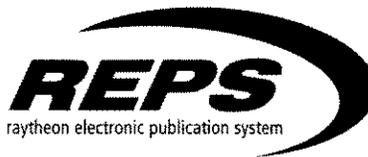


Attachment Ten
Maintenance Manual Procedure: 27-30-06



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Elevator Tab Actuators - Maintenance Practices

ELEVATOR TAB ACTUATORS - MAINTENANCE PRACTICES

ELEVATOR TRIM TAB ACTUATOR REMOVAL

- a. Remove the access plates from the top of the horizontal stabilizers (6-50-00).
- b. Tag for identification and disconnect both turnbuckles at each location. Refer to the Elevator Trim Tab Control System illustration in Chapter 27-30-04.
- c. Perform the ELEVATOR REMOVAL procedure. Refer to Chapter 27-30-00.
- d. Loosen the actuator rod end jam nuts and disengage the "dog bone" from the slots in the ends of the actuator shafts. Rotate the push-pull rods and rod ends through 90° to allow removal of the bolts. Remove the push-pull rods.
- e. Cut and remove the safety wire between the two push-pull rods.
- f. Rotate the rod ends to their original positions, engage the "dog bone" teeth into the proper slots and tighten the rod end jam nuts finger tight.

NOTE: Perform steps g, h and j only if the FA2100 Flight Data Recorder is installed on this aircraft.

- g. Open the DC power FLT DATA - RCDR and FDAU circuit breakers and the 26 VAC power FLT DATA - RCDR circuit breaker.
- h. Identify, tag and disconnect the electrical connector connecting the elevator trim position potentiometer (sensor) electrical harness to the aircraft wiring. Remove harness clamps and attaching hardware.
- i. Remove the mounting bolts and remove the actuator through the access opening.
- j. If the elevator trim position potentiometer requires replacement, perform the ELEVATOR TRIM POSITION POTENTIOMETER (SENSOR) REMOVAL/INSTALLATION procedure. Refer to Chapter 31-31-15 in the BEECH 1900D AIRLINER FLIGHT DATA RECORDER (FA2100) MAINTENANCE MANUAL SUPPLEMENT, P/N 129-590000-109.

NOTE: Note the locations of shims and lengths of the actuator mounting bolts during actuator removal to ensure proper reassembly.

ELEVATOR TRIM TAB ACTUATOR CABLE REPLACEMENT

NOTE: If a used cable is installed, the cable should be dipped in corrosion preventive compound (4, Chart 2, 27-00-00). Excess material should be removed by wiping with a clean cloth.

- a. Remove the trim tab actuator in accordance with ELEVATOR TRIM TAB ACTUATOR REMOVAL.

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- b. Pull the actuator cables until the "up" cable and the "down" cable hanging from the drum are of equal length.
- c. Remove the large jam nut and key from the bronze shaft.
- d. Remove the three drum housing bolts and remove the end cover off of the drum.
- e. With a pencil, mark the position of the drum against the housing and mark the position of the shafts in the end of the screw housing.
- f. Lift the drum out of the housing and unwind the cable.
- g. Remove the cable retaining sleeve from the slot and remove the cable.
- h. Install the new cable in position and rewind the cable.
- i. Reinstall the drum in the housing as previously assembled, check pencil marks for alignment, reinstall and secure the housing bolts and jam nut (DO NOT OVERTORQUE THE JAM NUT).
- j. Reinstall the trim actuator in accordance with ELEVATOR TRIM TAB ACTUATOR INSTALLATION.
- k. Install safety clips on the turnbuckles.

ELEVATOR TRIM TAB ACTUATOR INSTALLATION

- a. Position the actuator with the cable ends inboard and mount the assembly with the mounting bolts and secure. Check for proper bolt length at each corner of the tab actuator. Refer to the Elevator Trim Tab Control System illustration in Chapter 27-30-04.
- b. Loosen the actuator rod end jam nuts, disengage the "dog bone" teeth from the slots in the ends of the screw shafts and rotate both rod ends through 90° .
- c. Attach each push-pull rod and rotate rod ends back through the same 90° .

CAUTION: THE PUSH-PULL RODS MUST BE INSTALLED SO THAT THEY ARE OFFSET UP FROM THE ACTUATOR ROD ENDS.

- d. Engage the "dog bone" teeth and the key washers in the appropriate slots in the ends of the screw shafts.
- e. With the actuator cable ends even, check that the 3.07-inch neutral dimension from the end of the actuator housing to the center of the rod end bore is maintained. The rod end threads must be visible through the screw shaft inspection holes.
- f. Tighten the rod end jam nuts and install .032-inch safety wire.

NOTE: The dog bone should have some play in the screw shaft slots when installed properly.

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- g. Tighten the large clevis jam nuts at the forward clevises.
- h. Measure and record the distance between the push-pull rods. This distance must be maintained after the safety wire is installed. Install .032-inch safety wire between the push-pull rods as shown in Views A-A and B-B. Refer to Figure 201.

NOTE: Safety wire installed between the push-pull rods should be tight enough only to align the push-pull rods.

- i. Perform the ELEVATOR INSTALLATION procedure. Refer to Chapter 27-30-00.
- j. Identify and reconnect the turnbuckles.
- k. Rig to proper tension and check for correct travels.
- l. Install .032-inch safety wire through the push-pull rods as shown in View C-C. Refer to Figure 201.
- m. Install safety clips on the turnbuckles.

NOTE: Perform steps n, o and p only if the FA2100 Flight Data Recorder is installed on this aircraft.

- n. Position the elevator trim position potentiometer (sensor) electrical harness in the aircraft. Install the harness clamps and attaching hardware. Connect the electrical connector to connect the potentiometer electrical harness to the aircraft wiring.
- o. Close the DC power FLT DATA - RCDR and FDAU circuit breakers and the 26 VAC power FLT DATA - RCDR circuit breaker.
- p. If the elevator tab actuator was replaced, ensure all requirements of the ELEVATOR TRIM POSITION POTENTIOMETER (SENSOR) INSTALLATION procedure have been completed. Refer to Chapter 31-31-15 in the BEECH 1900D AIRLINER FLIGHT DATA RECORDER (FA2100) MAINTENANCE MANUAL SUPPLEMENT, P/N 129-590000-109.
- q. Reinstall the elevator access covers.

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