

9. Front ABS Wheel Speed Sensor

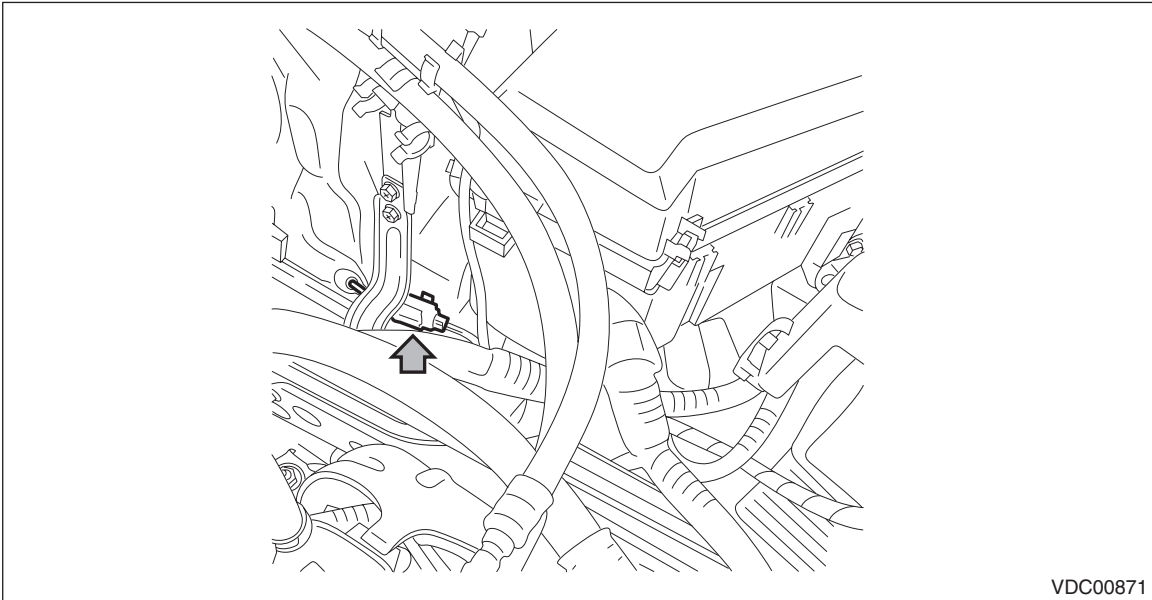
A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Lift up the vehicle, and then remove the front wheels.
- 3) Remove the front ABS wheel speed sensor.

CAUTION:

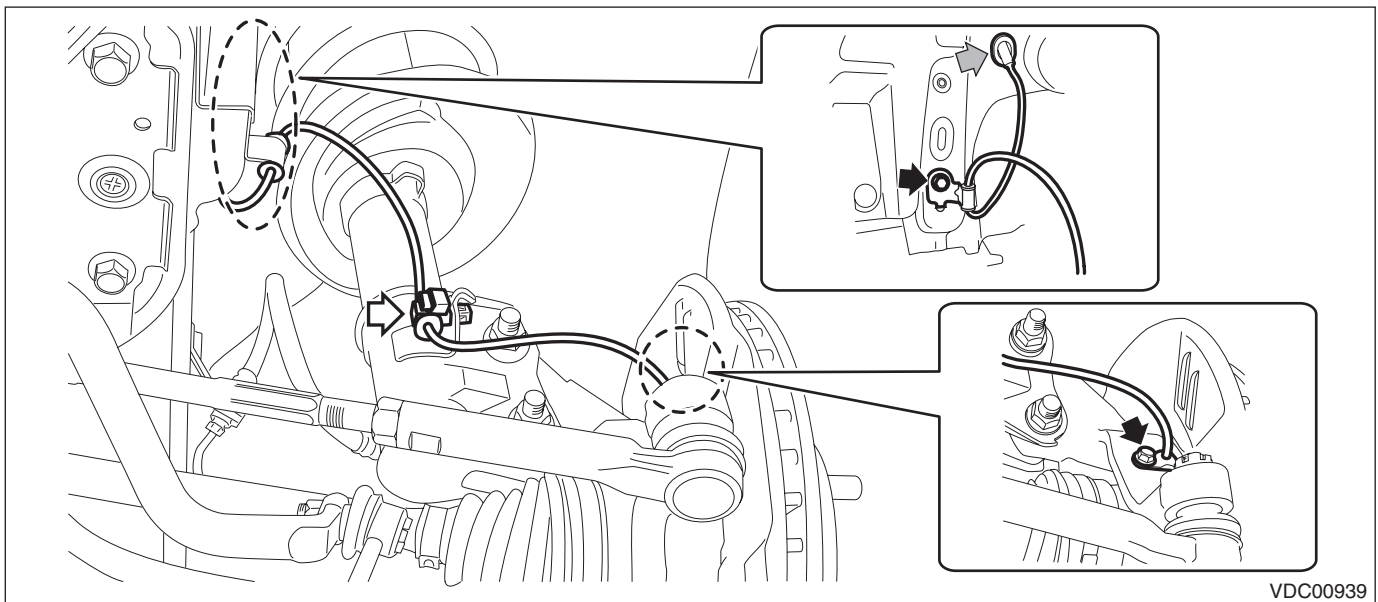
- Be careful not to damage the sensor.
- Do not apply excessive force to the sensor harness.
- Leave the sensor harness clamp on the vehicle side.

- (1) Disconnect the connector of the front ABS wheel speed sensor in the engine compartment.



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- (2) Remove each harness clip and grommet.
- (3) Remove the bolts, and remove the front ABS wheel speed sensor from the housing assembly - front axle.



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Front ABS Wheel Speed Sensor

VEHICLE DYNAMICS CONTROL (VDC)

B: INSTALLATION

CAUTION:

- **Be careful not to damage the sensor.**
- **Do not apply excessive force to the sensor harness.**

Install each part in the reverse order of removal.

NOTE:

- Check the identification (mark) on the harness to make sure there is no warpage. <Ref. to VDC-2, SPECIFICATION, General Description.>
- Check if the harness is not pulled and does not come in contact with the suspension or body while operating the steering.

Tightening torque:

Front ABS wheel speed sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

Front ABS wheel speed sensor bracket: 33 N·m (3.36 kgf-m, 24.3 ft-lb)

Front wheel: 120 N·m (12.24 kgf-m, 88.5 ft-lb)

C: INSPECTION

1. CHECK WITH SUBARU SELECT MONITOR

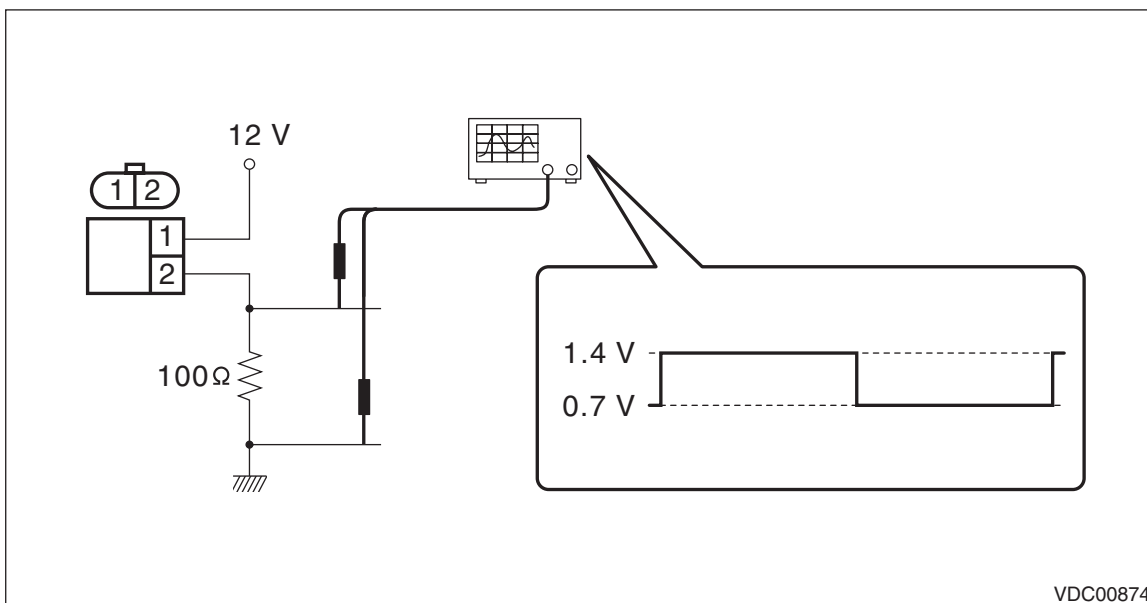
- 1) Connect the Subaru Select Monitor to data link connector.
 - (1) Run the "PC application for Subaru Select Monitor".
 - (2) On «Main Menu» display, select {Each System Check}.
 - (3) Select {Brake Control System}. When {VDC} is displayed, select the [OK] button.
 - (4) From {Current Data Display & Save}, select {FR Wheel Speed} and {FL Wheel Speed}.
- 2) Check if the speed indicated on the display changes in the same manner as the speedometer reading during acceleration/deceleration when the steering wheel is in the straight-ahead position.
- 3) If the speed indicated on the display does not change in the inspection, check the ABS wheel speed sensor. <Ref. to VDC-33, CHECK ABS WHEEL SPEED SENSOR UNIT, INSPECTION, Front ABS Wheel Speed Sensor.>

2. CHECK ABS WHEEL SPEED SENSOR UNIT

- 1) Visually check the tip of the ABS wheel speed sensor for foreign particles or damage. If necessary, clean the tip or replace the ABS wheel speed sensor.
- 2) Disconnect the ABS wheel speed sensor connector.
- 3) Check the ABS wheel speed sensor cable for discontinuity. If defective, replace the ABS wheel speed sensor.
- 4) Connect a 12 V power supply to No. 1 terminal of ABS wheel speed sensor connector, then attach resistance to the No. 2 terminal. Rotate the wheel at about 2.75 km/h (2 MPH), and measure the voltage using an oscilloscope.

Standard value of output voltage:

0.7 — 1.4 V



- 5) Replace the ABS wheel speed sensor if the inspection result is not within the standard value.