TWO TECHNICAL TEST REPORTS ON A VEHICLE FLEET

GAZEL and ZIL 130: compression rose on both vehicles, no teardown

ZAIK — Zaporizhzhia Production Aluminium Plant, PJSC, motor transport section · reports signed by the section mechanic and the engine fitter, approved by the plant's commercial director

Zaporizhzhia, Ukraine · treatment performed by XADO LLC, Kharkiv

PRODUCT

XADO compound

engines treated through the oil, without teardown and without taking the vehicles out of service

TEST OBJECT

Petrol engines of the vehicle fleet

GAZEL 53-25 ZPT, 4 cylinders · ZIL 130 95-36 ZPP, 8 cylinders

DOCUMENT TYPE

Technical test reports, signatures of both parties and the plant seal

VEHICLE	ENGINE	COMPRESSION BEFORE TREATMENT	WHAT WAS MEASURED
GAZEL, reg. no. 53-25 ZPT	petrol, 4 cylinders	**8.8-9.5 kgf/cm²**	compression in each cylinder, oil pressure
ZIL 130, reg. no. 95-36 ZPP	petrol, 8 cylinders	**7.0-9.4 kgf/cm²**	compression in each cylinder, oil pressure

Both vehicles come from the plant's working fleet; every cylinder was measured before the treatment and after it.

What repeated on both vehicles

↑ 2.2-33.3 %

compression across the cylinders of both vehicles, 7.0-9.5 → 7.4-12.0 kgf/cm²; increase in 12 of 20 readings; the rest unchanged

Compression by cylinder, kgf/cm²

VEHICLE	CYLINDER	BEFORE TREATMENT	AFTER TREATMENT	CHANGE
GAZEL 53-25 ZPT	1	**9.0**	**11.0**	**+2.0**
GAZEL 53-25 ZPT	2	**8.8**	**11.0**	**+2.2**
GAZEL 53-25 ZPT	3	**9.0**	**12.0**	**+3.0**
GAZEL 53-25 ZPT	4	**9.5**	**11.0**	**+1.5**
ZIL 130 95-36 ZPP	1	**8.5**	**9.4**	**+0.9**
ZIL 130 95-36 ZPP	2	**9.0**	**9.5**	**+0.5**
ZIL 130 95-36 ZPP	3	**9.0**	**9.0**	0
ZIL 130 95-36 ZPP	4	**9.0**	**9.0**	0
ZIL 130 95-36 ZPP	5	**9.4**	**9.4**	0
ZIL 130 95-36 ZPP	6	**9.0**	**9.4**	**+0.4**
ZIL 130 95-36 ZPP	7	**7.0**	**7.4**	**+0.4**
ZIL 130 95-36 ZPP	8	**9.0**	**9.2**	**+0.2**

Gain by cylinder: **16-33 %** on the GAZEL, **4-11 %** on the ZIL 130. Compression cannot rise above the engine's factory rating.

Oil pressure at idle, kgf/cm²

VEHICLE	BEFORE TREATMENT	AFTER TREATMENT
GAZEL 53-25 ZPT	**2.0**	**2.0**
ZIL 130 95-36 ZPP	**1.4**	**1.4**

The compound is added to the oil, so pressure in the lubrication system was monitored separately: on both vehicles it stayed the same.

What the series showed

Two engines from one fleet — the four-cylinder engine of the GAZEL and the eight-cylinder engine of the ZIL 130 — were treated with the XADO compound without teardown, on vehicles in service. The result repeated on both: compression rose. On the GAZEL all four cylinders came up — from **8.8-9.5** to **11.0-12.0 kgf/cm²**, and the most depressed cylinder reached the level of the others. On the ZIL 130 compression rose from **7.0-9.4** to **7.4-9.5 kgf/cm²**, including the engine's weakest cylinder. A rise in compression means restored sealing of the cylinder-piston group, on which power output and fuel consumption depend; it cannot rise above the factory rating, so pulling the lagging cylinders up to the rest is the limit of what is attainable. Oil pressure at idle stayed the same on both vehicles — the lubrication system works as intended.

XADO

The results relate to the petrol engines of a goods vehicle fleet — GAZEL and ZIL 130 — under the plant's operating conditions; on other vehicles and duty cycles the figures may differ. The original reports with signatures and seal are published in full and available for download.