

FR Backup Battery

Overview

This instruction sheet describes how to install a Model 934 Nickel-Cadmium Battery in a 3700FR, 3710FR, or 6712FR refrigerator.

During normal operation, the refrigerator is powered by AC. The refrigerator's internal electronics supply DC power to the sampler controller and a charging current to maintain the charge on the backup battery. If AC power fails, DC power to the sampler controller is then supplied by the backup battery. The battery recharges after AC power is restored.

Note

The backup battery powers only the sampler controller when AC power is lost. The cooling system will not operate until AC power is restored.

Before installing the Model 934 battery, verify that it will power the sampler controller. Attach it to the sampler power connector and press the ON button. If it powers the sampler, proceed with the installation. If the battery does not power the sampler, charge the battery and try again before installing it in the refrigerator.

CAUTION

Do not install other types of batteries. The charging circuit is intended for Model 934 Nickel-Cadmium Battery Packs only. Installing other types, such as lead-acid batteries, may damage the refrigerator or battery.

Installation Procedure

You will require the following items to install the FR Backup Battery:

- **68-6700-135 Battery Backup Kit**
 - (1) 60-1684-040 NiCad Battery Assembly
 - (1) Battery Serial Number Label
 - (4) 090-4026-00 1" foam fasteners
 - (1) Use Period Label
- **Tools**
 - #2 Phillips Screwdriver
 - Needle-nose Pliers
 - Voltmeter (optional)

CAUTION

There is a risk of electric shock! Disconnect the power before removing the lower back panel of the refrigerator. Only trained service personnel should remove the case top.

1. Remove the three screws that mount the Temperature Control Box assembly (Figure 1). Pull the Temperature Control Box assembly away from the refrigerator interior. It is not necessary to remove any cables.

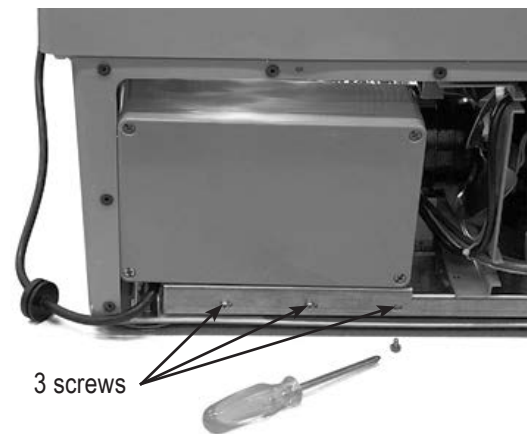
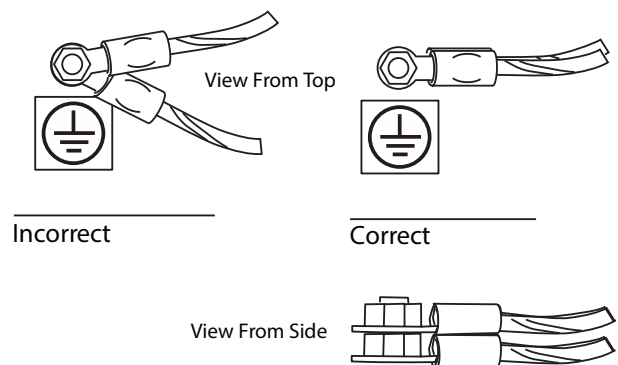


Figure 1: Temperature Control Box Assembly

2. Locate the ground post behind the Control Box. It is important that the connectors attached to this post are routed parallel to the Temperature Control Box and Backup Battery. If necessary, loosen the retaining nuts and reposition the wire connectors. Tighten after repositioning the connectors.

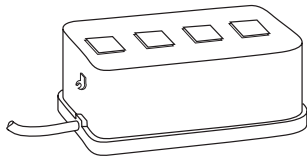


Note

If the ground connectors are pointing towards the front or rear of the refrigerator, they may interfere with installing the battery or reinstalling the temperature control box.

3. Attach the four foam fasteners to the bottom surface of the Model 934 Battery.

Four Foam Fasteners



4. Refer to Figure 2 and position the battery between the two rubber draw latches. Note that the battery cable is routed to the left, not towards the fan.



Figure 2: Positioning the Battery

5. Pull the rubber draw latches over the catches mounted on the sides of the battery. A pair of needle-nose pliers will make this task much easier.
6. Remove the dustcap from the remaining open connector on the back of the Temperature Control Box (Figure 3). Connect the battery to this open connector.



Figure 3: Connecting the Battery

7. Reinstall the Temperature Control Box. Secure the box with the three screws.
8. Inspect the interior before replacing the back cover. Be certain that none of the cables are pinched, and that the fan still rotates freely. Replace the back cover.
9. Place the Serial Number and the Use Period labels inside the refrigerator door.
10. Verify that the Backup Battery is installed correctly with the following test:
 - a. Make sure that the refrigerator AC line cord is still unplugged.
 - b. Ensure that the sampler power connector is attached to the sampler controller.
 - c. Press the ON button on the sampler controller. If characters appear on the controller's display, you have successfully installed the Backup Battery. If the controller will not operate, refer to the Refrigerated Sampler Instruction Manual to troubleshoot the problem. If a sampler controller is not mounted on the refrigerator, test the installation with a voltmeter. Measure the voltage between pins A (-) and B (+). The measured voltage will vary according to the charge held by the battery, but typically will read between 11.5 and 14.5 VDC.

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