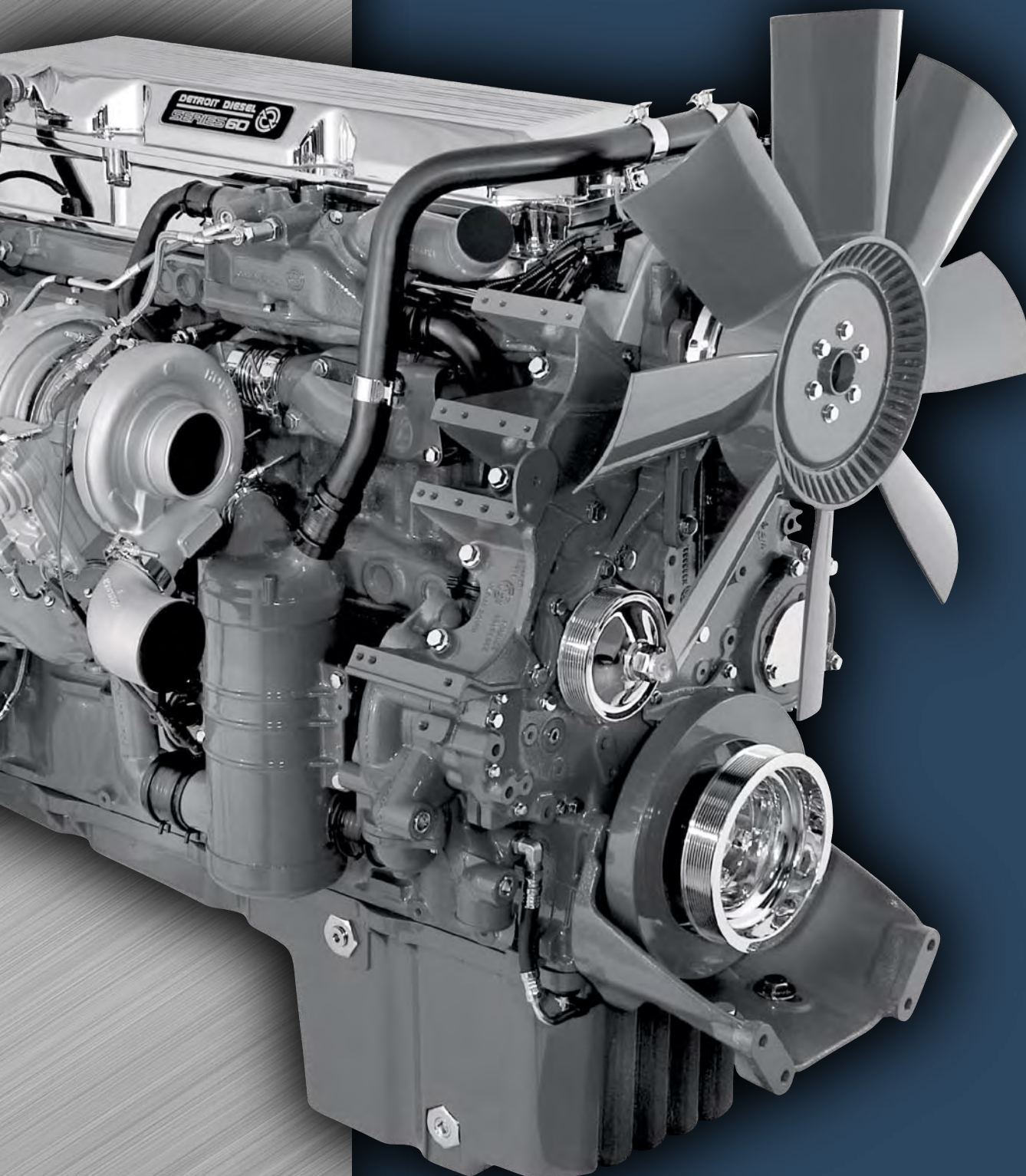




SERIES 60[®]

2007 EMISSIONS

ENGINE



WE'RE DRIVING TECHNOLOGY.

For nearly 70 years, Detroit Diesel has designed, tested and manufactured engines for on-highway applications. Customers choose our engines for reliability, fuel economy, weight advantages and ease of service. These qualities continue to define our 2007 product line. This is the most advanced and environmentally friendly generation of Detroit Diesel engines ever built.

Combining Detroit Diesel's long heritage of innovation with the resources of our parent company, DaimlerChrysler – the world's largest commercial vehicle manufacturer – we've created engines that comply with the Environmental Protection Agency's (EPA) 2007 diesel-emissions standards and also deliver the performance and dependability our customers expect and deserve.

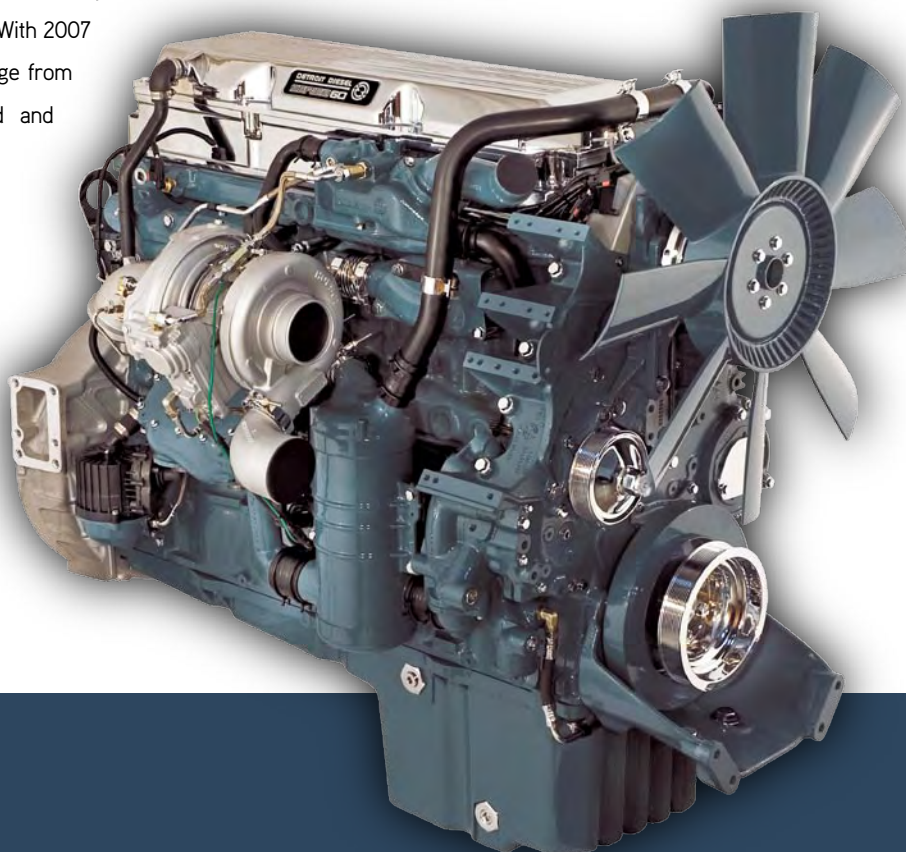
We have invested hundreds of millions of dollars in engineering, testing and manufacturing to ensure that our engines meet the next, and most challenging, round of EPA emissions requirements. By the end of 2006, our 2007 development engines will have endured countless laboratory tests and racked up millions of highway miles, running in a variety of customer applications. With 2007 nearly here, the message from Detroit Diesel is loud and clear: We're ready!

THE 2007 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 2007 version of the Series 60 will continue 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, which take effect in 2007, demand changes in both fuel and engine technology. The new regulations will dramatically reduce nitrogen oxide (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 (EGR) system and the second by adding an Aftertreatment System, comprised of a Diesel Oxidation Catalyst (DOC) and a Diesel Particulate Filter (DPF).



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 we 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.

SMART FUEL SYSTEM®

The SMART Fuel System adds to the performance and cleanliness of the 2007 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 at the same time improving engine sound quality.

Series 60 Engine Power Ratings

425 HP @ 1,800 RPM	1,450 lb-ft @ 1,200 RPM
445 HP @ 1,800 RPM	1,450 lb-ft @ 1,200 RPM
455 HP @ 1,800 RPM	1,550 lb-ft @ 1,200 RPM
470 HP @ 1,800 RPM	1,650 lb-ft @ 1,200 RPM
490 HP @ 1,800 RPM	1,550 lb-ft @ 1,200 RPM
515 HP @ 1,800 RPM	1,450 lb-ft @ 1,200 RPM
515 HP @ 1,800 RPM	1,550 lb-ft @ 1,200 RPM
515 HP @ 1,800 RPM	1,650 lb-ft @ 1,200 RPM

Series 60 Engine Cruise Power Ratings

425/445 HP @ 1,800 RPM	1,450 lb-ft @ 1,100 RPM
455/490 HP @ 1,800 RPM	1,550 lb-ft @ 1,100 RPM
490/515 HP @ 1,800 RPM	1,550 lb-ft @ 1,100 RPM
470/515 HP @ 1,800 RPM	1,650 lb-ft @ 1,100 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 2007 emissions. DDEC VI is a key part of the strategy to achieve greater operating efficiency and cleaner exhaust emissions.

ELECTRONIC VARIABLE GEOMETRY TURBOCHARGER (VGT)

Engine performance starts with low-end throttle response. The new 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 can continue to serve the engine. And the best thing is – there is no maintenance required.

REFINED FUELS AND LUBRICANTS

ULTRA LOW SULFUR DIESEL (ULSD) FUEL AND CJ-4 OIL

The 2007 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 required 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 (DPF) system.

REFINED EXHAUST SYSTEM

EXHAUST AFTERTREATMENT SYSTEM

The biggest change to the 2007 engine is the addition of an exhaust After-treatment System, which replaces the muffler assembly in the exhaust system. The unit's defining components are a Diesel Oxidation Catalyst (DOC) and a Diesel Particulate Filter (DPF) that oxidizes – or burns – soot. During normal highway operation, exhaust temperatures alone are 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.”

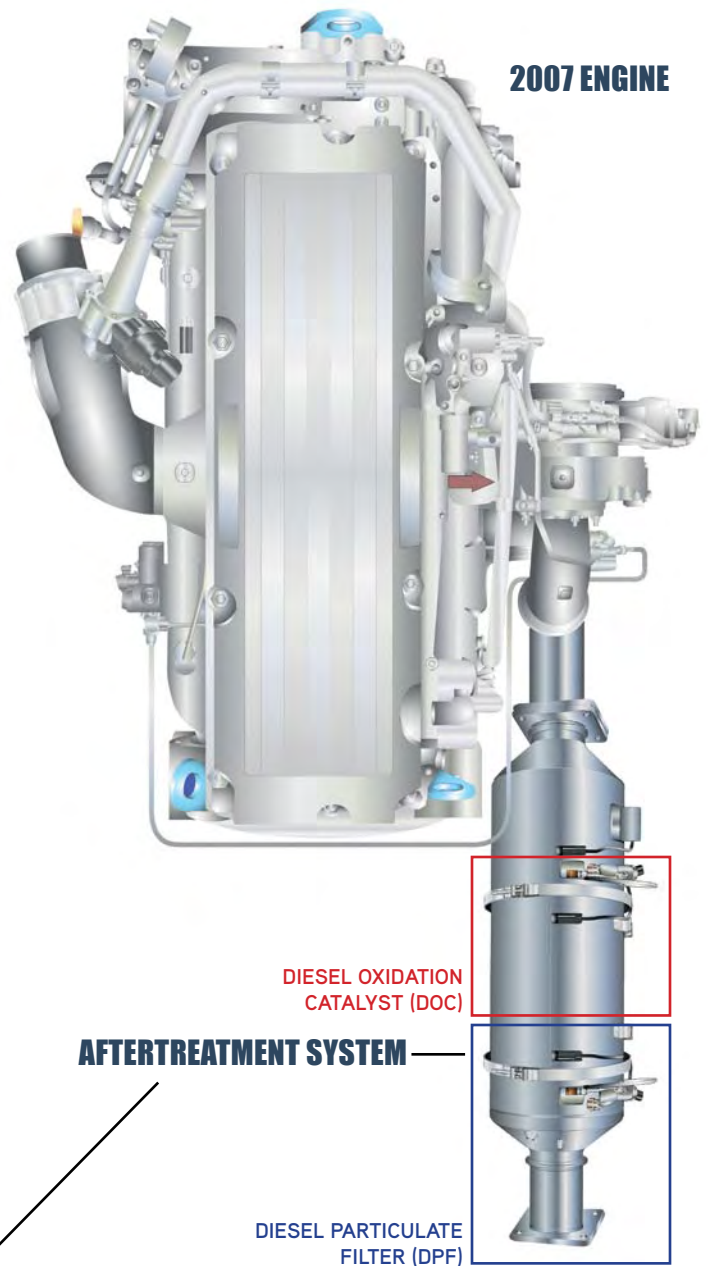
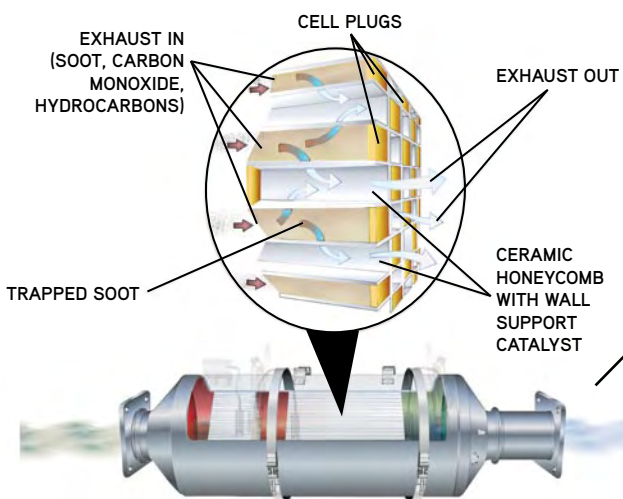
DOSER

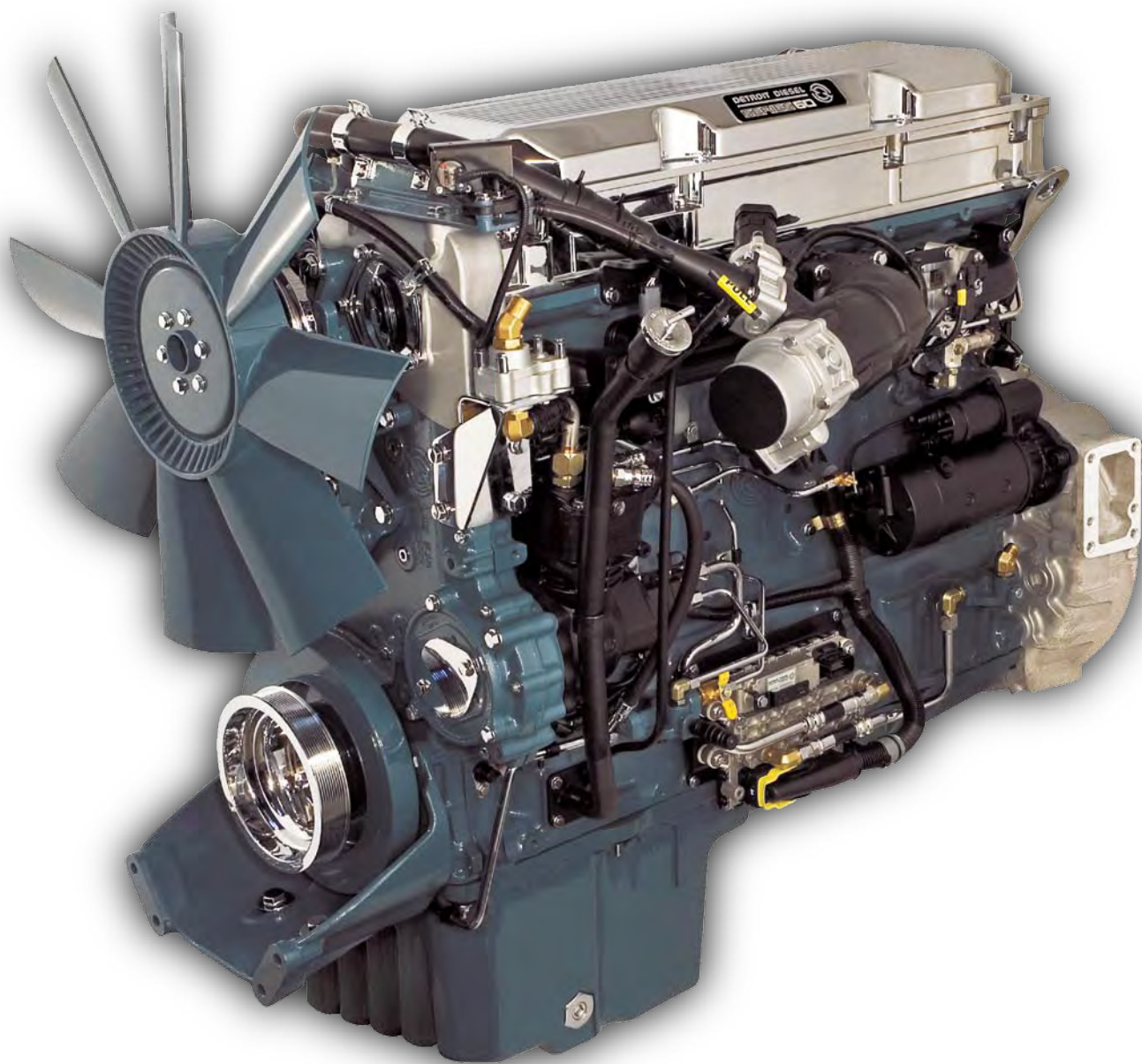
The Aftertreatment System uses a “doser” to initiate active regeneration. When the amount of soot inside reaches a certain level, the doser injects a measured amount of diesel fuel into the exhaust flow, which will react with the catalyst to raise the temperature to a point which enables regeneration.

There are two types of active regeneration: in-transit and stationary. In-transit regeneration occurs when the truck is in motion. In cases 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

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





CHANGES FOR 2007

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 2007 Series 60 engine is not only far cleaner than its predecessors — it's stronger too.

UNALTERED MAINTENANCE SCHEDULES, UNMATCHED SERVICE AND WARRANTY

MAINTENANCE INTERVALS (MILES)

Maintenance Item	Severe	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 2007 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 are also 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

Item	Warranty Limitations (Whichever Occurs First)		Repair Charge to be Paid by Owner	
	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

* Includes Jacobs Vehicle Systems braking devices, 50DN and T1 alternators, if so equipped.

+ Cylinder Block/Head, Crankshaft, Camshaft, Main Bearing Bolts, Flywheel Housing, Connecting Rod Assemblies, Oil Cooler Housing, Water Pump Housing and Air Inlet Housing.

WWW.DETROITDIESEL.COM



For more information, call 1-800-445-1980. www.detroitdiesel.com PT 1M, 6SA2000 (0603).

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DETROIT DIESEL

A DaimlerChrysler Company



EPA '07 Update Bulletin

MBE 900

MBE 4000

Series 60

March 29, 2006

Welcome to the Inaugural Edition of **EPA '07 Update Bulletin** from Detroit Diesel Corporation!

With EPA '07 just months away, we recognize there are an awful lot of questions pertaining to the new emissions standards and what it means for Detroit Diesel engines in 2007. The intent of this monthly newsletter is to help provide you with news and information relative to EPA '07 and Detroit Diesel's preparation efforts. Each month we will bring you news and details on our testing efforts, customer demonstration program, new oil and fuel requirements, engine enhancements and more. We hope you find the enclosed information useful and should you have additional questions, please feel free to contact the Detroit Diesel Marketing Department.

Top Five Things You Need to Know About EPA '07:

EPA Mandates NOx and Particulate Matter Levels be Reduced

Diesel engines manufactured after December 31, 2006, are required to meet the new EPA '07 emissions standard. This standard includes a reduction in nitrogen oxides (NOx) emissions to 1.1 g/bhp-hr (over 50% reduction) as well as a reduction of particulate matter emissions to .01 g/bhp-hr (90% reduction). The existing Exhaust Gas Recirculation (EGR) system will be optimized to meet the low NOx requirements. The particulate matter – which consists primarily of soot and ash – will be reduced through the use of an Aftertreatment System.

New Aftertreatment Device Replaces Muffler

A new Aftertreatment Device will be installed in place of the current muffler. The device includes a Diesel Oxidation Catalyst (DOC) and a Diesel Particulate Filter (DPF) used to remove particulate matter from the exhaust gas. Exhaust heat is used to burn-off the Particulate Matter collected in the DPF through a process called regeneration. A small amount of residual ash remains after regeneration that must be cleaned periodically. Detroit Diesel recommends that ash be cleaned from the DPF every 200,000 to 400,000 miles, depending on duty cycle and application.

Regeneration Process Eliminates Particulate Matter

There are three types of Regeneration – passive, active and stationary.

- Passive Regeneration takes place when exhaust temperatures exceed approx. 300-degrees Celsius. This process does not affect engine performance and is transparent to the driver.
- Active Regeneration takes place when exhaust temperature is insufficient to achieve passive regeneration. DDEC VI electronics automatically activate the intake throttle and/or the fuel doser to raise exhaust temperature and achieve successful regeneration while the vehicle is in motion.
- Stationary Regeneration – Expected to be necessary in very few customer applications. This process requires the vehicle to be parked while a driver or maintenance technician initiates the regeneration process.

New Fuels and Lubricants Required in 2007

Ultra Low Sulfur Diesel (ULSD) is required for use in all DDC 2007 heavy and medium-duty diesel engines. Further, DDC recommends that Low Ash Engine Oils be used as well. Available in October 2006, ULSD is 15-ppm diesel fuel that can be used in all diesel engines, has the same level of lubricity, but will have slightly less energy than fuel currently used. Low ash engine oils will also be usable in all diesel engines. Because burnt oil is the primary source of ash in the exhaust of a truck, low ash engine oils will contain less than 1% ash.

Aftertreatment System Technology to Change Exhaust Systems

The Aftertreatment System will only be available in a chassis mounted configuration. All of the piping will be stainless steel and a stainless steel bellow will replace strip-wound flex pipe between the turbocharger and the Aftertreatment System. The distance between the turbo and the ATD is important to maintain the exhaust temperatures required for a passive regeneration. This piping is part of the EPA certification and should not be altered or modified. Piping between the Aftertreatment System and the exhaust pipe is also critical due to higher exhaust gas temperatures and increased back-pressure and should only be modified using specific guidelines.

Top Questions About EPA '07:

Q: Will underhood temperatures run hotter due to the new Aftertreatment System?

A: No, the underhood temperatures will be no different than previous model year engines. In fact, the ATD is specifically designed to be no hotter than the muffler.

Q: What about fuel economy....how will it be impacted in 2007?

A: At Detroit Diesel, outstanding fuel economy has been our most significant product differentiator for our engines. We expect to retain this leadership position in the market with our 2007 products.

Q: What happens if I don't use ULSD?

A: Vehicles in the 2007 model year are being developed and engine control systems are being calibrated for the new fuel. Using the wrong fuel will impair the diesel particulate filter and could lead to failure of the engine's Aftertreatment System. For pre-2007 model year vehicles, there is an option of using either ULSD or higher sulfur fuel.

Q: What happens if I don't use the new CJ-4 oil?

A: CJ-4 contains less than 1% ash which is key to achieving maximum diesel particulate filter cleaning intervals. The higher ash content of current oils will increase the ash loading of the DPF and reduce cleaning intervals, however, testing on cleaning intervals is continuing. Also, it's important to note that CJ-4 is not designed to run with 500 PPM fuel.

This concludes the March 2006 edition of *EPA '07 Update Bulletin*, if you are not interested in receiving this newsletter in the future, please respond to this e-mail to have your name removed from the distribution list. Thank you!

DETROIT DIESEL



2007 SERIES 60®

TECHNICAL DATA



SPECIFICATIONS

Configuration	Inline 6 cylinder
Displacement	855 cu in (14.0 L)
Compression Ratio	17:1
Bore	5.17 in (106 mm)
Stroke	6.61 in (168 mm)
Weight (Dry)	2557 lbs (1273 kg)
Electronics	DDEC VI®

SERIES 60 ENGINE FEATURES

Excellent Performance and Fuel Economy

- New advanced fuel system maintains fuel economy and performance at reduced emissions
- DDEC VI electronics monitor and control the engine and aftertreatment system for peak efficiency
- Electronic VGT turbo provides quicker response and improved performance

Low Emissions

- Optimized EGR system reduces NOx emissions by over 50%
- Aftertreatment system consisting of an Oxidation Catalyst and Diesel Particulate Filter reduce particulate matter emissions by 90%
- Maintenance-free crankcase breather separator

MAINTENANCE INTERVALS

Maintenance Item	Severe	Short-Haul	Long-Haul
Engine oil and filter change*	10,000	15,000	30,000
Fuel filter change	10,000	15,000	15,000
Valve lash adjustment	30,000	45,000	60,000

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

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

STANDARD WARRANTY¹

Series 60	Warranty Limitations (Whichever Occurs First)		Repair Charge To Be Paid By Owner	
	Months	Miles/km	Parts	Labor
Engine ²	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 applies as follows:				
Major Components ³	25-60	0-500,000 mi 0-800,000 km	No Charge	100% of service outlet's normal charge

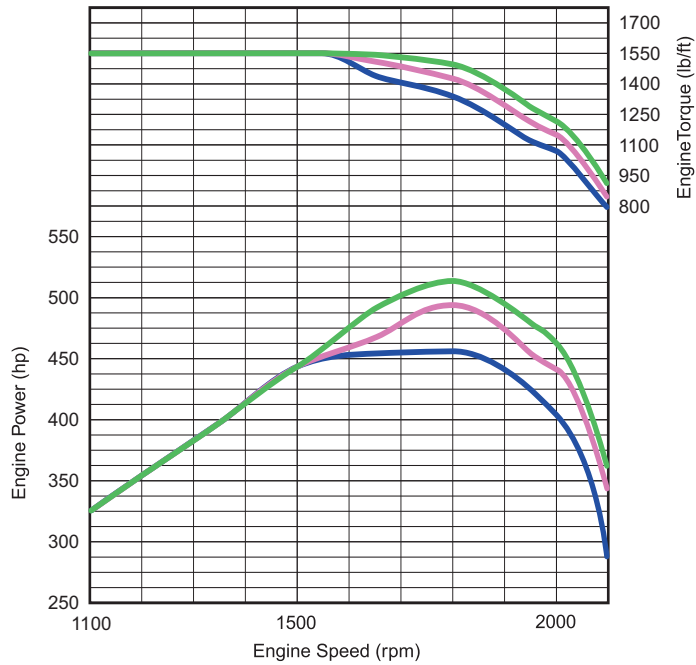
¹ See your Authorized Detroit Diesel service outlet for a copy of the warranty parchment for complete details.

² Includes Jacobs vehicle Systems braking devices, 50DN and T1 alternators, if so equipped.

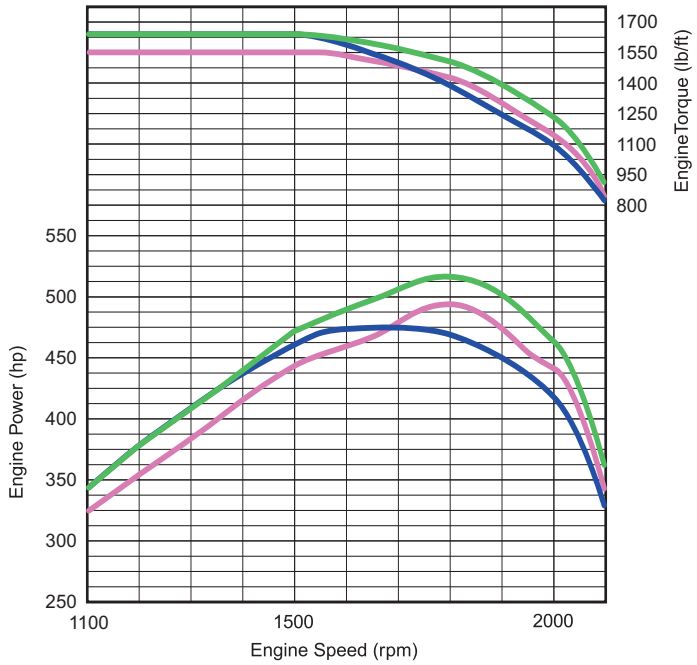
³ Cylinder Block/Head, Crankshaft, Main Bearing Bolts, Flywheel Housing, Connecting Rod Assemblies, Oil Cooler Housing, Water Pump Housing and Air Inlet Housing.

SERIES 60 2007 POWER RATINGS

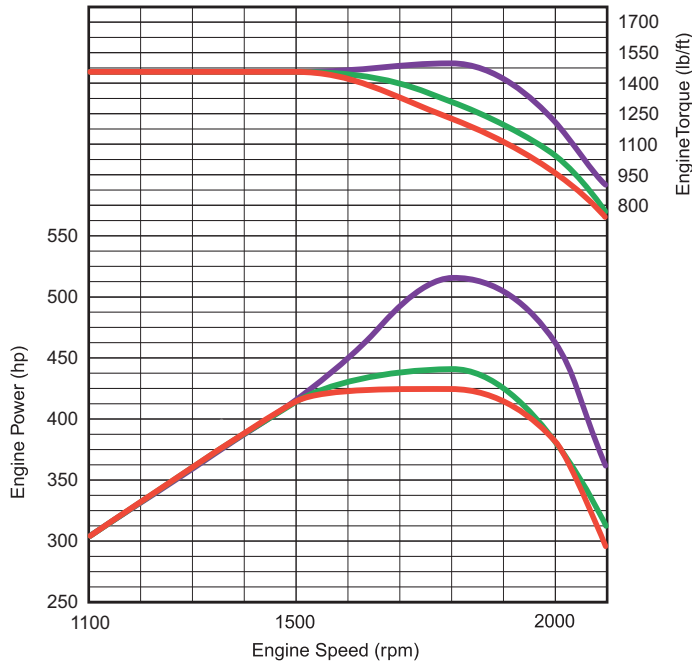
— 455 HP @ 1800 RPM 1550 lb/ft @ 1200 RPM
 — 490 HP @ 1800 RPM 1550 lb/ft @ 1200 RPM
 — 515 HP @ 1800 RPM 1550 lb/ft @ 1200 RPM



— 470 HP @ 1800 RPM 1650 lb/ft @ 1200 RPM
 — 490 HP @ 1800 RPM 1550 lb/ft @ 1200 RPM
 — 515 HP @ 1800 RPM 1550 lb/ft @ 1200 RPM



— 425 HP @ 1800 RPM 1450 lb/ft @ 1200 RPM
 — 445 HP @ 1800 RPM 1450 lb/ft @ 1200 RPM
 — 515 HP @ 1800 RPM 1450 lb/ft @ 1200 RPM



DETROIT DIESEL



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For the Detroit Diesel Distributor or Dealer nearest you, visit www.detroitdiesel.com RP 1M, 3/06 3SA2007 (0603).

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