

DTC	B1422/22	Compressor Lock Sensor Circuit
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DESCRIPTION

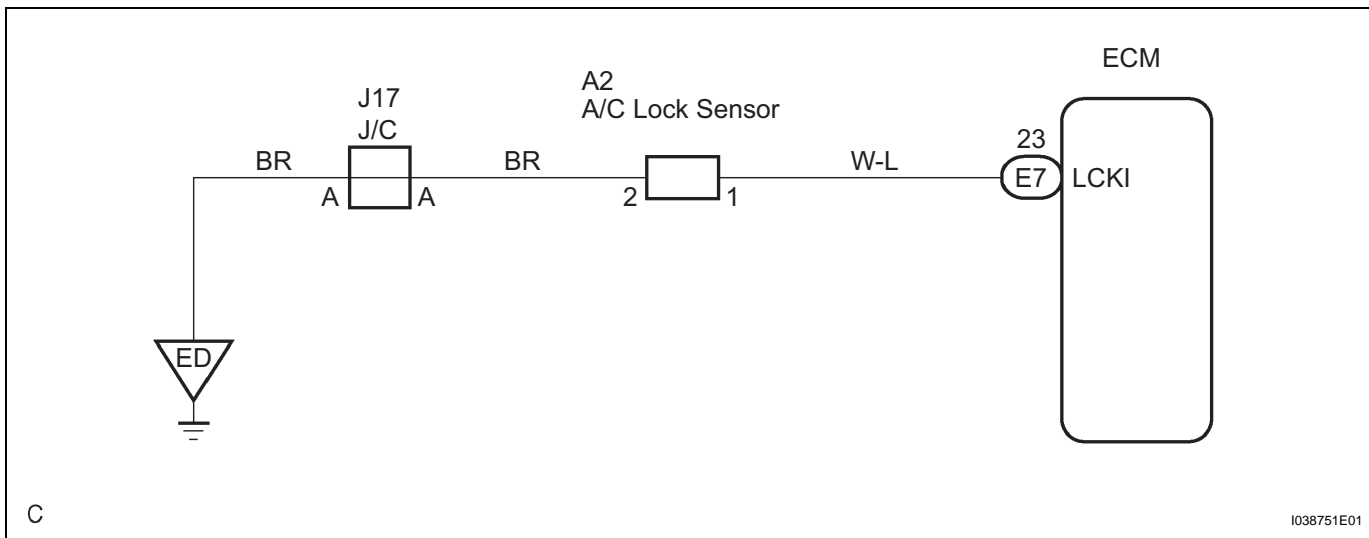
This sensor sends 1 pulses per engine revolution to the ECM.

If the number ratio of the compressor speed divided by the engine speed is smaller than a predetermined value, the ECM turns the compressor off, and the indicator flashes at approx. 1 second intervals.

AC

DTC No.	DTC Detection Condition	Trouble Area
B1422/22	All conditions below are detected for 3 secs. or more 1. Engine speed: 450 rpm or more 2. Ratio between engine and compressor speed deviates 20% or more in comparison to normal operation.	<ul style="list-style-type: none"> Cooler compressor assembly Cooler compressor assembly drive belt Cooler compressor and magnetic clutch lock sensor Harness and connector between ECM and cooler compressor assembly, cooler compressor assembly and body ground Multiplex communication circuit ECM A/C amplifier

WIRING DIAGRAM



1	CHECK COOLER COMPRESSOR ASSEMBLY
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- (a) Check and adjust compressor drive belt tension (See page [AC-169](#)).
- (b) Check if the cooler compressor does not lock during operation with engine started and below switch and A/C switch ON.

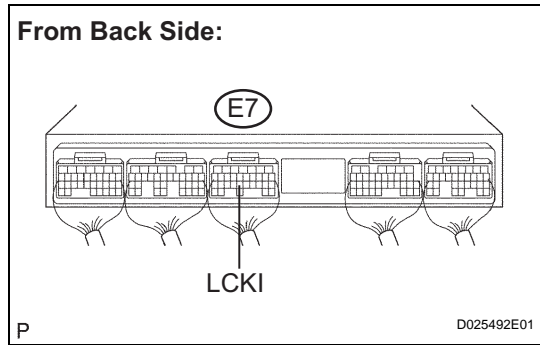
Standard:

Cooler compressor assembly does not lock during operation.

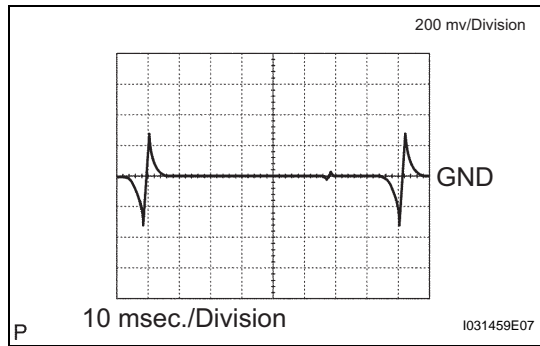
NG	REPLACE COOLER COMPRESSOR ASSEMBLY
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OK

2 INSPECT ECM (LCK1 - BODY GROUND)



- (a) Remove the ECM with connectors being connected.
- (b) Start the engine and push AUTO switch.



- (c) Measure the waveform according to the value(s) in the table below.

Waveform

Tester connection	Condition	Specified condition
E7-23 (LCKI) - Body ground	Ignition SW ON AUTO SW ON	Pulse generation

Result

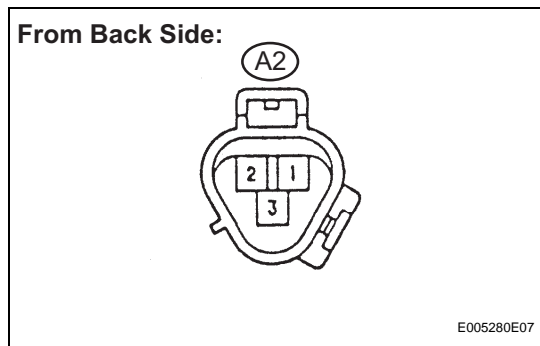
Condition	Proceed to
NG	A
OK (Checking from the PROBLEM SYMPTOM TABLE)	B
OK (Checking from the DTC)	C

B → PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

C → Go to step 5

A

3 INSPECT COOLER COMPRESSOR ASSEMBLY



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

Standard resistance

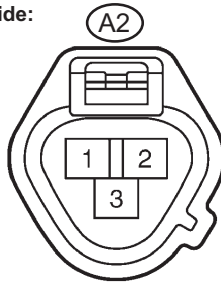
Tester connection	Condition	Specified condition
1 - 2	at normal temperature	185 +- 20 Ω

NG → REPLACE COOLER COMPRESSOR ASSEMBLY

OK

4 CHECK HARNESS AND CONNECTOR

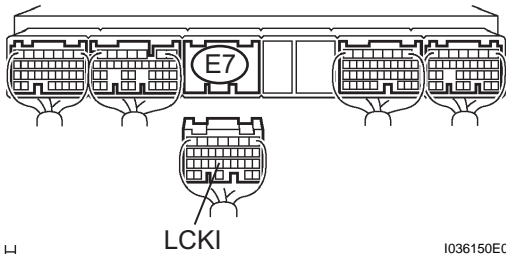
Wire Harness Side:



E051630E02

(a) Disconnect the cooler compressor assembly connector.

Wire Harness Side:



I036150E01

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

Standard resistance

Tester connection	Condition	Specified condition
A2-1 - E7-23 (LCKI)	Always	Below 1 Ω
A2-2 - Body ground	Always	Below 1 Ω
A2-1 - Body ground	Always	10 k Ω or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5 READ DTC OUTPUT

- (a) Clear the DTCs.
 (b) Read DTC at turning the ignition switch to the ON position.

Standard:

Normal codes are output.

NG

REPLACE AIR CONDITIONING AMPLIFIER

OK

USE SIMULATION METHOD TO CHECK