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## 2018 Ford Edge Service and Repair Manual

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- Mechanical concern
- Suspect sensor concern

**Pinpoint Test Steps available in the on-line Workshop Manual.**

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Sample

PCM (powertrain control module)	P0013:00	B Camshaft Position Actuator A Control Circuit/Open Bank 1: No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0014:00	B Camshaft Position Timing - Over-Advanced (Bank 1): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0015:00	B Camshaft Position Timing - Over-Retarded (Bank 1): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0016:00	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor A): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0017:00	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0018:00	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor A): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0019:00	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor B): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0020:00	A Camshaft Position Actuator A Control Circuit/Open Bank 2: No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0021:00	A Camshaft Position Timing - Over-Advanced (Bank 2): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0022:00	A Camshaft Position Timing - Over-Retarded (Bank 2): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P0023:00	B Camshaft Position Actuator A Control Circuit/Open Bank 2: No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>

PCM (powertrain control module)	P052B:00	Cold Start Intake A Camshaft Position Timing Over-Retarded (Bank 1): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P052C:00	Cold Start Intake A Camshaft Position Timing Over-Advanced (Bank 2): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P052D:00	Cold Start Intake A Camshaft Position Timing Over-Retarded (Bank 2): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P054A:00	Cold Start Exhaust B Camshaft Position Timing Over-Advanced (Bank 1): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P054B:00	Cold Start Exhaust B Camshaft Position Timing Over-Retarded (Bank 1): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P054C:00	Cold Start Exhaust B Camshaft Position Timing Over-Advanced (Bank 2): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>
PCM (powertrain control module)	P054D:00	Cold Start Exhaust B Camshaft Position Timing Over-Retarded (Bank 2): No Sub Type Information	<a href="#">GO to Pinpoint Test HK</a>

### Global Customer Symptom Code (GCSC) Chart

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices.

REFER to: [Diagnostic Methods](#)

(100-00 General Information, Description and Operation).

### Global Customer Symptom Code Chart

Customer Symptom	Action
Start/Run/Move > Running > Failed Emissions Testing > Catalyst	<a href="#">GO to Pinpoint Test DR</a>

Driving Performance > Engine Surge > Acceleration > Always	<a href="#">GO to Pinpoint Test HK</a>
Driving Performance > Engine Surge > Cruise/ Steady Speed > Always	<a href="#">GO to Pinpoint Test HK</a>
Driving Performance > Engine Surge > Deceleration > Always	<a href="#">GO to Pinpoint Test HK</a>

## Pinpoint Tests

### PINPOINT TEST DR : CAMSHAFT POSITION (CMP) SENSOR

#### Normal Operation and Fault Conditions

Refer to the DTC (diagnostic trouble code) Fault Trigger Conditions.

#### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
PCM (powertrain control module) P0340:00	Camshaft Position Sensor 'A' Circuit (Bank 1 or single sensor): No Sub Type Information	Sets when the PCM (powertrain control module) detects the CMP (camshaft position) bank 1, sensor 1, circuit signal cannot be detected. Harness routing, harness alterations, incorrect shielding, or electrical interference from other systems may have an intermittent impact on the CMP (camshaft position) signal. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT (variable camshaft timing) phasers.
PCM (powertrain control module) P0344:00	Camshaft Position Sensor 'A' Circuit Intermittent (Bank 1 or single sensor): No Sub Type Information	Sets when the PCM (powertrain control module) detects the CMP (camshaft position) bank 1, sensor 1, circuit signal is intermittent. Harness routing, harness alterations, incorrect shielding, or electrical interference from other systems may have an intermittent impact on the CMP (camshaft position) signal. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT (variable camshaft timing) phasers.

<p>module) P0369:00</p>	<p>1): No Sub Type Information</p>	<p>the CMP (camshaft position) sensor signal. Check for a camshaft position sensor trigger wheel alignment concern and a damaged mechanical vacuum pump. Make sure the mechanical vacuum pump oil feed hole is not restricted. Repair as necessary. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT (variable camshaft timing) phasers.</p>
<p>PCM (powertrain control module) P0390:00</p>	<p>Camshaft Position Sensor 'B' Circuit (Bank 2): No Sub Type Information</p>	<p>Sets when the PCM (powertrain control module) detects the CMP (camshaft position) bank 2, sensor 2 circuit signal can not be detected. Harness routing, harness alterations, incorrect shielding, or electrical interference from other systems may have an intermittent impact on the CMP (camshaft position) sensor signal. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT (variable camshaft timing) phasers</p>
<p>PCM (powertrain control module) P0394:00</p>	<p>Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2): No Sub Type Information</p>	<p>Sets when the PCM (powertrain control module) detects the CMP (camshaft position) bank 2, sensor 2 circuit signal is intermittent. Harness routing, harness alterations, incorrect shielding, or electrical interference from other systems may have an intermittent impact on the CMP (camshaft position) sensor signal. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT (variable camshaft timing) phasers</p>

### Possible Sources

- Radio frequency interference or electromagnetic interference
- CMP (camshaft position) circuitry concern
- Oil flow restriction
- Mechanical vacuum pump
- Camshaft phaser and sprocket
- Camshaft timing
- Camshaft position sensor alignment

		<p>concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P0012:00</p>	<p>'A' Camshaft Position Timing - Over-Retarded (Bank 1): No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in a retarded position, indicating the VCT (variable camshaft timing) position is over-retarded. This DTC (diagnostic trouble code) may be accompanied by other Diagnostic Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code). This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P0013:00</p>	<p>'B' Camshaft Position Actuator 'A' Control Circuit/Open Bank 1: No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects a low or high voltage on the VCT (variable camshaft timing) bank 1, solenoid 2 circuit or if the voltage exceeds a calibrated limit for a calibrated amount of time.</p>
<p>PCM (powertrain control module) P0014:00</p>	<p>'B' Camshaft Position Timing - Over-Advanced (Bank 1): No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in an advanced position, indicating the VCT (variable camshaft timing) position is over-advanced. This DTC (diagnostic trouble code) may be accompanied by other Diagnostic Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code). This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to</p>

	<p>No Sub Type Information</p>	<p>Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code) . This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P0018:00</p>	<p>Crankshaft Position - Camshaft Position Correlation - Bank 2 Sensor A: No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects a misalignment between the camshaft and crankshaft. This indicates the misalignment is 1 tooth or greater. This DTC (diagnostic trouble code) can also set due to VCT (variable camshaft timing) system concerns (oil contamination or VCT (variable camshaft timing) solenoid stuck). This DTC (diagnostic trouble code) may be accompanied by other Diagnostic Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code) . This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P0019:00</p>	<p>Crankshaft Position - Camshaft Position Correlation - Bank 2 Sensor B: No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects a misalignment between the camshaft and crankshaft. This indicates the misalignment is 1 tooth or greater. This DTC (diagnostic trouble code) can also set due to VCT (variable camshaft timing) system concerns (oil contamination or VCT (variable camshaft timing) solenoid stuck). This DTC (diagnostic trouble code) may be accompanied by other Diagnostic Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code) . This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-</p>

		check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.
PCM (powertrain control module) P0023:00	'B' Camshaft Position Actuator 'A' Control Circuit/Open Bank 2: No Sub Type Information	Sets when PCM (powertrain control module) detects the voltage exceeds a calibrated limit for a calibrated amount of time, indicating a low or high voltage from the VCT (variable camshaft timing) bank 2 solenoid 2 circuit.
PCM (powertrain control module) P0024:00	'B' Camshaft Position Timing - Over-Advanced (Bank 2): No Sub Type Information	Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in an advanced position, indicating the VCT (variable camshaft timing) position is over-advanced. This DTC (diagnostic trouble code) may be accompanied by other Diagnostic Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code) . This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.
PCM (powertrain control module) P0025:00	'B' Camshaft Position Timing - Over-Retarded (Bank 2): No Sub Type Information	Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in a retarded position, indicating the VCT (variable camshaft timing) position is over-retarded. This DTC (diagnostic trouble code) may be accompanied by other Diagnostic Trouble Codes (DTCs). Diagnose all CMP (camshaft position) sensor Diagnostic Trouble Codes (DTCs) first. If no CMP (camshaft position) sensor related Diagnostic Trouble Codes (DTCs) are present, continue to follow diagnosis for this DTC (diagnostic trouble code) . This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.

<p>PCM (powertrain control module) P054A:00</p>	<p>Cold Start Exhaust (B) Camshaft Position Timing Over-Advanced (Bank 1): No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in an advanced position, indicating the VCT (variable camshaft timing) position is over-advanced during cold start up. This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P054B:00</p>	<p>Cold Start Exhaust (B) Camshaft Position Timing Over-Retarded (Bank 1): No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in a retarded position, indicating the VCT (variable camshaft timing) position is over-retarded during cold start up. This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P054C:00</p>	<p>Cold Start Exhaust (B) Camshaft Position Timing Over-Advanced (Bank 2): No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in an advanced position, indicating the VCT (variable camshaft timing) position is over-advanced during cold start up. This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>
<p>PCM (powertrain control module) P054D:00</p>	<p>Cold Start Exhaust (B) Camshaft Position Timing Over-Retarded (Bank 2): No Sub Type Information</p>	<p>Sets when PCM (powertrain control module) detects the camshaft timing exceeds a maximum calibrated value or remains in a retarded position, indicating the VCT (variable camshaft timing) position is over-retarded during cold start up. This DTC (diagnostic trouble code) is a functional check of the VCT (variable camshaft timing) unit. Diagnose any base engine concerns related to the engine oil pressure or engine timing. Refer to the appropriate 303-00 section, Engine System, Oil Pressure Test, to check the engine oil pressure. Refer to the appropriate 303-01 section, Engine, to check the engine timing and VCT phasers.</p>