AS AKRONTO · REPORT ON TREATMENT OF A HYDRAULIC POWER UNIT

BEAVER III power unit: working pressure raised with no teardown, in service

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Tallinn, Estonia · report dated 06.12.2002

PRODUCT

XADO gel for the restoration of hydraulic systems

3 tubes of 9 ml per 7 l of hydraulic oil · three stages, 8 hours of operation apart

TREATED UNIT

JSB hydraulic power unit, BEAVER III model

hydraulic system of the unit · working tool — hydraulically driven water pump · rated pressure 138 bar

DOCUMENT TYPE

Report dated 06.12.2002 AS AKRONTO and AS T-Auten

EQUIPMENT	CONDITION AT START OF WORK	WHAT WAS MEASURED
JSB BEAVER III power unit	Pressure 100 bar against a rating of 138 bar	Working pressure of the hydraulic system
Hydraulically driven water pump	Moved water but built no working pressure — 0 bar	Pressure on the pump working gauge

The treatment was carried out without taking the unit out of service: the gel was introduced in three stages, 8 hours of machine operation apart.

Key results

↑ **20** %

working pressure of the power unit under load, 100 → 120 bar

↑ **1** bar

pressure on the pump working gauge, 0 → 1 bar

Power unit — working pressure of the hydraulic system

PARAMETER	BEFORE TREATMENT	AFTER 24 h OF OPERATION
Working pressure of the power unit	**100 bar**	**120 bar**
Share of the rated pressure of **138 bar**	**72 %**	**87 %**

Measured under working load: the power unit was driving the hydraulically driven water pump. The rated pressure of 138 bar is stated in the report itself.

Working tool — hydraulically driven water pump

TREATMENT STAGE	PRESSURE ON THE PUMP WORKING GAUGE
Before treatment	**0 bar**
After 8 h of operation following the first tube	**0.5 bar**
After the second tube was introduced	**1 bar**

Before the treatment the pump was unfit for its intended duty: it moved water but built no working pressure at all.

Conclusion of the report

The report by AS AKRONTO and AS T-Auten dated 06.12.2002 states: «The treatment carried out clearly demonstrates all the advantages of XADO technology over conventional repair methods, both in economic terms (the cost of restoring the said hydraulic power unit amounted to **750 Estonian kroons**) and in that the machine was practically never stopped, but went on doing its work. Besides the power unit itself, the working tool connected to it is also restored (in our case, the pump)». Before the treatment the unit held **100 bar** against a rating of **138 bar**, and the pump connected to it built no pressure at all. After **24 hours** of operation the pressure of the power unit is **120 bar**, which is **87 %** of the rating, and the pump reached **1 bar**. According to the report, for full and final restoration the power unit must run a further **400-450 hours** under normal service conditions.

XADO

The results relate to the JSB BEAVER III hydraulic power unit and the hydraulically driven water pump connected to it under the conditions described in the report; on other equipment the figures may differ. The treatment was performed by AS T-Auten. The original report is published in full and available for download.