

2012 - Mazda6 - Engine

INTERMITTENT CONCERN TROUBLESHOOTING [MZI 3.7 V6]

Vibration Method

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

NOTE:

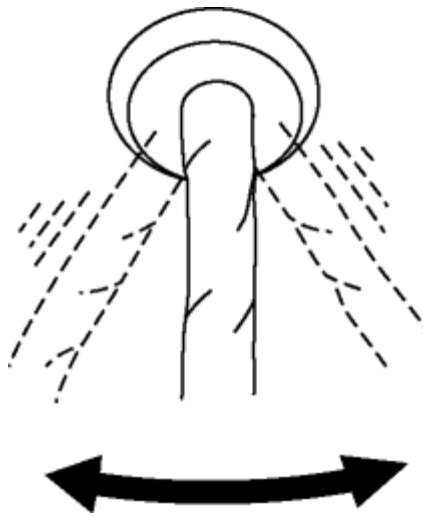
- There are several reasons vehicle or engine vibration could cause an electrical malfunction. Inspect the following:
 - Connectors not fully seated
 - Wiring harnesses not having full play
 - Wiring harnesses laying across brackets or moving parts
 - Wiring harnesses routed too close to hot parts
-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

Inspection Method for Switch Connectors or Wiring Harnesses

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

NOTE:

- If the engine starts and runs, perform the following steps during idle.
3. Access 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 PID value is unstable, inspect for poor connection.

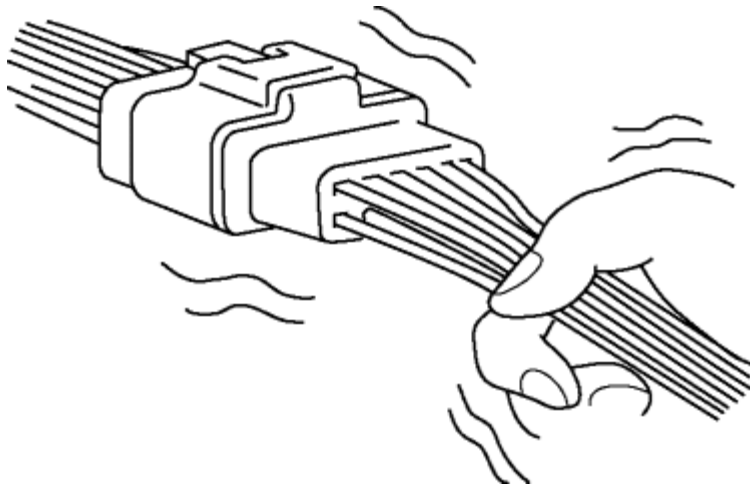


Inspection Method for Sensor Connectors or Wiring Harnesses

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

NOTE:

- If the engine starts and runs, perform the following steps during idle.
3. Access PIDs for the switch you are inspecting.
 4. Slightly shake each connector or wiring harness vertically and horizontally while monitoring the PID.
- If PID value is unstable, inspect for poor connection.



Inspection Method for Sensors

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

NOTE:

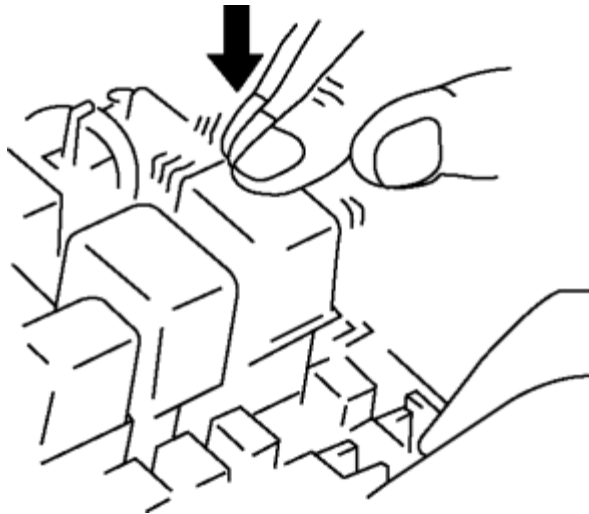
- If the engine starts and runs, perform the following steps during idle.
3. Access PIDs for the switch you are inspecting.
 4. Vibrate the sensor slightly with your finger.
 - If PID value is unstable or malfunction occurs, check for poor connection or poorly mounted sensor or both.

Inspection Method for Actuators or Relays

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

NOTE:

- If the engine starts and runs, perform the following steps during idle.
3. Prepare the output state control function for actuators or relays that you are inspecting.
 4. Vibrate the actuator or relay with your finger for **3 s** after output state control function is activated.
 - If variable click sound is heard, check for poor connection or poorly mounted actuator or both, or the relay.



NOTE:

- Vibrating relays too strongly may result in open relays.

Water Sprinkling Method

- If malfunction occurs only under 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 to ON (Engine off).

NOTE:

- If the engine starts and runs, perform the following steps at idle.
3. Access PIDs for sensor or 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 PID value is unstable or malfunction occurs, repair or replace part if necessary.



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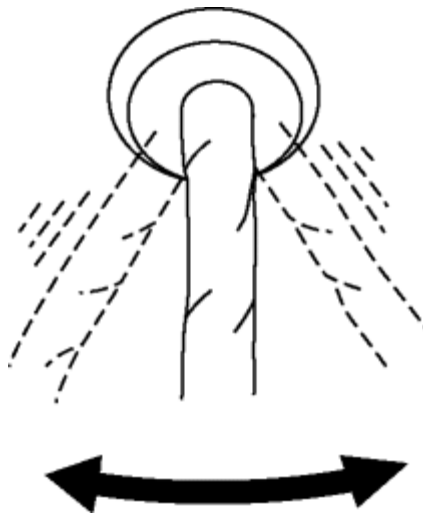
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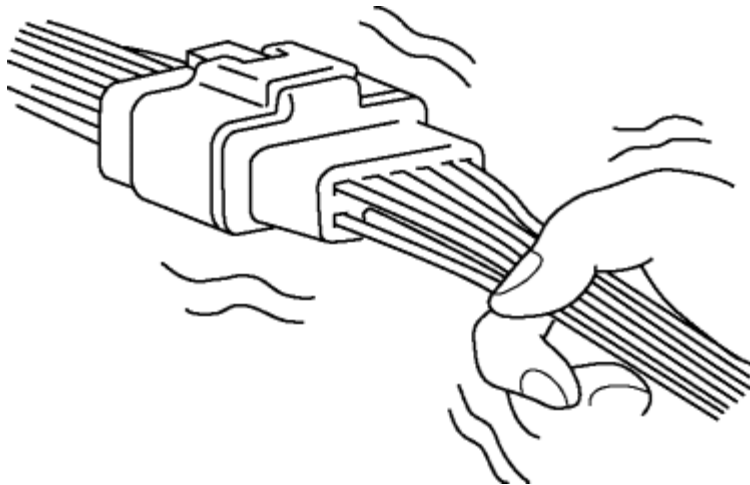


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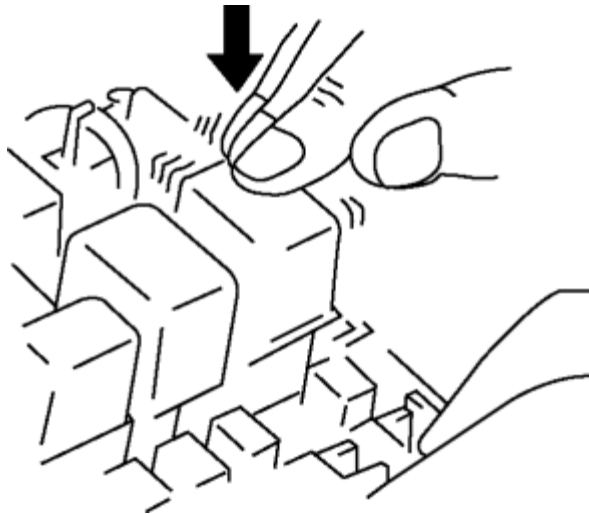
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3. Access PIDs for the switch you are inspecting.
 4. Vibrate the sensor slightly with your finger.
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Inspection Method for Actuators or Relays

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

NOTE:

- If the engine starts and runs, perform the following steps during idle.
3. Prepare the output state control function for actuators or relays that you are inspecting.
 4. Vibrate the actuator or relay with your finger for **3 s** after output state control function is activated.
 - If variable click sound is heard, check for poor connection or poorly mounted actuator or both, or the relay.



NOTE:

- Vibrating relays too strongly may result in open relays.

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