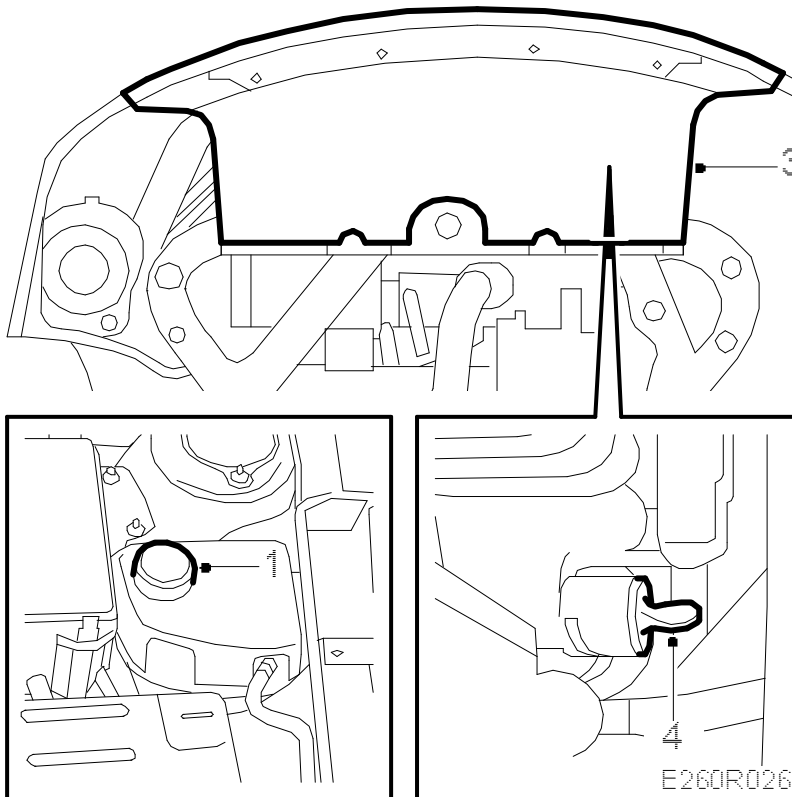


Coolant pump, 4-cyl.**Warning**

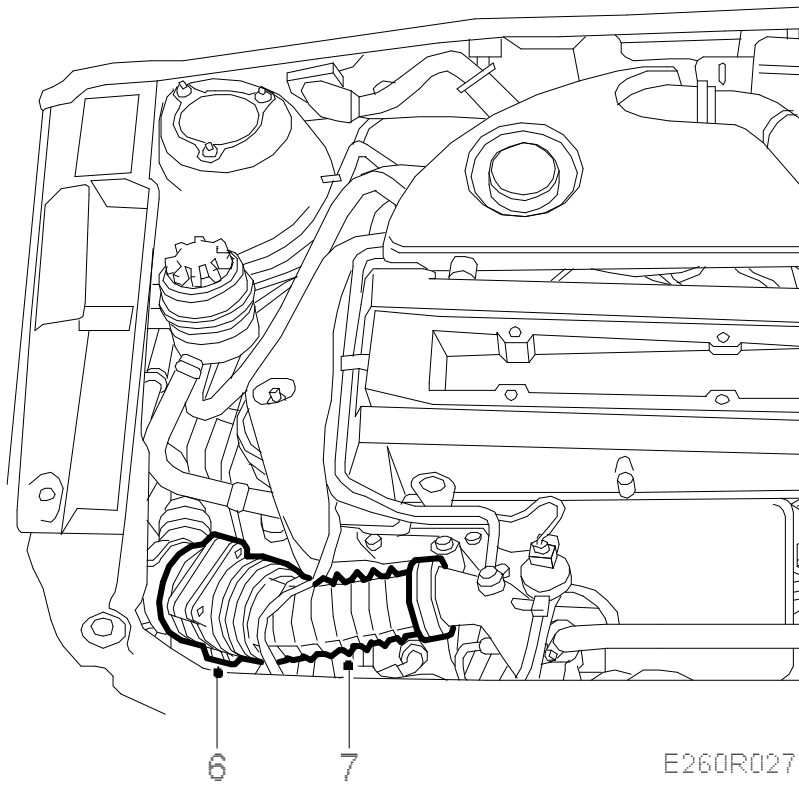
Take care if the car is warm. The coolant is hot and there is also a risk of burning yourself on the exhaust manifold.

To remove

1. Open the cap on the expansion tank and release the pressure.

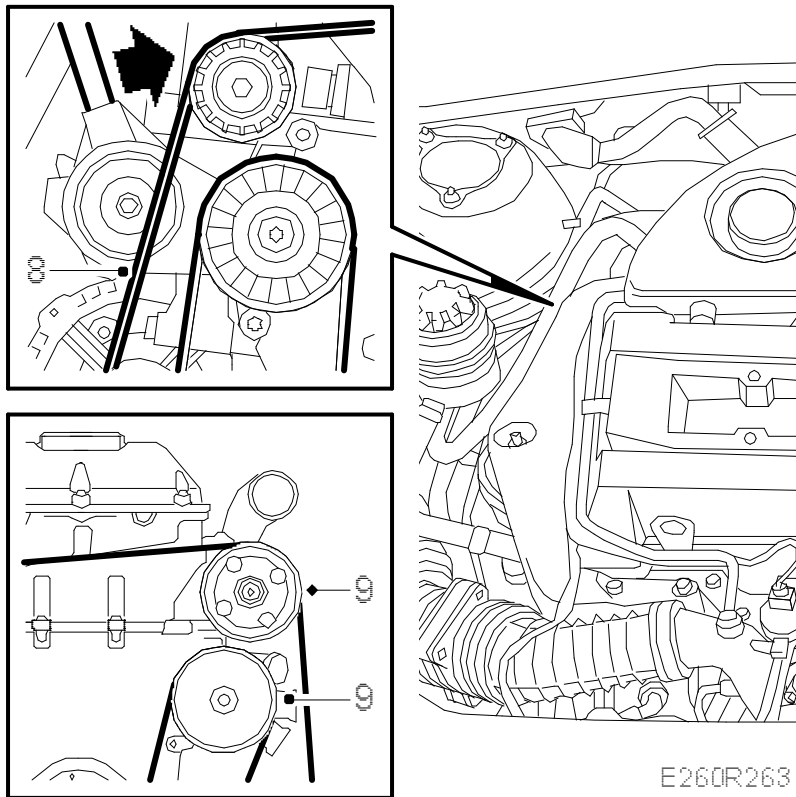


2. Raise the car.
3. Remove the lower front cover.
4. Drain off the coolant.
5. Lower the car to the floor.



6. Unplug the mass air flow sensor connector.
7. Remove the air hose and mass air flow sensor.
- 8.

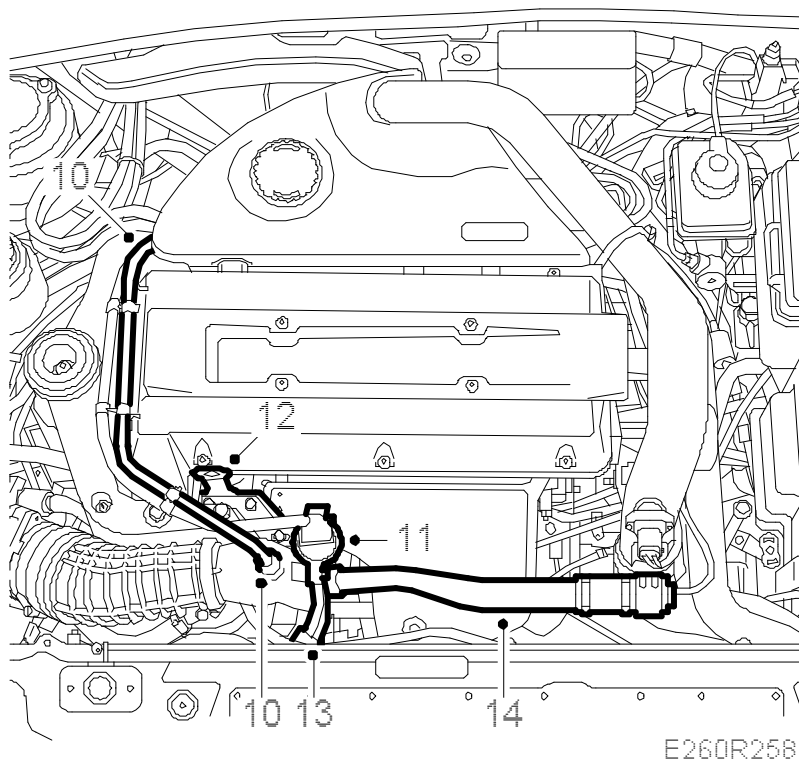
Release the tension of the poly-V-belt using [83 95 254 Drawbar handle, hydraulic belt tensioner](#).



9. Remove the belt from the power steering pump and water pump.

10.

Remove the crankcase breather pipe, fastened to the turbo intake pipe, and the camshaft cover.



11. Unplug the boost pressure control valve connector.

12. Remove the engine lifting eyelet.

13. Loosen the hoses to the turbo's wastegate valve.

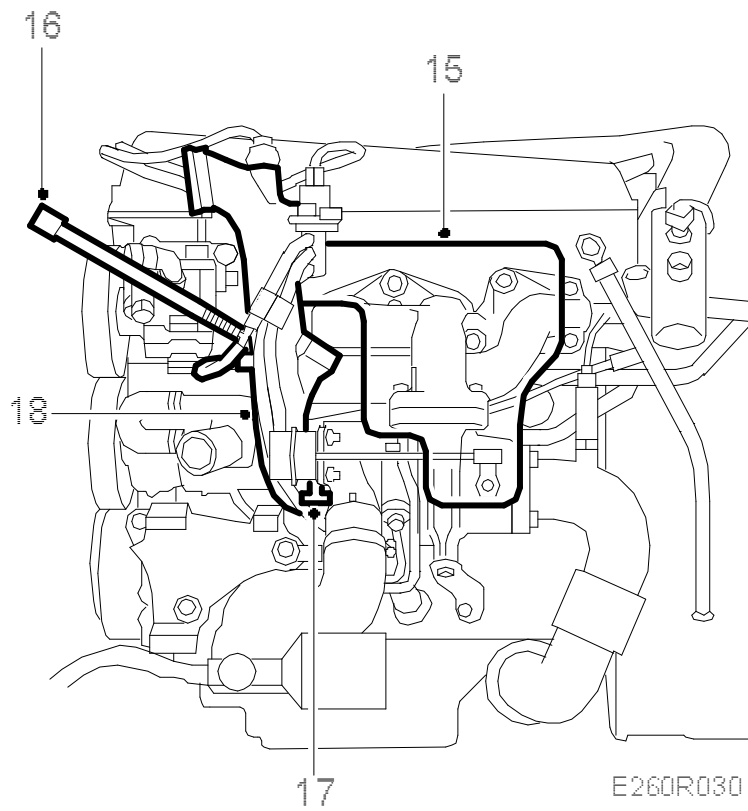
14. Remove the bypass pipe with valve.

Note

There is an O-ring at the bypass pipe's attachment to the turbo intake pipe.

15.

Remove the exhaust manifold heat shield. The heat shield is attached with a nut and two clips on the underside.



16. Undo the quick-release coupling on the vent hose, using tool 83 95 261.

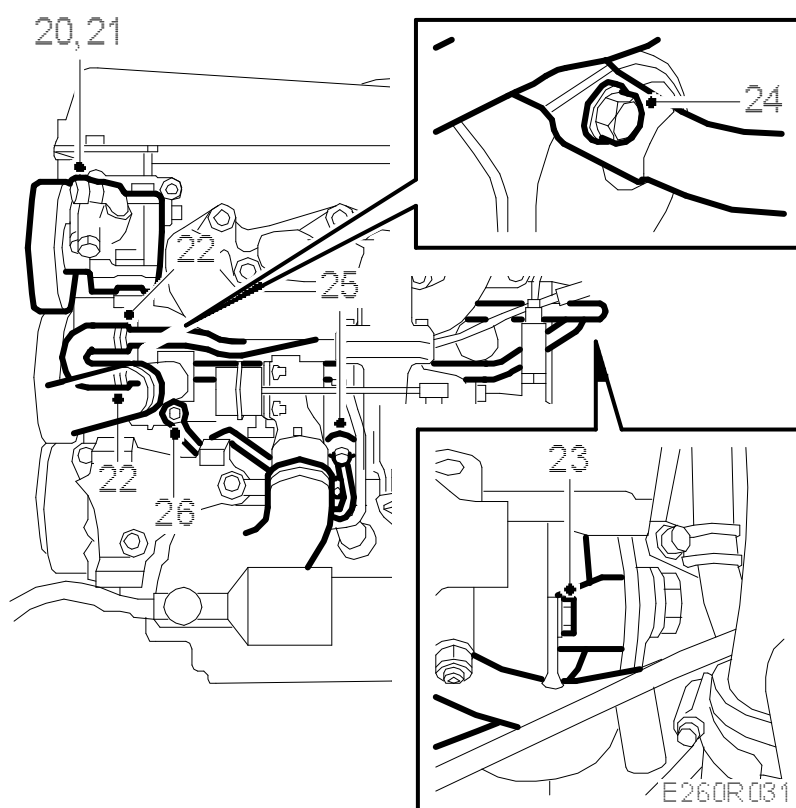
17. Remove the turbo intake pipe.

18. Remove the intake pipe.

19. Plug the turbo inlet using a plastic plug or the like.

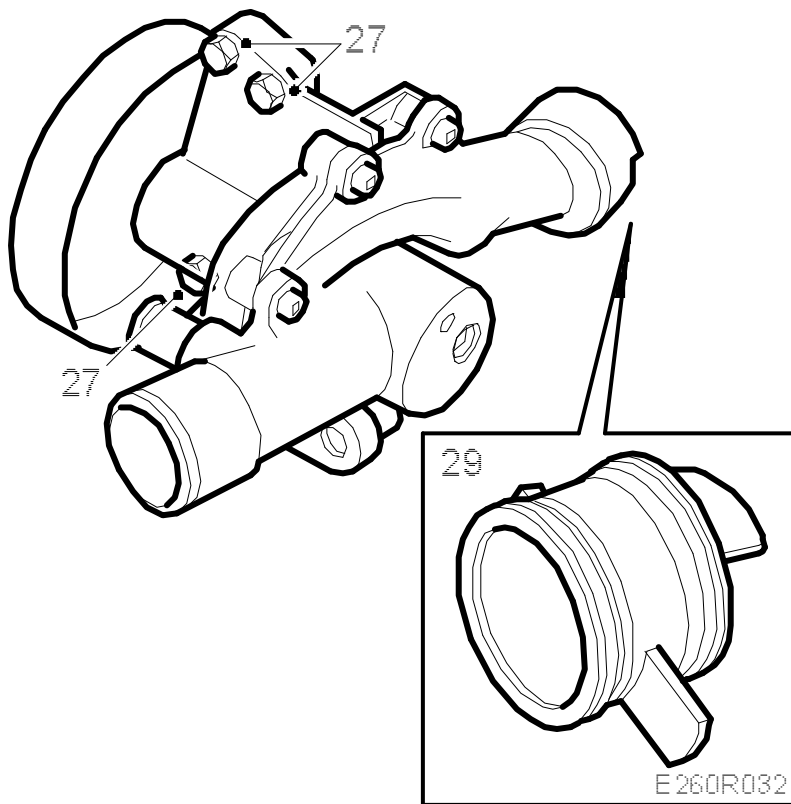
20.

Undo the power steering pump.



21. Move the power steering pump aside.
22. Remove the hose clips and hoses on the coolant pump inlet.
23. Detach the two longitudinal coolant pipes from the engine block.
24. Detach the two longitudinal coolant pipes from the coolant pump.
25. Slacken the bolt (by the turbo) securing the coolant pipe from the coolant pump.
26. Remove the coolant pipe from the coolant pump.
- 27.

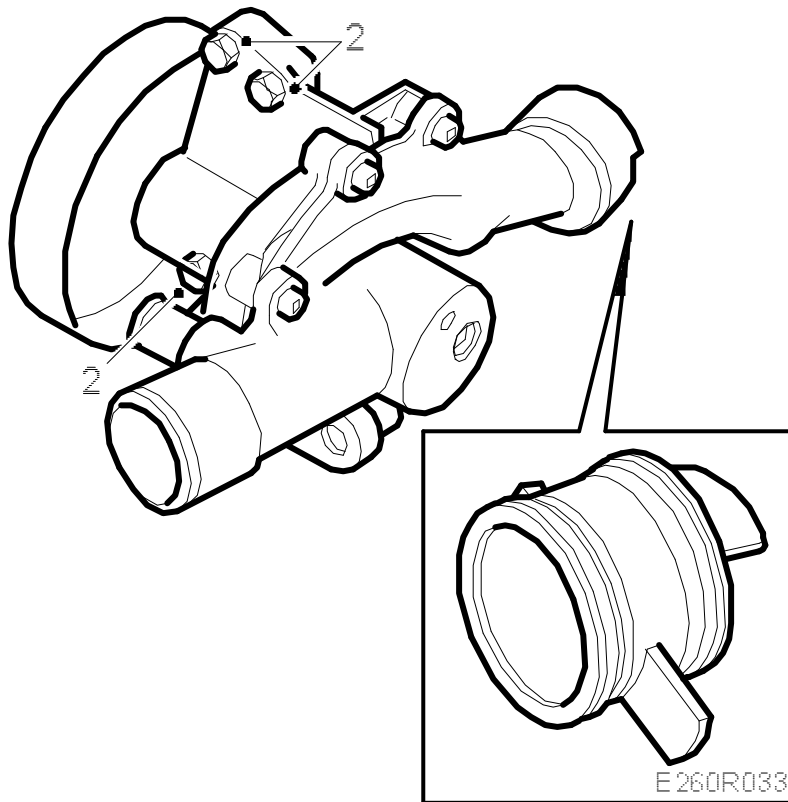
Undo the coolant pump retaining bolts.



28. Carefully work the pump free from the bracket and from the pump's connecting piece on the engine block.
29. Remove the connecting piece from the engine block and inspect its seals, Change the seals as necessary.

Important

It is normal for a very small amount of coolant to pass via the coolant pump shaft seal in order to lubricate it.

**Note**

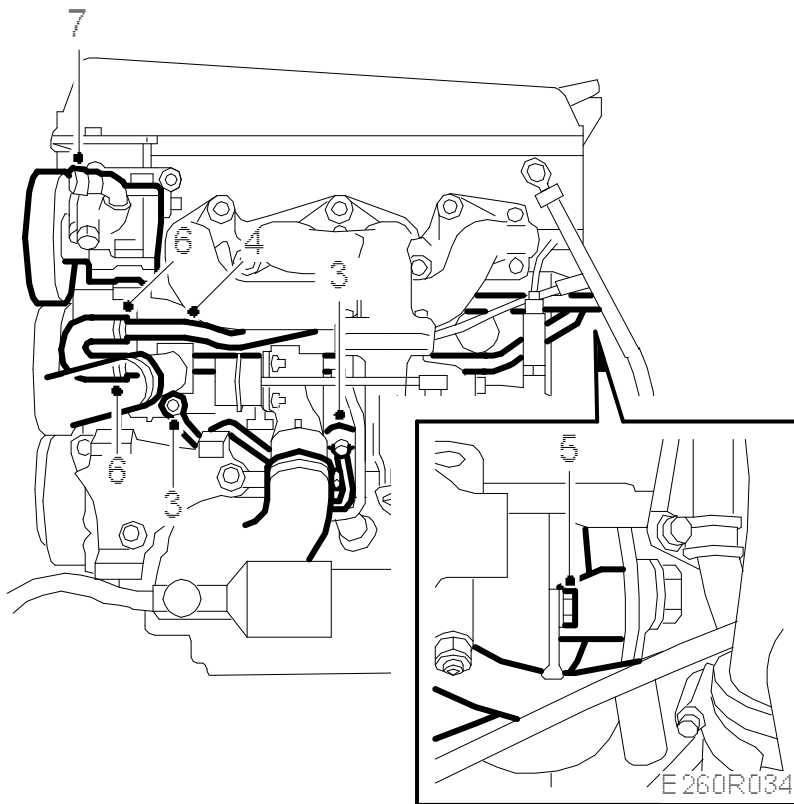
Spray the connectors with [30 04 520 Anti-corrosion agent](#).

1. Connect the connecting piece to the cylinder block. Grease the seals with [30 06 442 White high-pressure grease paste](#).
2. Fit the coolant pump.

Tightening torque 22 Nm (16 lbf ft)

- 3.

Fit and tighten the coolant pipe to the coolant pump and by the turbo.

**Tightening torques****Banjo screw, turbo: 25 Nm (18 lbf ft)****Banjo screw, coolant pump: 20 Nm (15 lbf ft)**

4. Fit the two longitudinal coolant pipes to the coolant pump.

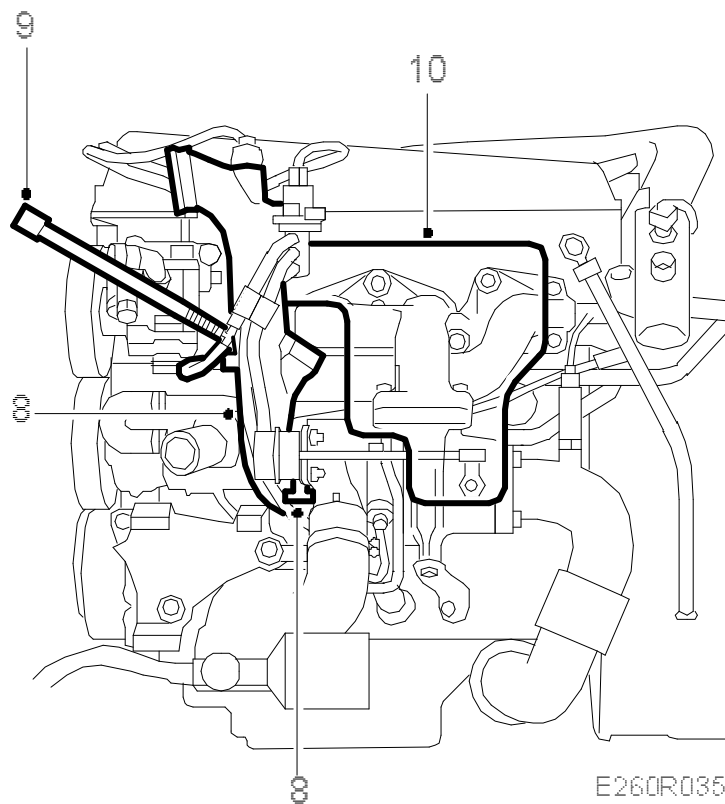
Tightening torque: 10 Nm (7 lbf ft)

5. Fit the two longitudinal coolant pipes to the engine block.
6. Fit the hose clips and hoses to the coolant pump inlet.
7. Fit the power steering pump.

Tightening torque 24 Nm (18 lbf ft)

- 8.

Extract the plug from the turbo inlet and then fit the intake pipe.

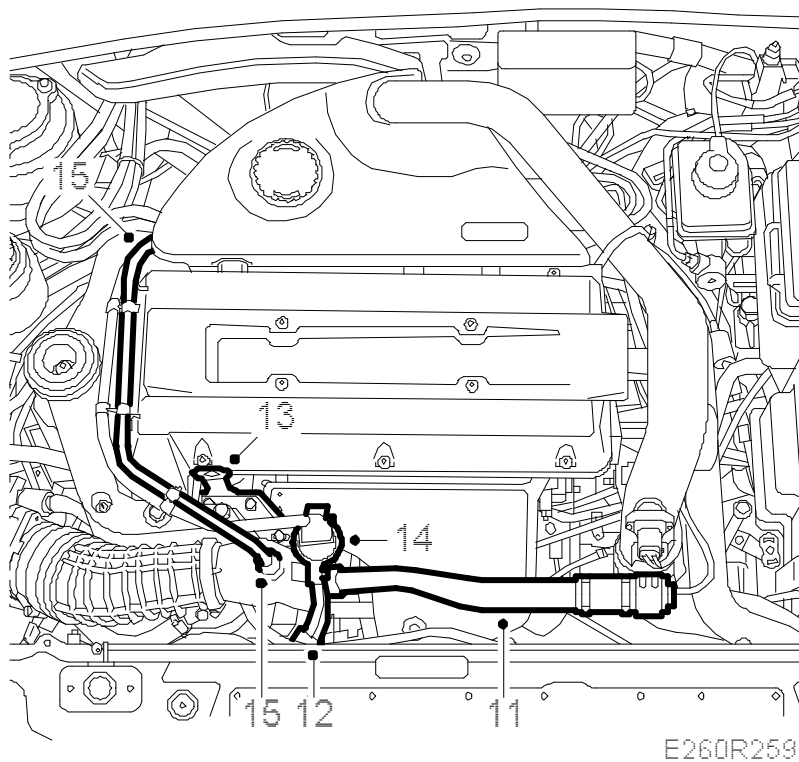
**Tightening torques****V-clamp 3 Nm (2 lbf ft)**

9. Reconnect the vent hose.
10. Fit the exhaust manifold heat shield.

Tightening torque: 20 Nm (15 lbf ft)

- 11.

Fit the bypass pipe and valve.



Tightening torques

Bypass pipe/intake pipe, bolt 8 Nm (6 lbf ft)

Bypass pipe, hose clip 8 Nm (6 lbf ft)

Note

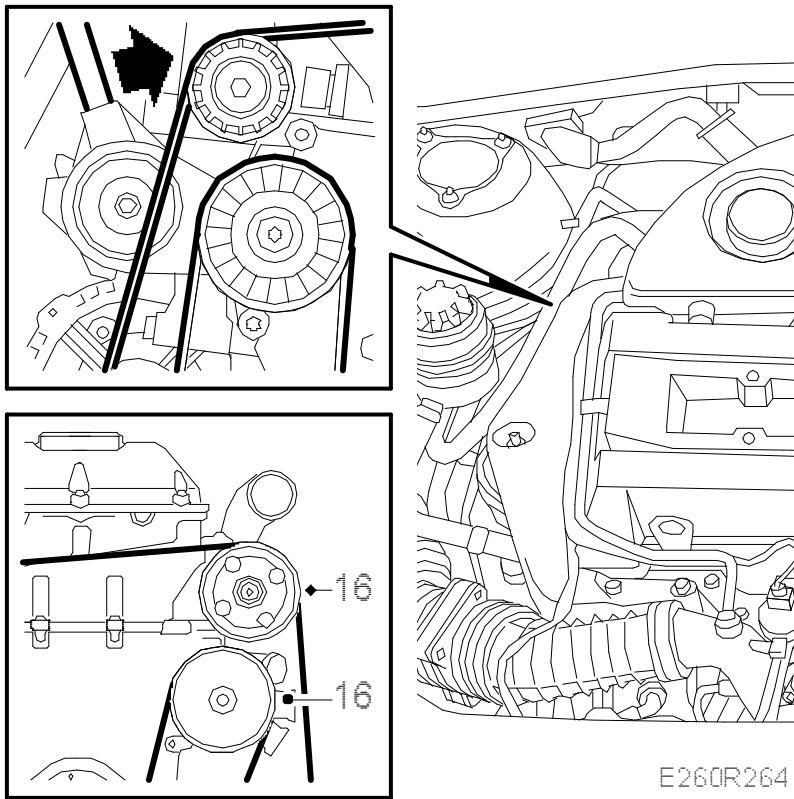
Fit a new O-ring at the bypass pipe mounting to the turbo intake pipe.

12. Fit the hoses to the turbo's wastegate valve.
13. Fit the engine lifting eye.
14. Plug in the boost pressure control valve connector.
15. Fit the crankcase breather pipe, fastened to the turbo intake pipe, and the camshaft cover.

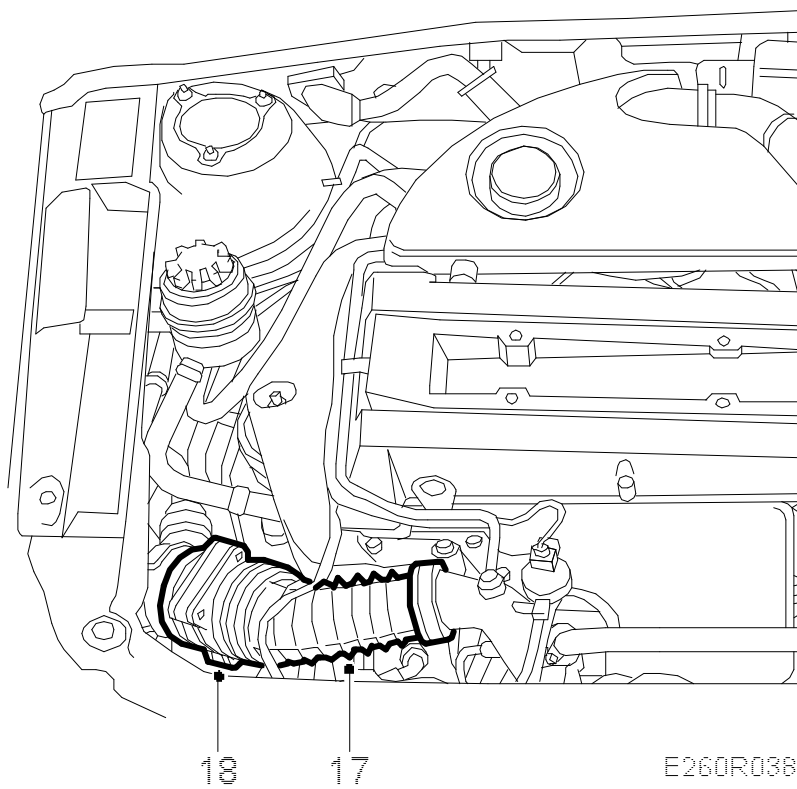
Tightening torques

Crankcase breather pipe 24 Nm (18 lbf ft)

16. Fit the poly-V-belt and adjust the belt tensioner. Use a [83 95 254 Drawbar handle, hydraulic belt tensioner](#).



17. Fit the air hose and mass air flow sensor.



18. Plug in the mass air flow sensor connector.
19. Switch off the A/C or ACC. Fill with coolant to the MAX level. Refer to [Coolant](#) for mixtures. Do not forget to close the drain plug on the radiator first. Close the expansion tank lid.
20. Start the engine and run unloaded until warm at varying engine speeds until the radiator fan starts.
21. Turn off the engine and top up to the MAX level.
22. Inspect the system for possible leaks.
23. Raise the car.
24. Fit the lower front cover.
25. Lower the car to the floor.