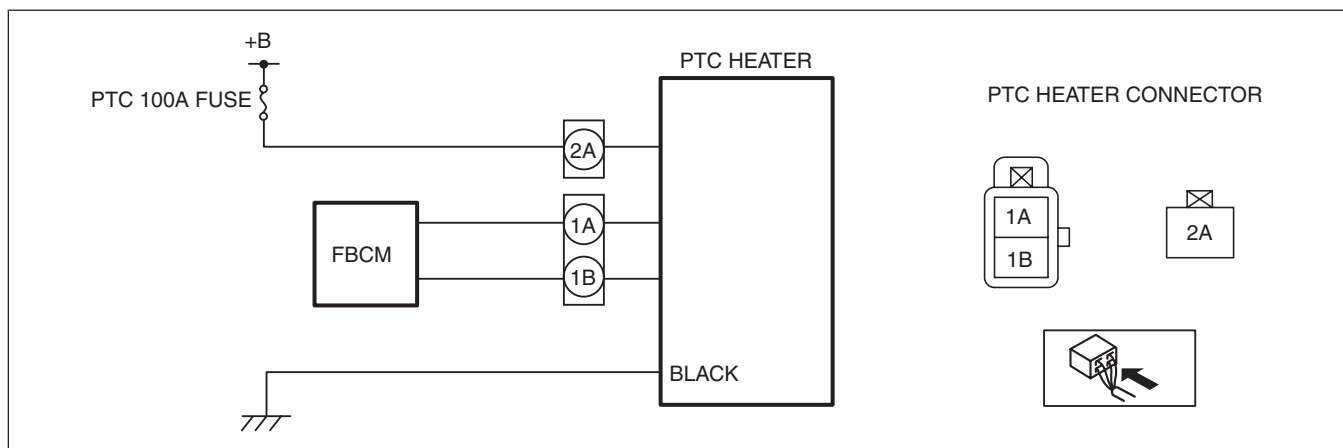


# PTC (POSITIVE TEMPERATURE COEFFICIENT) HEATER INSPECTION [MANUAL AIR CONDITIONER]

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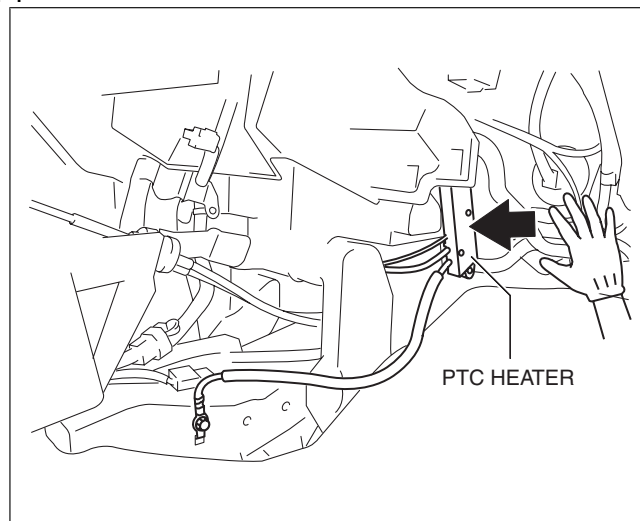
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## Step 1

1. Remove the side wall (passenger side). (See SIDE WALL REMOVAL/INSTALLATION.)
2. Connect the M-MDS to the DLC-2.
3. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - (1) Select "DataLogger".
  - (2) Select "Modules".
  - (3) Select "F\_BCM".
4. Operate the PTC heater using the PID "PTC\_HEAT\_ST".
5. Touch the side surface of the PTC heater by hand to verify that it warms up.

### Caution

- **Touching the metal part of the PTC heater directly by hand can cause a serious burn. Wear gloves to prevent burns.**
- If the side surface of the PTC heater does not warm, go to the next step.



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## Step 2

1. Measure the voltage of the PTC heater terminals 1A and 2A.
  - If there is any malfunction, inspect the parts under "Inspection item (s)".
  - If the parts under "Inspection item (s)" are found to be normal, go to the next step.

Terminal	Signal name	Connected to	Measurement condition	Voltage (V)	Inspection item (s)
1A	IG1	Front body control module (FBCM)	Switch the ignition ON (engine off)	B+	<ul style="list-style-type: none"> <li>• Related wiring harness</li> <li>• Front body control module (FBCM)</li> </ul>
			Switch the ignition off	1.0 or less	
2A	B+	<ul style="list-style-type: none"> <li>• Battery</li> <li>• PTC 100A fuse</li> </ul>	Under any condition	B+	<ul style="list-style-type: none"> <li>• Related wiring harness</li> <li>• Battery</li> <li>• PTC 100A fuse</li> </ul>

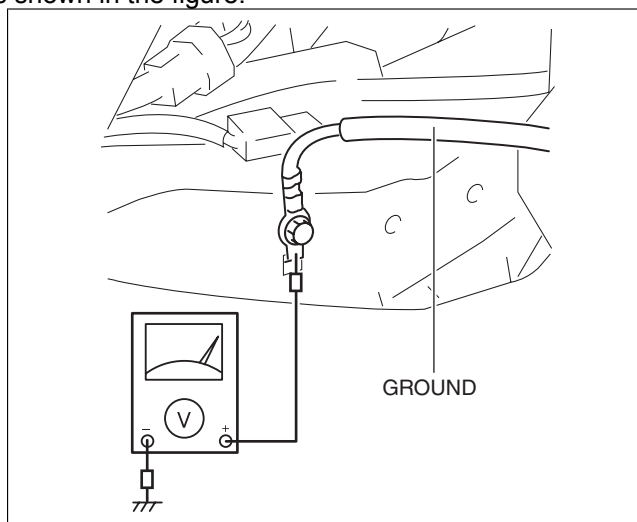
## Step 3

1. Operate the PTC heater using the PID "PTC\_HEAT\_ST".
2. Measure the voltage at PTC heater terminal 1B while the PTC heater is operating.
  - If the voltage is **1.0 V or less** or does not change from the battery voltage, inspect the front body control module (FBCM) or the related wiring harness.

— If the front body control module (FBCM) or the related wiring harness is normal, go to the next step.

#### Step 4

1. Switch the ignition off.
2. Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)
3. Remove the following parts:
  - (1) Decoration panel (See DECORATION PANEL REMOVAL/INSTALLATION.)
  - (2) Shift lever knob (MTX) (See MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [C66M-R, C66MX-R].) (See MANUAL TRANSAXLE SHIFT MECHANISM REMOVAL/INSTALLATION [D66M-R, D66MX-R].)
  - (3) Front console box (See FRONT CONSOLE BOX REMOVAL/INSTALLATION.)
  - (4) Shift panel (See SHIFT PANEL REMOVAL/INSTALLATION.)
  - (5) Upper panel (See UPPER PANEL REMOVAL/INSTALLATION.)
  - (6) Rear console (See REAR CONSOLE REMOVAL/INSTALLATION.)
  - (7) Side wall (See SIDE WALL REMOVAL/INSTALLATION.)
  - (8) Front console (See FRONT CONSOLE BOX REMOVAL/INSTALLATION.)
4. Connect the negative battery cable.
5. Switch the ignition ON (engine off or on).
6. Operate the PTC heater using the PID "PTC\_HEAT\_ST".
7. Measure the voltage at the ground of the PTC heater as shown in the figure.
  - If the voltage is other than **0 V**, verify that there is no poor contact between the ground and the body.
    - If there is no poor contact between the ground and the body, replace the PTC heater. (See PTC (POSITIVE TEMPERATURE COEFFICIENT) HEATER REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].)



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