

KNOWLEDGEBASE ARTICLE:

Buying a Porsche

How to make an informed decision when a used Porsche Boxster, Cayman, or 911 is right for you.

We field many phone calls on a daily basis about first time Porsche buyers considering purchasing a model year 1997 through 2008 Porsche Boxster, Cayman, or 911. Many are concerned about cylinder failures, intermix, leaky rear main seals, and IMS bearing failures. A well informed consumer willing to take a few extra steps and perform a thorough pre-purchase inspection can potentially reduce their chances of large, unexpected out of pocket expenses.

Although the venerable air-cooled Porsche 911 line ending with the 993 are considered relatively bulletproof, pretty much every series of 911 had one issue or another, all of which are conquerable. The only question is how much is it going to cost to fix? So remember, even though prices on Porsches have gone

down making them very enticing for first buyers, they are still a Porsche and required maintenance and repairs can easily surpass purchase price or vehicle value. However, this shouldn't diminish the enjoyment or satisfaction you have from owning and driving a Porsche.

One thing you should consider is purchasing a vehicle that is slightly cheaper than what you can afford to spend. Plan on setting aside the difference in price for at bare minimum preventative repairs or if you can, what it might cost for a new engine. From the number of calls we get about individuals who cannot now afford to fix their Porsche, this a something to consider when buying one.

Extended warranties are always an option, but many are shady or even if you do get one that will pay out for repairs, they won't always pay to have the repairs done right or sometimes a complete engine may cost more than what

they will pay out, as many limit costs to the replacement value of the vehicle. A certified pre-owned Porsche is one excellent way to ensure the car has been thoroughly checked and backed with a limited warranty, but you still need to take it one step further and do an exhaustive PPI on any purchase, certified vehicles included. Aftermarket warranties can be purchased through reputable companies like Paragon Motor Club, which represent several warranty companies and are there as a liaison for you. Many dealerships offer their own warranties – usually a dealership won't represent a warranty company that won't pay out, since it would be their neck on the line. Just do your research so you can make sure to make an educated purchase. Most warranties will be between 2-3k with a low deductible and be bumper to bumper, for the most part, and can be purchased also to cover normal wear. Usually the longest the warranties can be drawn out for is 4-5 years and 100,000

mi. Alternatively, there are also steps that can be taken to self-insure against these types of failures or to plan so that when the unexpected occurs, you're ready for it.

For starters, to properly rebuild an engine if you do have a failure, figure usually about 60 hours plus parts. A quality rebuild, addressing all the areas that need upgrading, along with upgrades will start at about \$15,000 and can easily exceed \$20,000. This is pretty much standard with all flat-6 Porsche engines, air-cooled or water-cooled. Actually, it takes about ten hours less to do an air-cooled rebuild than a water-cooled one, so just keep this figure in the back of your head. If you can't afford a properly rebuilt engine or a genuine Porsche engine, you're best to get a used engine from a known source that comes with some sort of warranty – most parts recyclers will give a 30 to 90-day warranty. There are ways to check the engine from doing a cold compression and leak down test to testing the

old oil for the presence of coolant or high levels of wear metals, before even installing it. Just remember, if you pay someone to put an engine in and it has problems, you will be the one stuck with the extra labor resulting from R&R of the faulty engine when sourced from a budget supplier. You get what you pay for when it comes to rebuilds and you can't afford to cut corners or pay labor on a job twice, as many shops charge \$140/hr or more nowadays.

With this in mind, do not pay a premium for low mileage cars or cars with blown engines. That's the first thing to not do. These cars were meant to be driven and not to be treated as coffee tables. Low mileage cars cost more and typically have more problems. Pull a Carfax report and find where the vehicle was serviced and get copies of the service history. This is invaluable. This will also tell you if the car spent its early years sitting and only recently started being driven heavily. For

example, you could have two cars that have similar mileage and be ten years old and have 50k miles— the first driven 5,000 miles yearly through its life and maintained regularly, where the other might have never been driven and then had 15k yearly miles put on it in the last three years, meaning it sat the first 7 years.

There are several sure fire ways to limit your probability of buying a car with an impending failure. YOU MUST GET A PPI. We're not going to discuss what to check for other than what directly could lead to expensive engine repairs. First off, pay for an oil change to be performed. Ask to be there when they remove the filter and drain the oil. Check for any debris whatsoever in the filter as well as for any sign of intermix, which makes the engine oil look like a milkshake. Although not something typically done, pulling the sump plate also can expose many ills, from signs of lack of proper maintenance or even foreign

object debris in the oil pickup. If there is any sign of any debris or contamination, walk away. You can also have a sample of oil collected and tested for irregular wear content and even contaminants like coolant. All you are out is the cost of the PPI and an oil change at this point.

Although a bit more time consuming, using a Durametric, PIWIS, or PST2, you can have the camshaft timing verified to check for deviation and fluctuation during operation. A trained ear with an engine stethoscope can listen to the IMS bearing – when it's going bad, it sounds just like a bad water pump or idler bearing, which most mechanics should know how to listen for.

Next, check for intermix in the coolant tank. Pull a spark plug and pressurize the combustion chamber while placing a rubber glove on the coolant fill to see if it fills up. Do this on one cylinder on each side of the

engine. Keep taking the rest of the plugs out and also have a compression and leak-down test performed to verify the health of the engine. Something as simple as even reading the spark plugs will help to tell you if the engine has had any detonation or if it is consuming oil.

If there is any oil at the mating area between the crankcase and transmission (from possible IMS or RMS leaks – they puddle at the same areas), you must have it checked out. Since you should have a copy of the service history, see if the engine has had multiple rear main seal replacements. This is a sign that there is something wrong with the engine, not just the rear main seal.

At this point, if you find major leaks, I wouldn't pay to have this done – that's the seller's job or they have to discount the car accordingly.

I'd find another car or have the seller have this addressed. If there is a leak and the seller is willing to fix it prior to your purchase of the vehicle, then I would think it's worth proceeding. If the transmission has to come out for an RMS seal and even more so if the IMS flange is leaking (only once everything else above has been completed to your satisfaction), then I would commit and while the transmission is already out, have an IMS retrofit kit installed and evaluate for a new clutch disc and dual mass flywheel if needed.

Another consideration on what vehicle model year to purchase is whether or not you get an engine with Variocam F1 or Variocam/Variocam Plus – this boils down to non-vane cell (5-chain) or vane cell (3-chain) engines. On the earlier non-vane cell engines, you have Variocam actuators with wear pads. This design is similar to the 968, and on those engines, it's a well-documented fact that the wear pads are good for 60-80k miles, and then

they need replacing. Obviously driving style and maintenance history will affect this number greatly, but it's something to consider. Later vane-cell engines don't have these wear pads. The flip side of this is that the lifters in the 3-chain vane-cell engines are about six times more expensive on the Variocam Plus engines than earlier 5-chain non-vane cell Variocam F1 engines. This brings us to the next thing to listen for – noisy chain tensioners and lifters. If at start-up, the engine is noisy but quiets up almost immediately as oil pressure builds, the tensioners need replacing and can be done externally. Once the engine is warmed up and the oil gets hot, then you can listen for bad lifters, which sometimes will have audible ticking, which typically is something we only see on Variocam F1 pre-vane cell adjuster engines. By all means, do not do an engine flush. That's a guaranteed way to ensure you need new lifters and tensioners on these earlier engines. Engines

with poor fuel economy can also have bad lifters or be out of time, as it's easy to find engines that are well over 11 degrees out of time, but won't have any symptoms other than poor fuel economy. It might be worth your while to do the wear pads and re-time the cams if you're approaching this mileage. If the lifters come out, they should be checked and any replaced if questionable. Same goes with the tensioners – if you're re-timing the cams, they come out, and it's better to replace with newer ones, especially the crank to IMS tensioner, which has been revised several times.

Although we've focused solely on the engine, you also want to make sure that the transmission shifts smoothly and doesn't have any problems between gears, as is typical with worn synchros. Also check for noisy bearings. Many of the gearboxes used a sealed ball bearing in them like the problematic IMS bearing and also cause problems with the

gearboxes. A proper rebuild on a gearbox will be several thousand dollars.

These are all things that a typical PPI doesn't include, but you want to make sure you do this. Although doing all this may cost you up front, addressing problem areas preventively should reduce the chances of a later problem that will cost several times more to fix after the failure has occurred. The purpose of this document isn't to scare you out of buying a Porsche, to make you stop driving yours, or to suggestion that you spend thousands doing repairs needlessly- the informed consumer can hopefully with enough knowledge in hand hopefully steer clear of problem vehicles so you can enjoy ownership of your new (to you) Porsche. Don't forget, drive it like you stole it!