Engine 642.8 in model 164.1/8
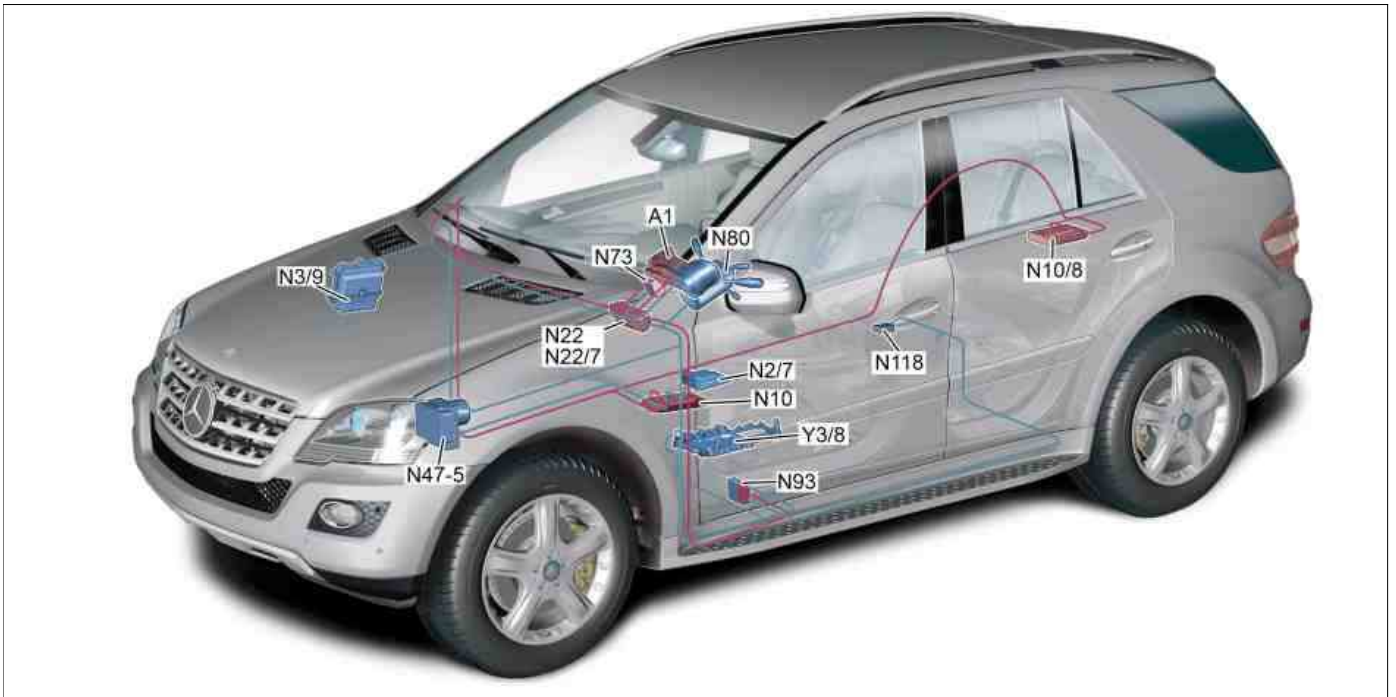**Engine 642.8 in model 251.0/1**
Engine 642.9 in model 164.1/8
Engine 642.9 in model 251.0/1

P07.16-3507-79

Vehicle view from the front left on model 164.1

N118   Fuel system control unit

Location

The fuel system control unit is located on the left under the rear bench seat.

Task

The FSCU is supplied by the company "Continental Automotive GmbH" and carries the code designation FSCM-light. The fuel system control unit regulates the fuel pump (M3) in accordance with requirements and transmits information about the current fuel pressure to the CDI control unit (N3/9).

Input and output signals

The following input signals are evaluated by the FSCU and the respective output signal is issued:

● **Direct input signals**
● **Direct output signals**
● **CAN input signals**
● **CAN output signals**

Direct input signals

● Terminal 15
● Circuit 30
● Circuit 31
● Ground signal "Fuel pump ON"
● Fuel pressure sensor (B4/7)

Direct output signals

● Fuel pressure sensor, voltage supply
● Fuel pressure sensor
● Fuel pump (12 V) (pulse width modulated signal) (plus)
● Fuel pump (pulse width modulated signal) (plus)

CAN input signals

● Fuel pump ON
● Fuel specified pressure

● Diagnostic data

Structure

The fuel system control unit consists of a fuel housing with two plug connections and internal measuring and control electronics.

Function

The function description is subdivided into the following points:

● **Controlling the fuel pump**
● **Fuel system control unit limp-home mode**
● **Diagnosis**
● **Tank drainage service**

Controlling the fuel pump

Switching on of the fuel pump takes place if a "fuel pump ON" signal is received by the FSCU. This signal is sent redundantly from the CDI control unit as a CAN signal via the engine compartment CAN (CAN C) and as a ground signal. The fuel system control unit also receives the CAN signal "fuel requirements" from the CDI control unit.

Fuel system control unit limp-home mode

● If the signal "fuel requirements" is missing a substitute value is created and the fuel pump is appropriately actuated by the fuel system control unit.
● If the "fuel requirements" signal and the signal from the fuel pressure sensor are missing, the fuel pump is actuated by means of an established permanent PWM signal (maximum delivery).
● If both signals "Fuel pump ON" are missing, the fuel pump is actuated upon recognition of circuit 15.
● Various limp-home functions ensure that the fuel supply is secured also for failure of the internal control.

Diagnosis

The FSCU performs am own and component check. If an error is detected, it is stored by the fuel system control unit and made available

CAN output signals
- Fuel pressure

to the CDI unit via the engine compartment CAN and also an attached Diagnosis Assistance System (DAS) via the diagnostic CAN (CAN-D).

Tank drainage service

The fuel tank can be emptied over the FSCU without the engine running. To do this, the fuel draining service must be selected with the Diagnosis Assistance System and the following parameters entered:

- Parameter 01 for "fuel pump ON"
- Time "0-99999"s
- Duty cycle of the PWM signal to 100%

The DAS must be attached during emptying and the ignition switched on.

Variants

The vehicle and engine variants are already stored in the FSCU. After replacement of the FSCU a variant coding must be carried out.

	Wiring diagram for fuel pump	Engine 642.8 in model 251.0/1Engine 642.9 in model 251.0/1	PE47.20-Q-2100-97RAB
	Wiring diagram for fuel pump	Engine 642.8 in model 164.1/8Engine 642.9 in model 164.1/8	PE47.40-P-2101-97MAA