

### 8. Diagnostic Procedure with Cancel Code

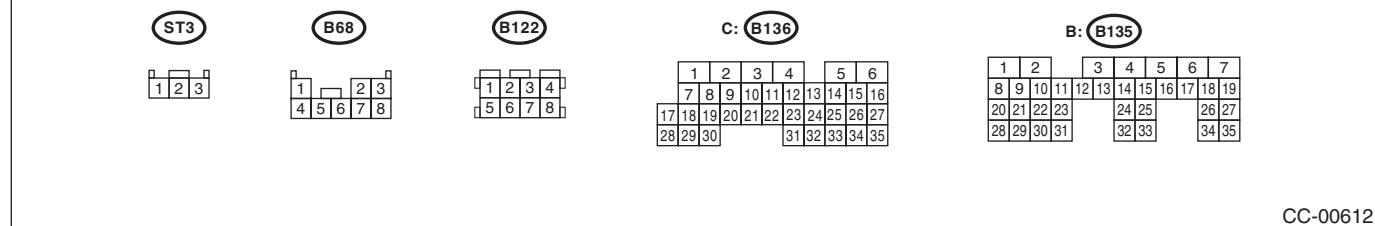
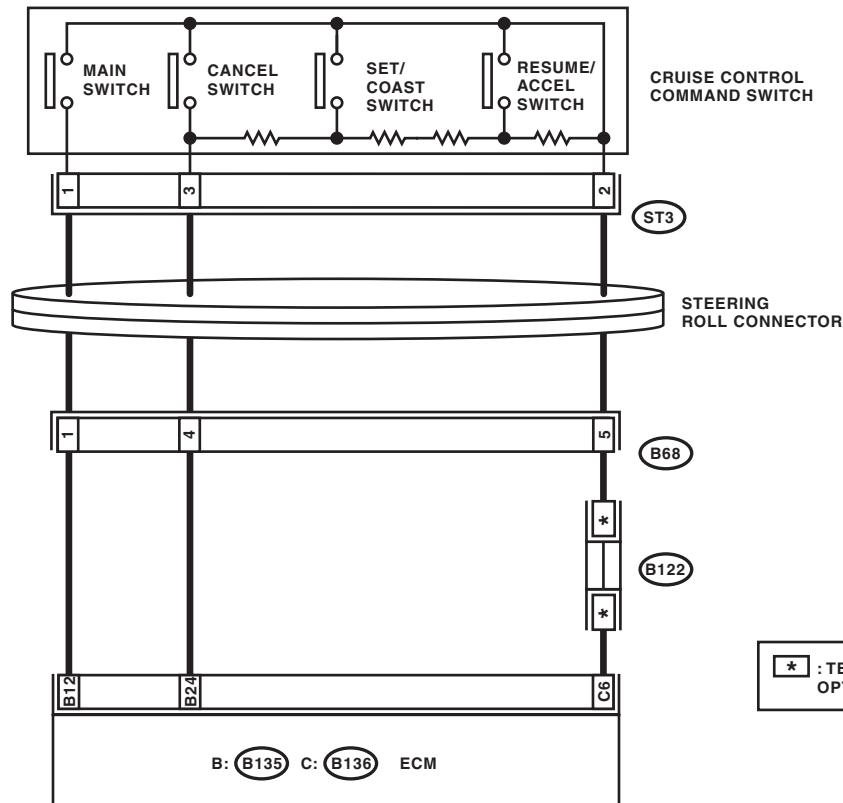
#### A: 11

Detected when main switch is pressed or malfunction related to the main switch occurs.

##### TROUBLE SYMPTOM:

- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

##### WIRING DIAGRAM:



CC-00612

# Diagnostic Procedure with Cancel Code

## CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 <b>CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.</b>  1) Remove the driver's airbag module. <Ref. to AB-14, REMOVAL, Driver's Airbag Module.> 2) Disconnect the harness connector of cruise control command switch. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground.  <i>Connector &amp; terminal</i> (ST3) No. 1 (+) — Chassis ground (-): (ST3) No. 3 (+) — Chassis ground (-):	Is the voltage 5 V or more?	Go to step 2.	Check the harness between cruise control command switch and ECM, and the steering roll connector for open or short circuit, or for poor contact.
2 <b>CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.</b>  1) Turn the ignition switch to OFF. 2) Remove the cruise control command switch. <Ref. to CC-5, REMOVAL, Cruise Control Command Switch.> 3) Measure the resistance between harness connector terminal and chassis ground.  <i>Connector terminal</i> (ST3) No. 2 — Chassis ground:	Is the resistance 10 $\Omega$ or less?	Go to step 3.	Check for open between cruise control command switch and ECM and chassis ground, and check the ECM.
3 <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b>  Measure the resistance between switch terminals when the cruise control command switch is not being pressed.  <i>Terminals</i> No. 2 — No. 3:	Is the resistance approx. 4 k $\Omega$ ?	Go to step 4.	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>
4 <b>CHECK CANCEL SWITCH.</b>  1) Turn the ignition switch to OFF. 2) Remove the cruise control command switch. <Ref. to CC-5, REMOVAL, Cruise Control Command Switch.> 3) Measure the resistance between switch terminals when the CANCEL switch is pressed.  <i>Terminals</i> No. 2 — No. 3:	Is the resistance approx. less than 1 $\Omega$ when the CANCEL switch is pressed?	Go to step 5.	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>
5 <b>CHECK SET/COAST SWITCH.</b>  Measure the resistance between switch terminals when the SET/COAST switch is pressed.  <i>Terminals</i> No. 2 — No. 3:	Is the resistance approx. 250 $\Omega$ when SET/COAST switch is pressed?	Go to step 6.	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>
6 <b>CHECK RESUME/ACCEL SWITCH CIRCUIT.</b>  Measure the resistance between switch terminals when the RESUME/ACCEL switch is pressed.  <i>Terminals</i> No. 2 — No. 3:	Is the resistance approx. 1,500 $\Omega$ when RESUME/ACCEL switch is pressed?	Replace the ECM. <Ref. to FU(H6DO)-38, Engine Control Module (ECM).>	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>

# Diagnostic Procedure with Cancel Code

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

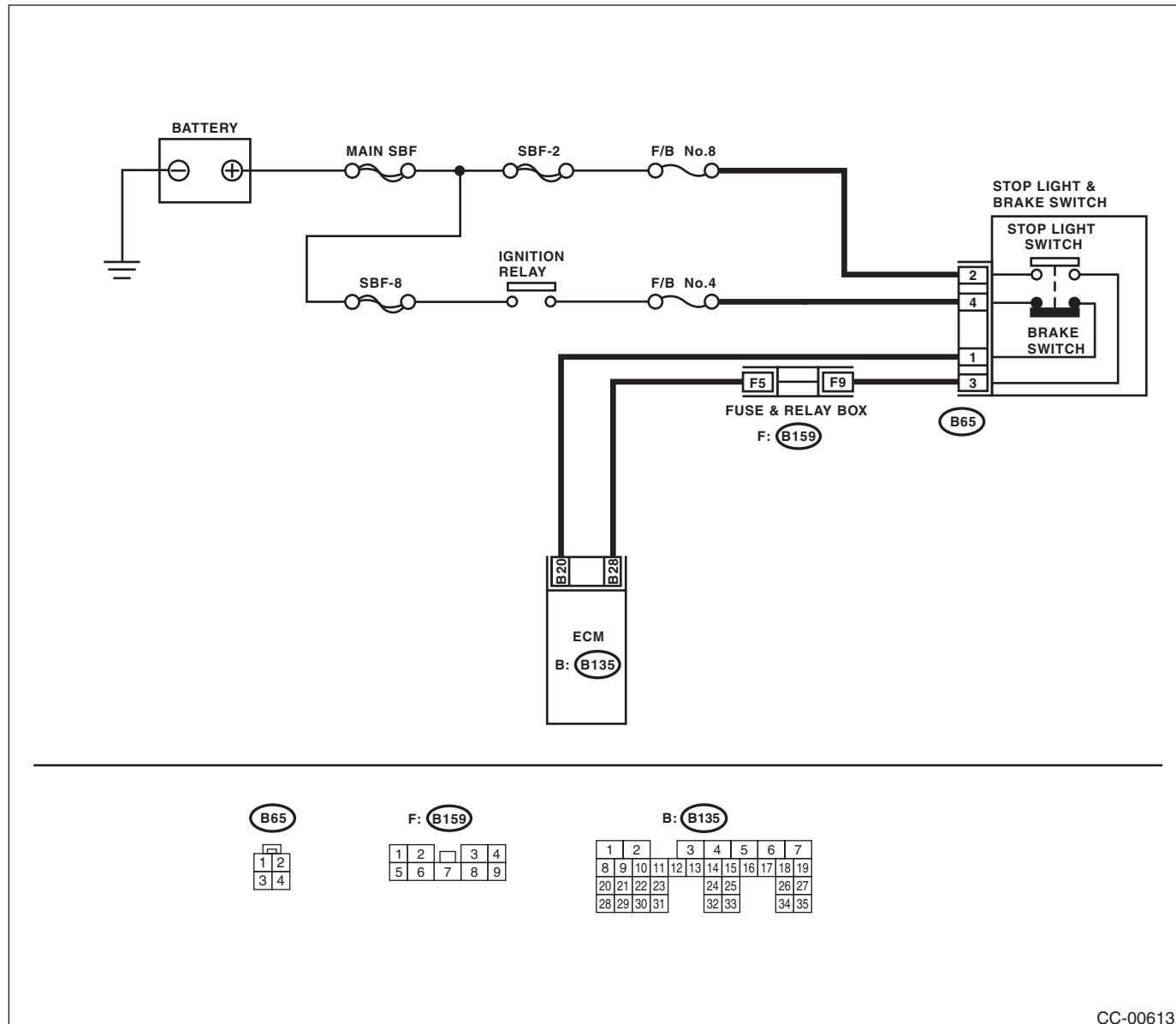
## B: 12

The DTC is detected when the brake pedal is pressed or problem relating to stop light & brake switch occurs.

### TROUBLE SYMPTOM:

- Cruise control cannot be set.
- Cruise control cannot be released.

### WIRING DIAGRAM:



# Diagnostic Procedure with Cancel Code

## CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 <b>CHECK STOP LIGHT SWITCH &amp; BRAKE SWITCH CIRCUIT.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the stop light switch & brake switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. <i>Connector &amp; terminal (B65) No. 2 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Go to step 2.	<ul style="list-style-type: none"> <li>• Check fuse No. 8 (in fuse &amp; relay box).</li> <li>• Check for open or short in the harness between stop light &amp; brake switch and fuse &amp; relay box.</li> </ul>
2 <b>CHECK STOP LIGHT SWITCH &amp; BRAKE SWITCH CIRCUIT.</b> Measure the voltage between harness connector terminal and chassis ground. <i>Connector &amp; terminal (B65) No. 4 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Go to step 3.	<ul style="list-style-type: none"> <li>• Check fuse No. 4 (in fuse &amp; relay box).</li> <li>• Check for open or short in the harness between stop light &amp; brake switch and fuse &amp; relay box.</li> </ul>
3 <b>CHECK STOP LIGHT SWITCH &amp; BRAKE SWITCH CIRCUIT.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of ECM. 3) Measure the resistance between ECM harness connector terminal and stop light switch & brake switch harness connector terminal. <i>Connector &amp; terminal (B135) No. 28 — (B65) No. 3: (B135) No. 20 — (B65) No. 1:</i>	Is the resistance 10 Ω or less?	Go to step 4.	Repair the harness.
4 <b>CHECK STOP LIGHT SWITCH &amp; BRAKE SWITCH CIRCUIT.</b> Remove and check the stop light switch & brake switch. <Ref. to CC-7, Stop Light & Brake Switch.>	Is the stop light switch & brake switch OK?	Replace the ECM. <Ref. to FU(H6DO)-38, Engine Control Module (ECM).>	Replace the stop-light switch & brake switch.

# Diagnostic Procedure with Cancel Code

## CRUISE CONTROL SYSTEM (DIAGNOSTICS)

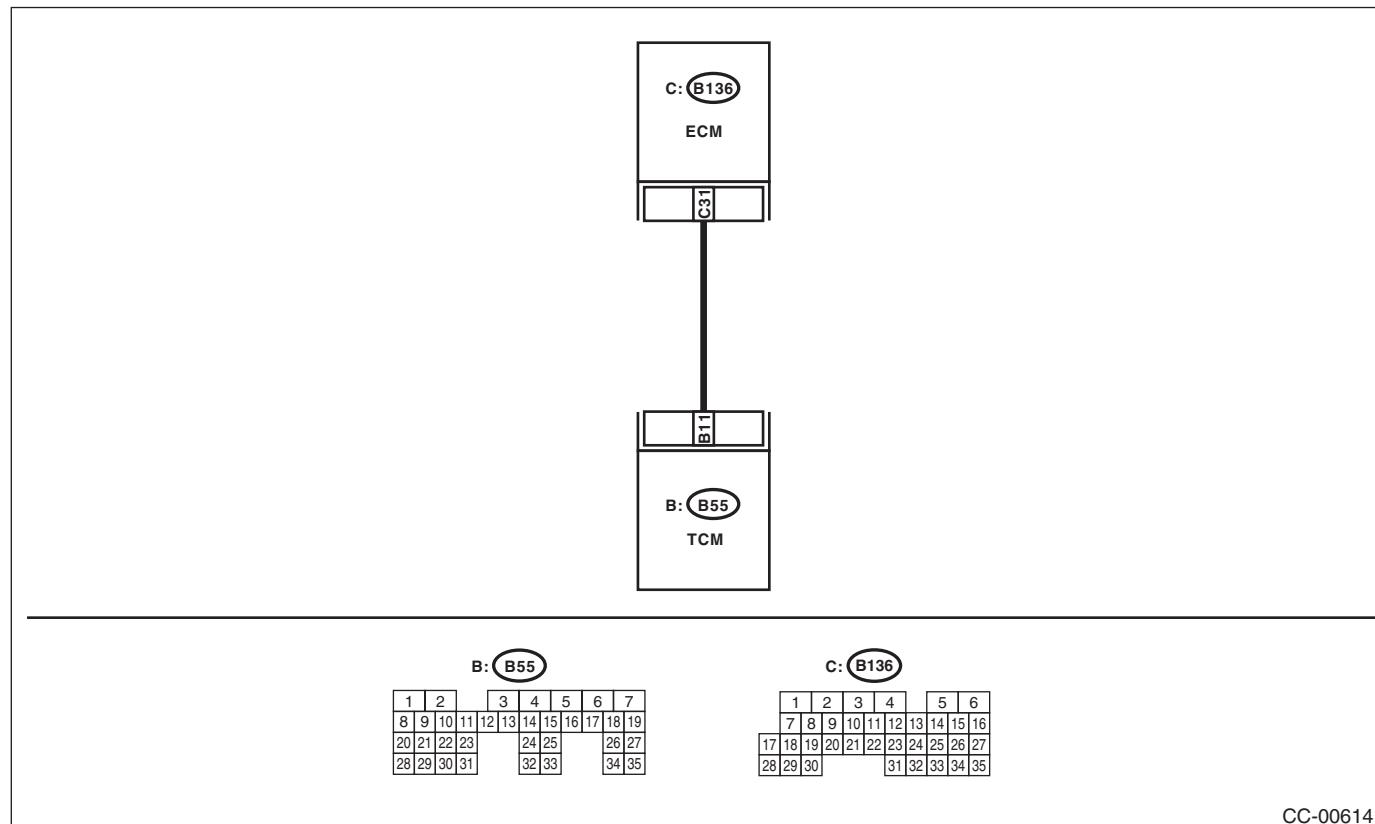
### C: 14

The DTC is detected when the select lever is placed in neutral position or problem relating to the neutral position switch occurs.

#### TROUBLE SYMPTOM:

Cruise control cannot be set.

#### WIRING DIAGRAM:



# Diagnostic Procedure with Cancel Code

## CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>1 CHECK NEUTRAL POSITION SWITCH.</b> 1) Connect the Subaru Select Monitor to data link connector. 2) Turn the ignition switch to ON and run the Subaru Select Monitor. 3) Select {Engine Control System} from the main menu. 4) Then select {Current Data Display & Save}. 5) Check the neutral position switch signal by shifting the select lever to "P" or "N" range.	Is Subaru Select Monitor ON when select lever is shifted into "P" or "N" range? Is Subaru Select Monitor OFF when select lever is shifted to a range other than the "P" or "N" range?	Replace the ECM. <Ref. to FU(H6DO)-38, Engine Control Module (ECM).>	Go to step 2.
<b>2 CHECK TCM OUTPUT VOLTAGE.</b> 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM harness connector terminal and chassis ground.  <i>Connector &amp; terminal (B55) No. 11 (+) — Chassis ground (-):</i>	Is voltage 10 V or more when select lever is shifted to a range other than "P" or "N" range? Is voltage less than 1 V when select lever is shifted into "P" or "N" range?	Go to step 3.	Check the TCM. <Ref. to 5AT(diag)-2, Basic Diagnostic Procedure.>
<b>3 CHECK HARNESS BETWEEN TCM AND ECM.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector from TCM and ECM. 3) Measure the resistance between TCM harness connector terminal and ECM harness connector terminal.  <i>Connector &amp; terminal (B136) No. 31 — (B55) No. 11:</i>	Is the resistance 10 Ω or less?	Replace the ECM. <Ref. to FU(H6DO)-38, Engine Control Module (ECM).>	Repair the wiring harness.

## D: 15

This DTC is detected when the cancel switch is pressed or problem relating to the main switch occurs.

Refer to DTC 11 for diagnostic procedure.

<Ref. to CC(diag)-13, 11, Diagnostic Procedure with Cancel Code.>

## Diagnostic Procedure with Cancel Code

### CRUISE CONTROL SYSTEM (DIAGNOSTICS)

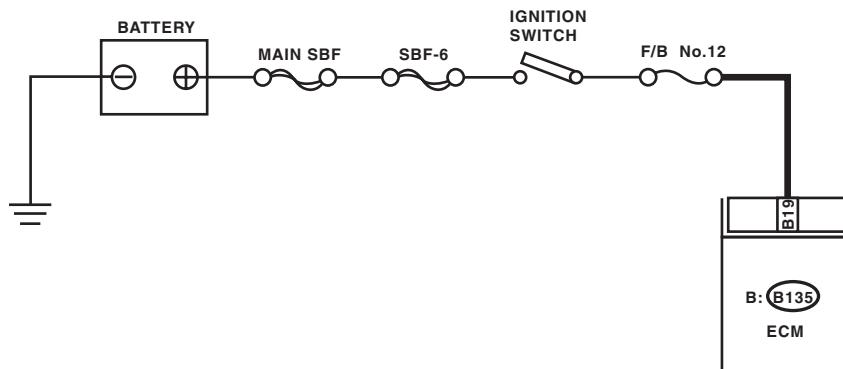
#### E: 16

This DTC is detected when the ignition switch is turned OFF or problem relating to the ignition switch occurs.

##### TROUBLE SYMPTOM:

Cruise control cannot be set.

##### WIRING DIAGRAM:



B: B135

1	2	3	4	5	6	7
8	9	10	11	12	13	14
20	21	22	23	24	25	26
28	29	30	31	32	33	34

CC-00615

Step	Check	Yes	No
1 <b>CHECK IGNITION SWITCH CIRCUIT.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the ECM harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground.  <i>Connector &amp; terminal (B135) No. 19 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Check for poor contact of the ECM connector.	<ul style="list-style-type: none"><li>• Check fuse No. 12 (in fuse &amp; relay box).</li><li>• Check the harness for open or short circuit between ignition switch and ECM.</li></ul>

#### F: 21

Cruise control command switch malfunction is detected.

Refer to DTC 11 for diagnostic procedure.

<Ref. to CC(diag)-13, 11, Diagnostic Procedure with Cancel Code.>

# Diagnostic Procedure with Cancel Code

## CRUISE CONTROL SYSTEM (DIAGNOSTICS)

### G: 22

Malfunction related to vehicle speed sensor is detected.

#### DIAGNOSIS:

Open or shorted circuit in vehicle speed sensor system.

#### TROUBLE SYMPTOM:

Cruise control cannot be set. (Cancelled immediately.)

Step	Check	Yes	No
<b>1</b> <b>CHECK ABS WARNING LIGHT.</b> 1) Turn the ignition switch to ON. 2) After the initial operation of combination meter is completed, check if VDC warning light continues to illuminate.	Does the VDC warning light continue to illuminate?	Check the VDCCM. <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>	Go to step <b>2</b> .
<b>2</b> <b>CHECK DTC OF LAN COMMUNICATION CIRCUIT.</b> Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC of LAN system displayed?	Check the LAN communication circuit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Replace the ECM. <Ref. to FU(H6DO)-38, Engine Control Module (ECM).>

### H: 24

Malfunction in cruise control-related switch is detected.

Refer to DTC 11 for diagnostic procedure.

<Ref. to CC(diag)-13, 11, Diagnostic Procedure with Cancel Code.>

### I: 25

Malfunction of brake input circuit in ECM is detected.

Refer to the Engine Diagnostic Procedure for diagnostic procedure.

<Ref. to EN(H6DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

### J: 31

Malfunction of the engine speed signal is detected.

Abnormal increase of engine speed is detected.

Gear is placed in 1st or Reverse position.

After driving at the 2nd gear position or more, perform the cruise setting again. If the cancel code is not detected, it is normal.

### K: 32

This DTC is detected out of vehicle speed range.

Refer to DTC 22 for diagnostic procedure.

<Ref. to CC(diag)-20, 22, Diagnostic Procedure with Cancel Code.>

### L: 34

Malfunction of acceleration opening duration is detected.

The vehicle has been driven at a speed higher than set speed for a long time (approximately 10 minutes) during cruise driving.

Cancel code is detected when driving for a long period of time at higher speed than appropriate cruise speed by operating accelerator pedal.

Cancel the cruise setting. If the DTC is not detected again, it is normal.

### M: 35

Detected when it is impossible to perform the vehicle speed feedback.

Set vehicle speed cannot be kept for some reasons (steep uphill, unreleased parking brake, etc.) during cruise driving.

Cancel code is detected when driving condition is not suitable for cruise control.

Perform cruise set operation again after clearing the possible cause.

### **N: 41**

VDC/TCS has operated.

Vehicle dynamics control (VDC) or TCS is operated during cruise driving or cruise setting.

<Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

### **O: 43**

Malfunction of ABS/VDC is detected.

VDC malfunction is detected during cruise driving or cruise setting.

<Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

### **P: 44**

Body integrated unit malfunction is detected.

Body integrated unit system malfunction is detected during cruise driving or cruise setting.

<Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

### **Q: 45**

Malfunction of the combination meter is detected.

Combination meter malfunction is detected during cruise driving or cruise setting.

<Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

### **R: 61**

Malfunction in the stop light & brake switch is detected.

Refer to DTC 12 for diagnostic procedure.

<Ref. to CC(diag)-15, 12, Diagnostic Procedure with Cancel Code.>

### **S: 62**

Neutral position switch malfunction is detected.

Refer to DTC 14 for diagnostic procedure.

<Ref. to CC(diag)-17, 14, Diagnostic Procedure with Cancel Code.>

### **T: 63**

Malfunction of vehicle speed signal variation is detected.

Refer to DTC 22 for diagnostic procedure.

<Ref. to CC(diag)-20, 22, Diagnostic Procedure with Cancel Code.>

### **U: 64**

Malfunction related to engine is detected.

Refer to the Engine Diagnostic Procedure for diagnostic procedure.

<Ref. to EN(H6DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

### **V: 65**

Cruise control command switch malfunction is detected.

While the command switch is pressed ON for a long time (approximately two minutes), stuck ON open circuit is detected.

Refer to DTC 11 for diagnostic procedure.

<Ref. to CC(diag)-13, 11, Diagnostic Procedure with Cancel Code.>

### **W: 66**

Cruise control calculation malfunction is detected.

Refer to the Engine Diagnostic Procedure for diagnostic procedure.

<Ref. to EN(H6DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

## **Diagnostic Procedure with Cancel Code**

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

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# IMMOBILIZER (DIAGNOSTICS)

## *IM(diag)*

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