

INSTRUCTIONS FOR USE IN TRUCK ENGINES

CERAMIZER® is recommended for the reconditioning of four-stroke combustion engines, through regeneration of the surfaces of metal parts which are subjected to friction.

The proper use of Ceramizer® will result in improvements of the vehicle's performance, increasing the compression level in all cylinders, reducing oil and fuel consumption, reducing vibration and noise, decreasing toxic emissions and extending the engine's life as well as the oil change intervals. Ceramizer® neither clogs filters nor blocks oil channels, as its particles are extremely small in diameter, so they can be freely transferred through filters.

Ceramizer® does not affect oil at all. Its viscosity and composition remain unchanged. Oil is used as a means of delivering active nano particles into the internal parts of the engine prone to friction.

Reconditioning of metal parts through the use of Ceramizer® takes place in normal operating conditions without the need to disassemble them. The ceramic-metal coating (which has unique properties) covers worn down surfaces, leading to restoration of ideal geometry of the surfaces which are subjected to friction.

2. Turn off the engine.
3. Turn off the oil filler plug and inject the dispenser(s) content through the filler plug. In case of filler with a long neck, it is recommended to inject some oil through the filler plug before applying Ceramizer®. Next, apply Ceramizer® and afterwards pour some oil again. This procedure ensures proper flow of additive to engine lubrication system. In case of strainer filler, it is recommended to mix Ceramizer® with some oil (e.g. 200ml), and then to apply the mixture through oiler filler plug.
4. Put the oil filler plug back on.
5. Start the engine and run on idle gear for 15 minutes.
6. Cover the distance of 200km with care, do not to exceed engine rotational speed of 1600 rpm or in case of vehicle without rev. counter at speed limited to 60 km/h. Caution: 200 km mileage corresponds to engine operation on idle gear for 4h. Engine operation on idle gear for 1 hour corresponds to distance of 50km.
7. Following making 200km or engine operation on idle gear for 4h, you may drive at any speed. The process of forming of ceramic-metal coating follows during 1500km, but in normal working conditions. Do not change oil within this period!
8. In case of vehicles with high mileage (over 500 thousand km) application of dispensers in 2 phases is recommended. Firstly apply a half of the required dosage of dispensers according to attached user manual, and then after making ca. 500km apply remaining dispensers in the same manner. This procedure ensures optimum ceramic-metal coating of surfaces subjected to friction.

INDICATIONS:

1. Ceramizer® is suitable for all types of oil and for combustion engines (petrol engines, powered by gas, Diesel, turbocharged engines and those with catalyzers).
2. Ceramizer® can be used for combustion engines of any machines and factory units after consulting the Producer.
3. Lowered dose of Ceramizer® will not provide the expected results.
4. Increased dose doesn't cause any side effects, it only lengthens the process of cermet layer creation.
5. Ceramizer® can be used at every stage of exploitation, but at best just after oil exchange.
6. Do not change oil during the whole period of ceramization (1.5 thousand km or 25 operating hours). Oil change should be carried out according to maintenance schedule.
7. Use Ceramizer® as a preventive measure to protect the engine against friction and to extend its operating life.

DOSAGING:







The below presented table specifies the QUANTITY OF CERAMIZERS (qty of dispensers) required for ceramization of surfaces subjected to friction.

Engine Oil Capacity (L)	8-16 l	16-25 l	25-35 l	35-45 l
Mileage: 10 000-150 000 km / 6 200-93 200 miles	1 package (2 disp.)	2 packages (4 disp.)	3 packages (6 disp.)	4 packages (8 disp.)
Mileage: 150 000- 700 000 km / 93 200-435 000 miles	2 packages (4 disp.)	3 packages (6 disp.)	4 packages (8 disp.)	5 packages (10 disp.)
Mileage: 700 000- 1 500 000 km / 435 000- 937 500 miles	3 packages (6 disp.)	4 packages (8 disp.)	5 packages (10 disp.)	6 packages (12 disp.)

PACKAGE CONTAINS:

1. Two dispensers, each of 4.5g net mass.
2. The user manual.

DIRECTIONS FOR USE:

1. **WARM UP THE ENGINE TO THE TEMP. OF 80-90°C**
 15 min
2. **TURN OFF THE ENGINE AND APPLY CERAMIZER**

3. **RUN THE ENGINE AT STANDSTILL FOR 15 min**
 15 min
4. **AVOID DYNAMIC DRIVING FOR THE FIRST 200 km/ 125 miles (MAX 1600 rpm)**

5. **FOLLOWING MAKING 200 km, DRIVE AT ANY SPEED**

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


1. Warm the engine up to working temperature of 80-90°C, (e.g. after drive, or engine operation at idle gear for at least 10 minutes).

NOTES

1. If any Teflon or molybdenum components have been added to the oil before, we recommend exchanging this oil and to clean the mechanism before applying Ceramizer®. Otherwise its effectiveness will be reduced and the process of cermet creation will be longer.
2. In case of any mechanical damages of the engine e.g. cracked or scorched piston ring, leaky valve, deep scratches on the cylinder etc., they should be repaired before adding Ceramizer®.
3. Ceramizer® does not recondition any places where friction of rubber or plastic with metal parts occurs.
4. In case of engines without automatic adjustment of valve clearance, after Ceramizer® treatment and 1500 km /900 miles, (clatters of valves are heard) - a valve regulation should be performed.
5. If the engine is equipped with a centrifugal oil filter, it should be cleaned before applying Ceramizer®. In these types of filters molecules of Ceramizer® may settle on the filter, therefore the amount that reaches the friction surfaces is reduced.

EFFECTIVENESS

Provides protection against wear and tear for minimum of 70 000 km/43 000 miles. Ceramizer® can be used again after this mileage.

RESEARCH

This product is safe and produced in accordance with the EU (91/155/EEC) norm.

Effectiveness confirmed by tests.

Store at a temperature below +40 °C . If the storage temperature exceeds 40° C the product can sedimentate. In such case product should be shaken and cooled to a temperature below 40° C in order to make it ready to use.

Particle filter is a metal box filled with metal or ceramic fibers on which soot particles are being deposited. These particles burn out in certain operating conditions of exploiting the vehicle.

Ceramizer does not change the rheological parameters of the oil, it does not generate soot particles, sulphated ash, phosphorus and sulfur, therefore it does not affect the work of the DPF and can be safely used in engines with DPF.

Does not contain either molybdenum or Teflon.

Keep away from children.

**Producer: CERAMIZER Sp. z o.o., Bartycka 116 Street, 00-716 Warsaw, Poland
 Phone: +48 22 498 0908, e-mail: office@ceramizer.com , web-site: www.ceramizer.com**