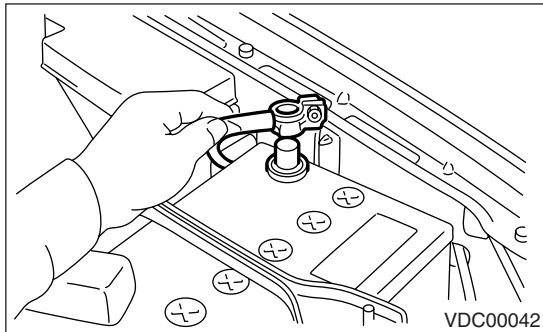


## 7. Steering Angle Sensor

### A: REMOVAL

1) Disconnect the ground cable from battery.



2) Remove the airbag module. <Ref. to AB-14, REMOVAL, Driver's Airbag Module.>

**WARNING:**

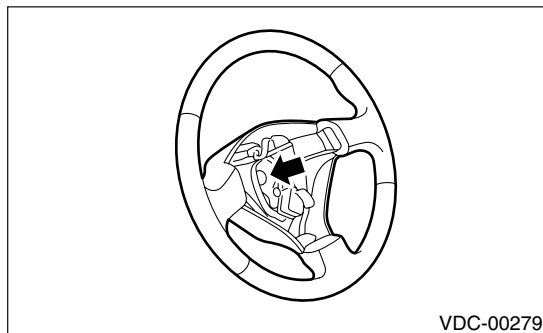
**Always refer to "Air Bag System" before performing service on the air bag modules.**

**<Ref. to AB-4, CAUTION, General Description.>**

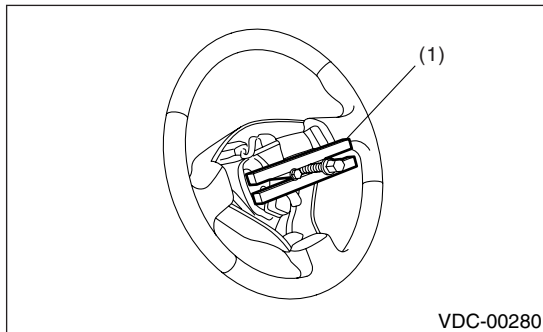
3) Remove the steering wheel nut.

**NOTE:**

Always remove the steering wheel with it positioned straight-ahead.

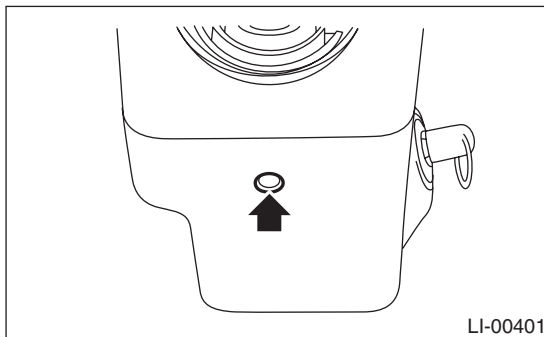


4) Pull off the steering wheel from the shaft using a steering puller.



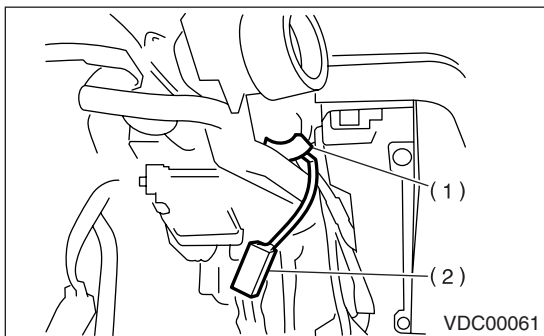
(1) Steering puller

5) Remove the screw securing the steering column lower cover.



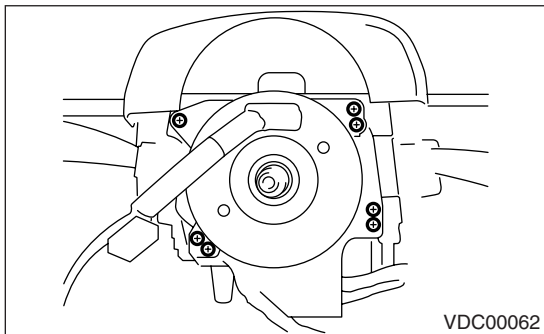
6) Remove the two screws securing the steering column upper cover.

7) Unlock the harness band and disconnect the connector of the steering angle sensor.



(1) Harness band  
(2) Connector

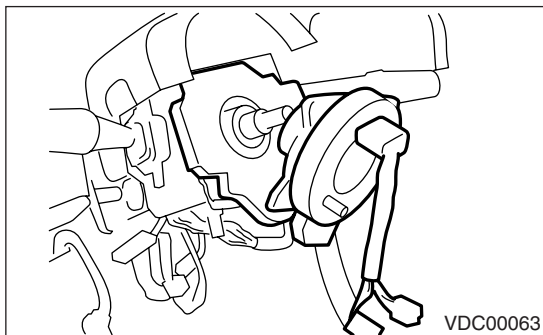
8) Remove the bolt which secure the roll connector and steering angle sensor to the steering column.



# Steering Angle Sensor

## VEHICLE DYNAMICS CONTROL (VDC)

9) Remove the roll connector and steering angle sensor.



**NOTE:**

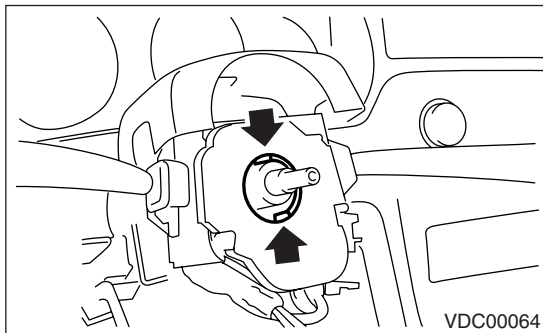
Do not rotate the steering angle sensor because the center position will be recognized by the VDC-CM.

### B: INSTALLATION

**CAUTION:**

Check that front wheels are positioned in a straight ahead direction.

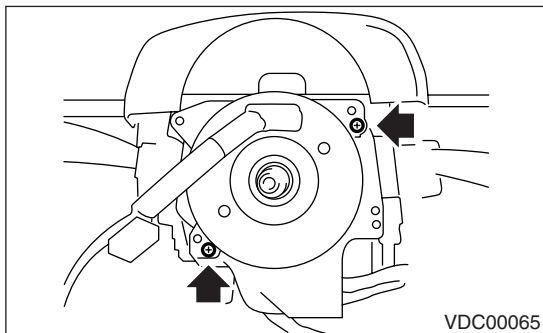
1) Install the steering angle sensor to the steering column while confirming that the sensor is positioned as shown in the figure.



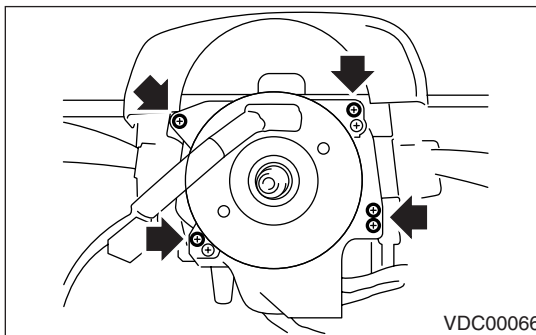
2) Align the roll connector with the center.

<Ref. to AB-20, INSTALLATION, Roll Connector.>

3) Place the roll connector on top of the steering angle sensor, then tighten the bolts that secure the roll connector and steering angle sensor.



4) Tighten the bolts which secure the roll connector and steering angle sensor to the steering column.



5) Put the steering wheel in a neutral position and install it onto the steering shaft.

**Tightening torque:**

45 N·m (4.6 kgf-m, 33.3 ft-lb)

**Column cover-to-steering wheel clearance:**

2 — 4 mm (0.08 — 0.16 in)

**CAUTION:**

Insert the roll connector guide pin into the guide hole on lower end of steering wheel surface, being careful not to damage them. Remove by drawing out the airbag system connector, horn connector and cruise control connectors from the guide hole of steering wheel lower end.

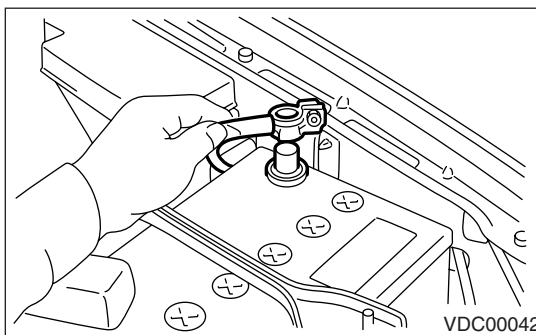
6) Install the airbag module to the steering wheel. <Ref. to AB-14, INSTALLATION, Driver's Airbag Module.>

**WARNING:**

Always refer to "Air Bag System" before servicing.

<Ref. to AB-4, CAUTION, General Description.>

7) Connect the ground cable to the battery.



## **CAUTION:**

After installation, always make the following two settings.

- SRS roll connector and steering angle sensor center 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).>

## **C: INSPECTION**

Refer to “VDC (Diagnostics) Section” for inspection procedures of the steering angle sensor.

<Ref. to VDC(diag)-105, DTC 71 STEERING ANGLE SENSOR OFFSET IS TOO BIG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

<Ref. to VDC(diag)-107, DTC 71 CHANGE RANGE OF STEERING ANGLE SENSOR IS TOO BIG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> <Ref. to VDC(diag)-109, DTC 71 STEERING ANGLE SENSOR MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> <Ref. to VDC(diag)-111, DTC 71 STEERING ANGLE SENSOR COMMUNICATION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>