

WESTERN STAR TRUCKS

DETROIT DD16

TECHNICAL SPECIFICATIONS

EFFICIENCY AND PERFORMANCE. THAT'S WHAT DETROIT ENGINES DELIVER. OPTIMISED FOR YOUR BOTTOM LINE, DETROIT ENGINES ARE DESIGNED FOR MAXIMUM PRODUCTIVITY.

Detroit's DD16 delivers all the power you need. With up to 600 horsepower and 2,050 lb-ft of torque, the big bore workhorse provides efficient and dependable power and performance in your Western Star. Detroit's advanced technology also means GHG21 requirements are met through innovative fuel efficiency resulting in lower emissions. With Detroit, there's no compromise.

PERFORMANCE

- The second generation amplified common rail system (ACRS™) fuel system, with higher injector pressure, improves performance and fuel economy
- Precise fuel delivery for extremely quiet and smooth combustion whilst meeting 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 with greater speeds and pulling power
- Turbo-compounding system recovers normally wasted exhaust gases and turns them into usable power without sacrificing fuel economy

- Three-stage integrated Jacobs engine brake offers quieter engine braking and superior braking horsepower for extended service brake life

POWER

- 15.6L displacement is the largest engine currently built by Detroit
- 600 hp, 2,050 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 through Detroit's renowned distributor and dealer service network
- Detroit™ Connect Virtual TechnicianSM remote diagnostic service helps you maximise uptime

ECONOMY

- Smart, fuel-efficient design makes the most of every litre
- Fuel injector designed for advanced combustion control
- Pulls strong down below 1000 RPM so drivers can spend more time in top gear
- Second generation amplified common rail system (ACRS™) optimises each injection event to minimise fuel consumption
- Advanced cooling system allows for decreased fan on time, minimising fuel consumption
- Usable power and torque reached at lower engine speeds, helping to reduce friction and improving fuel efficiency

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®
Service Fill (Oil & Filter Change).....	45 qt. (43 L)
Horsepower Range	500 – 600 hp
Torque Range.....	1,850 – 2,050 lb-ft

DETROIT. NO COMPROMISE.

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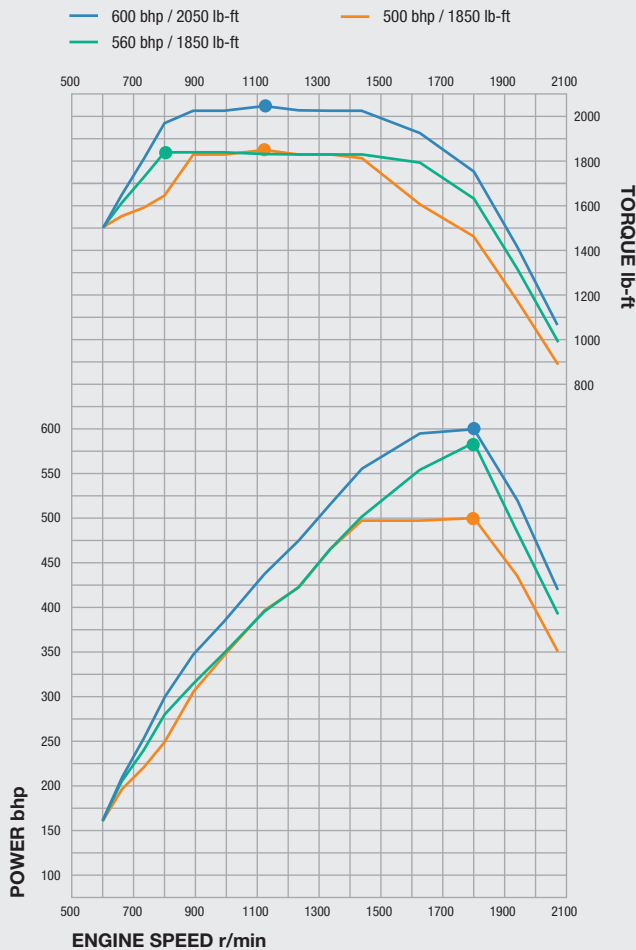
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DETROIT™



DD16 PERFORMANCE CURVE



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

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) or DFS93K223 (FA-4) Approved Oils 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.

STANDARD WARRANTY

Item	Warranty Limits (Whichever Occurs First)		Repair Charge (Paid by Owner)	
	Months	Kilometres	Parts	Labour
Engine	0-24	Unlimited	No charge	No charge
Injectors	0-24	320,000 km	No charge	No charge
Upon expiration of the 24-month warranty coverage, but within 800,000 km of use, the warranty continues to apply as follows:				
Major Components	25-60	800,000 km	No charge	Not covered

* Refer to standard warranty parchment.

EXTENDED COVERAGE

Agreement Limitation		Adjustment Charge	
Years	Kilometres	Parts	Labour
4	800,000 km*	No Charge	No Charge

*Fuel Burn and Engine Hours limits apply. The engine must be maintained in accordance with Detroit operator's guide. For complete details and customer obligations please refer to EW4 Agreement.

All data is correct at the time of printing.