

## Changing the oil in a 2004 Prius

There are many good reasons to change oil yourself. The most important is that you can control the quality and quantity of oil that goes into the car. Too many dealers are overfilling the 2004 Prius, which can hurt gas mileage and possibly damage the engine. Also, changing the oil when hot makes sure all of the crud in the oil system is still in the oil, rather than possibly settled onto the oilpan.

I'm not going to get into the arguments over whether synthetic oil is a waste of money or not. To *me*, it's not a waste of money, so I use it. Use what you want. Just change it at least every 5000 miles to meet Toyota's requirements (unless you live in Saharan sandstorms, I can't see a reason to change more often than 5000 miles when using synthetic).

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Before you change your oil, you should gather the following items (listed roughly in order of usage):

- Jack - better to use a floor jack than the factory weenie jack
- Jackstands - you really should use these for safety when using a jack
- Wheel chocks - you really should use these for safety when using a jack **or** ramps
- Ramps - if you don't want to use the jack/jackstands
- Rubber gloves - a good idea to avoid the carcinogenic used oil. Disposable medical gloves available at Sam's Club, Costco, and many drugstores. Latex or nitrile rubber (for those with latex allergies).
- Safety glasses/goggles - optional, but a *really* good idea
- Large piece of cardboard
- Wrench/socket for drainplug - 14mm
- Hammer - *optional*
- Drainpan - get at least a 5 quart capacity, preferably with a screen to catch the drainplug/filter
- Drainplug washer - *90430-12031 or 90430-12028*
- Torque wrench for drainplug - *recommended*
- Oil filter wrench
- Filter - *90915-YZZA2* is the US part #
- Oil - **5W30** (*not* 10W30, as many Toyota dealers try to use) - 4 quarts (3.9 US qts used when replacing filter)
- Funnel
- Clean rags/paper towels/napkins

Once you have everything ready, drive the car around a bit, making sure the engine actually runs for a while. Then get it home and up on the ramps or jacked up and on the jackstands while the engine is still warm.

Click on the pics if you want to see the fullsize versions.



Step 1 if using a jack - place the wheel chocks behind the rear wheels and **set the Parking Brake**. If using ramps, drive up onto the ramps, **set the Parking Brake**, then place the wheel chocks.



If you are more experienced with cars, are using jackstands, and will be using the [#2 method of leveling the car to check the oil level](#), crack the lugnuts loose for both front wheels before jacking the car up (to make rotating the tires much easier).

Here is where I jack it up for an oilchange - there are other places you can use.

NOTE - if you have a particularly short drainpan, and long arms, you won't even need to jack up the car to change the oil on a 2004 Prius. I use a large drainpan, so do have to just slightly jack up the car normally (I jacked it much higher this time to make taking the pics easier). If you need further pics, try the [front closeup](#) and the [diagonal closeup](#).



My jackstand placement. If you are using a jack/jackstands, **DO NOT get under the car before putting the jackstands into place and lowering the jack until the jackstands are taking the full weight of the car without shifting**. Use some cardboard between the jackstands and body to protect the body.

Further pics - [closeup](#), [closeup of passenger side](#), [closeup of driver's side](#).



To help locate the oilpan/filter, here's a view up on a lift, showing the location of the oil drainplug.



Here's a view directly under the car, the drainplug and oil filter are circled. If you need further pics, try the [diagonal underside view](#) and the [driver's side view](#).



Place the cardboard under the engine - it's there to absorb any small oil drips/spills to keep them off of the ground/garage floor. Place your drainpan under the oilpan, and remove the drainplug - use a 6 point 14mm socket if possible (14mm wrench used here as the socket would not stay on the drainplug for the picture). You might need to tap the ratchet/wrench with a hammer to crack the drainplug loose. Once it is loosened, spin it out with your gloved hands (so that when the oil starts pouring out, you don't coat your tools with it, just your gloves).

If you have a large drainpan, you can remove the old filter at this time too, and let it drain, but so little oil will come out of the filter mount after the filter is off, that I wait. The factory Shop Manual recommends the method I use - oilpan first, then filter.

I let the oil drain until it is dripping very slowly. Then I **find the old drainplug washer**, whether it is on is on the drainplug or stuck to the oilpan, and remove it, [replacing it with a new one](#). Tighten the drainplug - get it snug, then tighten it a bit beyond snug. Or better yet, use a torque wrench and tighten to 38 Nm / 28 ft-lb.



Time to remove the filter. The filter wrench I use goes on a 3/8" ratchet. I got it at Autozone, part # **25404**, *Oil filter "F" cap wrench*. It locks pretty tightly to the filter.



**Center the drainpan under the filter.** Press the wrench onto the end of the filter, break it loose, then wiggle the wrench off of the filter. Then unscrew the filter by hand. Some oil will spill out just as the filter gasket clears the filter block, so be ready for it. Once the filter is off, be careful to keep the filter upright, as it is full of dirty oil. Place it over your drainpan and turn it over to drain.



Remove the new filter from the box, and look at the face of the filter. If it has a plastic wrap seal, remove it. Dip your finger in one of the new oil bottles, and lubricate the o-ring on the filter. I also recommend mostly filling the filter with oil to speed the oil pressure rise, and to make sure you don't get an airlock in the oilpump. When filling the filter, the center fills rapidly, then it seeps through the filter media and the oil level drops slowly. So you will need to fill it several times. You don't need to completely fill it, as it makes for a messy install if you tip it the slightest bit, but get it about 3/4 full if possible. Just make sure not to tip the filter before getting it onto the engine.

If the front of the car is much higher than the rear, tilt the top of the filter a little towards the back of the car to line it up with the filter mount properly. Spin the filter on by hand until you feel the gasket contact the engine. Tighten it 3/4 turn past this point, either by hand or by using the filter wrench. You can also torque it to 17.5Nm / 13 ft-lb (though I've *never* seen anyone torque a filter down). Don't overtighten, as it can warp the gasket and lead to a leak. But don't undertighten either, or the filter could back off and you'd lose all the oil in the engine (not good). The "3/4 turn past contact" is straight out of the Shop Manual, so is a safe method to follow.



Find the oil cap, shown here circled in pink (the dipstick handle is circled in blue). Here's a [closeup](#).



**Use a funnel to fill the car** - the oil cap is somewhat buried, and if you just try pouring the oil into it, you risk pouring oil all over the valvecover. The funnel shown was bought at Walmart for about \$3, includes a long clear hose for the end, and the blue end you see sticking into the valvecover is an on/off switch.

Put about 3.5 quarts into the engine, **including any oil you put in the filter**, and **put the oil cap back on the valvecover**. Power up the car, turning on both defrosters to make sure the engine starts, then check the drainplug/filter area for leaks. If no leaks, let it run for about 10-15 seconds, then shut it down. This makes sure the filter is completely full, so your oil level check is as accurate as possible.



At this point, you need to get the car level. Depending on your experience with cars, and your comfort level, you can either:

1. Get the car off of the jackstands/ramps, drive it to a level surface
2. **If you are more experienced**, and have at least 4 jackstands, you can crack the lugnuts loose on the rear wheels, then jack up the rear of the car to level it (you can now rotate the tires all at once). **ONLY do this if you are very experienced with raising a car in this manner. I take no liability for anything that goes wrong if you use this method.** See the jacking point [here](#) and [here](#). Place the jackstands under the axle beam, or on the body seam spots just in front of the rear tires, similar to the spots used for the front jackstands.



Once the car has idled for at least 10 seconds or so, and is on level ground (or leveled on jackstands), shut it down and let it sit for about 5 minutes. Then check the oil level on the dipstick. With new oil, this can be difficult, as it is very clear. Pull the dipstick, clean it with a napkin/paper towel/clean rag, replace it, and pull it out again. Rotate the dipstick back and forth if necessary to see where the oil level stops. If you used 3.5 quarts, it will probably be about halfway between the Full and Low marks. Add a **little** more oil, let the car sit for 5 minutes, and check again. Repeat until it is right at the Full mark, or a bit below. **DO NOT go over, or you will have to drain it.** At this point, you should have a tiny bit of oil left in the fourth quart bottle. Keep that bottle, after 10 oilchanges, pouring the extra into one bottle should net a full quart :-)

You're almost done at this point. You need to:

- Make **sure** you put the oil cap back on the valvecover
- Turn off the flashing Maintenance Indicator Light (oil change reminder):
  1. Turn the power switch IG-ON and make sure that the ODO/TRIP meter is displaying the odometer.
  2. Turn the power switch OFF.
  3. While pushing the ODO button, turn the power switch IG-ON.
  4. The reminder light will flash until the reset is completed.
  5. The reset is complete when the reminder light turns OFF. Release the ODO button.

6. After the reset, the ODO/TRIP meter displays as a set of zeros for 1 second, then displays the your normal odometer mileage.

- [rotate the tires](#)
- Dispose of the used oil/filter.

**DO NOT** dump the oil in the trash. Find a recycling center. Or call your local autoparts stores, as many of them (Advance Auto, Kragens, PepBoys, etc) have tanks you may dump the oil into. Some stores even have oil filter crushers to remove as much oil from the filter as possible. These are somewhat rarer, so you may need to simply allow the filter to drain for a long as possible, then take it to a [Hazardous Waste center](#).

Questions, suggestions, comments, constructive criticism and/or corrections? Fill out [this form](#).

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