

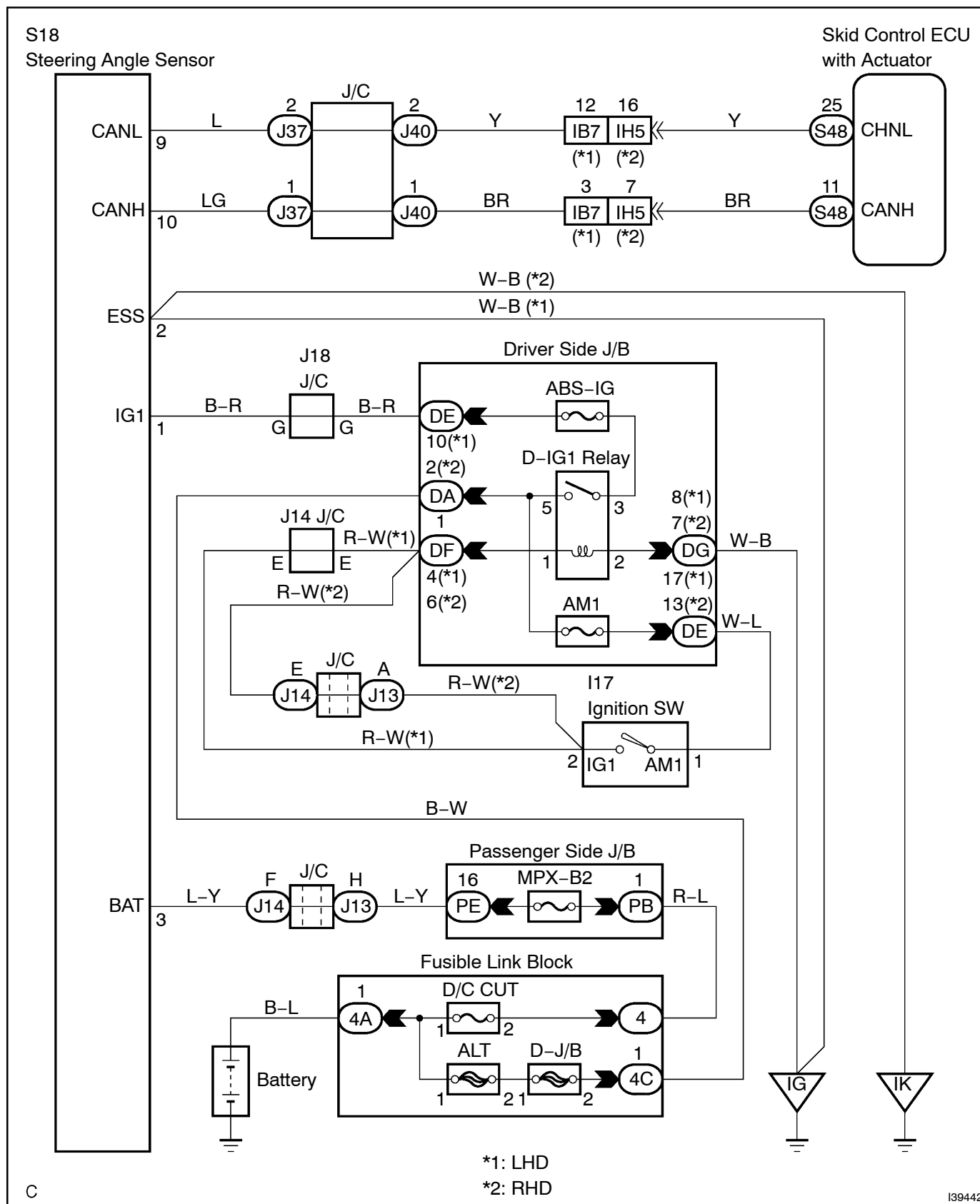
DTC	C1231/31	MALFUNCTION IN STEERING ANGLE SENSOR CIRCUIT
------------	-----------------	---

CIRCUIT DESCRIPTION

The steering angle sensor signal is sent to the skid control ECU through the CAN communication system. When there is a malfunction in the communication, it will be detected by the diagnosis function.

DTC No.	DTC Detecting Condition	Trouble Area
C1231/31	When ECU IG1 terminal voltage is 9.5 V or more, the steering angle sensor malfunction signal is received.	• Steering angle sensor • Steering angle sensor circuit • Steering angle sensor power supply • CAN communication system

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

- When U0121/94, U0123/62, U0124/95 or U0126/63 are output together with C1231/31, inspect and repair the trouble areas indicated by U0121/94, U0123/62, U0124/95 or U0126/63 first.
- When the speed sensor or the yaw rate sensor has trouble, DTCs for the steering angle sensor may be output even when the steering angle sensor is normal. When DTCs for the speed sensor or yaw rate sensor are output together with other DTCs for the steering angle sensor, inspect and repair the speed sensor and yaw rate sensor first, and then inspect and repair the steering angle sensor.

1 CHECK HARNESS AND CONNECTOR(MOMENTARY INTERRUPTION)

- (a) Using the intelligent tester II, check for any momentary interruption in the wire harness and connectors between the skid control ECU and the steering angle sensor ([see page 05-385](#)).

Item	Measurement Item / Range (Display)	Normal Condition
Steering Open	Steering sensor open detection	OPEN : Mormentary interruption

OK:

There are no momentary interruptions.

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

2 READ VALUE OF INTELLIGENT TESTER II(STEERING ANGLE SENSOR VALUE)

- (a) Connect the intelligent tester II to the DLC3.
 (b) Start the engine.
 (c) Select the DATA LIST mode on the intelligent tester II.

Item	Measurement Item / Range (Display)	Normal Condition
Steering Angle Sensor	Steering sensor/ Min.: -1152 deg, Max.: 1150.875 deg	Left turn: Increase Right turn: Decrease

- (d) Check that the steering angle sensor value of the steering angle sensor observed in the intelligent tester II changes when the steering wheel is moved.

OK:

Steering angle value changes.

NG

Go to step 3

OK

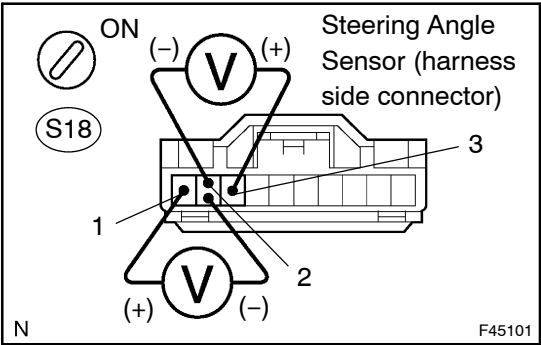
REPLACE ABS & TRACTION ACTUATOR ASSY ([SEE PAGE 32-53](#))

NOTICE:

When replacing ABS & TRACTION Actuator assy, perform zero point calibration ([see page 05-387](#)).

3

CHECK TERMINAL VOLTAGE(STEERING ANGLE SENSOR CONNECTOR)



- (a) Remove the steering wheel and the column lower cover.
- (b) Disconnect the steering angle sensor connector.
- (c) Turn the ignition switch to the ON position.
- (d) Measure the voltage according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
S18-1 (IG1) - S18-2 (ESS)	10 to 14 V

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

Standard:

Tester Connection	Specified Condition
S18-3 (BAT) - S18-2 (ESS)	10 to 14 V

NG

REPAIR OR CONNECTOR

REPLACE HARNESS OR

OK

REPLACE STEERING ANGLE SENSOR