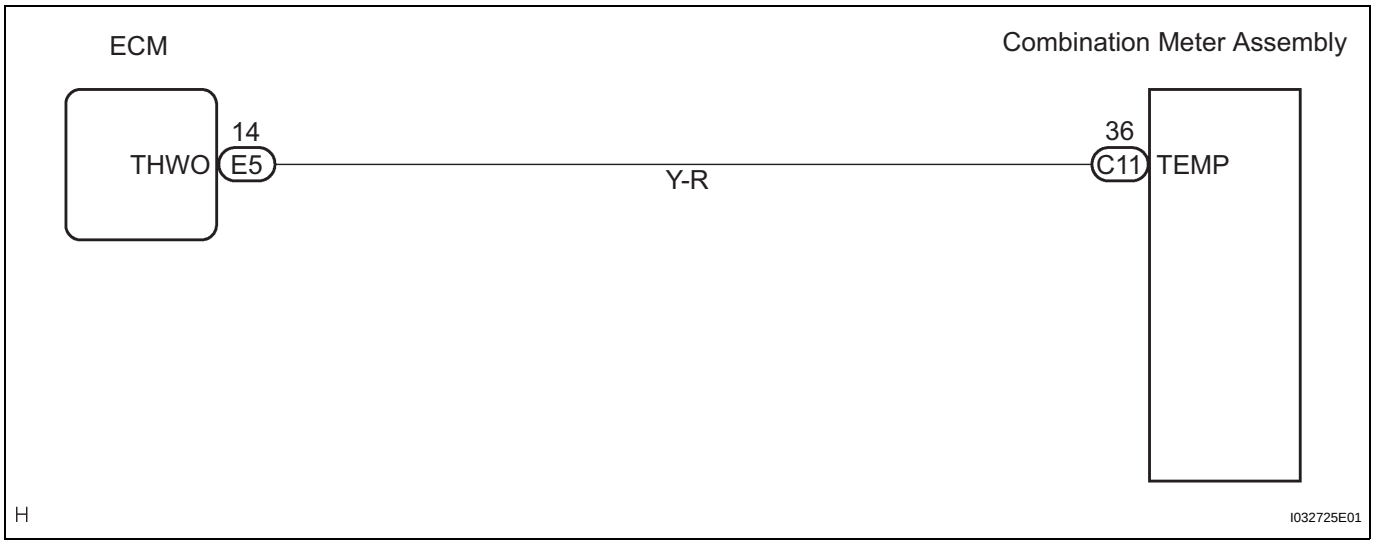
Engine Coolant Temperature Receiver Gauge Malfunction

WIRING DIAGRAM



ME

INSPECTION PROCEDURE

HINT:
If there is an open or short in the engine coolant temperature sensor circuit, the ECM outputs DTCs. Perform troubleshooting with the "SFI System (See page ES-30)".

1	READ VALUE OF INTELLIGENT TESTER

(a) Warm up the engine.
(b) Ignition switch off.
(c) Connect the intelligent tester to the DLC3.
(d) Turn the ignition switch to the ON position.
(e) Turn the tester ON.
(f) Enter following menus: DIAGNOSIS / OBD/MOBD / ENGINE / DATA LIST.
(g) Check values by referring to the table below.

ENGINE:

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
COOLANT TEMP	Coolant temperature/Min.: -40°C (-40°F), Max.: 140°C (284°F)	After warming up: 80 to 95°C (176 to 203°F)	If the value is "-40°C (-40°F)" or "140°C (284°F)", sensor circuit is open or shorted.

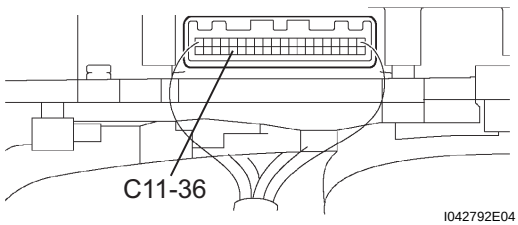
OK:
Coolant temperature displayed on the tester is between 80°C (176°F) and 95°C (203°F) after warning up.

NG → **GO TO SFI SYSTEM**

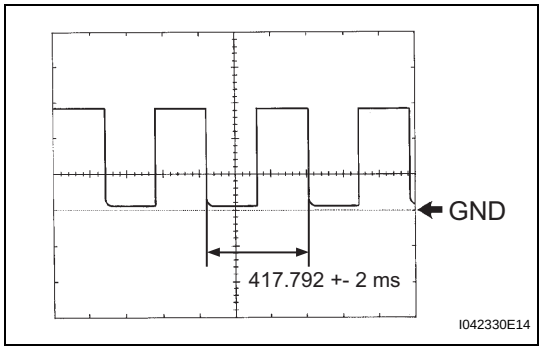
OK

2	**INSPECT COMBINATION METER ASSEMBLY**

Combination Meter Assembly Wire Harness View:



(a) Check the input signal waveform.
  (1) Remove the combination meter with connectors still connected.
  (2) Connect the oscilloscope to terminal C11-36 and body ground.
  (3) Start the engine.



  (4) Check the signal waveform according to the condition(s) in the table below.

Item	Condition
Tool setting	5 V/DIV., 10 ms/DIV.
Vehicle condition	Turn the ignition switch to the ON position

OK:
The waveform is displayed as shown in the illustration.

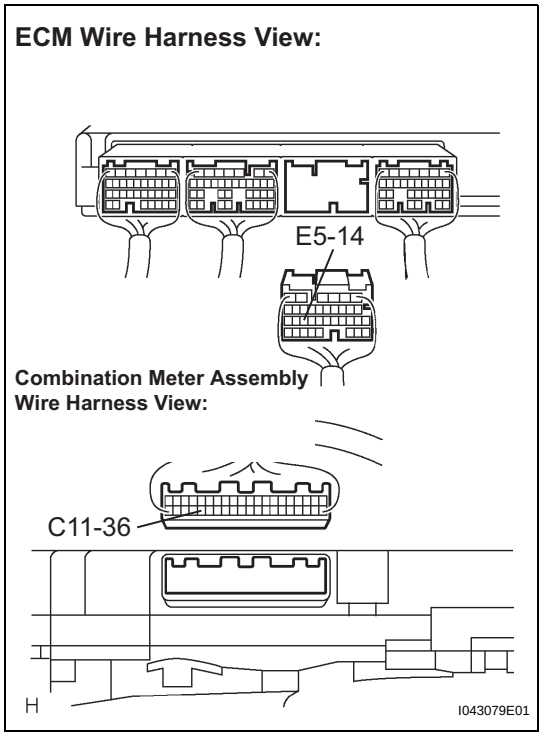
NG → **Go to step 3**

OK

REPLACE COMBINATION METER ASSEMBLY

ME

3	CHECK HARNESS AND CONNECTOR (COMBINATION METER - ECM)



(a) Disconnect the C11 and E5 connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection	Condition	Specified condition
C11-36 - E5-14	Always	Below 1 Ω
C11-36 - Body ground	Always	10 kΩ or higher

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

OK

GO TO SFI SYSTEM

ME