

<b>DTC</b>	<b>P2430</b>	<b>Secondary Air Injection System Air Flow/Pressure Sensor Circuit Bank 1</b>
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<b>DTC</b>	<b>P2431</b>	<b>Secondary Air Injection System Air Flow/Pressure Sensor Circuit Range/Performance Bank 1</b>
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<b>DTC</b>	<b>P2432</b>	<b>Secondary Air Injection System Air Flow/Pressure Sensor Circuit Low Bank 1</b>
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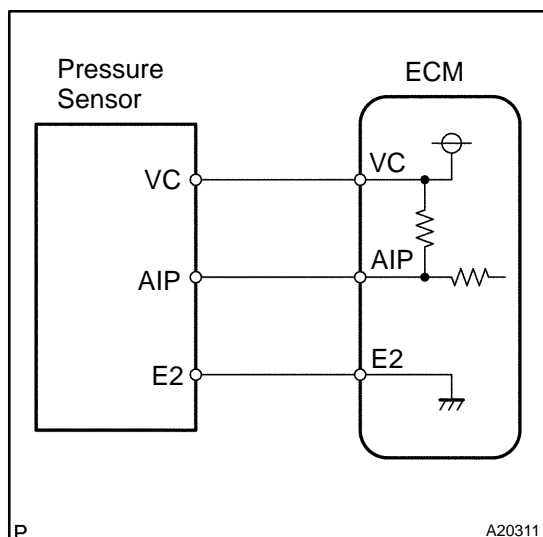
<b>DTC</b>	<b>P2433</b>	<b>Secondary Air Injection System Air Flow/Pressure Sensor Circuit High Bank 1</b>
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## CIRCUIT DESCRIPTION

Refer to DTC P0412 on page [DI-656](#).

DTC No.	DTC Detecting Condition	Trouble Area
P2430	While the engine is running, if voltage output of the pressure sensor indicates 0.1V or less, or indicates 4.815V or more. (1 trip detection logic)	<ul style="list-style-type: none"> <li>• Pressure sensor</li> <li>• Open or short in pressure sensor circuit</li> <li>• ECM</li> </ul>
P2431	The pressure sensor indicates less than 45.63 kPa (342 mmHg), or more than 135 kPa (1013 mmHg). (1 trip detection logic)	
P2432	While the engine is running, if voltage output of pressure sensor remains below 0.1 V. (1 trip detection logic)	
P2433	While the engine is running, if voltage output of the pressure sensor remains above 4.815 V. (1 trip detection logic)	

## MONITOR DESCRIPTION



The ECM observes the pressure in the secondary air passage using the pressure sensor located on the air switching valve in the secondary air injection system.

If there is a defect in the sensor or the sensor circuit, the voltage level will deviate from the normal operating range, the ECM interprets this deviation as a defect in the pressure sensor circuit and sets a DTC.

## MONITOR STRATEGY

Related DTCs	P2430	Air flow/Pressure sensor circuit range check (Fluctuating)
	P2431	Air flow/Pressure sensor circuit rationality
	P2432	Air flow/Pressure sensor circuit range check (Low voltage)
	P2433	Air flow/Pressure sensor circuit range check (High voltage)
Required sensors/components	Pressure sensor	
Frequency of operation	Continuous	
Duration	P2430, P2432, P2433: 0.5 sec. P2431: 5 sec.	
MIL operation	P2430, P2432, P2433: Immediate P2431: 2 driving cycles	
Sequence of operation	None	

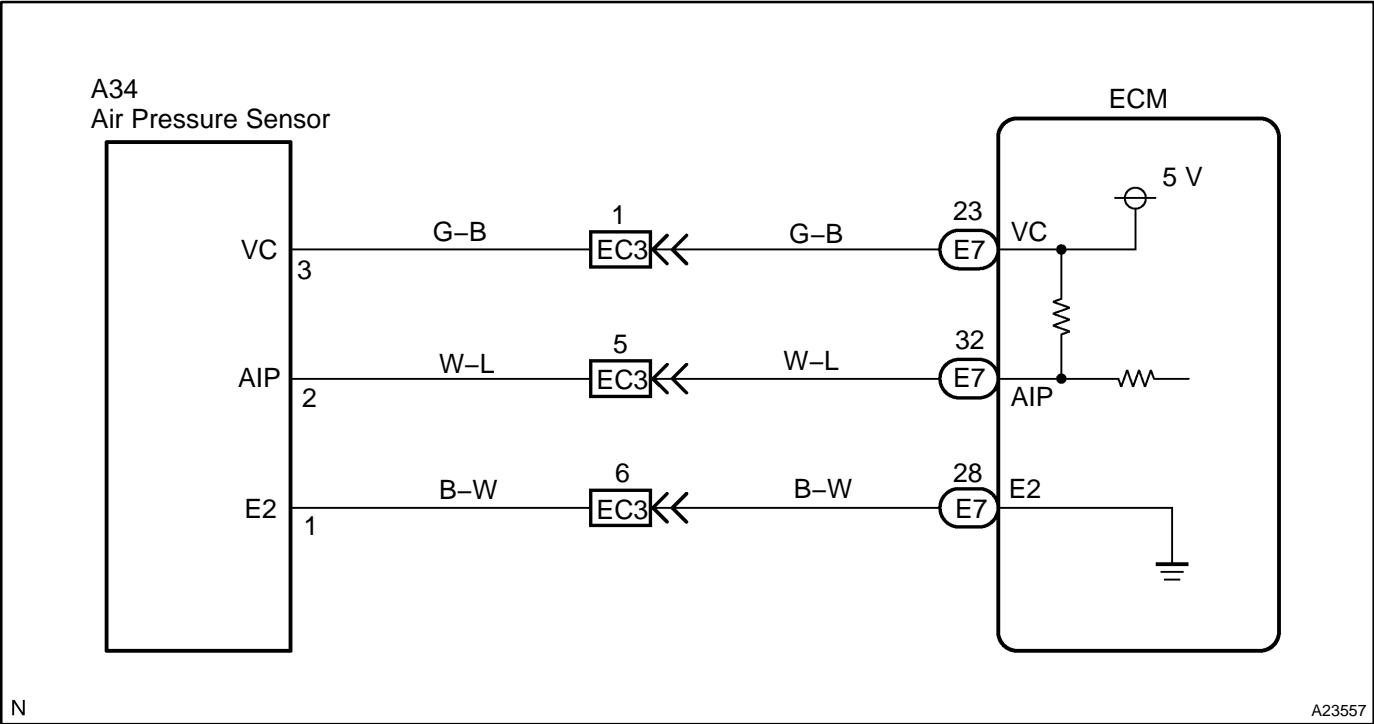
## TYPICAL ENABLING CONDITIONS

Item	Specification	
	Minimum	Maximum
The monitor will run whenever these DTCs are not present	See page <a href="#">DI-437</a>	
Starter	OFF	
Time after starter turned from ON to OFF	2 sec.	–
Battery voltage	8 V	–
Ignition switch	ON	

## TYPICAL MALFUNCTION THRESHOLDS

Detection Criteria	Threshold
<b>P2430:</b>	
Air pressure sensor voltage	Less than 0.1 V, or more than 4.815 V
<b>P2431:</b>	
Air pressure	Less than 45.63 kPa (342 mmHg), or more than 135 kPa (1013 mmHg)
<b>P2432:</b>	
Air pressure sensor voltage	Less than 0.1 V
<b>P2433:</b>	
Air pressure sensor voltage	More than 4.815 V

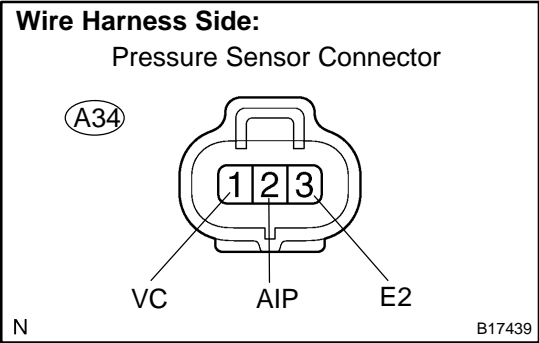
WIRING DIAGRAM



INSPECTION PROCEDURE

1

Check for open and short in harness and connector between pressure sensor and ECM (See page [IN-30](#)).



PREPARATION:

- (a) Remove the intake manifold (see page [EM-36](#)).
- (b) Disconnect the A34 pressure sensor connector.
- (c) Disconnect the E7 ECM connector.

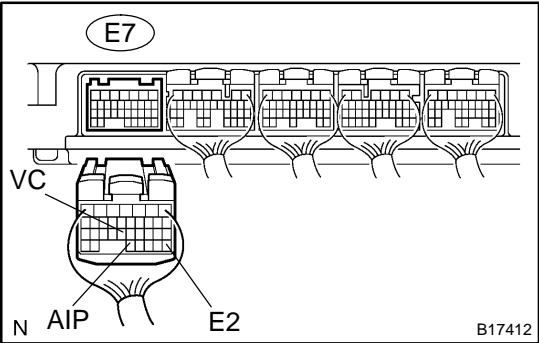
CHECK:

Measure the resistance between the wire harness side connectors.

OK:

Standard:

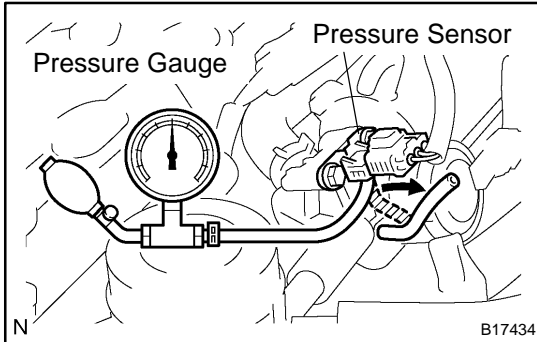
Tester Connection	Specified Condition
VC (A34-1) – VC (E7-23) AIP (A34-2) – AIP (E7-32) E2 (A34-3) – E2 (E7-28)	Below 1 Ω
VC (A34-1) or VC (E7-23) – Body ground AIP (A34-2) or AIP (E7-32) – Body ground	10 kΩ or higher



NG

Repair or replace harness and connector.

OK

**2****Inspect pressure sensor.****PREPARATION:**

- (a) Remove the intake manifold (see page [EM-36](#)).
- (b) Connect the pressure gauge to the pressure sensor as shown in the illustration.
- (c) Connect the hand-held tester to the DLC3 on the vehicle.
- (d) Turn the ignition switch ON and push the hand-held tester main switch ON (Do not start engine).
- (e) Select the following items: DIAGNOSIS / ENHANCED OBD II / DATA LIST / 2ND AIR PRESS.

**CHECK:**

Check that the pressure displayed on the hand-held tester fluctuates when applying the pressure to the pressure sensor with the pressure gauge.

**OK:**

**Pressure fluctuates in response to the pressure applied with pressure gauge.**

**NG****Replace pressure sensor (See page [EC-20](#)).****OK****Replace ECM (See page [SF-82](#)).**