SB-10054363-7649

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.

NOTE: The information contained in Technical Service Bulletins is intended for useby 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, Lincoln, or Mercury 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 supercede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

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

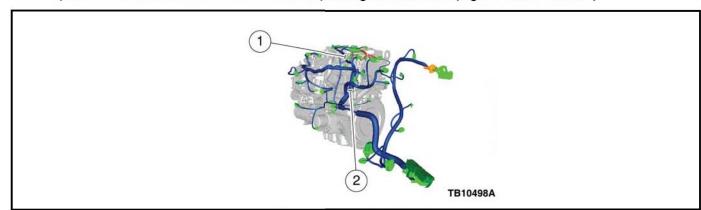


Figure 1 - Article 13-12-12

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)

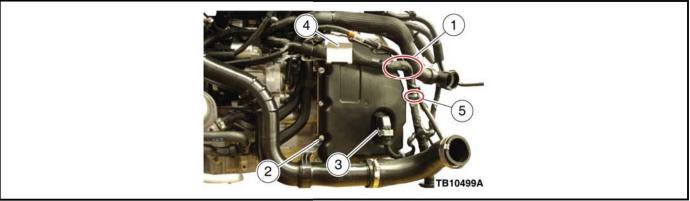


Figure 2 - Article 13-12-12

- (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.

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- 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. 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)

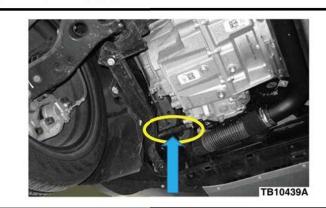


Figure 6 - Article 13-12-12

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)

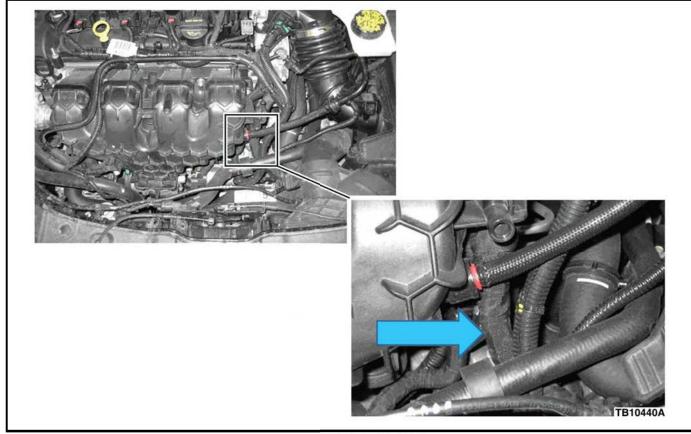


Figure 7 - Article 13-12-12

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