

RESTORATION REPAIR REPORT FOR A GEARBOX

Lift worm gearbox: a worn gear pair returned to service without replacement

«Kharkov – Lift 4» · restoration repair and measurements performed by the plant's mechanical service · report approved by the head of the enterprise, signature and stamp

Kharkov, Ukraine · report dated 12.10.2003 · repeat measurement after 400 h of operation in regular service

PRODUCT

XADO technology
restoration repair performed
with the lift in regular service

TREATED UNIT

Single-stage worm
gearbox of a lift
worm — wheel drive; worm
wheel rim made of bronze

DOCUMENT TYPE

Report of the enterprise
«Kharkov – Lift 4»

UNIT**CONDITION BEFORE TREATMENT****WHAT WAS MEASURED**

Single-stage worm gearbox of
a lift

Wear of the worm — wheel drive
100 %; pitting and cavities on the
wheel and the worm

Worm backlash in mesh;
condition of the working
surfaces

The worm wheel rim is bronze. The unit had fully exhausted its service life and was normally due for replacement.

Key result

↓ **22.2 %**

worm backlash in mesh, 36° → 28°

Worm gear pair: before treatment and after 400 hours of operation

PARAMETER	BEFORE TREATMENT	AFTER 400 H OF OPERATION
Worm backlash in mesh	36°	28°
Working surfaces of the worm wheel rim and the worm	Pitting and cavities	Appearance of a smooth ground surface, cavities and pitting gone

Measurements were taken by the mechanical service before treatment and after **400 h** of lift operation in regular service; surface condition was assessed by visual inspection.

Conclusion of the report

Before the work began, the worm — wheel drive of the worm gearbox had **100 %** wear, the worm backlash in mesh was **36°**, and there were pitting and cavities on the wheel and the worm. After the restoration repair using XADO technology and **400 hours** of operation in regular service, the enterprise recorded in the report: «the worm backlash in mesh became **28°**, the working surfaces of the worm wheel rim and of the worm took on the appearance of a smooth ground surface ,i.e. the cavities and pitting disappeared, the noise during gearbox operation decreased». The bronze rim, which had fully exhausted its service life, stayed in operation: the mesh was restored on a working lift, without replacing the worm gear pair.

XADO

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The results relate to a single-stage worm gearbox of a lift with a bronze wheel rim, treated with XADO technology under regular operating conditions; under other conditions the figures may differ. The original report with signature and stamp is published in full and available for download.