



TECHNICAL REPORT ON MEASUREMENTS BEFORE AND AFTER TREATMENT

SCANIA 143H-420 diesel: compression rose and evened out, no teardown

Vityaz LLC, Zaporizhzhia, Ukraine · treatment by XADO technology — XADO LLC,
Zaporizhzhia · contract No. 01/2004 of 28.01.2004, annex No. 5
Zaporizhzhia, Ukraine · work carried out 30.01–11.03.2004 · control measurement after 5200 km of running

PRODUCT	TREATED OBJECT	DOCUMENT TYPE
Treatment by XADO technology the formulation is added to a running engine, without teardown	Long-haul tractor unit SCANIA 143H-420 DSC-1408 diesel, 8 cylinders · reg. No. 083-66 HP	Technical report on measurements before and after treatment signatures and stamps of the customer and the contractor, 11.03.2004

EQUIPMENT	MILEAGE AT TEST START	WHAT WAS MEASURED
SCANIA 143H-420, DSC-1408 diesel, 8 cylinders	658,120 km	Compression in each of the eight cylinders; pressure in the engine lubrication system

Control measurement — after {{5200 km}} of running following the treatment. Compression taken with a ZECA diesel compression recorder, pressure with a mechanical gauge.

Key results

compression evened out across the cylinders

↑ **4-24.8 %**

compression across the eight cylinders, 21-26 → 24-26.3 atm; a gain in 8 of 9 measurements; in one, compression fell

↑ **15 %**

oil pressure at warmed-up idle, 4.0 →
4.6 kgf/cm²

Compression by cylinder — before treatment and after 5200 km

CYLINDER	BEFORE TREATMENT, ATM	AFTER 5200 KM, ATM	CHANGE, ATM
1	24.5	25.7	+1.2
2	25	26.3	+1.3
3	22.5	26	+3.5
4	21	26.2	+5.2
5	25	26	+1.0
6	23	24.3	+1.3
7	24	25	+1.0
8	26	24	-2.0
Engine average	23.9	25.4	+1.6
Spread (max – min)	5.0	2.3	-2.7

The largest gain came in the weakest cylinder: **21 → 26.2 atm**. Compression does not rise above the factory nominal, so bringing all cylinders into one band is the limit of what is achievable.

Pressure in the engine lubrication system

PARAMETER	BEFORE TREATMENT	AFTER 5200 KM
Maximum pressure, kgf/cm ²	7.0	7.0
Idle, start of warm-up, kgf/cm ²	5.2	5.2
Idle, after 15 min of warm-up, kgf/cm ²	4.0	4.6
Pressure drop over warm-up, kgf/cm ²	1.2	0.6

Measurements taken with a mechanical gauge; the warm-up mode was identical before and after — **15 min** at idle.

What the report recorded

The technical report of 11.03.2004 states: «As a result of the treatment there occurred an increase and evening-out of compression across the cylinders, a reduction of the oil pressure drop during warm-up» — the wording is quoted verbatim. By the time of treatment the tractor unit had covered **658,120 km**, and the cylinders had drifted apart: the weakest gave **21 atm** against **26** in the strongest. After **5200 km** of ordinary trips all eight fell into the band **24-26.3 atm**, the spread narrowed from **5.0** to **2.3 atm**, and mean compression rose by **6.5 %**. Compression physically cannot go above the nominal, so bringing all cylinders into one band is the maximum that restored cylinder-piston group sealing can deliver. The lubrication system showed the same picture: over 15 minutes of warm-up at idle the pressure now falls only to **4.6 kgf/cm²**, whereas before the treatment it went down to **4.0**. The engine was never taken apart.



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The results relate to the DSC-1408 diesel of a SCANIA 143H-420 long-haul tractor unit with more than 650 thousand km on the odometer; on other equipment and with components in a different condition the figures may differ. The original report bearing the signatures and stamps of both parties is published in full and available for download.