

Wheels: Paul of Fairborn writes, “I have a 1997 Mercury Grand Marquis with a 4.6-liter (2V) engine. It has 61,000 miles on it now. A short time ago I noticed a rumble, sort of like going over a washboard that felt like it was under the floorboard. The rumble would last only for a few seconds. This would happen as the car was going into overdrive at 40 mph. Then it began to happen at different speeds. I do not accelerate rapidly. On a recent trip to Michigan, the check engine light came on. When I returned to Ohio, I plugged in an OBD II Troubleshooter and got readouts of 0174 and 0171. These equated to “system too lean (bank 2)” and “system too lean (bank 1).” When I removed the reader, the check engine light went out. Now I don’t have a clue as to what I can do to fix the problem. I have always bought a shop manual for my cars and have been able to take care of most of the maintenance. I am 84 years old and don’t get along too well with the new computer-controlled cars.

I would appreciate any information you could provide that would help me fix the problem or tell me what I have to do to have it fixed.”

Halderman: Congratulations on being able to retrieve diagnostic trouble codes. Because the code indicated a lean condition for both banks of cylinders, the most likely places to start checking would be systems and parts that affect an air-fuel mixture for the entire engine and not just one side. The fuel filter could be clogged or the fuel pump could be weak. I would start with a fuel filter, which according to service information, is located under the vehicle and is a separate replaceable part.

Wheels: Is there anything else that could cause the reader’s problem?

Halderman: Yes. A dirty or defective mass air flow (MAF) sensor could also be the cause. If the sensing element is dirty, it cannot properly determine the correct amount of air entering the engine, resulting in a lean condition.

Another concern involves the rumble sound you have heard or felt. This could indicate a clogged catalytic converter. The catalytic converter is covered by all vehicle manufacturers for eight years or 80,000 miles, so you may be covered.

I suggest that you have the vehicle checked by a professional. The service technician could check for proper operation of the MAF sensor and also check the fuel trim numbers. Fuel trim is a computer program that uses the oxygen sensor data and determines if additional or less fuel is needed by the engine.

