Romax TECHNOLOGY

# *Drivetrain Health Assessments with Romax Portable Vibration Units*

## Reduce the cost of unscheduled repairs

Vibration analysis is an established engineering discipline and is proven to deliver valuable information about the health of a machine. When done properly it can be effective for diagnosing drivetrain health, scheduling inspections and planning repairs in wind farms.

Not all wind farms have permanent condition monitoring equipment. Vibration sweeps with portable equipment offer a solution for detecting damages leading up to end of warranty or performing predictive maintenance during turbine O&M.

## Identify major component damage before end of warranty

The portable system is compact, rugged and easy to use; 8 channels are available for acceleration and 1 channel for both power and speed. The onboard high-spec industrial computer can be configured to record data over certain power levels or for a set number of minutes every hour.

The vibration data is organized into various power and speed 'bins' for ease of use by the vibration analyst. A LCD display allows the technician to configure the recording and enter turbine number and other parameters.

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## Project working with owner site staff

Where an owner desires to provide staff for installation and retrieval of the Portable Vibration Units, Romax can provide the value added engineering services, including:

- Provision of Romax Portable Vibration Units
- Installation and measurement procedure
- 2 day on-the-job training to get the project running smoothly
- Direct link to Romax data analysis software for data analytics to find drivetrain faults
- Reporting
- Advice on components to inspect, review of findings and advice

## Turnkey project

Romax offer a turnkey project, including:

- Provision of Romax Portable Vibration Units
- Installation and measurement in every tower
- Data analysis to find drivetrain faults
- Reporting
- Follow up inspections and borescope reports

## Vibration data analysis

For 25 years Romax has been helping the world's large industrial companies design and manufacture quiet transmissions. Our PhD trained staff in vibration engineering have the experience you need to crunch the numbers, using the right algorithms and detect failures in your wind turbines.

From our experience in detecting failures at wind farms all around the world we have perfected methods for diagnosis of main bearing pitting, parallel stage bearing axial cracks, planetary and high speed gear tooth cracks, generator stator wedge looseness, gearbox bearing pitting, generator bearing pitting and electrical fluting damage, excessive shaft run-out and misalignment, mount looseness and rotor shaft imbalance.

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