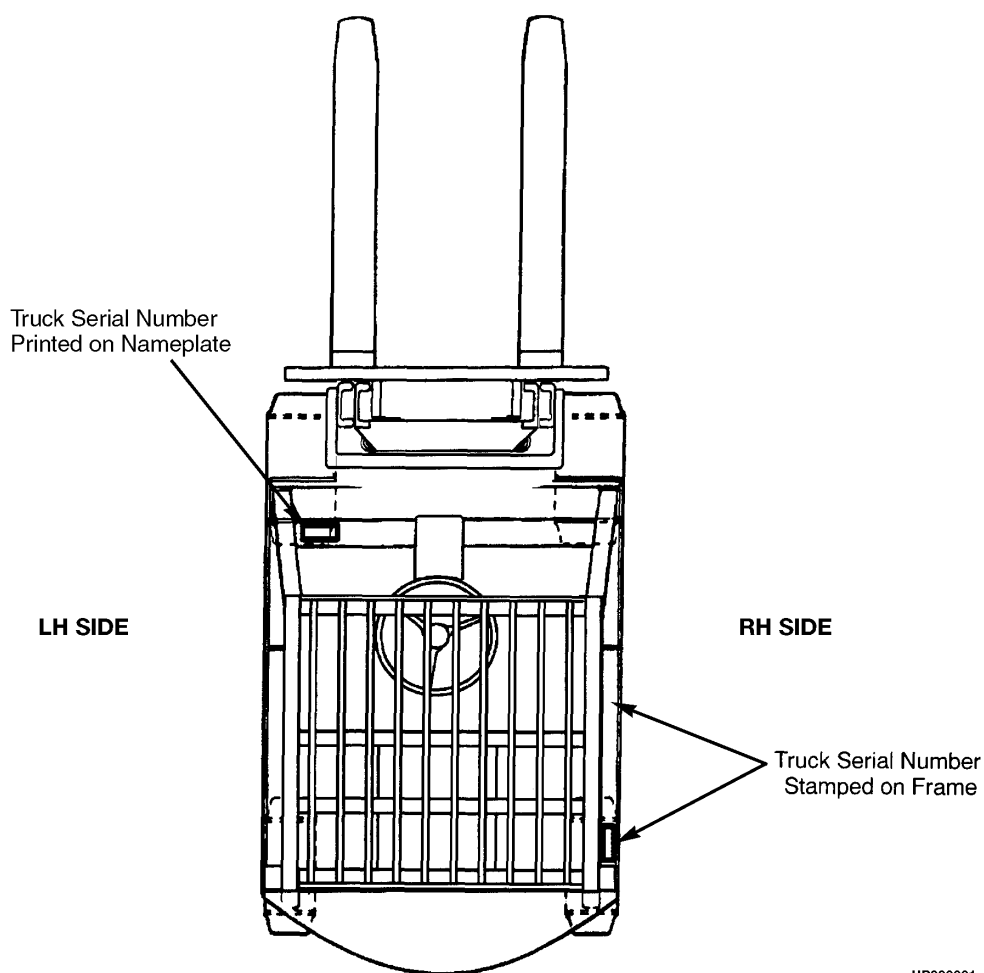
For any further information on parts, service, or ordering, consult your local dealer for Hyster lift trucks.

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.

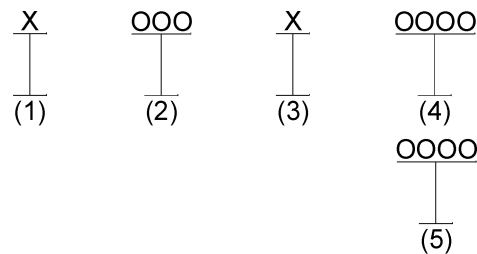
For pending serial numbers contact your local dealer for Hyster lift trucks.



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).

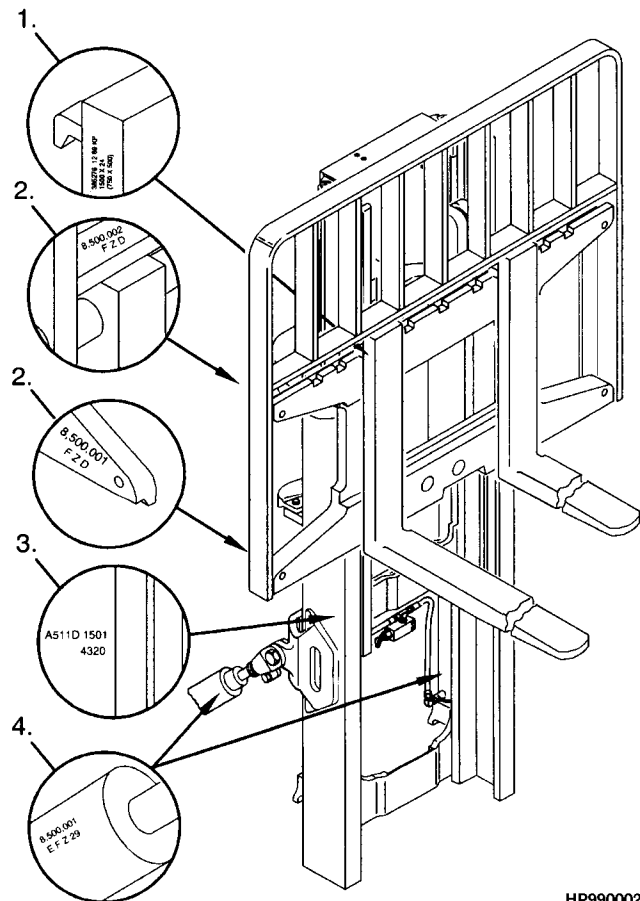
For pending production sequence numbers contact your local dealer for Hyster lift trucks.

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.

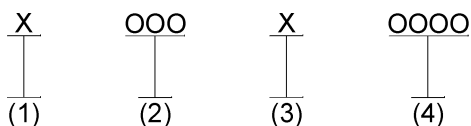
Always refer to the group, serial, or part number when ordering service parts.

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.

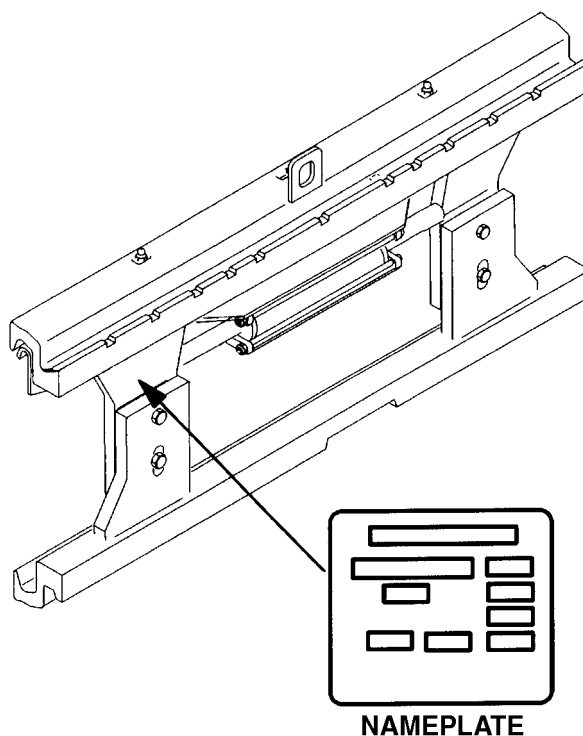


HP990002

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.....	1653165
Service Manual (Complete).....	1653211
Parts Manual.....	1653203

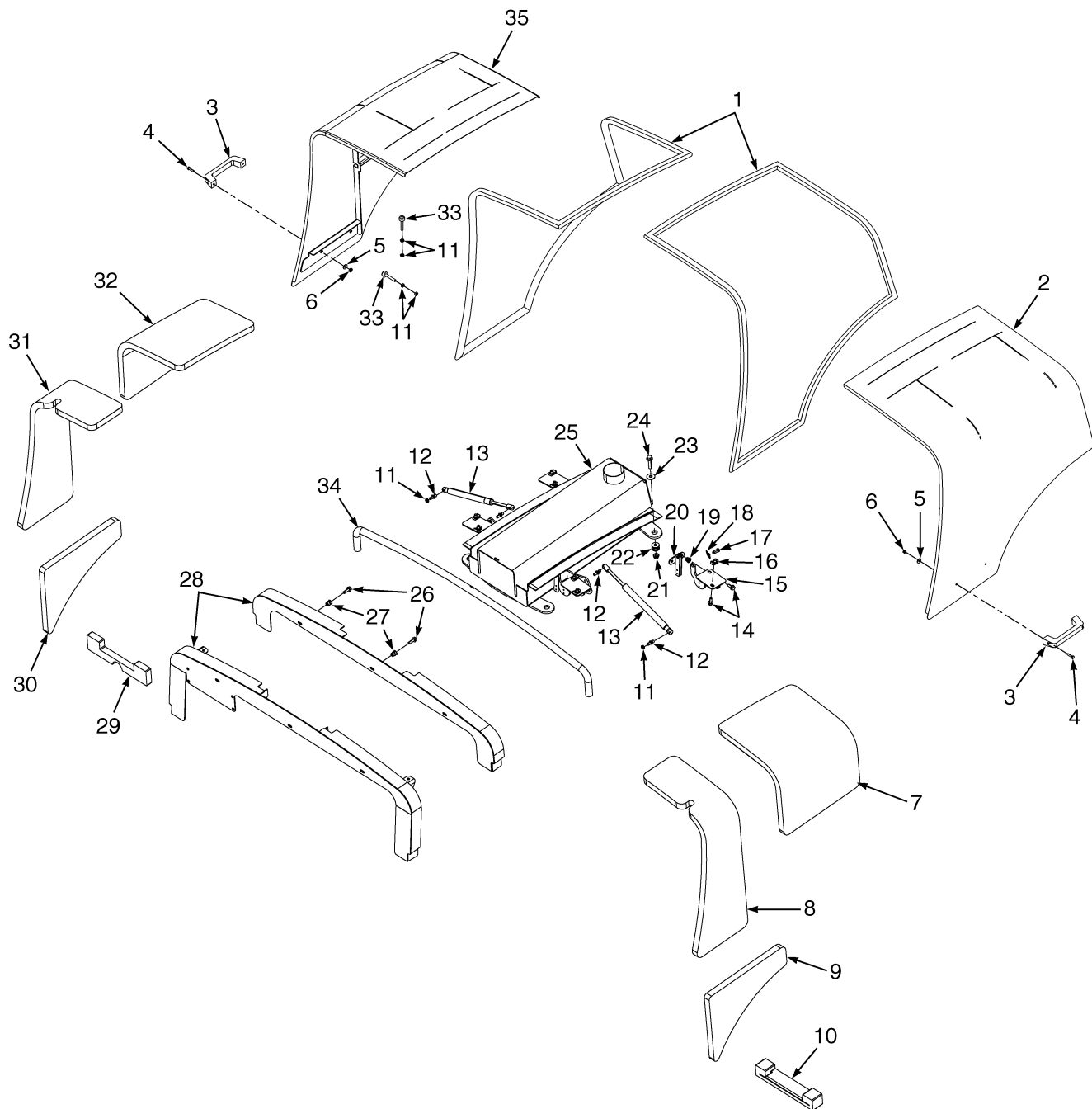
1

FRAME

SECTION 1
FRAME

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SOUND ABATEMENT	1-36

HOOD ASSEMBLY (FIGURE 1-1)



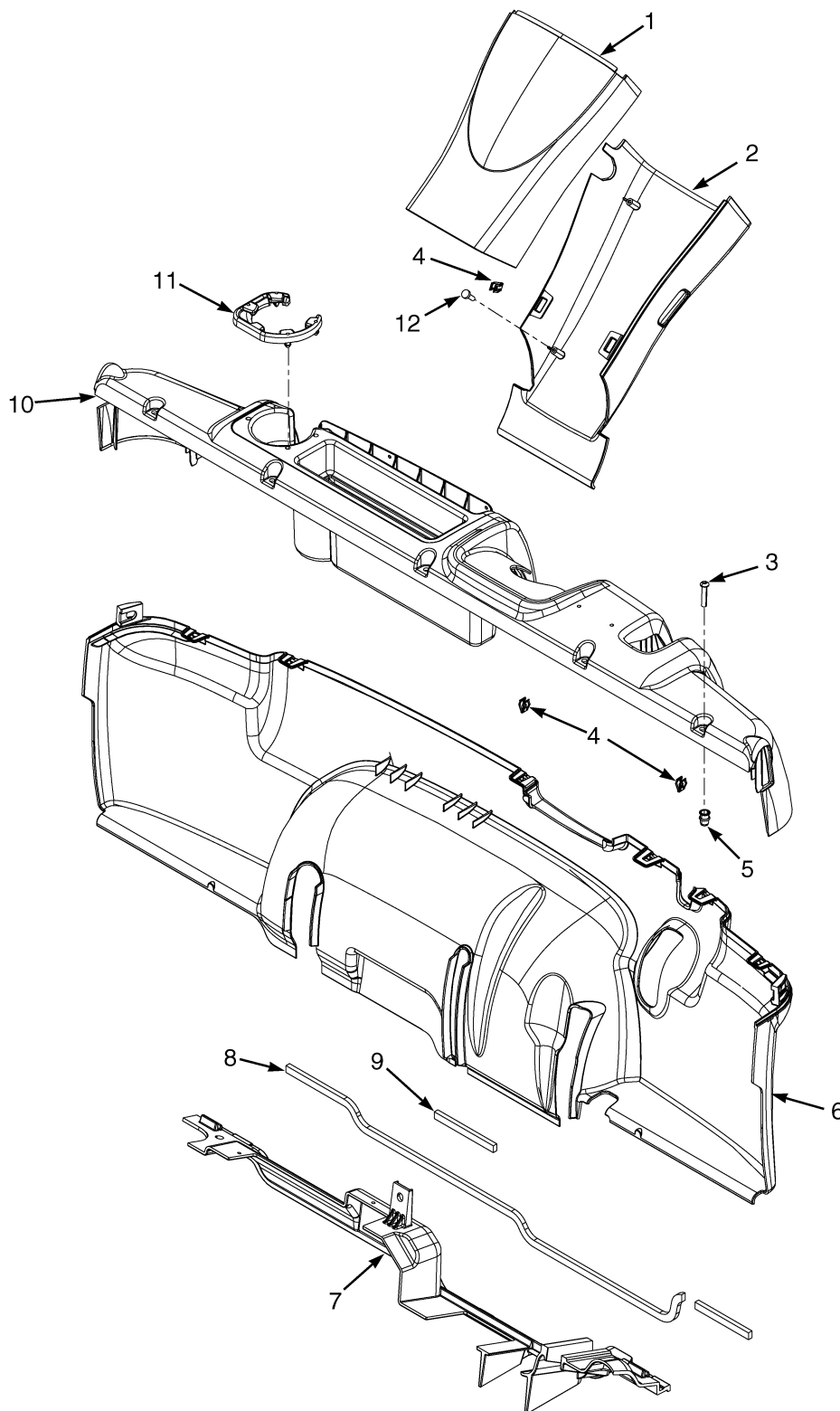
BP120329

HOOD ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	1675474	Seal	2
2	a 1644830	Hood (LH) (With Overhead Guard)	1
2	b 1664290	Hood (LH) (With Overhead Guard)	1
2	a 1638154	Hood (LH) (With Cab)	1
2	b 1664289	Hood (LH) (With Cab)	1
3	362030	Handle	2
4	287816	Capscrew	4
5	1476421	Washer	4
6	1581565	Nut	4
7	1650477	Sound Liner (LH)	1
8	1650478	Sound Liner (LH)	1
9	1650479	Sound Liner (LH)	1
10	1615395	Seal	1
11	1593335	Nut	12
12	1563369	Ball Stud	4
13	1632293	Gas Spring	2
14	1527880	Capscrew	16
15	1639723	Hinge	4
15	1678274	Hinge (Alternate Part)	2
16	1480237	Nut	8
17	1375391	Pin (Rod End)	4
18	1351689	Lockring	4
19	1531557	Insert	8
20	1669446	Hinge (Base)	4
20	1678273	Hinge (Base) (Alternate Part)	2
21	1460477	Nut	4
22	317594	Motor Mount	4
23	1356113	Washer	4
24	1527886	Capscrew	4
25	1638510	Hood Support	1
26	1510113	Capscrew	3
27	1530243	Insert	3
28	1641590	Crossmember (With Overhead Guard)	1
28	1641591	Crossmember (With Cab)	1
29	1610906	Seal	1
30	1650480	Sound Liner (RH)	1
31	1650474	Sound Liner (RH)	1
32	1650473	Sound Liner (RH)	1
33	1585581	Bumper (Hood)	4
34	1615638	Seal	1
35	a 1644834	Hood (RH) (With Overhead Guard)	1
35	b 1664273	Hood (RH) (With Overhead Guard)	1
35	a 1638970	Hood (RH) (With Cab)	1
35	b 1664272	Hood (RH) (With Cab)	1

FOOTNOTES:**a** → 6/2007**b** 6/2007 →

INTERIOR PANELS AND COVERS (FIGURE 1-2) (→ S/N H006V02227F)



BP120315

INTERIOR PANELS AND COVERS

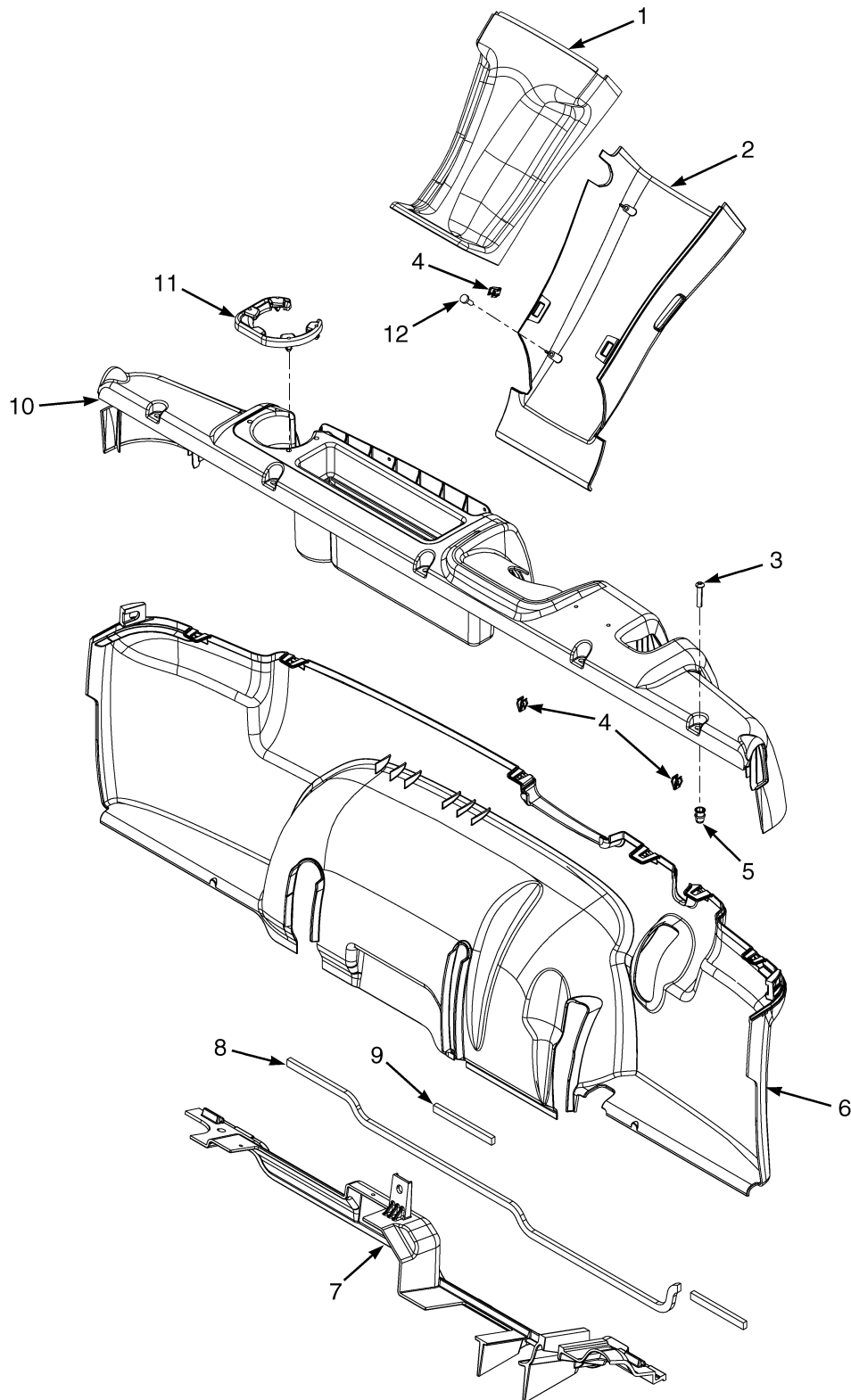
(→ S/N H006V02227F)

KEY:**A: Manual Hydraulics****B: Electronic Hydraulics**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2065668	Cover (Steering Column) (Upper)	1	1
2	2065666	Cover (Steering Column Lower) (Lower)	1	1
3	2071261	Capscrew	5	5
4	2065667	Clip	8	8
5	1531001	Insert	5	5
6	2070726	Panel (Single Pedal)	1	1
6	2076204	Panel (Dual Pedal)	1	1
7	1641656	Cover Plate	1	..
7	1641657	Cover Plate	..	1
8	1641658	Seal	1	1
9	1646609	Seal	1	1
10	1573597	Dash Panel	1	..
10	1573598	Dash Panel	..	1
11	2070975	Cup Holder	1	1
12	2027655	Screw	2	2

INTERIOR PANELS AND COVERS (FIGURE 1-3)

(S/N H006V02227F → INC. 02154, 02158, 02160, 02170, 02180, 02195-02198, 02)



BP120386

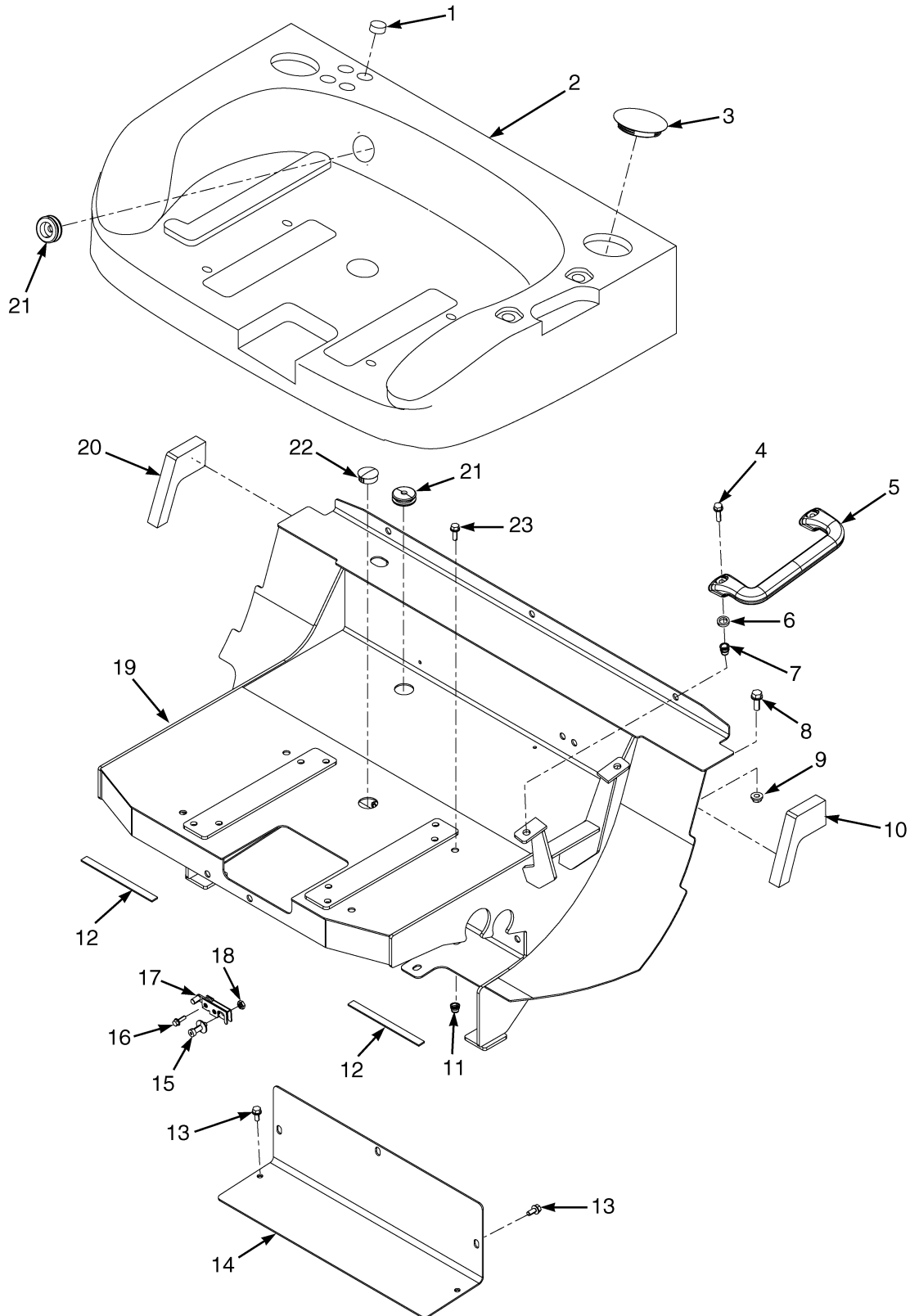
INTERIOR PANELS AND COVERS

(S/N H006V02227F → INC. 02154, 02158, 02160, 02170, 02180, 02195-02198, 02)

KEY:**A: Manual Hydraulics****B: Electronic Hydraulics**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2098330	Cover (Steering Column Upper)	1	1
2	2065666	Cover (Steering Column Lower) (Lower)	1	1
3	2071261	Capscrew	5	5
4	2065667	Clip	8	8
5	1531001	Insert	5	5
6	2070726	Panel (Single Pedal)	1	1
6	2076204	Panel (Dual Pedal)	1	1
7	1641656	Cover Plate	1	..
7	1641657	Cover Plate	..	1
8	1641658	Seal	1	1
9	1646609	Seal	1	1
10	1573597	Dash Panel	1	..
10	1573598	Dash Panel	..	1
11	2070975	Cup Holder	1	1
12	2027655	Screw	2	2

SEAT PAN AND COVERS (FIGURE 1-4)



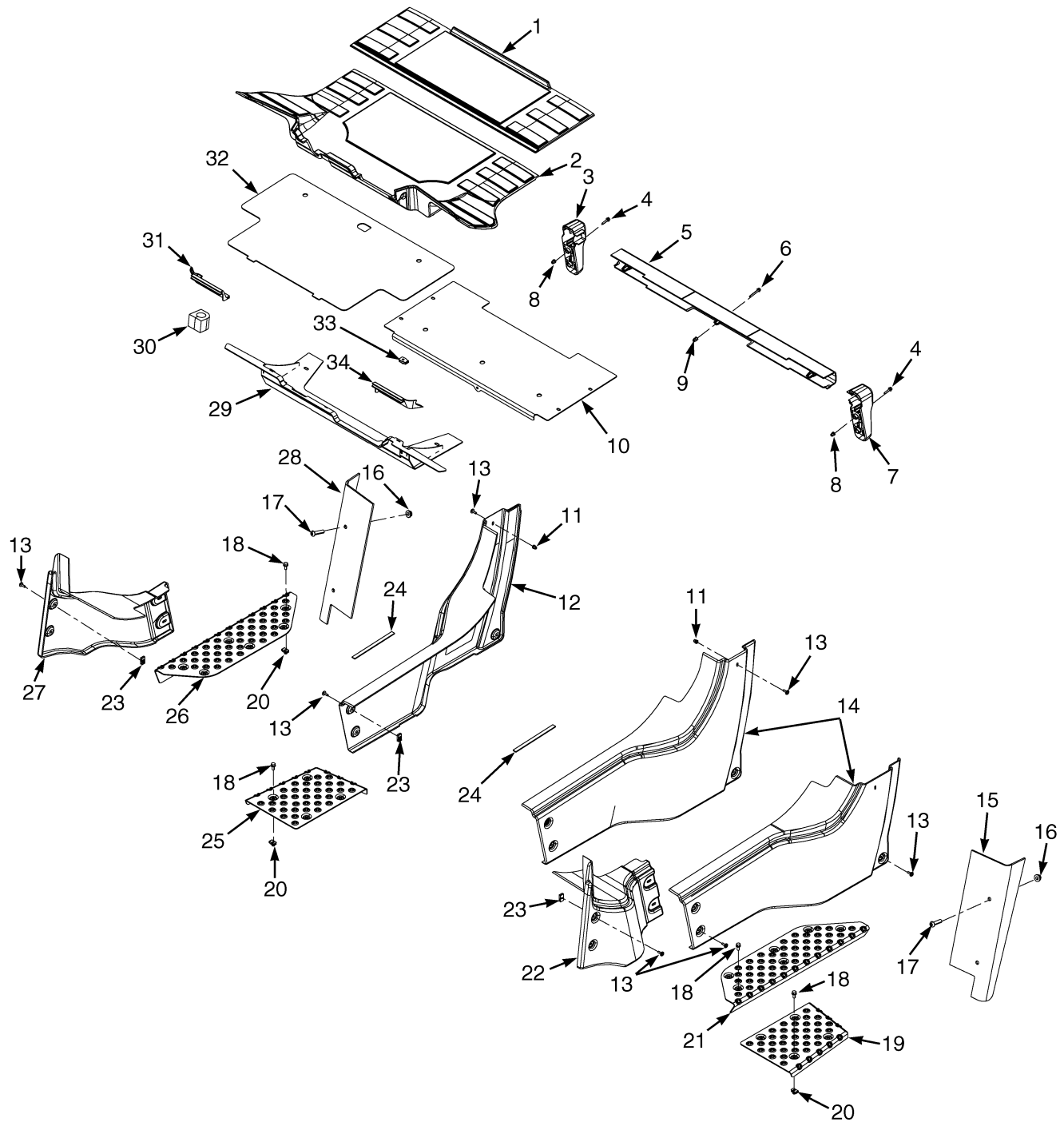
BP120318

SEAT PAN AND COVERS**KEY:****A: With Cab****B: Without Cab**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1660750	Insert	4	..
2	a 1649639	Cover (Seat Surround)	1	..
2	b 1649640	Cover (Seat Surround)	..	1
2	2098220	Plug	1	1
3	2021395	Cap	1	1
4	1586627	Capscrew	2	2
5	1536813	Handle (Grab)	1	1
6	1646509	Spacer	2	2
7	1530243	Insert	2	2
8	1605990	Capscrew	4	4
9	1586431	Nut	4	4
10	1615757	Seal (LH)	1	1
11	1531557	Insert	9	9
12	1597959	Seal	2	2
13	1608654	Capscrew	3	5
14	1646593	Cover	1	..
14	1647413	Cover	..	1
15	1608413	Striker Bolt	1	1
16	1527877	Capscrew	2	2
17	1608414	Latch	1	1
18	191534	Nut	1	1
19	1650191	Seat Pan	1	1
20	1615758	Seal (RH)	1	1
21	1561015	Grommet	2	2
22	c 1585592	Plug	2	2
22	d 1585592	Plug	1	1
23	1583611	Capscrew	20	20

FOOTNOTES:**a** With Cab**b** With Overhead Guard**c** With Swivel Seat**d** Without Swivel Seat

FLOORPLATES AND COVERS (FIGURE 1-5)



BP120321

FLOORPLATES AND COVERS**KEY:****A: Without Cab****B: With Cab**

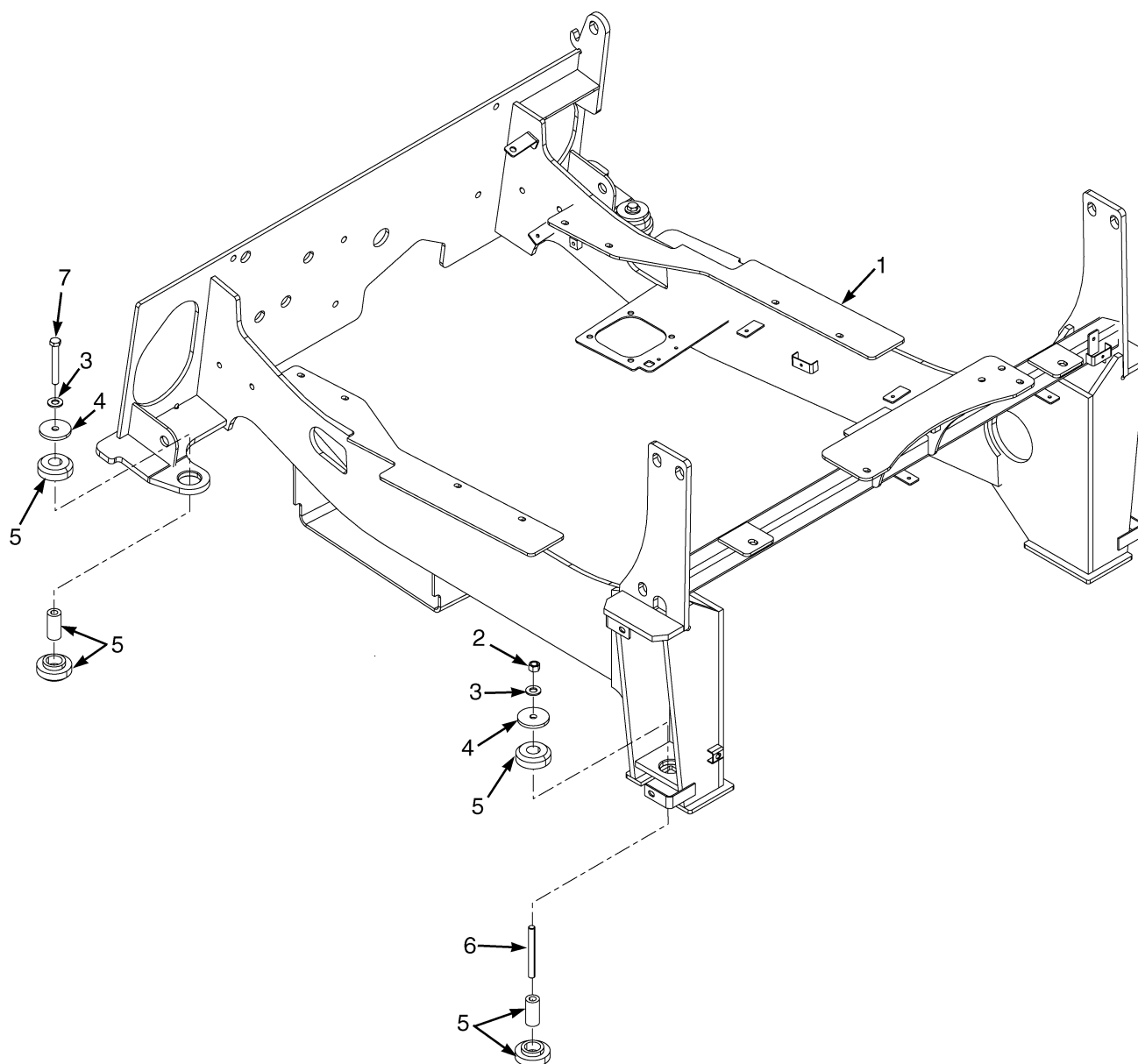
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2093343	Floormat (Rear)	1	1
2	2093342	Floormat (Front)	1	1
3	c 2056823	Tail Light Base (RH)	1	1
3	d 2107957	Tail Light Base (RH)	1	1
4	1586495	Capscrew	4	4
5	2067475	Cover	1	1
6	1540643	Capscrew	3	3
7	c 2056822	Tail Light Base (LH)	1	1
7	d 2107958	Tail Light Base (LH)	1	1
8	1531558	Insert	4	4
9	1531001	Insert	3	3
10	1659938	Floorplate (Rear)	1	1
11	1531558	Insert	2	2
12	a 1640867	Cover (RH) (Rear)	1	..
12	b 1640868	Cover (RH) (Rear)	1	..
12	a 1640877	Cover (RH) (Rear)	..	1
12	b 1640876	Cover (Rear)	..	1
13	1530019	Screw	12	12
14	1640874	Cover (LH) (Rear)	..	1
14	1640865	Cover (LH) (Rear)	1	1
15	1622865	Plate (LH)	1	1
16	1586432	Nut	4	4
17	2090693	Capscrew	4	4
18	1608654	Capscrew	10	10
19	1608671	Plate (Lower LH Tread)	1	1
20	1480237	Nut	23	33
21	1608667	Plate (Upper LH Tread)	1	1
22	1640870	Cover (Front LH)	..	1
23	325182	Nut	10	10
24	1597960	Seal	2	2
25	1608673	Plate (RH)	1	1
26	1608669	Plate (Upper RH Tread)	1	1
27	1640872	Cover (RH)	..	1
28	1622867	Plate (RH)	1	1
29	1607634	Floorplate	1	1
30	1530135	Grommet	1	1
31	2092324	Seal (RH)	1	1
32	1608204	Floorplate	1	1
33	1393879	Nut	8	8
34	2092323	Seal (LH)	1	1

FOOTNOTES:

a GM 4.3L Gasoline and Cummins 4.5L Diesel
b GM 4.3L LPG

c → PENDING PER ECN 136110
d PENDING PER ECN 136110 →

COMPARTMENT PLATFORM (FIGURE 1-6)

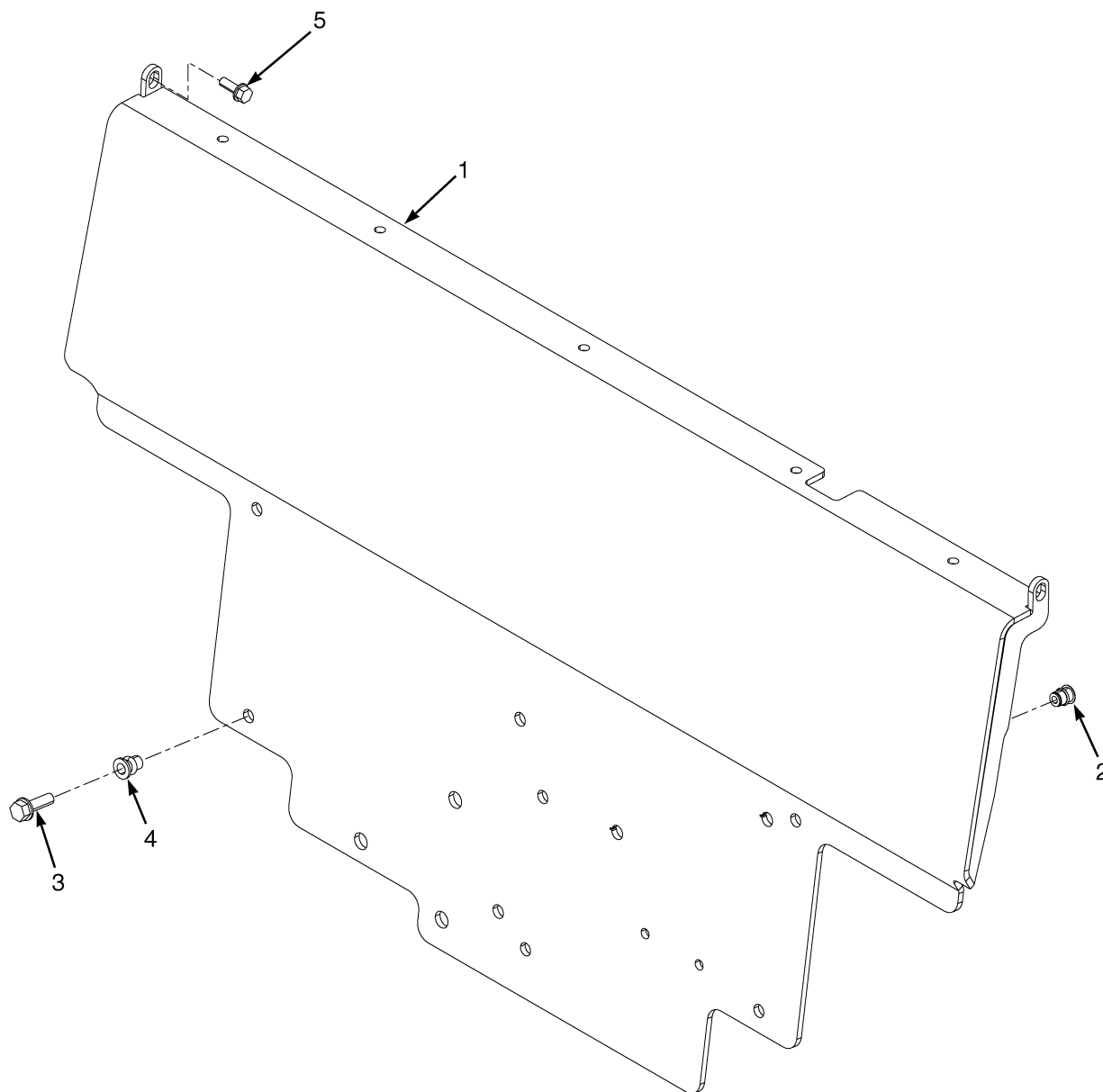


BP120335

COMPARTMENT PLATFORM

ITEM	PART NO.	DESCRIPTION	QTY
1	1614903	Module	1
2	300937	Nut	2
3	296423	Washer	4
4	300939	Washer	4
5	1660337	Isolator	4
6	2037998	Stud	2
7	293657	Capscrew	2

COWL MOUNT (FIGURE 1-7)



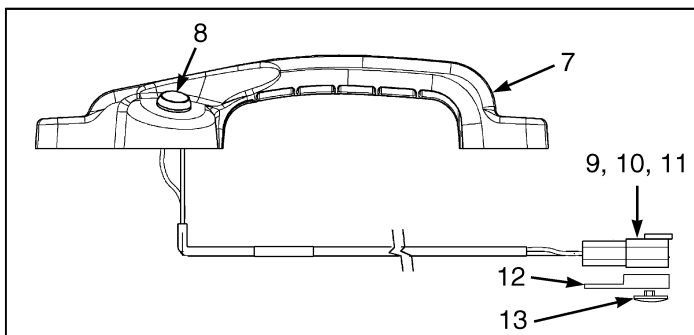
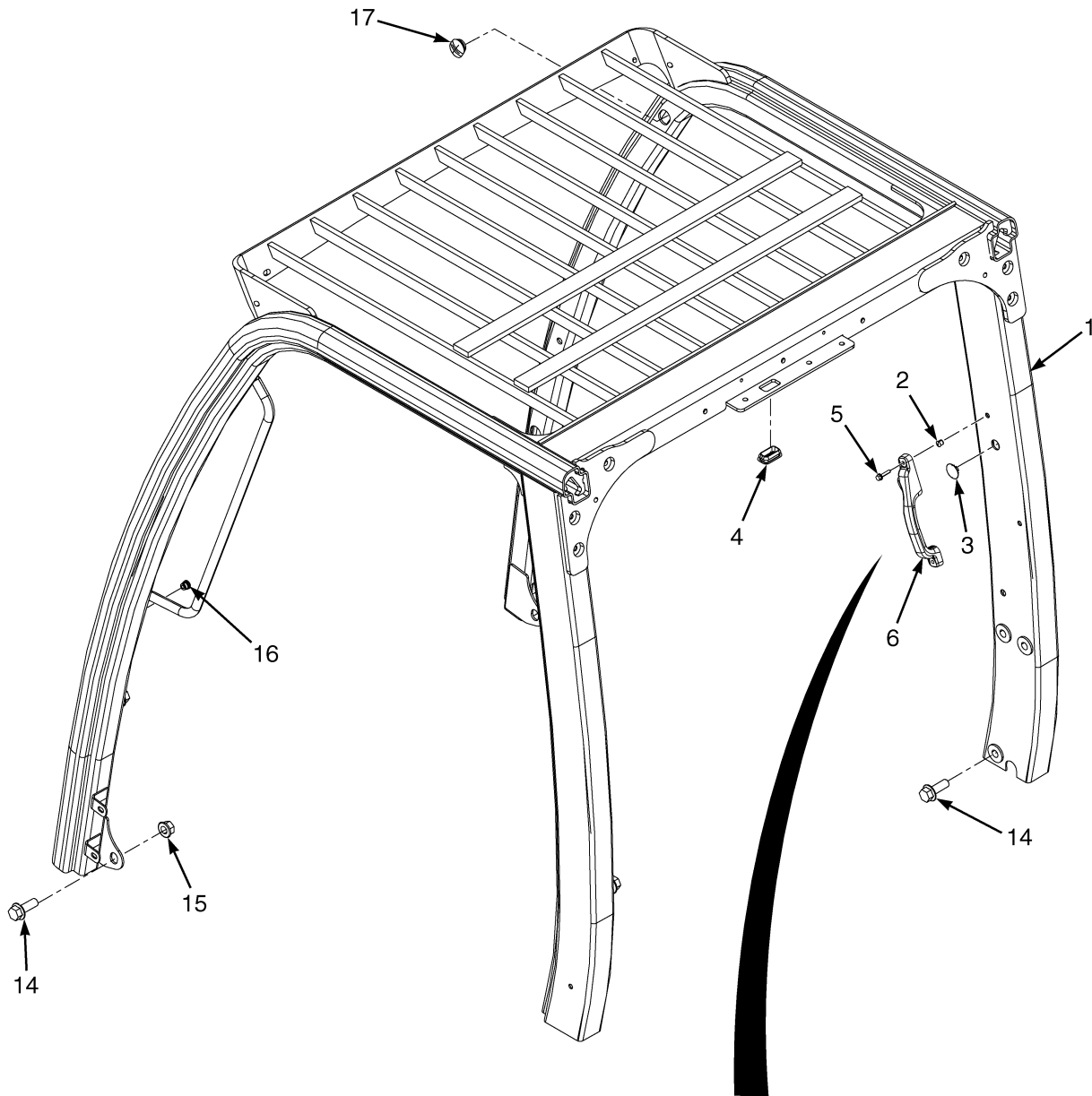
BP120323

COWL MOUNT

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1650193	Cowl	1
1	b 1686718	Cowl	1
2	1530243	Insert	2
3	1586629	Capscrew	6
4	1640776	Insert	6
5	1583611	Capscrew	2

FOOTNOTES:**a** → S/N H006V02848F**b** S/N H006V02849F →

OVERHEAD GUARD (FIGURE 1-8)



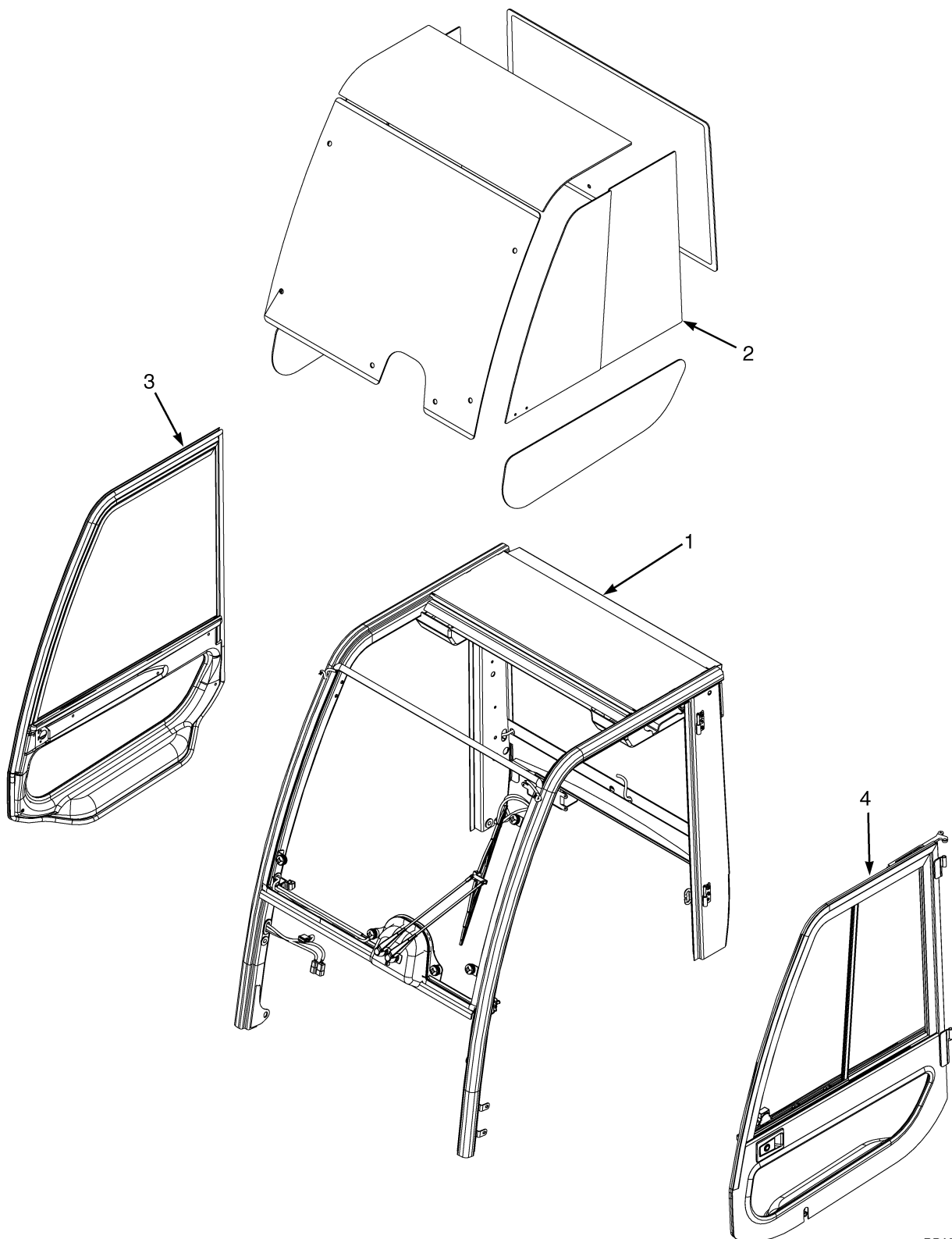
BP120357

OVERHEAD GUARD

ITEM	PART NO.	DESCRIPTION	QTY
1	1659541	Overhead Guard	1
2	1494888	Plug	4
3	1599415	Plug	1
4	1560671	Grommet	1
5	b 1586495	Capscrew	2
6	b 2070223	Handle (Alternate Horn Button)	1
7	2069454	Handle	1
8	1566726	Push Button Switch	1
9	1493465	Connector	1
10	1330414	Connector (Secondary Lock)	1
11	1330437	Terminal (Pin)	2
12	b 1500912	Clip	1
13	b 1582464	Fastener	1
14	1597479	Capscrew	10
15	1586436	Nut	2
16	1531557	Insert	2
17	1558219	Grommet	1
	a 1661321	Grommet	1

FOOTNOTES:**a** Not Illustrated**b** Optional

CAB (FIGURE 1-9) MAIN ASSEMBLY

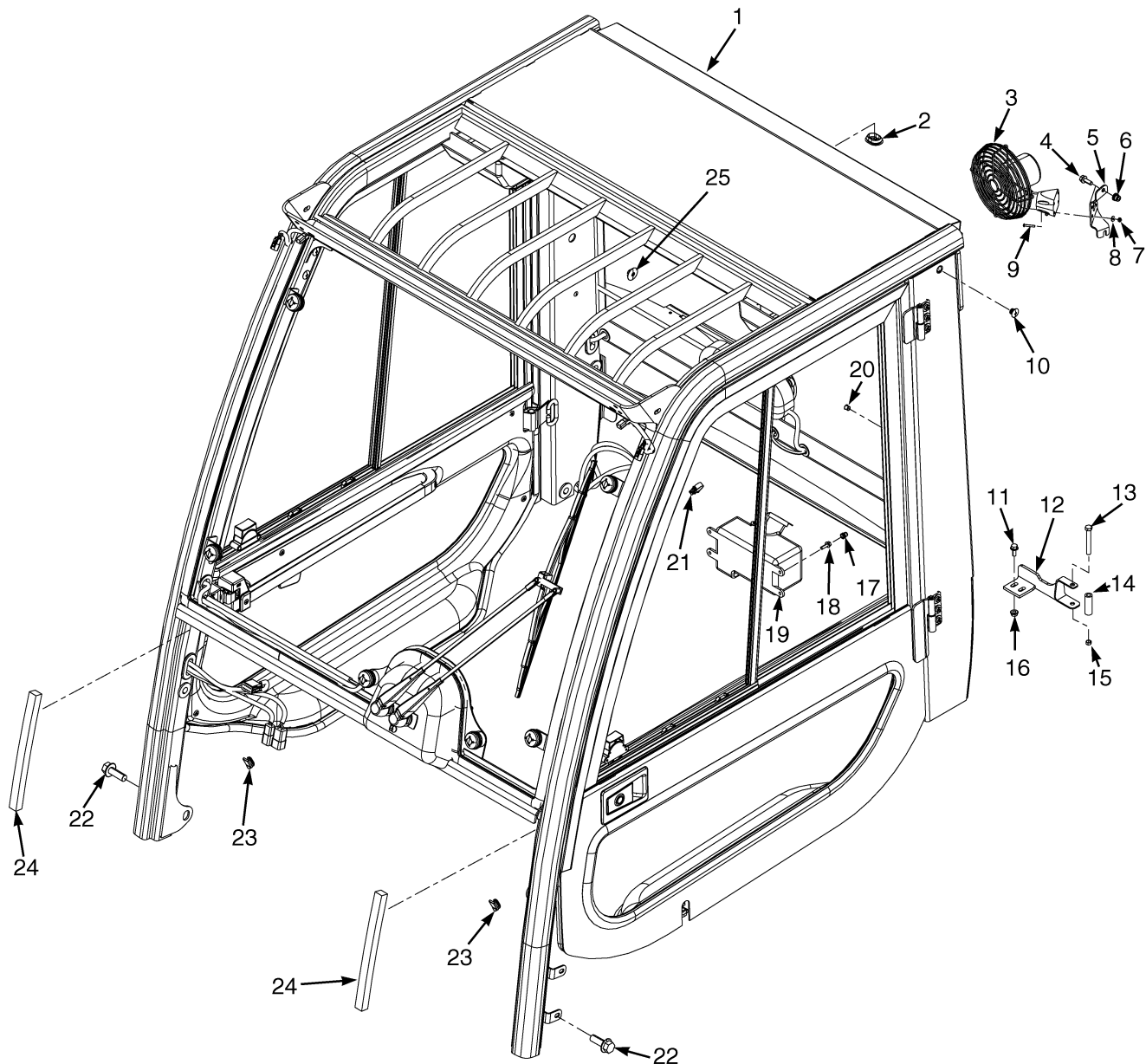


BP120332

**CAB
MAIN ASSEMBLY**

ITEM	PART NO.	DESCRIPTION	QTY
1	1673586	Cab (☞ Figure 1-10, ☞ Figure 1-11, ☞ Figure 1-13).....	1
2		Cab Glass (☞ Figure 1-12).....	1
3	1656067	Door (LH) (☞ Figure 1-14).....	1
4	1656081	Door (RH) (☞ Figure 1-15).....	1

CAB (FIGURE 1-10) ATTACHING PARTS — SHEET 1 OF 2

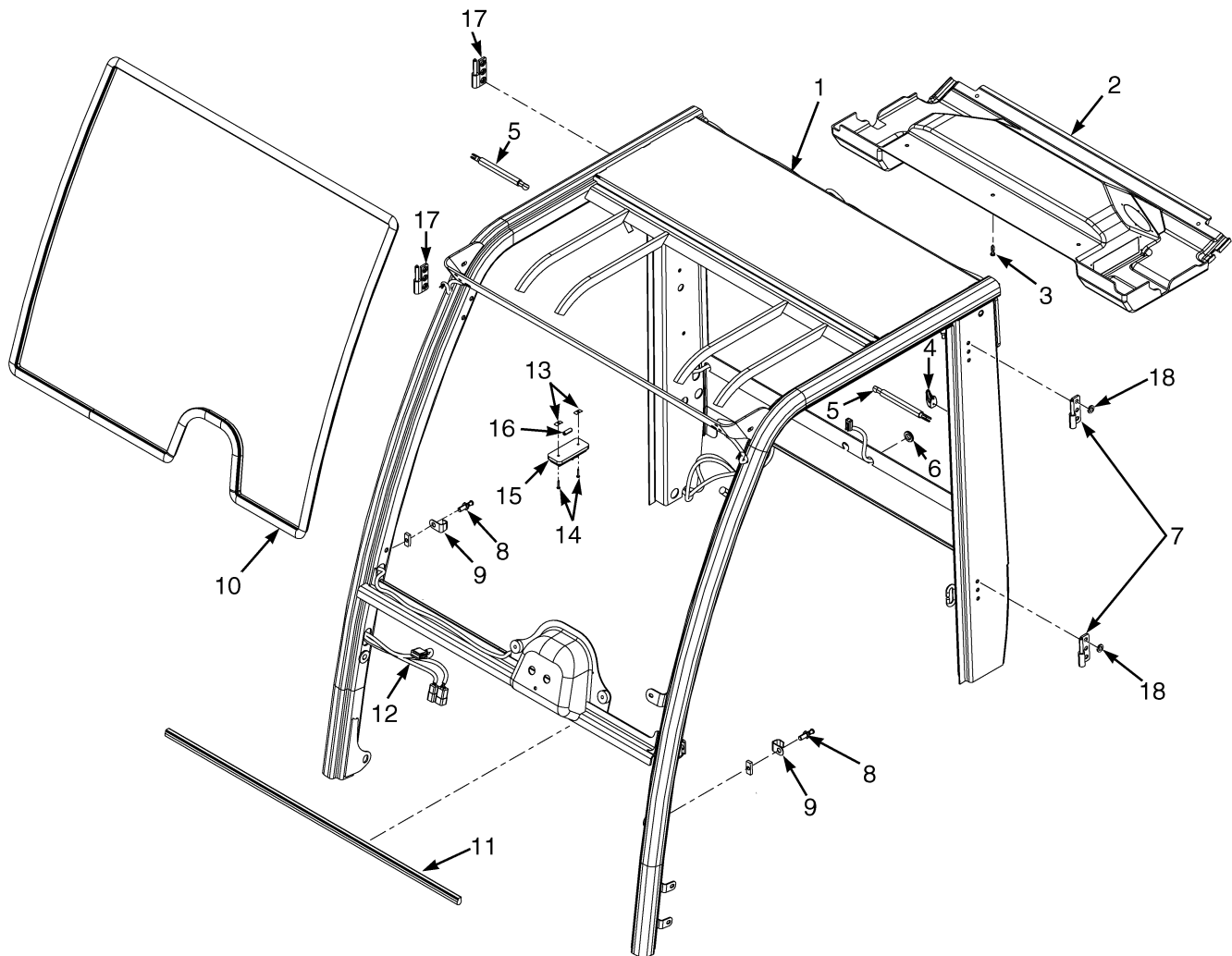


BP120330

CAB
ATTACHING PARTS – SHEET 1 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
1	1673586	Cab (With Steel Doors)	1
2	2070996	Grommet	1
3	1359562	Fan	1
4	1583611	Capscrew	2
5	1613734	Bracket	1
6	1531557	Insert	2
7	1463912	Nut	1
8	292678	Lockwasher	4
9	1565125	Screw	4
10	1574301	Plug	8
11	1527880	Capscrew	4
12	1668633	Striker	2
13	1669114	Bolt	2
14	1650145	Hose Assy	2
15	1581739	Nut	2
16	1502543	Nut (Flange)	4
17	1531558	Insert	4
18	1527877	Capscrew	4
19	1646922	Reservoir (Washer Bottle with Pump)	1
19	1635026	Cap	1
19	1705156	Pump	1
20	1494888	Plug	4
21	1534329	Clip	1
22	226458	Capscrew	10
23	1589787	Seal	2
24	1650568	Seal	2
25	1599415	Plug	1

CAB (FIGURE 1-11) ATTACHING PARTS — SHEET 2 OF 2

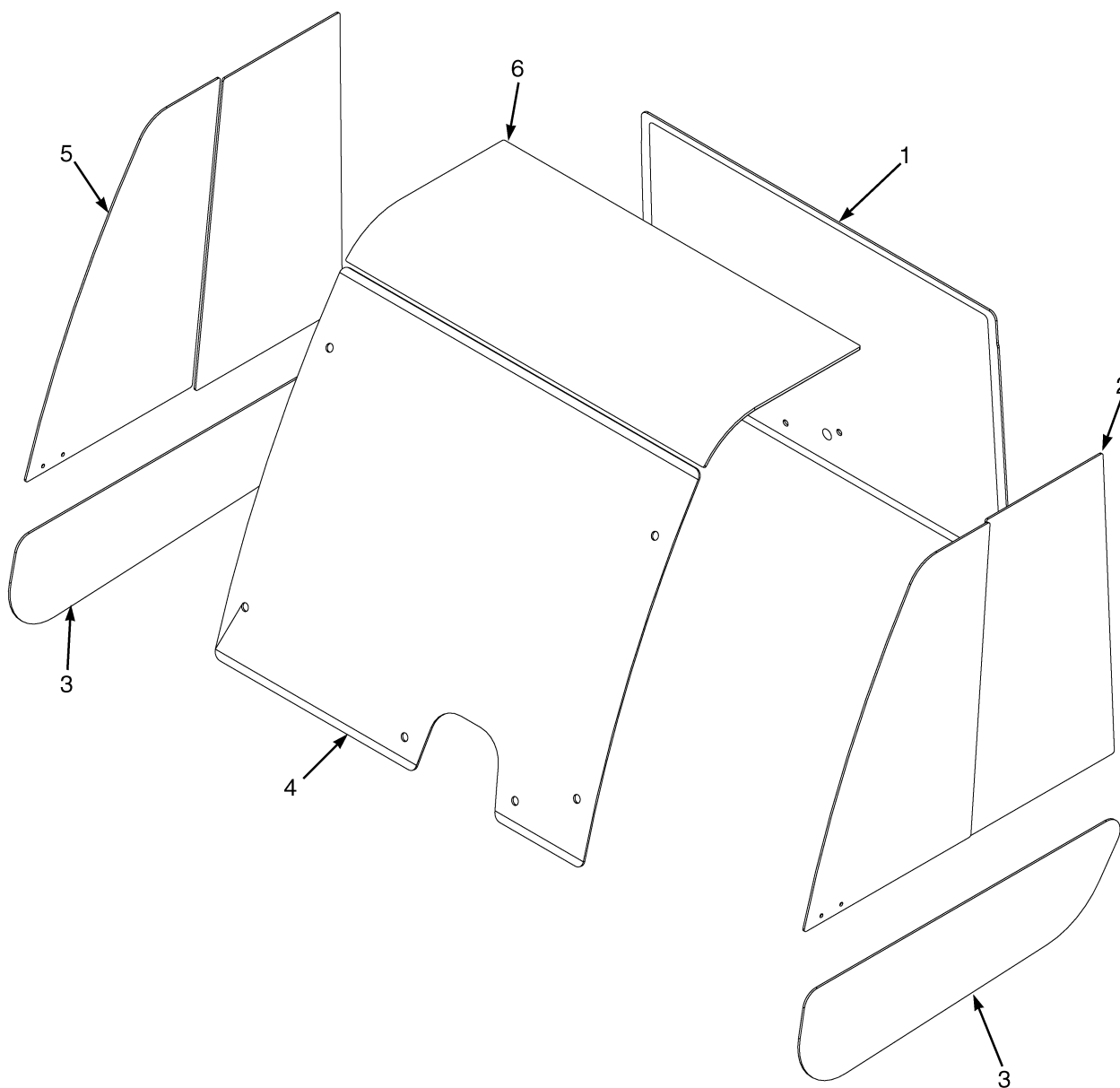


BP120338

CAB
ATTACHING PARTS – SHEET 2 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
	1673586	Cab	1
1		Cab Frame	1
2	1656012	Headliner	1
3	1474710	Insert	5
4	1647423	Coat Hook	1
5	1656013	Gas Spring	2
6	1393511	Grommet	3
7	1474953	Hinge (RH)	2
8	1656010	Bolt	2
9	1678405	Striker	2
10	1656015	Seal	1
11	1647439	Seal (Front Cowl)	1
12	1647440	Wire Harness (Cab)	1
13	1491466	Fastener	2
14	1491220	Screw	2
15	1393528	Dome Light	1
16	1393527	Bulb	1
17	1474952	Hinge (LH)	2
18	296419	Washer	12
19	1474709	Block (Not Illustrated)	1

CAB (FIGURE 1-12) WINDOWS

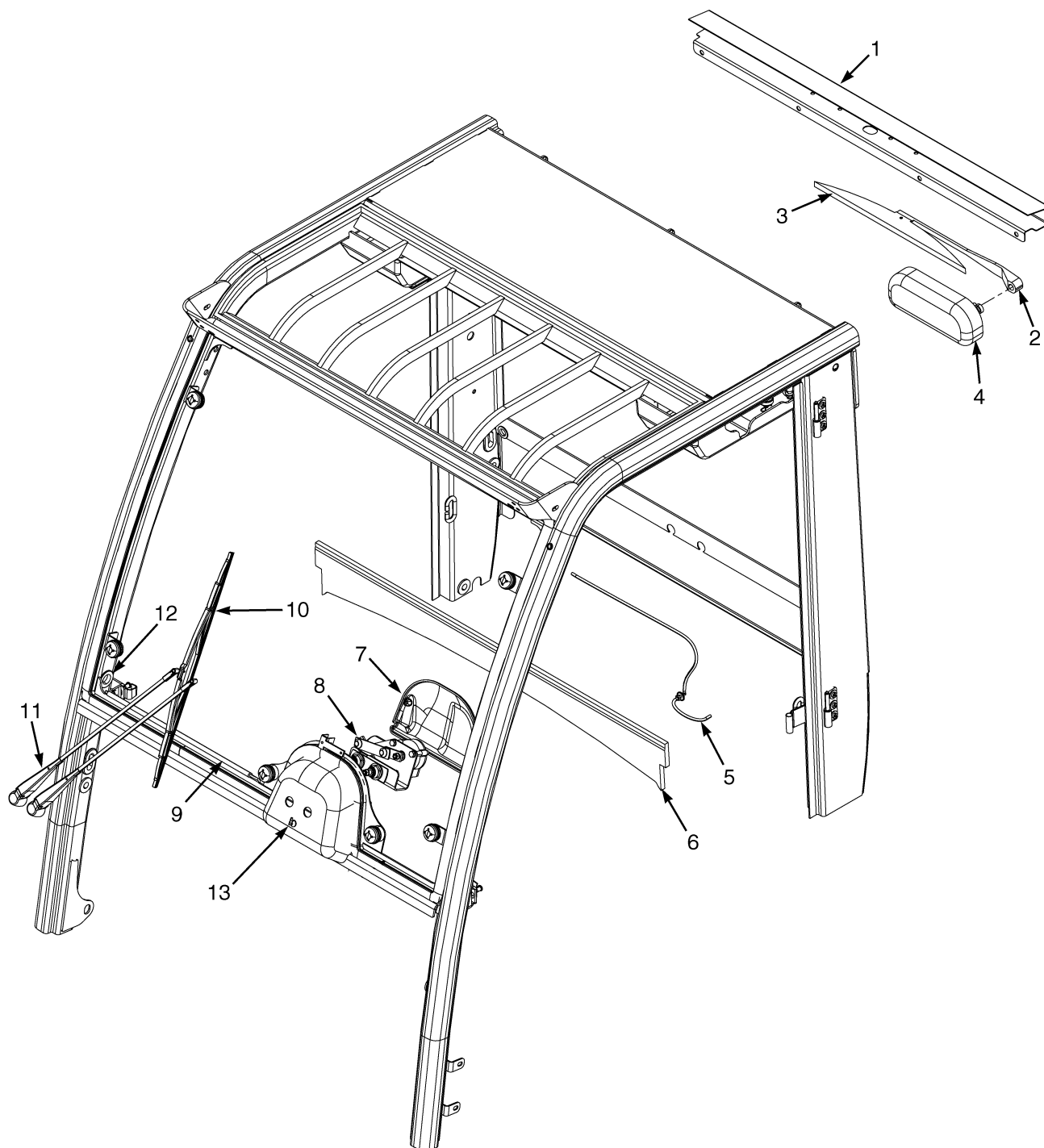


BP120333

**CAB
WINDOWS**

ITEM	PART NO.	DESCRIPTION	QTY
1	1656093	Window (Rear)	1
2	1656089	Sliding Window (LH Slider)	1
3	1656090	Window (Lower Door)	2
4	1656092	Front Window (Front)	1
5	1656091	Sliding Window (RH Slider)	1
6	1647522	Window	1
7	1697679	Latch (LH) (Not Illustrated)	1
8	1697680	Latch (RH) (Not Illustrated)	1

CAB (FIGURE 1-13) WINDOW WIPER SYSTEM



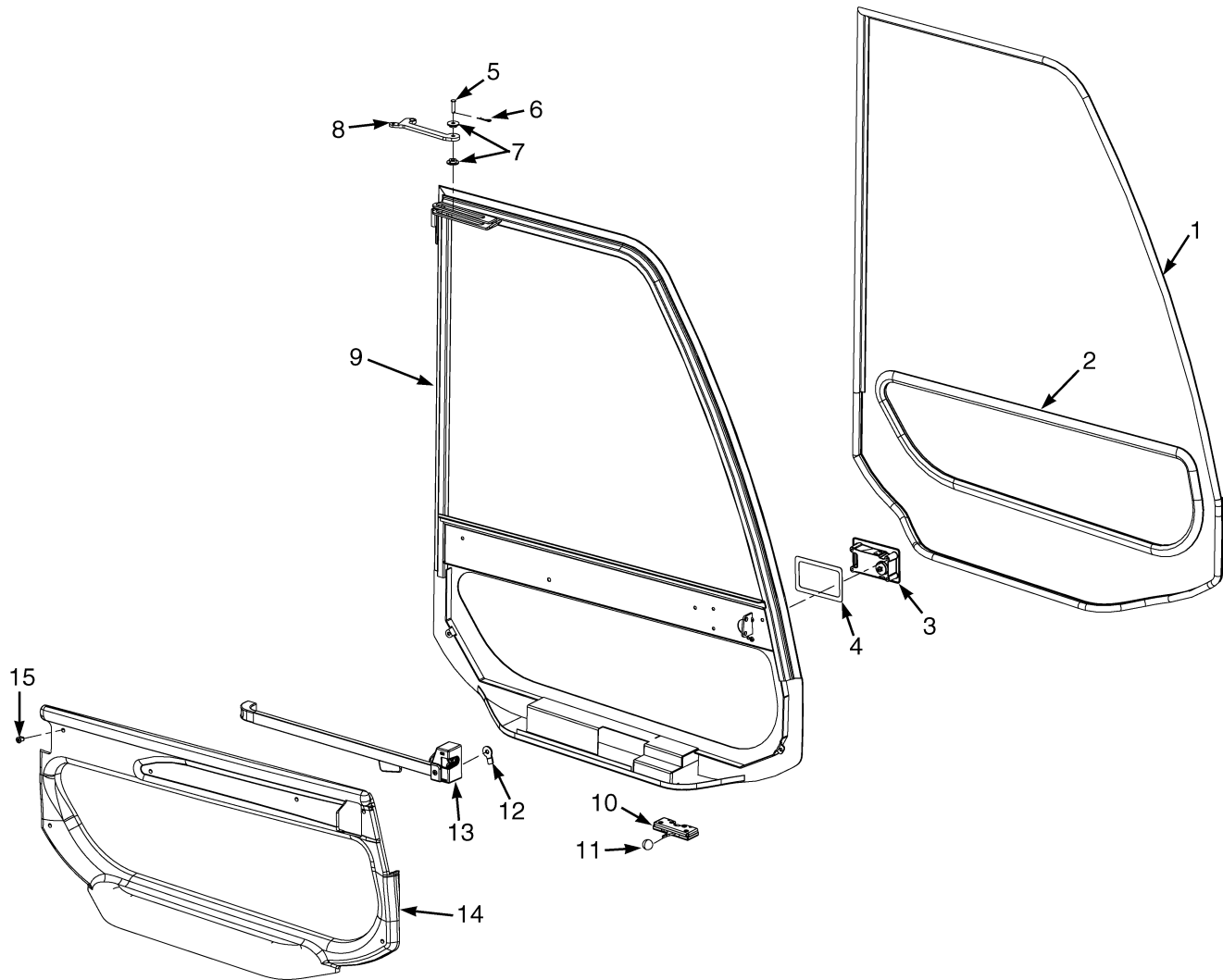
BP120334

CAB
WINDOW WIPER SYSTEM

ITEM	PART NO.	DESCRIPTION	QTY
	1673586	Cab	1
1	1656007	Cover (Tail Light)	1
2	1393505	Wiper Arm (Rear)	1
3	1656017	Wiper Blade (Rear)	1
4	1656008	Wiper Motor (Rear)	1
5	1656016	Hose	1
6	1656011	Trim (Rear)	1
7	1647422	Cover (Front Wiper)	1
8	1623368	Wiper Motor (Front)	1
9	1656014	Trim (Front Window)	1
10	1393494	Wiper Blade (Front)	1
11	1623369	Wiper Arm (Front)	1
12	1474704	Grommet	1
13	1647424	Connector	2
	a 1647446	Connector (washer hose)	1

FOOTNOTES:**a** Not Illustrated

CAB (FIGURE 1-14) LEFT HAND DOOR ASSEMBLY

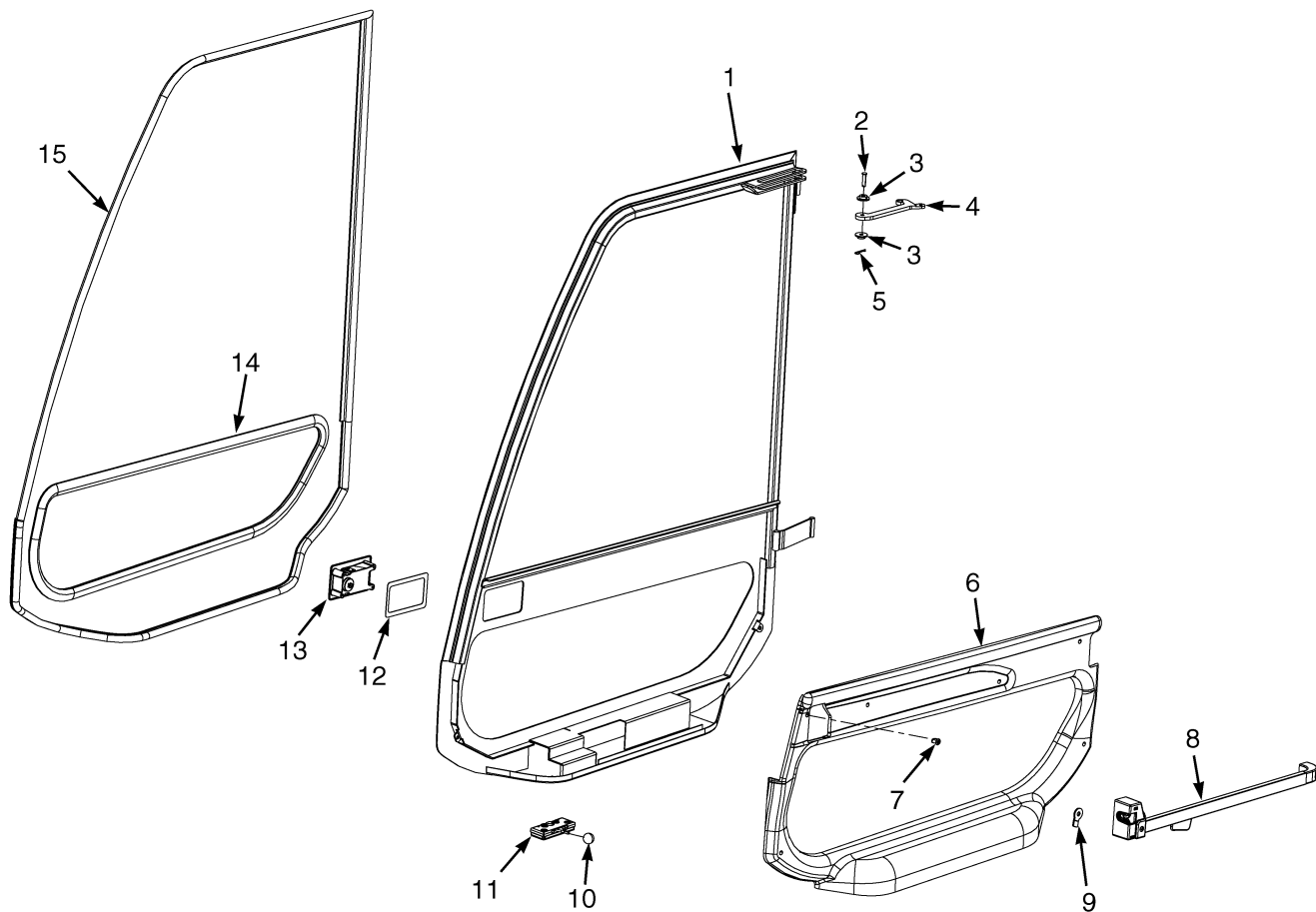


BP120336

CAB
LEFT HAND DOOR ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	1656067	Door (LH)	1
1	1656070	Seal	1
2	1656071	Seal	1
3	1647451	Latch (Door)	1
4	1647452	Seal (Door Latch)	1
5		Pin	1
6		Cotter Pin	1
7	1688654	Bushing	1
8	1656074	Link	1
9		Door (LH)	1
10	1656068	Latch Door Stop	1
11	1656069	Knob	1
12	1647453	Lever (LH Door)	1
13	1393479	Door Handle	1
14	1656072	Panel	1
15	1656073	Plug	5
	1474710	Insert (Not Illustrated)	1
	296229	Capscrew (Not Illustrated)	2
	1688655	Strap (Not Illustrated)	1
	1474709	Block (Not Illustrated)	1
	1490966	Screw (Not Illustrated)	1
21	1689908	Door Key (Not Illustrated)	1

CAB (FIGURE 1-15) RIGHT HAND DOOR ASSEMBLY

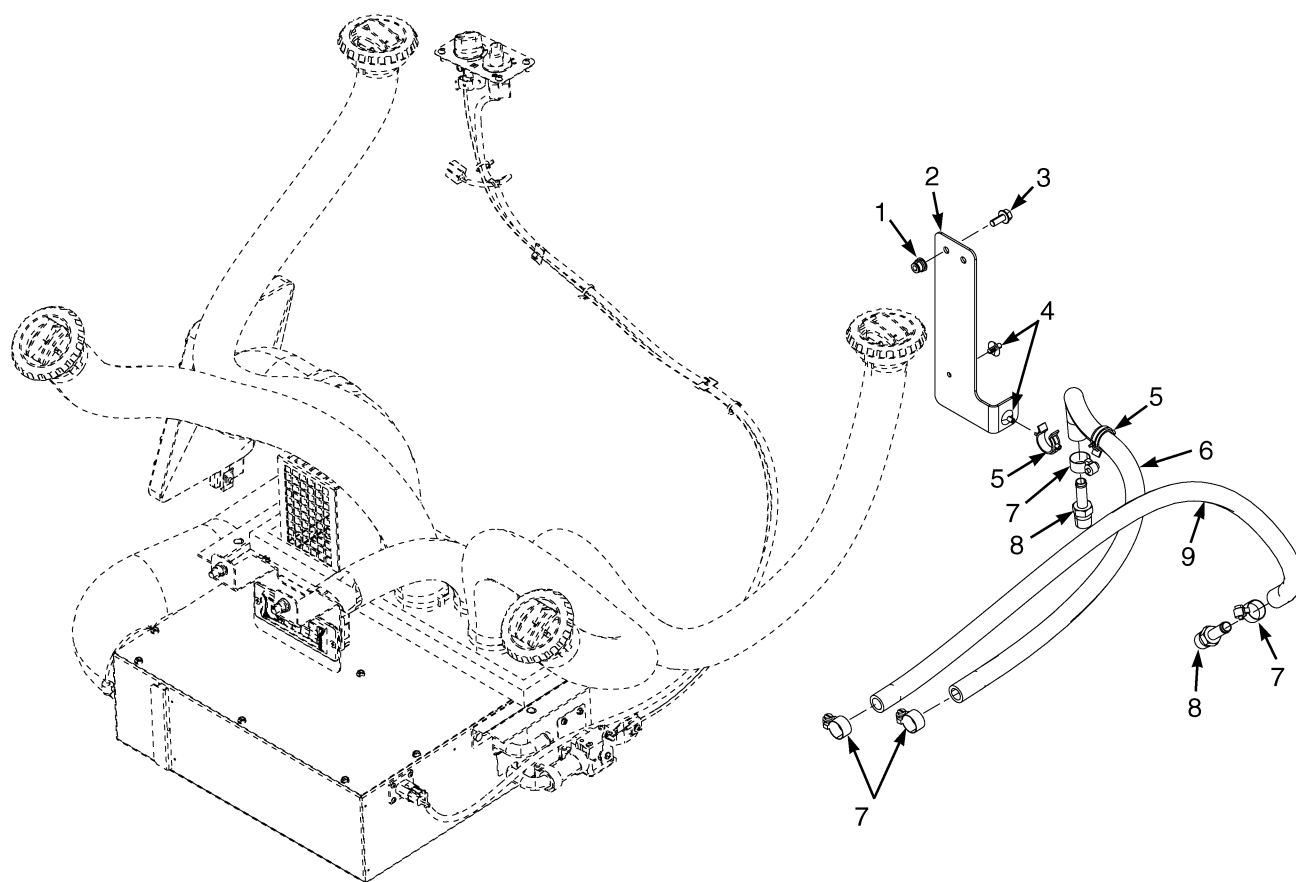


BP120337

CAB
RIGHT HAND DOOR ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	1656081	Door (RH)	1
1		Door (RH)	1
2		Pin	1
3	1688654	Bushing	1
4	1656085	Link	1
5		Cotter Pin	1
6	1656083	Panel (RH)	1
7	1656073	Plug	5
8	1393482	Door Handle	1
9	1647453	Lever (LH Door)	1
10	1656069	Knob	1
11	1474709	Block	2
12	1647452	Seal (Door Latch)	1
13	1647451	Latch (Door)	1
14	1656071	Seal	1
15	1656084	Seal	1
16	1474710	Insert (Not Illustrated)	1
17	296229	Capscrew (Not Illustrated)	2
18	1490966	Screw (Not Illustrated)	1
19	1688655	Strap (Not Illustrated)	1
20	1474709	Block (Not Illustrated)	2
21	1689908	Door Key (Not Illustrated)	1

CAB (FIGURE 1-16) HEATER HOSES — CUMMINS 4.5L DIESEL



BP120340

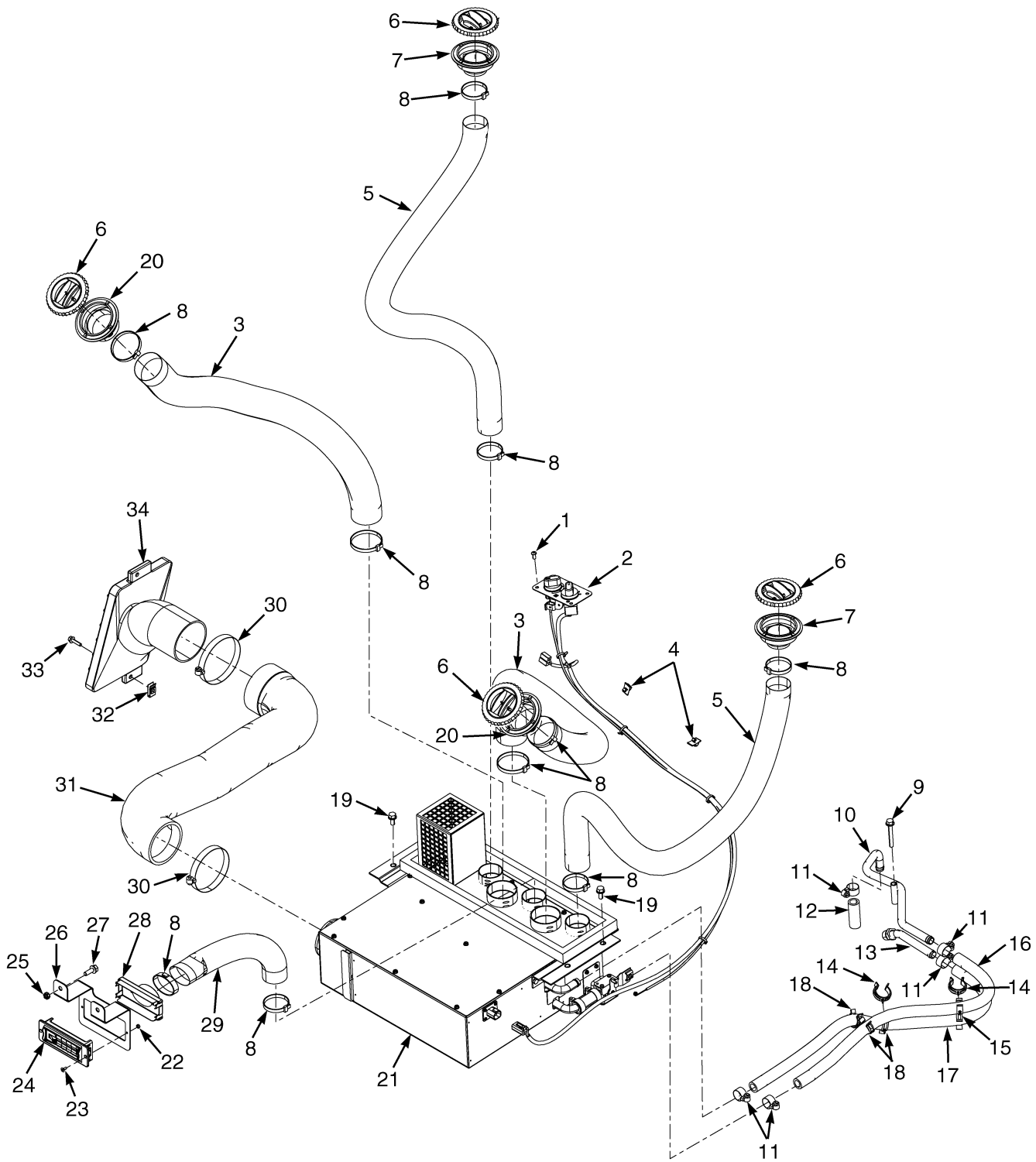
CAB
HEATER HOSES – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
1	1527880	Capscrew	2
2	1646803	Bracket	1
3	1531557	Insert	2
4	1543842	Clamp	2
5	1569465	Clamp	2
6	a 2092865	Hose (☞ Figure 1-17).....	1
7	130845	Clamp	4
8	222473	Fitting	2
9	2092866	Hose	1

FOOTNOTES:

- a** For Heater Information See Heater and Hoses GM 4.3L

CAB (FIGURE 1-17) HEATER AND HOSES — GM 4.3L GASOLINE AND LPG



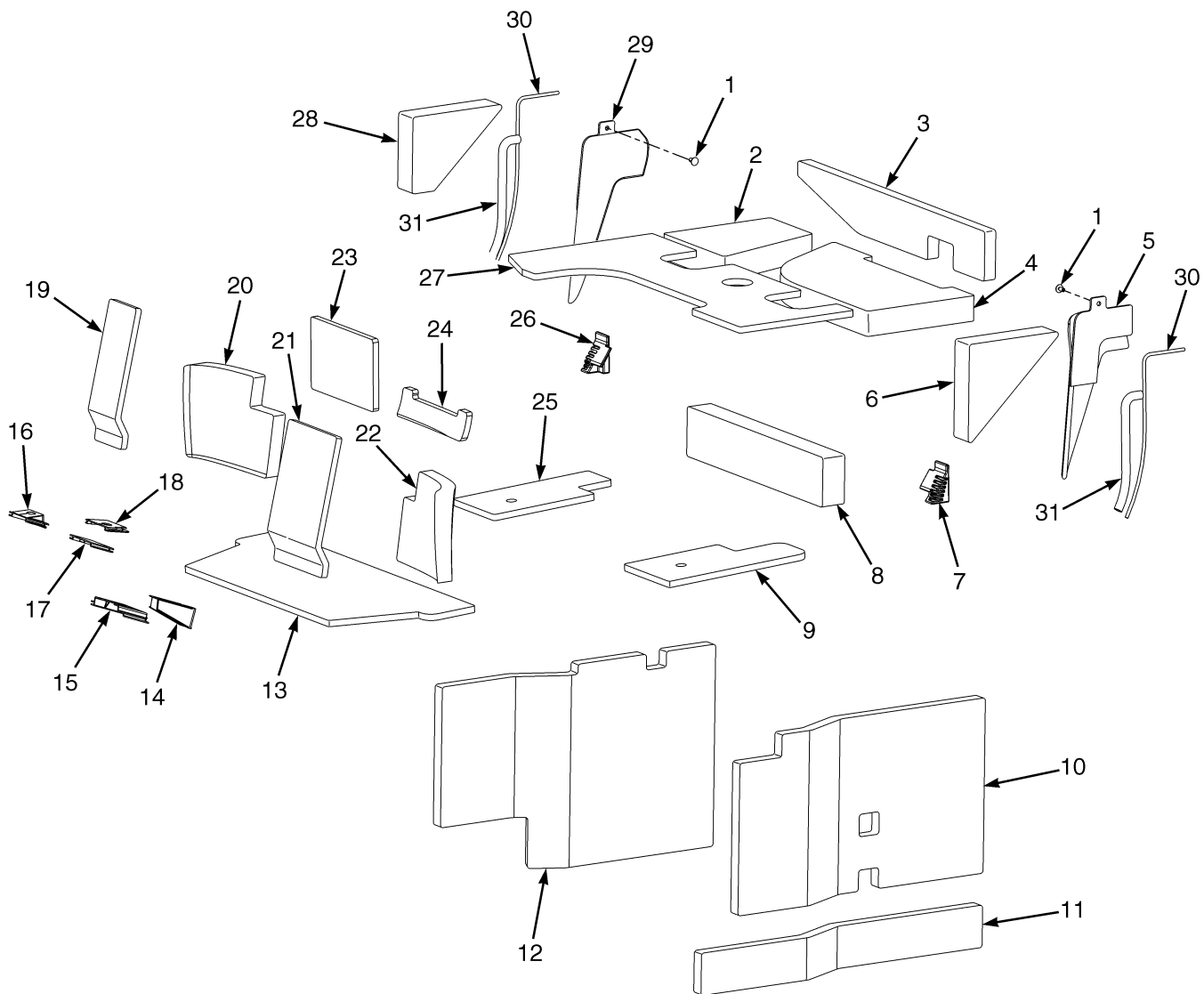
BP120339

CAB
HEATER AND HOSES – GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	1463910	Capscrew	4
2	1629297	Heater Control	1
3	1640513	Hose (Front)	2
4	1562088	Clip	2
5	1640778	Hose (Rear)	2
6	1636241	Louver	4
7	1636242	Adapter	2
8	397676	Strap Clamp	10
9	a 1510116	Capscrew	1
10	a 1564804	Tube	1
11	a 130845	Clamp	5
11	b 130845	Clamp	4
12	158269	Hose	1
13	a 1570597	Tube	1
14	1561759	Clamp (Swivel)	2
15	1612617	Clamp	1
16	2092717	Hose	1
17	2092718	Hose	1
18	1569465	Clamp	4
19	1608654	Capscrew	4
20	1636243	Adapter	2
21	1629280	Heater (12V) (☞ Figure 1-32).....	1
22	292667	Nut	2
23	296452	Screw	2
24	1636244	Vent	1
25	1531557	Insert	2
26	1640770	Bracket	1
27	1583611	Capscrew	2
28	1641103	Adapter (Rectangular)	1
29	1636510	Hose Assy	1
30	78286	Clamp	2
31	2092448	Hose	1
32	325182	Nut	2
33	1527878	Capscrew	2
34	1644840	Vent	1

FOOTNOTES:**a** GM 4.3L Gasoline**b** GM 4.3L LPG

SOUND ABATEMENT (FIGURE 1-18)



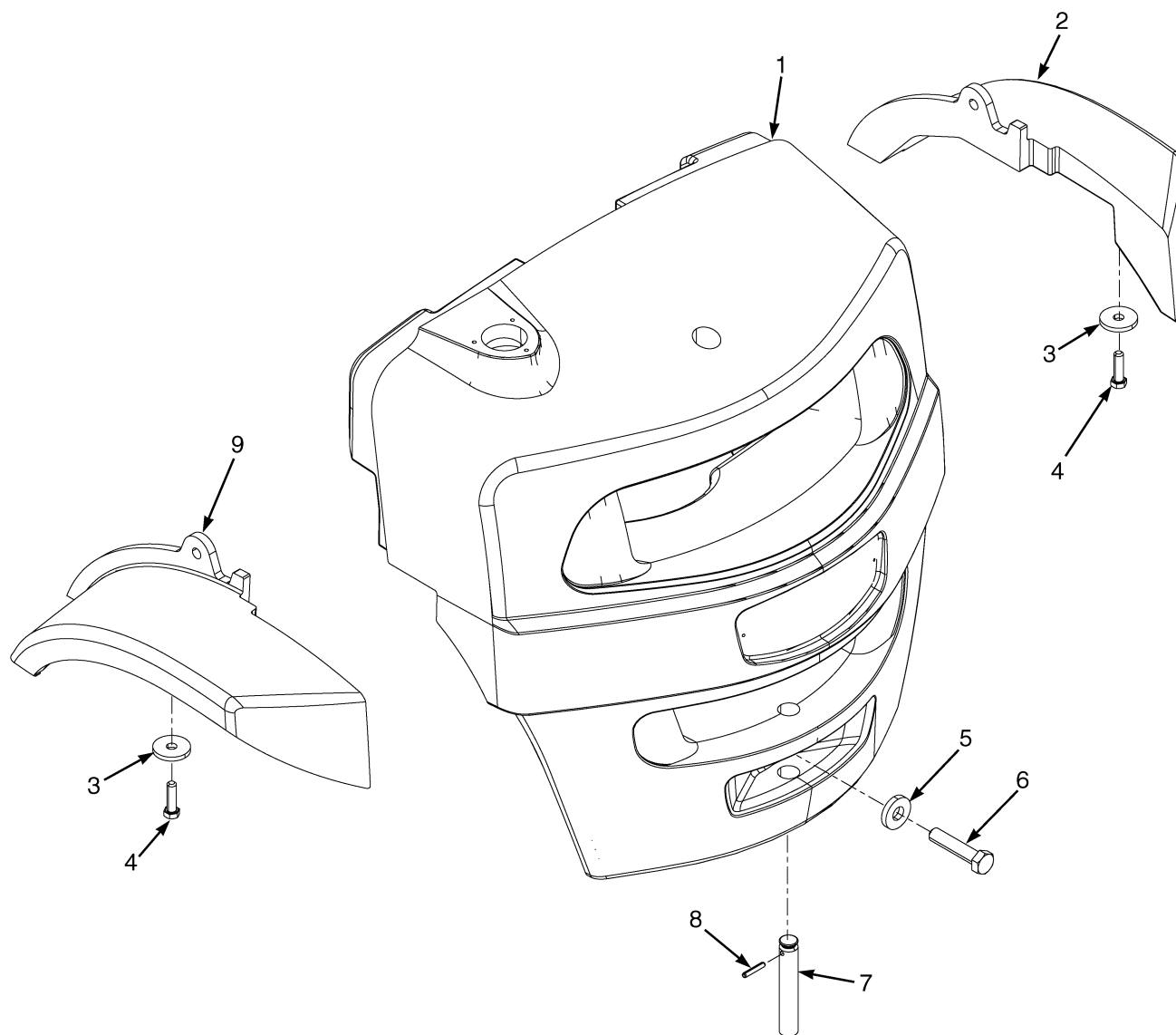
BP120343

SOUND ABATEMENT

ITEM	PART NO.	DESCRIPTION	QTY
1	1307737	Fastener	2
2	1651112	Sound Liner (Seat Support)	1
3	1651110	Sound Liner (Seat Support)	1
4	1651111	Sound Liner (Seat Support)	1
5	b 1661559	Liner (LH)	1
6	1651115	Sound Liner (Seat Support LH) (Seat Support LH)	1
7	2098416	Plug (LH)	1
8	1651113	Sound Liner	1
9	1651107	Sound Liner	1
10	1651104	Sound Liner (LH) (Frame)	1
11	1651105	Sound Liner (LH) (Frame)	1
12	1651106	Sound Liner	1
13	1651109	Sound Liner (Front Floor Plate)	1
14	2076134	Seal	1
15	2065797	Seal	1
16	a 2094680	Seal	1
17	a 2065826	Seal	1
18	a 2065827	Seal	1
19	1651405	Sound Liner (Cowl Plate)	1
20	1617081	Sound Liner (Dash) (RH)	1
21	1651404	Sound Liner (Cowl Plate)	1
22	1617082	Sound Liner (Dash) (LH)	1
23	1616484	Sound Liner	1
24	1616483	Sound Liner	1
25	1651108	Sound Liner	1
26	2098417	Plug (RH)	1
27	1651116	Sound Liner (Seat Pan)	1
28	1651114	Sound Liner (Seat Support RH) (Seat Support RH)	1
29	b 1661560	Liner (RH)	1
30	c 1670592	Seal	2
31	c 1670593	Seal	2

FOOTNOTES:**a** With Electronic Hydraulics**c** 5/2007 →**b** → 5/2007

COUNTERWEIGHTS AND FENDERS (FIGURE 1-19)



BP120314

COUNTERWEIGHTS AND FENDERS

ITEM	PART NO.	DESCRIPTION	QTY
1	1609046	Counterweight (H135FT)	1
1	1609047	Counterweight (H155FT)	1
2	1609049	Fender (RH)	1
3	1301086	Washer	4
4	292586	Capscrew	4
5	1571610	Washer	1
6	292629	Capscrew	1
7	1637881	Tow Pin	1
8	302492	Roll Pin	1
9	1609048	Fender (LH)	1

Diagram illustrating the location of the coolant reservoir and associated warning labels on the rear of the truck:

- 19**: USE ONLY BORON FREE TYPE ANTIFREEZE WHEN ADDING OR REPLACING COOLANT
- 20**: THE COOLANT SYSTEM IS PROTECTED WITH CORROSION INHIBITORS APPROVED TO -30°F (-35°C) (See 1-4000000)
- 21**: A label showing a bottle of coolant and a book icon.
- 22**: WARNING. INSTALL COVER BEFORE OPERATING TRUCK. (Warning label with a flame icon)
- 18**: WARNING. (Warning label with a flame icon)



**LABELS
EXTERIOR**

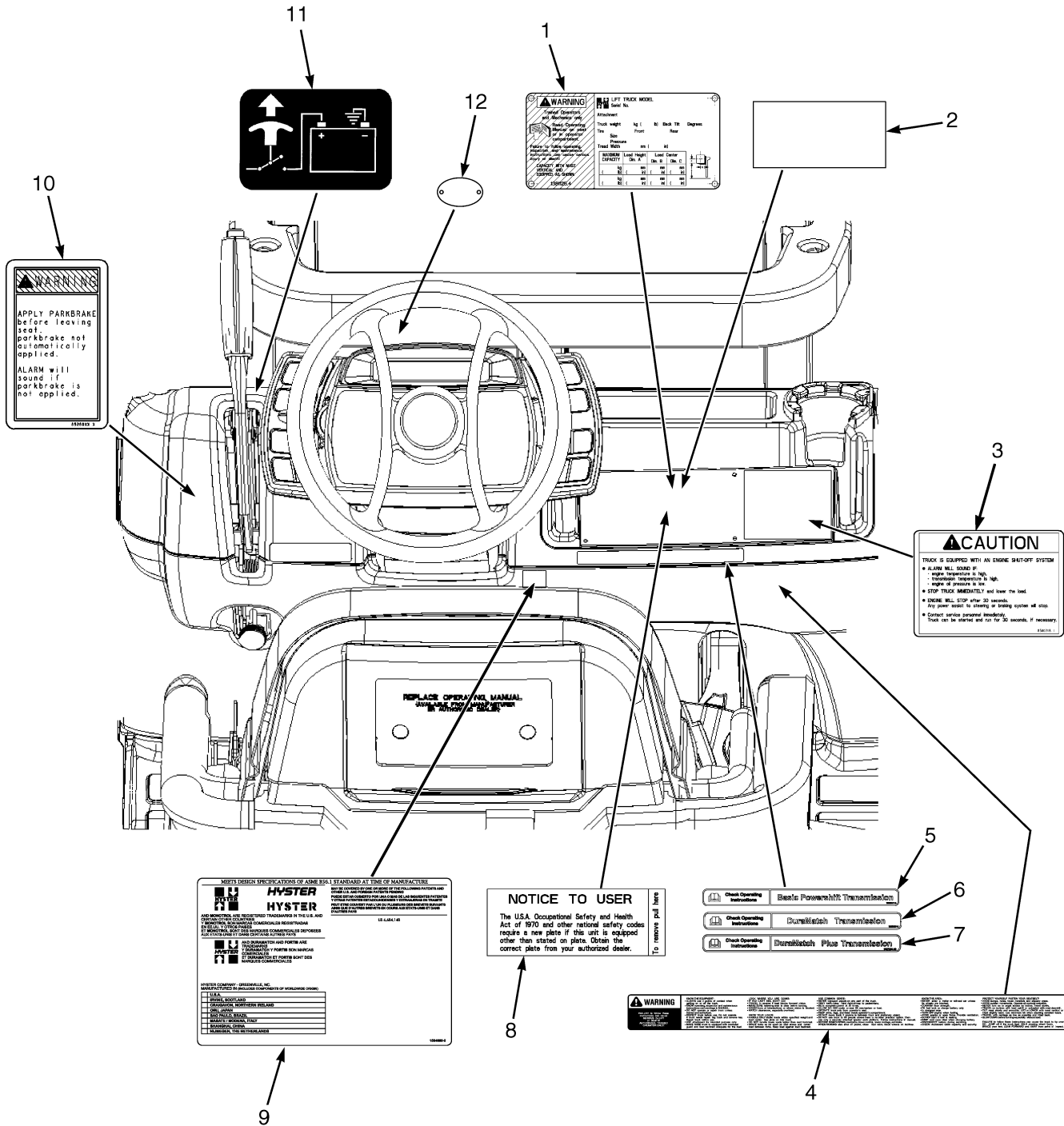
ITEM	PART NO.	DESCRIPTION	QTY
1	a	Label (Impact Rating)	1
2	b 2034459	Label (Ether Warning)	1
3	316448	Label (Lifting Eye)	3
4	d 1583609	Plate (Hyster Logo)	1
4	e 1677428	Label (Hyster Logo) (Alternate Part)	1
5	1566951	Fastener (Not used wirth 1677428)	2
6	1639478	Label (Model 135)	2
6	1639479	Label (Model 155)	2
7	1586439	Label (Fortis)	2
8	1636393	Label (Hyster)	2
9	2074255	Label (Unleaded Fuel Only)	1
9	2074256	Label (Diesel Fuel Only)	1
10	1330917	Label (Operator Restraint)	2
11	b 154067	Label (Type DS)	2
12	1330920	Label (No Riders)	2
13	1335129	Label (Pinch Point)	2
14	2075656	Label (Mast Warning)	2
15	1562353	Label (Hyster)	2
16	1330919	Label (Mast Warning)	1
17	c 2073197	Label (Operator Warning)	1
18	1345939	Label (Fan Warning)	2
19	1375676	Label (Boron-Free Antifreeze)	1
20	1354165	Label (Antifreeze)	1
21	2089112	Label (Coolant Fill)	1
22	1325271	Label (Fan Warning)	1

FOOTNOTES:

a Contact Your Local Hyster Dealer
b Diesel
c Without Cab

d → PENDING PER ECN 105354
e PENDING PER ECN 105354 →

LABELS (FIGURE 1-21) INTERIOR



BP120328

**LABELS
INTERIOR**

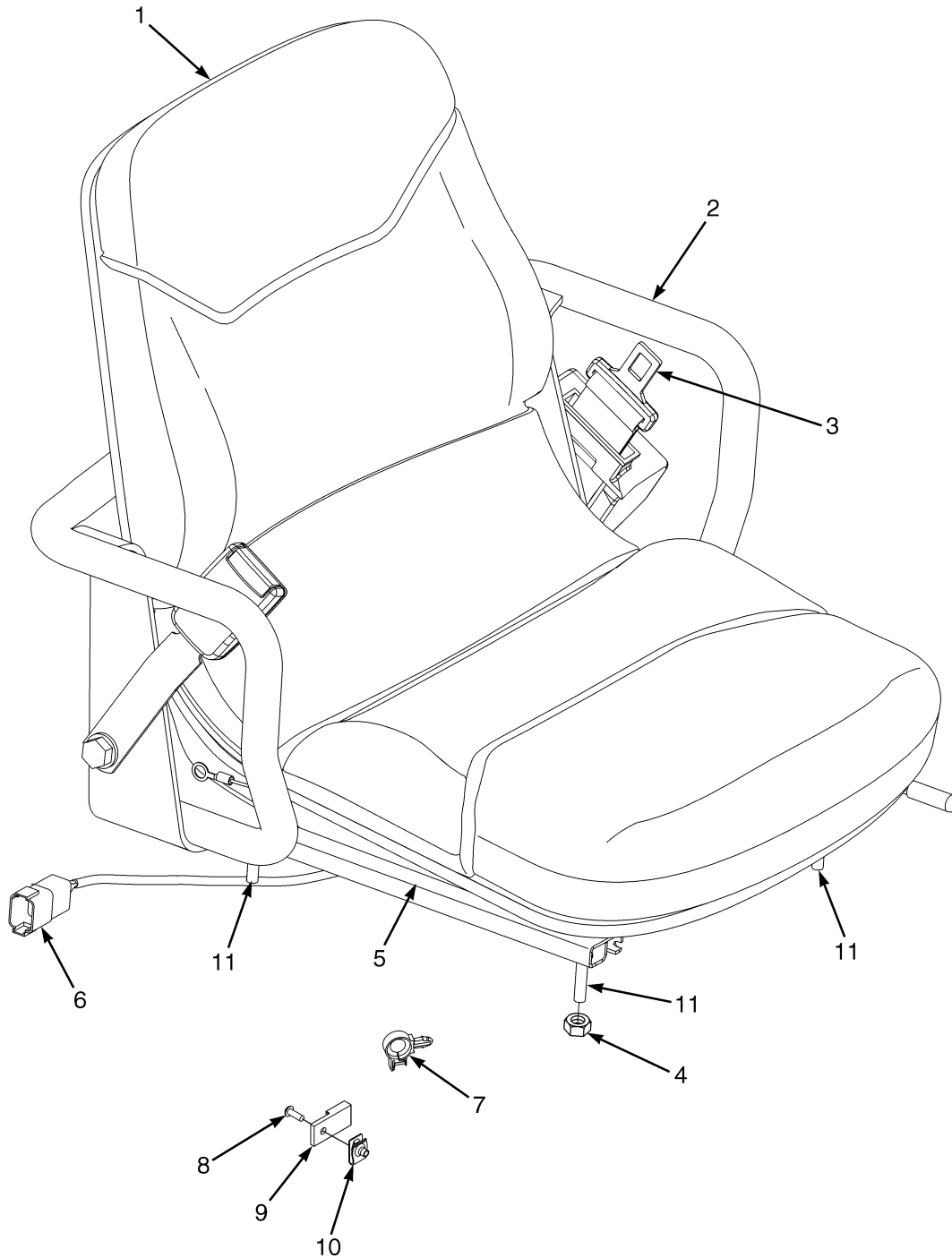
ITEM	PART NO.	DESCRIPTION	QTY
1	a	Nameplate	1
1	170658	Rivet	4
2	389688	Nameplate (Plastic Plate)	1
3	1385102	Label (Drive Train Protection)	1
4	2073197	Label (Operator Warning)	1
5	1589377	Label (Basic Powershift Transmission)	1
6	b 1589397	Label (DuraMatch Transmission)	1
7	b 1589417	Label (DuraMatch Plus Transmission)	1
8	1335137	Label (Nameplate Tag)	1
9	1534660	Label (Patents and Trademarks)	1
10	2074209	Label (Parking Brake Warning)	1
11	c 1324480	Label (Battery Switch)	1
12	a	UL Inspection Plate	1

FOOTNOTES:

- a** Contact Your Local Hyster Dealer
b Electronic Transmission

- c** UL Type DS

NON SUSPENSION SEAT (FIGURE 1-22) WITH HIP RESTRAINT

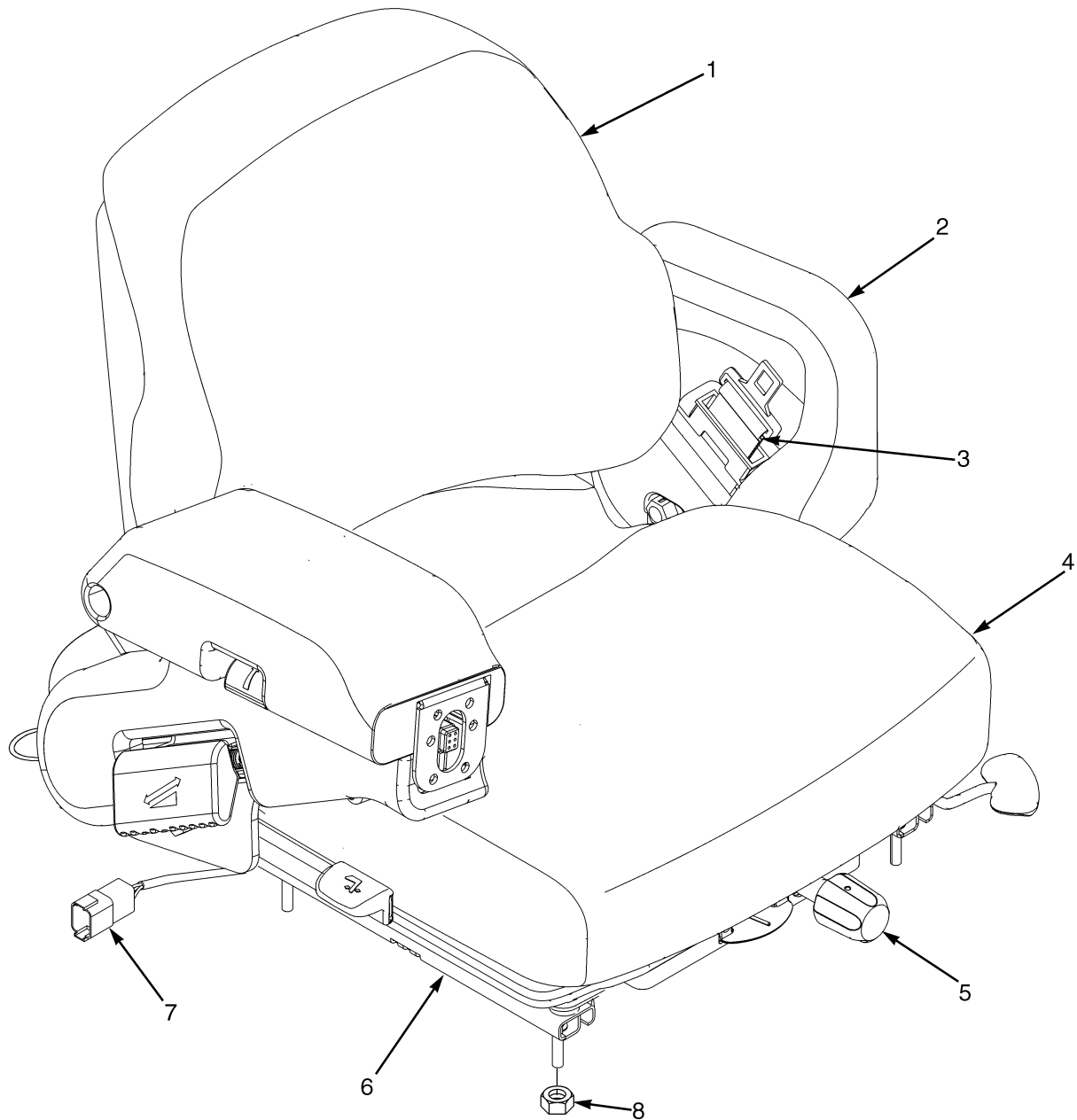


BP120292

**NON SUSPENSION SEAT
WITH HIP RESTRAINT**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1593433	Seat-Non Suspension (Vinyl)	1
	c 2102122	Seat-Non Suspension (Vinyl) (Alternate Part)	1
	b 1593434	Seat-Non Suspension (Cloth)	1
	c 2102125	Seat-Non Suspension (Cloth) (Alternate Part)	1
1	1563351	Kit-Seat Cushion (Vinyl)	1
1	1563222	Kit-Seat Cushion (Cloth)	1
1	1563215	Sensor (Operator Presence)	1
2	1563217	Hip Restraint (RH) (RH)	1
2	1563216	Hip Restraint (LH) (LH)	1
3	1598504	Kit-Seat Belt	1
4	b 191941	Nut	4
4	c 302400	Nut (Alternate Part)	4
4	ac 1677286	Stud (Alternate Part)	4
5	b 1459173	Kit-Seat Rail	1
5	c 1690996	Kit-Seat Rail (Alternate Part)	1
6	1591652	Wire Harness	1
7	1500901	Clip	1
8	296149	Capscrew	1
9	1500912	Clip	1
10	1537551	Nut	1

FOOTNOTES:**a** Not Illustrated**c** PENDING PER ECN 105255 →**b** → PENDING PER ECN 105255

**FULL SUSPENSION SEAT (FIGURE 1-23)
WITH AND WITHOUT ELECTRONIC CONTROLS**

BP120127

FULL SUSPENSION SEAT WITH AND WITHOUT ELECTRONIC CONTROLS

KEY:

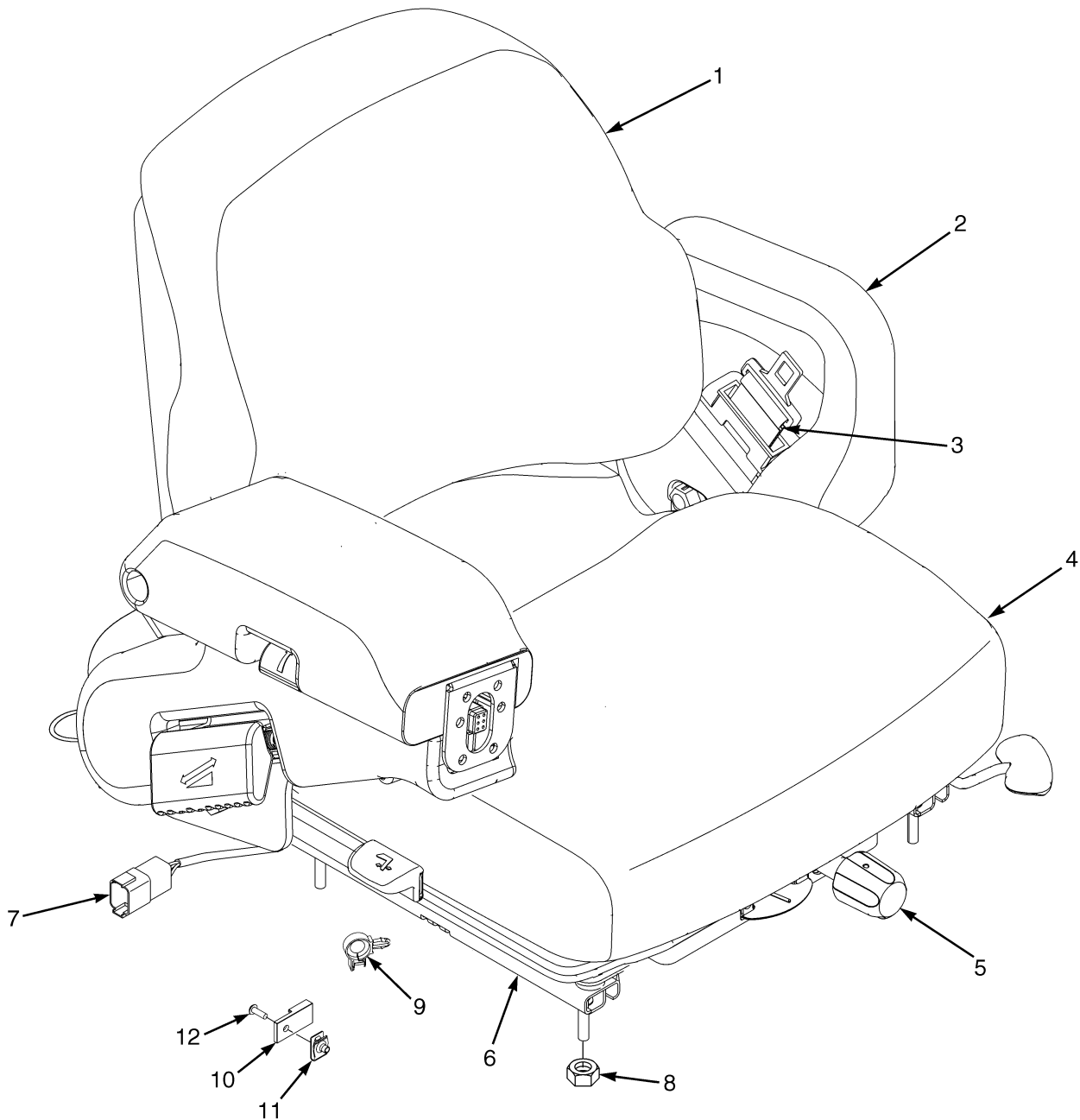
- A:** Full Suspension (Vinyl)
B: Full Suspension (Cloth)
C: Full Suspension (Vinyl with Electronic Control Arm)
D: Full Suspension (Cloth with Electronic Control Arm)

ITEM	PART NO.	DESCRIPTION	QTY			
			A	B	C	D
	1593425	Seat-Full Suspension (Vinyl)	1	..	..	..
	1593426	Seat-Full Suspension (Cloth)	..	1	..	..
	2084981	Seat-Full Suspension (Vinyl)	..	..	1	..
	2084982	Seat-Full Suspension (Cloth)	..	..	..	1
1	1470152	Seat Cushion (Back Cushion, Vinyl) (Vinyl)	1	..	1	..
1	1470153	Seat Cushion (Back Cushion, Cloth) (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	1591652	Wire Harness	1	1	..	..
7	1654891	Wire Harness	..	..	1	1
8	191941	Nut	4	4	4	4
	a 1500901	Clip	..	..	1	1
	a 1500912	Clip	..	..	1	1
	a 1537551	Nut	..	..	1	1
	a 296149	Capscrew	..	..	1	1
	a 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	1	..	..
	a 1563210	Cap (Electronic Control Arm)	..	..	1	1
	a 1563211	Knob (Electronic Control Arm)	..	..	1	1
	a 1470155	Information Case (Kit)	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

FOOTNOTES:

a Not Illustrated

FULL SUSPENSION SWIVEL SEAT (FIGURE 1-24) WITH AND WITHOUT ELECTRONIC CONTROLS



BP120289

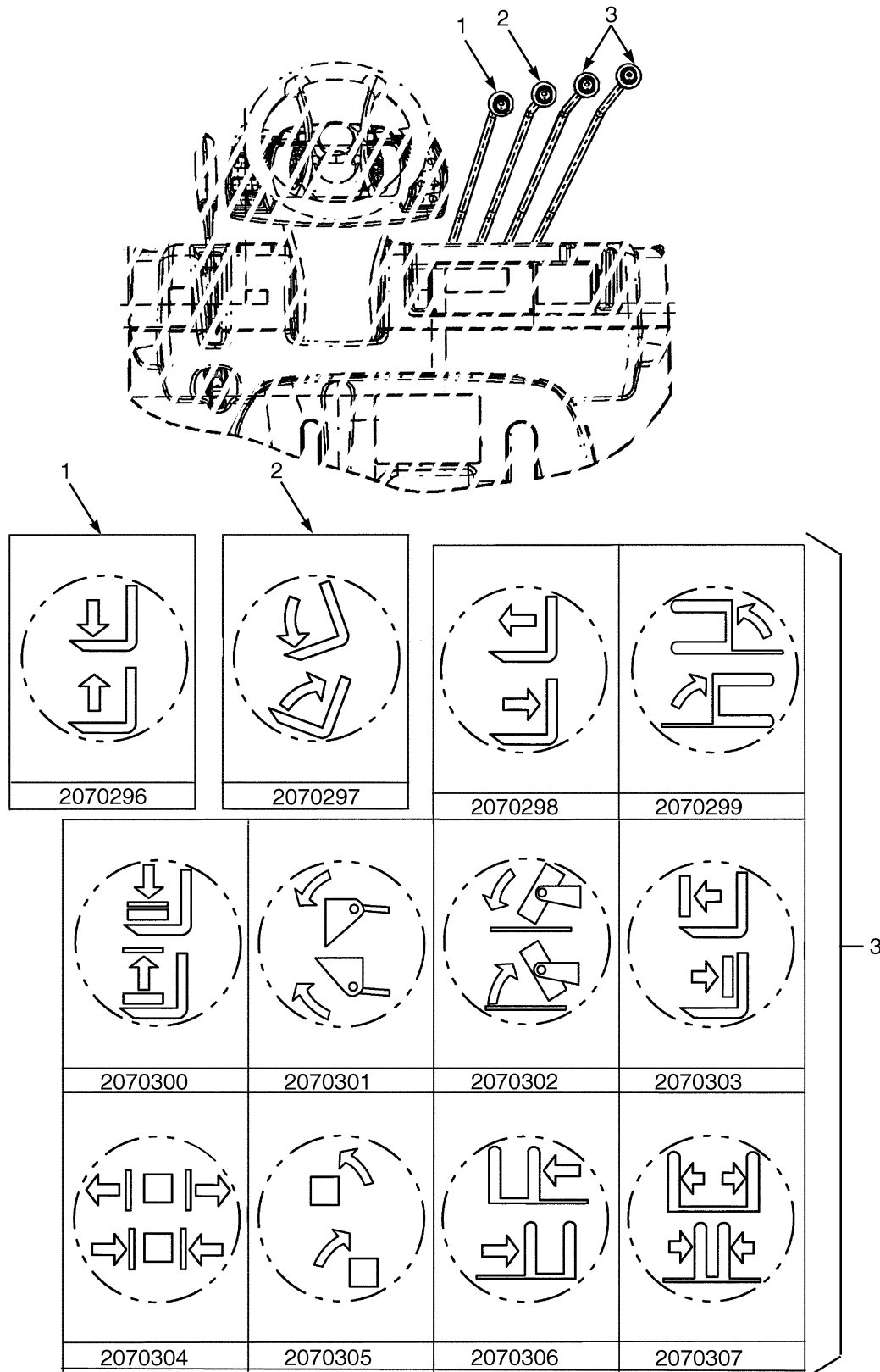
FULL SUSPENSION SWIVEL SEAT WITH AND WITHOUT ELECTRONIC CONTROLS

KEY:**A:** Full Suspension with Hip Restraints**B:** Full Suspension with Electronic Control Arm

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	1593425	Seat-Full Suspension (Vinyl)	1	..
	1593426	Seat-Full Suspension (Cloth)	1	..
	2084981	Seat-Full Suspension (Vinyl)	..	1
	2084982	Seat-Full Suspension (Cloth)	..	1
1	1470152	Seat Cushion (Back Cushion, Vinyl) (Vinyl)	1	1
1	1470153	Seat Cushion (Back Cushion, Cloth) (Cloth)	1	1
2	1470157	Hip Restraint (LH)	1	1
2	1470156	Hip Restraint (RH)	1	..
3	1598504	Kit-Seat Belt	1	1
4	1563207	Seat Cushion (Vinyl)	1	1
4	1566453	Seat Cushion (Cloth)	1	1
4	1563208	Sensor (Operator Presence)	1	1
5	1470163	Kit-Weight Adjuster	1	1
5	1584631	Knob	1	1
5	1600126	Handle	1	1
6	1470161	Kit-Seat Rail	1	1
7	1591652	Wire Harness	1	..
7	1654891	Wire Harness	..	1
8	191941	Nut	4	4
9	1500901	Clip	..	1
10	1500912	Clip	..	1
11	1537551	Nut	..	1
12	296149	Capscrew	..	1
	a 1483828	Kit-Gas Spring (Mounted to the rear of the seat)	1	1
	a 1647532	Foam	..	1
	a 1563211	Knob (Electronic Control Arm)	..	1
	a 1470155	Information Case (Kit)	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

FOOTNOTES:**a** Not Illustrated

CONTROL LEVER LABELS (FIGURE 1-25) MANUAL HYDRAULICS



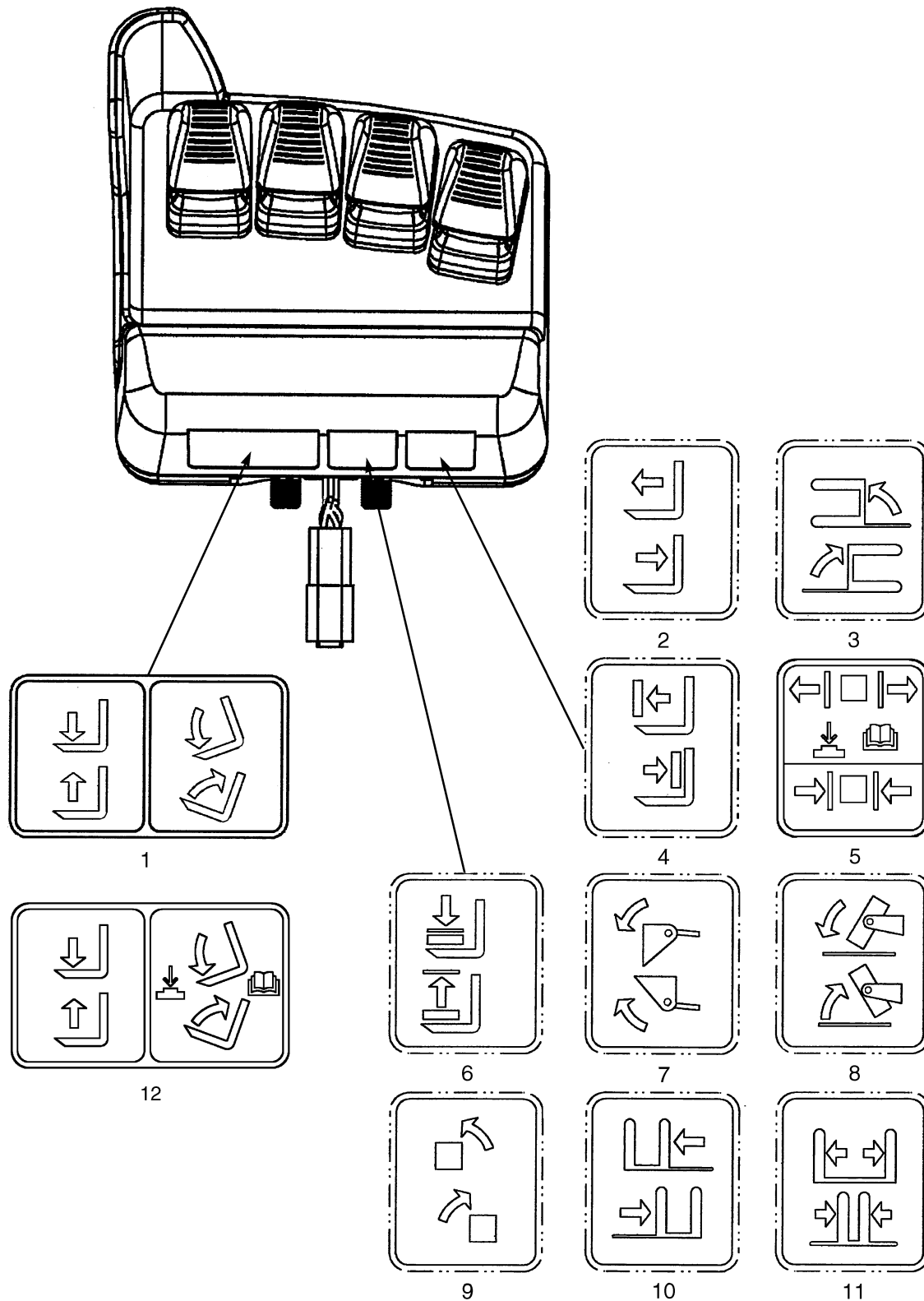
HP120829

**CONTROL LEVER LABELS
MANUAL HYDRAULICS**

ITEM	PART NO.	DESCRIPTION	QTY
1	2070296	Lens (Lift)	1
2	2070297	Lens (Tilt)	1
3	2070298	Lens (Reach)	1
3	2070299	Lens (Swing)	1
3	2070300	Lens (Load Stabilizer)	1
3	2070301	Lens (Scoop)	1
3	2070302	Lens (Upender)	1
3	2070303	Lens (Push/Pull)	1
3	2070304	Lens (Clamp)	1
3	2070305	Lens (Rotate)	1
3	2070306	Lens (Side-Shift)	1
3	2070307	Lens (Fork Spread)	1
	a 2070655	Lens (Blank)	1

FOOTNOTES:**a** Not Illustrated

ELECTRONIC MINI LEVER LABELS (FIGURE 1-26) SINGLE FUNCTION

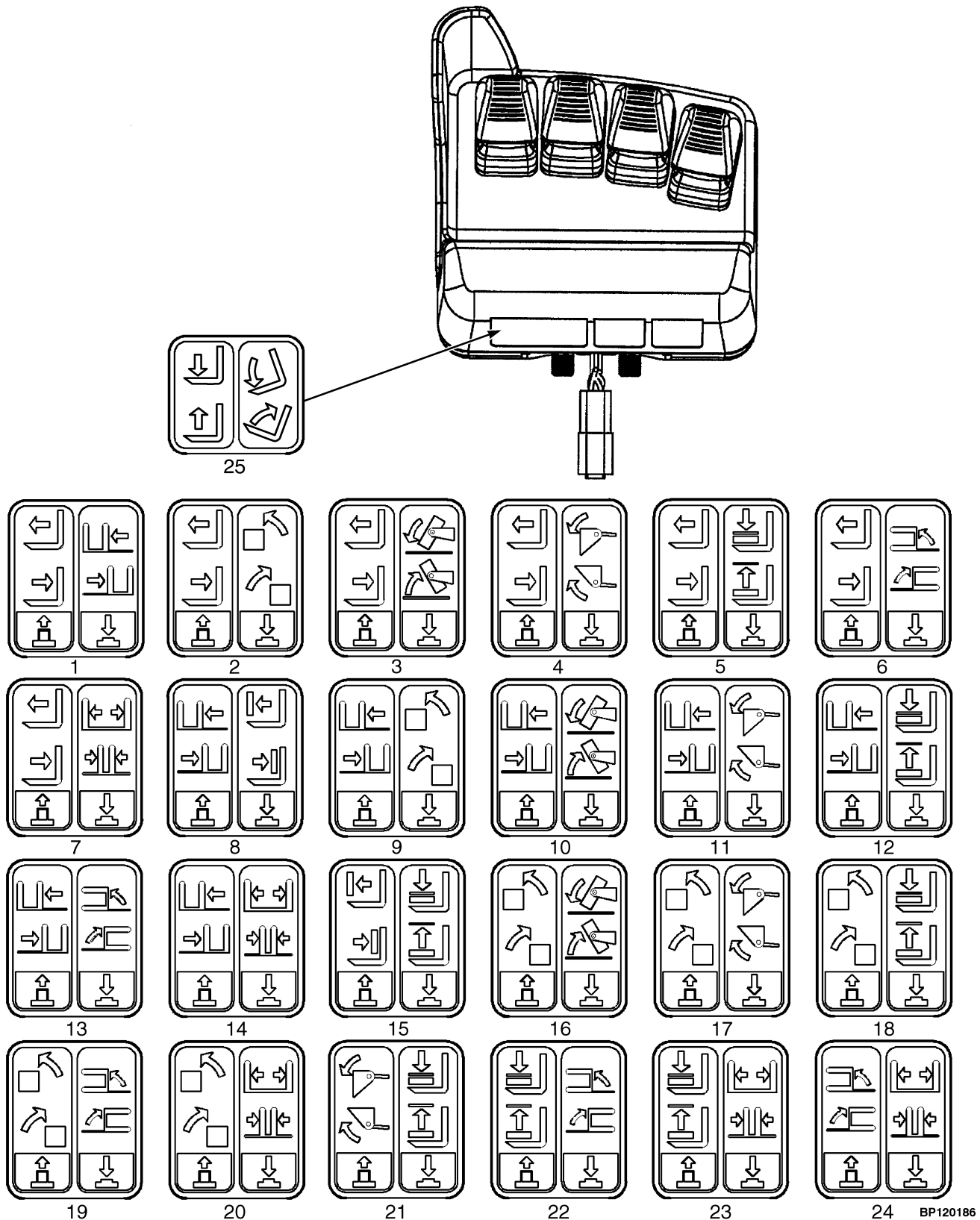


BP120199

**ELECTRONIC MINI LEVER LABELS
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

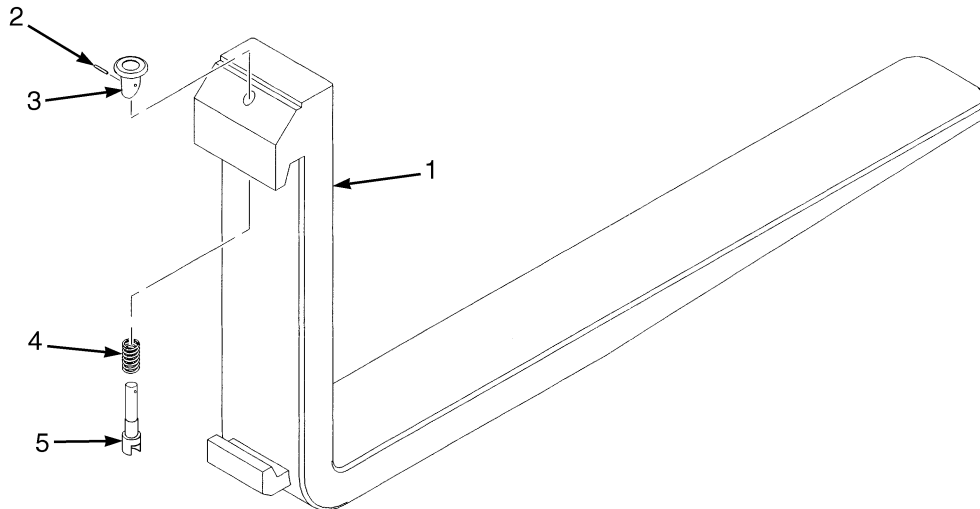
ELECTRONIC MINI LEVER LABELS (FIGURE 1-27) DUAL FUNCTION



**ELECTRONIC MINI LEVER LABELS
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

FORKS (FIGURE 1-28) STANDARD TAPER — CLASS IV

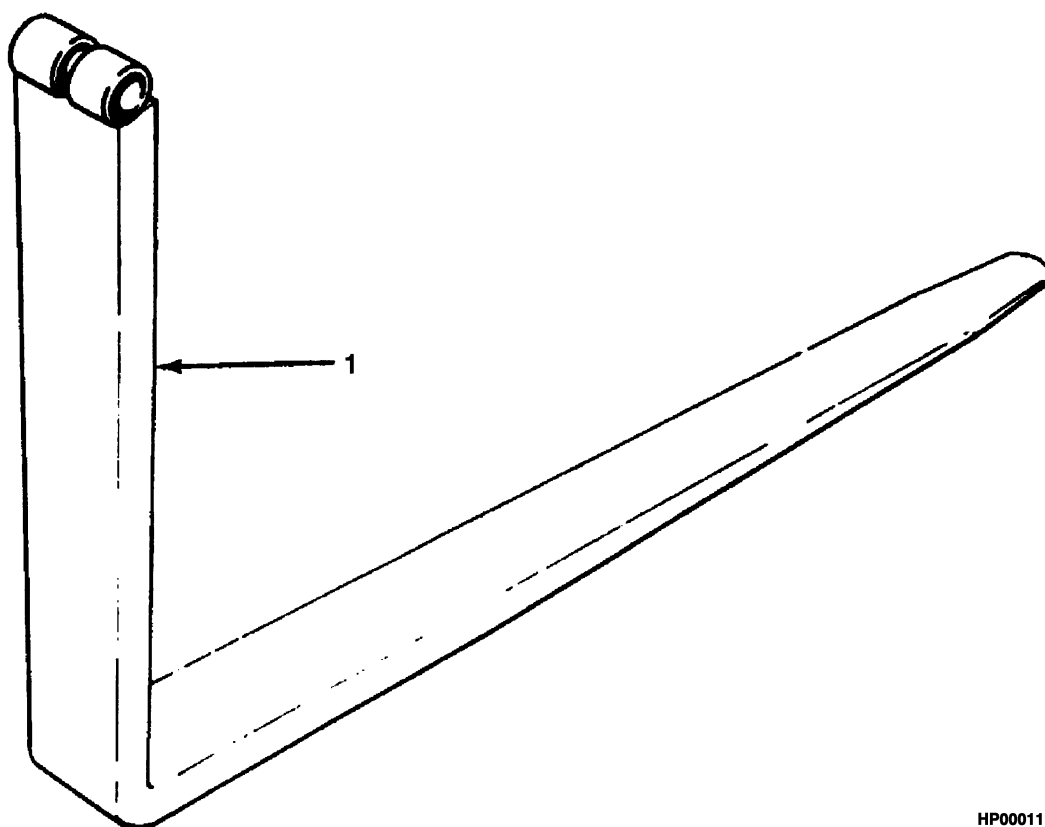


BP000187

ITEM	PART NO.	DESCRIPTION	QTY
1	1333001	Fork (48 in.)	2
1	1333002	Fork (54 in.)	2
1	1333003	Fork (60 in.)	2
1	1333004	Fork (72 in.)	2
1	1647909	Fork (96 in.)	2
2	1523734	Pin	1
3	1523732	Knob	1
4	1500786	Spring	1
5	1523741	Pin	1
	1523742	Kit-Latch (Class IV)	2

NOTES

[illegible]

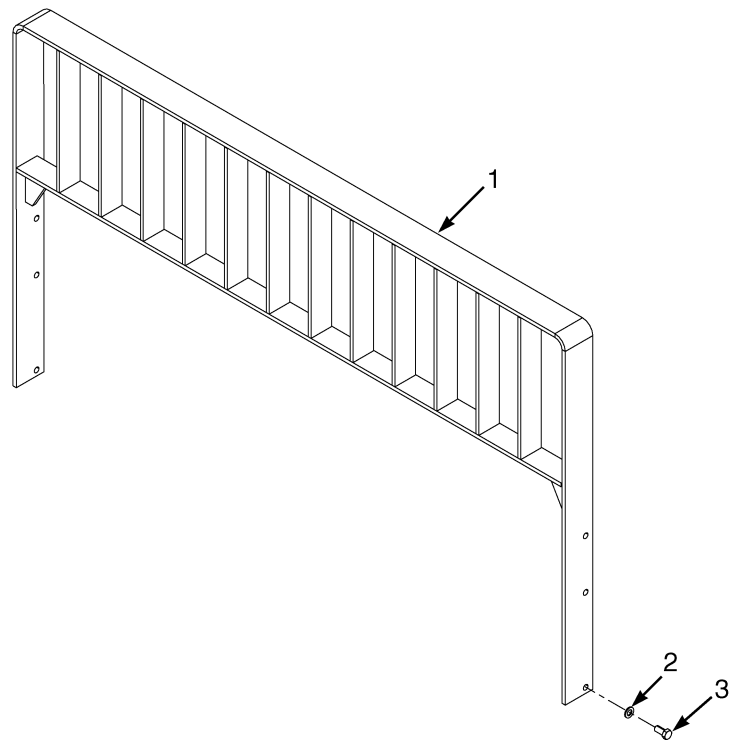
FORKS (FIGURE 1-29)
PIN TYPE

HP000111

FORKS
PIN TYPE

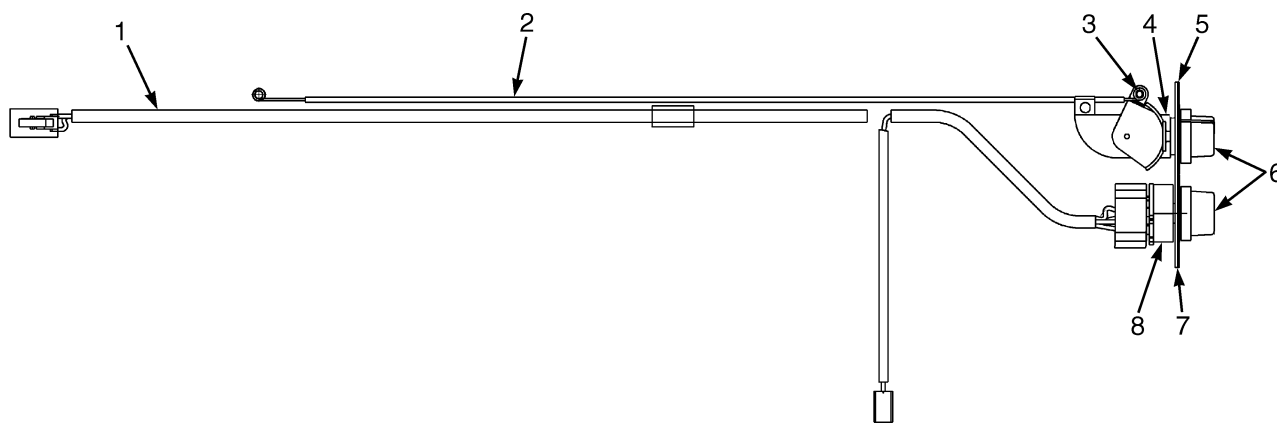
ITEM	PART NO.	DESCRIPTION	QTY
1	1330787	Fork (48.15 in.)	2
1	1330791	Fork (54.20 in.)	2
1	1330792	Fork (60.12 in.)	2
1	1330793	Fork (72.2 in.)	2
1	1330794	Fork (96.3 in.)	2

LOAD BACKREST EXTENSION (FIGURE 1-30)



BP120324

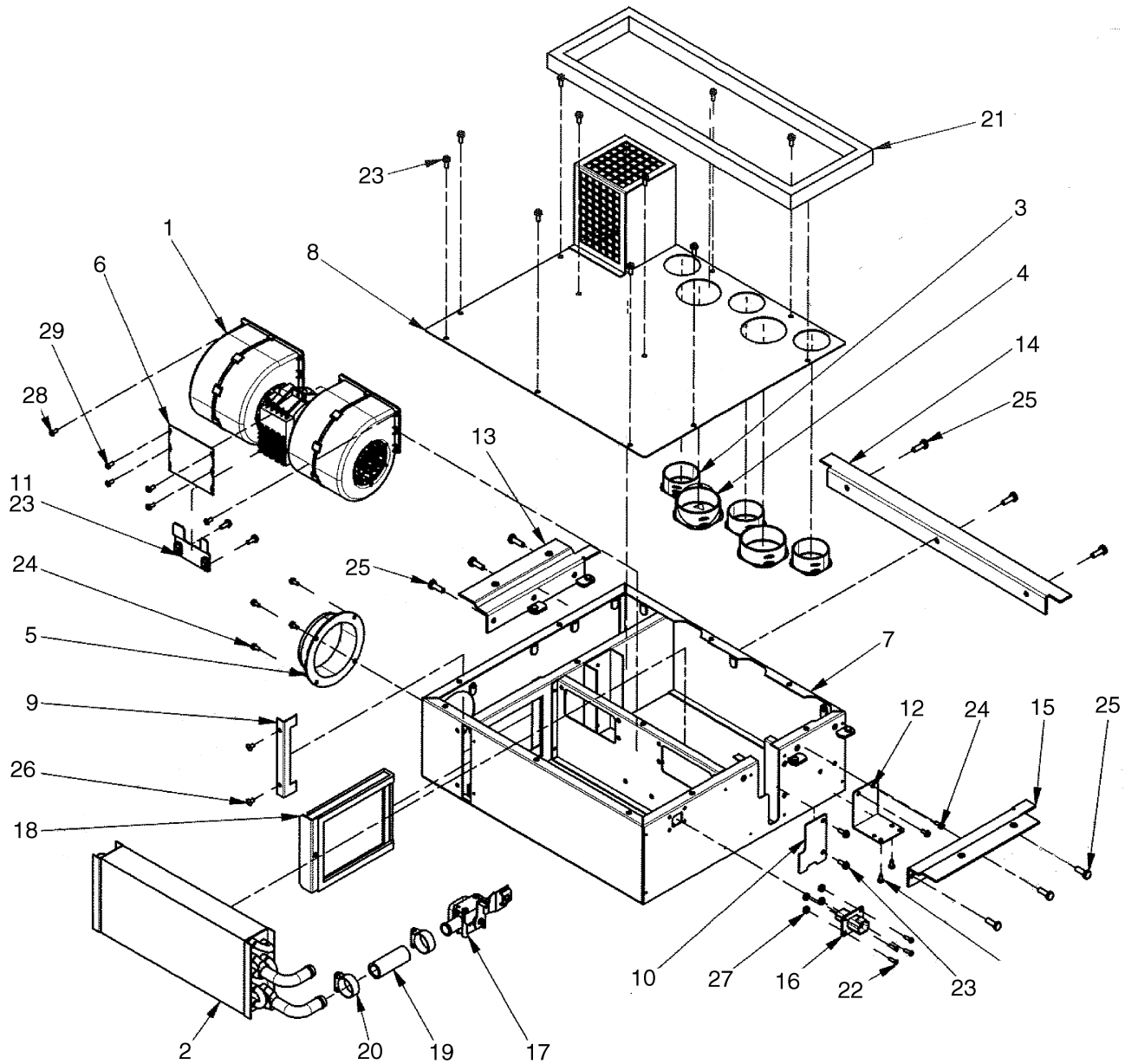
ITEM	PART NO.	DESCRIPTION	QTY
1	115112W	Load Backrest (78 in.) (Pin Type)	1
1	1652028	Load Backrest (78 in.) (Hook Type)	1
2	1581854	Washer	6
3	1581833	Capscrew	6

HEATER CONTROL (FIGURE 1-31)

BP120564

ITEM	PART NO.	DESCRIPTION	QTY
	1677808	Heater Control	1
1	1690068	Push-Pull Cable	1
2	1690067	Wire Harness (Heater Control)	1
3	1487959	Switch (180 deg)	1
4	1690070	Shim	2
5	1690069	Label	1
6	1487957	Knob	2
7	1690066	Mounting Plate	1
8	1487956	Switch (with Nut)	1

HEATER (FIGURE 1-32)



BP120551

HEATER

ITEM	PART NO.	DESCRIPTION	QTY
	1629280	Heater	1
1	1661971	Heater (Blower)	1
2	1661972	Heater (Coil)	1
3	1661973	Adapter (2.0 inch)	1
4	1661974	Adapter (2.5 inch)	1
5	1661975	Adapter (3.5 inch)	1
6	1661976	Heater (Blower Plate)	1
7		Casing	1
8	1661978	Cover	1
9	1661979	Bracket	1
10	1661980	Cover	1
11	1661981	Bracket	1
12	1661982	Bracket	1
13	1661983	Flange	1
14	1661984	Flange	1
15	1661985	Flange	1
16	1661986	Wire Harness	1
17	1661987	Valve	1
18	1661988	Filter	1
19	1487951	Hose (Heater)	1
20	1661989	Clamp	1
21	1661990	Gasket	1
22	220289	Screw	4
23	1662007	Screw	15
24	1662008	Screw	6
25	221420	Capscrew	9
26	187727	Rivet	2
27	15049	Nut	4
28	1661991	Screw (Plastic)	2
29	227096	Screw	6

[illegible]

2

ENGINE ASSEMBLY

SECTION 2 ENGINE ASSEMBLY

DESCRIPTION	PAGE
AIR HEATER STARTING AID	
CUMMINS 4.5L	
DIESEL (→ S/N H006V02265F EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0224)	2-50
CUMMINS 4.5L	
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CAMSHAFT AND OIL PAN	
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COIL ASSEMBLY	
GM 4.3L GASOLINE AND LPG	2-45
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GM 4.3L GASOLINE AND LPG - CUMMINS 4.5L DIESEL (S/N H006V01945E →)	2-10
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GM 4.3L GASOLINE AND LPG	2-36
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GM 4.3L GASOLINE AND LPG	2-34
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CAMSHAFT - CUMMINS 4.5L	2-63
CRANKCASE BREATHER - CUMMINS 4.5L	2-68
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CYLINDER HEAD - CUMMINS 4.5L	2-74
FAN DRIVE AND MOUNTING - CUMMINS 4.5L	2-58
INTAKE AND EXHAUST MANIFOLDS - CUMMINS 4.5L	2-72
LUBRICATION SYSTEM - CUMMINS 4.5L	2-66
OIL PAN - CUMMINS 4.5L DIESEL	2-48
OIL PUMP AND FRONT GEAR COVER - CUMMINS 4.5L	2-64
PISTON AND CONNECTING ROD - CUMMINS 4.5L	2-84
REAR GEAR HOUSING - CUMMINS	
4.5L (S/N H006V02266F → INC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223)	2-54
REAR GEAR HOUSING - CUMMINS 4.5L	
DIESEL (→ S/N H006V02265F EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0022)	2-56
REAR GEAR TRAIN ACCESSORY MOUNTING COVER - CUMMINS 4.5L	2-71
ROCKER LEVERS - CUMMINS 4.5L	2-78
THERMOSTAT - CUMMINS 4.5L	2-59
VALVE TAPPETS - CUMMINS 4.5L	2-62
VIBRATION DAMPER - CUMMINS 4.5L	2-70
WATER PUMP AND CONNECTIONS - CUMMINS 4.5L	2-82
ENGINE MOUNTING	
CUMMINS 4.5L DIESEL	2-14
GM 4.3L GASOLINE AND LPG	2-12
EXHAUST SYSTEM	
CUMMINS 4.5L DIESEL	2-6
GM 4.3L GASOLINE AND LPG	2-4

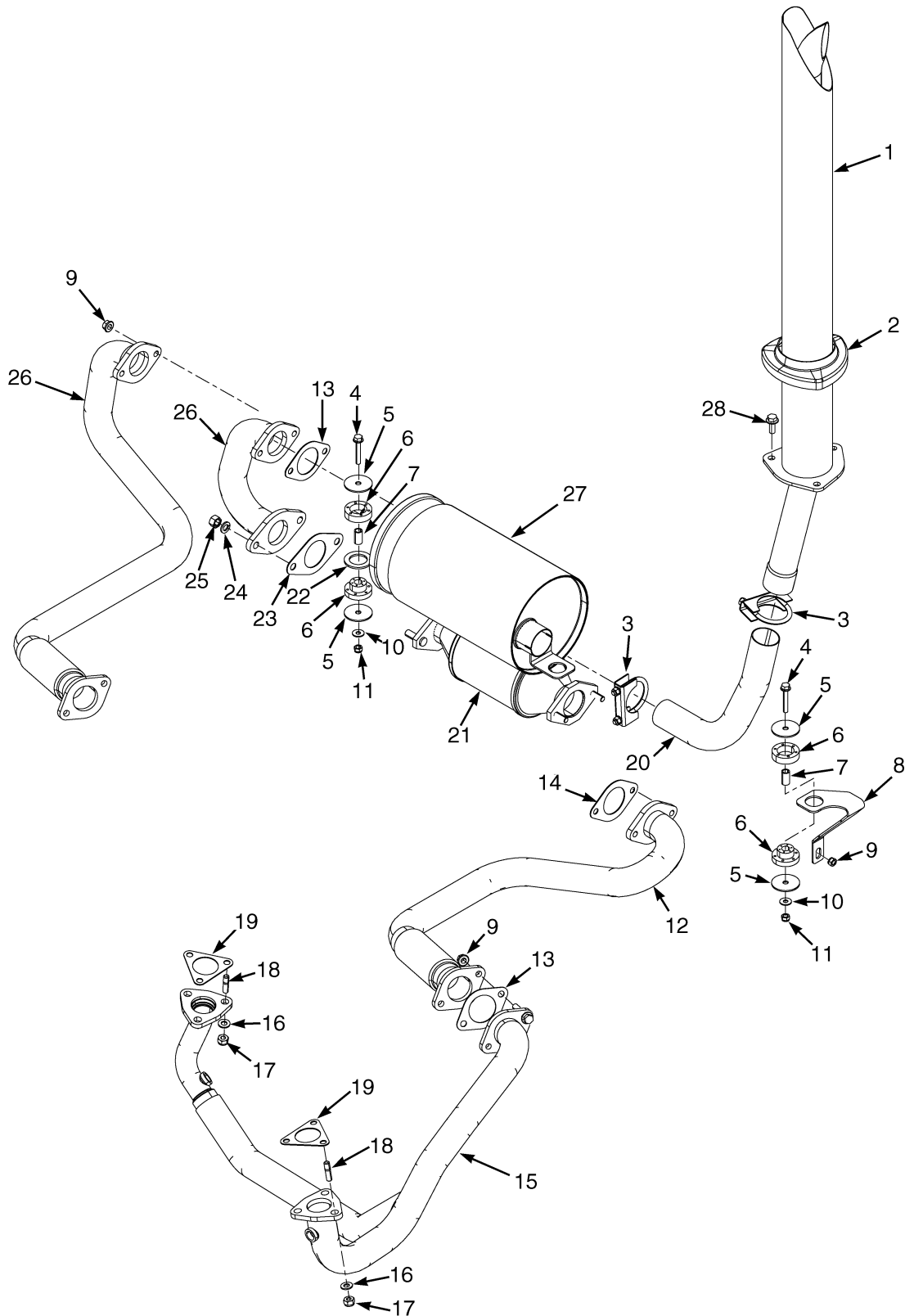
**SECTION 2
ENGINE ASSEMBLY**

DESCRIPTION	PAGE
FAN ASSEMBLY	
CUMMINS 4.5L DIESEL	2-20
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NOTES

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EXHAUST SYSTEM (FIGURE 2-1) GM 4.3L GASOLINE AND LPG



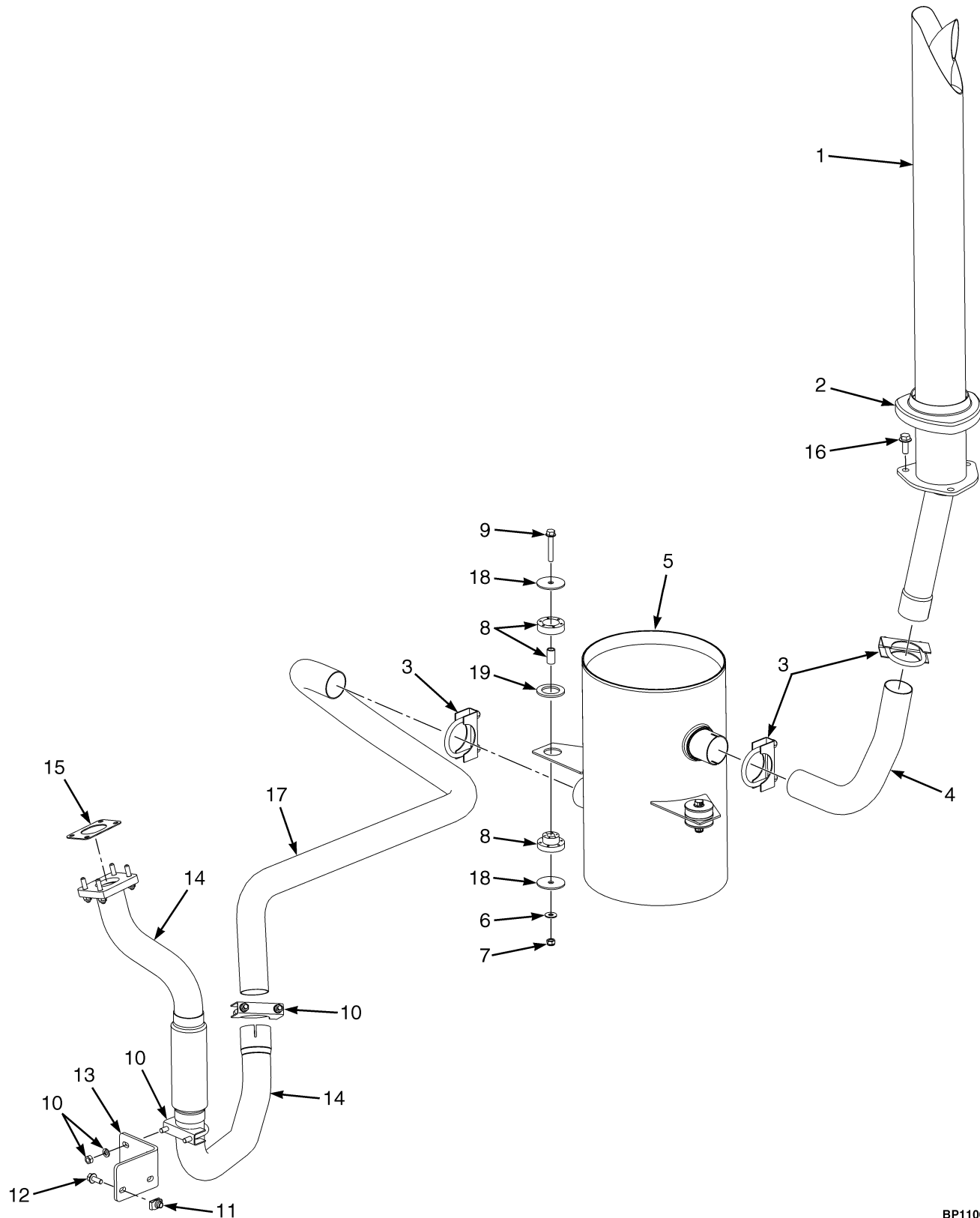
BP110048

EXHAUST SYSTEM
GM 4.3L GASOLINE AND LPG**KEY:****A: With Catalytic Converter****B: Without Catalytic Converter**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1611882	Tail Pipe	1	1
2	1351178	Cover	1	1
3	30370	Clamp	2	2
4	1510115	Capscrew	2	2
5	1528938	Washer	4	4
6	1528930	Mount	2	2
7	1649471	Spacer	2	2
8	1616249	Bracket	1	..
9	1460477	Nut	6	4
10	320158	Washer	2	2
11	1582222	Locknut	2	2
12	1657458	Exhaust Pipe	1	..
13	1402189	Gasket	2	2
14	1580027	Gasket	1	..
15	1657456	Exhaust Pipe	1	1
15	1683840	Exhaust Pipe (Alternate Part)	1	1
16	320159	Washer	6	6
17	1580136	Locknut	6	6
18	1580092	Stud	6	6
19	1580029	Gasket	2	2
20	1611885	Exhaust Pipe	1	1
21	a 2071327	Catalytic Converter (LPG)	1	..
21	ab 2098586	Catalytic Converter	1	..
22	1532585	Washer	1	2
23	1580028	Gasket	1	..
24	292683	Lockwasher	2	..
25	1469405	Nut	2	..
26	1639679	Exhaust Pipe	1	..
26	1657455	Exhaust Pipe	..	1
27	2078353	Muffler (Crimped)	1	1
27	c 2072202	Muffler (Welded)	1	1
28	1510117	Capscrew	3	3

FOOTNOTES:**a** For 2007 Engine Series - Gas**c** Optional**b** For 2008 Engine Series Gas + LPG

EXHAUST SYSTEM (FIGURE 2-2) CUMMINS 4.5L DIESEL



BP110047

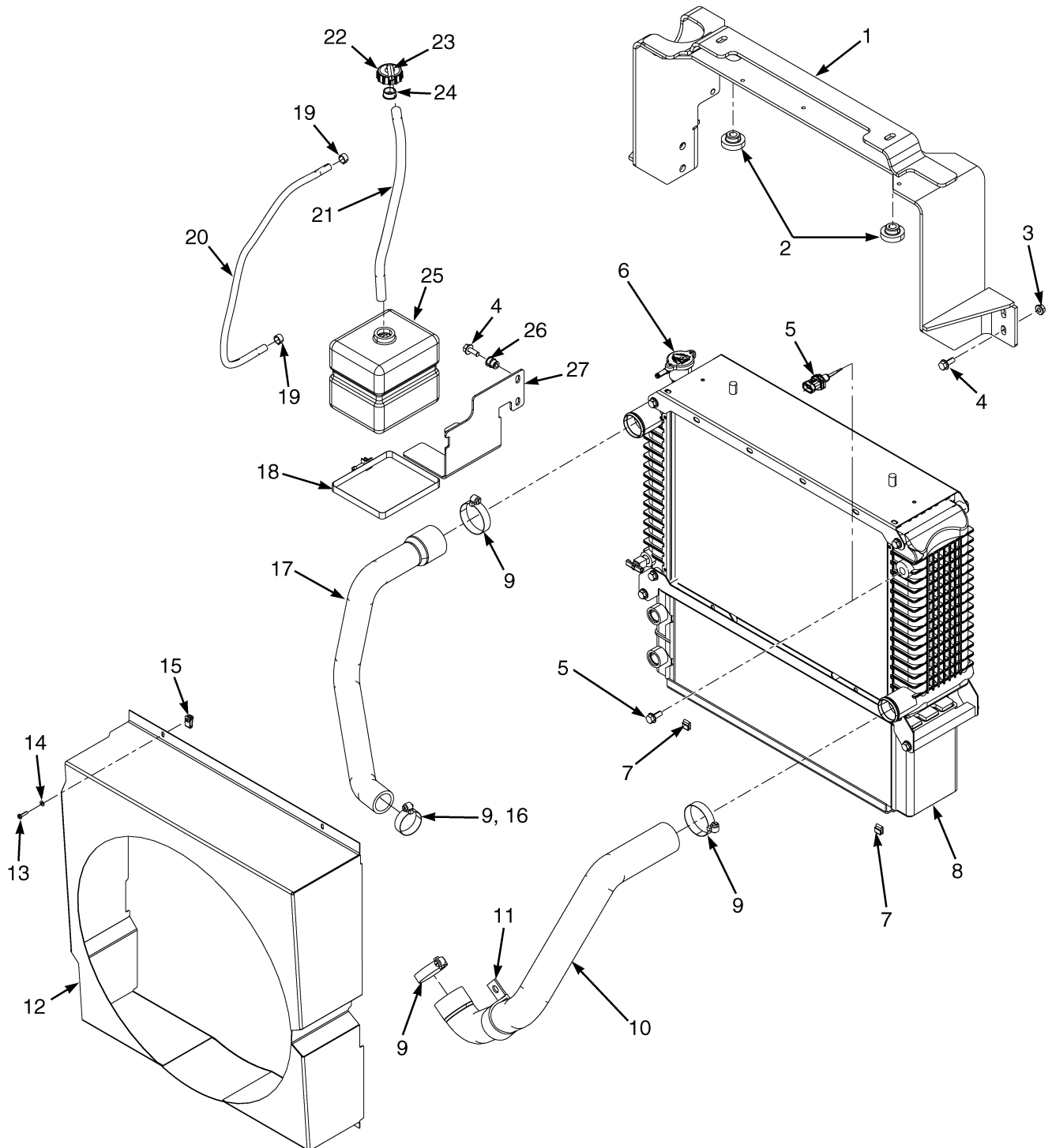
**EXHAUST SYSTEM
CUMMINS 4.5L DIESEL****KEY:****A: With Catalytic Converter****B: Without Catalytic Converter**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1611882	Tail Pipe	1	1
2	1351178	Cover	1	1
3	30370	Clamp	4	4
4	1612830	Exhaust Pipe	1	1
5	b 2092343	Muffler	..	1
5	2092344	Muffler	..	1
5	2082321	Catalytic Converter (2-Way Catalytic)	1	..
6	1582222	Locknut	6	6
7	320158	Washer	2	2
8	1655234	Isolator	2	2
9	1510115	Capscrew	2	2
10	30368	Clamp	1	1
11	1480237	Nut	2	2
12	1527880	Capscrew	2	2
13	1669049	Hanger	1	1
14	1668334	Exhaust Pipe	1	1
15	1582063	Gasket	1	1
16	1510117	Capscrew	3	3
17	1678063	Exhaust Pipe	1	1
18	1528938	Washer	4	4
19	1532585	Washer	2	2
	a 1597187	Stud	4	4

FOOTNOTES:**a** Not Illustrated**b** UL Application DS

COOLING SYSTEM (FIGURE 2-3)

GM 4.3L GASOLINE AND LPG — CUMMINS 4.5L DIESEL (→ S/N H006V01944E)



BP060050

COOLING SYSTEM**GM 4.3L GASOLINE AND LPG – CUMMINS 4.5L DIESEL (→ S/N H006V01944E)**

ITEM	PART NO.	DESCRIPTION	QTY
1	1603673	Support	1
2	1529787	Isolator	4
3	1502543	Nut (Flange)	4
4	1527880	Capscrew	6
5	1531404	Sensor (Low Coolant Level)	1
5	c 14385	Fitting	1
6	1352140	Radiator Cap	1
7	1551663	Clip	2
8	2066322	Radiator (Assembly)	1
8	1623821	Radiator	1
8	1623819	Oil Cooler	1
9	b 119236	Clamp	3
9	a 119236	Clamp	4
10	a 2078106	Radiator Hose (Lower)	1
10	b 2096559	Radiator Hose (Lower)	1
11	176451	Clamp	1
12	a 1600415	Shroud	1
12	b 1600414	Shroud	1
13	302023	Screw	2
14	320154	Washer	2
15	1535257	Nut	2
16	b 176451	Clamp	1
17	b 2078103	Radiator Hose (Upper)	1
17	a 2078105	Radiator Hose (Upper)	1
18	340204	Strap	1
19	369815	Clamp	2
20	1302955	Hose	1
21	345455	Outlet	1
21	339735	Hose	1
22	345454	Cap	1
23	345453	Outlet (Reservoir)	1
24	336550	Bushing	1
25	344432	Reservoir	1
26	1530243	Insert	2
27	1608659	Bracket	1

FOOTNOTES:**a** Cummins 4.5L Diesel**c** Without Low Coolant Sensor**b** GM 4.3L Gasoline and LPG

This exploded view diagram illustrates the assembly of a refrigeration unit. The components are numbered as follows:

- 1**: Top mounting rail.
- 2**: Mounting pins for the rail.
- 3**: Side mounting pin.
- 4**: Side mounting bracket.
- 5**: Mounting pins for the condenser coils.
- 6**: Condenser coil assembly.
- 7**: Mounting pin for the condenser coils.
- 8**: Condenser coil housing.
- 9**: Mounting pins for the evaporator coils.
- 10**: Evaporator coil assembly.
- 11**: Mounting bracket for the evaporator coils.
- 12**: Evaporator coil housing.
- 13**: Mounting pin for the evaporator coils.
- 14**: Mounting pin for the evaporator coils.
- 15**: Mounting pin for the evaporator coils.
- 16**: Mounting pin for the evaporator coils.
- 17**: Evaporator coil assembly.
- 18**: Mounting pins for the evaporator coils.
- 19**: Mounting pin for the evaporator coils.
- 20**: Mounting pin for the evaporator coils.
- 21**: Evaporator coil assembly.

BP060051

COOLING SYSTEM**GM 4.3L GASOLINE AND LPG – CUMMINS 4.5L DIESEL (S/N H006V01945E →)**

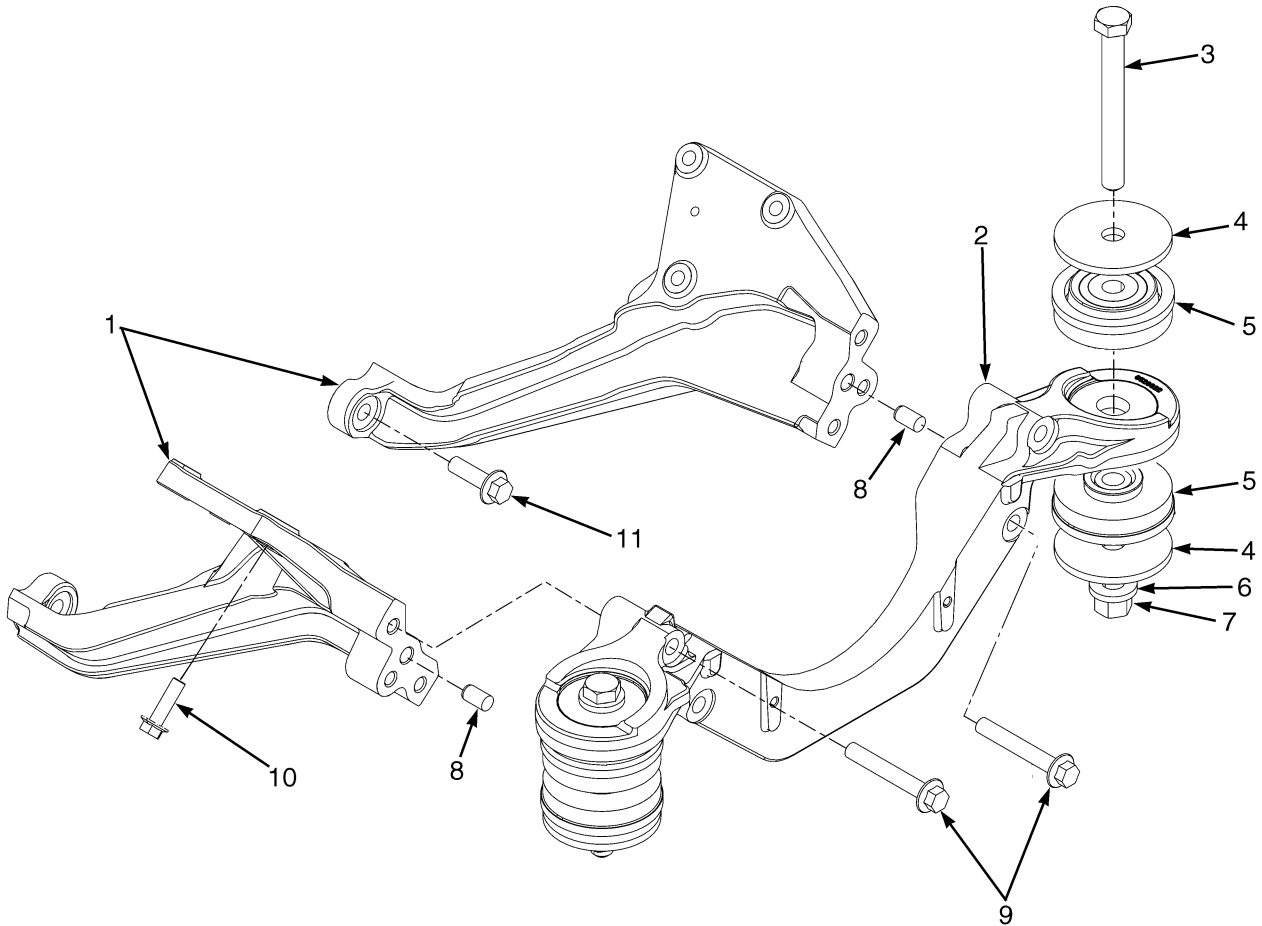
ITEM	PART NO.	DESCRIPTION	QTY
1	1668856	Support	1
2	1529787	Isolator	4
3	1502543	Nut (Flange)	4
4	1527880	Capscrew	6
5	1531404	Sensor (Low Coolant Level)	1
5	c 14385	Fitting	1
6	1352140	Radiator Cap	1
7	1551663	Clip	2
8	2066322	Radiator (Assembly)	1
8	1623821	Radiator	1
8	1623819	Oil Cooler	1
9	119236	Clamp	3
10	a 2078106	Radiator Hose (Lower)	1
10	b 2096559	Radiator Hose (Lower)	1
11	b 176451	Clamp	1
12	a 1600415	Shroud	1
12	b 1600414	Shroud	1
13	302023	Screw	2
14	320154	Washer	2
15	1535257	Nut	2
16	b 369804	Clamp	1
17	a 2078105	Radiator Hose (Upper)	1
17	b 2078103	Radiator Hose (Upper)	1
18	369815	Clamp	2
19	1302955	Hose	1
20		Outlet Assembly	1
20	336550	Bushing	1
20	345454	Cap	1
20	339735	Hose	1
21	1643342	Reservoir	1

FOOTNOTES:

- a** Cummins 4.5L Diesel
b GM 4.3L Gasoline and LPG

- c** Without Low Coolant Sensor

ENGINE MOUNTING (FIGURE 2-5) GM 4.3L GASOLINE AND LPG

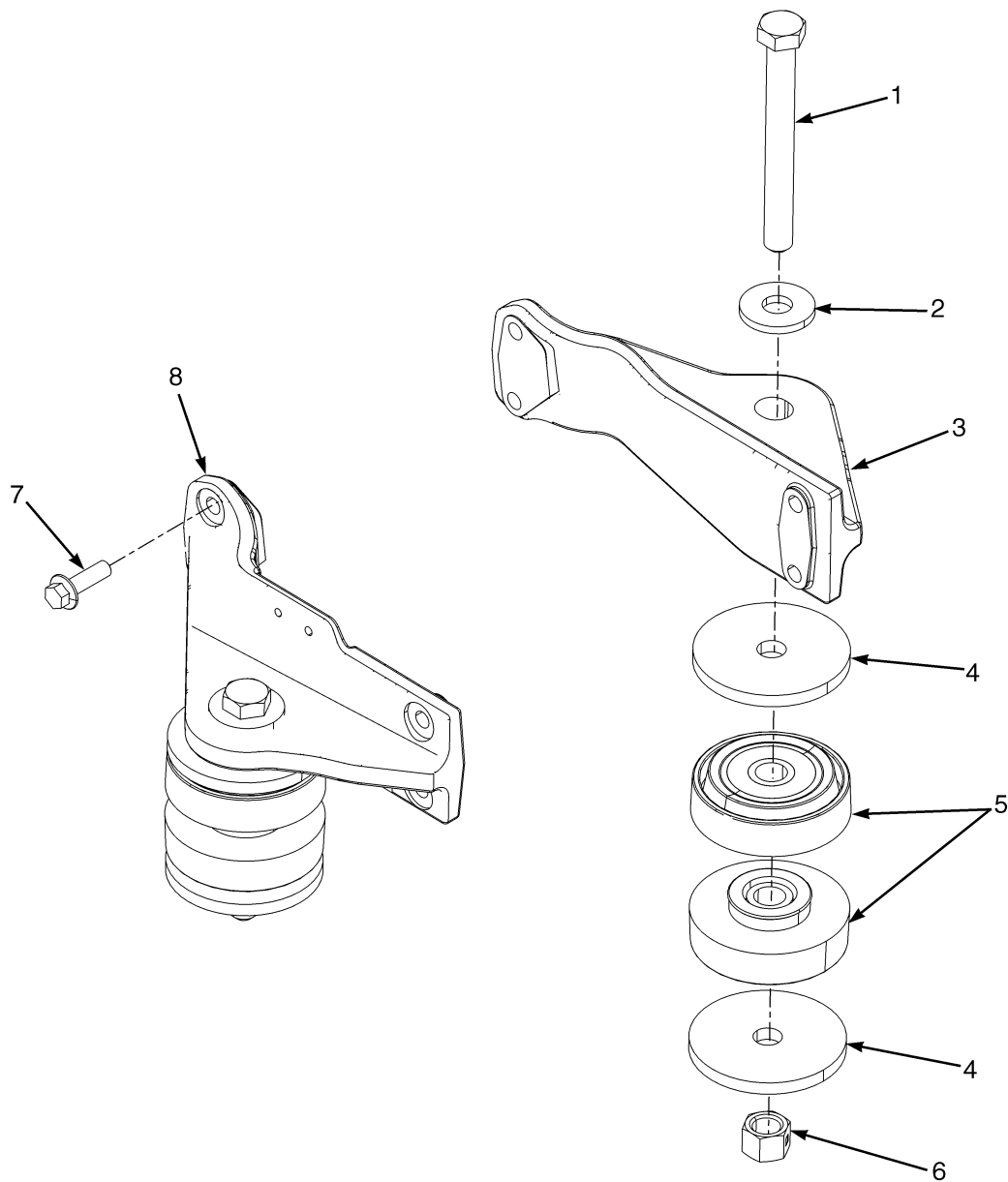


BP090325

ENGINE MOUNTING
GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	1590397	Mount (LH)	1
1	1590399	Mount (RH)	1
2	1667636	Rubber Mount (Crossmember)	1
3	293699	Capscrew	2
4	1557737	Washer	4
5	2069951	Isolator	4
6	1504075	Washer	2
7	1565453	Nut (Flange)	2
8	303150	Dowel	2
9	1591666	Capscrew	6
10	1565195	Capscrew	6
11	1566853	Capscrew	2

ENGINE MOUNTING (FIGURE 2-6) CUMMINS 4.5L DIESEL



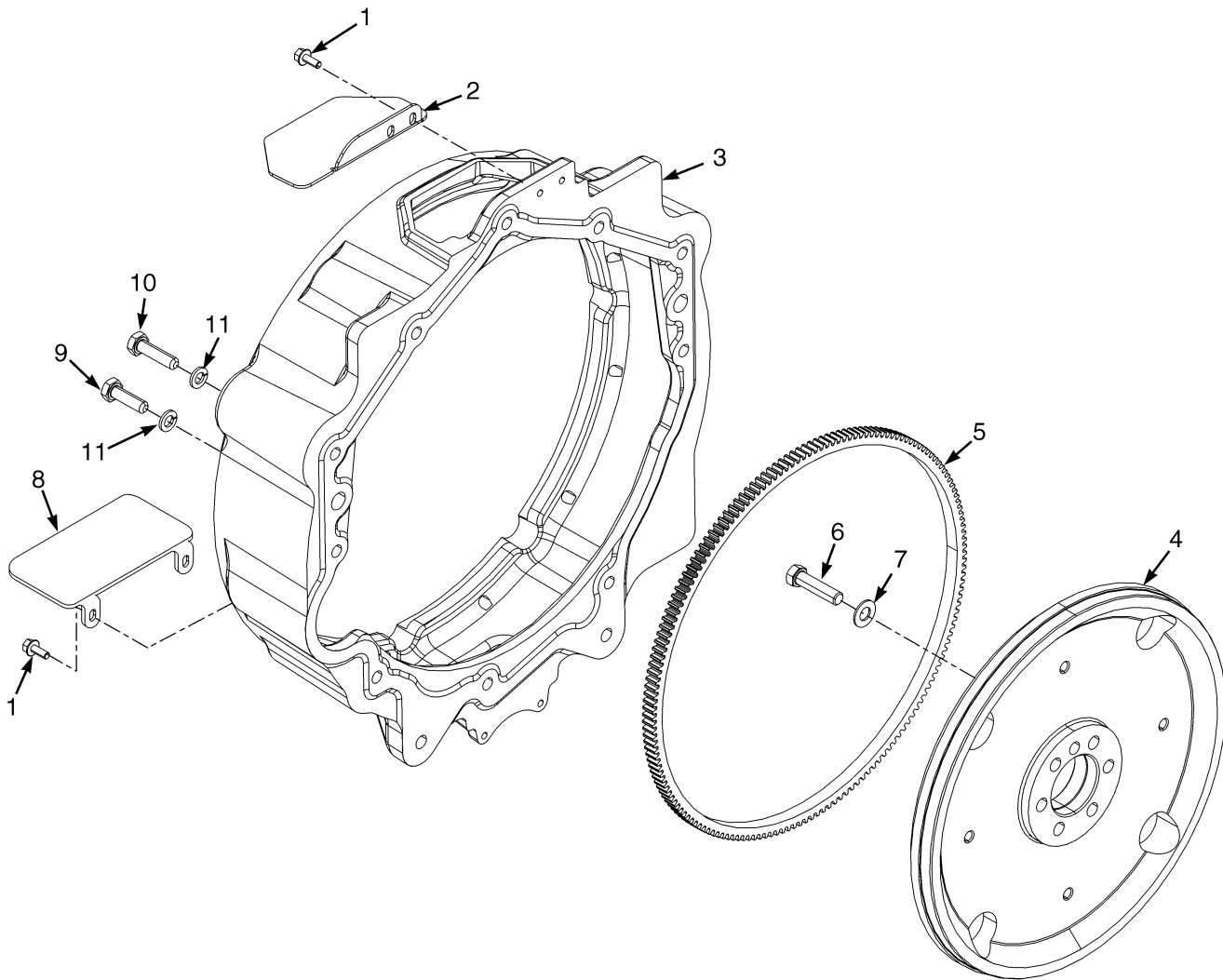
BP090285

ITEM	PART NO.	DESCRIPTION	QTY
1	293721	Capscrew	2
2	1605069	Washer	2
3	1501937	Mount (RH)	1
4	1597854	Washer	1
5	2076191	Isolator	4
6	1605068	Nut	2
7	1566853	Capscrew	8
8	1501936	Mount (LH)	1

NOTES

[illegible]

FLYWHEEL AND HOUSING (FIGURE 2-7) GM 4.3L GASOLINE AND LPG

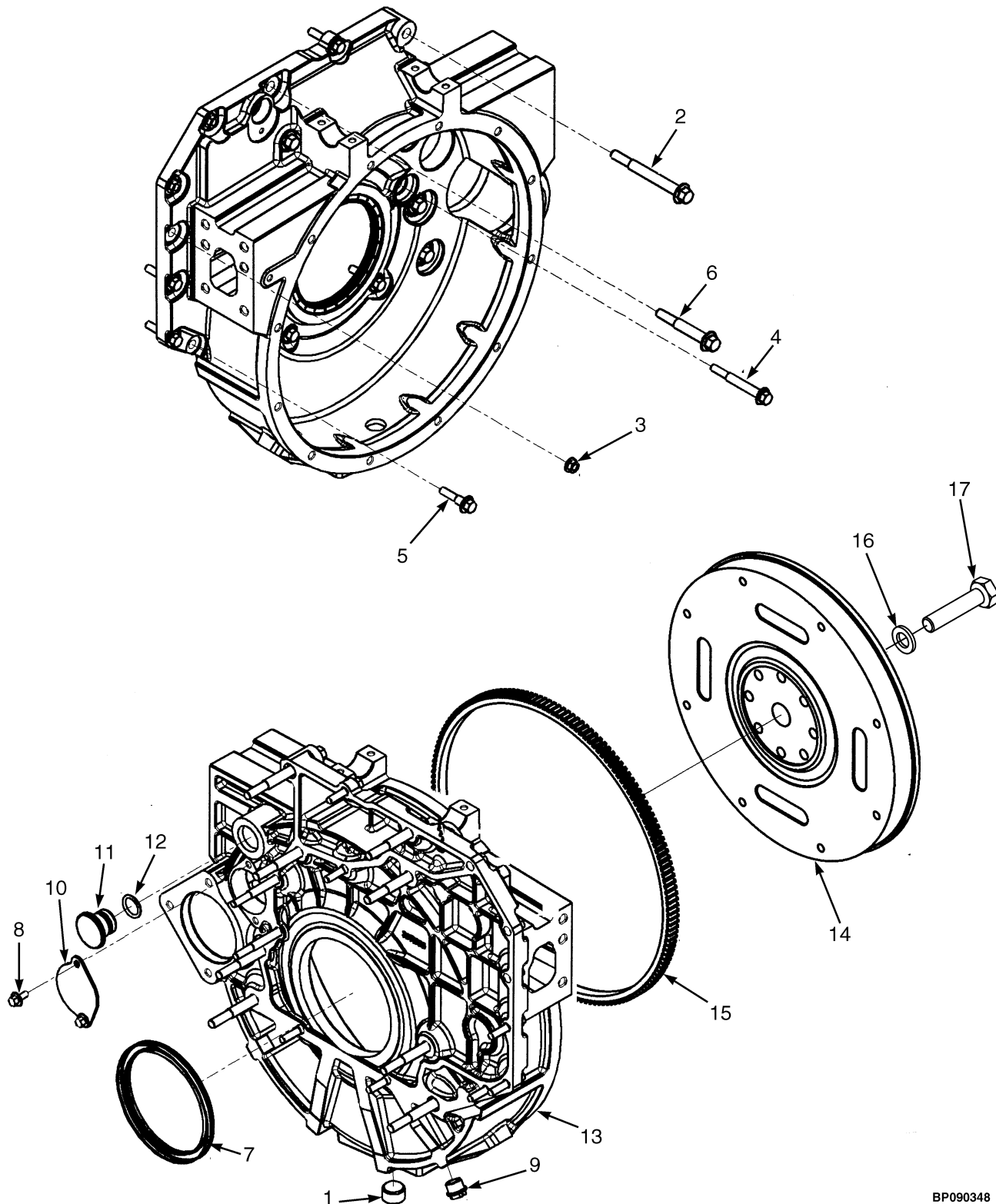


BP090324

**FLYWHEEL AND HOUSING
GM 4.3L GASOLINE AND LPG**

ITEM	PART NO.	DESCRIPTION	QTY
1	1527876	Capscrew	4
2	1602835	Cover	1
3	1594029	Housing	1
4	1636867	Flywheel	1
5	264749	Ring Gear	1
6	221539	Capscrew	6
7	221769	Washer	6
8	1602836	Cover Plate	1
9	1586629	Capscrew	12
10	292515	Capscrew	9
11	292682	Lockwasher	9

FLYWHEEL AND HOUSING (FIGURE 2-8) CUMMINS 4.5L DIESEL



BP090348

**FLYWHEEL AND HOUSING
CUMMINS 4.5L DIESEL**

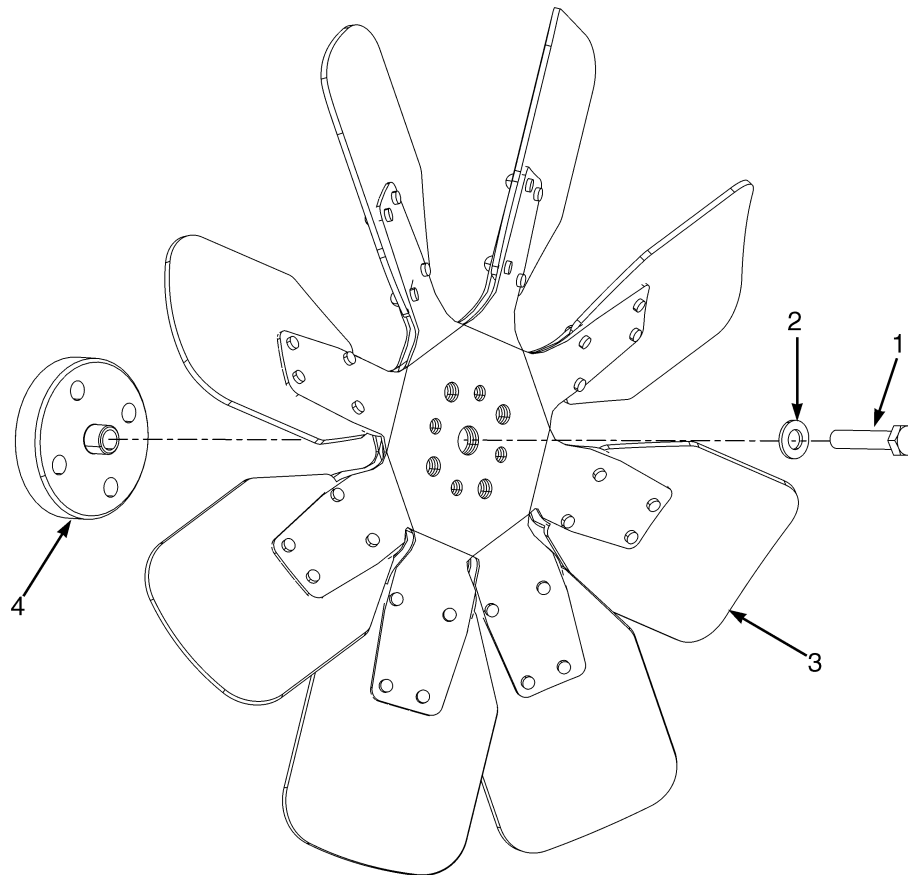
ITEM	PART NO.	DESCRIPTION	QTY
1	1512292	Plug	1
2	1635228	Capscrew	2
3	1513712	Nut	3
4	1521938	Capscrew	2
5	1635255	Capscrew	7
6	1511981	Capscrew	6
7	1564993	Oil Seal	1
8	1511970	Capscrew	1
9	1512046	Plug	2
10	1635256	Plate	1
11	1512047	Fitting	1
12	1512048	O-Ring	1
13	a 1635302	Flywheel Housing	1
13	b 1661089	Flywheel	1
14	1639724	Flywheel	1
15	1639725	Ring Gear	1
16	1512107	Washer	8
17	1512106	Capscrew	8
	1564992	Kit-Seal (Crankshaft)	1
	1635452	Flywheel Housing	1

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0224

FAN ASSEMBLY (FIGURE 2-9) CUMMINS 4.5L DIESEL



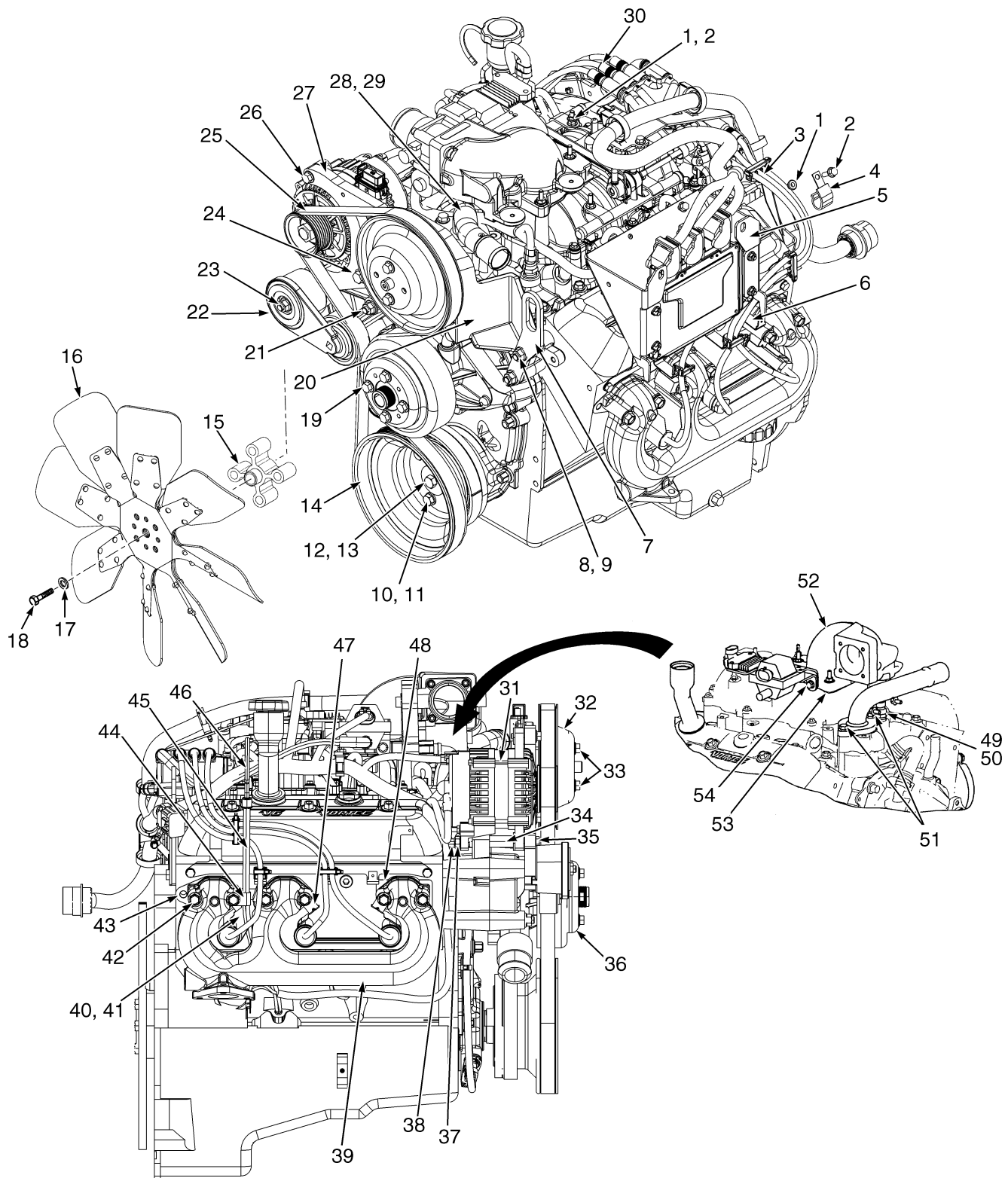
BP090286

ITEM	PART NO.	DESCRIPTION	QTY
1	293633	Capscrew	4
2	296420	Washer	4
3	2085641	Fan	1
4	1583743	Spacer	1

NOTES

[illegible]

ASSEMBLED ENGINE (FIGURE 2-10) GM 4.3L GASOLINE AND LPG — SHEET 1 OF 3



BP090229

ASSEMBLED ENGINE
GM 4.3L GASOLINE AND LPG – SHEET 1 OF 3

ITEM	PART NO.	DESCRIPTION	QTY
	a 1646674	Engine Assy-LPG (2007 Series)	1
	b 1646673	Engine Assy-Gas (2007 Series)	1
	d 1649504	Engine Assy-Gas (2008 Series)	1
	c 1649334	Engine Assy-LPG (2008 Series)	1
1	1514429	Nut	6
2	1527877	Capscrew	6
3		Spark Plug Wires (LH)	1
4	1628117	Clamp	2
5	1641371	Bracket	1
6	1564035	Bracket	2
7	1544212	Bracket	1
8	1460477	Nut	5
9	1578620	Stud	2
10	292682	Lockwasher	3
11	16634	Capscrew	3
12	1305165	Washer	1
13	221544	Capscrew	1
14	1377750	Pulley	1
15	1453247	Spacer	1
16	2085641	Fan	1
17	296418	Washer	4
18	1566505	Capscrew	4
19	1527879	Capscrew	4
20	1583769	Fan Mount Assembly	1
21	1578617	Stud	2
22	2090303	Belt Tensioner	1
23	1578619	Stud	1
24	1527885	Capscrew	1
25	2090051	V-Belt	1
26	1528482	Capscrew	1
27	1636803	Bracket (Alternator) (Alternator)	1
28	1560200	Thermostat Housing	1
29	1569540	Thermostat (Bypass Type 197 Degree With Seal)	1
30		Spark Plug Wires (RH)	1
31	1534017	Alternator	1
32	2071579	Fan Pulley (Fan)	1
33	1529366	Capscrew	2
34	1554814	Spacer	1
35	1327647	Capscrew	1
36	2063017	Pulley (Water Pump)	1
37	320157	Washer	1
38	302400	Nut	1
39	1623917	Manifold (Exhaust) (Exhaust)	2
40	1623895	Shield	2
41	1316487	Shield	1
42	1383257	Bolt	12
43	1539274	Gasket	2
44	133696	Clamp	1
45	ab 1514915	Dipstick Tube	1
45	cd 1671271	Dipstick Tube	1

ASSEMBLED ENGINE **GM 4.3L GASOLINE AND LPG – SHEET 1 OF 3**

ITEM	PART NO.	DESCRIPTION	QTY
46	ab 1510649	Dipstick	1
46	cd 1676923	Dipstick	1
47	1316488	Shield	2
48	1539273	Gasket	2
49	1560255	Sensor (Coolant Temperature)	1
50	246108	Sealant	AR
51	1510113	Capscrew	2
52	b 1657558	Adapter (Gasoline)	1
52	d 1654872	Adapter (Gasoline) (Gasoline)	1
52	a 1583601	Adapter (LPG)	1
52	c 1654871	Adapter (LPG) (LPG)	1
52	1560193	Sleeve	2
53	2067592	Gasket	1
54	1527876	Capscrew	2
	2088997	Kit-Ignition Cable (Spark Plug Wires and Coil Wire)	1

FOOTNOTES:

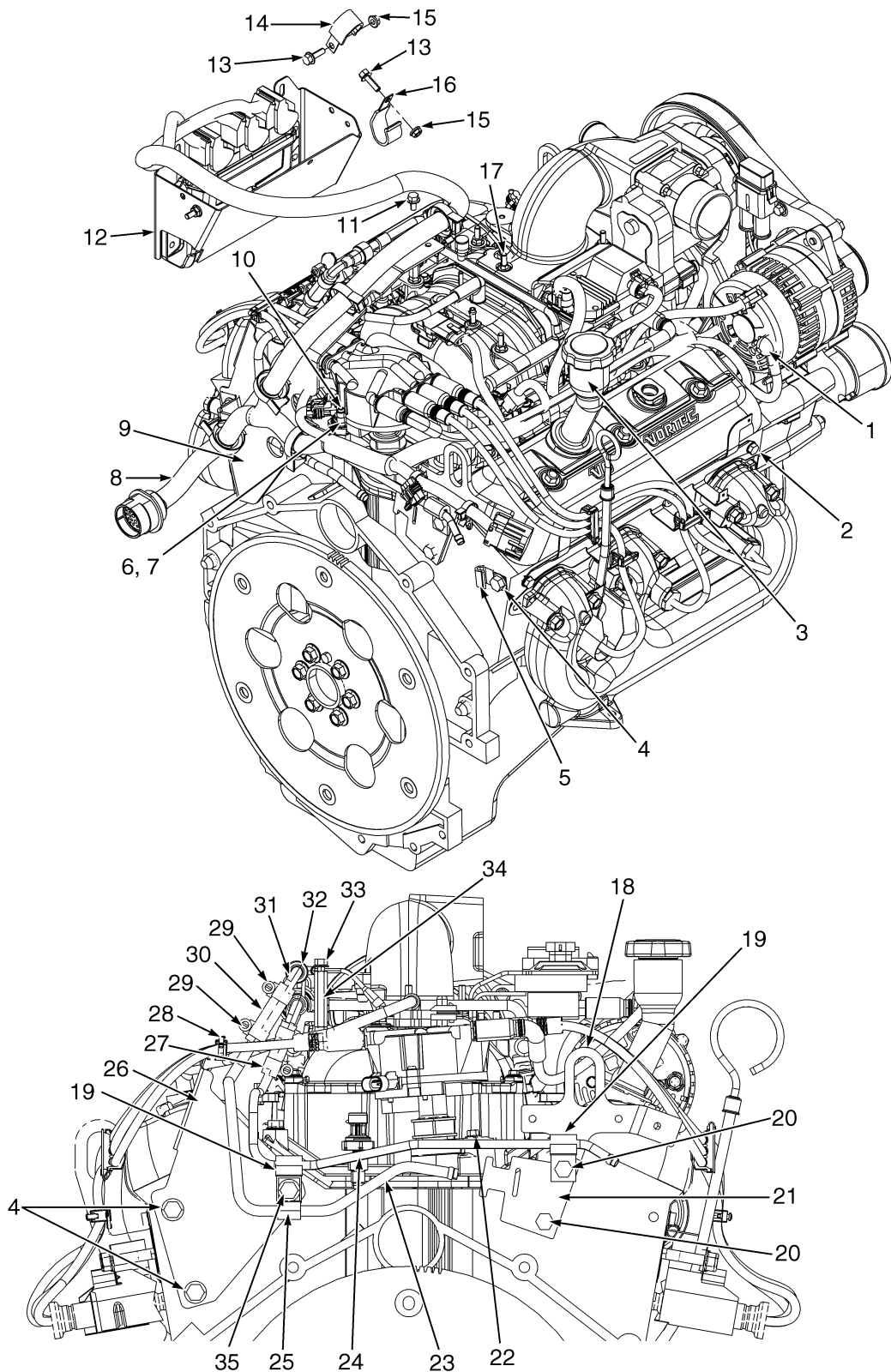
a → S/N H006V01742E (LPG)
b → S/N H006V02199E (Gasoline)

c S/N H006V01743E → (LPG)
d S/N H006V02200E → (Gasoline)

NOTES

[illegible]

ASSEMBLED ENGINE (FIGURE 2-11) GM 4.3L GASOLINE AND LPG — SHEET 2 OF 3



BP090360

ASSEMBLED ENGINE
GM 4.3L GASOLINE AND LPG – SHEET 2 OF 3**KEY:****A: Gasoline****B: LPG**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	c 1646673	Engine Assy-Gas (2007 Series)	1	..
	b 1646674	Engine Assy-LPG (2007 Series) (2007 Series)	..	1
	e 1649504	Engine Assy-Gas (2008 Series)	1	..
	d 1649334	Engine Assy-LPG (2008 Series)	..	1
1	1514429	Nut	1	1
2	392620	Screw	4	4
3	1552141	Filler Neck	1	1
4	1309993	Screw	4	4
5	385670	Clamp	2	2
6	1590201	Fitting	1	1
7	246108	Sealant	AR	AR
8	c 2087702	Wire Harness (Engine)	1	..
8	e 2093681	Wire Harness (Engine)	1	..
8	b 2087701	Wire Harness (Engine)	..	1
8	d 2093682	Wire Harness (Engine)	..	1
9	1636048	Bracket	1	1
10	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1	1
11	1534417	Capscrew	3	3
12	2094096	Engine Control Module	1	..
12	2094097	Engine Control Module (2006/2007 Engine ECU)	..	1
12	2101429	Engine Control Module (2008-2009 Engine ECU) (Alternate Part)	..	1
12	2101430	Engine Control Module (Alternate Part)	1	..
13	1527877	Capscrew	6	6
14	1628117	Clamp	1	1
15	1514429	Nut	6	6
16	1628118	Clamp	2	2
17	1579136	Fitting	1	1
18	1636047	Bracket	1	1
19	198675	Clamp	2	..
20	174413	Screw	2	2
21	2080791	Bracket	1	..
22	1552840	Tube	1	..
23	2081136	Tube	1	..
24	1552840	Tube	1	..
25	164488	Clamp	1	..
26	1623860	Bracket	1	..
27	2062587	Hose	1	..
28	1564036	Retainer (Three Wire Clip)	1	1
29	168718	Clamp (Worm Screw)	4	..
30	2066137	Hose	1	..
31	1546285	Elbow (3/8 90 degree Elbow)	1	..
32	1543933	Fitting	1	..
33	1534417	Capscrew	5	5
34	2081315	Adapter	1	1
35	1309993	Screw	1	1

ASSEMBLED ENGINE
GM 4.3L GASOLINE AND LPG – SHEET 2 OF 3**KEY:****A: Gasoline****B: LPG**

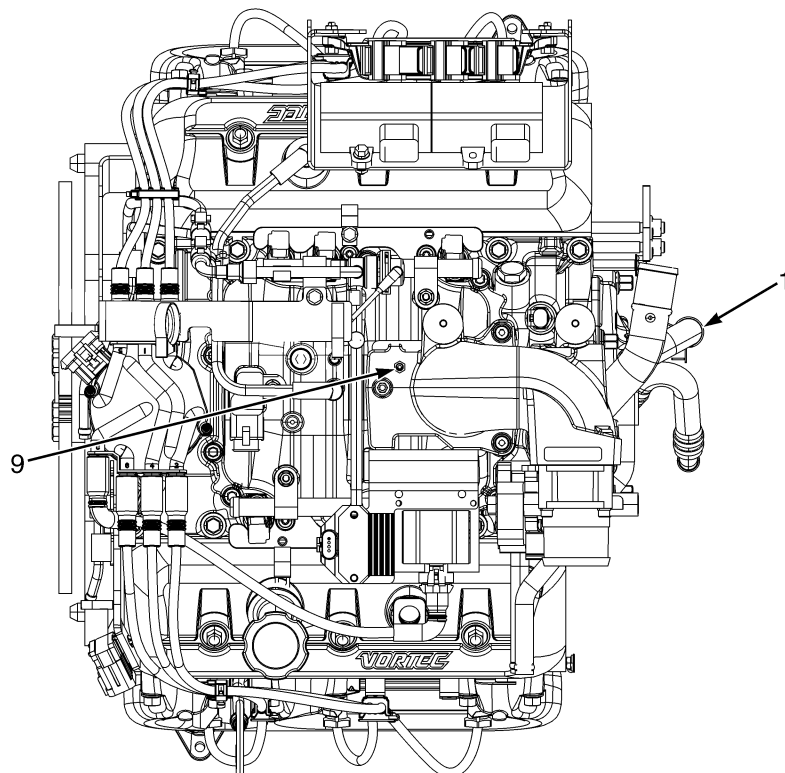
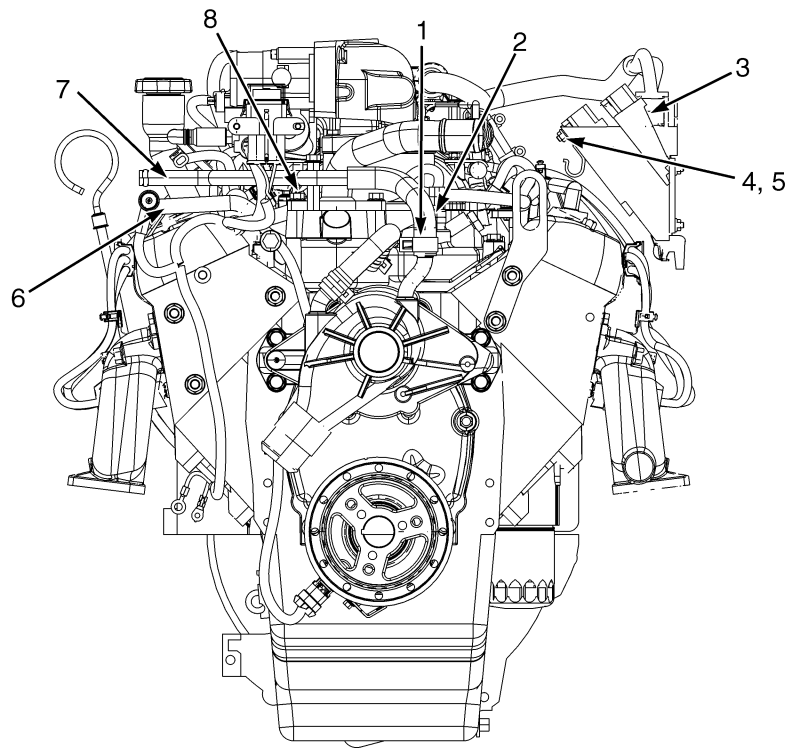
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a 14387	Fitting	1	1

FOOTNOTES:**a** Not Illustrated**b** → S/N H006V01742E**c** → S/N H006V02199E**d** S/N H006V01743E →**e** S/N H006V02200E →

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.

ASSEMBLED ENGINE (FIGURE 2-12) GM 4.3L GASOLINE AND LPG — SHEET 3 OF 3



BP090363

ASSEMBLED ENGINE **GM 4.3L GASOLINE AND LPG – SHEET 3 OF 3**

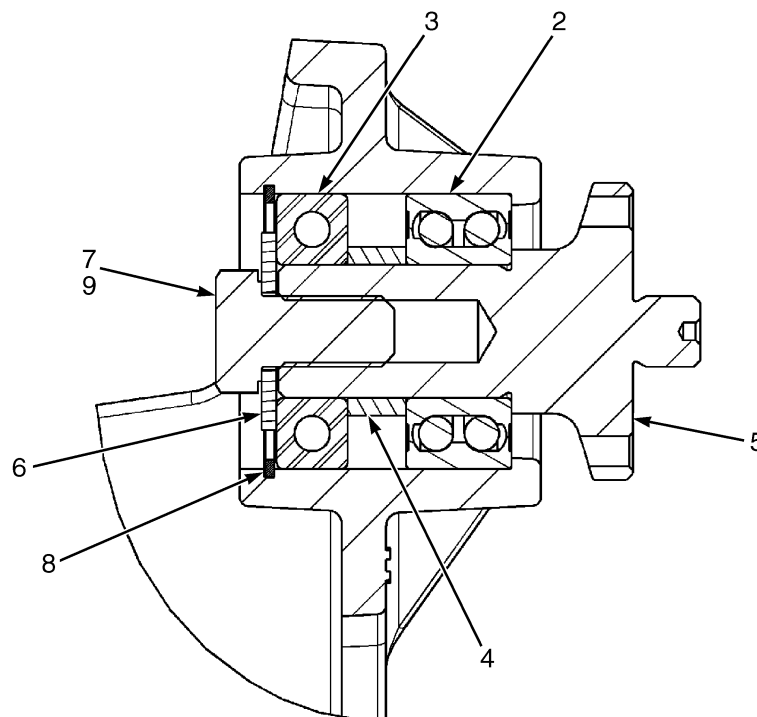
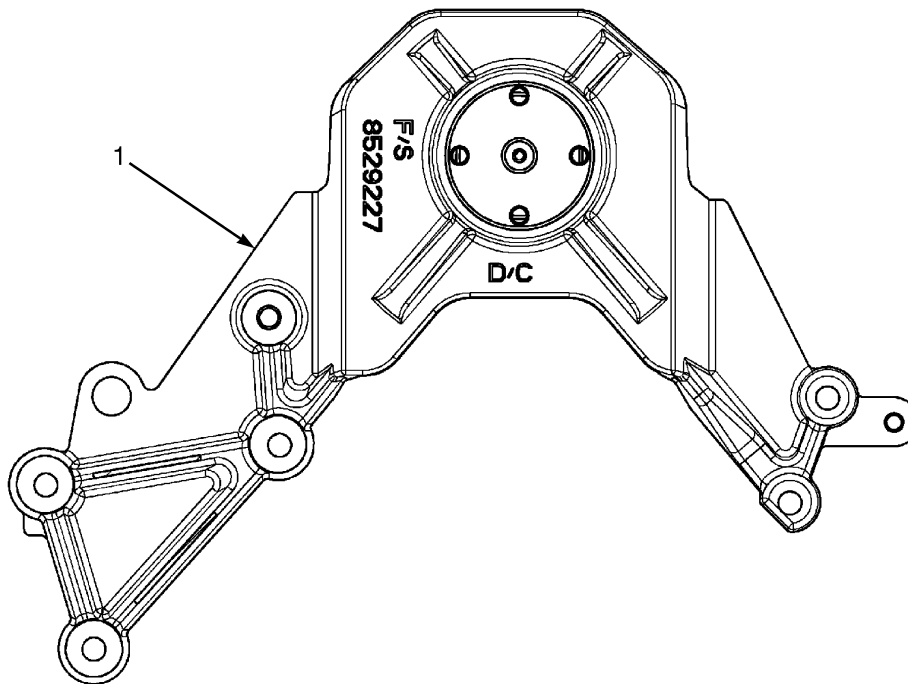
ITEM	PART NO.	DESCRIPTION	QTY
	d 1646673	Engine Assy-Gas (2007 Series)	1
	c 1646674	Engine Assy-LPG (2007 Series)	1
	f 1649504	Engine Assy-Gas (2008 Series)	1
	e 1649334	Engine Assy-LPG (2008 Series)	1
1	130845	Clamp	2
1	a 130845	Clamp	1
2	b 2076429	Hose	1
3	b 2082657	Module (Injector Driver)	2
4	1514429	Nut	6
5	1527877	Capscrew	6
6	b 1570597	Tube	1
7	b 1593913	Tube	1
8	b 1510116	Capscrew	1
9	b 1579136	Fitting	1

FOOTNOTES:

a Gasoline Engine
b LPG Engine
c → S/N H006V01742E

d → S/N H006V02199E
e S/N H006V01743E →
f S/N H006V02200E →

FAN MOUNT ASSEMBLY (FIGURE 2-13) GM 4.3L GASOLINE AND LPG

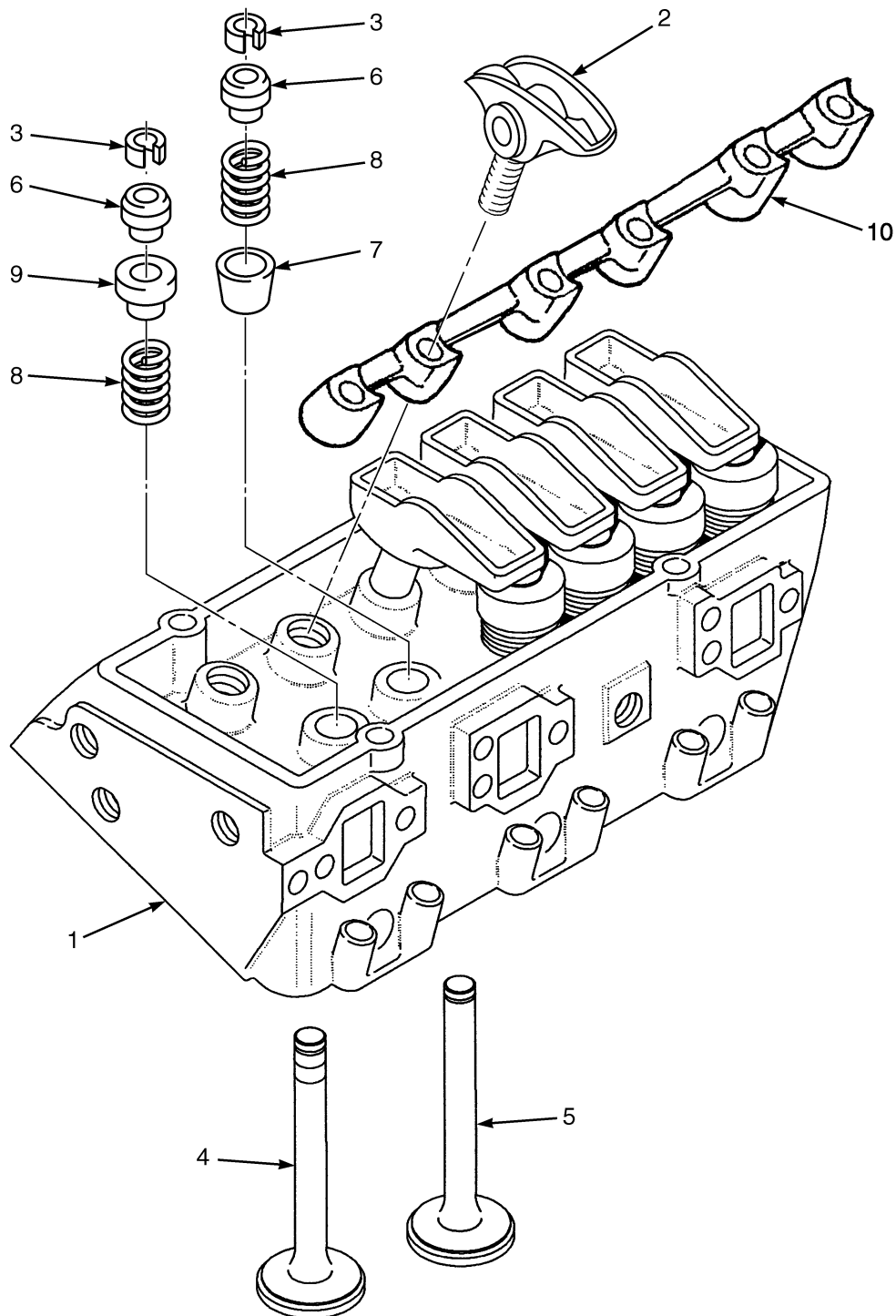


BP090311

**FAN MOUNT ASSEMBLY
GM 4.3L GASOLINE AND LPG**

ITEM	PART NO.	DESCRIPTION	QTY
	1583769	Fan Mount Assembly	1
1	1615817	Bracket	1
2	1615920	Ball Bearing	1
3	2014670	Bearing	1
4	1615818	Spacer	1
5	2083634	Shaft	1
6	15180	Washer	1
7	292559	Capscrew	1
8	12921	Snap Ring	1
9	360387	Loctite	AR

CYLINDER HEAD (FIGURE 2-14) GM 4.3L GASOLINE AND LPG



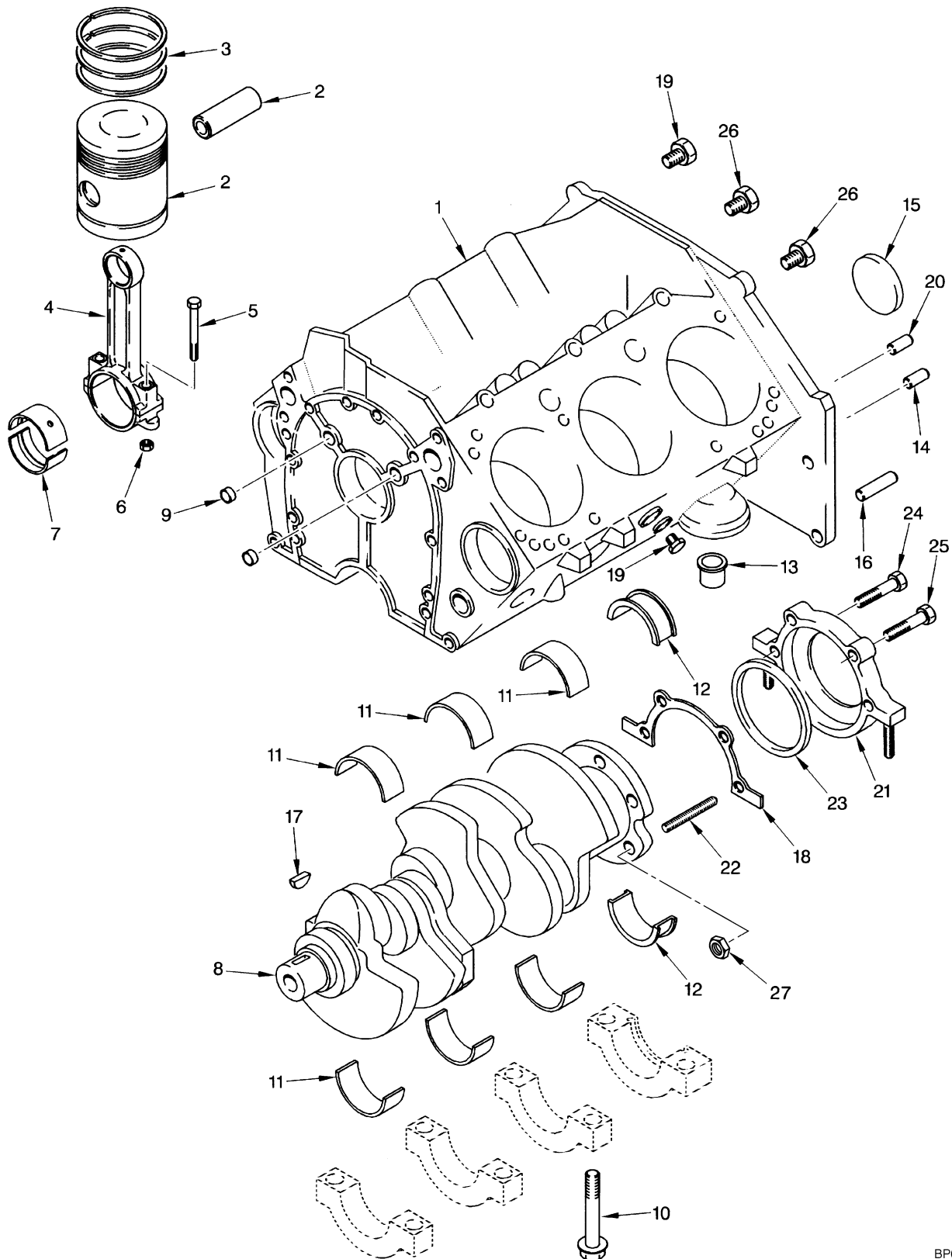
HP090254

**CYLINDER HEAD
GM 4.3L GASOLINE AND LPG**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1646673	Engine Assy-Gas (2007 Series)	1
	a 1646674	Engine Assy-LPG (2007 Series)	1
	d 1649504	Engine Assy-Gas (2008 Series)	1
	c 1649334	Engine Assy-LPG (2008 Series)	1
1	1471557	Cylinder Head (Gasoline)	2
1	1653888	Cylinder Head (LPG)	2
2	1653887	Rocker Arm	12
2	1389051	Bolt	4
3	1377110	Valve Stop	24
4	1386194	Exhaust Valve (Gasoline)	6
4	1482701	Exhaust Valve (LPG)	6
5	1386195	Inlet Valve	6
6	1393127	Cap	12
7	1386197	Seal (Black) (Intake)	12
8	1386198	Spring (Gasoline)	12
8	1689026	Spring (LPG)	1
9	1460384	Seal (Orange) (Exhaust)	12
10	1489643	Support (Rocker Arm)	2

FOOTNOTES:**a** → S/N H006V01742E**b** → S/N H006V02199E**c** S/N H006V01743E →**d** S/N H006V02200E →

CYLINDER BLOCK (FIGURE 2-15) GM 4.3L GASOLINE AND LPG



BP090113

CYLINDER BLOCK
GM 4.3L GASOLINE AND LPG

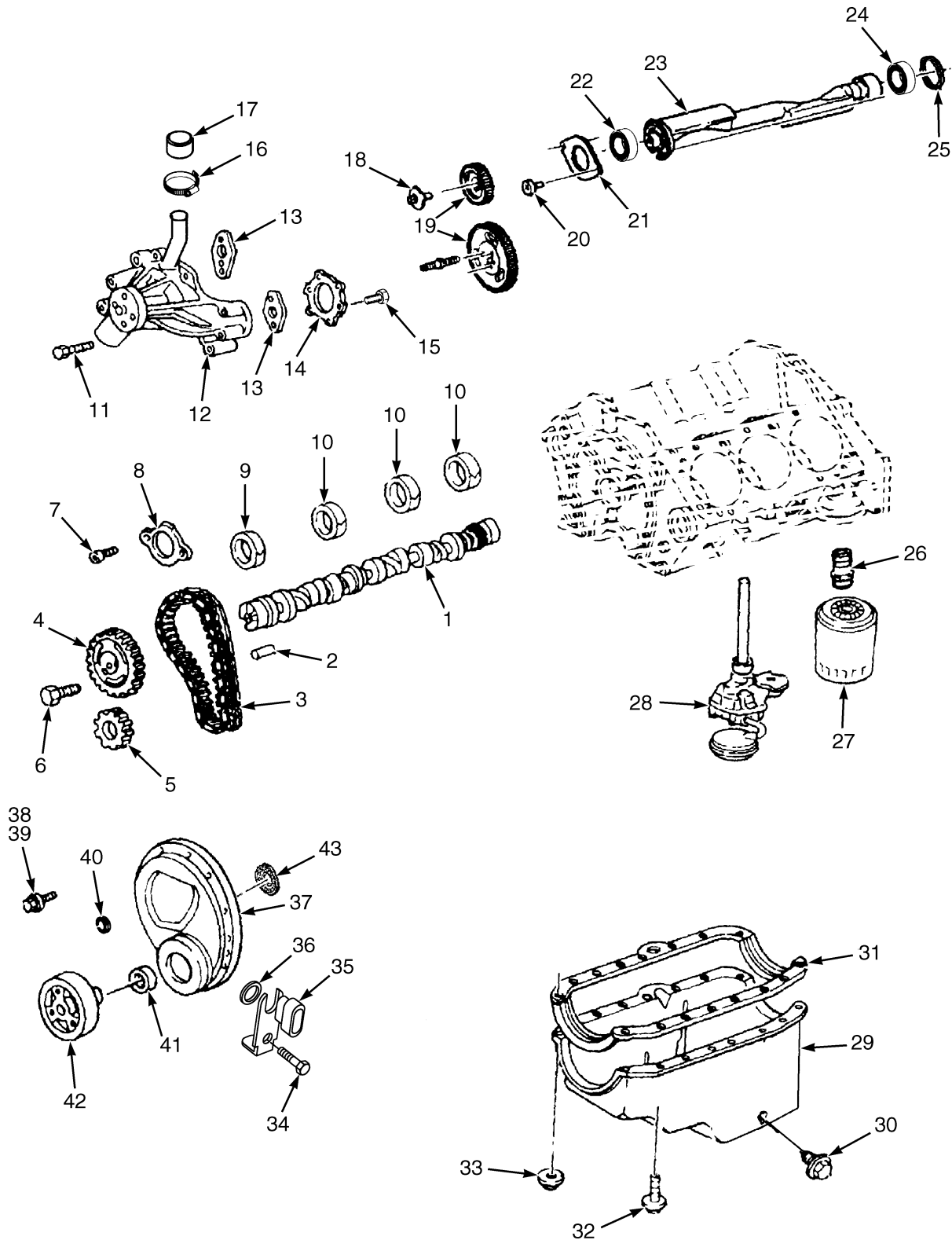
ITEM	PART NO.	DESCRIPTION	QTY
	b 1646673	Engine Assy-Gas (2007 Series)	1
	a 1646674	Engine Assy-LPG (2007 Series)	1
	d 1649504	Engine Assy-Gas (2008 Series)	1
	c 1649334	Engine Assy-LPG (2008 Series)	1
1		Short Block Assembly	1
2	1390759	Kit-Piston (Standard)	6
2	1390760	Kit-Piston (0.020 O/S)	6
2	1627183	Kit-Piston (0.005 in O/S)	6
3	1390761	Kit-Piston Ring (Standard)	6
3	1390765	Kit-Piston Ring (0.020 O/S)	6
4	1360179	Piston Rod	6
5	1360182	Bolt	2
6	1330450	Nut	2
7	1390770	Piston Rod Bearing (Connecting Rod) (Standard)	6
8	1460386	Crankshaft	1
9	388302	Plug (RH)	3
10	263842	Bolt	10
11	1558807	Kit-Crankshaft Bearing (Standard)	3
11	1460738	Kit-Crankshaft Bearing (0.020 in. O/S)	3
12	1309839	Bearing Set (0.010 in. O/S)	1
13	1514968	Valve	1
14	159977	Pin	4
15	1374313	Plug	1
16	1335499	Pin	2
17	1451319	Key	1
18	1500884	Gasket	1
19	1514267	Plug	2
20	375601	Pin	1
21	1460330	Retainer	1
22	1450555	Stud	2
23	1460331	Seal	1
24	375575	Bolt	1
25	375602	Bolt	1
26	1331341	Plug	4
27	388313	Nut	1
	159971	Plug (Not Illustrated)	8

FOOTNOTES:

a → S/N H006V01742E
b → S/N H006V02199E

c S/N H006V01743E →
d S/N H006V02200E →

CAMSHAFT AND OIL PAN (FIGURE 2-16) GM 4.3L GASOLINE AND LPG



BP090277

**CAMSHAFT AND OIL PAN
GM 4.3L GASOLINE AND LPG**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1646673	Engine Assy-Gas (2007 Series)	1
	a 1646674	Engine Assy-LPG (2007 Series)	1
	d 1649504	Engine Assy-Gas (2008 Series)	1
	c 1649334	Engine Assy-LPG (2008 Series)	1
1	1627196	Camshaft	1
2	1374297	Pin	1
3	ab 1471556	Kit-Repair Cable Chain	1
3	cd 1683675	Kit-Repair Cable Chain (Timing Chain)	1
3		Timing Chain	1
4		Sprocket	1
5		Sprocket	1
6	1374301	Bolt	3
7	1374299	Bolt	2
8	1374298	Retainer	1
9	1454955	Bearing	2
10	1454957	Bearing	1
11	1383257	Bolt	4
12	ab 1653884	Water Pump	1
12	cd 1683678	Water Pump	1
13	ab 263828	Gasket	2
13	cd 1683677	Gasket	1
14	1460322	Gasket	1
15	1374108	Bolt	10
16	130845	Clamp	1
17	1383263	Cap	1
18	1374317	Bolt	6
19	1374315	Kit-Gear (Balancer)	1
20	1339963	Bolt	2
21	1374326	Retainer	1
22	1374314	Bearing	1
23	1377107	Shaft	1
24	1451321	Bearing	1
25	1374313	Plug	2
26	375587	Fitting	1
27	1320000	Oil Filter	1
28	1386176	Engine Oil Pump	1
29	ab 1471558	Oil Pan	1
29	cd 1683746	Oil Pan	1
30	1460757	Screw	1
30	1460758	Gasket	1
31	1386184	Gasket	1
31	1683744	Gasket	1
32	1386183	Bolt	10
33	1360178	Nut	1
34	1514965	Bolt	1
35	ab 1514963	Sensor (Crankshaft Position)	1
35	cd 1683747	Sensor (Crankshaft Position)	1
36	1514964	O-Ring	1
37	ab 1585183	Engine Cover (Front Cover)	1
37	cd 1683720	Engine Cover (Front Cover)	1

CAMSHAFT AND OIL PAN GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
37	1654480	Bracket	1
37	1654481	Shoe	1
38	1386179	Bolt	4
39	1377103	Bolt	2
40	1389092	Grommet	6
41	ab 1377104	Seal	1
41	cd 1374107	Seal	1
42	1627199	Damper	1
43	1514962	Ring (Crankshaft Position Sensor)	1
	cd 1683721	Pin (Not Illustrated)	2
	cd 1683722	Gasket (Engine Front Cover) (Not Illustrated)	1

FOOTNOTES:

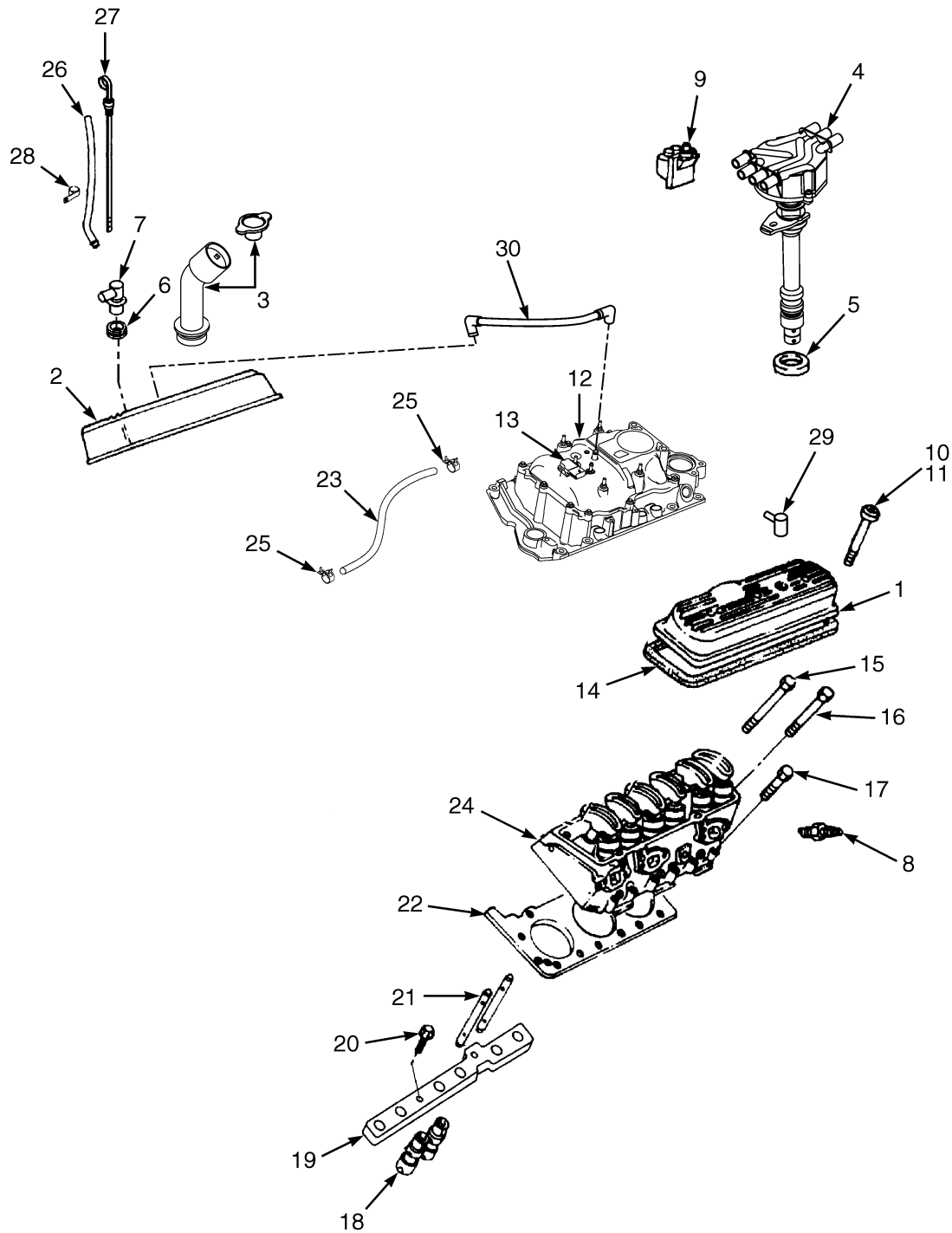
a → S/N H006V01742E (LPG)
b → S/N H006V02199E (Gasoline)

c S/N H006V01743E → (LPG)
d S/N H006V02200E → (Gasoline)

NOTES

[illegible]

VALVE COVER AND INLET MANIFOLD (FIGURE 2-17) GM 4.3L GASOLINE AND LPG



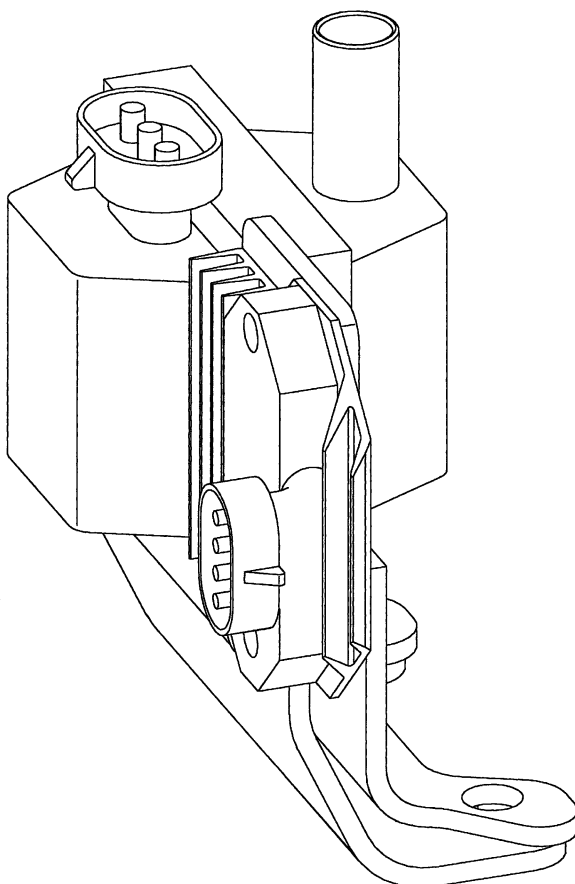
BP090414

**VALVE COVER AND INLET MANIFOLD
GM 4.3L GASOLINE AND LPG**

ITEM	PART NO.	DESCRIPTION	QTY
	c 1646673	Engine Assy-Gas (2007 Series)	1
	b 1646674	Engine Assy-LPG (2007 Series)	1
	e 1649504	Engine Assy-Gas (2008 Series)	1
	d 1649334	Engine Assy-LPG (2008 Series)	1
1	1597705	Cover (LH)	1
2	1389102	Cover (RH)	1
3	1552141	Filler Neck	1
3	bc 1374290	Cap	1
3	de 1683749	Cap	1
4	1559695	Distributor Assembly	1
5	1334423	Gasket	1
6	1374288	Grommet	3
7	379407	Fitting	1
8	1641492	Spark Plug	6
9	1564670	Ignition Coil Assembly	1
10	1383904	Grommet	6
11	1374289	Bolt	6
12	bc 1627350	Intake Manifold (Lower) (2007 Series)	1
12	bc 1653886	Intake Manifold (Upper) (2007 Series)	1
12	1684098	Manifold Assy (2008 Series)	1
12	de 1684085	Intake Manifold (2008 Lower)	1
12	de 1684099	Intake Manifold (2008 Upper)	1
12	1389093	Bolt	8
12	1559570	Gasket	1
13	1559567	Sensor (Temperature manifold absolute pressure)	1
14	1374293	Gasket	2
15	a 1377792	Bolt (Long)	10
16	a 1377793	Bolt (Medium)	4
17	a 1377794	Bolt (Short)	12
18	1471559	Valve Lifter	12
19	1389050	Guide	2
20	1389051	Bolt	2
21	1386189	Push Rod	12
22	1386190	Cylinder Head Gasket	1
23	1627354	Hose Assy	1
24	1471557	Cylinder Head (Gasoline)	1
24	1653888	Cylinder Head (LPG)	1
25	1471560	Clamp	2
26	bc 1514915	Dipstick Tube	1
26	de 1671271	Dipstick Tube	1
27	bc 1510649	Dipstick	1
27	de 1676923	Dipstick	1
28	133696	Clamp	1
29	1600925	Fitting (90 Degree)	1
30	1675726	Hose Assy (PCV)	1
30	1702272	Elbow	2
30	1702274	Connector	1
30	1702276	PCV Valve	1
	1386187	Kit-Gasket (Intake Manifold)	1

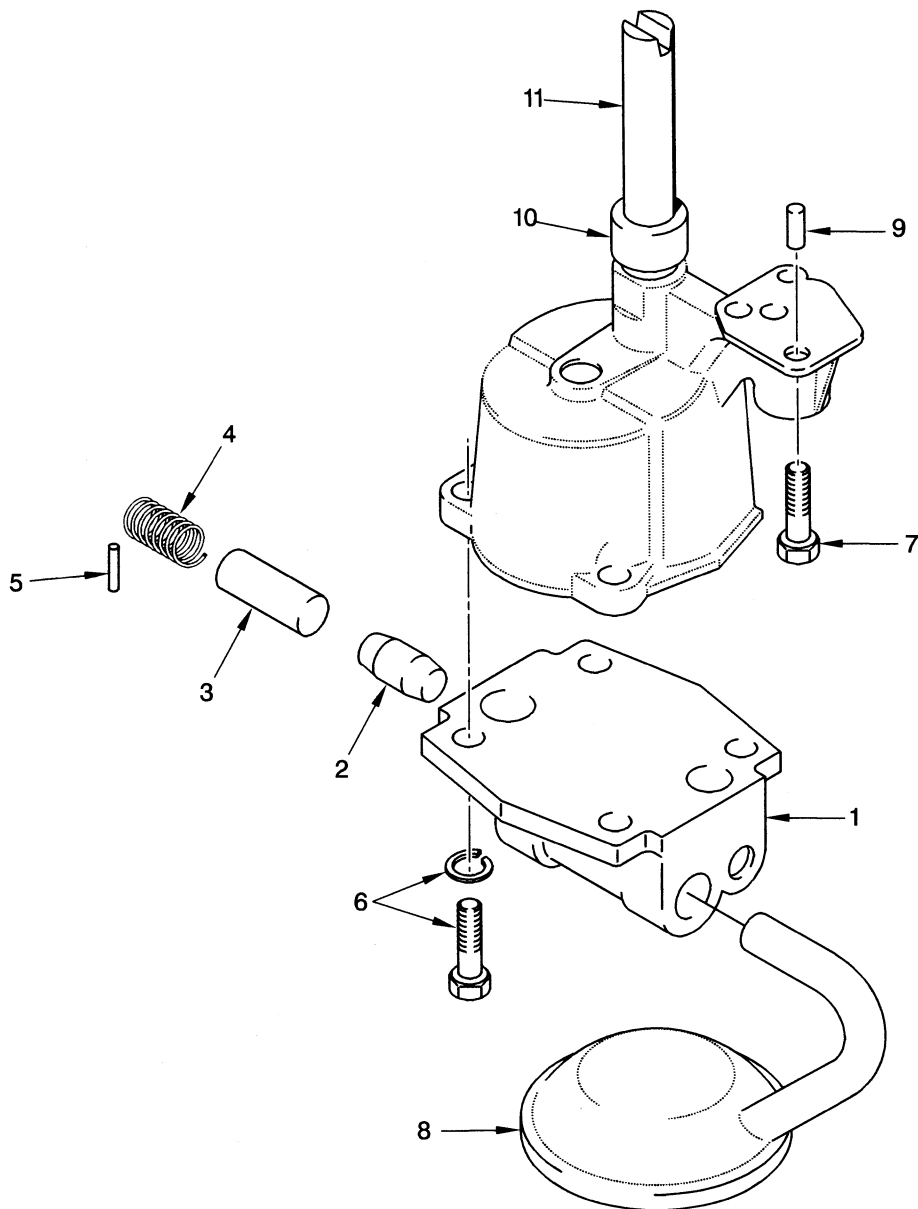
FOOTNOTES:

a	Quantity is listed for both heads	d	S/N H006V01743E → (LPG)
b	→ S/N H006V01742E (LPG)	e	S/N H006V02200E → (Gasoline)
c	→ S/N H006V02199E (Gasoline)		

COIL ASSEMBLY (FIGURE 2-18)
GM 4.3L GASOLINE AND LPG

BP090140

ITEM	PART NO.	DESCRIPTION	QTY
	1564670	Ignition Coil Assembly	1
	1578517	Bracket	1
	1371237	Bolt	4
	1578518	Module	1
	1578519	Heatsink	1
	1578520	Screw	2
	1578521	Ignition Coil	1
	1374323	Nut	1
	1578522	Bracket	1

OIL PUMP (FIGURE 2-19)
GM 4.3L GASOLINE AND LPG

HP090044

OIL PUMP
GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
	b 1646673	Engine Assy-Gas (2007 Series)	1
	a 1646674	Engine Assy-LPG (2007 Series)	1
	d 1649504	Engine Assy-Gas (2008 Series)	1
	c 1649334	Engine Assy-LPG (2008 Series)	1
	1386176	Engine Oil Pump	1
1	1374319	Cover	1
2	1338223	Stop	1
3	268573	Regulator Valve	1
4	1374320	Spring	1
5	1330453	Pin	1
6	1333541	Kit-Screw	2
7	388306	Bolt	1
8	1386177	Screen	1
9	1450941	Pin	2
10	263795	Retainer	1
11	263794	Shaft	1

FOOTNOTES:

a → S/N H006V01742E
b → S/N H006V02199E

c S/N H006V01743E →
d S/N H006V02200E →

BP090295

**DIESEL ENGINE ASSEMBLY
OIL PAN – CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	d 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637863	Gasket	1
2	1635375	Gasket	1
3	1637958	Tube	1
4	1637864	Oil Pan	1
5	1635234	Sealing Ring	2
6	1635233	Plug	2
7	1637862	Adapter	1
8	a 1565007	Capscrew	14
8	c 1512111	Capscrew	14
9	1635225	Capscrew	2

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0022

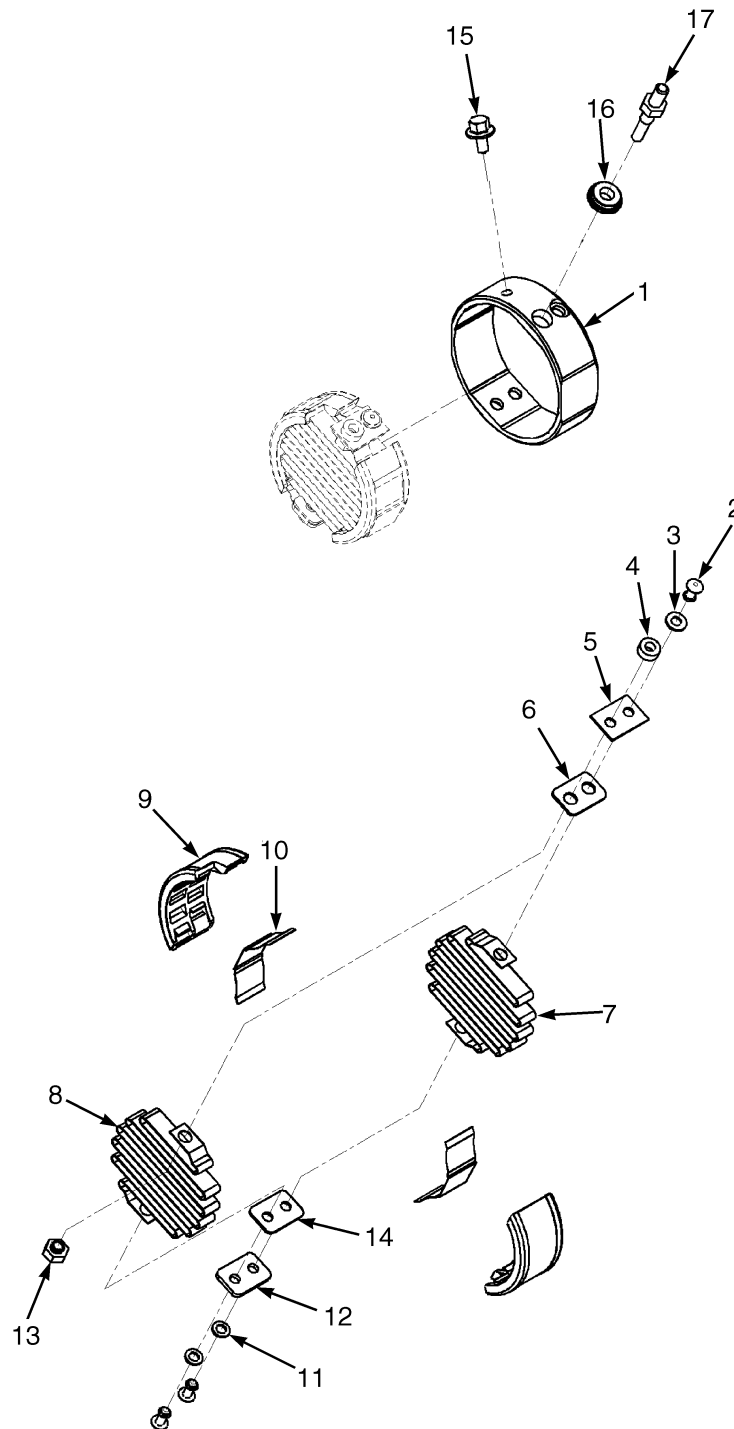
b → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

c S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0022

d S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0224

AIR HEATER STARTING AID (FIGURE 2-21)

CUMMINS 4.5L DIESEL (→ S/N H006V02265F EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0224)



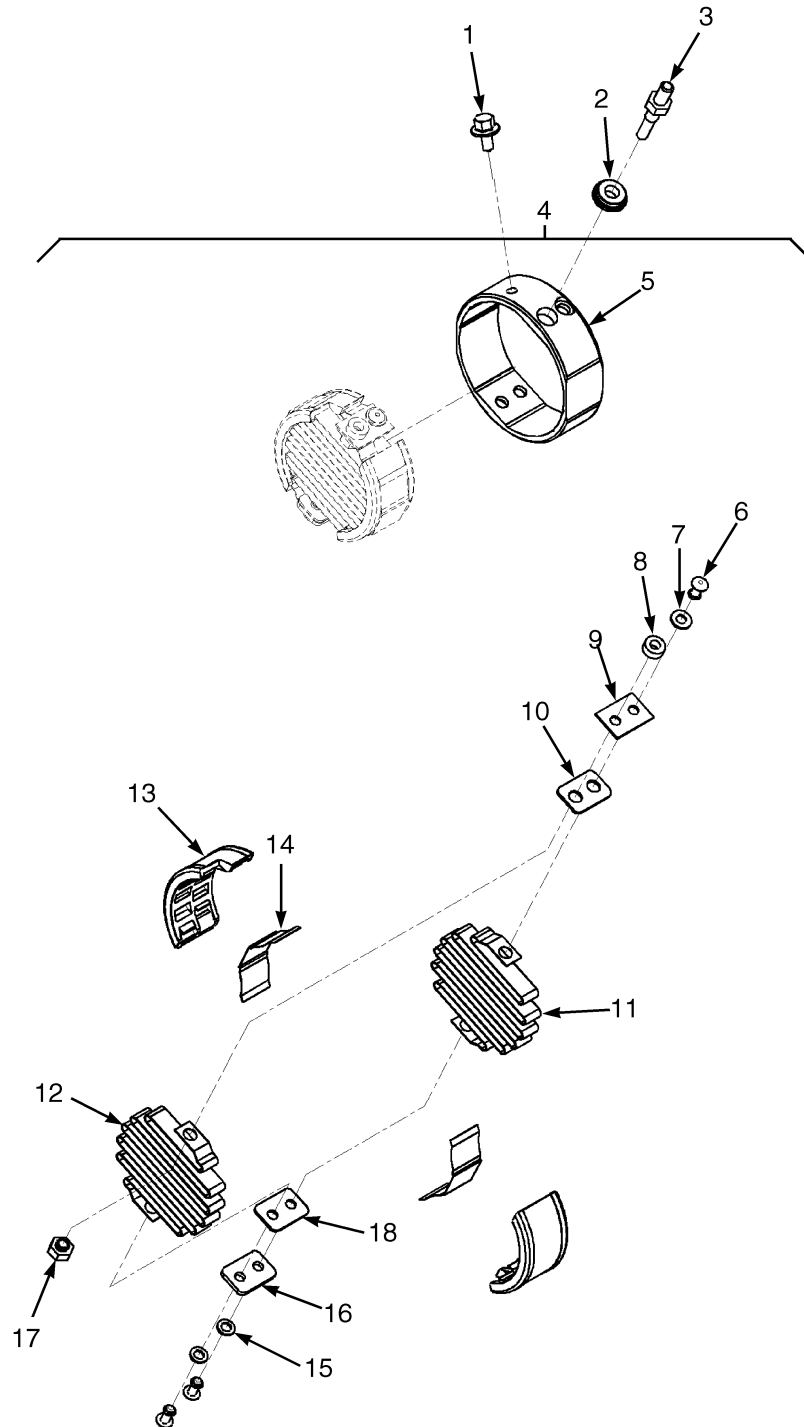
BP090351

AIR HEATER STARTING AID**CUMMINS 4.5L DIESEL (→ S/N H006V02265F EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0224)**

ITEM	PART NO.	DESCRIPTION	QTY
	1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	1648577	Starting Aid	1
1	1648578	Housing	1
2		Rivet	3
3	1648584	Washer (Insulating)	1
4	1648583	Washer (Insulating)	1
5	1648587	Washer	1
6	1648589	Retainer	3
7	1648579	Element	1
8	1648580	Element	2
9	1648581	Retainer	2
10	1648582	Spring	2
11	1648590	Washer	1
12	1648586	Washer	1
13	1648585	Adapter	1
14	1648588	Washer (Insulating)	1
15	1513836	Screw	1
16	1635363	Retainer	1
17	1635341	Terminal	1

AIR HEATER STARTING AID (FIGURE 2-22)

CUMMINS 4.5L DIESEL (S/N H006V02266F → INC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223)

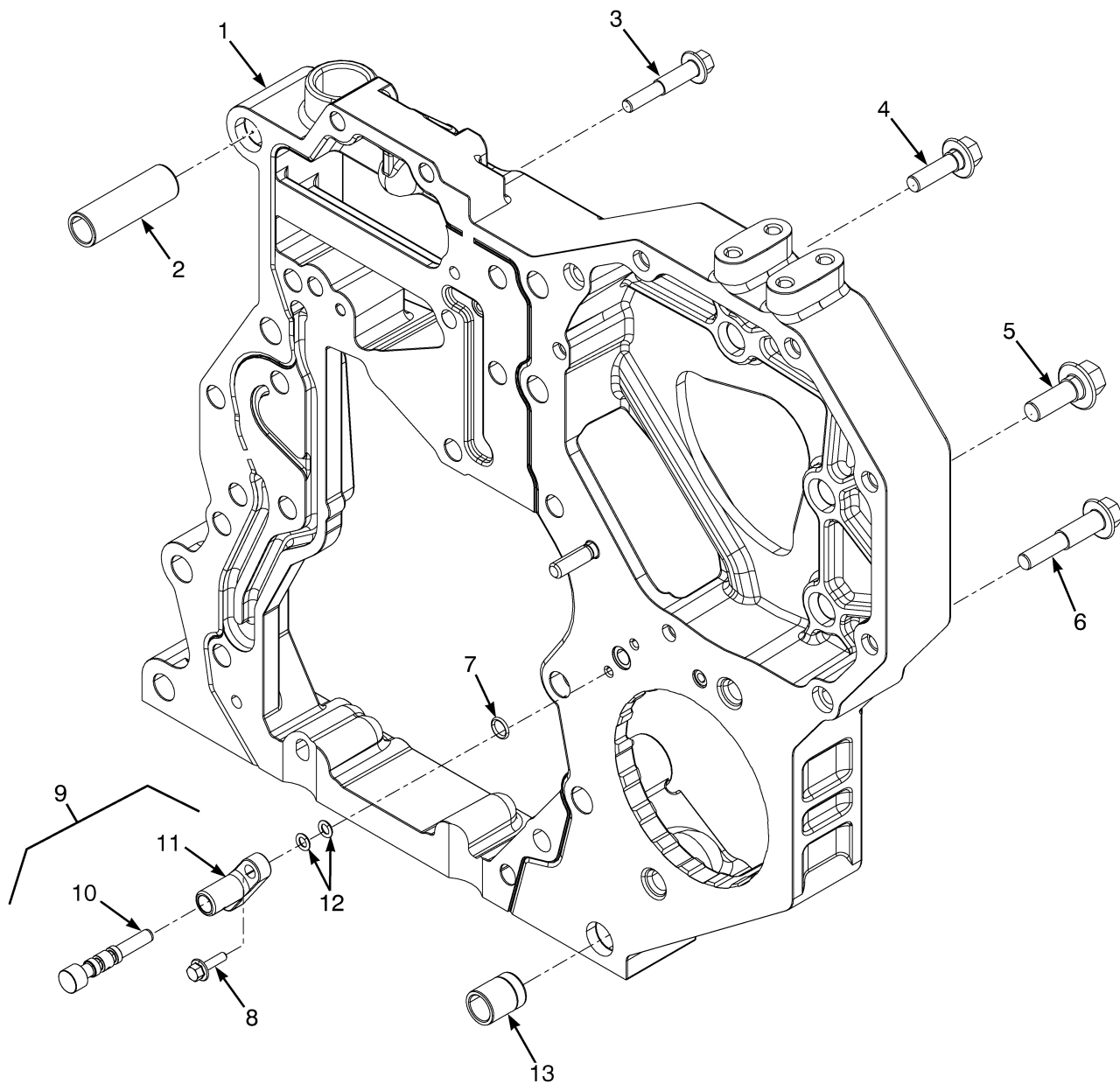


BP090349

AIR HEATER STARTING AID**CUMMINS 4.5L DIESEL (S/N H006V02266F → INC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223)**

ITEM	PART NO.	DESCRIPTION	QTY
	2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1513836	Screw	1
2	1635363	Retainer	1
3	1661074	Capscrew	1
4	1648577	Starting Aid	1
5		Housing	1
6		Rivet	3
7		Washer (Insulated)	1
8		Washer (Insulated)	1
9		Washer	1
10		Retainer	3
11		Element	1
12		Element - Heating	2
13		Retainer - Element	2
14		Spring	2
15		Washer	1
16		Washer	1
17		Adapter	1
18		Washer (Insulating)	1

DIESEL ENGINE ASSEMBLY (FIGURE 2-23)
REAR GEAR HOUSING — CUMMINS 4.5L
(S/N H006V02266F → INC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223)

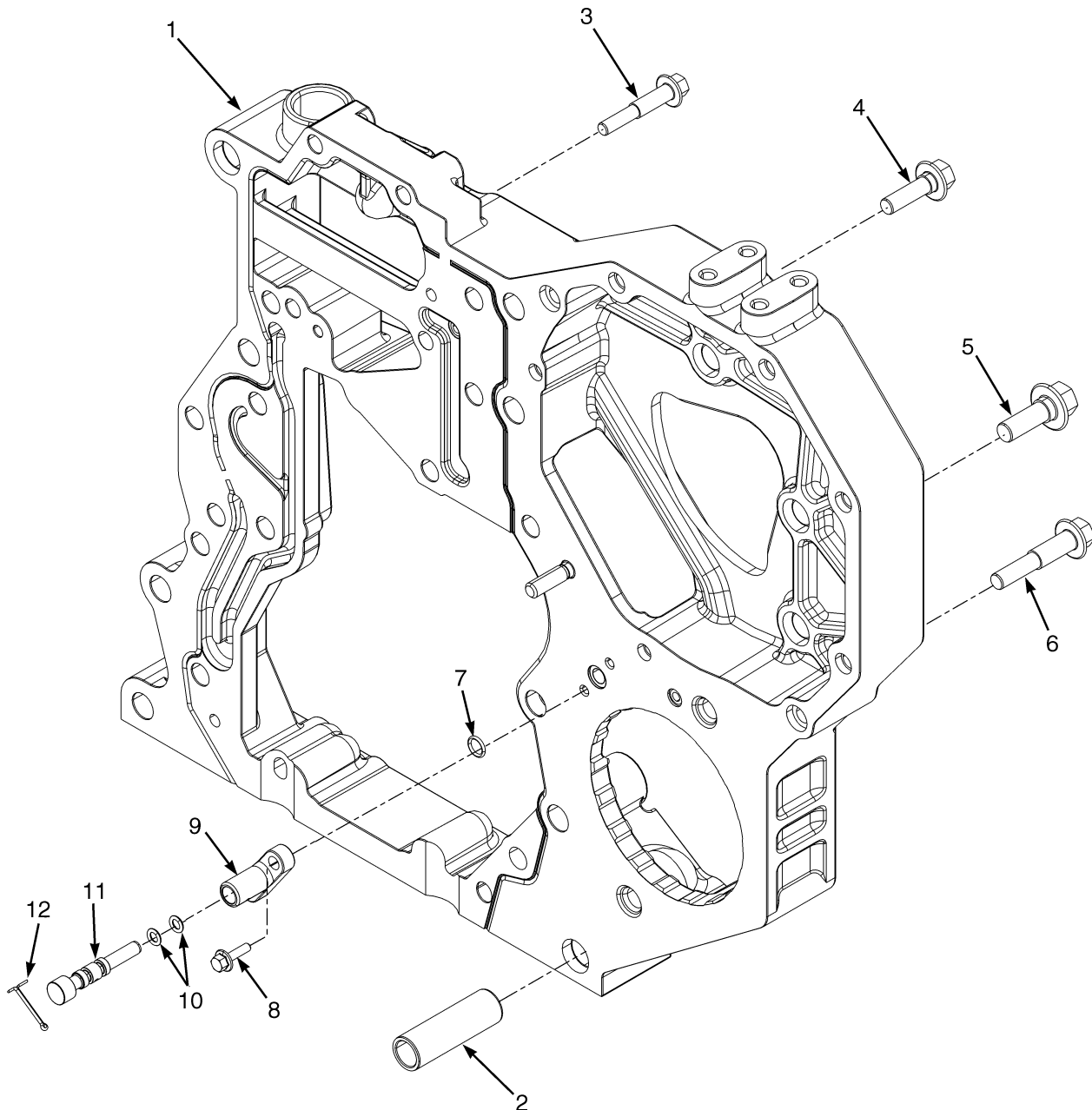


BP090408

DIESEL ENGINE ASSEMBLY
REAR GEAR HOUSING – CUMMINS 4.5L
(S/N H006V02266F → INC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223)

ITEM	PART NO.	DESCRIPTION	QTY
	2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1694848	Housing	1
1		Stud	1
1		Housing Gear	1
1	1635395	Insert	2
2	1635270	Ring (Dowel)	2
2		Insert	3
3	1512111	Capscrew	4
4	1511977	Capscrew	2
5	1511953	Capscrew	1
6	1635260	Capscrew	3
7	1513430	O-Ring	1
8	1513736	Capscrew	1
9		Timing Pin Assembly	1
10	1694851	Pin	1
11	1694853	Housing	1
12	1639274	O-Ring	2
13		Dowel	2

DIESEL ENGINE ASSEMBLY (FIGURE 2-24)
REAR GEAR HOUSING — CUMMINS 4.5L DIESEL
 (→ S/N H006V02265F EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0022)



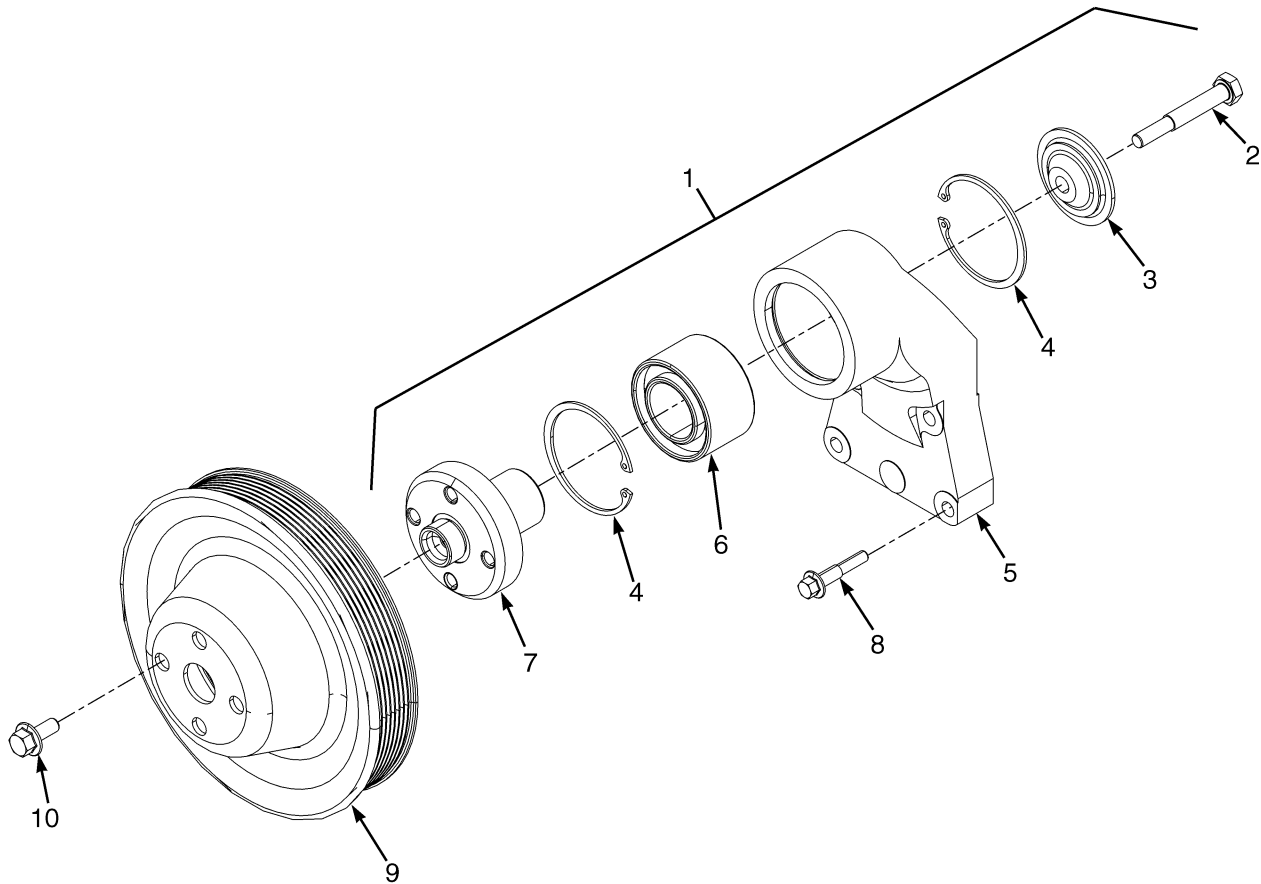
BP090345

DIESEL ENGINE ASSEMBLY**REAR GEAR HOUSING – CUMMINS 4.5L DIESEL**

(→ S/N H006V02265F EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0022)

ITEM	PART NO.	DESCRIPTION	QTY
	1501932	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637773	Housing (Rear Gear)	1
2	1635270	Ring (Dowel)	2
3	1512111	Capscrew	4
4	1511977	Capscrew	2
5	1511953	Capscrew	1
6	1635260	Capscrew	3
7	1517011	O-Ring	1
8	1638701	Capscrew	2
9	1639277	Housing (Timing Pin)	1
10	1639274	O-Ring	2
11	1639276	Pin	1
12	1639275	Cotter Pin	1

DIESEL ENGINE ASSEMBLY (FIGURE 2-25) FAN DRIVE AND MOUNTING — CUMMINS 4.5L



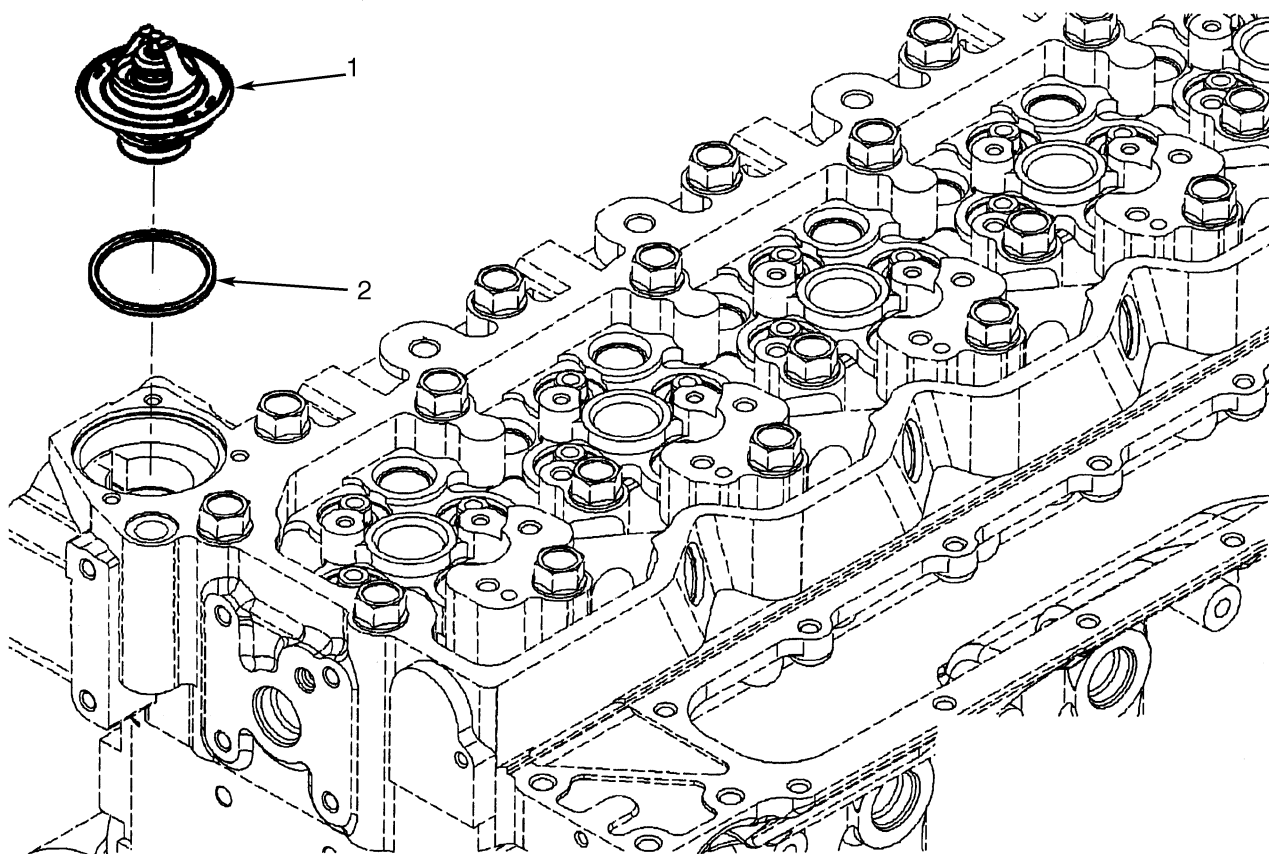
BP090296

ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1512014	Support	1
2	1512027	Capscrew	1
3	1512025	Hub	1
4	1512026	Retaining Ring	2
5		Support	1
6	1512015	Ball Bearing	1
7	1512024	Hub (Fan)	1
8	1512029	Screw	4
9	1635258	Fan Pulley	1
10	1512328	Capscrew	4
	1684029	Kit-Cooling	1

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0224

DIESEL ENGINE ASSEMBLY (FIGURE 2-26)
THERMOSTAT — CUMMINS 4.5L

HP090893

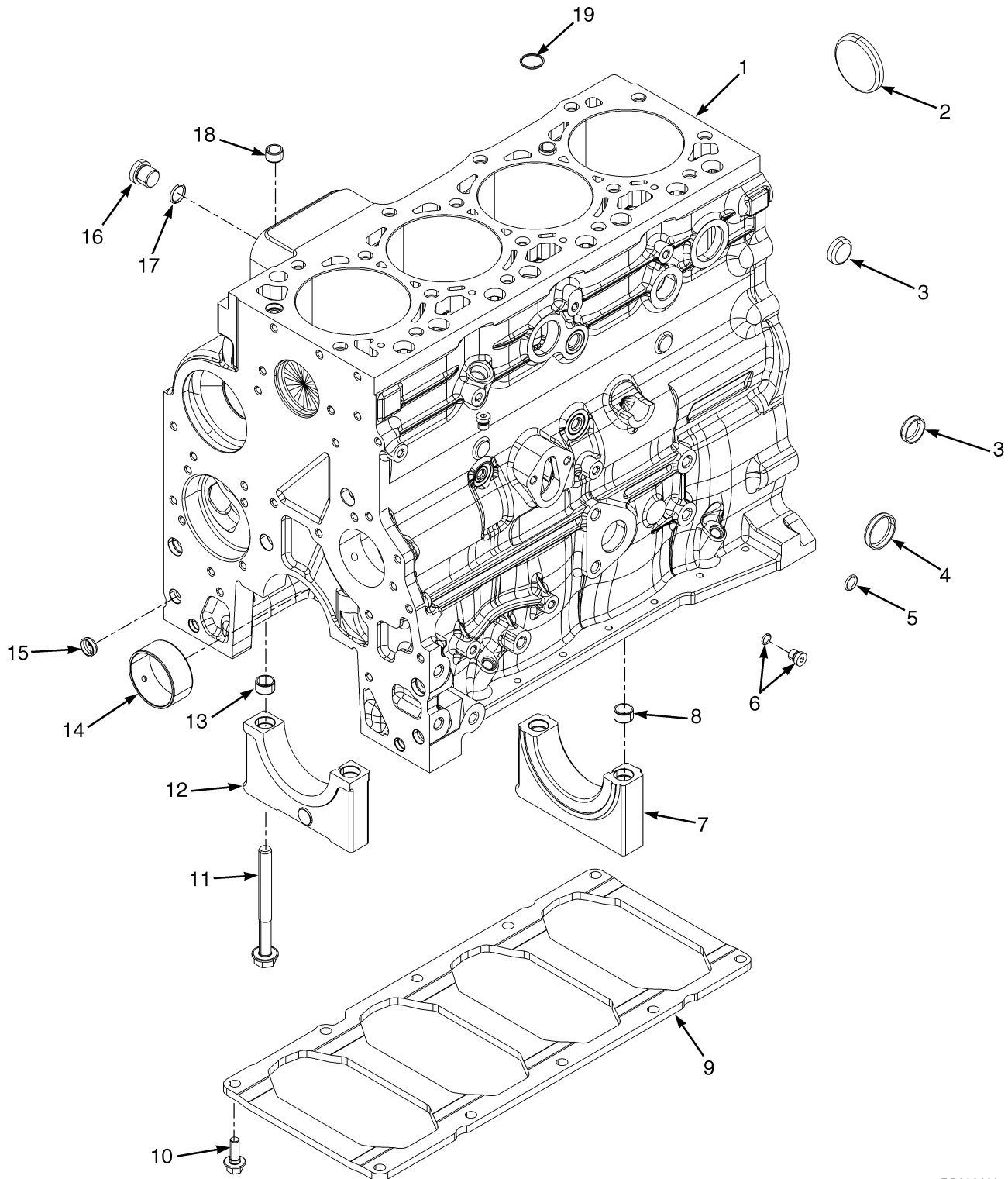
ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637803	Thermostat	1
2	1552716	Seal	1

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-27) CYLINDER BLOCK — CUMMINS 4.5L



BP090168

**DIESEL ENGINE ASSEMBLY
CYLINDER BLOCK – CUMMINS 4.5L**

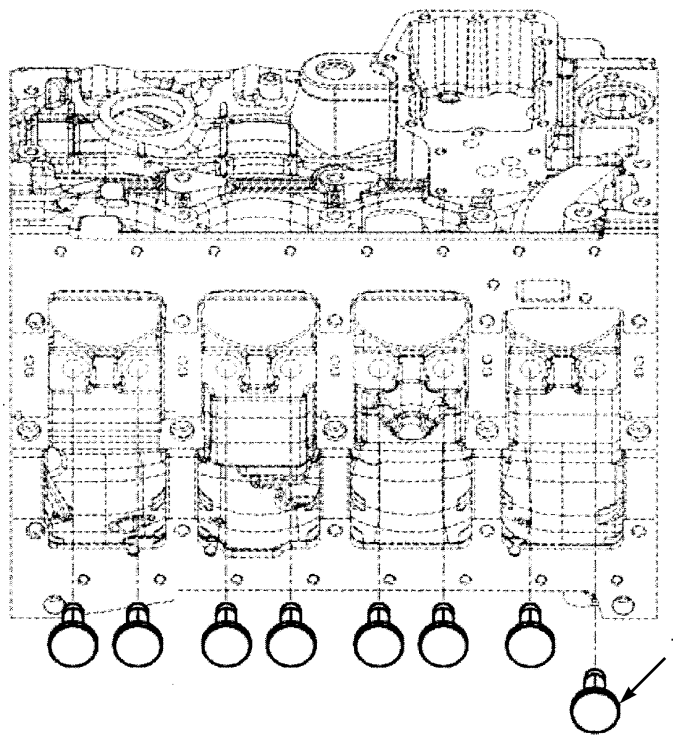
ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1		Cylinder Block	1
2	1618178	Plug	4
2	1661086	Plug	4
3	1512585	Plug	3
4	1513788	Plug	3
5	1517119	O-Ring	1
6	1517010	Plug	1
6	1517011	O-Ring	1
7	1635308	Cap (Main Bearing)	1
8	1521685	Ring	4
9	1637774	Plate	1
10	1512503	Capscrew	10
11	1521683	Capscrew	14
12	1635307	Cap (Main Bearing)	6
13	1521685	Ring	2
14	1521682	Bushing	2
15	1512304	Plug	3
16	1515897	Plug	2
17	1515898	O-Ring	1
18	1521691	Ring	2
19	1514339	Plug	1
	1640823	Plug (Not Illustrated)	1
	1512004	Capscrew (Not Illustrated)	1
	1640821	Kit	1
	1694855	Kit-Cylinder Block	1

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-28) VALVE TAPPETS — CUMMINS 4.5L

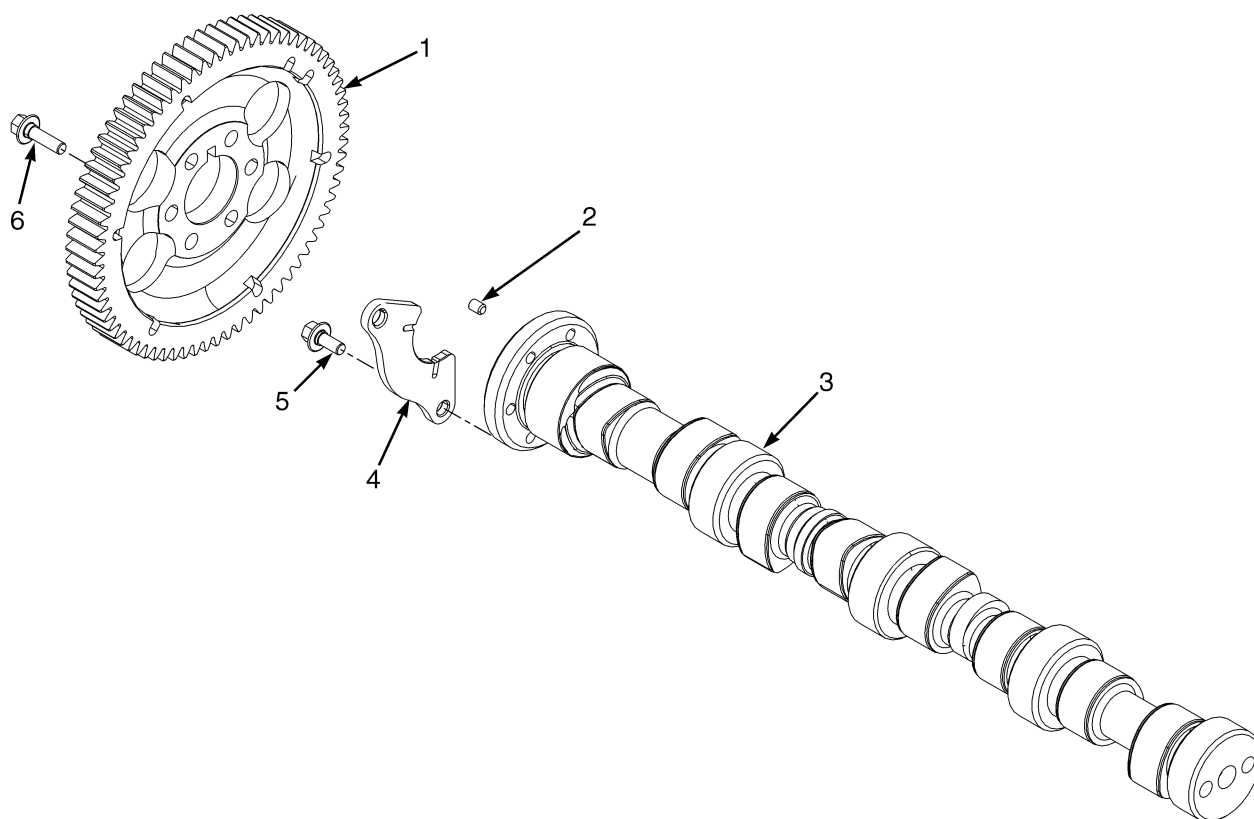


BP090304

ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1513734	Valve (Tappet)	8

FOOTNOTES:

- a** → S/N H006V02265E EXC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223
- b** S/N H006V02266F → INC. 02211, 02223-02224, 02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-29)
CAMSHAFT — CUMMINS 4.5L

BP0990302

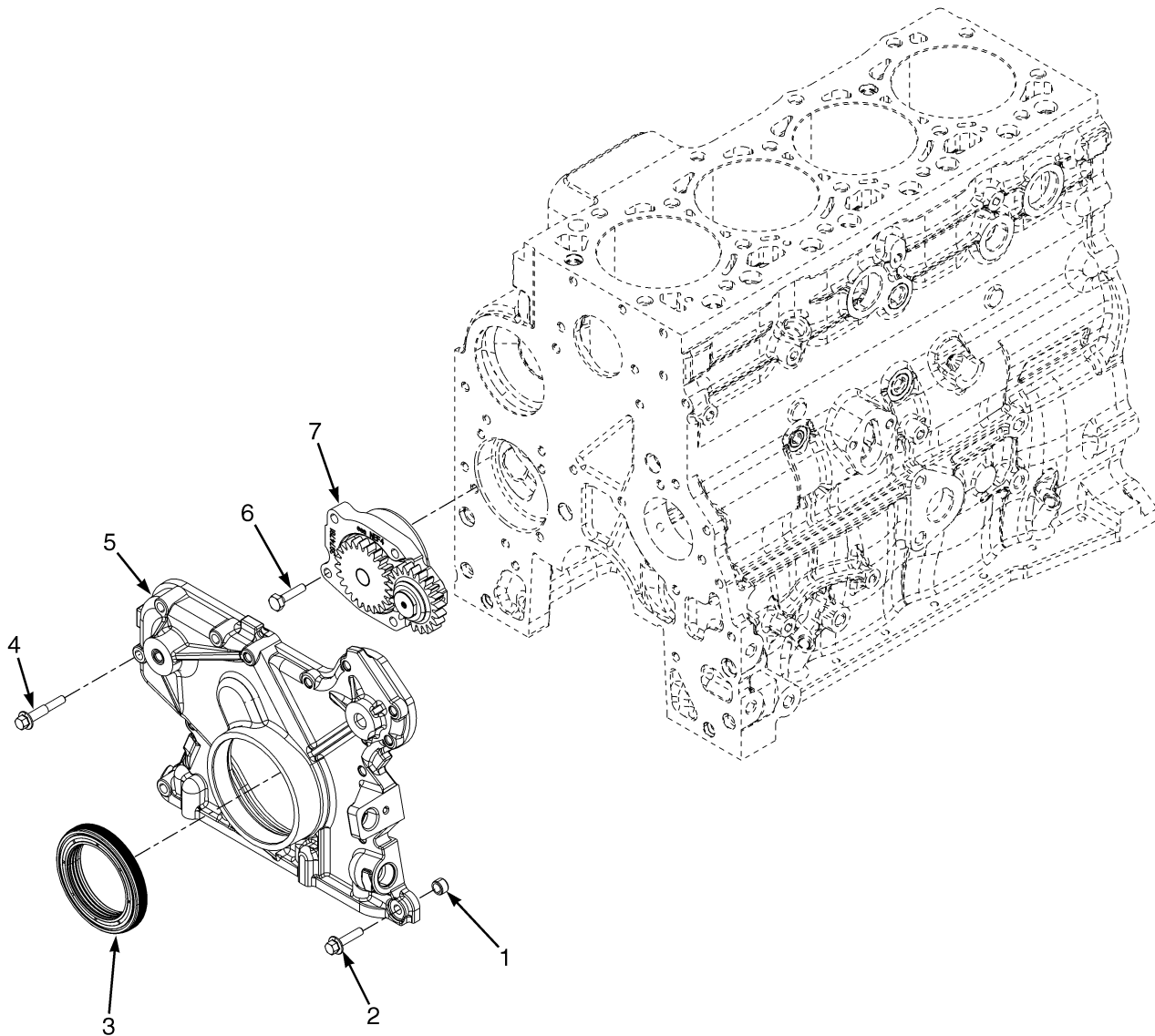
ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637874	Gear (Camshaft)	1
1	1696687	Gear (Camshaft)	1
2	1514346	Dowel	1
3	1637875	Camshaft	1
3	1637876	Camshaft	1
4	1635369	Plate	1
5	1513749	Capscrew	2
6	1597807	Capscrew (Flange)	6

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-30) OIL PUMP AND FRONT GEAR COVER — CUMMINS 4.5L



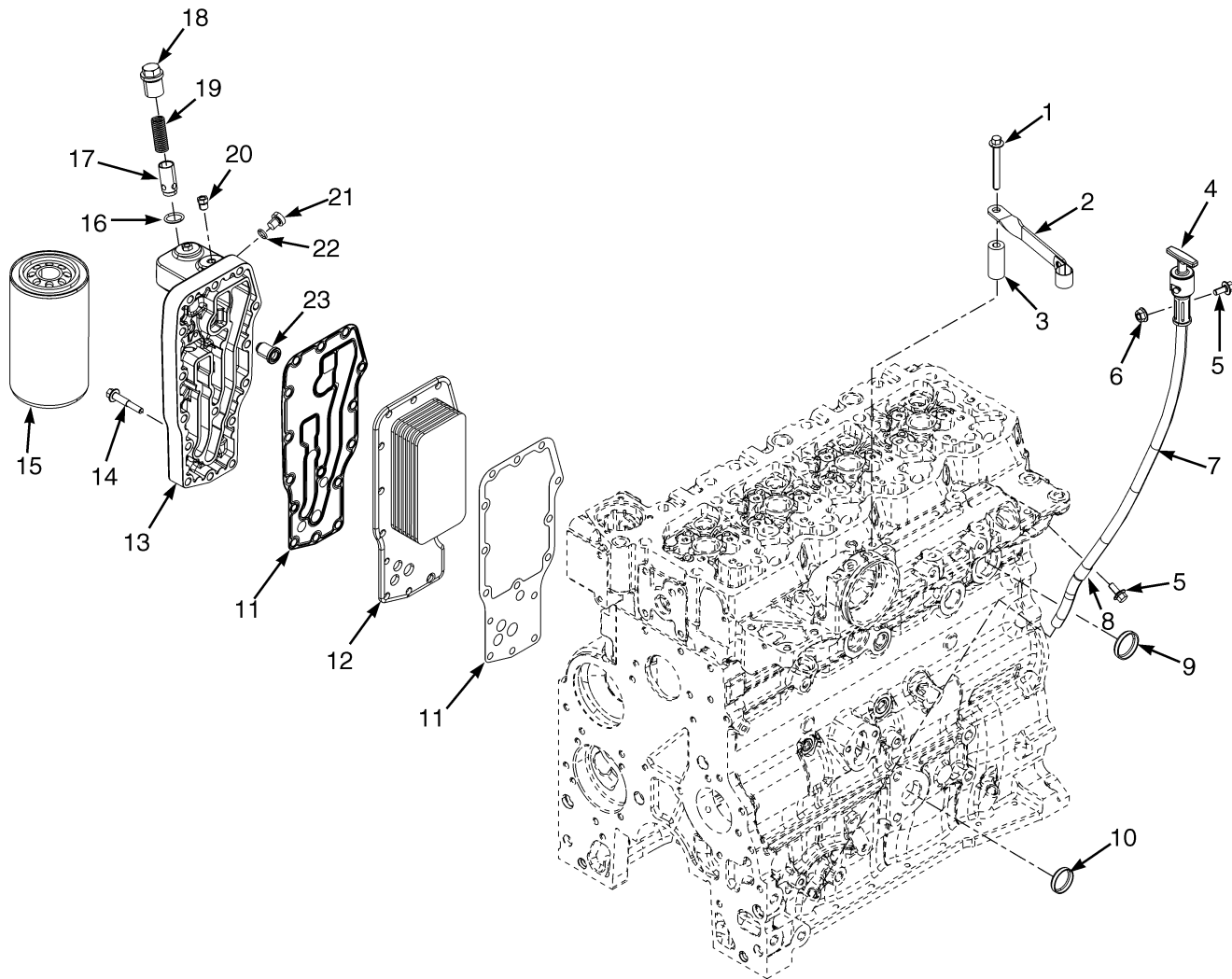
BP090300

DIESEL ENGINE ASSEMBLY
OIL PUMP AND FRONT GEAR COVER – CUMMINS 4.5L

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637841	Ring	2
2	1512423	Capscrew	8
3	1635350	Oil Seal	1
4	1512111	Capscrew	5
5	1637842	Cover	1
5	a 1696969	Cover	1
6	1512456	Capscrew	4
7	1637860	Oil Pump	1
7	1693387	Oil Pump (Alternate Part)	1

FOOTNOTES:**a** Use sealant 1651223**b** → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223**c** S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-31) LUBRICATION SYSTEM — CUMMINS 4.5L



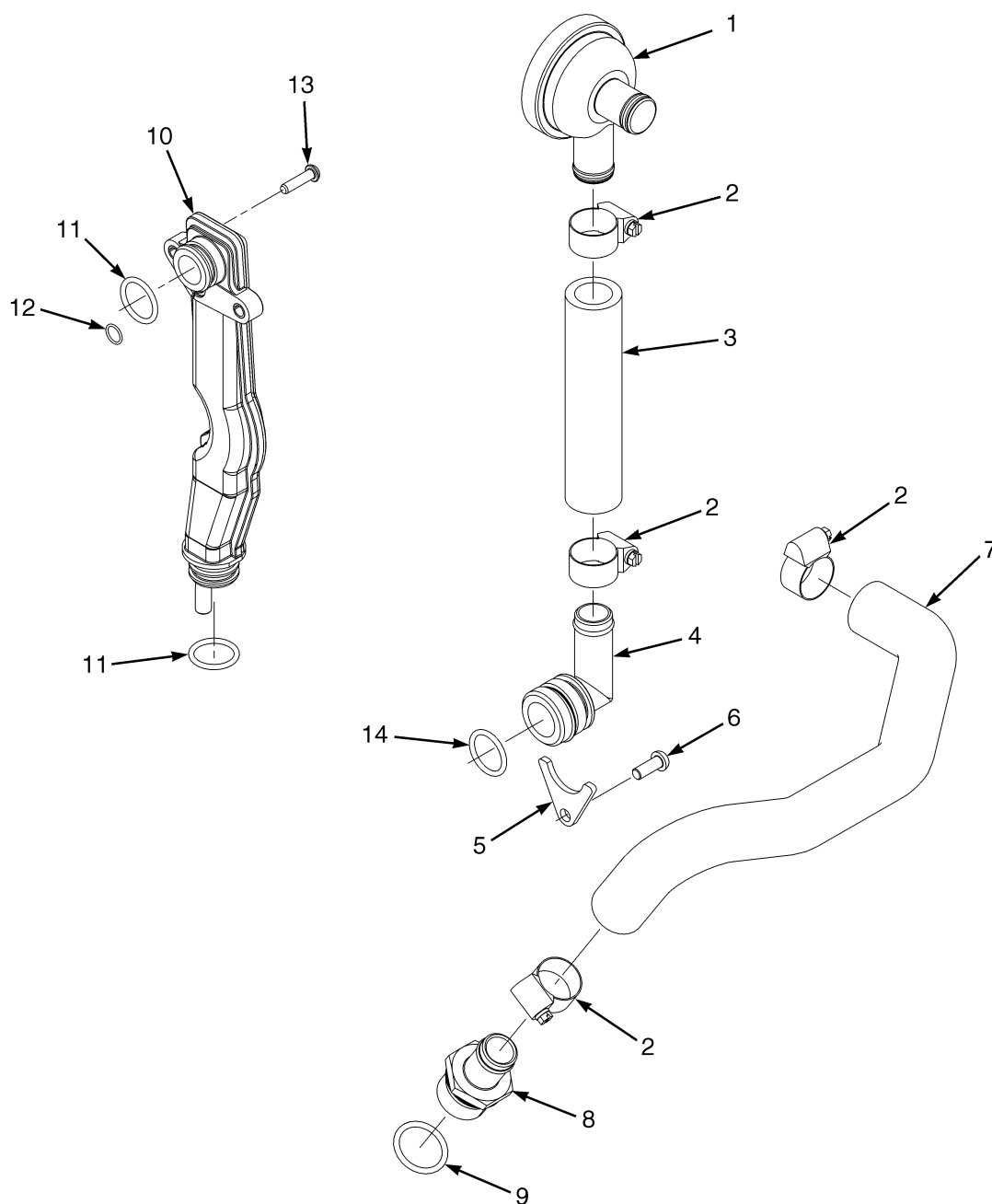
BP090301

**DIESEL ENGINE ASSEMBLY
LUBRICATION SYSTEM – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1553781	Capscrew	1
2	1638699	Brace	1
3	1638423	Spacer	1
4	1637857	Dipstick	1
5	1511970	Capscrew	3
6	1513712	Nut	2
7	1637858	Dipstick Tube	1
7	1637857	Dipstick	1
8	1513776	Clip	1
9	1513788	Plug	1
10	1521694	Plug	1
11	1635458	Kit-Gasket	1
12	1637854	Core (Oil Cooler)	1
13	1637852	Filter Head	1
14	1512111	Capscrew	15
15	1524551	Oil Filter	1
16	1512118	O-Ring	1
17	1637851	Plunger	1
18	1637850	Plug	1
19	1512112	Spring	1
20	1512448	Fitting	2
21	1517068	Plug	1
22	1517069	O-Ring	1
23	1513772	Relief Valve (Pressure Relief)	1
	a 1512130	Plug	3

FOOTNOTES:**a** Not Illustrated**b** → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223**c** S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-32) CRANKCASE BREATHER — CUMMINS 4.5L

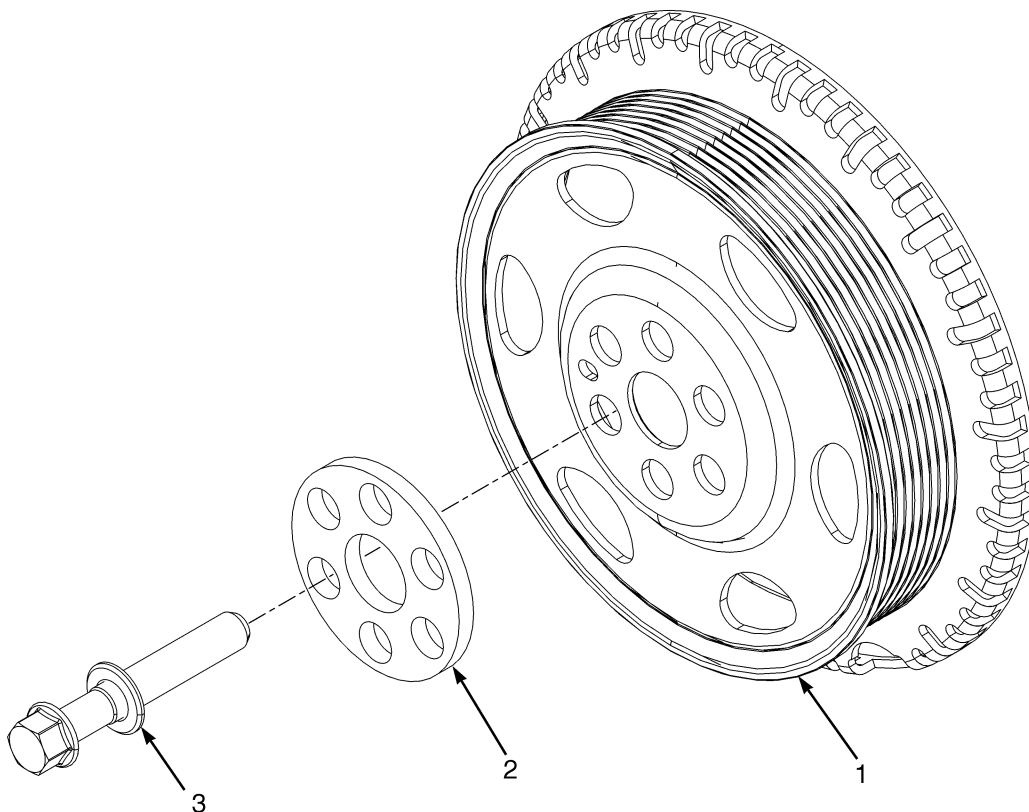


BP090321

**DIESEL ENGINE ASSEMBLY
CRANKCASE BREATHER – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637792	Pressure Regulator	1
2	1637791	Hose Clamp	4
3	1637799	Hose	1
4	1635286	Breather (Crankcase)	1
5	1635382	Plate	1
6	1635383	Capscrew	1
6	1661085	Capscrew	1
7	1637798	Hose	1
8	1637796	Fitting	1
8	1696680	Coupling	1
9	1511988	O-Ring	1
10	1635298	Tube Assy	1
11	1635281	O-Ring	2
12	1635227	O-Ring	1
13	1637795	Capscrew	1
14	1632984	O-Ring	1
	a 1635280	Capscrew	1
	a 1635259	Hose Clamp	1
	a 1696683	Plug	1
	a 1696682	Seal	1

FOOTNOTES:**a** Not Illustrated**b** → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223**c** S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

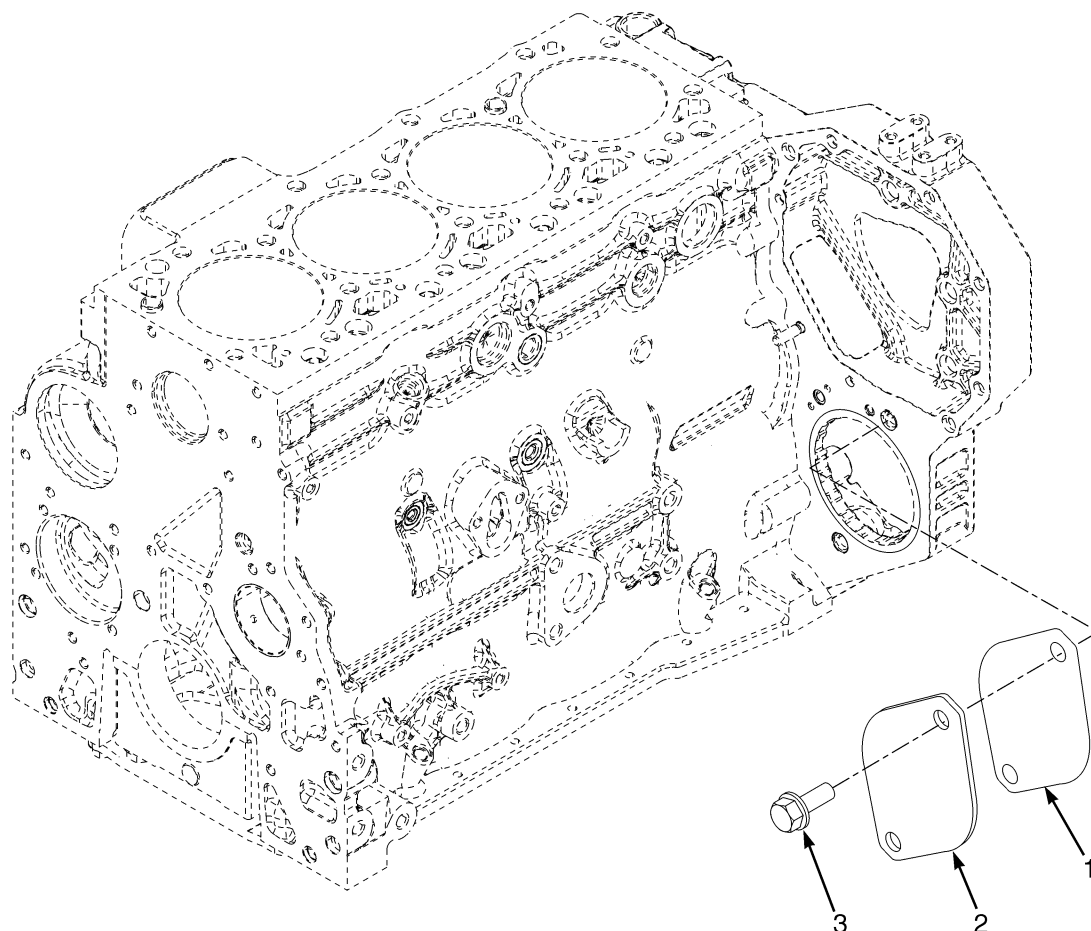
DIESEL ENGINE ASSEMBLY (FIGURE 2-33)
VIBRATION DAMPER — CUMMINS 4.5L

BP090290

ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
1	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637800	Crankshaft Pulley	1
2	1637801	Plate	1
3	1637802	Screw	6

FOOTNOTES:**a** → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223**b** S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-34) **REAR GEAR TRAIN ACCESSORY MOUNTING COVER — CUMMINS 4.5L**



BP090291

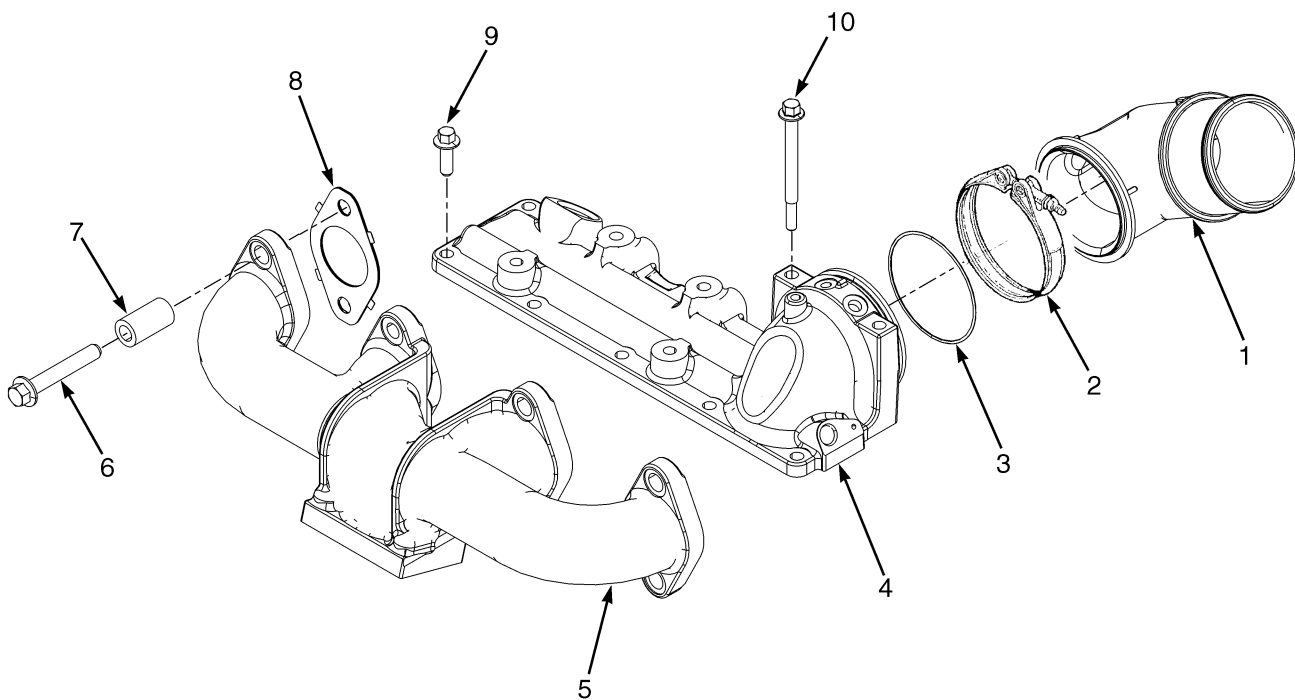
ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1635367	Gasket	1
2	1512417	Cover Plate	1
3	1511953	Capscrew	2
3	1512418	Capscrew	2
	a 1644095	Fitting	1
	a 1689641	Plug (Heater)	2

FOOTNOTES:

a Not Illustrated

b → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

c S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-35)
INTAKE AND EXHAUST MANIFOLDS — CUMMINS 4.5L

BP090298

DIESEL ENGINE ASSEMBLY **INTAKE AND EXHAUST MANIFOLDS – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1635412	Pipe	1
2	1635320	Clamp	1
2	1517094	Locknut	1
3	1635251	O-Ring	1
4	1637843	Intake Manifold	1
5	1637955	Exhaust Manifold	1
6	1517257	Screw	8
7	1517256	Spacer	8
8	1553965	Gasket	4
9	1512295	Capscrew	6
10	1635257	Capscrew	2
	a 1654061	Stud	4

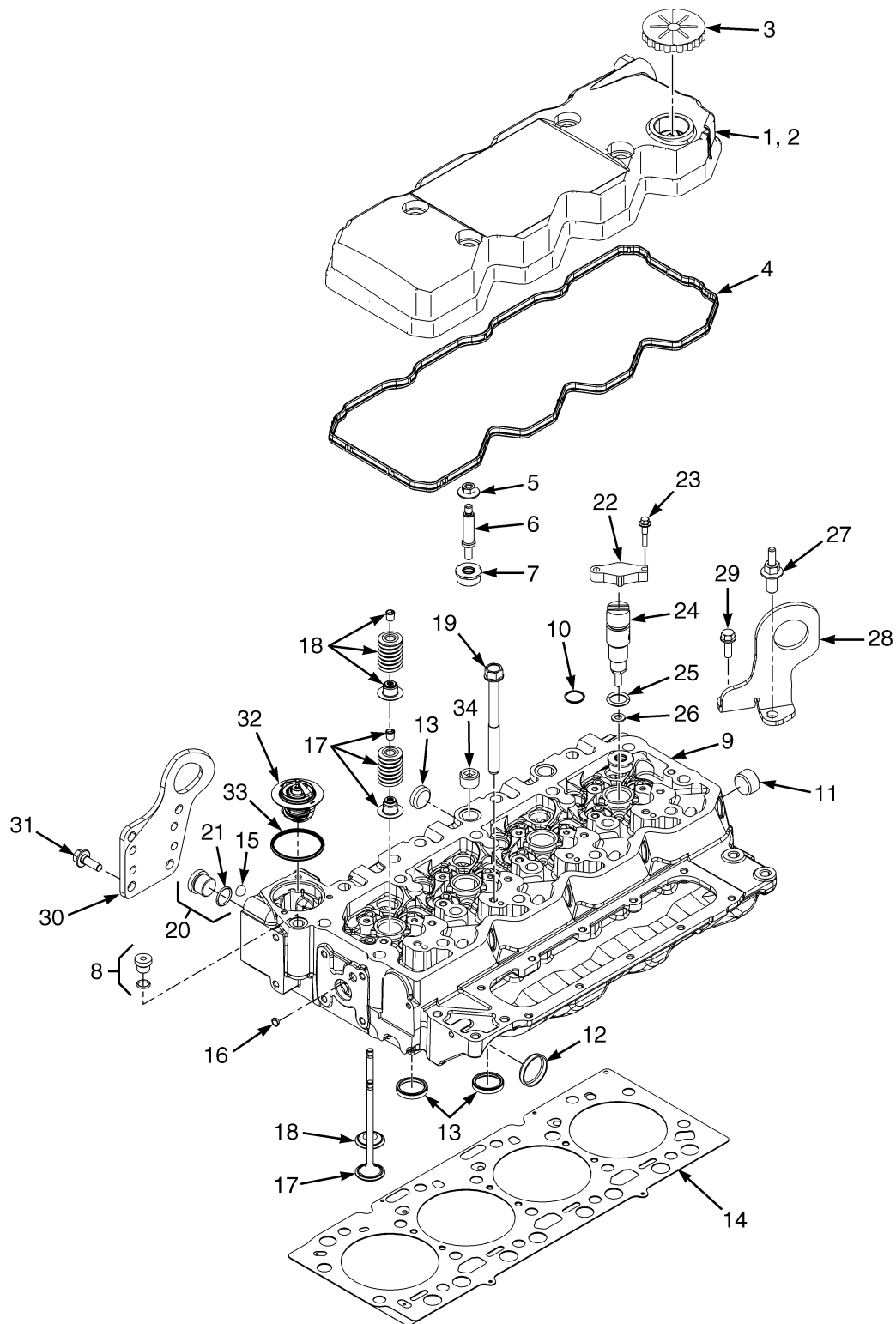
FOOTNOTES:

a Not Illustrated

b → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

c S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-36) CYLINDER HEAD — CUMMINS 4.5L



BP090294

**DIESEL ENGINE ASSEMBLY
CYLINDER HEAD – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1		Valve Cover Assembly	1
2	1663559	Cover	1
2	1649353	Label	1
3	1635360	Cap	1
3	1636525	Filler Cap	1
3	1635361	Gasket (Fill Cap)	1
4	1637950	Gasket (Valve Cover)	1
5	1635356	Nut	4
6	1635368	Stud	4
7	1635379	Isolator	4
8	1521695	Plug	1
8	1517119	O-Ring	1
9		Cylinder Head	1
10	1514339	Plug	9
10	1514339	Plug	7
11	1512292	Plug	3
12	1517190	Plug	1
13	1635464	Insert	8
13	1584925	Insert	8
14	1637926	Cylinder Head Gasket	1
15	1521919	Plug	2
16	1512586	Plug	5
17	1521913	Kit-Valve (Intake)	8
17	1521915	Retainer	16
17	1661289	Spring	16
17	1661289	Spring	24
18	1635346	Kit-Exhaust Valve (Exhaust)	8
18	1521912	Valve Kit (Exhaust)	8
18	1584923	Seal (Valve Stem)	1
18	1584922	Seal (Valve Stem)	1
18	1521914	Keeper	2
19	1521901	Screw	18
20	1521695	Plug	1
21	1517262	O-Ring	1
22	1517195	Clamp	4
23	1513791	Screw	8
24	1637927	Injector	4
24	1637928	Fuel Injector	4
25	1517210	O-Ring	1
26	1584914	Seal	1
27	1521895	Screw	1
28	1637849	Bracket	1
29	1512418	Capscrew	1
30	1635357	Bracket	1
31	1512503	Capscrew	4
32	1637803	Thermostat	1
33	1552716	Seal	1
34	1511952	Fitting	2

**DIESEL ENGINE ASSEMBLY
CYLINDER HEAD – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
34	1677128	Drain Valve	2
	a 1512584	Plug	1
	a 1512585	Plug	1
	1637877	Cylinder Head	1
	1666551	Kit-Gasket (Upper Engine)	1

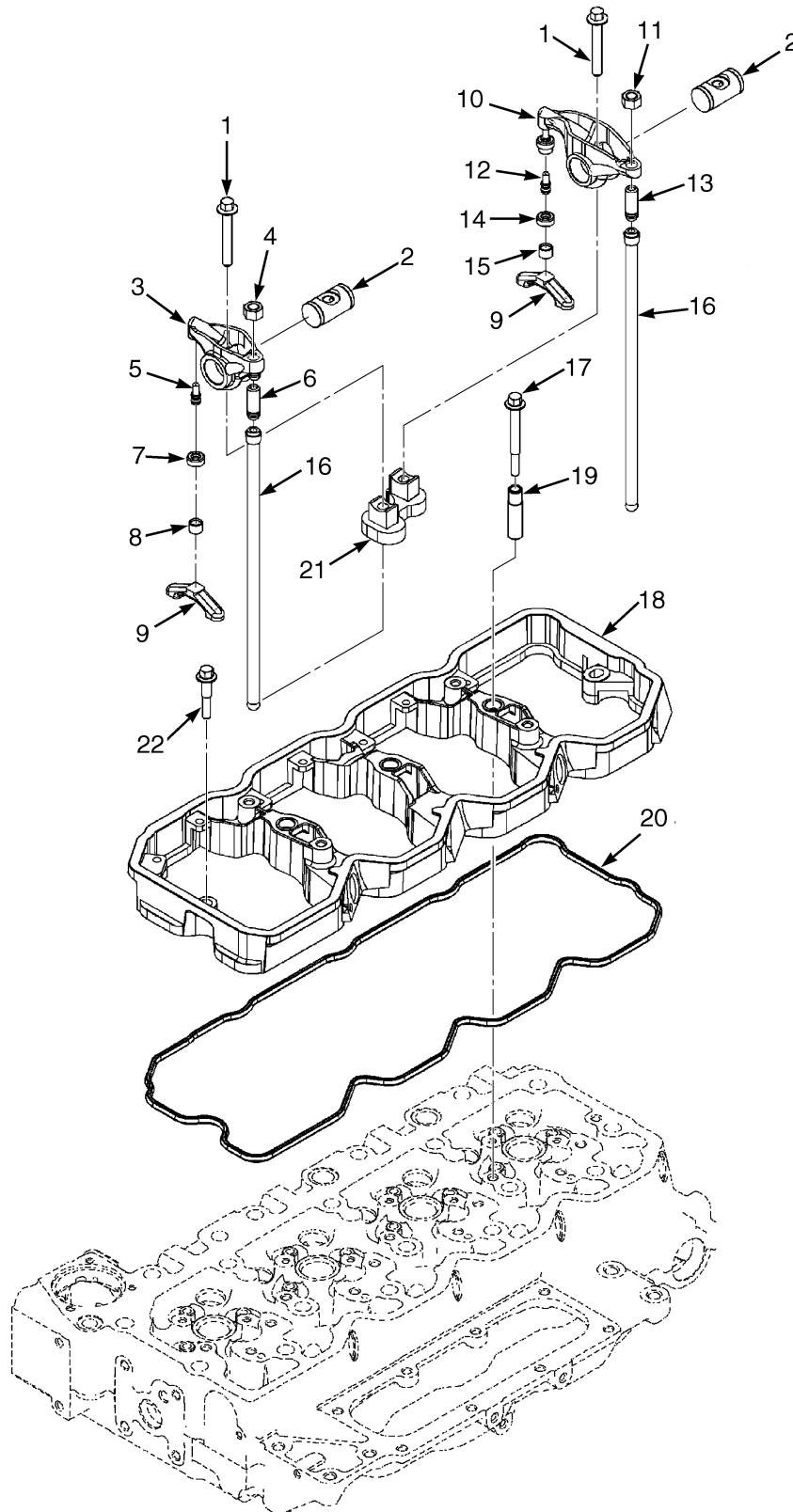
FOOTNOTES:

- a** Not Illustrated
- b** → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223
- c** S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

NOTES

[illegible]

DIESEL ENGINE ASSEMBLY (FIGURE 2-37) ROCKER LEVERS — CUMMINS 4.5L



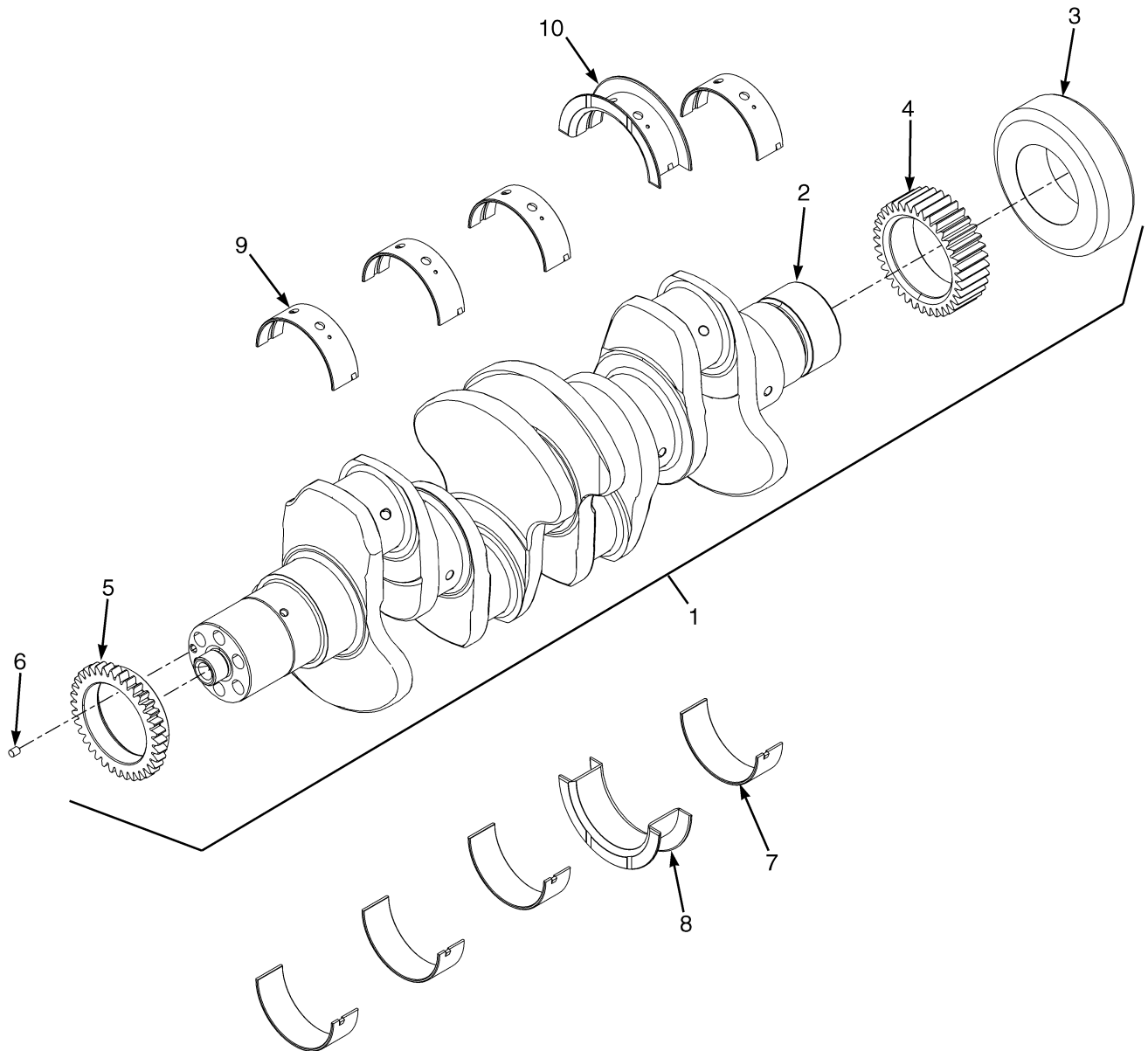
BP090312

**DIESEL ENGINE ASSEMBLY
ROCKER LEVERS – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
	b 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	c 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
		Rocker Lever Assembly	4
1	1553952	Capscrew	2
2	1635388	Rocker Shaft	2
3	1521939	Rocker (Intake)	1
3		Lever	1
4	1513806	Nut	1
5		Ball	1
6	1553956	Screw	1
7		Retainer	1
8		Socket	1
9	1521944	Valve (Crosshead)	8
10	1521937	Rocker (Exhaust)	1
10		Lever	1
11	1513806	Nut	1
11	1517246	Nut	1
12		Ball	1
13	1553956	Screw	1
14		Retainer	1
15		Socket	1
16	1521943	Push Rod	8
17	1635254	Capscrew	3
18	1637945	Housing	1
18	1637946	Housing	1
18	1695098	Housing	1
18	1695099	Housing	1
19		Sleeve	3
19	1661320	Rocker Shaft	3
20	1637944	Gasket	1
21	1584933	Support	1
22	1513725	Capscrew	2
	a 1514339	Plug	2
	a 1635368	Stud	4
	a 1635383	Capscrew	2

FOOTNOTES:**a** Not Illustrated**b** → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223**c** S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-38) CRANKSHAFT AND MAIN BEARINGS — CUMMINS 4.5L



BP090289

DIESEL ENGINE ASSEMBLY CRANKSHAFT AND MAIN BEARINGS – CUMMINS 4.5L

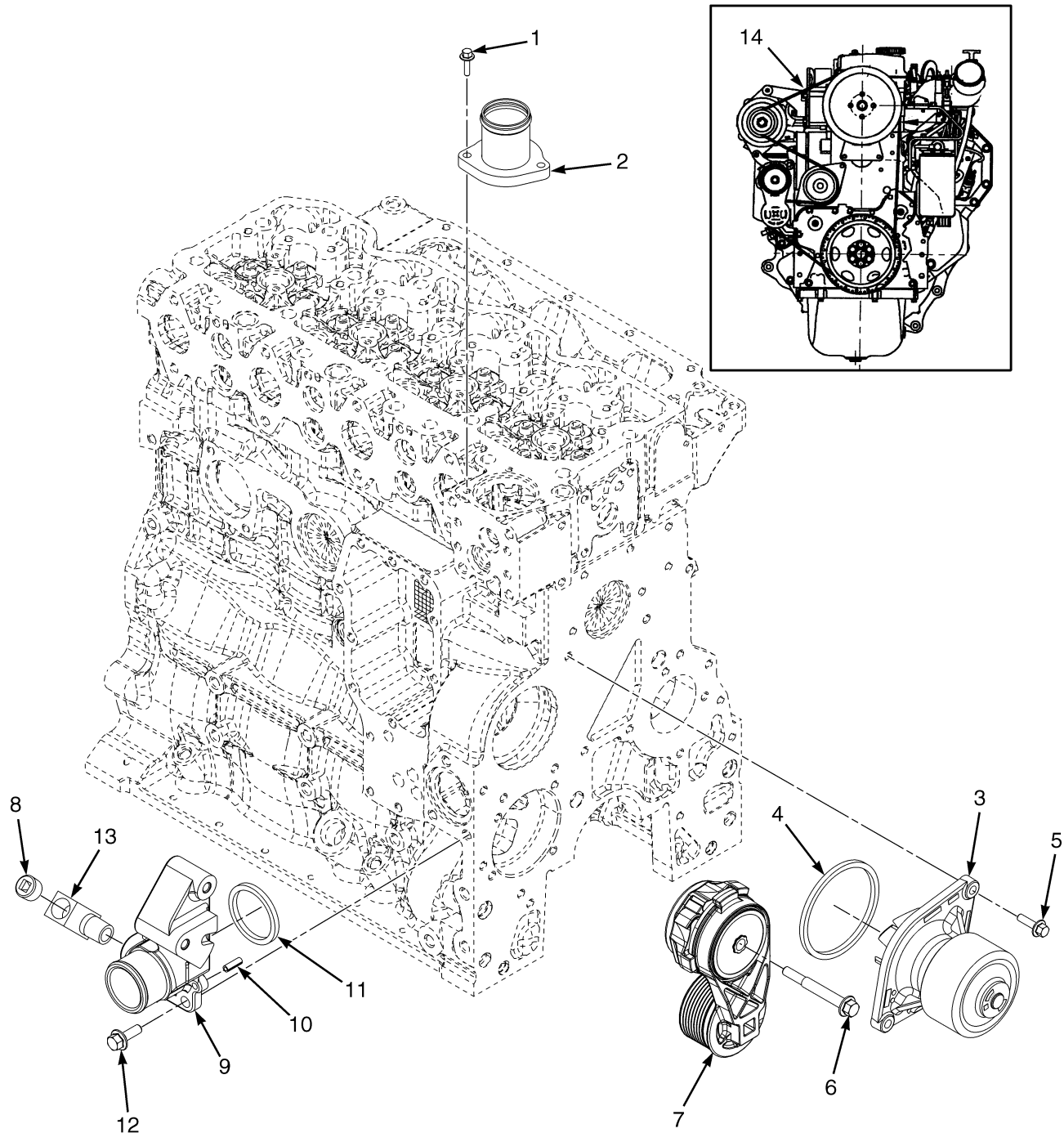
ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1637788	Crankshaft	1
2	1637775	Crankshaft	1
2		Crankshaft	1
3		Collar	1
4	1635274	Gear	1
5	1635273	Gear	1
6	1514346	Dowel	1
7	1543317	Bearing (Standard) (Lower)	4
7	1696674	Bearing (Standard) (Lower)	4
8	1637777	Thrust Bearing (Standard) (Lower)	1
9	1543318	Bearing (Standard) (Upper)	4
9	1696675	Bearing (Standard) (Upper)	4
9	1585002	Bearing (0.25 mm O/S)	AR
9	1584992	Bearing (0.50 mm O/S)	AR
9	1584995	Bearing (0.75 mm O/S)	AR
9	1585000	Bearing (1.00 mm O/S)	AR
10	1543316	Thrust Bearing (Standard) (Upper)	1
10	1707004	Thrust Bearing (Upper) (Alternate Part)	1

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-39) WATER PUMP AND CONNECTIONS — CUMMINS 4.5L



BP090299

DIESEL ENGINE ASSEMBLY WATER PUMP AND CONNECTIONS – CUMMINS 4.5L

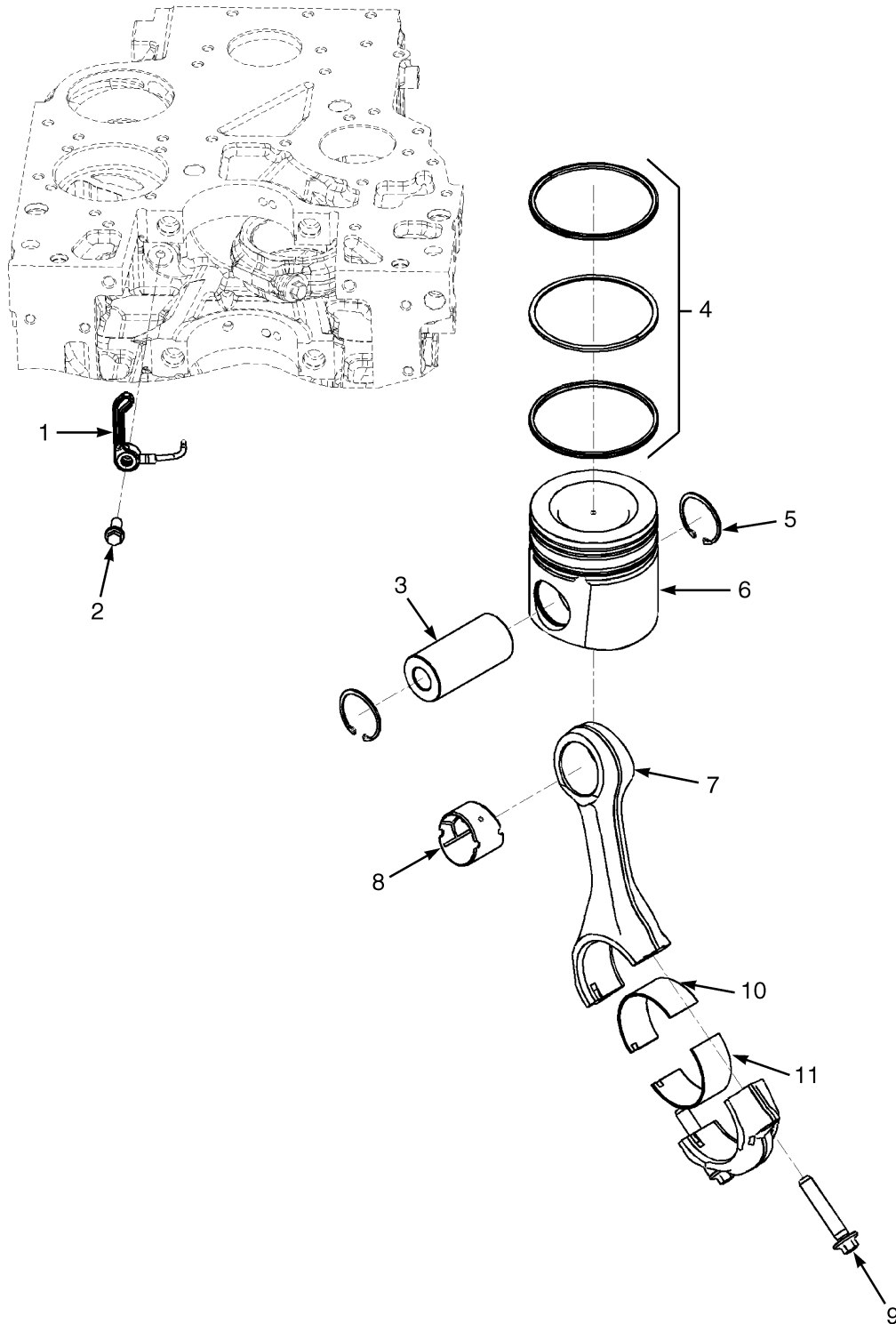
ITEM	PART NO.	DESCRIPTION	QTY
	a 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	b 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1513792	Capscrew	1
2	1521973	Water Outlet (Outlet)	1
3	1635242	Water Pump	1
3	1703491	Water Pump (Alternate Part)	1
4	1512322	Sealing Ring	1
5	1597807	Capscrew (Flange)	2
6	1521938	Capscrew	1
7	1635318	Belt Tensioner	1
8	1511952	Fitting	1
8	1689641	Plug	1
9	1637952	Water Inlet (Inlet)	1
9	1637953	Water Inlet	1
10	1521971	Roll Pin	2
11	1512305	O-Ring	1
12	1512503	Capscrew	3
13	1637951	Elbow	1
	1676321	V-Belt (Fan) (Drive) (Not Illustrated)	1

FOOTNOTES:

a → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

b S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

DIESEL ENGINE ASSEMBLY (FIGURE 2-40) PISTON AND CONNECTING ROD — CUMMINS 4.5L



BP090297

DIESEL ENGINE ASSEMBLY **PISTON AND CONNECTING ROD – CUMMINS 4.5L**

ITEM	PART NO.	DESCRIPTION	QTY
	c 1501932	Engine Assy-Diesel (Cummins 4.5L)	1
	d 2104489	Engine Assy-Diesel (Cummins 4.5L)	1
1	1635293	Nozzle (Piston Cooling)	4
1	1661211	Nozzle (Piston Cooling)	4
2	1635282	Screw (Banjo Connector)	4
3	1635400	Pin	4
4	1638418	Kit-Piston Ring	4
5	1512146	Retaining Ring	8
6		Piston	4
6	1678276	Piston (Engine)	4
7	1637868	Piston Rod	4
7	1696686	Rod (Assembly)	4
7		Rod	1
7	1697314	Rod	4
8	1553262	Bushing	1
9	1553261	Capscrew	2
10	b 1635295	Bearing (Standard)	4
10	b 1638419	Bearing (.25mm Oversized)	AR
10	b 1638420	Bearing (.50mm Oversized)	AR
10	b 1638421	Bearing (.75mm Oversized)	AR
10	b 1638422	Bearing (1.00mm Oversized)	AR
11	a 1543445	Bearing (Standard)	4
11	a 1584817	Bearing (.010 in.) (.25mm Oversized)	AR
11	a 1584818	Bearing (.020 in.) (.50 Oversized)	AR
11	a 1584819	Bearing (.030 in.) (.75 Oversized)	AR
11	a 1584820	Bearing (.040 in.) (1.0 Oversized)	AR
	1678329	Kit-Piston	1

FOOTNOTES:

a Lower
b Upper

c → S/N H006V02265F EXC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223
d S/N H006V02266F → INC. 02211, 02223-02224,
02228-02229, 02232-02233, 0223

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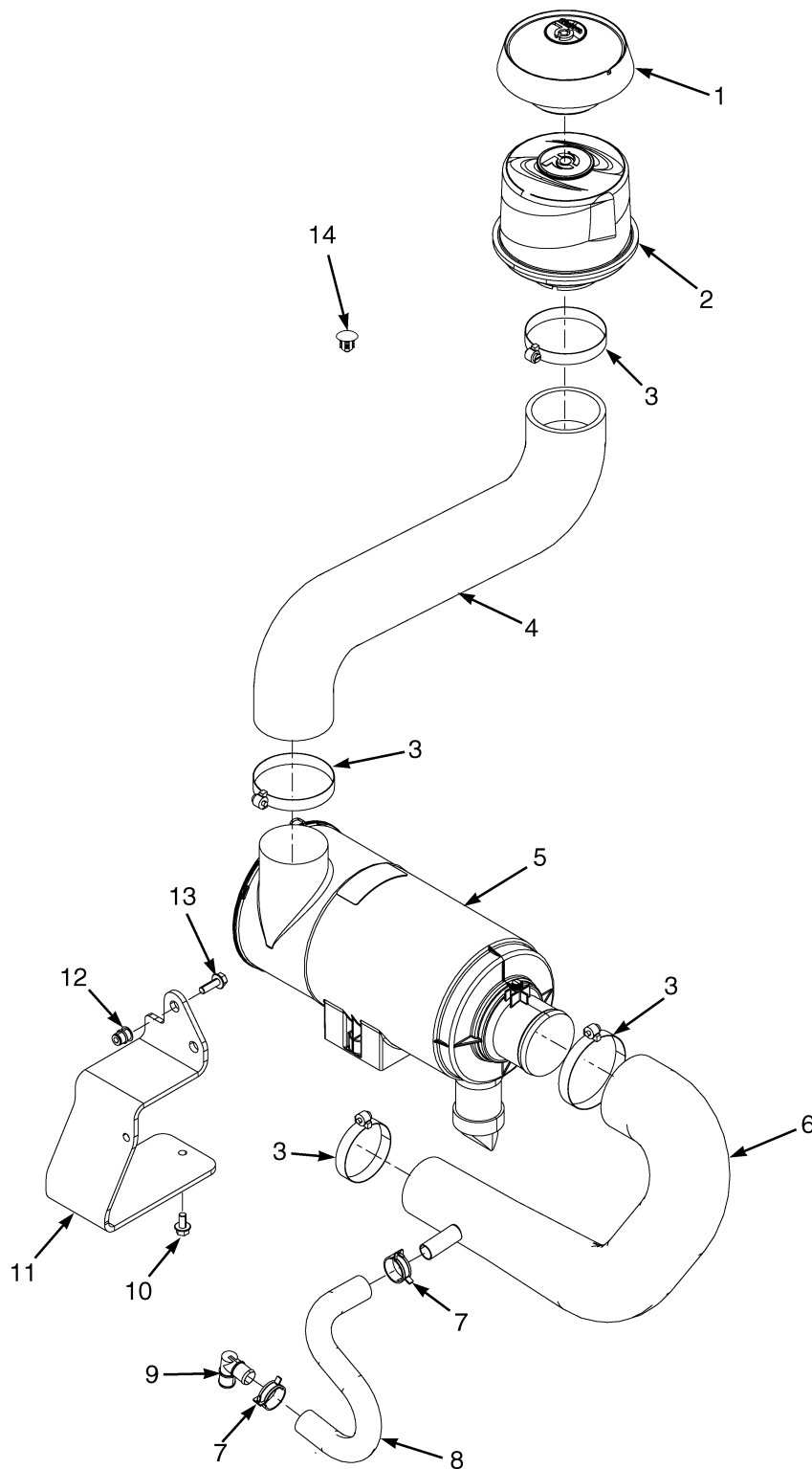
FUEL SYSTEM

**SECTION 3
FUEL SYSTEM**

DESCRIPTION	PAGE
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AIR INTAKE	
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AIR INTAKE (FIGURE 3-1)

GM 4.3L GASOLINE AND LPG (→ S/N H006V02775F)



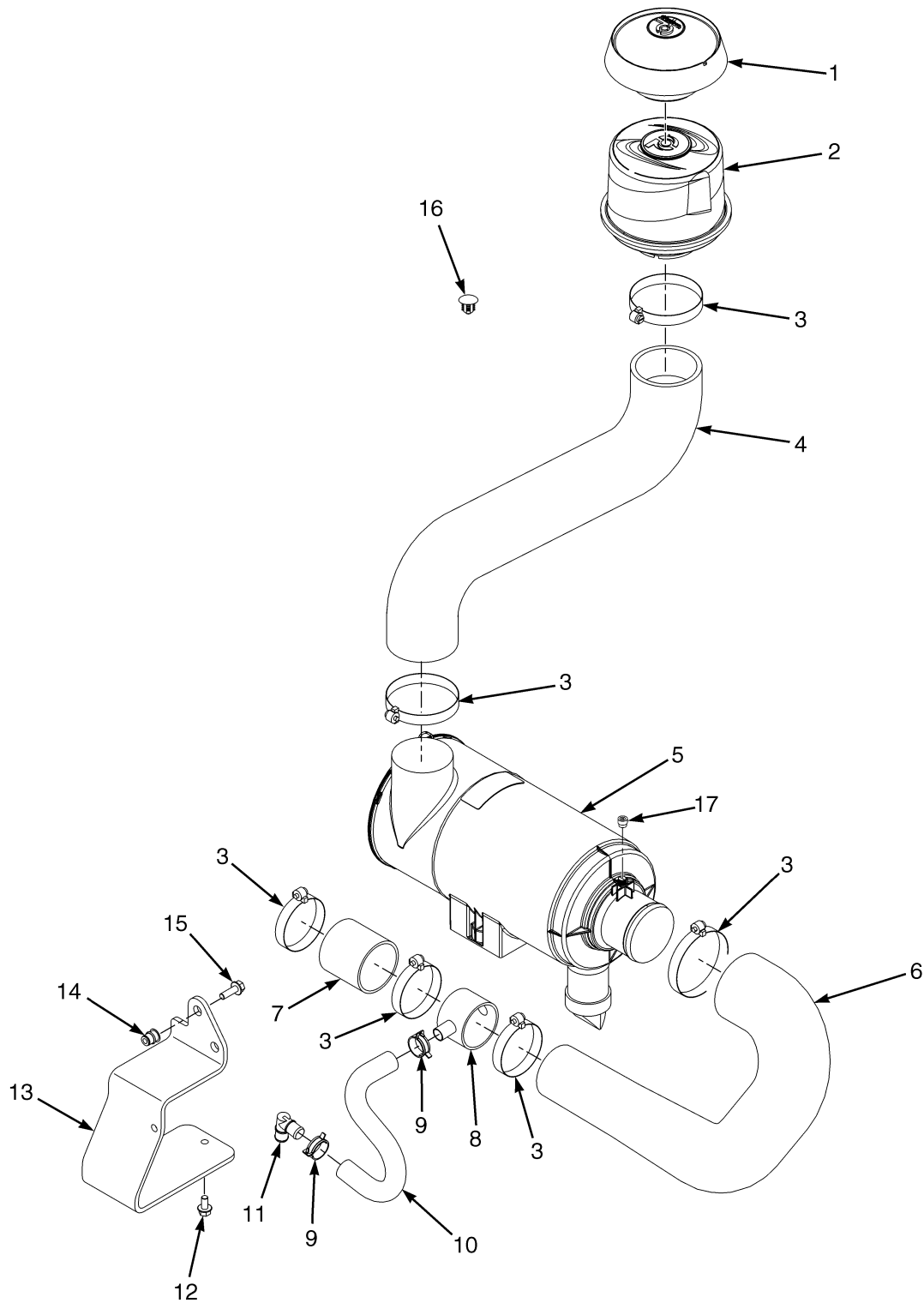
BP130269

AIR INTAKE
GM 4.3L GASOLINE AND LPG (→ S/N H006V02775F)

ITEM	PART NO.	DESCRIPTION	QTY
1	154821	Cap	1
2	1501888	Pre-Cleaner	1
3	115696	Hose Clamp	4
4	2081788	Hose	1
5	2070530	Air Filter (☞ Figure 3-4).....	1
6	2081789	Hose (Clean Air)	1
7	1502009	Hose Clamp	2
8	2093738	Hose	1
9	379407	Fitting	1
10	1527879	Capscrew	2
11	1640863	Bracket	1
12	1530243	Insert	2
13	1510113	Capscrew	2

AIR INTAKE (FIGURE 3-2)

GM 4.3L GASOLINE AND LPG (S/N H006V02776F →)



BP130284

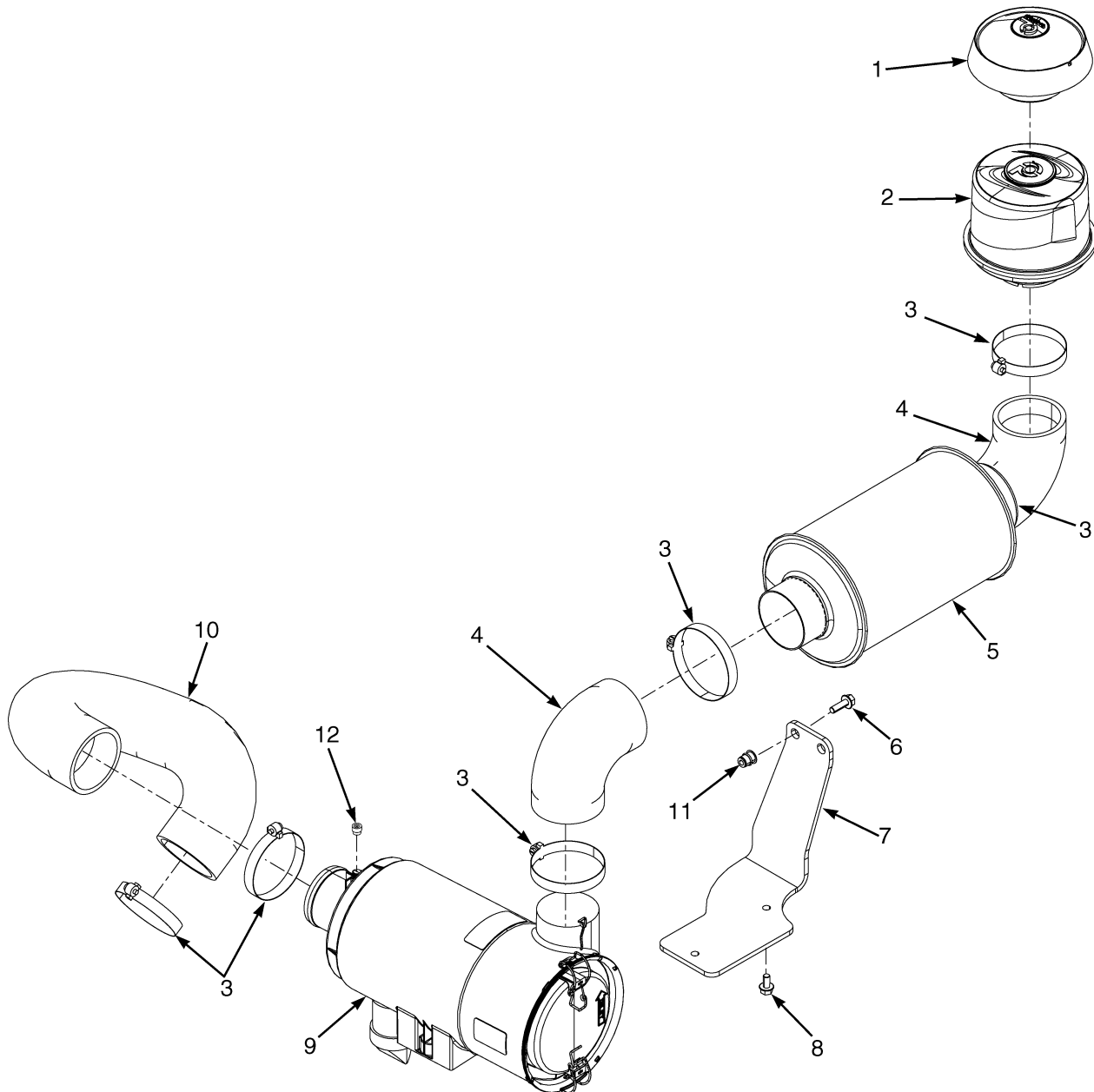
AIR INTAKE
GM 4.3L GASOLINE AND LPG (S/N H006V02776F →)

ITEM	PART NO.	DESCRIPTION	QTY
1	154821	Cap	1
2	1501888	Pre-Cleaner	1
3	115696	Hose Clamp	6
4	2081788	Hose	1
5	2070530	Air Filter	1
6	2099382	Hose (Clean Air)	1
7	2099381	Hose (Air Intake)	1
8	1661665	Coupler (PCV)	1
9	1502009	Hose Clamp	2
10	2093738	Hose	1
11	379407	Fitting	1
12	1527879	Capscrew	2
13	1640863	Bracket	1
14	1530243	Insert	2
15	1510113	Capscrew	2
16	1561847	Plug	2
17	a 165991	Indicator (Restriction)	1

FOOTNOTES:

a PENDING PER ECN 13628104 →

AIR INTAKE (FIGURE 3-3) CUMMINS 4.5L DIESEL



BP130270

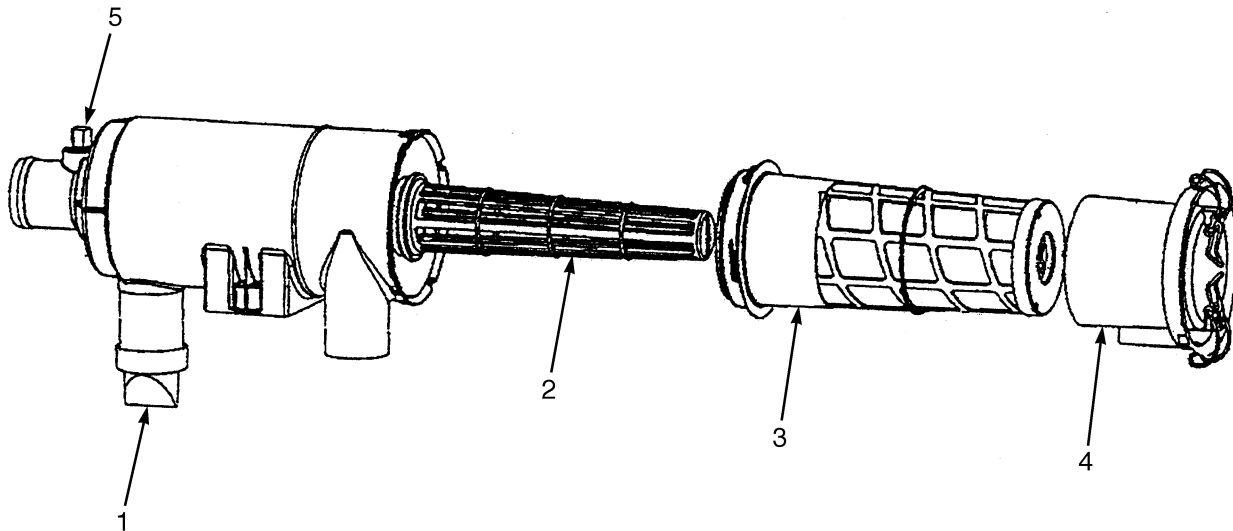
**AIR INTAKE
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	154821	Cap	1
2	1501888	Pre-Cleaner	1
3	115696	Hose Clamp	6
4	2091071	Hose	2
5	2090696	Silencer	1
6	1510113	Capscrew	2
7	1588238	Bracket	1
8	1527879	Capscrew	2
9	2070530	Air Filter (☞ Figure 3-4).....	1
10	2093742	Hose (Clean Air)	1
11	1530243	Insert	2
12	a 165991	Indicator (Restriction)	1

FOOTNOTES:

a PENDING PER ECN 13628104 →

AIR FILTER (FIGURE 3-4)



BP070054

ITEM	PART NO.	DESCRIPTION	QTY
	2070530	Air Filter	1
1	374923	Valve	1
2	1620145	Inner Liner Assy (Gasket)	1
3	1620142	Filter Element	1
4	b 1620144	Cover	1
4	c 1688547	Cover (Alternate Part)	1
5	141331	Cap	1
	a 2095889	Label (Air Filter Installation)	1

FOOTNOTES:

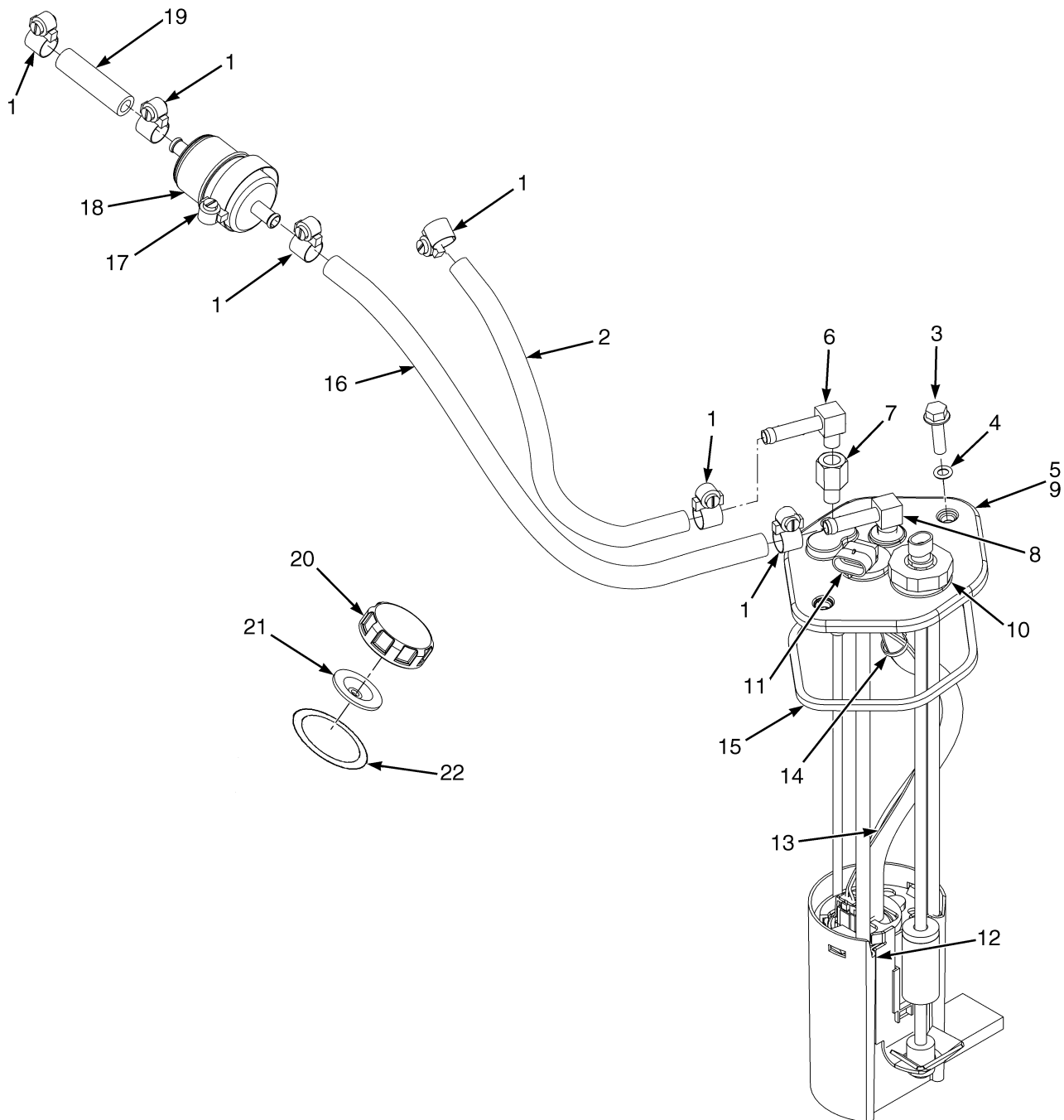
a Not Illustrated
b → S/N H006V02399F

c S/N H006V02400F →

NOTES

[illegible]

FUEL SUPPLY SYSTEM (FIGURE 3-5) GM 4.3L GASOLINE



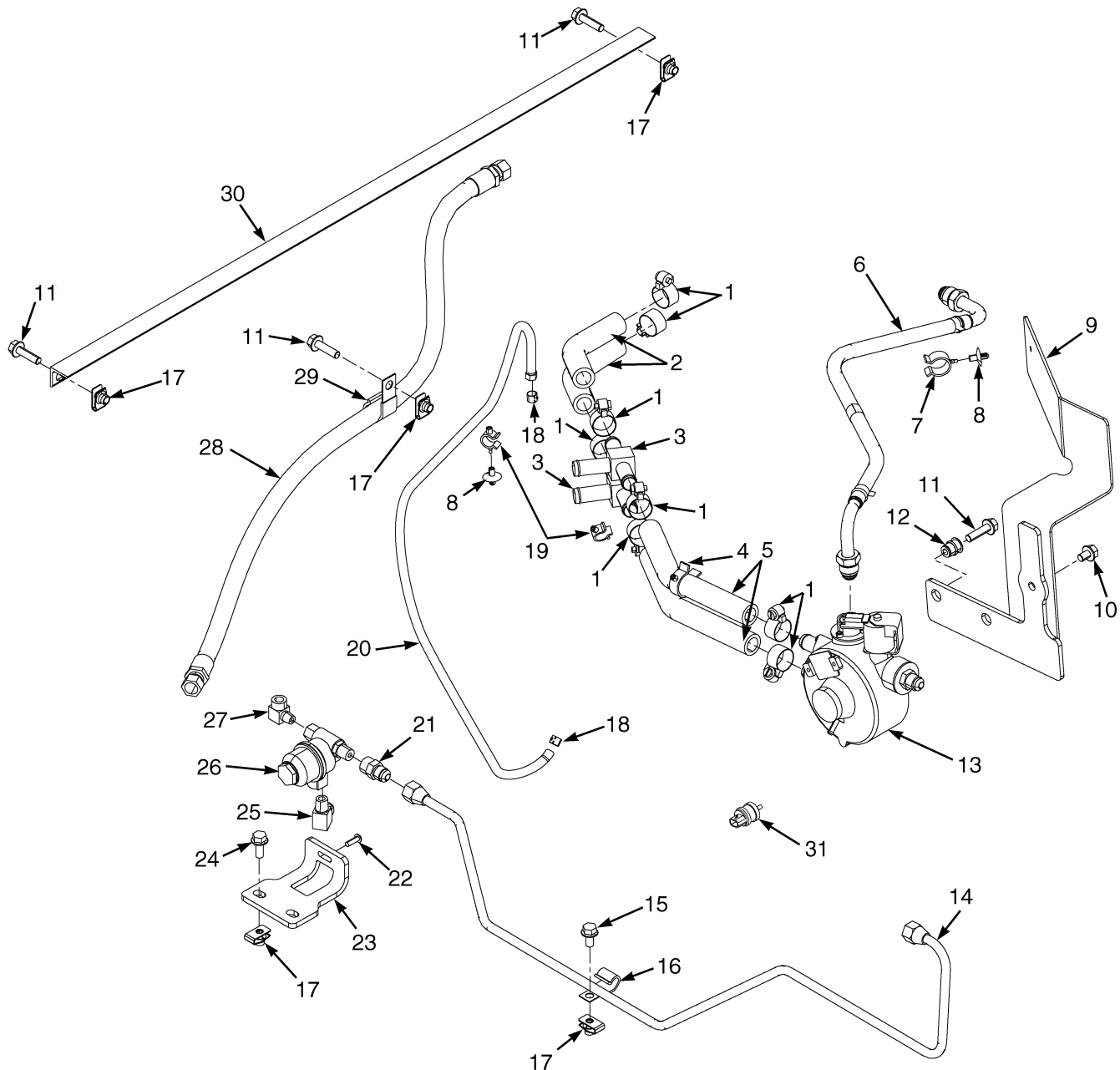
BP130271

FUEL SUPPLY SYSTEM
GM 4.3L GASOLINE

ITEM	PART NO.	DESCRIPTION	QTY
1	166857	Clamp	6
2	2080130	Hose	1
3	1527881	Capscrew	2
4	353000	O-Ring	1
5	1608872	Fuel Sender	1
6	192306	Fitting	1
7	12856	Fitting	1
8	17353	Fitting	1
9	1551665	Cover	1
10	1551828	Fuel Sender	1
11	1371149	Connector	1
12	1590211	Bracket	1
13	1511729	Wire Harness	1
14	114312	Strap Clamp	1
15	1528893	Quad Ring	1
16	2074231	Hose	1
17	119236	Clamp	1
18	1553541	Fuel Filter	1
19	2066137	Hose	1
20	1579677	Fuel Cap	1
21	1528608	Grommet	1
22	325549	Shim (0.020 in.)	1
	a 1528481	Plug (With O-Ring) (Fuel Tank Drain)	1

FOOTNOTES:**a** Not Illustrated

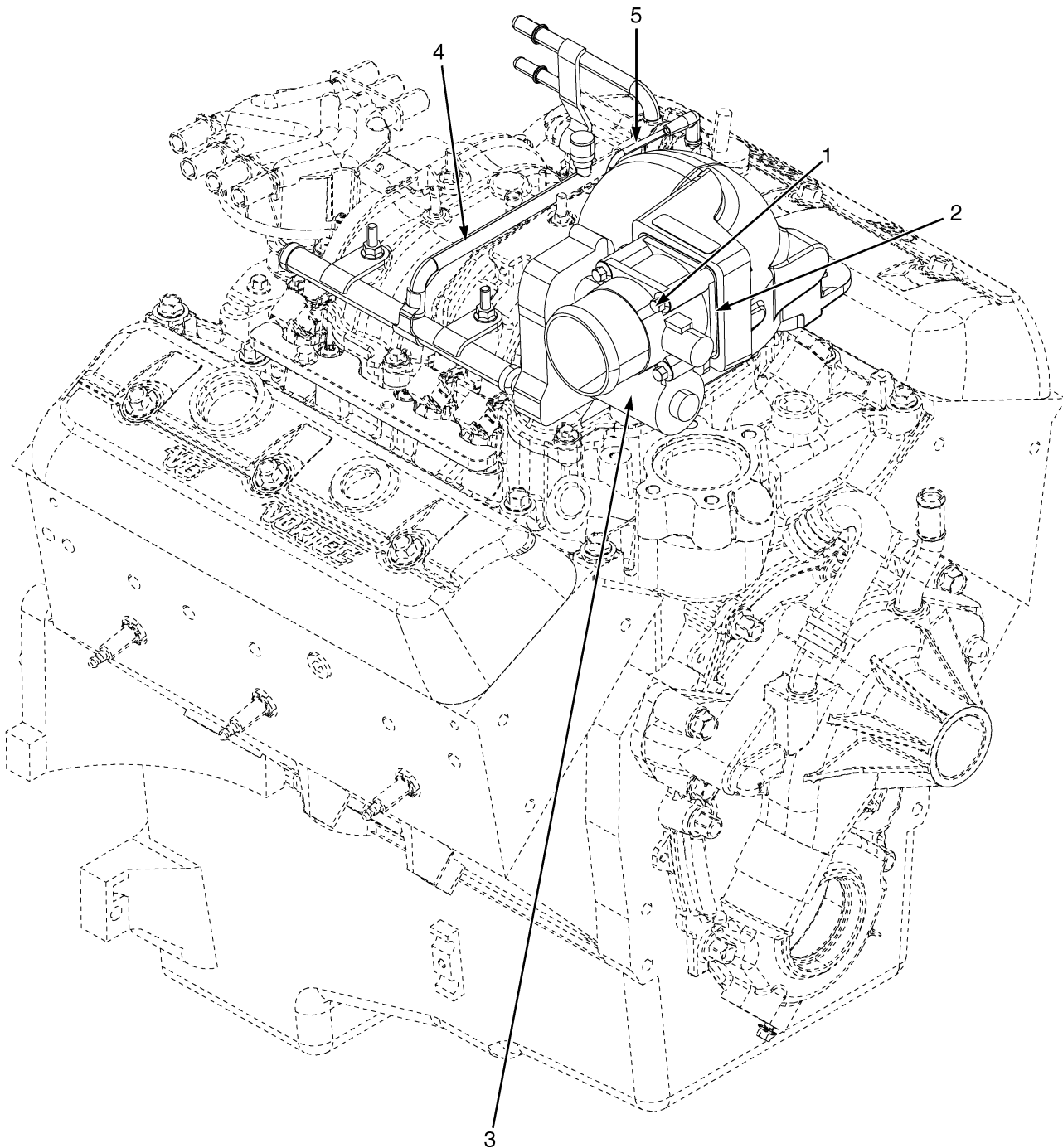
FUEL SUPPLY SYSTEM (FIGURE 3-6) GM 4.3L LPG



BP130273

FUEL SUPPLY SYSTEM
GM 4.3L LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	130845	Clamp	8
2	2094425	Coolant Hose (Coolant)	2
3	366000	Fitting	2
4	1542436	Clamp	1
5	2094426	Coolant Hose (Coolant)	2
6	2072631	Hose (Vapor)	1
6	1698684	Kit-O-Ring	1
7	1502066	Clamp	1
8	1543842	Clamp	2
9	1639118	Bracket	1
10	1529366	Capscrew	2
11	1527881	Capscrew	5
12	1530243	Insert	2
13	2056762	LPG Converter (☞ Figure 3-9).....	1
14	1639673	Tube	1
15	1527879	Capscrew	1
16	1376782	Clamp	1
17	1480237	Nut	6
18	366473	Clamp	2
19	1542439	Clamp (Swivel)	2
20	1579832	Hose	1
21	14330	Fitting	1
22	296153	Capscrew	2
23	1639119	Bracket	1
24	1527880	Capscrew	2
25	14358	Fitting	1
26	2070100	Fuel Filter (LPG)	1
26	2105803	Fuel Filter (LPG)	1
26	1581302	Kit-Filter Element	1
26	1689544	Kit-Filter Element	1
27	16151	Fitting	1
28	2079983	Hose Assy	1
29	1339452	Clamp	1
30	1650217	Bracket	1
31	1501970	Pressure Switch (Low Pressure)	1

**THROTTLE BODY ASSEMBLY AND FUEL RAIL (FIGURE 3-7)
GM 4.3L GASOLINE**

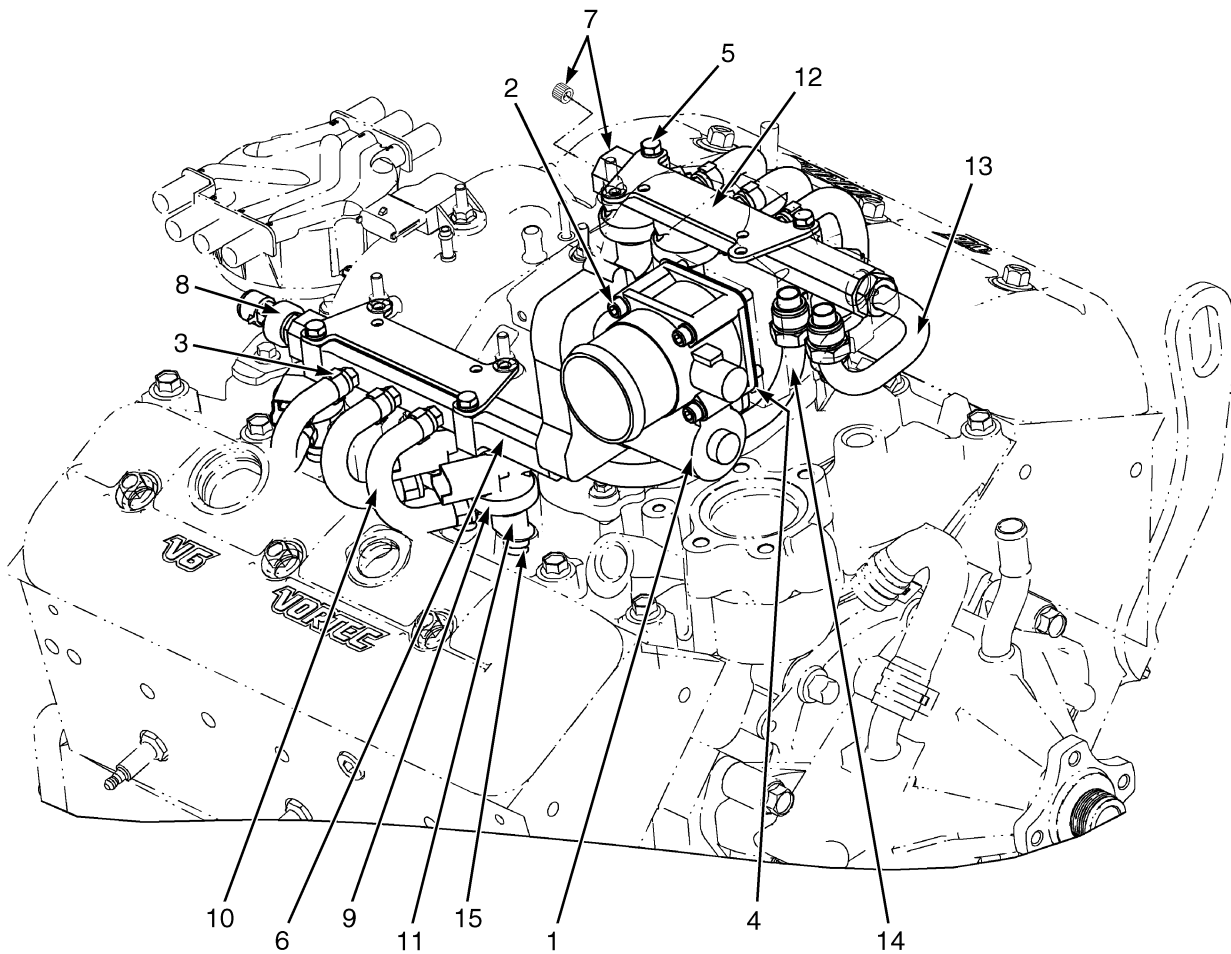
BP130267

**THROTTLE BODY ASSEMBLY AND FUEL RAIL
GM 4.3L GASOLINE**

ITEM	PART NO.	DESCRIPTION	QTY
1	1540643	Capscrew	4
2	1557551	Gasket (Throttle Body)	1
3	1557547	Throttle Body	1
4	a 1655360	Fuel Rail	1
4	b 1677787	Tube Assy	1
4	1559563	Injector	6
4	1677429	Retainer	6
4	1559557	Clip	1
4	1689940	Clip (Alternate Part)	1
4	1559561	Regulator	1
4	a 1677432	Fuel Rail	1
4	b 1686965	Fuel Rail	1
4	1686966	Pressure Valve	1
5	2066137	Hose	1

FOOTNOTES:**a** → 3/2008**b** 3/2008 →

THROTTLE BODY ASSEMBLY (FIGURE 3-8) GM 4.3L LPG



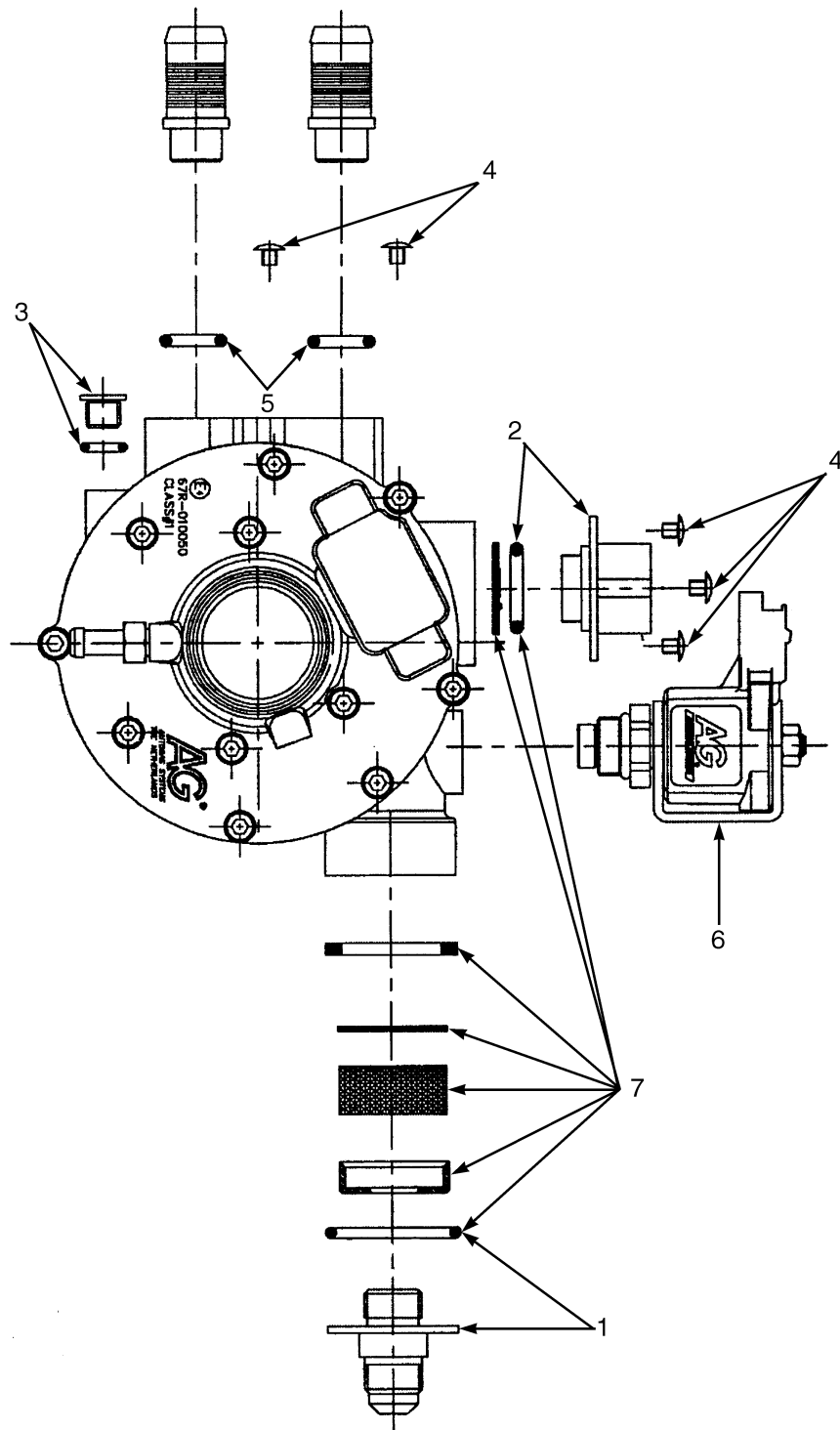
BP090275

THROTTLE BODY ASSEMBLY
GM 4.3L LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	1557547	Throttle Body	1
2	1540643	Capscrew	4
3	1557566	Hose Clamp	12
4	1557551	Gasket (Throttle Body)	1
5	1527876	Capscrew	4
6	1632297	Fuel Rail (Right Hand) (RH)	1
6	1632298	Fuel Rail (Left Hand) (LH)	1
6	1632299	Fuel Rail	1
7	c 15347	Fitting	1
8	a 1632300	Sensor (Fuel Pressure) (Fuel Pressure)	1
9	1557560	Injector (LPG)	6
10	1632301	Hose	6
11	1632302	Adapter	6
12	1632303	Bracket	2
13	1632304	Tube Assy (Right Hand) (RH)	1
14	1632305	Tube Assy (Left Hand) (LH)	1
15	1557565	O-Ring	6
	b 1632307	Bracket	2

FOOTNOTES:**a** Left Rail Only**b** Not Illustrated**c** Right Rail Only

LPG REGULATOR (FIGURE 3-9) GM 4.3L LPG

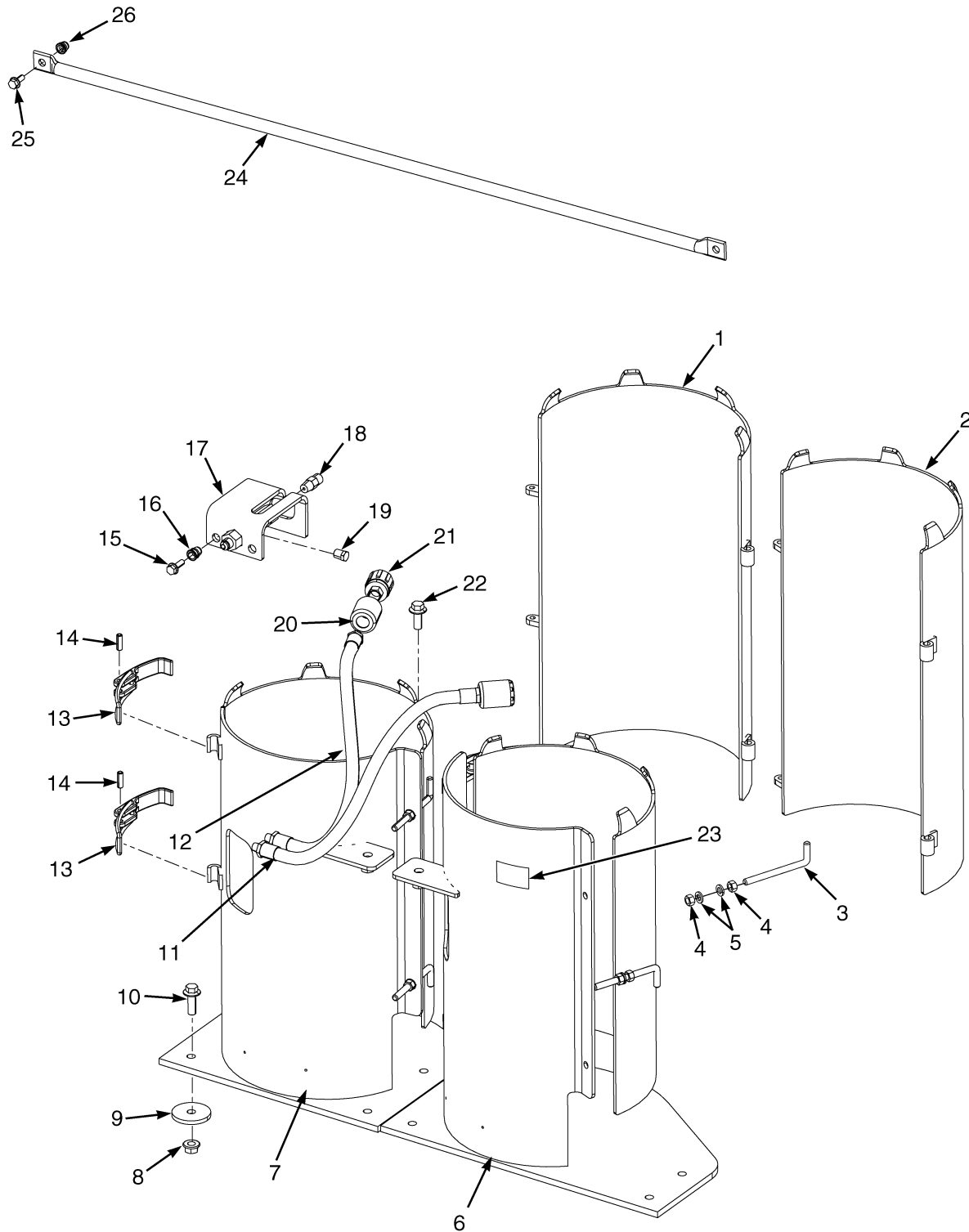


HP130352

LPG REGULATOR
GM 4.3L LPG

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 (With Connector Screw)	1
5	1585748	Kit-O-Ring (With Coolant Fitting O-Ring)	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

SINGLE AND DUAL LPG TANK BRACKETS (FIGURE 3-10)



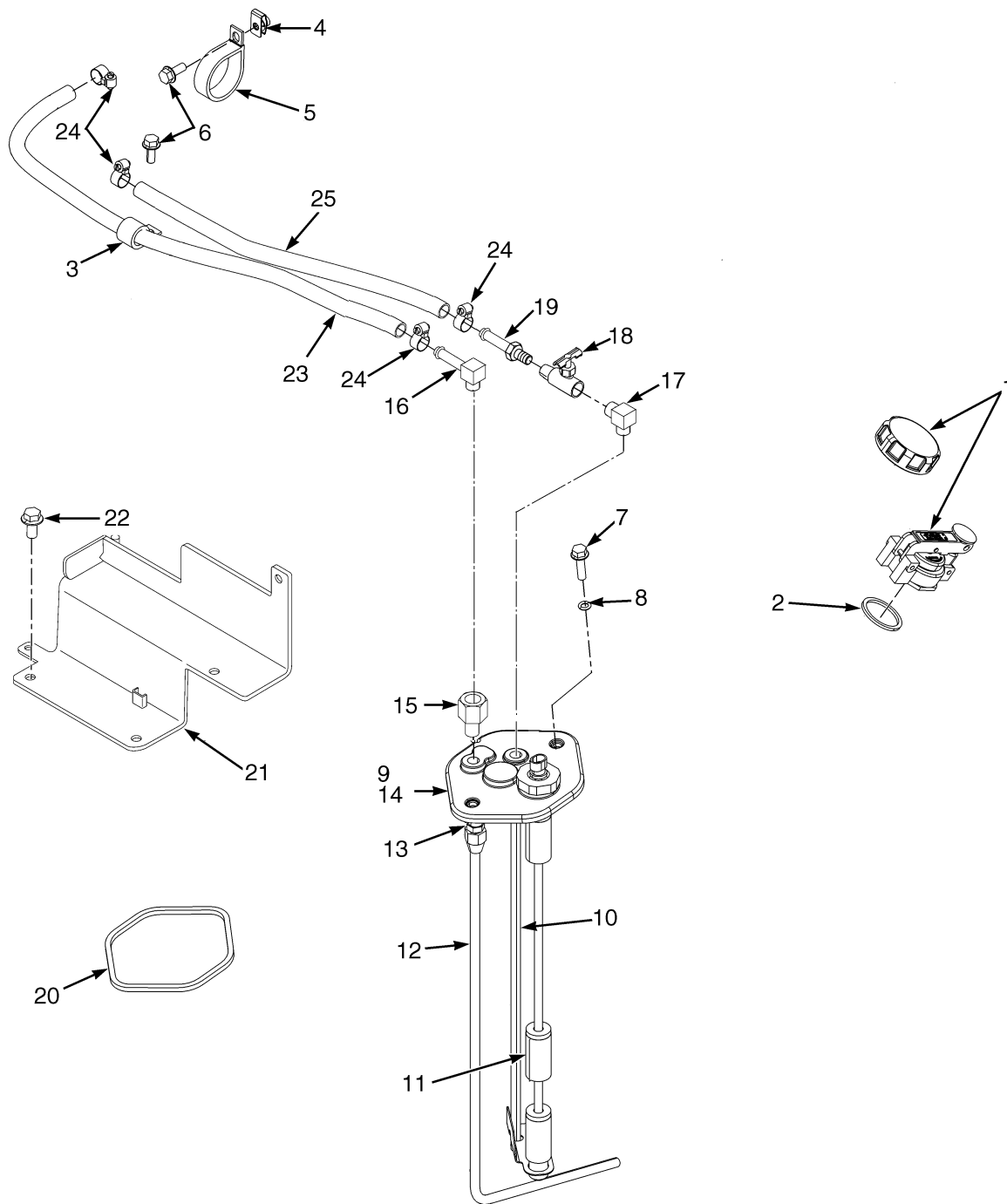
BP130268

SINGLE AND DUAL LPG TANK BRACKETS**KEY:****A: Single****B: Dual**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1649891	Cover (43.5 lb Front)	1	..
1	1649890	Cover (33.5 lb Front)	..	1
2	1651063	Cover (43.5 lb Rear)	..	1
2	1649889	Cover (33.5 lb Rear)	..	1
3	98334	Pin	2	4
4	15006	Nut	4	8
5	15156	Lockwasher	4	8
6	1657439	LPG Tank Bracket (33.5, 43.5 lb Rear)	..	1
7	1657438	LPG Tank Bracket (33.5, 43.5 lb Front)	1	1
8	1528888	Nut (Shoulder)	5	10
9	300939	Washer	4	8
10	1527888	Capscrew	4	8
11	2094438	Hose Assy (43.5 LB.)	1	2
12	2083136	Hose Assy (33.5 LB)	1	2
13	1650496	Latch	2	4
14	19923	Roll Pin	2	4
15	1510113	Capscrew	2	2
16	1530243	Insert	2	2
17	1614156	Bracket Wldmt	1	1
18	101809	Relief Valve	1	1
19	14385	Fitting	1	..
20	2071517	Sleeve	1	2
21	97999	Fitting	1	2
22	1528889	Capscrew	1	2
23	1354171	Label (Flammable LPG)	1	1
24	1661150	Barrier	1	1
25	1527880	Capscrew	2	2
26	1531557	Insert	2	2
	a 1501259	Nameplate (LP Tank)	1	2
	a 1501258	Nameplate (LP Tank)	..	2
	a 170658	Rivet	4	6
	a 2098848	Label (LPG Tank Quantity)	..	1

FOOTNOTES:**a** Not Illustrated

FUEL SUPPLY SYSTEM (FIGURE 3-11) CUMMINS 4.5L DIESEL



BP130272

**FUEL SUPPLY SYSTEM
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	2081840	Fuel Cap	1
1	2021683	Gasket (Not Illustrated)	1
1	b 1579677	Fuel Cap	1
2	b 2021685	Gasket	1
3	89220	Clamp	1
4	1480237	Nut	2
5	181899	Clamp	1
6	1527880	Capscrew	2
7	1527881	Capscrew	2
8	353000	O-Ring	2
9	1608871	Fuel Sender	1
10	1590977	Tube-Wldmt	1
11	1551828	Fuel Sender	1
12	1640901	Tube	1
13	16134	Fitting	2
14	1584171	Cover	1
15	12855	Fitting	1
16	17353	Fitting	1
17	17314	Fitting	1
18	16190	Drain Valve (Shutoff)	1
19	17352	Fitting	1
20	1528893	Quad Ring	1
21	1606617	Bracket	1
22	1527879	Capscrew	2
23	1380717	Hose	1
24	168718	Clamp (Worm Screw)	4
25	2066533	Hose	1
	ab 325549	Shim (0.020 in.) (Fuel Cap)	AR

FOOTNOTES:**a** Not Illustrated**b** UL Type DS

This diagram shows an exploded view of a mechanical assembly. The main component is a large, rectangular block with a complex internal structure, featuring numerous circular openings and a central circular feature. Below this block, a detailed exploded view of a smaller assembly is shown, with components numbered 1 through 21. The components include:

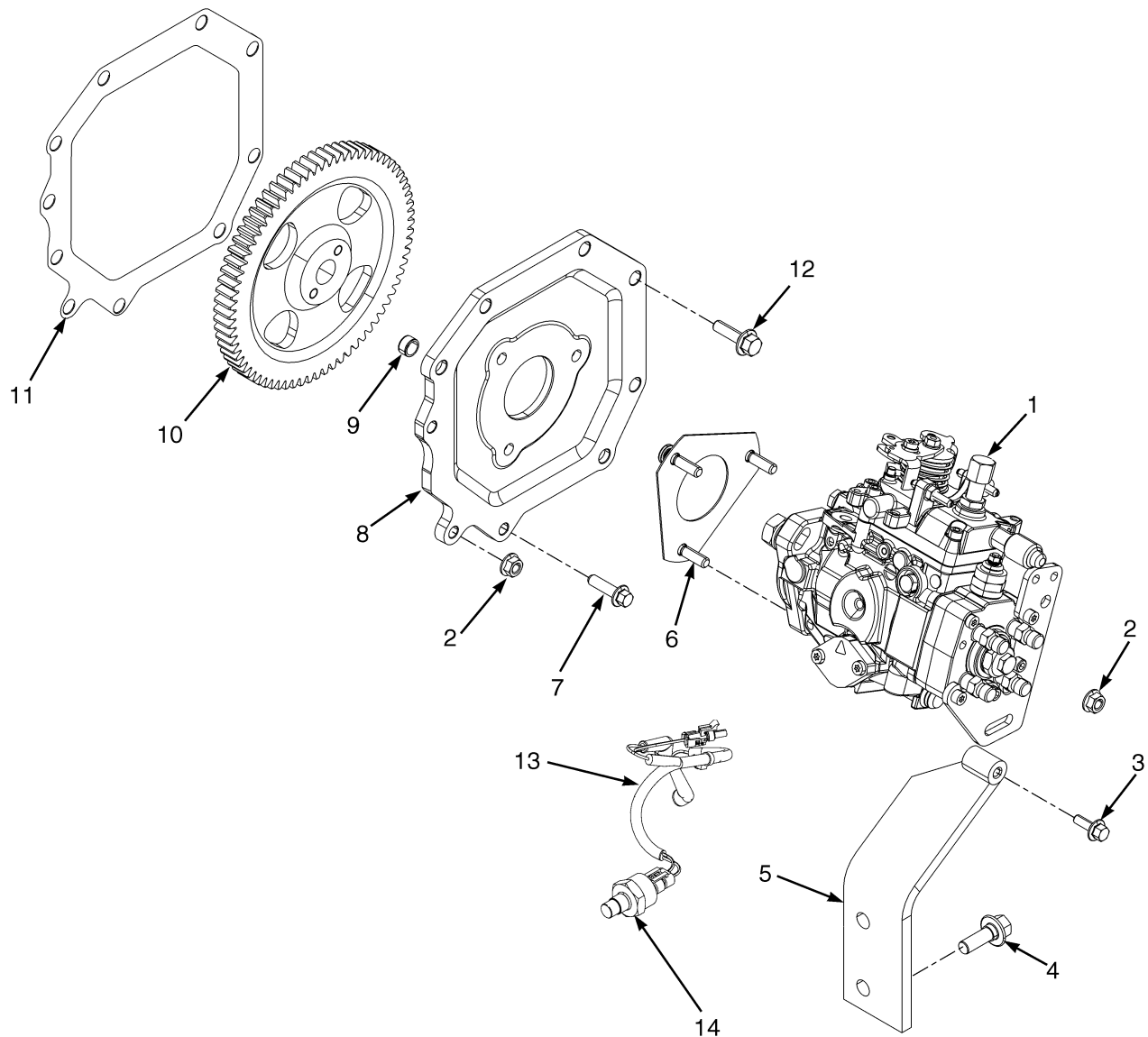
- 1: Two vertical pins or screws.
- 2: A small circular component, possibly a washer or seal.
- 3: A long, thin rod or pin.
- 4: A small cylindrical component, possibly a bush or spacer.
- 5: A small circular component, possibly a washer or seal.
- 6: A small rectangular component, possibly a bracket or plate.
- 7: A curved rod or pin.
- 8: A small cylindrical component, possibly a bush or spacer.
- 9: A curved rod or pin.
- 10: A small rectangular component, possibly a bracket or plate.
- 11: A small rectangular component, possibly a bracket or plate.
- 12: A small rectangular component, possibly a bracket or plate.
- 13: A small rectangular component, possibly a bracket or plate.
- 14: A small rectangular component, possibly a bracket or plate.
- 15: A small rectangular component, possibly a bracket or plate.
- 16: A small rectangular component, possibly a bracket or plate.
- 17: A small rectangular component, possibly a bracket or plate.
- 18: A bundle of wires or cables.
- 19: A small rectangular component, possibly a bracket or plate.
- 20: A small rectangular component, possibly a bracket or plate.
- 21: A small rectangular component, possibly a bracket or plate.

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**FUEL INJECTION SYSTEM
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1642028	Capscrew	2
2	1513712	Nut	1
3	1637871	Fitting	4
4	1635264	Retainer	4
5	1637934	O-Ring	1
6	1642031	Brace	1
7	1637932	Tube Assy (#1 Cylinder)	1
8	1637931	Tube Assy (#2 Cylinder)	1
9	1642036	Brace	1
10	1514498	Brace	1
11	1514501	Isolator	2
11	1517198	Isolator	4
12	1514504	Capscrew	3
13	1514501	Isolator	2
13	1517198	Isolator	4
14	1514498	Brace	1
15	1514504	Capscrew	3
16	1637929	Tube Assy (#4 Cylinder)	1
17	1512004	Capscrew	1
18	1637930	Tube Assy (#3 Cylinder)	1
19	1642030	Brace	2
20	1642032	Brace	2
21	1642033	Brace	1

FUEL INJECTION PUMP AND GEAR (FIGURE 3-13) CUMMINS 4.5L DIESEL

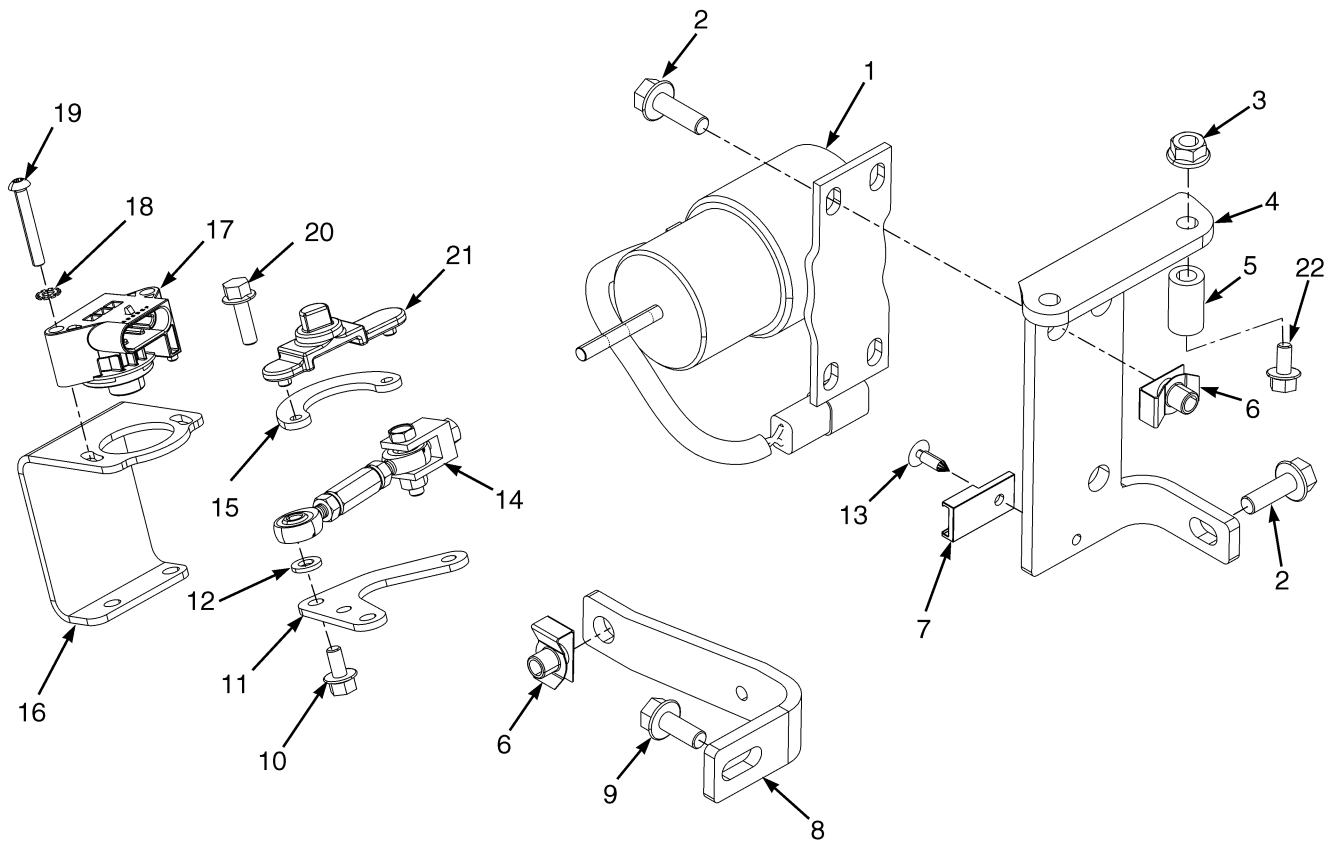


BP130213

**FUEL INJECTION PUMP AND GEAR
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1		Injection Pump	1
1	1697304	Reman Component (Alternate Part)	1
2	1513712	Nut	4
3	1512004	Capscrew	1
4	1511953	Capscrew	2
5	1637831	Brace	1
6	1601894	Gasket	1
7	1635220	Capscrew	2
8	1640963	Adapter	1
9	1637832	Ring	2
10	1637833	Gear	1
11	1637830	Gasket	1
12	1543337	Capscrew	6
13	1640965	Wire Harness	1
14	1670059	Switch (Temperature)	1
14	1515895	O-Ring	1

ELECTRONIC THROTTLE LINKAGE (FIGURE 3-14) CUMMINS 4.5L DIESEL



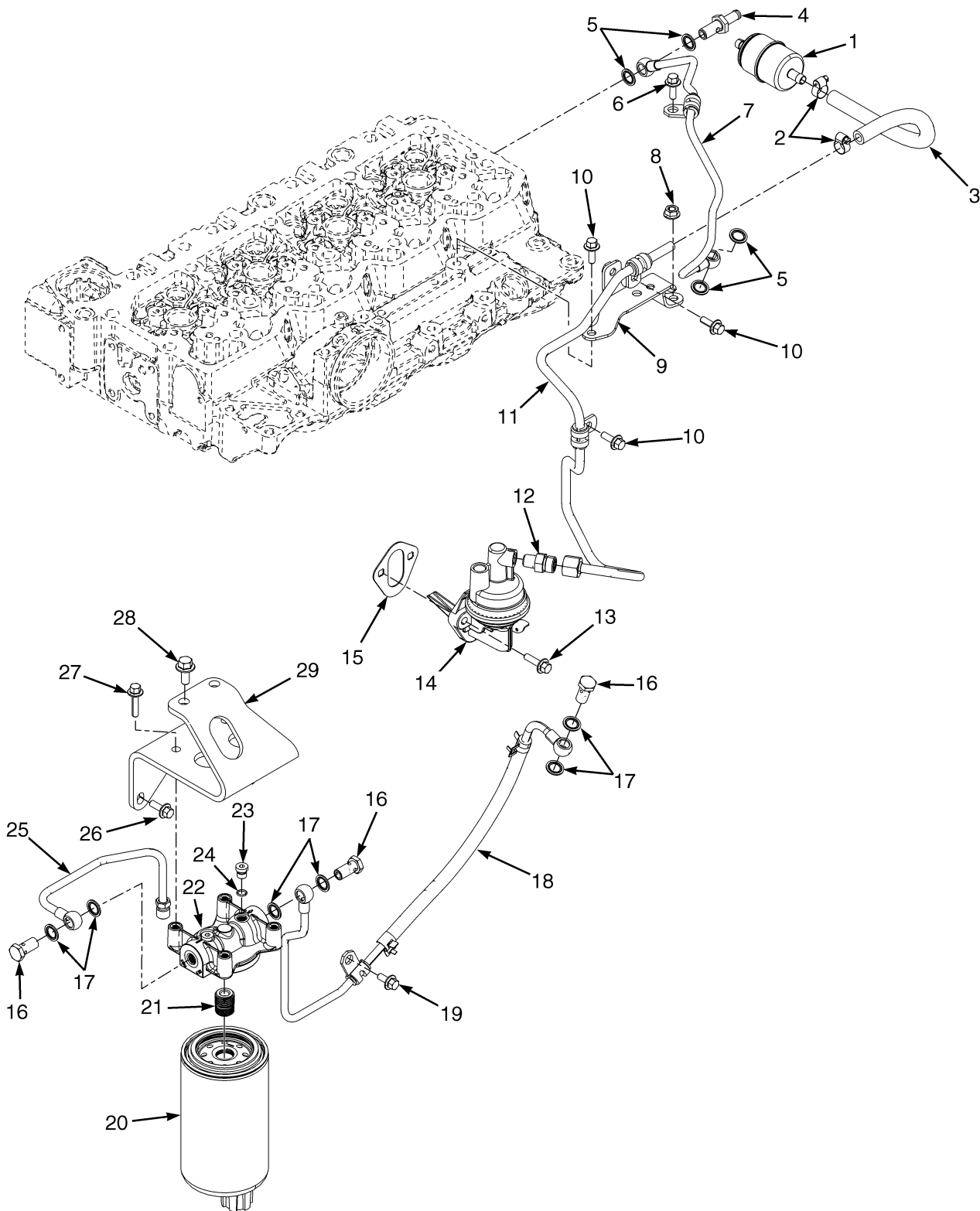
BP130212

**ELECTRONIC THROTTLE LINKAGE
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1542772	Actuator (Pull)	1
2	1510113	Capscrew	4
3	1502543	Nut (Flange)	2
4	1616425	Bracket	1
5	1616422	Spacer	2
6	1398062	Nut	4
7	1500912	Clip	1
8	1501883	Bracket	1
9	1527880	Capscrew	1
10	1534417	Capscrew	3
11	1501899	Adapter	1
12	320156	Washer	1
13	1344124	Fastener	1
14	a 1542773	Linkage	1
14	b 1690182	Linkage	1
15	1626774	Plate	1
16	1626732	Bracket	1
17	2080376	Sensor (Hall Throttle Position)	1
18	296378	Washer	2
19	1553897	Capscrew	2
20	1527877	Capscrew	1
21	2078335	Rotor	1
22	1642028	Capscrew	1

FOOTNOTES:**a** → PENDING PER ECN 105549**b** PENDING PER ECN 105549 →

FUEL FILTRATION SYSTEM (FIGURE 3-15) CUMMINS 4.5L DIESEL

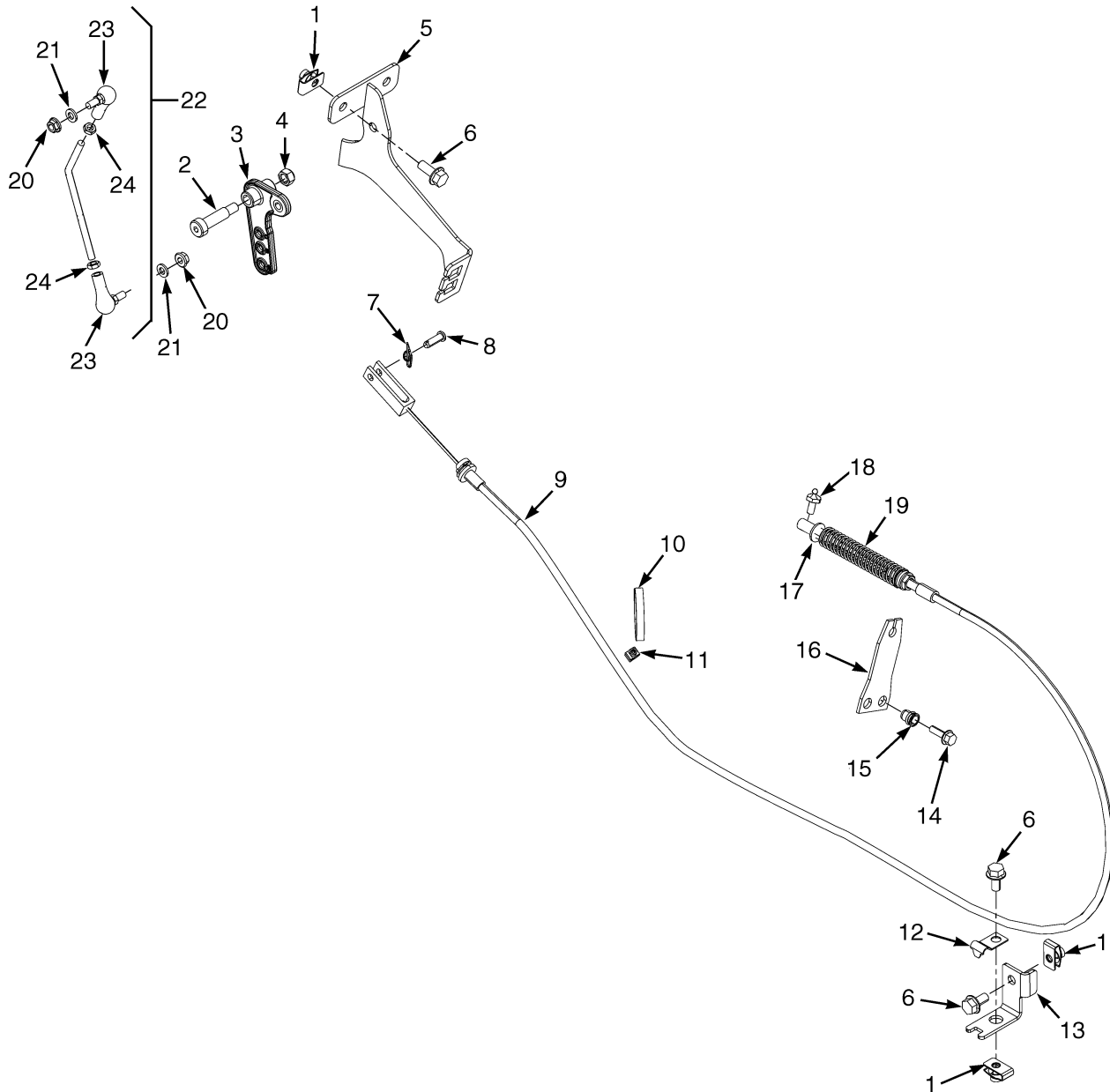


BP130215

**FUEL FILTRATION SYSTEM
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1637835	Fuel Filter	1
2	1516981	Hose Clamp	2
3	1637836	Hose	1
4	1641748	Capscrew (Banjo)	1
5	1543359	Sealing Ring	4
6	1512004	Capscrew	2
7	1637837	Tube Assy	1
8	1513712	Nut	1
9		Brace	1
10	1512004	Capscrew	4
11	1637821	Tube Assy (Fuel Supply)	1
12		Union Fitting	1
13	1512005	Capscrew	2
14	1596646	Fuel Pump	1
15	1513743	Gasket (Cover Plate)	1
16	1641748	Capscrew (Banjo)	3
17	1543359	Sealing Ring	6
18		Tube Assembly	1
18	1521846	Clamp	2
18	1695873	Hose	1
18	1637821	Tube Assy	1
18	1695874	Tube (Fuel Supply)	1
19	1511970	Capscrew	1
20	1543356	Fuel Filter	1
20		Water Sensor	1
21	1637819	Adapter	1
22	1637818	Filter Head	1
23	1517010	Plug	2
24		O-Ring	2
25	1637820	Tube Assy	1
25	1649235	Connector	1
25	1695876	Nut	1
25	1695877	Seal	1
25	1695878	Tube	1
26	1511970	Capscrew	1
27	1512460	Capscrew	2
28	1512423	Capscrew	4
29		Bracket	1

THROTTLE CABLE ASSEMBLY (FIGURE 3-16) CUMMINS 4.5L DIESEL

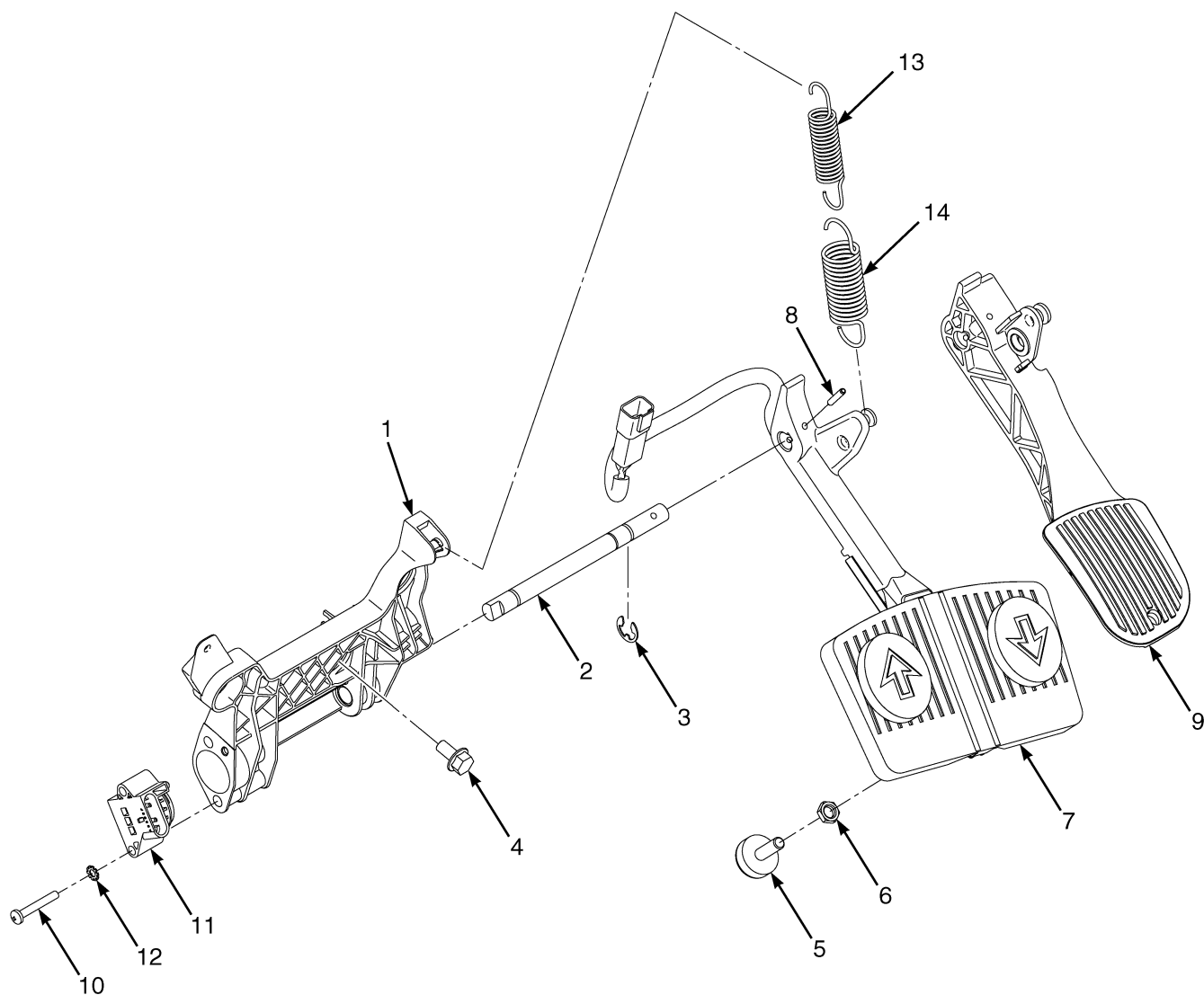


BP130266

**THROTTLE CABLE ASSEMBLY
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1480237	Nut	4
2	1399802	Bolt	1
3	1538162	Bellcrank	1
4	302400	Nut	1
5	1609374	Bracket (Throttle Cable)	1
6	1527879	Capscrew	4
7	1517361	Lockring	1
8	126	Pin	1
9	1648767	Throttle Cable	1
10	1502061	Clamp	1
11	1542440	Clamp (Swivel)	1
12	1618988	Clamp	1
13	1618986	Bracket	1
14	1527877	Capscrew	2
15	1531558	Insert	2
16	1618985	Bracket	1
17	1476421	Washer	1
18	1625026	Ball Joint	1
19	1650844	Spring	1
20	1514429	Nut	3
21	320156	Washer	4
22	1624014	Push Rod	1
23	2027949	Ball Joint	2
24	2308541	Nut	2

THROTTLE PEDAL AND ATTACHING PARTS (FIGURE 3-17)



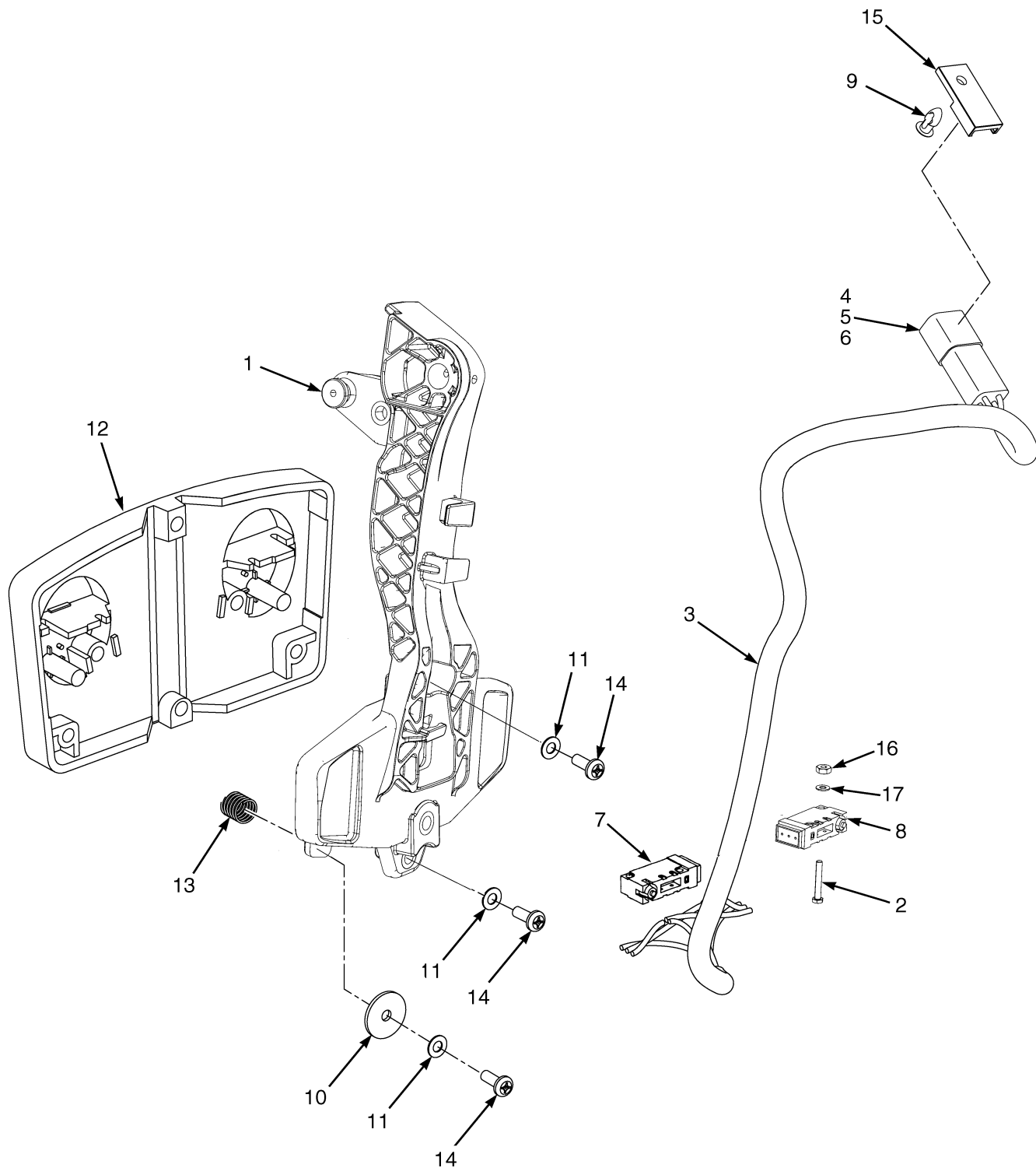
HP130383

THROTTLE PEDAL AND ATTACHING PARTS

ITEM	PART NO.	DESCRIPTION	QTY
1	1654411	Throttle Plate	1
1	1524267	Bushing	1
2	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 3-18).....	1
8	a 302437	Roll Pin	1
8	b 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
14	1582300	Spring (Outer)	1
	1654156	Shim (Not Illustrated)	AR

FOOTNOTES:**a** For Use With Monotrol Pedal Only**b** For Use With Standard Pedal Only

MONOTROL PEDAL ASSEMBLY (FIGURE 3-18)



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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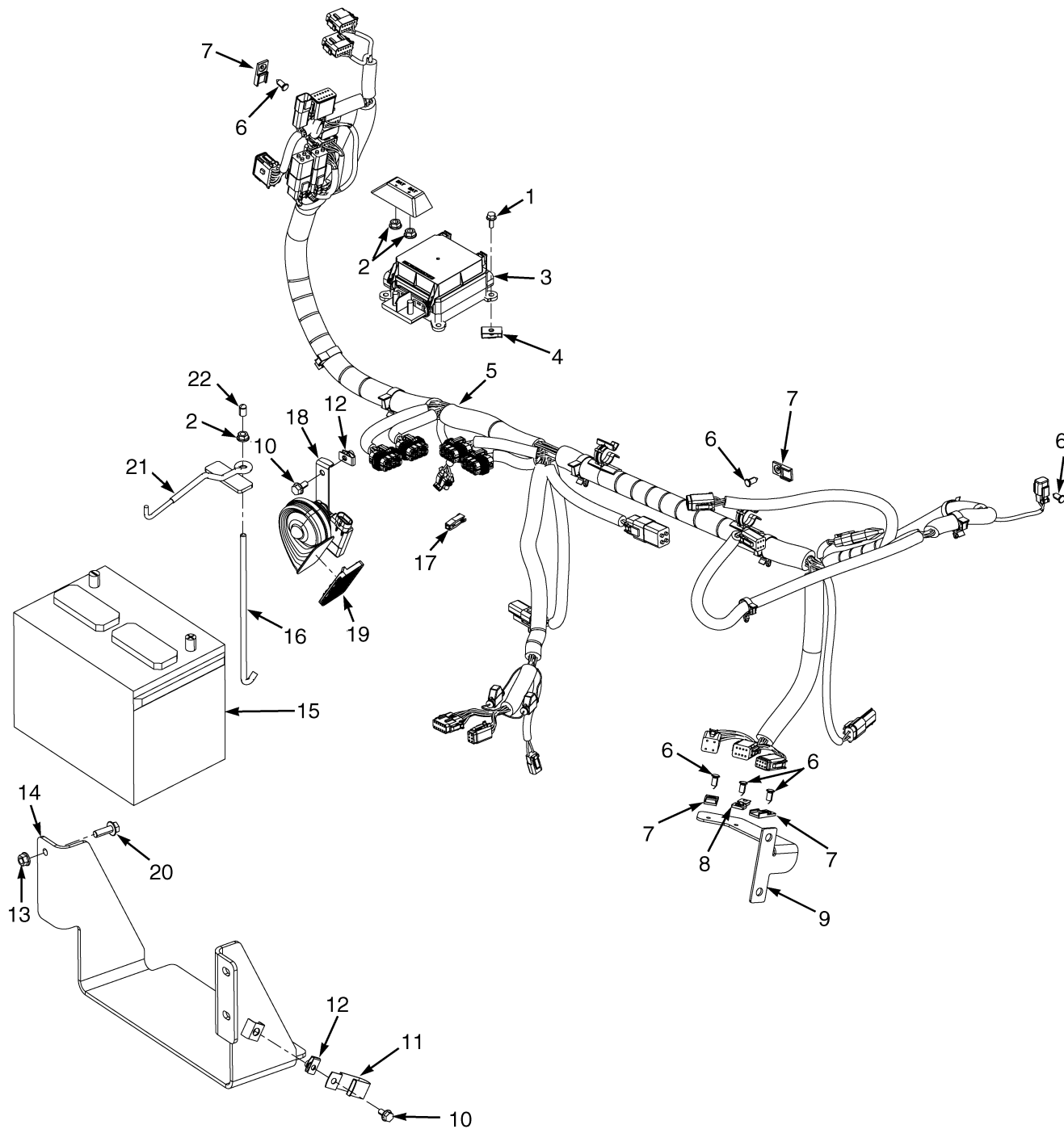
**SECTION 4
ELECTRICAL SYSTEM**

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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.

ELECTRICAL SYSTEM (FIGURE 4-1) RIGHT HAND CHASSIS — GM 4.3L GASOLINE AND LPG



BP080583

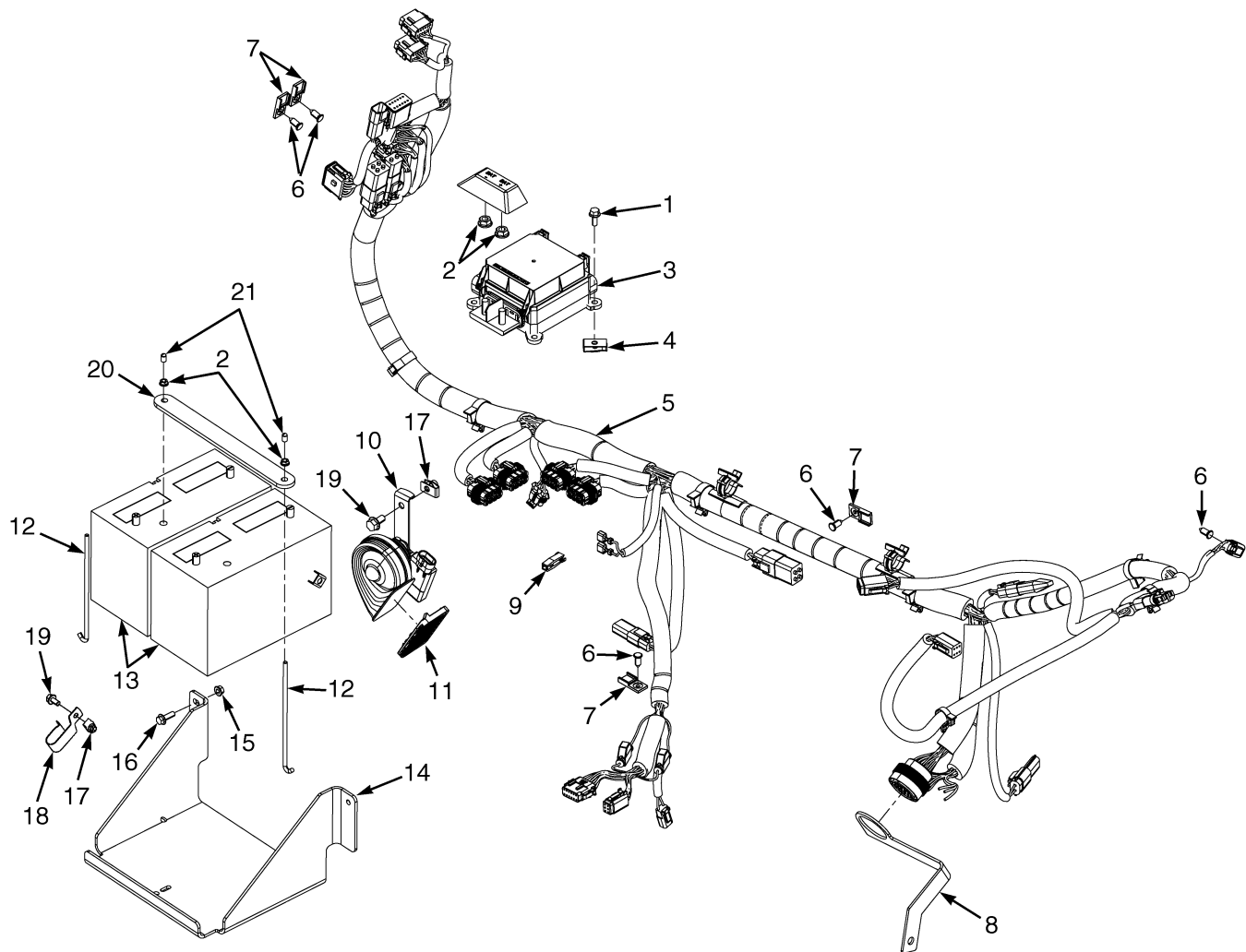
ELECTRICAL SYSTEM

RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	1527876	Capscrew	4
2	1502543	Nut (Flange)	3
3	2090613	Module (☞Figure 4-14).....	1
4	1350215	Nut	4
5	bc 2098014	Wire Harness (RH Chassis) (☞Figure 4-27).....	1
5	de 2097395	Wire Harness (RH Chassis) (☞Figure 4-28).....	1
6	1582464	Fastener	9
7	1500912	Clip	7
8	1531480	Clip	1
9	1657411	Bracket	1
10	1527879	Capscrew	3
11	1544157	Clip	2
12	1480237	Nut	3
13	1460477	Nut	3
14	1663948	Battery Tray	1
15	1643937	Start Battery Wet	1
16	2065745	Link (Battery Hold Down)	1
17	1402883	Fuse Puller	1
18	1618978	Horn	1
19	1638987	Shield	1
20	1527884	Capscrew	3
21	1638706	Link (Battery Hold Down)	1
22	1540805	Cap	1
	a 1593331	Connector	1

FOOTNOTES:**a** Not Illustrated**b** → S/N H006V01742E LPG**c** → S/N H006V02199E Gas**d** S/N H006V01743E → LPG**e** S/N H006V02200E → Gas

ELECTRICAL SYSTEM (FIGURE 4-2) RIGHT HAND CHASSIS — CUMMINS 4.5L DIESEL

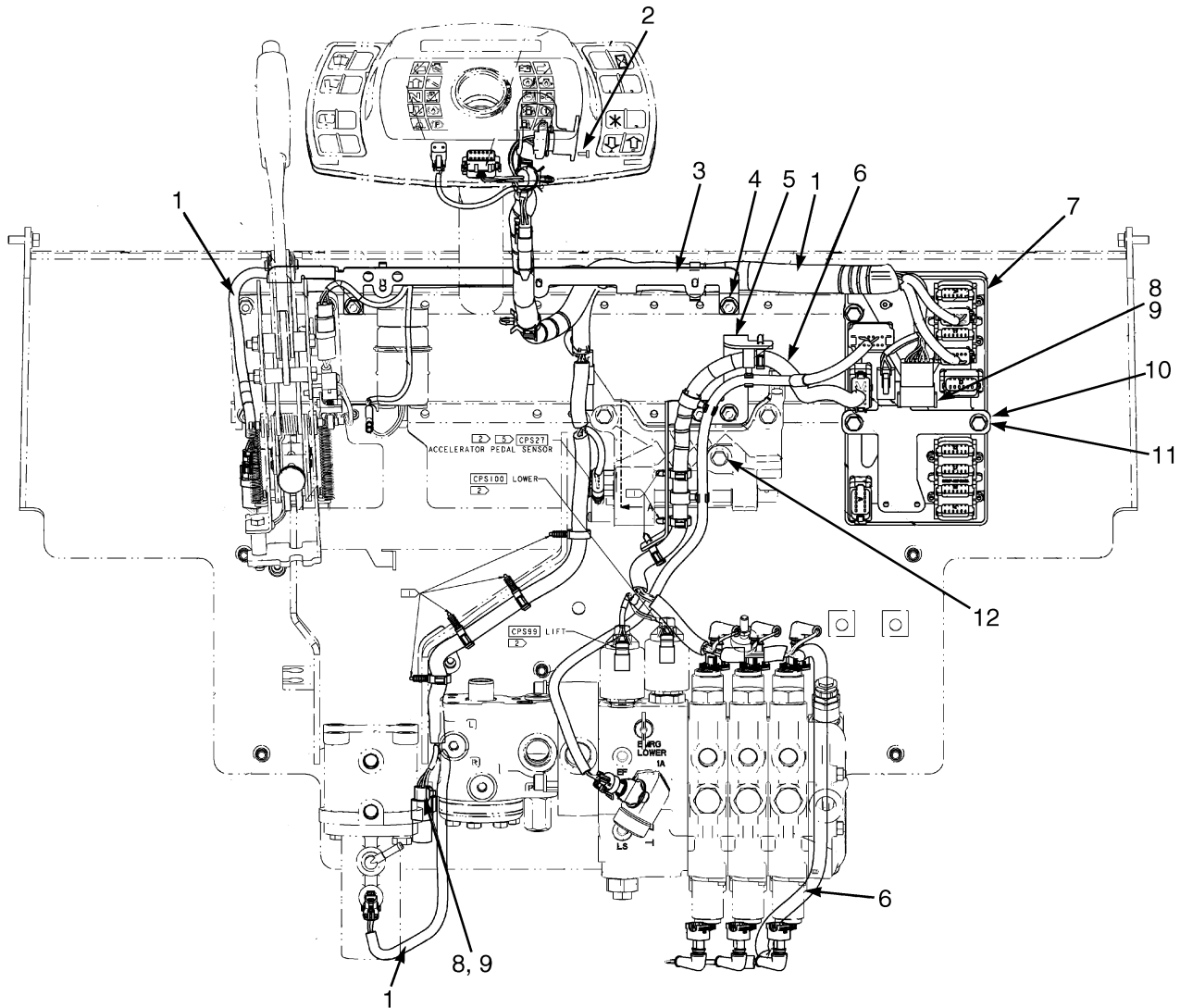


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ELECTRICAL SYSTEM
RIGHT HAND CHASSIS – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
1	1527876	Capscrew	4
2	1502543	Nut (Flange)	4
3	2090613	Module (☞Figure 4-14).....	1
4	1350215	Nut	4
5	2093536	Wire Harness (RH Chassis) (☞Figure 4-29).....	1
6	1582464	Fastener	6
7	1500912	Clip	5
8	1601994	Bracket	1
9	1402883	Fuse Puller	1
10	1618978	Horn	1
11	1638987	Shield	1
12	2065745	Link (Battery Hold Down)	2
13	1643937	Start Battery Wet	2
14	1663954	Battery Tray	1
15	1460477	Nut	3
16	1527884	Capscrew	3
17	1480237	Nut	3
18	1544157	Clip	2
19	1527879	Capscrew	3
20	1663747	Bracket	1
21	1540805	Cap	2

COWL ELECTRICAL (FIGURE 4-3) ELECTRIC HYDRAULIC



BP080588

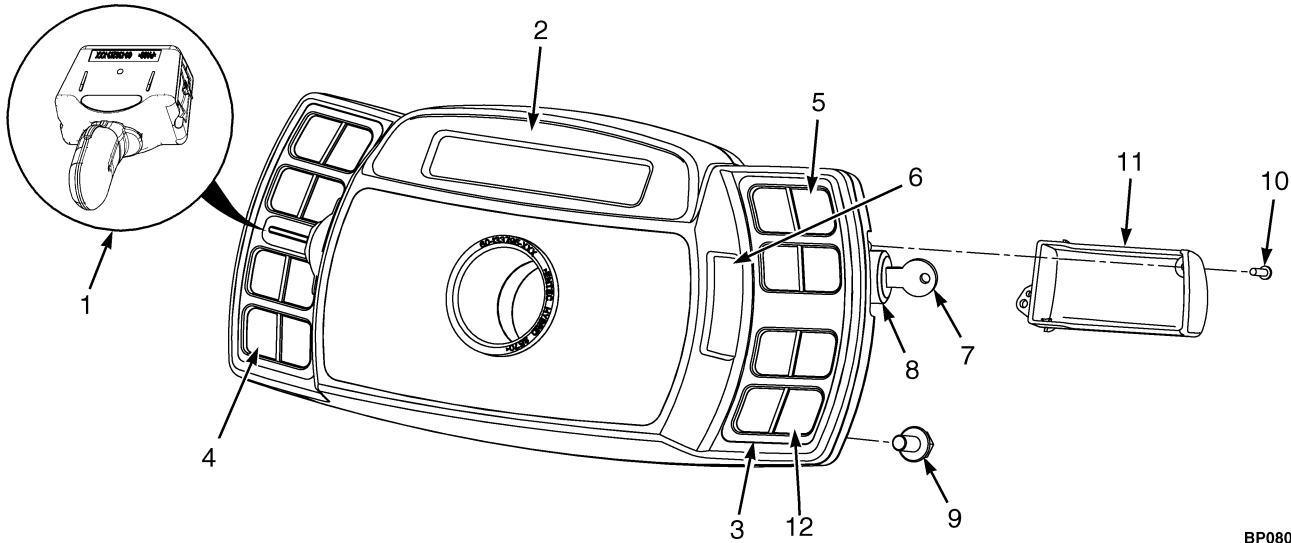
**COWL ELECTRICAL
ELECTRIC HYDRAULIC****KEY:****A: With Return to Set Tilt****B: Without Return to Set Tilt**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	2070269	Wire Harness (Cowl with Monotrol, Diesel) (☞ Figure 4-39).....	1	..
1	2084829	Wire Harness (Cowl with Forward/Reverse Lever) (Cowl with Forward/ Reverse Lever, Diesel) (☞ Figure 4-40).....	..	1
1	f 2098011	Wire Harness (Cowl with Monotrol, Gasoline and LPG) (☞ Figure 4-37).....	1	..
1	f 2098012	Wire Harness (Cowl with Forward/Reverse Lever) (Cowl with Forward/ Reverse Lever, Gasoline and LPG) (☞ Figure 4-40).....	..	1
2	1554902	Screw	2	2
3	1600190	Bracket	1	1
4	1529366	Capscrew	2	2
5	1531975	Bracket	1	1
6	a 2058909	Wire Harness (Electronic Control Valve) (☞ Figure 4-42).....	1	1
6	c 2060198	Wire Harness (Electronic Control Valve) (☞ Figure 4-41).....	1	1
7	g 2068342	Vehicle System Manager (VSM) -8525419	1	1
7	e 2068343	Vehicle System Manager (VSM) -8525420	1	1
7	d 2068344	Vehicle System Manager (VSM) -8525421	1	1
8	1500912	Clip	3	1
9	1582464	Fastener	3	1
10	1582465	Bracket	1	1
11	1510115	Capscrew	3	3
12	1529366	Capscrew	2	2
	b 1563841	Connector	1	1

FOOTNOTES:

a Four Function	e With Electronic Hydraulics and Overhead Guard
b Not Illustrated	f With Hydraulic Pump Solenoid
c Three Function	g Without Electronic Hydraulics
d With Electronic Hydraulics and Cab	

INSTRUMENT CLUSTER (FIGURE 4-4)



BP080816

ITEM	PART NO.	DESCRIPTION	QTY
1	b 2090110	Lever (Detent Forward and Reverse)	1
1	c 2102904	Lever (Detent Forward and Reverse)	1
2	2076696	Display (With Cab)	1
2	2076695	Display (With Overhead Guard)	1
3	2066485	Bezel (Display Cluster)	2
4	2069431	Label (Blank) (LH Display with Overhead Guard)	1
4	2066483	Label (LH Display with Cab)	1
5	2066484	Label (RH Display, All Options)	1
6	2060032	Cover (Display Lever)	1
7	1337197	Key Set	1
8	2057948	Ignition Switch (Without Keys)	1
9	1527879	Capscrew	4
10	1554902	Screw	5
11	2060033	Cover (Keyswitch)	1
12	a 2066482	Label (RH Display)	1

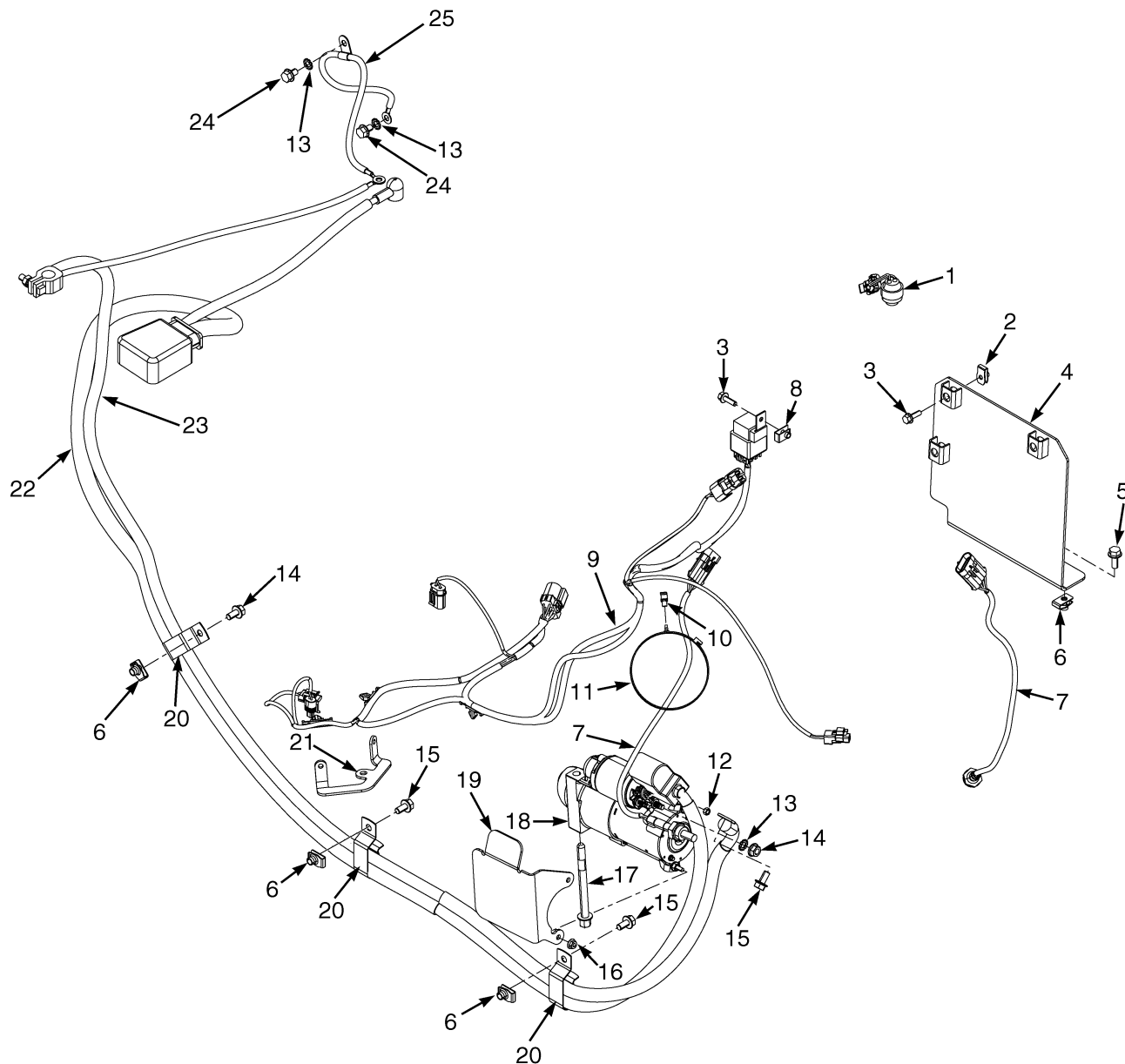
FOOTNOTES:

- a** Remove Panels From Overlay as Required For Truck Configuration.
- b** → PENDING PER ECN 105334
- c** PENDING PER ECN 105334 →

NOTES

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ENGINE ELECTRICAL SYSTEM (FIGURE 4-5) GM 4.3L, GASOLINE AND LPG

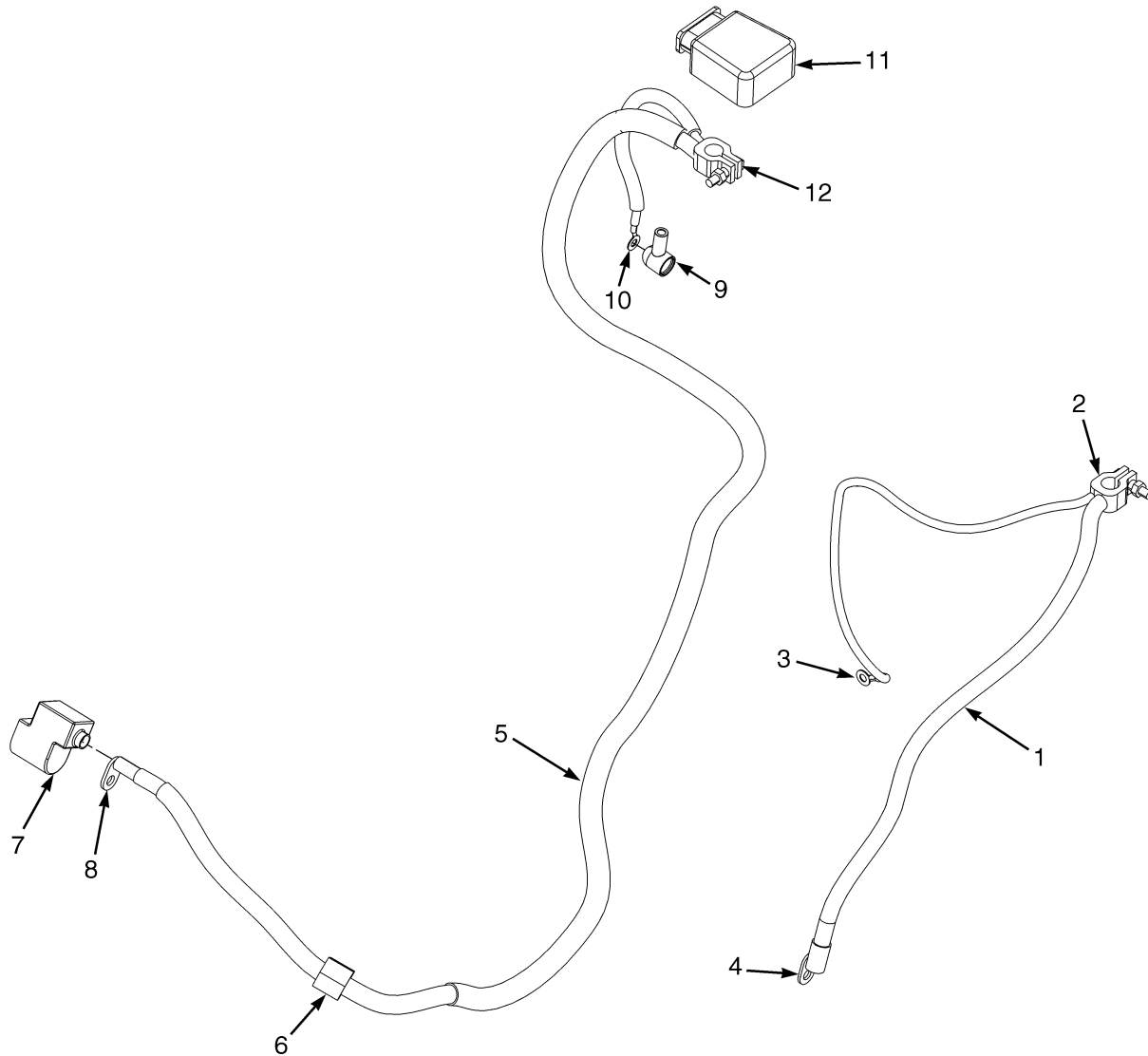


BP080590

ENGINE ELECTRICAL SYSTEM
GM 4.3L, GASOLINE AND LPG**KEY:****A: Gasoline****B: LPG**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1529257	Sensor (Air Flow Restriction)	1	1
2	1566420	Nut	3	3
3	1527877	Capscrew	4	4
4	1652220	Bracket Wldmt	1	1
5	1527880	Capscrew	3	3
6	1480237	Nut	6	6
7	1557546	Oxygen Sensor (With Wire Harness)	2	2
8	1350215	Nut	1	1
9	2094677	Wire Harness (LH Chassis) (☞Figure 4-30).....	1	..
9	2094678	Wire Harness (LH Chassis) (☞Figure 4-31).....	..	1
10	1561871	Clamp (Swivel)	1	1
11	1502061	Clamp	1	1
12	292668	Nut	1	1
13	296380	Washer	3	3
14	1502543	Nut (Flange)	1	1
15	1527879	Capscrew	4	4
16	264148	Nut	2	2
17	1397716	Bolt	2	2
17	1677876	Bolt (Alternate Part)	2	2
18	1640531	Starter	1	1
19	1640818	Bracket	1	1
20	1544157	Clip	3	3
21	1402629	Bracket	1	..
22	2098768	Battery Cable (Positive) (☞Figure 4-6).....	1	1
23	2098769	Battery Cable (Negative) (☞Figure 4-6).....	1	1
24	1529366	Capscrew	2	2
25	2093220	Battery Cable (Negative)	1	1
25	806426	E-Ring	2	2
25	1564044	E-Ring	1	1

BATTERY CABLES (FIGURE 4-6) GM 4.3L GASOLINE AND LPG

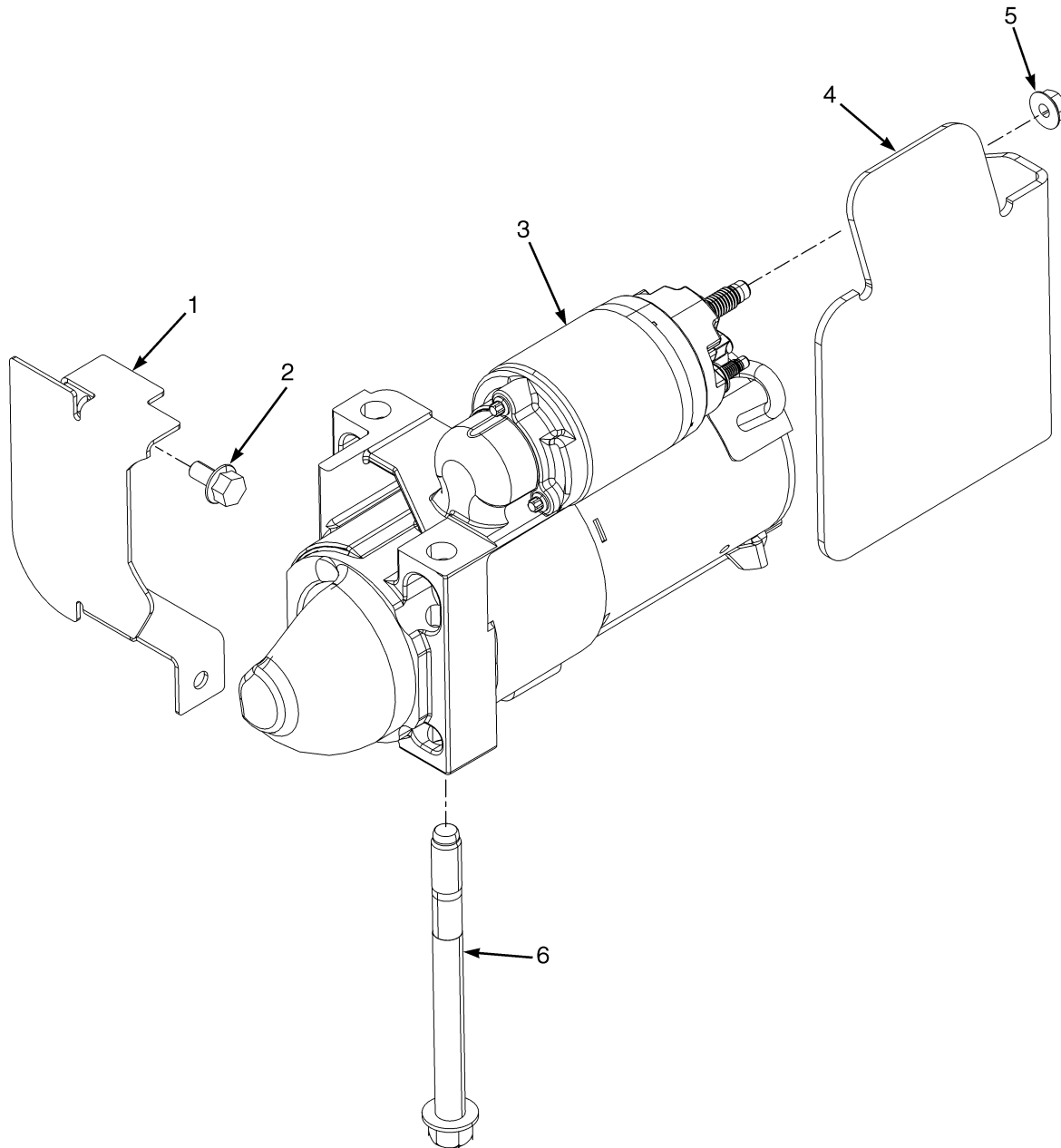


BP080599

BATTERY CABLES
GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
1	2098769	Battery Cable (Negative)	1
2	148789	Terminal	1
3	806426	E-Ring	1
4	16079	Terminal	1
5	2098768	Battery Cable (Positive)	1
6	153070	Clamp	1
7	1590173	Boot	1
8		Terminal	1
9	1566146	Boot	1
10	806426	E-Ring	1
11	1536304	Boot	1
12	148792	Terminal	1

STARTER (FIGURE 4-7)
GM 4.3L (GS AND LPS) (PENDING PER ECN 105844 →)

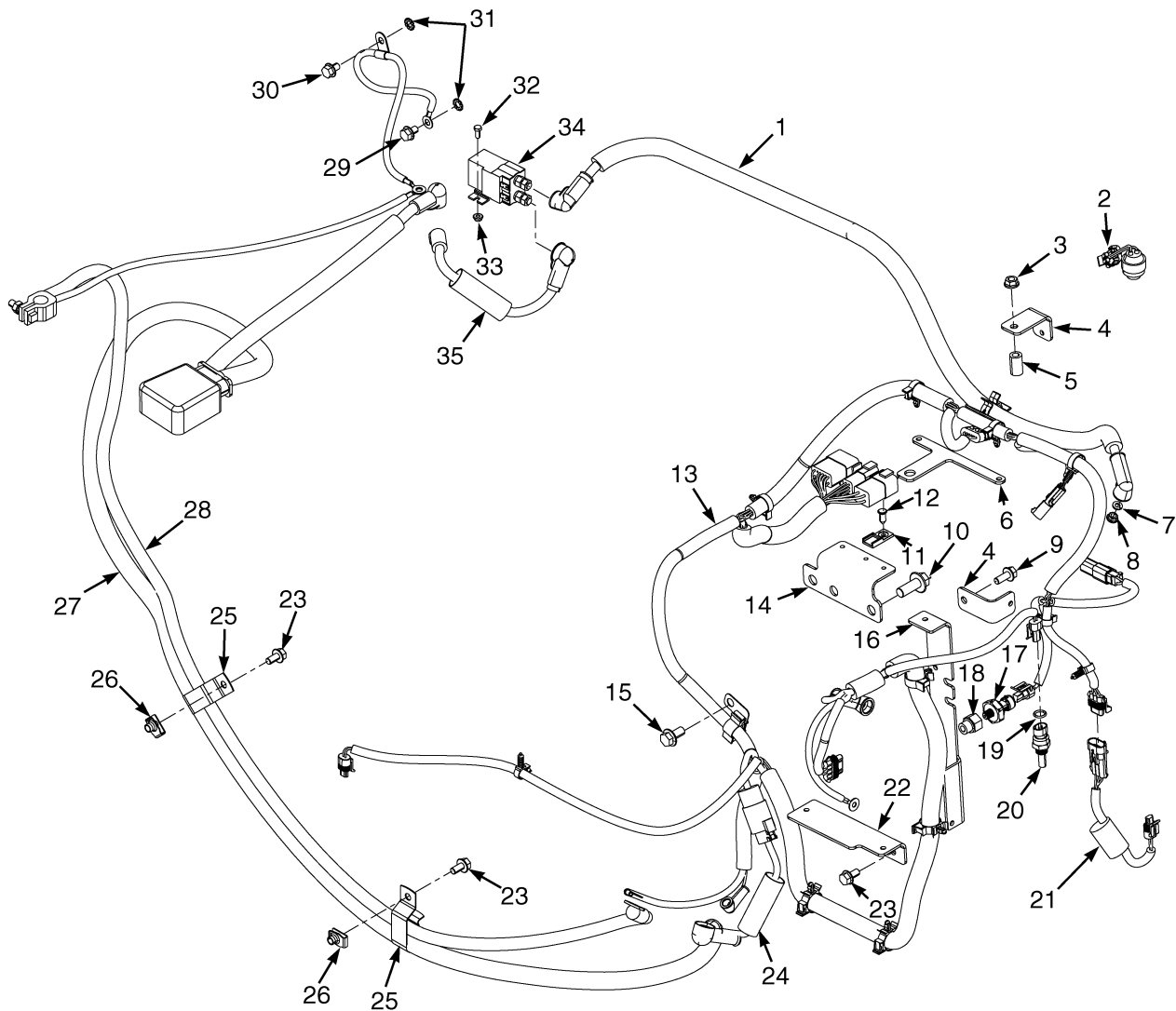


BP080827

STARTER**GM 4.3L (GS AND LPS) (PENDING PER ECN 105844 →)**

ITEM	PART NO.	DESCRIPTION	QTY
1	2109666	Dust Shield	1
2	1534417	Capscrew	2
3	1640531	Starter	1
4	1640818	Bracket (Heat Shield)	1
5	264148	Nut	2
6	1677876	Bolt	2

ENGINE ELECTRICAL SYSTEM (FIGURE 4-8) CUMMINS 4.5L DIESEL

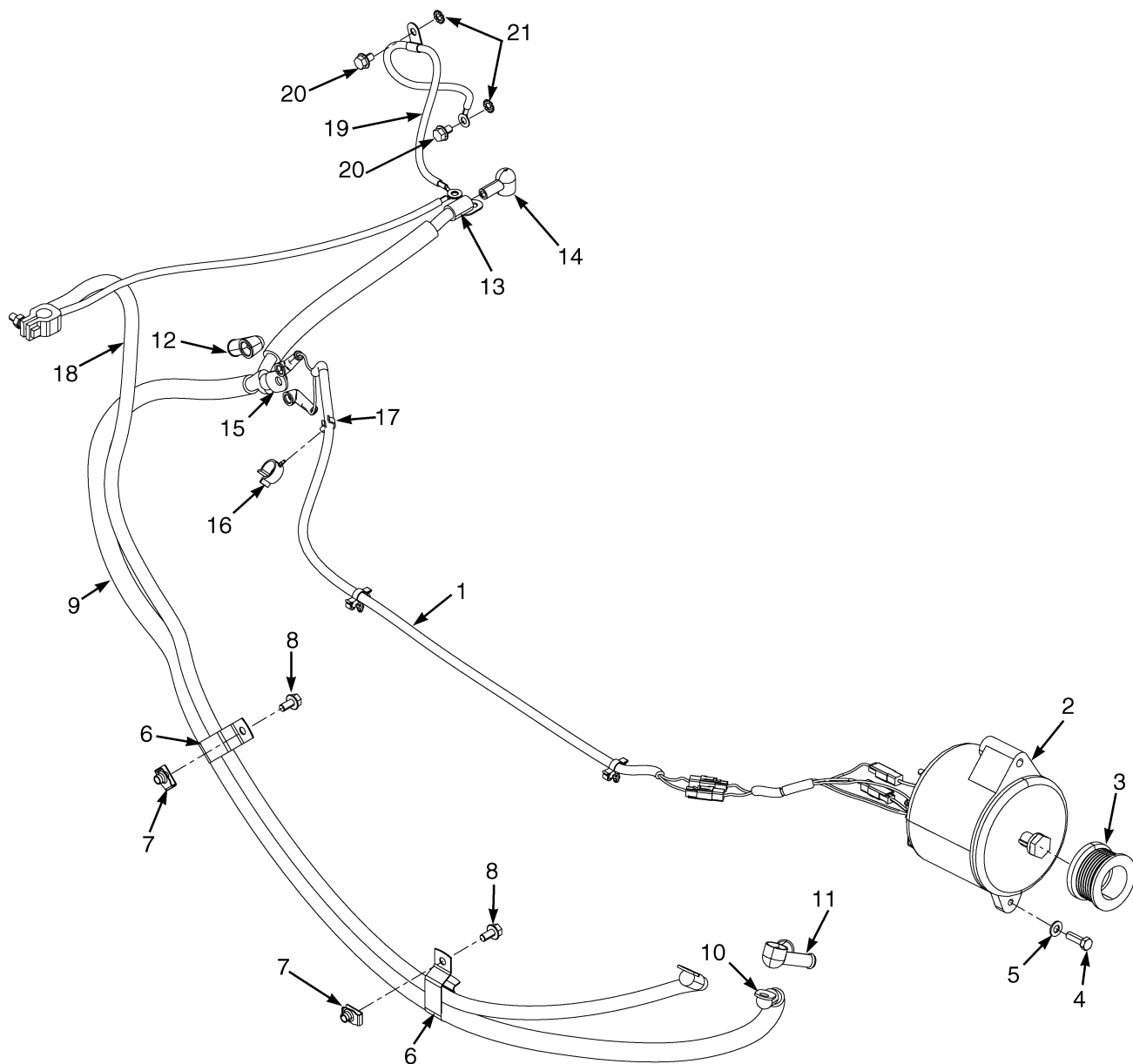


BP080598

**ENGINE ELECTRICAL SYSTEM
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	2084717	Battery Cable	1
1	148800	Terminal (Battery)	1
1	203689	E-Ring	1
1	204223	Boot	2
1	1357265	Battery Cable (Red) (Bulk)	1
1	1539153	Conduit	1
2	1529257	Sensor (Air Flow Restriction)	1
3	1502543	Nut (Flange)	1
4	1501938	Bracket	2
5	1616422	Spacer	1
6	1616314	Bracket	1
7	292680	Washer	1
8	1514429	Nut	1
9	1527880	Capscrew	1
10	1528889	Capscrew	2
11	1582464	Fastener	3
12	1500912	Clip	3
13	2084521	Wire Harness (Cummins 4.5L Diesel) (☞Figure 4-48).....	1
14	1644726	Bracket	1
15	1527883	Capscrew	1
16	1501928	Bracket	1
17	1566654	Pressure Transducer (Engine Oil Pressure Sensor)	1
18	1614852	Adapter	1
19	1615376	O-Ring	1
20	1501917	Sensor (Coolant)	1
21	2090355	Wire Harness (Water In Fuel)	1
22	1501929	Bracket	1
23	1527879	Capscrew	4
24	2094237	Battery Cable (Fused, 100 A)	1
24	1357527	Wire-Bulk (Bulk)	AR
24	1651850	E-Ring	1
24	1544729	Connector Body	1
24	1544730	Socket	1
25	1544157	Clip	2
26	1480237	Nut	2
27	2098992	Battery Cable (Positive) (☞Figure 4-10).....	1
28	2098991	Battery Cable (Negative) (☞Figure 4-10).....	1
29	2093220	Battery Cable (Negative)	1
30	1529366	Capscrew	2
31	296380	Washer	2
32	2046866	Capscrew	2
33	1565407	Nut	2
34	1501896	Contactor	1
35	2094236	Battery Cable (Fused, 150 A)	1
35	1357265	Battery Cable (Red) (Bulk)	AR
35	148800	Terminal (Battery)	2
35	1560091	Boot	1

ENGINE ELECTRICAL SYSTEM (FIGURE 4-9) CUMMINS 4.5L DIESEL — UL TYPE DS

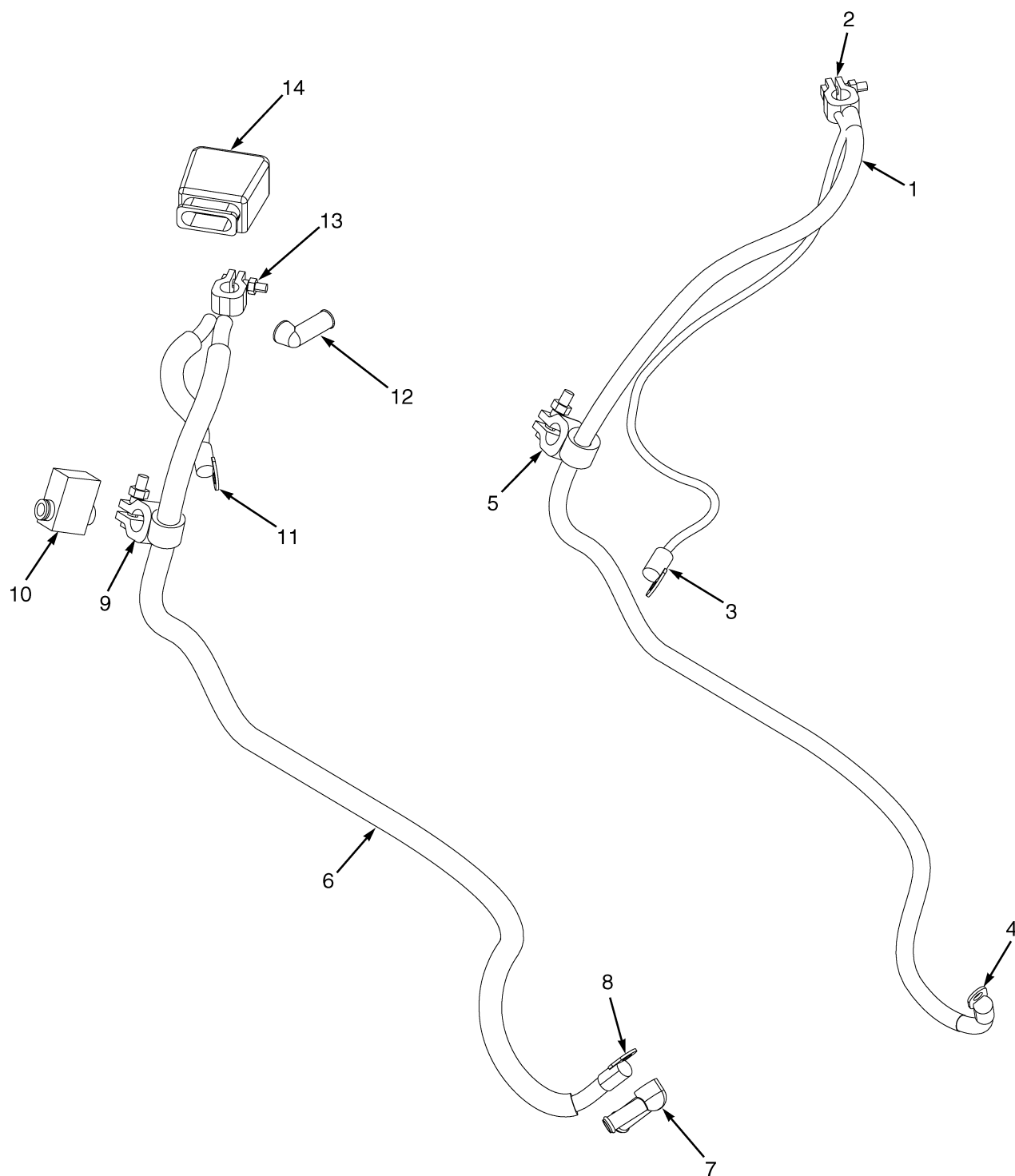


BP080601

**ENGINE ELECTRICAL SYSTEM
CUMMINS 4.5L DIESEL – UL TYPE DS**

ITEM	PART NO.	DESCRIPTION	QTY
1	2093783	Wire Harness (Sealed Alternator) (☞Figure 4-46).....	1
2	2089808	Alternator (Sealed)	1
3	1501948	Pulley	1
4	18497	Capscrew	1
5	18515	Washer	1
6	1544157	Clip	2
7	1480237	Nut	2
8	1527879	Capscrew	2
9	2098993	Battery Cable (Positive)	1
9	1357268	Battery Cable (Red)	AR
9	1357266	Battery Cable (Red)	AR
10	16079	Terminal	1
11	1661688	Boot	1
12	204223	Boot	1
13	148798	Terminal	1
14	1566146	Boot	1
15	148795	Terminal	1
16	1502066	Clamp	1
17	1561871	Clamp (Swivel)	1
18	2093219	Battery Cable (Negative) (☞Figure 4-10).....	1
19	2093220	Battery Cable	1
19	806426	E-Ring	2
19	1564044	E-Ring	1
20	1529366	Capscrew	2
21	296380	Washer	2

BATTERY CABLES (FIGURE 4-10) CUMMINS 4.5L DIESEL

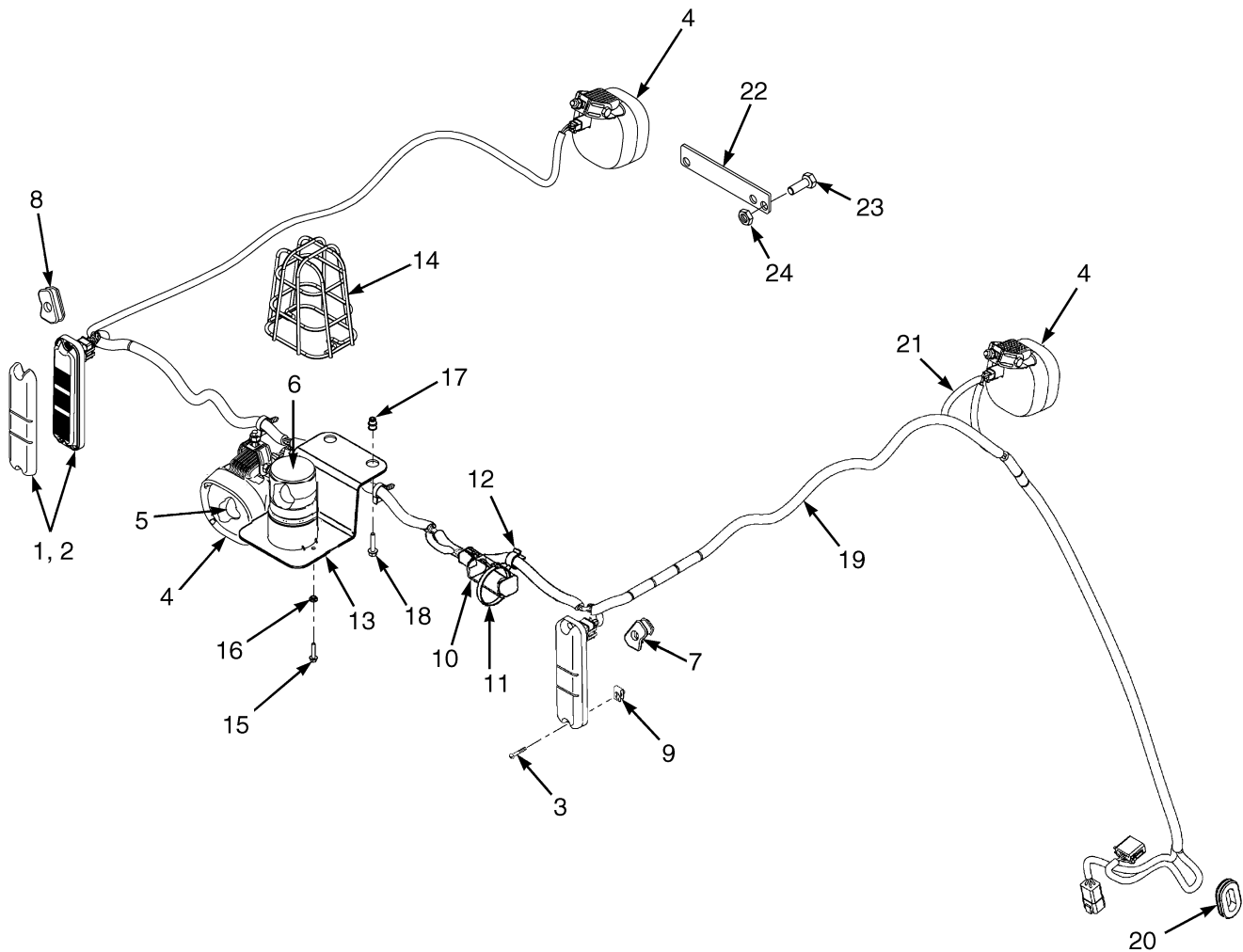


BP080600

**BATTERY CABLES
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	2098991	Battery Cable (Negative)	1
1	16078	Battery Cable	AR
2	148789	Terminal	1
3	806426	E-Ring	1
4	16079	Terminal	1
5	148783	Terminal	1
6	2098992	Battery Cable (Positive)	1
6	1357268	Battery Cable (Red)	AR
6	1357266	Battery Cable (Red)	AR
7	1661688	Boot	1
8	16079	Terminal	1
9	148786	Terminal	1
10	1595774	Boot	1
11	148798	Terminal	1
12	1566146	Boot	1
13	148792	Terminal	1
14	1536304	Boot	1

LIGHTS (FIGURE 4-11) STOP, TAIL, TURN, BACKUP, AND STROBE



BP080620

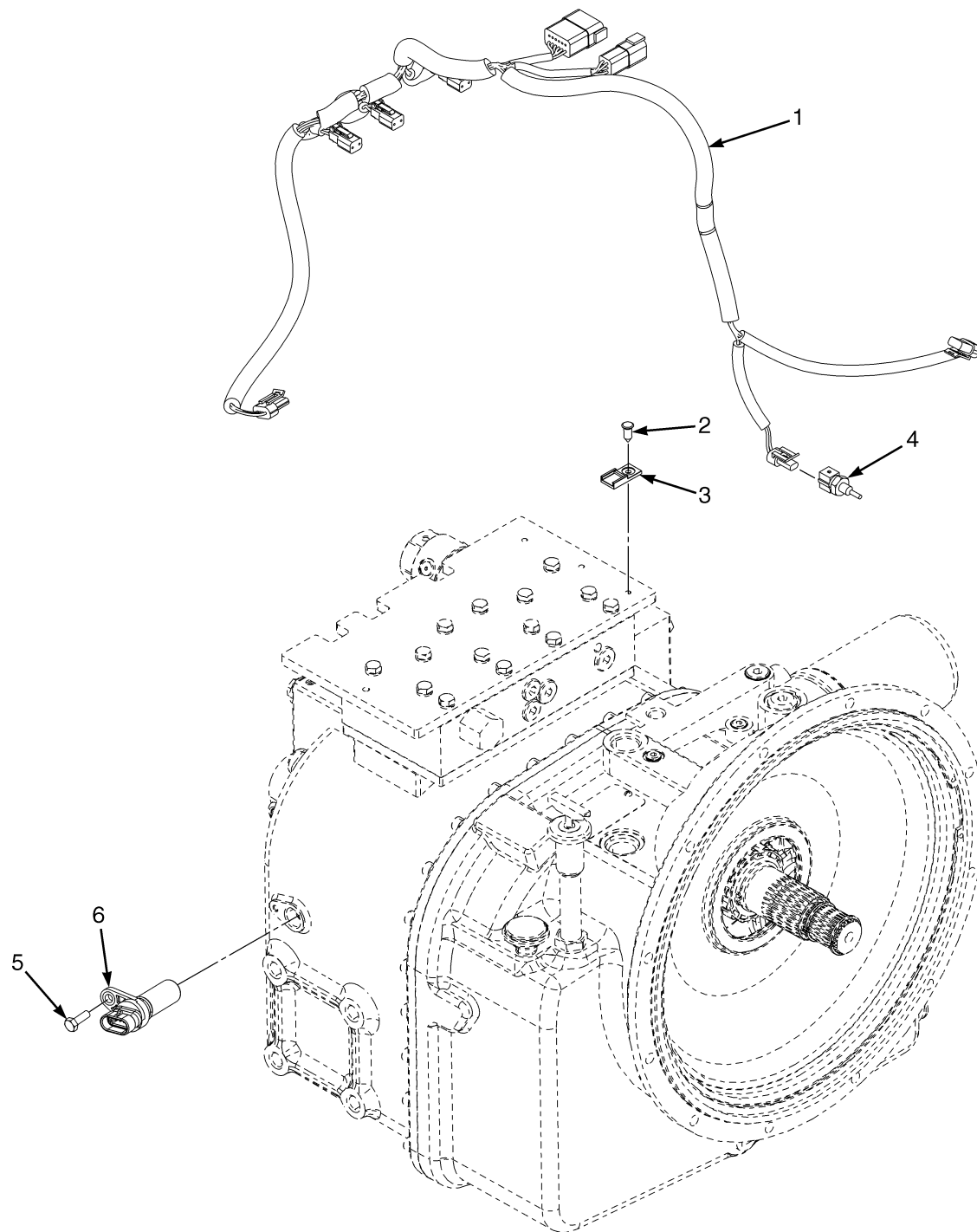
LIGHTS

STOP, TAIL, TURN, BACKUP, AND STROBE

ITEM	PART NO.	DESCRIPTION	QTY
1	2056824	Brake/Backup Light (Stop, Turn, Tail, And Back-Up)	2
2	2056826	Reflector (Tail)	2
3	1565125	Screw	4
4	2098083	Work Light (Rear)	1
4	2107382	Head/Work Light (Rear)	1
4	2098084	Work Light (RH Front)	1
4	2107383	Head/Work Light (RH Front) (LED)	1
4	2098085	Work Light (LH Front)	1
4	2107384	Head/Work Light (LH Front) (LED)	1
5	2098082	Bulb (Halogen)	1
6	1654013	Strobe Light Assembly (☞ Figure 12-1).....	1
7	1560447	Grommet (RH Tail Light)	1
8	1560448	Grommet (LH Tail Light)	1
9	1537551	Nut	4
10	b 2095895	Wire Harness	1
10	1514597	Connector	1
10	1514598	Connector	1
10	1484709	Terminal (Pin)	4
10	1634047	Resistor	3
11	1582605	Clamp	1
12	1502066	Clamp	1
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	1647440	Wire Harness (Cab) (Lights)	1
19	cd 2098386	Wire Harness (Lights) (Overhead Guard) (☞ Figure 4-49).....	1
19	e 2101861	Wire Harness (Lights) (Overhed Guard) (☞ Figure 4-49).....	1
20	1539584	Grommet	1
21	2099263	Wire Harness (Work Light Jumper) (☞ Figure 4-50).....	1
22	1664656	Bracket (With Cab)	2
22	1664626	Bracket (Without Cab)	2
22	1695249	Bracket (Use with LED Lights)	1
23	1586627	Capscrew	4
24	1586430	Nut	4
	a 1563841	Connector (To Vehicle System Manager)	1

FOOTNOTES:**a** Not Illustrated**b** → 6/2007**c** → PENDING PER ECN 105217**d** 6/2007 →**e** PENDING PER ECN 105217 →

TRANSMISSION ELECTRICAL SYSTEM (FIGURE 4-12) TWO SPEED TRANSMISSION

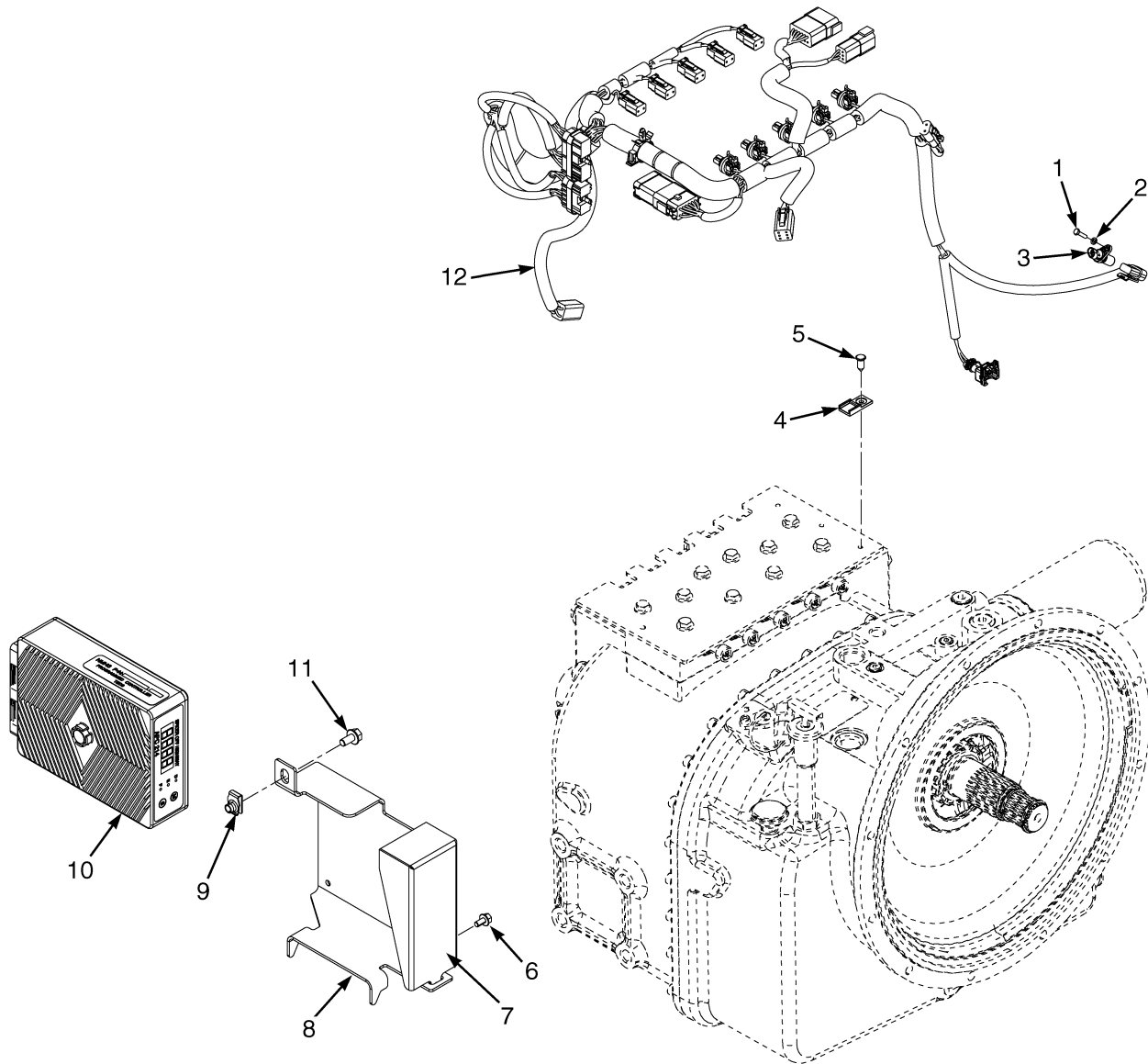


BP080573

**TRANSMISSION ELECTRICAL SYSTEM
TWO SPEED TRANSMISSION**

ITEM	PART NO.	DESCRIPTION	QTY
1	2093046	Wire Harness (Transmission, Two Speed) (☞ Figure 4-44).....	1
2	1582464	Fastener	2
3	1500912	Clip	2
4	1515654	Sensor (Coolant Temperature)	1
5	1527876	Capscrew	1
6	1541232	Sensor	1

TRANSMISSION ELECTRICAL SYSTEM (FIGURE 4-13) THREE SPEED TRANSMISSION



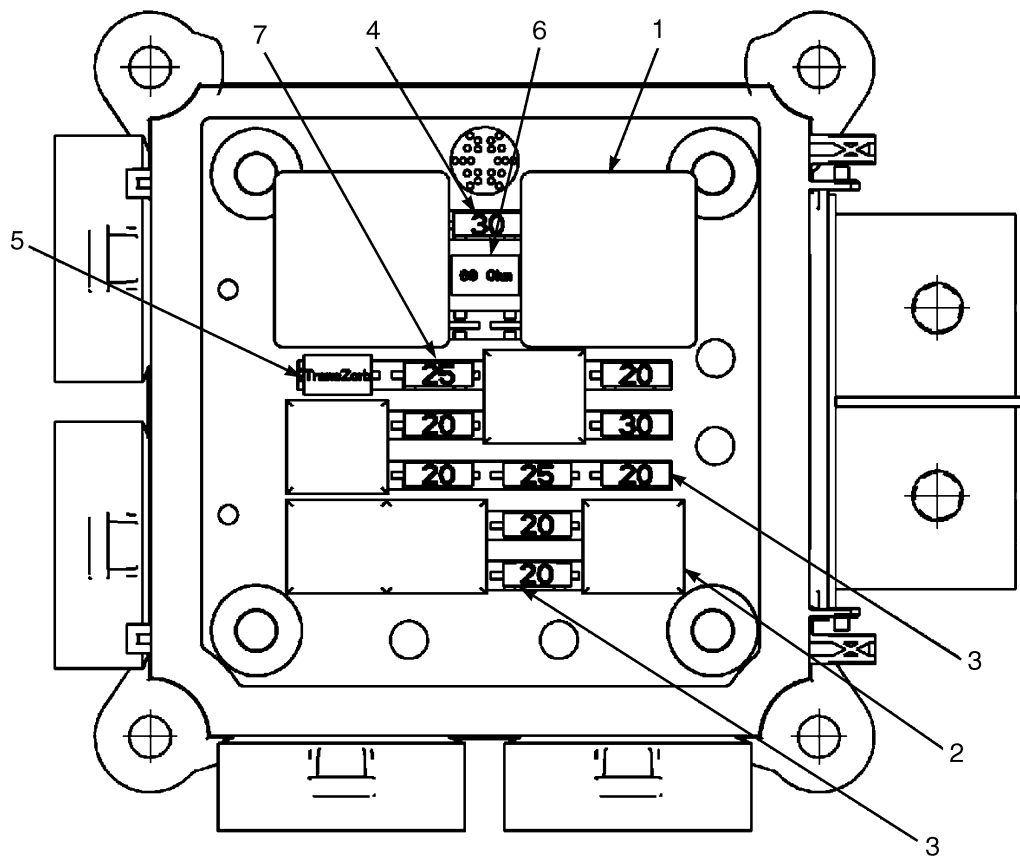
BP080546

**TRANSMISSION ELECTRICAL SYSTEM
THREE SPEED TRANSMISSION**

ITEM	PART NO.	DESCRIPTION	QTY
1	1527876	Capscrew	1
2	292680	Washer	1
3	1541231	Sensor (Input Speed)	1
4	1500912	Clip	4
5	1582464	Fastener	4
6	1534417	Capscrew	4
7	1603367	Cover	1
8	1662302	Bracket	1
9	1480237	Nut	1
10	b 2089015	Controller	1
10	ab 2108841	Controller	1
10	c 2091460	Controller (Extended Function)	1
10	c 2089017	Controller	1
10	b 2091459	Controller (Extended Function)	1
11	1527879	Capscrew	1
12	2093045	Wire Harness (Transmission, Three Speed) (☞ Figure 4-45).....	1

FOOTNOTES:**a** Alternate Part**c** GM 4.3L Gasoline and LPG**b** Cummins 4.5L Diesel

POWER DISTRIBUTION MODULE (FIGURE 4-14)



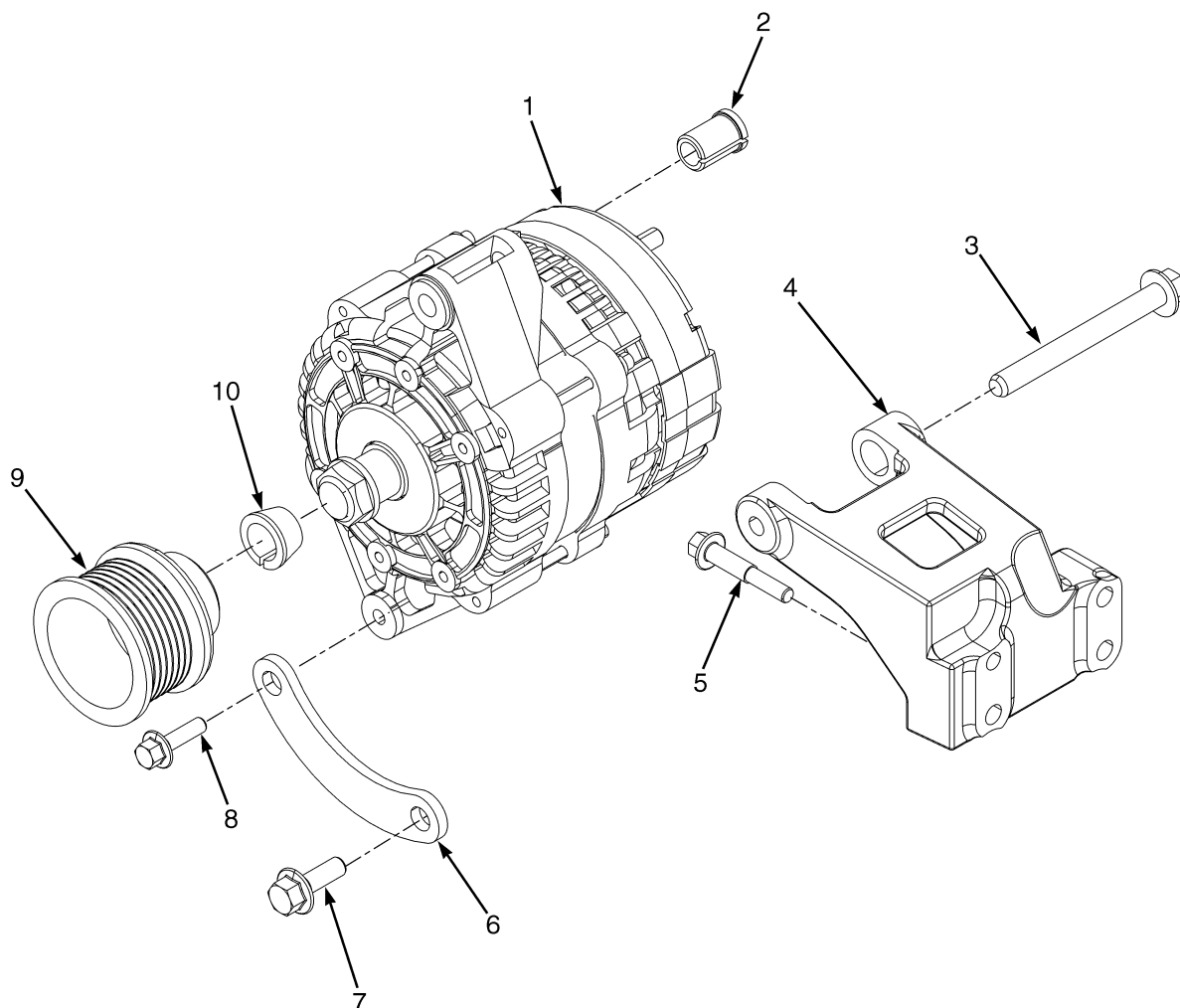
BP080485

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

NOTES

[illegible]

ALTERNATOR AND MOUNTING (FIGURE 4-15) CUMMINS 4.5L DIESEL

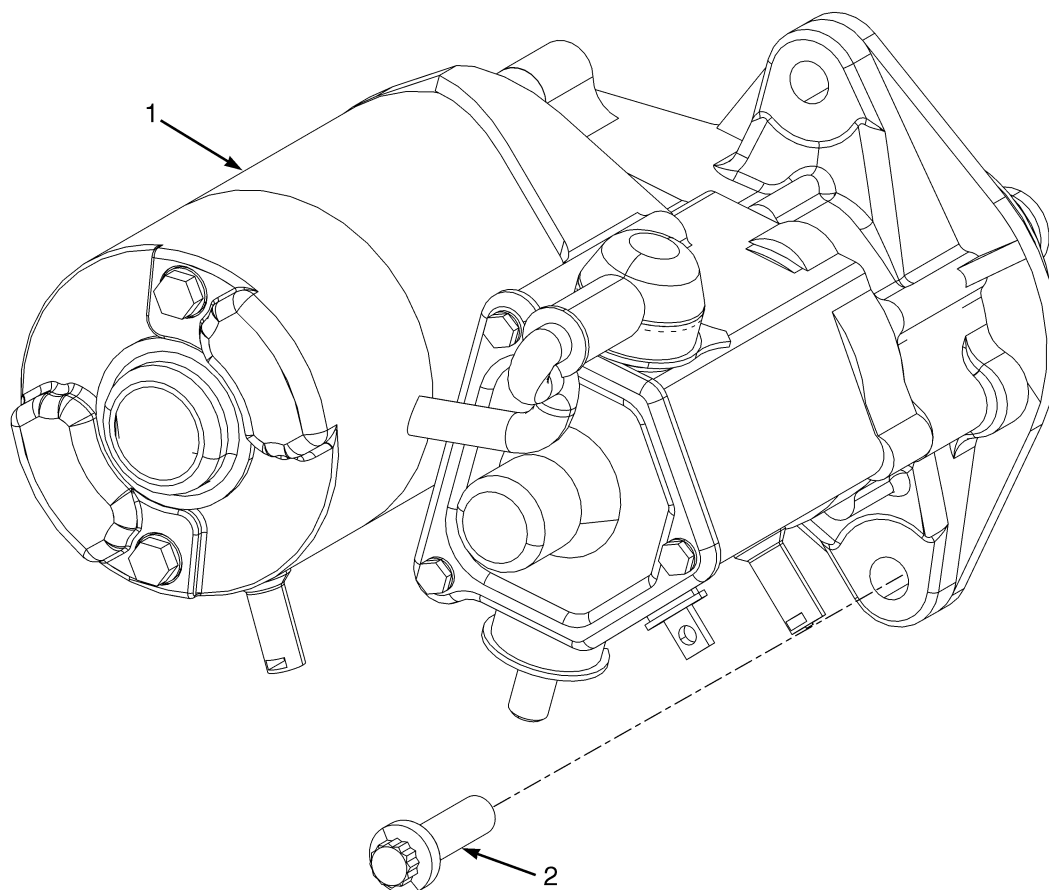


BP080486

**ALTERNATOR AND MOUNTING
CUMMINS 4.5L DIESEL**

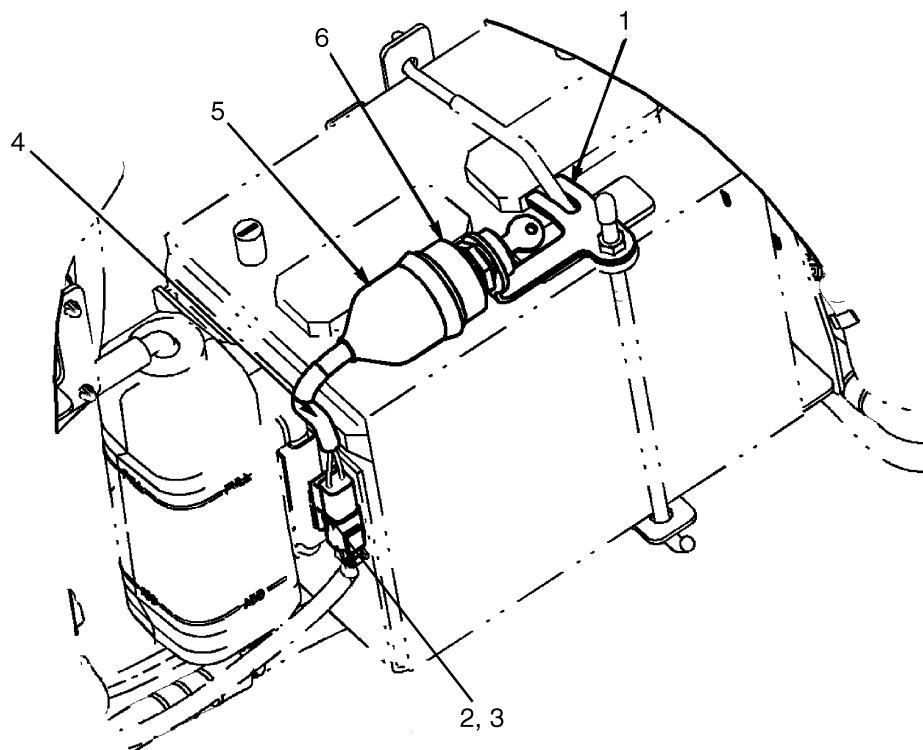
ITEM	PART NO.	DESCRIPTION	QTY
1	1637805	Alternator	1
2	1637814	Brace	1
3	1637810	Capscrew	1
4	1637813	Spacer	1
5	1512111	Capscrew	4
6	1637815	Support	1
7	1512503	Capscrew	2
8	1512005	Capscrew	1
9	1637811	Pulley	1
10	1637812	Retainer	1

STARTER AND MOUNT (FIGURE 4-16) CUMMINS 4.5L DIESEL



BP090305

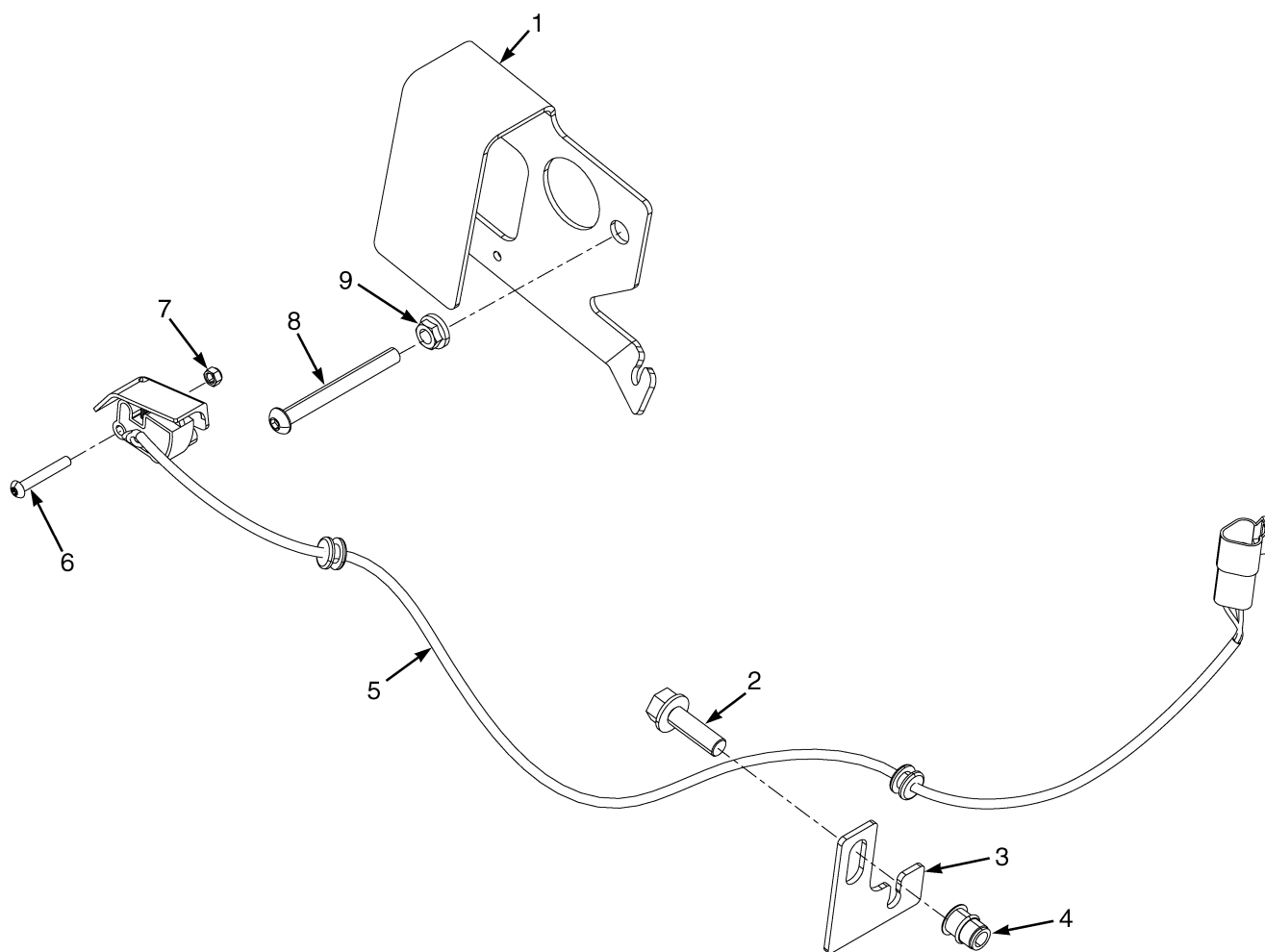
ITEM	PART NO.	DESCRIPTION	QTY
	1501932	Engine Assy-Diesel (Cummins 4.5L)	1
1	1654059	Starter	1
2	1588828	Capscrew	2

REMOTE KEY SWITCH (FIGURE 4-17)

BP080556

ITEM	PART NO.	DESCRIPTION	QTY
1	1582337	Bracket	1
2	1500912	Clip	1
3	1582464	Fastener	1
4	2058110	Wire Harness (Remote Keyswitch)	1
4	1493465	Connector	1
4	1330414	Connector (Secondary Lock)	1
4	1330437	Terminal (Pin)	2
4	1521309	Connector Body	2
5	190380	Boot	1
6	2058111	Ignition Switch	1
6	262798	Key Set	2

MAST ELECTRICAL (FIGURE 4-18)

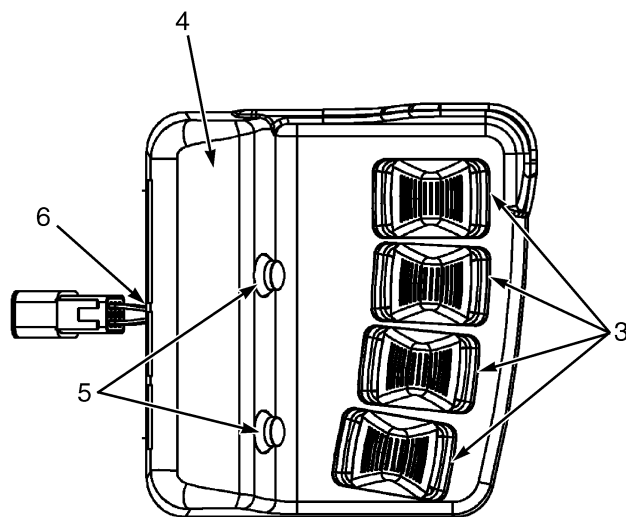
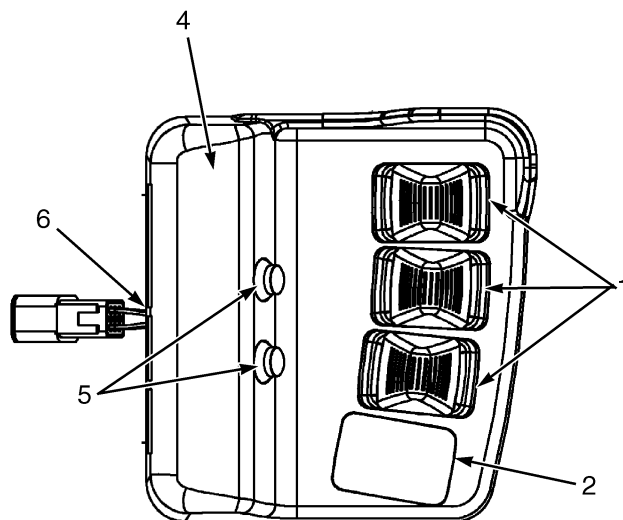


BP080602

MAST ELECTRICAL

ITEM	PART NO.	DESCRIPTION	QTY
1	1659573	Bracket	1
2	1586629	Capscrew	1
3	1649408	Bracket	1
4	1530244	Insert	1
5	1649407	Sensor (Mast Position)	1
6	1553897	Capscrew	2
7	302398	Locknut	2
8	1597451	Capscrew	1
9	1586430	Nut	1

ELECTRONIC CONTROL LEVERS (FIGURE 4-19) MINI-LEVER MODULES — DATE CODE 0724

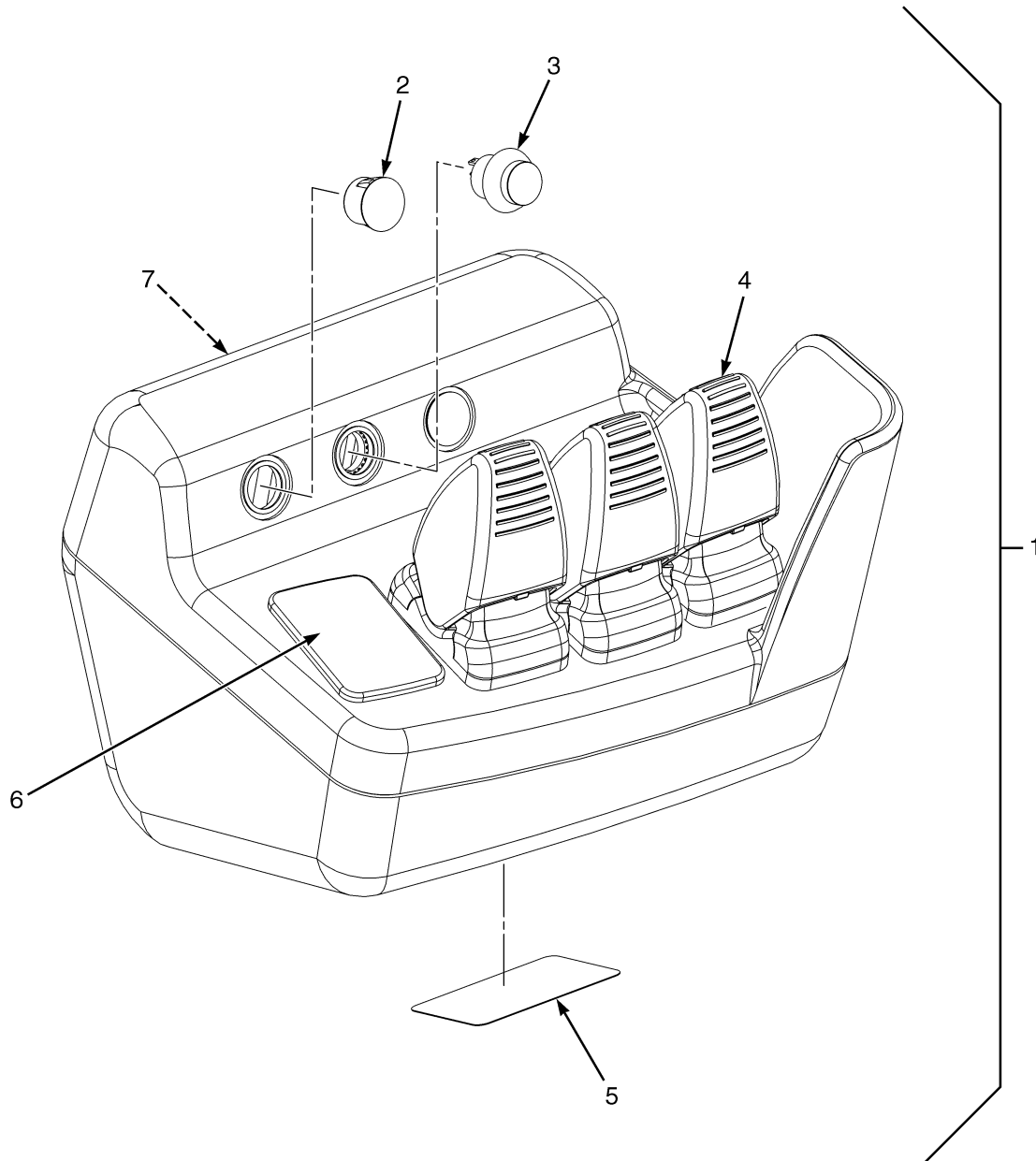


BP150206

**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 4-20)
MINI-LEVER MODULES (THREE FUNCTION) — DATE CODE 0725 THRU 0743



BP150259

ELECTRONIC CONTROL LEVERS

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

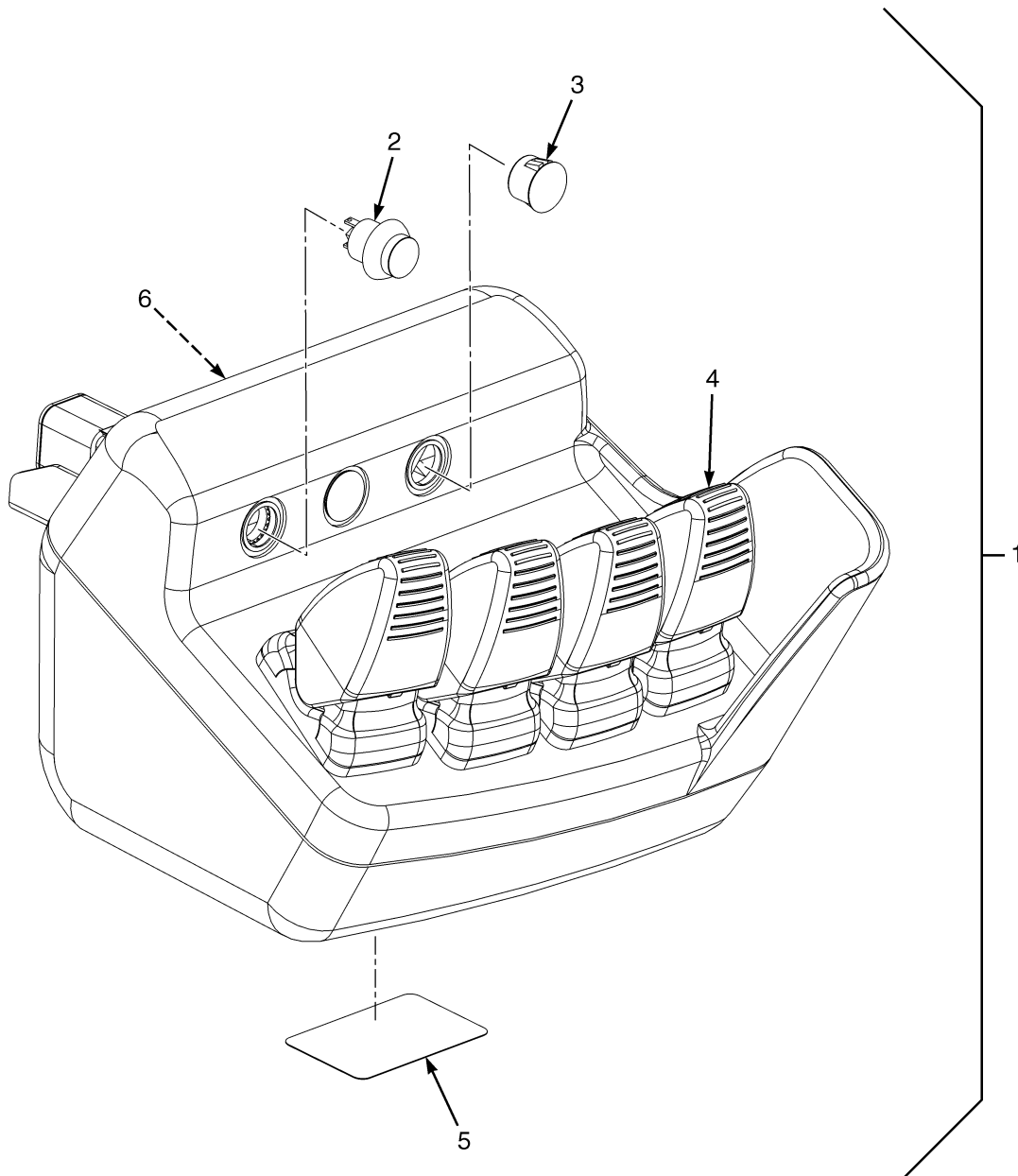
ITEM	PART NO.	DESCRIPTION	QTY
1	2099224	Mini-Lever (Plain, 8542298)	1
	b 1598222	Kit-Plug (Mini-Lever Plug)	1
	c 1598223	Kit-Plug (Interlock Switch Plug)	3
1	2099228	Mini-Lever (Clamping, 8542302)	1
	a 1683398	Kit-Mini-Lever (Clamping)	1
	d 1598221	Kit-Switch (Interlock Switch)	1
	b 1598222	Kit-Plug (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 1-26,  Figure 1-27).....	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 4-21)
MINI-LEVER MODULE (FOUR FUNCTION) — DATE CODE 0725 THRU 0743



BP150258

ELECTRONIC CONTROL LEVERS

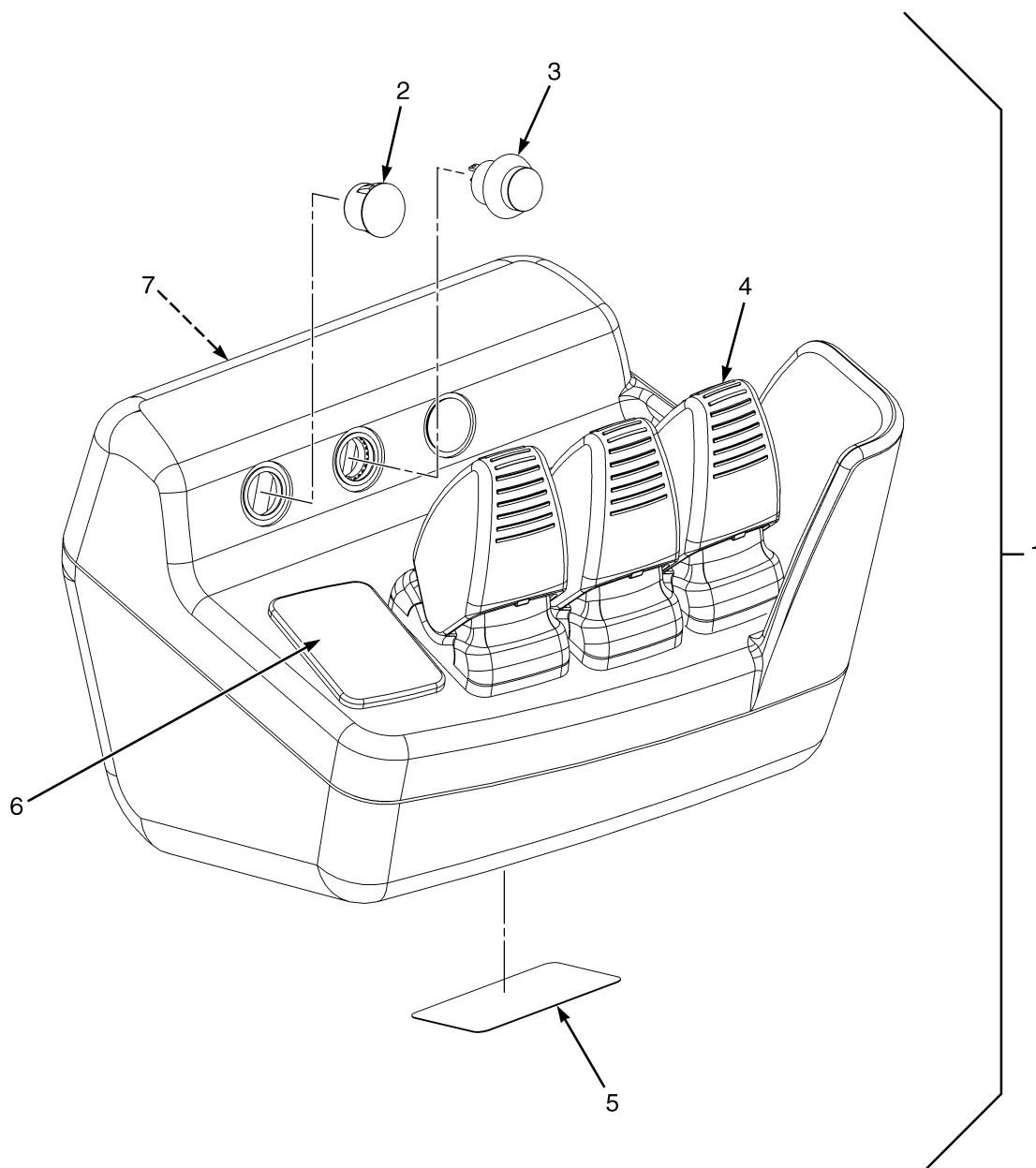
MINI-LEVER MODULE (FOUR FUNCTION) – DATE CODE 0725 THRU 0743

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 1-26, ☞Figure 1-27).....	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) d Kit Includes: 1 Plain Mini-Lever, 1 Gasket, 4 Screws (parts are NSS)

ELECTRONIC CONTROL LEVERS (FIGURE 4-22) 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

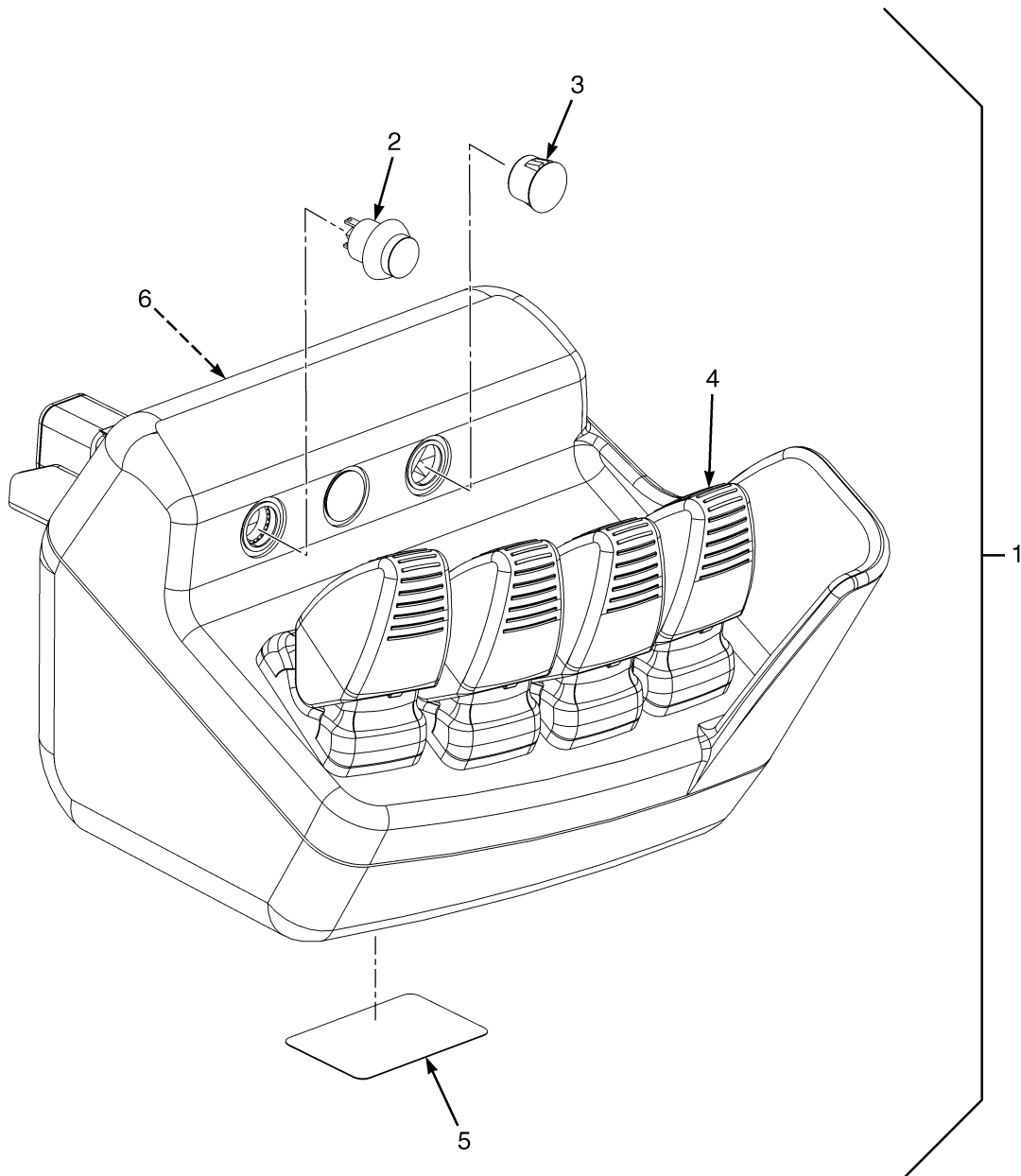
ITEM	PART NO.	DESCRIPTION	QTY
7		Control Labels (☞Figure 1-26, ☞Figure 1-27).....	1

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 4-23)
MINI-LEVER MODULE (FOUR FUNCTION) — DATE CODE 0744**

BP150258

ELECTRONIC CONTROL LEVERS

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

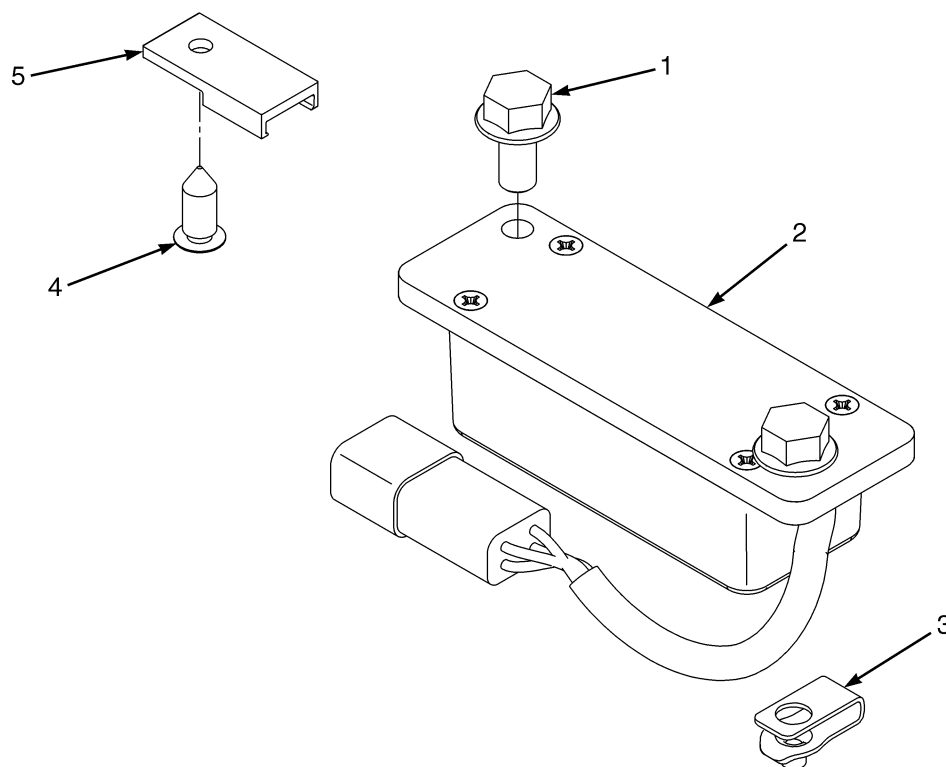
ITEM	PART NO.	DESCRIPTION	QTY
1	2105373	Mini-Lever (8544614)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	4
	b 1598223	Kit-Plug (Interlock Switch Plug)	3
1	2105377	Mini-Lever (8544618) (With Clamping)	1
	1689455	Kit-Mini-Lever (Non-Clamping)	3
	1689460	Kit-Mini-Lever (Clamping)	1
	c 1598221	Kit-Switch (Interlock 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 1-26, ☞ Figure 1-27).....	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)

This exploded view diagram illustrates the assembly of a mechanical component. The main assembly is shown on the left, with a central shaft (4) and a flange (8). A bracket (5) is attached to the top of the shaft. A cap (1) is shown on the right, secured by two screws (6). A base (2) is shown at the bottom, secured by two screws (7). A pin (3) is shown at the bottom of the shaft. A dashed line indicates the alignment of the assembly.

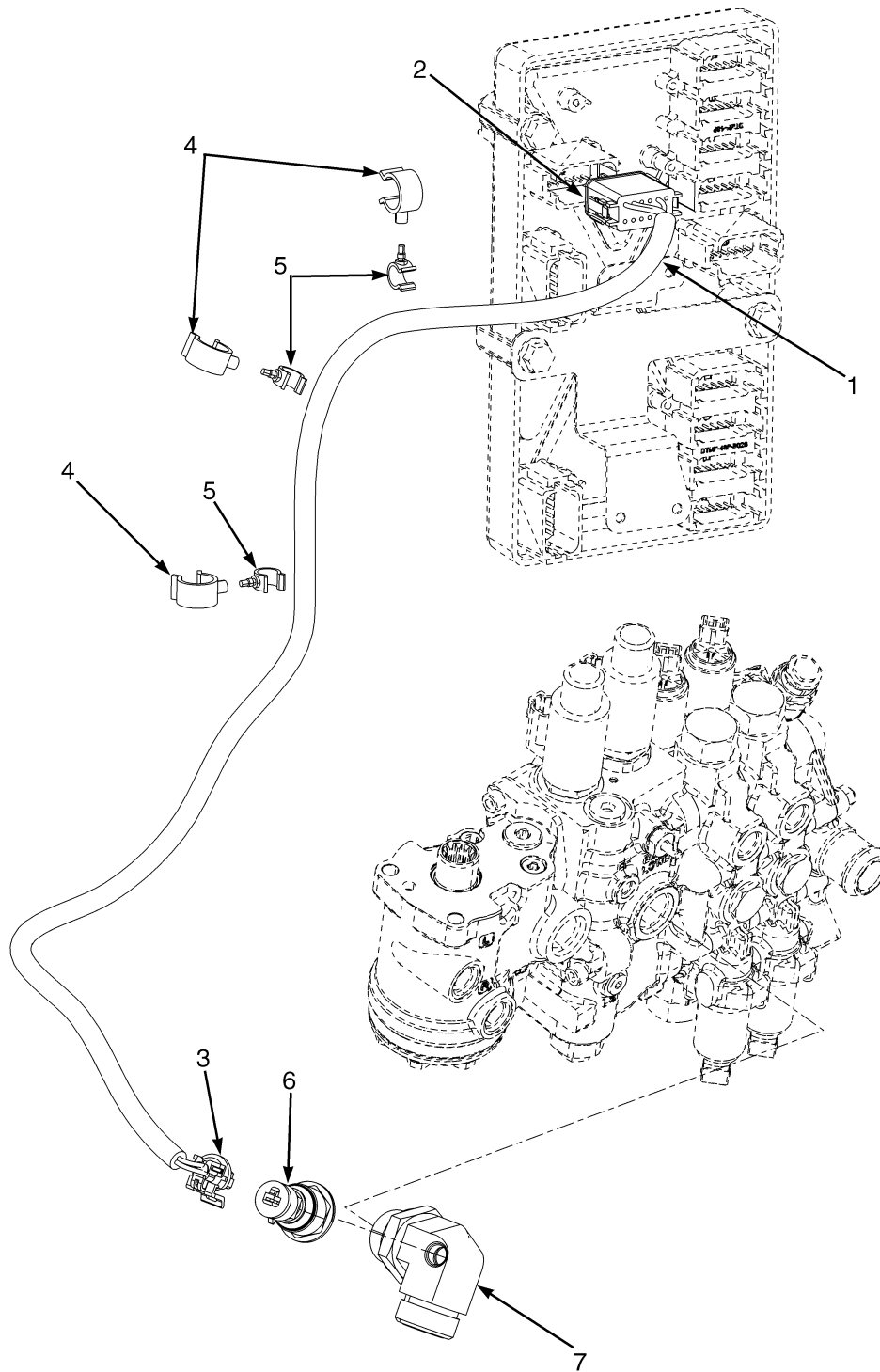
ITEM	PART NO.	DESCRIPTION	QTY
	1559695	Distributor Assembly	1
1	1566458	Distributor Cap	1
2	1566459	Rotor	1
3	1559922	Kit-Gear	1
4	1334423	Gasket	1
5	1559923	Sensor (Cam)	1
6	1559924	Screw	4
7	1559925	Screw	2
8	1335497	Clamp	1

IMPACT SENSOR (FIGURE 4-25)

BM080545

ITEM	PART NO.	DESCRIPTION	QTY
1	1527876	Capscrew	2
1	287851	Capscrew (Alternate Part)	2
1	320157	Washer (Alternate Part)	2
2	2079843	Sensor (Impact)	1
3	1566420	Nut	2
4	1582464	Fastener	1
4	2100710	Fastener (Alternate Part)	1
5	1500912	Clip	1

LOAD WEIGH ELECTRICAL (FIGURE 4-26)

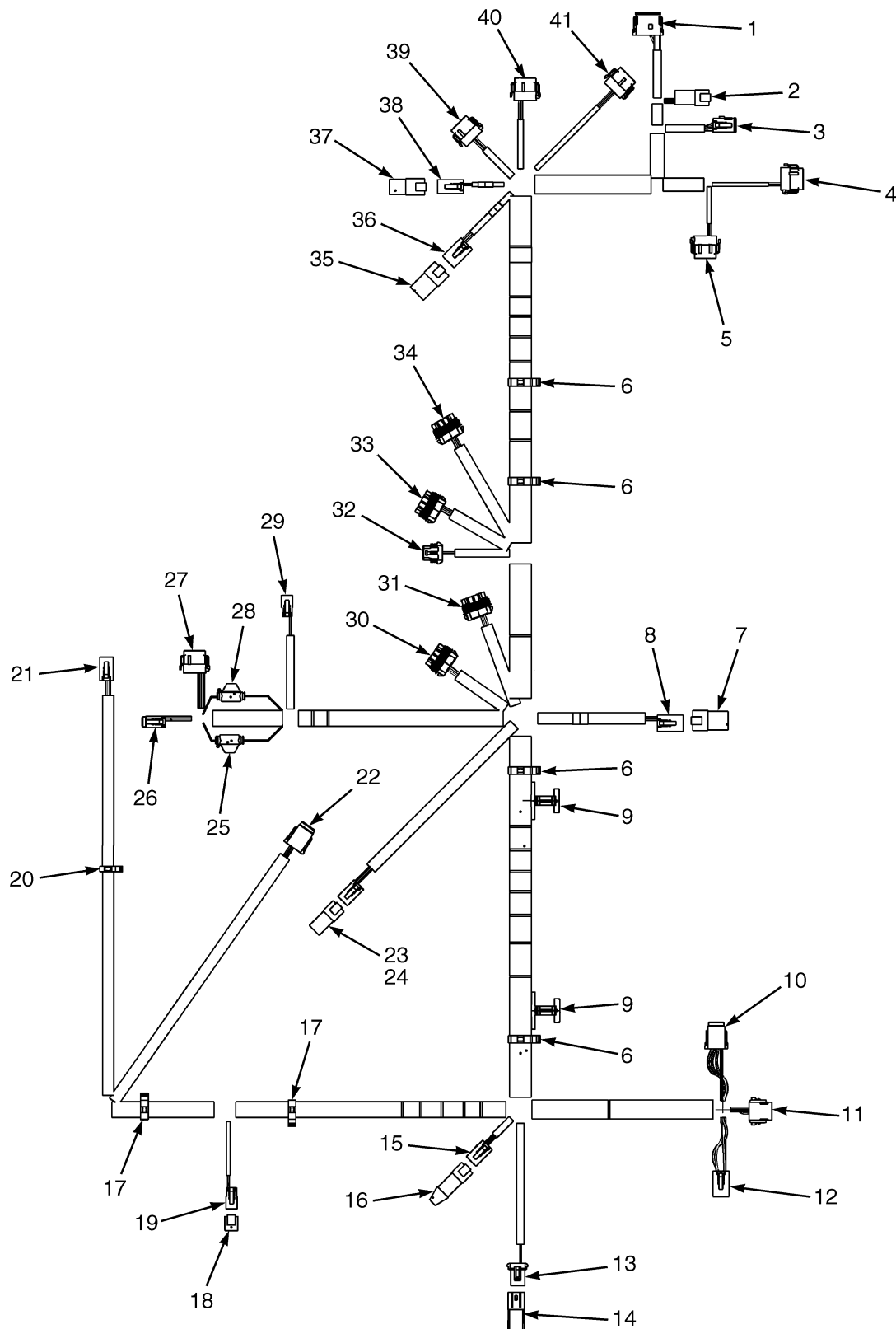


BP080413

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	1648259	Fitting	1

WIRE HARNESS (FIGURE 4-27)
RIGHT HAND CHASSIS — GM 4.3L GASOLINE AND LPG (→ S/N H006V02199E GAS)
(→ S/N H006V01742E LPG)



BP080582

WIRE HARNESS

RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (→ S/N H006V02199E GAS)
(→ S/N H006V01742E LPG)

ITEM	PART NO.	DESCRIPTION	QTY
	2098014	Wire Harness	1
1		Connector Assembly (To Vehicle System Manager (VSM))	1
1	1525563	Connector	1
1	1500913	Connector	1
1	1330438	Terminal (Socket)	8
1	1363886	Terminal (Socket)	4
2		Connector Assembly (To Cowl Harness)	1
2	1489655	Connector (4 Way)	1
2	1330416	Connector	1
2	1330437	Terminal (Pin)	4
3		Connector Assembly (To Cowl Harness)	1
3	1493428	Connector (12-Way)	1
3	1500913	Connector	1
3	1330438	Terminal (Socket)	10
3	1484377	Plug	2
4		Connector Assembly (To Vehicle System Manager (VSM))	1
4	1525567	Connector	1
4	1529046	Connector	1
4	1463139	Terminal	3
4	1484377	Plug	9
5		Connector Assembly (To Vehicle System Manager (VSM))	1
5	1525569	Connector	1
5	1529046	Connector	1
5	1463139	Terminal	3
5	1484377	Plug	9
6	1534282	Clip	4
7		Connector Assembly (End Cap)	1
7	1330439	Plug	4
7	1514597	Connector	1
8		Connector Assembly (Accessory Two)	1
8	1330439	Plug	1
8	1514602	Connector	1
8	1514603	Connector	1
8	1554359	Terminal	3
9	1620149	Clip	2
10		Connector Assembly (To Engine Harness)	1
10	1531501	Connector	1
10	1330438	Terminal (Socket)	9
10	1463139	Terminal	6
10	1484377	Plug	10
10	1554359	Terminal	4
11	1402888	Seal	2
11	1330281	Terminal	2
11	1329151	Terminal	1
11	1329152	Plug	1
11		Connector Assembly (To Hydraulic Filter)	1
12	1327164	Seal	2
12	1329151	Terminal	1
12	1329150	Connector	1

WIRE HARNESS

**RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (→ S/N H006V02199E GAS)
(→ S/N H006V01742E LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
12		Connector Assembly (End Cap)	1
13	1330438	Terminal (Socket)	4
13	1489657	Connector	1
13	1489656	Connector (4-Way)	1
13		Connector Assembly (Bus Terminal 2)	1
14	1525577	Connector (With Resistor) (End Cap)	1
15	1534329	Clip	2
16	1626727	Connector (End Cap)	1
17	1330438	Terminal (Socket)	2
17	1490243	Connector	1
17	1490242	Connector	1
17		Connector Assembly (To Alternate Horn button)	1
18	1402815	Clip	1
19	1330438	Terminal (Socket)	6
19	1529052	Connector	1
19	1493430	Connector	1
19		Connector Assembly (To Rear Harness)	1
20	1463139	Terminal	8
20	1541992	Connector	1
20	1541991	Connector	1
20		Connector Assembly (To Seat Harness)	1
21	1525573	Connector (Endcap)	1
22	1330438	Terminal (Socket)	4
22	1489657	Connector	1
22	1489656	Connector (4-Way)	1
22		Connector Assembly (End Cap)	1
23	1498045	Fuse (7.5 Amp)	1
23	1602431	Fuse Holder	1
23		Connector Assembly (Battery Fuse)	1
24	1484377	Plug	1
24	1463139	Terminal	5
24	1531974	Connector	1
24	1531973	Connector	1
24		Connector Assembly (to Transmission Harness)	1
25	1463139	Terminal	12
25	1529046	Connector	1
25	1525567	Connector	1
25		Connector Assembly (To Transmission Harness)	1
26	1498045	Fuse (7.5 Amp)	1
26	1602431	Fuse Holder	1
26		Connector Assembly (Ignition Fuse)	1
27	1330438	Terminal (Socket)	2
27	1490243	Connector	1
27	1490242	Connector	1
27		Connector Assembly (To Hydraulic Pump Solenoid)	1
28	1521989	Terminal	3
28	1330281	Terminal	4
28	1327164	Seal	1
28	1323579	Seal	7

WIRE HARNESS

RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (→ S/N H006V02199E GAS)
(→ S/N H006V01742E LPG)

ITEM	PART NO.	DESCRIPTION	QTY
28	1521188	Lock	1
28	1521183	Connector	1
28		Connector Assembly (To Power Distribution Module)	1
29	1402888	Seal	2
29	1521989	Terminal	1
29	1330281	Terminal	6
29	1327164	Seal	1
29	1323579	Seal	5
29	1521188	Lock	1
29	1521184	Connector	1
29		Connector Assembly (To Power Distribution Module)	1
30	1476108	Wire Seal	1
30	1330355	Terminal	3
30	1330356	Seal	2
30	1476109	Connector Lock	1
30	1476064	Connector	1
30		Connector Assembly (To Horn)	1
31	1521989	Terminal	7
31	1521188	Lock	1
31	1521186	Connector	1
31	1327164	Seal	1
31	1323579	Seal	7
31		Connector Assembly (To Power Distribution Module)	1
32	1521989	Terminal	3
32	1330281	Terminal	5
32	1323579	Seal	8
32	1521188	Lock	1
32	1521185	Connector	1
32		Connector Assembly (To Power Distribution Module)	1
33	1330439	Plug	4
33	1514597	Connector	1
33		Connector Assembly (End Cap)	1
34	1554359	Terminal	4
34	1514603	Connector	1
34	1514602	Connector	1
34		Connector Assembly (To Lights/Cab Harness)	1
35	1330439	Plug	2
35	1480187	Connector	1
35		Connector Assembly (End Cap)	1
36	1554359	Terminal	2
36	1546697	Connector	1
36	1545202	Connector	1
36		Connector Assembly (Accessory One)	1
37	1484377	Plug	3
37	1463139	Terminal	9
37	1530037	Connector	1
37	1525567	Connector	1
37		Connector Assembly (To Vehicle System Manager (VSM))	1
38	1484377	Plug	6

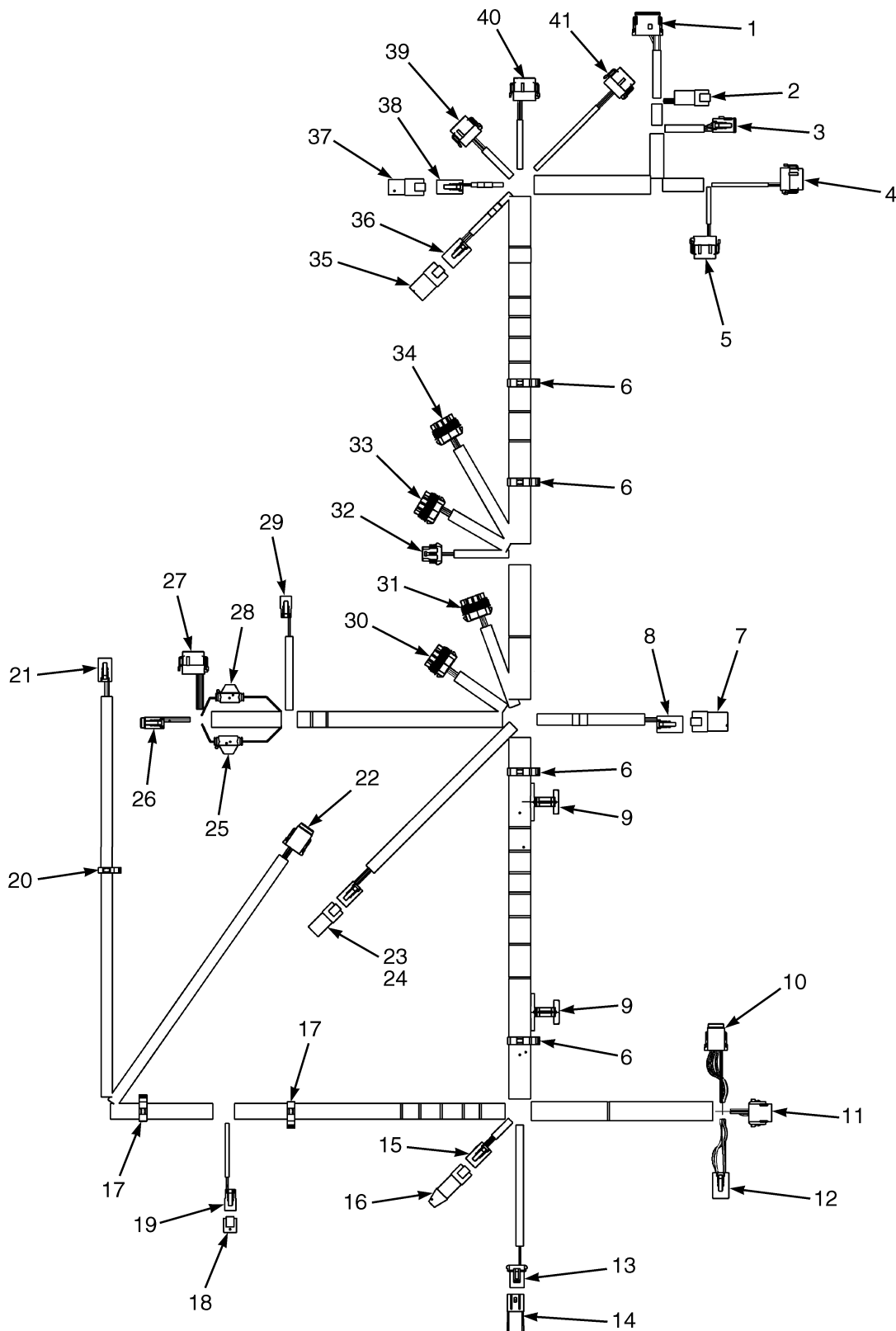
WIRE HARNESS**RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (→ S/N H006V02199E GAS)
(→ S/N H006V01742E LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
38		Connector Assembly (To Vehicle System Manager (VSM))	1
38	1525568	Connector	1
38	1530037	Connector	1
38	1463139	Terminal	6
39	1484377	Plug	8
39		Connector Assembly (To Vehicle System Manager (VSM))	1
39	1525570	Connector	1
39	1530037	Connector	1
39	1463139	Terminal	4

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-28)
RIGHT HAND CHASSIS — GM 4.3L GASOLINE AND LPG (S/N H006V02200E → GAS)
(S/N H006V01743E → LPG)



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WIRE HARNESS**RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (S/N H006V02200E → GAS)
(S/N H006V01743E → LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
	2097395	Wire Harness	1
1		Connector Assembly (To Vehicle System Manager (VSM))	1
1	1525563	Connector	1
1	1500913	Connector	1
1	1330438	Terminal (Socket)	8
1	1363886	Terminal (Socket)	4
2		Connector Assembly (To Cowl Harness)	1
2	1489655	Connector (4 Way)	1
2	1330416	Connector	1
2	1330437	Terminal (Pin)	4
3		Connector Assembly (To Cowl Harness)	1
3	1493428	Connector (12-Way)	1
3	1500913	Connector	1
3	1330438	Terminal (Socket)	10
3	1484377	Plug	2
4		Connector Assembly (To Vehicle System Manager (VSM))	1
4	1525567	Connector	1
4	1529046	Connector	1
4	1463139	Terminal	3
4	1484377	Plug	9
5		Connector Assembly (To Vehicle System Manager (VSM))	1
5	1525569	Connector	1
5	1529046	Connector	1
5	1463139	Terminal	3
5	1484377	Plug	9
6	1534282	Clip	4
7		Connector Assembly (End Cap)	1
7	1330439	Plug	4
7	1514597	Connector	1
8		Connector Assembly (Accessory Two)	1
8	1330439	Plug	1
8	1514602	Connector	1
8	1514603	Connector	1
8	1554359	Terminal	3
9	1620149	Clip	2
10		Connector Assembly (To Engine Harness)	1
10	1541991	Connector	1
10	1541992	Connector	1
10	1463139	Terminal	8
11	1502625	Connector (To Engine Harness)	1
11	1502626	Connector	1
11	1330438	Terminal (Socket)	7
11	1484377	Plug	1
12		Connector Assembly (To Engine Harness)	1
12	1514602	Connector	1
12	1514603	Connector	1
12	1554359	Terminal	4
13		Connector Assembly (To Hydraulic Filter)	1
13	1329152	Plug	1

WIRE HARNESS**RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (S/N H006V02200E → GAS)
(S/N H006V01743E → LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
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 (Bus Terminal 2)	1
15	1489656	Connector (4-Way)	1
15	1489657	Connector	1
15	1330438	Terminal (Socket)	4
16	1525577	Connector (With Resistor) (End Cap)	1
17	1534329	Clip	2
18	1626727	Connector (End Cap)	1
19		Connector Assembly (To Alternate Horn button)	1
19	1490242	Connector	1
19	1490243	Connector	1
19	1330438	Terminal (Socket)	2
20	1402815	Clip	1
21		Connector Assembly (To Rear Harness)	1
21	1493430	Connector	1
21	1529052	Connector	1
21	1330438	Terminal (Socket)	6
22		Connector Assembly (To Seat Harness)	1
22	1541991	Connector	1
22	1541992	Connector	1
22	1463139	Terminal	8
23	1525573	Connector (Endcap)	1
24		Connector Assembly (End Cap)	1
24	1489656	Connector (4-Way)	1
24	1489657	Connector	1
24	1330438	Terminal (Socket)	4
25		Connector Assembly (Battery Fuse)	1
25	1602431	Fuse Holder	1
25	1498045	Fuse (7.5 Amp)	1
26		Connector Assembly (to Transmission Harness)	1
26	1531973	Connector	1
26	1531974	Connector	1
26	1463139	Terminal	5
26	1484377	Plug	1
27		Connector Assembly (To Transmission Harness)	1
27	1525567	Connector	1
27	1529046	Connector	1
27	1463139	Terminal	12
28		Connector Assembly (Ignition Fuse)	1
28	1602431	Fuse Holder	1
28	1498045	Fuse (7.5 Amp)	1
29		Connector Assembly (To Hydraulic Pump Solenoid)	1
29	1490242	Connector	1

WIRE HARNESS**RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (S/N H006V02200E → GAS)
(S/N H006V01743E → LPG)**

ITEM	PART NO.	DESCRIPTION	QTY
29	1490243	Connector	1
29	1330438	Terminal (Socket)	2
30		Connector Assembly (To Power Distribution Module)	1
30	1521183	Connector	1
30	1521188	Lock	1
30	1323579	Seal	7
30	1327164	Seal	1
30	1330281	Terminal	4
30	1521989	Terminal	3
31		Connector Assembly (To Power Distribution Module)	1
31	1521184	Connector	1
31	1521188	Lock	1
31	1323579	Seal	5
31	1327164	Seal	1
31	1330281	Terminal	6
31	1521989	Terminal	1
31	1402888	Seal	2
32		Connector Assembly (To Horn)	1
32	1476064	Connector	1
32	1476109	Connector Lock	1
32	1330356	Seal	2
32	1330355	Terminal	3
32	1476108	Wire Seal	1
33		Connector Assembly (To Power Distribution Module)	1
33	1323579	Seal	7
33	1327164	Seal	1
33	1521186	Connector	1
33	1521188	Lock	1
33	1521989	Terminal	7
34		Connector Assembly (To Power Distribution Module)	1
34	1521185	Connector	1
34	1521188	Lock	1
34	1323579	Seal	8
34	1330281	Terminal	5
34	1521989	Terminal	3
35		Connector Assembly (End Cap)	1
35	1514597	Connector	1
35	1330439	Plug	4
36		Connector Assembly (To Lights/Cab Harness)	1
36	1514602	Connector	1
36	1514603	Connector	1
36	1554359	Terminal	4
37		Connector Assembly (End Cap)	1
37	1480187	Connector	1
37	1330439	Plug	2
38		Connector Assembly (Accessory One)	1
38	1545202	Connector	1
38	1546697	Connector	1
38	1554359	Terminal	2

WIRE HARNESS

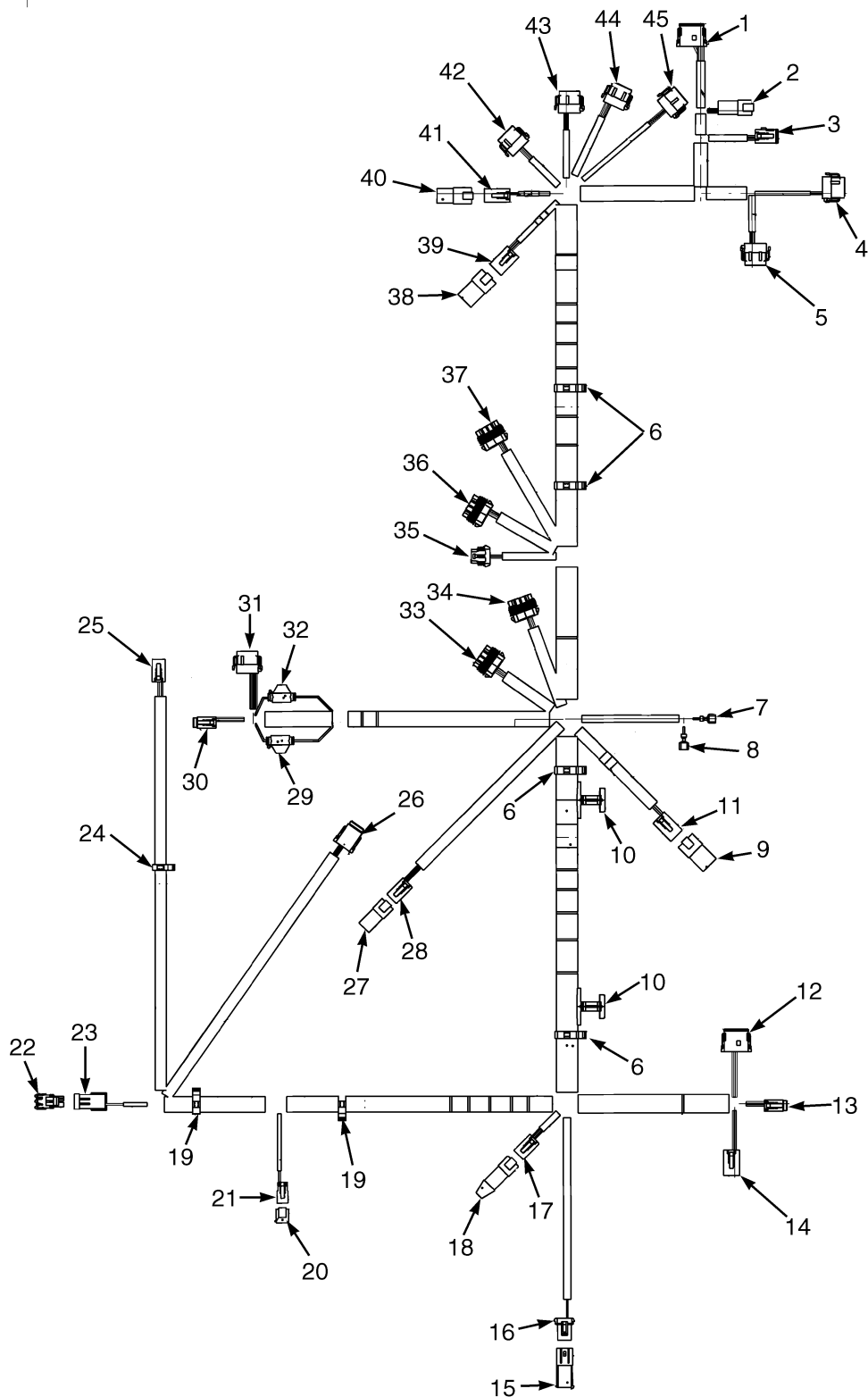
RIGHT HAND CHASSIS – GM 4.3L GASOLINE AND LPG (S/N H006V02200E → GAS)
(S/N H006V01743E → LPG)

ITEM	PART NO.	DESCRIPTION	QTY
39		Connector Assembly (To Vehicle System Manager (VSM))	1
39	1525567	Connector	1
39	1530037	Connector	1
39	1463139	Terminal	9
39	1484377	Plug	3
40		Connector Assembly (To Vehicle System Manager (VSM))	1
40	1525568	Connector	1
40	1530037	Connector	1
40	1463139	Terminal	6
40	1484377	Plug	6
41		Connector Assembly (To Vehicle System Manager (VSM))	1
41	1525570	Connector	1
41	1530037	Connector	1
41	1463139	Terminal	4
41	1484377	Plug	8

NOTES

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WIRE HARNESS (FIGURE 4-29) RIGHT HAND CHASSIS — CUMMINS 4.5L DIESEL



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WIRE HARNESS

RIGHT HAND CHASSIS – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	2093536	Wire Harness	1
1		Connector Assembly (To Vehicle System Manager (VSM))	1
1	1525563	Connector	1
1	1500913	Connector	1
1	1330438	Terminal (Socket)	8
1	1363886	Terminal (Socket)	4
2		Connector Assembly (To Cowl Harness)	1
2	1489655	Connector (4 Way)	1
2	1330416	Connector	1
2	1330437	Terminal (Pin)	4
3		Connector Assembly (To Cowl Harness)	1
3	1493428	Connector (12-Way)	1
3	1500913	Connector	1
3	1330438	Terminal (Socket)	9
3	1484377	Plug	3
4		Connector Assembly (To Vehicle System Manager (VSM))	1
4	1525567	Connector	1
4	1529046	Connector	1
4	1463139	Terminal	3
4	1484377	Plug	9
5		Connector Assembly (To Vehicle System Manager (VSM))	1
5	1525569	Connector	1
5	1529046	Connector	1
5	1463139	Terminal	9
5	1484377	Plug	3
6	1534282	Clip	4
7	1521309	Connector Body (Contactor Signal)	1
8	1521309	Connector Body (Contactor Ground)	1
9		Connector Assembly (End Cap)	1
9	1480187	Connector	1
9	1330439	Plug	4
10	1620149	Clip	2
11		Connector Assembly (Accessory Two)	1
11	1514602	Connector	1
11	1514603	Connector	1
11	1330439	Plug	1
11	1554359	Terminal	3
12		Connector Assembly (To Engine Harness)	1
12	1493428	Connector (12-Way)	1
12	1500913	Connector	1
12	1330438	Terminal (Socket)	9
12	1484377	Plug	3
13		Connector Assembly (To Engine Harness)	1
13	1531973	Connector	1
13	1531974	Connector	1
13	1463139	Terminal	6
14		Connector Assembly (To Engine Harness)	1
14	1514602	Connector	1
14	1514603	Connector	1
14	1330439	Plug	1

WIRE HARNESS

RIGHT HAND CHASSIS – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
14	1554359	Terminal	3
15		Connector Assembly (End Cap)	1
15	1329150	Connector	1
15	1329151	Terminal	1
15	1327164	Seal	2
16		Connector Assembly (To Hydraulic Filter)	1
16	1329152	Plug	1
16	1329151	Terminal	1
16	1330281	Terminal	2
16	1402888	Seal	2
17		Connector Assembly (Bus Terminal Two)	1
17	1489656	Connector (4-Way)	1
17	1489657	Connector	1
17	1330438	Terminal (Socket)	4
18	1525577	Connector (With Resistor) (End Cap)	1
19	1534329	Clip	2
20	1626727	Connector (End Cap)	1
21		Connector Assembly (To Alternate Horn Button)	1
21	1490242	Connector	1
21	1490243	Connector	1
21	1330438	Terminal (Socket)	2
22		Connector Assembly (End Cap)	1
22	1465468	Connector	1
22	1327164	Seal	2
23		Connector Assembly (To Air Restriction Indicator)	1
23	1465469	Connector	1
23	1402888	Seal	2
23	1323578	Terminal	2
24	1402815	Clip	1
25		Connector Assembly (To Rear Harness)	1
25	1493430	Connector	1
25	1529052	Connector	1
25	1330438	Terminal (Socket)	6
26		Connector Assembly (To Seat Harness)	1
26	1541991	Connector	1
26	1529052	Connector	1
26	1463139	Terminal	8
27	1525573	Connector (Endcap)	1
28		Connector Assembly (To Impact Sensor)	1
28	1489656	Connector (4-Way)	1
28	1489657	Connector	1
28	1330438	Terminal (Socket)	4
29		Battery Fuse	1
29	1602431	Fuse Holder	1
29	1498045	Fuse (7.5 Amp)	1
30		Connector Assembly (To Transmission Harness)	1
30	1531973	Connector	1
30	1531974	Connector	1
30	1463139	Terminal	6
31		Connector Assembly (To Transmission Harness)	1

WIRE HARNESS

RIGHT HAND CHASSIS – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
31	1525567	Connector	1
31	1529046	Connector	1
31	1463139	Terminal	12
32		Battery Fuse	1
32	1602431	Fuse Holder	1
32	1498045	Fuse (7.5 Amp)	1
33		Connector Assembly (To Power Distribution Module)	1
33	1521183	Connector	1
33	1521188	Lock	1
33	1323579	Seal	7
33	1327164	Seal	1
33	1330281	Terminal	4
33	1521989	Terminal	3
34		Connector Assembly (To Power Distribution Module)	1
34	1521184	Connector	1
34	1521188	Lock	1
34	1323579	Seal	5
34	1327164	Seal	2
34	1330281	Terminal	5
34	1521989	Terminal	1
34	1402888	Seal	1
35		Connector Assembly (To Horn)	1
35	1476064	Connector	1
35	1476109	Connector Lock	1
35	1330356	Seal	2
35	1330355	Terminal	3
35	1476108	Wire Seal	1
36		Connector Assembly (To Power Distribution Module)	1
36	1521186	Connector	1
36	1521188	Lock	1
36	1323579	Seal	7
36	1327164	Seal	1
36	1521989	Terminal	7
37		Connector Assembly (To Power Distribution Module)	1
37	1521185	Connector	1
37	1521188	Lock	1
37	1323579	Seal	8
37	1330281	Terminal	6
37	1521989	Terminal	2
38		Connector Assembly (End Cap)	1
38	1514597	Connector	1
38	1330439	Plug	4
39		Connector Assembly (To Lights/Cab Harness)	1
39	1514602	Connector	1
39	1514603	Connector	1
39	1554359	Terminal	4
40		Connector Assembly (End Cap)	1
40	1480187	Connector	1
40	1330439	Plug	2
41		Connector Assembly (Accessory One)	1

WIRE HARNESS

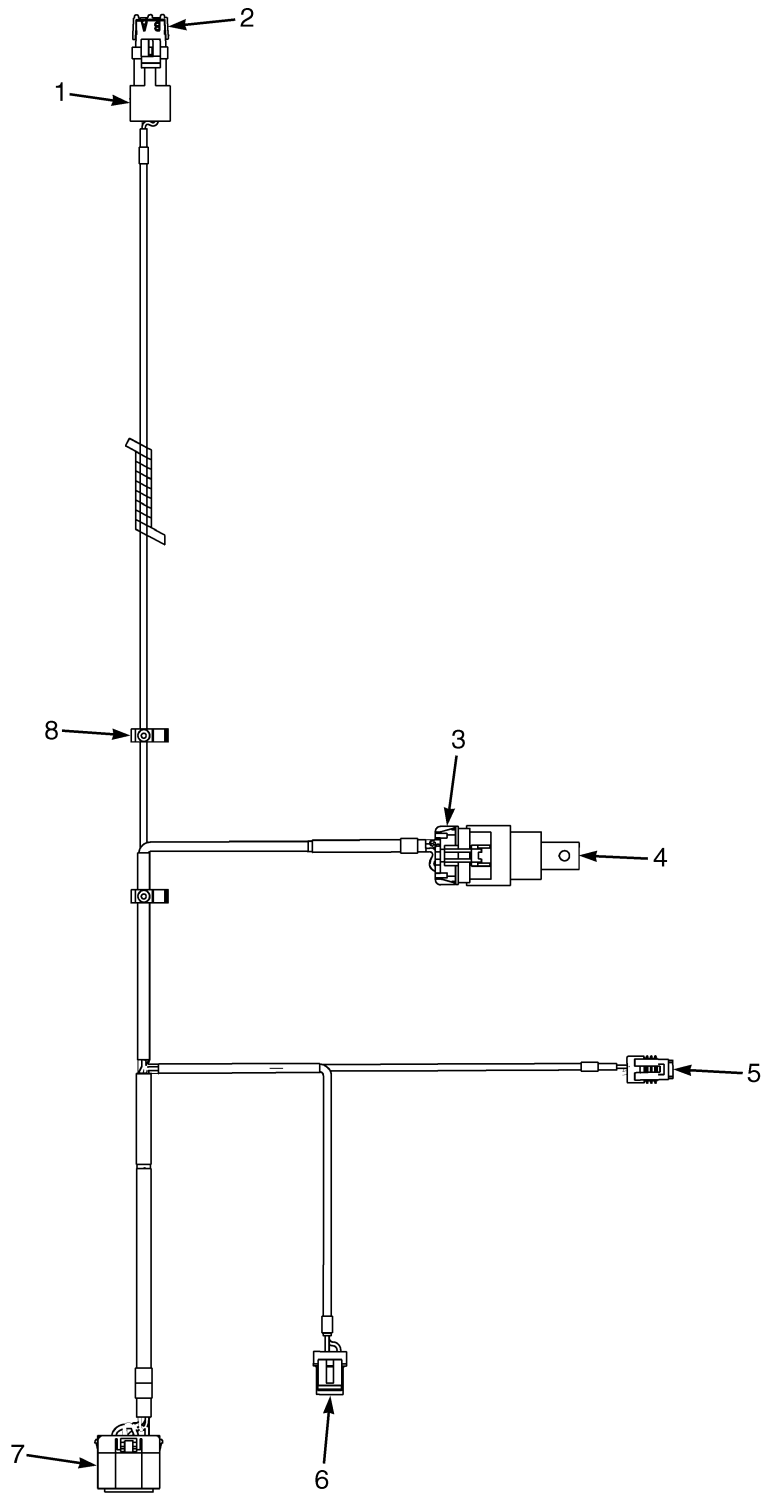
RIGHT HAND CHASSIS – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
41	1545202	Connector	1
41	1546697	Connector	1
41	1554359	Terminal	2
42		Connector Assembly (To Vehicle System Manager (VSM))	1
42	1525567	Connector	1
42	1530037	Connector	1
42	1463139	Terminal	9
42	1484377	Plug	3
43		Connector Assembly (To Vehicle System Manager (VSM))	1
43	1525568	Connector	1
43	1530037	Connector	1
43	1484377	Plug	5
43	1463139	Terminal	7
44		Connector Assembly (To Vehicle System Manager (VSM))	1
44	1525569	Connector	1
44	1530037	Connector	1
44	1463139	Terminal	11
44	1484377	Plug	1
45		Connector Assembly (To Vehicle System Manager (VSM))	1
45	1525570	Connector	1
45	1530037	Connector	1
45	1463139	Terminal	4
45	1484377	Plug	8

NOTES

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WIRE HARNESS (FIGURE 4-30) LEFT HAND CHASSIS — GM 4.3L GASOLINE

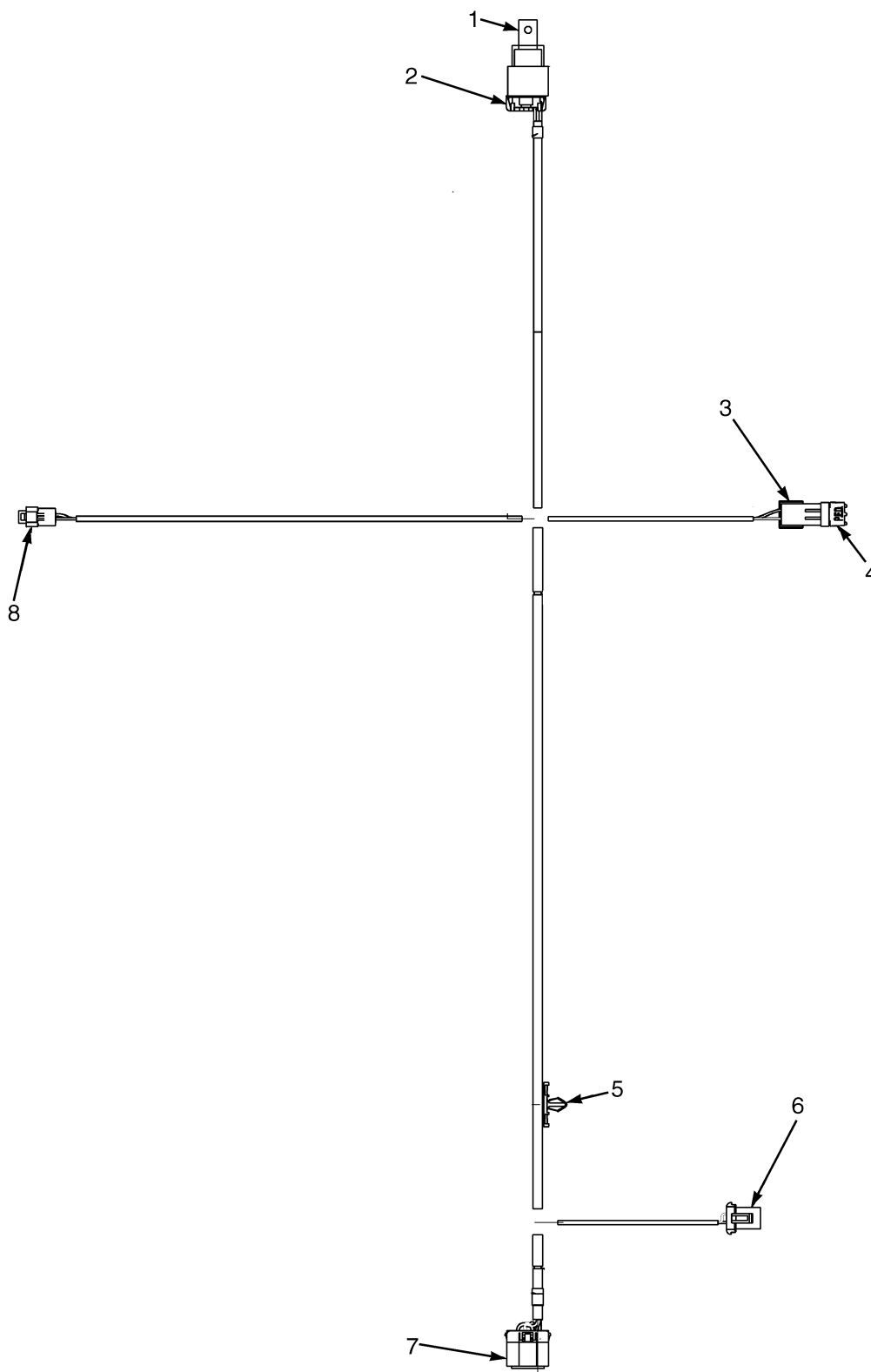


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WIRE HARNESS
LEFT HAND CHASSIS – GM 4.3L GASOLINE

ITEM	PART NO.	DESCRIPTION	QTY
	2094677	Wire Harness	1
1		End Cap	1
1	1461743	Relay	1
2		Connector Assembly (Air Restriction Cap)	1
2	1465468	Connector	1
2	1327164	Seal	2
3		Connector Assembly (Air Restriction)	1
3	1402888	Seal	2
3	1465469	Connector	1
3	1323578	Terminal	2
4	1539859	Clip	1
5		Connector Assembly (Fuel Level)	1
5	1476077	Connector	1
5	1323576	Terminal	2
6		Connector Assembly (Fuel Pump)	1
6	1519611	Connector	1
6	1323576	Terminal	2
7		Connector Assembly (To Engine Harness)	1
7	1527273	Connector	1
7	1402926	Terminal	3
7	1402927	Terminal	5
7	1507571	Seal	5
7	1402929	Wire Seal	3
7	1527305	Connector Lock	1
8		Connector Assembly (Latch Relay)	1
8	1461744	Connector Body	1
8	1323579	Seal	4
8	1402912	Terminal	4
8	1498483	Sealant	1

WIRE HARNESS (FIGURE 4-31) LEFT HAND CHASSIS — GM 4.3L LPG

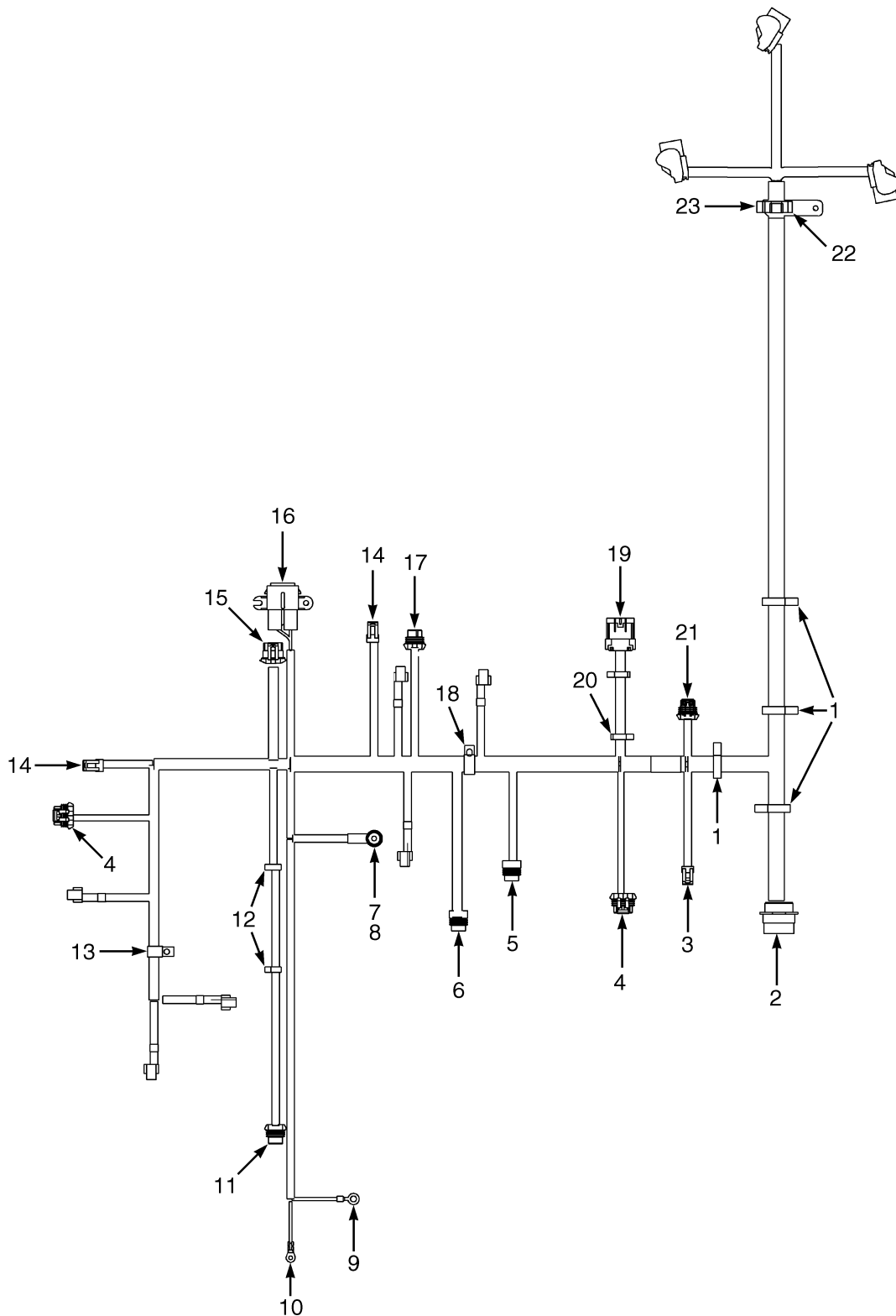


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WIRE HARNESS
LEFT HAND CHASSIS – GM 4.3L LPG

ITEM	PART NO.	DESCRIPTION	QTY
	2094678	Wire Harness	1
1	1461743	Relay	1
2		Connector Assembly (Latch Relay)	1
2	1461744	Connector Body	1
2	1323579	Seal	4
2	1327164	Seal	1
2	1402912	Terminal	4
2	1498483	Sealant	1
3		Connector Assembly (Air Restriction)	1
3	1465469	Connector	1
3	1323578	Terminal	2
3	1402888	Seal	2
4		Connector Assembly (Air Restriction Cap)	1
4	1327164	Seal	2
4	1465468	Connector	1
5	1539859	Clip	1
6		Connector Assembly (Low LPG Switch)	1
6	1329152	Plug	1
6	1329148	Terminal	2
6	1402888	Seal	2
6	1329151	Terminal	1
7		Connector Assembly (To Engine Wire Harness)	1
7	1527273	Connector	1
7	1402926	Terminal	3
7	1402927	Terminal	5
7	1402929	Wire Seal	3
7	1507571	Seal	5
7	1527305	Connector Lock	1
8		Connector Assembly (LPG Lockoff)	1
8	1599337	Connector	1
8	1561146	Terminal	2

WIRE HARNESS (FIGURE 4-32) ENGINE — GM 4.3L GASOLINE (→ S/N H006V02199E)



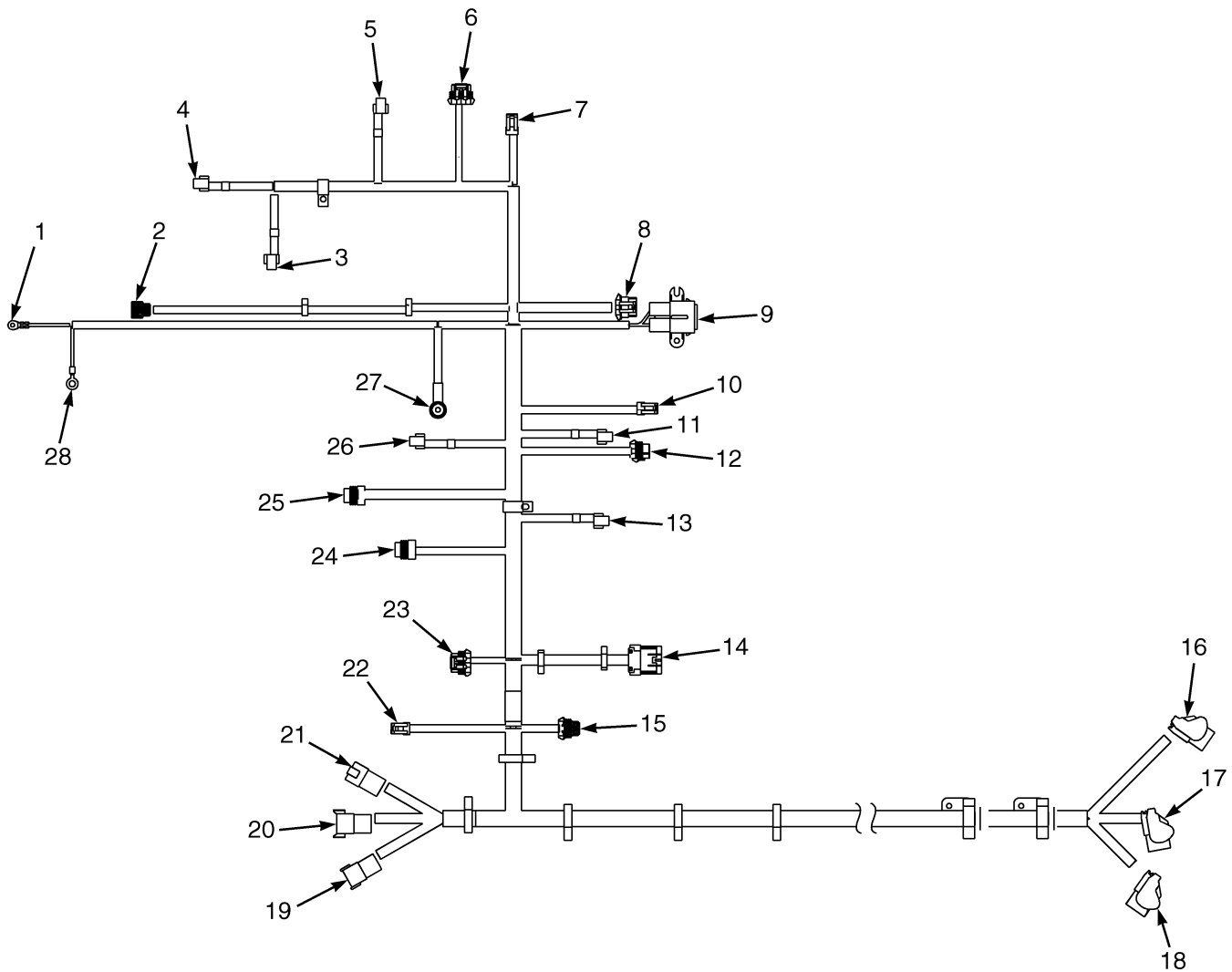
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WIRE HARNESS

ENGINE – GM 4.3L GASOLINE (→ S/N H006V02199E)

ITEM	PART NO.	DESCRIPTION	QTY
	2087702	Wire Harness (Engine)	1
1	1540944	Clip	4
2	1531502	Connector	1
3	1327957	Connector (Oil Pressure)	1
4	1482667	Connector Body (To Oxygen Sensors)	2
5	1607839	Connector	1
6	1547483	Connector (To Ignition/MAP)	2
7	148614	E-Ring (To Alternator)	1
8	1566146	Boot	1
9	148615	E-Ring (To Starter)	1
10	1519025	Ring Terminal (To Starter)	1
11	1476064	Connector (Crank Position)	1
12	1509888	Clip	2
13	132972	Clamp	1
14	1323586	Connector (To Coolant Sensor/Alternator)	2
15	1607743	Connector	1
16		Fuse Holder Assembly	1
16	1543553	Fuse Holder	1
16	1454829	Fuse (60 Amp)	1
16	1454862	Cover (With Seal)	1
16	1454827	Seal	2
16	1520543	Terminal	2
17	1476071	Connector (To Coil)	1
18	181089	Clamp	1
19		Connector Assembly	1
19	1527275	Connector (To Left Hand Chassis)	1
19	1520513	Clip	1
20	1500900	Clip	1
21	1476067	Connector (Cam Position)	1
22	1532779	Clip	1
23	1558226	Clip	1

WIRE HARNESS (FIGURE 4-33) ENGINE — GM 4.3L GASOLINE (S/N H006V02200E →)



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WIRE HARNESS

ENGINE – GM 4.3L GASOLINE (S/N H006V02200E →)

ITEM	PART NO.	DESCRIPTION	QTY
	2093681	Wire Harness (Engine)	1
1		Connector Assembly (Starter)	1
1	1519025	Ring Terminal	1
2		Connector Assembly (Crank Position)	1
2	1655119	Electrical Connector	1
2	1655120	Electrical Terminal	3
2	1655121	Seal	3
3		Connector Assembly (Injector 3)	1
4		Connector Assembly (Injector 5)	1
5		Connector Assembly (Injector 1)	1
6		Connector Assembly (Right Oxygen Sensor)	1
6	1482667	Connector Body	1
6	1330355	Terminal	4
6	1402877	Electrical Terminal	4
6	1482663	Connector	1
7		Connector Assembly (Temperature Sensor)	1
7	1323586	Connector	1
7	1354237	Terminal	2
8		Connector Assembly (Connector)	1
8	1607743	Connector	1
9		Connector Assembly (Connector)	1
9	1543553	Fuse Holder	1
9	1454829	Fuse (60 Amp)	1
9	1454862	Cover (With Seal)	1
9	1454827	Seal	2
9	1520543	Terminal	2
10		Connector Assembly (Alternator)	1
10	1323586	Connector	1
10	1323576	Terminal	2
11		Connector Assembly (Injector 2)	1
12		Connector Assembly (Coil)	1
12	1476071	Connector	1
12	1402877	Electrical Terminal	2
12	1330356	Seal	3
12	1351139	Seal	1
12	1476109	Connector Lock	1
13		Connector Assembly (Injector 6)	1
14		Connector Assembly (LH Chassis)	1
14	1527275	Connector	1
14	1402809	Clip	1
15		Connector Assembly (Cam Positioner Sensor)	1
15	1476067	Connector	1
15	1476109	Connector Lock	1
15	1330355	Terminal	3
15	1476108	Wire Seal	3
16		Connector Assembly (Connector)	1
17		Connector Assembly (Connector)	1
18		Connector Assembly (Connector)	1
19		Connector Assembly (Chassis Harness)	1
19	1541988	Connector	1

WIRE HARNESS

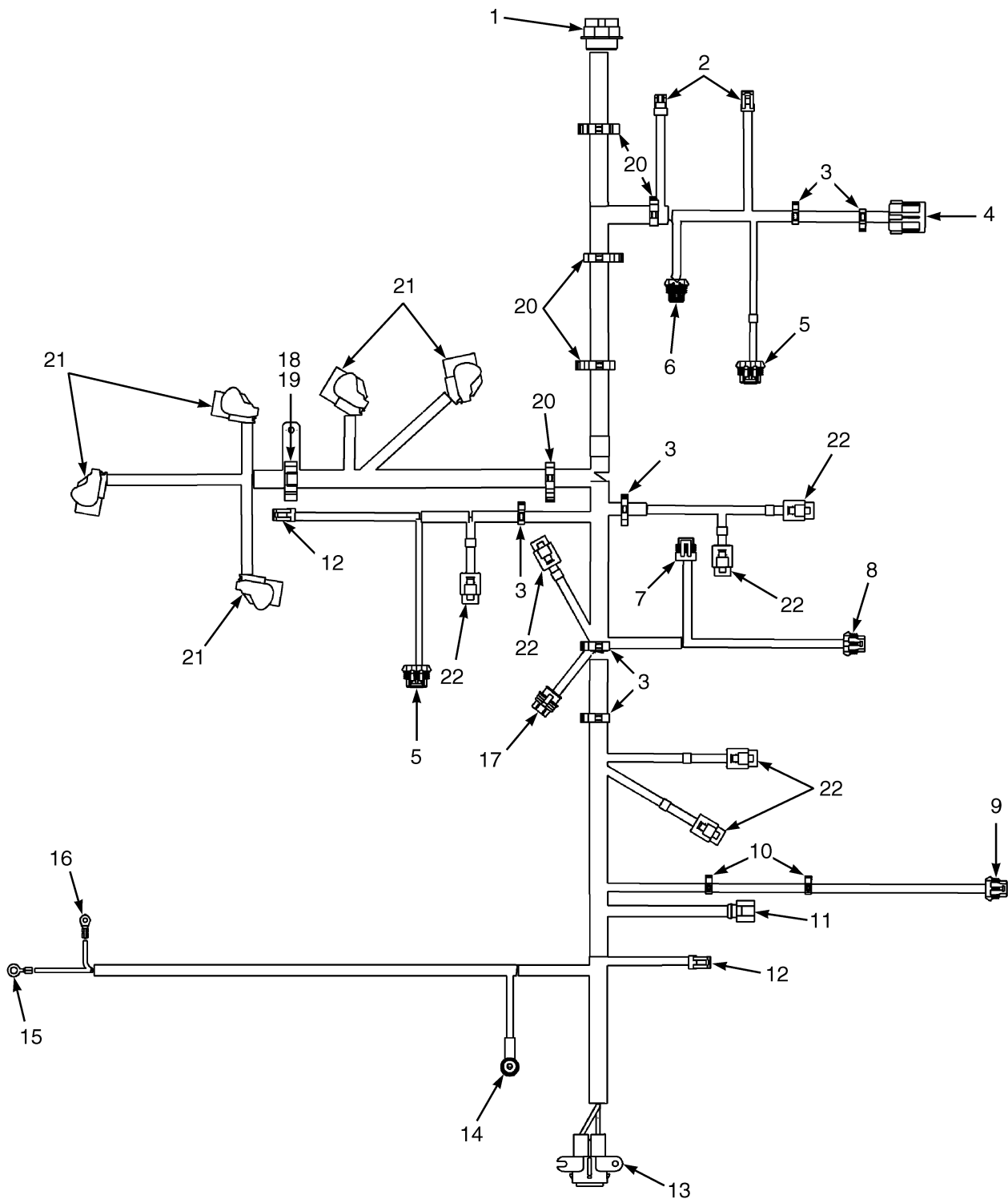
ENGINE – GM 4.3L GASOLINE (S/N H006V02200E →)

ITEM	PART NO.	DESCRIPTION	QTY
20		Connector Assembly (Chassis Harness)	1
20	1330413	Connector	1
21		Connector Assembly (Chassis Harness)	1
21	1514597	Connector	1
22		Connector Assembly (Oil Pressure)	1
22	1327957	Connector	1
22	1354237	Terminal	3
23		Connector Assembly (Left Oxygen Sensor)	1
23	1482667	Connector Body	1
23	1330355	Terminal	4
23	1402877	Electrical Terminal	4
23	1482663	Connector	1
24		Connector Assembly (Map Sensor)	1
24	1607839	Connector	1
24	1402814	Terminal	4
24	1562649	Seal	4
25		Connector Assembly (Ignition)	1
25	1547483	Connector	1
25	1354237	Terminal	1
25	1476109	Connector Lock	1
25	1323576	Terminal	3
26		Connector Assembly (Injector 4)	1
27		Connector Assembly (Alternator)	1
27	148614	E-Ring	1
27	1566146	Boot	1
28		Connector Assembly (Battery)	1
28	129886	E-Ring	1

NOTES

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WIRE HARNESS (FIGURE 4-34) ENGINE — GM 4.3L LPG (→ S/N H006V01742E)

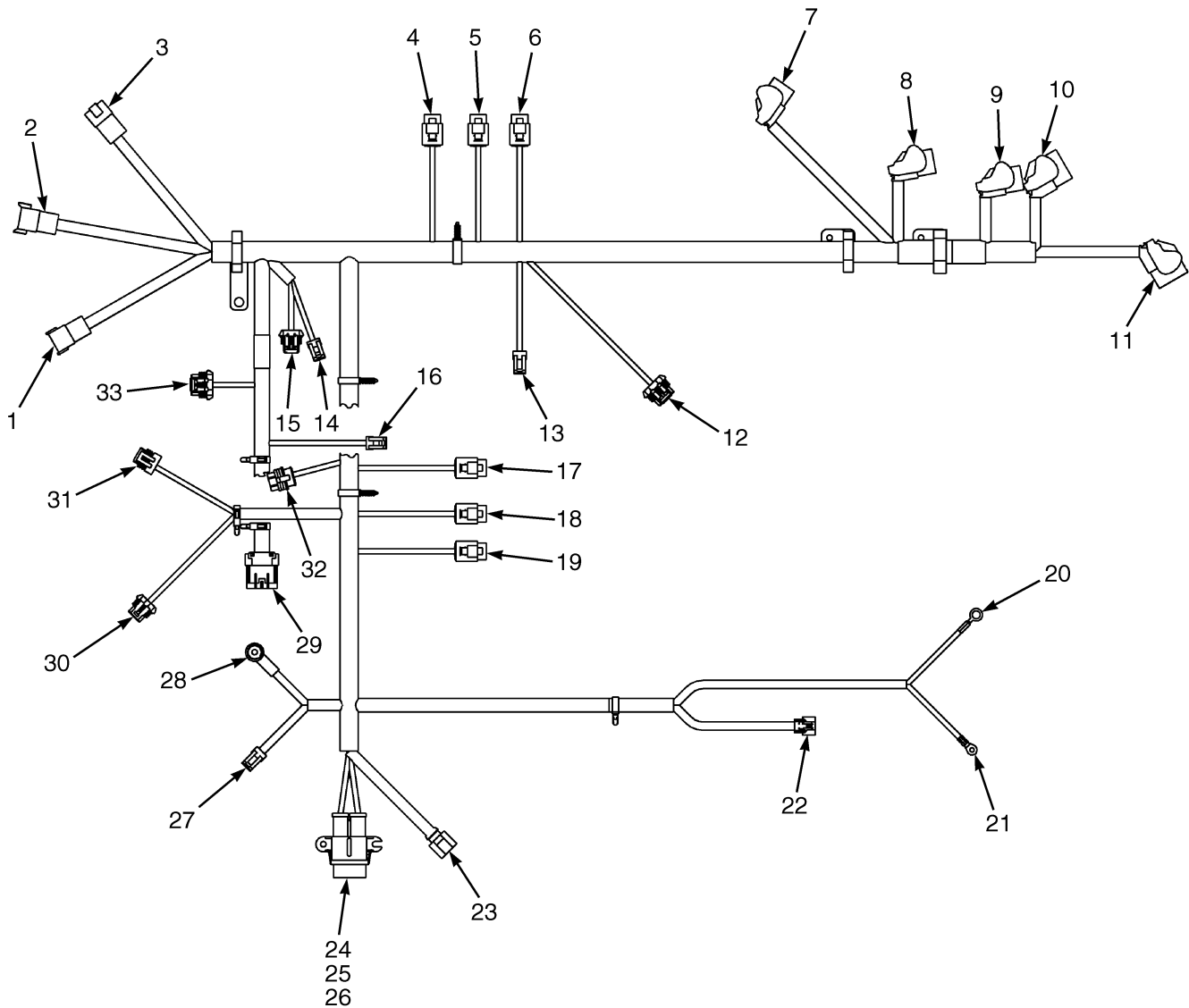


BP080491

WIRE HARNESS **ENGINE – GM 4.3L LPG (→ S/N H006V01742E)**

ITEM	PART NO.	DESCRIPTION	QTY
	2087701	Wire Harness (Engine)	1
1	1531502	Connector (To RH Chassis Harness)	5
2	1327957	Connector (Oil/Fuel Pressure)	2
3	1500901	Clip (Cam Sensor)	6
4		Connector Assembly (To LH Chassis Harness)	1
4	1402809	Clip	1
4	1527275	Connector	1
5	1482667	Connector Body (To Oxygen Sensor)	2
6	1476067	Connector (To Cam Sensor)	1
7	1547483	Connector (To Ignition)	1
8	1476071	Connector (To Coil)	1
9	1476064	Connector (Crank Position)	1
10	1509888	Clip	2
11	1607743	Connector	1
12	1323586	Connector (To Coolant Temp Sensor)	2
13		Fuse Holder Assembly (Starter Recharge Fuse)	1
13	1543553	Fuse Holder	1
13	1454829	Fuse (60 Amp)	1
13	1454862	Cover (With Seal)	1
13	1454827	Seal	2
13	1520543	Terminal	2
14		Connector Assembly (To Alternator)	1
14	148614	E-Ring	1
14	1566146	Boot	1
15	148615	E-Ring (To Battery Positive)	1
16	1519025	Ring Terminal (To Starter)	1
17	1607839	Connector (MAP/MAT)	1
18	1532779	Clip	1
19	1558226	Clip	1
20	1540944	Clip	5
21		Connector	5
22		Connector	6

WIRE HARNESS (FIGURE 4-35) ENGINE — GM 4.3L LPG (S/N H006V01743E →)



BP080686

WIRE HARNESS **ENGINE – GM 4.3L LPG (S/N H006V01743E →)**

ITEM	PART NO.	DESCRIPTION	QTY
	2093682	Wire Harness (Engine)	1
1		Connector Assembly (Chassis Harness)	1
1	1541988	Connector	1
2		Connector Assembly (Chassis Harness)	1
2	1330413	Connector	1
3		Connector Assembly (Chassis Harness)	1
3	1514597	Connector	1
4		Connector Assembly (Injector 5)	1
4	1561146	Terminal	2
4	1607548	Connector	1
5		Connector Assembly (Injector 3)	1
5	1561146	Terminal	2
5	1607548	Connector	1
6		Connector Assembly (Injector 1)	1
6	1561146	Terminal	2
6	1607548	Connector	1
7		Connector Assembly (Connector)	1
8		Connector Assembly (Connector)	1
9		Connector Assembly (Connector)	1
10		Connector Assembly (Connector)	1
11		Connector Assembly (Connector)	1
12		Connector Assembly (RH Oxygen Sensor)	1
12	1482667	Connector Body	1
12	1402877	Electrical Terminal	4
12	1330355	Terminal	4
12	1482663	Connector	1
13		Connector Assembly (Connector)	1
13	1323586	Connector	1
13	1354237	Terminal	2
14		Connector Assembly (Oil Pressure)	1
14	1327957	Connector	1
14	1354237	Terminal	3
15		Connector Assembly (Cam Sensor)	1
15	1476067	Connector	1
15	1476109	Connector Lock	1
15	1330355	Terminal	3
15	1476108	Wire Seal	3
16		Connector Assembly (Fuel Pressure)	1
16	1402613	Connector	1
16	1323576	Terminal	3
17		Connector Assembly (Injector 6)	1
17	1561146	Terminal	2
17	1607548	Connector	1
18		Connector Assembly (Injector 4)	1
18	1561146	Terminal	2
18	1607548	Connector	1
19		Connector Assembly (Injector 2)	1
19	1561146	Terminal	2
19	1607548	Connector	1
20		Connector Assembly (Battery)	1

WIRE HARNESS

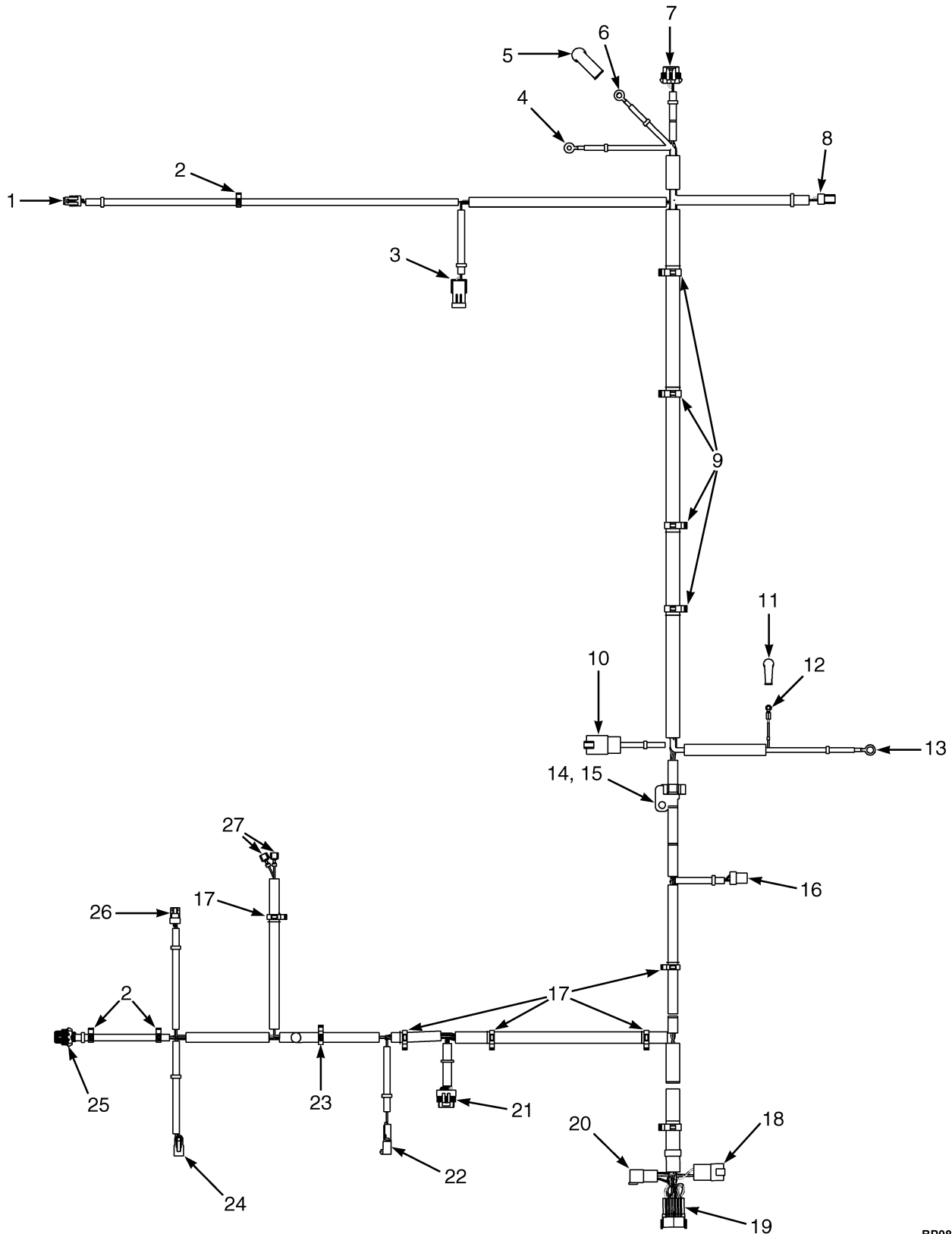
ENGINE – GM 4.3L LPG (S/N H006V01743E →)

ITEM	PART NO.	DESCRIPTION	QTY
20	129886	E-Ring	1
21		Connector Assembly (Starter)	1
21	1519025	Ring Terminal	1
22		Connector Assembly (Crank Position Sensor)	1
22	1655119	Electrical Connector	1
22	1655120	Electrical Terminal	3
22	1655121	Seal	3
23		Connector Assembly (Connector)	1
23	1607743	Connector	1
24		Connector Assembly (Connector)	1
24	1543553	Fuse Holder	1
24	1454829	Fuse (60 Amp)	1
24	1520543	Terminal	2
25		Connector Assembly (Cover)	1
25	1454862	Cover (With Seal)	1
26		Connector Assembly (Connector)	1
26	1454827	Seal	1
27		Connector Assembly (Alternator)	1
27	1323576	Terminal	2
27	1323586	Connector	1
28		Connector Assembly (Alternator)	1
28	148614	E-Ring	1
29		Connector Assembly (LH Chassis Harness)	1
29	1402809	Clip	1
29	1527275	Connector	1
30		Connector Assembly (Coil)	1
30	1476071	Connector	1
30	1402877	Electrical Terminal	2
30	1476109	Connector Lock	1
30	1330356	Seal	3
30	1351139	Seal	1
31		Connector Assembly (Ignition)	1
31	1547483	Connector	1
31	1354237	Terminal	1
31	1323576	Terminal	3
31	1476109	Connector Lock	1
32		Connector Assembly (Map Sensor)	1
32	1607839	Connector	1
32	1402814	Terminal	4
32	1562649	Seal	4
33		Connector Assembly (LH Oxygen Sensor)	1
33	1482663	Connector	1
33	1330355	Terminal	4
33	1402877	Electrical Terminal	4
33	1482667	Connector Body	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-36) ENGINE — CUMMINS 4.5L DIESEL



BP080522

WIRE HARNESS
ENGINE – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	2092371	Wire Harness	1
1		Connector Assembly (Fuel Level Sensor)	1
1	1476077	Connector	1
1	1323576	Terminal	2
2	1509888	Clip	3
3		Connector Assembly (Air Restriction Indicator)	1
3	1465469	Connector	1
3	1323578	Terminal	2
3	1402888	Seal	2
4	806425	E-Ring	1
5	204223	Boot	1
6	806426	E-Ring	1
7		Connector Assembly (Alternator)	1
7	1501919	Connector	1
7	1330355	Terminal	2
7	1482668	Plug	2
7	1330356	Seal	2
7	1482663	Connector	1
8		Connector Assembly (Water Temp. Sensor)	1
8	1323586	Connector	1
8	1323576	Terminal	2
9	1534329	Clip	4
10		Connector Assembly (Starter Positive)	1
10	1544731	Receptacle	1
10	1544733	Pin	1
11	190383	Boot	1
12	1493448	E-Ring	1
13	1354497	E-Ring	1
14	1532775	Clip	1
15	1558228	Clip	1
16		Connector Assembly (Engine RPM Sensor)	1
16	1546673	Connector	1
16	1323576	Terminal	3
17	1402815	Clip	5
18		Connector Assembly (Engine to Chassis)	1
18	1514597	Connector	1
18	1330438	Terminal (Socket)	1
18	866401	Terminal	3
18	1514598	Connector	1
19		Connector Assembly (Engine to Chassis)	1
19	1500925	Connector	1
19	1330437	Terminal (Pin)	12
19	1352603	Connector	1
20		Connector Assembly (Engine to Chassis)	1
20	1463138	Terminal	6
20	1530960	Connector	1
20	1530961	Connector	1
21		Connector Assembly (Throttle Position)	1
21	1525584	Connector	1
21	1532571	Terminal	6

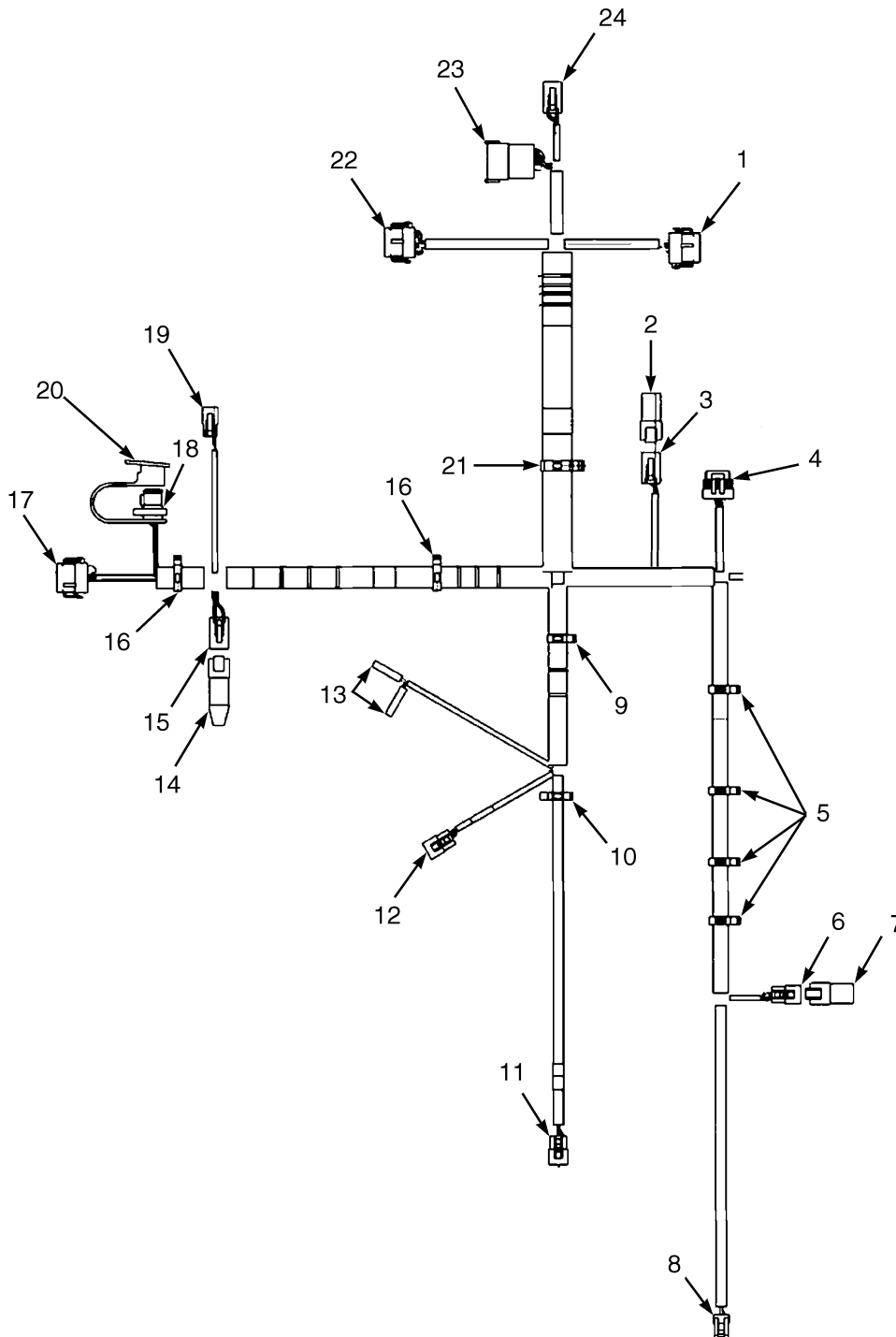
**WIRE HARNESS
ENGINE – CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
22		Connector Assembly (Fuel Shut Off Solenoid)	1
22	1498476	Connector	1
22	1334999	Terminal	1
22	1491818	Seal	1
23	1509890	Clip	1
24		Connector Assembly (Pull Actuator)	1
24	1330419	Connector	1
24	1351681	Connector	1
24	1363886	Terminal (Socket)	1
24	1330438	Terminal (Socket)	1
24	1330424	Connector	1
25		Connector Assembly (Water Separator)	1
25	1476067	Connector	1
25	1330355	Terminal	3
25	1476109	Connector Lock	1
25	1476108	Wire Seal	3
26		Connector Assembly (Oil Pressure Sensor)	1
26	1327957	Connector	1
26	1532571	Terminal	3
27	1521309	Connector Body	2

NOTES

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WIRE HARNESS (FIGURE 4-37) COWL WITH MONOTROL PEDAL — GM 4.3L GASOLINE AND LPG



HP081702

WIRE HARNESS

COWL WITH MONOTROL PEDAL – GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
	2098011	Wire Harness	1
1		Connector Assembly (To Vehicle System Manager (VSM))	1
1	1525568	Connector	1
1	1529046	Connector	1
1	1463139	Terminal	11
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
17	1463139	Terminal	5
17	1484377	Plug	7
18		Connector Assembly (Diagnostic)	1

WIRE HARNESS

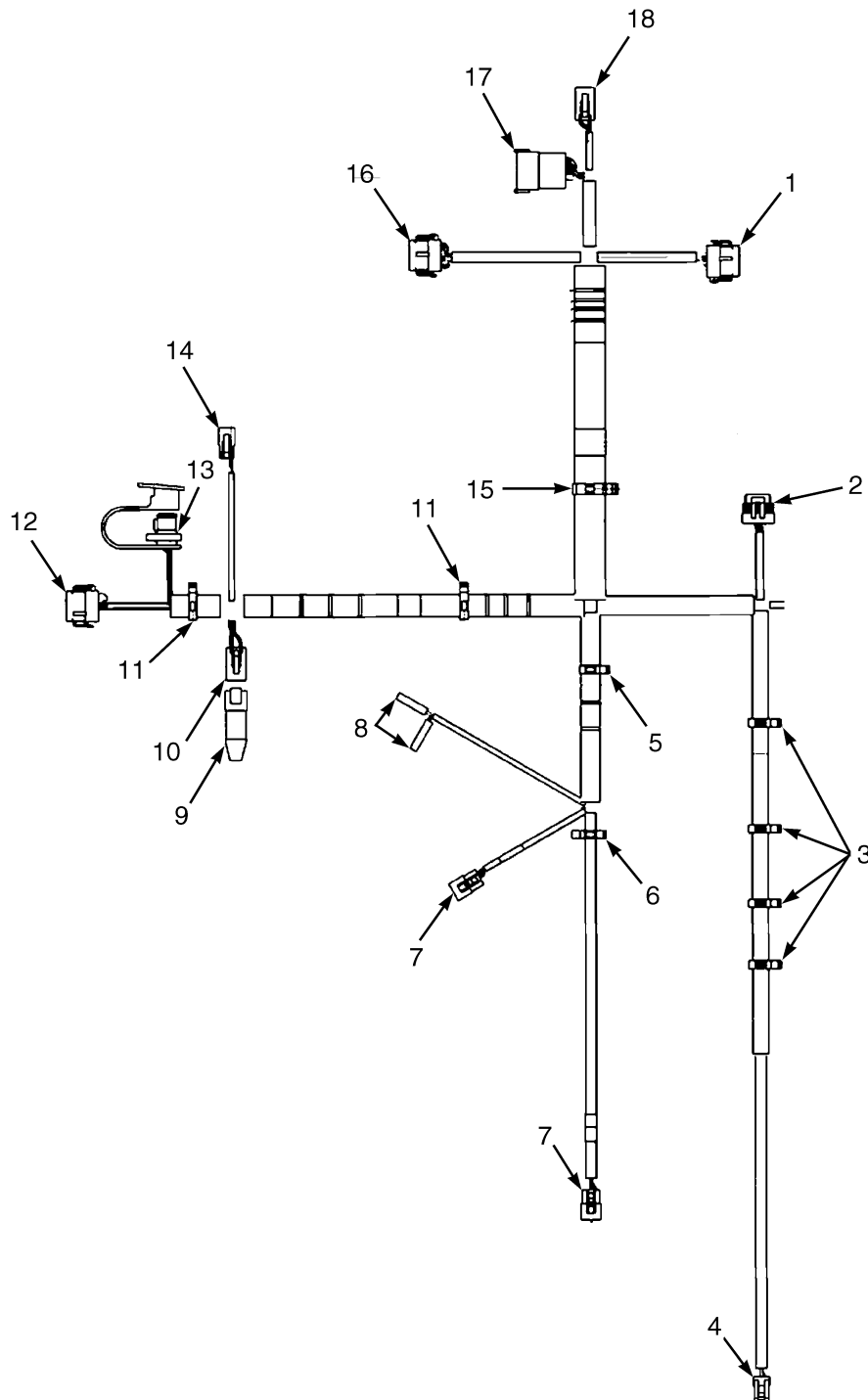
COWL WITH MONOTROL PEDAL – GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
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	1
21	1534282	Clip	1
22		Connector Assembly (To Vehicle System Manager (VSM))	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)	10
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

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-38) COWL WITH FORWARD/REVERSE LEVER — GM 4.3L GASOLINE AND LPG



BP080443

WIRE HARNESS

COWL WITH FORWARD/REVERSE LEVER – GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
	2098012	Wire Harness (Cowl with Forward/Reverse Lever) (Cowl)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1463139	Terminal	7
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
16	1529046	Connector	1
16	1463139	Terminal	7
16	1484377	Plug	5

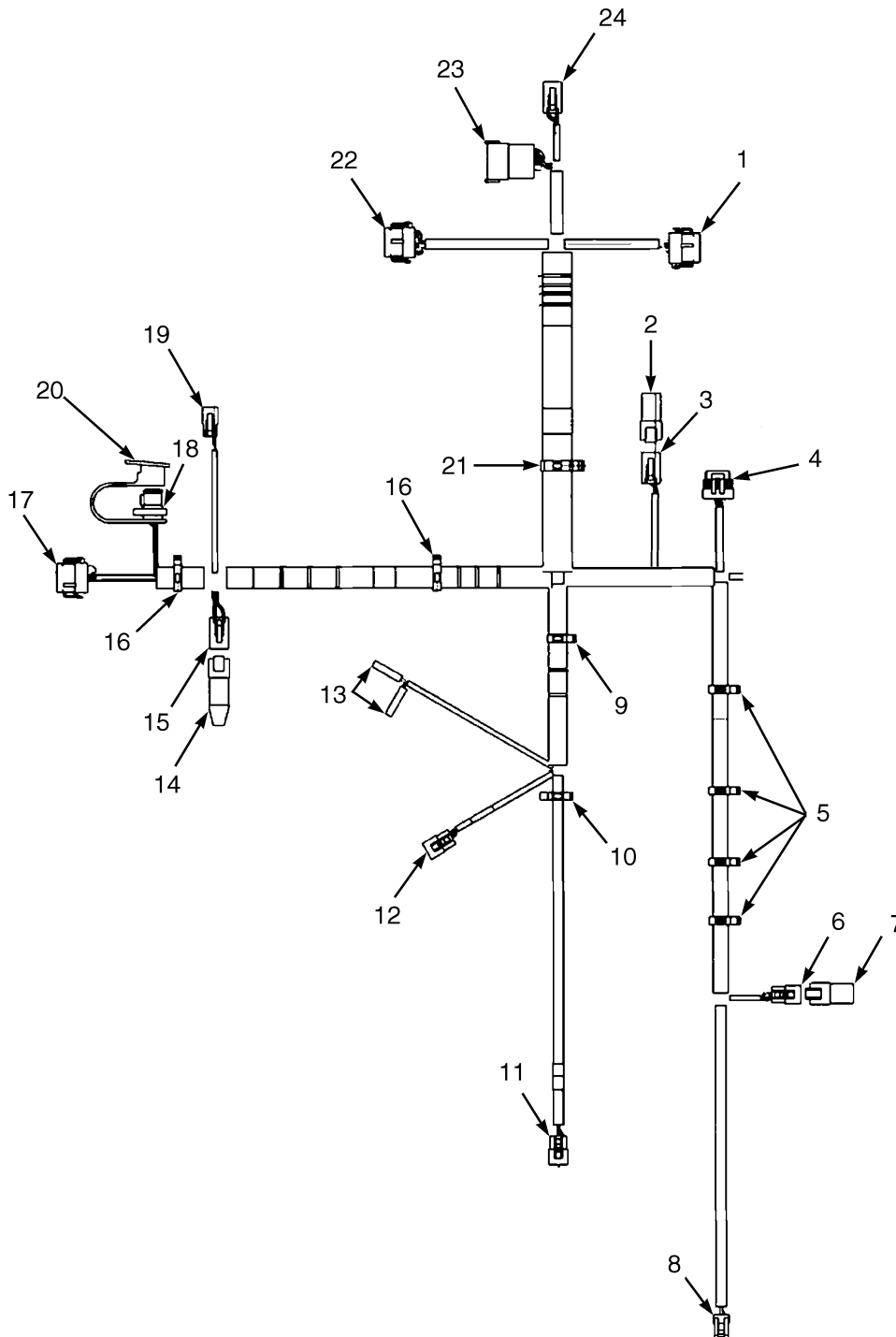
WIRE HARNESS
COWL WITH FORWARD/REVERSE LEVER – GM 4.3L GASOLINE AND LPG

ITEM	PART NO.	DESCRIPTION	QTY
17		Connector Assembly (To RH Chassis)	1
17	1500925	Connector	1
17	1352603	Connector	1
17	1330437	Terminal (Pin)	7
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

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-39) COWL WITH MONOTROL PEDAL — CUMMINS 4.5L DIESEL



HP081702

WIRE HARNESS

COWL WITH MONOTROL PEDAL – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	2070269	Wire Harness	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1529046	Connector	1
1	1463139	Terminal	10
1	1484377	Plug	2
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
17	1463139	Terminal	5
17	1484377	Plug	7
18		Connector Assembly (J1939 Diagnostic)	1

WIRE HARNESS

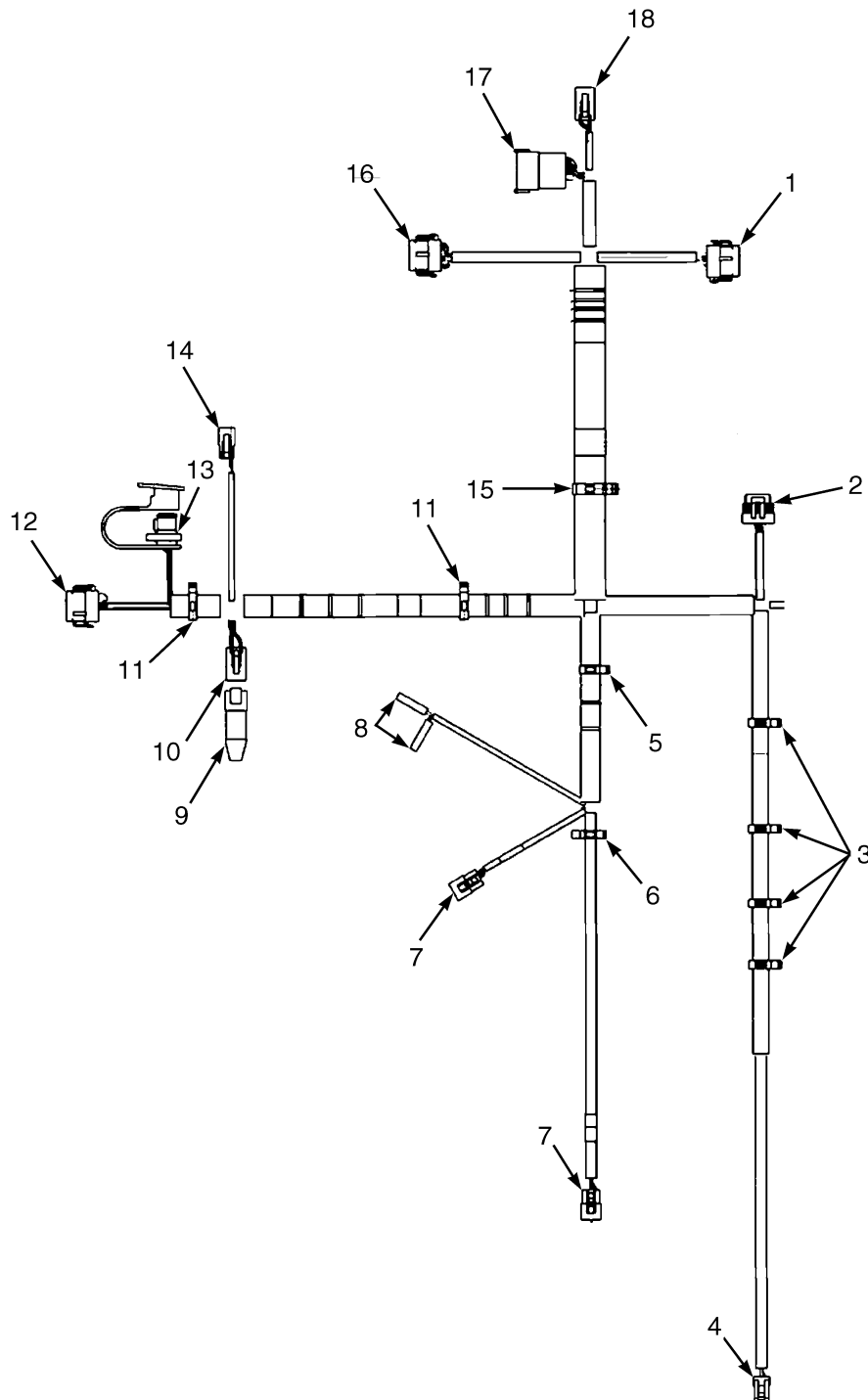
COWL WITH MONOTROL PEDAL – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
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	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	1484377	Plug	3
24		Connector Assembly (RH Chassis)	1
24	1489656	Connector (4-Way)	1
24	1330438	Terminal (Socket)	4
24	1489657	Connector	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-40) COWL WITH FORWARD/REVERSE LEVER — CUMMINS 4.5L DIESEL



BP080443

WIRE HARNESS

COWL WITH FORWARD/REVERSE LEVER – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	2084829	Wire Harness (Cowl with Forward/Reverse Lever) (Cowl)	1
1		Connector Assembly (Vehicle System Manager)	1
1	1525568	Connector	1
1	1463139	Terminal	6
1	1484377	Plug	6
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
16	1529046	Connector	1
16	1463139	Terminal	7
16	1484377	Plug	5

WIRE HARNESS

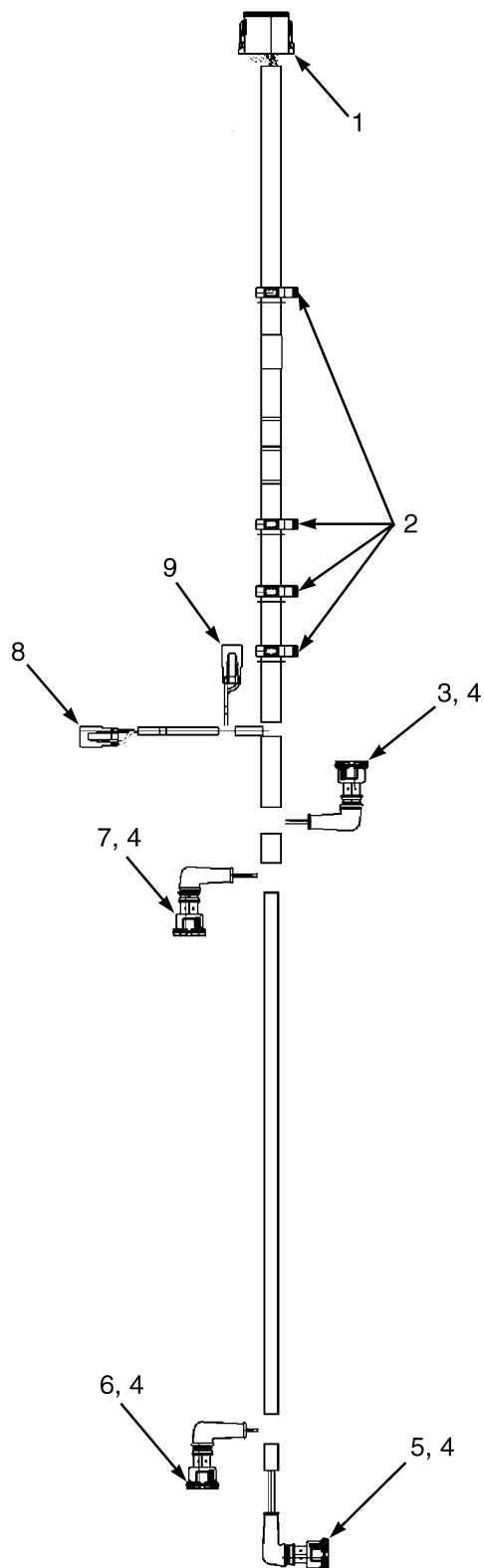
COWL WITH FORWARD/REVERSE LEVER – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
17		Connector Assembly (To RH Chassis)	1
17	1500925	Connector	1
17	1352603	Connector	1
17	1330437	Terminal (Pin)	6
17	1484377	Plug	6
18		Connector Assembly (To RH Chassis)	1
18	1489656	Connector (4-Way)	1
18	1489657	Connector	1
18	1330438	Terminal (Socket)	4

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-41) ELECTRONIC CONTROL VALVE — THREE FUNCTION

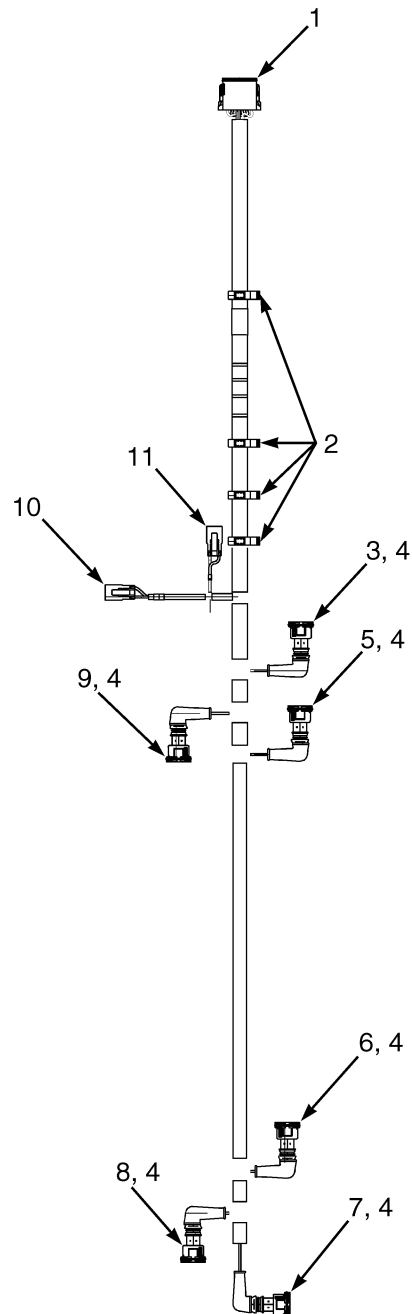


HP081569

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

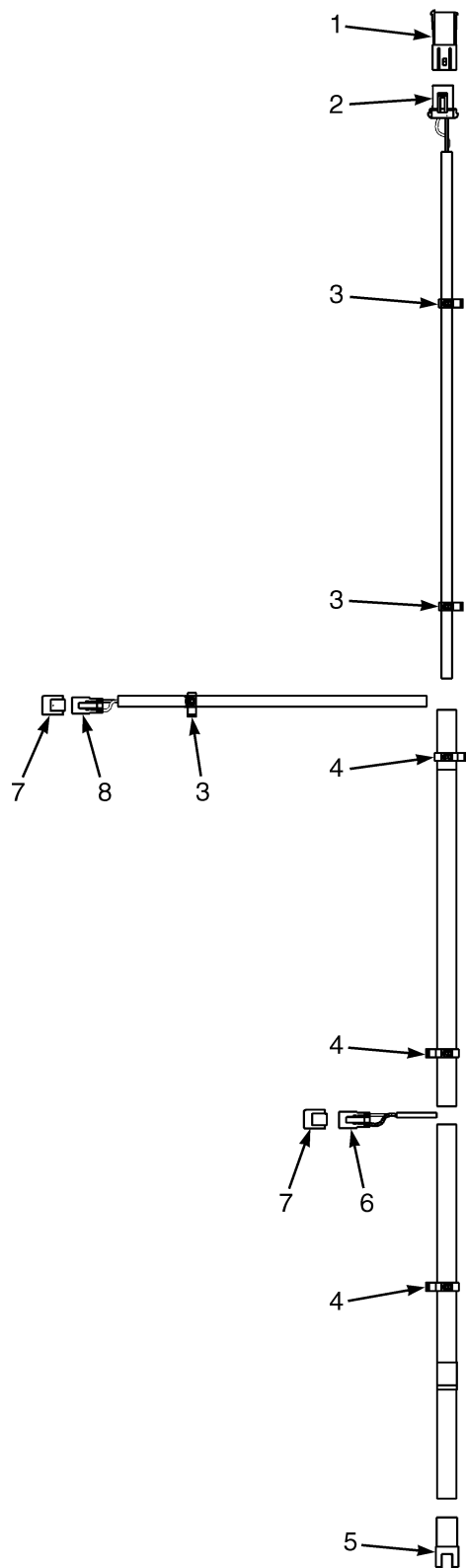
WIRE HARNESS (FIGURE 4-42)
ELECTRONIC CONTROL VALVE — FOUR FUNCTION

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 4-43) REAR CHASSIS

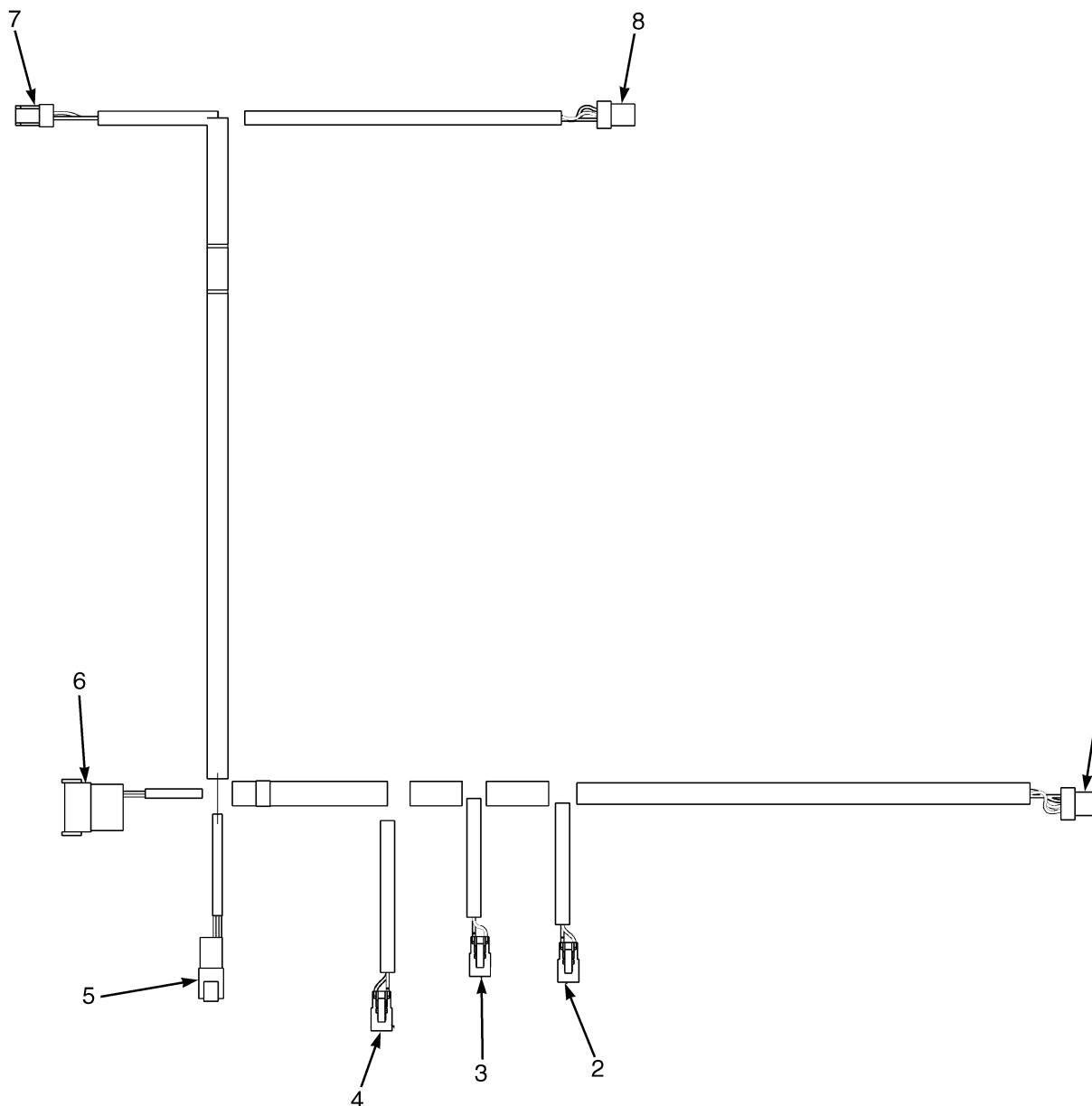


BP080576

**WIRE HARNESS
REAR CHASSIS**

ITEM	PART NO.	DESCRIPTION	QTY
	2092437	Wire Harness (Rear)	1
1		Connector Assembly	1
1	1329151	Terminal	1
1	1329152	Plug	1
1	1330281	Terminal	2
1	1402888	Seal	2
2		Connector Assembly	1
2	1327164	Seal	2
2	1329150	Connector	1
2	1329151	Terminal	1
3	1509888	Clip	3
4	1509890	Clip	3
5	1330437	Terminal (Pin)	6
5	1402923	Connector	1
5		Connector Assembly	1
5	1330417	Connector	1
6		Connector Assembly	1
6	1330438	Terminal (Socket)	2
6	1490242	Connector	1
6	1490243	Connector	1
7	1626727	Connector (End Cap)	2
8		Connector Assembly	1
8	1330438	Terminal (Socket)	2
8	1490242	Connector	1
8	1490243	Connector	1

WIRE HARNESS (FIGURE 4-44) TRANSMISSION — TWO SPEED



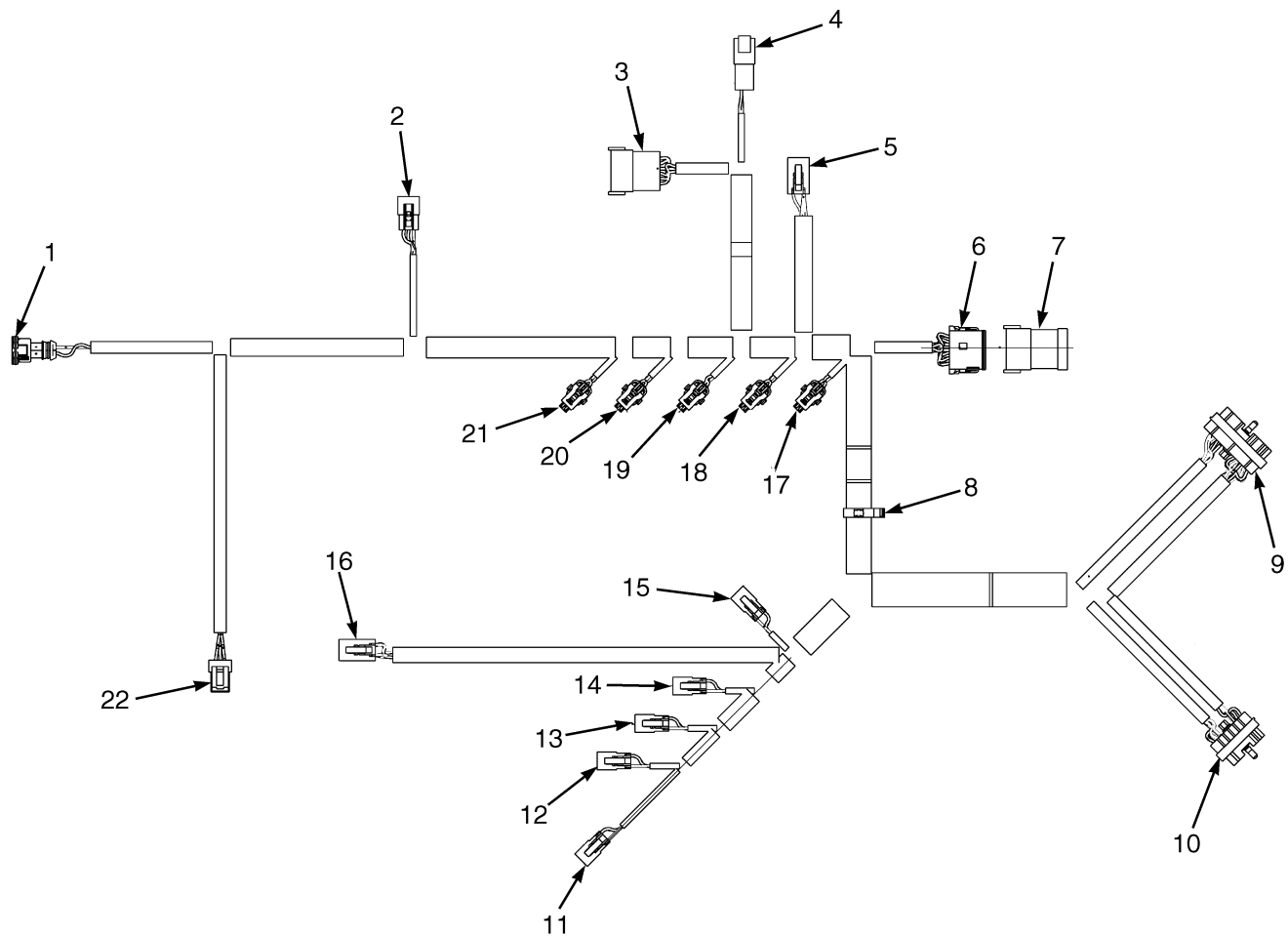
BP080549

**WIRE HARNESS
TRANSMISSION – TWO SPEED**

ITEM	PART NO.	DESCRIPTION	QTY
	2093046	Wire Harness (Transmission, Two Speed)	1
1		Connector Assembly (Output Speed)	1
1	1558156	Connector	1
1	1323576	Terminal	4
2		Connector Assembly (To High/Low Clutch)	1
2	1490242	Connector	1
2	1490243	Connector	1
2	1330438	Terminal (Socket)	2
3		Connector Assembly (To Reverse Clutch)	1
3	1490242	Connector	1
3	1490243	Connector	1
3	1330438	Terminal (Socket)	2
4		Connector Assembly (To Forward Clutch)	1
4	1490242	Connector	1
4	1490243	Connector	1
4	1330438	Terminal (Socket)	2
5		Connector Assembly (To RH Chassis Harness)	1
5	1530960	Connector	1
5	1623281	Connector	1
5	1463138	Terminal	6
6		Connector Assembly (To RH Chassis Harness)	1
6	1623280	Connector	1
6	1623281	Connector	1
6	1463138	Terminal	6
6	1484377	Plug	6
7		Connector Assembly (Transmission Temperature)	1
7	1402868	Connector	1
7	1323576	Terminal	2
8		Connector Assembly (Engine RPM)	1
8	1323576	Terminal	3
8	1546673	Connector	1
	a 1509889	Clip	1

FOOTNOTES:**a** Not Illustrated

WIRE HARNESS (FIGURE 4-45) TRANSMISSION — THREE SPEED



BP080564

**WIRE HARNESS
TRANSMISSION – THREE SPEED**

ITEM	PART NO.	DESCRIPTION	QTY
	2093045	Wire Harness (Transmission, Three Speed)	1
1		Connector Assembly (Sump Temperature)	1
1	1493435	Connector (2-Way)	1
1	1402814	Terminal	2
1	1562649	Seal	2
2		Connector Assembly (Drum Speed)	1
2	1484397	Connector (3-Way)	1
2	1463194	Connector	1
2	1330438	Terminal (Socket)	3
3		Connector Assembly (To RH Chassis)	1
3	1623280	Connector	1
3	1623281	Connector	1
3	1484377	Plug	6
3	1463138	Terminal	6
4		Connector Assembly (To RH Chassis)	1
4	1530960	Connector	1
4	1530961	Connector	1
4	1484377	Plug	3
4	1463138	Terminal	3
5		Connector Assembly (Turbine Speed)	1
5	1493430	Connector	1
5	1529052	Connector	1
5	1330438	Terminal (Socket)	5
5	1484377	Plug	1
6		Connector Assembly (Buss Bar)	1
6	1525564	Connector	1
6	1500913	Connector	1
6	1330438	Terminal (Socket)	12
7	1602430	Connector (Buss Bar)	1
8	1500899	Clip	1
9		Connector Assembly (To Transmission Control Unit)	1
9	1602432	Connector	1
9	1323581	Plug	10
9	1532571	Terminal	20
10		Connector Assembly (To Transmission Control Unit)	1
10	1602433	Connector	1
10	1323581	Plug	4
10	1532571	Terminal	14
11		Connector Assembly (Forward Low Solenoid)	1
11	1490242	Connector	1
11	1490243	Connector	1
11	1330438	Terminal (Socket)	2
12		Connector Assembly (Forward Two Solenoid)	1
12	1490242	Connector	1
12	1490243	Connector	1
12	1330438	Terminal (Socket)	2
13		Connector Assembly (Forward High Solenoid)	1
13	1490242	Connector	1
13	1490243	Connector	1
13	1330438	Terminal (Socket)	2

WIRE HARNESS

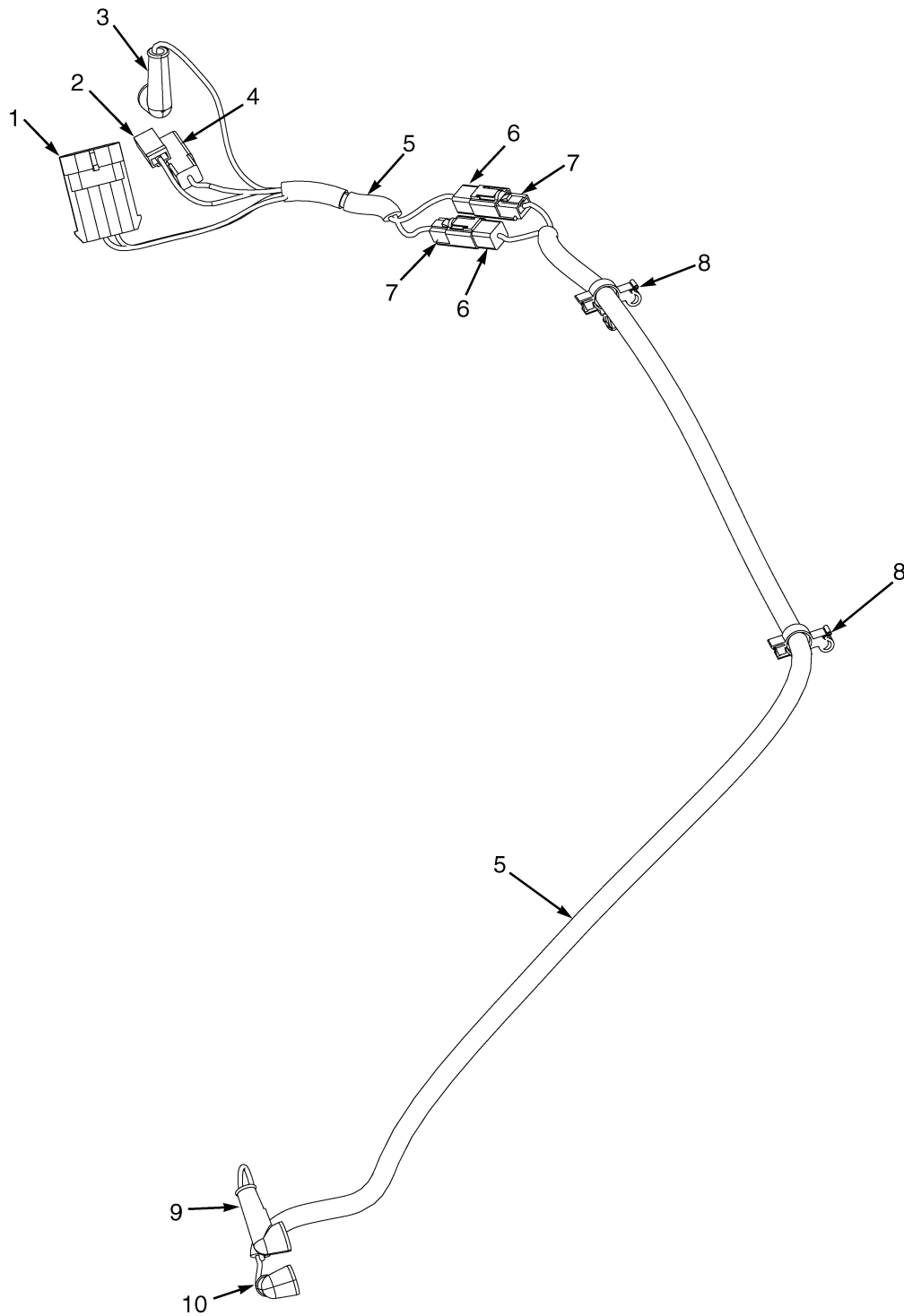
TRANSMISSION – THREE SPEED

ITEM	PART NO.	DESCRIPTION	QTY
14		Connector Assembly (Reverse One Solenoid)	1
14	1490242	Connector	1
14	1490243	Connector	1
14	1330438	Terminal (Socket)	2
15		Connector Assembly (Reverse Solenoid)	1
15	1490242	Connector	1
15	1490243	Connector	1
15	1330438	Terminal (Socket)	2
16		Connector Assembly (Output Speed)	1
16	1493430	Connector	1
16	1529052	Connector	1
16	1330438	Terminal (Socket)	5
16	1484377	Plug	1
17		Connector Assembly (Reverse Pressure)	1
17	1603021	Connector	1
17	1603236	Connector (Secondary Lock)	1
17	1548517	Terminal (Socket)	3
17	1548519	Seal	3
18		Connector Assembly (Reverse One Pressure)	1
18	1603021	Connector	1
18	1603236	Connector (Secondary Lock)	1
18	1548517	Terminal (Socket)	3
18	1548519	Seal	3
19		Connector Assembly (Forward High Pressure)	1
19	1603021	Connector	1
19	1603236	Connector (Secondary Lock)	1
19	1548517	Terminal (Socket)	3
19	1548519	Seal	3
20		(Connector Assembly (Forward Two Pressure)	1
20	1603021	Connector	1
20	1603236	Connector (Secondary Lock)	1
20	1548517	Terminal (Socket)	3
20	1548519	Seal	3
21		(Connector Assembly) (Forward Low Pressure)	1
21	1603021	Connector	1
21	1603236	Connector (Secondary Lock)	1
21	1548517	Terminal (Socket)	3
21	1548519	Seal	3
22		Connector Assembly (Engine RPM)	1
22	1546673	Connector	1
22	1323576	Terminal	3

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-46) SEALED ALTERNATOR — CUMMINS 4.5L DIESEL

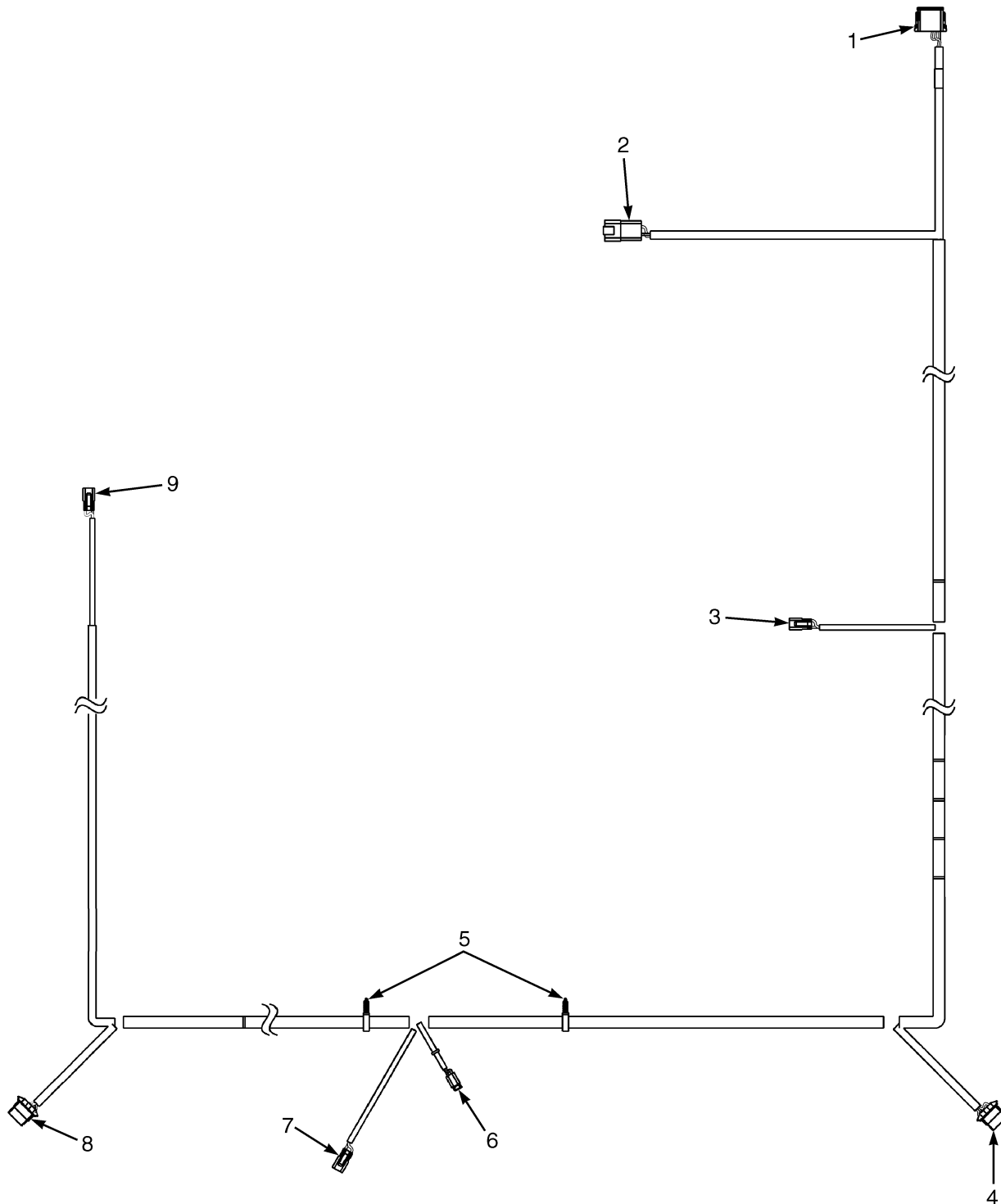


BP080613

WIRE HARNESS **SEALED ALTERNATOR – CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
	2093783	Wire Harness	1
1		Connector Assembly (Engine Harness)	1
1	181045	Connector Body	1
1	1482663	Connector	1
1	1330356	Seal	2
1	1482666	Connector Body (Male)	2
1	1482668	Plug	2
2		Connector Assembly (Alternator Excite)	1
2	181046	Connector Body	1
2	1561117	Terminal	1
3		Connector Assembly (Alternator Field)	2
3	181045	Connector Body	1
3	134810	Terminal	1
4		Connector Assembly (Alternator D+)	1
4	1582218	E-Ring	1
4	190383	Boot	1
4	175944	Heat Shrink	1
5	275493	Conduit	AR
6		Connector Assembly (Disconnect Switch Link)	2
6	181045	Connector Body	1
6	134810	Terminal	1
7		Connector Assembly (Disconnect Switch Link)	2
7	181046	Connector Body	1
7	1561117	Terminal	1
8	1402816	Clip	2
9		Connector Assembly (To Disconnect Switch)	2
9	1582218	E-Ring	1
9	175944	Heat Shrink	1
9	190383	Boot	1
10		Connector Assembly (To Disconnect Switch)	2
10	1582218	E-Ring	1
10	175944	Heat Shrink	1
10	190383	Boot	1

WIRE HARNESS (FIGURE 4-47) LIGHTS — WITH OVERHEAD GUARD (→ 6/2007)



BP080494

WIRE HARNESS

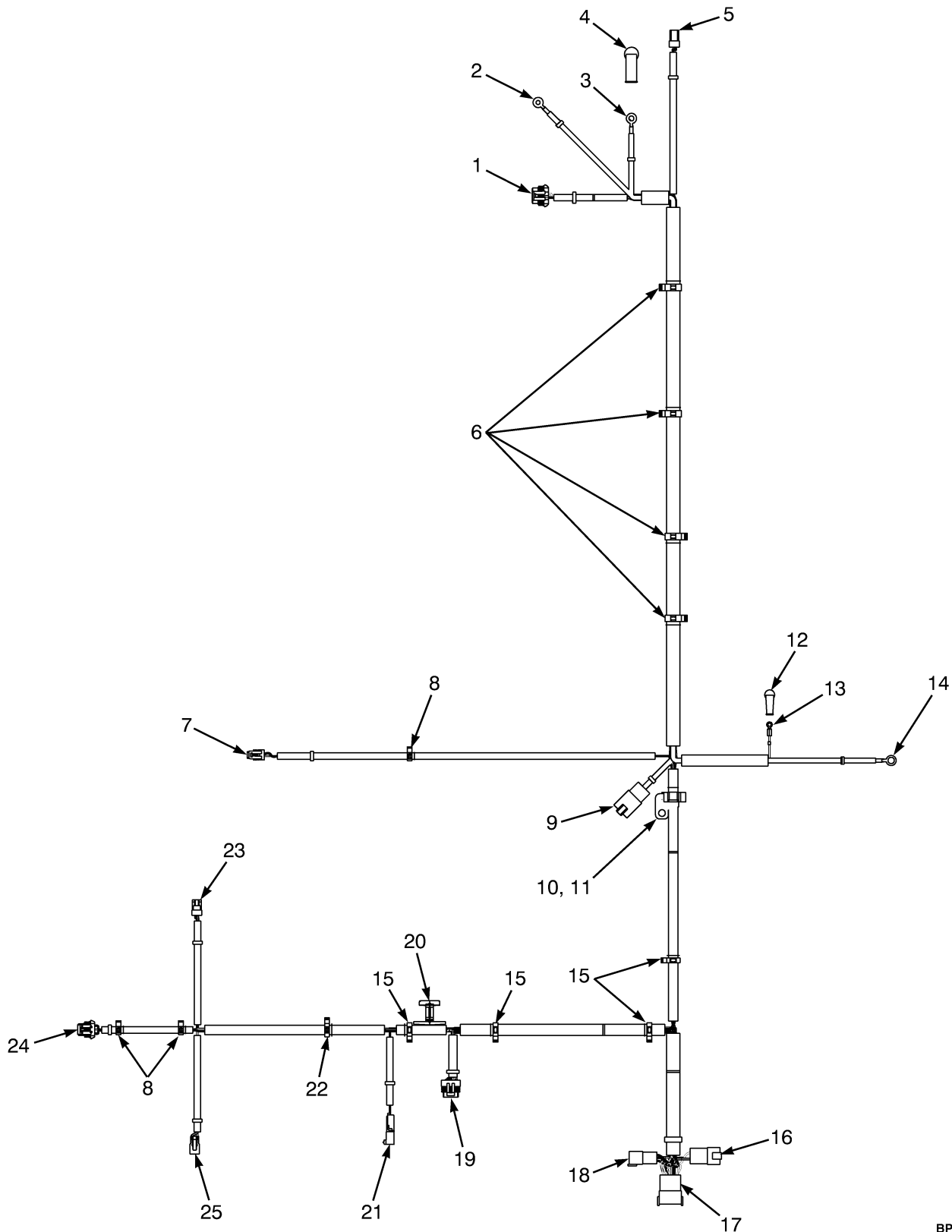
LIGHTS – WITH OVERHEAD GUARD (→ 6/2007)

ITEM	PART NO.	DESCRIPTION	QTY
	a 2098386	Wire Harness (Lights) (With Overhead Guard)	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	1509890	Clip	2
6		Connector Assembly (Strobe)	1
6	1484557	Connector	1
6	1484558	Connector	1
6	1463139	Terminal	2
7		Connector Assembly (Rear Work Lights)	1
7	1490242	Connector	1
7	1490243	Connector	1
7	1363886	Terminal (Socket)	2
8		Connector Assembly (LH Rear Signal)	1
8	1531486	Connector	1
8	930591	Connector	1
8	1330355	Terminal	4
8	1330356	Seal	1
8	1482668	Plug	2
8	1476108	Wire Seal	3
9		Connector Assembly (LH Front Work Lights)	1
9	1490242	Connector	1
9	1490243	Connector	1
9	1363886	Terminal (Socket)	2

FOOTNOTES:

a → PENDING PER ECN 105217

WIRE HARNESS (FIGURE 4-48) ENGINE — CUMMINS 4.5L DIESEL



BP080833

WIRE HARNESS
ENGINE – CUMMINS 4.5L DIESEL

ITEM	PART NO.	DESCRIPTION	QTY
	2084521	Wire Harness	1
1		Connector Assembly (Alternator)	1
1	1482663	Connector	1
1	1330356	Seal	2
1	1482668	Plug	2
1	1330355	Terminal	2
1	1501919	Connector	1
2	806425	E-Ring	1
3	806426	E-Ring	1
4	204223	Boot	1
5		Connector Assembly (Water Temp. Sensor)	1
5	1323586	Connector	1
5	1323576	Terminal	2
6	1534329	Clip	4
7		Connector Assembly (Fuel Level Sensor)	1
7	1476077	Connector	1
7	1323576	Terminal	2
8	1509888	Clip	3
9		Connector Assembly (Starter Positive)	1
9	1544731	Receptacle	1
9	1544733	Pin	1
10	1532775	Clip	1
11	1558228	Clip	1
12	190383	Boot	1
13	1493448	E-Ring	1
14	1354497	E-Ring	1
15	1402815	Clip	5
16		Connector Assembly (Engine to Chassis)	1
16	1514597	Connector	1
16	1330438	Terminal (Socket)	1
16	866401	Terminal	3
16	1514598	Connector	1
17		Connector Assembly (Engine to Chassis)	1
17	1500925	Connector	1
17	1330437	Terminal (Pin)	12
17	1352603	Connector	1
18		Connector Assembly (Engine to Chassis)	1
18	1463138	Terminal	6
18	1530960	Connector	1
18	1530961	Connector	1
19		Connector Assembly (Throttle Position)	1
19	1525584	Connector	1
19	1532571	Terminal	6
20	1620149	Clip	1
21		Connector Assembly (Fuel Shut Off Solenoid)	1
21	1498476	Connector	1
21	1334999	Terminal	1
21	1491818	Seal	1
22	1509890	Clip	1
23		Connector Assembly (Oil Pressure Sensor)	1

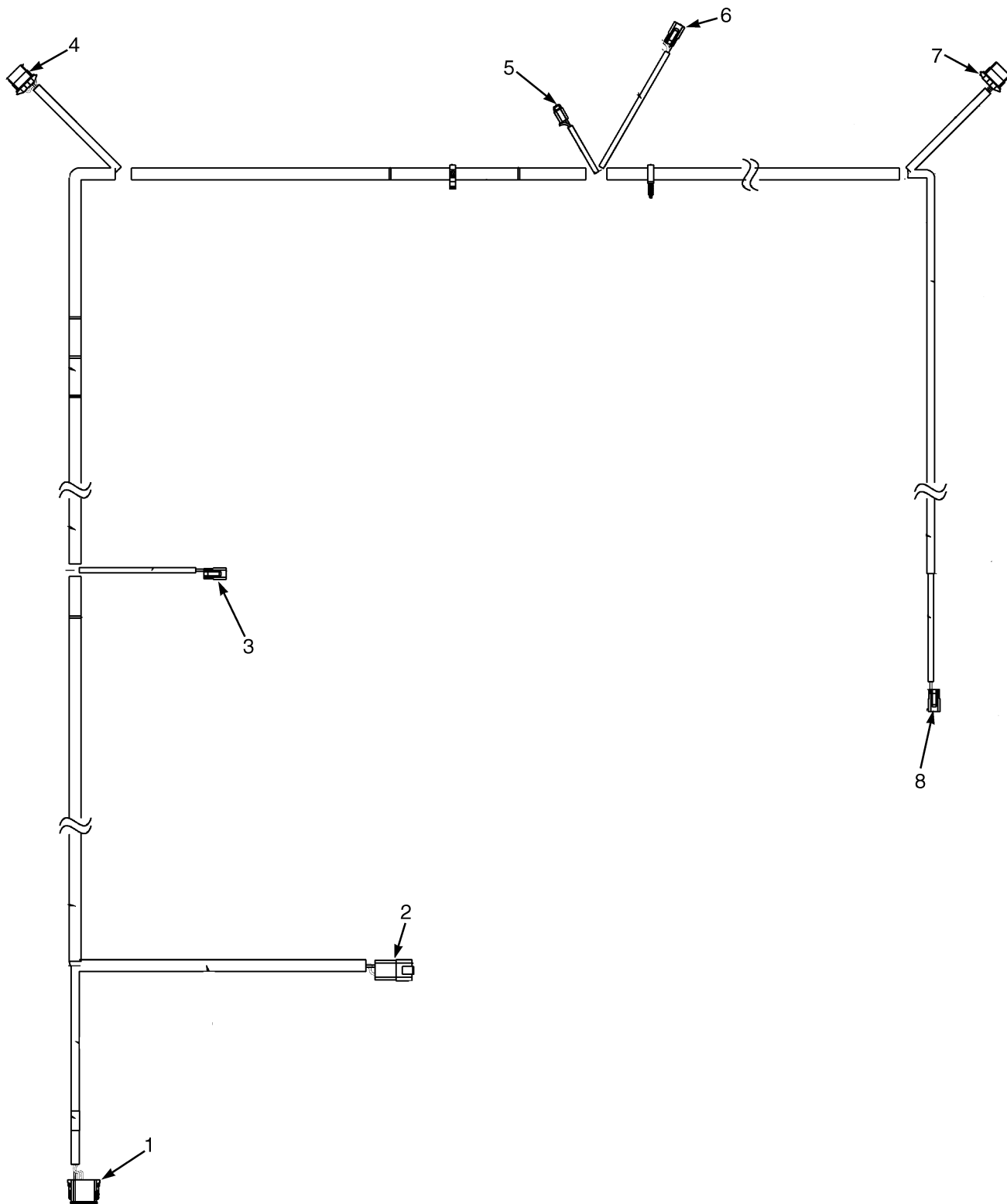
**WIRE HARNESS
ENGINE – CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
23	1327957	Connector	1
23	1532571	Terminal	3
24		Connector Assembly (Water Separator)	1
24	1476067	Connector	1
24	1330355	Terminal	3
24	1476109	Connector Lock	1
24	1476108	Wire Seal	3
25		Connector Assembly (Pull Actuator)	1
25	1330419	Connector	1
25	1351681	Connector	1
25	1363886	Terminal (Socket)	1
25	1330438	Terminal (Socket)	1
25	1330424	Connector	1

NOTES

[illegible]

WIRE HARNESS (FIGURE 4-49) LIGHTS WITH OVERHEAD GUARD (6/2007 →)



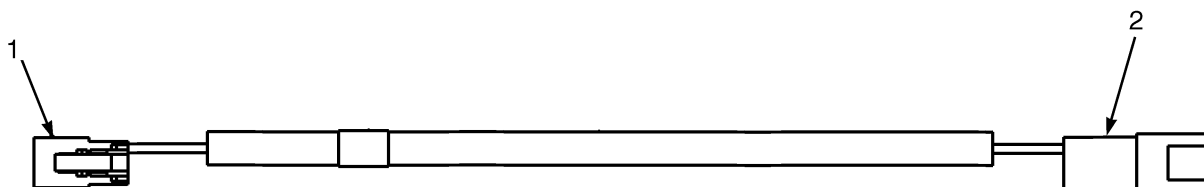
BP080628

WIRE HARNESS **LIGHTS WITH OVERHEAD GUARD (6/2007 →)**

ITEM	PART NO.	DESCRIPTION	QTY
	a 2101861	Wire Harness (Lights) (Lights)	1
1		Connector Assembly (Harness Attachment)	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 (RH 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

FOOTNOTES:**a** PENDING PER ECN 105217 →

WIRE HARNESS (FIGURE 4-50) **WORK LIGHT JUMPER — WITH TWO STAGE MASTS**



BP080632

ITEM	PART NO.	DESCRIPTION	QTY
	2099263	Wire Harness (Work Light Jumper)	1
1		Connector Assembly (To Work Light)	1
1	1490242	Connector	1
1	1490243	Connector	1
1	1330438	Terminal (Socket)	2
2		Connector Assembly (To Harness)	1
2	1493465	Connector	1
2	1330414	Connector (Secondary Lock)	1
2	1330437	Terminal (Pin)	2

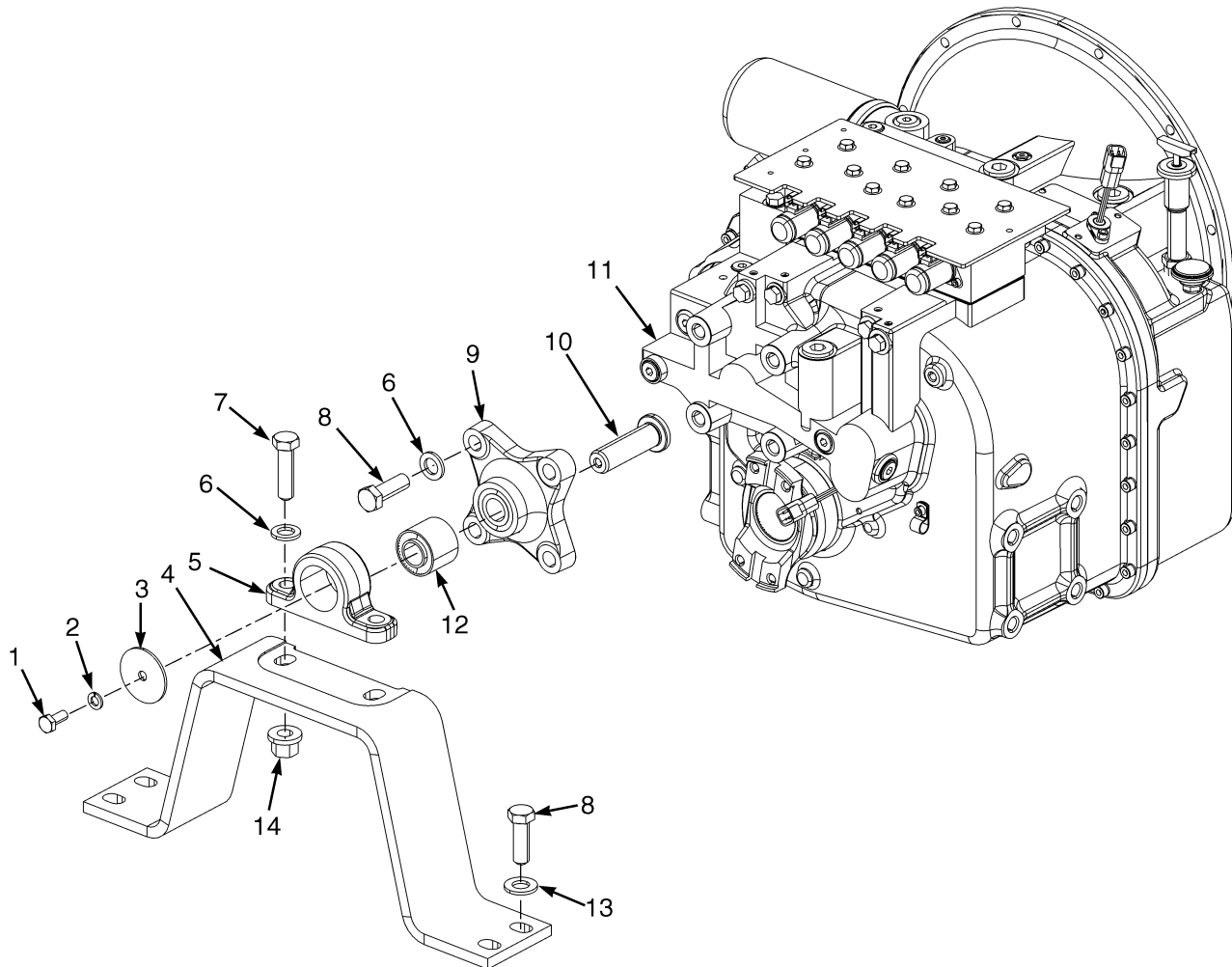
5

TRANSMISSION

**SECTION 5
TRANSMISSION**

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TRANSMISSION MOUNT	5-2

TRANSMISSION MOUNT (FIGURE 5-1)



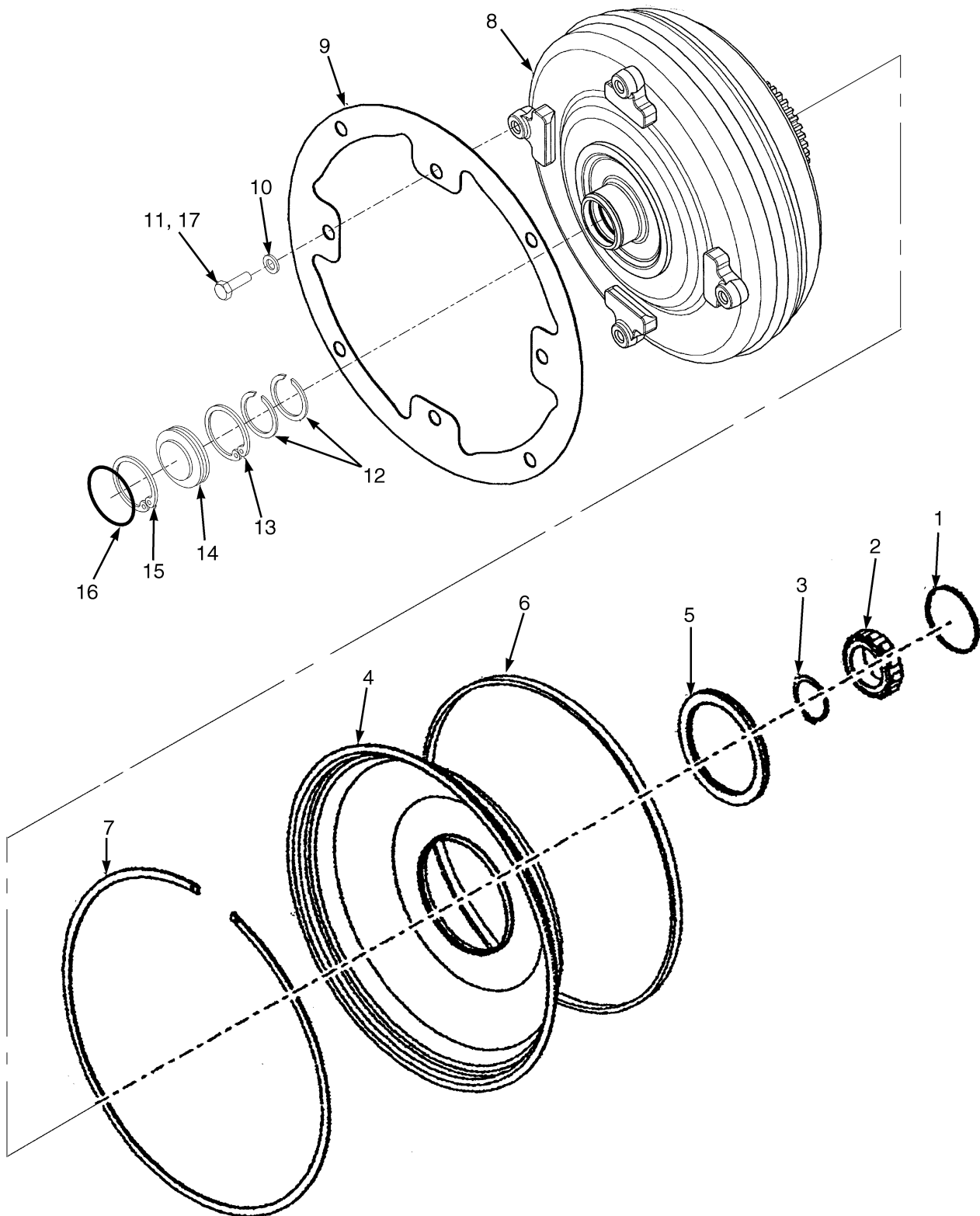
BP240128

TRANSMISSION MOUNT

ITEM	PART NO.	DESCRIPTION	QTY
1	287854	Capscrew	1
2	292682	Lockwasher	1
3	1591721	Washer	1
4	1591719	Crossmember	1
5	1591717	Housing (Bushing)	1
6	296426	Washer	6
7	293688	Capscrew	2
8	293686	Capscrew	8
9	1617487	Bracket (Isolator)	1
10	1591720	Pin	1
11	c 1569821	Transmission Assy (Three Speed) (☞ Figure 5-5).....	1
11	af 1672299	Transmission Assy (Three Speed)	1
11	d 1699926	Transmission Assy (Three Speed) (☞ Figure 5-7, ☞ Figure 5-8).....	1
11	b 1581645	Transmission Assy (Two Speed) (☞ Figure 5-13).....	1
11	ae 1672300	Transmission Assy (Two Speed)	1
11	d 1699927	Transmission Assy (Two Speed)	1
12	1591716	Bushing	1
13	296427	Washer	4
14	1565453	Nut (Flange)	2

FOOTNOTES:**a** → PENDING PER ECN 105757**b** → S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529**c** → S/N H006V02565F INC. 02566, 02781, 02787-02789, 02792-02798, 02800-0280**d** PENDING PER ECN 105757 →**e** S/N H006V02443F → EXC. 02443, 02498-02502, 02514, 02518-02519**f** S/N H006V02566F → EXC. 02566, 02781, 02787-02789, 02792-02798, 02800-0280

TORQUE CONVERTER (FIGURE 5-2) GM 4.3L GASOLINE AND LPG



BP240087

**TORQUE CONVERTER
GM 4.3L GASOLINE AND LPG**

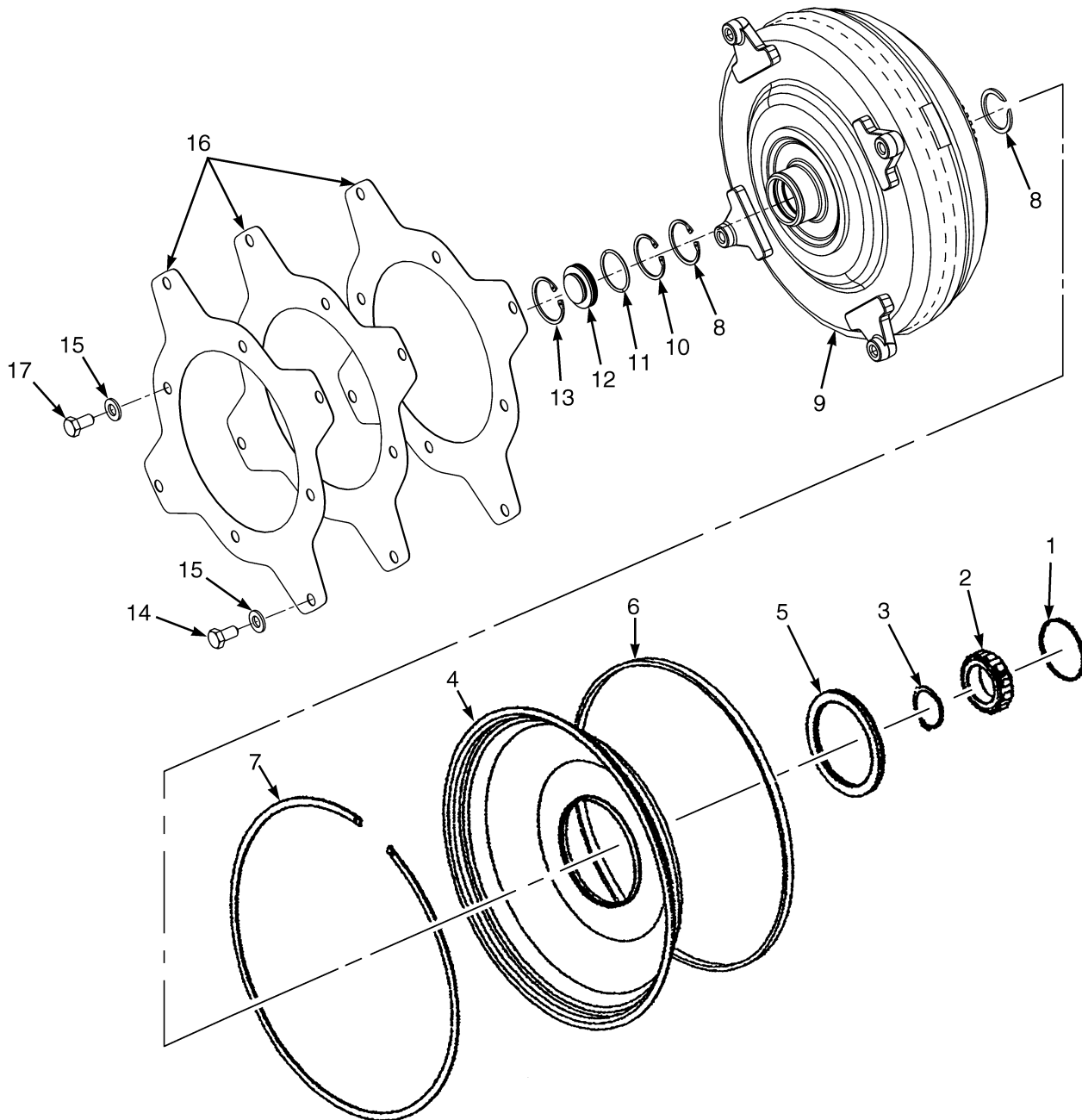
ITEM	PART NO.	DESCRIPTION	QTY
1	1655812	Piston Ring	1
2	1655813	Bearing	1
3	1655814	Snap Ring	1
4	ac 1312274	Baffle	1
4	df 1684271	Baffle	1
5	ac 330532	Seal	1
5	df 1684272	Oil Seal	1
6	1312375	Seal	1
7	1312376	Retaining Ring	1
8	a 1571820	Torque Converter (2.61 Stall Ratio)	1
8	b 1657918	Torque Converter	1
8	d 1571819	Torque Converter (3.17 Stall Ratio)	1
8	e 1657917	Torque Converter	1
9	1636958	Mounting Plate	3
10	296420	Washer	8
11	1541921	Capscrew	8
12	37065	Snap Ring	2
13	1194254	Snap Ring	1
14	1603286	Plug	1
15	205222	Snap Ring	1
16	1311840	O-Ring	1
17	360387	Loctite	AR

FOOTNOTES:

- a** → S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529
- b** → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0028
- c** → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0280

- d** S/N H006V02443F → EXC. 02498-02502, 02514, 02518-02519, 02526-02529
- e** S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0028
- f** S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0280

TORQUE CONVERTER (FIGURE 5-3) CUMMINS 4.5L DIESEL



BP240109

**TORQUE CONVERTER
CUMMINS 4.5L DIESEL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1655812	Piston Ring	1
2	1655813	Bearing	1
3	1655814	Snap Ring	1
	ad 1312274	Baffle	1
4	eh 1684271	Baffle	1
5	ac 330532	Seal	1
5	eg 1684272	Oil Seal	1
6	1312375	Seal	1
7	1312376	Retaining Ring	1
8	37065	Snap Ring	2
	ab 1582327	Torque Converter	1
9	ef 1657919	Torque Converter	1
10	1194254	Snap Ring	1
11	1311840	O-Ring	1
12	1603286	Plug	1
13	205222	Snap Ring	1
14	293626	Capscrew	4
15	296420	Washer	8
16	1601957	Mounting Plate	3
17	1541921	Capscrew	4

FOOTNOTES:

a → S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529

b → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0002

c → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0028

d → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0280

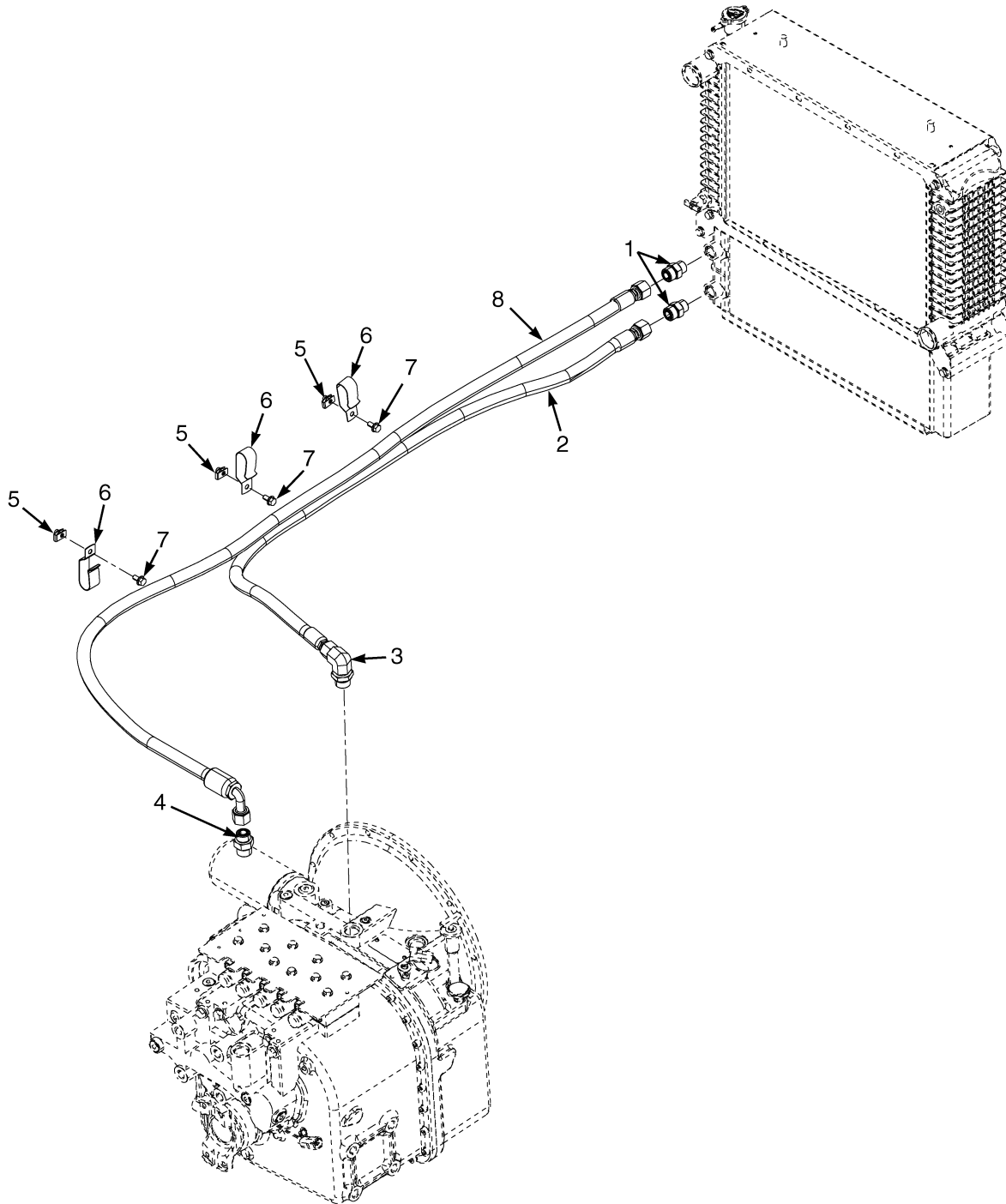
e S/N H006V02443F → EXC. 02498-02502, 02514, 02518-02519, 02526-02529

f S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0002

g S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0028

h S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0280

TRANSMISSION COOLING (FIGURE 5-4) WITH EXTERNAL OIL COOLER



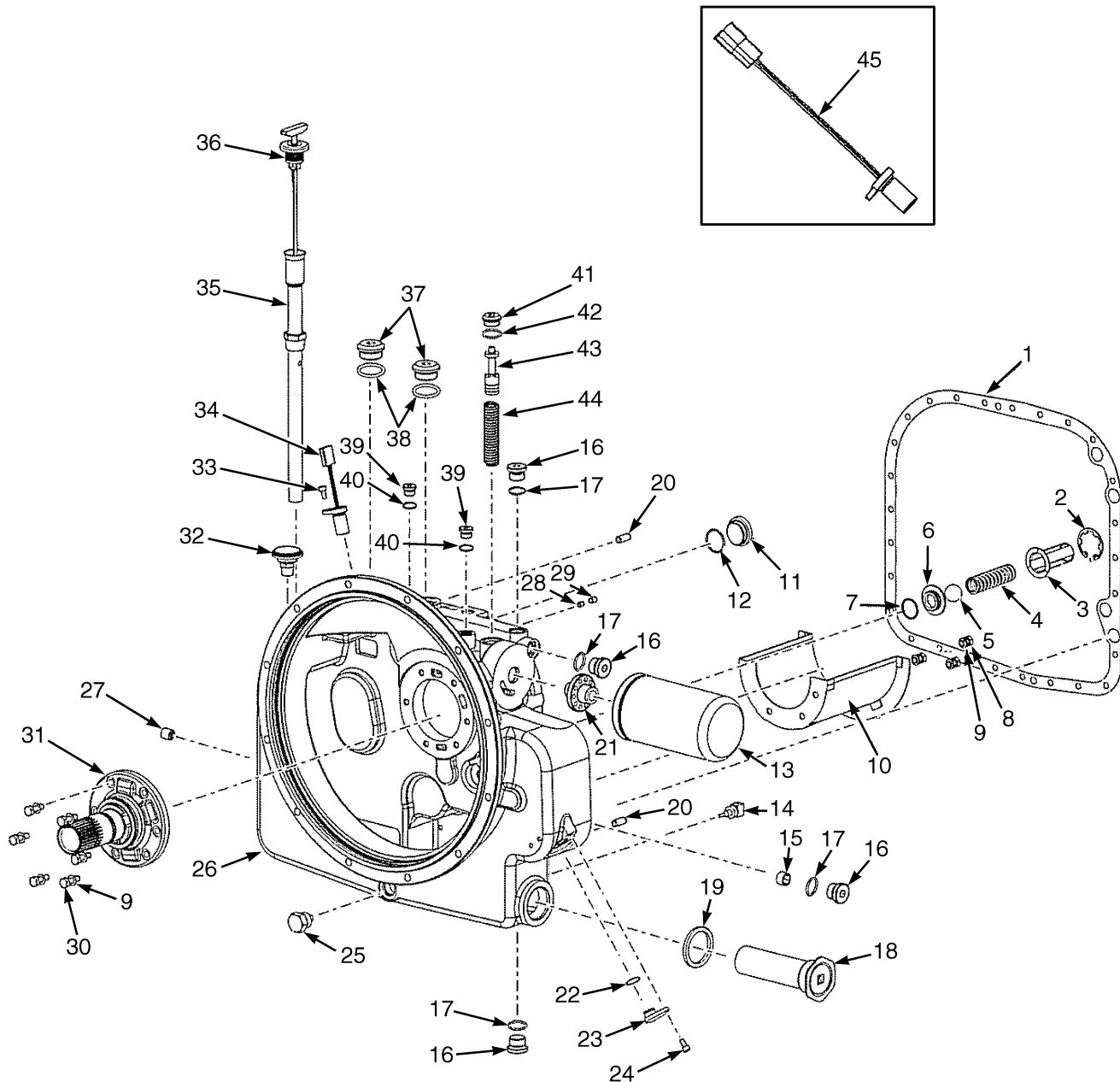
BP240125

**TRANSMISSION COOLING
WITH EXTERNAL OIL COOLER**

ITEM	PART NO.	DESCRIPTION	QTY
1	1486749	Fitting	2
1	252729	O-Ring	1
1	16485	O-Ring	1
2	2100258	Hose Assy	1
3	1487069	Fitting	1
3	252729	O-Ring	1
3	16486	O-Ring	1
4	a 1486751	Fitting	1
4	252729	O-Ring	1
4	16486	O-Ring	1
4	b 1473898	Fitting	1
4	16486	O-Ring	1
4	1527819	O-Ring	1
5	1480237	Nut	3
6	1562648	Clip	3
7	1527879	Capscrew	3
8	a 2100259	Hose	1
8	b 2100260	Hose Assy	1

FOOTNOTES:**a** → PENDING PER ECN 105068**b** PENDING PER ECN 105068 →

TRANSMISSION ASSEMBLY (FIGURE 5-5) THREE SPEED — SHEET 1 OF 2 (→ PENDING PER ECN 10575701)



BP240145

TRANSMISSION ASSEMBLY

THREE SPEED – SHEET 1 OF 2 (→ PENDING PER ECN 10575701)

ITEM	PART NO.	DESCRIPTION	QTY
	abc 1569821	Transmission Assy (Three Speed)	1
	d 1672299	Transmission Assy (Three Speed)	1
1	1655464	Gasket	1
2	1655455	Snap Ring	1
3	1655454	Retainer	1
4	1655453	Spring	1
5	1655452	Ball	1
6	1655451	Spacer	1
7	1655450	O-Ring	1
8	1624641	Screw	3
9	1590532	Lockwasher	9
10	1655463	Baffle	1
11	1624371	Plug	1
12	1624372	O-Ring	1
13	1556992	Transmission Filter	1
14	1655456	Sensor (Temperature)	1
15	1655465	Plug	1
16	1655459	Plug	4
17	60653	O-Ring	4
18	330514	Screen	1
19	330513	Gasket	1
20	330502	Pin	2
21	1612863	Adapter	1
22	1530732	O-Ring	1
23	1655468	Plug	1
24	1556910	Capscrew	2
25	1311544	Drain Plug	1
26	c 1655449	Converter Housing	1
26	d 1684259	Converter Housing	1
27		Plug	1
28		Plug	1
29		Plug	1
30	1655458	Screw	6
31	1655457	Support	1
32	330527	Breather	1
33	1556910	Capscrew	2
34	1655469	Sensor (Turbine Speed - Tiss)	1
35	1655461	Dipstick Tube	1
36	1655462	Dipstick	1
37	1556918	Plug	2
38	16486	O-Ring	1
39	1655460	Plug	2
40	1557008	O-Ring	1
41	1624368	Plug	1
42	1612905	O-Ring	1
43	1655466	Spool	1
44	1655467	Spring	1
	c 1655826	Kit-Gasket	1
	d 1684274	Kit-Gasket	1

TRANSMISSION ASSEMBLY
THREE SPEED – SHEET 1 OF 2 (→ PENDING PER ECN 10575701)

ITEM	PART NO.	DESCRIPTION	QTY
45		Intermediate Shaft Speed Sensor (Behind Filter) (☞ Figure 5-6).....	1

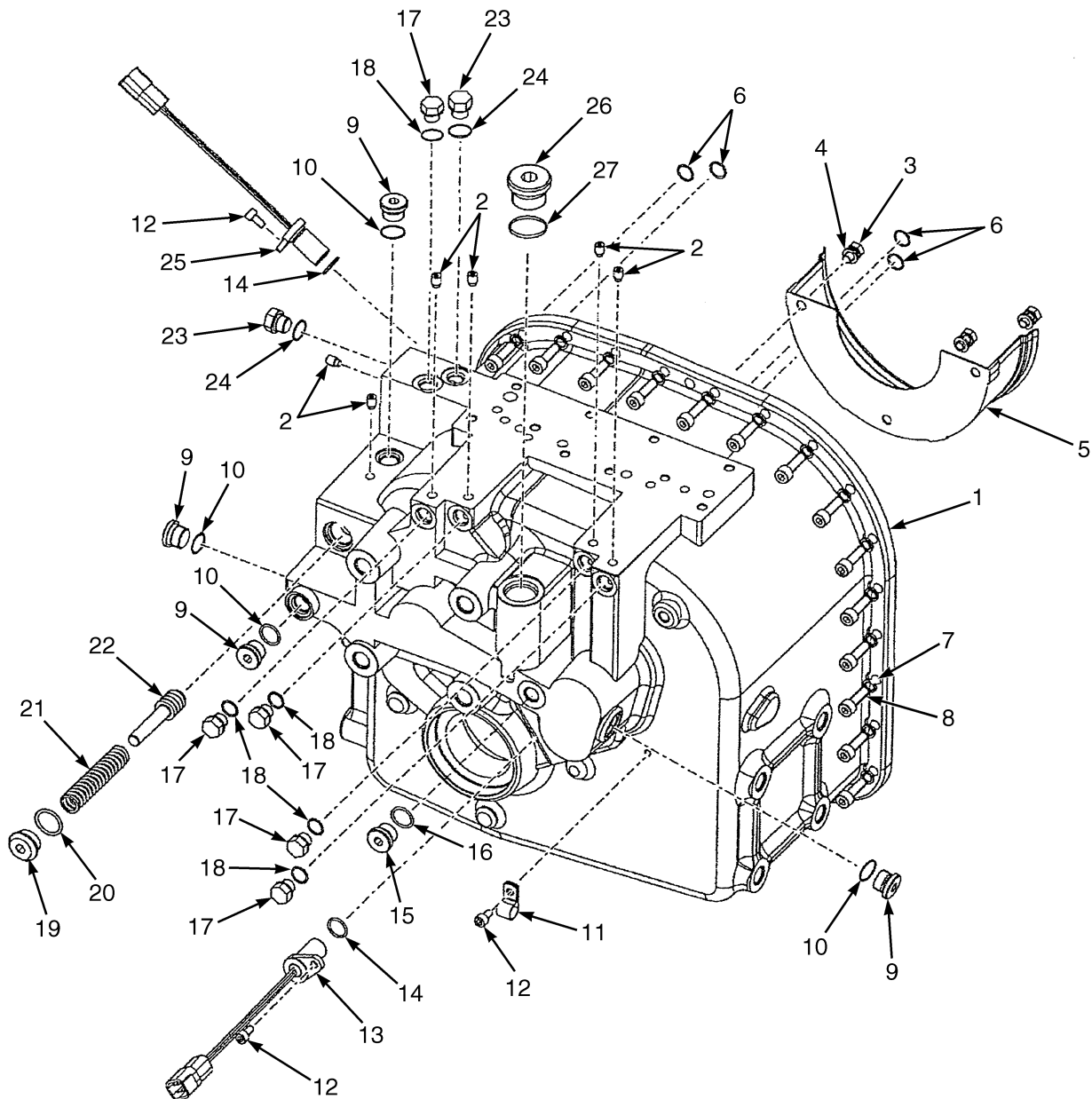
FOOTNOTES:

a	Cummins Engines-Service with 1672299 and Converter 1657919 plus CDF file	c	→ S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529
b	GM Engines - Service with 1672299 and Converter 1657918 plus CDF file	d	S/N H006V02443F → EXC. 02498-02502, 02514, 02518-02519, 02526-02529

NOTES

[illegible]

TRANSMISSION ASSEMBLY (FIGURE 5-6) THREE SPEED — SHEET 2 OF 2 (→ PENDING PER ECN 10575701)



BP240111

TRANSMISSION ASSEMBLY

THREE SPEED – SHEET 2 OF 2 (→ PENDING PER ECN 10575701)

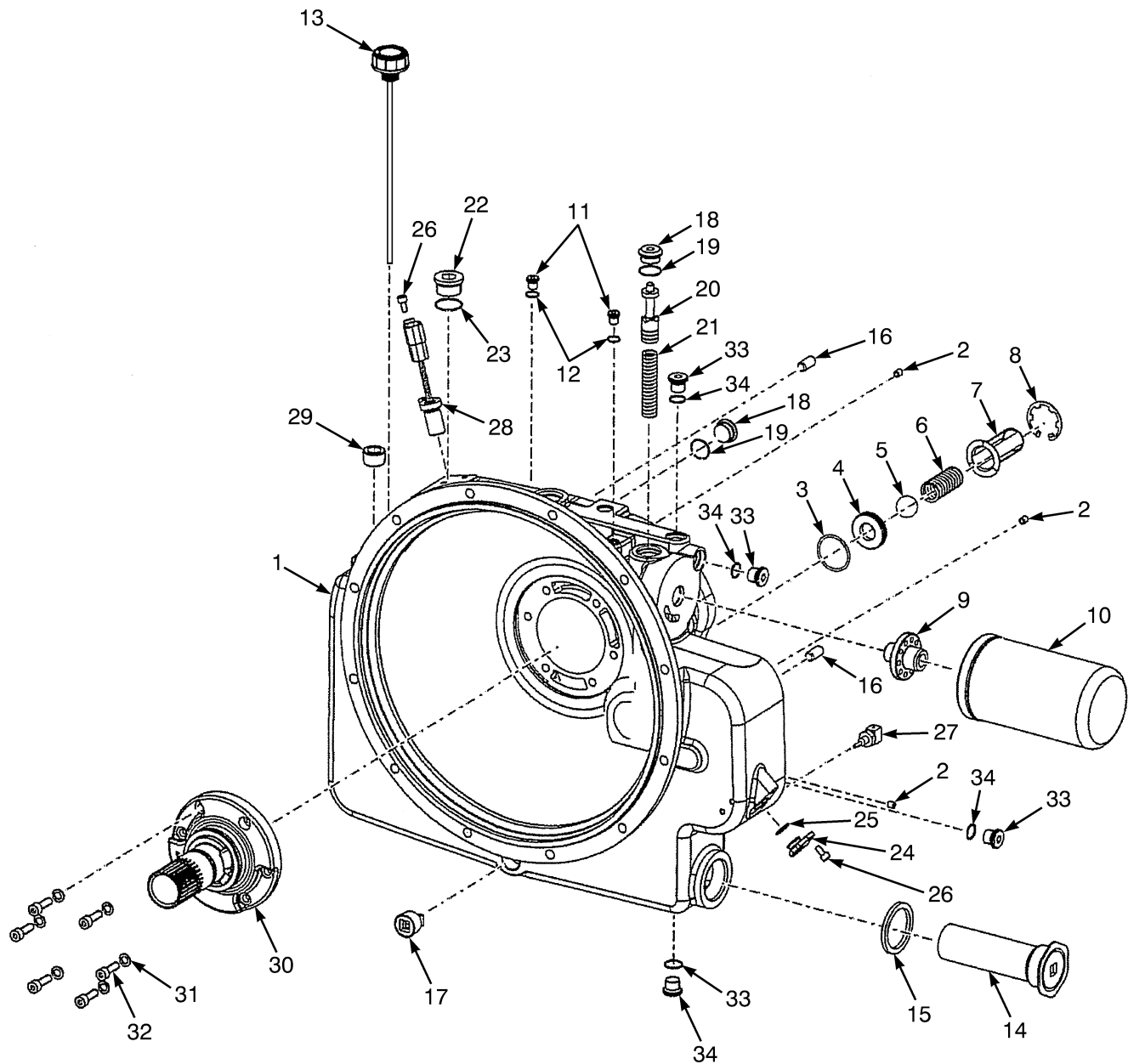
ITEM	PART NO.	DESCRIPTION	QTY
	abd 1569821	Transmission Assy (Three Speed)	1
	c 1672299	Transmission Assy (Three Speed)	1
1	1655514	Transmission Housing	1
2	1655515	Plug	6
3	1624641	Screw	3
4	1590532	Lockwasher	3
5	1655516	Baffle	1
6	87281	O-Ring	4
7	1556998	Lockwasher	27
8	1655458	Screw	27
9	1655459	Plug	4
10	60653	O-Ring	4
11	1655522	Clip	1
12	1556910	Capscrew	3
13	1655520	Sensor (Output Speed - Toss)	1
14	1530732	O-Ring	2
15	1655521	Plug	1
16	60653	O-Ring	1
17	14592	Plug	5
18	16482	O-Ring	5
19	1624368	Plug	1
20	1612905	O-Ring	1
21	1655518	Spring	1
22	1655517	Spool	1
23	14594	Plug	2
24	16483	O-Ring	2
25	1655519	Sensor (Turbine Speed)	1
26	1556918	Plug	1
27	16486	O-Ring	1

FOOTNOTES:

a Cummins Engines-Service with 1672299 and Converter 1657919 plus CDF file b GM Engines - Service with 1672299 and Converter 1657918 plus CDF file	c → PENDING PER ECN 105757 d → S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529

TRANSMISSION ASSEMBLY (FIGURE 5-7)

THREE SPEED — SHEET 1 OF 2 (PENDING PER ECN 10575701 →)

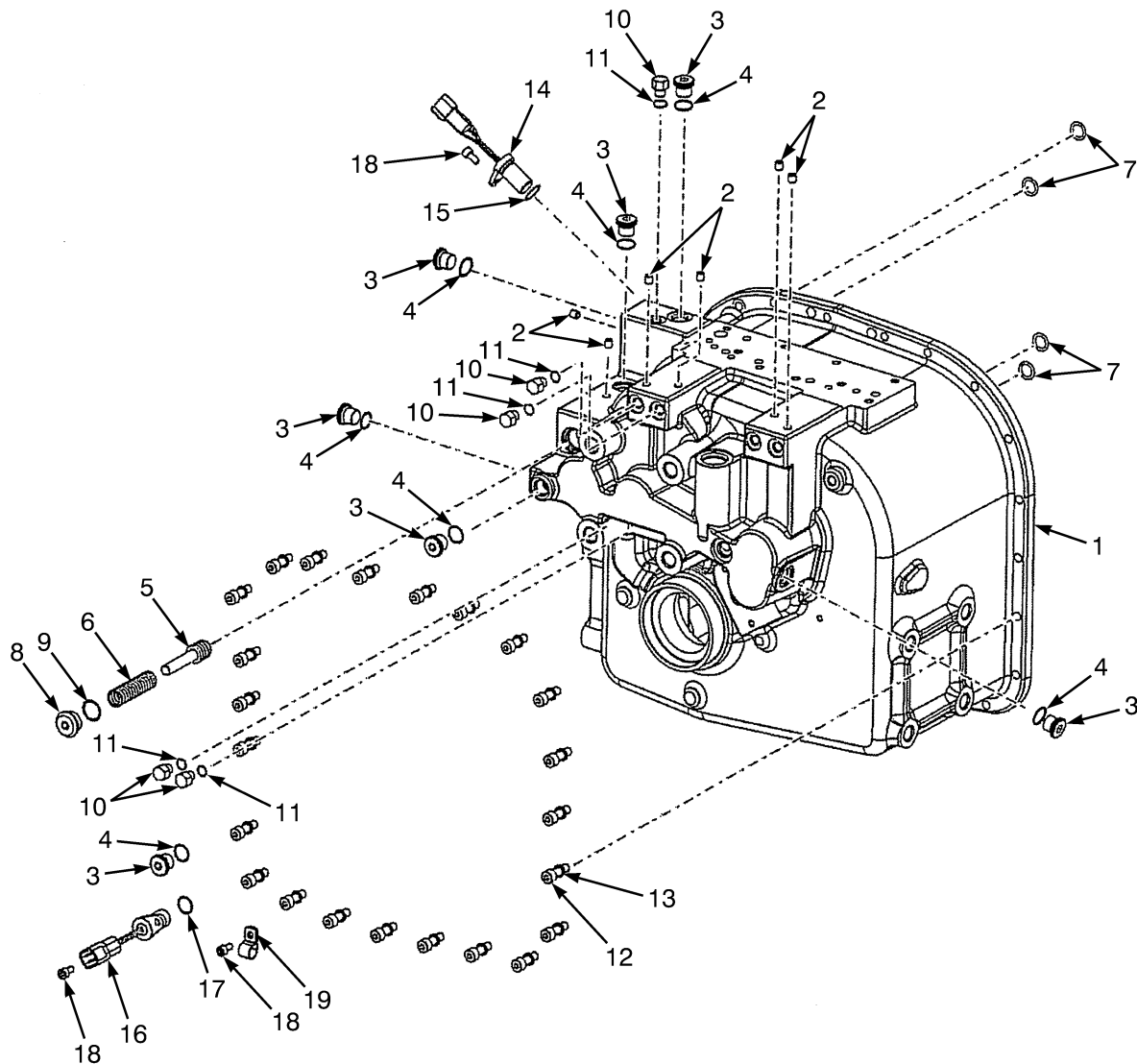


BP240157

TRANSMISSION ASSEMBLY
THREE SPEED – SHEET 1 OF 2 (PENDING PER ECN 10575701 →)

ITEM	PART NO.	DESCRIPTION	QTY
	1699926	Transmission Assy (Three Speed)	1
1	1707735	Converter Housing	1
2	1655515	Plug	3
3	1707736	O-Ring	1
4	1707737	Spacer	1
5	1655452	Ball	1
6	1655453	Spring	1
7	1655454	Retainer	1
8	1655455	Snap Ring	1
9	1612863	Adapter	1
10	1556992	Transmission Filter	1
11	1655460	Plug	2
12	1557008	O-Ring	2
13	1707738	Dipstick And Breather	1
14	330514	Screen	1
15	330513	Gasket	1
16	330502	Pin	2
17	1311544	Drain Plug	1
18	1624368	Plug	2
19	1612905	O-Ring	1
20	1655466	Spool	1
21	1655467	Spring	1
22	1556918	Plug	1
23	16486	O-Ring	1
24	1655468	Plug	1
25	1530732	O-Ring	1
26	1556910	Capscrew	2
27	1655456	Sensor (Temperature)	1
28	1655469	Sensor (Turbine Speed - Tiss)	1
29	1311552	Plug	1
30	1655457	Support	1
31	1590532	Lockwasher	6
32	1655458	Screw	6
33	1655459	Plug	2
34	60653	O-Ring	2
	1709808	Kit-Gasket	1

TRANSMISSION ASSEMBLY (FIGURE 5-8) THREE SPEED — SHEET 2 OF 2 (PENDING PER ECN 10575701 →)

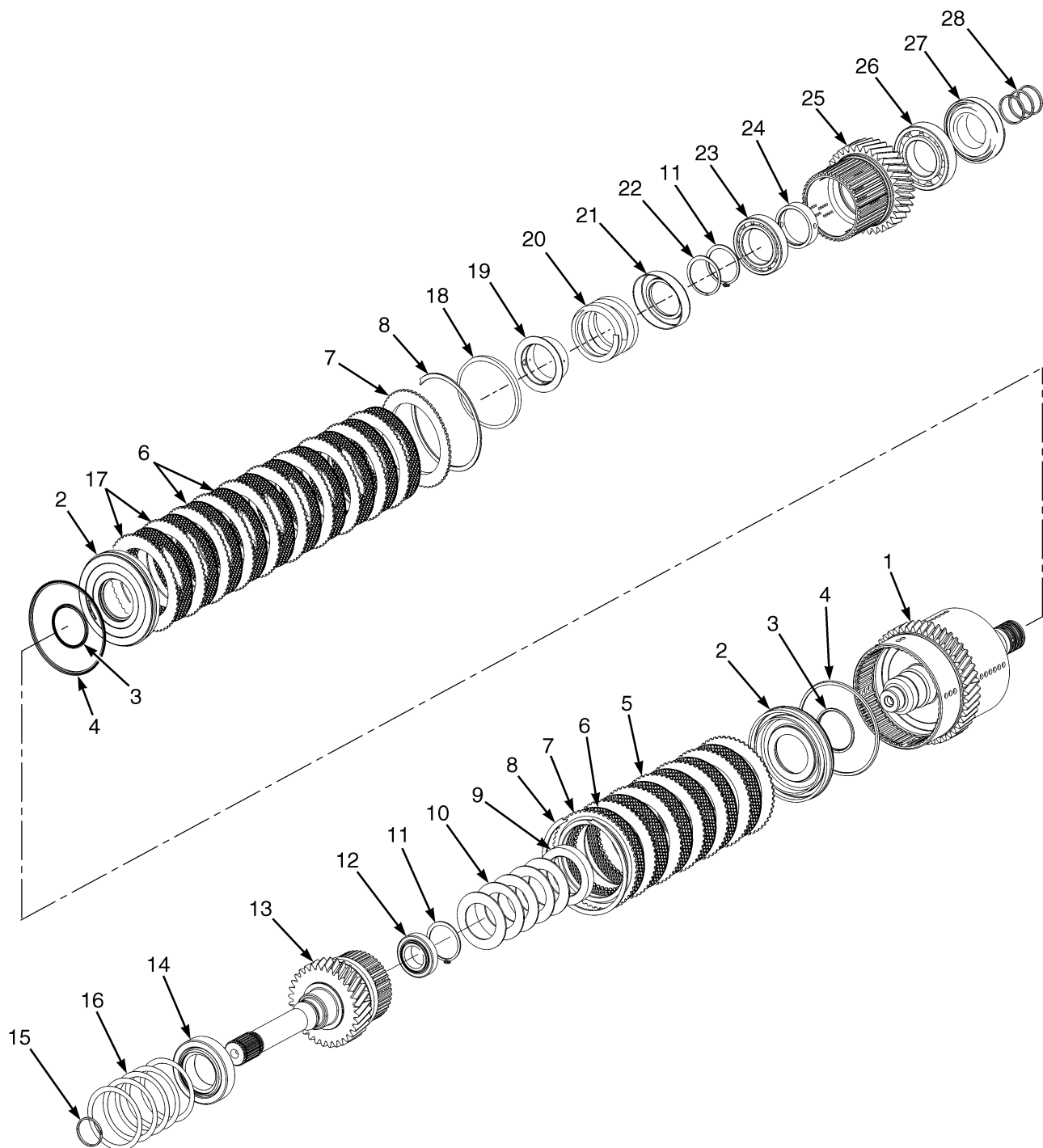


BP240158

TRANSMISSION ASSEMBLY
THREE SPEED – SHEET 2 OF 2 (PENDING PER ECN 10575701 →)

ITEM	PART NO.	DESCRIPTION	QTY
	1699926	Transmission Assy (Three Speed)	1
1	1707741	Transmission Housing	1
2	1655515	Plug	6
3	1655459	Plug	7
4	60653	O-Ring	7
5	1655517	Spool	1
6	1655518	Spring	1
7	87281	O-Ring	4
8	1624368	Plug	1
9	1612905	O-Ring	1
10	1557007	Plug	5
11	1557008	O-Ring	5
12	1655458	Screw	23
13	1556998	Lockwasher	23
14	1655519	Sensor (Turbine Speed)	1
15	1530732	O-Ring	1
16	1655520	Sensor (Output Speed - Toss)	1
17	1530732	O-Ring	1
18	1556910	Capscrew	3
19	1655522	Clip	1

FORWARD CLUTCH LOW AND SECOND SHAFT (FIGURE 5-9) THREE SPEED TRANSMISSION — FWD1, RANGE2



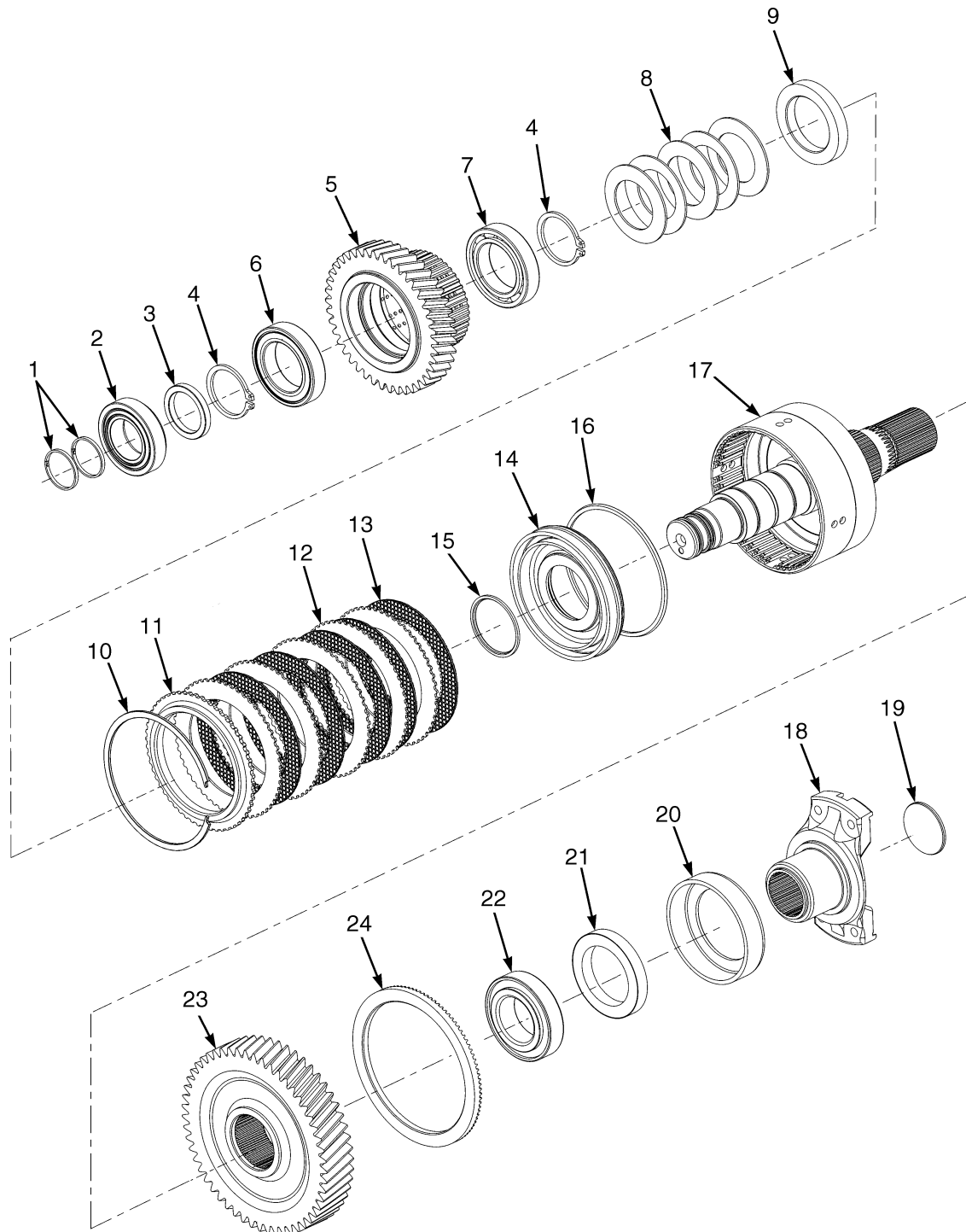
BP240114

**FORWARD CLUTCH LOW AND SECOND SHAFT
THREE SPEED TRANSMISSION – FWD1, RANGE2**

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1655545	Shaft (RANGE2)	1
1	b 1707745	Shaft	1
2	1655546	Clutch Piston	2
3	1655547	Seal	1
4	1311811	Piston Seal	1
5	1655548	Friction Disk (Inner, High Density)	17
6	1556965	Separator Plate (Outer)	6
7	1655552	Plate	2
8	1311810	Snap Ring	2
9	1655558	Spacer	1
10	1655557	Disk Spring	1
11	1655561	Snap Ring	2
12	1655562	Bearing	1
13	1655596	Shaft (Forward)	1
14	1655597	Bearing	1
15	1556985	Piston Ring	1
16	1655598	Shim	AR
16	1655599	Shim	AR
16	1655600	Shim	AR
16	b 1707749	Shim	AR
17	1655549	Separator Plate (Outer)	11
18	a 1655553	Seal	1
18	b 1707746	Sealing Ring	1
19	1655555	Retainer	1
20	1655554	Spring	1
21	a 1655556	Retainer	1
21	b 1655606	Retainer	1
22	a 1655601	Snap Ring	1
22	b 1707750	Retaining Ring	1
23	330590	Bearing	1
24	a 1655560	Spacer	1
24	b 1707748	Spacer	1
25	a 1655559	Gear (FWD1)	1
25	b 1707747	Clutch Gear	1
26	a 1612529	Bearing	1
26	b 1389220	Bearing	1
27	1655550	Bearing	1
28	1556985	Piston Ring	3

FOOTNOTES:**a** → PENDING PER ECN 10575701**b** PENDING PER ECN 10575701 →

FORWARD CLUTCH HIGH AND OUTPUT SHAFT (FIGURE 5-10) THREE SPEED TRANSMISSION — FWD2



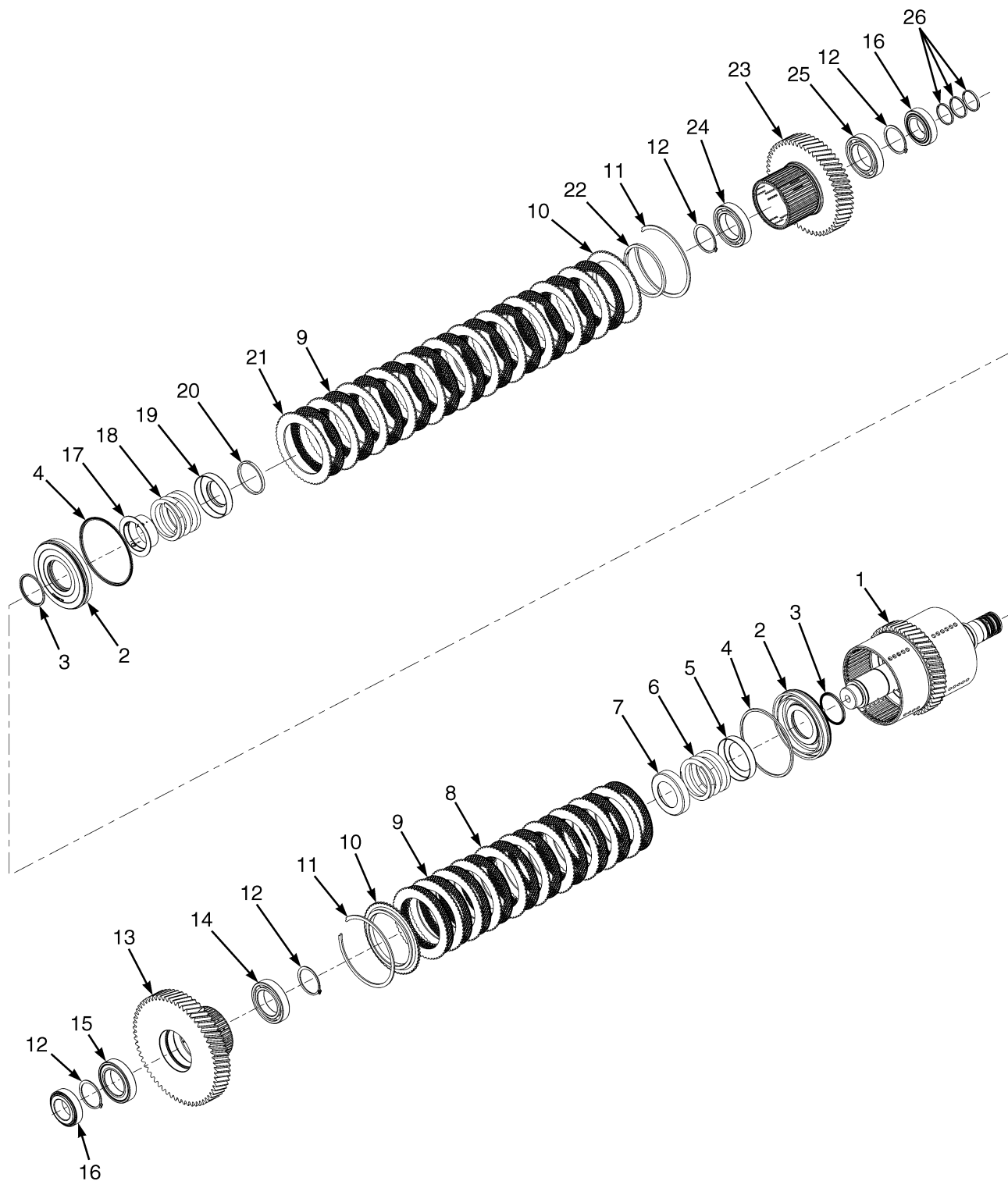
BP240116

**FORWARD CLUTCH HIGH AND OUTPUT SHAFT
THREE SPEED TRANSMISSION – FWD2**

ITEM	PART NO.	DESCRIPTION	QTY
1	1556985	Piston Ring	2
2	b 1655617	Bearing	1
2	c 1707768	Bearing	1
3	1655615	Spacer	1
4	1655561	Snap Ring	2
5	b 1655616	Gear (FWD2)	1
5	c 1707767	Gear	1
	ac 1707750	Retaining Ring	1
6	1312359	Bearing	1
7	330590	Bearing	1
8	1655557	Disk Spring	1
9	1655558	Spacer	1
10	1311810	Snap Ring	1
11	1655552	Plate	1
12	1556965	Separator Plate (Outer)	5
13	1655548	Friction Disk (Inner, High Density)	5
14	1655546	Clutch Piston	1
15	1655547	Seal	1
16	1311811	Piston Seal	1
17	b 1655614	Shaft (Output and FWD2)	1
17	c 1707766	Shaft	1
18	b 1655622	Flange	1
18	c 1707769	Flange	1
19	b 1655624	Plug	1
19	c 1707770	Plug	1
20	1655623	Cover	1
21	1655621	Oil Seal	1
22	1655618	Bearing	1
23	1694403	Transmission Gear (Output with Tone Ring)	1
24		Ring	1

FOOTNOTES:**a** Not Illustrated**c** PENDING PER ECN 10575701 →**b** → PENDING PER ECN 10575701

REVERSE CLUTCH AND FIRST SHAFT (FIGURE 5-11) THREE SPEED TRANSMISSION — REV1, RANGE 1



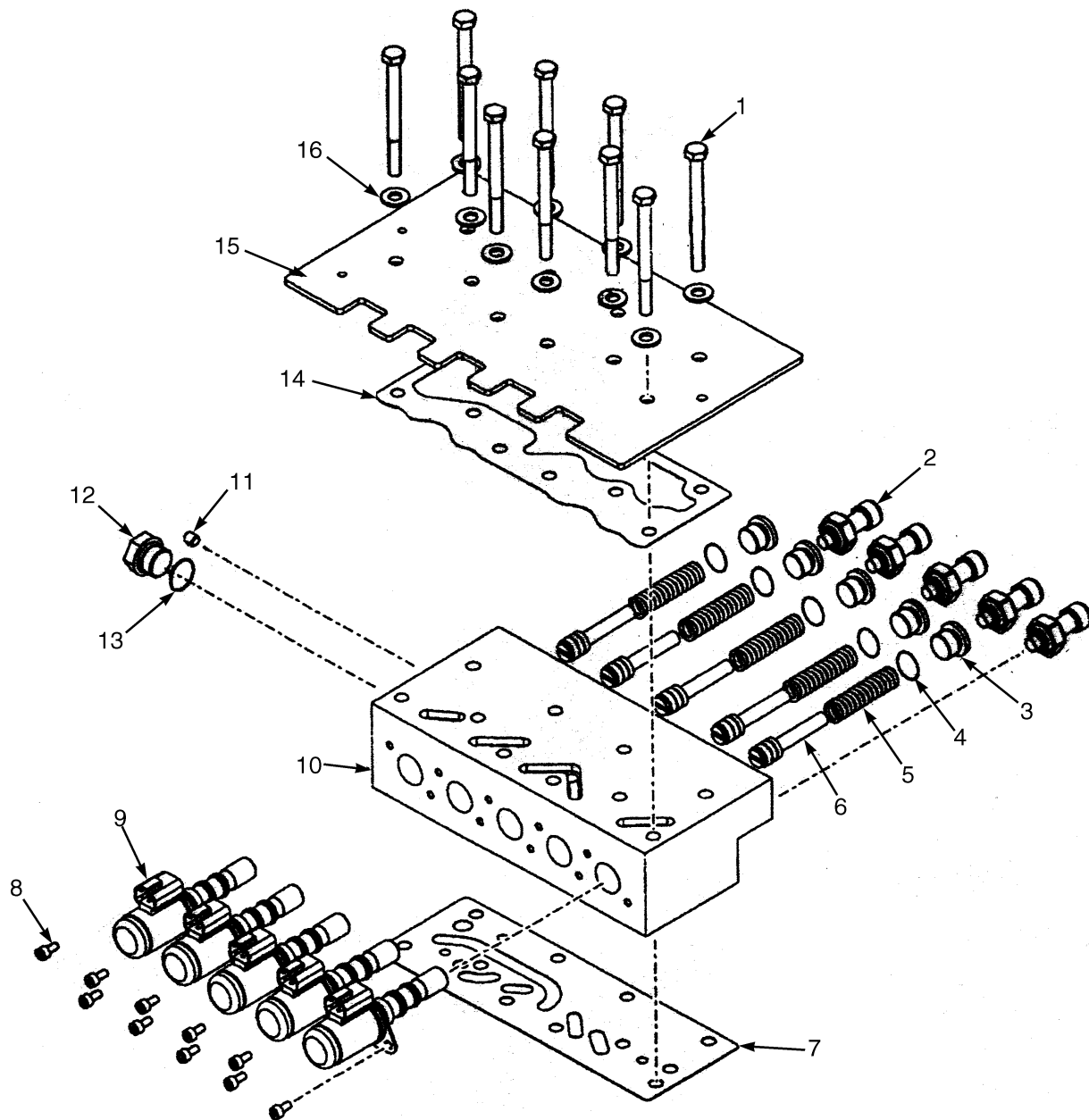
BP240115

**REVERSE CLUTCH AND FIRST SHAFT
THREE SPEED TRANSMISSION – REV1, RANGE 1**

ITEM	PART NO.	DESCRIPTION	QTY
1	b 1655604	Shaft	1
1	c 1707762	Shaft	1
2	1655546	Clutch Piston	2
3	1655547	Seal	2
4	1311811	Piston Seal	2
5	1655605	Retainer	1
6	1655610	Spring	1
7	b 1655556	Retainer	1
8	1556965	Separator Plate (Outer)	10
9	1655548	Friction Disk (Inner, High Density)	21
10	1655552	Plate	2
11	1311810	Snap Ring	2
12	1655561	Snap Ring	4
13	b 1655609	Gear (1st Clutch) (RANGE1)	1
13	c 1707764	Gear (1st Clutch) (RANGE1)	1
	ac 1707750	Retaining Ring	1
14	330590	Bearing	1
15	1312359	Bearing	1
16	1655607	Bearing	2
17	1655555	Retainer	1
18	1655554	Spring	1
19	1655606	Retainer	1
20	1655601	Snap Ring	1
21	1655549	Separator Plate (Outer)	11
22	b 1655553	Seal	1
22	c 1707746	Sealing Ring	1
23	b 1655608	Gear (REV1)	1
23	c 1707763	Gear (REV1)	1
	ac 1707750	Retaining Ring	1
24	330590	Bearing	1
25	1312359	Bearing	1
26	1556985	Piston Ring	3

FOOTNOTES:**a** Not Illustrated**c** PENDING PER ECN 10575701 →**b** → PENDING PER ECN 10575701

CONTROL VALVE (FIGURE 5-12) THREE SPEED TRANSMISSION

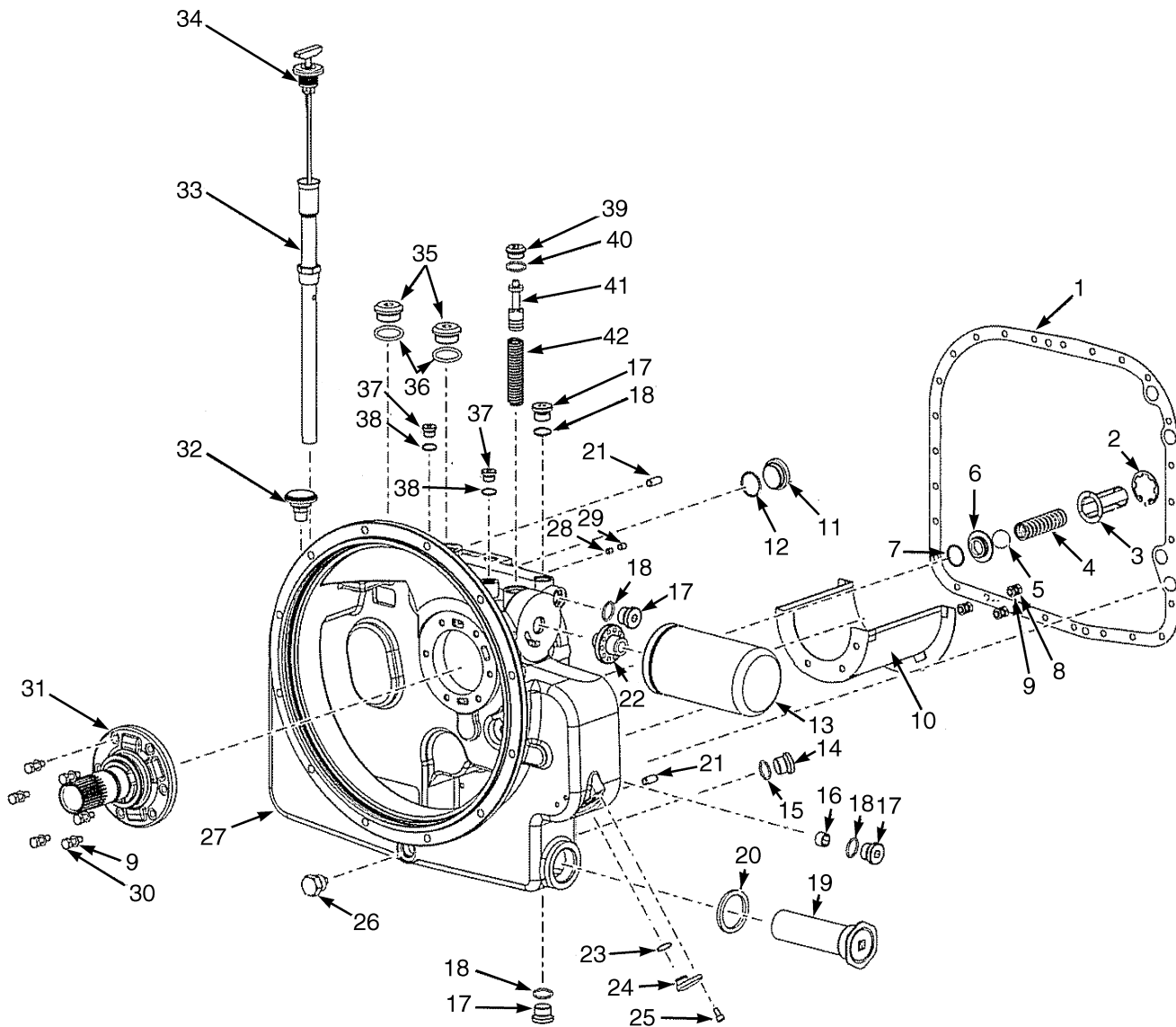


BP240117

**CONTROL VALVE
THREE SPEED TRANSMISSION**

ITEM	PART NO.	DESCRIPTION	QTY
	1655629	Valve	1
	1694405	Valve	1
1	1557009	Capscrew	10
2	1655633	Sensor (Valve Pressure)	5
3	1655639	Plug	5
4	87281	O-Ring	1
5		Spring	5
6		Spool	5
7	1655636	Gasket	1
8	1655638	Capscrew	10
9	1655632	Solenoid Valve	5
10	1655630	Body	1
11	1655631	Plug	1
12	14589	Plug	1
13	16484	O-Ring	1
14	1655634	Gasket	1
15	1655635	Cover (Control Valve)	1
16	1655637	Washer	10

TRANSMISSION ASSEMBLY (FIGURE 5-13) TWO SPEED — SHEET 1 OF 2



BP240120

TRANSMISSION ASSEMBLY
TWO SPEED – SHEET 1 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
	abd 1581645	Transmission Assy (Two Speed)	1
	abf 1671267	Transmission Assy (Two Speed)	1
	cg 1672300	Transmission Assy (Two Speed)	1
1	1655464	Gasket	1
2	1655455	Snap Ring	1
3	1655454	Retainer	1
4	1655453	Spring	1
5	1655452	Ball	1
6	1655451	Spacer	1
7	1655450	O-Ring	1
8	1624641	Screw	3
9	1590532	Lockwasher	9
10	1655463	Baffle	1
11	1624371	Plug	1
12	1624372	O-Ring	1
13	1655472	Transmission Filter	1
14	1655512	Plug	1
15	1624370	O-Ring	1
16		Plug	1
17	1655459	Plug	4
18	60653	O-Ring	4
19	330514	Screen	1
20	330513	Gasket	1
21	330502	Pin	2
22	1612863	Adapter	1
23	1530732	O-Ring	1
24	1655468	Plug	1
25	1556910	Capscrew	1
26	1311544	Drain Plug	1
27	e 1655471	Converter Housing	1
27	g 1684327	Converter Housing	1
28		Plug	1
29		Plug	1
30	1655458	Screw	6
31	1655457	Support	6
32	330527	Breather	1
33	1655461	Dipstick Tube	1
34	1655462	Dipstick	1
35	1556918	Plug	2
36	16486	O-Ring	1
37	1655460	Plug	2
38	1557008	O-Ring	2
39	1624368	Plug	2
40	1612905	O-Ring	1
41	1655466	Spool	1
42	1655467	Spring	1
	e 1655826	Kit-Gasket	1

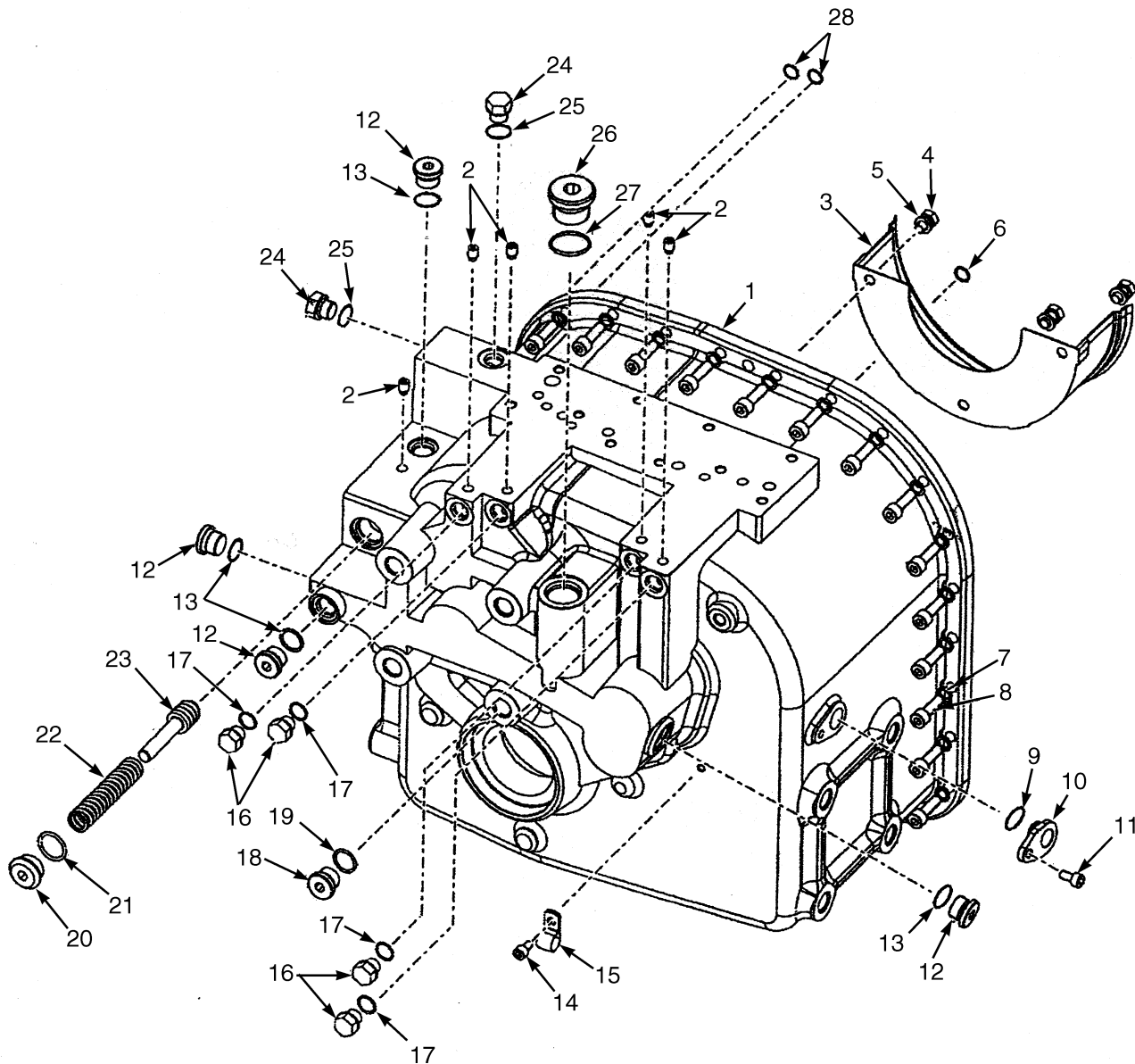
FOOTNOTES:

a	Cummins Engines-Service with 1672300 and Converter 1657919 plus CDF file	e	→ S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529
b	GM Engines - Service with 1672300 and Converter 1657918 plus CDF file	f	S/N H006V01605E ↔ S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529
c	→ PENDING PER ECN 105757	g	S/N H006V02443F → EXC. 02498-02502, 02514, 02518-02519, 02526-02529
d	→ S/N H006V01604E		

NOTES

[illegible]

TRANSMISSION ASSEMBLY (FIGURE 5-14) TWO SPEED — SHEET 2 OF 2



BP240118

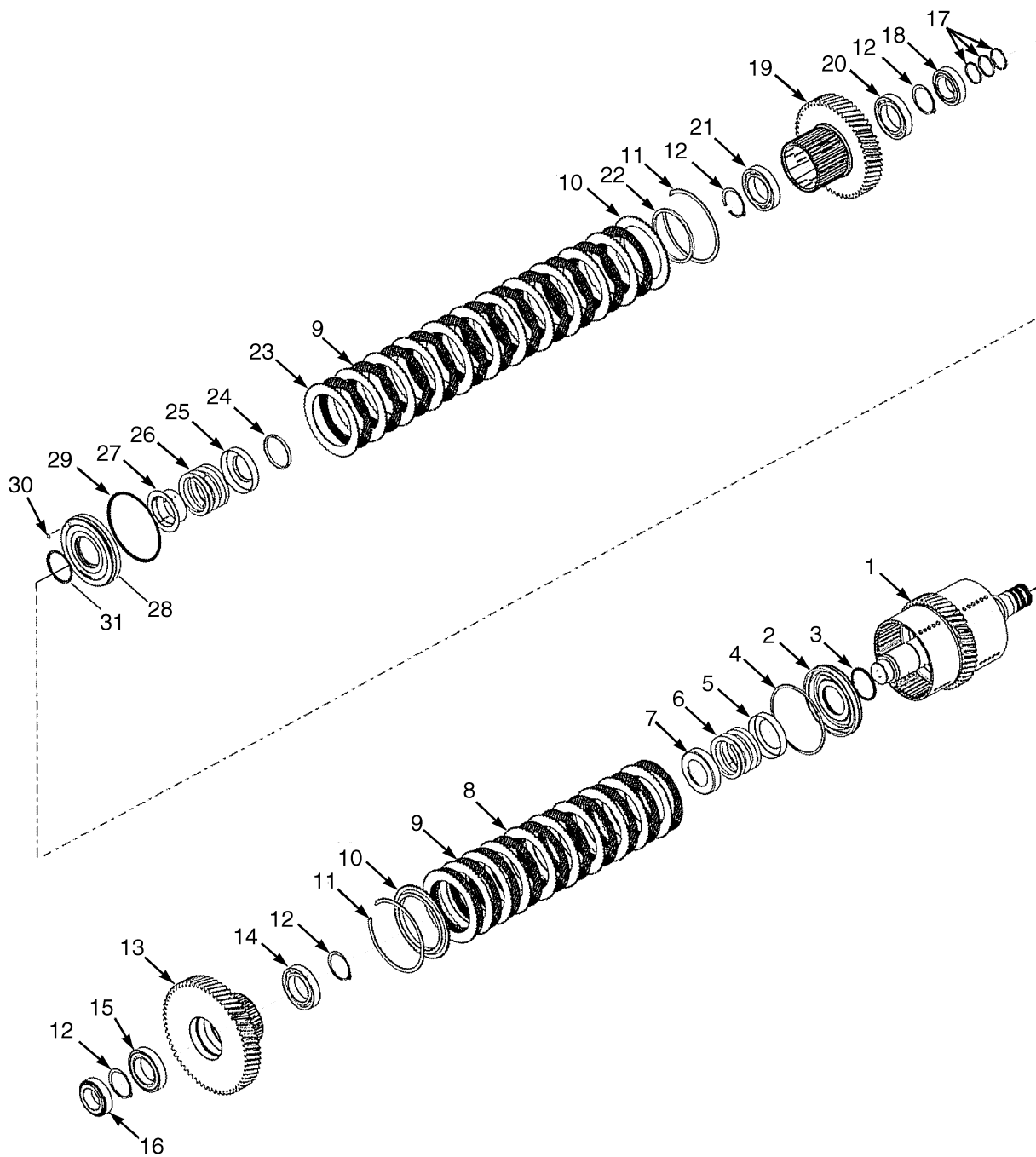
TRANSMISSION ASSEMBLY
TWO SPEED – SHEET 2 OF 2

ITEM	PART NO.	DESCRIPTION	QTY
	abd 1581645	Transmission Assy (Two Speed)	1
	abe 1671267	Transmission Assy (Two Speed)	1
	cf 1672300	Transmission Assy (Two Speed)	1
1	1659191	Transmission Housing	1
2	1655515	Plug	5
3	1655516	Baffle	1
4	1624641	Screw	3
5	1590532	Lockwasher	3
6	87281	O-Ring	3
7	1556998	Lockwasher	27
8	1655458	Screw	27
9	1530732	O-Ring	1
10	1655468	Plug	1
11	1556910	Capscrew	2
12	1655459	Plug	4
13	60653	O-Ring	4
14	1556910	Capscrew	2
15	1655522	Clip	1
16	14592	Plug	4
17	16482	O-Ring	4
18	1655521	Plug	1
19	60653	O-Ring	1
20	1624368	Plug	1
21	1612905	O-Ring	1
22	1655518	Spring	1
23	1655517	Spool	1
24	14594	Plug	2
25	16483	O-Ring	2
26	1556918	Plug	1
27	16486	O-Ring	1
28	87281	O-Ring	3

FOOTNOTES:

a Cummins Engines-Service with 1672300 and Converter 1657919 plus CDF file b GM Engines - Service with 1672300 and Converter 1657918 plus CDF file c → PENDING PER ECN 105757	d → S/N H006V01604E e S/N H006V01605E ↔ S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529 f S/N H006V02443F → EXC. 02498-02502, 02514, 02518-02519, 02526-02529

REVERSE CLUTCH (FIGURE 5-15) TWO SPEED TRANSMISSION



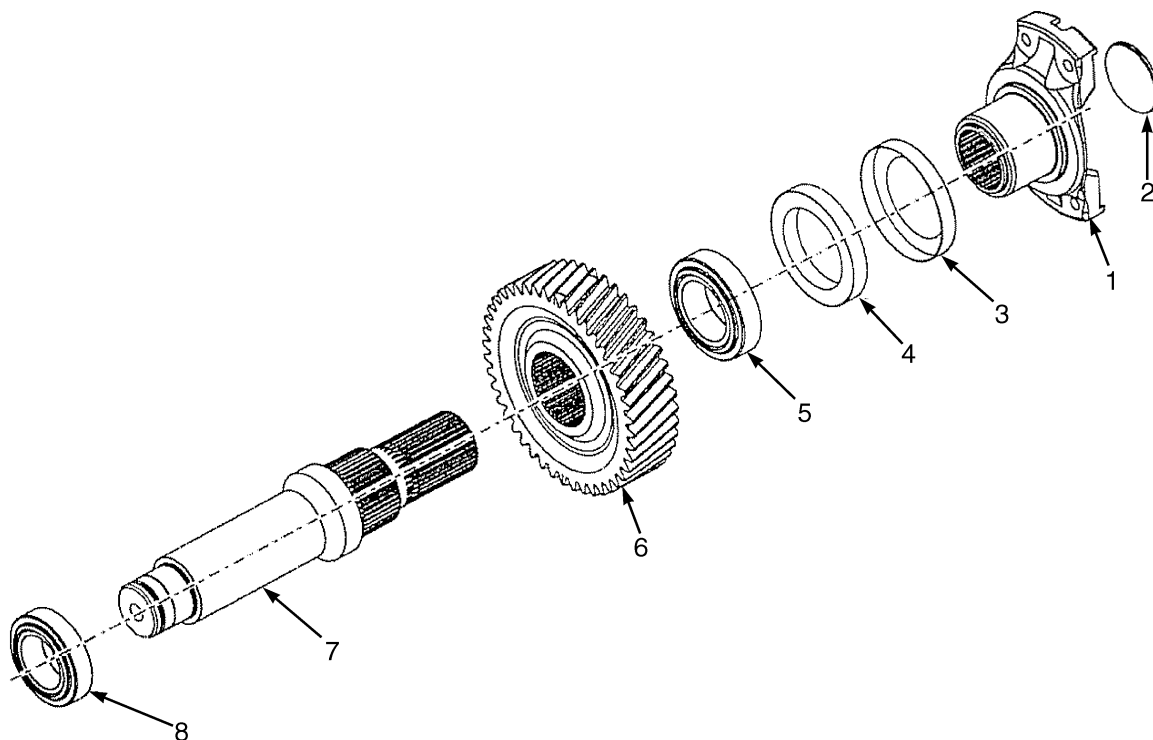
BP240121

**REVERSE CLUTCH
TWO SPEED TRANSMISSION**

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1655604	Shaft	1
1	b 1707762	Shaft	1
2	1655546	Clutch Piston	1
3	1655547	Seal	1
4	1311811	Piston Seal	1
5	1655605	Retainer	1
6	1655610	Spring	1
7	1655556	Retainer	1
8	1556965	Separator Plate (Outer)	10
9	1655548	Friction Disk (Inner, High Density)	21
10	1655552	Plate	2
11	1311810	Snap Ring	2
12	1655561	Snap Ring	4
13	1655609	Gear (1st Clutch)	1
14	330590	Bearing	1
15	1312359	Bearing	1
16	b 1707750	Retaining Ring	1
17	1556985	Piston Ring	3
18	1655607	Bearing	2
19	a 1655612	Gear (Reverse Clutch)	1
19	b 1707838	Gear	1
20	1312359	Bearing	1
21	330590	Bearing	1
22	b 1707750	Retaining Ring	1
23	a 1655553	Seal	1
23	b 1707746	Sealing Ring	1
24	1655549	Separator Plate (Outer)	11
25	a 1655561	Snap Ring	1
25	b 1655601	Snap Ring	1
26	1655606	Retainer	1
27	1655554	Spring	1
28	1655555	Retainer	1
29	1655551	Clutch Pack	1
30	1311811	Piston Seal	1
31	1655547	Seal	1
32		Screen	1

FOOTNOTES:**a** → PENDING PER ECN 10575701**b** PENDING PER ECN 10575701 →

OUTPUT SHAFT (FIGURE 5-16) TWO SPEED TRANSMISSION



BP240122

ITEM	PART NO.	DESCRIPTION	QTY
1	b 1655622	Flange	1
1	ad 1694477	Flange	1
1	c 1707769	Flange	1
2	a 1655624	Plug	1
2	c 1707770	Plug	1
3	1655623	Cover	1
4	1655621	Oil Seal	1
5	1655627	Bearing	1
6	1655628	Gear	1
7	b 1655626	Shaft	1
7	d 1694476	Shaft	1
8	1655607	Bearing	1

FOOTNOTES:

a → PENDING PER ECN 10575701

b → S/N H006V02442F INC. 02498-02502, 02514,
02518-02519, 02526-02529

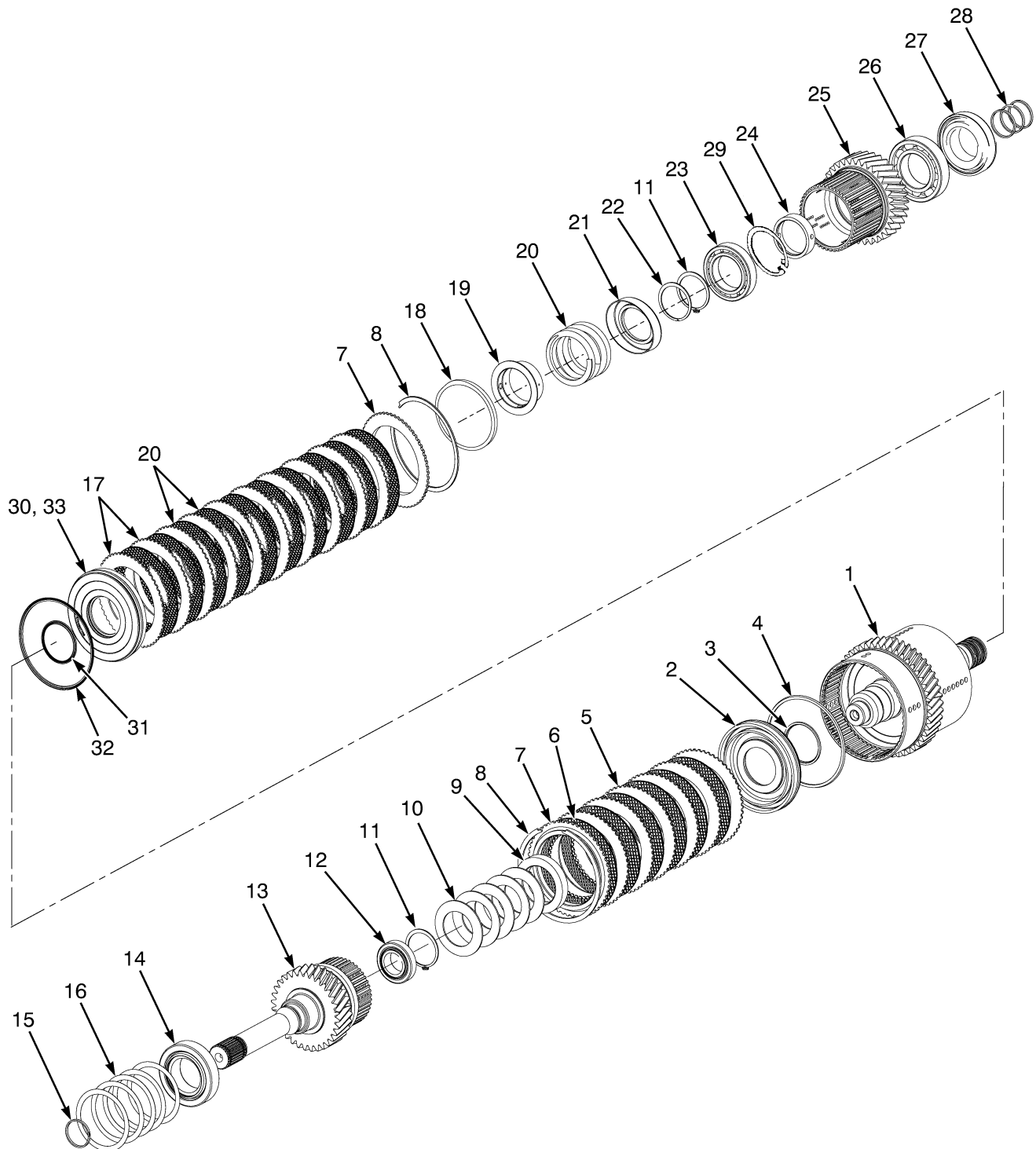
c PENDING PER ECN 10575701 →

d S/N H006V02443F → EXC. 02498-02502, 02514,
02518-02519, 02526-02529

NOTES

[illegible]

FORWARD CLUTCH LOW (FIGURE 5-17) TWO SPEED TRANSMISSION



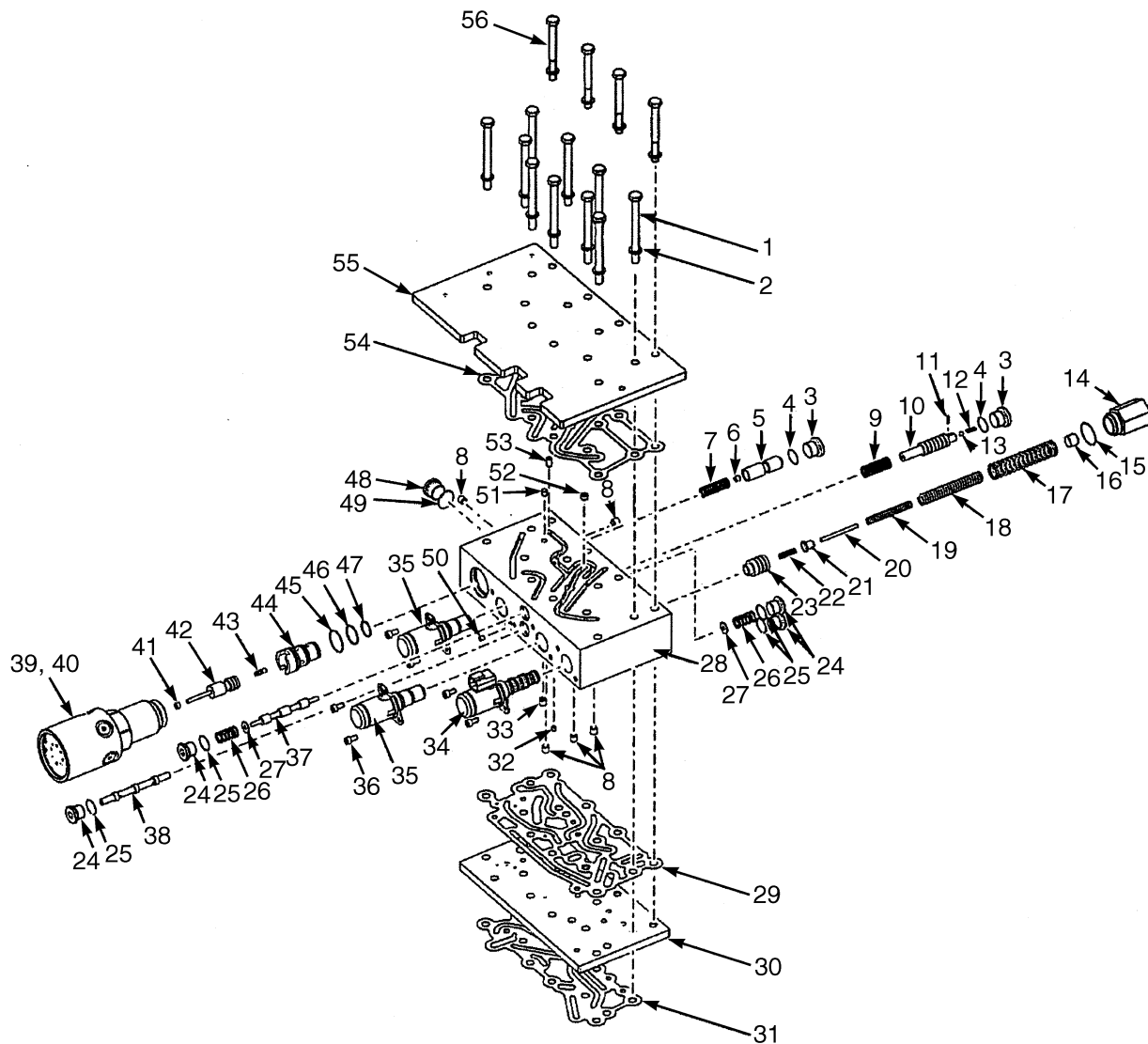
BP240159

**FORWARD CLUTCH LOW
TWO SPEED TRANSMISSION**

ITEM	PART NO.	DESCRIPTION	QTY
1	b 1655545	Shaft	1
1	c 1707745	Shaft	1
2	1655546	Clutch Piston	2
3	1655547	Seal	1
4	1311811	Piston Seal	1
5	1655548	Friction Disk (Inner, High Density)	17
6	1556965	Separator Plate (Outer)	6
7	1655552	Plate	2
8	1311810	Snap Ring	2
9	1655558	Spacer	1
10	1655557	Disk Spring	1
11	1655561	Snap Ring	2
12	1655562	Bearing	1
13	1655596	Shaft (Forward)	1
14	1655597	Bearing	1
15	1556985	Piston Ring	1
16	1655598	Shim	AR
16	1655599	Shim	AR
16	1655600	Shim	AR
16	c 1707750	Retaining Ring	AR
17	1655549	Separator Plate (Outer)	11
18	1655553	Seal	1
18	1707746	Sealing Ring	1
19	1655555	Retainer	1
20	1655554	Spring	1
21	1655556	Retainer	1
21	1655561	Snap Ring	1
22	1655601	Snap Ring	1
23	330590	Bearing	1
24	b 1655560	Spacer	1
24	c 1707748	Spacer	1
25	b 1655602	Gear (Forward Clutch)	1
25	c 1707836	Clutch Gear	1
26	b 1612529	Bearing	1
26	c 1389220	Bearing	1
27	1655550	Bearing	1
28	1556985	Piston Ring	3
	ac 1707750	Retaining Ring	1
29	1655551	Clutch Pack	1
30	1655547	Seal	1
31	1311811	Piston Seal	1
32		Screen	1

FOOTNOTES:**a** Not Illustrated**c** PENDING PER ECN 10575701 →**b** → PENDING PER ECN 10575701

CONTROL VALVE (FIGURE 5-18) TWO SPEED TRANSMISSION (→ S/N H006V01604F)



BP240124

CONTROL VALVE

TWO SPEED TRANSMISSION (→ S/N H006V01604F)

ITEM	PART NO.	DESCRIPTION	QTY
		Control Valve Assembly	1
1	1557009	Capscrew	10
2	1590532	Lockwasher	10
3	1655639	Plug	2
4	87281	O-Ring	1
5		Spool Regulator	1
6		Plug	1
7		Spring	1
8	1655803	Screw	5
9		Spring	1
10		Spool	1
11		Pin	1
12		Spring	1
13		Ball	1
14		Housing	1
15	1655799	O-Ring	1
16		Spacer	1
17		Spring	1
18		Spring	1
19		Spring	1
20		Pin	1
21		Retainer	1
22		Spring	1
23		Spool	1
24	1655643	Plug	4
25	60653	O-Ring	1
26		Spring	2
27		Spacer	2
28		Body	1
29	1655800	Gasket	1
30	1659224	Plate	1
31	1659225	Gasket	1
32		Plug	1
33		Plug	1
34	1655645	Solenoid (12 Volt)	1
35	1655642	Solenoid	2
36	1655638	Capscrew	6
37		Spool	5
38		Spool	1
39	1655644	Inching Valve	1
40		O-Ring	1
41		Shim	1
42		Spool	1
43		Piston	1
44		Sleeve	1
45		O-Ring	1
46		O-Ring	1
47		O-Ring	1
48	235691	Fitting	1
49	16484	O-Ring	1

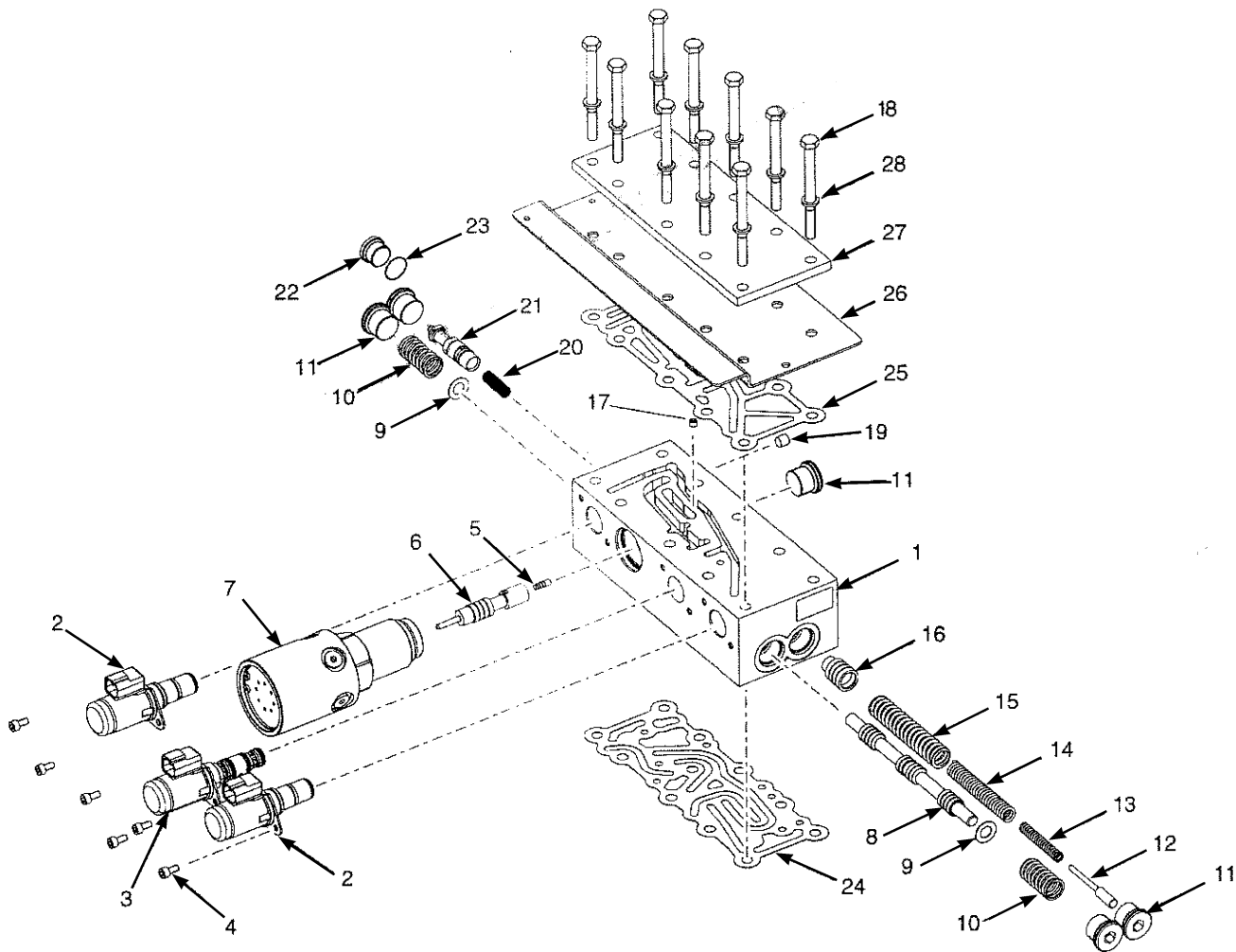
CONTROL VALVE
TWO SPEED TRANSMISSION (→ S/N H006V01604F)

ITEM	PART NO.	DESCRIPTION	QTY
50		Plug	1
51		Plug	1
52	1655798	Screw	1
53	1659227	Setscrew	1
54	1655802	Gasket	1
55	1655801	Cover	1
56	1659226	Screw	4

NOTES

[illegible]

CONTROL VALVE (FIGURE 5-19) TWO SPEED TRANSMISSION (S/N H006V01605F →)



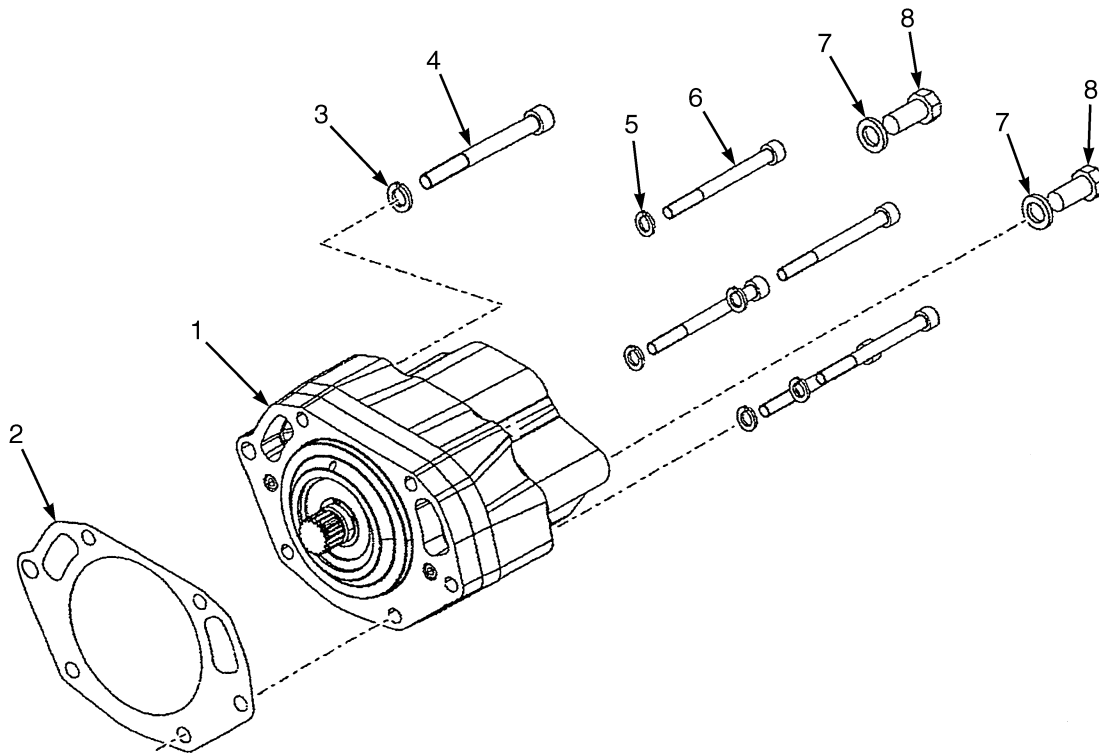
BP240144

CONTROL VALVE

TWO SPEED TRANSMISSION (S/N H006V01605F →)

ITEM	PART NO.	DESCRIPTION	QTY
	1684331	Hydraulic Control Valve	1
2	1655642	Solenoid	2
3	1655645	Solenoid	1
4	1655638	Capscrew	6
5	1659220	Piston (Inching)	1
6	1684332	Spool	1
7	1684333	Inching Valve	1
8	1684334	Spool	1
9	1684335	Spacer	2
10	1684336	Spring	2
11	1684337	Plug	5
12	1684338	Pin	1
13	1684339	Spring	1
14	1659210	Spring	1
15	1684340	Spring	1
16	1684341	Spool	1
17	1684342	Plug	1
18	1557009	Capscrew	10
19	1684343	Plug	1
20	1684344	Spring	1
21	1684345	Spool	1
22	235691	Fitting	1
23	16484	O-Ring	1
24	1684346	Gasket (Body To Transmission Case)	1
25	1684347	Gasket (Cover to Body)	1
26	1684348	Plate (Solenoid Protection)	1
27	1684349	Cover (Control Valve)	1
28	1590532	Lockwasher	10

CHARGE PUMP (FIGURE 5-20)

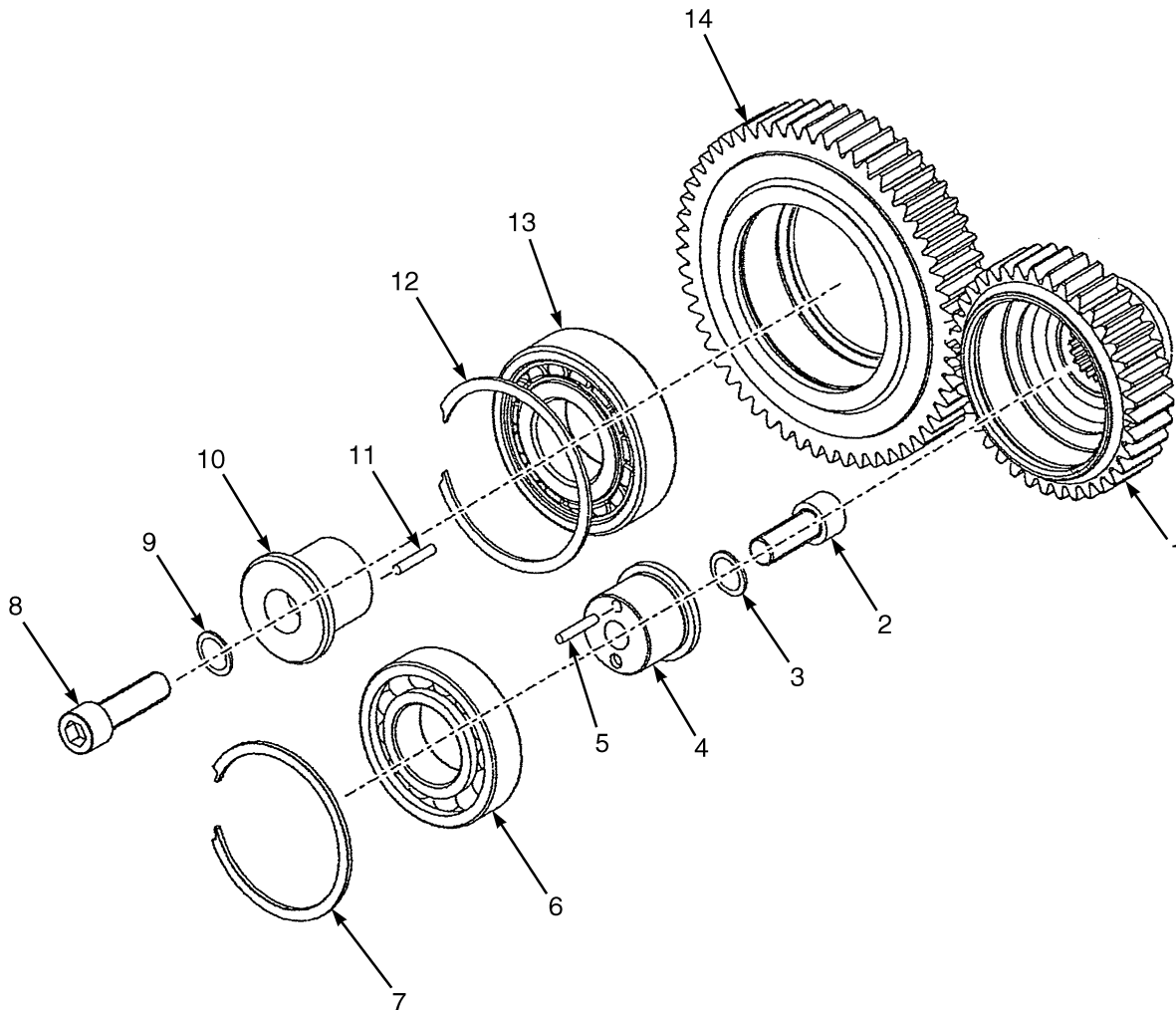


BP240112

ITEM	PART NO.	DESCRIPTION	QTY
1	1655527	Charge Pump	1
2	1655528	Gasket	1
3	1612314	Lockwasher	1
4	1655530	Capscrew	1
5	1590532	Lockwasher	5
6	1655529	Capscrew	5
7	1612870	Lockwasher	2
8	1655531	Capscrew	2

NOTES

[illegible]

PUMP DRIVE (FIGURE 5-21)

BP240113

PUMP DRIVE

ITEM	PART NO.	DESCRIPTION	QTY
1	bd 1655538	Drive Gear	1
1	fh 1684268	Drive Gear	1
2	1655542	Capscrew	1
3	1624602	Lockwasher	1
4	1655541	Support	1
5	1655543	Pin	1
6	a 1655539	Ball Bearing	1
6	e 1707743	Ball Bearing	1
7	1311803	Retaining Ring	1
8	1655536	Screw	1
9	1655537	Lockwasher	1
10	1655535	Support	1
11	1655534	Pin	1
12	1612711	Snap Ring	1
13	1612710	Bearing	1
14	bc 1655533	Gear (Pump Drive)	1
14	fg 1684266	Idler Gear (Pump Drive)	1

FOOTNOTES:

a → PENDING PER ECN 10575701	e PENDING PER ECN 10575701 →
b → S/N H006V02442F INC. 02498-02502, 02514, 02518-02519, 02526-02529	f S/N H006V02443F → EXC. 02498-02502, 02514, 02518-02519, 02526-02529
c → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0028	g S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0028
d → S/N H006V02565F INC. 02781, 02787-02789, 02792-02798, 02800-02806, 0280	h S/N H006V02566F → EXC. 02781, 02787-02789, 02792-02798, 02800-02806, 0280

[illegible]

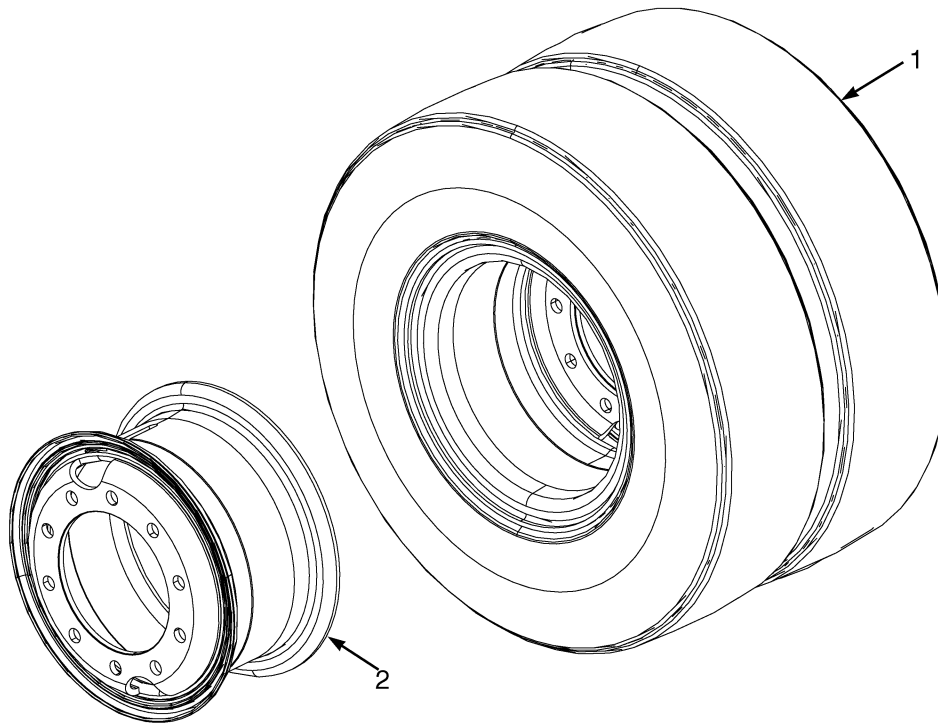
6

DRIVE AXLE

**SECTION 6
DRIVE AXLE**

DESCRIPTION	PAGE
DIFFERENTIAL	6-8
DRIVE AXLE AND ATTACHING PARTS	
WET BRAKE	6-4
DRIVE AXLE HOUSING AND HUB	6-6
DRIVE TIRE AND WHEEL	6-2
WET BRAKE ASSEMBLY	6-10

DRIVE TIRE AND WHEEL (FIGURE 6-1)



BP070060

KEY:

A: 8.25 x 15 Pneumatic

B: 8.25 x 15 Solid Pneumatic

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1547352	Tire (Monarch)	..	4
1	1656755	Tire (Monarch)	..	4
1	1547352	Tire (Monarch)(Alternate Part)	..	4
1	1547351	Tire (Trell)	4	..
1	1358182	Tire (Radial)	4	..
1	a 1471598	Tubeless Bead Seal	1	1
1	a 1471922	Tubeless Bead Seal Valve	1	1
2	2094200	Wheel Assy	4	4

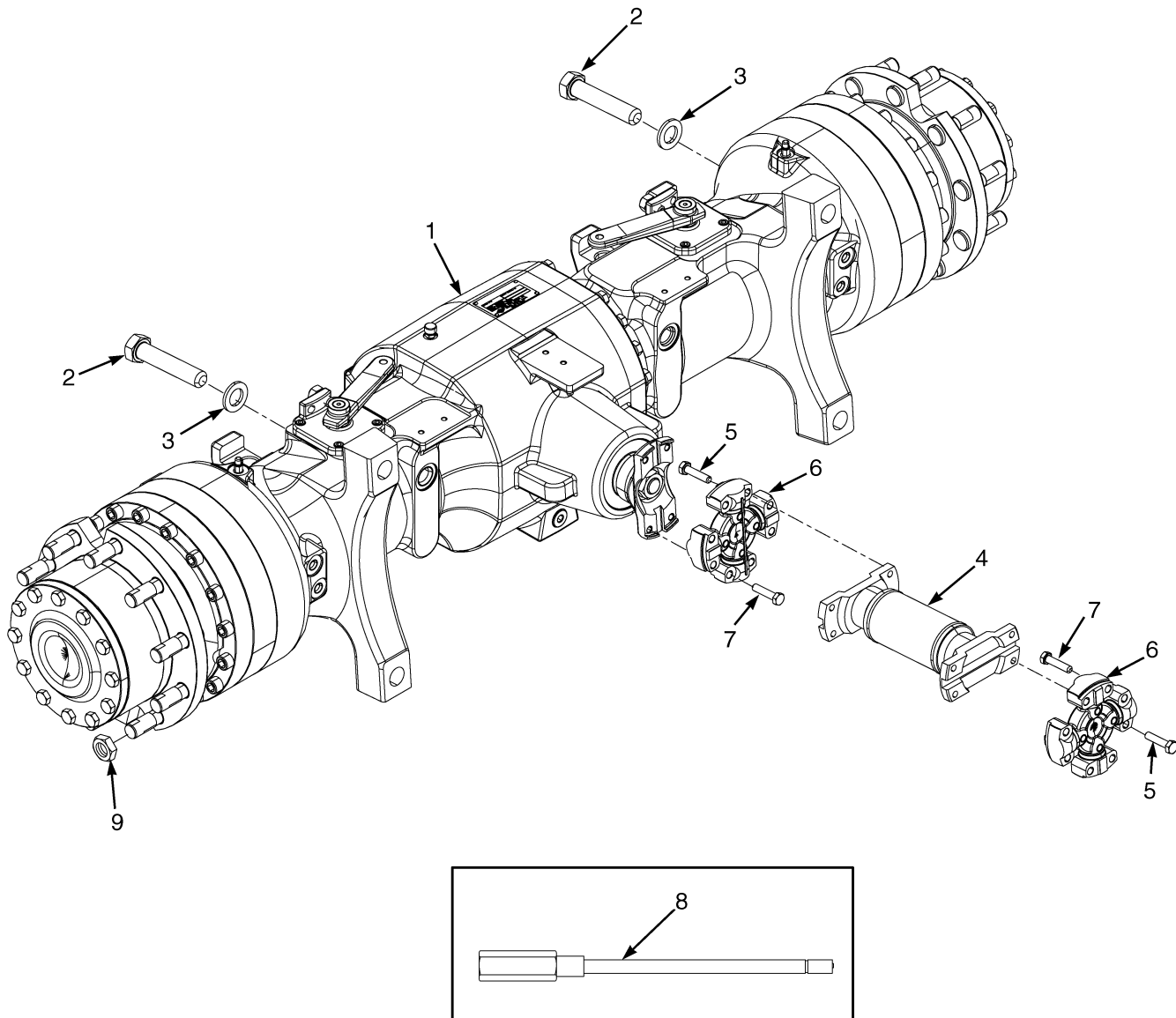
FOOTNOTES:

a Radial Tires Only

NOTES

[illegible]

DRIVE AXLE AND ATTACHING PARTS (FIGURE 6-2) WET BRAKE



BP070056

**DRIVE AXLE AND ATTACHING PARTS
WET BRAKE****KEY:****A: S135FT****B: S155FT**

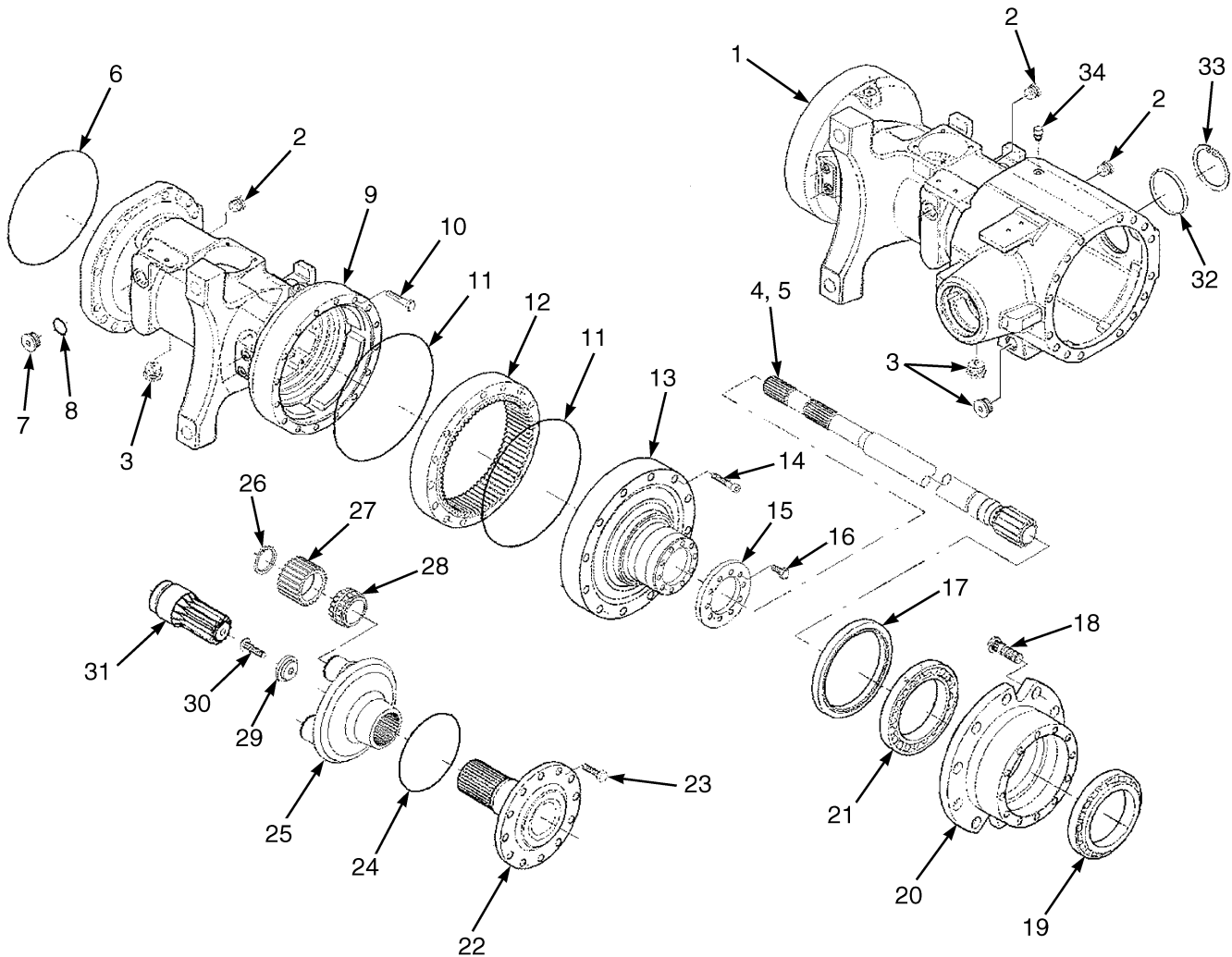
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	ae 2078968	Drive Axle (14.8 Overall Ratio)	1	..
1	d 2078969	Drive Axle (15.4 Overall Ratio)	..	1
2	226430	Capscrew	4	4
3	296434	Washer	4	4
4	1598063	Drive Shaft	1	1
4	1672700	Yoke	1	1
5	1672699	Capscrew	8	8
6	1672695	Gasket	2	2
7	1566514	Capscrew	8	8
8	b 49189	Extension	2	2
8	c 2028341	Extension	2	2
9	376026	Wheel Nut	20	20

FOOTNOTES:

- a** Cummins 4.5L Diesel
b Used with Bias Ply Tires
c Used with Radial Tires

- d** with Two and Three Speed Transmissions
e with Two Speed Transmissions

DRIVE AXLE HOUSING AND HUB (FIGURE 6-3)

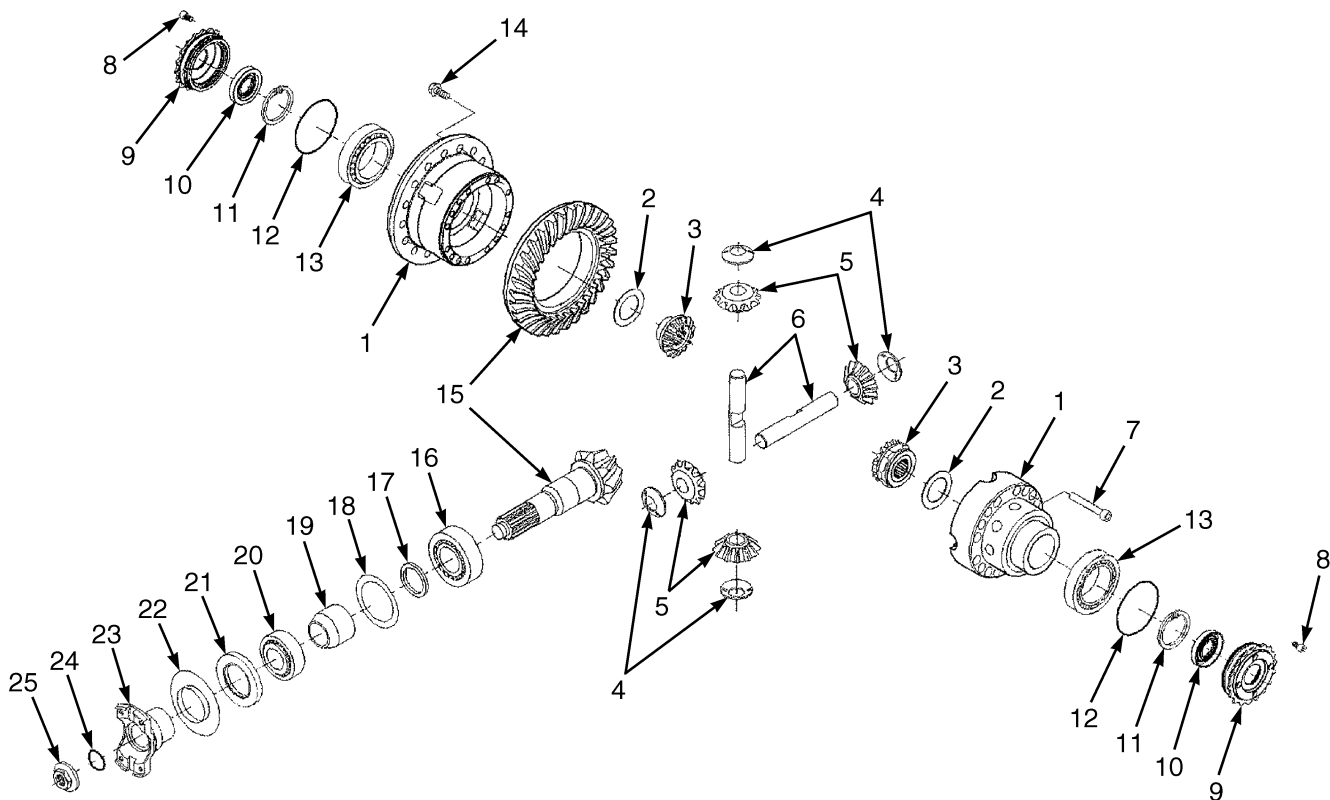


BP070057

DRIVE AXLE HOUSING AND HUB

ITEM	PART NO.	DESCRIPTION	QTY
	2078968	Drive Axle (14.8 Overall Ratio)	1
	2078969	Drive Axle (15.4 Overall Ratio)	1
1	1657746	Drive Axle Housing (RH)	1
2	1623544	Plug	3
3	1623545	Drain Plug	3
4	1657765	Shaft (Short)	1
5	1657766	Shaft (Long)	1
6	1644260	O-Ring	1
7	1641352	Plug	2
8	1623671	O-Ring	2
9	1657767	Drive Axle Housing (LH)	1
10	1657747	Bolt	16
11	1657748	O-Ring	4
12	1657749	Ring Gear	2
13	1657756	Flange	2
14	1657750	Bolt	32
15	1657758	Washer	2
16	1657759	Bolt	20
17	1657751	Ring	2
18	1657754	Stud	20
19	1657757	Bearing	2
20	1657753	Wheel Hub	2
21	1657752	Bearing	2
22	1657760	Shaft (Half)	2
23	1623643	Bolt	24
24	1657755	O-Ring	2
25	1657768	Carrier	2
25		Planetary Gear Carrier	2
26	1644275	Seal (Snap Ring)	6
27	1644276	Gear	6
28	1644277	Bearing	6
29	1657763	Spacer	2
30	1657762	Bolt	2
31	1657761	Pinion	2
32	1644229	Plug	1
33	1612530	Snap Ring	1
34	1623576	Plug	1

DIFFERENTIAL (FIGURE 6-4)

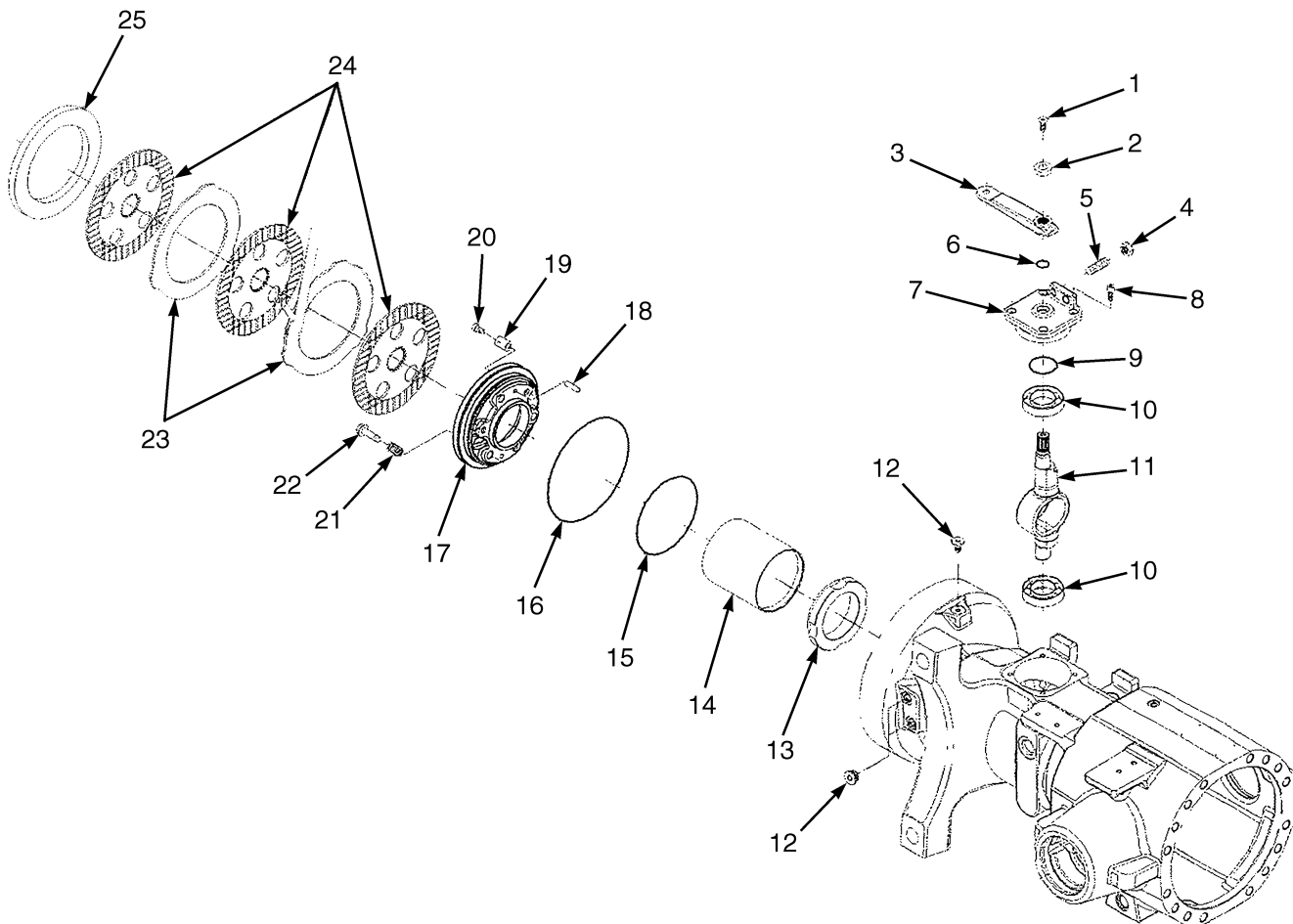


BP070050

DIFFERENTIAL

ITEM	PART NO.	DESCRIPTION	QTY
	2078968	Drive Axle (14.8 Overall Ratio)	1
	2078969	Drive Axle (15.4 Overall Ratio)	1
	1644256	Differential	1
1	1644250	Differential Carrier	1
2	1644251	Washer	2
3	1644252	Gear	2
4	1644254	Washer	4
5	1644255	Pinion	4
6	1644253	Pin	2
7	1644257	Bolt	15
8	1623593	Bolt	2
9	1644246	Nut	2
10	1644247	Seal	2
11	1612530	Snap Ring	2
12	1644245	O-Ring	2
13	1644248	Bearing	2
14	1644249	Bolt	2
15	1644244	Gear and Pinion (14.8 overall Ratio)	1
15	1644673	Gear and Pinion (15.4 Overall Ratio)	1
16	1644243	Bearing	1
17	1657852	Kit-Shim	1
18	1644238	Shim (0.1 mm)	1
18	1644239	Shim (0.2 mm)	1
18	1644240	Shim (0.5 mm)	1
18	1644241	Shim (0.15 mm)	1
19	1644237	Spacer	1
20	1623573	Bearing	1
21	1644236	Seal	1
22	1644235	Cover Plate	1
23	1644233	Flange	1
24	1644234	O-Ring	1
25	1644232	Nut	1

WET BRAKE ASSEMBLY (FIGURE 6-5)



BP070059

WET BRAKE ASSEMBLY

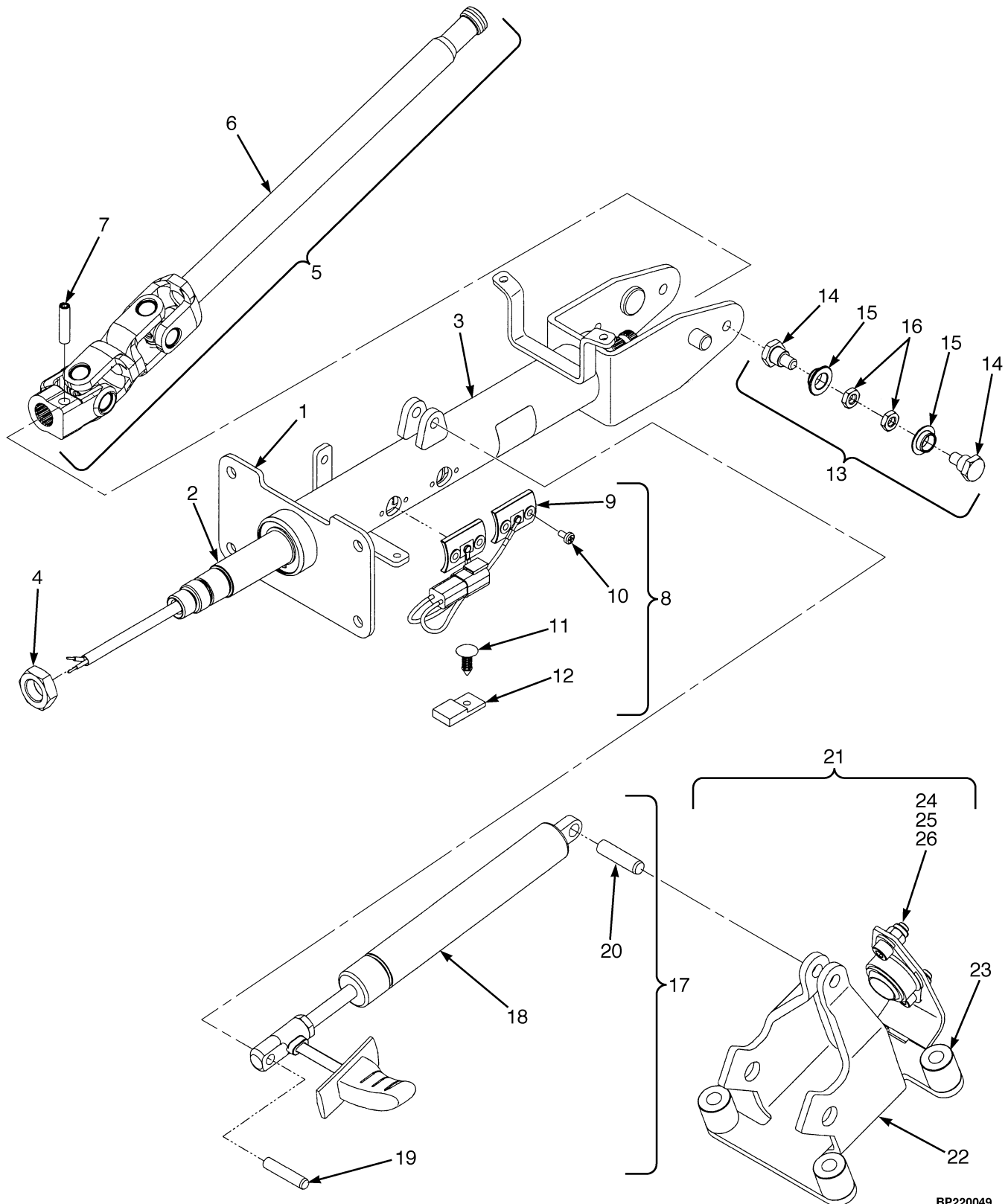
ITEM	PART NO.	DESCRIPTION	QTY
	2078968	Drive Axle (14.8 Overall Ratio)	1
	2078969	Drive Axle (15.4 Overall Ratio)	1
1	1623669	Bolt	2
2	1623694	Spacer	2
3	1657770	Lever	2
4	1623696	Nut	2
5	1657771	Bolt	2
6	1623671	O-Ring	2
7	1657772	Bushing	2
8	1623672	Bolt	8
9	1623673	O-Ring	2
10	1623674	Bearing	4
11	1623675	Lever	2
12	1644305	Bolt	6
13	1627823	Disk	2
14	1657774	Spacer	2
15	1657777	Seal	2
16	1657776	O-Ring	2
17	1657778	Piston	2
18	1644294	Dowel	4
19	1623690	Spring	6
20	1657779	Bolt	6
21	1657773	Spring	6
22	1657782	Bolt	6
23	1657781	Disk (Intermediate)	8
24	1657780	Disk	6
25	1657775	Disk	2

[illegible]

SECTION 7
STEERING SYSTEM

DESCRIPTION	PAGE
STEER AXLE	7-6
STEER COLUMN AND ATTACHING PARTS	7-4
STEER CYLINDER	7-9
STEER TIRE AND WHEEL	7-14
STEERING COLUMN ASSEMBLY	7-2
STEERING CONTROL UNIT	7-12
STEERING LINES	7-10

STEERING COLUMN ASSEMBLY (FIGURE 7-1)



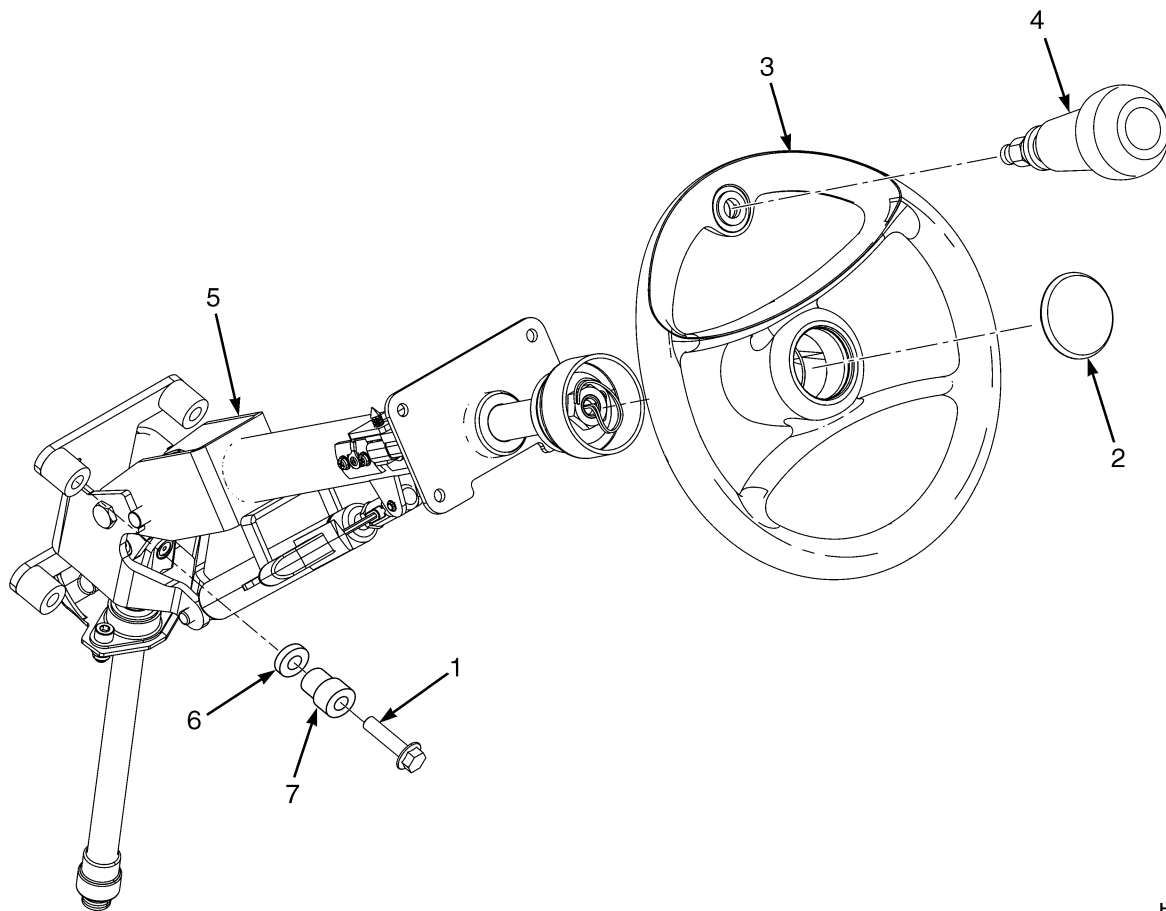
BP220049

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	a 1562489	Kit-Shaft (Upper)	1
1	b 1647528	Kit-Shaft (Upper)	1
2		Shaft Assembly (Upper)	1
3		Housing	1
4	1562492	Kit-Nut	1
4		Nut	2
5	1562493	Kit-Shaft (Lower)	1
6		Shaft Assembly (Lower)	1
7		Pin	1
8	1562496	Kit-Contact	1
9		Contact Assembly (Horn)	1
10		Screw	4
11		Fastener	1
12		Connector	1
13	1562501	Kit-Pivot (Lower)	1
14		Bolt (Pivot)	2
15		Bushing	2
16		Nut	2
17	1562505	Kit-Gas Spring	1
18		Gas Spring	1
19		Pin	1
20		Pin	1
21	1562509	Kit-Support	1
21	b 1647530	Kit-Support (Diesel)	1
22		Support	1
23		Spacer	4
24		Nut	2
25		Washer	2
26		Screw	2

FOOTNOTES:**a** → 1/2007**b** 2/2007 →

STEER COLUMN AND ATTACHING PARTS (FIGURE 7-2)



HP220446

ITEM	PART NO.	DESCRIPTION	QTY
1	1512403	Capscrew	4
2	1608622	Horn Button	1
3	1551839	Steering Wheel (Without Spinner Knob)	1
3	1531563	Steering Wheel (With Spinner Knob)	1
4	1586109	Knob	1
5	1657962	Steering Column	1
5	a 1657959	Steering Column	1
6	a 2079369	Isolator	8
7	a 1606750	Spacer	4

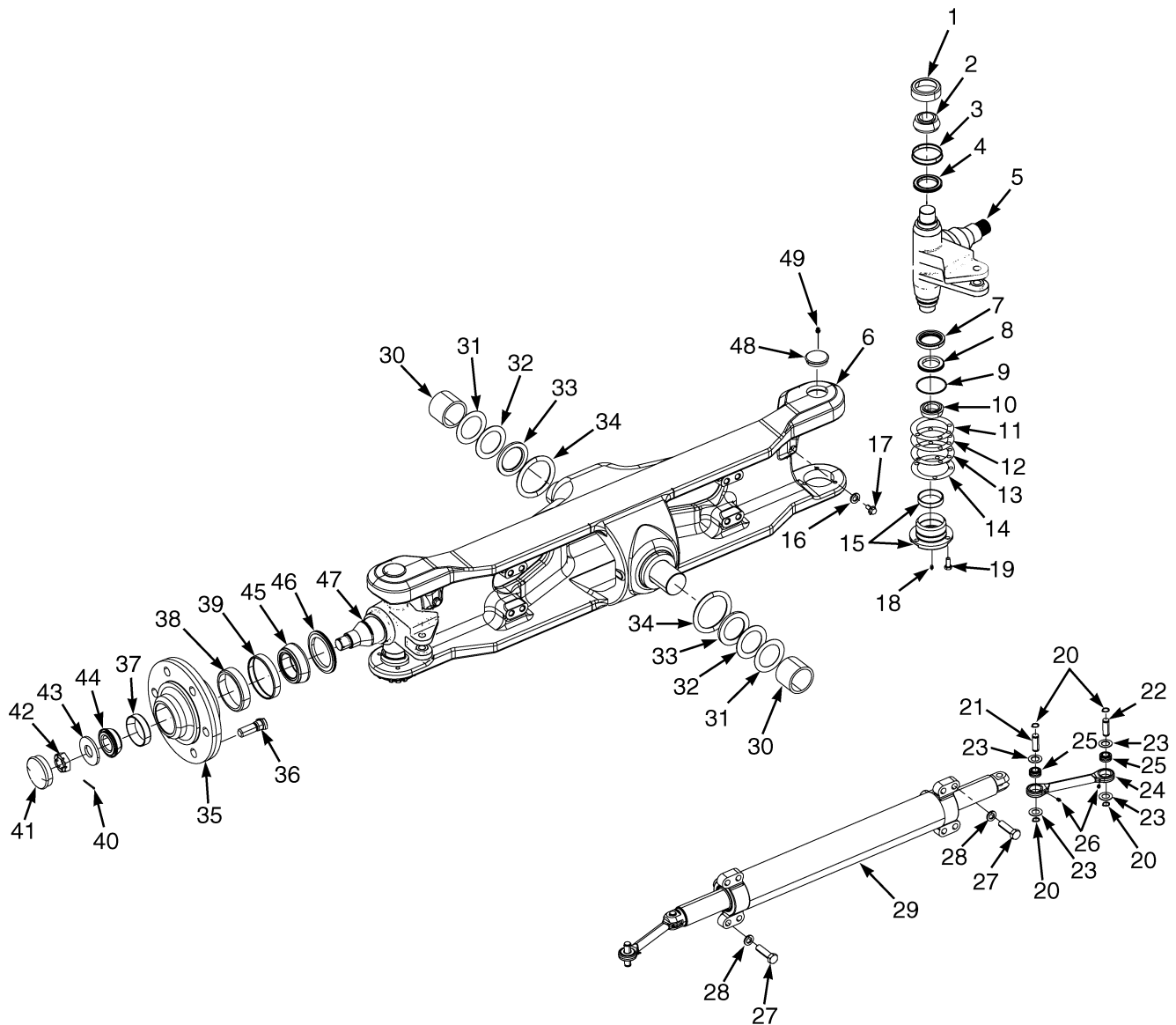
FOOTNOTES:

a For Vehicles With Diesel Engines Only

NOTES

[illegible]

STEER AXLE (FIGURE 7-3)



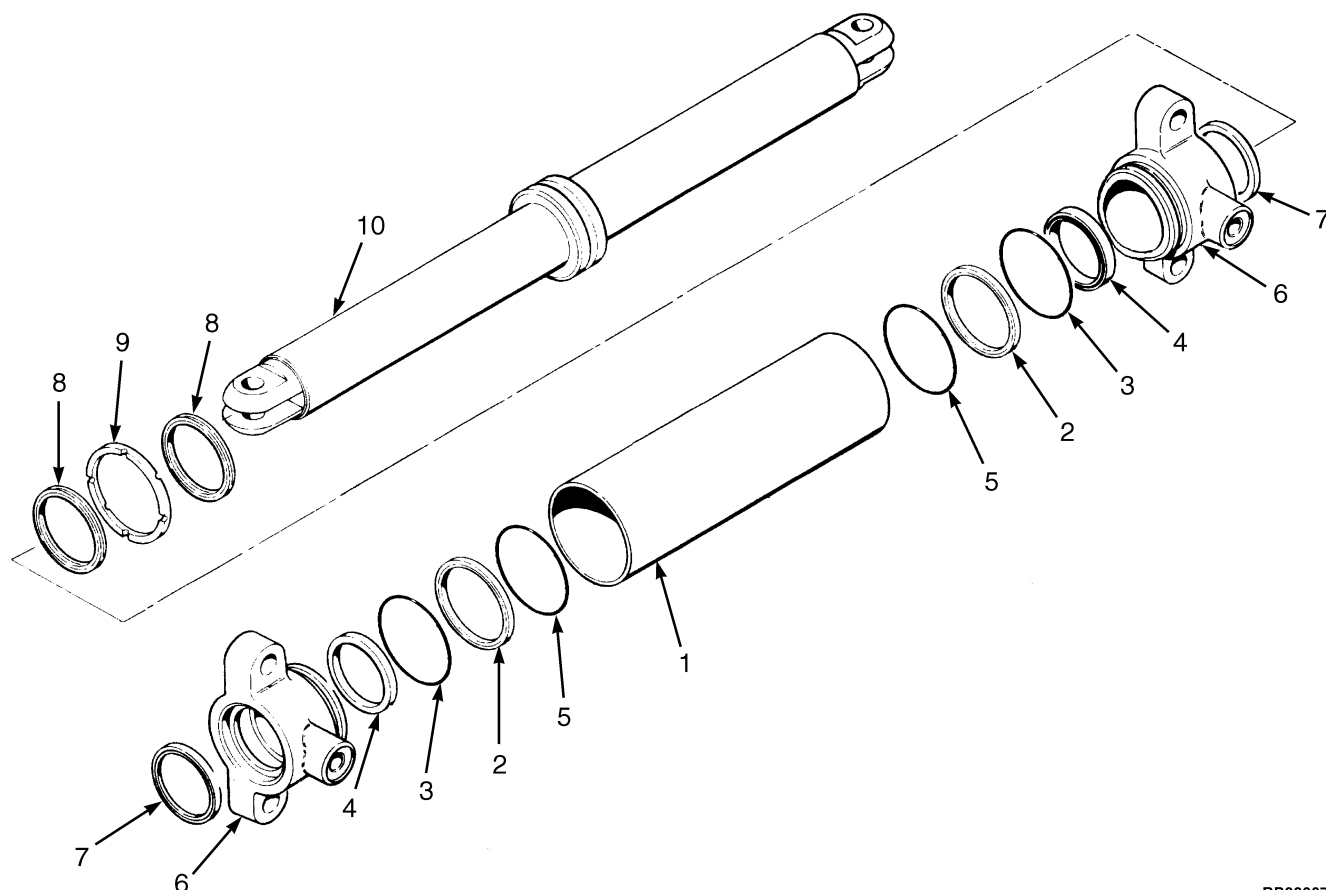
BP220104

STEER AXLE

ITEM	PART NO.	DESCRIPTION	QTY
	1594958	Steering Axle Assy	1
1	230421	Bearing Cup	2
2	153715	Bearing Cone	2
3	153717	Wear Sleeve	2
4	153716	Seal	2
5	1383795	Spindle (RH)	1
6	346299	Steering Axle (Frame)	1
7	266733	Seal	2
8	266728	Seal	2
9	39678	O-Ring	2
10	135657	Bearing Cone	2
11	185856	Shim (0.005 in.)	3
12	185857	Shim (0.007 in.)	3
13	185858	Shim (0.020 in.)	2
14	1563858	Shim (0.002 in.)	2
15	266612	Bearing Cap (Assembly)	2
15	266735	Bearing Cap	1
15	135658	Bearing Cup	1
16	320159	Washer	2
17	1527883	Capscrew	2
18	13957	Grease Fitting	2
19	293628	Capscrew	6
20	58903	Snap Ring	8
21	1568270	Pin	2
22	1568271	Pin	2
23	1345684	Seal	8
24	1568078	Tie Rod (Assembly)	1
24	1392255	Tie Rod	1
25	1568039	Spherical Roller Bearing	1
26	13957	Grease Fitting	2
27	293688	Capscrew	8
28	292685	Lockwasher	8
29	2079365	Steering Cylinder (☞ Figure 7-4)	1
30	1335873	Bushing	2
31	131191	Shim (0.040 in.)	AR
32	131190	Shim (0.110 in.)	AR
33	1335870	Flange	2
34	131193	Sealing Ring	2
35	1603898	Wheel Hub	2
36	1393348	Wheel Stud	12
37	153834	Bearing Cup	2
38	230324	Bearing Cup	2
39	129499	Wear Sleeve	2
40	15225	Cotter Pin	2
41	69029	Cap	2
42	53641	Wheel Nut	2
43	1383775	Washer	2
44	153835	Bearing Cone	2
45	230325	Bearing Cone	2
46	129498	Seal	2
47	1383797	Spindle (LH)	1

STEER AXLE

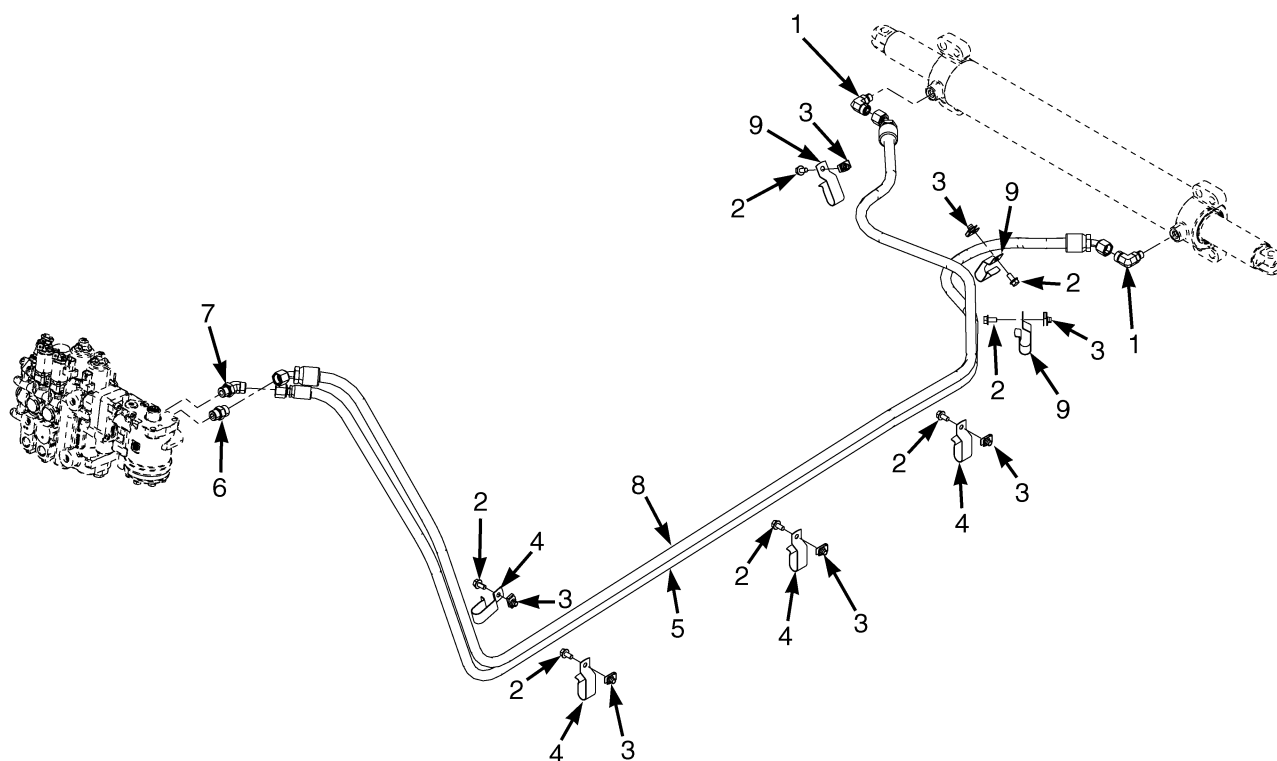
ITEM	PART NO.	DESCRIPTION	QTY
48	185860	Plug	2
49	13963	Grease Fitting	2

STEER CYLINDER (FIGURE 7-4)

BP220072

ITEM	PART NO.	DESCRIPTION	QTY
	2079365	Steering Cylinder	1
1	344391	Tube Wldmt-Cylinder	1
2	154358	Back-Up Ring	2
3	39679	O-Ring	2
4	1380092	Rod Seal	2
5	15880	O-Ring	2
6	1594137	End Cap	2
7	2071094	Rod Wiper	2
8	1611065	Wear Ring	2
9	2046765	Seal	2
10	1611062	Piston Rod	1
	1626361	Kit-Seal	1
11	1708573	Kit-Seal (Alternate Part)	1

STEERING LINES (FIGURE 7-5)



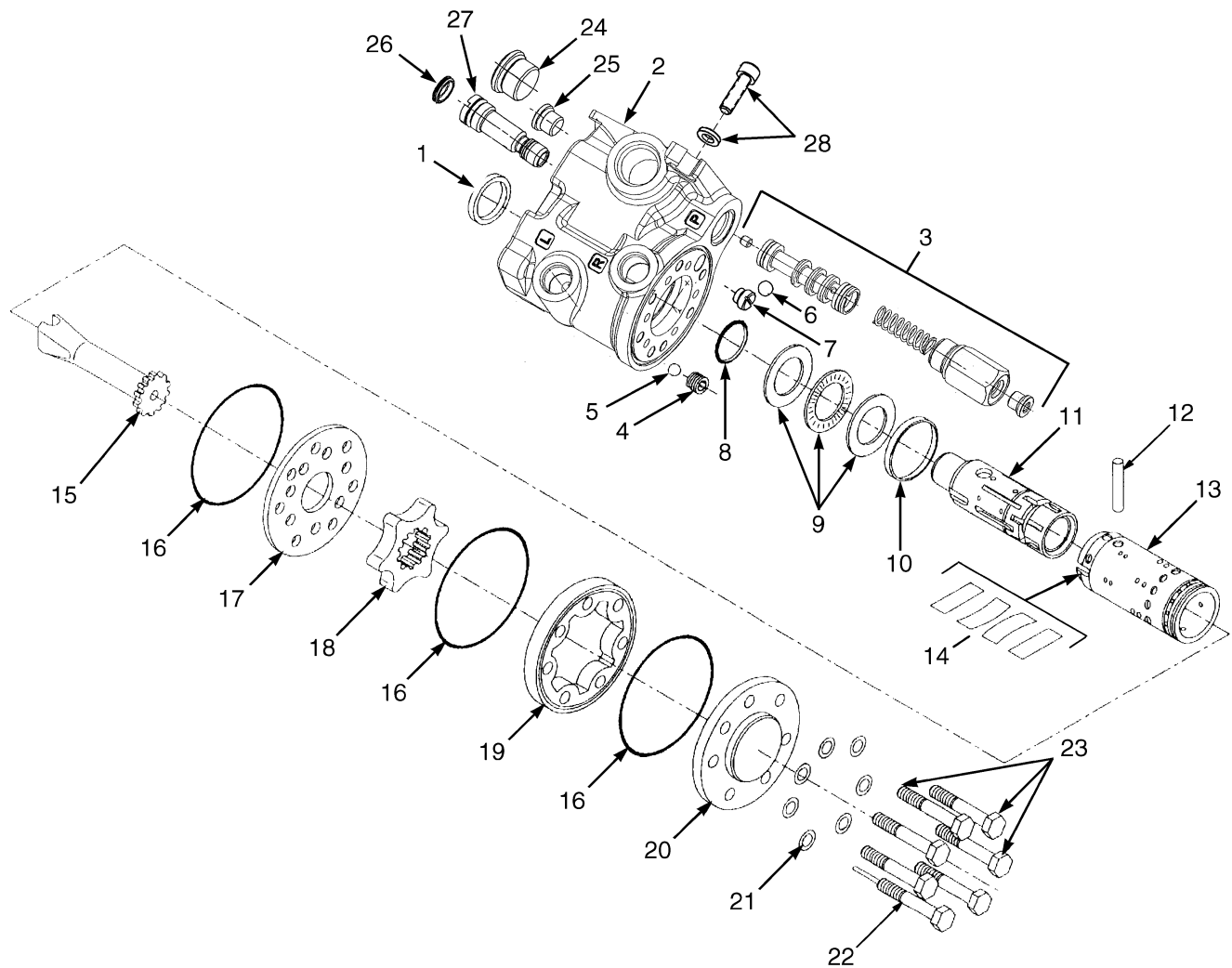
BP220107

STEERING LINES

ITEM	PART NO.	DESCRIPTION	QTY
1	1487064	Fitting	2
1	265731	O-Ring	1
1	16483	O-Ring	1
2	1527879	Capscrew	7
3	1480237	Nut	7
4	1544157	Clip	4
5	a 2091438	Hose Assy	1
5	bc 2103065	Hose Assy	1
5	d 2104080	Hose Assy	1
6	1473887	Fitting	1
6	265731	O-Ring	1
6	16484	O-Ring	1
7	1516202	Fitting	1
7	265731	O-Ring	1
7	16484	O-Ring	1
8	a 2091439	Hose Assy	1
8	bc 2103064	Hose Assy	1
8	d 2104081	Hose Assy	1
9	1562648	Clip	3

FOOTNOTES:**a** → PENDING PER ECN 105356**c** PENDING PER ECN 105356 →**b** → PENDING PER ECN 105432**d** PENDING PER ECN 105432 →

STEERING CONTROL UNIT (FIGURE 7-6)



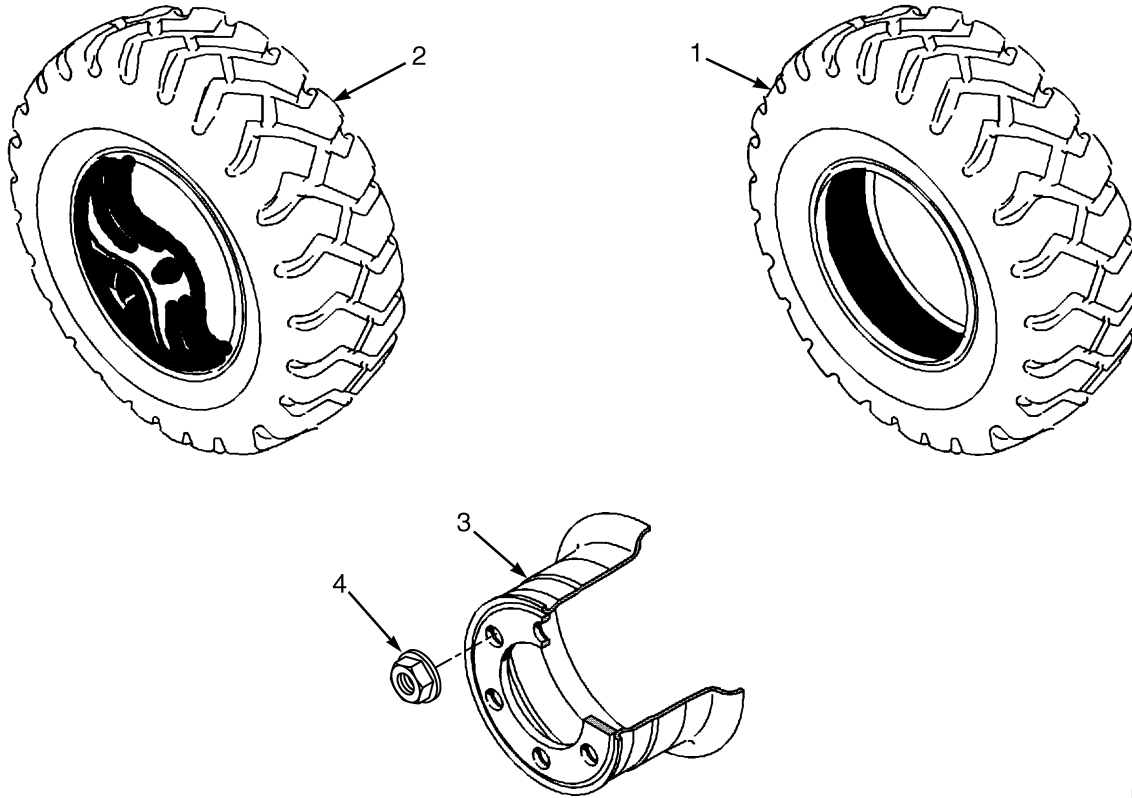
BP220103

STEERING CONTROL UNIT

ITEM	PART NO.	DESCRIPTION	QTY
	a 2063122	Steering Control Unit (200cc)	1
	b 2102566	Steering Control Unit (200cc) (Alternate Part)	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		Mounting Bolts	1
	1579908	Kit-Seal	1
	b 1676606	Kit (Load Sense Alteration Kit)	1

FOOTNOTES:**a** → 9/2007**b** 9/2007 →

STEER TIRE AND WHEEL (FIGURE 7-7)



BP220106

KEY:

- A:** 8.25 x 15-14 PR
B: 8.25 x 15 Solid Pneumatic
C: 8.25 R15 Radial

ITEM	PART NO.	DESCRIPTION	QTY		
			A	B	C
1	a 1547352	Tire (Monarch)	..	2	..
1	b 1656755	Tire (Monarch)	..	2	..
1	1547352	Tire (Monarch)(Alternate Part)	..	2	..
1	1547351	Tire (Trell)	2	..	..
2	1471838	Pneumatic Tire	..	..	2
2	1358182	Tire	..	..	1
2	1471598	Tubeless Bead Seal	..	..	1
2	1471922	Tubeless Bead Seal Valve	..	..	1
3	2094201	Wheel Assy	2	2	2
4	376026	Wheel Nut	12	12	12

FOOTNOTES:

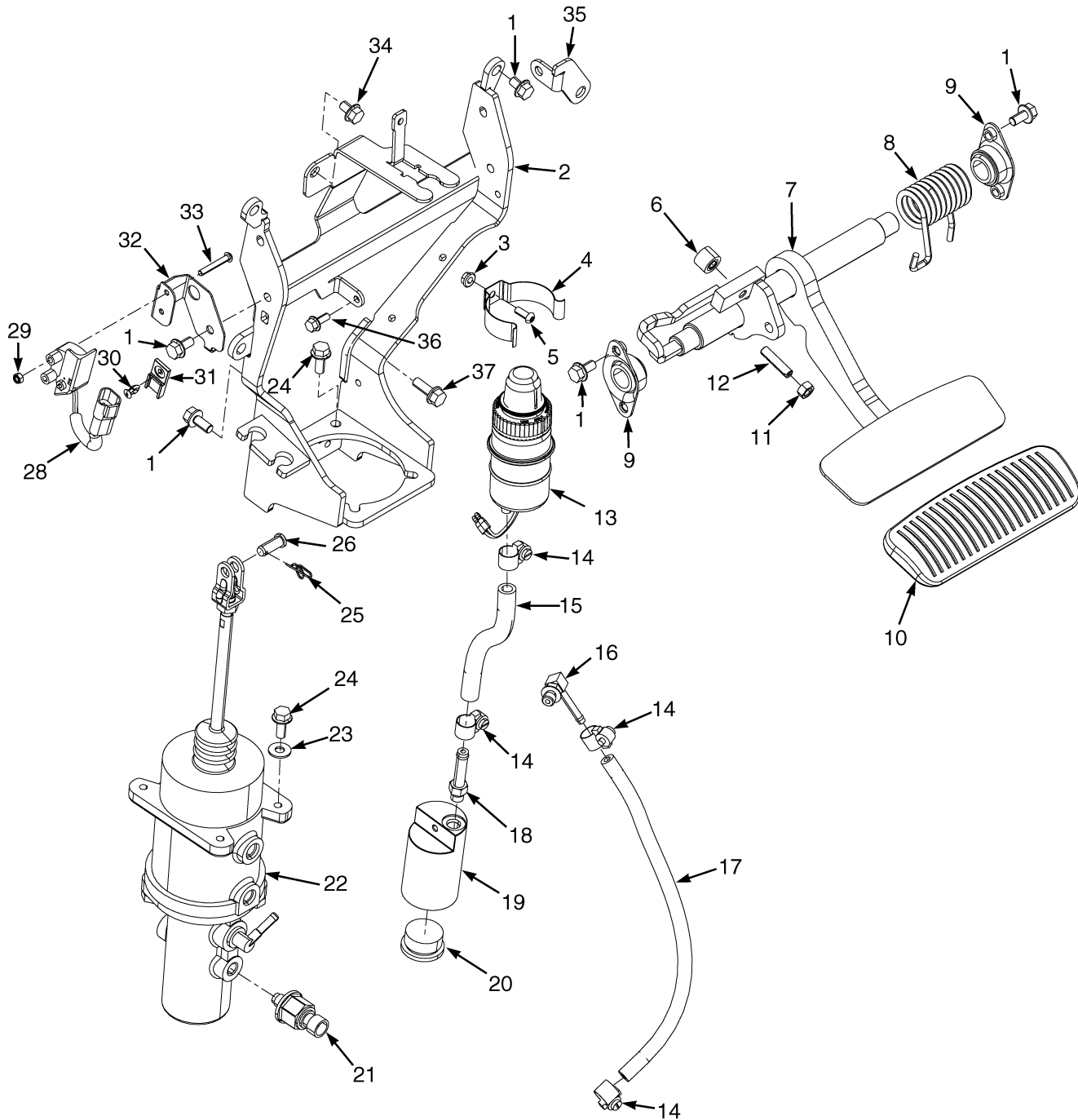
a Soft Ride

b Standard Hardness

**SECTION 8
BRAKE SYSTEM**

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BRAKE PEDAL LINKAGE (FIGURE 8-1) SINGLE PEDAL



BP040101

**BRAKE PEDAL LINKAGE
SINGLE PEDAL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1527879	Capscrew	6
2	1649212	Bracket	1
3	1514429	Nut	1
4	2021353	Holder	1
5	1510126	Screw (Button Head)	1
6	1556475	Bumper	1
7	1649656	Pedal	1
8	1568075	Spring (RH)	1
9	1585575	Bushing	2
10	1570298	Rubber Pad	1
11	239503	Nut	1
12	1534871	Bolt	1
13	1646439	Reservoir	1
13	2077604	Tank	1
13	1645381	Diaphragm	1
13	1646397	Cap	1
14	166857	Clamp	4
15	2092888	Hose	1
16	222509	Fitting	1
16	16481	O-Ring	1
17	117989	Hose (Brake Feed)	1
18	222491	Fitting	1
18	16481	O-Ring	1
19	2092613	Cylinder Block	1
20	233683	Fitting	1
20	16487	O-Ring	1
21	1590033	Transducer	1
22	1605266	Master Cylinder	1
22	1672003	Brake Booster	1
22	1672004	Master Cylinder	1
22	1672005	Kit-Repair Master Cylinder (Major)	1
22	1672006	Kit-Repair Master Cylinder (Minor)	1
23	1581851	Washer	2
24	1527880	Capscrew	4
25	1351689	Lockring	1
26	1375391	Pin (Rod End)	1
27	1608654	Capscrew	2
28	1547849	Sensor (Brake Position) (Inching)	1
29	302398	Locknut	2
30	1564526	Clip (Key Hole)	1
31	1500912	Clip	1
32	1531567	Bracket (Inching Sensor)	1
33	1553897	Capscrew	2
34	1529366	Capscrew	1
35	1594950	Bracket	1
36	1527876	Capscrew	1
37	1583611	Capscrew	2
	a 2093224	Label (Brake Fluid Warning)	1
	a 114312	Strap Clamp	1

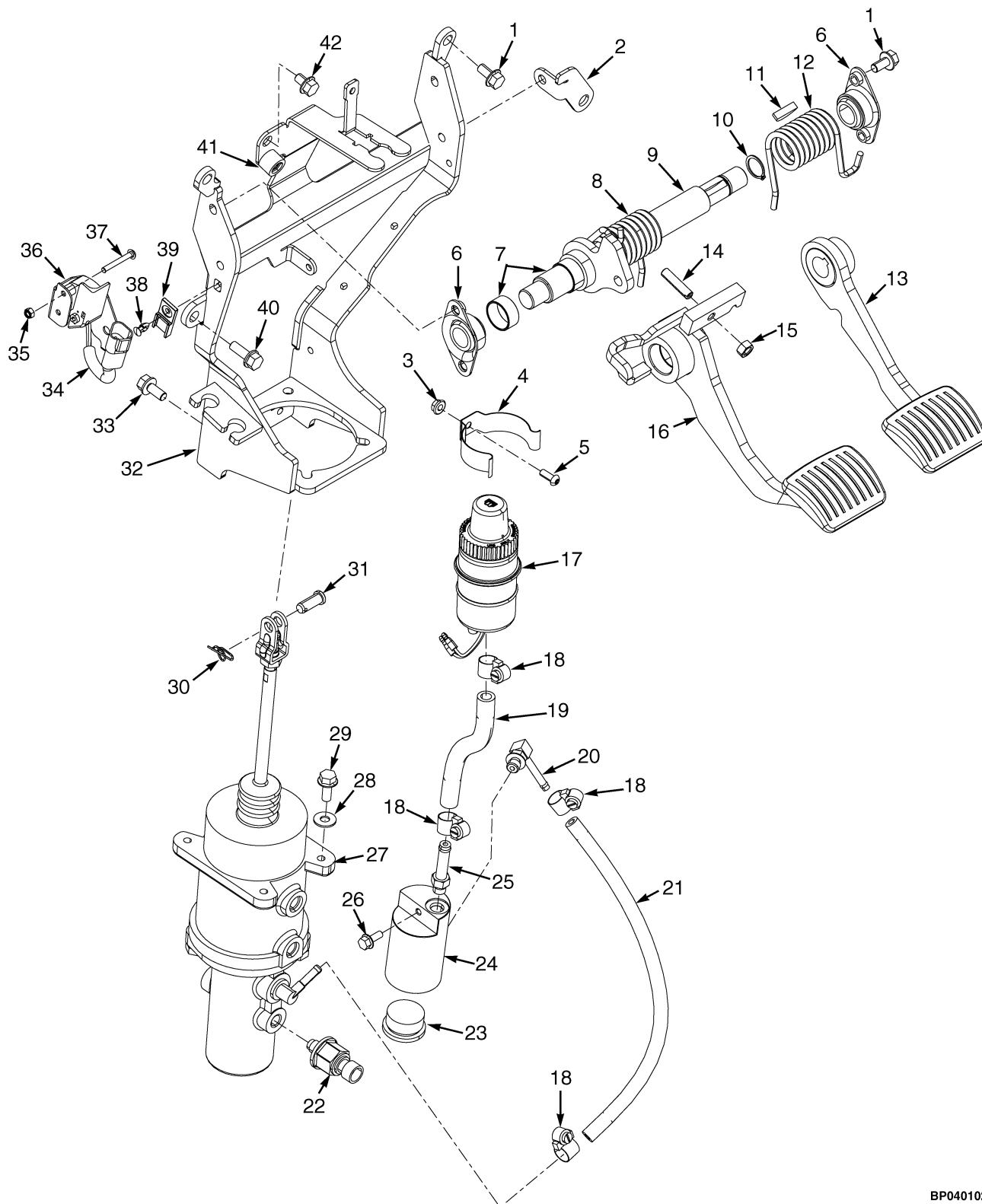
FOOTNOTES:

a Not Illustrated

NOTES

[illegible]

BRAKE PEDAL LINKAGE (FIGURE 8-2) DUAL PEDAL



BP040102

**BRAKE PEDAL LINKAGE
DUAL PEDAL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1527879	Capscrew	6
2	1594950	Bracket	1
3	1514429	Nut	1
4	2021353	Holder	1
5	1510126	Screw (Button Head)	1
6	1585575	Bushing	2
7	244540	Bushing	2
8	1568077	Spring (LH)	1
9	1606547	Crank	1
10	12929	Snap Ring	1
11	206	Woodruff Key	1
12	1568076	Spring (RH)	1
13	1568256	Brake Pedal (RH)	1
13	1570300	Pad	2
14	1534871	Bolt	1
15	239503	Nut	1
16	1639801	Brake Pedal (LH)	1
16	1570300	Pad	1
17	1646439	Reservoir	1
17	2077604	Tank	1
17	1645381	Diaphragm	1
17	1646397	Cap	1
18	166857	Clamp	4
19	2092888	Hose	1
20	222509	Fitting	1
20	16481	O-Ring	1
21	117989	Hose (Brake Feed)	1
22	1590033	Transducer	1
23	233683	Fitting	1
23	16487	O-Ring	1
24	2092613	Cylinder Block	1
25	222491	Fitting	1
25	16481	O-Ring	1
26	1527876	Capscrew	1
27	1605266	Master Cylinder	1
27	1672003	Brake Booster	1
27	1672004	Master Cylinder	1
27	1672005	Kit-Repair Master Cylinder (Major)	1
27	1672006	Kit-Repair Master Cylinder (Minor)	1
28	1581851	Washer	2
29	1527880	Capscrew	4
30	1351689	Lockring	1
31	1375391	Pin (Rod End)	1
32	1649212	Bracket	1
33	1608654	Capscrew	2
34	1547849	Sensor (Brake Position) (Inching)	1
35	302398	Locknut	2
36	1531567	Bracket (Inching Sensor)	1
37	1553897	Capscrew	2
38	1564526	Clip (Key Hole) (Key Hole)	1

**BRAKE PEDAL LINKAGE
DUAL PEDAL**

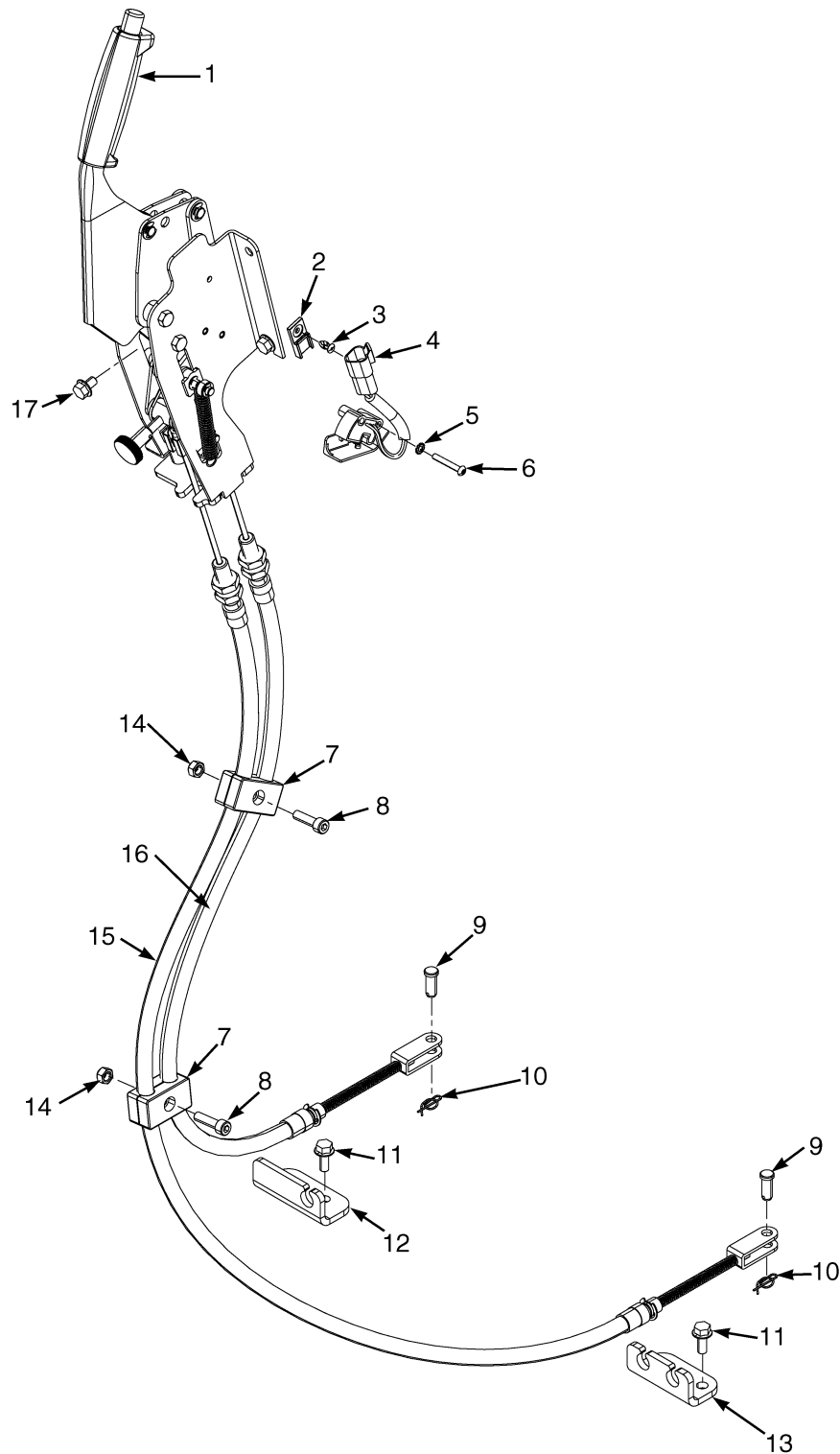
ITEM	PART NO.	DESCRIPTION	QTY
39	1500912	Clip (Connector)	1
40	1583611	Capscrew	2
41	1556475	Bumper	1
42	1529366	Capscrew	1
	a 2093224	Label (Brake Fluid Warning)	1
	a 114312	Strap Clamp	1

FOOTNOTES:**a** Not Illustrated

NOTES

[illegible]

PARK BRAKE ASSEMBLY (FIGURE 8-3)

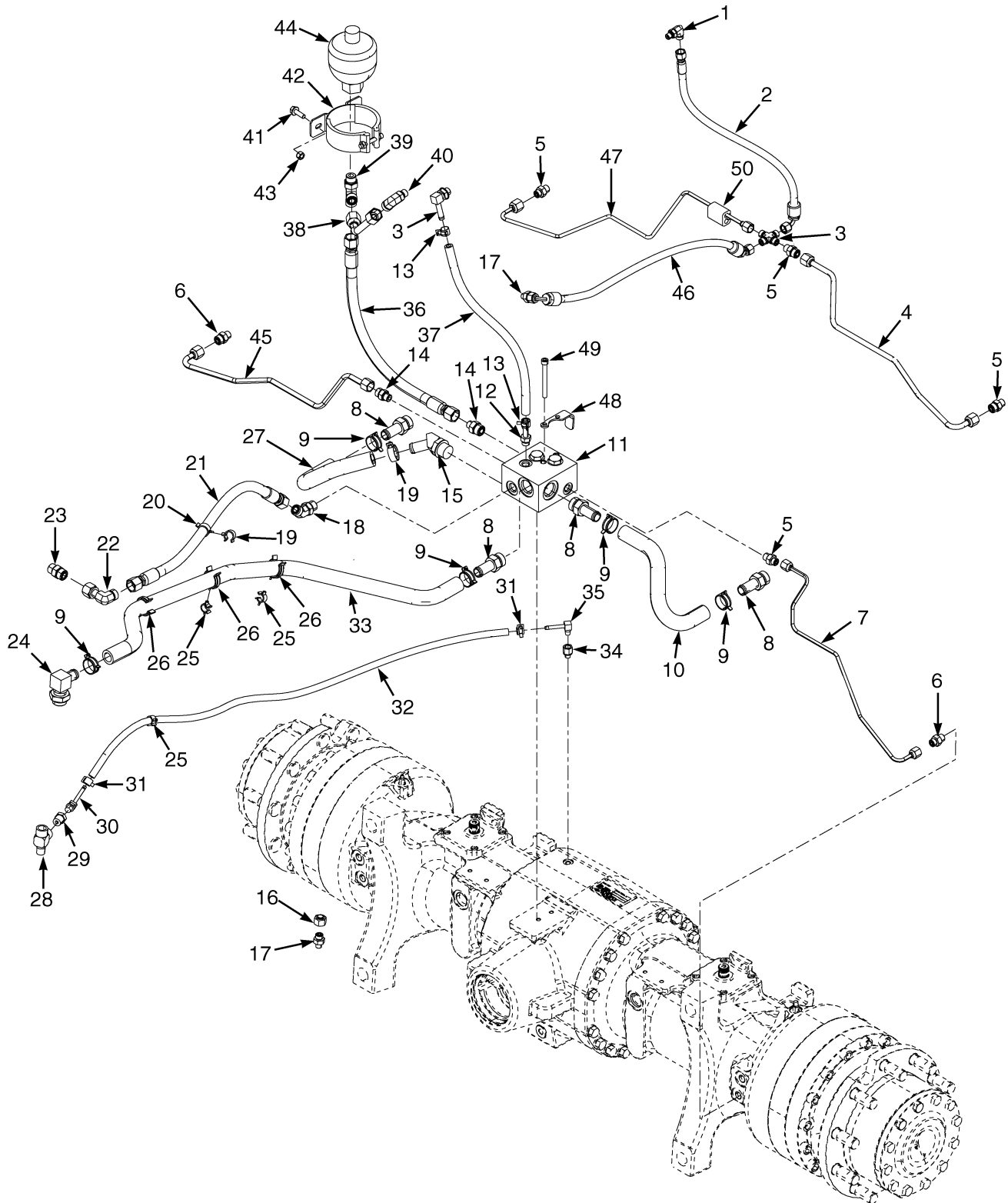


BP040103

PARK BRAKE ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	1654321	Parking Brake Assy (Non Cab) (without Cab)	1
	1654319	Parking Brake Assy (Cab) (with Cab)	1
1	1654320	Parking Brake Lever (Cab) (with Cab)	1
1	1654322	Parking Brake Lever Assy (Non Cab) (without Cab)	1
1	1583915	Grip	1
2	1500912	Clip	1
3	1564526	Clip (Key Hole)	1
4	1547849	Sensor (Brake Position) (Brake Position)	1
5	296378	Washer	2
6	1553897	Capscrew	2
7	2098527	Clamp	2
8	287844	Capscrew	2
9	1375391	Pin (Rod End)	2
10	1351689	Lockring	2
11	1527880	Capscrew	4
12	1657719	Bracket	1
13	1600923	Bracket	1
14	302399	Nut	2
15	2084247	Parking Brake Cable (RH)	1
16	2084246	Parking Brake Cable (LH)	1
17	1529366	Capscrew	4

BRAKE COOLING SYSTEM (FIGURE 8-4) SINGLE AND DUAL PEDAL



BP040104

**BRAKE COOLING SYSTEM
SINGLE AND DUAL PEDAL**

ITEM	PART NO.	DESCRIPTION	QTY
1	1487058	Fitting	1
1	265787	O-Ring	1
1	16483	O-Ring	1
2	2093938	Hose Assy	1
2	2093938	Hose Assy	4
3	1654373	Fitting (Tee)	1
4	2093989	Tube	1
5	1486740	Fitting	4
5	16483	O-Ring	1
6	1486738	Fitting	2
6	1527813	O-Ring	1
6	16483	O-Ring	1
7	2093936	Tube	1
8	17758	Fitting	4
8	16486	O-Ring	1
9	1502009	Hose Clamp	6
10	2093942	Hose	1
11	2091441	Manifold	1
11	1616054	Check Valve	2
11	1517906	Kit-Seal	1
12	222492	Fitting	1
12	16483	O-Ring	1
13	1569616	Hose Clamp	2
14	1486745	Fitting	1
14	265731	O-Ring	1
14	16483	O-Ring	1
15	222505	Fitting	1
15	16486	O-Ring	1
16	1529014	Fitting	1
16	265731	O-Ring	1
17	1486737	Fitting	2
17	1527813	O-Ring	1
17	16481	O-Ring	1
18	1516202	Fitting	1
18	265731	O-Ring	1
18	16484	O-Ring	1
19	1606544	Clamp	1
20	1502066	Clamp	1
21	2093939	Hose Assy	1
22	1486772	Fitting	1
22	265731	O-Ring	1
23	1473887	Fitting	1
23	16484	O-Ring	1
23	265731	O-Ring	1
24	1654374	Fitting	1
24	16486	O-Ring	1
25	1542439	Clamp (Swivel)	3
26	1561759	Clamp (Swivel)	3
27	2091442	Hose	1
28	154452	Fitting	1

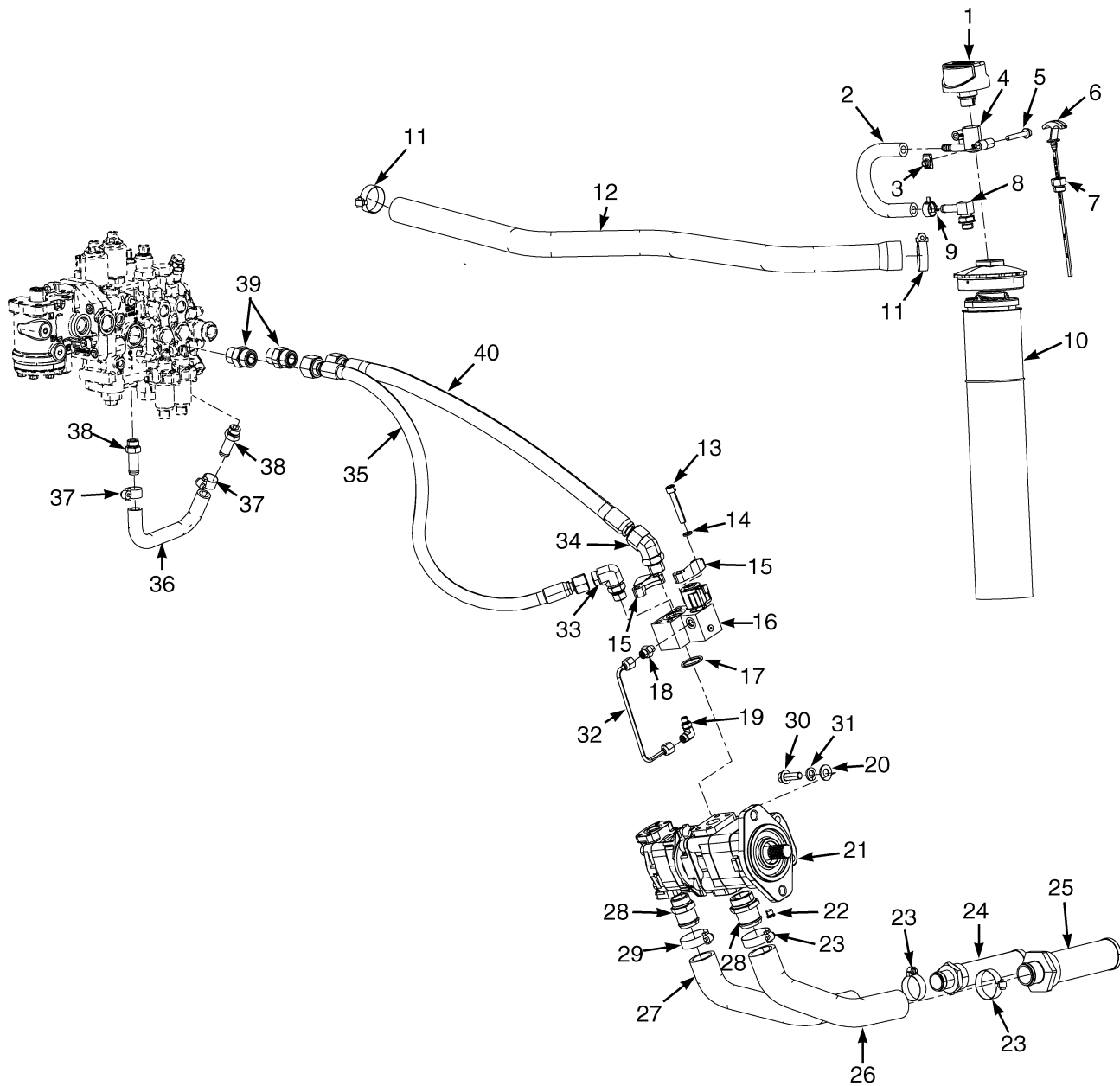
BRAKE COOLING SYSTEM SINGLE AND DUAL PEDAL

ITEM	PART NO.	DESCRIPTION	QTY
29	63108	Fitting	1
30	222498	Fitting	1
31	1625338	Hose Clamp	2
32	2098603	Hose	1
33	2093940	Hose (High Temperature)	1
34	1661488	Adapter	1
35	17343	Fitting	1
36	2073192	Hose Assy	1
37	17221	Fitting	1
37	16483	O-Ring	1
38	2097900	Tube Assy	1
39	1592852	Fitting	1
39	265731	O-Ring	2
39	16484	O-Ring	1
40	1487064	Fitting	1
40	265731	O-Ring	1
40	16483	O-Ring	1
41	1510113	Capscrew	2
42	1614250	Clamp	1
43	313828	Nut	2
44	1611999	Accumulator	1
45	2093937	Tube	1
46	2095922	Hose Assy	1
47	2093987	Tube	1
48	1649689	Bracket	1
49	296022	Capscrew	2
50	2091513	Block	1

SECTION 9 HYDRAULIC SYSTEM

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HYDRAULIC SUPPLY AND RETURN (FIGURE 9-1)



BP150207

HYDRAULIC SUPPLY AND RETURN

ITEM	PART NO.	DESCRIPTION	QTY
1	1582161	Breather	1
1	16486	O-Ring (Not Illustrated)	1
2	2098246	Hose	1
3	1480237	Nut	2
4	1582160	Adapter (Breather)	1
5	1510115	Capscrew	2
6	2060809	Dipstick	1
7	1568182	Fitting	1
7	16484	O-Ring	1
8	222442	Fitting	1
9	1502008	Hose Clamp	1
10	1600676	Hydraulic Filter (☞ Figure 9-28).....	1
11	119236	Clamp	2
12	2091014	Hose Assy	1
13	b 1670904	Capscrew	4
13	a 296026	Capscrew	4
14	e 293781	Lockwasher	4
15	e 190757	Clamp (Split Half)	2
16	b 2097933	Solenoid Valve	1
16	1662012	Plug	1
16	1662013	Fitting	1
16	1662014	Solenoid Valve	1
17	169787	O-Ring	1
18	1486737	Fitting	1
19	1487058	Fitting	1
20	15135	Washer	2
21	df 2097931	Gear Pump (41.3 cc) (☞ Figure 9-2).....	1
21	dg 2098592	Gear Pump (41.3 cc) (☞ Figure 9-4).....	1
21	ef 2097932	Gear Pump (46.5 cc) (☞ Figure 9-2).....	1
21	eg 2098593	Gear Pump (46.5 cc) (☞ Figure 9-4).....	1
22	e 222442	Fitting	1
23	369804	Clamp	4
24	1624904	Strainer	1
24	16984	O-Ring	1
25	1624905	Strainer	1
25	18909	O-Ring	1
26	2082241	Hose	1
27	2082194	Hose	1
28	1566890	Adapter	1
28	16983	O-Ring	1
29	1568199	Adapter (Suction)	1
29	16487	O-Ring	1
30	1636808	Capscrew	2
31	15158	Washer	2
32	b 2097983	Tube	1
33	1487067	Fitting	1
33	16485	O-Ring	1
33	252729	O-Ring	1
34	b 1516208	Fitting	1
35	2082240	Hose Assy	1
36	2083698	Hose (Three Function)	1

HYDRAULIC SUPPLY AND RETURN

ITEM	PART NO.	DESCRIPTION	QTY
36	2105640	Hose (Three Function) (Alternate Part)	1
36	2083699	Hose (Four Function)	1
36	2105284	Hose (Four Function) (Alternate Part)	1
37	130845	Clamp	2
38	222493	Fitting	2
38	16484	O-Ring	1
39	1473888	Fitting	2
39	280154	O-Ring	1
39	16486	O-Ring	1
40	b 2098221	Hose Assy	1
40	a 2098095	Hose Assy	1
	1618482	Kit-Valve	1
	c 1528481	Plug (With O-Ring) (Hydraulic Tank Drain)	1

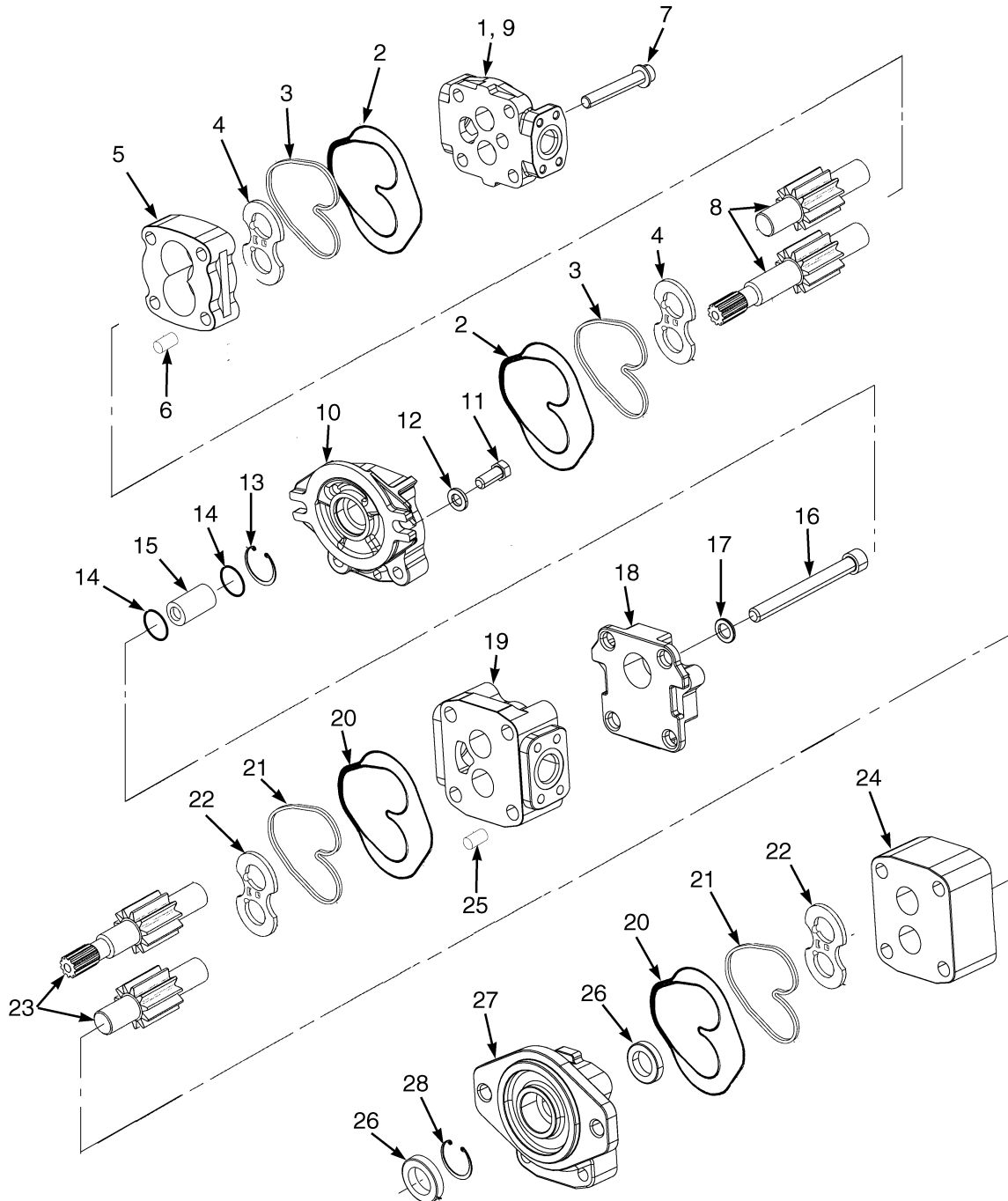
FOOTNOTES:

a Cummins 4.5L Diesel Only	e S135FT Diesel
b GM 4.3L Gasoline and LPG Only	f → PENDING PER ECN 104853
c Not Illustrated	g PENDING PER ECN 104853 →
d S135-155FT Gasoline and LPG and S155FT Diesel	

NOTES

[illegible]

GEAR PUMP ASSEMBLY (FIGURE 9-2) (→ S/N H006V01541E)



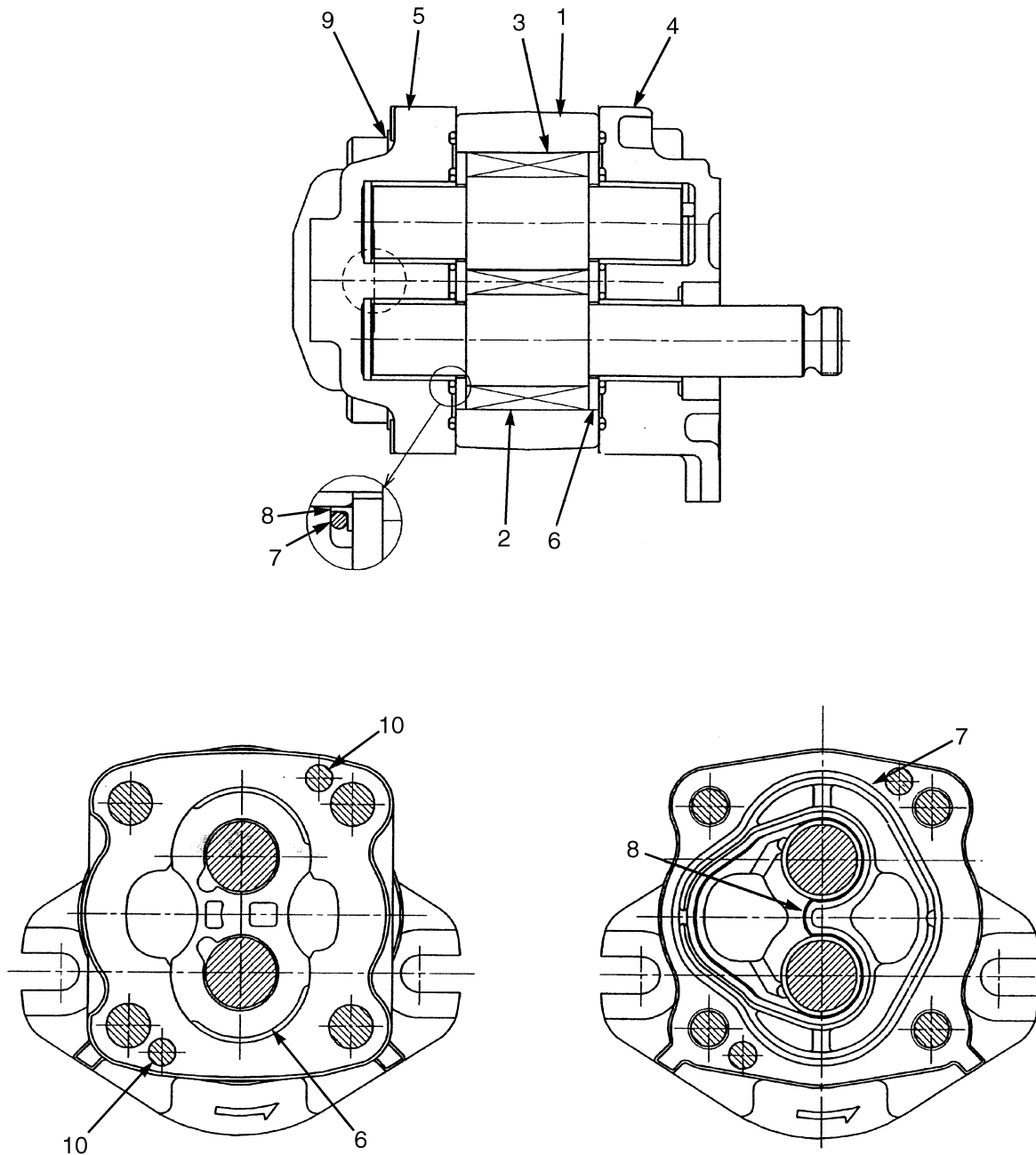
BP150204

GEAR PUMP ASSEMBLY

(→ S/N H006V01541E)

ITEM	PART NO.	DESCRIPTION	QTY
	2097931	Gear Pump (41.3 cc)	1
	2097932	Gear Pump (46.5 cc)	1
1	1657470	Gear Pump (☞Figure 9-3).....	1
2		Seal (Plate)	2
3		Back up Seal	2
4	1578673	Side Plate	2
5		Gear Housing	1
6	1578672	Dowel	4
7	1578671	Screw	4
8	1657483	Gear Set	1
9	1657480	Cover	1
10	1657479	Flange	1
11	1657467	Bolt	2
12	1657468	Washer	2
13	1657469	Snap Ring	1
14	1657465	O-Ring	2
15	1657463	Coupling	1
16	1657466	Bolt (41.3 cc)	4
16	1657474	Bolt (46.5 cc)	4
17	1624865	Washer	4
18	1657462	Plate	1
19	1662566	Cover Plate	1
20	1624862	Plate (Seal)	2
21	1624863	Back-Up Ring	2
22	1624861	Pressure Plate	2
23	1657472	Gear Set (41.3 cc)	1
23	1657475	Gear Set (46.5 cc)	1
24		Gear Housing (46.5 cc)	1
24	1662565	Housing (41.3 cc)	1
25	1657464	Dowel	1
26	1624866	Oil Seal	2
27	1657460	Flange	1
28	1624867	Snap Ring	1
	1657482	Kit-Repair	1
	1657471	Kit-Seal	1

GEAR PUMP (FIGURE 9-3) (→ S/N H006V01541E)

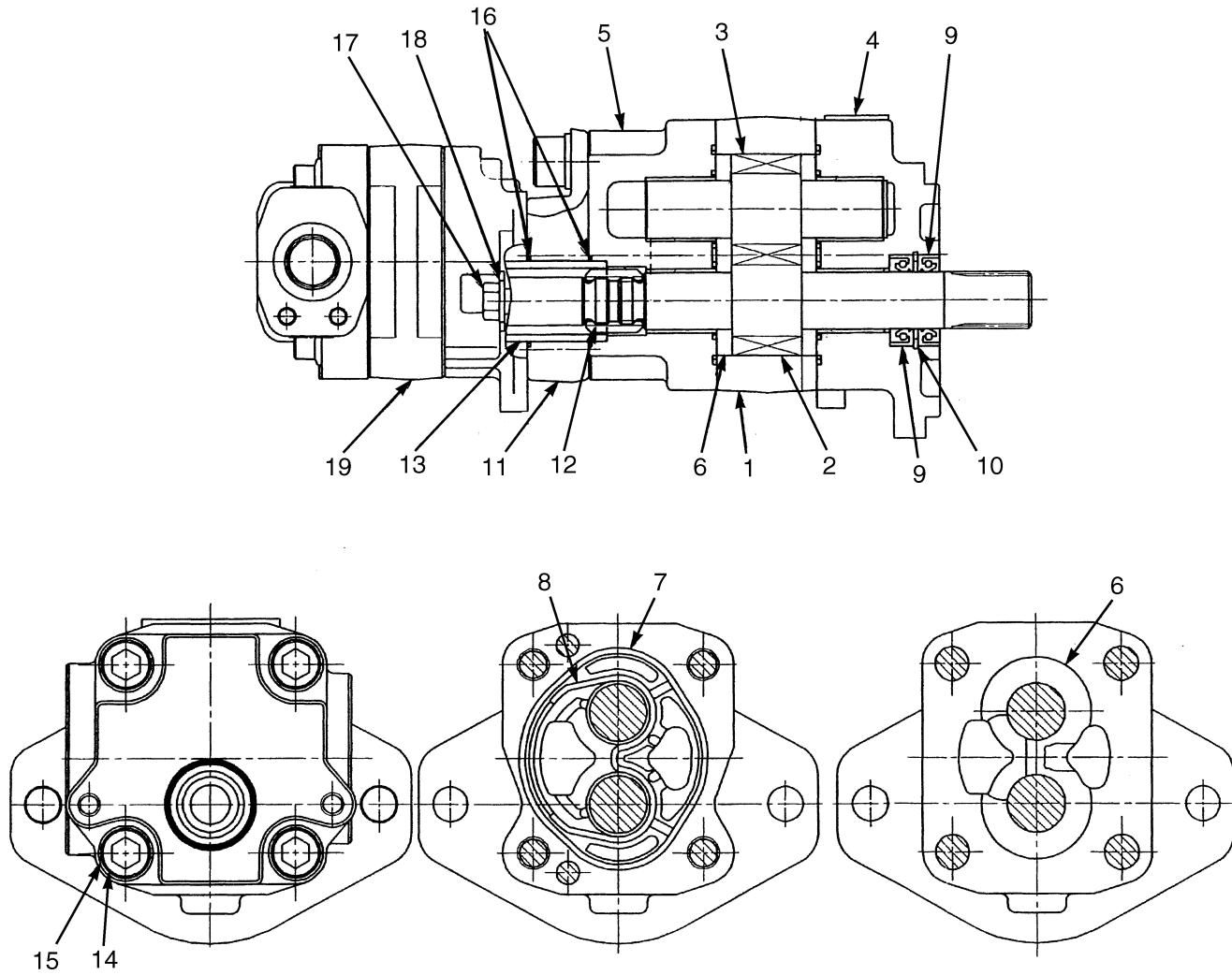


BP150210

GEAR PUMP
(→ S/N H006V01541E)

ITEM	PART NO.	DESCRIPTION	QTY
	1657470	Gear Pump	1
1		Gear Housing	1
2		Drive Gear	1
3		Driven Gear	1
4	1657479	Flange	1
5	1657480	Cover	1
6	1578673	Side Plate	2
7		Seal Plate	2
8		Back-Up Ring	2
9	1578671	Screw	4
10	1578672	Dowel	4
	1657483	Gear Set	1
	1657482	Kit-Repair	1

GEAR PUMP ASSEMBLY (FIGURE 9-4) (S/N H006V01876E →)

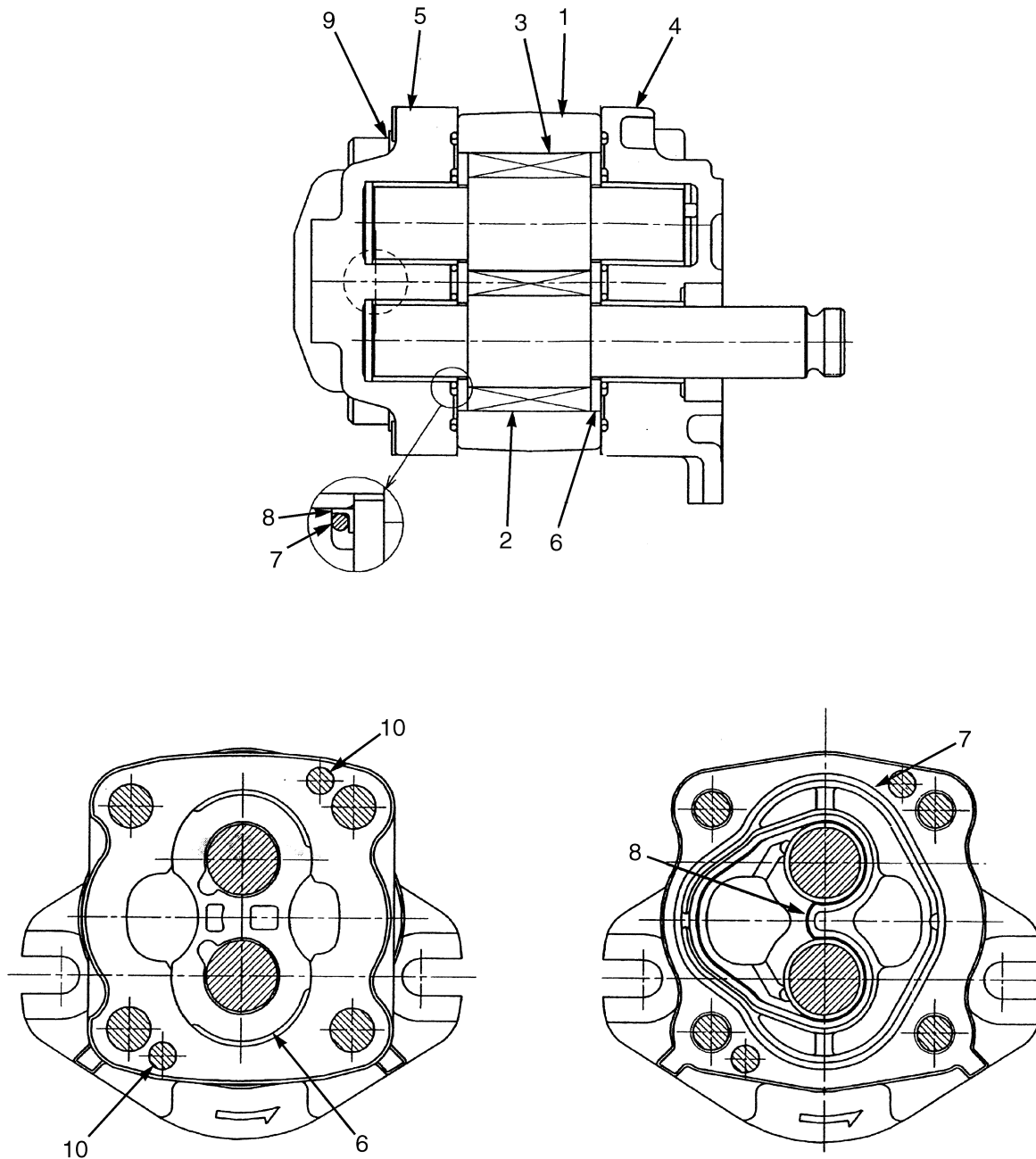


BP150211

GEAR PUMP ASSEMBLY
(S/N H006V01876E →)**KEY:****A: 41.3 cc****B: 46.5 cc**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	2098592	Gear Pump	1	..
	2098593	Gear Pump	..	1
1		Gear Housing	1	..
1		Gear Housing	..	1
2		Drive Gear	1	..
2		Drive Gear	..	1
3		Driven Gear	1	..
3		Driven Gear	..	1
4	1657460	Flange	1	1
5	1662566	Cover Plate	1	1
6	1624861	Pressure Plate	2	2
7		Plate Seal	2	2
8		Back-Up Ring	2	2
9		Oil Seal	2	2
10		Snap Ring	1	1
11	1657462	Plate	1	1
12	1669541	Coupling	1	1
13	1657464	Dowel	1	1
14	1657466	Bolt	4	..
14	1657474	Bolt	..	4
15	1624865	Washer	4	4
16		O-Ring	2	2
17	1657467	Bolt	2	..
17	1657466	Bolt	..	2
18	1657468	Washer	2	2
19	1669542	Gear Pump (Steering) (☞Figure 9-5).....	1	1
	1669543	Gear Set	1	..
	1669545	Gear Set	..	1
	1657471	Kit-Seal	1	1

GEAR PUMP (FIGURE 9-5) (S/N H006V01876E →)

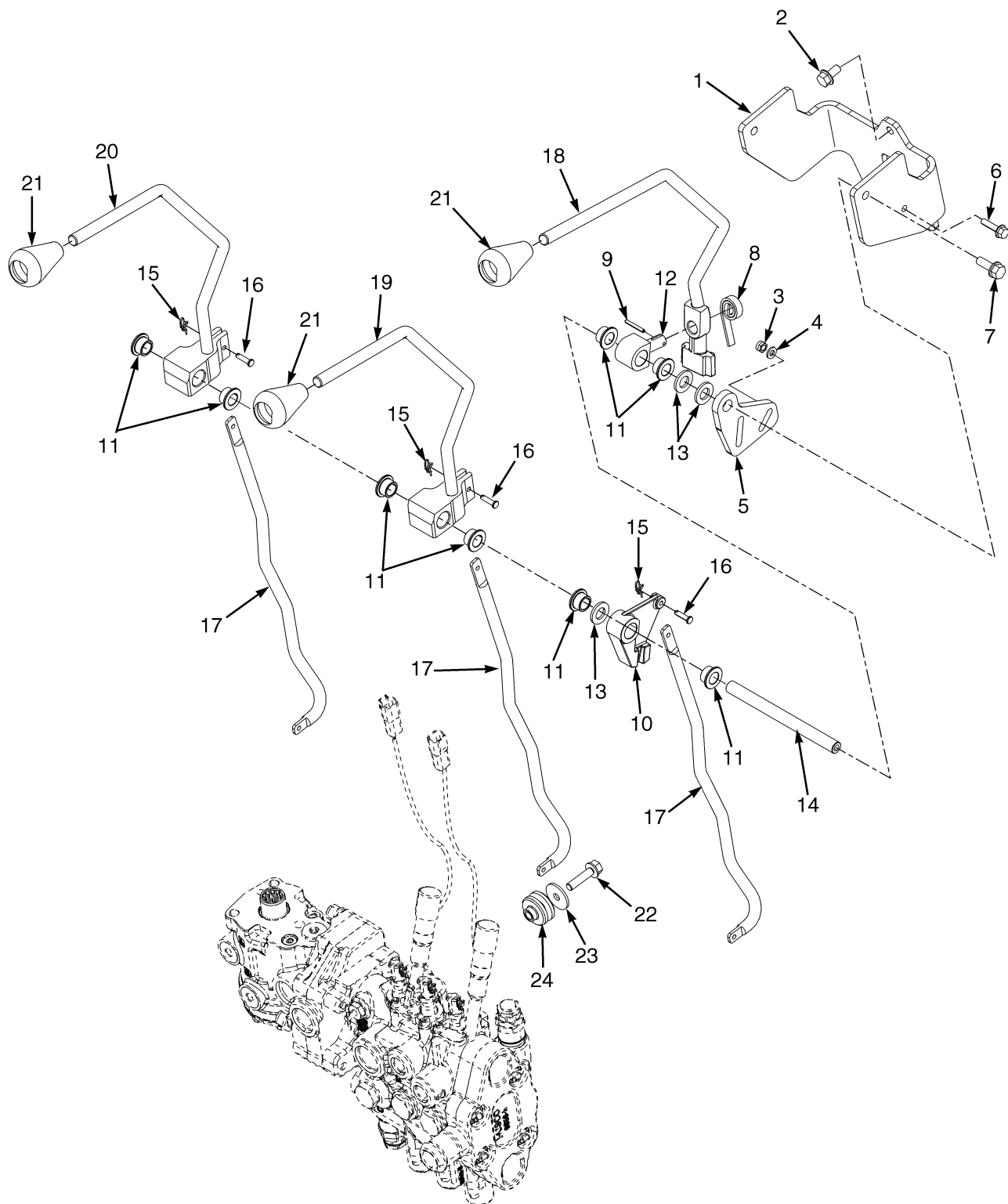


BP150210

GEAR PUMP
(S/N H006V01876E →)

ITEM	PART NO.	DESCRIPTION	QTY
	1669542	Gear Pump (Steering)	1
1		Gear Housing	1
2		Drive Gear	1
3		Driven Gear	1
4	1657479	Flange	1
5	1657480	Cover	1
6	1578673	Side Plate	2
7		Seal Plate	2
8		Back-Up Ring	2
9	1578671	Screw	4
10	1578672	Dowel	4
	1669547	Gear Set	1
	1657482	Kit-Repair	1

HAND LEVERS (FIGURE 9-6) THREE FUNCTION — WITH DETENTED LEVERS



BP150138

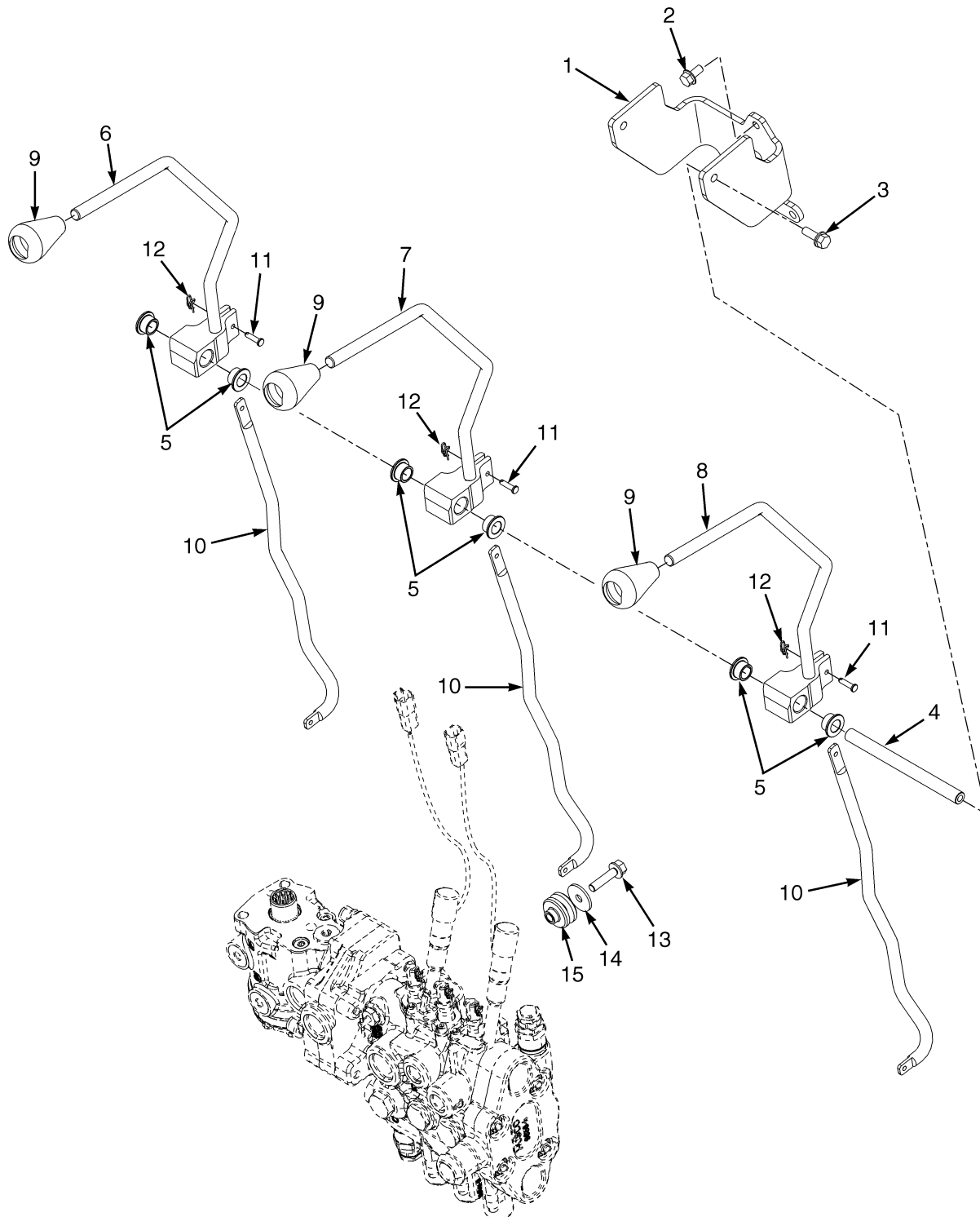
HAND LEVERS

THREE FUNCTION – WITH DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	b 1578454	Bracket	1
1	cd 1656384	Bracket	1
1	e 1670194	Bracket (Alternate Part)	1
2	1527879	Capscrew	3
3	c 230882	Locknut	1
3	e 316834	Nut (Alternate Part)	1
4	c 197067	Washer	2
4	e 320156	Washer (Alternate Part)	1
5	c 1528339	Spacer	1
5	e 1670677	Plate (Alternate Part)	1
6	c 18094	Capscrew	1
6	e 1527878	Capscrew (Alternate Part)	1
7	1583611	Capscrew	2
8	175861	Spring	1
9	302428	Roll Pin	1
10	c 1542546	Lever	2
10	e 1542546	Lever (Alternate Part)	1
11	c 1564747	Bushing	10
11	e 1564747	Bushing (Alternate Part)	8
12	306113	Pin (Selector)	1
13	c 320161	Washer	2
13	e 320161	Washer (Alternate Part)	3
14	c 1528328	Shaft	1
14	e 1670195	Shaft (Pivot) (Alternate Part)	1
15	1517361	Lockring	6
16	309109	Pin	6
17	b 1595526	Link	3
17	cd 1653918	Link	3
17	e 1672798	Link (Alternate Part)	3
18	c 2083706	Lever (Auxiliary One And Two)	1
18	e 2099398	Lever (Auxiliary One and Two) (Alternate Part)	1
19	c 2083702	Lever (Tilt)	1
19	e 2099394	Lever (Tilt) (Alternate Part)	1
20	c 2083701	Lever (Lift)	1
20	e 2099393	Lever (Lift) (Alternate Part)	1
21	1517395	Knob	3
22	1586627	Capscrew	3
23	1346752	Washer	3
24	2063991	Isolator	3
25	b 2094023	Hydraulic Control Valve (☞ Figure 9-10).....	1
25	ad 2100071	Hydraulic Control Valve (☞ Figure 9-10).....	1

FOOTNOTES:**a** alternative part**b** → PENDING PER ECN 104512**c** → PENDING PER ECN 10498402**d** PENDING PER ECN 104512 →**e** PENDING PER ECN 10498402 →

HAND LEVERS (FIGURE 9-7) THREE FUNCTION — WITHOUT DETENTED LEVERS



BP150139

HAND LEVERS

THREE FUNCTION – WITHOUT DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	b 1578453	Bracket	1
1	cd 1656383	Bracket	1
1	e 1665746	Bracket (Alternate Part)	1
2	1527879	Capscrew	3
3	1583611	Capscrew	2
4	c 1528327	Shaft	1
4	e 1670292	Shaft (Alternate Part)	1
5	1564747	Bushing	6
6	c 2083701	Lever (Lift)	1
6	e 2099393	Lever (Lift) (Alternate Part)	1
7	c 2083702	Lever (Tilt)	1
7	e 2099394	Lever (Tilt) (Alternate Part)	1
8	c 2083703	Lever (Auxiliary One)	1
8	e 2099395	Lever (Auxiliary One) (Alternate Part)	1
9	1517395	Knob	3
10	b 1595526	Link	3
10	cd 1653918	Link	3
10	e 1672798	Link (Alternate Part)	3
11	309109	Pin	6
12	1517361	Lockring	6
13	1586627	Capscrew	3
14	1346752	Washer	3
15	2063991	Isolator	3
16	b 2094023	Hydraulic Control Valve (☞Figure 9-10).....	1
17	ad 2100071	Hydraulic Control Valve (☞Figure 9-10).....	1

FOOTNOTES:**a** alternative part**b** → PENDING PER ECN 104512**c** → PENDING PER ECN 10498402**d** PENDING PER ECN 104512 →**e** PENDING PER ECN 10498402 →

This diagram illustrates the exploded view of a vehicle's rear suspension and steering assembly. The components are numbered as follows:

- 1:** Steering knuckle
- 2:** Upper ball joint
- 3:** Lower ball joint
- 4:** Lower control arm
- 5:** Lower control arm bracket
- 6:** Lower control arm bushing
- 7:** Lower control arm bushing
- 8:** Lower control arm bushing
- 9:** Lower control arm bushing
- 10:** Lower control arm bushing
- 11:** Lower control arm bushing
- 12:** Lower control arm bushing
- 13:** Lower control arm bushing
- 14:** Lower control arm bushing
- 15:** Lower control arm bushing
- 16:** Lower control arm bushing
- 17:** Lower control arm bushing
- 18:** Lower control arm bushing
- 19:** Lower control arm bushing
- 20:** Lower control arm bushing
- 21:** Lower control arm bushing
- 22:** Lower control arm bushing
- 23:** Lower control arm bushing
- 24:** Lower control arm bushing
- 25:** Lower control arm bushing
- 26:** Lower control arm bushing

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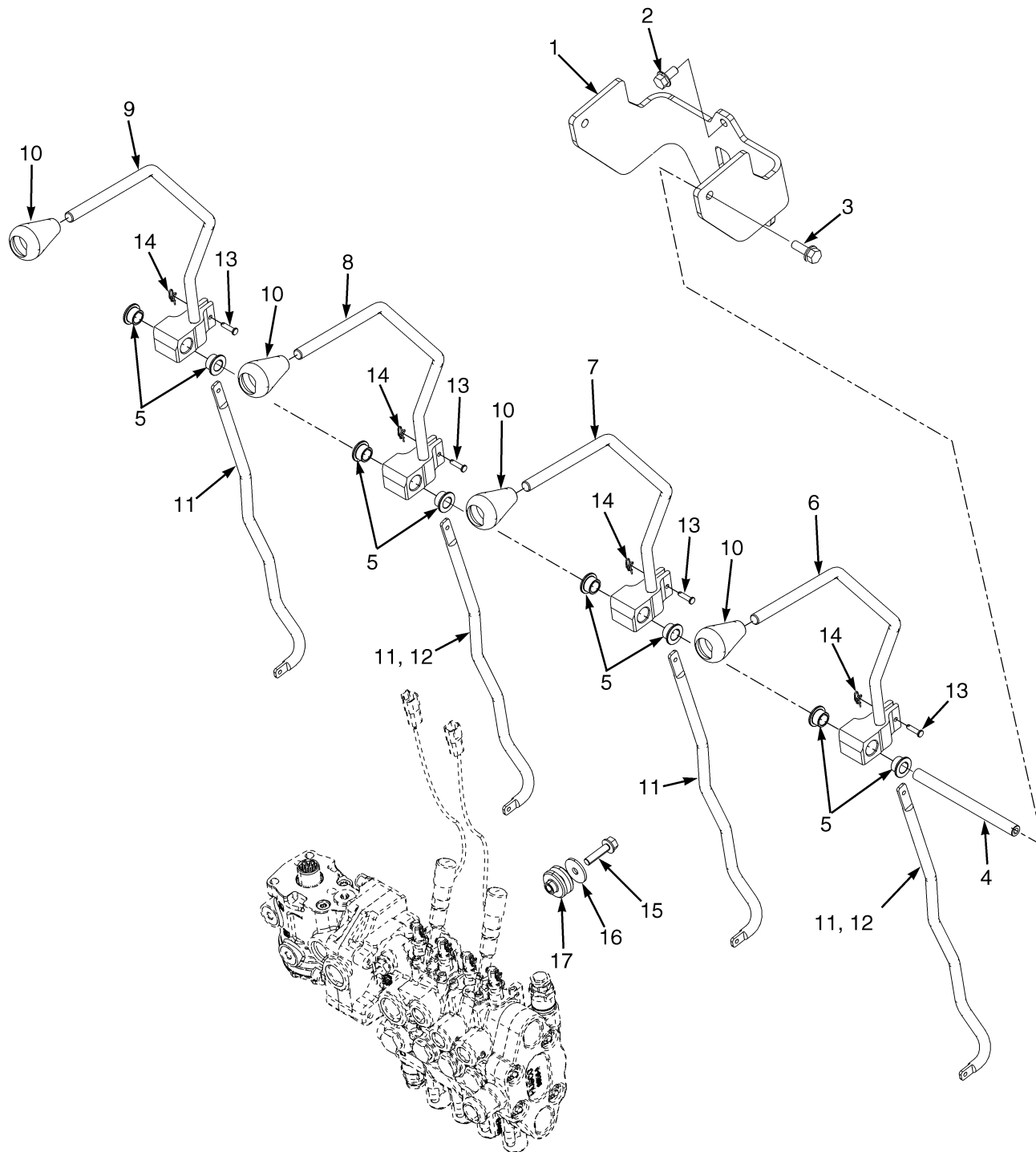
HAND LEVERS

FOUR FUNCTION – WITH DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1619997	Bracket	1
1	bc 1656385	Bracket	1
1	d 1665748	Bracket (Alternate Part)	1
2	1527879	Capscrew	4
3	b 230882	Locknut	1
3	d 316834	Nut (Alternate Part)	1
4	b 197067	Washer	2
4	d 320156	Washer (Alternate Part)	1
5	b 1528339	Spacer	1
5	d 1670677	Plate (Alternate Part)	1
6	b 18094	Capscrew	1
6	d 1527878	Capscrew (Alternate Part)	1
7	1583611	Capscrew	2
8	175861	Spring	1
9	302428	Roll Pin	1
10	b 1542546	Lever	2
10	d 1542546	Lever (Alternate Part)	1
11	b 1564747	Bushing	12
11	d 1564747	Bushing (Alternate Part)	10
12	306113	Pin (Selector)	1
13	b 1528329	Shaft	1
13	d 1670196	Shaft (Alternate Part)	1
14	b 320161	Washer	2
14	d 320161	Washer (Alternate Part)	3
15	a 1595526	Link	4
15	bc 1653918	Link	4
15	d 1672798	Link (Alternate Part)	4
16	1517361	Lockring	8
17	309109	Pin	8
18	b 2083705	Lever (Auxiliary Two And Three)	1
18	d 2099397	Lever (Auxiliary Two and Three) (Alternate Part)	1
19	b 2083703	Lever (Auxiliary One)	1
19	d 2099395	Lever (Auxiliary One) (Alternate Part)	1
20	b 2083702	Lever (Tilt)	1
20	d 2099394	Lever (Tilt) (Alternate Part)	1
21	b 2083701	Lever (Lift)	1
21	d 2099393	Lever (Lift) (Alternate Part)	1
22	1517395	Knob	4
23	1586627	Capscrew	3
24	1346752	Washer	3
25	2063991	Isolator	3
26	a 2094024	Hydraulic Control Valve (☞Figure 9-11).....	1
26	c 2100073	Hydraulic Control Valve (☞Figure 9-11).....	1

FOOTNOTES:**a** → PENDING PER ECN 104512**c** PENDING PER ECN 104512 →**b** → PENDING PER ECN 10498402**d** PENDING PER ECN 10498402 →

HAND LEVERS (FIGURE 9-9) FOUR FUNCTION — WITHOUT DETENTED LEVERS



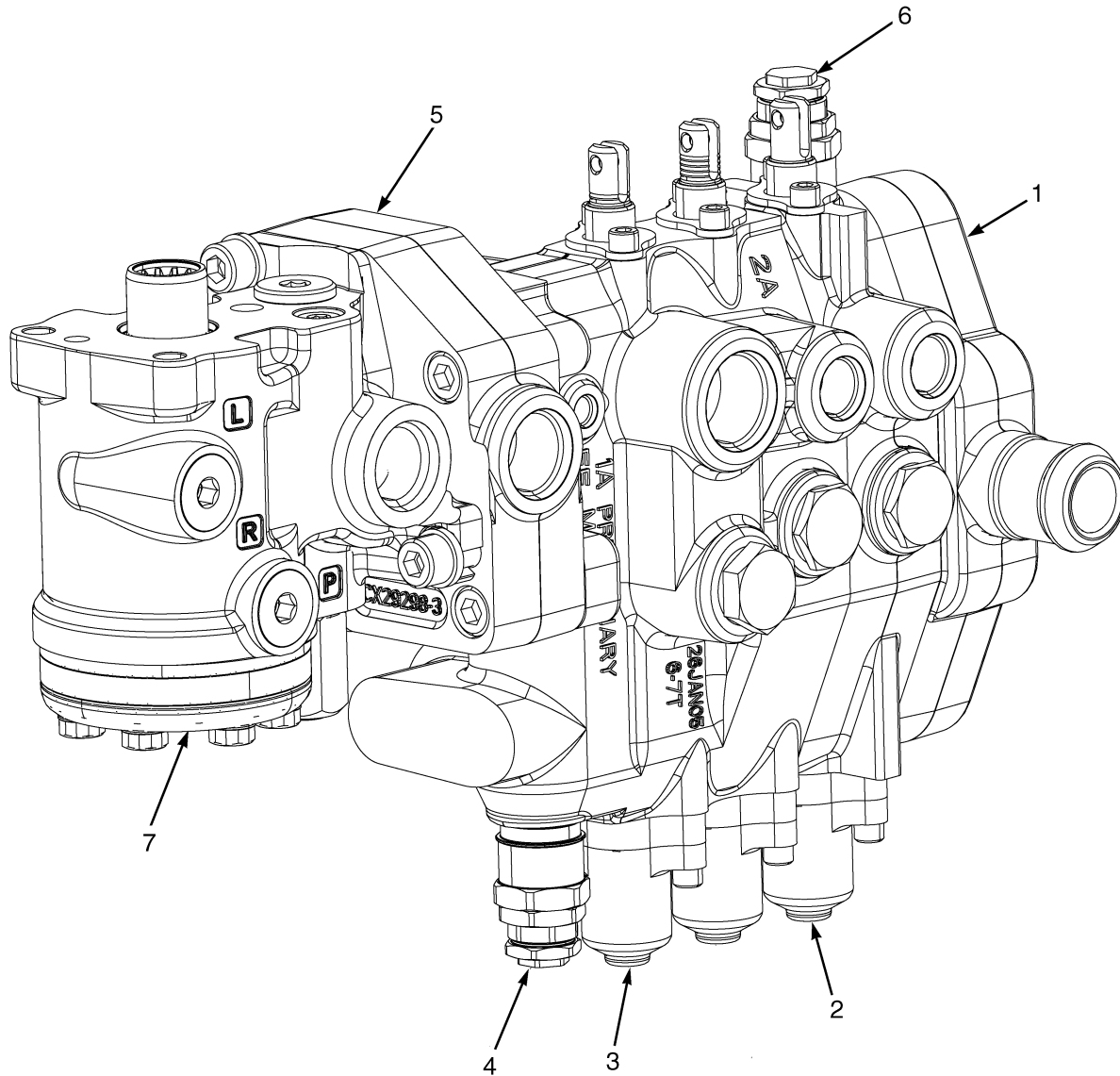
BP150200

HAND LEVERS

FOUR FUNCTION – WITHOUT DETENTED LEVERS

ITEM	PART NO.	DESCRIPTION	QTY
1	a 1578454	Bracket	1
1	bc 1656384	Bracket	1
1	d 1665747	Bracket (Alternate Part)	1
2	1527879	Capscrew	3
3	1583611	Capscrew	2
4	b 1528328	Shaft	1
4	d 1670293	Shaft (Alternate Part)	1
5	1564747	Bushing	8
6	b 2083704	Lever (Auxiliary Two)	1
6	d 2099396	Lever (Auxiliary Two) (Alternate Part)	1
7	b 2083703	Lever (Auxiliary One)	1
7	b 2099395	Lever (Auxiliary One) (Alternate Part)	1
8	b 2083702	Lever (Tilt)	1
8	d 2099394	Lever (Tilt) (Alternate Part)	1
9	b 2083701	Lever (Lift)	1
9	d 2099393	Lever (Lift) (Alternate Part)	1
10	1517395	Knob	4
11	a 1595526	Link	4
11	bc 1653918	Link	4
11	d 1672798	Link (Alternate Part)	4
12	309109	Pin	8
13	1517361	Lockring	8
14	1586627	Capscrew	3
15	1346752	Washer	3
16	2063991	Isolator	3
17	a 2094024	Hydraulic Control Valve (☞Figure 9-11).....	1
17	c 2100073	Hydraulic Control Valve (☞Figure 9-11).....	1

FOOTNOTES:**a** → PENDING PER ECN 104512**b** → PENDING PER ECN 10498402**c** PENDING PER ECN 104512 →**d** PENDING PER ECN 10498402 →

CONTROL VALVE AND STEERING UNIT ASSEMBLY (FIGURE 9-10)
MANUAL CONTROL — THREE FUNCTION

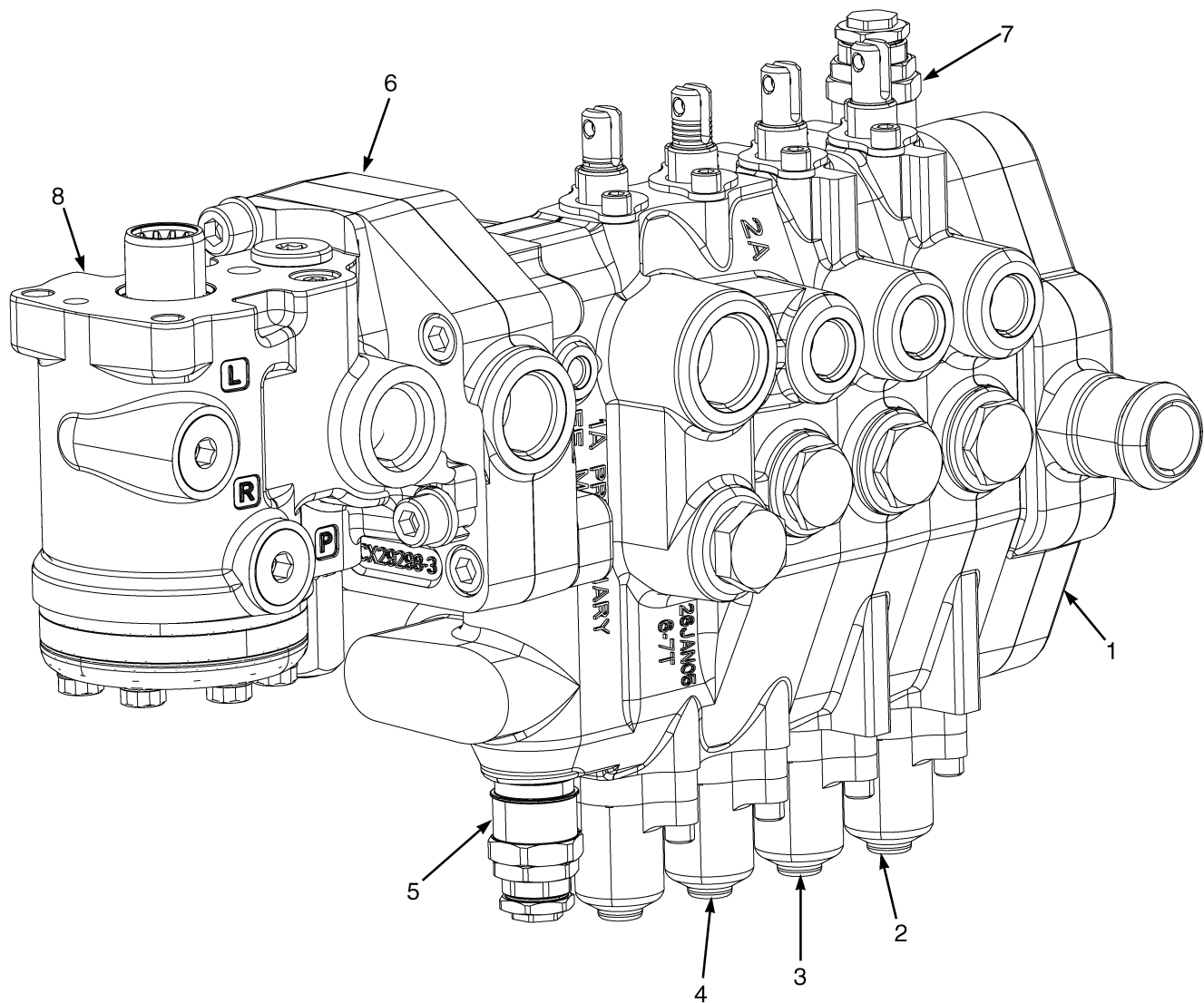
BP140088

CONTROL VALVE AND STEERING UNIT ASSEMBLY
MANUAL CONTROL – THREE FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	c 2094023	Hydraulic Control Valve	1
	ae 2100071	Hydraulic Control Valve	1
	c 2090921	Hydraulic Control Valve	1
	1580146	Kit-Seal (Three Function)	1
	e 2100074	Hydraulic Control Valve	1
	1670434	Kit-Seal (Three Function)	1
1	1657638	Valve Section (☞ Figure 9-16).....	1
2	c 1628747	Valve Section (☞ Figure 9-15).....	1
2	e 1670532	Valve Section (☞ Figure 9-15).....	1
3	c 1657637	Valve Section (Lift and Tilt) (☞ Figure 9-13).....	1
3	e 1670531	Valve Section (Lift and Tilt) (☞ Figure 9-14).....	1
4	1578747	Relief Valve (3100 PSI) (Main Relief)	1
5	1657632	Valve Section (Inlet) (☞ Figure 9-12).....	1
6	1578707	Relief Valve (2250 PSI) (Secondary)	1
7	b 2063122	Steering Control Unit	1
7	d 2102566	Steering Control Unit (Alternate Part)	1
	1657631	Kit-Capscrew	1

FOOTNOTES:**a** alternative part**b** → 9/2007**c** → PENDING PER ECN 104512**d** 9/2007 →**e** PENDING PER ECN 104512 →

CONTROL VALVE AND STEERING UNIT ASSEMBLY (FIGURE 9-11)



BP140094

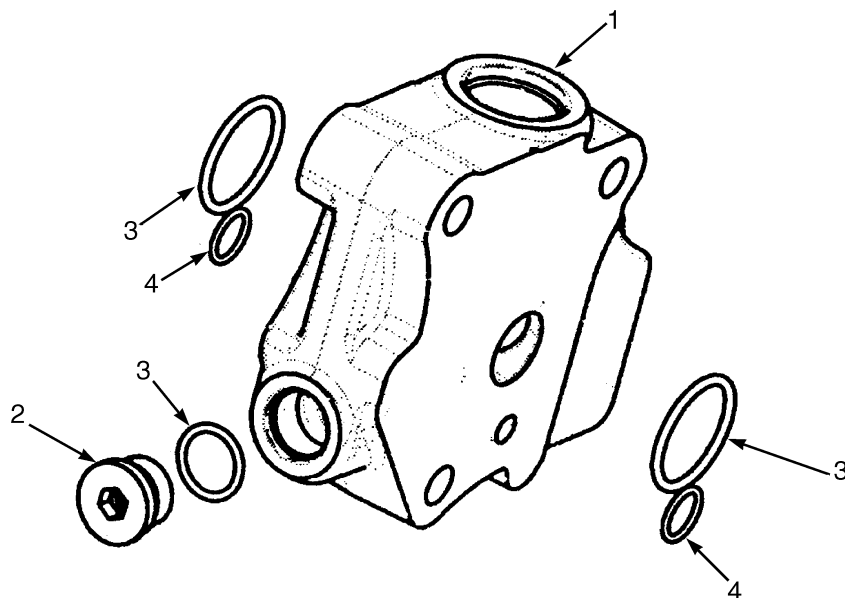
CONTROL VALVE AND STEERING UNIT ASSEMBLY
MANUAL CONTROL – FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	b 2094024	Hydraulic Control Valve	1
	d 2100073	Hydraulic Control Valve	1
	b 2090923	Hydraulic Control Valve	1
	1580148	Kit-Seal (Four Function)	1
	d 2100075	Hydraulic Control Valve	1
	1670054	Kit-Seal (Four Function)	1
1	1657638	Valve Section (☞ Figure 9-16).....	1
2	b 1628748	Valve Section (☞ Figure 9-15).....	1
2	d 1670530	Valve Section (☞ Figure 9-15).....	1
3	b 1628747	Valve Section (☞ Figure 9-15).....	1
3	d 1670532	Valve Section (☞ Figure 9-15).....	1
4	b 1657637	Valve Section (Lift and Tilt) (☞ Figure 9-13).....	1
4	d 1670531	Valve Section (Lift and Tilt) (☞ Figure 9-14).....	1
5	1578747	Relief Valve (3100 PSI) (Main Relief)	1
6	1657632	Valve Section (Inlet) (☞ Figure 9-12).....	1
7	1578707	Relief Valve (2250 PSI) (Secondary)	1
8	a 2063122	Steering Control Unit	1
8	c 2102566	Steering Control Unit (Alternate Part)	1
	1657631	Kit-Capscrew	1

FOOTNOTES:**a** → 9/2007**b** → PENDING PER ECN 104512**c** 9/2007 →**d** PENDING PER ECN 104512 →

MID INLET SECTION (FIGURE 9-12)

MANUAL AND ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION



BP140091

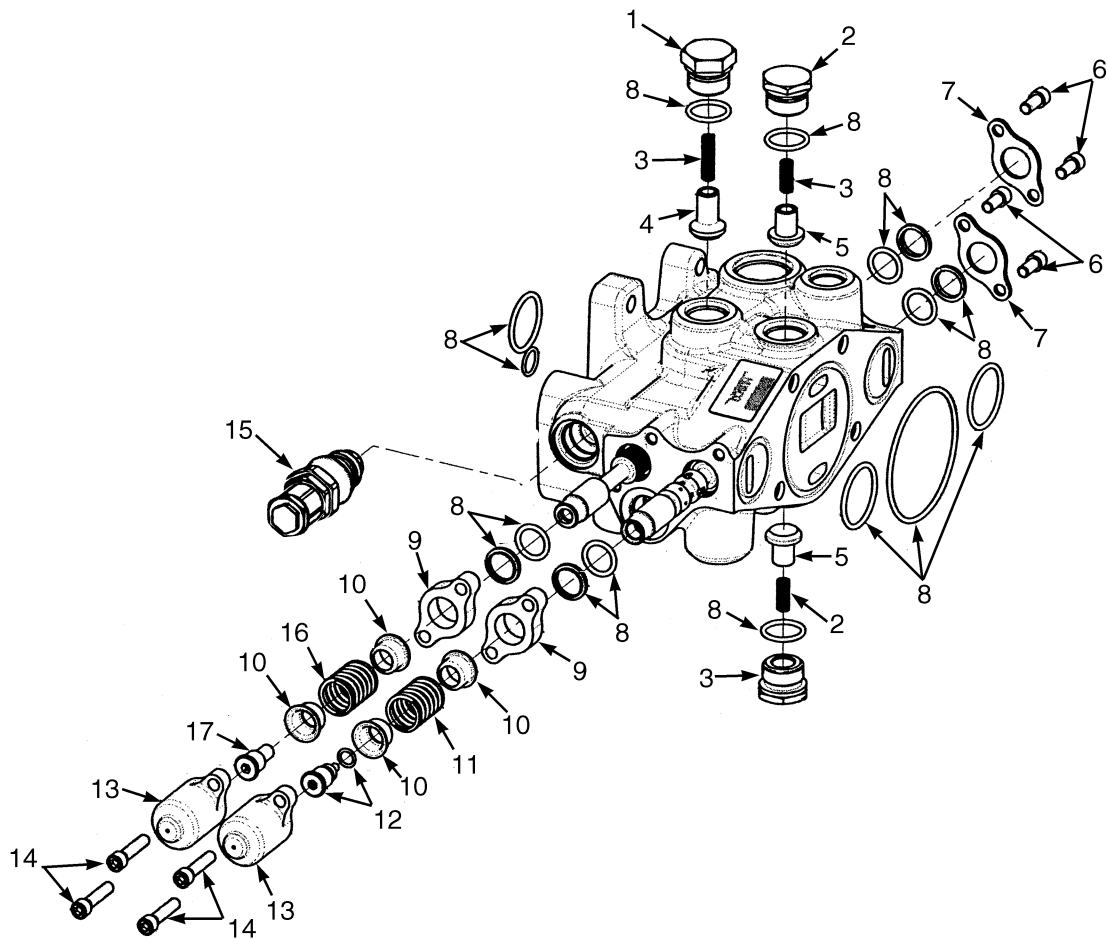
ITEM	PART NO.	DESCRIPTION	QTY
1	1657632	Valve Section (Inlet)	1
2	1569602	Plug	1
3	1580133	Kit-Seal (Inlet/Tilt Section)	1
4	1578911	Kit-Seal (Steering Control Unit Interface)	1
	1580146	Kit-Seal (Three Function)	1

NOTES

[illegible]

VALVE ASSEMBLY, LIFT AND TILT (FIGURE 9-13)

MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION (→ PENDING PER ECN 104512)



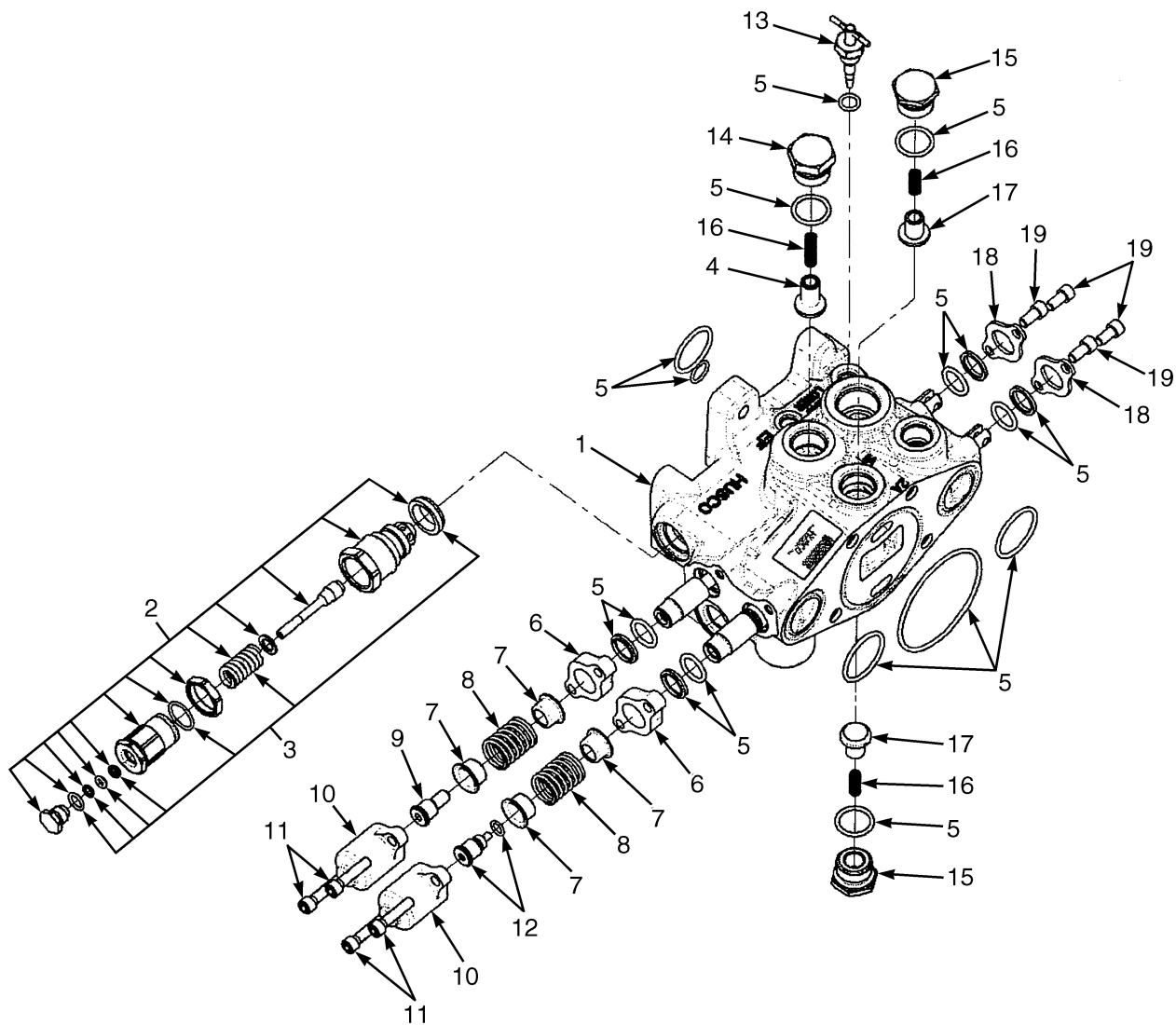
BP140089

VALVE ASSEMBLY, LIFT AND TILT
MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION (→ PENDING PER ECN 104512)

ITEM	PART NO.	DESCRIPTION	QTY
	1657637	Valve Section (Lift and Tilt)	1
1	1578940	Plug	1
2	1578713	Plug	2
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	1560682	Plate	2
10	320289	Spring Seat	2
11	188517	Spring	2
12	386015	Spool End	1
13	1560681	Cap	2
14	1628746	Capscrew	4
15	1578747	Relief Valve (3100 PSI) (Main Relief)	1
15	1580097	Kit-Seal	1
16	1581860	Spring	1
17	1581859	Spool End	1

VALVE ASSEMBLY, LIFT AND TILT (FIGURE 9-14)

MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION (PENDING PER ECN 104512 →)



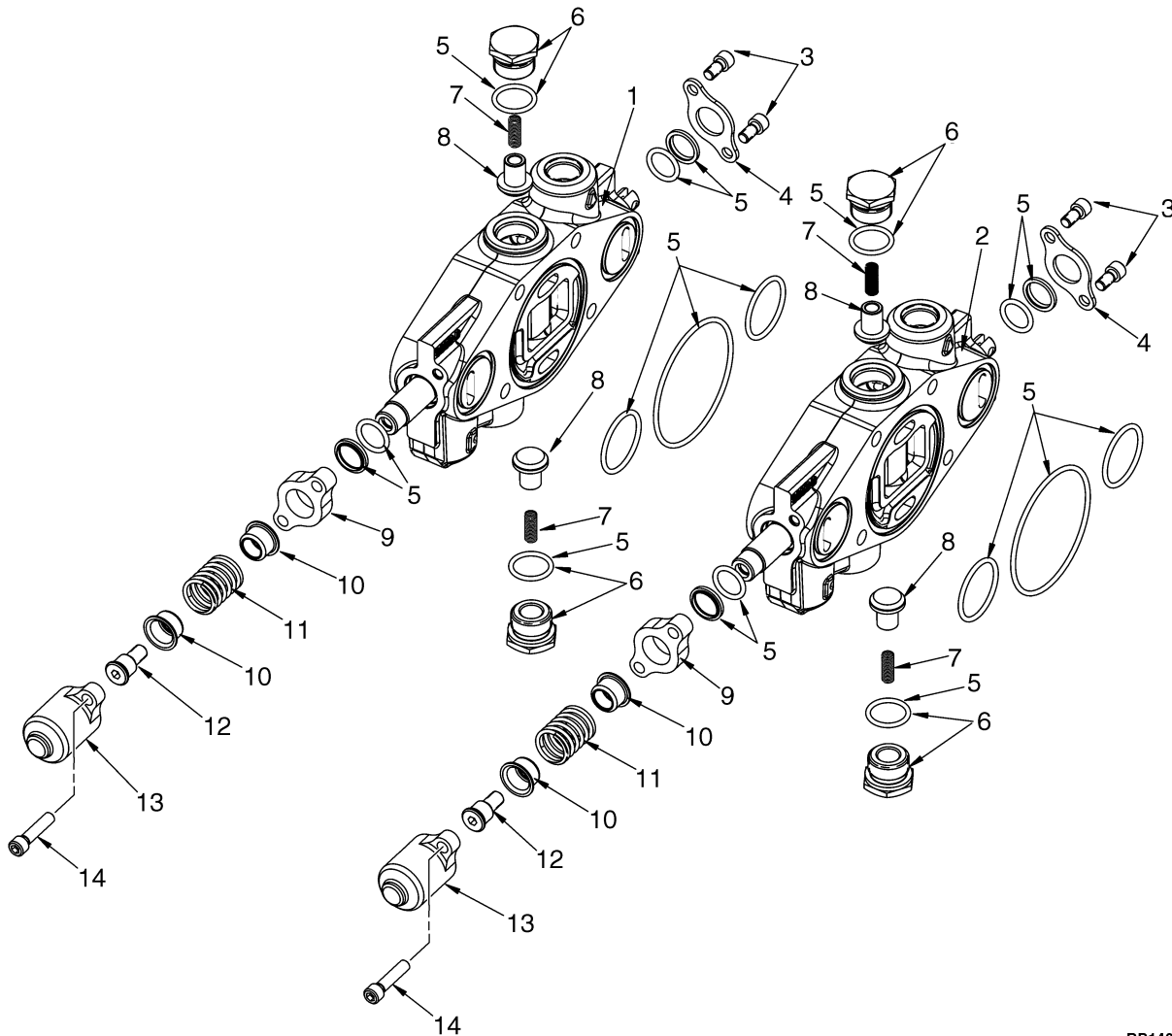
BP140118

VALVE ASSEMBLY, LIFT AND TILT **MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION (PENDING PER ECN 104512 →)**

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

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1670531	Valve Section	1	1
2	1578707	Relief Valve (2250 PSI) (Secondary)	1	1
2	1578747	Relief Valve (3100 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	1578943	Poppet	1	1
5	1670445	Kit-Seal (Lift and Tilt)	1	1
6		Seal Plate	2	2
7	320289	Spring Seat	4	4
8	188517	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	1670522	Kit-Valve (Manual)	1	1
14	1578940	Plug	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
	1670054	Kit-Seal (Four Function)	..	1
	1670434	Kit-Seal (Three Function)	1	..

AUXILIARY ONE AND TWO SECTIONS (FIGURE 9-15) MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION



BP140047

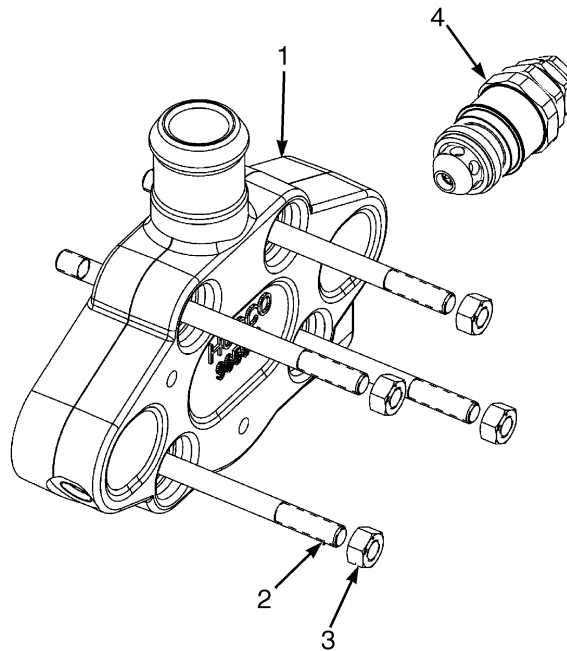
AUXILIARY ONE AND TWO SECTIONS **MANUAL CONTROL VALVE – THREE AND FOUR FUNCTION**

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

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	a 1628747	Valve Section One or Two	1	1
1	b 1670532	Valve Section	1	1
2	a 1628748	Valve Section One	..	1
2	b 1670530	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	2	2
11	188517	Spring	1	1
12	1581859	Spool End	1	1
13	1560681	Cap	1	1
14	1628746	Capscrew	2	2
	1580146	Kit-Seal (Three Function)	1	1

FOOTNOTES:**a** → PENDING PER ECN 104512**b** PENDING PER ECN 104512 →

OUTLET SECTION (FIGURE 9-16) MANUAL CONTROL VALVE — THREE AND FOUR FUNCTION



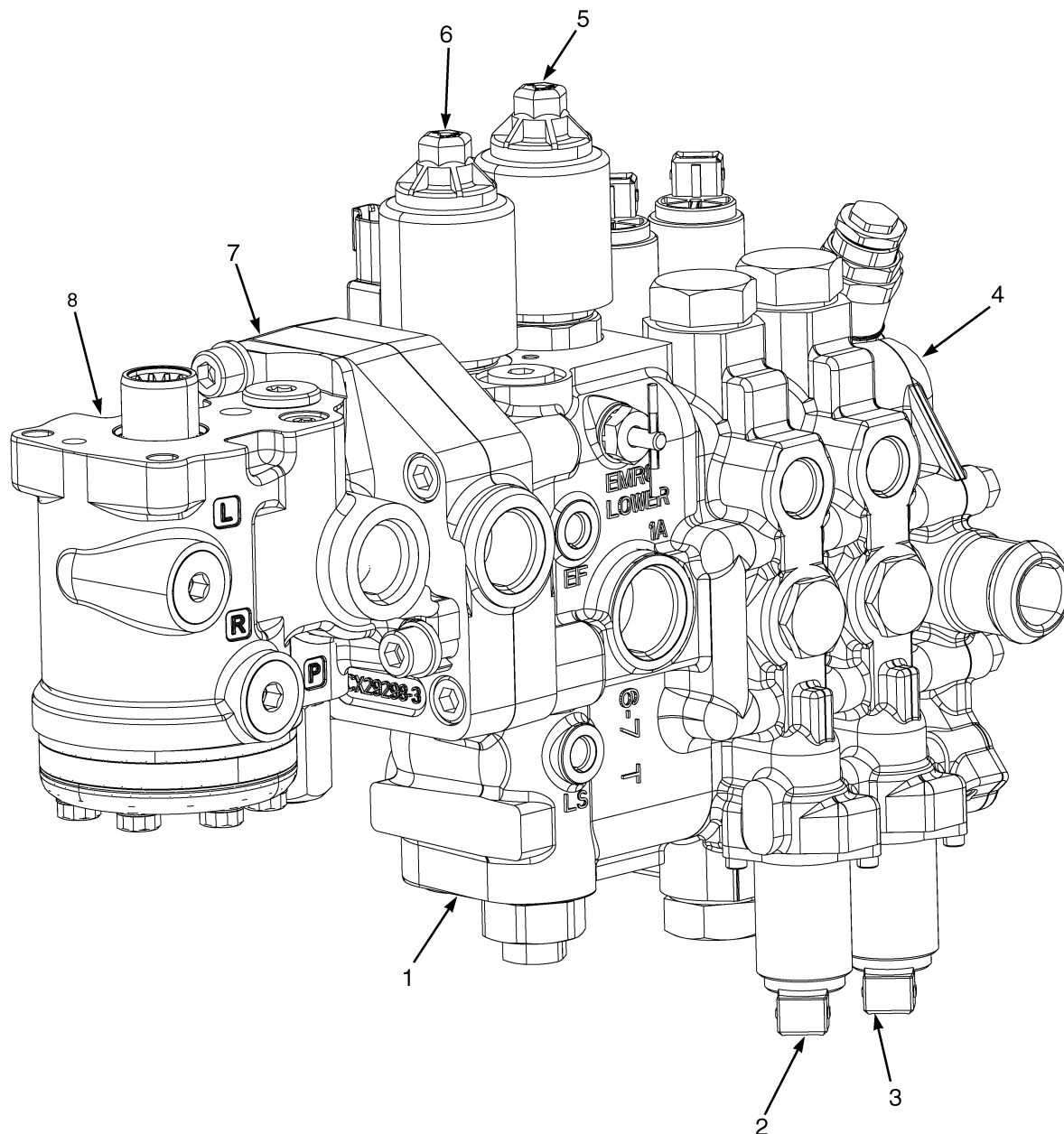
BP140090

ITEM	PART NO.	DESCRIPTION	QTY
1	1657638	Valve Section	1
2	1580155	Kit-Tie Rod (Three Function)	1
2	1580156	Kit-Tie Rod (Four Function)	1
3	15055	Nut	4
4	1578707	Relief Valve (2250 PSI) (Secondary)	1
4	1580131	Kit-Seal	1

NOTES

[illegible]

CONTROL VALVE AND STEERING UNIT ASSEMBLY (FIGURE 9-17) ELECTRONIC CONTROL — THREE FUNCTION



BP140092

CONTROL VALVE AND STEERING UNIT ASSEMBLY
ELECTRONIC CONTROL – THREE FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	2094021	Hydraulic Control Valve	1
	2090917	Hydraulic Control Valve	1
1	1657634	Body (☞Figure 9-19).....	1
2	1657635	Valve Section (☞Figure 9-20).....	1
3	1629198	Valve Section (Auxiliary One) (☞Figure 9-22).....	1
4	1578704	Valve Section (Outlet) (☞Figure 9-24).....	1
5	1629201	Kit-Valve (Lower) (☞Figure 9-21).....	1
6	1629200	Kit-Valve (Lift) (☞Figure 9-21).....	1
7	1657632	Valve Section (Inlet) (☞Figure 9-12).....	1
8	b 2063122	Steering Control Unit	1
8	c 2102566	Steering Control Unit (Alternate Part)	1
	a 1657636	Kit-Valve (Anti Stall)	1
	a 1657631	Kit-Capscrew	1
	a 1578715	Kit-Tie Rod	1

FOOTNOTES:**a** Not Illustrated**c** 9/2007 →**b** → 9/2007

This technical drawing shows an exploded view of a 322233 hydraulic valve assembly. The main body of the valve is labeled with '322233', 'L', 'R', 'P', 'EMR LOWER 1A', 'EF', '9-7 T', and 'LS'. The assembly includes various hydraulic ports, solenoid coils, and a solenoid armature. The numbered callouts indicate the following components:

- 1: Solenoid armature
- 2: Solenoid coil
- 3: Solenoid coil
- 4: Solenoid coil
- 5: Solenoid armature
- 6: Solenoid coil
- 7: Solenoid coil
- 8: Solenoid armature
- 9: Solenoid coil

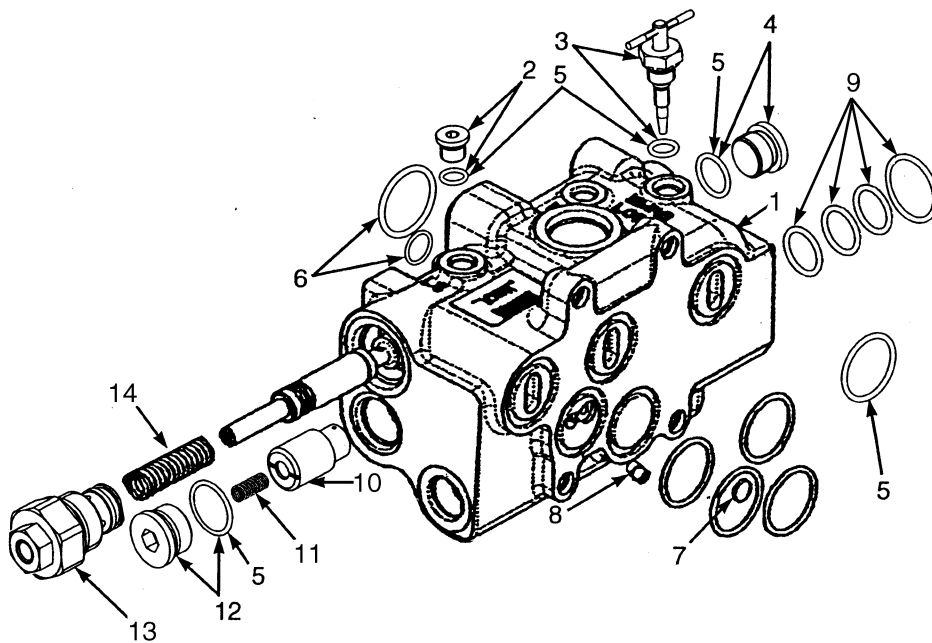
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CONTROL VALVE AND STEERING UNIT ASSEMBLY
ELECTRONIC CONTROL – FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	2094022	Hydraulic Control Valve	1
	2090919	Hydraulic Control Valve	1
1	1657634	Body (☞Figure 9-19).....	1
2	1657635	Valve Section (☞Figure 9-20).....	1
3	1629198	Valve Section (Auxiliary One) (☞Figure 9-22).....	1
4	1633693	Valve Section (Auxiliary Two and Three) (☞Figure 9-23).....	1
5	1578704	Valve Section (Outlet) (☞Figure 9-24).....	1
6	1629201	Kit-Valve (Lower) (☞Figure 9-21).....	1
7	1629200	Kit-Valve (Lift) (☞Figure 9-21).....	1
8	1657632	Valve Section (Inlet) (☞Figure 9-12).....	1
9	b 2063122	Steering Control Unit	1
9	c 2102566	Steering Control Unit (Alternate Part)	1
	a 1657636	Kit-Valve (Anti Stall)	1
	a 1580151	Kit-Tie Rod	1
	a 1657631	Kit-Capscrew	1

FOOTNOTES:**a** Not Illustrated**c** 9/2007 →**b** → 9/2007

VALVE ASSEMBLY, LIFT AND LOWER (FIGURE 9-19) ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION



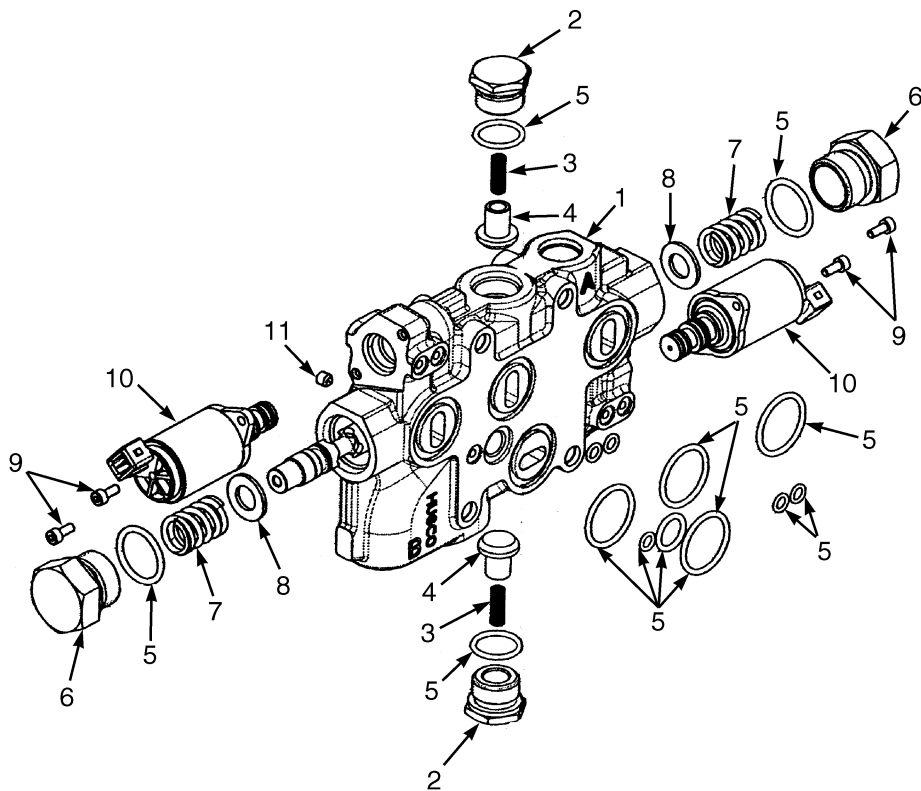
BP140095

VALVE ASSEMBLY, LIFT AND LOWER
ELECTRONIC CONTROL VALVE – THREE AND FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
1	1657634	Body	1
2	1578712	Plug	1
2	204128	Plug	1
3	1581862	Kit-Valve (Manual Lowering)	1
4	1629210	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	1586279	Kit-Seal (Electro Hydraulic Poppet Valve)	AR
10	1586280	Poppet	1
11	1578876	Spring	1
12	1578714	Plug	1
13	1578706	Relief Valve (Main)	1
13	1580132	Kit-Relief Valve	1
14	1658065	Spring	1
	b 1578909	Kit-Seal	1
	a 1578908	Kit-Seal	1

FOOTNOTES:**a** Four Function Only**b** Three Function Only

TILT SECTION (FIGURE 9-20) ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION

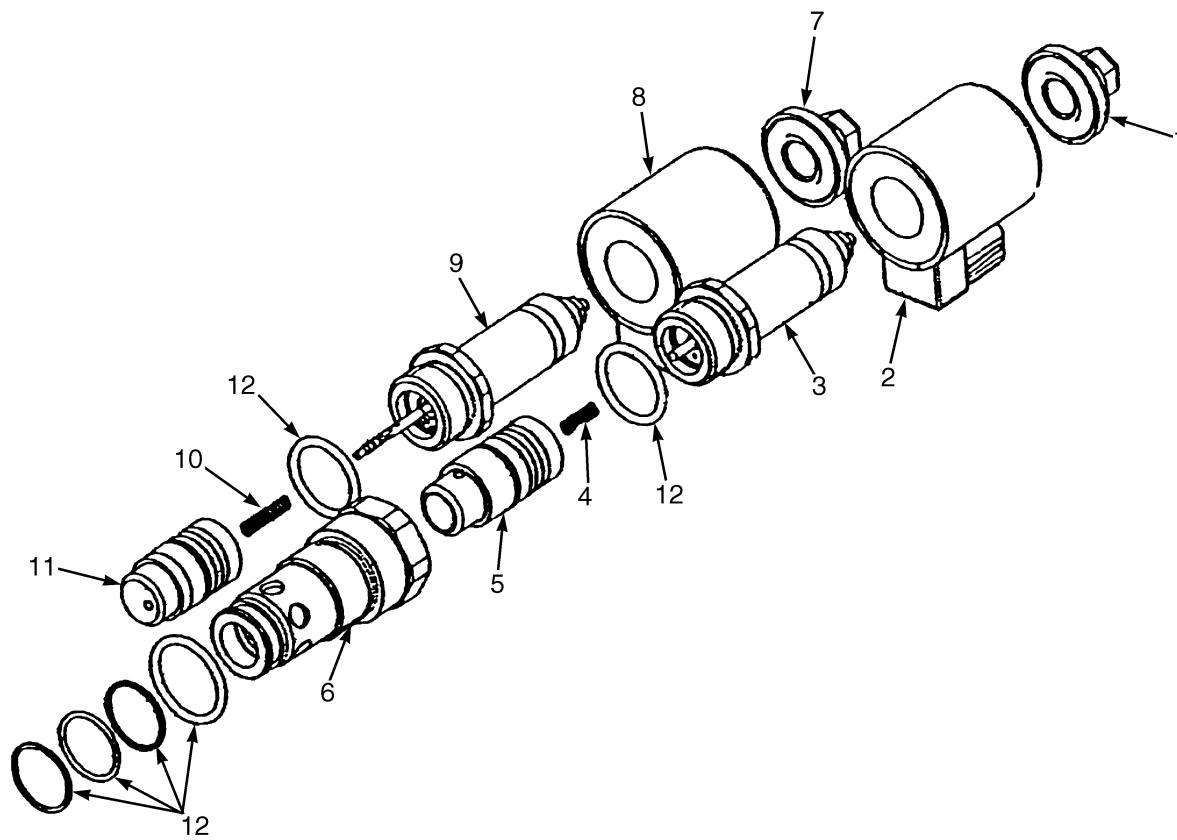


BP140096

TILT SECTION
ELECTRONIC CONTROL VALVE – THREE AND FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
1	1657635	Valve Section	1
2	1578713	Plug	2
3	77442	Spring	2
4	77443	Poppet	2
5	1578905	Kit-Seal (Tilt)	1
6	1578889	Plug	2
7	1578882	Spring	2
8	1578883	Washer	2
9	1578878	Capscrew	4
10	1578711	Valve	2
10	1578912	Kit-Seal (Pressure Reducing Valve)	1
11	1578887	Setscrew	1
	b 1578909	Kit-Seal	1
	a 1578908	Kit-Seal	1

FOOTNOTES:**a** Four Function Only**b** Three Function Only

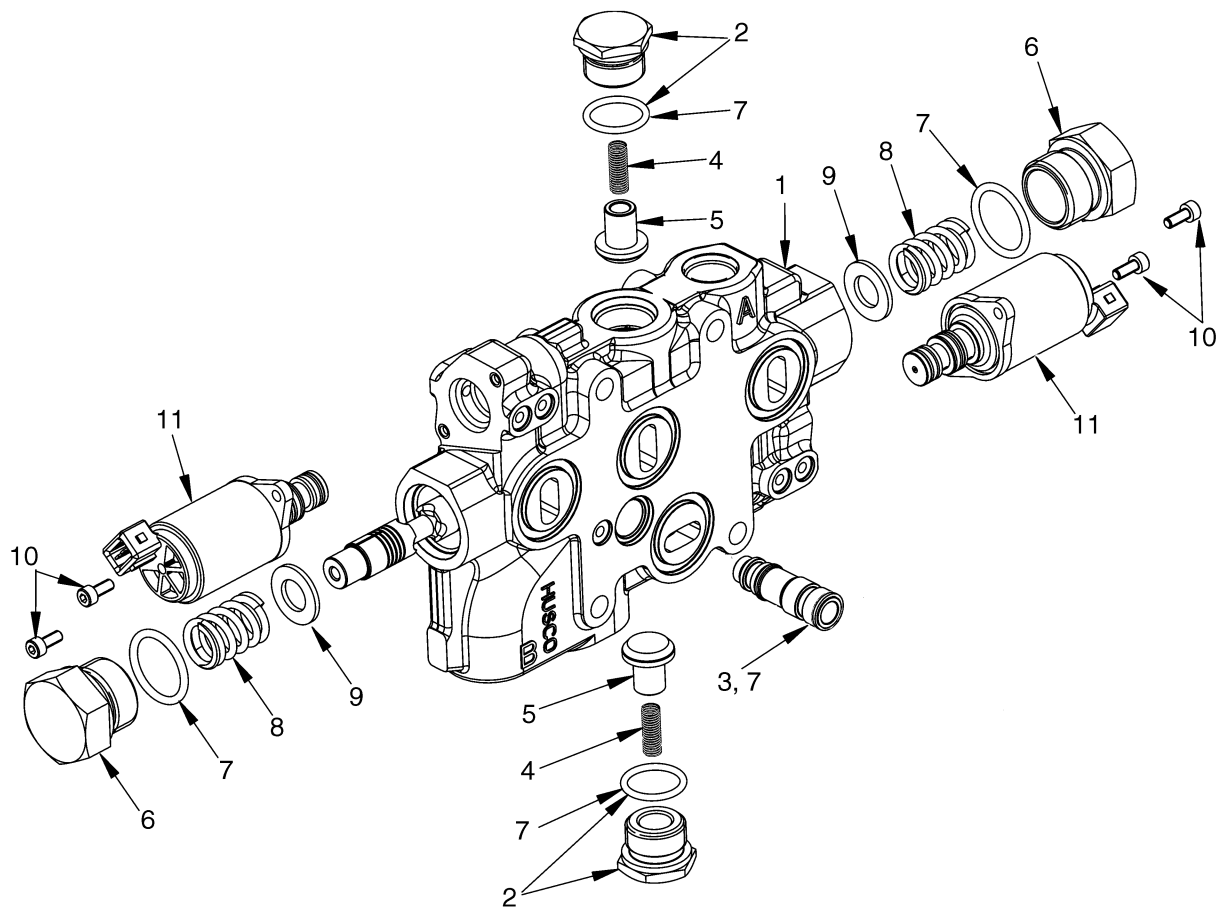
**ELECTRO HYDRAULIC POPPET VALVE (FIGURE 9-21)
ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION**

BP140098

ELECTRO HYDRAULIC POPPET VALVE
ELECTRONIC CONTROL VALVE – THREE AND FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
	1629201	Kit-Valve (Lower)	1
1	1629163	Nut	1
2	1578710	Coil	1
3	1629160	Tube (Solenoid)	1
4	1629165	Spring	1
5	1629159	Poppet Valve	1
6	1586020	Sleeve	1
	1629200	Kit-Valve (Lift)	1
7	1629163	Nut	1
8	1629162	Coil	1
9	1629161	Tube Assy (Solenoid)	1
10	1629164	Spring	1
11	1629158	Poppet Valve	1
12	1586279	Kit-Seal (Electro Hydraulic Poppet Valve)	1

AUXILIARY ONE SECTION (FIGURE 9-22) ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION



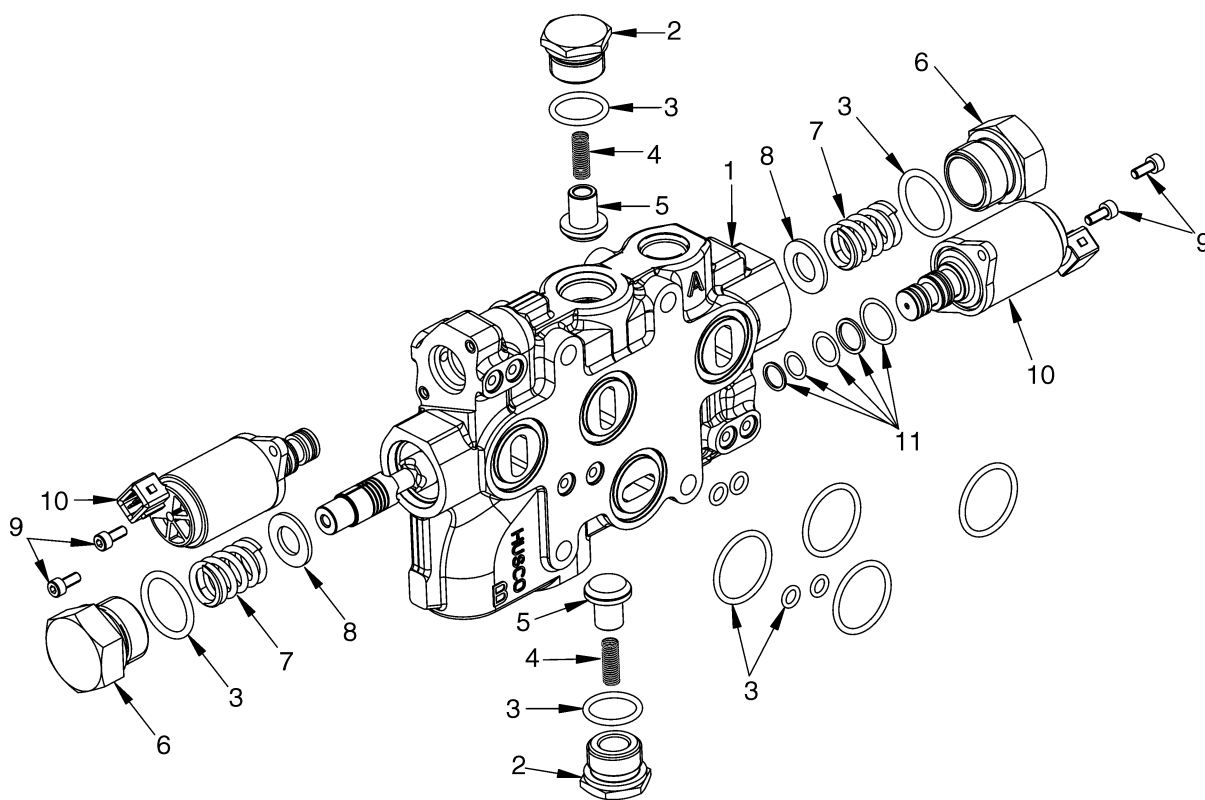
BP140099

AUXILIARY ONE SECTION
ELECTRONIC CONTROL VALVE – THREE AND FOUR FUNCTION

ITEM	PART NO.	DESCRIPTION	QTY
1	1629198	Valve Section (Auxiliary One)	1
2	1578713	Plug (Tilt/Auxiliary)	1
2	1578714	Plug (Lift)	1
3	1578718	Cartridge Valve	1
3	1578886	Spring	1
3	1629166	Sleeve	1
3	266519	O-Ring	2
4	77442	Spring	1
5	77443	Poppet	1
6	1578889	Plug	2
7	1578906	Kit-Seal (Auxiliary One Section)	1
8	1578882	Spring	2
9	1578883	Washer	2
10	1578878	Capscrew	4
11	1578711	Valve	2
	1578912	Kit-Seal (Pressure Reducing Valve)	1
	b 1578909	Kit-Seal	1
	a 1578908	Kit-Seal	1

FOOTNOTES:**a** Four Function Only**b** Three Function Only

AUXILIARY TWO SECTION (FIGURE 9-23) ELECTRONIC CONTROL VALVE — FOUR FUNCTION



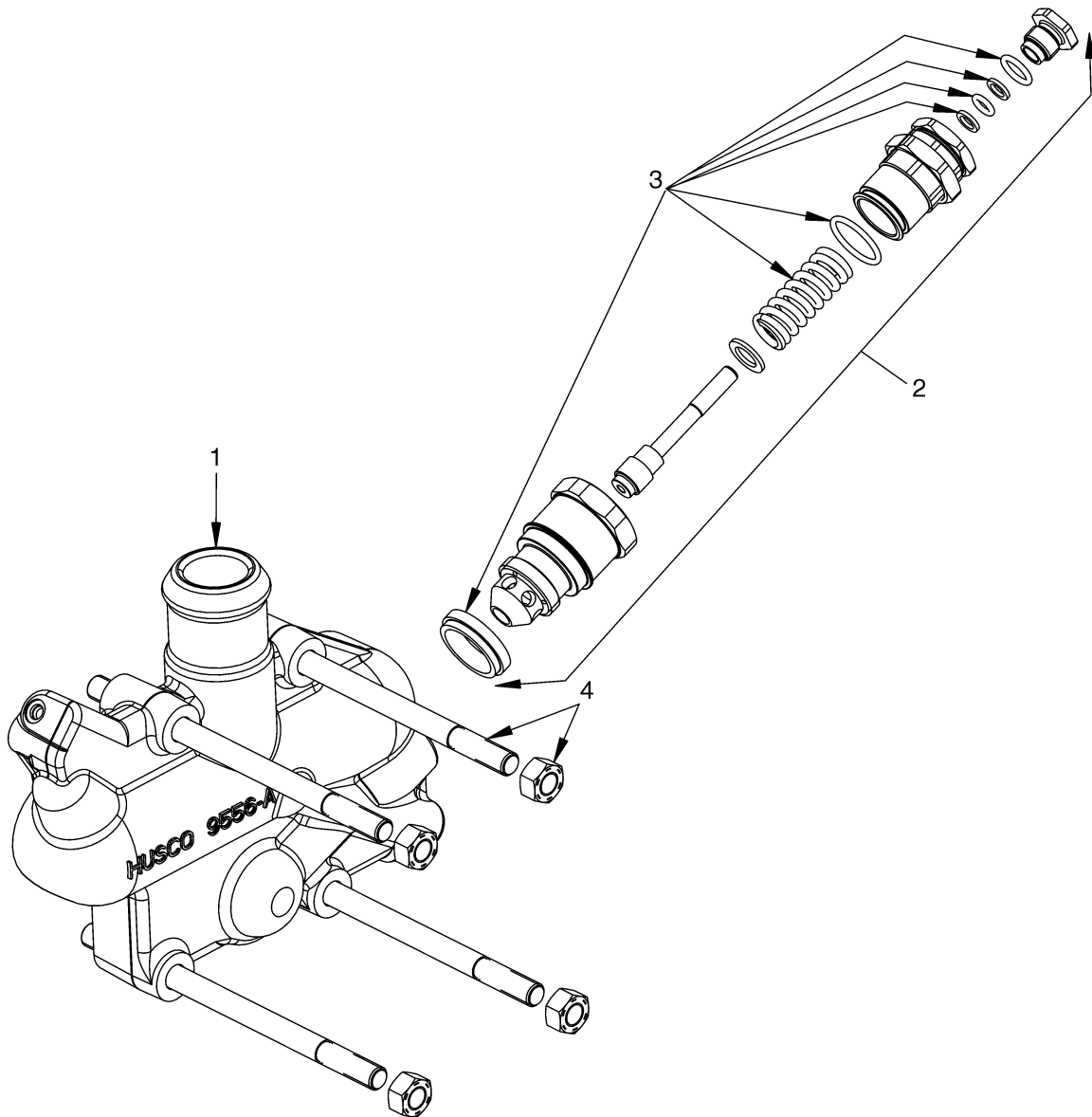
**AUXILIARY TWO SECTION
ELECTRONIC CONTROL VALVE – FOUR FUNCTION**

ITEM	PART NO.	DESCRIPTION	QTY
1	1633693	Valve Section	1
2	1578713	Plug (Tilt/Auxiliary)	1
2	1578714	Plug (Lift)	1
3	1578907	Kit-Seal	1
4	77442	Spring	2
5	77443	Poppet	2
6	1578889	Plug	2
7	1578882	Spring	2
8	1578883	Washer	2
9	1578878	Capscrew	4
10	1578711	Valve	2
	a 1578912	Kit-Seal (Pressure Reducing Valve)	1
	1578908	Kit-Seal	1

FOOTNOTES:

a Not Illustrated

OUTLET SECTION (FIGURE 9-24) ELECTRONIC CONTROL VALVE — THREE AND FOUR FUNCTION

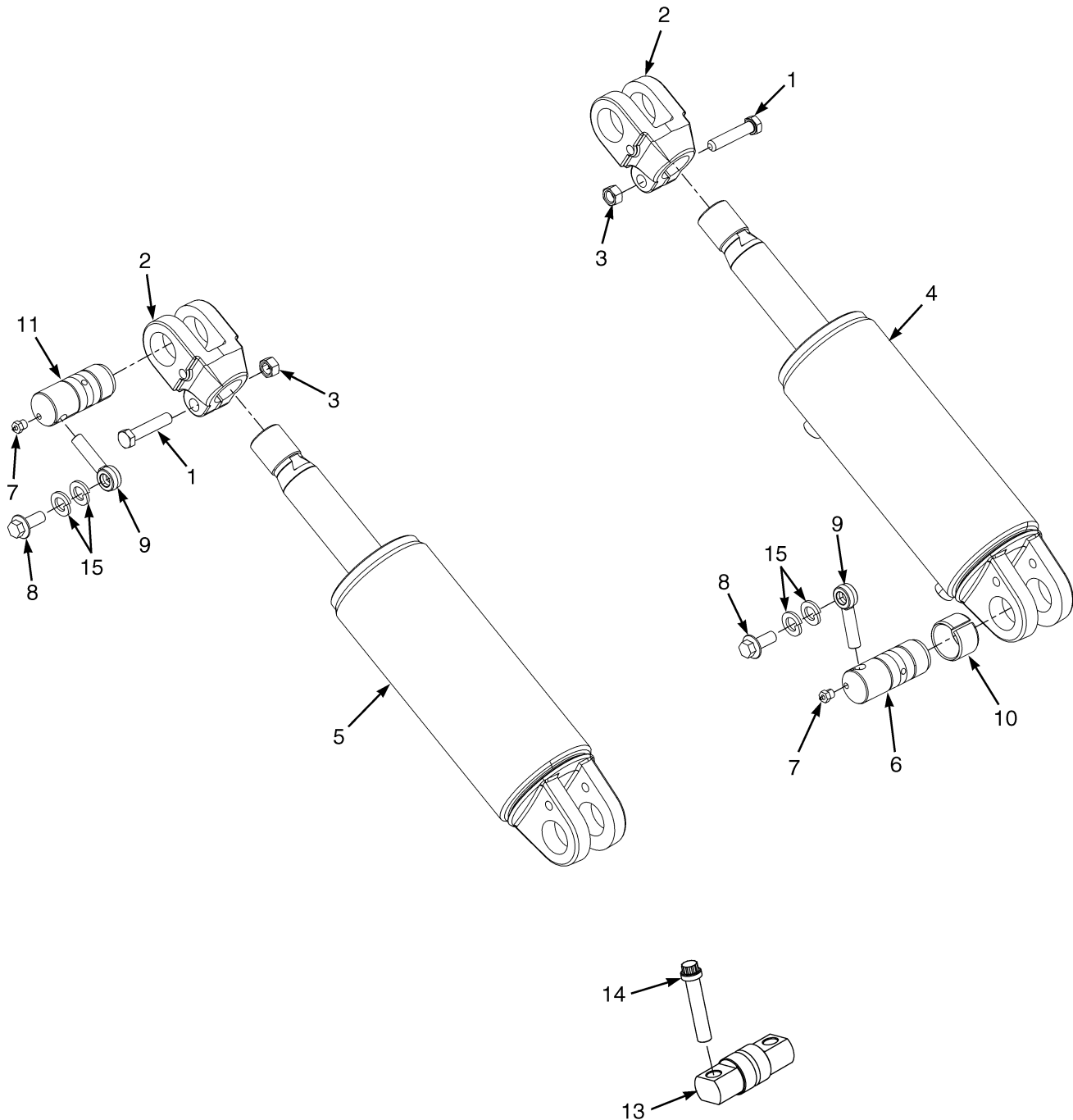


BP140075

OUTLET SECTION
ELECTRONIC CONTROL VALVE – THREE AND FOUR FUNCTION

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

TILT CYLINDER AND MAST INSTALLATION (FIGURE 9-25)

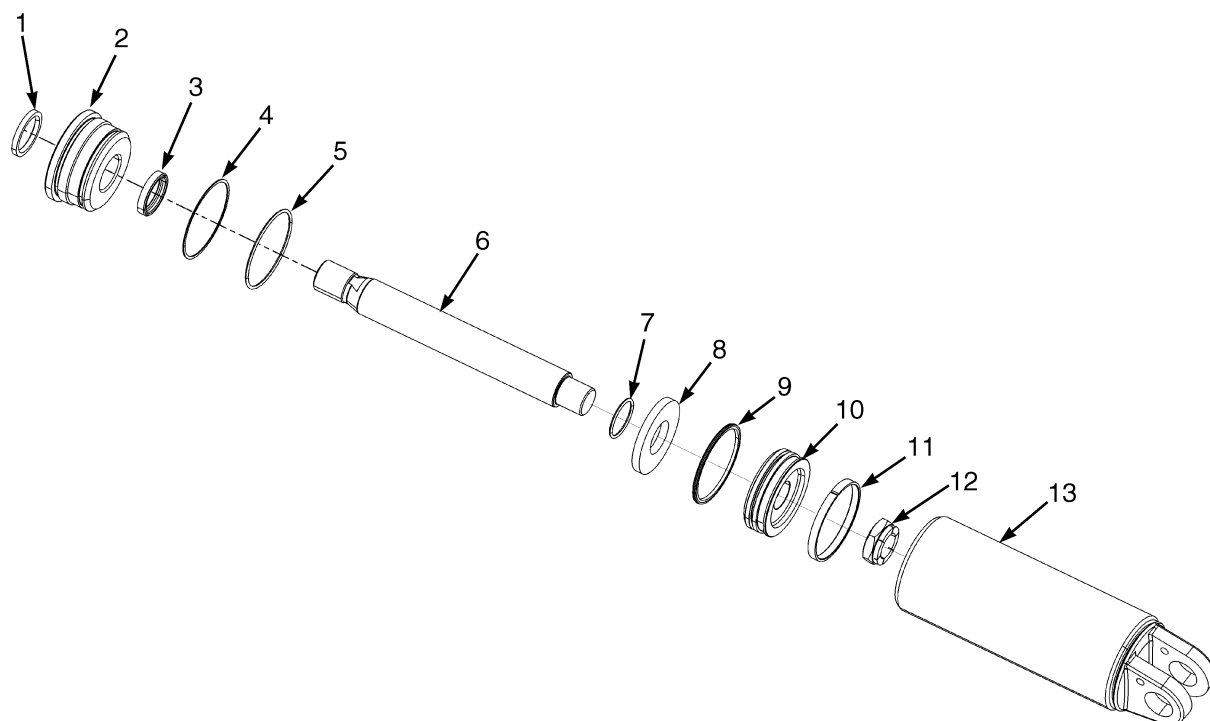


BP150208

TILT CYLINDER AND MAST INSTALLATION

ITEM	PART NO.	DESCRIPTION	QTY
1	1597381	Capscrew	2
1	1581592	Capscrew (Alternate Part)	2
2	1566792	Rod End (Three Stage)	2
3	1581848	Nut	2
3	1581849	Nut (Alternate Part)	2
4	b 2082826	Tilt Cylinder (RH) (☞ Figure 9-26).....	1
4	a 2082827	Tilt Cylinder (RH) (☞ Figure 9-26).....	1
5	b 2090626	Tilt Cylinder (LH) (☞ Figure 9-26).....	1
5	a 2090627	Tilt Cylinder (LH) (☞ Figure 9-26).....	1
6	1611572	Pin	2
7	16001	Grease Fitting	4
8	1615240	Capscrew	4
9	241079	Anchor	2
10	1611728	Bushing	2
11	1570303	Pin	2
12	1581564	Lockwasher	4
13	1611571	Pin	2
14	293730	Capscrew	4

FOOTNOTES:**a** 5° Forward/10° Back**b** 5° Forward/6° Back

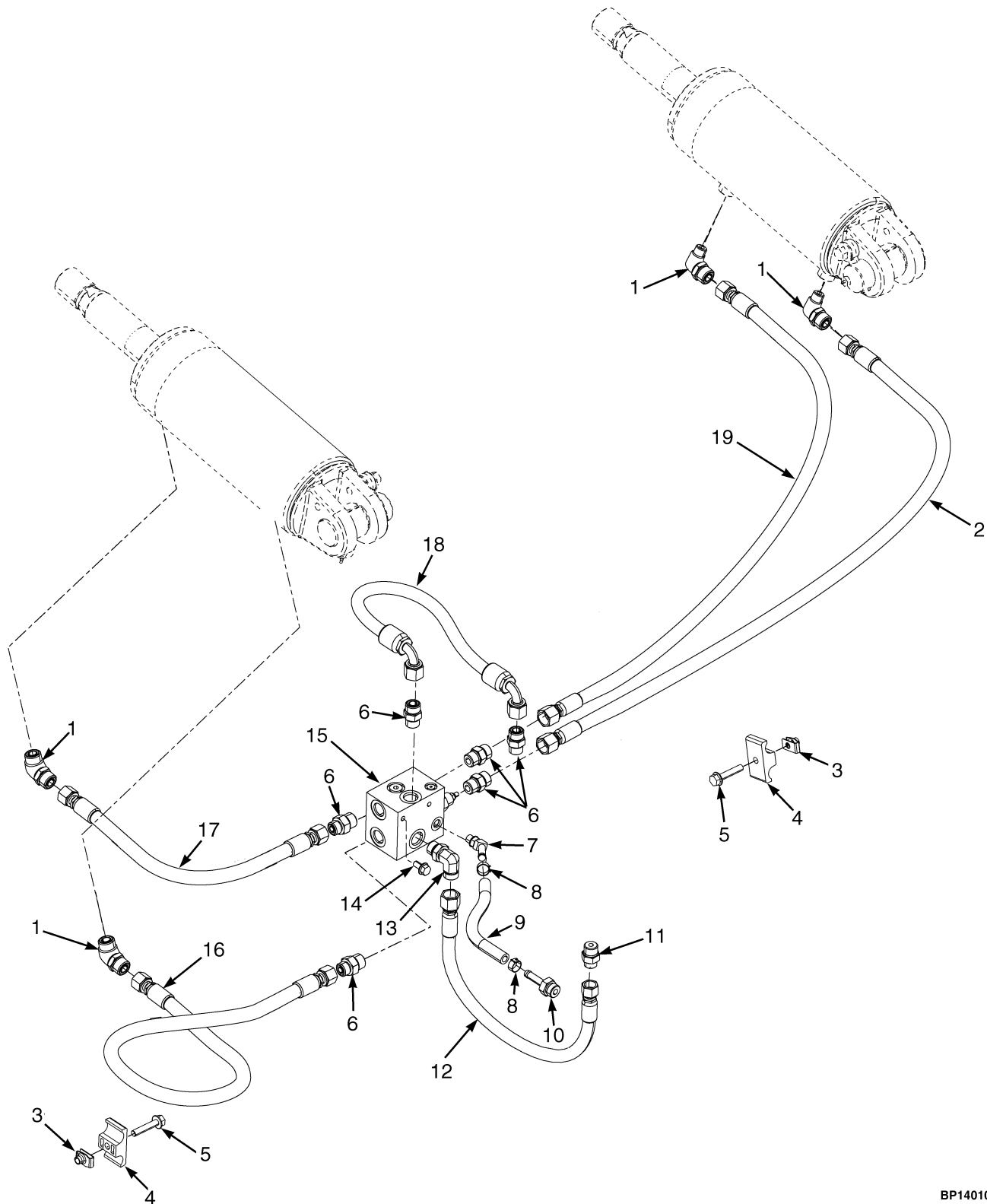
TILT CYLINDERS (FIGURE 9-26)

BP150197

TILT CYLINDERS**KEY:****A: 5 Degrees Forward/6 Degrees Back****B: 5 Degrees Forward/10 Degrees Back**

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	2090626	Tilt Cylinder (LH)	1	..
	2090627	Tilt Cylinder (LH)	..	1
	2082826	Tilt Cylinder (RH)	1	..
	2082827	Tilt Cylinder (RH)	..	1
1	193554	Rod Wiper	1	1
2	289969	End Plug	1	1
2	1706804	Gland (Alternate Part)	1	1
3	1381085	Rod Seal	1	1
4	1329756	Back-Up Ring	1	1
5	92482	O-Ring	1	1
5	92482	O-Ring (Alternate Part)	2	2
6	2098244	Cylinder Rod	1	..
6	2098245	Cylinder Rod	..	1
7	199082	O-Ring	1	1
8	2095852	Spacer	1	..
9	2044821	Piston Seal	1	1
10	239182	Wear Ring	1	1
11	289968	Piston	1	1
12	2036547	Locknut	1	1
13	1612451	Tube Wldmt-Cylinder (RH)	1	..
13	1612453	Tube Wldmt-Cylinder (LH)	1	..
13	1612452	Tube Wldmt-Cylinder (RH)	..	1
13	1612454	Tube Wldmt-Cylinder (LH)	..	1
	1494726	Kit-Seal	1	1

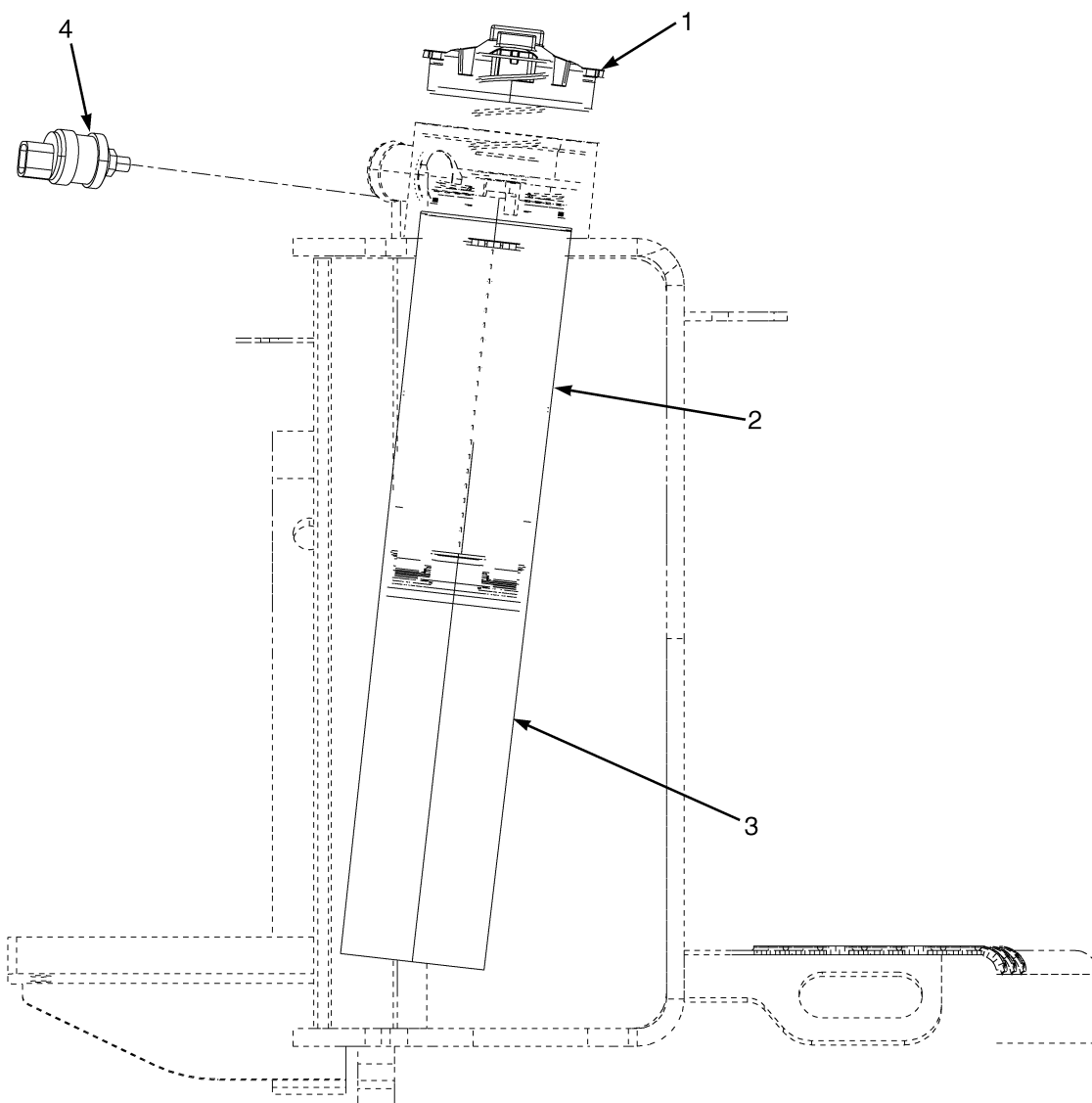
TILT HYDRAULICS (FIGURE 9-27)



BP140101

TILT HYDRAULICS

ITEM	PART NO.	DESCRIPTION	QTY
1	1487063	Fitting	4
1	265787	O-Ring	1
1	16483	O-Ring	1
2	2091584	Hose Assy	1
3	1480237	Nut	2
4	1605479	Hose Clamp (Dual Hose)	2
5	1586627	Capscrew	2
6	1473887	Fitting	6
6	265731	O-Ring	1
6	16484	O-Ring	1
7	222500	Fitting	1
8	353198	Clamp	2
9	2095409	Hose	1
10	1650229	Fitting	1
10	16484	O-Ring	1
11	1486742	Fitting	1
11	265787	O-Ring	1
11	16484	O-Ring	1
12	2091573	Hose Assy	1
13	1473897	Fitting	1
13	265731	O-Ring	1
13	16484	O-Ring	1
14	1527879	Capscrew	2
15	1648772	Valve Block	1
15	2093476	Valve Block	1
15	1648771	Hydraulic Control Valve	1
16	2091583	Hose Assy	1
17	2091582	Hose Assy	1
18	2091581	Hose Assy	1
19	2091585	Hose Assy	1

HYDRAULIC FILTER (FIGURE 9-28)

BP150209

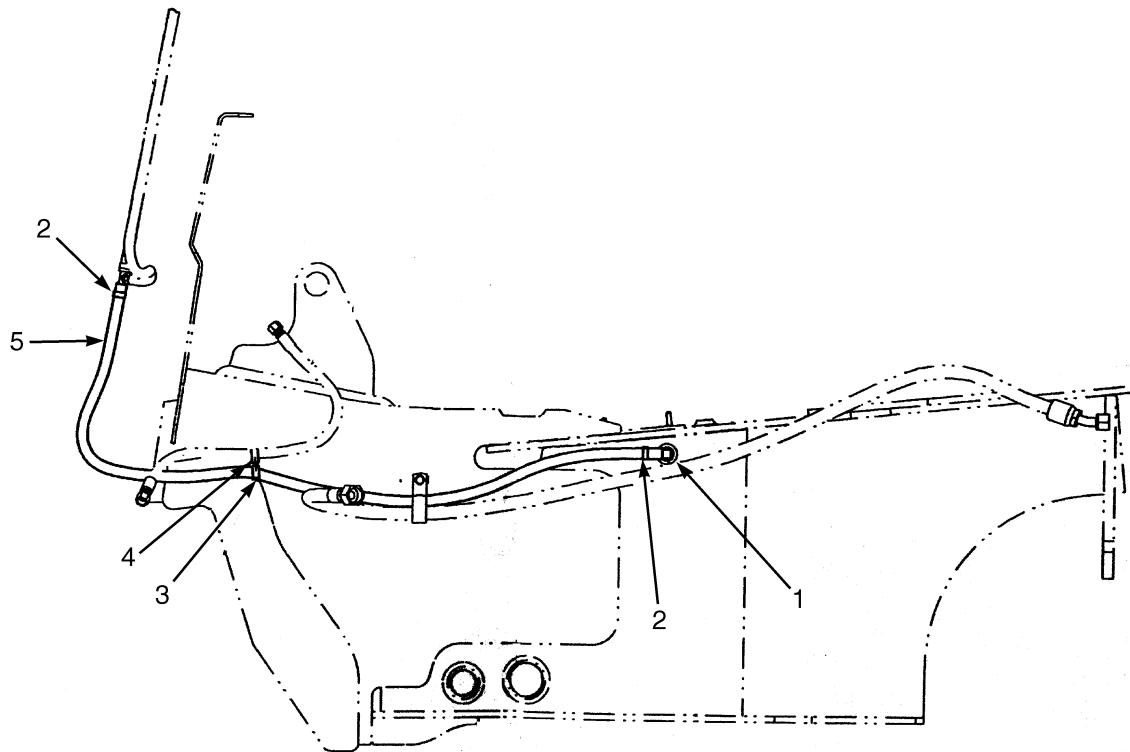
HYDRAULIC FILTER

ITEM	PART NO.	DESCRIPTION	QTY
1	1615173	Cap Assembly	1
1		O-Ring	1
1		Spring	1
2	1615175	Bowl	1
3	1615172	Hydraulic Filter	1
3		O-Ring	1
4	a 2068337	Pressure Switch	1
	1624663	Kit-O-Ring	1

FOOTNOTES:

a With Electronic Monitoring Package

VENT LINES (FIGURE 9-29)

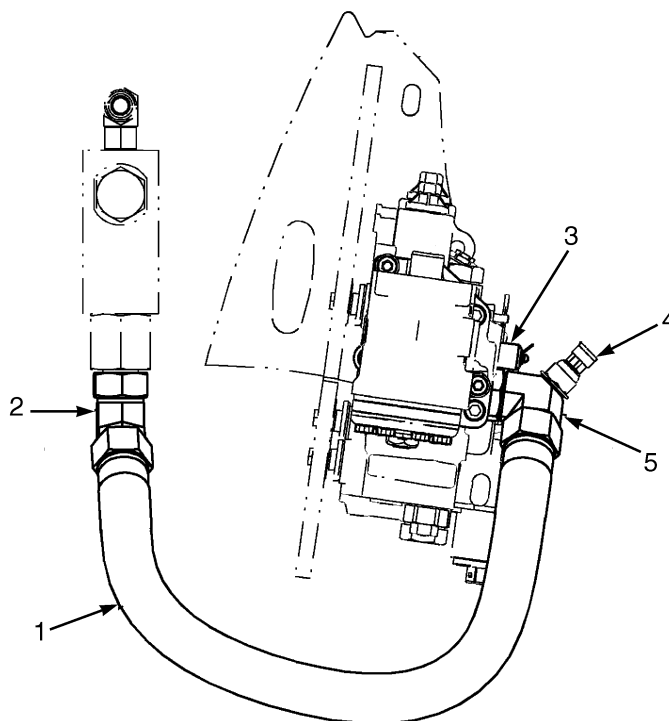


BP150202

ITEM	PART NO.	DESCRIPTION	QTY
1	222502	Fitting	1
1	a 235691	Fitting	1
1	16484	O-Ring	1
2	379405	Clamp	2
3	1502066	Clamp	1
4	1502053	Clamp (Swivel)	1
5	1399083	Hose Assy	1

FOOTNOTES:

a Used for mast removal

HOIST HOSE AND ATTACHING PARTS (FIGURE 9-30)

BP150216

ITEM	PART NO.	DESCRIPTION	QTY
1	2089484	Hose Assy (Electronic Valve)	1
1	a 2089484	Hose Assy (Manual Valve)	1
1	b 2099308	Hose Assy (Manual Valve)	1
2	1605481	Fitting (Swivel)	1
3	2061646	Fitting (Diagnostic)	1
4	1605770	Fitting	1
5	1594869	Fitting	1

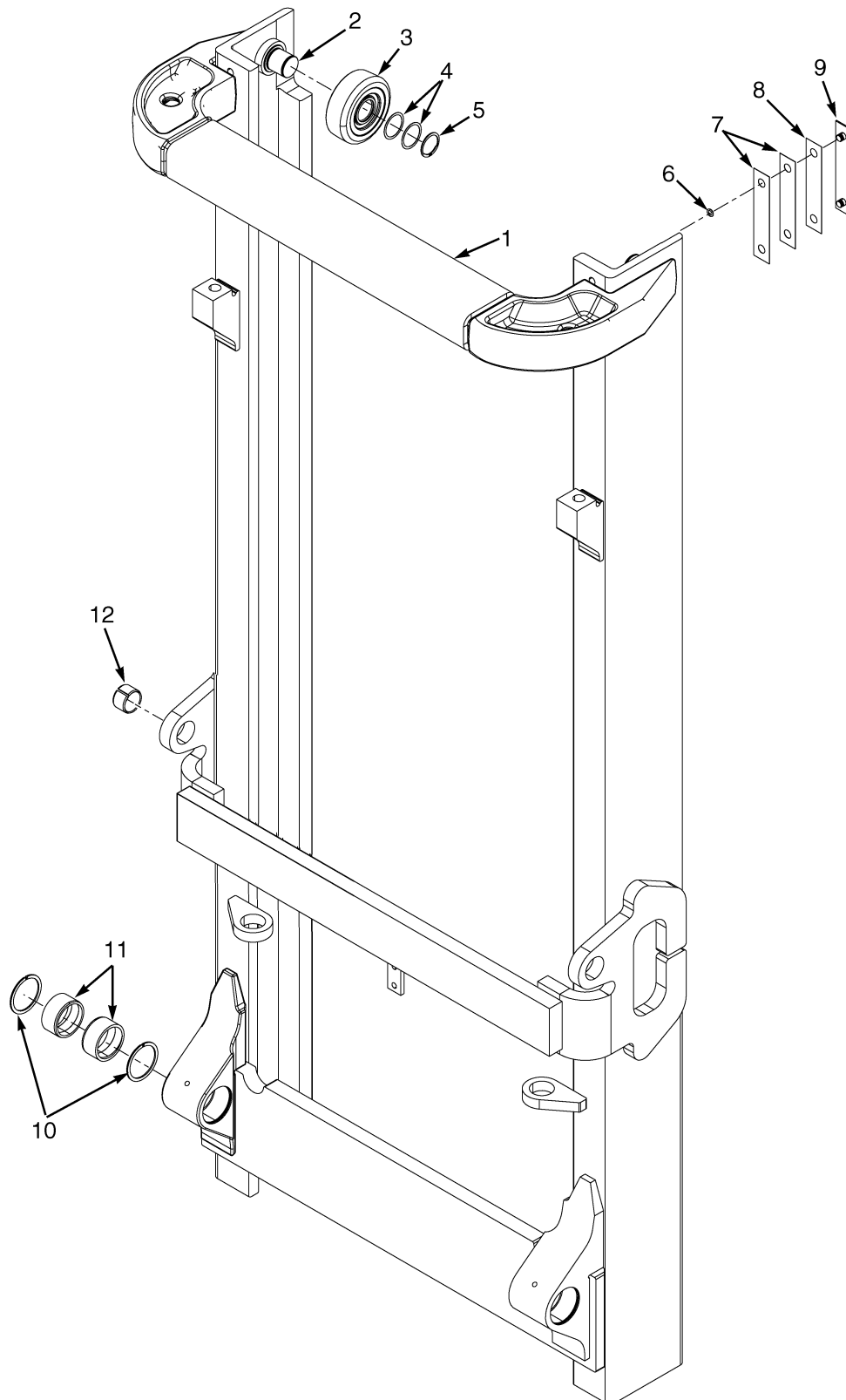
FOOTNOTES:**a** → PENDING PER ECN 104512**b** PENDING PER ECN 104512 →

[illegible]

SECTION 10
MAST-TWO STAGE LIMITED FREE-LIFT

DESCRIPTION	PAGE
AUXILIARY FUNCTION HOSES	10-20
CARRIAGE	
TWO STAGE LIMITED FREE-LIFT - HOOK TYPE	10-12
TWO STAGE LIMITED FREE-LIFT - PIN TYPE	10-14
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MAIN LIFT	
TWO STAGE LIMITED FREE-LIFT	10-6
MAIN LIFT CYLINDER	
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



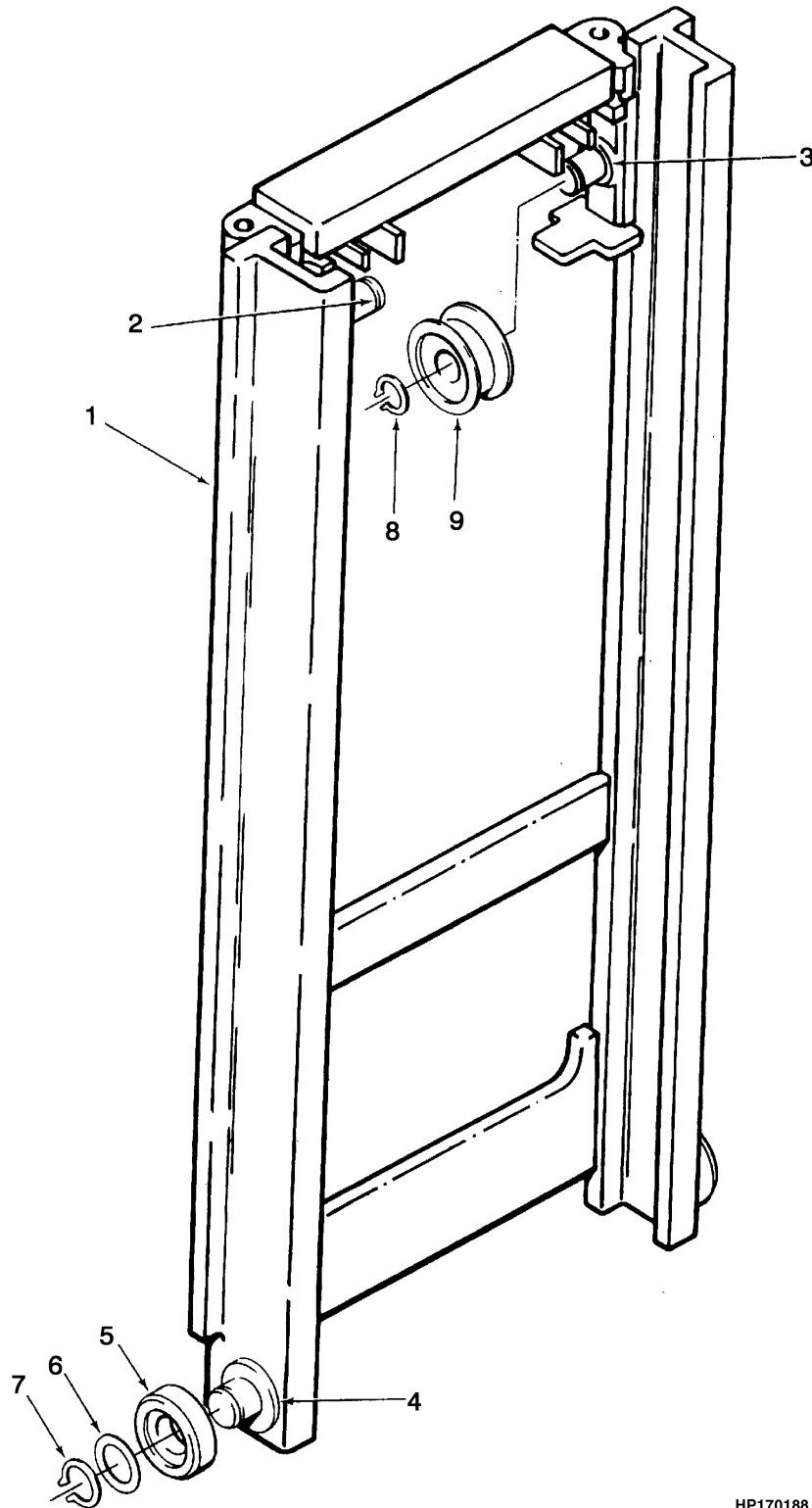
BP170287

**OUTER MAST
TWO STAGE LIMITED FREE-LIFT****A613**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
	Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
	Mast Assy	2092345	2092347	2092352	2092357	2092360
1	Outer Mast	1608931	1608933	1608938	1608943	1608946

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Outer Mast	1
2	341144	Stubshaft	2
3	1333649	Load Roller	2
4	126765	Shim (0.020 in.)	AR
5	187489	Snap Ring	2
6	104506	O-Ring	4
7	161273	Shim (0.020 in.)	4
8	161272	Shim (0.007 in.)	AR
9	104264	Wear Strip	2
10	1611580	Snap Ring	4
11	1611579	Bushing	4
12	192429	Bushing	2

FOOTNOTES:**a** Refer to Table

INNER MAST (FIGURE 10-2)
TWO STAGE LIMITED FREE-LIFT

HP170188

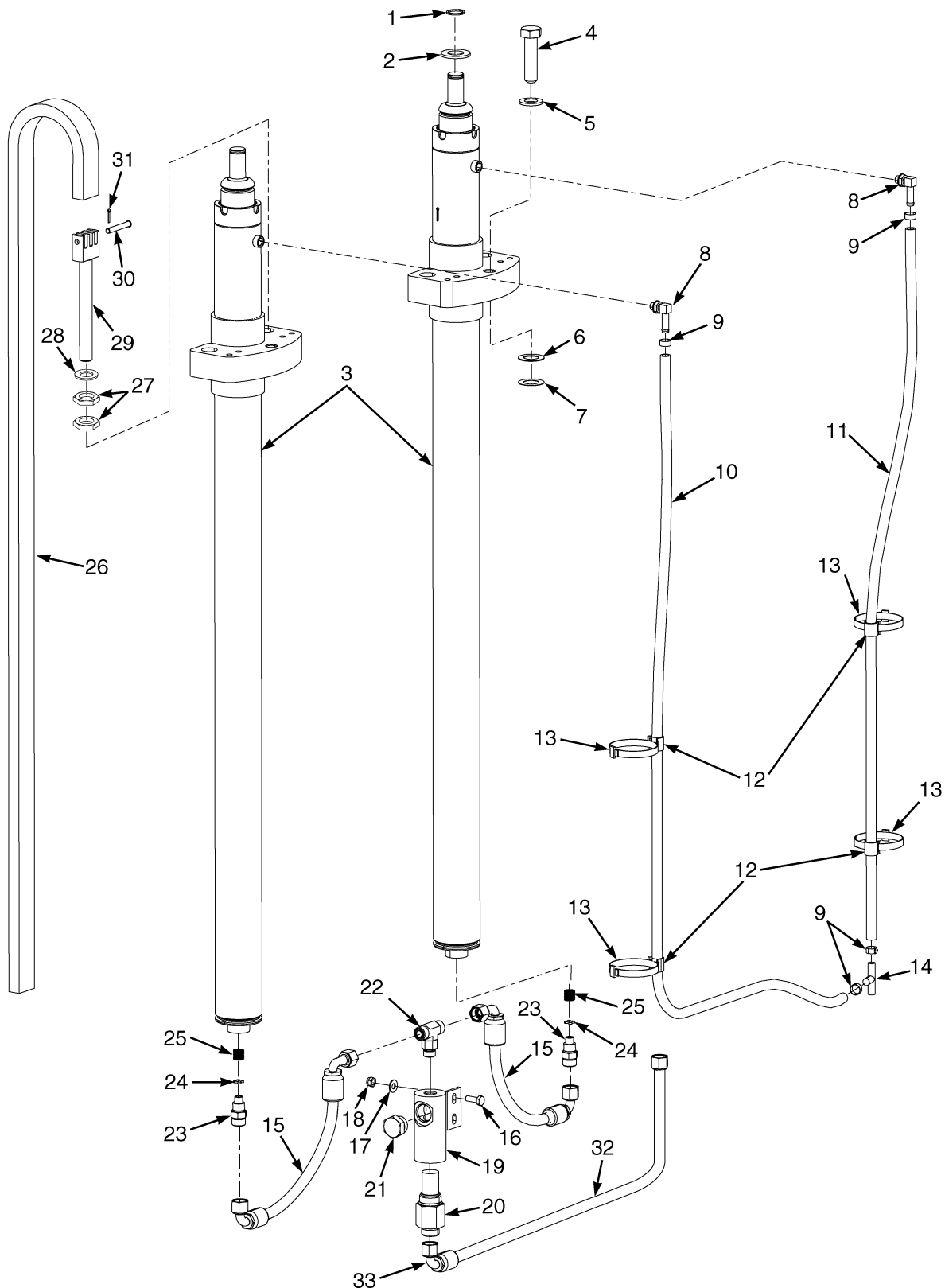
**INNER MAST
TWO STAGE LIMITED FREE-LIFT****A613**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
	Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
	Mast Assy	2092345	2092347	2092352	2092357	2092360
1	Inner Mast	1641126	341117	341118	346961	356582

ITEM	PART NO.	DESCRIPTION	QTY
	b	Mast Assy	1
1	b	Inner Mast	1
2	369431	Stubshaft	1
3	369432	Stubshaft	1
4	341144	Stubshaft	2
5	a 1333649	Load Roller	2
6	126765	Shim (0.020 in.)	AR
7	187489	Snap Ring	2
8	58939	Snap Ring	2
9	346906	Chain Sheave	2

FOOTNOTES:**a** Letter on Inside Face**b** Refer to Table

MAIN LIFT (FIGURE 10-3) TWO STAGE LIMITED FREE-LIFT



BP170298

**MAIN LIFT
TWO STAGE LIMITED FREE-LIFT****A613**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
	Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
10	Hose Assy	1399109	1399117	1399137	1399157	1399174
11	Hose Assy	1399089	1399097	1399117	1399137	1399154
26	Chain	1619425	341123	341124	341053	356593

ITEM	PART NO.	DESCRIPTION	QTY
1	304523	Snap Ring	2
2	1626463	Washer	2
3		Main Cylinder (☞ Figure 10-4).....	2
4	1626460	Capscrew	2
5	1626462	Lockwasher	2
6	134675	Shim	AR
7	1325119	Shim	AR
8	110178	Fitting	2
9	379405	Clamp	4
10	a.....	Hose Assy	1
11	a.....	Hose Assy	1
12	1465585	Hose Clamp	4
13	1360529	Clamp	6
14	2046871	Fitting	1
15	2079065	Hose Assy	2
16	1581587	Capscrew	2
17	1581558	Washer	2
18	1581567	Nut	2
19	1603961	Housing	1
20	2043538	Lowering Control Valve	1
20	16983	O-Ring	1
20	244167	O-Ring	1
21	14604	Plug	1
21	16487	O-Ring	1
22	1532650	Fitting	1
23	1605087	Fitting	4
24	356598	Washer	2
25	388186	Spring	2
26	a.....	Chain	1
27	1626521	Nut	4
28	343946	Kit-Washer	2
29	1331992	Chain Anchor	2
30	1307395	Pin	2
31	15222	Cotter Pin	2
32	b 2092558	Hose Assy	1
32	2102655	Hose Assy	1

FOOTNOTES:

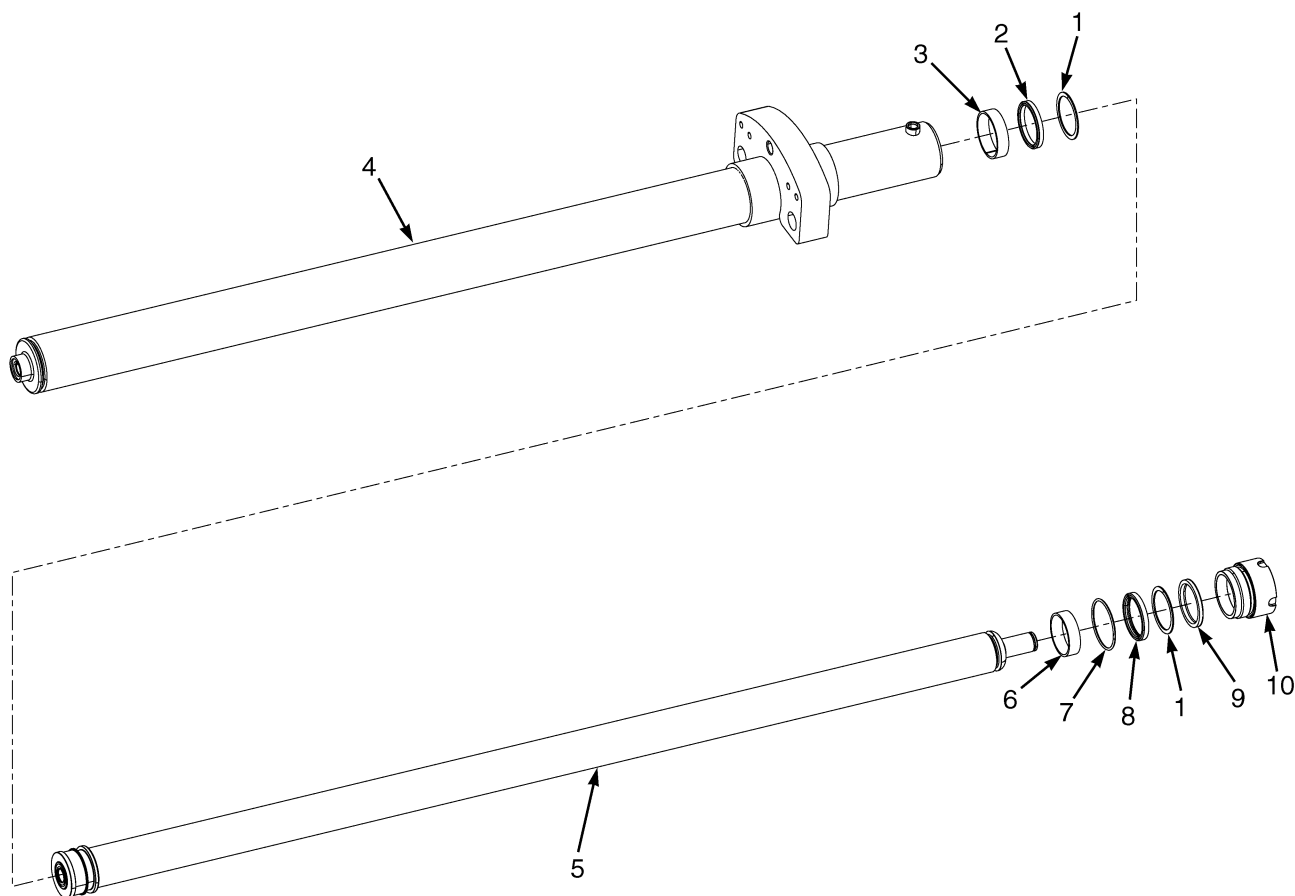
a Refer to Table

b → PENDING PER ECN 104512

NOTES

[illegible]

MAIN LIFT CYLINDER (FIGURE 10-4) TWO STAGE LIMITED FREE-LIFT



BP170274

**MAIN LIFT CYLINDER
TWO STAGE LIMITED FREE-LIFT****A613**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
	Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
	Cylinder Group Number	8609104	8609106	8609111	8609116	8609119
	Cylinder Assy	2086035	2086037	2086042	2086047	2086050
4	Tube Wldmt- Cylinder	2086006	2086008	2086031	2086017	2086020
5	Cylinder Rod	2085967	2085969	2085974	2085979	2085982

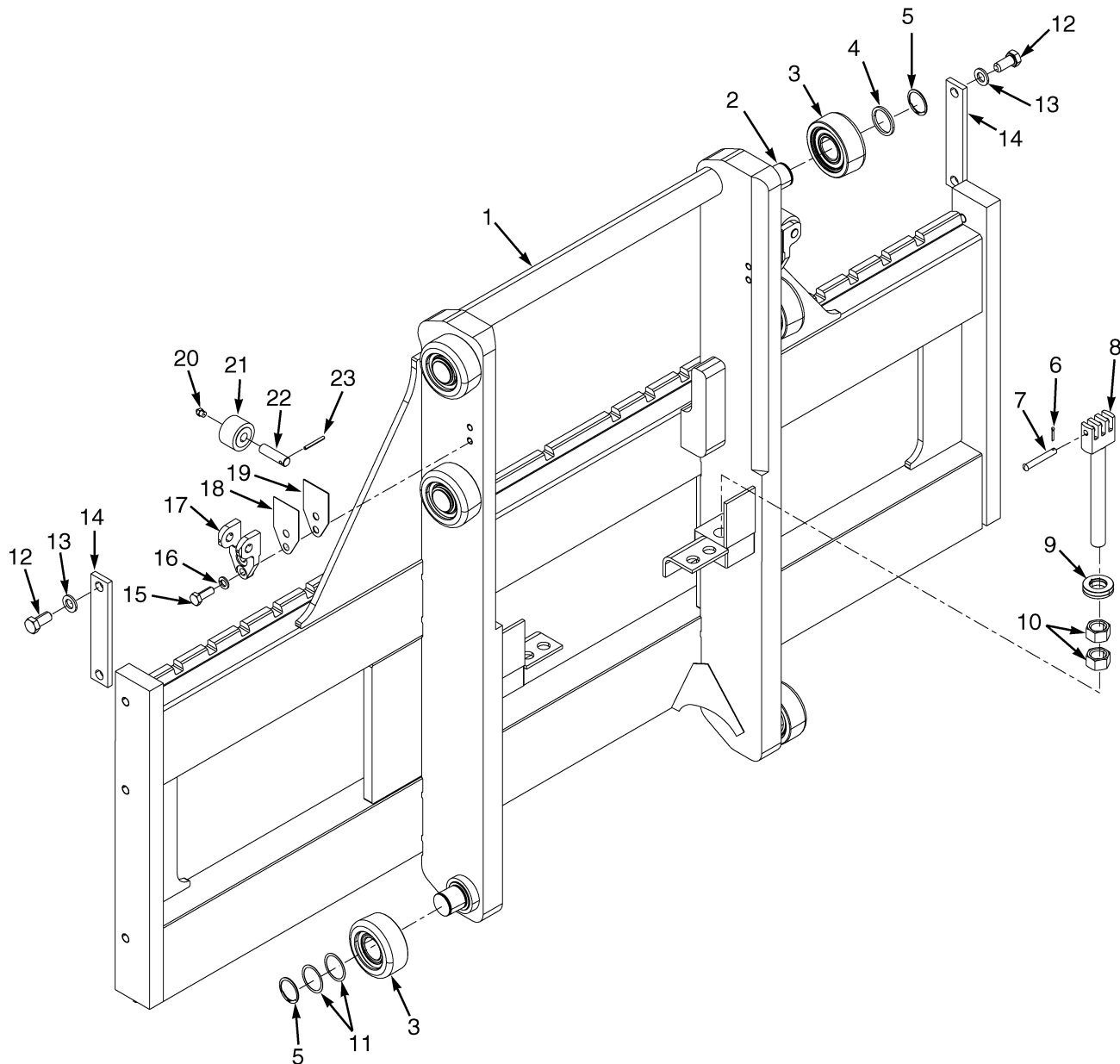
ITEM	PART NO.	DESCRIPTION	QTY
	b	Cylinder Assy	2
1	637565	Back-Up Ring	2
2	309062	Rod Seal	2
3	215345	Wear Ring	1
4	b	Tube Wldmt-Cylinder	1
5	b	Cylinder Rod	1
6	316513	Wear Ring	1
7	15880	O-Ring	1
8	2032492	Seal	1
9	1383071	Rod Wiper	1
10	1618463	Gland	1
	ac 332569	Spacer	1
	2096469	Kit-Seal	1

FOOTNOTES:

- a** Not Illustrated
b Refer to Table

- c** Used with 5940 mm Lift Height

CARRIAGE (FIGURE 10-5) TWO STAGE LIMITED FREE-LIFT — HOOK TYPE



BP170290

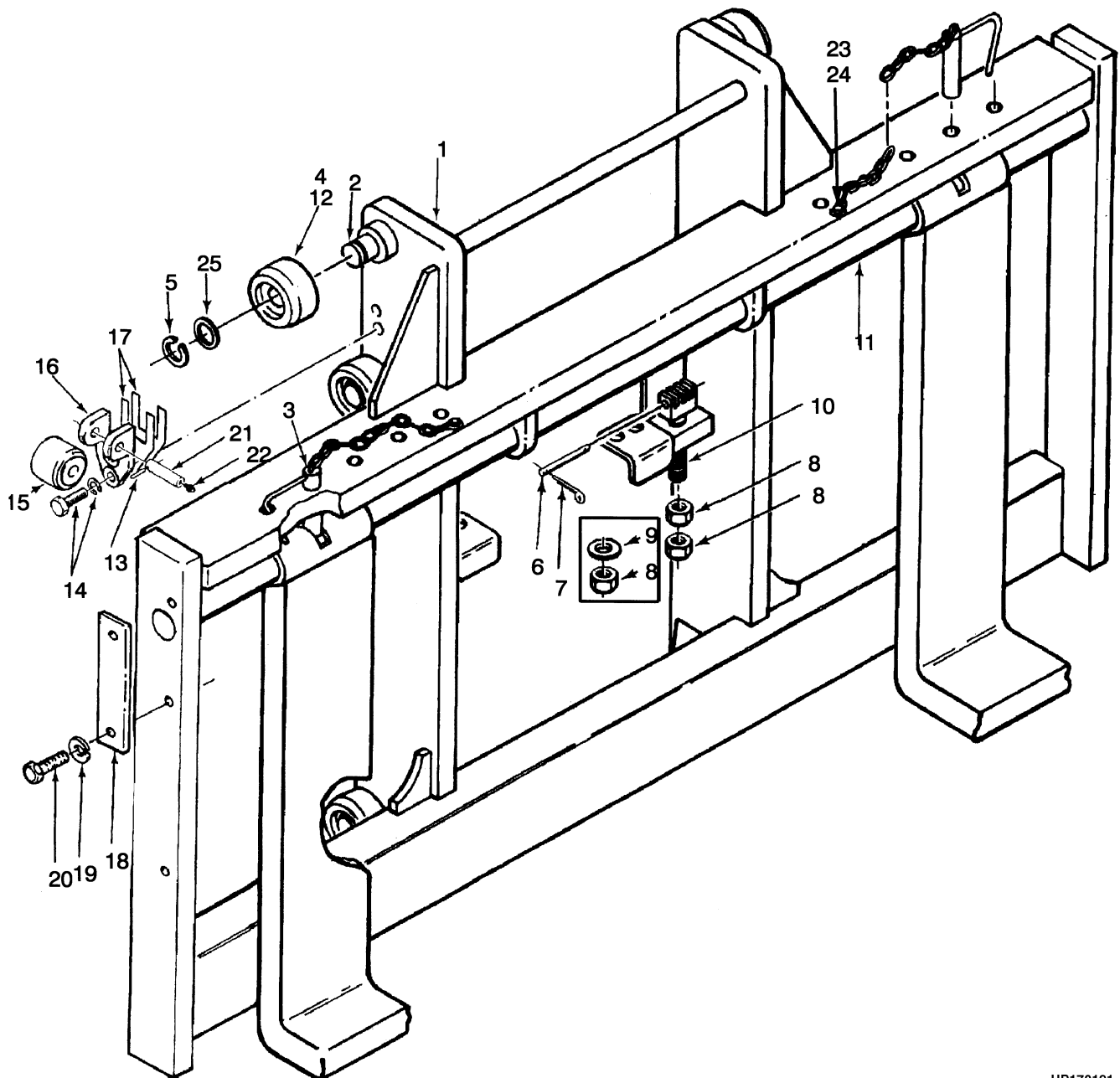
CARRIAGE

TWO STAGE LIMITED FREE-LIFT – HOOK TYPE

ITEM	PART NO.	DESCRIPTION	QTY
	2094241	Carriage	1
	2093493	Carriage (Alternate Part)	1
1	1649308	Carriage Wldmt	1
1	1639785	Carriage (Alternate Part)	1
2	341144	Stubshaft	6
3	a 1333648	Load Roller	6
4	366116	Spacer	2
5	187489	Snap Ring	6
6	15222	Cotter Pin	2
7	1307395	Pin	2
8	1331992	Chain Anchor	2
9	343946	Kit-Washer	2
10	1650840	Nut	4
11	126765	Shim (0.020 in.)	AR
12	1581833	Capscrew	4
13	1581854	Washer	4
14	66468	Plate	2
15	b 292528	Capscrew	4
16	b 292683	Lockwasher	4
17	b 244008	Bracket	2
18	b 192424	Shim (0.030 in.)	AR
19	b 192425	Shim (0.062 in.)	AR
20	b 16001	Grease Fitting	2
21	b 244005	Side Roller	2
22	b 244009	Pin	2
23	b 66333	Roll Pin	2

FOOTNOTES:**a** Letter on Inside Face**b** with Attachments

CARRIAGE (FIGURE 10-6) TWO STAGE LIMITED FREE-LIFT — PIN TYPE



HP170191

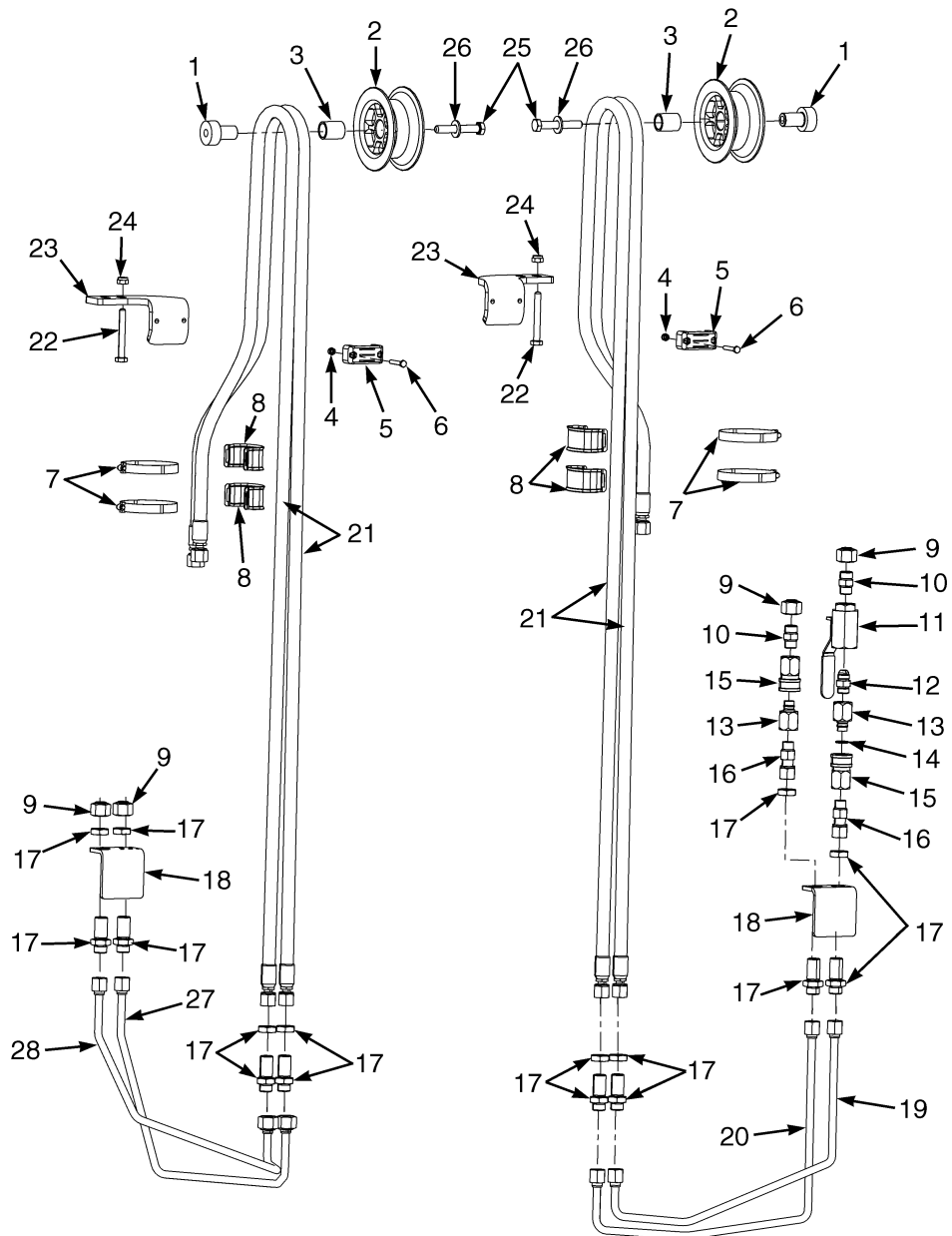
CARRIAGE

TWO STAGE LIMITED FREE-LIFT – PIN TYPE

ITEM	PART NO.	DESCRIPTION	QTY
	1318162	Carriage (78 in.)	1
1	1318167	Carriage Wldmt	1
2	341144	Stubshaft	6
3	1331269	Pin	2
4	126765	Shim (0.020 in.)	AR
5	187489	Snap Ring	6
6	1307395	Pin	2
7	15222	Cotter Pin	2
8	293723	Nut	4
9	343946	Kit-Washer	2
10	1331992	Chain Anchor	2
11	1330064	Pin	2
12	a 1333648	Load Roller (0.060 in.)	AR
13	b 66333	Roll Pin	2
14	b 292528	Capscrew	4
14	b 292683	Lockwasher	4
15	b 244005	Side Roller	2
16	b 244008	Bracket	2
17	b 192424	Shim (0.030 in.)	AR
17	b 192425	Shim (0.062 in.)	AR
18	66468	Plate	2
19	292685	Lockwasher	4
20	226458	Capscrew	4
21	b 244009	Pin	2
22	b 16001	Grease Fitting	2
23	292513	Capscrew	2
24	296420	Washer	2
25	366116	Spacer	2

FOOTNOTES:**a** Letter on Inside Face**b** Optional

HEADER HOSES AND AUXILIARY TUBE (FIGURE 10-7) TWO STAGE LIMITED FREE-LIFT



BP170291

**HEADER HOSES AND AUXILIARY TUBE
TWO STAGE LIMITED FREE-LIFT****A613**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS				
		2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
		A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
	Mast Assy	2092345	2092347	2092352	2092357	2092360
21	Hose Assy	2088538	2088540	2088545	2088550	2088551

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

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	a	Mast Assy	1	1
1	357529	Stubshaft	1	2
2	1495279	Hose Sheave	1	2
3	332057	Bushing	1	2
4	1581565	Nut	2	4
5	2035791	Hose Clamp	1	2
6	1581578	Capscrew	2	4
7	1360508	Clamp	2	4
8	1465489	Hose Clamp	2	4
9	1529016	Fitting	2	4
10	b 1473887	Fitting	2	2
10	16484	O-Ring	1	1
10	265731	O-Ring	1	1
11	b 2087565	Drain Valve	1	1
12	b 16541	Fitting	1	1
12	16484	O-Ring	1	1
13	b 1377954	Fitting	2	2
14	b 16484	O-Ring	1	1
15	b 1377953	Quick Disconnect Fitting	2	2
16	1622610	Fitting	2	2
16	265731	O-Ring	1	1
17	816591	Fitting	4	6
17	265731	O-Ring	1	1
18	1646850	Bracket	1	2
19	2095000	Tube Assy	..	1
20	2095001	Tube Assy	..	1
21	a	Hose Assy	2	4
22	1626461	Capscrew	2	4
23	1605444	Bracket (RH)	1	1
23	1605443	Bracket (LH)	..	1
24	1581567	Nut	2	4
25	1581593	Capscrew	1	2
26	1581853	Washer	1	2
27	2094999	Tube Assy	1	..

**HEADER HOSES AND AUXILIARY TUBE
TWO STAGE LIMITED FREE-LIFT****KEY:****A:** Three function**B:** Four Function

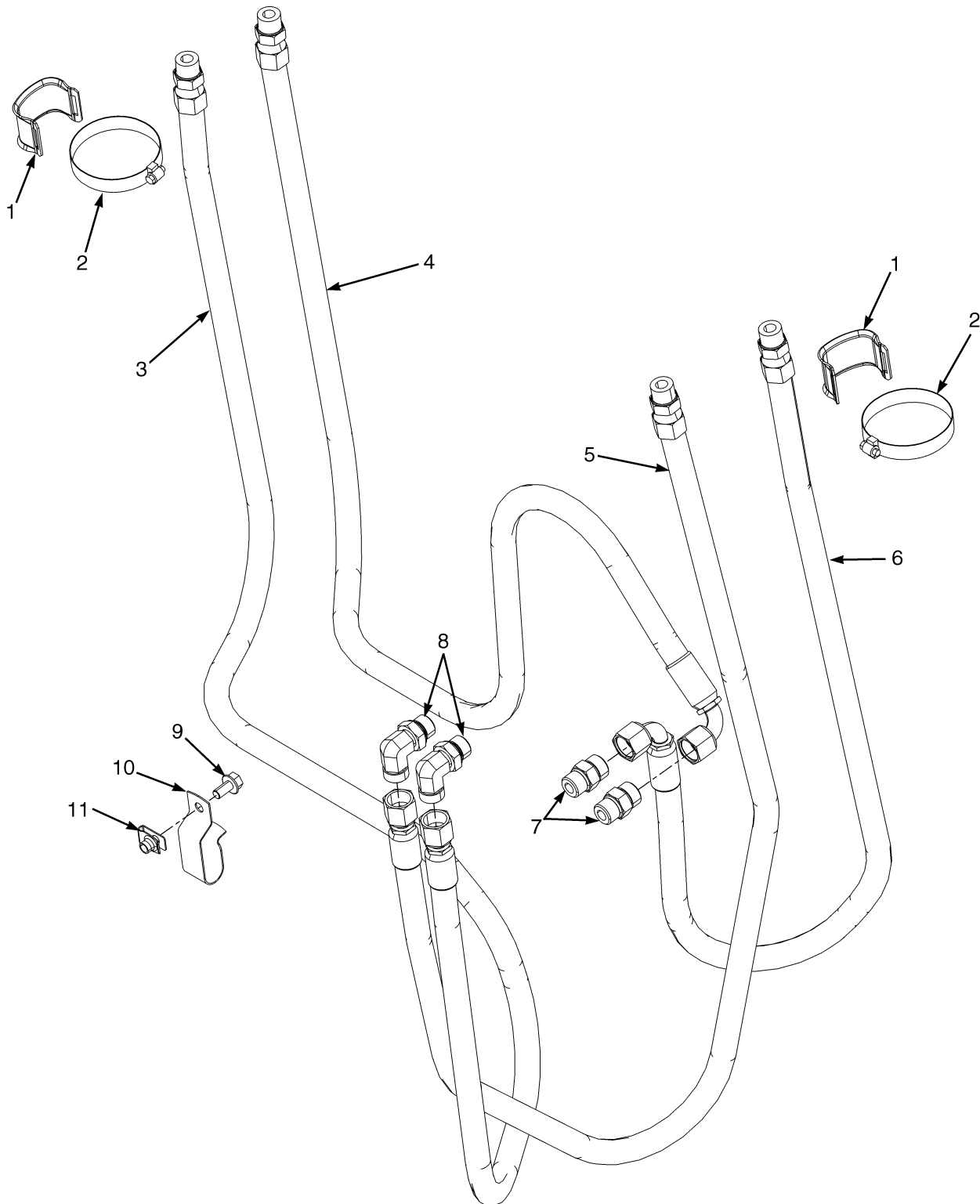
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
28	2094998	Tube Assy	1	..

FOOTNOTES:**a** Refer to Table**b** With Quick Disconnect Fittings

NOTES

This image shows a blank 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.

AUXILIARY FUNCTION HOSES (FIGURE 10-8)



BP150287

AUXILIARY FUNCTION HOSES**KEY:****A: Three Function****B: Four Function**

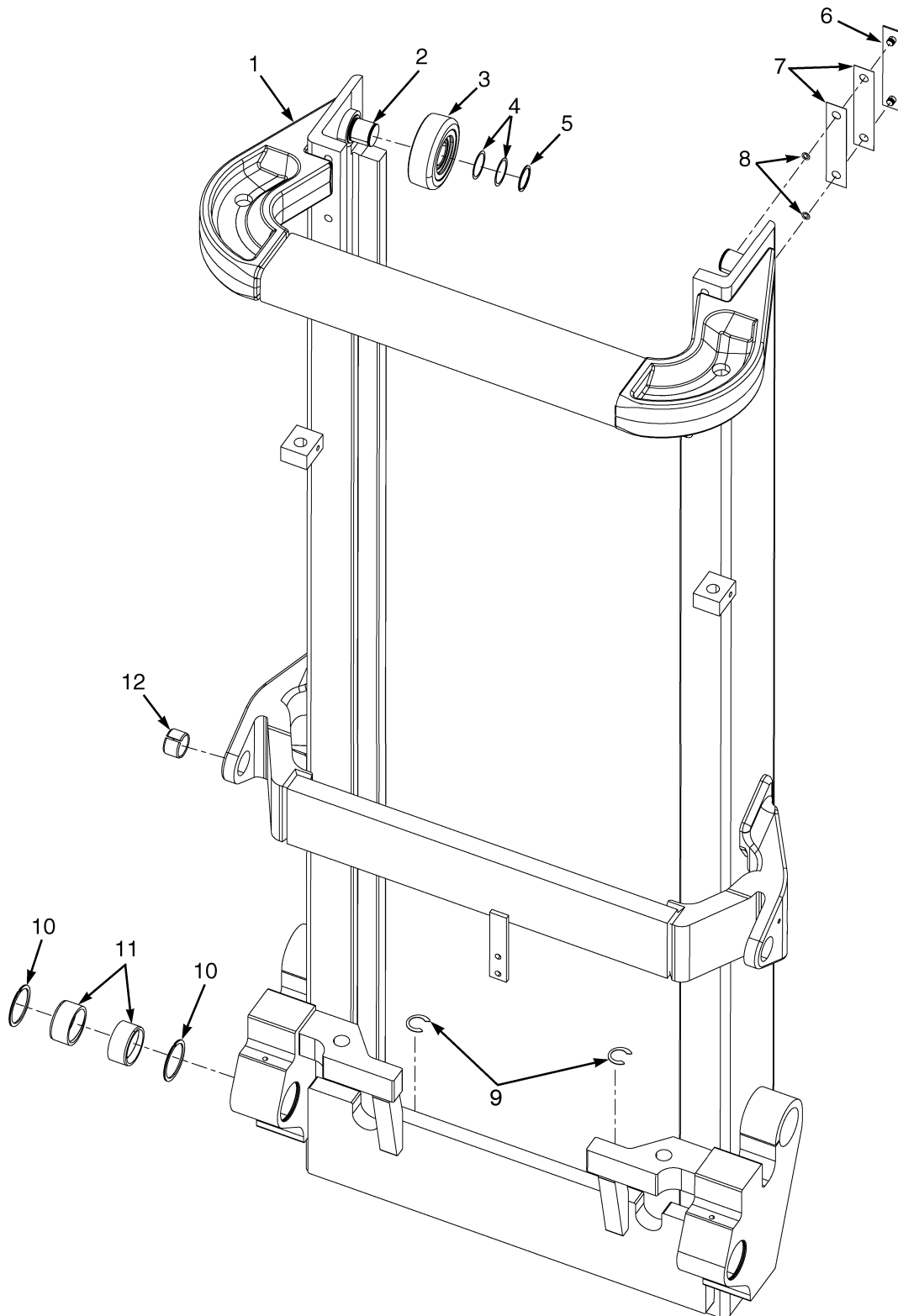
ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1502809	Hose Clamp	1	1
2	1360508	Clamp	1	1
3	2092396	Hydraulic Hose Asm	..	1
4	2092397	Hydraulic Hose Asm	..	1
5	2076301	Hydraulic Hose Asm (4th Function)	1	..
6	2076302	Hydraulic Hose Asm (3rd Function)	1	..
7	1473887	Fitting	1	1
8	1473897	Fitting	1	1
9	1527879	Capscrew	..	1
10	1544157	Clip	..	1
11	1480237	Nut	..	1

[illegible]

SECTION 11
MAST-THREE STAGE FULL FREE-LIFT

DESCRIPTION	PAGE
CARRIAGE	
THREE STAGE FULL FREE-LIFT - HOOK TYPE	11-20
THREE STAGE FULL FREE-LIFT - PIN TYPE	11-22
FREE-LIFT	
THREE STAGE FULL FREE-LIFT	11-16
FREE-LIFT CYLINDER	
THREE STAGE FULL FREE-LIFT	11-18
HEADER HOSES AND AUXILIARY TUBE	
THREE STAGE FULL FREE-LIFT	11-24
INNER MAST	
THREE STAGE FULL FREE-LIFT	11-6
INTERMEDIATE MAST	
THREE STAGE FULL FREE-LIFT	11-4
MAIN LIFT	
THREE STAGE FULL FREE-LIFT	11-8
MAIN LIFT CYLINDERS	
THREE STAGE FULL FREE-LIFT	11-12
OUTER MAST	
THREE STAGE FULL FREE-LIFT	11-2

OUTER MAST (FIGURE 11-1) THREE STAGE FULL FREE-LIFT



BP170288

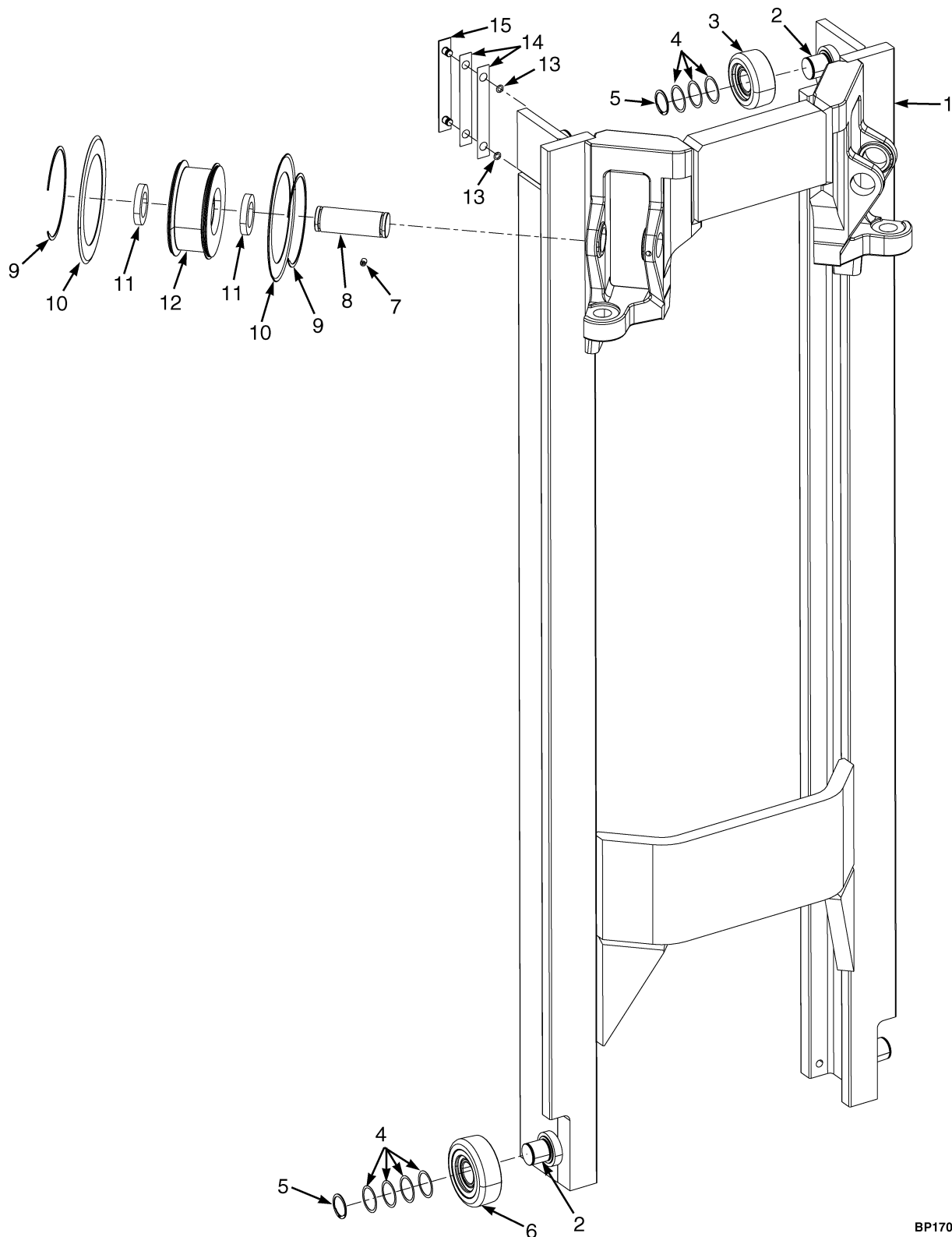
**OUTER MAST
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
	Mast Assy	2092372	2092375	2092377
1	Outer Mast	1608961	1608964	1608966

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Outer Mast	1
2	341144	Stubshaft	2
3	1333649	Load Roller	2
4	126765	Shim (0.020 in.)	AR
5	187489	Snap Ring	2
6	104264	Wear Strip	2
7	161273	Shim (0.020 in.)	AR
8	104506	O-Ring	2
9	1344753	Shim	AR
9	1307300	Electrical Connector (E-ring)	AR
10	1611580	Snap Ring	4
11	1611579	Bushing	4
12	192429	Bushing	2

FOOTNOTES:**a** Refer to Table

INTERMEDIATE MAST (FIGURE 11-2) THREE STAGE FULL FREE-LIFT



BP170278

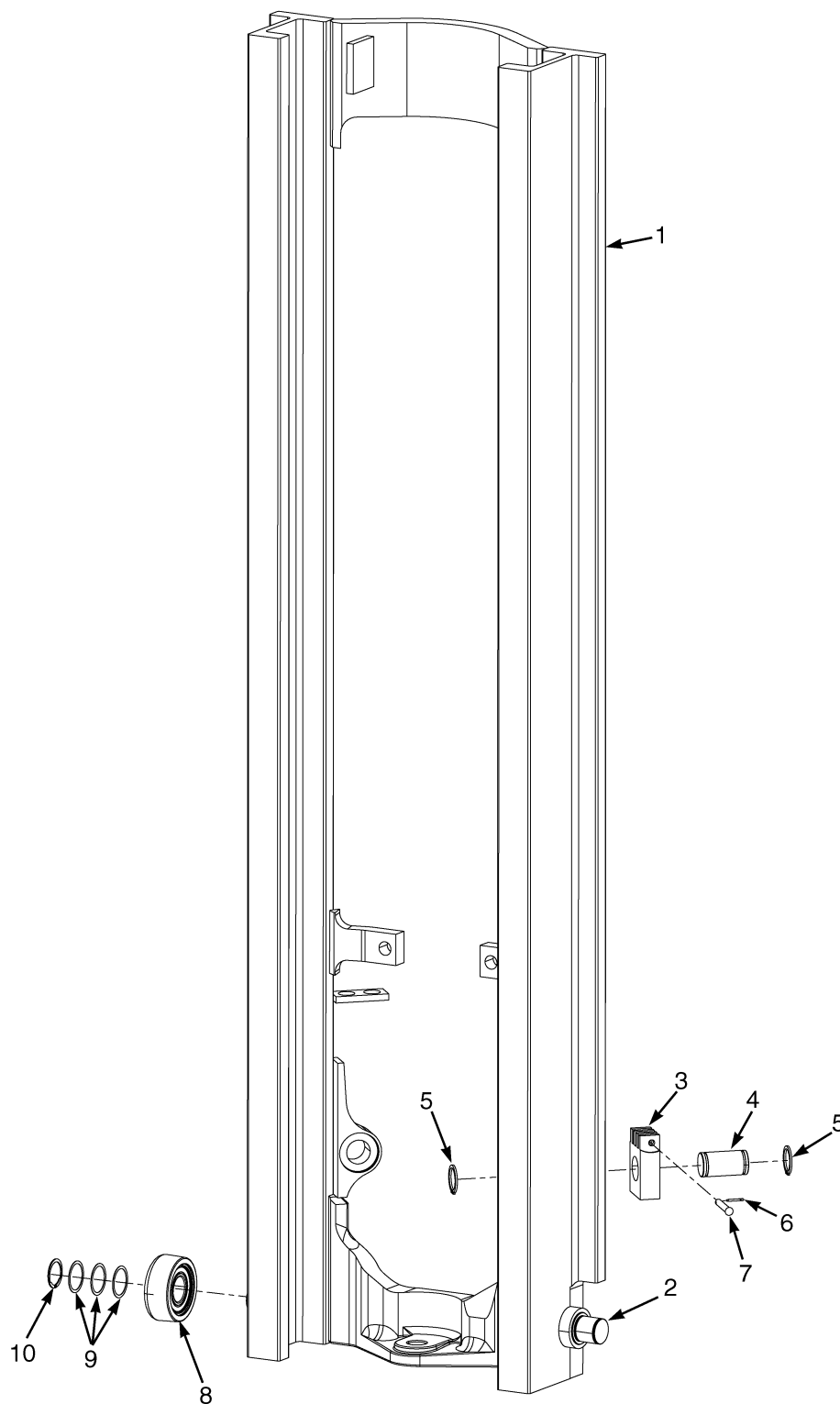
**INTERMEDIATE MAST
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
	Mast Assy	2092372	2092375	2092377
1	Intermediate Mast	1619178	364204	1619182

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Intermediate Mast	1
2	341144	Stubshaft	4
3	1333648	Load Roller	2
4	126765	Shim (0.020 in.)	AR
5	187489	Snap Ring	4
6	1333649	Load Roller	2
7	302105	Setscrew	2
8	366496	Pin	2
9	362953	Snap Ring	4
10	362950	Plate	4
11	362356	Spacer	4
12	362352	Chain Sheave	2
13	104506	O-Ring	4
14	131716	Shim (0.020 in.)	AR
15	215211	Wear Strip	2

FOOTNOTES:**a** Refer to Table

INNER MAST (FIGURE 11-3) THREE STAGE FULL FREE-LIFT



BP170279

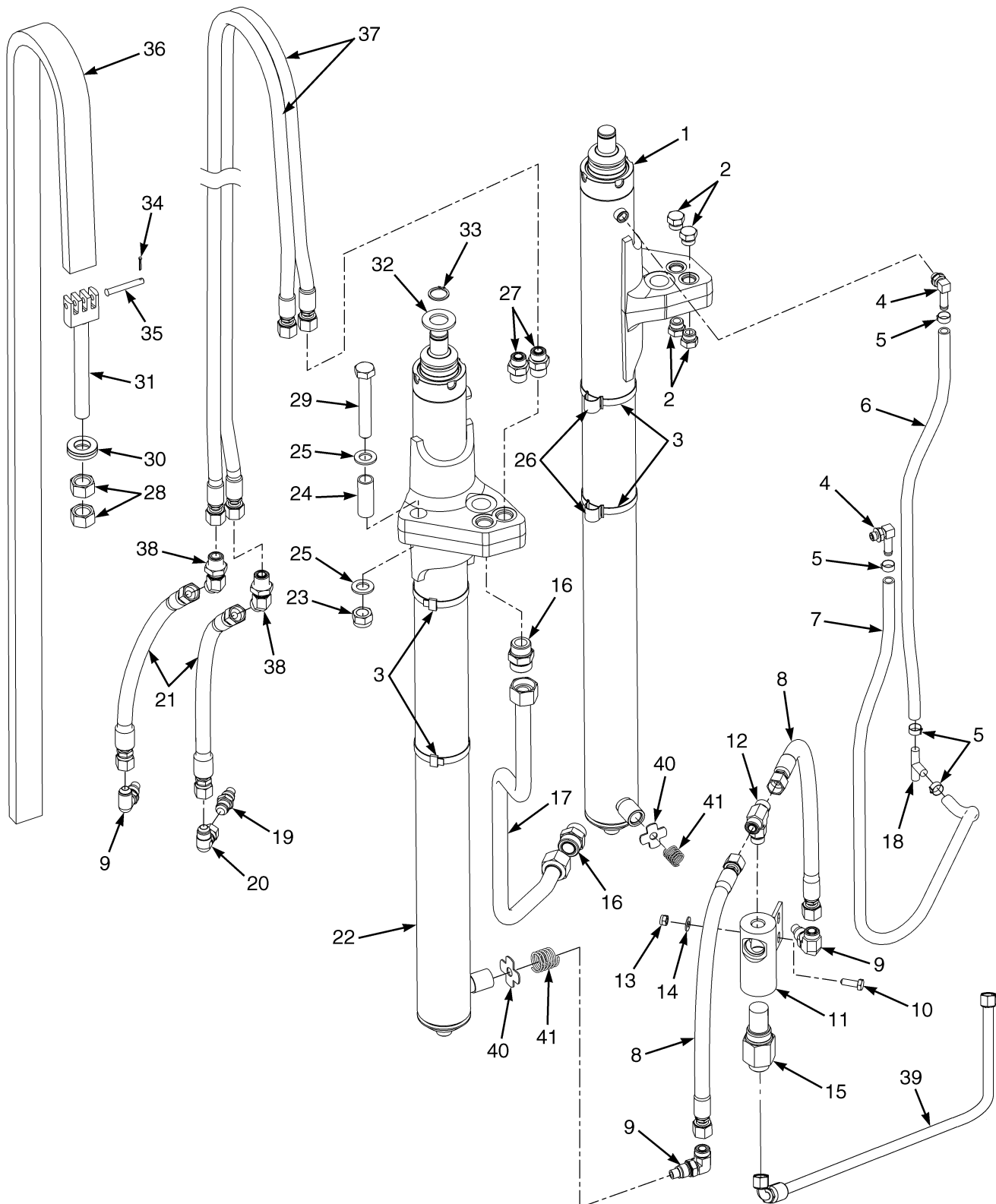
**INNER MAST
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
	Mast Assy	2092372	2092375	2092377
1	Inner Mast	1619230	1313811	1619234

ITEM	PART NO.	DESCRIPTION	QTY
	a	Mast Assy	1
1	a	Inner Mast	1
2	381389	Stubshaft	2
3	358305	Chain Anchor	2
4	349320	Pin	2
5	122400	Snap Ring	4
6	15222	Cotter Pin	4
7	1307395	Pin	2
8	1333648	Load Roller	2
9	126765	Shim (0.020 in.)	AR
10	187489	Snap Ring	2

FOOTNOTES:**a** Refer to Table

MAIN LIFT (FIGURE 11-4) THREE STAGE FULL FREE-LIFT



BP170299

**MAIN LIFT
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
6	Hose Assy	1399077	1399089	1399099
7	Hose Assy	1399096	1399108	1399118
36	Chain	1619430	366523	1619436
37	Hose Assy	2086090	2079000	2086094

ITEM	PART NO.	DESCRIPTION	QTY
1		Lift Cylinder (RH) (☞ Figure 11-5).....	1
2	216590	Fitting	4
2	16485	O-Ring	1
3	1360529	Clamp	4
4	110178	Fitting	2
4	16483	O-Ring	1
5	379405	Clamp	4
6	d	Hose Assy	1
7	d	Hose Assy	1
8	2061806	Hose Assy	2
9	189595	Fitting	3
9	16485	O-Ring	1
10	1581587	Capscrew	2
11	1603961	Housing	1
12	16578	Fitting	1
12	16485	O-Ring	1
13	1581567	Nut	2
14	1581558	Washer	2
15	2043538	Lowering Control Valve	1
16	1473889	Fitting	2
16	244167	O-Ring	1
16	16487	O-Ring	1
17	a 2085503	Tube Weldment	1
17	b 2085506	Tube Weldment	1
17	c 2085508	Tube Assy	1
18	2046871	Fitting	1
19	184799	Fitting	1
19		O-Ring	1
20	16882	Fitting	1
21	2079066	Hose Assy	2
22		Lift Cylinder (LH) (☞ Figure 11-5).....	1
23	1626491	Nut	4
24	372389	Spacer	2
25	1626490	Washer	8
26	1465585	Hose Clamp	4
27	1486751	Fitting	2

MAIN LIFT THREE STAGE FULL FREE-LIFT

ITEM	PART NO.	DESCRIPTION	QTY
27	16486	O-Ring	1
27	252729	O-Ring	1
28	1626521	Nut	4
29	1626459	Capscrew	4
30	343946	Kit-Washer	2
31	1331992	Chain Anchor	2
32	1626463	Washer	2
33	304523	Snap Ring	2
34	15222	Cotter Pin	4
35	1307395	Pin	2
36	d	Chain	2
37	d	Hose Assy	1
38	1528589	Fitting	2
38	252729	O-Ring	2
39	e 2092558	Hose Assy	1
39	f 2102655	Hose Assy	1
40	320334	Washer	2
41	388186	Spring	2

FOOTNOTES:

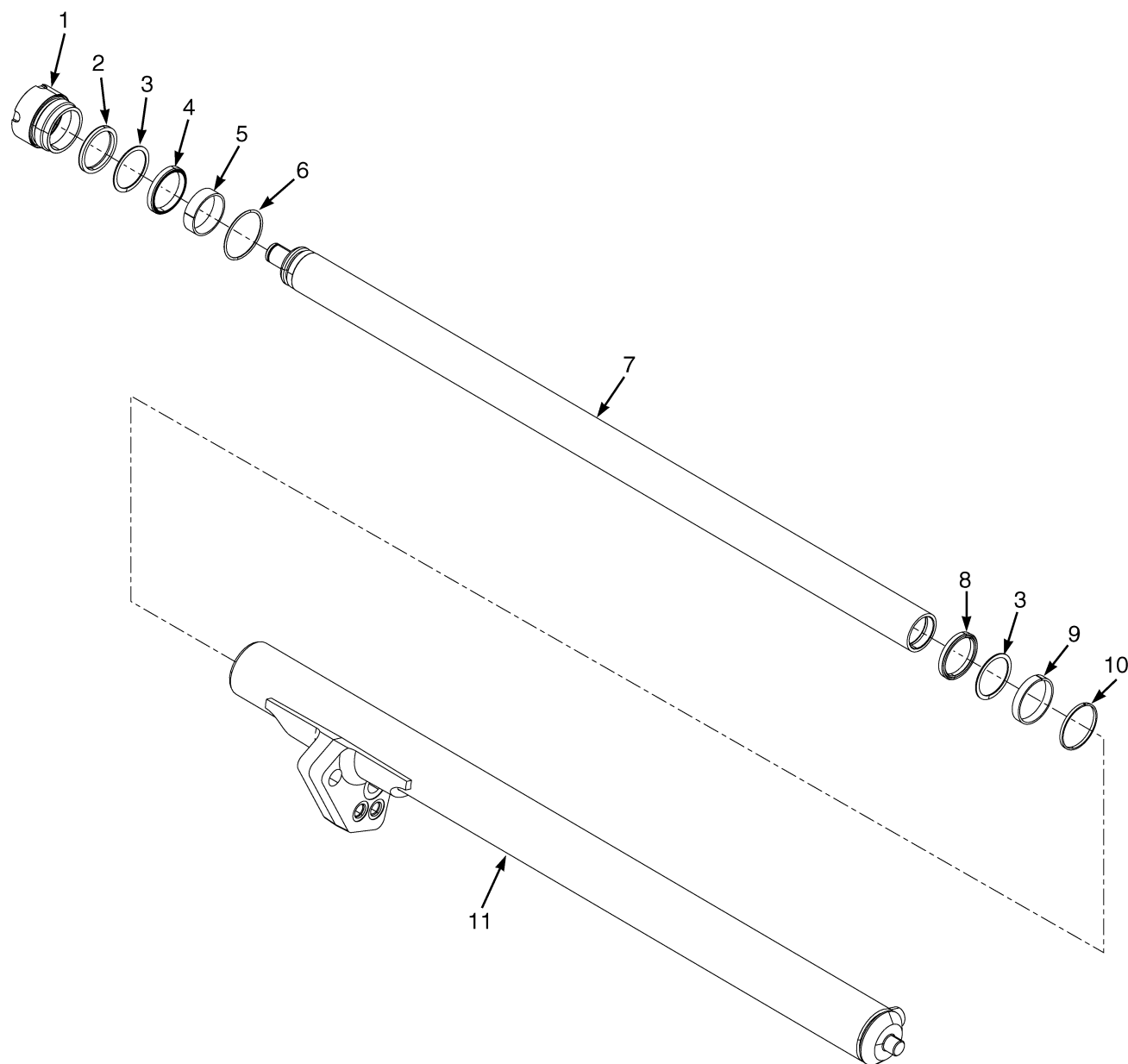
a A614-4640
b A614-5540
c A614-6140

d Refer to Table
e → PENDING PER ECN 104512
f PENDING PER ECN 104512 →

NOTES

This image shows a single page from a notebook or ledger. It features a series of evenly spaced, horizontal black lines running across the width of the page. The lines are thin and consistent in thickness. There are no vertical margin lines, headers, footers, or any other markings present on the page. The background is a solid off-white color.

MAIN LIFT CYLINDERS (FIGURE 11-5) THREE STAGE FULL FREE-LIFT



BP170281

**MAIN LIFT CYLINDERS
THREE STAGE FULL FREE-LIFT****LEFT HAND**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
	Cylinder Group Number	8609204	8609207	8609209
	Cylinder Assy	2087972	2087975	2087977
7	Cylinder Rod	2087904	2087921	2087908
11	Tube Wldmt- Cylinder	2087932	2087935	2087937

RIGHT HAND

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
	Cylinder Group Number	8609254	8609257	8609259
	Cylinder Assy	2087993	2087996	2087998
7	Cylinder Rod	2087904	2087921	2087908
11	Tube Wldmt- Cylinder	2087951	2087954	2087955

ITEM	PART NO.	DESCRIPTION	QTY
	b	Cylinder Assy	1
1	1618463	Gland	2
2	1383071	Rod Wiper	2
3	637565	Back-Up Ring	2
4	1381089	Rod Seal	2
5	316513	Wear Ring	2
6	15880	O-Ring	2
7	b	Cylinder Rod	2
8	309062	Rod Seal	2
9	636941	Wear Ring	2
10	364233	Piston Ring	2
11	b	Tube Wldmt-Cylinder	2
	ac 383824	Spacer	2
	2093817	Kit-Seal	1

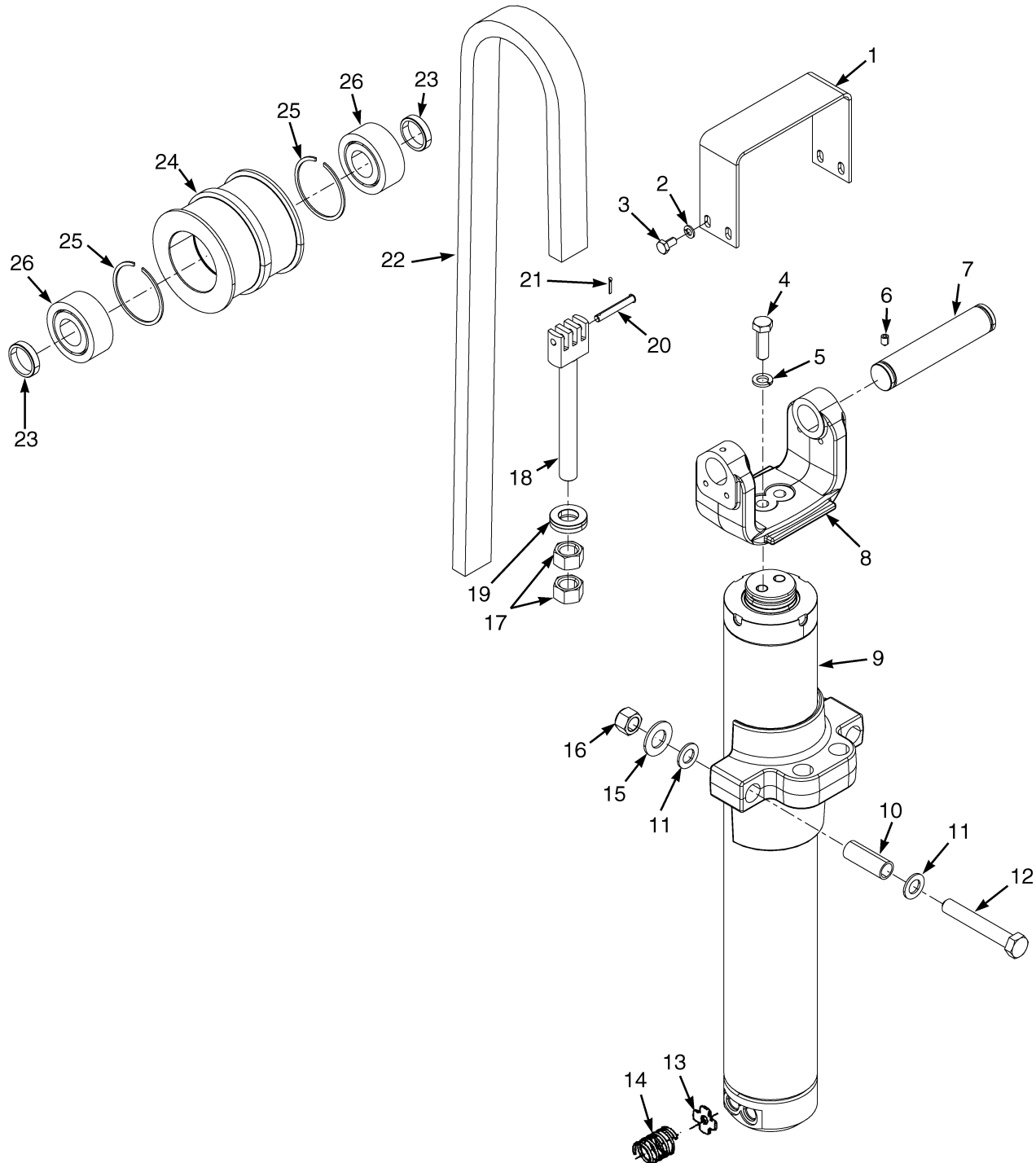
FOOTNOTES:

- a** Not Illustrated
- b** Refer to Table
- c** Used only with 6140 mm Lift Height

NOTES

[illegible]

FREE-LIFT (FIGURE 11-6) THREE STAGE FULL FREE-LIFT



BP170282

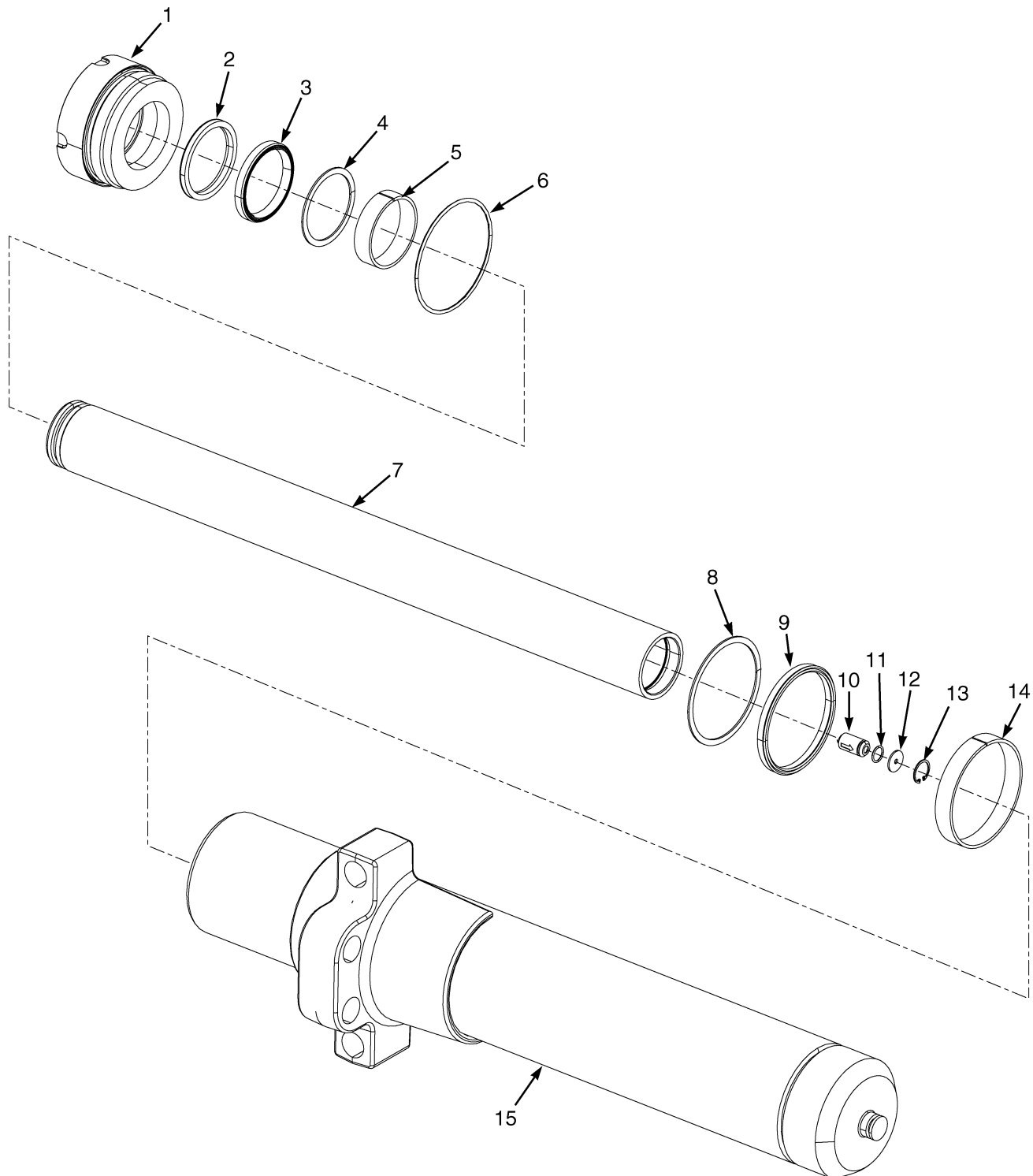
**FREE-LIFT
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
22	Chain	368140	1313789	1313791

ITEM	PART NO.	DESCRIPTION	QTY
1	366529	Chain Guard	1
2	1626478	Washer	4
3	1581585	Capscrew	4
4	1597457	Capscrew	2
5	1581854	Washer	2
6	302105	Setscrew	1
7	366526	Pin	1
8	366528	Crosshead	1
9		Lift Cylinder (☞ Figure 11-7).....	1
10	372389	Spacer	2
11	1626490	Washer	4
12	1626459	Capscrew	2
13	320334	Washer	2
14	388186	Spring	2
15	1626522	Washer	2
16	1626491	Nut	4
17	1626521	Nut	4
18	1331992	Chain Anchor	2
19	343946	Kit-Washer	2
20	1307395	Pin	2
21	15222	Cotter Pin	4
22	a	Chain	2
23	297573	Spacer	2
24	366524	Chain Sheave	1
24	366525	Chain Sheave	1
25	59625	Snap Ring	2
26	334932	Ball Bearing	2

FOOTNOTES:**a** Refer to Table

FREE-LIFT CYLINDER (FIGURE 11-7) THREE STAGE FULL FREE-LIFT



BP170283

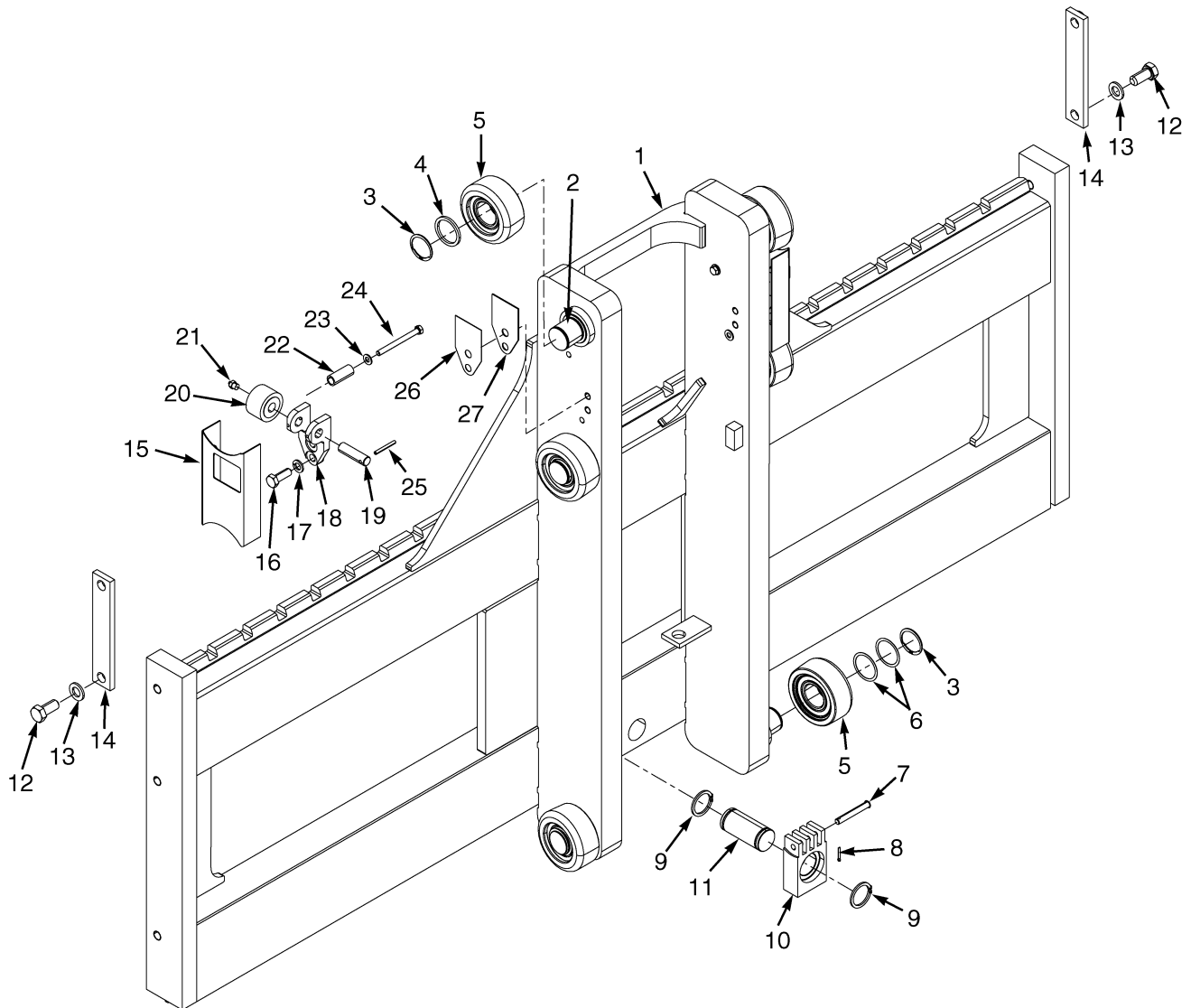
**FREE-LIFT CYLINDER
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
	Mast Group Number	A614 4640	A614 5540	A614 6140
	Cylinder Group Number	8609304	8609307	8609309
	Cylinder Assy	2085912	2085915	2087298
7	Cylinder Rod	2087324	2087107	2087339
15	Tube Wldmt- Cylinder	2096472	2096473	2096474

ITEM	PART NO.	DESCRIPTION	QTY
	a	Cylinder Assy	1
1	1623459	Gland	1
2	1383070	Rod Wiper	1
3	2033395	Seal	1
4	638251	Back-Up Ring	1
5	215345	Wear Ring	1
6	15889	O-Ring	1
7	a	Cylinder Rod	1
8	638223	Back-Up Ring	1
9	637166	Rod Seal	1
10	257913	Check Valve	1
11	190580	O-Ring	1
12	297531	Washer	1
13	187388	Snap Ring	1
14	636954	Wear Ring	1
15	a	Tube Wldmt-Cylinder	1
	2096470	Kit-Seal	1

FOOTNOTES:**a** Refer to Table

CARRIAGE (FIGURE 11-8) THREE STAGE FULL FREE-LIFT — HOOK TYPE



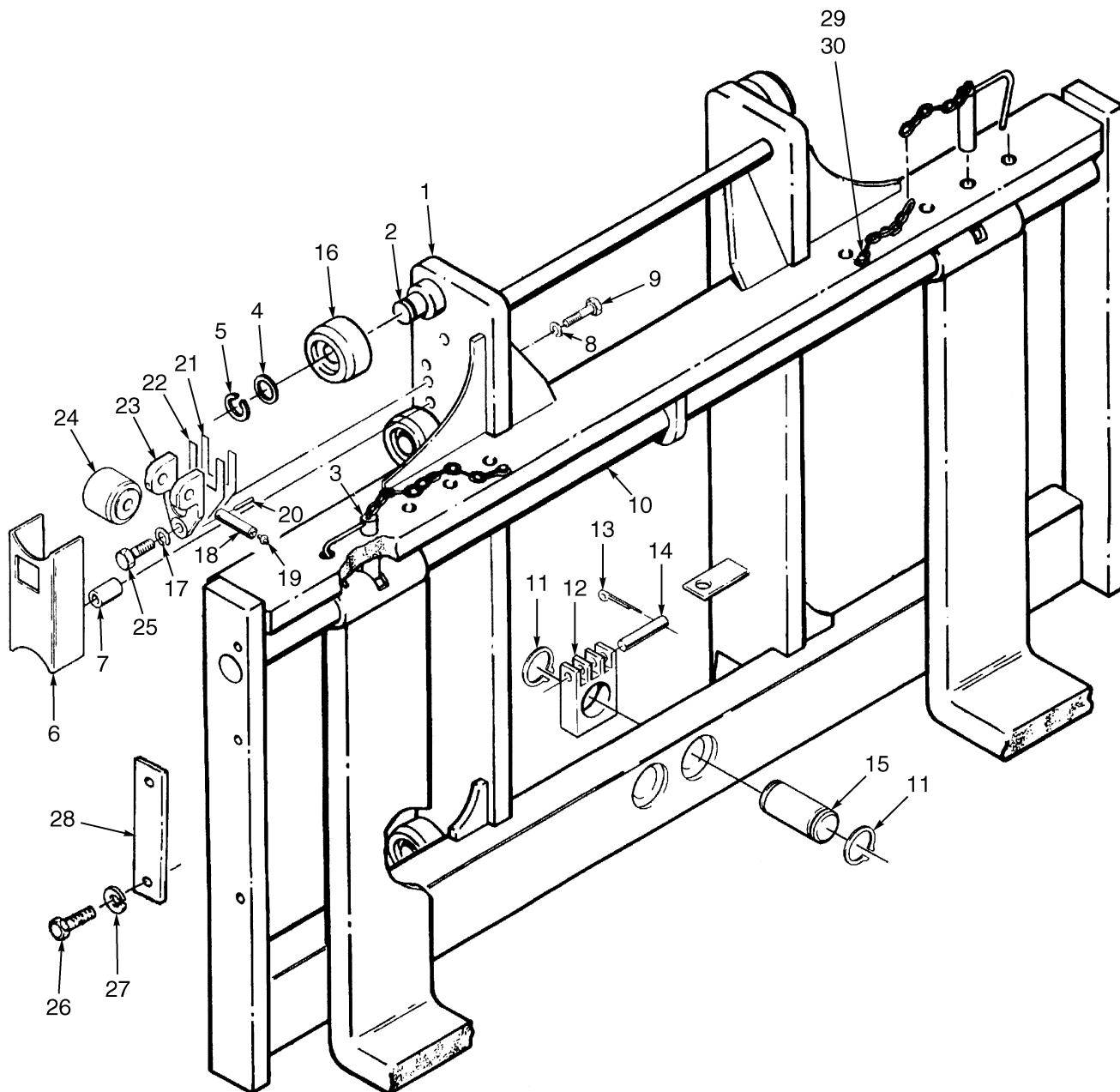
BP170289

CARRIAGE THREE STAGE FULL FREE-LIFT – HOOK TYPE

ITEM	PART NO.	DESCRIPTION	QTY
	2094242	Carriage	1
1	1649309	Carriage Wldmt	1
2	341144	Stubshaft	6
3	187489	Snap Ring	6
4	366116	Spacer	2
5	a 1333648	Load Roller	AR
6	126765	Shim (0.020 in.)	AR
7	1307395	Pin	2
8	15222	Cotter Pin	2
9	122400	Snap Ring	4
10	358305	Chain Anchor	2
11	1330780	Pin	2
12	1581833	Capscrew	4
13	1581854	Washer	4
14	66468	Plate	2
15	319322	Bracket Wldmt (RH)	1
15	319323	Bracket Wldmt (LH)	1
16	b 292528	Capscrew	4
17	b 292683	Lockwasher	4
18	b 244008	Bracket	2
19	b 244009	Pin	2
20	b 244005	Side Roller	2
21	b 16001	Grease Fitting	2
22	317292	Spacer	4
23	1650842	Washer	4
24	1650841	Fitting	4
25	b 66333	Roll Pin	2
26	b 192424	Shim (0.030 in.)	AR
27	b 192425	Shim (0.062 in.)	AR

FOOTNOTES:**a** Letter on Inside Face**b** with Attachments

CARRIAGE (FIGURE 11-9) THREE STAGE FULL FREE-LIFT — PIN TYPE



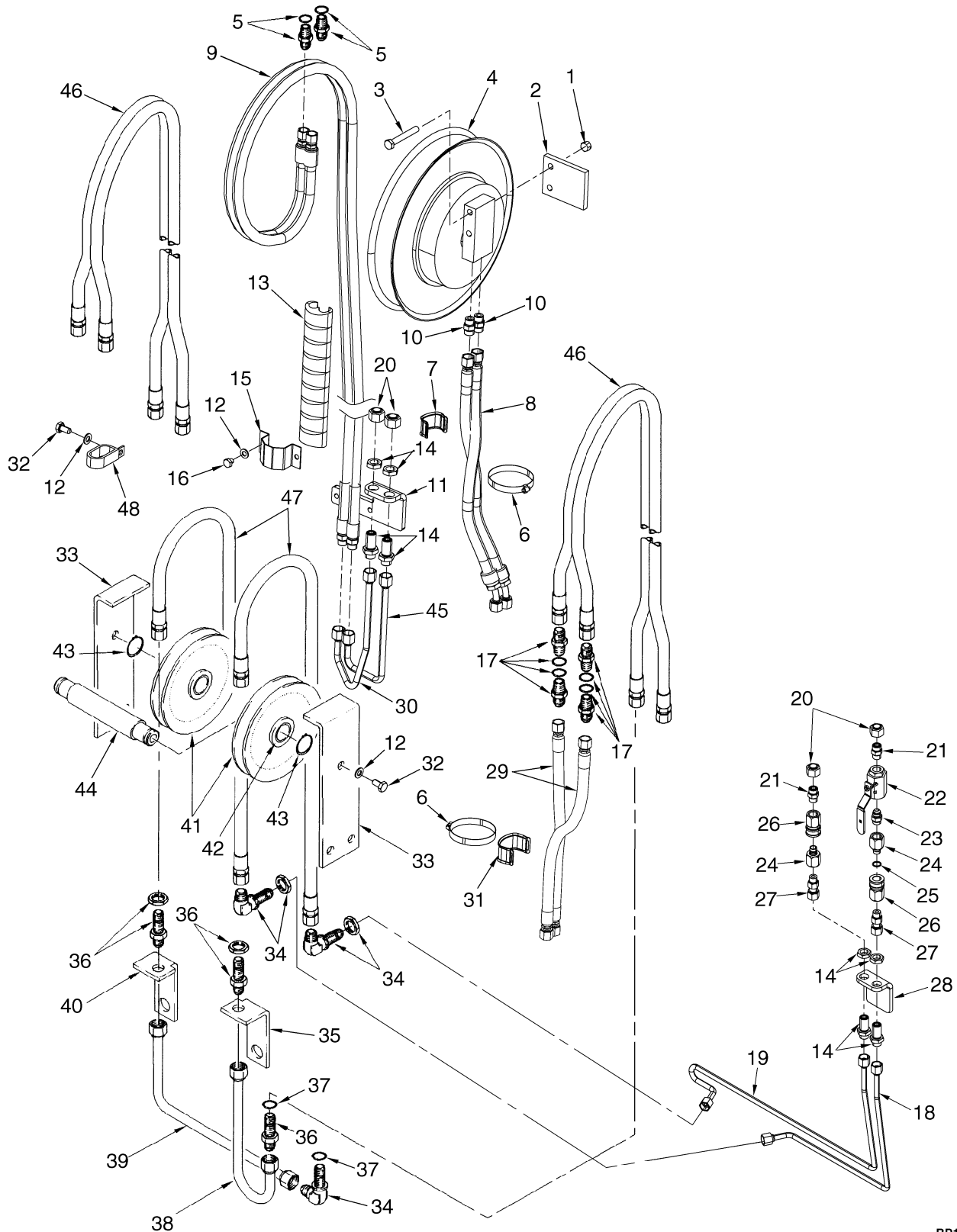
HP170606

CARRIAGE
THREE STAGE FULL FREE-LIFT – PIN TYPE

ITEM	PART NO.	DESCRIPTION	QTY
	1318161	Carriage (78 in.)	1
1	1331270	Carriage Wldmt	1
2	341144	Stubshaft	6
3	1331269	Pin	2
4	126765	Shim (0.020 in.) (Bottom Four Rollers)	AR
4	366116	Spacer (Top Two Rollers)	2
5	187489	Snap Ring	6
6	319322	Bracket Wldmt (RH)	1
6	319323	Bracket Wldmt (LH)	1
7	317292	Spacer	4
8	15155	Lockwasher	4
9	18522	Capscrew	4
10	1330064	Pin	2
11	122400	Snap Ring	4
12	358305	Chain Anchor	2
13	15222	Cotter Pin	2
14	1307395	Pin	2
15	1330780	Pin	2
16	a 1333648	Load Roller (0.060 in.)	AR
17	b 292683	Lockwasher	4
18	b 244009	Pin	2
19	b 16001	Grease Fitting	2
20	b 66333	Roll Pin	2
21	b 192424	Shim (0.030 in.)	AR
22	b 192425	Shim (0.062 in.)	AR
23	b 244008	Bracket	2
24	b 244005	Side Roller	2
25	b 292528	Capscrew	4
26	226458	Capscrew	4
27	292685	Lockwasher	4
28	66468	Plate	2
29	292513	Capscrew	2
30	296420	Washer	2

FOOTNOTES:**a** Letter on Inside Face**b** Optional

HEADER HOSES AND AUXILIARY TUBE (FIGURE 11-10) THREE STAGE FULL FREE-LIFT



BP170292

**HEADER HOSES AND AUXILIARY TUBE
THREE STAGE FULL FREE-LIFT****A614**

ITEM	DESCRIPTION 1 2 3 4	LIFT HEIGHT TO BOTTOM OF FORKS		
		4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
		A614 4640	A614 5540	A614 6140
8	Hose Assy	2088564	2088567	2078660
9	Hose Assy	2077914	2077916	2077916
29	Hose Assy	2088603	2088606	2088608
46	Hose Assy	2088624	2088627	2088629
47	Hose Assy	2088584	2088587	2088589

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

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
1	1581849	Nut	..	2
2	386648	Mounting Plate	..	1
3	1597661	Capscrew	..	2
4	358289	Hose Reel	..	1
4	672563	Kit-Seal	..	1
5	16541	Fitting	..	2
5	16484	O-Ring	..	1
6	1360508	Clamp	AR	AR
7	1502809	Hose Clamp	..	2
8	b	Hose Assy	..	2
9	b	Hose Assy	..	2
10	1473887	Fitting	..	2
10	16484	O-Ring	..	1
10	265731	O-Ring	..	1
11	1649764	Bracket (Optional)	..	1
12	1581557	Washer	2	5
13	358286	Strain Relief	..	1
14	816591	Fitting	..	2
14	265731	O-Ring	..	1
15	358287	Bracket	..	1
16	1597852	Capscrew	..	2
17	1486746	Fitting	4	4
17	16485	O-Ring	1	1
17	265731	O-Ring	1	1
18	2094063	Tube Assy	1	1
19	2095003	Tube Assy	1	1
20	1529016	Fitting	2	4
21	c 1473887	Fitting	..	2
21	16484	O-Ring	1	1
21	265731	O-Ring	1	1

HEADER HOSES AND AUXILIARY TUBE THREE STAGE FULL FREE-LIFT

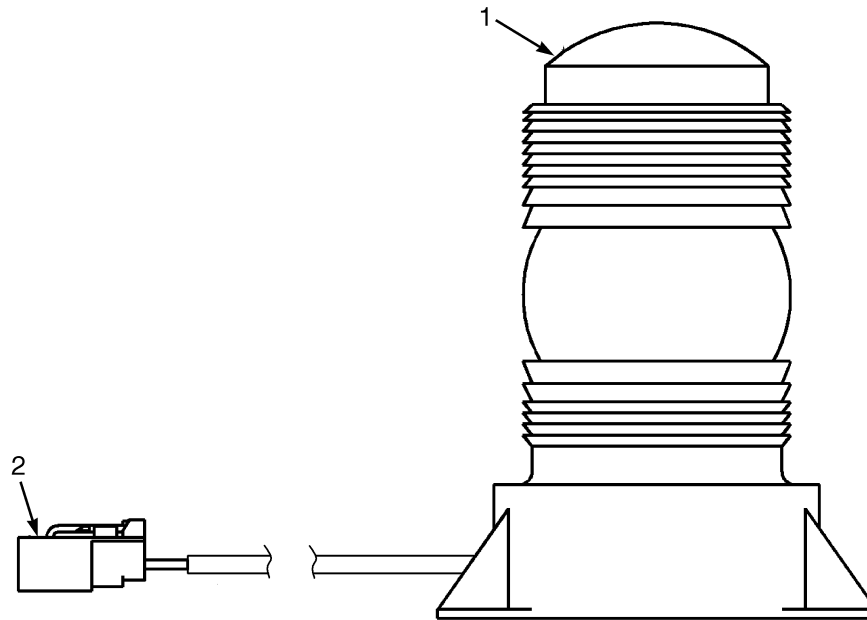
KEY:**A:** Three Function**B:** Four Function

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
22	c 2087565	Drain Valve	1	1
23	c 16541	Fitting	..	1
23	16484	O-Ring	1	1
24	c 1377954	Fitting	2	2
25	c 16484	O-Ring	1	1
26	c 1377953	Quick Disconnect Fitting	2	2
27	c 1622610	Fitting	2	2
27	265731	O-Ring	1	1
27	16484	O-Ring	1	1
28	1646850	Bracket	1	1
29	b	Hose Assy	2	2
30	2093830	Tube Assy	..	1
31	1465489	Hose Clamp	AR	AR
32	1581585	Capscrew	3	3
33	380585	Bracket	2	2
34	1528580	Fitting	3	3
34	265731	O-Ring	1	1
35	380591	Bracket	1	1
36	816591	Fitting	3	3
36	252729	O-Ring	1	1
37	1625092	Shim	2	2
38	2096962	Tube Assy	1	1
39	2096959	Tube Assy	1	1
40	380590	Bracket	1	1
41	297647	Sheave	2	2
42	136045	Bushing	1	1
43	248212	Snap Ring	2	2
44	1632103	Shaft	1	1
45	2093829	Tube Assy	..	1
46	b	Hose Assy	2	2
47	b	Hose Assy	2	2
48	255578	Clamp	..	1
49	1581585	Capscrew	2	3
	a 181298	Dust Cap	1	1
	a 181266	Dust Cap	1	1

FOOTNOTES:**a** Not Illustrated**b** Refer to Table**c** With Quick Disconnect Fittings

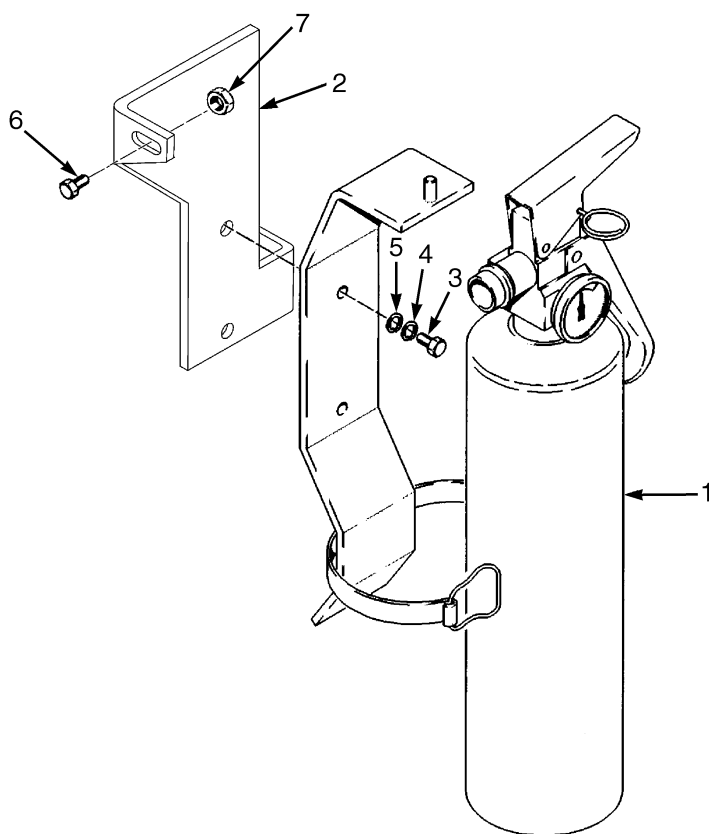
SECTION 12
OPTIONS

DESCRIPTION	PAGE
ACCUMULATOR	12-10
BACK-UP ALARM	12-6
DUAL MIRRORS	
WITH CAB	12-8
WITH OVERHEAD GUARD	12-9
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GM LPG REGULATOR DRAIN KIT	12-20
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LIFTING EYE	12-22
SIDE-SHIFT ASSEMBLY	12-16
SIDE-SHIFT CYLINDER	12-19
STROBE LIGHT	
LED	12-2

STROBE LIGHT (FIGURE 12-1)
LED

BP000363

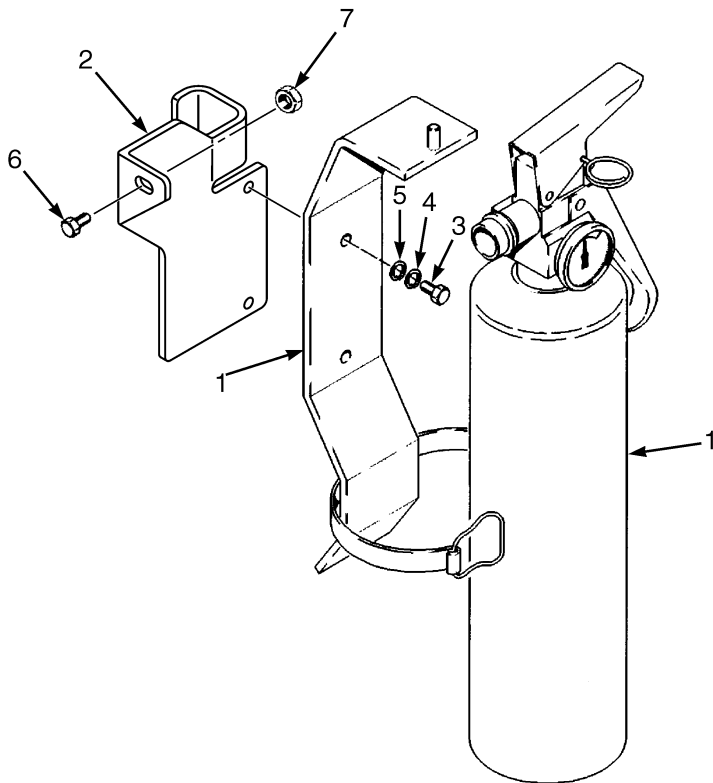
ITEM	PART NO.	DESCRIPTION	QTY
	1654013	Strobe Light Assembly	1
1	1652290	Strobe Light (LED)	1
2	1463138	Terminal	1
2	1561559	Connector	1
2	1561755	Connector	1

**FIRE EXTINGUISHER (FIGURE 12-2)
WITH CAB**

BP000252

ITEM	PART NO.	DESCRIPTION	QTY
1	146540	Fire Extinguisher	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

FIRE EXTINGUISHER (FIGURE 12-3) WITH OVERHEAD GUARD



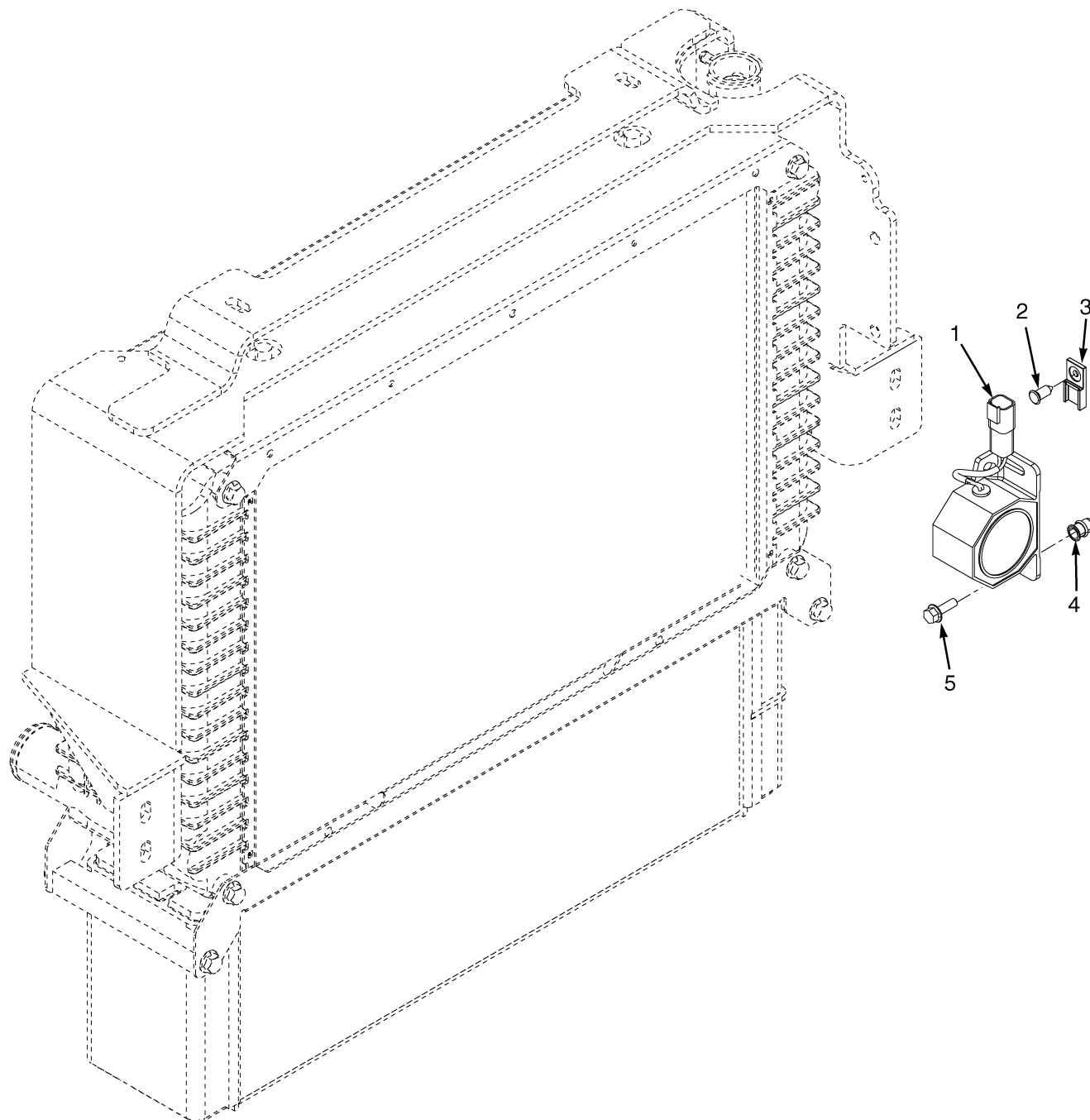
BP000354

ITEM	PART NO.	DESCRIPTION	QTY
1	146540	Fire Extinguisher	1
1	1561749	Bracket	1
2	1641394	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]

BACK-UP ALARM (FIGURE 12-4)

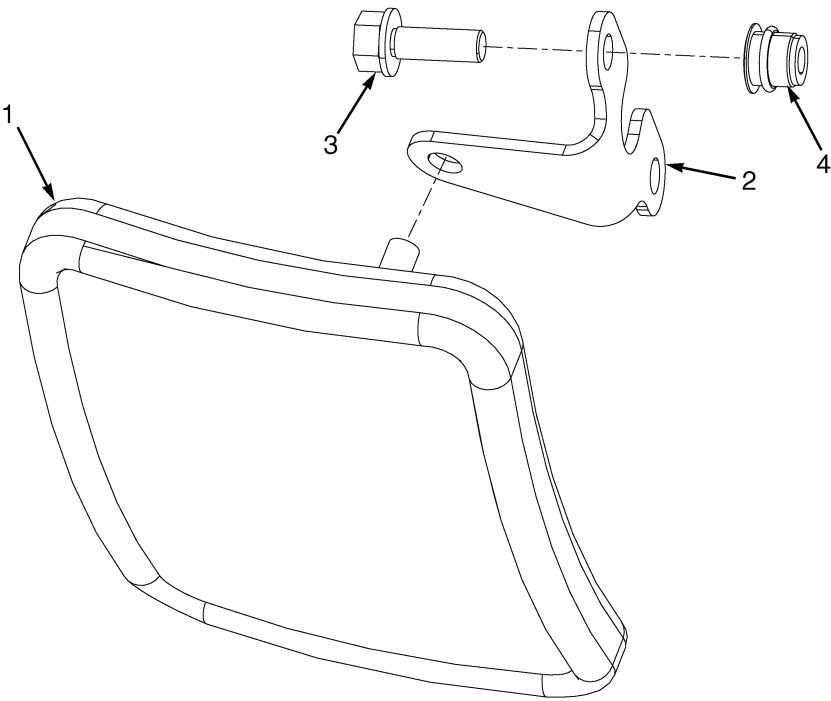


BP000369

BACK-UP ALARM

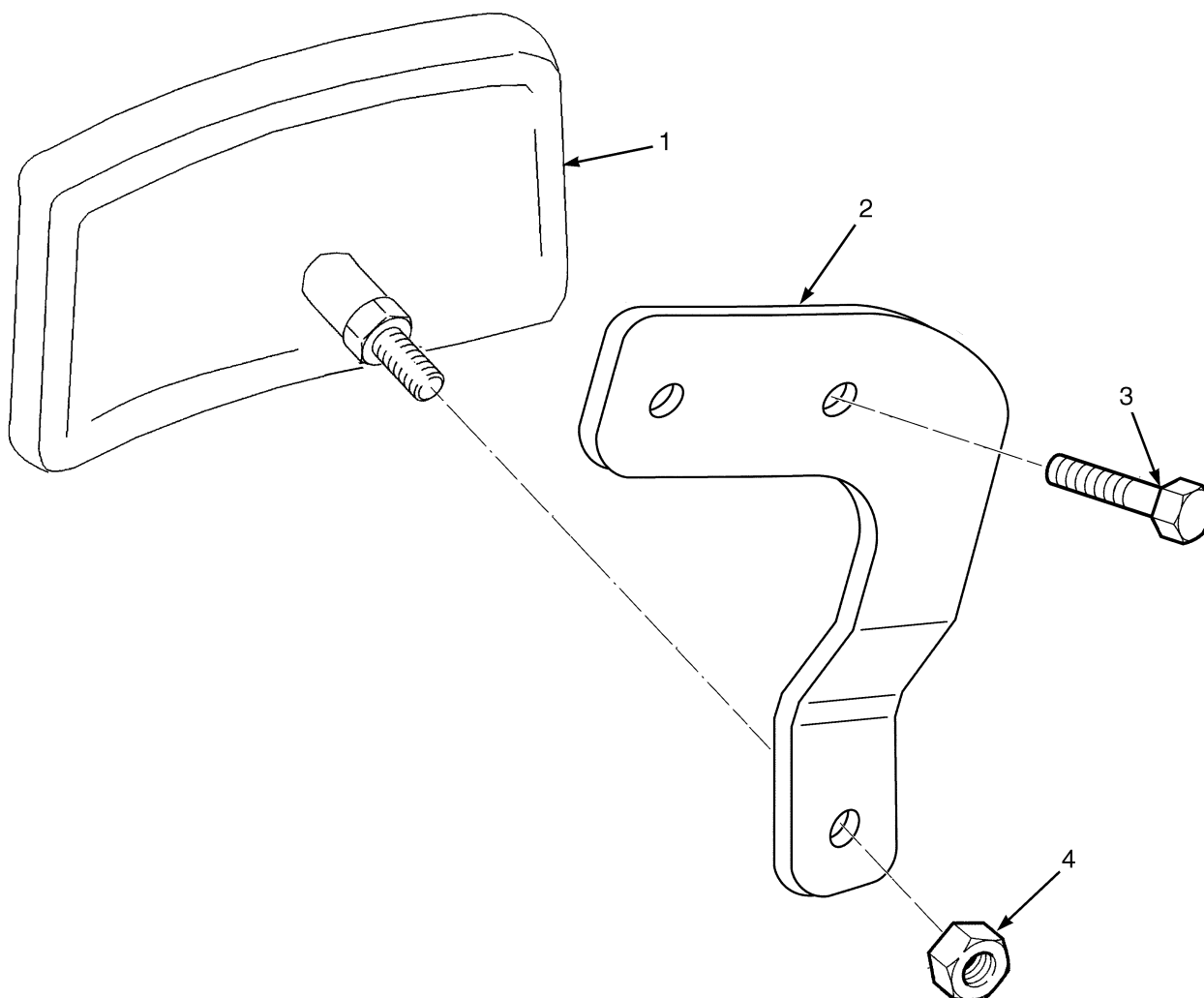
ITEM	PART NO.	DESCRIPTION	QTY
1	2064929	Back-Up Alarm (82-102 dbA)	1
2	1582464	Fastener	1
3	1500912	Clip	1
4	1531001	Insert	2
5	1527877	Capscrew	2

**DUAL MIRRORS (FIGURE 12-5)
WITH CAB**



HP000896

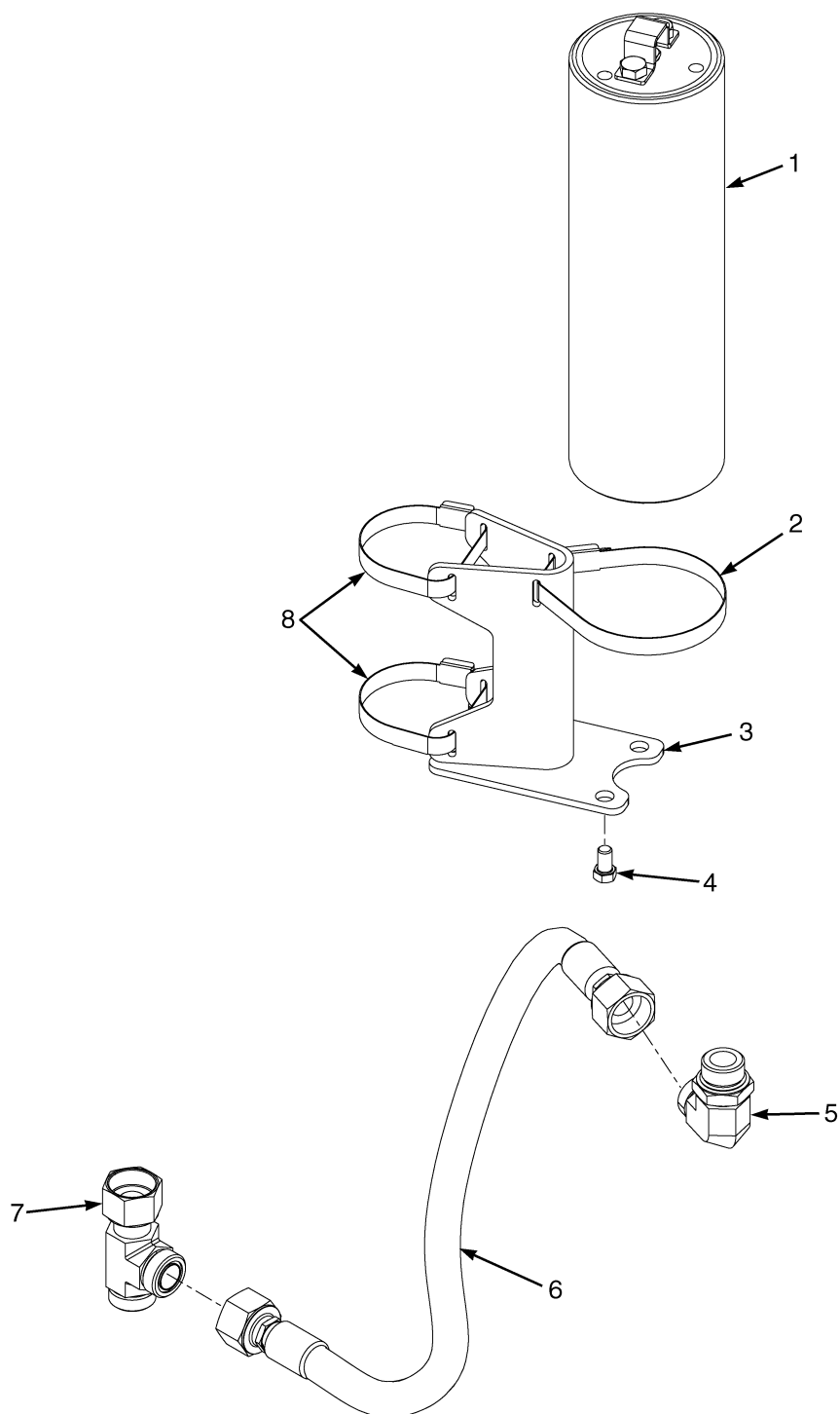
ITEM	PART NO.	DESCRIPTION	QTY
1	1301286	Mirror	2
2	1579412	Bracket	2
3	1583611	Capscrew	4
4	1531557	Insert	4

**DUAL MIRRORS (FIGURE 12-6)
WITH OVERHEAD GUARD**

BP000247

ITEM	PART NO.	DESCRIPTION	QTY
1	1301286	Mirror	2
2	1656215	Bracket (RH)	1
2	1656216	Bracket (LH)	1
3	1583611	Capscrew	4
4	1586430	Nut	4

ACCUMULATOR (FIGURE 12-7)

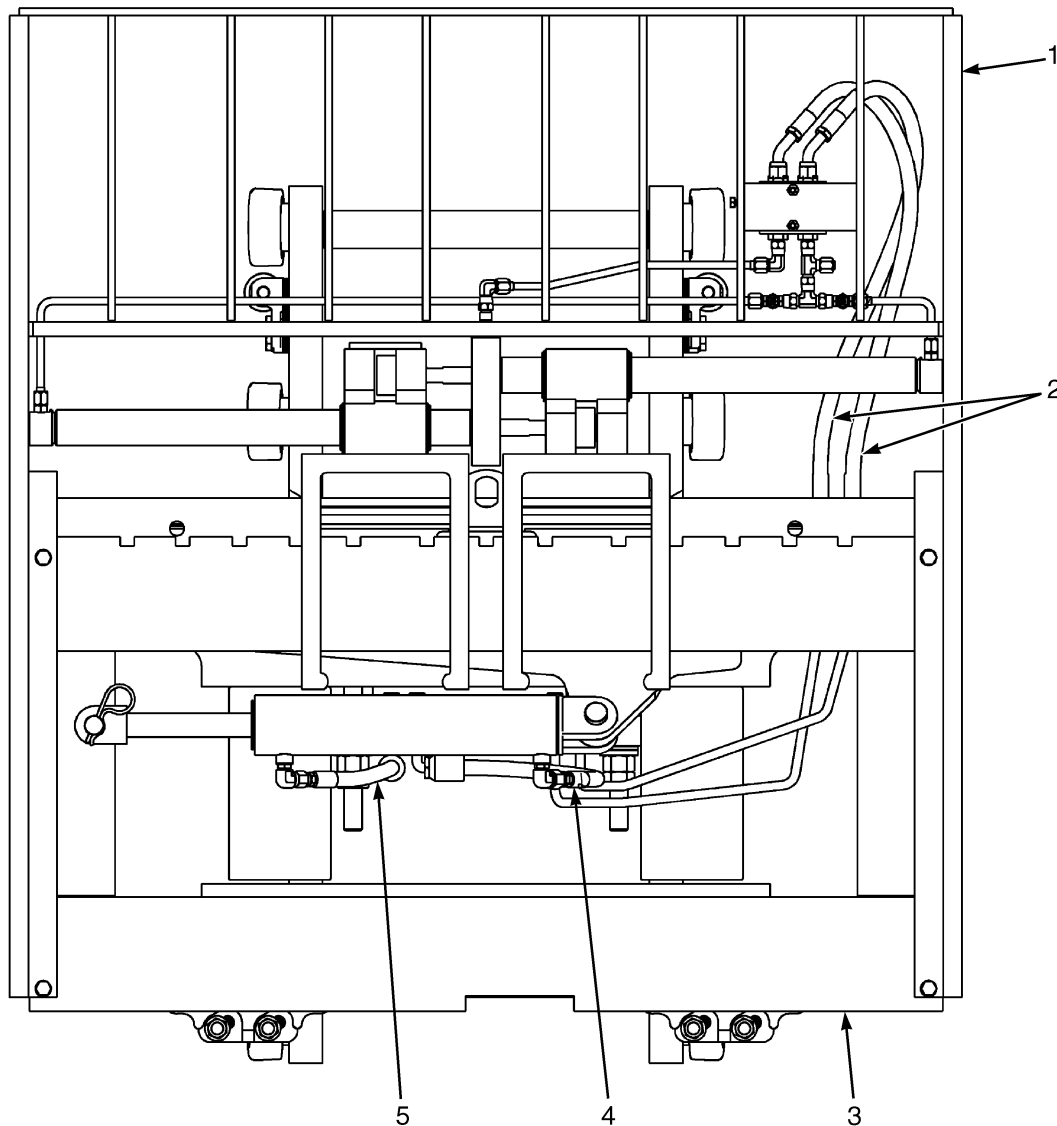


BP000368

ACCUMULATOR

ITEM	PART NO.	DESCRIPTION	QTY
1	1651275	Accumulator	1
2	1611564	Clamp	1
3	1651147	Bracket	1
4	16642	Capscrew	2
5	1487075	Fitting	1
5	16487	O-Ring	1
5	244167	O-Ring	1
6	2096180	Hose	1
7	1487099	Fitting	1
7	244167	O-Ring	2
8	1661416	Clamp	2

HANG-ON SIDE-SHIFT CARRIAGE (FIGURE 12-8)



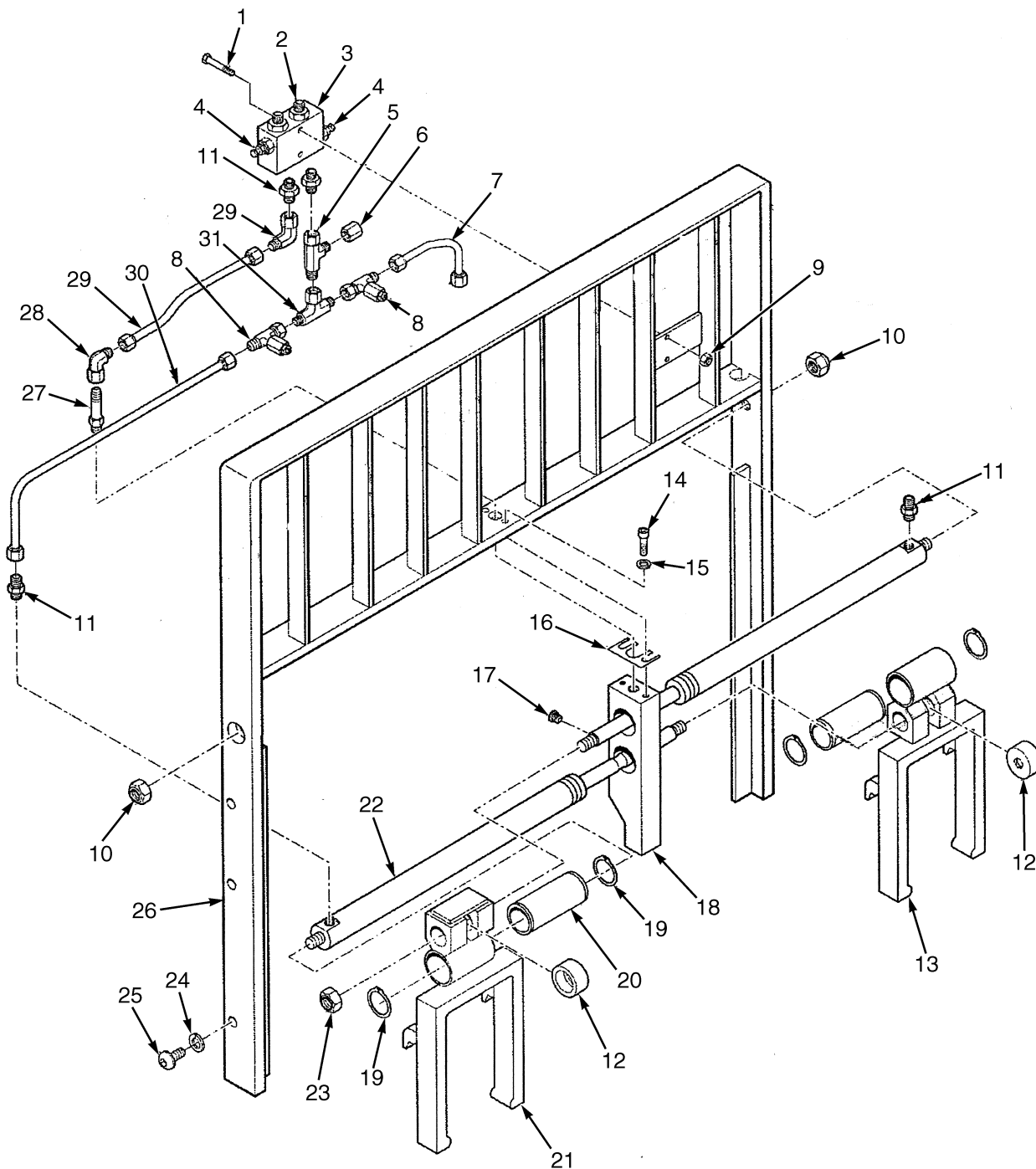
BP000371

HANG-ON SIDE-SHIFT CARRIAGE

ITEM	PART NO.	DESCRIPTION	QTY
	2096678	Side-Shift Carriage	1
1	1665416	Fork Positioner Assy (☞ Figure 12-9).....	1
2	2096512	Hose Assy	2
3	1665216	Side-Shift Carriage (☞ Figure 12-10).....	1
4	b 2096509	Hose Assy	1
4	a 2096511	Hose Assy	1
5	b 2096508	Hose Assy	1
5	a 2096510	Hose Assy	1

FOOTNOTES:**a** Three Stage Full Free-Lift**b** Two Stage Limited Free-Lift

FORK POSITIONER ASSEMBLY (FIGURE 12-9)

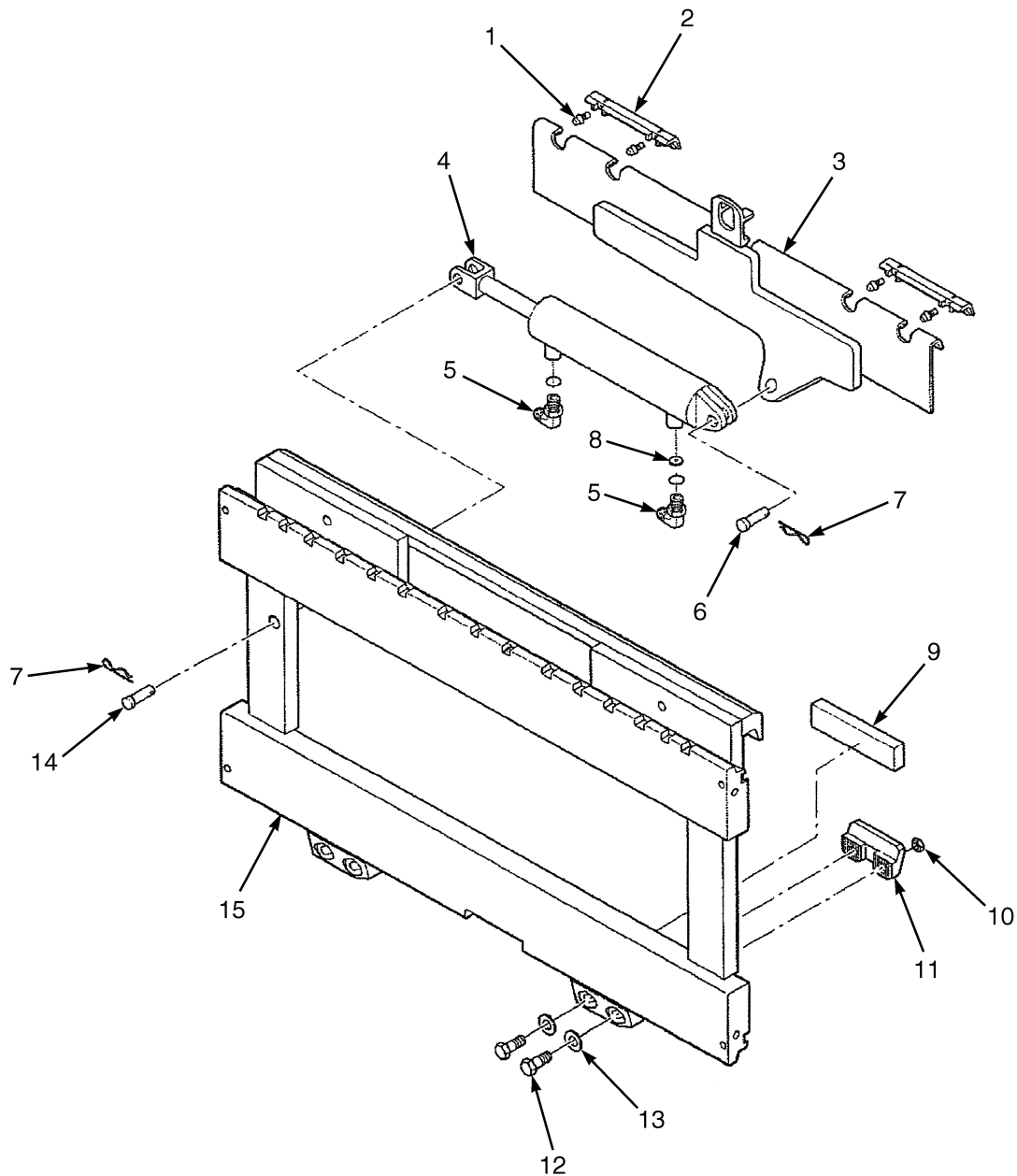


BP000373

FORK POSITIONER ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
	1665416	Fork Positioner Assy	1
1	1665002	Capscrew	2
2	1664987	Fitting	2
3	1664995	Valve Block	1
4	1665009	Valve	2
5	1664998	Fitting	1
6	1665005	Nut	1
7	1665004	Tube	1
8	1665001	Fitting	2
8	1665092	T-Fitting	1
8	1665093	O-Ring	1
8	1665094	Setscrew	1
8	1665095	Cap	1
8	1665096	Nut	1
9	1665003	Nut	2
10	1664990	Nut	2
11	1664996	Fitting	4
12	1664983	Lug	2
13	1665420	Fork Frame (LH)	1
14	1664989	Capscrew	2
15	1664988	Lockwasher	2
16	1664982	Shim	1
17	1664991	Plug	1
18	1664981	Plate	1
19	1665008	Snap Ring	4
20	1664984	Bushing	2
21	1665419	Fork Frame (RH)	1
22	1665418	Cylinder Assy (☞ Figure 12-11).....	2
23	1665000	Nut	2
24	1665421	Lockwasher	6
25	1665422	Capscrew	6
26	1665417	Frame	1
27	1665010	Fitting	1
28	1664997	Fitting	2
29	1665424	Tube	1
30	1665423	Tube	1
31	1664999	Fitting	1

SIDE-SHIFT ASSEMBLY (FIGURE 12-10)

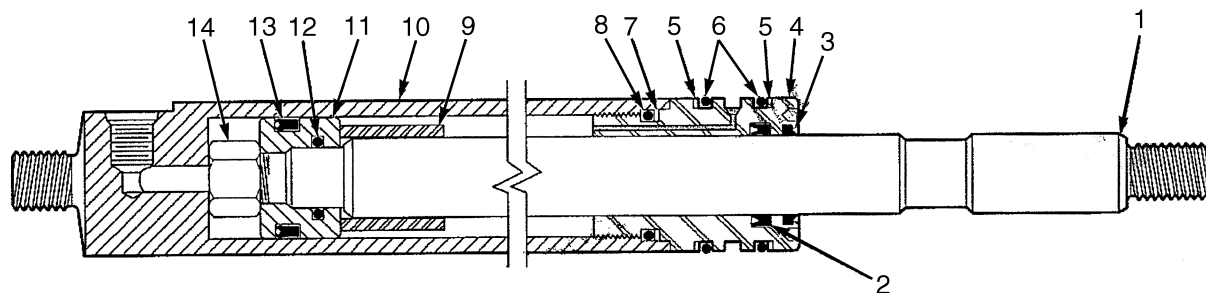


BP000372

SIDE-SHIFT ASSEMBLY

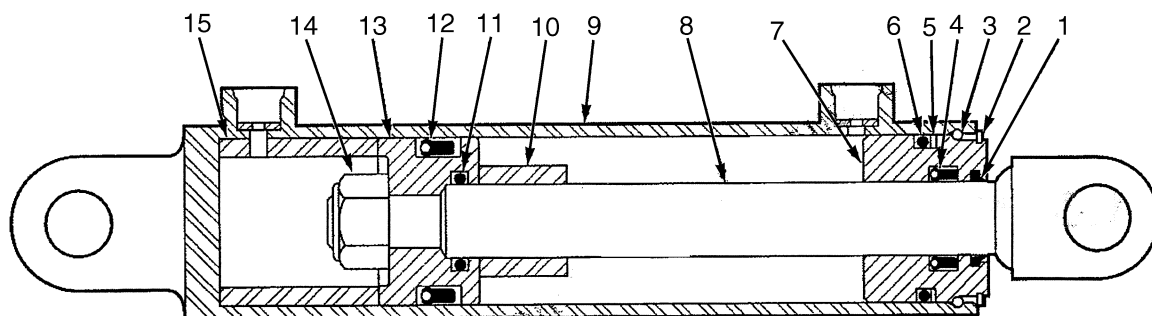
ITEM	PART NO.	DESCRIPTION	QTY
	1665216	Side-Shift Carriage	1
1	1664896	Grease Fitting	4
2	1664897	Bearing	2
3	1664898	Bracket	1
4	1664901	Cylinder Assy (☞ Figure 12-12).....	1
5	1664899	Fitting	2
5		O-Ring	1
6	1664904	Pin	1
7	1664903	Cotter Pin	2
8	1664912	Thrust Washer (Restrictor)	1
9	1664909	Bearing (Lower)	3
10	1664902	Nut	4
11	1664910	Hook	2
12	1664908	Capscrew	4
13	221775	Washer	4
14	1664911	Pin	1
15		Faceplate	1
	1664913	Kit-Service	1

FORK POSITIONER CYLINDER (FIGURE 12-11)



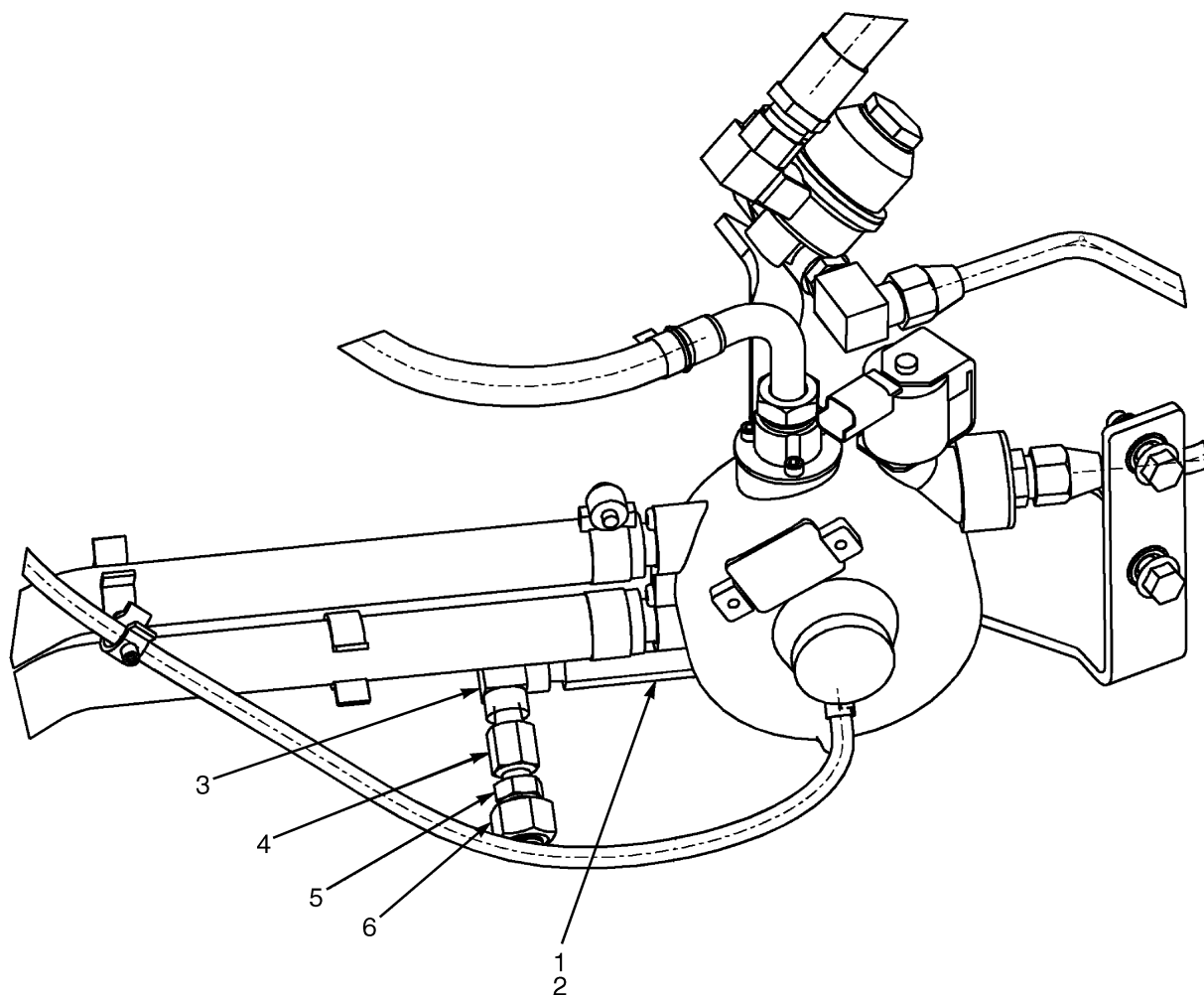
BP000374

ITEM	PART NO.	DESCRIPTION	QTY
	1665418	Cylinder Assy	1
1	1665427	Rod	1
2		Rod Seal	1
3		Wiper	1
4	1665078	Retainer	1
5		Back Up Ring	2
6		O-Ring	2
7		Back Up Ring	1
8		O-Ring	1
9	1665079	Spacer	1
10		Shell	1
11	1665077	Piston	1
12		O-Ring	1
13		Piston Seal	1
14	1665000	Nut	1
	1665089	Kit-Seal	1

SIDE-SHIFT CYLINDER (FIGURE 12-12)

BP000375

ITEM	PART NO.	DESCRIPTION	QTY
	1664901	Cylinder Assy	1
1		Wiper	1
2	1664964	Snap Ring	1
3	1664963	Retaining Ring	1
4		Seal	1
5		Back Up Ring	1
6		O-Ring	1
7	1664959	Retainer	1
8		Rod	1
9		Shell	1
10		Spacer (Rod)	1
11		O-Ring	1
12		Seal	1
13	1664956	Piston	1
14	1664916	Nut	1
15	1664954	Spacer (Head)	1
	1520671	Kit-Seal	1

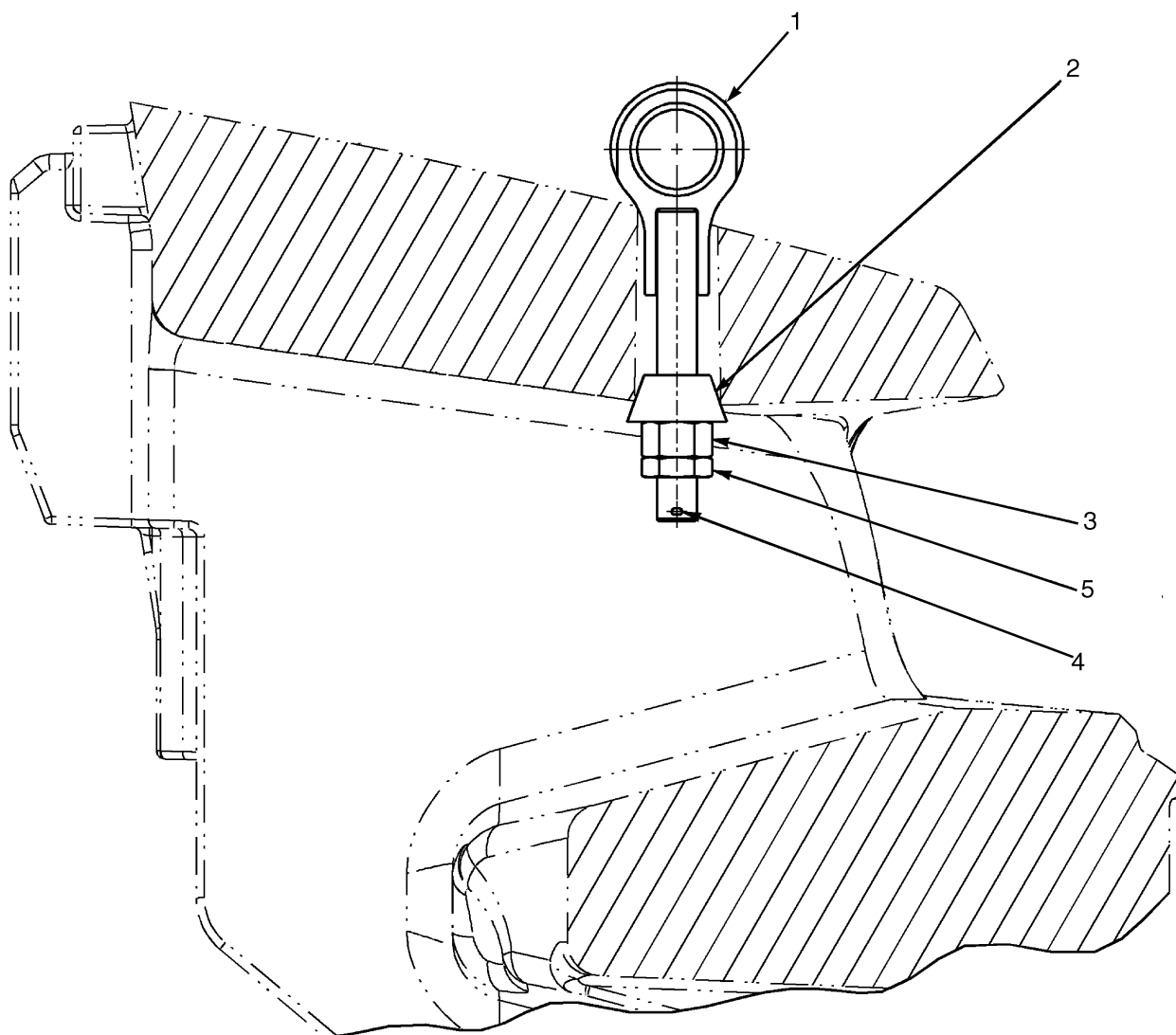
GM LPG REGULATOR DRAIN KIT (FIGURE 12-13)

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

LIFTING EYE (FIGURE 12-14)

BP000445

LIFTING EYE

ITEM	PART NO.	DESCRIPTION	QTY
1	1651797	Eyebolt	1
2	1474318	Anchor	1
3	292661	Nut	1
4	15246	Cotter Pin	1
5	1593341	Nut	1

[illegible]

SECTION 13
FIELD CONVERSION KITS

DESCRIPTION	PAGE
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ATTACHMENT MOUNTING KITS

DESCRIPTION	PART NUMBER
Kit-Aux Tube Extension	a1666416
Kit-Attaching Parts	a1666417
Kit-Attaching Parts	a1666419
Kit-Attaching Parts	a1666421
Kit-Attaching Parts	a1666422
Kit-Attaching Parts	a1666423
Kit-Attaching Parts (Single Block Handler, Std Carriage, 2 STG LFL Class IV)	d1664917
Kit-Attaching Parts (Single Block Handler, 3 Stg FFL, Class IV Std Carriage)	k1664918
Kit-Attaching Parts (Dual Block Handler, Std Carriage, 2 Stg LFL Class IV)	h1664919
Kit-Attaching Parts (Dual Block Handler, 3 Stg FFL, Class IV Std Carriage)	p1664920
Kit-Attaching Parts (Dual Block Handler, Std Carriage 2 Stg LFL, Class IV)	g1664921
Kit-Attaching Parts (Dual Block Handler, 3 Std FFL, Class IV Std Carriage)	r1664922
Kit-Attaching Parts (SS Pulp Bale Clamp, Std Carriage, 2 Stg LFL, Class IV)	b1664925
Kit-Attaching Parts (SS Pulp Bale Clamp, Std Carriage. 3 Stg FFL, Class IV)	o1664926
Kit-Attaching Parts (Pivot Arm Roll Clamp, Std Carriage, 2 LFL Class IV)	j1664937
Kit-Attaching Parts (Pivot Roll Arm Clamp, Std Carriage, 3 Stg FFL Class IV)	s1664938
Kit-Attaching Parts (Pivot Arm Roll Clamp, Std Carriage, 2 Stg LFL Class IV)	e1664941
Kit-Attaching Parts (Pivot Roll Arm Clamp, Std Carriage, 3 Stg FFL Class IV)	m1664942
Kit-Attaching Parts (Pivot Arm Roll Clamp, Std Carriage, 2 Stg LFL Class IV)	f1664943
Kit-Attaching Parts (Pivot Roll Arm Clamp, Std Carriage, 3 Stg FFL Class IV)	n1664944
Kit-Attaching Parts (Rotator, Std Carriage. 2 Stg LFL Class IV)	c1664949
Kit-Attaching Parts (Rotator, Std Carriage, 3 Stg FFL, Class IV)	l1664950
Kit-Attaching Parts (Rotator, Std Carriage. 2 Stg LFL Class IV)	i1664951
Kit-Attaching Parts (Rotator, Std Carriage, 3 Stg FFL, Class IV)	q1664952

FOOTNOTES:

- a** Used On Mast A613
- b** Used On Mast A613, Attachment 100D-PBS
- c** Used On Mast A613, Attachment 100D-RRB, 120D-RRB
- d** Used On Mast A613, Attachment 100E-BDS
- e** Used On Mast A613, Attachment 120F-RCP
- f** Used On Mast A613, Attachment 130F-RCP
- g** Used On Mast A613, Attachment 150D-BDS
- h** Used On Mast A613, Attachment 150D-BSS
- i** Used On Mast A613, Attachment 150D-RRB
- j** Used On Mast A613, Attachment 90F-RCF, 90F-RCP, 100F-RCF, 100F-RCP
- k** Used On Mast A614, Attachment 100D-BDS
- l** Used On Mast A614, Attachment 100D-RRB, 120D-RRB
- m** Used On Mast A614, Attachment 120F-RCP
- n** Used On Mast A614, Attachment 130F-RCP
- o** Used On Mast A614, Attachment 140D-PBS
- p** Used On Mast A614, Attachment 150D-BSS
- q** Used On Mast A614, Attachment 150D-RRB
- r** Used On Mast A614, Attachment 159D-BDS
- s** Used On Mast A614, Attachment 90F-RCF, 90F-RCP, 100F-RCF, 100F-RCP

BRAKE AND INCHING PEDAL CONVERSION

DESCRIPTION	PART NUMBER
Kit-Single to Dual Drive Wheel	1655416

SEAT CONVERSION KITS

DESCRIPTION	PART NUMBER
Kit-Swivel Seat Full Susp (Full Suspension Vinyl w/o E-Hyd Controls)	1655405
Kit-Swivel Seat Full Susp (Full Suspension Cloth w/o E-Hyd Controls)	1655406
Kit-Swivel Seat Full Susp (Full Suspension Vinyl with E-Hyd Controls)	1655407
Kit-Swivel Seat Full Susp (Full Suspension Cloth with E-Hyd Controls)	1655408

ADD ON OPTION KITS

DESCRIPTION	PART NUMBER
Kit-Fire Extinguisher (W/o Cab)	1650586
Kit-Load Weight on Display (With E-Hydraulics Only)	a1641495
Kit-Mirror (With Overhead Guard)	1581968
Kit-Mirror (Dual Mirrors For Cab)	1602398
Kit-Impact Monitoring (With Immediate Shutdown)	a1641523
Kit-Impact Monitoring (With 30 Second Shutdown)	a1641524
Kit-Powertrain Protection (English - US Language)	a1585854
Kit-Back-Up Alarm (87 dbA)	a1657000
Kit-Back-Up Alarm (97 dbA)	a1657001
Kit-Back-Up Alarm (102 dbA)	a1657002

ADD ON OPTION KITS (CONTINUED)

DESCRIPTION	PART NUMBER
Kit-Back-Up Alarm (107 dbA)	a1657003
Kit-Back-Up Alarm (82-102 dbA)	a1657004
Kit-Accumulator	1658249
Kit-Electronic Monitoring	a1629208

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.

MISCELLANEOUS CONVERSION KITS

DESCRIPTION	PART NUMBER
Kit-Keyswitch to Pushbutton (Pushbutton Start with Remote Key Switch)	a1624521
Kit-Return to Set Tilt 3 Way (Mini Lever without Clamp)	a1658860
Kit-Return to Set Tilt 4 Way (Mini Lever without Clamp)	a1658861
Kit-Return to Set Tilt 3 Way (Mini Lever with Clamp)	a1658863
Kit-Return to Set Tilt 4 Way (Mini Lever with Clamp)	a1658864
Kit-Fwd/Rev Lever to Monotrol	a1625467
Kit-Monotrol to Fwd/Rev Lever	a1583198
Kit-Red Seat Belt	1636120
Kit -Liner Assy w/secondary Filter for 6" Air Cleaner, Diesel	1670586
Kit-Mini Lever Conv 4 Way	1703633

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.

E-HYDRAULIC CONTROL CONVERSION KITS

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-Mini Lever Conv 4 Way (With Clamp to 4 Way Without Clamp)	a1635699
Kit-E-Hyd Valve 3 to 4 Way (without Clamp to 4 Way with Clamp)	a1661207
Kit-Hose Group 3 to 4 Way (without Clamp to 4 Way with Clamp)	a1661212

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.

HYDRAULIC CONTROL CONVERSIONS

DESCRIPTION	PART NUMBER
Kit-Manual Lever Conv 3 Way (without Clamp to 3 Way with Clamp)	1584061
Kit-Hose Group 3 to 4 Way	b 1661315
Kit	ad 1670828
Kit-Manual Lever Conv 3 Way (w/o clamp to 3 way with clamp) (Without Clamping to Four Way With Clamping)	c 1677917
Kit-Hose Group 3 to 4 Way	b 1661316
Kit	ad 1670829
Kit-Manual Lever Conv 3 Way (Without Clamping to Four Way Without Clamping)	c 1677920
Kit-Manual Lever Conv 3 Way (without Clamp to 3 Way with Clamp)	e 1677913
Kit-Manual Lever Conv 3 Way (without Clamp to 4 Way with Clamp)	e 1678508
Kit-Manual Lever Conv 3 Way (without Clamp to 4 Way without Clamp)	e 1678509

FOOTNOTES:

- a** → 9/2007
b → PENDING PER ECN 10451202
c 9/2007 →
d PENDING PER ECN 10451202 →
e PENDING PER ECN 10498402 →

AUXILIARY TUBE EXTENSION KITS

DESCRIPTION	PART NUMBER
Kit-Quick Disconnect Fitting	1650605
Kit-Aux Tube Extension (Three Function Class IV Std Carriage, 2 LFL)	1658112
Kit-Aux Tube Extension (Four Function Class IV Std Carriage, 2 Stg LFL)	1658113
Kit-Aux Tube Extension (Three Function Class IV, Std Carriage, 3 Stg FFL)	1658114

HEADER HOSE CONVERSION KITS TWO STAGE LIMITED FREE-LIFT

A613

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS				
	2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
Kit-Hose Group 2 to 3 Way	1658988	1648691	1648695	1658991	1658994

A613

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS				
	2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
Kit-Hose Group 2 to 4 Way	1658990	1648693	1648697	1658993	1658996

A613

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS				
	2940 mm (115.7 in.)	3340 mm (131.5 in.)	4340 mm (170.9 in.)	5340 mm (210.2 in.)	5940 mm (233.9 in.)
Mast Group Number	A613 2940	A613 3340	A613 4340	A613 5340	A613 5940
Kit-Hose Group 3 to 4 Way	1658989	1648692	1648696	1658992	1658995

**HEADER HOSE CONVERSION KITS
THREE STAGE FULL FREE-LIFT****A614**

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS		
	4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
Mast Group Number	A614 4640	A614 5540	A614 6140
Kit-Hose Group 2 to 3 Way	1648927	1648931	1648935

A614

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS		
	4640 mm (182.7 in.)	5540 mm (218.1 in.)	6140 mm (241.7 in.)
Mast Group Number	A614 4640	A614 5540	A614 6140
Kit-Hose Group 2 to 4 Way	1648929	1648933	1648937

A614

DESCRIPTION	LIFT HEIGHT TO BOTTOM OF FORKS	
	4640 mm (182.7 in.)	6140 mm (241.7 in.)
Mast Group Number	A614 4640	A614 6140
Kit-Hose Group 3 to 4 Way	1648928	1648936

LIGHT CONVERSION KITS

DESCRIPTION	PART NUMBER
Kit-Light (Front Drive/Rear Work Light, with Harness and Overhead Guard)	a1626526
Kit-Light (Strobe, Flash Tube w/o other lights, with Overhead Guard and with Harness)	a1626527
Kit-Light (Strobe, Flash Tube with Other Lights and Overhead Guard, w/o Harness)	a1583710
Kit-Strobe Light (Amber Strobe with Cab)	a1625728
Kit-Strobe Light (Amber Strobe LED Light with Cab)	a1655298
Kit-Light (LED Strobe with other lights for Overhead Guard, w/o Harness)	a1655205
Kit-Light (LED Strobe w/o Other Lights for Overhead Guard with Harness)	a1655206
Kit-Work Light Extension (Without Cab, with 2 Stg LFL Mast)	1670068
Kit-Work Light Extension (With Cab and 2 Stg LFL Mast)	1670070
Kit-Light (Front Drive/Rear Work lights, w/o Harness, with Overhead Guard)	1583708

LIGHT CONVERSION KITS (CONTINUED)

DESCRIPTION	PART NUMBER
Kit-Light (Front Drive/Rear Work Light, with Harness and Overhead Guard)	1673180
Kit-Light	b 1673181
Kit-Light (Front Drive/Rear Work lights, w/o Harness, with Overhead Guard) (Alternate Part)	c 1676111
Kit-Light (Brake/Tail/Back-up Lights with Harness, with Overhead Guard)	1626528
Kit-Light (Brake/Tail/Back-up Lights w/o Harness with Overhead Guard)	1583712
Kit-Light (Front Drive/Rear Work Light, with Harness and Overhead Guard)	1626526
Kit-Work Light Extension	1670069
Kit-Work Light Extension	1670200
Kit-Front Drive/Rear Worklight (LED w/o Other Lights for Overhead Guard with Harness)	1700248
Kit-Front Drive/Rear Worklight (LED with other lights for Overhead Guard, w/o Harness)	1700245
Kit-Front Drive/Rear Worklight (LED w/o Other Lights for Overhead Guard with Harness)	1700261
Kit-Front Drive/Rear Worklight (LED with other lights for Overhead Guard, w/o Harness)	1700262
Kit-Front Drive/Rear Worklight (LED w/o Other Lights for Overhead Guard with Harness)	1700263

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** → PENDING PER ECN 105217
- c** PENDING PER ECN 105217 →

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	4-129	4		5-7	6		4-85	13		4-113	2
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1194254	5-5	13	1313789	11-17	22		4-125	5		4-68	16
	5-7	10	1313791	11-17	22	1324309	4-93	13		4-75	6
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1307300	11-3	9	1323576	4-73	5	1324480	1-43	11		4-57	32
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	10-13	7		4-79	10	1325271	1-41	22		4-63	30
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	11-23	14		4-89	8		4-63	30		4-69	37
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1309839	2-37	12		4-115	1		4-63	33	1330355	4-57	30
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1311803	5-49	7		4-73	3		4-75	2		4-85	15
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	4-126	25		4-97	13		4-69	38	1339963	2-39	20
1330424	4-90	24		4-97	14		4-69	40	1340470	3-37	12
	4-126	25		4-98	18		4-109	1	1344124	3-29	13
1330437	1-17	11		4-101	3	1330450	2-37	6	1344753	11-3	9
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	4-125	14	1375391	1-3	17	1389220	5-21	26		4-109	6
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1357266	4-21	9	1375676	1-41	19	1390761	2-37	3		4-111	6
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1357527	4-19	24	1377107	2-39	23	1393127	2-35	6		4-117	1
1358182	6-2	1	1377110	2-35	3	1393348	7-7	36	1402815	4-56	18
	7-14	2	1377750	2-23	14	1393479	1-29	13		4-62	20
1359562	1-21	3	1377792	2-43	15	1393482	1-31	8		4-68	24
1360178	2-39	33	1377793	2-43	16	1393494	1-27	10		4-89	17
1360179	2-37	4	1377794	2-43	17	1393505	1-27	2		4-109	2
1360182	2-37	5	1377953	10-17	15	1393511	1-23	6		4-111	2
1360508	10-17	7		11-26	26	1393527	1-23	16		4-125	15
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1371149	3-11	11	1383904	2-43	10	1399118	11-9	7		4-57	29
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1374289	2-43	11	1386179	2-40	38	1399174	10-7	10		4-69	34
1374290	2-43	3	1386183	2-39	32	1399802	3-33	2		4-73	3
1374293	2-43	14	1386184	2-39	31	1402189	2-5	13		4-75	3
1374297	2-39	2	1386187	2-43		1402613	4-85	16		4-75	6
1374298	2-39	8	1386189	2-43	21	1402629	4-13	21		4-89	3
1374299	2-39	7	1386190	2-43	22	1402809	4-79	14		4-113	1
1374301	2-39	6	1386194	2-35	4		4-83	4	1402912	4-73	8
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1374314	2-39	22	1386198	2-35	8		4-97	14	1402926	4-73	7
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1450941	2-47	9		4-61	4		11-26	31	1473898	5-9	4
1451319	2-37	17		4-61	5	1465585	10-7	12	1474318	12-23	2
1451321	2-39	24		4-61	10		11-9	26	1474704	1-27	12
1453247	2-23	15		4-62	22	1467523	1-47		1474709	1-23	19
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1459173	1-45	5		4-70	45	1470153	1-47	1		4-79	15
1460322	2-39	14		4-93	1		1-49	1		4-83	6
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1460477	1-3	21		4-97	16	1470157	1-47	2		4-79	12
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	4-7	15		4-105	1	1470163	1-47	5		4-89	1
1460738	2-37	11		4-105	12		1-49	5		4-125	7
1460757	2-39	30		4-105	16	1471556	2-39	3	1476108	4-57	30
1460758	2-39	30		4-123	6	1471557	2-35	1		4-63	32
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1480187	4-57	35		4-57	38	1484558	4-123	6		4-56	22
	4-63	37		4-58	39		4-129	5		4-62	15
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	4-69	40		4-61	4		4-123	2		4-68	17
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1559925	4-50	7		4-111	9		4-105	13		1-7	10
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