

Thus, the current total number of runs and hours have been updated.

## When power failure occurs



**DANGER** Before removing the cover, top deck, or other components, for maintenance, be sure to turn off the POWER switch of the centrifuge. Then unplug the power cord from the wall outlet, and wait at least three minutes to avoid the risk of electrical shock.



### **WARNING**

1. Never open the door during rotation.
2. Never touch the rotor during rotation.



**CAUTION** Never conduct operations in a manner other than as described in this operation manual.

### **1. Rotation of the rotor**

The rotor coasts to a stop. If the power is restored when the current speed is more than 500 rpm, the rotor will be automatically accelerated to the set speed. If it is restored when the current speed is less than 500 rpm, the rotor will decelerate to a stop.

### **2. Displays on the panel**

All displays on the panel go out. The set values are all backed up by battery during the power failure. When the power is restored, the displays will come on as before the power failure; the set values will be restored; and the message “Power failure” will appear in the message display.

### **3. Removing the rotor from the ultracentrifuge**

First open the chamber door, then remove the rotor according to the following procedure:

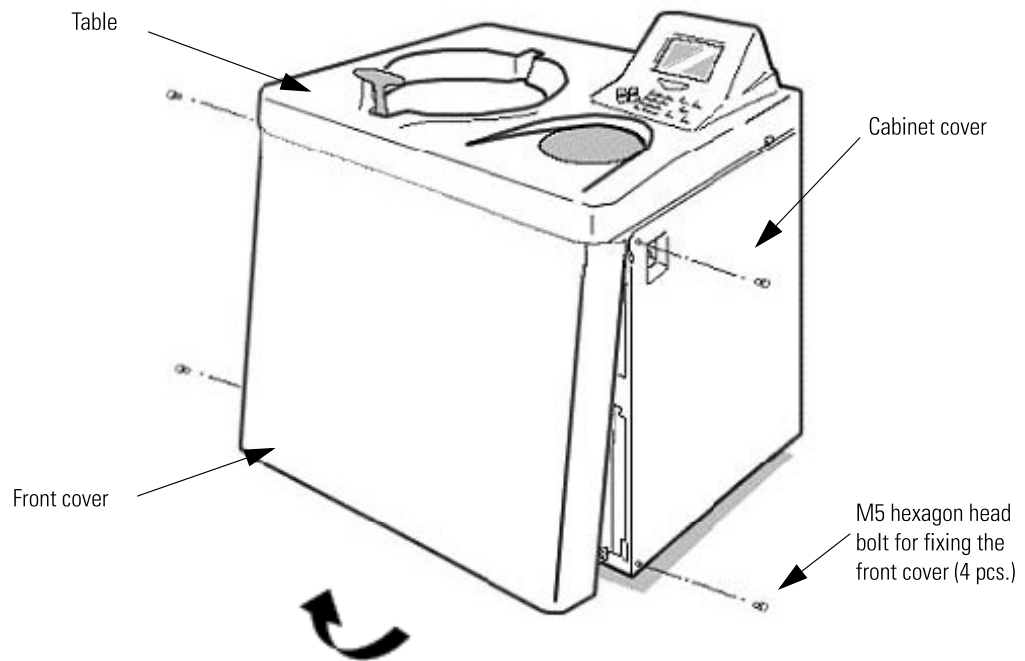
- (1) Check that the rotor is at rest. Listen carefully for any sounds coming from the drive.



**WARNING** It can take more than three hours for the rotor to come to a complete stop because the rotor chamber is under vacuum. Before opening the door, wait until the rotor comes to a stop.

- (2) Then unplug the power cord from the wall outlet, and wait at least three minutes to avoid the risk of electrical shock.

- (3) Remove the four M5 hexagon head bolts fixing the front cover from both sides and pull down the front cover by pulling its lower side forward. Then, remove the front cover. The upper side of the front cover is an insertion type but not a screw fixing type.



**Figure 2-16** Removing the front cover

(4) Open the air vent (by turning the vacuum release screw on the left of the vacuum chamber counterclockwise) to let air into the rotor chamber. When the pressure in the rotor chamber reaches atmospheric pressure, do not forget to tighten the vacuum release screw as it was before. (See Fig. 2-16.)

(5) Pull the door unlock wire on the right of the vacuum chamber and, at the same time, push the door handle. Then the door opens. When opening the door, confirm that the rotor is not rotating. If it is still rotating, immediately close the door.

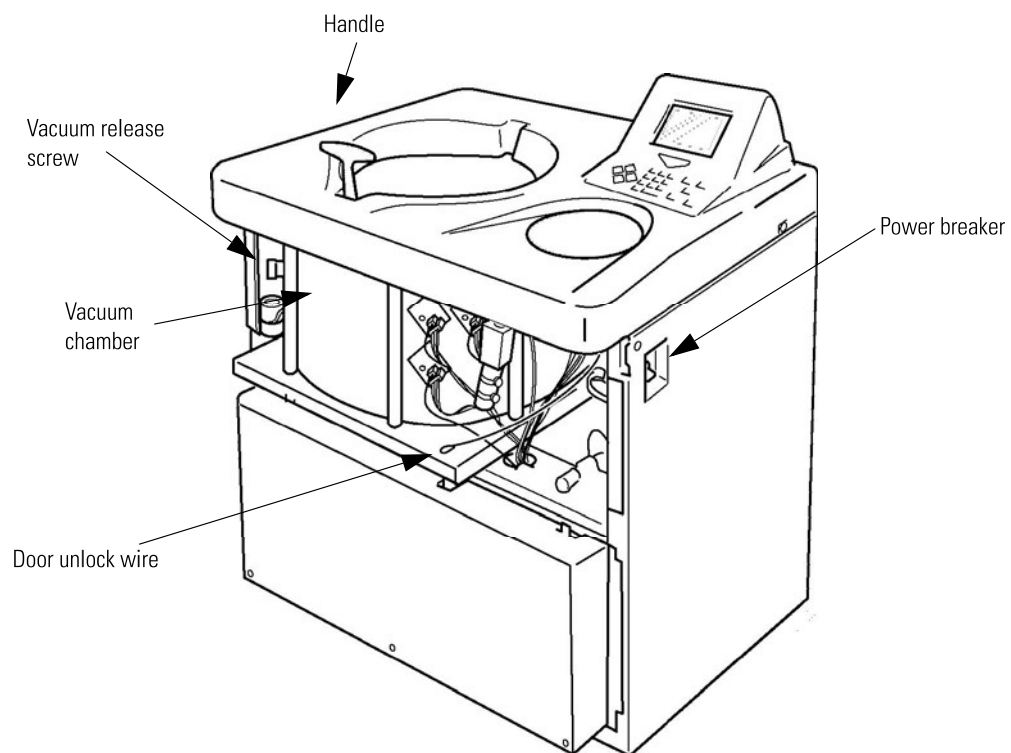


**WARNING** Never touch the rotor while it is rotating.

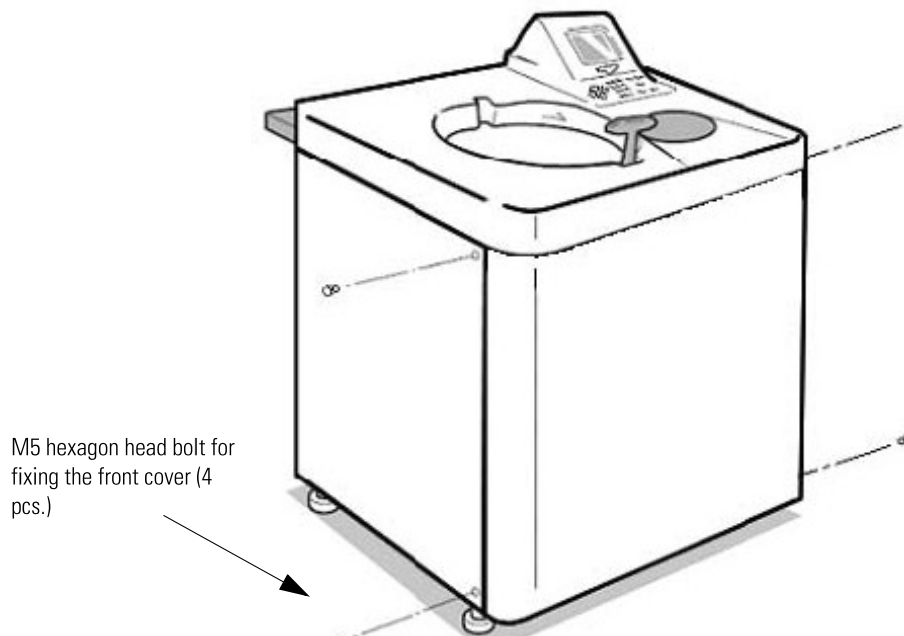
(6) Remove the rotor. After the removal, close the air vent and put the front cover back to the ultracentrifuge. Insert the top surface of the front cover in the bottom surface of the front side of the table and put the bottom surface of the front cover on the support plate of the front cover by reversing the removing procedure. Attach it on the frame with four M5 hexagon head bolts.

## Operation

When power failure occurs



**Figure 2-17** Ultracentrifuge with the front cover removed



**Figure 2-18** Installing the front cover

(7) Turn on the power breaker.



### **WARNING**

When the centrifuge will not be used for a long time, keep the power breaker off.