

CASE STUDY

Industry: Water Industry
Customer: Sweden

OFF-HIGHWAY  **POWERTRAIN SERVICES**

▶ Off-Highway Powertrain Services reduced RMS (Root Mean Square) by 77% to make customer's process secure!

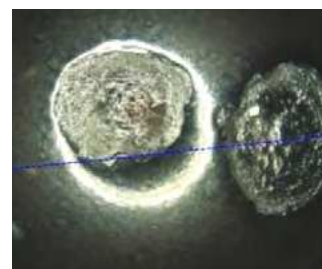
▶ Case Description

The customer had repeated problems with vibrations on a water pump drive. (The vibrations could even be felt in the office upstairs!) In order to avoid unplanned shutdowns and reduce high vibration levels, Off-Highway Powertrain Services (OHP Services) undertook a complete analysis. OHP Services identified faulty mountings, clear misalignment, looseness of some components, lack of lubrication, excessive operating temperatures and worn out parts. Therefore, to avoid such problems in the future, it was suggested that the initial assembly and commissioning should be carried out by our OHP Services experts.

Our experts carried out the commissioning for the water pump drive following proper protocol and installation standards. OHP Services made and then implemented the following recommendations to the customer:

- ▶ Installation of a newly-built intermediate shaft
- ▶ Installation of new intermediate shaft-bearing
- ▶ Installation of the main shaft
- ▶ For warranty reasons; a test run was included in commissioning protocol
- ▶ Documentation of vibration and thermographic values as a base reference of the intermediate shafts bearing

The high vibration value had been caused by a damaged intermediate bearing. After carrying out the recommendations, the vibration amplitude (RMS) was reduced by 77% to be within an acceptable level.



▶ Technology Snapshot

Commissioning:

A proper commissioning service includes the following measures

- ▶ Installation following our standardised protocol
- ▶ Test run and evaluation
- ▶ Adjustments, if needed, to make sure the powertrain is aligned properly and functioning smoothly

- ▶ Commissioning is carried out to ISO Standards 10816-3 and 10816-7

A report is also generated recording base measurements for future reference.

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► **Challenge:**

- Find the root cause of the problems to avoid unplanned shutdown
- Find out the reason for early bearing abrasion
- Evaluate the measurements for the powertrain excluding environmental vibrational noises
- Avoid transmission of vibrations into the office building

► **Solution:**

- High Tech Analysis to find the cause
- Assembly and installation of the powertrain matching the ISO Standards

► **Customer Value:**

- Smooth operation of the water pump
- Longer lifetime of components
- Continued warranty as OHP Services verifies the process in accordance to its design specifications

► **What's special?**

- The pump manufacturer trusted OHP Services to work on their behalf to avoid warranty claims
- OHP Services as a world-wide operating service provider is the perfect partner for your powertrain needs

