

Air Conditioning Switch

The air conditioning system, i.e. its relay, is actuated by the DME control unit. When the air conditioning system is switched on, an electrical signal is transmitted to the DME control unit, terminal 40, via the AC switch.

The DME control unit initially boosts the engine's ^{10LE}air throughput by a fixed amount. Only then is the air-conditioning relay actuated via terminal 32. This prevents the engine speed from falling when the air-conditioning compressor cuts in.

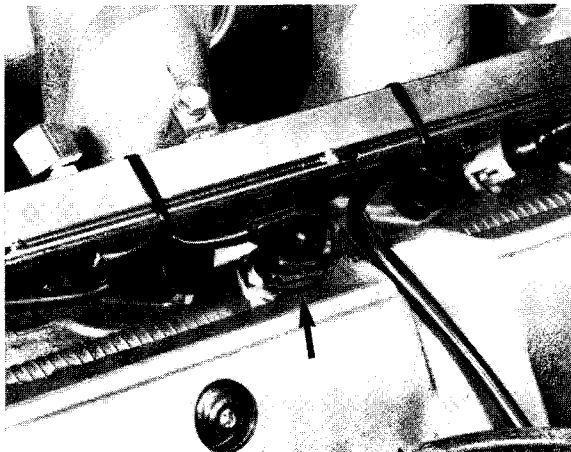
Special Function:

- If the air conditioning switch is operated before the engine is started or while it is being started, the DME control unit prevents the air conditioning system from coming on.
- If the temperature of the engine coolant reaches or exceeds 115°C, an electrical signal is sent from the coolant temperature switch to the DME control unit, terminal 41, and the air conditioning system cuts out.
- In order to achieve optimum acceleration values, when the throttle valve opens very rapidly (throttle valve potentiometer) and full load is then identified (opened angle greater than 66°), the air conditioning compressor cuts out for app. 5 seconds.

Solenoid Valve for Camshaft Adjustment(VarioCam)

The solenoid valve for camshaft adjustment(VarioCam) is actuated by the DME control unit. When the ignition has been switched on, a positive signal is received by the solenoid valve.

An NTC temperature sensor fitted in the cylinder head informs the DME control unit of the oil temperature in the cylinder head.



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If the oil temperature reaches 15°C, the engine speed 1500 rpm and the throttle valve is open by at least 8°, the DME control unit grounds the solenoid valve via terminal 23.

When a speed of 5500 rpm is reached, the DME control unit interrupts the ground signal again. If the oil temperature in the cylinder head rises, the solenoid valve's lower actuation points change in relation to engine speed as follows:

Oil temperature 120°C: actuation speed 2000 rpm

Oil temperature 130°C: actuation speed 2800 rpm

The remaining parameters and the cut-out speed remain unchanged.

Information:

The mechanical-hydraulic function of VarioCam camshaft adjustment is described in detail on pages 1 - 15 to 1 - 19.

System Adaptation

If the vehicle comes to a standstill, in other words if terminal 9 of the DME control unit receives no speed signal, and the engine temperature is simultaneously above 80°C (measured by the NTC II) and the throttle valve potentiometer indicates "Throttle valve closed", the DME control unit conducts one system adaptation. *ROAD*

Idle Speed Positioner

A dual-winding Idle speed positioner is fitted; together with the DME control unit it regulates the engine's idle speed (840±40 rpm on vehicles with manual gearbox, 880±40 rpm on vehicles with Tiptronic transmission).

The Idle speed positioner performs the following tasks:

- Cylinder filling control (constant idle speed when engine warm)
- Cold-idling speed (idle speed boost to overcome internal engine friction)
- Cruising speed boost (underpressure limiting on the overrun)
- Starting speed increase (additional air during the starting process)

The following incoming information is processed by the DME control unit:

- Position of throttle valve (idle speed identification)
- Engine temperature (NTC II)
- Engine speed (speed sensor)