

Cooling System Components Assembly Overview, Engine Side

Part 1

Part 2 → **Anchor**

1 - Cylinder block

2 - Oil cooler

3 - 25 Nm

4 - 10 Nm

5 - To heater core of heater, bottom

6 - Retaining clip

7 - O-ring

□ Replace

8 - Front coolant line

9 - Connecting hose

10 - O-ring

□ Replace

11 - Coolant line

12 - Connecting hose

13 - Connecting piece

14 - To radiator, bottom

15 - 5 Nm

16 - O-ring

□ Replace

17 - Coolant thermostat

□ Removing and installing → **Chapter**

□ Note installation position:

Valve must be at top

□ Checking (coolant thermostat installed):

Checking → **Vehicle Diagnosis system, Testing and Information System VAS 5051** "Guided Functions".

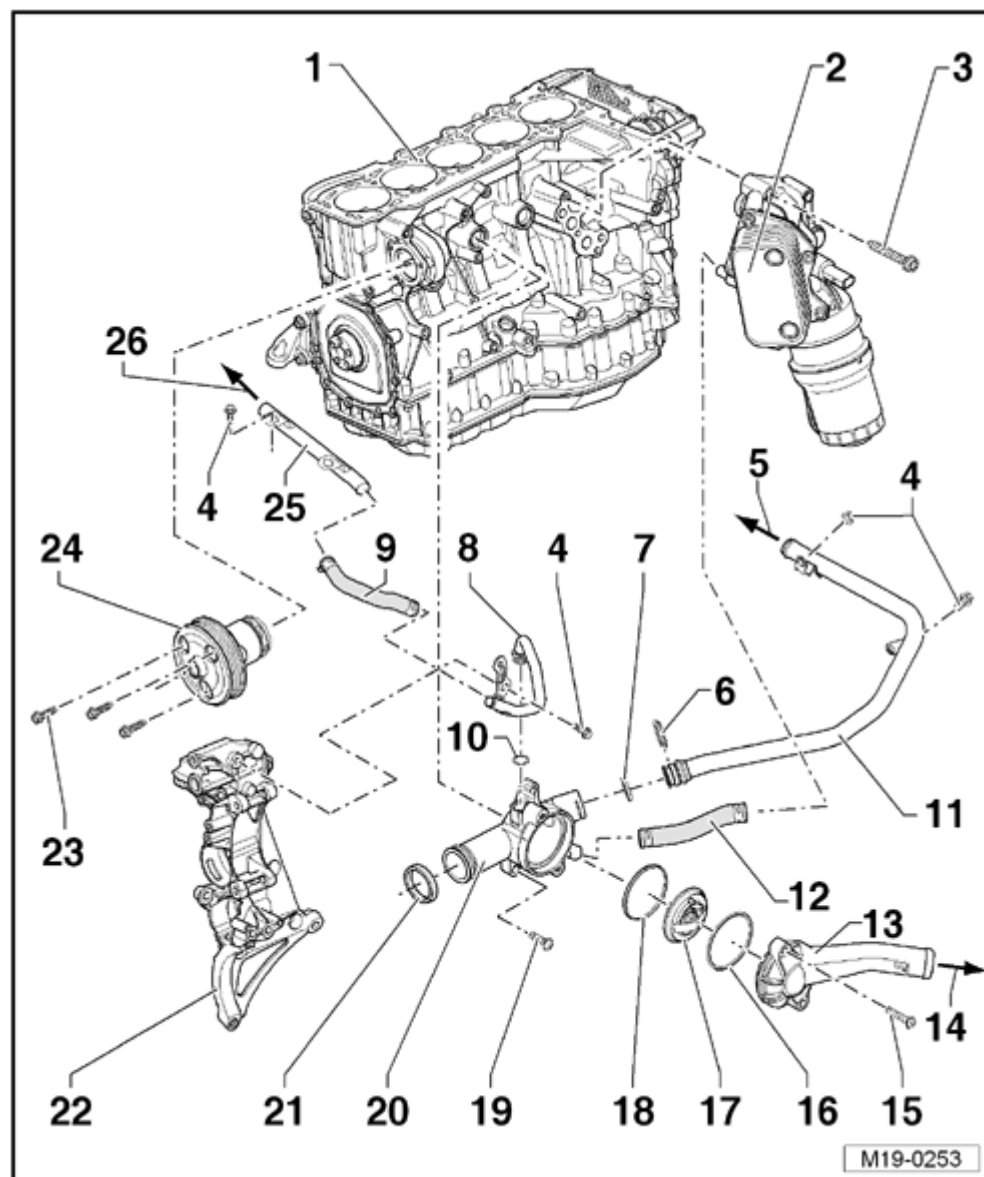
□ Checking (coolant thermostat removed):

Heat up thermostat in water

Starts to open: approx. 87 °C

End of opening: approx. 102 °C

Open distance: at least 7 mm



18 - Seal

- Replace

19 - 25 Nm**20 - Coolant thermostat housing****21 - Seal**

- Replace

22 - Bracket for assemblies**23 - 10 Nm****24 - Coolant pump**

- With integrated silicone sealing ring for cylinder block seal
- Removing and installing → [Chapter](#)

25 - Right coolant line

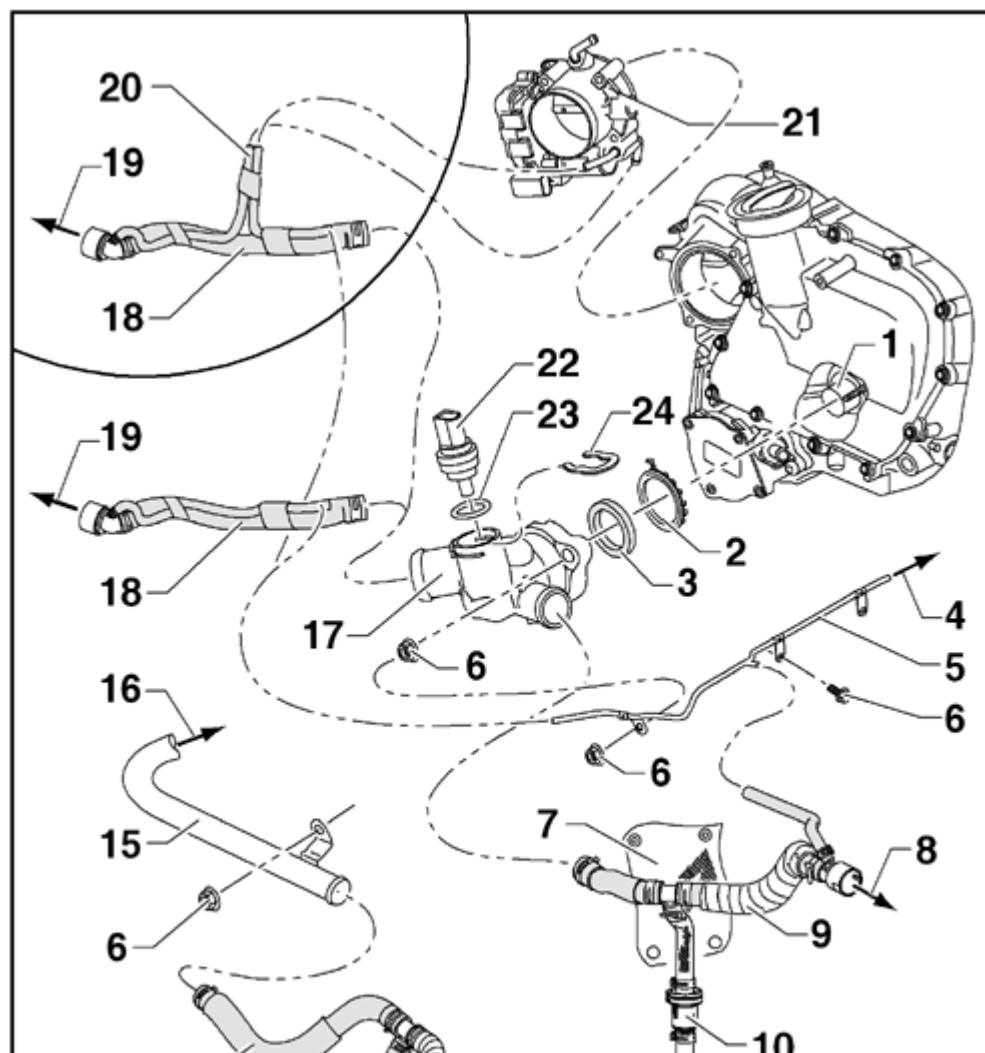
- Secured to engine mount

26 - To expansion tank, bottom**Part 2**Part 1 → [Anchor](#)**1 - Coolant pipe connection**

- Pressed in cylinder head
- Clean before installing coolant distribution housing
→ [Item](#)
- If necessary, remove coolant deposits using a copper wire brush or fine sandpaper (minimum 100 grit).
- If pipe connection is worn, replace it using locking fluid -D 000600 A2- .

2 - Circlip**3 - Seal**

- Replace



after
removing
coolant
distribution
housing

→ [Item](#)

4 - To expansion tank, top

5 - Rear coolant pipe

6 - 10 Nm

7 - Heat shielding

8 - To heater core, top

9 - Supply hose

10 - Bypass Thermostat

- ☐ Only for vehicles with automatic transmission
- ☐ Assembly overview → [Fig.](#)
- ☐ Checking → [Anchor](#)

11 - To ATF cooler

- ☐ Only for vehicles with automatic transmission

12 - To heater core, bottom

13 - From ATF cooler

- ☐ Only for vehicles with automatic transmission

14 - Return hose

15 - Coolant line

- ☐ Bolted to coolant regulator housing → [Item](#)

16 - To coolant regulator housing

17 - Coolant distribution housing

18 - Supply hose

19 - To top of radiator

20 - Coolant hoses

- ☐ Only for Throttle Valve Control Module -J338- heated by coolant

21 - Throttle valve control module -J338-

22 - Engine Coolant Temperature (ECT) Sensor -G62-

23 - O-ring

- ☐ Replace

24 - Retaining clip

Bypass thermostat - assembly overview

1 - Spring bracket

2 - Lower part of housing

- Note installation position: Arrow points

toward ATF cooler

3 - Operating element

4 - Spring

5 - O-ring

6 - Upper part of housing

Checking bypass thermostat

- Remove operating element -3- and heat in a hot water bath.

Starts to open: approx. 75 °C

Opening end: approx. 85 °C

Opens: approx. 5 mm

