

CONDITION MONITORING
AND PREDICTIVE MAINTENANCE

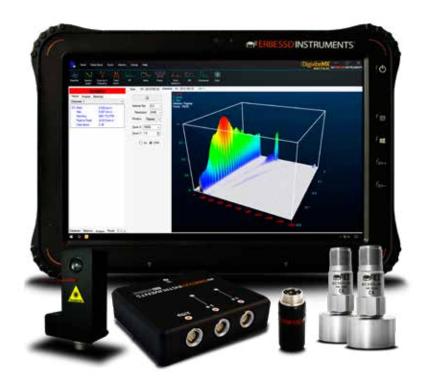
Reliability service

ENHANCE YOUR ASSET RELIABILITY AND OPTIMIZE LIFECYCLE COSTS BY REDUCING DOWNTIME WITH PROACTIVE MACHINERY HEALTH INSIGHTS

At Wajax, we are driven by pioneering ideas. Keeping our customuers' objectives at the forefront, we take a collaborative approach to understand your issues.

Over the past 160 years, we have provided value added solutions with our innovative techniques, backed by a talented team of over 700 skilled technicians and engineers, and 110 branches across Canada. Wajax is uniquely positioned to fully support your business needs.

- Vibration analysis
- Asset monitoring program (AMP 2.0)
- · Visual & thermal inspections
- · Lubrication management



Vibration analysis & inspections

Vibration monitoring determines your machine's health using early detection and analysis of chronic problems, avoiding issues that would otherwise prove detrimental. We use state-of-theart technology to collect vibration data allowing for superior prognosis and troubleshooting, supported by asset health dashboards and actionable recommendations - ensuring machine failures are anticipated.







Creating a collaborative partnership between your in-house technicians and Wajax's cloud-based analytics team will operationalize your capital expense.

- · Online and offline monitoring technology
- Operating deflection shape (ODS) and motion amplification
- Early detection & failure warnings
- Vibration database & alarm level set up
- Route development
- Sensor selection & Installation
- · Onsite data collection
- Inspection sheets and operator routes (TPM)

- Onsite analysis & troubleshooting
- Dynamic balancing and laser alignment
- Bump and run up / coast down test
- Cloud-based support and analysis
- · Remote analytics centre
- Machine learning & prognostics
- · Asset health dashboards
- Training and certification

Asset Monitoring Program (AMP 2.0)

Starting an in-house vibration monitoring program is capital intensive. Hardware costs and training personnel can increase your maintenance budget to the point where exploring the benefits of condition monitoring and predictive maintenance is cost prohibitive. With AMP we can help you reap the benefits of condition monitoring - achieving significant savings over time with minimal start-up and capital investments.



AMP 75

AMP 150

AMP 300

AMP 500

Equipment and end-user training for vibration data collection

Setup of database and data routes by Wajax Engineers Straight forward, end-user data collection and synchronisation Cloud-based analysis, reporting, and recommended actions Asset Health
Dashboard for
easy data
interpretation

Lubrication Management

Proper and regimented lubrication management is critical to maximize equipment health and ultimately reducing your overall maintenance cost.

It's a common belief that maintaining lubricant levels is enough to ensure effective lubrication. However, by analyzing oil health, oil contamination, and machine wear recommendations for lube types, quantities, and frequencies can be implemented that will optimize equipment reliability and maximize the return on your assets.

Our lubrication management program focuses on three core outcomes:

- · Properly implementing lubricant recommendations
- · Reducing lubricant failures and machine downtime
- Optimizing the program to fit your evolving needs

Our lubrication management program will provide full Reliability Solutions for both Lubricants & Auto Lube Systems detailed below:

- · Lubrication strategies includes analysis, recommendations and implementations
- · Reduce cost of ownership by implementing reliability solutions
- Lube room set up
- · Lube handling, storage and consumption
- Lube audit (type, quantity, frequency and color codes)
- Lube route development and implementation
- Onsite oil sampling and analysis
- · Filter change-outs and used filter analysis



Visual & Thermal Inspections

Predict failures cost effectively with non-intrusive examinations and engineering evaluations. Our technicians use flexible, articulating video borescopes for non-destructive inspections on large component failures such as gearboxes, valves, etc. For electrical systems, infrared thermography is performed to identify hot spots and map thermal patterns.





- Detailed reporting with precise condition assessments
- High quality images with exceptional resolutions
- Expanded measurement capabilities with precise, real-time 3D measurements
- · Improved inspection efficiencies with superimposing capabilities
- 24/7 support with on-site trained technicians
- Thermography PM program development
- · Early indication of thermal loading, asymmetric loads and discrepancies
- Detailed reports with accurate recordings of heat radiations
- Fault detection and thermal imaging
- 24/7 support with on-site trained technicians

Specialized field services

ASSET MANAGEMENT

Asset care program

- · CMMS design and population
- Asset register
- Strategies
- Criticality
- · RCM
- · Job plans

Spares & inventory

- · Material master
- · BOMs
- Spares optimization

Bad actor management

- · Root cause analysis
- · Defect elimination

RELIABILITY SERVICES

Laser alignment balancing non-destructive tests condition monitoring

- Borescope
- · Vibration analysis
- Monitoring
- Thermography

Lubrication management Filtration servicing **Preventative Maintenance**

INSTALLATION & COMMISSIONING

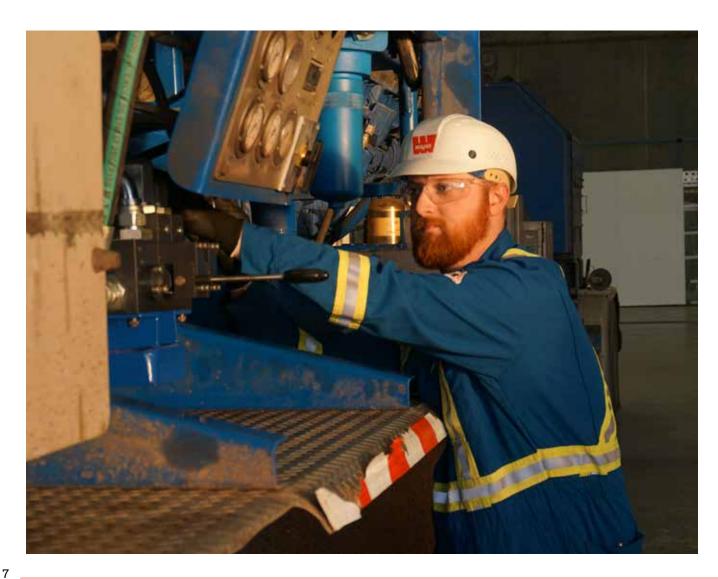
- Installation & startup supervision
- · Implementation plans
- · Process & piping assessment
- · Turnkey engineered packages
- Bearings & pillow blocks
- Construction

PROGRAM MANAGEMENT **& EXECUTION**

- · Turnaround & shutdown management
- · Engineering support
- · Center of excellence
- Project commissioning support from design to installation and start up

BREAKDOWN & EMERGENCY

- · 24/7 emergency service
- · Fully equipped trailers with specialized tooling





Since 1858, Wajax has been serving major Canadian industries as one of the nation's leading providers of heavy equipment, power systems, and industrial products and services.

With our dedicated team, national network, diverse market expertise, broad range of products and services and world-class vendor partners -Wajax has you covered from coast-to-coast.

























