

# Mobil SHC™ 626 helps improve gearbox thermal and mechanical efficiency

Den Hartog | REINTJES marine gearbox | The Netherlands



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Energy efficiency tests revealed big savings for ExxonMobil distributor in the Netherlands, Den Hartog, with a reduction in total energy losses of approximately 10% and a savings of about EUR 1400, or 1600 USD, per year.

## Situation

ExxonMobil distributor in the Netherlands Den Hartog supplies the vast fleet of inland vessels, river barges and tugs with fuel and lubricants. The company approached ExxonMobil Field Engineering Service and the local division of the marine gear manufacturer REINTJES to quantify the energy efficiencies associated with the use of a fully synthetic gear oil in gears versus traditionally used mineral motor oil.

## Recommendation

Working with the REINTJES R&D group in Hameln, Germany and ExxonMobil's Equipment Builder services, state-of-the-art power and torque monitoring devices were purchased and a number of oils were selected for the test. Among them, Mobil Delvac™ 1330 engine oil: a high performance monograde diesel engine oil, and Mobil SHC™ 626: an exceptional performance gear and bearing oil designed to provide outstanding service in terms of equipment protection, oil life and operation.

## Impact

The total thermal and mechanical efficiency of the system measured with Mobil SHC 626 was 0.27% higher than for Mobil Delvac 1330. For a fully mechanically optimized gear, this means a reduction in total energy losses of approximately 10% and a savings of about €1400 (\$1,600) per year. Aside from reduced fuel consumption for the tested 430 kW rated gear, lower thermal and mechanical stress on all involved components was achieved: gear wheels, bearings, seals, hydraulic components and the oil itself. After the test, all oils were analysed for changes in oil and traces of wear metals; all oils were in near-new condition without any signs of wear.

Reduction of energy losses by

10%.