

<b>DTC</b>	<b>P1656</b>	<b>OCV Circuit Malfunction (Bank 1)</b>
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<b>DTC</b>	<b>P1663</b>	<b>OCV Circuit Malfunction (Bank 2)</b>
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## CIRCUIT DESCRIPTION

Refer to DTCs P1349 and P1354 on page [DI-310](#).

DTC No.	DTC Detecting Condition	Trouble Area
P1656 P1663	Open or short in OCV circuit	<ul style="list-style-type: none"> <li>• Open or short in OCV circuit</li> <li>• OCV</li> <li>• ECM</li> </ul>

## WIRING DIAGRAM

Refer to DTCs P1349 and P1354 on page [DI-310](#).

## INSPECTION PROCEDURE

### HINT:

- If DTC P1656 displayed, check left bank OCV circuit.
- If DTC P1663 displayed, check right bank OCV circuit.
- Read freeze frame data using LEXUS hand-held tester or OBD II scan tool. Because freeze frame records the engine conditions when the malfunction is detected. When troubleshooting, it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.

### LEXUS hand-held tester:

<b>1</b>	<b>Check OCV circuit.</b>
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### PREPARATION:

- Start the engine and warmed it up.
- Connect the LEXUS hand-held tester and select the VVT from the ACTIVE TEST menu.

### CHECK:

Check the engine speed when operate the OCV by the LEXUS hand-held tester.

### OK:

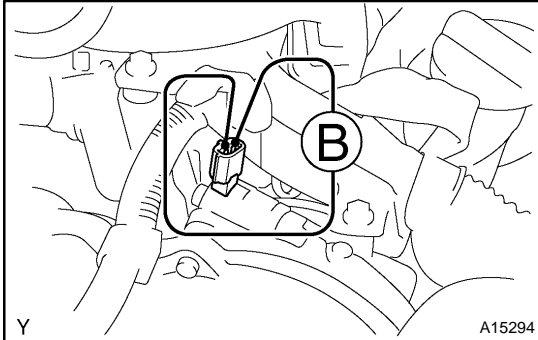
**VVT system is OFF (OCV is OFF): Normal engine speed**

**VVT system is ON (OCV is ON): Rough idle or engine stalled**

**OK**

**Check for intermittent problems  
(See page [DI-173](#)).**

**NG**

**2 Check operation of OCV.****PREPARATION:**

- (a) Start the engine and warmed it up.
- (b) Disconnect the OCV connector.
- (c) Apply battery positive voltage between the terminals of the OCV.

**CHECK:**

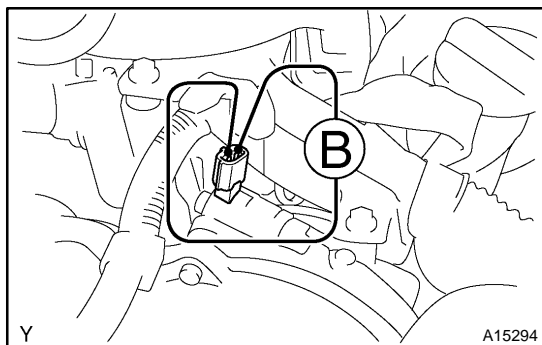
Check the engine speed.

**OK:**

Rough idle or engine stalled.

**NG****Replace OCV.****OK****3 Check voltage between terminals OCV+ and OCV– of ECM connector (See page [DI-310](#)).****NG****Check and replace ECM (See page [IN-32](#)).****OK****4 Check for open and short in harness and connector between OCV and ECM (See page [IN-32](#)).****NG****Repair or replace harness or connector.****OK**

**Check for intermittent problems  
(See page [DI-173](#)).**

**OBD II scan tool (excluding LEXUS hand-held tester):****1 Check operation of OCV.****PREPARATION:**

- (a) Start the engine and warmed it up.
- (b) Disconnect the OCV connector.
- (c) Apply battery positive voltage between the terminals of the OCV.

**CHECK:**

Check the engine speed.

**OK:**

Rough idle or engine stalled

NG

Replace OCV.

OK

**2 Check voltage between terminals OCV+ and OCV– of ECM connector (See page [DI-310](#)).**

NG

Check and replace ECM (See page [IN-32](#)).

OK

**3 Check for open and short in harness and connector between OCV and ECM (See page [IN-32](#)).**

NG

Repair or replace harness or connector.

OK

Check for intermittent problems  
(See page [DI-173](#)).