

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

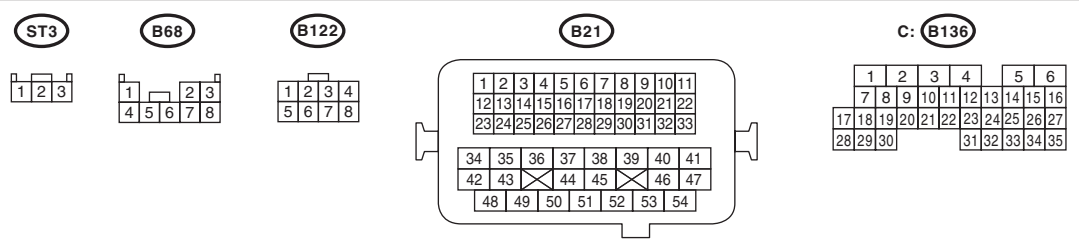
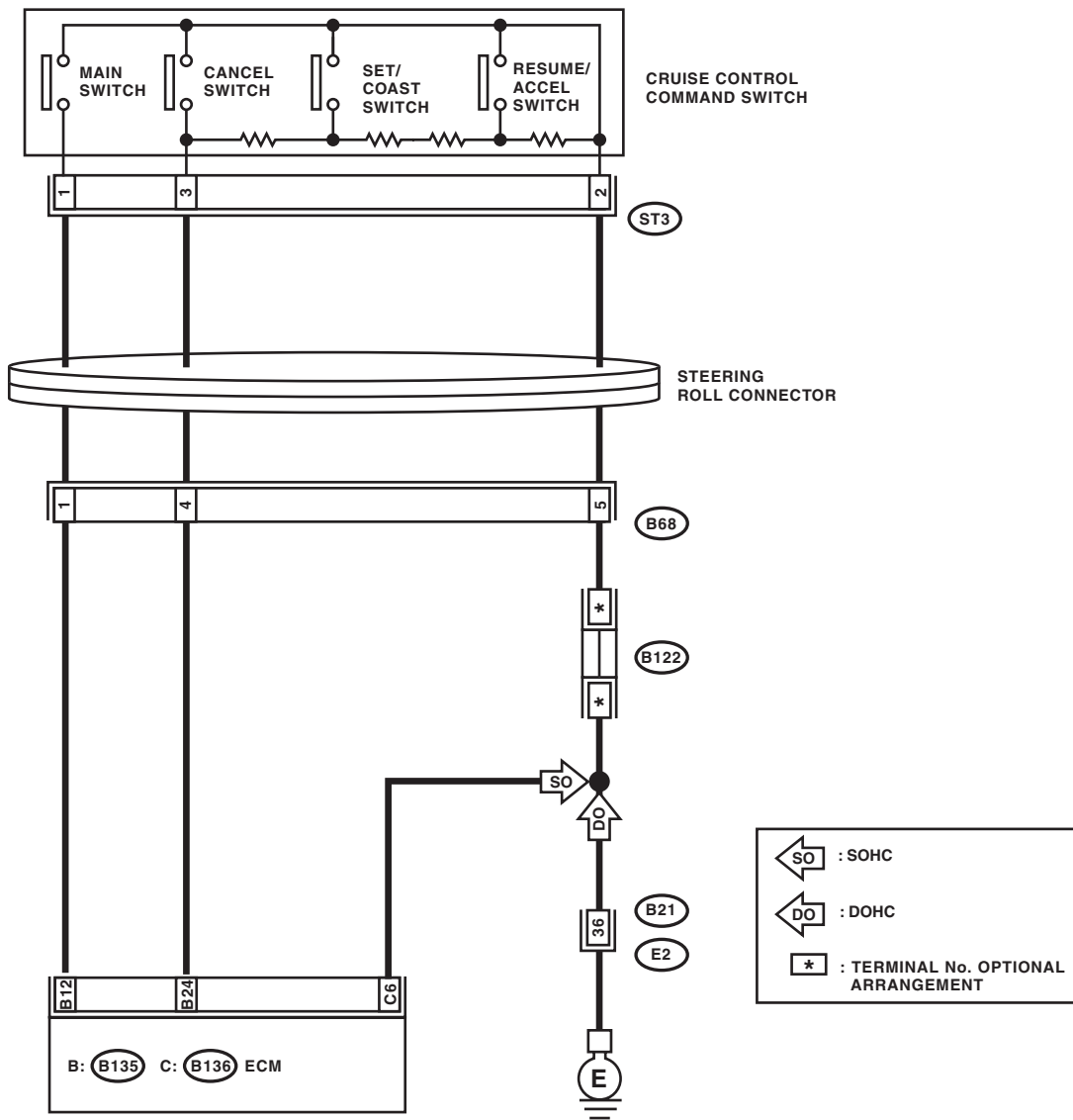
8. Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC 11, 15, 21 AND 24 CRUISE CONTROL COMMAND SWITCH

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



CC-00399

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p>1 CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.</p> <p>1) Remove the driver's airbag module. <Ref. to AB-17, REMOVAL, Driver's Airbag Module.></p> <p>2) Disconnect the harness connector of cruise control command switch.</p> <p>3) Turn the ignition switch to ON.</p> <p>4) Measure the voltage between harness connector terminal and chassis ground.</p> <p>Connector & terminal (ST3) No. 1 (+) — Chassis ground (-): (ST3) No. 3 (+) — Chassis ground (-):</p>	Is the voltage more than 5 V?	Go to step 2.	Check the harness between cruise control command switch and ECM for open or shorted circuit.
<p>2 CHECK CANCEL SWITCH.</p> <p>1) Turn the ignition switch to OFF.</p> <p>2) Remove the cruise control command switch. <Ref. to CC-5, REMOVAL, Cruise Control Command Switch.></p> <p>3) Measure the resistance between switch terminals when the CANCEL switch is pressed and not pressed.</p> <p>Terminals No. 2 — No. 3:</p>	Is the resistance approx. less than 1 Ω when the CANCEL switch is pressed? Is the resistance approx. 4 k Ω when the CANCEL switch is not pressed?	Go to step 3.	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>
<p>3 CHECK SET/COAST SWITCH.</p> <p>Measure the resistance between switch terminals when SET/COAST switch is pressed and not pressed.</p> <p>Terminals No. 2 — No. 3:</p>	Is the resistance approx. 250 Ω when SET/COAST switch is pressed? Is the resistance approx. 4 k Ω when SET/COAST switch is not pressed?	Go to step 4.	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>
<p>4 CHECK RESUME/ACCEL SWITCH CIRCUIT.</p> <p>Measure the resistance between switch terminals when RESUME/ACCEL switch is pressed and not pressed.</p> <p>Terminals No. 2 — No. 3:</p>	Is the resistance approx. 1,500 Ω when RESUME/ACCEL switch is pressed? Is the resistance approx. 4 k Ω when RESUME/ACCEL switch is not pressed?	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>	Replace the cruise control command switch. <Ref. to CC-5, Cruise Control Command Switch.>

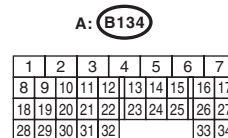
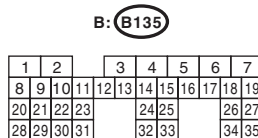
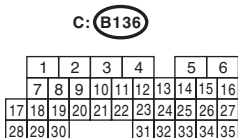
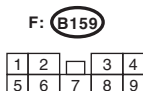
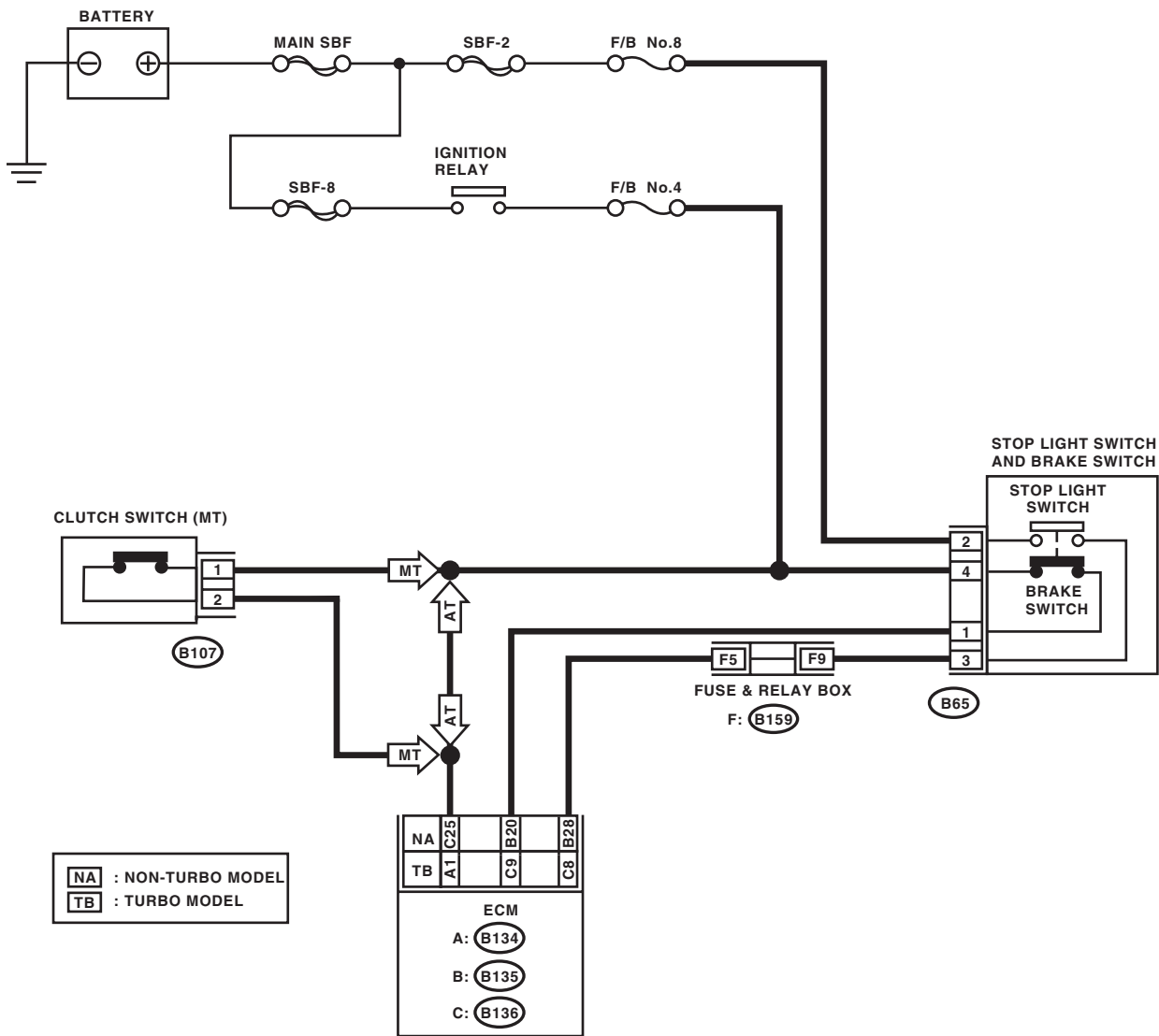
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

B: DTC 12 AND 25 STOP LIGHT SWITCH AND BRAKE SWITCH

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK STOP LIGHT SWITCH AND BRAKE SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the stop light switch and brake switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. Connector & terminal (B65) No. 2 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 2.	<ul style="list-style-type: none"> • Check fuse No. 8 (in fuse & relay box). • Check for open or short in the harness between stop light/brake switch and fuse & relay box.
2 CHECK STOP LIGHT SWITCH AND BRAKE SWITCH CIRCUIT. Measure the voltage between harness connector terminal and chassis ground. Connector & terminal (B65) No. 4 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 3.	<ul style="list-style-type: none"> • Check fuse No. 4 (in fuse & relay box). • Check for open or short in the harness between stop light/brake switch and fuse & relay box.
3 CHECK STOP LIGHT SWITCH AND BRAKE SWITCH CIRCUIT. 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 and brake switch harness connector terminal. Connector & terminal (B136) No. 8 — (B65) No. 3: (B136) No. 9 — (B65) No. 1:	Is the resistance less than 10 Ω ?	Go to step 4.	Repair the harness.
4 CHECK STOP LIGHT SWITCH AND BRAKE SWITCH. Remove and check the stop light switch and brake switch. <Ref. to CC-6, Stop Light & Brake Switch.>	Are the stop light switch and brake switch OK?	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>	Replace the stop light switch and brake switch.

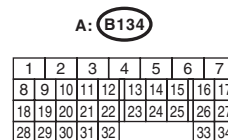
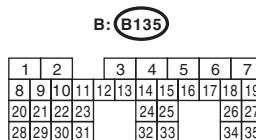
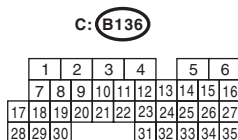
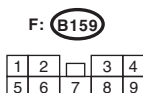
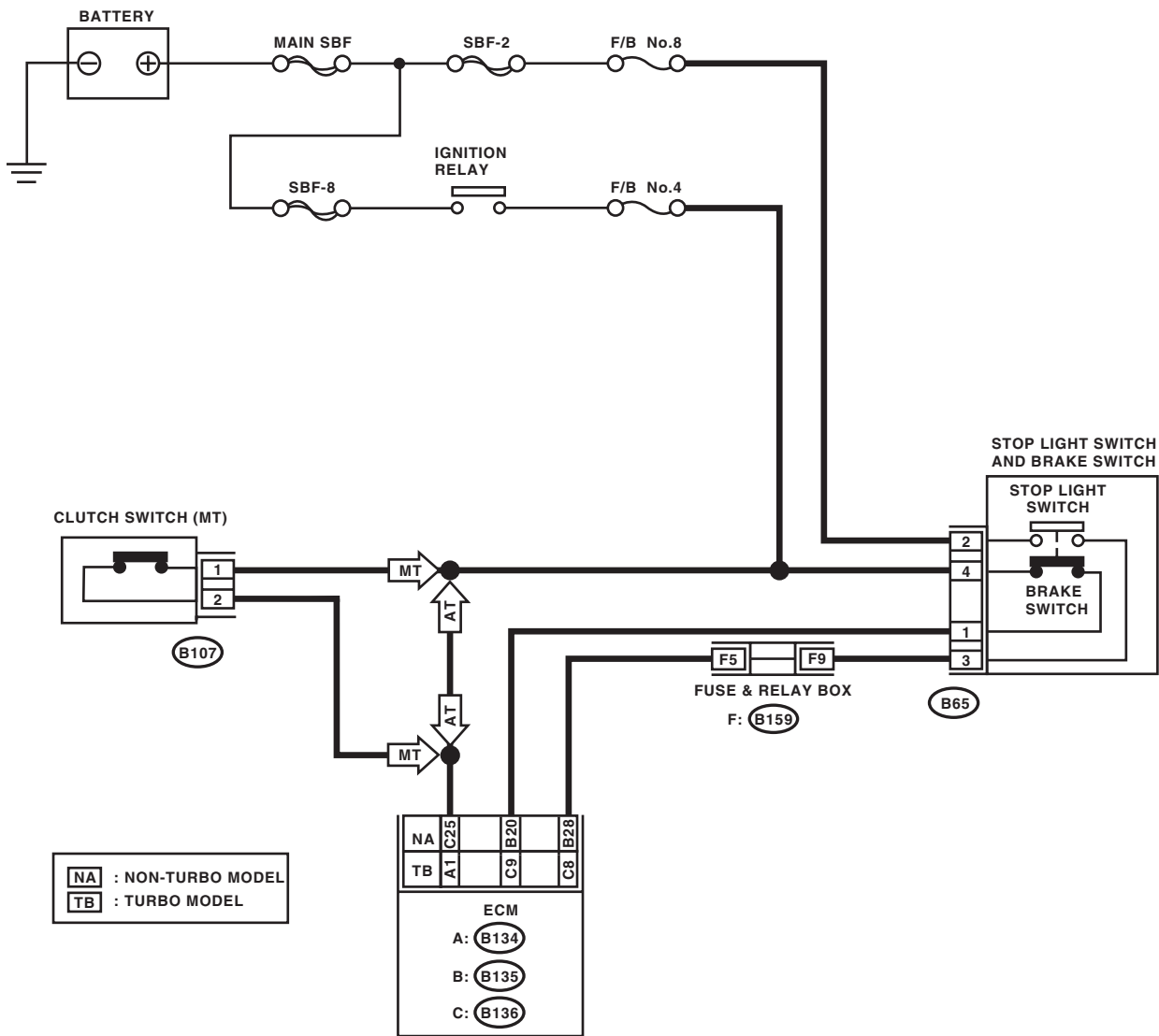
Diagnostic Procedure with Diagnostic Trouble Code (DTC)

C: DTC 13 CLUTCH SWITCH

TROUBLE SYMPTOM:

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

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK CLUTCH SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the clutch switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. Connector & terminal (B107) No. 1 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Go to step 2.	<ul style="list-style-type: none"> • Check fuse No. 4 (in fuse & relay box). • Check open or shorted circuit of harness between clutch switch and fuse & relay box.
2 CHECK CLUTCH SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of ECM. 3) Measure the resistance between clutch switch harness connector terminal and ECM harness connector terminal. Connector & terminal Non-turbo model: (B107) No. 2 — (B136) No. 25: Turbo model: (B107) No. 2 — (B134) No. 1:	Is the resistance less than 10 Ω ?	Go to step 3.	Repair the harness.
3 CHECK CLUTCH SWITCH. Remove and check the clutch switch. <Ref. to CC-7, Clutch Switch.>	Is clutch switch OK?	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).>	Replace the clutch switch.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

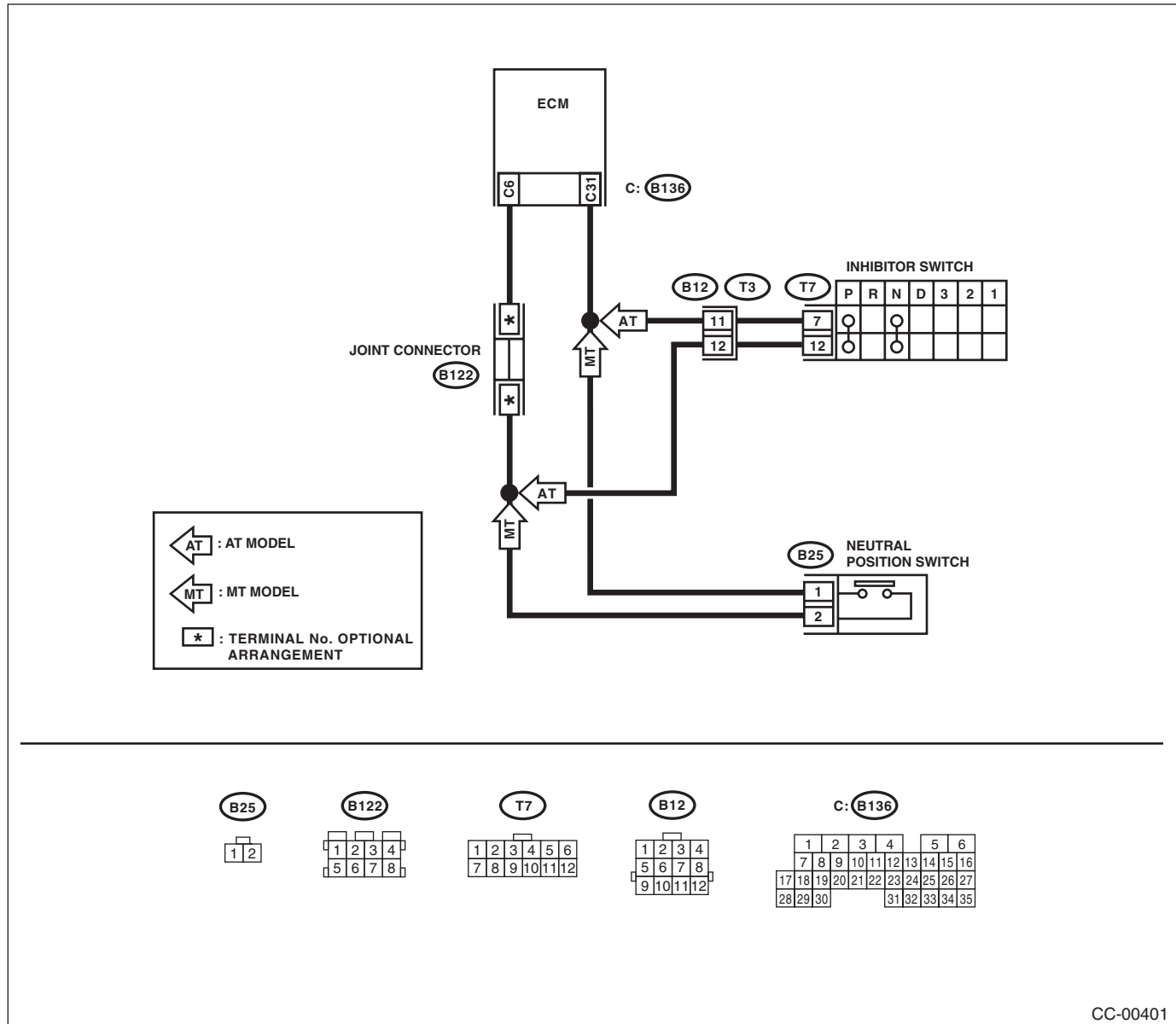
D: DTC 14 NEUTRAL POSITION SWITCH

TROUBLE SYMPTOM:

Cruise control cannot be set.

WIRING DIAGRAM:

- H4 Non-turbo (MT and 4AT) model AT

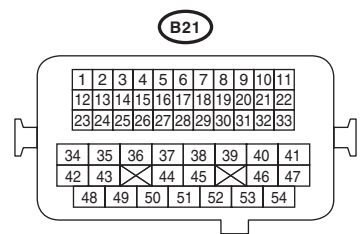
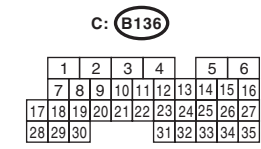
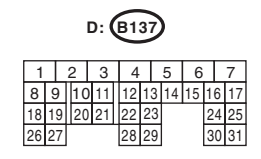
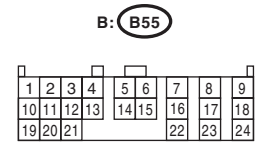
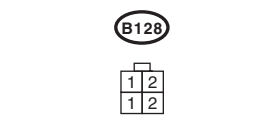
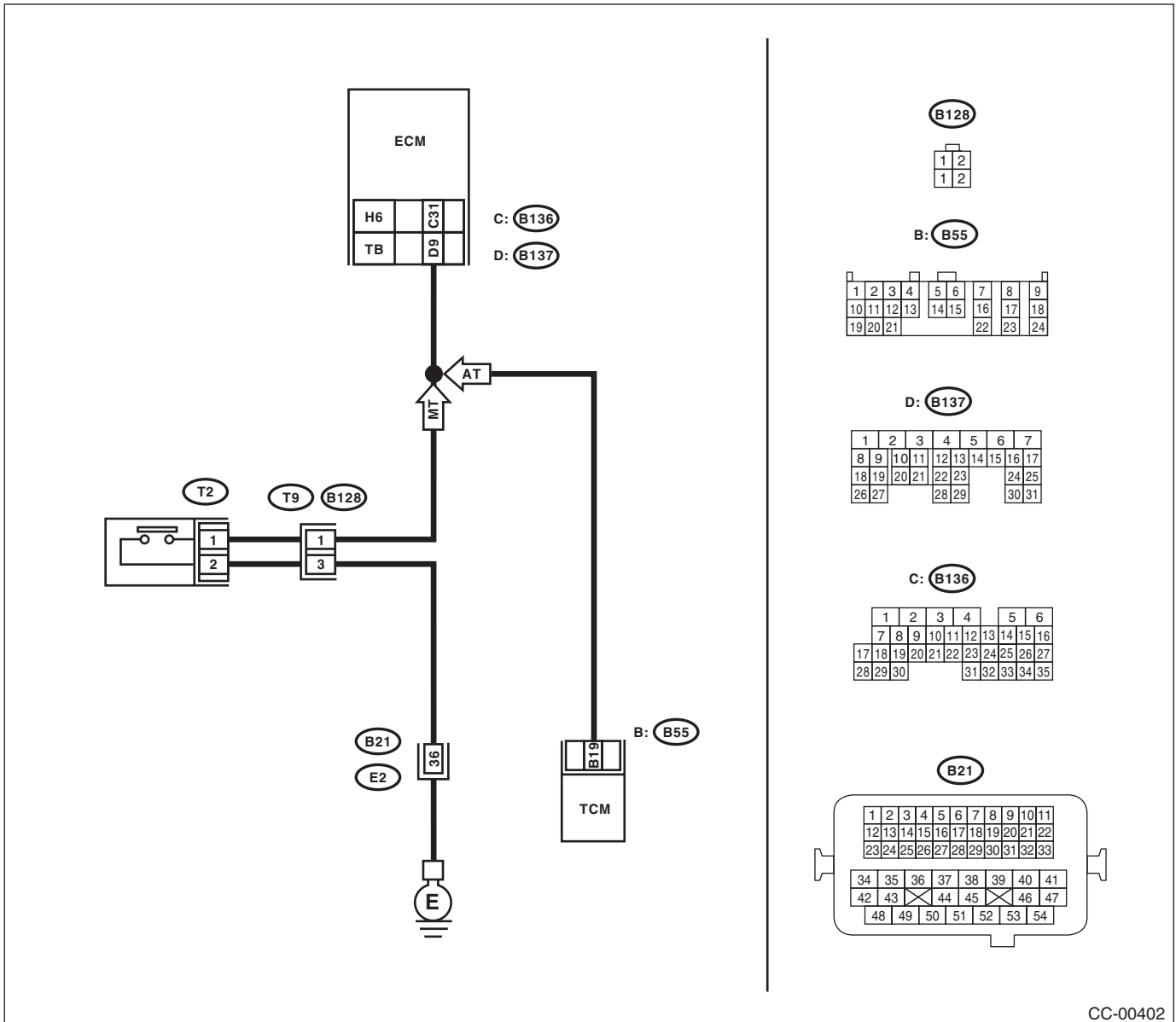


CC-00401

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

- H4 Turbo (MT and 5AT) model
- H6 (5AT) model



CC-00402

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No	
1	CHECK VEHICLE FOR SPECIFICATION. Check the vehicle specification.	Is the transmission type 5AT?	Go to step 2.	Go to step 5.
2	CHECK NEUTRAL POSITION SWITCH. 1) Connect the Subaru Select Monitor to the data link connector. 2) Turn the ignition switch and Subaru Select Monitor switch to ON. 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(H4DOTC)-38, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>	Go to step 3.
3	CHECK TCM OUTPUT VOLTAGE. 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM harness connector terminal and chassis ground. Connector & terminal (B55) No. 19 (+) — Chassis ground (-):	Is voltage more than 10 V 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 4.	Check the TCM. <Ref. to 5AT(diag)-2, Basic Diagnostic Procedure.>
4	CHECK HARNESS BETWEEN TCM AND ECM. 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. Connector & terminal Non-turbo model (B136) No. 31 — (B55) No. 19: Turbo model (B137) No. 9 — (B55) No. 19:	Is the resistance less than 10 Ω ?	Replace the ECM. <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>	Repair the wiring harness.
5	CHECK TRANSMISSION TYPE.	Is the transmission type 4AT?	Go to step 6.	Go to step 9.
6	CHECK INHIBITOR SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the inhibitor switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. Connector & terminal (ST7) No. 12 (+) — Chassis ground (-):	Is the voltage approx. 5 V?	Go to step 7.	Check for open or short in the harness between inhibitor switch and ECM.
7	CHECK INHIBITOR SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the starter motor harness connector. 3) Measure the resistance between inhibitor switch harness connector terminal and chassis ground. Connector & terminal (T7) No. 7 — Chassis ground:	Is the resistance less than 10 Ω ?	Go to step 8.	Repair the harness.
8	CHECK INHIBITOR SWITCH. Remove and check the inhibitor switch. <Ref. to CC-8, Inhibitor Switch.>	Is the inhibitor switch OK?	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).>	Replace the inhibitor switch.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
9 CHECK NEUTRAL POSITION SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Disconnect the neutral position switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. Connector & terminal Non-turbo model: (B25) No. 1 (+) — Chassis ground (-): Turbo model: (B128) No. 1 (+) — Chassis ground (-):	Is the voltage approx. 5 V?	Go to step 10.	Check for open or short in the harness between neutral position switch and ECM.
10 CHECK NEUTRAL POSITION SWITCH CIRCUIT. 1) Turn the ignition switch to OFF. 2) Measure resistance between harness connector terminal of neutral position switch and chassis ground. Connector & terminal Non-turbo model: (B25) No. 2 — Chassis ground: Turbo model: (B128) No. 3 — Chassis ground:	Is the resistance less than 10 Ω ?	Go to step 11.	Repair the harness.
11 CHECK NEUTRAL POSITION SWITCH. Remove and check the neutral position switch. <Ref. to CC-9, Neutral Position Switch.>	Is the neutral position switch OK?	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).>	Replace the neutral position switch.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

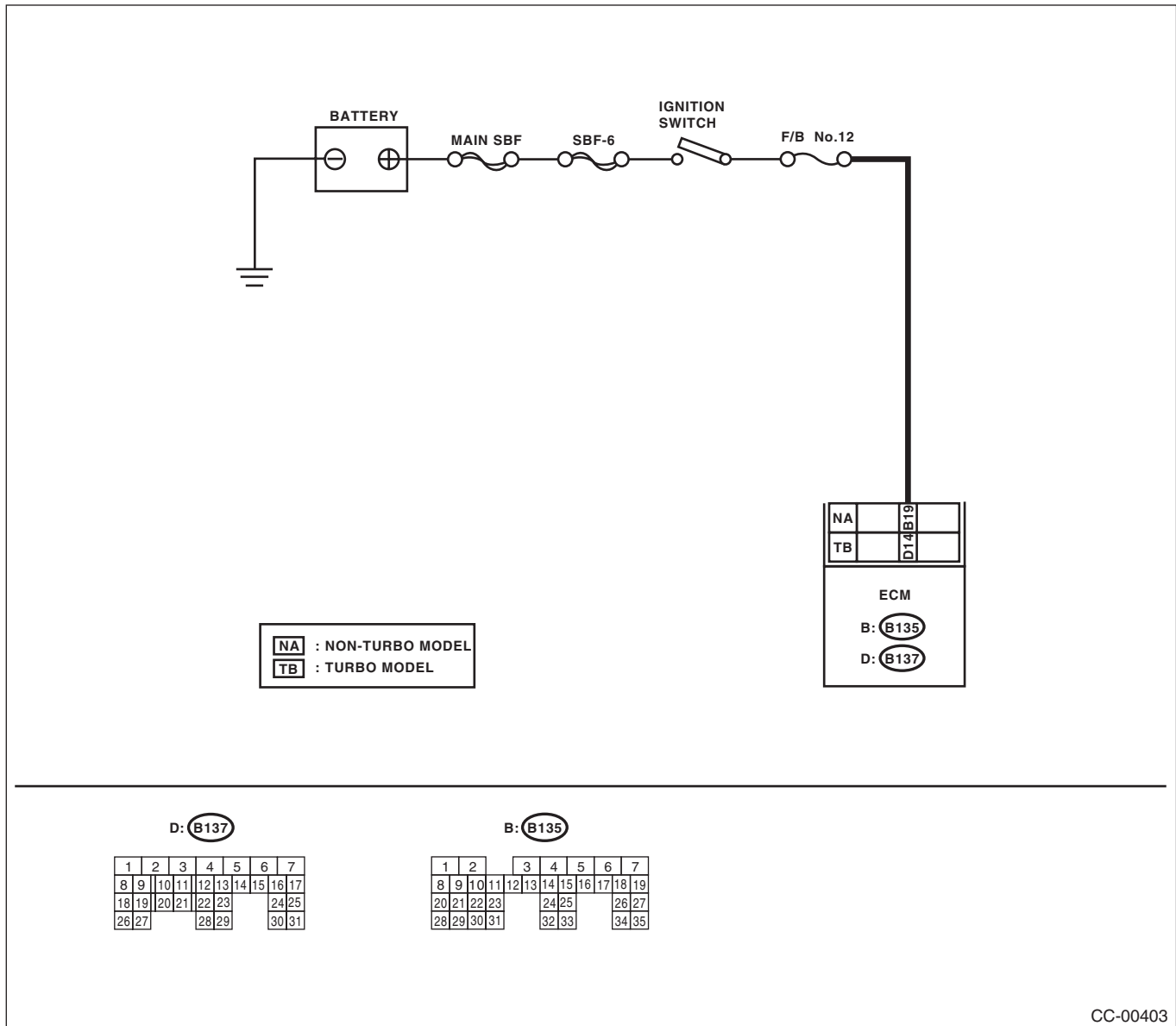
CRUISE CONTROL SYSTEM (DIAGNOSTICS)

E: DTC 16 IGNITION SWITCH

TROUBLE SYMPTOM:

Cruise control cannot be set.

WIRING DIAGRAM:



CC-00403

Step	Check	Yes	No
1 CHECK IGNITION SWITCH CIRCUIT. 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. Connector & terminal Non-turbo model (B135) No. 19 (+) — Chassis ground (-): Turbo model (B137) No. 14 (+) — Chassis ground (-):	Is the voltage more than 10 V?	Check the poor contact of ECM connector.	<ul style="list-style-type: none"> Check fuse No. 12 (in fuse & relay box). Check the harness for open or short circuit between ignition switch and ECM.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

F: DTC 22 AND 32 VEHICLE SPEED SENSOR

DIAGNOSIS:

Open or shorted circuit in vehicle speed sensor system.

TROUBLE SYMPTOM:

Cruise control cannot be set. (Cancelled immediately.)

Step	Check	Yes	No
1 CHECK ABS WARNING LIGHT. 1) Turn the ignition switch to ON. 2) After the initial operation of combination meter is completed, check if the ABS warning light continues to illuminate.	Does the ABS warning light continue to illuminate?	Check ABSCM or VDCCM. <Ref. to ABS(diag)-2, Basic Diagnostic Procedure.> or <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>	Go to step 2.
2 CHECK LAN COMMUNICATION CIRCUIT ERROR DISPLAY. Check if the communication error is displayed on the odo/trip meter in combination meter.	Is the error code "Er xx" displayed on odo/trip meter?	Check the LAN communication circuit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>

IMMOBILIZER (DIAGNOSTICS)

IM(diag)

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