



How to change front
suspension strut on
Volvo XC90 1 –
replacement guide

VIDEO TUTORIAL



Important!

This replacement procedure can be used for:

VOLVO XC90 I (275) 2.4 D5, VOLVO XC90 I (275) 3.2 AWD, VOLVO XC90 I (275) 2.5 T AWD, VOLVO XC90 I (275) 2.9 T6, VOLVO XC90 I (275) 4.4 V8, VOLVO XC90 I (275) 2.4 D5 AWD

The steps may slightly vary depending on the car design.

REPLACEMENT: SUSPENSION STRUT – VOLVO XC90 1.
LIST OF THE TOOLS YOU'LL NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Drive socket # 13
- Drive socket # 21
- Combination spanner #18
- Combination spanner #21
- Torx bit T30
- Torx bit T40
- Wheel impact socket #19
- Ratchet wrench
- Torque wrench
- Pin punch
- Hammer
- Flat Screwdriver
- Hydraulic strut spring compressor
- Fender cover
- Wheel chock

BUY TOOLS

Replacement: suspension strut – Volvo XC90 1. AUTODOC experts recommend:

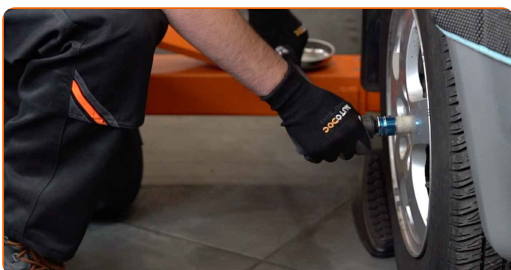
- Both shock struts of the front suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right shock struts of the front suspension.
- Please note: all work on the car – Volvo XC90 1 – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Secure the wheels with chocks.



2 Loosen the wheel mounting bolts. Use wheel impact socket #19.



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.
Volvo XC90 1

5

Remove the wheel.



6

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



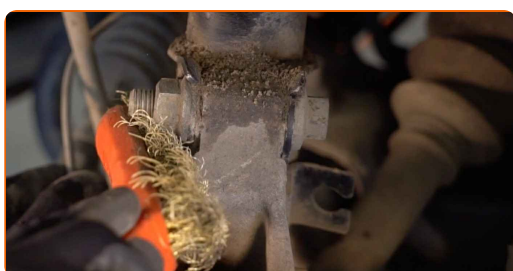
- 7** Unscrew the fastener connecting the stabilizer link to the shock strut. Use a combination spanner #18. Use Torx T30. Use a ratchet wrench.



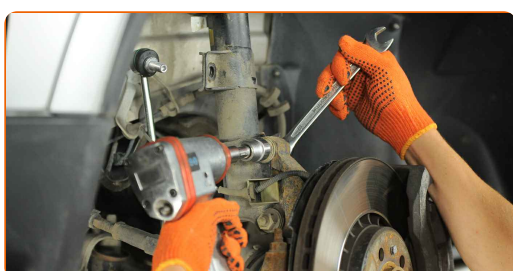
- 8** Remove the stabilizer rod.



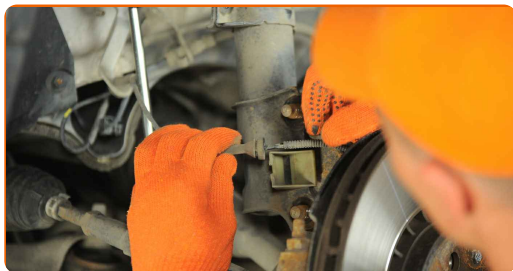
- 9** Clean the fasteners connecting the shock strut to the steering knuckle. Use a wire brush. Use WD-40 spray.



- 10** Unscrew the fasteners connecting the suspension strut to the steering knuckle. Use a combination spanner #18. Use a drive socket #21. Use a ratchet wrench.



11 Disconnect the ABS sensor wiring. Use a flat screwdriver.



12 Remove the fastening bolts.



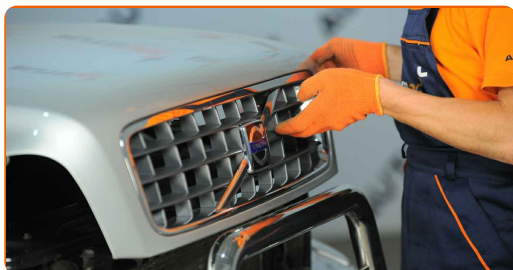
13 Disconnect the steering knuckle from the shock absorber strut.



14 Lower the car.

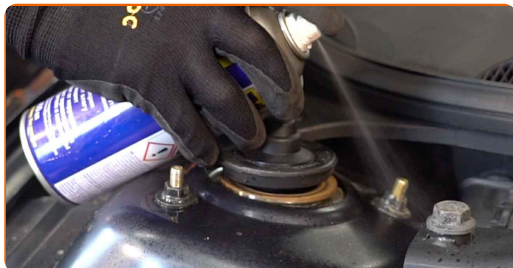


15 Open the bonnet.

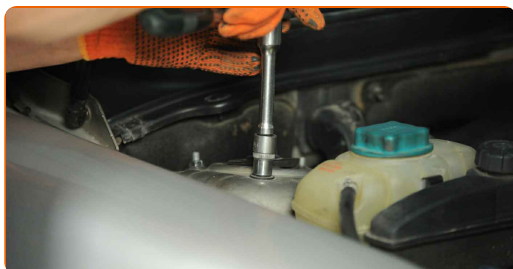


16 Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

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



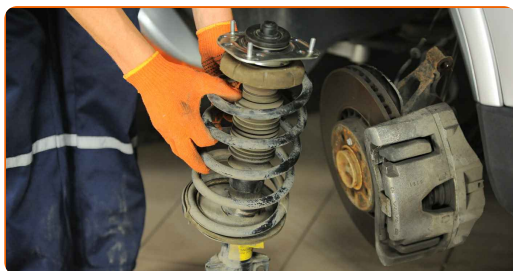
18 Unscrew the upper fasteners of the shock strut. Use a drive socket #13. Use a ratchet wrench.



AUTODOC recommends:

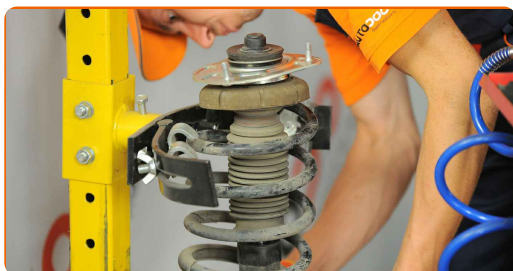
- Important! Hold the suspension strut while unscrewing the fastening bolts. Volvo XC90 1

19 Remove the suspension strut.



20

Set the shock absorber strut on the spring compressor tool.

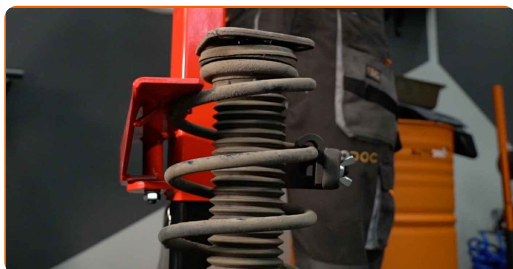


Replacement: suspension strut – Volvo XC90 1. AUTODOC recommends:

- 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.

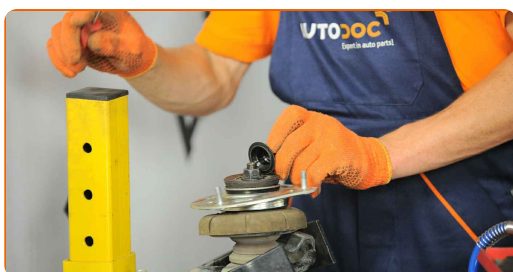
21

Compress the spring.



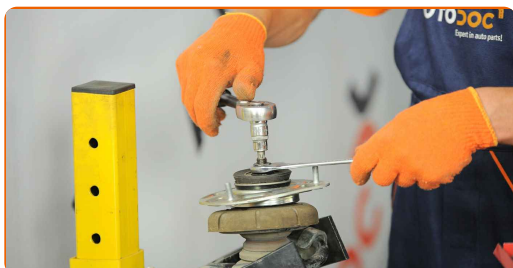
22

Remove the suspension strut mount cap. Use a flat screwdriver.



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

24 Unscrew the mount fasteners, while securing in place the shock absorber piston rod. Use a combination spanner #21. Use Torx T40. Use a ratchet wrench.

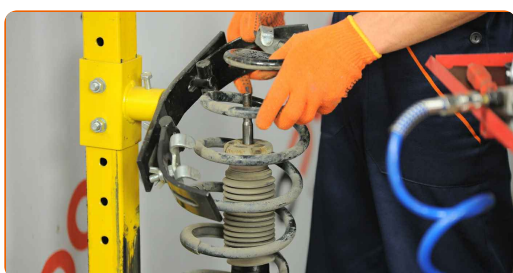


25 Release the coil spring.

26 Remove the top strut mount.



27 Remove the spring.



28 Remove the shock absorber dust cap and the bump stop.

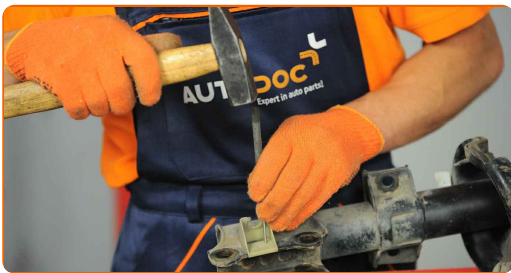
AUTODOC recommends:

- Replacement: suspension strut – Volvo XC90 1. Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.

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



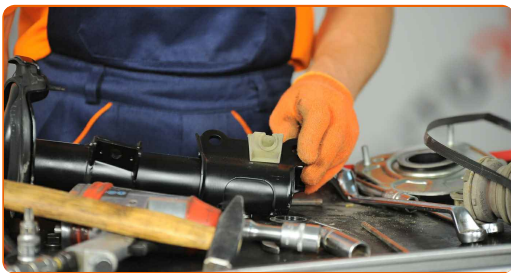
30 Remove the ABS wiring harness bracket. Use a pin punch. Use a hammer.



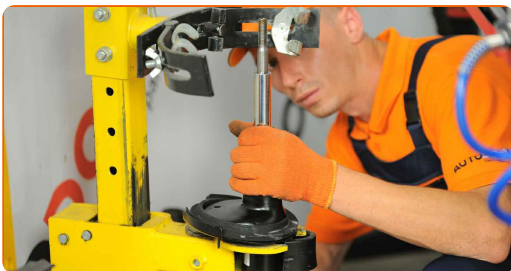
Replacement: suspension strut – Volvo XC90 1. Tip:

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

31 Install the ABS wiring harness bracket.

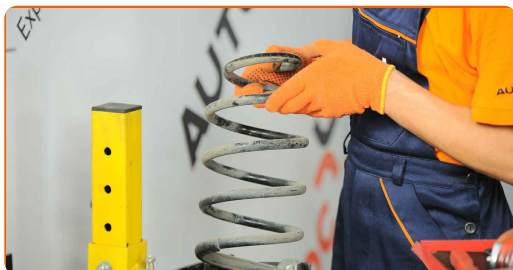


32 Install the new shock absorber on the hydraulic coil spring compressor.



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

34 Install the spring on the shock absorber.



35 Compress the spring.

36 Install the upper strut mount and the strut mount bearing.



37 Tighten the shock strut piston rod nut. Use a flat screwdriver. Use a combination spanner #21. Use Torx T40. Use a torque wrench. Tighten it to 70 Nm torque.

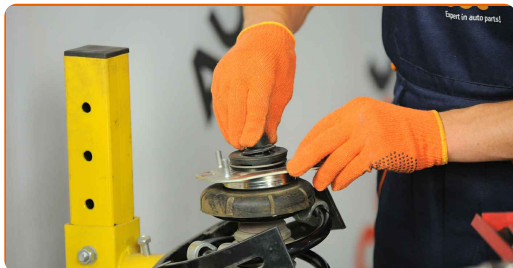


Replacement: suspension strut – Volvo XC90 1. Tip from AUTODOC experts:

- Check to make sure the spring is positioned correctly. Avoid its misalignment.

38 Treat the shock strut rod. Use copper grease.

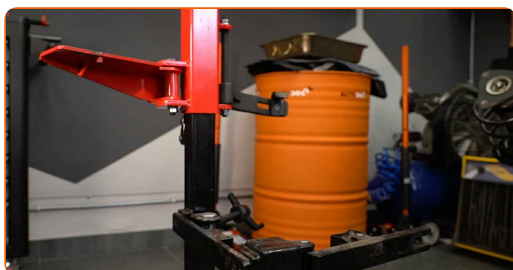
39 Install the suspension strut mount cap.



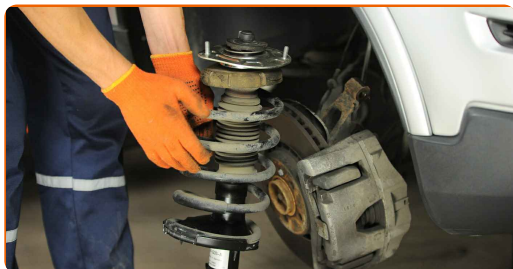
40 Decompress the spring.



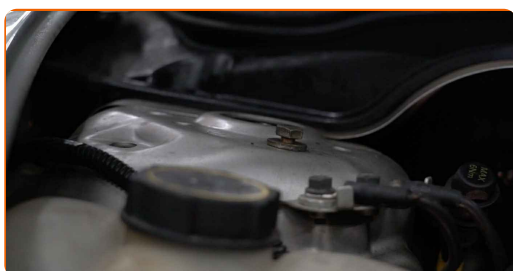
41 Remove the assembled shock strut.



42 Install the shock strut into the wheel arch.



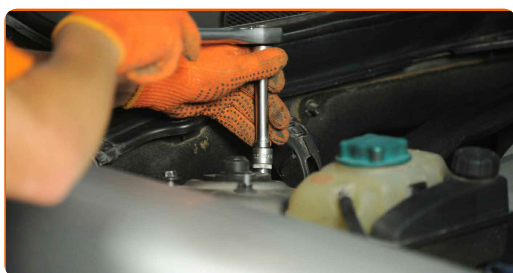
43 Secure the upper fasteners of the shock strut.



AUTODOC recommends:

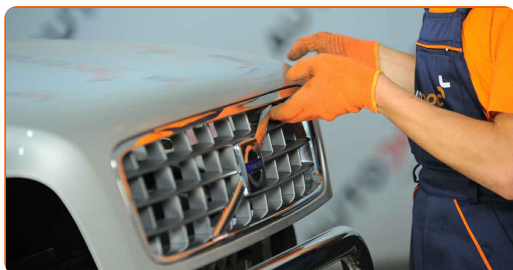
- Volvo XC90 1 – To avoid injury, hold the suspension strut while screwing in the fastening bolts.

44 Tighten the upper fasteners of the shock strut. Use a drive socket #13. Use a torque wrench. Tighten it to 25 Nm torque.



45 Remove the fender protection cover.

46 Close the hood.

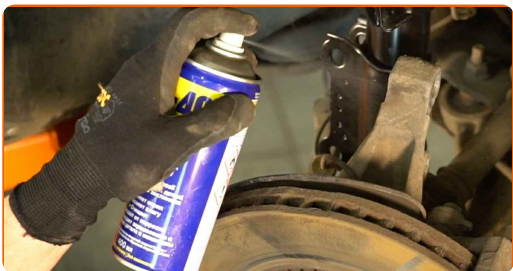


47 Raise the front of the car and secure on supports.



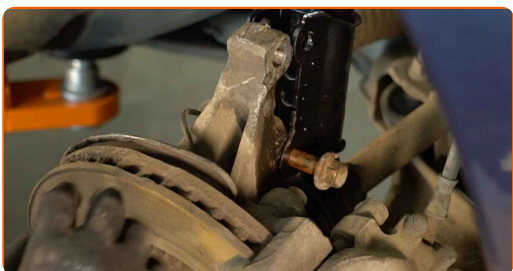
48

Treat the shock strut mounting seat on the steering knuckle. Use a wire brush. Use WD-40 spray.



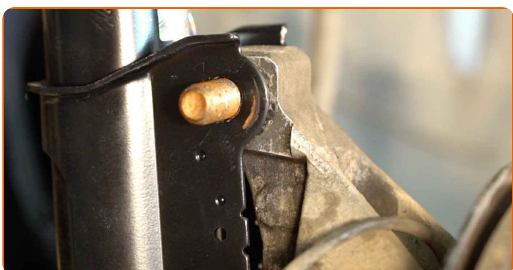
49

Fix the shock absorber strut on the steering knuckle.



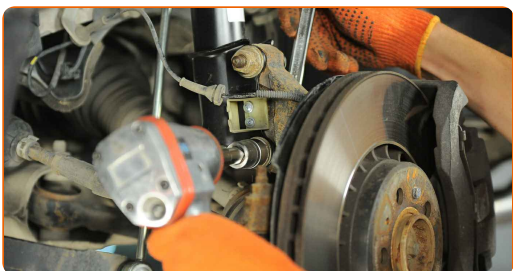
50

Install the fastening bolts.



51

Tighten the lower fasteners connecting the shock strut to the steering knuckle. Use a combination spanner #18. Use a drive socket #21. Use a torque wrench. Tighten it to 105 Nm torque.+75°

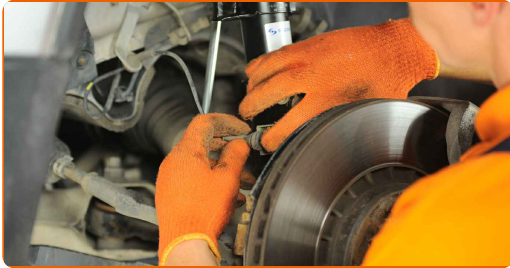


AUTODOC recommends:

- Important! Be sure to use new fasteners.

52

Connect the ABS sensor wiring.



53

Install the transverse stabilizer link.

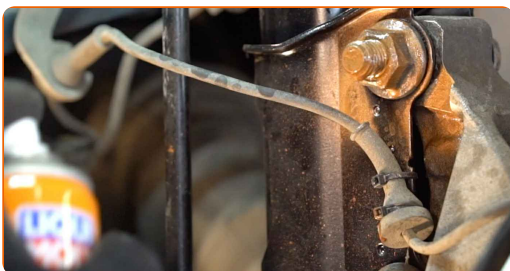
54

Tighten the fastener connecting the stabilizer link to the shock strut. Use a combination spanner #18. Use Torx T30. Use a torque wrench. Tighten it to 90 Nm torque.



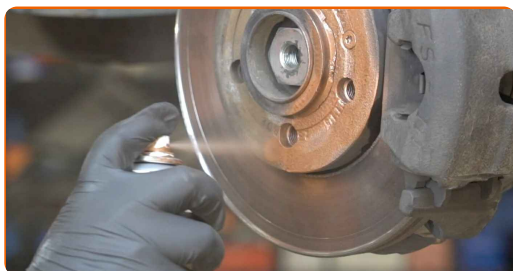
55

Treat all joints of the stabiliser link. Treat the shock strut fasteners. Use copper grease.



56

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



57

Clean the brake disk surface. Use a brake cleaner.



AUTODOC recommends:

- Replacement: suspension strut – Volvo XC90 1. After applying the spray, wait a few minutes.

58

Install the wheel.



AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. Volvo XC90 1

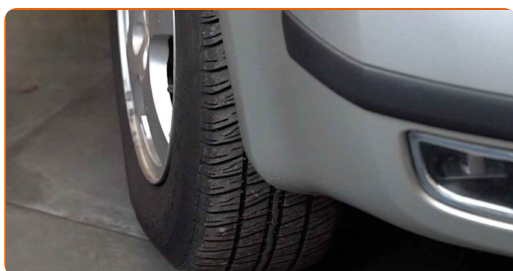
59 Screw in the wheel bolts. Use wheel impact socket #19.



60 Lower the car and working in a cross order, tighten the wheel bolts. Use wheel impact socket #19. Use a torque wrench. Tighten it to 140 nm torque.



61 Remove the jacks and chocks.



WELL DONE! 

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