

CAPACITIES AND SPECIFICATIONS

S/H2.00-3.20XM (S/H40-65XM) [H177, D187]



HM210000

HYSTER

SAFETY PRECAUTIONS

MAINTENANCE AND REPAIR

- When lifting parts or assemblies, make sure all slings, chains, or cables are correctly fastened, and that the load being lifted is balanced. Make sure the crane, cables, and chains have the capacity to support the weight of the load.
- Do not lift heavy parts by hand, use a lifting mechanism.
- Wear safety glasses.
- DISCONNECT THE BATTERY CONNECTOR before doing any maintenance or repair on electric lift trucks. Disconnect the battery ground cable on internal combustion lift trucks.
- Always use correct blocks to prevent the unit from rolling or falling. See HOW TO PUT THE LIFT TRUCK ON BLOCKS in the **Operating Manual** or the **Periodic Maintenance** section.
- Keep the unit clean and the working area clean and orderly.
- Use the correct tools for the job.
- Keep the tools clean and in good condition.
- Always use **HYSTER APPROVED** parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- Make sure all nuts, bolts, snap rings, and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE tag to the controls of the unit when making repairs, or if the unit needs repairs.
- Be sure to follow the **WARNING** and **CAUTION** notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), and Diesel fuel are flammable. Be sure to follow the necessary safety precautions when handling these fuels and when working on these fuel systems.
- Batteries generate flammable gas when they are being charged. Keep fire and sparks away from the area. Make sure the area is well ventilated.

NOTE: The following symbols and words indicate safety information in this manual:



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and property damage.

On the lift truck, the WARNING symbol and word are on orange background. The CAUTION symbol and word are on yellow background.

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This section is for the following models:

S/H2.00-3.20XM (S/H40-65XM) [H177, D187]

**"THE
QUALITY
KEEPERS"**

**HYSTER
APPROVED
PARTS**

Lift Truck Weights

Model	kg	lb
S2.00XM (S40XM)	2595	5721
S2.25XM (S45XM)	3280	7231
S2.50XM (S50XM)	3470	7650
S2.50XM/6 (S55XM)	3655	8058
S2.50XM/6 (S55XMS)	3730	8223
S3.00XM (S60XM)	3900	8598
S3.20XML (S65XM)	4060	8951
H2.00XM ¹	3610	7959
(H45XM) ¹	3765	8300
H2.50XM (H50XM) ¹	3965	8741
H2.50XM (H50XM) ²	4100	9039
(H55XM) ¹	4145	9138
H3.00XM (H60XM) ¹	4370	9634
H3.00XM (H60XM) ²	4425	9755
H3.20XML (H65XM) ²	4500	9921

NOTES:
¹ = 1625 mm (64.0 in.) wheelbase

² = 1700 mm (66.9 in.) wheelbase

All units equipped with gasoline engine, standard carriage, forks, two-stage limited free-lift mast and 91 kg (200 lb) operator.

Tire Pressure

Bias Ply Tires		
Tire Size	kPa	psi
6.00 × 9, 10 ply	860	125
6.50 × 10, 10 ply	795	115
7.00 × 12, 12 ply	860	125
28 × 9 - 15, 12 ply	825	120

Radial Tires			
Tire Size	kPa	psi	Warning
6.00 R9	1000	145	 WARNING SPECIAL RADIAL TIRES AND WHEELS Use ONLY the Michelin® tires specified on the Nameplate, inflated to the specified pressure. Use only lock ring style wheels with radial tires. Do not use two piece (bolt together) wheels with radial tires. Other types or brands of radial tires, or mixing with bias-ply tires can cause improper handling or increase risk of tipover. Use of other wheels can cause wheel failure. Improper handling, tipover, or wheel failure can result in SERIOUS INJURY OR DEATH! Consult your dealer for this lift truck for the correct tire and wheel specification and lift capacity rating before installing bias-ply tires. All tires and wheels MUST be the same type.
6.50 R10	1000	145	
7.00 R12	1000	145	
225/75 R15	1000	145	

BM210009

Capacities

Item	Quantity
Engine Oil (with filter)	
Mazda M4-2.0G	4.3 liter (4.5 qt)
Mazda M4-2.2G	4.6 liter (4.9 qt)
GM 3.0L	4.3 liter (4.5 qt)
Perkins 704-26 (UB)	8.3 liter (8.8 qt)
Cooling System	
Mazda M4-2.0G	11.0 liter (11.6 qt)
Mazda M4-2.2G	11.0 liter (11.6 qt)
GM 3.0L	11.0 liter (11.6 qt)
Perkins 704-26 (UB)	9.84 liter (10.4 qt)
Hydraulic System	
S2.00-3.20XM (S40-65XM)	Initial Fill 32.0 liter (33.8 qt)
H2.00-3.20XM (H45-65XM)	Initial Fill 34.0 liter (36.0 qt)
Hydraulic Tank	
S2.00-3.20XM (S40-65XM)	Drain and Fill 26.0 liter (27.5 qt)
H2.00-3.20XM (H45-65XM)	Drain and Fill 30.4 liter (32.1 qt)
Transmission	
S2.00-3.20XM (S40-65XM) Powershift Transmission	10.5 liter (11.1 qt)
H2.00-3.20XM (H45-65XM) Powershift Transmission	9.0 liter (9.5 qt)
H2.00-3.20XM (H45-65XM) Hydrostatic Transmission	18.0 liter (19.0 qt)

Item	Quantity
Differential	
S2.00-3.20XM (S40-65XM)	3.8 liter (8.0 pt)
H2.00-3.20XM (H45-65XM)	7.6 liter (8.0 qt)
Transmission Axle Shaft Oil	
Hydrostatic Transmission	0.36 liter (0.80 pt) (each side)
Fuel Tank	
GM 3.0L	39.4 liter (10.4 gal)
Mazda M4-2.0G	54.5 liter (14.5 gal)
Mazda M4-2.2G	54.5 liter (14.5 gal)
Perkins 704-26 (UB)	51.3 liter (13.6 gal)
Brake Fluid	0.2 liter (0.4 pt)

Tire Sizes

S2.00-3.20XM (S40-65XM)	
Drive Tires	Steer Tires
21 × 7 × 15	16 × 5 × 10.5
21 × 8 × 15	16 × 6 × 10.5

Electrical System

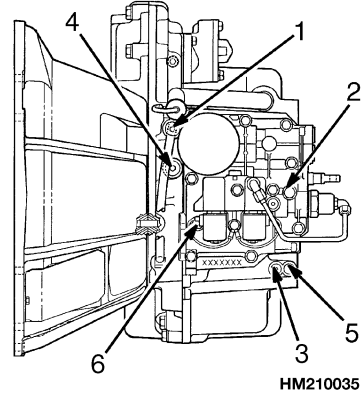
GASOLINE/LPG

Item	Mazda M4-2.0G and M4-2.2G	GM 3.0L
All Models	12-volt, negative ground	12-volt, negative ground
Alternator Output (Hot)	37 amps @ 2700 rpm	56 amps @ 2600 rpm
Ignition Timing		
Gasoline	0° BTDC	Electronic Timing
LPG	9° BTDC	Electronic Timing
Spark Plugs	ND W9 EXR-U	AC R44 LTSMA
Spark Plug Gap	0.8 mm (0.031 in.)	1.1 mm (0.043 in.)

DIESEL

Item	Perkins 704-26 (UB)
H45-65XM	12-volt, negative ground
Alternator Output (Hot)	61.5 amps @ 2800 rpm

Transmission Oil Pressures

Test Port 1	Test Port 2	Test Port 3	Test Port 4	Test Port 5	Test Port 6
965 to 1170 kPa (140 to 170 psi)	724 to 860 kPa (105 to 125 psi)	724 to 860 kPa (105 to 125 psi)	724 to 827 kPa (105 to 120 psi)	105 to 175 kPa (15 to 25 psi)	Pressure Variation
NOTES:					
All pressures are measured at 2000 rpm, oil temperature at 50°C (122°F).					
The difference in the forward and reverse clutch pressure must not be more than 70 kPa (10 psi).					
TEST PORT 1 - Pressure from the transmission pump					
TEST PORT 2 - Pressure to the forward clutch					
TEST PORT 3 - Pressure to the reverse clutch					
TEST PORT 4 - Oil Pressure to the torque converter					
TEST PORT 5 - Oil Pressure from the oil cooler					
TEST PORT 6 - Modulator pressure					

Hydraulic System

Item	Specification
Hydraulic Pump	
Type	Gear
Priority Flow	10 liter/min (2.64 gal/min)
Relief Pressures	
Steering (at Pump)	10.6 to 11.7 MPa (1540 to 1700 psi)
Primary (at Control Valve)	21.37 ±0.5 MPa (3100 ±75 psi)
Secondary (at Control Valve)	15.5 ±0.5 MPa (2250 ±75 psi)
All pressures with oil at 55 to 65°C (130 to 150°F) and engine at 2000 rpm.	

Stall Speeds

H2.00-3.20XM (H45-65XM)

Engine	New Engine	Engine With 30+ Hours
Mazda M4-2.0G		
Gasoline	1930 to 2030 rpm	2050 to 2150 rpm
LPG	1880 to 1980 rpm	2000 to 2100 rpm
Mazda M4-2.2G		
Gasoline	1930 to 2030 rpm	1800 to 1900 rpm
LPG	1870 to 1970 rpm	1750 to 1850 rpm
GM 3.0L		
Gasoline	2100 to 2200 rpm	2200 to 2300 rpm
LPG	2000 to 2100 rpm	2150 to 2250 rpm
Perkins 704-26 (UB)	1830 to 1930 rpm	1920 to 2020 rpm

S2.00-3.20XM (S40-65XM)

Engine	New Engine	Engine With 30+ Hours
Mazda M4-2.0G		
Gasoline	1930 to 2030 rpm	2030 to 2130 rpm
LPG	1930 to 2030 rpm	2030 to 2130 rpm
Dual Fuel		
Gasoline	1930 to 2030 rpm	2030 to 2130 rpm
LPG	1930 to 2030 rpm	2030 to 2130 rpm
Mazda M4-2.2G		
Gasoline	1920 to 2030 rpm	1800 to 1900 rpm
LPG	1870 to 1970 rpm	1750 to 1850 rpm
Dual Fuel		
Gasoline	1920 to 2030 rpm	1800 to 1900 rpm
LPG	1870 to 1970 rpm	1750 to 1850 rpm
GM 3.0L		
Gasoline	2275 to 2375 rpm	2275 to 2375 rpm
LPG	2130 to 2230 rpm	2230 to 2330 rpm
Dual Fuel		
Gasoline	2130 to 2230 rpm	2230 to 2330 rpm
LPG	2130 to 2230 rpm	2230 to 2330 rpm

Engine Specifications

GASOLINE/LPG

Item	Mazda M4-2.0G	Mazda M4-2.2G	GM 3.0L
No. of Cylinders	4	4	4
Firing Order	1-3-4-2	1-3-4-2	1-3-4-2
Bore and Stroke	86 mm × 86 mm (3.39 in. × 3.39 in.)	86 mm × 94 mm (3.39 in. × 3.70 in.)	120 mm × 91 mm (4.72 in. × 3.60 in.)
Displacement	1998 cm ³ (122 in. ³)	2184 cm ³ (133.2 in. ³)	2966 cm ³ (181 in. ³)
Compression Ratio	8.6:1	8.6:1	8.0:1
Compression Pressure	1131 kPa (164 psi) @ 270 rpm	1131 kPa (164 psi) @ 270 rpm	758 kPa (110 psi) @ 200 rpm
Oil Pressure	226 to 362 kPa (33 to 53 psi) @ 2400 rpm	226 to 362 kPa (33 to 53 psi) @ 2400 rpm	138 kPa (20 psi) min. @ 1200 rpm
Valve Clearance (Intake/Exhaust)	0.3 mm (0.012 in.) Hot	0.3 mm (0.012 in.) Hot	Not Adjustable
Idle Speed			
Gasoline	800 ±25 rpm	800 ±25 rpm	800 ±25 rpm
Idle Speed			
LPG (IMPCO)	700 to 750 rpm	N/A	675 to 725 rpm
Idle Speed			
LPG (Aisan Closed Loop)	800 ±25 rpm	800 ±25 rpm	800 ±25 rpm
Idle Speed			
LPG (Aisan Open Loop)	800 ±25 rpm	800 ±25 rpm	800 ±25 rpm
Governed Speed			
Gasoline H2.00-3.20XM (H40-65XM)	2700 to 2800 rpm	2700 to 2800 rpm	2900 ±50 rpm
Governed Speed			
Gasoline S2.00-3.20XM (S40-65XM)	2700 to 2800 rpm	2700 to 2800 rpm	2800 ±50 rpm
Governed Speed			
LPG (IMPCO)	2600 to 2700 rpm	N/A	2850 to 2950 rpm
Governed Speed			
LPG (Aisan Closed Loop) H2.00-3.20XM (H40-65XM)	2700 to 2800 rpm	2700 to 2800 rpm	2900 ±50 rpm

Item	Mazda M4-2.0G	Mazda M4-2.2G	GM 3.0L
Governed Speed			
LPG (Aisan Closed Loop) S2.00-3.20XM (S40-65XM)	2700 to 2800 rpm	2700 to 2800 rpm	2800 ±50 rpm
Governed Speed			
LPG (Aisan Open Loop) H2.00-3.20XM (H40-65XM)	2700 to 2800 rpm	2700 to 2800 rpm	2900 ±50 rpm
Governed Speed			
LPG (Aisan Open Loop) S2.00-3.20XM (S40-65XM)	2700 to 2800 rpm	2700 to 2800 rpm	2800 ±50 rpm
Thermostat Range	82°C (180°F)	82°C (180°F)	82°C (180°F)
Cooling System Pressure	103 kPa (15 psi)	103 kPa (15 psi)	88 kPa (13 psi)

DIESEL

Item	Perkins 704-26 (UB)
No. of Cylinders	4
Firing Order	1-3-4-2
Bore and Stroke	91 mm × 100 mm (3.58 in. × 3.94 in.)
Displacement	2606 cm ³ (159 in. ³)
Compression Ratio	22.0:1
Compression Pressure	3140 kPa (455 psi) @ 200 rpm
Oil Pressure	330 kPa (48 psi) min. @ 2800 rpm
Valve Clearance (Intake/Exhaust)	0.35 mm (0.014 in.) Cold
Idle Speed	
Powershift Transmission	725 ±25 rpm
Hydrostatic Transmission	800 ±25 rpm
Governed Speed @ No Load	2700 to 2800 rpm
Thermostat Range	80.5 to 83.5°C (177 to 182°F)
Cooling System Pressure	103 kPa (15 psi)
Fuel Injector Pressure	13.2 MPa (1915 psi)
Fuel Injection Timing	10° BTDC Static

Mast Speeds

H40-65XM MAST SPEEDS (US MODELS) - MAZDA M4-2.0G ENGINE

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.60	118	0.54	107	0.42	83	0.50	99
H45XM	0.60	118	0.53	104	0.42	83	0.50	99
H50XM	0.60	118	0.53	104	0.42	83	0.50	99
H55XM	0.60	118	0.52	102	0.42	83	0.50	99
H60XM	0.53	104	0.46	90	0.42	83	0.50	99
H65XM	0.53	104	0.45	89	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.54	107	0.49	97	0.42	83	0.50	99
H45XM	0.54	107	0.49	96	0.42	83	0.50	99
H50XM	0.54	107	0.48	95	0.42	83	0.50	99
H55XM	0.54	107	0.48	94	0.42	83	0.50	99
H60XM	0.52	102	0.45	89	0.42	83	0.50	99
H65XM	0.52	102	0.45	88	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.57	113	0.52	102	0.42	83	0.50	99
H45XM	0.57	113	0.51	102	0.42	83	0.50	99
H50XM	0.57	113	0.50	99	0.42	83	0.50	99
H55XM	0.57	113	0.50	98	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H60XM	0.51	100	0.45	88	0.42	83	0.50	99
H65XM	0.51	100	0.44	87	0.42	83	0.50	99

H40-65XM MAST SPEEDS (US MODELS) - MAZDA M4-2.2G ENGINE

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.66	130	0.59	117	0.42	83	0.50	99
H45XM	0.66	130	0.59	116	0.42	83	0.50	99
H50XM	0.66	130	0.58	114	0.42	83	0.50	99
H55XM	0.66	130	0.57	113	0.42	83	0.50	99
H60XM	0.58	114	0.50	99	0.42	83	0.50	99
H65XM	0.58	114	0.50	98	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.59	117	0.54	107	0.42	83	0.50	99
H45XM	0.59	117	0.54	106	0.42	83	0.50	99
H50XM	0.59	117	0.53	104	0.42	83	0.50	99
H55XM	0.59	117	0.53	103	0.42	83	0.50	99
H60XM	0.56	111	0.49	97	0.42	83	0.50	99
H65XM	0.56	111	0.49	96	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.62	123	0.57	112	0.42	83	0.50	99
H45XM	0.62	123	0.56	111	0.42	83	0.50	99
H50XM	0.62	123	0.55	109	0.42	83	0.50	99
H55XM	0.62	123	0.55	108	0.42	83	0.50	99
H60XM	0.56	110	0.49	96	0.42	83	0.50	99
H65XM	0.56	110	0.48	95	0.42	83	0.50	99

H40-65XM MAST SPEEDS (US MODELS) - GM 3.0L ENGINE

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.64	125	0.59	117	0.42	83	0.50	99
H45XM	0.64	125	0.59	116	0.42	83	0.50	99
H50XM	0.64	125	0.58	115	0.42	83	0.50	99
H55XM	0.64	125	0.57	113	0.42	83	0.50	99
H60XM	0.56	110	0.51	100	0.42	83	0.50	99
H65XM	0.56	110	0.51	100	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.57	113	0.54	106	0.42	83	0.50	99
H45XM	0.57	113	0.53	105	0.42	83	0.50	99
H50XM	0.57	113	0.53	104	0.42	83	0.50	99
H55XM	0.57	113	0.52	103	0.42	83	0.50	99
H60XM	0.55	108	0.50	98	0.42	83	0.50	99
H65XM	0.55	108	0.50	98	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.60	119	0.57	112	0.42	83	0.50	99
H45XM	0.60	119	0.56	111	0.42	83	0.50	99
H50XM	0.60	119	0.56	110	0.42	83	0.50	99
H55XM	0.60	119	0.55	109	0.42	83	0.50	99
H60XM	0.54	107	0.49	97	0.42	83	0.50	99
H65XM	0.54	107	0.49	96	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.68	134	0.61	121	0.42	83	0.50	99
H45XM	0.68	134	0.60	119	0.42	83	0.50	99
H50XM	0.68	134	0.59	117	0.42	83	0.50	99
H55XM	0.68	134	0.58	115	0.42	83	0.50	99
H60XM	0.60	118	0.52	102	0.42	83	0.50	99
H65XM	0.60	118	0.51	101	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.61	121	0.56	110	0.42	83	0.50	99
H45XM	0.61	121	0.55	109	0.42	83	0.50	99
H50XM	0.61	121	0.54	107	0.42	83	0.50	99
H55XM	0.61	121	0.54	106	0.42	83	0.50	99
H60XM	0.58	115	0.51	100	0.42	83	0.50	99
H65XM	0.58	115	0.50	99	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.65	128	0.58	115	0.42	83	0.50	99
H45XM	0.65	128	0.58	114	0.42	83	0.50	99
H50XM	0.65	128	0.57	112	0.42	83	0.50	99
H55XM	0.65	128	0.56	111	0.42	83	0.50	99
H60XM	0.58	114	0.50	99	0.42	83	0.50	99
H65XM	0.58	114	0.50	98	0.42	83	0.50	99

H45-65XM MAST SPEEDS (US MODELS) - PERKINS 704-26 (UB) DIESEL ENGINE

Perkins 704-26 (UB) Diesel								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.61	119	0.55	109	0.42	83	0.50	99
H45XM	0.61	119	0.55	108	0.42	83	0.50	99
H50XM	0.61	119	0.54	107	0.42	83	0.50	99
H55XM	0.61	119	0.53	105	0.42	83	0.50	99
H60XM	0.53	105	0.47	93	0.42	83	0.50	99
H65XM	0.53	105	0.47	92	0.42	83	0.50	99

Perkins 704-26 (UB) Diesel								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.55	108	0.50	99	0.42	83	0.50	99
H45XM	0.55	108	0.50	98	0.42	83	0.50	99
H50XM	0.55	108	0.49	97	0.42	83	0.50	99
H55XM	0.55	108	0.49	96	0.42	83	0.50	99
H60XM	0.52	103	0.46	91	0.42	83	0.50	99
H65XM	0.52	103	0.46	91	0.42	83	0.50	99

Perkins 704-26 (UB) Diesel								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H40XM	0.58	114	0.53	104	0.42	83	0.50	99
H45XM	0.58	114	0.52	103	0.42	83	0.50	99
H50XM	0.58	114	0.52	102	0.42	83	0.50	99
H55XM	0.58	114	0.51	101	0.42	83	0.50	99
H60XM	0.52	101	0.46	90	0.42	83	0.50	99
H65XM	0.52	101	0.45	89	0.42	83	0.50	99

S45-65XM MAST SPEEDS (US MODELS) - MAZDA M4-2.0G ENGINE

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.62	123	0.56	111	0.42	83	0.50	99
S45XM	0.62	123	0.55	109	0.42	83	0.50	99
S50XM	0.62	123	0.55	108	0.42	83	0.50	99
S55XM	0.62	123	0.54	106	0.42	83	0.50	99
S55XMS	0.62	123	0.54	106	0.42	83	0.50	99
S60XM	0.55	108	0.48	94	0.42	83	0.50	99
S65XM	0.55	108	0.47	93	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.56	111	0.51	101	0.42	83	0.50	99
S45XM	0.56	111	0.51	100	0.42	83	0.50	99
S50XM	0.56	111	0.50	99	0.42	83	0.50	99
S55XM	0.56	111	0.50	98	0.42	83	0.50	99
S55XMS	0.56	111	0.50	98	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S60XM	0.54	107	0.47	92	0.42	83	0.50	99
S65XM	0.54	107	0.46	91	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.59	117	0.54	106	0.42	83	0.50	99
S45XM	0.59	117	0.53	105	0.42	83	0.50	99
S50XM	0.59	117	0.52	103	0.42	83	0.50	99
S55XM	0.59	117	0.52	102	0.42	83	0.50	99
S55XMS	0.59	117	0.52	102	0.42	83	0.50	99
S60XM	0.53	104	0.47	92	0.42	83	0.50	99
S65XM	0.53	104	0.46	91	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.63	124	0.56	111	0.39	76	0.47	92
S45XM	0.63	124	0.56	110	0.39	76	0.47	92
S50XM	0.63	124	0.55	109	0.39	76	0.47	93
S55XM	0.63	124	0.53	105	0.39	76	0.47	93
S55XMS	0.63	124	0.53	105	0.39	76	0.47	93
S60XM	0.63	124	0.50	98	0.39	76	0.48	95
S65XM	0.63	124	0.47	93	0.39	76	0.48	95

S40-65XM MAST SPEEDS (US MODELS) - MAZDA M4-2.2G ENGINE

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.68	134	0.61	121	0.42	83	0.50	99
S45XM	0.68	134	0.60	119	0.42	83	0.50	99
S50XM	0.68	134	0.60	118	0.42	83	0.50	99
S55XM	0.68	134	0.59	116	0.42	83	0.50	99
S55XMS	0.68	134	0.59	116	0.42	83	0.50	99
S60XM	0.60	118	0.52	103	0.42	83	0.50	99
S65XM	0.60	118	0.52	102	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.61	121	0.56	111	0.42	83	0.50	99
S45XM	0.61	121	0.56	111	0.42	83	0.50	99
S50XM	0.61	121	0.55	108	0.42	83	0.50	99
S55XM	0.61	121	0.54	106	0.42	83	0.50	99
S55XMS	0.61	121	0.54	106	0.42	83	0.50	99
S60XM	0.58	115	0.51	101	0.42	83	0.50	99
S65XM	0.58	115	0.51	100	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.65	127	0.59	116	0.42	83	0.50	99
S45XM	0.65	127	0.58	115	0.42	83	0.50	99
S50XM	0.65	127	0.57	113	0.42	83	0.50	99
S55XM	0.65	127	0.56	111	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S55XMS	0.65	127	0.56	111	0.42	83	0.50	99
S60XM	0.58	114	0.51	101	0.42	83	0.50	99
S65XM	0.58	114	0.50	99	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.69	135	0.62	122	0.39	76	0.47	92
S45XM	0.69	135	0.61	120	0.39	76	0.47	92
S50XM	0.69	135	0.60	119	0.39	76	0.47	93
S55XM	0.69	135	0.59	117	0.39	76	0.47	93
S55XMS	0.69	135	0.59	117	0.39	76	0.47	93
S60XM	0.69	135	0.56	111	0.39	76	0.48	95
S65XM	0.69	135	0.53	105	0.39	76	0.48	95

S40-65XM MAST SPEEDS (US MODELS) - GM 3.0L ENGINE

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.69	136	0.65	127	0.42	83	0.50	99
S45XM	0.69	136	0.64	126	0.42	83	0.50	99
S50XM	0.69	136	0.64	125	0.42	83	0.50	99
S55XM	0.69	136	0.63	124	0.42	83	0.50	99
S55XMS	0.69	136	0.63	124	0.42	83	0.50	99
S60XM	0.60	119	0.55	109	0.42	83	0.50	99
S65XM	0.60	119	0.55	108	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.62	122	0.58	115	0.42	83	0.50	99
S45XM	0.62	122	0.58	114	0.42	83	0.50	99
S50XM	0.62	122	0.57	113	0.42	83	0.50	99
S55XM	0.62	122	0.57	112	0.42	83	0.50	99
S55XMS	0.62	122	0.57	112	0.42	83	0.50	99
S60XM	0.59	117	0.54	107	0.42	83	0.50	99
S65XM	0.59	117	0.54	106	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.66	129	0.61	121	0.42	83	0.50	99
S45XM	0.66	129	0.61	120	0.42	83	0.50	99
S50XM	0.66	129	0.60	119	0.42	83	0.50	99
S55XM	0.66	129	0.60	118	0.42	83	0.50	99
S55XMS	0.66	129	0.60	118	0.42	83	0.50	99
S60XM	0.58	115	0.54	106	0.42	83	0.50	99
S65XM	0.58	115	0.53	105	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.70	137	0.65	128	0.39	76	0.47	92
S45XM	0.70	137	0.65	127	0.39	76	0.47	92
S50XM	0.70	137	0.64	126	0.39	76	0.47	93
S55XM	0.70	137	0.63	124	0.39	76	0.47	93
S55XMS	0.70	137	0.63	124	0.39	76	0.47	93

GM 3.0L Engine (Gas Only)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S60XM	0.70	137	0.62	123	0.39	76	0.48	95
S65XM	0.70	137	0.62	122	0.39	76	0.48	95

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.68	133	0.61	120	0.42	83	0.50	99
S45XM	0.68	133	0.60	118	0.42	83	0.50	99
S50XM	0.68	133	0.59	117	0.42	83	0.50	99
S55XM	0.68	133	0.58	115	0.42	83	0.50	99
S55XMS	0.68	133	0.58	115	0.42	83	0.50	99
S60XM	0.59	117	0.52	102	0.42	83	0.50	99
S65XM	0.59	117	0.51	101	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.61	120	0.56	110	0.42	83	0.50	99
S45XM	0.61	120	0.55	108	0.42	83	0.50	99
S50XM	0.61	120	0.54	107	0.42	83	0.50	99
S55XM	0.61	120	0.54	106	0.42	83	0.50	99
S55XMS	0.61	120	0.54	106	0.42	83	0.50	99
S60XM	0.58	114	0.51	100	0.42	83	0.50	99
S65XM	0.58	114	0.50	99	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.65	127	0.58	115	0.42	83	0.50	99
S45XM	0.65	127	0.58	114	0.42	83	0.50	99
S50XM	0.65	127	0.57	112	0.42	83	0.50	99
S55XM	0.65	127	0.56	111	0.42	83	0.50	99
S55XMS	0.65	127	0.56	111	0.42	83	0.50	99
S60XM	0.57	113	0.50	99	0.42	83	0.50	99
S65XM	0.57	113	0.50	98	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S40XM	0.68	134	0.61	121	0.39	76	0.47	92
S45XM	0.68	134	0.60	119	0.39	76	0.47	92
S50XM	0.68	134	0.59	117	0.39	76	0.47	93
S55XM	0.68	134	0.59	116	0.39	76	0.47	93
S55XMS	0.68	134	0.59	116	0.39	76	0.47	93
S60XM	0.68	134	0.58	114	0.39	76	0.48	95
S65XM	0.68	134	0.57	112	0.39	76	0.48	95

H2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - MAZDA M4-2.0G ENGINE

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.60	118	0.54	107	0.42	83	0.50	99
H2.25XM	0.60	118	0.53	104	0.42	83	0.50	99
H2.50XM	0.60	118	0.53	104	0.42	83	0.50	99
H2.50-6XM	0.60	118	0.52	102	0.42	83	0.50	99
H3.00XM	0.53	104	0.46	90	0.42	83	0.50	99
H3.20XM	0.53	104	0.45	89	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.54	107	0.49	97	0.42	83	0.50	99
H2.25XM	0.54	107	0.49	96	0.42	83	0.50	99
H2.50XM	0.54	107	0.48	95	0.42	83	0.50	99
H2.50-6XM	0.54	107	0.48	94	0.42	83	0.50	99
H3.00XM	0.52	102	0.45	89	0.42	83	0.50	99
H3.20XM	0.52	102	0.45	88	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.57	113	0.52	102	0.42	83	0.50	99
H2.25XM	0.57	113	0.51	102	0.42	83	0.50	99
H2.50XM	0.57	113	0.50	99	0.42	83	0.50	99
H2.50-6XM	0.57	113	0.50	98	0.42	83	0.50	99
H3.00XM	0.51	100	0.45	88	0.42	83	0.50	99
H3.20XM	0.51	100	0.44	87	0.42	83	0.50	99

H2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - MAZDA M4-2.2G ENGINE

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.66	130	0.59	117	0.42	83	0.50	99
H2.25XM	0.66	130	0.59	116	0.42	83	0.50	99
H2.50XM	0.66	130	0.58	114	0.42	83	0.50	99
H2.50-6XM	0.66	130	0.57	113	0.42	83	0.50	99
H3.00XM	0.58	114	0.50	99	0.42	83	0.50	99
H3.20XM	0.58	114	0.50	98	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.59	117	0.54	107	0.42	83	0.50	99
H2.25XM	0.59	117	0.54	106	0.42	83	0.50	99
H2.50XM	0.59	117	0.53	104	0.42	83	0.50	99
H2.50-6XM	0.59	117	0.53	103	0.42	83	0.50	99
H3.00XM	0.56	111	0.49	97	0.42	83	0.50	99
H3.20XM	0.56	111	0.49	96	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.62	123	0.57	112	0.42	83	0.50	99
H2.25XM	0.62	123	0.56	111	0.42	83	0.50	99
H2.50XM	0.62	123	0.55	109	0.42	83	0.50	99
H2.50-6XM	0.62	123	0.55	108	0.42	83	0.50	99
H3.00XM	0.56	110	0.49	96	0.42	83	0.50	99
H3.20XM	0.56	110	0.48	95	0.42	83	0.50	99

H2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - GM 3.0L ENGINE

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.64	125	0.59	117	0.42	83	0.50	99
H2.25XM	0.64	125	0.59	116	0.42	83	0.50	99
H2.50XM	0.64	125	0.58	115	0.42	83	0.50	99
H2.50-6XM	0.64	125	0.57	113	0.42	83	0.50	99
H3.00XM	0.56	110	0.51	100	0.42	83	0.50	99
H3.20XM	0.56	110	0.51	100	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.57	113	0.54	106	0.42	83	0.50	99
H2.25XM	0.57	113	0.53	105	0.42	83	0.50	99
H2.50XM	0.57	113	0.53	104	0.42	83	0.50	99
H2.50-6XM	0.57	113	0.52	103	0.42	83	0.50	99
H3.00XM	0.55	108	0.50	98	0.42	83	0.50	99
H3.20XM	0.55	108	0.50	98	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.60	119	0.57	112	0.42	83	0.50	99
H2.25XM	0.60	119	0.56	111	0.42	83	0.50	99
H2.50XM	0.60	119	0.56	110	0.42	83	0.50	99
H2.50-6XM	0.60	119	0.55	109	0.42	83	0.50	99
H3.00XM	0.54	107	0.49	97	0.42	83	0.50	99
H3.20XM	0.54	107	0.49	96	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.68	134	0.61	121	0.42	83	0.50	99
H2.25XM	0.68	134	0.60	119	0.42	83	0.50	99
H2.50XM	0.68	134	0.59	117	0.42	83	0.50	99
H2.50-6XM	0.68	134	0.58	115	0.42	83	0.50	99
H3.00XM	0.60	118	0.52	102	0.42	83	0.50	99
H3.20XM	0.60	118	0.51	101	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.61	121	0.56	110	0.42	83	0.50	99
H2.25XM	0.61	121	0.55	109	0.42	83	0.50	99
H2.50XM	0.61	121	0.54	107	0.42	83	0.50	99
H2.50-6XM	0.61	121	0.54	106	0.42	83	0.50	99
H3.00XM	0.58	115	0.51	100	0.42	83	0.50	99
H3.20XM	0.58	115	0.50	99	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.65	128	0.58	115	0.42	83	0.50	99
H2.25XM	0.65	128	0.58	114	0.42	83	0.50	99
H2.50XM	0.65	128	0.57	112	0.42	83	0.50	99
H2.50-6XM	0.65	128	0.56	111	0.42	83	0.50	99
H3.00XM	0.58	114	0.50	99	0.42	83	0.50	99
H3.20XM	0.58	114	0.50	98	0.42	83	0.50	99

H2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - PERKINS 704-26 (UB) DIESEL ENGINE

Perkins 704-26 (UB) Diesel								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.61	119	0.55	109	0.42	83	0.50	99
H2.25XM	0.61	119	0.55	108	0.42	83	0.50	99
H2.50XM	0.61	119	0.54	107	0.42	83	0.50	99
H2.50-6XM	0.61	119	0.53	105	0.42	83	0.50	99
H3.00XM	0.53	105	0.47	93	0.42	83	0.50	99
H3.20XM	0.53	105	0.47	92	0.42	83	0.50	99

Perkins 704-26 (UB) Diesel								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.55	108	0.50	99	0.42	83	0.50	99
H2.25XM	0.55	108	0.50	98	0.42	83	0.50	99
H2.50XM	0.55	108	0.49	97	0.42	83	0.50	99
H2.50-6XM	0.55	108	0.49	96	0.42	83	0.50	99
H3.00XM	0.52	103	0.46	91	0.42	83	0.50	99
H3.20XM	0.52	103	0.46	91	0.42	83	0.50	99

Perkins 704-26 (UB) Diesel								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H2.00XM	0.58	114	0.53	104	0.42	83	0.50	99
H2.25XM	0.58	114	0.52	103	0.42	83	0.50	99
H2.50XM	0.58	114	0.52	102	0.42	83	0.50	99
H2.50-6XM	0.58	114	0.51	101	0.42	83	0.50	99

Perkins 704-26 (UB) Diesel								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
H3.00XM	0.52	101	0.46	90	0.42	83	0.50	99
H3.20XM	0.52	101	0.45	89	0.42	83	0.50	99

S2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - MAZDA M4-2.0G ENGINE

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.62	123	0.56	111	0.42	83	0.50	99
S2.25XM	0.62	123	0.55	109	0.42	83	0.50	99
S2.50XM	0.62	123	0.55	108	0.42	83	0.50	99
S2.50-6XM	0.62	123	0.54	106	0.42	83	0.50	99
S2.50-6XMS	0.62	123	0.54	106	0.42	83	0.50	99
S3.00XM	0.55	108	0.48	94	0.42	83	0.50	99
S3.20XM	0.55	108	0.47	93	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.56	111	0.51	101	0.42	83	0.50	99
S2.25XM	0.56	111	0.51	100	0.42	83	0.50	99
S2.50XM	0.56	111	0.50	99	0.42	83	0.50	99
S2.50-6XM	0.56	111	0.50	98	0.42	83	0.50	99
S2.50-6XMS	0.56	111	0.50	98	0.42	83	0.50	99
S3.00XM	0.54	107	0.47	92	0.42	83	0.50	99
S3.20XM	0.54	107	0.46	91	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.59	117	0.54	106	0.42	83	0.50	99
S2.25XM	0.59	117	0.53	105	0.42	83	0.50	99
S2.50XM	0.59	117	0.52	103	0.42	83	0.50	99
S2.50-6XM	0.59	117	0.52	102	0.42	83	0.50	99
S2.50-6XMS	0.59	117	0.52	102	0.42	83	0.50	99
S3.00XM	0.53	104	0.47	92	0.42	83	0.50	99
S3.20XM	0.53	104	0.46	91	0.42	83	0.50	99

Mazda M4-2.0G Engine (Gas/LPG)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.63	124	0.56	111	0.39	76	0.47	92
S2.25XM	0.63	124	0.56	110	0.39	76	0.47	92
S2.50XM	0.63	124	0.55	109	0.39	76	0.47	93
S2.50-6XM	0.63	124	0.53	105	0.39	76	0.47	93
S2.50-6XMS	0.63	124	0.53	105	0.39	76	0.47	93
S3.00XM	0.63	124	0.50	98	0.39	76	0.48	95
S3.20XM	0.63	124	0.47	93	0.39	76	0.48	95

S2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - MAZDA M4-2.2G ENGINE

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.68	134	0.61	121	0.42	83	0.50	99
S2.25XM	0.68	134	0.60	119	0.42	83	0.50	99
S2.50XM	0.68	134	0.60	118	0.42	83	0.50	99
S2.50-6XM	0.68	134	0.59	116	0.42	83	0.50	99
S2.50-6XMS	0.68	134	0.59	116	0.42	83	0.50	99
S3.00XM	0.60	118	0.52	103	0.42	83	0.50	99
S3.20XM	0.60	118	0.52	102	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.61	121	0.56	111	0.42	83	0.50	99
S2.25XM	0.61	121	0.56	111	0.42	83	0.50	99
S2.50XM	0.61	121	0.55	108	0.42	83	0.50	99
S2.50-6XM	0.61	121	0.54	106	0.42	83	0.50	99
S2.50-6XMS	0.61	121	0.54	106	0.42	83	0.50	99
S3.00XM	0.58	115	0.51	101	0.42	83	0.50	99
S3.20XM	0.58	115	0.51	100	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.65	127	0.59	116	0.42	83	0.50	99
S2.25XM	0.65	127	0.58	115	0.42	83	0.50	99
S2.50XM	0.65	127	0.57	113	0.42	83	0.50	99
S2.50-6XM	0.65	127	0.56	111	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.50-6XMS	0.65	127	0.56	111	0.42	83	0.50	99
S3.00XM	0.58	114	0.51	101	0.42	83	0.50	99
S3.20XM	0.58	114	0.50	99	0.42	83	0.50	99

Mazda M4-2.2G Engine (Gas/LPG)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.69	135	0.62	122	0.39	76	0.47	92
S2.25XM	0.69	135	0.61	120	0.39	76	0.47	92
S2.50XM	0.69	135	0.60	119	0.39	76	0.47	93
S2.50-6XM	0.69	135	0.59	117	0.39	76	0.47	93
S2.50-6XMS	0.69	135	0.59	117	0.39	76	0.47	93
S3.00XM	0.69	135	0.56	111	0.39	76	0.48	95
S3.20XM	0.69	135	0.53	105	0.39	76	0.48	95

S2.00-3.20XM MAST SPEEDS (EUROPEAN MODELS) - GM 3.0L ENGINE

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.69	136	0.65	127	0.42	83	0.50	99
S2.25XM	0.69	136	0.64	126	0.42	83	0.50	99
S2.50XM	0.69	136	0.64	125	0.42	83	0.50	99
S2.50-6XM	0.69	136	0.63	124	0.42	83	0.50	99
S2.50-6XMS	0.69	136	0.63	124	0.42	83	0.50	99
S3.00XM	0.60	119	0.55	109	0.42	83	0.50	99
S3.20XM	0.60	119	0.55	108	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.62	122	0.58	115	0.42	83	0.50	99
S2.25XM	0.62	122	0.58	114	0.42	83	0.50	99
S2.50XM	0.62	122	0.57	113	0.42	83	0.50	99
S2.50-6XM	0.62	122	0.57	112	0.42	83	0.50	99
S2.50-6XMS	0.62	122	0.57	112	0.42	83	0.50	99
S3.00XM	0.59	117	0.54	107	0.42	83	0.50	99
S3.20XM	0.59	117	0.54	106	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.66	129	0.61	121	0.42	83	0.50	99
S2.25XM	0.66	129	0.61	120	0.42	83	0.50	99
S2.50XM	0.66	129	0.60	119	0.42	83	0.50	99
S2.50-6XM	0.66	129	0.60	118	0.42	83	0.50	99
S2.50-6XMS	0.66	129	0.60	118	0.42	83	0.50	99
S3.00XM	0.58	115	0.54	106	0.42	83	0.50	99
S3.20XM	0.58	115	0.53	105	0.42	83	0.50	99

GM 3.0L Engine (Gas Only)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.70	137	0.65	128	0.39	76	0.47	92
S2.25XM	0.70	137	0.65	127	0.39	76	0.47	92
S2.50XM	0.70	137	0.64	126	0.39	76	0.47	93
S2.50-6XM	0.70	137	0.63	124	0.39	76	0.47	93
S2.50-6XMS	0.70	137	0.63	124	0.39	76	0.47	93

GM 3.0L Engine (Gas Only)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S3.00XM	0.70	137	0.62	123	0.39	76	0.48	95
S3.20XM	0.70	137	0.62	122	0.39	76	0.48	95

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Limited Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.68	133	0.61	120	0.42	83	0.50	99
S2.25XM	0.68	133	0.60	118	0.42	83	0.50	99
S2.50XM	0.68	133	0.59	117	0.42	83	0.50	99
S2.50-6XM	0.68	133	0.58	115	0.42	83	0.50	99
S2.50-6XMS	0.68	133	0.58	115	0.42	83	0.50	99
S3.00XM	0.59	117	0.52	102	0.42	83	0.50	99
S3.20XM	0.59	117	0.51	101	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Two-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.61	120	0.56	110	0.42	83	0.50	99
S2.25XM	0.61	120	0.55	108	0.42	83	0.50	99
S2.50XM	0.61	120	0.54	107	0.42	83	0.50	99
S2.50-6XM	0.61	120	0.54	106	0.42	83	0.50	99
S2.50-6XMS	0.61	120	0.54	106	0.42	83	0.50	99
S3.00XM	0.58	114	0.51	100	0.42	83	0.50	99
S3.20XM	0.58	114	0.50	99	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Three-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.65	127	0.58	115	0.42	83	0.50	99
S2.25XM	0.65	127	0.58	114	0.42	83	0.50	99
S2.50XM	0.65	127	0.57	112	0.42	83	0.50	99
S2.50-6XM	0.65	127	0.56	111	0.42	83	0.50	99
S2.50-6XMS	0.65	127	0.56	111	0.42	83	0.50	99
S3.00XM	0.57	113	0.50	99	0.42	83	0.50	99
S3.20XM	0.57	113	0.50	98	0.42	83	0.50	99

GM 3.0L Engine (LPG Only)								
Unit	Four-Stage Full Free Lift							
	Lifting				Lowering			
	No Load		Rated Load		No Load		Rated Load	
	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
S2.00XM	0.68	134	0.61	121	0.39	76	0.47	92
S2.25XM	0.68	134	0.60	119	0.39	76	0.47	92
S2.50XM	0.68	134	0.59	117	0.39	76	0.47	93
S2.50-6XM	0.68	134	0.59	116	0.39	76	0.47	93
S2.50-6XMS	0.68	134	0.59	116	0.39	76	0.47	93
S3.00XM	0.68	134	0.58	114	0.39	76	0.48	95
S3.20XM	0.68	134	0.57	112	0.39	76	0.48	95

Torque Specifications

FRAME

Overhead Guard Mount

66 N•m (49 lbf ft)

Operator Compartment Mount

53 N•m (39 lbf ft)

Cowl-to-Overhead Guard Legs

66 N•m (49 lbf ft)

Counterweight

555 N•m (409 lbf ft)

BRAKE SYSTEM

Wheel Cylinder Capscrews

18 to 27 N•m (159 to 239 lbf in)

Back Plate-to-Axle Mount Capscrews

S2.00-3.20XM (S40-65XM) 255 N•m (188 lbf ft)

H2.00-3.20XM (H45-65XM) 225 N•m (166 lbf ft)

MAST

Lift Cylinder Mount Bolts

53 N•m (40 lbf ft)

Mast Pivot Capscrews

90 N•m (66 lbf ft)

STEERING SYSTEM

Axle Mount Capscrews

88 N•m (65 lbf ft)

Steering Cylinder Mount

S2.00-3.20XM (S40-65XM) 121 N•m (89 lbf ft)

H2.00-3.20XM (H45-65XM) 225 N•m (166 lbf ft)

Tie Rods S2.00-3.20XM (S40-65XM) Only

163 N•m (120 lbf ft)

Lower Spindle Cap S2.00-3.20XM (S40-65XM) Only

44 N•m (32 lbf ft)

Kingpin Nut H2.00-3.20XM (H45-65XM) Only

90 N•m (66 lbf ft) initial

34 N•m (25 lbf ft) final

Wheel Bearings

200 N•m (150 lbf ft) initial

34 N•m (25 lbf ft) final

Wheel Nuts H2.00-3.20XM (H45-65XM) Only

Two-Piece Wheels 237 to 305 N•m (175 to 225 lbf ft)

Three-Piece Wheels 155 N•m (115 lbf ft)

DRIVE AXLE

Back Plate-to-Axle Mount Capscrews

S2.00-3.20XM (S40-65XM) 255 N•m (188 lbf ft)

H2.00-3.20XM (H45-65XM) 225 N•m (166 lbf ft)

Axle Mounts S2.00-3.20XM (S40-65XM)

Torque Wrench on Head of Bolt 780 N•m (575 lbf ft)

Torque Wrench on Nut of Bolt 715 N•m (527 lbf ft)

Axle Mounts H2.00-3.20XM (S40-65XM)

Torque Wrench on Head of Bolt 540 N•m (400 lbf ft)

Torque Wrench on Nut of Bolt 473 N•m (350 lbf ft)

Spindle-to-Differential Housing Capscrews

H2.00-3.20XM (H45-65XM) Only 66 N•m (50 lbf ft)

Axle Housings to Differential Housing

S2.00-3.20XM (S40-65XM) Only 90 N•m (66 lbf ft)

Differential Housing to Differential Adaptor Housing

S2.00-3.20XM (S40-65XM) Only 38 N•m (28 lbf ft)

Axle Shaft Capscrews

S2.00-3.20XM (S40-65XM) 90 N•m (66 lbf ft)

H2.00-3.20XM (H45-65XM) 98 N•m (72 lbf ft)

Wheel Nuts

S2.00-3.20XM (S40-65XM) 237 to 305 N•m (175 to 225 lbf ft)

H2.00-3.20XM (H45-65XM) 490 to 510 N•m (361 to 376 lbf ft)

Wheel Bearing Lock Nuts

H2.00-3.20XM (H45-65XM) 205 N•m (150 lbf ft) initial

H2.00-3.20XM (H45-65XM) 35 N•m (25 lbf ft) final

S2.00-3.20XM (S40-65XM) 205 N•m (150 lbf ft) initial

S2.00-3.20XM (S40-65XM) 35 N•m (25 lbf ft) final

S2.00-3.20XM (S40-65XM Newer Models)

68 N•m (50 lbf ft) initial

S2.00-3.20XM (S40-65XM Newer Models)

3 N•m (27 lbf in) final

TRANSMISSION AND DIFFERENTIAL**Control Valve Capscrews**

19 N•m (168 lbf in)

Front Cover Capscrews

38 N•m (28 lbf ft)

Torque Converter Drive Plate Capscrews

S2.00-3.20XM (S40-65XM) 38 N•m (28 lbf ft)

H2.00-3.20XM (H45-65XM) 45 N•m (33 lbf ft)

Torque Converter HousingH2.00-3.20XM (H45-65XM) Only 38 N•m
(28 lbf ft)**Torque Converter Housing-to-Engine
Capscrews**

S2.00-3.20XM (S40-65XM) Only 59 N•m (44 lbf ft)

Transmission Housing-to-Engine Capscrews**H2.00-3.20XM (H45-65XM) Only**

M10 Capscrews 38 N•m (28 lbf ft)

M12 Capscrews 66 N•m (49 lbf ft)

Differential Bearing Lock PlateS2.00-3.20XM (S40-65XM) Only 19 N•m
(168 lbf ft)**Differential Bearing Caps**H2.00-3.20XM (H45-65XM) Only 175 N•m
(129 lbf ft)**Differential Adaptor to Transmission and
to Differential Housing**

S2.00-3.20XM (S40-65XM) Only 38 N•m (28 lbf ft)

Differential CaseH2.00-3.20XM (H45-65XM) Only 71 N•m
(52 lbf ft)**Pinion Nut**

750 N•m (553 lbf ft)

Ring Gear Bolts

S2.00-3.20XM (S40-65XM) 111 N•m (82 lbf ft)

H2.00-3.20XM (H45-65XM) 142 N•m (105 lbf ft)

Thrust Bolt Lock Nut

68 to 95 N•m (50 to 70 lbf ft)

ENGINE - MAZDA M4-2.0G AND M4-2.2G**Camshaft Pulley Lock Bolt**

47 to 65 N•m (35 to 48 lbf ft)

Cooling Fan

8 to 11 N•m (71 to 97 lbf in)

Connecting Rod Cap

65 to 69 N•m (48 to 51 lbf ft)

Crankshaft Pulley

12 to 17 N•m (106 to 150 lbf in)

Cylinder Head (Cold)

80 to 86 N•m (59 to 63 lbf ft)

Engine Mount to Engine

37 to 52 N•m (28 to 38 lbf ft)

Exhaust Manifold

22 to 30 N•m (195 to 266 lbf in)

Flywheel

96 to 103 N•m (71 to 76 lbf ft)

Flywheel Housing

M8 Capscrews 21 to 25 N•m (186 to 221 lbf in)

M14 Capscrews 114 to 136 N•m (84 to 100 lbf ft)

Intake Manifold

19 to 25 N•m (168 to 221 lbf in)

Main Bearing Cap

82 to 88 N•m (60 to 65 lbf ft)

Oil Pan

8 to 11 N•m (71 to 97 lbf in)

Oil Pump

M8 Capscrews 19 to 26 N•m (168 to 230 lbf in)

M10 Capscrews 37 to 52 N•m (27 to 38 lbf ft)

Rocker Cover

6 to 8 N•m (53 to 71 lbf in)

Rocker Shaft Assembly

18 to 26 N•m (159 to 230 lbf in)

Spark Plugs

15 to 23 N•m (133 to 204 lbf in)

Starter

37 to 52 N•m (27 to 38 lbf ft)

Thermostat Cover

19 to 26 N•m (168 to 230 lbf in)

Timing Belt CoverUpper and Lower Capscrews 7 to 10 N•m
(62 to 89 lbf in)**Timing Tension Lock Bolt**

37 to 52 N•m (27 to 38 lbf ft)

Water Pump

19 to 26 N•m (168 to 230 lbf in)

ENGINE - GM 3.0L**Cylinder Head Capscrews**

122 N•m (90 lbf ft)

Main Bearing Capscrews

90 N•m (66 lbf ft)

Connecting Rod Cap Nuts

50 N•m (37 lbf ft)

Crankshaft Pulley Capscrews

44 N•m (32 lbf ft)

Flywheel

107 N•m (79 lbf ft)

Torque Converter Drive Plate

45 N•m (33 lbf ft)

Starter Capscrews

44 N•m (32 lbf ft)

Torque Converter Housing

44 N•m (32 lbf ft)

Fan Capscrews

19 N•m (168 lbf in)

ENGINE - PERKINS 704-26 (UB)**Cylinder Head Capscrews** (See Service Manual)**Rocker Arm Bracket Capscrews**

9 N•m (80 lbf in)

Rocker Arm Bracket Nuts

22 N•m (195 lbf in)

Valve Cover Capnuts

11 N•m (97 lbf in)

Intake Manifold-to-Cylinder Head Capscrews

22 N•m (195 lbf in)

Exhaust Manifold-to-Cylinder Head Nuts

18 N•m (159 lbf in)

Engine Lift Bracket Capscrews

22 N•m (195 lbf in)

Connecting Rod Nuts

54 N•m (40 lbf ft)

Main Bearing Capscrews

147 N•m (108 lbf ft)

Crankshaft Pulley to Crankshaft

185 N•m (136 lbf ft)

Timing Case-to-Engine Block Capscrews (M8)

22 N•m (195 lbf in)

Timing Case-to-Engine Block Capscrews (M10)

44 N•m (32 lbf ft)

Retainer Plate for Fuel Injection**Pump Capscrews**

9 N•m (80 lbf in)

Engine Camshaft Thrust Washer Capscrew

9 N•m (80 lbf in)

Timing Case-to-Blanking Plate Nuts

22 N•m (195 lbf in)

Timing Case-to-Blanking Plate Capscrews (M8)

22 N•m (195 lbf in)

Timing Case-to-Blanking Plate Capscrews (M10)

44 N•m (32 lbf ft)

Oil Sump Plug

34 N•m (25 lbf ft)

Oil Sump Capscrews

22 N•m (195 lbf in)

Oil Pump-to-Timing Case Capscrews

9 N•m (80 lbf in)

Relief Valve Assembly to Timing Case

20 N•m (177 lbf in)

High-Pressure Fuel Line Nuts

22 N•m (195 lbf in)

Fuel Injector Clamp Capscrews

12 N•m (106 lbf in)

Fuel Injectors

39 N•m (29 lbf ft)

Low-Pressure Fuel Line Nuts

20 N•m (177 lbf in)

Fuel Pump Capscrews

22 N•m (195 lbf in)

Fuel Injection Pump Capscrews

22 N•m (195 lbf in)

Fuel Injection Pump Nuts

22 N•m (195 lbf in)

Fuel Drain Screw

12 N•m (106 lbf in)

Maximum Fuel Adjustment Screw Nut

14 N•m (124 lbf in)

Angleigh Unit

18 N•m (159 lbf in)

Governor Assembly to Camshaft Gear

7 N•m (62 lbf in)

Coolant Pump Nuts and Screws

22 N•m (195 lbf in)

Fan and Pulley Capscrews (M8)

22 N•m (195 lbf in)

Fan and Pulley Capscrews (M6)

9 N•m (80 lbf in)

Flywheel-to-Crankshaft Capscrews

100 N•m (71 lbf ft)

Air Breather Capscrews

9 N•m (80 lbf in)

Alternator Pulley Nut

60 N•m (44 lbf ft)

Alternator Bolt and Nut

24 N•m (212 lbf in)

Alternator Adjusting Lever Capscrew

12 N•m (106 lbf in)

Glow Plugs

17 N•m (150 lbf in)

Glow Plug Connections

1.5 N•m (13 lbf in)

NOTES

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