STATIC DISCHARGING - MAINTENANCE PRACTICES

1. General

A. Trailing edge static dischargers are installed at airplane control surface extremities. These dischargers are used to reduce stored potential voltage that is the result of electrostatic charging from flying through haze, dust, rain, snow or ice crystals. Reduction of stored voltage is necessary to prevent undesirable electrostatic currents that could cause unacceptable radio noise or electrical insulation failures.

2. Tools, Equipment and Materials

NOTE: Equivalent substitutes may be used for the following items:

NAME	NUMBER	MANUFACTURER	USE
Megohmeter	Model 2850	Inotek 9902 E. 42nd Street Tulsa, OK 47146	To measure high resistance.
Bonding Meter	Shallcross Type 670	Eaton Corp. Operation and Technical Center 4201 N. 27th Street Milwakee, WI 53200-0000	To check electrical bonding connections.

3. Static Discharger Removal/Installation

A. Remove Static Discharger (Refer to Figure 201).

(1) Remove static discharger and lock washer from base.

NOTE: Static dischargers showing deterioration should be replaced.

B. Install Static Discharger (Refer to Figure 201).

(1) Position lock washer on static discharger and screw into base.

4. Discharger Base Removal/Installation

A. Remove Discharger Base (Refer to Figure 201).

(1) Drill out blind rivets securing discharger base to airplane.

(2) Remove discharger base from airplane.

B. Install Discharger Base (Refer to Figure 201).

(1) Use fine grit sandpaper and remove any paint around attaching holes or under discharger base footprint.

(2) Using a 500 or 600 grit emery cloth, break aluminum oxide in the footprint area.

NOTE: Do not delay performing steps 4.B.(3) and 4.B.(4), as new oxide will form within minutes.

(3) Clean mating surface of airplane skin with solvent.

(4) Brush cleaned skin with Aluma Prep 1201 alodine and wait until it is dry before proceeding.

(5) Install new base using an appropriate sized blind rivet.

(6) Primer and paint may be used as desired on airplane skin.

NOTE: Cover any attached static discharger and base with paper or rag. Do not use tape. Screw threads in base should be protected with a lightly inserted wooden plug.

5. Electrical Bonding

A. Individual electrically conductive components and structures of the airplane must be electrically bonded together. This bonding is necessary to ensure that all conductive materials on the airplane are at the same electric potential. If electrical bonding is not maintained, crew members or passengers may encounter electrical shocks, radio and other avionic system interference or even damage will result and corrosion between dissimilar materials may occur.

B. Bond resistance between structures should not exceed 0.003 ohms unless otherwise specified in specific installations. After major repair and/or replacement of components or control surfaces, an electrical bonding check is required.

Figure 201 : Sheet 1 : Static Discharging