

Ammeters

The ammeter is one of the most helpful diagnostic tools. Pilots should become familiar with the type of ammeter in their aircraft and how it reacts to battery discharge, alternator failure, and loads that exceed alternator capacity. The alternator will provide very different information, depending on where it is placed in the electrical system. One thing is for sure: current flow means heat, and excessive current flow can generate enough heat to cause a fire. The pilot should be aware of trends in ammeter readings to head off a potential problem.

It is the role of the ammeter to provide information about current flow. The two types of ammeters are illustrated in Figure 8-13. They are the charge/discharge and the loadmeter. The charge/discharge or zero center type ammeter displays information about current flow. If the needle is to the right of zero, the alternator is working and supplying power to the electrical system. If the needle is to the left of zero, then the battery is discharging, indicating that the alternator is not supplying power to the electrical system.

The loadmeter or zero-left type of ammeter displays actual current draw (system demand) from the alternator. If the loadmeter reads zero, then the alternator is not supplying power to the system, leaving the battery as the sole source of power.

Whenever alternator failure occurs in flight, all operating electrical equipment will begin to deplete the battery. If that happens, the pilot must immediately assess the situation to determine what equipment is absolutely essential to the safety of flight at that moment and turn off everything else to lengthen the time to battery failure. This procedure, known as *load shedding*, will be explained later in the chapter.

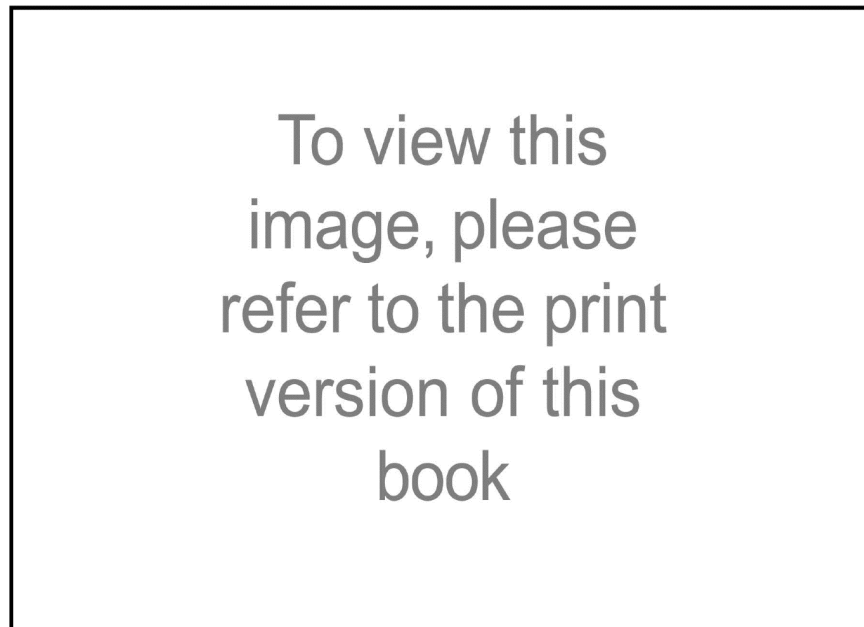


Fig. 8-13. Types of ammeters.