

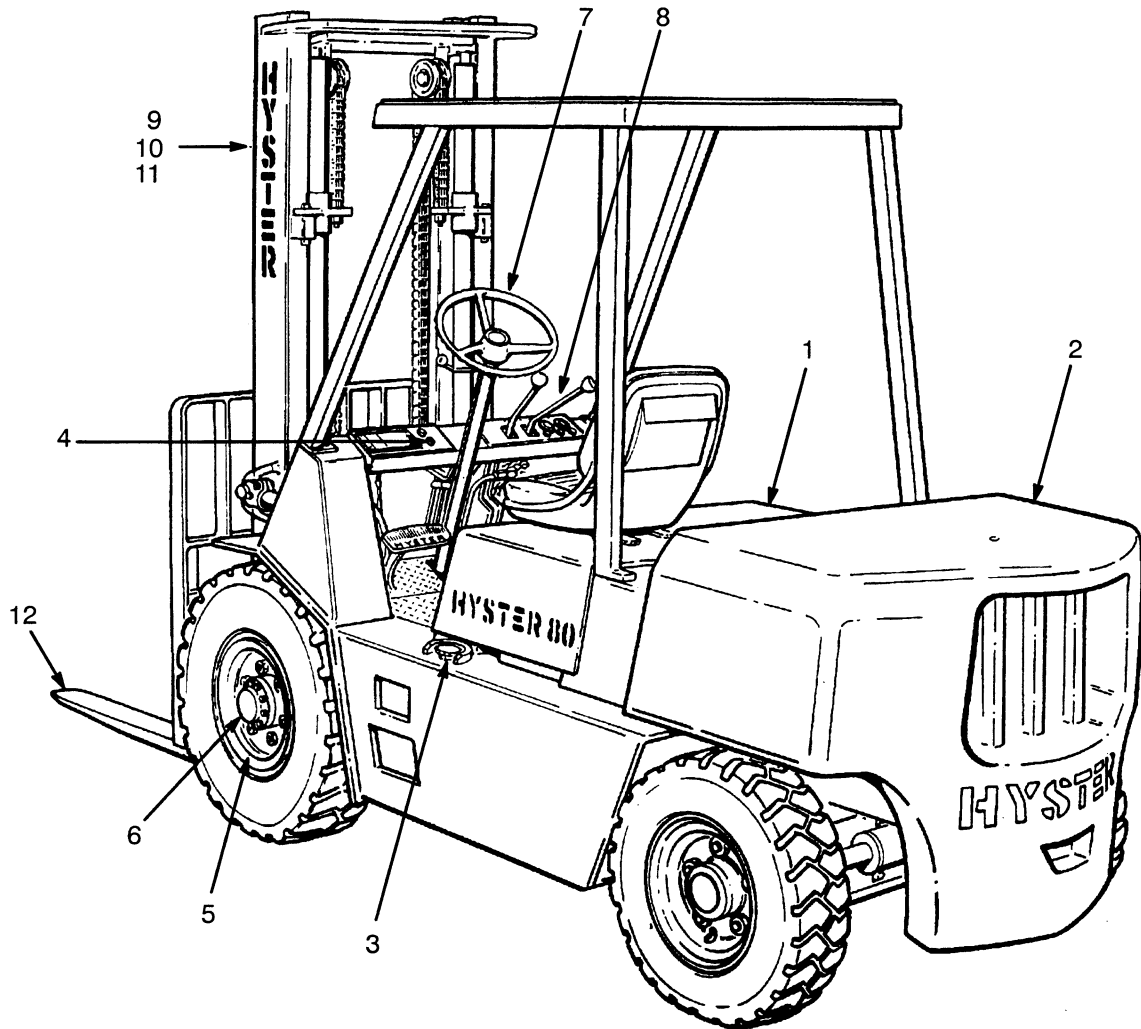
PARTS MANUAL

**CHALLENGER
H70, 80, 90, 100, & 110XL
H90XLS
(G5)**

CUSTOMER EDITION

HYSTER

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ABBREVIATIONS QUICK REFERENCE SHEET

Listed Below Are Abbreviations Used In Parts Manuals To Denote The Following Expressions:

2-STG	Two Stage Mast
3-STG	Three Stage Mast
4-STG	Four Stage Mast
Amp	Amperes
AR	As Required
BCS	Box Car Special
BWI	Brush Wear Indicator
CE	Commutator End
CRE	Corrosive Environment
dbA	Decibel "A" Scale
DE	Drive End
EC or ECH	Empty Container Handler Europe Empty Container Handler U.S.
EC-3 ECH-3	Empty Container Handler-3 High Stacking
EC-4 ECH-4	Empty Container Handler-4 High Stacking
EC-5 ECH-5	Empty Container Handler-5 High Stacking
EC-6 ECH-6	Empty Container Handler-6 High Stacking
EC-7 ECH-7	Empty Container Handler-7 High Stacking
ECM	Electronic Control Module
ECN	Engineering Change Notice
EEPROM	Electrically Erasable Programable Read Only Memory
EPROM	Electrically Programable Read Only Memory
EGR	Exhaust Gas Recirculation
FFL	Full Free Lift
FLT	Fork Lift Truck
FRE	Freezer Environment
in.	inches
I.D.	Inside Diameter
LFL	Limited Free Lift
LPG	Liquified Petroleum Gas
MAP	Manifold Absolute Pressure
mm	millimeters
MSTS	Microprocessor Spark Timing System

NC	Normally Closed
NDE	Not Drive End (Commutator End)
NFL	No Free Lift
NI	Not Illustrated
NO	Normally Open
NPT	National Pipe Threads
NS	Neutral Start
OC	Oil Clutch Transmission
O.D.	Outside Diameter
O/S	Oversize
PS	Powershift Transmission
PTO	Power Take Off
RPM	Revolutions per Minute
S/N	Serial Number
SFL	Semi-Free Lift
TMM	Truck Management Module
Type D	UL Type D, Diesel-Powered Safety Rating
Type DS	UL Type DS, Diesel-Powered Safety Rating
Type E	UL Type E, Battery Powered Safety Rating
Type EE	UL Type EE, Battery-Powered Safety Rating
Type ES	UL Type ES, Battery-Powered Safety Rating
Type G	UL Type G, Gasoline-Powered Safety Rating
Type GS	UL Type GS, Gasoline-Powered Safety Rating
Type LP	UL Type LP, LP Gas-Powered Safety Rating
Type LPS	UL Type LPS, LP Gas-Powered Safety Rating
U/S	Undersize
UL	Underwriters Laboratory
UK	United Kingdom
U.S.	United States
V	Volts
Xmsn	Transmission

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, symbols and footnotes.

HYSTER
SERIAL CODE D177-U.S.

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							8	31	15225	367	9
							8	35	15227	305	29
							8	34	15236	305	39
							8	13		327	14
							8	0		351	3
							8	1		352	3
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HYSTER

CARRIAGE (Figure 233)
TWO STAGE FFL
SIX ROLLER

9 → LAST USED ON S/N PENDING PER ECN 98765

6 →

KEY:
A: H48-850M
B: H60-850M

REF	PART NO.	NAME OF PART	QTY	REF	PART NO.	NAME OF PART	QTY
a		Carriage Assy	1	5	366116	Spacer	2
1	1345239	Carriage	1	6	1369345	Chain Anchor	2
1	1345240	Carriage	1	6	1369344	Chain Anchor	2
1	1345264	Stubshaft	1	7	317735	Pin	2
2	1345218	Load Roller	6	8	131358	Snap Ring	2
2	1395172	Load Roller ("A" Standard)	4	9	323161	Pin	4
2	1345219	Load Roller ("B" 0.76 mm)	6	10	15200	Cotter Pin	2
2	1345220	Load Roller ("C" 1.52 mm)	6				2
3	12991	Snap Ring	6				
4	1345283	Shim	6				

7 →

8 →

KEY:
a Table Above
b Last Used On S/N Pending ECN 72449
c First Used On S/N Pending ECN 72449

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See Service Manual for service procedures

10/20/1987

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 illustrated index page immediately behind the front cover. Choose the general area of reference most likely to include the part.
2. Find the page number for the reference number you choose and turn to that page. Use the division index 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 Master Index immediately following the Illustrated Index.
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 at the back of the manual to find the part number. Turn to the figure listed and locate the part as indicated by the reference number.

GENERAL:

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

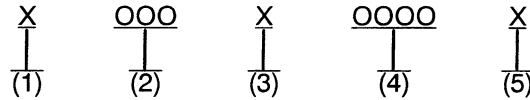
6. Keys are used to show effective serial numbers for two or more similar assemblies, RH and LH assembly parts, etc. Select the appropriate key, "A", "B", "C" or "D" and the corresponding quantity column to find the required parts.
7. Indented descriptions under "Name of Part" are used to indicate assemblies and sub-parts of assemblies. In the example, *LOAD ROLLER* (Item 7) is a subpart of the major assembly *CARRIAGE*.
8. Quantities shown are for one assembly. The quantities of the subpart *LOAD ROLLER* are indicated as six and six. This means six per *CARRIAGE* assembly.
9. Engineering change notice (ECN) numbers for pending serial numbers are shown to allow for the inclusion of the most current parts information. Contact your local dealer for Hyster lift trucks for serial number information listed by ECN number.
10. Additional fork lengths are available. Contact your dealer for Hyster lift trucks.

ORDERING PARTS:

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

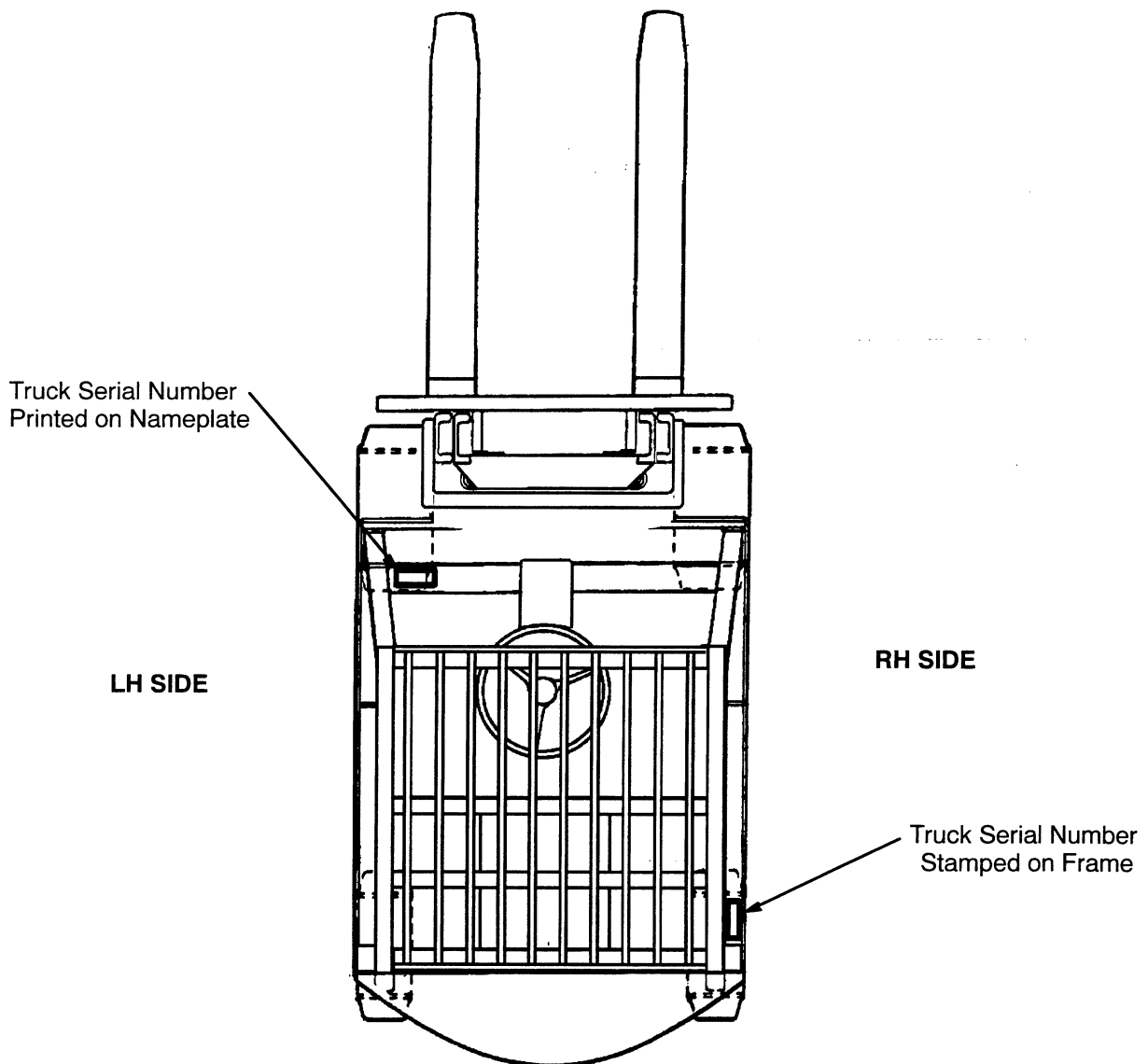
For any further information on parts, service, or ordering, consult your local dealer for Hyster lift trucks.

IDENTIFICATION OF TRUCK SERIAL NUMBERS



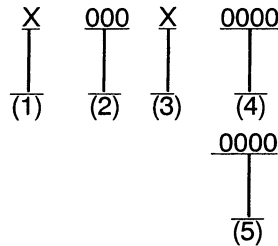
- (1) & (2) The first letter and three numbers indicate the truck model code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number series indicates the serial number of the truck.
- (5) The final letter indicates the year of manufacture starting with "A" in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

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



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) & (2) The first letter and number indicates the mast model code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number series indicates the serial number of the mast.
- (5) Lift Height in Millimeters stamped just below the serial number

Mast Group Identification consists of mast unit code (1) & (2) plus lift height (5).

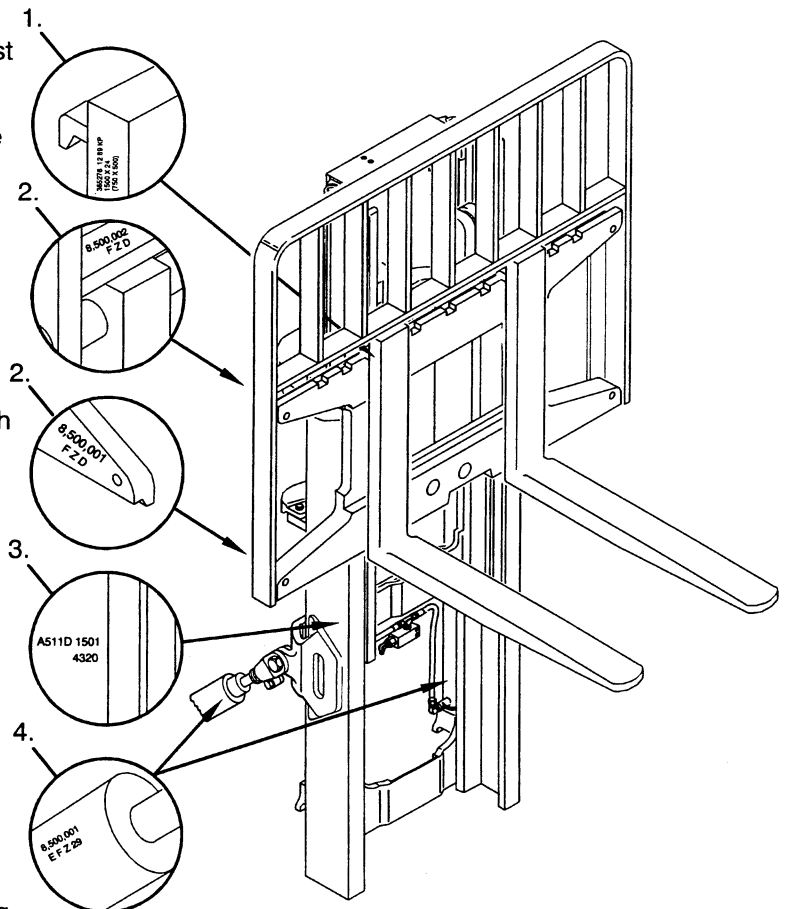
For pending serial numbers contact your local dealer for Hyster lift trucks.

LIFT EQUIPMENT IDENTIFICATION

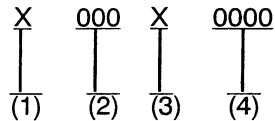
1. Fork part number, capacity rating, plant code letter and date of manufacture are stamped approximately six inches below the top of most forks.
2. The carriage group number is stamped on the right hand side of the top crossmember (pin type) or on the back of the right hand end of the bottom crossmember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

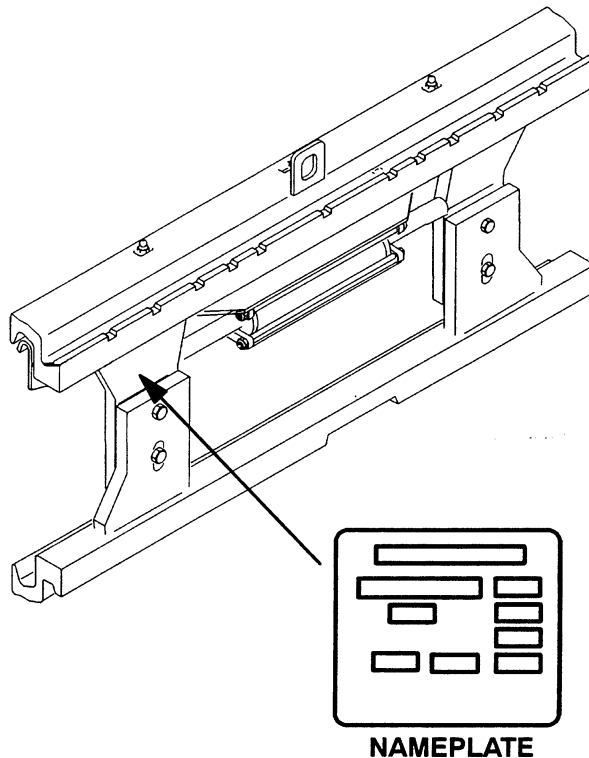


IDENTIFICATION OF ATTACHMENT AND SIDE-SHIFT CARRIAGE SERIAL NUMBERS



- (1) & (2) The first letter and three numbers indicate the attachment model code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number series indicates the serial number.

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



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.

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