

Care & Maintenance of Coolant Systems

Recommended Actions

Action Colors	Fix Now	Adjust & Monitor	System OK
Concentration & pH	pH Low (< 8.5)	pH OK (8.5 - 9.5)	pH High (> 9.5)
Conc. Very High	Bacteria or Fungus likely present. Treat or dump, clean and refill (dcr).	Add water to reduce concentration, remove tramp oil, and recheck	Add water to reduce conc. and recheck pH. If pH is still high. Coolant is likely contaminated and needs change (dcr).
Conc. Slightly High			
Conc. OK	Bacteria or Fungus likely present. Treat or change (dcr).	No action required	Likely contamination with alkaline material or excess biocide. Consider change (dcr).
Conc. Slightly Low	Add concentrate and recheck pH. If pH is still low, may need to treat or change (dcr).	Add concentrate and recheck pH. If conc. is < 2% check bacteria & fungus and treat if high	Coolant is likely contaminated. Can try to remove coolant and treat, but will likely have to change (dcr).
Conc. Very Low			

Concentration Control:

1. Apply 2-3 drops of coolant to prism of refractometer. Lower cover slide. If initial reading is hazy, allow coolant to sit on prism for 30-60 seconds and re-check. Multiply the reading by the coolant's refractive index to get the actual concentration (Ex: 4 reading x 1.5 R.I. = 6% concentration).
2. Clean the prism with soft dry tissue after each use.

Sampling Tips:

1. Allow the system to circulate for minimum of 2 hours before taking a sample. Sample coolant from the nozzles (not from the tank).

Refractometer Tips:

1. Always use refractometer at room temperature plus or minus 5°C. If refractometer has been stored at extremes of temperature, allow it to return to room temperature before use.
2. Calibrate often (set screw on top) using plant water (room temp.) and clean prism. If reading is not zero, adjust the screw until it reads zero.

Additions of Fluid Concentrate:

1. Always add concentrate to well agitated area of fluid system. Allow sufficient time for mixing and recheck concentration. Always add concentrate to water or emulsion (OIL = Oil In Last).

Fluid Concentrate Storage & Handling Tips:

1. Store indoors between 40F and 90F, out of direct sunlight.
2. If stored outdoors, keep out of direct sunlight and keep rainfall off of container lids (esp. bungs).
3. Consult Material Safety Data Sheet for safe handling instructions.