How to Change the Oil in Your Car

Regularly changing your car's engine oil and filter is one of the most important things you can do to keep your car running well. Over time, your oil will break down and your filter will become clogged with contaminants. Depending upon your driving habits and type of vehicle, this may take as few as 3 months or 3,000 miles (4,800 km), or be as long as 20,000 miles (32,000 km) or 24 months (consult your owner's manual for service intervals). Fortunately, changing your oil is both easy and inexpensive, so the sooner you change the oil in your car if it needs it, the better.

Part 1 of 4: Draining the Oil

1. **Lift your car.** Use either jacks or ramps. On a flat even surface, place the parking brake on and jack your car up, bracing it with jack stands. Improper jack-placement can damage your car badly, so always refer to the owner's manual for the instructions for your specific car. It's also extremely dangerous to work under a car that's still on a jack, so make sure you brace it first.

   - If you want to use ramps to lift your car, make sure you brace the back tires with blocks. Have someone to spot as you drive up the ramps, to make sure you don't drive off the other end.
2 Let car heat up a bit to get the oil warm. 2 or 3 minutes of idling should be sufficient to get the oil churned up a bit so it will drain more quickly. Solid particles of dirt and grime are caught in the oil and tend to settle to the bottom when the oil is cold. Letting it run ensures you're getting the crankcase cleaned out thoroughly.

- While the car idles, assemble the necessary tools. You'll need your new oil, a new filter, a pan and newspaper to catch the draining oil, and probably a socket wrench and a flashlight. Consult your owner’s manual to determine the type of oil and filter you'll need.

- Any auto shop will also be able to tell you the kind of oil and type of filter you'll need as long as you provide them with the make and model of your car.
3 Remove the oil cap. Open the hood and locate the oil cap on top of the engine. This is where you'll add oil after you're done draining the old oil. Doing this will help the oil drain more easily because air can flow in as the crankcase empties.
4 Find the oil pan. Under your car, look for a flat metal pan closer to the engine than the transmission. It should have a bolt or plug toward the bottom. This is the oil plug you'll need to remove to let the oil drain. Directly under the plug, place your pan and a couple of newspapers for catching the oil.

- If you can't distinguish the oil pan from the transmission pan, let the car run for five or ten minutes. The oil plug should get warm to the touch by that time, while the transmission won't.
5 **Remove the oil plug.** Loosen the plug counter-clockwise using the proper sized socket or crescent wrench if you've got room to maneuver. You should also remove and replace the circular paper (or felt) drain plug gasket, but a metal washer can be re-used if in good condition.

- The oil will come out of the pan as soon as you do this, and it will come at a slight angle, so it can be tricky to catch. Once you've loosened the plug with your wrench, remove it the rest of the way with your hand. Make sure you've got your big catch-pan and newspapers placed before you remove the plug. Also be careful not to drop the plug in the oil, it's a messy job trying to find the plug in the black stuff. If you do drop it in the pan, you can easily find it with a magnet. Ideally, use the type that is at the end of an expandable rod.

- Another easy way to "save" the drain plug is to use a funnel with a bit of screening in it. Catch the plug as it falls out. You can then pull the funnel out of the way of the stream and set it to one side.

- If you need more leverage to remove the oil plug, an extension such as a pipe segment on your ratchet handle can help. If this type of "breaker-bar" arrangement is required it was way too tight.

- You'll probably get oil on your hands and clothes at some point during this process. Putting down newspaper is a smart precaution, or else you'll have big oil stains on your driveway or garage you'll have to clean up.
6 **Wait.** It will take several minutes for all the oil to drain out of the car. When the oil has ceasing running out of the crankcase, replace the plug. Hand tighten to make sure you're not cross-threading the oil plug when you screw it back in, and tighten the rest of the way with your wrench. Don't forget to install a replacement gasket or washer.

- While you're poking around under the car, though, take a minute to locate the blue or white-colored cylinder that is the oil filter. You'll need to replace this next.
Part 2 of 4: Replacing the Oil Filter

1 Locate the filter assembly. Filters are not put in a standard position, so they can be on the front, back or side of engines depending on the model. Look at the replacement filter you purchased to have some idea of what to look for. Typically, they're white, blue, or black cylinders about 4–6 inches (10.2–15.2 cm) long and 3 inches (7.6 cm) wide, like a soup can.

- Some vehicles such as BMW, Mercedes, and newer Volvos may have a filter element or cartridge as opposed to the simpler spin-on type. They require you to open the cap of a built-in reservoir and lift out the filter element itself.
2 Unscrew the oil filter. Get a good grip and twist slow and steadily, counter-clockwise. The plastic coating and grease in the engine compartment often makes the filter somewhat slippery, but it shouldn't be more than hand-tight. Use a rag or mechanics gloves with a grip to help. A filter wrench is basically a rubber belt you grip the filter with, which you could fasten from an old belt of yours or an old alternator belt you've got laying around the garage.

- Make sure the pan is still under the car catching the spilling oil. There will be some trapped in the filter that will come out when you unscrew it.

- When removing the oil filter, make sure that the rubber gasket ring comes off with the filter. If it sticks to the car, the new filter won't seal properly and will leak. If it does stick, peel it off with your fingers or use a screwdriver to scrape off any sticky bits.

- To avoid spilling too much oil as you remove the filter, you can wrap a plastic bag around the filter, which will catch any oil that escapes as you remove it. Let it sit upside down in the bag to drain as you complete the job.
3 **Prepare the new filter.** Dip the tip of your finger in the new replacement oil and smear it on the gasket ring of the new filter. This will lubricate the gasket and create a good seal for the new filter, and ensure that you’ll be able to get it off the next time.

- You can also pour a tiny amount of oil into the filter prior to installing it. This will reduce the amount of time your car takes to regain proper oil pressure. If your filter is mounted vertically, you may be able to fill it almost to the top. If mounted at an angle then a little oil will spill just prior to spinning the filter on but that will not amount to much.
4 Carefully screw on the new, lubricated filter, being careful to not cross the threads. The filter will generally say how tight to tighten it, so look to the specifications on the box for more specific instructions. In general, you’ll tighten the filter until the gasket touches, then a quarter-turn more.
1 Add new oil to the car at the fill hole. The amount you need is in the owner's manual, usually listed under "capacities."

- If you hold the bottle with the spout on top, it will pour more smoothly, without bubbling.
- Make sure you're adding the correct oil. Typically, you can safely add 10W-30 to most cars in a pinch, but you should consult your owner's manual or the experts at an auto shop before adding oil.
- Don't always rely on the dipstick for an accurate measurement; it can be off, especially if the engine has just been run (the stick will read low because there is still oil in the galleries). If you want to check the stick accurately, just check it first thing in the morning, parked on a level surface, when it's cold and settled.
2 Replace the fill cap. Check around for any loose tools you might have left around and close the hood.

- It's a good idea to wipe up any spills as best you can. While it's not dangerous to get a little oil on the crankcase as you're pouring, it may smoke as the engine heats up, leading to that burning oil smell that can be momentarily frightening. It can also make your interior smell bad.
3 Start the engine. Watch to be sure the oil pressure light goes off after start-up. Put your car in park or neutral with the parking brake on to check for any drips and look carefully under the car to check for any leaks or drips. If the filter and drain plug aren't tight, they may leak slowly. Run the engine for a minute or so to get the pressure up and ensure you've installed everything correctly.
4 Reset the oil change light. This will differ depending upon the make and model of your car, so you should consult the owner's manual to figure out the specific set of steps. On most GM cars, for instance, you'll need to shut the car off and then turn the ignition on without turning the car over. Next, pump the gas pedal three times in ten seconds. When you start the car back up, the lights should be reset.
Part 4 of 4: Disposing of Oil

1. **Transfer the oil to a sealing container.** Now that you've changed your oil, get the sludgy gunk into a more permanent container. Adding it to the new container you've just emptied is the safest bet. Use a plastic funnel in the bottle and pour slowly to ensure you don't spill any. Clearly mark the bottle "used oil" so you don't mistake it for the real thing.

   - Other options include old milk jugs, windshield washer-fluid jugs, or other plastic bottles. Be very careful anytime you're using old food bottles to clearly mark it.
   - Don't put old oil in containers that held chemicals like bleach, pesticides, paint, or antifreeze. These will contaminate the recycling process.
2 Make sure your oil filter is drained. You can add this oil (sometimes as much as 8 oz.) to the old oil. Filters are also recyclable, so hang onto them.
3 Find a designated collection site in your area. Typically, all places that sell motor oil will have this information on hand. Retailers that sell more than 1,000 filters in a year are required to accept old filters. Many service stations that do oil changes will also take your used oil, though sometimes for a small fee.
4 Try recycled oil next time. Used motor oil is refined until it meets the same certifications and specifications of virgin oil. The process requires less energy than pumping and refining new oil and recycling motor oil helps to reduce the need of foreign oil imported. In some cases, recycled oil also costs less than "new" oil.

Tips

- For a very stubborn filter, using a hammer and a large screwdriver as a sort of "chisel" can push the filter counter-clockwise. Be advised: once you punch hole in this thin filter wall, the engine cannot be started until it's replaced.

- There are some oil drain valves on the market that replace your normal drain pan bolt. These can make oil changes much more convenient and can reduce the amount of mess you make.

- Consider having a green, eco-friendly oil absorbent product on hand in case you spill some oil. They will absorb oil and will keep your garage and driveway clean. Kitty litter or clay-based products are not effective solutions for this. You can find a wide variety of eco-friendly oil absorbent products online. They are extremely absorbent, easy to use and renewable.

- To avoid getting oil all over your arm when removing the drain plug bolt, apply inward force (as if you are trying to push the plug back into the hole) while removing it. When you know that bolt is fully unscrewed, quickly pull it away from the opening. If you're lucky only a few drops will get on your hand. Tie a rag around your wrist when you remove the oil plug.
• Use disposable nitrile gloves. Used motor oil contains many toxic contaminants and can be easily absorbed through your skin.

Warnings

• Don’t get the oil inlet confused with the transmission fluid inlet. You can ruin your transmission if you put oil in it.

• Be careful not to burn yourself. Your engine, the used oil inside it, and other parts of the car can stay hot enough to burn you for a long time after you turn the ignition off.

Things You’ll Need

• 4–6 liters (1.1–1.6 US gal) of oil. Make sure you use oil that meets the API performance rating for your vehicle. Most vehicles made since 2004 require rating "SM", which is better than the oil that was available when older cars were made.

• Socket wrench. For European or Japanese cars you will likely need a metric set.

• Oil filter. Some come with a grippy coating that makes the filter easier to install and tighten.

• Oil filter wrench (optional). There are different size oil wrenches available depending on the diameter of the filter. The expensive one that is double articulated is the surest one to use.

• A way to get your car off the ground. Ramps or a jack stand are the safest bets.

• A pan to catch the used oil in, and a funnel and sturdy gallon jugs to transport it.

• Oil rags or paper towel.

• Some vehicles require you to remove top or bottom panels, which might require additional tools.

Sources and Citations