

AUTOMOTIVE

2019~ Porsche Cayenne Turbo Oil Change

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This tutorial applies to Porsche Cayenne Turbo models 9Y0/9YA/9YB/9Y3.

What's so special about the Turbo?

- There are two extra steps to the process compared to the base model Cayenne.
- Takes an extra quart of oil compared to base model.
- The oil drain plug is under the first under carriage plate.
- The oil filter housing is under the front torsion bar.
- The drain plug and filters have been standardized with the Panamera.

Time and Difficulty

Easy but dirty

- Beginner: About 8 hrs
- DIY-er: About 4 hrs
- Pro: About 1.5 hours

Parts and Tools

- New oil filter and O-ring (9A719840500)
 - Purflux is a Porsche OEM supplier
- New oil (8+1 qt of C40 approved 0W-40 oil; Mobil ESP X3 0W-40††)
- 32mm filter cap socket
- T25 socket/bit for under carriage plate
- T30 socket/bit for torsion bar
- T45 socket/bit for under carriage plate and drain plug
- 7mm wrench (ratcheting box wrench recommended)
- Torque wrench for 25 Nm (19ft-lbs) and 50 Nm (37ft-lbs)
- Jack or ramps
- Jackstands
- Wheel chocks
- Drain pan
- Plastic bag

† C40 has superseded A40 approval without backwards compatibility in mid-2018. C40 approved engine oil is still not widely available in the US as of 2021.

†† [Updated] Previous information was based on marketing information which turned out to be inaccurate. Mobil has officially released specs of the ESP and ESP X3 oils and the formulations are clearly different. The non-X3 version of ESP is not C40 approved. Mobil ESP X3 is labeled ESP in the North America. It is meant for vehicles equipped with diesel GDI (Gasoline Direct Injection) to help with Gasoline Particulates Filtering, but North American Cayennes are not equipped with diesel – as of yet. Nevertheless, it will not harm non-diesel engines. It is most likely an attempt by VW/Audi/Porsche to standardize on an engine oil for newer vehicles.

Optional parts and tools

- New drain plug (M14 x 1.5mm : PAF-911-679)
 - Rein Automotive is a Porsche OEM supplier
- New drain plug crush washer (14 x 20 x 1.5mm : N-013-849-8)
 - Fischer & Plath
- Movers blanket or Floor creeper
- Disposable gloves
- Oil absorbing rags
- Parts cleaner spray
- Funnel

Torque specs

- Oil filter cap to housing 25Nm (19ft-lbs*)
- Oil drain plug to oil pan 50Nm (37ft-lbs*) with new crush washer. 30Nm (22ft-lbs) with old crush washer.

* There is a +/- 2Nm margin in the torque specs, therefore it is safe to say 19ft-lbs and 37ft-lbs are acceptable SAE values respectively.

Procedure

1. Warm up car for 10–15 min
2. Engage lift mode through PCM. Turn off car.
3. Lift car, engage parking break (P), chock wheels, apply jack stands
4. Remove under carriage covers
5. Locate the oil drain plug, place drain pan underneath. Remove drain plug and drain old oil into pan.



Location of drain plug

6. Pop hood
7. Remove plastic engine cover by disengaging two metal clips at 4 & 8 o'clock. Pop cover off from 8 ball joint clips.
8. Disengage engine oil cap housing by pressing on the clip and lifting up.
9. Remove intake filter with housing:
 1. Loosen air intake manifold ducts by pulling towards nose of car.
 2. Loosen 7mm clamps on both turbo elbows.
 3. Pull filter housing up from two rubber grommets while pulling off the turbo elbows. The back clips are hinged. Lift up and towards front of car to remove completely.



Air intake

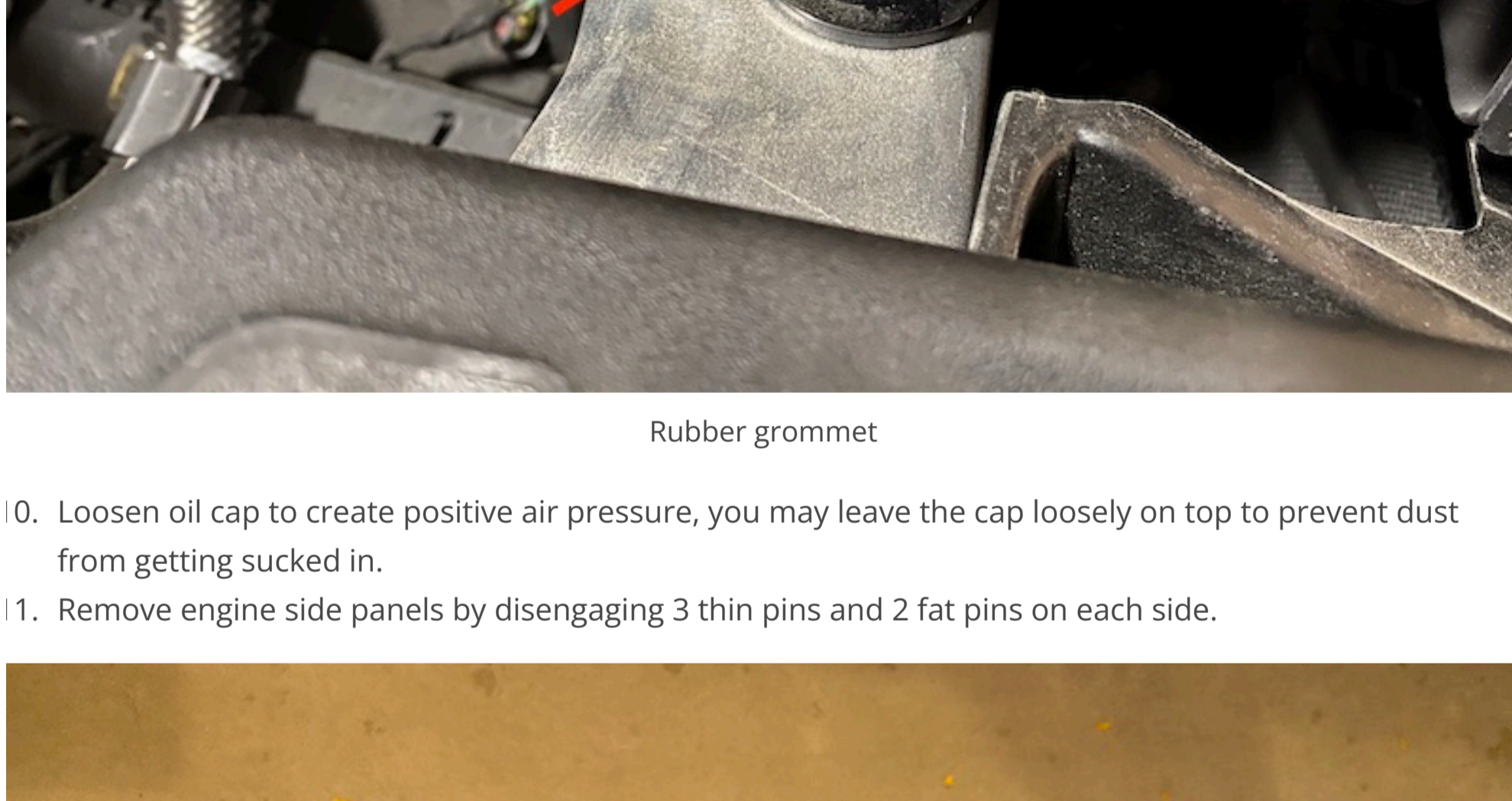


7mm clamps



Rubber grommet

10. Loosen oil cap to create positive air pressure, you may leave the cap loosely on top to prevent dust from getting sucked in.
11. Remove engine side panels by disengaging 3 thin pins and 2 fat pins on each side.



Don't break those pins!

12. Remove front torsion bar by removing six (6) T30 screws. Tilt bar up from the back to lift out.



Torsion bar



Voilà! The filter cap is revealed!!

13. When the oil stops draining from the bottom, replace oil filter
 1. Move the two turbo lines straddling the filter housing to either side.
 2. Loosen and remove oil filter cap using 32mm filter wrench
 3. Have a plastic bag ready as you pull up and remove the oil filter
 4. Inspect the area for debris. Insert new filter.
 5. Clean filter cap and replace O-ring. Lubricate the new ring with a dab of new oil.
 6. Re-install filter cap, do not cross thread. Torque to 25Nm (18ft-lbs).
14. Install new crush washer and drain plug. Torque to 50Nm (37ft-lbs). *If re-installing the old washer that is already crushed, torque to 30Nm (22ft-lbs).
15. Remove oil cap, add 8qt oil. Close cap. Inspect for leaks.
16. Inspect and clean drain plug area. Re-install undercarriage plate.
17. Re-install front torsion bar.
18. Re-install air filter housing, air intake manifold, and turbo elbows –tighten clamps.
19. Re-attach engine oil spout and re-install all engine covers.
20. Remove wheel chock and jack stands. Disengage parking break, return car to flat ground
21. Disengage lift mode through PCM
22. Turn on car and keep it running for 10–15 min, check oil level through right cluster
23. Top off oil if necessary. If not now, probably a few days later

You will definitely need to add some oil later. Usually, there is burn off of the new oil and about a pint gets sucked into the new filter. You will also want to save a quart bottle of oil as the car will ask for a top off in about 5,000 miles.

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