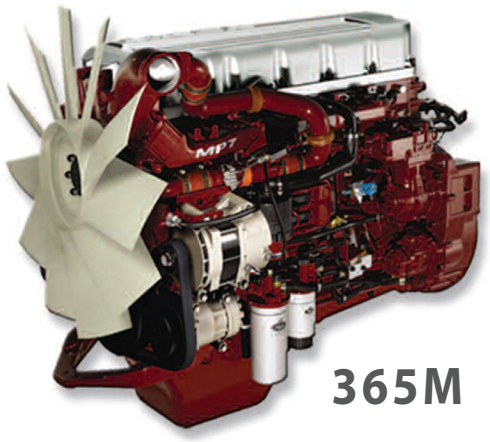
MACK

ClearTech™ MP7 ENGINE

FEATURES

- High Torque MAXIDYNE™ Diesel Engine
- Cooled Exhaust Gas Recirculation (CEGR)
- Maximum Horsepower 365 BHP [272 kW]
- Electronic Unit Fuel Injection with Rate Shaping
- V-MAC IV Total Vehicle Electronics System
- Wide Operating Range 1100-2100 RPM
- Chassis Mounted Charge Air Cooled
- Variable Geometry Turbocharger
- Extended Service Intervals
- MACK PowerLeash Engine Brake



SPECIFICATIONS

Peak HP (kW) @ RPM	365 [272] @ 1500-1900
HP [kW] @ Governed RPM	335 [250] @ 2100
Max. Torque lb. ft. [N•m] @ RPM.	1,340 [1816] @ 1100-1400
Type	Direct Injection Diesel
Number of Cylinders	6, In-Line
Bore & Stroke, in. [mm]	4.84 x 5.98 [123 x 152]
Displacement, in.^{3} [L]	659 [11]
Compression Ratio	16:1
Firing Order	1-5-3-6-2-4
Torque Rise	60%
Clutch Engagement	1,030 lb. ft. [1397 N•m] @ 800 RPM
Idle Speeds:	
Low	Adjustable; 600 RPM
High	2100 RPM
Engine Brake Retarding Power (If Applicable)	420 HP [313 kW] @ 2100 RPM
Weight, Dry: (Approx.)	2,286 lbs. [1 037 kg]

Greenhouse Gas 2014 Certified, OBD 2013 Certified

V-MAC IV® FUNCTIONS

4th Generation **V**ehicle **M**anagement **A**nd **C**ontrol **S**ystem

V-MAC IV PRODUCTIVITY FEATURES:

PTO (4) and Electronic Hand Throttle Control
Engine "Smart Fan Control"
"Smart Idle" Speed Regulator
GuardDog Routine Maintenance Monitoring †

V-MAC IV DRIVER CONVENIENCE FEATURES:

Full Featured Cruise Control
Cruise and Brake Engine Brake Control
Programmable Engine Governor Type
Idle Cooldown
Daytime Running Light (DRL) Override †

V-MAC IV FUEL ECONOMY FEATURES:

Vehicle Speed Limiting
Engine "Sweet Spot Indicator"
Fuel Economy Incentive Program
Idle Shutdown

V-MAC IV RELIABILITY FEATURES:

Engine Protection
Starter Protection
Differential Lock Auto Control

V-MAC IV FLEET MANAGEMENT FEATURES:

DataMax Comprehensive On-Board Data Logger

V-MAC IV SAFETY AND SECURITY FEATURES:

Speed Sensor Tamper Resistance
Theft Deterrence
5th Wheel Slide Unlocked Vehicle Speed Limiting
Air Suspension Deflated Vehicle Speed Limiting

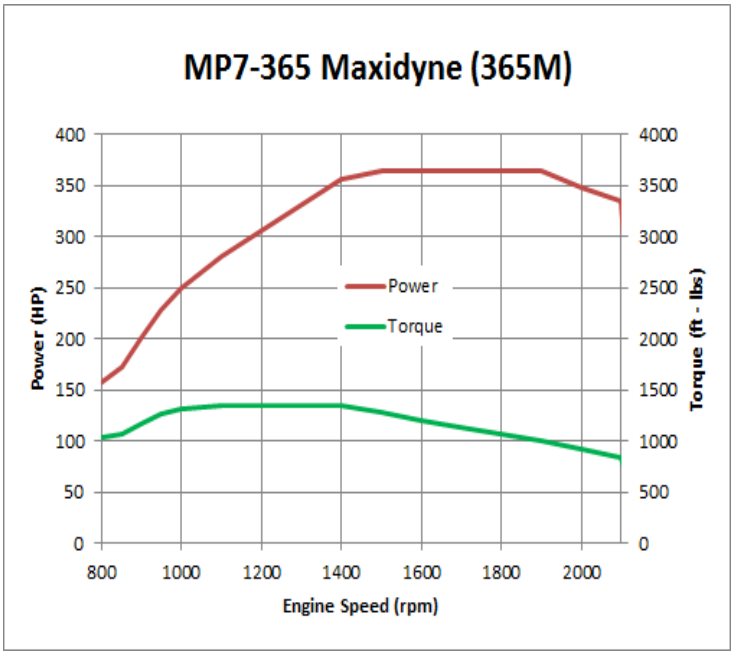
V-MAC IV SERVICEABILITY FEATURES:

SAE J1587 and J1939 Diagnostic Port
Electronic Fault Logging with Fault Reporter
VCADS PC Based Service Software

† Denotes an available option.

ENGINE PERFORMANCE

Maxidyne
In Vocational duty cycle type chassis with Maxidyne, startability and gradability must be considered when determining an optimized engine cruise RPM.



ENGINE SPECIFICATIONS

Flywheel Housing . . . . . .Die cast Aluminum
Cylinder Block:
Material . . . . . Alloyed Grey Cast Iron
Ladder Frame Reinforcement
Cylinder Liners:
Type . . . . . .Full Wet Design
Surface Finish . . . . . Plateau Honed
Cylinder Head Assembly:
Type Grey Cast Iron Slab Head With
Intermediate Deck
Single Overhead Cam
Configuration . . . . . 4 Valves/Cyl., OHV
Valve Type . . . . . Poppet
Valve/Insert Material . . . . . Super Alloy (Serviceable)
Pistons & Rings:
Piston Type . . . . . Monotherm™ Single Piece Steel
w/Closed Cooling Gallery
Pin Diameter . . . . . 2.125" [54 mm]
Rings . . . . . 2 Compression, 1 Oil Control
Crankshaft:
Material . . . . . Forged, Carbon Steel
Heat Treatment . . . . . Induction-Hardened Journals/Fillet
Main Bearing Diameter . . . . . 4.5" [114 mm]
Charge Air Cooling . . . . . Chassis Mounted, Air-To-Air
Fuel System . . . . . Delphi E3 Electronic Unit Injectors
w/2 Solenoid Valve Technology and Rate Shaping
Fuel Supply Pump . . . . . ZF Meritor
Filter . . . . . Spin On, Disposable
Lubrication System:
TypeFull Pressure, Wet Sump
Oil Filters . . . . . 2 Spin-On Full Flow Disposable,
Single Bypass Disposable
Oil Cooler . . . . . Stainless Steel Plate
Total Oil Capacity . . . . . 32 qts. (Incl's. Filters)
Drain Plug . . . . . Magnetic
Cooling System:
Capacity . . . . . 17 qts. [16 L]
Thermostats . . . . . 180°F [82°C]
Hose Material . . . . . Silicone
Air Compressor:
Type Meritor WABCO
Standard Capacity . . . . . 18.7 cfm [8.9L/s]
Turbocharger . . . . . Holset, Sliding Nozzle Ring Variable
Geometry w/Water Cooled Actuator and Bearings
and Electronic Controls
Accessory Belt . . . . . Poly-V w/Automatic Tensioners
EGR System
Single EGR Valve Assembly . . . Modulated Cast Stainless Steel
EGR Cooler . . . . . Stainless Steel Tube
and Insert Gas to Coolant

OIL/FILTER SERVICE INTERVALS

Refer to the latest version of Mack Maintenance & Lubrication Manual TS494.

OPTIONAL EQUIPMENT**

High Capacity Air Compressor
120 and 240 Volt Engine Block Heaters
High Capacity Alternator

** Availability may be chassis model dependent.

GEARING RECOMMENDATIONS

Proper gearing is necessary to achieve optimum vehicle performance and fuel economy. Vehicle specifications, including engine, transmission, axle ratio, and tire selection, should generally be selected to meet the following criteria:

Startability	Highway Applications . . . . . ≥ 10% On-Off Highway Applications . . . . . ≥ 16%
Gradeability	@ Cruise Max. MPH . . . . . ≥ 0.5% @ Peak Torque, Top Gear . . . . . ≥ 1.5%
Cruise RPM	1450 ±50 RPM*

*Cruise RPM = Engine speed in top gear @ Desired Cruise Speed

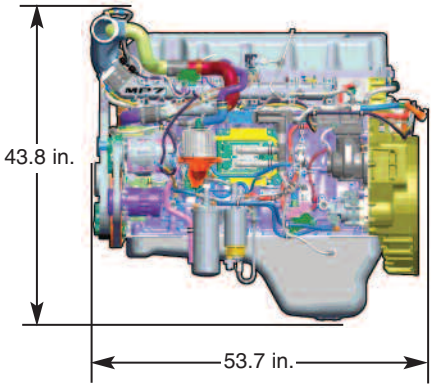
Refer to the MACKTRAQ® electronic sales tool to obtain startability, gradeability and cruise RPM results for specific vehicle specifications. Special service applications, road surfaces, high GCW's or other factors may require different gearing considerations.

DIMENSIONS

Conventional Chassis

(CHU, CXU, GU7 AND GU8 MODELS)

LEFT SIDE VIEW

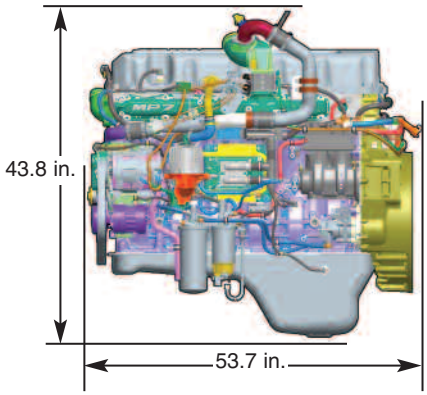


FRONT VIEW

LCF Chassis

(MRU AND LEU MODELS)

LEFT SIDE VIEW



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