

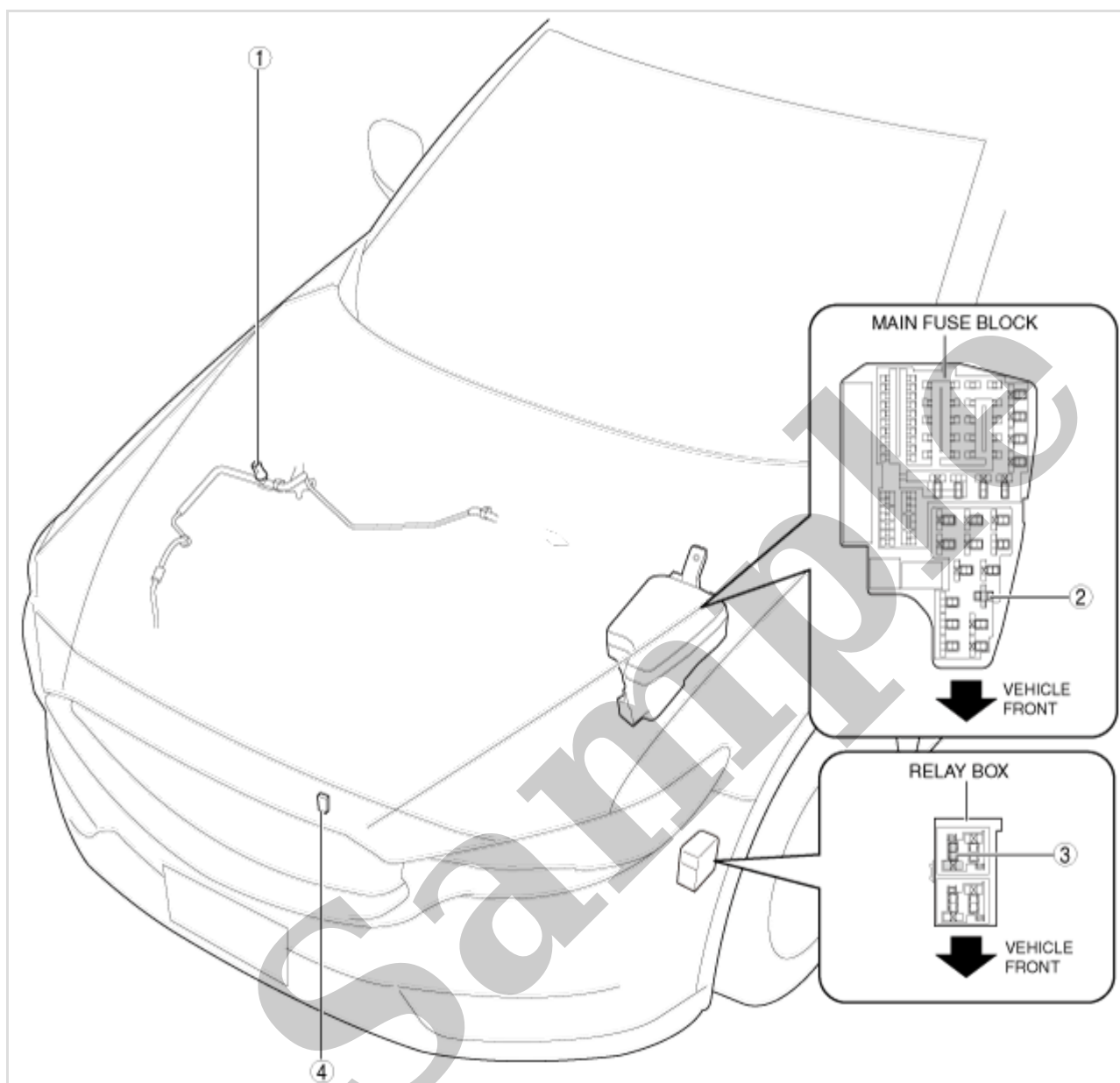
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2014 MAZDA MX-5 / Miata OEM Service and Repair Workshop Manual

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Structural View



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1	Refrigerant pressure sensor (See REFRIGERANT PRESSURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].) (See REFRIGERANT PRESSURE SENSOR INSPECTION [MANUAL AIR CONDITIONER].)
2	Blower relay (See RELAY LOCATION.) (See RELAY INSPECTION.)
3	A/C relay (See RELAY LOCATION.) (See RELAY INSPECTION.)
4	Ambient temperature sensor (See AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].) (See AMBIENT TEMPERATURE SENSOR INSPECTION [MANUAL AIR CONDITIONER].)

AIRFLOW MODE ACTUATOR REMOVAL [MANUAL AIR CONDITIONER]

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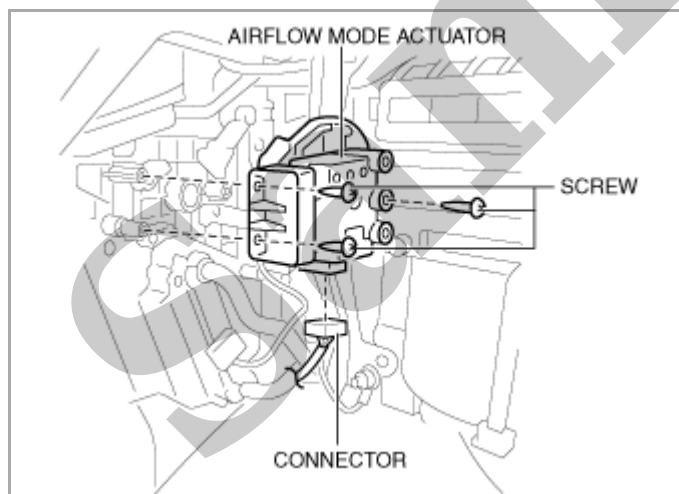
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1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))

2. Remove the following parts:

- (1) Passenger-side front scuff plate (See [FRONT SCUFF PLATE REMOVAL/INSTALLATION.](#))
- (2) Passenger-side front side trim (See [FRONT SIDE TRIM REMOVAL/INSTALLATION.](#))
- (3) Glove compartment (See [GLOVE COMPARTMENT REMOVAL/INSTALLATION.](#))
- (4) Dashboard under cover (See [DASHBOARD UNDER COVER REMOVAL/INSTALLATION.](#))
- (5) Lower decoration panel (See [DECORATION PANEL REMOVAL/INSTALLATION.](#))
- (6) Passenger-side lower panel (See [LOWER PANEL REMOVAL/INSTALLATION.](#))
- (7) Passenger-side front heat duct (See [FRONT HEAT DUCT REMOVAL/INSTALLATION.](#))

3. Disconnect the connector.



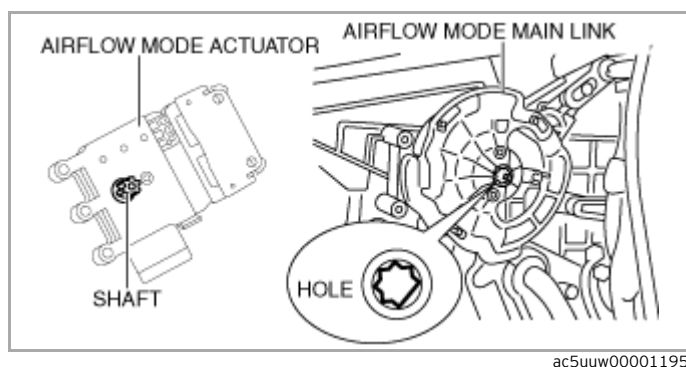
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4. Remove the screws.

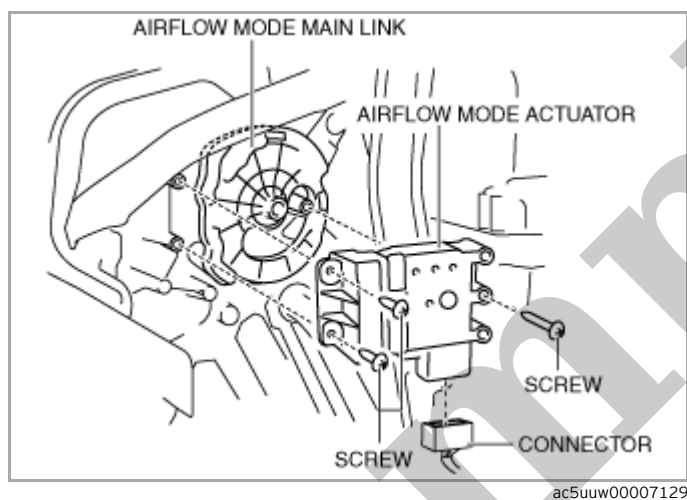
5. Remove the airflow mode actuator.

6. Remove the airflow mode main link.

4.Align the airflow mode main link installation hole with the shape of the airflow mode actuator shaft, and install while holding the airflow mode main link.



5.Install the airflow mode actuator.



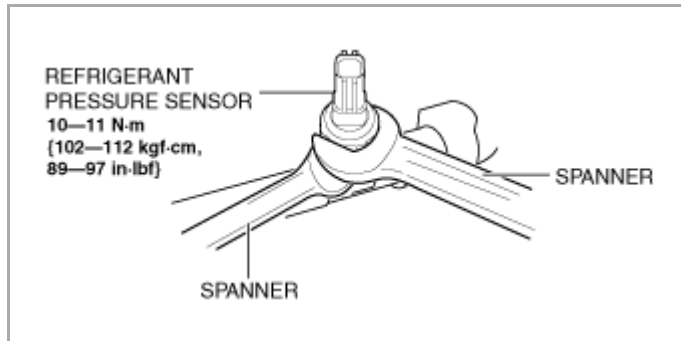
6.Install the screws.

7.Connect the connector.

8.Install the following parts:

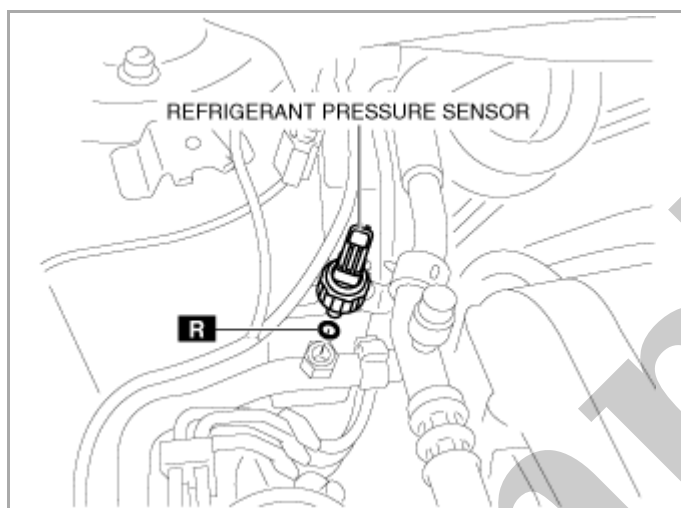
- (1)Passenger-side front heat duct (See [FRONT HEAT DUCT REMOVAL/INSTALLATION.](#))
- (2)Passenger-side lower panel (See [LOWER PANEL REMOVAL/INSTALLATION.](#))
- (3)Lower decoration panel (See [DECORATION PANEL REMOVAL/INSTALLATION.](#))
- (4)Dashboard under cover (See [DASHBOARD UNDER COVER REMOVAL/INSTALLATION.](#))
- (5)Glove compartment (See [GLOVE COMPARTMENT REMOVAL/INSTALLATION.](#))
- (6)Passenger-side front side trim (See [FRONT SIDE TRIM REMOVAL/INSTALLATION.](#))
- (7)Passenger-side front scuff plate (See [FRONT SCUFF PLATE REMOVAL/INSTALLATION.](#))

9.Connect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))



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6.Remove the refrigerant pressure sensor.



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Caution

- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

7.Install in the reverse order of removal. (See [Refrigerant pressure sensor installation note](#).)

8.Perform the refrigerant system performance test. (See [REFRIGERANT SYSTEM PERFORMANCE TEST](#).)

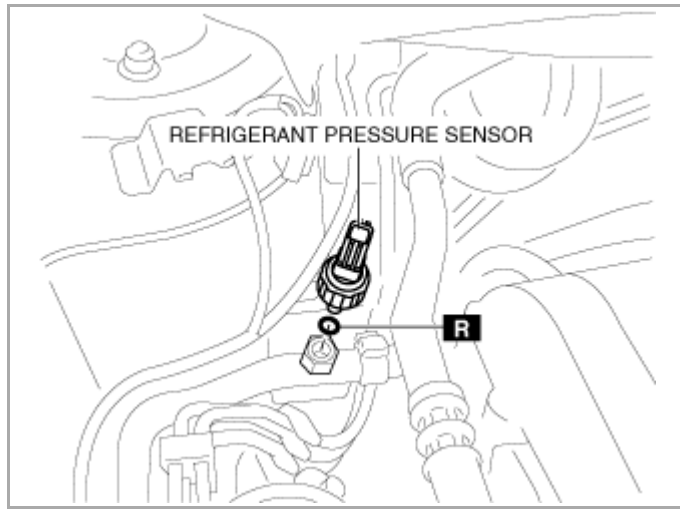
Refrigerant pressure sensor installation note

1.Apply compressor oil to the O-rings and connect the joints.

SKYACTIV-D 2.2

1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION](#).)

2.Discharge the refrigerant. (See [REFRIGERANT RECOVERY](#).) (See [REFRIGERANT CHARGING](#).)



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Caution

- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

13. Install in the reverse order of removal. (See [Refrigerant pressure sensor installation note](#).)

14. Perform the refrigerant system performance test. (See [REFRIGERANT SYSTEM PERFORMANCE TEST](#).)

Refrigerant pressure sensor installation note

1. Apply compressor oil to the O-rings and connect the joints.

SKYACTIV-G 2.5T

1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION](#).)

2. Discharge the refrigerant. (See [REFRIGERANT RECOVERY](#).) (See [REFRIGERANT CHARGING](#).)

3. Remove the plug hole plate. (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.5T\]](#).)

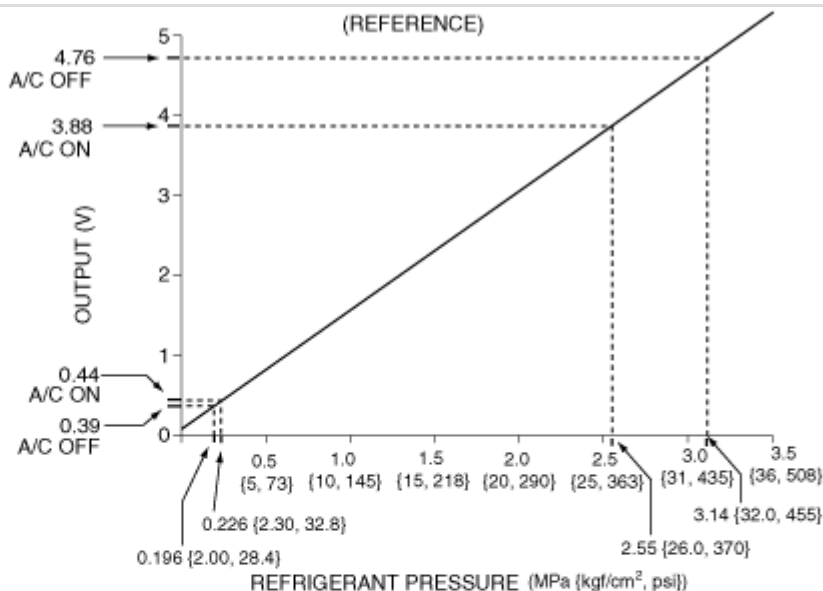
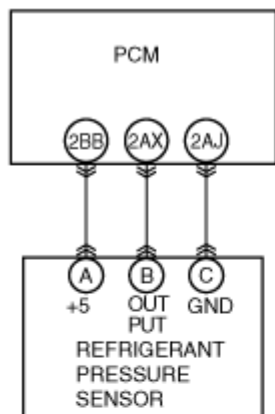
4. Detach the clips.

14. Perform the refrigerant system performance test. (See **REFRIGERANT SYSTEM PERFORMANCE TEST.**)

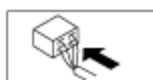
Refrigerant pressure sensor installation note

1. Apply compressor oil to the O-rings and connect the joints.

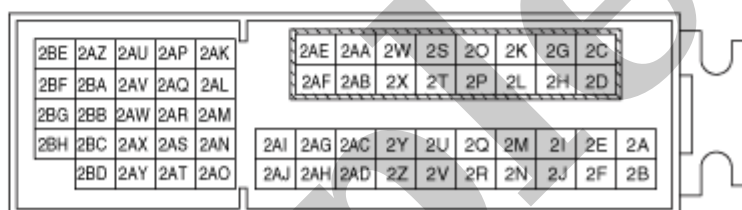
Sample



REFRIGERANT PRESSURE SENSOR
WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS SIDE CONNECTOR



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SKYACTIV-G 2.5T

1. Install the manifold gauge. (See [MANIFOLD GAUGE SET CONNECTION](#).)
 2. Verify the high-pressure side reading of the manifold gauge.
 3. Measure the terminal voltage at PCM terminal 2Y, 2W and 2V.
 4. Using the graph below, measure and verify the terminal voltages at 2W.
 5. Follow the PCM inspection when measuring the other terminal voltages. (See [PCM INSPECTION \[SKYACTIV-G 2.5T\]](#).)
- Terminal 2Y: Approx. 5 V (Ignition switch ON)
 - Terminal 2W: 1.0 V or less
- If each voltage is not normal, inspect the related wiring harness.
- If there is any malfunction, replace the related wiring harness.
 - If the wiring harness is normal, replace the refrigerant pressure sensor.

EVAPORATOR TEMPERATURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER]

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Warning

- Handling the air bag module improperly can accidentally deploy the air bag module, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag module. (See [AIR BAG SYSTEM SERVICE WARNINGS \[STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.\]](#).) (See [AIR BAG SYSTEM SERVICE CAUTIONS \[STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.\]](#).) (See [AIR BAG SYSTEM SERVICE WARNINGS \[TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.\]](#).) (See [AIR BAG SYSTEM SERVICE CAUTIONS \[TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.\]](#).)

1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION](#).)

2. Discharge the refrigerant. (See [REFRIGERANT RECOVERY](#).) (See [REFRIGERANT CHARGING](#).)

3. Drain the engine coolant. (See [ENGINE COOLANT REPLACEMENT \[SKYACTIV-G 2.5 \(WITH CYLINDER DEACTIVATION\)\]](#).) (See [ENGINE COOLANT REPLACEMENT \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).) (See [ENGINE COOLANT REPLACEMENT \[SKYACTIV-D 2.2\]](#).) (See [ENGINE COOLANT REPLACEMENT \[SKYACTIV-G 2.5T\]](#).)

4. Remove the following parts:

- (1) Plug hole plate (SKYACTIV-G 2.5, SKYACTIV-G 2.5T) (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITH CYLINDER DEACTIVATION\)\]](#).) (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).) (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.5T\]](#).)
- (2) Engine cover (SKYACTIV-D 2.2) (See [ENGINE COVER REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)
- (3) Windshield wiper arm and blade (See [WINDSHIELD WIPER ARM AND BLADE REMOVAL/INSTALLATION](#).)
- (4) Cowl grille (See [COWL GRILLE REMOVAL/INSTALLATION](#).)
- (5) Front scuff plate (See [FRONT SCUFF PLATE REMOVAL/INSTALLATION](#).)
- (6) Front side trim (See [FRONT SIDE TRIM REMOVAL/INSTALLATION](#).)
- (7) A-pillar trim (See [A-PILLAR TRIM REMOVAL/INSTALLATION](#).)
- (8) Driver-side air bag module (See [DRIVER-SIDE AIR BAG MODULE REMOVAL \[STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.\]](#).) (See [DRIVER-SIDE AIR BAG MODULE INSTALLATION \[STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.\]](#).) (See [DRIVER-SIDE AIR BAG MODULE REMOVAL \[TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.\]](#).) (See [DRIVER-SIDE AIR BAG MODULE INSTALLATION \[TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.\]](#).)
- (9) Steering wheel (See [STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION](#).)
- (10) Upper column cover (See [COLUMN COVER REMOVAL/INSTALLATION](#).)
- (11) Lower column cover (See [COLUMN COVER REMOVAL/INSTALLATION](#).)
- (12) Lower decoration panel (See [DECORATION PANEL REMOVAL/INSTALLATION](#).)

EVAPORATOR TEMPERATURE SENSOR INSPECTION [MANUAL AIR CONDITIONER]

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Note

- When inspecting the evaporator temperature sensor, inspect it when it is installed to the A/C unit.

1. Perform the following procedure so that the ambient temperature of the evaporator temperature sensor is close to the cabin temperature.

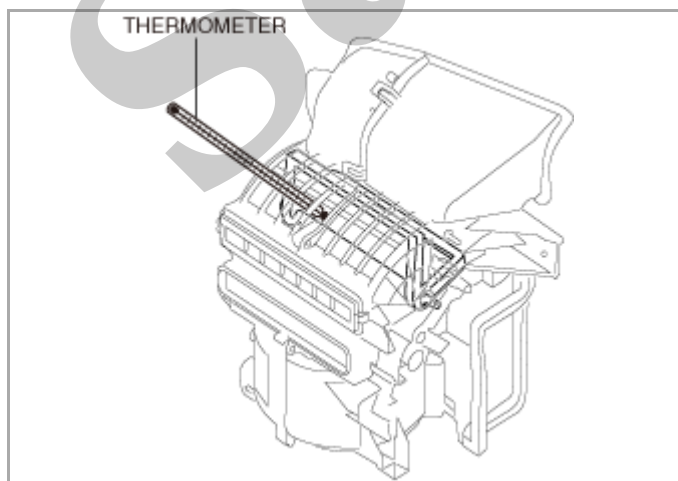
- Switch the ignition ON (engine on).
- Set airflow volume to maximum.
- Set the temperature to MAX COLD.
- Turn the A/C switch off.
- Set the air intake mode to REC.
- Fully close all the doors and the door glass.
- Leave for 5 min.

2. Switch the ignition OFF (LOCK).

3. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))

4. Disconnect the evaporator temperature sensor connector.

5. Measure the temperature of the air intake port.



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6. Measure the resistance between the evaporator temperature sensor terminals A and B.