



OIL CHANGE **STEP BY STEP**



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KEY DEFINITIONS

When dealing with anything to do with your car's maintenance, it is important to understand the terms and expressions that will likely be used by your technician and within the industry. Here are some important terms and definitions for you to understand about oil changes.

OIL WEIGHT: Oil weight is the term used to describe the viscosity of the oil.

The viscosity of oil determines how thick the oil is. The thicker your oil, the longer it takes to heat up and move in your engine, but it does not overheat as much as a thinner oil.

So for winter, you will want a thinner oil weight, but in summer, it is better to have a thicker oil weight. When you check the owner's manual, you can find the oil weight where it says "Viscosity". You will likely see a combination of letters and numbers like "OW-20".

CORRECT OIL QUANTITY: Your engine only needs a certain amount of oil running through it. It is important not to overfill as it can cause your engine to be strained as the oil adds weight, and your engine's power will decrease, plus you may end up burning the oil. Underfilling the oil can cause a decrease in lubrication, which leads to metal-to-metal touching. Thus causing friction and can destroy your engine.

The amount of oil your vehicle takes will depend on the type of engine your vehicle has. Most small, four-cylinder engines need around 4 quarts while other engines will typically use 5-6 quarts. Larger engines can take around 8-9 quarts. To find out more about your engine and how much oil it needs, refer to the car's owner manual.

■ **TORQUE:** The definition of torque is that it is the amount of energy that is needed to move an object a certain amount. To explain it, if you need to pull a weight up a hill, it will require a certain amount of energy to move the weight up the hill. It is important that car parts are torqued to the correct amount, as if the part is not tightened correctly, the part can either fall off, or the bolt/object can break from being over-tightened. So for winter, you will want a thinner oil weight, but in summer, it is better to have a thicker oil weight. When you check the owner's manual, you can find the oil weight where it says "Viscosity". You will likely see a combination of letters and numbers like "0W-20".

■ **OIL FILTER:** An oil filter for your car is highly important to keep your car reliable and running. It is important that you replace it every time you change your oil. Oil filters are used to filter any contaminants that can be found in your oil while in the engine.

As with your engines, it might create small metal shavings, or dirt may get into the engine itself. The filter traps these small particles to make sure your engine stays healthy.





WHAT YOU'LL NEED

One way to be sure your oil change is successful is to have all your equipment and tools ready.

Here's what you'll need:

- 1** Socket set with a ratchet and various socket sizes.
- 2** Gloves - These will protect your skin from the oil.
- 3** Towels - Changing oil can get messy so these will help with clean up.
- 4** Fresh Oil and New Oil Filter - More details for how to pick the correct oil and oil filter are included below.
- 5** Oil Filter Wrench - This is optional but is definitely a useful tool when changing your oil.
- 6** Oil Catch Pan - This is for catching the old oil.
- 7** Funnel - This will be used to put in new oil.
- 8** Breaker Bar - This is optional as well but in case the drain bolt is difficult to remove.

In addition to these tools, there are some pieces of equipment that will also help the process to go smoothly. You will need something to jack your car up, such as a car jack. In many cases this should have come with the car. You can also opt for a small ramp or a jack stand with some wood blocks to secure the back tires.



PART I

DRAIN THE OLD OIL

Here is a step by step on how to change the oil on your car. These steps are the same ones being taken by your technician so whether you're changing the oil yourself or getting it done somewhere else, these steps will help you follow along!

Choosing the Correct Oil Weight: The correct oil needs to be chosen. It is either found in the owner's manual or can be found on a sticker that is either in the engine bay or a door sill. Not only will the owner's manual tell you what kind of oil, it will also tell you how much oil your car needs. **There are 11 different oil weights, 0W, 5W, 10W, 15W, 20W, 25W, 30, 40, 50, and 60.**

You will also need to choose between synthetic and conventional oil.

- **Conventional:** This should not be used in newer cars. Some people choose to use this for older cars. It is refined from naturally occurring crude oil. Its viscosity index is typically less reliable than Synthetic oil.
- **Synthetic:** Though you can use conventional for an older car, synthetic is typically the better choice for both old and new cars as it will last longer and be better for your car. Keep in mind, you can switch between conventional and synthetic at any point. This type of oil is created in a lab and has a more reliable viscosity index.

■ **Jack Up the Vehicle:** Use your jack of choice to jack your car high enough for you to safely get under it. Remember, you will need to place a wood block behind the back tires before you begin jacking up the car to help secure your car.



Using a Car Jack:

- If you've opted for the car jack that comes with the car, you will first find a level and stable surface to park your car and engage the parking brake.
- Then, locate the recommended jacking points for your car, which can typically be found in your owner's manual.
- Place the car jack under the jacking point and pump the handle to raise the car to the desired height.
- Be sure to use jack stands to support the car before working underneath it.



Using a Ramp:

- With a ramp you will need to start by finding a level and stable surface to park your car and engage the parking brake.
- Then, position the ramp in front of the car and slowly drive the car onto the ramp until it is in place.
- Be sure to use chocks or blocks to prevent the car from rolling.
- When you are finished, slowly back the car off the ramp and remove it from under the car.



Using a Curb:

- Another method you can use is driving your vehicle up on a curb high enough to give you enough room to get under your vehicle.
- First, find a level and stable surface to park your car and engage the parking brake.
- Then, position the front or rear wheels of the car onto the curb and apply the brakes. This will lift the opposite end of the car off the ground, allowing you to work under the car.

■ **Locate the Drain Pan:** Once the car is jacked up, locate the oil drain plug by situating yourself under the vehicle. You will be looking for the drain pan, which is usually black and has a bolt sticking out. There can sometimes be multiple drain pans so make sure the one you are working with has the bolt.

■ **Remove Old Oil:** After sliding the oil catch pan under the vehicle, situate it to where it will catch the oil when the drain plug is released. Untighten the drain plug using a ratchet with the correct size socket. It will likely be near 14 millimeters. Turn the bolt counter-clockwise and catch the oil in the oil catch pan for proper removal.

If you have difficulty turning the bolt of the drain plug, use a breaker bar to get more leverage. Once the oil is drained, set aside the catch pan of old oil to be used later on and to eventually be properly disposed of at a recycling plant.

■ **Replace the Bolt Gasket:** The copper colored gasket on the inside of the drain plug bolt that you loosed to remove the oil is one-time use so you will need to get a replacement gasket as well. Clean the opening and replace the drain plug. Be sure not to put it on too tight so the sides get stripped. You will not use the breaker bar for this part, the ratchet by itself will do.





PART 2

REPLACE THE OIL FILTER

Locate the Oil Filter: When you go to purchase your new oil filter, there will likely be a guide book for getting the right kind. Simply search for your car's make and model in the guide book and find the oil filter it recommends on the shelf.

On your vehicle, the oil filter can either be behind the drain pan or it will be visible from the open hood. You should be able to screw it off by hand but if you can't, the oil filter wrench will come in handy. Be sure to have the oil catch pan under the filter at this point as it will leak oil as it is removed.

Pre-Oil the Filter: Putting oil in the filter before putting it on the car can help prevent the engine from running dry. This is only an option if your filter does not attach sideways or upside down. Use your funnel to pour a small amount of oil into the filter. It is also helpful to spread a bit of oil around the gasket on the filter using a finger dipped in oil.

Replace Oil Filter: Putting oil in the filter before putting it on the car can help prevent the engine from running dry. This is only an option if your filter does not attach sideways or upside down. Use your funnel to pour a small amount of oil into the filter. It is also helpful to spread a bit of oil around the gasket on the filter using a finger dipped in oil.

PART 3

REFILL WITH THE CORRECT OIL

Put New Oil In: Open the hood and locate the lid that has the oil sign on it. This is where you will refill the oil. Feel free to use your towels as you go as there will be oil on different parts of the vehicle. This will also help in preventing bits of dried, used oil from falling back into the oil tank.

Unscrew the lid and add the new oil using the funnel. The jug of oil that you bought will likely have a scale on one side so you can see how much oil is being poured out. Have a towel ready for this part and try not to spill.

Run The Car: Once you have done the oil change, take your car off the ramp or jack that it is on. It is important to start the engine and check for any leaks. Check the oil filter and drain plug for any leaks and make sure there are no warning lights on.

Other Fluids: While you are looking for leaks and replacing the oil, it is a good time to look at the other fluids. This includes your brake fluids, clutch fluids, washer fluids, and your radiator fluids. Top these up while you are there.

Look For Leaks: While checking your oil and fluids, look for any leaks that your engine may have. Check your radiator and cooling pipes, fuel lines, oil lines, hydraulic lines, water pumps, oil pumps, and your pulleys while you are at it.



HOW TO CHECK YOUR OIL

There are a few ways you can know when it is time for an oil change. Many cars have an oil life monitor that will indicate it's time for an oil change. You can also check your owner's manual or as a rule of thumb, change the oil every 5,000 miles.

However, it is also recommended to check your car's oil level at least once a month, and ideally, every time you fill up your gas tank. You should also check your oil level if you notice any unusual engine noises or if you have been driving in extreme conditions, such as very hot weather or dusty roads. By regularly checking your car's oil, you can catch any potential issues early and prevent costly damage to your engine.

The dipstick test is used to check your oil level. When you open the hood there should be a dipstick, it may even be labeled. Be sure that the dipstick is pushed all the way down before pulling it out to check the oil level. You will see two small holes, the bottom hole means that the oil level is low. When the oil reaches the top hole, it is a sign that the oil is completely full.

Anywhere between the two dots is good. Be sure to check both the front and the back of the stick if you're having a hard time determining where the oil is. You can check your oil at any time, not just once you've changed the oil.



YOU'RE ALL SET!



Did you know, doing your own oil change yourself is not the only way to have an at home oil change? Mobile oil changes from trusted local businesses offer quick and convenient oil changes, done for you whether you're at work or at home.

So, whether you choose to have the professionals take care of your vehicle or you take on the task yourself, you should have everything you need to understand the ins and outs of an oil change. Remember to be prepared with all the tools and equipment you need and to ensure that you've purchased the right oil and oil filter for your vehicle. Good luck!

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