

PARTS MANUAL

CHALLENGER

H165XL, H190XL

H210XL, H230XL

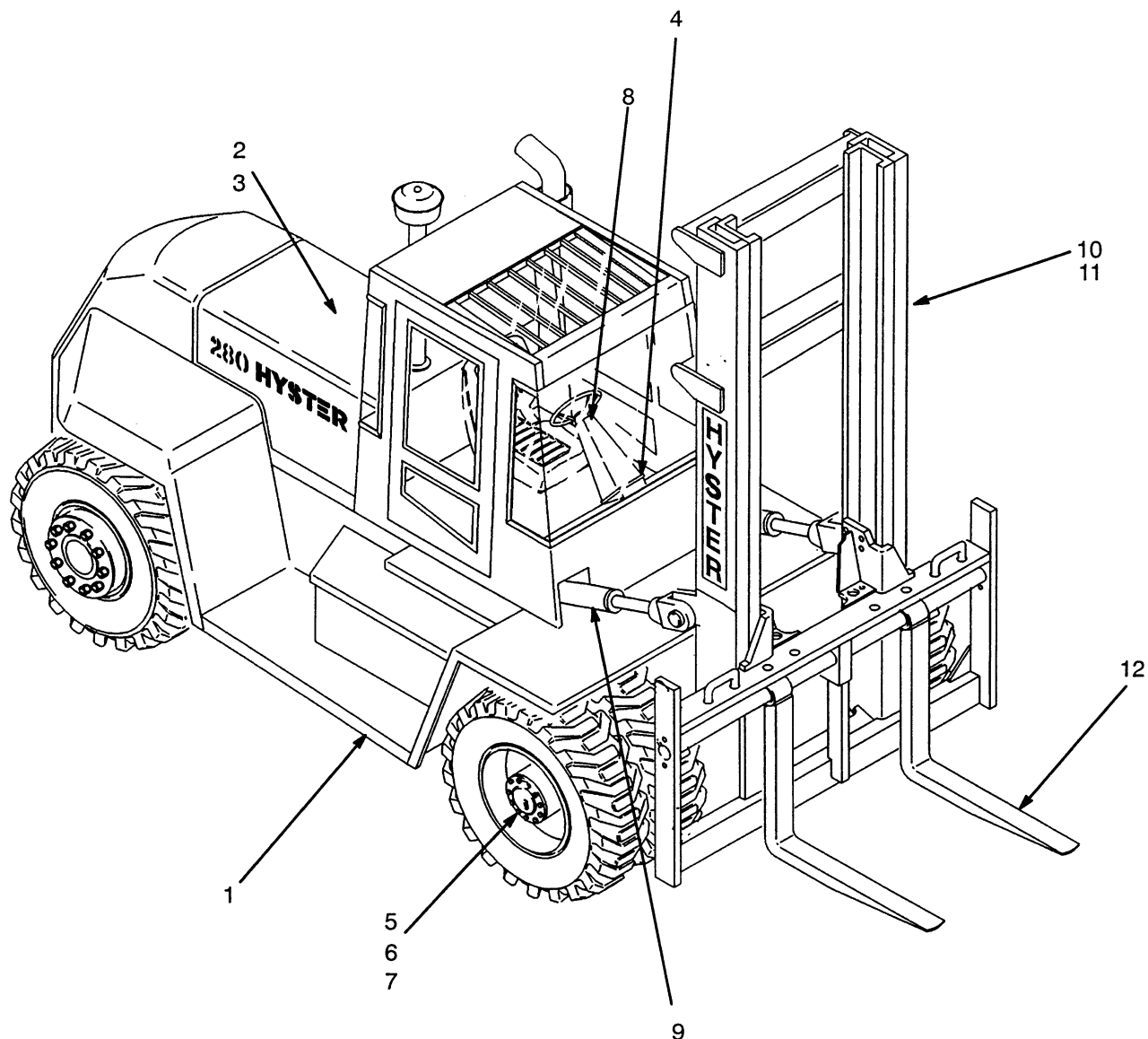
H250XL, H280XL

(E7)

CUSTOMER EDITION

HYSTER

ILLUSTRATED CONTENTS



REF	SECTION	PAGE
1	FRAME	Page 1
2	ENGINE	Page 33
3	FUEL	Page 121
4	ELECTRICAL	Page 179
5	BRAKE	Page 217
6	TRANSMISSION	Page 259
7	DRIVE AXLE	Page 291
8	STEERING	Page 301
9	HYDRAULIC	Page 311
10	VISTA 2-STG NFL MAST	Page 345
11	A783 THREE STAGE FULL FREE LIFT MAST	Page 361
12	OPTIONAL	Page 387
13	NUMMERICAL INDEX	Page 413

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
A	
AIR COMPRESSOR (Figure 121) LAST USED ON ENGINE S/N U563738X	Page 230
AIR COMPRESSOR (Figure 122) USED ON ENIGNE S/N U563739X UP TO UNIT S/N E7D-2050	Page 232
AIR COMPRESSOR (Figure 123) UP TO ENGINE S/N U593028	Page 234
AIR COMPRESSOR (Figure 124) USED ON ENGINE S/N U593029 THRU U607097 FIRST USED ON UNIT S/N E7D-2050	Page 236
AIR COMPRESSOR (Figure 125) FIRST USED ON ENGINE S/N U607098 AND UNIT S/N E7D-3217	Page 238
AIR COMPRESSOR (Figure 126) FIRST USED ON 366 LPG ENGINE	Page 240
AIR DUCTS (Figure 57) TURBO-DIESEL	Page 106
AIR FILTER (Figure 84) DIESEL TURBO WITH LOW EMISSIONS FIRST USED ON S/N E7D-3217	Page 162
AIR FILTER (Figure 75) NON TURBO-DIESEL	Page 144
AIR FILTER (Figure 76) LPG	Page 146
AIR FILTER (Figure 83) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 160
AIR TANK (Figure 116) DIESEL LAST USED ON S/N E7D-1615	Page 224
AIR TANK (Figure 117) DIESEL AND LPG FIRST USED ON S/N E7D-1616	Page 225

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
A (Continued)	
AIR TANK (Figure 118) WITH AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 226
ALTERNATOR (Figure 103) DIESEL-LAST USED ON S/N E7D-2133 IDENTIFY BY "DELCO"	Page 200
ALTERNATOR (Figure 104) LPG DIESEL-FIRST USED ON S/N E7D-2134	Page 202
ALTERNATOR MOUNTING (Figure 105) DIESEL WITHOUT LOW EMISSIONS	Page 204
ALTERNATOR MOUNTING (Figure 106) DIESEL WITH LOW EMISSIONS AND NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 206
ALTERNATOR MOUNTING (Figure 107) LPG	Page 208
ALTERNATOR OPTIONAL (Figure 102) DIESEL LAST USED ON S/N E7D-2133 IDENTIFY BY "PRESTOLITE"	Page 198
AUXILIARY DRIVE GEAR (Figure 36) DIESEL LAST USED ON S/N E7D-2050	Page 70
AUXILIARY DRIVE GEAR (Figure 37) DIESEL FIRST USED ON S/N E7D-2051	Page 72
B	
BACKUP ALARM (Figure 214)	Page 412
BRAKE CHAMBER (Figure 134)	Page 252
BRAKE LINE WITH AUTOSHIFT (Figure 119) FIRST USED ON S/N E007D-3325	Page 227
BRAKE LINES (Figure 114) LAST USED ON S/N E7D-1548	Page 220

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
B (Continued)	
BRAKE LINES (Figure 115) LPG and DIESEL -FIRST USED ON S/N E7D-1549	Page 222
BRAKE SYSTEM (Figure 132) LAST USED ON S/N E7D-2862	Page 248
BRAKE SYSTEM (Figure 133) FIRST USED ON S/N E7D-2863	Page 250
C	
CAB (Figure 2)	Page 4
CARRAIGE (Figure 201) DUAL FUNCTION PIN QUICK DISCONNECT FIRST USED ON S/N E7D-3265	Page 394
CARRIAGE (Figure 185)	Page 356
CARRIAGE (Figure 194) 3 STG FULL FREE LIFT WITH SIDESHIFT	Page 378
CARRIAGE (Figure 195) 3 STG FULL FREE LIFT WITH SIDESHIFT AND FORK POSITIONER .	Page 380
CHARGE PUMP (Figure 151)	Page 284
CLUTCH (Figure 146) FORWARD AND LOW	Page 276
CLUTCH (Figure 147) REVERSE AND SECOND	Page 278
CLUTCH (Figure 148) THIRD	Page 280
COMPRESSOR MOUNTING (Figure 127) LPG	Page 242
CONTROL VALVE (Figure 168) TWO FUNCTION	Page 322

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
C (Continued)	
CONTROL VALVE (Figure 171) THREE FUNCTION	Page 328
CONTROL VALVE (Figure 173) FOUR FUNCTION	Page 332
CONTROL VALVE (Figure 175) FIVE FUNCTION	Page 336
COOLING (Figure 21) TURBO-DIESEL AND NON-TURBO	Page 42
COOLING (Figure 22) LPG	Page 44
COUNTERWEIGHT (Figure 14)	Page 28
CRANKSHAFT And PISTON (Figure 29) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 56
CRANKSHAFT And PISTON (Figure 30) TURBO-DIESEL WITH AND WITHOUT LOW EMISSIONS DIESEL NATURALLY ASPIRATED	Page 58
CYLINDER BLOCK (Figure 59) LPG	Page 110
CYLINDER BLOCK (Figure 25) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 48
CYLINDER BLOCK (Figure 26) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 50
CYLINDER BLOCK (Figure 27) TURBO-DIESEL WITH LOW EMISSIONS FIRST USED ON S/N E7D-3217	Page 52
CYLINDER BLOCK (Figure 28) DIESEL NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 54
CYLINDER HEAD AND VALVES (Figure 60) LPG	Page 112
CYLINDER HEAD (Figure 31) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 60

TABLE OF CONTENTS

DESCRIPTION **PAGE**

C (Continued)

CYLINDER HEAD (Figure 32) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 62
CYLINDER HEAD (Figure 33) TURBO-DIESEL WITH EMISSIONS NON-TURBO DIESEL NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 64

D

DIFFERENTIAL AND CARRIER (Figure 157) LAST USED ON S/N E7D-1759	Page 296
DIFFERENTIAL AND CARRIER (Figure 158) FIRST USED ON S/N E7D-1760	Page 298
DISTRIBUTOR (Figure 101) LPG	Page 196
DRIVE AXLE (Figure 155) DIESEL-NON-EMISSIONS LAST USED ON S/N E7D-2862	Page 292
DRIVE AXLE (Figure 156) FIRST USED ON S/N E7D-2863	Page 294

E

ELECTRICAL (Figure 96) DIESEL WITH AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 186
ELECTRICAL SYSTEM (Figure 94) DIESEL WITHOUT AUTOSHIFT	Page 182
ELECTRICAL SYSTEM (Figure 95) DIESEL	Page 184
ELECTRICAL SYSTEM (Figure 98) LPG WITHOUT AUTOSHIFT	Page 190

TABLE OF CONTENTS

DESCRIPTION **PAGE**

E (Continued)

EXHAUST (Figure 18)
NON-TURBO-DIESEL Page 38

EXHAUST (Figure 19)
TURBO-DIESEL Page 39

EXHAUST (Figure 20)
LPG Page 40

F

FAN (Figure 15) Page 29

FIRE EXTINGUISHER (Figure 213) Page 411

FLOODLIGHTS (Figure 208) Page 404

FLOORPLATES AND COVERS (Figure 7) Page 14

FLOW REGULATOR (Figure 179) Page 343

FLYWHEEL (Figure 23)
DIESEL Page 46

FLYWHEEL (Figure 24)
LPG Page 47

FORK POSITIONER CYLINDER (Figure 196) Page 382

FORK POSITIONER VALVE (Figure 197) Page 383

FORKS (Figure 204) Page 398

FREE-LIFT CYLINDER (Figure 193)
THREE-STAGE FULL FREE-LIFT MAST Page 376

FREE-LIFT (Figure 192)
THREE-STAGE FULL FREE-LIFT MAST Page 374

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
F (Continued)	
FUEL FILTER (Figure 82) TURBO-DIESEL WITH LOW EMISSIONS DIESEL-NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 158
FUEL INJECTION (Figure 78) TURBO-DIESEL WITH LOW EMISSIONS FIRST USED ON S/N E7D-3217	Page 150
FUEL INJECTION (Figure 79) DIESEL NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 152
FUEL INJECTION (Figure 66) NON TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 128
FUEL INJECTION (Figure 77) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 148
FUEL INTAKE (Figure 64) DIESEL	Page 124
FUEL PRE-FILTER (Figure 65)	Page 126
FUEL TANK (Figure 70) LPG	Page 136
H	
HEADER HOSE (Figure 198) (THREE AND FOUR FUNCTION) THREE-STAGE FULL FREE-LIFT MAST	Page 384
HEADER HOSE (Figure 207) (FIVE FUNCTION) DUAL FUNCTION SIDE SHIFT FORK POSITIONER FIRST USED ON S/N E7D-3265	Page 402
HEADER HOSES (Figure 186)	Page 358
HEATER CONTROL (Figure 8)	Page 16
HEATER (Figure 5) DIESEL	Page 10

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
H (Continued)	
HEATER (Figure 6) LPG	Page 12
HOOD (Figure 12) WITHOUT LOW EMISSIONS	Page 24
HOOD (Figure 13) WITH LOW EMISSIONS FIRST USED ON S/N E7D-3217	Page 26
HYDRAULIC CYLINDER (Figure 202) DUAL FUNCTION PIN QUICK DISCONNECT FIRST USED ON S/N E7D-3265	Page 396
HYDRAULIC PUMP (Figure 166)	Page 318
HYDRAULIC SYSTEM (Figure 164)	Page 312
HYDRAULIC TANK (Figure 165)	Page 316
I	
IDLER SHAFT (Figure 149)	Page 282
INNER MAST (Figure 181)	Page 348
INNER MAST (Figure 189) THREE-STAGE FULL FREE-LIFT MAST	Page 366
INSTRUMENT PANEL (Figure 100) LPG	Page 194
INSTRUMENT PANEL (Figure 97) DIESEL	Page 188
INTAKE MANIFOLD (Figure 61) LPG	Page 114
INTERMEDIATE MAST (Figure 188) THREE-STAGE FULL FREE-LIFT MAST	Page 364

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
L	
LABELS (Figure 11)	Page 22
LIFT CYLINDER (Figure 183) LAST USED ON S/N E7D-2580	Page 352
LIFT CYLINDER (Figure 184) FIRST USED ON S/N E7D-2581	Page 354
LIFT (Figure 182)	Page 350
LIFT PUMP (Figure 68)	Page 132
LOW PRESSURE SYSTEM (Figure 81) TURBO-DIESEL WITH LOW EMISSIONS AND NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 156
LOW PRESSURE SYSTEM (Figure 67) NON TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 130
LOW PRESSURE SYSTEM (Figure 80) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 154
LPG CONVERTER (Figure 74)	Page 143
LPG FUEL SYSTEM (Figure 71)	Page 138
LPG LOCK-OFF AND FILTER (Figure 73)	Page 142
LPG TANK MOUNTING (Figure 69)	Page 134
LUBE SYSTEM (Figure 58) TURBO-DIESEL	Page 108
M	
MAIN LIFT CYLINDER (Figure 191) THREE-STAGE FULL FREE-LIFT MAST	Page 372
MAIN LIFT (Figure 190) THREE-STAGE FULL FREE-LIFT MAST	Page 368
MANIFOLDS (Figure 48) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 90

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
M (Continued)	
MANIFOLDS (Figure 49) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 92
MANIFOLDS (Figure 50) TURBO-DIESEL WITH EMISSIONS FIRST USED ON S/N E7D-3217	Page 93
MANIFOLDS (Figure 51) NON-TURBO DIESEL NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 94
MODULATOR VALVE (Figure 152)	Page 286
MONOTROL PEDAL (Figure 154)	Page 290
O	
OIL FILTER (Figure 44) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION, NATURALLY ASPIRATED	Page 86
OIL FILTER (Figure 45) DIESEL TURBO WITHOUT LOW EMISSIONS UP TO ENGINE S/N U647451C	Page 87
OIL FILTER (Figure 46) DIESEL TURBO WITHOUT LOW EMISSIONS ENGINE S/N U647452C AND UP	Page 88
OIL FILTER (Figure 47) DIESEL TURBO WITH LOW EMISSIONS	Page 89
OIL PAN (Figure 39) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 76
OIL PAN (Figure 38) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 74
OIL PAN (Figure 40) TURBO-DIESEL WITH LOW EMISSIONS DIESEL NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 78
OIL PUMP AND PAN (Figure 62) LPG	Page 116

TABLE OF CONTENTS

DESCRIPTION	PAGE
O (Continued)	
OPERATOR COMPARTMENT (Figure 1) WITHOUT CAB	Page 2
OPERATOR COMPARTMENT (Figure 3) WITH CAB	Page 6
OPERATOR COMPARTMENT (Figure 4) WITH CAB (CONTINUED)	Page 8
OUTER MAST (Figure 180)	Page 346
OUTER MAST (Figure 187) THREE-STAGE FULL FREE-LIFT MAST	Page 362
OUTPUT GEARS (Figure 150)	Page 283
P	
PARK BRAKE VALVE (Figure 136) LAST USED ON S/N E7D-1548	Page 256
PARK BRAKE VALVE (Figure 137) FIRST USED S/N E7D-1549	Page 257
PIN FORKS (Figure 205) FIRST USED ON S/N E7D-3265	Page 399
PNEUMATIC SOLENOID VALVE (Figure 120) FIRST USED ON S/N E007D-3325	Page 228
POWERTRAIN MOUNT (Figure 17)	Page 37
PUMP DRIVE GEARS (Figure 145)	Page 274
Q	
QUICK DISCONNECT FORKS (Figure 206) FIRST USED ON S/N E7D-3265	Page 400

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
R	
RANGE CONTROL (Figure 139) WITHOUT AUTOSHIFT	Page 262
RANGE CONTROL (Figure 140) WITH AUTOSHIFT FIRST USED ON TRANSMISSION S/N T050M-6089 FIRST USED ON S/N E007D-3325	Page 264
RANGE CONTROL Figure 141 WITH AUTOSHIFT TRANSMISSION S/N T050M-6089 USED ON S/N E007D-3736 THRU S/N PENDING PER ECN 63481 ...	Page 266
RANGE CONTROL WITH AUTOSHIFT (Figure 142) FIRST USED ON S/N PENDING PER ECN 63481	Page 268
ROTATING BEACON (Figure 211)	Page 409
S	
SELECTOR VALVE (Figure 203) FIRST USED ON S/N E7D-3265	Page 397
SEMI-SUSPENSION SEAT (Figure 10)	Page 20
SIDESHIFT CARRIAGE (Figure 200)	Page 392
SIDESHIFT CYLINDER (Figure 212)	Page 410
STARTER (Figure 108) DIESEL	Page 210
STARTER (Figure 99) FIRST USED ON S/N PENDING ECN 63263-05	Page 192
STEER pUMP (Figure 160)	Page 304
STEERING AXLE (Figure 162)	Page 308
STEERING CYLINDER (Figure 163)	Page 310

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
S(Continued)	
STEERING (Figure 159)	Page 302
STROBE LIGHT (Figure 210)	Page 408
SUSPENSION SEAT (Figure 9)	Page 18
T	
THROTTLE LINKAGE (Figure 88) LOW-EMISSION DIESEL WITH AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 168
THROTTLE LINKAGE (Figure 85) DIESEL-NON EMISSIONS	Page 164
THROTTLE LINKAGE (Figure 86) TURBO-DIESEL-WITH LOW EMISSIONS DIESEL-NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 165
THROTTLE LINKAGE (Figure 87) NON-EMISSION DIESEL AND LPG WITH AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 166
THROTTLE LINKAGE (Figure 89) LPG	Page 170
THROTTLE PEDAL (Figure 92) MONOTROL PEDAL WITH AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 174
THROTTLE PEDAL (Figure 93) FORWARD/REVERSE LEVER WITH AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 176
THROTTLE PEDAL (Figure 90) FORWARD/REVERSE LEVER	Page 171
THROTTLE PEDAL (Figure 91) MONOTROL PEDAL	Page 172
TILT CYLINDER ATTACHING PARTS (Figure 176)	Page 338

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
T (Continued)	
TILT CYLINDER (Figure 177)	Page 340
TILT LOCK VALVE (Figure 178)	Page 342
TIMING GEAR (Figure 34) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 66
TIMING GEAR (Figure 35) TURBO-DIESEL WITH AND WITHOUT LOW EMISSIONS NON-TURBO DIESEL NATURALLY ASPIRATED	Page 68
TIRE & WHEEL (Figure 199)	Page 388
TRANSMISSION ATTACHING PARTS (Figure 138)	Page 260
TRANSMISSION CONTROL VALVE (Figure 153)	Page 288
TRANSMISSION (Figure 143) LAST USED ON S/N T050M-6089 LAST USED ON TRANSMISSION S/N E007D-3325	Page 270
TRANSMISSION (Figure 144) FIRST USED ON S/N T050M-6089 FIRST USED ON TRANSMISSION S/N E007D-3325	Page 272
TREADLE VALVE AND ATTACHING PARTS (Figure 128) SERVICE BRAKE LAST USED ON S/N E7D-1548	Page 244
TREADLE VALVE AND ATTACHING PARTS (Figure 129) SERVICE BRAKE FIRST USED ON S/N E7D-1549	Page 245
TREADLE VALVE (Figure 135)	Page 254
TURBOCHARGER (Figure 55) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 102
TURBOCHARGER (Figure 56) WITH LOW EMISSIONS FIRST USED ON S/N E7E-3217	Page 104

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
V	
VALVE AND ATTACHING PARTS (Figure 130) PARK BRAKE LAST USED ON S/N E7D-1548	Page 246
VALVE AND ATTACHING PARTS (Figure 131) PARK BRAKE FIRST USED ON S/N E7D-1549	Page 247
VALVE ATTACHING PARTS (Figure 167) TWO FUNCTION	Page 320
VALVE ATTACHING PARTS (Figure 169) THREE FUNCTION	Page 324
VALVE ATTACHING PARTS (Figure 170) DUAL FUNCTION SIDESHIFT FIRST USED ON S/N E7D-3265	Page 326
VALVE ATTACHING PARTS (Figure 172) FOUR FUNCTION	Page 330
VALVE ATTACHING PARTS (Figure 174) FIVE FUNCTION	Page 334
VALVE BLOCK (Figure 161)	Page 306
VALVE COVER (Figure 41) NON-TURBO-DIESEL WITH AND WITHOUT SOUND REDUCTION	Page 80
VALVE COVER (Figure 42) TURBO-DIESEL WITHOUT LOW EMISSIONS	Page 82
VALVE COVER (Figure 43) TURBO-DIESEL WITH LOW EMISSIONS DIESEL NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 84
W	
WATER PUMP (Figure 52) DIESEL LAST USED ON S/N E7D-2050	Page 96
WATER PUMP (Figure 53) DIESEL FIRST USED ON S/N E7D-2051	Page 98

TABLE OF CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
W (Continued)	
WATER PUMP (Figure 54) TURBO-DIESEL WITH LOW EMISSIONS DIESEL-NATURALLY ASPIRATED FIRST USED ON S/N E7D-3217	Page 100
WATER PUMP (Figure 63) LPG	Page 118
WINDSHIELD WASHER (Figure 16)	Page 30
WIRE HARNESS (Figure 109) CONTROL PANEL FIRST USED ON S/N E7D-3265	Page 211
WIRE HARNESS (Figure 110) ENGINE COMPARTMENT FIRST USED ON S/N E007D-3325	Page 212
WIRE HARNESS (Figure 111) CONTROLLER AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 213
WIRE HARNESS (Figure 112) SHIFTER AUTOSHIFT FIRST USED ON S/N E007D-3325	Page 214
WIRE HARNESS (Figure 113) MONOTROL FIRST USED ON S/N E007D-3325	Page 215
WORK, BRAKE/BACK-UP, FRONT & REAR DRIVE LIGHT (Figure 209) ...	Page 406

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.

3 → **DESCRIPTION** → **TABLE OF CONTENTS** → **PAGE NO.**

STEERING CONTROL UNIT (Figure 173)
LAST USED ON S/N PENDING PER ECN 59650-27 Page 316

STEERING
FIR!

ACCESS
CAL

AIR FIL
GA

AIR FIL

HYSTER
496
SERIAL CODE D177

NUMERICAL INDEX

PART NO	PAGE NO	REF NO	PART NO	PAGE NO	REF NO	PART NO	PAGE NO	REF NO	PART NO	PAGE NO	REF NO	
126	171	14	14386	209	39	149	43	8	303	15	213	30
142	175	17						8	311	19	16187	203
								8	311	19	207	79
								31	15223	367	207	79
								35	15225	305	209	71
								35	15227	305	16192	135
								14	15236	327	137	2
								13			351	3
								0			18374	59
								3			18379	57
								1			381	3
								4			18480	333
												28

1 → **ILLUSTRATED CONTENTS**

REF	SECTION
1	Frame
2	Engine
3	Fuel System
4	Electrical System
5	Transmission
6	Steering System
7	Brake System
8	Hydraulic System
9	Two Stage Limited
10	Three Stage Full Fr
11	Two Stage Full Fre
12	Optional
13	Numerical Index

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Page 441
SERIAL CODE D177-U.S.

HYSTER

CARRIAGE (Figure 233)
TWO STAGE FFL
SIX ROLLER

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

6 →

KEY:
A: H45-550M
B: H80-650M

REF	PART NO.	NAME OF PART	QTY
			A B
		Carriage Assy	1
1	1345239	Carriage	1
1	1345240	Carriage	1
1	1345264	Stubehaft	1
2	1345218	Load Roller	6 6
2	1395172	Load Roller ("A" Standard)	4 4
2	1345219	Load Roller ("B" 0.76 mm)	6 6
2	1345220	Load Roller ("C" 1.52 mm)	6 6
3	12961	Snap Ring	6 6
4	1345263	Shim	ARAR

REF	PART NO.	NAME OF PART	QTY
			A B
5	356116	Spacer	2 2
6	1369345	Chain Anchor	2 2
6	1369344	Chain Anchor	2 ..
7	317735	Pin	2
8	131358	Snap Ring	2 2
9	323161	Pin	4 4
10	15200	Cotter Pin	2 2

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

10/20/1997

2000 HYSTER COMPANY

See Service Manual
for service procedures

04/00

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.

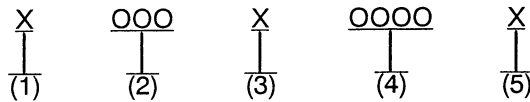
6. Keys are used to show effective serial numbers for two or more similar assemblies, RH and LH assembly parts, etc. Select the appropriate key, "A", "B", "C" or "D" and the corresponding quantity column to find the required parts.
7. Indented descriptions under "Name of Part" are used to indicate assemblies and sub-parts of assemblies. In the example, *LOAD ROLLER* (Item 2) 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.

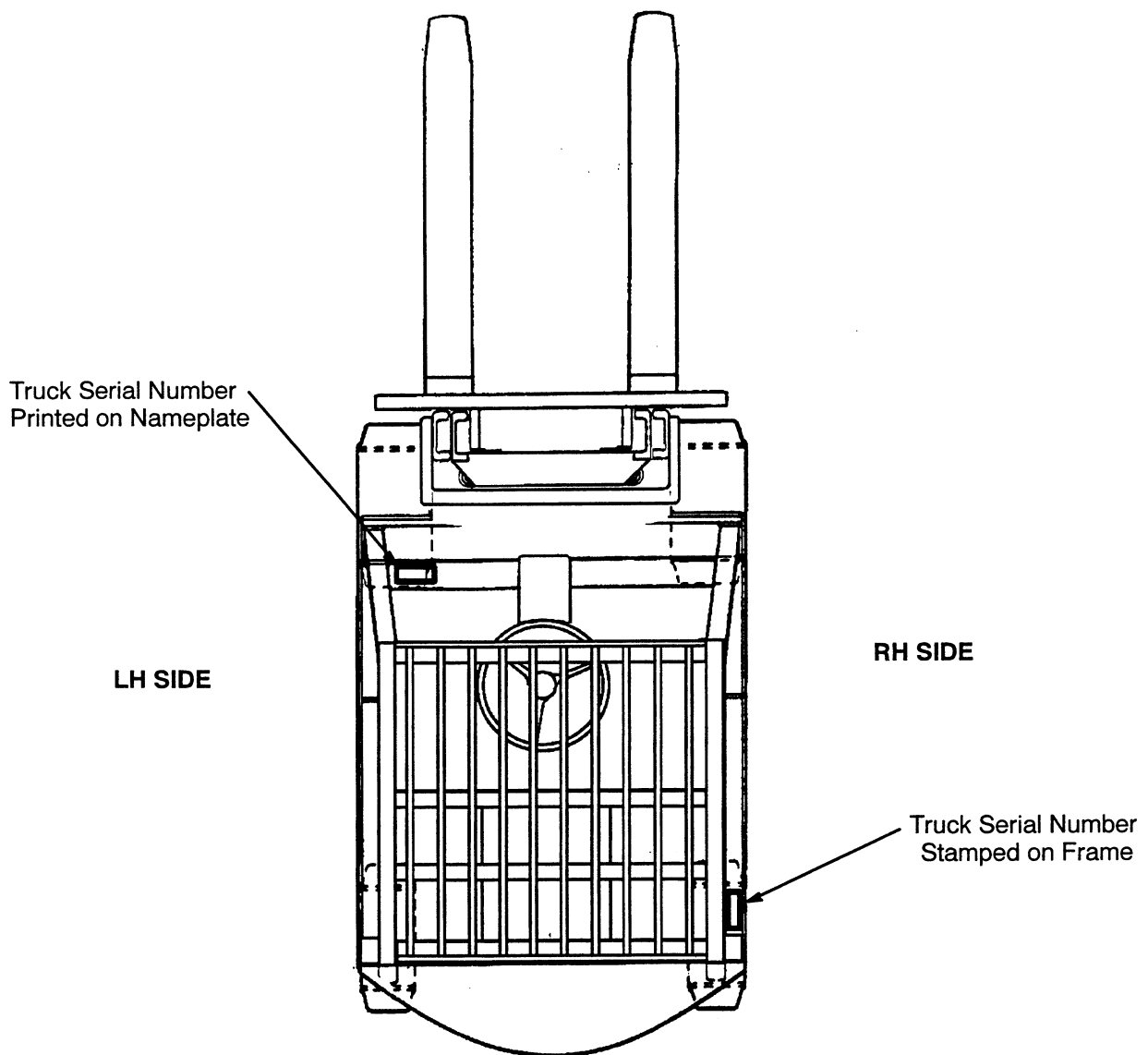
For any further information on parts, service, or ordering, consult your local dealer for Hyster lift trucks.

IDENTIFICATION OF TRUCK SERIAL NUMBERS



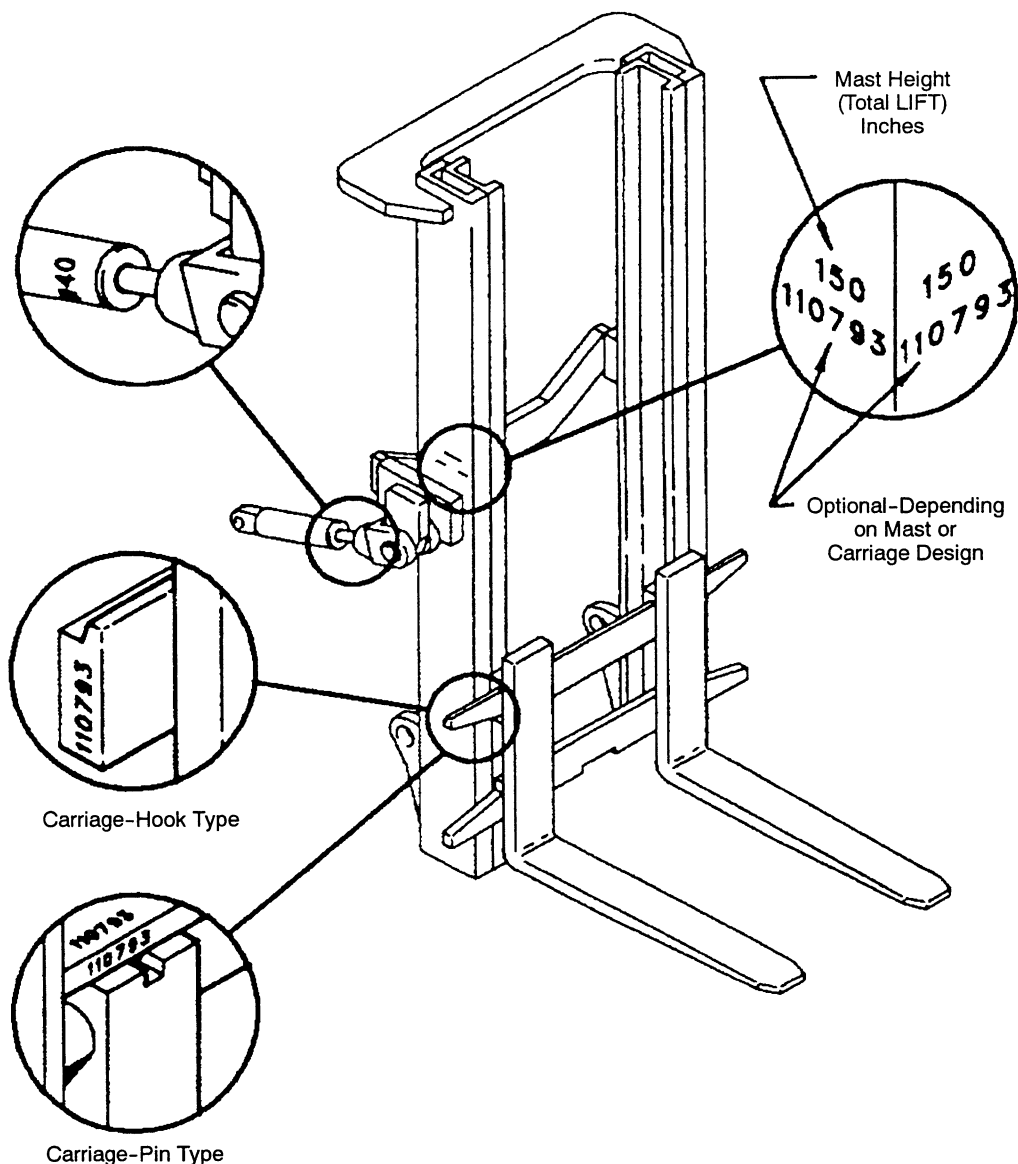
- (1) & (2) The first letter and three numbers indicate the truck model code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number series indicates the serial number of the truck.
- (5) The final letter indicates the year of manufacture starting with "A" in 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



LIFT EQUIPMENT IDENTIFICATION

1. Mast group numbers and total lift heights are stamped on the right hand outer mast approximately four feet from the bottom of the load arm. The group numbers include the inner and outer masts, lift cylinder, lift chain and bleeder hoses or pipes.
2. The carriage and tilt cylinder numbers are located as shown. Lift cylinder numbers are stamped on the cylinder shell near the bleeder screw or on the chain anchor. Load arm part number, capacity rating, plant code letter and date of manufacture are stamped approximately six inches below the top RH side of load arms. Always refer to these group and part numbers when ordering service parts.

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
FFL	Full Free Lift
FLT	Fork Lift Truck
FRE	Freezer Environment
in.	inches
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
O/S	Oversize
OC	Oil Clutch Transmission
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

PUBLICATIONS

Every new lift truck is provided with at least two publications. These publications are the OPERATING MANUAL and the section of the SERVICE MANUAL called Periodic Maintenance.

The OPERATING MANUAL, must always be available on every lift truck. This Manual has information that the operator must know for inspection and operation of the lift truck.

Other manuals, publications and programs are available from your Dealer For Hyster Lift Trucks to Help you operate and maintain your lift truck professionally. See the list that follows for reference to items for lift trucks in this PARTS MANUAL.

	HYSTER PART NUMBER
Operating Manual	
English	897342
Service Manual (complete)	897373
Parts Manual	897604

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