

CERAMIZER® - CBAT FOR THE REGENERATION AND WEAR PROTECTION OF AUTOMATIC TRANSMISSION.

Ceramizer® CBAT regenerates metal friction surfaces and "magnetises" the oil

BENEFITS:

1. Regenerates the friction surfaces of automatic transmissions (gear teeth, distributors, bearings) and synchronisers during operation - without having to disassemble the mechanisms.
2. Reduces the risk of automatic transmission failure.
3. Easy to use - just apply it to the oil.
4. Reduces annoying vibration, noise and friction, eliminates rasping and jerking when shifting gears.
5. Improves gear changes.
6. Avoids costly repairs in most cases, reducing costs many times over compared to traditional repairs.
7. Hardens and increases the wear resistance of friction surfaces, reduces the coefficient of friction.
8. Protects and preserves friction surfaces of the transmission and rear bridges for at least 100,000 km.
9. Protects components against corrosion and aggressive chemicals (important when using lower quality oils).
10. Cleans friction points from carbon build-up and sediment.
11. Increases the transmitted torque by approximately 10%.
12. Prevents and stops pitting. Removes surface defects.
13. Protects the transmission mechanisms in the event of a temporary emergency low oil level.
14. Reduces the oil temperature by several °C as a result of the high thermal conductivity of the ceramic-metal layer produced.
15. Significantly extends the life of automatic transmission.

DESCRIPTION OF OPERATION:

Regeneration with Ceramiser® involves restoring the nominal size and correct geometry of mating surfaces in mechanisms where friction is present, through the build-up of a ceramic-metal layer with unique anti-friction and anti-wear properties.

Regeneration is carried out without dismantling the equipment, during normal operation. The thermodynamic processes taking place on friction surfaces result in the build-up of a ceramic-metal layer at all points, particularly at worn / abraded points. The build-up gradually stabilises as the friction coefficient decreases.

The build-up process of the ceramic-metal layer itself optimises the gaps of the frictional workpieces and, once the nominal values are reached, stops automatically to rebuild the friction surfaces. This means that a thicker layer is rebuilt in the more abraded areas or where scratches have formed than in the less abraded areas, resulting in the restoration of an almost perfect (desired) geometry of the abraded parts.

Ceramiser® molecules are characterised by a high degree of adhesion with metal, they carry the metal particles (selective transfer) to the worn areas where there is an increased temperature due to friction and diffuse there. In these areas, the combined particles of metal and Ceramizer® (by diffusing) rebuild the surfaces, forming a ceramic-metal layer. As a result of the

diffusion of Ceramiser® with the metal surface, the crystal lattice structure of the metal improves, thereby hardening and filling the surface layer (a permanent inseparable ceramic-metal protective layer is formed). The process of layer formation is called ceramization. This layer fills, covers and evens out micro defects and deformations of the surfaces subjected to friction.

GENERAL PRINCIPLES OF APPLICATION:

1. The highest efficiency of ceramization is achieved by following the recommendations and instructions.
2. The technology is designed to protect new and regenerate worn but undamaged mechanisms.
3. Can be used with any type of transmission oil and applied to all types of automatic transmissions.
4. An underdose of Ceramiser® will not produce the desired results for the formation of the ceramic-metal layer.
5. An excessive (e.g. twice as much) dosage of Ceramiser® has no side-effects and only increases the duration of treatment, so it is recommended to select the amount of CBAT according to the table below.
6. In case of previous use of oil additives (with molybdenum or Teflon), it is advisable to change the oil with washing the mechanism before applying Ceramiser® CBAT, otherwise the effectiveness of the ceramization will be reduced and the processing time increased.
7. The durability of the ceramic-metal coating produced is, depending on the operating conditions of the device, approximately 2 years (with continuous operation of the device under normal conditions) or the mileage of up to 100,000 km.
8. Ceramization of the surface with Ceramizer® CBAT can be repeated several times.
9. Ceramizer® CBAT can be applied to any equipment (including industrial equipment), after prior consultation with the manufacturer.

NUMBER OF CERAMIZER® CBATs

The number of dispensers needed to ceramize the friction pair surface of an automatic transmission is determined by the table below:

Quantity of oil in automatic transmission in litres	Up to 8 L	8.1-12 L	12.1-18 L
Number of dispensers	1 dosage.	2 doses.	3 doses.

The package contains:

1. One dispenser of an easily oil-soluble CBAT formulation with a net weight of 4 g.
2. This manual.

RECOMMENDATIONS:

1. Apply at any time whilst the vehicle is in use or at oil changes to continue driving with the product for as long as possible (until the next oil change).
2. Can be used with any type of transmission oil.

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PRODUCT MADE IN POLAND

3. A characteristic symptom of the onset of regeneration is a reduction in the noise of the mechanism after only a few tens of kilometres of mileage.

- If there is significant wear on the mechanisms,

and in particular if, during regeneration, a slight improvement in the performance of the automatic transmission is noticed after 500 km, it is recommended to double the dosage of Ceramizer® CBAT.

- If, after 500 km, an improvement in the performance of the mechanism is not noticeable

- this may indicate an incorrect assessment of the wear condition of the transmission or mechanical damage to the unit.

4. For automatic transmissions used in motorsport and under extreme operating conditions, it is recommended to double the dosage of Ceramizer® CBAT.
5. Ceramizer® CBAT should primarily be used preventatively to protect the transmission mechanisms from the effects of friction, significantly prolonging their service life and failure-free operation.
6. Do not change the oil during the entire ceramization process (2,000 km or 40 motoring hours). Change the oil on the due date.
7. Ceramizer CBAT is recommended for use together with Ceramizer® CS for the engine, CK for the power steering system and CP fuel enrichment formula.

MANUAL FOR AUTOMATIC TRANSMISSIONS:

1. Warm up the oil in the automatic transmission by driving about 10 km.
2. Switch off the engine. Unscrew the automatic transmission oil filler cap and empty the dispenser(s) into the oil filler hole (observing the required oil level). Close the oil filler cap.
3. Travel a distance of no less than 30 km at a time and 100 - 200 m in reverse gear.
4. The formation of the ceramic-metal layer continues for up to 1,500 km of mileage under normal operating conditions. The oil should not be changed during this time.

**1. WARM UP THE GEARBOX OIL
BY DRIVING FOR A 10KM**



**2. TURN OFF THE ENGINE-
ADD CERAMIZER CBAT
TO GEARBOX OIL**



3. DRIVE ~200 M ON REVERSE



**4. DRIVE NORMALLY ABOUT 30KM
DO NOT CHANGE OIL FOR 2000 KM**



**CBAT can be used for all types of automatic transmissions:
CVT, DSG, Tiptronic, Steptronic, SB, PDK, Power Shift
and other wet transmissions.**

NOTES:

1. In case of previous use of oil additives (with molybdenum or Teflon) it is recommended to change the oil with a wash before applying ceramizer®CBAT. Otherwise, the effectiveness of treatment with Ceramizer® CBAT will be reduced and the ceramization time will increase.
2. In the event of mechanical damage to the automatic transmission (e.g. broken tooth, deep scratches, significant wear, etc.), the defects must be repaired and then treated with Ceramizer®CBAT.
3. Ceramizer® CBAT does not regenerate areas where there is friction of rubber, plastics or composites against metal.
4. Dispensers/syringes that have a small leak from under the plunger are also considered to be properly filled.

SAFETY:

1. The product is safe, manufactured in accordance with current EU standards.
2. Store below +40°C
3. If the storage temperature exceeds +40 °C the product may sediment, in which case it must be shaken and cooled to below +40 °C to be used safely.
4. It does not clog oil filters or oil channels.
5. Ceramizer® CBAT is not an oil thickener, one dose only contains 4 grams of concentrated formulation.
6. Ceramizers® can be used with any oil - they are neutral to oil and do not change its properties (confirmed by ITWL expert report NR 6/55/08)
7. When using the formulations, avoid contact with the eyes, with the digestive tract, and do not expose the formulations to direct sunlight, as the packaging may unseal. Formulations are not subject to a flammability warning. Dispose of emptied packaging in containers compatible with their intended use.
8. Keep formulations out of reach of children.

TESTING AND RESEARCH:

Effectiveness of the product confirmed by tests on www.ceramizer.pl

EFFECTIVENESS:

The durability and effectiveness of the ceramic-metal layer produced is at least 100,000 km mileage or 1,800 mth. After this mileage, it is recommended to reapply Ceramizer® CBAT.

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