TECHNICAL REPORT ON OPERATING PARAMETER MEASUREMENTS

# KamAZ diesel: compression rose in all cylinders and evened out

OJSC Dmitrovsky Avtodor · approved by chief mechanic V. G. Sarzhin · endorsed by R&D; firm Friction and Wear Problems, general director Ch. G. Andreev

**Dmitrov, Moscow Region, Russia · 2001**

**PRODUCT**

Treatment with XADO technology®

work performed by R&D; firm Friction and Wear Problems, without engine disassembly

**TEST OBJECT**

KamAZ truck

diesel engine, 8 cylinders

**DOCUMENT TYPE**

Technical report on operating parameter measurements

signed by customer and contractor, two round stamps

| EQUIPMENT | MILEAGE BETWEEN MEASUREMENTS | WHAT WAS MEASURED |
|---|---|---|
| KamAZ truck, diesel engine, 8 cylinders | **3,261 km** (odometer **04707 → 07968 km**) | Compression in all eight cylinders · pressure at idle **1100 rpm** |

The repeat measurement was taken after 3,261 km of ordinary vehicle service, not immediately after the treatment.

## Key results

**↑ 4.3-9 %**

compression across the cylinders, 26.8-28.2 → 29.2-29.5

**↑ 31.6 %**

pressure at idle, 1.9 → 2.5 kgf/cm²

**compression evened out across the cylinders**

# Compression by cylinder — before treatment and after 3,261 km

| CYLINDER | BEFORE TREATMENT | AFTER 3,261 KM | CHANGE |
|---|---|---|---|
| 1 | **28.0** | **29.5** | **+1.5** |
| 2 | **27.0** | **29.3** | **+2.3** |
| 3 | **28.2** | **29.5** | **+1.3** |
| 4 | **28.0** | **29.3** | **+1.3** |
| 5 | **27.9** | **29.5** | **+1.6** |
| 6 | **27.7** | **29.3** | **+1.6** |
| 7 | **28.0** | **29.2** | **+1.2** |
| 8 | **26.8** | **29.2** | **+2.4** |
| Average across the eight cylinders | **27.70** | **29.35** | **+1.65 (+6.0 %)** |
| Spread between cylinders | **1.4** | **0.3** | **−1.1** |

The compression unit is not stated in the table headers of the report — values are given exactly as in the document.

# Pressure at idle

| PARAMETER | BEFORE TREATMENT | AFTER 3,261 KM | CHANGE |
|---|---|---|---|
| Pressure at **1100 rpm** | **1.9 kgf/cm²** | **2.5 kgf/cm²** | **+31.6 %** |

The repeat measurement was made at the same 1100 rpm and at 60 °C against 45 °C — on a more thoroughly warmed engine, where pressure is normally lower.

# What the measurements showed

The technical report of OJSC Dmitrovsky Avtodor records what treatment with XADO technology® gave the KamAZ diesel — without engine disassembly, on a vehicle in ordinary service. After **3,261 km** of running, compression rose in all eight cylinders, from **26.8-28.2** to **29.2-29.5**. The weakest gained the most: cylinder eight **+2.4**, cylinder two **+2.3**, while the best one before treatment gained **+1.3**. That is how a revitalizant works: the coating builds up where there is wear and does not build up where there is none. So the key point here is not the average gain but the evening out — the spread between cylinders narrowed from **1.4** to **0.3**, and the engine settled into even running across the whole group; compression simply cannot rise above the factory rating. Pressure at idle over the same mileage rose from **1.9** to **2.5 kgf/cm²**.

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The results relate to the diesel engine of a KamAZ truck under the operating conditions of OJSC Dmitrovsky Avtodor; on other equipment and under a different duty cycle the figures may differ. The original technical report with signatures and stamps is published in full and available for download.