P1094

Mass air flow in front of throttle implausible

Diagnostic conditions

- Battery positive voltage between 10 V and 16 V
- Engine running

Possible cause of fault

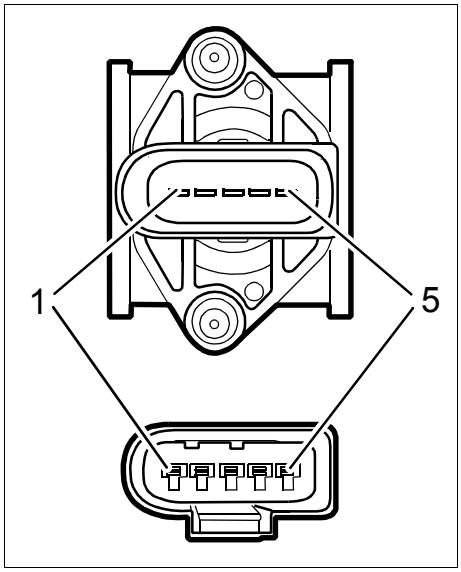
- Throttle stiff or 'blocked'
- Secondary air between hot film mass air flow meter and throttle (e.g. crack in hose)
- Throttle adjusting unit faulty
- Hot film mass air flow meter faulty (intake air temperature sensor)
- Hot film mass air flow meter faulty
- DME faulty (pressure sensor for ambient air pressure)

Affected terminals

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Diagnosis/troubleshooting

Hot film mass air flow meter ►



Note!

- *In this fault code, the intake system between the hot film mass air flow meter and the throttle is monitored.*
- *The pressure sensor for the ambient air pressure is installed in the engine control module.*

Note!

- *Adaptation 'RKAT' is additive, remains unadapted in ± 0.0 %.*
- *Adaptation 'FRAU' is multiplicative, remains unadapted in + 1.00.*

Work instruction			Display OK	If not OK
1	Check actual values	♦ Using the 9588 Porsche System Tester II, read out the 'RKAT' and 'FRAU' adaptation values under "Actual values" and evaluate the difference	The adaptations are well below the unadapted value ⇒ Step 2 The adaptations are well above the unadapted value ⇒ Step 4 The adaptation values are OK ⇒ Step 6	
2	The adaptations are well below the unadapted value	♦ Check air guide between hot film mass air flow meter and throttle for leaks	⇒ Step 3	Continue troubleshooting in Workshop Manual ⇒ Group 2; Rep. Gr. 24; Fuel system, electronic injection → End
3		Check operation of hot film mass air flow meter ♦ Switch on ignition ♦ Switch off all 'loads' ♦ Measure signal voltage between DME control module plug A, pin 29, and ground ♦ Switch off ignition	0.9 V to 1.1 V ⇒ Step 9	Replace faulty hot film mass air flow meter → End

Work instruction			Display OK	If not OK
4	The adaptations are well above the unadapted value	Check operation of hot film mass air flow meter ♦ Switch on ignition ♦ Switch off all 'loads' ♦ Measure signal voltage between DME control module plug A, pin 29, and ground ♦ Switch off ignition	0.9 V to 1.1 V ⇒ Step 5	Replace faulty hot film mass air flow meter → End
5		♦ Check fuel system for correct fuel pressure and mechanically faulty injection valves	Continue troubleshooting in Workshop Manual ⇒ Group 2; Rep. Gr. 20; Checking fuel pressure and quantity delivered → End	
6a	Adaptation values are OK	♦ Check throttle adjusting unit for stiffness in accordance with Workshop Manual ⇒ Group 2; Rep. Gr. 24; Fuel system, electronic injection	Throttle adjusting unit mechanically OK ⇒ Step 7	Mechanical faulty in throttle adjusting unit ⇒ Replace throttle adjusting unit → End
6b		♦ Check throttle adjusting unit for sticky soiling	Throttle adjusting unit OK ⇒ Step 7	Clean throttle adjusting unit and check engine for oil consumption; correct the cause of the fault if necessary → End
7		♦ Pull off plug from hot film mass air flow meter ♦ Visual inspection ♦ Measure resistance between pins 1 and 3 of hot film mass air flow meter	2,250 Ω to 2,560 Ω at 20°C ⇒ Step 8	Intake air temperature sensor faulty → End
8		Check ambient pressure sensor ♦ Using the 9588 Porsche System Tester II, read out the actual value of the ambient pressure sensor ♦ Compare the value that has been read out with the display value of a calibrated barometer	The values roughly agree → End	Difference between the values of the ambient pressure sensor and those of the barometer are too great ⇒ Step 9

Work instruction		Display OK	If not OK
9	Check whether additional faults are entered	⇒ Step 10	Work through faults in accordance with instructions → End
10	Replace DME control module	Observe the notes on possible causes of faults in the introduction at all times!	