8. Yaw Rate and G Sensor

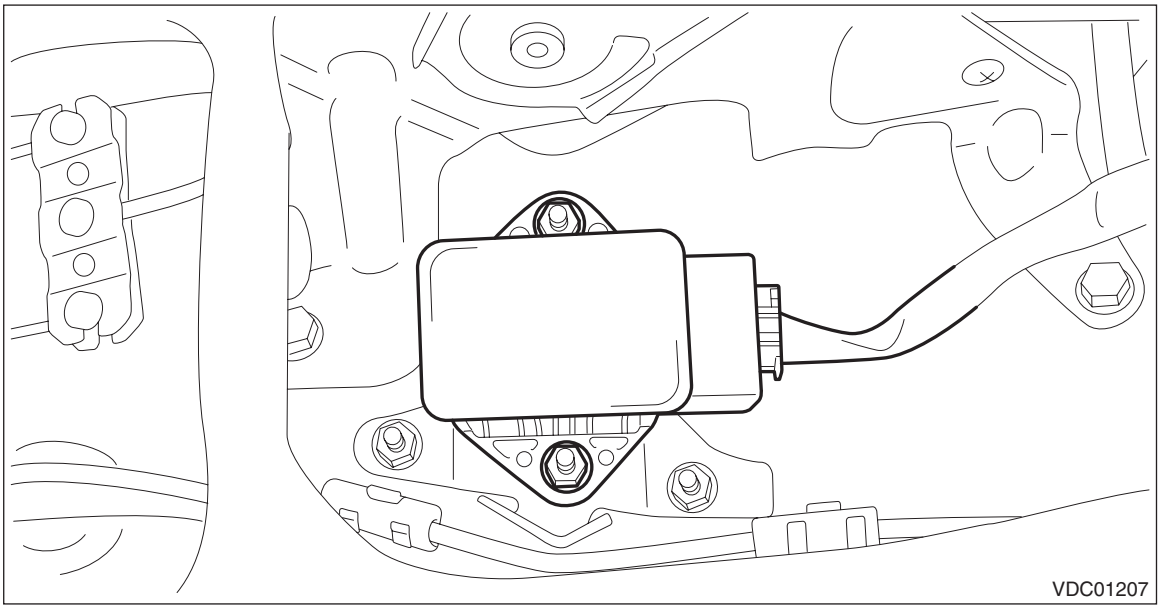
A: NOTE

For models without EyeSight, yaw rate & longitudinal G and lateral G sensors are integrated with the VDC control module & hydraulic control unit (VDCCM&H/U).

B: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the console box. <Ref. to EI-65, REMOVAL, Console Box.>
3) Disconnect the connector from yaw rate & G sensor.
4) Remove the nut and remove the yaw rate & G sensor.

CAUTION:
Do not drop or hit the yaw rate & G sensor.



C: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Yaw rate & G sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Console box assembly: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

CAUTION:
After completion of installation, set the following two positions.
- **Positioning to the center of steering angle sensor**
- **Positioning the yaw rate & G sensors to zero**

The above procedure is required for the VDCCM&H/U to identify the vehicle position afterward. For the setting procedures of the 2 steps above, refer to "Adjustment" in "VDC Control Module and Hydraulic Control Unit (VDCCM&H/U)". <Ref. to VDC-23, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

D: INSPECTION

1. YAW RATE & LONGITUDINAL G AND LATERAL G SENSORS SIGNAL (MODELS WITHOUT EyeSight)

Step		Check	Yes	No
1	**CHECK YAW RATE & G SENSOR.** 1) Check the installation condition of the VDC control module & hydraulic control module (VDCCM&H/U). 2) Select "Current Data Display & Save" on the Subaru Select Monitor. 3) Read the output of yaw rate & G sensor.	When the vehicle is placed horizontally, are the displayed values –1.5 — 1.5 m/s^2 for longitudinal G and lateral G sensor, and –4 — 4 deg/s for yaw rate sensor?	Go to step **2**.	Replace the VDC control module & hydraulic control unit (VDCCM&H/U).
2	**PERFORM DRIVING TEST.** Drive for approximately 10 minutes, and check that there is no system malfunction or the warning light illumination while driving.	Is there any abnormal movement or the warning light illumination while driving?	Perform the diagnosis according to DTCs for the VDC system. <Ref. to VDC(diag)-36, List of Diagnostic Trouble Code (DTC).>	G sensor is normal.

2. YAW RATE & G SENSOR SIGNAL (MODELS WITH EyeSight)

Step		Check	Yes	No
1	**CHECK YAW RATE & G SENSOR.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor connector to the data link connector. 3) Turn the ignition switch to ON. 4) Set the Subaru Select Monitor connector to the "Brake Control System" mode. 5) Select "Current Data Display & Save". 6) Read the output of yaw rate & G sensor.	Are the indicated values when the vehicle is placed horizontally, Lateral G sensor: –1.5 — 1.5 m/s^2, Yaw rate sensor: –4 — 4 deg/s?	Go to step **2**.	Repair the harness connector between yaw rate & G sensor and VDCCM&H/U. Or replace yaw rate & G sensor.
2	**CHECK G SENSOR.** 1) Remove the console box. 2) Remove the yaw rate & G sensor from vehicle without disconnecting the connector. 3) Read the display of Subaru Select Monitor. NOTE: When the yaw rate & G sensor is moved with its power supply on, DTC of yaw rate & G sensor may be recorded.	Is the value 6.8 — 12.8 m/s^2 when the yaw rate & G sensor is inclined 90° to the right?	Go to step **3**.	Repair the harness connector between yaw rate & G sensor and VDCCM&H/U. Or replace yaw rate & G sensor.
3	**CHECK G SENSOR.** Read the display of Subaru Select Monitor. NOTE: When the yaw rate & G sensor is moved with its power supply on, DTC of yaw rate & G sensor may be recorded.	Is the value –6.8 — –12.8 m/s^2 when the yaw rate & G sensor is inclined 90° to the left?	Yaw rate & G sensors are normal.	Repair the harness connector between yaw rate & G sensor and VDCCM&H/U. Or replace yaw rate & G sensor.