DTC	14	ENGINE COOLANT TEMPERATURE COMMUNICATION CIRCUIT

CIRCUIT DESCRIPTION

This sensor detects the temperature and sends the appropriate signals to the A/C amplifier. These signals are used for warm up control when engine is cold.

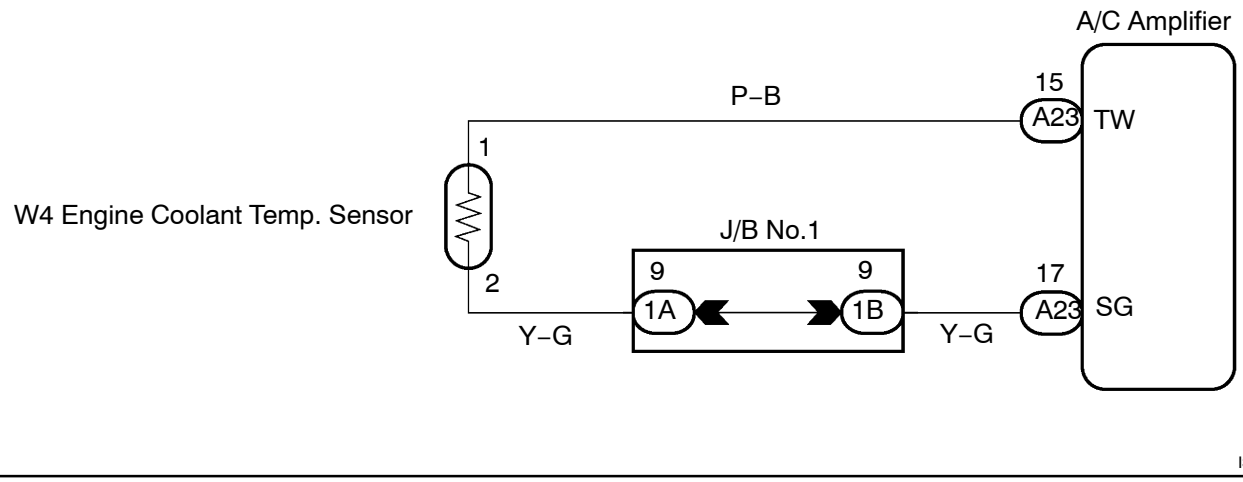
DTC No.	Detection Item	Trouble Area
14	Open or short in water temperature circuit.	• Thermistor (engine coolant temp. sensor) • Harness or connector between thermistor (engine coolant temp. sensor) and A/C amplifier *1 • Harness or connector between thermistor (engine coolant temp. sensor) and ECM *2 • ECM *2 • Harness or connector between ECM and A/C amplifier *2 • A/C amplifier

*1: 1KZ–TE Models

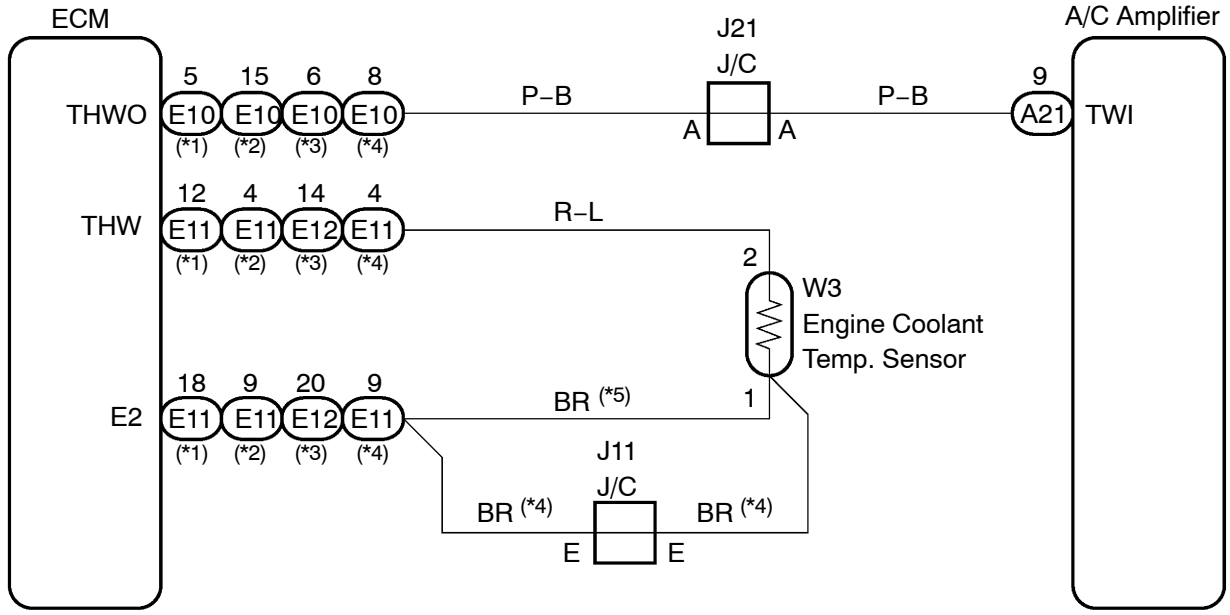
*2: Except 1KZ–TE Models

WIRING DIAGRAM

1KZ–TE Models:



Except 1KZ–TE Models:



*1: 3RZ–FE Unleaded Gasoline
*2: 3RZ–FE Leaded Gasoline
*3: 1KD–FTV
*4: 5L–E
*5: Except 5L–E

C

I33355

INSPECTION PROCEDURE

1	CHECK ENGINE

(a) Check engine type.

A	B
Except 1KZ–TE	1KZ–TE

B → **Go to step 5**

A

2	DIAGNOSTIC TROUBLE CODE CHECK

(a) Check that the DTC P0115/22 does not output.

NG → **GO TO ENGINE CONTROL SYSTEM**

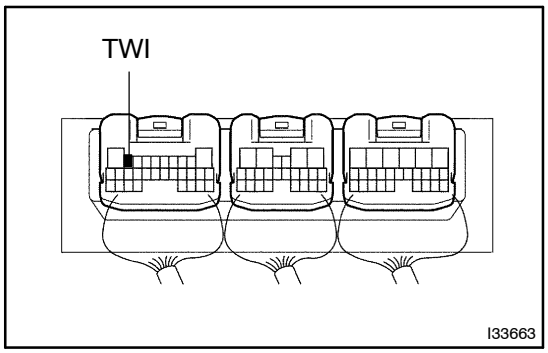
OK

3	CHECK HARNESS AND CONNECTOR(A/C AMPLIFIER – ECM)

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

OK

4	INSPECT AIR CONDITIONING AMPLIFIER(TWI)



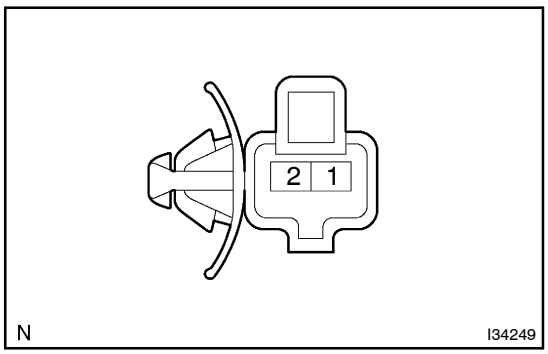
(a) Remove A/C amplifier with being connected.
(b) Turn ignition switch ON.
(c) Measure the waveform between terminal TWI of the A/C amplifier connector and body ground.
OK: Pulse generation

NG → **CHECK AND REPLACE ECM**

OK

CHECK AND REPLACE AIR CONDITIONING AMPLIFIER

5	INSPECT THERMISTOR ASSY(ENGINE COOLANT TEMP. SENSOR)



(a) Remove thermistor assy(engine coolant temp. sensor).
(b) Check the resistance between terminal 1 and 2 or thermistor assy(engine coolant temp. sensor) at each temperature.
Resistance:
At 0°C (32°F): 4.76 – 4.95 kΩ
At 15°C (59°F) 2.22 – 2.46 kΩ

NG → **REPLACE THERMISTOR ASSY**

OK

6	CHECK HARNESS AND CONNECTOR(A/C AMPLIFIER – THERMISTOR ASSY(ENGINE COOLANT TEMP. SENSOR))

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

OK

CHECK AND REPLACE AIR CONDITIONING AMPLIFIER