



DWS-Wincon

Lower Oil Temperature, Less Wear in the Gearbox Bearings & Pinions and a Considerable Reduction in Noise Level



In 1997 I erected a 600 Kw Nordtank WTG and in 1998 a Wincon of similar size. After four years of operation we had, like almost all other wind turbine owners, problems with the Nordtank's gearbox.

The manufacturer repaired the gearbox, but two years later it had yet more problems – it was then replaced. After some negotiations, the manufacturer agreed to pay the total repair cost of approximately DKK 600,000, but declared that no further repairs would be paid for by them.

The new gearbox was identical to the old one – without any upgrades. I knew therefore that we could look forward to more big gear repair costs in about four years time.

I decided to cancel the service contract with the manufacturer and make a new contract with DWS-Wincon, who also services my Wincon Wind Turbine.

Now we didn't have to follow the manufacturer's lubricant recommendations as to oil types & volumes. I searched the market for appropriate lubricant products & chose the lubricants from Lubrication Engineers (LE). Along with the LE team we then decided which LE gear oil to use in the wind turbine.

Compared to the previous oil that the manufacturer recommended, the LE gear oil had a much higher oil film strength. This is very important as it seems that the gearbox is under-designed and therefore has a much higher pressure on the bearings & pinions when the turbine is under full load.

LE's 605 ALMASOL® Vari-Purpose Gear Oil does not foam and because of that we were able to add an extra 25 litres of oil to the gearbox. The gear oil was therefore filled right up to the top of the oil indication level glass.

LE 605 ALMASOL® Gear Oil has a better penetration ability & travels more effectively to the bearings as soon as the wind turbine starts. This meant that a planned installation of a central lubrication system for all the bearings was no longer necessary.

LE 605 ALMASOL® Gear Oil does not mix with water. When any condensation forms inside the gearbox, the moisture drops to the bottom where it can easily be drained off.

The temperature of the gearbox fell from 70°C to 60°C. Also, the first time that we started up the wind turbine after filling with LE 605 ALMASOL® Gear Oil we noticed a considerable reduction in the noise level.

The wind turbine has now been operating with the LE gear oil for two years. There is absolutely no wear on the bearings or pinions and no metal particles in the oil filters. These problems were all previously identified when we used the manufacturer's recommended gear oil.

When our Wincon Wind Turbine needed new oil, we also used the LE gear oil in this unit.

I am looking forward to following the progress of my wind turbines in the future. I am very confident & optimistic and I believe that we will see a considerable improvement in their performance and a longer gearbox lifecycle – all due to Lubrication Engineers 605 ALMASOL Vari-Purpose Gear Oil.



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