

In late 1996, Porsche introduced the Boxster, and with it an all new family of water cooled flat-six engines dubbed the M96 series. Versions of this motor powered all of the 986 Boxsters and the 996 Carreras. When Porsche updated both of these vehicles in 2005 to the 987/997 series, minor changes were also made to their respective engines, but the platform (now called M97) remained fundamentally intact. As the M96/M97 power plants have been in customer's hands for well over a decade, real world data has accumulated to the point that patterns have emerged. Over the next three Heat Exchanger issues I'll be discussing some of the survival strategies, moderate maintenance items, and unfortunate horror stories generated by owners and enthusiasts just like you.

Despite a number of well publicized stories about M96/M97 engines going kaput, there are far more incidences of owners quietly getting year after year and mile after mile of dependable, enjoyable service from these motors. Reaching the 100,000 mile mark is common, and the 200,000 mark has been surpassed by a well traveled few. So, what are some things that these folks are doing, besides lots of driving, to reach these milestones?

1. The most common trait among these owners is that they change the oil and filter at considerably shorter intervals than the factory recommends. 15,000 miles between oil changes is too long. Despite the quality of modern synthetics, gasoline and all of the byproducts of the combustion process break the oil down well before you reach 15,000 miles. 7500 miles seems to be the maximum safe interval, and 5000 miles isn't overdoing it. Also, don't skip the filter. Change that with every oil change.

2. When starting the car for the first time of the day, let it idle and warm up a couple of minutes. At startup, the oil, coolant, engine block, and other parts are all coming up to operating temperature at different rates, and the most dramatic differences are in the first couple of minutes. Letting the car sit at idle allows temperatures and tolerances to equalize before putting any load

against them. It isn't necessary for the car to get all the way up to 180 degrees, just give it a couple of minutes, then on to warm up, part 2...

3. The second part to warming the car up is to drive, but keep things below 4000 RPM until you see the temperature gauge reading above 180 degrees. Doing this ensures that all of the engine components get into their proper temperature ranges before asking them to perform at their peak. Another important aspect of driving the car up to operating temperature, as opposed to idling until it reaches 180 degrees, is that driving warms up the transmission and driveline components. These too have specific temperature ranges for their best performance and longevity.

4. And the final part to warm-up is to avoid taking short trips that don't allow the car to get up to temperature. Short trips that don't allow the engine and driveline to reach their ideal operating temperatures cause a lot of wear and tear internally.

5. Once the car is warmed up, avoid lugging the engine. These motors begin to make power around 2000 RPM. Placing a lot of demand on the engine below 2000 RPM creates quite a bit of internal stress on pistons, bearings, cylinder walls, and the crankshaft. If you need to accelerate and the engine is struggling to build RPM, by all means, downshift and make things easier on the motor.

6. Keep an eye on the coolant level in the coolant tank. Just as the engines are sensitive to cold or unequal temperatures at startup, they are very sensitive to things getting too hot. If the coolant level drops below the minimum marker, the cooling system will have a difficult time keeping the engine temperature in the proper range. If the red indicator light at the hot end of the temperature gauge comes on and is steady, it is showing a very low level of coolant in the



tank, and that coolant needs to be added (and that coolant is leaking somewhere). If that light is flashing, your engine is overheating and you should shut the car off immediately.

7. Finally, the really good news... Drive the car! M96/M97 doesn't like to sit for extended periods of time. When these motors sit, internal seals begin to dry out and stretch or shrink, and that's the beginning of real trouble. The M96/M97's need to have the oil splashed into all of the places that oil needs to go, they need to be run at their proper operating temperatures, and they need to be taken throughout their operating RPM range (2000-6800) occasionally.

It may seem overly simplistic or perhaps ironic, but the Boxsters and Carreras that are driven the most are also the ones with the fewest reports of major problems. So, change your oil, let the car warm up, and by all means, take that beauty for a nice therapeutic drive.

Happy driving and wrenching!



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www.rennzenn.com
Jeffrey Elmore

e-mail: jfro@rennzenn.com
Phone: 434-409-0023