

**Haynes**  
*shows you how*

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**BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual**

## 3 Engine oil and filter replacement

05:00

**Caution:**

This video is for familiarization purposes only. Read below for specific information on your vehicle.

1 Frequent oil and filter changes are the most important preventative maintenance procedures which can be undertaken by the home mechanic. As engine oil ages, it becomes diluted and contaminated, which leads to premature engine wear.

2 Before starting this procedure, gather together all the necessary tools and materials. Also make sure that you have plenty of clean rags and newspapers handy, to mop up any spills. Ideally, the engine oil should be warm, as it will drain better, and more built-up sludge will be removed with it. Take care, however, not to touch the exhaust or any other hot parts of the engine when working under the vehicle. To avoid any possibility of scalding, and to protect yourself from possible skin irritants and other harmful contaminants in used engine oils, it is advisable to wear gloves when carrying out this work. Access to the underside of the vehicle will be greatly improved if it can be raised on a lift, driven onto ramps, or jacked up and supported with jackstands. Whichever method is chosen,

make sure that the vehicle remains level, or if it is at an angle, so that the drain plug is at the lowest point. Where necessary remove the splash guard from under the engine.

3 Working in the engine compartment, locate the oil filter housing on the left-hand side of the engine, in front of the intake manifold.

4 Place a bundle of rags around the bottom of the housing to absorb any spilled oil.

5 Unscrew the through-bolt, then slowly remove the cover, and lift the filter cartridge out (see illustrations) . The oil will drain from the housing back into the oil pan as the cover is removed.

### 3.5a Unscrew the through-bolt . . .



### 3.5b . . . and lift out the filter cartridge



6 Remove the O-rings from the cover and from the bottom of the through-bolt.

7 Using a clean rag, wipe the mating faces of the housing and cover.

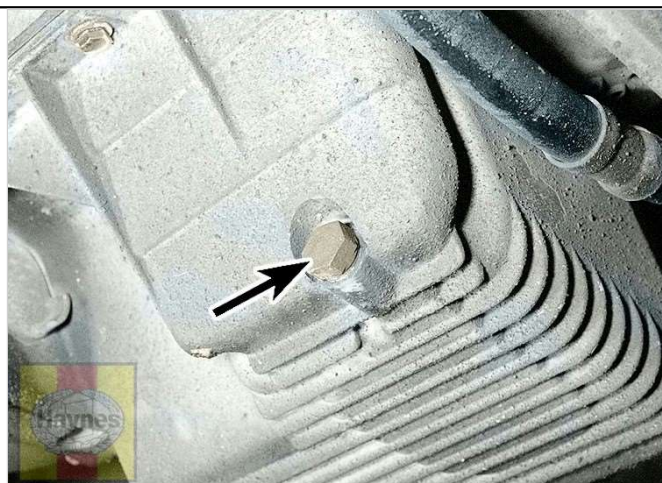
8 Install new O-rings to the cover and the through-bolt (see illustrations) .

**3.8a Install a new O-ring on the cover . . .****3.8b . . . and on the through-bolt**

9 Lower the new filter cartridge into the housing.

10 Smear a little clean engine oil on the O-rings, then install the cover. Install and tighten the through-bolt, ensuring that the washer is in place under the bolt head.

11 Working under the vehicle, loosen the oil pan drain plug about half a turn (see illustration) . Position the draining container under the drain plug, then remove the plug completely. If possible, try to keep the plug pressed into the oil pan while unscrewing it by hand the last couple of turns.

**3.11 Oil pan drain plug (arrow) - four-cylinder engine shown**

**12 Recover the sealing ring from the drain plug.**

**13 Allow some time for the old oil to drain, noting that it may be necessary to reposition the container as the oil flow slows to a trickle.**

**14 After all the oil has drained, wipe off the drain plug with a clean rag. Check the sealing washer for condition, and replace it if necessary. Clean the area around the drain plug opening, then install and tighten the plug.**

**15 Remove the old oil and all tools from under the car, then lower the car to the ground (if applicable).**

**16 Remove the dipstick then unscrew the oil filler cap from the valve cover. Fill the engine, using the correct grade and type of oil (see [Section 2](#)). A funnel may help to reduce spillage. Pour in half the specified quantity of oil first, then wait a few minutes for the oil to fall to the oil pan. Continue adding oil a little at a time until the level is up to the lower mark on the dipstick. Finally, bring the level up to the upper mark on the dipstick. Insert the dipstick, and install the filler cap.**

**17 Start the engine and run it for a few minutes; check for leaks around the oil filter seal and the oil pan drain plug. Note that there may be a delay of a few seconds before the oil pressure warning light goes out when the engine is first started, as the oil circulates through the engine oil galleries and the new oil filter, before the pressure builds up.**

**18 Switch off the engine, and wait a few minutes for the oil to settle in the oil pan once more. With the new oil circulated and the filter completely full, recheck the level on the dipstick, and add more oil as necessary.**

**19 The old oil drained from the engine cannot be reused in its present state and should be disposed of. Check with your local refuse disposal company, disposal facility or environmental agency to see if they will accept the oil for recycling. Don't pour used oil into drains or onto the ground. After the oil has cooled, it can be drained into a suitable container (capped plastic jugs, topped bottles, milk cartons, etc.) for transport to one of these disposal sites.**