

DTC P0112:00	IAT sensor No.1 circuit low input
DETECTION CONDITION	<ul style="list-style-type: none"> The PCM monitors the IAT sensor No.1 signal. If the PCM detects that the IAT sensor No.1 voltage at the PCM terminal 2U is below 0.19 V for 5 s, the PCM determines that the IAT sensor No.1 circuit has a malfunction. <p>Diagnostic support note</p> <ul style="list-style-type: none"> This is a continuous monitor (CCM). The check engine light illuminates if the PCM detects the above malfunction condition during the first drive cycle. FREEZE FRAME DATA (Mode 2)/Snapshot data is available. The DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	<ul style="list-style-type: none"> Illuminates the charging system warning light. Fixes the intake air temperature (for engine control) at 20 °C {68 °F}. Inhibits the fuel cut control during shift change.
POSSIBLE CAUSE	<ul style="list-style-type: none"> MAF sensor/IAT sensor No.1 connector or terminals malfunction IAT sensor No.1 malfunction Short to ground in wiring harness between MAF sensor/IAT sensor No.1 terminal A and PCM terminal 2U PCM connector or terminals malfunction IAT sensor No.1 signal circuit and ground circuit are shorted to each other PCM malfunction
<p style="text-align: center;">④</p> <p style="text-align: center;">IAT SENSOR NO.1 (MAF SENSOR/IAT SENSOR NO.1)</p> <p style="text-align: center;">MAF SENSOR/IAT SENSOR NO.1 WIRING HARNESS-SIDE CONNECTOR</p> <p style="text-align: center;">PCM PCM WIRING HARNESS-SIDE CONNECTOR</p>	

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED • Has the FREEZE FRAME DATA (Mode 2)/ snapshot data been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.
2	VERIFY RELATED SERVICE INFORMATION AVAILABILITY • Verify related Service Information availability. • Is any related Service Information available?	Yes	Perform repair or diagnosis according to the available Service Information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	INSPECT MAF SENSOR/IAT SENSOR NO.1 CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the MAF sensor/IAT sensor No.1 connector. • Inspect for poor connection (such as damaged/ pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector and/or terminals, then go to Step 8.
		No	Go to the next step.

STEP	INSPECTION		ACTION
4	INSPECT IAT SENSOR NO.1 <ul style="list-style-type: none"> Inspect the IAT sensor No.1. (See INTAKE AIR TEMPERATURE (IAT) SENSOR INSPECTION [SKYACTIV-G 2.0].) Is there any malfunction? 	Yes	Replace the MAF sensor/IAT sensor No.1, then go to Step 8. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
5	INSPECT IAT SENSOR NO.1 SIGNAL CIRCUIT FOR SHORT TO GROUND <ul style="list-style-type: none"> Verify that the MAF sensor/IAT sensor No.1 connector is disconnected. Inspect for continuity between MAF sensor/IAT sensor No.1 terminal A (wiring harness-side) and body ground. Is there continuity? 	Yes	If the short to ground circuit could be detected in the wiring harness: <ul style="list-style-type: none"> Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected in the wiring harness: <ul style="list-style-type: none"> Replace the PCM (short to ground in the PCM internal circuit). (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to Step 8.
		No	Go to the next step.
6	INSPECT PCM CONNECTOR CONDITION <ul style="list-style-type: none"> Disconnect the PCM connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? 	Yes	Repair or replace the connector and/or terminals, then go to Step 8.
		No	Go to the next step.
7	INSPECT IAT SENSOR NO.1 SIGNAL CIRCUIT AND GROUND CIRCUIT FOR SHORT TO EACH OTHER <ul style="list-style-type: none"> Verify that the MAF sensor/IAT sensor No.1 and PCM connectors are disconnected. Inspect for continuity between MAF sensor/IAT sensor No.1 terminals A and B (wiring harness-side). Is there continuity? 	Yes	Repair or replace the wiring harness for a possible short to each other, then go to the next step.
		No	Go to the next step.
8	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> Make sure to reconnect all disconnected connectors. Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) Start the engine and warm it up completely. Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G 2.0].) Is the same DTC present? 	Yes	Repeat the inspection from Step 1. <ul style="list-style-type: none"> If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to the next step.
		No	Go to the next step.
9	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) Are any DTCs present? 	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No	DTC troubleshooting completed.