Beechcraft

CLASS II

SERVICE INSTRUCTIONS

76

No. 1009
ATA Code 23-60

Kit No. 76-5001-1 S

SUBJECT: **COMMUNICATIONS - INSTALLATION OF STATIC DISCHARGE WICKS**

EFFECTIVITY: BEECHCRAFT Duchess 76, serials ME-4, ME-5, ME-6 and ME-9 through ME-79.

REASON: To provide improved discharge of static electricity by installing static discharge wicks.

COMPLIANCE: At the owner's discretion, however, Beech Aircraft Corporation recommends that this be accomplished at the next scheduled inspection.

APPROVAL: FAA Approved - DOA CE-2.

MANPOWER: The following information is for planning purposes only:

Estimated man-hours: 24 hours.
Suggested number of men: 2 men.

MATERIAL: The parts required to accomplish these Service Instructions are contained in Kit No. 76-5001-1 S. This kit may be ordered through a BEECHCRAFT Aero or Aviation Center. The value of the kit required to accomplish these Service Instructions on one airplane is to be advised. Price, when issued, will be subject to change without notice. Beech Aircraft Corporation expressly reserves the right to supersede, cancel and/or declare obsolete any kits or publications that may be referenced in these Service Instructions without prior notice.

WARRANTY: This is a product improvement type change and may be accomplished at the owner's discretion, therefore no warranty is applicable.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: BEECHCRAFT Duchess 76 Maintenance Manual, P/N 105-590000-7 or subsequent.

PUBLICATIONS AFFECTED: It is recommended that a note to "See Service Instructions No. 1009" be made in the following:

Duchess 76 Maintenance Manual copies, P/N 105-590000-7 or subsequent;
Duchess 76 Parts Catalog copies, P/N 105-590000-9 or subsequent.

CLASS II

ACCOMPLISHMENT INSTRUCTIONS:

These Service Instructions may be accomplished as follows:

1. Remove the bolt securing the aileron push rod to the aileron. Disconnect the bonding jumper from the aileron, remove the aileron hinge bolts and remove the aileron from the airplane.

NOTE

Do not turn the aileron push rod or rod end.

2. Drill out one rivet where each static discharger will be installed and drill the hole out to .147 inch diameter.

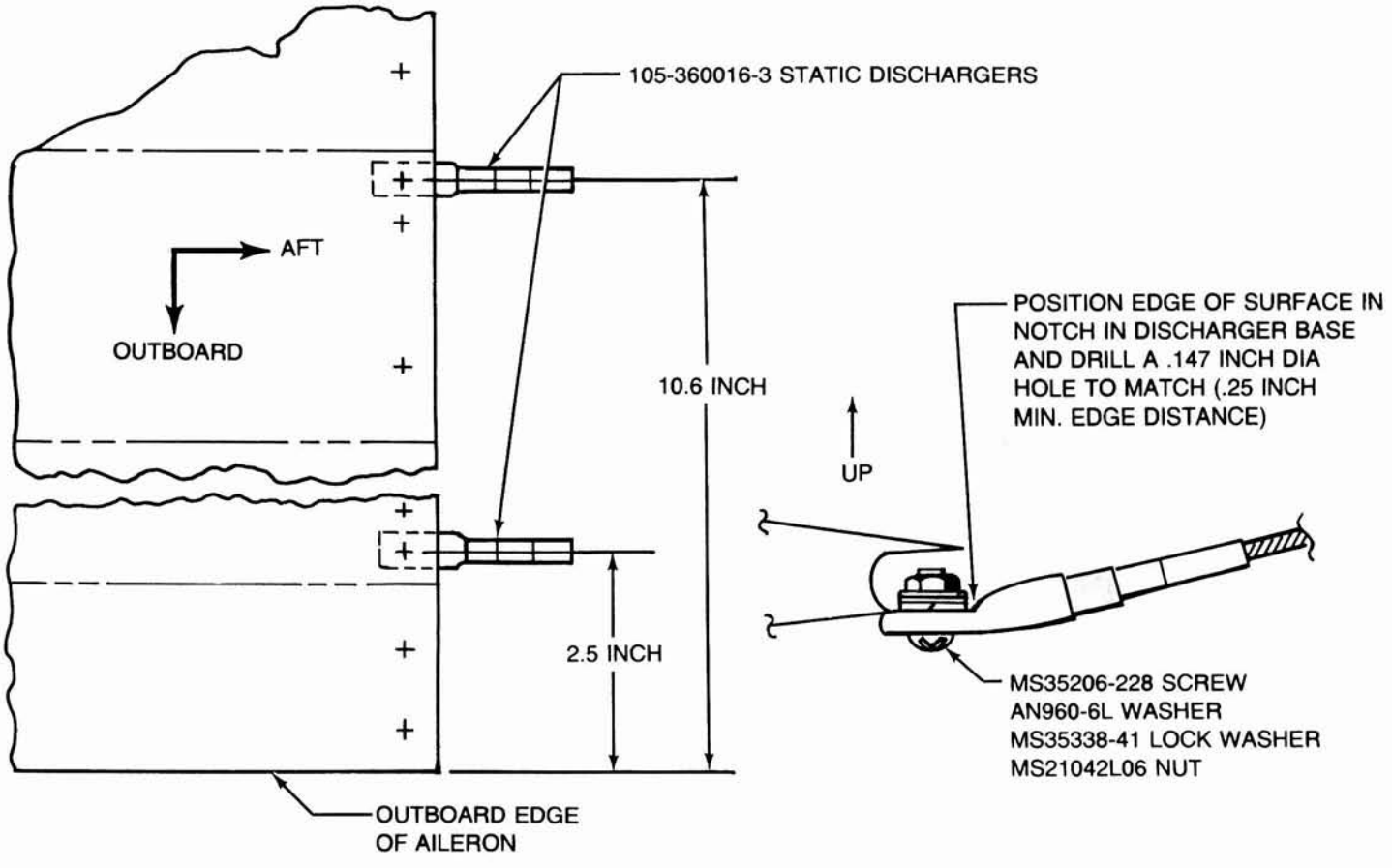


Figure 1.

3. Remove all paint or other protective coating from an area on the underside of the aileron trailing edge just large enough to accomodate one static discharger at each location shown in Figure 1.

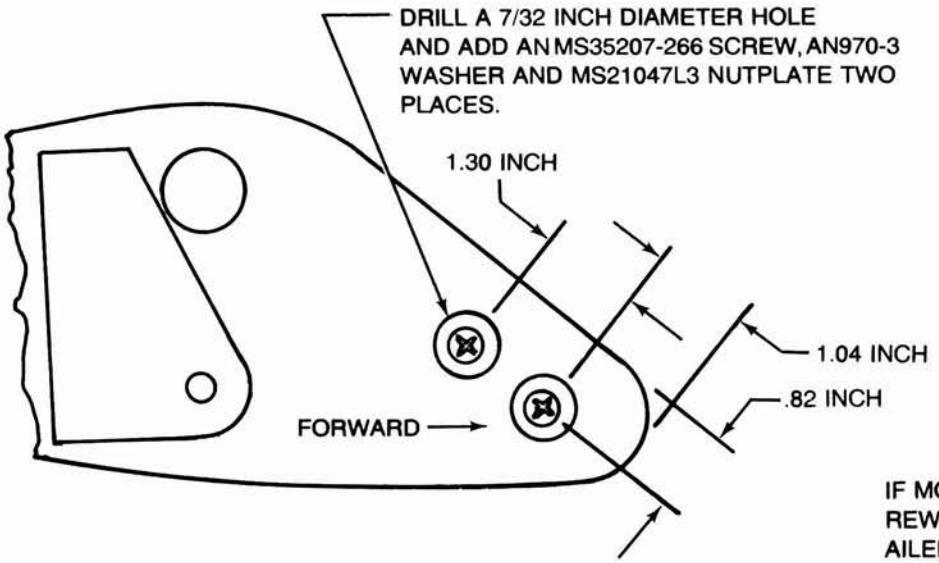
4. Clean each static discharger location area with 1,1,1 trichloroethane or equivalent (obtain locally). Apply Alodine 1200 (brush-on strength) to each area with a clean scotch-brite, sponge or equivalent. Keep the area wet for three to five minutes or until a yellow color develops. Using clean water, dampen a clean cloth and wipe the treated area (wipe with care as the formed coating is soft while wet). Allow the area to thoroughly air dry (1 hour maximum) prior to installation of the static dischargers.

5. Install a P/N 105-360016-3 static discharger at each location as shown in Figure 1. Touch up paint as required around the static dischargers. The metal base and the mounting bolt may be painted but do not paint the static discharger wicks.

6. Refer to the Duchess 76 Maintenance Manual, Chapter 57-50 and balance the aileron. A total of five P/N 115-610010-123 weights may be installed on each of the two screws on the outboard end of the aileron. Additional weights, if required, may be added to the inboard end of the aileron (see Figure 2.).

NOTE

The ailerons must be balanced completely assembled and in flying condition. All painting, including strips and touch up, must be completed. The tab, static wicks and hinge bolts must be attached.



NOTE

IF MORE WEIGHT IS REQUIRED REWORK THE INBOARD END OF THE AILERON AS SHOWN. A MAXIMUM OF FIVE P/N 115-610010-123 WEIGHT MAY BE USED ON EACH SCREW.

Figure 2.

7. Reinstall the aileron using the hardware removed in step 1. Reconnect the bonding jumper and safety the hinge bolts.

NOTE

If the push rod and/or rod end have not been turned it should not be necessary to rerig the aileron.

8. Repeat steps 1 through 7 on the other aileron.

9. Refer to the Maintenance Manual, Chapter 27-10 and cycle the ailerons through full travel (20° ± 1° up and 15° ± 1° down). Check for proper travel, binding and/or obstruction.

10. Remove the tail cone and disconnect the rudder cables from the bell crank. Disconnect the trim tab push rod at the tab end, remove the bonding jumper at the bottom of the rudder and remove the lower hinge retaining plate. Slide the rudder down and out of the upper hinge plate. Remove the rudder from the airplane. Remove the lower hinge plate from the rudder.

NOTE

Do not turn the rudder trim tab push rod.

11. Drill a .147 inch diameter hole at each location shown in Figure 3.
12. Remove all paint or other protective coating from the areas where the static dischargers will be installed.

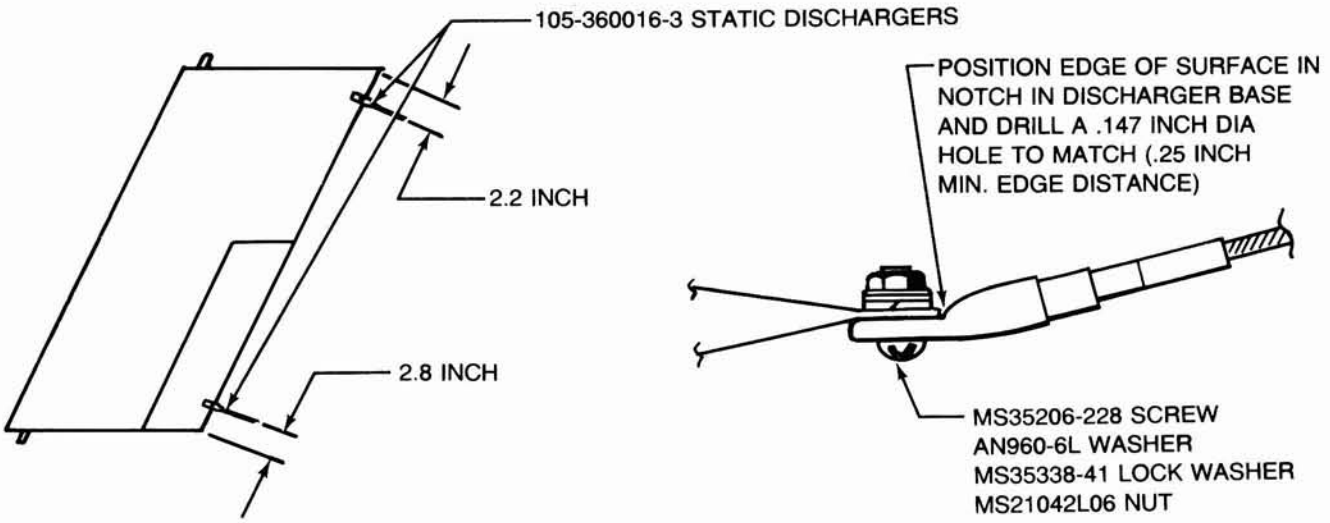


Figure 3.

13. Clean and treat the area around the holes as described in step 4.
14. Install one P/N 105-360016-3 static discharger at each location shown in Figure 3. Touch up paint as required around the static dischargers. The metal base and the mounting bolt may be painted but do not paint the static discharger wicks.
15. Refer to the Maintenance Manual, Chapter 55-40 and balance the rudder. A total of five P/N 105-630012-3 weights may be installed on the rudder. Install the weights, if required, with NAS1738B4-3 rivets.

NOTE

The rudder must be balanced completely assembled and in flying condition. All painting, including strips and touch up, must be completed. The trim tab, trim tab push rod, static wicks and bell crank must be attached.

16. Reinstall the rudder and reconnect the trim tab push rod and the bonding jumper. Refer to the Maintenance Manual, Chapter 27-20 and cycle the rudder and trim tab through full travel left and right (rudder: 30° ± 1°; trim tab: 20° ± 1°, left and right from neutral). Check for proper travel, binding and/or obstruction.

CAUTION

The bolt through the clevis on the forward end of the trim tab rod must be vertical. If this bolt is not vertical, damage could result to the clevis or the actuator rod.

NOTE

If the trim tab push rod has not been turned it should not be necessary to rerig the rudder.

17. Remove the screws holding the aft vertical stabilizer fairing in place, disconnect the navigation light wire and remove the fairing and navigation light from the airplane.

18. Remove the bonding jumpers from the outboard ends of the elevator and disconnect the elevator tab push rods at the tab end. Remove the bolts and nuts holding the elevator halves to the control horn. Remove the elevator halves by sliding them outboard to disengage the outboard hinge pins and pulling aft away from the tab push rods.

NOTE

Do not turn the elevator trim tab push rods.

19. Drill a .147 inch diameter hole at each location shown in Figure 4.

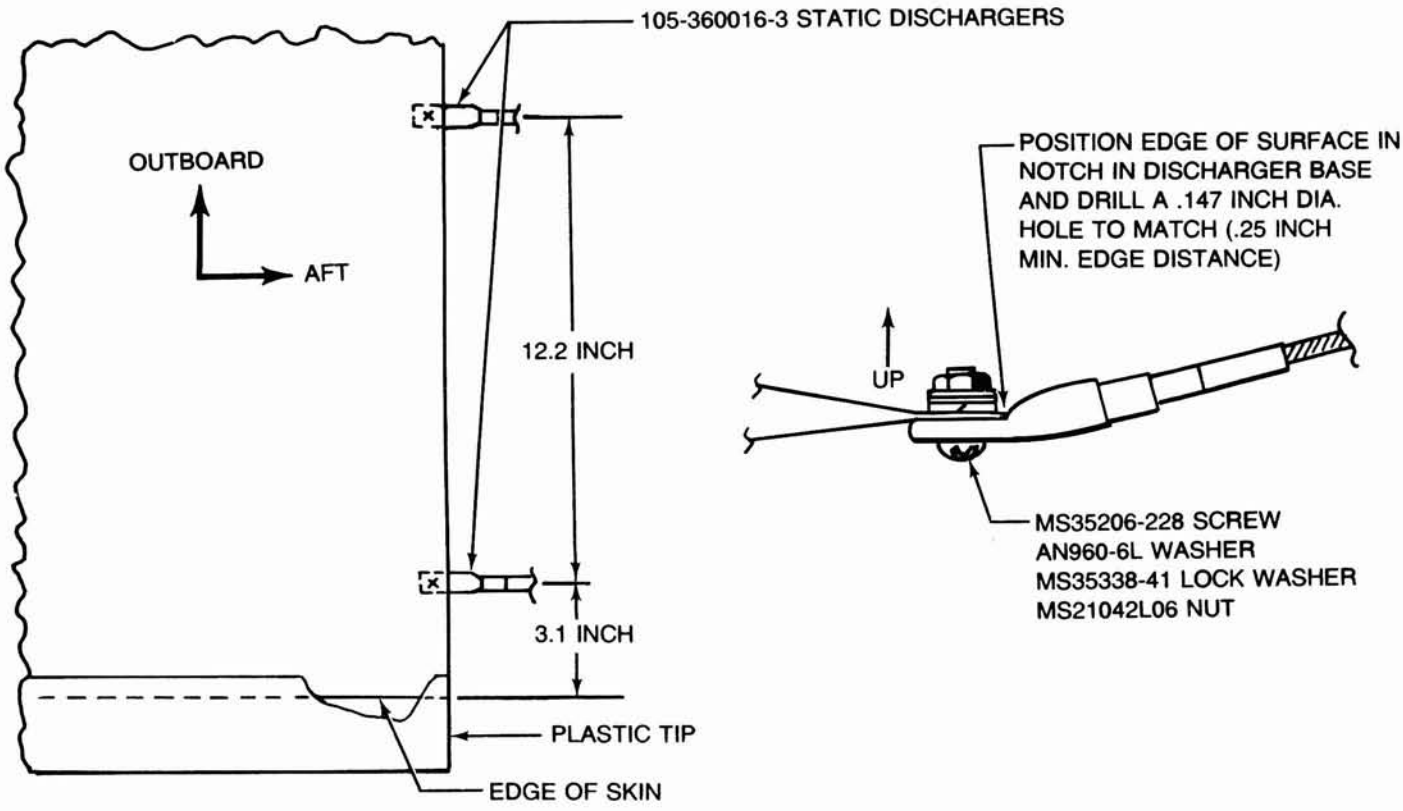


Figure 4.

20. Remove all paint or other protective coating from the areas where the static dischargers will be installed.
21. Clean and treat the area around the holes as described in step 4.
22. Install one P/N 105-360016-3 static discharger at each location as shown in Figure 4. Touch up paint as required around the static dischargers. The metal base and the mounting bolt may be painted but do not paint the static discharger wicks.

23. Refer to the Maintenance Manual, Chapter 55-20 and balance the elevator halves. A total of ten P/N 105-610012-5 weights may be installed on each elevator half. Install the weights, if required, with four screws as follows:

TOTAL NUMBER OF 105-610012-5 WEIGHTS	INBOARD END	OUTBOARD END
1,2,3,4,5, or 6	MS27039-1-07 Screw 2 Req.	MS27039-1-07 Screw 2 Req.
7	MS27039-1-11 Screw 2 Req.	MS27039-1-11 Screw 2 Req. AN960-10 Washer 2 Req.
8	MS27039-1-11 Screw 2 Req.	MS27039-1-11 Screw 2 Req.
9	MS27039-1-12 Screw 2 Req. AN960-10L Washer 2 Req.	MS27039-1-11 Screw 2 Req.
10	MS27039-1-12 Screw 2 Req.	MS27039-1-12 Screw 2 Req. AN960-10L Washer 2 Req.

NOTE

The elevator must be balanced completely assembled and in flying condition. All painting, including strips and touch up, must be completed. The trim tab, trim tab push rod, static wicks and hinge plate bolt must be attached.

24. Reinstall the elevator and reconnect the trim tab push rods and bonding jumpers. Refer to the Maintenance Manual, Chapter 27-30 and cycle the elevator and trim tab through full travel up and down (elevator: 20° + 1° - 0° up, 15° + 1° - 0° down; trim tab: 20° ± ½° down, 4° ± ½° up). Check for proper travel, binding and/or obstruction.

CAUTION

The bolt through the clevis on the forward end of the push rods must be horizontal. If this bolt is not horizontal,damage could result to the clevis or the actuator rod.

NOTE

If the trim tab push rod has not been turned it should not be necessary to rerig the elevator.

25. Remove the navigation light from the fairing which was removed in step 17.
26. Position the P/N ESD1 static discharger on the fairing as shown in Figure 5 and drill two .147 inch diameter holes in the fairing to match the static discharger.
27. Cut the navigation light ground wire (wire number L11B20) approximately three inches from the navigation light and install a P/N 31885 terminal on each cut end.

28. Install the ESD1 static discharger on the fairing as shown in Figure 5 and reinstall the navigation light in the fairing.

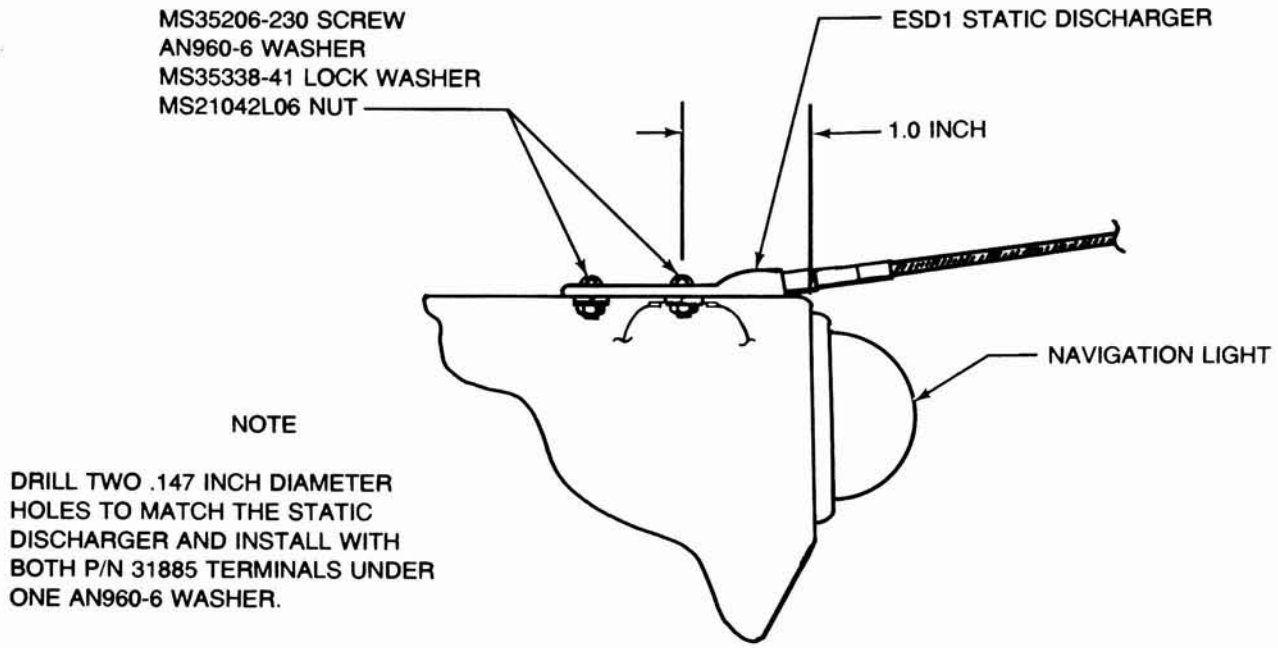


Figure 5.

29. Reconnect the navigation light wires and install the fairing on the airplane.
30. Replace any panels or equipment removed to accomplish these Service Instructions.

RECORD COMPLIANCE: Upon completion of these Service Instructions make an appropriate maintenance record entry specifying the kit identification number and the kit serial number. It is recommended that the parts list contained in the kit be filed for future reference until the listing of parts has been incorporated into the parts catalog.