

# ELECTRONICALLY CONTROLLED TRANSMISSION COMMUNICATION CIRCUIT

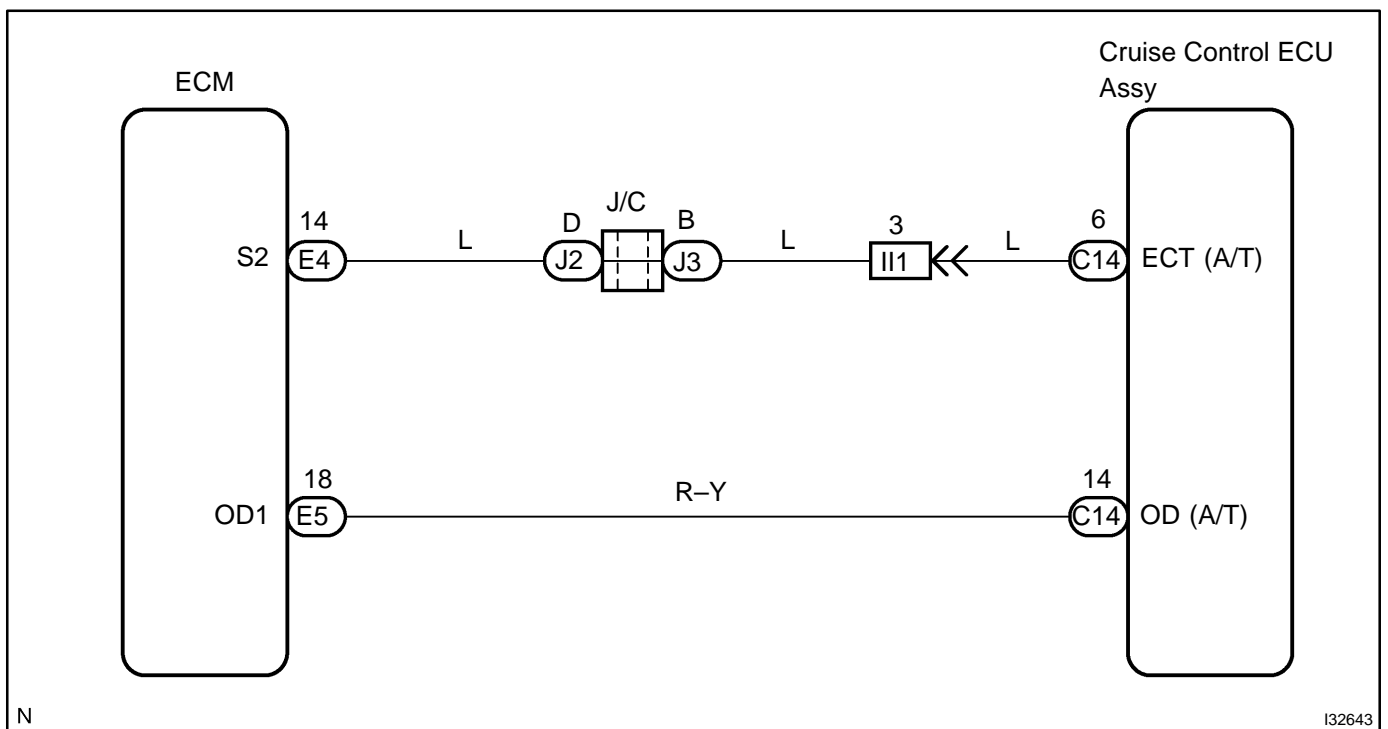
## CIRCUIT DESCRIPTION

When driving uphill under cruise control, in order to reduce the number of 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 uphill slope is sent from the cruise control ECU Assy to the electronically controlled transmission.

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

If the vehicle slows down, also when terminal ECT of the cruise control ECU Assy 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 number of gear shifts are reduced and gear shift points in the electronically controlled transmission are changed.

## WIRING DIAGRAM



## INSPECTION PROCEDURE

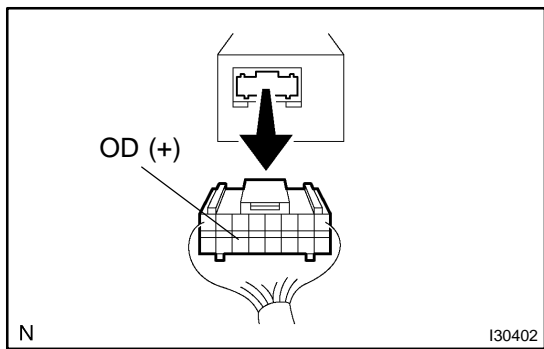
### 1 CHECK OPERATION(OVERDRIVE)

- (a) Drive the vehicle after the engine warms up.
- (b) Check that overdrive ON ↔ OFF occurs by an operation of the O/D switch ON-OFF.

**NO** → GO TO ELECTRONIC CONTROLLED AUTOMATIC TRANSMISSION[ECT]

**YES**

### 2 INSPECT TERMINAL VOLTAGE(OD)



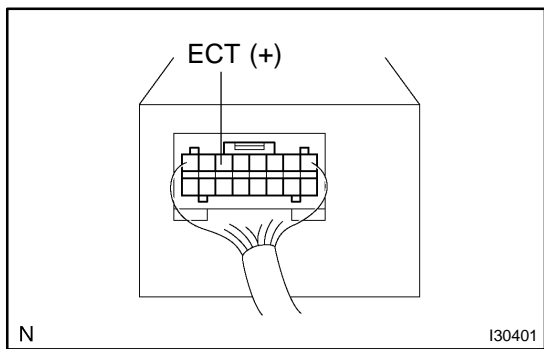
- (a) Remove the cruise control ECU assy with the connector still connected.
- (b) Turn the ignition switch to ON.
- (c) Disconnect the cruise control ECU assy connector.
- (d) Measure voltage between terminal 14 (OD) of harness side connector of cruise control ECU assy and body ground.

**OK:**  
**Voltage: 10 – 14 V**

**NG** → Go to step 5

**OK**

### 3 INSPECT TERMINAL VOLTAGE(ECT)



- (a) Connect the cruise control ECU assy connector.
- (b) Perform the test drive after engine warms up.
- (c) Check voltage between terminal 6 (ECT) of cruise control ECU assy connector and body ground when O/D switch is ON and OFF.

**OK:**

O/D Switch Position	Voltage
ON	Below 0.5 V
OFF	8 – 16 V

**OK** → PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE (See page 05-754)

**NG**

**4 CHECK HARNESS AND CONNECTOR(BETWEEN CRUISE CONTROL ECU ASSY AND ELECTRONICALLY CONTROLLED TRANSMISSION SOLENOID)**

- (a) Check for open and short circuit in harness and connector between cruise control ECU assy and electronically controlled transmission solenoid (See page 01-30).

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****CHECK AND REPLACE CRUISE CONTROL ECU ASSY (See page 01-30)****5 CHECK HARNESS AND CONNECTOR(BETWEEN CRUISE CONTROL ECU ASSY AND ECM)**

- (a) Check for open and short circuit in harness and connector between cruise control ECU assy and ECM (See page 01-30).

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****CHECK AND REPLACE CRUISE CONTROL ECU ASSY (See page 01-30)**