

DTC	34 (2)	Turbocharger system malfunction
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DTC	34 (3)	Turbocharger stick detected (Close)
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DTC	34 (4)	Turbocharger stick detected (Open)
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CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
34 (2)	When the condition that the turbocharger pressure exceeds the standard value for 0.5 sec. or more is detected.	• VNT valve • Turbocharger • EGR valve • Air flow meter • Engine ECU
34 (3) (4)	When the condition that for 60 sec. or more the turbocharger pressure is 20 kPa (0.2 kgf/cm ² , 1.4 psi) or more above the value that is set based on the engine revolution and the amount of fuel injection is detected.	

INSPECTION PROCEDURE

HINT:

If DTC 35 is output simultaneously, first troubleshoot DTC 35.

When using hand-held tester:

1	Check connection of vacuum hose.
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NG

Repair or replace.

OK

2 Check vacuum between turbocharger and E-VRV for intake pressure change at 900 rpm.

PREPARATION:

- Using a 3-way connector, connect a vacuum gauge to the hose between the E-VRV and turbocharger.
- Warm up the engine to above 80°C (176°F).

CHECK:

Check the vacuum at 900 rpm.

RESULT:

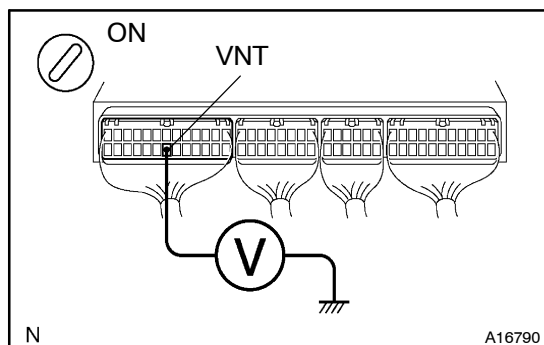
Type	Vacuum
I	0 kPa (0 mmHg, in. Hg) – 50 kPa (375 mmHg, 14.8 in. Hg)
II	Above 50 kPa (375 mmHg, 14.8 in. Hg)

Type II

Go to step 7.

Type I

3 Check voltage between terminal VNT of engine ECU connector and body ground.



PREPARATION:

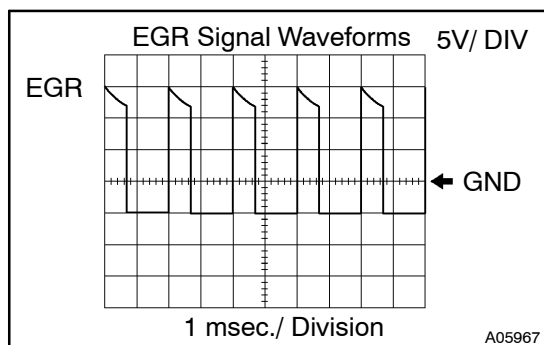
- Remove the glove compartment door.
- Turn the ignition switch ON.

CHECK:

Measure the voltage between terminal VNT of the engine ECU connector and body ground.

OK:

Voltage: 9 – 14 V



Reference: INSPECTION USING OSCILLOSCOPE

During EGR system is ON (engine speed 900 rpm), check the waveform between terminals VNT and E1 of engine ECU connector.

HINT:

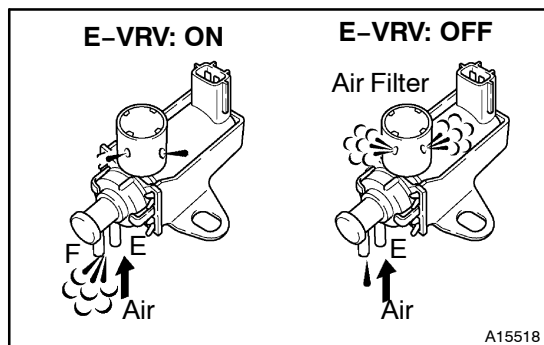
The correct waveform is as shown.

NG

Go to step 5.

OK

4 Check operation of E-VRV for intake pressure change.



PREPARATION:

- Disconnect the vacuum hoses from the E-VRV.
- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON and the push hand-held tester main switch ON.
- Select the ACTIVE TEST mode on the hand-held tester.

CHECK:

Check the operation of the E-VRV when it is operated by the hand-held tester.

OK:

E-VRV ON:

Air from port E flows out through port F.

E-VRV OFF:

Air from port E flows out through air filter.

OK

Go to step 7.

NG

5 Check E-VRV for intake pressure change ([See page TC-15](#)).

NG

Replace E-VRV.

OK

6 Check for open and short in harness and connector between E-VRV and engine ECU, and E-VRV and EFI main relay (Marking : EFI) ([See page IN-19](#)).

NG

Repair or replace harness or connector.

OK

7	Check turbocharger assembly (See page TC-1).
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NG	Replace turbocharger.
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OK

8	Check EGR valve (See page EC-2).
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NG	Replace EGR valve.
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OK

9	Check air flow meter (See page DI-26).
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NG	Replace air flow meter.
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OK

Check and replace engine ECU (See page IN-19).
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When not using hand-held tester:

1	Check the connection of vacuum hose.
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NG	Repair or replace.
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OK

- 2 Check vacuum between turbocharger and E-VRV for intake pressure change at 900 rpm.**

PREPARATION:

- (a) Using a 3-way connector, connect a vacuum gauge to the hose between the E-VRV and turbocharger.
 (b) Warm up the engine to above 80°C (176°F).

CHECK:

Check the vacuum at 900 rpm.

RESULT:

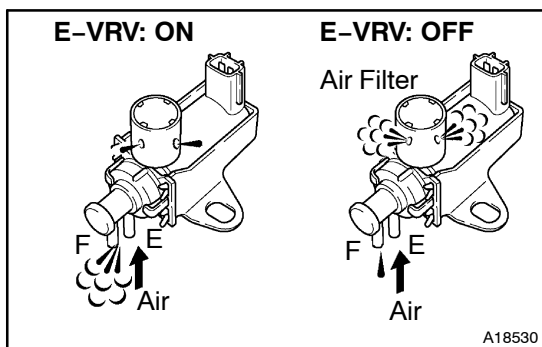
Type	Vacuum
I	0 kPa (0 mmHg, in. Hg) – 50 kPa (375 mmHg, 14.8 in. Hg)
II	Above 50 kPa (375 mmHg, 14.8 in. Hg)

Type II

Go to step 6.

Type I

- 3 Check operation of E-VRV.**

**PREPARATION:**

- (a) Remove the glove compartment door.
 (b) Disconnect the E3 connector from the engine ECU.
 (c) Turn the ignition switch ON.

CHECK:

Check the E-VRV operation.

- (1) Connect between terminal VNT of the engine ECU connector and body ground (ON).
 (2) Disconnect between terminal VNT of the engine ECU connector and body ground (OFF).

OK:**E-VRV ON:**

Air from port E flows out through port F.

E-VRV OFF:

Air from port E flows out through air filter.

OK

Go to step 6.

NG

4	Check E–VRV for intake pressure change (See page ED–10).
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NG	Replace E–VRV.
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OK

5	Check for open and short in harness and connector between E–VRV and engine ECU, and E–VRV and EFI main relay (Marking : EFI) (See page IN–19).
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NG	Repair or replace harness or connector.
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OK

6	Check turbocharger assembly (See page TC–1).
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NG	Replace turbocharger.
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OK

7	Check EGR valve (See page EC–2).
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NG	Replace EGR valve.
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OK

8 Check air flow meter ([See page DI-26](#)).

NG

Replace air flow meter.

OK

Check and replace engine ECU ([See page IN-19](#)).