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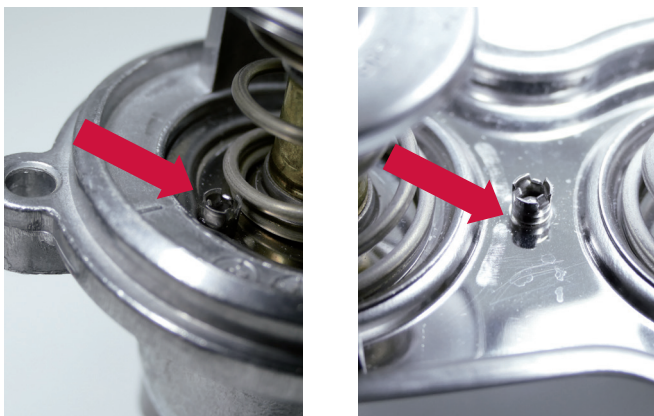
Thermostat makes rattling noises

*Noises from a disassembled thermostat—e.g., a rattling when you shake it—can cause a lot of uncertainty.*

But the reason is simple: depending on the vehicle and type of thermostat, a ventilation valve is fitted to the thermostat disk (see Figures 1 and 2) to allow any entrapped air to escape after assembly (see Figure 4).

This prevents the formation of an insulating bubble that could impair the function of the thermostat and ultimately cause the engine to overheat.

During operation, this ventilation valve is closed by the coolant flow, which stops the rattling sound (see Figure 3).



Figures 1 and 2: Ball valve (arrow) on the thermostat disk in different thermostat types

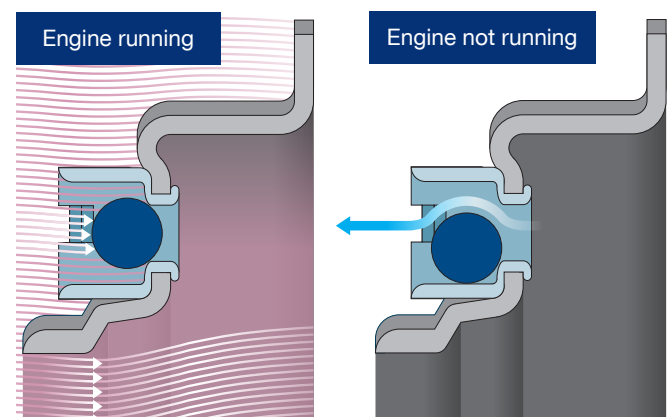


Figure 3: When the engine is running, the ball valve is closed by the flowing coolant.

Figure 4: When the engine is not running, the ball valve is open and trapped air can escape.

**IMPORTANT!**

Air that becomes trapped during thermostat replacement is the main cause of thermal problems in the cooling circuit. In general, thorough ventilation—e.g., with a vacuum-venting device—is therefore strongly recommended!

» See also Issue no. 06/2016: Thermal problems after a thermostat change: air in the cooling circuit