



## **PARTS, SERVICE and SUPPORT**

CUSTOMER CARE  
WARRANTY

MCI PARTS STORE  
SERVICE CENTERS

### **TECHNICAL SUPPORT**

- Technical Training Institute
- Service Bulletins
- Maintenance Tips
- Preventive Maintenance
- Quick Reference Charts
- Publications

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- Emergency Roadside Assistance
  - Locate a Service Center
  - Locate your Customer Solutions Team
  - Parts Credit Application

## **MAINTENANCE MATTERS**

### **Coolant System Maintenance Recommendations**

Coolant does much more than simply protect your engine from freezing up during the winter months. Proper coolant mixes protect your engine from the ravages of combustion.

It is a fact that the number-one failure in the cooling system is cylinder wall cavitation. Cavitations occur at the liner face where the cylinder wall contacts the coolant.

Why does this happen? It's really quite simple. In fact, the next time you boil water on a stove, pay close attention to the inside of the pot. As the water heats, you will see bubbles forming at the bottom of the pot. These bubbles are actually the water separating into its gas components, hydrogen and oxygen.

In an improperly maintained coolant system, these bubbles will occur around the liner. As the gases recombine under the pressure of the cooling system, they cause a microscopic explosion that creates a pit on the face of the liner. If the system is not maintained, the pit will continue to grow to the point that the liner wall will deteriorate and cause a catastrophic engine failure (remember: liquids are not compressible. Something has to give).

As engine technology advances, engines run hotter to take advantage of the combustion process that makes engines run cleaner. This, in turn, puts a larger demand on the coolant system. Proper freeze-point maintenance raises the boiling point of the coolant, which inhibits bubble formation. Proper inhibitor levels slow the cavitation process and protect the liners and critical components such as the water pump. No matter what you do, however, a certain amount of metallic material will eventually contaminate the system. This is why most engine and coolant manufacturers recommend an interval for complete coolant change-out.

Our tips:

- ✓ **Maintain a 50/50 coolant mix (equals -34° F).**
- ✓ **Use test strips to maintain coolant pH as recommended by your Engine Manufacturer.**
- ✓ **Replace your coolant as recommended by your Engine and Coolant Manufacturer.**

Remember, give more thought to your coolant system and how its maintenance directly affects the longevity of the engine.