



Gas Engine Oil (GEO) Combined Heat and Power Plant, CHP - CATERPILLAR

CJC® Application Study



CUSTOMER

E.ON Danmark A/S, Combined Heat and Power Plant, CHP.

THE SYSTEM

System: Caterpillar 3516
Gas Engine, 1,036 kW
Oil type: Mobil Pegasus 905
Oil volume: 450 litres
Fuel: Natural Gas
Engine hours: approx. 57,000 hours

THE PROBLEM

Short oil change intervals, approx. 1,500 hours.
The oil was condemned due to too high viscosity.

THE SOLUTION

CJC® Lube Oil Filter 27/27-27/27 was installed. The filter has two filter housings: in the first filtration stage particles, soot, oxidation residues and water are removed. In the second stage acids are neutralized.

Dirt holding capacity: approx. 2 kg
Water absorption capacity: approx. 1,2 L

The filter inlet is connected diagonally arranged directly at the oil sump, and the filter outlet is connected higher up – as far away as possible from the filter inlet. The pump unit of the filter enables an independent circuit for the continuous filtration and care of the gas engine oil (24/7).

THE TEST

The test with CJC® Lube Oil Filter increased the oil lifetime from 1,500 hours to 3,997 hours, which is approx. two times normal oil lifetime.

The oil viscosity was reduced from 164 cSt to 150 cSt.

The test was not terminated because any condemning limits had been exceeded, but only because a reasonable oil life had been achieved. 3,000 hours was the aim.



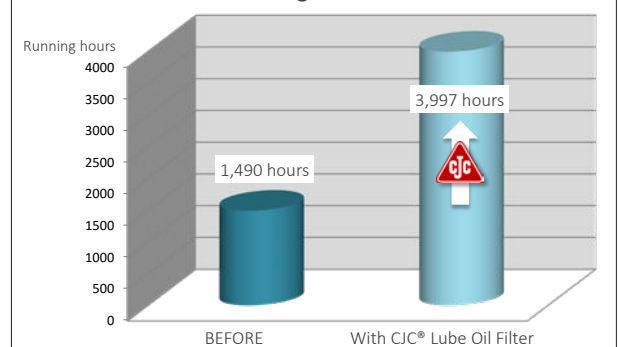
E.ON Danmark A/S, Caterpillar Gas Engine and the CJC® Lube Oil Filter 27/27-27/27

THE RESULT

	BEFORE CJC® Filtration	AFTER CJC® Filtration
Oil life time, hours	1,490	3,997
Viscosity 40°C, cSt *)	164	150

*) Viscosity at 40 °C, new oil: 126 cSt

Oil change intervals



The oil samples were analysed by Spectro Oil in the United Kingdom. They have analysed the Gas Engine Oil (GEO) for Mobil Oil Danmark A/S since 1997. The analysis reports are available on request.

SAVINGS PER YEAR

Only due to the prolonged oil change intervals (8,000 running hours per year):

- approx. 1.515 litres oil
≈ 4.364 EUR
≈ 3.940 kg CO₂*

* The thermal disposal of waste oil causes CO₂ emissions – approx. 2.6 kg CO₂ per 1 litre of oil.

Protect resources and reduce emissions:

- less new oil
- less waste oil and CO₂

