

## Performance Improver & Cetane Booster

### The Problem

#### EGR Valve Soot-Accumulation on Diesel Truck Engines

##### The Cause

EGR (exhaust gas recirculation) valves found on diesel truck engines can collect soot and become fouled with deposit accumulation over time. The soot is caused by insufficient combustion attributed to,

- excessive idling
- inconsistent fuel vendor cetane levels
- the new Ultra Low Sulfur Diesel (ULSD) fuel (more so on pre 2007 vehicles)

The EGR valves ability to control the internal combustion chamber temperature decreases when it becomes fouled with soot accumulation.

##### The Effect

A "clean" EGR valve introduces cooler, recirculated exhaust gases into the combustion chamber via the intake manifold during a steady state throttle position. On late-model diesel engines a coolant-to-air heat exchanger is also utilized to "pre-cool" the exhaust gases before they are sent to the EGR valve. These cooler exhaust gases help decrease combustion chamber temperatures and replace some of the excess oxygen in the pre-combustion mixture. This results in lower NOx (Nitrogen Oxide) emissions out the tailpipe and into the atmosphere. NOx is a very harmful gas that contributes to ozone depletion. It is essential we keep NOx levels to a minimum.

##### The Result

When the EGR valve is clean (figure 1) and working properly, the engine functions efficiently and NOx emissions are reduced. When fouled (figure 2), increased combustion chamber temperatures result in poor performance and increased NOx levels. It is imperative that the EGR valve is kept clean. Idling should be kept to a minimum and a preventative fluid maintenance program should be incorporated with every fuel fill up to ensure higher cetane levels. This should include a premium OEM quality cetane booster. Failure to do so may lead to costly repairs.



Fig. 1



Fig. 2

### The Solution

**Diesel Power! Performance Improver and Cetane Booster** when added to diesel fuel, increases fuel cetane levels. Higher cetane levels allow for a longer fuel combustion process resulting in a more thorough burning of the fuel. This produces less soot and allows the EGR system to function efficiently. NOx levels are kept to a minimum and performance is maximized. **Diesel Power! Performance Improver and Cetane Booster** utilizes OEM chemistry and meets OEM service requirements. It can be used in all diesel powered light cars and trucks and is available in two convenient sizes to suit customer needs. The larger bottle can be conveniently used for multiple applications.

GM®, Chrysler® and Ford® have all recognized this issue and have either released service bulletins and/or service procedures acknowledging the EGR valve "fouling" issue. For your reference please see attached Ford® bulletin for a thorough explanation of this issue on Ford Power Stroke™ engines.

Diesel Power!™ is a Gold Eagle® product. Gold Eagle® is a recipient of the Ford® Q1 Preferred Quality Award.



**2104 Large Bottle (6/591mL)**  
Treats up to 380 Litres of diesel fuel

**15211 Small Bottle (12/355mL)**  
Treats up to 133 Litres of diesel fuel



Phone: 1-800-461-0781  
Fax: 1-800-511-6311  
order@completelube.com

