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2010 MAZDA BT-50 OEM Service and Repair Workshop Manual

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3. After the vehicle is identified, select the following item from the initial screen of the M-MDS.

(1) Select the "Powertrain".

4. Then, select the following item from the screen menu.

(1) Select the "DPF".

(2) Select the "DPF Regeneration".

5. Perform the procedure according to the directions on the screen.

6. Switch the ignition off.

7. Start the engine.

8. Verify that the messages, "Soot Accumulation in DPF too high" and "DPF Inspection Required" are displayed in the TFT LCD in the instrument cluster.

Message is displayed

- Perform compulsory diesel particulate filter regeneration again.

No message is displayed

- Compulsory diesel particulate filter regeneration is completed.

Compulsory Diesel Particulate Filter Regeneration Performed Using Test Terminal

Caution

- Perform compulsory diesel particulate filter regeneration with the bonnet opened to prevent engine compartment overheating.

Note

- DTC P1905:00 may be detected by grounding the test terminal to the body. In this case, DTC P1905:00 is automatically erased by disconnecting the test terminal ground.

1. Open the bonnet.

2. Start the engine.

3. Short the connection between body ground and test terminal using a jumper wire.

EXHAUST GAS PRESSURE SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

SM2897847

id0140z744360

Replacement Par

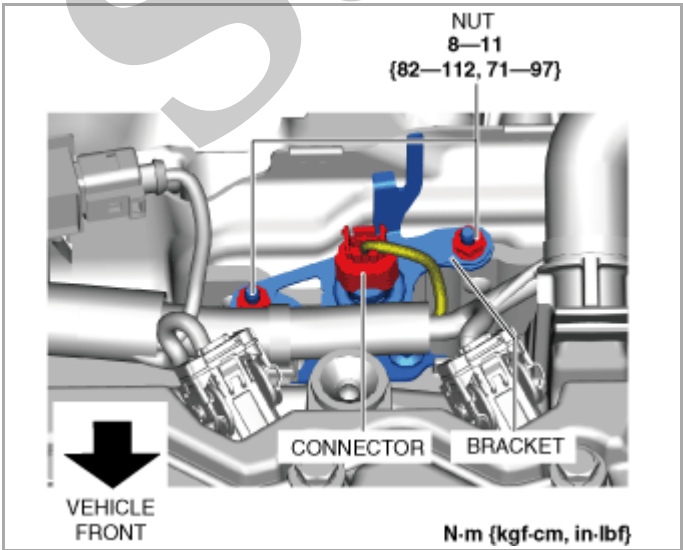
Hose	Hose	Clip
Quantity: 1	Quantity: 2	Quantity: 2
Location of use: Exhaust gas pressure sensor No.1	Location of use: Exhaust gas pressure sensor No.2	Location of use: Exhaust gas pressure sensor No.2

Exhaust Gas Pressure Sensor No.1 Removal/Installation

Warning

- A hot engine and exhaust system can cause severe burns. Turn off the engine and wait until they are cool before removing the exhaust system.

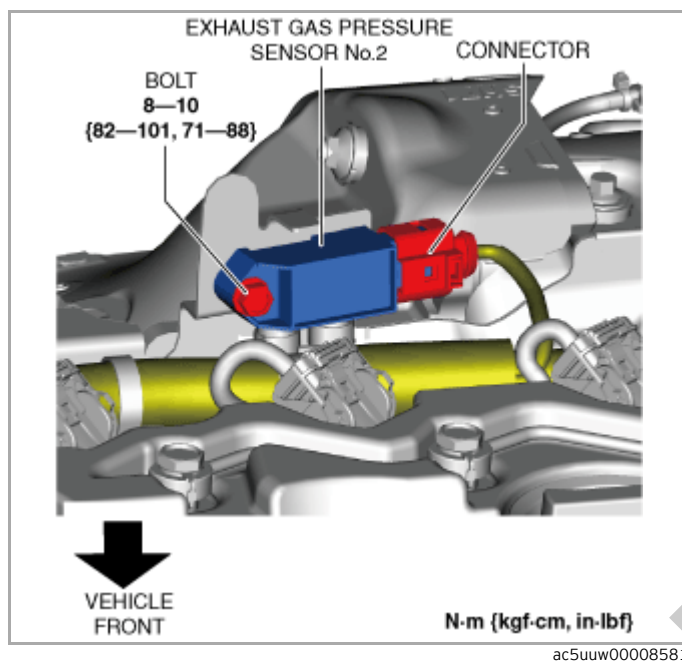
- 1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 2.Remove the engine cover. (See [ENGINE COVER REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 3.Remove the insulator. (See [TIMING CHAIN REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 4.Disconnect the exhaust gas pressure sensor No.1 connector.



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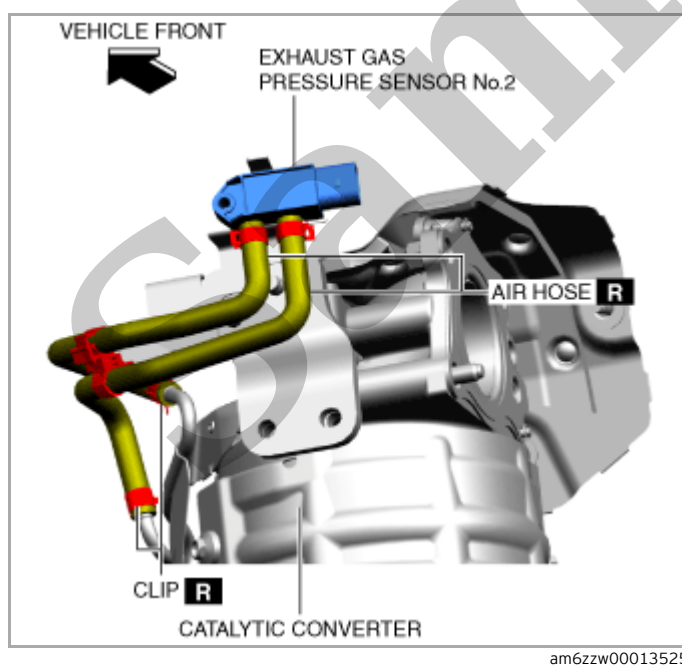
- 5.Remove the bracket installation nut.

4. Disconnect the exhaust gas pressure sensor No.2 connector.



5. Remove the bolt.

6. Remove the exhaust gas pressure sensor No.2. (See [Exhaust gas pressure sensor No.2 installation note.](#))



7. Install in the reverse order of removal.

8. Perform operation after replacing exhaust gas pressure sensor No.2. (See [Operation After Replacing Exhaust Gas Pressure Sensor No.2.](#))

ENGINE OIL DATA RESET [SKYACTIV-D 2.2]

SM2897849

id0140z744470

Note

- If the engine oil was replaced, perform the engine oil data reset to reset the engine oil replacement period calculation data recorded in the PCM, regardless of whether or not the wrench indicator light is turned on.

Using the Center Display

1. Switch the ignition ON (engine off or on).
2. Select [Applications] on the center display.
3. Select [Vehicle Status Monitor] on the center display.
4. Select [Maintenance] on the center display.
5. Select [Oil Change] on the center display.
6. Select [Reset] on the center display.

Using the M-MDS

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following item from the initial screen of the M-MDS.

(1) Select the "Powertrain".

3. Then, select the items from the screen menu in the following order.

(1) Select the "Data Reset".

(2) Select the "Engine oil".

4. Perform the procedure according to the directions on the screen.

EXHAUST GAS PRESSURE SENSOR INSPECTION [SKYACTIV-D 2.2]

SM2897851

id0140z744600

Exhaust Gas Pressure Sensor No.1

Warning

- A hot engine and exhaust system can cause severe burns. Turn off the engine and wait until they are cool before removing the exhaust system.

Visual inspection

- 1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 2.Remove the exhaust gas pressure sensor No.1. (See [EXHAUST GAS PRESSURE SENSOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 3.Visually inspect the exhaust gas pressure sensor No.1 for the following malfunction:
 - Damage, cracks, soiling
 - If there is any malfunction, repair or replace the exhaust gas pressure sensor No.1. (See [EXHAUST GAS PRESSURE SENSOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 4.Visually inspect the air hose for the following malfunction:
 - Air hose for improper routing, kinks or leakage
 - If there is any malfunction, repair or replace the malfunctioning part according to the inspection results.

Output signal inspection

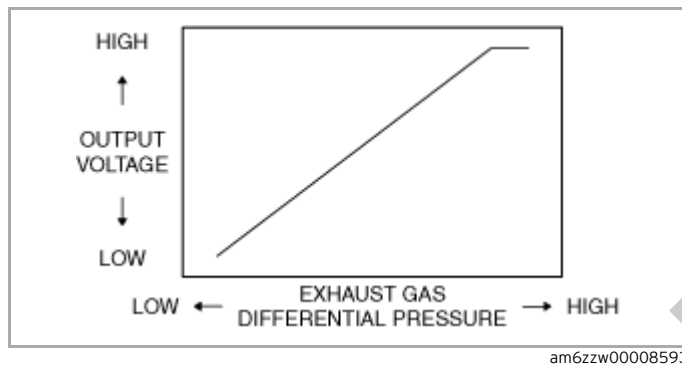
- 1.Connect the M-MDS to the DLC-2.
- 2.Switch the ignition ON (engine off).
- 3.Display PIDs EXHPRES1 and BARO using the M-MDS. (See [ON-BOARD DIAGNOSTIC TEST \[PCM \(SKYACTIV-D 2.2\)\].](#))
- 4.Verify that the PID EXHPRES1 value is within the range in the table below for the PID BARO value.

3.Start the engine.

4.Measure the voltage at the exhaust gas pressure sensor No.2 terminal C when the accelerator pedal is depressed.

- If the voltage does not increase, replace the exhaust gas pressure sensor No.2. (See **EXHAUST GAS PRESSURE SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].**)

Specification (Reference)



Unit inspection

1.Switch the ignition ON (engine off).

2.Connect the M-MDS to the DLC-2.

3.Access the PID/DATA monitor item EXHPRESS_DIF using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [PCM (SKYACTIV-D 2.2)].**)

4.When the ignition is switched ON, verify the value of the PID item EXHPRESS_DIF.

- If the monitoring value is within the range of ± 2 kPa, go to the next step.
- If the monitoring value is outside of the range of ± 2 kPa, replace exhaust gas pressure sensor No.2. (See **EXHAUST GAS PRESSURE SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].**)

5.Disconnect the air hose at the position shown in the figure.

TURBOCHARGER INITIALIZATION [SKYACTIV-D 2.2]

SM2897908

id0140z799350

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following item from the initial screen of the M-MDS.

(1)Select the "Powertrain".

3.Then, select the items from the screen menu in the following order.

(1)Select the "Initialization".

(2)Select the "Turbo charger".

4.Perform the procedure according to the directions on the screen.

Sample

EGR COOLER BYPASS VALVE INITIALIZATION [SKYACTIV-D 2.2]

SM2897910

id0140z799780

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following item from the initial screen of the M-MDS.

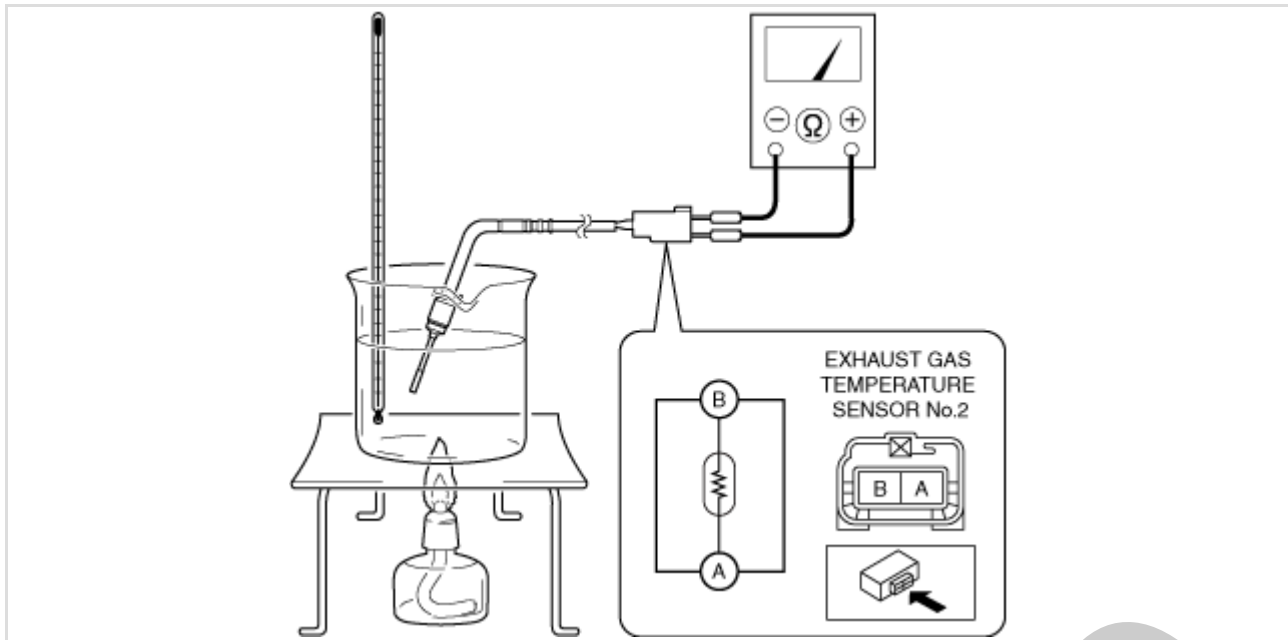
(1)Select the "Powertrain".

3.Then, select the items from the screen menu in the following order.

(1)Select the "Initialization".

(2)Select the "EGR".

4.Perform the procedure according to the directions on the screen.



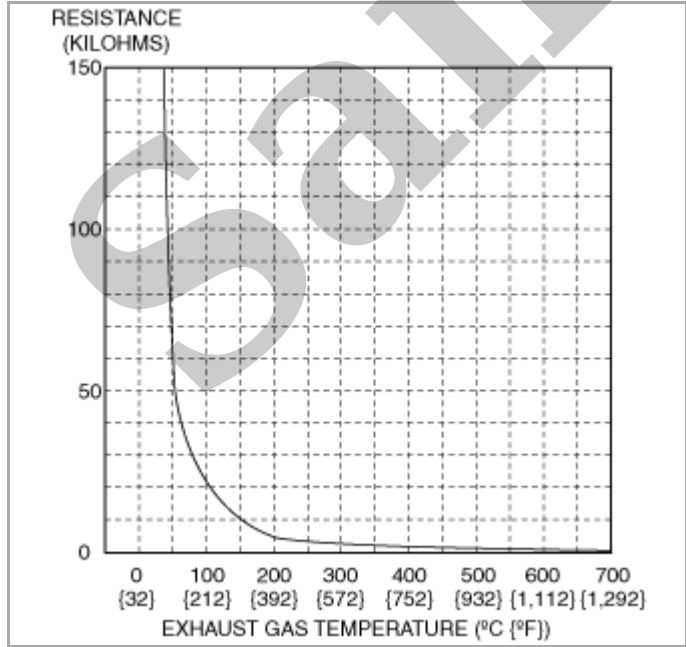
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- If not as specified, replace the exhaust gas temperature sensor No.2. (See [EXHAUST GAS TEMPERATURE SENSOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)

Resistance

Water temperature (°C {°F})	Resistance (Kilohms)
50 {122}	Approx. 53.27

Specification (Reference)



ac5uuw00008501

Exhaust Gas Temperature Sensor No.3

Warning