

CAPACITIES AND SPECIFICATIONS

**H8.00-12.00XM (H170-280HD) [H007];
H13.00-14.00XM (H300-330HD) [G019];
H16.00XM-6 (H360HD) [G019];
H10.00-12.00XM-12EC (H360HD-EC) [G019]**

HYSTER

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This section is for the following models:

H8.00-12.00XM (H170-280HD) [H007];
H13.00-14.00XM (H300-330HD) [G019];
H16.00XM-6 (H360HD) [G019];
H10.00-12.00XM-12EC (H360HD-EC) [G019]

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.		

Capacities

Item	Quantity
Engine Oil, QSB6.7, With Oil Filter	16.3 liter (17.2 qt)
Engine Oil, B LPG Plus, With Oil Filter	15.4 liter (16.3 qt)
Cooling System	25.5 liter (27 qt)
Hydraulic Tank (FULL mark)	
H8.00-12.00XM (H170-280HD)	109 liter (28.8 gal)
H13.00-14.00XM (H300-330HD); H16.00XM-6 (H360HD); H10.00-12.00XM-12EC (H360HD-EC)	109 liter (28.8 gal)
Hydraulic System (Total Capacity)	
H8.00-12.00XM (H170-280HD)	139 liter (36.7 gal)
H13.00-14.00XM (H300-330HD); H16.00XM-6 (H360HD); H10.00-12.00XM-12EC (H360HD-EC)	139 liter (36.7 gal)
Transmission	16.5 liter (17.4 qt)
Drive Axle and Differential	
Dry Brake System	
H8.00-12.00XM (H170-280HD)	19 liter (20 qt)
H13.00-14.00XM (H300-330HD); H16.00XM-6 (H360HD); H10.00-12.00XM-12EC (H360HD-EC)	21 liter (21.1 qt)
Wet Brake System	
H8.00-12.00XM (H170-280HD)	19 liter (20 qt)
H13.00-14.00XM (H300-330HD); H16.00XM-6 (H360HD); H10.00-12.00XM-12EC (H360HD-EC)	21 liter (21.1 qt)
Planetary Gears	
H8.00-12.00XM (H170-280HD)	2.8 liter (3.0 qt) each
H13.00-14.00XM (H300-330HD); H16.00XM-6 (H360HD); H10.00-12.00XM-12EC (H360HD-EC)	2.4 liter (2.5 qt) each
Fuel Tank (Diesel Engines)	128 liter (33.8 gal)
LPG Tank	LPG HD-10 77 liter (20.3 gal)

(More Content includes: Brake system, Capacities, and specifications, Frame, Hydraulic, System, Industrial battery, Main control, Valve, Mast repair, Fasteners, Schematics diagrams, Steering axle, Steering system, Wire harness repair And more)

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Engine Specifications

Item	Specification	
Type	Cummins B LPG Plus	Cummins QSB6.7
Number of Cylinders	6	6
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4
Bore	102 mm (4.02 in.)	102 mm (4.02 in.)
Stroke	120 mm (4.62 in.)	120 mm (4.62 in.)
Displacement	5.88 liter (359 in. ³)	6.7 liter (409 in. ³)
Compression Ratio	9.25:1	17.2:1
Oil Pressure (Minimum, at 2500 rpm and normal operating temperature)	345 kPa (50 psi)	345 kPa (50 psi)
Oil Pressure (At low idle)	69 kPa (10 psi)	69 kPa (10 psi)
Governed Speed (Full power at Normal Operating Temperature)		
H8.00-14.00XM, H16.00XM-6, H10.00-12.00XM-12EC	2500 rpm with load 2600 ±50 no load	2300 rpm with load 2450 ±30 no load
H170-360HD, H360HD-EC	2500 rpm with load 2600 no load	2500 rpm with load 2600 no load
Idle Speed	850 rpm ±2%	725 rpm ±2%
Stall Speed (Broken-in Engine)	1950 to 2100 rpm	1950 to 2100 rpm
Thermostat		
Begin to open	83°C (181°F)	83°C (181°F)
Fully open	91°C (196°F)	91°C (196°F)
Valve Clearance (Cold)		
Intake	0.305 mm (0.012 in.)	0.25 mm (0.01 in.)
Exhaust	0.61 mm (0.024 in.)	0.51 mm (0.02 in.)
Minimum Cranking Speed	125 rpm	125 rpm
Weight (Dry)	N/A	485 kg (1069 lb)

Hydraulic System

Item	Quantity
Cummins Diesel Hydraulic Pump Capacity @ 2300 rpm	
Main Section @ 21 MPa (3045 psi)	192 liter/min (51 gal/min)
Steering/Aux Section @ 19.3 MPa (2800 psi)	93 liter/min (24.6 gal/min)
Cummins LPG Hydraulic Pump Capacity @ 2500 rpm	
Main Section @ 21 MPa (3045 psi)	183 liter/min (48.3 gal/min)
Steering/Aux Section @ 19.3 MPa (2800 psi)	89 liter/min (23.5 gal/min)
Relief Pressures *	
Main Control Valve	
Lift Circuit	21.0 MPa (3045 psi)
Tilt and Auxiliary Circuits	19.3 MPa (2800 psi)
Steering Circuit	16.5 MPa (2400 psi)
ECH Functions	14.0 MPa (2030 psi)
*Oil temperature 60°C (140°F)	

Electrical System

All Models 24 Volt, Negative Ground	
Alternator Output at 24°C (75°F)	
All Engines	21 amps at 750 rpm
	76 amps at 2200 rpm

Tire Sizes

Model	Tire Size
H8.00-9.00XM (H170-210HD)	9.00 × 20-12 ply
H10.00-12.00XM (H230-280HD)	10.00 × 20-14 ply
H13.00XM (H300HD)	11.00 × 20-14 ply
H13.00-14.00XM (H300-330HD); H16.00XM-6 (H360HD)	12.00 × 20-16 ply
H10.00-12.00XM-12EC (H360HD-EC)	12.00 × 20-16 ply
Tire inflation pressure: 690 kPa (100 psi)	

Mast Speeds

Unit	Lifting				Lifting				Lowering			
	B LPG Plus				QSB6.7				B LPG Plus/QSB6.7			
	NOTE: Cummins LPG Plus engine not available for H10.00-12.00XM-12EC (H360HD-EC) models.											
	No Load		Rated Load		No Load		Rated Load		No Load		Rated Load	
	m/ sec	ft/ min	m/ sec	ft/ min	m/ sec	ft/ min	m/ sec	ft/ min	m/ sec	ft/ min	m/ sec	ft/ min
H170HD	0.69	136	0.37	73	0.78	155	0.53	104	0.48	95	0.50	98
H8.00XM	0.69	136	0.37	73	0.73	143	0.48	95	0.48	95	0.50	98
H9.00XM	0.69	136	0.37	73	0.73	143	0.48	95	0.48	95	0.50	98
H10.00XM	0.50	98	0.26	51	0.53	104	0.34	67	0.46	91	0.49	97
H250HD	0.50	98	0.26	51	0.57	130	0.41	80	0.46	91	0.49	97
H12.00XM	0.50	98	0.26	51	0.53	104	0.34	67	0.46	91	0.49	97
H13.00XM	0.41	81	0.22	43	0.44	87	0.29	57	0.44	87	0.48	95
H14.00XM	0.41	81	0.22	43	0.44	87	0.29	57	0.44	87	0.48	95
H16.00XM-6	0.41	81	0.22	43	0.44	87	0.29	57	0.44	87	0.48	95
H10.00XM-12EC	N/A	N/A	N/A	N/A	0.63	124	0.43	84	0.45	89	0.47	93
H12.00XM-12EC	N/A	N/A	N/A	N/A	0.63	124	0.43	84	0.45	89	0.47	93
H360HD-EC	N/A	N/A	N/A	N/A	0.64	126	0.43	84	0.45	89	0.47	93
H190HD	0.69	136	0.37	73	0.78	155	0.53	104	0.48	95	0.5	99
H210HD	0.69	136	0.37	73	0.78	155	0.53	104	0.48	95	0.5	99
H230HD	0.5	98	0.26	51	0.57	130	0.41	80	0.46	91	0.49	96
H280HD	0.5	98	0.26	51	0.57	130	0.41	80	0.46	91	0.49	96
H300HD	0.41	81	0.22	43	0.48	95	0.32	63	0.44	87	0.48	94
H330HD	0.41	81	0.22	43	0.48	95	0.32	63	0.44	87	0.48	94
H360HD	0.41	81	0.22	43	0.48	95	0.32	63	0.44	87	0.48	94

Torque Specifications, Cummins Diesel

LUBRICATION SYSTEM

Plug, Oil Sump, Steel Oil Pan
80 N•m (59 lbf ft)

Plug, Oil Sump, Aluminum Oil Pan
60 N•m (44 lbf ft)

All other torque specifications are found in Cummins Engine Manual. Contact Cummins Engine for any torque specifications not listed for this engine.

Torque Specifications, General

TRANSMISSION

Nuts, Mount Bolts for Isolator

155 N•m (114 lbf ft)

Capscrews, Mount Bracket to Transmission

270 N•m (200 lbf ft)

Capscrews, Transmission to Flywheel Housing

25 N•m (19 lbf ft)

Capscrews, Drive Plate to Flywheel

36 N•m (26.5 lbf ft)

Nut, Output Yoke

270 to 339 N•m (200 to 250 lbf ft)

Capscrews, Drive Plate to Torque Convertor

50 N•m (37 lbf ft)

Oil Screen Assembly

14 to 20 N•m (10 to 15 lbf ft)

Oil Filter

27 to 34 N•m (20 to 25 lbf ft)

See the sections **Transmission** 1300 SRM 1082 for other torque values.

DRIVELINE AND AXLE

Capscrews, Universal Yoke

50 N•m (37 lbf ft)

Bolts, Axle to Frame

920 N•m (679 lbf ft)

COUNTERWEIGHT

Top Capscrews

1500 N•m (1106 lbf ft)

Rear Capscrews

1500 N•m (1106 lbf ft)

DIFFERENTIAL

See the section **Differential** 1400 SRM 46.

BRAKES - WET

See the sections **Planetary Drive Axle, (Wet System)** 1400 SRM 944 and **Wet Brake System** 1800 SRM 951.

BRAKES - DRY

Air Fittings in Air Chambers

34 N•m (25 lbf ft)

Nuts Air Chamber Ring Clamps

H8.00-12.00XM (H170-280HD) 27 to

34 N•m (20 to 25 lbf ft)

H13.00-16.00XM (H300-360HD) 34 to

47 N•m (25 to 35 lbf ft)

Jam Nut, Clevis

47 to 68 N•m (35 to 50 lbf ft)

Lock Nuts, Air Chamber Studs

135 to 156 N•m (100 to 115 lbf ft)

Capscrew, Brake Anchor Pin

14 N•m (10 lbf ft)

Capscrew, Spider See the section **Dry Brake System** 1800 SRM 937.

STEERING

Nut, Steering Wheel

68 N•m (50 lbf ft)

Capscrews, Steer Cylinder Mount

435 N•m (321 lbf ft)

Capscrews, Bearing Cap

75 N•m (55 lbf ft)

Nut, Wheel Bearing

Initial 203 N•m (150 lbf ft)

Final 34 N•m (25 lbf ft)

Note: Torque lock nut to Initial torque while rotating wheel hub. Back off lock nut until wheel hub turns freely with no end play. (Torque at this point should be less than 27 N•m (20 lbf ft)). Retorque to Final torque and lock in place at first alignment position which occurs at or above final torque spec.

Capscrews, Steer Axle Mount

270 N•m (199 lbf ft)

WHEEL NUTS

Drive Wheels (Final Torque Value)

640 to 680 N•m (472 to 502 lbf ft)

Steer Wheels (Final Torque Value)

640 to 680 N•m (472 to 502 lbf ft)

HYDRAULIC SYSTEM**Nuts, Hydraulic Pump Assembly**

271 N•m (200 lbf ft)

Capscrews, High-pressure Hose Flange

71 N•m (52 lbf ft)

Capscrews, Suction Hose Flange

110 N•m (81 lbf ft)

Nuts, Control Valve Assembly

7/16 in. 65 N•m (48 lbf ft)

1/2 in. 100 N•m (74 lbf ft)

Jam Nut, Relief Valve Adjustment

55 to 67 N•m (41 to 49 lbf ft)

Capscrews, Pump Mount

110 N•m (81 lbf ft)

MAST**Capscrews, Pivot Pin**

435 N•m (321 lbf ft)

Capscrew, Bearing Block

9 N•m (7 lbf ft)

Capscrews, Bearing Block Bracket

44 N•m (32 lbf ft)

Nuts, Wear Plate

53 N•m (39 lbf ft)

Retainer, Lift CylinderH8.00-9.00XM (H170-210HD) 400 to 475 N•m
(295 to 350 lbf ft)H10.00-12.00XM (H230-280HD) 475 to
550 N•m (350 to 406 lbf ft)H13.00-14.00XM (H300-330HD); H16.00XM-6
(H360HD); H10.00-12.00XM-12EC (H360HD-EC)

550 to 625 N•m (406 to 461 lbf ft)

CARRIAGE**Capscrew, Bearing Block**

9 N•m (7 lbf ft)

Capscrews, Bearing Block Bracket

44 N•m (32 lbf ft)

Nut, Sideshift Cylinder Rod

675 N•m (498 lbf ft)

TILT CYLINDERS**Nut, Cylinder Rod**H8.00-12.00XM (H170-280HD); H13.00-14.00XM
(H300-330HD); H16.00XM-6 (H360HD);

H10.00-12.00XM-12EC (H360HD-EC) 949

to 983 N•m (700 to 725 lbf ft)

H13.00-16.00XM (H300-360HD) 1105 to

1140 N•m (815 to 841 lbf ft)

RetainerH8.00-12.00XM (H170-280HD) 542 to
610 N•m (400 to 450 lbf ft)H13.00-14.00XM (H300-330HD); H16.00XM-6
(H360HD); H10.00-12.00XM-12EC (H360HD-EC)

610 to 675 N•m (450 to 498 lbf ft)

Lock Nut, Rod End

66 N•m (49 lbf ft)

Capscrew, Pin Anchor

165 N•m (122 lbf ft)

WIPER ARMS, FRONT**Capscrews, Bracket to Cab**

20 to 25 N•m (14.7 to 18.4 lbf ft)

Capscrews, Arm to Bracket

22 to 27 N•m (16.2 to 19.9 lbf ft)

Capscrews, Blade to Arm

8 to 10 N•m (6 to 7.4 lbf ft)

Capscrew, Arm Set

35 to 45 N•m (25.8 to 33.2 lbf ft)

