DTCS P0505, P0506 AND/OR ENGINE IDLE RPM FLUCTUATION—HARD START

FORD:
2005-2008 Crown Victoria
2005-2009 Mustang
2004-2006 F-150
2004-2007 Explorer, F-Super Duty
2005-2006 E-Series
2006 F-53 Motorhome Chassis
2007 Explorer Sport Trac

LINCOLN:
2005-2008 Town Car
2006 Mark LT

MERCURY:
2004-2007 Explorer, F-Super Duty
2005-2008 Grand Marquis
2004-2007 Mountaineer

This article supersedes TSBs 10-2-5, 10-2-3, 9-24-1, 09-4-5, 09-4-2 and 08-18-2 to consolidate previously released information and update the Service Procedure.

ISSUE
Some vehicles may exhibit diagnostic trouble codes (DTCs) P0505, P0506 and/or engine idle RPM fluctuation and hard starts. These vehicles may also exhibit DTCs P2111 and P2112 after KAM has been cleared, or the battery has been disconnected or the vehicle had a dead battery. On vehicles with over 10,000 miles the issue may be caused by sludge buildup in the electronic throttle body (ETB) leading to airflow being less than desired.

ACTION
Follow the service procedure to correct the condition.

SERVICE PROCEDURE

1. Verify vehicle is listed in the vehicle application chart.

2. Using IDS datalogger or equivalent, check the PID value of ETC_TRIM.
   a. If ETC_TRIM PID is not available proceed to Step 3.
   b. If ETC_TRIM PID is available proceed to Step 4.

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by “do-it-yourselfers”. Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company’s on-line technical resources.
3. Reprogram the powertrain control module (PCM) to the latest calibration using IDS release 75.03A and higher. Calibration files may also be obtained at www.motorcraft.com.

4. With the vehicle in park or neutral and A/C off, start the vehicle and allow the engine to reach normal operating temperature which is greater than 77 °C (170 °F) coolant temperature.

5. While the engine is running, using IDS datalogger or equivalent, check the PID value of ETC_TRIM.
   a. If ETC_TRIM value is 3.0 degrees or greater, proceed to Step 6.
   b. If ETC_TRIM value is less than 3.0 degrees, but drivability concerns persist, Refer to Powertrain Control/Emissions Diagnosis (PC/ED) manual for normal diagnostics.

6. Remove the throttle body. Refer to Workshop Manual (WSM), Section 303-04.

7. Using Motorcraft® Choke and Linkage Cleaner or equivalent, spray the throttle body plate and bore. Using a small, soft, solvent resistant brush, clean the edges of the throttle plate and the mating surface of the throttle bore to remove all engine deposit build up. Reapply choke and linkage cleaner. (Figures 1-2)

   **WARRANTY STATUS:** Eligible Under Provisions Of New Vehicle Limited Warranty Coverage Warranty/ESP coverage limits/policies/prior approvals are not altered by a TSB. Warranty/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

   **OPERATION** 120704A **DESCRIPTION** All Vehicles Included In This Article: Check DTCs, Reprogram The PCM, Warm The Engine, And Monitor ETC Trim Less Than 3.0 Degrees PASS **TIME** 0.6 Hr.

Figure 1 - Article 12-7-4

Figure 2 - Article 12-7-4

**NOTE** DO NOT SPRAY CLEANER DIRECTLY INTO THROTTLE PLATE PIVOT SHAFT.

8. Install the throttle body. Refer to WSM, Section 303-04.
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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<td>120704B</td>
<td>2006-2007 Explorer, Mountaineer 4.6L, 2004-2006 F-150 4.6L, 2007 Explorer Sport Trac 4.6L 3V: Check DTCs, Reprogram The PCM, Warm The Engine, Monitor ETC Trim Greater Than 3.0 Degrees FAILED, Clean The Throttle Body Includes Time To Remove And Install The Throttle Body (Do Not Use With Any Other Labor Operations)</td>
<td>1.0 Hr.</td>
<td>120704B</td>
<td>2005-2007 F-Super Duty 5.4L 3V: Check DTCs, Reprogram The PCM, Warm The Engine, Monitor ETC Trim Greater Than 3.0 Degrees FAILED, Clean The Throttle Body Includes Time To Remove And Install The Throttle Body (Do Not Use With Any Other Labor Operations)</td>
<td>1.3 Hrs.</td>
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<td>120704B</td>
<td>2005-2006 Mustang 4.0L, 2004-2006 F-150 5.4L 3V: Check DTCs, Reprogram The PCM, Warm The Engine, Monitor ETC Trim Greater Than 3.0 Degrees FAILED, Clean The Throttle Body Includes Time To Remove And Install The Throttle Body (Do Not Use With Any Other Labor Operations)</td>
<td>1.2 Hrs.</td>
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