## DTC B1A61:11, B1A61:13 [FULL-AUTO AIR CONDITIONER]

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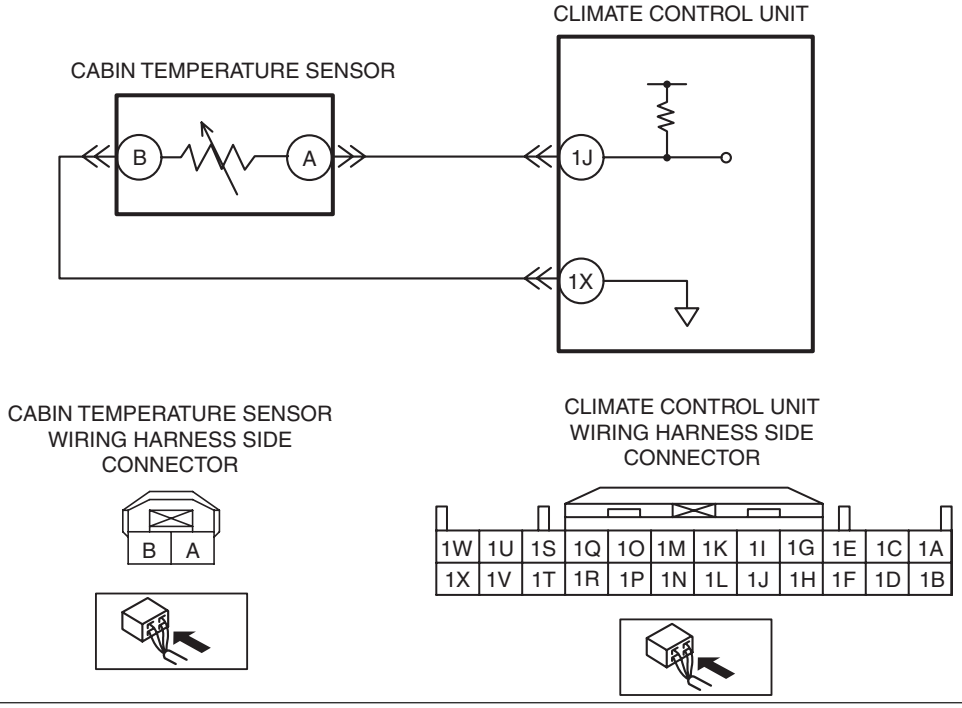
|---|---|
| **System malfunction location** | • B1A61:11: Cabin temperature sensor circuit short to ground<br>• B1A61:13: Cabin temperature sensor circuit open |
| **Detection condition** | • Malfunction in wiring harness between cabin temperature sensor and climate control unit |
| **Fail-safe** | **Malfunction determined when IG SW at ON**<br>• Cabin temperature sensor input value is fixed at the value right before the malfunction.<br>**Malfunction already exists when IG SW turned to ON**<br>• Cabin temperature sensor input value is fixed at **25 °C {77 °F}**. |
| **Possible cause** | • Connector or terminal malfunction<br>• Cabin temperature sensor malfunction<br>• Open circuit in wiring harness between climate control unit and cabin temperature sensor<br>• Short to ground in wiring harness between climate control unit and cabin temperature sensor<br>• Climate control unit malfunction |




### Diagnostic Procedure

| STEP | INSPECTION | | ACTION |
|---|---|---|---|
| 1 | **INSPECT CABIN TEMPERATURE SENSOR CONNECTOR**<br>• Switch the ignition off.<br>• Disconnect the negative battery cable.<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)<br>• Disconnect the cabin temperature sensor connector.<br>• Inspect the connector and terminals (corrosion, damage, pin disconnection).<br>• Are the connector and terminals normal? | Yes | Go to the next step. |
| | | No | Repair/replace the connector or terminal.<br>After repair procedure, go to the next step. |

| STEP | INSPECTION | | ACTION |
|---|---|---|---|
| 2 | **INSPECT CABIN TEMPERATURE SENSOR**<br>• Inspect the cabin temperature sensor. (See CABIN TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].)<br>• Is it normal? | Yes | Go to the next step. |
| | | No | Replace the cabin temperature sensor. (See CABIN TEMPERATURE SENSOR REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].)<br>Go to the next step. |
| 3 | **INSPECT CABIN TEMPERATURE SENSOR CIRCUIT FOR OPEN CIRCUIT**<br>• Disconnect the climate control unit connector and the cabin temperature sensor connector.<br>• Inspect for continuity between the following terminals (wiring harness-side):<br>— Climate control unit terminal 1J—cabin temperature sensor terminal A<br>— Climate control unit terminal 1X—cabin temperature sensor terminal B<br>• Is there continuity? | Yes | Go to the next step. |
| | | No | Repair the wiring harness.<br>Go to the next step. |
| 4 | **INSPECT CABIN TEMPERATURE SENSOR CIRCUIT FOR SHORT TO GROUND**<br>• Inspect for continuity between the following terminals (wiring harness-side) and body ground:<br>— Climate control unit 1J<br>• Is there continuity? | Yes | Repair the wiring harness.<br>Go to the next step. |
| | | No | Connect the climate control unit connector, then go to the next step. |
| 5 | **VERIFY CLIMATE CONTROL UNIT CONNECTOR CONDITION**<br>• Inspect the connector and terminals (corrosion, damage, pin disconnection).<br>• Are the connector and terminals normal? | Yes | Go to the next step. |
| | | No | Repair/replace the malfunctioning vehicle wiring harness, connector, or terminal.<br>After repair procedure, go to the next step. |
| 6 | **INSPECT CABIN TEMPERATURE SENSOR CIRCUIT**<br>• Connect the climate control unit connector.<br>• Connect the negative battery cable.<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)<br>• Switch the ignition ON (engine off or on).<br>• Inspect the voltage at the following climate control unit terminal (wiring harness-side).<br>— Terminal 1J (cabin temperature sensor input signal)<br>• Is the voltage normal? (**Approx. 5 V**) | Yes | The system is normal at present.<br>Go to the next step. |
| | | No | Go to the next step. |
| 7 | **VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN**<br>• Switch the ignition off.<br>• Disconnect the negative battery cable.<br>• Reconnect the disconnected connectors.<br>• Connect the negative battery cable.<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)<br>(See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)<br>• Clear the past malfunction from memory.<br>• Verify DTCs.<br>• Is DTC B1A61:11 or B1A61:13 output? | Yes | Repeat the inspection from Step 1.<br>• If the malfunction does not recur, go to the next step.<br>• If the malfunction recurs, replace the climate control unit.<br>(See CLIMATE CONTROL UNIT REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].)<br>Go to the next step. |
| | | No | Go to the next step. |

| STEP | INSPECTION | | ACTION |
|---|---|---|---|
| 8 | **VERIFY THAT NO OTHER DTCs ARE PRESENT**<br>• Verify other DTCs displayed.<br>• Are any other DTCs output? | Yes | Perform the corresponding DTC inspection. |
| | | No | DTC troubleshooting completed. |