

DTC	C1223/43	ABS Control System Malfunction
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DESCRIPTION

This DTC is output when the VSC system detects a malfunction in the ABS system.

DTC No.	DTC Detecting Condition	Trouble Area
C1223/43	Malfunction in ABS control system	Skid control ECU

INSPECTION PROCEDURE

1	CHECK DTC FOR ABS SYSTEM
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- (a) Clear the DTC (see page [BC-47](#)).
- (b) Turn the ignition switch ON.
- (c) Check if the same DTC is recorded (see page [BC-47](#)).

Result

Result	Proceed to
DTC is output	A
DTC is not output	B

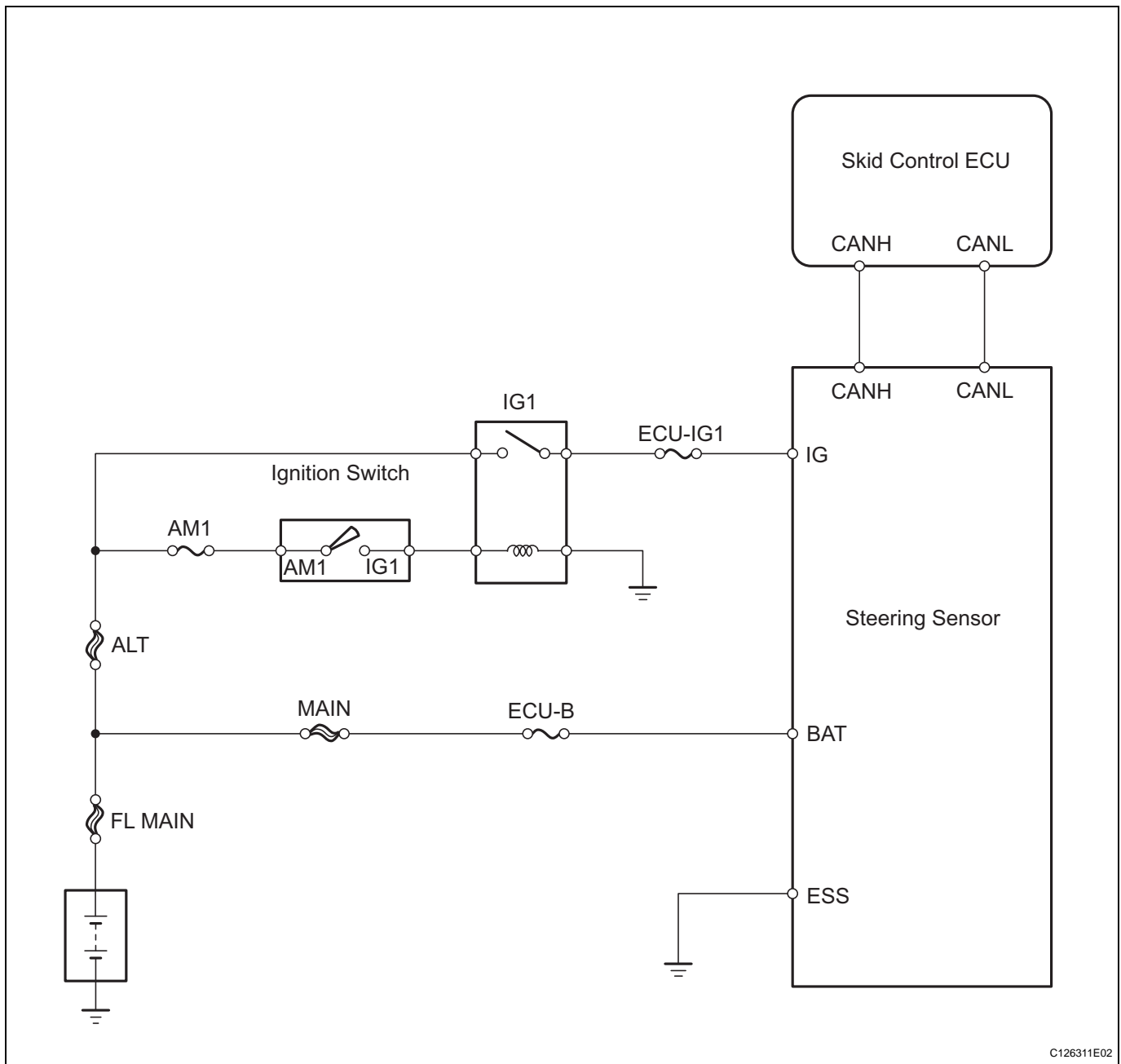


REPAIR CIRCUIT INDICATED BY OUTPUT DTC
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**DTC****C1231/31****Steering Angle Sensor Circuit Malfunction****DESCRIPTION**

The steering sensor signal is sent to the skid control ECU via the CAN communication system. When there is a malfunction in the CAN communication system, it is detected by the steering sensor zero point malfunction diagnostic function.

DTC No.	DTC Detection Condition	Trouble Area
C1231/31	When IG1 terminal voltage 9.5 V or more, steering angle sensor malfunction signal received.	<ul style="list-style-type: none"> <li>Steering sensor</li> <li>Steering sensor circuit</li> <li>Steering sensor power supply</li> <li>CAN communication system</li> </ul>

**WIRING DIAGRAM****BC**

## INSPECTION PROCEDURE

HINT:

- When U0073/94, U0123/62, U0124/95 or U0126/63 is output together with C1231/31, inspect and repair the trouble areas indicated by U0073/94, U0123/62, U0124/95 or U0126/63 first.
- When there are problems with the speed sensor or the yaw rate sensor, DTCs for the steering sensor may be output even when the steering sensor is normal. When DTCs for the speed sensor or yaw rate sensor are output together with other DTCs for the steering sensor, inspect and repair the speed sensor and yaw rate sensor first, and then inspect and repair the steering sensor.

### 1 CHECK HARNESS AND CONNECTOR (MOMENTARY INTERRUPTION)

- (a) Using the DATA LIST of the intelligent tester, check for any momentary interruptions in the wire harness and connectors between the skid control ECU and the steering sensor (see page [BC-23](#)).

#### Skid control ECU

Item (Display)	Measurement Item / Range (Display)	Normal Condition	Diagnostic Note
STEERING OPN	Steering angle sensor open detection / ERROR or NORMAL	ERROR: Momentary interruption NORMAL: Normal	-

**OK:**

**There are no momentary interruptions.**

**HINT:**

Perform the above inspection before removing the sensor and connector.

**NG**

**Go to step 4**

**OK**

### 2 CHECK DTC

- (a) Clear the DTC (see page [BC-47](#)).  
 (b) Turn the ignition switch OFF.  
 (c) Turn the ignition switch ON again and check that no CAN communication system DTC is output.  
 (d) Drive the vehicle and turn the steering wheel to the right and left at a speed of 35 km/h (24 mph) and check that no speed and yaw rate sensor DTCs are output.

**Result**

Result	Proceed to
DTC is not output	A
CAN communication system DTC is output	B
Speed sensor or yaw rate sensor DTC is output	C

**B**

**CHECK CAN COMMUNICATION SYSTEM**

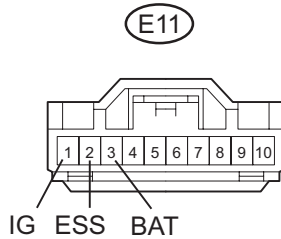
**C**

**REPAIR CIRCUIT INDICATED BY OUTPUT DTC**

A

**3 CHECK WIRE HARNESS (STEERING SENSOR - BATTERY AND BODY GROUND)**

Wire Harness Side



- (a) Remove the steering wheel assembly and the column cover.
- (b) Disconnect the E11 sensor connector.
- (c) Measure the voltage of the wire harness side connector.

**Standard voltage**

Tester Connection	Condition	Specified Condition
E11-1(IG) - Body ground	Ignition switch ON	10 to 14 V
E11-3 (BAT) - Body ground	Always	10 to 14 V

- (d) Measure the resistance of the wire harness side connector.

**Standard resistance**

Tester Connection	Specified Condition
E11-2 (ESS) - Body ground	Below 1Ω

NG

**REPAIR OR REPLACE HARNESS AND CONNECTOR**

BC

OK

**REPLACE STEERING SENSOR****4 REPAIR OR REPLACE HARNESS AND CONNECTOR (STEERING SENSOR TO SKID CONTROL ECU)**

NEXT

**5 RECONFIRM DTC**

- (a) Clear the DTC (see page [BC-47](#)).
- (b) Start the engine.
- (c) Drive the vehicle and turn the steering wheel to the right and left at a speed of 45 km/h (28 mph) or more for several seconds.
- (d) Check if the same DTC is recorded (see page [BC-47](#)).

**Result**

Result	Proceed to
DTC is not output	A
DTC is output	B

B

**Go to step 2**

A

END