

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 the electrical test equipment on all airbag system wiring harnesses and connectors.
- 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-110, 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.

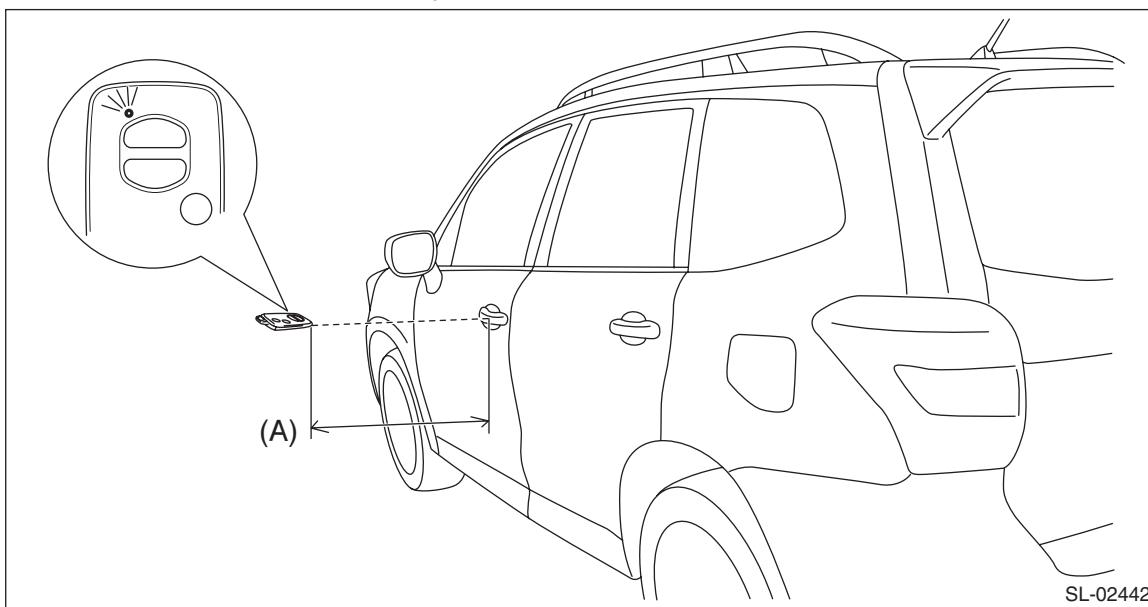
1) Keyless access door unlock function check

(1) 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 door will unlock (model with double lock), all doors will unlock (model without double lock) and the answer-back function operates (hazard light blinks 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 (A) 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-81, INSPECTION, Access Key.>



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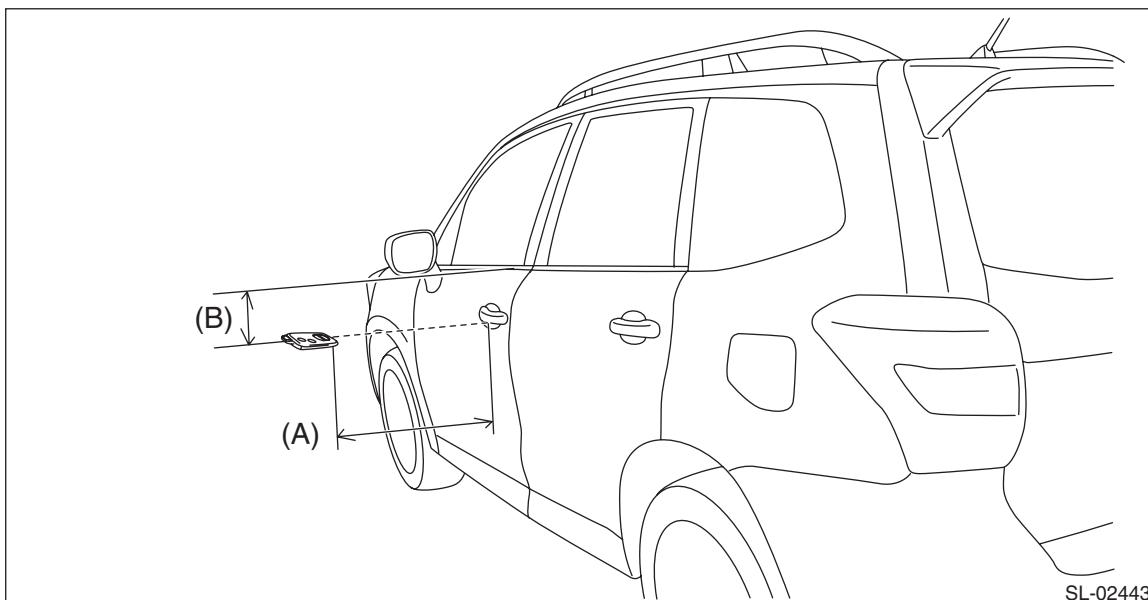
2) Check keyless access door lock function

(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).

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, in the door trim pocket or at the corner of the luggage room), 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 (B) 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) when you touch the touch sensor (lock) at a distance (A) of approx. 30 cm from the vehicle.



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

NOTE:

- When the door does not lock even if the touch sensor (lock) is touched, touch the touch sensors (lock) located at the upper and lower part of the door handle by holding with your hand.
- 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.

3) Check of the keyless access rear gate function

(1) With the rear gate locked, check that the all doors unlock and rear gate opens simultaneously and the answer-back function operates (hazard light blinks twice) when you press the rear gate opener button while carrying the access key.

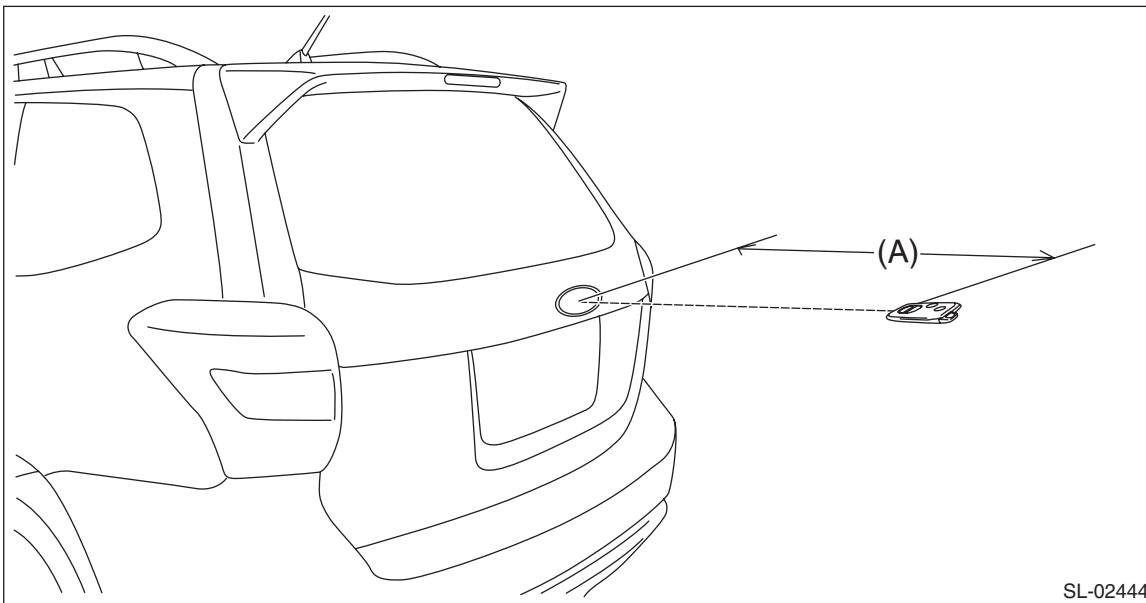
NOTE:

- For vehicles with power rear gate, the rear gate opens automatically. Holding down the button switches the operation to manual mode.
- The hazard light for the answer-back function blinks twice on vehicles without power rear gate, and four times on vehicles with power rear gate.

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



(3) With the rear gate unlocked, check that all doors lock and the answer-back function operates (hazard light blinks once) when you press the rear lock button while carrying the access key.

4) Check of the keyless access ignition switching function

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

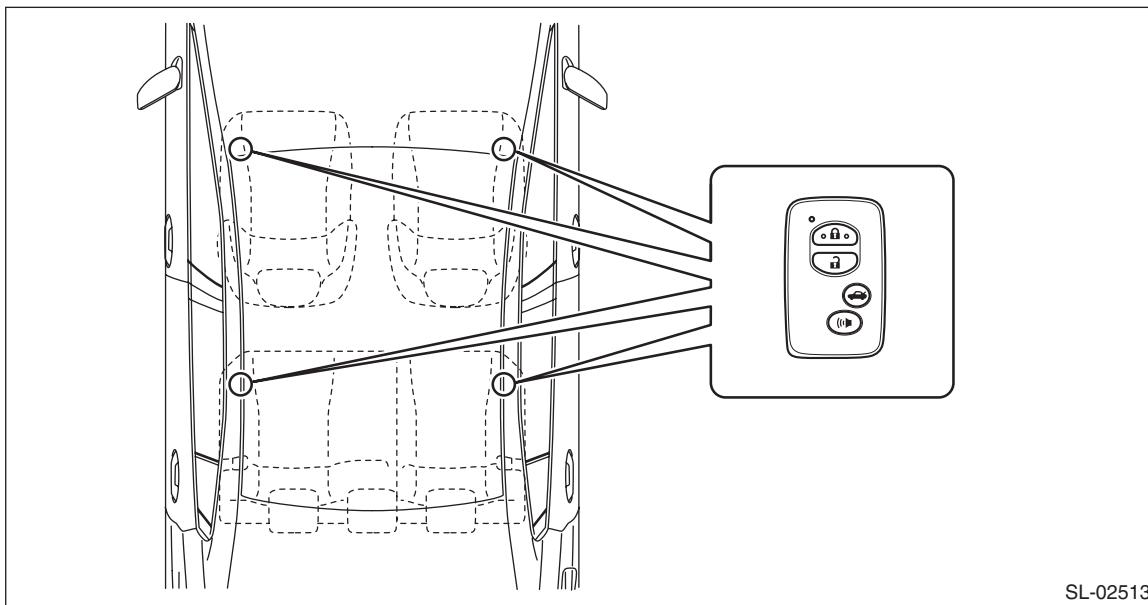
(2) While carrying the access key, check that when you press the push button ignition switch without depressing the brake pedal, the following occurs: 'Ignition OFF' → 'ACC ON' → 'Ignition ON' → 'Ignition OFF'. However, if the shift lever is any range except for the P range and the push button ignition 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, 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 ignition is not turned OFF and instead the power supplies changes to ACC ON. Check that the steering lock operates if the door is opened in the ignition OFF state (shift P range).

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(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 sheet 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 in the instrument panel, on the rear tray, in the glove box, on the floor, in the door trim pocket, or at the corner of the luggage room.

NOTE:

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

5) 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.

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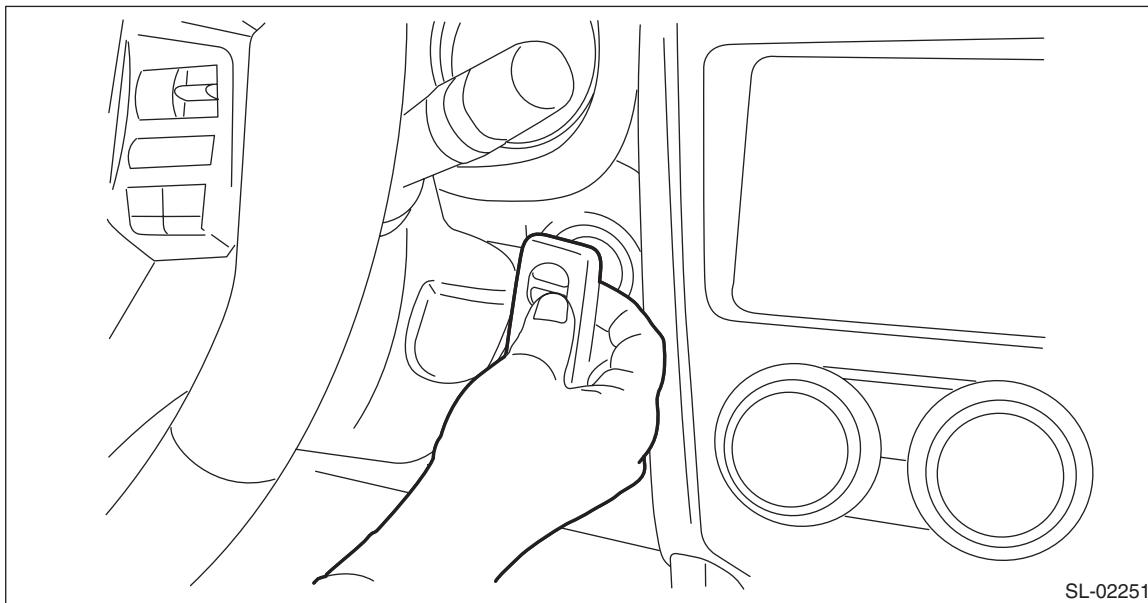
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6) Check of the keyless access cancel function

(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-110, 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.



7) Access key diagnostic mode

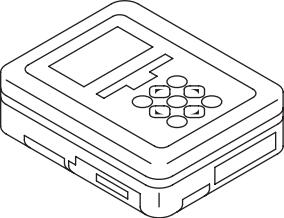
- (1) Connect the Subaru Select Monitor, and select «Work Support» of {Keyless access system}. <Ref. to KPS(diag)-28, Keyless Access System Check.>
- (2) From {Work Support}, select «Function Check Sequence».
- (3) From {Function Check Sequence}, select «Keyless access system check».
- (4) Select the 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.

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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.