



Cooling System Maintenance

Most cooling system problems have a long incubation period. It can take several years for corrosion, scale, rust and other deposits in the system to jeopardize everyday driving. But when the problems arise, they are big problems.

A clogged radiator, if not replaced in time, can lead to a blown head-gasket. And the radiator isn't the only component being compromised. Poorly maintained coolant corrodes the water pump, leading to failure. Bad coolant can also cause scaling and overheating. The thermostat, hoses, cap and overflow system must also be working properly for the system to perform.

Preventive maintenance makes all cooling system problems nearly 100% preventable. Waiting until your vehicle overheats before servicing the cooling system is not the best strategy to take. Coolant should be changed according to the service maintenance schedule requirements of the vehicle. When changing coolant, get the system flushed to remove any unwanted debris from the system. Replacing the coolant and flushing the system brings everything back to peak efficiency.

While many coolants and antifreezes guarantee protection for the life of the engine, it is highly recommended that you regularly maintain and test your coolant to ensure its condition and protection levels. What should you look for when checking your coolant?

- **Color** – The color of your coolant indicates what kind of coolant you have and how it is to be maintained. Mixing technologies and maintaining them incorrectly leads to problems.
- **Clarity** – Regardless of color, all coolants should be clear. If your coolant appears cloudy or has particulates floating in it, this is a sign of bigger problems.
- **Freeze Point** – Properly maintained coolant should have a freeze point of -34° Fahrenheit. This indicates that you have the proper 50/50 mix of antifreeze and water.
- **Chemical Protection** – Chemical levels must be maintained and monitored in your coolant.



The easiest way to check the coolant is with test strips, which provide quick and accurate results in less than two minutes. Penray provides four options:

- 2038 Automotive Test Strips, for standard automotive coolant, test freeze point and pH.
- 2039 Extended Life Test Strips, for extended life automotive coolants such as Dexcool®, also tests freeze point and pH.
- TS200 3-Way Universal Test Strips, for all heavy-duty coolant types including conventional and extended life, test freeze point, SCA concentrations and extended life contamination.
- TS100 Heavy Duty 2-Way Test Strips, for standard and conventional coolants, test freeze point and SCA concentrations.

Summary:

All cooling system problems are virtually 100% preventable. Remember to:

- Know the coolant
- Maintain it regularly
- Check for color, clarity, freeze point and chemical protection
- Adjust coolant freeze point and chemical protection as needed
- Follow engine manufacturers' drain intervals for the coolant type

Solution:

Penray is the cooling solutions expert. Team Penray is available to provide training and to help resolve any coolant questions and problems. Penray has been providing cooling system solutions for decades. Automotive, Dexcool®, Conventional, Fully Formulated, Extended Life – Penray can help technicians safely and properly treat all of these coolants. They offer liquid inhibitors, filters, additives, cleaners and test strips.

For more information on Penray, visit www.penray.com.

