



DETROIT™ DD5™

TECHNICAL SPECIFICATIONS

THE DETROIT™ DD5™ ENGINE THE MOST ADVANCED ENGINE TECHNOLOGIES ENGINEERED TODAY.

This next-generation medium duty engine delivers unsurpassed efficiency with exceptional endurance. All while achieving the longest maintenance intervals in the industry for maximum uptime.

PERFORMANCE

- Meet your deadline every time
 - Sturdy rear gear train and ribbed cast iron block minimizes noise vibration harshness (NVH)
 - Simple fixed-geometry dual-stage turbo provides performance, efficiency, and reliability
 - Robust design provides B10 life of 400,000 miles
 - Integrated engine brake option provides superior braking horsepower and extended service brake life

POWER

- Usable power and torque reached at lower engine speeds—ideal for the demands of today's medium duty truck operations

COMPLIANCE

- The DD5 is compliant with 2017 Greenhouse Gas (GHG17) requirements
- 2016 On-Board Diagnostics certified

ECONOMY

- Smart, fuel-efficient design makes the most of every gallon
 - Advanced common rail fuel pressure system optimizes each injection event to minimize fuel consumption
 - Piston and cylinder design reduce friction and provide optimal combustion
 - Variable cam phasing technology for improved aftertreatment system performance
 - Variable-speed fan and advanced cooling reduce fan on time, contributing to lower fuel consumption

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™ Connect Virtual Technician™ remote diagnostic service helps you maximize uptime

DD5 SPECIFICATIONS

Configuration	..... Inline 4 Cylinder
Displacement	..... 313 cu in (5.1 L)
Compression Ratio	..... 17.6:1
Bore	..... 4.33 in (110 mm)
Stroke	..... 5.3 in (135 mm)
Weight (Dry)	..... 1188 lb (539 kg)
Electronics	..... DDEC®
Service Fill (Oil & Filter Change)	.. 18 qt (17.5 L)
Horsepower Range	..... 210-230
Torque Range	..... 575-660



Maintenance Intervals

Item	Mi / km	Severe Duty	Short-Haul	Long-Haul
Engine Oil and Filter Change*	Miles	35,000	45,000	50,000
	Kilometers	56,000	73,000	80,000
Fuel Filter Change	Miles	35,000	45,000	50,000
	Kilometers	56,000	73,000	80,000
Valve Lash Adjustment	Miles	Adjust at every 90,000 or 4 years, whichever comes first.		
	Kilometers	Adjust at every 145,000 or 4 years, whichever comes first.		
Diesel Particulate Filter**	A check-engine light will illuminate when ash requires removal.			
	Miles	200,000		
	Kilometers	321,000		
DEF Pump Filter	Replace filter every 3 years or 300,000 (480,000 km) miles, whichever comes first.			

*Recommended based on using Detroit's lube oil and oil analysis program. Severe duty is up to 35,000 annual miles and a vehicle that averages less than 10 miles per gallon (mpg). Short-haul is between 35,000 and 45,000 annual miles and a vehicle that averages between 10.1 and 11.9 mpg. Long-haul is over 60,000 annual miles and a vehicle that averages greater than 12 mpg.

**Duty cycle dependent

Power Ratings

DD5 Engine Power Ratings	
210 HP @ 2200 RPM	575 lb-ft @ 1400 RPM
230 HP @ 2200 RPM	660 lb-ft @ 1400 RPM

Standard Warranty

Item	Warranty Limits (Whichever Occurs First)		Repair Charge (Paid by Owner)	
	Months	Miles / Kilometers	Parts	Labor
Engine	0-36	250,000 mi 400,000 km	No charge	No charge



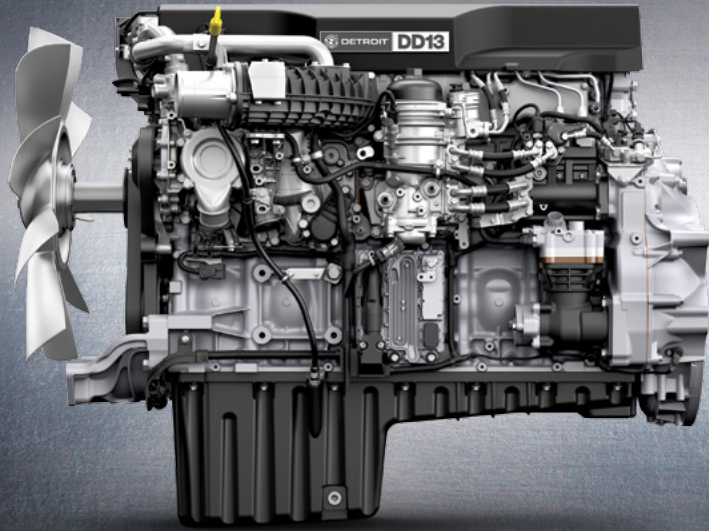
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DETROIT™
DEMAND PERFORMANCE™



DETROITTM DD13[®]

TECHNICAL SPECIFICATIONS

JUST RIGHT. SIMPLY AWESOME. THE DETROITTM DD13[®] ENGINE PROVIDES THE RIGHT AMOUNT OF POWER AND TORQUE TO YOUR BOTTOM LINE.

Designed specifically for less-than-truckload, regional distribution, and vocational applications, the Detroit DD13 engine delivers a smooth, quiet ride and outstanding fuel economy.

PERFORMANCE

- Meet your deadline every time
 - Enjoy less shifting with an extremely wide and flat torque curve
 - Three-stage integrated Jacobs[®] engine brake offers quieter engine braking and provides superior braking horsepower for extended service brake life
 - Overall robust design provides B50 life of 1 million miles
 - Sturdy rear gear train and ribbed cast-iron block minimize noise vibration harshness (NVH)
 - Proven asymmetric turbocharger—now built in Detroit—is optimally matched to updated Exhaust Gas Recirculation (EGR) system for improved efficiency
- Rear Powertrain Take-Off (PTO) availability for vocational applications

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
- DetroitTM Connect Virtual TechnicianSM remote diagnostic service helps you maximize uptime

ECONOMY

- Smart, fuel-efficient design makes the most of every gallon
 - Improved fuel economy
 - Pulls strong down below 1000 RPM so drivers can spend more time in top gear
 - 2nd Generation Amplified Common Rail System (ACRSTM) optimizes each injection event to minimize fuel consumption
 - Advanced cooling system allows for decreased fan on time, minimizing 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

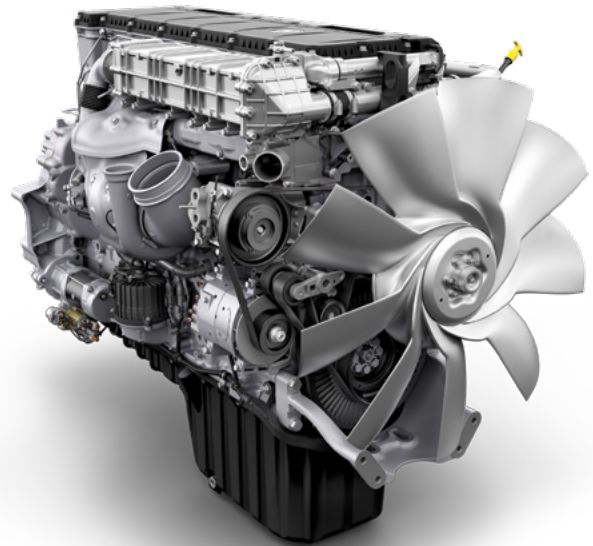
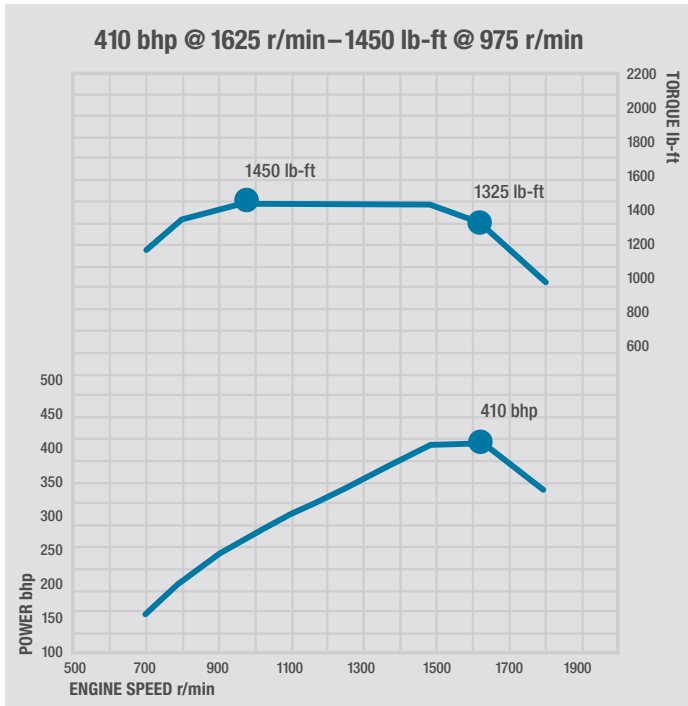
- The DD13 is compliant with 2017 Greenhouse Gas (GHG17) requirements

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 [®]
Service Fill (Oil & Filter Change).....	40 qt. (38 L)
Horsepower Range	350-505
Torque Range	1250-1850 lb-ft
Rear-Engine Power Take-Off.....	Optional



Horsepower and Torque Curve



Power Ratings

DD13 Engine Power Ratings	
350 HP @ 1625 RPM	1350 lb-ft @ 975 RPM
370 HP @ 1625 RPM	1250 lb-ft @ 975 RPM
380 HP @ 1625 RPM	1450 lb-ft @ 975 RPM
400 HP @ 1625 RPM*	1750 lb-ft @ 975 RPM*
410 HP @ 1625 RPM	1450 lb-ft @ 975 RPM
410 HP @ 1625 RPM	1550 lb-ft @ 975 RPM
410 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
435 HP @ 1625 RPM	1550 lb-ft @ 975 RPM
450 HP @ 1625 RPM	1550 lb-ft @ 975 RPM
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
DD13 Engine Multi-Torque Power Ratings	
410 HP @ 1625 RPM	1450/1650 lb-ft @ 975 RPM

*Integrated Detroit Powertrain only.

Standard Warranty

Item	Warranty Limits (Whichever Occurs First)		Repair Charge (Paid by Owner)	
	Months	Miles / Kilometers	Parts	Labor
Engine	0-24	Unlimited	No charge	No charge
Injectors	0-24	200,000 mi / 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	500,000 mi / 800,000 km	No charge	Not covered

Maintenance Intervals*

Item	Mi / km / Hr†	Severe Duty	Short-Haul	Long-Haul	Efficient Long-Haul
Engine Oil and Filter Change**	Miles	35,000	40,000	55,000	65,000
	Kilometers	56,000	64,000	89,000	105,000
	Hours	750	1000	—	—
Fuel Filter Change	Miles	35,000	40,000	55,000	65,000
	Kilometers	56,000	64,000	89,000	105,000
	Hours	750	1000	—	—
Valve Lash Adjustment	Miles	Adjust at 100,000, at 500,000, and then every 500,000 thereafter.			
	Kilometers	Adjust at 160,000, at 800,000, and then every 800,000 thereafter.			
Diesel Particulate Filter	A check engine light will illuminate when ash requires removal. Normal DPF ash clean interval is:				
	Miles	500,000 to 550,000			
	Kilometers	800,000 to 880,000			
	Hours	11,000 to 11,500			
DEF Pump Filter	Replace filter every 3 years or 500,000 (800,000 km) miles, whichever comes first.				

* Maintenance intervals using Detroit Fluids Specification 93K222 (CK-4) or 93K223 (FA-4) Approved Oils.

** Recommended based on using Detroit's lube oil and oil analysis program.

Severe duty is up to 30,000 annual miles (48,000 kilometers) and a vehicle that averages less than 5 miles per gallon (mpg).

Short-haul is between 30,000 and 60,000 annual miles (48,000-96,000 kilometers) and a vehicle that averages between 5.1 and 5.9 mpg.

Long-haul is over 60,000 annual miles (96,000 kilometers) and a vehicle that averages between 6.0 and 6.9 mpg.

Efficient long-haul is over 60,000 annual miles (96,000 kilometers) and a vehicle that averages greater than 7 mpg.

Fuel economy represents overall fuel economy (including idle time).

† Miles/Kilometers or Hours, whichever occurs first.

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DETROIT[™] DD15[®]

TECHNICAL SPECIFICATIONS



THE DETROIT[™] DD15[®] ENGINE TAKES INNOVATION TO A WHOLE NEW LEVEL.

This impressive engine delivers incredible torque response and power, increased fuel economy, extremely wide torque range, extended maintenance intervals, and a smoother, cleaner ride.

PERFORMANCE

- Meet your deadline every time
 - Enjoy less shifting with an extremely wide and flat torque curve
 - Three-stage integrated Jacobs[®] engine brake offers quieter engine braking and provides superior braking horsepower for extended service brake life
 - Overall robust design provides B50 life of 1.2 million miles
 - Sturdy rear gear train and ribbed cast iron block minimize noise vibration harshness (NVH)

ECONOMY

- 2nd Generation Amplified Common Rail System (ACRS[™]) optimizes each injection event to minimize fuel consumption
- Proven asymmetric turbocharger—now built in Detroit—is optimally matched to updated Exhaust Gas Recirculation (EGR) system for improved efficiency
- Advanced cooling system with variable speed water pump reduces load on the engine minimizing fuel consumption

POWER

- Pulls strong down below 1000 RPM
- Ultra-wide flat torque curve for less shifting
- Usable power and torque reached at lower engine speeds improving vehicle startability

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[™] Connect Virtual TechnicianSM remote diagnostic service helps you maximize uptime

COMPLIANCE

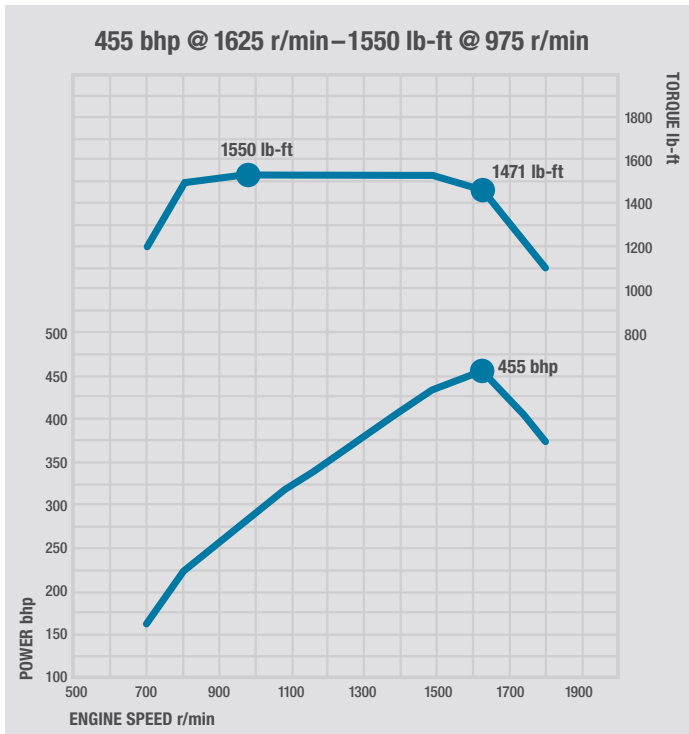
- The DD15 is compliant with 2017 Greenhouse Gas (GHG17) requirements

DD15 SPECIFICATIONS

Configuration	Inline 6 Cylinder
Displacement	906 cu. in. (14.8 L)
Compression Ratio	18.5:1
Bore	5.47 in. (139 mm)
Stroke	6.42 in. (163 mm)
Weight (Dry)	2718 lb. (1233 kg)
Electronics	DDEC [®]
Service Fill (Oil & Filter Change) ..	45 qt. (43 L)
Horsepower Range	400-505
Torque Range	1550-1750



Horsepower and Torque Curve



Power Ratings

DD15 Engine Power Ratings	
400 HP @ 1625 RPM*	1750 lb-ft @ 975 RPM*
455 HP @ 1625 RPM	1550 lb-ft @ 975 RPM
455 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
475 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
505 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
505 HP @ 1625 RPM	1750 lb-ft @ 975 RPM
DD15 Engine Cruise Power Ratings	
475/505 HP @ 1625 RPM	1650 lb-ft @ 975 RPM
DD15 Engine Multi-Torque Power Ratings	
455 HP @ 1625 RPM	1550/1750 lb-ft @ 975 RPM

* Integrated Detroit Powertrain only.

Standard Warranty

Item	Warranty Limits (Whichever Occurs First)		Repair Charge (Paid by Owner)	
	Months	Miles / Kilometers	Parts	Labor
Engine	0-24	Unlimited	No charge	No charge
Injectors	0-24	200,000 mi 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	500,000 mi 800,000 km	No charge	Not covered

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Maintenance Intervals*

Item	Mi / km / Hr†	Severe Duty	Short-Haul	Long-Haul	Efficient Long-Haul
Engine Oil and Filter Change**	Miles	35,000	45,000	60,000	75,000
	Kilometers	56,000	72,000	97,000	121,000
	Hours	750	1000	—	—
Fuel Filter Change	Miles	35,000	45,000	60,000	75,000
	Kilometers	56,000	72,000	97,000	121,000
	Hours	750	1000	—	—
Valve Lash Adjustment	Miles	Adjust at 100,000, at 500,000, and then every 500,000 thereafter.			
	Kilometers	Adjust at 160,000, at 800,000, and then every 800,000 thereafter.			
Diesel Particulate Filter	A check engine light will illuminate when ash requires removal. Normal DPF ash clean interval is:				
	Miles	500,000 to 550,000			
	Kilometers	800,000 to 880,000			
DEF Pump Filter	Hours	11,000 to 11,500			
DEF Pump Filter	Replace filter every 3 years or 500,000 (800,000 km) miles, whichever comes first.				

* Maintenance intervals using Detroit Fluids Specification 93K222 (CK-4) or 93K223 (FA-4) Approved Oils.

** Recommended based on using Detroit's lube oil and oil analysis program.

Severe duty is up to 30,000 annual miles (48,000 kilometers) and a vehicle that averages less than 5 miles per gallon (mpg).

Short-haul is between 30,000 and 60,000 annual miles (48,000-96,000 kilometers) and a vehicle that averages between 5.1 and 5.9 mpg.

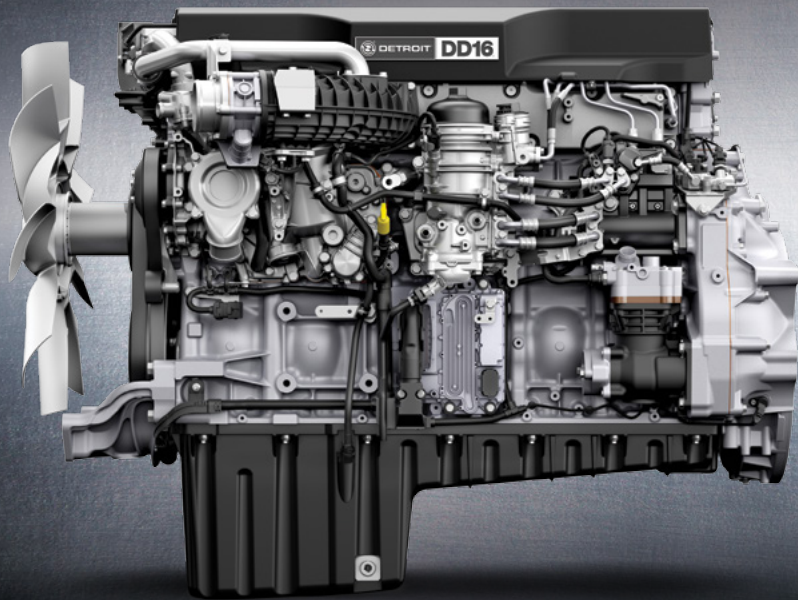
Long-haul is over 60,000 annual miles (96,000 kilometers) and a vehicle that averages between 6.0 and 6.9 mpg.

Efficient long-haul is over 60,000 annual miles (96,000 kilometers) and a vehicle that averages greater than 7 mpg.

Fuel economy represents overall fuel economy (including idle time).

† Miles/Kilometers or Hours, whichever occurs first.





DETROIT[™] DD16[®]

TECHNICAL SPECIFICATIONS

WHEN YOUR RIG NEEDS BIG. THE DETROIT[™] DD16[®] 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[™] 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[®] 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
- Big-bore durability and reliability with a 1.2-million-mile B50 life

COMPLIANCE

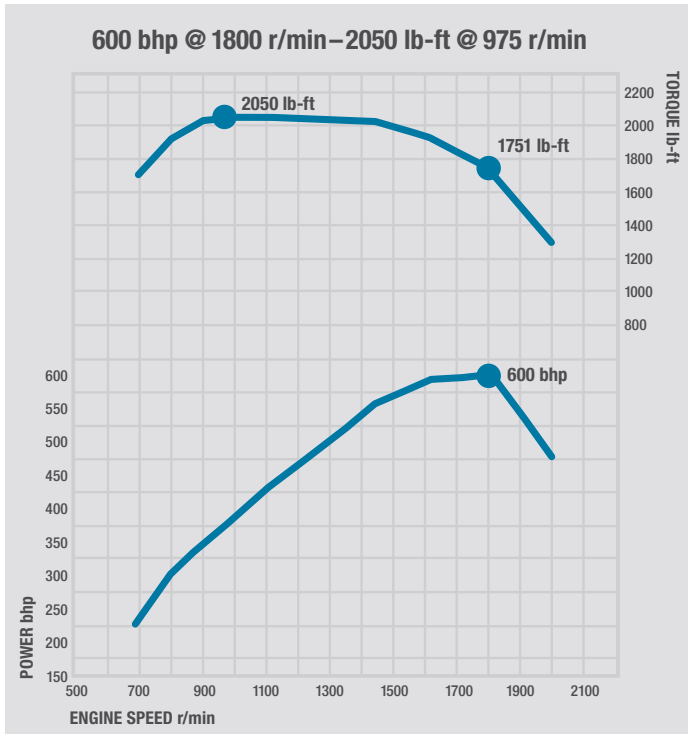
- The DD16 is compliant with 2017 Greenhouse Gas (GHG17) requirements

DD16 SPECIFICATIONS

Configuration	..... In-line 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
Torque Range	..... 1850-2050 lb-ft



Horsepower and Torque 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

Standard Warranty

Item	Warranty Limits (Whichever Occurs First)		Repair Charge (Paid by Owner)	
	Months	Miles / Kilometers	Parts	Labor
Engine	0-24	Unlimited	No charge	No charge
Injectors	0-24	200,000 mi 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	500,000 mi 800,000 km	No charge	Not covered

Maintenance Intervals*

Item	Mi / km / Hr†	Severe Duty	Short-Haul	Long-Haul
Engine Oil and Filter Change**	Miles	35,000	40,000	55,000
	Kilometers	56,000	64,000	89,000
	Hours	750	1000	—
Fuel Filter Change	Miles	35,000	40,000	55,000
	Kilometers	56,000	64,000	89,000
	Hours	750	1000	—
Valve Lash Adjustment	Miles	Adjust at 100,000, at 500,000, and then every 500,000 thereafter.		
	Kilometers	Adjust at 160,000, at 800,000, and then every 800,000 thereafter.		
Diesel Particulate Filter	A check engine light will illuminate when ash requires removal. Normal DPF ash clean interval is:			
	Miles	500,000 to 550,000		
	Kilometers	800,000 to 880,000		
	Hours	11,000 to 11,500		
DEF Pump Filter	Replace filter every 3 years or 500,000 (800,000 km) miles, whichever comes first.			

* Maintenance intervals using Detroit Fluids Specification 93K222 (CK-4) or 93K223 (FA-4) Approved Oils.
 ** Recommended based on using Detroit's lube oil and oil analysis program.
 Severe duty is up to 30,000 annual miles (48,000 kilometers) and a vehicle that averages less than 5 miles per gallon (mpg). Short-haul is between 30,000 and 60,000 annual miles (48,000-96,000 kilometers) and a vehicle that averages between 5.1 and 5.9 mpg. Long-haul is over 60,000 annual miles (96,000 kilometers) and a vehicle that averages between 6.0 and 6.9 mpg. Fuel economy represents overall fuel economy (including idle time).
 † Miles/Kilometers or Hours, whichever occurs first.

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