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FIELD CASE STUDY | ROAD TRANSPORT | DIESEL ENGINE · CYLINDER-PISTON GROUP

REPORT ON TREATMENT WITH XADO REVITALIZANTS · 15 JUNE 2012

KAMAZ 5320 diesel: higher compression and fuel savings — with no teardown

ChAAP "Promin" · approved by General Director I. M. Gulyi; signed by Chief Engineer V. A. Lyubchenko, driver A. P. Velichko and specialists of XADO LLC

Ukraine · treatment 25.05–15.06.2012 · control measurement after 2375 km of running

PRODUCT

XADO revitalizant compounds

preparation: VitaFlush oil system flush · JET 100 Ultra fuel system cleaner · VERYLUBE "Antikoks" into the cylinders

TREATED OBJECT

KAMAZ 5320 diesel engine

8 cylinders · reg. no. 147-97 KhA · oil and fuel systems, cylinder-piston group

DOCUMENT TYPE

Test report ChAAP "Promin"

"Approved" endorsement, round company seal, five signatories

EQUIPMENT	MILEAGE AT START OF TESTS	WHAT WAS MEASURED
KAMAZ 5320, reg. no. 147-97 KhA — diesel engine, 8 cylinders	**27 532 km**	Compression in each cylinder, fuel consumption at idle, oil pressure

Full treatment cycle — from 25.05 to 15.06.2012; control measurements taken after {{2375 km}} of running on the treated engine.

Key results

↑ 3.9-8.3 %

compression across the cylinders, 28.7-30.5 → 31.0-32.5 kgf/cm²

↓ 8 %

fuel consumption at idle, 100 ml of fuel in 2 min 20 s → 2 min 33 s

Compression in the engine cylinders

CYLINDER	BEFORE TREATMENT, kgf/cm²	AFTER 2375 KM, kgf/cm²	GAIN, kgf/cm²
I	30.0	32.5	+2.5
II	30.0	32.3	+2.3
III	30.1	31.7	+1.6
IV	29.3	31.0	+1.7
V	28.7	31.3	+2.6
VII	30.5	31.7	+1.2
VIII	30.2	31.5	+1.3

Measured with a ZEGA 363 compression tester with recording onto a diagram card: before treatment and after **2375 km** of running. The largest gain is on the cylinder with the lowest initial compression.

Fuel consumption at idle

PARAMETER	BEFORE TREATMENT	AFTER TREATMENT
Engine running time on 100.0 ml of diesel fuel	2 min 20 s	2 min 33 s

The longer the engine runs on the same volume, the lower the consumption: according to the report's conclusion, fuel consumption at idle dropped by **8 %**.

Conclusions of the report

The commission of ChAAP "Promin", with the participation of XADO specialists, recorded the following: after flushing the oil and fuel systems and treating the diesel engine of the KAMAZ 5320 truck with XADO revitalizant compounds, compression increased in practically all cylinders by **0.5** to **2.6 kgf/cm²**, or by **1-8 %**, and fuel consumption at idle decreased by **8 %**. According to the driver, exhaust smoke dropped considerably and oil pressure in the engine lubrication system rose (before treatment — **1.5 kgf/cm²**, after treatment — **2.5 kgf/cm²**). The increase in cylinder compression indicates the formation of minimum thermal clearances in the cylinder-piston group due to the build-up of a XADO metal-ceramic layer on the working surfaces of the parts, which promotes optimisation of the fuel combustion process, an increase in engine power and an extension of engine service life until major overhaul by at least **1.5×**.

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The results refer to the diesel engine of a KAMAZ 5320 truck under the operating conditions of ChAAP "Promin"; on other equipment and in other duty cycles the figures may differ. The treatment was carried out and the measurements attended by specialists of XADO LLC. The original report with signatures and seal is published in full and available for download.