



How to change rear
suspension strut on **MINI
Convertible (R52)** –
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:

MINI Convertible (R52) 1.6 One, MINI Convertible (R52) 1.6 Cooper, MINI Convertible (R52) 1.6 Cooper S, MINI Convertible (R52) 1.6 John Cooper Works

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: MINI Hatchback (R50, R53) 1.6 Cooper

REPLACEMENT: SUSPENSION STRUT – MINI CONVERTIBLE (R52). TOOLS YOU MIGHT NEED:



- Wire brush
- WD-40 spray
- Copper grease
- Combination spanner #19
- Drive socket # 13
- Drive socket # 21
- HEX bit No.H6.
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Tap wrench
- Hydraulic transmission jack
- Hydraulic strut spring compressor
- Wheel chock

Buy tools

Replacement: suspension strut – MINI Convertible (R52). Tip from AUTODOC experts:

- Both shock struts of the rear suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right shock struts of the rear suspension.
- Warning! Shut down the engine before starting any work – MINI Convertible (R52).

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.



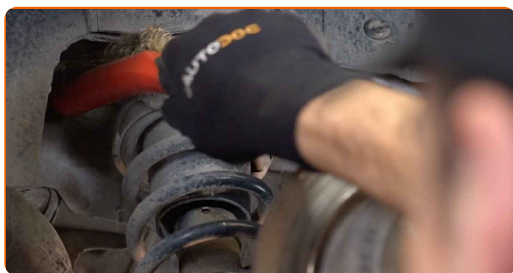
Replacement: suspension strut – MINI Convertible (R52). Tip:

- To avoid injury, hold up the wheel when unscrewing the bolts.

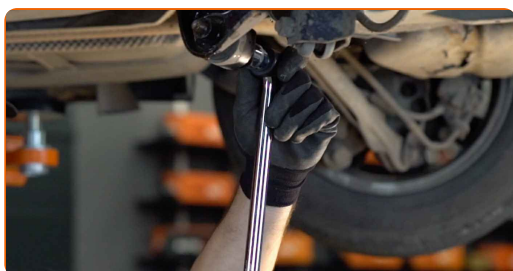
5 Remove the wheel.



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



7 Unscrew the lower fastener of the shock absorber strut. Use a drive socket #21. Use a ratchet wrench. Use a tap wrench.



8

Disconnect the wiring and the brake hose from the bracket on the shock strut.



9

Unscrew the upper fastening of the shock absorber strut. Use a drive socket #13. Use a ratchet wrench.

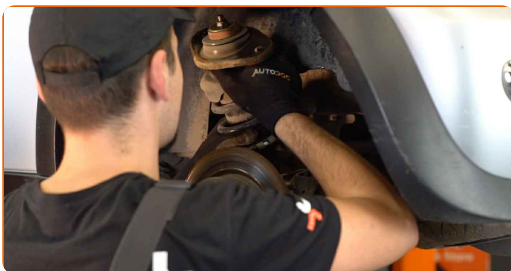


Replacement: suspension strut – MINI Convertible (R52). AUTODOC recommends:

- To avoid injuries, hold the shock strut when undoing the fastening bolts.

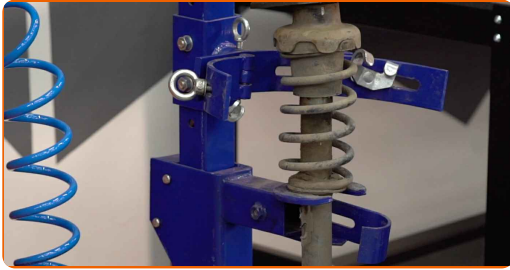
10

Remove the suspension strut.



11

Set the shock absorber strut on the spring compressor tool.



Replacement: suspension strut – MINI Convertible (R52). AUTODOC experts 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.

12

Compress the spring.



13

Remove the strut piston rod nut. Use HEX No.H6. Use a combination spanner #19. Use a ratchet wrench.



14 Remove the shock absorber mount, boot and bump stop.



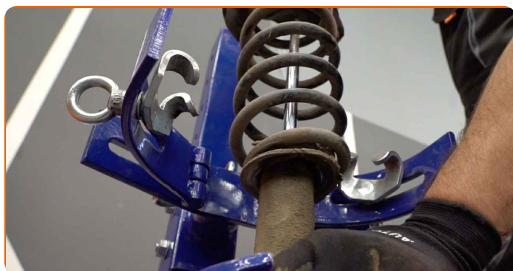
AUTODOC recommends:

- Replacement: suspension strut – MINI Convertible (R52). Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.

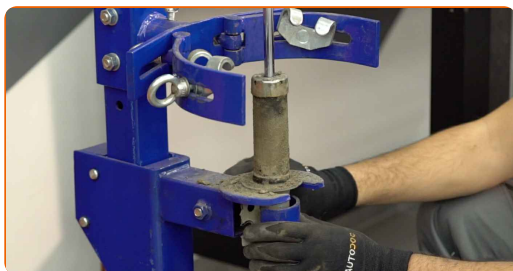
15 Release the coil spring.



16 Remove the spring.



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



Replacement: suspension strut – MINI Convertible (R52). Professionals recommend:

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

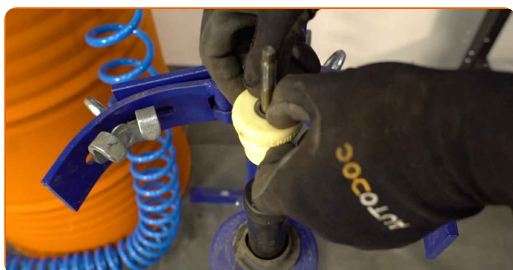
18

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



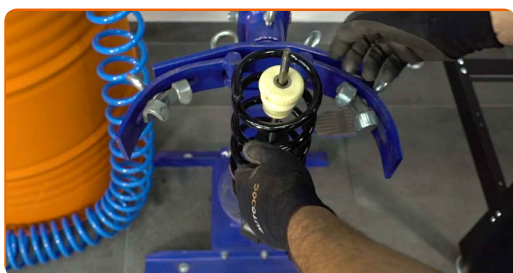
19

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



20

Install the spring on the shock absorber.

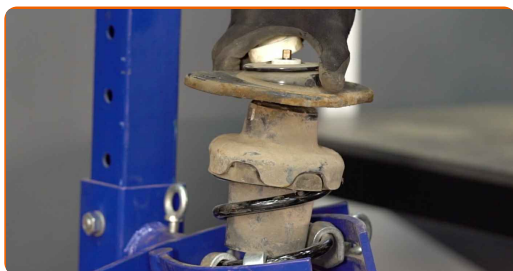


21

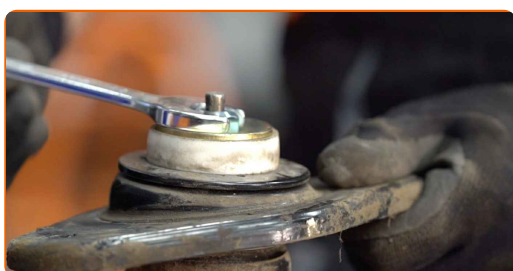
Compress the spring.



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



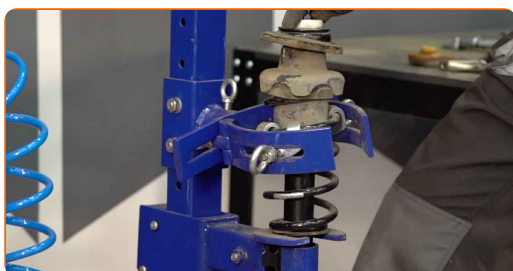
23 Tighten the shock strut piston rod nut. Use HEX No.H6. Use a combination spanner #19. Use a torque wrench. Tighten it to 30 Nm torque.



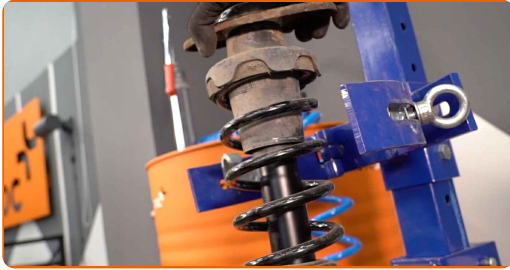
Replacement: suspension strut – MINI Convertible (R52). AUTODOC recommends:

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

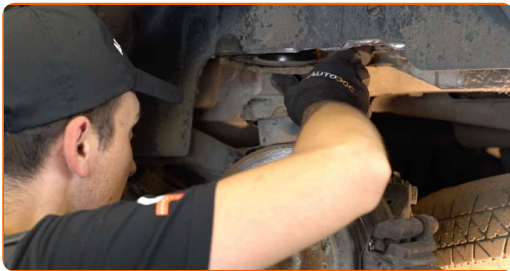
24 Decompress the spring.



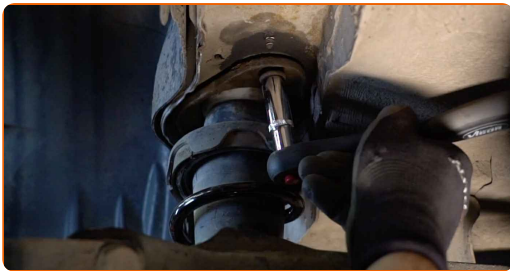
25 Remove the assembled shock strut.



26 Install the shock strut into the wheel arch.



27 Tighten the shock strut top mount. Use a drive socket #13. Use a torque wrench. Tighten it to 56 Nm torque.



28 Install the lower fastener of the shock strut.



AUTODOC recommends:

- MINI Convertible (R52) – To avoid injury, hold the suspension strut while screwing in the fastening bolts.

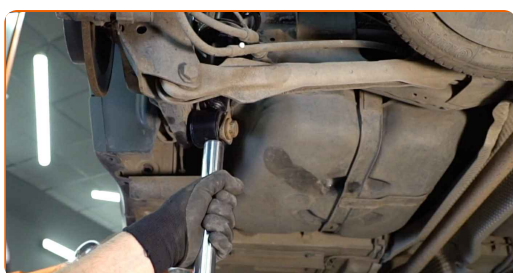
29 Support the arm. Use a hydraulic transmission jack.



30 Tighten the lower fastening of the shock absorber. Use a drive socket #21. Use a torque wrench. Tighten it to 140 Nm torque.



31 Remove the support from under the rear arm.



AUTODOC recommends:

- MINI Convertible (R52) – Do not lower the transmission jack sharply to avoid damaging components and mechanisms of the car.

32

Clean the wheel rim mounting seat. Use a wire brush. Treat the contacting surface. Use copper grease.



33

Install the wheel.



Replacement: suspension strut – MINI Convertible (R52). Tip from AUTODOC:

- To avoid injury, hold up the wheel when screwing in the fastening bolts.

34

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

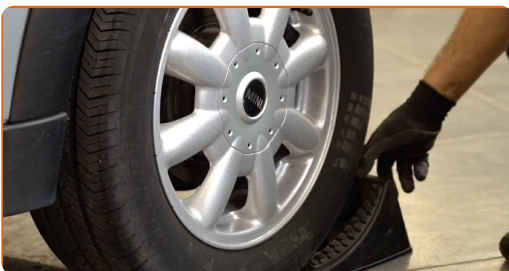


35

Lower the car and working in a cross order, tighten the wheel bolts. Use a torque wrench. Tighten it to 110 Nm torque.

**36**

Remove the jacks and chocks.



WELL DONE! 

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