

P2179

Oxygen Sensing Adaptation, Lower Load Range, Bank 2 (FRAU2) - Above Limit

Diagnosis conditions – V8

- Battery positive voltage between 10 V and 16 V
- Oxygen sensing system active
- Engine temperature > 60 °C
- Time elapsed after engine start-up between 250 and 350 seconds (USA)
- Time elapsed after engine start-up between 302 and 402 seconds (RoW)
- Engine load between 18 % and 70 %
- Mass air flow between 50 kg/h and 320 kg/h
- Engine speed - naturally aspirated between 800 1/min and 3520 1/min
- Engine speed - turbo between 920 1/min and 3520 1/min

Diagnosis conditions – V6

- Battery positive voltage between 10 V and 16 V
- Oxygen sensing system active
- Engine temperature > 60 °C
- Engine load between 16 % and 50 %
- Mass air flow between 40 kg/h and 240 kg/h
- Engine speed between 1200 1/min and 4200 1/min

Possible fault cause

- ◆ Intake air system leaking
- ◆ Leaking exhaust system (draws fresh air)
- ◆ Incorrect main charge signal from MAF sensor
- ◆ Fuel pressure too low
- ◆ Fuel injector(s) mechanically faulty (sticks)
- ◆ Volume supply of fuel pump too low

Affected pins

DME control module connector A, pin 29 and mass air flow sensor 1, pin 5

Not V6 - DME control module connector B, pin 109 and mass air flow sensor 2, pin 5

Diagnosis/troubleshooting**Note!**

- ◆ *The diagnosis should display a positive oxygen sensing adaptation deviation (enrichment) of more than 30% in the lower load range (FRAU > 1.3).*
- ◆ *Only V8 - If this fault is set, both mass air flow sensors must essentially be checked since the main charge signal is calculated from both signals.*

Work instruction		Display OK	If not OK
1	Read out the fault memory	◆ Check whether additional faults have been recorded	Only fault P2179 was recorded ⇒ Step 2
2	Check mass air flow sensors 1 and 2	◆ Connect the 173 universal test box, 105-pole and the 173-1 adapter cable, DME 7.1.1 ◆ Switch on the ignition Measure signal voltage between DME control module connector: ◆ A, pin 29 and ground ◆ B, pin 109 and ground	Voltage between 0.9 V and 1.1 V ⇒ Step 3
3	Check exhaust system (before catalytic converters) for leaks	◆ Replace faulty mass air flow sensor → End	Leakproof ⇒ Step 4
4	Check fuel pressure, volume supply of fuel pump and injection valve (mechanically)	Correct fault, eliminate cause of damage if necessary → End	Continue troubleshooting in Engine Manual (Group 1) and Fuel Exhaust Engine Electrics Manual (Group 2) → End