



## COVID-19: guidance for metalworking fluid users

As a result of the government guidance regarding physical distancing and to curb the transmission of COVID-19, many end users of metalworking fluids (MWF) may have chosen to shut down or reduce production. Others may be continuing to work, while practising responsible physical distancing, but are learning to cope with the challenges this brings, especially if face to face meetings with the lubricant supplier and service calls have been postponed.

**For lubricant users who have continued to operate** it is important that all checks continue to be carried out and records maintained, according to established good practise guidance on their use.

<http://www.ukla.org.uk/wp-content/uploads/UKLA-HSE-Good-Practice-Guide-for-Safe-Handling-and-Disposal-of-Metalworking-Fluids.pdf>

These checks must continue even if they had previously been carried out by the lubricant supplier or other third party. While face to face service visits are cancelled/postponed, some suppliers may be providing a remote service where samples are provided by post, however the postal system is currently under strain and some tests may need to be carried out in-house.

Your lubricant supplier will be able to advise on remote testing, or sourcing of the required equipment to carry out testing yourselves.

**For other companies, who have shut down some or all of their production**, ideally each machine should have been emptied prior to shut-down, however systems which have been left unattended and still contain MWF should be sampled and checked before being brought back into use.

The basic tests and actions required before start-up are listed below

Test	Action
Appearance	Check for deviations from your "normal condition" and check for surface contamination and remove tramp oil. If the MWF is heavily fouled, consider replacing the MWF and investigate the source, especially if this has occurred while there has been limited manufacturing activity.
Odour	
Tramp oil	
pH	Agitate the fluid and perform the measurement. Compare the result to the suppliers recommended range, if required adjust using MWF at the required "top-up" concentration.
Concentration by refractometer	
Bacteria content by dipslide	Agitate the fluid and perform the test. Compare the result to the chart in the UKLA Good Practice Guide*
<p>* The test should preferably be carried out at least 48H before planned start-up date so that the results are available, and actions can be taken before the machine is put back into use. If the level of bacteria is <math>10^4</math> CFU/ml or more, act as advised in the UKLA Good Practice Guide. If <math>10^6</math> CFU/ml or more, a full system cleanout is recommended using a system cleaner following normal best practice and the waste coolant disposed of according to normal procedure and local legislation</p>	

Particular caution should be taken before using MWFs which have been left in a machine sump for extended periods without circulation, especially when aerosols may be formed.

Performing these checks will help protect human health and will also protect the business, as heavily contaminated fluids can be known to kick-start corrosion and damage machines and workpieces.



Careful thought is needed if the results of checks fall outside of the target range; it may be more cost effective to dispose of the fluid, and re-start with new, clean fluid, particularly when tasks which must be carried out by trained personnel cannot be carried out, if visits from the supplier have been delayed.