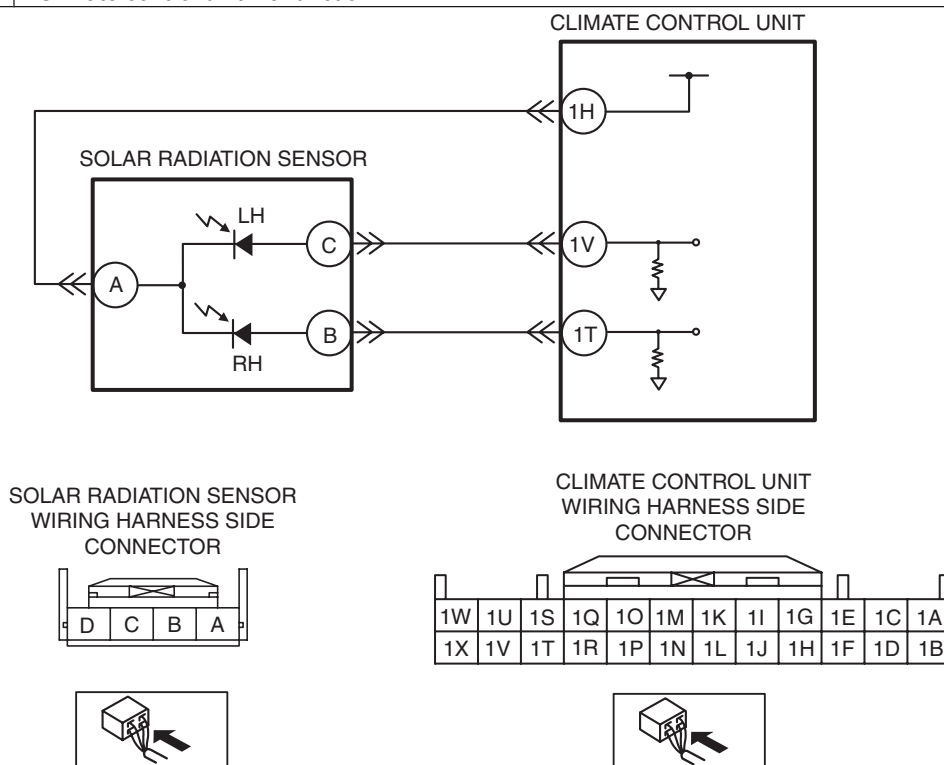


# DTC B1A63:12, B1A63:13, B1A64:12, B1A64:13 [FULL-AUTO AIR CONDITIONER]

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<b>System malfunction location</b>	<ul style="list-style-type: none"> <li>B1A63:12: Solar radiation sensor (RH) circuit short to power supply</li> <li>B1A63:13: Solar radiation sensor (RH) circuit open</li> <li>B1A64:12: Solar radiation sensor (LH) circuit short to power supply</li> <li>B1A64:13: Solar radiation sensor (LH) circuit open</li> </ul>
<b>Detection condition</b>	<ul style="list-style-type: none"> <li>Malfunction in wiring harness between solar radiation sensor and climate control unit</li> </ul>
<b>Fail-safe</b>	<p><b>Malfunction determined when IG SW at ON</b></p> <ul style="list-style-type: none"> <li>The solar radiation sensor input value is fixed at the value directly before the malfunction only when the valve is <b>1,450 W/m<sup>2</sup> or more</b>.</li> </ul> <p><b>Malfunction already exists when IG SW turned to ON</b></p> <ul style="list-style-type: none"> <li>Solar radiation sensor value is fixed at <b>0 W/m<sup>2</sup></b>.</li> </ul>
<b>Possible cause</b>	<ul style="list-style-type: none"> <li>Connector or terminal malfunction</li> <li>Light amount shone on the solar radiation sensor is insufficient (Circuit is normal)</li> <li>Solar radiation sensor malfunction</li> <li>Open circuit in wiring harness between climate control unit and solar radiation sensor</li> <li>Short to power supply in wiring harness between climate control unit and solar radiation sensor</li> <li>Climate control unit malfunction</li> </ul>



## Diagnostic Procedure

STEP	INSPECTION	ACTION	
1	<b>INSPECT SOLAR RADIATION SENSOR CONNECTOR</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)</li> <li>• Disconnect the solar radiation sensor connector.</li> <li>• Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>• Are the connector and terminals normal?</li> </ul>	Yes	Go to the next step.
		No	Repair/replace the connector or terminal. After repair procedure, go to the next step.
2	<b>INSPECT SOLAR RADIATION SENSOR</b> <ul style="list-style-type: none"> <li>• Inspect the solar radiation sensor. (See SOLAR RADIATION SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].)</li> <li>• Is it normal?</li> </ul>	Yes	Go to the next step.
		No	Replace the solar radiation sensor. (See SOLAR RADIATION SENSOR REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].) Go to the next step.
3	<b>INSPECT SOLAR RADIATION SENSOR CIRCUIT FOR OPEN CIRCUIT</b> <ul style="list-style-type: none"> <li>• Disconnect the climate control unit connector and the solar radiation sensor connector.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Climate control unit terminal 1H—solar radiation sensor terminal A</li> <li>— Climate control unit terminal 1V—solar radiation sensor terminal C</li> <li>— Climate control unit terminal 1T—solar radiation sensor terminal B</li> </ul> </li> <li>• Is there continuity?</li> </ul>	Yes	Go to the next step.
		No	Repair the wiring harness. Go to the next step.
4	<b>INSPECT SOLAR RADIATION SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY</b> <ul style="list-style-type: none"> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)</li> <li>• (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)</li> <li>• Switch the ignition ON (engine off or on).</li> <li>• Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> <li>— Climate control unit terminal 1H</li> <li>— Climate control unit terminal 1V</li> <li>— Climate control unit terminal 1T</li> </ul> </li> <li>• Is the voltage <b>0V</b>?</li> </ul>	Yes	Go to the next step.
		No	Repair the wiring harness. Go to the next step.

STEP	INSPECTION	ACTION	
5	<b>VERIFY CLIMATE CONTROL UNIT CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)</li> <li>• Inspect the connector and terminals (corrosion, damage, pin disconnection).</li> <li>• Are the connector and terminals normal?</li> </ul>	Yes	Go to the next step.
		No	Repair/replace the malfunctioning vehicle wiring harness, connector, or terminal. After repair procedure, go to the next step.
6	<b>VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN</b> <ul style="list-style-type: none"> <li>• Reconnect the disconnected connectors.</li> <li>• Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)</li> <li>• Clear the past malfunction from memory.</li> <li>• Verify DTCs.</li> <li>• Is DTC B1A63:12, B1A63:13, B1A64:12 or B1A64:13 output?</li> </ul>	Yes	Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>• If the malfunction does not recur, go to the next step.</li> <li>• If the malfunction recurs, replace the climate control unit. (See CLIMATE CONTROL UNIT REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].) Go to the next step.</li> </ul>
		No	Go to the next step.
7	<b>VERIFY THAT NO OTHER DTCs ARE PRESENT</b> <ul style="list-style-type: none"> <li>• Verify other DTCs displayed.</li> <li>• Are any other DTCs output?</li> </ul>	Yes	Perform the corresponding DTC inspection.
		No	DTC troubleshooting completed.