

Driver Side Door Key Lock and Unlock Switch Circuit

DESCRIPTION

The driver's door key lock and unlock switch is built into the driver's door lock assembly.

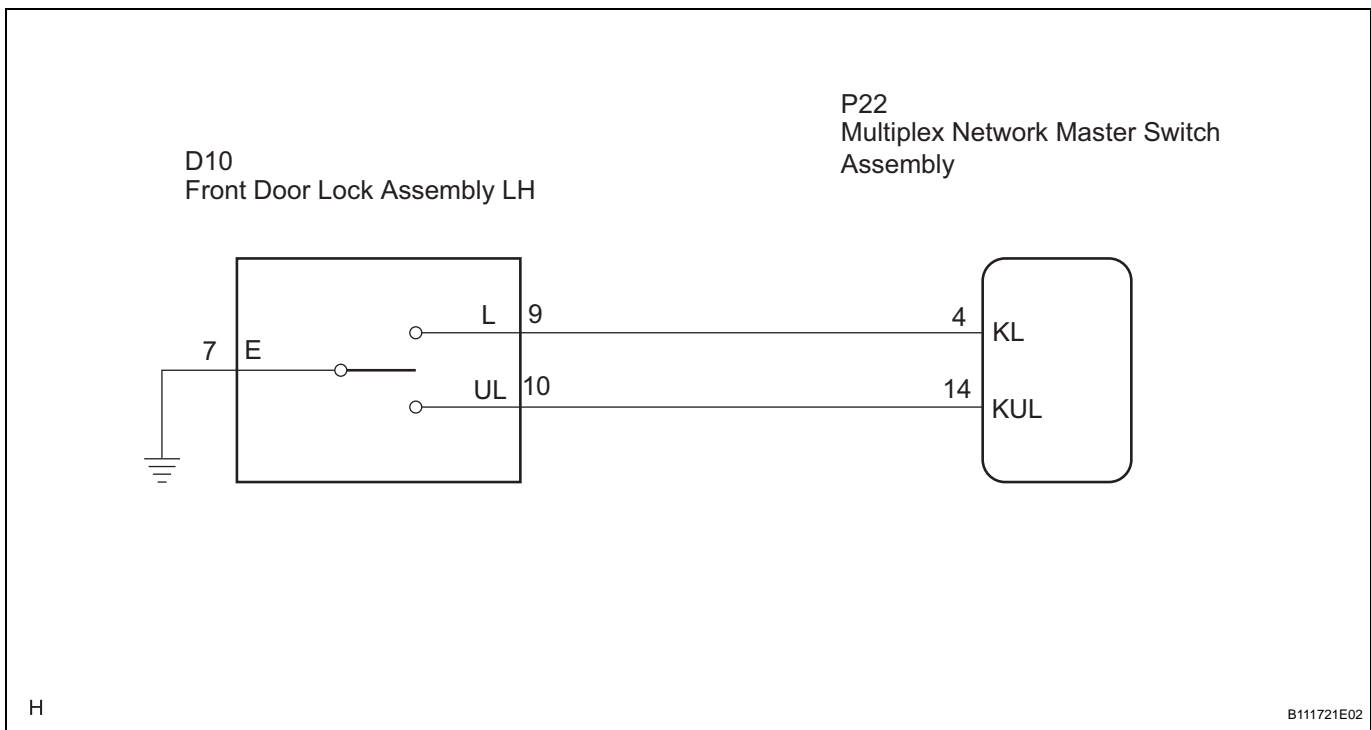
When the driver's door key cylinder is turned to lock all the doors by key, there is continuity between terminals L and E of the key lock and unlock switch. When the cylinder is turned to unlock the door(s), there is continuity between terminals UL and E.

Terminals KL and KUL of the multiplex network master switch assembly are connected to the door lock assembly, and door lock/unlock request signals (by key) are input to the multiplex network master switch assembly.

The multiplex network master switch assembly constantly applies voltage to terminal L of the driver's door lock assembly via terminal KL. When the driver's door key cylinder is turned to lock all the doors by key, current flows from terminal KL to terminal L. The multiplex network master switch assembly determines that this is door lock request signal input and sends a door lock signal to the body ECU using multiplex communication.

The multiplex network master switch assembly also applies constant voltage to terminal UL of the door lock assembly via terminal KUL. When the door key cylinder is turned in the direction to unlock the door(s) by key, current flows from terminal KUL to terminal UL. The multiplex network master switch assembly determines that this is door unlock request signal input and sends a door unlock signal to the the body ECU using multiplex communication.

WIRING DIAGRAM



1 READ VALUE OF DATA LIST

- (a) Check the DATA LIST to ensure proper function of the door unlock detection switch.

MASTER SW:

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
DOOR KEY LOCK	Driver door lock/unlock switch lock signal (key-linked-lock switch) /ON or OFF	ON: Driver side door key cylinder is turned to LOCK OFF: Driver side door key cylinder is not turned to LOCK	-
DOOR KEY UNLOCK	Driver door lock/unlock switch unlock signal (key-linked-unlock switch) /ON or OFF	ON: Driver side door key cylinder is turned to UNLOCK OFF: Driver side door key cylinder is not turned to UNLOCK	-

OK:

The display is as specified in the normal condition.

NG → **Go to step 2**

OK

OTHERS PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

DL

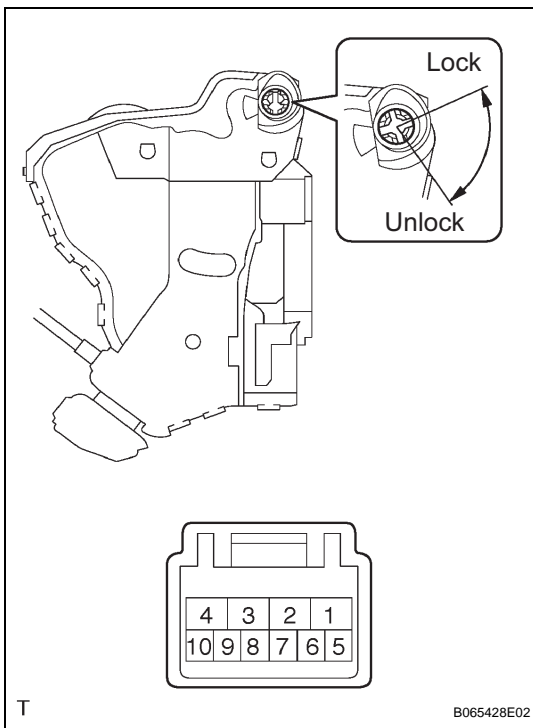
2 INSPECT FRONT DOOR LOCK ASSEMBLY (DOOR KEY LOCK AND UNLOCK SWITCH)

- (a) Remove the front door lock assembly.
- (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
7 - 9	ON (Door lock set to LOCK)	Below 1 Ω
7 - 9, 7 - 10	OFF (Free)	10 kΩ or higher
7 - 10	ON (Door lock set to UNLOCK)	Below 1 Ω

NG → **REPLACE FRONT DOOR LOCK ASSEMBLY**

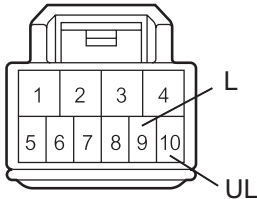


OK

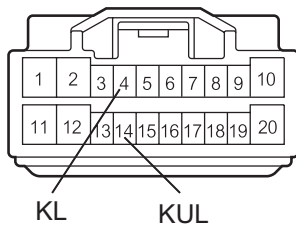
3 CHECK WIRE HARNESS (FRONT DOOR LOCK ASSEMBLY - MULTIPLEX NETWORK MASTER SWITCH)

Wire Harness Side:

D10
Front Door Lock Assembly LH



P22
Multiplex Network Master
Switch Assembly



H

B111707E03

- Disconnect the front door lock assembly connector.
- Disconnect the multiplex network master switch assembly connector.
- Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Condition
D10-9 (L) - P22-4 (KL)	Always	Below 1 Ω
D10-10 (UL) - P22-14 (KUL)	Always	Below 1 Ω
D10-7(E) - Body ground	Always	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

OTHERS PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE