

## Metalworking Processes Restart

Detailed instructions for restarting metalworking processes have been outlined below:

### Required Products

- Perchem Alkalinity Boost
- Perchem 7707
- GX Conditioner CC-780
- Bactericide – Contact your local DuBois Representative for availability in your state.

### Tramp Oil Removal

In Metalworking applications, tramp oils are typically the cause of Anaerobic growth. Tramp oils are oils not from the metalworking fluid itself but from hydraulic oils, way lubes, spindle oils, rust preventives and mill oils.

1. Remove tramp oil from surface. Do Not Turn on Pumps. This is a great opportunity to remove these oils before they get mixed into solution when the pumps are turned on. A common way to remove these oils is with a shop vac; just hold the tip of the nozzle at the surface.
2. Bring the fluid back to its optimum performance condition.
  - a. First check the concentration with a refractometer.
  - b. Based on the concentration add concentrate or water as needed.
  - c. Next check the pH with pH strips, these can be attained from your fluid supplier.

### pH Control

The pH is important because it tells us what the health of the fluid is much like checking temperature for people. Most MWF have an operating range between 8.6-9.2 as a dilution. The pH gets lowered by the anerobic bacterial activity.

As the bacteria live, eat and proliferate in the fluid their byproduct is an acid and lowers the pH. As the pH becomes low, rust protection is becomes a concern that also must be addressed. Following are chemical solutions DuBois provides to help control biological growth, pH and odor.

## Bactericide

A common initial reaction may be to use a tank side bactericide. These materials are very effective. Caution must be taken when using because they are concentrated and require very careful handling and dosage rate. Bactericides have very low dosage rates, typically 1 pint per 1000 gallons of fluid.

It is critical that you know the volume of your fluid sump. If a machine has a sump, reservoir, of 100 gallons that would call for a treatment of bactericide of 1.60 oz., but if this assumption is off by 20 gallons and the sump is 80 gallons that would be a treatment rate of 1.3 oz. This almost a 20% difference.

Please consult your DuBois representative for the product that is registered in your state and use advice that may be unique to your situation.

## Alkalinity Boost

**Perchem Alkalinity Boost** is an additive that will resolve both of low pH and biological issues. This product will slowly increase the pH and make the fluid a hostile environment for the bacteria. **Perchem Alkalinity Boost** isn't a bactericide, so it is safer to handle, and the dosage rate is 2 pints per 100 gallons.

## Odor Elimination

If the fluid has a distinct smell like ammonia or rotten eggs once the fluid starts to circulate that smell will be released to the air and will offend the operators. **Perchem 7707** is a copper complex that will sequester the odor and also inhibit further proliferation of bacteria.

One final option is **GX Conditioner CC-780**. This additive is a combination of Alkalinity Boost and DCHA which is a common bactericide used in MWF. The dosage rate for this additive is 2 quarts per 100 gallons.

Please consult your DuBois Representative for SDS and availability as well as any advice you may need.