

PARTS MANUAL

CHALLENGER

**H45-65XM
(H177)**

CUSTOMER EDITION

HYSTER

SECTIONS

1	FRAME
2	ENGINE ASSEMBLY
3	FUEL SYSTEM
4	ELECTRICAL SYSTEM
5	TRANSMISSION
6	STEERING SYSTEM
7	BRAKE SYSTEM
8	HYDRAULIC SYSTEM
9	MAST-TWO STAGE LIMITED FREE-LIFT
10	MAST-TWO STAGE FULL FREE-LIFT
11	MAST-THREE STAGE FULL FREE-LIFT
12	OPTIONS
13	NUMERICAL INDEX

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.

TABLE OF CONTENTS

DESCRIPTION	PAGE
A	
ACCESSORIES	
CAB.....	12-52
AIR FILTER	
DIESEL 2.6L	
⇒S/N H177B-26621.....	3-104
S/N H177B-26622⇒.....	3-106
DIESEL TIER II.....	3-108
GAS AND LPG	
EPA COMPLIANT 2.0L AND 2.2L.....	3-10
GASOLINE AND LPG	
2.0L	
⇒S/N H177B-23393.....	3-4
2.0L AND 2.2L	
S/N H177B-23394⇔S/N H177B-26621.....	3-6
S/N H177B-26622⇒.....	3-8
AIR FILTER AND BREATHER	
GAS AND LPG 3.0L.....	3-58
EPA COMPLIANT.....	3-62
GASOLINE 3.0L	
S/N H177B-30074⇒.....	3-54
GASOLINE AND LPG	
3.0L	
⇒S/N H177B-30073Y.....	3-50
LPG 3.0L	
S/N H177B-30074⇒.....	3-56
ALTERNATOR	
DIESEL 2.6L.....	4-152
GASOLINE AND LPG	
2.0L AND 2.2L.....	4-142
3.0L ENGINE	
⇒S/N H177B-32018Z.....	4-146
TYPES GS, LPS AND DS.....	4-144
ALTERNATOR MOUNTING	
GM 3.0L	
V-BELT.....	4-148
SERPENTINE BELT	
GM 3.0L.....	4-150
AUDIBLE ALARMS.....	12-72
AUXILIARY DRIVE	
DIESEL 2.6L.....	2-168
AUXILIARY TUBES	
TWO AND THREE STAGE FULL FREE-LIFT	
FOUR FUNCTION GROUP.....	12-26
B	
BRAKE.....	7-4
BRAKE LINES.....	7-6
BRAKE PEDAL LINKAGE.....	7-2

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
C	
CAB KIT	
PVC.....	12-46
WITH DOOR MOUNTED AGAINST OUT-BOARD SIDE OF OVERHEAD GUARD	12-42
CAMSHAFT AND OIL PAN	
GASOLINE AND LPG 3.0L	
1998 AND 1999 SERIES ENGINE.....	2-134
2000 AND 2001 SERIES ENGINE.....	2-146
2002-2004 SERIES ENGINE	2-150
CAMSHAFT AND VALVES	
2.2L.....	2-70
GASOLINE	
EPA COMPLIANT.....	2-54
GASOLINE AND LPG	
2.0L	2-52
CARBURETOR	
GASOLINE 2.0L AND 2.2L	3-30
LPG 2.0L	
⇒S/N H177B-9725.....	3-32
S/N H177B-9725⇔S/N H177B-23393	3-34
LPG 2.0L AND 2.2L	
CLOSED LOOP	
S/N H177B-30074Y⇒.....	3-38
OPEN LOOP	
S/N H177B-23394⇒	3-36
LPG 3.0L	
OPEN LOOP	
S/N H177B-30074Y⇒.....	3-86
⇒S/N H177B-20721.....	3-82
S/N H177B-20722⇒.....	3-84
LPG 3.0L CLOSED LOOP	
S/N H177B-15698Z⇒	3-88
CARRIAGE	
THREE STAGE FULL FREE-LIFT	
SIX ROLLER	11-34
TWO STAGE FULL FREE-LIFT	
SIX ROLLER	10-32
TWO STAGE LIMITED FREE-LIFT	
SIX ROLLER	9-18
CONTROL VALVE	
FOUR FUNCTION	8-46
T078 AND T080	5-26
T080 AND T109	5-30
THREE FUNCTION	8-42
CONVERTER	
LPG	
⇒S/N H177B-01786.....	3-44
S/N H177B-01787⇔S/N H177B-23393	3-46
COOLING	
GASOLINE AND LPG 3.0L.....	2-114
2003 THRU 2004 SERIES WITH SERPENTINE BELT	2-118
COOLING GROUP	

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
C (continued)	
DIESEL 2.6L	2-180
COOLING SYSTEM	
RADIATOR AND HOSES	
DIESEL TIER II	2-44
COUNTERWEIGHT	1-8
CRANKSHAFT AND PISTON	
GASOLINE AND LPG	
2.0L	2-50
GASOLINE AND LPG 3.0L	
1998 THRU 2001 ENGINE.....	2-124
2002-2004 SERIES ENGINE	2-138
CRANKSHAFT AND PISTONS	
2.2L.....	2-68
DIESEL 2.6L	2-160
CYLINDER BLOCK	
2.2L.....	2-64
DIESEL 2.6L	2-154
GASOLINE AND LPG	
2.0L	2-46
CYLINDER HEAD	
2.2L.....	2-66
DIESEL 2.6L	2-156
GASOLINE AND LPG	
2.0L	2-48
GASOLINE AND LPG 3.0L	
1998 AND 1999 SERIES ENGINE.....	2-128
2000 THRU 2004 SERIES ENGINE	2-140
D	
DIFFERENTIAL	
T078 AND T080	
⇒D/B 07/1998.....	5-34
T080 AND T109	
D/B 07/1998⇒.....	5-36
DISTRIBUTOR	
GASOLINE 2.0L AND 2.2L	
EPA COMPLIANT.....	4-138
GASOLINE AND LPG	
2.0L	4-134
2.2L	4-136
3.0L	4-140
DRIVE AND REAR LIGHT	12-40
DRIVE AXLE	5-40
E	
ELECTRICAL	
2.0L AND 2.2L	
GASOLINE NON EPA COMPLIANT	
⇒S/N H177B-26763Y FOR LPG.....	4-8

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
E (continued)	
2.0L AND 2.2L GASOLINE	
EPA COMPLIANT.....	4-16
COWL	4-4
DIESEL 2.6L	4-52
GASOLINE	
GM 3.0L	
⇒S/N H177B-25275Y.....	4-22
GASOLINE AND LPG	
2.0L AND 2.2L.....	2-100
GM 3.0L EPA COMPLIANT.....	4-42
GASOLINE AND LPG 3.0L	
1998 AND 1999 SERIES ENGINE.....	2-132
2000 THRU 2004 SERIES ENGINE	2-144
GM	
LPG 3.0L	
⇒D/B 01/1998	4-30
D/B 1/1998⇔S/N H177B-30073Y	4-34
S/N H177B-30074Y⇒.....	4-38
GM 3.0L, GASOLINE	
S/N H177B-25276⇒.....	4-26
LPG WITH LOW EMISSIONS	
2.0L AND 2.2L	
S/N H177B-26764Y⇒.....	4-12
TYPES DSL	
2.6L	4-56
TYPES GS AND LPS	
2.0L AND 2.2L.....	4-20
3.0L	4-46
ELECTRICAL SYSTEM	
GM 3.0L LPG	
CLOSED LOOP	
⇒S/N H177B-26763Y.....	4-48
S/N H177B-26764Y⇒.....	4-50
EMISSION CONTROL AND EXHAUST SYSTEM	
GASOLINE 2.0L AND 2.2L	
EPA COMPLIANT.....	2-92
EMISSION CONTROL SYSTEM.....	2-94
LPG 2.0L AND 2.2L	
EPA COMPLIANT.....	2-98
EMISSION CONTROLS GASOLINE	
2.2L.....	2-96
ENGINE ASSEMBLY	
3.0L EPA COMPLIANT	
GASOLINE.....	2-122
LPG	
3.0L EPA COMPLIANT.....	2-120
ENGINE ELECTRICAL SYSTEM	
GASOLINE 2.0L AND 2.2L	
EPA COMPLIANT.....	2-102
ENGINE FUEL SYSTEM	

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
E (continued)	
3.0L LPG ENGINE	
EPA COMPLIANT.....	3-80
LPG 2.0L AND 2.2L	
EPA COMPLIANT.....	2-108
ENGINE MOUNT	
DIESEL.....	2-10
GASOLINE AND LPG	
2.0L AND 2.2L.....	2-6
3.0L.....	2-8
EXHAUST	
DIESEL.....	2-12
LPG 2.0L AND 2.2L	
CLOSED LOOP	
S/N H177B-23394⇒.....	2-20
EXHAUST GAS AND LPG	
2.0L AND 2.2L MAZDA	
EPA COMPLIANT.....	2-22
2.0L MAZDA	
STANDARD.....	2-14
3.0L EPA COMPLIANT.....	2-26
3.0L GM.....	2-24
EXHAUST GROUP	
OVERHEAD.....	2-28
EXHAUST LPG	
2.0L AND 2.2L MAZDA	
2-WAY.....	2-18
F	
FENDERS.....	12-6
FILTER AND LOCK-OFF VALVE	
LPG	
⇒S/N H177B-23393.....	3-48
FIRE EXTINGUISHER.....	12-70
FLOW VALVE.....	8-18
FLYWHEEL	
2.2L.....	2-112
FORKS	
H45-55XM.....	1-24
H60-65XM.....	1-26
FRAME AND FLOORPLATES.....	1-2
FREE LIFT	
THREE STAGE FULL FREE-LIFT.....	11-14
FREE-LIFT	
TWO STAGE FULL FREE-LIFT.....	10-8
FREE-LIFT CYLINDER	
THREE STAGE FULL FREE LIFT	
S/N PENDING PER ECN 73703-01⇒.....	11-30
THREE STAGE FULL FREE-LIFT	
⇒S/N B508V-18484 EXC. 18477, ⇒S/N B563V-7094.....	11-22

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
F (continued)	
S/N B508V-18585 INC. 18477⇔S/N PENDING PER ECN 73703-01, S/N B563V-07095⇔S/N PENDING PER ECN 73703-01	11-26
TWO STAGE FULL FREE-LIFT	
S/N PENDING PER ECN 73703-01⇒	10-28
⇒S/N PENDING PER ECN 73703-01	10-24
FUEL	
DIESEL 2.6L	3-110
GASOLINE 3.0L.....	3-94
GASOLINE AND LPG	
2.0L	2-104
LPG	
2.0L AND 2.2L.....	2-106
FUEL FILTER AND FUEL PUMP	
DIESEL 2.6L	3-114
FUEL FILTERING AND LOCK-OFF SYSTEM	
3.0L LPG	
EPA COMPLIANT.....	3-78
FUEL INJECTION	
DIESEL 2.6L	2-178
FUEL PUMP	
DIESEL 2.6L	3-118
FUEL SUPPLY SYSTEM	
2.0L AND 2.2L GASOLINE	
EPA COMPLIANT.....	3-24
3.0L GASOLINE	
EPA COMPLIANT.....	3-98
FUEL SYSTEM	
3.0L GASOLINE ENGINE	
EPA COMPLIANT.....	3-101
LPG 2.0L	
⇒S/N H177B-23393.....	3-18
LPG 2.0L AND 2.2L	
CLOSED LOOP	
S/N H177B-26764Y⇒.....	3-22
OPEN LOOP	
S/N H177B-23394⇒	3-20
LPG 3.0L	
CLOSED LOOP	
S/N H177B-35698Z⇒.....	3-72
OPEN LOOP	
S/N H177B-30074Y⇒.....	3-68
⇒S/N H177B-30073Y	3-64
FUEL TANK	
GASOLINE 2.0L.....	3-16
G	
GOVERNOR	
GASOLINE 2.0L.....	3-26
LPG 2.0L AND 2.2L	

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
G (continued)	
S/N H177B-23394⇒.....	3-28
H	
HEADER HOSE	
THREE STAGE FULL FREE-LIFT	11-36
TWO STAGE FULL FREE-LIFT	10-34
TWO STAGE LIMITED FREE-LIFT.....	9-20
HEATER	
CAB.....	12-54
HEATER ASSEMBLY	
CAB.....	12-56
HOOD.....	1-4
HYDRAULIC	
⇒S/N H177B-23563X.....	8-2
S/N H177B-23564X⇒.....	8-6
HYDRAULIC PUMP	
DOUBLE GEAR	
⇒S/N H177B-13286 (LPG 3.0L), ⇒S/N H177B-13826 (GASOLINE AND LPG 2.0L, GASOLINE 3.0L, AND DIESEL 3.0L).....	8-14
S/N H177B-13961⇒ (GASOLINE AND LPG 2.0L-2.2L, GASOLINE 3.0L, AND DIESEL 3.0L), S/N H177B-14210⇒ (LPG 3.0L)	8-16
SINGLE GEAR	
⇒S/N H177B-13960 (GASOLINE AND LPG 2.0L, GASOLINE 3.0L, AND DIESEL 3.0L), ⇒S/N H177B-14209 (LPG 3.0L).....	8-10
S/N H177B-13961⇒ (GASOLINE AND LPG 2.0L-2.2L, GASOLINE 3.0L, AND DIESEL 3.0L), S/N H177B-14210⇒ (LPG 3.0L)	8-12
I	
INLET MANIFOLD AND FUEL SYSTEM	
GASOLINE 2.0L AND 2.2L	
EPA COMPLIANT.....	2-90
INNER MAST	
THREE STAGE FULL FREE-LIFT	11-8
TWO STAGE FULL FREE-LIFT	10-4
TWO STAGE LIMITED FREE-LIFT.....	9-4
INPUT AND COUNTER CLUTCH	
T080	
S/N T080M-04190⇔S/N T080M-04775.....	5-20
S/N T080M-04776⇔S/N PENDING PER ECN 74068.....	5-22
⇒S/N T080M-4189	5-18
T109	
S/N PENDING PER ECN 74068⇒	5-24
INSTRUMENT CLUSTER	
D/B 11/2003⇒	4-164
⇒D/B 11/2003	4-160
INSTRUMENT PANEL.....	4-158
INTEGRAL SIDE-SHIFT	
HYDRAULIC HOSES	
THREE STAGE FULL FREE-LIFT	12-24

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
I (continued)	
TWO STAGE FULL FREE-LIFT	12-23
TWO STAGE LIMITED FREE-LIFT	12-22
INTEGRAL SIDE-SHIFT CARRIAGE	
THREE STAGE FULL FREE-LIFT	12-18
TWO STAGE FULL FREE-LIFT	12-16
TWO STAGE LIMITED FREE-LIFT	12-14
INTEGRAL SIDE-SHIFT CYLINDER	12-20
INTERMEDIATE MAST	
THREE STAGE FULL FREE-LIFT	11-4
L	
LABELS	1-19
LIFT	
TWO STAGE LIMITED FREE-LIFT	9-8
LIFT CYLINDER	
TWO STAGE LIMITED FREE-LIFT	
H45-55XM	9-12
H60-65XM	9-15
LIFTING EYE	12-4
LIGHTS	4-166
LOAD BACKREST EXTENSION	1-22
48 INCH (1220 MM)	12-28
LPG REGULATOR	
3.0L EPA COMPLIANT	3-92
LPG TANK AND MOUNTING	
EPA COMPLIANT	3-76
M	
MAIN CYLINDER	
THREE STAGE FULL FREE-LIFT	11-18
MAIN CYLINDER (H45-55XM)	
TWO STAGE FULL FREE-LIFT	
LEFT HAND	
⇒S/N B509V-4962	10-11
S/N B509V-4963⇒	10-13
RIGHT HAND	
⇒S/N B509V-4962	10-15
S/N B509V-4963⇒	10-16
MAIN CYLINDER (H60-65XM)	
TWO STAGE FULL FREE-LIFT	
LEFT HAND	
⇒S/N B564V-3940	10-17
S/N B564V-3941⇒	10-19
RIGHT HAND	
⇒S/N B564V-3940	10-21
S/N B564V-3941⇒	10-22
MAIN LIFT	
THREE STAGE FULL FREE-LIFT	11-10
TWO STAGE FULL FREE-LIFT	10-6

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
M (continued)	
MANIFOLD	
DIESEL 2.6L	2-172
GASOLINE AND LPG	
2.0L	2-84
MANIFOLD VALVE	
T080 AND T109	
S/N H177B-30181Y⇒ INC. 30117, 30173, 30179	5-33
MANIFOLDS	
2.2L	2-86
LPG 2.0L AND 2.2L	
EPA COMPLIANT.....	2-88
MAST INSTALLATION	
SHEET 1 OF 2	
6° FORWARD TILT	8-20
SHEET 2 OF 2	
10° FORWARD TILT	8-22
MASTER CYLINDER	7-10
MIRROR	12-68
MONOTROL PEDAL	3-130
MUFFLER AND EXHAUST PIPES	
2.2L	2-16
O	
OIL PAN, PUMP, AND FILTER	
DIESEL 2.6L	2-174
OIL PUMP AND FILTER	
2.2L	2-74
GASOLINE	
EPA COMPLIANT.....	2-62
GASOLINE AND LPG	
2.0L	2-60
OUTER MAST	
THREE STAGE FULL FREE-LIFT	11-2
TWO STAGE FULL FREE-LIFT	10-2
TWO STAGE LIMITED FREE-LIFT.....	9-2
P	
PARK BRAKE	7-8
PEDAL LINKAGE	3-128
POWERTRAIN PROTECTION SYSTEM	12-74
PUMP DRIVE	5-38
R	
RADIATOR AND HOSES	
2.6L DSL	
S/N H177B-40927A⇒	2-42
GASOLINE 2.0L AND 2.2L	
EPA COMPLIANT.....	2-36
GASOLINE AND LPG	

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
R (continued)	
2.0L AND 2.2L S/N H177B-41040A⇒.....	2-34
GASOLINE AND LPG 3.0L EPA COMPLIANT.....	2-40
S/N H177B-40525A⇒.....	2-38
⇒S/N H177B-18577.....	2-30
⇒S/N H177B-40525A 3.0L, ⇒S/N H177B-40926A 2.6L, S/N H177B-18578⇔S/N H177B-41039A 2.0L-2.2L.....	2-32
REGULATOR CLOSED LOOP 2.0L, 2.2L, AND 3.0L S/N H177B-23394Y⇒, S/N H177B-30074Y⇒.....	3-42
OPEN LOOP 2.0L, 2.2L, AND 3.0L S/N H177B-23394⇒, S/N H177B-30074Y⇒.....	3-40
ROCKER SHAFT DIESEL 2.6L.....	2-162
S	
SEAT.....	1-10
FULL SUSPENSION SHEET 1 OF 2 S/N H177B-24915Y⇒.....	1-14
SHEET 2 OF 2 S/N H177B-24915Y⇒.....	1-16
SHIFT LEVER.....	6-4
SIDE-SHIFT CARRIAGE.....	12-8
SIDE-SHIFT CYLINDER.....	12-12
SOUND LINERS CAB ⇒S/N H177B-27634.....	12-58
S/N H177B-27635⇒.....	12-60
STARTER GASOLINE AND LPG 2.0L AND 2.2L ⇒S/N H177B-13244.....	4-154
S/N H177B-13245⇒.....	4-156
STEERING AXLE.....	6-6
STEERING CYLINDER.....	6-10
STEERING POD.....	6-2
STEERING PUMP.....	6-8
STROBE LIGHT.....	12-38
T	
TANK LPG ⇒S/N H177B-23393.....	3-12
S/N H177B-23394⇒.....	3-14
THROTTLE BODY AND LPG MIXER	

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
T (continued)	
3.0L EPA COMPLIANT	3-90
THROTTLE BODY INJECTOR	
3.0L EPA COMPLIANT	
GASOLINE	3-102
THROTTLE LINKAGE	
GASOLINE AND LPG	
3.0L	
⇒S/N H177B-30073Y	3-120
S/N H177B-30074Y⇒	3-122
GASOLINE, LPG AND DIESEL	
2.0L AND 2.6L	3-124
GASOLINE, LPG, AND DIESEL	
EPA COMPLIANT	3-126
TILT CYLINDER	8-24
TIMING GEAR AND CAMSHAFT	
DIESEL 2.6L	2-164
TIMING GEAR COVER AND OIL PAN	
2.2L	2-72
GASOLINE	
EPA COMPLIANT	2-58
GASOLINE AND LPG	
2.0L	2-56
TIRE AND WHEEL	
DRIVE WHEEL	
SHEET 1 OF 2	12-30
SHEET 2 OF 2	12-32
STEER WHEEL	12-34
TORQUE CONVERTER AND FLYWHEEL	
DIESEL 2.6L	2-176
GASOLINE AND LPG	
2.0L AND 3.0L	2-110
TRANSMISSION	
1 OF 2	
T078	5-2
T080	
⇒S/N PENDING PER ECN 74068	5-8
T109	
S/N PENDING PER ECN 74068⇒	5-14
2 OF 2	
T078 (INPUT AND COUNTER CLUTCH)	5-6
T080	
⇒S/N PENDING PER ECN 74068	5-12
T109	
S/N PENDING PER ECN 74068⇒	5-17
TRANSMISSION COOLING	
⇒S/N H177B-36823Z	5-42
S/N H177B-36824Z⇒	5-44

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
V	
VALVE ATTACHING PARTS	
THREE AND FOUR FUNCTION	
WITH DETENTED LEVERS	
⇒S/N H177B-10871	8-26
S/N H177B-10872⇒	8-34
THREE FUNCTION	
WITHOUT DETENTED LEVERS	
⇒S/N H177B-10871	8-30
S/N H177B-10872⇒	8-38
VALVE COVER	
DIESEL 2.6L	2-158
W	
WATER PUMP	
GASOLINE	
EPA COMPLIANT 2.0L AND 2.2L	2-82
GASOLINE 2.2L	2-80
GASOLINE AND LPG	
2.0L	2-76
LPG 2.2L	2-78
WATER SEPARATOR	3-116
WINDOWS	
CAB	12-48
WIRE HARNESS	
CAB	
COWL	12-64
REAR	12-63
CHASSIS	
EPA COMPLIANT	4-70
REAR	12-66
⇒S/N H177B-13698	4-64
S/N H177B-13699⇔S/N H177B-23393	4-66
S/N H177B-23394Y⇒	4-68
CLUSTER	4-72
COWL	
⇒S/N H177B-26763Y	4-58
S/N H177B-26764Y⇔S/N H177B-301180Y	4-60
S/N H177B-301181Y⇒	4-62
ENGINE	
DIESEL 2.6L	
⇒S/N H177B-19415	4-124
S/N H177B-19416X⇔S/N H177B-34913Z	4-126
S/N H177B-34914Z⇒	4-130
ENGINE WITH MSTs	
3.0L, WITH LOW EMISSIONS	
D/B 08/2002⇒	4-116
LPG 3.0L	
⇒D/B 06/1998	4-106
LPG 3.0L, WITH LOW EMISSIONS	
S/N H177B-30074Y⇔D/B 08/2002	4-112
LPG 3.0L, WITHOUT LOW EMISSIONS	

TABLE OF CONTENTS (Continued)

DESCRIPTION	PAGE
W (continued)	
D/B 06/1998⇒	4-108
ENGINE WITHOUT MSTs	
3.0L, WITH CLOSED LOOP	
S/N H177B-35698Z⇒	4-118
LPG 3.0L	
⇒S/N H177B-30073Y	4-102
LPG 3.0L, GM, WITHOUT LOW EMISSIONS	
S/N H177B-30074Y⇒	4-104
ENGINE, GASOLINE AND LPG, 3.0L	
NON-EPA COMPLIANT	4-96
FORWARD AND REVERSE LEVER	4-76
FUEL PUMP AND SENDER	4-132
GASOLINE AND LPG ENGINE	
2.0L AND 2.2L	
S/N H177B-09725W↔S/N H177B-23394X	4-80
GASOLINE ENGINE	
3.0L	
⇒S/N H177B-11463	4-88
S/N H177B-11464⇒	4-92
INTERFACE, GASOLINE	
GM 3.0L, EPA COMPLIANT	4-120
INTERFACE, LPG	
GM 3.0L, EPA COMPLIANT	4-122
LPG 2.0L AND 2.2L	
CLOSED LOOP	
S/N H177B-26764Y⇒	4-86
S/N H177B-23394⇒	4-84
MAIN ENGINE, GASOLINE AND LPG	
3.0L EPA COMPLIANT	4-100
NEUTRAL START	4-74
POWERTRAIN PROTECTION	12-76
ROUTING	
CAB	12-50
WIPER	12-62
WIRE HARNESS (ENGINE)	
GASOLINE 2.0L AND 2.2L	
EPA COMPLIANT	4-82
GASOLINE AND LPG	
2.0L AND 2.2L	
⇒S/N H177B-09725W	4-78

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

TABLE OF CONTENTS

DESCRIPTION	PAGE
AIR INTAKE AND FILTER DIESEL (⇒ D/B 11/96 ⇒)	3-22
AIR INTAKE AND FILTER DIESEL (D/B 11/96 ⇒)	
AIR INTAKE AND FILTER GASOLINE AND LPG	
ALTERNATOR GASOLINE, LPG, AND DIESEL	
ALTERNATOR TYPES GS, LPS, AND DS	
AUXILIARY FUNCTION TUBE TWO AND THREE STAGE FULL F	

SECTION 13 NUMERICAL INDEX

PART NO.	ITEM PAGE NO.	PART NO.	ITEM PAGE NO.	PART NO.	ITEM PAGE NO.	PART NO.	ITEM PAGE NO.
142	3-4 19	10-13	25	11-27	29	12-31	12
12445	3-32 19	10-17	6	11-31	25	16719	3-35 5
	3-34 1	10-27	11	11-32	37	16751	3-16 27
		11	6	8-4	29	16845	3-34 21
		11-11	6	8-4	45		3-36 20
		12-21	11	8-8	34	16863	3-26 17
		4	13	9-7	9	16885	3-6 18
		12	6	9-7	19	16882	9-7 30
		3	17	9-11	9		9-11 27
		23	46	10-9	21		10-10 36
		27	46	10-9	26		10-13 32
		26	14	10-13	16		11-7 24
		28	14	11-7	18		11-9 17
		30	14				

SECTIONS

- 1 FRAME
- 2 ELECTRICAL SYSTEM
- 3
- 4
- 5 BRAKE/ACC
- 6
- 7 MAST-TWO STAGE
- 8 MAST-THREE STAGE
- 9 MAST-TWO STAGE
- 10
- 11

TRANSMISSION HOUSING ⇒ S/N D001H-2628

KEY:
A: Diesel
B: Gasoline and LPG

ITEM	PART NO.	DESCRIPTION	QTY	
			A	B
	2022547	Transmission	1	1
	2023329	Transmission	2	2
	2021670	Case	4	4
1	2023419	Bearing Cap	4	4
2	296426	Washer	1	1
3	293592	Bolt	2	2
4	2021390	Coil	4	4
5	1371655	Coller Pin	1	1
6	2021329	O-Ring	1	1
7	2021915	Plug	4	4
8	2021675	Housing	22	22
9	2021336	Bolt	39	39
10	287860	Bolt	1	1
11	292682	Lockwasher	1	1
12		Hydraulic Pump	1	1
13		⇒ Figure 5-3	8	8
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	Capscrew	4	4
24	292683	Lockwasher	4	4
25	293837	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 can be made by placing the right thumb on the tab of the desired section, bending the pages to the corresponding tab.

© Copy Right Date HYSTER COMPANY See Service Manual for service procedures. 5-15

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:

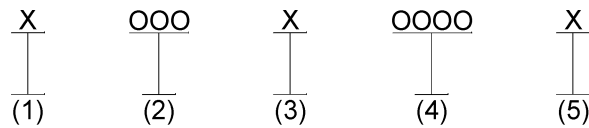
- ⇒ **D/B 3/00**
Indicates that a change occurred sometime within that month for the item affected.
- D/B 3/00** ⇒
Indicates that a change occurred sometime within that month for the item affected.
- D/B 3/00** ⇔ **D/B 4/00**
Indicates a range of production dates of the item affected.

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

ORDERING PARTS:

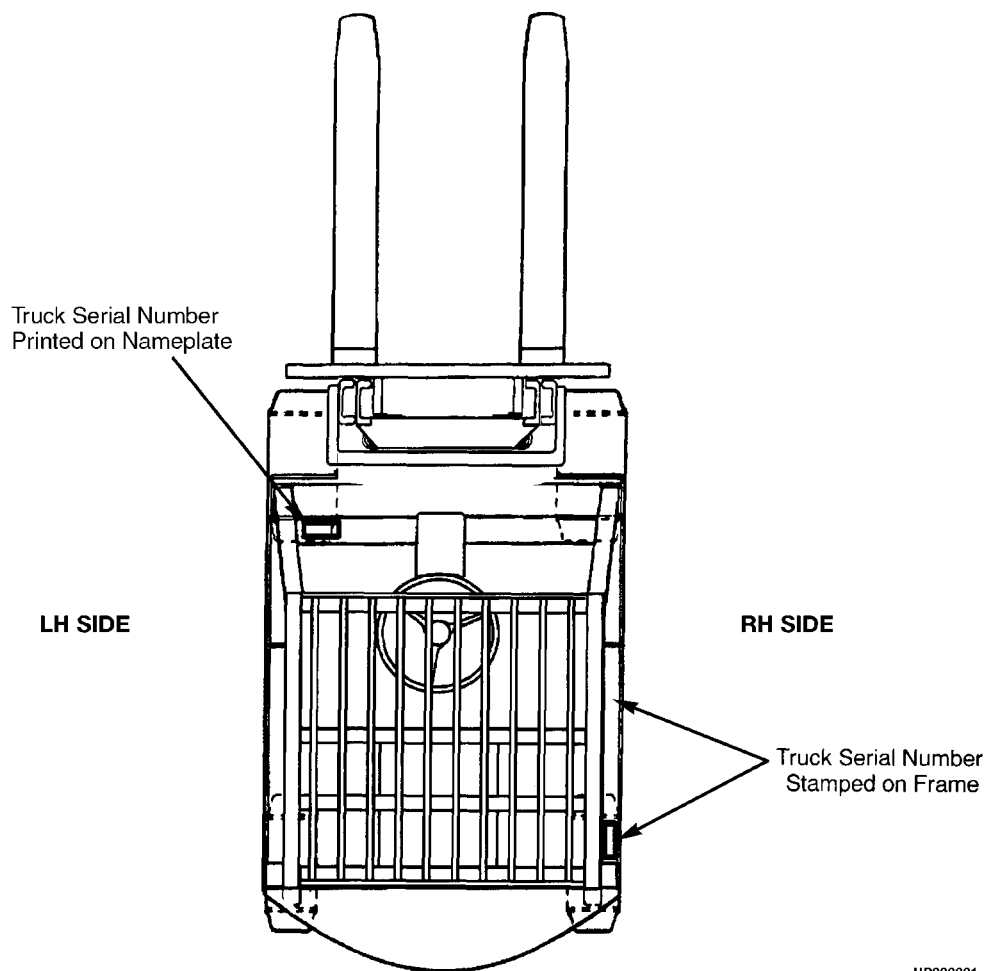
When ordering replacement parts, give the unit serial number, part number, name of part and quantity required.

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

IDENTIFICATION OF TRUCK SERIAL NUMBERS

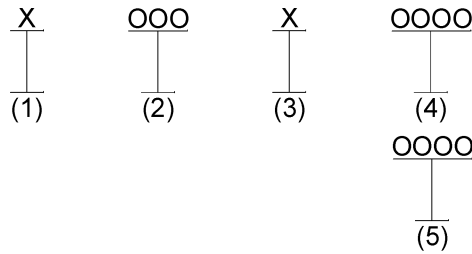
- (1) and (2) The first letter and three numbers indicate the truck unit code.
- (3) The second letter indicates the plant of manufacture.
- (4) The four or five digit number indicates the production sequence number of the truck.
- (5) The final letter indicates the year of manufacture starting with "A" in 1957 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) 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).

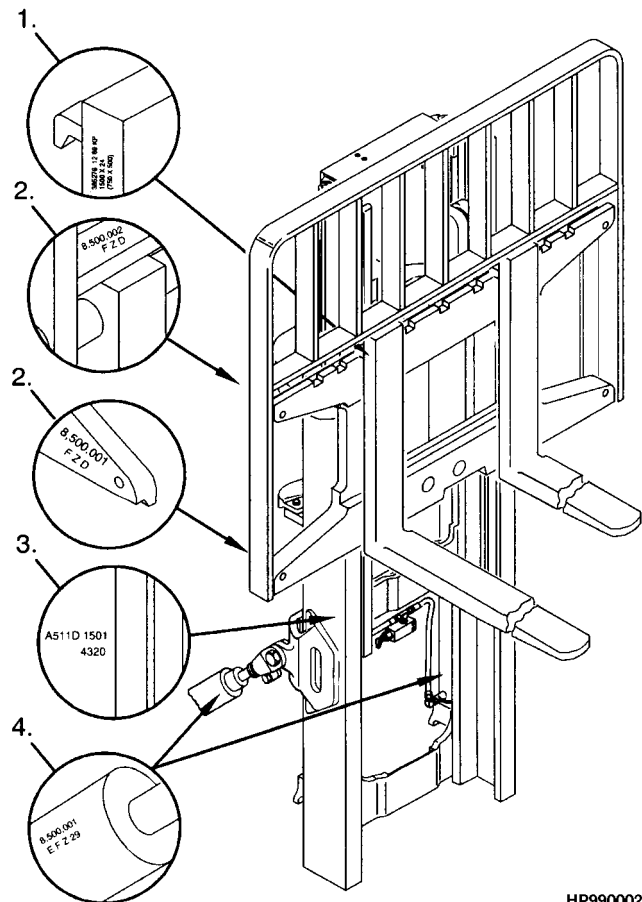
For pending production sequence numbers contact your local dealer for Hyster lift trucks.

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.

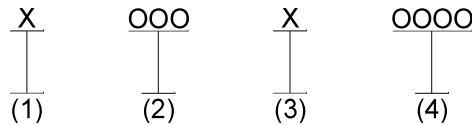
Always refer to the group, serial, or part number when ordering service parts.

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

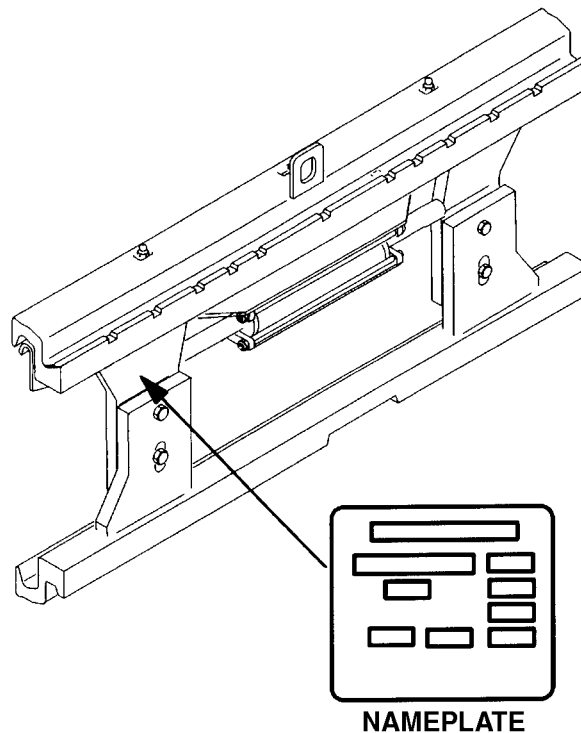


(1) and (2) The first letter and three numbers indicate the attachment unit code.

(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	1458874
Service Manual (Complete)	1456964
Parts Manual	1458509

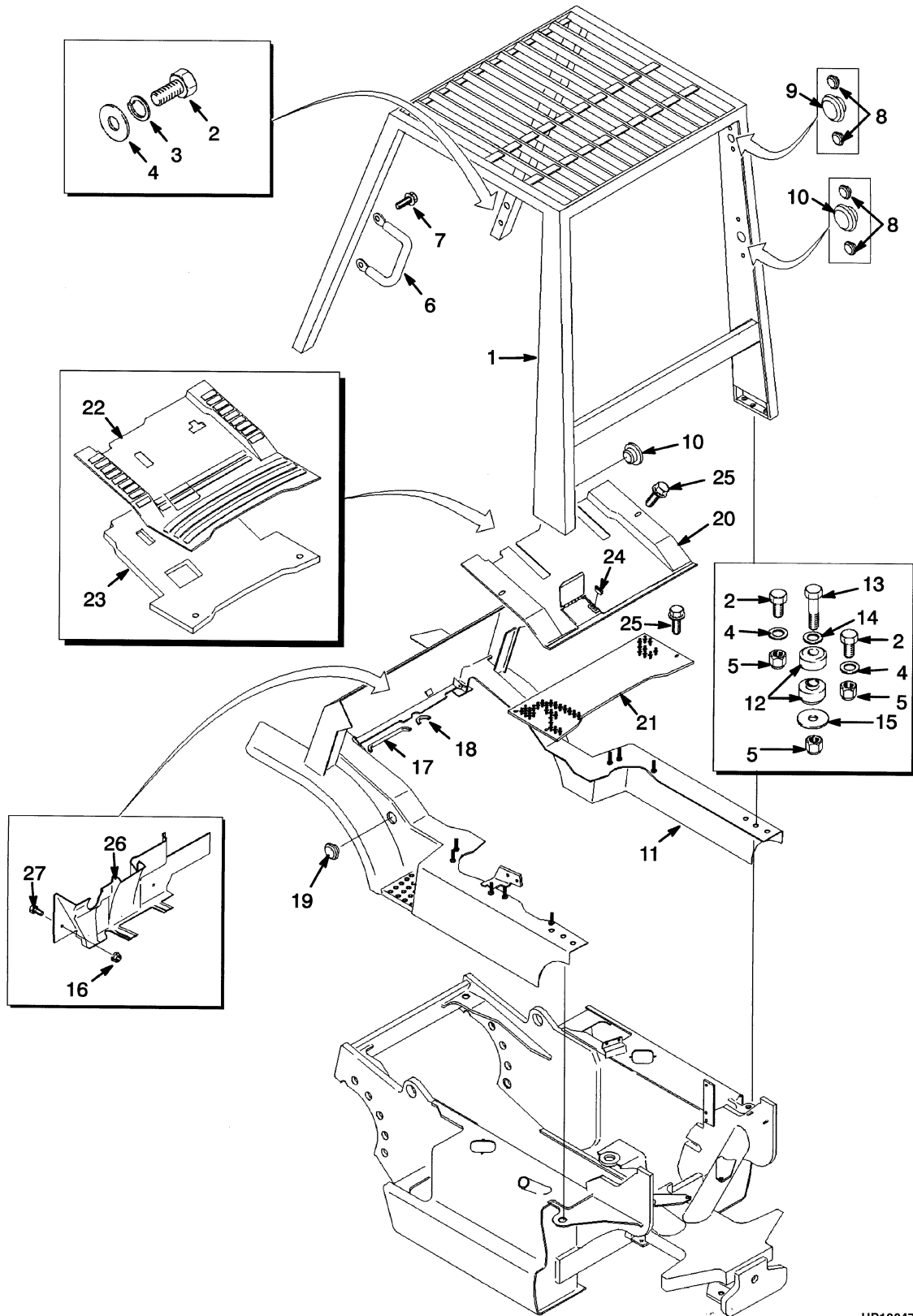
1

FRAME

SECTION 1
FRAME

DESCRIPTION	PAGE
COUNTERWEIGHT	1-8
FORKS	
H45-55XM.....	1-24
H60-65XM.....	1-26
FRAME AND FLOORPLATES.....	1-2
HOOD.....	1-4
LABELS.....	1-19
LOAD BACKREST EXTENSION.....	1-22
SEAT.....	1-10
FULL SUSPENSION	
SHEET 1 OF 2	
S/N H177B-24915Y⇒.....	1-14
SHEET 2 OF 2	
S/N H177B-24915Y⇒.....	1-16

FRAME AND FLOORPLATES (Figure 1-1)



HP120478

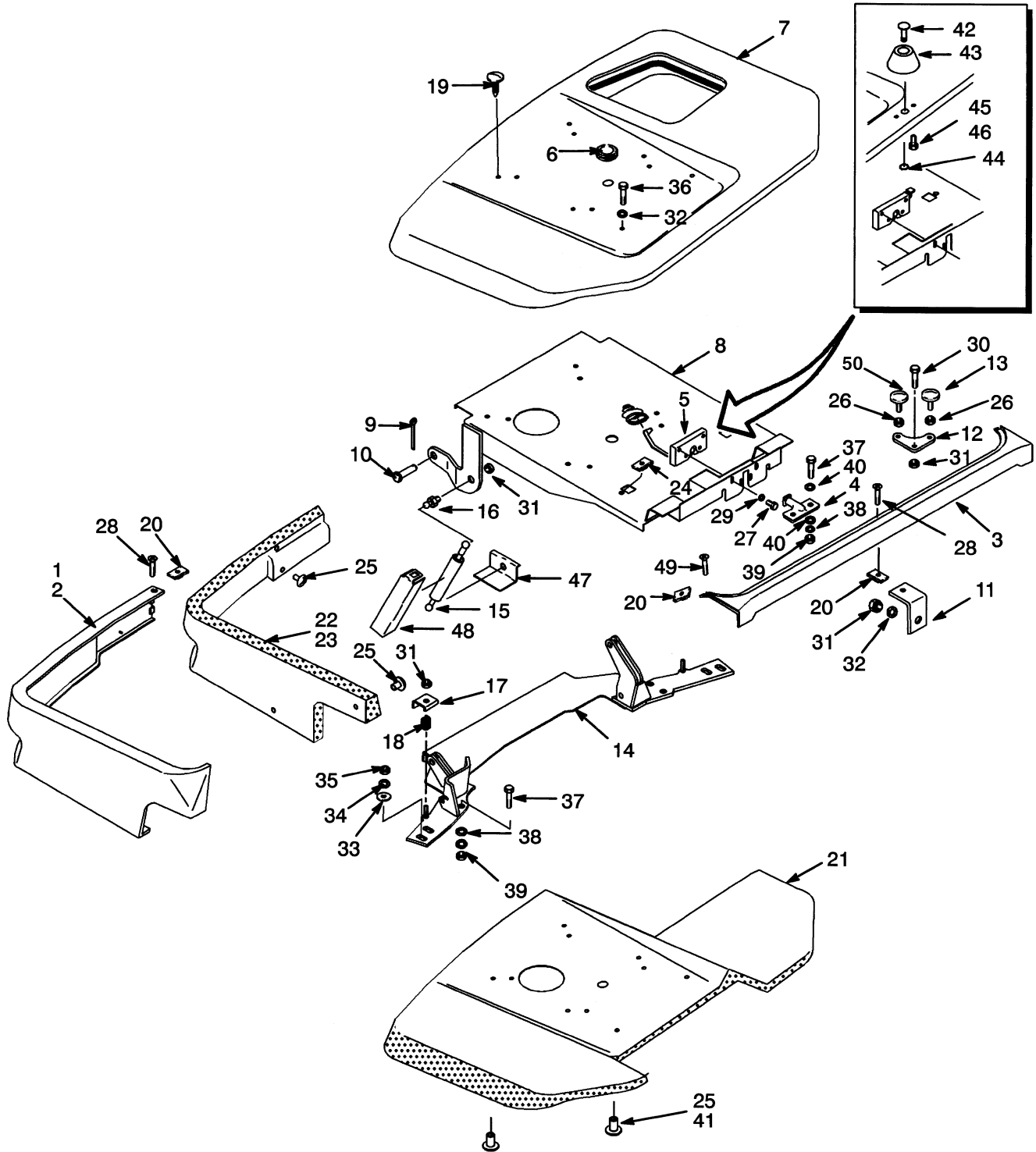
FRAME AND FLOORPLATES

ITEM	PART NO.	DESCRIPTION	QTY
1	c 1337179	Overhead Guard (Standard)	1
1	d 1485864	Overhead Guard (Standard)	1
1	c 1352608	Overhead Guard (Raised)	1
1	d 1485866	Overhead Guard (Raised)	1
2	292528	Capscrew	8
3	292683	Lockwasher	4
4	296423	Washer	8
5	1390182	Nut	8
6	1343647	Handle	1
7	329067	Screw	2
8	1363916	Plug	12
9	1363917	Plug	5
10	1363918	Plug	2
11	c 1360718	Frame	1
11	d 1483917	Frame	1
12	e 1383559	Mount	4
12	f 1461802	Mount	4
13	292536	Capscrew	4
14	320161	Washer (Rear Only)	2
14	320161	Washer (Front Only)	2
15	300939	Washer	4
16	1359600	Nut	2
17	1323052	Edge Trim	1
18	2007856	Trim	1
19	1350231	Plug	2
20	b 1339777	Floorplate (Front)	1
20	d 1483338	Floorplate (Front)	1
20	a 1359534	Floorplate (Front)	1
21	bc 1339773	Floorplate (Rear)	1
21	b 1483117	Floorplate (Rear)	1
21	a 1359535	Floorplate (Rear)	1
22	1354090	Floor Mat	1
23	ac 1390611	Barrier	1
23	ad 1502600	Barrier	1
24	1339776	Catch	1
25	1356100	Capscrew	4
26	1390607	Cover	1
27	292501	Capscrew	2

FOOTNOTES:

- a** With Low Noise
- b** Without Low Noise
- c** ⇒ S/N H177B-24941Y
- d** S/N H177B-24941Y ⇒
- e** ⇒ D/B 07/1998
- f** D/B 07/1998 ⇒

HOOD (Figure 1-2)



HP120662

Please Click Here To Download The Complete Manual
Download Other Manuals
If Having Any Questions Feel Free To Contact us

admin@servicemanualbit.com