



## **Bakersfield Composite Squadron #121**



## **60-Second Safety Advisor #31**

### **Automobile Battery Hazards**

Explosive hydrogen, acidic liquids and vapors, and electrical burns are only a few of the many hazards that are present when servicing, charging, or jumping the common lead-acid battery found in cars and trucks. However, the hazards can be minimized by following a few common sense safety rules. First, always wear eye protection when working around a battery. Batteries contain corrosive acids that are capable of eating away metals. It takes just one droplet to cause serious eye damage. You also need to protect yourself against fire and explosion. Lead-acid batteries produce flammable hydrogen gas while being charged. This highly explosive gas, generated within the cells, can expand and seep out of the vent caps. A cigarette, tool, or spark from any source could ignite the gas, causing the battery to explode. Always charge in a well ventilated area. When jumping a battery, remember the following safeguards: first, make sure all electrical equipment is off. If you connect the jumper battery while a load is being drawn, a spark could occur. Make sure both batteries are of the same voltage. Use good quality jumper cables (at least 10-gauge wire). Always be sure of your polarity when connecting the jumper cables: 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 fourth and last connection to a clean metal part, such as the engine block of the car 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. Also, 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 and a spark. Respect the hazards posed by these batteries and take no chances or short cuts!

