Diagnostic Information and Procedures

Power Door Lock System Symptom Diagnosis (If Equipped)

S6RW0C9604001

NOTE

- **Use of SUZUKI scan tool makes it easy to check whether a faulty condition is on the input side or output side of BCM. For checking procedure, refer to "Diagnosis Using Output Test Function of SUZUKI Scan Tool" under "Scan Tool Data in Section 10B".**
- **Check each part in the order from the top of the following list.**

Condition	Possible cause	Correction / Reference Item
All door can not be locked / unlocked by all of switches	Circuit fuse blown	*Replace fuse and check for short circuit.*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
All door can not be locked / unlocked by only power door lock switch	Circuit fuse blown	*Replace fuse and check for short circuit.*
	Power door lock switch faulty	*Check power door lock switch referring to "Power Door Lock Switch Inspection (If Equipped)".*
	Wiring harness connected to power door lock switch faulty	*Repair.*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
All door can not be locked / unlocked by only key cylinder switch	Circuit fuse blown	*Replace fuse and check for short circuit.*
	Key cylinder switch faulty	*Check key cylinder switch referring to "Door Key Cylinder Switch Inspection (If Equipped)".*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
Only one door can not be locked / unlocked	Power door lock actuator faulty	*Check actuator referring to "Power Door Lock Actuator Inspection (If Equipped)".*
	Wiring harness connected to applicable door lock actuator faulty	*Repair.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*

Power Door Lock System Operation Inspection (If Equipped)

S6RW0C9604002

1) Check the following operation:
   a) Turn the driver side key cylinder is turned LOCK once, check all doors lock.
   b) Turn the driver side door key cylinder is turned UNLOCK position with door key twice, check all doors unlock.
   c) With all doors unlocked, insert key in key cylinder of driver side door and turn it to lock side, turn it again to lock side within 3 seconds and check that no door can be opened even when door lock knob is moved to unlock side (dead lock function, if equipped).

If malfunction is found, go to "Power Door Lock System Symptom Diagnosis (If Equipped)".

Keyless Entry System Symptom Diagnosis (If Equipped)

S6RW0C9604003

NOTE

- **Confirm that power door lock system is in good condition before referring to the following possible causes.**
- **Check each part in the order from the top of the following list.**

Condition	Possible cause	Correction / Reference Item
All door can not be locked / unlocked by only keyless entry transmitter	Transmitter battery dead	*Replace battery referring to "Replacement of Transmitter Battery (Other than Keyless Start Model)".*
	Door switch faulty	*Check door switch referring to "Door Switch (Front / Rear Door) Inspection in Section 9C" and/or "Rear End Door Switch Inspection in Section 9C".*
	Transmitter faulty	*Replace transmitter.*
	Key reminder switch in ignition switch faulty	*Check ignition switch referring to "Ignition Switch Inspection in Section 9C".*
	Wiring or grounding faulty	*Repair circuit.*
	Keyless entry receiver faulty	*Check keyless entry receiver referring to "Keyless Entry Receiver and Its Circuit Inspection (If Equipped)".*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
Turn signal lights can not be flashed when doors are locked / unlocked by keyless entry transmitter	Turn signal and hazard warning relay faulty	*Check turn signal and hazard warning relay referring to "Turn Signal and Hazard Warning Relay Inspection in Section 9B".*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
Interior light does not light when doors are unlocked by keyless entry transmitter	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
Hazard warning lights do not light when doors are locked/unlocked by keyless entry transmitter	Turn signal and hazard warning relay faulty	*Check turn signal and hazard warning relay referring to "Turn Signal and Hazard Warning Relay Inspection in Section 9B".*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*
Transmitter code can not be programmed to BCM	Door switch faulty	*Check door switch referring to "Door Switch (Front / Rear Door) Inspection in Section 9C" and/or "Rear End Door Switch Inspection in Section 9C".*
	Keyless entry receiver faulty	*Check keyless entry receiver referring to "Keyless Entry Receiver and Its Circuit Inspection (If Equipped)".*
	Key reminder switch in ignition switch faulty	*Check ignition switch referring to "Ignition Switch Inspection in Section 9C".*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*

Keyless Entry System Operation Inspection (If Equipped)

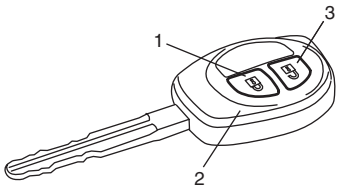
S6RW0C9604004

NOTE

When performing the this inspection, make sure to have any of the door once opened / closed after the ignition key has been removed from the ignition key cylinder.

1) Confirm that power door lock system operates normally, refer to “Power Door Lock System Operation Inspection (If Equipped)”.
2) All doors are closed and unlocked.
3) Check the following operation:
   a) Push “lock” button (1) on transmitter (2) or remote controller once, and check all doors lock and hazard waning lights flash once.
   b) Push “unlock” button (3) on transmitter (2) or remote controller twice, and check all doors unlock and hazard waning lights flash twice and interior light turns on several seconds with the interior light switch in the middle position.

If malfunction is found, go to “Keyless Entry System Symptom Diagnosis (If Equipped)”.



I4RS0B960013-01

Door Lock Function of Keyless Start System Symptom Diagnosis (If Equipped)

S6RW0C9604005

Proceed to “Keyless Start System Symptom Diagnosis in Section 10E” in case that doors cannot be locked and unlocked by operating the request switch at the outside door handle.

Rear End Door Opener System Symptom Diagnosis (If Equipped)

S6RW0C9604006

NOTE

- **Use of SUZUKI scan tool makes it easy to check whether a faulty condition is on the input side or output side of BCM. For checking procedure, refer to “Diagnosis Using Output Test Function of SUZUKI Scan Tool” under “Scan Tool Data in Section 10B”.**
- **Check each part in the order from the top of the following list.**

Condition	Possible cause	Correction / Reference Item
Rear end door can not be opened	Circuit fuse blown	*Replace fuse and check for short circuit.*
	Rear end door opener switch faulty	*Check rear end door opener switch referring to “Rear End Door Opener Switch Inspection (If Equipped)”.*
	Rear end door actuator faulty	*Check rear end door actuator referring to “Power Door Lock Actuator Inspection (If Equipped)”.*
	Wiring or grounding faulty	*Repair circuit.*
	BCM faulty	*Replace after making sure that none of above parts is faulty.*

Rear End Door Opener System Operation Inspection (If Equipped)

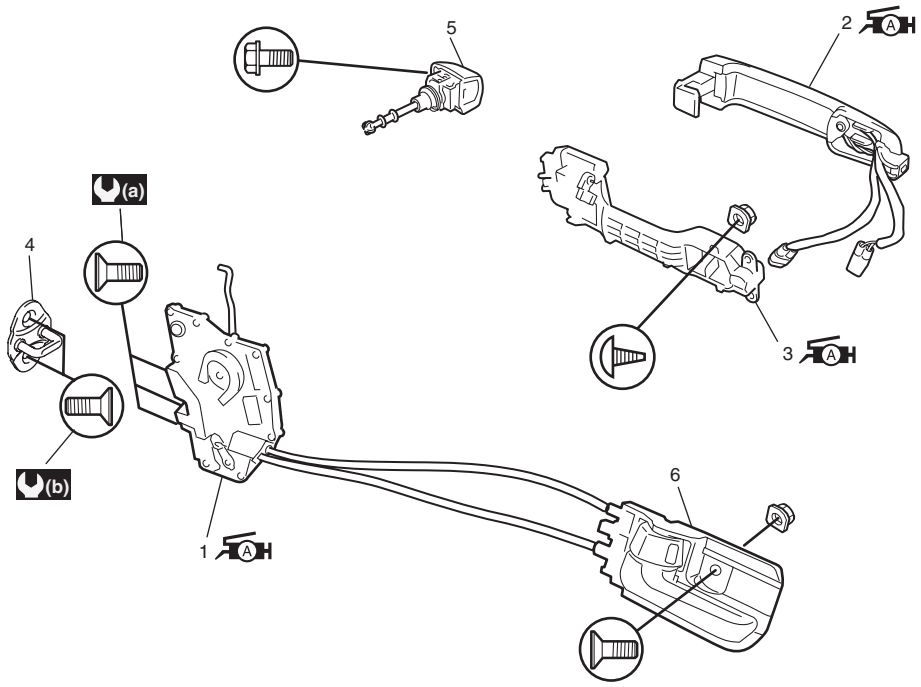
S6RW0C9604007

1) Unlock all doors by using manual lock switch, keyless entry transmitter, or key cylinder switch.
2) Make sure that latch of rear end door is released from striker when rear end door opener switch is pushed.
   If malfunction is found, go to “Rear End Door Opener System Symptom Diagnosis (If Equipped)”.

Repair Instructions

Front Door Lock Assembly Components

S6RW0C9606001



I5RW0A960003-01

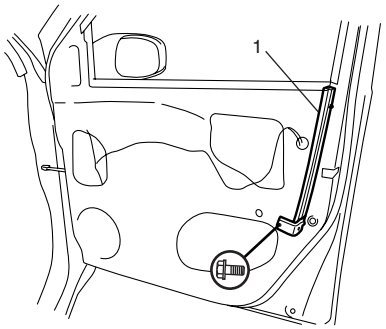
1. Front door latch assembly : Apply lithium grease 99000-25011 to sliding and rotating parts and spring if any.	4. Latch striker	(a) : 5.0 N·m (0.5 kgf-m, 4.0 lb-ft)
2. Outside handle assembly : Apply lithium grease 99000-25011 to sliding part.	5. Key cylinder	(b) : 10 N·m (1.0 kgf-m, 7.5 lb-ft)
3. Outside handle frame : Apply lithium grease 99000-25011 to sliding part and spring.	6. Inside handle bezel	

Front Door Lock Assembly Removal and Installation

S6RW0C9606002

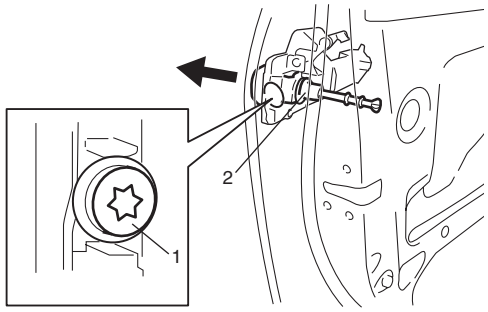
Removal

1) Remove door trim and door sealing cover referring to step 1) to 6) of “Front Door Glass Removal and Installation in Section 9E”.
2) Raise window all the way up.
3) Remove door sash (1).



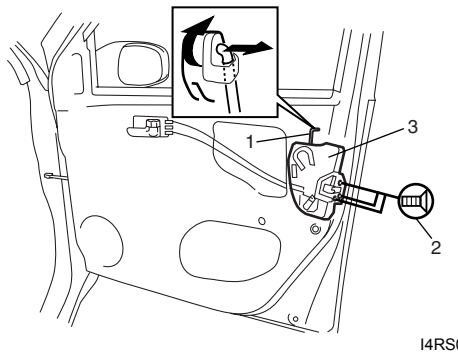
I4RS0A960007-01

4) Remove key cylinder mounting bolt (1), and then remove key cylinder (2).



I4RS0B960005-01

5) Disconnect door opening control rod (1) from outside handle.
6) Disconnect door lock motor lead wire at coupler (if equipped).
7) Remove door latch screws (2) and remove door lock assembly (3).



I4RS0A960006-01

Installation

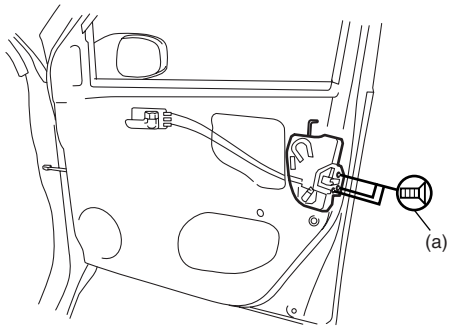
Reverse removal procedure to install front door lock assembly noting the following instructions.

- Apply grease to sliding parts of door latch assembly.

  : Grease 99000–25011 (SUZUKI Super Grease A)

- Tighten door latch screws to specified torque.

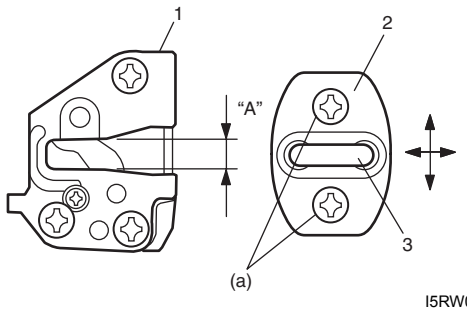
Tightening torque
Door latch screw (a): 5.0 N·m (0.5 kgf-m, 4.0 lb-ft)



I4RS0A960008-01

- Move door latch striker (2) up or down so its center aligns with the center of groove “A” on the door lock assembly (1) as shown.
  Striker should be moved vertically and placed level.
  Do not adjust door lock (1).

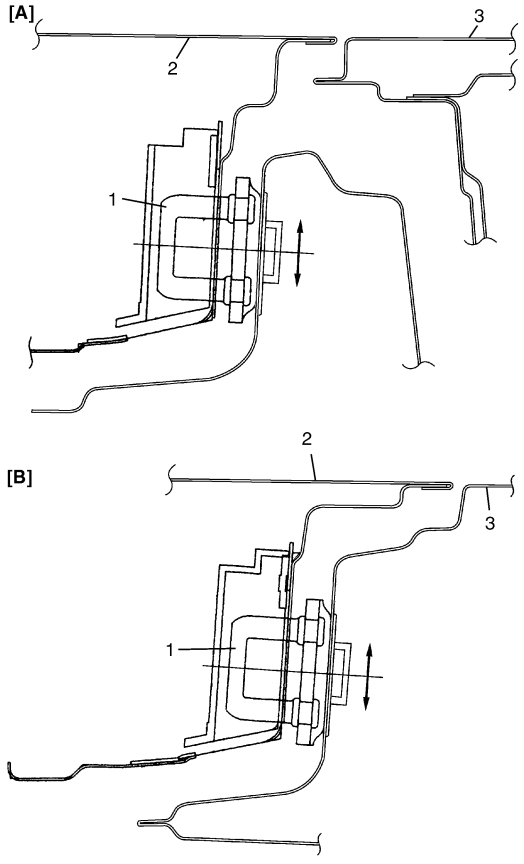
Tightening torque
Door latch striker screw (a): 10 N·m (1.0 kgf-m, 7.5 lb-ft)



I5RW0A960005-01

3. Shaft

- Move door latch striker (1) sideways to adjust door outer panel surface (2) flush with rear door outer panel or body outer panel surface (3) as shown.



I5RW0A960012-01

[A]: Front door
[B]: Rear door

- Install door trim referring to “Front Door Glass Removal and Installation in Section 9E”.

Front Door Lock Assembly Inspection

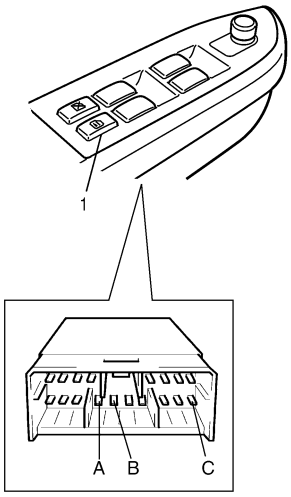
S6RW0C9606003

- Check that door open and closes smoothly and properly.
- Check that door stops in the secondary latched position properly (preventing door from opening freely) and that door closed completely in the fully latched position.
- Adjust door latch striker position referring to “Front Door Lock Assembly Removal and Installation”, if necessary.

Power Door Lock Switch Inspection (If Equipped)

S6RW0C9606004

Check for continuity between terminals at each switch position. If check result is not as specified, replace switch.



Terminal / Switch	A	B	C
LOCK	○	—	○
OFF			
UNLOCK	○	○	

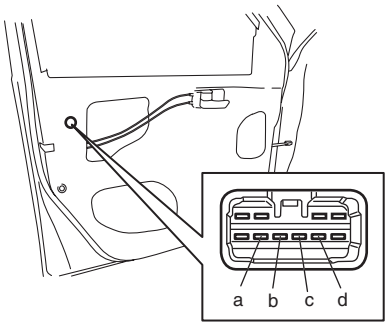
I6RW0C960003-01

1. Power door lock switch

Door Key Cylinder Switch Inspection (If Equipped)

S6RW0C9606005

1) Remove front door trim referring to Step 1) to 3) of “Front Door Glass Removal and Installation in Section 9E”.
2) Check for continuity between terminals at each switch position. If check result is not as specified, replace door lock assembly.



Right side switch terminals	b	c	d
Left side switch terminals	c	b	a
LOCK	○	—	○
OFF			
UNLOCK	○	○	

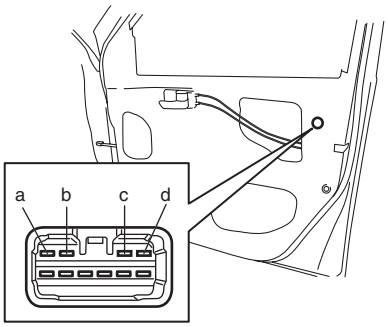
I4RS0B960007-01

Power Door Lock Actuator Inspection (If Equipped)

S6RW0C9606006

1) Remove door trim from door panel.
   For front door, refer to Step 1) to 3) of “Front Door Glass Removal and Installation in Section 9E”.
   For rear door, refer to Step 1) to 3) of “Rear Door Glass Removal and Installation in Section 9E”.
   For rear end door, refer to Step 1) of “Rear End Door Assembly Removal and Installation in Section 9J”.
2) Disconnect power door lock actuator coupler.
3) Connect battery positive (+) and negative (–) terminals to the door lock actuator terminals (a, b, c, d) as shown in figure.
   If it does not operate as specified in the following table, replace door lock assembly.

For front door



[A]

Right side switch terminals			d	b
Left side switch terminals			a	c
Lock	→	Unlock	⊕	⊖
Unlock	→	Lock	⊖	⊕

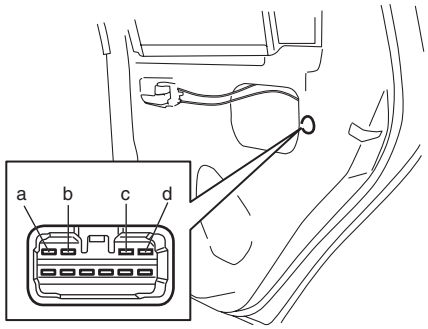
[B]

Right side switch terminals			d	**b**	a
Left side switch terminals			a	**c**	d
Unlock	→	Lock	⊖	⊕	⊖
Lock	→	Deadlock	⊖	⊕	⊕
Lock	→	Unlock	⊕	⊖	⊖
Deadlock	→	Unlock			

I5RW0C960002-03

[A]:	Without deadlock
[B]:	With deadlock

For rear door



[A]

Right side switch terminals			a	c
Left side switch terminals			d	b
Lock	→	Unlock	⊕	⊖
Unlock	→	Lock	⊖	⊕

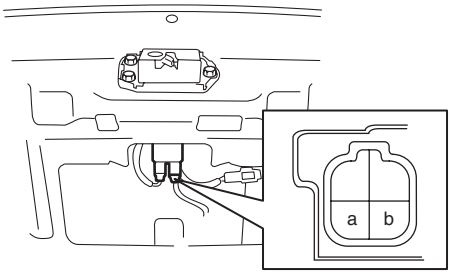
[B]

Right side switch terminals			a	**c**	d
Left side switch terminals			d	**b**	a
Unlock	→	Lock	⊖	⊕	⊖
Lock	→	Deadlock	⊖	⊕	⊕
Lock	→	Unlock	⊕	⊖	⊖
Deadlock	→	Unlock			

I5RW0C960001-03

[A]:	Without deadlock
[B]:	With deadlock

For rear end door

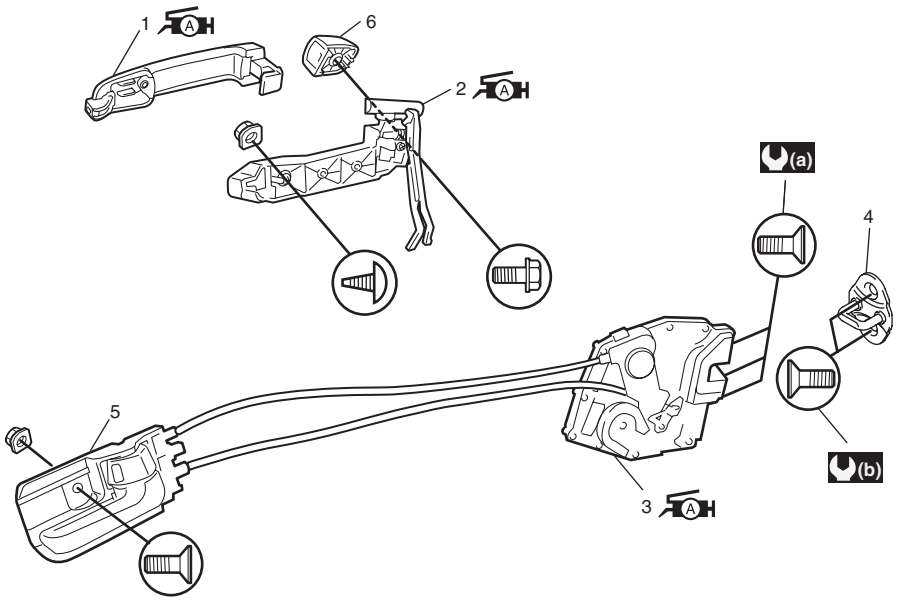


			a	b
Lock	→	Unlock	⊕	⊖

I5RW0C960003-03

Rear Door Lock Assembly Components

S6RW0C9606007



I5RW0A960006-01

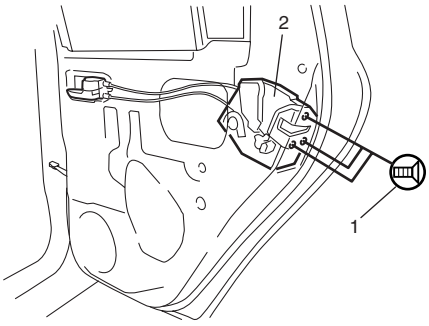
A H 1. Outside handle : Apply lithium grease 99000-25011 to sliding part.	4. Latch striker	(a) : 5.0 N·m (0.5 kgf-m, 4.0 lb-ft)
A H 2. Outside handle frame : Apply lithium grease 99000-25011 to sliding part and spring.	5. Inside handle bezel	(b) : 10 N·m (1.0 kgf-m, 7.5 lb-ft)
A H 3. Rear door latch assembly : Apply lithium grease 99000-25011 to sliding part.	6. Out side handle cap	

Rear Door Lock Assembly Removal and Installation

S6RW0C9606008

Removal

1) Remove rear door glass referring to “Rear Door Glass Removal and Installation in Section 9E”.
2) Disconnect door lock motor lead wire (If equipped).
3) Remove door latch mounting screws (1) and remove door latch assembly (2).



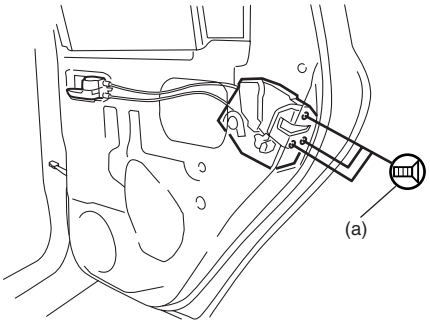
I4RS0A960013-01

Installation

Reverse removal procedure to install rear door lock assembly referring to the following instruction and “Front Door Lock Assembly Removal and Installation”.

- Tighten door latch screw to specified torque.

  Tightening torque
  Door latch screw (a): 5.0 N·m (0.5 kgf-m, 4.0 lb-ft)



I4RS0A960014-01

- Install door trim referring to “Rear Door Glass Removal and Installation in Section 9E”.

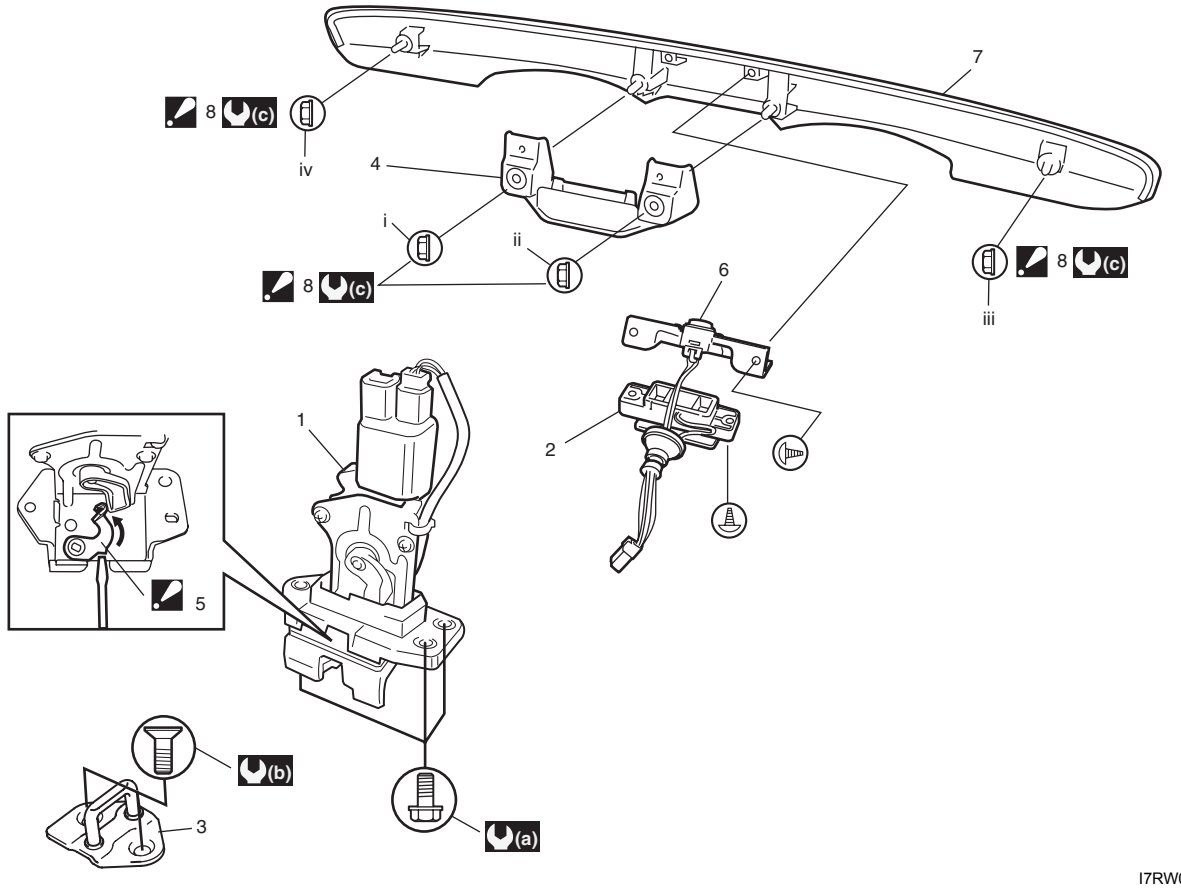
Rear Door Lock Assembly Inspection

S6RW0C9606009

- Check that door opens and closes smoothly and properly.
- Check that door stops in the secondary latched position properly (preventing door from opening freely) and that door closes completely in the fully latched position.
- Adjust door latch striker position referring to “Front Door Lock Assembly Removal and Installation”, if necessary.

Rear End Door Lock Assembly Components

S6RW0C9606010



I7RW01960007-04

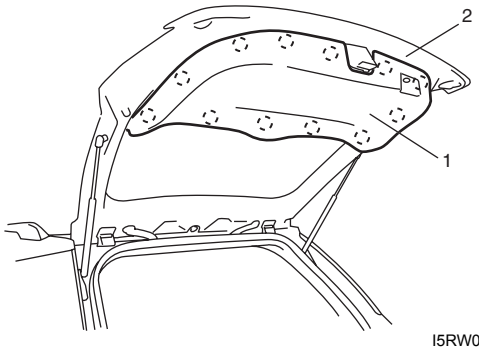
1. Rear end door latch assembly (rear end door switch is built in this assembly)	5. Emergency lever : Rear end door is unlocked by pushing emergency lever with flat head driver if rear end door lock can not be released by door opener switch.	(a) : 10 N·m (1.0 kgf-m, 7.5 lb-ft)
2. Rear end door opener switch	6. Rear end door request switch (if equipped)	(b) : 23 N·m (2.3 kgf-m, 17.0 lb-ft)
3. Latch striker	7. Rear end door license garnish	(c) : 6 N·m (0.6 kgf-m, 4.5 lb-ft)
4. Door handle	8. Rear end door license garnish mounting nut : Tighten nuts in such order as indicated in figure.	

Rear End Door Lock Assembly Removal and Installation

S6RW0C9606011

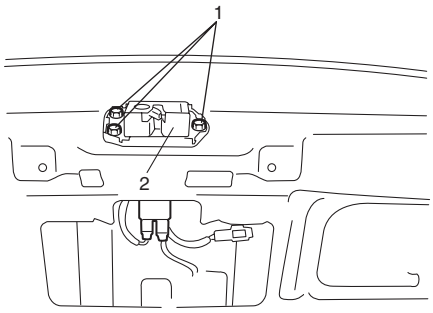
Removal

1) Remove door trim (1) from rear end door panel (2).



I5RW0A960008-02

2) Disconnect door lock motor lead wire (if equipped).
3) Loosen door latch bolts (1) and remove door latch assembly (2).



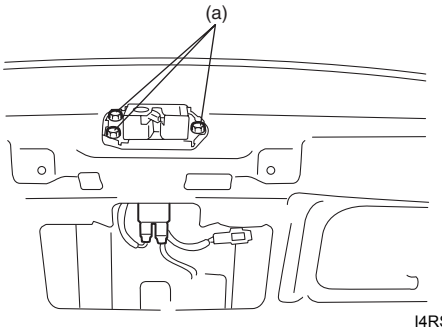
I4RS0A960017-01

Installation

Reverse removal procedure to install rear end door lock assembly noting the following instruction.

- Tighten rear end door latch bolt to specified torque.

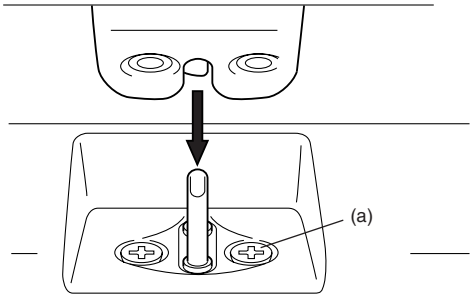
Tightening torque
Rear end door latch bolt (a): 10 N·m (1.0 kgf-m, 7.5 lb-ft)



I4RS0A960018-01

- Adjust door latch striker so that its center aligns with the center of groove in door latch base.

Tightening torque
Rear end door striker screw (a): 23 N·m (2.3 kgf-m, 17.0 lb-ft)



I4RS0A960019-01

Rear End Door Lock Assembly Inspection

S6RW0C9606012

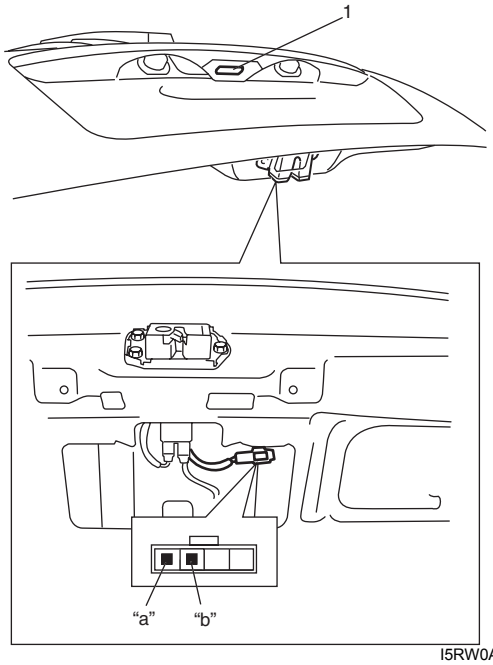
- Check that door opens and closes smoothly and properly.
- Check that door stops in the secondary latched position properly (preventing door from opening freely) and that door closes completely in the fully latched position.
- Adjust door latch striker position referring to “Front Door Lock Assembly Removal and Installation”, if necessary.

Rear End Door Opener Switch Inspection (If Equipped)

S6RW0C9606013

1) Remove rear end door trim.
2) Disconnect rear end door switch coupler.
3) Check that there is continuity between terminals “a” and “b” when rear end door opener switch (1) is pushed.
4) Check that there is no continuity between terminals when rear end door opener switch (1) is not pushed.

If check result is not as specified, replace switch.



I5RW0A960009-02

Replacement of Transmitter Battery (Other than Keyless Start Model)

S6RW0C9606014

NOTE

For keyless start model, perform “Replacement of Remote Controller Battery in Section 10E” instead of “Replacement of Transmitter Battery (Other than Keyless Start Model)”.

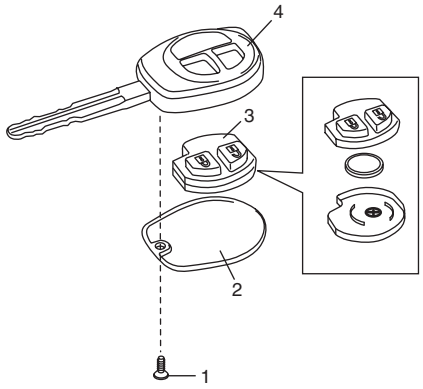
If transmitter becomes unreliable, replace transmitter battery as follows.

1) Remove screw (1) and transmitter cover (2).
2) Remove transmitter (3) from transmitter holder (4).

⚠ CAUTION

Use care not to allow grease or dirt to be attached on the printed circuit board and the battery.

3) With tip of flat blade screwdriver put in slot of transmitter, pry it open.
4) Replace the battery (lithium disc-type CR 1620 or equivalent battery) so its (+) terminal faces “+” mark on transmitter.
5) Fit together transmitter (3) and install it into transmitter holder (4).
6) Install transmitter cover (2) and screw (1).
7) Make sure that door locks can be operated with transmitter.



I4RS0B960014-01

NOTE

- **To prevent theft, be sure to break the transmitter before discarding it.**
- **Dispose of the used battery properly according to applicable rules or regulations. Do not dispose of lithium batteries with ordinary household trash.**

Programming Transmitter Code for Keyless Entry System (Other than Keyless Start Model)

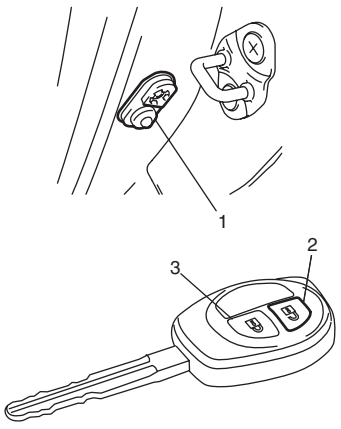
S6RW0C9606015

NOTE

- **Three transmitter codes can be registered.**
- **When a new transmitter code is registered, the oldest one will be cleared.**
- **As for vehicle equipped with keyless start system, perform "Registration Procedure for Remote Controller ID Code in Section 10E" instead of "Programming Transmitter Code for Keyless Entry System (Other than Keyless Start Model)".**

If transmitter or BCM (included in junction block assembly) is replaced with a new one or additional transmitter(s) is necessary, program transmitter code(s).

1) Confirm that all doors are closed and ignition key is out of ignition key cylinder.
2) Open driver side door.
3) Turn ignition switch to ON position, and then drawn ignition key from ignition key cylinder within 10 seconds after that.
4) Push and release driver side door switch (1) at 3 times by hand within 20 seconds after removing ignition key from ignition key cylinder.
5) Turn ignition switch to ON position, and then drawn ignition key from ignition key cylinder within 10 seconds after that. All doors automatically lock and unlock once.
   With this, registration mode.
6) Push "UNLOCK" button (2) on transmitter (3) within 20 seconds after Step 5). All doors automatically lock and unlock once.
   With this, code registration is completed.
7) If an additional transmitter, needs to be programed repeat the procedure of Step 1).



I4RS0B960010-01

Keyless Entry Answer Back Function Change-over Procedure (If Equipped)

S6RW0C9606018

Output of keyless entry answer back function can be switched over by performing the following procedure.

1) Confirm that all doors are closed, all doors are unlocked, ignition key is out of ignition key cylinder and interior light switch is in the middle position.
2) Perform Step a) through c) described below within 10 seconds.
   a) Insert ignition key in ignition key cylinder.
   b) Remove ignition key from ignition key cylinder.
   c) Repeat Step a) and b) once.
3) Push "UNLOCK" button on transmitter 3 times within 10 seconds.
4) Interior light flashes once which indicates that answer back function is changed over from A mode to B mode.

NOTE

When answer back function is changed from B mode to A mode, hazard warning lights flashes once.

	Answer back A mode		Answer back B mode	
	LOCK	UNLOCK	LOCK	UNLOCK
Hazard warning light	Flashes once	Flashes twice		
Interior light		Turn on for a while	Flashes once	Turn on for a while

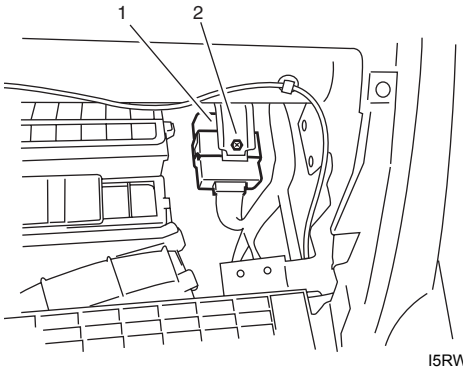
I5RS0C960001-01

Keyless Entry Receiver Removal and Installation (If Equipped)

S6RW0C9606016

Removal

1) Disconnect negative cable at battery.
2) Remove grove box referring to Step 6) of "Instrument Panel Removal and Installation in Section 9C".
3) Disconnect keyless entry receiver coupler.
4) Remove keyless entry receiver (1) from steering support member (2).



I5RW0A960010-02

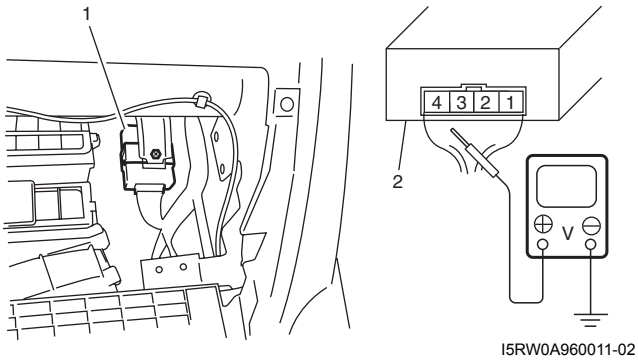
Installation

Reverse removal procedure.

Keyless Entry Receiver and Its Circuit Inspection (If Equipped)

S6RW0C9606017

1) Check that the voltage between the following terminals and body ground are specifications under each conditions. If check result is not as specified, check applicable circuit for open or short. If circuit is normal, proceed to next step.



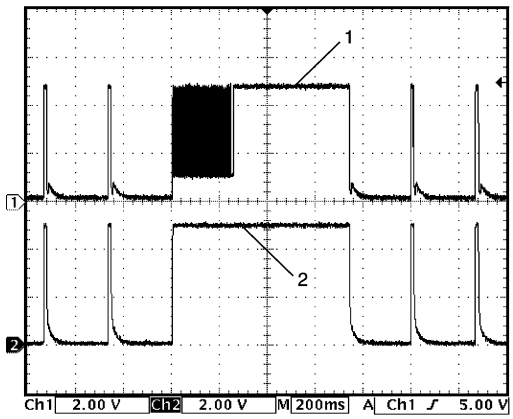
I5RW0A960011-02

1. Keyless entry receiver
2. Keyless entry receiver connector (view from harness side)

Terminal	Circuit	Specification	Condition
1	Power source	Figure [A]	Push “Lock” or “Unlock” button on transmitter.
		0 – 1 V	Except the above-mentioned condition.
3	Lock/Unlock output signal circuit	Figure [A]	Push “Lock” or “Unlock” button on transmitter.
		0 – 1 V	Except the above-mentioned condition.
4	Ground	0 – 1 V	—

Oscilloscope setting
CH1: 2V/DIV
CH2: 2V/DIV
TIME: 200 ms/DIV

[A]



I4RS0A960024-01

1. Lock/Unlock out put signal
2. Power source

1) Recheck keyless entry receiver as follows.
   a) Substitute a known-good keyless entry receiver.
   b) Record key code referring to “Programming Transmitter Code for Keyless Entry System (Other than Keyless Start Model)”.
   c) Recheck keyless entry receiver system.