

PRE-CHECK

1. MULTIPLEX COMMUNICATION SYSTEM (BEAN)

- (a) The BEAN communication line is used for the body, meters and air conditioning controls. Since the line is loop-shaped, the communication can be kept by the line that is not open even if a part of the line becomes open for some reasons. In case that the line becomes short (bus-down) for some reasons, however, all the BEAN communication will be impossible and some DTC will be output.

HINT:

When a bus-down occurs, the communication from the related ECU will stop. Therefore, an outputs of a DTC will be impossible. So, perform a DTC (SAE code) inspection with the hand-held tester.

2. COMMUNICATION FUNCTION INSPECTION

- (a) Inspect the battery positive voltage.

Standard: 10 - 14 V

- (b) Perform a DTC check of the body ECU by connecting the hand-held tester to the DLC3 and turning the ignition switch ON.

- (1) Check that the DTCs of the ECU unconnected and also a short-circuit in the communication bus are not output.

3. INSPECT OUTPUT OF DTC BY DOOR OPEN INDICATOR

- (a) Inspect the battery positive voltage.

Standard: 10 - 14 V (when engine stopped)

- (b) Check the DTC output.

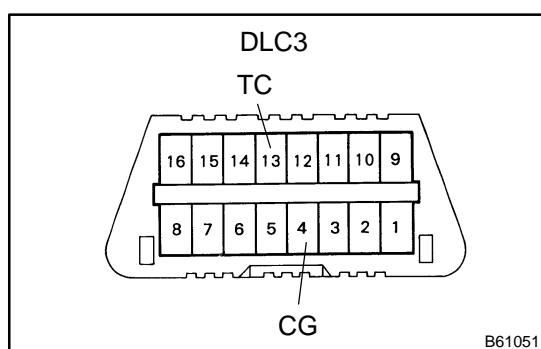
NOTICE:

No abnormality exists in all the following items; door open indicator LED, wire harness, courtesy lamp switch's contact condition, multiplex network body ECU, etc.

- (1) Check that the door open indicator will be on when any of the doors is opened.

HINT:

In case that the indicator will not be on, the following problems are possible reasons; door open indicator LED defective, wire harness short, courtesy light switch's contact condition defective, multiplex network body ECU defective, etc.



- (2) Using SST (diagnosis check wire), make a short-circuit between terminals TC (13) and CG (4) of the DLC3 connector.

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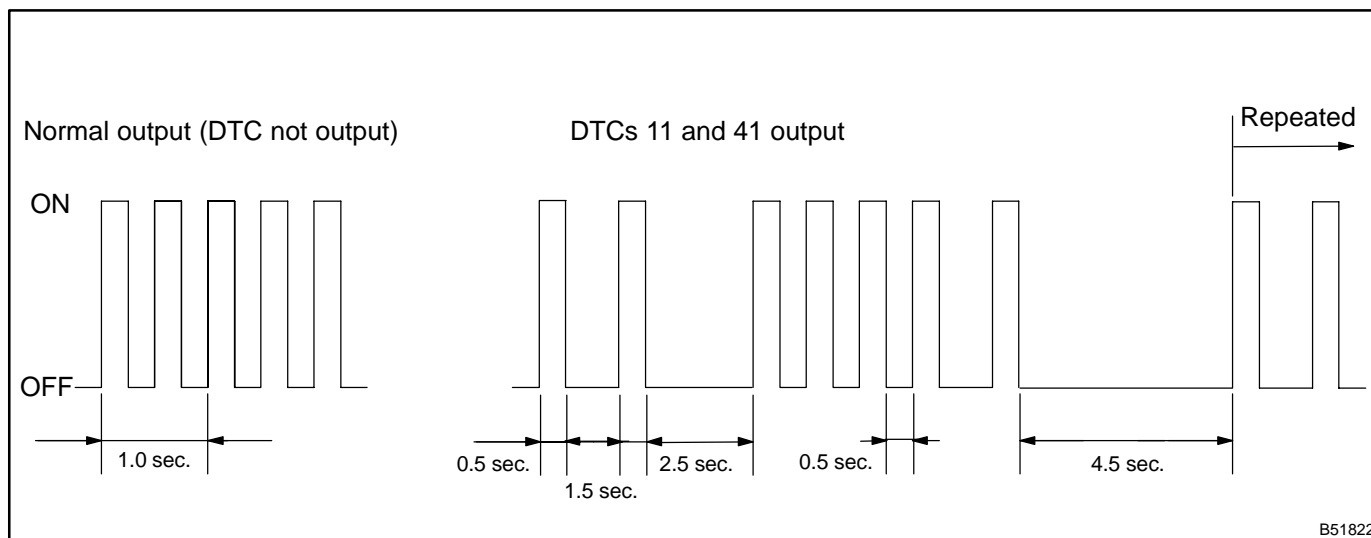
NOTICE:

Do not make a short-circuit in any other positions.

- (3) Turn the ignition (starter) switch ON and read the number of blinks of the door open indicator.

HINT:

When 2 or more codes are output simultaneously, the display will be started from the smallest numbered code.



- (4) When the DTC of the ECU disconnected is displayed, perform an inspection depending on the troubleshooting.

HINT:

- When the communication bus is defective, the door open indicator in the meter will not be on. Therefore no DTC will be output.
- When other DTCs are output, refer to the DTC chart and applicable section.
- When no normal output is output even in the normal condition, problems, such as a short-circuit between terminals TC and CG, meter fuses defective, etc., may exist.
- When the door open indicator is always on, the wire harness might be short-circuited.

4. INSPECT OUTPUT OF DTC WITH HAND-HELD TESTER

- (a) Inspect the battery positive voltage.

Standard: 10 - 14 V

- (b) Inspect the DTC monitor code output.

- (1) Connect the hand-held tester to the DLC3 and turn the ignition (starter) switch ON, then check the DTC.

HINT:

When the DTC check is impossible, check the following items.

- ECU data monitor is possible (multiplex network body ECU is defective).
 - The display shows a communication error (refer to the new diagnostic system and operations when an error occurred). (See page 01-26)
- (2) When the display shows DTCs that the ECU is disconnected and the communication bus is defective, perform an inspection depending on the troubleshooting.

HINT:

When other DTCs are output, refer to the DTC chart and applicable section.