

TRIPP LITE SMART SERIES BATTERY REPLACEMENT PROCEDURE

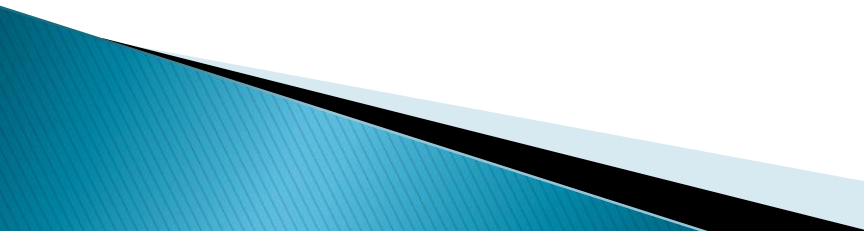


SMART SERIES BATTERY REPLACEMENT PROCEDURE

Thank you for purchasing the Tripp Lite SmartPro Medical Grade SMART SERIES Tower UPS.

We hope this product exceeds your expectations of performance in its intended application.


Throughout the life span of this UPS, there are some maintenance practices that need to occur in order to ensure continued operation of the unit. The primary component that requires attention is the internal battery of the UPS system.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

In spite of good maintenance practices and favorable operating conditions, the capacity of batteries does deplete over time which reduces the back up or run time a UPS can deliver to user applications.

Some environmental factors that influence loss of battery capacity are:

- Humidity
 - Temperature
 - Depth of discharge
 - Frequency of recharge
- 

SMART SERIES BATTERY REPLACEMENT PROCEDURE

Replacing the batteries may be required if the UPS has been stored for an extended period of time without a recharge, a loss of AC power occurred allowing the batteries to completely discharge, or if a problem has occurred whereby the batteries cannot sustain an adequate voltage.

For planning purposes, expect most batteries in Tripp Lite UPS products to have a lifespan of 3–5 years. However, for applications that require constant discharging and charging of the internal batteries on a daily basis, the lifespan expectation diminishes at a much higher rate.

Because battery cells have only a finite number of discharge and recharge cycles, the internal batteries may require replacement within a 2 year period if not earlier. This issue is also magnified by deep discharges, or complete battery drains, allowing the UPS to completely power off due to lack of DC voltage.

Providing the UPS with a fresh set of batteries maintains the effectiveness and reliability of the unit and restores the UPS capacity to its factory fresh state.

SMART SERIES BATTERY REPLACEMENT PROCEDURE

The SMART SERIES comes equipped with a user accessible battery replacement door, which enables qualified personnel to replace the UPS' batteries without the need to take the unit out of service. This prevents extended downtimes for an application.

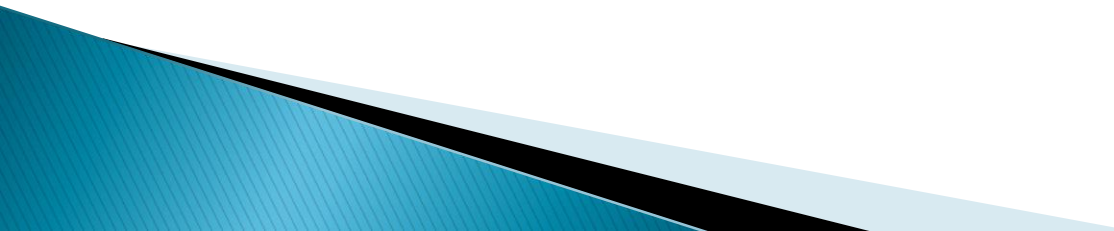
The batteries in the SMART SERIES are hot-swappable, which allows for the replacement to occur while the equipment attached to the unit continues to operate.

However, for added safety to the load, consider performing battery replacement during off or non-peak hours of your application with the attached load shut down, and the UPS completely powered off.

SMART SERIES BATTERY REPLACEMENT PROCEDURE

The following steps are crucial to proper battery replacement.

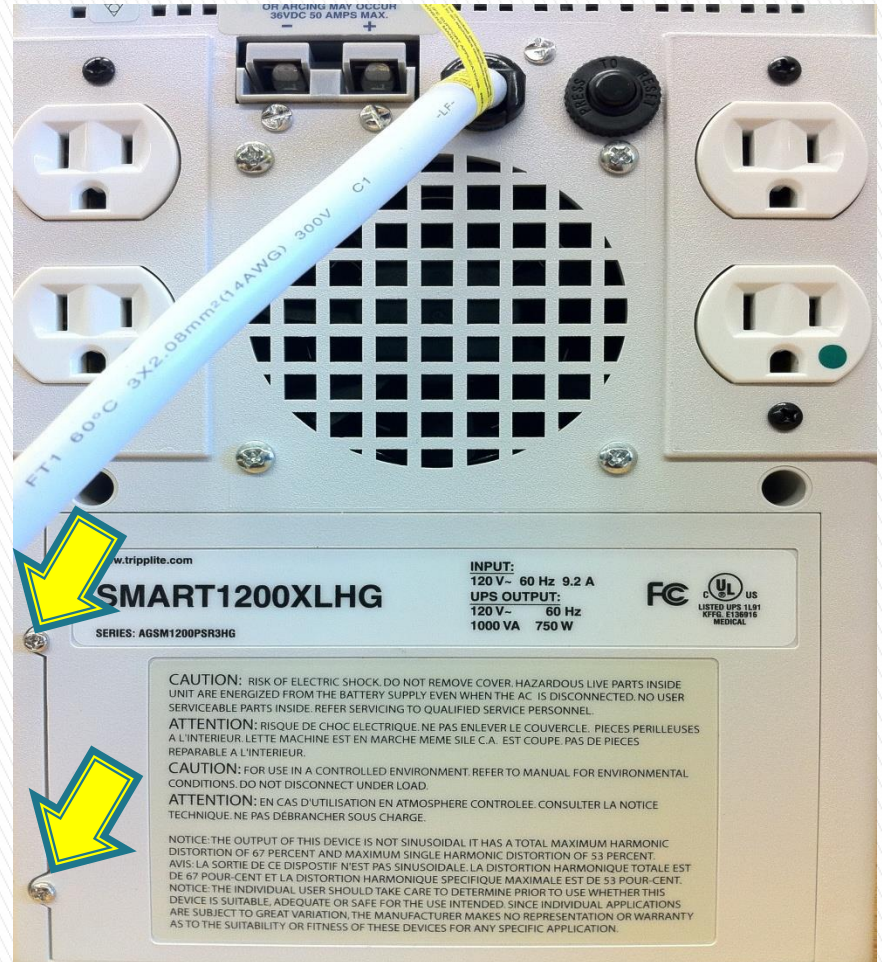
Please adhere to these instructions in order to prevent personal injury and damage to the UPS.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Facing the rear of the UPS, locate the two screws that hold the battery door in place.

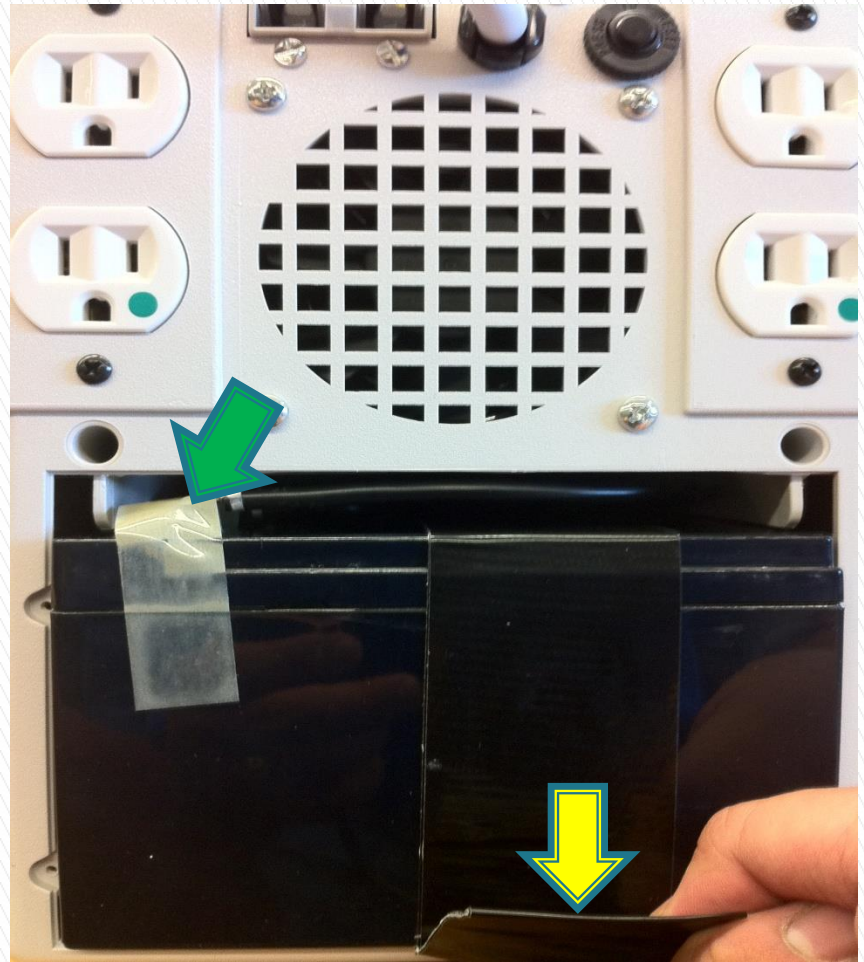
Using a Phillips head screw driver, remove the two screws. Once the last screw is removed, remove the battery door from the UPS.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Locate the tab made of black tape that allows the battery cartridge to be pulled away from the unit (indicated by the yellow arrow).

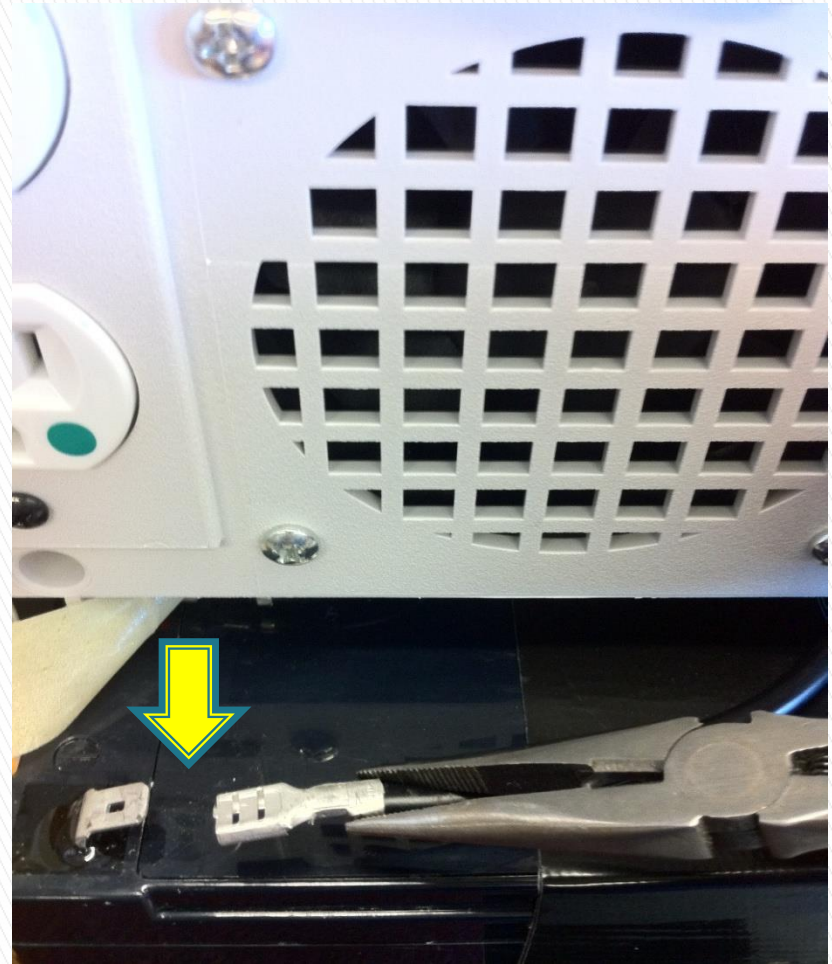
Firmly grasp the tab and pull the battery away from the unit enough to expose the black battery cable taped to the battery itself (indicated by the green arrow).



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Remove the tape covering the black battery cable connection to the battery.

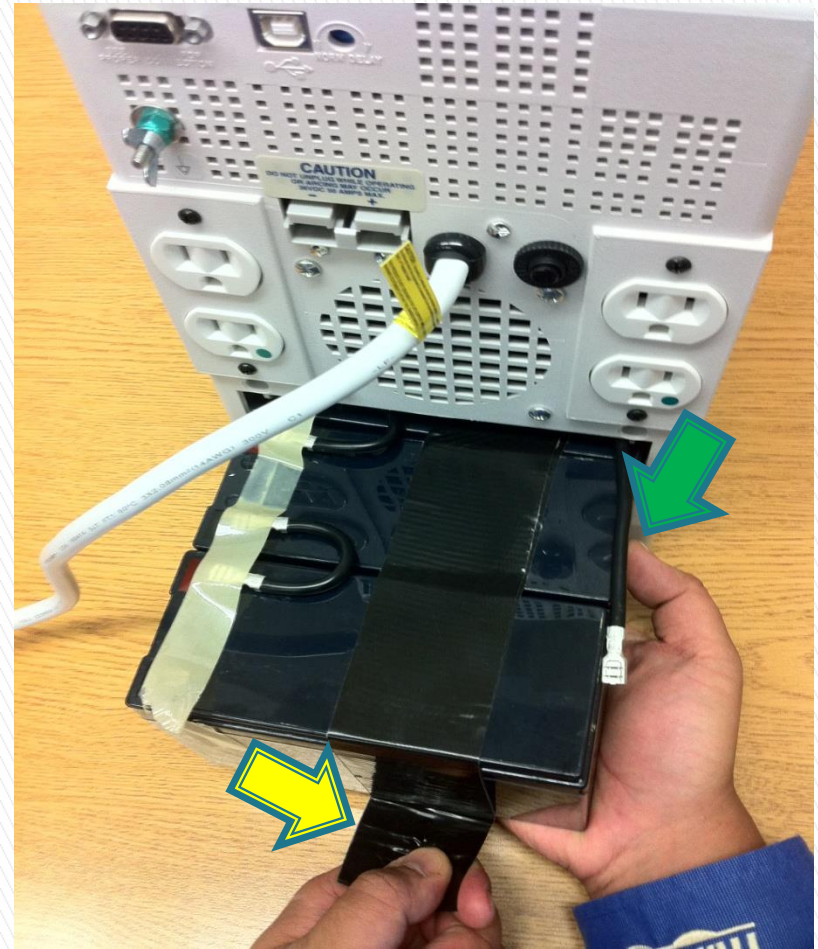
Using needle nose pliers, pull the cable away from the battery terminal in a side to side motion until the cable is disconnected.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Using the tab that allows the battery cartridge to be removed from the UPS (indicated by the yellow arrow), begin to pull the battery away from the unit.

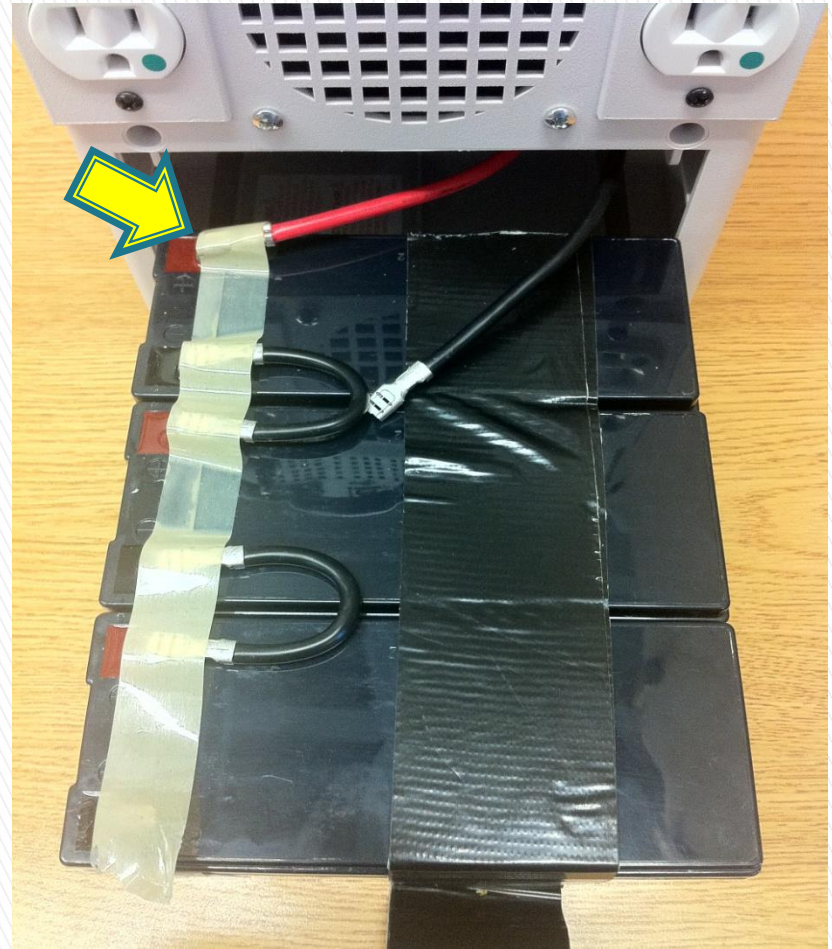
As more of the battery is exposed, place one hand underneath the battery cartridge (indicated by the green arrow) to support it as it is removed from the unit.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Pull the battery out of the unit until it is free from the compartment and place it directly behind the UPS.

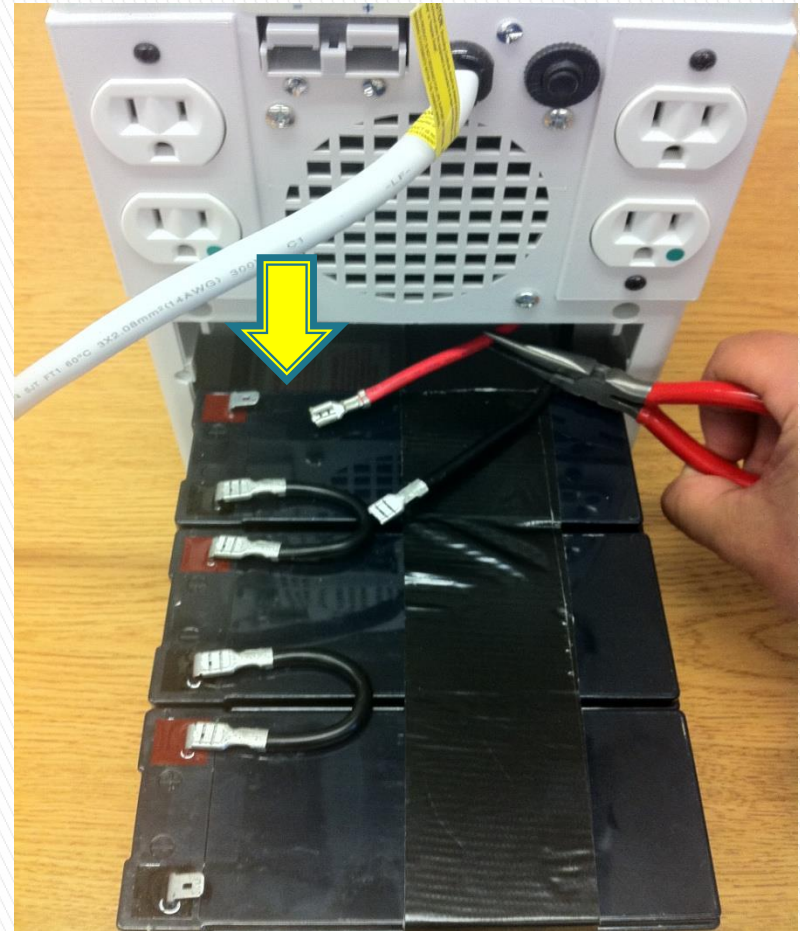
A red battery cable will remain connected so be sure not to pull the battery too far so as not to disconnect this cable.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Remove the tape covering the battery terminal connections to expose all the battery cable connectors.

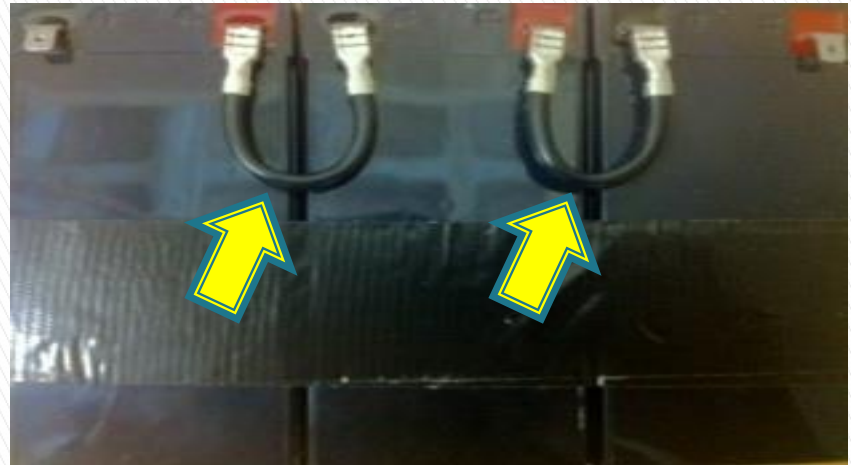
Using needle nose pliers, pull the red cable away from the battery terminal in a side to side motion until the cable is disconnected.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

With the battery fully disconnected from the UPS, locate the 2 battery cables connecting the three batteries (indicated by yellow arrows) together.

Using needle nose pliers, pull the battery cables away from the battery terminals in a side to side motion until the cables are disconnected. Set them aside for use with the replacement battery cells.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Set the original batteries aside.

Line up the 3 new batteries included with the RBC53 side by side with the red positive battery connector of each cell next to the black negative battery connector of the battery next to it (indicated with yellow arrows).

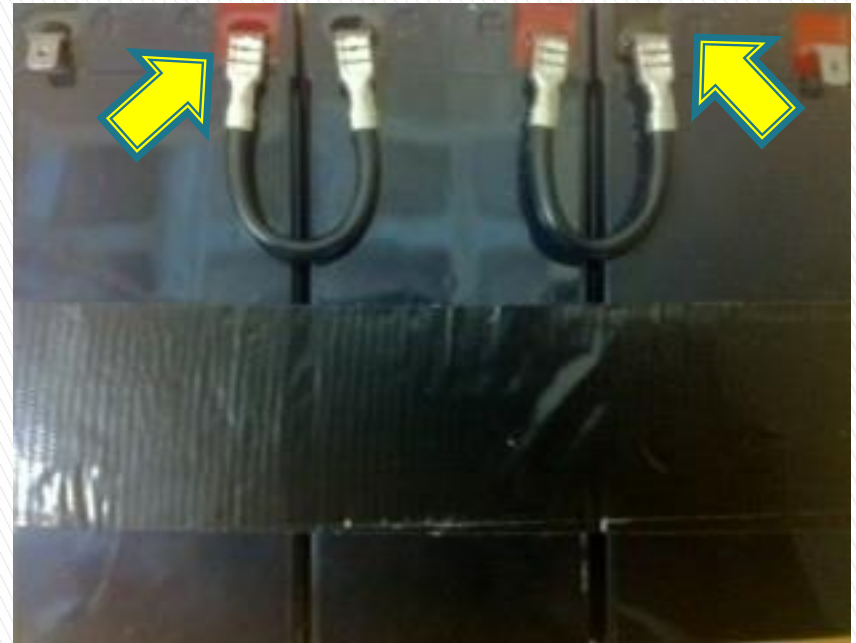
(Note: RBC53 batteries are not taped together as one cell. We suggest using duct tape to connect the cells together, which allows for easier cable connection and installation into the UPS battery compartment.)



SMART SERIES BATTERY REPLACEMENT PROCEDURE

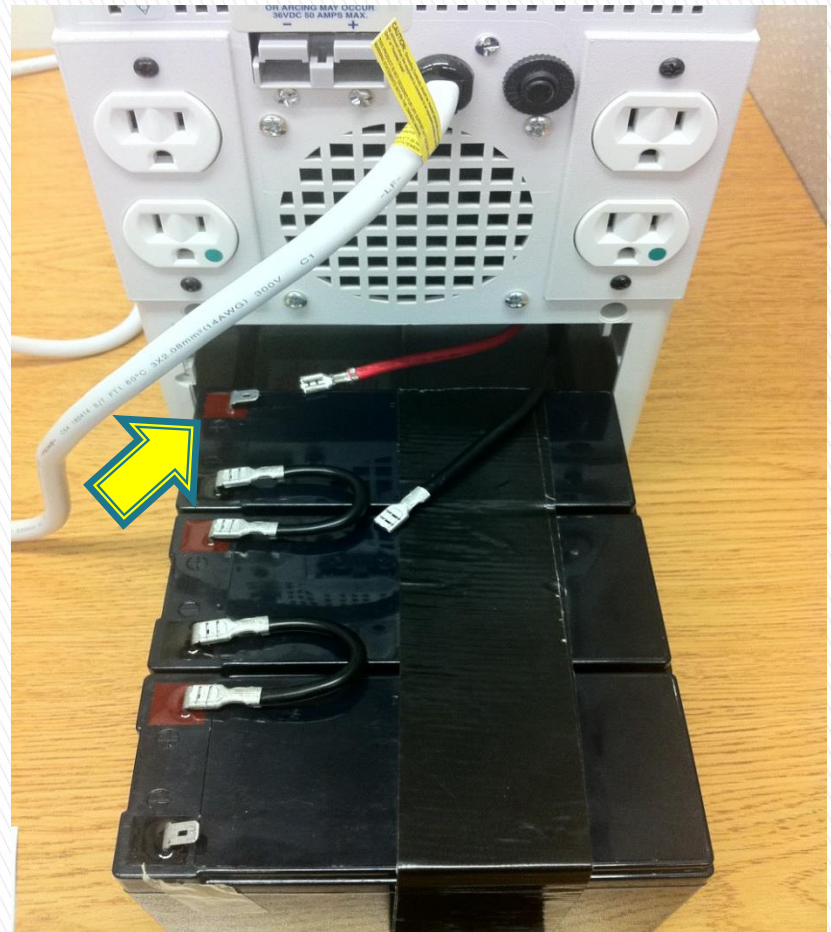
Using the short black battery cables removed from the original batteries, reconnect the 3 cells together connecting the red positive terminal of one cell to the negative black terminal of the next cell. Repeat this process to connect the third cell.

Be aware that a spark or arc can appear when the connections are made.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

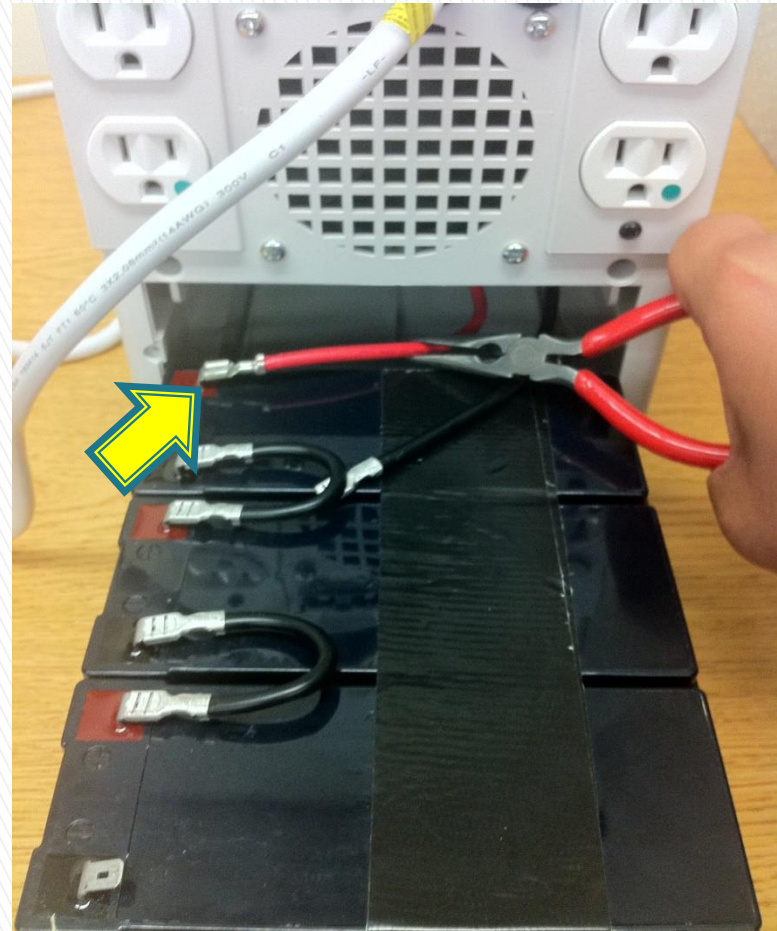
Place the new set of batteries directly behind the battery compartment of the UPS with the exposed red battery terminal closest to the unit.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Using needle nose pliers, take the red cable from the UPS system and connect it to the red positive battery terminal using a side to side motion until the cable is connected.

Be aware that a spark or arc can appear when the connection is made.



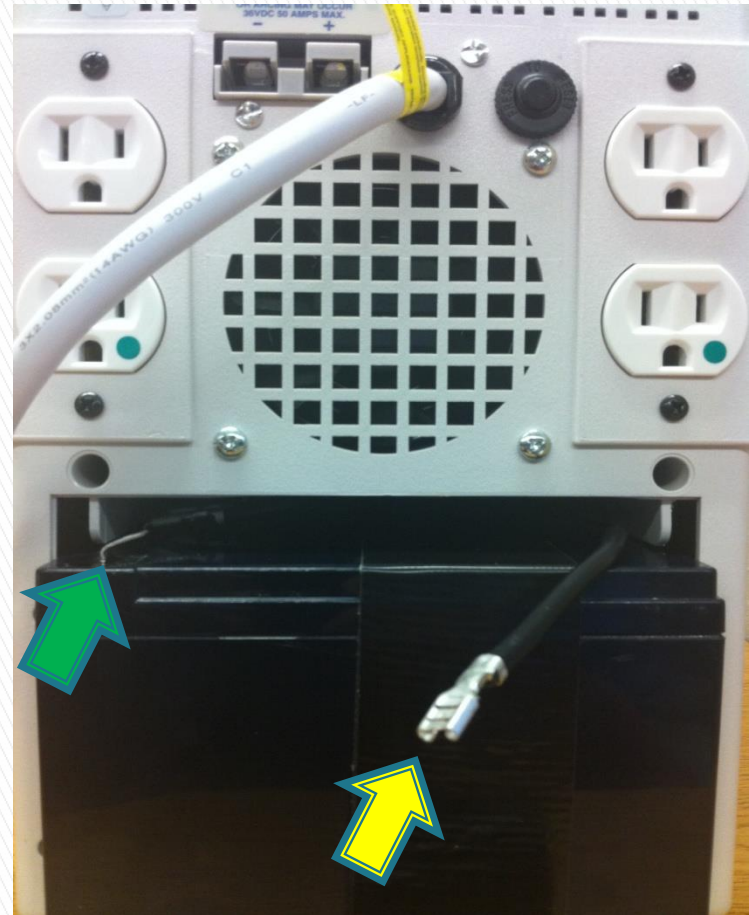
SMART SERIES BATTERY REPLACEMENT PROCEDURE

Lift the battery cartridge and begin to ease the cells into the battery compartment.

Be careful not to pinch the red battery cable at the rear or top of the compartment.

Also be sure that the loose black negative battery cable from the UPS is held above the cells so as to allow connection after the batteries are inserted (indicated by yellow arrow).

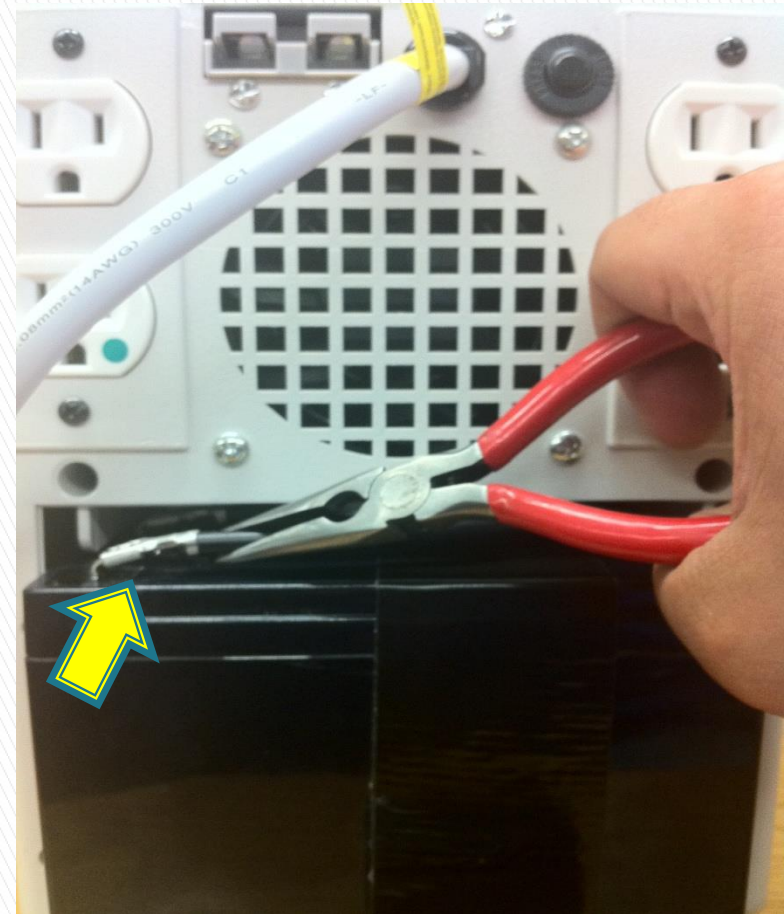
Leave the black negative battery terminal not connected to a cable exposed (indicated by green arrow).



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Using needle nose pliers, take the black cable from the UPS system and connect it to the black negative battery terminal using a side to side motion until the cable is connected.

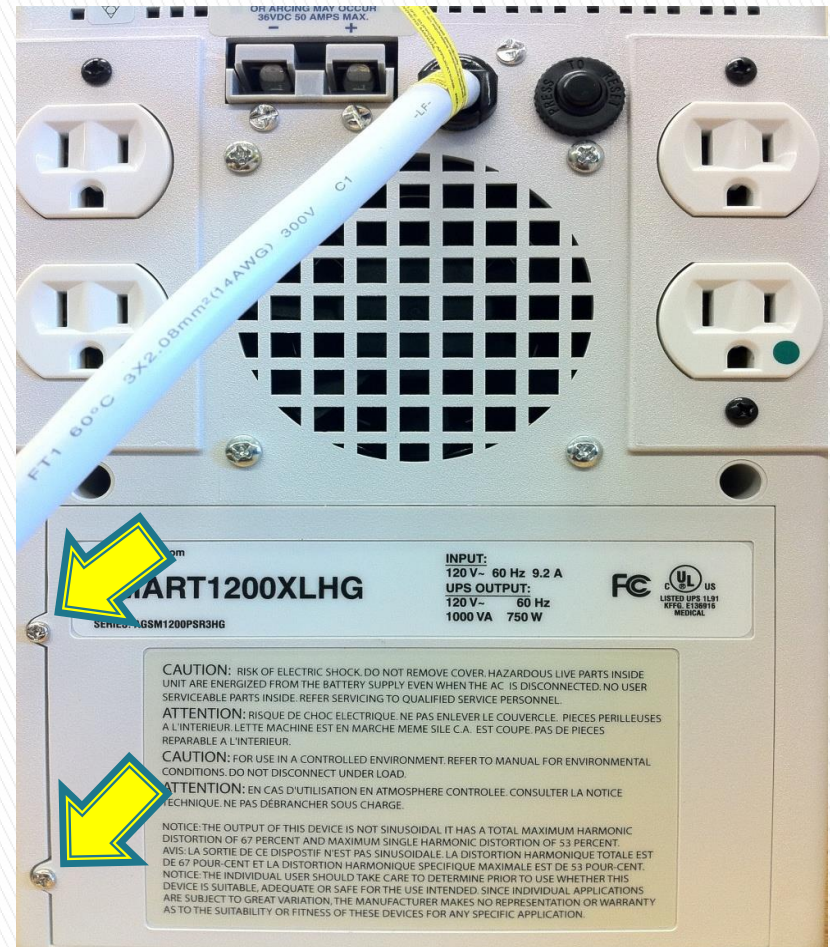
Be aware that a spark or arc can appear when the connection is made.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Once the black cable from the UPS is connected to the black negative battery terminal, push the battery cartridge into the compartment.

Align the battery door with the mounting holes of the housing for the UPS system. Install the screws used to secure the door in place.

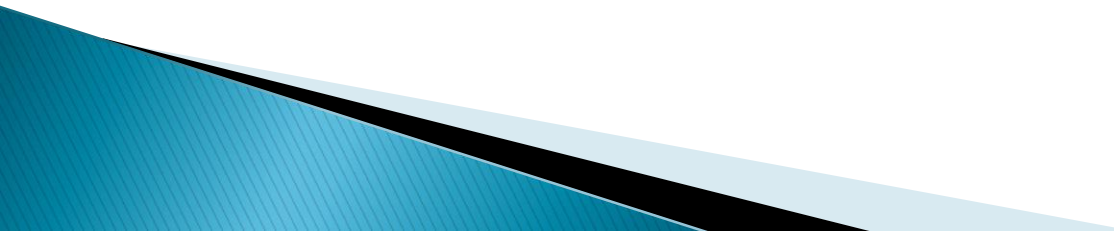


SMART SERIES BATTERY REPLACEMENT PROCEDURE

Your battery replacement is now complete. Allow your UPS to charge for at least 6–8 hours in order to achieve the maximum amount of runtime able to be provided by your unit.

Remember, this operation is for use only by qualified personnel.

If you are unclear about any of these instructions, or have questions regarding the operation of your SmartPro Medical Grade SMART SERIES Tower UPS please contact Tripp Lite Technical Support immediately for assistance.



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Tripp Lite Technical Support is available by phone:

(773) 869-1234

Monday - Friday 7:00am to 6:00pm CST

or by email:

techsupport@tripplite.com



SMART SERIES BATTERY REPLACEMENT PROCEDURE

Thank you for being a Tripp Lite customer and we look forward to serving you in the future.

