Wheels: John wrote, "My vehicle passed E-Check well within tolerance except for the NO_X test (limit – 1208, reading was 1947 ppm). I gave the car a good tune up (air filter, oil change, distributor cap, rotor, and PCV valve). I also replaced the failed EGR valve, and retested with a half tank of premium gas. All readings were improved – except the NO_X. It was worse (reading 2088 ppm). The catalytic converter was about the last part left to try (which put me over the $300 E-Check limit). After replacing the catalytic converter, the car passed with the NOX much improved (reading 105 ppm). I examined the old catalytic converter (4 years old). It was not damaged or clogged. I was amazed that a properly operating catalytic converter made such a difference.
Also, I wanted to add that I really enjoy your articles in the Saturday paper – very informative. Keep up the good work."

Halderman: A catalytic converter should last the life of the vehicle unless it has been damaged. The damage does not need to be physical. There is an old saying: "Catalytic converters do not commit suicide; they are murdered." I would suspect that some fault in the ignition or fuel system resulted in high exhaust emissions beyond that the converter could handle, which caused the converter to overheat or be damaged so that it cannot function chemically, even though it would still flow exhaust gases and not be clogged. While most excessive NOX emissions can be corrected by cleaning the exhaust passages for the EGR valve and performing a decarbonization, some like in your case, require that the converter operate at full efficiency to pass E-Check.