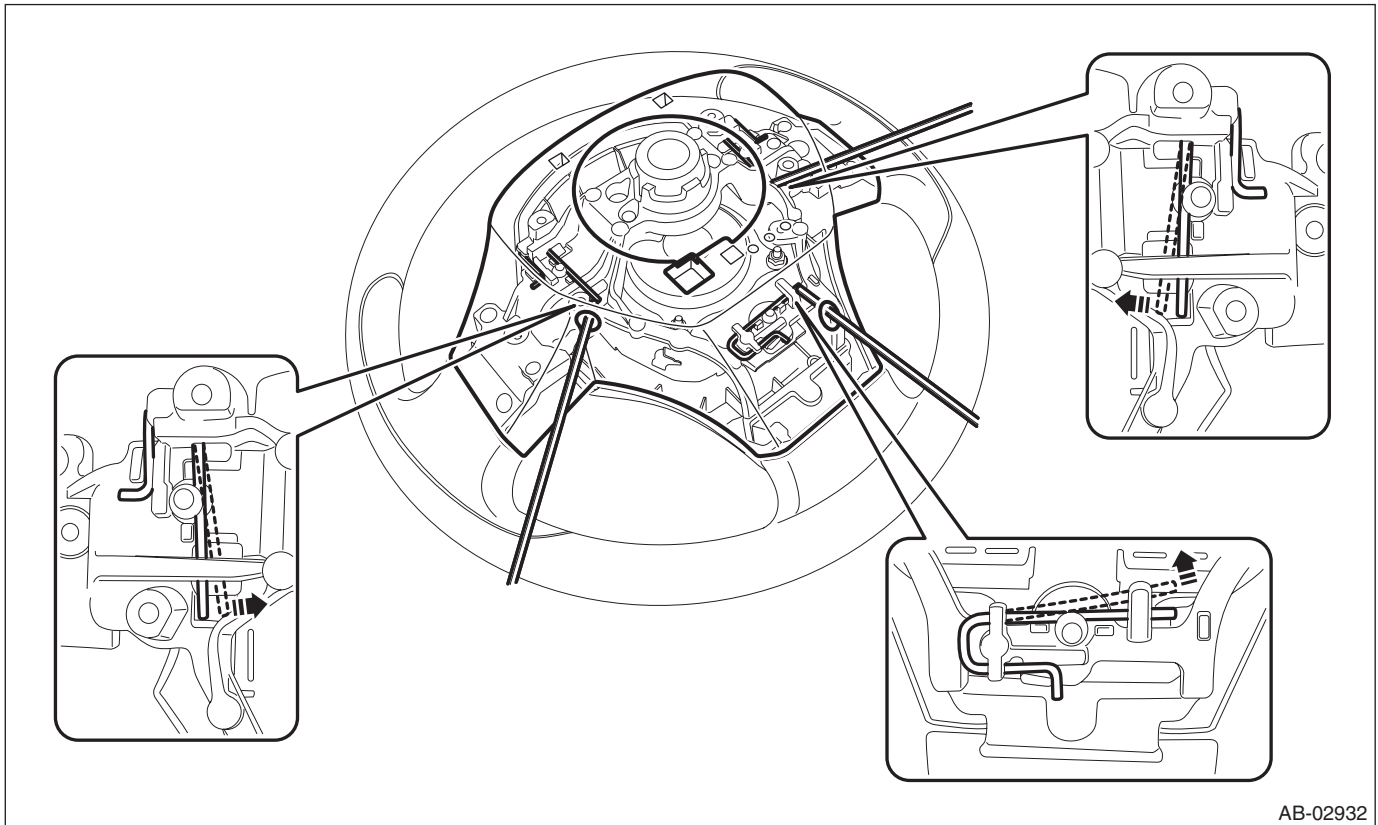


## 15.Roll Connector

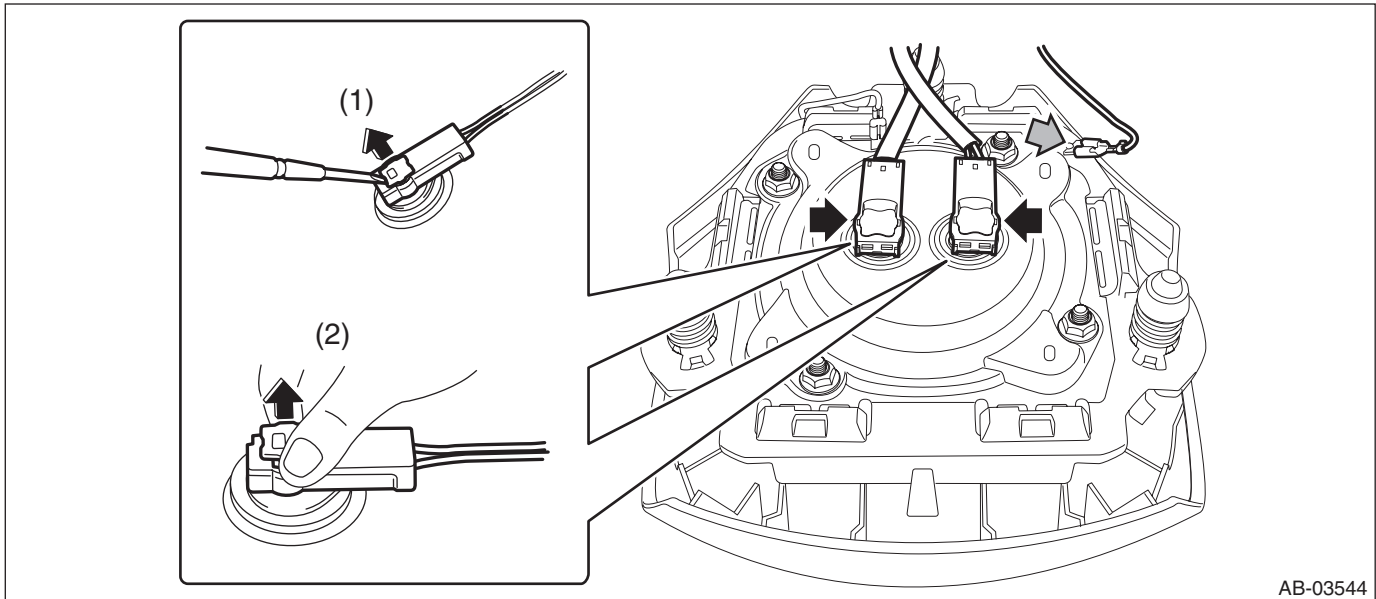
### A: REMOVAL

- 1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
- 2) Turn the ignition switch to OFF.
- 3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
- 4) Remove the driver's airbag module.
  - (1) Using a hexagon wrench etc. wrapped by protective tape, insert the snap pins and release the locks (3 locations).



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(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module.<Ref. to AB-22, DRIVER'S AIRBAG MODULE, KNEE AIRBAG MODULE, CURTAIN AIRBAG MODULE AND PRETENSIONER, PROCEDURE, Airbag Connector.>



AB-03544

5) Remove the steering wheel.

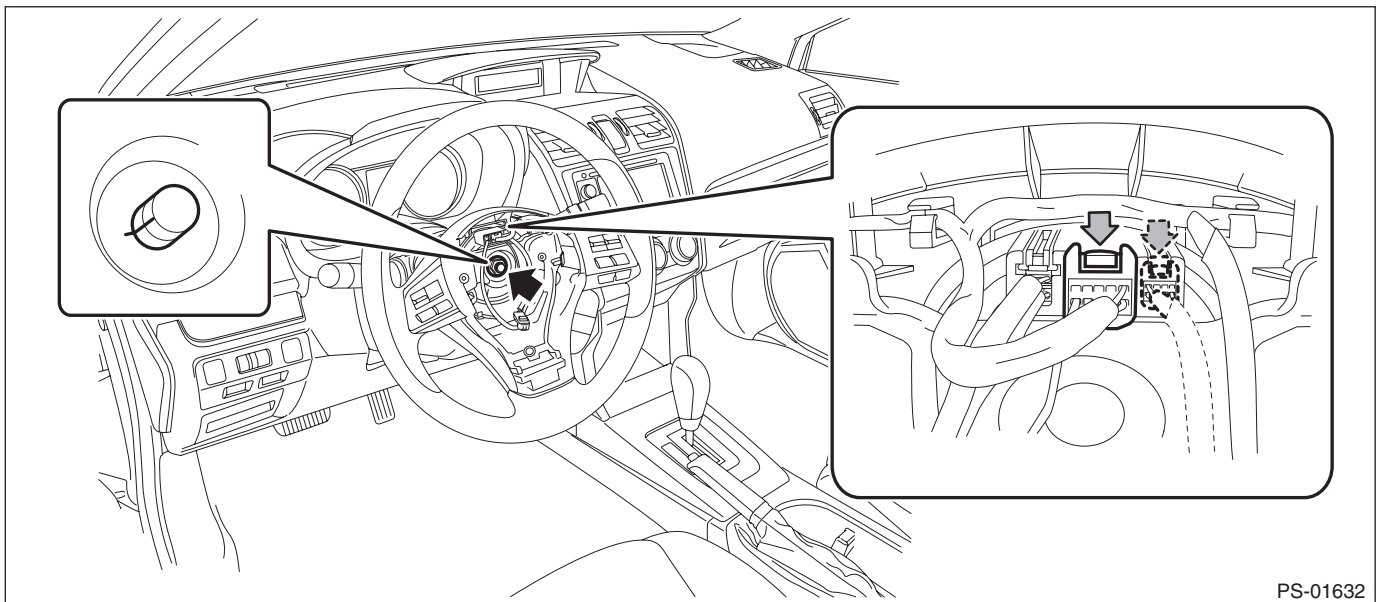
## CAUTION:

- Always use the steering wheel puller for removal to avoid deforming the steering wheel.
- If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.

- (1) Disconnect the connector and remove the nut.
- (2) Put alignment marks and remove the steering wheel.

## Preparation tool:

**Steering wheel puller**



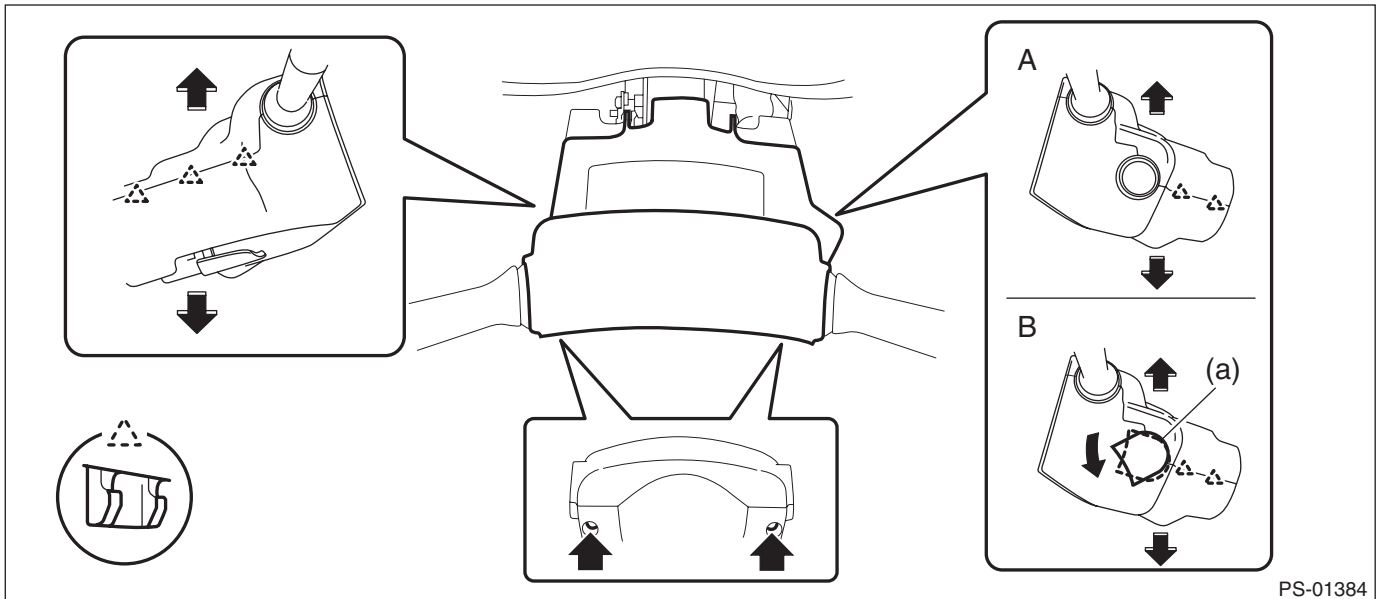
PS-01632

## Roll Connector

### AIRBAG SYSTEM

#### 6) Remove the cover assembly - column.

- (1) Remove the screws.
- (2) Remove the cap - key cylinder (a). (Model with keyless access)
- (3) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.



A Model without keyless access

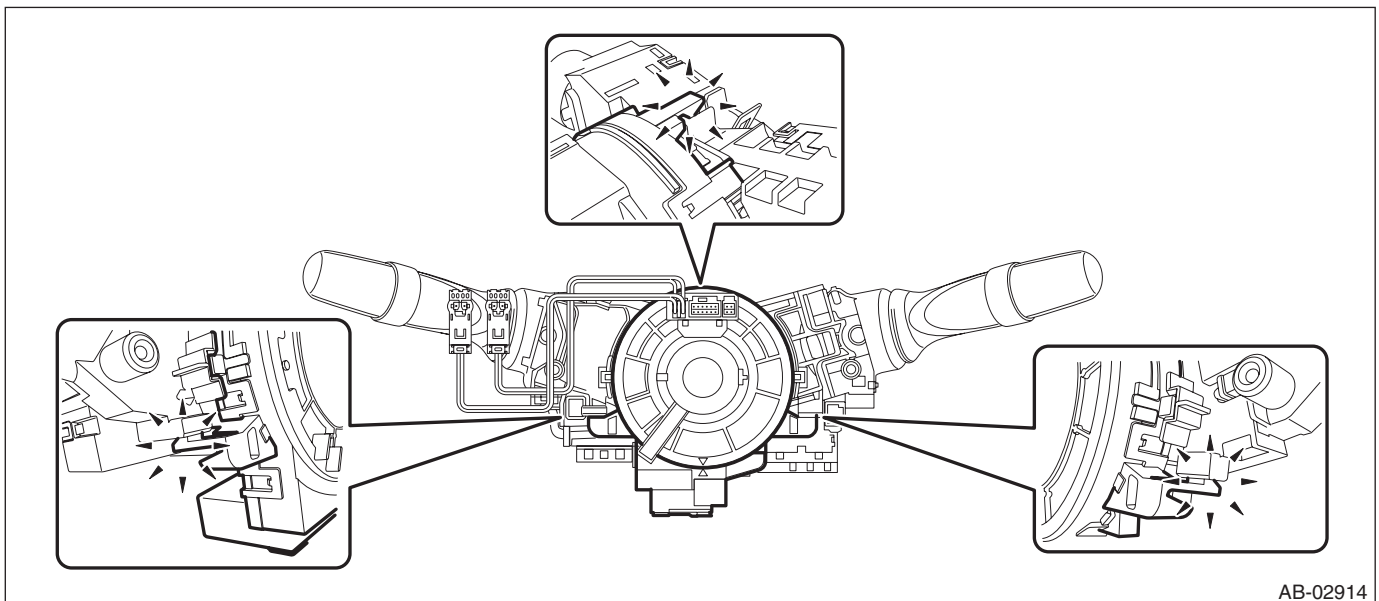
B Model with keyless access

#### 7) Remove the roll connector.

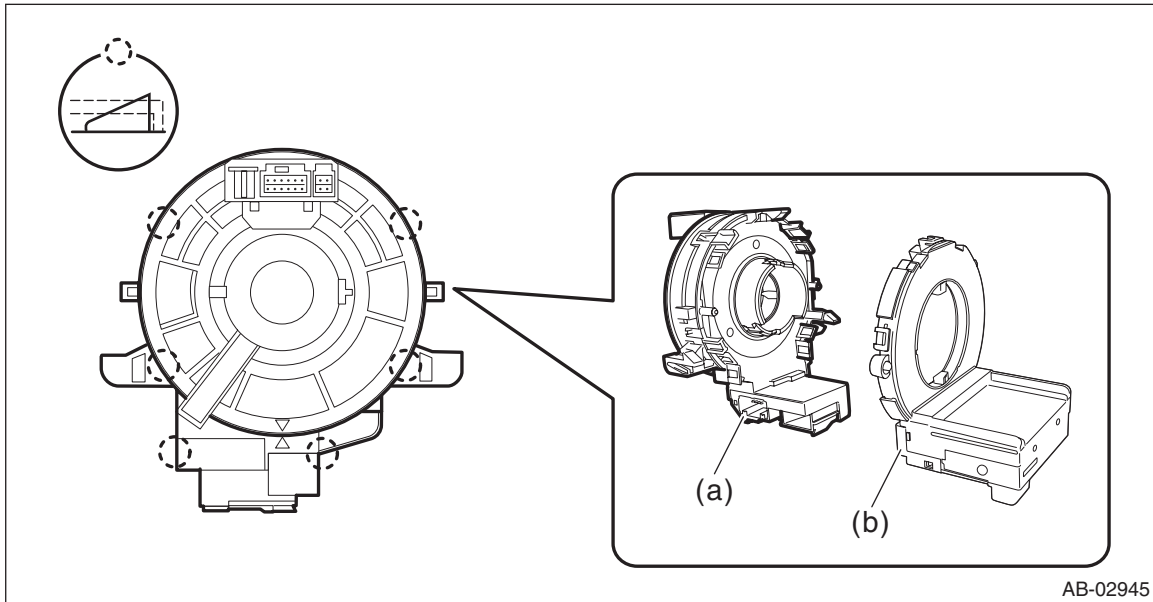
##### **CAUTION:**

**Make sure that the roll connector is not turned from the original position.**

- (1) Disconnect the connector under the roll connector.
- (2) Release the claws and remove the roll connector.



- (3) Release the claws and separate the roll connector (a) and steering angle sensor (b).

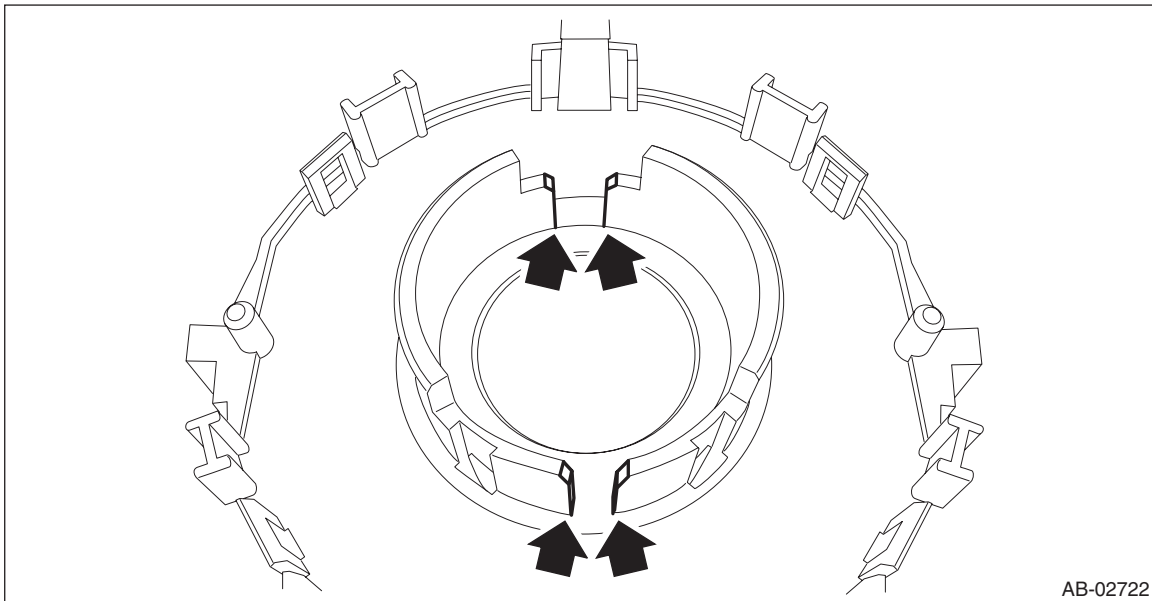


## B: INSTALLATION

### CAUTION:

If the steering wheel and steering angle sensor are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-23, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

- 1) Before attaching a new roll connector, apply a thin coat of grease contained in the connector onto the areas shown by the arrows.



- 2) Install each part in the reverse order of removal.  
3) Before installing steering wheel, be sure to adjust the direction of roll connector with steering. <Ref. to AB-107, ADJUSTMENT, Roll Connector.>

### Tightening torque:

**Steering wheel: 39 N·m (3.98 kgf-m, 28.8 ft-lb)**

### Clearance:

**Cover assembly - column to Steering wheel: 4 — 6 mm (0.16 — 0.24 in)**

## C: INSPECTION

### 1. VISUAL INSPECTION

Check for the following, and replace the damaged parts with new parts.

- Combination switch is cracked or deformed.
- Roll connector is cracked or deformed.

### 2. UNIT INSPECTION OF ROLL CONNECTOR

#### CAUTION:

- Do not rotate the roll connector to more than the specified number of turns. Otherwise, the roll connector internal wire may be broken.
- When determining the end stop, rotate the connector slowly without applying excessive force. Applying excessive force at the end stop may break the internal wire.

1) Adjust the roll connector. <Ref. to AB-107, ADJUSTMENT, Roll Connector.>

2) Set the roll connector to the central position.

3) Connect the test harness to the connector E and connector F.

#### Preparation tool:

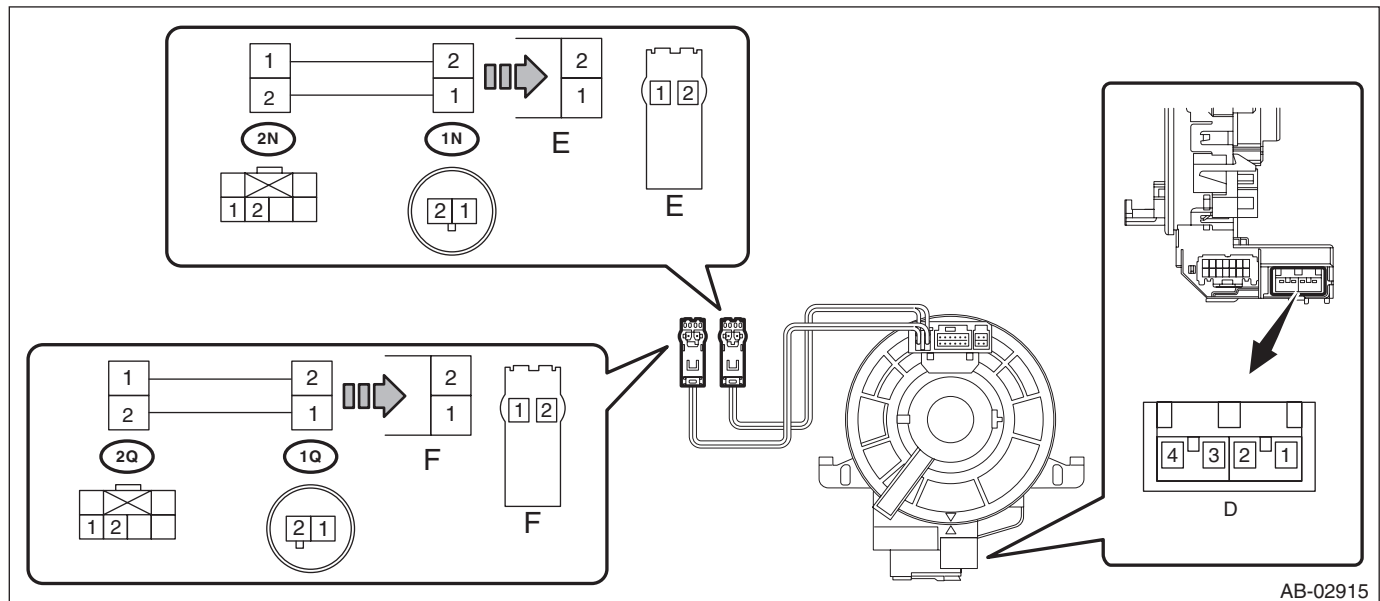
**Test harness N (98299SA000)**

**Test harness Q (98299SA040)**

- Connector E - Test harness N (1N)
  - Connector F - Test harness Q (1Q)
- 4) With the following conditions, check the resistance between the test harness connector terminals.
- Perform the check with the roll connector centered (front wheels direct straightforward).
  - Rotate the roll connector counterclockwise from the center (front wheels direct straightforward) to an end stop. Then, perform the check while rotating it clockwise to approximately 4.5 turns.

#### Preparation tool:

**Circuit tester**



Terminal No.	Inspection conditions	Standard
(2N) No. 1 — (2N) No. 2	Always	Less than 1 $\Omega$
(2Q) No. 1 — (2Q) No. 2	Always	Less than 1 $\Omega$

#### NOTE:

The connector D is designed to short the terminals D1/D2 and D3/D4 when disconnected.

5) Replace the roll connector with a new part if the inspection result is not within the standard.

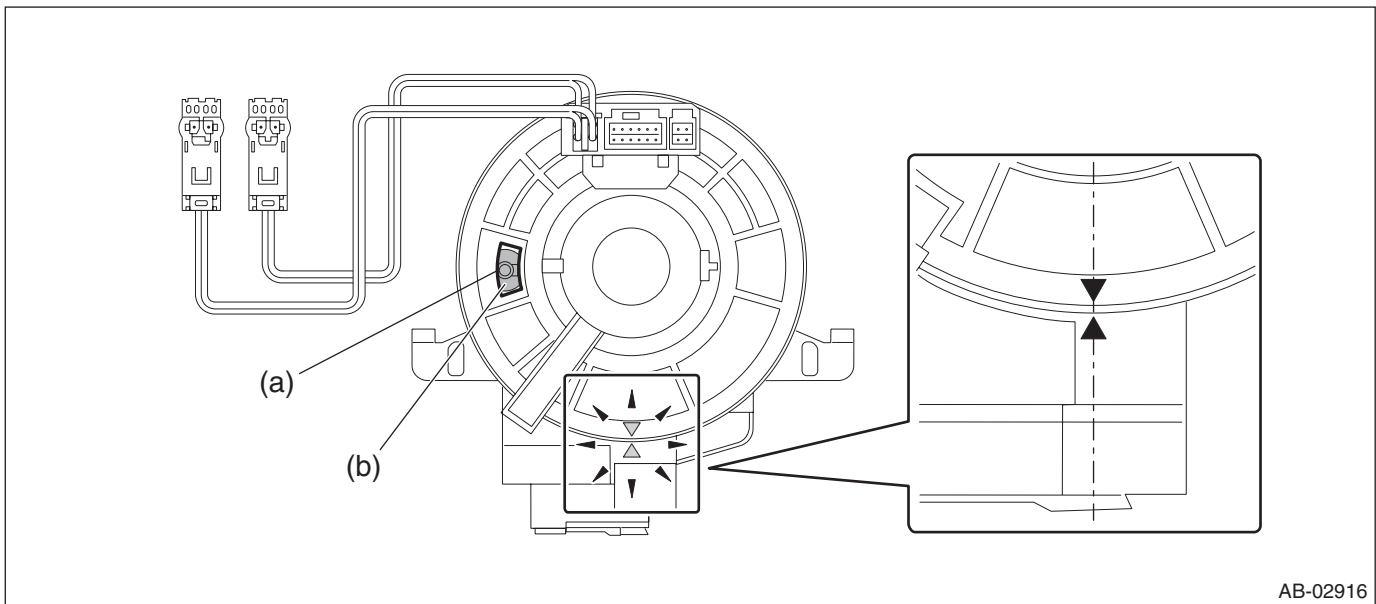
**D: ADJUSTMENT****CAUTION:**

- Do not rotate the roll connector to more than the specified number of turns. Otherwise, the roll connector internal wire may be broken.
- When determining the end stop, rotate the connector slowly without applying excessive force. Applying excessive force at the end stop may break the internal wire.

- 1) Check that front wheels are positioned in straight ahead direction.
- 2) Rotate the roll connector counterclockwise until it stops.
- 3) Rotate the roll connector clockwise approx. 2.5 turns until “▲” marks are aligned.

**NOTE:**

When the roll connector comes to the center position, the orange roller (b) can be seen from the sight glass (a).



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