

## SIMILAR VIDEO TUTORIAL



This video shows the replacement procedure of a similar car part on another vehicle

### **Important!**

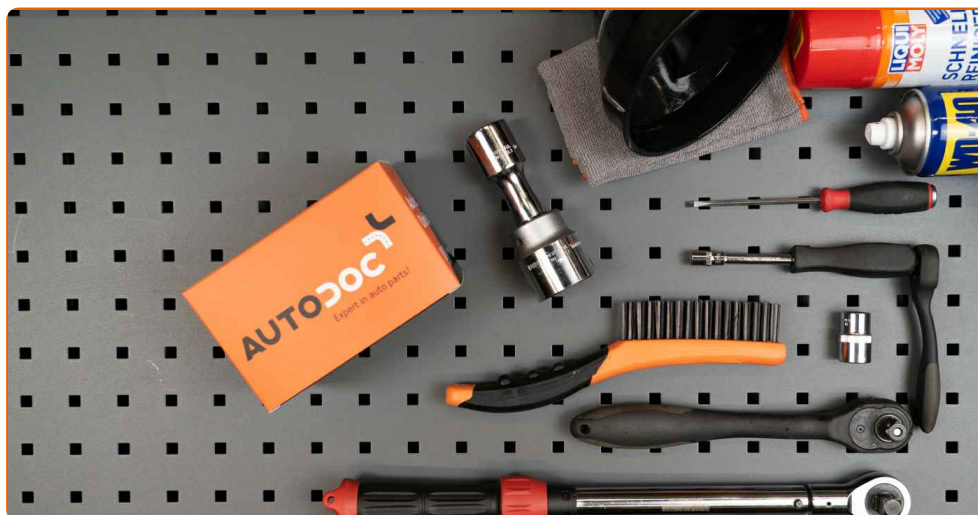
This replacement procedure can be used for:

BMW 3 Touring (E91) 320d 2.0, BMW 3 Touring (E91) 318d 2.0

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: BMW 3 Saloon (E90) 320d 2.0

## REPLACEMENT: ENGINE OIL AND FILTER – BMW E90. TOOLS YOU NEED:




- Wire brush
- WD-40 spray
- All-purpose cleaning spray
- Drive socket # 8
- Drive socket # 17
- Drive socket # 36
- Flat screwdriver
- Ratchet wrench
- Torque wrench
- Oil drain pan
- Funnel
- Microfibre towel
- Fender cover

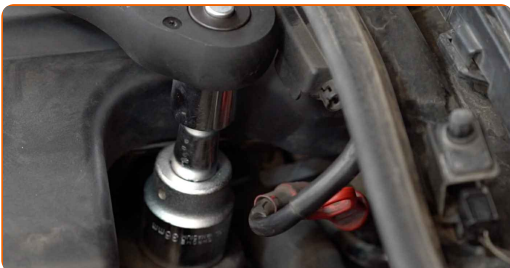
**Buy tools**

### Replacement: engine oil and filter – BMW E90. AUTODOC recommends:

- Replace the oil filter every time when changing motor oil.
- Wear gloves to prevent contact with hot liquid.
- Use only new O-rings during installation.
- Warning! Shut down the engine before starting any work – BMW E90

## CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

- 1 Open the hood.
- 2 Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.
- 3 Unscrew the oil filler plug.  

- 4 Unscrew the filter housing cap together with the old filter element. Use a drive socket #36. Use a ratchet wrench.



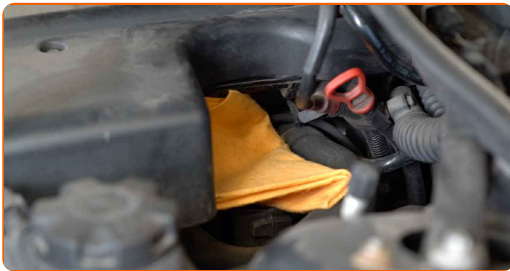
5

Put the old filter cartridge in the container.



6

Cover the oil filter housing with a microfibre towel to prevent dirt and foreign objects from getting into the system.



7

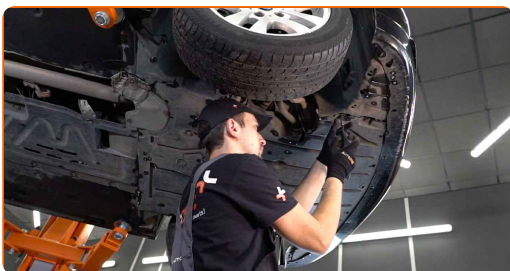
Lift the car using a jack or place it over an inspection pit.

Replacement: engine oil and filter – BMW E90. AUTODOC recommends:

- The vehicle must be on even keel, and if it is at an angle, the drain plug must be at the lowest point.

8

Undo the fasteners of the oil pan lower cover.



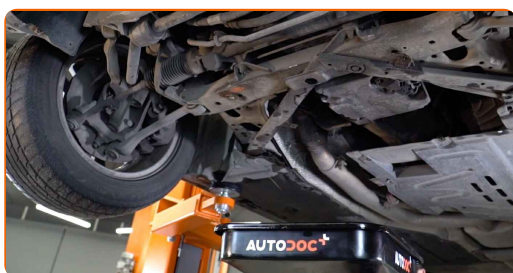
9

Remove the oil pan cover. Use a drive socket #8. Use a ratchet wrench.



10

Put a waste oil container with at least 6 l capacity under the drainage hole.



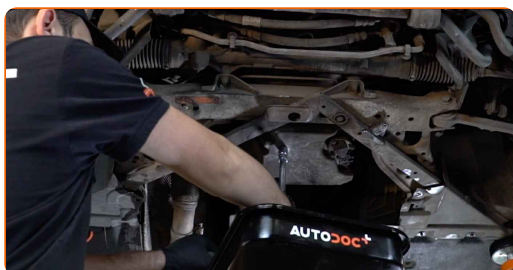
11

Clean the area of the oil pan drainage hole. Use a wire brush. Use WD-40 spray.



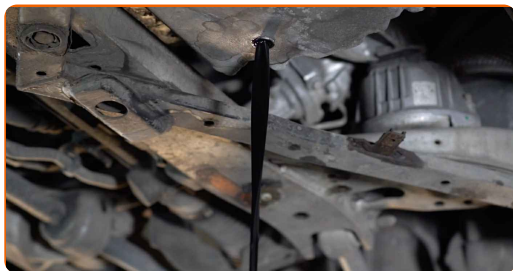
12

Unscrew the drain plug. Use a drive socket #17. Use a ratchet wrench.



13

Drain the used oil.

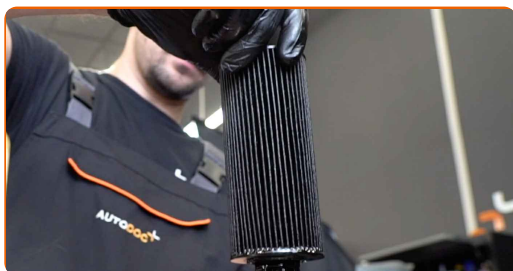


Replacement: engine oil and filter – BMW E90. Tip from AUTODOC:

- Caution! The oil may be hot.

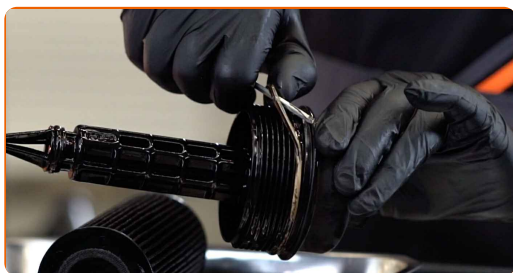
14

Detach the oil filter from the filter cover.



15

Remove the oil filter cover O-ring. Use a flat screwdriver.



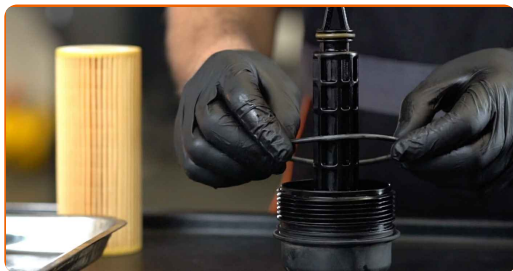
16

Clean the oil filter housing cap. Use all-purpose cleaning spray.

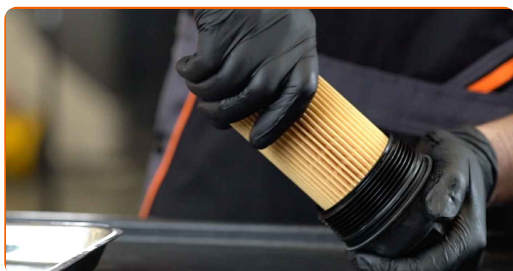




- 17 Install a new O-ring to its mounting seat on the filter cover.



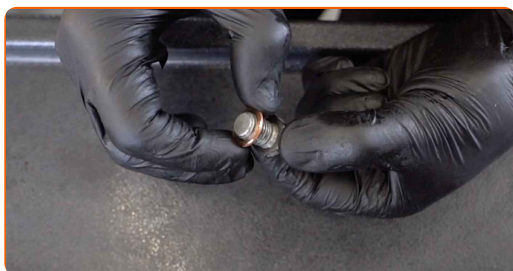
- 18 Install the new oil filter to the mounting seat on the filter cover.



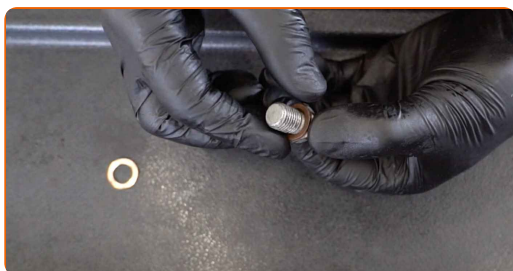
### Please note!

- Make sure to install the filter correctly. Don't mix up the sides of the part.

- 19 Remove the O-ring from the plug.



- 20 Clean the plug and put a new O-ring on it.



## Replacement: engine oil and filter – BMW E90. Tip from AUTODOC experts:

- Wait until the oil has completely drained from the drainage hole.

**21** Screw in the new drainage plug and tighten it. Use a drive socket #17. Use a torque wrench. Tighten it to 25 Nm torque.

**22** Clean the area of the oil pan drainage hole.



**23** Reinstall the oil pan lower cover.



**24** Tighten the fasteners of the oil pan lower cover. Use a drive socket #8. Use a ratchet wrench.



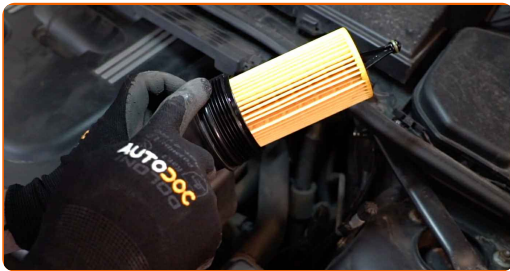
**25** Lower the car.



- 26 Remove the microfibre towel from the oil filter housing.



- 27 Lubricate the rubber seal of the new filter with a little amount of fresh oil.



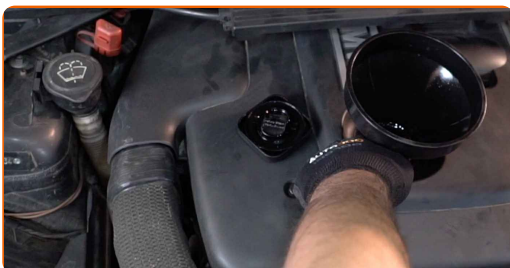
- 28 Screw the new filter into its place.



- 29 Screw the cap. Use a drive socket #36. Use a torque wrench. Tighten it to 25 Nm torque.



- 30 Remove the oil filler cap. Insert the funnel.



31

Pour new oil into the engine in the amount recommended by the car manufacturer.

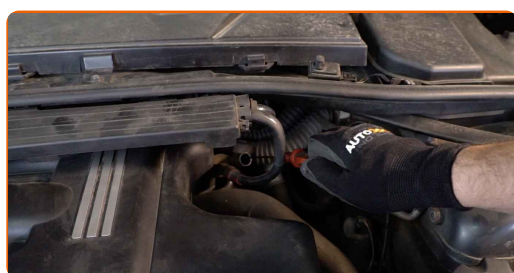


Replacement: engine oil and filter – BMW E90. AUTODOC experts recommend:

- Use the oil recommended by the manufacturer.

32

Check the oil level using the dipstick. Top up oil if necessary.



Please note!

- The oil level should be between the Min and Max marks.

33

Tighten the oil filler cap.