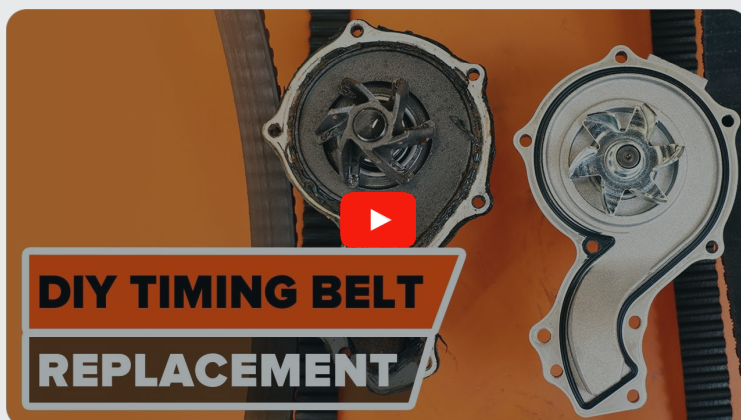


# **AUTODOC CLUB**

How to change water pump & timing belt kit on **VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ)** – 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 Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ) 1.9 D, VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ) 1.9 TD

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: VW Golf III Hatchback (1H1) 1.9 D

**REPLACEMENT: WATER PUMP & TIMING BELT KIT –  
VW TRANSPORTER T4 MINIBUS (70B, 70C, 7DB, 7DK,  
70J, 70K, 7DC, 7DJ). TOOLS YOU NEED:**



- Wire brush
- WD-40 spray
- All-purpose cleaning spray
- Brake cleaner
- Copper grease
- Sealant
- Torque wrench
- Combination spanner #15
- HEX bit No.H6.
- Drive socket # 7
- Drive socket # 10
- 12-point socket # 19
- Drive socket # 13
- Drive socket # 15
- Drive socket # 16
- Drive socket # 19
- Ratchet wrench
- Universal pulley holder
- Engine timing tool set
- Circlip pliers
- Phillips screwdriver
- Seal scraper
- Funnel
- Fluid container
- Crow bar
- Microfibre towel
- Fender cover
- Wheel chock

**Buy tools**

Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). AUTODOC experts recommend:

- Follow the terms, recommendations and requirements of the part operation provided by the manufacturer.
- All work should be done with the engine stopped.

## REPLACEMENT: WATER PUMP & TIMING BELT KIT – VW TRANSPORTER T4 MINIBUS (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). USE THE FOLLOWING PROCEDURE:

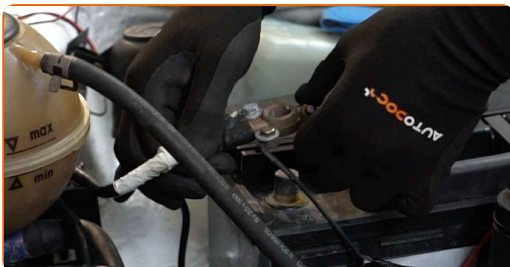
**1** Open the bonnet.

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

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



**4** Remove the battery terminals.



**5** Unscrew the coolant reservoir cap.



**6** Release the air filter cover clips.



**7** Slightly raise the cover of the air filter housing.



**8** Unscrew the fasteners of the air distribution housing assembly. Use a drive socket #7. Use a ratchet wrench.



**9** Remove the air distribution housing assembly.



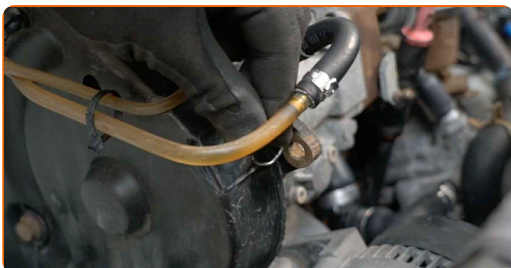
**10** Cover the throttle body with a microfibre towel to prevent dust and dirt from getting into the system.



**11** Release the air filter housing retainers. Remove the air filter housing.



**12** Undo the fasteners of the upper timing cover.

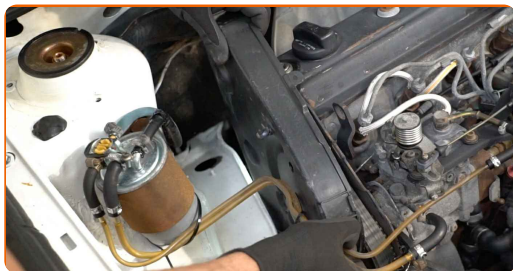


**13** Unscrew the fasteners of the upper timing cover. Use a drive socket #13. Use a ratchet wrench.

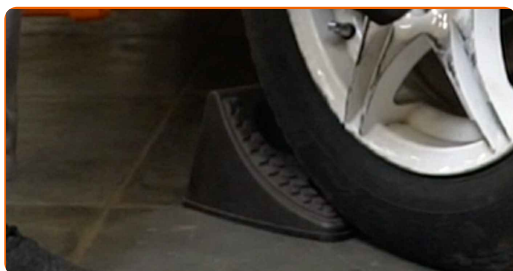




**14** Remove the upper timing cover.



**15** Secure the wheels with chocks.



**16** Loosen the wheel mounting bolts. Use wheel impact socket #17.



**17** Raise the front of the car and secure on supports.

**18** Unscrew the wheel bolts.

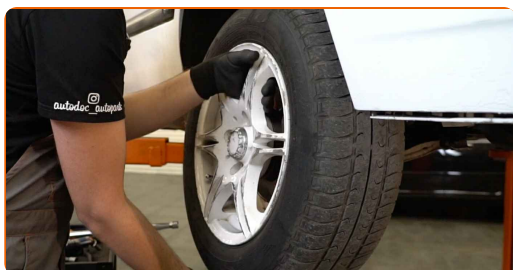


Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). AUTODOC recommends:

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

19

Remove the wheel.



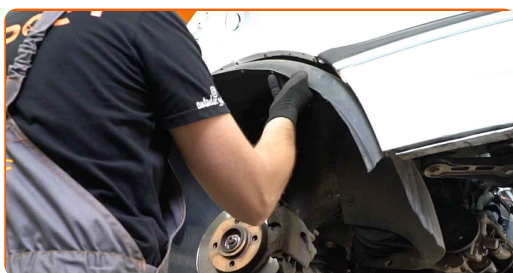
20

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



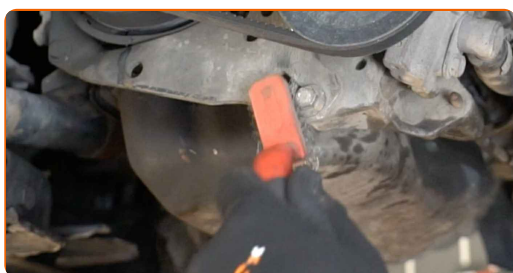
21

Remove the wheel arch cover.



22

Clean the fasteners of the hydraulic power steering pump. Use a wire brush. Use WD-40 spray.





- 23 Unscrew the fasteners of the hydraulic power steering pump. Use a drive socket #13. Use a drive socket #16. Use a ratchet wrench.



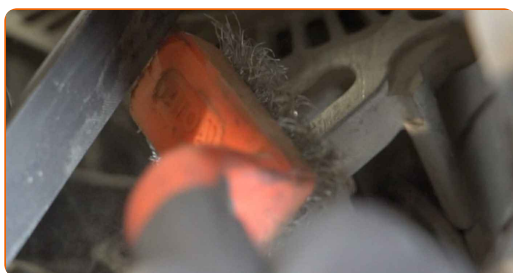
- 24 Loosen the V belt.



- 25 Remove the V belt.

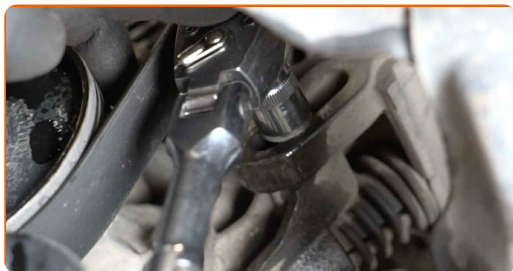


- 26 Clean the alternator fasteners. Use a wire brush. Use WD-40 spray.



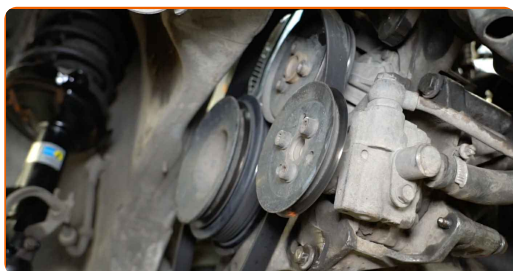
27

Loosen the alternator fasteners. Use a drive socket #13. Use a drive socket #16. Use a ratchet wrench.



28

Remove the V-ribbed belt.



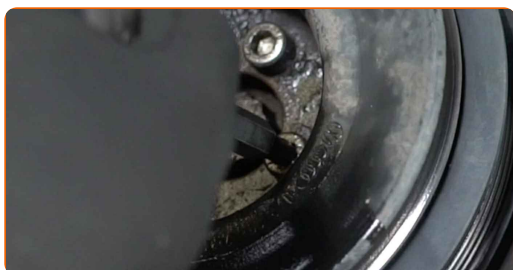
29

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

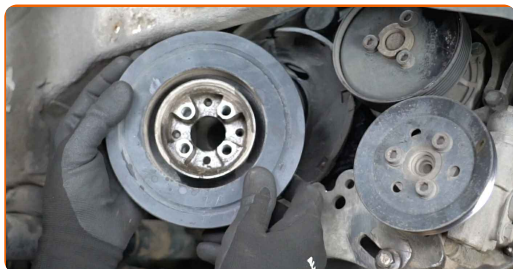


30

Unscrew the fastener of the crankshaft pulleys. Use HEX No.H6. Use a ratchet wrench.



**31** Remove the crankshaft pulleys.



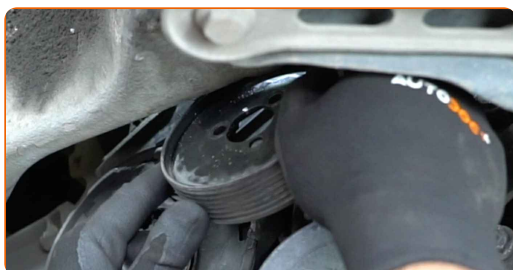
**32** Clean the water pump pulley fastener. Use a wire brush. Use all-purpose cleaning spray.



**33** Unscrew the water pump pulley fastener. Use HEX No.H6. Use a ratchet wrench.



**34** Remove the water pump pulley.



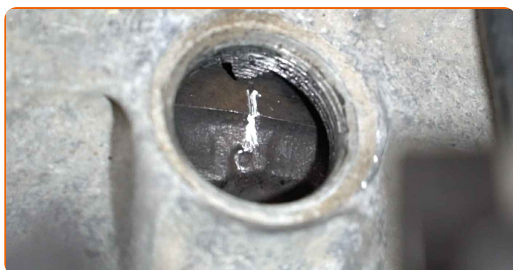
**35** Unscrew the fasteners of the lower timing cover. Use a drive socket #10. Use a ratchet wrench.



**36** Remove the lower timing cover.



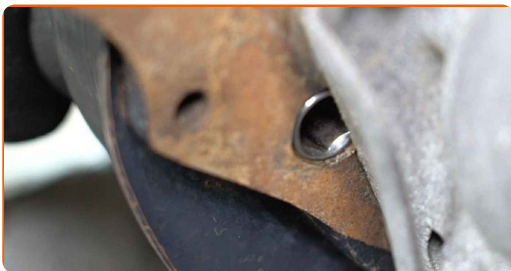
**37** Turn the crankshaft gear. Use 12-point socket No.19. Use a ratchet wrench.



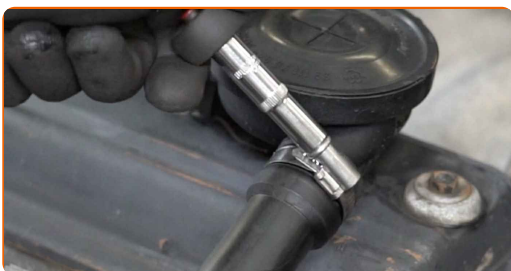
Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Tip:

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

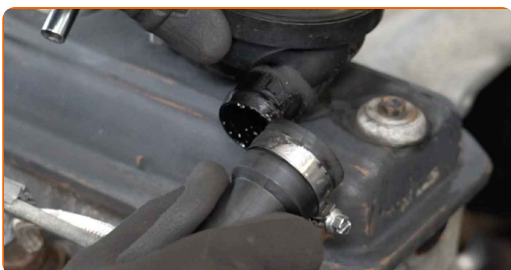
**38** Lock the high pressure fuel pump pulley. Use an engine timing tool set.



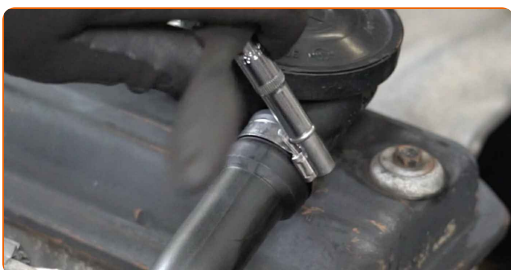
**39** Detach the crankcase ventilation hose clamp. Use a drive socket #7. Use a ratchet wrench.



**40** Remove the crankcase ventilation hose.



**41** Detach the crankcase ventilation hose clamp. Use a drive socket #7. Use a ratchet wrench.





**42** Remove the crankcase ventilation hose.



**43** Cover the PCV valve hole with a microfibre cloth to prevent dirt and foreign objects from getting into the system.



**44** Unscrew the engine valve cover fasteners. Use a drive socket #10. Use a ratchet wrench.



**45** Remove the engine valve cover.

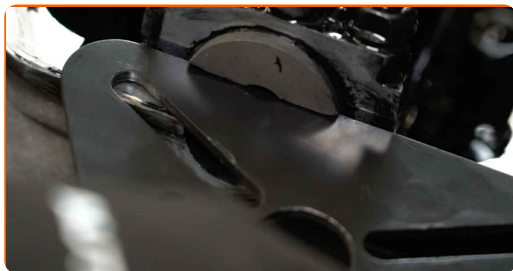


**AUTODOC recommends:**

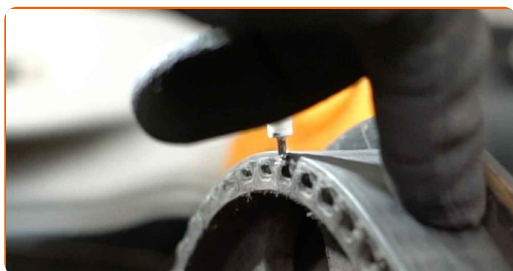
- Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). To avoid damaging the part during installation, do not use excessive force.



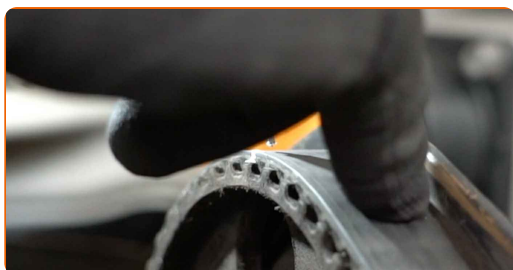
**46** Install the camshaft locking tool according to the factory marks. Use an engine timing tool set.



**47** Make a mark on the camshaft gear.

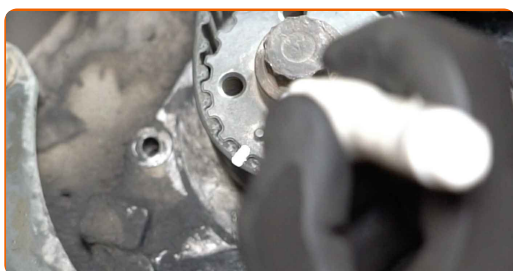


**48** Make a mark on the timing belt.



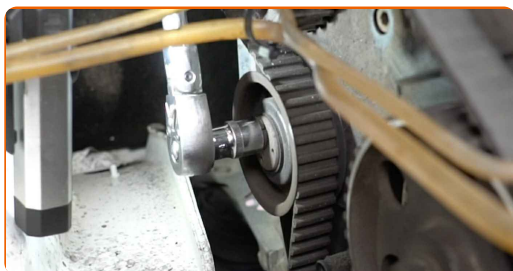
**49** Make a mark on the high pressure fuel pump.

**50** Make a mark on the crankshaft gear.



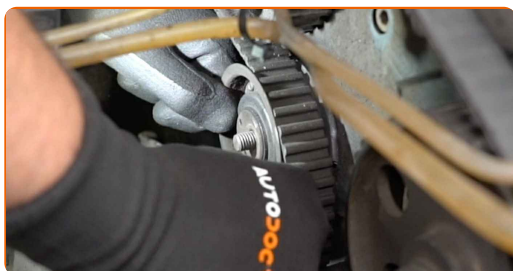
51

Loosen the fastener of the timing belt tensioner pulley. Use a drive socket #15. Use a ratchet wrench.



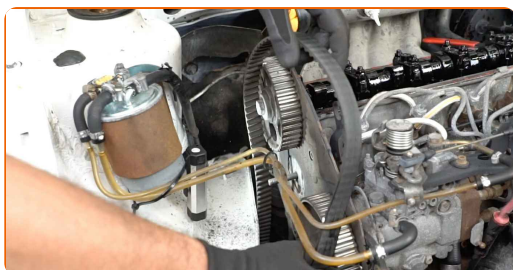
52

Remove the timing belt tensioner pulley.



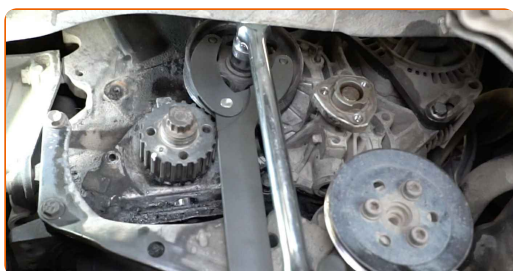
53

Remove the timing belt.



54

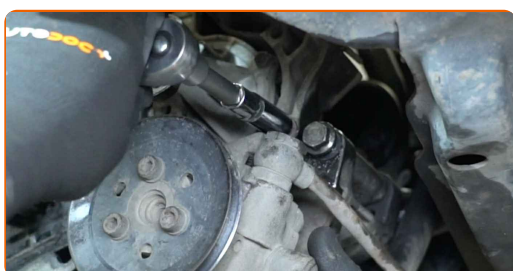
Loosen the vacuum pump pulley fastener. Use a universal pulley holder. Use a drive socket #19. Use a ratchet wrench.



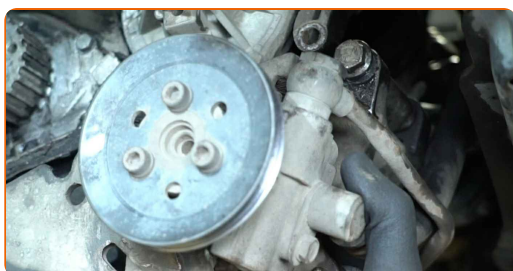
**55** Remove the vacuum pump pulley.



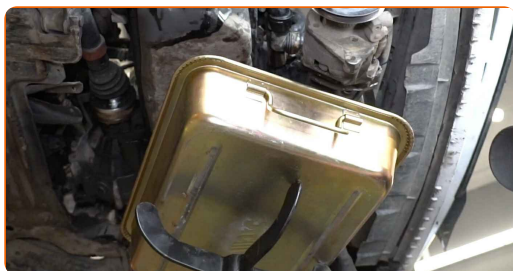
**56** Unscrew the fasteners of the hydraulic power steering pump. Use a drive socket #13. Use a drive socket #16. Use a ratchet wrench.



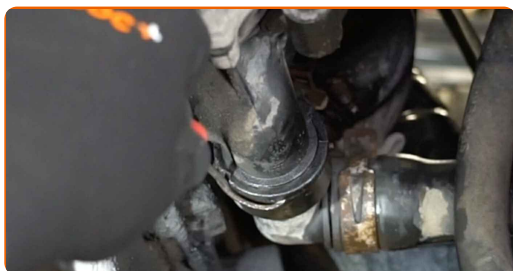
**57** Remove the hydraulic power steering pump.



**58** Prepare a container for fluids.

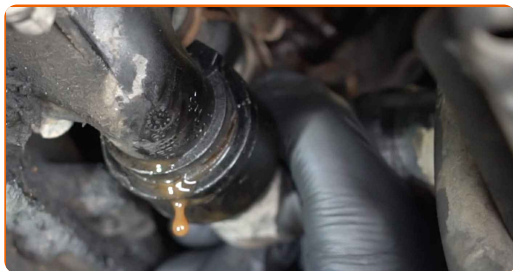


**59** Detach the clip of the lower coolant hose. Use a crowbar.



60

Detach the lower coolant pipe.



61

Drain the coolant from the engine.

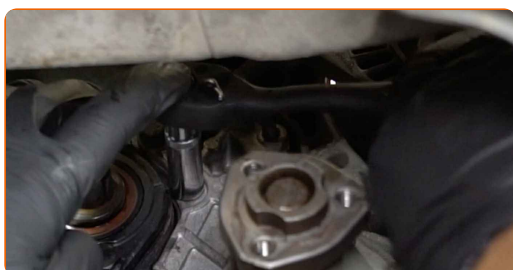


Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Tip from AUTODOC experts:

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

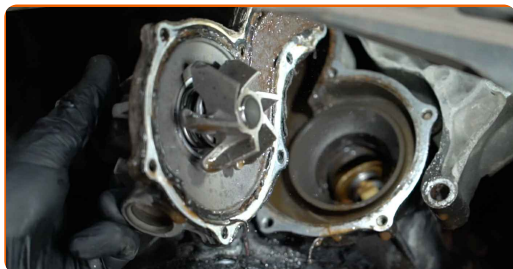
62

Unscrew the water pump fasteners. Use a drive socket #10. Use a ratchet wrench.



63

Remove the water pump. Use a crowbar.

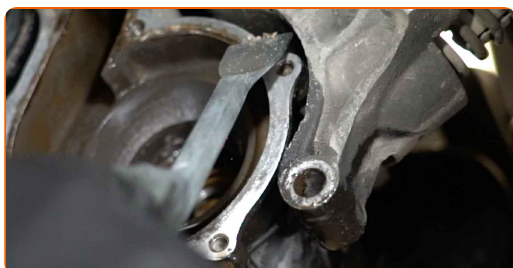


Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Tip from AUTODOC:

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

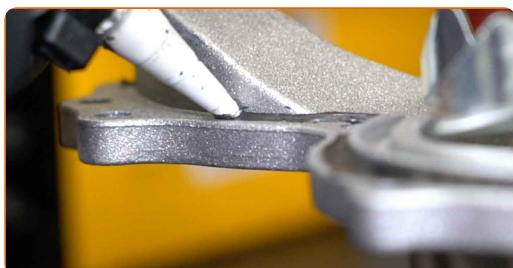
64

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



65

Treat the water pump mounting seat. Use a sealant.





**66** Install the water pump gasket.



**67** Install the new water pump.



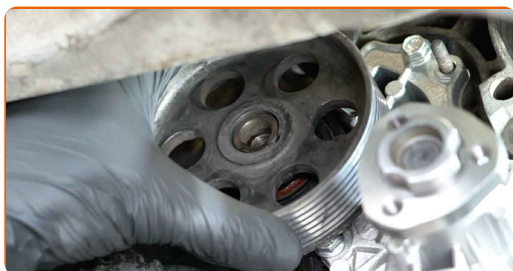
**68** Tighten the water pump fasteners. Use a drive socket #10. Use a torque wrench. Observe the recommended tightening torque.



**69** Treat the mounting seat of the vacuum pump pulley. Use all-purpose cleaning spray.

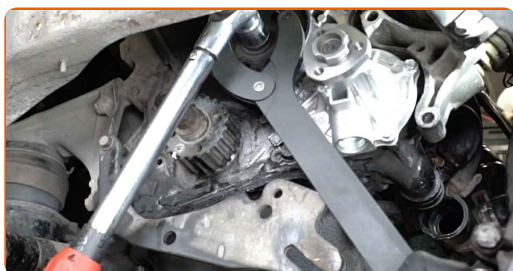


**70** Install the vacuum pump pulley.

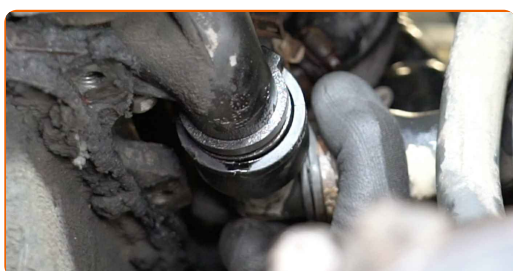




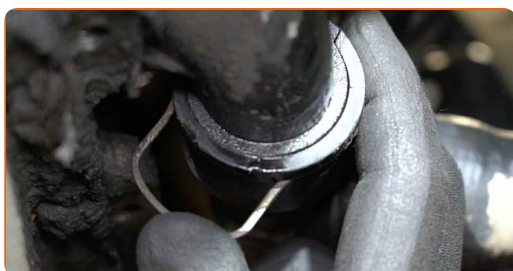
- 71 Tighten the vacuum pump pulley fastener. Use a universal pulley holder. Use a drive socket #19. Use a torque wrench. Observe the recommended tightening torque.



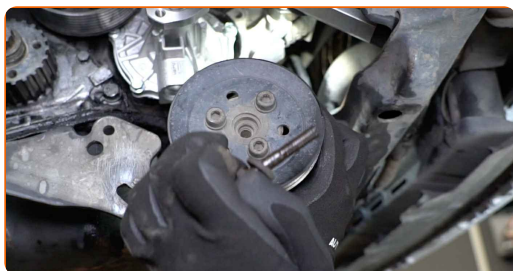
- 72 Attach the lower coolant pipe.



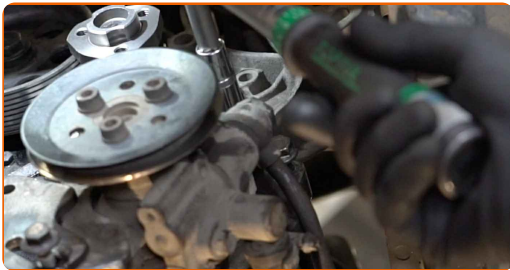
- 73 Attach the clip of the lower coolant hose.



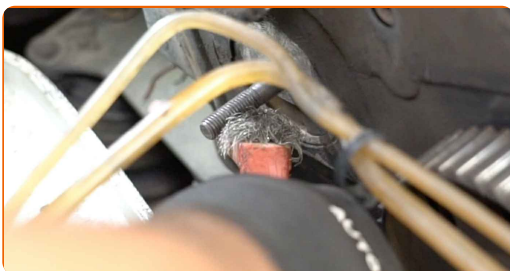
- 74 Install the hydraulic power steering pump.



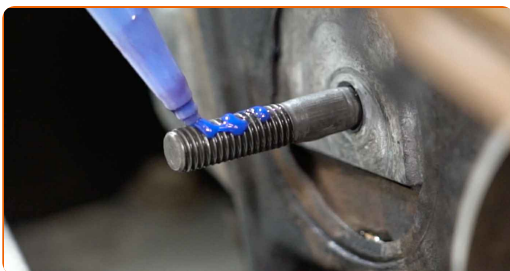
- 75** Tighten the fasteners of the hydraulic power steering pump. Use a drive socket #13. Use a drive socket #16. Use a torque wrench. Observe the recommended tightening torque.



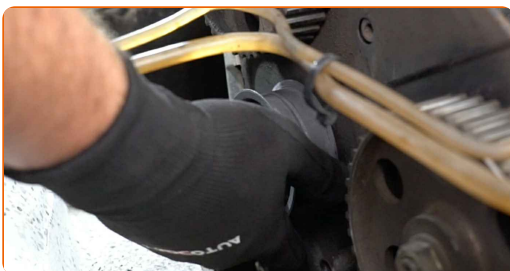
- 76** Clean the mounting seat of the timing belt tensioner pulley. Use a wire brush. Use all-purpose cleaning spray.



- 77** Treat the mounting seat of the timing belt tensioner pulley. Use a sealant.

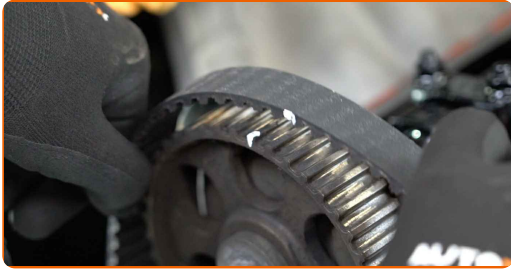


- 78** Install the timing belt tensioner pulley.



**79**

Install the new timing belt according to the factory marks.

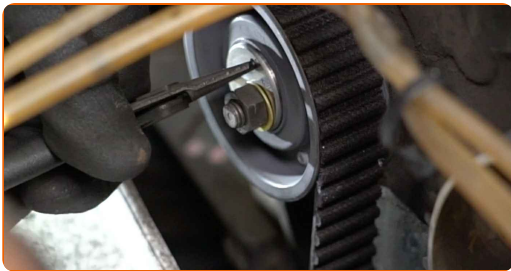


Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). AUTODOC recommends:

- Be careful not to damage the timing belt.

**80**

Adjust the timing belt tension by moving the tensioner pulley. Use circlip pliers. Use a combination spanner #15.



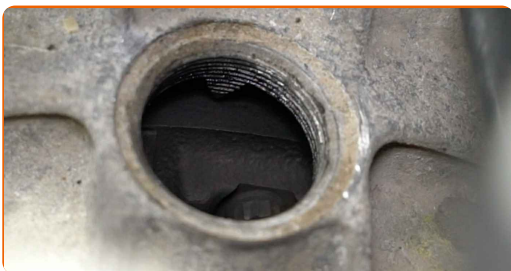
**81**

Remove the locking tool from the high pressure fuel pump pulley.



**82**

Remove the camshaft locking tool.



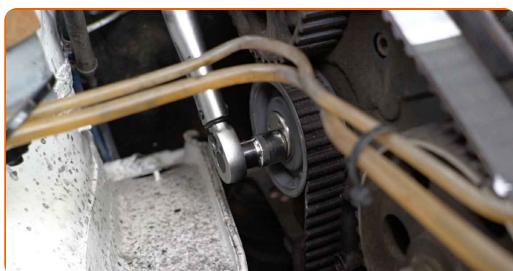
**83** Turn the crankshaft gear. Use 12-point socket No.19. Use a ratchet wrench.



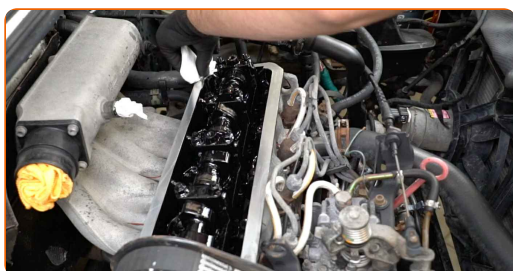
Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Tip:

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

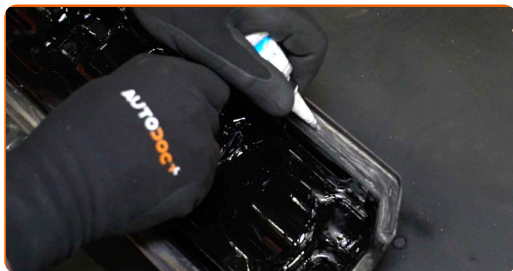
**84** Tighten the fastener of the timing belt tensioner pulley. Use a drive socket #15. Use a torque wrench. Observe the recommended tightening torque.



**85** Clean the engine valve cover mounting seat. Use all-purpose cleaning spray.



**86** Treat the engine valve cover mounting seat. Use a sealant.



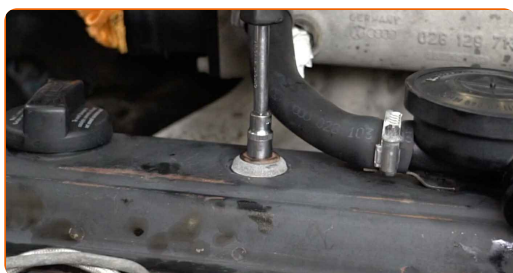
**87** Install the engine valve cover gasket.



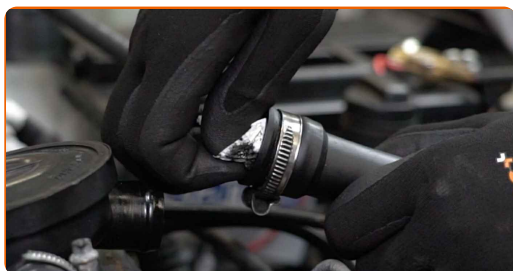
**88** Install the engine valve cover.



**89** Tighten the engine valve cover fasteners. Use a drive socket #10. Use a torque wrench. Observe the recommended tightening torque.



**90** Remove the microfibre cloth from the PCV valve hole.





**91** Install the PCV pipe.



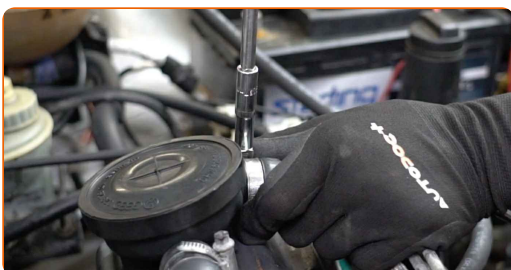
**92** Remove the microfibre cloth from the PCV valve hole.



**93** Install the PCV pipe.



**94** Fasten the clamp on the crankcase ventilation hose. Use a drive socket #7. Use a ratchet wrench.



**95** Install the lower timing cover.

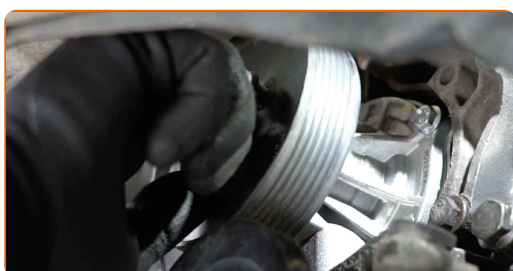




- 96 Tighten the fasteners of the lower timing cover. Use a drive socket #10. Use a torque wrench. Observe the recommended tightening torque.



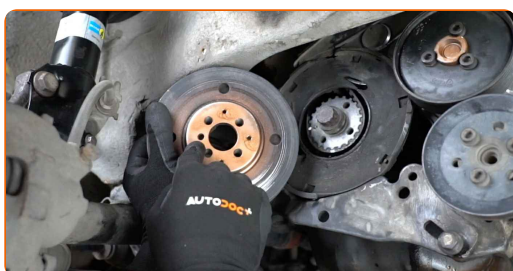
- 97 Install the water pump pulley.



- 98 Tighten the water pump pulley fastener. Use HEX No.H6. Use a torque wrench. Observe the recommended tightening torque.

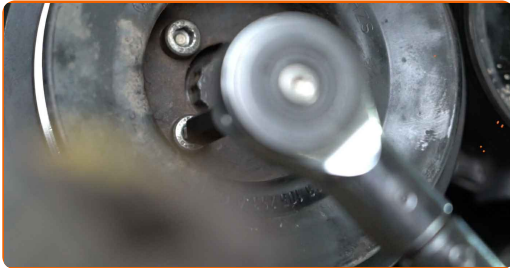


- 99 Install the crankshaft pulleys according to the factory marks.



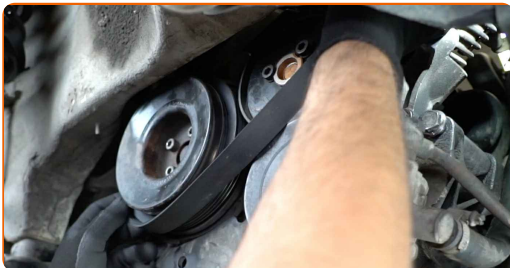
**100**

Tighten the fastener of the crankshaft pulleys. Use HEX No.H6. Use a torque wrench. Observe the recommended tightening torque.



**101**

Install the V-ribbed belt.



Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Professionals recommend:

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

**102**

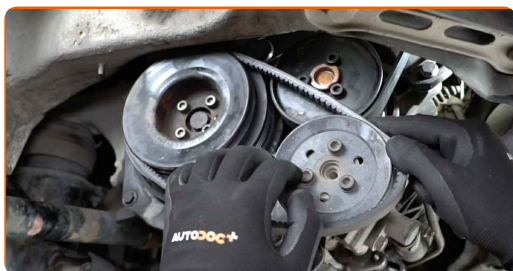
Place the V-ribbed belt on the alternator. Use a crowbar.



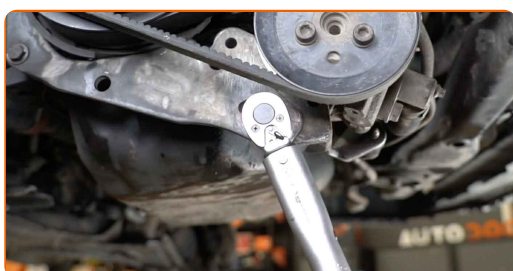
**AUTODOC recommends:**

- Make sure that the V-ribbed belt is properly tensioned.

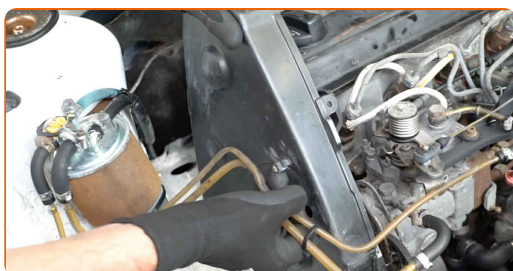
**103** Install the V belt.



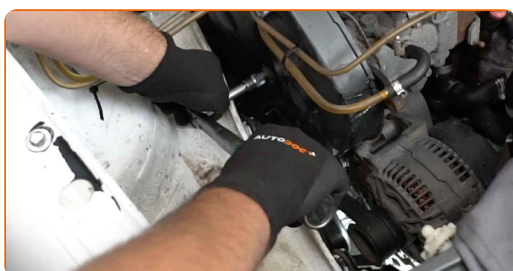
**104** Tighten the fasteners of the hydraulic power steering pump. Use a drive socket #13. Use a drive socket #16. Use a torque wrench. Observe the recommended tightening torque.



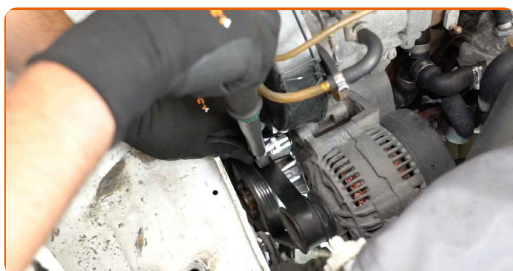
**105** Install the upper timing cover. Make sure you hear a click indicating that it is locked in place.



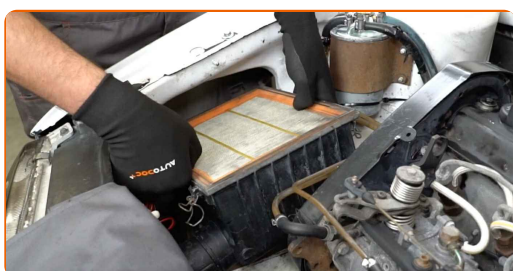
**106** Tighten the fasteners of the upper timing cover. Use a drive socket #13. Use a torque wrench. Observe the recommended tightening torque.



- 107** Tighten the alternator fasteners. Use a drive socket #13. Use a drive socket #16. Use a torque wrench. Observe the recommended tightening torque.



- 108** Install the air filter housing.



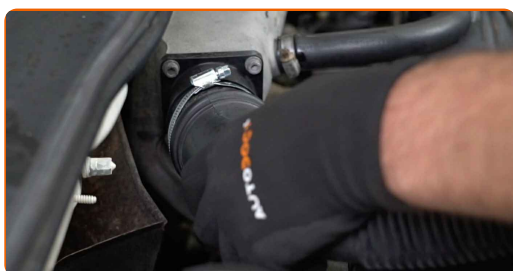
- 109** Lock the air filter housing retainers.



- 110** Remove the microfibre towel from the throttle body.



- 111** Reinstall the air distribution housing assembly.



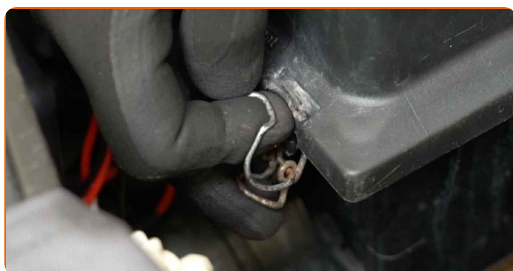
**112** Reinstall the air filter cover. Fasten it.



Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). AUTODOC experts recommend:

- When installing, do not use excessive force to avoid damage to the part.

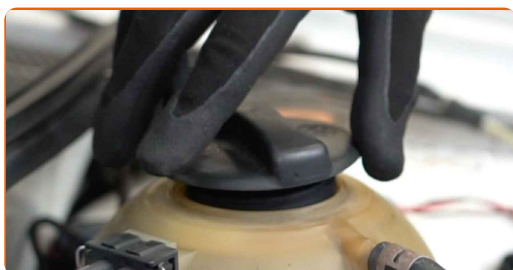
**113** Press the air filter cover clips into place.



**114** Screw in the fasteners of the air distribution housing assembly. Use a drive socket #7. Use a ratchet wrench.



**115** Remove the coolant reservoir cap.





116

Insert the funnel.



117

Pour coolant in the coolant reservoir.



Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Tip from AUTODOC:

- 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.

118

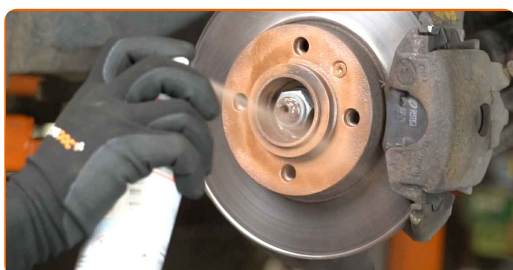
Install the wheel arch cover to its mounting seat. Screw in the fasteners. Use a Phillips screwdriver.



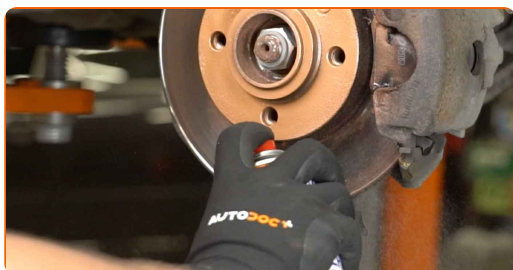
**119** Clean the wheel rim mounting seat. Use a wire brush.



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



**121** Clean the brake disk surface. Use a brake cleaner.



**AUTODOC recommends:**

- Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). After applying the spray, wait a few minutes.

**122** Install the wheel.



**AUTODOC recommends:**

- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ)

**123**

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



**124**

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.



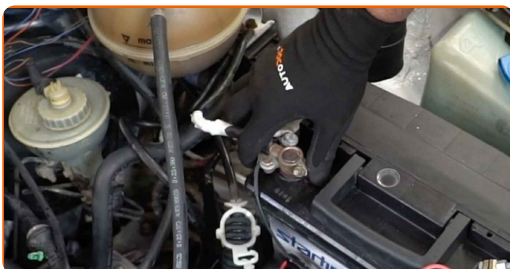
**125**

Remove the jacks and chocks.



**126**

Attach the terminals to the battery.

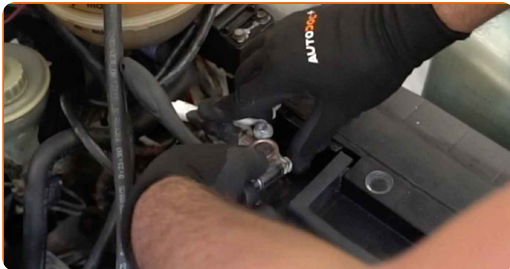


Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Tip:

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

127

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



128

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.

129

Shut off the engine.

130

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

**Please note!**

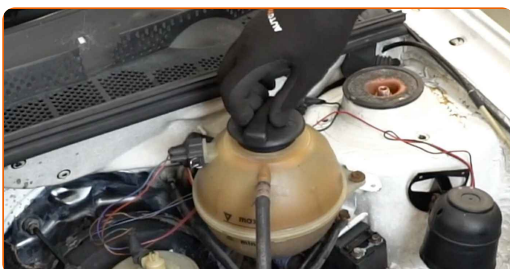
- The coolant level should be at the MAX mark.

131

Install the coolant reservoir cap.

132

Screw on the coolant reservoir cap.



133 Remove the fender protection cover.

134 Close the hood.

Replacement: water pump & timing belt kit – VW Transporter T4 Minibus (70B, 70C, 7DB, 7DK, 70J, 70K, 7DC, 7DJ). Professionals recommend:

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

**WELL DONE!** 

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