

KEY REMINDER WARNING SYSTEM

OPERATION CHECK

1. OPERATION CHECK

- (a) Check the sound of the key reminder warning buzzer.
 - (1) With all the doors closed, insert the key in the ignition switch lock cylinder, and put the key in the LOCK or ACC position.
 - (2) Repeat the above with any of the doors open, and check that the buzzer sounds intermittently.
- (b) Check that the key reminder warning sound stops.
 - (1) With the buzzer sounding, perform the following and check whether the buzzing sound stops.
 - Close all the doors. (Turn each door's door courtesy light switch assembly OFF.)
 - Turn the key to the ON position.
 - Remove the key from the ignition switch lock cylinder.

DL

LOCATION

COMBINATION METER ASSEMBLY

UNLOCK WARNING SWITCH ASSEMBLY

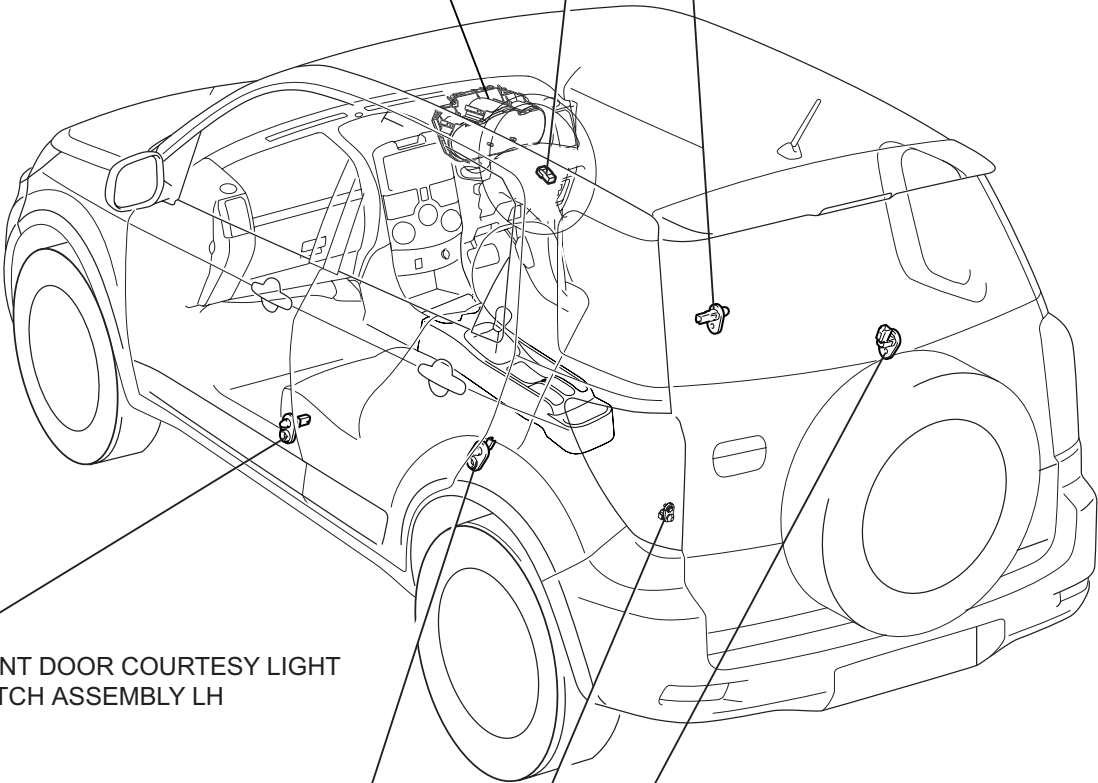
FRONT DOOR COURTESY
LIGHT SWITCH ASSEMBLY RH

FRONT DOOR COURTESY LIGHT
SWITCH ASSEMBLY LH

REAR DOOR COURTESY LIGHT
SWITCH ASSEMBLY LH

REAR DOOR COURTESY LIGHT SWITCH
ASSEMBLY RH

BACK DOOR COURTESY LIGHT SWITCH ASSEMBLY



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PROBLEM SYMPTOMS TABLE

Symptom	Suspected Area	See Page
The key reminder warning does not work	Unlock warning switch assembly	DL-74
	Each door's door courtesy light switch assembly	-
	Combination meter assembly	ME-8
	Wire harness	-

HOW TO PROCEED WITH TROUBLE-SHOOTING

1 VEHICLE BROUGHT TO WORKSHOP

DL

2 CONDUCT CUSTOMER PROBLEM ANALYSIS AND CHECK SYMPTOMS

HINT:

For customer problem analysis check, see page DL-56.

3 PROBLEM SYMPTOMS TABLE

- (a) Refer to the problem symptoms table and check if the symptom of the problem is listed in the table.

HINT:

See page DL-55.

Standard

Result	Proceed to
Symptom is not listed in problem symptoms table	A
Symptom is listed in problem symptoms table	B

B

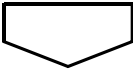
GO TO INSPECTION PROCEDURE 5

A

4 TROUBLESHOOT BASED ON THE SYMPTOM

- (a) CHECK FUNCTION (See page DL-53.)
 (b) ECU terminals (See page DL-57.)
 (c) INSPECTION

5	ADJUST, REPAIR OR REPLACE
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END

CUSTOMER PROBLEM ANALYSIS
CHECK

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Key Reminder Warning System Problem
Diagnosis Check Sheet

Date Vehicle Brought In
/ /

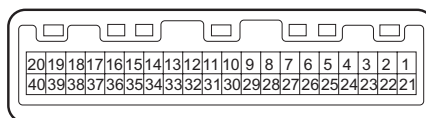
Customer's Name		License Plate No.			Engine Type	
		First Registration Year		20__ / /	Model	
Written By		Odometer Reading			VIN	
Inspector's Name						
Description Of Symptoms						
Date Problem First Occurred		Date		Time		
Frequency Problem Occurs		Constant Occasional (__times per day, __times per month)				
Conditions (Method of use and results)						
Weather	Clear Cloudy Rainy Snowy Others ()	Temperature		Approx. ()°C		
Road	City Suburbs Highway Others()			Paved Unpaved		
Problem Symptoms		☐ Key reminder buzzer does not operate (unlock warning switch circuit) ☐ Key reminder buzzer does not operate (front door courtesy switch circuit)				

ECU TERMINALS

1. COMBINATION METER ASSEMBLY

(a) CHECK INPUT / OUTPUT SIGNALS

- (1) Using a tester, connect the connector and check the continuity and the voltage of each terminal by aiming the tester needle from behind the vehicle's wire harness connector.



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Connector A

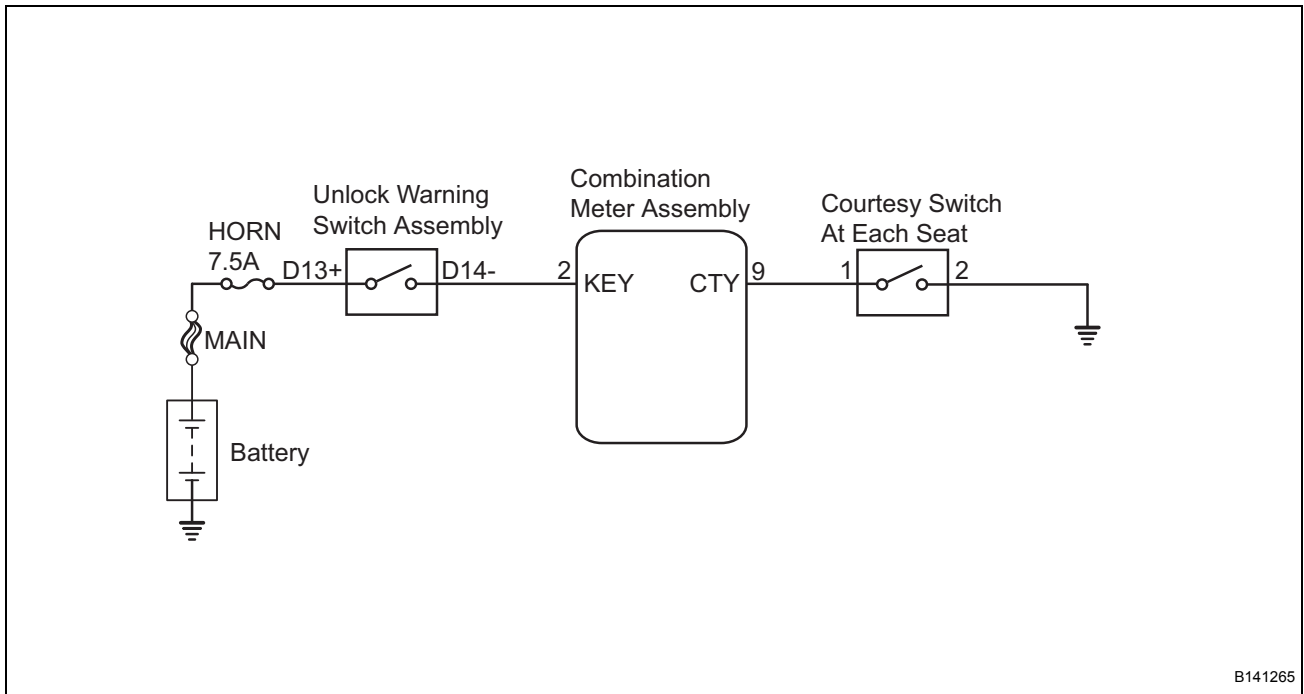
Terminal Symbol (Terminal No.)	Input / Output	Item	Measurement Condition	Standard
IG+ ↔ Body ground (12 ↔ Body ground)	Input	Voltage	Ignition switch OFF → ON	1 V or less → 10 to 14 V
Courtesy ↔ Body ground (9 ↔ Body ground)	Input	Voltage	Any of the doors closed → open	1 V or less → 10 to 14 V
LIN ← Body ground (37 ↔ Body ground)	Input / Output	Waveform	Engine is stopped, ignition switch ON	Pulse is generated
GND ↔ Body ground (15 ↔ Body ground)	-	Continuity	Always	Continuity

KEY REMINDER WARNING DOES NOT WORK

DESCRIPTION

Through the unlock warning switch assembly and each door's courtesy light switch, the combination meter assembly senses whether each door is opened or closed and whether a key is present or absent in the ignition switch lock cylinder. Furthermore, by sensing the open signal from each door's courtesy light switch and the signal that there is a key in the ignition, the combination meter assembly decides to issue a key reminder and intermittently sounds the buzzer of the built-in meter.

CIRCUIT DIAGRAM



INSPECTION PROCEDURE

1

INSPECT FUSES

(a) Check the HORN 7.5 A fuse.

NG

REPLACE FUSES

OK

2

CHECK WIRE HARNESS (POWER SOURCE SYSTEM)

(a) Check the voltage.

- (1) Disconnect the connector of the unlock warning switch assembly.
- (2) Using a tester, check the voltage between the body ground and the vehicle side connector of the unlock warning switch assembly.

Standard:**10 V to 14 V (when normal)**

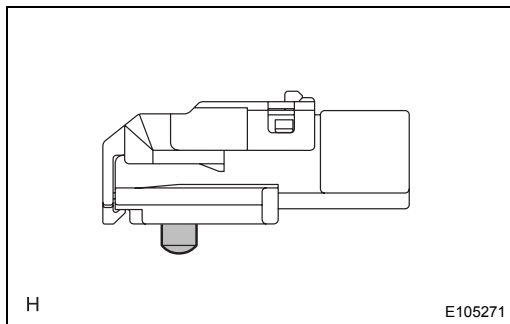
NG

REPLACE WIRE HARNESS (POWER SOURCE SYSTEM)

OK

3

CHECK UNLOCK WARNING SWITCH ASSEMBLY



(a) Check the continuity.

- (1) Using a tester, check the continuity between terminal 1 and terminal 2 of the connector.

Standard

Measurement Condition	Standard
With the pin not depressed	No continuity
With the pin depressed	Continuity

NG

REPLACE UNLOCK WARNING SWITCH ASSEMBLY

DL

OK

4

CHECK WIRE HARNESS (BETWEEN THE UNLOCK WARNING SWITCH AND THE COMBINATION METER ASSEMBLY)

(a) Check the continuity.

- (1) Disconnect the connector of the combination meter assembly.
 (2) Insert the key into the ignition lock cylinder.
 (3) Using a tester, check the voltage between each terminal of the vehicle side connector.

Standard

Tester Connection	Standard
2 (KEY) ↔ 15 (GND)	10 to 14 V

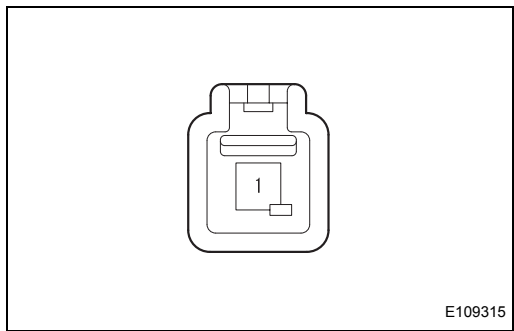
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REPAIR OR REPLACE WIRE HARNESS OR CONNECTOR (BETWEEN THE UNLOCK WARNING SWITCH ASSEMBLY AND THE COMBINATION METER ASSEMBLY)

OK

5

CHECK COURTESY LIGHT SWITCH ASSEMBLY



- (a) Check the continuity.
- (1) Using a tester, operate the switch and check the continuity between the bracket and connector 1 terminal.

Standard

Measurement Condition	Standard
With the switch depressed	No continuity
With the switch not depressed	Continuity

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REPLACE COURTESY LIGHT SWITCH ASSEMBLY

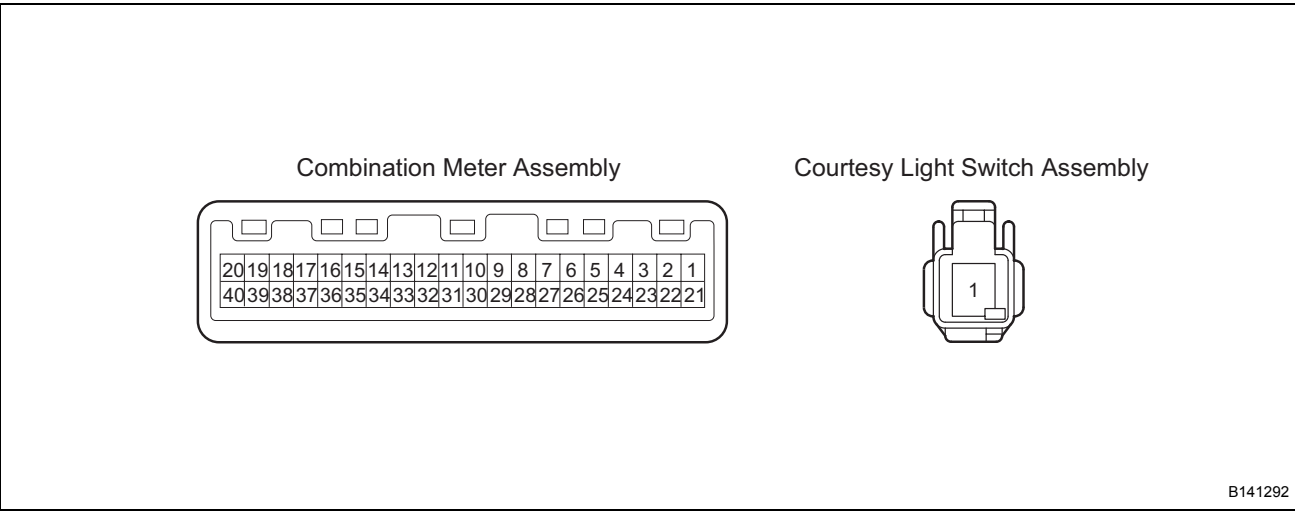
OK

DL

6

CHECK WIRE HARNESS (BETWEEN EACH DOOR COURTESY LIGHT SWITCH ASSEMBLY AND THE COMBINATION METER ASSEMBLY)

- (a) Check the continuity.



- (1) Disconnect the connector to each door's courtesy light switch assembly and the connector to the combination meter assembly.
- (2) Using a tester, check the continuity between each terminal of the connector of the vehicle side wire harness.

Standard

Tester Connection Terminal No. (Receiver ↔ Combination meter assembly)	Standard
1 ↔ 9 (courtesy)	Continuity

NG

REPAIR OR REPLACE WIRE HARNESS OR CONNECTOR (BETWEEN EACH DOOR COURTESY LIGHT SWITCH ASSEMBLY AND THE COMBINATION METER ASSEMBLY)

OK

REPLACE COMBINATION METER ASSEMBLY

DL

