| 1.6L OR 2.0L GTDI ENGINE - DRIVABILITY CONCERNS WITH DTCS P0106, P0236 - OR ENGINE FAULT SERVICE ENGINE NOW MESSAGE WITHOUT DTCS - BUILT ON OR BEFORE 10/24/2013 | TSB 13-12-12 |
|---|---|

**FORD:**

2013-2014 Escape

This article supersedes TSB **13-7-5** to add a production fix date, update the vehicle model years, Issue Statement, Part List and Service Procedure.

**ISSUE**

Some 2013-2014 Escape vehicles equipped with 1.6L or 2.0L Gasoline Turbocharged Direct Injection (GTDI) engines and built on or before 10/24/2013 may exhibit difficult to start, runs rough, crank no-start, lack of power, loss of RPM or hesitation concerns with diagnostic trouble code (DTC) P0106 and/or P0236. An Engine Fault Service Engine Now message may also be displayed without any DTCs in self test. These conditions may be caused by a wiring concern in the signal return splices.

**ACTION**

Follow the Service Procedure Steps to correct the condition.

**SERVICE PROCEDURE**

1. Using Integrated Diagnostic System (IDS), check for DTCs.
2. Does the vehicle exhibit a driveability concern with DTC P0106 Or P0236?
   a. Yes
      (1) 1.6L proceed to Step 3.
      (2) 2.0L proceed to Step 4.
   b. No - Proceed to Step 5.
3. Replace signal return splices with 0.75 mm (18 AWG) wire using the crimp method. Affected splice numbers are S123 and S178. Refer to Wiring Diagram, Section 5-1.

a. 1.6L - Splice S123 can be in one of two locations depending on build date. (Figure 1 Items 1 and 2)

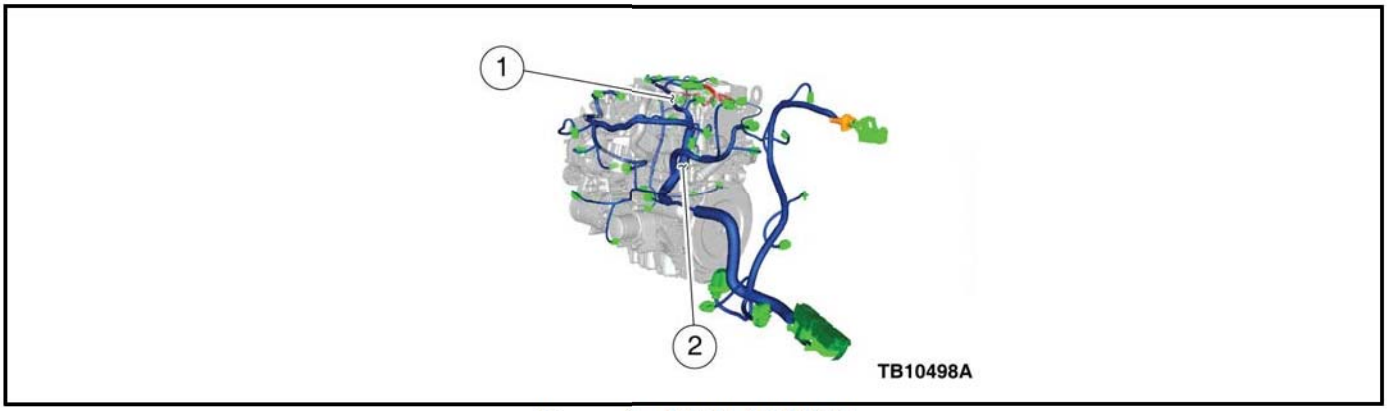


Figure 1 - Article 13-12-12

| Figure Item | Location Description | Location Description |
|---|---|---|
| Figure 1 Item 1 | Early Splice 123 | Late Splice 126 |
| Figure 1 Item 2 | Early Splice 126 | Late Splice 123 |

(1) Remove enough harness wrap to locate and replace splice.

(2) Backfill the crimp with solder before sealing repair with heat shrink tube.

b. 1.6L - Splice S178 is located under the air box where the 12A581 harness turns downward near the transmission cover. (Figure 2 Item 1)

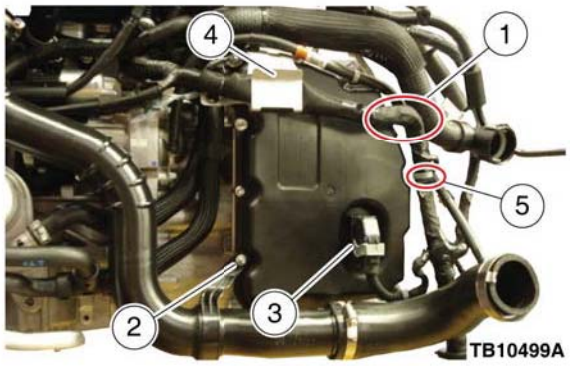


Figure 2 - Article 13-12-12

(1) Raise vehicle. Refer to Workshop Manual (WSM), Section 100-02.

(2) Remove lower splash shield. Refer to WSM, Section 303-01A for engine removal.

(3) Remove nut at the transmission oil pan. (Figure 2 Item 2)

(4) Remove the charge air cooler tube. Refer to WSM, Section 303-12A.

(5) Disconnect transmission electrical connector (Figure 2, Item 3)

(6) Disconnect the white plastic harness bracket. (Figure 2, Item 4)

(7) Disconnect the harness from the black harness clip. (Figure 2, Item 5)

(8) Pull down harness to gain access to S178.

(9) Remove enough harness wrap to locate and replace splice.

(10) Backfill the crimp with solder before sealing repair with heat shrink tube.

(11) Reverse Steps 1 through 8 for installation.

4. Replace signal return splices with 0.75 mm (18 AWG) wire using the crimp method. Affected splice numbers are S108 and S182. Refer to Wiring Diagram, Section 5.1.

a. 2.0L - Splice S108 is located under the air box where the harness makes a bend. (Figure 3) Splice S182 is located near the bottom of the transmission. (Figure 4)


Figure 3 - Article 13-12-12

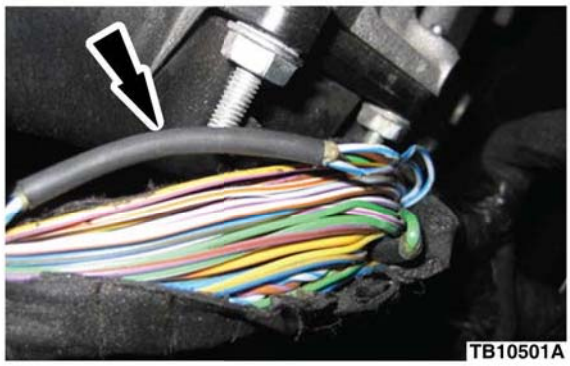


Figure 4 - Article 13-12-12

(1) Remove air filter housing assembly. Refer to WSM, Section 303-12B.

(2) Disconnect retainer clip from radiator hose and position hose aside. (Figure 5)


Figure 5 - Article 13-12-12

(3) Disconnect electrical connectors at the PCM and raise the harness up to access the splices.

(4) Remove enough harness wrap to locate and replace the splices.

(5) Backfill the crimp with solder before sealing repair with heat shrink tube.

(6) Reverse Steps 1 through 3 for installation.

5. If the vehicle exhibits a driveability concern along with an engine fault Service Engine Now message in the Instrument Panel Cluster (IPC) message center without any DTCs stored in PCM memory, perform wiggle test on Powertrain Control Module engine harness (12A581) while monitoring MAP, TCBP and BARO Sensors PSI with IDS. Refer to Figures 1-4 and 6-7 for wiggle test locations. If signal noise or VREF pull down is confirmed during harness wiggle test, replace signal return splices with 0.75 mm (18 AWG) wire using the crimp method per Step 3 for 1.6L or Step 4 for 2.0L.

   a. a. 1.6L or 2.0L GTDI engine wiggle test here by pushing and pulling on the harness lightly while monitoring MAP, TCBP, BARO at key on engine off (KOEO). (Figure 6)


Figure 6 - Article 13-12-12

   b. 2.0L GTDI engine wiggle test here by pushing and pulling on the harness lightly while monitoring MAP, TCBP, BARO pressure in PSI units at KOEO. (Figure 7)

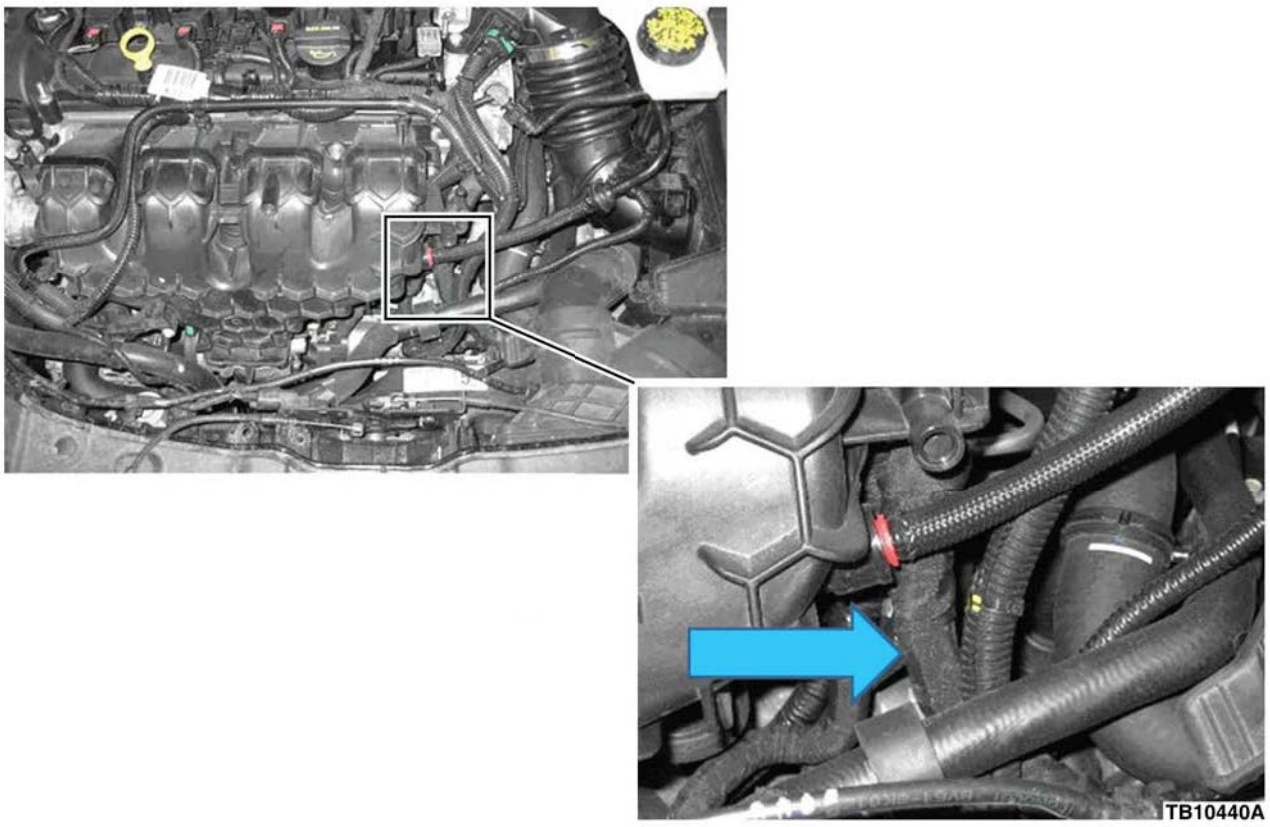


Figure 7 - Article 13-12-12

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|---|
| Obtain Part Locally |
| 12.7 cm (5") - O.75 mm wire (18 AWG) |

| PART NUMBER | PART NAME |
|---|---|
| 3U2Z-14A088-AB | Kit - Terminal |

| OPERATION | DESCRIPTION | TIME |
|---|---|---|
| 131212A | 2013-2014 Escape 1.6L GTDI: Check DTCs And Replace Signal Return Splices For MAP And TCBP/CACT/MAPT Includes Time To Access Splices And Wiggle Test (Do Not Use With Any Other Labor Operations) | 1.4 Hrs. |
| 131212B | 2013-2014 Escape 2.0L GTDI: Check DTCs And Replace Signal Return Splices For MAP And TCBP/CACT/MAPT Includes Time To Access Splices And Wiggle Test (Do Not Use With Any Other Labor Operations) | 1.5 Hrs. |

**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.

**DEALER CODING**

| BASIC PART NO. | CONDITION CODE |
|---|---|
| 12A581 | 28 |