



# SED

PRODUCT INFORMATION

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## Sales Engineering

Mack Trucks, Inc.  
Allentown, PA 18103  
United States

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MackTrucks.com

**PID Code/Condition:** 100-1762  
**Description:** Mack MP7-425E US17  
**Date:** March 1, 2017



## FEATURES:

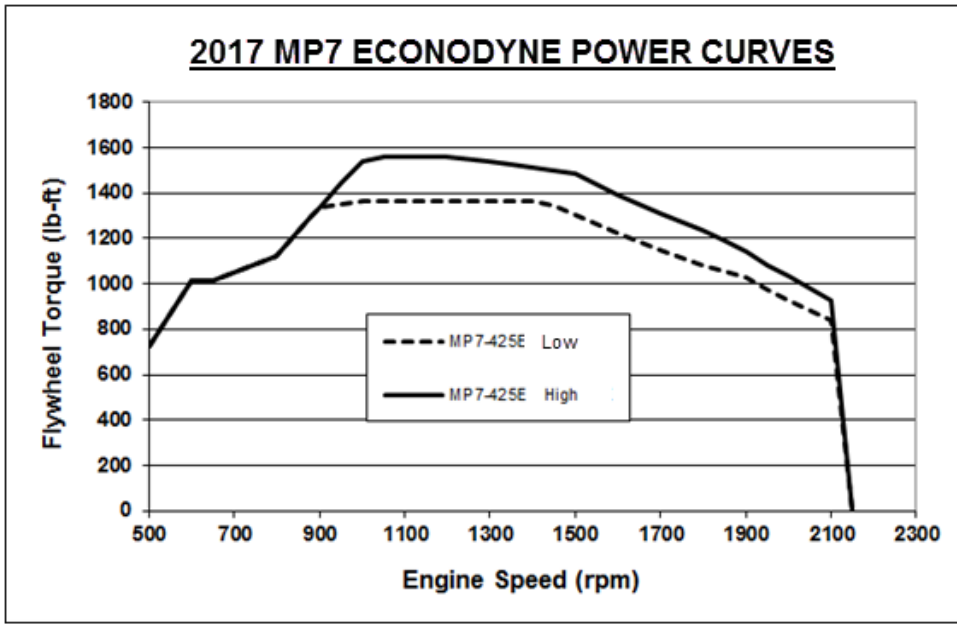
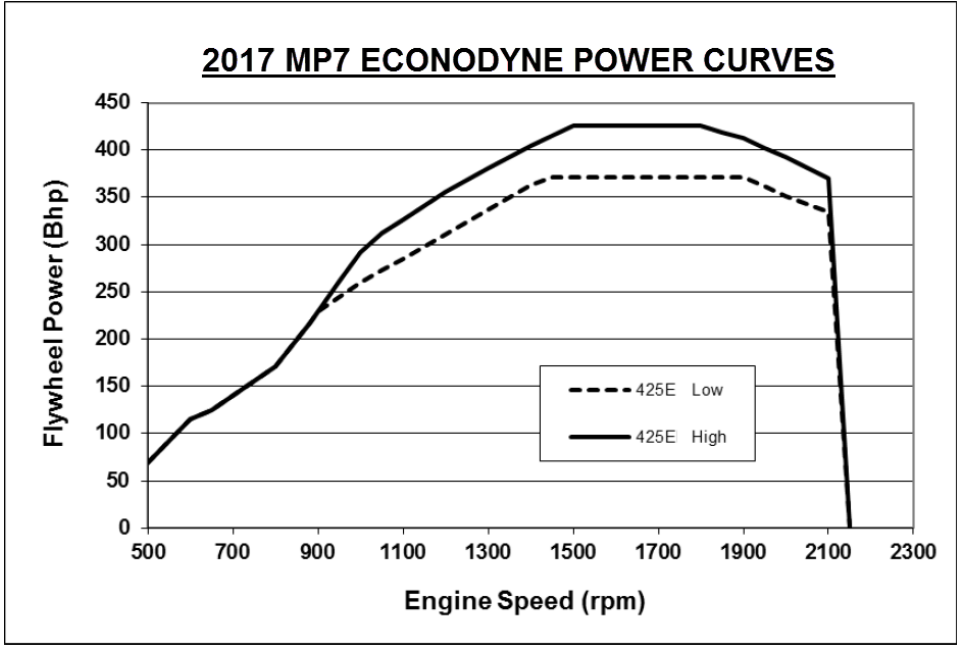
- High Torque ECONODYNE Diesel Engine
- Maximum Horsepower 425 BHP [317 kW]
- Electronic Common Rail Fuel Injection
- V-MAC IV Total Vehicle Electronics System
- Wide Operating Range 600 – 2100 RPM
- Variable Geometry Turbocharger
- Extended Service Intervals
- MACK PowerLeash Engine Brake

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## SPECIFICATIONS:

Peak HP [kW] @ RPM High Curve . . . . .	425 [317] @ 1500 – 1800
Peak HP [kW] @ RPM Standard Curve . . . . .	371 [277] @ 1450 – 1900
HP [kW] @ Governed RPM . High Curve . . . . .	370 [276] @ 2100
HP [kW] @ Governed RPM . Standard Curve . . . . .	335 [250] @ 2100
Max. Torque lb. ft. [Nm] @ RPM High Curve . . . . .	1560 [2115] @ 1050 - 1200
Max. Torque lb. ft. [Nm] @ RPM Std. Curve . . . . .	1360 [1844] @ 1000 - 1400
Type . . . . .	Direct Injection Diesel
Number of Cylinders . . . . .	6, In-Line
Bore & Stroke, inches [mm] . . . . .	4.84 X 5.98 [123 X 152]
Displacement, cubic inches [L] . . . . .	659 [11]
Compression Ratio . . . . .	16:1
Firing Order . . . . .	1 - 5 - 3 - 6 - 2 - 4
Torque Rise . . . . .	60%
Clutch Engagement . lb. ft. [Nm] @ RPM . . . . .	1121 [1520] @ 800
Idle Speeds:	
Low . . . . .	Adjustable, 600 RPM
High . . . . .	2100 RPM
Engine Brake Retarding Power[If Applicable] . . . . .	420 HP [313 kW] @ 2100 RPM
Weight, Dry [Approximate] lbs. [kg] . . . . .	2207 [1001]
Flywheel Housing . . . . .	Die Cast Aluminum
Cylinder Block . . . . .	Alloyed Grey Cast Iron with Ladder Frame Reinforcement
Cylinder Liners . . . . .	Full Wet Design, Plateau Honed
Cylinder Head Assembly:	
Type . . . . .	Grey Cast Iron Slab Head with Intermediate Deck
Configuration . . . . .	Single Overhead Cam, 4 valves per Cylinder
Valve Type . . . . .	Poppet
Valve Insert Material . . . . .	Super Alloy [Serviceable]
Piston and Rings:	
Piston Type - Monotherm Single Piece Steel with Closed Cooling Gallery	
Pin Diameter, inches [mm] . . . . .	2.125 [55]
Rings . . . . .	2 Compression, 1 Oil Control
Crankshaft:	
Material . . . . .	Forged, Carbon Steel
Heat Treatment . . . . .	Induction Hardened Journals/Fillet
Main Bearing Diameter inches [mm] . . . . .	4.5 [114]
Charge Air Cooling . . . . .	Chassis Mounted, Air – To – Air
Fuel System . . . . .	High Pressure F2 Common Rail
Fuel Supply Pump . . . . .	.ZF Meritor
Fuel Filter . . . . .	Spin On, Disposable

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### 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 Quarts, Includes Filters
- Drain Plug . . . . . Magnetic

### Cooling System:

- Capacity Quarts [L] . . . . . 17 [16]
- Thermostats . . . . . 180 Degrees F, 82 Degrees C
- Hose Material . . . . . Mack Brand EPDM

### Air Compressor:

- Type . . . . . Meritor/WABCO
- Standard Capacity:
- GU7, & GU8 . . . . . 18.7 cfm [8.9L/s]
- MRU, LR . . . . . 37.4 cfm [17.8L/s]

Turbocharger Holset, Sliding Nozzle Ring variable Geometry with Water Cooled Actuator and Bearings, and Electronic Controls

Accessory Belt . . . . . Poly – V with 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 the Mack Maintenance and Lubrication Manual

## OPTIONAL EQUIPMENT:

- High Capacity Air Compressor
- 120 Volt and 240 Volt Engine Block Heater
- Oil Pan Heater
- Oil Change System
- High Capacity Alternator
- Heavy Duty Air Cleaner [Model Specific]

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## V-MAC IV FUNCTIONS:

4<sup>TH</sup> Generation **V**ehicle **M**anagement **A**nd **C**ontrol 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
- 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 SAFETY AND SECURITY FEATURES:**

- Tamper Resistant Speed Sensor
- Theft Deterrence
- 5<sup>th</sup> Wheel Slide Unlock 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
- OBD II Style Diagnostic Connector
- DataMax Comprehensive On-Board Data Logger

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## GEARING RECOMMENDATIONS:

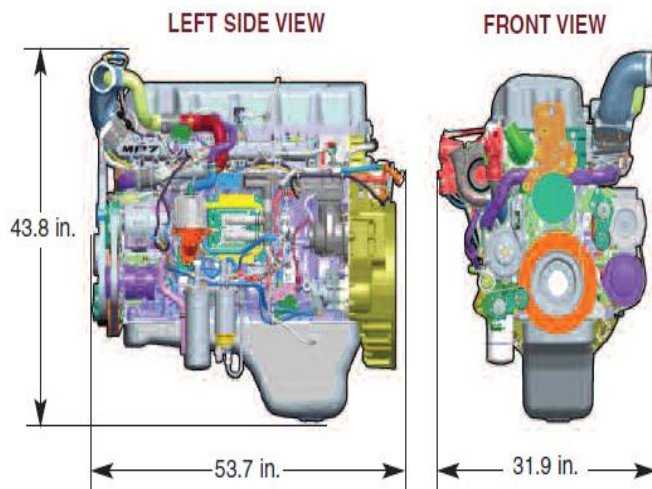
Proper Gearing is necessary to achieve optimum vehicle performance and fuel economy. Vehicle specifications, including engine, transmission, axle ratio, and tire selection should generally be selected to meet the following criteria:

<b>Startability</b>	Highway Applications . . . . .	≥ 10%
	On-Off Highway Applications . . . . .	≥ 16%
<b>Gradeability</b>	@ Cruise Max. MPH . . . . .	≥ 0.5%
	@ Peak Torque, Top Gear . . . . .	≥ 1.5%
<b>Cruise RPM</b>		<b>1275-1375</b>

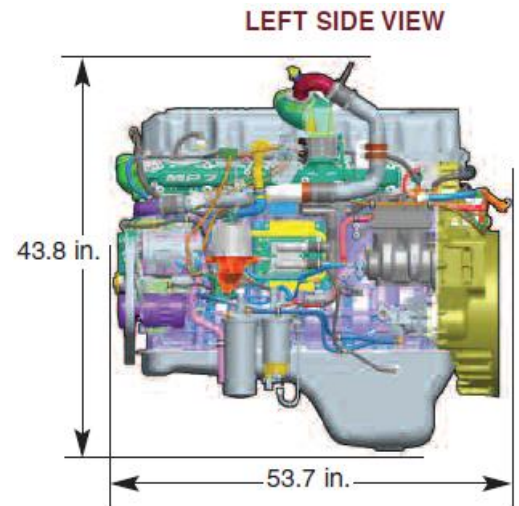
Refer to your current sales tool to obtain startability, gradeability and cruise RPM results for each unique vehicle specification. Special service applications, road surfaces, high Gross Combination Weights or other factors may require different gearing considerations.

## DIMENSIONS:

Conventional Chassis



Low Cab Forward Chassis



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