

Optigear Synthetic X Extends Gear and Oil Life

WIND AFTERMARKET (DENMARK)

Wind Turbine Gearboxes

Castrol Optigear® Synthetic X 320

Reduced Micro-Pitting and Prolonged Oil Life



THE SITUATION

A wind farm owner in Denmark was using a mineral gear oil in their 600 kW wind turbines.

The customer was experiencing performance issues with the current gear oil, leading to downtime and high maintenance costs.

BEFORE

- Oil was causing micro-pitting on the gears leading to gearbox failure and downtime
- Residue formation was causing build-up on gearbox walls
- High foam was present
- Oil life was less than 2 years

AFTER

- Castrol recommended Optigear Synthetic X 320 to ensure extended life with minimal side effects like micro-pitting and sludge
- No residue formation
- No foam presence detected

THE SOLUTION

- The needs of the customer were discussed and determined to be primarily longer oil life and reduced gear wear.
- The excellent load carrying capabilities of the Optigear Synthetic X along with its long-life synthetic base fluid made it the perfect choice.
- Even after 24 months in use, Optigear Synthetic X 320 performs excellent in the FZG Micropitting Test (FVA-54) and FZG Scoring Test with results similar to new oil.
- Expected oil lifetime is 3+ years with the potential to run much longer.
- Optigear Synthetic X 320 has exceeded expectations in maintenance cost, by extending gearbox life, prolonging oil life, and saving countless hours of downtime.

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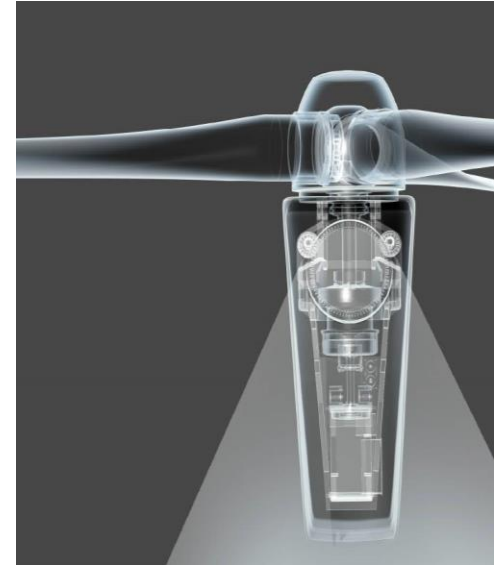
RECOMMENDATIONS

Castrol Optigear Synthetic X 320 is a high performance synthetic wind turbine gear oil designed for maximum micro-pitting protection and longest oil life, allowing for minimal maintenance over the life of the turbine.

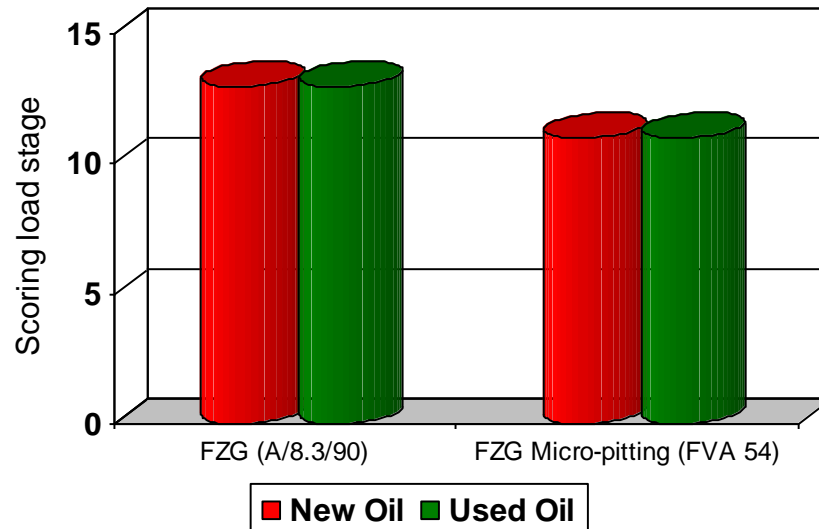
CONCLUSION

Excellent performance was achieved with regard to load carrying capabilities of the gears and extension of the oil life by a minimum of 50%.

Testing of the oil after 2 years in service shows the gear protection performance remains equal to the new oil.



Results of FZG Tests



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