

## DIAGNOSIS SYSTEM

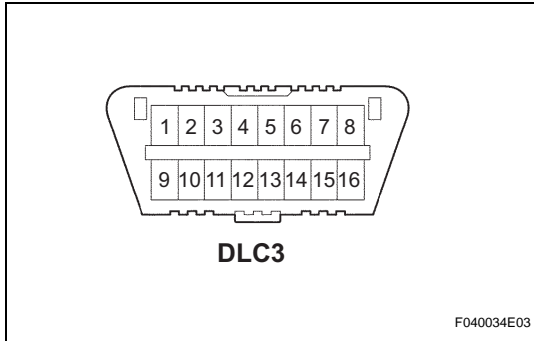
### 1. DESCRIPTION

Electrical back door outside handle system data can be read through the Data Link Connector 3 (DLC3) of the vehicle. When the system seems to be malfunctioning, use the intelligent tester to check for malfunctions and perform repairs.

### 2. CHECK DLC3

- (a) The vehicle's ECU uses ISO 9141-2 for communication.

The terminal arrangement of the DLC3 complies with SAE J1962 and matches the ISO 9141-2 format.



Symbols (Terminal No.)	Terminal Description	Condition	Specified Condition
SIL (7) - SG (5)	Bus "+" line	During transmission	Pulse generation
CG (4) - Body ground	Chassis ground	Always	Below 1 $\Omega$
SG (5) - Body ground	Signal ground	Always	Below 1 $\Omega$
BAT (16) - Body ground	Battery positive	Always	11 to 14 V
CANH (6) - CANL (14)	HIGH-level CAN bus line	Ignition switch OFF	54 to 67 $\Omega$
CANH (6) - Battery positive	HIGH-level CAN bus line	Ignition switch OFF	1 M $\Omega$ or higher
CANH (6) - CG (4)	HIGH-level CAN bus line	Ignition switch OFF	3 k $\Omega$ or higher
CANL (14) - Battery positive	LOW-level CAN bus line	Ignition switch OFF	1 M $\Omega$ or higher
CANL (14) - CG (4)	LOW-level CAN bus line	Ignition switch OFF	3 k $\Omega$ or higher

#### HINT:

If the display shows a communication error message after connecting the intelligent tester to the DLC3 and turning the ignition switch to the ON position, there is a problem with either the vehicle or the intelligent tester.

- If communication is normal when the tester is connected to another vehicle, inspect the DLC3 on the original vehicle.
- If communication is still impossible when the tester is connected to another vehicle, the problem is probably in the tester itself. Consult the Service Department listed in the tester's operator's manual.

## DATA LIST / ACTIVE TEST

### 1. READ DATA LIST

#### HINT:

Using the intelligent tester's DATA LIST allows switch, actuator and other item values to be read without removing any parts. Reading the DATA LIST early in troubleshooting is one way to save time.

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch ON.
- (c) Read the DATA LIST

#### BODY (Body ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
B DOE OPEN SW	Back door opener switch signal (Outside handle switch) /ON or OFF	ON: Back door opener switch is pushed OFF: Back door opener switch is not pushed	-

#### BACK-DOOR (Power Back Door ECU):

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
DOOR HANDLE SW	Back door opener switch signal (Outside handle switch) /ON or OFF	ON: Back door opener switch is pushed OFF: Back door opener switch is not pushed	-

### 2. PERFORM ACTIVE TEST

#### HINT:

Performing the intelligent tester's ACTIVE TEST allows relay, VSV, actuator, and other items to be operated without removing any parts. Performing the ACTIVE TEST early in troubleshooting is one way to save time. The DATA LIST can be displayed during the ACTIVE TEST.

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch ON.
- (c) Perform the ACTIVE TEST.

#### BODY (Body ECU):

Item	Test Details	Diagnostic Note
TRUNK/BDOR OPEN	Operate back door open OFF/ON	-

#### BACK-DOOR (Power Back Door ECU):

Item	Test Details	Diagnostic Note
LATCH RELEASE	Back door lock latch is released OFF/ON	-