



# DETROIT<sup>™</sup> DD13<sup>®</sup>

## TECHNICAL SPECIFICATIONS

**JUST RIGHT. SIMPLY AWESOME.** THE DETROIT<sup>™</sup> DD13<sup>®</sup> ENGINE PROVIDES THE RIGHT AMOUNT OF POWER AND TORQUE TO YOUR BOTTOM LINE.

Designed specifically for intrastate local distribution and vocational applications, the DD13 delivers a smooth, quiet ride and improved fuel economy.

### PERFORMANCE

- Meet your deadline every time
  - Enjoy less shifting with an extremely wide and flat torque curve
  - Three-stage integrated Jacobs<sup>®</sup> engine brake offers quieter engine braking and provides superior braking horsepower for extended service brake life
  - Overall robust design provides B50 life of 1.5 million kilometres
  - Sturdy rear gear train and ribbed cast-iron block minimise noise vibration harshness (NVH)
  - Proven asymmetric turbocharger—now built in Detroit—is optimally matched to updated Exhaust Gas Recirculation (EGR) system for improved efficiency

### SERVICEABILITY

- Lower your cost of ownership with easier serviceability
  - Longest scheduled maintenance intervals in its class
  - Oil and fuel filters are positioned above the frame rails for easier, faster, and cleaner filter changes

- Maintenance-free crankcase breather
- Detroit<sup>™</sup> Connect Virtual Technician<sup>SM</sup> remote diagnostic service helps you maximise uptime

### ECONOMY

- Smart, fuel-efficient design makes the most of every tank
  - Improved fuel economy
  - Pulls strong down below 1000 RPM so drivers can spend more time in top gear
  - 2nd Generation Amplified Common Rail System (ACRS<sup>™</sup>) optimises each injection event to minimise fuel consumption
  - Advanced cooling system allows for decreased fan on time, minimising fuel consumption
  - Available variable-speed water pump reduces load on the engine
  - Fuel injector improvements for improved combustion control
- Usable power and torque reached at lower engine speeds, helping to reduce friction and improving fuel efficiency

### COMPLIANCE

- The DD13 is compliant with 2017 Greenhouse Gas (GHG17) requirements

### DD13 SPECIFICATIONS

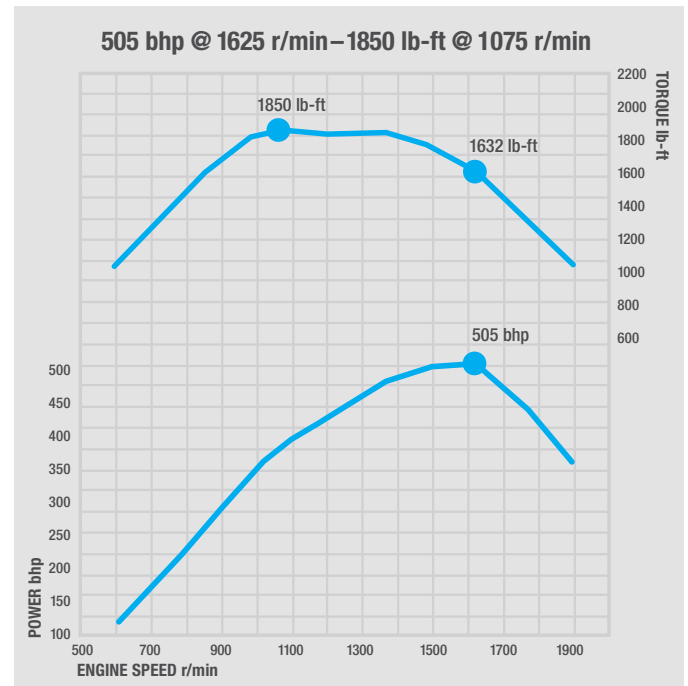
Configuration .....	Inline 6 Cylinder
Displacement .....	781 cu. in. (12.8 L)
Compression Ratio .....	18.4:1
Bore .....	5.20 in. (132 mm)
Stroke .....	6.15 in. (156 mm)
Weight (Dry) .....	2487 lb. (1128 kg)
Electronics .....	DDEC <sup>®</sup>
Service Fill (Oil & Filter Change) ..	40 qt. (38 L)
Horsepower Range .....	450-505
Torque Range .....	1650-1850 lb-ft



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### Horsepower and Torque Curve



### Maintenance Intervals\*†

Component	Severe, Short-Haul and Dusty Conditions	B-Double or Single Trailer	Multi-Trailer
Engine Oil and Engine Oil Filter	30,000 km or 480 hrs	80,000 km or 1,280 hrs	60,000 km or 960 hrs
Engine Fuel Filter	60,000 km or 960 hrs	160,000 km or 2,560 hrs	120,000 km or 1,920 hrs
Frame Mounted Fuel / Water Filter	30,000 km or 480 hrs	80,000 km or 1,280 hrs	60,000 km or 960 hrs
Valve Lash Adjustment	Initial valve lash set at 320,000 km and then every 320,000 km thereafter		
Coolant Change - ELC	450,000 km	960,000 km	900,000 km
Diesel Particulate Filter*	A check engine light will illuminate when ash requires removal. Normal DPF ash clean interval is approximately 600,000 km or 8,250 hours		
DEF Filter	225,000 km	480,000 km	450,000 km

\* Maintenance intervals using Using DFS 93K222(CK-4) Approved Oils that also Meet MB 228.51 or MB 228.31 Using Ultra Low Sulfur Diesel (ULSD) Fuel.

Severe, Short-Haul and Dusty Conditions: Vehicles that operate under normal conditions and travel less than 100,000 km annually in metropolitan areas with infrequent freeway travel, or stop-and-go travel.  
B-Double or Single Trailer: With one or more trailers to be pulled on sealed roads 100% of its operation and annually travels more than 100,000 km up to 62.5t GCM.

Multi-Trailer: Applies to multi-trailer general freight operation vehicles that operate 100% on sealed roads and annually travel more than 100,000 km from ≥ 62.5t up to ≤ 90t GCM.

Heavy Multi-Trailer: Applies to multi-trailer general freight operation vehicles that operate 100% on sealed roads and annually travel more than 100,000 km ≥ 90t GCM.

† Kilometres or Hours, whichever occurs first.

For further maintenance interval information, please refer to the Freightliner Cascadia Supplementary Maintenance Manual.

### Power Ratings

DD13 Engine Power Ratings	
450 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
470 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
505 HP @ 1625 RPM	1850 lb-ft @ 975 RPM

### Standard Warranty

Classification	On Highway (Vehicles <110T GCM)	On Highway (Vehicles >110T GCM)
Engine	48 months / 800,000 kms / 400,000 ltrs of fuel /12,000 hrs*	48 months / 800,000 kms / 400,000 ltrs of fuel /12,000 hrs*

\* Whichever occurs first.

For further information, please refer to the Terms and Conditions in the New Cascadia Owner's Warranty Information.



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