

P0113 Intake Air Temperature Sensor Circuit High

Wiring Diagram

Refer to "DTC P0111: Intake Air Temperature Circuit Range / Performance".

DTC Detecting Condition and Trouble Area

DTC detecting condition	Trouble area
Voltage of IAT sensor output is more than specified value with engine running. (Low intake air temperature (high voltage / high resistance)) (1 driving cycle detection logic)	<ul style="list-style-type: none"> • IAT sensor circuit • IAT sensor • ECM

DTC Confirmation Procedure

- 1) With ignition switch turned OFF, connect scan tool.
- 2) Turn ON ignition switch and clear DTC using scan tool.
- 3) Start engine and run it for 10 sec.
- 4) Check DTC and pending DTC.

DTC Troubleshooting

Step	Action	Yes	No
1	Was "Engine and Emission Control System Check" performed?	Go to Step 2.	Go to "Engine and Emission Control System Check".
2	IAT sensor and its circuit check 1) Connect scan tool to DLC with ignition switch turned OFF. 2) Turn ON ignition switch. 3) Check intake air temp. displayed on scan tool. Is -40°C (-40°F) indicated?	Go to Step 3.	Intermittent trouble. Check for intermittent referring to "Intermittent and Poor Connection Inspection in Section 00".

Step	Action	Yes	No
3	<p>IAT sensor voltage check</p> <p>1) Disconnect connector from MAF and IAT sensor with ignition switch turned OFF.</p> <p>2) Check for proper connection to MAF and IAT sensor at "BLK/YEL" and "GRY/BLU" wire terminals.</p> <p>3) If OK, then turn ON ignition switch, measure voltage between "BLK/YEL" wire terminal of MAF and IAT sensor connector (1) and vehicle body ground.</p> <p>I4RS0B110020-01</p> <p>Is voltage about 4 – 6 V?</p>	Go to Step 7.	Go to Step 4.
4	<p>ECM voltage check</p> <p>1) Turn OFF ignition switch. 2) Remove ECM from its bracket with ECM connectors connected.</p> <p>3) Check for proper connection of ECM connector at "C01-25" terminal.</p> <p>4) If OK, then turn ON ignition switch, measure voltage between "C01-25" terminal of ECM connector and vehicle body ground.</p> <p>Is voltage about 4 – 6 V?</p>	"BLK/YEL" wire is open circuit. If wire and connection are OK, go to Step 5.	Go to Step 5.
5	<p>Wire circuit check</p> <p>1) Disconnect connectors from ECM with ignition switch turned OFF.</p> <p>2) Turn ON ignition switch. 3) Measure voltage between "BLK/YEL" wire terminal of MAF and IAT sensor connector and vehicle body ground.</p> <p>Is voltage about 0 V?</p>	Go to Step 6.	"BLK/YEL" wire is shorted to other circuit. If wire is OK, substitute a known-good ECM and recheck.

Step	Action	Yes	No
6	Wire circuit check 1) Measure resistance between "C01-25" terminal of ECM connector and "BLK/YEL" wire terminal of MAF and IAT sensor connector with ignition switch turned OFF. Is resistance below 5 Ω ?	Go to Step 7.	"BLK/YEL" wire is high resistance circuit.
7	Ground circuit check 1) Connect connectors to ECM. 2) Measure resistance between "GRY/BLU" wire terminal of MAF and IAT sensor connector and vehicle body ground with ignition switch turned OFF. Is resistance below 5 Ω ?	Go to Step 9.	Go to Step 8.
8	Ground circuit check 1) Remove ECM from its bracket with ECM connectors connected. 2) Measure resistance between "C01-55" terminal of ECM connector and vehicle body ground. Is resistance below 5 Ω ?	"GRY/BLU" wire is open circuit or high resistance circuit. Poor "C01-55" connection.	Faulty ECM ground circuit. If circuit is OK, substitute a known-good ECM and recheck.
9	IAT sensor for performance check 1) Check IAT sensor according to "Intake Air Temperature (IAT) Sensor Inspection in Section 1C". Is it in good condition?	Substitute a known-good ECM and recheck.	Replace MAF and IAT sensor.