



Machine Health Monitoring

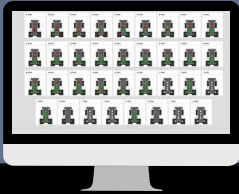
Rigid Dump Truck in Mining

Comprehensive online condition monitoring technology and services solution

HOW CAN WE HELP YOU?

We design, develop, implement and operate advanced online condition monitoring solutions on trucks.

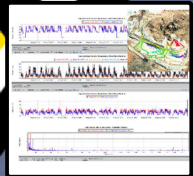
Dashboard



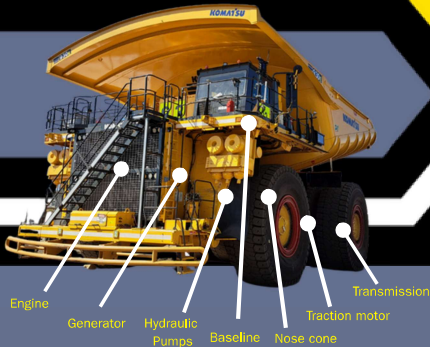
Motornostix Canary® Software



Data and Graphs



Remote monitoring



FLEET DATA MONITORING

Detection with fleet data analytics

- Data analytics for modelling unique filtered data for the fleet
- Periodic model comparison for anomaly detection
- Notify monitoring team of anomaly to inspect and interpret
- Review, supply feedback and optimized alert levels and model



BENEFITS

Prevent failures

Improve uptime

Schedule maintenance — not emergencies

Stay informed - know more

Get real-time alerts, early

Historical trends & diagnostics at your fingertips

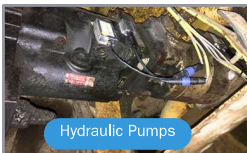
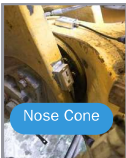
Peace of mind - Anytime, Anywhere

**AVOIDING
LOSSES**

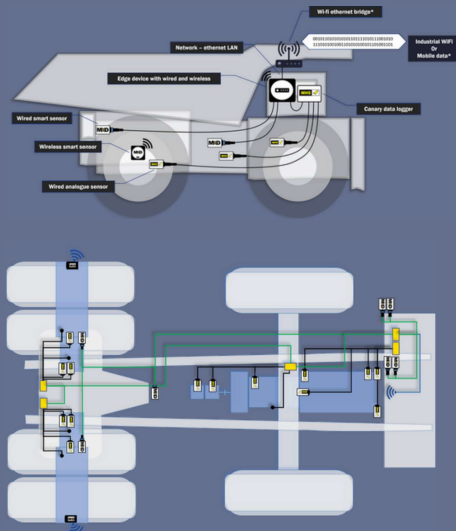
5X

the number of times one of our client's business benefits when compared with implementation and operating cost.

INSTALLATION



SYSTEM LAYOUT



Standard Scope

Diesel engine
Generator
Transmission
Hydraulic pump
Traction motors
Differential
Nose cone bearing

Baseline

Location
Speed
Direction
Altitude
Vibration
Impacts
Pitch and Roll
Temperature

Customized Scope

PRODUCT SOLUTIONS



Smart Online Product

Our **MXD™** solution offers the capability to make machine monitoring possible in a digital future by bringing data from various physical data collection devices, sensors and edge processing smart sensors into the data delivery and interpretation capabilities.

MXD™ makes machine health monitoring easier, digital and more cost effective so you can do more.



Advanced Online Product

Our capable **Machine Health Surveillance™** solution based on the Motornostix Canary® data logger, software and machine-to-cloud-to-shop-floor data management and monitoring solutions. A comprehensive, cost-effective remote condition monitoring solution for application on a wide range of machines. Optimized to ensure business value considering the use case, expected failure modes, and the services required.

SCOPE FOR MINE HAUL TRUCKS

Component	Vibration	Temperature	AE	RPM	Other
All Diesel Trucks					
Engine	MHS	MHS	MHS	MHS	MHS: US(leak), Sonic, IAS*; MXD: US(leak), Sonic
Baseline	MXD	MXD	-	-	MXD: Location & speed (GPS), Pitch and Roll, Impact Events; MHS: Humidity, Temperature
Electric Trucks					
Alternator	MHS/MXD	MHS/MXD	MHS/MXD	MHS/MXD	MHS/MXD: Current*
Hydraulic Pumps	MHS/MXD	MHS/MXD	MHS/MXD	MHS/MXD	
Nose Cone Bearing	-	-	MXD	-	
Traction Motors	MHS	MHS	MHS	MHS	MHS/MXD: Current*; MHS: IAS*
Transmission/Final Drive	MXD	MXD	MXD WL		
Mechanical Truck					
Torque Converter	MXD	MXD	MXD	MXD	
Hydraulic Pumps	MXD	MXD	MXD	MXD	
Gearbox	MXD	MXD	MXD	MXD	
Differential	MXD	MXD	MXD	MXD	
Final Drive DE	MXD	MXD	MXD	MXD	
Final Drives NDE	MXD	MXD	MXD	MXD	

MHS™ - Machine Health Surveillance™

MXD™ - Smart monitoring

WL - Wireless

AE - Acoustic Emission

US - Ultrasonic

IAS - Instantaneous Angular Speed (on flywheel gear)

Sonic - Audio Sound

Impact Events - Detect elevated high g events

*Subject to access and requirements

Subject to machine specifications and data provided.

T&C apply. All rights reserved.



DETECTING FAILURE MODES

Imbalance
Misalignment
Looseness
Gear mesh
Air leaks
Bearing wear
Lack of lubrication
Overtemperature
Vibration
Overload
Engine misfire
Overcurrent



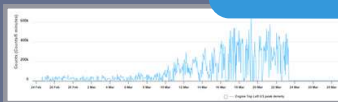
COOLING FANS TEMPERATURE



PROP SHAFT VIBRATION



EXHAUST LEAKS



NOSE CONE LUBRICATION



WHY US

Proven track record

We understand industrial machines and how to monitor them and interpret the data. We have satisfied clients of more than 20 years standing. Motornostix strives to be the best provider of remote online condition monitoring services in the industry. Since 2020 we have proven our rigid dump truck solutions, losses avoided far exceeding the cost of the service.

Solutions to match client needs

Motornostix has the capability to configure customised applications of condition monitoring technologies to match the unique requirements of our clients. We supply Condition Based Maintenance strategy and tactic development support.

Long-term partnership

We are in the business of supplying long-term value, not just moving a product. Our Field Service and Condition Monitoring Analyst team work with you to ensure our systems are in good working order, data can be interpreted accurately, and you are provided with appropriate and timeous information.

Cost-effective and scalable solutions

Motornostix offers scalable and modular solutions, with seamless upward migration from portable data collection devices to full remote online monitored systems, all through the same web portal.

ABOUT US

Motornostix (Pty) Ltd, established in 2000, is a South African technology company that assists companies, engineers and maintenance people to benefit from cost-effective condition-based asset management, by integrating complete, easy to use online condition monitoring solutions to support business objectives. Motornostix South Africa (Pty) Ltd is our South African subsidiary.



www.motornostix.com

info@motornostix.com

+27 11 568 0966

Information herein is subject to final evaluation by parties and subject to change without notice. All rights reserved by Motornostix (Pty) Ltd. This document is provided to the Client for internal use only, for evaluation of incorporation into services and products opportunities and may not be distributed to third parties without written permission from Motornostix (Pty) Ltd. 2025. Terms and Conditions apply. MHS™, Machine Health Surveillance™, MCH™, Peak Density™, Adaptive Condition Monitoring™, Motornostix Carvery™ and the associated logo are trademarks of Motornostix (Pty) Ltd.