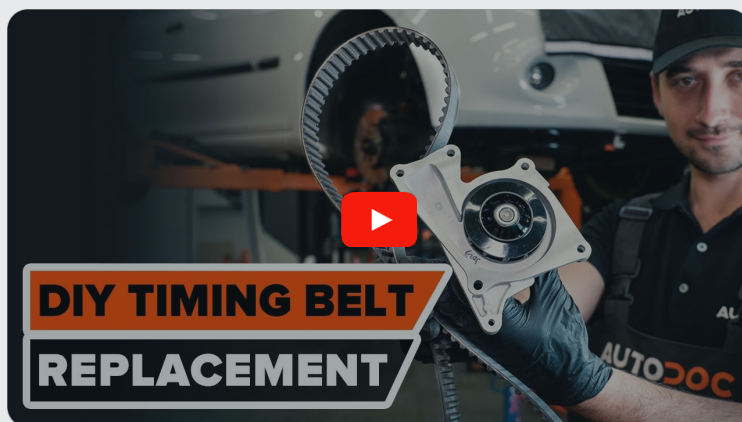




How to change water
pump & timing belt kit
on **NISSAN Almera II**
Saloon (N16) –
replacement guide

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:
NISSAN Almera II Saloon (N16) 1.5 dCi

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: RENAULT Clio III Hatchback (BR0/1, CR0/1) 1.5 dCi

**REPLACEMENT: WATER PUMP & TIMING BELT KIT –
NISSAN ALMERA II SALOON (N16). TOOLS YOU MIGHT
NEED:**



- Brake cleaner
- Copper grease
- Sealant
- Torque wrench
- Combination spanner #10
- Combination spanner #13
- Combination spanner #16
- HEX bit No.H6.
- Drive socket # 8
- Drive socket # 10
- Drive socket # 13
- Drive socket # E14
- Drive socket # 16
- Drive socket # 18
- Wheel impact socket #17
- Ratchet wrench
- Funnel
- Fluid container
- Seal scraper
- Clic-R collar pliers
- Long round nose pliers
- Clip removal tool
- Engine timing tool set
- Hydraulic transmission jack
- Fender cover
- Wheel chock

Buy tools

Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
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 – NISSAN ALMERA II SALOON (N16). RECOMMENDED SEQUENCE OF STEPS:

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**

Secure the wheels with chocks.

**7**

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

**8**

Raise the front of the car and secure on supports.

9

Unscrew the wheel bolts.



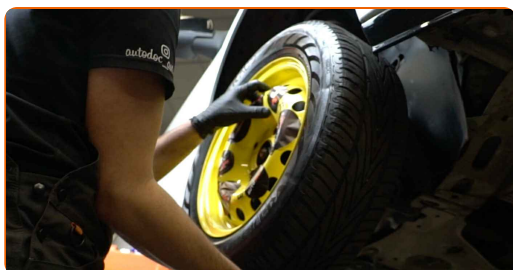
Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).

Tip:

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

10

Remove the wheel.



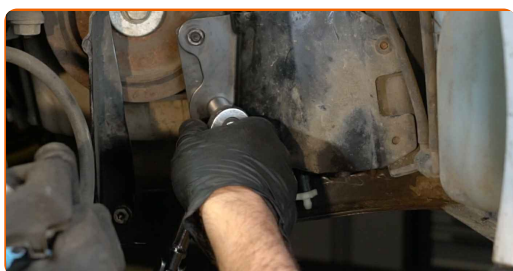
11

Remove the wheel arch cover. Use a clip removal tool.



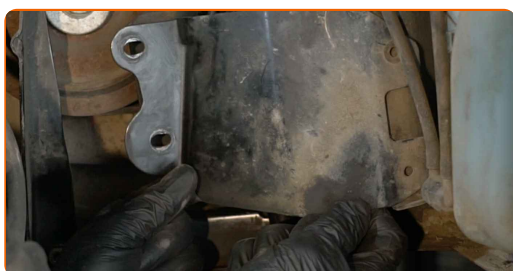
12

Unscrew the fuel filter bracket fixing bolts. Use a drive socket #13. Use a ratchet wrench.



13

Remove the fuel filter fastening bracket.



14 Unscrew the fuel filter bracket fixing bolts. Use a combination spanner #10.



15 Remove the fuel filter fastening bracket.



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



17 Remove the V-ribbed belt.

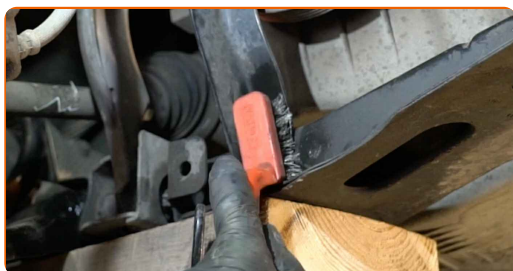


18 Return the tensioner pulley to its initial position. Use a combination spanner #16.

19 Support the subframe. Use a hydraulic transmission jack.



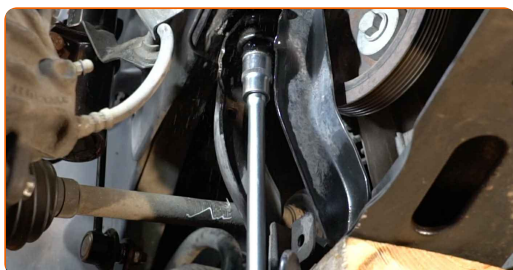
20 Clean the subframe fasteners. Use a wire brush. Use WD-40 spray.



21 Unscrew the subframe reinforcement bracket fasteners. Use a drive socket #13. Use a ratchet wrench.



22 Unscrew the subframe fastening. Use a drive socket #18. Use a ratchet wrench.



23

Remove the support from under the subframe.



AUTODOC recommends:

- Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16). Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

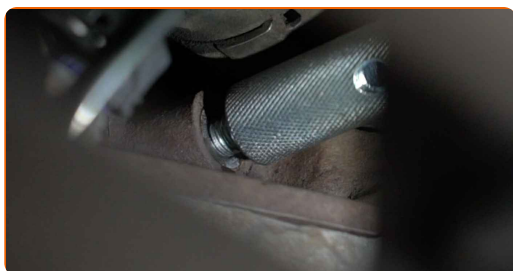
24

Unscrew the TDC timing pin plug. Use a drive socket #E14. Use a ratchet wrench.

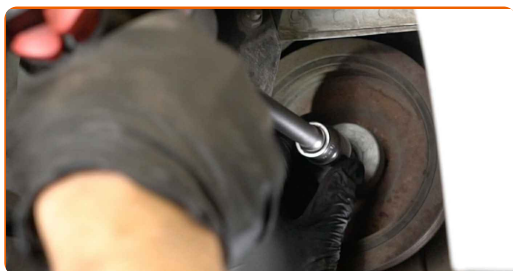


25

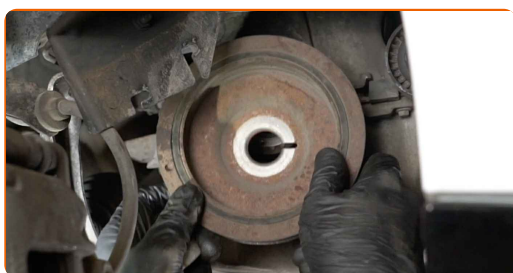
Install the crankshaft gear locking tool according to the factory marks. Use an engine timing tool set.



26 Unscrew the crankshaft pulley fastener. Use a drive socket #18. Use a ratchet wrench.



27 Remove the crankshaft pulley.



28 Screw in the crankshaft pulley fastener. Use a drive socket #18. Use a ratchet wrench.

29 Remove the crankshaft gear locking tool.



30 Remove the lower timing cover.



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



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



33 Remove the upper part of the engine mount.



34 Remove the upper timing cover.



- 35** Unscrew the engine mount fasteners. Use a combination spanner #10. Use a drive socket #10. Use a ratchet wrench.



- 36** Remove the engine mount.



- 37** Turn the crankshaft gear. Use a drive socket #18. Use a ratchet wrench.



Please note!

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

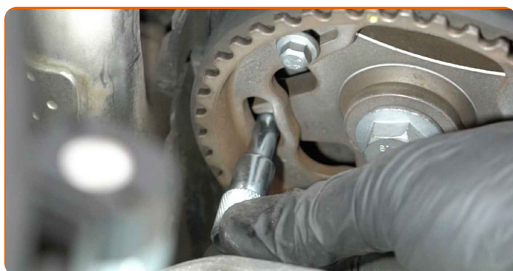
- 38** Install the crankshaft gear locking tool according to the factory marks. Use an engine timing tool set.



39 Make a mark on the crankshaft gear.



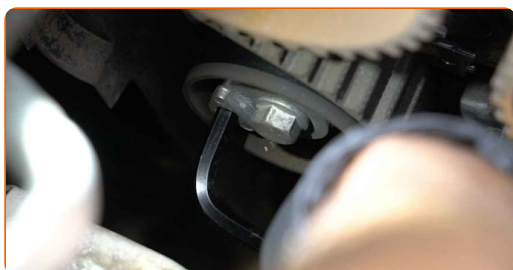
40 Install the camshaft gear locking tool according to the factory marks. Use an engine timing tool set.



41 Make a mark on the camshaft gear.



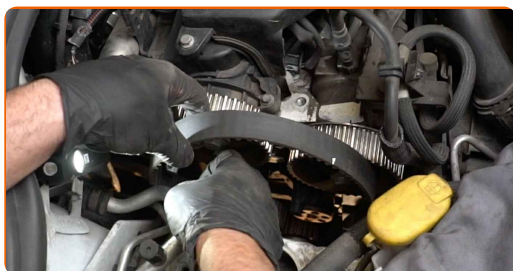
42 Loosen the fastener of the timing belt tensioner pulley. Use a combination spanner #13. Use HEX No.H6.



43 Pull aside the timing belt tensioner pulley.



44 Remove the timing belt.

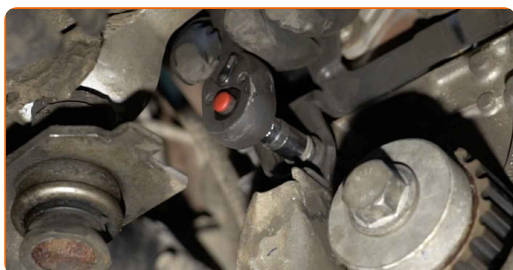


45 Return the tensioner pulley to its initial position.

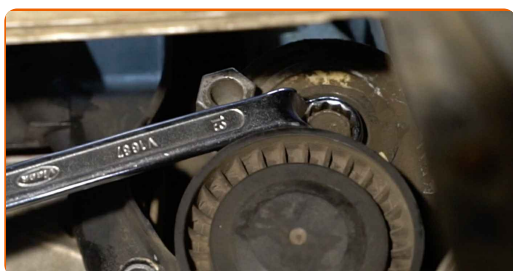
46 Remove the timing belt tensioner pulley.



47 Unscrew the fasteners of the middle timing cover. Use a drive socket #8. Use a ratchet wrench.



48 Unscrew the fastener of the serpentine belt tensioner pulley. Use a combination spanner #13.



49 Remove the serpentine belt tensioner pulley.



50 Remove the middle timing cover.



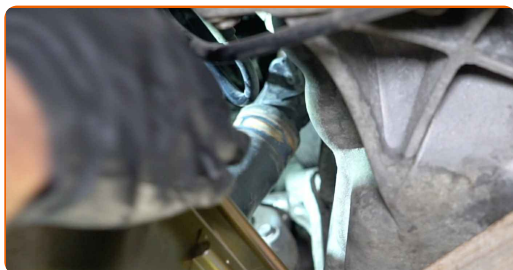
51 Detach the clamp of the lower coolant pipe. Use long round nose pliers.



52 Prepare a container for fluids.

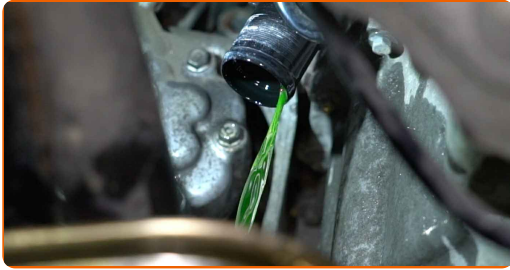


53 Detach the lower coolant pipe.



54

Drain the coolant from the engine.

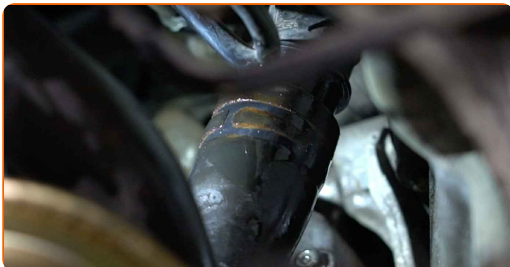


Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
Professionals recommend:

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

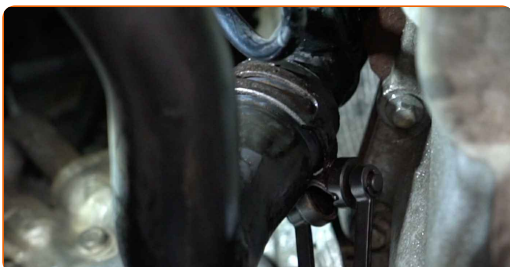
55

Attach the lower coolant pipe.



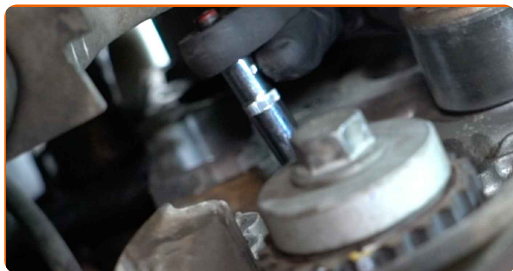
56

Attach the clamp of the lower coolant pipe. Use clic-R collar pliers.



57

Unscrew the water pump fasteners. Use a drive socket #8. Use a ratchet wrench.



58

Remove the water pump.



Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).

Tip:

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

59

Clean the water pump mounting seat. Use a seal scraper.



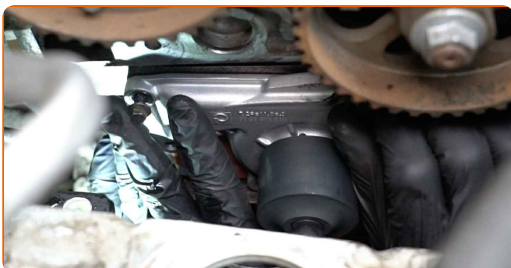
60 Treat the fastening bolts. Use a sealant.



61 Install the water pump gasket.



62 Install the new water pump.



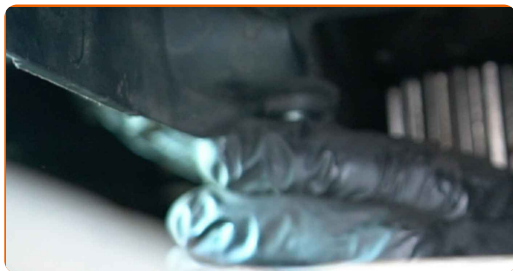
63 Tighten the water pump fasteners. Use a drive socket #8. Use a torque wrench. Tighten it to 12 Nm torque.



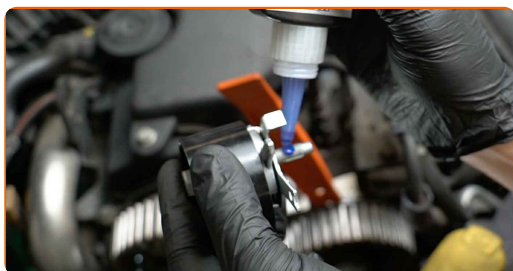
64 Install the middle timing cover.



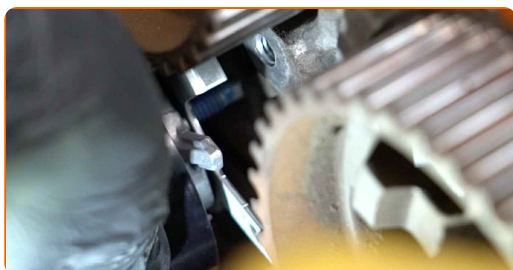
65 Screw in the fasteners of the middle timing cover. Use a drive socket #8. Use a ratchet wrench.



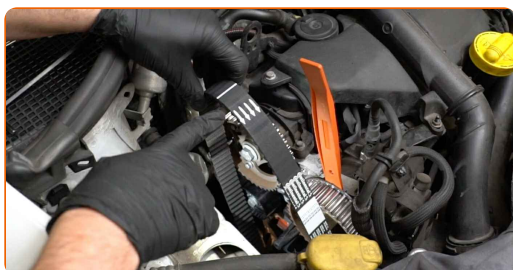
66 Treat the fastening bolt. Use a sealant.



67 Install the timing belt tensioner pulley.



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



Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
AUTODOC experts recommend:

- Be careful not to damage the timing belt.

69

Adjust the timing belt tension by moving the tensioner pulley. Use HEX No.H6.



Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
AUTODOC recommends:

- Make sure that the timing belt is properly tensioned.

70

Screw in the fastener of the timing belt tensioner pulley. Use a combination spanner #13.



71

Remove the camshaft gear locking tool.



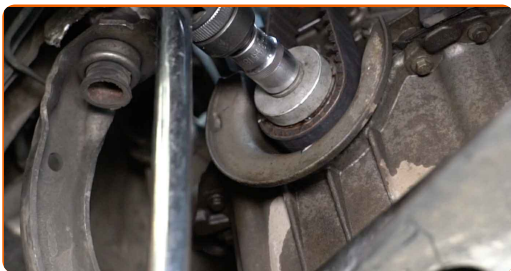
72

Remove the crankshaft gear locking tool.



73

Turn the crankshaft gear. Use a drive socket #18. Use a ratchet wrench.

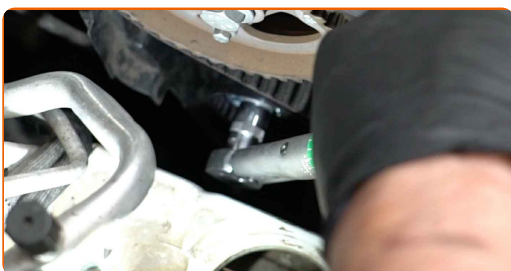


AUTODOC recommends:

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

74

Tighten the fastener of the timing belt tensioner pulley. Use a drive socket #13. Use a torque wrench. Tighten it to 27 Nm torque.

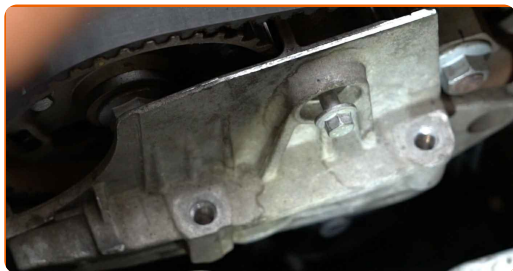


75

Treat the engine mount fasteners. Use a sealant.



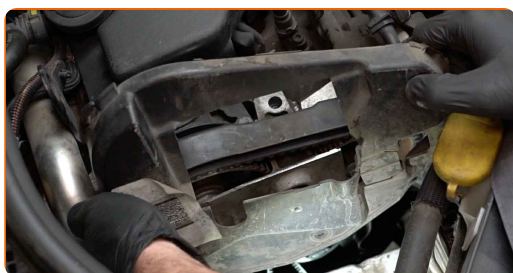
76 Install the engine mount to its mounting seat.



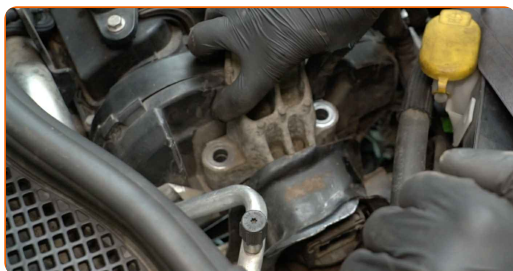
77 Tighten the engine mount fastening bolts. Use a drive socket #10. Use a torque wrench. Tighten it to 40 Nm torque.



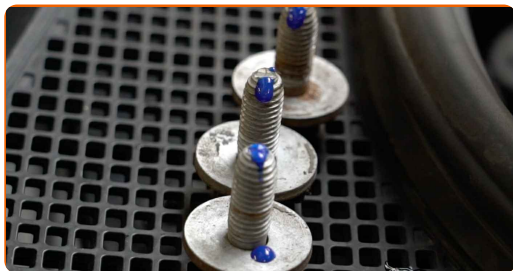
78 Install the upper timing cover. Make sure you hear a click indicating that it is locked in place.



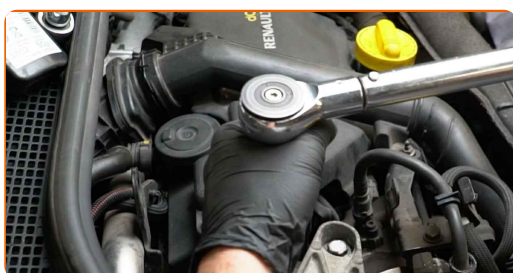
79 Install the upper part of the engine mount.



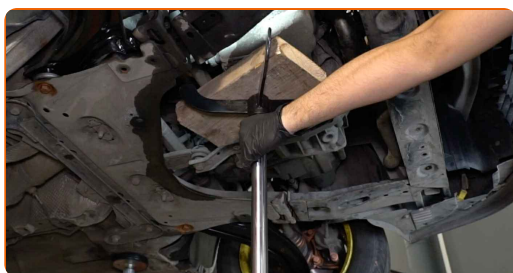
80 Treat the engine mount fasteners. Use a sealant.



81 Tighten the upper fastener of the engine mount. Use a drive socket #16. Use a torque wrench. Tighten it to 76 Nm torque.



82 Remove the support from under the engine.



Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
Tip from AUTODOC:

- Lower the hydraulic transmission jack smoothly, without jerks, to avoid damaging assemblies and mechanisms.

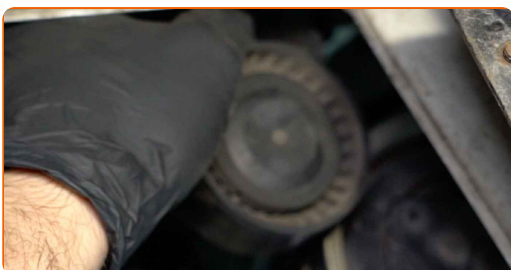
83 Install the lower timing cover.



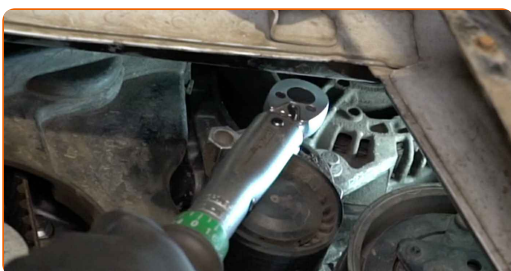
84 Treat the fastening bolt. Use a sealant.



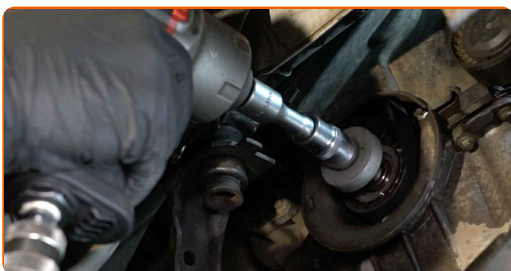
85 Install the serpentine belt tensioner pulley.



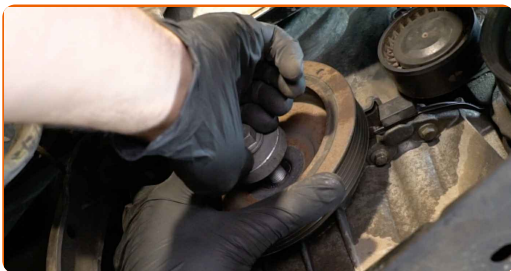
86 Tighten the fastener of the serpentine belt tensioner pulley. Use a drive socket #13. Use a torque wrench. Tighten it to 35 Nm torque.



87 Unscrew the crankshaft pulley fastener. Use a drive socket #18. Use a ratchet wrench.

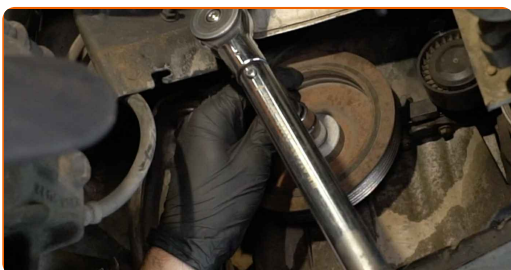


88 Install the crankshaft pulley according to the factory marks.



89 Install the crankshaft pulley locking tool. Use an engine timing tool set.

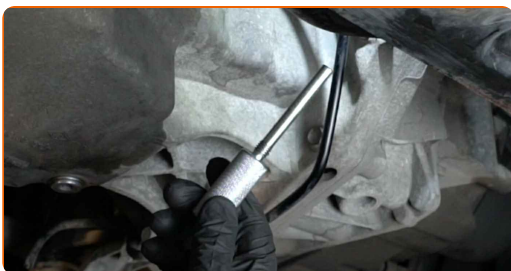
90 Tighten the crankshaft pulley fastener. Use a drive socket #18. Use a torque wrench. Tighten it to 60 Nm torque. +90°



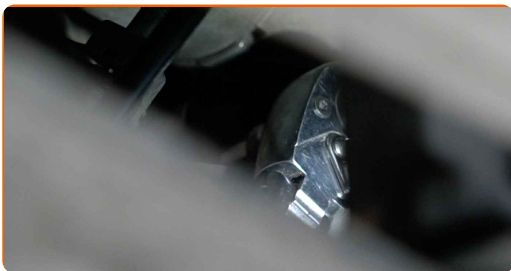
AUTODOC recommends:

- Important! Be sure to use new fasteners.

91 Remove the crankshaft pulley locking tool.



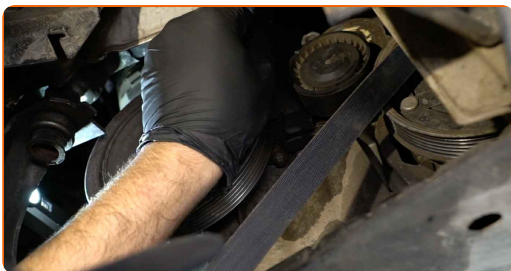
92 Screw in the TDC timing pin plug. Use a drive socket #E14. Use a ratchet wrench.



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



94 Install the V-ribbed belt.



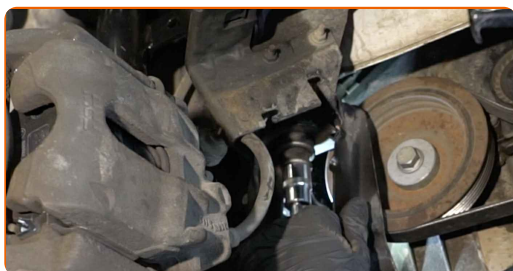
Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
Tip from AUTODOC experts:

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

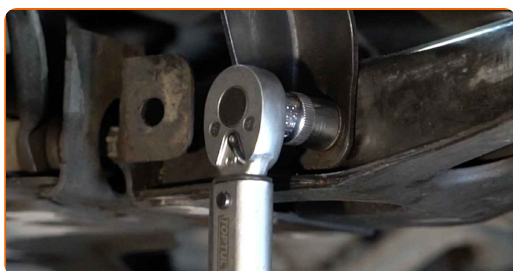
95 Return the tensioner pulley to its initial position. Use a combination spanner #16.



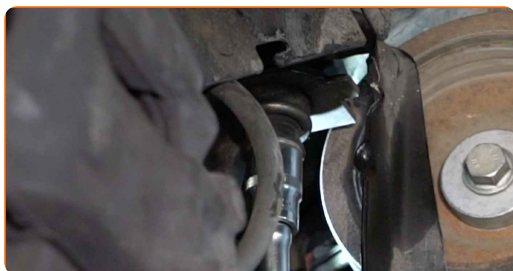
96 Screw in the subframe fasteners. Use a drive socket #18. Use a ratchet wrench.



97 Tighten the subframe reinforcement bracket fasteners. Use a drive socket #13. Use a torque wrench. Tighten it to 35 Nm torque.



98 Tighten the subframe fastening. Use a drive socket #18. Use a torque wrench. Tighten it to 105 Nm torque.



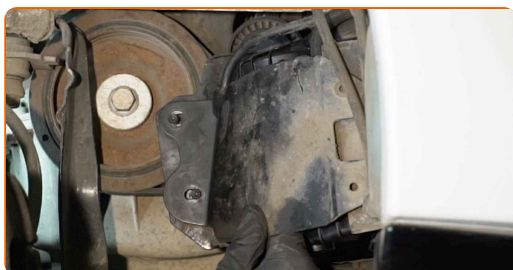
99 Install the fuel filter fastening bracket.



100 Screw the fixing bolts of the fuel filter bracket. Use a combination spanner #10.



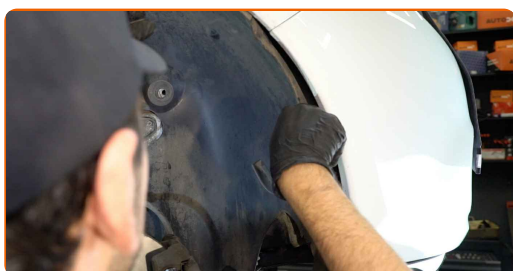
101 Install the fuel filter fastening bracket.



102 Screw the fixing bolts of the fuel filter bracket. Use a drive socket #13. Use a ratchet wrench.



103 Install the wheel arch cover to its mounting seat.



104

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



105

Clean the brake disk surface. Use a brake cleaner.

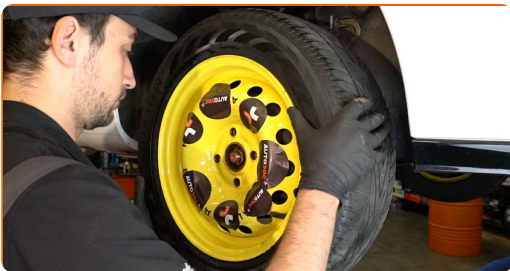


AUTODOC recommends:

- Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
After applying the spray, wait a few minutes.

106

Install the wheel.



AUTODOC recommends:

- To avoid injury, hold up the wheel when screwing in the fastening bolts.

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



108 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 105 Nm torque.



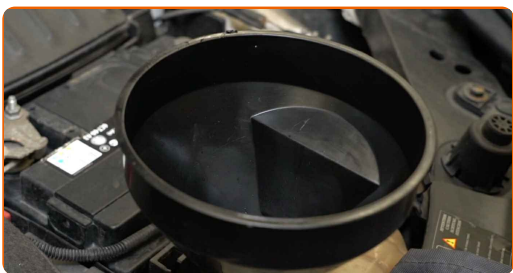
109 Remove the jacks and chocks.



110 Remove the coolant reservoir cap.



111 Insert the funnel.



112

Pour coolant in the coolant reservoir.



Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
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.

113

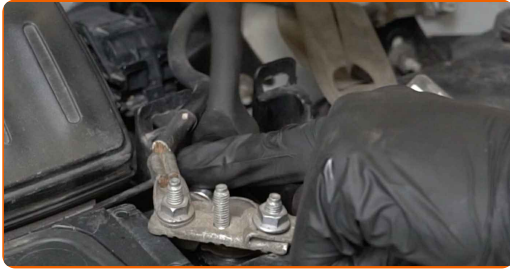
Attach the terminals to the battery.



Replacement: water pump & timing belt kit – NISSAN Almera II Saloon (N16).
AUTODOC experts recommend:

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

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



115 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.



116 Shut off the engine.

117 Install the coolant reservoir cap.

118 Screw on the coolant reservoir cap.



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 – NISSAN Almera II Saloon (N16).
Tip from AUTODOC experts:

- 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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