# 16.Stop Light Switch

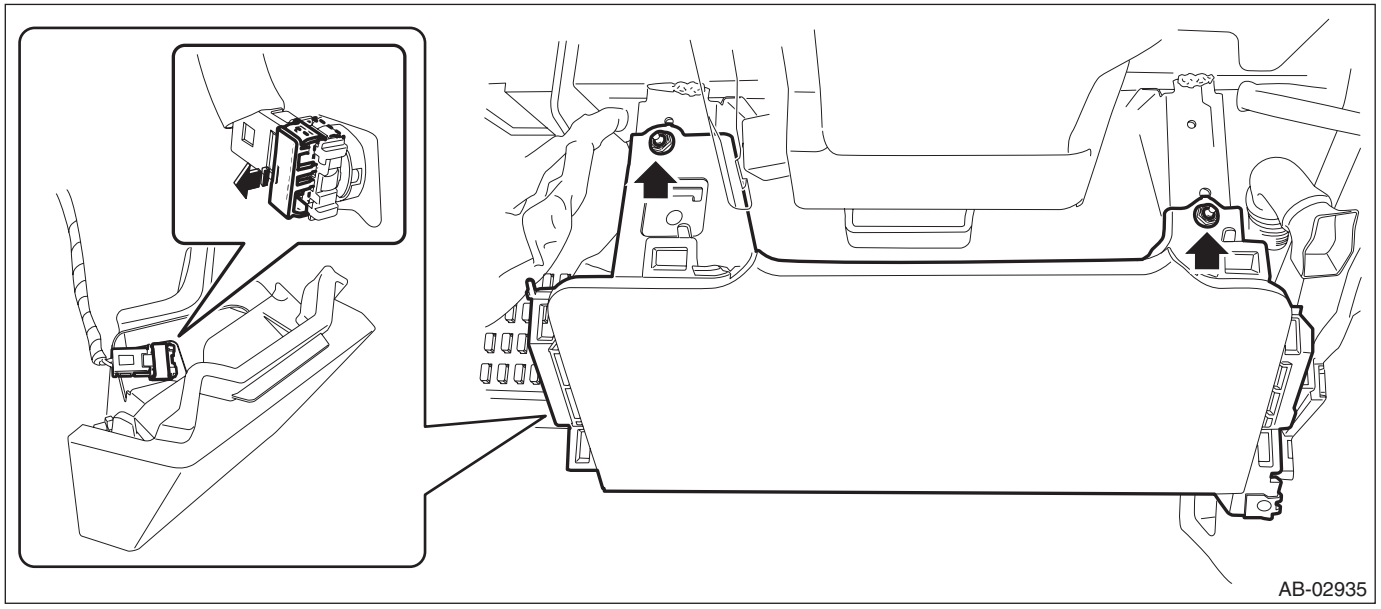
## A: REMOVAL

1) Disconnect the ground cable from battery. <Ref. to NT-5, BATTERY, NOTE, Note.>

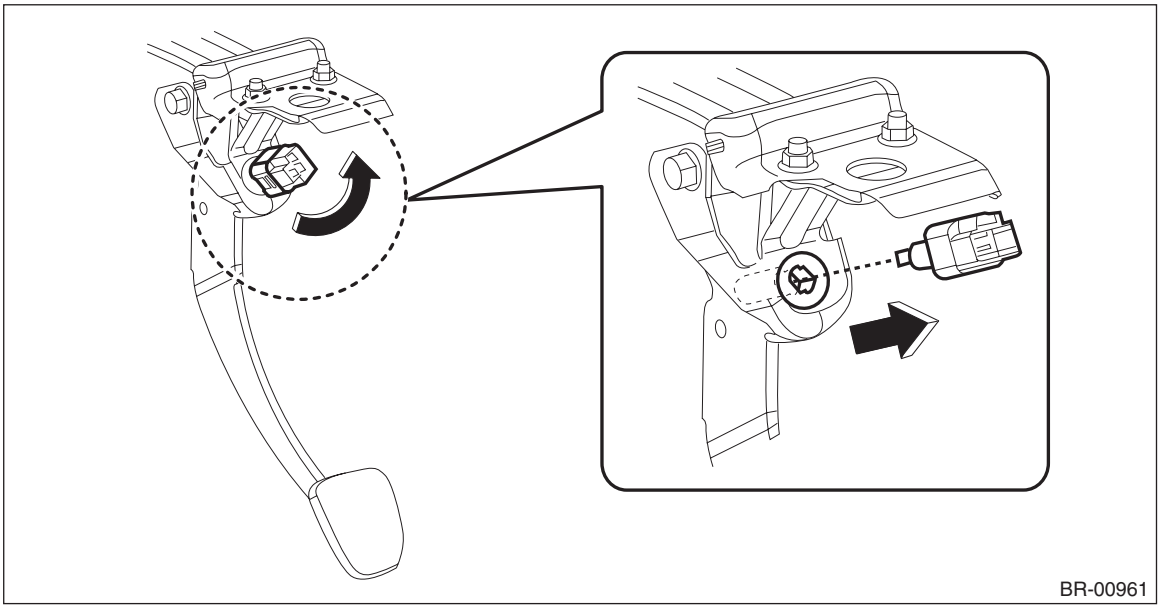
NOTE:
For the 12 volt engine restart battery of HEV model, disconnect the ground terminal from 12V engine restart battery sensor.

2) Remove the cover assembly - instrument panel LWR driver. <Ref. to EI-76, REMOVAL, Instrument Panel Lower Cover.>

3) Remove the nuts to remove the knee airbag module and disconnect the harness connector. <Ref. to AB-23, KNEE AIRBAG MODULE, PROCEDURE, Airbag Connector.>




4) Remove the stop light switch.
   (1) Disconnect the stop light switch connector.
   (2) Remove the stop light switch by turning it counterclockwise.



## B: INSTALLATION

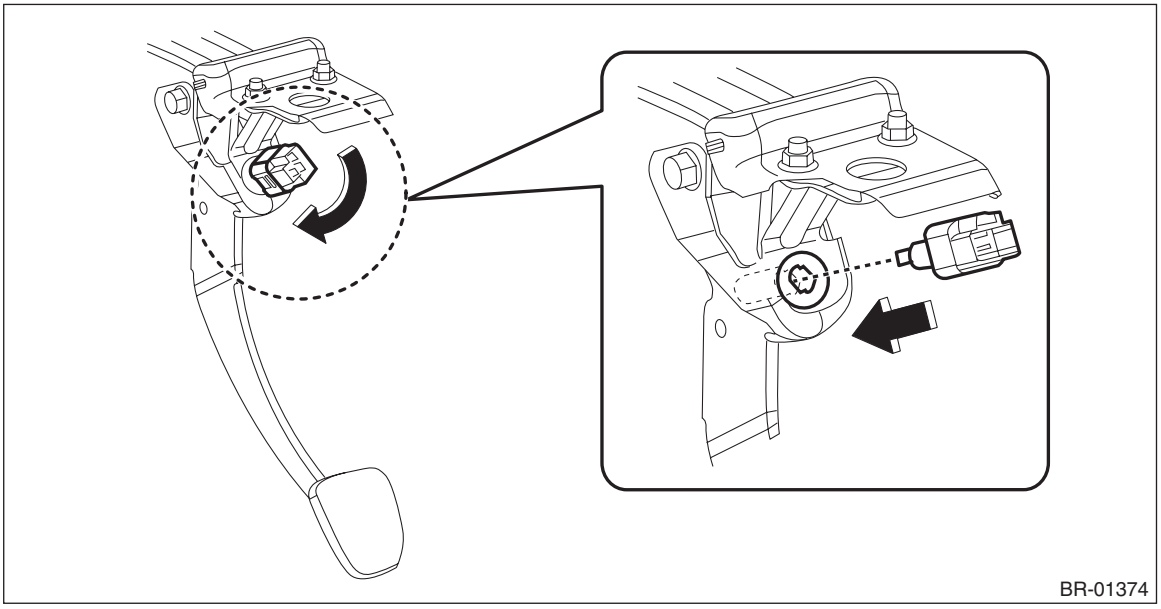
### 1. GASOLINE ENGINE MODEL

1) Install the stop light switch.

**CAUTION:**

- **Turn the stop light switch clockwise when installing so that it can return backward by approximately 1 mm (0.04 in) and clearance is automatically adjusted.**
- **If it is hard to turn the switch, reduce the switch pushing force and turn it again.**

(1) While pulling up the brake pedal toward you, contact the stop light switch to the stopper and temporarily install it by rotating it clockwise.
(2) Adjust the stop light switch position, and install it. <Ref. to BR-78, ADJUSTMENT, Stop Light Switch.>
(3) Install the stop light switch connector.




2) Install the cover assembly - instrument panel LWR driver.
3) Connect the battery ground terminal.
4) Check that the brake light operate properly.
5) Check the stop light switch operation.
(1) Turn the ignition switch to OFF and connect the Subaru Select Monitor.
(2) Start the engine and warm it up to a sufficient temperature.

NOTE:
Perform the following operations with the engine running.
(3) Display the data of «Brake Switch» and «Pressure Sensor Output» by following the Subaru Select Monitor display screen.
(4) Check that the stop light switch is ON with the brake pedal not depressed.
(5) Quickly depress the brake pedal 5 times.
(6) Slowly release the brake pedal depressed at the fifth time and check that the master cylinder pressure is within the standard value when the stop light switch changes from ON to OFF.

***Specification:***
***Less than 1 Mpa (10 bar)***

### 2. HEV MODEL

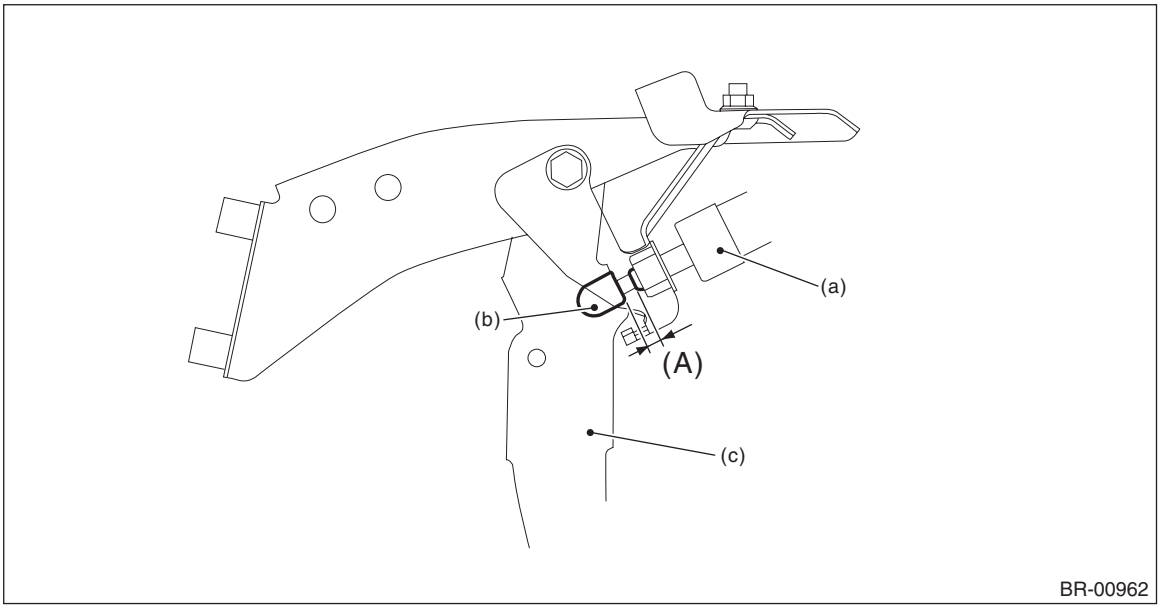
1) Adjust the stop light switch position, and then secure the stop light switch by turning it clockwise. <Ref. to BR-78, ADJUSTMENT, Stop Light Switch.>
2) Install each part in the reverse order of removal.

# C: INSPECTION

## 1. CLEARANCE CHECK

NOTE:
Check for clearance is applied only to HEV model.
1) Measure the clearance between the end of the stop light switch and the stopper.

***Specification:***
***Clearance (A) of the stop light switch: 1 mm — 2 mm (0.04 in — 0.08 in)***



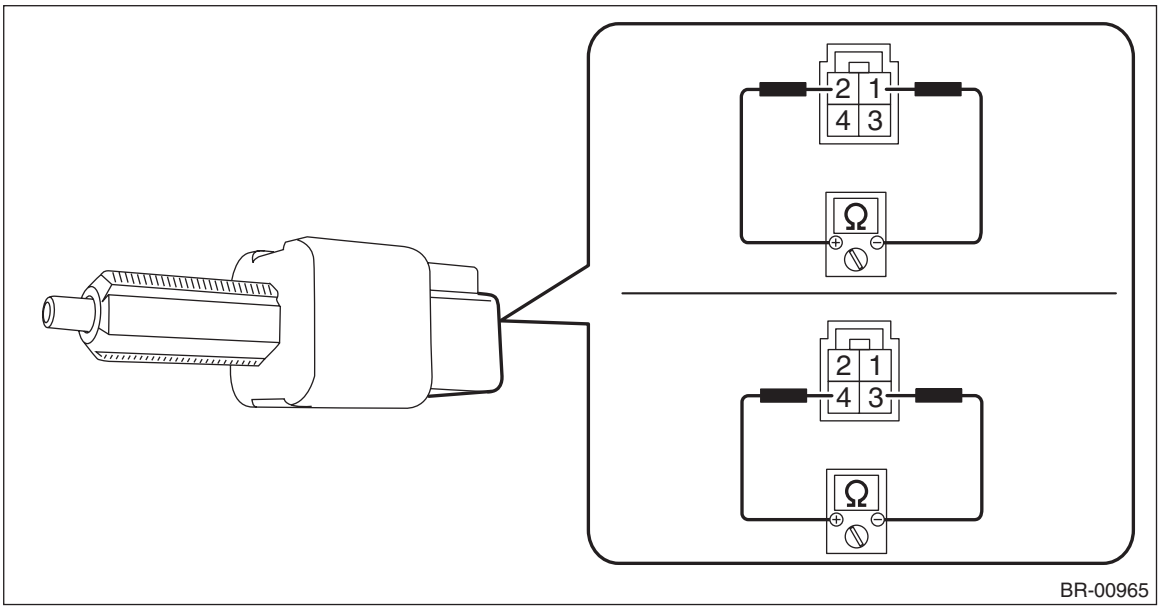

(a) Stop light switch (b) Stopper (c) Brake pedal

2) Adjust the position of the stop light switch if the inspection result is not within the standard value. <Ref. to BR-78, ADJUSTMENT, Stop Light Switch.>

## 2. CHECK RESISTANCE

1) Disconnect the stop light switch connector.
2) Measure the resistance between stop light switch terminals.

***Preparation tool:***
***Circuit tester***




- Gasoline engine model

| Terminal No. | Inspection conditions | Standard |
|---|---|---|
| 1 — 2 | When brake pedal is depressed | 1 MΩ or more |
| | When brake pedal is released | Less than 1 Ω |
| 3 — 4 | When brake pedal is depressed | Less than 1 Ω |
| | When brake pedal is released | 1 MΩ or more |

- HEV model

| Terminal No. | Inspection conditions | Standard |
|---|---|---|
| 1 — 2 | When brake pedal is depressed | Less than 1 Ω |
| | When brake pedal is released | 1 MΩ or more |
| 3 — 4 | When brake pedal is depressed | 1 MΩ or more |
| | When brake pedal is released | Less than 1 Ω |

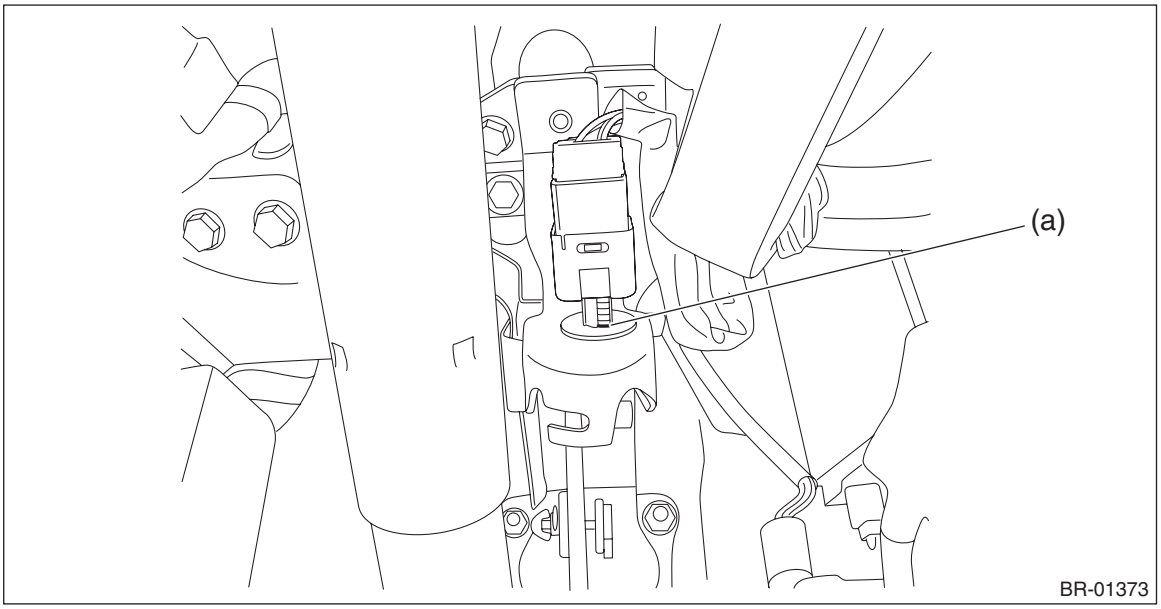
3) Replace the stop light switch if the inspection result is not within the standard value.

# D: ADJUSTMENT

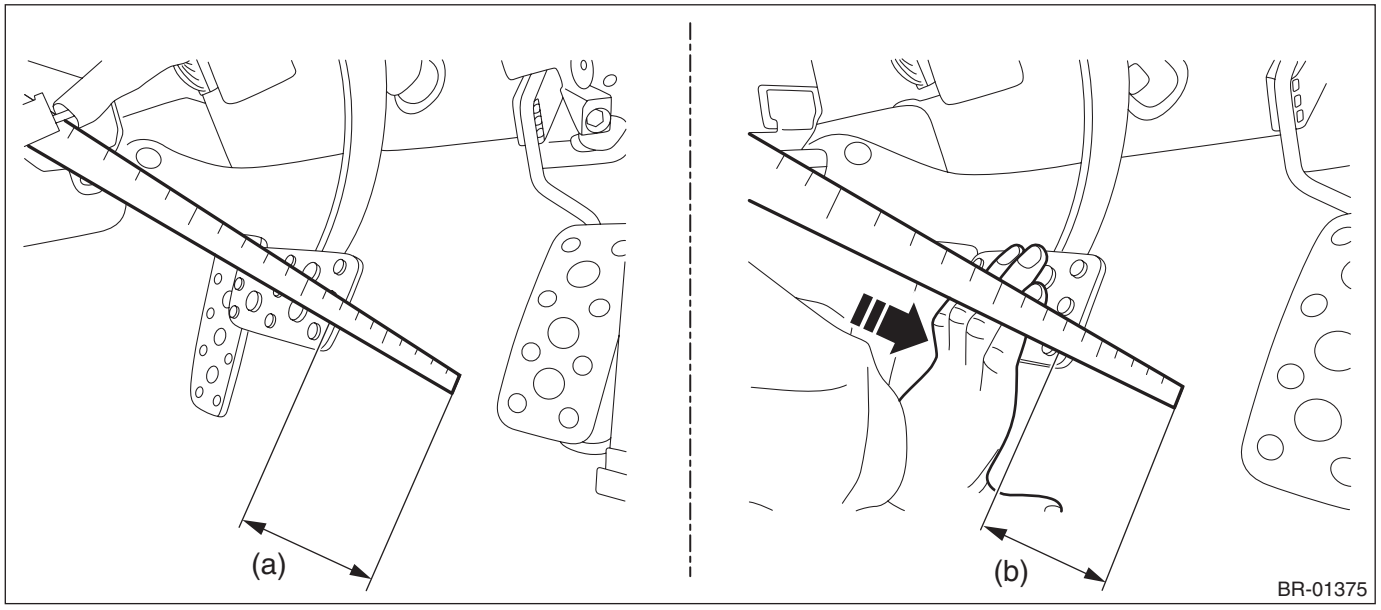
## 1. GASOLINE ENGINE MODEL

**CAUTION:**
**• Turn the stop light switch clockwise when installing so that it can return backward by approximately 1 mm (0.04 in) and clearance is automatically adjusted.**
**• If it is hard to turn the switch, reduce the switch pushing force and turn it again.**
**• After adjustment, if the pedal stroke is less than 3 mm (0.12 in), it may lead to an incorrect light illumination by vibrations etc.**

1) Mark the threaded portion of the stop light switch (a).



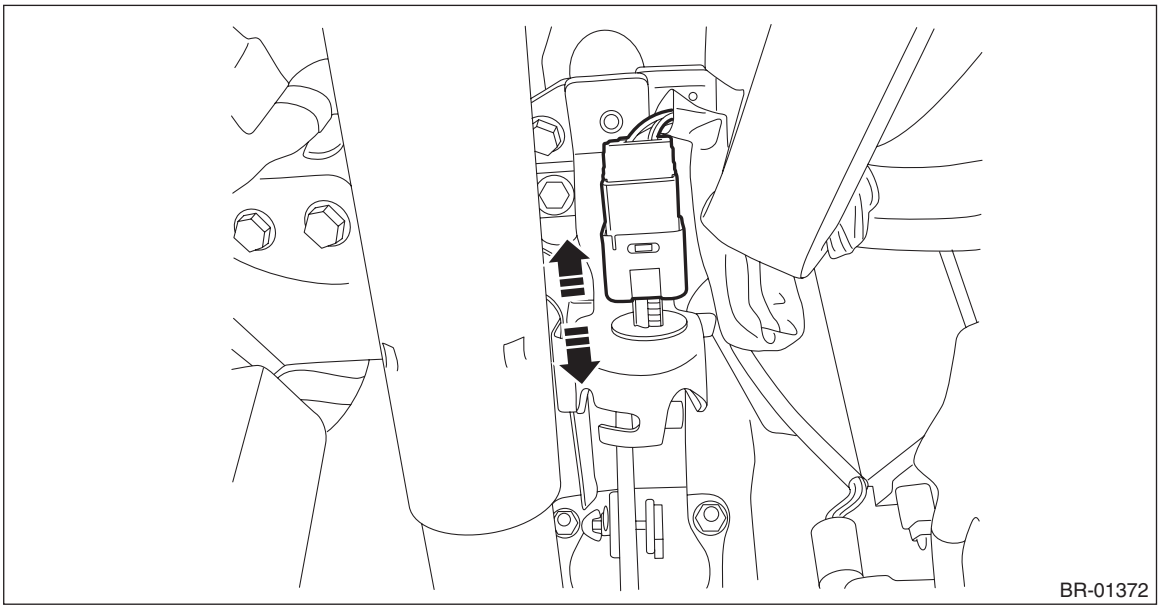

2) Measure the brake pedal stroke which turns on the stop light switch.
   (1) Measure the distance (a) from the floor mat to the end of brake pedal pad.
   (2) Hold the pedal to a position that the stop light illuminates, and measure the distance (b) from the floor mat to the end of brake pedal pad.
   (3) Calculate the difference (stroke value) between the values (a) and (b) measured as above.



3) Adjust so that the calculated difference of stroke value fit within the specified value, and install the stop light switch.

***Specification:***
***3 mm (0.12 in) or more, less than 8 mm (0.31 in)***

NOTE:
Pedal stroke volume per a pitch becomes approx. 5 mm (0.2 in).

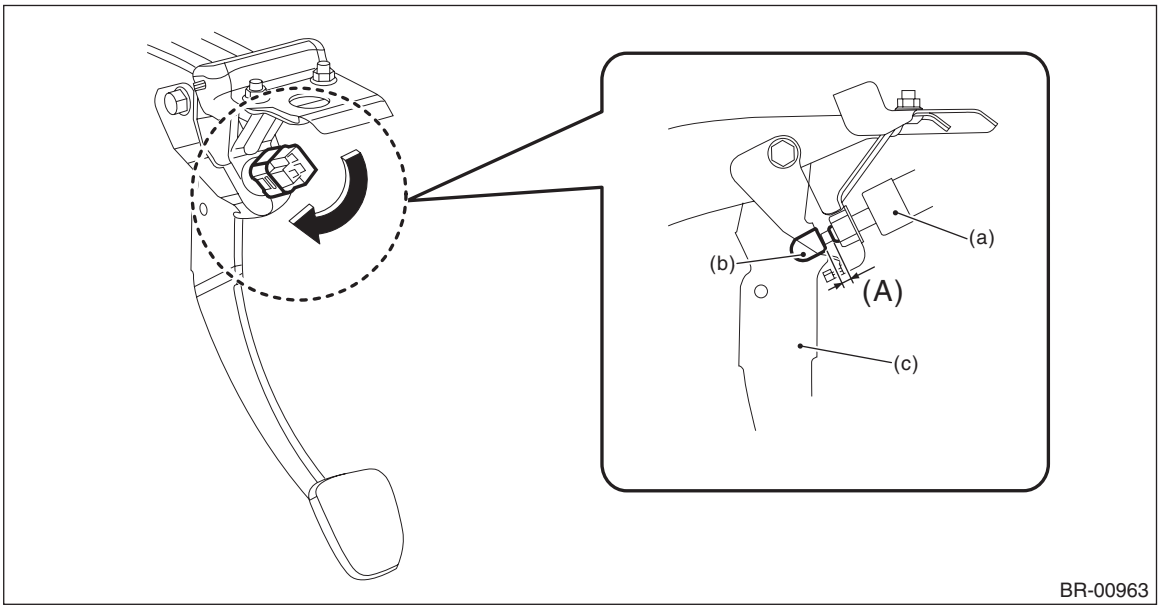



4) After adjustment, make sure that the stop light switch illuminates normally.

## 2. HEV MODEL

1) While pulling up the brake pedal (c) toward you, insert the stop light switch (a) until it reaches the stopper (b).
2) Install the stop light switch by turning it clockwise.

**CAUTION:**
**Turn the stop light switch clockwise when installing so that it can return backward by approximately 1 mm (0.04 in) and clearance is automatically adjusted.**
**Insert until it contacts the stopper, and make sure that clearance (A) of the end of stop light switch and the stopper is 1 mm — 2 mm (0.04 in — 0.08 in).**




(a) Stop light switch (b) Stopper (c) Brake pedal