

## SIMILAR VIDEO TUTORIAL



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

### **i Important!**

This replacement procedure can be used for:

BMW 3 Touring (E91) 325i 3.0, BMW 3 Touring (E91) 318d 2.0, BMW 3 Touring (E91) 318i 2.0, BMW 3 Touring (E91) 316d 2.0, BMW 3 Touring (E91) 320i 2.0, BMW 3 Touring (E91) 325i 2.5, BMW 3 Touring (E91) 330i 3.0, BMW 3 Touring (E91) 320d 2.0, BMW 3 Touring (E91) 330d 3.0, BMW 3 Touring (E91) 335i 3.0, BMW 3 Touring (E91) 335d 3.0, BMW 3 Touring (E91) 325d 3.0, BMW 3 Touring (E91) 323i 2.5, BMW 3 Touring (E91) 316i 1.6

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: SUSPENSION STRUT – BMW 3 TOURING (E91). TOOLS YOU MIGHT NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Combination spanner #13
- Combination spanner #15
- Combination spanner #18
- Combination spanner #22
- Drive socket # 13
- Drive socket # 17
- Drive socket # 18
- Drive socket # 21
- Torx bit T45
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Flat chisel
- Hammer
- Flat Screwdriver
- Hydraulic strut spring compressor
- Hydraulic transmission jack
- Fender cover
- Wheel chock

**Buy tools**

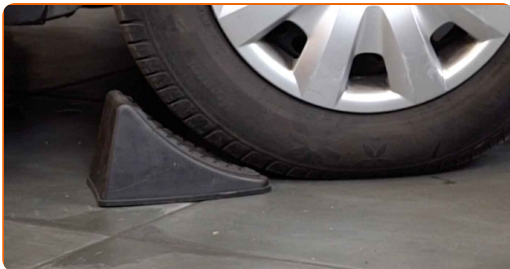
### Replacement: suspension strut – BMW 3 Touring (E91). AUTODOC recommends:

- Both shock struts of the front suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right shock struts of the front suspension.
- Please note: all work on the car – BMW 3 Touring (E91) – should be done with the engine switched off.

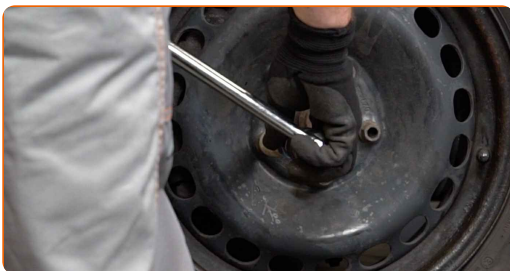
## CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

**1**

Secure the wheels with chocks.

**2**

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

**3**

Raise the front of the car and secure on supports.

4

Unscrew the wheel bolts.

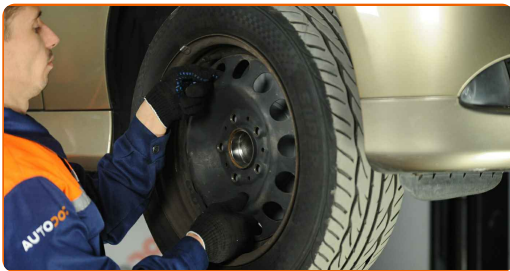


### AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts.  
BMW 3 Touring (E91)

5

Remove the wheel.



6

Clean the stabiliser link fasteners. Use a wire brush. Use WD-40 spray.

7

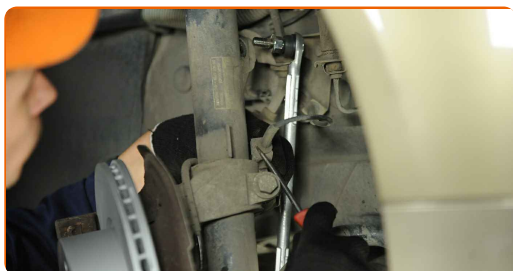
Unscrew the fastener connecting the stabilizer link to the shock strut. Use a combination spanner #15. Use a drive socket #17. Use a ratchet wrench.



8

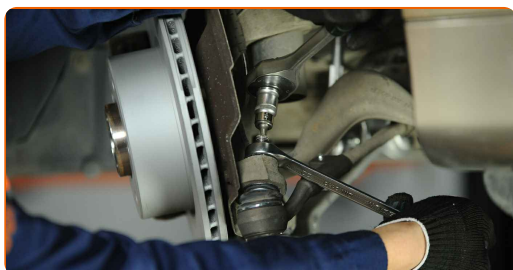
Remove the stabilizer rod.

- 9 Disconnect the ABS sensor wiring. Use a flat screwdriver.

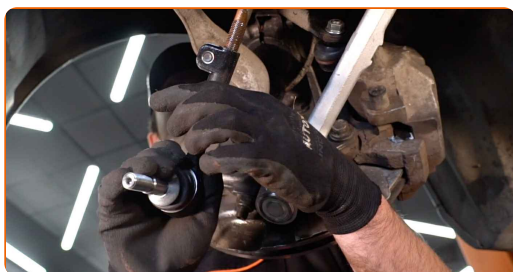


- 10 Clean the fastener connecting the tie rod end to the steering knuckle. Use a wire brush. Use WD-40 spray.

- 11 Unscrew the end fastening nut to the steering knuckle. Use a combination spanner #22. Use Torx T45. Use a ratchet wrench.

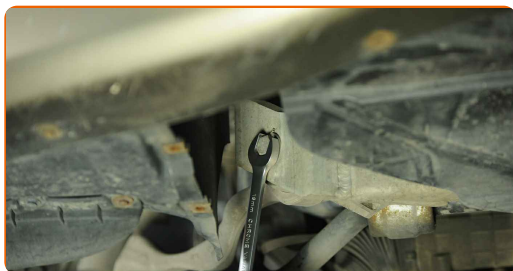


- 12 Disconnect the tie rod end from the steering knuckle.

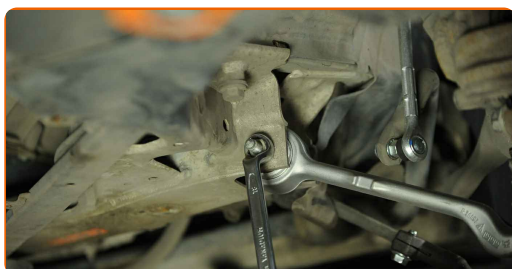


- 13 Clean the fasteners connecting the control arm to the subframe. Use a wire brush. Use WD-40 spray.

- 14 Loosen the front fastener of the control arm. Use a combination spanner #18.



- 15** Unscrew the rear fastener connecting the control arm to the subframe. Use a combination spanner #18 (2 pieces).

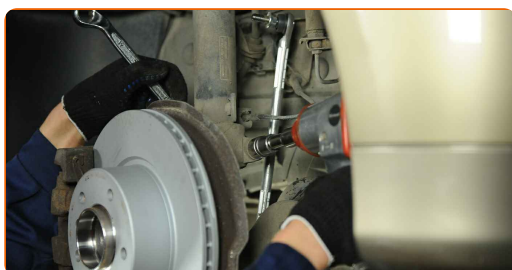


- 16** Remove the rear fastener of the control arm.



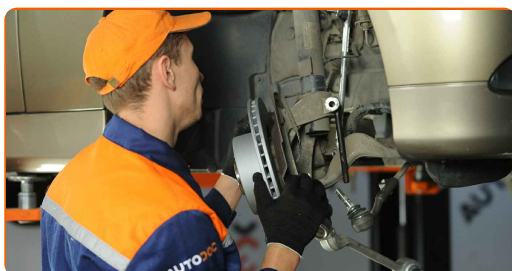
- 17** Clean the fasteners connecting the shock strut to the steering knuckle. Use a wire brush. Use WD-40 spray.

- 18** Unscrew the lower fastener connecting the shock strut to the steering knuckle. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.



- 19** Remove the fastening bolt.

- 20** Release the lower fastener connecting the shock strut to the steering knuckle. Use a flat metal-working chisel. Use a hammer.





21

Disconnect the steering knuckle from the shock absorber strut.



Replacement: suspension strut – BMW 3 Touring (E91). Tip from AUTODOC experts:

- Make sure that the steering knuckle is supported.

22

Lower the car.

23

Open the bonnet.

24

Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

25

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

26

Unscrew the top fastening of the shock strut mount. Use a combination spanner #13. Use a drive socket #13. Use a ratchet wrench.



AUTODOC recommends:

- Important! Hold the suspension strut while unscrewing the fastening bolts. BMW 3 Touring (E91)

27 Remove the suspension strut.



28 Set the shock absorber strut on the spring compressor tool.

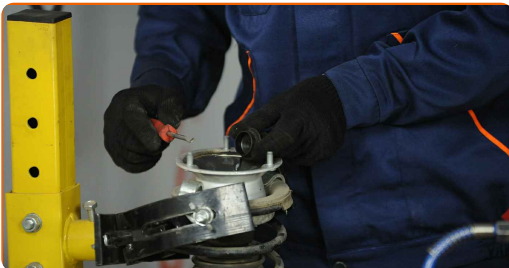
Replacement: suspension strut – BMW 3 Touring (E91). Professionals recommend:

- Note that when using a spring compressor, spring coils need to be securely gripped, compressing the spring on the opposite sides.
- Ensure the correct position of the spring in the retainer.
- Make sure that the spring coils tightly entered the lock handles.

29 Compress the spring.



30 Remove the shock strut mount cap. Use a flat screwdriver.





- 31 Treat the shock strut rod. Use a wire brush. Use WD-40 spray.



- 32 Remove the strut piston rod nut. Use a drive socket #21. Use a ratchet wrench.

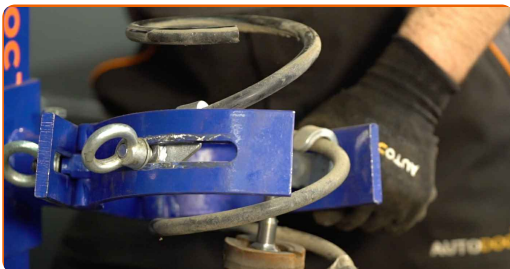


- 33 Remove the top strut mount. Use a flat screwdriver.



- 34 Release the coil spring.

- 35 Remove the spring.



36

Remove the shock absorber dust cap and the bump stop.



#### AUTODOC recommends:

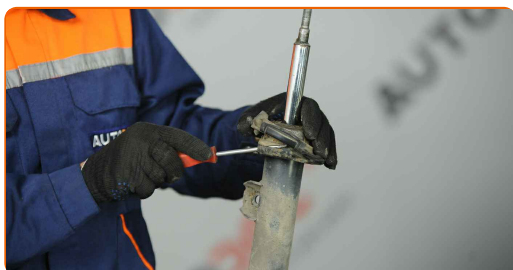
- Replacement: suspension strut – BMW 3 Touring (E91). Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.

37

Remove the old shock absorber from the hydraulic coil spring compressor.

38

Remove the rubber spring spacer. Use a flat screwdriver.



Replacement: suspension strut – BMW 3 Touring (E91). AUTODOC experts recommend:

- Before installing a new shock absorber you should pump it manually 3-5 times.