

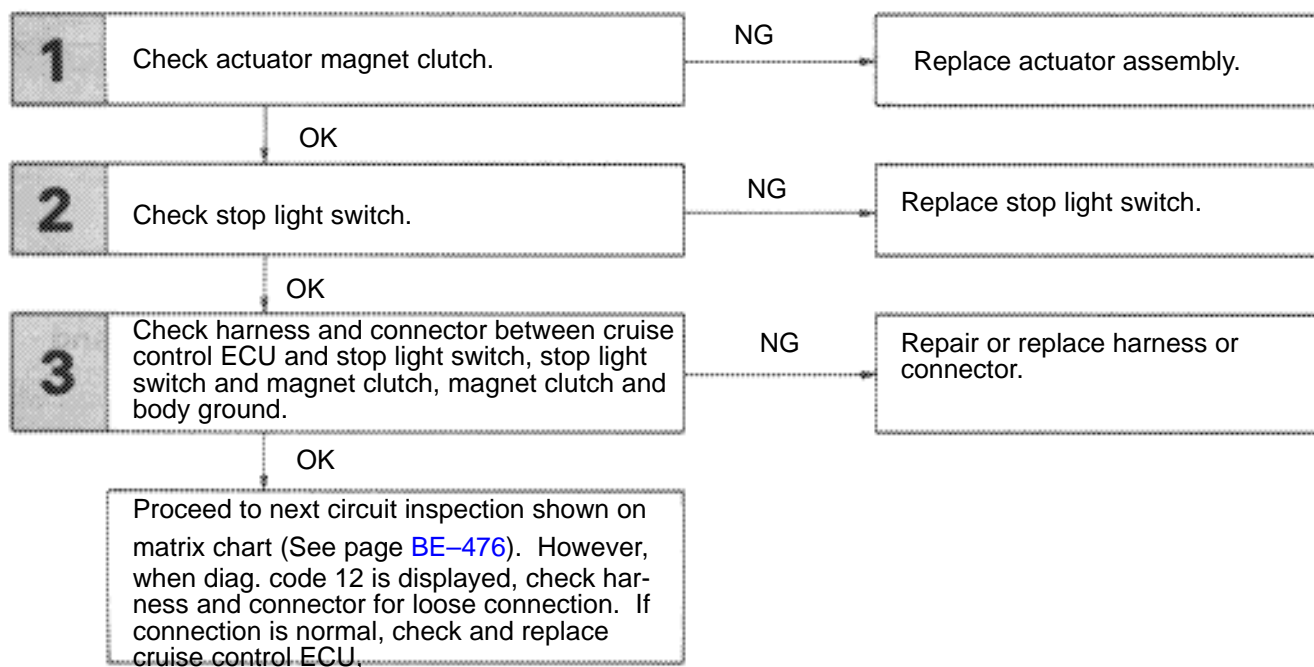
**Diag. Code 12****Actuator Magnetic Clutch Circuit****— CIRCUIT DESCRIPTION —**

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

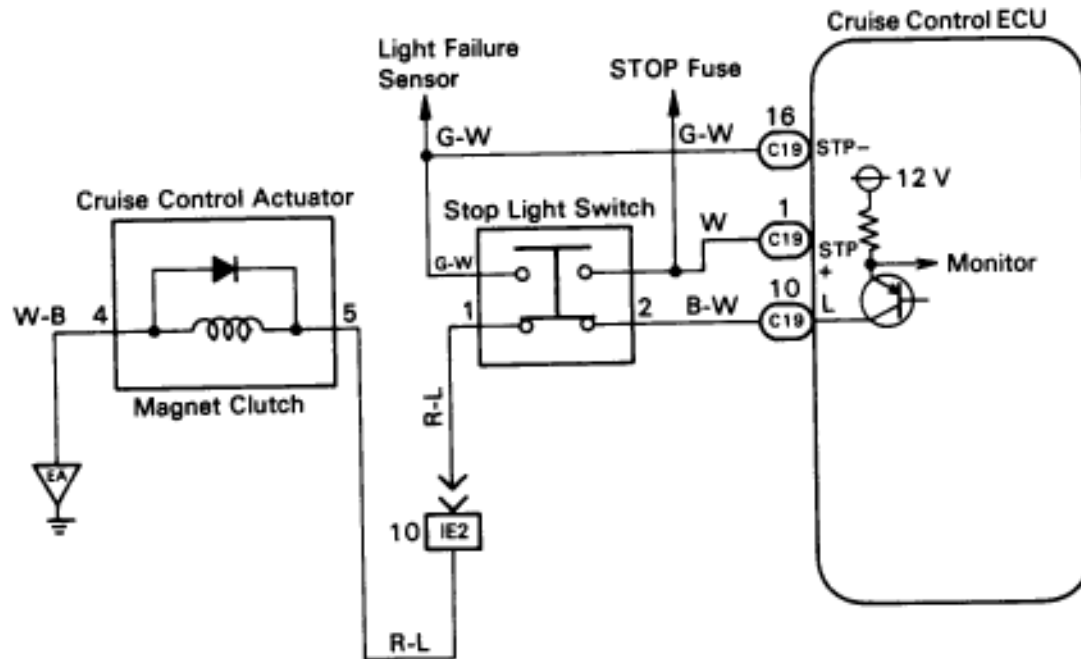
When the brake pedal is depressed, the stoplight switch turns on, supplying electrical power to the stoplight. Power supply to the safety magnet clutch is mechanically cut and the magnet clutch is turned OFF.

When driving downhill, if the vehicle speed exceeds the set speed by 15 km/h (9 mph), the ECU turns the magnet clutch OFF. If the vehicle speed later drops to within 10 km/h (6 mph) above the set speed, then cruise control at the set speed is resumed.

Code No.	Diagnosis	Trouble area
12	<ul style="list-style-type: none"> <li>Over current (short) in magnet clutch circuit.</li> <li>Open (0.8 sec) in magnet clutch circuit.</li> </ul>	<ul style="list-style-type: none"> <li>Cruise control magnet clutch.</li> <li>Harness or connector between ECU and magnet clutch, magnet clutch and body ground.</li> <li>ECU</li> </ul>

**— DIAGNOSTIC CHART —**

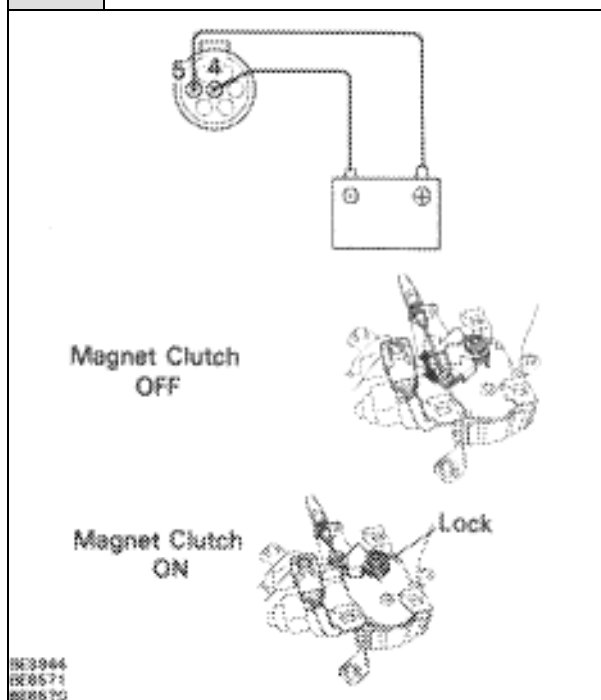
# WIRING DIAGRAM



BE0574

## INSPECTION PROCEDURE

### 1 Check actuator magnetic clutch.



- P** (1) Remove cruise control actuator.  
(2) Disconnect actuator connector.

**C** Move the control plate by hand.

**OK** Control plate moves. (Magnetic clutch off).

- C** (1) Connect positive  $\oplus$  lead to terminal 5 and negative  $\ominus$  lead to terminal 4 of actuator connector.  
(2) Move the control plate by hand.

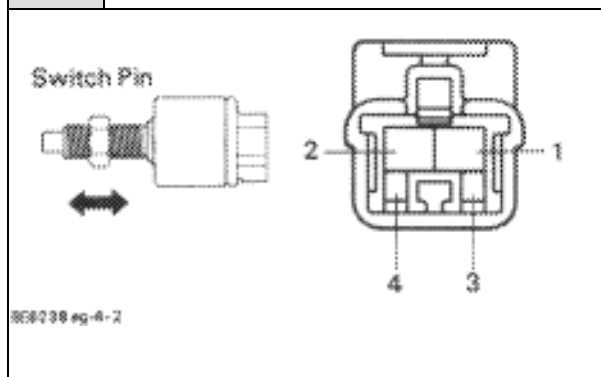
**OK** Control plate doesn't move. (Magnet clutch on).

**OK**

**NG**

Replace actuator assembly.

### 2 Check stop light switch.



- P** Disconnect stop light switch connector.

**C** Check continuity between terminals.

**OK**

Terminals	1	2	3	4
Switch position				
Switch pin free (Brake pedal depressed)	○—○			
Switch pin pushed in (Brake pedal released)			○—○	

**OK**

**NG**

Replace stop light switch.

### 3 Check for open and short in harness and connectors between ECU and stop light switch, stop light switch and magnet clutch, magnet clutch and body ground. (See page IN-27).

**OK**

**NG**

Repair or replace harness or connector.

Proceed to next circuit inspection shown on matrix chart (See page BE-476).  
However, when diag. code 12 is displayed, check harness and connector for loose connection.  
If connection is normal, check and replace ECU.