

OPERATOR TESTIMONIAL LETTER WITH A TABLE OF MEASUREMENTS

ALIMAK 27/37 hoist: reducer vibration and heating cut without disassembly

DALCANADA Ltd, Canada · signed by: Joe Bouchard, Vice President of Manufacturing Operations and Technology

Canada · measurements 15.01–11.02.2004 · letter dated 23.02.2004

PRODUCT

XADO gel for reducers
9 ml per 2 l of synthetic gear oil

TREATED UNIT

Drive of the ALIMAK 27/37
goods-and-passenger
hoist

two angular worm reducers on
a common rack · rated load
6000 lb

DOCUMENT TYPE

Operator testimonial letter
with a table of its own
measurements

EQUIPMENT**CONDITION AT THE START OF THE
TRIAL****WHAT WAS MEASURED**

Upper drive reducer

Ran noisily and with vibration

Vibration at two points, housing
temperature

Lower drive reducer

Ran in parallel on the same rack

Vibration at two points, housing
temperature

Treatment — 9 ml of XADO gel added to the reducer oil. Measurements taken with the hoist running upwards at 1800 cycles per minute: before treatment, after 100 and after 500 hours of operation.

Key results

↓ **56-83 %**

vibration of the upper reducer at two
points, 500 h of operation

↓ **9-30 %**

vibration of the lower reducer at two
points, 500 h of operation

↓ **10 °C**

lower reducer temperature, 50 →
40 °C

Reducer vibration — change against the baseline measurement

UNIT	MEASURING POINT	AFTER 100 H	AFTER 500 H
Upper reducer	Point 1	–82.5 %	–82.5 %
Upper reducer	Point 2	–64.4 %	–55.6 %
Lower reducer	Point 1	–10.0 %	–30.0 %
Lower reducer	Point 2	–18.8 %	–9.4 %

The vibration scale and the measuring instrument are not named in the document, therefore only the relative change against the pre-treatment measurement is given.

Reducer housing temperature

UNIT	BEFORE TREATMENT	AFTER 100 H	AFTER 500 H
Upper reducer	54 °C	55 °C	47 °C
Lower reducer	50 °C	49 °C	40 °C
Ambient air	0 °C	–1 °C	–3 °C

Housing and ambient air temperatures were recorded in the same measurement session on 15.01, 20.01 and 11.02.2004.

Operator's conclusion

XADO was approached because of a fault: before treatment the upper drive reducer ran noisily and with vibration. The hoist was neither disassembled nor taken out of service — **9 ml** of gel were added to the oil and the measurements were taken while running after **100** and **500 hours** of operation. The conclusion of the DALCANADA Ltd letter: "We are convinced that, thanks to the treatment with XADO technology, the noise and vibration level in the gearbox has decreased considerably. By reducing the vibration in the upper reducer, we also managed to reduce the vibration in the lower reducer." The same letter notes a side effect — slight heating of the upper gearbox. By **500 hours** of operation the effect held on both drive reducers.

XADO

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The results refer to the worm drive reducers of the ALIMAK 27/37 construction hoist and to the stated operating mode; under other conditions the figures may differ. The document is an operator testimonial letter with a table of its own measurements, not a test report. The original letter is published in full and available for download.