# **+** AUTODOC CLUB

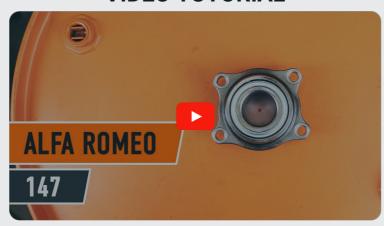
How to change front wheel bearing on **Alfa Romeo 147 937** – replacement guide







### **VIDEO TUTORIAL**



### important!

This replacement procedure can be used for:

ALFA ROMEO 147 (937) 2.0 16V T.SPARK, ALFA ROMEO 147 (937) 1.6 16V T.SPARK, ALFA ROMEO 147 (937) 1.6 16V T.SPARK, ALFA ROMEO 147 (937) 1.9 JTD, ALFA ROMEO 147 (937) 1.9 JTD 16V (937.AXG1B, 937.BXG1B), ALFA ROMEO 147 (937) 1.9 JTD (937.AXF1A, 937.BXF1A), ALFA ROMEO 147 (937) 1.9 JTDM 8V (937.AXD1A, 937.AXU1A, 937.BXU1A), ALFA ROMEO 147 (937) 1.9 JTDM 16V (937.AXN1B, 937.BXN1B), ALFA ROMEO 147 (937) 1.9 JTD 16V (937.AXM1B, 937.AXS1B), ALFA ROMEO 147 (937) 2.0 (937.AXC, 937.BXC), ALFA ROMEO 147 (937) 1.9 JTDM 16V (937.AXN1B, 937.AXZ1B), ALFA ROMEO 147 (937) 1.9 JTD (937AXD1A, 937BXD1A), ALFA ROMEO 147 (937) 1.6 LPG (937BXB1A), ALFA ROMEO 147 (937) 1.6 LPG (937AXA1A)

The steps may slightly vary depending on the car design.

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## REPLACEMENT: WHEEL BEARING – ALFA ROMEO 147 937. TOOLS YOU'LL NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Torque wrench
- Combination spanner #19
- Drive socket # 10
- Drive socket # 12
- Drive socket # 17
- Drive socket # 19
- Drive socket # 24
- Drive socket # 38
- HEX bit No.H7
- HEX bit No.H8

- Wheel impact socket #17
- Ratchet wrench
- Bush and bearing driver set
- Bearing separator
- Ball joint puller
- Flat screwdriver
- Phillips screwdriver
- Flat chisel
- Tap wrench
- Hammer
- Vice
- Crow bar
- Hydraulic transmission jack
- Wheel chock

**BUY TOOLS** 

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### **AUTODOC** recommends:

- Do not re-use the bearing assembly of your Alfa Romeo 147 937 car.
- The wheel hub bearing replacement procedure is identical for both wheels on the same axle.
- Please note: all work on the car Alfa Romeo 147 937 should be done with the engine switched off.

### CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

Open the bonnet. Unscrew the brake fluid reservoir cap.



- Secure the wheels with chocks.
- Loosen the wheel mounting bolts. Use wheel impact socket #17.



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



5 Unscrew the wheel bolts.



### **AUTODOC** recommends:

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts.
  Alfa Romeo 147 937
- Remove the wheel.



Clean the fastener of the driveshaft. Use a wire brush. Use WD-40 spray.



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- Unstake the fastener of the driveshaft. Use a flat metal-working chisel. Use a hammer.
- Loosen the fastener of the driveshaft. Use a drive socket #38. Use a tap wrench.



- 10 Remove the fastening nut.
- Remove the dust boot caps of the brake caliper guide pins. Use a crowbar.



Unscrew the brake caliper fastening. Use HEX No.H7. Use a ratchet wrench.



Detach the brake caliper retaining spring. Use a crowbar.



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Spread the brake pads. Use a crowbar.



Remove the brake caliper.



## Replacement: wheel bearing – Alfa Romeo 147 937. AUTODOC experts recommend:

- Tie the caliper to the suspension or to the body with a wire without disconnecting from the brake hose to prevent depressurization of the brake system.
- Make sure that the brake caliper is not hanging on the brake hose.
- Don't press the brake pedal after the brake caliper has been removed. As a result, the piston can fall out from the brake cylinder, and brake fluid leakage and depressurization of the system may occur.
- Check the brake caliper bracket, brake caliper guide pins and boots. Clean them.
  Replace, if necessary.

Remove the brake pads.

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



Unscrew the caliper bracket fastening. Use a drive socket #19. Use a ratchet wrench. Use a tap wrench.



Remove the caliper bracket.



- Clean the brake disc fastener. Use a wire brush. Use WD-40 spray.
- Unscrew the brake disc fastening. Use a drive socket #12. Use a ratchet wrench.
- Remove the brake disc.



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Unscrew and remove the wheel arch cover fasteners. Use a Phillips screwdriver.



Remove the wheel arch cover.



Detach the ABS sensor connector.



Remove the cowl grille seal.

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Disconnect the ABS sensor wiring. Use a flat screwdriver.



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Clean the fastening bolt that connects the shock absorber fork with the lower control arm. Use a wire brush. Use WD-40 spray.



Unscrew the fastening bolt that connects the shock absorber fork with the lower control arm. Use a combination spanner #19. Use a drive socket #19. Use a ratchet wrench.



Remove the fastening bolt.



- Clean the fastener connecting the ball joint to the steering knuckle. Use a wire brush. Use WD-40 spray.
- Unscrew the ball joint fastening to the steering knuckle. Use a drive socket #24. Use a ratchet wrench.



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Disconnect the ball joint from the steering knuckle. Use a ball joint puller. Use a hammer.



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



Unscrew the end fastening nut to the steering knuckle. Use a drive socket #17. Use a ratchet wrench.



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



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Clean the control arm fasteners. Use a wire brush. Use WD-40 spray.



Unscrew the fastener that connects the suspension arm to the steering knuckle. Use a drive socket #17. Use a ratchet wrench.



Detach the control arm. Use a ball joint puller.

40



Remove the steering knuckle together with the hub.



Replacement: wheel bearing – Alfa Romeo 147 937. Professionals recommend:

Make sure that the drive shaft is not unloaded (when the car is jacked).

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- Place the steering knuckle assembled with the wheel hub in a vice.
- Clean the fasteners of the brake disc cover. Use a wire brush. Use WD-40 spray.



Unscrew the fasteners of the brake disc cover. Use a drive socket #10. Use a ratchet wrench.



Remove the brake disc cover.



- Clean the wheel hub mounting seat. Use a wire brush. Use WD-40 spray.
- Release the vice and remove the steering knuckle assembled with the wheel hub.

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



Place the steering knuckle in the vice.



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



Unscrew the fastener that connects the wheel hub bearing to the steering knuckle. Use HEX No.H8. Use a ratchet wrench. Use a tap wrench.



Loosen the vice and remove the steering knuckle.

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



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



Pull the bearing inner race out of the wheel hub. Use a bush and bearing driver set. Use a bearing separator.



Treat the wheel hub bearing. Use copper grease.



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58







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



## Replacement: wheel bearing – Alfa Romeo 147 937. Tip from AUTODOC experts:

- 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.
- Tighten the wheel hub bearing fasteners. Use HEX No.H8. Use a ratchet wrench. Use a tap wrench.



Tighten the fastener of the wheel hub bearing. Use HEX No.H8. Use a torque wrench. Tighten it to 76 Nm torque.



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Treat the wheel hub fasteners. Use WD-40 spray.



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



### Replacement: wheel bearing – Alfa Romeo 147 937. AUTODOC recommends:

• Make sure that the wheel hub is positioned correctly. Avoid any misalignment.

61 Install the brake disc cover.

62



Screw in the fasteners of the brake disc cover. Use a drive socket #10. Use a ratchet wrench.



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



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



65 Install the steering knuckle with a hub in assembly.



66 Attach the control arm.



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Screw in the fastener that connects the suspension arm to the steering knuckle. Use a drive socket #17. Use a ratchet wrench.



- Connect the ball joint to the steering knuckle.
- Screw the fastener connecting the ball joint to the steering knuckle. Use a drive socket #24. Use a ratchet wrench.



70 Install the fastening nut.



- 71 Screw the nut of the drive shaft.
- Treat the mounting seats of the tie rod end. Use a wire brush. Use WD-40 spray.



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Connect the tie rod end to the steering knuckle.



Screw on the fastening nut that connects the tie rod end to the steering knuckle. Use a drive socket #17. Use a ratchet wrench.



75 Install the fastening bolt.



Screw in the fastener connecting the shock absorber fork to the lower control arm. Use a combination spanner #19. Use a drive socket #19. Use a ratchet wrench.



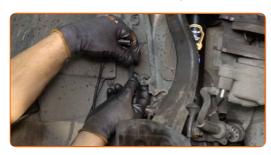
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77 Connect the ABS sensor wiring.



78 Attach the ABS sensor connector.



79 Install the cowl grille seal.

81



Install the wheel arch cover to its mounting seat.



Install and tighten the wheel arch cover fasteners. Use a Phillips screwdriver.



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Tighten the fastener that connects the suspension arm to the steering knuckle. Use a drive socket #17. Use a torque wrench. Tighten it to 50 nm torque.



Tighten the fastener connecting the ball joint to the steering knuckle. Use a drive socket #24. Use a torque wrench. Tighten it to 90 nm torque.



Tighten the fastening nut connecting the tie rod end to the steering knuckle. Use a drive socket #17. Use a torque wrench. Tighten it to 35 nm torque.



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



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Tighten the fastening bolt that connects the shock absorber fork to the lower control arm. Use a combination spanner #19. Use a drive socket #19. Use a torque wrench. Tighten it to 110 nm torque.



Remove the support from under the steering knuckle.

#### **AUTODOC** recommends:

- Alfa Romeo 147 937 Do not lower the transmission jack sharply to avoid damaging components and mechanisms of the car.
- Clean the hub. Use a wire brush. Treat the contacting surface. Use copper grease.



Install the brake disc.



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Tighten the brake disc fastening. Use a drive socket #12. Use a torque wrench. Tighten it to 11 nm torque.



Clean the brake caliper bracket from dirt and dust. Use a wire brush. Use a brake cleaner.



#### **AUTODOC** recommends:

- After applying the spray, wait a few minutes.
- 92 Install the brake caliper bracket.

93



Tighten the brake caliper bracket. Use a drive socket #19. Use a torque wrench. Tighten it to 115 nm torque.



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- 94 Install the brake pads.
- Install the brake caliper and fix it. Use HEX No.H7. Use a torque wrench. Tighten it to 35 Nm torque.



Install the dust boot caps of the brake caliper guide pins.



97 Install the brake caliper retaining spring. Use a crowbar.



Tighten the drive shaft nut. Use a drive socket #38. Use a torque wrench. Tighten it to 177 Nm torque.



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Restake the fastener of the driveshaft. Use a flat metal-working chisel. Use a hammer.



Treat all joints of the arm. Treat the steering knuckle fasteners. Use copper grease.



Clean the wheel rim mounting seat. Use a wire brush.



102

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



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103

Clean the brake disk surface. Use a brake cleaner.



## Replacement: wheel bearing - Alfa Romeo 147 937. Tip:

• After applying the spray, wait a few minutes.

104

Install the wheel.



#### **AUTODOC** recommends:

• Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. Alfa Romeo 147 937

105

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



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106

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 108 Nm torque.



107

Remove the jacks and chocks.



Replacement: wheel bearing – Alfa Romeo 147 937. Professionals recommend:

• Without starting the engine, press the brake pedal several times until you feel significant resistance.

108

Tighten the brake fluid reservoir cap. Close the hood.



WELL DONE!



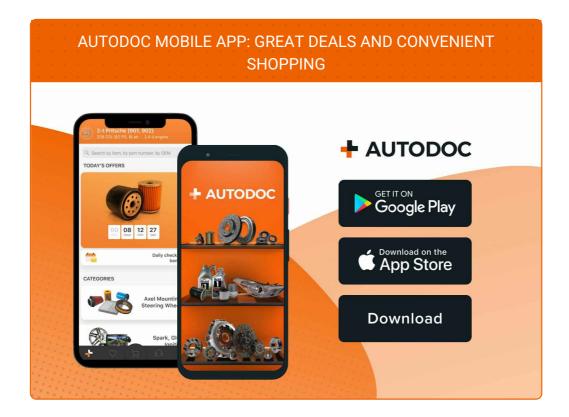
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