



How to change water pump & timing belt kit on **VW GOLF PLUS (5M1, 521)** – 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:
VW GOLF PLUS (5M1, 521) 1.4 16V

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: SEAT Ibiza III Hatchback (6L) 1.4 16V

**REPLACEMENT: WATER PUMP + TIMING BELT KIT –
VW GOLF PLUS (5M1, 521). LIST OF THE TOOLS YOU'LL
NEED:**



- Wire brush
- WD-40 spray
- All-purpose cleaning spray
- Sealant
- Torque wrench
- Combination spanner #13
- Combination spanner #16
- HEX bit No.H6.
- Drive socket # 10
- Drive socket # 15
- Drive socket # 16
- 12-point socket #21
- Ratchet wrench
- Engine timing tool set
- Universal pulley holder
- Funnel
- Fluid container
- Crow bar
- Hydraulic transmission jack
- Microfibre towel
- Fender cover

Buy tools

Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521).
 AUTODOC experts recommend:

- Follow the terms, recommendations and requirements of the part operation provided by the manufacturer.
- Please note: all work on the car – VW GOLF PLUS (5M1, 521) – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Open the bonnet.

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

3 Remove the protective cover.



4 Unscrew the fasteners of the car battery terminals. Use a drive socket #10. Use a ratchet wrench.



5 Remove the battery terminals.



6 On the right side, detach the PCV valve hose from the engine cover.



7 Remove the engine cover.



Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521). Tip:

- Raise the engine cover, holding it on two sides simultaneously.
- Do not apply excessive force when removing the part. Otherwise you may damage it.

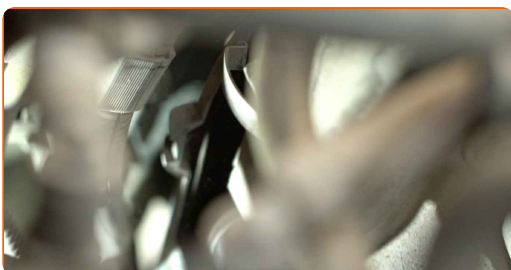
8 Cover the throttle body with a microfibre towel to prevent dust and dirt from getting into the system.



9 Undo the fasteners of the upper timing cover.



10 Remove the upper timing cover.

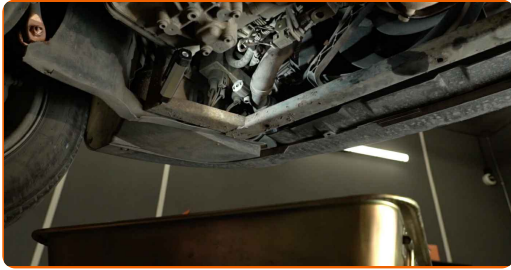


11 Unscrew the coolant reservoir cap.



12 Lift the car using a jack or place it over an inspection pit.

13 Prepare a container for fluids.



14 Open the coolant drain tap.



15 Drain the coolant from the engine.



AUTODOC recommends:

- Caution! The coolant can be very hot.
- Wear gloves to prevent contact with hot liquid.
- All work should be done with the engine stopped.

16 Pull aside the V-ribbed belt tensioner pulley. Use a combination spanner #16.



17 Remove the V-ribbed belt.



18 Return the tensioner pulley to its initial position.



19 Unscrew the fastener of the serpentine belt tensioner pulley. Use a combination spanner #16.



20 Remove the serpentine belt tensioner pulley.



21

Unscrew the crankshaft pulley fastener. Use 12-point socket No.21. Use a ratchet wrench.



22

Remove the crankshaft pulley.



23

Screw in the crankshaft pulley fastener. Use 12-point socket No.21. Use a ratchet wrench.



24

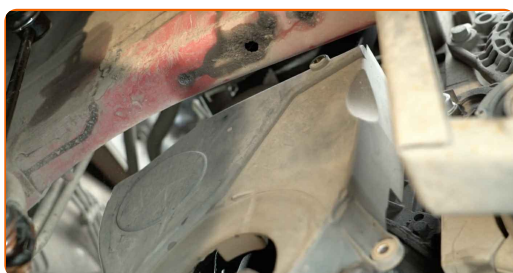
Unscrew the fasteners of the lower timing cover. Use a drive socket #10. Use a ratchet wrench.



25 Open the clips of the lower timing cover. Use a crowbar.



26 Remove the lower timing cover.



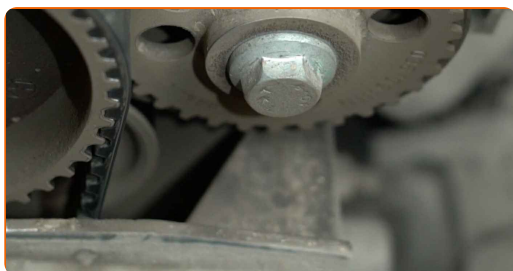
27 Turn the crankshaft gear. Use 12-point socket No.21. Use a ratchet wrench.



Please note!

- The piston should be at its top dead centre (TDC).

28 Install the camshaft gear locking tool according to the factory marks. Use an engine timing tool set.



29 Support the engine in the oil pan area. Use a hydraulic transmission jack.



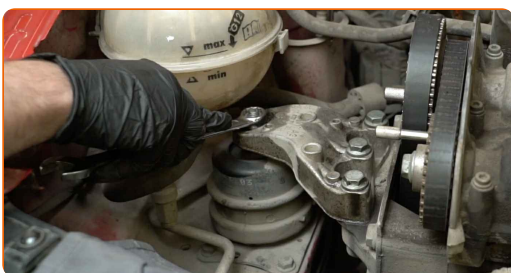
30 Clean the engine mount fasteners. Use a wire brush. Use WD-40 spray.



31 Detach the coolant pipe bracket.



32 Unscrew the upper fastener of the engine mount. Use a combination spanner #16. Use a drive socket #16. Use a ratchet wrench.



33 Remove the fastening bolts.



34 Clean the engine mount fasteners. Use a wire brush. Use WD-40 spray.



35 Unscrew the engine mount fasteners. Use a drive socket #16. Use a ratchet wrench.



36 Remove the fastening bolts.



37 Remove the engine mount.



38 Make a mark on the crankshaft gear.



39 Make a mark on the camshaft gear.



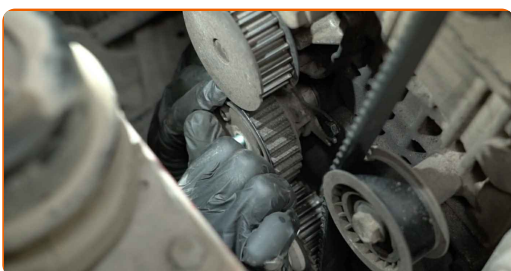
40 Make a mark on the timing belt.



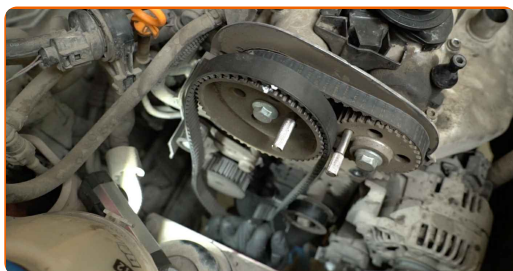
41 Loosen the fastener of the timing belt tensioner pulley. Use a combination spanner #13. Use HEX No.H6.



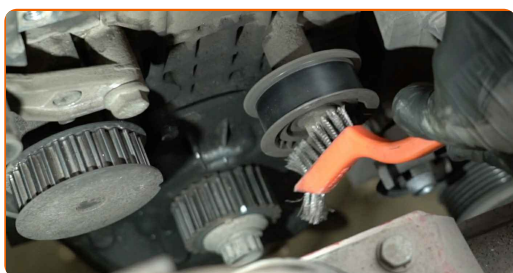
42 Remove the timing belt tensioner pulley.



43 Remove the timing belt.



44 Clean the fastener of the timing belt idler pulley. Use a wire brush. Use WD-40 spray.



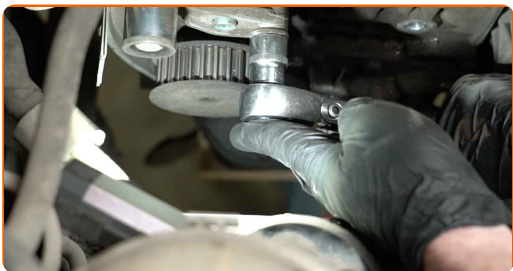
45 Unscrew the fastener of the timing belt idler pulley. Use a drive socket #15. Use a ratchet wrench.



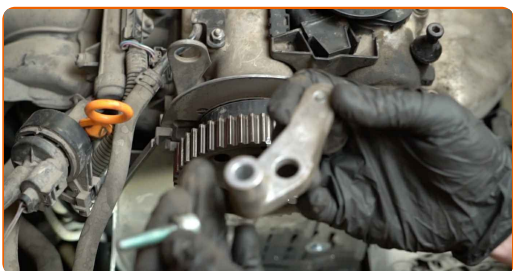
46 Remove the timing belt idler pulley from its mounting seat.



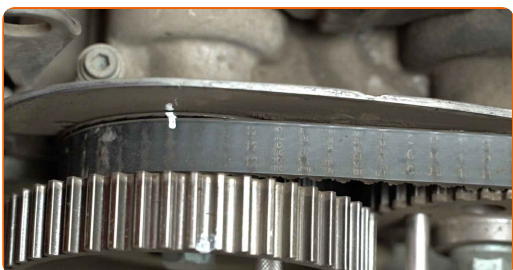
47 Unscrew the timing belt idler pulley bracket with integrated pulley. Use a drive socket #16. Use a ratchet wrench.



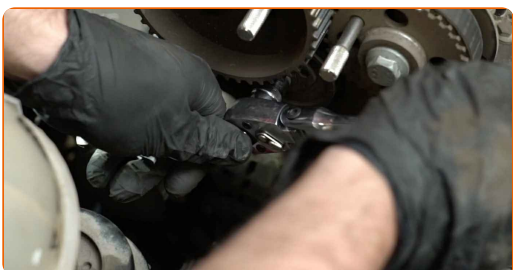
48 Remove the timing belt idler pulley bracket with integrated pulley.



49 Make a mark on the camshaft gear. Make a mark on the timing belt.



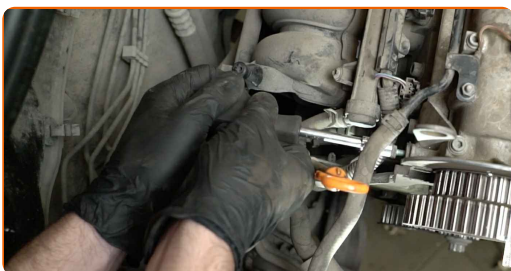
50 Remove the timing belt tensioner pulley. Use a drive socket #16. Use a ratchet wrench.



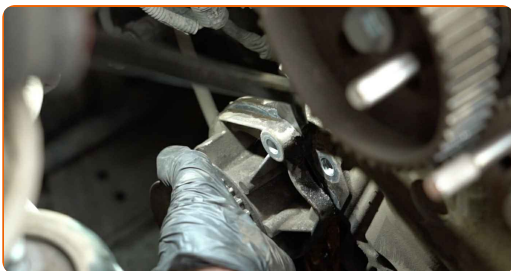
51 Remove the timing belt.



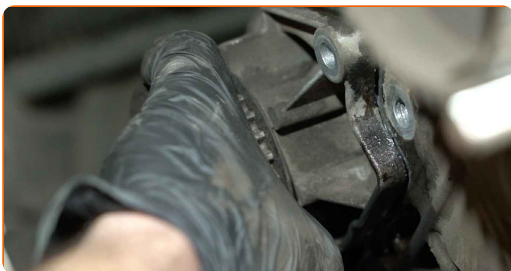
52 Unscrew the fasteners of the side timing cover. Use a drive socket #10. Use HEX No.H6. Use a ratchet wrench.



53 Remove the side timing cover.



54 Unscrew the water pump fasteners. Use HEX No.H6. Use a ratchet wrench.



55 Remove the water pump.

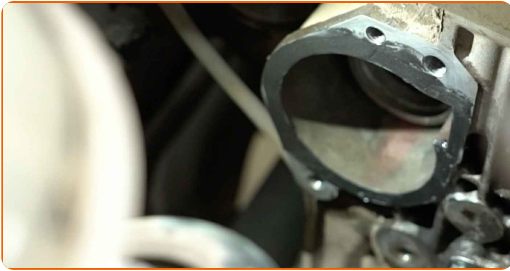


Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521). Tip from AUTODOC:

- Caution! Coolant may come out from the water pump channels and body.

56

Clean the water pump mounting seat. Use all-purpose cleaning spray.



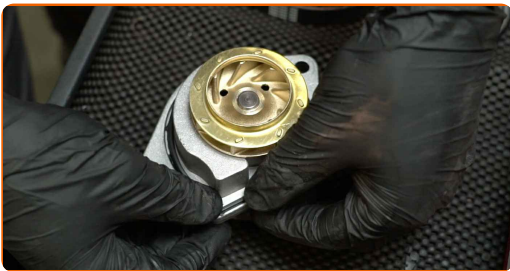
57

Treat the water pump mounting seat. Use a sealant.



58

Install the water pump gasket.

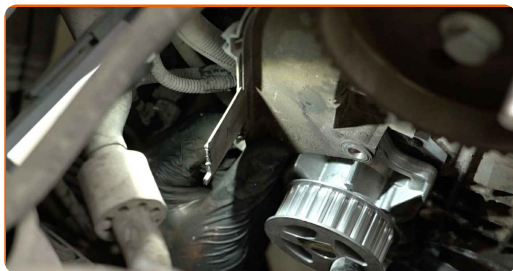


59

Install the new water pump.



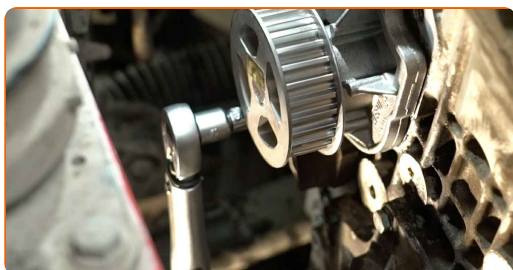
60 Install the side timing cover.



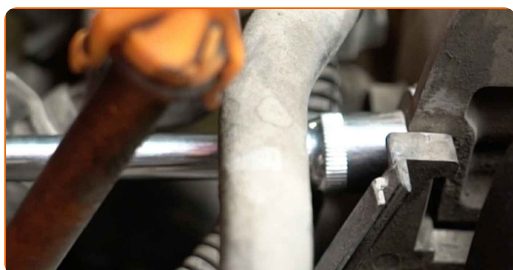
61 Screw in the water pump fasteners. Use HEX No.H6. Use a ratchet wrench.



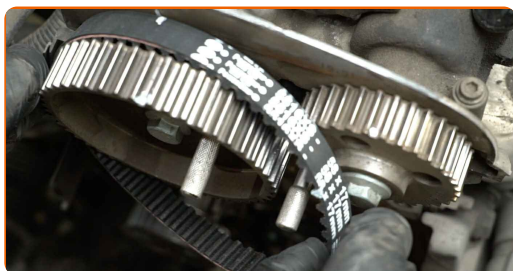
62 Tighten the water pump fasteners. Use HEX No.H6. Use a torque wrench. Tighten it to 20 Nm torque.



63 Screw in the fasteners of the side timing cover. Use a drive socket #10. Use a ratchet wrench.



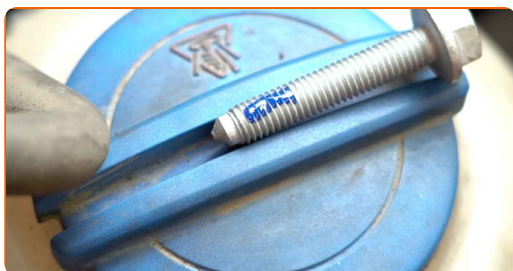
64 Install the new timing belt according to the factory marks.



Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521).
AUTODOC experts recommend:

- Be careful not to damage the timing belt.

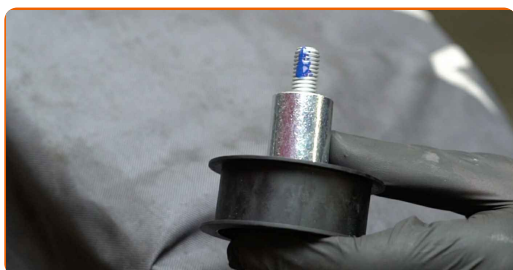
65 Treat the fastening bolt. Use a sealant.



66 Install the timing belt tensioner pulley. Use a drive socket #16. Use a ratchet wrench.



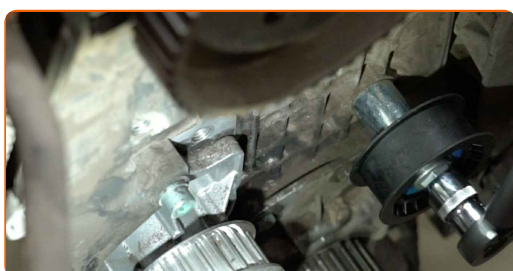
67 Treat the fastening bolt. Use a sealant.



68 Install the timing belt idler pulley.



69 Tighten the fastener of the timing belt idler pulley. Use a drive socket #15. Use a torque wrench. Tighten it to 25 Nm torque.



70 Treat the fastening bolt. Use a sealant.



71 Install the timing belt idler pulley bracket with integrated pulley.



- 72** Tighten the timing belt idler pulley bracket with integrated pulley. Use a drive socket #16. Use a torque wrench. Tighten it to 50 Nm torque.



- 73** Adjust the timing belt tension by moving the tensioner pulley. Use a combination spanner #16. Use HEX No.H6.



AUTODOC recommends:

- Make sure that the timing belt is properly tensioned.

- 74** Tighten the fastener of the timing belt tensioner pulley. Use a combination spanner #16. Use a torque wrench. Tighten it to 20 Nm torque.



75

Install the new timing belt according to the factory marks.



Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521).
AUTODOC recommends:

- Be careful not to damage the timing belt.
- Install the timing belt tensioner pulley.

76

Adjust the timing belt tension by moving the tensioner pulley. Use a drive socket #15. Use HEX No.H6. Use a ratchet wrench.



AUTODOC recommends:

- Make sure that the timing belt is properly tensioned.

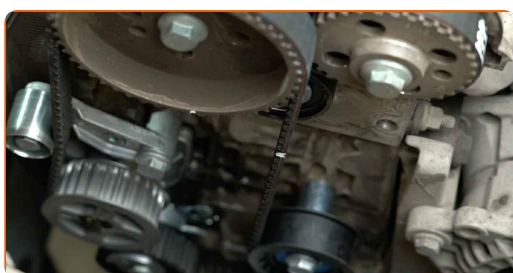
- 77** Tighten the fastener of the timing belt tensioner pulley. Use a drive socket #15. Use HEX No.H6. Use a torque wrench. Tighten it to 20 Nm torque.



- 78** Remove the camshaft gear locking tool.



- 79** Turn the crankshaft pulley. Use 12-point socket No.21. Use a ratchet wrench.



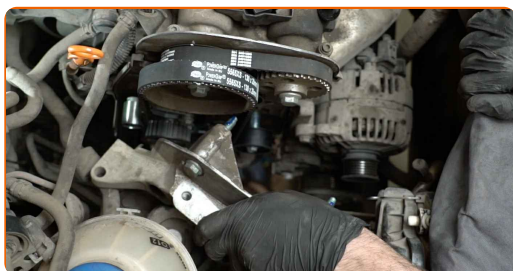
Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521). Tip:

- Make sure all the timing belt components are mounted correctly.

80 Treat the engine mount fasteners. Use a sealant.



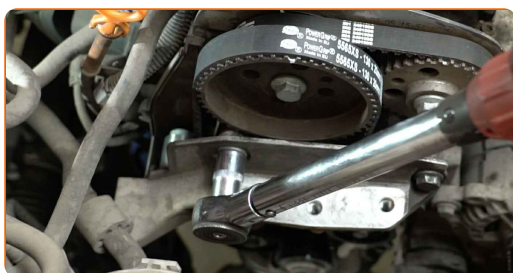
81 Install the engine mount to its mounting seat.



82 Install the fastening bolts.



83 Tighten the engine mount fastening bolts. Use a drive socket #16. Use a torque wrench. Tighten it to 50 Nm torque.



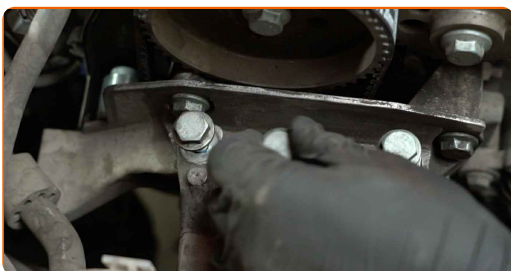
84 Treat the fastening bolts. Use a sealant.



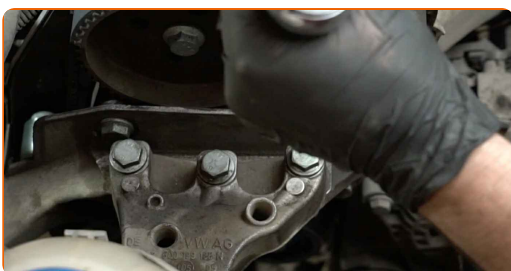
85 Install the fastening bolts.



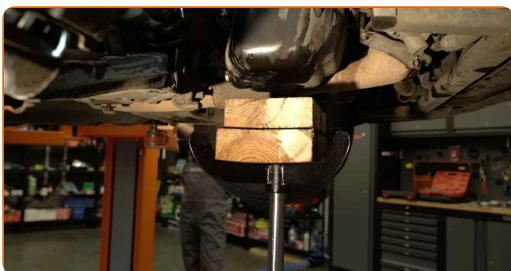
86 Screw in the upper fasteners of the engine mount. Use a drive socket #16. Use a ratchet wrench.



87 Tighten the upper fastener of the engine mount. Use a drive socket #16. Use a torque wrench. Tighten it to 50 Nm torque.



88 Remove the support from under the engine.

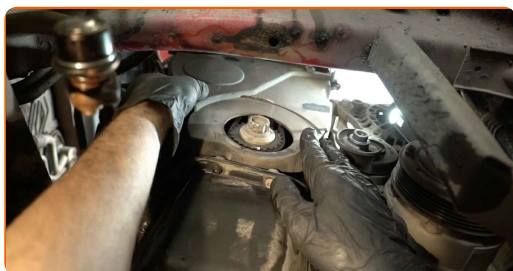


AUTODOC recommends:

- Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521). Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

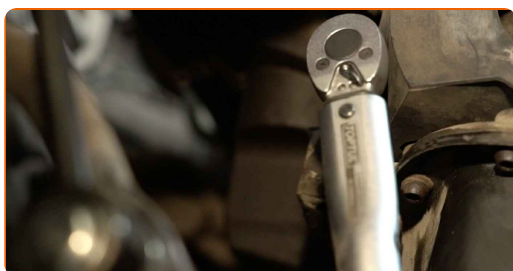
89

Install the lower timing cover. Make sure you hear a click indicating that it is locked in place.



90

Tighten the fasteners of the lower timing cover. Use a drive socket #10. Use a torque wrench. Tighten it to 8 Nm torque.



91

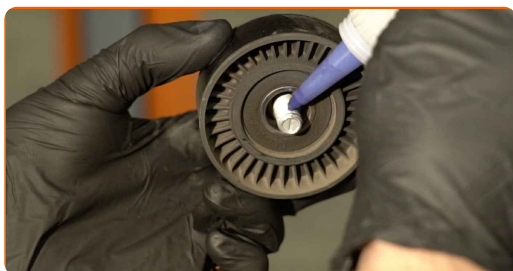
Unscrew the crankshaft pulley fastener. Use 12-point socket No.21. Use a ratchet wrench.



92 Install the crankshaft pulley according to the factory marks.



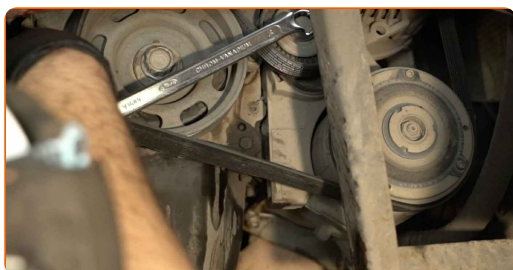
93 Treat the fastening bolt. Use a sealant.



94 Install the serpentine belt tensioner pulley.



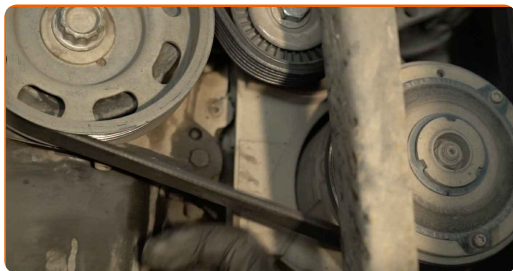
95 Screw in the fastener of the serpentine belt tensioner pulley. Use a combination spanner #16.



96 Pull aside the V-ribbed belt tensioner pulley. Use a combination spanner #16.



97 Install the V-ribbed belt.



Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521). Tip from AUTODOC experts:

- Make sure that the V-ribbed belt fits all pulleys snugly.

98 Install the crankshaft pulley locking tool. Use a universal pulley holder.



99 Tighten the crankshaft pulley fastener. Use 12-point socket No.21. Use a torque wrench. Tighten it to 90 Nm torque.+90°



AUTODOC recommends:

- Important! Be sure to use new fasteners.

100 Remove the crankshaft pulley locking tool.



101 Return the tensioner pulley to its initial position. Use a combination spanner #16.

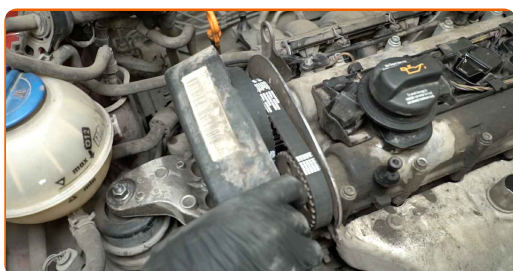


102 Lower the car.

103 Close the coolant drain tap.

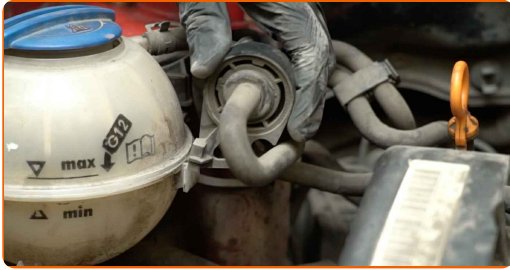


104 Install the upper timing cover. Make sure you hear a click indicating that it is locked in place.



105

Attach the coolant pipe bracket.



106

Remove the microfibre towel from the throttle body.



107

Install the engine cover and secure it. Make sure you hear a click indicating that it is locked in place.

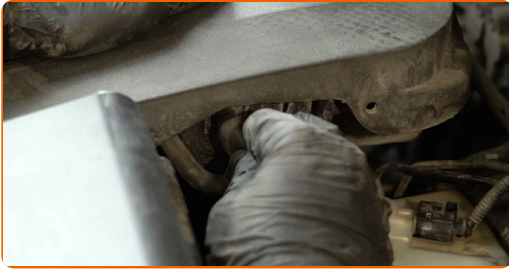


Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521).
Professionals recommend:

- Do not apply excessive force when installing the part. Otherwise you may damage the fasteners.
- Make sure the engine cover is properly seated. It should not be displaced with respect to the guiding fasteners and the throttle body air intake hose.

108

On the right side, attach the PCV valve hose to the engine cover.

**109**

Remove the coolant reservoir cap.

**110**

Insert the funnel.

**111**

Pour coolant in the coolant reservoir.

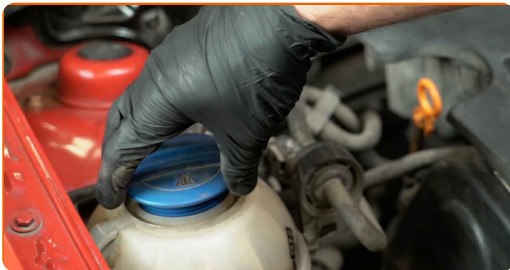


AUTODOC recommends:

- Only use the coolant recommended by the manufacturer.
- The coolant level should be at the MAX mark.
- Wait until the air goes out of the system.

112

Install the coolant reservoir cap.



113

Screw on the coolant reservoir cap.



114

Attach the terminals to the battery.



Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521).
AUTODOC recommends:

- Be careful! Do not mix up the positive and the negative terminals of the car battery.

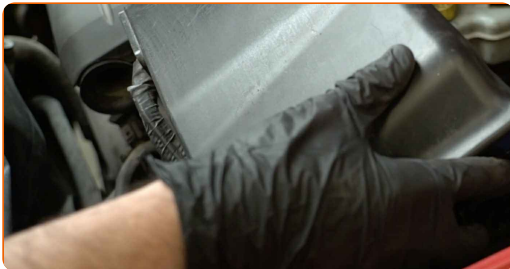
115

Screw in the fasteners of the battery terminals. Use a drive socket #10. Use a ratchet wrench.



116

Install the protective cover.



117

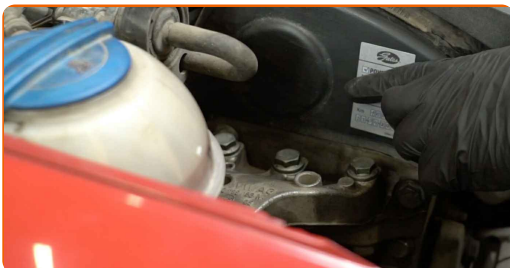
Run the engine for a few minutes. This should be done in order to remove residual air from the cooling system and to check if the components are operating correctly.

118

Shut off the engine.

119

Check the coolant level. If necessary, top up to the required level.



Please note!

- The coolant level should be at the MAX mark.

120 Remove the fender protection cover.

121 Close the hood.

Replacement: water pump + timing belt kit – VW GOLF PLUS (5M1, 521). Tip from AUTODOC:

- Be sure to record the mileage at which you replaced the timing belt and water pump kits.

WELL DONE! 

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WATER PUMP + TIMING BELT KIT: A WIDE SELECTION

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