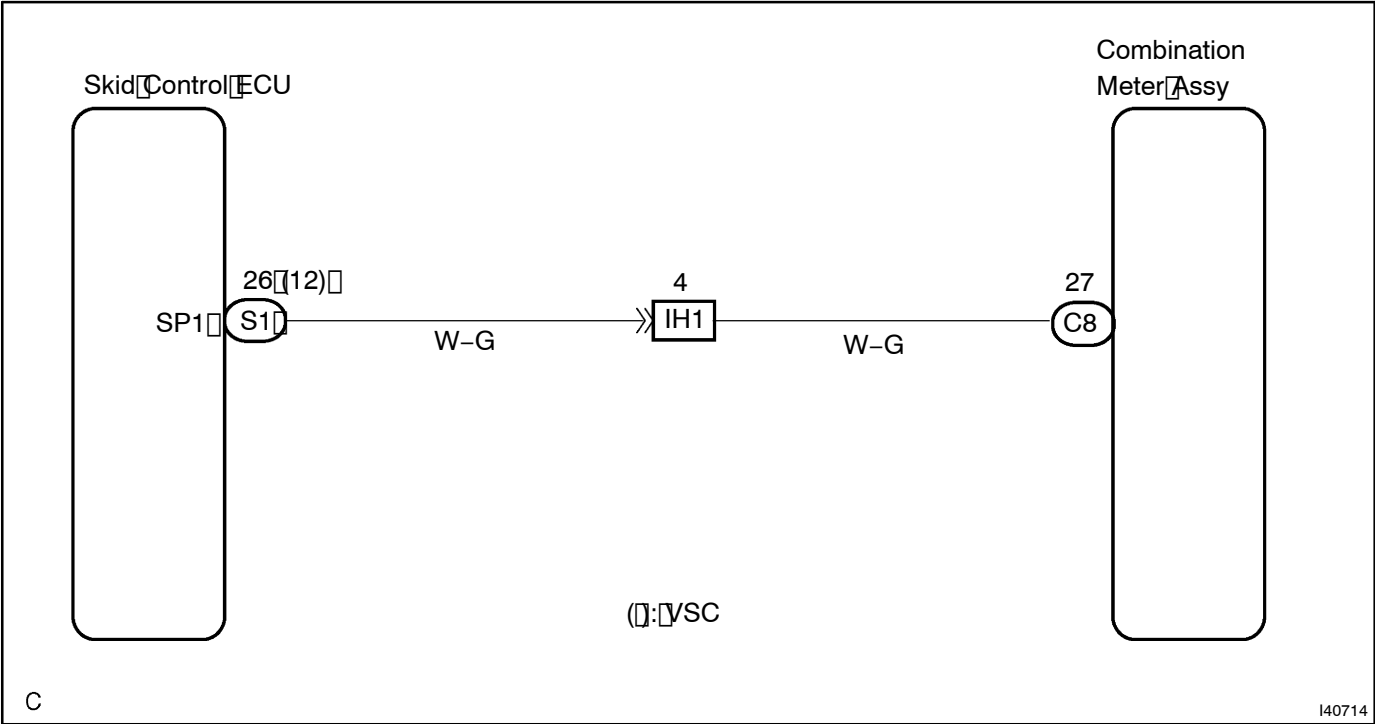


MALFUNCTION IN SPEEDOMETER

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".  
**ABS:**

Item	Measurement Item/ Range (Display)	Normal Condition	Diagnostic Note
(FR/FL/RR/RL) Wheel Speed	Vehicle speed (Min.: 0 km/h (0 mph), Max.: 326 km/h (202 mph))	Almost same as actual speed (When driving)	-

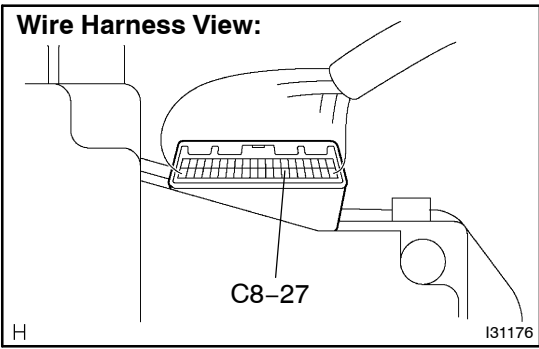
**OK:**  
Vehicle speed displayed on the tester is almost the same as the actual vehicle speed.

**NG** → **GO TO BRAKE CONTROL SYSTEM (SEE PAGE 05-606)**

**OK**

2 INSPECT COMBINATION METER ASSY

Wire Harness View:



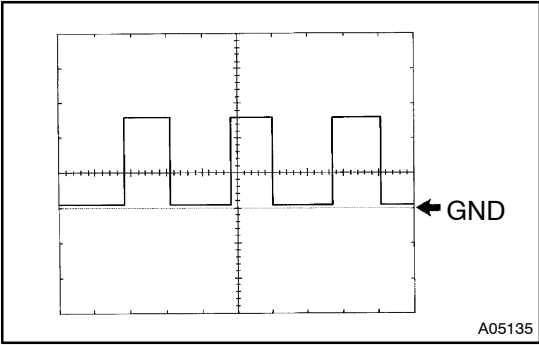
INSPECTION USING OSCILLOSCOPE

- (a) Check the input signal waveform.
- (1) Remove the combination meter assy.
  - (2) Connect the oscilloscope to terminal C8-27 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, 20 ms/ DIV
Vehicle condition	Driving at approx. 20 km/h (12 mph)

**OK:**  
**As shown in the illustration**

**HINT:**  
As vehicle speed increases, the cycle of the signal waveform narrows.



OK	A
NG (w/ VSC)	B
NG (w/ ABS)	C

**B** Go to step 3

**C** Go to step 5

**A**

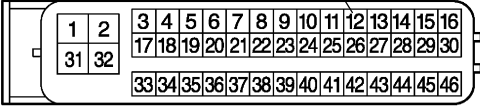
REPLACE COMBINATION METER ASSY

3

CHECK HARNESS AND CONNECTOR (BETWEEN ABS & TRACTION ACTUATOR ASSY AND COMBINATION METER ASSY)

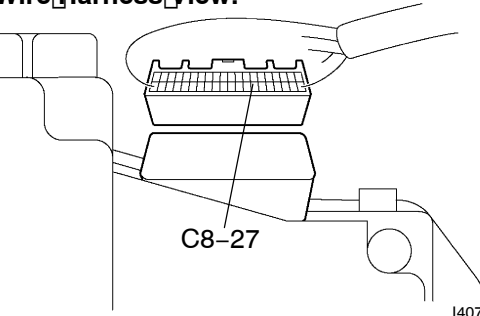
ABS & Traction Actuator Assy (VSC)

Wire Harness View:



Combination Meter Assy

Wire Harness View:



H

I40717

- (a) Disconnect the C8 and S1 connectors.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
C8-27 – S1-12	Below 1 Ω
C8-27 – Body Ground	10 kΩ or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

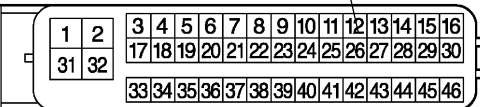
OK

4

INSPECT ABS & TRACTION ACTUATOR ASSY (VSC)

ABS & Traction Actuator Assy (VSC)

Wire Harness View:



I40133

- (a) Disconnect the S1 connector.
- (b) Measure the voltage according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Condition
S1-12 – Body Ground	Ignition switch ON	10 to 14 V

NG

REPLACE COMBINATION METER ASSY

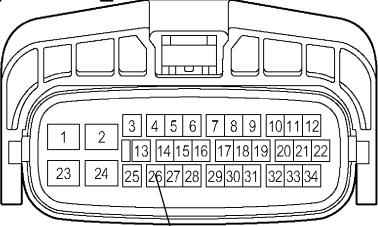
OK

GO TO BRAKE CONTROL SYSTEM (SEE PAGE 05-606)

**5 CHECK HARNESS AND CONNECTOR (BETWEEN BRAKE ACTUATOR ASSY AND COMBINATION METER ASSY)**

**Brake Actuator Assy (ABS)**

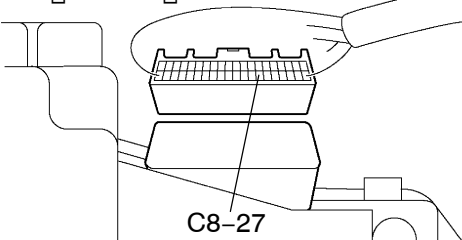
**Wire Harness View:**



S1-26

**Combination Meter Assy**

**Wire Harness View:**



C8-27

H

I40718

- (a) Disconnect the C8 and S1 connectors.  
(b) Measure the resistance according to the value(s) in the table below.

**Standard:**

Tester Connection	Specified Condition
C8-27 - S1-26	Below 1 Ω
C8-27 - Body Ground	10 kΩ or higher

NG

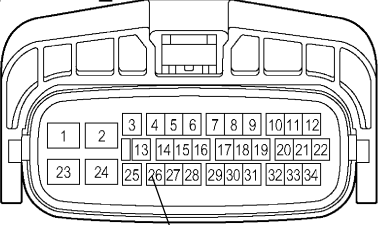
**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

**6 INSPECT BRAKE ACTUATOR ASSY (ABS)**

**Brake Actuator Assy (ABS)**

**Wire Harness View:**



S1-26

I40719

- (a) Disconnect the S1 connector.  
(b) Measure the voltage according to the value(s) in the table below.

**Standard:**

Tester Connection	Condition	Specified Condition
S1-26 - Body Ground	Ignition switch ON	10 to 14 V

NG

**REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

**GO TO BRAKE CONTROL SYSTEM (SEE PAGE 05-606)**