DI9GV–01

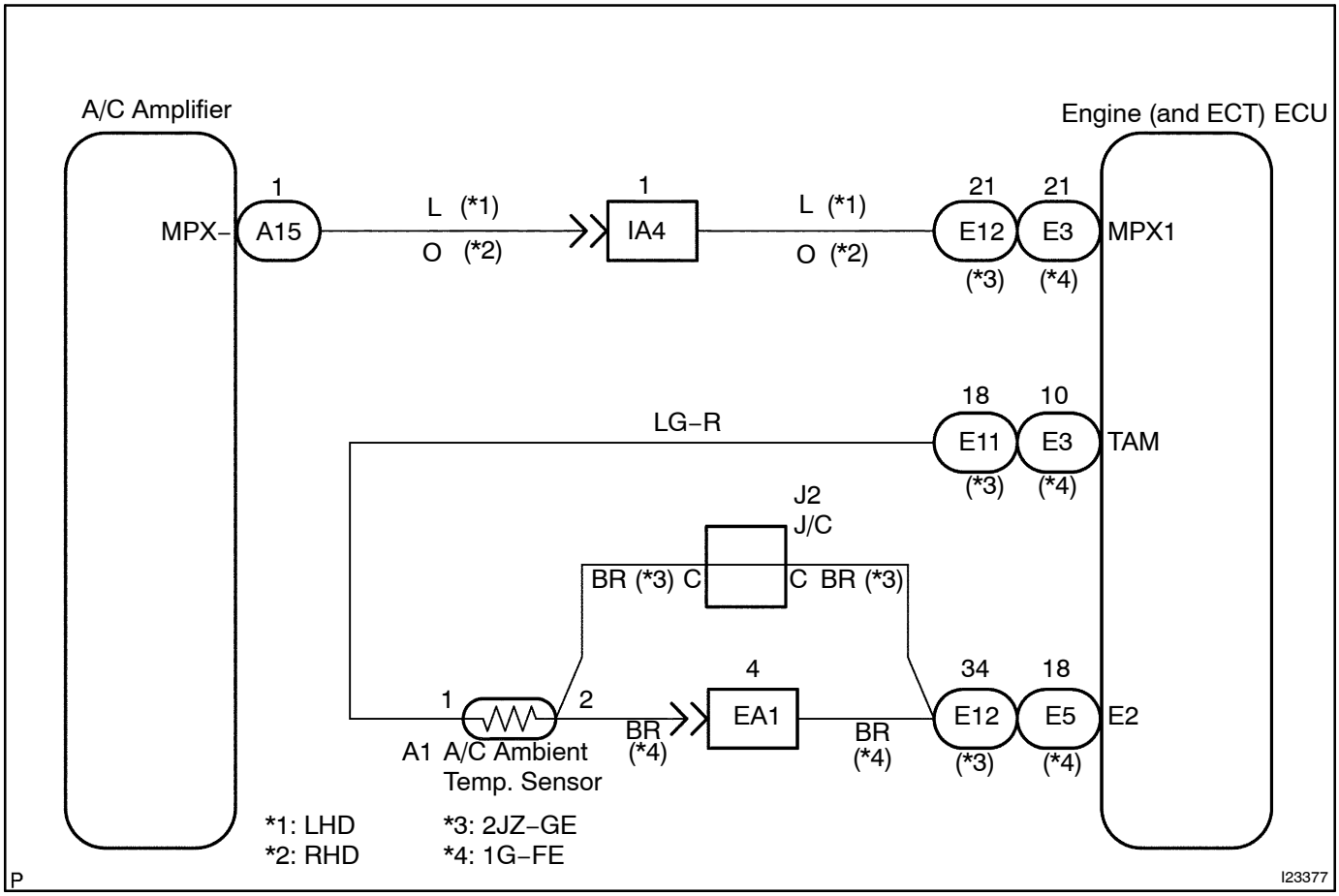
DTC	B1412	Ambient Temperature Sensor Circuit

CIRCUIT DESCRIPTION

This sensor detects the ambient temperature and sends the appropriate signals to the A/C amplifier.

DTC No.	Detection Item	Trouble Area
B1412	Open or short in ambient temperature sensor circuit.	• Ambient temperature sensor. • Harness or connector between ambient temperature sensor and engine (and ECT) ECU • Harness or connector between engine (and ECT) ECU and A/C amplifier • Engine (and ECT) ECU • A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
In case of using the hand–held tester, start the inspection step 1 and in case of not using the hand–held tester, start from step 2.

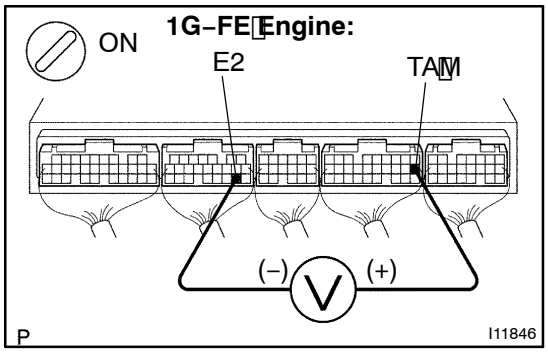
1	**Check ambient temp. sensor using hand–held tester.**

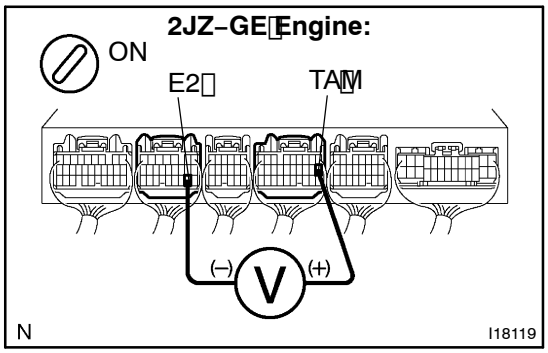
PREPARATION:
Connect the hand–held tester to the DLC3.
CHECK:
Check the ambient temp. sensor using DATA LIST.

OK ⇒ **Check and replace engine (and ECT) ECU.**

NG

2	**Check voltage between terminals TAM and E2 of engine (and ECT) ECU.**





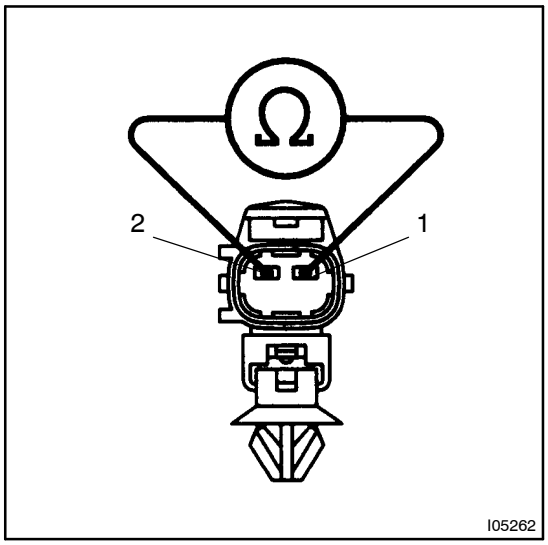
PREPARATION:
Remove engine (and ECT) ECU with connectors still connected.
CHECK:
(a) Turn ignition switch to ON.
(b) Measure voltage between terminals TAM and E2 of engine (and ECT) ECU connector at each temperature.
OK:
Voltage:
at 25°C (77°F): 1.35 – 1.75 V
at 40°C (104°F): 0.85 – 1.25 V
HINT:
As the temperature increases, the voltage decreases.

NG ⇒ **Go to step 3.**

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI–612). However, if DTC B1412 is displayed, check and replace engine (and ECT) ECU and A/C amplifier.

3	**Check ambient temperature sensor.**



PREPARATION:
Disconnect ambient temperature sensor.
CHECK:
Measure resistance between terminals 1 and 2 of ambient temperature sensor connector at each temperature.
OK:

Resistance:
at 25°C (77°F): 1.6 – 1.8 kΩ
at 50°C (122°F): 0.5 – 0.7 kΩ

HINT:
As the temperature increases, the resistance decreases.
NOTICE:
When installing the ambient temperature sensor, be sure to connect the sensor connector before connecting the battery.

NG → **Replace ambient temperature sensor.**

OK

4	**Check harness and connector between engine (and ECT) ECU and ambient temperature sensor (See page IN–34).**

NG → **Repair or replace harness or connector.**

OK

5	**Check harness and connector between engine (and ECT) ECU and A/C amplifier (See page IN–34).**

NG → **Repair or replace harness or connector.**

OK

Check and replace engine (and ECT) ECU or A/C amplifier.