



CLEAN OIL
BRIGHT IDEAS

CJC™ Application Study

Application Study
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CUSTOMER

Customer: Enersis, France & ERG Renewable
Wind Farm: Voie Bleriot Est &
Oise Lihus, France

SYSTEM

Turbine: Nordex N90
System: Gearbox, Eickhoff
Oil type: Mobilgear XMP 320
Oil volume: 340 L

PROBLEM

The wind turbine gearboxes were all having problems related to high oil contamination of particles and oxidation deposits in the gear oil.

The high contamination level caused accelerated wear on gearbox components and reduced oil lifetime, leading to increased O&M costs, unforeseen breakdowns and lost productivity. The oil was so contaminated that it had to be changed.

SOLUTION

CJC™ Offline Fine Filter, type HDU 27/27.
With CJC™ Filter Inserts, type B 27/27, 3 µm abs.
Pump flow: 120 L/h

RESULT

Installation of the CJC™ Offline Oil Filter led to a significant reduction of solid particle contamination and to an important improvement of the overall oil cleanliness.

In an average of all 5 turbines, the contamination level in the oil was reduced by a factor of more than 3,500.

BENEFITS

As a result, the customer avoided changing the oil, which would have cost more than **2,500 EUR** per turbine taking into account the costs of new oil and the costs related to changing the oil and disposal of used oil.

Field experiences have shown that with the CJC™ Offline Oil Filter and regular preventive service and maintenance, including oil analysis, mineral gear oils like the Mobile XMP can last up to 5 years.

On top of avoiding the oil change and extending the oil change interval, the CJC™ Offline Oil Filter also led to reduced gearbox wear, and thus longer component lifetime, higher turbine availability and reduced O&M costs.



NORDEX Wind Turbine N90
with a CJC™ HDU 27/27
Offline Fine Filter installed



RESULT

Turbine	BEFORE installation 4 µm particles		AFTER installation 4 µm particles		Life improvement factor
	Count/100 ml	ISO	Count/100 ml	ISO	
1. Voie Bleriot Est WT3	≈ 12,000,000	24	≈ 24,000	15	x 5
2. Voie Bleriot Est WT5 *)	≈ 96,000,000	27	≈ 6,000	13	x 10
3. Oise Lihus WT2	≈ 3,000,000	22	≈ 12,000	14	x 4
4. Oise Lihus WT3	≈ 12,000,000	24	≈ 24,000	15	x 4
5. Oise Lihus WT4	≈ 1,500,000	21	≈ 48,000	16	x 2

