





Maintenance Item	Severe-Duty	Short-Haul	Long-Haul
Engine Oil and Filter Change*	15,000	20,000	30,000
Fuel Filter Change	10,000	15,000	15,000
Valve Lash Adjustment	30,000	45,000	60,000

^{*} Based on using Detroit Diesel approved lube oil and oil analysis program.

Severe-Duty: Less than 6,000 annual miles. Short-Haul: 6,000 to 60,000 annual miles. Long-Haul: Over 60,000 annual miles.

Parts, Service and Warranty

The Series 60 engine is backed by a two-year, unlimited mileage warranty that covers 100 percent of the cost of parts and labor. Major components are covered for five years or 500,000 miles with 100 percent parts coverage. Extended service coverage options also are available through authorized Detroit Diesel service centers.

Parts and service are available at more than 800 Detroit Diesel authorized service locations throughout North America. Factory certified technicians know your Series 60 inside and out and are ready to help. For roadside assistance, technical support or locating the nearest service center, contact the Detroit Diesel hotline at 1-800-445-1980.

Warranty Period

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	Warranty Limitations (Whichever Occurs First)		Repair Charge to be Paid by Owner		
Item	Months	Miles / Kilometers	Parts	Labor	
Engine*	0 - 24	Unlimited	No Charge	No Charge	
Accessories	0 - 24	0 - 100,000 mi. 0 - 160,000 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	0 - 500,000 mi. 0 - 800,000 km	No Charge	100% of Service Outlet's Normal Charge	



NO QUESTION ABOUT IT.

The 2007 EPA diesel-emissions mandate was one of the most challenging engineering tasks Detroit Diesel has confronted, demanding more time, effort and resources than any other single program since the Series 60 was originally developed. The Series 60 engine not only is far cleaner than its predecessors. It's stronger, too.



For more information, call 1-800-445-1980. www.DetroitDiesel.com

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DETROIT DIESEL: DRIVING TECHNOLOGY.

Detroit Diesel has been designing, testing and manufacturing engines for on-highway applications since 1938. Customers choose our engines for reliability, fuel economy, weight advantage and ease of service. That's never changed. But when the Environmental Protection Agency's '07 requirements grew more stringent to protect the environment, Detroit Diesel combined our long heritage and industry-leading innovation with the resources of our parent company, Daimler – the world's largest commercial vehicle manufacturer. Together, we did more than just meet emissions standards. We took our engines to the next level.

Our newest engines are the most advanced and environmentallyfriendly generation of Detroit Diesel engines ever built. We lowered oil consumption. Increased response times. Reduced emissions. And achieved SMART Fuel Systems.

With our investment of hundreds of millions of dollars and the work of hundreds of engineers, Detroit Diesel dramatically reduced oxides of nitrogen (NOx) by 55 percent, and particulate matter (soot and ash) by 90 percent. We achieved the testing and manufacturing to ensure that our engines meet the target by optimizing the existing Exhaust Gas Recirculation and adding an Aftertreatment System consisting of an oxidation catalyst and diesel particulate filter.

After countless laboratory tests and more than 24 million miles in testing across our three engine lines, one thing is clear:
Detroit Diesel isn't just meeting standards. We're driving technology.

The Series 60 Engine

Since 1992, the Detroit Diesel Series 60 has been North America's most popular heavy-duty on-highway diesel engine. With its excellent fuel economy and highly reliable performance, the Series 60 has become the industry's workhorse. The current version of the Series 60 continues this tradition while meeting all federal and California diesel engine emissions requirements.

Tightening Emissions Standards

The EPA has been reducing diesel emissions for the past 30 years. The latest regulations, demand changes in both fuel and engine technology. The new regulations dramatically reduce NOx by 55 percent and particulate matter (soot and ash) by 90 percent. We achieved the first target by optimizing the existing Exhaust Gas Recirculation system and the second by adding an Aftertreatment System, comprised of a Diesel Oxidation Catalyst and a Diesel Particulate Filter.

REFINED ENGINE COMPONENTS

Exhaust Gas Recirculation (EGR)

Exhaust Gas Recirculation systems have been optimized to dramatically cut NOx formation by routing a measured amount of exhaust flow to the cylinders to lower combustion temperatures. The newly designed system features a high-capacity, tube-and-shell EGR cooler that is more rugged than the previous model.

Because coolant is the system's lifeblood, we enhanced the water pump for greater output, and changed to a partial-flow stream inside the EGR cooler.

The EGR valve, now located on the cool side of the engine, is new as well, at least for the Series 60. Identical to that used on the MBE 4000, it is noteworthy for its demonstrated reliability.

Advanced Fuel System

The advanced fuel system adds to the performance and cleanliness of the Series 60. Dual solenoid Electronic Unit Injectors provide exact fuel metering and enable independent injection pressure control. This system has multiple injection capability to maintain performance and fuel economy advantages, while improving engine sound quality.

Series 60 Engine Power Ratings	
425 HP @ 1800 RPM	1450 lb-ft @ 1100 RPM
445 HP @ 1800 RPM	1450 lb-ft @ 1100 RPM
455 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
470 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM
490 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
515 HP @ 1800 RPM	1450 lb-ft @ 1100 RPM
515 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
515 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM

Series 60 Engine Cruise Power Ratings	
425 / 445 HP @ 1800 RPM	1450 lb-ft @ 1100 RPM
455 / 490 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
490 / 515 HP @ 1800 RPM	1550 lb-ft @ 1100 RPM
470 / 515 HP @ 1800 RPM	1650 lb-ft @ 1100 RPM

Detroit Diesel Electronic Control (DDEC®) VI

The Series 60 set the benchmark as the first fully electronic heavy-duty diesel engine. Now Detroit Diesel raises the bar with the sixth generation DDEC VI engine management system. It employs a more powerful microprocessor, increased memory and enhanced diagnostics. The DDEC VI is capable of monitoring and managing all engine functions, including the Aftertreatment Systems required for emissions. DDEC VI is a key part of the strategy to achieve greater operating efficiency and cleaner exhaust emissions.

Electronic Variable Geometry Turbocharger

Engine performance starts with low-end throttle response. The Series 60 uses an electronic variable geometry turbocharger that automatically and precisely adjusts its boost across the operating range, delivering quick and punchy lift on the low end, where turbo lag would otherwise occur.

Cylinder Kits

New pistons for the Series 60 are designed to improve combustion and oil control. Designed with enhanced monotherm geometry, the pistons have a new bowl shape and enhanced oil consumption characteristics, combined with a smoother liner bore finish. Together, these elements substantially reduce the amount of make-up oil required between oil changes.

Maintenance-Free Crankcase Breather Oil Separator

This device, a centrifugal oil separator, also helps reduce oil consumption. The spinning separator sends oil droplets back to the sump where they continue to serve the engine. And there is no maintenance required.

REFINED FUELS AND LUBRICANTS

ULTRA LOW SULFUR DIESEL (ULSD) Fuel and CJ-4 Oil

The Series 60 is designed to run on ULSD fuel, which can contain no more than 15 PPM sulfur. The current maximum sulfur content for on-highway diesel fuel is 500 PPM. ULSD fuel is necessary to avoid fouling the engine's Aftertreatment System.

A new low ash oil formulation, designated CJ-4, will be recommended in EPA '07 engines. CJ-4 oil contains less than 1.0 wt. % sulfated ash. Use of high ash engine oils will reduce the cleaning interval on the Diesel Particulate Filter system.

REFINED EXHAUST SYSTEM

Exhaust Aftertreatment System

The biggest change to the engine is the addition of an exhaust Aftertreatment System, which replaces the muffler assembly in the exhaust system. The unit's defining components are a Diesel Oxidation Catalyst and a Diesel Particulate Filter that oxidize — or burn — soot. During normal highway operation, exhaust temperatures alone usually high enough to burn off accumulating soot, a process known as "passive regeneration." In low ambient temperatures, however, or in some stop-and-go applications, the system needs a little help to regenerate, or clean itself. This process is called "active regeneration."

EXHAUST IN (SOOT, CARBON MONOXIDE, HYDROCARBONS) TRAPPED SOOT CERAMIC HONEYCOMB WITH WALL SUPPORT CATALYST

AFTERTREATMENT SYSTEM

Doser

The Aftertreatment System uses a "doser" to initiate active regeneration. When the amount of soot inside reaches a certain level, the doser injects a measured amount of diesel fuel into the exhaust flow, which reacts with the catalyst to raise the temperature to a point that enables regeneration.

There are two types of active regeneration: in-transit and stationary. In-transit regeneration occurs when the truck is in motion. When the truck's driving cycle is insufficient for in-transit active regeneration, stationary active regeneration is required. This is performed when the truck is parked and monitored by the driver or a service technician.

Intake Throttle

ENGINE

The intake throttle also assists in the regeneration process. When necessary, this device limits the amount of air entering the engine, raising the exhaust temperature and facilitating regeneration.



