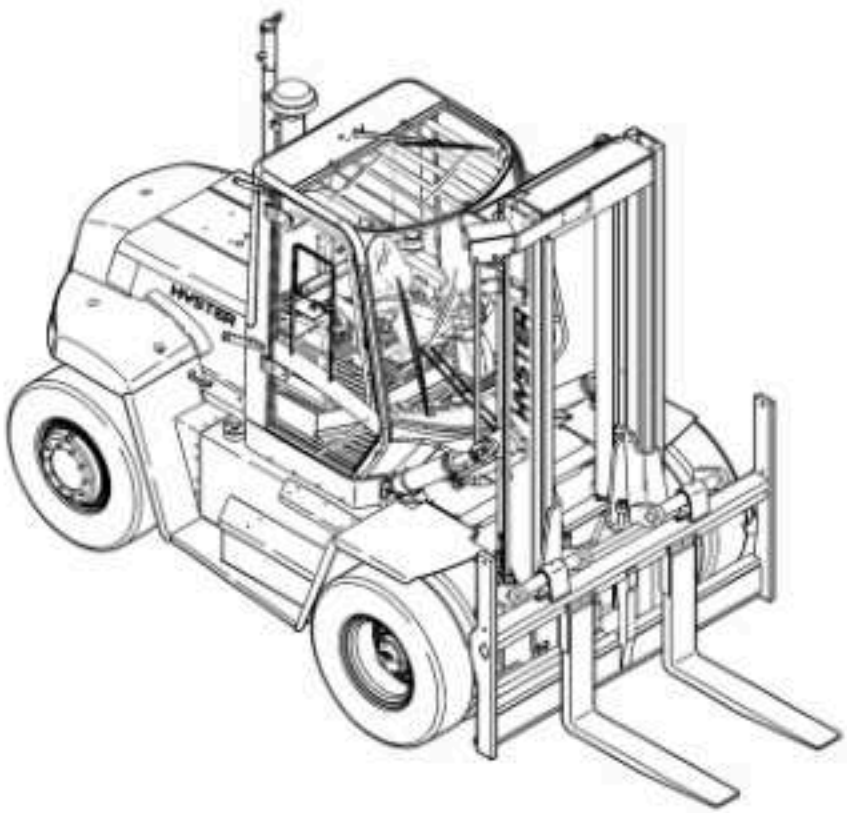
SERVICE MANUAL

H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD)



Rev. 08/14

MidWestTech | Hyster H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD) He... Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

General 1
Description 1
Steering Axle Assembly Repair 6
Steering Axle H3.50-5.00XL (H70-110XL) (G005), S3.50-5.50XL (S70-120XL) (D004), S3.50-5.50XM (S70-120XM) (E004, F004), E3.50-5.50XL (E70-120XL, E70-120XL$_3$) (C098), and E3.50-5.50XL, E4.50XLS (E70-120Z, E100ZS) (D098/E098) 6
Remove 6
Install 6
Steering Axle H6.00-7.00XL (H135-155XL, H135-155XL$_2$) (F006, G006), H8.00-16.00XL (H165-360XL) (D019, E007), and H8.00-12.00XM (H170-280HD) (F007, G007, H007), H13.00-14.00XM (H300-330HD) (E019, F019, G019), H16.00XM-6 (H360HD) (E019, F019, G019), H10.00-12.00XM-12EC (H360HD-EC) (E019, F019, G019) 7
Remove 7
Install 7
Wheels and Hubs Repair (All Units) 8
Remove and Disassemble 8
Clean 8
Inspect 8
Assemble and Install 8
Spindles and Bearings Repair (All Units) 10
Remove 10
Clean 10
Assemble and Install 11
Tie Rods Repair (All Units) 12
Remove 12
Clean 12
Install 12
Steering Cylinder Repair 15
Remove and Disassemble 15
Clean and Inspect 15
Assemble and Install 15
Troubleshooting 16

This section is for the following models:

S3.50-5.50XL (S70-120XL) [D004];
S3.50-5.50XM (S70-120XM) [E004, F004];
E3.50-5.50XL (E70-120XL, E70-120XL$_3$) [C098];
H3.50-5.00XL (H70-110XL) [G005];
H6.00-7.00XL (H135-155XL, H135-155XL$_2$) [F006, G006];
H8.00-16.00XL (H165-360XL) [D019, E007];
H8.00-12.00XM (H170-280HD) [F007, G007, H007];
H13.00-14.00XM (H300-330HD) [E019, F019, G019];
H16.00XM-6 (H360HD) [E019, F019, G019];
H10.00-12.00XM-12EC (H360HD-EC) [E019, F019, G019]
E3.50-5.50XL, E4.50XLS (E70-120Z, E100ZS) [D098/E098]

©2007 HYSTER COMPANY

MidWestTech | Hyster H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD) He... Order the manual at mid-west-tech.com >

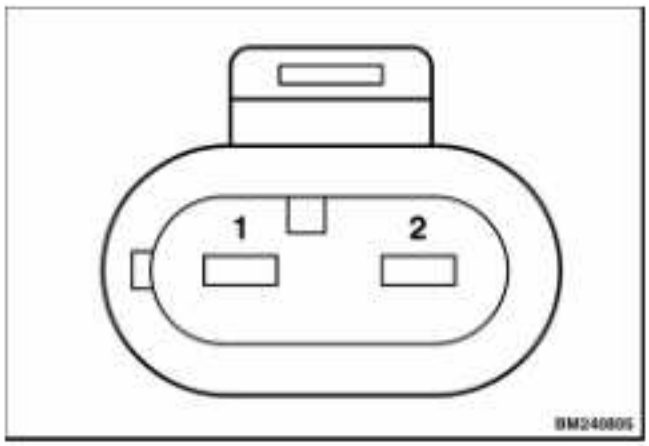
Counterweight Weights

Unit	Main Counterweight
H170HD	2900 kg (6393 lb)
H190HD/H8.00XM	3070 kg (6768 lb)
H210HD/H9.00XM	3385 kg (7463 lb)
H230HD/H10.00XM-6	4295 kg (9469 lb)
H250HD	4470 kg (9855 lb)
H280HD/H12.00XM	5150 kg (11,354 lb)
H300HD/H13.00XM	5360 kg (11,817 lb)
H330HD/H14.00XM/H10.00XM-12EC	5995 kg (13,217 lb)
H360HD/H16.00XM-6/H12.00XM-12EC/ H360HD-EC	7050 kg (15,543 lb)

Lift Truck Weights

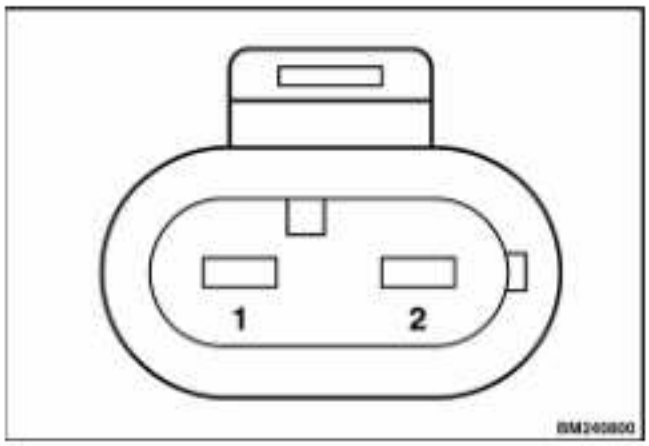
Unit	kg	lb
H170HD	11,735	25,872
H8.00XM (H190HD)	11,928	26,296
H9.00XM (H210HD)	12,508	27,572
H10.00XM (H230HD)	14,144	31,178
H250HD	14,343	31,621
H12.00XM (H280HD)	15,787	34,800
H13.00XM (H300HD)	16,669	36,753
H14.00XM (H330HD)	17,826	39,303
H16.00XM-6 (H360HD)	18,710	41,253
H10.00XM-12EC	21,198	46,734
H12.00XM-12EC (H360HD-EC)	24,695	54,443
H8.00-12.00XM (H170-280HD) models: 5335 mm (210 in.) mast, 2350 mm (92.5 in.) standard carriage, 65 [70] × 200 × 1220 mm (2.6 [2.76] × 8 × 48 in.) forks.		
H13.00-14.00XM (H300-330HD) and H16.00XM-6 (H360HD) models: 5310 mm (209 in.) mast, 2502 mm (98.5 in.) standard carriage, 90 × 200 × 1375 mm (3.5 × 8 × 54 in.) forks.		
H10.00XM-12EC models: 6806 mm (268 in.) lift height mast and attachment.		
H12.00XM-12EC (H360HD-EC) models: 9796 mm (386 in.) lift height mast and attachment.		

MidWestTech | Hyster H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD) He... Order the manual at mid-west-tech.com >



Pin No.	Wire No.	APC200 Name	Wire Description	APC200 Pin	Mating Connector			
					Code	Pin	Figure	Description
1	419	SS1+	Output Speed Sensor +	D3	C144	43	See Figure 54	Cab Signals
2	433	SS1-	Output Speed Sensor -	E3	C144	44	See Figure 54	Cab Signals

Figure 51. Output Speed Connector C120 of Wire Harness Frame



Pin No.	Wire No.	APC200 Name	Wire Description	APC200 Pin	Mating Connector			
					Code	Pin	Figure	Description
1	437	SS3+	Turbine Speed Sensor+	R2	C144	48	See Figure 54	Cab signals
2	478e	SGND	Ground	K3	C144	11	See Figure 54	Cab signals

Figure 52. Turbine Speed Connector C340 of Wire Harness Frame

MidWestTech | Hyster H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD) He... Order the manual at mid-west-tech.com >

Table 7. APC200 Fault Codes (Continued)

Fault Code	Fault Explanation	APC200 Action	Troubleshooting
57.05	Analog input 7 (pin C2) related fault: analog input value is above the maximum value calibrated.	Controller will flag the fault, and will use the highest clipped value in its settings.	Check the wiring between the controller and the device connected to this analog input. Check this device connected. Check if the calibration is done correctly recalibrate if necessary.
58.00	Analog input 8 (pin B2) related fault: analog input is shorted to ground or measured input value is below the minimum value.	Depending on the function that is assigned to this pin: - Temperature Sensor: controller will use the lowest clipped value in its settings (which results in bad temperature compensation - Pressure Feedback: the controller will revert to limp home mode - Pressure Sensor: the controller will revert to shut down mode - Other: the controller will use the lowest clipped value.	Check the wiring between the controller and the device connected to this analog input. Check this device connected. Check if the calibration is done correctly recalibrate if necessary.
58.01	Analog input 8 (pin B2) related fault: analog input is not connected or measured input value is above the maximum value.	Depending on the function that is assigned to this pin: - Temperature Sensor: controller will use the highest clipped value in its settings (which results in bad temperature compensation - Pressure Feedback: the controller will revert to limp home mode - Pressure Sensor: the controller will revert to shut down mode - Other: the controller will use the lowest clipped value.	Check the wiring between the controller and the device connected to this analog input. Check this device connected. Check if the calibration is done correctly recalibrate if necessary.
58.04	Analog input 8 (pin B2) related fault: analog input value is below the minimum value calibrated.	Controller will flag the fault, and will use the lowest clipped value in its settings.	Check the wiring between the controller and the device connected to this analog input. Check this device connected. Check if the calibration is done correctly recalibrate if necessary.

MidWestTech | Hyster H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD) He... Order the manual at mid-west-tech.com >

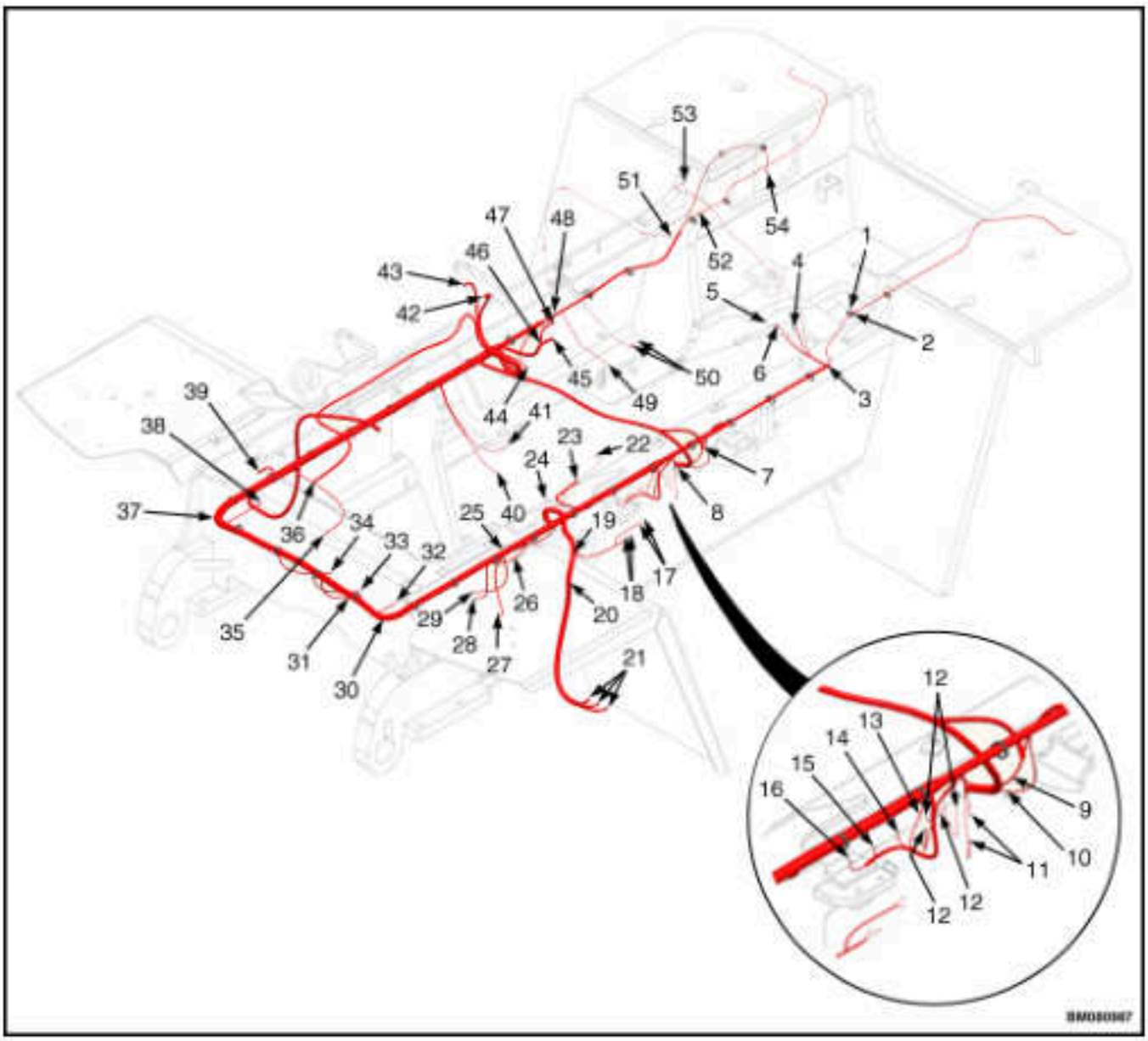


Figure 2. Main Electrical Wire Harness (LPG)

Legend for Figure 2

Item No.	Connector	Description
Main Wiring Harness		
1	C390	Reverse Alarm
2	C380	LH Rear Lamp
3	C100	Backup Diode
4	C270	Alternator +
5	C280	Alternator Signs
6	C290	Alternator Ground

MidWestTech | Hyster H007 (H170HD, H190HD, H210HD, H230HD, H250HD, H280HD) He... Order the manual at mid-west-tech.com >