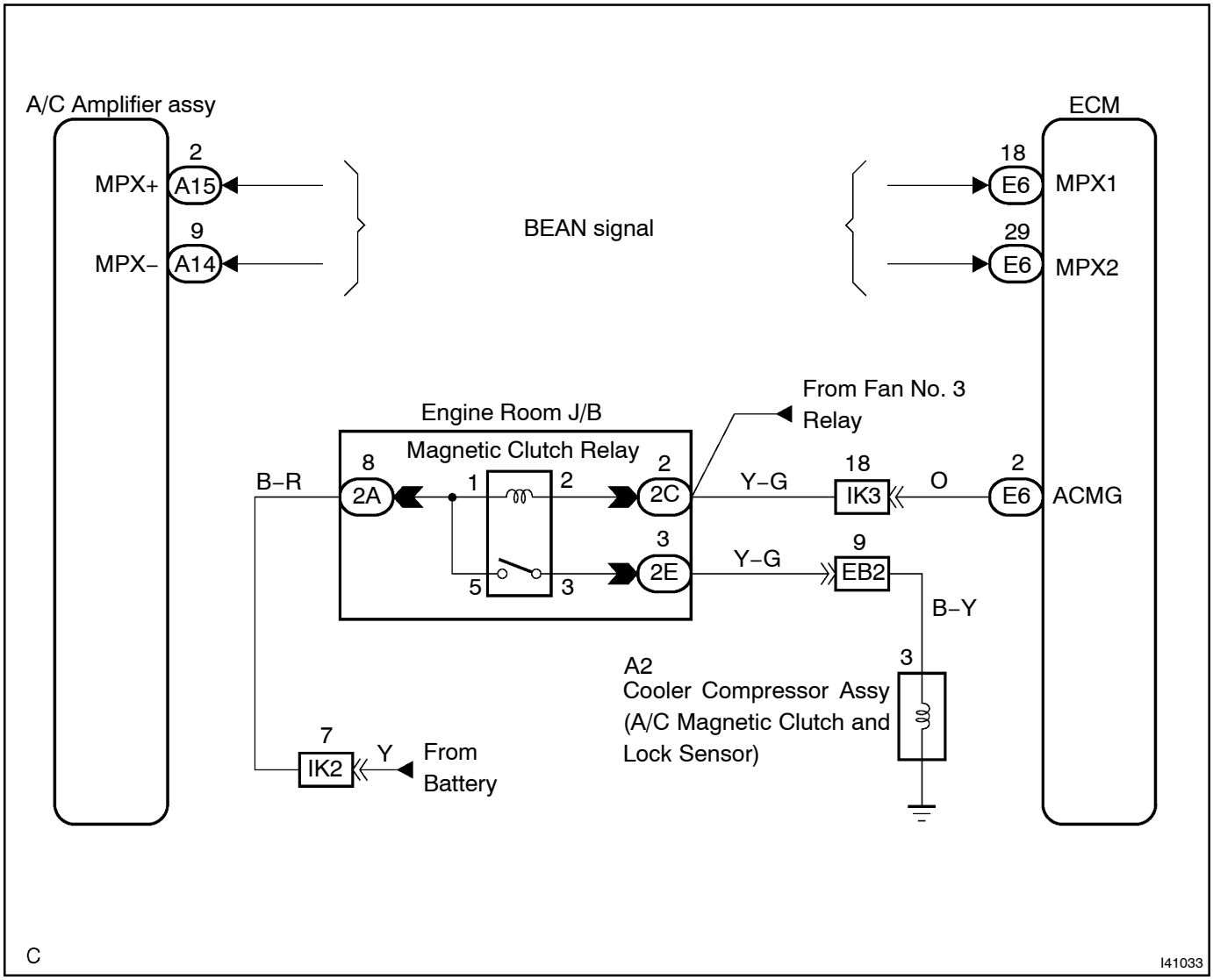
COMPRESSOR CIRCUIT

CIRCUIT DESCRIPTION

The ECM and A/C amplifier communicate via BEAN.
The A/C amplifier assy outputs the magnetic clutch ON signal to the ECM.
Receiving this signal, the ECM sends a signal through terminal ACMG and switches the magnetic clutch relay ON, thus turning on the magnetic clutch.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE ON INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch ON and push the intelligent tester II main switch on.
(c) Select the item below in the DATA LIST, and read the display on the intelligent tester II.

ENGINE AND ECT / ALL:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
A/C signal (A/C Sig)	A/C signal/ ON or OFF	A/C ON: ON	–
A/C magnet clutch (A/C Mag Clutch)	A/C magnet clutch/ ON or OFF	A/C magnet clutch ON: ON	–

NG → **INSPECT MULTIPLEX COMMUNICATION CIRCUIT**

OK

2	PERFORM ACTIVE TEST USING INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch ON and push the intelligent tester II main switch ON.
(c) Select the item below in the ACTIVE TEST, and then check that the relay operates.

ENGINE AND ECT / ALL:

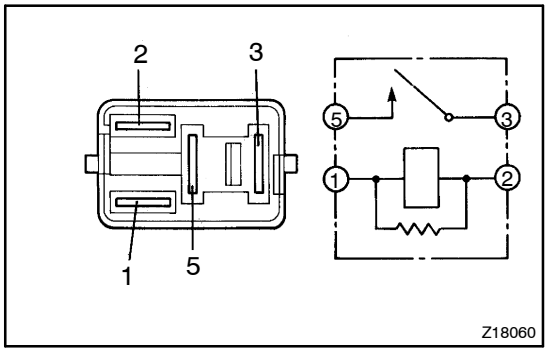
Item	Test Details/Display (Range)	Diagnostic Note
A/C Mag Clutch	Magnetic clutch relay / OFF, ON	Operating sound can be heard

NG → **Go to step 3**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–435)

3 INSPECT MAGNET–CLUTCH RELAY



(a) Remove the relay (magnet clutch relay) from the engine room R/B.
(b) Measure the resistance according to the value(s) in the table below.

Standard:

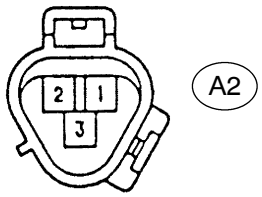
Tester connection	Condition	Specified condition
3 – 5	Always	10 kΩ or higher
3 – 5	When battery voltage is applied to terminals 1 and 2	Below 1 Ω

NG → **REPLACE MAGNET–CLUTCH RELAY**

OK

4 INSPECT COOLER COMPRESSOR ASSY(A/C MAGNETIC CLUTCH AND LOCK SENSOR)

Cooler Compressor Assy Connector From View:



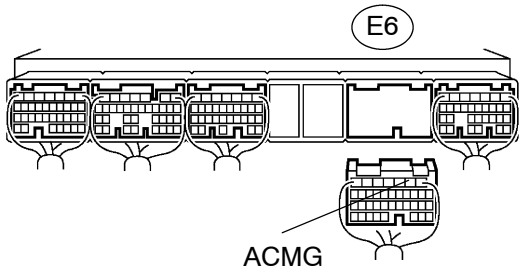
(a) Disconnect the connector from the cooler compressor assy.
(b) Connect the positive (+) lead from the battery to terminal 3 and negative (–) lead to body ground, then check that the cooler compressor assy is engaged.

NG → **REPLACE COOLER COMPRESSOR ASSY(A/C MAGNETIC CLUTCH AND LOCK SENSOR)**

OK

5 INSPECT ECM

ECM Connector Wire Harness View:



(a) Remove the ECM and disconnect the connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard:

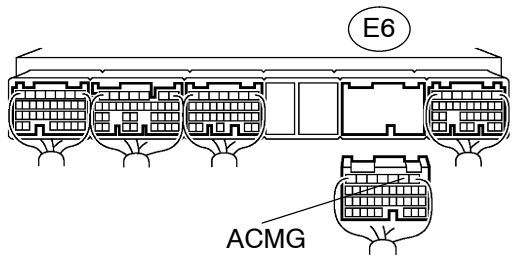
Tester connection	Condition	Specified condition
E6–2 (ACMG) – Body ground	Ignition switch ON	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

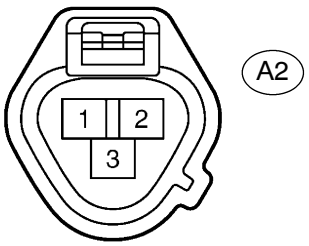
OK

6 CHECK HARNESS AND CONNECTOR

ECM Connector
Wire Harness View:



Cooler Compressor Assy Connector
Wire Harness View:



I36159
E51630
I38853

(a) Disconnect the connector.
(b) Measure the voltage according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
A2–3 – Body ground	Ignition switch ON When using service wire, terminal E6–2 (ACMG) and Body ground are not connected	Below 1 V
A2–3 – Body ground	Ignition switch ON When using service wire, terminal E6–2 (ACMG) and Body ground are connected	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE ECM