

**Attachment Twelve**  
**Maintenance Manual Procedure: 27-30-04**

Beech 1900D Airliner Maintenance Manual (UE-1 and After)  
**Elevator Tab Cables - Maintenance Practices**

## **ELEVATOR TAB CABLES - MAINTENANCE PRACTICES**

### *ELEVATOR TRIM TAB CABLE REMOVAL*

- a. Remove all flight compartment seats (25-10-00) and all left passenger seats (25-20-00).
- b. Remove the flight compartment carpet (25-10-01) and floorboards (6-50-00), the belly access plate below the pedestal (121DBC, 6-50-00), all left passenger compartment carpets (25-20-01) and floorboards (6-50-00), and all access plates on top of the horizontal stabilizer (6-50-00).
- c. Remove the cable retaining pins, fairleads and pressure seals. Refer to Figure 202.

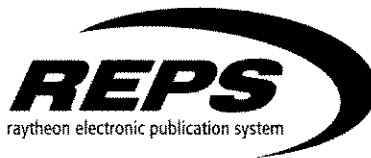
*NOTE: Some of the pulleys cannot be cleared by the stops and turnbuckles even with retaining pins removed. Remove those pulleys where necessary to provide for adequate clearance.*

- d. Remove the straps securing the conduit tubes both forward and aft of the brackets.
- e. Slide the conduit tubes forward or aft as required to gain access to the turnbuckles.
- f. Separate the forward cables from the aft cables at the turnbuckles.
- g. Attach lead lines to the aft ends of the forward cables and properly identify them to facilitate reinstallation.
- h. In the crew compartment, remove the front and both side access panels from the pedestal.
- i. Tape the two cables together just below the cable drum to prevent backlash from the drum.

**CAUTION: IF THE FA2100 FLIGHT DATA RECORDER IS INSTALLED ON THIS AIRCRAFT, PERFORM THE PITCH TRIM CONTROL POTENTIOMETER (SENSOR) REMOVAL PROCEDURE. REFER TO CHAPTER 31-31-23 IN THE BEECH 1900D AIRLINER FLIGHT DATA RECORDER (FA2100) MAINTENANCE MANUAL SUPPLEMENT, P/N 129-590000-109.**

- j. On the left side of the pedestal, loosen the two bolts in the idler sprocket bracket to relieve tension from the elevator tab chain in the pedestal.
- k. Cut and remove the safety wire from the two bolts on each end of the elevator tab drum shaft in the lower forward pedestal.
- l. Remove the two bolts, lift the shaft assembly slightly to remove the chain from the sprocket and remove the shaft assembly from the pedestal with the cable attached.

*NOTE: The point where the cable is secured by the pin can be marked with a drop of paint or a piece of tape. If the cable is to be replaced with a new one, measure the new cable against the old one and mark it also. Make certain the dimensions for the tab up and tab down are the same for the new cable as on the old cable.*



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- m. Withdraw the cable from the airplane, drawing the lead lines through the pedestal.
- n. Identify and attach lead lines to the aft cables in the aft fuselage section.
- o. Working through the access openings in the top of the horizontal stabilizer, separate both cables at the turnbuckles and withdraw the cable with the lead line attached. (The other cable is still connected to the opposite tab actuator through a turnbuckle.

*NOTE: While working with the cables that are strung up through the vertical stabilizer, take precautions to avoid losing the ends of the cables down into the interior of the vertical stabilizer since recovery is difficult.*

- p. Attach and identify a lead line to the remaining cable that runs inboard from the turnbuckle.
- q. Working up through the access openings on top of the horizontal stabilizer, disconnect the turnbuckle of the crossover cable (which has a lead line attached at the left horizontal stabilizer) and remove the cable from the airplane.
- r. Disconnect the remaining cable at the turnbuckle and withdraw the remaining aft cable from the aft fuselage section.

### **ELEVATOR TRIM TAB CABLE INSTALLATION**

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

- a. Position the cable in the slot in the cable drum (use the mark as indicated in ELEVATOR TRIM TAB CABLE REMOVAL) and install the cable lock pin. Refer to Figure 201.
- b. The cable must be installed as shown in the illustration. From the pin, wrap each cable 2-1/4 turns around the drum and tape the two cables together to prevent backlash from the drum.
- c. Set the tab indicator at 0. Refer to Figure 202.
- d. Assemble the cable guard over the drum, install the sprocket on the shaft and carefully position the shaft assembly in the pedestal, installing the lower end of the chain over the sprocket.
- e. Install and safety wire the two bolts in the ends of the shaft assembly on each side of the pedestal.
- f. Adjust the idler sprocket in the pedestal to remove slack from the tab control chain and tighten the two bolts in the idler sprocket bracket on the left side of the pedestal.
- g. After identifying the cable ends, attach the proper lead lines to the cables and pull them back through to the aft fuselage opening. Install the conduit tubes over the cables, but do not install the straps around the tubes at this time. Secure the cable ends to the structure with tape to prevent movement while the remainder of the cables are being strung.



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- h. Reinstall the pulleys that were removed for routing and reinstall the cable retaining pins.
- i. Working through the access openings on the top of the horizontal stabilizer, attach the LH aft cable to the lead line and pull the cable through the vertical stabilizer to the aft fuselage area. Secure the end of the cable at the stabilizer with tape.

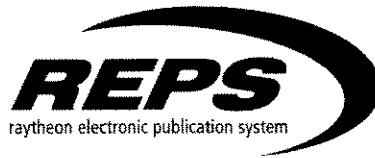
*NOTE: While working with the cables that are strung up through the vertical stabilizer, take precautions to avoid losing the ends of the cables down into the interior of the vertical stabilizer since recovery is difficult.*

- j. Attach the crossover cable to the lead line at the opening in the top of the left horizontal stabilizer and pull the cable through to the right horizontal stabilizer. Secure both ends of the cable with tape.
- k. Attach the RH aft cable to the lead line in the aft fuselage area and pull the cable up through the access opening in the top of the horizontal stabilizer. Secure the cable with tape.
- l. Identify and reconnect the turnbuckles in the right stabilizer access opening.

*NOTE: The interior of all turnbuckles should be coated or filled with grease (1, Chart 2, 27-00-00) for corrosion protection. Check for proper installation before safetying the turnbuckles.*

- m. Identify and reconnect the turnbuckles in the left horizontal stabilizer access opening.
- n. Identify and reconnect the turnbuckles in the aft fuselage area.
- o. Using solvent (2, Chart 2, 27-00-00), clean the cables for the length of travel through the pressure seals in the aft fuselage. Lubricate to one inch beyond the cleaned area with grease (1, Chart 2, 27-00-00).
- p. Remove the tape from the cables below the cable drum in the pedestal.
- q. Fill the pressure seals with grease (1, Chart 2, 27-00-00) and install them.
- r. Reinstall the cable retaining pins and fairleads.
- s. Seal the rubber seals to the metal with sealer (3, Chart 2, 27-00-00).
- t. Rig the cables to the proper tension as indicated in Figure 201, Chapter 27-30-05 and safety all turnbuckles.
- u. Rig the cables as outlined in ELEVATOR TRIM TAB RIGGING in Chapter 27-30-05.
- v. If necessary, adjust the indicator in the flight compartment to 0 while the tabs are neutral to the elevator.
- w. Install straps on the conduit tubes both forward and aft of the brackets.

*NOTE: If the FA2100 Flight Data Recorder is installed on this aircraft, perform the PITCH TRIM*

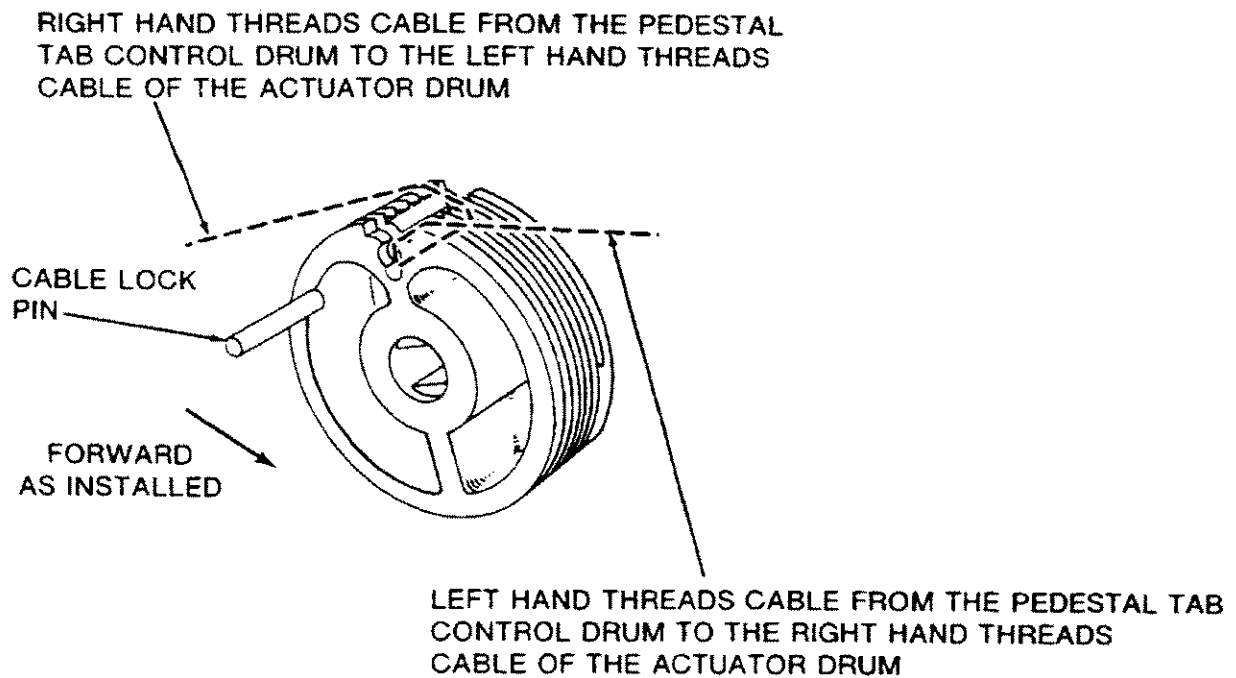


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*CONTROL POTENTIOMETER (SENSOR) INSTALLATION procedure. Refer to Chapter 31-31-23 in the BEECH 1900D AIRLINER FLIGHT DATA RECORDER (FA2100) MAINTENANCE MANUAL SUPPLEMENT, P/N 129-590000-109.*

- x. Replace all access panels, floor coverings and seats.

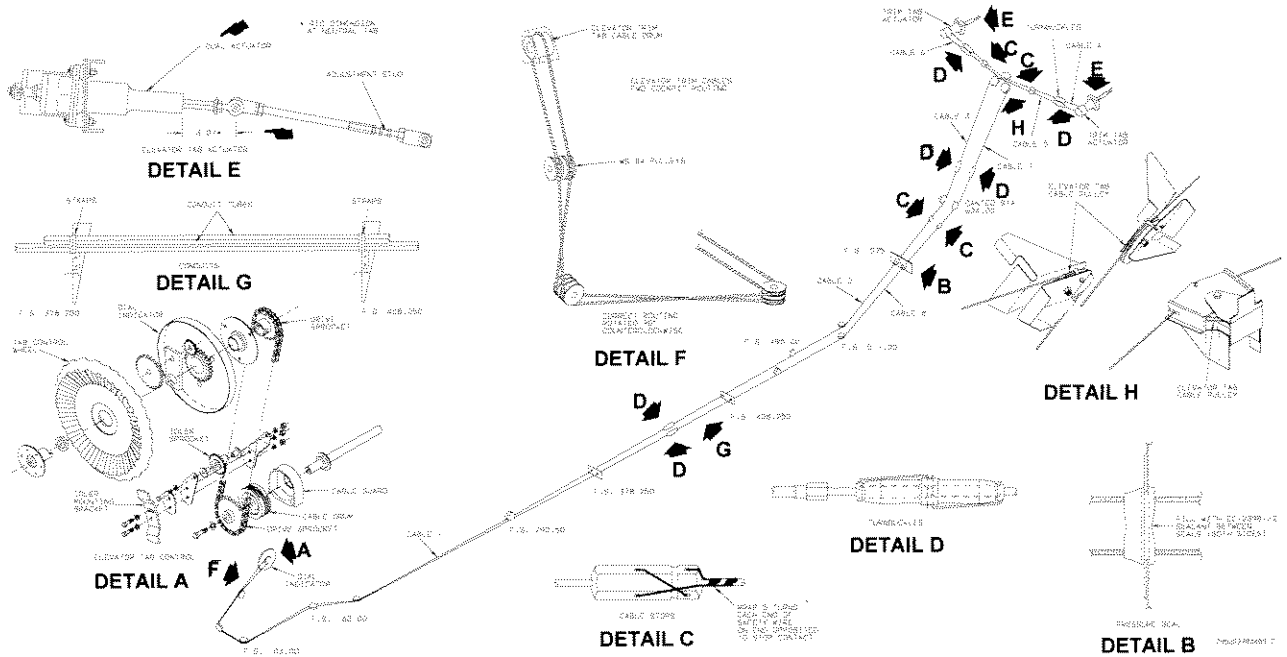
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**Elevator Tab Control Cable Winding**

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**Elevator Trim Tab Control System**