



YORK[®] Enhancement Services

Vibration Analysis and Failure Prevention



Vibration Analysis Allows You To Look Inside Your Compressor

Wouldn't it be great if your service technician could be miniaturized and gain access to the internals of your compressor? He would then be able to visually inspect bearings, seals, and other components. Farfetched? Vibration analysis actually accomplishes the same goal. Defects on bearings and other components will emit a distant signal corresponding to the severity of the defect and its rotational speed. Sensitive vibration equipment can detect the signal and record it for diagnosis by a vibration engineer.

Early Detection Prevents Costly Compressor and Motor Failures

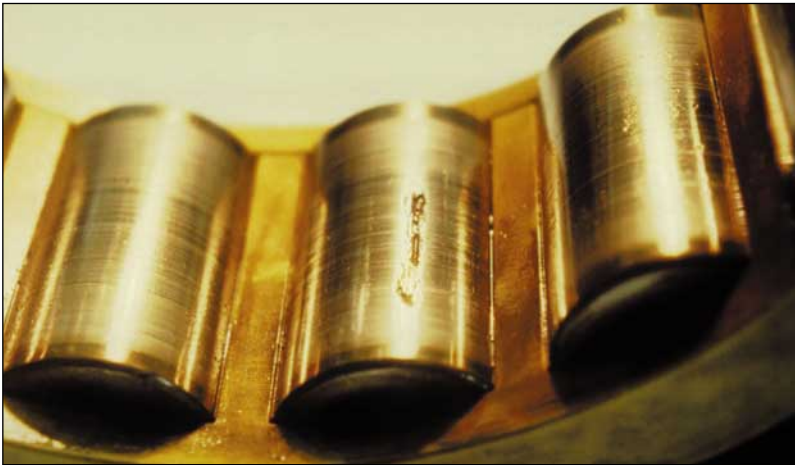
Vibration analysis is an important tool in determining compressor and motor operating condition. Many failures can be prevented through the early detection of bearing wear and/or component imbalance. If a problem is detected, the downtime can be scheduled to reduce the inconvenience and cost. Vibration analysis should be scheduled at the following times:

- During Chiller commissioning to develop baseline levels.
- During seasonal start-up to confirm component condition.
- Prior to winter shut-down to determine whether off season repairs need to be accomplished.
- Whenever a change in unit sound level is detected.
- Vibration analysis is a key component in every preventative maintenance program.

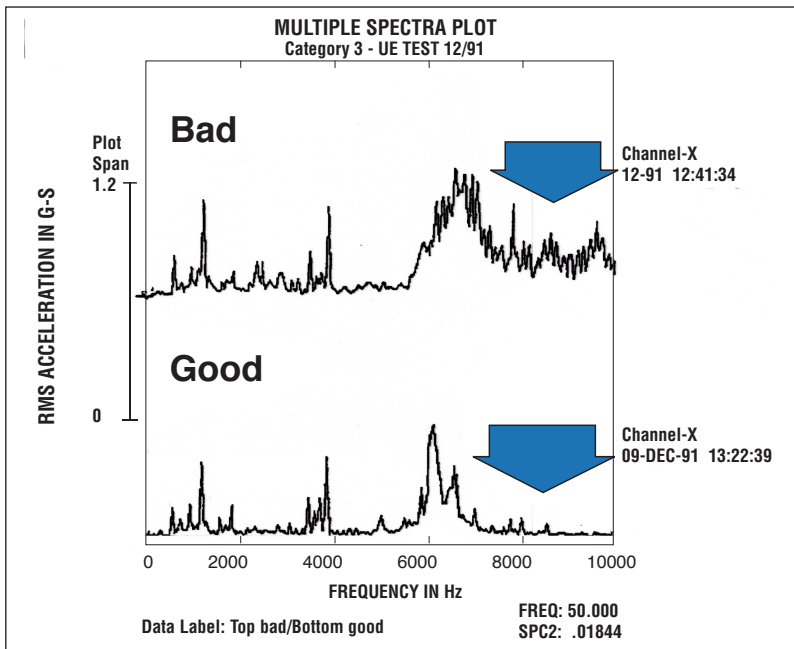
Our Features	Your Benefits
<ul style="list-style-type: none"> • Vibration analysis at start-up. 	<ul style="list-style-type: none"> • Establishes a baseline level for comparison to future readings.
<ul style="list-style-type: none"> • Analysis of compressor operating condition throughout the unit life cycle. 	<ul style="list-style-type: none"> • Provides trending on compressor and motor condition. Elevated levels are identified and downtime scheduled to minimize chiller plant disruptions.
<ul style="list-style-type: none"> • Engineering analysis of collected data. 	<ul style="list-style-type: none"> • YORK Headquarters Vibration Engineers review each report for completeness and accuracy.
<ul style="list-style-type: none"> • Early detection of potential motor and compressor problems. 	<ul style="list-style-type: none"> • Catastrophic failures can be avoided. Rebuild costs are minimized.
<ul style="list-style-type: none"> • Compressor overhauls or exchanges by YORK Factory trained technicians. 	<ul style="list-style-type: none"> • YORK provides single source responsibility for the rebuild or change-out of affected compressors and motors.

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Bearing with roller damage.



Vibration plot comparing a good and damaged bearing.

What Kinds of Problems Can Be Detected?

Many problems that eventually lead to catastrophic failure can be diagnosed early in their failure cycle. Vibration analysis can detect the following problems:

- Bearing defects & wear
- Seals contacting rotating components
- Impeller imbalance
- Motor rotor bar problems
- Motor rotor imbalance
- Gear wear & broken teeth
- Coupling misalignment

Vibration Experts Evaluate Your Test Results

YORK's vibration analysis program builds on the expertise and skills of both field vibration technicians and factory engineers. The field technician will evaluate your equipment for proper placement of the vibration detection accelerometers. Vibration readings are recorded along with operating conditions and submitted for expert analysis. YORK's Vibration Engineering Department reviews all reports prior to release.

YORK, Carrier, and Trane included

As the only worldwide manufacturer and service provider focused solely on air conditioning and refrigeration equipment, YORK has the expertise to inspect, service and repair all brands of equipment. In every case, you receive a detailed report of compressor condition that allows you to make informed decisions about any necessary repairs and component replacements.

Rely on YORK Expertise

YORK is uniquely qualified to provide you with total service and engineered solutions to your individual building and equipment challenges. Our Factory trained technicians can assist you in developing preventative maintenance programs encompassing your entire HVAC or refrigeration system. Their individualized recommendations will keep your equipment in peak operating condition.

