



GUIDE TO COOLANT MANAGEMENT

When blending coolant with water; always remember to blend coolant into the water, not water into the coolant! Reminder is OIL IN LAST (O.I.L.).

Do not add water only to the coolant sump. The emulsifiers in the coolant, that are already in the sump, have done their job and are not as likely to take on more water.

To bring down the concentration, add a weak concentration of FRESH coolant, mixed with water, to the coolant tank.

Always maintain an adequate concentration. Too low of a concentration will not give protection against rust, bacteria growth, tool life and surface finish.

Regularly clean sump and lower machine areas of swarf and chips. The chips harbor bacteria and will constantly affect the performance of the coolant. This chip build-up also cuts down on sump capacity, limiting performance as well.

Taking the tramp oil off the top of the coolant in the sump is required to aid in bacteria control. When oil lays on top of the coolant, an atmosphere for bacteria growth is created.

Bacteria thrives on the oil as a food source just under the tramp oil layer on the sump. As the bacteria consumes the oil, the bacteria is excreting waste into the coolant causing an acidic sump. This breaks down the coolant emulsion and leads to problems such as rust on parts and machine tools, dermatitis, poor tool life and surface finish; not to mention that smell.

How about that smell?? Bacteria is like us humans; it eats and poops. The poop smell is not detected until the coolant is circulated and after a weekend of eating oil and excreting waste, wow! Then, the smell seems to go down after the coolant is agitated during machining. What is happening is the churning and machining process is mixing air with the coolant and is killing bacteria.

An easy and cheap fix, to help in preventing bacteria growth and smell, is to bubble air into the coolant sump, even when the machine is not operating. Bubble the coolant overnight and weekends as well. Also, take away the bacteria food source, the tramp oil on top of the coolant sump! Use skimmers or oil absorbent pads.

Adding fresh coolant to the sump has best results when larger amounts are added. For example, lets say you have a 50 gallon sump and each day the operator adds 5 gallon of properly mixed coolant to the sump because it is low, habit, whatever. A more effective approach would be to hold off adding properly mixed coolant UNTIL the sump would take 10-15 gallons. This gives the machine sump a booster shot, so to speak ,of all desired coolant functions.

Do NOT dispose of waste into the coolant tank. Things like gum, chewing tobacco and spitting into the coolant are not to be tolerated.

Coolants can be useful and economical over the cost of straight oils. They also need your help to give them longevity, so do your part and follow suggestions.