



# PETERBILT NEWS

---

## AUG 29 2002 COOLING SYSTEM HEALTH BEGINS WITH COOLANT

**DENTON, Texas (August 29, 2002)** – Helping ensure top performance and long life for your engine begins with changing the way you think about what you put into your radiator. If you're thinking only of antifreeze, it's time to start thinking of coolant mixture.

Coolant – the mixture of water, antifreeze and additives that keeps the cooling system working properly – performs two essential functions. The more familiar is providing freeze and boil protection. The other is coating and protecting internal working parts of the engine, particularly preventing corrosion and pitting of cylinder liners and the engine block. The first function is performed by either ethylene glycol or propylene glycol (the active ingredients in antifreeze) and the second function is performed by supplemental cooling additives (SCA), the most important of which are nitrites in conventional coolant and carboxylates in extended life coolant.

"Keeping coolant mixture in its proper proportion, as well as regularly performing several other simple cooling system maintenance checks, will help keep your trucks running their best and prevent premature engine failure," says Dan Sobic, Peterbilt Assistant General Manager. "These steps should be followed as part of your regular vehicle maintenance program."

### Checking the Coolant

- Keep glycol level at the manufacturers' recommended ratio for your operating conditions. For instance, for freeze protection at -40 f., the mixture of glycol to water is typically half and half. **For a highly accurate reading of freeze protection, a refractometer should be used.**
- Keep nitrite level at the manufacturers' recommended levels, usually between 1,200 and 4,000 parts per million (ppm).
- Keep acidity/alkaline levels at manufacturers' recommended levels, typically between 8.5 and 10.5 pH.
- Use coolant test strips at every oil change interval when using conventional coolant. Test strips are dipped into the coolant through the radiator opening and will indicate ratios of glycol and nitrites, helping you keep them in proper balance. Test strips are also available for extended life coolant and should be used at every oil change interval to measure its purity and detect possible contamination. **However, a refractometer is needed to test the freeze protection of extended life coolant.**
- **Use distilled water in your cooling system to help prevent mineral deposits.**
- Top off the radiator only with the recommended cooling mixture for your vehicle.
- **Consider using pre-mixed (antifreeze and additives) coolant such as Penray.**
- Consider installing a need release filter. A need release filter, available through Peterbilt as a factory-installed option or aftermarket part, automatically replenishes (SCAs) to their recommend ratios.

- Have a lab analysis done of conventional coolant every 100,000 miles, and at 300,000 miles for extended life coolant. This can help detect depletion of additives and help prevent small problems from becoming big ones.
- Add Extender to extended life coolant at 300,000 miles or sooner if indicated by the test strips. This can double the remaining useful life of the coolant.
- Flush and fill the cooling system every 200,000 miles if you are using conventional coolant, and every 600,000 miles if you are using extended life coolant. Use the manufacturer's recommended flushing agent and procedure when flushing and filling the cooling system.
- Replace the standard cooling system filter every service interval. If you are using a need release filter, it should be replaced annually.

### **Checking the Cooling System**

- Pressure test the cooling system at every maintenance interval. This can reveal any leaks and catch problems while they're minor.
- Inspect the radiator cap for a secure seal with the radiator.
- Inspect hose clamps for tightness, and hoses for wear, cracks, soft spots and brittleness.
- Check the thermostat for proper operation, and make sure radiator shutters (if your truck is equipped with them) open and close at the correct temperatures.
- Inspect the water pump for proper operation.
- Check drive belts for proper tension and wear. Adjust and replace belts as necessary.

Peterbilt Motors Company, a division of PACCAR Inc, manufactures premium quality trucks and offers a broad range of services for the over-the-road, construction, municipal and medium-duty markets. Peterbilt combines classic styling, innovative design and superior-quality features in a comprehensive, custom-engineered truck that is sold and serviced through its 208 U.S. and Canadian dealerships. For more information about Peterbilt, visit its website on the Internet at <http://www.peterbilt.com>.

<http://www.peterbilt.com/newsdetails.aspx?id=92>