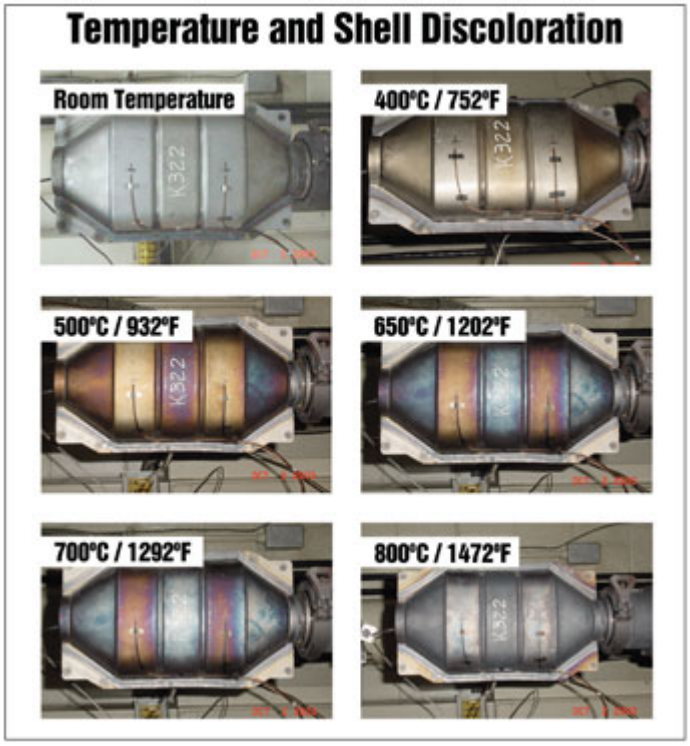
ADDRESSING NOx ISSUES

NOx - HighNOx readings are a clear sign of performance issues somewhere in the system. The real questions are:
Where? and Why? *Among the potential causes of high NOx readings are:*

- **Misfire condition**
- **Malfunctioning or improperly adjusted EGR valve**
- **Failed O2 sensor**
- **Leak in exhaust tubing upstream of the converter**
- **Excessive carbon deposits in the combustion chamber**
- **Improper spark advance**
- **Blocked coolant passage**
- **Overly lean AFR**
- **Damaged cold air duct**
- **Failed or malfunctioning catalytic converter**
- **Corroded or damaged engine sensor electrical connections**

NOx can be formed by many component failures and system malfunctions – anything that allows the combustion chamber temperatures to exceed 2,300 degrees Fahrenheit. For example, if the cooling system is using pure water, it will absorb combustion heat and boil rapidly, leaving an air pocket around the combustion chamber. The air pocket will become a hot spot, allowing for combustion chamber temperatures to rise. Equally bad is 100% antifreeze, which forms a blanket around the combustion chamber, keeping heat in and allowing the combustion chamber temperature to rise. Rust surrounding the cooling jacket surface will create the same blanket around the combustion chamber. Poor flow through the radiator (as a result of a blockage, poor circulation, a partially closed thermostat, or limited flow from the water pump), will prevent the high temperatures from escaping through the cooling.



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