

Diag. Code 13

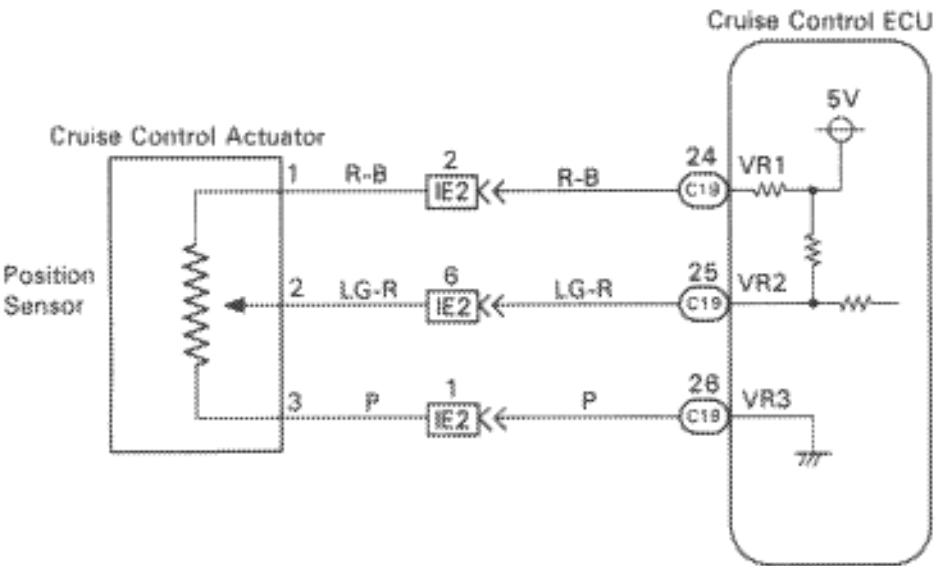
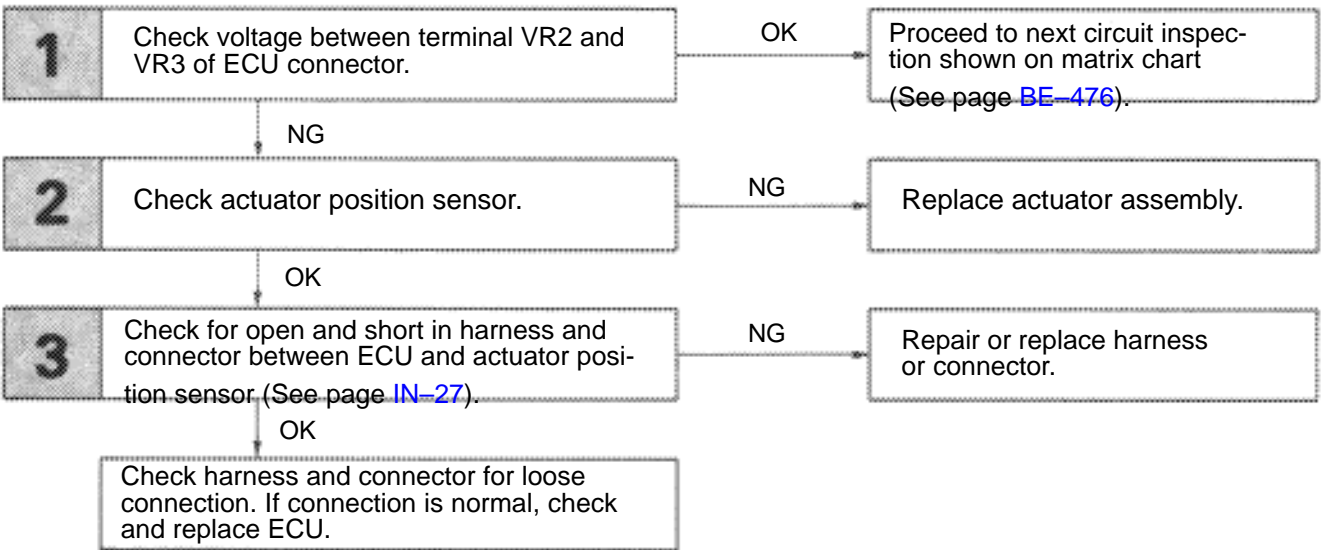
Actuator Position Sensor Circuit

CIRCUIT DESCRIPTION

This circuit detects the rotation of the actuator control plate and sends signal to the ECU.

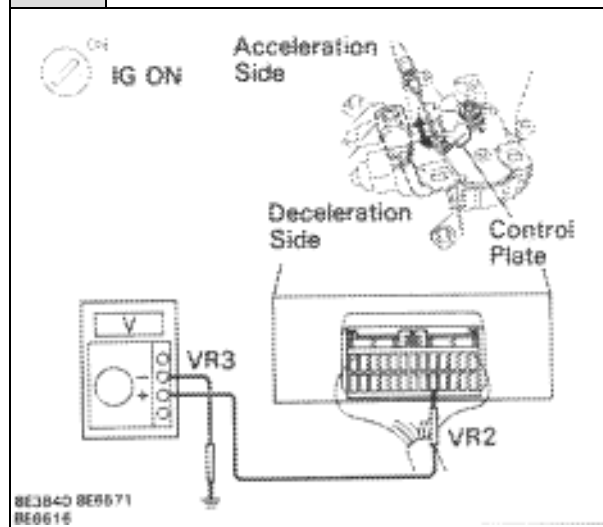
Code No.	Diagnosis	Trouble area
12	<ul style="list-style-type: none">Over current (short) in magnet clutch circuit.Open (0.8 sec) in magnet clutch circuit.	<ul style="list-style-type: none">Cruise control magnet clutch.Harness or connector between ECU and magnet clutch, magnet clutch and body ground.ECU

DIAGNOSTIC CHART



INSPECTION PROCEDURE

1 Check voltage between terminals VR2 and VR3 of ECU connector.



P Remove ECU with connectors still connected.

C

OK

- (1) Turn ignition switch on.
- (2) Measure voltage between terminals VR2 and VR3 of ECU connector while turning control plate slowly by hand from the deceleration side to the acceleration side.

Hint

Voltage:

Fully closed: 0.6 – 1.6 V

Fully opened: 3.4 – 5.1 V

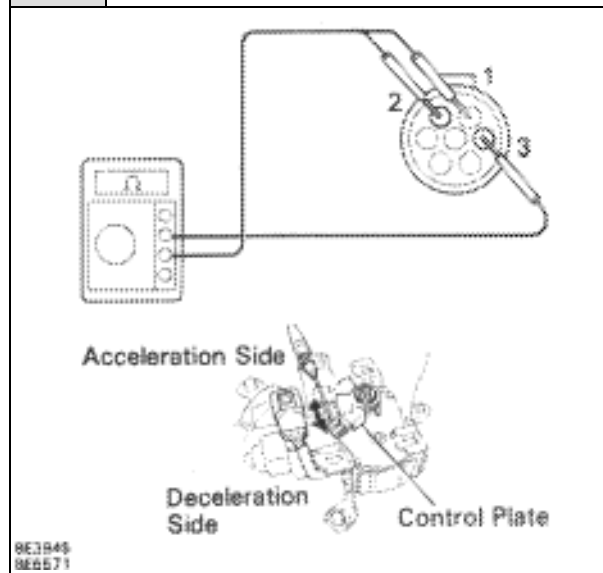
In addition, as the control plate is turned, the voltage should increase gradually without interruption.

NG

OK

Proceed to next circuit inspection shown on matrix chart (See page [BE-476](#)).

2 Check actuator position sensor.



P

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

C

Measure resistance between actuator terminals 1 and 3 of actuator connector.

OK

Resistance: 1.6 – 2.4 kΩ

C

Measure resistance between terminals 2 and 3 of actuator connector, while turning the control plate slowly by hand from the deceleration side to the acceleration side.

OK

Resistance:

Fully closed: 200 – 800 Ω

Fully opened: 1.2 – 2.4 Ω

In addition, as the control plate is turned, the resistance should increase gradually without interruption.

OK

NG

Replace actuator assembly.

3 Check for open and short in harness and connector between ECU and actuator position sensor (See page [IN-27](#)).

OK

NG

Repair or replace harness or connector.

Check harness and connector for loose connection.
If connection is normal check and replace ECU.