

<b>DTC</b>	<b>12</b>	<b>Actuator Magnetic Clutch Circuit</b>
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**CIRCUIT DESCRIPTION**

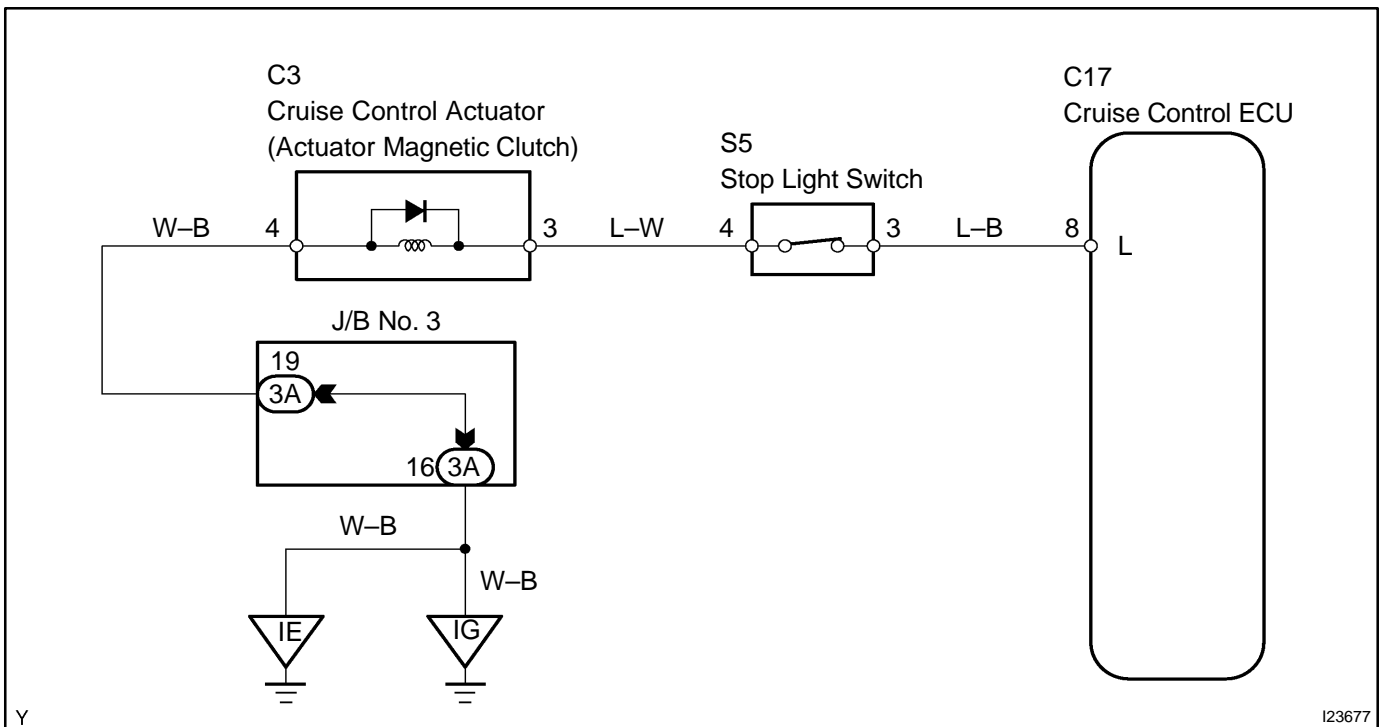
This circuit turns on the magnetic clutch inside the actuator during cruise control operation, according to the signal from the ECU. If a malfunction has occurred in the actuator or speed sensor, etc. during cruise control operation, the rotor shaft between the motor and control plate is released.

When the brake pedal is depressed, the stop light switch turns on, supplying electrical power to the stop light. Power supply to the magnetic clutch is mechanically cut and the magnetic clutch is turned off.

When driving downhill, if the vehicle speed has exceeded the set speed by 8 km/h (5 mph), the ECU turns the safety magnet clutch off. If the vehicle speed later drops to within 5 km/h (3 mph), cruise control at the set speed is resumed.

DTC No.	DTC Detection Condition	Trouble Area
12	<ul style="list-style-type: none"> <li>• Short in actuator magnetic clutch circuit</li> <li>• Open (0.8 sec.) in actuator magnetic clutch circuit</li> </ul>	<ul style="list-style-type: none"> <li>• STOP Fuse</li> <li>• Stop light switch</li> <li>• Actuator magnetic clutch</li> <li>• Harness or connector between cruise control ECU and actuator magnetic clutch, and actuator magnetic clutch and body ground</li> <li>• Cruise control ECU</li> </ul>

**WIRING DIAGRAM**

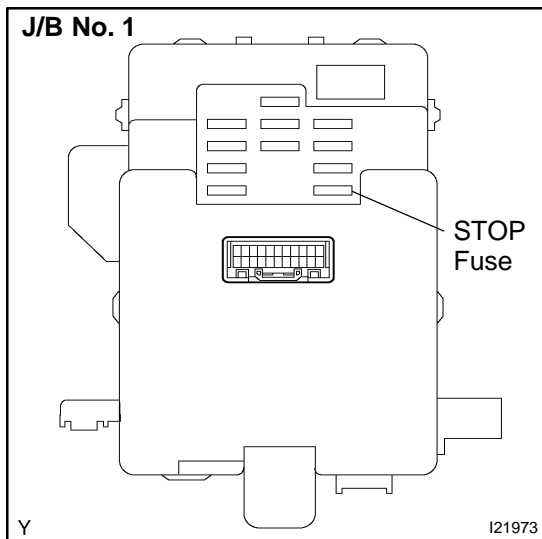


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## INSPECTION PROCEDURE

**1 Check STOP fuse.**



**PREPARATION:**

- (a) Turn the ignition switch OFF.
- (b) Remove the STOP fuse from the J/B No. 1.

**CHECK:**

Check the fuse continuity.

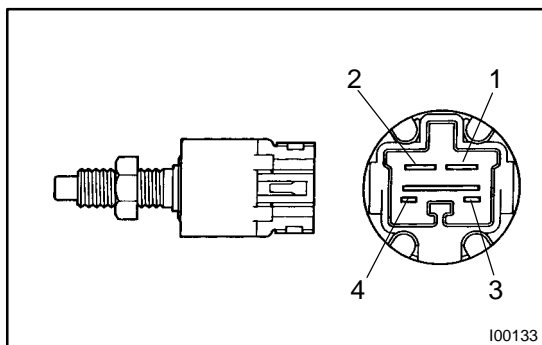
**OK:**

**There is continuity.**

**NG** Replace STOP fuse.

**OK**

**2 Check stop light switch.**



**PREPARATION:**

Disconnect the stop light switch connector.

**CHECK:**

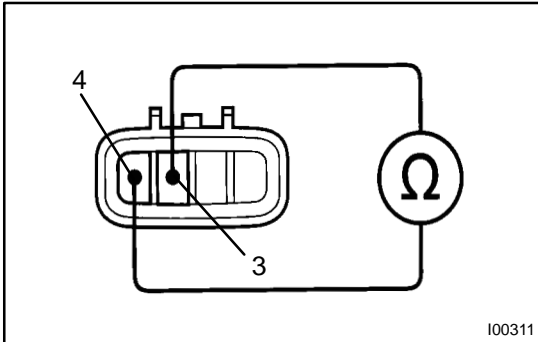
Check the continuity between the terminals.

Switch Position	Continuity
Switch pin free (Brake pedal depressed)	1 - 2
Switch pin pushed in (Brake pedal released)	3 - 4

**NG** Replace stop light switch.

**OK**

**3 Check resistance between terminals 3 and 4 of actuator magnetic clutch.**



**PREPARATION:**

- (a) Turn the ignition switch OFF.
- (b) Disconnect the actuator connector.

**CHECK:**

Measure the resistance between terminals 3 and 4.

**OK:**

**Resistance: 34.65 – 42.35 Ω**

**NG**

**Replace cruise control actuator.**

**OK**

**4 Check for open and short in harness and connector between cruise control ECU and actuator magnetic clutch, and actuator magnetic clutch and body ground (See page IN-28).**

**NG**

**Repair or replace harness or connector.**

**OK**

**Check and replace cruise control ECU.**