



How to change rear  
shock absorbers on **BMW**  
**1 Hatchback (E81)** –  
replacement guide

## SIMILAR VIDEO TUTORIAL



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

### Important!

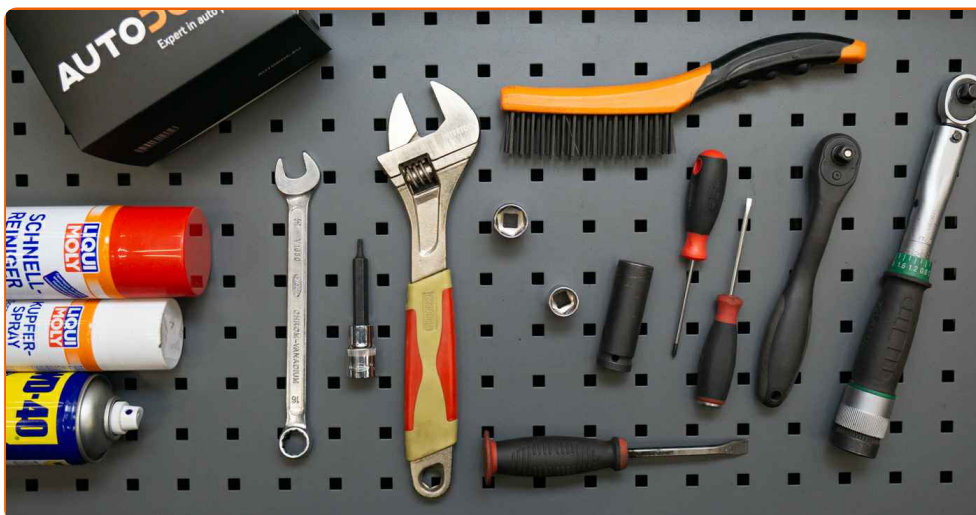
This replacement procedure can be used for:

BMW 1 Hatchback (E81) 116i 1.6, BMW 1 Hatchback (E81) 120d 2.0, BMW 1 Hatchback (E81) 130i 3.0, BMW 1 Hatchback (E81) 118i 2.0, BMW 1 Hatchback (E81) 120i 2.0, BMW 1 Hatchback (E81) 118d 2.0, BMW 1 Hatchback (E81) 123d 2.0, BMW 1 Hatchback (E81) 116i 2.0, BMW 1 Hatchback (E81) 116d 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) 318i 2.0

REPLACEMENT: SHOCK ABSORBERS – BMW 1 HATCHBACK (E81). 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

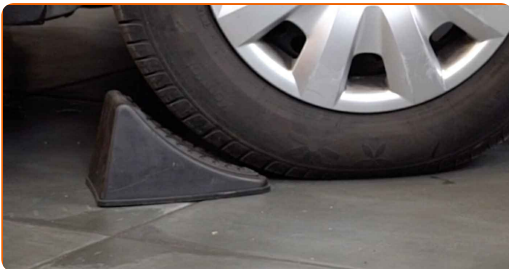
**Buy tools**

Replacement: shock absorbers – BMW 1 Hatchback (E81). Tip from AUTODOC:

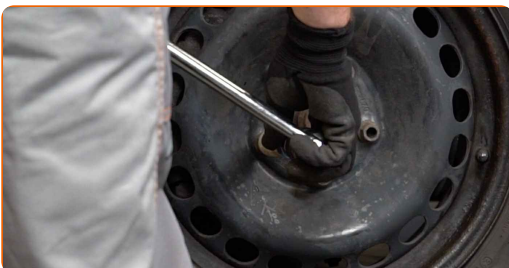
- Both shock absorbers of the rear suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right shock absorbers of the rear suspension.
- Please note: all work on the car – BMW 1 Hatchback (E81) – should be done with the engine switched off.

**CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:**

**1** Secure the wheels with chocks.

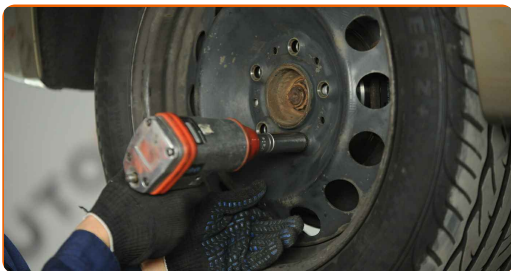


**2** Loosen the wheel mounting bolts. Use wheel impact socket #17.



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

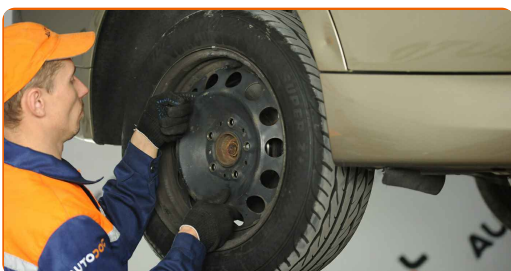
**4** Unscrew the wheel bolts.



**AUTODOC recommends:**

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts.  
BMW 1 Hatchback (E81)

**5** Remove the wheel.

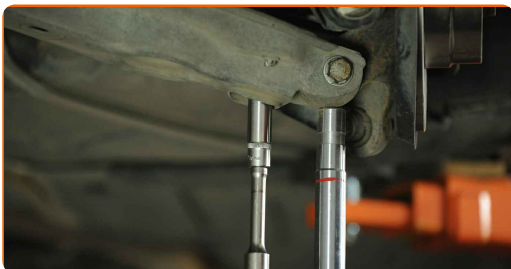


**6** Support the stub axle. Use a hydraulic transmission jack.



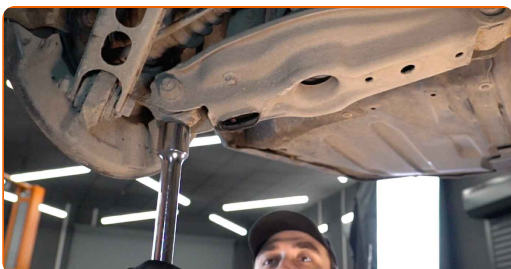
**7** Clean the shock absorber fasteners. Use a wire brush. Use WD-40 spray.

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



**9** Remove the fastening bolt.

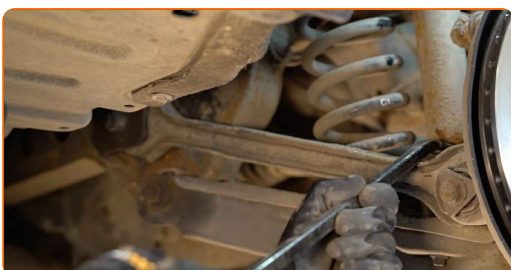
**10** Remove the support from under the stub axle.



**AUTODOC recommends:**

- BMW 1 Hatchback (E81) – 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).



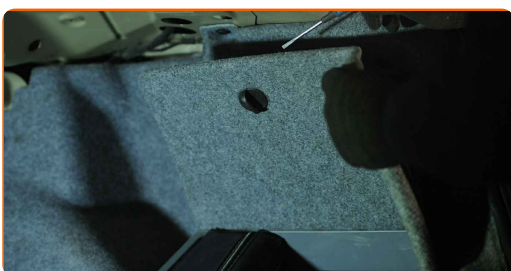
**16** Unscrew the fasteners of the plastic boot sill guard. Use a Phillips screwdriver.



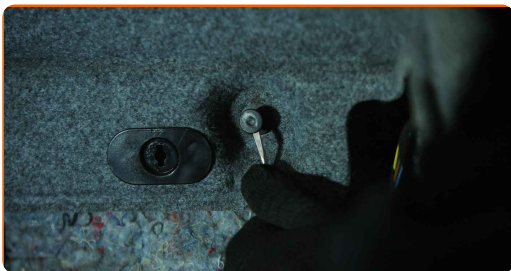
**17** Remove the plastic door sill plate.



**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.



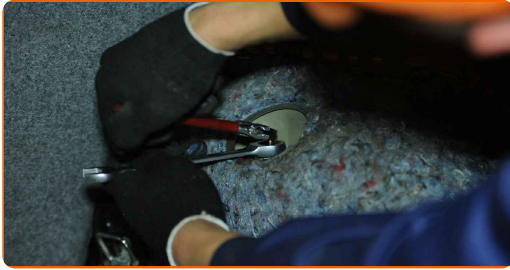
**22** Remove the protective cap of the shock absorber mount. Use a flat screwdriver.



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



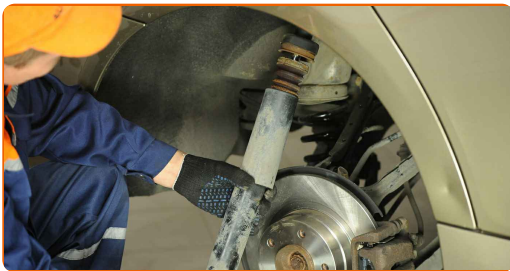
**24** Unscrew the upper fastener of the shock absorber. Use a combination spanner #16. Use an adjustable wrench.



**AUTODOC recommends:**

- Important! Hold the shock absorber while unscrewing the fastening bolts. BMW 1 Hatchback (E81)

**25** Remove the shock absorber.



**26** Remove the shock absorber upper mount.

**27** Remove the shock absorber dust cap and the bump stop.

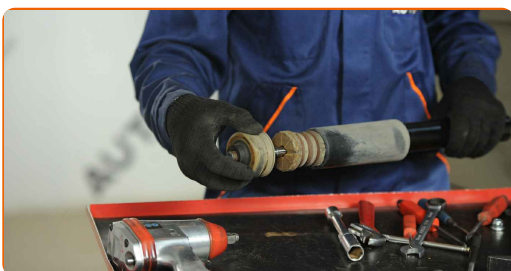


**AUTODOC recommends:**

- Replacement: shock absorbers – BMW 1 Hatchback (E81). 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.

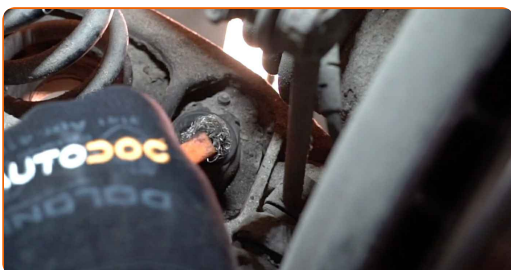


**29**

Install the shock absorber upper mount.

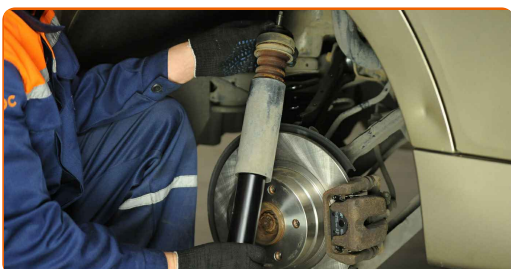
**30**

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



**31**

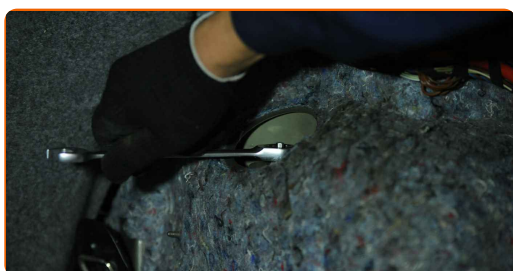
Place the shock absorber in the wheel arch and secure it.



**AUTODOC recommends:**

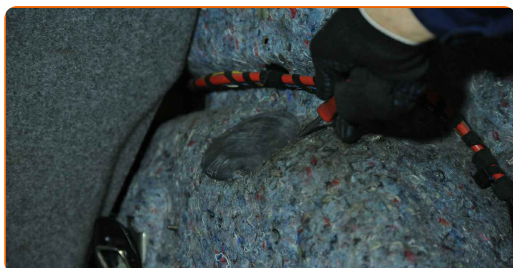
- Important! Hold the shock absorber while screwing in the fastening bolts. BMW 1 Hatchback (E81)

**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.

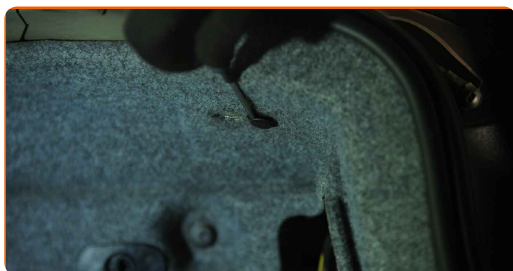
**34** Install the protective shock absorber mounting cap.



**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.



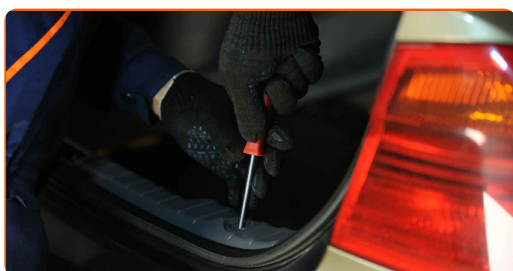
**38** Install the cover of the boot side lining.



**39** Install the plastic door sill plate.



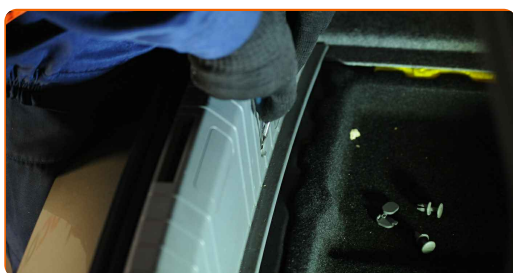
**40** Screw in the fasteners of the plastic boot sill guard. Use a Phillips screwdriver.



**41** Put the clips back in place.



**42** Install the boot front lower lining.



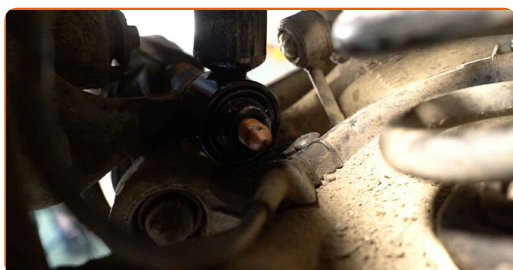
**43** Close the lid of the luggage compartment.

**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.

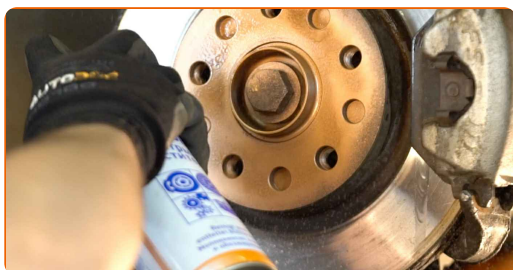


- 50 Remove the support from under the stub axle.

**AUTODOC recommends:**

- Replacement: shock absorbers – BMW 1 Hatchback (E81). 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 1 Hatchback (E81). After applying the spray, wait a few minutes.

53

Install the wheel.

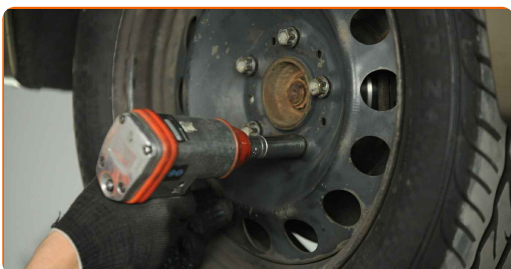


**AUTODOC recommends:**

- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. BMW 1 Hatchback (E81)

54

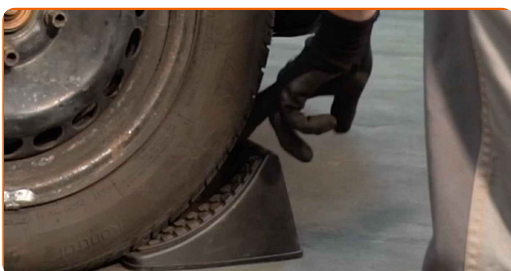
Screw in the wheel bolts. Use wheel impact socket #17.



- 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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