

2022 CHEVROLET CORVETTE SERVICE MANUAL

- **SEARCH**

1. **Engine/Propulsion**
2. **Engine Controls and Fuel - 6.2L (LT2)**
3. **Repair Instructions**
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Crankshaft Position Variation Learn

Diagnostic Instructions

- Perform the Diagnostic System Check prior to using this diagnostic procedure: Diagnostic System Check - Vehicle
- Review the description of Strategy Based Diagnosis: Strategy Based Diagnosis

Description

The crankshaft position sensor variation or reluctor ring learn is used to calculate reference period errors caused by slight tolerance variations in the crankshaft and the crankshaft position sensor. The calculated error allows the ECM to accurately compensate for reference period variations. This enhances the ability of the ECM to detect misfire events over a wider range of engine speed and load. The compensation values are stored in ECM memory after a learn procedure has been performed.

When to Perform the Procedure

Note :

Failure to perform this procedure may result in poor system performance, DTCs being set, or customer dissatisfaction.

Perform this procedure when the following component has been serviced:

- B26 Crankshaft Position Sensor
- Any repair which disturbs the alignment between the components: B26 Crankshaft Position Sensor & Crankshaft
- Crankshaft
- Crankshaft Balancer
- Engine Assembly

Conditions for Running the Procedure

- DTC P0117, P0118, P0335, P0336
- ECT = Greater than 60°C (140°F)
- Ignition Voltage = Greater than 11 V

Reference Information

Scan Tool Reference

Control Module References

With Scan Tool

1. Ignition >> On / Vehicle >> In Service Mode
2. Verify there are no other DTCs set, except for DTC P0300, P0308, P0315
3.
 - If any other DTCs are set
 - Refer to: Diagnostic Trouble Code (DTC) List - Vehicle

4.
 - **If no other DTCs are set**
5. Select: Module Diagnostics
6. Select: Body Control Module
7. Select: Configuration/Reset Functions
8. Select: Brake Pedal Position Sensor Learn
9. Follow the instructions on the scan tool.
10. Verify the scan tool parameter: Brake Pedal Position Sensor Learn = Yes
11.
 - **If not the specified state**
 - Repeat step 6>
12.
 - **If the specified state**
13. Select: Module Diagnostics
14. Select: Engine Control Module
15. Select: Configuration/Reset Functions
16. Select: Learn Functions
17. Select: Crankshaft Position Variation Learn
18. Follow the instructions on the scan tool.
19. Verify the scan tool procedure was successful.
20.
 - **If the procedure was not successful and first time here**
21.
 1. Ignition/Vehicle >> Off
 2. Verify the following conditions do not exist:
22.
 - B26 Crankshaft Position Sensor & Reluctor Ring - Foreign material passing between the components / Incorrect air gap
 - Battery Voltage - Low
 - Crankshaft Bearing - Worn
 - Crankshaft - Excessive runout / Visible Damage
 - Reluctor Ring - Misaligned / Visible Damage
 - Signal circuit @ B26 Crankshaft Position Sensor - Electromagnetic Interference
 - - If a condition exists >> Repair or replace as necessary
 - If no condition exists >> Repeat step 8>
23.
 - **If the procedure was not successful and performed 4> times or less**

- If the procedure was not successful and performed 7 times or less

- Repeat step 12
- **If the procedure was not successful and performed 5> times**
- Replace the component: K20 Engine Control Module

24.

- **If the procedure was successful**

25. All OK.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair: Diagnostic Repair Verification

For control module replacement, programming, and setup refer to: Control Module References

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