

DETROIT[™] DD13[®] ENGINE

BDC for Manuals - specs - Bolt torques
<https://barringtondieselclub.co.za/>

FROM
350-470
Horsepower

FROM
1250-1650
lb-ft Torque

DISPLACEMENT
12.8
Liters



DETROIT[™]
DEMAND PERFORMANCE[™]

BUILT FOR YOUR BOTTOM LINE

DETROIT™ DD13® ENGINE WITH BLUETEC® EMISSIONS
TECHNOLOGY WAS DESIGNED FOR THE PROFIT MINDED.



THE RIGHT ENGINE FOR YOUR LINE OF WORK

YOU STOP. START. HAUL. LOAD. DUMP. DELIVER.

Your driving requirements are different and your engine should be different as well. That's why Detroit offers the DD13 with BlueTec emissions technology. Tailored specifically for LTL, Vocational and Regional Distribution operators, the DD13 uses the latest in diesel design technology to create a fuel saving 12.8 liter workhorse. Detroit engineers have been building engines for strength, economy and dependability for over 70 years. We know what works. And what doesn't. That's why the DD13 follows the common base engine design of its successful big brother, the Detroit DD15.® Assembled at our facility in Detroit, Michigan, the DD13 is everything you need and nothing you don't. In a time when economy and saving means everything, the DD13 is ready to take your business further.

REGIONAL DISTRIBUTION

GO THE DISTANCE – AND THEN SOME.

Stop and go is an understatement. You have a schedule to keep and the DD13 engine keeps you going. For those times when you need service, 800-plus authorized service outlets are ready with parts and trained technicians.

VOCATIONAL

THE HARDER YOU PUSH, THE HARDER IT PERFORMS.

This engine is built tough. Perfect whether you're hauling, dumping or mixing. Push the DD13 to the limit. It's made to work.

LTL

LOADS VARY. PERFORMANCE DOESN'T.

You travel intra-city and intercity. Every day is different. But you can count on the DD13 to offer a smooth, efficient drive no matter what route, pallet or load comes your way.

THE DD13 BOTTOM LINE BENEFITS: ECONOMY, SERVICEABILITY, PERFORMANCE. DEMAND IT ALL

BETTER ECONOMY

PROFITS PER GALLON. THE DD13 PULLS STRONG DOWN TO 1100 RPM SO DRIVERS CAN SPEND MORE TIME IN TOP GEAR — AND RUN UP TO 5% MORE MILES PER GALLON.*



The fuel-efficient design makes the most of every gallon with an Amplified Common Rail System (ACRS™) that optimizes each

injection event to minimize fuel consumption and reduce NOx. Available exclusively in Detroit engines, ACRS works in unison with our DDEC® 10 electronic engine controls to deliver the exact amount of fuel you need at the right moment, creating an optimal combustion event. All that work fine-tuning combustion means lower emissions, less engine noise and vibration, and less wasted time stopping at the pump. Everything, right down to the advanced cooling system that decreases fan on-time, was designed to minimize fuel consumption.

Another factor contributing to the impressive fuel economy of the DD13 is BlueTec emissions technology. BlueTec was designed to allow the DD13 to perform at its peak. By treating exhaust gases outside of the engine and using less EGR, BlueTec emissions technology allows for extended regeneration intervals.

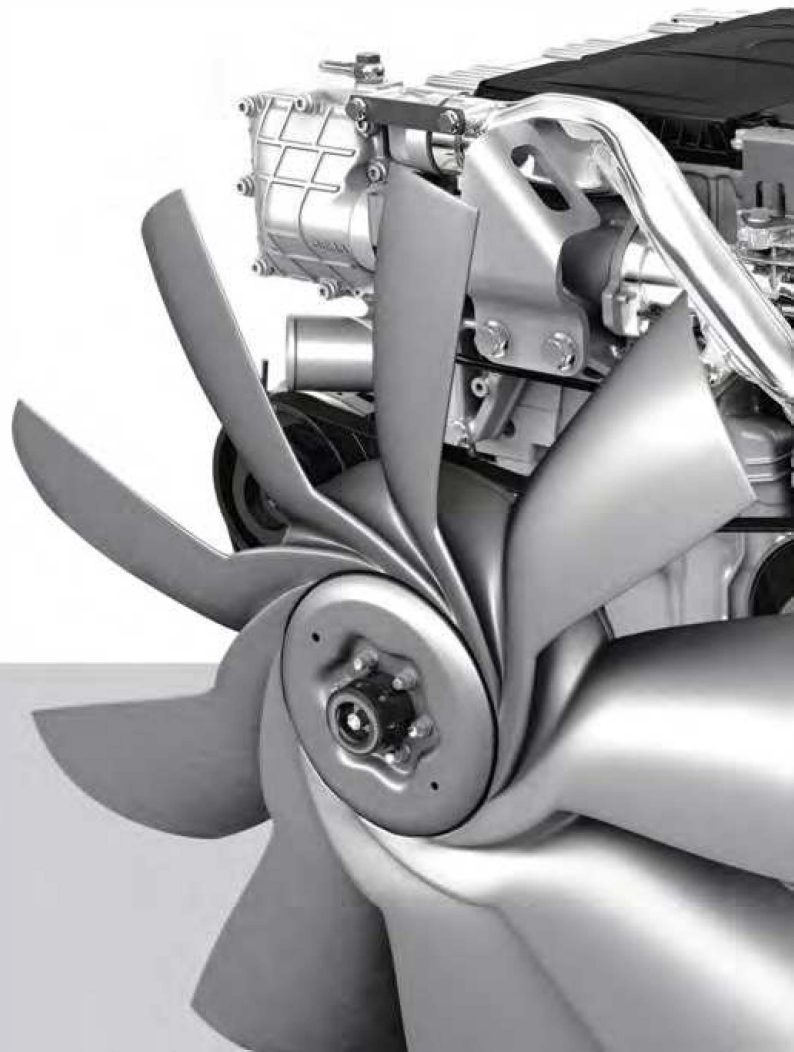
GEARED FOR YOU.

You have expectations. And with a drivetrain that's properly optimized to fit the application, the DD13 helps you meet them. For example, vehicle gearing is another important factor in the fuel economy equation. Here's what you can expect for typical on-highway tractor-trailer applications of 80,000 lbs or less:

- For maximum fuel economy at 65 mph, gear for an engine speed of 1400 RPM.

- When you need extra performance, gear for an engine speed of 1500 RPM at 65 mph.
- For gearing recommendations specific to vocational applications, please visit your local Detroit outlet.

When you are ready to spec your DD13, our engine experts and vast support network will ensure you get the perfect engine and drivetrain combination to meet your needs. With access to the Detroit Spec Manager tool, we'll analyze your specifications and make sure that all performance and economy needs are met. And then some.



UP TO 5% BETTER FUEL ECONOMY*

*Compared to the DD13 EPA 2007 engine
with comparable engine settings and load weights.

SERVICEABILITY

DESIGNED TO KEEP YOU ON THE ROAD.

If hanging out at the service bay isn't your idea of productivity, you'll appreciate the fact that the DD13 will go up to 50,000 miles between oil drain, oil filter and fuel filter changes. That's the longest scheduled maintenance interval in its class.

And better yet, it's easy to keep an eye on those important maintenance items like the cartridge style filters which are conveniently located above the frame rails along with the oil fill. This makes it easy to replace the filters when it's time and get you back out on the road quickly.



For those times when you need genuine parts and expert service, Detroit's support network will get you back on the road fast. The DD13 drives down your costs of ownership at every turn, sharing service procedures and 65% of its parts with the DD15. And, you are supported by the network: 800-plus authorized service outlets, an award-winning technician training program, an extensive parts distribution network and expert engine support from our technical support center. Detroit combines all this to give you the genuine parts and expert service you need to demand it all.

Maintenance Intervals

ITEM	MI/HR [†]	SEVERE-DUTY	SHORT-HAUL	LONG-HAUL
Engine Oil and Filter Change*	Miles	25,000	35,000	50,000
	Hours	640	895	1,280
Fuel Filter Change	Miles	25,000	35,000	50,000
	Hours	640	895	1,280
Valve Lash Adjustment	Miles	Adjust at 100,000, at 500,000 and then every 500,000 thereafter.		
	Hours	Adjust at 2,565, at 12,825 and then every 12,825 thereafter.		
Diesel Particulate Filter	Miles	A "check engine light" will illuminate when ash requires removal. Normal DPF ash cleaning intervals are 300,000 to 400,000 miles.		
	Hours	A "check engine light" will illuminate when ash requires removal. Normal DPF ash cleaning intervals are 9,000 to 10,250 hours.		
DEF Pump Filter	Miles	150,000	175,000	250,000
	Hours	3,840	4,475	6,400

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

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

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

Long-haul is over 60,000 annual miles and a vehicle that averages greater than 6 mpg.

† Miles/Hours, whichever occurs first.

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

PERFORMANCE

MORE POWER. LESS WORK. DEMAND PERFORMANCE. DEMAND LESS SHIFTING. DEMAND QUIET BRAKING. AND GET IT ALL WITH THE DD13.

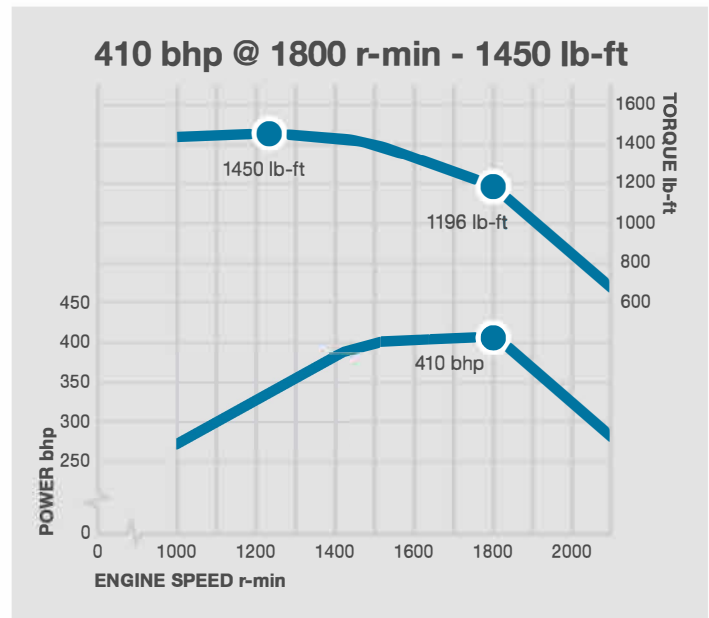
An extremely wide and flat torque curve maintains the power to keep drivers' feet off the clutch and their hands on the wheel for less shifting—and fatigue.

With the DD13, drivers will also get a wider sweet spot that makes it easier to cruise along in the fuel saving range. So whether you're navigating traffic or dodging construction, the DD13 delivers great fuel economy. A three-stage integrated Jacobs® Engine Brake gives you more flexible braking power and quieter engine braking than ever before. And thanks to its exceptional braking power, the Jake Brake also extends the service brake life.

Durability. Reliability. No compromise. The DD13 design is based on a sturdy rear gear train and ribbed cast iron block to minimize noise, vibration and harshness (NVH). The robust design provides a B50 life of 1 million miles. And, the waste-gated, asymmetrical turbocharger has fewer moving parts than a VGT design, which improves performance, and reliability.

The turbocharger also applies constant back-pressure to efficiently enable the EGR system, all of which add up to a dependable engine that gets drivers where they need to go, and makes work seem a little less like work. The DD13 also offers Rear-Engine Power Take-Off as an option for certain applications. And if all that is not enough, DDEC 10 provides a complete offering of engine and driver performance reports to help you maximize the DD13's advantages.

Horsepower and Torque Curve



DD13 ENGINE POWER RATINGS	
370 HP @ 1800 RPM	1250 lb-ft @ 1100 RPM
350 HP @ 1800 RPM	1350 lb-ft @ 1100 RPM
380 HP @ 1800 RPM	1350 lb-ft @ 1100 RPM
380 HP @ 1800 RPM	1450 lb-ft @ 1100 RPM
410 HP @ 1800 RPM	1450 lb-ft @ 1100 RPM
410 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
435 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
450 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
410 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
450 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
470 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
DD13 ENGINE MULTI-TORQUE POWER RATINGS	
380 HP @ 1800 RPM	1350/1550 lb-ft @ 1100 RPM
410 HP @ 1800 RPM	1450/1650 lb-ft @ 1100 RPM

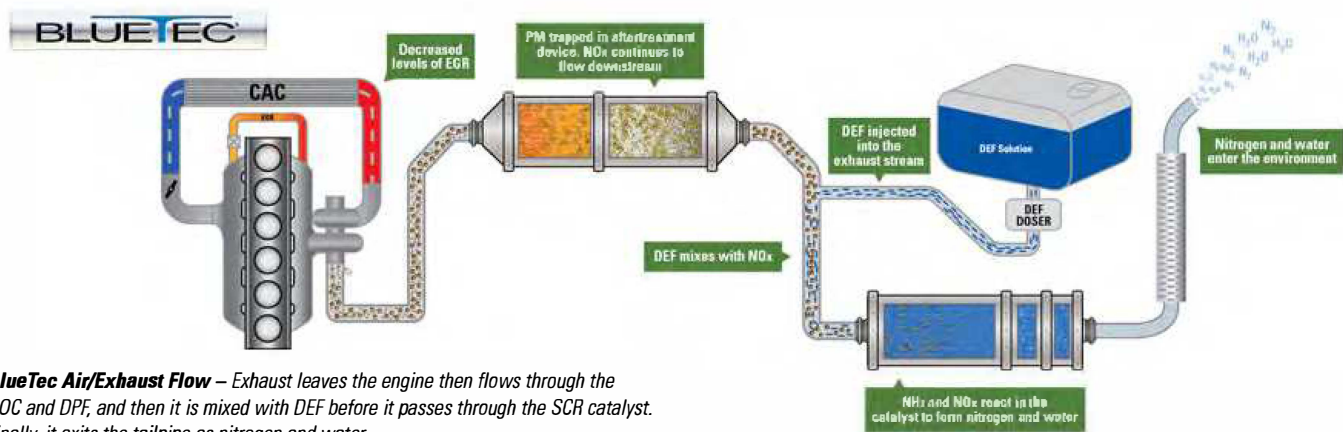
TECHNOLOGY

DD13: WITH BLUETEC EMISSIONS TECHNOLOGY.

How BlueTec Emissions Technology Works

BlueTec is a complete emissions system that combines exhaust gas recirculation (EGR), diesel particulate filter (DPF), diesel oxidation catalyst (DOC) and selective catalytic reduction (SCR) to efficiently meet the EPA 2010 emissions standards. BlueTec treats the exhaust gases downstream of the engine instead of requiring complex

changes under the hood. It does this by injecting a small amount of diesel exhaust fluid (DEF) into the exhaust stream which reacts with the NOx in the SCR catalyst, forming nitrogen and water. Lastly, the nitrogen and water, safe elements in the air we breathe, are released into the environment.



BlueTec Air/Exhaust Flow – Exhaust leaves the engine then flows through the DOC and DPF, and then it is mixed with DEF before it passes through the SCR catalyst. Finally, it exits the tailpipe as nitrogen and water.

DDEC

Detroit Diesel Electronic Controls (DDEC) is a suite of innovative features that enable you to better manage fuel economy, engine performance, driving efficiency and maintenance. In addition to our Virtual Technician onboard diagnostic system, you can utilize technology to better control speed, assist in passing, optimize idle efficiency and even reward your drivers for reaching fuel economy targets. With DDEC, you can maximize efficiency, and profitability

VIRTUAL TECHNICIAN

Virtual Technician is a factory-installed onboard diagnostic system that puts you in control of your business 24/7. When a truck's check engine light illuminates, data is immediately collected, providing a technical snapshot of the engine's status before, during and after a fault code event. This information is sent to you and our Customer Support Center, where a trained representative can diagnose the issue, recommend service and even contact the nearest authorized locations with parts in stock. Additionally, Virtual Technician's optional Visibility Package offers access to the Ground Traffic Control website.

1-BOX™

Only available with Detroit's
BlueTec Emissions Technology

1-Box™ Emissions Package:

- Combines DOC, DPF, SCR catalyst, DEF doser in the same package
- Enables lower exhaust back pressure for better fuel economy
- Enables optimal packaging solutions for truck configurations

Detroit and Daimler engineers have developed several ways to package these components on the truck.

This groundbreaking system captures latitude, longitude, time and odometer readings. With pinpoint accuracy, the system records vehicle stops, speeds, routes traveled, mileage by state, excessive idling, fuel consumption and other on-board events. Put simply, Virtual Technician takes the guesswork out of engine repair, helping you to manage your business more efficiently.

DETROIT SUPPORT. ANYWHERE.

- Unmatched parts availability
- Factory-certified technicians
- Live technical support
- More than 800 authorized service outlets in North America

