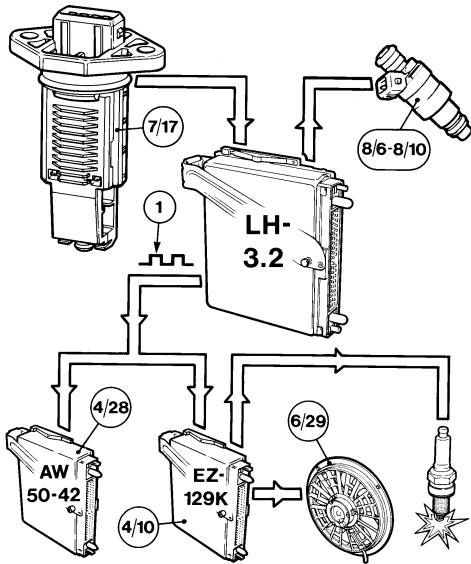


Hot-film MAF sensor Control functions



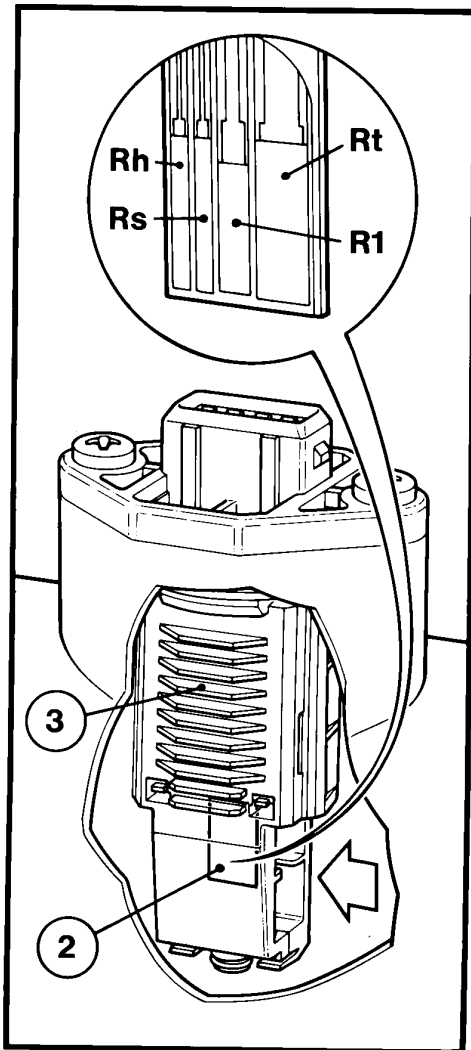
The MAF sensor (7/17) supplies the MFI module with continuous signals describing the intake air mass.

The load information is used by:

- * MFI module (4/45), to compute the opening period of the injectors (8/6–8/10);
- * ICM (4/10), to compute the timing and to determine if the engine cooling fan must be run for a further period;
- * AW 50–42 TCM (4/28), for gear-change computations.

The MFI module converts the analogue signal from the MAF sensor into a digital signal (1) before transmitting the information further to the ICM and TCM.

MAF sensor – design



Employing a 'hot film' (2) rather than a heated wire, the MAF sensor is mounted on the air cleaner (ACL) cover. The unit consists of a plastic housing containing a connector, electronic circuitry and an aluminium heat sink (3). Consisting of four resistances, the film is acted on by the intake air flow.

The resistances have the following functions:

- * Rt is a temperature-sensitive resistance of the NTC type. Its purpose is to supply information on intake air temperature.
- * R1 is a calibration resistance.
- * Rs is a flow-sensitive resistance of the PTC type. Its purpose is to supply signals indicating the cooling effect of the intake air.
- * Rh is a heating resistance whose purpose is to maintain the temperature of Rs 170°C (340°F) above the intake air temperature.

Since the working temperature is relatively high (170°C/340°F), and the flow and temperature-sensitive resistances are mounted on the side of the hot film, a burn-off function is not required.