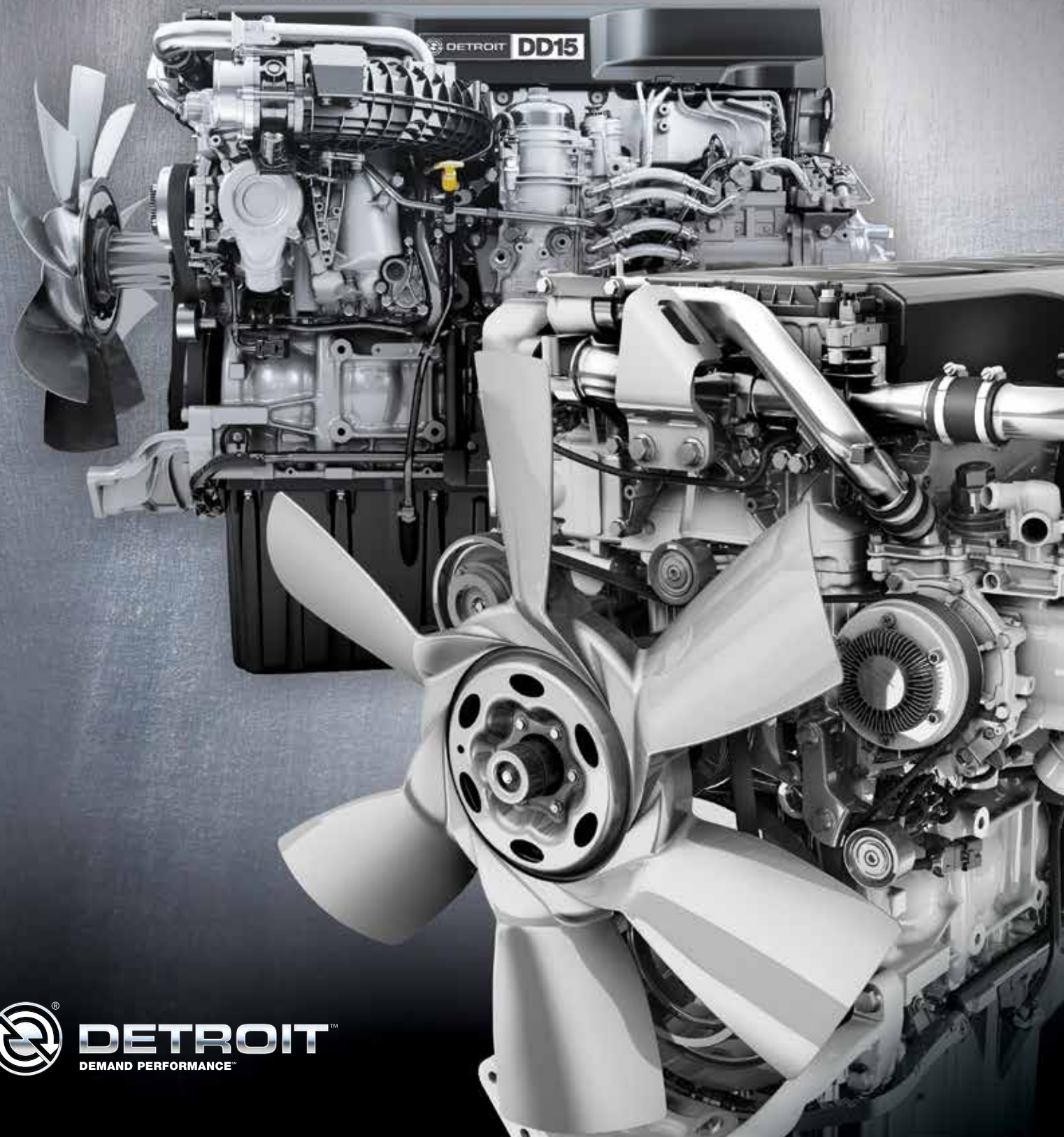


# DETROIT™ DD15® ENGINE

FROM  
**455-505**  
Horsepower

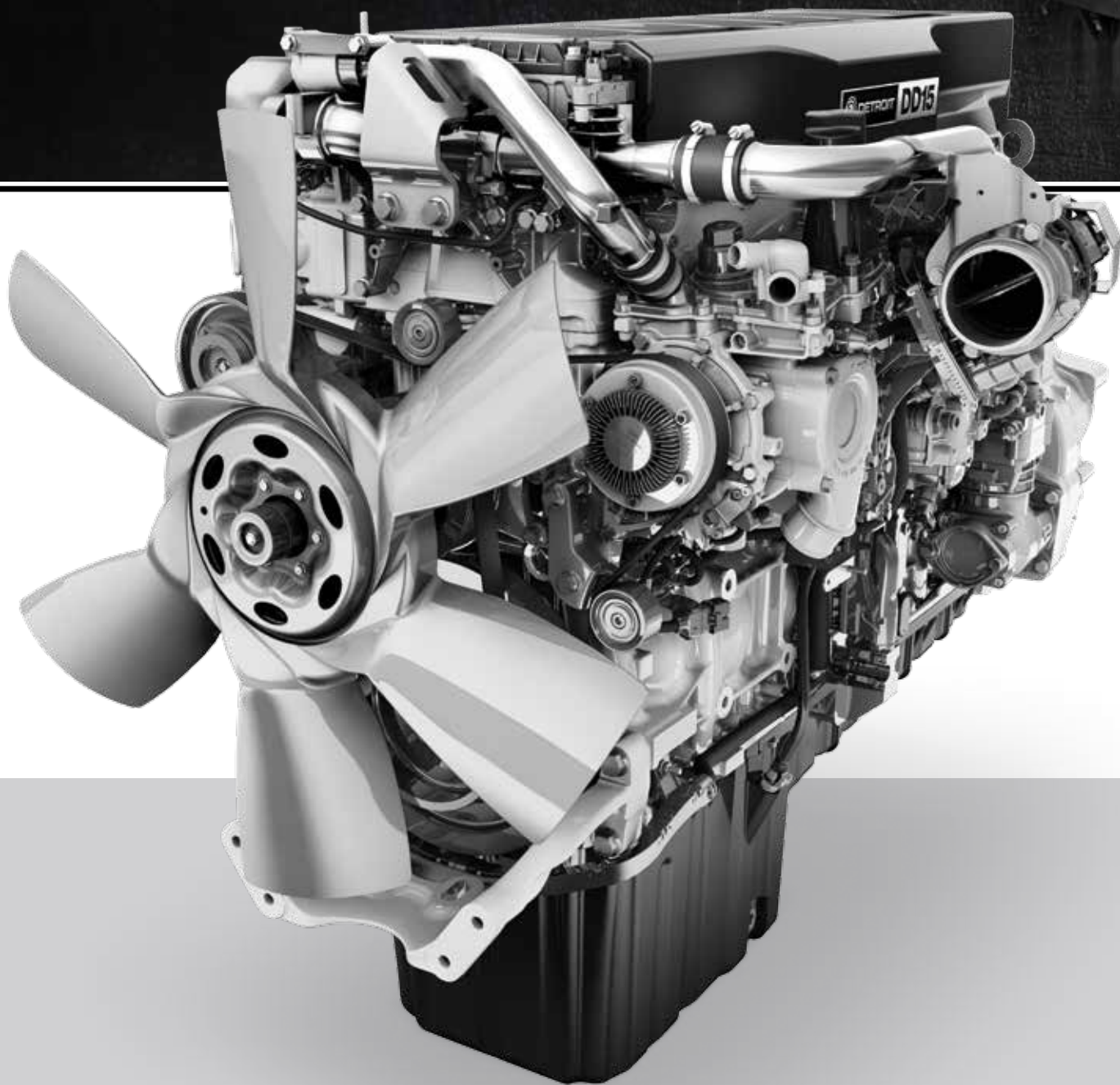
FROM  
**1550-1750**  
lb-ft Torque

DISPLACEMENT  
**14.8**  
Liters



**DETROIT™**  
DEMAND PERFORMANCE™

# EFFICIENCY HAS **EVOLVED**







## THE DETROIT™ DD15® ENGINE DEVELOPED SPECIFICALLY FOR OPTIMUM FUEL ECONOMY

The focus of Detroit engineers is to achieve the most effective combination of performance and fuel economy. Their goal is to design and build engines that enable customers to operate their fleets more efficiently and ultimately to provide a lower Real Cost of Ownership.<sup>SM</sup>

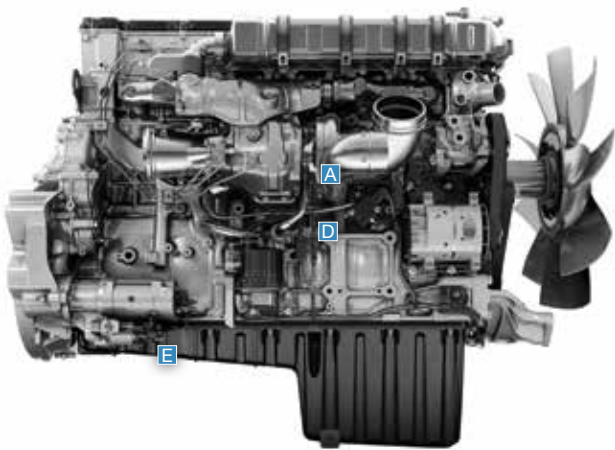
That's why the new DD15 engine is an evolution of our incredibly successful EPA 2010 model. Our engine technology and enhancements offer an unprecedented level of efficiency. The future of trucking has definitely arrived.

The DD15 incorporates a variety of innovations. A patented asymmetric turbocharger reduces complexity and weight while enhancing performance. An updated piston design improves both efficiency and durability. The next-generation Amplified Common Rail Fuel System (ACRS™), a variable-speed water pump and optimized oil pump help maximize fuel economy. And the DD15 meets GHG14 certification and compliance.

**OUR ENGINE TECHNOLOGY AND  
ENHANCEMENTS OFFER AN UNPRECEDENTED  
LEVEL OF FUEL EFFICIENCY.**

# ECONOMY

PUT LESS IN THE TANK AND MORE IN THE BANK. THE DD15 ENGINE WAS ENGINEERED TO INCLUDE A VARIETY OF FEATURES THAT ENHANCE FUEL ECONOMY.



A [proprietary asymmetric turbocharger \[A\]](#) is optimally matched to the exhaust gas recirculation (EGR) system for significant improvements in real-world fuel economy, without sacrificing any of the performance you've come to expect from the DD15. We've also streamlined the design of the turbocharger for reduced weight and even greater efficiency and reliability.

The engine is equipped with the next-generation [Amplified Common Rail Fuel System \(ACRS\) \[B\]](#), which enables higher injector pressure and optimized combustion control, delivering the exact amount of fuel you need at the right moment. The ACRS contributes to improved throttle response, while also helping reduce emissions and engine noise.

A [variable-speed water pump \[C\]](#) controls the pump flow, based on engine speed and coolant temperature. It utilizes a viscous clutch between the pulley and the impeller drive to reduce impeller speeds, making it more efficient than gear-driven designs. The result is reduced load on the engine and improved fuel economy.

Precise details can also make a big difference. That's why Detroit engineers seized the opportunity to incorporate other improvements, such as an [optimized piston design \[D\]](#) that reduces friction while improving both engine performance and durability. Even the [oil pump \[E\]](#) has been enhanced to help contribute to the DD15's great fuel economy.

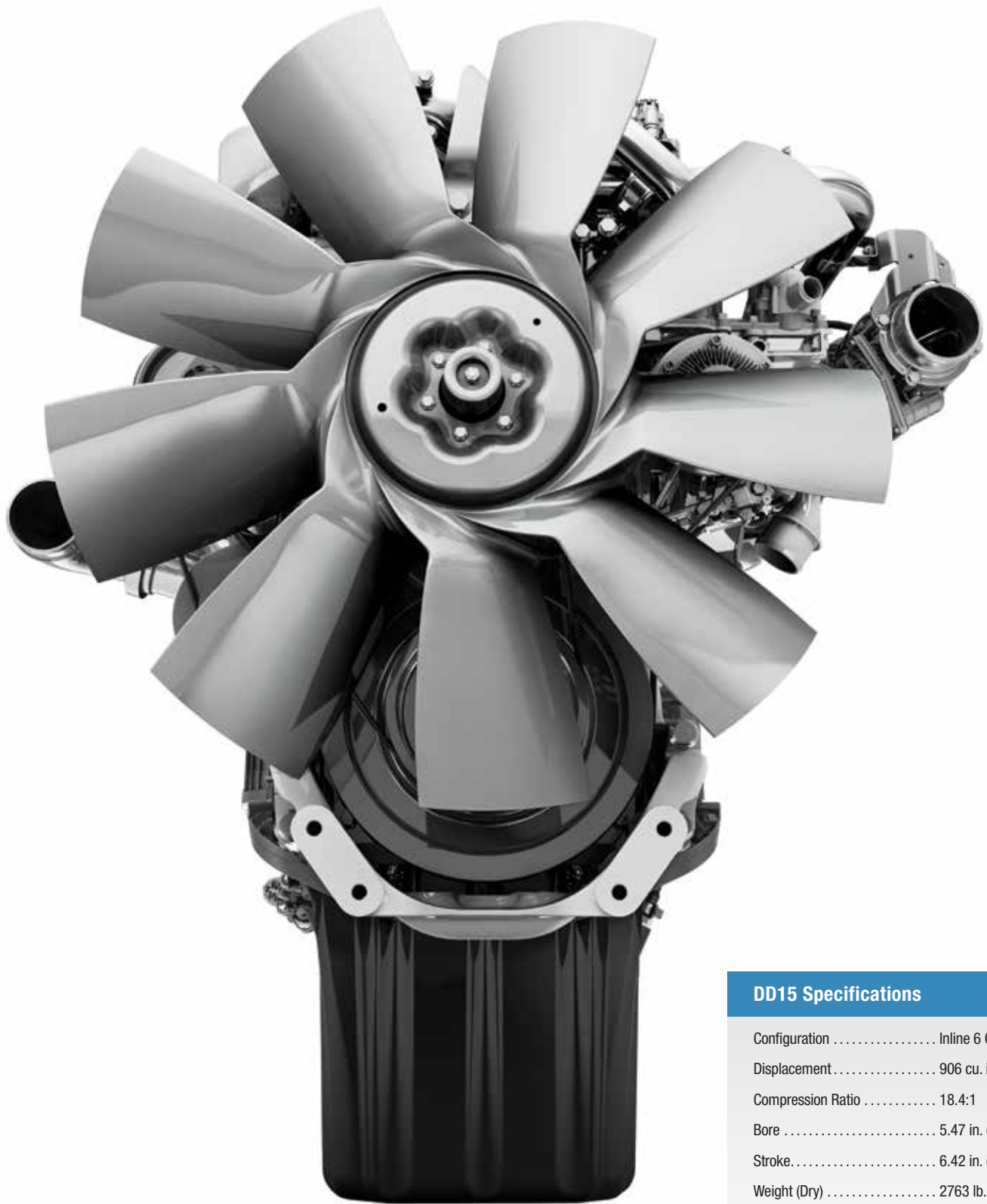
To top it all off, the DD15 is [100 pounds lighter](#), compared to our EPA 2010 model.

## OPTIMIZED DRIVETRAIN EFFICIENCY

When it comes to maximizing the return on your Detroit-powered drivetrain, vehicle gearing is an important thing to consider. Spec'ing the right axles also is a critical factor in the fuel economy equation. To get the most out of each gallon of fuel, simply consult your local Detroit representative. Our powertrain experts and vast support network will ensure you get the perfect engine and drivetrain combination to meet your needs. With the Detroit Spec Manager tool, we'll analyze your specifications and make sure that all performance and economy needs not only are met, but exceeded.

Here's what you can expect for typical on-highway tractor-trailer applications of 80,000 lb. or less.

- For maximum fuel economy at 65 mph, gear for an engine speed of 1350 RPM.
- When you need extra performance, gear for an engine speed of 1450 RPM at 65 mph.



### DD15 Specifications

Configuration .....	Inline 6 Cylinder
Displacement .....	906 cu. in. (14.8 L)
Compression Ratio .....	18.4:1
Bore .....	5.47 in. (139 mm)
Stroke.....	6.42 in. (163 mm)
Weight (Dry) .....	2763 lb. (1254 kg)
Electronics .....	DDEC®
Oil Capacity.....	45.5 qt. (43 L)
Horsepower Range .....	455-505
Torque Range .....	1550-1750 lb-ft

# TECHNOLOGY

THE BEST ENGINES HAVE THE BEST TECHNOLOGY.  
DETROIT INNOVATION BENEFITS OUR CUSTOMERS  
AND LEADS THE INDUSTRY FORWARD.

## VIRTUAL TECHNICIAN

Our factory-installed Virtual Technician™ onboard diagnostic system takes the guesswork out of engine repair. When a truck's check engine light illuminates, data is collected immediately, providing a technical snapshot of the engine's status before, during and after a fault code event. This information is sent to you and to the Detroit Customer Support Center (CSC), where a trained representative can diagnose the issue, recommend service and even contact the nearest authorized locations with parts in stock. The CSC can tell you if you need to pull over so you don't cause further damage, or if you can stay on the road. Put simply, it's like having a technician in every truck.

Virtual Technician's optional Visibility Package is a fleet management system which offers access to the Ground Traffic Control website. This groundbreaking system captures latitude, longitude, time and odometer readings for your trucks. With pinpoint accuracy, the system records vehicle stops, speeds, routes, mileage traveled by state, excessive idling, fuel consumption and other onboard events. The Visibility Package helps you manage your business more efficiently.

## DDEC

Detroit DDEC is a suite of innovative features that allow you to better manage fuel economy, engine performance, driving efficiency and maintenance. 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, there are also several options available to fleet managers that will help drivers better control engine idling, shifting techniques and aftertreatment management. To learn more, contact your local Detroit dealer, distributor or representative.

## BLUETEC

The DD15 features BlueTec® selective catalytic reduction (SCR) emissions technology, which was first introduced to meet EPA 2010 emissions standards. This comprehensive system works in concert with exhaust gas recirculation (EGR) and has been improved while still meeting today's emissions standards.

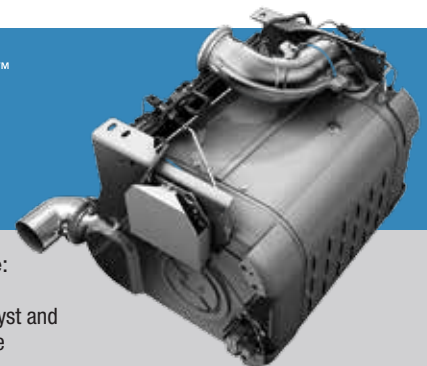
BlueTec includes the diesel oxidation catalyst (DOC), diesel particulate filter (DPF), diesel exhaust fluid (DEF) and an SCR catalyst to remove particulate matter and nitrogen oxide from the exhaust. The system cleans emissions downstream, helping the engine run more efficiently, which improves fuel economy. Most of the harmful exhaust is converted into nitrogen and water before being released from the tailpipe.

## GHG14

The DD15 is compliant with 2014 Greenhouse Gas (GHG14) requirements.

## 1-BOX™

Only available with BlueTec  
Emissions Technology



### 1-Box™ Emissions Package:

- Combines DOC, DPF, SCR catalyst and DEF doser in the same package
- Enables lower exhaust back-pressure for better fuel economy
- Provides optimal packaging solutions for a variety of truck configurations
- Enhancements to the new 1-Box make it lighter and more efficient
- Reduced number of parts for easier serviceability
- Liquid only DEF dosing for improved reliability and a less complex system

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

# PERFORMANCE

**THIS ENGINE CAN HAUL, CLIMB, PULL AND PASS.** WITH THE DD15, WE'VE ACHIEVED AN OPTIMAL TORQUE RANGE TO ENABLE CONTINUOUS PERFORMANCE. NO MATTER THE LOAD OR THE TERRAIN.

Torque response is the key to performance. The DD15 has excellent low-end torque, thanks to a flat, ultra-wide torque curve. Whether you're driving up an incline, merging onto the highway or passing slower traffic, the DD15 engine provides the power you need, quickly and efficiently.

DD15 Engine Power Ratings	
455 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
455 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
475 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
475 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
505 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
DD15 Engine Cruise Power Ratings	
475/505 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
DD15 Engine Multi-Torque Power Ratings	
455 HP @ 1800 RPM	1550/1750 lb-ft @ 1100 RPM
505 HP @ 1800 RPM	1550/1750 lb-ft @ 1100 RPM

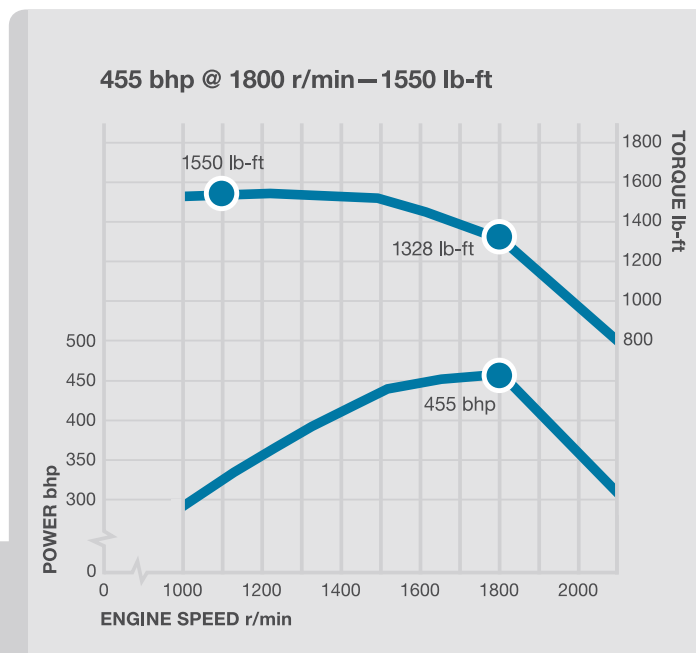
This is achieved by the ACRS fuel system working in unison with our updated DDEC<sup>®</sup> electronic engine controls to create the optimal combustion event at just the right moment.

Also, the combination of low inertia, dual overhead camshafts and the asymmetric turbocharger allows for faster acceleration. The overall effect is a smoother driving experience with less shifting involved.

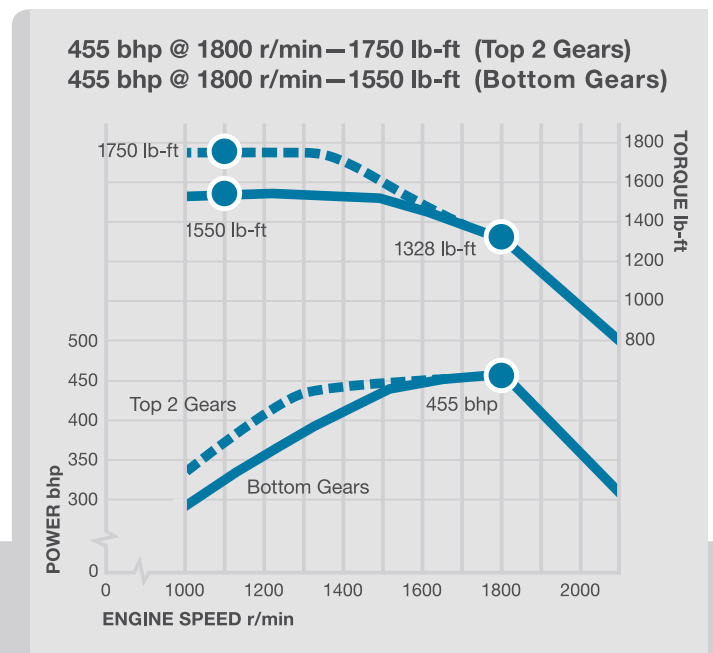
## QUIET BRAKING

Along with uncompromising power, your DD15 also is equipped with an integrated Jacobs<sup>®</sup> Engine Brake that will slow you down safely when you need it. So, when you're cruising through small towns where everyone's asleep, go ahead and turn it on. No one will hear it. And, with three levels of braking, you've got a wide range of braking power. Get down hills safer and with more control.

**Horsepower and Torque Curve**



**Multi-Torque Curve**





# SERVICEABILITY

## THE DD15 IS ENGINEERED TO MAKE MAINTENANCE QUICK AND EASY, SO YOU CAN GET BACK ON THE ROAD AND KEEP COSTS IN CHECK.

The DD15 features a new fuel filter module that uses one less filter for quicker changes. It also notifies the driver when the filter loads are approaching levels where a change will be necessary. And, the priming pump has been optimized.

Engine subsystems are modularly built to simplify part replacement and maintenance. This reduces downtime during routine servicing. And less routine servicing is required, because the DD15 was built for longer service intervals.

Changing your oil is faster, too. All the filters on the DD15 are located above the frame rails and are cartridge-style for easy replacement.

For times when you need genuine parts and expert service, the Detroit support network will get you back on the road fast. In fact, you are supported by hundreds of authorized service outlets, an award-winning technician training program, an extensive parts distribution network and expert engine support from our Customer Support Center.

## FACTORY-BACKED WARRANTY

Detroit engine owners enjoy comprehensive warranty coverage, including a fast, hassle-free process and expedited parts and service for critical downtime situations.

### 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 / 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

\* Recommended using Detroit's lube oil and 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.





## DETROIT GENUINE PARTS

Authorized Detroit service outlets are staffed with factory-trained technicians who exclusively use Detroit™ genuine parts. Our technicians, graduates of our award-winning training program, know your powertrain inside and out. They're the experts who will make sure that, with normal maintenance at regular intervals, all components continue to perform at optimum power and efficiency for years to come. You can find expert technicians at hundreds of authorized Detroit service locations. Whether it's a new or remanufactured part, Detroit genuine parts precisely fit your engine, axles and transmission, giving you the performance, reliability and durability you count on from Detroit.

Detroit genuine parts are covered by a factory-backed nationwide warranty, so you never have to worry about unexpected repair costs.

## EXTENDED SERVICE COVERAGE

Detroit engine extended service coverage (ESC) takes care of tomorrow's costs at today's pricing, extending your factory on-highway coverage for up to five-years/500,000 miles, or seven-years/250,000 miles for vocational coverage. So, whether you need your engine serviced three years from now, or a major repair right now, your engine ESC helps protect your investment.

From covering basic engine components to complete coverage, including aftertreatment, our ESC packages fit your needs and your budget by providing:

- Service at hundreds of Detroit authorized service locations
- Repairs performed by certified technicians
- Unmatched availability of Detroit Genuine Parts
- Coverage throughout the U.S. and Canada
- Availability to purchase without a late fee for up to 12 months, or for a nominal \$400 late fee between 13-18 months
- Ability to transfer coverage to subsequent owner, enhancing resale value

**UPTIME IS MONEY. THAT'S WHY  
SERVICEABILITY IS ESSENTIAL TO ACHIEVE  
A LOWER REAL COST OF OWNERSHIP.**



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## EMPOWERED BY DETROIT

Here at Detroit, we've built our reputation by building high-quality products that perform beyond expectations. Today, you'll find our engines in Freightliner and Western Star trucks on roads and at job sites around the globe.

The secret to our success goes beyond the engines we build. Our people and our continuous pursuit of innovation are powerful driving forces. Our engineering and manufacturing expertise are world class. Our service network is expansive and responsive. That's why we continue to grow and evolve. That's also why we now offer a full line of products: engines, axles, transmissions and advanced technologies. That's right. The company that makes the heart of the truck now gives you the arms, legs and backbone to go with it. So, if you demand it all, demand Detroit.

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[DEMANDDETROIT.COM](http://DEMANDDETROIT.COM)

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