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| DTC | P1431 | Vacuum Sensor for HC Adsorber and Catalyst System Circuit Range/Performance Problem |
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CIRCUIT DESCRIPTION

Refer to DTC P1430 on page [DI-132](#).

| DTC No. | DTC Detecting Condition | Trouble Area |
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| P1431 | Conditions (a), (b), (c) and (d) continue with more than 10 seconds: (2 trip detection logic) (b) PIM > 3.96 V (c) VSV for HC Adsorber and Catalyst System is ON (d) Engine speed is 1,000 rpm or more (e) THW \geq 0°C (32°F) | <ul style="list-style-type: none"> • Vacuum sensor for HC adsorber and catalyst system • Vacuum line |
| | Conditions (a), (b) and (c) continue with more than 10 second: (2 trip detection logic) (a) PIM < 1.2 V (b) Engine stopped (c) VSV for HC Adsorber and Catalyst System is OFF (d) THW \geq 0°C (32°F) | |

INSPECTION PROCEDURE

HINT:

- If DTCs P1430, P1431, P0110, P0115, P0116, P0120, P0121 are output simultaneously, E2 (sensor ground) may be open.
- 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 was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.
- When a bypass valve has a trouble, it is possible that DTC P1341 will be detected ahead of DTC P1436, and P1437, so in case that P1431 even if they are not memorized.

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| 1 | Are there any other codes (besides DTC P1431) being output? |
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YES

Go to relevant DTC chart (See page [DI-14](#)).

NO

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| 2 | Check vacuum sensor for HC adsorber and catalyst system (See page SF-51). |
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| NG | Replace vacuum sensor. |
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| OK |
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| Check vacuum line for vacuum sensor for blockage. |
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