

9 UL File(MH46335)



the standard in safety

Underwriters
Laboratories

VP Engineering
NATIONAL ENERGY TECHNOLOGY CO LTD
14TH FL-2 NO 37 SEC SAN MIN RD
BAN CHIAO
TAIPEI HSIEN
220 TAIWAN

Date: 2008/02/06
Subscriber: 100237155
PartySite: 1416414
File No: MH46335
Project No: 07CA64913
PD No: 08004073
Type: R
PO Number: YVONNE LEE 17-DE

Subject: Initial Production Inspection

PLEASE NOTE: YOUR MANUFACTURING REPRESENTATIVE IS NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to (886-2-2896-7790), referring to the above Project and/or PD Numbers.

This material is provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

TPI File

ADDENDUM TO TRANSMITTAL LETTER

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The following material resulting from the investigation under the above numbers is enclosed.

Issue

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
2008/02/04	1	1	Add New Volume	

Follow-Up Service Procedure

DO NOT DISCARD THIS PAGE

It is important to keep Procedures and Test Reports up-to-date as new or revised pages are received. Correct maintenance will decrease the amount of time the UL Representative spends when visiting your facility. Refer to the **HOW TO UPDATE** column below for instructions.

PAGE	FUNCTION	HOW TO UPDATE
Authorization Page	Authorizes the appropriate type of Follow-Up Service (L or R). Contains the names and addresses of the Applicant, Listee (Recognized or Classified Company) and Manufacturer and the corporate Identifier number assigned by UL to each entity, as well as the name of the UL product category title.	Replace present page by matching the UL File Number, Volume Number and most current "Issued" or "Revised" date.
Addendum to Authorization Page*	Lists the names, addresses and UL identifier numbers of all manufacturing locations when multiple locations exist	Replace, add or delete page by matching the UL File Number, Volume Number and most current "Issued" or "Revised" date.
Listing Mark Data (LMD) Page, Classification Mark Data (CMD) Page or Recognized Component Marking Data (RCMD) Page*	Used only for products covered under Type R service as shown on the Authorization Page. Use to determine the correct Listing/Classification/Recognized Component Mark(ing). For Listed and Classified categories the assigned control number is included, which is part of the required marking. Also includes additional information regarding minimum size, application, procurement, and any other optional markings, as well as the appropriate UL Mark.	Replace present page with most current "Issued" or "Revised" date.
Multiple Listing (ML) Correlation Sheet	Correlates product model numbers between those products made by a Manufacturer for the Basic Applicant and those supplied to another company, the Multiple Listee.	Replace, add or delete page(s) with most current "Issued" or "Revised" date.
Index*	Catalogs the contents of the Procedure by some logical means, i.e. Section Number or Issue Date.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Appendices (App.)	Contains instructions for the Manufacturer and UL Representative concerning specific responsibilities and required periodic tests. May also outline tests to be conducted on samples to be forwarded to UL's facilities.	Replace present page by matching the UL File Number, Volume Number, Appendix letter (eg. App.A), Page Number and most current "Revised" date.
	Standardized Appendix Pages are the same for all manufacturers within a particular product category.	Replace present page by matching the Appendix letter (eg. App.A), Page Number and most current "Revised" date.
Follow-Up Inspection Instructions (FUII) Pages	Contains information similar to that in the Appendices. FUII Pages are issued as part of the Procedure when a UL Standard is used in conjunction with the Procedure, and are the same for all manufacturers within a particular category.	Replace present pages by matching the Page Number and most current "Issued" or "Revised" date.
Section General (Sec. Gen.)	Contains description, requirements, identifications and/or specifications that are common to all products covered by the entire volume and supplements the information provided in the Description Section.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Description Section (Sec.)	Contains the specific description of one or more products or systems. This includes written text supplemented by photographs, drawings, etc., as necessary, to define features that affect compliance with the applicable requirements.	Replace present page by matching the UL File Number, Volume Number, Section Number, Page Number and most current "Issued" date.

The above page(s) may not appear in all UL Follow-Up Service Procedures. Their inclusion is determined by UL's Conformity Assessment Services staff.

PLEASE NOTIFY YOUR LOCAL UL OFFICE OF ANY CHANGES IN CONTACT NAME, COMPANY NAME OR ADDRESS SO THAT MATERIAL AND IMPORTANT INFORMATION CONTINUES WITHOUT INTERRUPTION TO YOUR FACILITY.



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File MH46335

Vol 1

Issued: 2008-02-04

Revised:

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

COMPONENT - LITHIUM BATTERIES
(BBCV2)

Manufacturer: MOBILE ENERGY TECHNOLOGY CO LTD
(575581-001) 2ND INDUSTRIAL PARK
18 KONG 9TH RD
LIN KOU
TAIPEI HSIEN 244 TAIWAN

Applicant: NATIONAL ENERGY TECHNOLOGY CO LTD
(100237-155) 14TH FL-2 NO 37 SEC SAN MIN RD
BAN CHIAO
TAIPEI HSIEN
220 TAIWAN

Recognized Company: APOGEE POWER INC (MH46364)
(100226-906) 1711 DELL AVE
CAMPBELL CA 95008

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc. (UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc. (UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

THIS FORM PAGE IS TO BE REVISED BY THE NORTHBROOK LABEL DEPARTMENT ONLY

SPECIAL INSTRUCTIONS

UL REPRESENTATIVE:

SAMPLES

Once each year, select the appropriate type and number of samples for each group as specified in Table A, marked with the appropriate identification, and forward to:

- BRE - BREA
- CAM - CAMAS
- NKW - NORTHBROOK, WEST (Bldg. 6A)
- NWT - NEW TERRITORY, HONG KONG
- TKY - TOKYO, JAPAN
- TPI - TAPEI, TAIWAN

Models are tabulated under a specific group based upon common construction features. The number of models chosen reflects 1 model for every 4 models within each group. For example, if there are 8 models within a group, 2 models are chosen for follow up testing and examination each year. Records should be maintained to ensure that all models for each group are subjected to follow up testing within approximately every four years.

The UL Representative is responsible for selecting the quantity of samples at the stated frequency for Follow-Up testing in accordance with the Sample Selection criteria noted above. Samples shall be identified and tagged with the applicable information using a Sample Tag (Form 300-217). Unless otherwise stated, the UL Representative shall inform the manufacturer that the samples are to be forwarded to the Test Office(s) as designated on the specific Procedure Volume subscriber card.

CONFORMITY ASSESSMENT SERVICES:

GENERAL

The following tests shall be conducted as specified in Table A on samples received from the Field Representative.

OPEN CIRCUIT VOLTAGE (PRIMARY CELLS/BATTERIES ONLY)

The open circuit voltage for each model of primary cell/battery shall be as shown below in Table 1 when measured using a direct-current voltmeter.

TABLE 1

OPEN CIRCUIT VOLTAGE (PRIMARY CELLS/BATTERIES ONLY)

Models	Open Circuit Voltage, V

PROJECTILE TEST:

METHOD

Five samples from each group and models to be tested, as outlined in Table A, are subjected to this test.

Each test sample cell is placed on a screen that covers a 102 mm (4 inch) diameter hole in the center of a platform table. The screen is constructed of steel wire mesh having 20 openings per inch (25.4 mm) and a wire diameter of 0.017 in. (0.43 mm). The screen is mounted 38 mm (1-1/2 inch) above a burner. The fuel and airflow ratios are set to provide a bright blue flame that causes the supporting screen to glow a bright red.

An eight-sided covered wire cage, 610 mm (2 feet) across and 305 mm (1 foot) high, made from metal screening is placed over the test sample as shown in Figure 19.3 of UL 1642. The metal screening is constructed from 0.25 mm (0.010 inch) diameter aluminum wire with 16-18 wires per inch (25.4 mm) in each direction.

The sample is heated and shall remain on the screen until it explodes or the cell has ignited and burned out. It is not required to secure the sample in place unless it is at risk of falling off the screen before the test is completed. When required, the sample shall be secured to the screen with a single wire tied around the sample.

BASIS FOR ACCEPTABILITY

When subjected to the Projectile Test, no part of an exploding cell shall penetrate the wire screen such that some or the entire cell protrudes through the screen.

Note: A hole in the screen created by a piece of the cell sitting on the screen and burning a hole through the screen is not considered a failing result. Only those holes created by exploding parts puncturing the screen due to the force of the explosion are considered failing results.

ABNORMAL CHARGE**METHOD**

This test is conducted only for those constructions of secondary cells as noted in Table A.

Five samples of each group and model noted in Table A were subjected to this test.

Fully charged cells or batteries are used for this test. The cells or batteries are tested in an ambient temperature of $20 + 5^{\circ}\text{C}$ ($68 + 9^{\circ}\text{F}$).

Each test sample is discharged at a constant current of $0.2C/1$ hour to a manufacturer specified discharge endpoint voltage. The cell or battery is then to be charged with a constant maximum specified output voltage and a current limit of three times the maximum charging current I_c , specified by the manufacturer. Charging duration is 7 hour or the time required to reach the manufacturer's specified end-of-charge conditions, whichever is greater. When a non-resettable overcurrent or thermal protective device is either integral to the cell construction or has been investigated for the purpose operates during the tests, the test is to be repeated with the cell connected to the maximum load that does not cause the protective device to operate. When a resettable protective device operates during the test, the protector is allowed to reset as often as necessary and the test is continued until the appropriate charging time has been completed but not less than 7 hours. A protective device that is not integral to the cell and that has not been investigated for the purpose is short-circuited prior to testing.

BASIS FOR ACCEPTABILITY

The samples shall not explode or catch fire as a result of the abnormal charge test.