

Last month, I began discussing the M96/M97 engines and offered a few tips for use and maintenance. This month, I'll continue the discussion by covering some of the most common "wear items" associated with these motors. None of these are "engine killers"...just bumps in the ownership journey that many of us will encounter, fix, and survive.

As many of these cars age, one of the first things that seems to suffer is the idle quality. You may notice that the car idles a bit higher than it used to, or that it surges a bit when you're waiting at a stop light. If it's getting really bad, the Check Engine Light may come on. There are a few usual suspects. The first, and easiest to take care of, is a dirty throttle body. Remember years ago having to clean a dirty carburetor? This is the modern descendent, but it's a much easier job. Just like with the ole' carbs, throttle bodies collect a build-up of oil and dirt that causes the round valves to stick open slightly. Because of this, the engine gets more air than it should, and the engine's confused and frustrated computer tries to compensate, unsuccessfully, causing an erratic idle. The solution is to remove the throttle body and give it a good cleaning. It's not a tough job, but a complete description is more than I have room for here. If you're curious, do an online search for either "cleaning 996 throttle body" or "cleaning Boxster throttle body".

The second culprit in a poor idle dilemma may be a bad air/oil separator. The air/oil separator (AOS) allows the engine's internals and crankcase to breathe. For those who speak Ford/Chevy, it is akin to the PCV valve, but with Porsche's technology and budget. The AOS uses a diaphragm to allow air, but not oil, to circulate from the crankcase back into the intake, just inboard of the throttle body. As the diaphragm deteriorates, oil begins to get by. If the diaphragm fails completely, your car will produce a smoke screen worthy of James Bond. So how do you know if the

AOS is going bad before things have gotten completely out of hand? The first check is to try and remove the engine's oil filler cap while the engine is running. If the AOS is fine, the cap should come off with just slight resistance from engine vacuum. If the AOS is going bad, the vacuum will be substantially greater, and you may not be able to get the cap off at all. The second check involves looking into the tube that connects the AOS with the throttle body. On earlier "cable" throttle cars, this tube connects on the left side of the throttle body. For later "e-gas" cars, it connects on the right side. Disconnect the tube from the TB and wipe inside of it. A bit of dampness/grime is OK, but if it's wet or dripping oil, your AOS needs to be replaced.

The next two causes of a rough idle are usually accompanied by a Check Engine Light. If you get a CEL, before you do anything, check the code. If you don't have an OBD II scanner, you can get one for around \$75, or many auto parts places will have a loaner that they will let you use. If you get codes 0102 or 0103, it indicates trouble with your Mass Air Flow sensor. The MAF is located in the intake pipe, just inboard of your air filter. If this sensor becomes dirty or reaches the end of its life, the computer is no longer able to accurately read information such as temperature, speed, or density for air coming into the engine. The sensor can be cleaned with electrical contact cleaner, but eventually, it will need replacement. However, before shelling out the cash for a new MAF (not cheap), there's one more thing to check. Have a look at the plastic oil filler tube. It runs from your oil filler cap, down under the intake system, and connects to the engine. Because of heat, vibrations, and solvency of the oil,



this tube is prone to developing cracks. In turn, this leads to a vacuum leak in the engine which the computer may interpret as a problem with the MAF. Cracks in the oil filler tube aren't hard to spot: the tube will be leaking oil, and will be developing a velvety-looking patch of oil and dirt at the crack. There may also be oil on anything below or behind the crack itself. The most frequent spot for cracks is in the ribbed "flex" area in the middle of the tube.

Like the TB cleaning, all of these problems can be Do-it-Yourself projects, and there is plenty of documentation online provided by gracious DIY pioneers. If you're feeling brave or curious, do a search and have a look at the information these folks have provided. When you need the parts to get the job done, give the parts counter at Euroclassics or Flow a call- I bet they've got everything in stock!

Happy driving and wrenching  
Jeffrey

An advertisement for RennZenn. On the left is a small image of a silver Porsche Boxster convertible. To the right of the image is the RennZenn logo in a stylized script font, with the tagline "HARMONY FOR YOUR PORSCHE" underneath. Below the logo, the services offered are listed: "Concours Detailing • Maintenance • Performance Pre-purchase Inspections". At the bottom, the website "www.rennzenn.com" and name "Jeffrey Elmore" are on the left, and the email "e-mail: jfro@rennzenn.com" and phone number "Phone: 434-409-0023" are on the right.