

DTC**B1422****COMPRESSOR LOCK SENSOR CIRCUIT****CIRCUIT DESCRIPTION**

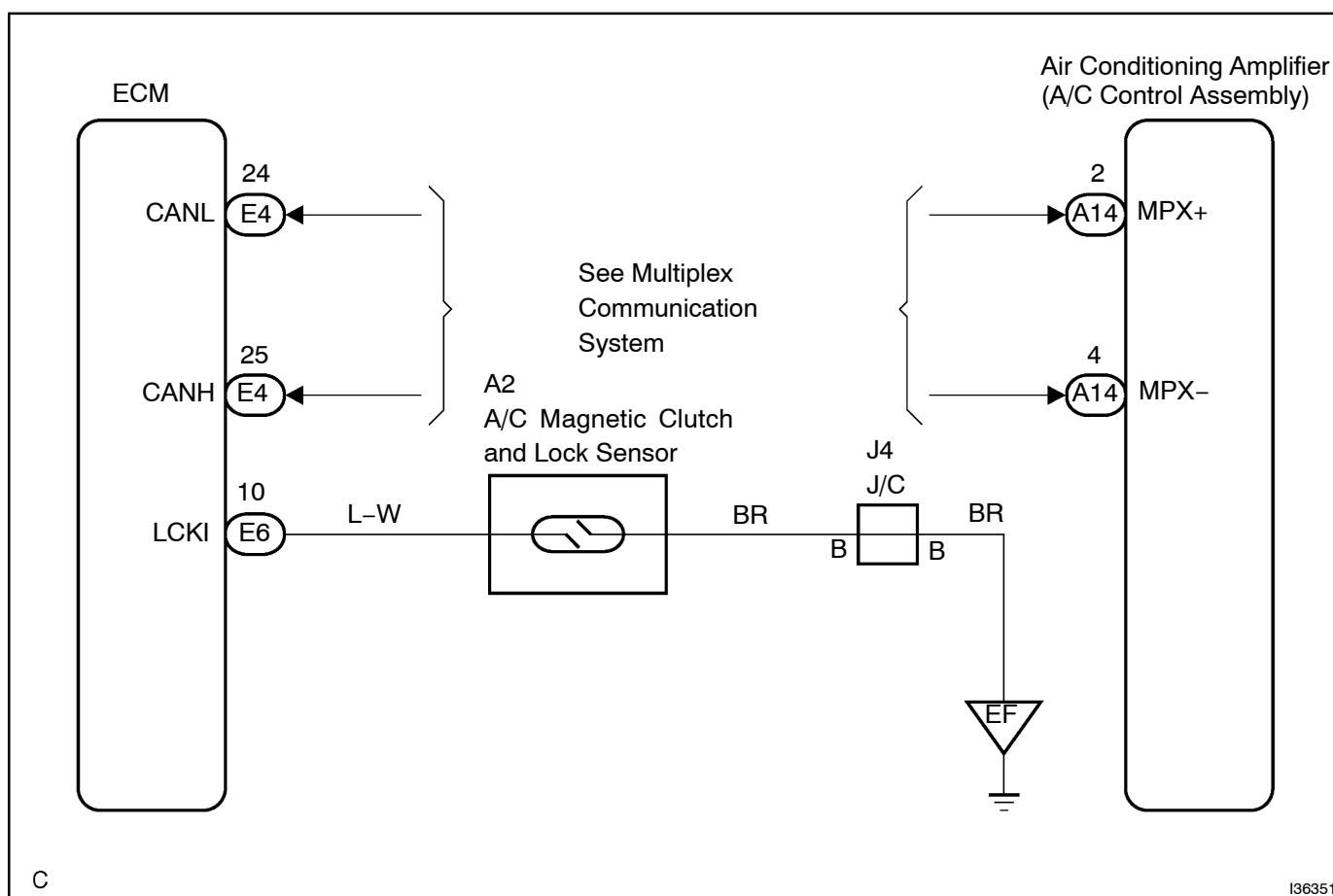
This sensor sends 1 pulse per engine revolution to the ECM.

If the ratio between engine and compressor speed deviates 20 % or more in compression to normal operation, the ECM turns the cooler compressor off and the indicator blinks at approximately 1 second intervals. The ECM informs the A/C amplifier of the operation condition of the cooler compressor through the multiplex communication (CAN and BEAN).

HINT:

This DTC is output only for G.C.C country models.

DTC No.	Detection Item	Trouble Area
B1422	Compressor lock sensor circuit (Open or short)	• Cooler compressor assy • Cooler compressor assy drive belt • Cooler compressor assy and magnetic clutch lock sensor • Harness and connector between ECM and cooler compressor assy • ECM • A/C amplifier

WIRING DIAGRAM

INSPECTION PROCEDURE

1 CHECK COOLER COMPRESSOR ASSY

- (a) Check and adjust compressor drive belt tension ([see page 14-6](#)).
- (b) Check if the cooler compressor does not lock when starting the engine and turning the A/C switch on.

OK: Cooler compressor assy does not lock during operation

If the compressor drive belt slips when A/C switch is turned on, the magnet clutch seems to be locked.

If the condition continues for more than 3 seconds, the A/C amplifier turns off the magnet clutch for compressor drive belt protection.

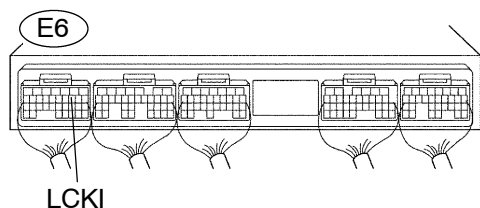
NG

REPLACE COOLER COMPRESSOR ASSY

OK

2 INSPECT ECM(LCKI - BODY GROUND)

**EMC Connector
Wire Harness View:**



- (a) Remove the ECM with connectors still connected.
- (b) Start the engine and push the AUTO switch.
- (c) Measure the waveform according to the condition in the table below.

Standard:

Tester connection	Condition	Specified condition
E6-10 (LCKI) - Body ground	Ignition switch ON AUTO switch ON A/C switch ON Magnet clutch ON	Pulse generation

Result:

NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

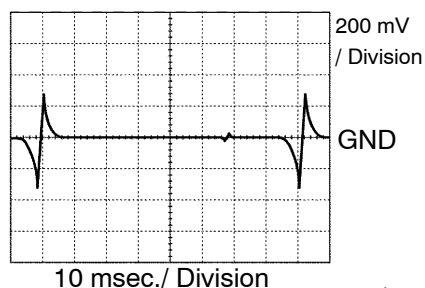
B

**PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN IN PROBLEM SYMPTOMS TABLE
(SEE PAGE 05-778)**

C

REPLACE ECM (SEE PAGE 10-21)

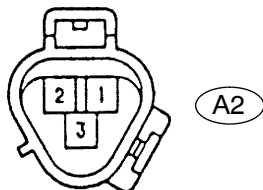
Waveform



A

3 INSPECT COOLER COMPRESSOR ASSY(A/C LOCK SENSOR)**Cooler Compressor Assy (A/C Lock Sensor) Connector**

Front View:



le-3-2

E05280

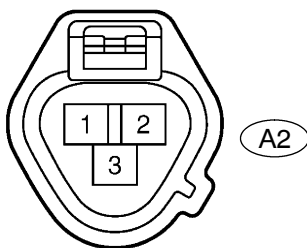
- (a) Disconnect the cooler compressor assy connector.
 (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
1 - 2	at 20°C (68°F)	160 to 320 Ω

NG**REPLACE COOLER COMPRESSOR ASSY(A/C LOCK SENSOR)****OK****4 CHECK HARNESS AND CONNECTOR(ECM - COOLER COMPRESSOR ASSY)
(SEE PAGE 01-44)****Cooler Compressor Assy Connector**

Front View:



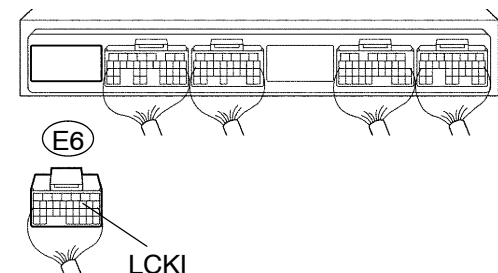
P

E51630

- (a) Measure the resistance according to the value(s) in the table below.

Standard:

Tester terminals	Condition	Specified condition
E6-10 (LCKI) - A2-1	Always	Below 1 Ω
A2-2 - Body ground	Always	Below 1 Ω
E6-10 (LCKI) - Body ground	Always	10 kΩ or higher

ECM Connector Wire Harness View:

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I36399

NG**REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE ECM (SEE PAGE 10-21)**