

CASTROL AND WIND TURBINE OEMS THE PERFECT PARTNERSHIP

MEETING THE CHALLENGES OF WIND TURBINE LUBRICATION



After the customer warranty period expires, a key focus for an OEM's wind turbine service division will be the customer's Operation and Maintenance (O&M) requirements. O&M costs represent the largest financial outlay for wind farm owners and form an essential consideration during the post warranty period and also part of a successful contract renewal process.

YOUR KEY NEEDS AND CHALLENGES

Castrol's Liquid Engineers along with OEMs both know that these O&M costs will be need to be well managed to help ensure that reliable productive uptime is achieved and that financial objectives are also met. Based on our close partnerships working with various OEMs, their service divisions and from our own experience with BP's wind farms, we found, for example, that pro-actively identifying issues before they materialise and maintaining components in a timely manner can help reduce the O&M costs associated with component failure and long periods of downtime.

HOW DOES CASTROL HELP?

By continuing to work together and share our experience, we can help to address post-warranty challenges jointly. As the existing service provider, OEMs are well placed to offer O&M services to customers based on a deep understanding of their needs. As your lubricant provider and having worked closely with you for many years during trials, warranty and approval stages, we can provide high quality products and expertise to the wind turbine market.

In recent years, we have worked together to overcome some of the key operational challenge areas which affect downtime, such as sludge formation, foaming and micro-pitting, among others, and have introduced cutting edge products like Castrol Optigear Synthetic X and Castrol Optigear Synthetic CT into the market. We're proud of the extensive OEM approvals* that our gear oils, hydraulic oils and greases have achieved through joint working with you during the approval process and on the on-site project trials. Now, we want to take this relationship to the next level of partnership in the post warranty area too.

By working together and recommending Castrol to customers through the post warranty and contract renewal stage, you can help them to minimise O&M costs and maximise their productivity, which can lead to overall cost savings and give wind farm owners the opportunity to increase their overall ROI.

OUR OFFER TO YOU

In addition to our product offerings, we also offer various post warranty care options that we can take forward jointly:

- **Used Oil Analysis** services program that can be offered to the wind customers to help strengthen their data transparency
- **Joint capability building programs** that can be supported through our products, application of technical knowledge and through multiple customer references
- **Flushing procedure guidance and support** to plan for successful gear oils switch with a flushing guidance document
- **Filter analysis service** to help better understand contaminants, if any, and overall support to help maximise asset outputs
- **Sharing the advantages** of high quality pre-filtered products with customers
- **Global logistics support** to help customer through better reach and also support initiatives for product consolidation opportunities

Talk to your Castrol representative to discover how we can strengthen our partnership and nurture and educate both new and existing customers, together.

*Please speak to your Castrol representative who can share the updates with you.

The information and recommendations contained herein are based upon laboratory research, experience in the field and/or state-of-the-art procedures, and are believed to be accurate and reliable. However, they are provided as information only and in no way modify, amend, enlarge, or create any specification or warranty, and all warranties, express or implied, including without limitation the warranties of merchantability and fitness for a particular purpose, are excluded.

Further information about Castrol's range of products and services is available on the Castrol website and the Lubricant Oracle. Visit [Castrol.com/windenergy](https://www.Castrol.com/windenergy).

IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.

