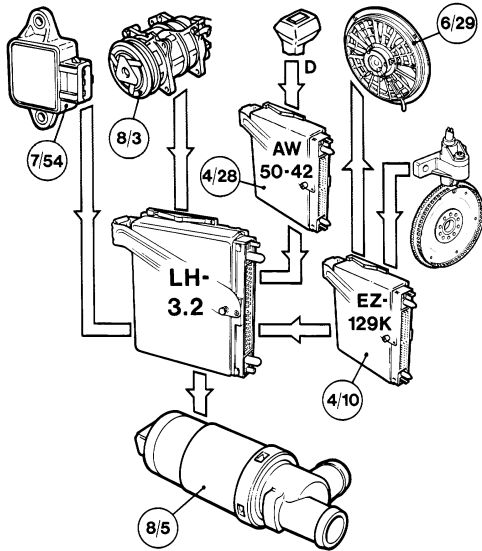# Idle air control (IAC) system and valve
Control functions

The MFI module controls the IAC valve (8/5) using the following information:

* a signal from the TP potentiometer (7/54) indicating when valve operation is required;
* an RPM sensor signal from the ICM (4/10), which compares the current speed with the desired idling speed of 800 rpm and attempts to maintain this value constant;

The MFI module is supplied with the following signals to enable it to adjust the idling speed quickly, even under variable engine load conditions:

* A/C compressor (8/3) running
* Engagement of drive position on automatics. The signal is supplied by the TCM (4/28).
* Engine cooling fan (6/29) running. The signal is supplied by the ICM (4/10).

The MFI module incorporates idle air trim functions for idling control. This enables the module to vary the opening and closing of the IAC valve as required by different operating conditions.

IAC valve – design

The IAC valve consists of a stepping motor (1) with an opening and a closing coil, and a permanent magnet (2). The MFI module delivers pulsed ground signals to both IAC valve coils. Depending on the character of these control signals, the motor operates a rotary valve (4), which controls the air flow through the outlet port (5).

In the event of an electrical fault, the spring (6) maintains the rotary valve in a fixed position and the idling speed is increased to approx. 1200 rpm. Since the MFI module incorporates an adaptive (self–learning) idling program, the rotary valve is not provided with an adjusting screw.