

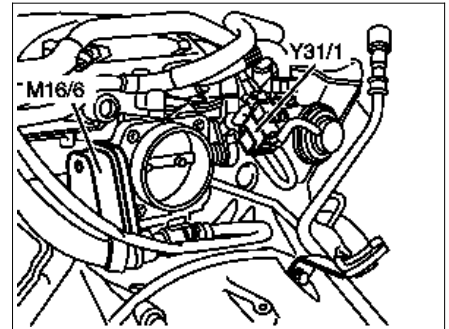
ENGINE 113.967 in MODEL 219
 ENGINE 113.964 in MODEL 164.1 up to Model Year 8
 ENGINE 113.971 in MODEL 251 up to Model Year 8

M16/6 Throttle valve actuator
 Y31/1 EGR [ARF] vacuum transducer

Location
 The EGR [ARF] vacuum transducer is mounted behind the right cylinder head.

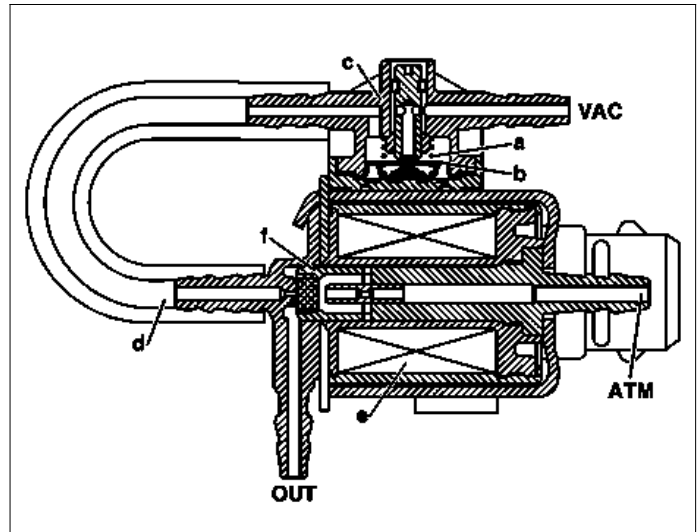
Task
 The EGR pressure transducer controls the vacuum pressure to the EGR valve.

Design
 The EGR pressure transducer is an electromagnetic proportioning valve.



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- a Compression spring
 - b Valve plate with diaphragm
 - c Housing, pressure regulator
 - d Hose line (guides controlled vacuum of approx. -200 mbar to the electrical unit)
 - e Coil
 - f Electromagnetically operated valve unit
- ATM Atmospheric pressure, air admission via cylinder head
 OUT Controlled vacuum to EGR valve
 VAC Vacuum supply from intake manifold



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Function
 From connection VAC the intake manifold vacuum reaches the pressure regulator, which stabilizes the intake manifold vacuum in line with engine speed and throttle valve position via a control valve to approx. -200 mbar.
 The controlled vacuum flows further via a hose line to the following electric unit.
 This unit is actuated by the ME control unit with a pulse width modulation signal (frequency approx. 10 Hz, on/off ratio approx. 30 to 100%) at the ground end.

The developing magnetic field influences via the coil anchor the valve unit as follows:

- No signal from control unit:
 The connections OUT and ATM are linked. The exhaust gas recirculation valve is close (ventilated).
- Signal from control unit:
 The valve unit opens in proportion to the current flow in the coil. The vacuum acts partially or fully at connection OUT and operates the ERF valve accordingly.