

Function

The electric suction fan engine and AC with integrated control (M4/7) is actuated by a fan motor. The request to actuate the electric suction fan engine and AC with integrated control (M4/7) comes in the event of:

- Vehicles with diesel motor from the CDI control unit (N3/9) or from the AAC [KLA] control and operating unit (N22) or comfort automatic air conditioning (N22/7),
- Vehicles with gasoline engine from the motor electronics control unit (N3/10) or from the AAC [KLA] control and operating unit (N22) or comfort automatic air conditioning (N22/7).

Depending upon the refrigerant pressure the AAC (N22) or comfort automatic air conditioning (N22/7) control and operating module sends the following requirements to the electric suction fan engine and AC with integrated control (M4/7):

- Refrigerant pressure < 12 bar: fan in basic venting
- Refrigerant pressure >20 bar: fan at maximum output
- Refrigerant pressure 12 < 20 bar: fan continuously controlled

When the refrigerant compressor (A9) is turned on, the electric suction fan engine and AC with integrated control (M4/7) starts running with a basic power output of 25 %; the fan motor is cut out at outside temperatures of below 15 °C. Regulation using the refrigerant pressure is fully retained. At outside temperatures greater than 15 °C and vehicle speeds less than 70 km/h a basic ventilation of 25 % output is adjusted (40 % in hot countries).

The AAC [KLA] control and operating unit (N22) or comfort automatic air conditioning (N22/7) calculates the nominal fan speed depending on the refrigerant pressure and transmits a request via the central gateway control unit (N93) to the CDI control unit (N3/9) (for diesel engines) or to the motor electronics control unit (N3/10) (on gasoline engines).

This calculates a specified fan speed dependent on engine temperature and compares this value with the request of the AAC (N22) or comfort automatic air conditioning (N22/7) control and operating module. The higher value is displayed as the control signal.