Engine leaks oil from

Leaks from valve stem

seals (Exhaust emits

Loss of compression

due to piston rings

Stubborn contaminants

and/or runs unevenly

various seals

blue smoke)

seizing up

in oil circuit

The engine is noisy

Increase in fuel

consumption

Loss of compression

due to excessive wear

High wear at the shaft of

the turbocharger due to

insufficient lubrication

Difficult to shift gear

Noisy transmission/

Transmission leaks oil

from various seals

Engine overheats

Deposits in cooling

Slight leakage of

Loss of coolant over

a prolonged period

Heating does not work

circuit

coolant

sioning

bearings

during the initial commis-

Pro-Line

Pro-Line

Pro-Line

Engine Wear

Pro-Line

Visco-Plus

Pro-Line Engine

Wear Protection

Protection

Pro-Line

Additive

Pro-Line

Pro-Line

Pro-Line

Pro-Line

Injector and Glow

Plug Dismantling Aid

Radiator Cleaner

Radiator Stop Leak K

Turbocharger

Gear Oil Additive

Gear Oil Leak Stop

Engine Flush

Oil Loss Stop

Description: This highly concentrated cleaning additive removes even stubborn

Description: This additive reduces the friction between the bearing points, allowing

Description: Add Visco-Plus + Engine Wear Protection to compensate for wear

additives improve the sealant and wear protection properties of the motor oil.

and/or minimize future wear between the piston rings and cylinder walls. These

Description: Used for the initial filling of new turbochargers in order to protect them against

dry running and damage caused by lack of oil after a change in the running-in phase.

Description: LIQUI MOLY Gear Oil Additive smoothes the surfaces of synchronizers,

Description: To regenerate seals which have lost their sealing ability over the years,

add LIQUI MOLY Gear Oil Leak Stop, which regenerates the seals and improves the

Description: The deposits which reduce the cooling performance are loosened

Description: The polysparkles contained in LIQUI MOLY Radiator Stop Leak K

are deposited between the outside air and the cooling system where leaks are

located - due to the difference in pressure - and plug them safely without the

Handy hint: To avoid long-term damage from deposits in the cooling

circuit, use in the cooling system before replacing components.

by the radiator cleaner, holding suspension, and then flushed out.

which in turn significantly improves the gear shift action. To minimize noise and

Pro-Line Turbocharger Additive before the oil supply line is connected.

further wear, we recommend LIQUI MOLY Gear Oil Additive.

Instructions for use: The oil intake passage of the turbocharger is filled to the brim with

deposits on the piston rings and in the oil system, allowing the engine to run

smoothly again.

for significantly quieter running.

viscosity index of the oil.

need for epoxy.

Bonus benefit: This will allow

fresh motor oil to be fully effective.

PROBLEM-SOLVING IN THE WORKSHOP



Pro-Line Throttle Valve

Recommended product

Pro-Line Fuel Injection Cleaner

Description: The two products together remove even stubborn deposits in the fuel system and intake system, allowing the engine to run smoothly again.

Functional characteristics/Application

Instructions for use: Apply a thin coat of LIQUI MOLY Throttle Valve Cleaner to the intake valves. Keep the engine running and after 2-3 minutes the cleaner removes the loosened deposits in the residual fluid. LIQUI MOLY Fuel Injection Cleaner additive can be added at any time through the fuel tank (minimum content of 30 liters of fuel).

Injection nozzles are covered in deposits

Engine runs irregularly

Loss of compression

due to intake valves

not closing properly

Problem

Delay in throttle response

Emissions values outside

permitted range

Irregular running while idling



Fuel Injection Cleaner

Pro-Line

Description: This highly concentrated cleaning additive removes even stubborn deposits in the fuel system, allowing the injection nozzles to function properly.

Description: This highly concentrated cleaning additive removes even stubborn

deposits in the fuel system, allowing the injection nozzles to function properly.

and/or engine stalling



Pro-Line Throttle Valve Cleaner

Pro-Line

Cleaner

Pro-Line

Diesel System

Description: LIQUI MOLY Throttle Valve Cleaner removes even stubborn deposits in the intake system, allowing the engine to run smoothly again.

Instructions for use: The cleaning fluid is applied by spraying it onto the throttle valve at frequent intervals while the engine is running. This loosens the deposits, which are then burned off.

Handy hint: For stubborn deposits, spray the cleaner sparingly into the throttle valve while the engine is at a standstill and allow the deposits to soak in the fluid for 2-3 minutes.

Injection nozzles are covered in deposits

Engine runs irregularly

Emissions values outside permitted range

Engine is difficult

Increase in fuel consumption

to start

Super Diesel **Additive**

Description: This cleaning additive removes deposits in the fuel system and boosts the cetane number of the fuel. To keep the system clean over a prolonged period, add Super Diesel Additive every 2000 km. This in turn optimizes the combustion performance.

Particulate filter is frequently choked (preventive action)

Pro-Line Diesel Particulate Filter Protection

Description: This additive reduces the burn-off temperature of the soot particles generated by the combustion process and therefore prevents the particulate filter from becoming clogged up. To prevent the diesel particulate filter from becoming repeatedly clogged up, add LIQUI MOLY Diesel Particulate Filter Protection every 2000 km before refueling.

EGR valve indicates there is a fault due to contamination

■ Intake values and/or intake manifold clogged with soot

Pro-Line Intake System **Cleaner Diesel**

Description: LIQUI MOLY Intake System Cleaner Diesel removes even stubborn deposits in the intake system, allowing the engine to run smoothly again. **Instructions for use:** Before cleaning, make sure you have direct access to the relevant components. The entire quantity is then applied to the EGR valve, intake manifold and intake valve by squirting the product onto the components with the engine running at approx. 2500 rpm.

A new diesel filter must be filled with fuel before the

replacement

injectors

Heavy deposits on the

Pro-Line Dieselfilter Additive

Description: To prevent air bubbles in the fuel system after replacing the filter, it is necessary to fill the fuel filter with fuel or with the Dieselfilter Additive before assembly. Increased wear on the high-pressure components during the initial starting is hereby prevented. In addition, the components carrying fuel are also intensively cleaned by the concentrated additive.

Particulate filter is clogged with soot

Automatic regeneration function not active

Pro-Line Diesel Particulate Filter Cleaner

Pro-Line Diesel Particulate Filter Purge

Description: Used in succession, these two highly effective additives clean typical contaminants from the particulate filter.

Instructions for use: Add to the new diesel filter or the cartridge before assembly.

Instructions for use: LIQUI MOLY Diesel Particulate Filter Cleaner is applied to the surface using the pressurised spray gun and the probe through an opening in front of the particulate filter (e.g. pressure sensor or temperature sensor). After approx. 15 minutes, flush the loosened soot out to the exhaust using LIQUI MOLY Diesel Particulate Filter Purge. After cleaning the filter, go through the regeneration process as specified by the manufacturer.

Oil and exhaust gas residues and resinification in the in-

- being removed
- jector shaft prevent injectors
- Corrosion in the injector shaft prevents removal
- Injectors/glow plugs begin to corrode (preventative use)
- Injectors/glow plugs become more difficult to remove (preventative use)



3

Pro-Line Injector and Glow **Plug Grease**

Description: Artly synthetic, metal-free special grease for lubricating injectors and glow plugs before installation in the engine. Blocks the ingress of moisture and so prevents corrosion of the injector and glow plug. The special grease also makes disassembly much easier.

Description: Heavy-duty solvent for seized injectors, glow and spark plugs. Undermines

allow stubborn oil residues, resinification and encrusted dirt to be removed easily.

accumulated dirt and corrosion and enables easy removal. Outstanding cleaning properties

High oil consumption? A solution in just a few steps:



Fuel System Cleaner Cleaner

Gasoline: Pro-Line Fuel Injection Cleaner. 500 ml-Cont., Add entire contents to tank

Diesel: Pro-Line Diesel System Cleaner, 500 ml-Cont., Add entire contents to tank



Step 2 **Intakte System** Cleaner

Gasoline: Pro-Line Throttle Valve Cleaner, 400 ml-Cont., Apply completely

Diesel: Pro-Line Intake System Cleaner Diesel, 400 ml-Cont., Apply completely



Step 3 Cleaning of the motor oil circuit/the piston rings

Pro-Line Engine Flush, 500 ml-Cont., Add entire contents or 15 % of the oil filling quantity

Let engine idle for 15 minutes



Change oil and add additives

Drain off the old oil, take a sample of the old oil if necessary. Change the oil filter. Use motor oil with the highest possible viscosity. Follow the manufacturer's instructions!

Pro-Line Engine Wear Protection, 1 l-Cont., Add 5 % of the oil filling quantity