

PRE-CHECK

1. DIAGNOSIS SYSTEM

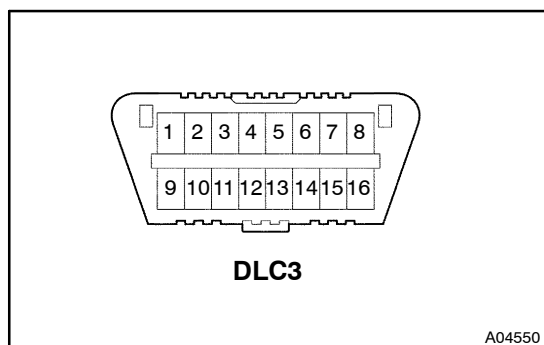
(a) Description

ECU data of this system can be read from DLC3 of the vehicle.

Therefore when there seems to be a trouble on this system, use hand-held tester to check and troubleshoot it.

(b) Check the DLC3.

The vehicle's ECM uses ISO 9141-2 for communication. The terminal arrangement of DLC3 complies with SAE J1962 and matches the ISO 9141-2 format.



Terminal No.	Connection/Specified Condition	Condition
4	Chassis Ground ↔ Body Ground/1 or less	Always
13	TC ↔ Body Ground/9 – 14 V	Always

HINT:

If your display shows "UNABLE TO CONNECT TO VEHICLE" when you have connected the cable of the hand-held tester to DLC3, turned the ignition switch ON and operated the hand-held tester, there is a problem on the vehicle side or tool side.

- If communication is normal when the tool is connected to another vehicle, inspect DLC3 on the original vehicle.
- If communication is still not possible when the tool is connected to another vehicle, the problem is probably in the tool itself, so consult the Service Department listed in the tool's instruction manual.

2. DATA LIST

HINT:

According to the DATA LIST displayed by the Hand-held tester, you can read the value of the switch, sensor, actuator and so on without parts removal. Reading the DATA LIST as a first step of troubleshooting is one of the method to shorten the labor time.

- Turn the ignition switch OFF.
- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON.
- According to the display on tester, read the "DATA LIST".

Rain Sensor

Item	Condition	Specified Condition
SEN COND INF	IG switch ON and front wiper switch except AUTO → AUTO	OK/NG
SEN REACT CONDE	IG switch ON and front wiper switch except AUTO → AUTO	OK/NG

SEN HI TEMP INF	IG switch ON and front wiper switch except AUTO → AUTO	OK/NG
SEN LO TEMP INF	IG switch ON and front wiper switch except AUTO → AUTO	OK/NG
WIP SW LO SIG	IG switch ON and front wiper switch except LO → LO	OFF/ON
WIP SW HI SIG	IG switch ON and front wiper switch except HI → HI	OFF/ON
WIP SW AUTO SIG	IG switch ON and front wiper switch except AUTO → AUTO	OFF/ON
WASH SW SIG	IG switch ON and front washer switch OFF → ON	OFF/ON
KEY SW SIG	IG switch ON OFF → Without key	OFF/ON

Wiper Control ECU

Item	Condition	Specified Condition
F WIPER SW	IG switch ON and front wiper switch OFF → LO, HI, AUTO	OFF/ON
WIPER LO SW	IG switch ON and front wiper switch except LO → LO	OFF/ON
WIPER HI SW	IG switch ON and front wiper switch except HI → HI	OFF/ON
WIPER AUTO SW	IG switch ON and front wiper switch except AUTO → AUTO	OFF/ON
WASHER SW	IG switch ON and front washer switch OFF → ON	OFF/ON
BRAKE PEDAL SW	IG switch ON and brake pedal released → depressed	OFF/ON
NSW SW	IG switch ON and PNP switch except N → N	OFF/ON
TIME CTL SW	IG switch ON and front wiper INT switch fully clockwise → fully counterclockwise	deg
SPEED MODE	–	NOT AVL/AVIL
REWIPE CONTROL	–	OFF/3 s/ SPD MOD

3. ACTIVE TEST

HINT:

Performing the ACTIVE TEST using the Hand-held tester allows the relay, and so on to operate without parts removal. Performing the ACTIVE TEST as a first step of troubleshooting is one of the method to shorten the labor time.

It is possible to display the DATA LIST during the ACTIVE TEST.

- Turn the ignition switch OFF.
- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON.
- According to the display on tester, perform the "ACTIVE TEST".

Wiper Control ECU

Item	Check Item	Operation
WIPER MOT (HI)	Front wiper motor HI operation	OFF/ON
WIPER MOT (LO)	Front wiper motor LO operation	OFF/ON