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Your Vehicle: 2010 Audi Q7 Quattro (4LB) V6-3.0L DSL Turbo (CATA)



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Procedures

Cooling System, Draining and Filling

Special tools, testers and auxiliary items required

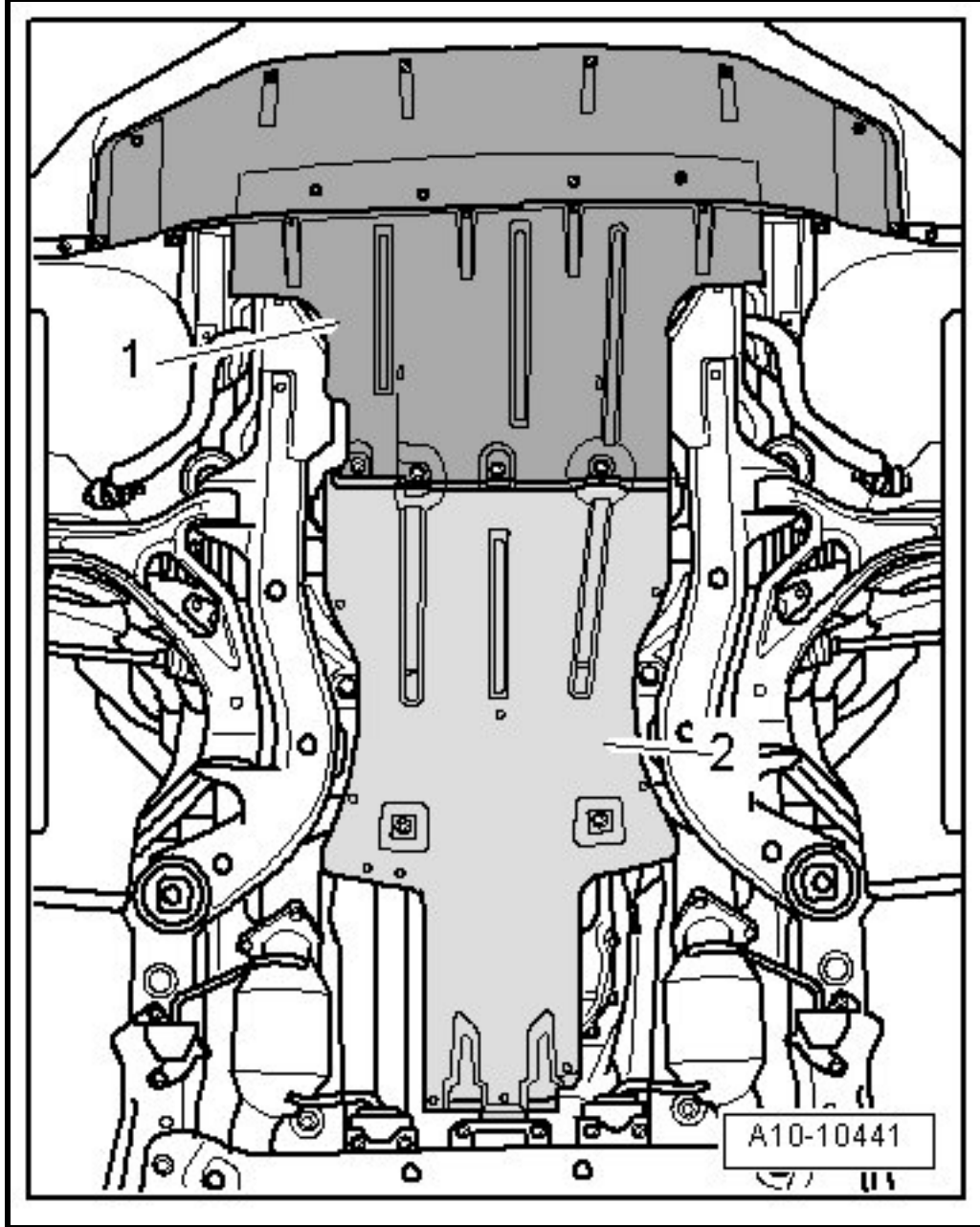
- ✘ Adapter (V.A.G 1274/8)
- ✘ Adapter V.A.G 1274 Tester (V.A.G 1274/10)
- ✘ Drip Tray (VAS 6208)
- ✘ Cooling System Charge Unit (VAS 6096)
- ✘ Hose Clip Pliers (VAS 6362)
- ✘ Refractometer (T10007)
- ✘ Vehicle Diagnosis Tester for vehicles built through 05.10

Draining

- ✘ Collect escaping coolant in a clean container for disposal or reuse.
 - On a vehicle with air suspension, activate vehicle lift mode.

Risk of scalding due to hot steam and hot coolant.

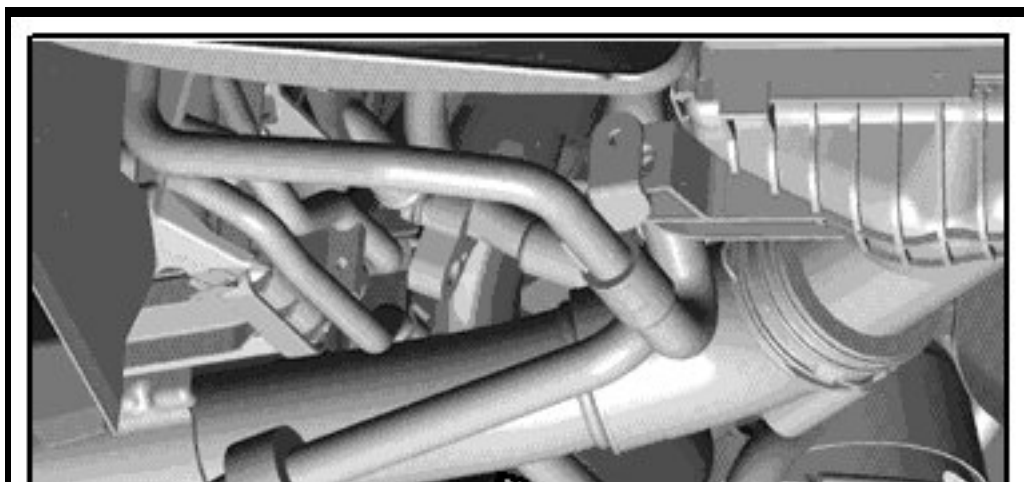
- ✘ **The coolant system is under pressure when the engine is warm.**
- ✘ **Cover the coolant reservoir cap with a cloth and then open it slowly to release the pressure in the system.**
 - Open the coolant reservoir cap.
 - Remove the front noise insulation - 1 -..

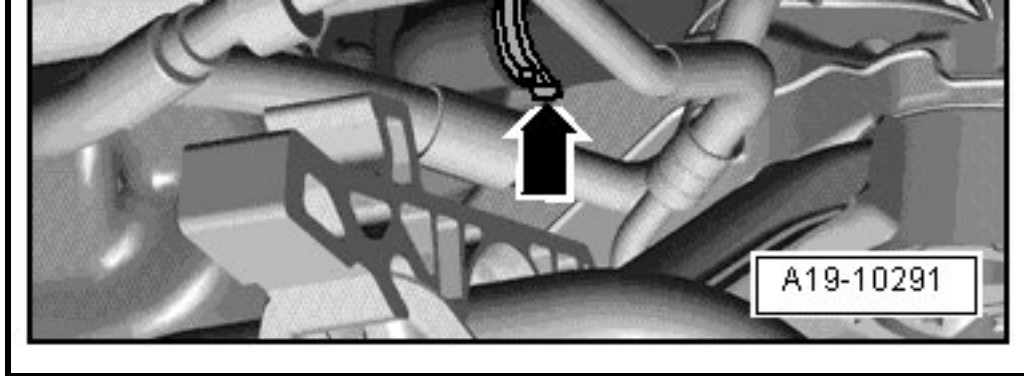


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- Place the (VAS 6208) under the engine.





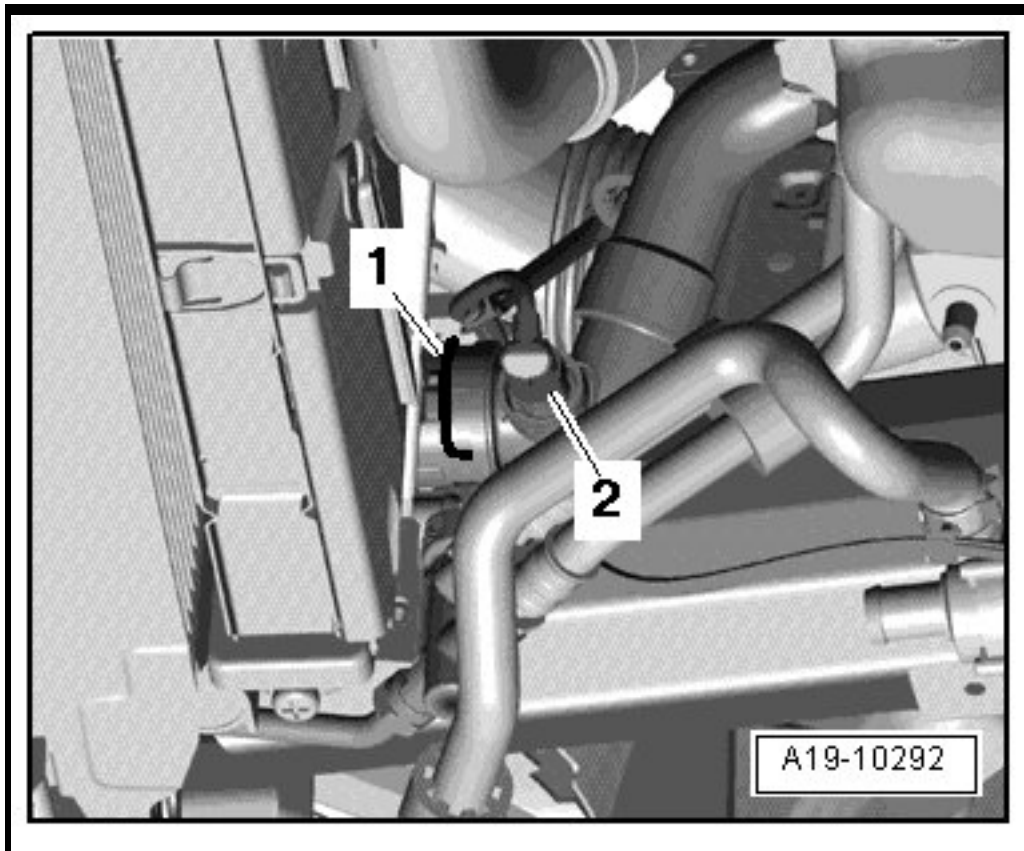
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- Remove the coolant hose from the left coolant pipe by loosening the hose clamp - **arrow** - and letting the coolant drain out.

Vehicles Built through 05.10

- Remove the right lower coolant hose from the radiator by lifting the clamp - **1** - and let the coolant drain out.



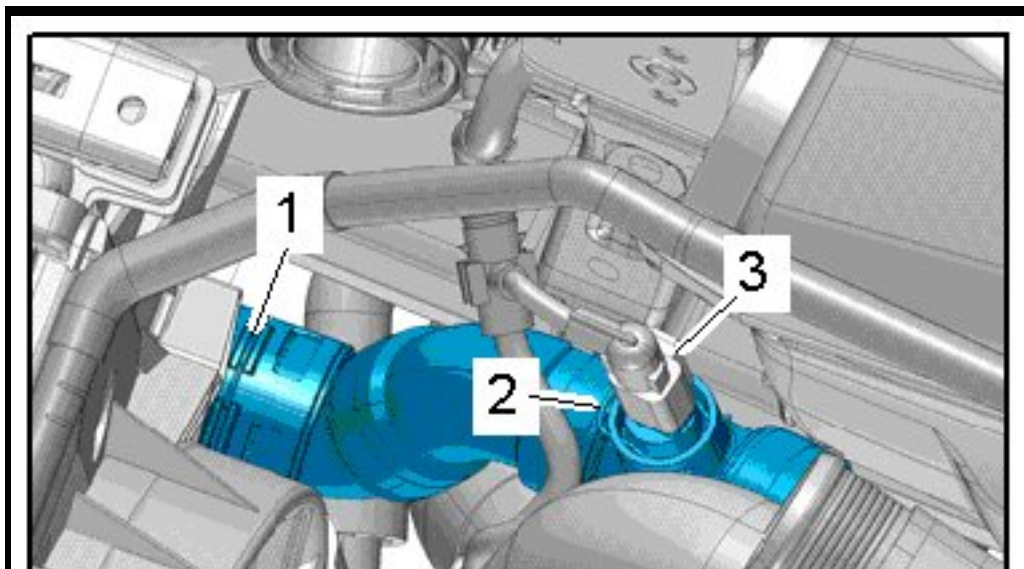
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⌘ Ignore - 2 -.

Vehicles Built from 06.10

- Remove the right lower coolant hose from the radiator by lifting the clamp - **1** - and let the coolant drain out.





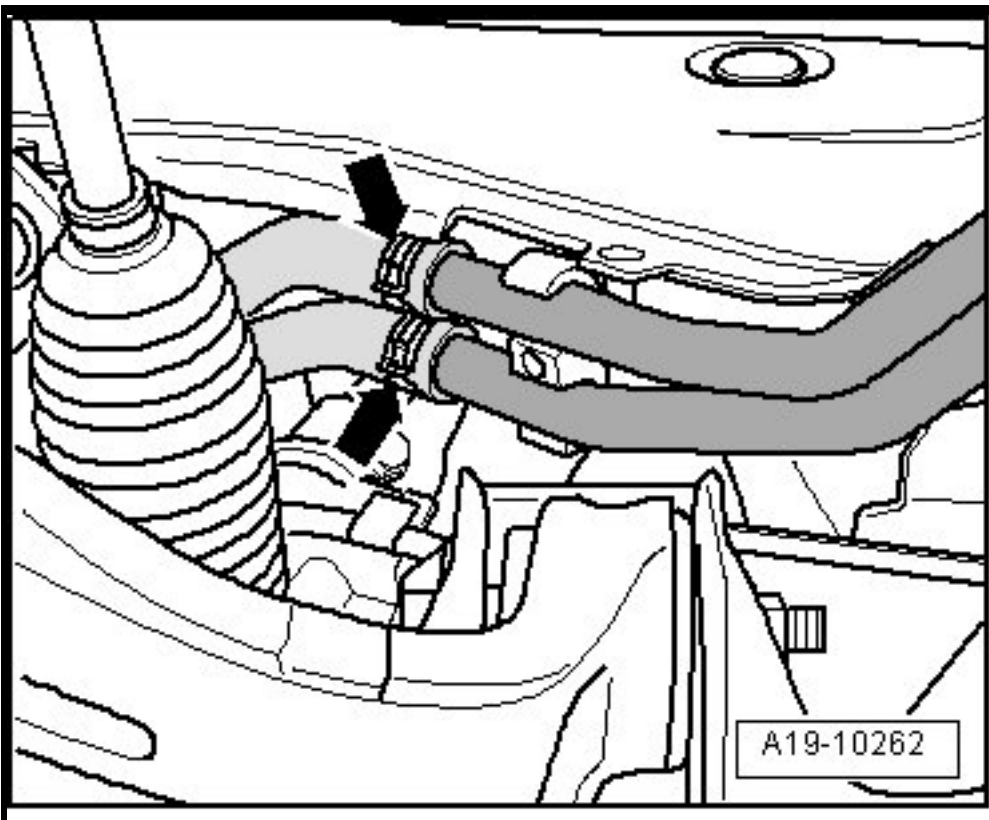
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⌘ Ignore - 2 and 3 -.

All Vehicles

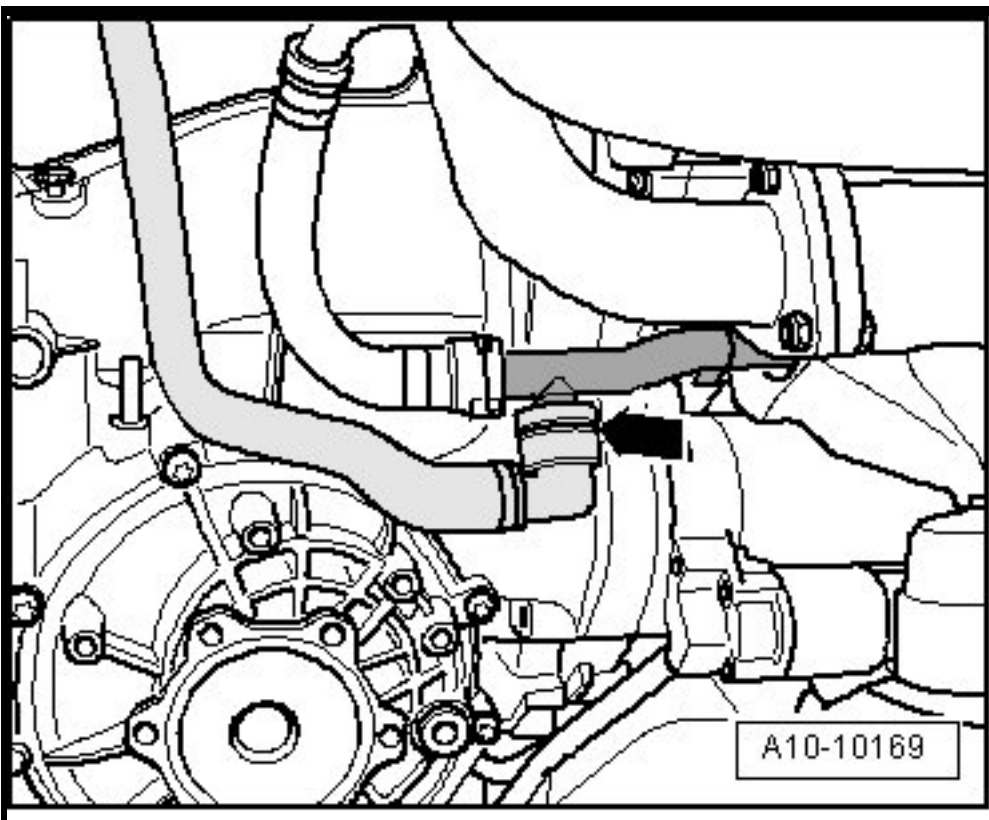
- Loosen the hose clamps, remove the coolant hoses from the heat exchanger - **arrows** - and let the coolant drain out.



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- Remove the coolant hose from the right coolant pipe by loosening the clamp - **arrow** - and letting any remaining coolant drain out.



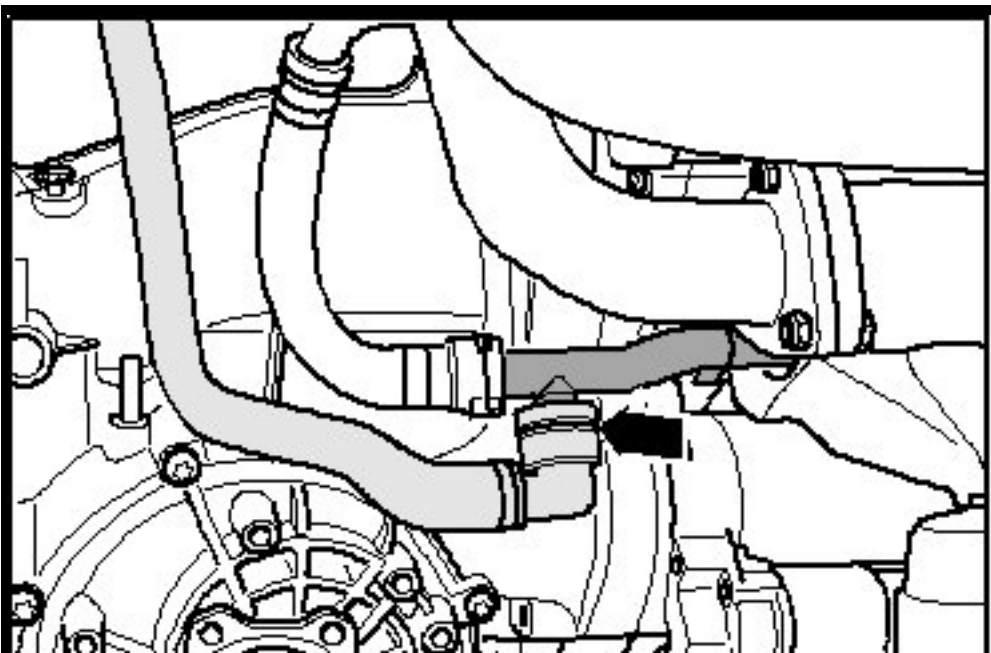
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Filling

- ⌘ Tightening specifications, refer to => [[Coolant Pipes Overview](#)] [See: Coolant Line/Hose\Service and Repair\Coolant Pipes Overview](#).
- ⌘ Ignition switched off.
- ⌘ The cooling system is filled year year-round with a mixture of water and coolant additive. Mixture ratio.
- ⌘ Only use coolant according to the Parts Catalog. Other coolant additives may above all reduce the corrosion protection effect significantly. The damage resulting from this may lead to loss of coolant and consequently to severe engine damage.
- ⌘ Coolant with the correct mixture ratio prevents freezing and corrosion damage and calcium deposits. They also raise the boiling point. The cooling system must be filled with coolant additive year-round.
- ⌘ Because of its high boiling point, the coolant improves engine reliability under heavy loads, particularly in countries with tropical climates.
- ⌘ Protection against frost must be assured down to approximately -25°C (-13°F) (in arctic climatic countries down to approximately -35°C (-31°F)).
- ⌘ The coolant concentration must not be reduced by adding water even in warmer seasons and in warmer countries. Coolant additive portion must be at least 40%.
- ⌘ When stronger freeze protection is needed due to the climate, the portion of coolant additive can be increased up to 60% (freeze protection down to approximately -40°C (-40°F)). Otherwise the freeze protection and cooling effect are reduced.
- ⌘ Only use clean drinking water for mixing coolant.
- ⌘ If [radiator](#), heat exchanger, cylinder head or head seal or cylinder block were replaced, do not reuse used coolant.
- ⌘ Dirty coolant may not be used again.
- ⌘ Use the refractometer (T10007) to check the freeze protection in the cooling system.

Coolant Mixture Ratio

- ⌘ Coolant additive (40%) and water (60%) for freeze protection down to -25°C (-13°F)
 - ⌘ Coolant additive (50%) and water (50%) for freeze protection down to -35°C (-31°F)
 - ⌘ Coolant additive (60%) and water (40%) for freeze protection down to -40°C (-40°F)
 - ⌘ Coolant additive, refer to the Parts Catalog
- Connect the coolant hose - **arrow** - and connector coupling to the right coolant pipe. Refer to => [[Connect the Coolant Hose to the Coupling](#)] [See: Radiator\Service and Repair\Radiator Overview](#).

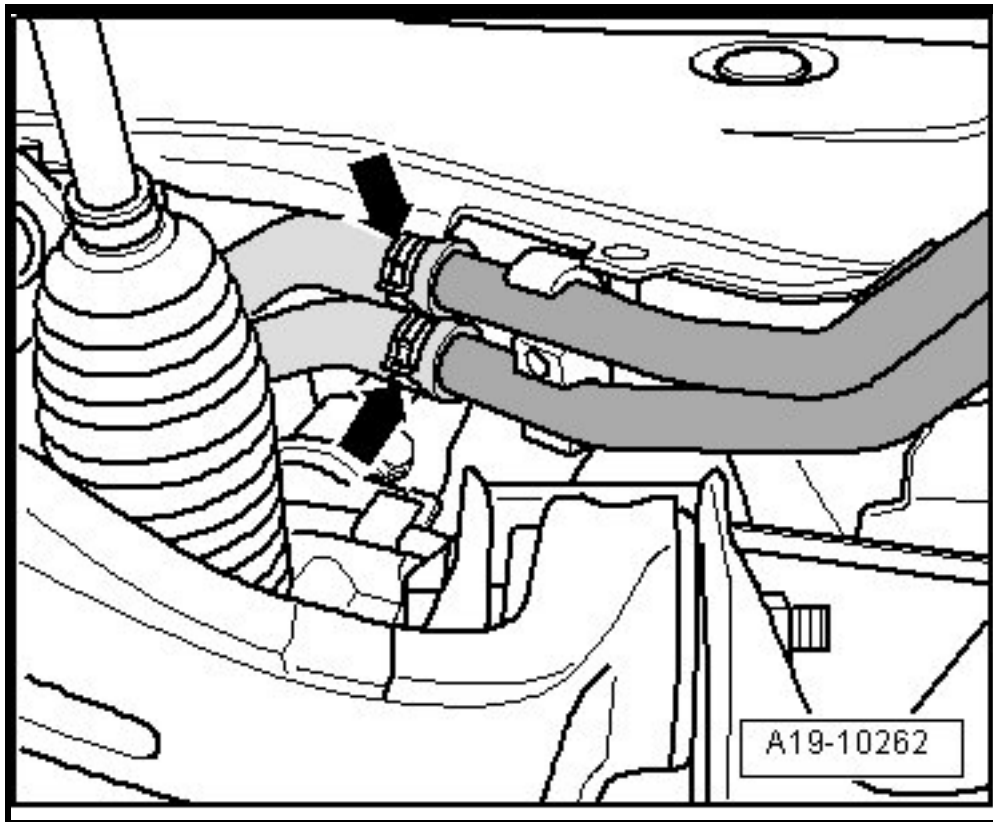




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- Connect coolant hoses to coolant pipes for the heater heat exchanger - **arrows** -.

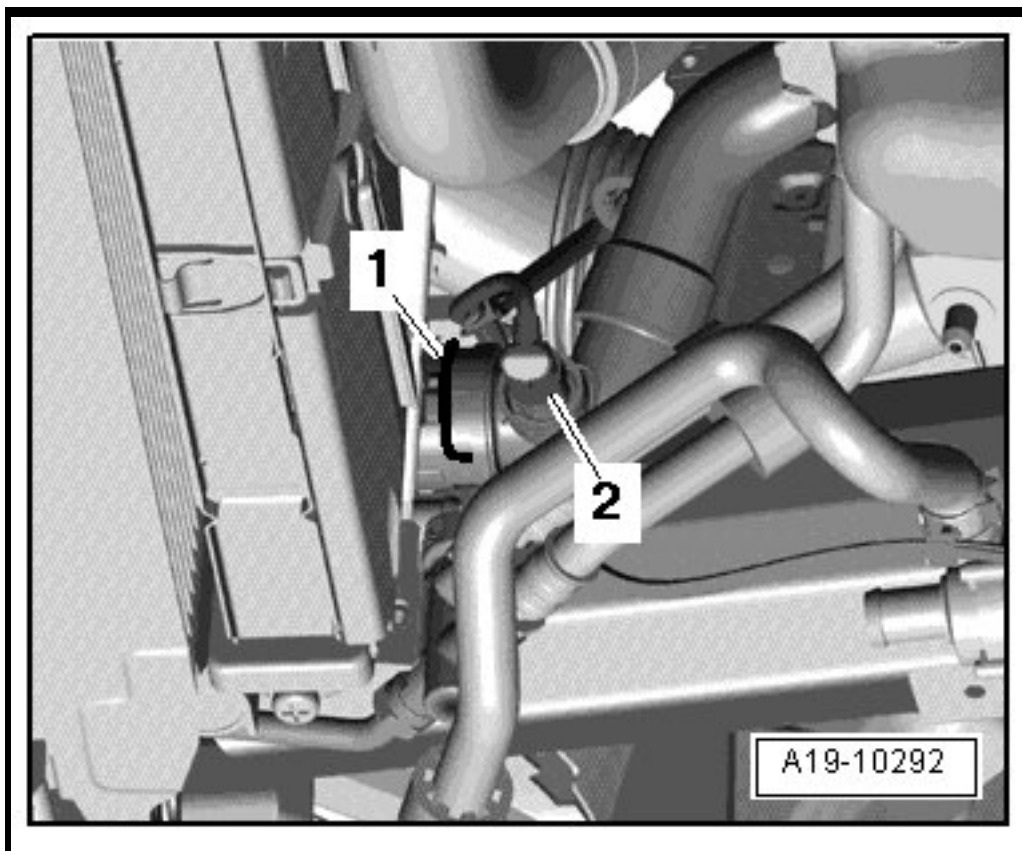


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Vehicles Built through 05.10

- Connect the coolant hose - **1** - and the lower right release coupling to the [radiator](#). Refer to => [Connect the Coolant Hose to the Coupling] [See: Radiator\Service and Repair\Radiator Overview.](#)

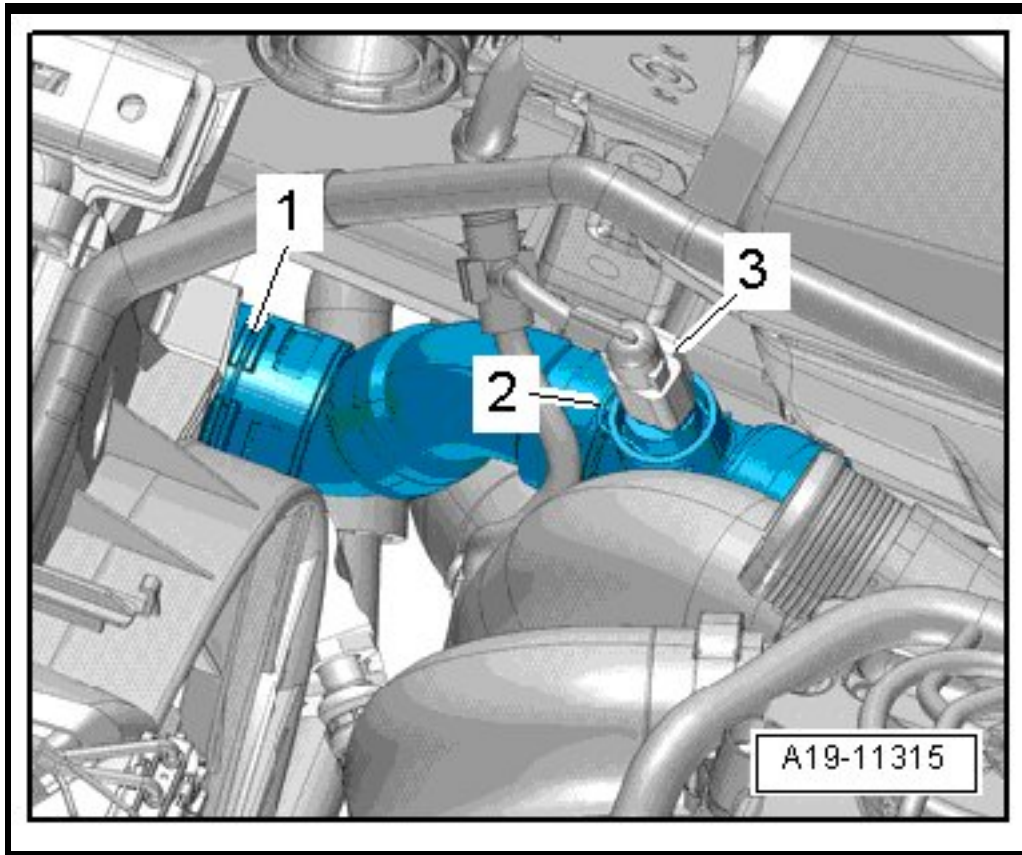


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Vehicles Built from 06.10

- Connect the coolant hose - **1** - and the lower right release coupling to the [radiator](#). Refer to => [Connect the Coolant Hose to the Coupling] [See: Radiator\Service and Repair\Radiator Overview](#).

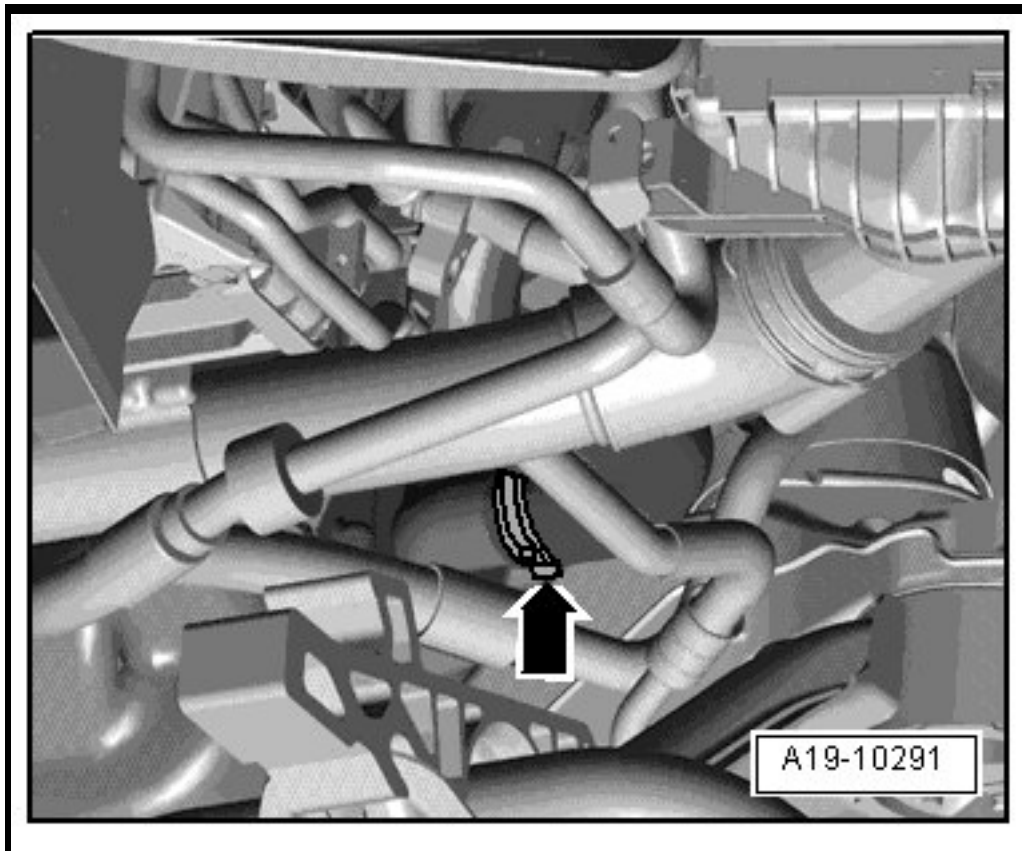


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All Vehicles

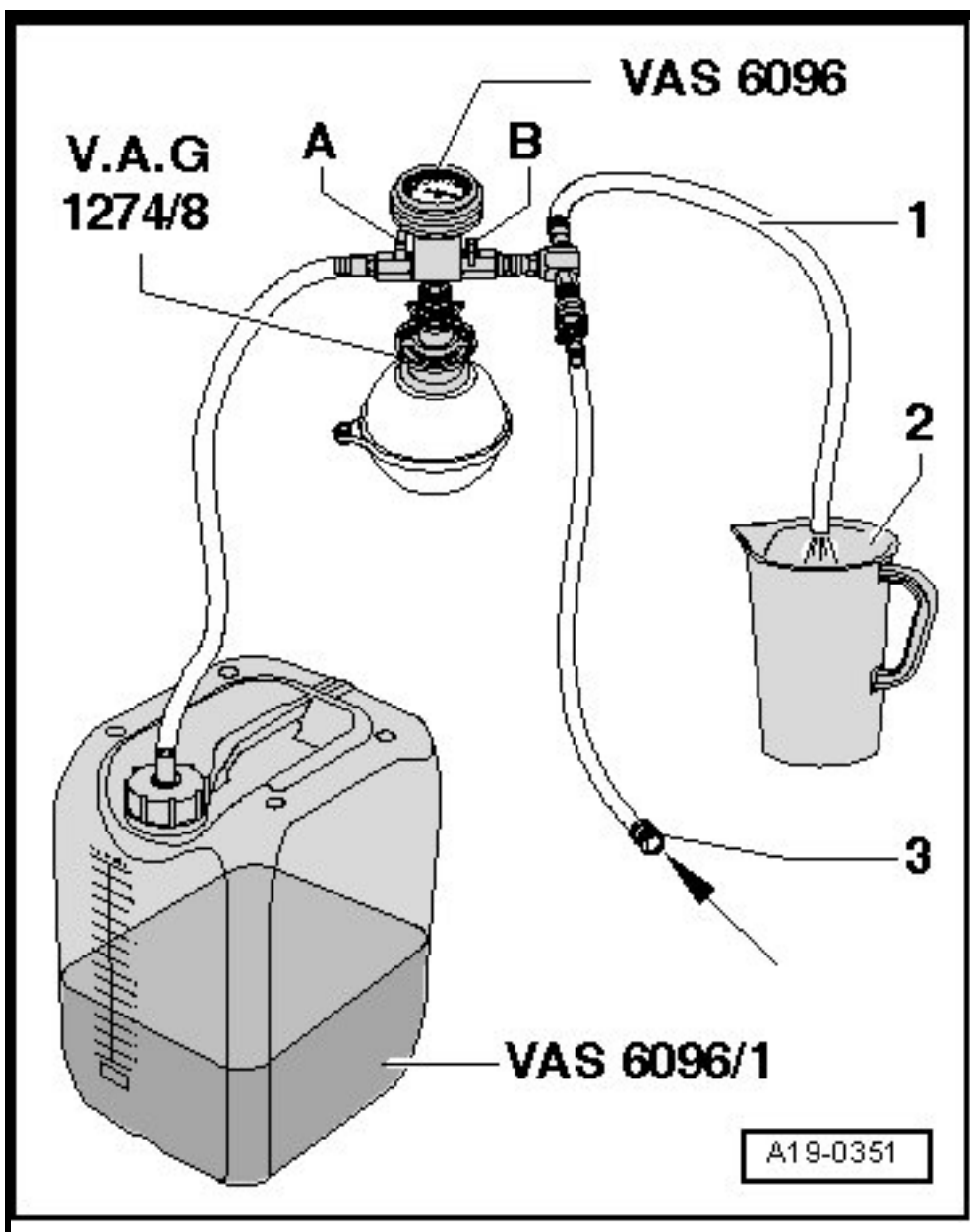
- Connect the coolant hose - **arrow** - to the left coolant pipe.



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- Fill [coolant reservoir](#) on the (VAS 6096) with at least 12 liters of premixed coolant with the proper mixture ratio:



Zoom

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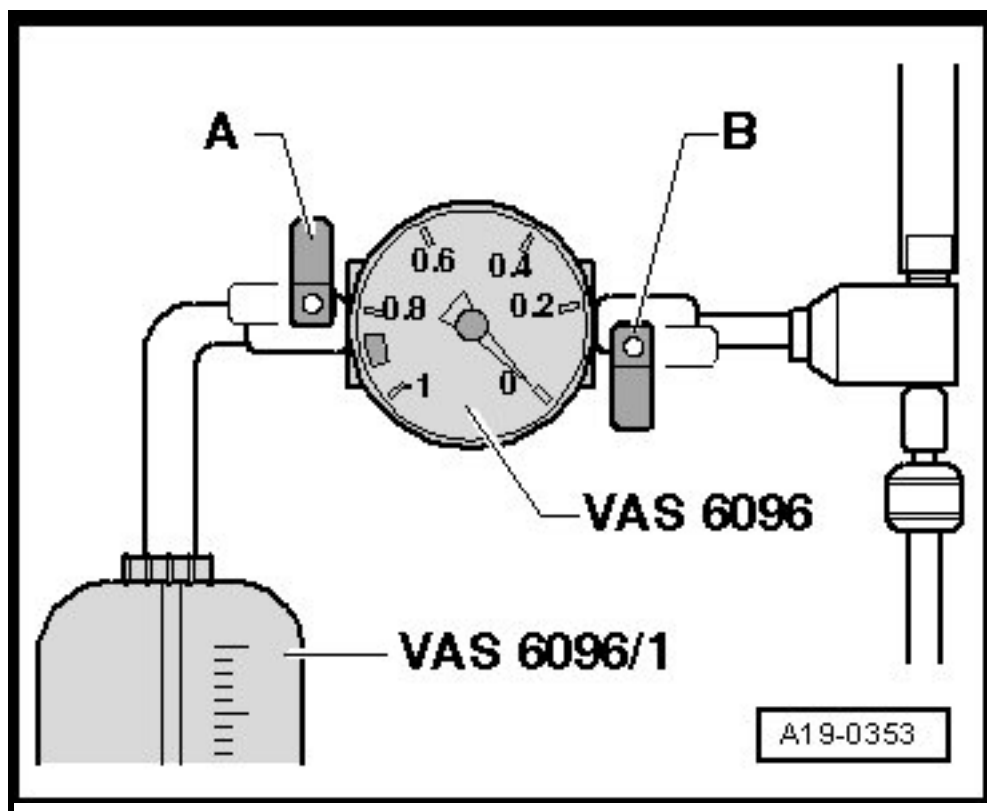
- Attach the (V.A.G 1274/8) to coolant reservoir.
- Install the (VAS 6096) on the (V.A.G 1274/8).
- Place air outlet - **1** - in a small container - **2** -.

α A small amount of coolant which should be collected is drawn off with the discharged air.

- Close valves - **A and B** - by turning lever at a right angle to direction of flow.
- Connect hose - **3** - to compressed air.

α Pressure: 6 to 10 bar (87 to 145 psi) pressure.

- Open valve - **B** - by turning level in direction of flow.

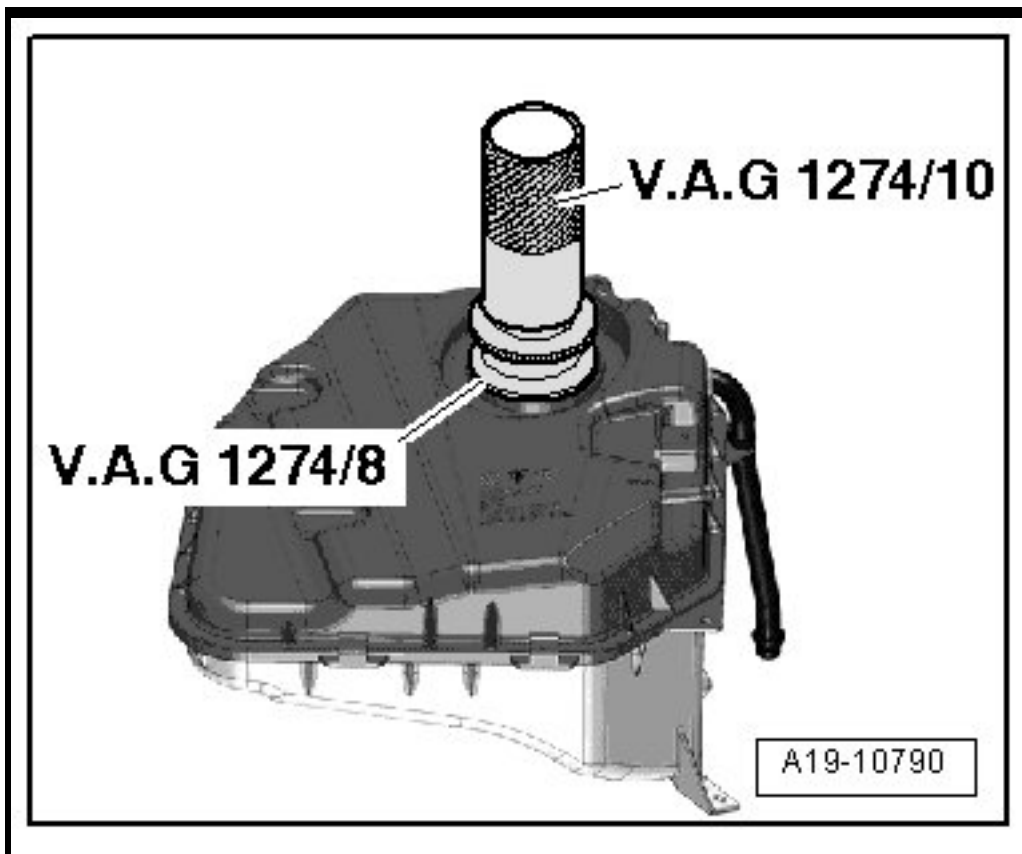


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- α The suction jet pump generates pressure in the coolant system; indicator on display instrument must move into green area.
 - Briefly open valve - **A** - by turning lever in direction of flow so that the hose on (VAS 6096) coolant reservoir fills with coolant.
 - Close valve - **A** - again.
 - Leave valve - **B** - open another 2 minutes.
 - α More pressure is generated in the coolant system by the suction jet pump; indicator on display instrument must stay in green area.
 - Close valve - **B** -.
 - α Needle in the display instrument must remain in the green region, then the sufficient vacuum in the cooling system is obtained for the upcoming filling.
 - α If needle stands below the green area, repeat procedure.
 - α If pressure falls, check coolant system for leaks.
 - Remove pressurized air hose.
 - Open valve - **A** -.
 - α Coolant is extracted from the (VAS 6096) coolant reservoir by pressure in the coolant system and the system is filled.
 - Remove the (VAS 6096) from the (V.A.G 1274/8) on coolant reservoir.

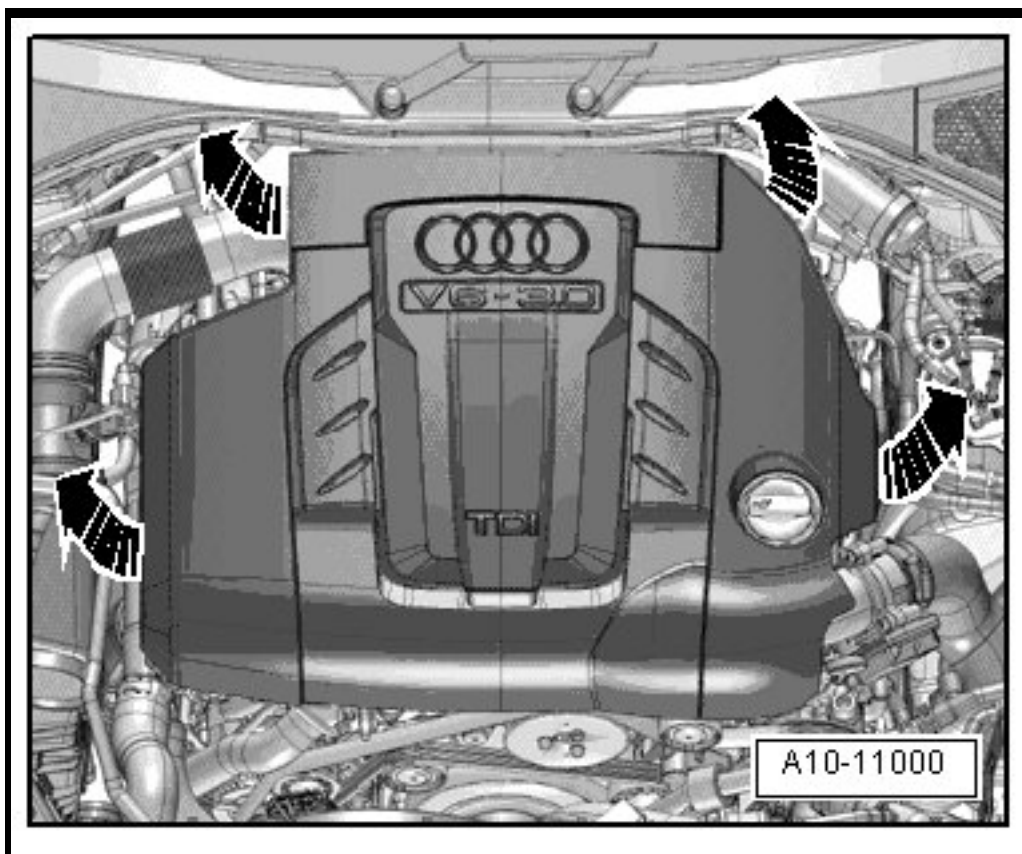
- Connect the (V.A.G 1274/10) to the (V.A.G 1274/8).



Zoom

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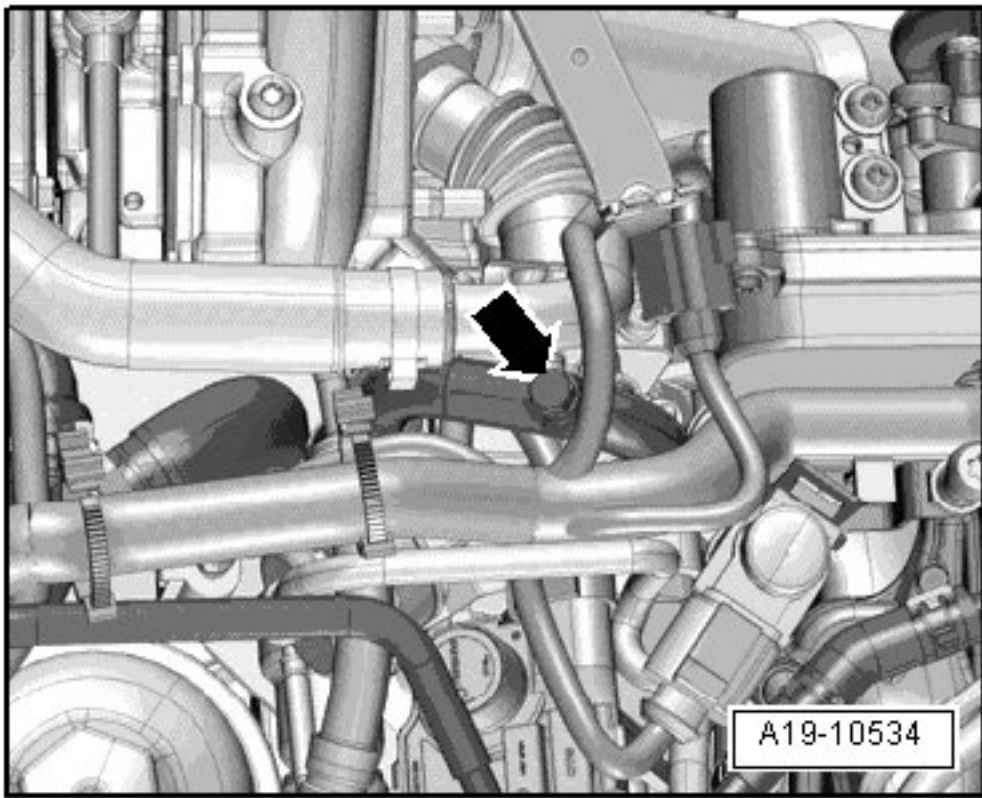
- Fill with coolant until the coolant system tester tube is full. Fill again during the bleeding procedure if necessary.
- Carefully pull the engine cover - **arrows** - off the 4 bolts one after the other.



Zoom

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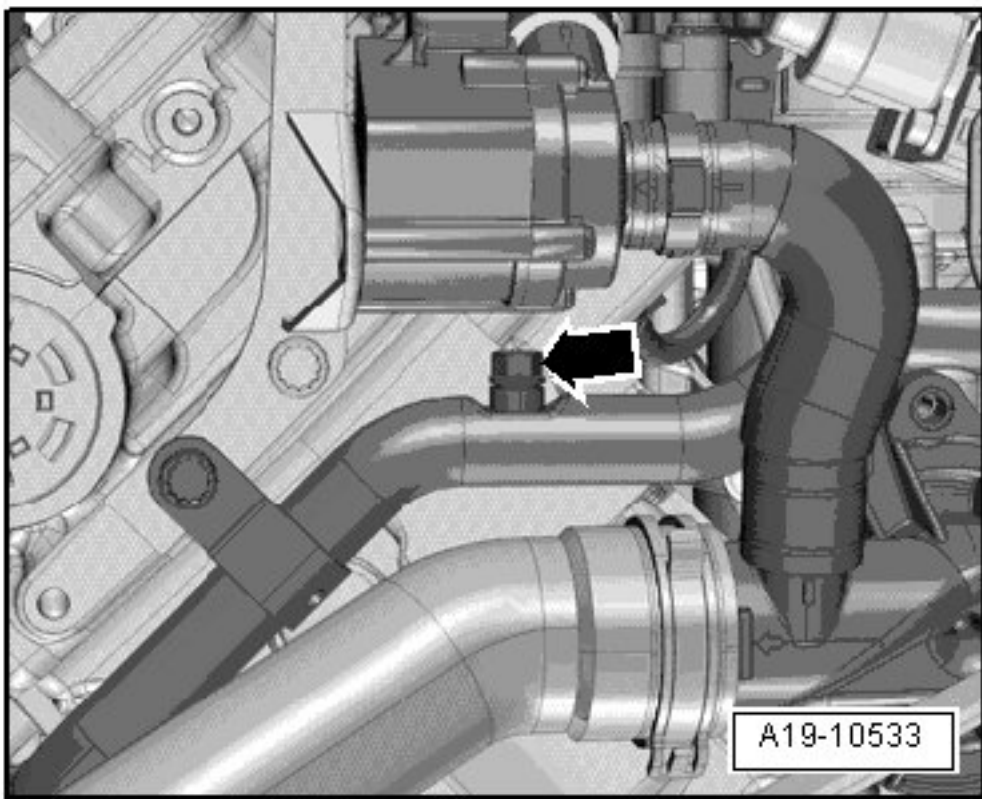
- Open the vent plug - **arrow** - on the top of the left coolant pipe until the coolant is allow to come out until there are no bubbles.



Zoom

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- Close the bleeder screw.
- Open the front vent plug - **arrow** - on the engine and let the coolant drain out until there are no bubbles.



Zoom

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- Close the bleeder screw.

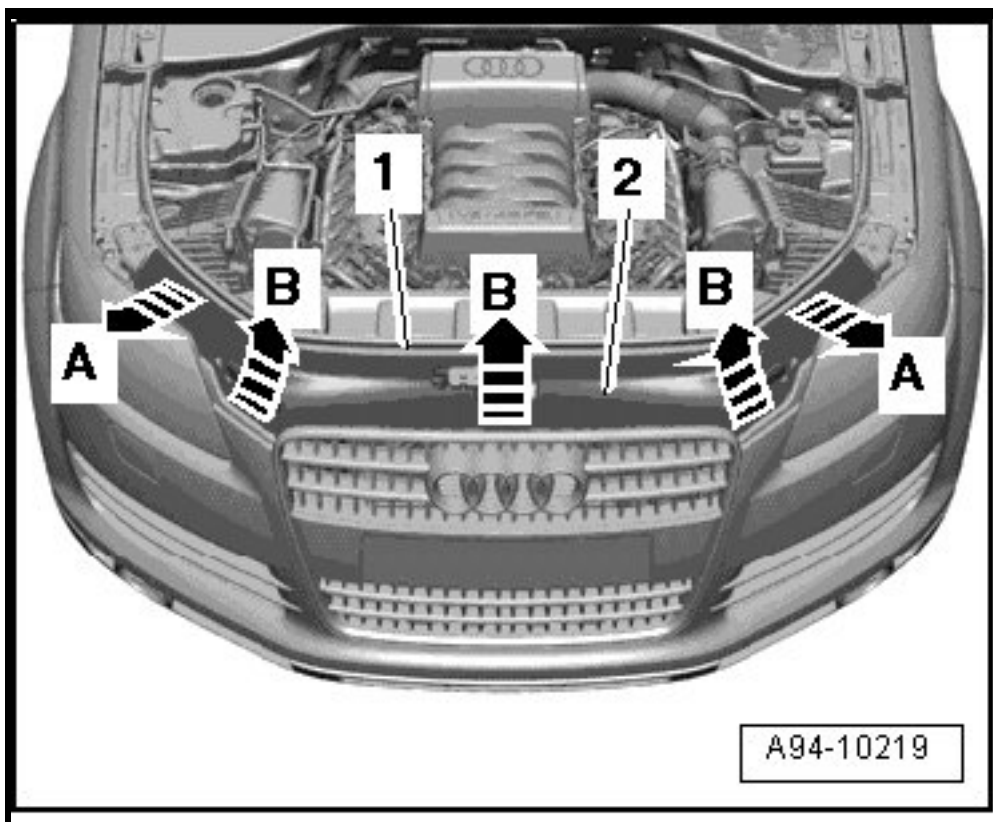
Vehicles Built through 05.10

- Connect the vehicle diagnosis tester, turn on the ignition and select OBD.
- Select the following menu points in vehicle on board diagnostic:

α "01- Engine electronics"

α "Output Diagnostic Test Mode"

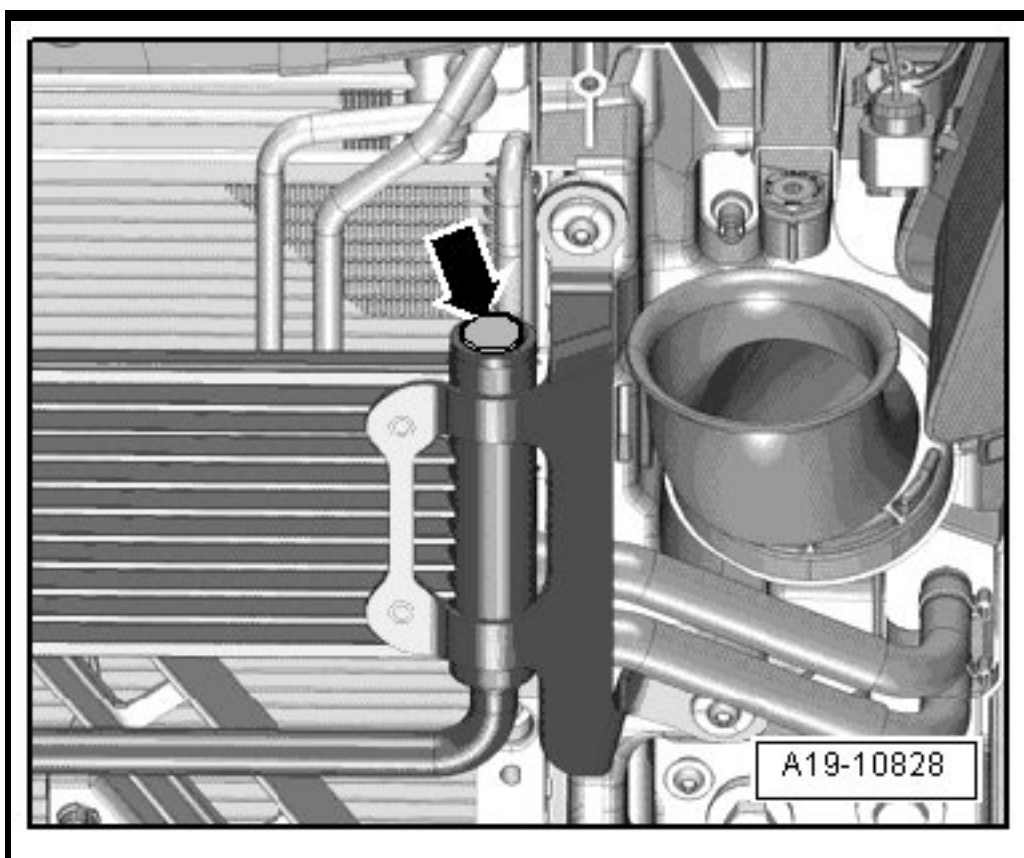
- Remove the cover - **2** - from the guide in the lock carrier - **1** - - **arrows A** -.



Zoom

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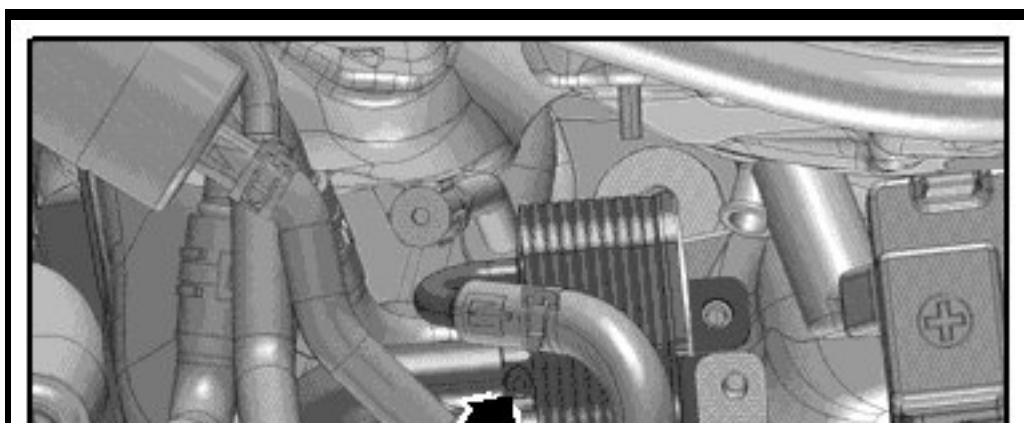
- Remove the side cover on the bumper and radiator grille - **arrows B** -.
- Remove the cover - **arrow** - and open the vent plug underneath.

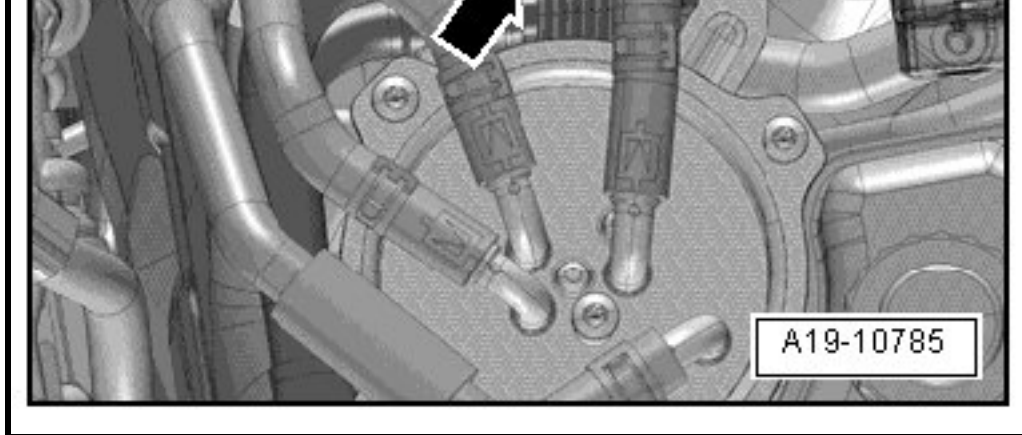


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- Open the bleeder screw - **arrow** - on the fuel cooler.

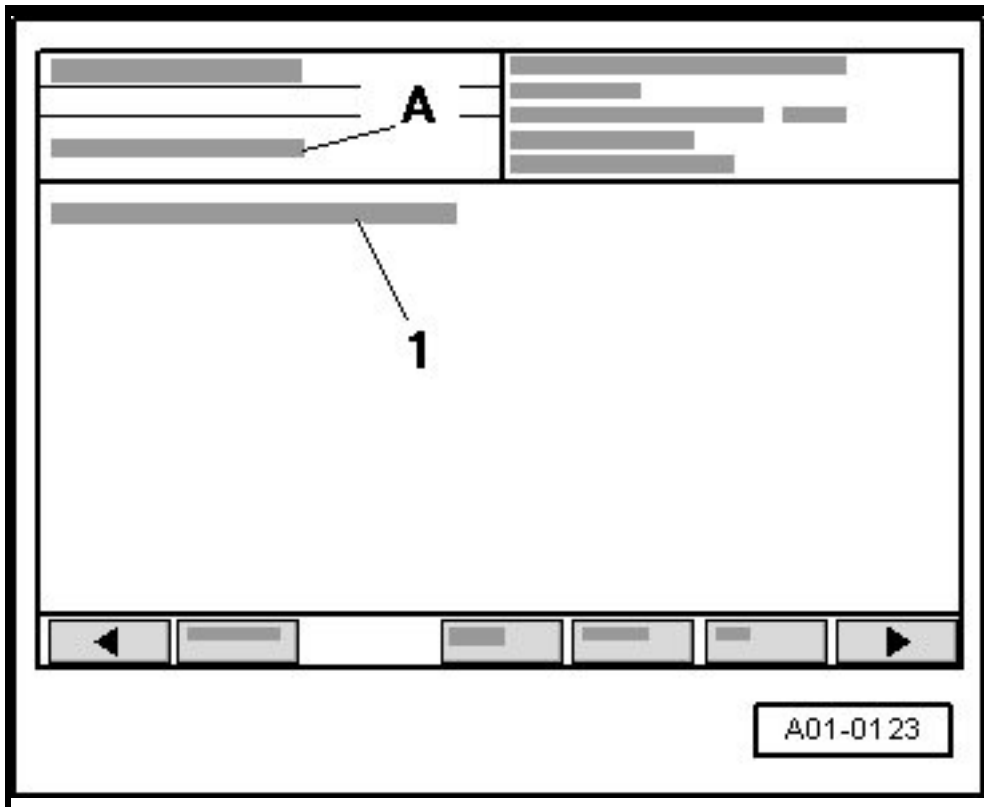




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- Press the -> button until the following display appears:



Zoom

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1. Fuel cooler pump (V166)

- To activate, press the -> button.

α The fuel cooler pump is controlled in intervals.

- Close the vent plug as soon as coolant comes out without any bubbles; repeat "output diagnostic test mode" if necessary.

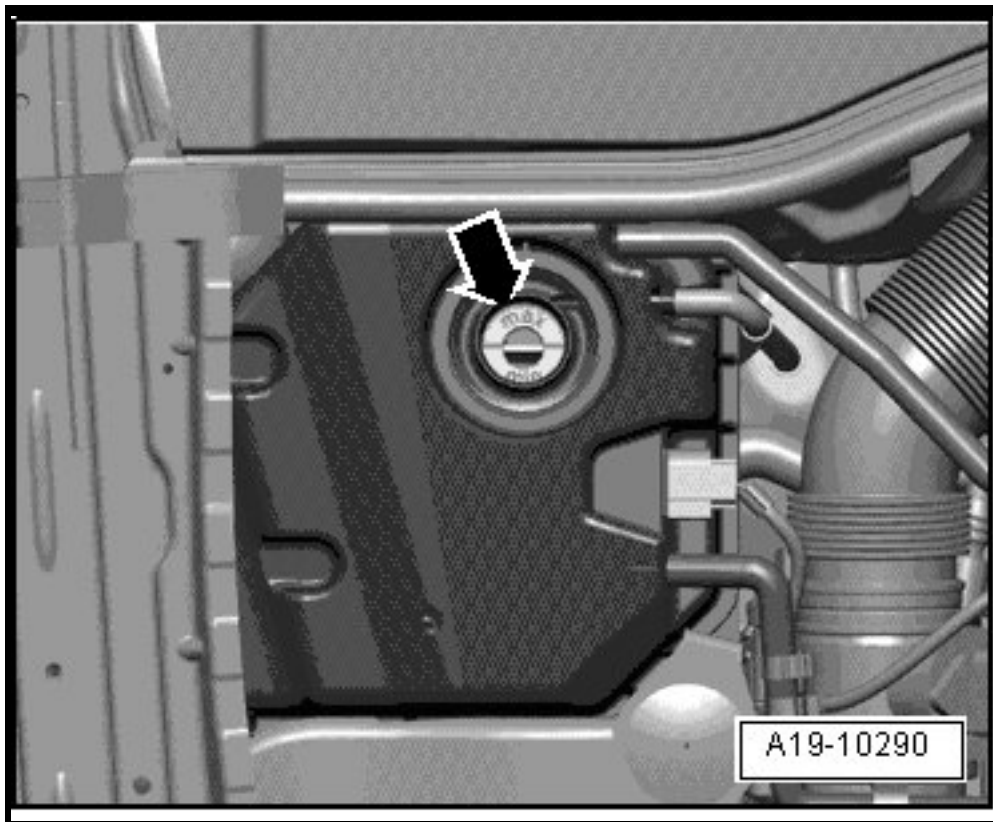
All Vehicles

- If the vehicle has an auxiliary heater, switch it on for about 30 seconds.
- Close coolant reservoir cap.
- Start the engine.
- Set the temperature to "HI" for all zones and set the fan speed as low as possible (0).
- Press the ECON/ON/OFF button to turn off the Air Conditioning (A/C) compressor.

α The LED inside the button must come on.

- Run the engine at 2000 RPM for 3 minutes.
- Run the engine at idle until both large coolant hoses on the radiator are warm.
- Run engine at 2000 RPM for 1 minute.
- Turn off engine and allow it to cool off

- Turn on engine and allow it to cool off.
- Install the noise insulation..
- Check the coolant level.



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- ⌘ Coolant level must be at MAX-marking - **arrow** - with engine cold.
- ⌘ Coolant level may be above MAX marking with engine at operating temperature.
- On a vehicle with air suspension, deactivate vehicle lift mode.

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