



How to change front
wheel bearing on
MERCEDES-BENZ
VANEO (414) –
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:

MERCEDES-BENZ Vaneo (414) 1.7 CDI (414.700), MERCEDES-BENZ Vaneo (414) 1.6 (414.700), MERCEDES-BENZ Vaneo (414) 1.9 (414.700)

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: MERCEDES-BENZ A-Class (W168) A 170 CDI (168.009, 168.109)

REPLACEMENT: WHEEL BEARING – MERCEDES-BENZ Vaneo (414). TOOLS YOU MIGHT NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Torque wrench
- Combination spanner #13
- Combination spanner #18
- HEX bit No.H4
- Torx bit T30
- Drive socket # 13
- Drive socket # 18
- Drive socket # 19
- Drive socket # 30
- Wheel impact socket #17
- Bush and bearing driver set
- Ratchet wrench
- Pin punch
- Flat chisel
- Tap wrench
- Hammer
- Rubber mallet
- Impact screwdriver
- Circlip pliers
- Crow bar
- Ball joint puller
- Wheel chock

Buy tools

Replacement: wheel bearing – MERCEDES-BENZ Vaneo (414). Professionals recommend:

- Do not re-use the bearing assembly of your MERCEDES-BENZ Vaneo (414) car.
- The wheel hub bearing replacement procedure is identical for both wheels on the same axle.
- All work should be done with the engine stopped.

REPLACEMENT: WHEEL BEARING – MERCEDES-BENZ Vaneo (414). USE THE FOLLOWING PROCEDURE:

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.

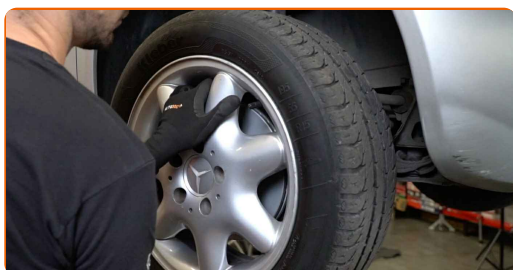


AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts.
MERCEDES-BENZ Vaneo (414)

5

Remove the wheel.



6

Remove the wheel hub nut cap. Use a crowbar. Use a hammer.

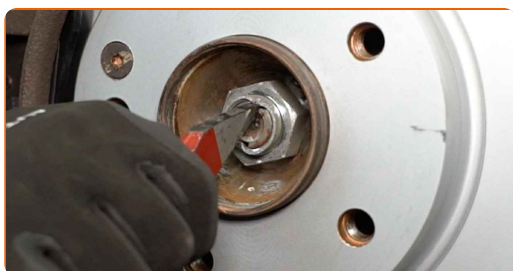


Replacement: wheel bearing – MERCEDES-BENZ Vaneo (414). Tip:

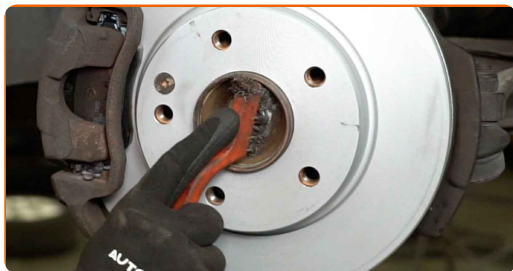
- In some cars, the wheel hub nut is not protected with a cap.

7

Unstake the wheel hub retaining nut. Use a flat metal-working chisel. Use a hammer.



8 Clean the wheel hub fastener. Use a wire brush. Use WD-40 spray.



9 Unscrew the hub nut. Use a drive socket #30. Use a tap wrench.



10 Detach the driveshaft from the steering knuckle. Use a pin punch. Use a hammer.



11 Remove the fastening nut.



12 Spread the brake pads. Use a crowbar.



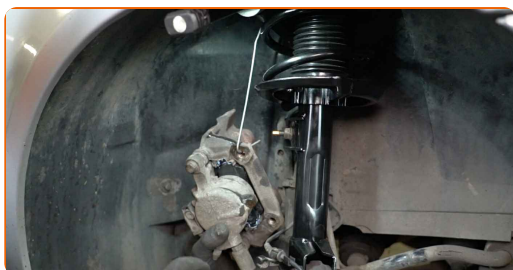
13 Clean the brake caliper bracket fasteners. Use a wire brush. Use WD-40 spray.



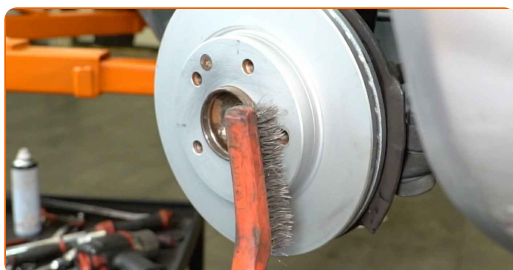
14 Unscrew the caliper bracket fastening. Use a drive socket #18. Use a ratchet wrench. Use a tap wrench.



15 Remove the brake caliper together with its bracket.



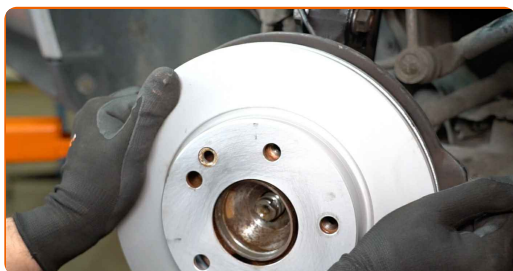
16 Clean the brake disc fastener. Use a wire brush. Use WD-40 spray.



17 Unscrew the brake disc fastening. Use Torx T30. Use an impact screwdriver.



18 Remove the brake disc.



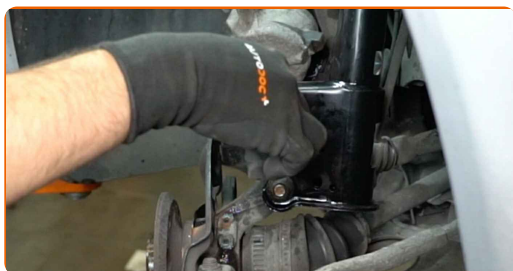
19 Clean the ABS sensor fastener. Use a wire brush. Use WD-40 spray.



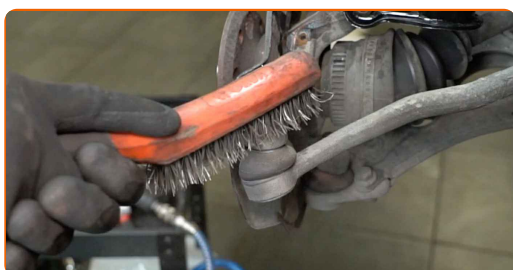
20 Unscrew the ABS sensor fastener. Use HEX No.H4. Use a ratchet wrench.



21 Disconnect the ABS sensor.



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



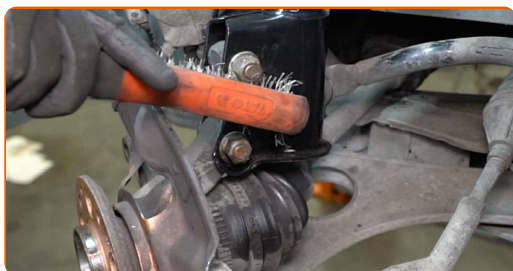
23 Unscrew the end fastening nut to the steering knuckle. Use a drive socket #19. Use a ratchet wrench.



24 Disconnect the tie rod end from the steering knuckle. Use a ball joint puller.



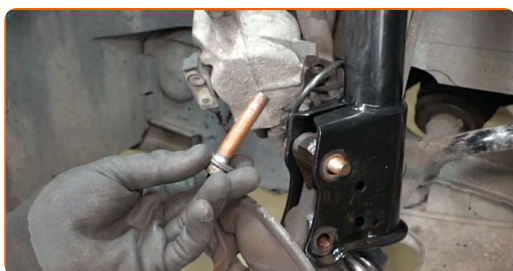
25 Clean the fasteners connecting the shock strut to the steering knuckle. Use a wire brush. Use WD-40 spray.



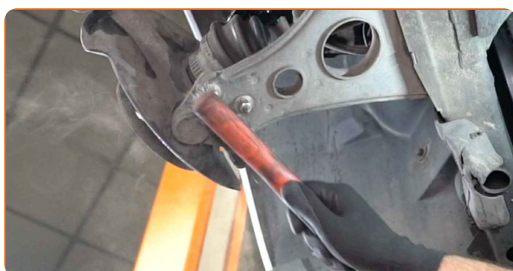
26 Unscrew the fasteners connecting the suspension strut to the steering knuckle. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.



27 Remove the fastening bolt.



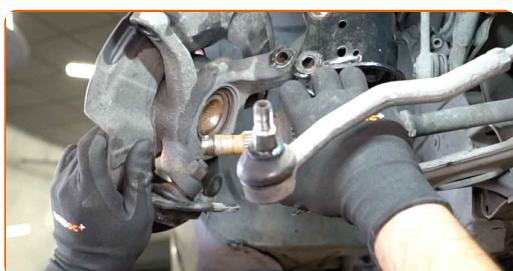
28 Clean the fasteners connecting the ball joint to the suspension control arm. Use a wire brush. Use WD-40 spray.



- 29 Unscrew the fastener connecting the ball joint to the suspension control arm. Use a combination spanner #13. Use a drive socket #13. Use a ratchet wrench.

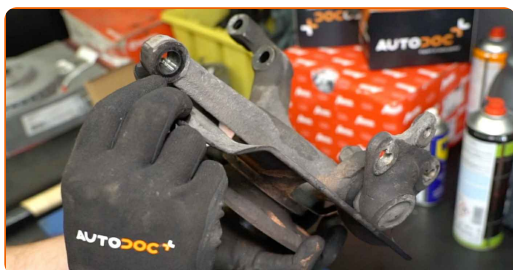


- 30 Remove the drive shaft.

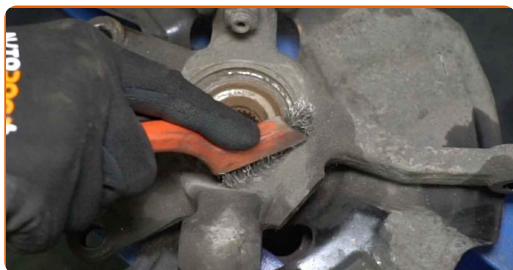


- 31 Remove the fastening bolt.

- 32 Remove the steering knuckle together with the hub.



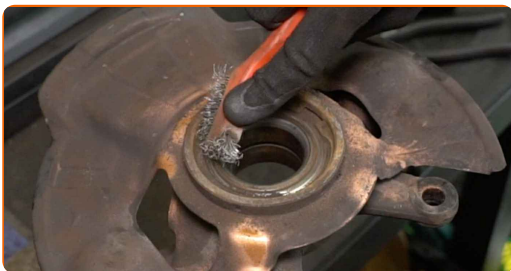
- 33 Clean the wheel hub mounting seat. Use a wire brush. Use WD-40 spray.



34 Remove the wheel hub from the steering knuckle. Use a bush and bearing driver set. Use a hammer.



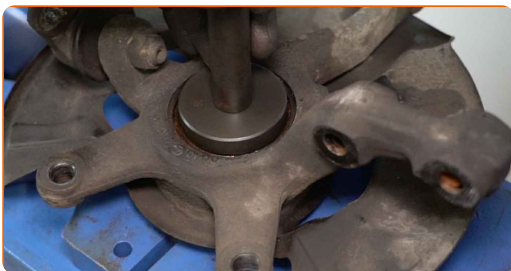
35 Clean the wheel hub bearing retaining ring. Use a wire brush. Use WD-40 spray.



36 Remove the wheel hub bearing retaining ring. Use circlip pliers.

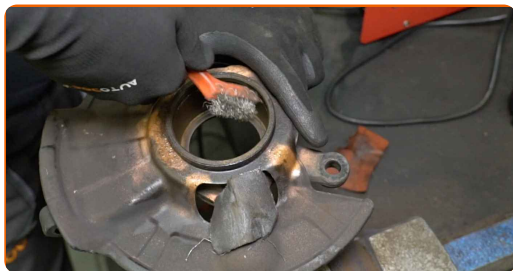


37 Press out the wheel hub bearing. Use a bush and bearing driver set.



38

Clean the hub bearing mounting seat. Use a wire brush. Use WD-40 spray.



39

Press the new bearing in the steering knuckle. Use a bush and bearing driver set.



Replacement: wheel bearing – MERCEDES-BENZ Vaneo (414). AUTODOC experts recommend:

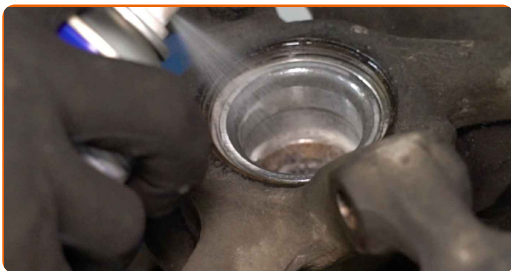
- Check to make sure the wheel hub bearing is positioned correctly. Avoid its misalignment.
- Stop pressing on the surface of the bearing immediately after it has been fitted into its mounting seat.

40

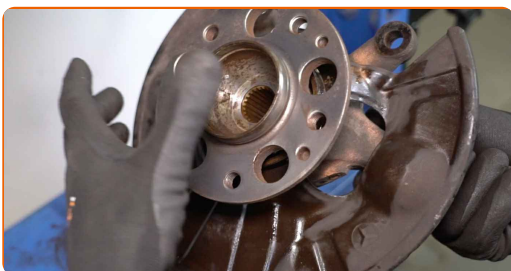
Install the wheel hub bearing retaining ring. Use circlip pliers.



41 Clean the hub. Use WD-40 spray.



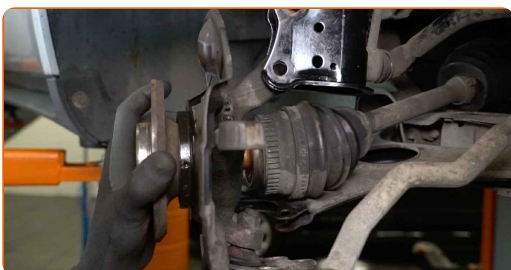
42 Install the wheel hub on the steering knuckle. Use a bush and bearing driver set.



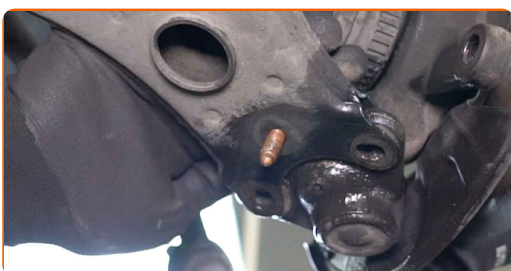
43 Clean the splines of the drive shaft CV joint. Use a wire brush. Use WD-40 spray.



44 Install the steering knuckle assembled with the wheel hub. Install the drive shaft.



45 Install the fastening bolt.



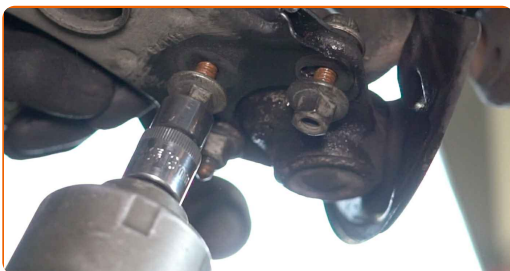
46

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



47

Tighten the fastener connecting the ball joint to the steering knuckle. Use a combination spanner #13. Use a drive socket #13. Use a ratchet wrench.



48

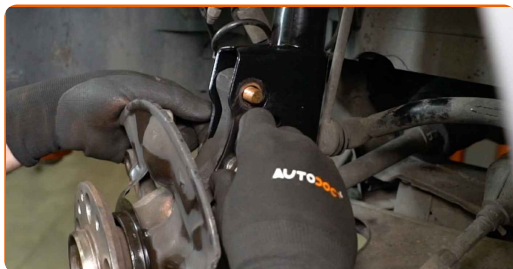
Tighten the fasteners connecting the ball joint to the control arm. Use a drive socket #13. Use a torque wrench. Tighten it to 20 Nm torque.+45°



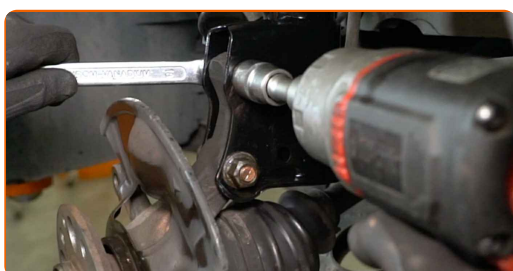
AUTODOC recommends:

- Important! Be sure to use new fasteners.

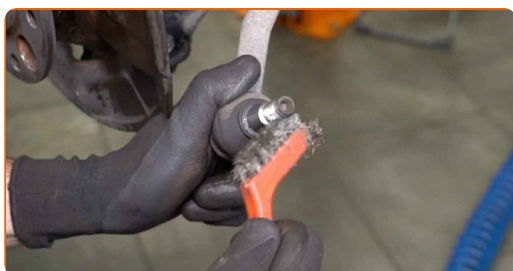
49 Install the fastening bolt.



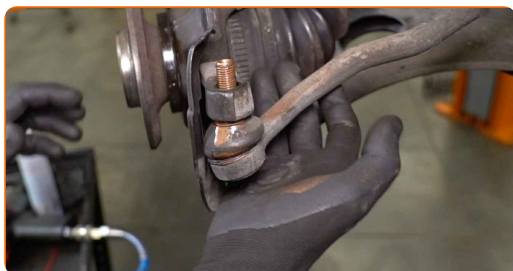
50 Screw in the fasteners connecting the suspension strut to the steering knuckle. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.



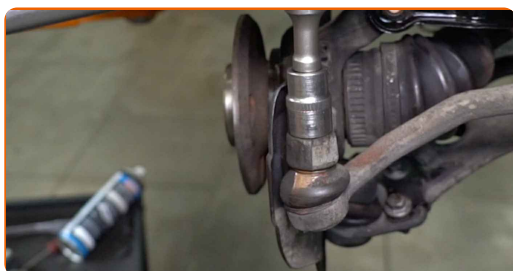
51 Clean the mounting seats of the tie rod end. Use a wire brush. Use WD-40 spray.



52 Connect the tie rod end to the steering knuckle.



- 53** Tighten the fastening nut connecting the tie rod end to the steering knuckle. Use a drive socket #19. Use a torque wrench. Tighten it to 30 Nm torque. +90°



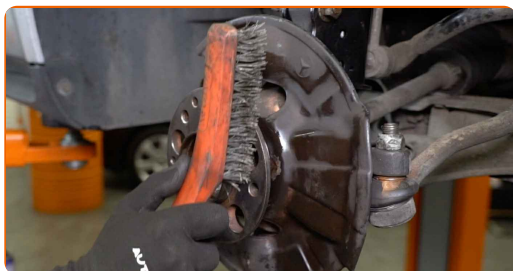
AUTODOC recommends:

- Important! Be sure to use new fasteners.

- 54** Tighten the lower fasteners connecting the shock strut to the steering knuckle. Use a combination spanner #18. Use a drive socket #18. Use a torque wrench. Tighten it to 100 Nm torque.



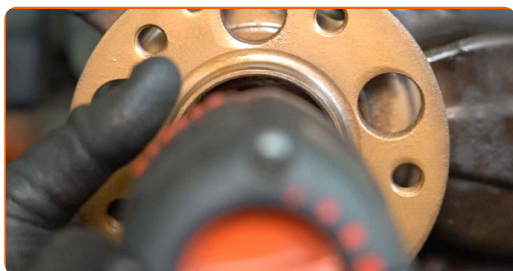
- 55** Clean the hub. Use a wire brush. Treat the contacting surface. Use copper grease.



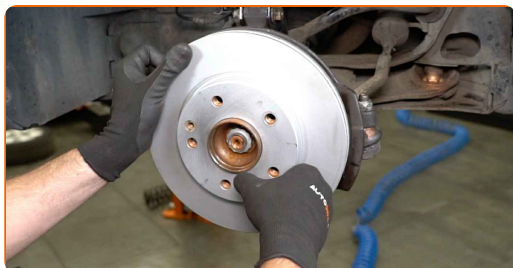
56 Install the fastening nut.



57 Screw on the hub nut. Use a drive socket #30. Use a ratchet wrench.



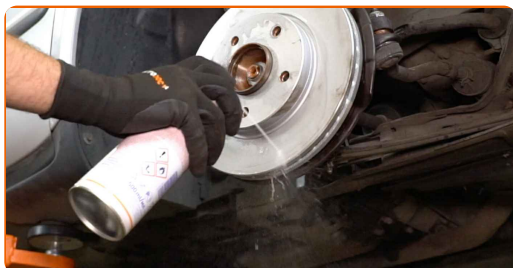
58 Install the brake disc.



59 Tighten the brake disc fastening. Use Torx T30. Use a torque wrench. Tighten it to 9 Nm torque.



60 Clean the brake disk surface. Use a brake cleaner.

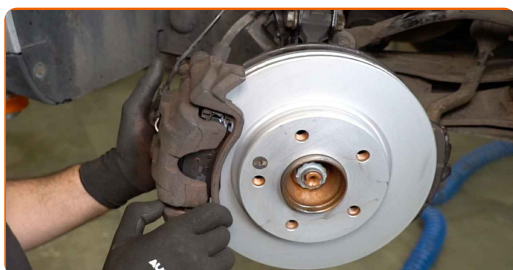


AUTODOC recommends:

- Replacement: wheel bearing – MERCEDES-BENZ Vaneo (414). After applying the spray, wait a few minutes.

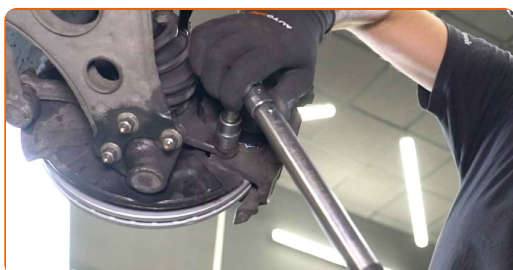
61

Install the brake caliper together with its bracket.



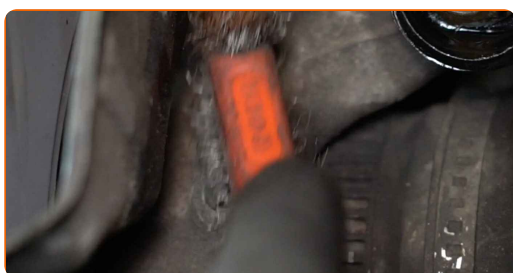
62

Tighten the brake caliper bracket. Use a drive socket #18. Use a torque wrench. Tighten it to 115 Nm torque.



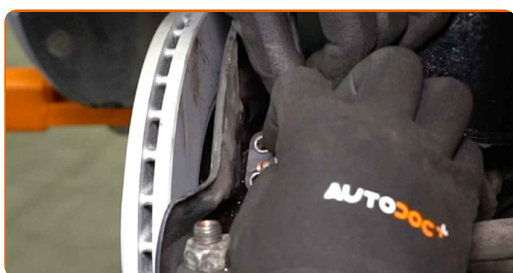
63

Clean the ABS sensor mounting seat. Use a wire brush. Use WD-40 spray.

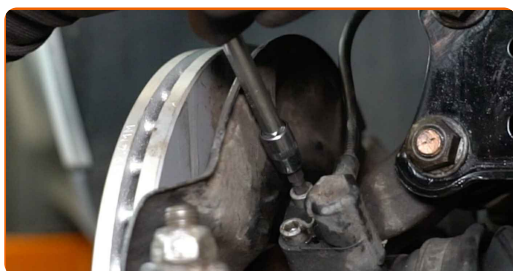


64

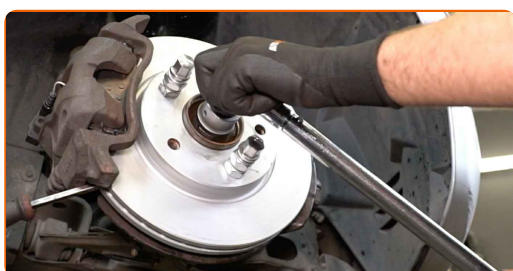
Connect the ABS sensor.



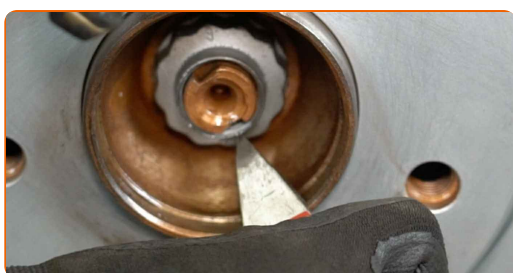
- 65 Tighten the fastener that connects the ABS sensor to the steering knuckle. Use HEX No.H4. Use a torque wrench. Tighten it to 5 nm torque.



- 66 Tighten the wheel hub nut. Use a drive socket #30. Use a torque wrench. Tighten it to 182 Nm torque.



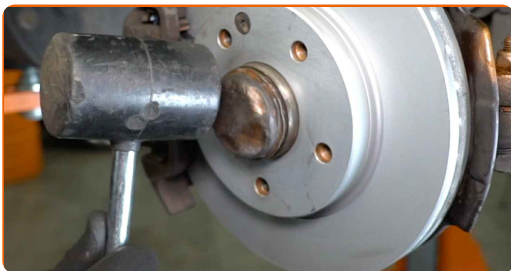
- 67 Restake the wheel hub retaining nut. Use a flat metal-working chisel. Use a hammer.



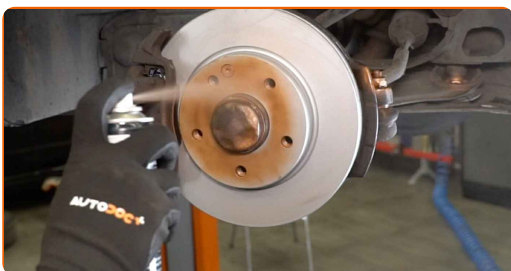
- 68 Treat the steering knuckle fasteners. Treat the wheel hub nut. Use copper grease.



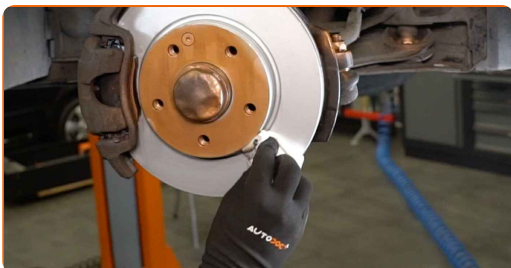
69 Install the cap of the hub nut. Use a rubber mallet.



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



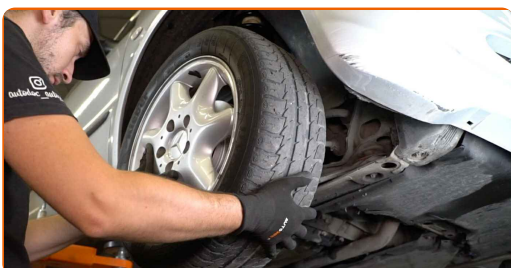
71 Clean the brake disk surface. Use a brake cleaner.



Replacement: wheel bearing – MERCEDES-BENZ Vaneo (414). Tip from AUTODOC:

- After applying the spray, wait a few minutes.

72 Install the wheel.



AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. MERCEDES-BENZ Vaneo (414)

73

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



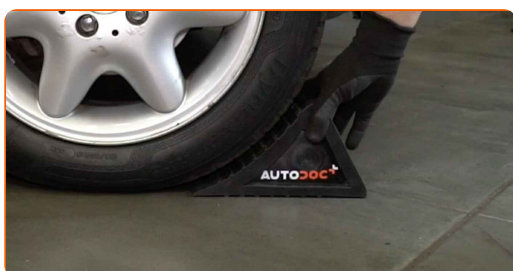
74

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 110 Nm torque.



75

Remove the jacks and chocks.



WELL DONE! 

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