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Lambda control adaptation FRAU (lower load range) - below limit value

NOTE

• The diagnosis is intended to display a negative deviation of more than 30% (leaning) of the lambda control adaptation in the partial load range (FRAU > 0.7).

Diagnostic conditions

- Engine load 15 .. 80%
- Mass air flow via hot-film mass air flow meter 40 … 220 kg/h
- Engine speed 1,040 ... 4760 rpm
- Oxygen sensing in front of catalytic converter active
- Engine temperature > 55.5 °C
- No tank ventilation
  - ⇒ USA: Time after engine starts 250 … 350 s
  - ⇒ RoW: Time after engine starts 302 … 402 s
- No faults detected for oxygen sensor
- No faults detected for tank vent
- No faults detected for hot-film mass air flow meter

Possible fault causes

♦ Incorrect main filling signal from hot-film mass air flow meter
♦ Fuel pressure too high
♦ Injection valve faulty (dripping)
♦ Tank vent faulty (does not close completely)

Lambda control adaptation FRAU (lower load range) - above limit value

NOTE

• The diagnosis is intended to display a positive deviation of more than 30% (fattening) of the lambda control adaptation in the partial load range (FRAU > 1.3).

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• No faults detected for hot-film mass air flow meter

Possible fault causes

♦ Intake system leaking (secondary air)
♦ Incorrect main filling signal from hot-film mass air flow meter
♦ Leak in exhaust system
♦ Fuel pressure too low
♦ Fuel injector faulty (stuck)
♦ Fuel pump delivery too low

Lambda control adaptation RKAT (range near idle speed) - above limit value

ⓘ **NOTE**
• The diagnosis is intended to display a positive deviation of more than 6 % (fattening) of the lambda control adaptation in the range near idle speed.
• Opposed adaptation values in connection with misfires indicate that the timing has been changed.

Diagnostic conditions

- Mass air flow < 32 kg/h
- Engine speed < 960 rpm
- Oxygen sensing in front of catalytic converter active
- Engine temperature > 55.5 °C
- No tank ventilation
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Possible fault causes

- ♦ Oil filler cap leaking (secondary air)
- ♦ Intake system leaking (secondary air)
- ♦ Crankcase ventilation leaking (secondary air)
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Possible fault causes

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♦ Injection valve mechanically faulty (dripping)
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