

**LAVR<sup>®</sup>**

Opening New Roads



LAVR Presentation



# About Us

Modern cars require a lot of care. However, car owners often do not know what it takes to have a long-serving, pleasant-to-ride car.

LAVR knows how to make your car be a pleasure, not trouble; how to drive a million km, not 100k before it needs service.

We produce truly proper car care products for your car.



# Our History

LAVR is one of the leading producers of car care products with 20-year experience of successful work



**2017**

We opened a new 20,000 sq.m. production site that can produce more than 20 million units per annum



**2019**

We opened a new aerosol production site

**2013**

We began shipping to the CIS countries



**2010**

We expanded our range to 140 SKUs and began supplying to 60 regions of Russia



**2007**

We opened a warehouse in Moscow



**1997**

Prof. Aleksandr Lavrik developed a unique formula for engine carbon cleaning



**1999**

We began making two new products: ML202 and ML101



**2001**

We began delivering to five regions of Russia

# Geography

LAVR operates in 14 countries worldwide





# Quality is LAVR's Priority

## Quality begins when you use raw materials only from the world's top chemical suppliers.

Over the years in the car care market, we've built strong partnerships with our supply chain and implemented a robust quality control system for it.

Today, LAVR procures basic solvents from Shell and Russia's premier oil refineries, including Gazpromneft. Surfactants for engine carbon cleaners and other auto chemical products are supplied by AkzoNobel, BASF, Kao Corporation, and Russia's top-notch chemical producers.



# Engine Carbon Cleaners for Piston Rings

## Your engine is in danger!

Most engine failures are due to deposits in the piston system. Under high temperatures, fuel and oil convert into resins, cokes, and carbon deposits that look like dense black crust on the piston and on the walls of the combustion chamber.

## What is Engine Carbon Cleaning?

Engine Carbon Cleaning is preventive cleaning of pistons, piston rings, and combustion chambers that does not involve disassembly. It becomes necessary for natural causes.

Carbon deposits disrupt the engine and increase the wear rate; they may even result in an engine failure.



*Even a thinly deposited layer in the cylinder piston assembly results in a power loss, rendering the car less maneuverable.*



# When Do You Need Engine Carbon Cleaning?



**1** When the engine feels way less powerful

**2** When the acceleration feels clunky and less dynamic

**3** When the engine consumes more fuel and oil than it's supposed to

**4** When the engine starts poorly

**5** When the car fumes a lot



✓ PATENTED FORMULATIONS

## How Do Engine Carbon Cleaners Work?

Pour the agent directly into the cylinders to clean carbon deposits from the contaminated surfaces, compression and oil scraper piston rings.

- Reduces fuel and oil consumption
- Restores engine power
- Extends engine life
- Cleans the piston, the piston rings, and the combustion chamber components



# Why Do We Recommend Lavr Engine Carbon Cleaners?

LAVR is the leader in the domestic market of engine carbon cleaners; it far exceeds its European and Asian counterparts: BG, Mitsubishi Shumma, Xado, etc. How do we do this?



## State-of-the-art research and production facilities

LAVR's product range builds upon the South Ural State University's R&D. Dozens of engineers, chemists, and engine specialists work daily to create and improve formulations.



## A unique product range

Today, LAVR is the world's only producer to offer the entire spectrum of engine carbon cleaners and combustion chamber cleaning products. LAVR engine carbon cleaners have patented formulations.



## Strict quality control

LAVR factory employs continuous multilevel quality control. Raw materials are monitored to comply with European standards; samples are taken for testing at all key production stages, including –pre-packing. Quality is LAVR's priority, and we know no compromise.



### LAVR ML202 Engine Carbon Cleaner

- > Russia's best known engine carbon cleaner
- > Cleans the piston, the piston rings, and the combustion chamber components in 12 hours
- > A soft engine carbon cleaner for slight to medium engine contamination, with little oil consumption



### LAVR ML203 NOVATOR Engine Carbon Cleaner

- > Cleans 100% of resin, coke, and carbon deposits, even if persistent
- > Takes effect in 60 minutes
- > Levels the compression if deviated by up to 25%



### LAVR EXPRESS Engine Carbon Cleaner

- > The first product that does not require oil change after use
- > A fast formula: see the results in 15 minutes
- > One product cylinder is enough to treat 20 car cylinders
- > Suitable for preventing carbon deposition in engines with carbon deposition prone design



### LAVR COMPLEX Foamy Engine Carbon Cleaner

- > For the worst cases of carbon deposition (quantity-wise)
- > Cleans the entire combustion chamber, the compression rings, and the valve collars
- > One product cylinder is enough to handle an engine with a volume of up to 4 liters
- > Perfect for carbon cleaning from V and flat engines



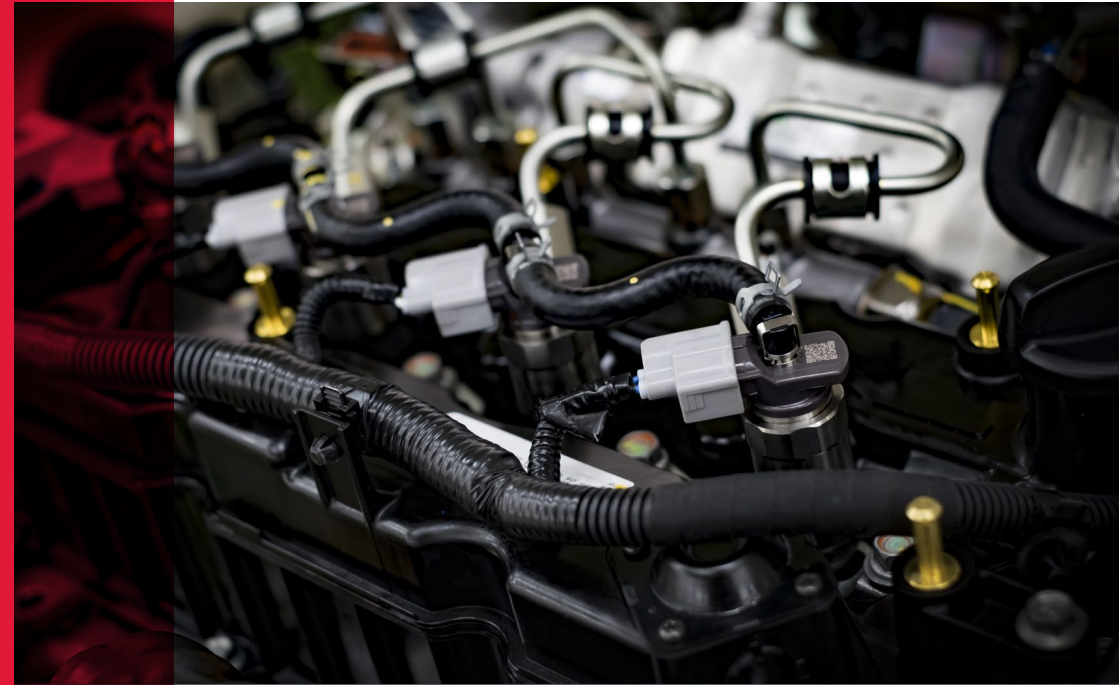
# Injection System Purges

## What's the Problem?

The injection system is a core component of the engine. Better fuel injection precision stands for a healthier engine.

Deposits will build up inside any injector, that's just inevitable. First, the metal parts collect resins and impurities contained in the fuel. Oxidation turns them into a persistent lacquer film. If not addressed asap, the problem will snowball and cause wear and tear of parts; carbon and coke deposits will build up and break the catalyst, there will be problems with starting the engine, etc.

Fuel quality, extreme temperatures, and prolonged downtime in traffic jams are the risk factors that speed up the carbon deposition.



*Even a few microns of deposits reduce the nozzle channel diameter and disrupt the spraying*

# When Do You Need to Clean the Injection System?



**1** When the engine  
consumes more fuel

**2** When you have problems  
starting the engine

**3** When the acceleration  
feels less dynamic

**4** When the engine speed  
is dipping when idling

**5** When the engine is  
noisy and vibrating  
when running





✓ PATENTED  
FORMULATIONS

## How Does the Injection System Purge Work?

Cleaning is performed at service stations. Connect a special cleaning station to feed washing fuel. Running the engine on this fuel will remove the deposits from the nozzles. The procedure takes about an hour.

- Suitable for gasoline and diesel engines of any injection type
- Guaranteed to remove 100% of deposits from nozzles
- Restores the spray pattern
- Reduces fuel consumption
- Eliminates vibrations at idle speeds
- Restores engine power

# Why Do We Recommend LAVR Injection System Purges?

The market of non-disassembly nozzle clean agents is not an oversaturated competitive market, as it has a clear leader, WYNN'S. BG and Liqui Moly also have their fair share. However, LAVR has up to 40% of the market in Russia and the CIS thanks to the quality and competitive pricing of its products



Patented formulations for  
different uses



Wide range and price  
advantage



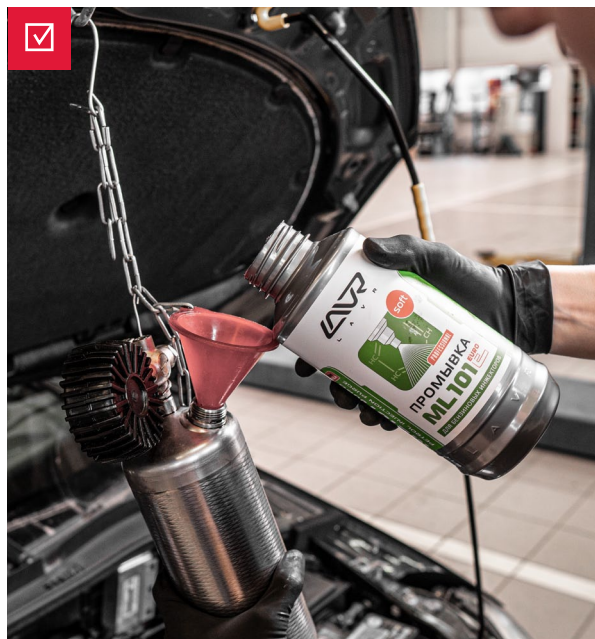
Powerful formula and  
strong engine carbon  
cleaning effect





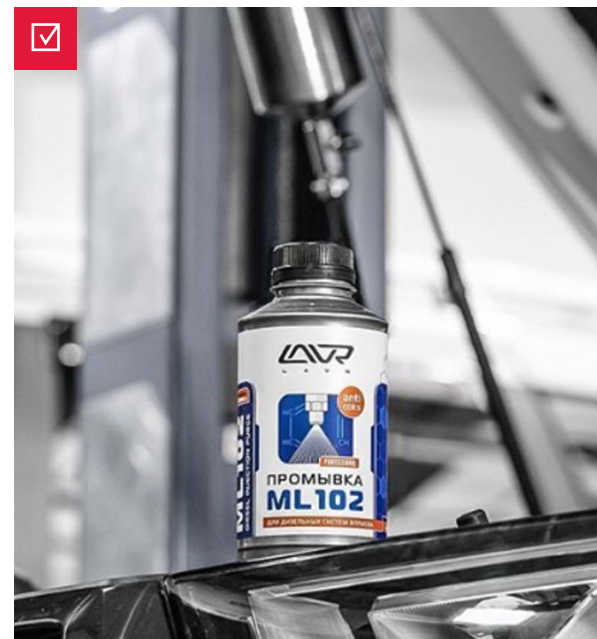
### LAVR ML101 Injection System Purge

- > Efficiently removes carbon deposits from piston rings
- > Levels cylinder compression
- > No oil and spark plug replacement needed



### LAVR ML101 EURO Injection System Purge

- > A EURO standard formulation: affects only the nozzles and has no carbon removal effect
- > No oil and spark plug replacement needed



### LAVR ML102 Diesel Injection System Purge

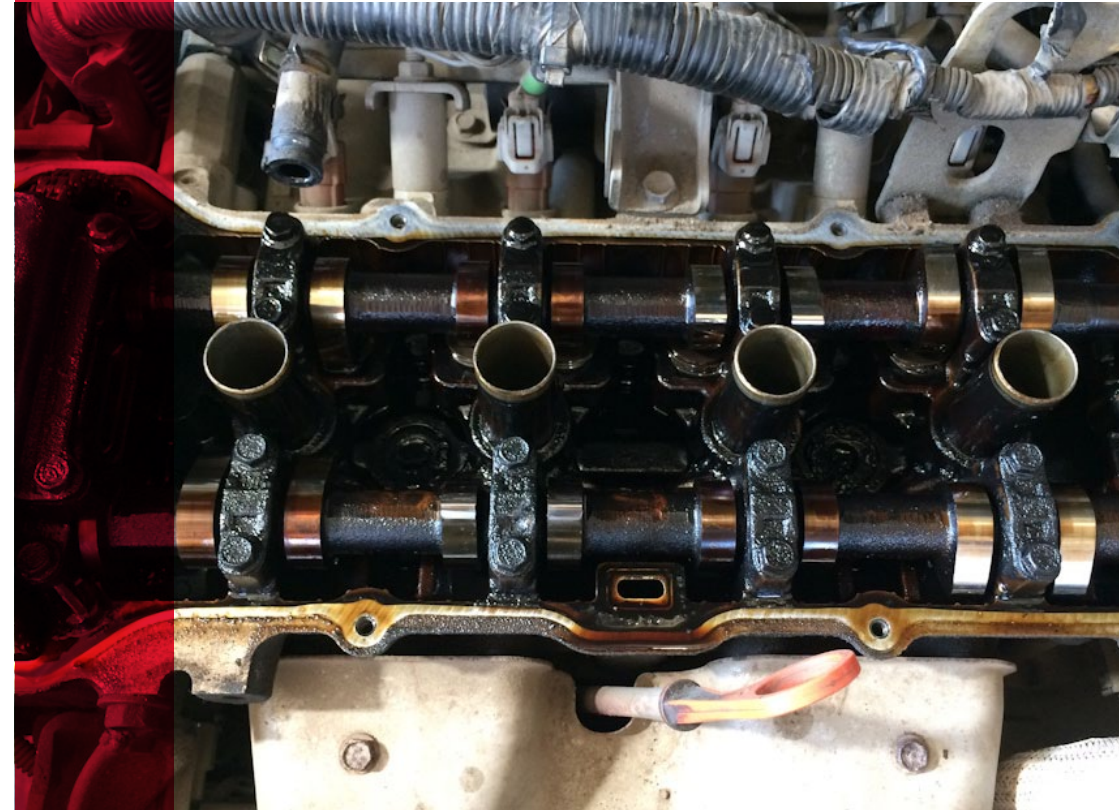
- > Efficiently removes carbon deposits from piston rings
- > Levels cylinder compression
- > No oil replacement needed

# Oil System Flushes

## How Do Deposits Emerge in the Oil System?

Most state-of-the-art engines are designed to run hot, which means the oil there has a maximum operating temperature. Such temperatures cause the oil to oxidize and form a lacquer film in the lubrication system. The film then collects other contaminants: incomplete fuel combustion products, mechanical wear dust, etc. Over time, the film will turn into a solid deposit.

Engine oil circulation is disrupted, and the parts are wearing faster. If the deposits start to peel off, a serious engine failure may occur.



*This will disrupt the engine lubrication cycle causing faster wear and tear; deposits may even break the engine*



# When Do You Need to Flush the Motor?



**1** When the engine  
consumes more fuel

**2** When you have problems  
starting the engine

**3** When the acceleration  
feels less dynamic

**4** When speeds are dipping  
while idling; the engine is  
noisy and vibrating when  
running



## How Do the Oil System Flushes Work?

LVR flushes for the lubrication system are recommended for use each time you replace the lubricant. Add an express flush to your old oil and run the engine at idle speeds for as long as the package specifies. If using a soft flush, add it 150 to 200 km before replacement and use the car normally.

- Remove lacquer, bituminous, and salvelike deposits as well as the engine wear products
- Prevent carbon deposition on piston rings
- Prevent the sticking of hydraulic compensators and hydraulic tensioners
- Renew rubber lip seals and gaskets
- Reduce the amount of undrainable residual oil by >50%
- Extend the service life of new oil
- Prevents dry friction at start
- Compatible with any engine, oil, or additive package



# Why Do We Recommend LAVR Motor Flushes?

LAVR express flushes have a 17-20% share in the domestic market and compete successfully against Hi Gear or Liqui Moly at a budget-friendlier price



A wide range of flushes,  
some of which are one-of-  
a-kind



Competitively priced and  
increasingly popular  
with car enthusiasts and  
professionals



Patented formulations  
proven efficient



### LAVR Classic 5-Minute Motor Flush

- Oil serves 10% to 20% longer thanks to a smaller undrainable residue
- Prevents carbon deposition on piston rings



### LAVR Classic++ 5-Minute Motor Flush for Commercial Transports

- For regular cleaning of any truck diesel engine or construction machinery
- Contains a viscosity-adjusting agent to protect the engine from galling



### LAVR 200-km Soft Motor Flush

- For most gentle flush, add this agent 200 km before replacing the oil
- Gently removes any deposits from the oil system, including coke





### LVR Lux 7-Minute Motor Flush

- > For turbocharger- and VVT-equipped engines, high-performance engines, flat and V engines
- > Applicable to engines that have long been unwashed



### HIGH TRAFFIC 10-Minute Motor Flush

- > A special formulation for urban driving
- > A stronger carbon remover
- > Prevent the sticking of hydraulic compensators and hydraulic tensioners



### POWER SAFE 10-Minute Motor Flush

- > A special formulation for engines with mileage of >150k (km)
- > Penetrates efficiently to clean all the internal hydraulic drives and tensioners
- > Higher concentration of cleaning and anti-galling additives

# Cooling System Flushes

## What's the Problem?

A coolant performs worse as it ages. This will cause a buildup of harmful deposits in the cooling system: scale, rust, antifreeze decomposition products, etc.

That disrupts coolant circulation and heat transfer, resulting in worse engine performance and faster wear and tear of parts.



*Cooling system disruptions are quick to affect the engine, as it overheats and boils, with its components failing faster.*



# When Do You Need to Flush the Cooling System?



**1** When the engine overheats frequently

**2** When the pump is failing

**3** When the response to rheostat signals is slow

**4** When the heater is failing

**5** When the cooling fan is running continuously



## How Do the Cooling System Flushes Work?

LAVR washes and radiator sealants are professional products for cooling system maintenance. Our experts strived to perfectly balance the cleaning properties and safety when formulating the products. This is why LAVR agents perform well while not jeopardizing the engine.

### Four components that fail first

- > Cooling radiator
- > Heating radiator
- > Pump
- > Thermostat



# Why Do We Recommend LAVR Cooling System Flushes?

LAVR offers a range of high-performance cooling system flushes, including bicomponent formulations that will remove any contaminants. This means we can compete with Hi Gear and Liqui Moly, the global leaders, in quality while withstanding the pressure of cheap 3TON and Fillinn products



A good balance of  
price and quality



Patented formulations  
that have a comprehensive  
targeted effect



Based on raw materials  
from the world's premier  
suppliers



### Classic Cooling System Flush

- > Prevents the engine from overheating
- > Completely cleans any cooling system
- > Extends the service life of antifreeze by 30-40%
- > Contains a corrosion inhibitor



### Classic Cooling System Flush for Commercial Transports

- > Removes deposits efficiently and safely. Prevents the engine from overheating
- > Extends the service life of antifreeze by 30-40%
- > Extends the service life of radiators, pumps, and thermostats
- > Contains a corrosion inhibitor



### Synthetic Cooling System Cleaner

- > Extends the service life of antifreeze by 30-40%
- > Removes scale, coolant decomposition products, oil traces, and rust
- > Extends the service life of radiators, pumps, and thermostats



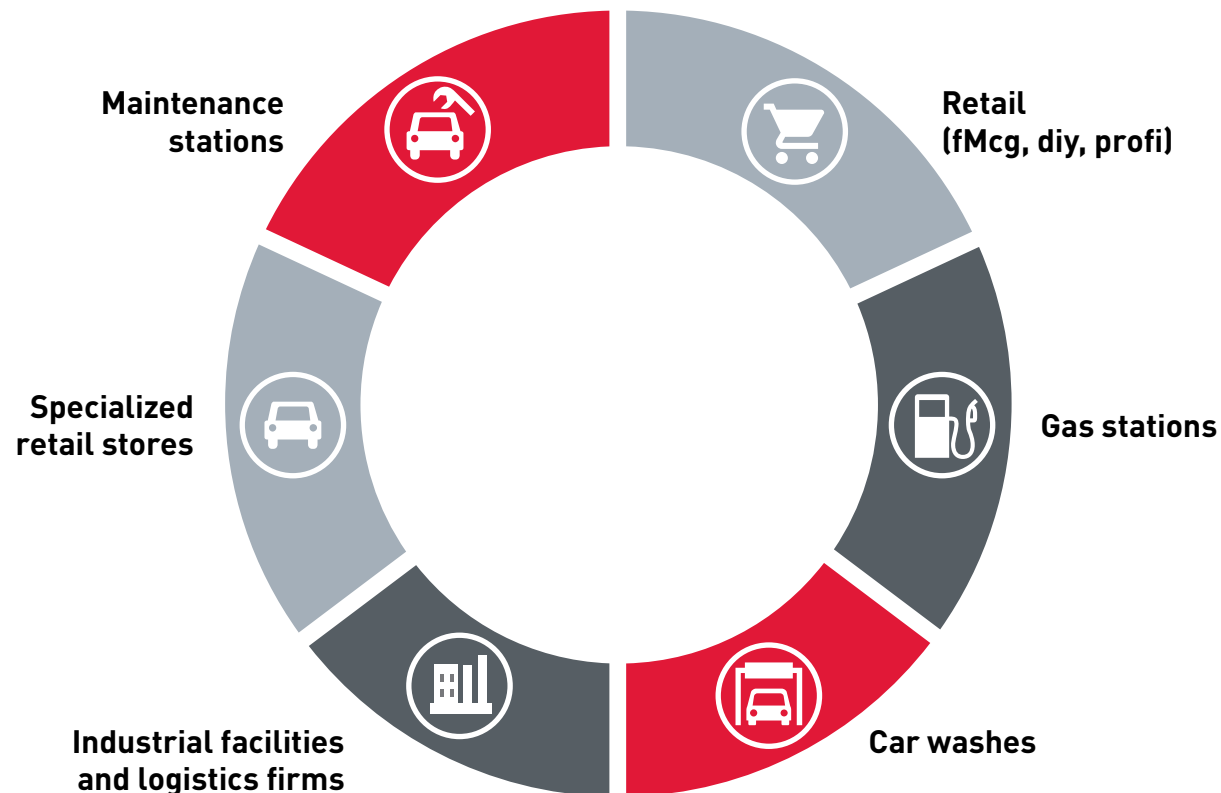
### Complete Cooling System Cleaner Kit 1&2

- > Bicomponent kit for total cleaning of badly contaminated cooling systems
- > Completely removes any bad combined contamination
- > Normalizes heat exchange and prevents the engine from overheating



# LAVR's Present in Any Distribution Channel

LAVR seeks not only geographical, but also distributional expansion



# Why Consumers Choose LAVR

30 million motorists have chosen LAVR of any other car care and cosmetics supplier

## A Professional Approach

01

LAVR car care products are developed by engine design and chemistry experts. All products are subject to multiple tests and rigorous quality control

## European Raw Materials

02

LAVR agents compete with the world brands in terms of quality at budget-friendlier prices thanks to well-thought pricing policies and the opportunities of the Russian market

## Unconditional Performance

03

However extremely you run your car, LAVR products just work

## Focus on Trends

04

We continue to improve the formulations and expand the product range. The car and car-care markets are developing—and so are we





The Lavr Company  
Manufacture of auto chemicals  
and car cosmetics since 1997

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