SERVICE BULLETIN

Bulletin No.: **TSB-009**

Date: **January 4, 2012**

Subject: **High Voltage Safety Disconnect**

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

Background
When Hybrid Escapes are converted to Plug-in Hybrid Electric Vehicle (PHEV) Escapes, the factory high-voltage battery is replaced with Quantum components. As a result, the High Voltage Safety Disconnect (HVSD) is no longer found in the original location and additional high voltage components and interfaces have been added to the vehicle.

Condition
The factory equipped Hybrid Escape HVSD was located on top of the high voltage battery pack in the rear of the cargo area. The Quantum PHEV battery pack HVSD is located on the front of the battery, behind the rear seat backs.

It is necessary for all service technicians and emergency first responders to be aware of the new HVSD location. The HVSD must be removed whenever work is performed on the high voltage system.

Also, the vehicle is now equipped with an AC charge port to allow charging of the PHEV battery pack. The charge cord must be removed from the vehicle charge port before any service is performed on the high voltage system.

Cause
The PHEV conversion installed by Quantum relocated the HVSD to a location behind the rear seat and added high voltage components not originally found on the Hybrid Escape.

The high voltage system is energized whenever the charge cord is plugged in, regardless of whether the HVSD is installed.

Correction
A new information label will be installed on the vehicle near the original location of the HVSD alerting users, service technicians, and first responders that the HVSD has been relocated to the front of the battery, behind the rear seats. A warning label will be installed near the HVSD alerting users, service technicians, and first responders that the charge cord must be disconnected from the vehicle charge port before servicing the high voltage system.

Use the attached procedure when removal of the HVSD is required.

Contact Information:
E-Mail: mgust@qtww.com
Phone: 949.930.3496
Fax: 949.930.3401

Procedure

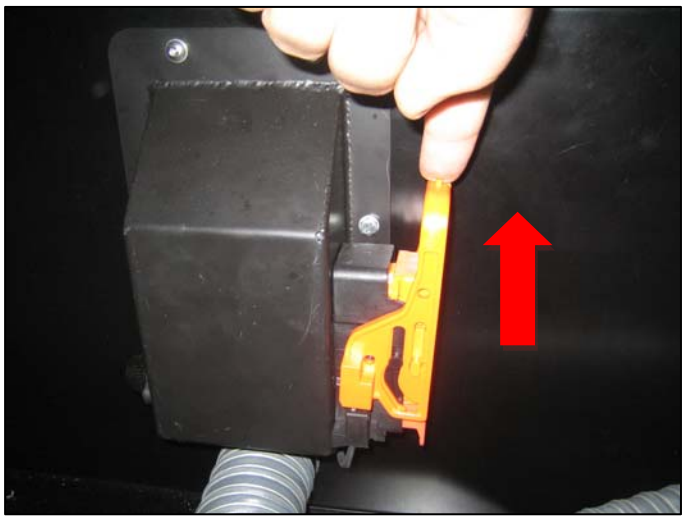
DANGER **To prevent the risk of high-voltage shock, always follow precisely all warnings and service instructions, including instructions to depower the system. The high-voltage hybrid system utilizes approximately 300 volts DC, provided through high-voltage cables to its components and modules. The high-voltage cables and wiring are identified by orange harness tape or orange wire covering. All high-voltage components are marked with high-voltage warning labels with a high-voltage symbol. Failure to follow these instructions may result in serious personal injury or death.**

High Voltage Safety Disconnect
If any service work will be performed to the vehicle that may subject the technician to any of the high voltage wiring or components the high voltage safety disconnect must be removed prior to any work being performed. Failure to safely isolate the high voltage battery may result in severe personal injury or death.

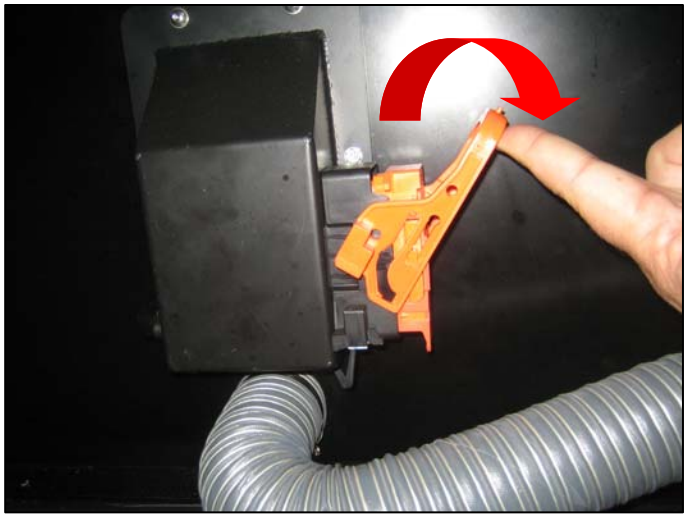
Follow the steps below to remove the high voltage safety disconnect from the high voltage battery pack.

1. Set up the buffer zone around the vehicle. For additional information, refer to Buffer Zone in the Ford Service Manual.
2. Turn the ignition to the OFF position.
3. Verify the 120 VAC charge cord is disconnected.
4. Fold the LH rear seat back down.
5. Locate the high voltage service disconnect plug.

6. Lift the lever up until it stops.



7. Rotate the lever until it has moved approximately 90 degrees.



8. Remove the high voltage service plug from the socket.
9. Place the high voltage service plug in a safe location away from the vehicle.
10. When service work is complete, reinstall the high voltage service plug in reverse order.