

CESSNA AIRCRAFT COMPANY
MODEL 180/185 SERIES (1969 - 1980)
SERVICE MANUAL

SUPPLEMENTAL INSPECTION NUMBER: 55-10-01

1. **TITLE:**
Horizontal Stabilizer, Elevators and Attachments Inspection

2. **EFFECTIVITY**
18051994 thru 18053167
185-1448 thru 18504138

INSPECTION COMPLIANCE

ALL USAGE: INITIAL 5,000 Hours or 20 Years **(NOTE)**

REPEAT 2,000 Hours or 5 Years **(NOTE)**

NOTE: Refer to Note 1, Section 2A-14-00.

3. **PURPOSE**
To inspect horizontal stabilizer, elevator and attachments for signs of damage, fatigue or deterioration.

4. **INSPECTION INSTRUCTIONS**

- A. Open all stabilizer and elevator access panels, including the stinger and vertical stabilizer to horizontal tail fairings. Refer to the applicable Model 180/185 Service Manual.
- B. Visually inspect stabilizer and elevator for condition, cracks and security; hinge bolts, hinge bearings for condition and security; bearings for freedom of rotation; attach fittings for evidence of damage, wear, failed fasteners and security. Refer to Figure 1.
- (1) Clean area before inspecting if grime or debris is present.
- (2) Visually inspect horizontal stabilizer hinge reinforcement for cracks or corrosion along the aft edge to a fastener hole at the inboard lower tabs. Pay particular attention to the lower reinforcement at the flange bend radius.
- (3) If cracks or frozen bearings are found, conduct a surface eddy current inspection. Refer to Section 2A-13-01 Nondestructive Inspection Methods and Requirements, Eddy current Inspection - (Surface Inspection), for additional instructions. The inspection is for the aluminum structure outside of the bearing, so set the instrument for aluminum.
- C. Visually inspect the elevator torque tube for corrosion and rivet security. Pay particular attention to the flange riveted onto the torque tube near the airplane centerline for corrosion.
- (1) Clean area before inspecting if grime or debris is present.
- D. Using a borescope inspect forward and aft stabilizer and elevator spars, ribs and attach fittings for cracks, corrosion, loose fasteners, elongated fastener attach holes, signs of fatigue and deterioration.
- (1) Clean area before inspecting if grime or debris is present.
- (2) Pay particular attention to the skins at the location where stringers pass through ribs and at the leading edge skin close to the fuselage. Apply finger pressure at the stringer intersection or the rib to spar juncture to check for free play indicating a broken rib.
- (3) Visually inspect the forward stabilizer attachment bulkhead for loose rivets and cracks.
- (4) Visually inspect the forward side of the front spar.
- E. Visually inspect the horizontal stabilizer aft attach points for cracks or corrosion.
- (1) Clean area before inspecting if grime or debris is present.
- (2) Pay particular attention to inspect the internal reinforcement triangle bracket around the washers of attach hardware and in the radius of the angle.
- F. Visually inspect the trailing edge portion of the elevator for indications of cracks, corrosion and deterioration.
- G. Install all previously removed access panels. Refer to the applicable Model 180/185 Service Manual.

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5. ACCESS AND DETECTABLE CRACK SIZE

ACCESS/LOCATION

Horizontal Tail

DETECTABLE CRACK SIZE

Not Allowed

6. INSPECTION METHOD

Visual and Eddy Current

7. REPAIR/MODIFICATION

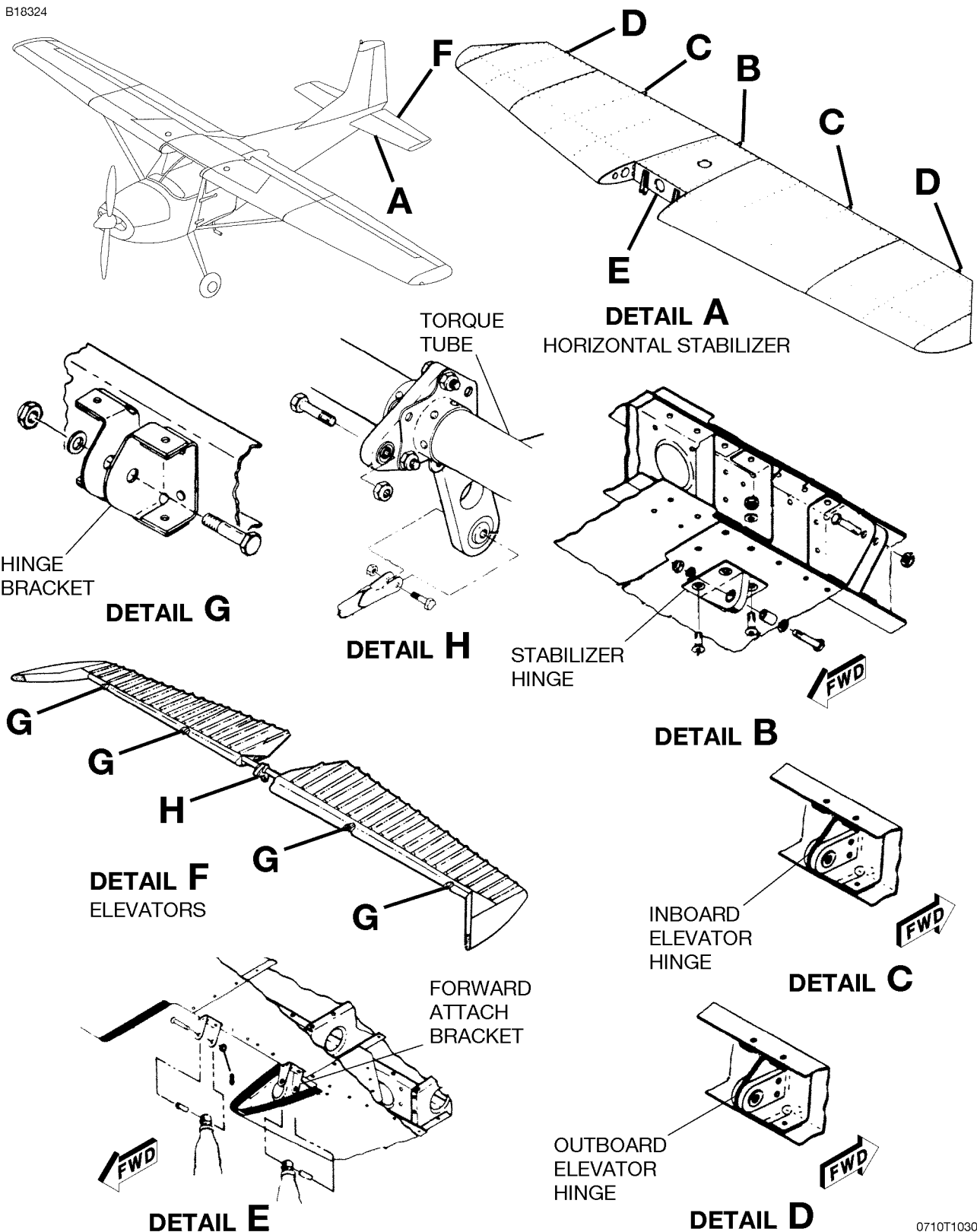
Replace damaged bolts and nuts. Replace damaged fittings and small parts. Replace damaged or loose rivets. Hinge bearings are prepacked with grease, which will eventually oxidize and harden after years of service. Several applications of penetrating oil will help free up a stiff bearing. It is the owner/operator option to replace stiff bearings. Repairs may be made in accordance with Section 17 (Structural Repair) of the applicable Model 180/185 Service Manual. Any repair not available in Section 17 should be coordinated with Cessna Customer Service prior to beginning the repair.

8. COMMENTS

Coordinate this inspection with SID 55-30-01, Vertical Stabilizer, Rudder and Attachments Inspection.

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HORIZONTAL STABILIZER, ELEVATORS AND ATTACHMENTS INSPECTION
 Figure 1 (Sheet 1)