PURE Reliability



- 08006123536
- **9** 4.5 Kirkhill house office park, G77 5LL
- www.purelubrication.co.uk



Oil Condition Monitoring



Oil condition monitoring is a critical maintenance practice that provides invaluable insights into the condition of machinery and lubricants, enabling proactive maintenance strategies that enhance equipment reliability, performance, and longevity.

1 Cost Saving

Identifying problems early with oil analysis can prevent significant breakdowns that could lead to expensive repairs or the need for new equipment. Additionally, it aids in optimising maintenance schedules, minimising unnecessary maintenance expenses and downtime. Furthermore, it decreases premature oil changes, cutting down on lubricant expenses.

2 Increase Safety

Regular monitoring of equipment condition, which includes oil analysis, is essential for complying with safety regulations. It aids in reducing safety risks for workers and environmental threats by avoiding oil spills and leaks, controlling waste, and mitigating hazards related to reactive maintenance.

(3) Environmental Impact

Oil analysis plays a vital role in reducing the environmental impact associated with the operation of machinery and equipment. It aids in preventing oil leaks and spills, reducing equipment failures, extending equipment lifespan, minimising oil wastage, ensuring regulatory compliance, and promotes the organisations overall commitment to sustainability.

4 Equipment Reliability

Oil analysis enhances equipment reliability through proactive maintenance, optimised lubricant performance, and root cause identification. It extends equipment life and minimises unplanned downtime. By leveraging oil analysis insights, you can improve equipment reliability and performance, leading to increased productivity and reduced costs associated with reactive maintenance.



Oil Condition Monitoring Process

Collect Sample



Collect the sample using vacuum pump and hosing provided and by following the quick easy 'how to' steps in the sample box. Instructions also available online via QR code.



Submit & Send Sample



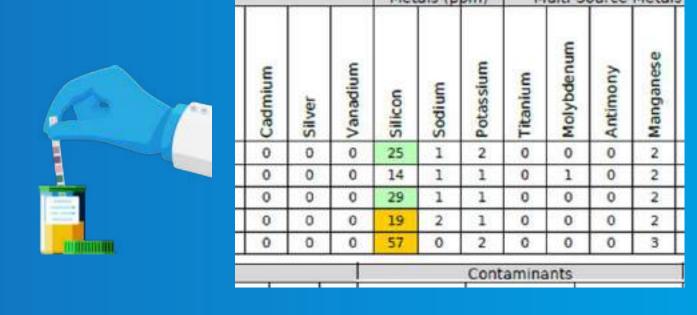
Samples can be submitted easily via the Horizon app. Simply scan the QR code on the sample bottle and submit in a matter of minutes. Post samples to laboratory for analysis. Results 24-48h



Analysis



Laboratory processes the sample against database containing over **50 million samples**. Testing is complete, results are analysed, recommendations are made and a report is generated.



Results



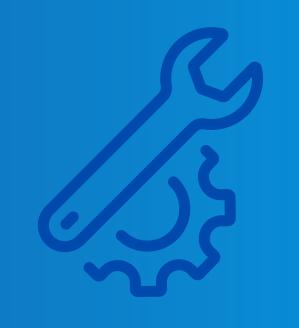
Results are sent to customers via email & accessible as a pdf on the Horizon app. Results graded on severity [1-4]. Clear recommendations made for any remedial actions required.



Remedial Work & Asset History



Oil changes/ preventative maintenance work carried out as a result of analysis. Horizon database; sample schedule, sample severity, equipment list & 'bad actors'.







Lubrication Management



Implementing a robust lubrication management program boosts equipment lifespan, efficiency, and safety, while reducing costs and downtime. It also supports environmental compliance and enhances overall operational reliability and productivity.

(1) Cost Saving

An effective lubrication programme ensures that the right lubricant is applied at the right time to the right place. This prevents component wear, equipment breakdowns, production downtime and increased inventory usage. Data driven top ups and replacements also reduce the risk of over expenditure on lubricants and waste control.

2 Increase Safety

Proper lubrication helps prevent overheating and reduces the risk of fires caused by friction or mechanical stress. It enhances equipment reliability, allowing for predictable performance that minimises the potential for unexpected failures or hazardous operational conditions. Additionally, proper lubrication management helps mitigate slip and fall hazards associated with leaks or spills.

(3) Environmental Impact

Effective lubrication practices minimise leakage and spillage, preventing soil and water contamination. Proper lubrication extends equipment lifespans and reduces energy consumption, lowering overall energy use in manufacturing. Lubricant changeovers based on condition also reduce the risk of unnecessary waste.

4 Equipment Reliability

Lubrication management enhances equipment reliability by reducing friction, minimising wear on moving parts, and preventing premature failures. Proper lubrication ensures consistent performance, reducing unexpected breakdowns and costly downtime. Maintaining optimal lubricant levels prolongs equipment lifespan, improves efficiency, and ensures reliable performance



Lubrication Equipment



Our lubrication equipment offer ensures efficient handling and storage of lubricants, offering solutions like spill kits, transfer pumps, Oil Safe containers, and filtration systems.

With Pure's range of lube spares, containers, pumps, and tanks, you can manage fluids safely and effectively, preventing contamination and spills.

(1) Cost Saving

Using the right lubrication equipment helps ensure precise lubricant application, reducing waste and extending the life of both the lubricant and the machinery. This precision lowers overall maintenance costs by preventing over-lubrication and reducing repair expenses.

2 Increase Safety

Proper lubrication equipment minimizes the risk of accidental spills and leaks, reducing slip hazards and other workplace safety risks. It ensures consistent application, preventing equipment overheating and enhancing operational safety for workers.

(3) Environmental Impact

Well-maintained lubrication equipment reduces excess lubricant use and minimizes environmental contamination risks from leaks. Efficient equipment supports sustainable practices by decreasing lubricant waste and disposal needs.

4 Equipment Reliability

High-quality lubrication equipment ensures accurate and consistent application, which reduces friction and wear on machinery. This reliability helps maintain equipment performance, extending the lifespan of machinery and minimizing unexpected downtime.



Vibration Analysis



Vibration analysis offers a concise yet comprehensive way to monitor machinery health.

This predictive approach optimises maintenance efforts, reduces operational risks, and extends equipment lifespan.

1 Cost Saving

By investing in vibration analysis, businesses can achieve significant cost savings and maximise the return on their assets. By not only identifying an issue, but pin pointing the exact root cause (misalignment, bearing defects etc), organisations can prevent costly equipment failures, minimise downtime, extend equipment lifespan, and ensure maintenance resources are used effectively.

2 Increase Safety

Vibration analysis improves safety by enabling early detection of machinery issues, such as wear, misalignment, or imbalance, which could lead to catastrophic failures or accidents. By identifying these issues early, proactive maintenance can be performed to prevent accidents, injuries, and ensure help ensure the safety of all workers.

(3) Environmental Impact

Vibration analysis plays a role in improving environmental impact by promoting energy efficiency, preventing oil leaks and spills, conserving resources, and reducing the risk of environmental incidents. By ensuring machinery is in optimum condition through vibration analysis, businesses can minimise their environmental footprint and contribute to a more sustainable future.

4) Equipment Reliability

Non-intrusive vibration analysis identifies wear, misalignment, or imbalance in machine components.

Detecting changes in vibration patterns allows for early issue identification, preventing potential failures before they escalate. Proactive maintenance ensures reliable and efficient machinery operation, enhancing uptime, productivity, and the equipment's longevity.



Maintenance & Reliability Auditing



A maintenance and reliability audit provides a comprehensive evaluation of your lubrication practices, covering product details, waste control, and a full lubrication management report. Identifying inefficiencies and improving overall lubrication performance.



Maintenance and reliability audits in lubrication systems help identify inefficiencies and excessive lubricant usage, reducing operational costs. By preventing equipment failures, these audits lower repair and replacement expenses, contributing to long-term cost savings.

2 Increase Safety

Well-maintained lubrication systems reduce the risk of equipment malfunction, which can prevent accidents and enhance workplace safety. Regular auditing ensures that lubricants are applied correctly, minimizing slip hazards and other risks associated with improper lubrication.

3 Environmental Impact

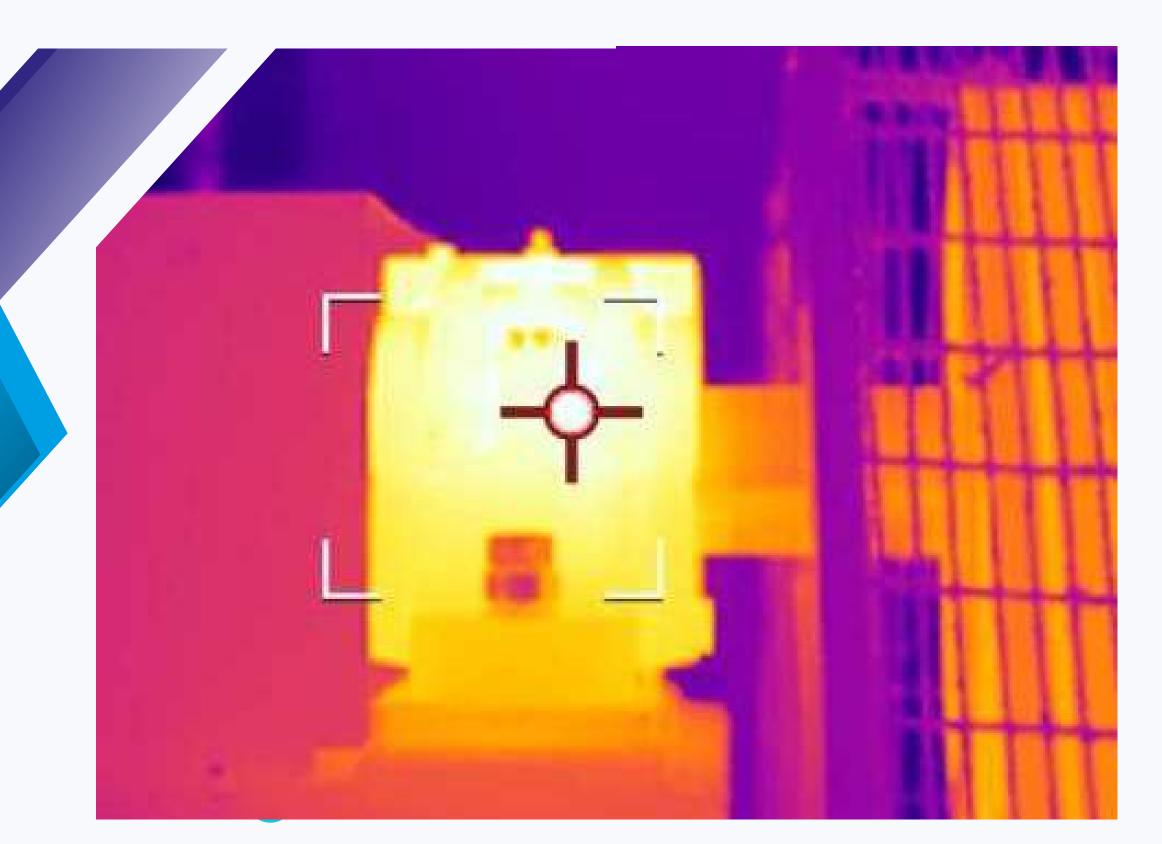
Auditing improves lubricant management, reducing waste and minimizing environmental contamination from leaks and spills. By ensuring only necessary amounts of lubricants are used, audits support eco-friendly practices and regulatory compliance.

4 Equipment Reliability

Reliable lubrication systems decrease wear and tear on equipment, extending machinery lifespan and improving uptime. Audits identify potential issues early, allowing for proactive maintenance that enhances overall system reliability and performance.



Thermal Imaging - Mechanical



Thermal imaging is a non intrusive, proactive tool that organisations can use to saves costs by minimising downtime, preventing equipment failures, and optimising maintenance efforts, resulting in improved reliability, efficiency, and profitability.

1 Cost Saving

In mechanical systems, thermal imaging reduces the need for emergency repairs, minimises downtime, and extends equipment lifespan, resulting in substantial cost savings over time. Moreover, by identifying and fixing operational inefficiencies such as alignment and heat loss, it ensures efficient energy utilisation during operation which reflects in companies utility costs.

2 Increase Safety

By Identifying overheating components and insulation deficiencies, thermal imaging helps prevent accidents, fires, and equipment failures that could endanger personnel and property. Addressing these issues promptly minimises the risk of workplace injuries, ensuring a safer working environment and displays the organisations commitment to the wellbeing of their employees.

3 Environmental Impact

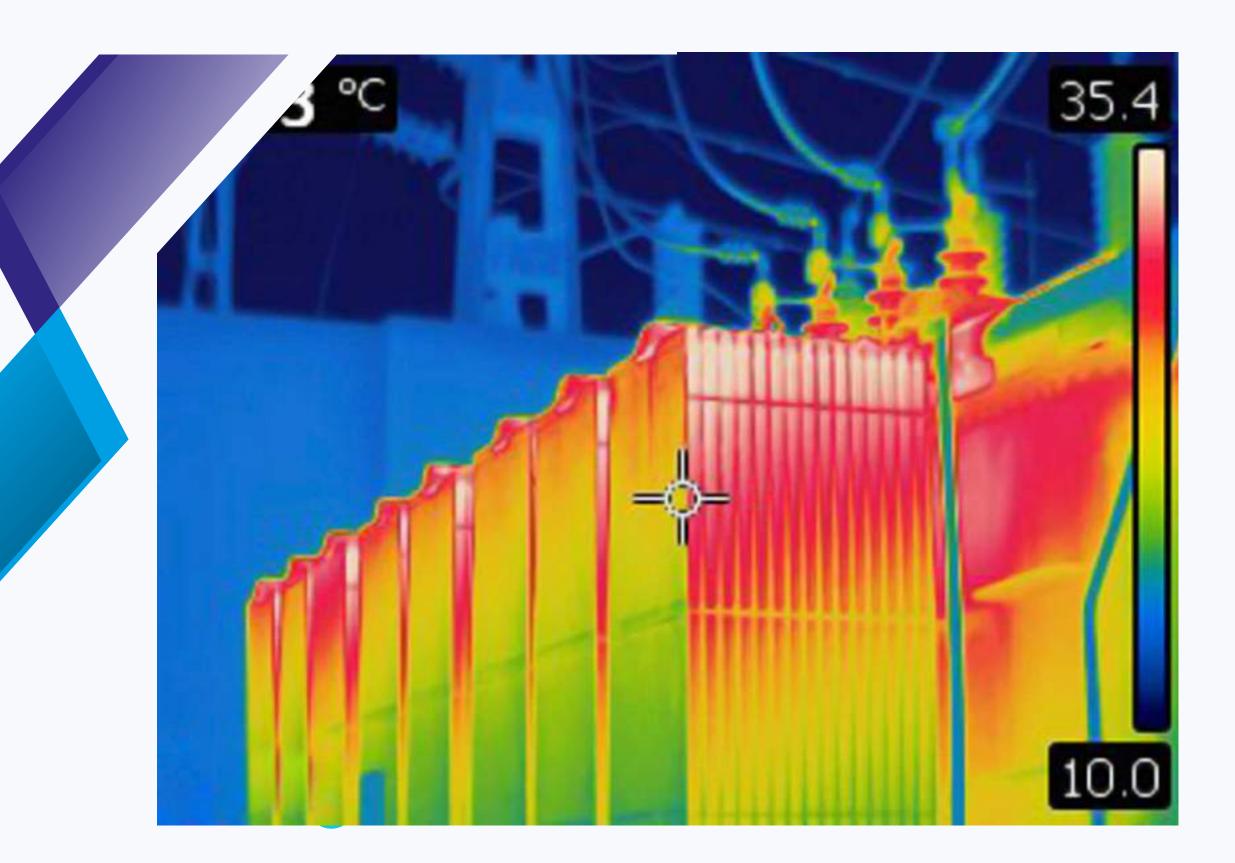
Utilising thermal imaging can assist in pinpointing areas of heat loss or inefficiency within mechanical systems. Rectifying these inefficiencies has the potential to yield cost savings and mitigate environmental impact through the reduction of energy consumption.

(4) Equipment Reliability

Mechanical thermal imaging detects abnormal temperature patterns, indicating overheating, lubrication issues, and mechanical failures, prolonging equipment life. Early detection allows for timely maintenance, preventing failures, downtime, and reduced machine availability. This enhances equipment reliability and operational efficiency while reducing costs.



Thermal Imaging - Electrical



Utilising thermal imaging for electrical panels offers significant benefits, including early detection of issues, increased safety, optimised energy efficiency, compliance with regulations, and improved equipment reliability.

1 Cost Saving

Thermal imaging of electrical panels provides significant cost-saving opportunities by enabling early detection of potential issues such as loose connections, overloaded circuits, and faulty components. By identifying these issues before they escalate into major failures, proactive maintenance can be implemented to prevent costly downtim and equipment damage.

2 Increase Safety

Employing thermal imaging on electrical panels enhances safety by promptly identifying components operating at elevated temperatures. This proactive approach aids in identifying potential hazards, facilitating preventive maintenance, reducing fire risks, improving worker safety, and ensuring regulatory compliance.

(3) Environmental Impact

Thermal imaging assists businesses in optimising energy consumption by pinpointing areas of energy loss, such as overheating components or inadequate insulation. Also, by identifying potential faults early, thermal imaging aids in averting electrical fires and damage, thus reducing the emission of harmful pollutants into the environment.

4 Equipment Reliability

Periodic thermal imaging helps to extend the lifespan of electrical equipment and components, reducing the frequency of repairs and replacements and enhancing overall reliability. By investing in thermal imaging technology, businesses can improve the operational efficiency and longevity of their electrical systems, ensuring continuous and reliable performance of critical equipment.





Insulation plays a vital role in reducing heat loss across various systems. Conducting routine thermal inspections can improve process efficiency, reduce energy costs, promote worker safety, and prolong the lifespan of equipment.

(1) Cost Saving

Cost savings associated with thermal imaging on insulation not only result in immediate energy savings but can also lead to improved operational efficiency, reduced maintenance costs, risk management, and asset performance. This makes it a valuable investment for organisations seeking to optimise process performance and reduce lifecycle costs.

2 Increase Safety

Adequate insulation is essential in avoiding extreme temperatures that could endanger employees. Thermal imaging is a valuable tool for pinpointing areas with insufficient insulation that could result in discomfort, burns, or safety issues, allowing for timely corrective actions to be taken.

3 Environmental Impact

Utilising periodic thermal imaging can enhance energy efficiency in industrial equipment and processes by pinpointing and rectifying insulation deficiencies. Effective insulation serves to mitigate heat loss, leading to lower heating and cooling costs, as well as a reduction in energy consumption.

4 Equipment Reliability

Regular thermal imaging inspections help in detecting insulation issues early, enabling prompt repairs or replacements. This proactive maintenance strategy reduces the chances of expensive breakdowns, prolongs equipment lifespan, and guarantees continuous operation.





Ultrasound is the process of assessing the health and condition of your equipment by collecting and analysing ultrasonic signals produced during operation. It allows us to listen and interpret frequencies above the range of the human ear (above 20KHZ).

Cost Saving

Ultrasound technology assesses equipment health by capturing ultrasonic signals, allowing early detection of lubrication issues that can lead to costly failures. By precisely identifying the need for lubrication, ultrasound prevents waste and reduces both lubricant consumption and repair costs.

Increase Safety

By analyzing ultrasonic signals, ultrasound detects early signs of friction and potential malfunctions, reducing the risk of sudden equipment breakdowns that could compromise safety. This advanced monitoring enables safer operations by alerting maintenance teams to issues before they escalate.

Environmental Impact

Ultrasound ensures lubrication is applied only when needed, reducing excess lubricant use and minimizing the risk of leaks or spills. This targeted approach promotes sustainable practices by reducing lubricant waste and decreasing the environmental footprint of industrial operations.

Equipment Reliability

Ultrasound allows technicians to interpret high-frequency signals beyond human hearing, revealing friction, wear, or lubrication deficiencies. This proactive insight enhances equipment reliability by enabling timely interventions that extend machinery life and improve operational consistency.





Steam trap monitoring is a proactive approach of optimising steam system performance, reducing maintenance costs, enhancing process reliability and supporting sustainability targets.

By adopting effective monitoring technologies and maintenance practices, organisations can gain significant benefits across their operations.

Cost Saving

A single defective steam trap can lead to £2,000 worth of wasted steam annually. Monitoring steam traps and identifying early signs of failure can decrease energy usage and result in lower utility costs. Moreover, proactive maintenance helps minimise the chances of expensive repairs or equipment breakdowns associated with poorly maintained steam systems.

Increase Safety

Steam leaks resulting from faulty traps can create safety risks and operational issues. Detecting and fixing malfunctioning traps promptly improves system safety and protects employees, reducing the likelihood of accidents and downtime.

Environmental Impact

Faulty steam traps can result in significant energy losses, they can lead to substantial steam loss or condensate to remain in the system longer than necessary. Inspecting and monitoring steam traps on a regular basis helps identify and repair faulty traps promptly, reducing energy waste and improving overall efficiency.

Equipment Reliability

Maintaining steam traps is crucial to avoid water hammer and other damaging effects on steam system components. Regular monitoring and upkeep can extend the life of steam traps and associated equipment, reducing the need for frequent replacements and extensive downtime.



Pure Fluid Care



Pure Fluid Care involves the ongoing management and maintenance of metal working fluids by testing coolant concentration, pH levels, sump temperature and monitoring bacterial growth.

Pure's Fluid Care Service ensures HSE compliance, reduces environmental impact and maximises uptime by keeping coolants in optimum condition for longer periods.

(1) Cost Saving

Regular coolant checks help you detect problems early, such as contamination, which might otherwise lead to equipment breakdowns or the need for more expensive repairs. Maintaining optimal coolant conditions is more cost-effective in the long run than dealing with the consequences of neglecting coolant maintenance.

2 Increase Safety

HSE guidance recommend that metalworking coolants are checked on a daily, weekly and monthly basis. Improper coolant levels can lead to issues such as bacterial growth, which can pose health risks for workers. Checking and maintaining coolant helps ensure a safer working environment, reducing the potential for contamination or unpleasant odours.

3 Environmental Impact

By regularly checking the coolant, you can ensure it is being used effectively, avoiding excess waste or improper disposal. This can help reduce the environmental impact associated with the use of metalworking fluids.

4 Equipment Reliability

When regularly checking the metalworking coolant, you ensure that it's performing effectively, which in turn can extend the life of your tools and reduce the frequency of replacements or repairs. A well maintained coolant helps reduce friction and heat during machining which helps the cutting process remains efficient, reducing the chances of machine stalling, poor cutting, or excessive wear.

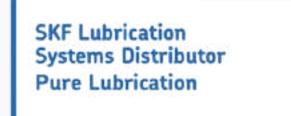


Automatic Lubrication Systems



Integrating automatic lubrication systems into industrial operations extends equipment lifespan and reduces costs, amongst many other benefits. Especially with SKF technology matched with Pure Reliability experts.









Cost Saving

Automatic systems decrease the need for manual lubrication, resulting in lower labour costs associated with routine maintenance. This method also mitigates the dangers of over-lubrication or under- lubrication, which may cause damage and higher maintenance costs. Proper lubrication intervals and amounts also help reduce unnecessary lubricant expenditures.



Increase Safety

Manual lubrication can pose risks, particularly in inaccessible or hazardous locations. Automatic systems mitigate these dangers by removing the necessity for manual intervention, thereby improving workplace safety. Safety measures can also be incorporated into system design to reduce the risks associated with over pressure etc.



Environmental Impact

Employing appropriate lubrication not only minimises usage but also mitigates the risk of over-lubrication, thereby decreasing waste and reducing the environmental footprint. Furthermore, this practice can lower the likelihood of oil leaks and spills, promoting a cleaner and safer work environment.



Equipment Reliability

Automatic lubrication systems enhance the reliability of machinery by ensuring consistent, precise, and efficient lubrication, reducing wear and tear, preventing contamination, optimising lubricant use, and enabling proactive maintenance. These benefits collectively lead to improved performance, reduced downtime, and extended equipment lifespan.



Borescope Reliability



Borescope inspection is a costeffective, non-invasive method to assess the internal condition of a generator's combustion chamber, enhancing safety, reducing environmental impact, and ensuring equipment reliability by identifying and addressing potential issues efficiently.

(1) Cost Saving

Getting the most out of a generator maximises the profits. Engine output can be restricted by the engine management system to reduce pre-ignition or pre-combustion issues, excessive deposits or lubricant inside the combustion chamber. A professional borescope inspection allows the condition inside the combustion chamber to be established and understood, and corrective actions to be implemented.

2 Increase Safety

Establishing the condition of the combustion chamber can be achieved by removing the cylinder heads, allowing perfect opportunity for detailed inspection. Such an intervention is costly both in downtime, risk of introducing problems associated with the activity, as well as the risk of handling the often-heavy components that have to be removed. Borescopic inspection can often negate the need to do this.

3 Environmental Impact

Anything that enters the combustion chamber will be exhausted to atmosphere. Ensuring that those emissions are minimal is vital to maintain legislative compliance as well as to the health and wellbeing of any people in the area. Borescopic inspection ensures that the combustion process is as efficient as possible and identifies potential improvement areas

4 Equipment Reliability

Reliability with any power generation application is vital, especially if power response where failure to run can lead to potentially severe penalties. With landfill or digester gas, a lack of availability of an engine may compromise the fine balance between gas production and consumption, leading to gas flaring which is always a last resort.



Lubricants and Fluids

We specialise in offering a comprehensive selection of highquality industrial lubricants and fluids designed to meet the diverse needs of various industries. Our focus is on providing efficient and reliable lubrication solutions sourced from reputable manufacturers.











Cost Saving

Using the right lubricants in the correct locations and at the right intervals minimizes waste and optimizes lubricant use, reducing purchasing and maintenance costs. This targeted approach decreases wear, lowering repair and replacement expenses over time.



Increase Safety

Properly applied, high-quality lubricants reduce friction and overheating, decreasing the likelihood of equipment malfunctions and workplace accidents. Ensuring that the right lubricant is used in each specific application enhances safety for operators and maintenance teams.



Environmental Impact

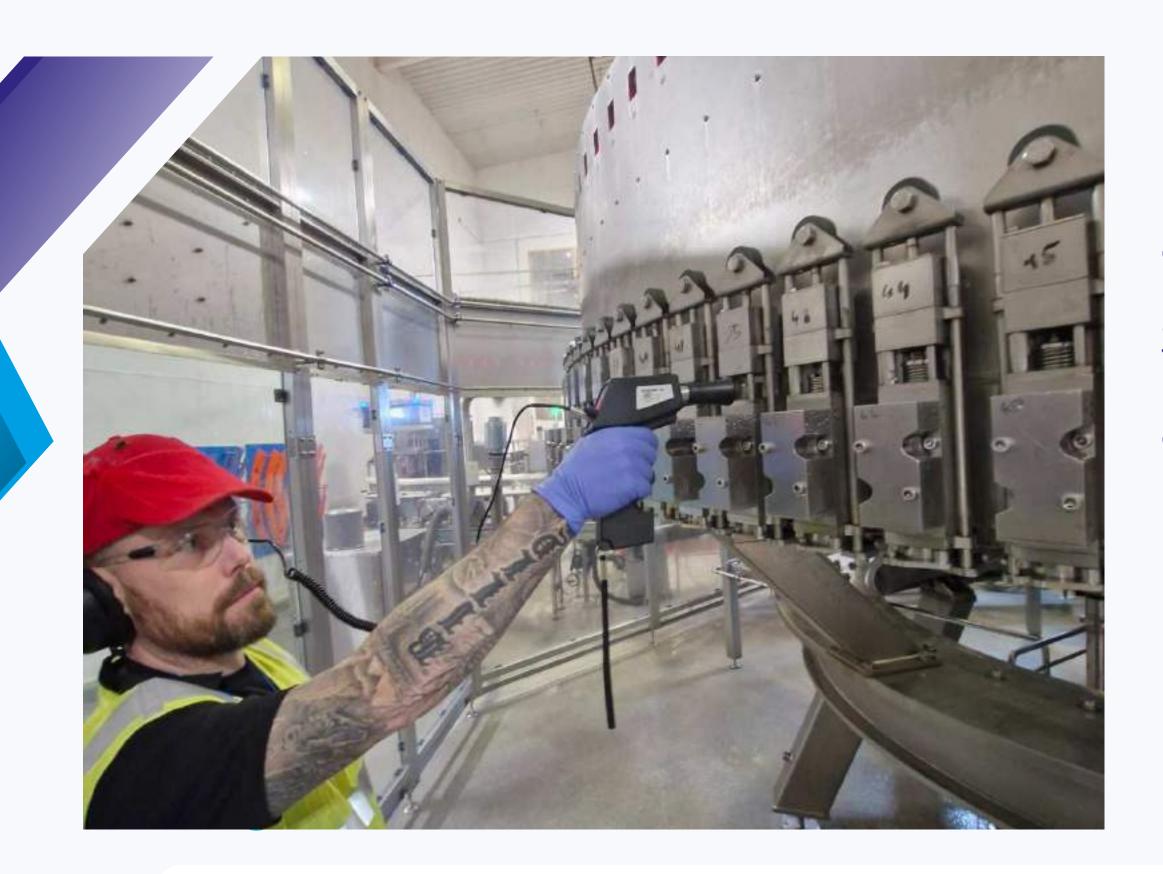
Accurate lubricant selection and application minimize excess and prevent leaks, reducing the environmental footprint of industrial operations. This approach reduces the frequency of disposal and waste, supporting ecofriendly practices and regulatory compliance.



Equipment Reliability

Ensuring that each component has the right lubricant at the right time improves equipment performance and lifespan. This approach enhances system reliability, minimizes unexpected breakdowns, and boosts overall operational uptime.





Industrial air leak detection serves as a proactive maintenance strategy that presents a variety of advantages such as cost savings, enhanced energy efficiency, environmental sustainability, and increased operational reliability.

Cost Saving

Detecting and repairing air leaks can lead to quite significant immediate and long term cost savings. An inefficient compressed air system needs to work harder and use more energy to meet the required set point. Consequently elevating the expenses associated with energy consumption per kilowatt - 2 hour. A typical compressed air system can experience leakage rates ranging from 20% to 30%.

Increase Safety

Air leaks can create hazards in the workplace, including noise pollution, trip hazards and potential risks of equipment failure. Detecting and repairing leaks enhances workplace safety by mitigating these risks and creating a healthier, safer working environment for employees.

Environmental Impact

Minimising air leaks reduces the carbon footprint of industrial operations by decreasing the amount of energy required to produce compressed air. This contributes to environmental sustainability efforts and helps mitigate greenhouse gas emissions associated with energy generation.

Equipment Reliability

Air leaks can put additional strain on compressors and other pneumatic equipment, leading to premature wear and tear. Detecting and fixing leaks promptly can extend the lifespan of equipment, reducing maintenance costs and downtime associated with repairs or replacement.





Collection. Storage. Handling. Transportation.



Why use our service

- Legal Compliance
- **Promote Sustainability**
- Improve Health and Safety
- **Prevent Pollution**



Thermal Imaging is the process of using a thermal camera to capture the infared radiation emitted from an object. This is converted into an image which allows the user to see temperatures that would otherwise be visible to the naked eye.

When should inspections be carried out?

Scheduled inspections are carried out while systems are fully operational. Inspection intervals are determined by asset criticality, accessability and hours of operation.

? Why do we do it?

REDUCE DOWNTIME REDUCE REACTIVE

MAINTENANCE

REDUCE INVENTORY EXPENDITURE

REDUCE ENERGY COSTS INCREASE

OVERALL SAFETY INCREASE MACHINE

AVAILABILITY

INCREASE KNOWLEDGE

? Where can we use it?

PUMPS

ELECTRICAL MOTORS BEARINGS

GEARBOXES

STEAM SYSTEMS CONVEYORS

BELTS & CHAINS INSULATION

BUILDING INSPECTIONS

What can we detect?

LUBRICATION ISSUES MISALIGNMENT

INCORRECT TENSION

COMPONENT WEAR

GEARBOX ISSUES

BEARING ISSUES

ELECTRICAL FAULTS

FRICTIONAL ENERGY LOSSES

RADIATED HEAT LOSS

FAULTY VALVES

FAULTY STEAM TRAPS PIPEWORK

BLOCKAGES

Who can carry out the inspections?

We can!

Pure Reliability can work together in partnership with you to help tailor a condition monitoring programme to suit your exact requirements...protect your process, your people and our planet.



Ultrasound is the process of assessing the health and condition of your equipment by collecting and analysing ultrasonic signals produced during operation. It allows us to listen and interpret frequencies above the range of the human ear (above 20KHZ).

US data can be collected wirelessly or by using handheld devices.

When should inspections be carried out?

Scheduled inspections are carried out while systems are fully operational. Inspection intervals are determined by asset criticality, accessability and hours of operation.

Why do we do it?

REDUCE ENERGY COSTS

IMPROVE SYSTEM EFFICIENCY

REDUCE DOWNTIME

IMPROVE PRODUCTIVITY

REDUCE REACTIVE MAINTENANCE- FAILURES

MORE TIME TO REACT PREVENTATIVE MAINT

REDUCE INVENTORY EXPENDITURE

INCREASE OVERALL SAFETY

INCREASE MACHINE AVAILABILITY

INCREASE KNOWLEDGE

Where can we use it?

STEAM SYSTEMS

VACUUM SYSTEMS

COMPRESSED AIR SYSTEMS

GAS SYSTEMS

VALVES

PIPEWORK

BEARINGS

MOTORS

GEARBOXES

SLOW ROTATING MACHINERY

V & HV ELECTRICAL PLANTS

What can we detect?

FAULTY STEAM TRAPS

FAULTY VALVES

BLOCKAGES

AIR LEAKS

GAS LEAKS

VACUUM LEAKS

LUBRICATION STARVATION

ELECTRICAL ISSUES GEARING ISSUES

BEARING ISSUES

FAULTY PUMPS

FAULTY MOTORS

?

Who can carry out the inspections?

We can!

Pure Reliability can work together in partnership with you to help tailor a condition monitoring programme to suit your exact requirements...protect your process, your people and our planet.





People are at the core of all we do, fostering supportive relationships, well-being, and the development of our colleagues, our customers and business community.



Partnerships

We value the importance of collaboration, trust and mutual support with our customers, suppliers and stakeholders, enabling us to achieve shared goals and drive productivity.



Passion

We approach our work
with enthusiasm,
dedication and a
relentless pursuit of
excellence to ensure
we deliver exceptional
results and
continuously innovate
in all that we do



Pride

We are inspired to take ownership of our work, uphold high standards of quality and celebrate our achievements, fostering a culture of accountability and excellence throughout the company

Caring for our Customers

The Pure Lubrication team transformed our customer experience.
Great service and glad we made the move.



First Class!
Excellent Service, good prices and fantastic customer service.

A++++

 $\star\star\star\star\star$

They are very easy to deal with and will go the extra mile when needed - for example to get hold of stock when deadlines are tight.



Pure Lubrication is the company i rely on for all my lubricant needs and always have done.

I can rely 100% on Pure.



Our Pure Promise to You

The Pure team are passionate about our customers and the service we provide. With over 200 years of lubrication experience between us, we fully understand the challenges you face in your business when it comes to lubrication and reliability.

Constantly listening to and working closely with our customers, we provide help and advice and offer individually tailored solutions to make lubrication as easy as possible and ensure your business can operate efficiently, no matter what business you are in.

If you'd like us to visit you on site, great or if you prefer to talk to us over the phone or send us an email, we'd be delighted to hear from you.





sales@purelubrication.co.uk



0800 612 3536



