

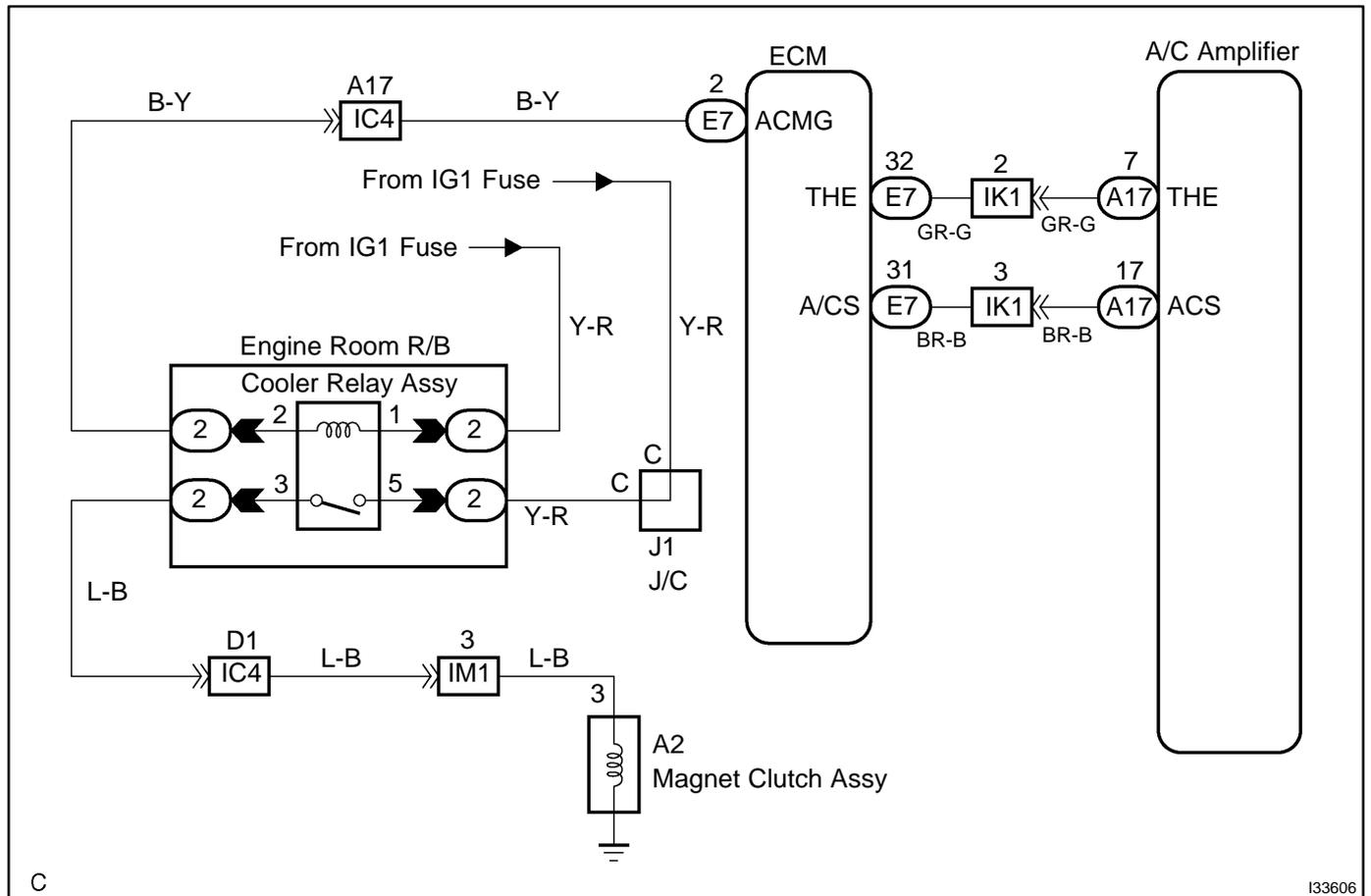
COMPRESSOR CIRCUIT

CIRCUIT DESCRIPTION

This is a driving circuit of the A/C magnetic clutch and controlled by the ECU terminal as shown below.

- ACS of the the A/C amplifier: Output the A/C switch condition "ON" or "OFF".
- THE of the A/C amplifier: Output the request signal to drive the magnetic clutch and send it to ECM.
- ACMG of ECM: Operates the cooler relay assy and drive the magnetic clutch.

WIRING DIAGRAM



C

133606

INSPECTION PROCEDURE

1 READ VALUE OF HAND-HELD TESTER

- (a) Connect the hand-held tester to DLC3.
- (b) Turn the ignition switch ON and push the hand-held tester main SW ON.
- (c) Check the A/C magnet clutch input signal using DATA LIST.

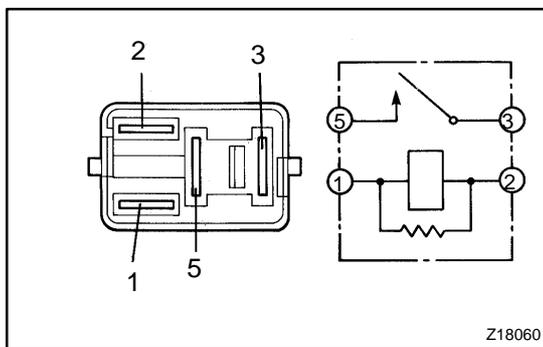
ECM:

Description	Tester display	Check condition
Magnet clutch input signal	A/C SIG	ON - OFF

NG → Go to step 7

OK

2 INSPECT COOLER RELAY ASSY



- (a) Remove the cooler relay assy from the engine room R/B.
- (b) Check continuity between each pair of terminals as shown in the chart.

Standard:

Tester connection	Specified condition
1 - 2	Continuity
3 - 5	No continuity

- (c) Apply battery voltage between terminal 1 and terminal 2.
- (d) Check that continuity exists between terminal 3 and terminal 5.

Standard: Continuity exists.

NG → REPLACE COOLER RELAY ASSY

OK

3 READ VALUE OF HAND-HELD TESTER

- (a) Connect the hand-held tester to DLC3.
- (b) Turn the ignition switch to ON and push the hand-held tester main SW ON.
- (c) Check the A/C magnet clutch using DATA LIST.

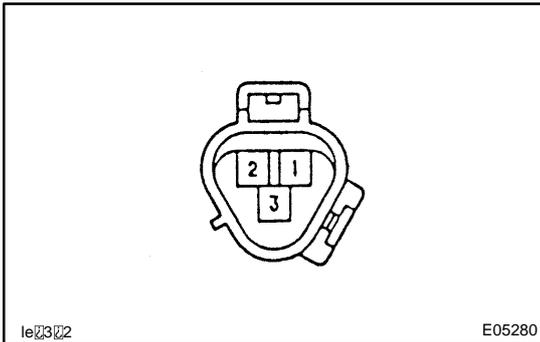
ECM:

Description	Tester display	Check condition
Magnet clutch output signal	A/C MAG CLUTCH	ON - OFF

NG → Go to step 9

OK

4 INSPECT MAGNET CLUTCH ASSY



- Disconnect the connector from the compressor.
- Connect the battery positive (+) lead to terminal 3 and the battery negative (-) lead to body ground, then check that the magnetic clutch is engaged.

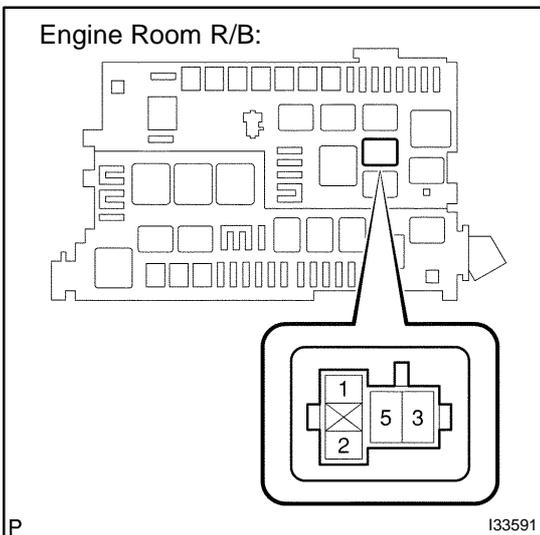
Standard: Magnetic clutch is engaged.

NG

REPLACE MAGNET CLUTCH ASSY

OK

5 CHECK HARNESS AND CONNECTOR(BETWEEN BATTERY AND COOLER RELAY ASSY)



- Remove the cooler relay assy from the engine room R/B.
- Turn the ignition switch to ON.
- Measure voltage between terminal 1 and terminal 5 of the engine room J/B and body ground.

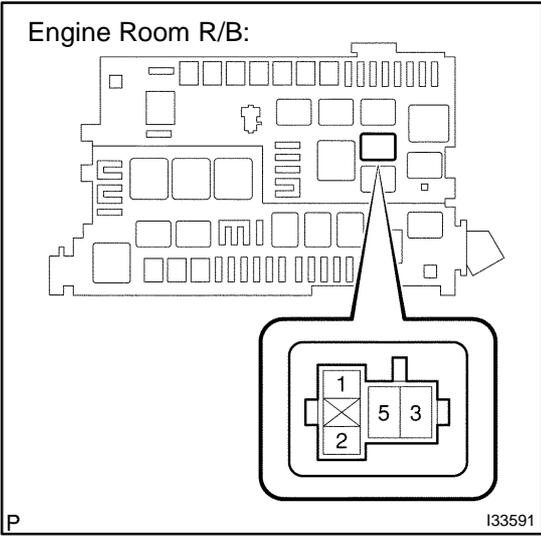
Voltage: 10 - 14 V

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REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

6 CHECK HARNESS AND CONNECTOR(BETWEEN COOLER RELAY ASSY AND BODY GROUND)



- (a) Remove the cooler relay assy from the engine room R/B.
- (b) Measure resistance between terminal 3 of the engine room R/B and body ground.

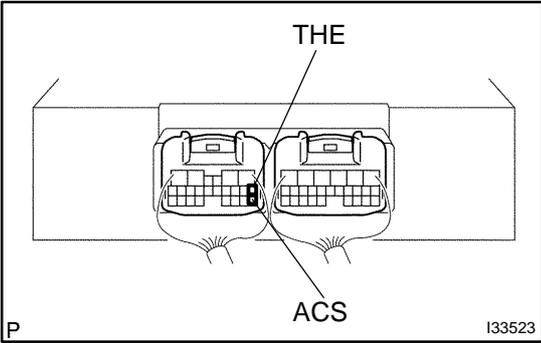
Resistance: Below 1.0 Ω (Continuity)

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE

7 INSPECT AIR CONDITIONING AMPLIFIER(ACS, THE)



- (a) Remove the A/C amplifier with the connectors being connected.
- (b) Start the engine and push the AUTO switch.
- (c) Measure voltage between terminal THE and terminal ACS of the A/C amplifier and body ground when the magnetic clutch is turned ON and OFF by operating the A/C switch.

Voltage:

Switch operation	Tester connection	Specified condition
ON	THE - Body ground	1.3 - 2.6 V
OFF	THE - Body ground	3.7 - 4.5 V
ON	ACS - Body ground	10 - 14 V
OFF	ACS - Body ground	Below 1 V

NG CHECK AND REPLACE AIR CONDITIONING AMPLIFIER

OK

8	CHECK HARNESS AND CONNECTOR(BETWEEN ECM AND AIR CONDITIONING AMPLIFIER)
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- (a) Check for open and short circuit in the harness and the connector between ECM and the A/C amplifier
(See page 01-35).

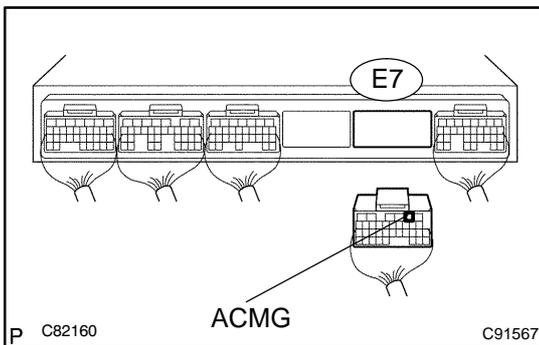
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REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

CHECK AND REPLACE ECM

9	CHECK HARNESS AND CONNECTOR(BETWEEN ECM AND BODY GROUND)
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- (a) Disconnect the "E7" connector from ECM.
(b) Turn the ignition switch to ON.
(c) Measure voltage between terminal ACMG of ECM and body ground.

Voltage: 10 - 14 V

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

CHECK AND REPLACE ECM