

FUB-FUB-FB-GZ-B537-B48 FUB-FUB-FB-GZ-B537-B48 - Exhaust gas pressure sensor for petrol particulate filter - V.3, VIN: XXXXXXX

ISTA system version	4.15.32.17442	Data version	R4.15.32	Programming data	-
VIN	XXXXXXX	Vehicle	2'/F87/Coupe/M2 Competition/S55/MANUAL/ECE/RL/2018/09		
Int.lev.works	-	Int.lev.(cur.)	-	Int.lev.(tar.)	-
Mileage	-				

Exhaust gas pressure sensor for petrol particulate filter

The petrol particulate filter exhaust gas pressure sensor is secured by a holder on the engine (to protect it from high temperatures). The exhaust gas pressure sensor is connected with the petrol particulate filter by two pipes through two attached connecting hoses.

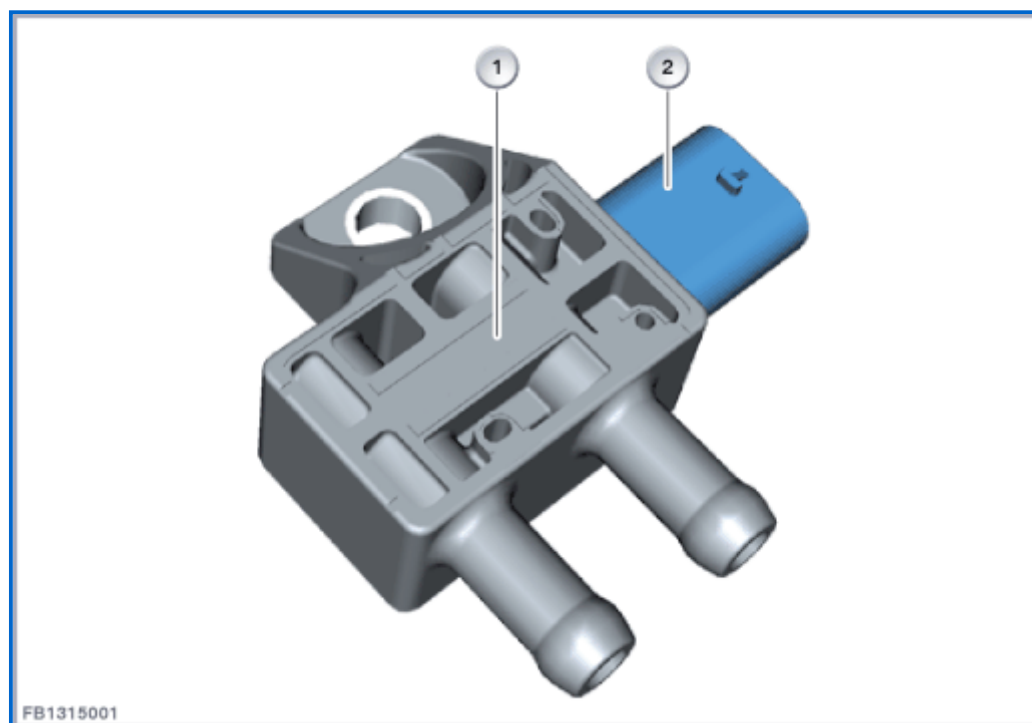
The petrol particulate filter exhaust gas pressure sensor is a differential pressure sensor.

Functional description

Using the signal from the petrol particulate filter exhaust gas pressure sensor, the Digital Motor Electronics (DME) controls regeneration of the petrol particulate filter.

The Digital Motor Electronics (DME) calculates the exhaust mass flow using the signals of the exhaust gas pressure sensor and other signals such as the air mass.

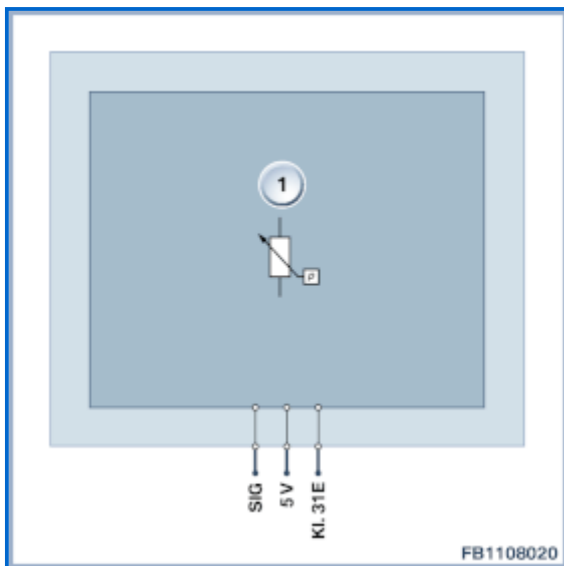
A value for the exhaust gas pressure after the petrol particulate filter is determined using the calculation of the exhaust mass flow in combination with the measured ambient pressure. The calculated differential pressure before and after the petrol particulate filter gives information on the load status of the petrol particulate filter. The Digital Motor Electronics (DME) activates regeneration when the permitted load status is exceeded.



Item	Explanation	Item	Explanation
1	Exhaust gas pressure sensor for petrol particulate filter	2	three-pin plug connection

Structure and inner electrical connection

The petrol particulate filter exhaust gas pressure sensor is connected with a 3-pin plug connection. The sensor is supplied with 5 Volts by the engine control.



Item	Explanation
1	Exhaust gas pressure sensor for petrol particulate filter

Pin assignments

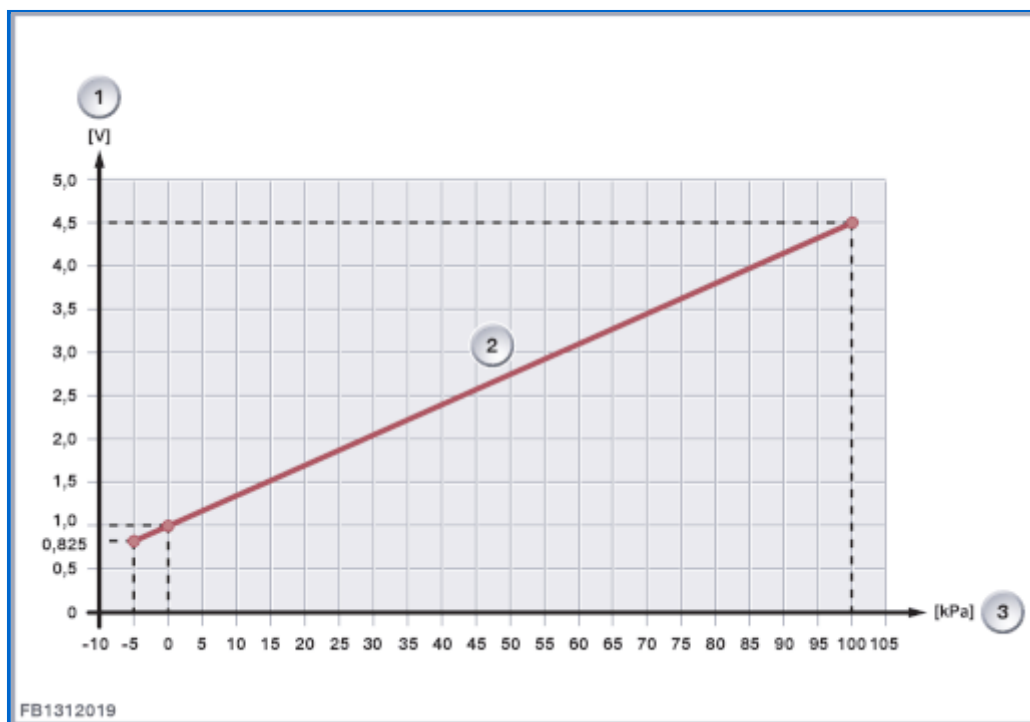
Pin	Explanation
SIG	Exhaust back pressure signal
5 V	5 Volts, supply voltage
Terminal 31E	Terminal 31, electronics earth (ground)

Characteristic curve and setpoint values

The exhaust back pressure information is sent to the engine control via a signal line. The signal for evaluation of the exhaust back pressure fluctuates depending on the pressure. The measuring range of approx. 0.8 to 4.5 Volts corresponds to a fuel pressure of -5 kPa (-0.05 bar) to 100 kPa (1 bar).

The plausibility of the signal is checked with reference to the following variables:

- Engine speed
- Injection rate
- Consumption



Item	Explanation	Item	Explanation
1	Signal voltage	2	Characteristic curve for exhaust gas pressure sensor for petrol particulate filter
3	Pressure		

Observe the following setpoint values for the petrol particulate filter exhaust gas pressure sensor:

Variable	Value
Voltage range	4,9 to 5,1 volts
Operating pressure	-0.05 to 1.0 bar
Response time	less than 5 ms
Maximum output current	15 mA
Temperature range	-40 °C to 130 °C

Diagnosis instructions

Failure of the component

If the petrol particulate filter exhaust gas pressure sensor fails, the following behaviour is to be expected:

- Fault entry in the engine control unit
- Switching off petrol particulate filter regeneration

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