

As promised a while back, this is a step by step DIY for changing the oil and filter in the latest Porsche Cayenne V8 (Type 958 Model year 2011-). Hopefully a few tips plus some pictures will help make this a pretty straightforward experience for you. Some of the info is basic for experienced oil changers, but I've included it in case there are some first timers out there who might want to give this a try. Picture taking aside, my first change with the Cayenne took longer as I was eyeballing and taking note of the location of things, but next time I expect it to take about an hour.

What You Need:

Picture 1 shows the items and tools you'll need:

Taken from:
<https://rennlist.com/forums/cayenne-diy/697425-958-cayenne-diy-v8-oil-change-w-pictures.html>

Oil filter

Oil filter cap ring gasket

Drain plug washer

10 quarts of synthetic oil (more on this later)

36 mm 6 or 12 point socket

10 mm socket

T30 Torx bit or driver

8 mm Hex bit

Minimum 12 quart capacity oil drain pan (not shown)

Container for used oil (not shown)

I purchased the filter and gaskets from Suncoast Porsche as a kit, but they are available through many outlets. I'm not going to recommend a particular synthetic oil or viscosity; there is probably as much diversity of thought on this subject as any on Rennlist. You should read the manual and do a RL search, but suffice to say that Porsche recommends the following viscosities:

SAE 0W-40

SAE 5W-40

SAE 5W-50

I use Mobil 1 0W-40. If you decide to go with a different brand just make sure that it meets the Porsche A40 approval spec; that designation should appear right on the oil's label. Depending on your source, with discounts, expect to pay in the neighborhood of \$90-\$100 for oil and parts (most of it for oil).

Jacking Up the Car:

If you have a garage lift this is a snap, and you also probably don't need any DIY help from an amateur. If you do jack up the car, make sure that it's properly supported by jack stands and that all proper safety precautions are used. You will be crawling fully under the vehicle so don't

skimp on this step. As an alternative to jacking the car, Picture 2 shows what I like to do. I place a 2x4 in front of each wheel and drive up on them. This automatically provides an added 1.5" of clearance and keeps the car level which facilitates draining the oil and checking the oil level when refilling. Since I have Air Suspension I raised the car to the highest setting then used my jack as a fail safe under the center chassis cross member. This provided plenty of clearance for me to work.

Removing the Engine Under Trays:

For this step you'll need the T30 Torx bit or driver. There are 14 Torx screws, 10 for the front tray and 4 for the rear. Picture 3 shows the trays in place, Picture 4 shows them removed, and Picture 5 shows them off the car. Remove the front tray first. Note the two "wings" on the front tray; remove these screws before the others as they are harder to reach and you don't want the tray potentially hanging from them. After the front tray is off you can remove the rear tray. You may be tempted to leave it in place because at this point the drain plug is exposed, but a lot of oil comes out when the plug is removed and the rear tray would certainly capture some of it. Before you remove it, note how the back of the rear tray hooks over a slot in the frame and is "sandwiched" in place between the frame and a removable metal piece held by 2 Torx screws.

Drain the Oil:

Make sure that the engine is warmed up (do this before you jack the car). The oil will flow better and contaminants will be suspended and can be flushed out more easily (Picture 6). Use the 8mm hex bit to remove the drain plug. Your catch container should be of sufficient size to accommodate the oil from the sump with enough extra capacity to avoid sloshing over the top when you move it around. I let the oil drain for about 15 minutes or until the flow is reduced to individual drips. While you're waiting for this you can start the next step.

Exposing the Filter

The filter is located underneath the engine on the passenger side at the front. On my car, there is a hose and a bracket that need to be relocated to get to it. (I say on my car because I have PDCC and it appears the hose is associated with that option. If you don't have it you can skip this step.) Picture 7 shows the location of the 3-10mm bolts that need to be removed (one is just out of the picture to the driver's side). The bolt closest to the filter actually separates the hose from the bracket and allows you to tie off the hose to the rear. The bracket will ultimately remain attached by a single remaining bolt that is secured from above, but it's mounted in rubber and the bracket can easily be swung out of the way. Picture 8 shows the now exposed filter housing.

Removing the Filter:

By now the sump has probably drained sufficiently so you can button it up with a new washer on the drain plug. Recommended torque is 50nm or 37ftlbs. Sump and plug are both aluminum: DON'T OVERTIGHTEN. Move your drain pan under the filter housing. The filter cap (and filter) are the exact same ones used on the 997.2 Carrera. A 36mm 6 or 12 point socket is required to remove it. FWIW, this is a change from the earlier V8 which required a 76mm 14 sided cap wrench. Remove the cap (Picture 9), allow the oil to drain and remove the filter element (Picture 10). Picture 11 shows how to remove the old filter ring gasket from the cap. Note the groove in the cap where the ring gasket resides. Wipe down the filter cap, lightly oil the new gasket with fresh oil, and slip it over the cap into place.

Reinstall the filter:

The filter fits snugly over a collar inside the housing (it doesn't matter which end of the filter goes in first), and also a collar inside the cap. As with my Carrera, I like to seat the filter over the collar in the housing first (Picture 12), then center and screw down the cap, but you can fit it in the cap first if you choose. I'm more confident of proper alignment when I do it the first way. Tighten the filter cap to 25nm or 18ftlbs. The cap is plastic; DON'T OVERTIGHTEN. Reinstall the PDCC bracket and hose into their proper positions if necessary.

Add Oil:

You'll want to do this before reinstalling the engine trays, so you can start the car and check for leaks. The stated capacity of the engine and filter is 9.5 quarts, however it is critical that you don't overfill as damage to the engine or catalytic converters can result. Depending on how long and thoroughly you let the engine drain and whether the car is level, a full 9.5 quarts may not have come out. For that reason, I always fill initially to something less than capacity, but enough so that at worst I will be above the minimum level when I start the car. In this case I added about 8.75 quarts. After starting the car and checking for leaks I brought the engine up to temperature to get a reading on the oil level gauge. It read "Oil Level OK" but it was 1 bar low. Each segment of the gauge is supposedly equal to .26 of a quart, but since the point at which the next bar is illuminated is unknown (to me at least) it's best to proceed slowly. Rechecking after each add, I added a couple of tenths of a quart, then 2 more tenths and the gauge was at full (Picture 13). Total oil added was about 9.25 quarts. The thing to remember is, don't just dump in 9.5 quarts; sneak up on it and you won't overfill.

Finishing Up:

Time to reinstall the engine trays in the reverse order you took them off. I didn't torque the screws, I just made sure they were snug without tightening them too much. The clips and screws on engine trays often don't fit well on some cars but these all lined up perfectly. The car comes down off the jack stands or whatever and it's ready to go. BTW, if your "service due" indicator has come on, you will need to have your Porsche dealer reset it. Mine does it as a courtesy.

For me, the savings of a few hundred dollars isn't the biggest attraction of doing this job myself. There's not much shade tree maintenance that can be done on cars any more without specialized equipment or expertise, but an oil change can still be one of them. Spending quality time under the hood may not be everyone's cup of tea, but for some reason, it's especially rewarding when that hood is on a Porsche, and this service on the 958 Cayenne V8 is pretty easy. The money savings is icing on the cake.

Attached Images





Picture 2



Picture 3



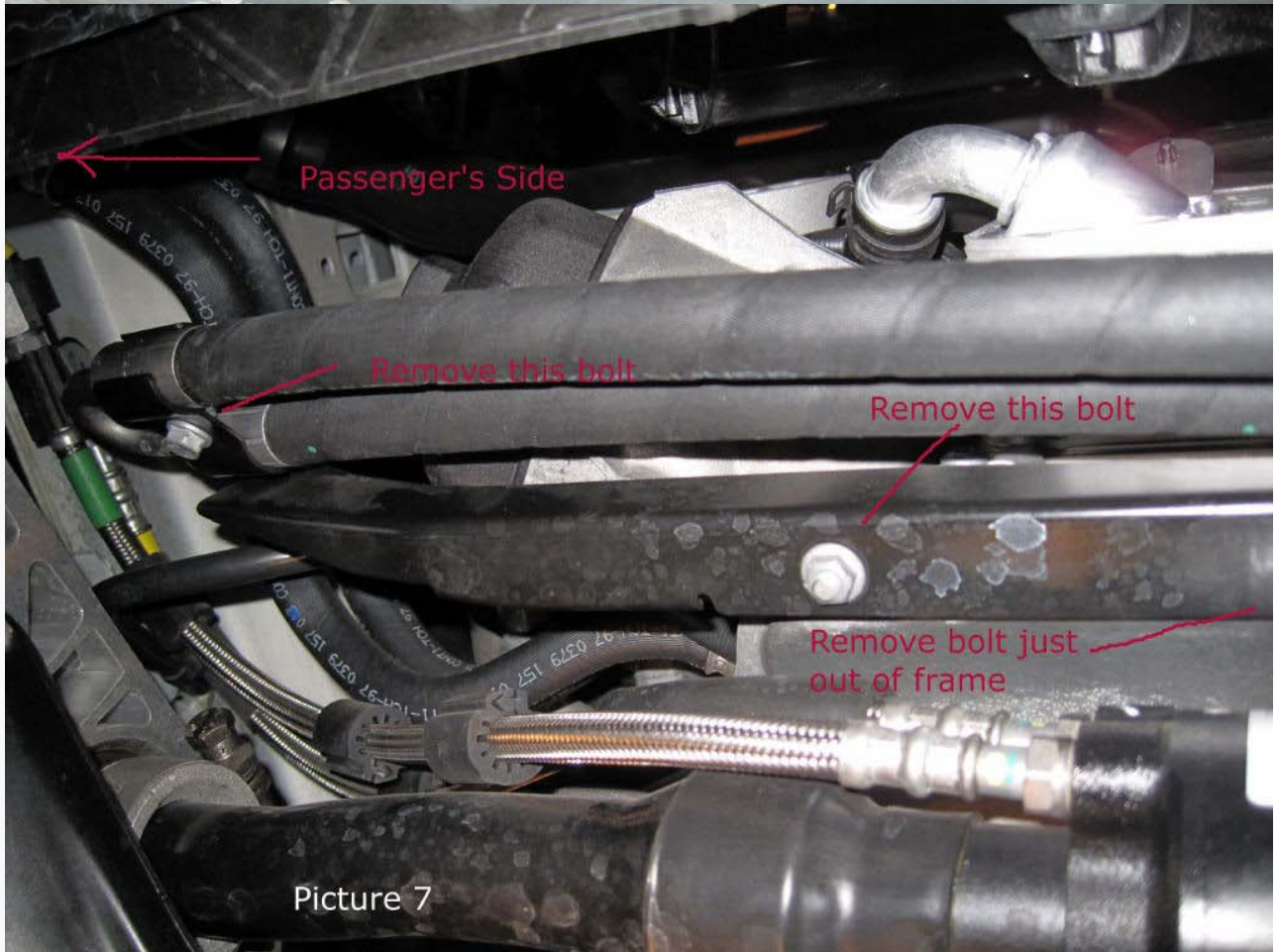
Picture 4



Picture 5



Picture 6



Picture 7



Picture 8



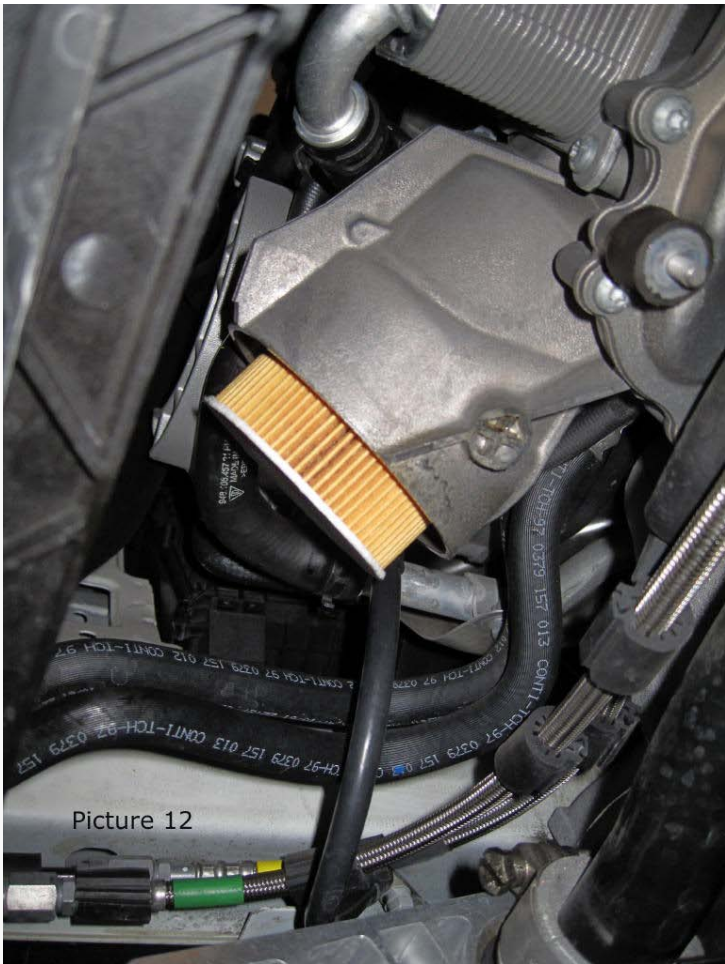
Picture 9



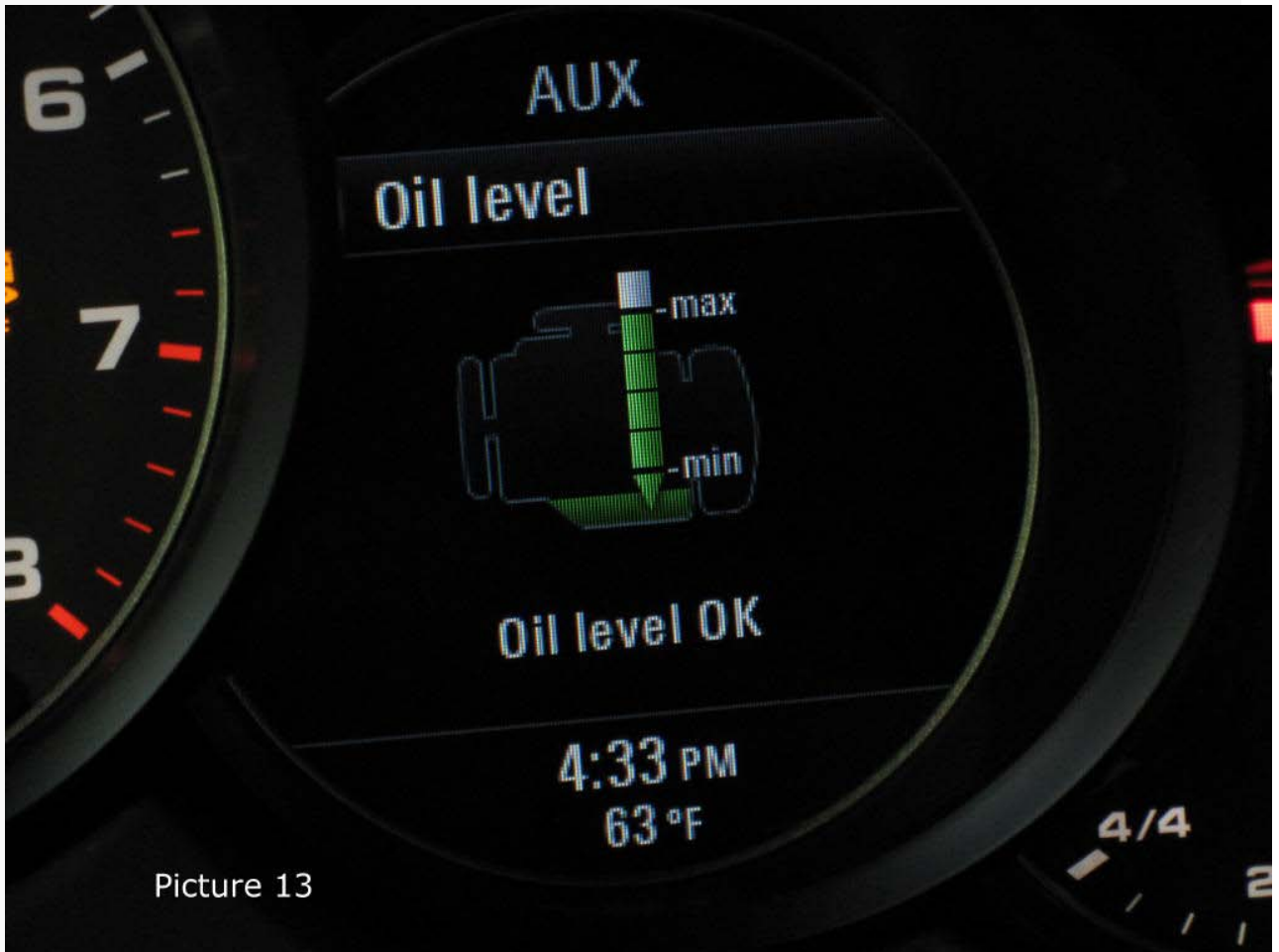
Picture 10



Picture 11



Picture 12



Picture 13