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BATTERY SAFETY: JUMP STARTING

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Every year there are reports of injuries resulting from incorrectly jump-starting equipment. Severe and sometimes fatal injuries have resulted from battery explosions during jump-starting. Battery explosions and fires can and do cause personal injuries and equipment losses. Many of these incidents can be prevented when proper safety guidelines are followed.

A battery gives off explosive hydrogen gas, and this increases during the high-current operation of jump starting. Hydrogen gas will explode if it contacts an open flame or spark. **Keep sparks, flames, burning cigarettes, or other ignition sources away from batteries at all times.** Batteries contain sulfuric acid that can spew out. **Always wear safety goggles and a face shield.** Gloves are also recommended.

The following guidelines for jump starting vehicles should be followed to reduce the chance of personal injury or equipment damage.

1. Wear safety goggles, a face shield, and gloves.
2. **Both batteries must be of the same voltage (6-volt, 12-volt, etc.).**
3. Position the vehicle with the good battery adjacent to the vehicle with the dead battery, so the jumper cables can be connected easily to the batteries in both vehicles. Make certain the vehicles do not touch each other.
4. Turn off all electrical loads on both vehicles.
5. Be sure that the vent caps are tight and level on both batteries. Place a wet cloth over the vent caps of each battery to dissipate hydrogen gas. Make certain the wet cloth is clear of fan blades, belts, and other moving parts.
6. Do not lean over batteries during jump starting procedures.

The following steps, or the manufacturer's procedures, must be performed in sequence:

1. On a negative ground (SEE ***NOTE*** BELOW) system, connect one end of the jumper cable to positive (+) terminal of dead battery, and then connect the other end to the positive terminal of the good battery.
2. Connect one end of the negative jumper cable to negative (-) terminal of the good battery.
3. **Important: This connection may cause sparks.** Connect the remaining end of the negative jumper cable, away from the battery, to the engine block or vehicle frame on the vehicle with dead battery. Do not connect to carburetor or tubing.
4. Make certain that all cables are clear of fan blades, belt, and other moving parts of both engines, and be sure everyone is standing away from the vehicles. Start the engine of the vehicle with the good battery. Wait a few minutes; then start the engine of the vehicle with the dead battery.
5. After starting, allow the engine to return to idle speed. Remove the negative jumper cable connection at engine block or vehicle frame. Remove the other end of the negative jumper cable from the good battery. Remove positive cable from good battery, then from the dead battery.

NOTE: Connections on a positive ground system will be different; refer to manufacturer's instructions.

See also Prevent Blindness America's "10 Things You Should Know About Jump-Starting a Car Battery."