
FUEL EFFICIENCY

PRI-D IMPROVES FUEL EFFICIENCY

How PRI-D Enhances Fuel Efficiency: The combustion behavior of diesel fuel has been extensively studied. To summarize, diesel combustion occurs in three stages;

Pre-ignition delay period - the time elapsed between fuel injection and fuel ignition.

The flame period - Ignition is marked by a sharp increase in the temperature. The lowest weight volatiles are quickly consumed. Thermal cracking produces higher weight volatiles – which, owing to their high carbon weight, are only partially combusted. As a result, energy is lost.

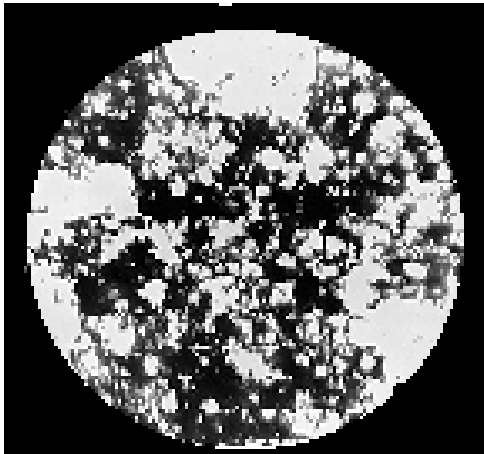
The coke-ignition period – Only a small amount of the solid residue is combusted. The remaining residue quenches combustion, forming deposits on engine components and exhausting in the emissions stream as unburned particulate emissions (soot).

PRI-D contains proprietary thermal stability chemistries that disrupt the thermal cracking process during the second combustion stage. In so doing, **PRI-D** prevents the formation of higher weight volatiles. More fuel is permitted to burn, releasing more BTUs. With more complete combustion, coke formation is also minimized. As a result, deposits and exhaust particulates are dramatically reduced.

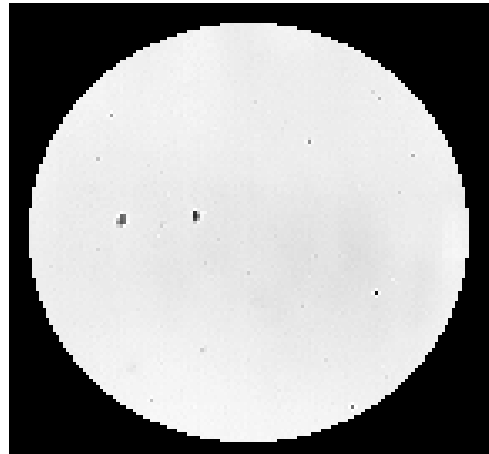


Unburnable coke residue formation during combustion

Efficiency improvements with **PRI-D** vary depending on the fuel. Diesel engine studies at independent engine testing laboratories confirm that efficiency and horsepower improvements with **PRI-D** chemistry vary from 1-to-4 percent.



**UNTREATED:
CARBON FORMS IN COMBUSTION**



**PRI-D TREATED:
CARBON FORMATION PREVENTED**