

## Even Gravy Can Spoil

If you twist wrenches for a living long enough, you'll come to understand that there should be nothing that surprises you when dealing with cars on a daily basis.

Picture this: A regular customer drove into your shop in a 2005 Ford Mustang with a 4.0L engine. It was a gravy job; the owner requested that his thermostat be replaced. In this case, the technician performed what should have been a relatively easy job, only to have the next day and a half consumed by this car.

It all started when he discovered a leaking thermostat housing after re-assembly. Not only did he have to disassemble it again to reseal it, but before the leak was corrected, he had to disassemble and reseal it another three times. Imagine his relief when the project was finally finished. All that was left was to bleed out the cooling system, and one last thing while the Inlet Air Hose was off: a quick clean of the Electronic Throttle Body (ETB) and this car would be out of there. Then he could move on to another job.

Not so fast. Imagine his frustration when he discovered that now that the car was running, the engine would only idle. Idle speed was around 770 RPM but there was no throttle blade movement as the accelerator was pressed. Being a 'drive-by-wire' vehicle, the place to start was to install a scan tool and pull codes.

Retrieving codes P2104, P2110, and P2111 led him to call me. Starting out, I had him check the values on the Throttle Position Sensors on the ETB using a lab scope. They both appeared to sweep good with no apparent glitches.

Knowing that the Powertrain Control Module (PCM) does a brief throttle sweep on key up, I asked the tech to install a scope on the two throttle control wires and check for a momentary pattern. When throttle control was found to be present from the PCM, I recommended a replacement ETB.

The next day, I received a call from the tech informing me the car was finally gone. Instead of replacing the ETB, he took it upon himself to experiment. On the motor side of the throttle body is a housing that contains two magnets to energize the windings that drive the throttle blade. These magnets had literally fallen off the housing. His description was, "They are very delicate and it looks like they were held on with Elmer's Glue."

His fix was to thoroughly clean the housing and using the discoloration of the housing from the magnets as a guide, he re-glued the magnets using J-B Weld and it worked great. Hopefully, this fix will work for you too if this concern appears at your shop!

*Many thanks to Jason Hillman of Ansonia Tire Center, Ansonia, Connecticut for this valuable tip.*

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