

FIGURE 17-1 Batteries are constructed of plates grouped into cells and installed in a plastic case.

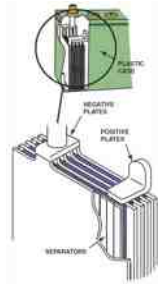


FIGURE 17-2 A grid from a battery used in both positive and negative plates.



FIGURE 17-3 Two groups of plates are combined to form a battery element.



FIGURE 17-4 A cutaway battery showing the connection of the cells to each other through the partition.



FIGURE 17-5 Chemical reaction for a lead-acid battery that is fully charged being discharged by the attached electrical load.

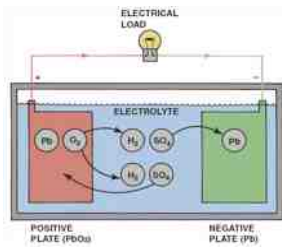


FIGURE 17-6 Chemical reaction for a lead-acid battery that is fully discharged being charged by the attached generator.

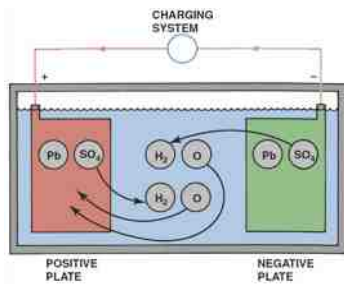


FIGURE 17-7 As the battery becomes discharged, the specific gravity of the battery acid decreases.

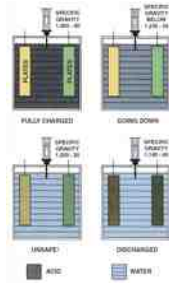


FIGURE 17-8 Typical battery charge indicator. If the specific gravity is low (battery discharged), the ball drops away from the reflective prism. When the battery is charged enough, the ball floats and reflects the color of the ball (usually green) back up through the sight glass and the sight glass is dark.

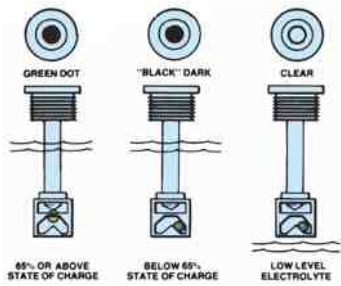


FIGURE 17-9 An absorbed glass mat battery is totally sealed and is more vibration resistant than conventional lead-acid batteries.



FIGURE 17-10 A typical battery hold-down bracket. All batteries should use a bracket to prevent battery damage due to vibration and shock.



BATTERY HOLD DOWN BRACKET

FIGURE 17-11 This battery has a cranking amperes (CA) rating of 1,000. This means that this battery is capable of cranking an engine for 30 seconds at a temperature of 32°F (0°C) at a minimum of 1.2 volts per cell (7.2 volts for a 12-volt battery).