

## **Knowledge Domain: Power Supply**

### **Unit: Batteries**

#### **Skill: Cleaning**

#### **Tools and Parts Required:**

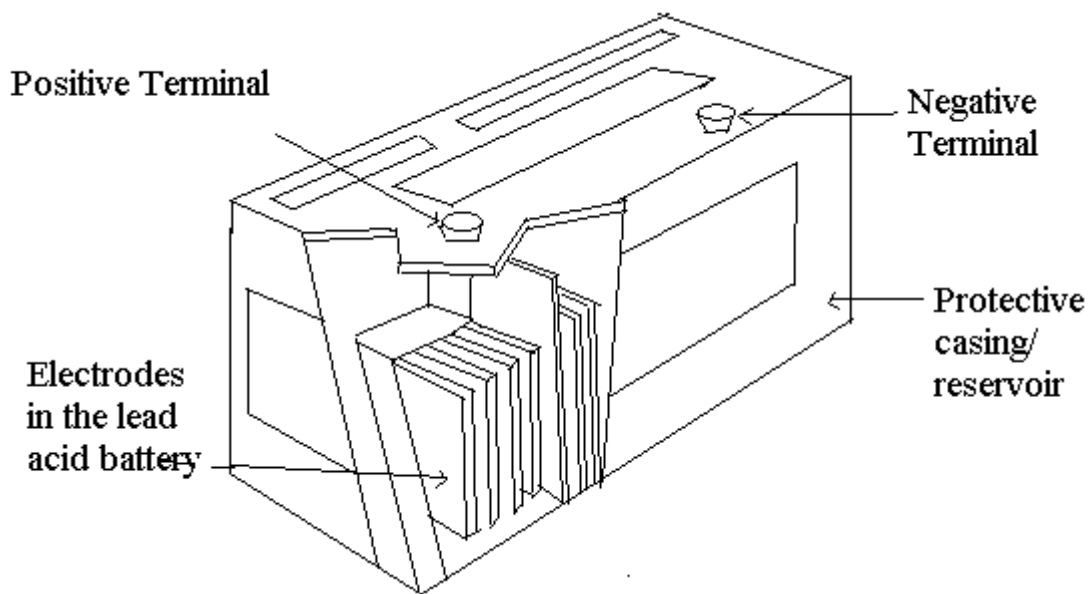
- 1) A lead acid battery that needs to be cleaned
- 2) Safety equipment (glasses and rubber gloves)
- 3) Glass container for electrolyte solution
- 4) Baking soda
- 5) Wire brush
- 6) Water

#### **Introduction**

Lead acid batteries are used in cars and in electronic instruments. Lead acid batteries provide 6 volts or 12 volts. Lead acid batteries contain lead plates in an acidic electrolyte solution. The lead and electrolytes create electricity and a chemical change in the plates. These batteries can be recharged. Cleaning a lead acid battery requires care and preparation.

#### **Example**

Below is a picture of a lead acid battery.



## **Identification and Diagnosis**

Dirt or acid may accumulate inside the batteries or on the terminals of the battery. You can clean the dirt and acid from the terminals. You must replace the batteries if there is too much damage from dirt or acid.

## **Procedure**

Cleaning lead acid batteries requires care. Avoid contact with the contents of the lead acid battery. Wear goggles, rubber gloves and old clothing.

1. Disconnect the lead acid battery from the instrument and set it on a mat in an open place where fumes can easily escape. Escaping lead-acid battery fumes are explosive.
2. Use a paste of baking soda in water to neutralize the acid present on the case and near the terminals of the lead acid battery.
  - a. Mix a small amount of water into a pile of baking soda to create a paste. The paste is easier to control than powder.
3. Rinse the case of the lead acid battery with clean water.
4. Dispose of the cleaning water carefully and safely. The water used for cleaning the lead acid battery may contain harmful material
5. Wipe the battery case with a cloth.
6. Clean off any corrosion with a wire brush.
7. Once the battery is clean, it can be recharged.
8. Take the lead acid battery to a technician for refilling with distilled water.

## **Exercise**

Your instructor will give you a dirty or corroded battery. Use the correct safety procedures before beginning.

Use the procedure steps to clean the battery. After cleaning the battery, you may take the battery to a technician to refill the battery with distilled water.

Your instructor must verify your work.

## **Preventative Maintenance and Calibration**

Check lead acid batteries for corrosion. Clean or replace corroded batteries.

Always calibrate every medical device before returning it to use.