

BODY SECTION

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.

This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.

Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

HVAC SYSTEM (HEATER, VENTILATOR AND A/C)	AC
HVAC SYSTEM (AUTO A/C) (DIAGNOSTIC)	AC
AIRBAG SYSTEM	AB
AIRBAG SYSTEM (DIAGNOSTIC)	AB
SEAT BELT SYSTEM	SB
LIGHTING SYSTEM	LI
WIPER AND WASHER SYSTEM	WW
ENTERTAINMENT	ET
COMMUNICATION SYSTEM	COM
GLASS/WINDOW/MIRROR	GW
BODY STRUCTURE	BS
INSTRUMENTATION/DRIVER INFO	IDI
SEAT	SE
SECURITY AND LOCK	SL
SUNROOF/T-TOP/CONVERTIBLE TOP (SUNROOF)	SR
EXTERIOR/INTERIOR TRIM	EI
EXTERIOR BODY PANEL	EB

BODY SECTION

CRUISE CONTROL SYSTEM CC

CRUISE CONTROL SYSTEM (DIAGNOSTIC) CC(H4SO)

CRUISE CONTROL SYSTEM (DIAGNOSTIC) CC(H4DOTC)

CRUISE CONTROL SYSTEM (DIAGNOSTIC) CC(H4DOTC 2.5)

IMMOBILIZER (DIAGNOSTIC) IM

CRUISE CONTROL SYSTEM



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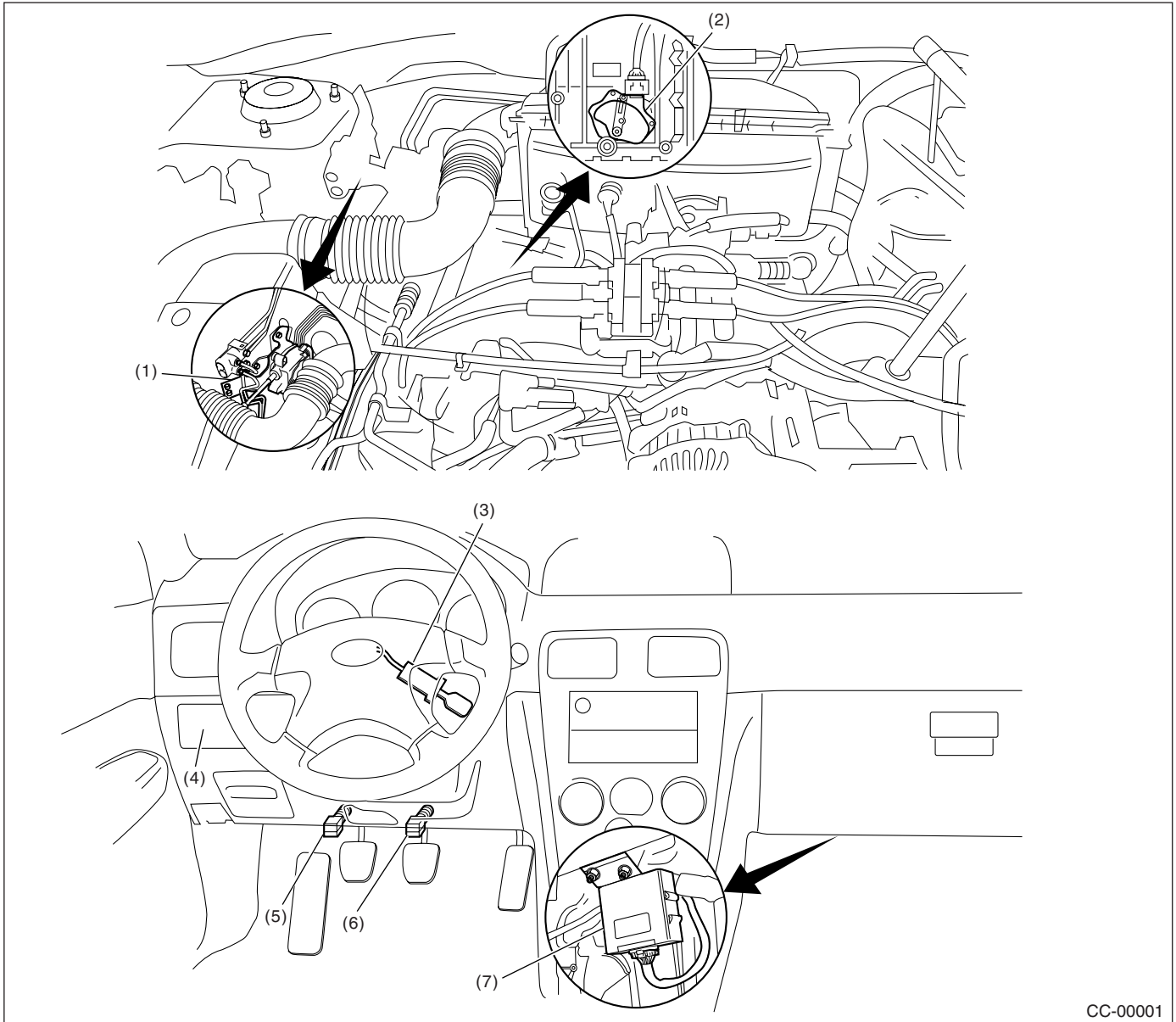
General Description

CRUISE CONTROL SYSTEM

1. General Description

A: COMPONENT

1. EXCEPT 2.5 L TURBO MODEL



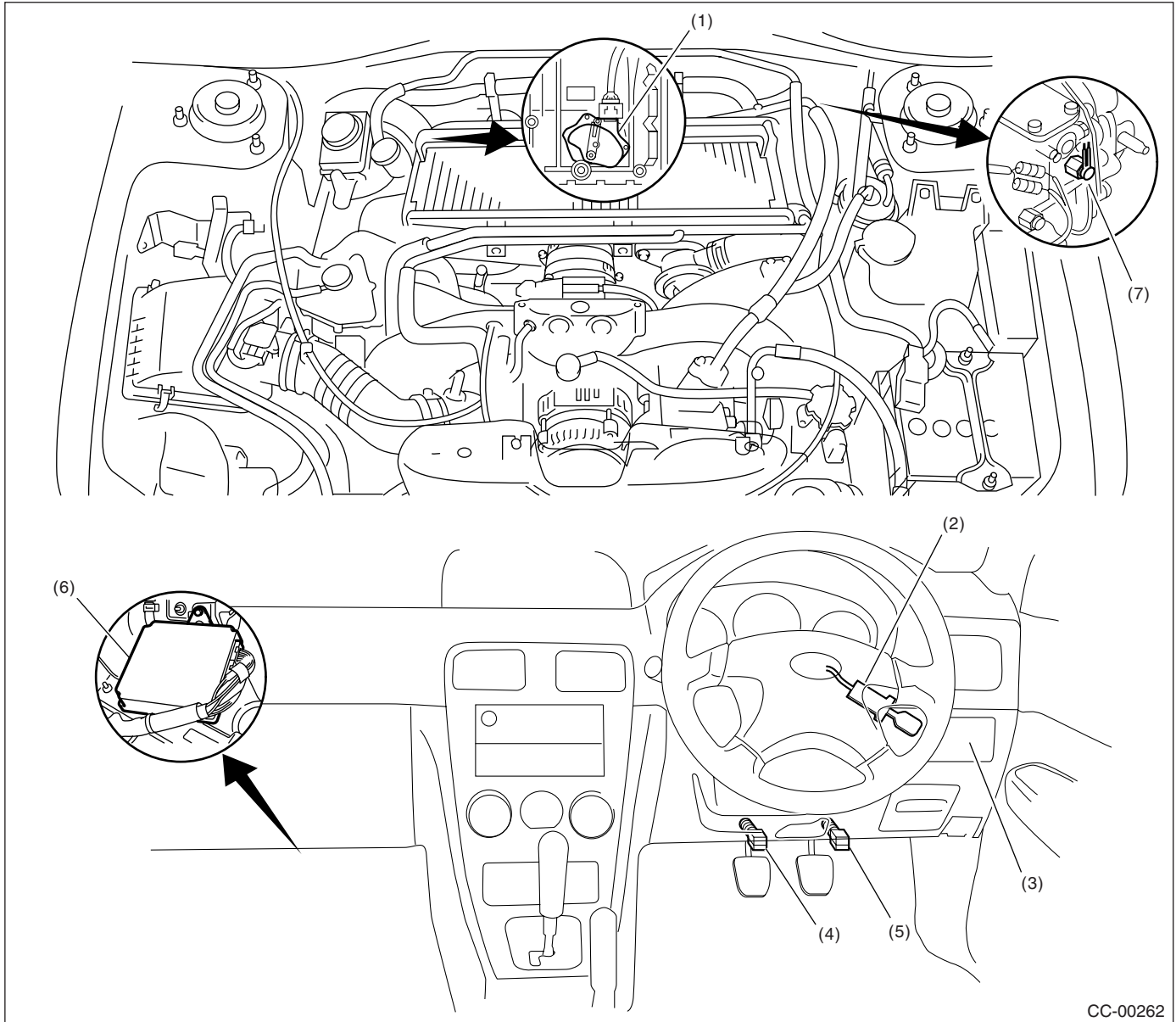
CC-00001

- | | | |
|-----------------------------------|--------------------------------|---------------------------|
| (1) Actuator | (4) Cruise control main switch | (7) Cruise control module |
| (2) Inhibitor switch (AT model) | (5) Clutch switch (MT model) | |
| (3) Cruise control command switch | (6) Stop and brake switch | |

NOTE:

Electrical component location are for LHD vehicles. Cruise control actuator and cruise control module location for RHD vehicles are symmetrically opposite.

2. 2.5 L TURBO MODEL



(1) Inhibitor switch (AT model)

(2) Cruise control command switch

(3) Cruise control main switch

(4) Clutch switch (MT model)

(5) Stop and brake switch

(6) Engine control module

(7) Neutral position switch (MT model)

General Description

CRUISE CONTROL SYSTEM

B: CAUTION

- Before disassembling or reassembling parts, always disconnect the battery ground cable. When repairing the radio, control module and other parts with memory functions, make note of the memory before disconnecting the battery ground cable. All memory will be erased.
- Reassemble parts in the reverse order of disassembly unless otherwise indicated.
- Adjust parts to specifications specified in this manual.
- Connect the connectors and hoses securely during reassembly.
- After reassembly, ensure functional parts operate properly.

C: PREPARATION TOOL

TOOL NAME	REMARKS
Circuit Tester	Used for measuring resistance and voltage.

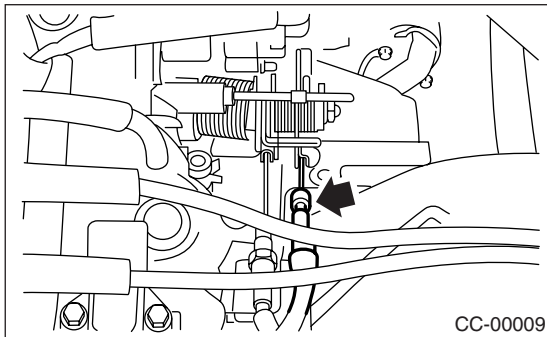
2. Actuator

A: REMOVAL

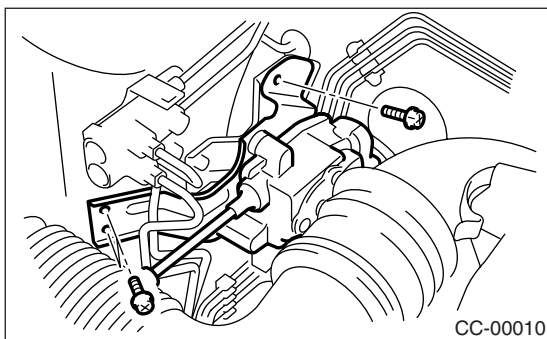
CAUTION:

- Be careful not to apply excessive load to the wire cable when adjusting and/or installing; otherwise, the actuator may be deformed or damaged.
- Do not bend the cable sharply with a radius less than 100 mm (3.94 in); otherwise, cable may bend permanently, resulting in poor performance.
- When installing the cable, be careful not to sharply bend or pinch the inner cable; otherwise, the cable may break.

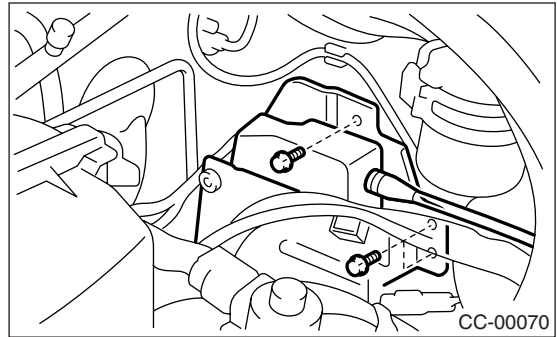
- 1) Disconnect the ground cable from battery.
- 2) Remove the clip bands from cruise control cable.
- 3) Loosen the nut which secures cruise control cable end to throttle cam, and then remove the cable from throttle cam.



- 4) Remove the four actuator attaching bolts.
 - 5) Remove the actuator while disconnecting the connector.
- LHD model



- RHD model



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

ACTUATOR:

7.4 N·m (0.75 kgf-m, 5.4 ft-lb)

Cable end nut:

12 N·m (1.2 kgf-m, 8.7 ft-lb)

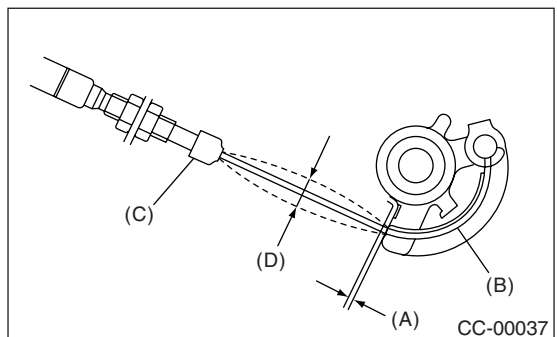
NOTE:

(A): Must be adjusted when the cable end outer is fixed in place, so that gap between throttle cam and lever is 0 — 1 mm (0 — 0.04 in), otherwise, inner cable deflection (D) is 1 — 8 mm (0.039 — 0.315 in) when the throttle cable is installed.

(Must be attached while the throttle cam is being pulled by wire cable.)

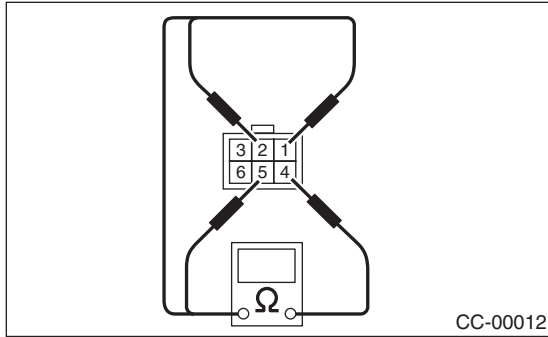
(B): Must be coated evenly on the cam end inner connection.

(C): Cover must be inserted securely, until tip of cable touches cover stopper.



C: INSPECTION

Measure the cruise control actuator resistance.



Terminal No.	Standard
4 and 1	Approx. 5 Ω
4 and 2	Approx. 5 Ω
4 and 5	Approx. 5 Ω
3 and 6	Approx. 39 Ω

If NG, replace the cruise control actuator.

3. Cruise Control Module

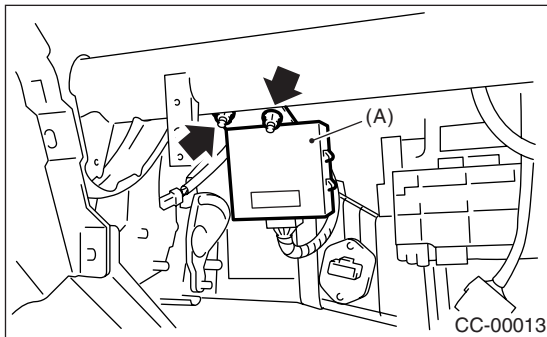
A: NOTE

Engine Control Module (ECM) controls cruise control system (Turbo model).

B: REMOVAL

1. NON-TURBO MODEL

- 1) Disconnect the ground cable from battery.
- 2) Remove the glove box. <Ref. to EI-37, REMOVAL, Glove Box.>
- 3) Disconnect the connector from cruise control module.
- 4) Remove the bolt, then detach the cruise control module (A).



2. TURBO MODEL

<Ref. to FU(H4DOTC)-50, REMOVAL, Engine Control Module (ECM).>

C: INSTALLATION

1. NON-TURBO MODEL

Install in the reverse order of removal.

NOTE:

Attach the part number label, facing the rear side of the vehicle.

2. TURBO MODEL

<Ref. to FU(H4DOTC)-50, INSTALLATION, Engine Control Module (ECM).>

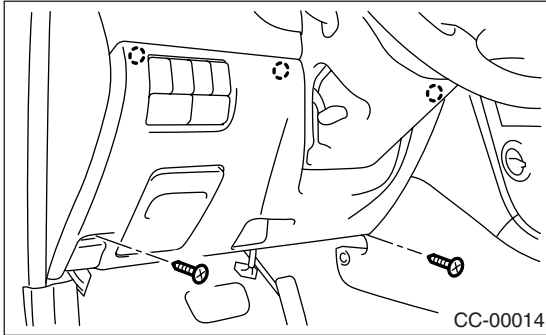
Cruise Control Main Switch

CRUISE CONTROL SYSTEM

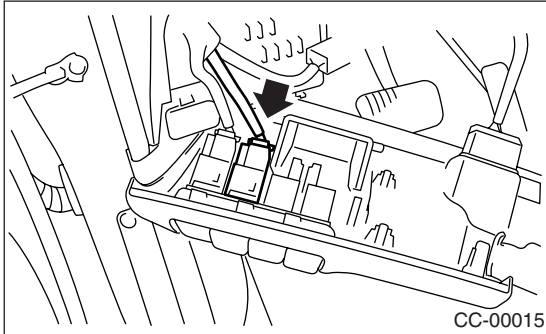
4. Cruise Control Main Switch

A: REMOVAL

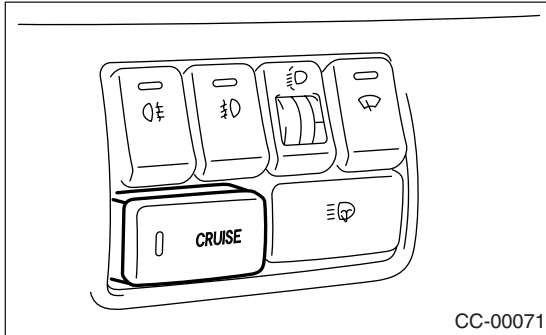
- 1) Disconnect the ground cable from battery.
- 2) Remove the screws and clip from instrument panel lower cover.
- 3) Remove the instrument panel lower cover.



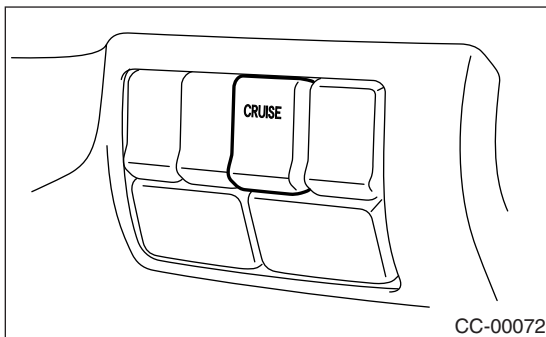
- 4) Disconnect the connector from cruise control main switch.



- 5) Remove the main switch by pushing it outward.
- For Europe model



- For Australia model

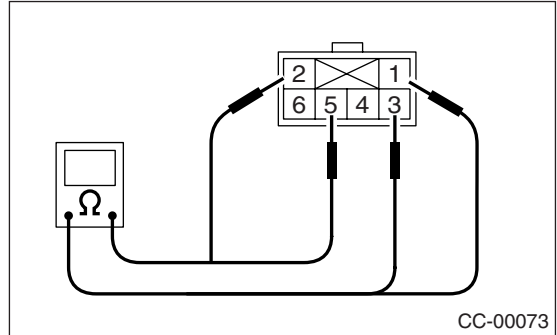


B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Measure the cruise control main switch resistance.



Switch position	Terminal No.	Standard
OFF (released)	LHD, RHD (For Europe) model : 1 and 2	More than 1 MΩ
ON (depressed)	RHD (Except for Europe) model : 3 and 5	Less than 1 Ω

If NG, replace the cruise control main switch.

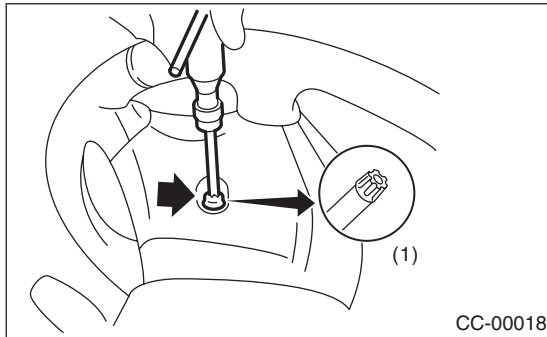
5. Cruise Control Command Switch

A: REMOVAL

WARNING:

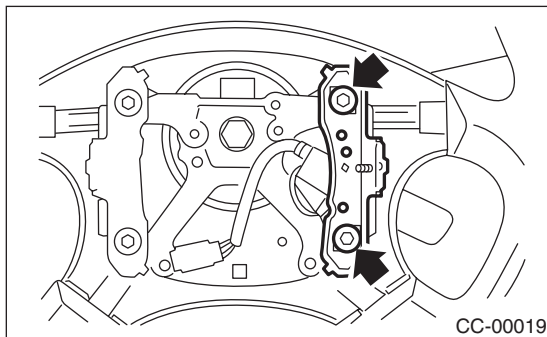
Before servicing, be sure to read the notes in the AB section for proper handling of the driver's airbag module. <Ref. to AB-3, CAUTION, General Description.>

- 1) Set the front wheels in straight ahead position.
- 2) Turn the ignition switch to OFF.
- 3) Disconnect the ground cable from battery and wait for at least 20 seconds before starting work.
- 4) Using the TORX® BIT T30 (Tamper resistant type), loosen the two TORX® bolts which secure driver's airbag module.

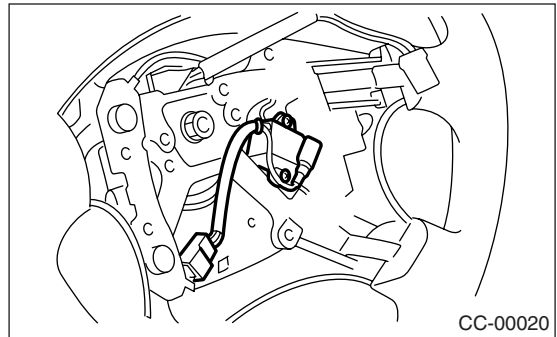


(1) TORX® BIT T30

- 5) Disconnect the airbag module connector on back of airbag module.
- 6) Remove the horn switch from steering wheel as shown.



- 7) Disconnect the horn and cruise control command switch connector, then remove the cruise control command switch.

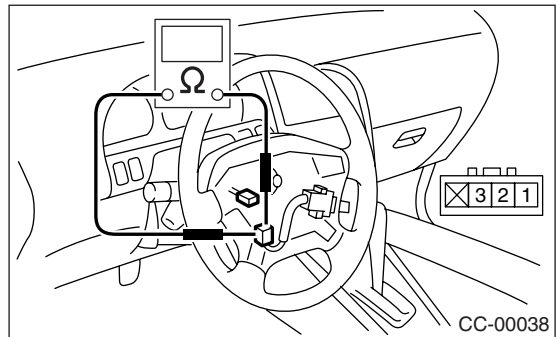


B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Measure the cruise control command switch resistance.



Switch	Position	Terminal No.	Standard
CANCEL	ON	1 (+) and 2 (-)	Less than 1 Ω
	ON	1 (+) and 3 (-)	Less than 1 Ω
SET/COAST	OFF	1 and 2	More than 1 MΩ
	ON	1 and 2	Less than 1 Ω
RESUME/ ACCEL	OFF	1 and 3	More than 1 MΩ
	ON	1 and 3	Less than 1 Ω

If NG, replace the cruise control command switch.

6. Stop and Brake Switch

A: REMOVAL

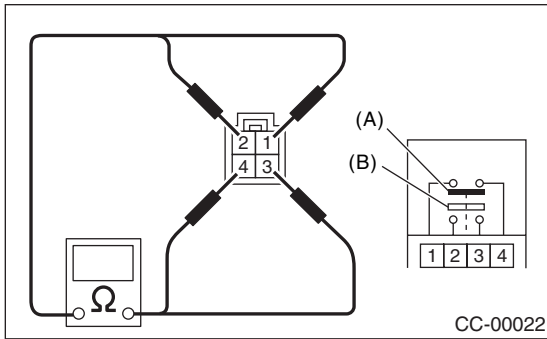
- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from stop and brake switch, and then remove the switch. <Ref. to BR-54, REMOVAL, Stop Light Switch.>

B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Measure the brake switch (A) and stop light switch (B) resistance.



Switch	Pedal	Terminal No.	Standard
Brake	Released	1 and 4	Less than 1 Ω
	Depressed	1 and 4	More than 1 MΩ
Stop light	Released	2 and 3	More than 1 MΩ
	Depressed	2 and 3	Less than 1 Ω

If NG, replace the stop and brake switch.

7. Clutch Switch

A: REMOVAL

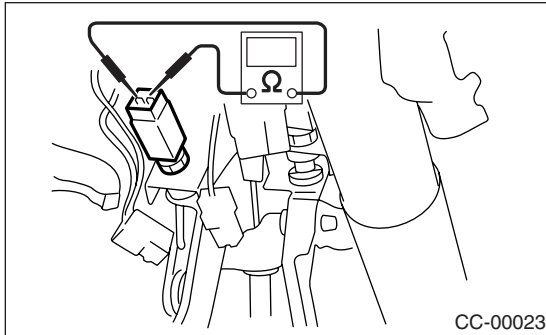
- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from clutch switch, and then remove the switch. <Ref. to CL-34, REMOVAL, Clutch Pedal.>

B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Measure the clutch switch resistance.



Switch	Pedal	Terminal No.	Standard
Clutch	Released	1 and 2	Less than 1 Ω
	Depressed	1 and 2	More than 1 M Ω

If NG, replace the clutch switch.

Inhibitor Switch (AT model)

CRUISE CONTROL SYSTEM

8. Inhibitor Switch (AT model)

A: REMOVAL

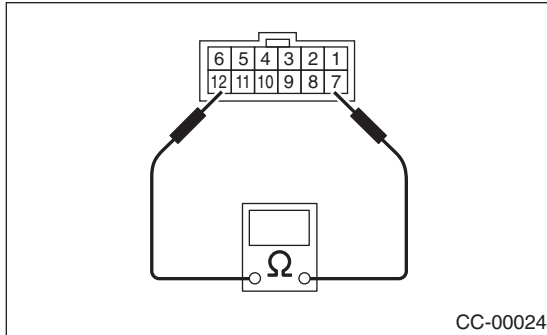
- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from inhibitor switch, and then remove the switch. <Ref. to 4AT-52, REMOVAL, Inhibitor Switch.>

B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Measure the inhibitor switch resistance.



Selector lever position	Terminal No.	Standard
P	7 and 12	Less than 1 Ω
N		Less than 1 Ω
Except P and N		More than 1 M Ω

If NG, replace the inhibitor switch.

9. Neutral Position Switch (MT model)

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from neutral position switch, and then remove the switch. <Ref. to 5MT-43, BACK-UP LIGHT AND NEUTRAL POSITION SWITCH, REMOVAL, Switches and Harness.>

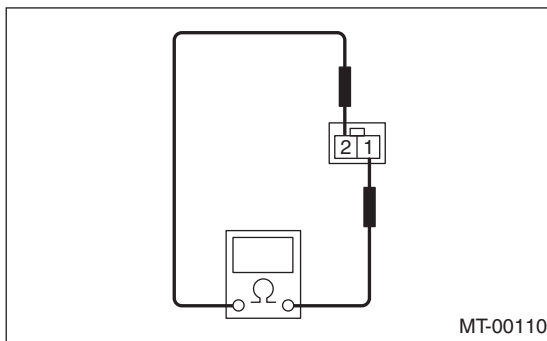
B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

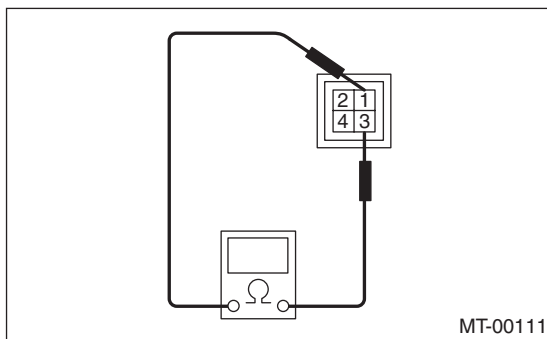
Measure the neutral position switch resistance.

- Non-turbo model



Gear shift position	Terminal No.	Specified resistance
Neutral position	1 and 2	Less than 1 Ω
Other positions		More than 1 M Ω

- Turbo model



Gear shift position	Terminal No.	Specified resistance
Neutral position	1 and 3	Less than 1 Ω
Other positions		More than 1 M Ω

If NG, replace the neutral position switch.

