



MISSISSIPPI STATE UNIVERSITY™  
MS AGRICULTURAL AND FORESTRY  
EXPERIMENT STATION

# MAFES DAWG TRACKS

A dead battery in vehicles and equipment is not uncommon. The first thought is to get a jump start. If that doesn't work, it may be time to put the battery on a charger or replace it with a new battery. Corrosive acid, explosive gases, electrical burns, and back injury are all potential hazards that can be avoided by following these safety tips.

## Jump Starting:

- Check owner's manual, as newer vehicles & equipment may have specific instructions.
- Make sure both batteries are the same voltage and vehicles are not touching each other.
- Be very careful not to let the booster cable clamps touch each other or come in contact with vehicle parts.
- Connect the first cable to the positive (+) terminal of the good battery; then attach the other end of that cable to the positive (+) terminal of the dead battery. Next, attach the second cable to the negative (-) terminal of the good battery, and make the last connection to a clean metal part, such as the engine block of the vehicle being energized, rather than to its negative battery terminal. This completes the electrical circuit, as if it were connected to the dead battery, but if sparks are produced, it serves to keep them away from any explosive battery gases.
- Remove the cables in the reverse order of connection.

## Battery Charging:

- Never try to charge a frozen battery. Allow the battery to warm to above 32°F before charging.

- Only charge a battery in a well-ventilated area & away from other work areas that may cause problems (hot work-welding/grinding) since batteries emit explosive gasses.
- Set the charger to the proper settings for your battery, for example, 6-volts vs. 12-volts, low-maintenance vs. sealed, standard automotive vs. deep cycle.
- Connect the leads of charger to the proper battery terminals before plugging in & turning on the charger.
- Do not allow the battery to become overheated or hot to the touch. Discontinue charge if battery bubbles or spews acid as this is a sign of overcharging or internal damage to battery.
- After the battery is fully charged, turn off and unplug the charger. Continuing to charge a fully charged battery may severely damage the internal plates and shorten battery life. (If using an automatic charger, it will automatically shut off when it electronically senses the battery is at or near a full charge.)

## Battery Replacement:

- Never lay your tools on top of the battery. They could come in contact with both posts, or the positive post and a ground, creating a short.
- Batteries are heavy. If you must move one, use a battery strap as a handle. Never carry by the terminal post.
- Installed battery must be secured - bungee cords do not count as secure. Legit hold downs will prevent the battery from turning over, coming in contact with other components, or movement to prevent rubbing a hole in the battery's case.

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## **Sources:**

<http://www.ibslhc.com>  
<http://www.toolboxtopics.com>