CA

FAIL-SAFE CHART

1. FAIL-SAFE FUNCTION

(a) When communication fails in any of the main wires (communication lines) due to a short circuit or other causes, the fail-safe function, which is specified for each system, operates to prevent the system from malfunctioning.

(b) The table below shows the effects on each system when communication is impossible. For further details, refer to each system.

Function	ECM	Network Gateway ECU	Skid control ECU with Actuator	Yaw Rate Sensor	Steering Angle Sensor	Distance control ECU	Condition when communication impossible	DTC detection (Driver detectable)
VSC control	B	-	A	B	B	-	• ABS control stops • VSC control stops • Traction control stops	• VSC warning light illuminates • ABS warning light illuminates • Brake warning light illuminates • Slip indicator illuminates
Dynamic laser cruise control	B	-	B	B	B	A	Dynamic laser cruise control stops	CRUISE main indicator illuminates
Air conditioning control	B	A (Air conditioning system)	-	-	-	-	Air conditioning stops	No indicators or buzzers illuminate
Meter display	B	A (Meter)	B	-	-	-	Light does not come on or remains on	Light does not operate normally

HINT:

- A: Main control judgment system
- B: Location where necessary control information is input

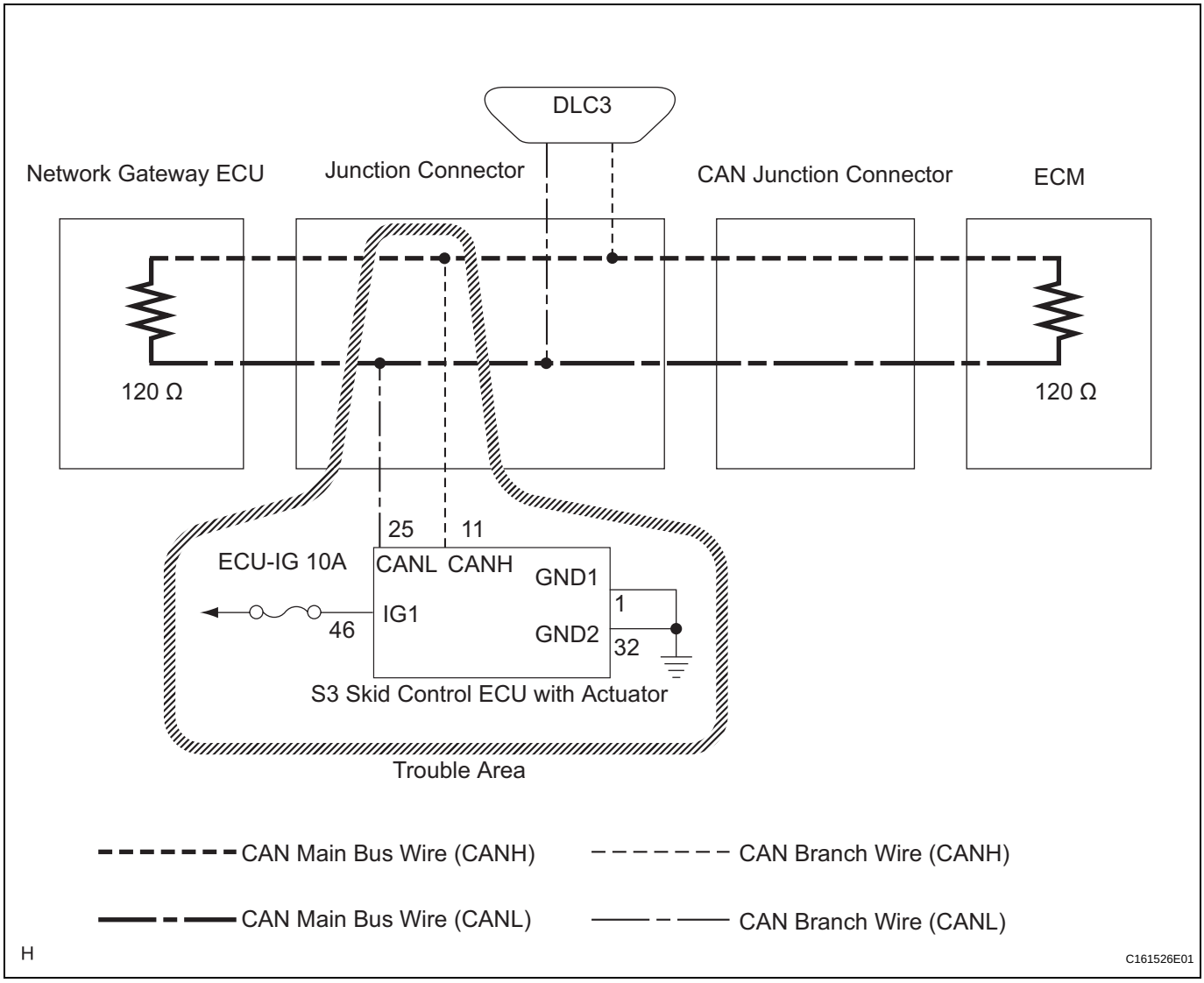
Skid Control ECU Communication Stop Mode

DESCRIPTION

Detection Item	Symptom	Trouble Area
Skid Control ECU Communication Stop Mode	• "ABS/VSC/TRC" is not displayed on the "Communication Bus Check" screen of the intelligent tester • Applies to "Skid Control ECU Communication Stop Mode" in the "DTC COMBINATION TABLE"	• Power source circuit of skid control ECU • Skid control ECU branch wire or connector • Skid control ECU with Actuator

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WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

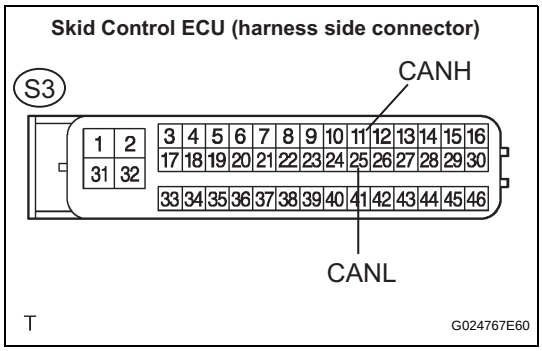
- **Turn the ignition switch off before measuring the resistances of CAN bus main wires and CAN bus branch wires.**
- **After the ignition switch is turned off, check that the key reminder warning system and light reminder warning system are not in operation.**

- **Before measuring the resistance, leave the vehicle as is for at least 1 minute and do not operate the ignition switch, any other switches, or the doors. If any doors need to be opened in order to check connectors, open the doors and leave them open.**

HINT:
Operating the ignition switch, any switches, or any doors triggers related ECU and sensor communication with the CAN. This communication will cause the resistance value to change.

CA

1 CHECK OPEN IN CAN BUS WIRE (SKID CONTROL ECU BRANCH WIRE)



(a) Turn the ignition switch off.
(b) Disconnect the skid control ECU with Actuator connector.
(c) Measure the resistance according to the value(s) in the table below.

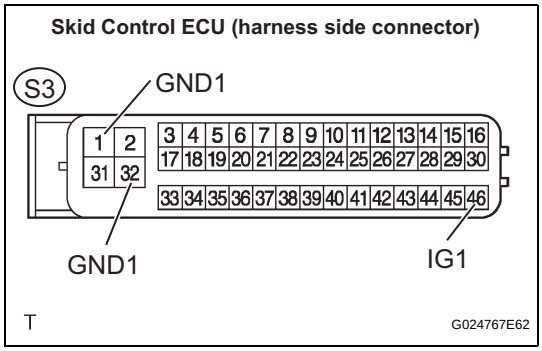
Standard resistance

Tester Connection	Condition	Specified Condition
S3-11 (CANH) - S3-25 (CANL)	Ignition switch off	54 to 69 Ω

NG → **REPAIR OR REPLACE CAN BUS BRANCH WIRE OR CONNECTOR**

OK

2 CHECK WIRE HARNESS (IG1, GND1, GND2)



(a) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
S3-1 (GND1) - body ground	Always	Below 1 Ω
S3-32 (GND2) - body ground	Always	Below 1 Ω

(b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Condition	Specified Condition
S3-46 (IG1) - body ground	Ignition switch on	10 to 14 V

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

OK

REPLACE ABS & TRACTION ACTUATOR ASSEMBLY (See page BC-179)