5. Subaru Select Monitor

A: OPERATION

1. GENERAL DESCRIPTION

The on-board diagnosis function of the cruise control system uses Subaru Select Monitor.

The on-board diagnosis function operates in two categories, which are used depending on the type of problems;

1) Cruise Control Cancel Conditions Diagnosis:

(1) This category of diagnosis requires actual vehicle driving in order to determine the cause, as when cruise speed is cancelled during driving although cruise cancel condition is not entered.

(2) Cruise control memory in ECM stores the cancel condition (Code No.) which occurred during driving. When there are multiple cancel conditions (Code No.), they are shown on the Subaru Select Monitor.

CAUTION:
• The cruise control memory stores not only the cruise "cancel" which occurred (although "cancel" operation is not entered by the driver), but also the "cancel" condition input by the driver.

• The latest content of memory (current code) is cleared when ignition switch is turned to OFF. However, the content of memory for troubleshooting switches related to the system or cruise control, is stored as a diagnostic history (memory code) even after the ignition switch has been turned to OFF.

2) Real-time Diagnosis:

Real-time diagnosis function is used to determine whether or not the input signal system is in good order, according to signal emitted from switches, sensors, etc.

(1) Vehicle cannot be driven at cruise speed when the problem occurs in the cruise control system or relevant circuits.

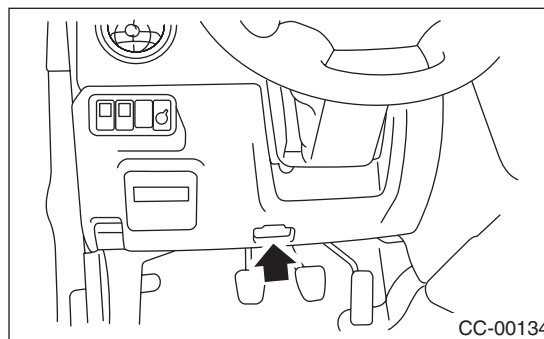(2) Monitor the signal conditions from switches and sensors.

2. CRUISE CONTROL CANCEL CONDITIONS DIAGNOSIS

1) Prepare the Subaru Select Monitor kit.

2) Connect the diagnosis cable to the Subaru Select Monitor.

3) Connect the Subaru Select Monitor to the data link connector.

(1) Data link connector is located in the lower portion of the instrument panel (on the driver's side).

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(2) Connect the diagnosis cable to the data link connector.

4) Start the engine and turn the cruise control main switch to ON.

5) Run the Subaru Select Monitor.

6) Turn the Subaru Select Monitor switch to ON. On the «Main Menu» display screen, select the {2. Each System Check}.

On the system selection display screen, select the {Engine Control System}. Select the [OK] after the information of engine type is displayed.

7) Drive vehicle at 40 km/h (25 MPH) or more and set the cruise control.

CAUTION:
• When performing diagnosis, observe the legal speed limit on the road.

• DTC will also appear when cruise control is cancelled by the driver's operation. Do not confuse them.

• Make sure an assistant is present in order to support diagnosis while driving. Have the assistant operate the select monitor.

8) If the set cruise speed is canceled by itself (without any cancel operations) or if the cruise control cannot be set by performing the set operation, a DTC will appear on select monitor display when {Check Cancel Code} is selected on the engine malfunction diagnosis display screen.

NOTE:
The DTC has a {Current code} and {Memory code}. {Current code} displays the latest code that occurred in this check drive, and {Memory code} displays the code recorded in the previous driving condition. Also, DTC's for diagnosis of switches relating to the system and cruise control are listed in the {Memory code}.

9) Clear the engine DTC memory. <Ref. to EN(H4SO)(diag)-63, OPERATION, Clear Memory Mode.> <Ref. to EN(H4DOTC)(diag)-54, OPERATION, Clear Memory Mode.>
The DTC of system and cruise control switches are cleared by a memory clear operation for the engine.

NOTE:
DTC will be cleared by turning ignition switch to OFF.

3. REAL-TIME DIAGNOSIS

1) Connect the Subaru Select Monitor.
2) Turn the ignition switch and cruise control main switch to ON.
3) Run the Subaru Select Monitor.
4) Turn the Subaru Select Monitor switch to ON. On the «Main Menu» display screen, select the {2. Each System Check}.
5) On the «System Selection Menu» display screen, select the {Engine Control System} and select the [OK].
6) Select the [OK] after the information of engine type has been displayed.
7) On the «Engine Diagnosis» screen, select the {Current Data Display/Save}.
8) Make sure that normal indication is displayed when controls are operated as indicated below:
• Depress and release the brake pedal. (Stop light switch and brake switch are turned to ON.)
• Turn the «SET/COAST» switch to ON.
• Turn the «RESUME/ACCEL» switch to ON.
• Turn the «CANCEL» switch to ON. (The «SET/COAST» switch and «RESUME/ACCEL» switch are turned to ON at the same time.)
• Depress or release the clutch pedal.
• Place the shift lever in any position other than neutral.

NOTE:
• For details concerning the operation procedure, refer to the «PC application for Subaru Select Monitor».
• For the DTC, refer to the List of Diagnostic Trouble Code (DTC). <Ref. to CC(ETC)(diag)-13, List of Diagnostic Trouble Code (DTC).>