

## Electronically Controlled Transmission Communication Circuit

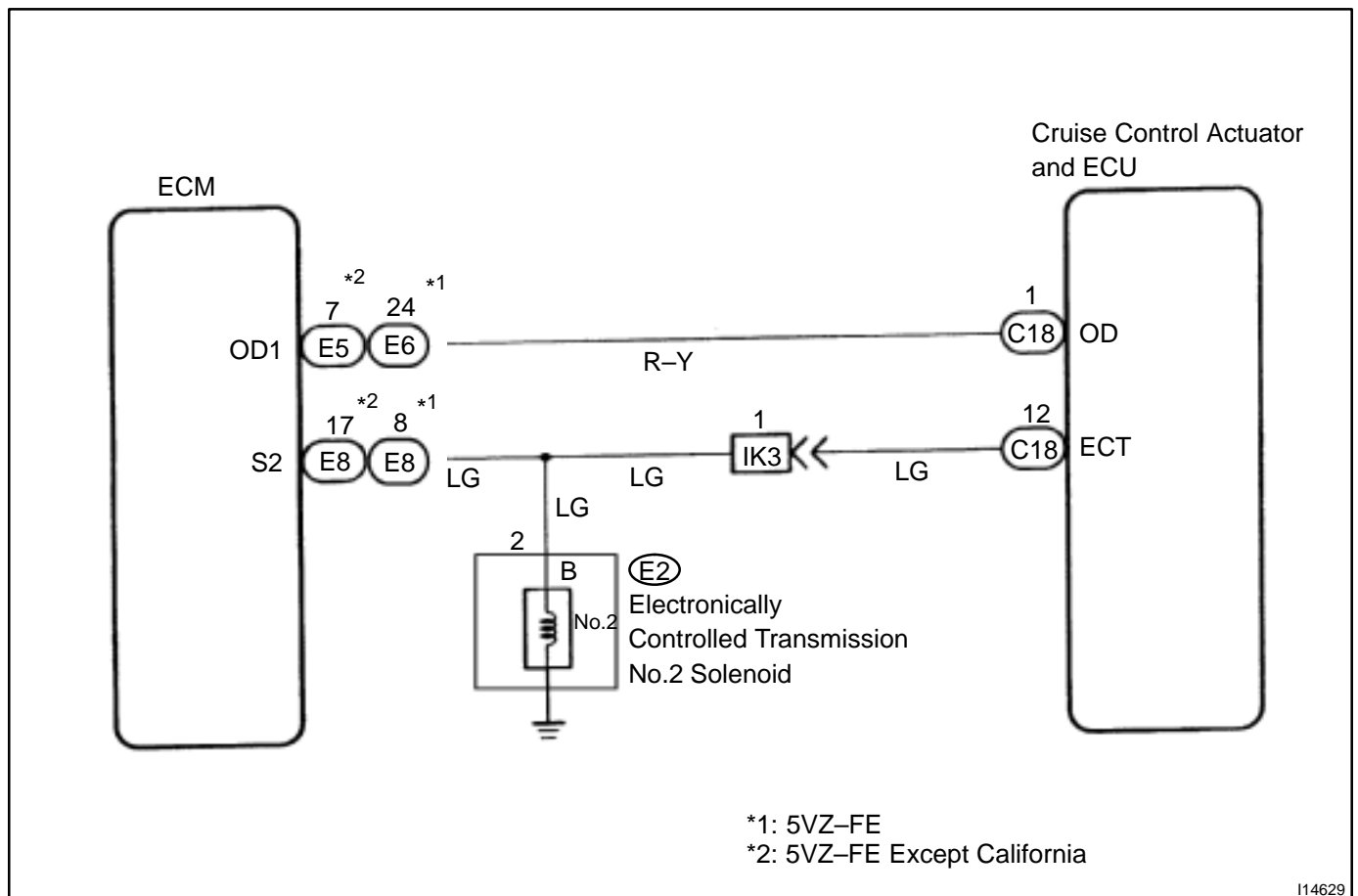
### CIRCUIT DESCRIPTION

When driving uphill under the cruise control, in order to reduce shifting due to ON-OFF overdrive operation and to provide smooth driving, when down shifting in the electronically controlled transmission occurs, a signal to prevent upshift until the end of the up hill slope is sent from the cruise control ECU to the electronically controlled transmission.

Terminal ECM of the cruise control ECU detects the shift change signal (output to electronically controlled transmission No. 2 solenoid) from the electronically controlled transmission.

If vehicle speeds down, also when terminal electronically controlled transmission of the cruise control ECU receives down shifting signal, it sends a signal from terminal OD to ECM to cut overdrive until the end of the uphill slope, and the gear shifts are reduced and gear shift points in the electronically controlled transmission are changed.

### WIRING DIAGRAM



I14629

## INSPECTION PROCEDURE

### 1 Check operation of overdrive.

#### **PREPARATION:**

Test drive after engine warms up.

#### **CHECK:**

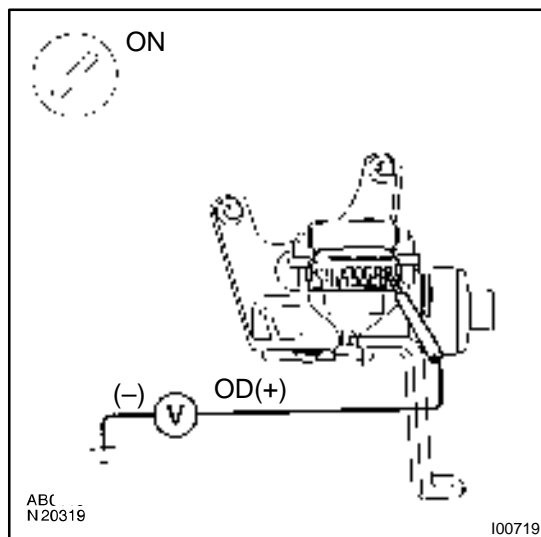
Check that overdrive ON ↔ OFF occurs with operation of OD switch ON–OFF.

**NG**

**Check and repair electronically controlled transmission (See page [DI-340](#)).**

**OK**

### 2 Check voltage between terminal OD of harness side connector of cruise control actuator and ECU and body ground.



#### **PREPARATION:**

Remove cruise control ECU with connector still connected.

#### **CHECK:**

- Disconnect cruise control ECU connector.
- Turn ignition switch ON.
- Measure voltage between terminal OD of harness side connector of cruise control ECU and body ground.

#### **OK:**

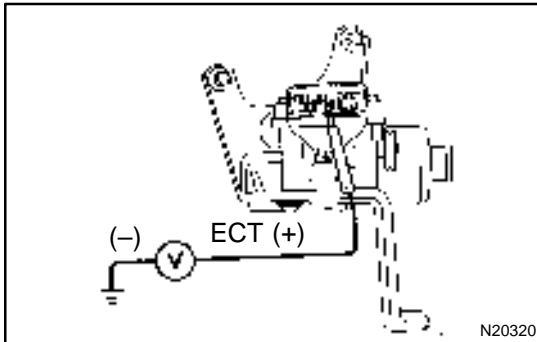
**Voltage: 10 – 14 V**

**NG**

**Go to step 5.**

**OK**

- 3 Check voltage between terminal ECT of cruise control actuator and ECU connector and body ground (On test drive).**

**PREPARATION:**

- (a) Connect cruise control ECU connector.
- (b) Test drive after engine warms up.

**CHECK:**

Check voltage between terminal ECT of cruise control ECU connector and body ground when OD switch is ON and OFF.

**OK:**

OD switch position	Voltage
ON	8 – 14 V
OFF	Below 0.5 V

**OK**

Proceed to next circuit inspection shown on problem symptoms table(See page [DI-621](#)).

**NG**

- 4 Check harness and connector between terminal ECT of cruise control actuator and ECU and electronically controlled transmission solenoid (See page [IN-28](#)).**

**NG**

Repair or replace harness or connector.

**OK**

Check and replace cruise control actuator and ECU (See page [IN-28](#)).

5	Check harness and connector between terminal OD of cruise control actuator and ECU and terminal OD1 of ECM (See page <a href="#">IN-28</a> ).
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**NG**

Repair or replace harness or connector.

**OK**

Check and replace cruise control actuator and ECU (See page [IN-28](#)).