

- **SUPPLEMENTAL RESTRAINT SYSTEM “AIRBAG”**

Airbag system wiring harness is routed near the cruise control sub switch.

**CAUTION:**

- All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuit.
- Be careful not to damage Airbag system wiring harness when servicing the cruise control sub switch.

## 1. On-board Diagnosis System

### 1. GENERAL

The on-board diagnosis function of the cruise control system uses an external select monitor. The on-board diagnosis function operates in two categories — the cruise cancel conditions diagnosis and real-time diagnosis, which are used depending on the type of problems.

**Applicable cartridge No.: 498349300**

- Cruise cancel conditions diagnosis

This category of diagnosis requires actual vehicle driving in order to determine the cause, (as when cruise speed is cancelled during driving although no cruise cancel condition is not entered).



Cruise control module memory stores the cancel condition (Code No.) which occurred during driving. When there are plural cancel conditions (Code No.), they are shown in order, for 2 seconds per Code No., on the 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 content of memory is cleared when ignition switch or cruise main switch is turned OFF.

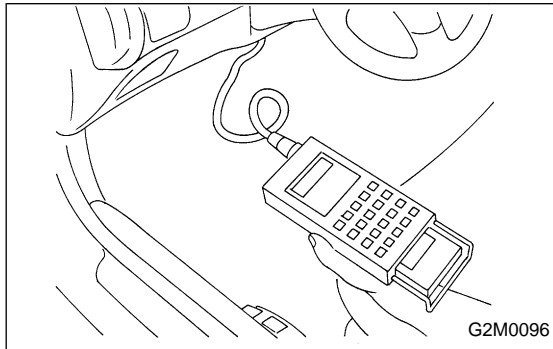
- Real-time diagnosis

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

Vehicle cannot be driven at cruise speed because problems occurs in the cruise control system or its associated circuits.



Dummy signals are manually entered from sub switch, etc.



**2. ON-BOARD DIAGNOSIS PROCEDURES USING SELECT MONITOR**

- 1) Connect select monitor to data link connector.
- 2) Turn ignition switch ON, then turn cruise main switch ON.
- 3) Turn select monitor's power ON. All LED's will come on. Select monitor display will read, after several seconds.

**NOTE:**

If cruise main switch is OFF, error 1 will appear. Turn cruise main switch ON and repeat steps 2.

- 4) Press "F", "B", "0", and "ENT" in that order, and enter the desired designated code ("FB0", for example), or press scroll key to select the code.

**3. DIAGNOSIS OF CRUISE CANCEL CONDITIONS**

- 1) Connect select monitor.
- 2) Turn ignition and cruise main switch ON, and set select monitor in "FBO" mode.
- 3) Start engine and drive vehicle at least 40 km/h (25 MPH) with cruise speed set.
- 4) If cruise speed is canceled itself (without doing any cancel operations), a trouble code will appear on select monitor display.

**CAUTION:**

- A trouble code will also appear when cruise cancel is effected by driver. Do not confuse.
- Have a co-worker ride in vehicle to assist in diagnosis during driving.

Function code indication		Item to measure		Contents of diagnosis
Code No.	Abbreviation	Trouble code	Abbreviation	
FBO	CANCEL	10	OK	Normal
		11	BRAKE/STOP	Input signals from brake switch "OFF", stop light switch "ON" (Brake pedal is depressed.)
		12	CLU or N	Input signals from clutch switch "OFF", inhibitor switch "N" (Clutch pedal is depressed, or select lever is set to "N".)
		13	SPEED LIM	Low-speed control limiter
		14	SET+RESUME	Input signal from cancel switch "ON"
		21	VAC VALVE	Faulty vacuum valve or valve drive system
		22	VENT2 VALVE	Faulty vent 2 valve or valve drive system
		23	VENT1 VALVE	Faulty vent 1 valve or valve drive system
		24	SP SENSOR	Faulty vehicle speed sensor
		25	CONTROL UNIT	Faulty control module

- 5) Trouble code will be cleared by turning ignition or cruise main switch OFF.

**4. REAL-TIME DIAGNOSIS**

- 1) Connect select monitor.
- 2) Turn ignition switch and cruise main switch ON.
- 3) Set select monitor in FA0 mode.
- 4) Ensure that normal indication is displayed when controls are operated as indicated below:
  - When SET/COAST switch is pressed.
  - WHEN RESUME/ACCEL switch is pressed.
  - When brake pedal is depressed. (Stop and brake switch turns ON.)
  - When clutch pedal is depressed (MT model).
  - When select lever is set to “N” (AT model).

Function code indication		Item to measure	Content of items to be monitored
Code No.	Abbreviation		
FA0	ST	Stop light switch	LED No.1 comes on when switch is turned ON. (Brake pedal is depressed.)
	BR	Brake switch	LED No. 2 comes on when brake pedal is depressed.
	SE	SET/COAST switch	LED No. 3 comes on when switch is turned ON.
	RE	RESUME/ACCEL switch	LED No. 4 comes on when switch is turned ON.
	IH	Clutch switch/inhibitor switch	<ul style="list-style-type: none"> <li>● LED No. 5 comes on when clutch pedal is depressed (MT model).</li> <li>● LED No. 5 comes on when select lever is set to “N” (AT model).</li> </ul>

**NOTE:**  
LED's come on shortly after switches are pressed.

**5. DATA SHOWN ON SELECT MONITOR DISPLAY DISPLAY**

Indication of function code		Item to measure	Contents of items to be monitored
Code No.	Abbreviation		
F 00	CRUISE CONTROL	Cruise control module identification	Reads ROM ID number of cruise control module to display a possible communication state.
F 01	VSP (MPH)	Vehicle speed (MPH)	Displays vehicle speed data (in miles/h) determined by cruise control module in relation to signal emitted from vehicle speed sensor 2 in combination meter.
F 02	VSP (km/h)	Vehicle speed (km/h)	Displays vehicle speed in km/h.