

2012 - Mazda6 - Transmission/ Transaxle

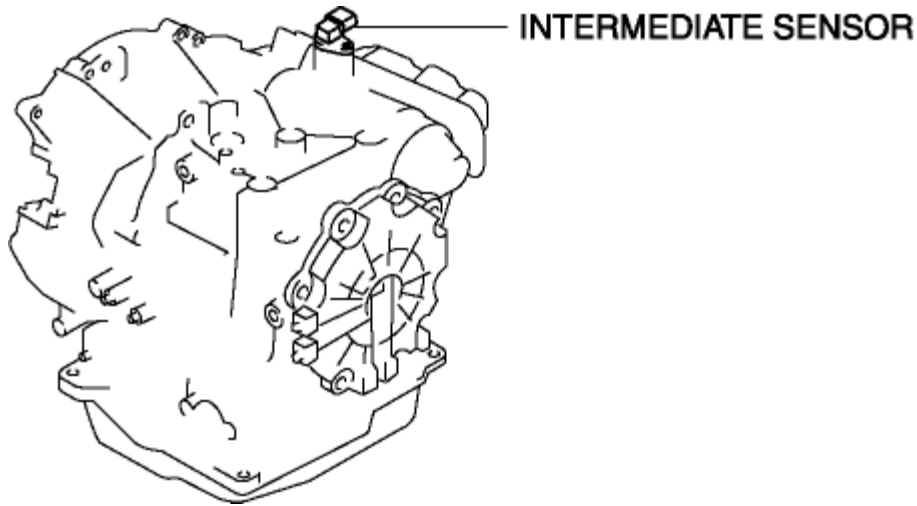
INTERMEDIATE SENSOR INSPECTION [FS5A-EL]

CAUTION:

- Water or foreign objects entering the connector can cause a poor connection or corrosion. Be sure not to drop water or foreign objects on the connector when disconnecting it.

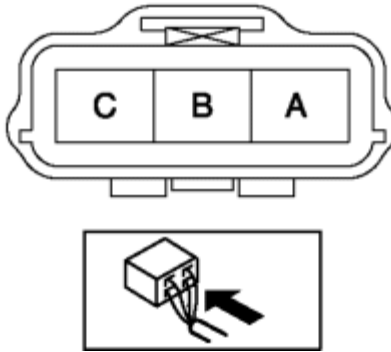
On-Vehicle Inspection

1. Inspect the power supply circuit for the intermediate sensor.
 - a. Set the battery and battery tray out of the way. (See [BATTERY REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
 - b. Disconnect the intermediate sensor connector.



- c. Switch the ignition to ON (engine off).
- d. Measure the voltage at intermediate sensor connector terminal A (harness-side).

INTERMEDIATE SENSOR HARNESS-SIDE CONNECTOR

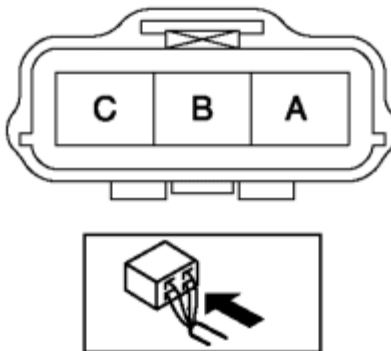


- If there is any malfunction, repair wiring harness between intermediate sensor and TCM.

Intermediate sensor specification

- B+
 - e. Switch the ignition to off (LOCK).
 - f. Connect the intermediate sensor connector.
2. Inspect the GND circuit for the intermediate sensor.
- a. Switch the ignition to off (LOCK).
 - b. Measure the voltage at intermediate sensor connector terminal C (harness-side).

INTERMEDIATE SENSOR HARNESS-SIDE CONNECTOR



- If there is any malfunction, repair wiring harness between intermediate sensor and TCM.

Intermediate sensor specification

- Below 1.0 V
3. Inspect the signal circuit for the intermediate sensor.
- a. Connect the oscilloscope to the following TCM connector terminals and set it as below.
 - (+) lead: TCM terminal 2L

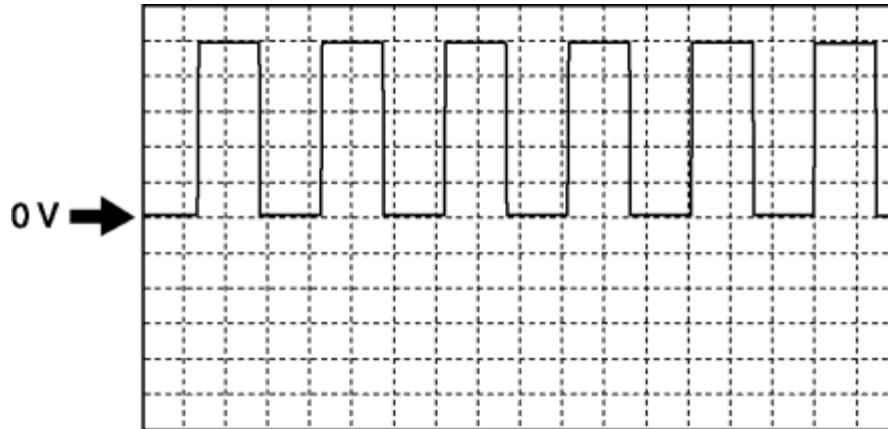
(-) lead: battery negative terminal

- Oscilloscope setting: 1 V/DIV (Y), 200 μ s/DIV (X), DC range

b. Start the engine.

c. Measure the wave form when the following conditions are met.

- Vehicle speed: **30 km/h { 19 mph }**
- Gear position: 3 GR



- If there is any malfunction, replace the intermediate sensor. (See [INTERMEDIATE SENSOR REMOVAL/ INSTALLATION \[FS5A-EL\]](#).)

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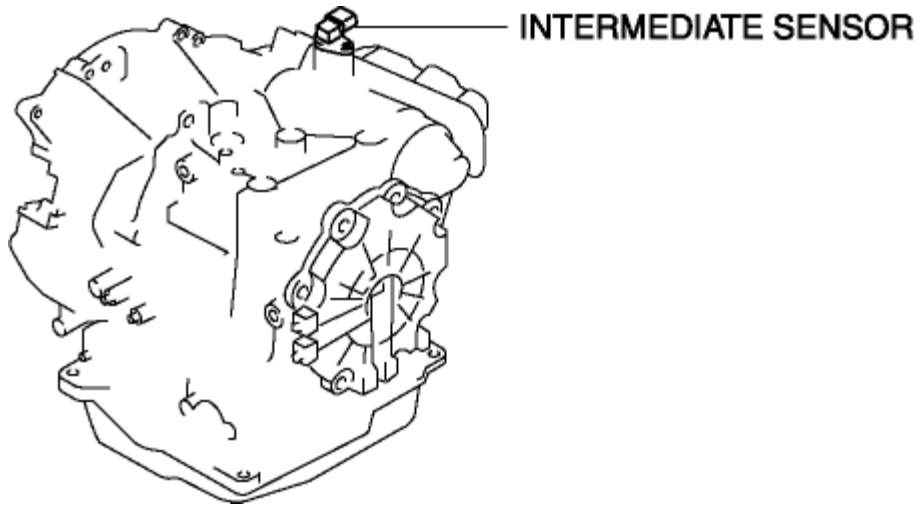
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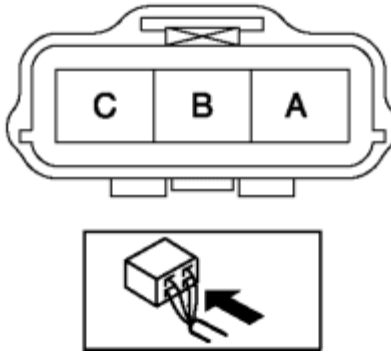
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- d. Measure the voltage at intermediate sensor connector terminal A (harness-side).

INTERMEDIATE SENSOR HARNESS-SIDE CONNECTOR

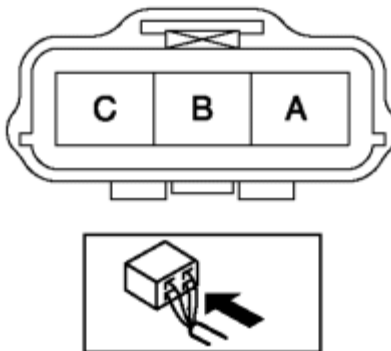


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- B+
 - e. Switch the ignition to off (LOCK).
 - f. Connect the intermediate sensor connector.
2. Inspect the GND circuit for the intermediate sensor.
- a. Switch the ignition to off (LOCK).
 - b. Measure the voltage at intermediate sensor connector terminal C (harness-side).

INTERMEDIATE SENSOR HARNESS-SIDE CONNECTOR



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Intermediate sensor specification

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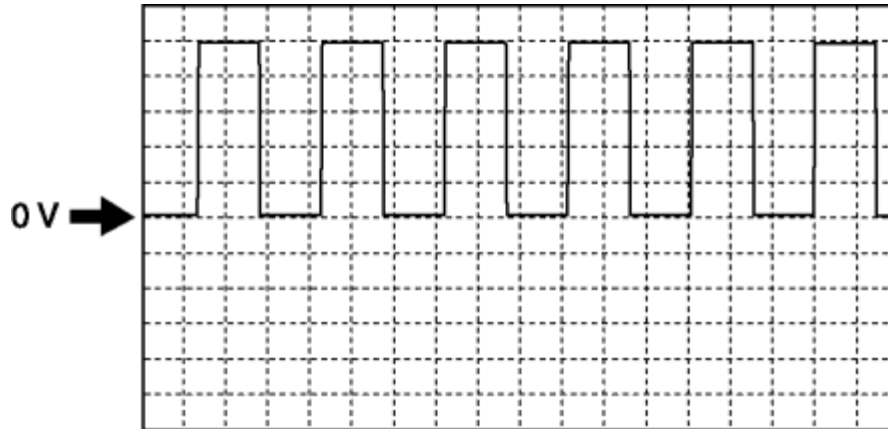
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