

PROBLEM SYMPTOMS TABLE

RESULT LIST OF CHECK CAN BUS LINE

Symptom	Suspected area	See page
Open in CAN Main Wire	Check CAN Main Wire for Disconnection	CA-28
Short in CAN Bus Line	Check CAN Bus Lines for Short Circuit	CA-31
Short to +B in CAN Bus Line	Check CAN Bus line for Short to +B	CA-41
Short to GND in CAN Bus Line	Check CAN Bus line for Short to GND	CA-50
Open in One Side of CAN Branch Wire	Check for an Open in One Side of the CAN Branch Wire	CA-60

COMMUNICATION STOP MODE TABLE

Symptom	Suspected area	See page
"ENGINE" not displayed on intelligent tester via CAN VIM	ECM Communication Stop Mode	CA-23
"ABS/VSC/TRAC" not displayed on intelligent tester via CAN VIM	Skid Control ECU Communication Stop Mode	CA-17
"STEERING_SENSOR" not displayed on intelligent tester via CAN VIM	Steering Angle Sensor Communication Stop Mode	CA-19
"YAW DECELERATE" not displayed on intelligent tester via CAN VIM	Yaw Rate Sensor Communication Stop Mode	CA-21

TERMINALS OF ECU

NOTICE:

- Turn the ignition switch off before measuring the resistances of the CAN main wire and the CAN branch wire.
- After the ignition switch is turned off, check that the key reminder warning system is 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 doors need to be opened in order to check connectors, open the doors and leave them open.

HINT:

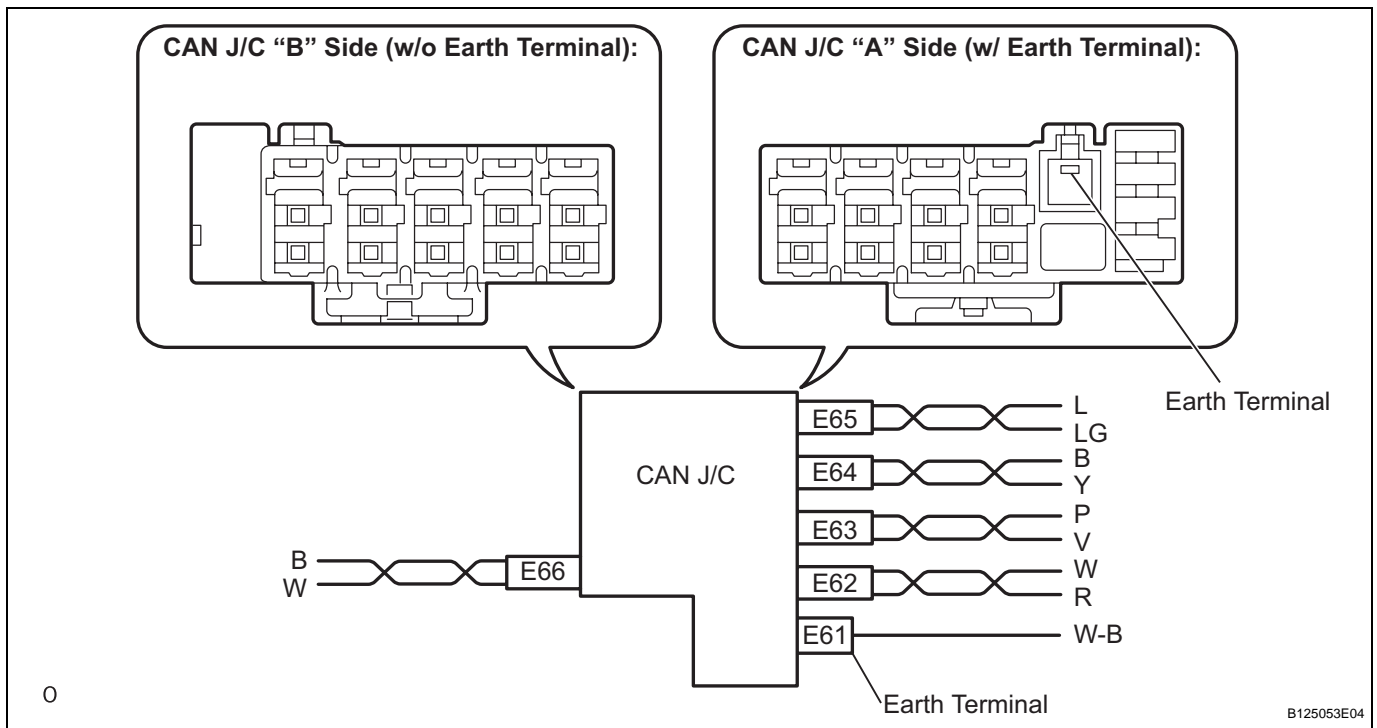
Operating the ignition switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1. CAN JUNCTION CONNECTOR

- (a) CAN J/C connectors.

HINT:

- The connectors connected to the CAN J/C can be distinguished by the colors of the bus lines and the connecting side of the connector.
- E62, E63, E64 and E65 are interchangeable.



Wiring color

CAN J/C connectors ("A" side, w/ earth terminal)	Color (CAN-H Side)	Color (CAN-L Side)
ECM (E62)	W	R
DLC3 (E63)	P	V
Steering angle sensor (E64)	B	Y

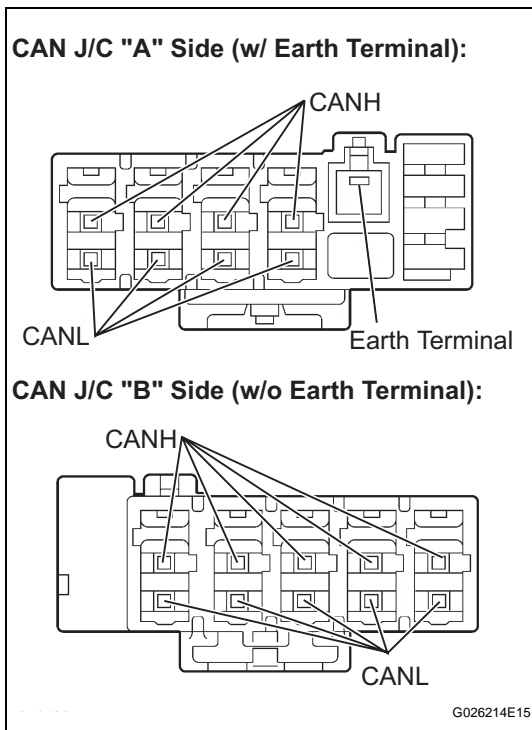
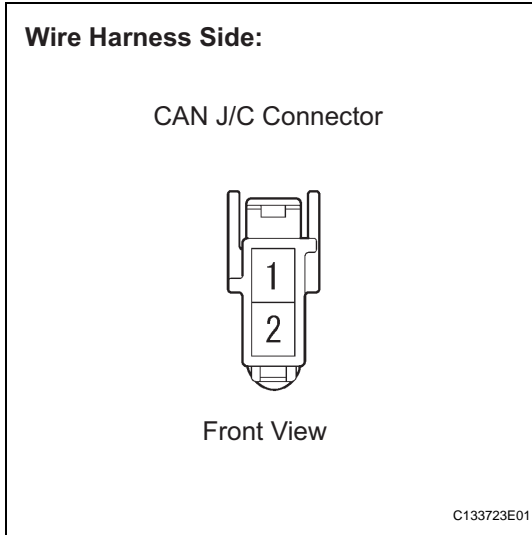
CAN J/C connectors ("A" side, w/ earth terminal)	Color (CAN-H Side)	Color (CAN-L Side)
Yaw rate sensor (E65)	L	LG

Wiring color

CAN J/C connectors ("B" side, w/o earth terminal)	Color (CAN-H Side)	Color (CAN-L Side)
Skid control ECU (E66)	B	W

(b) The terminals of the CAN J/C connectors.

Terminal	Terminal symbol
1	CAN-H
2	CAN-L

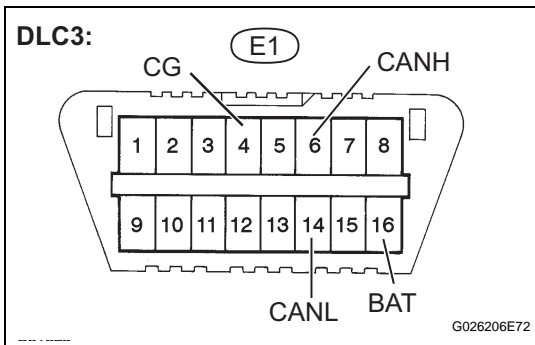
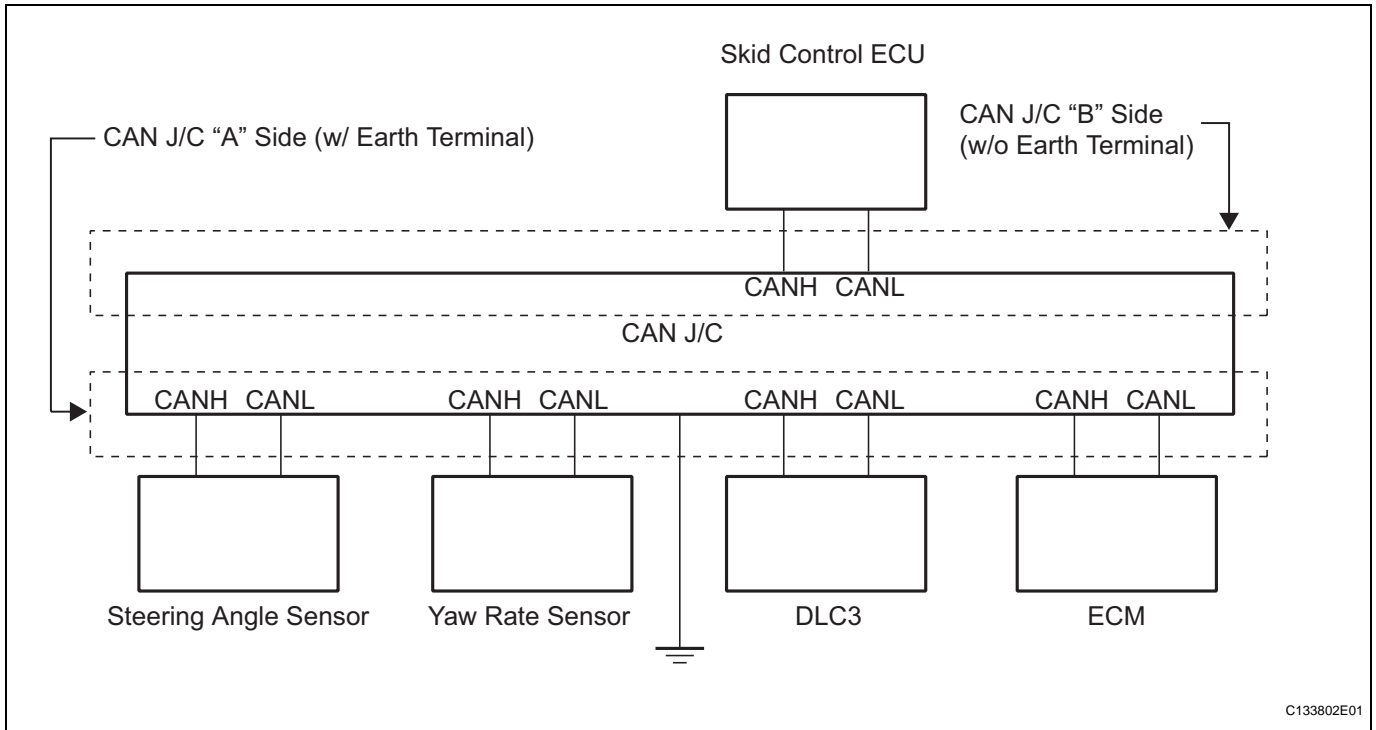


(c) Measure the resistance.

Standard resistance

Terminal	Specified Condition
CANH - CANL	108 to 132 Ω

(d) Wiring diagram for identifying CAN J/C connectors.

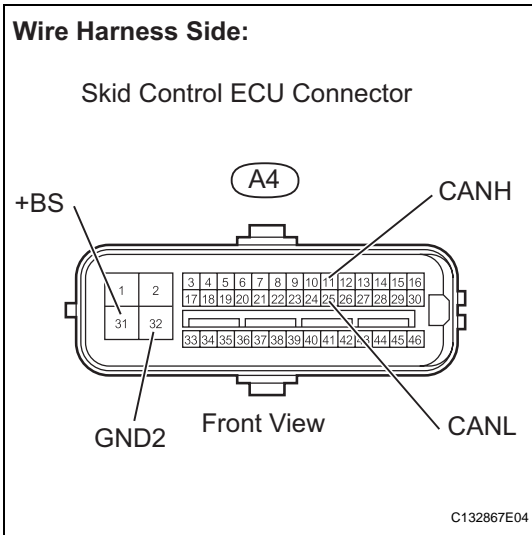


2. DLC3

- (a) Turn the ignition switch OFF.
- (b) Measure the resistance.

Standard resistance

Terminals	Wiring Color	Condition	Specified Condition
E1-6 (CANH) - E1-14 (CANL)	P - V	Ignition Switch OFF	54 to 69 Ω
E1-6 (CANH) - E1-4 (CG)	P - W-B	Ignition Switch OFF	200 Ω or more
E1-14 (CANL) - E1-4 (CG)	V - W-B	Ignition Switch OFF	200 Ω or more
E1-6 (CANH) - E1-16 (BAT)	P - O	Ignition Switch OFF	6 kΩ or more
E1-14 (CANL) - E1-16 (BAT)	V - O	Ignition Switch OFF	6k Ω or more

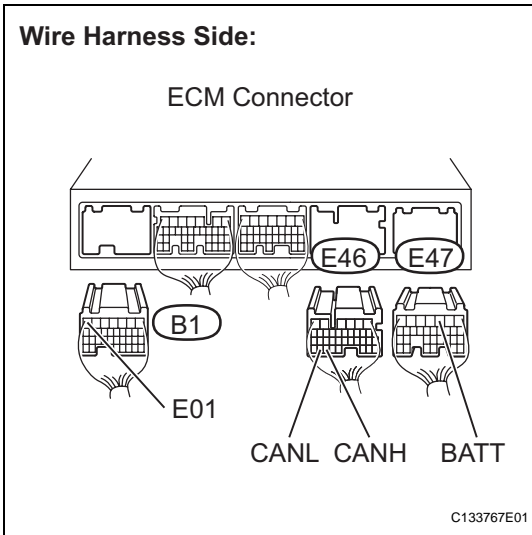


3. SKID CONTROL ECU

- (a) Turn the ignition switch OFF.
- (b) Disconnect the A4 skid control ECU connector.
- (c) Measure the resistance.

Standard resistance

Terminals	Wiring Color	Condition	Specified Condition
A4-11 (CANH) - A4-25 (CANL)	B - W	Ignition Switch OFF	54 to 69 Ω
A4-11 (CANH) - A4-32 (GND2)	B - W-B	Ignition Switch OFF	200 Ω or more
A4-25 (CANL) - A4-32 (GND2)	W - W-B	Ignition Switch OFF	200 Ω or more
A4-11 (CANH) - A4-31 (+BS)	B - Y	Ignition Switch OFF	6 kΩ or more
A4-25 (CANL) - A4-31 (+BS)	W - Y	Ignition Switch OFF	6 kΩ or more

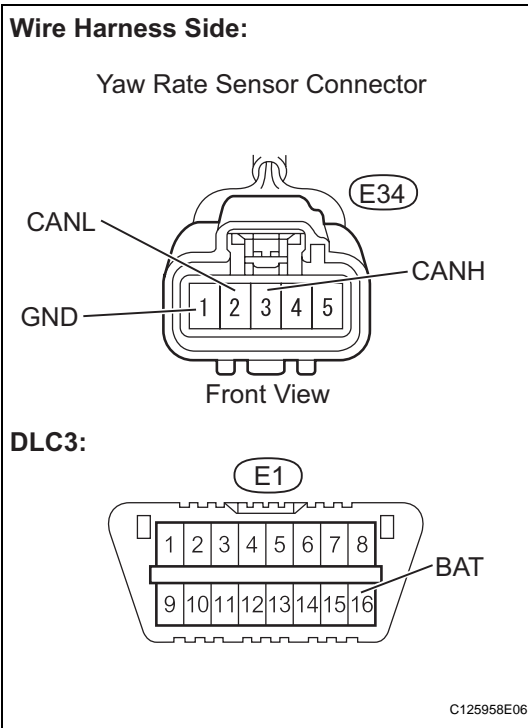


4. ECM

- (a) Turn the ignition switch OFF.
- (b) Disconnect the B1, E46 and E47 ECM connectors.
- (c) Measure the resistance.

Standard resistance

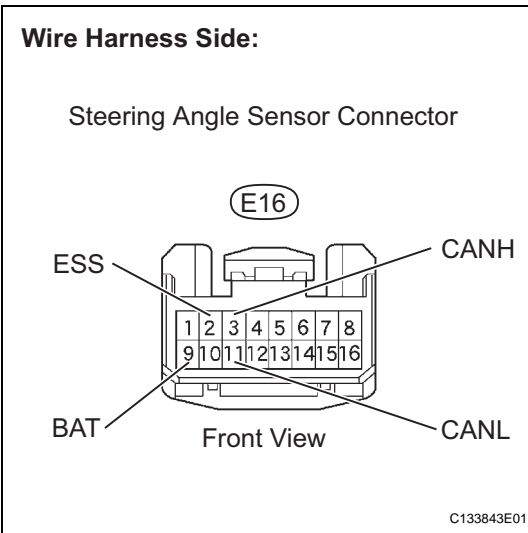
Terminals	Wiring Color	Condition	Specified Condition
E46-33 (CANH) - E46-34 (CANL)	W - R	Ignition switch OFF	108 to 132 Ω
E46-33 (CANH) - B1-7 (E01)	W - BR	Ignition switch OFF	200 Ω or more
E46-34 (CANL) - B1-7 (E01)	R - BR	Ignition switch OFF	200 Ω or more
E46-33 (CANH) - E47-3 (BATT)	W - L	Ignition switch OFF	6 kΩ or more
E46-34 (CANL) - E47-3 (BATT)	R - L	Ignition switch OFF	6 kΩ or more

**5. YAW RATE SENSOR**

- (a) Turn the ignition switch OFF.
- (b) Disconnect the E34 yaw rate sensor connector.
- (c) Measure the resistance.

Standard resistance

Terminals	Wiring Color	Condition	Specified Condition
E34-3 (CANH) - E34-2 (CANL)	L - LG	Ignition switch OFF	54 to 69 Ω
E34-3 (CANH) - E34-1 (GND)	L - W-B	Ignition switch OFF	200 Ω or more
E34-2 (CANL) - E34-1 (GND)	LG - W-B	Ignition switch OFF	200 Ω or more
E34-3 (CANH) - E1-16 (BAT)	L - O	Ignition switch OFF	6 k Ω or more
E34-2 (CANL) - E1-16 (BAT)	LG - O	Ignition switch OFF	6 k Ω or more

**6. STEERING ANGLE SENSOR**

- (a) Turn the ignition switch OFF.
- (b) Disconnect the E16 steering angle sensor connector.
- (c) Measure the resistance.

Standard resistance

Terminals	Wiring Color	Condition	Specified Condition
E16-3 (CANH) - E16-11 (CANL)	B - Y	Ignition switch OFF	54 to 69 Ω
E16-3 (CANH) - E16-2 (ESS)	B - W-B	Ignition switch OFF	200 Ω or more
E16-11 (CANL) - E16-2 (ESS)	Y - W-B	Ignition switch OFF	200 Ω or more
E16-3 (CANH) - E16-9 (BAT)	B - W-R	Ignition switch OFF	6 k Ω or more
E16-11 (CANL) - E16-9 (BAT)	Y - W-R	Ignition switch OFF	6 k Ω or more