

REPORT OF FSBI «MOTOR TRANSPORT DEPOT», ADMINISTRATIVE DIRECTORATE OF THE PRESIDENT OF THE RUSSIAN FEDERATION · 12.09.2011

Hyundai AeroExpress buses: compression rose and evened out without teardown

FSBI «Motor Transport Depot», Administrative Directorate of the President of the Russian Federation, vehicle repair shop · approved by: chief engineer G. A. Boykov · signed by: deputy chief engineer — head of the vehicle repair shop V. I. Styopin, workshop manager S. L. Samoshin

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PRODUCT

XADO 1 Stage revitalizant gel
into the oil system · XADO
revitalizant gel for injection
pumps — into the fuel tank

TREATED OBJECT

Hyundai AeroExpress
buses, 2 units
D6CA diesel engines · reg. no.
M22700 and no. M 219 00

DOCUMENT TYPE

Company report
with signatures and seal

EQUIPMENT	MILEAGE AT START OF WORK	MILEAGE AFTER TREATMENT	WHAT WAS MEASURED
Hyundai AeroExpress bus, reg. no. M22700	220 763 km	5 437 km	Compression across the cylinders of the D6CA engine
Hyundai AeroExpress bus, reg. no. M 219 00	226 200 km	14 621 km	Compression across the cylinders of the D6CA engine

Before treatment the oil systems were flushed with XADO «VitaFlush» cleaner and the fuel systems with «J100» complex cleaner; the buses stayed in scheduled service throughout.

Key result

↑ **1.5 kgf/cm²**

compression, average across all cylinders of the D6CA engines (2-3 kgf/cm² in the worn cylinders)

What the compression measurements showed

PARAMETER	MEASURED OBJECT	RESULT
Compression, average across all cylinders	D6CA engines of both buses	+1.5 kgf/cm²
Compression in the cylinders that read lower before treatment	D6CA engines of both buses	+2-3 kgf/cm²
Spread of compression between cylinders	D6CA engines of both buses	Evened out

Measurements were taken before treatment and after it was completed — at **226 200 km** on M22700 and **240 821 km** on M 219 00; the engines were not disassembled.

Conclusion of the company commission

The commission of FSBI «Motor Transport Depot», Administrative Directorate of the President of the Russian Federation, recorded in the report: «The measurement results showed that after the XADO treatment, the engines of both buses displayed an increase and an evening-out of compression values across all cylinders». Averaged over all cylinders, compression rose by **1.5 kgf/cm²**; in the individual cylinders that read lower before treatment, the increase came to **2-3 kgf/cm²**. The engines were not disassembled: the treatment was carried out to the XADO procedure by the depot's own specialists, the buses ran in normal service the whole time, and the final measurements were taken after **5 437** and **14 621 km** of mileage. The largest gain came from the most worn cylinders — the coating builds up where the wear is, and compression cannot rise above the factory rating, so bringing the cylinders to a common level is the limit of what is achievable.

XADO

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The results refer to Hyundai AeroExpress buses with D6CA diesel engines; on other equipment and under different operating conditions the figures may differ. The original report with signatures and seal is published in full and available for download.