

PARTS MANUAL

CHALLENGER

**H1050EH, H800E, H880E,
H970E
(D117)**

CUSTOMER EDITION

HYSTER

SECTIONS

1	FRAME
2	ENGINE ASSEMBLY
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5	TRANSMISSION
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9	HYDRAULIC SYSTEM
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This Parts Manual is divided into 13 major sections which are listed above. Quick reference to these sections can be made by placing the right thumb on the tab of the desired section, bending the book back and thumbing the pages to the corresponding tab.

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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
EPROM	Electrically Programmable Read Only Memory	UL Type GS	Gasoline-Powered Safety Rating
		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 the next page.

HYSTER UNIT CODE D001 NORTH AMERICA 06/2001

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- 11

FRAME

ELECTRICAL SYSTEM

BRAKE/ACC

MAST-TWO STAGE

MAST-THREE STAGE

MAST-TWO STAGE

HYSTER UNIT CODE D001 NORTH AMERICA 06/2001

TRANSMISSION HOUSING ⇒ S/N D001H-2628

KEY:
A: Diesel
B: Gasoline and LPG

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
		Transmission	1	1
	2022547	Transmission	1	1
	2023229	Transmission	2	2
	2021670	Case	4	4
1	2023418	Bearing Cap	4	4
2	296426	Washer	1	1
3	296426	Washer	2	2
4	296426	Washer	2	2
5	2021380	Bolt	4	4
6	1371656	Cotter Pin	1	1
7	2021329	O-Ring	4	4
8	2021915	Plug	4	4
9	2021675	Housing	22	22
10	2021336	Pin	39	39
11	287860	Bolt	1	1
12	292682	Lockwasher	1	1
13	292682	Hydraulic Pump	1	1
		⇒ Figure 5-5		
14	2021345	Gasket	8	8
15	214364	Bolt	1	1
16	296418	Washer	1	1
17	2021388	Temperature Switch	1	1
18	2021389	Breather	9	9
19	2021383	Dipstick	9	9
20	292515	Bolt	2	2
21	136692	Nut	3	3
22	292527	Bolt	3	2
23	292531	Lockwasher	4	4
24	292683	Lockwasher	4	4
25	293637	Bolt	1	1
26	296420	Washer	1	1
	996403	Transmission Kit (Includes Item 7)	1	1
	996405	Transmission Kit (Includes Item 14)	1	1

This Parts Manual is divided into 11 major sections which are listed above. Quick reference may 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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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 on 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 on Page 13-1 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 D001H-2628**
Indicates last serial number affected.
 - S/N D001H-2629** ⇒
Indicates the first serial number affected.
 - S/N D001H-1553** ⇔ **S/N D001H-3291**
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.