



### **C**eramizer®

rejuvenate used engines and protect them





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### Introducing Ceramizer®

Ceramizer® is an innovative new oil additive that uses unique "nano" technology to rejuvenate used engines and protect them from every day wear and tear.

Ceramizer® is easy to use, cost effective and unlike other products it really does work.

There are hundreds of customer testimonials backing up the efficiency of our product.

Contact your local distributor for a copy of the testimonial book.



# 2. Conventional oil additive technology

Conventional oil additives produce only temporary benefits to the engine and can actually cause damage in the long term.

There are many products on the market that claim to recondition and protect your engine. Most are based on oil thickening technology or PTFE technology-there are two main groups.





# Most products are based on oil thickening technology or PTFE technology

How do they work?

#### Thickeners:

The thickened oil temporarily fills up micro cracks making mechanisms sound quieter and reducing oil consumption.

Unfortunately these thickeners break down in normal use and the oil thins down returning the engine to its pre-treated condition.

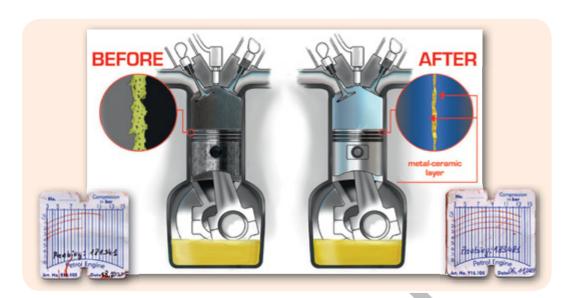
#### PTFE

Common name you all probably know is Teflon®, but let's not call it this way, because that is registered trademark.

DuPont, who invented Teflon® claims that "Teflon® is not useful as an ingredient in oil additives or oils used for internal combustion engines"

### Why?

Because PTFE is solid which seems to be even more (compared to thickeners) inclined to coating and clogging non-moving parts, like oil passages and filters. According to NASA solids in the oil act as a dam, which simply blocks the oil from entering. Instead of helping, it is actually depriving parts of the lubricant.





### 3. How does Ceramizer® work?

Ceramizer® is based on unique "nano" technology that will rebuild and restore worn surfaces by covering them with a ceramic-metal coating.

Ceramizer® contains microscopic particles of a specially developed material which will bond to metal particles present within the engine oil-originating from normal wear and tear.

These particles then bond to any steel or cast metal surface undergoing friction by a scientifically proven process called "selective transfer".

A worn surface is therefore effectively rebuilt using a highly lubricating protective layer of ceramic and metal particles.

This coating is highly durable and will last up to 40 000 miles even after an oil change.

# 4. "Selective Transfer" - The technology behind Ceramizer®

Selective Transfer was originally discovered by Russian geologists.

While drilling exploratory bore-holes for the oil industry they noticed that when drilling through certain ground layers the drills were becoming sharper rather than becoming blunt.

Professor D.N Garkunow with his research team (G.P Shepenkov, W.J Matioshenko, A.A Polijakow) conducted a number of tests and discovered the phenomenon of "selective transfer" whereby, under certain conditions, a particle can be transferred to a 'working' surface by electrostatic charges.

This discovery was awarded the 2006 Golden Prize by the British Institute of Mechanical and Engineering and the concept of "selective transfer" has since been widely tested and adapted for use in automotive and military applications, particularly with East European Air Forces.



### 5. Products

### CERAMIZER® for 4-stroke combustion engines



### Principal benefits of application of Ceramizer® product:

- Decreases oil consumption and lengthens operating time between oil changes.
- Decreases fuel consumption from 3% to 15 %.
- Reduces noise and vibration level, increases the power of the engine.
- Equalizes and increases compression pressure in cylinders.
- Reconditions and protects friction surfaces.
- Improves engine start especially at low tempera-
- Applicable both for engine regeneration and as a measure of protection of engine against possible damage (particularly in heavily exploited units).

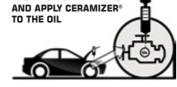
The process of regeneration and build-up of ceramic layer takes place automatically, already after 200 km /125 miles from the moment of adding of the product to oil benefits are noticeable. Cost of regeneration of engine with the use of Ceramizer® is many times lower than in case of disassembly and overhaul of the mechanical unit.

#### **APPLICATION**

1. WARM UP THE ENGINE



4. AVOID DYNAMIC DRIVING FOR THE FIRST 200 km / 125 miles



2. SWITCH OFF THE ENGINE



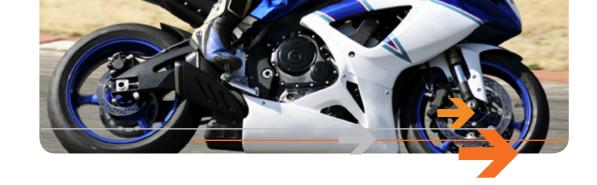


3. START THE ENGINE

5. DO NOT CHANGE OIL BEFORE MAKING THE FIRST







### CERAMIZER® for motorcycle engines (4-stroke) with wet clutch



### Principal benefits of application of Ceramizer® product:

- Regenerates friction surfaces, which causes, reduction of fuel consumption (from 3 to 15%) and consumption of oil.
- Reduces noise and vibration level, increases the power of the engine.
- Equalizes and increases compression pressure in cylinders.
- In engines possesing lubrication system which is common with a gearbox (most four-stroke motorcycle engines), Ceramizer® improves fluency of gear change and increases the durability of the mechanisms, even up to 5 times.
- Protects engine against corrosion (important during the wintering of motorcycle).
- Improves engine start especially at low temperatures.
- Applicable both for purposes of engine regeneration and as protection.

The process of regeneration and build-up of ceramic layer takes place automatically, already after 200 km /125 miles from the moment of adding of the product to oil benefits are noticeable. Cost of regeneration of engine with the use of Ceramizer® is many times lower than in case of disassembly and overhaul of the mechanical unit.

#### **APPLICATION**

1. WARM UP THE ENGINE



AND APPLY CERAMIZER®

2. SWITCH OFF THE ENGINE 3

3. START THE ENGINE





4. AVOID DYNAMIC DRIVING FOR THE FIRST 100 km / 62 miles



5. DO NOT CHANGE OIL BEFORE MAKING THE FIRST







### CERAMIZER® for 2-stroke engines



### Principal benefits of application of Ceramizer® product:

- Regenerates engine surfaces which are subjected to friction (dismantling unnecessary).
- Reduces fuel consumption by 3 to 15%, oil consumption, vibrations and noise, smoke, toxic substances emission, minimizes friction.
- Increases compression pressure on cylinders, prolongs engine life and enhances vehicle dynamics. It improves gears switching in case of shared lubricating system for engines and gearbox.
- Protects the engine and rear axle against wear and tear.
- Ensures quiet engine operation.
- Efficient in recreation and sport machines.

### APPLICATION - FIRST PHASE - Ceramizer® with the one litre of oil

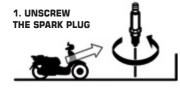
1. MIX CERAMIZER® WITH 1L OF TWO-STROKE OIL AND THEN POUR THE MIXTURE INTO THE FUEL TANK



2. USE THE VEHICLE FOR 700 km / 430 miles



### SECOND PHASE- Ceramizer® into cylinder

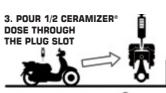


4. TURN THE
CRANKSHAFT
CLOCKWISE
CONTINOUSLY
FOR SEVERAL
SECONDS



5. REPEAT STEPS

2 → 3 → 4





7. START THE ENGINE





### CERAMIZER® for Truck Engines



### Principal benefits of application of Ceramizer® product:

- Regenerates engine surfaces which are subjected to friction and protects them.
- Decreases oil consumption and lengthens operating times between oil changes.
- Decreases fuel consumption from 3 to 15 %.
- Reduces noises and vibration level, inceases the power of the engine.
- Equalizes and increases compression pressure in cylinders.
- Improves engine start especially at low temperatures.
- Applicable both for engine regeneration and as a measure of protection of engine against possible damage (particularly in heavily exploited units).

The process of regeneration and build-up of ceramic layer commences automatically, already after 200 km/125 miles from the moment of adding of the product to oil benefits are noticeable. Cost of regeneration of engine with the use of Ceramizer® is many times lower than in case of disassembly and overhaul of the mechanical unit.

#### **APPLICATION**

1. WARM UP THE ENGINE TO THE TEMP. OF 80-90°C



4. AVOID DYNAMIC DRIVING FOR THE FIRST 200 km - 125 miles (MAX 1600 rpm.)





5. FOLLOWING MAKING 200 km, DRIVE AT ANY SPEED

3. RUN THE ENGINE AT STANDSTILL FOR 15  $\min$  .



6. DO NOT CHANGE OIL BEFORE MAKING THE FIRST 1 500 km/ 930 miles

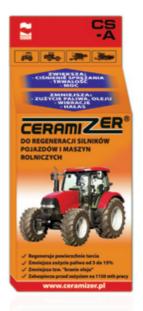








### CERAMIZER® for Agricultural Machine Engines



### Principal benefits of application of Ceramizer® product:

- Regenerates engine surfaces which are subjected to friction and protects them.
- Decreases oil consumption and lengthens operating times between oil changes.
- Decreases fuel consumption from 3 to 15 %.
- Reduces noises and vibration level, inceases the power of the engine.
- Equalizes and increases compression pressure in cylinders.
- Improves engine start especially at low tempera-
- Applicable both for engine regeneration and for protection of engine against possible damage (particularly in heavily exploited units).

The process of regeneration and build-up of ceramic layer commences automatically, already after 5 working hours (mth) from the moment of adding of the product to oil benefits are noticeable. Cost of regeneration of engine with the use of Ceramizer® is many times lower than in case of disassembly and overhaul of the power unit.

#### **APPLICATION**

1. WARM UP THE ENGINE





3. RUN THE ENGINE AT STANDSTILL



4. AVOID DYNAMIC DRIVING FOR THE FIRST 3,5 mth



5. FOLLOWING MAKING 3,5 mth,

**DRIVE AT ANY SPEED** 

6. DO NOT CHANGE OIL BEFORE MAKING THE FIRST 25 mth





### CERAMIZER® for gearboxes, rear axles, reducers



### Principal benefits of application of Ceramizer® product:

- Facilitates gear change (particularly in case of shifting difficulty).
- Lowers noise level of gearboxes, joints, transmissions and adapters.
- Prolongs durability of mechanisms up to 5 times - which is particularly useful in case of competition vehicles, where transmissions are subjected to far greater stresses.

Cost of regeneration of gearbox with the use of Ceramizer® is many times lower than in case of disassembly and overhaul of the unit.

#### **APPLICATION**

1. WARM UP THE GEARBOX



2. SWITCH OFF THE ENGINE **AND APPLY CERAMIZER®** TO THE GEARBOX OIL

3. DRIVE THE VEHICLE FOR 10 km / 6 miles



4. DRIVE THE VEHICLE FOR 200 m / 18 yards ON REVERSE GEAR







# CERAMIZER® for Truck Manual Gearboxes and Rear Axles



### Principal benefits of application of Ceramizer® product:

- Regenerates gearbox surfaces which are subjected to friction, strenghtens and protects them.
- Facilitates gear change (particularly in case of shifting difficulty).
- Lowers vibration and noise level of gearbox.
- Stops and prevents gearbox pitting.

Cost of regeneration of gearbox with the use of Ceramizer® is many times lower than in case of disas -sembly and overhaul of the unit.

### **APPLICATION**

1. WARM UP THE GEARBOX, REAR AXLE BY MAKING 10 km/ 6 miles



3. DRIVE THE VEHICLE FOR 10 km/6 miles AT SPEED UP TO 90 km/56 miles



5. FOLLOWING MAKING THAT DISTANCE, DRIVE AT ANY SPEED



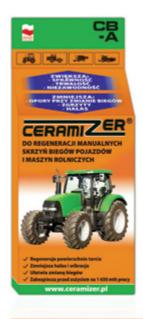


4. DRIVE THE VEHICLE FOR 200 - 300 m (18-27 yards) ON REVERSE GEAR





# CERAMIZER® for Agricultural Machine Manual Gearboxes and Rear Axles



### Principal benefits of application of Ceramizer® product:

- Regenerates gearbox surfaces which are subjected to friction, strengthens and protects them.
- Facilitates gear change ( particularly in case of shifting difficulty ).
- Lowers vibration and noise level of gearbox.
- Stops and prevents gearbox pitting.

Cost of regeneration of gearbox with the use of Ceramizer® is many times lower than in case of disassembly and overhaul of the unit.

### **APPLICATION**

1. WARM UP THE GEARBOX BY OPERATING FOR A FEW km OR 0.5 mth



3. DRIVE THE VEHICLE FOR A FEW km OR 0,5 mth



5. FOLLOWING MAKING THAT DISTANCE, DRIVE AT ANY SPEED



2. TURN OFF THE ENGINE AND APPLY CERAMIZER®

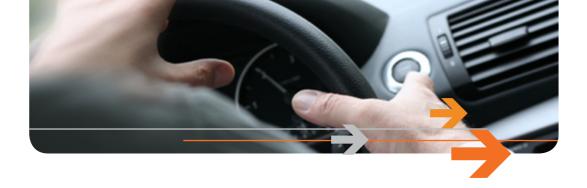
4. DRIVE THE VEHICLE FOR 100 - 300 m (9-27 yards) ON REVERSE GEAR



6. DO NOT CHANGE OIL BEFORE MAKING THE FIRST 25 mth







# CERAMIZER® for hydraulic power steering systems



### Principal benefits of application of Ceramizer® product:

- Reconditions and protects hydraulic power steering systems.
- Improves driving comfort due to reduction of steering resistance.
- Maintains both new and used devices in best possible shape.
- Protects against corrosion and aggressive chemicals (especially important when lower quality oil is used).

Ceramizer® regenerates and protects the steering assistance system, greatly enhancing reliability of the mechanism.

### **APPLICATION**

1. WARM UP THE ENGINE

2. SWITCH OFF THE ENGINE AND APPLY 1/2 CERAMI-ZER'S® UNIT VOLUME TO POWER STEERING FLUID 3. START THE ENGINE



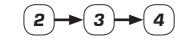




4. TURN THE STEERING WHEEL TO THE LEFT AND RIGHT SEVERAL TIMES

10 min

5. REPEAT STEPS



6. DO NOT REPLACE POWER STEERING FLUID BEFORE MAKING THE FIRST 1500 km / 930 miles





# Product for upgrading and improvement of fuel quality



### Principal benefits of application of Ceramizer® product:

- Increases the power and mechanical efficiency of the engine.
- Keeps the engine clean (removes sludges from the combustion chamber).
- Improves engine start especially at low temperatures.
- Reconditions the fuel feeding system during exploitation.
- Decreases exhaust emissions of toxic gases, CO up to 50%.

Product for upgrading and improvement of fuel quality.

### **APPLICATION**

1. SWITCH OFF THE ENGINE



2. POUR CERAMIZER® INTO A NEAR-EMPTY FUEL TANK



3. FILL THE VEHICLE'S FUEL TANK WITH 25-40 LITRES OF FUEL





### SETS

We also offer sets which are in more attractive prices than individually purchased products.

We especially recommend Set No 4 – for comprehensive protection and regeneration of the main mechanisms in cars.



Set number	Products in the set	Recommendation
Set no 1	1 engine, 1 gearbox, 1 fuel	the most versatile set for the protection and regeneration of the drive system
Set no 2	1 engine, 2 x gearbox, 1 fuel	especially recommended for comprehensive regeneration and protection of the drive system with differential
Set no 3	2 x engine, 1 gearbox, 1 fuel	recommended for regeneration and protection of older and heavily exploited cars
Set no 4	1 engine, 1 gearbox, 1 fuel, 1 hydraulic power steering systems	comprehensive protection and regeneration of the main mechanisms in cars
Set no 5	1 engine, 1 fuel	recommended for comprehensive regeneration and protection of engine and fuel supply system
Set no 6	1 motorcycle engine, 1 fuel	recommended for regeneration and protection of engine and fuel systems in motorcycles



### Which Ceramizer® should be used in which mechanism?

Ceramizers® are innovative products to regenerate and protect surfaces subjected to friction of mechanisms presented in the table below:

Mechanism	Use Ceramizer® with symbol	Full name of product
Four-stroke combustion engine	CS CS-C CS-A	Ceramizer® for 4T engines Ceramizer® for Truck Engines Ceramizer® for Agricultural Machine Engines
Two-stroke combustion engine	CM-2T	Ceramizer® for 2T engines
Manual gearbox	CB CB-C CB-A	Ceramizer® for gearbox Ceramizer® for Truck Manual Gearboxes Ceramizer® for Agricultural Machine Manual Gearboxes
Inventory transmission, rear axle	СВ	Ceramizer® for gearbox
Motorcycle combustion engine (four-stroke)	CM	Ceramizer® for motorcycle
Motorcycle gearbox	CM	Ceramizer® for motorcycle
Reducer	CB CB-C CB-A	Ceramizer® for gearbox Ceramizer® for Truck Manual Gearboxes Ceramizer® for Agricultural Machine Manual Gearboxes
Hydraulic power steering system	CK	Ceramizer® for hydraulic power steering
Fuel supply system	СР	Ceramizer® for fuel
Plain bearing	СВ	Ceramizer® for gearbox
Piston compressor	CS	Ceramizer® for 4T engines
Constant velocity universal joint	СВ	Ceramizer® for gearbox
Hydraulic systems	CK	Ceramizer® for hydraulic power steering
Automatic gearbox	Don't use	Don't use

If you have any other questions about using Ceramizer® in different mechanisms - please e-mail us at: office@ceramizer.com



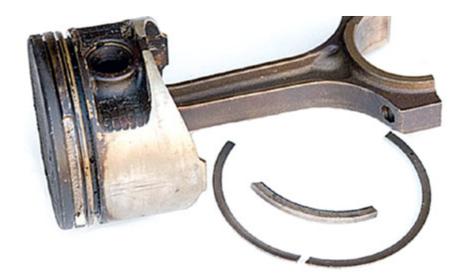


# 6. Ceramizer<sup>®</sup> is designed to restore not repair

Ceramizer is not a remedy to every situation.

It will not help in the case of:

- mechanical damage such as cracked piston rings, broken tine of cogwheel;
- damaged head gasket, distorted valves, etc.;
- excessive wear of mechanism, for example when oil consumption in engine is over 1 litre per 1000 km/1 litre per 620 miles;
- excessive wear of non-metalic elements like valve seals which are made of rubber;
- major oil leaks;
- excessive fuel consumption caused by disability of the ignition system (defective timer-distributor, coil, ignition cables, ignition plugs, etc.);
- incorrect engine regulation for example noisy valves which should be adjusted;
- leak (for example burned) seat face of a valve;
- engine overheating such as tempering of piston rings;
- cracked piston rings in this case Ceramizer will not help and reparation is necessary.





### 7. Ceramizer® is 100% safe

Ceramizer® products contain no Teflon®, lead, molybdenum, which clog oil ducts and filters.

Particles are so small they pass through any filter within the engine and will not adhere to or clog non wearing surfaces.

The nano-particles used in Ceramizer $^{\circ}$  are approximately 2 microns in size and will easily pass though filters which typically filter down to 5 microns.



In addition, these particles will only form a ceramic-metal protective layer where surfaces are subject to abrasive stress. This does not include oil ducts and filters.

### 8. Fast and Easy to use

Ceramizer<sup>®</sup> is easy to use and requires no mechanical expertise, special tools or disassembly of engine or any other mechanical units.

Simply run the engine to warm the oil and then add the product through the oil filler cap.

Ceramizer® is supplied pre-packaged in an easy to use syringe for fast and accurate dosing.







### 9. Ceramizer Ltd - The company behind Ceramizer®

Ceramizer Ltd (formerly Vidar) was established in 1996 and during 16 years has gained an enviable reputation for product performance and quality.

All of our products are made in Poland to the highest standards of chemical/ automotive industry and their effectiveness has been proven in many independent tests conducted by institutes like Polish Air Force Technical Institute, Industrial Motorization Institute, Steelworks Academy in Poland and more.

Ceramizer® is currently being marketed in many countries around the world including: UK, France, Slovakia, Malaysia, Ireland.

### 10. What are the benefits of selling Ceramizer® in my store?

- Wide and favorable market to address the product. In these uncertain economic times with everybody tightening their belts-Ceramizer® provides a reliable and cost effective solution. Ceramizer® saves money on repairs.
- Your contact date will be placed on our web site distributor directory, which again is a big support for your sales
- Customers looking for Ceramizer® most likely will buy other products from your assortment.
- You will be introduced to a discount system when entering into our distribution structure.

To order Ceramizers® and discuss terms of cooperation, please contact your local distributor or directly the Ceramizer HQ in Poland- in case there is no distributor in your country.

The list of distributors worldwide is available on:

www.ceramizer.com/distribution.html



### 11. Questions

#### **Common questions**



### Will your product reduce high oil consumption (over 2litres per 700

Very high oil consumption is usually the result of extreme wear or damage and as such Ceramizer® is unlikely to be effective though it will not make things worse either.



### Can I use Ceramizer® to eliminate oil leaks from the engine and/or

Ceramizer® will not be effective against most oil leaks as they are caused by wear and tear effects to rubber seals and non-metallic gaskets.



#### Will Ceramizer® reduce tappet noise?

Ceramizer® will reduce tappet noise created by worn surfaces and results should be apparent soon after the initial application.

It will not be effective at reducing noise created by incorrectly set tappets or heavy carbon deposits.



#### Does it matter what type of oil I use (synthetic, semi, mineral)?

Ceramizer® does not react with or change the lubrication properties of the oil. It is therefore safe to use with any oil type.



🖞 I had major work done on engine-bearing rings, bearings' caps changed together with head cylinder skimming. After what mileage should I use/add Ceramizer®?

We recommend that you allow at least 1875 miles before using Ceramizer®.



Within next 800 miles I need to change oil in the engine. Is it a good time to apply Ceramizer® or should I add it after oil change?

The Ceramization process needs approximately 950 miles to be fully effective. We would therefore recommend adding Ceramizer® to the fresh oil.



#### Has Ceramizer® influence on turbo charger ever been tested?

Yes, a number of tests have been conducted and Ceramizer® has been found to improve turbine efficiency which in turn will improve the durability and working life of the turbo.







# There are a lot of questions and answers regarding pistons, bearings and cylinders but what about bearings bushes, timing gear and timing chain with adjusters?

Ceramizer® will be beneficial to all moving metal surfaces that come into contact with other metal parts and are submerged or in contact with oil.

#### Questions about gearbox



#### How Ceramizer® affects synchromesh in gearbox?

The synchromesh in a typical gearbox is protected with a molybdenum layer in order to reduce wear and tear in use.

Inevitably wear to the synchromesh will occur during the life of the vehicle resulting in increased gearbox noise and eventually in difficulties in gear changing.

Ceramizer® will reduce gearbox noise and improve gear change by restoring worn synchromesh surfaces.



### Will Ceramizer® help if in the synchromesh putting first gear on is difficult?

It depends of the type of damage. If the problem is due to wear and tear to the synchromesh then Ceramizer® will certainly help. It will not be effective if the synchromesh itself is damaged.

#### **Motorcycles and scooter questions**



### I know Ceramizer<sup>®</sup> is not recommended for automatic car gearbox but what about scooters with automatic gearbox??

Scooters power transmission systems are usually a 'dry' type-have no contact with oil. In this type of gearboxes Ceramizer® use is pointless as its technology requires oil as a particle carrier.

For that reason it is ok to use our product in two-stroke and four-stroke engine scooters..



### I ride a two-stroke engine scooter. Can I use your product? Will it regenerate piston-cylinder surfaces? Both are made of aluminum.

Ceramizer® is unlikely to be effective in this application.

Ceramizer® is less effective at building a protective layer on alloy surfaces which is what most scooter cylinders are made of. In addition the lubrication of 2 stroke engines differs to that of a 4 stroke engine and does not allow sufficient oil contact time to build a protective coating.





### Will Ceramizer® application to my motorcycle gearbox affect the wet clutch causing it to slip?

Ceramizer® will not cause clutch slip as it requires a metal surface to bond to. The friction material in clutches is non-metallic.

#### Questions about fuel consumption



#### How Ceramizer® application affects fuel consumption?

Ceramizer® will improve fuel consumption by repairing worn surfaces and therefore improving the working efficiency of the engine. The awaited savings can range from 3-15% (based on gathered customer testimonials to date).

#### Other questions



### How long will Ceramizer® protective layer last?

Layer durability is meant to last for 40 000 miles.



# Manual instruction recommends not exceeding 2700revs/min for first 125miles after Ceramizer® application. What happens if I exceed permissible revs?

Nothing serious will happen, but driving above this rev range will make the regeneration process less efficient and will therefore take longer.



#### Can Ceramizer® fuel additive help regenerate injection pump?

Fuel additive will improve the efficiency of the fuel injection system and pump by removing carbon deposits which restrict fuel flow. Fuel additive will also remove carbon build up from the combustion chamber, valves and pistons, thus improving engine performance.

Fuel additive is safe to use with catalytic converters.



#### Will magnetizers disturb Ceramizer® work?

No, they have no influence on the ceramization process.



#### Is it worth to use thicker oil when applying Ceramizer®?

It is not a recommended treatment - as it will significantly deteriorate the lubrication process.





# 12. Terms of cooperation - contact

To order Ceramizer® or discuss terms of possible cooperation in distribution please contact:

### **CERAMIZER Ltd**

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skype: ceramizer www.ceramizer.com

Your local distributor:

