

DETROIT[™] DD13[®]

TECHNICAL SPECIFICATIONS

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

Perfectly suited for intrastate and vocational applications, Detroit's DD13 engine will deliver a smooth and quiet ride in your Freightliner Cascadia 116 with exceptional fuel economy. And boasting superior service intervals and an easily serviceable design, the Detroit DD13 increases your uptime, lowering your overall cost of ownership. With Detroit, there's no compromise.

PERFORMANCE

- Meet your deadline every time
- An extremely wide and flat torque curve means less shifting
- Three-stage integrated Jacobs engine brake offers quieter engine braking and superior braking horsepower for extended service brake life
- Sturdy rear gear train and ribbed cast-iron block minimise noise vibration harshness (NVH)
- Proven asymmetric turbocharger optimally matched to refined exhaust gas recirculation (EGR) system with improved flow for better efficiency

SERVICEABILITY

- Lower your cost of ownership with easier serviceability
- Superior scheduled maintenance intervals and extended coverage warranty package across a broad range of applications

- Oil and fuel filters are positioned above the frame rails for easier, faster, and cleaner filter changes
- Maintenance-free crankcase breather
- 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
- Improved fuel economy
- 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

- Available variable speed water pump reduces load on the engine
- Fuel injector designed for advanced combustion control
- Usable power and torque reached at lower engine speeds, helping to reduce friction and improving fuel efficiency

COMPLIANCE

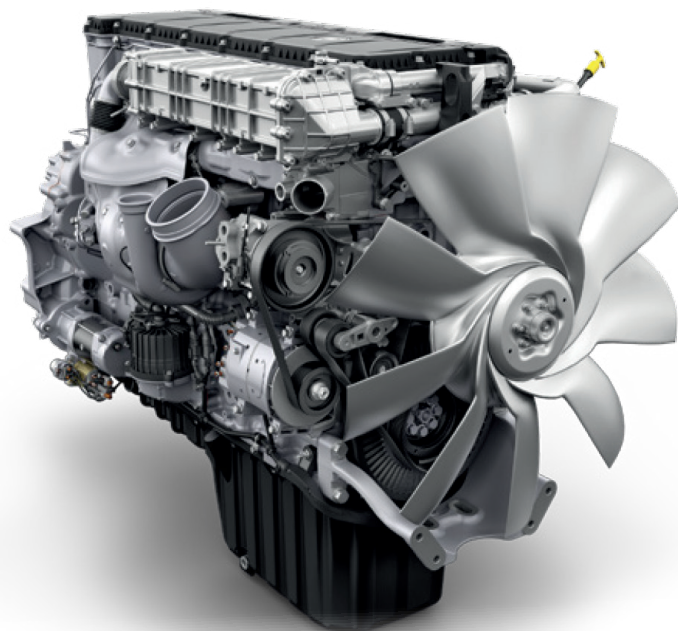
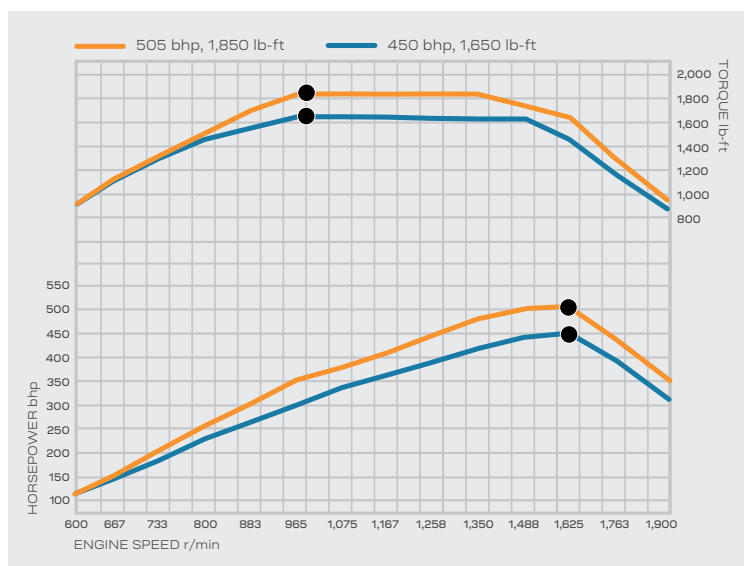
- The cleanest engine in the Australian market, the DD13 is compliant with 2017 Greenhouse Gas (GHG17) requirements

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®
Service Fill (Oil & Filter Change).....	40 qt. (38 L)
Horsepower Range	450-505
Torque Range.....	1,650-1,850 lb-ft



Horsepower and Torque Curves



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.

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

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 500,000 mi / 800,000 km of use, the warranty continues to apply as follows:				
Major Components	25-60	800,000 km	No charge	Not covered

Extended Coverage

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

* Fuel Burn and Engine Hours. 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.

