

DIY Oil Change

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Difficulty Rating: 2/5 - Easier than it looks, but can get messy.



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Revision 1

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Locate the oil cap, oil filter and sump bolt for your car.

This is a step-by-step guide on performing a full oil change and flush to a car engine. This guide was carried out on a Nova 1.6L 8v GTE, but the procedure is the same in most cases for other cars. This is one of the basic service procedures that is carried out during a car service and is also a easy DIY job. A lot of local garages offer this task for cheap prices but you often don't know what 'type' of oil is used in your car or the type of oil filter fitted.

Getting it done by a garage is obviously easier than doing it yourself plus you get a nice new service stamp in your book but a lot of people wish to do the job themselves as they know what has gone into the engine. The whole job can easily be done in 20 minutes, depending on location of oil filter and sump nut and ease of access underneath your car (i.e. is it lowered?).



OIL BANK LINE
0800 66 33 66

It is illegal to dump oil down the drain. To find your nearest oil bank call the above number.

The main item to bump up the cost of the oil change is the type or brand of oil you buy and the quantity. The cost of a new oil filter, engine flush and new sump bolt and washer is VERY cheap. Plus the labour is free if you do it yourself.



Caution: Avoid skin contact with used engine oil. Repeated or prolonged contact can be harmful to your health and skin.

Parts:



Trolley jack	2 axle stands	Fresh oil
Engine oil flush	New oil filter	Lots of old rags
Oil catcher	Large grips	Large screw driver
Rubber gloves	19mm socket	Ratchet set
New sump bolt	Haynes book	New sump washer

Cost:

5L of oil, Magnatec GTX	£20
New sump bolt & washer	£2
New oil filter	£10
Engine oil flush	£4

- There is cheaper oil on the market, plus the oil filter was a standard Lucas item. A new oil sump bolt and washer is advised but not necessary. All these items are obtainable from your local parts shop or Halfords.

General Notes:

Just before you start, make sure you note the following:

- If you don't have one, buy a Haynes manual for your car and have this in front of you. You'll need it on location of sump bolt and torque settings. Plus how much oil is required for the engine.
- As this can be a messy job, using disposable rubber gloves makes cleaning up much easier.
- Engine oil flush is not necessary but it is ideal and safe to use to clean most of the old oil inside the engine block and veins.
- Use a large oil catcher or old tub for the oil to drain out into. Remember before undoing the sump bolt completely, take the oil cap off first to release the pressure within. Otherwise the sump bolt will pop off and the oil which shot yards past your oil catcher (words from experience here :)
- The oil coming out of the engine will be HOT, so caution on where your hands are. It can take over 15 minutes before the last drop of oil comes out.
- Remove the old oil filter by either using a strap wrench or punch a long screw driver through the body and twist it off.
- Before fitting a new oil filter, smear some new oil on the rubber ring and then fit the filter back on. This ensures a good sealing between the mating faces.
- A new sump bolt and washer is advised, as the old one is used and score marks are on the washer which could lead to slow loss of oil from the sump. The sump bolt is usually 19mm.
- When filling the engine with new oil, fill it up to 80% capacity and look for any leaks and start the engine. Idle for about 10 minutes and when happy, switch it off, allow to cool and read the dip stick. Continue to fill the engine with the full amount as stated in the users manual.

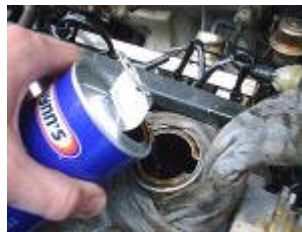
OK, got all the above? Then follow the steps below (remember to click on the pictures for a bigger view):

Step 1



Locate the oil cap, oil filter and sump bolt on your engine. Jack up the car on axle stands on flat level ground.

Step 2



Follow the instructions on the engine oil flush can. Idle the car first till warm, pour contents in and fast idle for 15 minutes.

Step 3



After fast idle, take the oil cap off and undo the sump bolt. Release the engine oil in a oil catcher and wait 15min for it to drain out.

Step 4



With oil drained out locate the oil filter. Some may be near the bottom crank pulley, this is situated near the dip stick.

Step 5



Remove the oil filter and fit a new one. Smear some new oil on the rubber ring before fitting it on. Hand tighten the item on.

Step 6



Fit a new sump bolt, washer and torque up to spec. Fill the engine 80% to the required amount and look for any leaks. If none, fill engine to full capacity.

FAQ:



How often do I need to change the oil in my car?

The Haynes book or manual that came with your car will tell you how many miles or months before a oil change is recommended. New engines tend not to be serviced often while older engines (because of older technology) will need more frequent oil changes. The average is 9000 miles or every 12 months, what ever comes soonest.

What 'type' of oil shall I put in my car?

Again this will be mentioned in the Haynes book or your car manual. But the most common is 10W40 oil. It's up to you what brand you buy for your car and 5 litres is usually more than enough.

Does it matter if I over fill the engine will oil?

Yes it can because as there is too much oil in the engine, the pressure is much higher. This can cause oil seals to fail and a expensive repair job is in hand. That's why its advised to fill the engine to 80% capacity first, start the engine (to get the pressure correct inside) and then check the dip stick. In extreme cases it can make the dip stick pop out because of the pressure build up.

What's type of oil do I use and what does 10W40 mean?

Oil manufactures make oil in different viscosity, or otherwise thickness. Some are like water while others seem like trickle. Viscosity is the resistance to flow, the thicker it is, the more resistive the liquid is, hence the higher the value of its viscosity. If its too thin it will not provide adequate lubrication for your engine. Again if its too thick then it will take longer for it to be pumped around vital parts of the engine. So for example the oil 10W40 means the viscosity is 10 at low temperatures. The 'W' is the winter value (which is 10, i.e. when its cold) and the number 40 is the viscosity value when hot (about 300 °F). So you can think of it when the engine is cold, the viscosity is 10, but when the engine gets to running temperature, the oil thickens up to a value of 40. There is a lot more to oil than that with grading, but that is beyond the scope of this article.

Since filling it up with new oil, the engine doesn't run very well. Why is this?

This is more common on very old engines with high mileage (particularly if they haven't had many oil changes in its life). What happens is that over the years the oil gets thicker and thicker and it actually fills up imperfections inside the engine block. It fills up the gaps during wear and tear of the engine life. When you flush the old oil out and put in new fresh oil, these imperfections aren't filled up anymore with old thicker oil. Hence the engine may seem to run rough, until the oil gets thicker again. There isn't much you can do about this unless you put in thicker oil or repair the defect(s) in the engine.

Once I've drained the oil, what do I do with it?

Your council should have a local waste despoil unit that will accept anything from domestic rubbish, old white goods, old batteries and liquids like oil. Phone your local council for more information of get in contact with the Oil Bank Line which will tell you the nearest outlet.

