

Replacing the Standard Internal Battery in FERRUPS®

FE and QFE 1.15 – 1.4 kVA Models

This Technical Information Publication (TIP) explains how to replace the standard internal battery in FE and QFE 1.150–1.4 kVA models. A qualified service person familiar with the FERRUPS unit must replace the standard internal batteries. If you encounter any problems during this procedure, please call Best Power Worldwide Service at 1-800-356-5737 (U.S. and Canada only), 1-608-565-2100, or call your local Best Power office.

Tools Needed — Use Insulated Tools:

7/16-inch Open End Wrench or Nutdriver	Phillips Screwdriver
Safety Equipment Required by Local Codes	Torque Wrench Calibrated to In/lbs or N/m
Masking Tape and Pen to Label Wires	Electrical Tape



CAUTION!

This procedure must be performed by a qualified service person. FERRUPS units are designed to provide power under a variety of operating conditions. Dangerous voltages may be present even if AC line or DC voltage is removed. **TEST BEFORE TOUCHING!**

Turn off the FERRUPS unit according to the procedure describing “How (and When) to Shut Down Your FERRUPS” in the *FERRUPS User Manual*. Make sure that the FERRUPS batteries and AC input are off or disconnected before you replace the standard internal battery.



This unit contains electrostatic-sensitive devices. If you do not follow proper ESD procedures, you may cause severe damage to the electrical circuitry.

FERRUPS batteries are high current sources. Shorting battery terminals can cause severe arcing, equipment damage, and injury. A short circuit can cause a battery to explode.

Best Power recommends the following for qualified service personnel servicing the FERRUPS unit:

- A) Remove rings, watches, and other jewelry before servicing the FERRUPS unit.**
- B) Always wear protective clothing and eye protection and use insulated tools when working near batteries.**
- C) Whenever you are servicing an energized unit with the cover off, electric shock is possible; follow all local safety codes.**

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Section 100: Removing the Cover from the UPS

101. Shut down all load equipment plugged into (or hardwired to) the UPS.



CAUTION!

Make sure the On/Off (I/O) switch on the back of the UPS is turned to Off (O), and make sure all AC and DC power to the unit is off.

102. Turn off the UPS. If the UPS has an AC input plug, unplug it. If not, make sure the unit cannot receive AC power.
103. Remove the #1 Phillips screw on the top of the UPS. (See Figure 1.)
104. Next, find the sticker in the lower right corner of the front panel with the BEST logo. Remove the sticker, and loosen the #2 Phillips screw behind the sticker 5 or 6 turns to loosen (but not remove) it. Save the sticker.
105. Slide the cover forward until it is completely off the UPS.

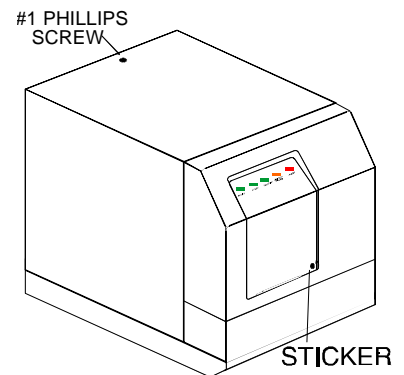


Figure 1

Section 200: Removing the Standard Internal Battery

201. Using an 8-mm wrench or nutdriver, remove the battery brackets holding the battery in place. (See Figure 2.)
202. Label each cable with its battery connection (+ or -) to guide you when you install the new batteries.
203. Disconnect the battery. Remove the negative (-) cable first. Tape the cable end with electrical tape to prevent contact with the battery or components in the unit. Then, disconnect the positive (+) cable.

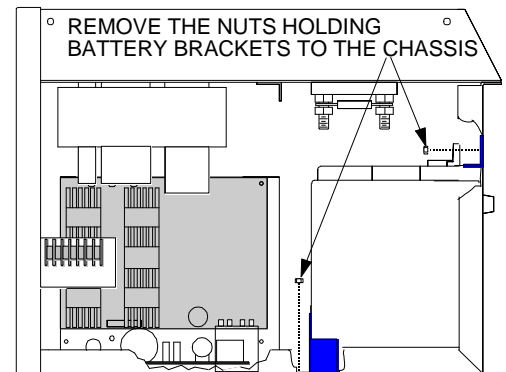


Figure 2



CAUTION!

Use proper safety and lifting procedures when removing the battery from the unit.

204. Remove the battery from the unit.

Section 300: Replacing the Standard Internal Battery

301. Place the battery in the unit. Using a torque wrench calibrated to 32 in/lbs (3.6 Newton-meters) and the labels which you attached earlier, reconnect the positive (+) cable to the battery first, then the negative (-) cable.
302. Reattach the battery brackets to the unit. (See Figure 2 above.)

303. Dispose of the old battery properly. For information on proper battery disposal, call Best Power Worldwide Service at 1-800-356-5737 or your local Best Power office.

Section 400: Placing the Cover on the UPS

401. Using the slide rails on each side of the unit, slide the cover on the UPS.
402. At the front of the UPS, tighten the screw in the lower right corner of the front panel with the BEST logo. Cover the screw with the round sticker you removed.
403. Put the screw back in the top of the UPS and tighten the screw.
404. Reapply AC power to the UPS. If the UPS has external batteries, reapply DC power to the UPS. (Units with internal batteries should already have DC power applied.)
405. Startup the UPS, connect all load equipment, and return the UPS to normal operation.