



How to change rear
shock absorbers on **BMW**
E90 – replacement guide

VIDEO TUTORIAL

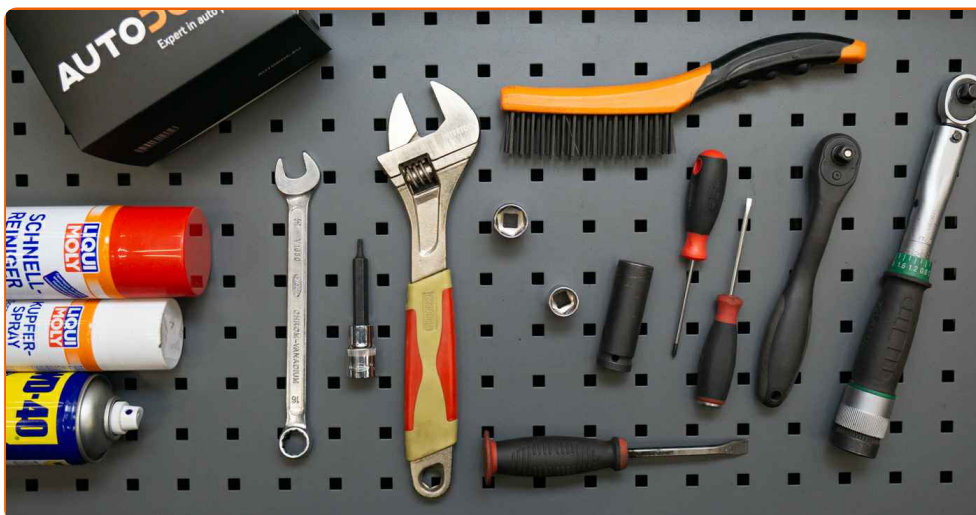
** Important!**

This replacement procedure can be used for:

BMW 3 Touring (E91) 325i 3.0, BMW 3 Touring (E91) 318d 2.0, BMW 3 Saloon (E90) 318d 2.0, BMW 3 Touring (E91) 318i 2.0, BMW 3 Touring (E91) 316d 2.0, BMW 1 Coupe (E82) 118d 2.0, BMW 3 Coupe (E92) 318i 2.0, BMW 3 Convertible (E93) 318i 2.0, BMW 3 Convertible (E93) 325d 3.0, BMW 1 Hatchback (E81) 116i 1.6, BMW 1 Hatchback (E81) 120d 2.0, BMW 3 Saloon (E90) 320i 2.0, BMW 3 Saloon (E90) 325i 2.5, BMW 3 Saloon (E90) 330i 3.0, BMW 3 Saloon (E90) 320d 2.0, (+ 67)

The steps may slightly vary depending on the car design.

**REPLACEMENT: SHOCK ABSORBERS – BMW E90.
TOOLS YOU NEED:**



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Combination spanner #16
- Drive socket # 16
- Drive socket # 17
- Torx bit T25
- Wheel impact socket #17
- Ratchet wrench
- Flat Screwdriver
- Phillips screwdriver
- Adjustable wrench
- Crow bar
- Hydraulic transmission jack
- Wheel chock

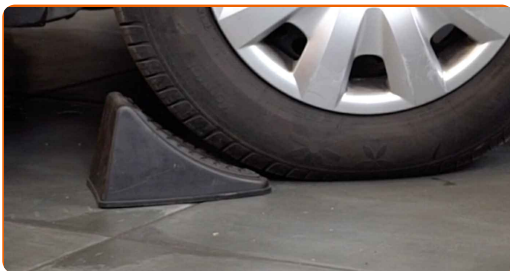
BUY TOOLS

Replacement: shock absorbers – BMW E90. Tip from AUTODOC:

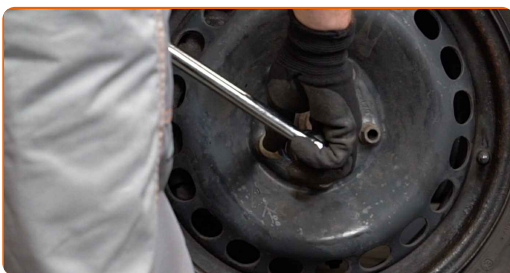
- Both shock absorbers of the rear suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right shock absorbers of the rear suspension.
- Please note: all work on the car – BMW E90 – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Secure the wheels with chocks.



2 Loosen the wheel mounting bolts. Use wheel impact socket #17.



3 Raise the rear of the car and secure on supports.

4

Unscrew the wheel bolts.

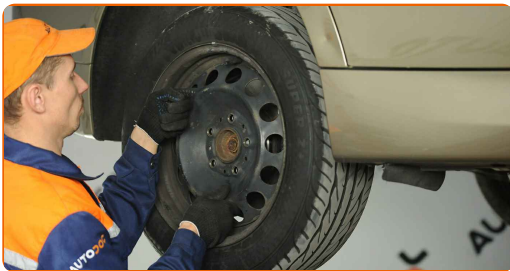


AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts.
BMW E90

5

Remove the wheel.



6

Support the stub axle. Use a hydraulic transmission jack.

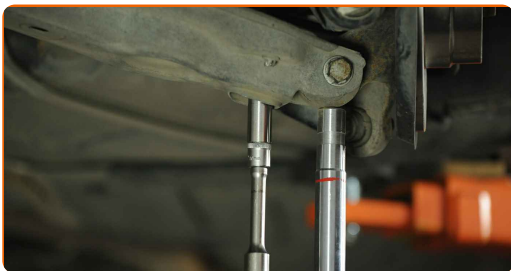


7

Clean the shock absorber fasteners. Use a wire brush. Use WD-40 spray.

8

Unscrew the lower fastener of the shock absorber. Use a drive socket #17. Use a ratchet wrench.

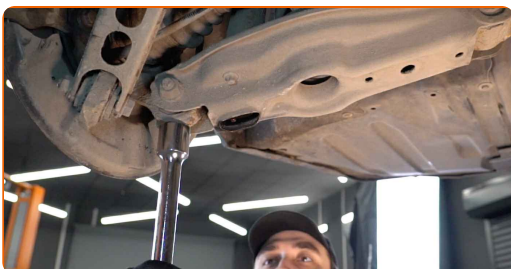


9

Remove the fastening bolt.

10

Remove the support from under the stub axle.

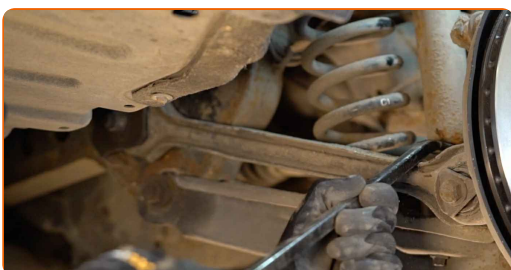


AUTODOC recommends:

- BMW E90 – Do not lower the transmission jack sharply to avoid damaging components and mechanisms of the car.

11

Detach the lower part of the shock absorber. Use a crowbar.



12 Lower the car.



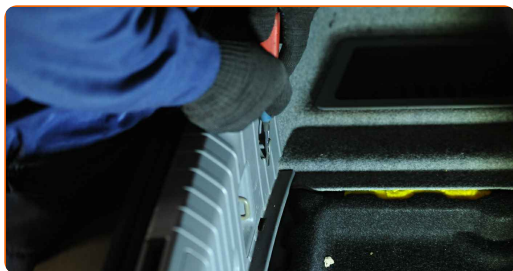
13 Open the boot lid.



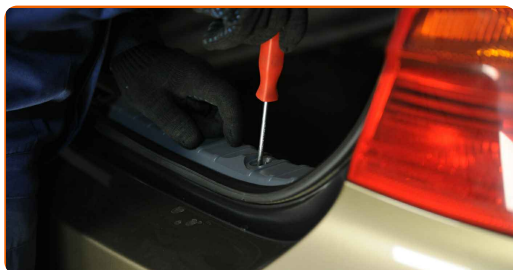
14 Remove the boot front lower lining.



15 Remove the clips from the plastic boot sill guard. Use flat screwdrivers (2 pieces).



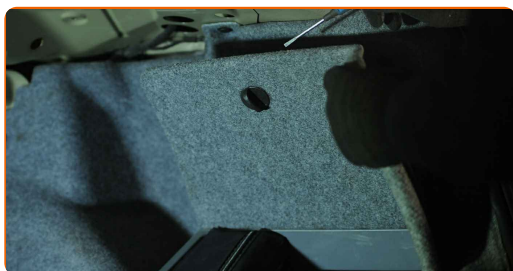
16 Unscrew the fasteners of the plastic boot sill guard. Use a Phillips screwdriver.



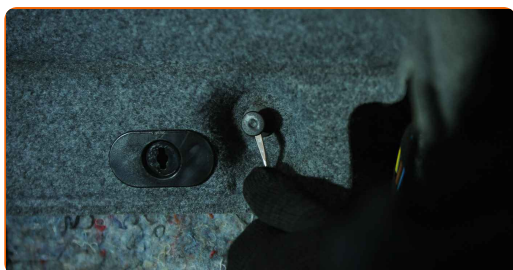
17 Remove the plastic door sill plate.



18 Remove the cover of the boot side lining.



19 Remove the clips of the boot side lining. Use a flat screwdriver.



20 Unscrew the fastener of the boot side lining. Use Torx T25. Use a ratchet wrench.



21 Remove the boot side lining.



22

Remove the protective cap of the shock absorber mount. Use a flat screwdriver.

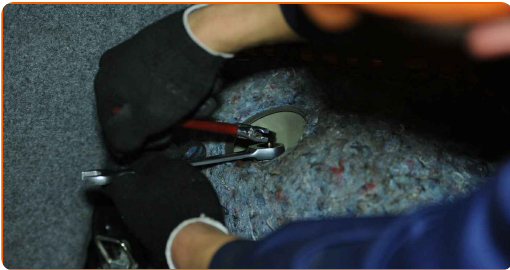


23

Clean the fasteners of the shock absorber upper mount. Use a wire brush. Use WD-40 spray.

24

Unscrew the upper fastener of the shock absorber. Use a combination spanner #16. Use an adjustable wrench.

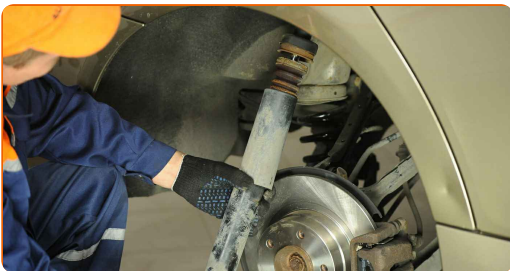


AUTODOC recommends:

- Important! Hold the shock absorber while unscrewing the fastening bolts. BMW E90

25

Remove the shock absorber.



26

Remove the shock absorber upper mount.

27

Remove the shock absorber dust cap and the bump stop.

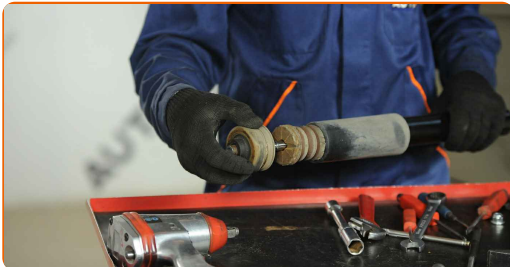


AUTODOC recommends:

- Replacement: shock absorbers – BMW E90. Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.
- Before installing a new shock absorber you should pump it manually 3-5 times.

28

Install the dust sleeve and the bump stop on the new shock absorber.

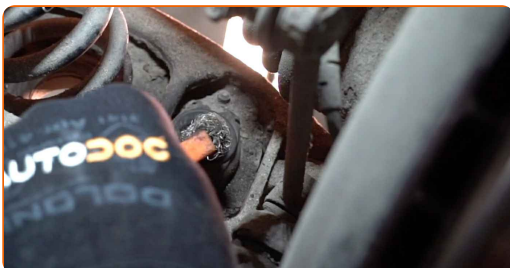


29

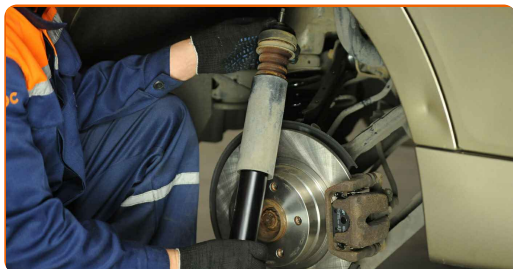
Install the shock absorber upper mount.

30

Clean the shock absorber mounting seats. Use a wire brush. Use WD-40 spray.



31 Place the shock absorber in the wheel arch and secure it.



AUTODOC recommends:

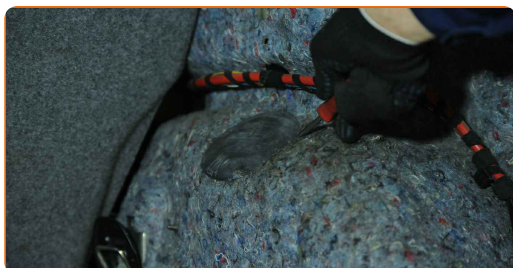
- Important! Hold the shock absorber while screwing in the fastening bolts. BMW E90

32 Tighten the top shock absorber fastening. Use a combination spanner #16. Use a drive socket #16. Use a torque wrench. Tighten it to 27 Nm torque.



33 Treat the shock absorber fasteners. Use copper grease.

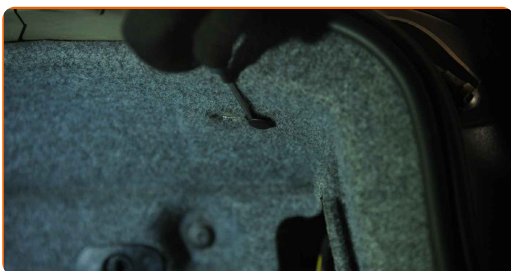
34 Install the protective shock absorber mounting cap.



35 Attach the side lining of the boot.



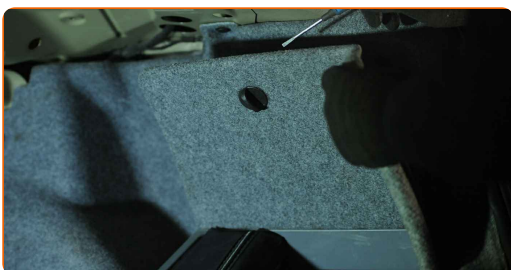
36 Screw in the fastener of the boot side lining. Use Torx T25. Use a ratchet wrench.



37 Install the clips of the boot side lining.



38 Install the cover of the boot side lining.

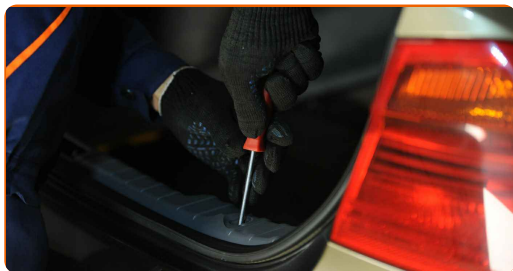


39 Install the plastic door sill plate.



40

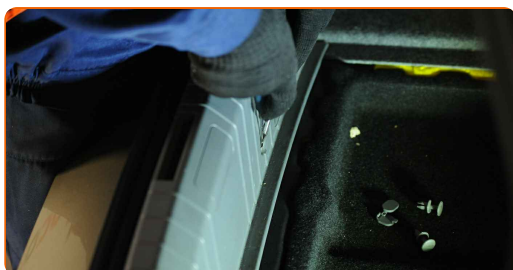
Screw in the fasteners of the plastic boot sill guard. Use a Phillips screwdriver.

**41**

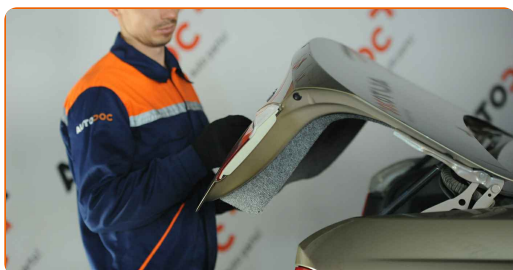
Put the clips back in place.

**42**

Install the boot front lower lining.

**43**

Close the lid of the luggage compartment.

**44**

Raise the rear of the car and secure on supports.

45 Support the stub axle. Use a hydraulic transmission jack.

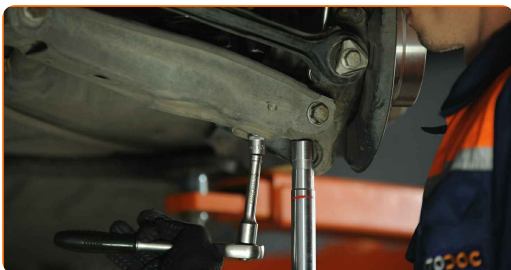


46 Attach the lower part of the shock absorber. Use a crowbar. Use a flat screwdriver.

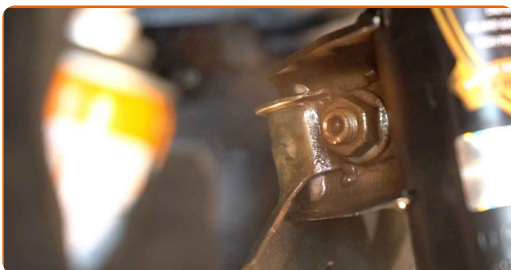


47 Install the fastening bolt.

48 Tighten the lower fastener of the shock absorber. Use a drive socket #17. Use a torque wrench. Tighten it to 60 Nm torque.



49 Treat the shock absorber fasteners. Use copper grease.



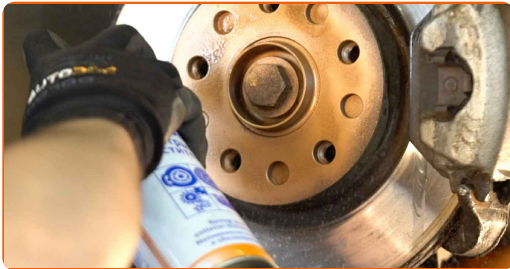
50 Remove the support from under the stub axle.

AUTODOC recommends:

- Replacement: shock absorbers – BMW E90. Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

51

Treat the surface where the brake disc contacts the wheel rim. Use copper grease.



52

Clean the brake disk surface. Use a brake cleaner.



AUTODOC recommends:

- Replacement: shock absorbers – BMW E90. After applying the spray, wait a few minutes.

53

Install the wheel.



AUTODOC recommends:

- **Warning!** To avoid injury, hold the wheel while screwing in the fastening bolts on the car. BMW E90

54

Screw in the wheel bolts. Use wheel impact socket #17.



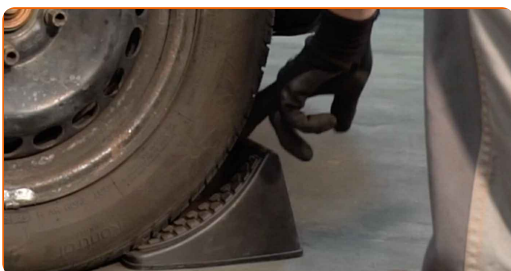
55

Lower the car and working in a cross order, tighten the wheel bolts. Use wheel impact socket #17. Use a torque wrench. Tighten it to 120 Nm torque.



56

Remove the jacks and chocks.



WELL DONE! 

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