

# 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

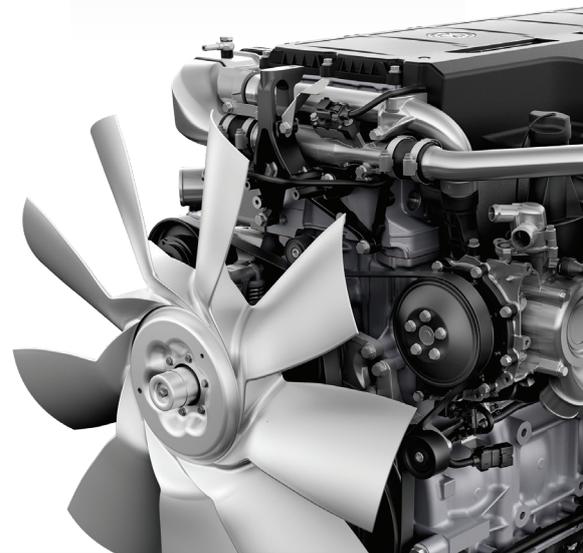
- Above the frame rail, cartridge-style filters for easier, faster, and cleaner filter changes
- Unmatched parts availability and expert service at Detroit's best-performing service network

### COMPLIANCE

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

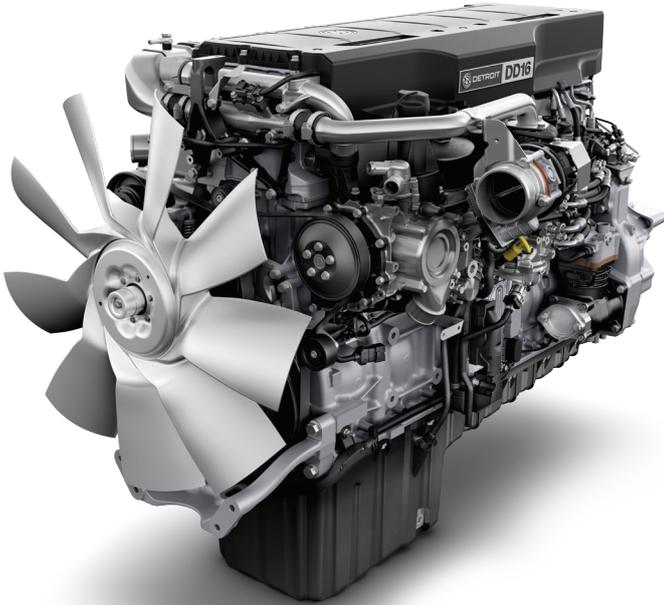
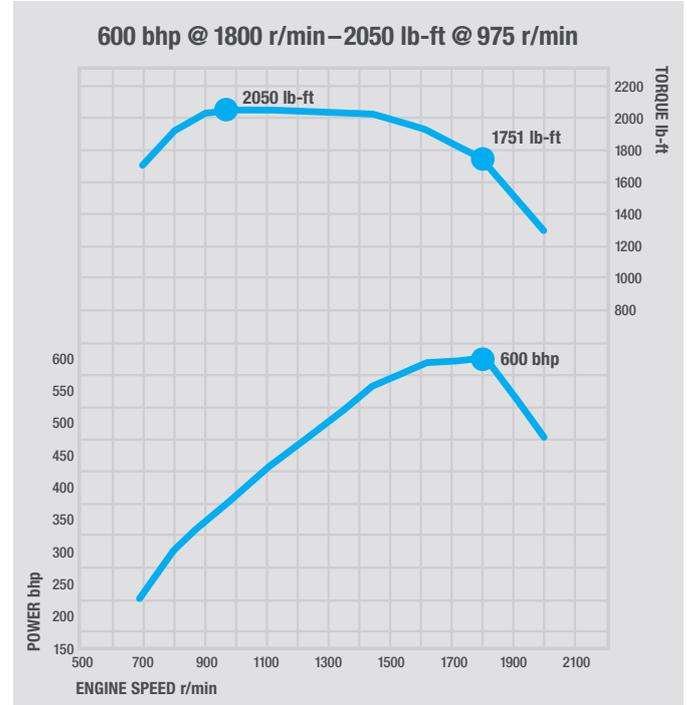
### DD16 SPECIFICATIONS

|                                       |                      |
|---------------------------------------|----------------------|
| 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      |



**DETROIT<sup>™</sup>**  
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              |

### 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.

\* 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.



**DETROIT**  
DEMAND PERFORMANCE™