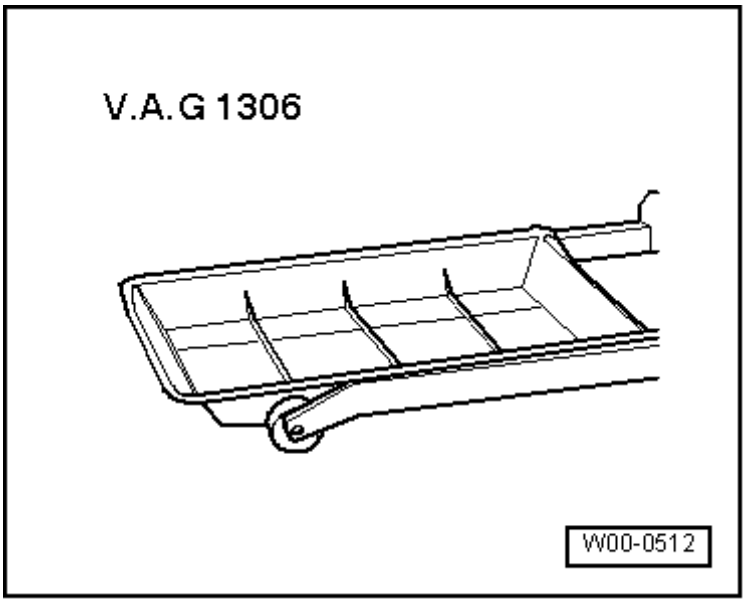
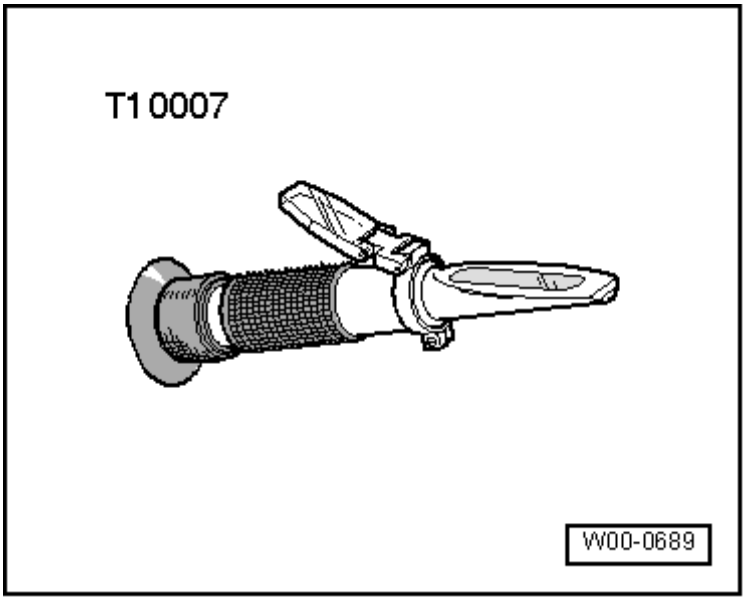
Removing and installing parts of the cooling system
Draining and filling cooling system

Special tools and workshop equipment required

- Drip tray V.A.G 1306



- Special tool T10007 (for coolant additive G 012 A8 D)



Draining

Note:

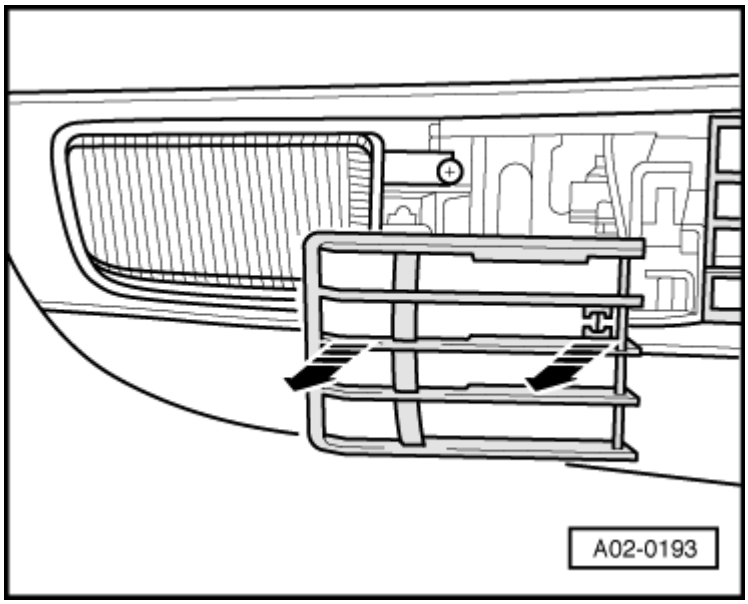
Collect drained coolant in a clean container for re use or disposal.

Important
Hot steam or hot coolant can escape when opening expansion tank. Cover cap with a cloth and open carefully.

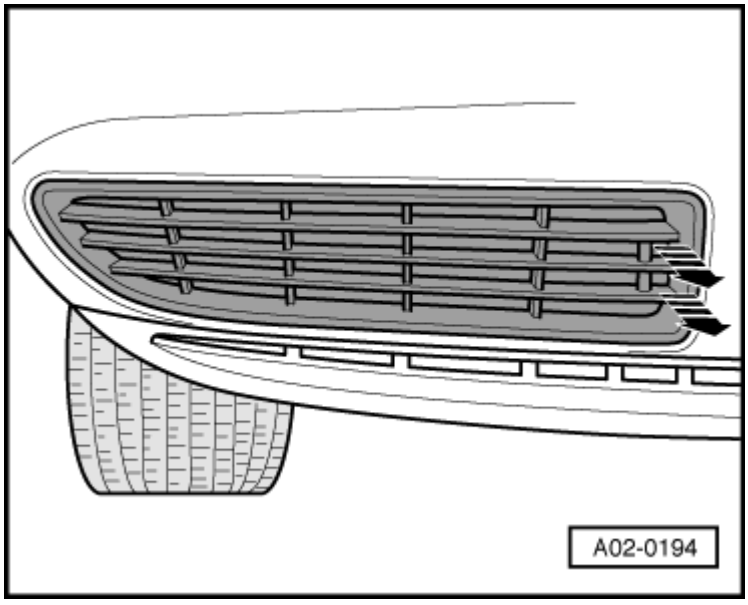
- Open the cover of the coolant expansion tank

Audi 100:

- → Unclip the air intake grille to the lower right of the bumper -arrows-.

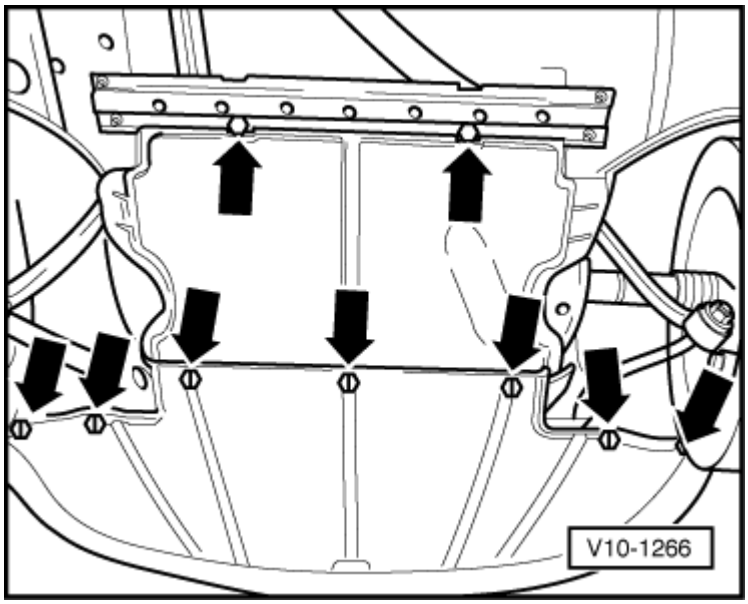


Audi A6:



- → Pull back retainer catch -arrows- and remove air intake grille.

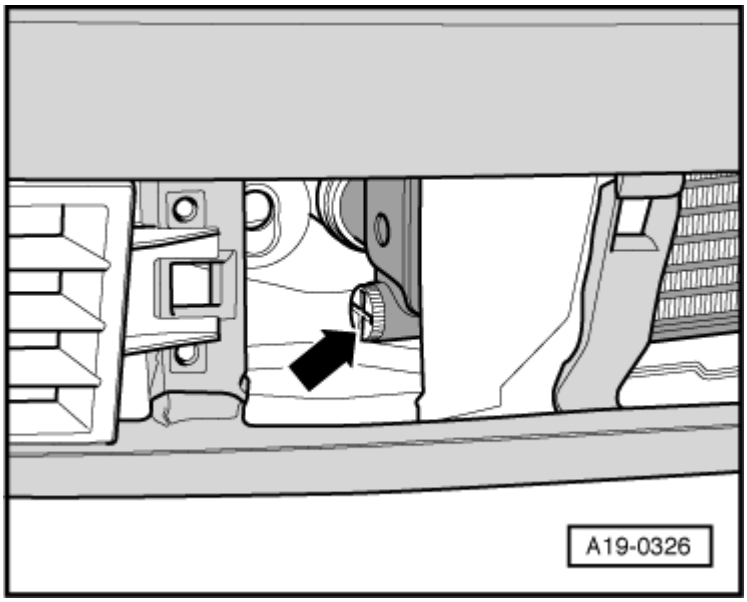
All models:



- → Remove the noise insulation -arrows-.
- Place drip tray V.A.G 1306 below

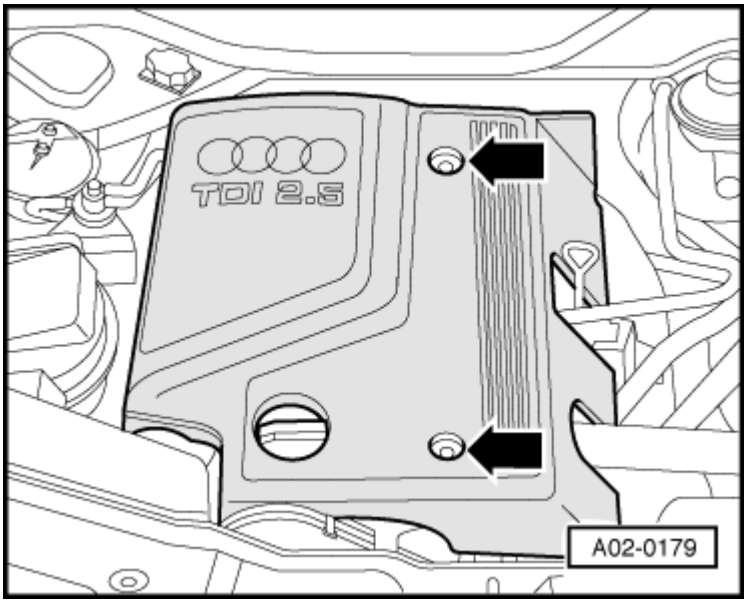
engine.

- → Turn drain plug -arrow- on radiator anti-clockwise. If necessary, fit drain hose on connection.



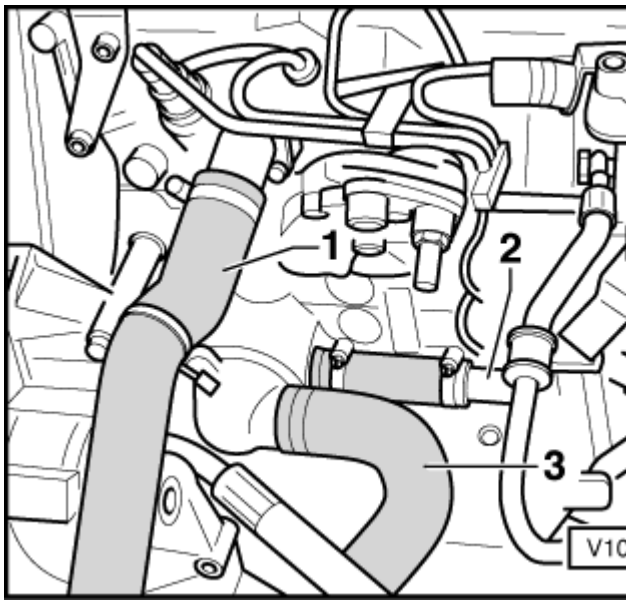
Audi A6:

- → Remove engine cover -arrows-.



All models:

- Remove the toothed belt guard for injection pump drive.
- → Unscrew securing bolt for coolant pipe -2- (engine/gearbox flange).
- Release cable tie on coolant pipe.
- Detach coolant hose of coolant pipe -2-.



Filling

Notes:

- The cooling system is filled all year round with a mixture of water and antifreeze/corrosion protection agent.
- Coolant additive G 011 A8 C (green) is used in vehicles up to 06.96.
- Only coolant additive G 012 A8 D (red) is used in vehicles from 07.96 onwards.

Important
The two different coolant additives G 011 A8 C and G 012 A8 D must not be mixed together. Otherwise, this can result in serious damage to the engine.

- If the fluid in the expansion tank is brown, this means G 012 A8 D has been mixed with another type of coolant. In this case, flush out the cooling system and fill with fresh coolant. To flush the system, fill it with clean water and run the engine for about 2 minutes. This should remove as much of the old coolant as possible.

- G 011 A8 C and G 012 A8 D and coolant additives marked meeting specification TL VW 774 C or meeting specification TL VW 774 D prevent frost and corrosion damage, stop scaling and at the same time raise the boiling point of the coolant. For these reasons the cooling system must be filled all year round with the correct anti freeze and anti corrosion additive.
- 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 to about -25°C (in countries with an arctic climate to about -35°C).
- The coolant concentration must not be reduced by adding water even in warmer seasons and in warmer countries. The anti-freeze ratio must be at least 40 %.
- If greater frost protection is required in very cold climates, the amount of G 012 A8 D can be increased, but only up to 60 % (this gives frost protection to about -40°C), as otherwise frost protection is reduced again and cooling effectiveness is also reduced.
- Only use clean drinking water to mix the coolant.
- If radiator, heat exchanger, cylinder head or cylinder head gasket is replaced, do not reuse old coolant.

- Use special tool T10007 to check frost protection of coolant additive G 012 A8 D in cooling system.

Recommended mixture ratios:

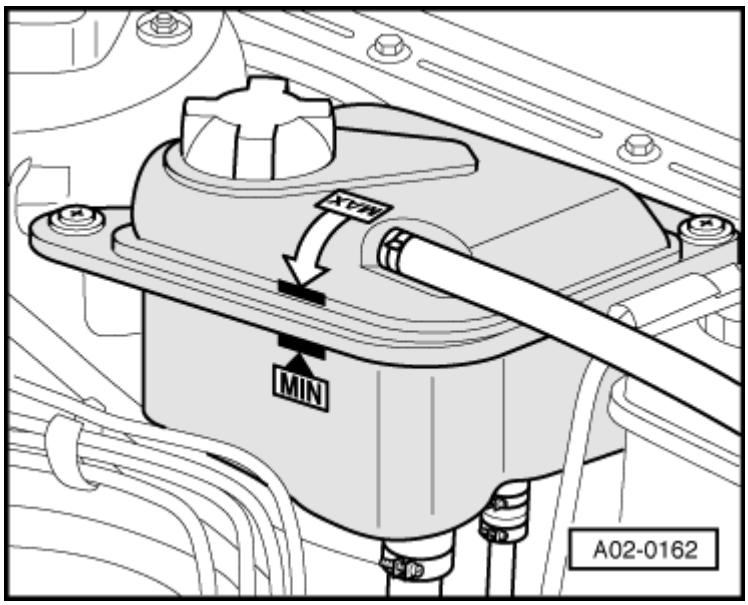
Frost protection to	Antifreeze concentration	G11/G12 1)	Water 1)
-25 °C	40 %	2.60 l	3.90 l
-35 °C	50 %	3.25 l	3.25 l

1) Coolant quantity: 6.5 litres (may vary depending upon the vehicle equipment)

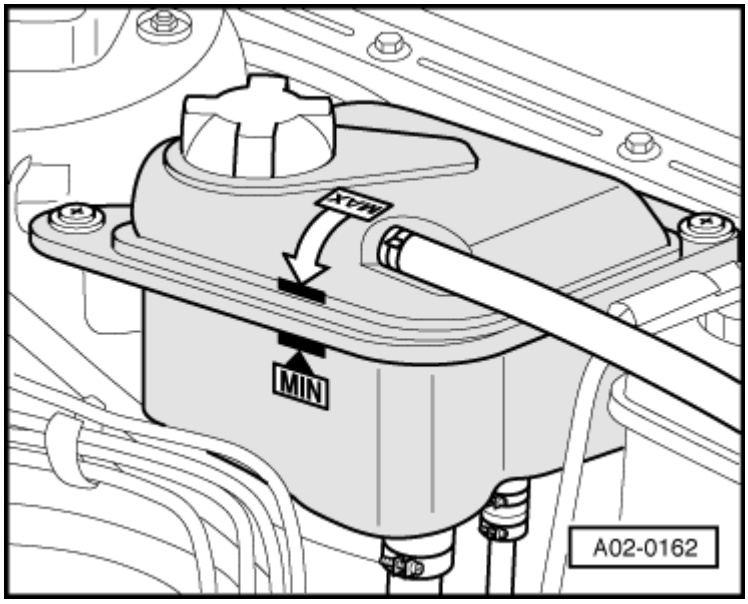
- Installing and securing coolant hoses.
- Close drain plug on radiator.

- → Top up coolant to max. mark on expansion tank.
- Fit expansion tank cap.
- Start the engine.
- Run engine until operating temperature is attained (coolant temperature gauge reading approx. 80 °C).

Important
Hot steam or hot coolant can escape when opening expansion tank. Cover cap with a cloth and open carefully.



- → Check the coolant level and top up if necessary. If the engine is warm, the coolant level should be at the max. mark; if cold, between the min. and max. marks.
- Stop engine.



Tightening torque

Component	Nm
Hose clamps for coolant hoses	2