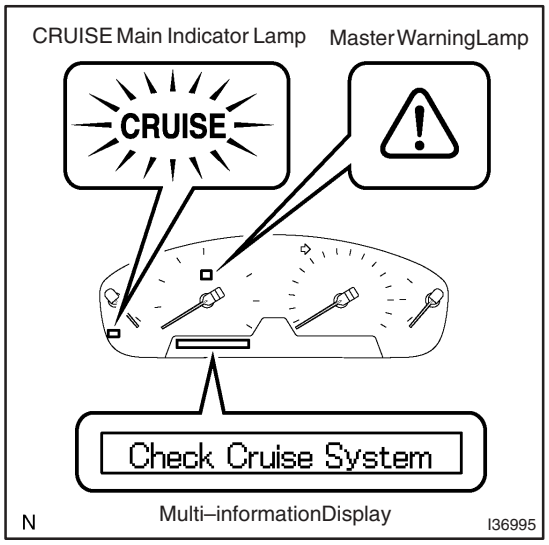
DIAGNOSIS SYSTEM

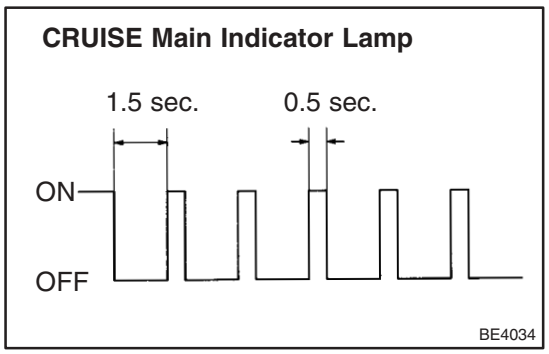


1. DIAGNOSIS FUNCTION

(a) The diagnosis function makes the master warning lamp and the multi–information display turn on, and the CRUISE main indicator lamp blinks as shown in the illustration. When a malfunction occurs in the dynamic radar cruise control system, the DTCs are stored in the ECM.

NOTICE:

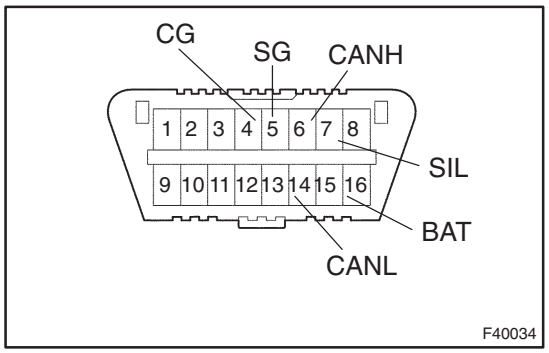
- **The master warning lamp turns off if the system returns to normal condition.**



- **Do not disconnect the cable from the negative (–) battery terminal or remove the EFI NO. 1 fuse. Doing so will erase the data stored in the ECM. If necessary, disconnect the cable or remove the fuse after the inspection is complete.**

2. DESCRIPTION

(a) The ECM controls the dynamic radar cruise control system of the vehicle. The data and DTCs relating to the dynamic radar cruise control system can be read from the DLC3 of the vehicle. If either DTC or CRUISE OK is not displayed in the multi–information display on the combination meter when checking for DTCs, there may be a problem with the combination meter or the CAN communication and multiplex communication systems. Use the intelligent tester II to check and solve the problem.



3. CHECK DLC3

(a) The vehicle's ECM uses ISO 9141–2 (Eure–OBO) and ISO 14230 (M–OBD) communication protocol. The terminal arrangement of the DLC3 complies with ISO 15031–03 and matches the ISO 9141–2 and ISO 14230 format.

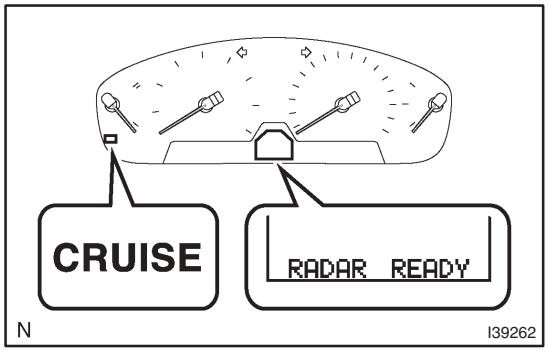
Symbols (Terminal No.)	Terminal Description	Condition	Specified Condition
SIL (7) – SG (5)	Bus "+" line	During transmission	Pulse generation
CG (4) – Body ground	Chassis ground	Always	Below 1 Ω
SG (5) – Body ground	Signal ground	Always	Below 1 Ω
BAT (16) – Body ground	Battery positive	Always	11 to 14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

If the result is not as specified, the DLC3 may have a malfunction. Repair or replace the harness and connector.

HINT:

Connect the cable of the intelligent tester II to the DLC3, turn the ignition switch ON and attempt to use the tester. If the display indicates that a communication error has occurred there is a problem either with the vehicle or with the tester.

- If communication is normal when the tool is connected to another vehicle, inspect the 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.



4. CHECK INDICATOR

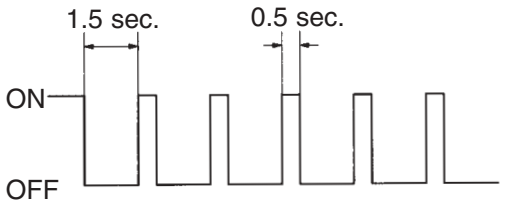
(a) Turn the ignition switch ON.

(b) Check that the CRUISE main indicator lamp and RADAR READY indicator turn on when the cruise control main switch is turned ON, and that the indicator lamp turns off when the main switch is turned OFF.

HINT:

- If the indicator check result shows a problem, proceed to troubleshooting for the combination meter section (see Pub. No. RM1049E, page 05–3691).

CRUISE Main Indicator Lamp



- If a malfunction occurs in the vehicle speed sensors, the stop lamp switch, or other related parts during cruise control driving, the cruise control ECU actuates AUTO CANCEL of the cruise control and blinks the CRUISE main indicator lamp. This indicator lamp informs the driver of the malfunction. At the same time, the malfunction is stored as a diagnostic trouble code.