DI2SQ–04

DTC	P1656/39	OCV Circuit Malfunction (bank 1)

CIRCUIT DESCRIPTION

Refer to DTC P1349/39 (VVT System Malfunction) on page DI–133.

DTC No.	DTC Detecting Condition	Trouble Area
P1656/39	Open or short in oil control valve circuit	• Open or short in oil control valve circuit • Oil control valve • Engine ECU

WIRING DIAGRAM

Refer to DTC P1349/39 (VVT System Malfunction) on page DI–133.

INSPECTION PROCEDURE

HINT:

Read freeze frame data using hand–held tester. 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 warmed up or not, the air–fuel ratio lean or rich, etc. at the time of the malfunction.

When using hand–held tester

1	**Check OCV circuit.**

PREPARATION:

(a) Start the engine and warmed it up.

(b) Connect the hand–held tester and select VVT from ACTIVE TEST menu.

CHECK:

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

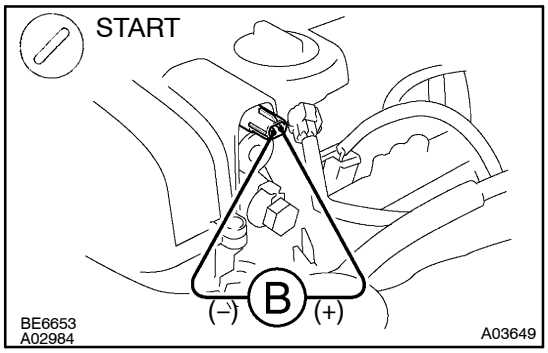
OK:

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–4).**

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 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 engine ECU connector (See page DI–133, step 3).

NG → Check and replace engine ECU (See page IN–34).

OK

4	Check for open and short in harness and connector between OCV and engine ECU (See page IN–34).

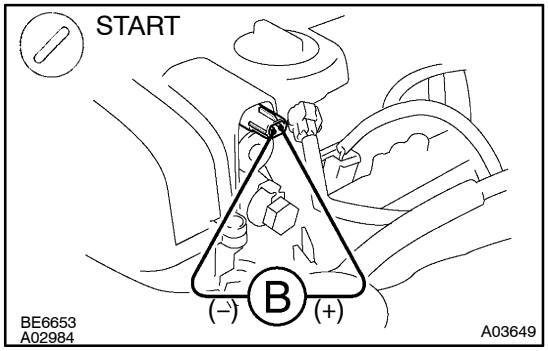
NG → Repair or replace.

OK

Check for intermittent problems (See page DI–4).

When not using 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 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 engine ECU connector (See page DI–133, step 3).

NG → Check and replace engine ECU (See page IN–34).

OK

3	Check for open and short in harness and connector between OCV and engine ECU (See page IN–34).

NG → Repair or replace.

OK

Check for intermittent problems (See page DI–4).