

**Halderman:** To follow up with the October 9, 2004-column about the case of the GMC pickup that was noisy and lacked power, I heard from a chemistry professor at Sinclair Community College, Dr. Ed Saccocio, who stated: “I had a similar case with my pickup truck that didn’t seem to have enough power to climb even modest hills in the Dayton, Ohio, area. Then I took the truck through E-check and it failed for excessive oxides of nitrogen (NO<sub>x</sub>). After replacing the exhaust gas recirculation (EGR) valve, the engine was noticeably quieter and had a lot more power.”

Engine noise is very difficult to diagnose without actually hearing the noise, but any experienced service technician should be able to identify the engine noise during acceleration as being caused by spark knock, also called detonation or ping. Without 6% to 10% of the exhaust added back into the intake, the engine will spark knock during acceleration. The loss of power occurs when the knock sensor detects the spark knock and retards (delays) the spark timing. This is just one example of where the E-Check program is beneficial to vehicle owners by detecting problems that affect engine performance and fuel economy. Remember, if the engine is operating efficiently, it is less likely to create air pollution and deliver the maximum possible performance and fuel economy.

