
GROUP 55B

AUTOMATIC AIR CONDITIONING

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GENERAL DESCRIPTION

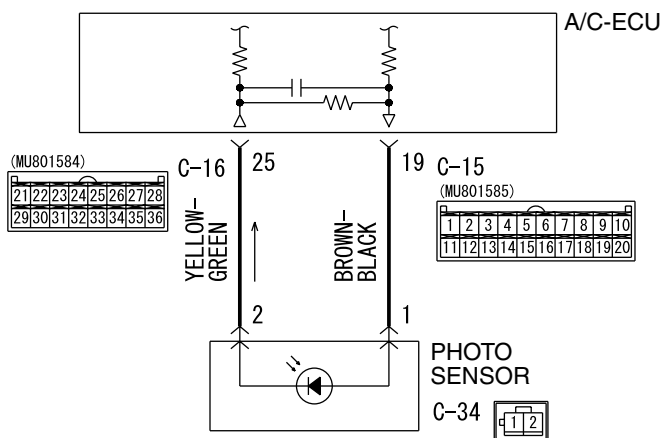
M1551000100187

The following service procedures have been established due to the connector shape change of photo sensor. The other service procedures are the same as before.

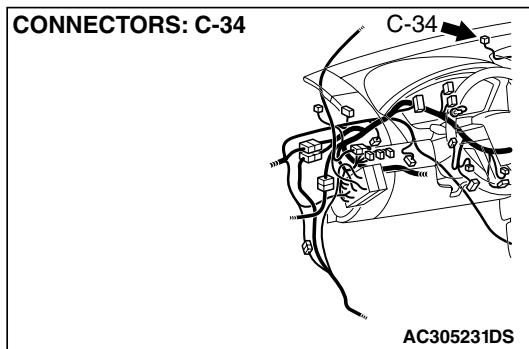
SYMPTOM PROCEDURES

When Sunlight Intensity Changes, Air Outlet Temperature Does Not Change.

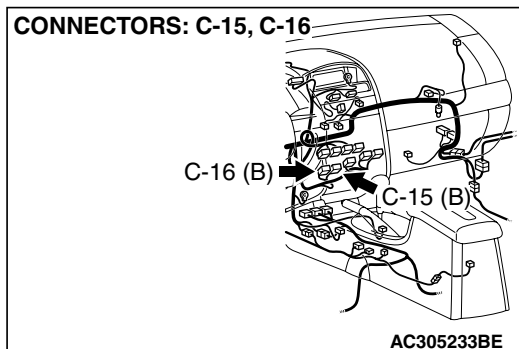
Photo Sensor Motor Circuit

AC601807
W4P55M29AA

CONNECTORS: C-34



CONNECTORS: C-15, C-16



CIRCUIT OPERATION

When the blower air temperature cannot be changed even if the preset temperature is changed, the sensors may be defective.

TROUBLESHOOTING HINTS

- Improper amount of refrigerant

- Malfunction of the A/C pressure sensor
- Malfunction of the photo sensor
- Malfunction of the A/C-ECU
- The wiring harness or connectors may have loose, corroded, or damaged terminals, or terminals pushed back in the connector

DIAGNOSIS

Required Special Tools:

- MB991223: Harness Set
- MB992006: Extra Fine Probe
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
 - MB991824: V.C.I.
 - MB991827: M.U.T.-III USB Cable
 - MB991910: M.U.T.-III Main Harness A

STEP 1. Check the defogger and outside/inside air selection damper control motor operation.

Q: Do the defogger and outside/inside air selection damper control motor work normally?

YES : Go to Step 2.

NO : Refer to GROUP 55A, Manual A/C Diagnosis.

STEP 2. Using scan tool MB991958, read diagnostic trouble code.

CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

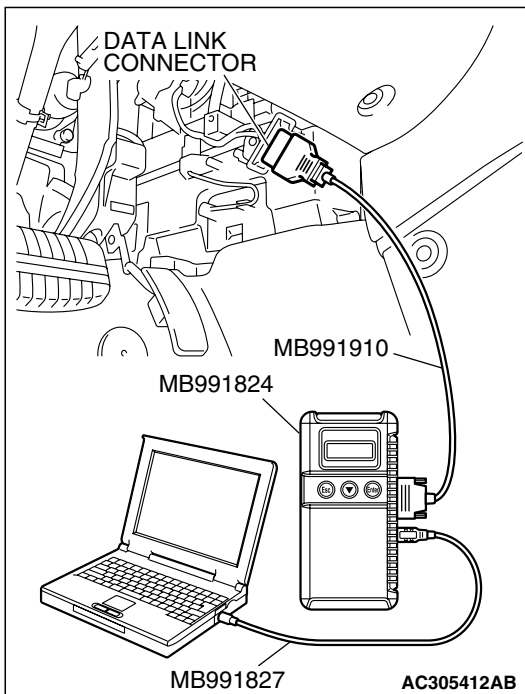
Check if an A/C-ECU DTC is set.

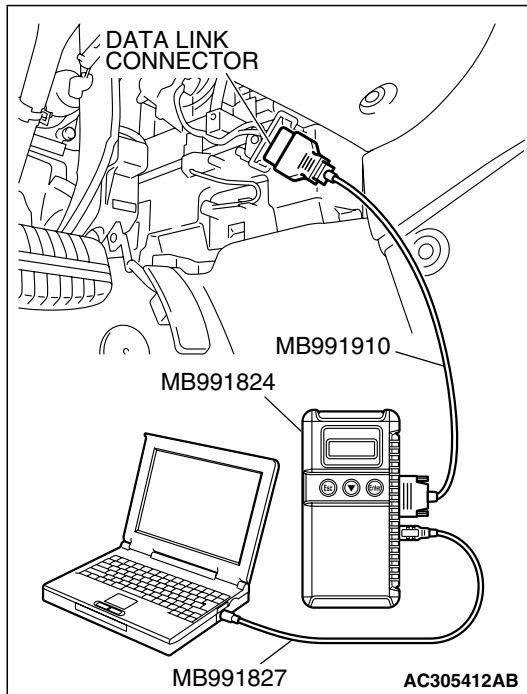
1. Connect scan tool MB991958 to the data link connector.
2. Turn the ignition switch to the "ON" position.
3. Check if the DTC is set.
4. Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is the DTC set?

YES : Refer to GROUP 55A, Diagnostic Trouble Code Chart.

NO : Go to Step 3.



**STEP 3. Using scan tool MB991958, check data list item 06: Photo sensor.**

- (1) Connect scan tool MB991958 to the data link connector.
- (2) Start the engine.
- (3) Set scan tool MB991958 to the data reading mode for item 06: Photo sensor.
 - Check that the display on the scan tool changes when the photo sensor is covered with hands.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

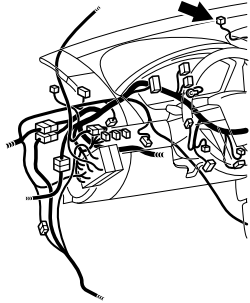
Q: Is the sensor within the specified range?

YES : Go to Step 7.

NO : Go to Step 4.

CONNECTOR: C-34

HARNESS SIDE



AC305231TD

STEP 4. Check A/C-ECU connectors C-15, C-16 and photo sensor connector C-04 for loose, corroded or damaged terminals, or terminals pushed back in the connector.

Q: Are A/C-ECU connectors C-15, C-16 and photo sensor connector C-04 in good condition?

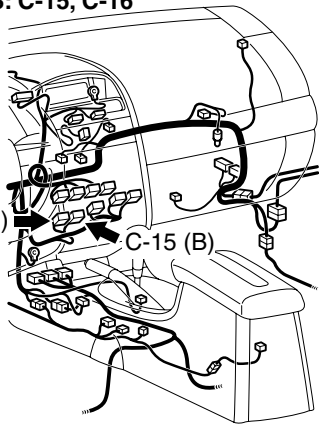
YES : Go to Step 5.

NO : Repair or replace the connector. Refer to GROUP 00E, Harness Connector Inspection. Check that the A/C works normally.

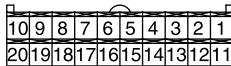
CONNECTORS: C-15, C-16

C-16 (B)

C-15 (B)



HARNESS SIDE
C-15



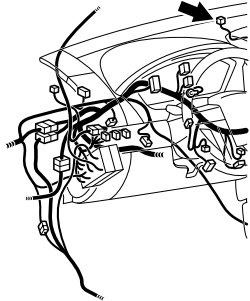
HARNESS SIDE
C-16



AC305234AG

CONNECTOR: C-34

HARNESS SIDE



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STEP 5. Check the wiring harness between photo sensor connector C-04 (terminal 1, 2) and A/C-ECU connector C-15 (terminal 19), C-16 (terminal 25).

Q: Is the wiring harness between photo sensor connector C-04 (terminal 1, 2) and A/C-ECU connector C-15 (terminal 19), C-16 (terminal 25) in good condition?

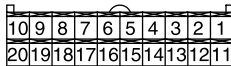
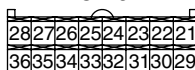
YES : Go to Step 6.

NO : Repair the wiring harness. Check that the A/C works normally.

CONNECTORS: C-15, C-16

C-16 (B)

C-15 (B)

HARNESS SIDE
C-15HARNESS SIDE
C-16

AC305234 AG

STEP 6. Replace the photo sensor.

Q: Does the A/C operate normally?

YES : No action is necessary and testing is complete.

NO : Replace the A/C-ECU. Check that the A/C works normally.

STEP 7. Check the refrigerant level.

Use the refrigerant recovery station to remove all of the refrigerant, and then calculate the amount of the refrigerant and charge it.

Q: Is the refrigerant level correct?

YES : Refer to GROUP 55A, Symptom Chart.

NO : Correct the refrigerant level (Refer to GROUP 55A, On-vehicle Service). Check that the A/C works normally.