

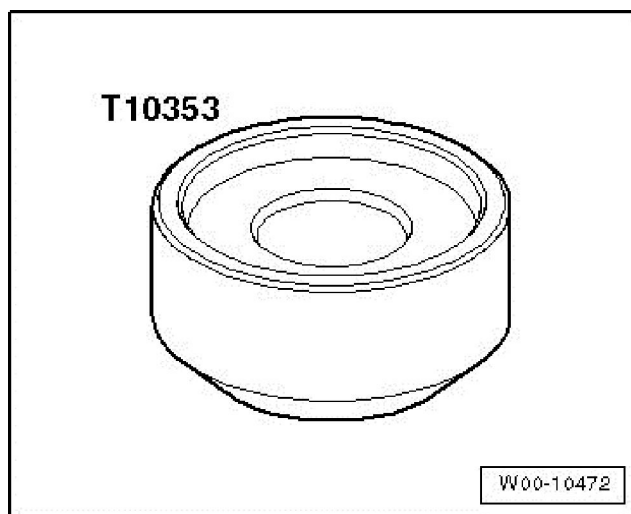
Water Pump: Service and Repair

Coolant Pump Drive Shaft Seal, Removing and Installing

Coolant Pump Drive Shaft Seal, Removing and Installing

Special tools, testers and auxiliary items required

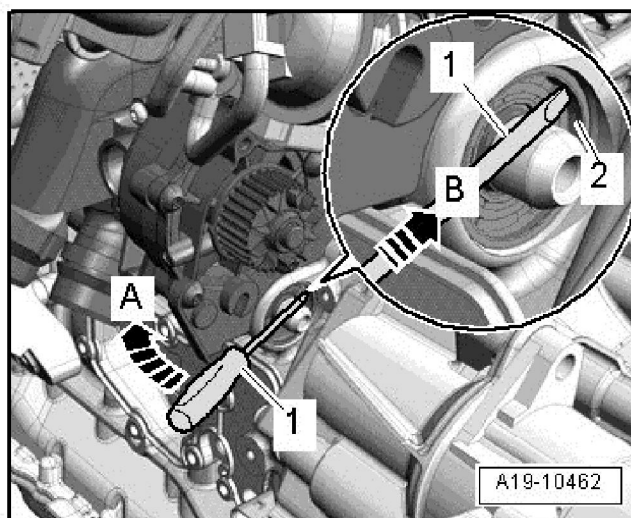
⟳ Pressure piece (T10353)



Procedure

Proceed as follows:

- Remove the coolant pump toothed belt => [Coolant Pump Toothed Belt, Removing and Installing] See: Coolant Pump Toothed Belt, Removing and Installing.
- Firmly press a screwdriver - **1** - on the surface of the seal - **2** -- **arrow B** -.



- Pry out the seal - **arrow A** -.
- Clean running and sealing surface.
- Coat the sealing surface of the balance shaft - **2** - with transmission oil.

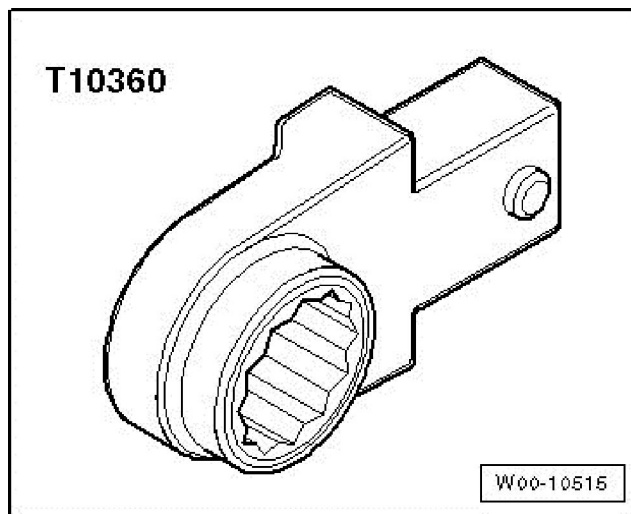
Water Pump: Service and Repair

Coolant Pump Toothed Belt, Removing and Installing

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Special tools, testers and auxiliary items required

- ◊ Assembly tool (T10360)

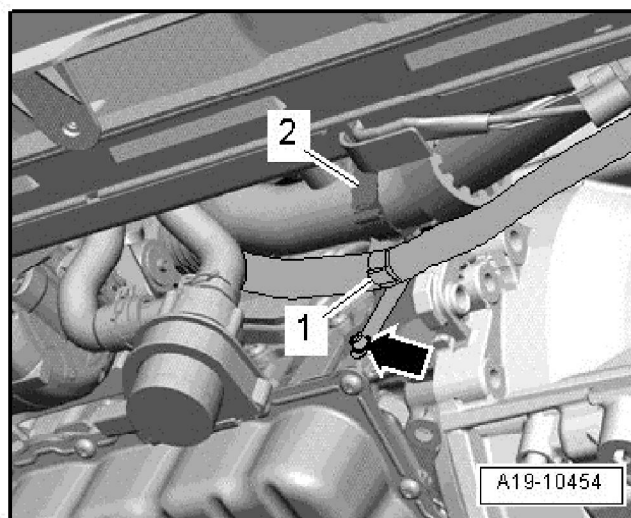


- ◊ Torque Wrench (V.A.G 1331)

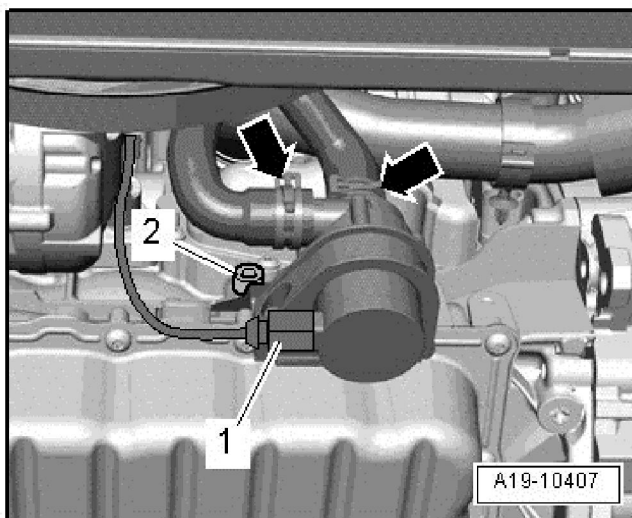
Removing

Proceed as follows:

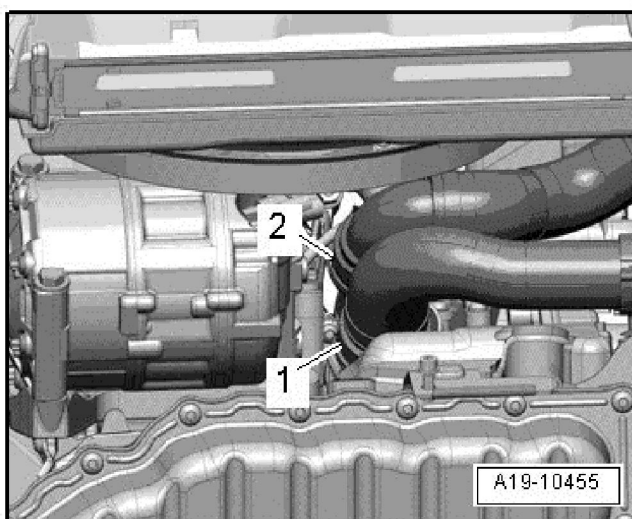
- Remove small coolant pipe => [Small Coolant Pipe, Removing and Installing] See: Cooling System/Coolant Line/Hose/Service and Repair/Small Coolant Pipe, Removing and Installing.
- Lay aside the coolant hose - **2** - a electrical wiring harness - **1** -.



- Remove the bolt - **arrow** - and remove bracket.
- Remove the bolt - **2** - on the bracket for the After-Run Coolant Pump (V51).



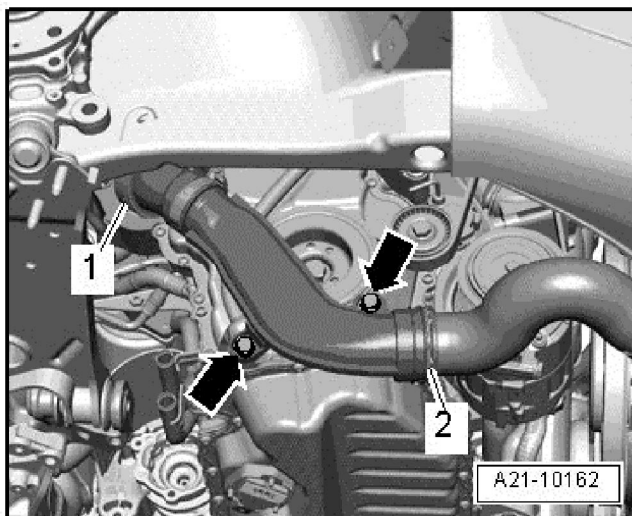
- Remove the coolant hoses - **1 and 2** - and lay them aside.



- Remove the front right wheel housing liner => Body

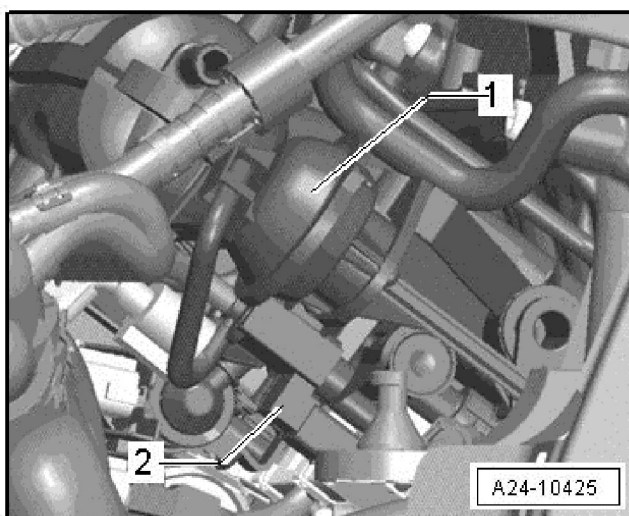
Exterior 66 Wheel Housing liner.

- Remove bolts - **arrows** -.

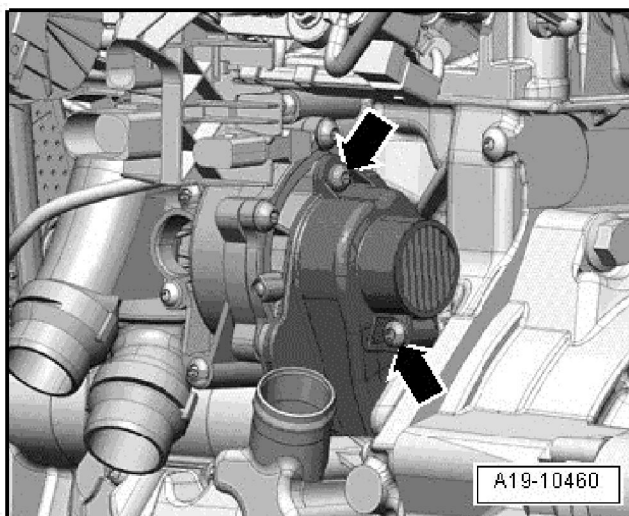


- Remove the air guide pipe by lifting the clamps - **items 1 and 2** -.

- Pull off the Intake Manifold Runner Control (IMRC) Valve (N316) - **2** - (2.0L engine) or unscrew it (1.8L engine) and lay it to the side.

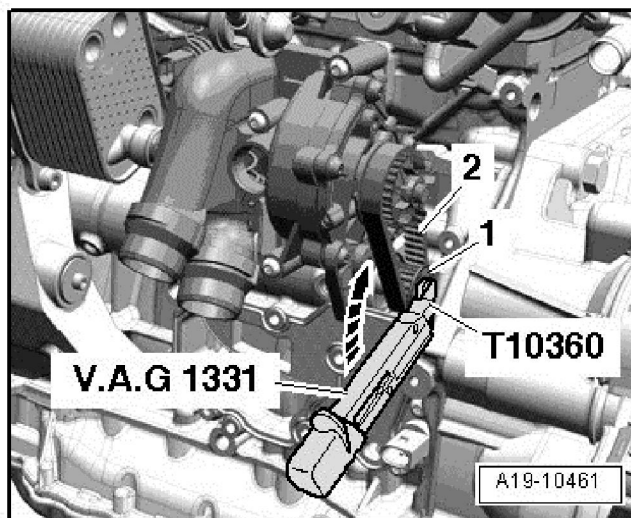


- Remove the bolts - **arrows** - and remove the toothed belt cover.

**CAUTION!**

The drive gear bolt has a left thread.

- Remove the bolt on the coolant pump drive gear - **1** - using Torque Wrench (V.A.G 1331) clockwise and Insert Tool (T10360); at the same time, counterhold the vibration damper.



- Remove the drive gear - **1** - and toothed belt - **2** -.

Installing

Installation is performed in reverse order of removal, noting the following:

- Replace the drive gear bolt.
- Replace seals and O-rings.

Drive gear installation position: The collar on the drive gear faces the transmission.

Tightening specifications => [Coolant Pump and Thermostat, Assembly Overview] See: Coolant Pump and Thermostat, Assembly Overview.

Water Pump: Service and Repair

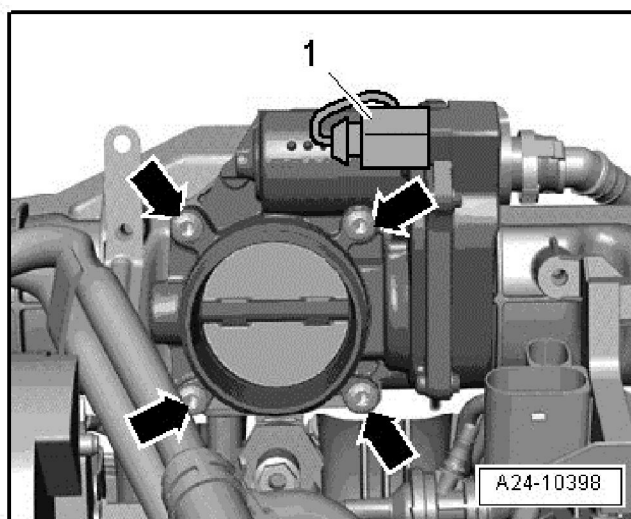
Coolant Pump, Removing and Installing

Coolant Pump, Removing and Installing

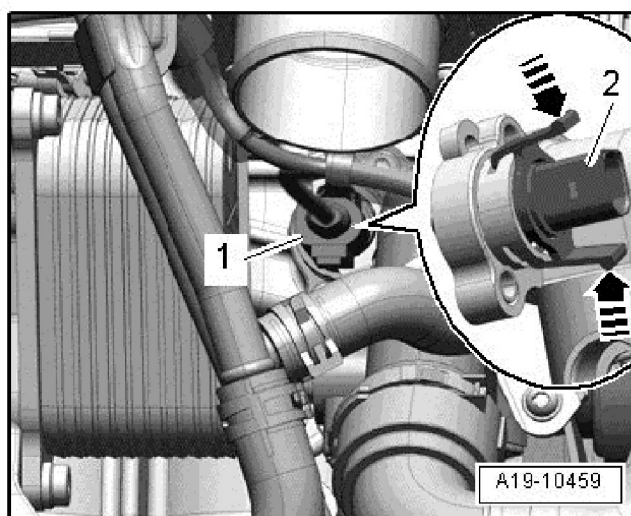
Removing

Proceed as follows:

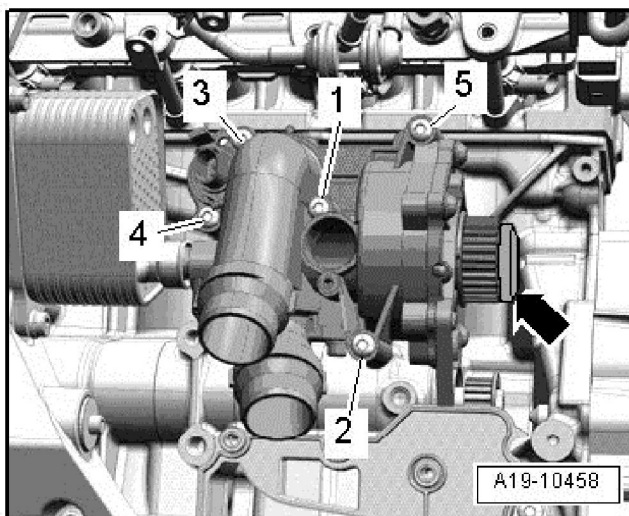
- Remove small coolant pipe => [Small Coolant Pipe, Removing and Installing] See: Cooling System/Coolant Line/Hose/Service and Repair/Small Coolant Pipe, Removing and Installing.
- Remove the coolant pump toothed belt => [Coolant Pump Toothed Belt, Removing and Installing] See: Coolant Pump Toothed Belt, Removing and Installing.
- Disconnect electrical connector - **1** - on Throttle Valve Control Module (J338).



- Remove bolts - **arrows** - and remove Throttle Valve Control Module (J338).
- Disconnect the electrical connector - **1** - on the engine coolant temperature (ECT) sensor (G62).



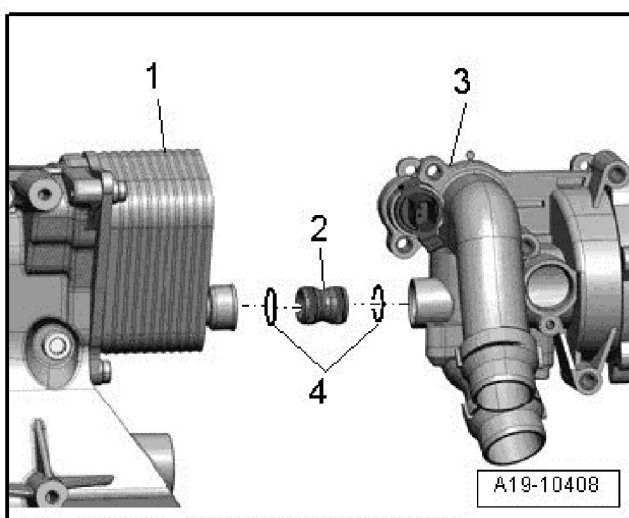
- Remove bolts - **1 to 5** -.



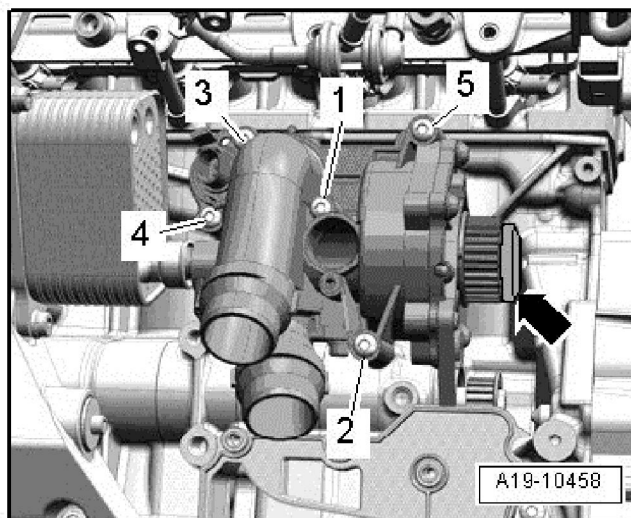
- Remove the coolant pump from the centering pin and remove the oil cooler.

Installing

- ⟳ Replace seals and O-rings.
- Coat the O-rings - 4 - with coolant.



- Make sure both centering pins are installed in the cylinder block.
- Install the connection piece - 2 - into the oil cooler - 1 -.
- Push the coolant pump - 3 - onto the connection piece and onto the centering pins in the cylinder block.
- Tighten bolts in - 1 to 5 - sequence.



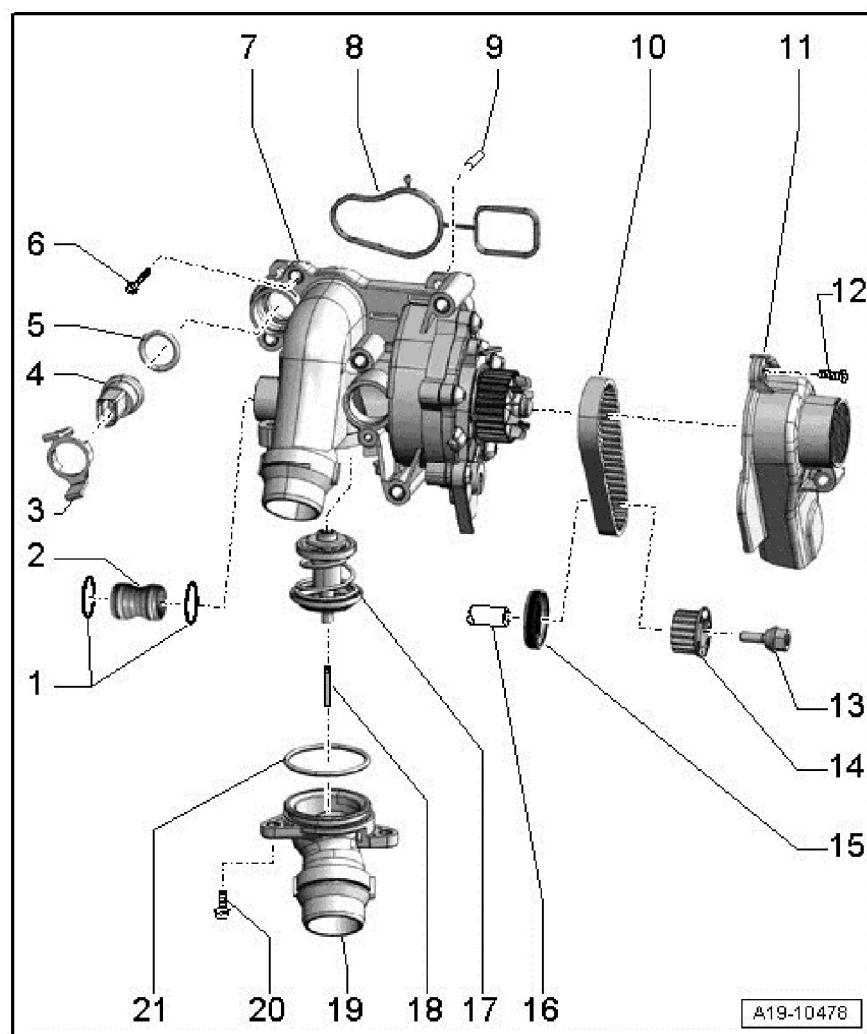
◇ If a new coolant pump was installed, then the protective cap - **arrow** - must be removed.

The rest of the installation follows the reverse of the removal procedures.

Water Pump: Service and Repair

Coolant Pump and Thermostat, Assembly Overview

Coolant Pump and Thermostat, Assembly Overview



1 O-rings

- ◇ Replace

2 Connection

3 Retaining clip

- ◇ Ensure seated tightly

4 Engine Coolant Temperature (ECT) Sensor (G62)

- ◇ Removing and installing => [Engine Coolant Temperature Sensor, Removing and Installing] See: Cooling System/Engine - Coolant Temperature Sensor/Switch/Service and Repair

5 O-ring

- ◇ Replace

6 Bolt

- ◇ 9 Nm

- ◇ Tightening order => [Coolant Pump, Tightening Sequence]

7 Coolant pump

- ◇ Removing and installing => [Coolant Pump, Removing and Installing] See: Coolant Pump, Removing and Installing
- ◇ with a new coolant pump, remove the protective cap

8 Gasket

- ◇ Replace

9 Centering pins

10 Toothed belt

- ◇ For coolant pump
- ◇ Removing and installing => [Coolant Pump Toothed Belt, Removing and Installing] See: Coolant Pump Toothed Belt, Removing and Installing

11 Toothed belt cover

12 Bolt

- ◇ 9 Nm

13 Bolt

- ◇ Left thread
- ◇ Replace
- ◇ 10 Nm + 90° (1/4) turn.

14 Drive gear for toothed belt

- ◇ Installation position: The collar on the drive gear faces the transmission.

15 Shaft seal

- ◇ replacing => [Coolant Pump Drive Shaft Seal, Removing and Installing] See: Coolant Pump Drive Shaft Seal, Removing and Installing.

16 Balance shaft

17 Coolant thermostat

- ◇ Removing and installing => [Coolant Thermostat, Removing and Installing] See: Cooling System/Thermostat/Service and Repair/Coolant Thermostat, Removing and Installing

18 Centering pin

19 Connecting piece

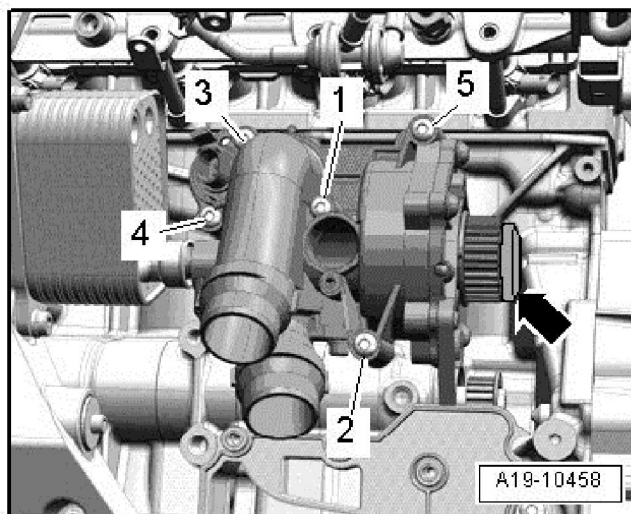
20 Bolt

- ◇ 9 Nm

21 O-ring

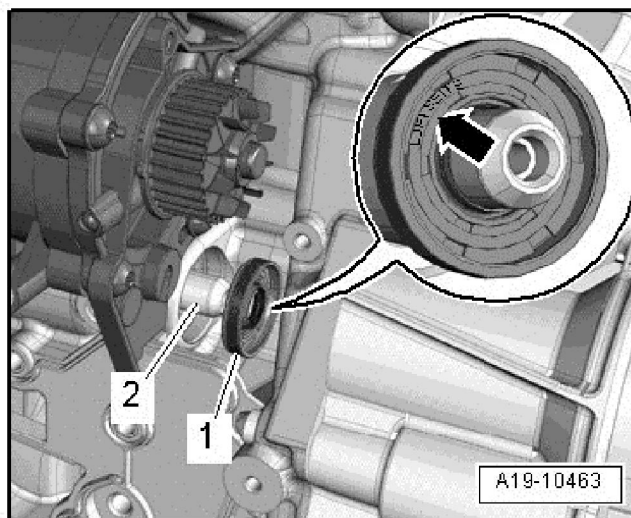
- ◇ Replace

Coolant Pump, Tightening Sequence



- Tighten bolts in - **1 to 5** - sequence.

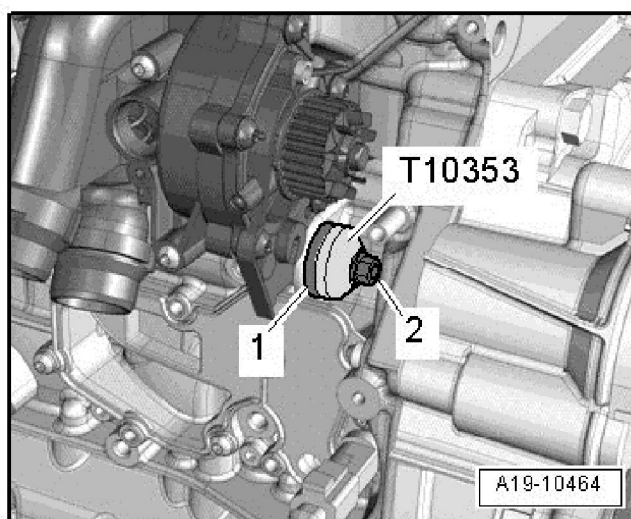
◇ 9 Nm



- Push the seal - **1** - onto the balance shaft.

⌘ "Luftseite" or ("Outside") - **arrow** - must be readable from the outside.

- Mount the thrust piece (T10353) on the seal - **1** - and press it into the cylinder block all the way with the screw - **2** -; when doing this, do not bend the sealing ring.



- Install the coolant pump toothed belt => [Coolant Pump Toothed Belt, Removing and Installing] See: Coolant Pump Toothed Belt, Removing and Installing.

The rest of the installation follows the reverse of the removal procedures.