



# Providing 3-Dimensions Of Service

Dependability • Dedication • Diversity

## PREVENTIVE MAINTENANCE

Breakdowns and failures cause costly unscheduled downtime. Magnetech Industrial Services provides a comprehensive predictive/preventive maintenance program that can greatly reduce the threat of downtime. Our engineers and state-of-the-art equipment can detect problems and repair them prior to a failure.

### Vibration Analysis

Mechanical and electrical problems will eventually develop in all rotating equipment. Vibration levels will increase and occur at specific frequencies that relate to the type of developing fault. A vibration analyzer will measure both vibration frequency and severity. Magnetech uses trended data and vibration signatures to quickly pinpoint defective components.

Potential Problems that can be identified and corrected include:

- roller bearing defects
- rotor imbalance
- worn belts or sheaves
- resonance
- bent shafts
- load imbalance
- flow deficiencies in pumps & fans
- component misalignment
- gear mesh irregularities
- inefficient system coordination



### Oil Analysis

Magnetech obtains oil samples from machinery at regular intervals - while the machine is operating - to obtain true samples of "active oil." The information obtained from each oil analysis is combined with vibration data, thermal imaging, electrical and other testing methods to provide a more accurate assessment of condition. Test results are entered into a database, stored and trended.

### Ultrasonic Examination

With modern equipment, Magnetech technicians are able to scan an area and identify problems such as gas leaks, vacuum leaks, valve leaks and similar problems.

### Physical Inspections

Careful examination of the entire machine is critical to an accurate evaluation of component condition. Using observed physical characteristics and predictive maintenance data, Magnetech can provide valuable information on potential problems. We also offer precision inspection service on gear sets and machine tool spindles - close tolerance, high-speed components critical to many manufacturing processes. Magnetech crews can conduct routine inspections through our PM schedules.

Form 115 D  
WWW.MAGNETECH.COM

## MAGNETECH INDUSTRIAL SERVICES

24/7 EMERGENCY SERVICE

MOTORS • GENERATORS • TRANSFORMERS • MAGNETS • SWITCHGEAR • BREAKERS • COMPRESSORS • TURBINES • PUMPS • GEARBOXES • CRANES • DRIVES • BLOWERS • WIND TOWERS  
CORPORATE OFFICE 800 NAVE ROAD SE MASSILLON, OHIO PHONE: 330-830-3500 FAX: 330-830-3520

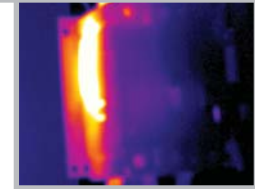
**Boardman, Ohio** 1-800-758-0941  
**Merrillville, Indiana** 1-866-942-2346  
**Hammond, Indiana** 1-866-299-8502

**Massillon, Ohio** 1-800-837-1614  
**Cincinnati, Ohio** 1-800-837-1614

**Visalia, California** 1-800-437-4854  
**Saraland, Alabama** 1-800-932-2065  
**Huntington, West Virginia** 1-800-926-4379

### Infrared Thermal Imaging

A non-intrusive predictive maintenance tool, infrared imaging provides visual representation of a component's relative condition. Conducted under load, this technology views energy emissions from operating equipment and transforms the information into a color-coded map. Reports then capture temperature differences between problem areas and baseline values.



### Electrical Testing

Our predictive maintenance engineers and technicians can handle all your motor testing needs using either a **PdMA Motor Circuit Evaluator (MCE)™** while a unit is off-line or a **PdMA Emax™ Tester** when a unit is on-line providing graphs of data trends and comparison reports in the field to analyze *power quality, power circuit condition, stator health and motor efficiency* through the following testing services:

#### PdMA Motor Circuit Evaluator (MCE)™

- Polarization Index & Dielectric Absorption
- Resistance to Ground (RTG)
- Capacitance to Ground (CTG)
- Resistive Imbalance in Three-Phase Motor Circuits
- Inductive Imbalance
- Rotor Influence Check (RIC)
- Resistance in DC Motors and Generators
- Commutator Test

#### PdMA Emax™ Tester

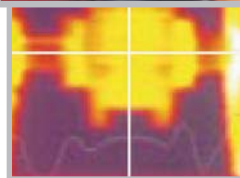
- Eccentricity Testing
- Low High Resolution
- In-Rush/Startup

### Laser Shaft Alignment

Precision alignment is proven to deliver significant cost savings in electricity, machine repair and expensive downtime.

Symptoms of misalignment include:

- excessive vibration
- high bearing temperatures
- loose foundation bolts
- excessive oil leakage at seals
- excessive coupling temperature & wear
- shafts breaking at inboard bearings
- premature bearing, seal & coupling failure



Form 115 D  
WWW.MAGNETECH.COM

**MAGNETECH INDUSTRIAL SERVICES**

24/7 EMERGENCY SERVICE

MOTORS • GENERATORS • TRANSFORMERS • MAGNETS • SWITCHGEAR • BREAKERS • COMPRESSORS • TURBINES • PUMPS • GEARBOXES • CRANES • DRIVES • BLOWERS • WIND TOWERS  
CORPORATE OFFICE 800 NAVE ROAD SE MASSILLON, OHIO PHONE: 330-830-3500 FAX: 330-830-3520

**Boardman, Ohio** 1-800-758-0941  
**Merrillville, Indiana** 1-866-942-2346  
**Hammond, Indiana** 1-866-299-8502

**Massillon, Ohio** 1-800-837-1614  
**Cincinnati, Ohio** 1-800-837-1614

**Visalia, California** 1-800-437-4854  
**Saraland, Alabama** 1-800-932-2065  
**Huntington, West Virginia** 1-800-926-4379