VOLVO CAR SERVICE AND PARTS BUSINESS



Service Manager Bulletin

TITLE: Shipping and Handling of Volvo Lithium-ion Hybrid Battery Packs to LG Chem LLC							
GROUP:	NO:	ISSUING DEPARTMENT:			CAR MARKET:		
31	001	Warranty			United States		
REVISIONS:					ISSUE DATE:	STATUS DATE:	
Outdated information removed					2016-05-03	2020-06-29	
Service Personnel: Read and initial		SERVICE MANAGER	SERVICE WRITER	WARRANTY ADMINISTRATOR	Page 1	l of 15	

"Right first time in Time"

Attention Volvo Parts Managers and Service Managers

There may come a time where a Customer Vehicle will require Technical Service and you will be instructed to replace and ship a defective lithium hybrid battery directly to our Supplier for Technical Evaluation.

Note: All Volvo Lithium-ion Hybrid Batteries will be part of our Volvo Technical Helpdesk Prior Approval Process.

The failed Hybrid battery must be shipped directly to the hybrid battery supplier LG Chem Power Inc. (LGCPI) at the address indicated below and on the shipping labels attached.

VOLVO LITHIUM-ION HYBRID BATTERY PACK SHIPPING AND HANDLING GUIDELINES:

Remove the replacement battery from the shipping container and follow instructions as outline in VIDA for vehicle installation.

HANDLING:

Ensure the replacement crate is kept in its original condition. The replacement battery pack shall be removed from its original packaging and installed in the vehicle as soon as possible in order to maintain protection against mechanical impact or tampering.

Service Manager Bulletin 31-001



Once the replacement battery is removed, store this container in a safe and secure place to be used for the transportation of the defective hybrid battery.

- Do not remove or cover up any of the hazmat shipping labels on the outside of the replacement container.
- Do not damage the replacement crate.
- Do not stack anything on top of the replacement crate.
- The battery pack shall always be kept in an upright position.
- If you damage the crate you will be charged for a replace crate of \$250 plus shipping and hazmat labeling cost.

Carefully insert the defective hybrid battery in the replacement crate as soon as possible and move this crate to a safe and secure staging location.

It is mandatory the defective hybrid battery be shipped to the supplier LG Chem within 2 days of receiving the replacement battery from LG Chem. The defective battery must be received by LG Chem 7 days of receipt of the replacement battery.

SHIPPING:

You will receive an LG RMA Number from Volvo Technical Helpdesk via of the open VR Case. Please complete the attached FedEx VICS Bill of lading. Retailers only need to fill out their return address and the RMA number.

All other information is pre-filled. Do not alter any information on this Bill of lading. Located at the end of this bulletin are 4 LG Chem return shipping labels pre-address to LG Chem Power Inc.

- Cut out one of the labels.
- Fill out this label completely. Ensure the RMA Number is on the label.
- Secure the label to the outside of the replacement container.
- Contact the FedEx Freight at the number below and request a pick-up: FedEx Freight Customer Service 1.866.393.4585

Ship to:

LG Chem Power Inc. (LGCPI) 1064 Chicago Rd. Troy, MI. 48083 Attention: Michael Staszek Quality Customer Service Supervisor

Once the FedEx Driver arrives, it is important to give the driver the completed FedEx Bill of Lading form and a copy of the attached Safety Data Sheets. Print the Safety Data Sheet from Service Manager Bulletin 31-001A.

You should also attach a copy of the Safety Data Sheet to the outside of the replacement shipping crate using the Volvo Poly Bags 7777563.

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Warranty and Technical Documents

These Documents must be included inside the crate with the defective battery.

- Technical Helpdesk Vehicle Report (mandatory) see sample below.
- Shipping Label affix to the outside of the replacement crate. (mandatory)
- Material Data Safety Sheets affix to the outside of the replacement crate. (mandatory)
- Copy of the original Repair order-see sample below.

PLEASE DO NOT COVER OR REMOVE ANY OF THE HAZMAT LABELS





VICS Bill of Lading

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Original not negotiable. See last page for further terms and conditions.

VICS COMPATIBLE BILL OF LADING Terms & Conditions

Sec. 1. (a) The carrier or the party in possession of any of the property described in this bill of lading shall be liable as at common law for any loss thereof or damage thereto, except as hereinafter provided.

(b) No carrier shall be liable for any loss or damage to a shipment or for any delay caused by an Act of God, the public enemy, the authority of law, or the act or default of shipper. Except in the case of negligence of the carrier or party in possession, the carrier or party in possession shall not be liable for loss, damage or delay which results: when the property is stopped and held in transit upon request of the shipper, owner or party entitled to make such requests; or from faulty or impassible highway, or by lack of capacity of a highway bridge or ferry; or from a defect or vice in the property; or from riots or strikes. The burden to prove freedom from negligence is on the carrier or the party in possession.

Sec. 2. Unless arranged or agreed upon, in writing, prior to shipment, carrier is not bound to transport a shipment by a particular schedule or in time for a particular market, but is responsible to transport with reasonable dispatch. In case of physical necessity, carrier may forward a shipment via another carrier.

Sec. 3. (a) As a condition precedent to recovery, claims must be filed in writing with: any participating carrier having sufficient information to identify the shipment.

(b) Claims for loss or damage must be filed within nine months after the delivery of the property (or, in the case of export traffic, within nine months after delivery at the port of export), except that claims for failure to make delivery must be filed within nine months after a reasonable time for delivery has elapsed.

(c) Suits for loss, damage, injury or delay shall be instituted against any carrier no later than two years and one day from the day when written notice is given by the carrier to the claimant that the carrier has disallowed the claim or any part or parts of the claim specified in the notice. Where claims are not filed or suits are not instituted thereon in accordance with the foregoing provisions, no carrier shall be liable, and such claims will not be paid.

(d) Any carrier or party liable for loss of or damage to any of said property shall have the full benefit of any insurance that may have been effected, upon or on account of said property, so far as this shall not avoid the policies or contracts of insurance, PROVIDED, that the carrier receiving the benefit of such insurance will reimburse the claimant for the premium paid on the insurance policy or contract.

Sec. 4. (a) If the consignee refuses the shipment tendered for delivery by carrier or if carrier is unable to deliver the shipment, because of fault or mistake of the consignor or consignee, the carrier's liability shall then become that of a warehouseman. Carrier shall promptly attempt to provide notice, by telephonic or electronic communication as provided on the face of the bill of lading, if so indicated, to the shipper or the party, if any, designated to receive notice on this bill of lading. Storage charges, based on carrier's tariff, shall start no sooner than the next business day following the attempted notification. Storage may be, at the carrier's option, in any location that provides reasonable protection against loss or damage. The carrier may place the shipment in public storage at the owner's expense and without liability to the carrier.

(b) If the carrier does not receive disposition instructions within 48 hours of the time of carrier's attempted first notification, carrier will attempt to issue a second and final confirmed notification. Such notice shall advise that if carrier does not receive disposition instructions within 10 days of that notification, carrier may offer the shipment for sale at a public auction and the carrier has the right to offer the shipment for sale. The amount of sale will be applied to the carrier's invoice for transportation, storage and other lawful charges. The owner will be responsible for the balance of charges not covered by the sale of the goods. If there is a balance remaining after all charges and expenses are paid, such balance will be paid to the owner of the property sold hereunder, upon claim and proof of ownership.

(c) Where carrier has attempted to follow the procedure set forth in subsections 4(a) and (b) above and the procedure provided in this section is not possible, nothing in this section shall be construed to abridge the right of the carrier at its option to sell the property under such circumstances and in such manner as may be authorized by law. When perishable goods cannot be delivered and disposition is not given within a reasonable time, the carrier may dispose of property to the best advantage.

(d) Where a carrier is directed by consignee or consignor to unload or deliver property at a particular location where consignor, consignee, or the agent of either, is not regularly located, the risk after unloading or delivery shall not be that of the carrier.

Sec. 5. (a) In all cases not prohibited by law, where a lower value than the actual value of the said property has been stated in writing by the shipper or has been agreed upon in writing as the released value of the property as determined by the classification or tariffs upon which the rate is based, such lower value plus freight charges if paid shall be the maximum recoverable amount for loss or damage, whether or not such loss or damage occurs from negligence.

(b) No carrier hereunder will carry or be liable in any way for any documents, coin money, or for any articles of extraordinary value not specifically rated in the published classification or tariffs unless a special agreement to do so and a stipulated value of the articles are endorsed on this bill of lading.

Sec. 6. Every party, whether principal or agent, who ships explosives or dangerous goods, without previous full written disclosure to the carrier of their nature, shall be liable for and indemnify the carrier against all loss or damage caused by such goods. Such goods may be warehoused at owner's risk and expense or destroyed without compensation.

Sec. 7. (a) The consignor or consignee shall be liable for the freight and other lawful charges accruing on the shipment, as billed or corrected, except that collect shipments may move without recourse to the consignor when the consignor so stipulates by signature or endorsement in the space provided on the face of the bill of lading. Nevertheless, the consignor shall remain liable for transportation charges where there has been an erroneous determination of the freight charges assessed, based upon incomplete or incorrect information provided by the consignor.

(b) Notwithstanding the provisions of subsection (a) above, the consignee's liability for payment of additional charges that may be found to be due after delivery shall be as specified by 49 U.S.C. §13706, except that the consignee need not provide the specified written notice to the delivering carrier if the consignee is a for-hire carrier.

(c) Nothing in this bill of lading shall limit the right of the carrier to require the prepayment or guarantee of the charges at the time of shipment or prior to delivery. If the description of articles or other information on this bill of lading is found to be incorrect or incomplete, the freight charges must be paid based upon the articles actually shipped.

Sec. 8. If this bill of lading is issued on the order of the shipper, or his agent, in exchange or in substitution for another bill of lading, the shipper's signature on the prior bill of lading or in connection with the prior bill of lading as to the statement of value or otherwise, or as to the election of common law or bill of lading liability shall be considered a part of this bill of lading as fully as if the same were written on or made in connection with this bill of lading.

Sec. 9. If all or any part of said property is carried by water over any part of said route, such water carriage shall be performed subject to the terms and provisions and limitations of liability specified by the "Carriage of Goods By Sea Act" and any other pertinent laws applicable to water carriers.

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CUSTOMER #: 1234569

AMPLE REPAIR ORDER

WARRANTY

VOLVO USA RETAILER ONE VOLVO DRIVE SERVICE PH: 201-768-7300 .201-768-4556

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WARRANTY COPY

CUSTOMER SIGNATURE

Please use this shipping label for LG Chem Power Inc. (LGCPI) You will use FedEx Freight Carriers for transportation. All Lines on this label must be filled out completely

Please Note: The phone number for FedEx Freight Customer Service 1.866.393.4585 FedEx LTL Volume Services 1.888.465.5646

Please make a note of where this label and phone number can be found for future reference.

LG CHEM SHIPPING LABELS

From: _____

LG Chem Power Inc. (LGCPI) 1064 Chicago Rd. Troy, MI. 48083 Attention: Michael Staszek Quality Customer Service Supervisor



LG RMA Number_____ TIE REPORT NUMBER

FedEx Tracking Number

From: _____

LG Chem Power Inc. (LGCPI) 1064 Chicago Rd. Troy, MI. 48083 Attention: Michael Staszek Quality Customer Service Supervisor



LG RMA Number______ TIE REPORT NUMBER______ FedEx Tracking Number______ From: _____

LG Chem Power Inc. (LGCPI) 1064 Chicago Rd. Troy, MI. 48083 Attention: Michael Staszek Quality Customer Service Supervisor



LG RMA Number_

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From: _____

LG Chem Power Inc. (LGCPI) 1064 Chicago Rd. Troy, MI. 48083 Attention: Michael Staszek Quality Customer Service Supervisor



LG RMA Number______ TIE REPORT NUMBER______ FedEx Tracking Number______



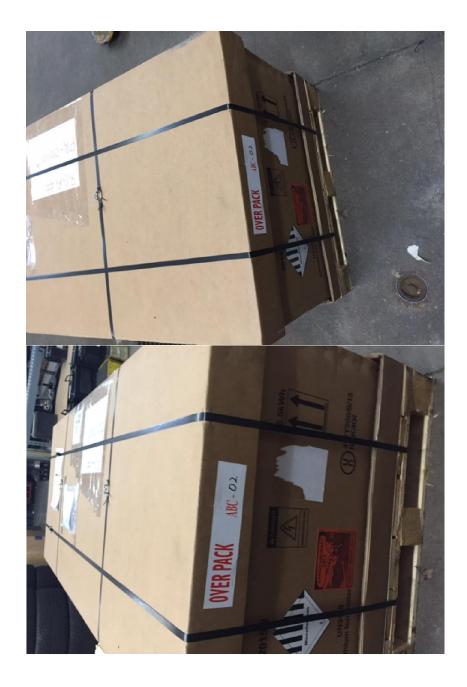
LG Return RMA Number



Attach to outside of shipping container

OUTGOING SHIPMENT CORRECTLY PACKAGED





Sample of a comple	ted bill of ladi	ng with bar code fro	m the Fe	edEx driver	
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SAMPLE VOLVO WEEKLY SERVICE TRANSACTION STATEMENT

LBAASPFR

Volvo Car USA LLC Service Transaction Statement For Period: 04/01/16 to 07/08/16 Parts Disposition Section

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47045776	1/04/16	SCRAP OR CORE	08692305-0 OIL FI	LTER INSERT	1.0		
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			30630752-0 POLLEN	FILTER	1.0		
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VOLVO CAR SERVICE AND PARTS BUSINESS



Service Manager Bulletin

TITLE: LITHIUM-ION POLYMER BATTERY Safety Data Sheet for Shipping and Handling UP: NO: ISSUING DEPARTMENT: CAR MARKET:

GROUP:	NO:	ISSUING DEPARTMENT:			CAR M	ARKET:
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	REFE	RENCE BUL	ISSUE DATE:	STATUS DATE:		
					2016-05-03	2016-05-03
Service P	ersonnel·	SERVICE MANAGER	SERVICE WRITER	WARRANTY ADMINISTRATOR		
Service Personnel: Read and initial					Page	1 of 6

"Right first time in Time"

This SDS is required for the shipping of the Lithium-ion battery. In this process, a copy of the SDS document must be on the outside of the shipment crate and a copy of it must be given to the FedEx driver.

Print pages 2 – 6 of this Service Manager Bulletin (SDS Document)

VOLVO CARS SERVICE AND PARTS BUSINESS



Safety Data Sheet

31473177

Volvo Cars of North America, LLC 1 Volvo Drive P.O. Box 914 Rockleigh, NJ 07647

Emergency Telephone No.:

1-800-467-8583 (US) 1-613-996-6666 (CAN)

Revision Date: Printed: Supersedes: 2014-01-14 2015-12-16

NOTE: Use the 24-Hour Emergency Telephone Numbers **only in the event of a chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.** All non-emergency questions should be directed to Volvo Cars of North America, LLC at (201) 768-7300 (U.S.) or (416) 498-3700 (Canada) for assistance.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/ UNDERTAKING

PRODUCT NAME: LGCHEM P2.7 LITHIUM-ION POLYMER BATTERY PART NO: 31473177

MANUFACTURER: LG Chemical Limited Twin Tower Youido-Dong, Youngdeungpo-Ku Seoul, Korea

EMERGENCY TELEPHONE NUMBER: +82-2-3773-6730

2. HAZARDS IDENTIFICATION

Primary routes of entry	
Skin contact:	No
Skin absorption:	No
Eye contact	No
Inhalation:	No
Ingestion:	No
Symptoms of exposure	
Skin contact:	No effect under routine handling and use.
Skin absorption:	No effect under routine handling and use.
Eye contact:	No effect under routine handling and use.
Inhalation:	No effect under routine handling and use.
Reported as carcinogen:	Not applicable.
Emergency overview:	May explode in a fire, which could release hydrogen fluoride gas. Use extinguishing media suitable for materials burning in fire.

Safety Data Sheet

31473177

PRODUCT NAME: Lithium-Ion Polymer Battery

REVISION DATE: 2014-01-14

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	CAS Number
Aluminum Foil	2-10	7429-90-5
Metal Oxide (proprietary)	20-50	
- Manganese	5-15	
- Nickel	3-6	
- Cobalt	3-6	
Polyvinylidene Fluoride (PVDF)	<5	24937-79-9
Copper Foil	5-20	7440-50-8
Carbon (proprietary)	10-20	7440-44-0
Electrolyte (proprietary)	10-20	
Aluminum, Copper plate and inert materials	Remainder	N/A

Lithium-equivalent Content: 7.72g (95.83 Watt)

4. FIRST-AID MEASURES

Inhalation:	Not a health hazard.
Eye contact:	Not a health hazard.
Skin contact:	Not a health hazard.
Ingestion:	If swallowed, obtain medical attention immediately.

IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING, THE FOLLOWING ACTIONS ARE RECOMMENDED:

Inhalation:	Leave area immediately and seek medical attention.
Eye contact:	Rinse eyes with water for 15 minutes and seek medical attention.
Skin contact:	Wash area thoroughly with soap and water and seek medical attention.
Ingestion:	Drink milk/water and induce vomiting; seek medical attention.

5. FIRE-FIGHTING MEASURES

General hazard:	Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.
Extinguishing media:	Use extinguishing media suitable for the materials that are burning.
Special fire-fighting	
instructions:	If possible, remove cell(s) from fire-fighting area. If heated above 150°C, cell(s) may explode/vent.
Fire-fighting equipment:	Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6. ACCIDENTAL RELEASE MEASURES

On land:	Place material into suitable containers and call local fire/police department.
In water:	If possible, remove from water and call local fire/police department.



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Safety Data Sheet

PRODUCT NAME: Lithium-Ion Polymer Battery

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7. HANDLING AND STORAGE

Handling:	No special protective clothing required for handling individual cells.
Storage:	Recommend to store the cell in an environment with under 70% RH
	free from corrosive gas within in a temperature range of -20 to 35°C. A
	temperature of 60°C or higher will accelerate the deterioration of battery
	performance.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:	Keep away from heat and open flame. Store in a cool, dry place.
Personal protection	
Respirator:	Not required during normal operations. SCBA required in the event of a fire.
Eye/face protection:	Not required beyond safety practices of employer.
Gloves:	Not required for handling of cells.
Foot protection:	Steel-toed shoes recommended for large container handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

State:	Solid.
Odor:	N/A
pH:	N/A
Vapor pressure:	N/A
Vapor density:	N/A
Boiling point:	N/A
Solubility in water:	Insoluble.
Specific gravity:	N/A
Density:	N/A

10. STABILITY AND REACTIVITY

Reactivity:	None.
Incompatibilities:	None during normal operation. Avoid exposure to heat, open flame, and corrosives.
Hazardous decomposition	
products:	None during normal operating conditions. If cells are damaged, hydrogen fluoride and carbon monoxide may be released.
Conditions to avoid:	Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

11. TOXICOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use.

Sensitization	Teratogenicity	Reproductive toxicity	Acute toxicity
No	No	No	No

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

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PRODUCT NAME: Lithium-Ion Polymer Battery

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12. ECOLOGICAL INFORMATION

Some materials within the cell are bioaccumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13. DISPOSAL CONSIDERATIONS

<u>California regulated debris</u>	
RCRA waste code:	Non-regulated.

Dispose of according to all federal, state, and local regulations.

14. TRANSPORT INFORMATION

<u>UN No. 3480</u>	
Proper shipping name:	Lithium-Ion Batteries
Class 9 packing group II	
hazard label:	Miscellaneous
ICAO/IATA	
Packing instruction:	965
Maximum gross weight per	
package on passenger and	
cargo aircraft:	5 kg
Maximum gross weight per	
package on cargo only aircraft:	35 kg
Special provision:	A45, A88, A99
<u>IMO</u>	
Packing instruction:	P903
Special provision:	188, 230, 310, 957
EmS:	F-A, S-I

<u>US DOT</u>

This product is not subject to any other requirements of dangerous goods under 49 CFR 173.185 (Lithium Batteries and Cells).

15. REGULATORY INFORMATION

OSHA hazard communication standard (29 CFR 1910.1200): Hazardous

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.



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Safety Data Sheet

PRODUCT NAME: Lithium-Ion Polymer Battery

REVISION DATE: 2014-01-14

16. OTHER INFORMATION

For further information, see:	For more information, consult the Technical Data Sheet (www.lgchem.com).
Sources of key data used to compile the datasheet:	Information contained in this safety data sheet is based on LG Chem owned
-	data and public sources deemed valid or acceptable. The absence of data elements indicates, that no data meeting these requirements is available.
Further information:	This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality.