

INFORMATION ONLY

Bulletin No.: TSB-001

Date: January 4, 2012

Subject: Diagnostic Trouble Codes

Models: All 2010 Ford Escape Hybrids with Quantum PHEV battery packs.

Background

When Escape Hybrids are converted to PHEV Escape Hybrids, the factory high-voltage battery and Battery Control Module (BCM) are replaced with Quantum components. This system operates differently than the Ford system and may cause Diagnostic Trouble Codes (DTCs) to set in several Ford modules under certain operating conditions. The Quantum BCM also communicates unique DTCs to the State of Charge display in the center console and can illuminate the Powertrain Lamp and Battery Malfunction Indicator Lamp on the instrument panel if a fault occurs.

Condition

The Powertrain lamp may be illuminated by faults in the Quantum BCM. If the Powertrain lamp is illuminated, check for DTCs on the Battery State of Charge display immediately after the ignition key is turned ON.

There are two known actions the vehicle operator can initiate that can cause a number of DTCs to be stored in the Quantum BCM and various Ford control modules. In addition, as a result of the additional battery capacity, there may be intermittent detection of inverter performance faults.

The DTC's indicated in this bulletin (Table 1) can be induced by the operator or by normal operation of the vehicle and should not be cause for concern unless accompanied by additional DTC's.

Cause

As a safety feature, the vehicle is designed not to start while connected to AC power. Attempting to start the vehicle while AC power is sensed by the vehicle will result in multiple DTCs being set.

Cycling the ignition key from ON to OFF and back to ON too quickly may result in an incorrect BCM power-up sequence and DTCs being set.

Correction

The operator must ensure the charge cord is disconnected from the vehicle before attempting to start the vehicle. The operator must wait 10 seconds before cycling the ignition key between the OFF and ON positions.

Even if these DTC's are stored in the vehicle, they are not emission relevant and do not affect the emission system monitors.

Clear the DTC's and operate the vehicle normally. If the DTC returns, refer to the factory service information for troubleshooting procedures.

Contact Information:

E-Mail: mgust@qtww.com

Phone: 949.930.3496

Fax: 949.930.3401

INFORMATION ONLY**Normal DTC's**

- Powertrain Control Module (PCM):
 - P1A10 Hybrid Powertrain Control Module (HPCM) battery disabled
 - P1A14 Hybrid Powertrain Control Module (HPCM) transmission disabled
 - U0111 Lost communication with Battery Control Module (BCM)

- Transmission Control Module (TCM):
 - P0A0A HVIL circuit
 - P0A7A Generator inverter performance
 - P1A0A Immediate shut down signal
 - P1A07 Inverter high voltage performance
 - U0111 Lost communication with Battery Control Module (BCM)

- Instrument Cluster Module (ICM):
 - U2511 CAN data mismatch
 - U0111 Lost communication with Battery Control Module (BCM)

- Air Conditioner Control Module:
 - P0AFA Hybrid battery system voltage low

- ABS / Traction Control Module:
 - C1018 regenerative braking

Table 1

Note: Due to the increased battery capacity, the ABS system DTC C1018 regenerative braking and TCM DTC P0A7A Generator inverter performance can be set during normal operation. If these DTC's are accompanied by additional diagnostic indications or perceived to be valid diagnostic codes contact Quantum Technologies for assistance.