



## EngineWatch® Case Study

### How the EngineWatch® polarity measurements compare to laboratory analysis results in detecting oil wear

#### How the EngineWatch® sensor data compares to laboratory oil analysis in detecting oil wear

In this field experiment Oil Advantage's compact EngineWatch® oil condition monitoring sensor was fitted to a diesel generator. This case study compares oil wear data collected in real time by the EngineWatch® sensor to laboratory-based oil analysis results performed on samples taken at regular intervals:

- The EngineWatch® sensor was fitted to a diesel genset to monitor its oil condition continuously over a test period of 200 engine hours.
- Regular oil samples were taken from the diesel generator for laboratory analysis during this same 200-hour test period.
- Oil wear data collected by EngineWatch® was compared to the analysis results from the laboratory.
- The results proved that EngineWatch® can determine oil wear in an engine, providing a convenient, cost-effective solution to monitoring oil wear at all times and optimizing equipment performance and maintenance routines accordingly.

Figure 1 below shows the EngineWatch® sensor's polarity readings in relation to the laboratory's oil oxidation analysis results. The chart demonstrates the inverse relationship between polarity and oxidation - as the EngineWatch® polarity reading decreases, so oxidation increases in a similar manner.

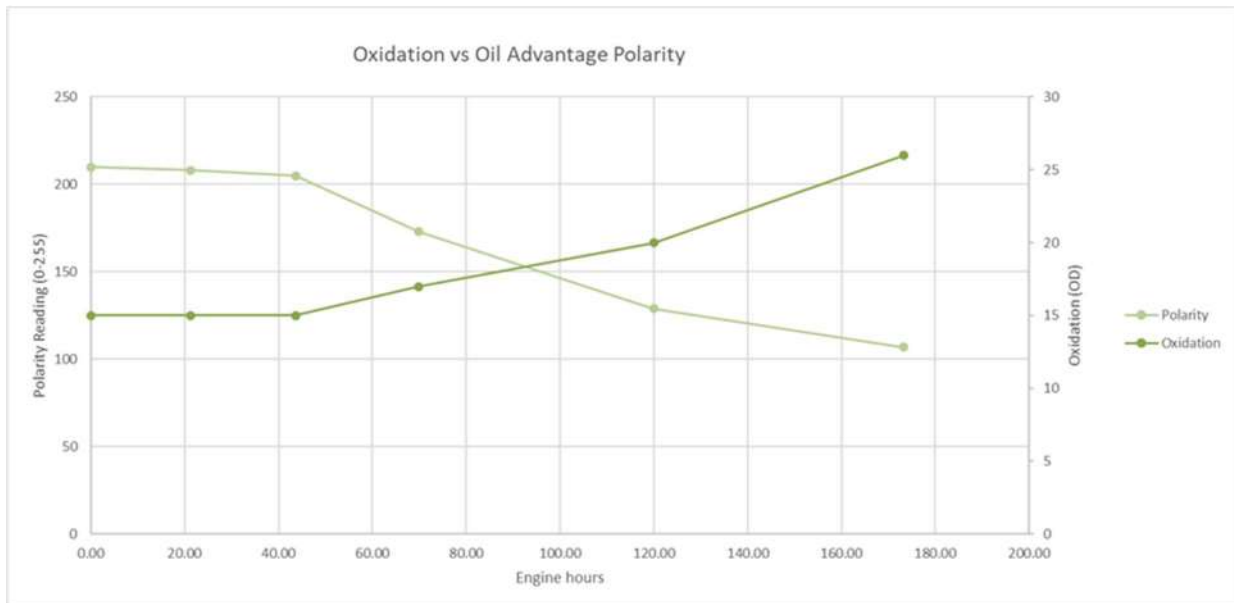


Figure 1: Laboratory oxidation test results vs Oil Advantage's EngineWatch® sensor polarity readings over a 200-hour test period.

### Why is this important?

Whether through monitoring oil polarity or oxidation, detecting oil wear early is key to informing your preventative maintenance programs and minimizing equipment downtime.

Oil Advantage's EngineWatch® sensor offers the convenience and flexibility to accurately monitor your engine's oil wear trend – in real time – using its novel polarity scale. This can help to reduce your oil sampling frequency, which can be costly and disruptive. It provides better visibility of the wear profile of your oil, and helps you optimize the use of lubricating oil in your engines.

The EngineWatch® sensor's polarity readings can be correlated with your laboratory's oxidation measurements. In each case, it is important that a baseline – clean oil – is properly established to determine the rate of oil wear under normal operating conditions.

### About Oil Advantage

Oil Advantage provides cost-effective, real-time oil condition monitoring equipment and services, empowering decision makers to act with data-driven insight and improving the operational performance and lifespan of critical equipment.

Our sensors require no calibration and are compatible with all commercially available oils. They are maintenance-free, durable, and designed to last the lifetime of your equipment. Data collected over a given period can provide valuable insight about machine performance and helps you to plan your preventative maintenance routine.

When trialling our equipment as an early warning system or for continuous condition monitoring, we help you interpret your data before developing intelligent dashboards and automated notifications that suit your business' unique needs and workflows.

**Contact us for an obligation-free consult or to test drive an EngineWatch® sensor**

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