

FEATURES

- High Torque MAXIDYNE™ Diesel Engine
- Cooled Exhaust Gas Recirculation (CEGR)
- Maximum Horsepower 405 BHP [302 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	405 [302] @ 1500-1900
HP [kW] @ Governed RPM	370 [276] @ 2100
Max. Torque lb. ft. [N•m] @ RPM	1,480 [2006] @ 1050-1350
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	1,120 lb. ft. [1519 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 Vehicle Management And Control System

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:

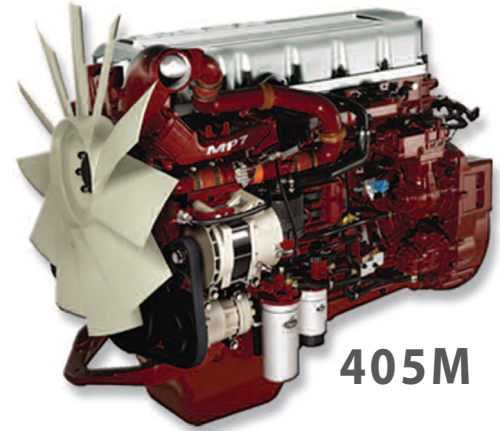
- Vehicle Speed Limiting
- Engine "Sweet Spot Indicator"
- Fuel Economy Incentive Program
- Idle Shutdown

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



405M

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:

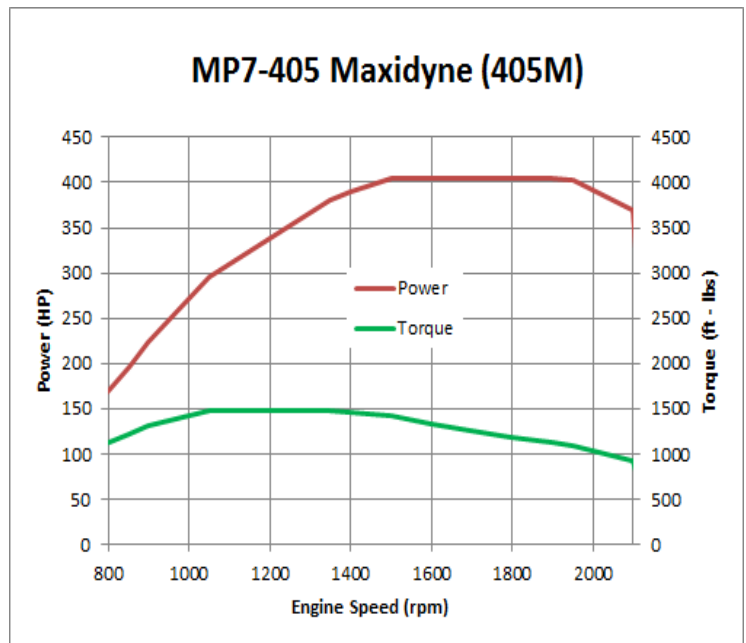
- SAE J1587 and J1939 Diagnostic Port
- Electronic Fault Logging with Fault Reporter
- VCADS PC Based Service Software

† 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:
 Type Full 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

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*

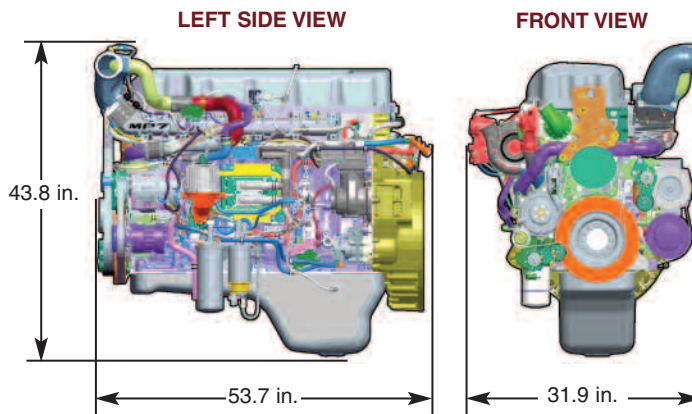
*Cruise RPM = Engine speed in top gear @ Desired Cruise Speed

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

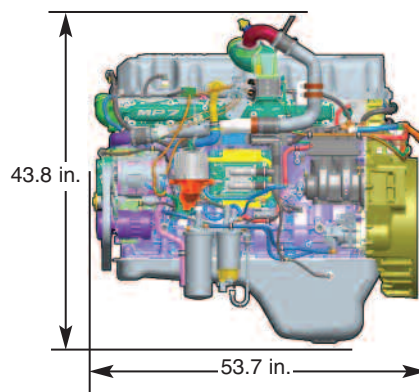
(CHU, CXU, GU7 AND GU8 MODELS)



LCF Chassis

(MRU AND LEU MODELS)

LEFT SIDE VIEW



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.

