

4.2 Auxiliary heating sequence

The level of fuel in the tank is interrogated. If the fuel tank is "empty", the auxiliary heating function is not permitted and the auxiliary heater symbol in the dash panel insert goes out. "Empty" roughly corresponds to the red display zone. The energy management control unit J644 checks whether there is sufficient energy to accept auxiliary heating. If this is the case, the auxiliary heater is switched on in the various operating modes depending on the characteristic temperature curve and the fresh-air blower is actuated.

If the auxiliary heating temperature reaches a level of 30 °C, the fresh-air blower is activated and the coolant shutoff valve N279 pulsed in line with the characteristic curve.

The auxiliary heater is switched off automatically on completion of the operating time transmitted by the MMI system to the Climatronic control unit or it can be switched off using the remote control OFF button.



If the engine is switched off again and not all additional heater criteria (temperature, time) are satisfied, the auxiliary heater remains in operation for any residual operating time before being deactivated. This function can be encoded.

Auxiliary heater circulation pump control

To speed up heating of the passenger compartment and to achieve a better "heat yield" in the air conditioner unit heat exchanger, the circulation pump V55 and coolant shutoff valve N279 are pulsed as a function of water temperature and the heating circuit flow rate is thus reduced.

An electric circulation pump is used for the auxiliary heater. It is not possible to reduce the supply voltage in the auxiliary heater control unit and the circulation pump is thus actuated at specific intervals to decrease its output.

Additional control curve for "auxiliary heater" and "additional heater"

When the engine is on, the auxiliary heater and engine temperatures are constantly compared. A switch to the large coolant circuit is made as soon as the engine temperature exceeds the auxiliary heater temperature.

Activation of auxiliary heater circulation pump with engine on (pulsed operation of circulation pump)

In order to be able to ensure a sufficient flow of water through the heat exchanger, the auxiliary heater circulation pump must additionally be switched on, as is the case for instance with the 12-cylinder engine.



Heating/Air Conditioner

Small coolant circuit with auxiliary heater

The small coolant circuit employed with auxiliary heating is designed to ensure rapid warming of the passenger compartment.

With the engine stopped, the coolant shutoff valve N279 switches to the small heating circuit until a defined temperature value has been attained. The coolant exiting from the heat exchangers via the pump/valve unit is conveyed by the circulation pump V55 into the auxiliary heater. After being warmed, the coolant is pumped back into the heat exchangers and initially heats the passenger compartment.



Design and operation are described in SSP 267 – The 6.0 l W12 engine in the Audi A8 - Part 1.

