

ENGINE 113.967 in MODEL 219

ENGINE 113.964 in MODEL 164.1 up to Model Year 8

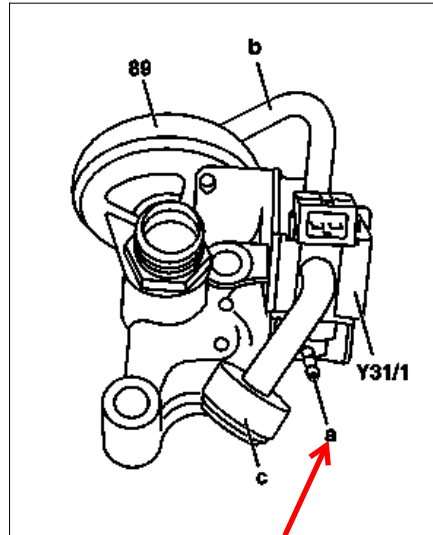
ENGINE 113.971 in MODEL 251 up to Model Year 8

Right

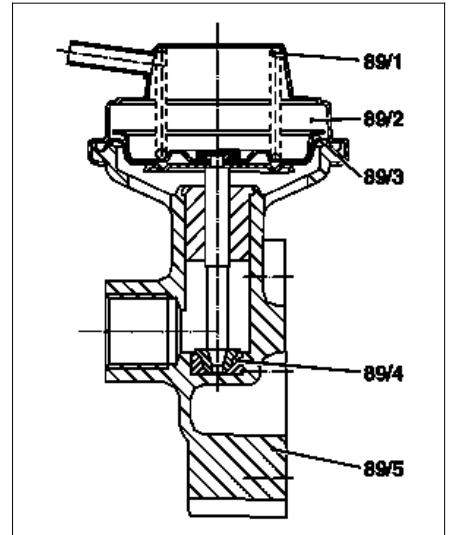
- 89/1 Compression spring
- 89/2 Vacuum reservoir
- 89/3 Diaphragm
- 89/4 Valve seat
- 89/5 Housing

Left

- 89 Exhaust gas recirculation valve
- Y31/1 EGR [ARF] vacuum transducer
- a Vacuum supply from intake manifold
- b Controlled vacuum from EGR [ARF] vacuum transducer to exhaust gas recirculation valve
- C Air admission



P14.20-0249-02



P14.20-0248-02

The EGR valve (89) is combined with an electric EGR vacuum transducer at the rear on the right cylinder head.

The EGR vacuum transducer stabilizes the sharply varying intake manifold vacuum and is actuated by the ME control unit by means of a PWM signal, frequency approx. 10 HZ, on/off ratio approx. 30 - 100%.

The EGR valve is opened to a varying extent as a result of this actuation with a vacuum of approx. 80 to 200 mbar and the quantity of exhaust gases which are recirculated is controlled in this way.

The exhaust gases are recirculated in line with the map stored in the ME control unit as soon as the following conditions are met:

- Coolant temperature between 60°C and 110°C
- Engine speed < 3500 rpm
- Partial load.

The map is designed to achieve optimum fuel consumption. In this case as much exhaust gas as possible is recirculated without impairing engine running or exhaust emissions.

Low-oxygen exhaust is inducted at the EGR valve, depending on the opening cross-section. As a result, the fuel-air mixture contains less oxygen. The combustion temperature drops and the formation of NO_x is reduced.

The inducted air mass is reduced by the quantity of exhaust gases which are recirculated. In line with this, the ME control unit meters less fuel.

	Component description for the engine electronics control unit	GF07.61-P-6000BK
	Component description for the coolant temperature sensor	GF07.04-P-6040BK
	Component description for the crankshaft position sensor	GF07.04-P-6010BK
	Component description for the accelerator pedal sensor	GF30.20-P-2010BK
	Component description for the throttle valve actuator	GF30.20-P-2020BK
	Component description for the hot film MAF sensor	GF07.07-P-6000BK
	Component description for the exhaust gas recirculation pressure transducer	GF14.20-P-2010BK