

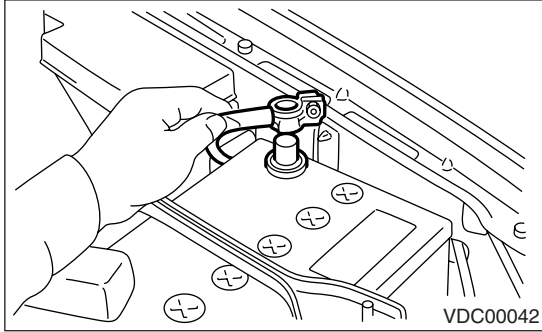
Yaw Rate & Lateral G Sensor

VEHICLE DYNAMICS CONTROL (VDC)

6. Yaw Rate & Lateral G Sensor

A: REMOVAL

1) Disconnect the ground cable from battery.



2) Remove the console box.

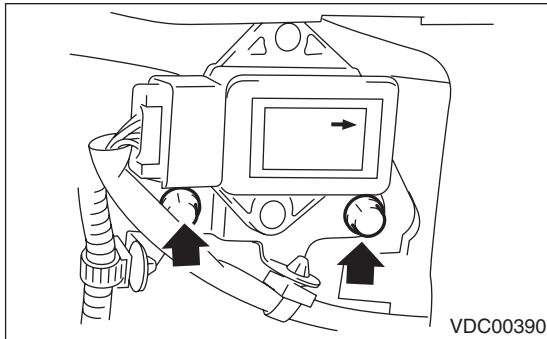
<Ref. to EI-38, Console Box.>

3) Disconnect the connector from yaw rate & lateral G sensor.

4) Remove the yaw rate & lateral G sensor.

CAUTION:

- Do not drop or bump the yaw rate & lateral G sensor.
- The sensor and bracket is considered a single part. Do not disassemble.

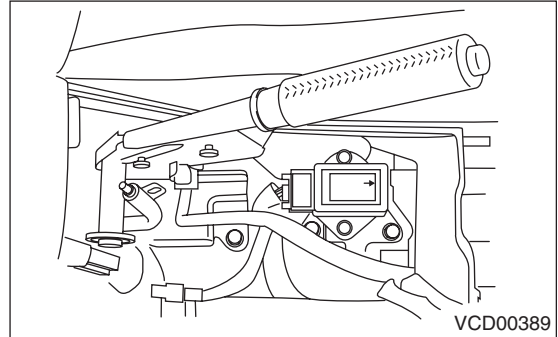


B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

Do not install the yaw rate & lateral G sensors facing an incorrect direction. There is an arrow mark on the sensor showing the front direction of the vehicle.



Tightening torque:

18 N·m (1.8 kgf-m, 13.0 ft-lb)

CAUTION:

Do not drop or bump the yaw rate & lateral G sensor. After installation, always make the following two settings.

- Steering angle sensor centering setting
 - Yaw rate & lateral G sensor 0 point setting
- These two procedures are required to make the VDCCM recognize what position the vehicle is in later. Refer to VDCCM Adjustments for procedures regarding the above settings. <Ref. to VDC-9, ADJUSTMENT, VDC Control Module (VDCCM).>

Yaw Rate & Lateral G Sensor

VEHICLE DYNAMICS CONTROL (VDC)

C: INSPECTION

1. LATERAL G SENSOR SIGNAL

	Step	Check	Yes	No
1	CHECK SUBARU SELECT MONITOR.	Is the Subaru Select Monitor available?	Go to step 5.	Go to step 2.
2	CHECK YAW RATE & LATERAL G SENSOR. 1) Move the vehicle to a level surface. 2) Turn the ignition switch to OFF. 3) Connect the connector to the yaw rate & lateral G sensor. 4) Turn the ignition switch ON. 5) Measure the voltage between connector terminals of the yaw rate & lateral G sensor when the yaw rate & lateral G sensor is horizontally positioned. Connector & terminal (B230) No. 5 (+) — No. 6 (-)	Is the voltage 2.3 — 2.7 V?	Go to step 3.	Replace the yaw rate & lateral G sensor.
3	CHECK YAW RATE & LATERAL G SENSOR. 1) Remove the yaw rate & lateral G sensors from vehicle. 2) Measure the voltage between connector terminals of the yaw rate & lateral G sensor when the yaw rate & lateral G sensor are inclined 90° to the right. Connector & terminal (B230) No. 5 (+) — No. 6 (-) NOTE: When the yaw rate & lateral G sensor is moved with its power supply on, DTC of yaw rate & lateral G sensor may be recorded.	Is the voltage 3.3 — 3.7 V?	Go to step 4.	Replace the yaw rate & lateral G sensor.
4	CHECK YAW RATE & LATERAL G SENSOR. Measure the voltage between connector terminals of the yaw rate & lateral G sensor when the yaw rate & lateral G sensor are inclined 90° to the left. Connector & terminal (B230) No. 5 (+) — No. 6 (-) NOTE: When the yaw rate & lateral G sensor is moved with its power supply on, DTC of yaw rate & lateral G sensor may be recorded.	Is the voltage 1.3 — 1.7 V?	Yaw rate & lateral G sensors are normal.	Replace the yaw rate & lateral G sensor.
5	CHECK YAW RATE & LATERAL G SENSOR. 1) Turn the ignition switch to OFF. 2) Connect the Subaru data link connector to the data link connector. 3) Turn the ignition switch ON. 4) Set the Subaru Select Monitor to {Current Data Display & Save} mode. 5) Set the screen to the {Current Data Display & Save} mode. 6) Read the output voltage of yaw rate & lateral G sensor when the vehicle is in a flat horizontal position. NOTE: When the yaw rate & lateral G sensor is moved with its power supply on, DTC of yaw rate & lateral G sensor may be recorded.	Is the reading indicated on monitor display 2.3 to 2.7 V?	Go to step 6.	Replace the yaw rate & lateral G sensor.

Yaw Rate & Lateral G Sensor

VEHICLE DYNAMICS CONTROL (VDC)

Step	Check	Yes	No
6 CHECK YAW RATE & LATERAL G SENSOR. 1) Remove the console box. 2) Remove the yaw rate & lateral G sensors from vehicle. (Do not disconnect the connector.) 3) Read the Subaru Select Monitor display when the yaw rate & lateral G sensor are inclined 90° to the right. NOTE: When the yaw rate & lateral G sensor is moved with its power supply on, DTC of yaw rate & lateral G sensor may be recorded.	Is the reading indicated on monitor display 3.3 to 3.7 V?	Go to step 7.	Replace the yaw rate & lateral G sensor.
7 CHECK YAW RATE & LATERAL G SENSOR. Read the Subaru Select Monitor display when the yaw rate & lateral G sensor are inclined 90° to the left. NOTE: When the yaw rate & lateral G sensor is moved with its power supply on, DTC of yaw rate & lateral G sensor may be recorded.	Is the reading indicated on monitor display 1.3 to 1.7 V?	Yaw rate & lateral G sensors are normal.	Replace the yaw rate & lateral G sensor.

2. YAW RATE SENSOR SIGNAL

Step	Check	Yes	No
1 CHECK YAW RATE & LATERAL G SENSORS USING AN OSCILLOSCOPE. 1) Connect all the connectors. 2) Set the oscilloscope to the connector terminal of yaw rate & lateral G sensor. Positive probe; (B230) No. 4 Grounding wire; (B230) No. 6 3) Start the engine. 4) Measure the signal voltage indicated on oscilloscope. <Ref. to VDC(diag)-16, WAVEFORM, MEASUREMENT, Control Module I/O Signal.>	Is the voltage 2.1 to 2.9 V?	Go to step 2.	Replace the yaw rate & lateral G sensor.
2 INSPECT USING AN OSCILLOSCOPE. 1) Turn the ignition switch to OFF. 2) Set the oscilloscope to the connector terminal of yaw rate & lateral G sensor. Positive probe; (B230) No. 2 Grounding wire; (B230) No. 6 3) Start the engine. 4) Measure the signal voltage indicated on oscilloscope. <Ref. to VDC(diag)-16, WAVEFORM, MEASUREMENT, Control Module I/O Signal.>	Is the voltage 5 V?	Yaw rate & lateral G sensors are normal.	Replace the yaw rate & lateral G sensor.