

Things to consider when buying / servicing / replacing parts on a 993.

Just a few IF items, items with a "*" can be done at home with basic tools:

- **Clutch - IF** not done once in the past. All sorts of shifting issues can present when a clutch is at the end of its life including slipping on acceleration, a hard to actuate clutch even dinging gears when shifting. A 993 should shift as easily as a Honda Civic. If this is not your experience have it looked at.

While the clutch is out inspect the wiring that leads to the SAI pump where it attaches to a connector on a bracket above the air pump.

These wires are known to suffer insulation failure and are easier to deal with when there is access to the back of the engine.

- **1st & 2nd gear synchros** – IF the gears tend to ding while shifting especially in cool weather when the car is cold. This is not a common occurrence, just an experience I had. If the problem only gets worse with a gear lubricant refresh it is a dead giveaway you have this issue. This was an 80K+ odometer item for me.
- **Differential repair** – When the transmission is open for synchro replacement one of the gears on the differential may exhibit some chips missing from its face. Any shop that does a reasonable amount of Porsche transmission work will have a used or repaired standard differential on hand. This is because many times when a previous customer upgraded to a limited slip differential the shop retained the original. These parts may be available at a very low cost to you. I have an unsubstantiated theory that when a 911 is pushed to the point of wheel spin it jackhammers the standard differential gears and may be the cause of gouging chips from the gear face showing up at the lubricant drain plug.
- **Steering rack rebuild - IF** leaking - inspect with the under body cover off; a little weeping of the fluid at the rack ends is OK as the end boots really do not seal very well and even less so with age. Wet dripping on the

underbody cover suggests an established leak. This seems to be somewhat of a chronological age related issue. It is likely accelerated by corrosion on the rack rod ends as the inside tie-rod end boots lose their sealing ability and road moisture & debris can get inside the boots contaminating the rack. Replacing the inside tie-rod boots may forestall this issue to some extent.

There are significant service life advantages to sending in your own rack for a rebuild rather than accepting a swap-out from the rebuilder's inventory of racks. See Rennlist posting "[steering rack replacement notes](#)" also see "[How to jack the car up](#)" safely, remember As the French say "to die for love" is a good thing however I think they are speaking of this while under something other than a car!

(* Send out rack for rebuild, remove & install yourself on jack stands, very messy two session job - one day to pull the rack, a week later a day to put the rebuild back in.)

- **Replace power steering belt - IF** not done once in past by 80K miles, a skilled technician can replace this belt without removing the engine;
- **Replacement of hydraulic lifter cartridges - IF** noisy at startup after sitting for a day or two; if car sits for an extended period such as a month and the sound presents on startup this is a sign that the lifter cartridge seals may leak a bit but have not progressed to the point where replacement is indicated. This seems to be a chronological age related issue related to the cartridge seals losing elasticity and slipping off.
- **Replace ignition wires - IF** not done once in the past by 60K miles;
- **Replace plugs - IF** not done once in past by 80K miles;
- **Replace rotor & cap – IF** there is a concern about rough idling. 993 does not exhibit a perfectly smooth idle so what is normal is learned with experience. I found that caps and rotors seem to be a two to three year

repeat item on my car. If I leave them longer at some point I get a check engine light and a misfire diagnostic code.

- ***Replace Strut cartridges and or springs - IF** car bounces on rebound while driving, the suspension sits low or seems harsh on brick or cobblestone roads.

If a car has over 60K miles on it, as most examples have by now, it likely has replacement (upgraded) aftermarket struts already that are good-to-go as is. If the aftermarket struts on your car are H&R or Bilstein (most common brands) and some time in the future need replacement, they can be rebuilt at a substantial savings over buying new – saving potentially \$1500 over a new set.

Many US cars have had their springs swapped out with aftermarket springs early in their life to lower the suspension to more sporting height. Over time these aftermarket springs can sag. Replacing struts, springs or both as a complete coil-over kit is a surprisingly easy job done with jack stands and one of these: "[MacPherson Strut Spring Compressor Set](#)" transforming the ride of the car. Also see "[How to jack the car up](#)" safely. An inexpensive height adjustable coil-over option I have had great daily driver results with for the last several years is the [H&R Street Performance Coil-Over kit 29954-1](#), both springs and matched struts for all four wheel-ends, cost < \$2000 if you shop around, I got mine on e-Bay. You can reuse the existing rear anti-sway bar down-links with this kit. The only additional parts you will need for the job is 16 replacement lock-nuts for where the strut mounts attach to the body at the top. Lots of aspiring track guys buy kits with adjustable valving for a considerable premium over this kit, to each his own I say.

- ***Replace Tie rod ends IF** play is present - **IF** only the end boots are cracked just replace the boots. See: "[Energy Suspension Tie Rod End Dust Boots](#)". Simple tool to do this at home; See "[Tie Rod and Pitman Arm Puller](#)"
- **Replace suspension bushings - IF** car does not feel tight after an alignment;

- **Replace distributor belt - IF** by 80K miles it has not been done once in the past; A broken belt can cause significant consequential damage to the engine so checking for a working belt should be done regularly on all cars **and** any time you perceive a change in engine performance, rough idle or other ignition issue. I do a quick check once a year just to be on the safe side. To test just unplug the primary distributor's coil, the one leading to the distributor where the base of the distributor bolts to the engine case. If the car starts and runs at all with only the secondary distributor's coil wire attached the belt is in place, if not it is most likely broken. If the belt is found to be broken and you must drive the car to have it serviced leave only the primary distributor's coil attached to minimize the risk of out of timing cylinder detonation damaging the engine.
- ***Replace Odometer gear - IF** odometer is not working or if not done once in past by 80K miles. This seems to be an age related issue as the plastic internal gears become brittle, easy kitchen table project. See "[How to repair a broken odometer](#)".
- ***Air Flow sensor and idle valve** should be cleaned when you get the car. The idle valve should never need replacement, just spray-out cleaning until the valve internals rotate freely when you shake the unit. I would clean it every 30k miles or so. See "[993 Idle Stabilizer Valve \(ISV\) Cleanout](#)". The air flow sensor rarely needs replacement but by 60K miles or so will need to be cleaned with a Q-tip as just spraying it out will not release the grey debris coating on the sensor element, the element when clean looks like a white circuit board. See Rennlist posting: "[Mass Air Flow Sensor MAF Cleaning does it work?](#)",
- Door check strap fix **IF** making a loud "click" or "pop" when the door is opened or closed. You may have no "pop" sound but observe the strap mounting point on the A pillar shifting slightly as you open or close the door, a sign of future failure. This is a long standing 911 universal body part weakness with a relatively expensive (body shop) fix however it is very easy to avoid. There is a DIY to modify the check strap reducing forces and

greatly reducing the likelihood of the check strap progressing to failure going forward. **I would do this DIY modification as soon as I get the car.**
See: “[[Modifying 993 Door Check-Strap Detent Assembly](#)]”

- There is an oil filling bellows tube nested inside the oil filler neck in the engine compartment. It originally was designed to pull out making an oil fill easier. This bellows tends to break down and bits of plastic can fall down the filler tube into the engine oil. On many cars this bellows was removed long ago. If you see it inside under the oil filler cap you can pull it out and throw it away. Unfortunately if it is still in place once you pull it out what debris that remains will need to be flushed out and the oil changed.
- Check engine light – **IF** because of air injector port clogging. I have no experience with this however the previous owner of my car did. I have read antidotal notes such as it shows up more in cars that have spent most of their life in hot climates and that it is related to valve guide wear as the original guides are made of a slightly too soft metal. I have also read that once the valve guides are replaced the problem seems to not return. There is more than one approaches to fix this issue or simply getting the light to stay off:
 - o Remove the exhaust manifold & air supply and clean the passages/ports with a wire snake attached to a hand drill & flushing with cleaning solvent. With this process you will replace the check valve, some do this as a DIY project;
 - o Add electronics so engine management thinks the clog does not exist, something that may not be legal as well as a disclosure issue when you sell your car, also a DIY item or;
 - o Disassemble the engine to clean the ports/passages and replace the valve guides. The official Porsche solution, the one your friendly neighborhood automotive shop will \$love\$ to recommend.

My gut tells me that by now many 993s have had their valve guides replaced, on my car it was done in-warranty years ago. If you do experience this problem you may be able to forestall a full-on disassembly & valve guide replacement for tens of thousands of miles if not indefinitely by engaging in one of the less invasive fixes.

Also a bad air check valve, leaking air hose, faulty air pump, or deteriorated wires (known issue) on the back side of the engine leading to and clamped above the air pump can also cause the same light to come on. In the case of the wire deterioration I would check this any time you have access to the back of the engine for example during a clutch replacement.

- Alarm light on door sills flash in couplets when the car is locked using the remote key fob – This is an indication that the battery is not providing adequate voltage to the system, a wire is loose or broken or something is wrong with a component in the door lock / alarm / ignition kill system. This symptom should be investigated as it can be something as simple as a battery that needs charging or replacement to a bad component in the door related electronics or a bad alternator/ voltage regulator that results in inadequate battery charging. Although this issue would not cause me to not consider a car for purchase I would be aware of its implications.

Minor item inspection items:

- High mounted tail light with some missing bulb illumination – A common item. The lamp housing is easily disassembled and if replacement bulbs are purchased from a non-automotive on-line supplier it is inexpensive, <\$10, to replace the entire set. This is table top DIY soldering iron job and is very easy. There seems to be lots of DIY discussions of replacing the bulbs with LEDs. Seeing that the bulbs have a 10 year + service life and, from personal experience, a neatly done LED conversion is not simple, I would not do this conversion.
- Airbag light is on - In many cases this is a non-deployment related airbag system error identified by the air bag warning light in the clock extinguishing

after a short while after the car is started. The error light is easily reset by disconnecting the battery or using Durametric Diagnostic software under the 964 menu to reset the light. If this does not work I understand re-soldering the circuit board on the back of the clock solves this issue for some. The soldering is a table top DIY job. See: [Airbag clock fix](#)

- High mounted stop light not working – This is a common electrical issue related to a failed pass-through of the wire through the glass. An easy fix with several well documented DIY methods to fix it on the rennlist.com web forum. See: [Wire fix](#)

- Window up/down switch non-functional - Switch number 964.613.621.00 is slightly different from the older model 911 switches. They have pin connectors for a dedicated wire plug unlike the older cars that had generic paddle connections on the switch backs. For this reason the replacement switches are dedicated to 964 & 993 and so are expensive at \$50 +/- each.

In most cases the pivot on one side of the rocker paddle shears off causing the switch to malfunction.

It turns out you can pry off the switch bezel from the original OE switch body and gain access to the paddle handle. A small hole can be drilled half way through the paddle at the missing pivot point and a nylon rod can be inserted in the hole to recreate the pivot. I got the nylon rod from an Edible Arrangements® basket where it is used to hold the fruit in place. Some Rennlisters just use a piece of a finishing nail for the same purpose. The internal rockers electrical contacts are only exposed to wear from use on one side. When reassembling the switch they can be buffed up with an eraser or simply reversed bringing the unused contacts into use.

Seeing that the original switches can last 15 years or longer vs. the aftermarket switches that seem to last just a few years the above fix should last a long time! A well documented fix on Rennlist.com. See: [Paddle Fix](#)

- Hard back sports seat leather cover edges detached – Two related fixes for this. One is to add additional clips, part number 999.507.526.01, used to pin

the edge behind the mounting lip on the hard seat back. The other is to spray Lexol leather conditioner to the back of the leather softening it up and allowing the leather to stretch a little more, reducing the tension that seems to pull the leather edge out of place. If the leather is split on one of the seats there are several ways to have a repair done. Anything from replacing the section of leather by a shop to a DIY solution of placing a matching leather patch behind the rip.

Other notes:

Be aware that the clutch and transmission can be serviced on a 993 without removing the engine. Some technicians neglect to tell you this and want to charge you for the labor on a full engine out.

Also the 993 has OBDC so if the ignition wires are bad or the rotor or cap are bad or the plugs are fouled the light will likely be on.

Inspecting a car for purchase:

If you are using this list as guidance on a prospective car purchase here are my additional thoughts:

I do not put a lot of faith in Pre-Purchase Inspections by third parties:

- **As they will generally only capture gross mechanical issues and miss most wear related parts and body condition items;**
- **Inspections by any dealer or local servicing shop is always suspect as a conflict of interest exists as they are in the business of servicing stuff once the car is purchased;**
- **Most new car Porsche dealers are no longer familiar with these older cars and therefore do not provide any enhanced inspection simply because they are a Porsche dealer;**

You are better off looking at the car yourself with a friendly local PCA member who knows how the car should drive and feel. Making a request

through the 993 Technical Forum on Rennlist.com will usually turn up a PCA member in the geography where the car is located who will be more than glad to assist you.

A CarFax is only as valuable as the facts they have in their system. Once out of warranty, something that happened a long time ago with these cars, they are generally serviced and repaired by their owners DIY or small independent mechanical or boutique body shops. These shops almost universally do not report on their work to anyone CarFax uses as an information source. Beyond having a salvage title in its history these reports, I feel are of little value.

I hear lots of discussion about leak-down testing of engines as a validation of engine condition. From reading the comments I have come to believe that the conditions under which such tests are made vary quite a bit making such tests not reliable as an absolute test of condition. They may be of some very limited value in capturing variances between individual cylinders on a single engine in the presence of other gross operating symptoms. What appears as general low engine output can have many sources that should be ruled out before considering cracking open the engine for any reason!

Seeing the age of these cars paint & body work is present on most examples. For example I am on my third rear bumper cover as cars have scraped and bumped my car while parked in the local shopping center. Cosmetic damage to parts that bolt onto the car are not a big deal as they can be replaced and restored to original condition, things such as hoods, doors, front ¼ panels, front & rear bumper covers.

However any car that has seen impact damage to a door jamb or in the rear quarter panel areas can profoundly diminish the integrity of the car and so should be carefully investigated. Also any serious front end or rear damage where the unibody was involved signals that you should not be considering the car. Such damage is identifiable by a competent body shop guy.

As you can see above there are really just a few items that may need attention on a 993 as it gets older, a testament to the quality of the engineering and build on these cars.

If the car starts easily and runs reliably do not consider any actions that involves internal engine repairs. An occasional single cylinder OBD misfire code after a long drive on a hot day or a slow oxygen sensor code in the cooler months require no action, just clear the code and see if it comes back. 993s tend to have a little uneven rumble at idle – this is normal. A slight cycling of the RPM on cold days, a small stumble on acceleration when the engine is cold or in very hot weather, an engine that uses some oil between oil changes, this is normal stuff.

A puff of smoke after sitting a while is OK, think “What would Jerry do?”

And most importantly don’t go Neurotic, just enjoy the car!

You know the line, “accept the things I should not fix, have courage to fix the things I must and have the wisdom to know the difference”

Andy