

# Technical Information



## Pro-Line Direct Injection Cleaner



Pro-Line Direct Injection Cleaner can be used during every inspection and is recommended by LIQUI MOLY as an alternative to Opel OEM part number 95 599 923 (Opel Technical Service Bulletin 3319).

### Properties

- considerably reduces the risk for damage to the engine due to LSPI
- polyetheramine technology
- excellent cleaning effect
- cleans the combustion chamber and injectors
- outstanding engine cleanliness
- cleans the fuel system

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### What is special about our Pro-Line Direct Injection Cleaner?

The Pro-Line Direct Injection Cleaner optimally cleans the fuel system, engine, combustion chamber and injectors through active polyetheramine (PEA). PEA is a chemical compound class that is used in fuel as an additive. Polyetheramines are known for their good cleaning performance in the event of deposits in the combustion chamber and on the outside of the injectors.

### Why is the Pro-Line Direct Injection Cleaner needed instead of a different additive?

Modern turbocharged gasoline direct injection engines have a highly stressed injection system. The injection valves are positioned directly in the combustion chamber and thereby exposed to extreme loads (high temperature and pressure). Deposits form quickly at the nozzle outlet opening that negatively influence the spray pattern or even cause the formation of larger droplets. This leads to poor emissions and fuel consumption values or even to knocking combustion which in turn can cause engine damage. The use of active PEA achieves the greatest cleaning effect in the fuel system as well as excellent piston and combustion chamber cleanliness.

### What happens when you add the new Pro-Line Direct Injection Cleaner?

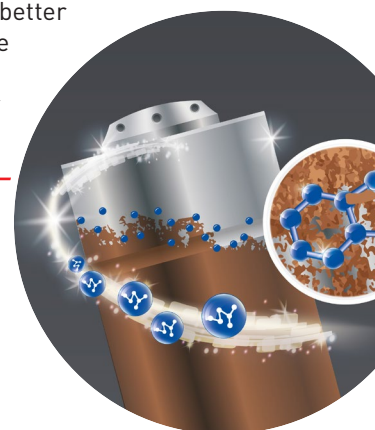
By cleaning the injection nozzles, the fuel consumption is reduced and the engine performance improved after the first application. Polyetheramine not only removes existing deposits, it also helps to form long-term protection against carbon deposits. Regular application (every 5,000 km) achieves even better results and considerably reduces the risk of damage to the engine through low-speed pre-ignition (LSPI) thanks to excellent piston and combustion chamber cleanliness.

### Is Pro-Line Direct Injection Cleaner suitable for manifold fuel injection?

The additive is suitable for all passenger cars with 4-stroke gasoline engines. Our fuel additives are suitable for all injection variants, whether direct injection or manifold fuel injection.

### How much Pro-Line Direct Injection Cleaner is required?

A 120 ml can is formulated for 30 l to max. 50 l of fuel. Mix the contents of the can with the fuel. Mixing takes place automatically. For the ideal effect, add to the fuel every 5,000 km at the earliest.



Part no.	Product	Cont.	Type of container	Language	PU
21281	Pro-Line Direkt Injection Reiniger	120 ml	Can sheet metal	D-GB	6
21373	Pro-Line Direct Injection Cleaner	120 ml	Can sheet metal	DK-N	6
21374	Pro-Line Direct Injection Cleaner	120 ml	Can sheet metal	S-FIN	6