



Quick Tips for Maintaining Coolant

Concentration is the most critical aspect of coolant
— **Check it often**

- Check daily prior to machining
- Use a properly calibrated refractometer (see instructions below)
- When low, add coolant concentrate to the system while circulating to ensure proper mixing
- Add fresh coolant concentrate regularly (daily or several times a week) to replenish additives

Stagnant coolant can allow bacteria to grow
— **Circulate coolant regularly**

- When a machine will be down for an extended period of time, circulate or aerate the coolant regularly to help prevent bacteria growth

Tramp oil is detrimental to the coolant
— **Use skimmers**

- Tramp oil is food for bacteria
- Prioritize and fix leaks to prevent tramp oil contamination
- Use skimmers whenever possible to remove the oil that floats to the top of the coolant
- Remove tramp oil using a shop vac if necessary

Water type is important

— **Use the correct water source**

- City water, well water, and/or treated water (RO or DI) may be available
- If treated water is not available, check hardness, chlorides, and bacteria of incoming city or well water
- Use a 50/50 mix of city water and treated water when initially charging the coolant
- Salt-based water softeners should not be used for coolant systems

Housekeeping is important to maintain a clean system

— **Use good housekeeping and hygiene methods**

- Keep contaminants out of the fluid (trash, cigarette butts, mop water, etc)
- Minimize contact with coolant (use gloves or barrier creams if you must come into contact)
- Use proper PPE, wash hands regularly, and change clothes daily
- Do not use additives in the coolant without approval (consult your Castrol rep for recommendations)
- Never add chemicals like bleach, sanitizer tabs, chlorine, or deodorizers to the coolant
- Do not eat or drink on the shop floor

Concentration by Refractometer

1. Clean the glass with a soft, lint-free cloth
2. Calibrate (i.e. zero out) the refractometer using the same water source that is mixed with the coolant. Adjust to zero using the adjustment screw
3. Check the Brix % of the coolant by applying a few drops and looking through the viewfinder towards a light source
4. Calculate the coolant concentration using this formula: **Coolant Concentration = Brix % x Refractometer Factor***

*The refractometer factor is different for every coolant; consult with the coolant manufacturer for details.
Note: The presence of dirt, oil, debris and foam in the coolant will skew the refractometer reading.