FORD:
2011-2012 F-150

This article supersedes TSB 13-3-3 to update the Service Procedure and Part List.

ISSUE
Some 2011-2012 F-150 equipped with a 3.5L gasoline turbocharged direct injection (GTDI) Ecoboost engine may exhibit an intermittent stumble and/or misfire on hard acceleration after an extended drive at highway speeds during high humidity or damp conditions. This may result in either a steady or flashing malfunction indicator lamp (MIL). Diagnostic trouble codes (DTCs) P0304, P0305, P0306, or P0430 may also be present. Evidence of misfire may be available in Misfire Freeze Frame Data even with no active DTCs.

ACTION
Follow the Service Procedure steps to correct the condition.

SERVICE PROCEDURE
1. Acquire Misfire Freeze Frame Data and DTCs with the Integrated Diagnostic System (IDS) service tool. Use the following steps with IDS to obtain Misfire Freeze Frame Data.

   a. Select Toolbox
   b. Then Data Logger
   c. Then Modules
   d. Then PCM
   e. Next, select the following PIDs: MFF_LOAD and MFF_RPM.

2. Is the misfire concern only repeatable in humid or damp conditions?
   a. Yes - Proceed to Step 3.
   b. No - This article does not apply. Refer to Powertrain Control/Emissions Diagnosis (PC/ED) Manual Section 3: Powertrain Symptom Index to inspect such areas as Ignition, Compression, and Injection.

3. Does the Misfire Freeze Frame Data indicate engine speed above 2500 rpm and load 100% or above? (Figure 1)
TSB 13-8-1 (Continued)

Figure 1 - Article 13-8-1

a. Yes - Proceed to Step 4.

b. No - This article does not apply. Refer to PC/ED Manual Section 3: Powertrain
   Symptom Index to inspect such areas as Ignition, Compression, and Injection.

4. Is vehicle equipped with latest level charge air cooler, engineering part number BL34-9L440-AE? (Figure 2)

NOTE
CARE NEEDS TO BE TAKEN NOT TO INSTALL THE REVISED BOTTOM AIR DEFLECTOR ONTO CHARGE AIR COOLER ENGINEERING PART BL34-9L440-AE AS IT WILL RESULT IN HIGHER MANIFOLD AIR CHARGE TEMPERATURES AND SIGNIFICANT LOSS OF ENGINE PERFORMANCE.

5. Is DTC P0430 present?
   a. Yes - replace the left hand catalytic converter. Refer to Workshop Manual (WSM), Section 309-00. Proceed to Step 6.
   b. No - Proceed to Step 6.

6. Is the Charge Air Cooler equipped with the top air deflector? (Figure 3)

b. No - Proceed to Step 7.

7. Install revised bottom air deflector.

a. Make sure that the lower forward facing bottom seven (7) tubes and eight (8) rows of fins on the Charge Air Cooler are dry and free of dirt and debris. (Figure 4)

8. Reprogram the PCM to the latest calibration level using IDS release 79.02A or higher. This new calibration is not included in the 2012.5 DVD. Calibration files may also be obtained at www.motorcraft.com.

NOTE
PLEASE ADVISE THE CUSTOMER THAT THIS VEHICLE IS EQUIPPED WITH AN ADAPTIVE TRANSMISSION SHIFT STRATEGY WHICH ALLOWS THE VEHICLE’S COMPUTER TO LEARN THE TRANSMISSION’S UNIQUE PARAMETERS AND IMPROVE SHIFT QUALITY. WHEN THE ADAPTIVE STRATEGY IS RESET, THE COMPUTER WILL BEGIN A RE-LEARNING PROCESS. THIS RE-LEARNING PROCESS MAY RESULT IN FIRMER THAN NORMAL UPSHIFTS AND DOWNSHIFTS FOR SEVERAL DAYS.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PART NAME</th>
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<tbody>
<tr>
<td>BL3Z-5E212-E</td>
<td>Catalytic Converter Assembly</td>
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<tr>
<td>WS20514-S440</td>
<td>Nuts (2 Req)</td>
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<td>DL3Z-2021702-A</td>
<td>Air Deflector</td>
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<td>W711281-S300</td>
<td>Push Pin (2 Req)</td>
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**WARRANTY STATUS:** Eligible Under Provisions Of New Vehicle Limited Warranty Coverage And Emissions 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.

**DEALER CODING**

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<th>OPERATION</th>
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<tbody>
<tr>
<td>130801A</td>
<td>2011-2012 F-150 3.5L GTDI: Diagnose And Inspect The Charge Air Cooler, Install Revised Bottom Air Deflector And Reprogram The PCM Includes Time To Remove Top Air Deflector If Equipped And Clear DTCs (Do Not Use With Any Other Labor Operations)</td>
<td>0.5</td>
<td>42</td>
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