



How to change front coil
springs on **Mazda 3 BK** –
replacement guide

VIDEO TUTORIAL



Important!

This replacement procedure can be used for:
MAZDA 3 Hatchback (BK) 1.6, MAZDA 3 Hatchback (BK) 1.4

The steps may slightly vary depending on the car design.

REPLACEMENT: COIL SPRINGS – MAZDA 3 BK. LIST OF THE TOOLS YOU'LL NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Drive socket # 14
- Drive socket # 17
- Combination spanner #18
- HEX bit no.H6.
- Wheel impact socket #19
- Ratchet wrench
- Torque wrench
- Hydraulic strut spring compressor
- Flat Screwdriver
- Rubber mallet
- Fender cover
- Wheel chock

BUY TOOLS

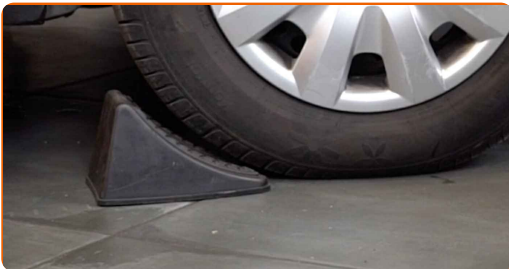
Replacement: coil springs – Mazda 3 BK. Tip from AUTODOC experts:

- Both coil springs of the front suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right coil springs of the front suspension.
- Please note: all work on the car – Mazda 3 BK – 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.

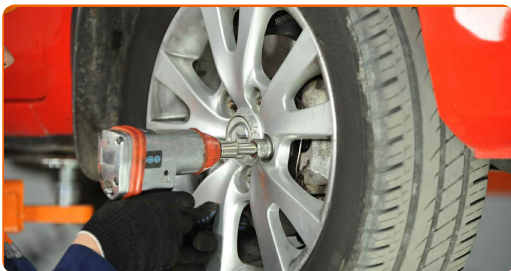


3

Raise the front of the car and secure on supports.



4 Unscrew the wheel bolts.



AUTODOC recommends:

- Important! Hold the wheel while unscrewing the fastening bolts. Mazda 3 BK

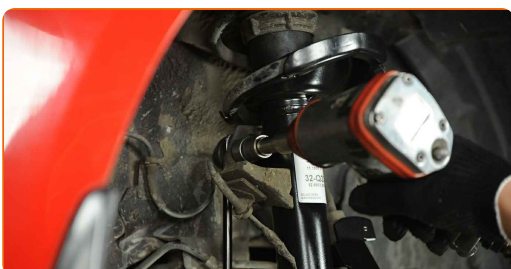
5 Remove the wheel.



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



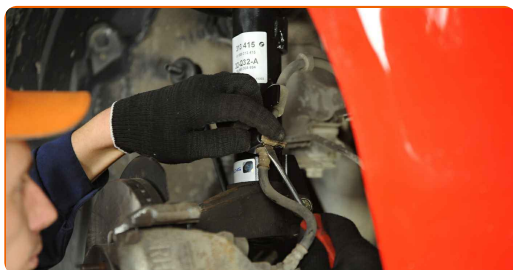
7 Unscrew the fastener connecting the stabilizer link to the shock strut. Use a drive socket #17. Use a ratchet wrench.



8 Remove the ABS wiring harness bracket.

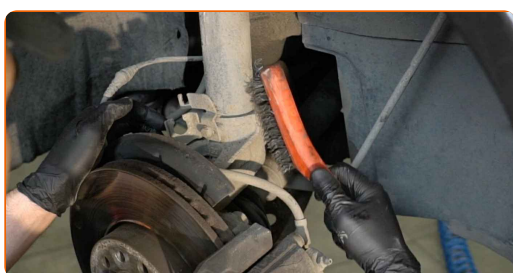
9 Remove the stabilizer rod.

10 Remove the fastener attaching the brake hose to the shock strut. Use a flat screwdriver.

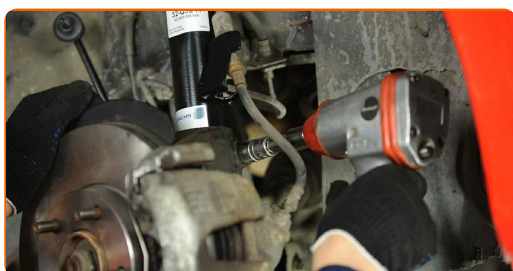


11 Detach the brake hose from the shock strut.

12 Clean the lower fastener connecting the suspension strut to the steering knuckle. Use a wire brush. Use WD-40 spray.



13 Unscrew the lower fastener connecting the shock strut to the steering knuckle. Use a drive socket #17. Use a ratchet wrench.



14 Remove the fastening bolt.

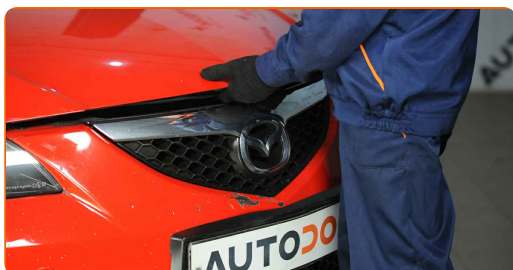
15 Disconnect the steering knuckle from the shock absorber strut. Use a rubber mallet.



16 Lower the car.



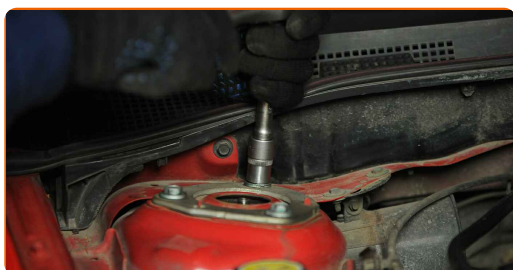
17 Open the bonnet.



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

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

20 Unscrew the upper fasteners of the shock strut (3 pieces). Use a drive socket #14. Use a ratchet wrench.

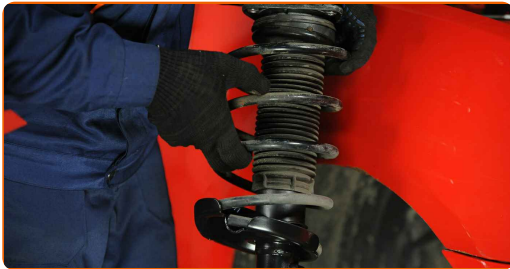


AUTODOC recommends:

- Important! Hold the suspension strut while unscrewing the fastening bolts.
Mazda 3 BK

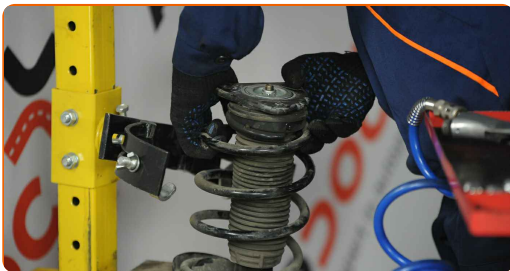
21

Remove the suspension strut.



22

Set the shock absorber strut on the spring compressor tool.



Replacement: coil springs – Mazda 3 BK. Tip from AUTODOC experts:

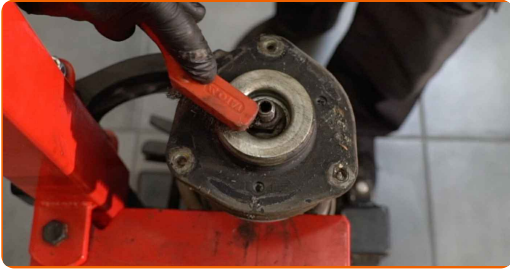
- Note that when using a spring compressor, spring coils need to be securely gripped, compressing the spring on the opposite sides.
- Ensure the correct position of the spring in the retainer.
- Make sure that the spring coils tightly entered the lock handles.

23

Compress the spring.

24

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



25

Remove the strut piston rod nut. Use a combination spanner #18. Use HEX No.H6. Use a ratchet wrench.



26

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



AUTODOC recommends:

- Thoroughly examine the shock absorber mount, dust boot, and bump stop. Replace them if necessary.

27

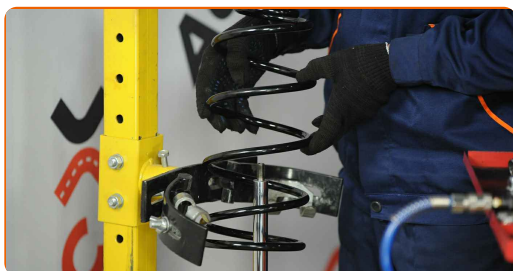
Release the coil spring.



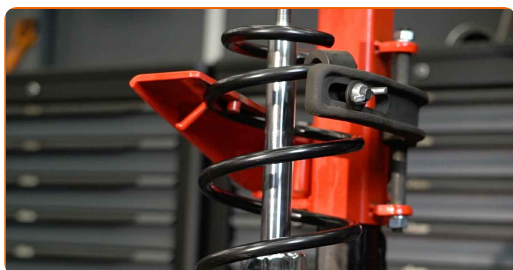
28 Remove the spring.



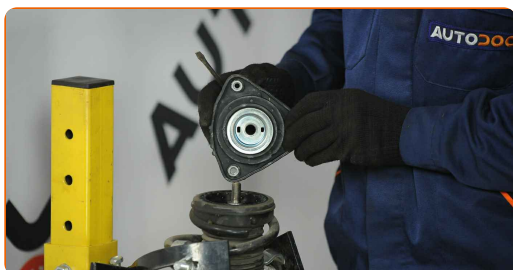
29 Install the spring on the shock absorber.



30 Compress the spring.



31 Install the mount, the boot and the bump stop on the shock absorber.



32 Tighten the shock strut piston rod nut. Use a combination spanner #18. Use HEX No.H6. Use a torque wrench. Tighten it to 60 Nm torque.



Replacement: coil springs – Mazda 3 BK. AUTODOC experts recommend:

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

33 Decompress the spring.

34 Treat the shock strut rod. Use copper grease.

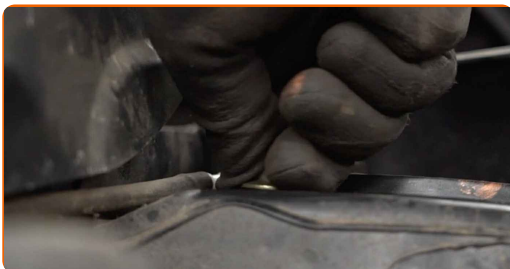


35 Remove the assembled shock strut.

36 Install the shock strut into the wheel arch.



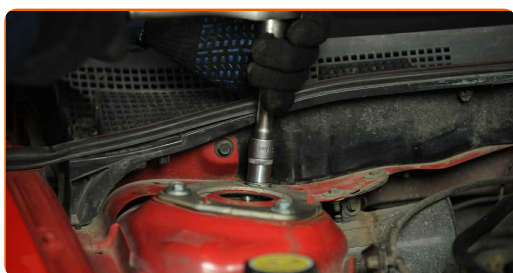
37 Secure the upper fasteners of the shock strut (3 pieces).



AUTODOC recommends:

- Important! Hold the suspension strut while screwing in the fastening bolts.
Mazda 3 BK

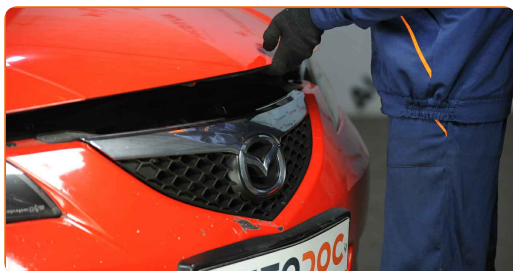
38 Tighten the upper fasteners of the shock strut (3 pieces). Use a drive socket #14. Use a torque wrench. Tighten it to 30 Nm torque.



39 Treat the fasteners of the shock strut mount. Use copper grease.

40 Remove the fender protection cover.

41 Close the hood.



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



43 Fix the shock absorber strut on the steering knuckle. Use a rubber mallet.

44

Prop up the steering knuckle. Use a hydraulic transmission jack.

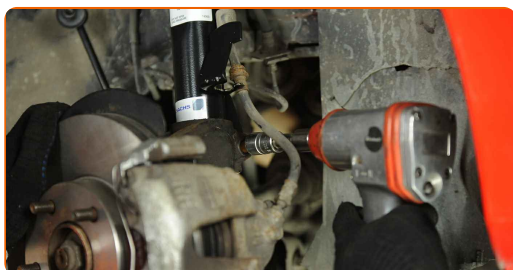


45

Install the fastening bolt.

46

Tighten the lower fastening of the shock absorber. Use a drive socket #17. Use a torque wrench. Tighten it to 70 Nm torque.

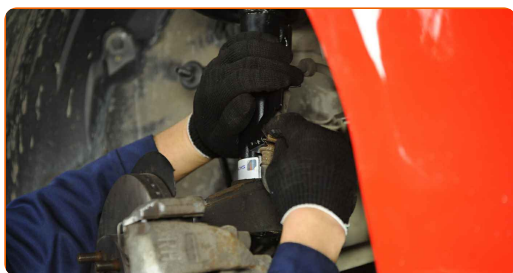


47

Fasten the brake hose on the strut.

48

Install the brake hose retaining clip. Use a rubber mallet.



49

Remove the support from under the steering knuckle.



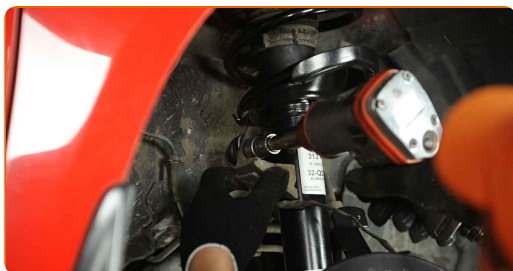
AUTODOC recommends:

- Replacement: coil springs – Mazda 3 BK. Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

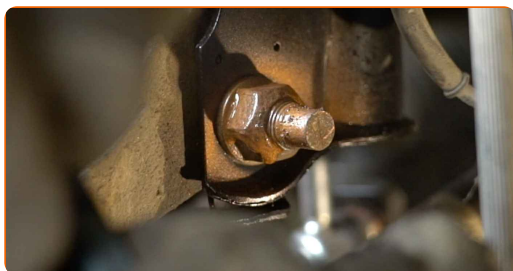
50 Install the transverse stabilizer link.

51 Install the ABS wiring harness bracket.

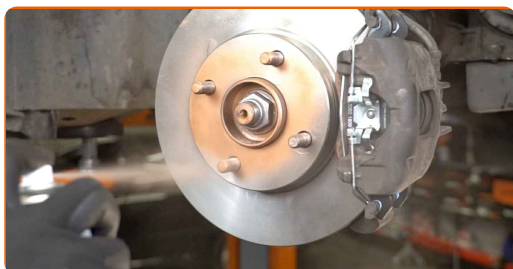
52 Tighten the fastener connecting the stabilizer link to the shock strut. Use a drive socket #17. Use a torque wrench. Tighten it to 50 Nm torque.



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

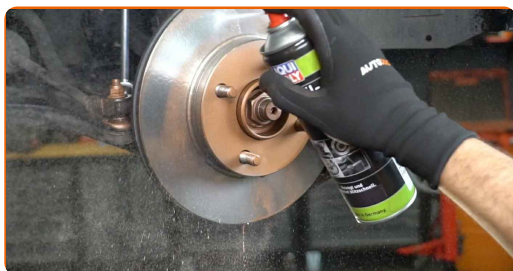


54 Treat the surface where the brake disc contacts the wheel rim. Use copper grease.



55

Clean the brake disk surface. Use a brake cleaner.



AUTODOC recommends:

- Replacement: coil springs – Mazda 3 BK. After applying the spray, wait a few minutes.

56

Install the wheel.



AUTODOC recommends:

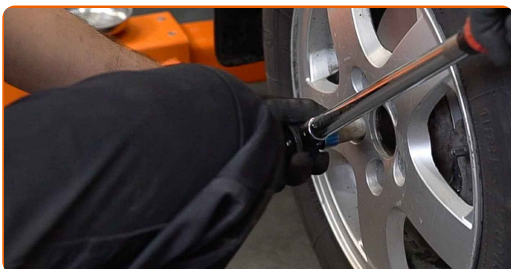
- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. Mazda 3 BK

57

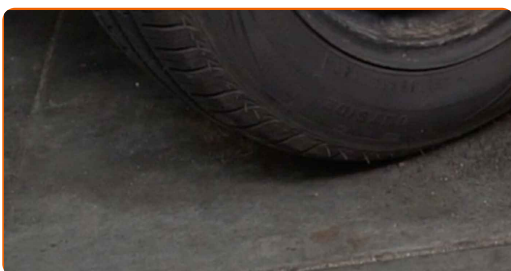
Screw in the wheel bolts. Use wheel impact socket #19.



- 58** 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 118 nm torque.



- 59** Remove the jacks and chocks.



WELL DONE! 

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