

## **TECHNICAL BULLETIN**

DATE: 13 JUNE 2023

## Why Ferox is the real and effective solution to Eliminate and Prevent Carbon Deposits in the Engine

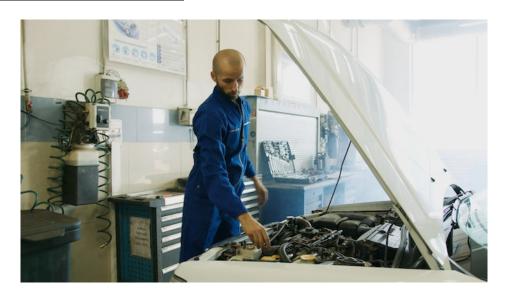
The deposits are mainly carbon and aromatic compounds in a state highly resistant to combustion. Deposits are the source of many associated engine and combustion problems.

The decarbonization of the engine is one of the things that must be taken into account if we do not want to shorten the useful life of our engine, lose power and have an increase in fuel consumption.

Currently, oxyhydrogen gas (HHO) is usually used to decarbonize the engine, as it allows cleaning carbon from any engine (gasoline, diesel, LPG, fuel oil), and can be used in all types of vehicles.

The gas is introduced through the intake, mixing with the air through the filter. When it goes through the tubes and the pieces that are before the combustion chamber, its effect is neutral, **since the process begins when it is combusted**. Subsequently, all the heat generated by the gas, together with the water vapor generated by the combustion, go on to form the exhaust gases that will cause the decarbonization of the engine. Thanks to the combination of high temperatures, water vapor and the affinity of the gas, little by little they will clean all the ducts through which they pass. The EGR valve combustion chamber, the intake, the turbo, the particulate filter, etc.

For best results, it is recommended to perform this <u>decarbonization of the engine between every 15,000</u> and 20,000km (10,000 and 12,500 miles).





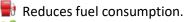


FEROX is a real, effective and economical solution since it addresses this problem at its source, which is bad combustion, it works at the chemical level of the combustion process, accelerating the combustion speed and decreasing the activation temperature of the fuel molecules. and carbon deposits, achieving that more fuel is burned in less time and the deposits at a lower temperature, achieving a more complete and efficient combustion of the fuel, obtaining all its energy instead of sending it to the exhaust or generating more deposits. Ferox promotes the formation of CO2 and faster heat transfer times, so the exhaust will be cooler and will leave less oxygen available to form Sulfur Oxides (SOx) and Nitrogen Oxides (NOx), in addition to eliminating up to 80% of the soot and smoke (Particulate Material – PM2.5-PM10).



With the constant use of FEROX carbon deposits are removed and prevented from forming in the burner or in the combustion chamber and in the fuel injector, ferox interacts with the ends of the aromatic chains and the junctions of the primary fuel particles, leaving no free unions that allow the primary particles to agglomerate during combustion and form new carbon deposits. Removing injector coking deposits is critical to ensuring optimal fuel "atomization" and incylinder fuel injector spray patterns, contributing to more fuel being burned in the engine and fewer emissions in the exhaust, also less carbon and deposits increase the useful life of the oil, spark plugs and contributes to less wear on the engine, or less maintenance costs.

FEROX has a high cost-benefit since, in addition to preventing and eliminating the problem of carbon deposits, it is a product that generates savings and added values such as:



Reduce polluting emissions.

Increase horsepower and torque.

Protects antiparticle filter. (diesel DPF)

Protects the turbocharger.

Longer oil and engine life

Less consumption of DEF/Adblue/Urea

Reduce maintenance costs





If you want to know more about how our catalyst eliminates and prevents carbon deposits, we leave you this link to our technical bulletin:

 $\frac{https://www.rennsli.com/wp-content/uploads/2020/04/How-FEEROX-Solid-Fuel-Borne-Catalyst-works-on-Carbon-Deposits.pdf}{}$ 









CAT 972G Loader Engine Disarmed, 10,000 hrs maintenance (3,000 hrs using FEROX by RENNSLI)



