

DTC**C1223/43****ABS Control System Malfunction****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**

- (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 |

A

B

END

REPAIR CIRCUIT INDICATED BY OUTPUT DTC

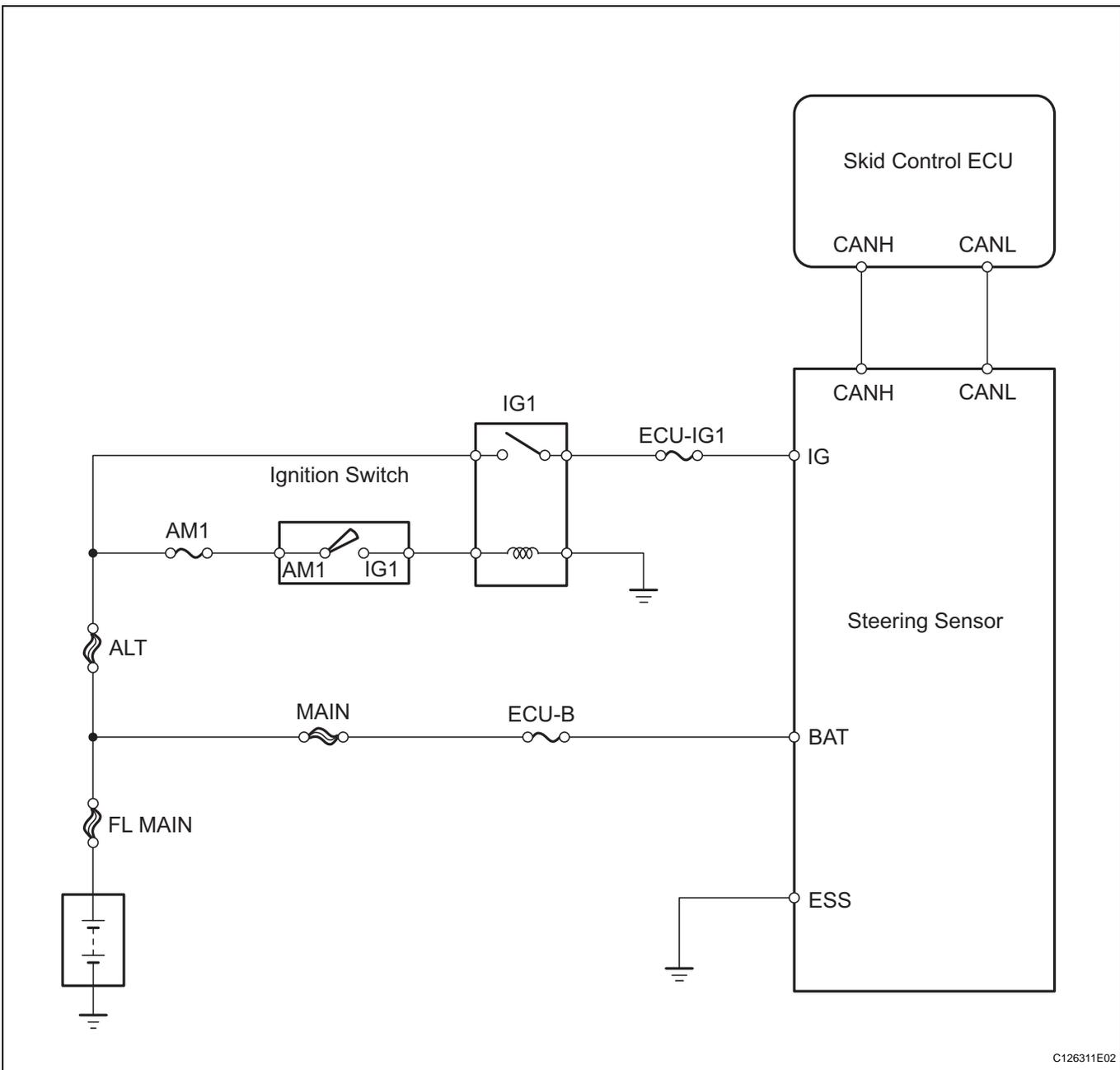
| | | |
|------------|-----------------|--|
| DTC | C1231/31 | Steering Angle Sensor Circuit Malfunction |
|------------|-----------------|--|

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"> • Steering sensor • Steering sensor circuit • Steering sensor power supply • CAN communication system |

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 | - |

BC

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

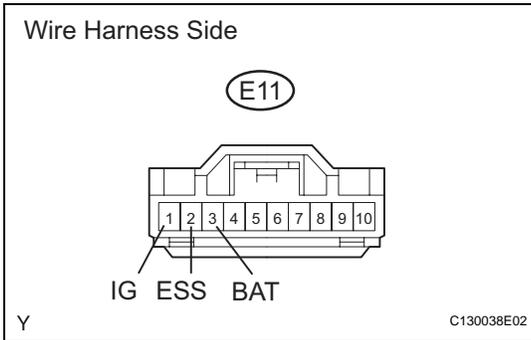
| Result | Proceed to |
|---|------------|
| DTC is not output | A |
| CAN communication system DTC is output | B |
| Speed sensor or yaw rate sensor DTC is output | C |

B **CHECK CAN COMMUNICATION SYSTEM**

C **REPAIR CIRCUIT INDICATED BY OUTPUT DTC**

A

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



- (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