

Section : Body
Electrical

Ref. No. : BE-2017

Date : Jun., 2002

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Area Application : Others (Thailand)

Model Name : HIACE

Model Code : RZH153R

Subject : SUPPLEMENTAL FOR REPAIR MANUAL (Door Closer System)

This Service Bulletin informs you of the door closer system repair procedure for HIACE due to addition from August, 2002.

The attached pages will be used with the following manuals.

Pub. No.	Publication Name
RM156E	HIACE Repair Manual
RM471E	HIACE Repair Manual Supplement
RM670E	HIACE Repair Manual Supplement
RM709E	HIACE Repair Manual Supplement

Production Effective :

Frame No.	Production Date
---	From August, 2002

DOOR CLOSER SYSTEM ON-VEHICLE INSPECTION

CHECK BASIC FUNCTION

- (a) When the slide door is not completely closed, check that the motor operates to fully close the door (the door is fully closed).
- (b) With the slide door is fully closed (locked), check that the door can be opened.
- (c) Immediately after the slide door is not completely closed (before the motor starts operating), check that the motor will not operate even if the outside handle or the inside handle is pulled.

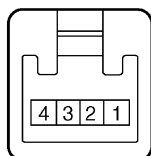
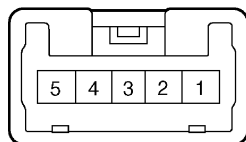
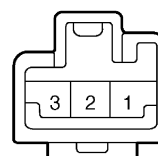
TROUBLESHOOTING

HINT:

Inspect the problems in accordance with the applicable chart.

Malfunction Symptoms	Applicable Chart
Slide door easy closer function does not operate even if slide door is not completely closed.	1
Door control motor operates for approx. 3 sec. (Slide door can be closed).	2

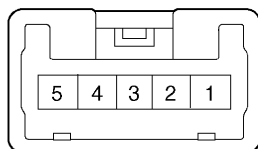
Terminal Location of Slide Door Closer Relay

**S32****S33****S34**

Y

I25452

Terminal Location of Door Control Relay

**S35**

Y

I25453

1 Slide door closer function does not operate even if slide door is not completely closed.**Basic function check:**

- (a) Check that slide door can be fully closed (fully locked) manually.
- (b) Check that slide door can be opened.

OK

NG

Check power slide door lock:

Check power slide door lock operation.

OK

Slide door is not properly fitted or foreign objects are caught in there.

NG

Replace power slide door lock.

Check slide door closer relay (check input voltage):

- (a) Disconnect S34 slide door closer relay connector.
- (b) Check voltage between terminal 3 of S34 connector on vehicle side and body ground.

Standard:**0 V → 10 – 14 V (Slide door open → Slide door not completely closed)**

OK

NG

Check DOOR circuit breaker :

Check if DOOR circuit breaker is normal.

NG

Replace DOOR circuit breaker.

OK

Check door control relay (check input voltage):

- (a) Disconnect S35 door control relay connector.
- (b) Check voltage between terminal 1 of S35 connector on vehicle side and body ground.

Standard:**10 – 14 V (Constant)**

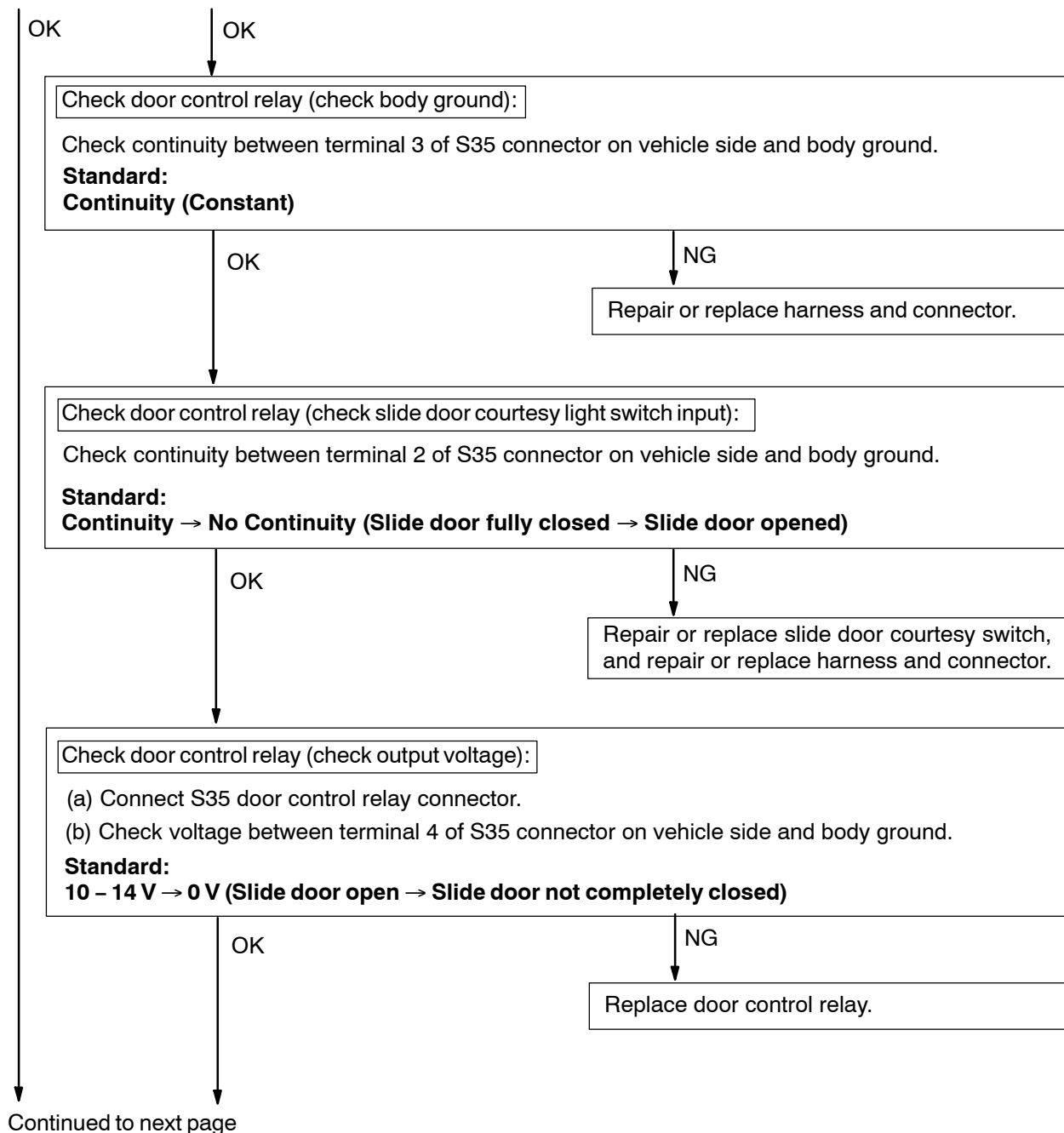
OK

NG

Repair or replace harness and connector.

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OK

OK

Check harness and connector (check continuity):

(a) Disconnect S35 door control relay connector.

(b) Check continuity between terminals of S35 (door control relay) and S34 (slide door closer relay) connectors on vehicle side, and terminal of S35 (door control relay) and body ground.

Standard:

Door control relay ↔ Slide door closer relay

Terminal 4 – Terminal 1 of S34 connector Continuity

Terminal 5 – Terminal 3 of S34 connector Continuity

Door control relay ↔ Body ground

Terminal 4 – Body ground Continuity

NG

OK

Replace door control relay.

Inspect slide door junction (See page 9).

OK

NG

Replace slide door junction.

Repair or replace harness and connector.

Check slide door closer relay (check continuity):

(a) Disconnect S32 slide door closer relay connector.

(b) Check continuity between terminals 1 and 4 of S32 connector on vehicle side.

Standard:

Continuity → No continuity (Slide door not completely closed → Slide door open)

OK

NG

Replace power slide door lock.

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OK

Check slide door closer relay (check output voltage):

(a) Connect S32 and S34 slide door closer relay connectors.

(b) Check voltage between terminal 2 of S33 (slide door closer relay) connector and body ground.

Standard:

**0 V → 0 V → 10 – 14 V (Slide door open → Slide door not completely closed
→ Motor normally rotating)**

OK

NG

Replace power slide door lock.

Replace slide door closer relay.

2 Door control motor operates for approx. 3 sec..

Inspect power slide door lock (See page 8).

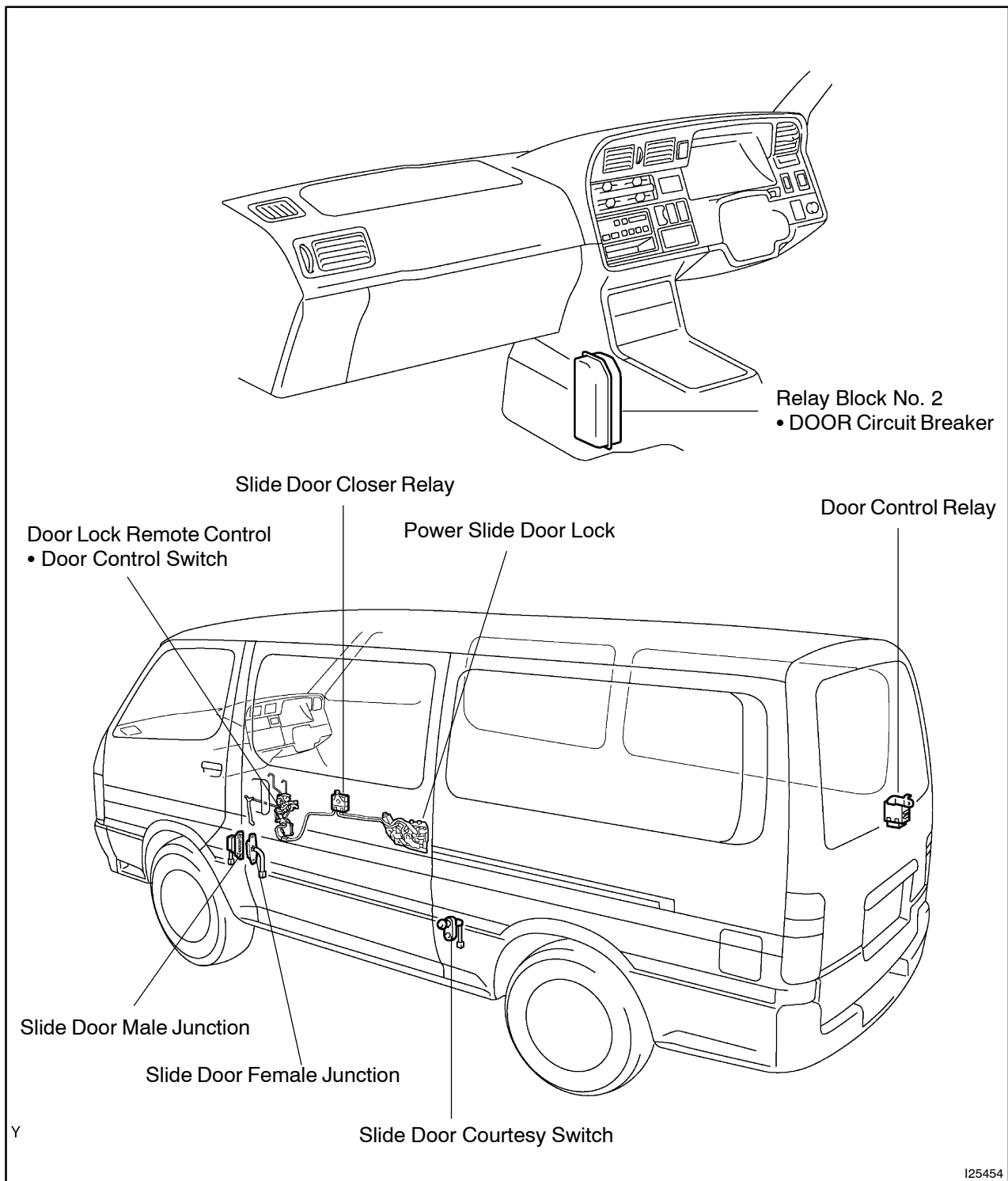
NG

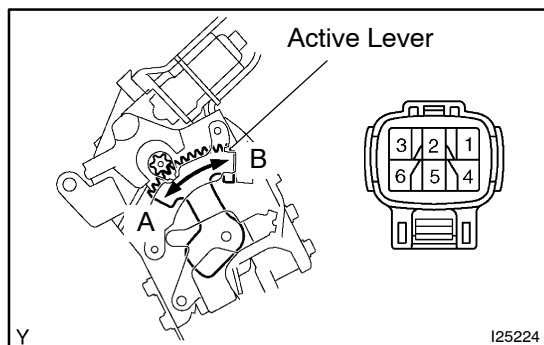
Replace power slide door lock.

OK

Replace slide door closer relay.

LOCATION





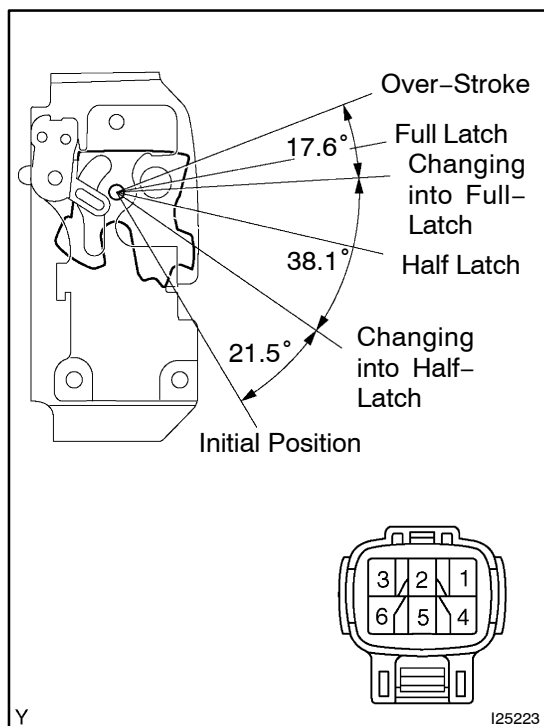
INSPECTION

1. INSPECT POWER SLIDE DOOR LOCK

- (a) Inspect the slide door lock motor operation.
Check that the active lever operates smoothly when the battery voltage is applied to each terminal of the connector.

Measurement Condition	Operational Direction
Battery positive (+) – Terminal 3 Battery negative (–) – Terminal 6	A direction
Battery positive (+) – Terminal 6 Battery negative (–) – Terminal 3	B direction

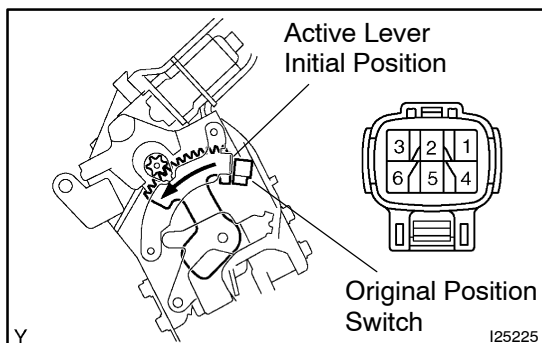
If the result is not as specified, replace the door lock.



- (b) Inspect the pole switch and latch switch continuity.

Terminal No.	Condition	Specified Condition
1 – 4 – 5	Initial position ↔ Changing into half-latch	No continuity
1 – 5	Changing into half-latch ↔ Changing into full-latch	Continuity
1 – 4 – 5	Changing into full-latch ↔ Over-stroke	Continuity

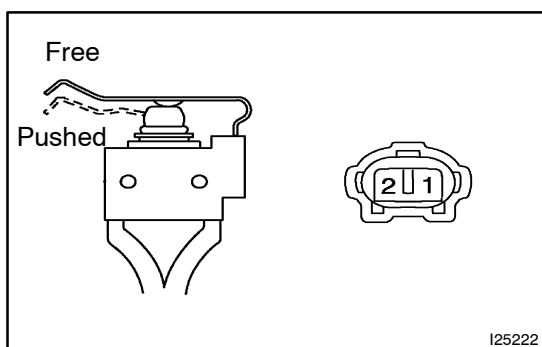
If the result is not as specified, replace the door lock.



(c) Inspect the original position switch continuity.

Terminal No.	Condition	Specified Condition
2 - 5	Active lever initial position	No continuity
	Except active lever initial position	Continuity

If the result is not as specified, replace the switch.

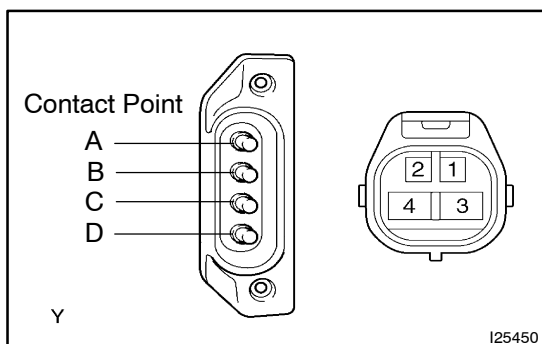


2. INSPECT DOOR CONTROL SWITCH

Inspect the switch continuity.

Terminal No.	Condition	Specified Condition
1 - 2	Switch free (Slide door open)	Continuity
	Switch pushed (Slide door closed)	No continuity

If the result is not as specified, replace the switch.

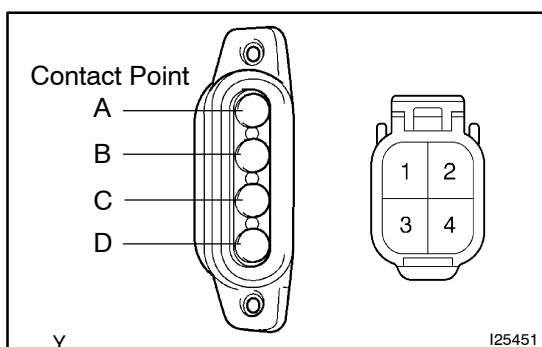


3. INSPECT SLIDE DOOR JUNCTION

(a) Inspect the male junction continuity.

Terminal No. (Contact Point)	Condition	Specified Condition
1 - C	Constant	Continuity
2 - B		
3 - D		
4 - A		

If the result is not as specified, replace the switch.

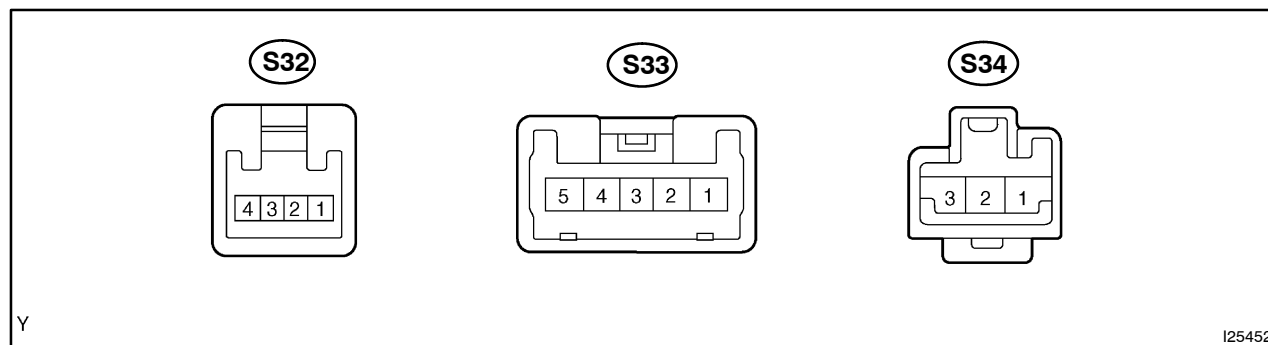


(b) Inspect the female junction continuity.

Terminal No. (Contact Point)	Condition	Specified Condition
1 - D	Constant	Continuity
2 - C		
3 - B		
4 - A		

If the result is not as specified, replace the switch.

4. CHECK SLIDE DOOR CLOSER RELAY



- (a) Disconnect the S32, S33 and S34 relay connectors, and check the voltage or continuity of each terminal of the wire harness side connector.

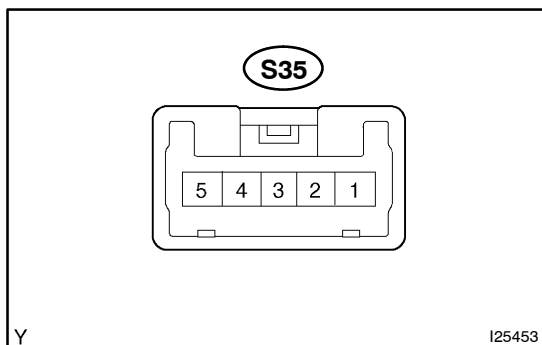
Terminal No.	Wiring Color	Condition	Specified Condition
S34-1 ↔ Body ground	W-B ↔ -	Slide door open → Slide door not completely closed	No continuity → Continuity
S34-3 ↔ Body ground	L-W ↔ -	Slide door open → Slide door not completely closed	0 V → 10 - 14 V
S32-1 ↔ S32-2	Y ↔ BR	Slide door open → Slide door fully closed	No continuity → Continuity
S32-1 ↔ S32-4	Y ↔ R	Slide door open → Slide door not completely closed	No continuity → Continuity
S32-4 ↔ S33-5	BR ↔ - L	Slide door not completely closed → Inside or outside handle pulled → Slide door open (Slide door lock unlock)	Continuity → No continuity → Continuity

If the result is not as specified, there may be a malfunction on the wire harness side.

- (b) Reconnect the S32, S33 and S34 relay connectors, and check the voltage of each terminal of the connector.

Terminal No.	Wiring Color	Condition	Specified Condition
S34-3 ↔ Body ground	L-W ↔ -	Slide door open → Slide door not completely closed (easy closer operating) → Slide door not completely closed after approx. 18 sec. or slide door open	0 V → 10 - 14 V → 0 V
S33-1 ↔ Body ground	L ↔ -	Slide door open → Slide door not completely closed → motor clockwise → Motor rotating counterclockwise → Operation finished	0 V → 0 V → 0 V → 10 - 14 V → 0 V
S33-2 ↔ Body ground	L-Y ↔ -	Slide door open → Slide door not completely closed → Motor clockwise → motor rotating counterclockwise → Operation finished	0 V → 0 V → 10 - 14 V → 0 V → 0 V
S33-5 ↔ Body ground	L ↔ -	Slide door open → Slide door not completely closed → motor clockwise → inside or outside handle pulled → Motor rotating counterclockwise → Operation finished	0 V → 10 - 14 V → 0 V → 10 - 14 V → 10 - 14 V → 10 - 14 V

If the result is not as specified, the relay may malfunction.



5. CHECK DOOR CONTROL RELAY

- (a) Disconnect the S35 relay connector, and check the voltage or continuity of each terminal of the wire harness side connector.

Terminal No.	Wiring Color	Condition	Specified Condition
S35-1 ↔ Body ground	L ↔ -	Constant	10 - 14 V
S35-2 ↔ Body ground	R-W ↔ -	Slide door open → Slide door fully closed	Continuity → No continuity
S35-3 ↔ Body ground	W-B ↔ -	Constant	Continuity
S35-4 ↔ Body ground	G-W ↔ -	Slide door open → Slide door not completely closed	No continuity → Continuity

If the result is not as specified, there may be a malfunction on the wire harness side.

- (b) Reconnect the S35 relay connector, and check the voltage of each terminal of the connector.

Terminal No.	Wiring Color	Condition	Specified Condition
S35-4 ↔ Body ground	G-W ↔ -	Slide door open → Slide door not completely closed	10 - 14 V → 0 V
S35-5 ↔ Body ground	L-W ↔ -	Slide door open → not completely closed (easy closer operating) → Slide door not completely closed after approx. 18 sec. or slide door open	0 V → 10 - 14 V → 0 V

If the result is not as specified, the relay may malfunction.