



COMMISSION TEST REPORT · SEPTEMBER 2005

GAZ-3221 Gazelle: compression restored without engine teardown

Gaztekhservis LLC · commission: deputy director A. A. Tyumkin (chairman), chief mechanic of STO Yuzhny LLC V. V. Shcherbakov, manager G. A. Sokolov, director of LIDA LLC K. A. Krasnikov · report approved by director G. M. Verbilo

Russia · report dated 11 September 2005 · observation over 1594 km of route service

PRODUCT

XADO revitalizant gel
for petrol engines, 3 tubes ·
Antikoks cleaner

TEST OBJECT

Petrol engine, 4 cylinders
GAZ-3221 Gazelle route
minibus · mileage at test start
181 445 km

DOCUMENT TYPE

Commission test report
with signatures and stamps

EQUIPMENT

GAZ-3221 Gazelle, route service,
petrol engine, 4 cylinders

MILEAGE AT TEST START

181 445 km

WHAT WAS MEASURED

Compression in each cylinder; condition
of spark plugs

Five series of compression measurements: initial condition, after the cleaner, and at 231, 997 and 1594 km from the start of treatment.

Key result

↑ **33 %**

compression across cylinders, 8.0-9.2 → 10.5-11.5 atm

Compression by cylinder, atm

OBSERVATION STAGE	CYL. 1	CYL. 2	CYL. 3	CYL. 4
Before treatment	9.2	8.5	8.0	8.5
After the Antikoks cleaner	9.0	10.0	9.5	9.5
231 km — 2 tubes of gel added	9.5	10.0	10.0	9.8
997 km — intermediate measurement	10.5	11	11	11
1594 km — final measurement	10.5	11.5	11.5	11.5

Treatment was carried out on the vehicle in service, without disassembling the engine. The resulting gain of **33 %** is the commission's assessment from the Conclusion section of the report.

Condition of spark plugs

STAGE	WHAT THE COMMISSION RECORDED
Before treatment	Black oily carbon deposit on the insulator and electrodes — oil burning in the cylinders
After the test	Greyish-brown, brick-coloured deposit, i.e. normal condition

The plug of the first cylinder retained its black deposit: the commission attributed this to a faulty valve or valve stem seal.

Commission conclusion

The commission of Gaztekhshservis LLC recorded: "As a result of applying XADO technology, the engine operating parameters have improved. Despite the first cylinder being faulty, compression has on the whole increased by **33%**." The engine entered the test with a mileage of **181 445 km** and black oily carbon deposits on the plugs of all cylinders — a worn cylinder-piston group with oil burning. The treatment was performed on the vehicle in service, without disassembly and without removing the engine. By **997 km** compression had reached its final level and held to the closing measurement: **8.0-9.2 atm → 10.5-11.5 atm**, with the three sound cylinders converging on a single value of **11.5 atm** — sealing was restored and engine operation evened out. The driver noted lower noise and better vehicle throttle response.

XADO

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The results apply to the petrol engine of a GAZ-3221 vehicle with a mileage of 181 445 km in route service; with a different component condition and other operating conditions the figures may differ. The original report of 11 September 2005 with signatures and stamps is published in full and available for download.