
INSTALLATION INSTRUCTIONS

Original Issue Date: 12/92

Model: 6-2800 kW

Market: Industrial

Subject: **Battery Activation (Dry-Charged Batteries)**

Introduction

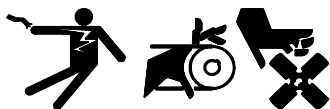
Refer to these instructions to activate dry-charged batteries (batteries containing no electrolyte). Wet storage or maintenance-free batteries are shipped with electrolyte and do not require battery activation. Electrolyte is not supplied with battery kit. Procure electrolyte from an automotive or commercial supplier. Should the following instructions differ from those supplied by the battery manufacturer, use the battery manufacturer's instructions. Observe all safety precautions attached to the battery.

To allow for maximum shelf life of the battery, add battery electrolyte only when the battery is ready to be used. The useful life of a battery begins when electrolyte is added.

Safety Precautions

Observe the following safety precautions while installing the kit.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

Disconnect the battery cables before working on the generator set. Remove the negative (-) lead first when disconnecting the battery. Reconnect the negative (-) lead last when reconnecting the battery.

Disabling the generator set. Accidental starting can cause severe injury or death. Before working on the generator set or connected equipment, disable the generator set as follows: (1) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first.

Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

⚠ WARNING



Sulfuric acid in batteries.
Can cause severe injury or death.

Wear protective goggles and clothing. Battery acid may cause blindness and burn skin.

Battery electrolyte is a diluted sulfuric acid. Battery acid can cause severe injury or death. Battery acid can cause blindness and burn skin. Always wear splashproof safety goggles, rubber gloves, and boots when servicing the battery. Do not open a sealed battery or mutilate the battery case. If battery acid splashes in the eyes or on the skin, immediately flush the affected area for 15 minutes with large quantities of clean water. Seek immediate medical aid in the case of eye contact. Never add acid to a battery after placing the battery in service, as this may result in hazardous spattering of battery acid.

Battery gases. Explosion can cause severe injury or death. Battery gases can cause an explosion. Do not smoke or permit flames or sparks to occur near a battery at any time, particularly when it is charging. Do not dispose of a battery in a fire. To prevent burns and sparks that could cause an explosion, avoid touching the battery terminals with tools or other metal objects. Remove all jewelry before servicing the equipment. Discharge static electricity from your body before touching batteries by first touching a grounded metal surface away from the battery. To avoid sparks, do not disturb the battery charger connections while the battery is charging. Always turn the battery charger off before disconnecting the battery connections. Ventilate the compartments containing batteries to prevent accumulation of explosive gases.

Installation Procedure

1. Place the battery on a level surface.
2. Remove vent cap, vent strip, or sealing tape from each battery cell.

Note: Do not use water or any other liquid to activate battery. If electrolyte is stored in a cold area, allow electrolyte to warm to room temperature.

3. Make sure battery-grade electrolyte (diluted sulfuric acid) is at room temperature and fill battery with electrolyte of a specific gravity of 1.265 at a temperature of 27°C (80°F). Use a temperature correction factor, if necessary. Fill to the bottom of vent well (filler hole) or to the top of the plates.
4. Charge battery for approximately 3–5 hours at 10 amperes minimum.

If circumstances do not allow time for charging or no battery charger is available, perform the charging process using the generator set charging system. This is possible only if the reserve charge in the battery is sufficient to start the generator set. Run the generator set a minimum of 20-30 minutes to charge the battery.

5. Use a battery hydrometer to check the specific gravity of the electrolyte in each battery cell. While holding the hydrometer vertically, read the number on the glass bulb at the top of the electrolyte level. Determine specific gravity and electrolyte temperature of battery cells. The battery is fully charged if the specific gravity is 1.260 at an electrolyte temperature of 27°C (80°F). The difference between specific gravities of each cell should not exceed ± 0.01 . The battery should be charged if the specific gravity is below 1.215 at an electrolyte temperature of 27°C (80°F).

6. Check electrolyte level. If necessary, add electrolyte to each cell. Add electrolyte only during this initial filling. After the initial filling, use distilled water or clean, soft water to keep the battery level full.
7. Replace vent caps or vent strips over each vent firmly. If caps are not tight, electrolyte may leak out.
8. Clean battery with water and dry battery with a rag. Use a solution of baking soda (sodium bicarbonate) and water to neutralize any spilled electrolyte, if necessary. Do not allow this solution to enter the battery cells. Clean all areas of spilled electrolyte and dry with a rag. Dispose of unused electrolyte and rags in a safe manner.
9. (Optional) Check the battery with a load tester using the load tester manufacturer's instructions. The battery condition should indicate a reading of Good or Okay.
10. Install battery on battery rack.
11. Attach battery cables. Attach red battery cable to (+) or positive terminal of battery. Attach black battery cable to (-) or negative battery terminal.
12. Start generator set and allow it to run for 20–30 minutes. Stop generator set.
13. Charge battery once each month if the battery is not connected to a float/equalize battery charger.
14. Check electrolyte level and specific gravity of battery monthly or at the interval specified by the battery manufacturer.