

# DETROIT<sup>™</sup> DD16<sup>®</sup>

## TECHNICAL SPECIFICATIONS

**WHEN YOUR RIG NEEDS BIG.** THE DETROIT<sup>™</sup> DD16<sup>®</sup> ENGINE DELIVERS STRENGTH AND EFFICIENCY ON THE ROAD OR ON THE JOB SITE.

Detroit offers a big-bore workhorse with up to 600 horsepower and 2050 lb-ft of torque, delivering more efficient and dependable power and performance. Beyond performance, Detroit engineers have been able to meet GHG17 requirements while improving fuel economy.

### PERFORMANCE

- The 2nd generation ACRS<sup>™</sup> fuel system, with higher injector pressure, improves performance and fuel economy
  - Precise fuel delivery for extremely quiet, smooth combustion and to meet stringent emissions-control requirements
  - Variable injection patterns for optimal fuel economy across all modes of engine operation
  - Final high-pressure amplification is isolated in the injector, not in the rail or fuel lines, which results in less stress on components
- Exceptional torque response leads to superior launch feel and acceleration
- Outstanding gradeability
  - Flattens steep grades and mountain roads with greater speeds and pulling power
- Turbo-compounding system recovers normally wasted exhaust gases and turns them into usable power without sacrificing fuel economy
- Integrated Jacobs<sup>®</sup> Engine Brake
  - Offers three levels of quieter engine braking for enhanced downhill control
  - Reduces wear on service brakes, tires, and other components

### POWER

- 15.6 L displacement is the largest engine built by Detroit
- 600 HP/2050 lb-ft rating available to pull the most extreme loads
- Wide, flat torque curve pulls strong all the way down below 1000 RPM

### SERVICEABILITY

- Above the frame rail, cartridge-style filters for easier, faster, and cleaner filter changes
- Unmatched parts availability and expert service at Detroit's best-performing service network

### COMPLIANCE

- The DD16 is compliant with 2017 Greenhouse Gas (GHG17) requirements

### DD16 SPECIFICATIONS

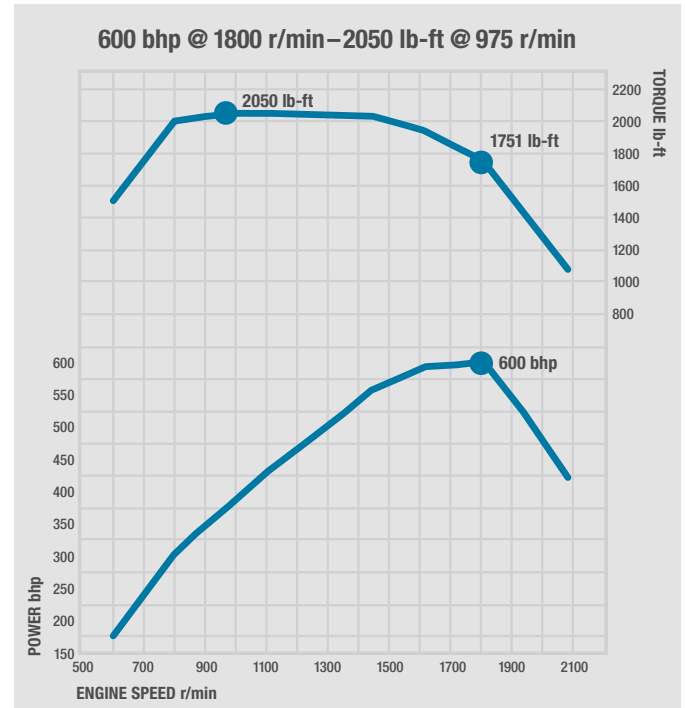
Configuration .....	Inline 6 Cylinder
Displacement .....	952 cu. in. (15.6 L)
Compression Ratio .....	17:1
Bore .....	5.47 in. (139 mm)
Stroke .....	6.73 in. (171 mm)
Weight (Dry) .....	2837 lb. (1287 kg)
Electronics .....	DDEC <sup>®</sup>
Service Fill (Oil & Filter Change) ..	45 qt. (43 L)
Horsepower Range .....	500-600
Torque Range .....	1850-2050 lb-ft



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DEMAND PERFORMANCE<sup>™</sup>



### Horsepower and Torque Curve



### Maintenance Intervals\*†

Component	Severe, Short-Haul and Dusty Conditions	B-Double or Single Trailer	Multi-Trailer	Heavy 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	50,000 km or 800 hrs
Engine Fuel Filter	60,000 km or 960 hrs	160,000 km or 2,560 hrs	120,000 km or 1,920 hrs	100,000 km or 1,600 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	50,000 km or 800 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	750,000 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	375,000 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

DD16 Engine Power Ratings	
500 HP @ 1800 RPM	1850 lb-ft @ 975 RPM
530 HP @ 1800 RPM	1850 lb-ft @ 975 RPM
560 HP @ 1800 RPM	1850 lb-ft @ 975 RPM
560 HP @ 1800 RPM	2050 lb-ft @ 975 RPM
600 HP @ 1800 RPM	1850 lb-ft @ 975 RPM
600 HP @ 1800 RPM	2050 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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