

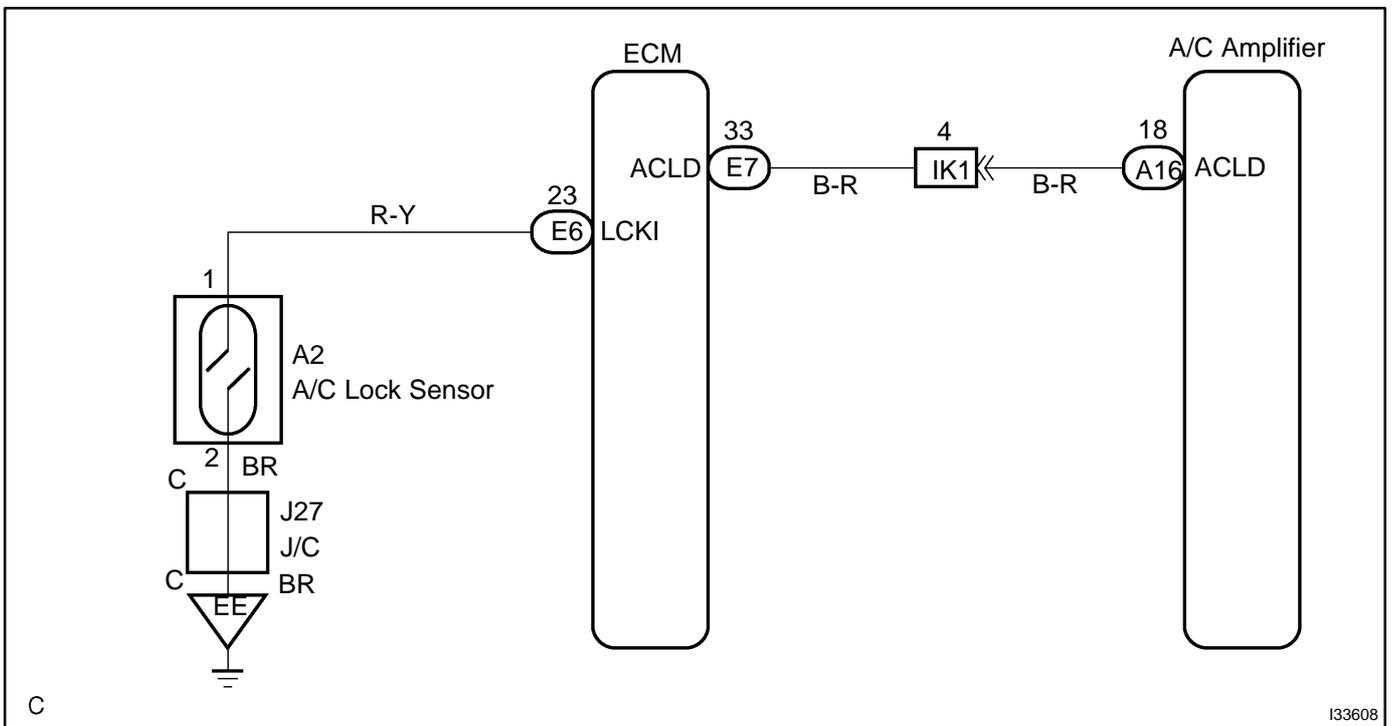
DTC	22	COMPRESSOR LOCK SENSOR CIRCUIT
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CIRCUIT DESCRIPTION

This sensor sends 4 pulses per engine revolution to the A/C amplifier. If the ratio of the compressor speed divided by the engine speed is smaller than a predetermined value, the A/C amplifier turns the compressor off, and the indicator flashes at about 1 sec. intervals.

DTC No.	Detection Item	Trouble Area
22	Following conditions are detected for 3 sec. or more. (a) Engine speed : 450 rpm or more. (b) Ratio between engine and compressor speed deviates 20 % or more in comparison to normal operation.	<ul style="list-style-type: none"> • Cooler compressor assy • Compressor drive belt • Compressor lock sensor • Harness or connector between ECM and compressor lock sensor, A/C amplifier assy • A/C amplifier assy • ECM

WIRING DIAGRAM

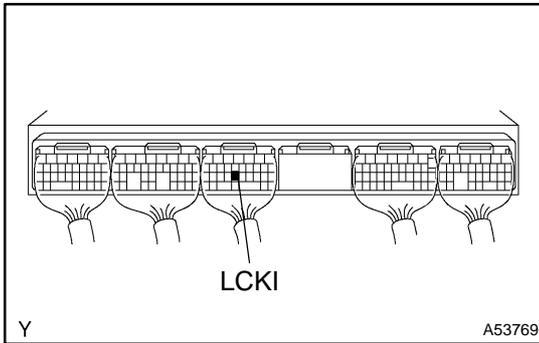


C

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INSPECTION PROCEDURE

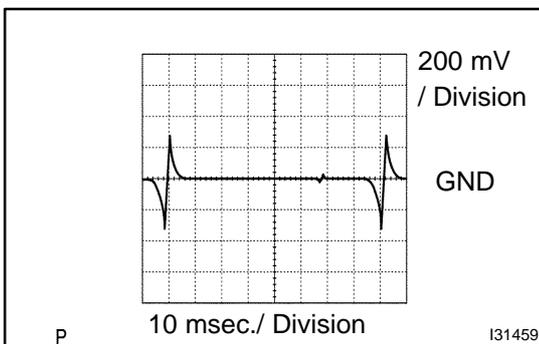
1 INSPECT ECM(LCKI)



- (a) Remove ECM with the connectors being connected.
- (b) Start the engine.
- (c) Operate the A/C system.
- (d) Check the signal waveform between terminal LCKI of ECM and body ground.

Standard:

The correct waveform appears as shown in the illustration.



OK → Go to step 6

NG

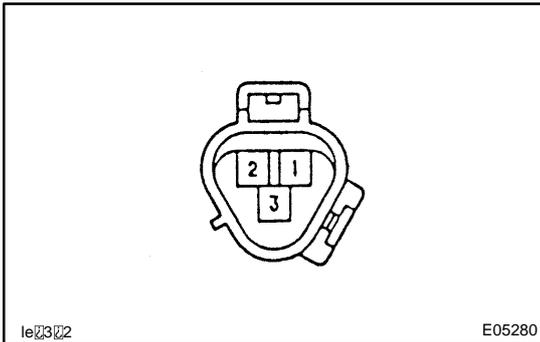
2 CHECK COOLER COMPRESSOR ASSY

- (a) Check and adjust the compressor drive belt tension (See page 14-1).
- (b) Check the cooler compressor assy does not lock while running the engine and operating the A/C system.

Standard: Cooler compressor assy does not lock during the operation.

NG → REPLACE COOLER COMPRESSOR ASSY

OK

3 INSPECT COOLER COMPRESSOR ASSY(COMPRESSOR LOCK SENSOR)

- (a) Disconnect the cooler compressor assy connector.
 (b) Measure resistance between terminal 1 and 2 of the cooler compressor assy connector.

Resistance: at 20 °C (68 °F): 165 - 205 Ω

NG

REPLACE COOLER COMPRESSOR ASSY

OK

4 CHECK HARNESS AND CONNECTOR(BETWEEN ECM AND AIR CONDITIONING AMPLIFIER)

- (a) Check for open and short circuit in the harness and the connector between the cooler compressor assy and the A/C amplifier (See page 01-35).

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5 CHECK HARNESS AND CONNECTOR(BETWEEN COOLER COMPRESSOR ASSY AND BODY GROUND)

- (a) Check for open and short circuit in the harness and the connector between the cooler compressor assy and body ground (See page 01-35).

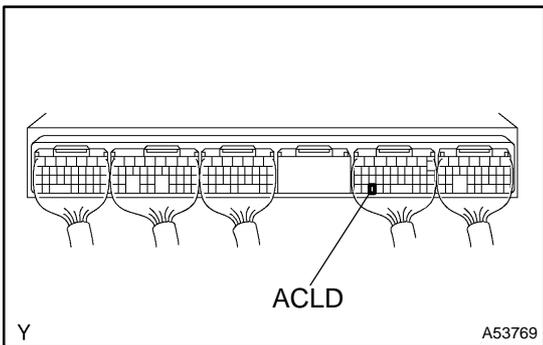
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

CHECK AND REPLACE ECM

6 INSPECT ECM(ACLD)



- (a) Remove ECM with the connectors being connected.
- (b) Operate A/C system.
- (c) Measure voltage between terminal ACLD of ECM and body ground under each condition.

Voltage:

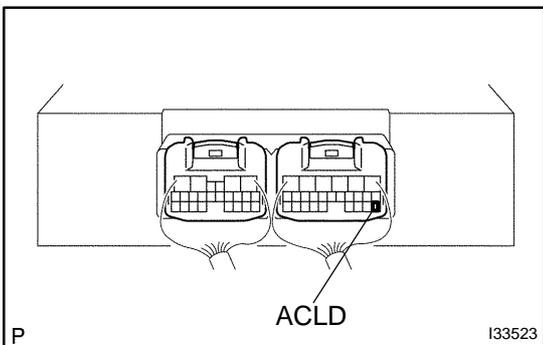
Magnetic clutch is engaged: Below 1.0 V

Magnetic clutch is not engaged: 10 - 14 V

NG → **CHECK AND REPLACE ECM**

OK

7 INSPECT AIR CONDITIONING AMPLIFIER(ACLD)



- (a) Remove the A/C amplifier assy with the connectors being connected.
- (b) Operate the A/C system.
- (c) Measure voltage between terminal ACLD of the A/C amplifier assy and body ground under each condition.

Voltage:

Magnetic clutch is engaged: Below 1.0 V

Magnetic clutch is not engaged: 10 - 14 V

Result:

A	NG
B	OK (when checking using PROBLEM SYMPTOM TABLE)
C	OK (when checking using DTC)

B → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE**

C → **CHECK AND REPLACE AIR CONDITIONING AMPLIFIER**

A

REPAIR OR REPLACE HARNESS OR CONNECTOR