

PRODUCT APPLICATION PRESS RELEASE

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For Immediate Release

SENSONICS PROXIMITY PROBES PROVE IDEAL SOLUTION FOR MONITORING ENGINE PERFORMANCE

Among the many performance and monitoring tests required to ensure dependable and durable engine performance across a wide range of power applications is the need to **measure relative shaft vibration in dynamometers**. This is where **condition monitoring specialists SENSONICS** excel with a range of **proximity probes** which make an essential contribution to overall engine performance.

A recent example is a major manufacturer of large industrial diesel engines used for a wide range of industrial applications including fruit picking machines, mining trucks, commercial and recreational marine craft. A cutting-edge technical centre is a global focal point for engine development and low-emissions technology for their engines and includes a wide range of testing services for customers.

The technical centre is co-located with their main engine manufacturing plant and in close proximity to test cells which are dedicated to engine research & development work for mining, rail, oil & gas, marine and power generation industrial applications.

The company purchased two dynamometers and also Sensonics eddy current proximity probes for measuring relative shaft vibration. A Senior Technician commented, *"We were considering purchasing more sensors and as a result of the performance of the Sensonics eddy current probes we decided to take a closer at what they could offer"*. He confirmed, *"Basically, we needed a solution for measuring relative shaft vibration in our dynamometers*

and we really appreciated the repeatability and reliability of the Sensonic sensors. They have done a great job in reporting driveline failures as well as alignment issues, before they became catastrophic failures". As a result of the performance of the Sensonics eddy current proximity probes the company decided to install them on the other dynamometers in their technical centre for condition and vibration monitoring applications.

Sensonics initially supplied their **Senturian PRS04 sensors** and now the company will be looking at the features and benefits of the latest **Senturian XPR04 range of Eddy Current Proximity Probes.**

The XPR04 proximity probe system consists of a calibrated probe, extension cable and driver based on the eddy current principle. This combination forms a tuned circuit with the target material and variations in probe face to target distance are detected in this circuit by the driver. This provides a linearised voltage output proportional to target gap with a nominal sensitivity of 7.87mV/ μ m and a range of up to 2.5mm. This type of measurement system provides highly accurate (resolution typically less than one micro-meter) vibration and relative positional measurements, for harsh environments up to 180°C.

The driver unit offers selectable system lengths of 5m, 7m or 9m, with a front panel green LED indicating the selected option. The gap voltage monitoring socket assists with commissioning the probe system; a volt meter can be connected directly to the driver through the 3.5mm standard audio socket to display the gap voltage at the point of installation and the probe mechanical gap can then be adjusted to suite the specifics of the application.

The cable system incorporates snap lock connectors which require no torqueing and provide a shake-proof solution which is important for heavy industrial applications. The double screened cable offers robustness in combination with high immunity to interference and

optional stainless steel convoluted armour is available for applications or environments where cable protection is paramount. ENDS

Further details at: <http://www.sensonics.co.uk/resources/datasheets/proximity-probes/>

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