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Auxiliary fan: E60, E61, E63, E64

How it works

The auxiliary fan cools the condenser. The auxiliary fan is switched on at road speeds below 70 km/h (approx. 43 mph). The auxiliary fan is switched off at road speeds above 80 km/h (approx. 50 mph).

At higher speeds, the air stream alone is sufficient to cool the condenser. At lower speeds and when stationary (idle), the cooling of the condenser must be supported or maintained by the auxiliary fan.

The speed of the auxiliary fan depends on the refrigerant pressure. Speed is regulated as follows:

- The refrigerant pressure sensor sends a signal to the IHKA control unit that is linear to the refrigerant pressure.
- The IHKA control unit calculates the fan speed needed for the auxiliary fan. The 15 possible fan speeds are assigned to pressure values in the refrigerant circuit. Thus demand is transmitted by the IHKA control unit through the body CAN and powertrain CAN to the DME/DDE.
- The DME/DDE control unit regulates the speed of the auxiliary fan with a pulse-modulated signal (PWM signal).

The maps for the auxiliary fan are encoded in the DME/DDE control unit. The encoded map for the fan (encoding viscous fan coupling or electric fan) always gives at least speed 1 when the air conditioner is switched on.

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