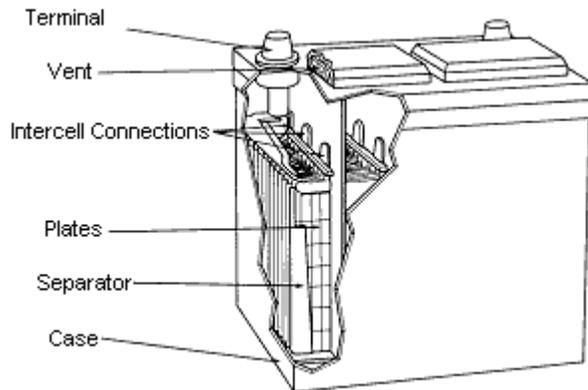


Batteries

Depending on the mill model you own, your electrical system could be quite simple or complex. Almost all of the Wood-Mizer systems use a 12-volt battery. We use high-output commercial batteries on our Super Hydraulic Mills and heavy duty deep cycle batteries on our Standard Hydraulic Mills.

If you can grasp the battery basics, you will have less battery problems and will gain greater battery performance, reliability and longevity.



Eighty percent of all battery failure is related to sulfating build-up. This build-up occurs when the sulfur molecules in the electrolyte (battery acid) become so deeply discharged that they begin to coat the battery's lead plates, and before long, the plates become so coated the battery dies. The causes of sulfating are numerous:

- Battery sits too long between charges.
- Undercharging a battery, to 90% of capacity allows sulfating of the battery in the 10% not reactivated by charging.
- Heat of 100° F., or more, increases internal discharge. As temperatures increase, so does internal discharge. A new fully charged battery left sitting 24 hours a day at 110° F for 30 days would be unlikely to start an engine.
- Low electrolyte level-battery plates exposed to air will immediately sulfate.
- Incorrect charging levels and settings. Most cheap battery chargers can do more damage than help.
- Cold weather is hard on a battery. Its chemistry cannot make the same amount of energy as when warm. A deeply discharged battery can freeze solid in sub-zero weather.
- A parasitic drain can kill a battery in a weekend. A parasitic drain is a load put on a battery with the key off.

When extended run-times are necessary (as when cutting small logs), you should increase charge time. Run the engine longer during breaks in cutting and on start-up and shut-down. Also, use a trickle charger overnight every other day. If you are not going to be using your mill for an extended time, it is best to put the battery on a trickle charger to maintain the battery voltage.

Vibration is another cause of low battery life. That is why a battery hold-down must always be in place while towing. Rough terrain can affect battery life by causing plate or separator damage. The battery can bounce high enough to short out the posts and damage the battery or other electrical components. The battery hold-down must be securely in place.

Not all batteries are the same. When choosing a battery, you can not go by the biggest battery with the highest Cold Cranking Amps (CCA) that will fit in the battery box. A 1200 CCA battery, with a smaller case than the one we use, will not last as long. There is less surface area and less acid storage area. Both are very important for high-output use. The less surface area, the less reserve capacity will be available, and more heat will be generated as the battery is charged and discharged. Heat is a battery's worst enemy.

The climatic conditions in your area dictate the minimum CCA rating necessary for proper operation. If you live in a warm temperate region, a 950 CCA battery may be adequate for a Super Hydraulic Mill with a diesel engine. But the same mill in a cold temperature region, 1200 CCA would be needed to start the engine in the extreme conditions there.

With this information, you have a better understanding of why your mill battery is an important part of mill operation. If you have questions about any of the information in this article, please contact Wood-Mizer Customer Service at 1.800.525.8100.