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I am sure many of you look at an exhaust gas recirculation (EGR) flow code and figure it is just another plugged EGR port.

I, too, fell victim to the same line of thinking until a few 1999 Mazda Miatas proved me wrong. This is a fairly common problem on Mazdas; there are technical service bulletins that explain the problem and how to clean the EGR port in the intake. I have not figured out what makes

this model year different from the rest. However, I have found a way to fix them if cleaning the intake port doesn't do it.

The first one of these I encountered seemed like all of the rest. The technician found the plugged EGR port, cleaned it out, and we thought it was fixed. Two weeks later the code returned. Feeling he must not have removed all of the carbon, the technician removed the upper and lower intake chambers and cleaned them (even though he didn't see any carbon buildup at that time). A week later, the car returned with the same code. This time he replaced all the vacuum hoses that ran between the base of the EGR valve and the EGR boost sensor. There had been reports of the vacuum hoses and pipes getting plugged with carbon. Again the vehicle returned with the P0402 code; at that time, I was out of ideas. It was such a common problem I couldn't understand why we couldn't get it fixed.

I can't take credit for fixing the first one. The technician I was working with had obtained some information about a flaw in the upper intake and decided to try replacing it. A few weeks later, he was kind enough to call and tell me what he had done. It didn't make much sense to me at the time, but it did fix the problem.

Six months passed before the next 1999 Miata call with a P0402 code and this one had all of the same symptoms. This technician had found the technical service bulletin and had done all the EGR port cleaning he could. He had run new vacuum hoses and replaced the EGR valve but was still getting the P0402 code.

Since there had been some problems related to the intake on the first 1999 Miata, I wondered what would happen if we ran the EGR boost sensor hose to a different vacuum source on the intake manifold, instead of where it was originally attached to the port at the base of the EGR valve. If there was really a problem with the EGR passage, it should now set a code for low flow instead. Two weeks later, the technician called to thank me - the car had not been returned since he swapped the vacuum hose around.

Since that time, I have encountered more than a dozen of these EGR problems and have fixed them by swapping the vacuum hoses around. It turns out there is even a capped-off port on the intake to run the hose to, and then cap off the original port. It seems too easy!