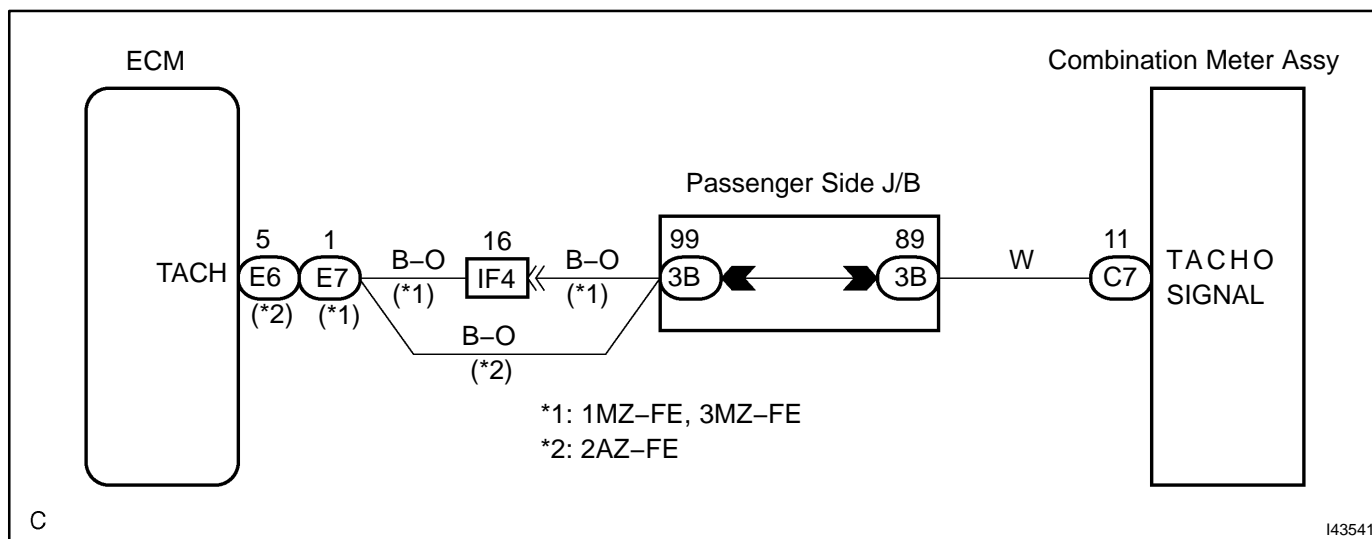


MALFUNCTION IN TACHOMETER

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Start the inspection from step 1 when using the hand-held tester and start from step 2 when not using the hand-held tester.

1 READ VALUE OF HAND-HELD TESTER(ENGINE SPEED SIGNAL)

(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
ENGINE SPD	Engine speed/Min.: 0 rpm, Max.: 16,383 rpm	Almost same as the actual engine speed (When engine is running)	-

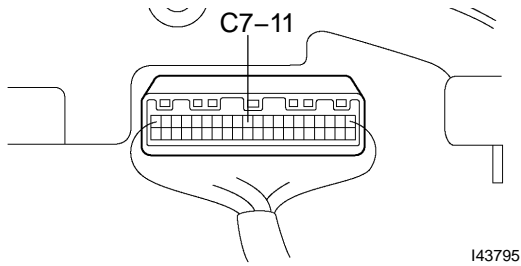
OK:

Engine speed displayed on the tester is almost the same as the actual engine speed.

NG

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

OK

2 INSPECT COMBINATION METER ASSY**Combination Meter Assy Wire Harness View:****INSPECTION USING OSCILLOSCOPE**

- (a) Check the input signal wave form.
- (1) Remove the combination meter assy with the connectors still connected.
 - (2) Connect the oscilloscope to terminal C7-11 and body ground.
 - (3) Start the engine.

- (4) 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	Engine idle speed

OK:**As shown in the illustration****NG****Go to step 3****OK****REPLACE COMBINATION METER ASSY (SEE PAGE 71-29)****3 CHECK HARNESS OR CONNECTOR(BETWEEN ECM AND COMBINATION METER ASSY)****NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE ECM**