

which produce noise at the radio frequency spectrum. Static dischargers are normally mounted on the trailing edges of the control surfaces, wing tips and the vertical stabilizer. They discharge precipitation static at points a critical distance away from avionics antennas where there is little or no coupling of the static to cause interference or noise.

Flexible and semi-flexible dischargers are attached to the aircraft structure by metal screws, rivets, or epoxy. The connections should be checked periodically for security. A resistance measurement from the mount to the airframe should not exceed 0.1 ohm. Inspect the condition of all static dischargers in accordance with manufacturer's instructions. *Figure 11-160* illustrates examples of static dischargers.

Installation of Aircraft Antenna Systems

Knowledge of antenna installation and maintenance is especially important as these tasks are performed by the aircraft technician. Antennas take many forms and sizes dependent upon the frequency of the transmitter and receiver to which they are connected. Airborne antennas must be mechanically secure. The air loads on an antenna are significant and must be considered. Antennas must be electrically matched to the receiver and transmitter which

they serve. They must also be mounted in interference free locations and in areas where signals can be optimally transmitted and received. Antennas must also have the same polarization as the ground station.

The following procedures describe the installation of a typical rigid antenna. They are presented as an example only. Always follow the manufacturer's instructions when installing any antenna. An incorrect antenna installation could cause equipment failure.

1. Place a template similar to that shown in *Figure 11-161* on the fore-and-aft centerline at the desired location. Drill the mounting holes and correct diameter hole for the transmission line cable in the fuselage skin.
2. Install a reinforcing doubler of sufficient thickness to reinforce the aircraft skin. The length and width of the reinforcing plate should approximate the example shown in *Figure 11-162*.
3. Install the antenna on the fuselage, making sure that the mounting bolts are tightened firmly against the reinforcing doubler, and the mast is drawn tight against the gasket. If a gasket is not used, seal between the



Figure 11-160. Static dischargers or wicks dissipate built up static energy in flight at points a safe distance from avionics antennas to prevent radio frequency interference.