

RAVENOL®

RAVENOL ADDITIVES -

THE KEY TO THE OPTIMAL
PERFORMANCE OF YOUR CAR



DEPOSITS IN THE COMBUSTION ENGINE

The biggest enemy of all engines, which is as old as the internal combustion engine itself, are deposits in the combustion chamber and the exhaust gas aftertreatment system. Deposits are the result of several chemical and physical processes during combustion and form even with the best quality fuel - although not as quickly as with fuels of undergrade quality - but are nevertheless unavoidable.

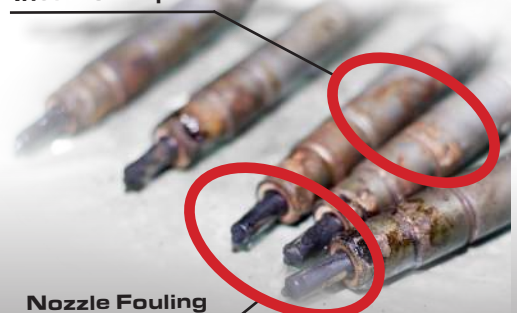
IMPACT ON ENGINE COMPONENTS

Deposits form primarily in the intake system and on the injection nozzles and piston rings. The injection nozzles are highly sensitive to the formation of deposits. In particular, deposits on the injection nozzle lead to a deterioration in the jet pattern and consequently to incomplete, unclean combustion. This results in further problems such as contamination and rapid ageing of the lubricating oil due to combustion products and unburned fuel, increased mechanical wear of the engine and possibly corrosion damage. The use of exhaust gas recirculation systems (EGR) causes the combustion chamber to become increasingly contaminated with the products of unclean combustion, causing the deposits to build up more and more as operation continues. This creates a so called "vicious circle", which not only leads to a considerable reduction in engine performance as well as increased fuel consumption and pollutant emissions, but in the worst case can cause the complete failure of several components of the engine system and very expensive repairs.

IMPACT OF MODERN FUELS AND ENGINES

The use of biofuels and technical developments in the field of engine technology are making the problem even more acute. Modern engines with direct injection systems are particularly susceptible, as the injection nozzles are permanently exposed to high pressure and temperatures. The hole openings are extremely small in order to ensure optimum fine atomization of the fuel. Therefore, even small amounts of impurities are enough to completely block the nozzle openings.

Internal Deposits



Nozzle Fouling

RAVENOL®

SOLUTION THROUGH HIGH QUALITY FUEL ADDITIVES

The best and most user-friendly solution to these challenges and the cheapest problem solver are high-quality fuel additives with special cleaning agents, the so-called Deposit Control Additives (DCA). These will not only effectively remove existing deposits of any type and composition (Clean Up), but also delay or prevent the formation of new deposits (Keep Clean).

By removing the deposits in the intake tract and in the injection systems, optimum combustion is ensured, and the original engine performance intended by the manufacturer is restored. At the same time, clean combustion means a significant reduction in pollutant emissions and fuel consumption.

INJECTOR FUEL ATOMISATION



NO ADDITIVES



WITH ADDITIVES

THANKS TO THE USE OF RAVENOL FUEL ADDITIVES, THE SERVICE LIFE OF ALL FUEL SYSTEM COMPONENTS IS SIGNIFICANTLY INCREASED, AND EXPENSIVE REPAIRS ARE NO LONGER NECESSARY.

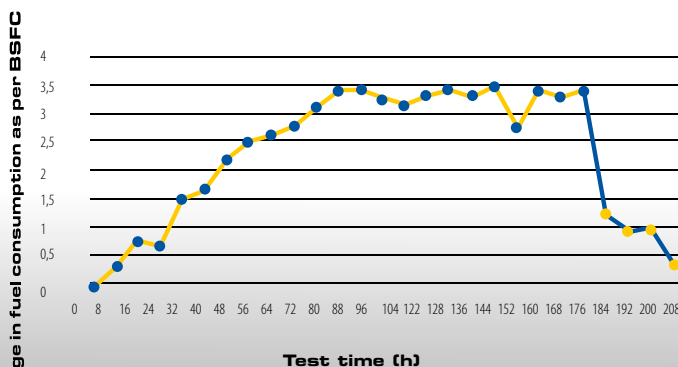
RESTORATION OF ENGINE PERFORMANCE AND TECHNOLOGY

The German lubricant manufacturer, RAVENSBERGER SCHMIERSTOFFVERTRIEB GmbH from Werther/Westphalia, provides specialized high-performance fuel additives under its RAVENOL® brand. Thanks to the use of high-quality active ingredients of the latest generation and the well-thought-out formulations, these can be used in a particularly effective and manner.

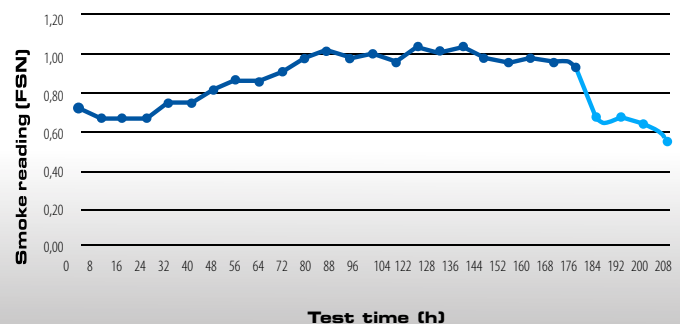
The DCAs used in the cleaning additives of the RAVENOL® brand are characterized by the fact that they are already designed with a focus on all the diverse problems of qualitatively different fuels and modern high-performance injection systems. At the same time, they retain their full effectiveness even with older, conventional fuel injection systems. The effectiveness of these additives has been proven in numerous tests.



FUEL ECONOMY AND EMISSION REDUCTION DIESEL



BSFC is a unit of measurement used to express the consumption of the engine regardless of its size, so that the data can be used to compare the consumption of engines of different power.



FSN is the index that measures the amount of carbon particles (soot) available in the exhaust gas.



RAVENSBERGER SCHMIERSTOFFVERTRIEB GmbH recommends the regular use of high-quality additives in order to bring the car to its maximum performance level, to contribute to a cleaner environment by reducing pollutant emissions and at the same time to save on fuel and repair costs:

RAVENOL PETROL CLEAN EXTREME

Art. 1390207

- INTENSIVE CLEANING - CLEANUP
- RESTORES THE ORIGINAL ENGINE PERFORMANCE
- IDEALLY SUITED FOR BOTH GDI AND PFI INJECTION SYSTEMS



RAVENOL PETROL POWER PERFORMANCE

Art. 1390206

- SUPPORTS STABLE CLEANLINESS OF THE FUEL SYSTEM - KEEPCLEAN
- PROTECTS AGAINST CORROSION AND OXIDATION
- REDUCES FUEL CONSUMPTION AND POLLUTANT EMISSIONS
- ENSURES OPTIMUM ENGINE PERFORMANCE
- IMPROVES THE LUBRICATING EFFECT OF THE FUEL
- IDEALLY SUITED FOR BOTH GDI AND PFI INJECTION SYSTEMS



RAVENOL OCTANE BOOSTER

Art. 1390209

- OCTANE NUMBER (RON) INCREASE
- PREVENTS RE-IGNITION OF THE ENGINE
- INCREASING ENGINE POWER



RAVENOL ENGINE CLEAN PROFESSIONAL

Art. 1390323

- EFFECTIVE CLEANING OF THE OIL SYSTEM FROM SLUDGE AND DIRT DEPOSITS
- RESTORING THE COMPRESSION
- REDUCING OF OIL CONSUMPTION AND WEAR



RAVENOL DIESEL CLEAN EXTREME

Art. 1390247

- INTENSIVE CLEANING - CLEANUP
- RESTORES THE ORIGINAL ENGINE PERFORMANCE
- FOR ALL TYPES OF INJECTION SYSTEMS



RAVENOL DIESEL POWER PERFORMANCE

Art. 1390246

- SUPPORTS STABLE CLEANLINESS OF THE FUEL SYSTEM - KEEPCLEAN
- INCREASES THE CETANE NUMBER
- PROTECTS AGAINST CORROSION AND OXIDATION
- REDUCES FUEL CONSUMPTION AND POLLUTANT EMISSIONS
- ENSURES OPTIMUM ENGINE PERFORMANCE
- IMPROVES THE LUBRICATING EFFECT OF THE FUEL



RAVENOL CETANE BOOSTER

Art. 1390249

- INCREASE IN CETANE NUMBER
- PREVENTS RE-IGNITION OF THE ENGINE
- INCREASING ENGINE POWER



RAVENOL DPF CLEANER

Art. 1390250

- CLEANS THE ENTIRE FUEL SYSTEM
- PROTECTS THE DIESEL PARTICULATE FILTER (DPF) AND SUPPORTS ITS CONSTANT REGENERATION EVEN ON SHORT JOURNEYS AND IN STOP-AND-GO TRAFFIC
- ENSURES OPTIMUM COMBUSTION



DIESEL PETROL ENGINE