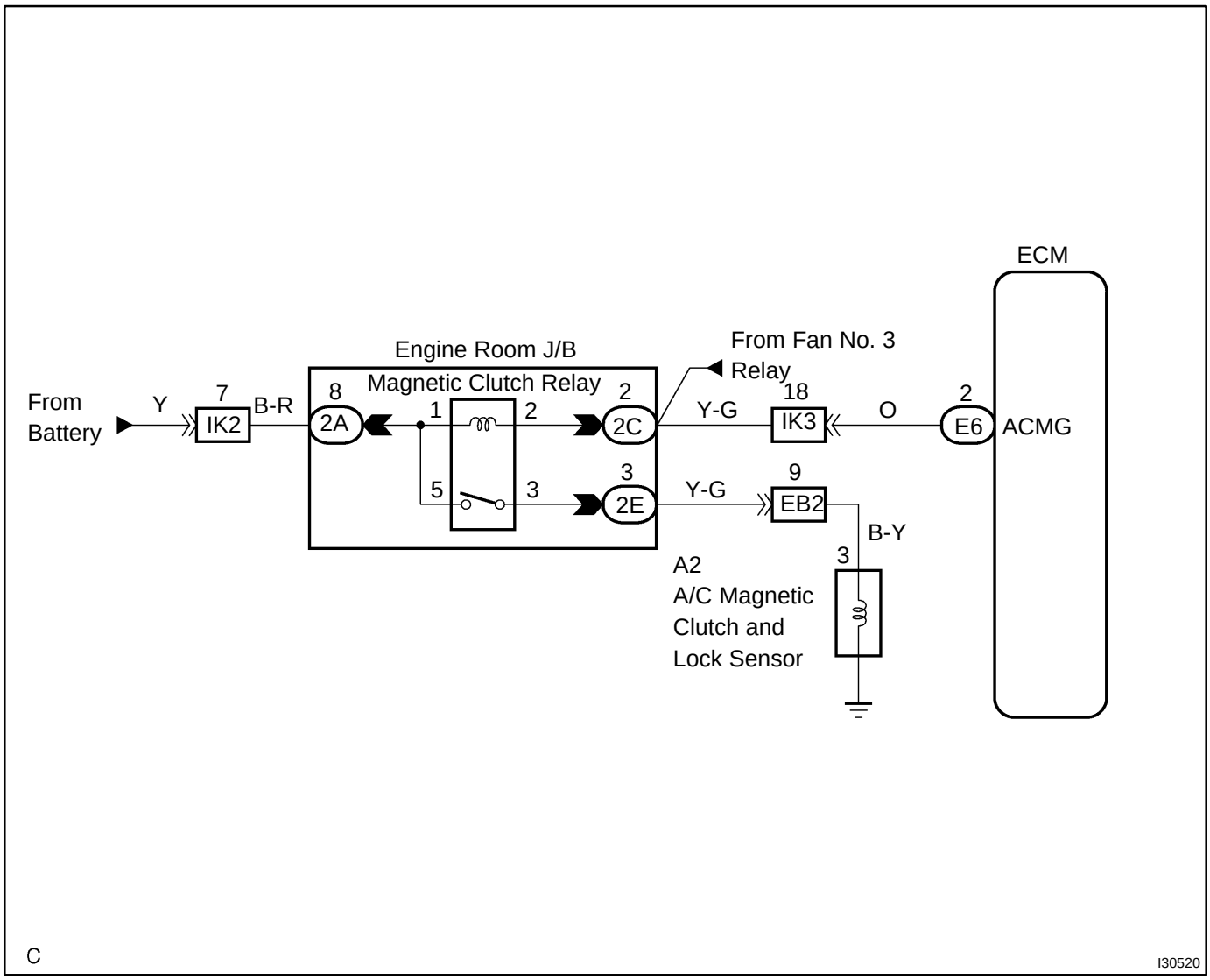
COMPRESSOR CIRCUIT

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 OF HAND-HELD TESTER

(a) Connect the hand-held tester to the DLC3.
(b) Turn the ignition switch ON and push the hand-held tester main switch ON.
(c) Select the items below in the DATA LIST, and read the displays on the hand-held tester.

ENGINE AND ECT / ALL:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
A/C SIG	A/C signal/ ON or OFF	A/C ON: ON	-
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 HAND-HELD TESTER

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

ENGINE AND ECT / ALL:

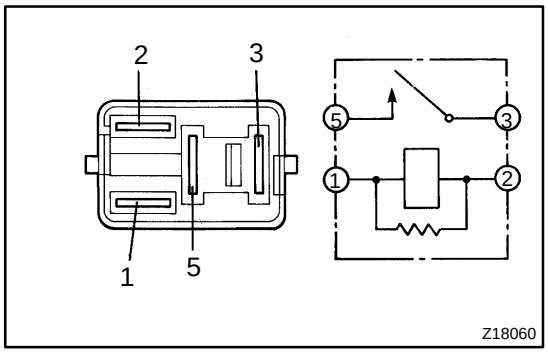
Item	Test Details/Display (Range)	Diagnostic Note
A/C MAG CLUTCH	Magnetic clutch relay / OFF, ON	Operating sound can be heard

NG → **Go to step 3**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-1 129)

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:

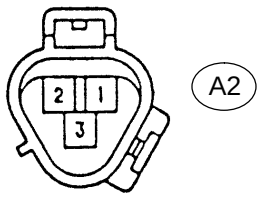
Tester connection	Condition	Specified condition
3 - 5	Always	10 kΩ or higher
3 - 5	When battery voltage applied to terminals 1 and 2	Below 1 Ω

NG → **REPLACE MAGNET-CLUTCH RELAY**

OK

4 INSPECT MAGNET CLUTCH ASSY

Magnet Clutch Assy Connector From View:



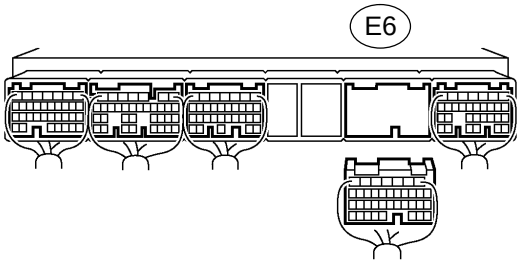
(a) Disconnect the connector from the magnet clutch assy.
(b) Connect the positive (+) lead from the battery to terminal 3 and negative (-) lead to body ground, then check that the magnet clutch assy is engaged.

NG → **REPLACE MAGNET CLUTCH ASSY**

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:

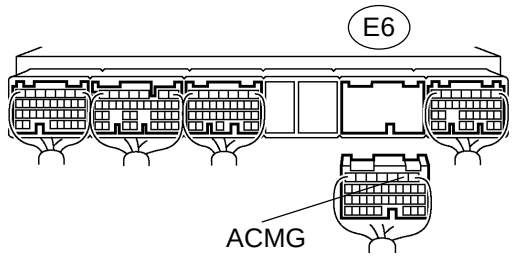
Tester connection	Condition	Specified condition
E6-2 (ACMG) - Body ground	Ignition switch ON	10 to 14 V

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

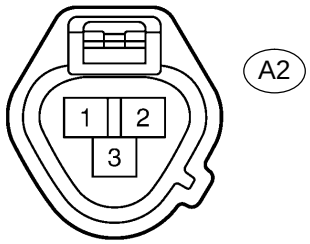
OK

6 CHECK HARNESS AND CONNECTOR

ECM Connector
Wire Harness View:



Magnet Clutch 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 connect	Below 1 V
A2-3 - Body ground	Ignition switch ON When using service wire, terminal E6-2 (ACMG) and Body ground are connect	10 to 14 V

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

OK

REPLACE ECM