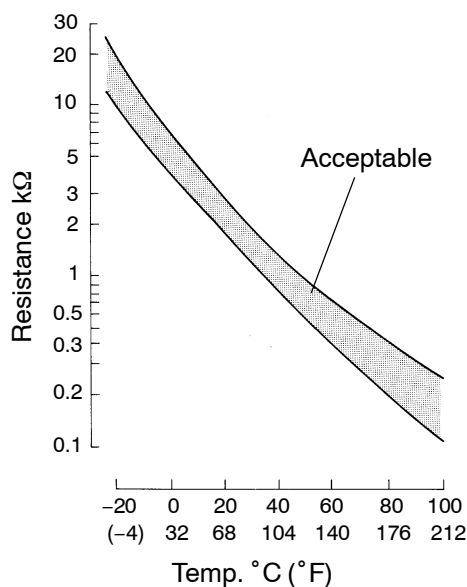


**DTC****P1115/23****Atmospheric Temperature Circuit****CIRCUIT DESCRIPTION**

Fig. 1

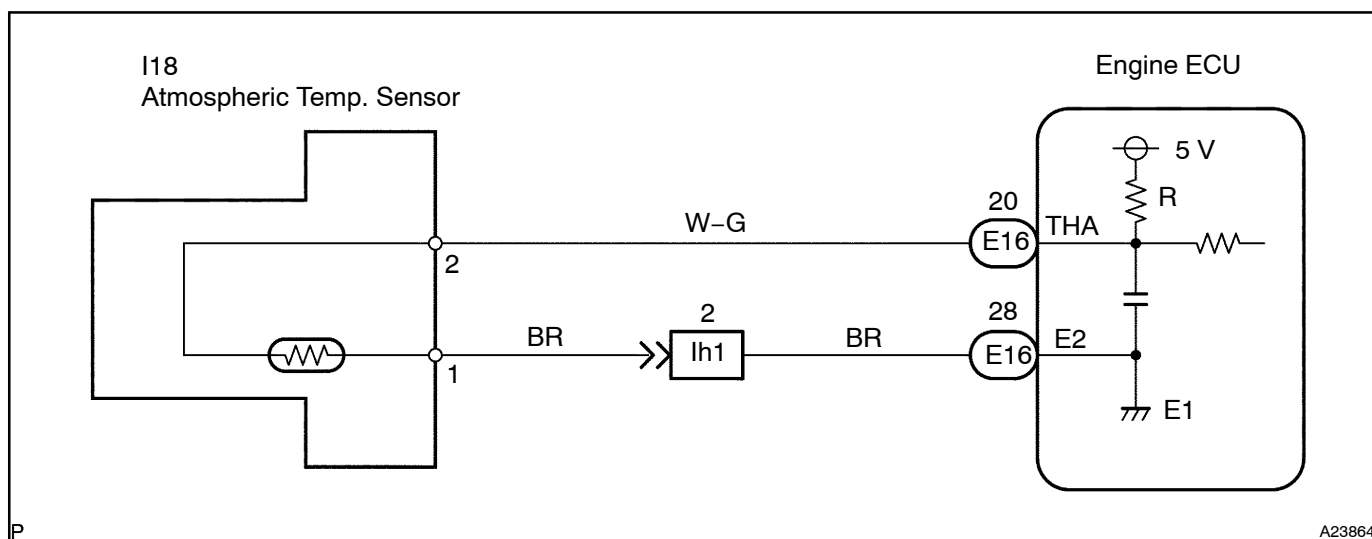


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The atmospheric temperature sensor is built into the intake manifold and senses the atmospheric temperature. A thermistor built in the sensor changes the resistance value according to the intake air temperature. The lower the atmospheric temperature, the greater the thermistor resistance value, and the higher the atmospheric temperature, the lower the thermistor resistance value (See Fig. 1).

The atmospheric temperature sensor is connected to the engine ECU. The 5 V power source voltage in the engine ECU is applied to the atmospheric temperature sensor from terminal THA via a resistor R. That is, the resistor R and the atmospheric temperature sensor are connected in series. When the resistance value of the atmospheric temperature sensor changes, according to changes in the atmospheric temperature, the voltage at terminal THA also varies. Based on this signal, the engine ECU increases the fuel injection volume to improve driveability during cold engine operation.

DTC No.	DTC Detection Condition	Trouble Area
P1115/23	Open or short in atmospheric temp. sensor circuit for 0.5 sec. or more	<ul style="list-style-type: none"> <li>• Open or short in atmospheric temp. sensor circuit</li> <li>• Atmospheric temp. sensor</li> <li>• Engine ECU</li> </ul>

**WIRING DIAGRAM**

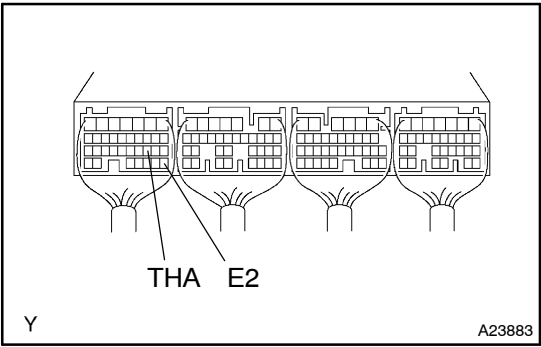
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# INSPECTION PROCEDURE

## HINT:

- If DTCs related to different systems that have terminal E2 as the ground terminal are output simultaneously, terminal E2 may have an open circuit.
- Read freeze frame data using the intelligent tester. Freeze frame data records the engine conditions when a malfunction is detected. When troubleshooting, freeze frame data can help determine if the vehicle was running or stopped, if the engine was warmed up or not, and other data from the time the malfunction occurred.

### 1 Check voltage between terminals THA and E2 of engine ECU connector.



#### PREPARATION:

- Remove the glove compartment door.
- Turn the ignition switch ON.

#### CHECK:

Measure the voltage between terminals THA and E2 of the engine ECU connector.

#### OK:

Intake Air Temp.	Voltage
20°C (68°F) (Engine is cool)	0.2 to 3.8 V
80°C (176°F) (Engine is hot)	0.1 to 1.5 V

OK

Check for intermittent problems  
(See page DI-4).

NG

### 2 Check atmospheric temperature sensor (See Pub. No. RM617E on page ED-7).

NG

Replace atmospheric temperature sensor.

OK

### 3 Check for open and short in harness and connector between engine ECU and atmospheric temperature sensor (See page IN-19).

NG

Repair or replace harness or connector.

OK

Check and replace engine ECU (See page  
IN-19).