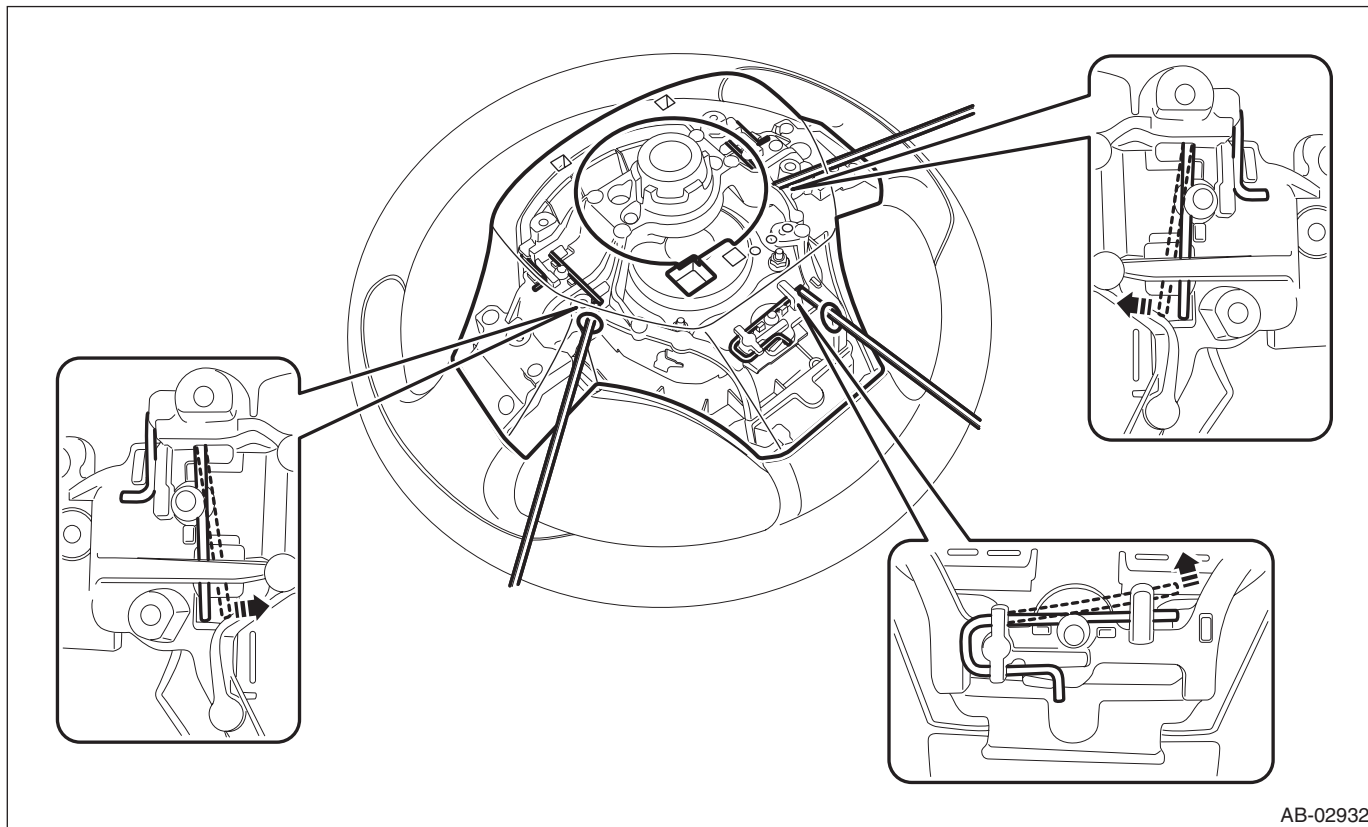


15.Roll Connector

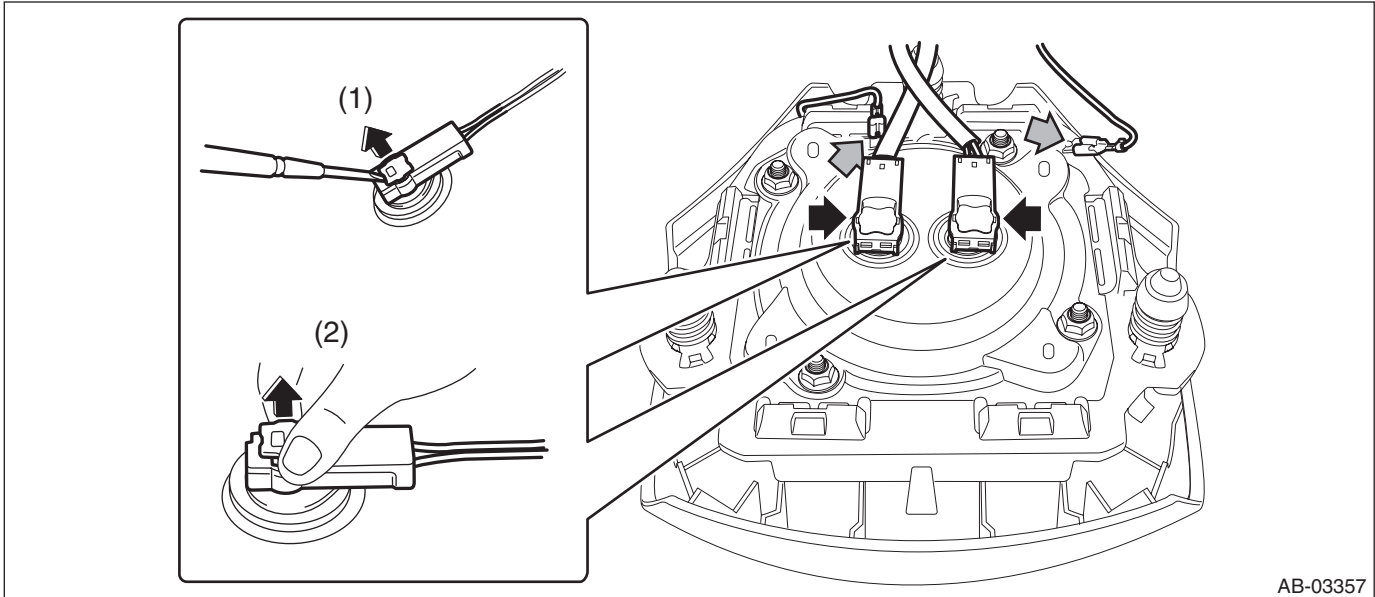
A: REMOVAL

- 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).



AB-02932

(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-21, DRIVER'S AIRBAG MODULE, KNEE AIRBAG MODULE, CURTAIN AIRBAG MODULE AND PRETENSIONER, PROCEDURE, Airbag Connector.>



AB-03357

5) Remove the steering wheel.

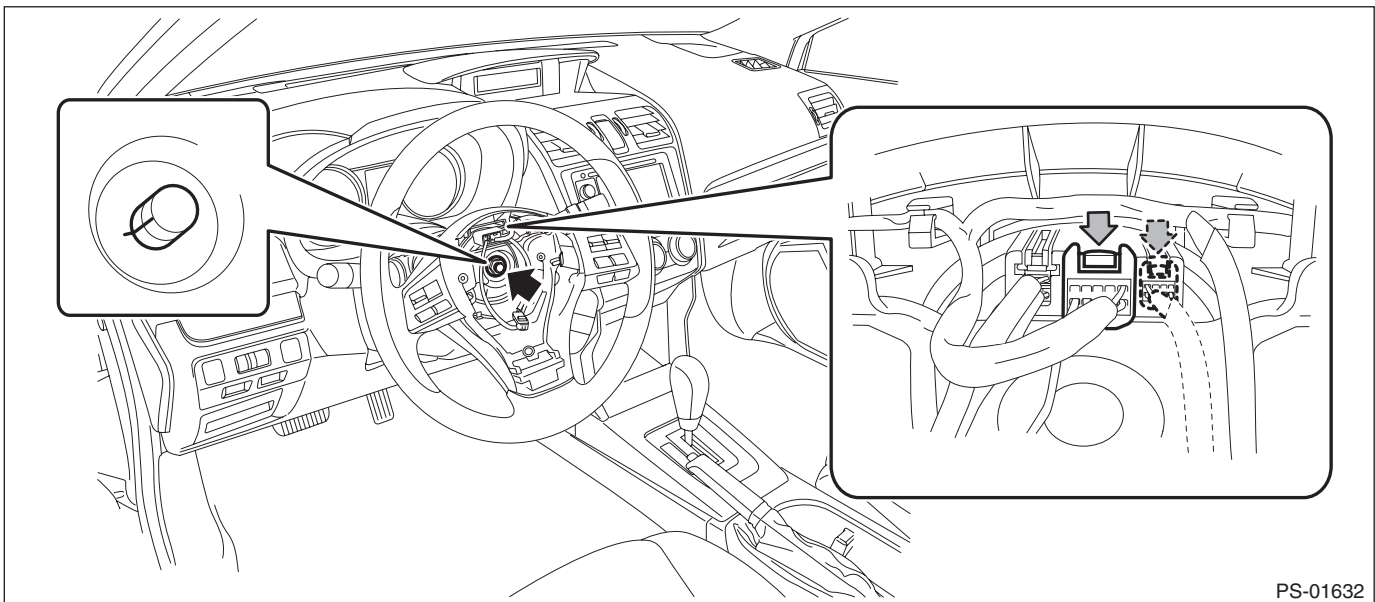
CAUTION:

- 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



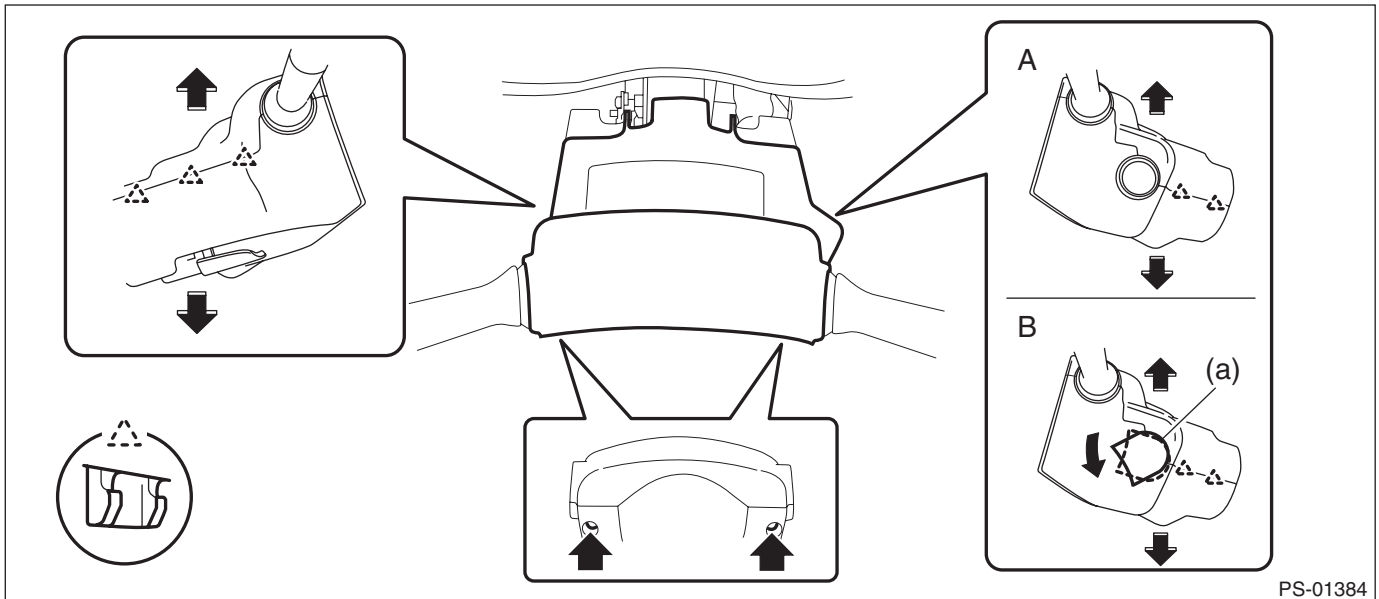
PS-01632

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 Models without keyless access

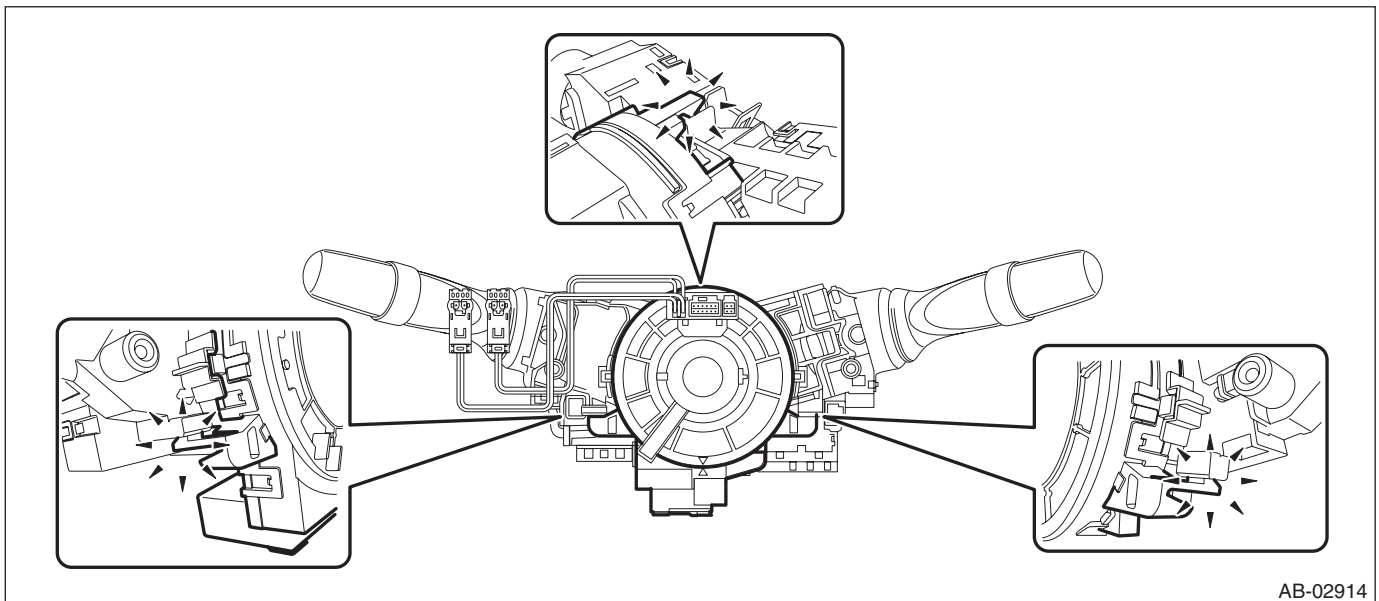
B Models with keyless access

7) Remove the roll connector.

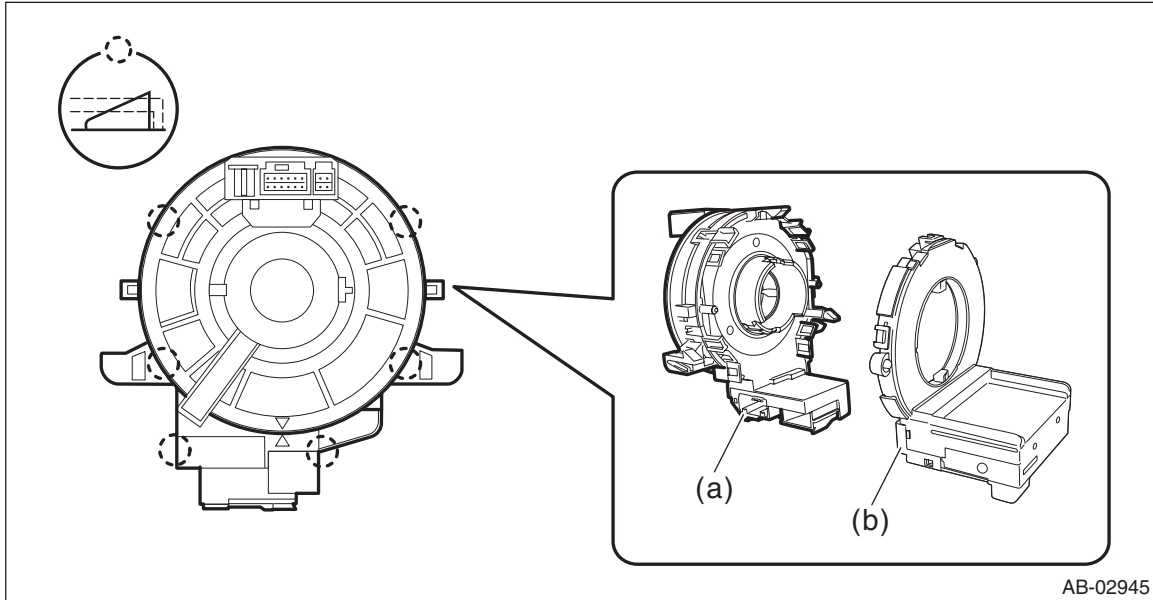
CAUTION:

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).

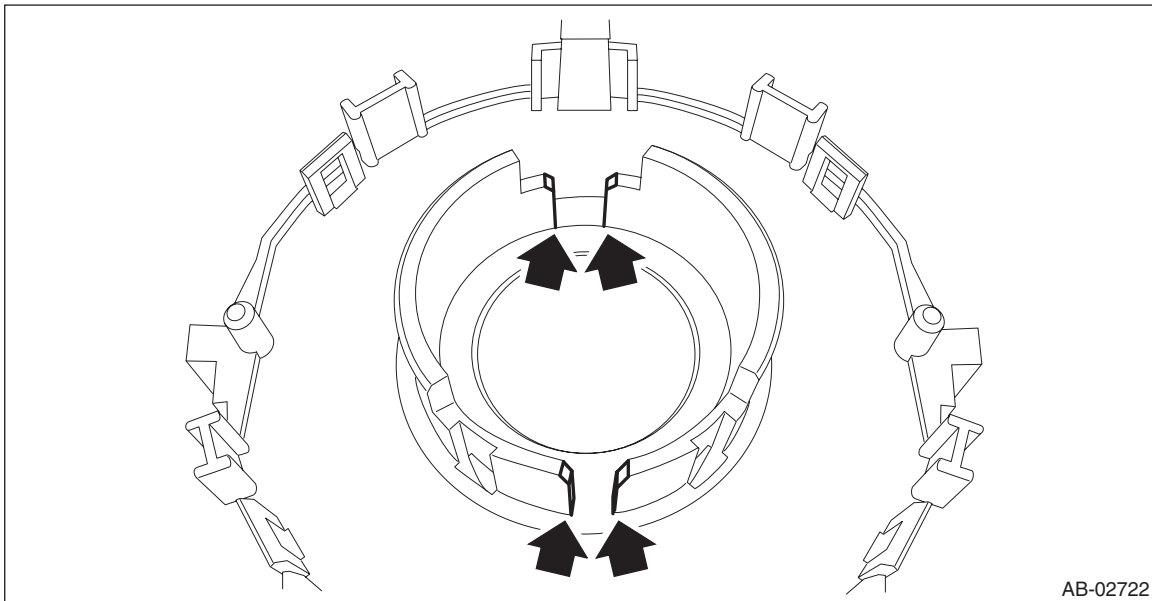


B: INSTALLATION

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-103, 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-103, 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:

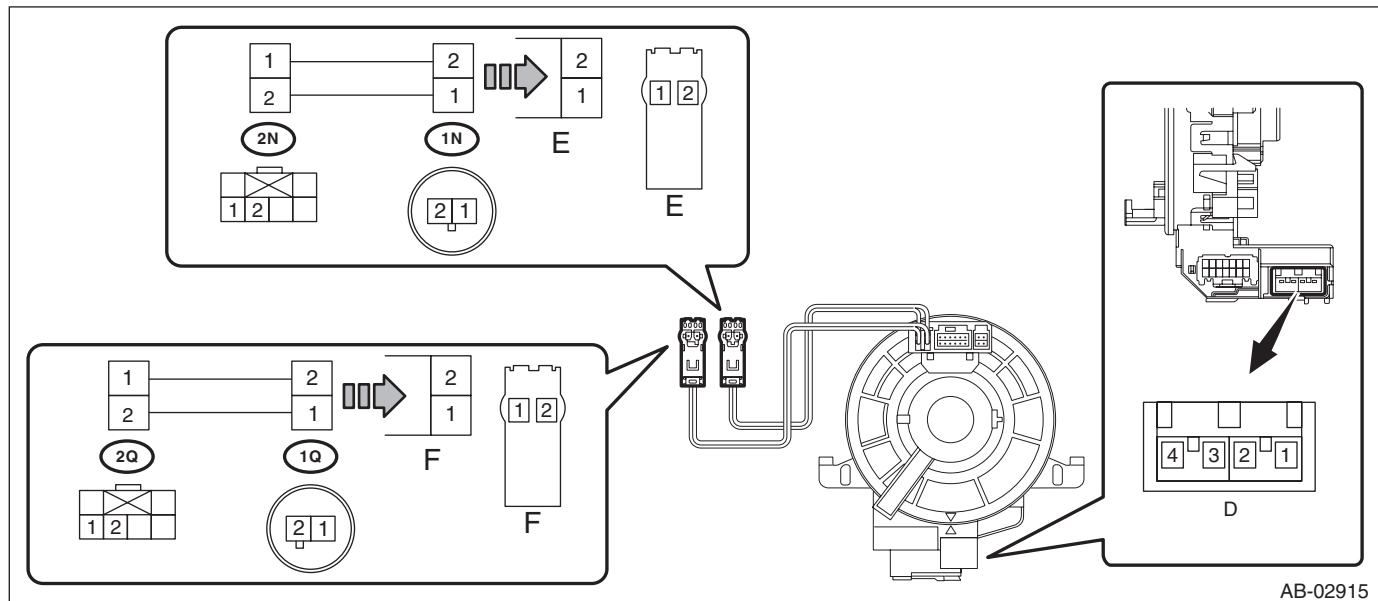
Test harness N (98299SA000)

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 Ω
(2Q) No. 1 — (2Q) No. 2	Always	Less than 1 Ω

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.

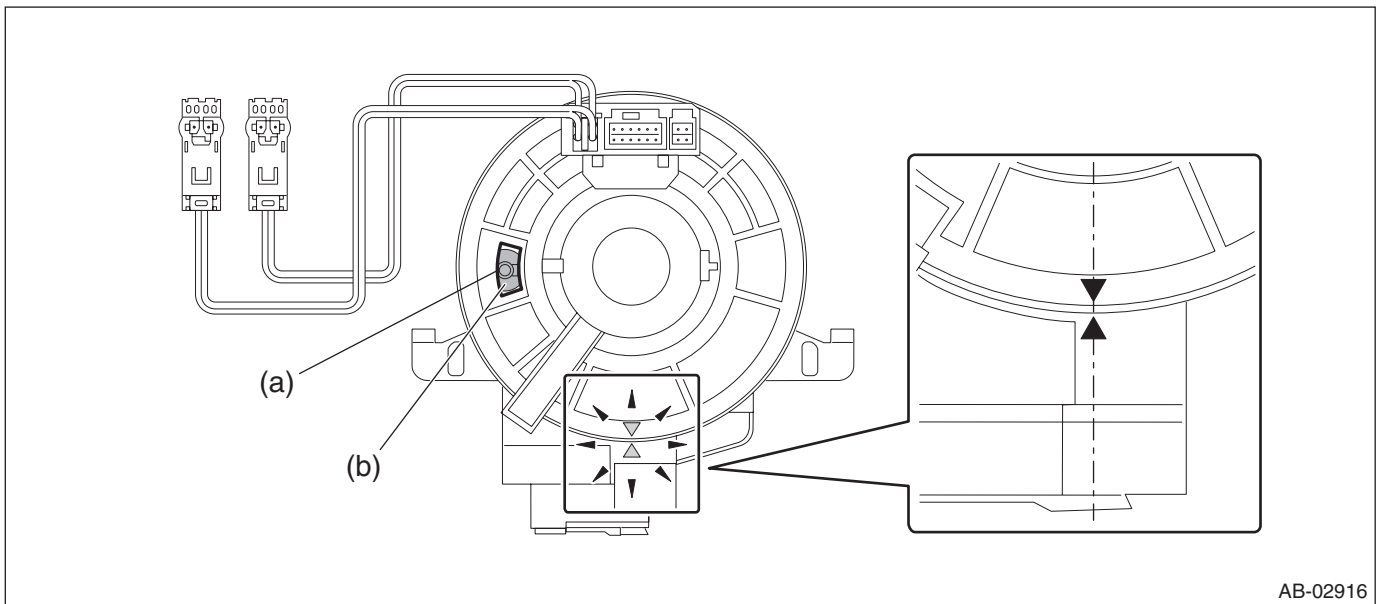
D: ADJUSTMENT**CAUTION:**

- 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).



Roll Connector

AIRBAG SYSTEM

AIRBAG SYSTEM (DIAGNOSTICS)

AB(diag)

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