

The IMS Bearing: What You Need To Know

What is it?

The IMS bearing, or intermediate shaft bearing, is a sealed bearing unit that is a part of the intermediate shaft. The intermediate shaft is driven off of the crankshaft, and in turn drives the camshafts and main oil pump.

Why does it fail, and what happens?

Every 911 ever produced has an IMS. While there is nothing wrong with the design, there is everything wrong with the bearing used from 1997 through 2008. The IMS bearing used during this time is a GM manufactured alternator bearing, #6204. It is an outer race rotation bearing application. The inner race remains stationary as the outer race spins about. Poor bearing design is the main reason why failure occurs.

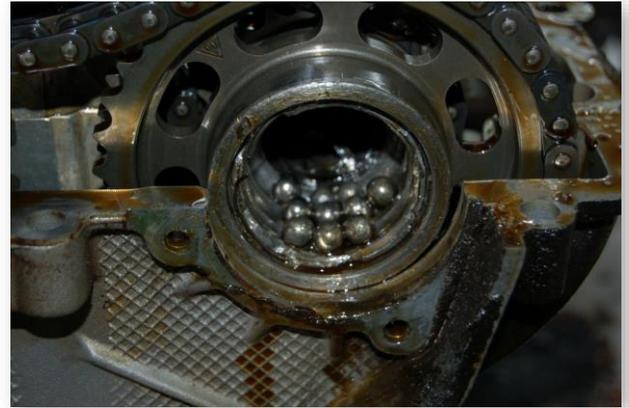


Photo of IMS bearing failure

Over time, the debris resulting from the corrosion of the ball bearings cycles throughout your engine. Upon failure, in short, catastrophic engine failure can and usually will occur. The IMS is typically damaged beyond the point of service, can cause the engine timing to skip (thus resulting in collision of valves and pistons), and the debris from the failure can cause massive destruction throughout the engine. The IMS bearing failure will cause an extremely costly repair bill, as most cases require a complete engine teardown and rebuild, or replacement altogether.

Which vehicles are susceptible?

Porsche Boxsters, 996s and 997s equipped with the M96 and M97 engines from 1997 through 2008 are susceptible to IMS bearing failure. It has been noted 2000-2005 single row bearings are more likely to fail, and 2004 Special Edition cars (i.e. Boxster Spyder and 40th anniversary edition 911) have an exceptionally high occurrence of failure.

The following conditions also contribute to IMS bearing failure:

- o Garage queens with low mileage
- o Extended oil service intervals as suggested by the dealer
- o Oils heavily laden with fuel from excess cold-starts
- o Oils with as little as .002% water can reduce bearing life by 43%, levels up to 6% can reduce life by 83%
- o Coolant intrusion (common with M96 engines)
- o The normal mileage range when failure typically occurs is between 30,000 and 60,000 miles.



Photo of corroded ball bearings

What can be done to prevent IMS bearing failure?

1. Be aware. Most owners are not aware of these issues before they become a problem.
2. Do not baby your car; drive it the way Porsche intended. This helps unload the bearings and aids in lubrication.
3. Keep a look out for oil leaks.
4. Check your engine oil filter at each service for signs of contaminants such as metal flakes.
5. Install a retrofit kit (applicable to 1997-2005 M96 engines) or the IMS Solution (a permanent solution applicable to 2000-2005 single row IMS bearings): this is the best way to avoid IMS bearing failures.
6. M97 engines years 2006 through 2008 have a non-serviceable IMS bearing without engine disassembly. However, you can remove the IMS bearing seal on these engines to allow oil to provide lubrication to the bearing, therefore reducing heat and wear, in turn increasing the longevity of the bearing. Also utilize high quality engine oil, change the oil every 3,000 miles, and install a high quality spin-on oil filter.
7. All M96 and M97 IMS bearings will fail. It's just a matter of time.



IMS Bearing Bulletin 2013

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