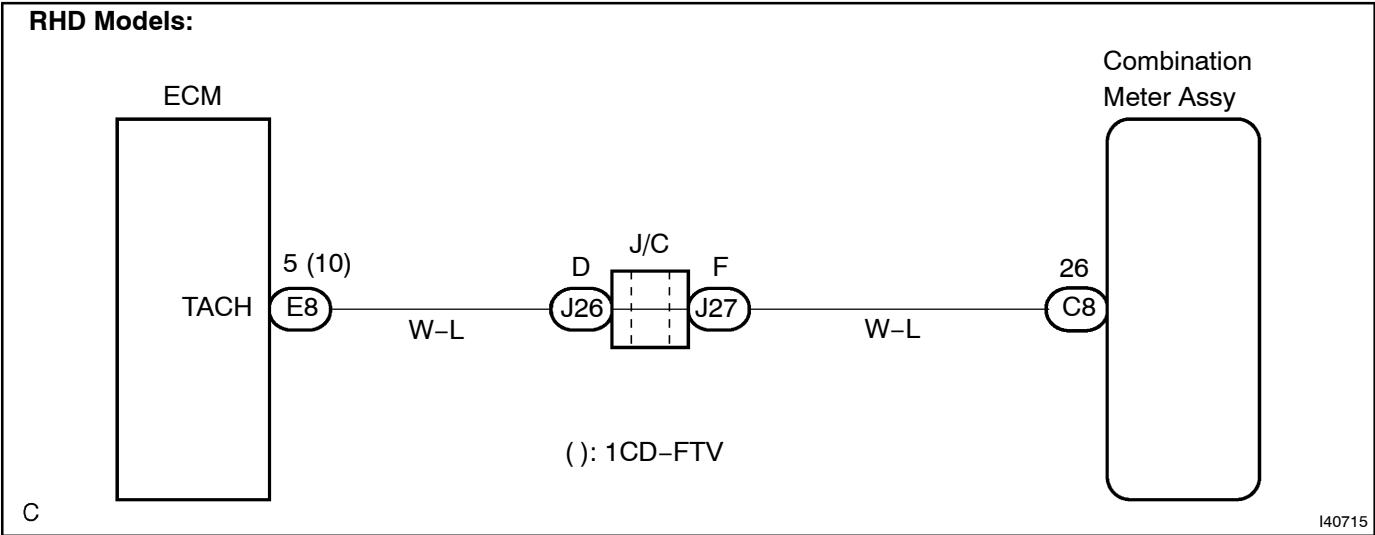
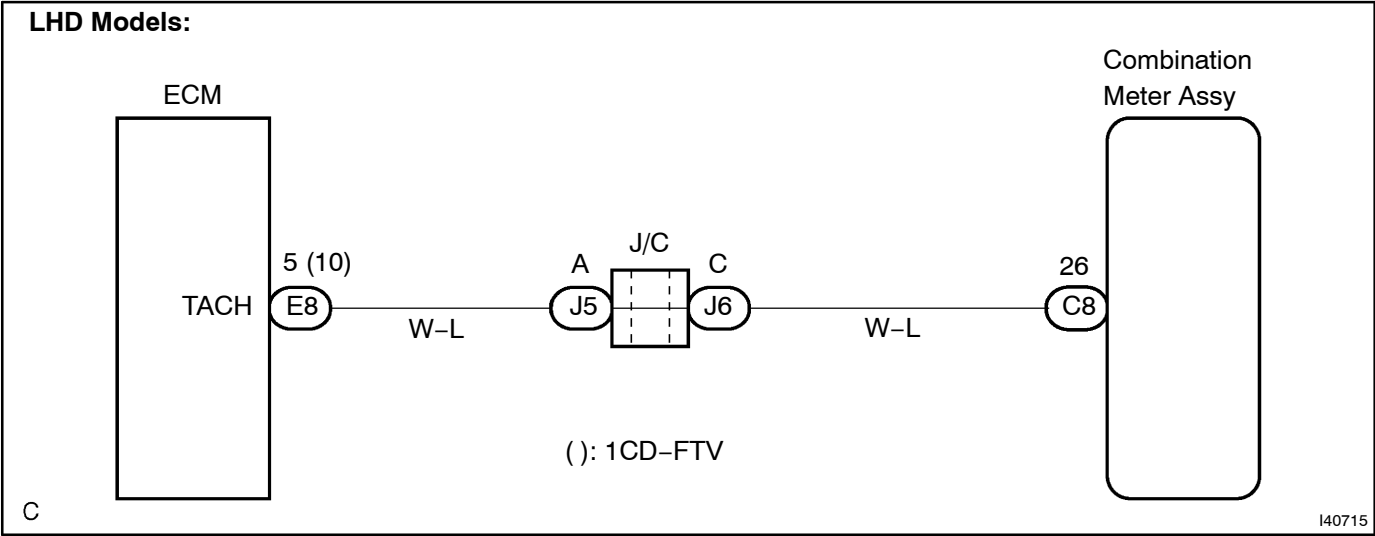


MALFUNCTION IN TACHOMETER

WIRING DIAGRAM



## INSPECTION PROCEDURE

## 1 READ VALUE OF INTELLIGENT TESTER (VEHICLE SPEED SIGNAL)

(a) Operate the intelligent 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 the same as the actual engine speed (When engine is running)	-

OK:

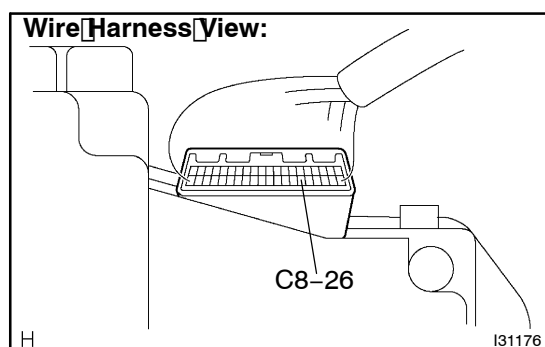
Engine speed displayed on the tester is almost the same as the actual engine speed.

NG

GO TO ENGINE CONTROL SYSTEM  
(SEE PAGE 05-3, 05-253, 05-436)

OK

## 2 INSPECT COMBINATION METER ASSY



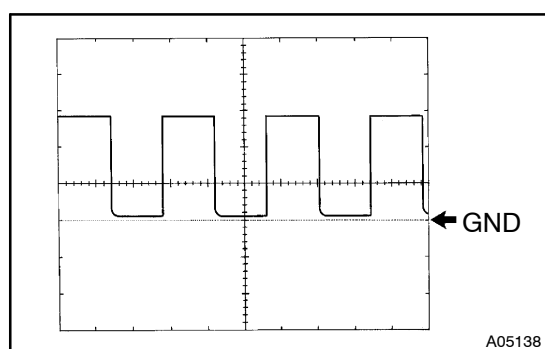
## INSPECTION USING OSCILLOSCOPE

- (a) Check the input signal waveform.
  - (1) Remove the combination meter assy.
  - (2) Connect the oscilloscope to terminal C8-26 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	Engine idle speed

OK:

As shown in the illustration



OK	A
NG (1AZ-FE)	B
NG (1CD-FTV)	C

B

Go to step 3

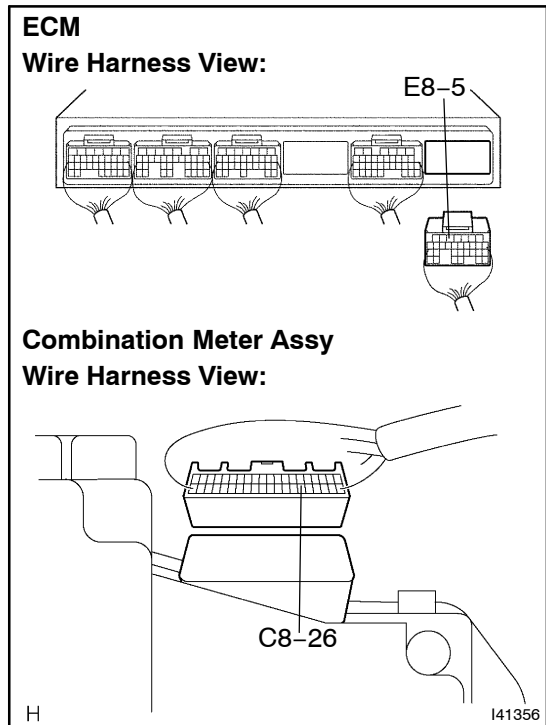
C

Go to step 4

A

## REPLACE COMBINATION METER ASSY

AVENSIS/VERSO/PICNIC Supplement (RM1032E)

**3 CHECK HARNESS AND CONNECTOR(BETWEEN ECM AND COMBINATION METER ASSY)**

- (a) Disconnect the C8 and E8 connectors.  
(b) Measure the resistance according to the value(s) in the table below.

**Standard:**

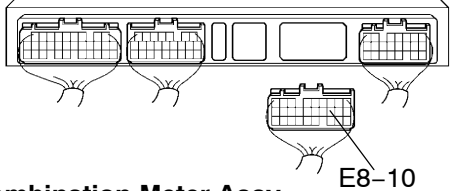
Tester Connection	Specified Condition
C8-26 - E8-5	Below 1 $\Omega$
C8-26 - Body ground	10 k $\Omega$ or higher

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE ECM**

**4 CHECK HARNESS AND CONNECTOR(BETWEEN ECM AND COMBINATION METER ASSY)**

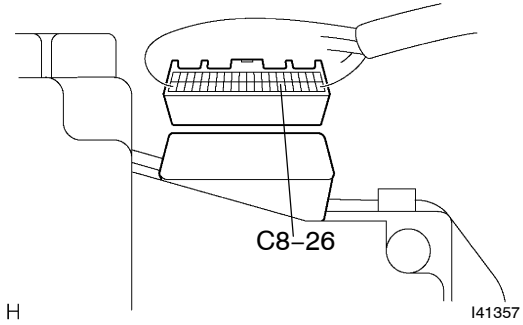
**ECM**

**Wire Harness View:**



**Combination Meter Assy**

**Wire Harness View:**



- (a) Disconnect the C8 and E8 connectors.
- (b) Measure the resistance according to the value(s) in the table below.

**Standard:**

Tester Connection	Specified Condition
C8-26 - E8-10	Below 1 $\Omega$
C8-26 - Body ground	10 k $\Omega$ or higher

**NG**

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**

**REPLACE ECM**