■DIAGNOSIS

1. Diagnosis of CAN

- If a malfunction occurs on the CAN communication line, the ECU that is connected to the CAN communication line stores the DTCs (Diagnostic Trouble Codes) in its memory.
- The DTCs for CAN communication concerning the engine control and THS control can be read by connecting a intelligent tester II (5-digit code).
- The DTCs for CAN communication concerning the brake control system can be read by connecting the SST 09843-18040 to the Tc and CG terminals of the DLC3 connector, and observing the blinking of the ECB, ABS and VSC warning light (2-digit code) or by connecting a intelligent tester II (5-digit code).
- The details of a communication malfunction (such as the location of the malfunction) on the CAN communication line can be checked by connecting a intelligent tester II to the DLC3 connector. For details, see the Prius Repair Manual (Pub. No. RM1076E).
- If a communication malfunction occurs, the ECU's will perform the failsafe processes. For details, see the Prius Repair Manual (Pub. No. RM1076E).

▶ DTC Chart ◀

ECU	DTC	Detection Item
Battery ECU	U0100	Lost Communication with ECM/PCM "A"
	U0293	Lost Communication with Hybrid Vehicle Control System
Engine ECU	U0293	Lost Communication with Hybrid Vehicle Control System
EPS ECU	U0073	Control Module Communication Bus Off
	U0121	Lost Communication with Anti-Lock Brake System (ABS) Control Module
HV ECU	U0100	Lost Communication with ECM/PCM "A"
	U0111	Lost Communication with Battery Energy Control Module "A"
	U0129	Lost Communication with Brake System Control Module
	U0131	Lost Communication with Power Steering Control Module
	U0146	Lost Communication with Gateway "A"
Skid Control ECU	U0073	Control Module Communication Bus Off
	U0123	Lost Communication with Yaw Rate Sensor Module
	U0124	Lost Communication with Lateral Acceleration Sensor Module
	U0126	Lost Communication with Steering Angle Sensor Module
	U0293	Lost Communication with Hybrid Vehicle Control System

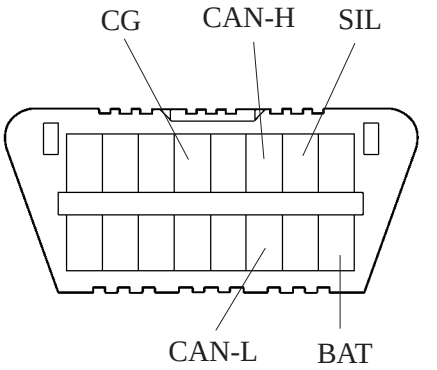
Service Tip

The diagnosis communication for engine control and hybrid system control has been changed from serial communication (ISO9141) to CAN communication. Accordingly, a newly adopted Intelligent Tester II is required for reading DTCs and checking the details of communication failures. For details, see the Prius Repair Manual (Pub. No. RM1076E).

- DLC3 is equipped with CAN-H and CAN-L terminals for CAN diagnosis. It is possible to determine if there is an open or short on the main bus line by measuring the resistance value between these terminals. It is possible to determine if there is a short between the bus line - power supply/ground by measuring the resistance value between terminal CAN-H or CAN-L, and the BAT or CG terminal.
- For details of the CAN diagnosis system, see the Prius Repair Manual (Pub. No. RM1076E).

▶ CAN-H - CAN-L Inspection ◀

Resistance Value	Bus line condition
54 Ω ~ 69 Ω	• Normal • Sub bus line open (except DLC3 bus line, DTC output) • Short between bus line ~ power supply/ground (Short in one area, DTC output)
more than 69 Ω	• Sub bus line open (only DLC3 bus line, No DTC output) • Main bus line open
less than 54 Ω	• Short between bus line



DLC3 241BE110

▶ Inspection for short between bus line - power supply/ground ◀

Inspection Item	Resistance Value	Bus line condition
• CAN-H~BAT • CAN-L~BAT	more than 1MΩ	No bus line malfunction if no DTC output
	less than 1MΩ	Short between bus line ~ power supply/ground
• CAN-H~CG • CAN-L~CG	more than 1kΩ	No bus line malfunction if no DTC output
	less than 1kΩ	Short between bus line ~ power supply/ground

2. Diagnosis of BEAN

If a malfunction occurs in BEAN communication line, gateway ECU stored DTCs in its memory. The DTCs can be read by connecting a intelligent tester II to DLC3. For details, see the Prius Repair Manual (Pub. No. RM1076E).

3. Diagnosis of AVC-LAN

If a malfunction occurs in the AVC-LAN communication line, DTCs (Diagnostic Trouble Codes) are stored in the multi display memory.
DTCs for AVC-LAN can be read on the diagnosis menu display on the multi display. For details, see the Prius Repair Manual (Pub. No. RM1076E).