

General Description

KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)

3. General Description

A: CAUTION

1. SRS AIRBAG SYSTEM

The airbag system wiring harness is routed near the keyless access with push button start system.

CAUTION:

- Do not use electrical test equipment on any wiring harnesses and connectors in the airbag system.
- Be careful not to damage the wiring harness of the airbag system when servicing the keyless access with push button start system.

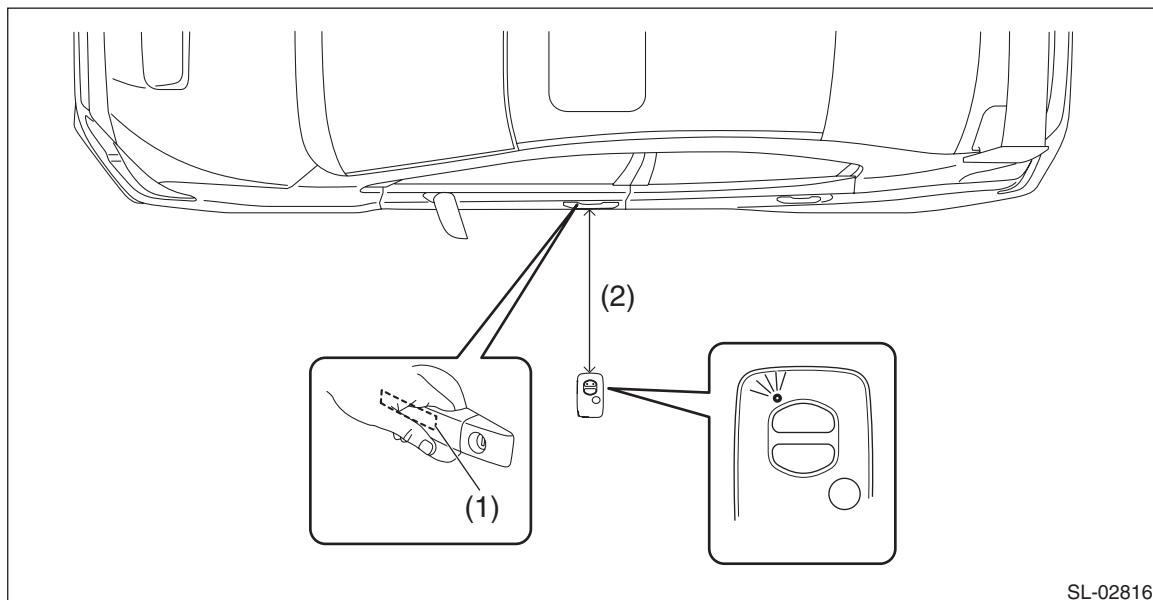
2. KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM

NOTE:

- Using the function setting (ECM customizing), check that the keyless access system is not OFF. <Ref. to SL-119, OPERATION, Function Setting (Customize).>
- The dark current is approx. 400 mA if there is communication between the vehicle and access key.
- The dark current is approx. 40 mA if there is no communication between the vehicle and access key.*

* No communication with the vehicle means that the keyless access function has been cancelled or that the access key has not been near the vehicle for 15 minutes or more after door locking.

1) Keyless access door unlock function check



(1) Touch sensor (unlock)

(2) 40 — 80 cm

(1) When carrying the access key with all doors locked by keyless lock operation, check that when the touch sensor (unlock) built in to the back side surface of door outer handle of front door is touched, the driver's door will unlock (when touched on the driver's side) or all doors will unlock (when touched on the passenger's side) and the answer-back function operates (hazard light blinks twice, access buzzer sounds twice).

(2) In the keyless access door unlock detection area, hold the access key at the same height as the outer handle (approx. 80 cm from the ground) and in the direction shown in the figure, and check that the vehicle becomes unlock mode [access key LED (red) blinks] at 40 to 80 cm from the vehicle.

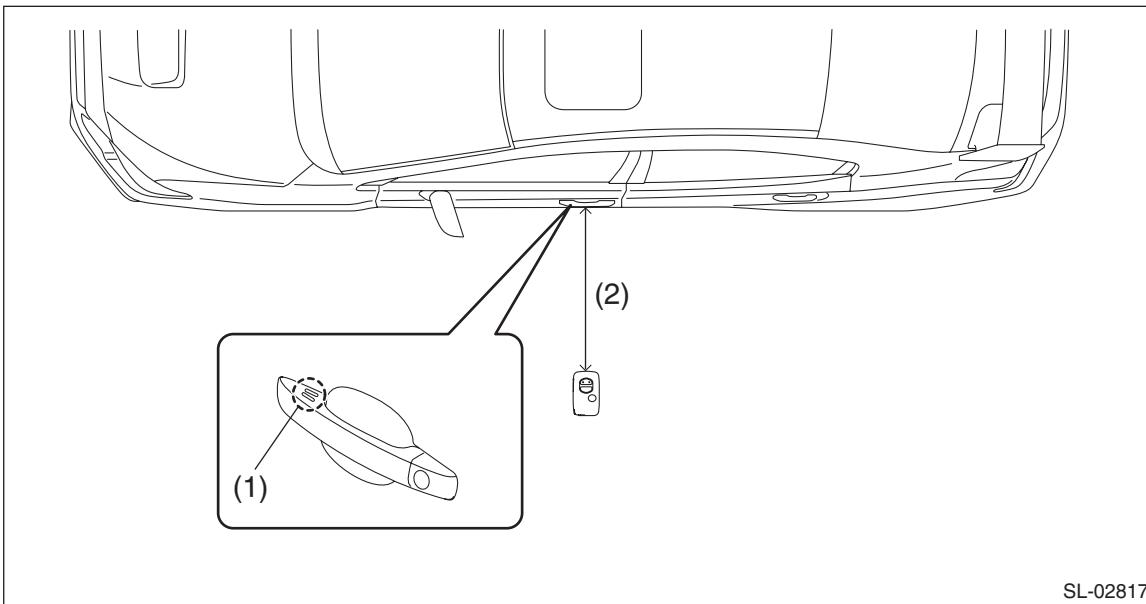
NOTE:

Check the access key battery if the LED (red) does not illuminate when the access key button is pressed. <Ref. to SL-86, INSPECTION, Access Key.>

General Description

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2) Check keyless access door lock function



(1) Touch sensor (lock)

(2) Approx. 30 cm

(1) When carrying the access key outside of the vehicle with all doors closed and unlocked, check that when the touch sensor (lock) on the surface of door outer handle of front door is touched, all doors will lock and the answer-back function operates (hazard light blinks once, access buzzer sounds once).

CAUTION:

If the access key is within the vehicle but not within the detection area (in the instrument panel, on the rear tray, in the glove box, on the floor, or in the door trim pocket), then lockout protection will not function when the doors are locked and the access key will be locked into the vehicle.

(2) To check the keyless access door lock operation range, hold the access key at a height of 10 cm under the bottom edge of the door glass (approx. 80 cm from the ground) in the direction shown in the figure, and check that all doors lock and the answer-back function operates (hazard light blinks once, access buzzer sounds once) when you touch the touch sensor (lock) at a distance of approx. 30 cm from the vehicle.

(3) Check the passenger's side door in the same manner.

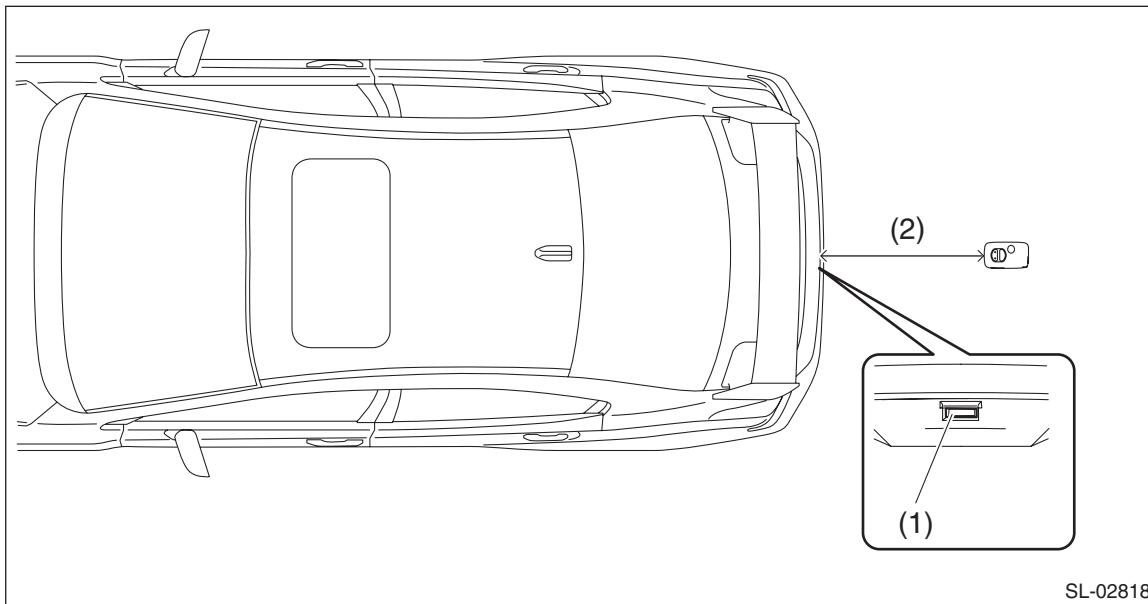
NOTE:

- When the door cannot lock if the touch sensor (lock) is touched, touch the touch sensor (lock) with palm.
- Since communication is not possible within close range (20 cm or less) of the door outer handle, the access key may not operate if you touch the touch sensor (lock) with the same hand you are holding the access key.
- If the lockout prevention buzzer sounds, it is possible that the interior transmitter has radio wave leakage.

General Description

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3) Check of the keyless access trunk open function



(1) Trunk opener button

(2) 40 — 80 cm

(1) With the trunk closed, check that the trunk opens and the answer-back function operates (hazard light blinks twice, access buzzer sounds twice) when you press the trunk opener button while carrying the access key.

(2) To check the keyless access trunk open operation range, hold the access key behind and in the center of the vehicle at the same height as the trunk opener button (90 cm from the ground) in the direction shown in the figure, and check that the trunk opens and the answer-back function operates (hazard light blinks twice, access buzzer sounds twice) when the trunk opener button is pressed at a distance of 40 to 80 cm from the vehicle.

4) Check of the keyless access ignition switching function

(1) With the ignition OFF, enter the vehicle while carrying the access key. Depress the brake pedal with the shift lever in the "P" range (except for MT model) or depress the clutch pedal (MT model), and check that the push button ignition switch indicator is illuminated in green, and check that the engine starts when you press the push button ignition switch.

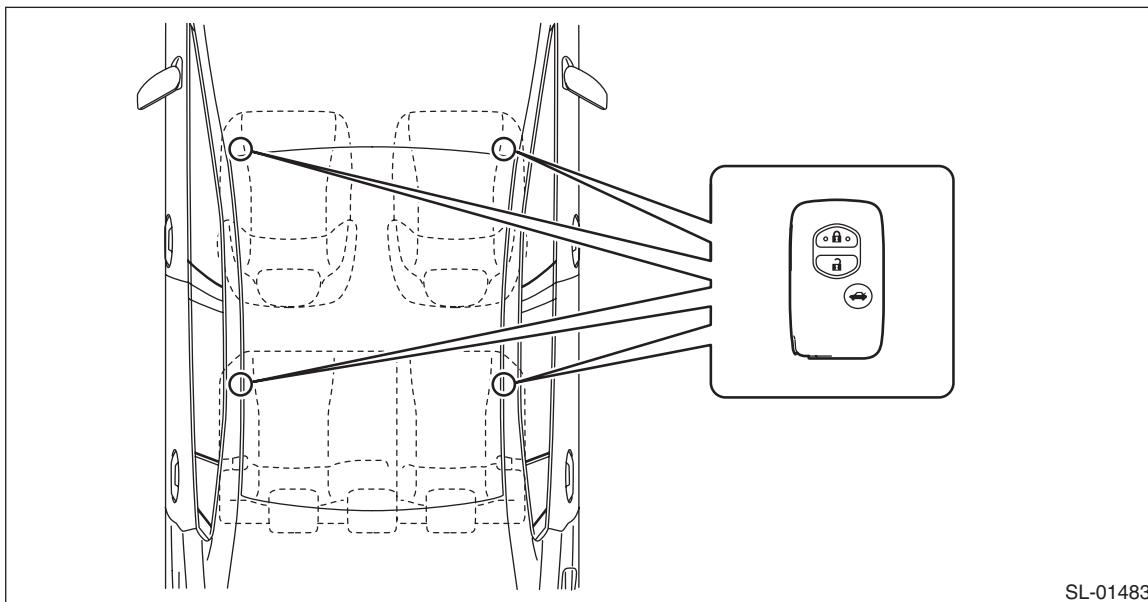
(2) While carrying the access key, check that when you press the push button ignition switch without depressing the brake pedal (except for MT model) or clutch pedal (MT model), the following occurs: 'Ignition OFF' → 'ACC ON' → 'Ignition ON' → 'Ignition OFF'. However on the model except for MT, if the shift lever is in any range except for the "P" range and the push button ignition switch is pressed from ignition ON, then it will change to ACC ON without changing to ignition OFF.

(3) After the vehicle has stopped, press the push button ignition switch and ignition is turned OFF (engine stopped · all power supplies OFF). However on the model except for MT, if the shift lever is in any range except for the "P" range and the push button ignition switch is pressed with the vehicle stopped, then the power supplies changes to ACC ON without changing to ignition OFF. Check that the steering lock operates if the door is opened in the ignition OFF state. (However, except for MT model, the shift must be in the "P" range.)

General Description

KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)

(4) To check the range of the keyless access ignition operation, check that the engine can start when you set the access key at the check position on the seat in the direction indicated in the figure.



CAUTION:

The access key may not be correctly detected even though it is within the detection area within the passenger room, if it is on the instrument panel, on the rear tray, in the glove box, on the floor, or in the door trim pocket.

NOTE:

Perform the check twice, once each with the access key positioned on the driver's, passenger's and rear seats.

General Description

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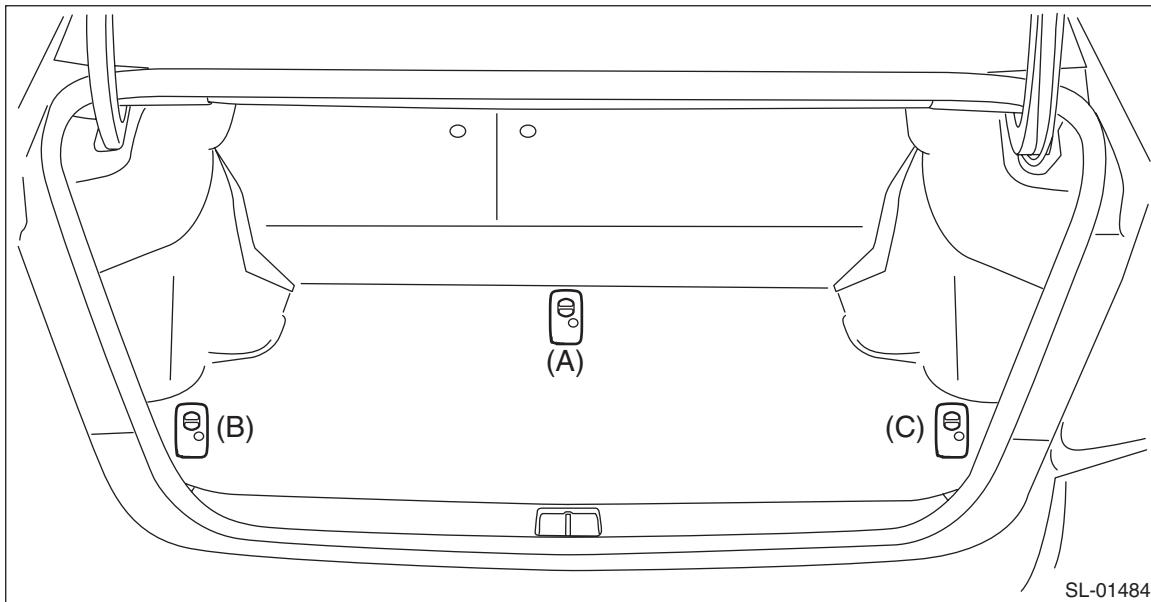
5) Lockout protection function check with the access key in the trunk

CAUTION:

Open one of the windows before performing this check in order to prevent the key from being locked inside the vehicle.

(1) With all doors closed and locked, and with the access key in the trunk room and the trunk closed, check that the access buzzer sounds (approx. 2 seconds). Also check that the trunk opens when you press the trunk opener button.

(2) To check the detection range of the lockout protection function with the access key in the trunk, position the access key in the direction shown in the figure, and check that the lockout protection function operates normally when you check the lockout protection function for the access key locked in the trunk.



CAUTION:

The lockout protection function will not operate if the access key is any of the locations described below.

- Near the spare tire or on the edge of the trunk room.
- Inside a bag made of metallic material or near metal objects.

NOTE:

Check the trunk in two locations or more.

6) Lockout protection function check (in the passenger room)

CAUTION:

Open one of the windows before performing this check in order to prevent the key from being locked inside the vehicle.

- (1) Position the access key on the driver's or passenger's seat.
- (2) Close all doors. (with all doors unlocked)
- (3) Check that the doors do not lock and the lockout protection buzzer (exterior) sounds for 2 seconds when you touch the touch sensor (lock) of either the driver's or passenger's door.

General Description

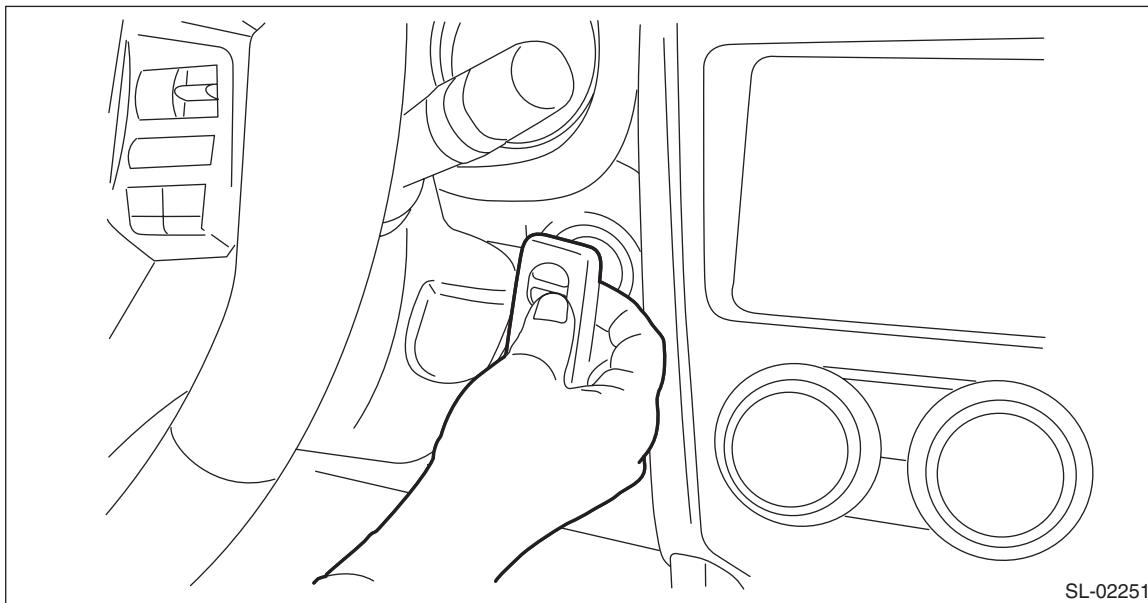
KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)

7) Check of the keyless access cancel function

(1) After setting the keyless access cancel function, check that all keyless access and start system (keyless access) functions are inoperable. (For cancel setting, refer to <Ref. to SL-119, OPERATION, Function Setting (Customize).>)

NOTE:

When keyless access is cancelled, door lock and unlock can be operated by access key button operation and the starter system can be operated by passing the access key over the push button ignition switch with the access key button toward you.

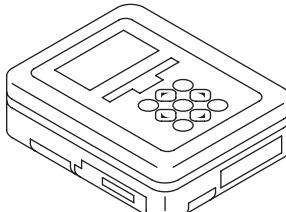


8) Access key diagnostic mode

- (1) Connect the Subaru Select Monitor, and select «Work Support» of {Keyless access system}. <Ref. to KPS(diag)-38, Keyless Access System Check.>
- (2) From {Work Support}, select «Function Check Sequence».
- (3) From {Function Check Sequence}, select «Keyless access system check».
- (4) Select the transmitter to check from the items.
- (5) Check that the door lock buzzer sounds (short blips, a continuous beeping sound for the center room antenna) when the access key is near the selected transmitter or antenna.

B: PREPARATION TOOL

1. SPECIAL TOOL

| ILLUSTRATION | TOOL NUMBER | DESCRIPTION | REMARKS |
|---|-------------|-------------------------------|---|
|  ST1B022XU0 | 1B022XU0 | SUBARU SELECT MONITOR III KIT | Used for troubleshooting the electrical system. |

2. GENERAL TOOL

| TOOL NAME | REMARKS |
|----------------|---|
| Circuit tester | Used for measuring resistance, voltage and current. |