

park. If no DTCs are present and the malfunction indicator lamp (MIL) is not illuminated after idling for 6 minutes, carry out the key ON, engine running (KOER), self-test to confirm that no DTCs are present and the repair is complete.

Application	Key On Engine Off	Key On Engine Running	Continuous Memory
All	Refer to the Description, Possible Causes and Diagnostic Aids for the DTC.		

DIAGNOSTIC TROUBLE CODE (DTC) CHARTS AND DESCRIPTIONS > P050B - COLD START IGNITION TIMING PERFORMANCE - DTC CHART

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Description: This DTC sets when the difference between desired and commanded spark timing exceeds the calibrated threshold.

Possible Causes:

- Intake air restriction
- Exhaust restriction
- Engine mechanical concern
- Damaged or sludged electronic throttle body (ETB)
- Vacuum leaks
- Damaged PCM

Diagnostic Aids: Disregard the freeze frame data. Freeze frame data does not apply to the cold start monitor.

This DTC is informational only and may be accompanied by other DTCs. Diagnose other DTCs first. If no other DTCs are present, inspect the intake air system for air restrictions, vacuum leaks, and damage. If no concerns are present, clear the DTCs and verify the engine coolant temperature is below 37.8°C (100°F). Allow the vehicle to soak for 2 to 3 hours if necessary for the engine coolant temperature to fall below 37.8°C (100°F).

Start the engine without touching the accelerator pedal and allow the engine to idle for 6 minutes in park. If no DTCs are present and the malfunction indicator lamp (MIL) is not illuminated after idling for 6 minutes, carry out the key ON, engine running (KOER), self-test to confirm that no DTCs are present and the repair is complete.

Application	Key On Engine Off	Key On Engine Running	Continuous Memory
All	Refer to the Description, Possible Causes and Diagnostic Aids for the DTC.		

DIAGNOSTIC TROUBLE CODE (DTC) CHARTS AND DESCRIPTIONS > P050E - COLD START ENGINE EXHAUST TEMPERATURE OUT OF RANGE - DTC CHART

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