

GIVE YOUR COOLANT A HEALTH CHECK THIS CHRISTMAS



Coolant plays a vital role in heat transfer, corrosion prevention, and machine longevity. Over a shutdown period coolant can degrade, lose its protective properties, and allow harmful deposits or corrosion to form.

Preventative Maintenance

As many shop floors prepare to shut down over the festive period it's important to think about predictive maintenance and ensure systems are clean, protected and optimised, reducing the risk of costly failures and potential health risks when operations resume.

- Draining or flushing coolant systems if the shutdown is extended.
- Adding biocides or stabilisers to prevent microbial growth.
- Conducting a coolant healthcheck before and after shutdown to test pH, concentration, and contamination levels.

Millers Oils Coolant Health Check

Prior to a shutdown we can offer a diagnostic service that evaluates the condition of your coolant system to help identify potential risks, keep you compliant with regulations and reduce harmful exposure.

Our health checks include:

- Visual inspection for contamination and discoloration
- Concentration and pH testing to ensure chemical balance
- Oil analysis that can identify bacteria and fungus levels
- Remedial advice and actions to bring coolant back under control
- Advice on keeping controls in place for today, tomorrow and beyond



MILLERS OILS: CNC COOLANT HEALTH CHECK



Coolant Degradation and Contamination

Stagnant coolant can become a breeding ground for bacteria and fungi, especially in water-based systems. This leads to foul odours, reduced performance, and health risks for operators. PH levels may shift, causing the coolant to become more acidic or alkaline, which can corrode metal surfaces. Additives in the coolant (like corrosion inhibitors) may break down over time, reducing their effectiveness.

Corrosion and Scaling

Without circulation, oxygen and moisture can settle in the system, accelerating corrosion of internal components. Scale and sludge may form, especially in hard water environments, clogging passages and reducing heat transfer efficiency.

Start-Up Risks after a Shutdown

Upon restarting, degraded coolant can cause blockages, pump failures, or overheating due to poor flow or heat transfer. Residual contaminants may damage seals, gaskets, or sensitive components.

The Health and Safety Executive (HSE)

The Health and Safety Executive (HSE) regulators often do inspections to ensure employers are conducting regular health checks and adequately safeguarding workers against exposure to fluid or mist from computer numerical control (CNC) machines.

Risks of working with metal working fluids

Metal working fluids fall under the Control of Substances Hazardous to Health (COSHH) Regulations 2002. Without correct measures in place, exposure to metal working fluids can cause a range of health issues.

To ensure compliance with COSHH regulations for metal working fluids you'll need to consider:

1. **Control Measures:** Implement engineering controls such as local exhaust ventilation (LEV) to reduce exposure to metalworking fluid mist.
2. **Fluid Quality Checks:** Regularly check fluid quality for concentration, pH, and bacteria to maintain safety and performance.
3. **Health Surveillance:** Conduct health surveillance for workers exposed to metal working fluids to monitor for any health issues.
4. **Occupational Hygienists:** Consult with occupational hygienists to assess and control exposure effectively.
5. **Inspection Compliance:** Be prepared for inspections by the HSE to ensure compliance with COSHH

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