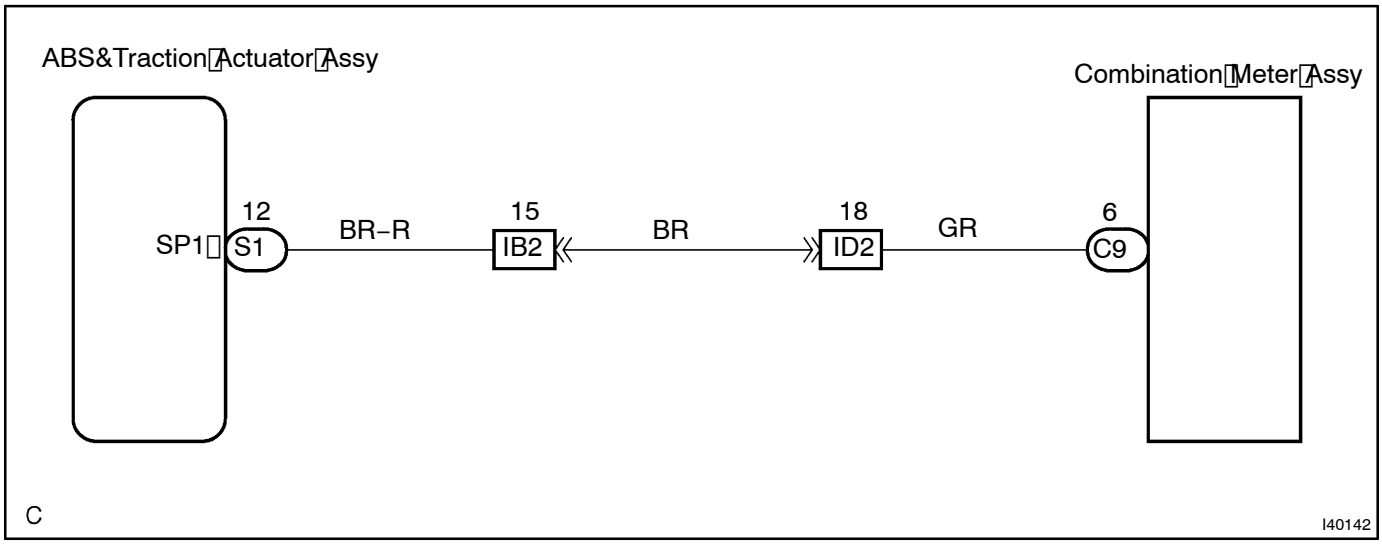
MALFUNCTION IN SPEEDOMETER

WIRING DIAGRAM



INSPECTION PROCEDURE

1 **PERFORM ACTIVE TEST BY INTELLIGENT TESTER II**

(a) Operate the intelligent tester II according to the steps on the display and select the "ACTIVE TEST".

METER:

Item	Test Details	Diagnostic Note
SPEED METER	0 / 40(25) / 80(50) / 120(75) / 160(99) / 200(124) km/h(mph)	–

OK:

Needle indication is normal.

NG → **REPLACE COMBINATION METER ASSY (SEE PAGE 71–17)**

OK

2 **READ VALUE OF INTELLIGENT TESTER II(VEHICLE SPEED SIGNAL)**

(a) Operate the intelligent tester II according to the steps on the display and select the "DATA LIST".

METER:

Item	Measurement Item/ Range (Display)	Normal Condition	Diagnostic Note
SPEED METER	Vehicle speed / Min.: 0 km/h (0 mph), Max.: 255 km/h (158 mph)	Almost same as actual vehicle speed (When driving)	–

OK:

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

NG → **Go to step 3**

OK

REPLACE COMBINATION METER ASSY (SEE PAGE 71–17)

3	READ VALUE OF INTELLIGENT TESTER II (VEHICLE SPEED SIGNAL)

(a) Operate the Intelligent tester II according to the steps on the display and select the "DATA LIST".

ABS:

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

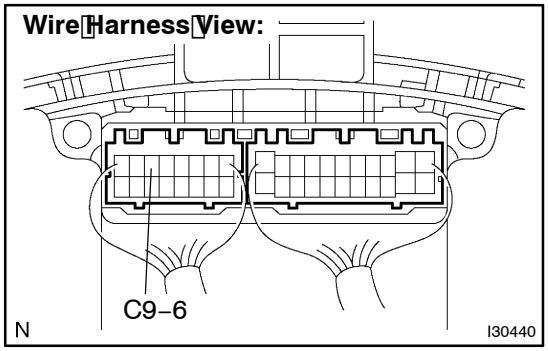
OK:

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

NG	GO TO BRAKE CONTROL SYSTEM (SEE PAGE 05–153)

OK

4	INSPECT COMBINATION METER ASSY



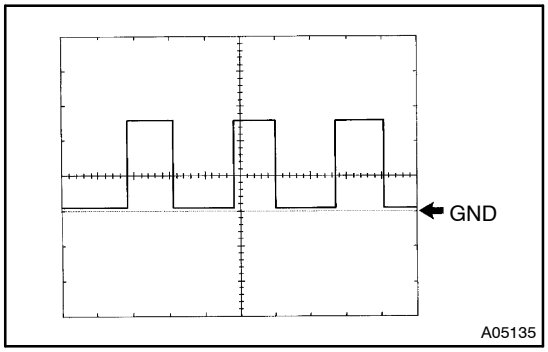
INSPECTION USING OSCILLOSCOPE

(a) Check the input signal waveform.

(1) Remove the combination meter assy.

(2) Connect the oscilloscope to the terminals C9–6 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.

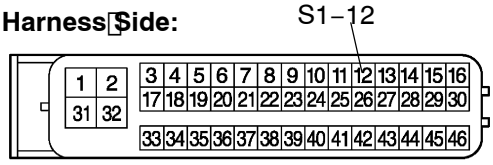
NG	Go to step 5

OK

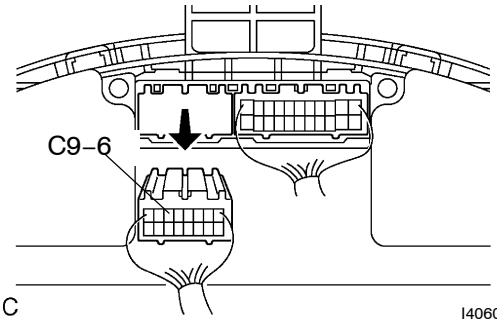
REPLACE COMBINATION METER ASSY (SEE PAGE 71–17)

5	CHECK HARNESS AND CONNECTOR(ABS&TRACTION ACTUATOR ASSY(VSC) – COMBINATION METER ASSY)(SEE PAGE 01–23)

ABS&Traction Actuator Assy (VSC) Connector Front View of Wire Harness Side:



Combination Meter Assy Wire Harness View:



(a) Disconnect the C9 and S1 connectors.
(b) Measure the resistance according to the value(s) in the table below.

Standard:

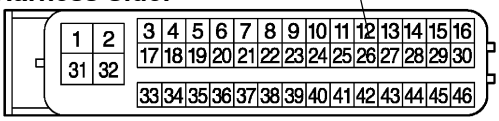
Tester Connection	Condition	Specified Condition
C9–6 – S1–12	Always	Below 1 Ω
C9–6 – Body ground	Always	10 kΩ or higher

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

OK

6	INSPECT COMBINATION METER ASSY

ABS&Traction Actuator Assy (VSC) Connector Front View of Wire Harness Side:



(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 (SEE PAGE 71–17)**

OK

GO TO BRAKE CONTROL SYSTEM(SEE PAGE 05–163)