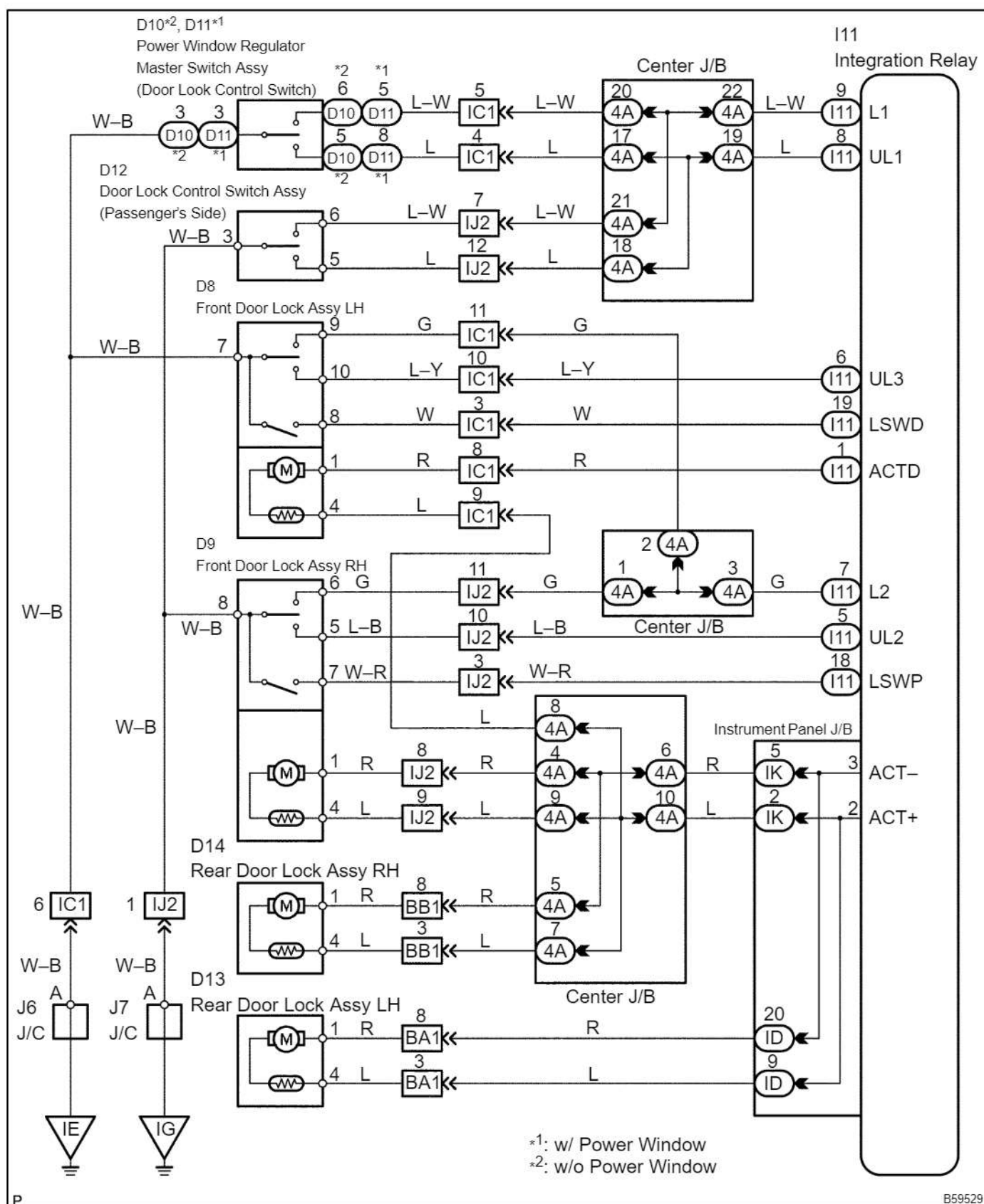


ALL DOOR LOCK AND UNLOCK DO NOT OPERATE BY THE MASTER SWITCH OR THE DRIVER'S DOOR KEY**CIRCUIT DESCRIPTION**

The integration relay receives a switch signal from the master switch, door lock control switch or the driver's door key and then drives the door lock motor.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 CHECK DOOR LOCK

- (a) When the door does not operate manually, proceed to "A".
 (b) When the door does not operate via the key, proceed to "B".

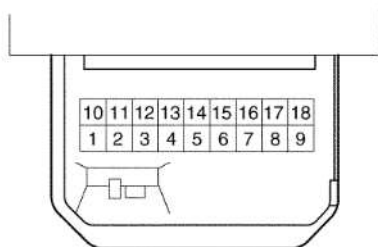
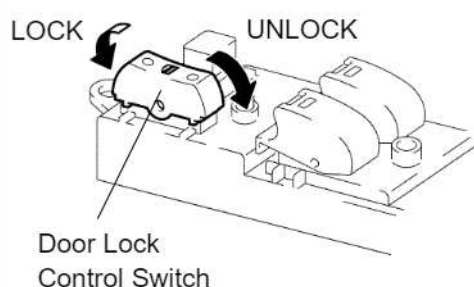
B

Go to step 4

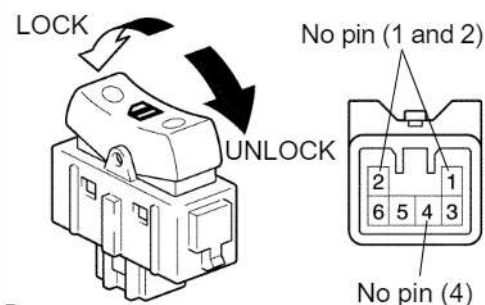
A

2 INSPECT DOOR LOCK CONTROL SWITCH

w/ Power Window



w/o Power Window



P
B59539
B59538

B59540

- (a) w/ Power window:
 Remove the power window regulator master switch assy.
 (1) Inspect the master switch (door lock control switch) continuity, as shown in the illustration and table.

Standard:

Switch position	Terminal No.	Specified condition
Lock	1 ⇄ 3 ⇄ 5	Continuity
OFF	–	–
Unlock	1 ⇄ 3 ⇄ 8	Continuity

- (b) w/o Power window:
 Remove the door lock control switch.
 (1) Inspect the door lock control switch continuity, as shown in the illustration and table.

Standard:

Switch position	Terminal No.	Specified condition
Lock	3 ⇄ 6	Continuity
OFF	–	–
Unlock	3 ⇄ 5	Continuity

NG

REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSY (W/ POWER WINDOW)

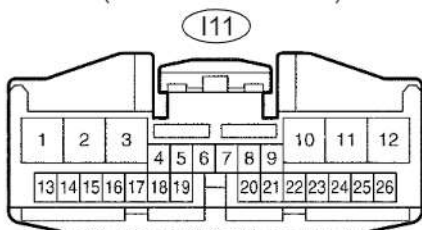
NG

REPLACE DOOR LOCK CONTROL SWITCH (W/O POWER WINDOW)

OK

3 CHECK WIRE HARNESS (SWITCH ⇄ INTEGRATION RELAY)

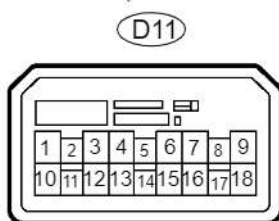
Integration Relay (Instrument Panel J/B)
(Wire Harness Side)



P

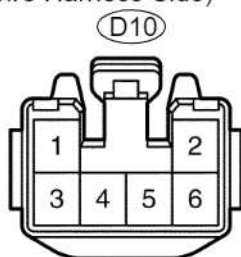
w/ Power Window

Master Switch (Wire Harness Side)



w/o Power Window

Door Lock Control Switch
(Wire Harness Side)



B59533

- (a) w/ Power window:
Disconnect the power window regulator master switch assy and integration relay connectors.
w/o Power window:
Disconnect the door lock control switch and integration relay connectors.
- (b) Check the continuity between the terminals of the power window regulator master switch assy or door lock control switch and integration relay connectors, as shown in the illustration and tables.

[w/ Power Window]

Standard (Check for open):

Symbols (Terminal No.) (Master switch ⇄ Integration relay)	Specified condition
L (D11-5) ⇄ L1 (I11-9)	Continuity
UL (D11-8) ⇄ UL1 (I11-8)	
E (D11-1) ⇄ Body ground	
E (D11-3) ⇄ Body ground	

[w/o Power Window]

Standard (Check for open):

Symbols (Terminal No.) (Door lock control switch ⇄ Integration relay)	Specified condition
L (D10-6) ⇄ L1 (I11-9)	Continuity
UL (D10-5) ⇄ UL1 (I11-8)	
E (D10-3) ⇄ Body ground	

OK

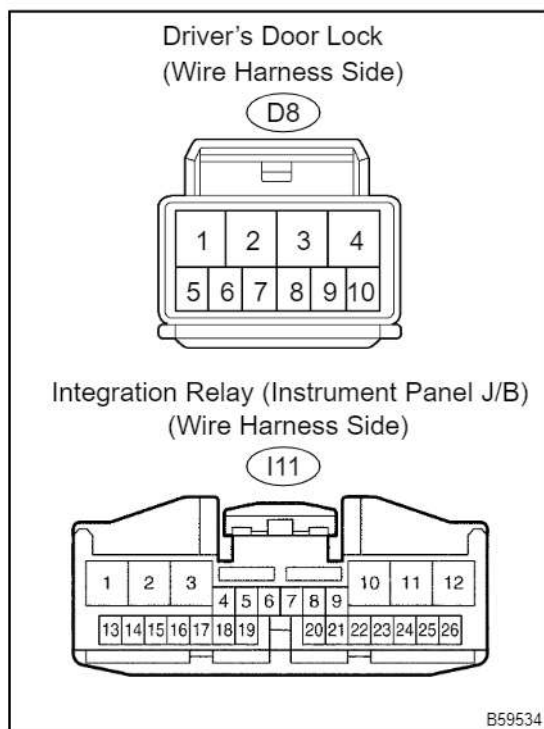
REPLACE INTEGRATION RELAY

NG

REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR

4 INSPECT DRIVER'S DOOR LOCK (See page 73-3)

- (a) Inspect the driver's door lock key switch.
 (b) Inspect the driver's door lock position switch.

NG**REPLACE DRIVER'S DOOR LOCK****OK****5 CHECK WIRE HARNESS (DRIVER'S DOOR LOCK ⇔ INTEGRATION RELAY)**

- (a) Disconnect the driver's door lock and integration relay connectors.
 (b) Check the continuity between the terminals of the driver's door lock and integration relay connectors, as shown in the illustration and table.

Standard (Check for open):

Symbols (Terminal No.) (Driver's door lock ⇔ Integration relay)	Specified condition
(D8-9) ⇔ L2 (I11-7)	Continuity
(D8-10) ⇔ UL3 (I11-6)	
(D8-8) ⇔ LSWD (I11-19)	
(D8-7) ⇔ Body ground	

NG**REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR****OK****REPLACE INTEGRATION RELAY**

CUSTOMER PROBLEM ANALYSIS CHECK

POWER DOOR LOCK CONTROL SYSTEM Check Sheet

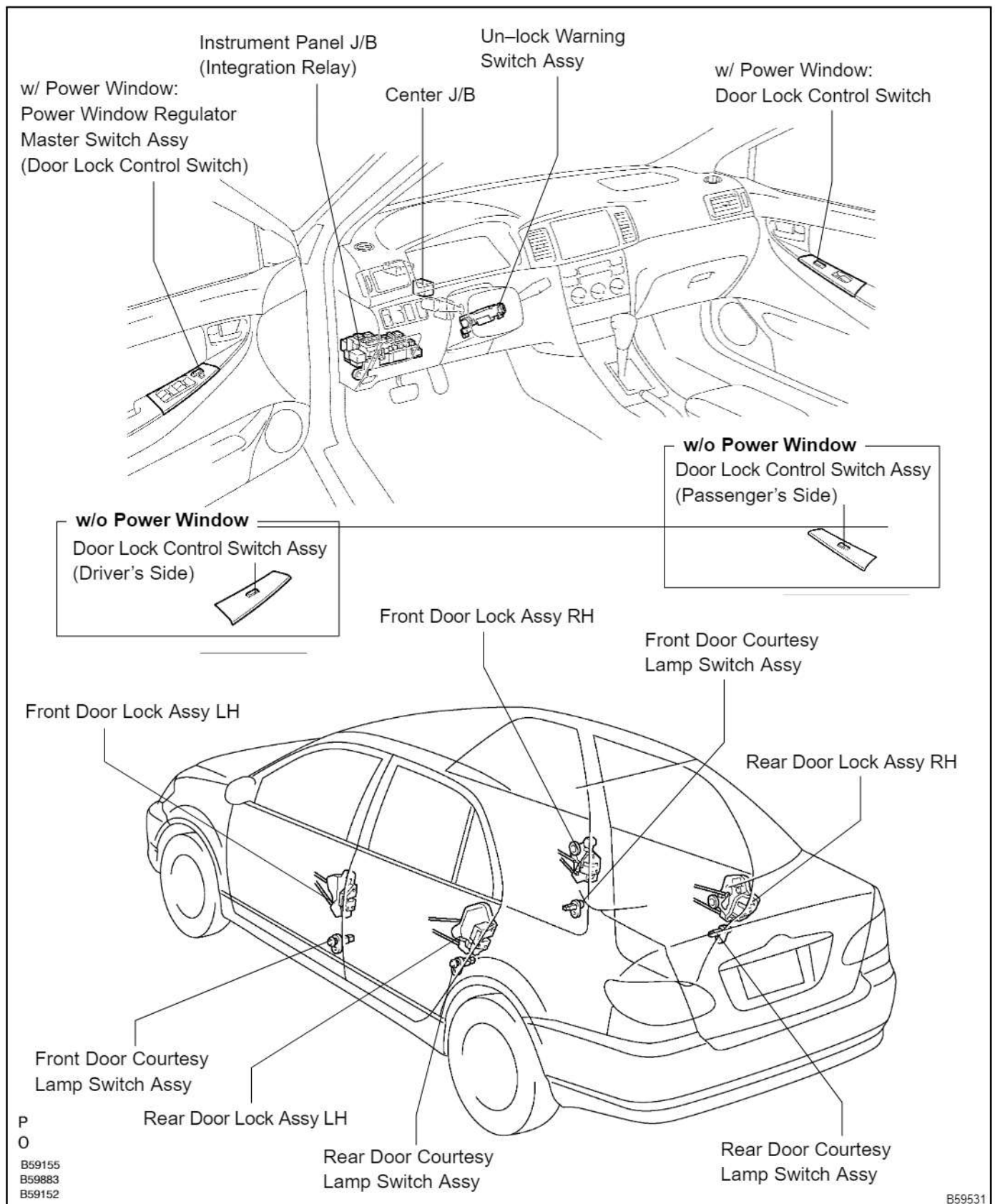
Inspector's name: _____

Customer's Name		Registration No.	
		Registration Year	
		Frame No.	
Date Vehicle Brought in	/ /	Odometer Reading	km Mile

Date Problem First Occurred	/ /
Frequency Problem Occurs	☐ Constant ☐ Sometimes (Times per day, month) ☐ Once only
Weather Conditions When Problem Occurred	Weather ☐ Fine ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Various/Others
	Outdoor temperature ☐ Hot ☐ Warm ☐ Cool ☐ Cold (Approx. °F (°C))

Problem Symptom	☐ Malfunction in Door Lock/Unlock Operation Using Door Lock Control Switch.	☐ Driver's side door lock control switch.	☐ Driver's side door ☐ Passenger's side door
		☐ Passenger's side door lock control switch.	☐ Driver's side door ☐ Passenger's side door
	☐ Malfunction in Door Lock/Unlock Operation Using Key.	☐ Driver's side door key lock and unlock control switch.	☐ Driver's side door ☐ Passenger's side door
		☐ Passenger's side door key lock and unlock control switch.	☐ Driver's side door ☐ Passenger's side door
		☐ 2-step unlocking function of driver's side door key lock and unlock switch.	
	☐ Malfunction in Key Confinement Prevention Function.		
☐ Others.			

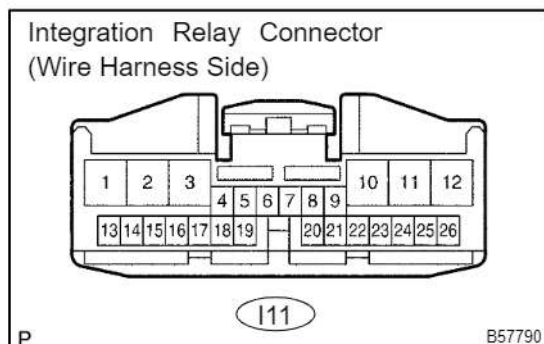
LOCATION



PROBLEM SYMPTOMS TABLE

Symptom	Suspected Area	See page
All doors are not operated by driver's door key cylinder interlocked with key	1. Door lock control switch 2. Front door lock assy LH 3. Wire harness 4. Integration relay	05-677
Key confinement prevention function does not work properly (Unlock warning switch circuit)	1. Un-lock warning switch assy 2. Front door courtesy lamp switch assy 3. Wire harness 4. Integration relay	05-682

TERMINALS OF ECU



1. INSPECT INTEGRATION RELAY

- (a) Disconnect the connector and check the continuity of each terminal of the disconnected connector.

Standard :

Symbols (Terminal No.)	Wiring color	Condition	Specified Condition
L1 (I11-9) ⇒ Body ground	L-W ⇒ Body ground	[w/ power window] Master switch (Manual door lock operation) OFF → LOCK	No continuity → Continuity
		[w/o power window] Driver's door control switch (Manual operation) OFF → LOCK	
		Passenger's door control switch (Manual operation) OFF → LOCK	
L2 (I11-7) ⇒ Body ground	G ⇒ Body ground	Key in driver's door lock cylinder LOCK → Other position	Continuity → No continuity
		Key in passenger's door lock cylinder LOCK → Other position	
UL1 (I11-8) ⇒ Body ground	L ⇒ Body ground	[w/ power window] Master switch (Manual door lock operation) OFF → UNLOCK	No continuity → Continuity
		[w/o power window] Door control switch (Manual operation) OFF → UNLOCK	
		Passenger's door control switch (Manual operation) OFF → UNLOCK	
UL2 (I11-5) ⇒ Body ground	L-B ⇒ Body ground	Key in passenger's door lock cylinder UNLOCK → Other position	Continuity → No continuity
UL3 (I11-6) ⇒ Body ground	L-Y ⇒ Body ground	Key in driver's door lock cylinder UNLOCK → Other position	
LSWD (I11-19) ⇒ Body ground	W ⇒ Body ground	Driver's door lock control knob LOCK → UNLOCK	No continuity → Continuity
LSWP (I11-18) ⇒ Body ground	W-R ⇒ Body ground	Passenger's door lock control knob LOCK → UNLOCK	
PCTY (I11-13) ⇒ Body ground	R-W ⇒ Body ground	Passenger's door fully closed → Opened	No continuity → Continuity

If the result is not as specified, the vehicle's side may malfunction.

(b) Reconnect the connector and check each terminal.

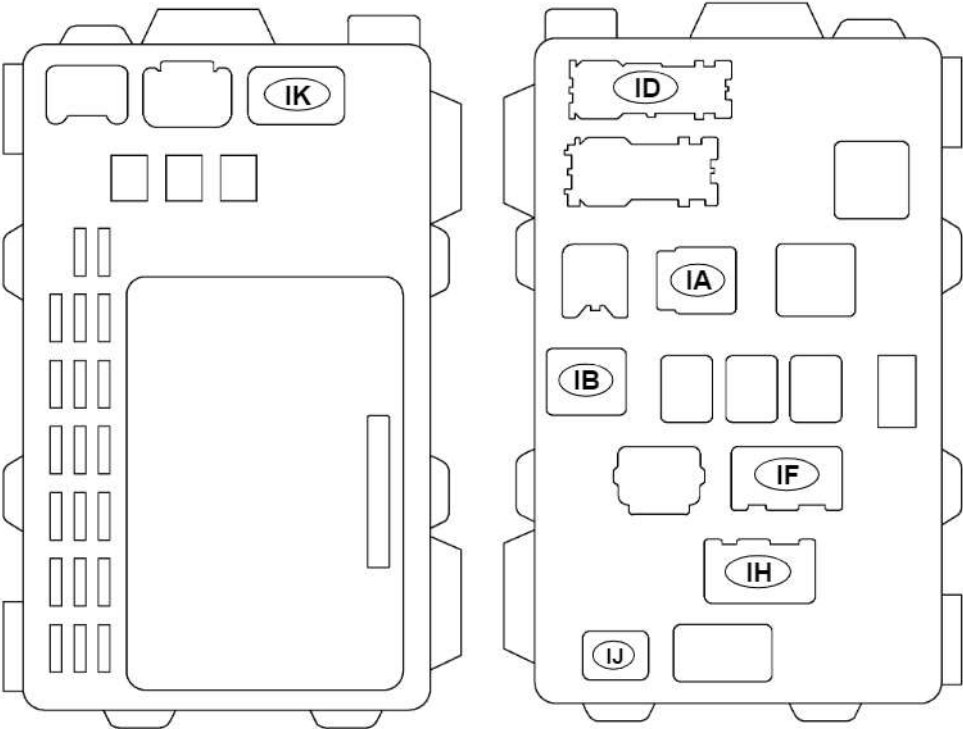
Standard:

Symbols (Terminal No.)	Wiring color	Condition	Specified Condition
ACTD (I11-1) ⇒ Body ground	R ⇒ Body ground	Key in driver's door lock cylinder OFF → LOCK	0 V → 10 – 14 V → 1 V or less

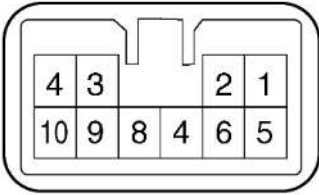
If the result is not as specified, the integration relay may malfunction.

2. INSPECT INSTRUMENT PANEL J/B (INTEGRATION RELAY)

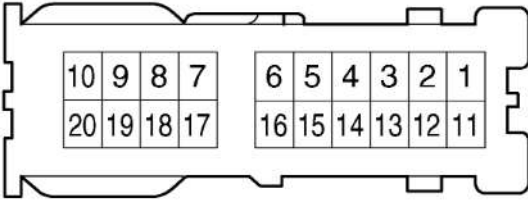
Instrument Panel J/B (Integration Relay)



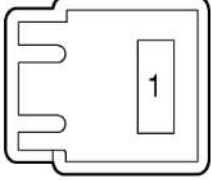
Instrument Panel J/B Side Connector IK



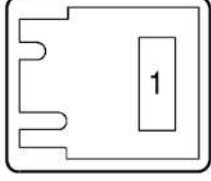
Instrument Panel J/B Side Connector ID



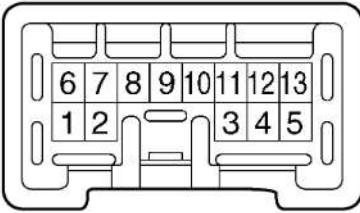
Instrument Panel J/B Side Connector IA



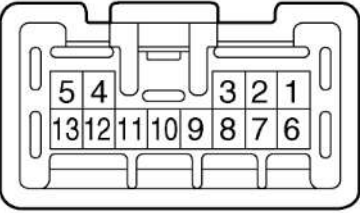
Instrument Panel J/B Side Connector IB



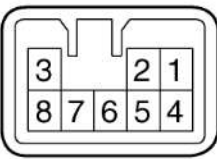
Instrument Panel J/B Side Connector IF



Instrument Panel J/B Side Connector IH



Instrument Panel J/B Side Connector IJ



B59376
B59378
Y

B59532

- (a) Inspect the DOOR fuse.
- (b) Disconnect connectors ID, IF, IH and IJ of the instrument panel J/B.
- (c) Check each terminal of the disconnected connectors.

Standard:

Symbols (Terminal No.)	Wiring color	Condition	Specified Condition
KSW (IJ-8) ⇒ Body ground	L-B ⇒ Body ground	No key in ignition switch lock cylinder → Inserted	No continuity → Continuity
GND (IF-4) ⇒ Body ground	W-B ⇒ Body ground	Constant	Continuity
GND (IH-10) ⇒ Body ground	W-B ⇒ Body ground		
DCTY (ID-1) ⇒ Body ground	R-W ⇒ Body ground	Driver's door fully closed → Opened	No continuity → Continuity
PRCTY (ID-14) ⇒ Body ground	R-B ⇒ Body ground	Rear LH door fully closed → Opened	
PRCTY (ID-15) ⇒ Body ground	R-Y ⇒ Body ground	Rear RH door fully closed → Opened	

If the result is not as specified, the vehicle's side may malfunction.

- (d) Reconnect the connectors and check each terminal.

Standard:

Symbols (Terminal No.)	Wiring color	Condition	Specified Condition
IG (IA-1) ⇒ Body ground	W ⇒ Body ground	Constant	10 – 14 V
+B (IB-1) ⇒ Body ground	W ⇒ Body ground		
KSW (IJ-8) ⇒ Body ground	L-B ⇒ Body ground	No key in ignition switch lock cylinder → Inserted	10 – 14 V → 0 V
ACT+ (IK-2) ⇒ Body ground	L ⇒ Body ground	Key in driver's door lock cylinder OFF → LOCK	0 V → 10 – 14 V → 1 V or less
ACT+ (ID-9) ⇒ Body ground	L ⇒ Body ground	Key in driver's door lock cylinder OFF → UNLOCK	
ACT- (IK-5) ⇒ Body ground	R ⇒ Body ground	Key in driver's door lock cylinder OFF → LOCK	
ACT- (ID-20) ⇒ Body ground	R ⇒ Body ground	Key in driver's door lock cylinder OFF → UNLOCK	

If the result is not as specified, the instrument panel J/B (integration relay) assembly may malfunction.

POWER DOOR LOCK CONTROL SYSTEM

HOW TO PROCEED WITH TROUBLESHOOTING

057TD-01

1 VEHICLE BROUGHT IN**2 CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK**
(See page [05-671](#))**3 PROBLEM SYMPTOMS TABLE (See page [05-676](#))**

- (a) Without applicable symptoms, proceed to "A"
- (b) With applicable symptoms, proceed to "B"

B**GO TO STEP 5****A****4 PERFORM TROUBLESHOOTING IN THE FOLLOWING METHOD, DEPENDING ON MALFUNCTION SYMPTOM**

- (a) Terminals of ECU (See page [05-673](#))
- (b) Inspection (See page [73-3](#))
- (c) On-vehicle inspection (See page [73-1](#))

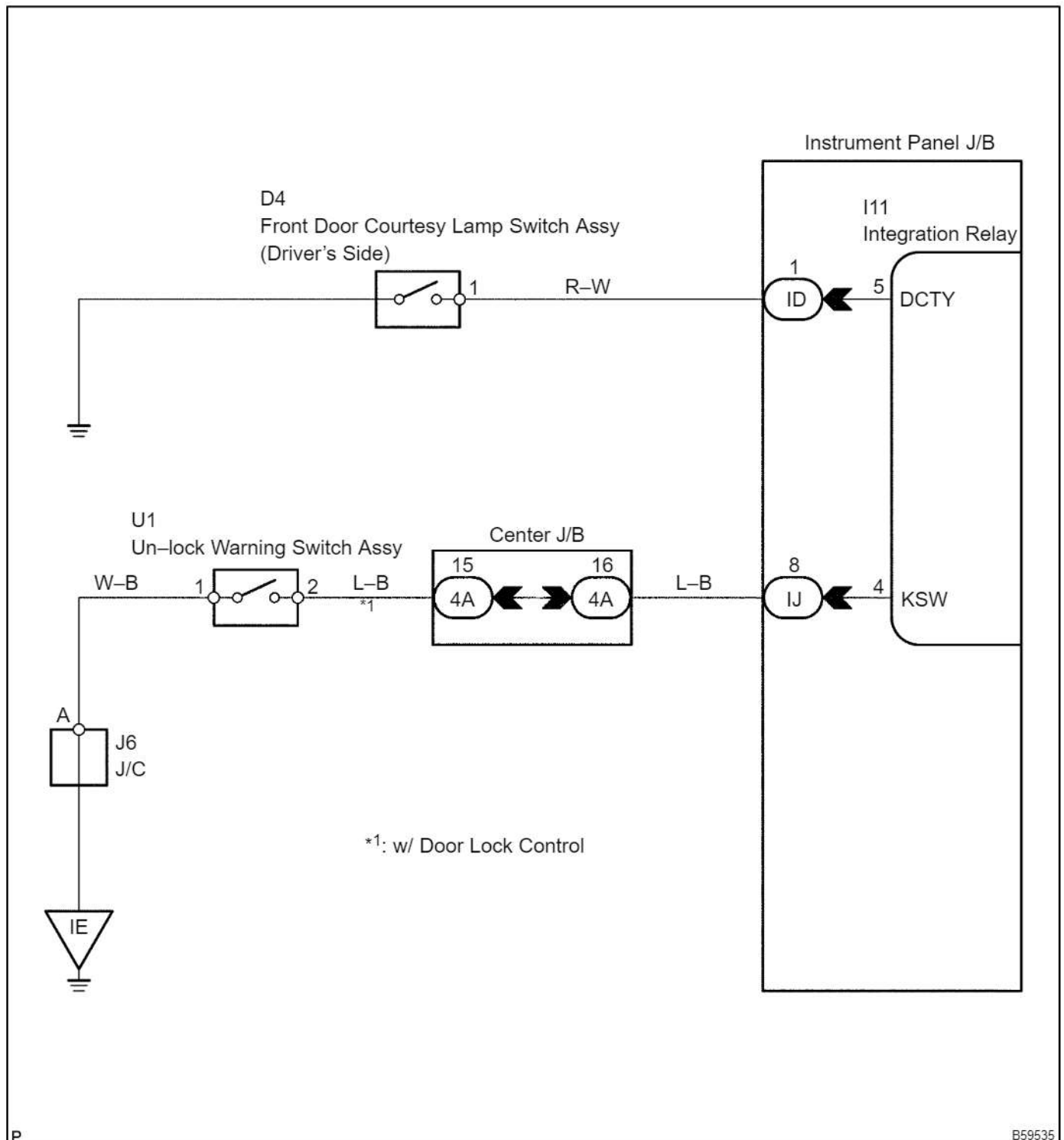
5 ADJUSTMENT, REPAIR OR REPLACEMENT**END**

KEY CONFINEMENT PREVENTION FUNCTION DOES NOT WORK PROPERLY (UNLOCK WARNING SWITCH CIRCUIT)

CIRCUIT DESCRIPTION

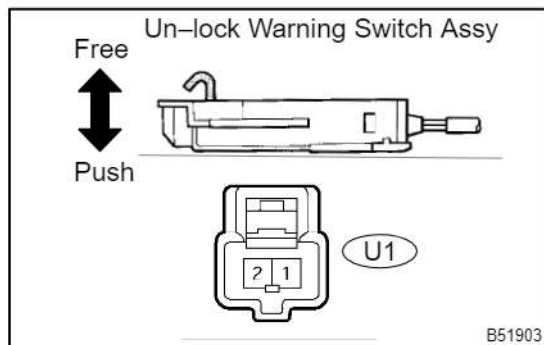
The unlock warning switch turns on when the key is inserted in the ignition key cylinder and the door courtesy switch turns on when the driver's door is opened, and the integration relay monitors both switches conditions. According to these switches conditions, the integration relay controls the door locking operation not to lock the doors while both switches are on, in order to prevent the key from being confined.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT UN-LOCK WARNING SWITCH ASSY



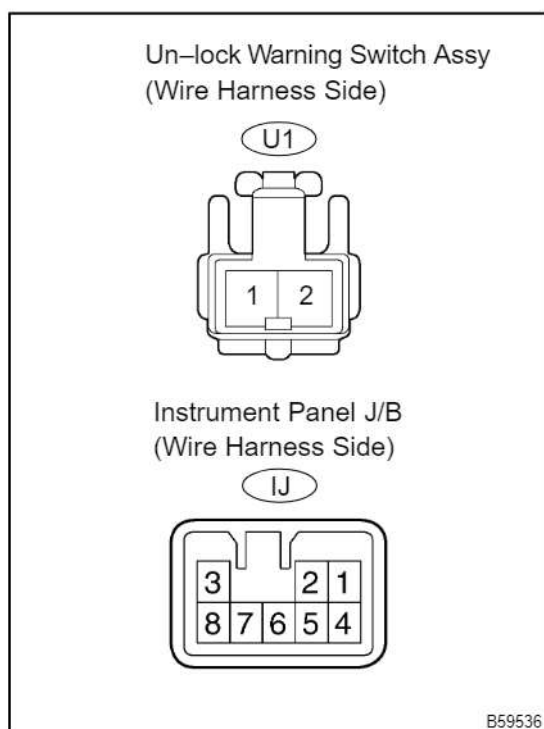
- (a) Remove the un-lock warning switch assy.
- (b) Inspect the un-lock warning switch assy continuity, as shown in the illustration and table.

Standard:

Terminal No.	Condition	Specified condition
U1-1 $\Rightarrow$ U1-2	Free	No continuity
	Push	Continuity

NG
REPLACE UN-LOCK WARNING SWITCH ASSY
OK

2 CHECK WIRE HARNESS (UN-LOCK WARNING SWITCH $\Leftrightarrow$ INSTRUMENT PANEL J/B)



- (a) Disconnect the un-lock warning switch assy and instrument panel J/B connectors.
- (b) Check the continuity between the terminals of the un-lock warning switch assy and instrument panel J/B connectors, as shown in the illustration and table.

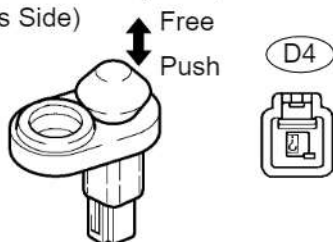
Standard (Check for open):

Symbols (Terminal No.) (Un-lock warning switch $\Leftrightarrow$ Instrument panel J/B)	Specified condition
(U1-2) $\Rightarrow$ KSW (IJ-8)	Continuity
(U1-1) $\Rightarrow$ Body ground	

NG
REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR
OK

3 INSPECT FRONT DOOR COURTESY LAMP SWITCH ASSY (DRIVER'S SIDE)

Front Door Courtesy Lamp Switch Assy
(Driver's Side)



B58556

- Remove the courtesy lamp switch.
- Inspect the courtesy lamp switch continuity, as shown in the illustration and table.

Standard:

Terminal No.	Condition	Specified condition
D4-1 ⇔ Body ground	Free	Continuity
	Push	No continuity

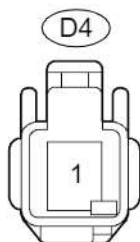
NG

REPLACE FRONT DOOR COURTESY LAMP SWITCH ASSY

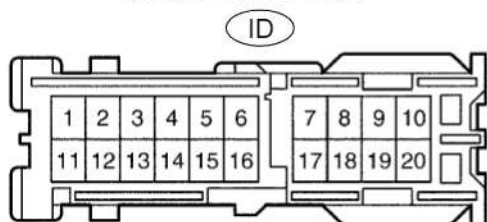
OK

4 CHECK WIRE HARNESS (FRONT DOOR COURTESY LAMP SWITCH ASSY [DRIVER'S SIDE] ⇔ INSTRUMENT PANEL J/B)

Front Door Courtesy Lamp Switch Assy
[Driver's Side] (Wire Harness Side)



Instrument Panel J/B
(Wire Harness Side)



B59537

- Disconnect the courtesy lamp switch and instrument panel J/B connectors.
- Check the continuity between the terminals of the courtesy lamp switch and instrument panel J/B connectors, as shown in the illustration and table.

Standard (Check for open):

Symbols (Terminal No.) (Courtesy lamp switch ⇔ Instrument panel J/B)	Specified condition
(D4-1) ⇔ DCTY (ID-1)	Continuity

NG

REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR

OK

REPLACE INTEGRATION RELAY