Wheels: John of Bellbrook asks by e-mail, “My transmission on my car seemed to be acting up. It is a 1997 Buick Riviera with about 85,000 miles on it. The first indication of a problem was that it was very sluggish during acceleration. After I got on the highway, it would never go into overdrive, therefore, the engine would be racing at high speed, even while driving at the speed limit.

My first step was to take it to a "neighborhood mechanic" place that does all my basic maintenance. The technician flushed out the transmission fluid and replaced it, stating he hoped that fixed the problem, as it could easily cost $2,500 to repair it.

Well, the next day it failed again, so I took it to a local transmission shop. They tore into it after they ran their diagnostics test, and told me that the second gear and the overdrive were the problems, so they ordered a repair kit. When they were done, I had spent just less than $3,000 and I wept all the way home. A week later, I went back to transmission shop after it failed again, reproducing the same problems. The shop could not find anything wrong with it, so the next time it didn't run right, I took it right back.

I told them to call me when it was fixed. About three days later, I got a call and they told me they found the problem - and that it was the alternator. They stated that the transmission was not getting the volts it needed to get the correct "readouts."

I talked to one of the service managers at a local Buick dealer, and they had never heard of the alternator being the cause of a transmission failure.

My question to you is what are the odds that it was the alternator to begin with?
Thanks.

Halderman: From your description of the problem, there are several possible causes for the symptoms, but high resistance in the ignition feed circuit to the transmission could explain all of them.

Your electronically shifted transmission is controlled by electrical solenoids. If there is not enough electrical current to operate them or if there is a fault detected, then neither shift solenoid is actuated resulting in a default setting. The default gear in your transmission is second gear. This means that it starts out in second gear, giving you the impression that the engine lacks power or that the transmission is in the wrong gear, which it is.

Then the transmission will not shift and that is why you felt that the engine was operating way too fast at highway speeds.
One common cause of this condition is high resistance in the ignition switch. The ignition switch controls the electrical circuit that feeds the transmission. A common check for this condition is for the technician to use an old headlight, which draws about 5 amperes, and connect it to the wire at the connector to the transmission from the ignition switch. If the light is dim, this indicates a high-resistance fault in the feed circuit. If the circuit is OK, a bad alternator could be the cause of the lower-than-normal current to the transmission.