INTERMITTENT CONCERN TROUBLESHOOTING [SKYACTIV-D 2.2]

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Vibration Method

- If a malfunction occurs or becomes worse while driving on a rough road or when the engine is vibrating, perform the steps below.

Note

- There are several reasons why the vehicle or engine vibration could cause an electrical malfunction. Check the following:
  - — Connectors are not fully seated.
  - — Wiring harnesses do not have full play.
  - — Wires laying across brackets or moving parts.
  - — Wires routed too close to hot parts.
- An improperly routed, improperly clamped, or loose harness can cause a wiring harness to become pinched between parts.
- The connector joints, points of vibration, and places where the wiring harnesses pass through the firewall and body panels are the major areas to be checked.

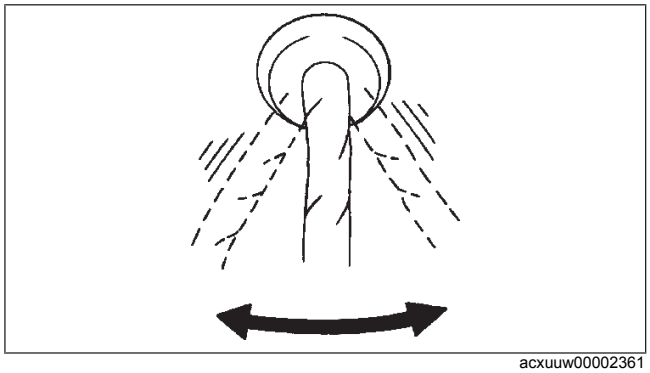
Inspection Method for Switch Connectors or Wires

1. Connect the M-MDS to the DLC-2.
2. Switch the ignition ON (engine off).

Note

- If engine starts and runs, perform the following steps during idle.

3. Access the PIDs for the switch you are inspecting.
4. Turn the switch on manually.
5. Slightly shake each connector or wiring harness vertically and horizontally while monitoring the PID.
   - If the PID value is unstable, check for a poor connection.



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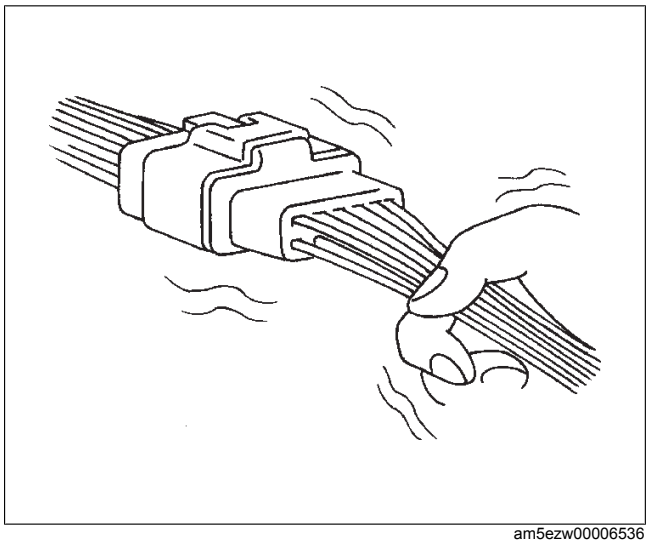
Inspection Method for Sensor Connectors or Wires

1. Connect the M-MDS to the DLC-2.
2. Switch the ignition ON (engine off).

Note

- If the engine starts and runs, perform the following steps during idling.

3. Access the PIDs for the switch you are inspecting.
4. Slightly shake each connector or wiring harness vertically and horizontally while monitoring the PID.
   - If the PID value is unstable, check for poor connection.



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Inspection Method for Sensors

1. Connect the M-MDS to the DLC-2.
2. Switch the ignition ON (engine off).

Note
- If the engine starts and runs, perform the following steps during idle.

3. Access the PIDs for the switch you are inspecting.
4. Shake the sensor slightly with your finger.
   - If the PID value is unstable or a malfunction occurs, check for a poor connection or a poorly mounted sensor or both.

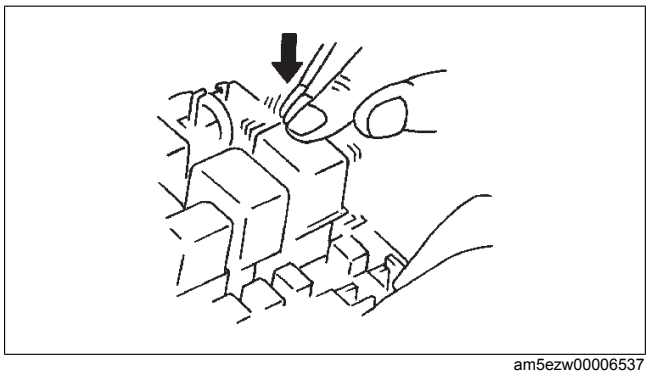
Inspection Method for Actuators or Relays

1. Connect the M-MDS to the DLC-2.
2. Switch the ignition ON (engine off).

Note
- If engine starts and runs, perform the following steps during idling.

3. Prepare the output state control function for actuators or relays that you are inspecting.
4. Shake the actuator or relay with your finger for **3 s** after the output state control function is activated.
   - If a variable click sound is heard, check for a poor connection or a poorly mounted actuator or both, or the relay.

Note
- Shaking the relays too strongly may result in open circuits.



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Water Sprinkling Method

If a malfunction occurs only during high humidity or rainy/snowy weather, perform the following steps:

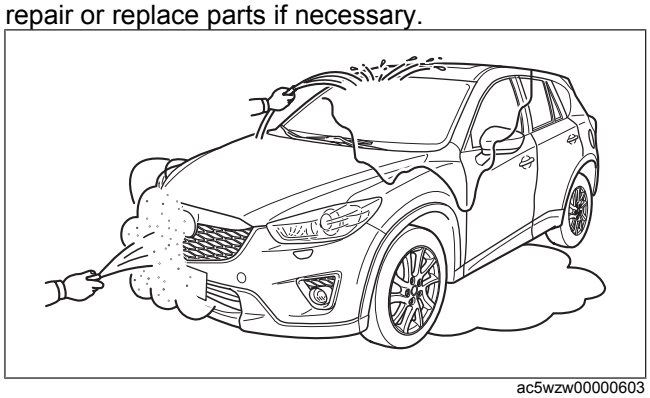
Caution
- **Indirectly change the temperature and humidity by spraying water onto the front of the radiator.**
- **If a vehicle is subject to water leakage, the leakage may damage the control module. When testing a vehicle with a water leakage problem, special caution must be used.**

1. Connect the M-MDS to the DLC-2 if you are inspecting sensors or switches.

2. Switch the ignition ON (engine off).

Note
- If the engine starts and runs, perform the following steps at idle.

3. Access the PIDs for the sensor or the switch if you are inspecting sensors or switches.
4. If you are inspecting the switch, turn it on manually.
5. Spray water onto the vehicle or run it through a car wash.
   - If the PID value is unstable or a malfunction occurs, repair or replace parts if necessary.



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