

SAFE BOOSTER CABLE JUMP-STARTING A VEHICLE

PRE-CAUTION AND WARNING:

Batteries contain hazardous sulfuric acid. Avoid contact with skin and eyes. Always wear protective eye wear and clothing when handling batteries. Batteries produce potentially explosive hydrogen gas while charging, and retains that gas for some amount of time. Keep flames, cigarettes, sparks, and any other fire source away from batteries. Do not place metal tools on the battery that could contact battery terminals and cause arcing. Avoid standing directly over the battery while working around a battery.

BASIC JUMPER CABLE INFORMATION

Jumper cables are designed to allow a disabled vehicle with a dead battery to be “jumped” from another vehicle. Copper cable carries current better than aluminum wire. The larger, or thicker, the cable, the better it will carry the current to the other battery. Cable thickness is designated by “x-gauge”--4 gauge is a very good gauge that will do a good job. The larger the number, the smaller the cable thickness, and it won't convey the current to the dead battery as well. A car starter needs about 200 amps to turn the engine, and if the cable thickness is too small, or the length of the cable is too long, there is too much current lost and it may not start the car. Also, the clamps should be good with a very strong spring to clamp onto the terminals. A good clamp rating to look for is one rated for at least 400 amps. Of course, a good cable (for example: 4 gauge, 16' long, with 400 amp clamps) will cost more—around \$35.00. A cheaper set, like an 8 gauge (thin) wire, 16' long, with 200 amp clamps may not start the vehicle during the winter, but may cost around \$15.00.

SAFE BOOSTER CABLE CONNECTION PROCEDURE

It is important to use precaution when jump starting another vehicle to avoid a possible explosion of the battery.

Note: Do not rely on the color of the car's cable to locate the positive and negative terminals. ALWAYS identify the “POS”, (+) and the “NEG”, (-) on the battery.

1. With both vehicles turned off, connect the positive (+) booster cable clamp to the positive (+) terminal of the DISCHARGED (or dead) battery first.
2. Second, connect the other end of the positive (+) booster cable clamp to the positive (+) terminal of the assisting (or good) battery.
3. Third, connect the negative (-) booster cable clamp to the negative (-) terminal of the assisting (or good) battery. Do not let the positive and negative booster cables to touch each other, or a short will occur and damage car electronic components.
4. Finally, and **MOST IMPORTANT**, make the final connection of the negative (-) booster cable clamp to the **ENGINE BLOCK** of the stalled vehicle, **AWAY FROM THE BATTERY**. Often, the dead battery can have lesser voltage in it than the good battery, and that voltage difference can often create a spark, and a possible hydrogen gas explosion.
5. Start the good vehicle and let it run about ten minutes. This helps the bad battery to receive some current so it can self-assist the jump start process. Then, start the dead vehicle.
6. Remove the booster cables in reverse order.

Note: If the dead car does not start, check connections to assure they are solid and tight on the metal terminals or block. If the dead car attempts to start, but doesn't, and if you feel hot booster clamps or see sparks at those connections, there may be a starter related problem.

Temperature affects a battery's performance. The colder the temperature, more battery power is required to do the same job as if it were warmer. Never jump start or charge a frozen battery-it may explode.