

# CRUISE CONTROL SYSTEM

# CC

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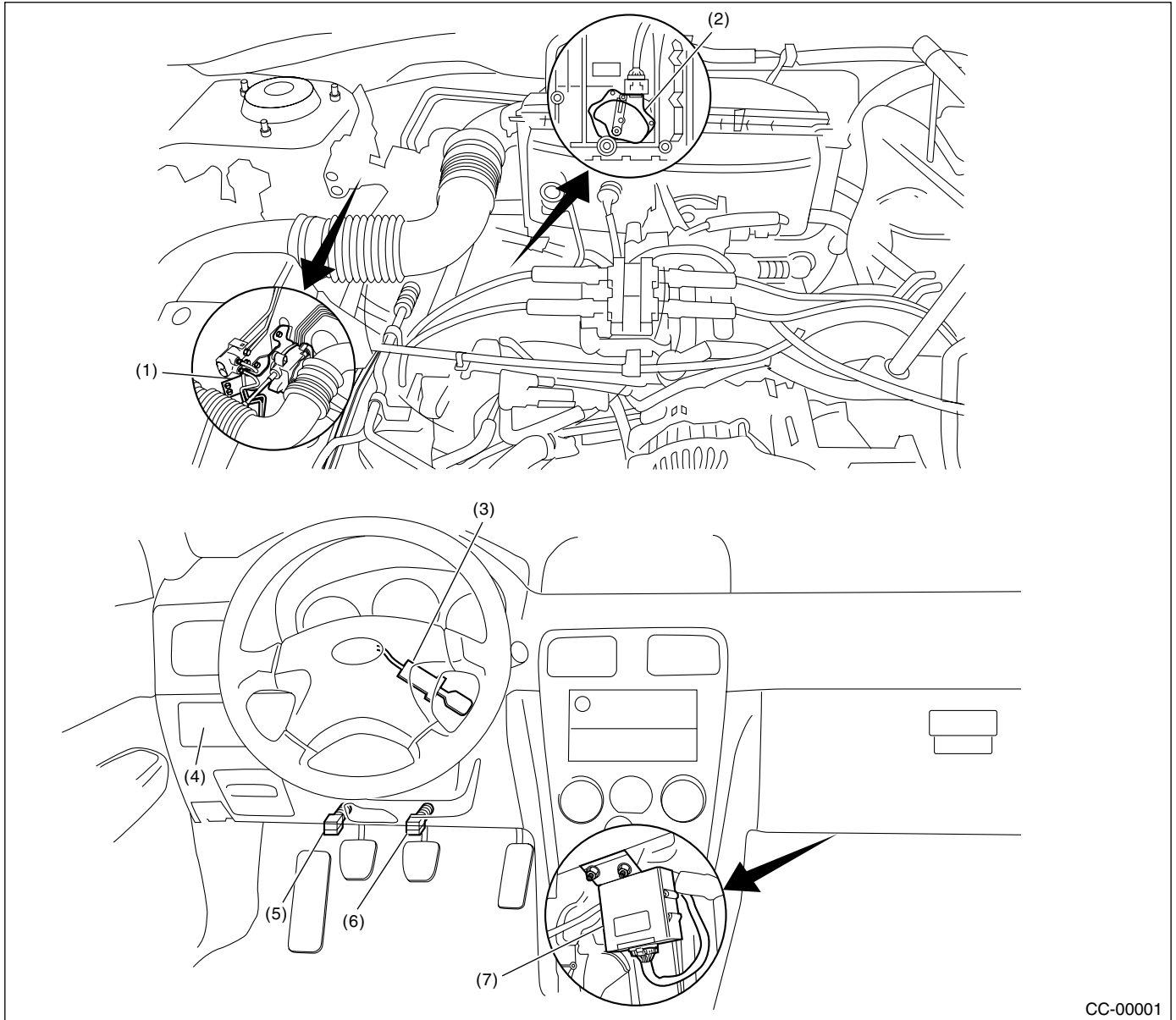
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# GENERAL DESCRIPTION

## CRUISE CONTROL SYSTEM

### 1. General Description

#### A: COMPONENT



CC-00001

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

**NOTE:**

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

### **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.

# ACTUATOR

## CRUISE CONTROL SYSTEM

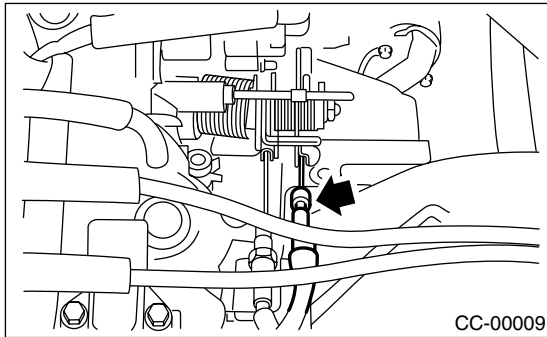
### 2. Actuator

#### A: REMOVAL

##### CAUTION:

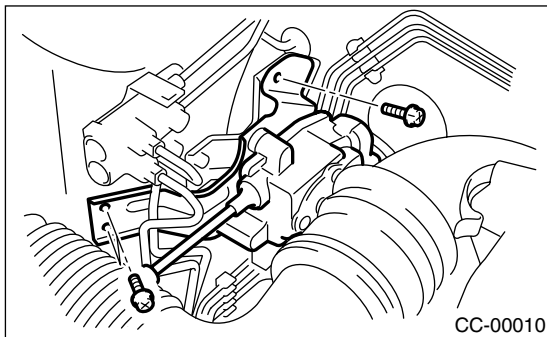
- Be careful not to apply excessive load to the wire cable when adjusting and/or installing; otherwise, the actuator may be deformed or damaged.
- Do not bend the cable sharply with a radius less than 100 mm (3.94 in); otherwise, cable may bend permanently, resulting in poor performance.
- When installing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

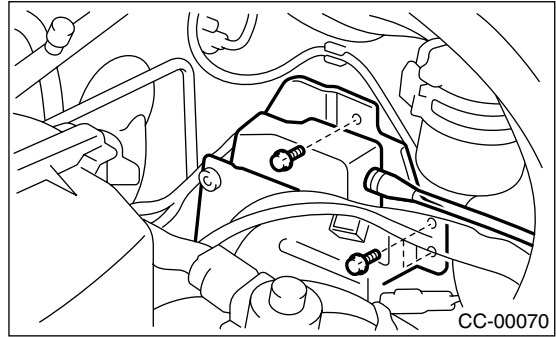


- 4) Remove the four actuator attaching bolts.
- 5) Remove the actuator while disconnecting the connector.

#### • 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)**

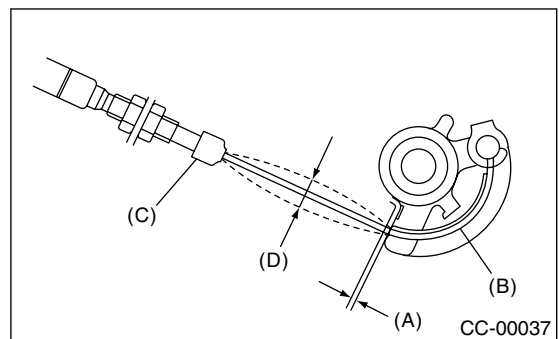
##### NOTE:

(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.)

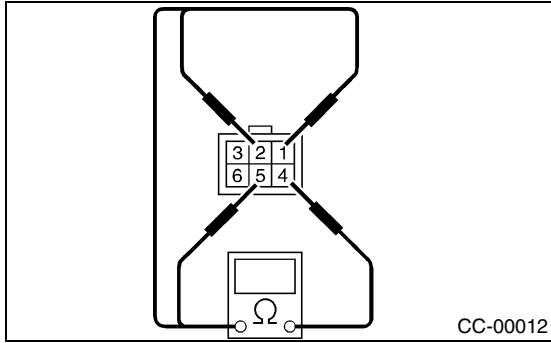
(B): Must be coated evenly on the cam end inner connection.

(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 $\Omega$
4 and 2	Approx. 5 $\Omega$
4 and 5	Approx. 5 $\Omega$
3 and 6	Approx. 39 $\Omega$

If NG, replace the cruise control actuator.

# CRUISE CONTROL MODULE

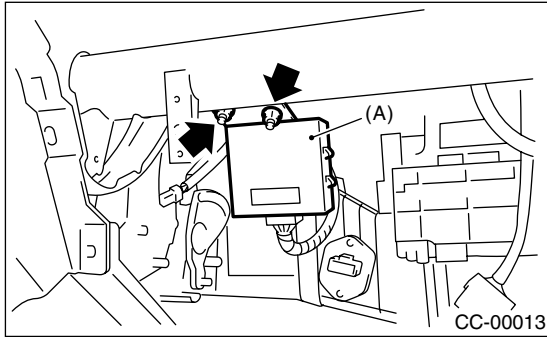
## CRUISE CONTROL SYSTEM

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### 3. Cruise Control Module

#### A: REMOVAL

- 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).



#### B: INSTALLATION

Install in the reverse order of removal.

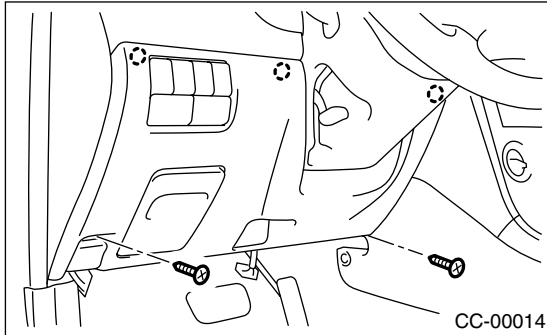
#### NOTE:

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

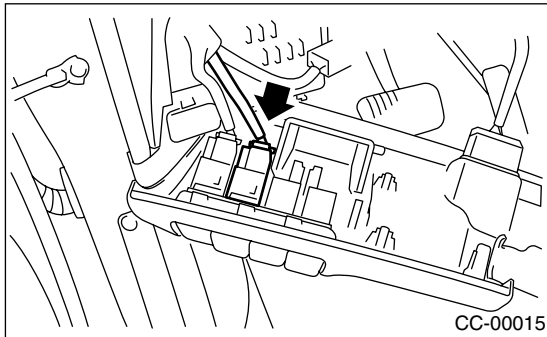
## 4. Cruise Control Main Switch

### 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.

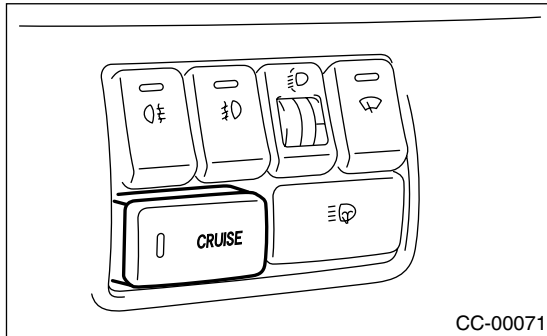


- 4) Disconnect the connector from cruise control main switch.

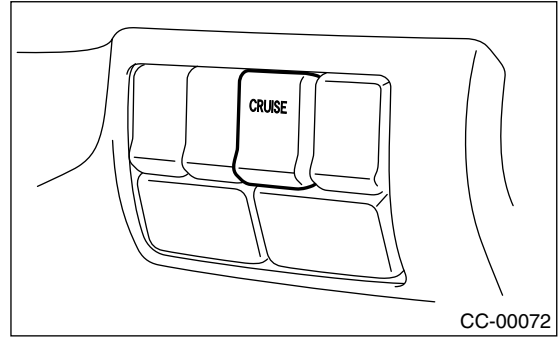


- 5) Remove the main switch by pushing it outward.

### • FOR EUROPE MODEL



### • FOR AUSTRALIA MODEL

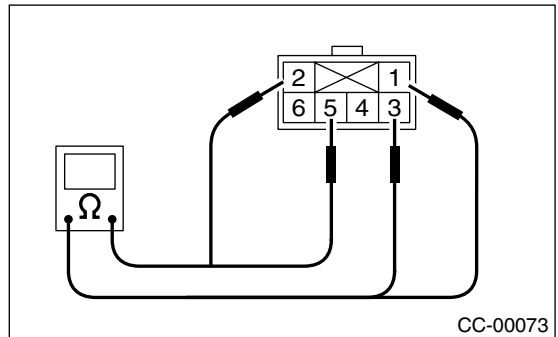


### B: INSTALLATION

Install in the reverse order of removal.

### C: INSPECTION

Measure the cruise control main switch resistance.



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

If NG, replace the cruise control main switch.

# CRUISE CONTROL COMMAND SWITCH

## CRUISE CONTROL SYSTEM

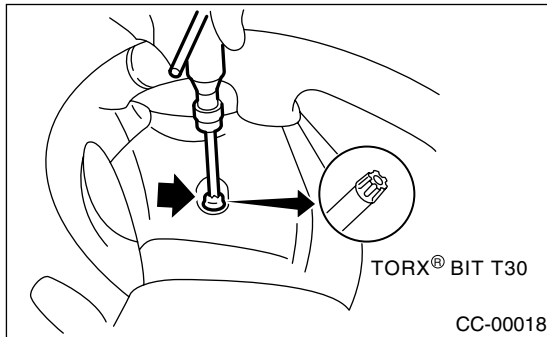
### 5. Cruise Control Command Switch

#### A: REMOVAL

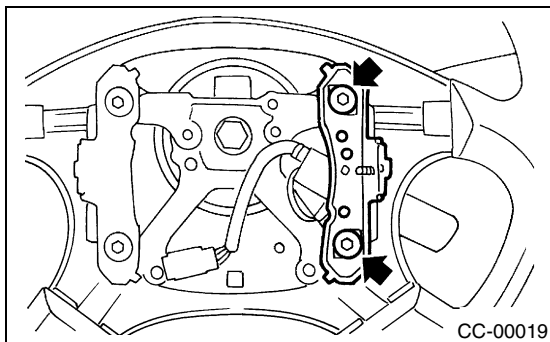
**WARNING:**

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.>

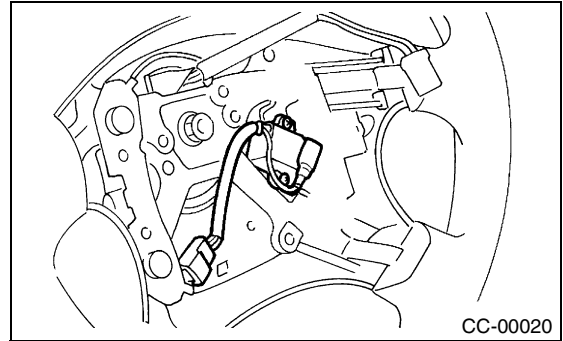
- 1) Set the front wheels in straight ahead position.
- 2) Turn the ignition switch to OFF.
- 3) Disconnect the ground cable from battery and wait for at least 20 seconds before starting work.
- 4) Using the TORX® BIT T30 (Tamper resistant type), loosen the two TORX® bolts which secure driver's airbag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



- 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.

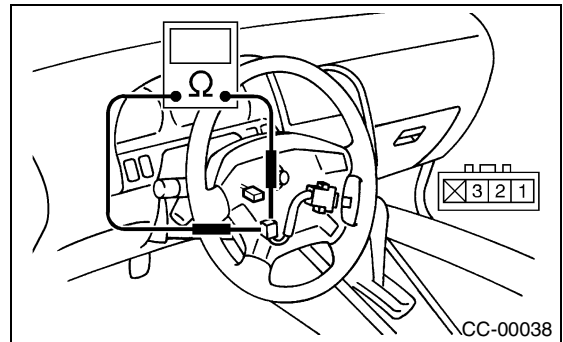


#### B: INSTALLATION

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

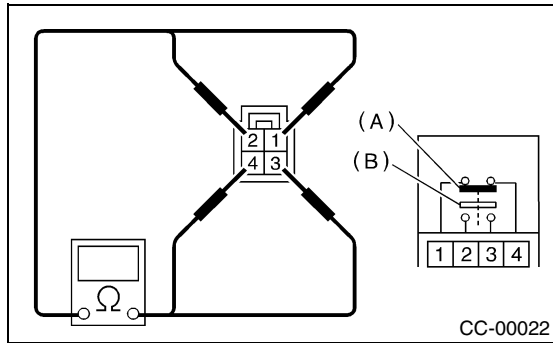
- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from stop and brake switch, and then remove the switch. <Ref. to BR-54, REMOVAL, Stop Light Switch.>

### 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 $\Omega$
	Depressed	1 and 4	More than 1 M $\Omega$
Stop light	Released	2 and 3	More than 1 M $\Omega$
	Depressed	2 and 3	Less than 1 $\Omega$

If NG, replace the stop and brake switch.

## 7. Clutch Switch

### A: REMOVAL

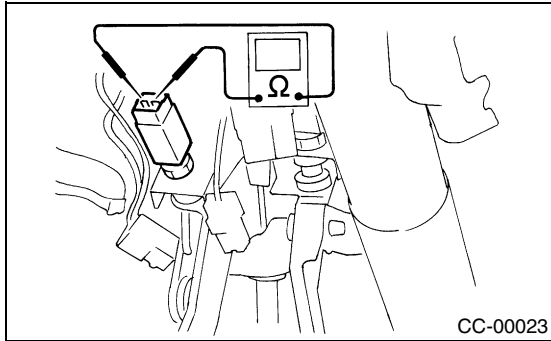
- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from clutch switch, and then remove the switch. <Ref. to CL-37, REMOVAL, Clutch Pedal.>

### 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 $\Omega$
	Depressed	1 and 2	More than 1 M $\Omega$

If NG, replace the clutch switch.

## 8. Inhibitor Switch

### A: REMOVAL

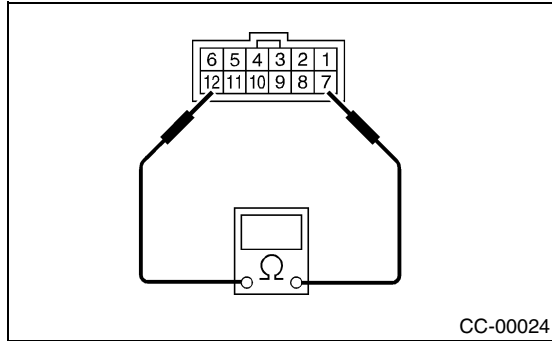
- 1) Disconnect the ground cable from battery.
- 2) Disconnect the connector from inhibitor switch, and then remove the switch. <Ref. to AT-49, REMOVAL, Inhibitor Switch.>

### 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 MΩ

If NG, replace the inhibitor switch.

# INHIBITOR SWITCH

CRUISE CONTROL SYSTEM

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