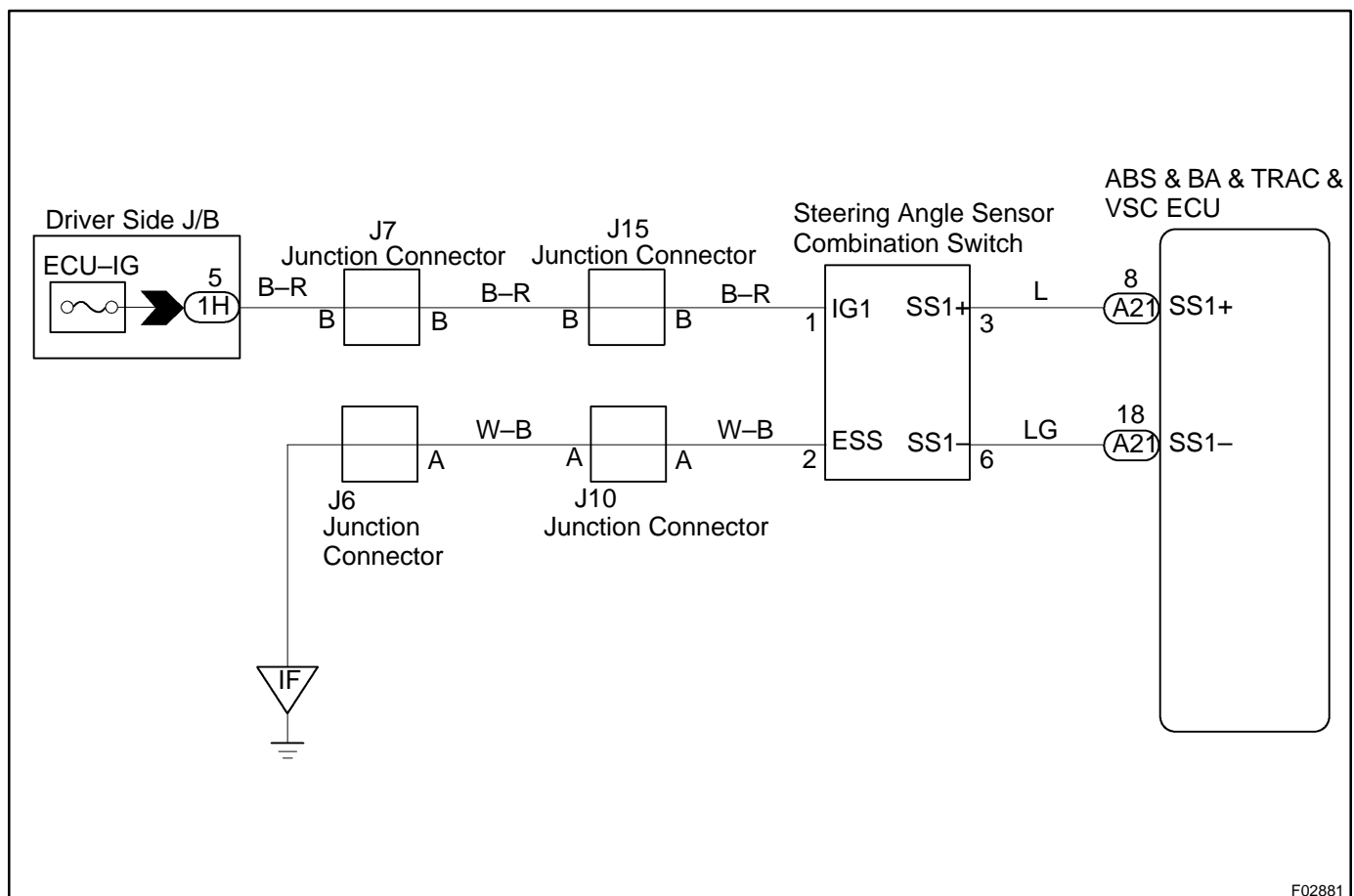


<b>DTC</b>	<b>C1231 / 31</b>	<b>Steering Angle Sensor Circuit</b>
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## CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
C1231 / 31	<p>Detection of any of conditions 1. through 3.:</p> <ol style="list-style-type: none"> <li>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.</li> <li>When the steering angle sensor value changes by 360° or more with SSC signal from steering angle sensor remaining ON or OFF.</li> <li>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.</li> </ol>	<ul style="list-style-type: none"> <li>Steering angle sensor</li> <li>Steering angle sensor circuit</li> </ul>

## WIRING DIAGRAM



F02881

## INSPECTION PROCEDURE

### HINT:

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

1	<b>Check output value of the steering angle sensor.</b>
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### PREPARATION:

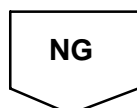
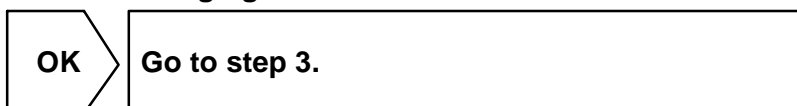
- (a) Connect the LEXUS hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the LEXUS hand-held tester main switch ON.
- (c) Select the DATALIST mode on the LEXUS hand-held tester.

### CHECK:

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

### OK:

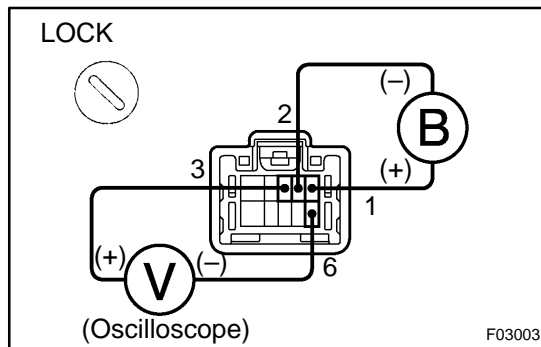
**Steering wheel turning angle value must be changing.**



2	<b>Replace the ECU and check whether or not the trouble occurs again.</b>
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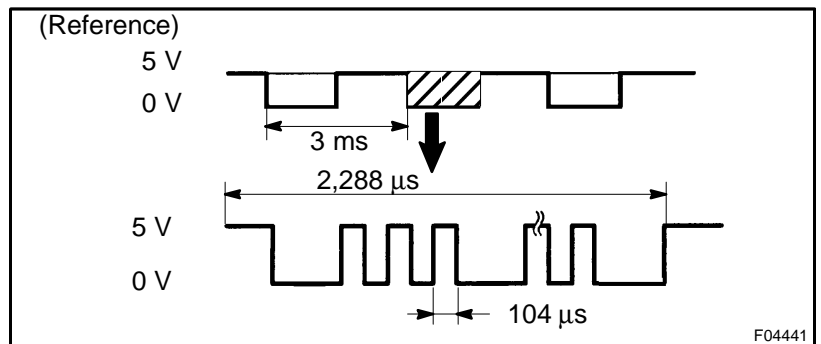
<b>END</b>
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**3 Check steering angle sensor.****PREPARATION:**

- Remove the steering wheel lower No. 2 and No. 3 covers, steering wheel pad, steering wheel column upper and lower covers (See page [SR-11](#)).
- 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 positive 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 sensor disc are clogged up.****NG****Repair or replace steering sensor disc.****OK**

- |          |   |
|----------|---|
| <b>5</b> | <b>Check for open and short circuit in harness and connector between steering position sensor and ABS &amp; BA &amp; TRAC &amp; VSC ECU (See page <a href="#">IN-32</a>).</b> |
|----------|---|

**NG**

**Repair or replace harness or connector.**

**OK**

**Check and replace ABS & BA & TRAC & VSC ECU.**