

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

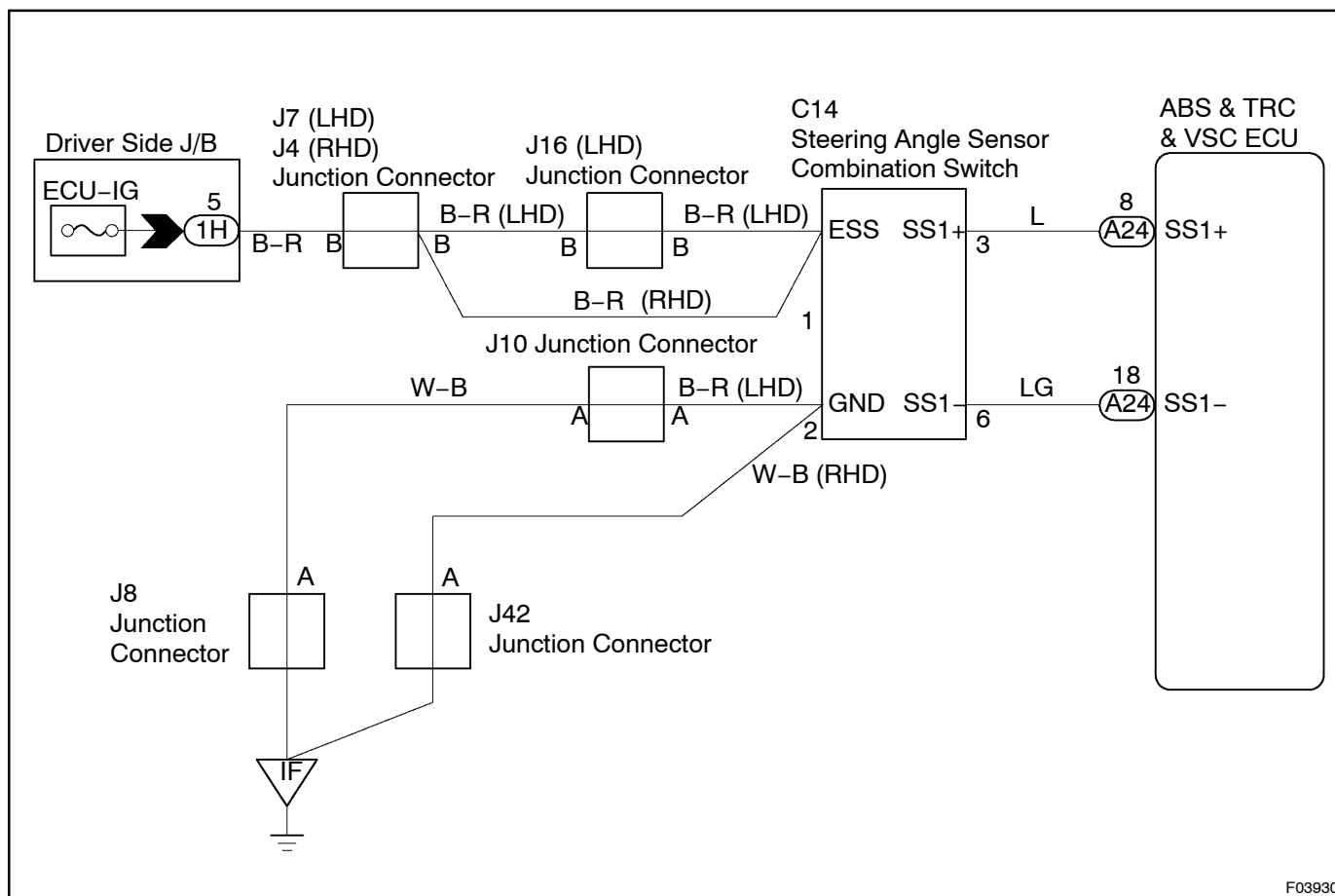
CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
C1231 / 31	<p>Detection of any of conditions (1) through (3):</p> <p>(1) When the condition that ECU terminal IG1 voltage is 9.5 V or more, and does not receive a data from steering angle sensor continues for 1 sec. or more.</p> <p>(2) When the steering angle sensor value changes by 360° or more with SSC signal from steering angle sensor remaining ON or OFF.</p> <p>(3) When the condition that difference between the steering angle value at edge occurring in SSC signal and the value at edge occurring in SSC signal after turning the steering wheel one-turn is out of the range from 355.5° - 364.5° occurs 10 times or more.</p>	<ul style="list-style-type: none"> Steering angle sensor Steering angle sensor circuit

Fail safe function:

If trouble occurs in the steering angle sensor circuit, the ECU prohibits TRC & VSC controls.

WIRING DIAGRAM



F03930

INSPECTION PROCEDURE

HINT:

Start the inspection from step 1 in case of using the hand-held tester and start from step 3 in case of not using the hand-held tester.

1	Check output value of the steering angle sensor.
----------	---------------------------------------------------------

PREPARATION:

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the hand-held tester main switch ON.
- (c) Select the DATALIST mode on the hand-held tester.

CHECK:

Check that the steering wheel turning angle value of the steering angle position sensor displayed on the hand-held tester is changing when turning the steering wheel.

OK:

Steering wheel turning angle value must be changing.

OK

Go to step 3.

NG

2	Replace the ECU and check whether or not the trouble occurs again.
----------	---------------------------------------------------------------------------

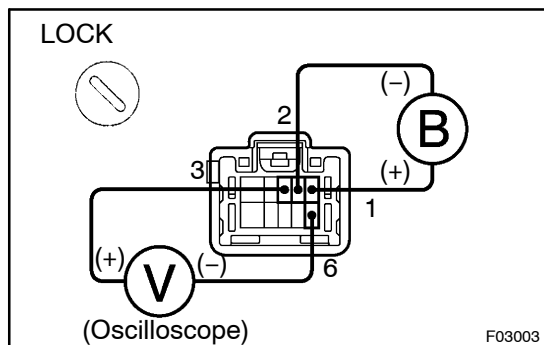
YES

Replace steering angle sensor.

NO

END

3 Check steering angle sensor.



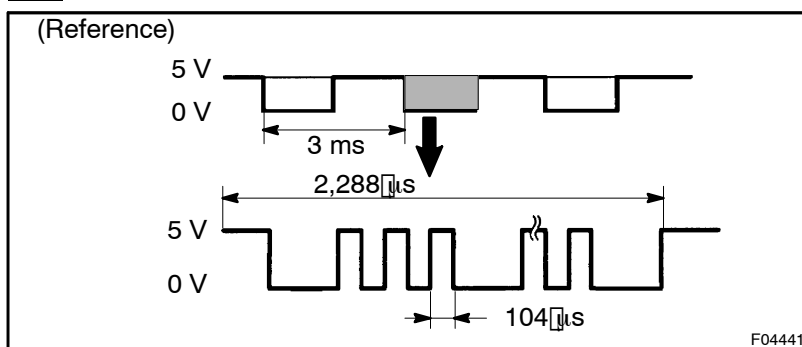
PREPARATION:

- Remove the steering wheel power No. 2 and No. 3 covers, steering wheel pad, steering wheel column upper and lower covers (See page SR-12).
- Disconnect the combination switch connector (for steering angle sensor).
- Connect the oscilloscope to the terminals 3 and 6 of the combination switch connector (for steering angle sensor).
- Apply battery voltage between terminals 1 and 2.

CHECK:

Turns the steering wheel slowly and check the signal waveform.

OK:



HINT:

The above signal wave form does not repeat ON and OFF regularly and this combination changes case by case according to the data.

NG

Replace steering angle sensor.

OK

4 Check that slits of the steering angle sensor disc are clogged up.

NG

Repair or replace steering angle sensor disc.

OK

5

Check for open and short circuit in harness and connector between steering angle sensor and ABS & TRC & VSC ECU (See page IN-29).

NG

Repair or replace harness or connector.

OK

Check and replace ABS & TRC & VSC ECU.