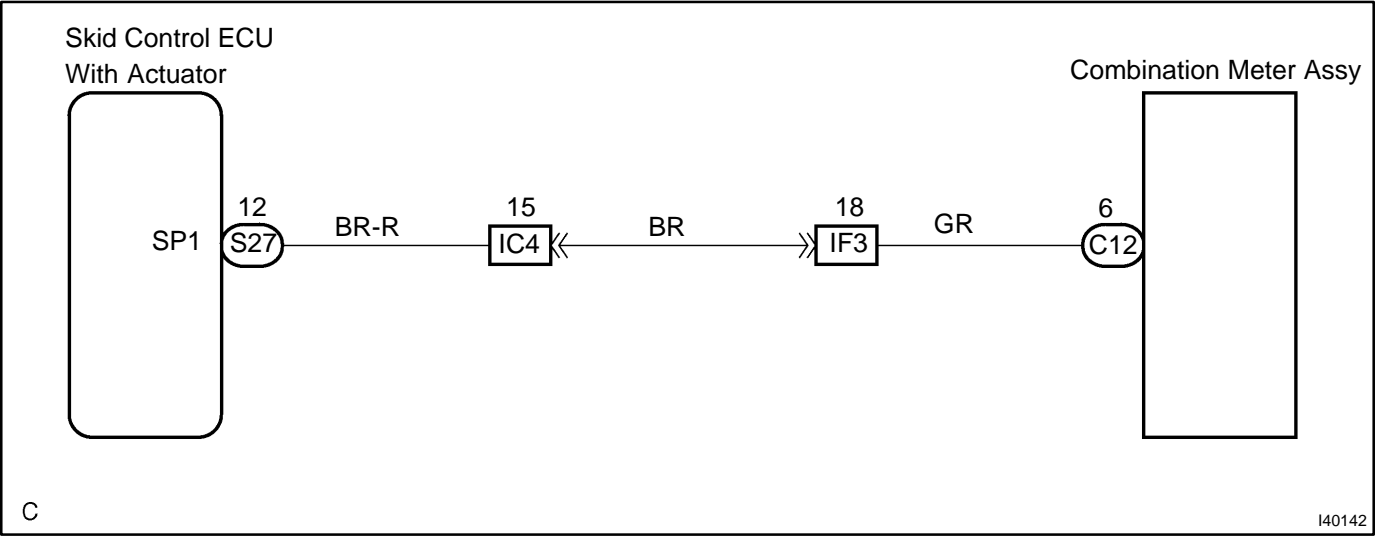


MALFUNCTION IN SPEEDOMETER

WIRING DIAGRAM



INSPECTION PROCEDURE

1 PERFORM ACTIVE TEST BY HAND-HELD TESTER

(a) Operate the hand-held tester according to the steps on the display and select the "ACTIVE TEST".

METER:

Item	Test Details	Diagnostic Note
SPEED METER	0 / 40(24) / 80(48) / 120(72) / 160(96) / 200(120) km/h(mph)	-

OK:
Needle indication is normal.

NG

REPLACE COMBINATION METER ASSY
(SEE PAGE 71-18)

OK

2 READ VALUE OF HAND-HELD TESTER(VEHICLE SPEED SIGNAL)

- (a) Operate the hand-held tester 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.: 1 km/h (1 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 71-18)****3 READ VALUE OF HAND-HELD TESTER(VEHICLE SPEED SIGNAL)**

- (a) Operate the hand-held tester 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)	-

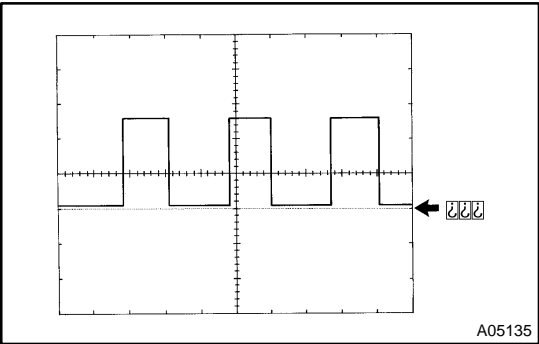
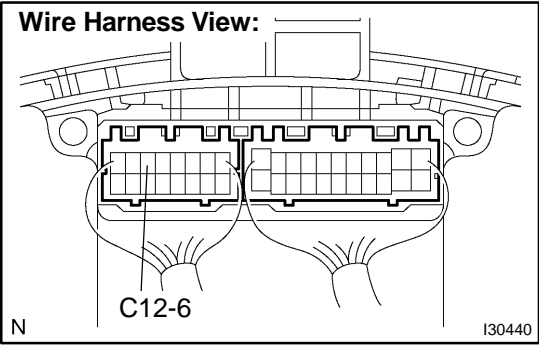
OK:

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

NG**GO TO BRAKE CONTROL SYSTEM
(SEE PAGE 05-761)****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 C12-6 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

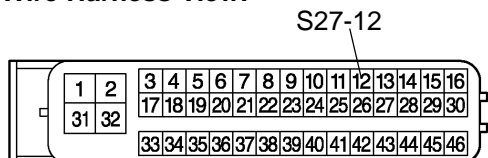
Go to step 5

OK

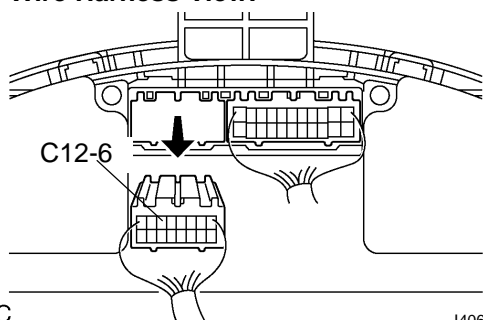
REPLACE COMBINATION METER ASSY(SEE PAGE 71-18)

5 CHECK HARNESS AND CONNECTOR(ABS&TRACTION ACTUATOR ASSY(VSC) - COMBINATION METER ASSY)(SEE PAGE 01-26)

ABS&Traction Actuator Assy (VSC) Wire Harness View:



Combination Meter Assy Wire Harness View:



- Disconnect the C12 and S27 connectors.
- Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Condition
C12-6 - S27-12	Always	Below 1 Ω
C12-6 - Body ground	Always	10 k Ω or higher

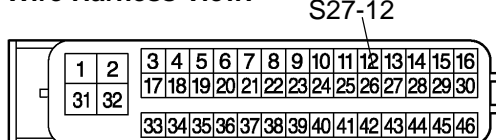
NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

6 INSPECT COMBINATION METER ASSY

ABS&Traction Actuator Assy (VSC) Wire Harness View:



- Disconnect the S27 connector.
- Measure the voltage according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Condition
S27-12 - Body ground	Ignition switch ON	10 to 14 V

NG

REPLACE COMBINATION METER ASSY
(SEE PAGE 71-18)

OK

GO TO BRAKE CONTROL SYSTEM(SEE PAGE 05-761)