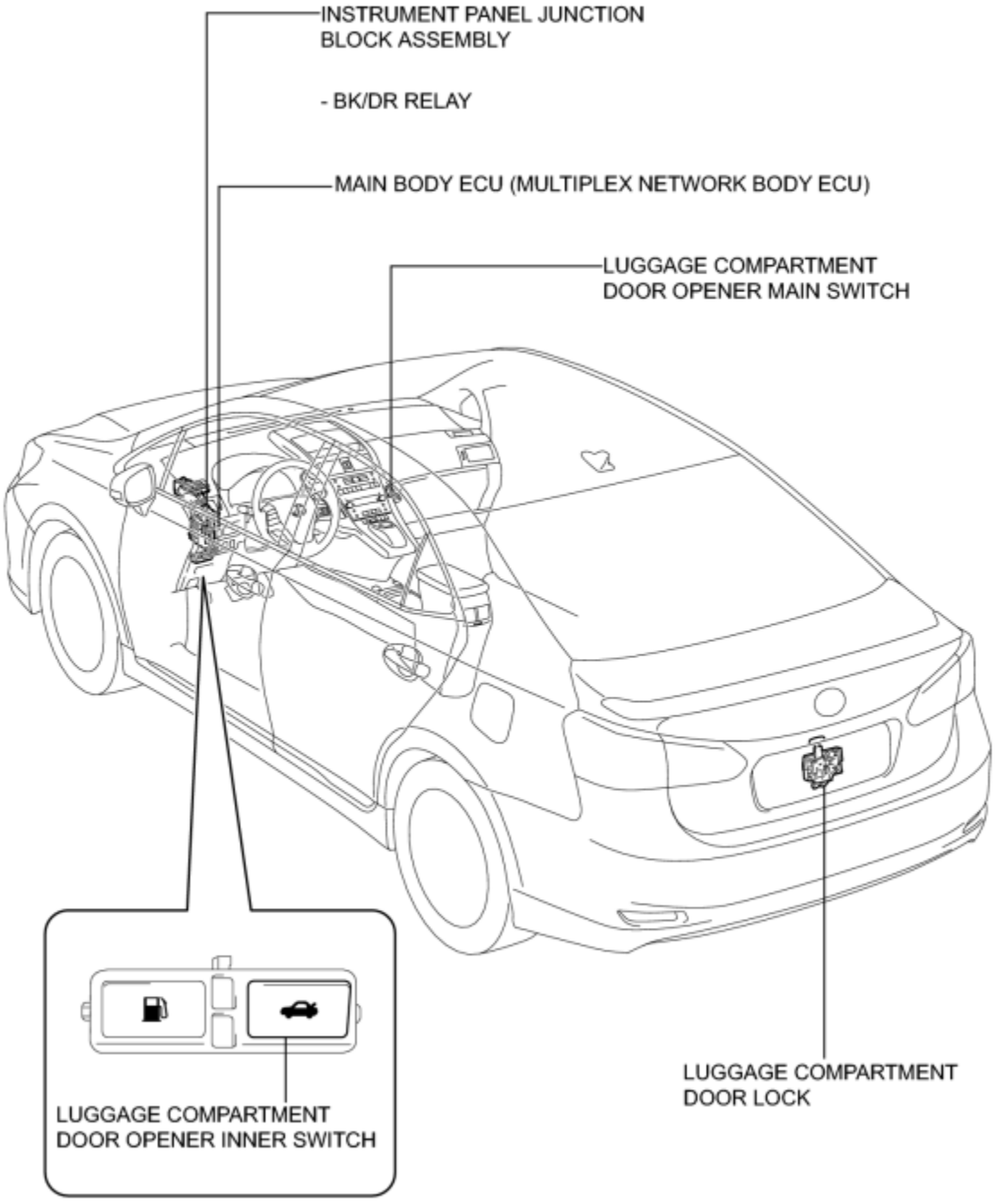
Last Modified: 5-25-2010	6.4 R	**From:** 200907
Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000001WLL00CX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: PARTS LOCATION (2010 HS250H)		

PARTS LOCATION

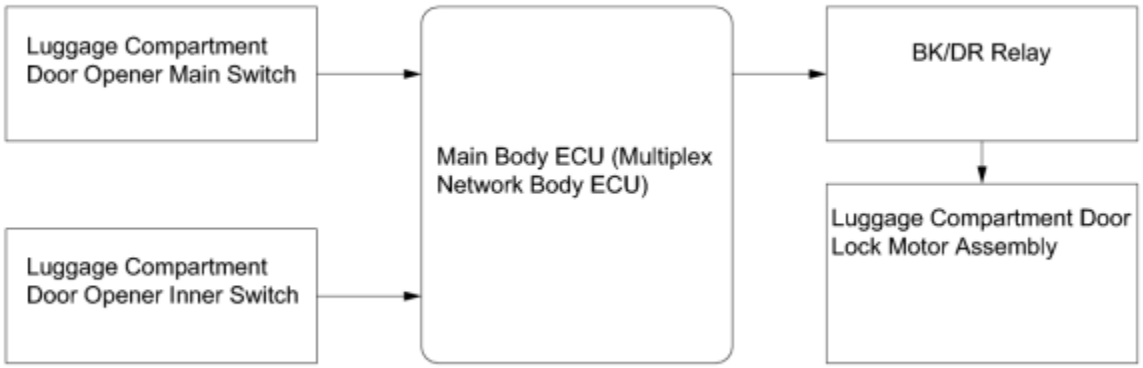
ILLUSTRATION



Last Modified: 5-25-2010	6.4 U	**From:** 200907

Model Year: 2010	**Model:** HS250H	**Doc ID:** RM00000418F002X
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: SYSTEM DIAGRAM (2010 HS250H)		

SYSTEM DIAGRAM



Communication Table

Sender	Receiver	Signal	Line
Luggage Compartment Door Opener Inner Switch	Main body ECU (multiplex network body ECU)	Luggage compartment door opener inner switch signal	Local communication
Luggage Compartment Door Opener Main Switch	Main body ECU (multiplex network body ECU)	Luggage compartment door opener main switch signal	Local communication

Last Modified: 5-25-2010	6.4 D	**From:** 200907
Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000001SHG00IX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: SYSTEM DESCRIPTION (2010 HS250H)		

SYSTEM DESCRIPTION

1. LUGGAGE COMPARTMENT DOOR OPENER SYSTEM DESCRIPTION

(a) The luggage compartment door opener is an electric type.

(b) The main body ECU (multiplex network body ECU) activates the luggage compartment door lock motor when the ON signal from the luggage compartment door opener inner switch is received.

(c) The luggage compartment door opener system operates as follows:

Opener Main Switch Condition	Opener Inner Switch Condition	Door Lock Condition	Luggage Compartment Door Opener System Condition
ON (Pushed)	Pushed (ON)	Locked	Does not operate
ON (Pushed)	Not pushed (OFF)	Locked	Does not operate
ON (Pushed)	Pushed (ON)	Unlocked	Operates
OFF (Not pushed)	Pushed (ON)	Unlocked	Does not operate

2. FUNCTION OF MAIN COMPONENTS

Component	Function
Luggage Compartment Door Lock Motor Assembly	Controlled by main body ECU (multiplex network body ECU) and unlatches luggage compartment door lock.
Luggage Compartment Door Opener Inner Switch	When luggage compartment door opener inner switch is pushed, opener inner switch ON signal is sent to main body ECU (multiplex network body ECU).
Luggage Compartment Door Opener Main Switch	When luggage compartment door opener main switch is pushed, opener main switch ON signal is sent to main body ECU (multiplex network body ECU).
Main Body ECU (multiplex network body ECU)	When luggage compartment door opener inner switch is pushed, main body ECU (multiplex network body ECU) receives opener inner switch ON signal. When luggage door opener main switch is pushed, main body ECU (multiplex network body ECU) receives opener main switch ON signal.

OPERATION CHECK

1. CHECK LUGGAGE COMPARTMENT DOOR OPENER OPERATION

NOTICE:

- To prevent inadvertent operation of the luggage compartment door, the opener does not operate while driving.
- When the theft deterrent system is in the armed state or alarm sounding state, the luggage compartment door opener does not operate.

(a) When the luggage compartment door opener main switch is on, push the luggage compartment door opener inner switch and check that the luggage compartment door opens.

(b) When the luggage compartment door opener main switch is off, push the luggage compartment door opener inner switch and check that the luggage compartment door does not open.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Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000001SHF00IX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: PROBLEM SYMPTOMS TABLE (2010 HS250H)		

PROBLEM SYMPTOMS TABLE

HINT:

- Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.
- Inspect the fuses and relays related to this system before inspecting the suspected areas below.

Luggage Compartment Door Opener System

Symptom	Suspected Area	See page
Luggage compartment door opener does not operate	Luggage compartment door lock assembly	INFO

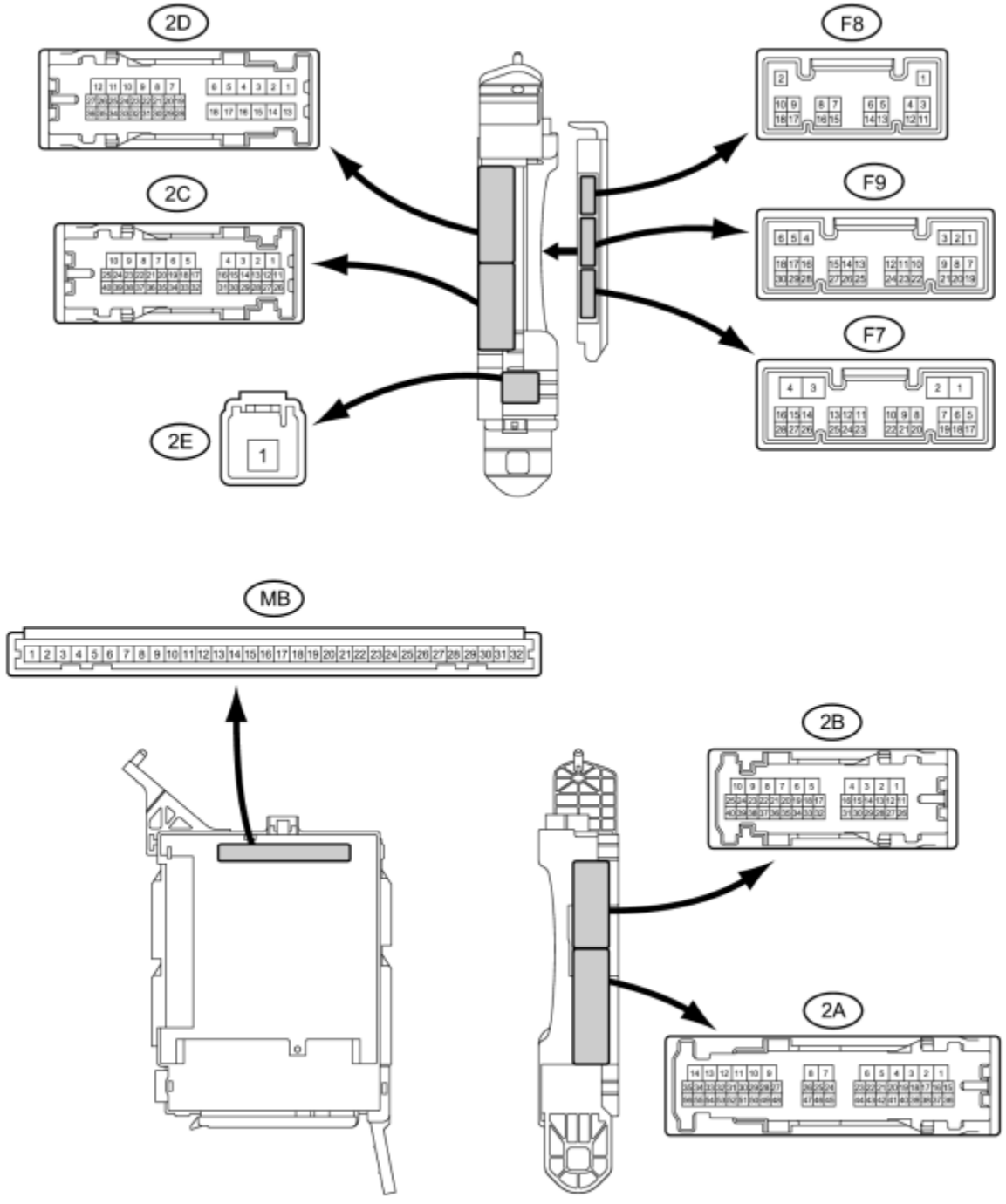
	Luggage compartment door opener inner switch	-
	Luggage compartment door opener main switch	-
	Main body ECU (multiplex network body ECU)	-
	Wire harness or connector	-

Last Modified: 5-25-2010	6.4 U	**From:** 200907
Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000001TFW00IX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: TERMINALS OF ECU (2010 HS250H)		

TERMINALS OF ECU

1. CHECK MAIN BODY ECU (Multiplex NETWORK BODY ECU)

(a) Disconnect the 2B, 2C and F7 connectors.



(b) Measure the resistance and voltage according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
2C-18 (BECU) - Body ground	R - Body ground	ECU power supply	Power switch off	11 to 14 V
2B-6 (GND1) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
F7-3 (GND2) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
F7-11 (TMSW) - Body ground	R - Body ground	Luggage compartment door opener main switch signal input	Luggage compartment door opener main switch off	10 kΩ or higher
F7-11 (TMSW) - Body ground	R - Body ground	Luggage compartment door opener main switch signal input	Luggage compartment door opener main switch on	Below 1 Ω
F7-5 (TSW) - Body ground	W - Body ground	Luggage compartment door opener inner switch signal input	Luggage compartment door opener inner switch off	10 kΩ or higher
F7-5 (TSW) - Body ground	W - Body ground	Luggage compartment door opener inner switch signal input	Luggage compartment door opener inner switch on	Below 1 Ω

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

(c) Reconnect the 2B, 2C and F7 connectors.

(d) Measure the voltage according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
2D-9 - Body ground	B - Body ground	Luggage compartment door lock motor drive output	Power switch on (IG) Luggage compartment door opener inner switch off	Below 1 V
2D-9 - Body ground	B - Body ground	Luggage compartment door lock motor drive output	Power switch on (IG) Luggage compartment door opener inner switch on	11 to 14 V

If the result is not as specified, the main body ECU (multiplex network body ECU) or instrument panel junction block assembly may have a malfunction.

Last Modified: 5-25-2010	6.4 D	**From:** 200907
Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000000VPI00SX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: DIAGNOSIS SYSTEM (2010 HS250H)		

DIAGNOSIS SYSTEM

1. CHECK DLC3

(a) Check the DLC3 INFO.

2. INSPECT AUXILIARY BATTERY VOLTAGE

(a) Measure the auxiliary battery voltage with the power switch off.

Standard Voltage:

11 to 14 V

If voltage is below 11 V, recharge or replace the auxiliary battery.

Last Modified: 5-25-2010	6.4 U	**From:** 200907
Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000000VPK00ZX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: DATA LIST / ACTIVE TEST (2010 HS250H)		

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the Techstream to read the Data List allows the values or states of switches, sensors,

actuators and other items to be read without removing any parts. This non-intrusive inspection can be very useful because intermittent conditions or signals may be discovered before parts or wiring is disturbed. Reading the Data List information early in troubleshooting is one way to save diagnostic time.

NOTICE:

In the table below, the values listed under "Normal Condition" are reference values. Do not depend solely on these reference values when deciding whether a part is faulty or not.

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Data List.

(e) Read the Data List according to the display on the Techstream.

Main Body

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Trunk/BDoor Open SW	Luggage door opener inner switch signal/ON or OFF	ON: Luggage compartment door opener inner switch pushed OFF: Luggage compartment door opener inner switch not pushed	-
Trunk Main SW	Luggage door opener main switch signal/ON or OFF	ON: Luggage compartment door opener main switch pushed OFF: Luggage compartment door opener main switch not pushed	-

2. ACTIVE TEST

HINT:

Using the Techstream to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List

information can be displayed while performing Active Tests.

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Active Test.

(e) Perform the Active Test according to the display on the Techstream.

Main Body

Tester Display	Test Part	Control Range	Diagnostic Note
Trunk and Back-Door Open	Operate luggage compartment door lock motor	ON/OFF	This test will open the trunk

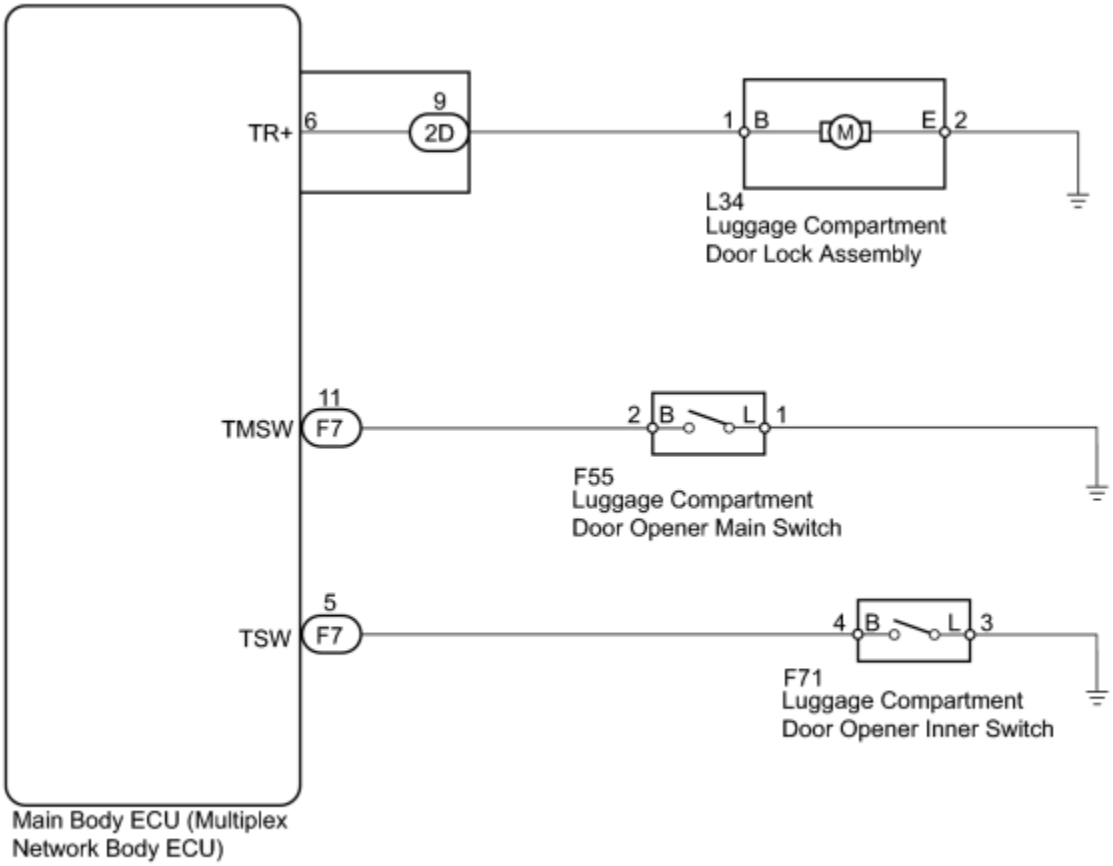
Last Modified: 5-25-2010	6.4 J	**From:** 200907
Model Year: 2010	**Model:** HS250H	**Doc ID:** RM000001SHK00LX
Title: DOOR / HATCH: LUGGAGE COMPARTMENT DOOR OPENER SYSTEM: Luggage Compartment Door Opener does not Operate (2010 HS250H)		

Luggage Compartment Door Opener does not Operate

DESCRIPTION

When the main body ECU (multiplex network body ECU) has received the ON signal from the luggage compartment opener main switch and the ON signal from the luggage compartment door opener inner switch, the main body ECU (multiplex network body ECU) activates the luggage compartment door lock motor.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1.	CHECK LUGGAGE COMPARTMENT DOOR OPENER SYSTEM (LUGGAGE COMPARTMENT DOOR OPENER MAIN SWITCH)

(a) When the luggage compartment door opener main switch is on, push the luggage compartment door opener inner switch and check that the luggage compartment door

*1

opens.

OK:

Luggage compartment door opener system operates normally.

(b) When the luggage compartment door opener main switch is off, push the luggage compartment door opener inner switch and check that the luggage compartment door does not open.

OK:

Luggage compartment door opener system does not operate.

Text in Illustration

*1	Luggage Compartment Door Opener Main Switch

NG ▶ PERFORM ACTIVE TEST USING TECHSTREAM

OK ▶ **END**

2.	PERFORM ACTIVE TEST USING TECHSTREAM

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Active Test.

(e) Perform the Active Test according to the display on the Techstream.

Main Body

Tester Display	Test Part	Control Range	Diagnostic Note

Trunk and Back-Door Open	Operate luggage compartment door lock motor	ON/OFF	This test will open the trunk

OK:

Luggage compartment door lock motor operates.

NG ▶ INSPECT LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY

OK

▼

3.	READ VALUE USING TECHSTREAM

(a) Connect the Techstream to the DLC3.

(b) Turn the power switch on (IG).

(c) Turn the Techstream on.

(d) Enter the following menus: Body Electrical / Main Body / Data List.

(e) Read the Data List according to the display on the Techstream.

Main Body

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
Trunk/BDoor Open SW	Luggage door opener inner switch signal/ON or OFF	ON: Luggage compartment door opener inner switch is pushed OFF: Luggage compartment door opener inner switch is not pushed	-
Trunk Main SW	Luggage door opener main switch signal/ON or OFF	ON: Luggage compartment door opener main switch is pushed OFF: Luggage compartment door opener main switch is not pushed	-

OK:

On the Techstream screen, each item changes between ON and OFF according to the above.

Result:

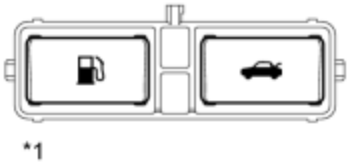
Result	Proceed to
NG (Luggage compartment door opener inner switch is abnormal)	A
NG (Luggage compartment door opener main switch is abnormal)	B
OK (Luggage compartment door opener main switch and luggage compartment door opener inner switch are normal)	C

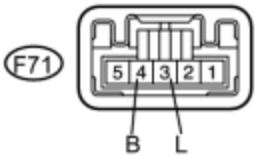
C REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

B INSPECT LUGGAGE COMPARTMENT DOOR OPENER MAIN SWITCH

A

4.	INSPECT LUGGAGE COMPARTMENT DOOR OPENER INNER SWITCH





P

(a) Remove the luggage compartment door opener inner switch INFO.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F71-4 (B) - F71-3 (L)	Pushed (ON)	Below 1 Ω
F71-4 (B) - F71-3 (L)	Not pushed (OFF)	10 kΩ or higher

Text in Illustration

*1	Component without harness connected (Luggage Compartment Door Opener Inner Switch)

NG ▶ REPLACE LUGGAGE COMPARTMENT DOOR OPENER INNER SWITCH

OK

▼

5.	CHECK HARNESS AND CONNECTOR (LUGGAGE COMPARTMENT DOOR OPENER INNER SWITCH - MAIN BODY ECU)

(a) Disconnect the F7 main body ECU (multiplex network body ECU) connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

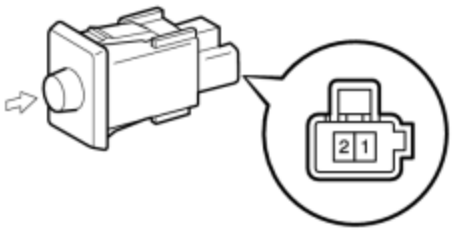
Tester Connection	Condition	Specified Condition
F7-5 (TSW) - F71-4 (B)	Always	Below 1 Ω
F7-5 (TSW) - Body ground	Always	10 kΩ or higher
F71-3 (L) - Body ground	Always	Below 1 Ω

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR (LUGGAGE COMPARTMENT DOOR OPENER INNER SWITCH - MAIN BODY ECU)

OK ▶ **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

6.	INSPECT LUGGAGE COMPARTMENT DOOR OPENER MAIN SWITCH

*1



(a) Remove the luggage compartment door opener main switch INFO.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
F55-1 (L) - F55-2 (B)	Not pushed (OFF)	10 kΩ or higher
F55-1 (L) - F55-2 (B)	Pushed (ON)	Below 1 Ω

Text in Illustration

*1	Component without harness connected (Luggage Compartment Door Opener Main Switch)

NG ▶ REPLACE LUGGAGE COMPARTMENT DOOR OPENER MAIN SWITCH

OK

▼

7.	CHECK HARNESS AND CONNECTOR (LUGGAGE COMPARTMENT DOOR OPENER MAIN SWITCH - MAIN BODY ECU)

(a) Disconnect the F7 main body ECU (multiplex network body ECU) connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

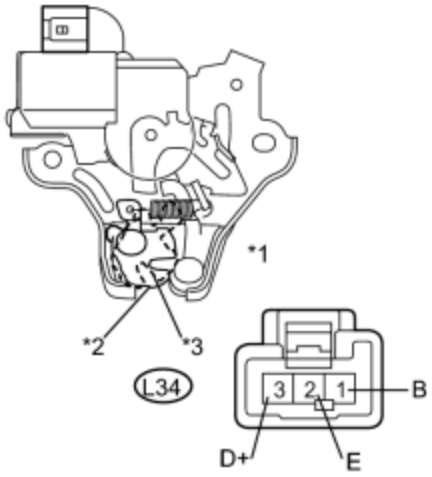
Tester Connection	Condition	Specified Condition
F7-11 (TMSW) - F55-2 (B)	Always	Below 1 Ω
F55-1 (L) - Body ground	Always	Below 1 Ω
F7-11 (TMSW) - Body ground	Always	10 kΩ or higher

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR (LUGGAGE COMPARTMENT DOOR OPENER MAIN SWITCH - MAIN BODY ECU)

OK ▶ **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

8.	INSPECT LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY

(a) Remove the luggage compartment door lock assembly INFO.



(b) Move the door lock to the closed (locked) position.

(c) Apply auxiliary battery voltage to the door lock motor and check the operation of the door lock motor.

OK:

Connection	Result
Auxiliary battery positive (+) → Terminal 1 (B) Auxiliary battery negative (-) → Terminal 2 (E)	Luggage compartment door lock motor opens door lock

(d) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
L34-3 (D+) - L34-2 (E)	Open (Unlocked)	Below 1 Ω
L34-3 (D+) - L34-2 (E)	Closed (Locked)	10 kΩ or higher

Text in Illustration

*1	Component without harness connected (Luggage Compartment Door Lock Assembly)
*2	Closed (Locked)
*3	Open (Unlocked)

NG ▶ REPLACE LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY

OK

▼

9.	CHECK HARNESS AND CONNECTOR (LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY - MAIN BODY ECU)

(a) Disconnect the 2D instrument panel junction block assembly connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
L34-1 (B) - 2D-9 (TR+)	Always	Below 1 Ω
L34-1 (B) - Body ground	Always	10 kΩ or higher
L34-2 (E) - Body ground	Always	Below 1 Ω

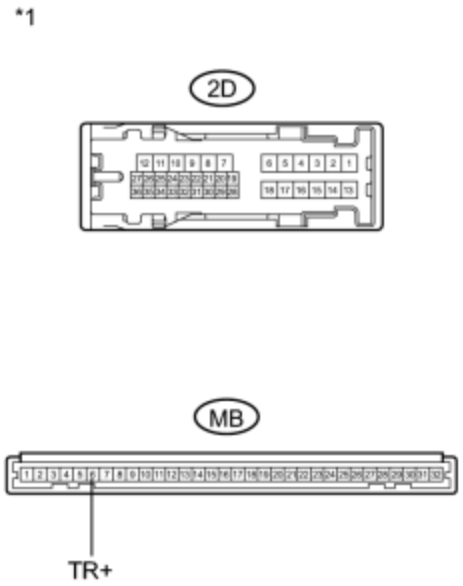
NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR (LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY - MAIN BODY ECU)

OK

▼

10.	INSPECT INSTRUMENT PANEL JUNCTION BLOCK

(a) Remove the instrument panel junction block assembly INFO.



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
MB-6 (TR+) - 2D-9	Always	Below 1 Ω
MB-6 (TR+) - Body ground	Always	10 kΩ or higher

Text in Illustration

*1	Component without harness connected (Instrument Panel Junction Block assembly)

NG ▶ REPLACE INSTRUMENT PANEL JUNCTION BLOCK

OK ▶ **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**