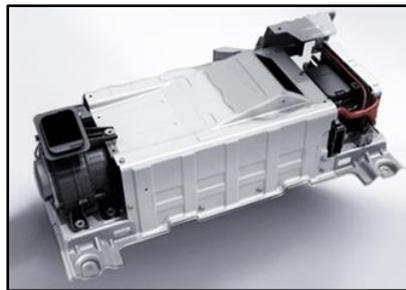


	GROUP ELE	MODEL Optima Hybrid (TF HEV, JF HEV, JF PHEV) Soul EV (PS EV) Niro (DE)
	NUMBER 044 (Rev 1, 10/28/2016)	DATE January 2013
TECHNICAL SERVICE BULLETIN		
SUBJECT: HIGH-VOLTAGE BATTERY ORDERING AND RETURN PROCEDURE		

*** NOTICE**

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin outlines the ordering and return procedure for high-voltage Lithium-ion batteries equipped on EV/hybrid vehicles (hereafter referred to as "high-voltage batteries" or HVBs). Every Kia-approved EV/hybrid dealership's parts and service departments should follow these procedures to ensure the fastest handling time and to minimize the possibility of charge-backs.



Limitations on High Voltage Battery Orders

- Non-approved EV / hybrid dealerships cannot order HVBs or be paid by warranty for repairs performed on hybrid components.
- HVBs cannot be ordered except as direct replacements for damaged or failed HVBs.
- In the case of out-of-warranty or collision-damaged HVBs, evidence of the failure or damage must be submitted via a Tech Line case. A core return is required in all cases.

Shipping and Handling Regulations

- Pursuant to federal law, all shipments of HVBs, to or from the dealer, must be shipped by ground service. Air shipments are not allowed.
- Anyone who receives, packs, ships, or otherwise handles HVBs may need to be hazardous materials (HazMat) certified, as required by the U.S. Department of Transportation.
- It is the dealership's responsibility to ensure that its team members are appropriately certified and follow all laws and regulations related to this and other HazMat components on Kia vehicles.

File Under: <Electrical>

-
- Circulate To:** **General Manager** **Service Manager** **Parts Manager**
 Service Advisors **Technicians** **Body Shop Manager** **Fleet Repair**

Ordering Procedure:

The service department should follow this procedure when requesting a battery.

1. Use GDS/KDS to scan for DTCs.
 - a) If any HVB DTC (P1B70, P1B74, P1B96, etc.) is found, save screenshots of the DTC search results. This can be achieved with 1-2 screenshots.
 - b) Save the screenshots of each DTC's Freeze-Frame Data. This can be done with 2 screenshots per DTC.
 - c) Select the BMS system and save screenshots of Current Data. This can be done with 5 screenshots.

Screenshot examples are provided on the last page of this document.

2. Create a Tech Line web case, and include the following items in the initial message:
 - a) Describe the customer complaint and what portion of the complaint was duplicated or confirmed.
 - b) Identify (in the case notes) the problem cells from the FFD or BMS Current Data.
 - c) Upload all screenshots to the case.
3. A Techline representative will review these details and recommend either HVB replacement or another action.
4. If Techline recommends HVB assembly replacement, the dealership service department should contact its DPSM for a PWA and place a parts order for the HVB assembly, and any other components that are recommended by Techline (for non-warranty repairs, evidence of battery failure or damage must be submitted via Techline case). The HVB will appear to be on backorder; this is normal. The order will be reviewed by Mobis Parts America and Kia Motors America with two possible outcomes:
 - a) If approved, the order will be allocated and shipped via ground carrier.
 - b) If not approved, the dealership will be contacted and informed of the appropriate actions to take.

*** NOTICE**

HVB packs are shipped from California, and transit times will vary from 1 to 5 business days from shipment date in the contiguous United States. Transit time of shipments to dealers in Hawaii or Alaska will require additional time.

*** NOTICE**

The Battery Management System (BMS) is no longer required to be replaced with the High Voltage Battery (HVB) and is only to be replaced when directed by Techline.

SUBJECT: HIGH-VOLTAGE BATTERY ORDERING AND RETURN PROCEDURE**Return Procedure:**

The parts department should follow this procedure when receiving a replacement HVB and when returning the original (core) HVB.

1. When the replacement HVB ships, KMA Warranty Department will supply instructions, including a bill of lading and the emergency response document via email to the dealership parts department.
2. When receiving the replacement HVB, inspect the wooden shipping crate of the replacement HVB for damage. If it was damaged in shipment, be certain to note this on the receiving document, and contact the Parts Hotline to request a new crate for the HVB.
3. Care must be taken when unpacking the replacement HVB to not damage the wooden crate. Damage caused by the dealer will be the dealership's responsibility. Make sure to retain all packaging materials for reuse.
4. Package the return HVB in the same manner as the replacement HVB was received.
5. Follow all federal requirements for preparing the HazMat shipment. KMA cannot legally accept inappropriately packaged, marked, or mislabeled HazMat shipments. Situations arising from these and other errors are time-consuming to resolve and may result in fines to the dealer by various government entities. In addition, if these situations cause financial losses to KMA, KMA may seek reimbursement for any added processing costs or delays.

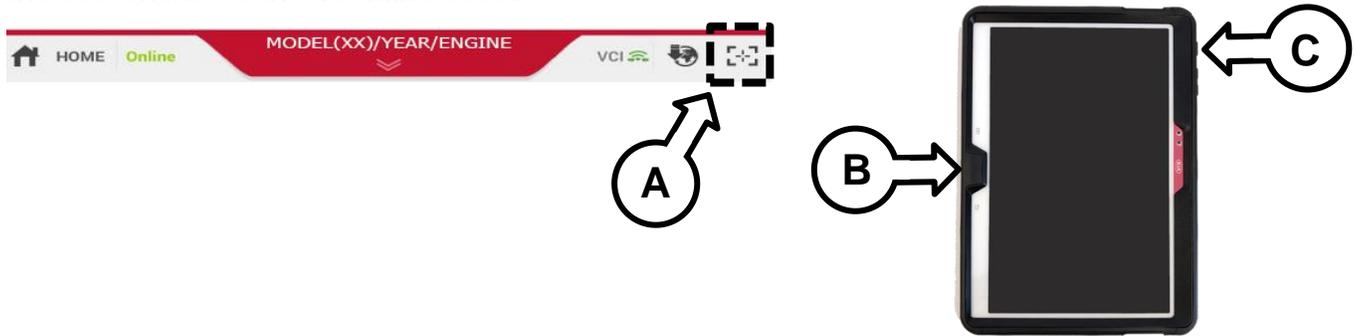
See next page for example of GDS/KDS Screen Capture Process

SUBJECT: HIGH-VOLTAGE BATTERY ORDERING AND RETURN PROCEDURE

GDS/KDS Screen Capture Process (BMS Current Data Shown as an Example):

GDS: Click on the camera icon in the upper-right corner of the active GDS screen, select “Entire GDS Area,” make sure that there is a check mark next to “include vehicle info,” and click on “Send to File.” Remember or write down the file path for the screenshots, and name the screenshot files so that it is clear which should be uploaded to the Techline case.

KDS: Take a screenshot using the capture icon (A) at the upper-right corner of the KDS screen or use the tablet screen capture feature by simultaneously pressing and holding the Home (B) and the Power button (C). Refer to the “KDS - Attaching Files to Techline Cases” publication under “Diagnostic Tools → KDS & GDS Information” on KGIS for instructions on how to attach the screenshot to the Techline case.



VIN	KNAGM4AD4B5005166		
Maker	Kia Motor Company	Vehicle	OPTIMA HYBRID(TF HEV)
Model Year	2011	Engine Type	G 2.4 HEV
System	Battery Management System/HEV Battery System		
Software Version	N-K-01-11-0002	Content Version	N-K-01-11-0002
ECU Version	N-K-01-11-0002	VCI Version	1.98
Dealer	WV005	Name	
Tel.		e-mail	
Address			

Sensor Name	Value	Unit
State of Charge of Battery(BMS)	45.5	%
Available Charge Power	Not Supported	-
Available Discharge Power	Not Supported	-
BMS Main Relay ON Status	YES	-
BMS Cost-Effective State	YES	-
BMS Warning	YES	-
BMS Fault	NO	-
BMS Weld Flag	NO	-
BMS Overcharge Protection Flag	NO	-
BMS Main Relay ON Retry Flag	NO	-
BMS Main Relay ON Temporary Flag	NO	-
Battery DC Current	18.2	A
Battery DC Voltage	263.000	V
Battery Module 1 Temperature	86	F
Battery Module 2 Temperature	86	F
Battery Module 3 Temperature	86	F
Battery Module 4 Temperature	86	F
Battery Module 5 Temperature	86	F
Auxiliary Battery Temperature	75	F
Battery Inlet Temperature	77	F
Max Cell Voltage	3.68	V
Max Cell Voltage No.	64	-
Min Cell Voltage	2.68	V
Min Cell Voltage No.	63	-
FAN Status	1	-

Battery Cell Voltage 32	3.78	V
Battery Cell Voltage 33	3.78	V
Battery Cell Voltage 34	3.78	V
Battery Cell Voltage 35	3.78	V
Battery Cell Voltage 36	3.78	V
Battery Cell Voltage 37	3.98	V
Battery Cell Voltage 38	3.78	V
Battery Cell Voltage 39	3.78	V
Battery Cell Voltage 40	3.98	V
Battery Cell Voltage 41	3.76	V
Battery Cell Voltage 42	3.76	V
Battery Cell Voltage 43	3.76	V
Battery Cell Voltage 44	3.76	V
Battery Cell Voltage 45	3.76	V
Battery Cell Voltage 46	3.76	V
Battery Cell Voltage 47	3.76	V
Battery Cell Voltage 48	3.76	V
Battery Cell Voltage 49	3.78	V
Battery Cell Voltage 50	3.78	V
Battery Cell Voltage 51	3.78	V

Screenshot #1

Drag Scroll Bar down to scroll to next segment of uncaptured data. It is OK to capture a few lines of data more than once, but take care to ensure that no lines are missed between screenshots.

Intermediate screenshots (not shown here, but still required)

Continue scrolling / taking screenshots as many times as necessary until all lines of data have been captured, down to end of scrollable area.

Screenshot #5

Note: It should be possible to capture all data in 5 screenshots.

