SHOPKEY.PRO

2002 Chevrolet Blazer 4.3L Eng VIN W

Print Date: 8/18/2019

CRANKSHAFT POSITION SENSOR

NOTE: *For additional diagnostic information, see DTC P0336: CRANKSHAFT POSITION SENSOR CIRCUIT PERFORMANCE.*

1. Install a scan tool.
2. With a scan tool, monitor the powertrain control module for DTCs. If other DTCs are set, except DTC P1336, see DIAGNOSTIC TROUBLE CODE DEFINITIONS.
3. With a scan tool, select the crankshaft position variation learn procedure.
4. Observe the fuel cut-off for the engine that you are performing the learn procedure on.
5. The scan tool instructs you to perform the following:
    1. Block the drive wheels.
    2. Apply the vehicles parking brake.
    3. Cycle the ignition from OFF to ON.
    4. Apply and hold the brake pedal.
    5. Start and idle the engine.
    6. Turn OFF the A/C.
    7. Place the vehicle's transmission in Park (A/T) or Neutral (M/T).
    8. The scan tool monitors certain component signals to determine if all the conditions are met to continue with the procedure. The scan tool only displays the condition that inhibits the procedure. The scan tool monitors the following components:
        A. Crankshaft position (CKP) sensor activity. If there is a CKP sensor condition, refer to the applicable DTC that set. See DIAGNOSTIC TROUBLE CODE DEFINITIONS.
        B. Camshaft position (CMP) sensor activity. If there is a CMP sensor condition, refer to the applicable DTC that set. See DIAGNOSTIC TROUBLE CODE DEFINITIONS.
        C. Engine Coolant Temperature (ECT). If the engine coolant temperature is not warm enough, idle the engine until the engine coolant temperature reaches the correct temperature.
6. With the scan tool, enable the crankshaft position system variation learn procedure.
7. Slowly increase the engine speed to the RPM that you observed.

NOTE: *While the learn procedure is in progress, release the throttle immediately when the engine starts to decelerate. The engine control is returned to the operator and the engine responds to throttle position after the learn procedure is complete.*

8. Immediately release the throttle when fuel cut-off is reached.

9. The scan tool displays Learn Status: Learned this ignition. If the scan tool does NOT display this message and no additional DTCs set, see DIAGNOSTIC SYSTEM CHECK - ENGINE CONTROLS under SELF-DIAGNOSTIC SYSTEM. If a DTC set, see DIAGNOSTIC TROUBLE CODE DEFINITIONS.
10. Turn OFF the ignition for 30 seconds after the learn procedure is completed successfully.

CRANKSHAFT POSITION SENSOR SYSTEM VARIATION LEARN PROCEDURE

Avalanche, Astro, Aztek, Blazer, Bravada, Cab & Chassis - 8.1L, Chevy Express - 4.3L, 5.0L, 5.7L & 8.1L, Cutaway - 5.7L & 8.1L, Envoy, Envoy XL, Escalade, Escalade EXT, Jimmy Canadian, Montana, Rendezvous, RV Cutaway - 5.7L & 8.1L, S10 Pickup, Safari, Savana - 4.3L, 5.0L, 5.7L & 8.1L, Savana Camper Special -5.7L & 8.1L, Savana Special - 5.7L & 8.1L, Sierra - 4.3L, 4.8L, 5.3L, 6.0L & 8.1L, Silhouette, Silverado - 4.3L, 4.8L, 5.3L, 6.0L & 8.1L, Sonoma, Suburban, Tahoe, Trailblazer, Venture, Yukon & Yukon XL

CAUTION: *Before performing Crankshaft Position Sensor (CKP) system variation learn procedure, always set parking brake and block drive wheels in order to prevent personal injury. Release throttle immediately when engine starts to decelerate in order to eliminate over revving engine. Once learn procedure has been completed, control module will return engine control to operator and engine will respond to throttle position.*

NOTE: *For additional diagnostic information, see appropriate SELF-DIAGNOSTICS article.*

1. Install a scan tool.
2. With a scan tool, monitor the powertrain control module for DTCs. If other DTCs are set, except DTC P1336, see appropriate SELF-DIAGNOSTICS article.
3. With a scan tool, select the crankshaft position variation learn procedure.
4. Observe the fuel cut-off for the engine that you are performing the learn procedure on.
5. The scan tool instructs you to perform the following:
    1. Block the drive wheels.
    2. Apply the vehicles parking brake.
    3. Cycle the ignition from OFF to ON.
    4. Apply and hold the brake pedal.
    5. Start and idle the engine.
    6. Turn OFF the A/C.
    7. Place the vehicle's transmission in Park (A/T) or Neutral (M/T).
    8. The scan tool monitors certain component signals to determine if all the conditions are met to continue with the procedure. The scan tool only displays the condition that inhibits the procedure. The scan tool monitors the following components:

A. Crankshaft Position (CKP) sensor activity. If there is a CKP sensor condition, refer to the applicable DTC that set. See appropriate SELF-DIAGNOSTICS article.
B. Camshaft Position (CMP) sensor activity. If there is a CMP sensor condition, refer to the applicable DTC that set. See appropriate SELF-DIAGNOSTICS article.
C. Engine Coolant Temperature (ECT). If the engine coolant temperature is not warm enough, idle the engine until the engine coolant temperature reaches the correct temperature.

6. With the scan tool, enable the crankshaft position system variation learn procedure.
7. Slowly increase the engine speed to the RPM that you observed.

NOTE: *While the learn procedure is in progress, release the throttle immediately when the engine starts to decelerate. The engine control is returned to the operator and the engine responds to throttle position after the learn procedure is complete.*

8. Immediately release the throttle when fuel cut-off is reached.
9. The scan tool displays Learn Status: Learned this ignition. If the scan tool does NOT display this message and no additional DTCs set, see appropriate SELF-DIAGNOSTICS article. If a DTC set, see appropriate SELF-DIAGNOSTICS article.
10. Turn OFF the ignition for 30 seconds after the learn procedure is completed successfully.

Vue - 2.2L

1. Start engine and allow ECT to reach more than 158°F (70°C).
2. Turn A/C off and place transaxle in Park or Neutral.
3. Using scan tool, perform CRANKSHAFT POS. VARIATION LEARN procedure.

Procedure requires accelerator to be depressed to wide open throttle and then released. ECM will cut fuel off at speeds more than 4000 RPM and will allow engine to decelerate. ECM will learn crankshaft as engine decelerates.
If ECM will not learn crankshaft, see EXCESSIVE CRANKSHAFT VARIATION SYMPTOM table for diagnostic aids.
EXCESSIVE CRANKSHAFT VARIATION SYMPTOM

Scan Tool Display	Possible Causes
Factors Out Of Range	Reluctor Wheel Machining Quality, Run Out, Incorrect Air Gap
Opposing Factors Out Of Range	Disturbance Or Noise In Crank Sensor Circuit
Sum Out Of Range	Engine Too Cold
Crank Pulse Count Error	Cam Or Crank Sensor DTC Set