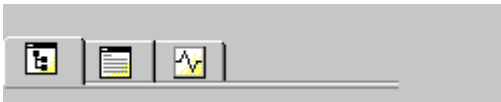
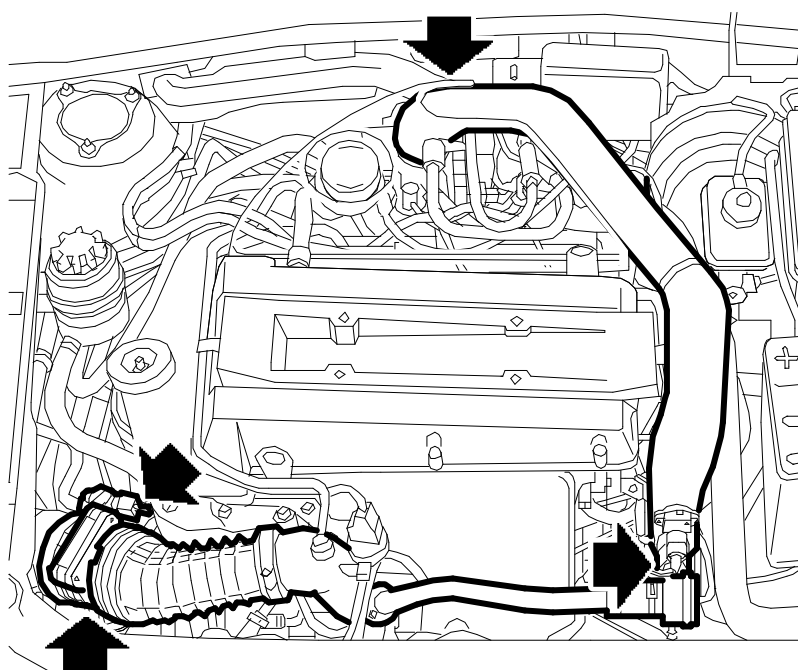


P0101**Important**

Read the introductory instructions below and then click on the tab to start the fault diagnosis procedure.

**Mass Air Flow Circuit. Performance Problems.**

E724F110

Fault symptoms

- Market US/CA/EU: CHECK ENGINE
- Possible driveability problems

On-Board Diagnostics**Type of diagnosis:**

- Continuous. Terminated when fault criteria fulfilled. Restarts next driving cycle.

Enable criteria:

- General conditions for this trouble code: Atmospheric pressure must exceed 72 kPa and the engine coolant and intake air temperature must exceed -7°C.
- Main relay voltage exceeds 10V. Speed above 45 km/h for more than 60s accumulated time. Coolant temperature between 78 and 115°C. Engine speed between 700 and 4000 rpm. EVAP active. No fuel shut-off. No change in bypass valve status. Pressure ratio for pressure after and before the throttle between 0.2 and 0.7. Throttle opening between 50 and 500 mm². Uniform engine load.
- Mass air flow calculated in principle using the throttle opening and the pressure difference before and after the throttle.

Fault criteria:

- Conditions for test 1, 2, 3 or 4 fulfilled.
 - **Test 1:** Mass air flow sensor indicates value more than 12% lower than the calculated while the multiplicative adaptation is higher than 17%.
 - **Test 2:** Mass air flow sensor indicates value more than 12% higher than the calculated while the multiplicative adaptation is lower than -17%.
 - **Test 3:** Mass air flow sensor indicates value more than 30% lower than the calculated.
 - **Test 4:** Mass air flow sensor indicates value more than 30% higher than the calculated.

Dependents:

- P0112, P0113, P0106, P0107, P0108, P1105, P1106, P1107, P1108, P1230, P0501, P0502, P1625, P0444, P0445.

System reaction to a fault:

- Fuel adaptation zeroed. Intake pressure and intake air temperature is used as substitute values for the mass air flow sensor. This value is used for instance for fuel calculation instead of the value from the mass air flow sensor, which is considered unreliable.

OK report:

- Enable criteria fulfilled without any faults being reported.

Fault handling: (For more information, see [Fault handling III, other emission-related components and functions](#) .)

- Type III.

Diagnostic help

This DTC indicates that the mass air flow sensor value is unreliable in comparison with a calculated value. This can be due to an air leak or defective mass air flow sensor.

Check the intake system for leaks first then continue with fault diagnosis.

Functions in the diagnostic tool related to the fault:

- Diagnostic status for the diagnosis.
- Air mass deviation from calculated, unit %.