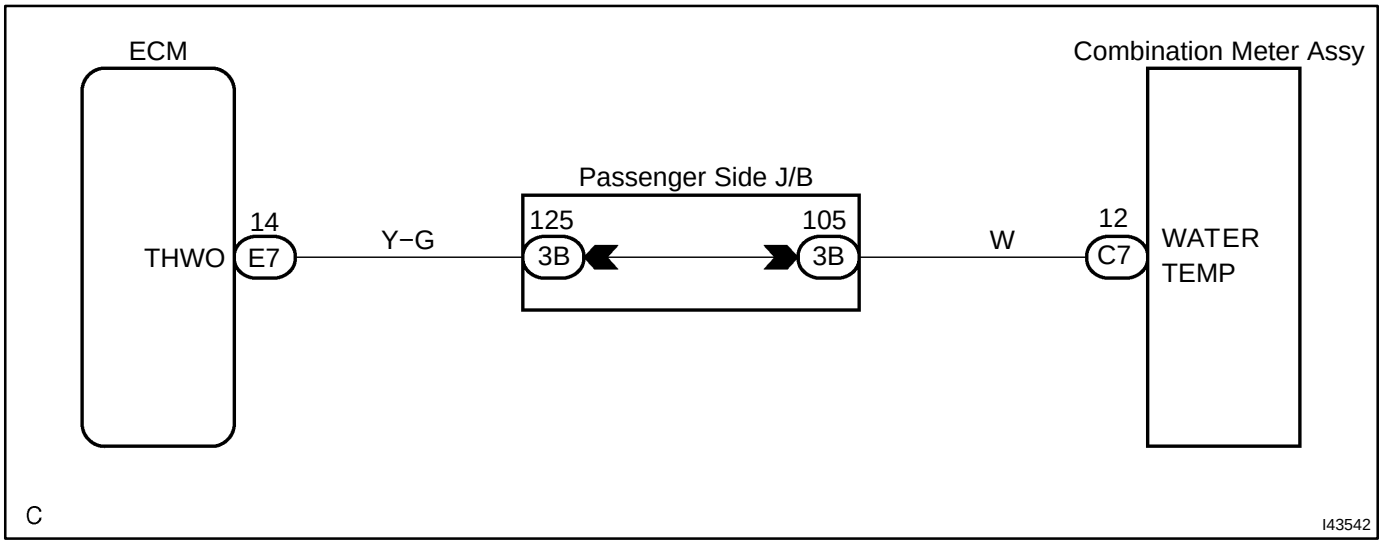
MALFUNCTION IN WATER TEMPERATURE RECEIVER GAUGE

WIRING DIAGRAM



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 05−496 (1MZ−FE/3MZ−FE), 05−5 (2AZ−FE) or 05−353 (2AZ−FE (Partial Zero Emission Vehicle))".

1	READ VALUE OF HAND−HELD TESTER

(a) Operate the hand−held tester according to the steps on the display and select "DATA LIST".

ECM:

Item	Measurement Item/ Range (Display)	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:

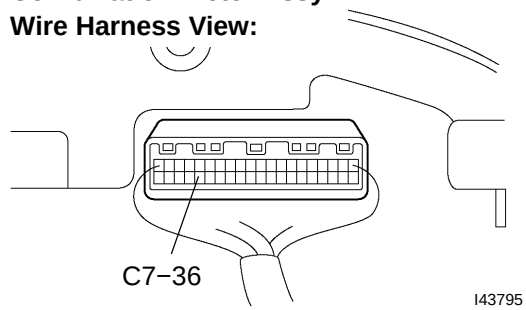
Coolant temperature displayed on the tester is between 80°C (176°F) and 95°C (203°F) after warning up.

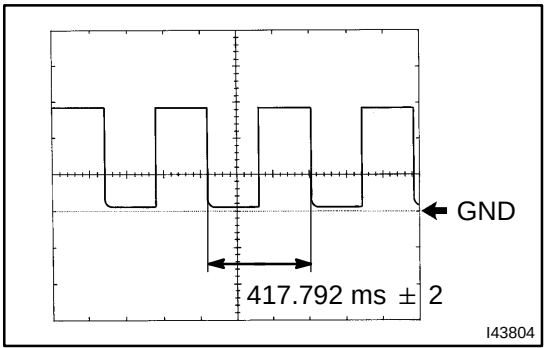
NG → **GO TO ENGINE CONTROL SYSTEM (SEE PAGE 05−5(2AZ−FE), 05−353(2AZ−FE(PZEV), 05−496(1MZ−FE/3MZ−FE))**

OK

2	INSPECT COMBINATION METER ASSY

Combination Meter Assy Wire Harness View:





INSPECTION USING OSCILLOSCOPE

(a) Remove the combination meter with the connectors still connected.

(b) Connect the oscilloscope to terminal C7−36 and body ground.

(c) Start the engine.

(d) Check the signal wave form according to the condition(s) in the table below.

Item	Condition
Tool setting	5 V/DIV, 10 ms/DIV
Vehicle condition	Ignition switch ON

OK:

As shown in the illustration

NG → **REPLACE COMBINATION METER ASSY (SEE PAGE 71−29)**

OK

3	CHECK HARNESS OR CONNECTOR(BETWEEN WATER TEMPERATURE RECEIVER GAUGE AND COMBINATION METER ASSY)

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

OK

GO TO ENGINE CONTROL SYSTEM (SEE PAGE 05−5(2AZ−FE), 05−353(2AZ−FE(PZEV) or 05−496(1MZ−FE/3MZ−FE))