

HORIZONTAL STABILIZER - REMOVAL/INSTALLATION

1. General

- A. The horizontal stabilizers are of all metal, fully cantilever, semimonocoque design consisting of spars, stringers, ribs, and skins and attach fittings. Skins are riveted to supporting structure with conventional MS20470AD rivets. Spar caps and attach fittings are of extruded and forged 7075 aluminum alloy material, respectively, while the remainder of the stabilizer structure is of formed 2024 sheet Alclad material, heat-treated after forming. The entire horizontal stabilizer structure is riveted together using standard MS20470AD universal head rivets. An aerodynamically balanced elevator and rudder are hinged to the trailing edge of the horizontal and vertical stabilizer, respectively. Left and right elevator trim tabs are attached to the trailing edges of the elevator via piano-type hinges.

2. Horizontal Stabilizer Removal/Installation

- A. Remove Horizontal Stabilizer (Refer to Figure 401).

- (1) Remove stinger by removing attach screws.
- (2) If installed, disconnect tail navigation light wire at quick-disconnect. Refer to Chapter 33, Incandescent Navigation Lights - Maintenance Practices Stinger Navigation Light Removal/Installation.

- (3) Remove rudder in accordance with Rudder - Removal/Installation.
- (4) Remove vertical stabilizer in accordance with Vertical Stabilizer - Removal/Installation.
- (5) Remove elevator pushrod at pushrod arm assembly. Refer to Elevator - Removal/Installation.
- (6) Remove four inspection covers (9) on top of horizontal stabilizer near center.
- (7) Remove access panel from aft lower surface of tailcone.

NOTE: Removal of access panels on the lower left and right sides of the horizontal stabilizer at Stabilizer Stations 80.60 provides access to the left and right elevator trim tab actuators.

- (8) Cut safety wire from elevator trim tab cable turnbuckles inside tailcone, tag cables for identification, and disconnect turnbuckles.
- (9) Remove attach bolts (4) and (6).
- (10) Remove horizontal stabilizer (1) from airplane. Retain shims (7).

- B. Install Horizontal Stabilizer (Refer to Figure 401).

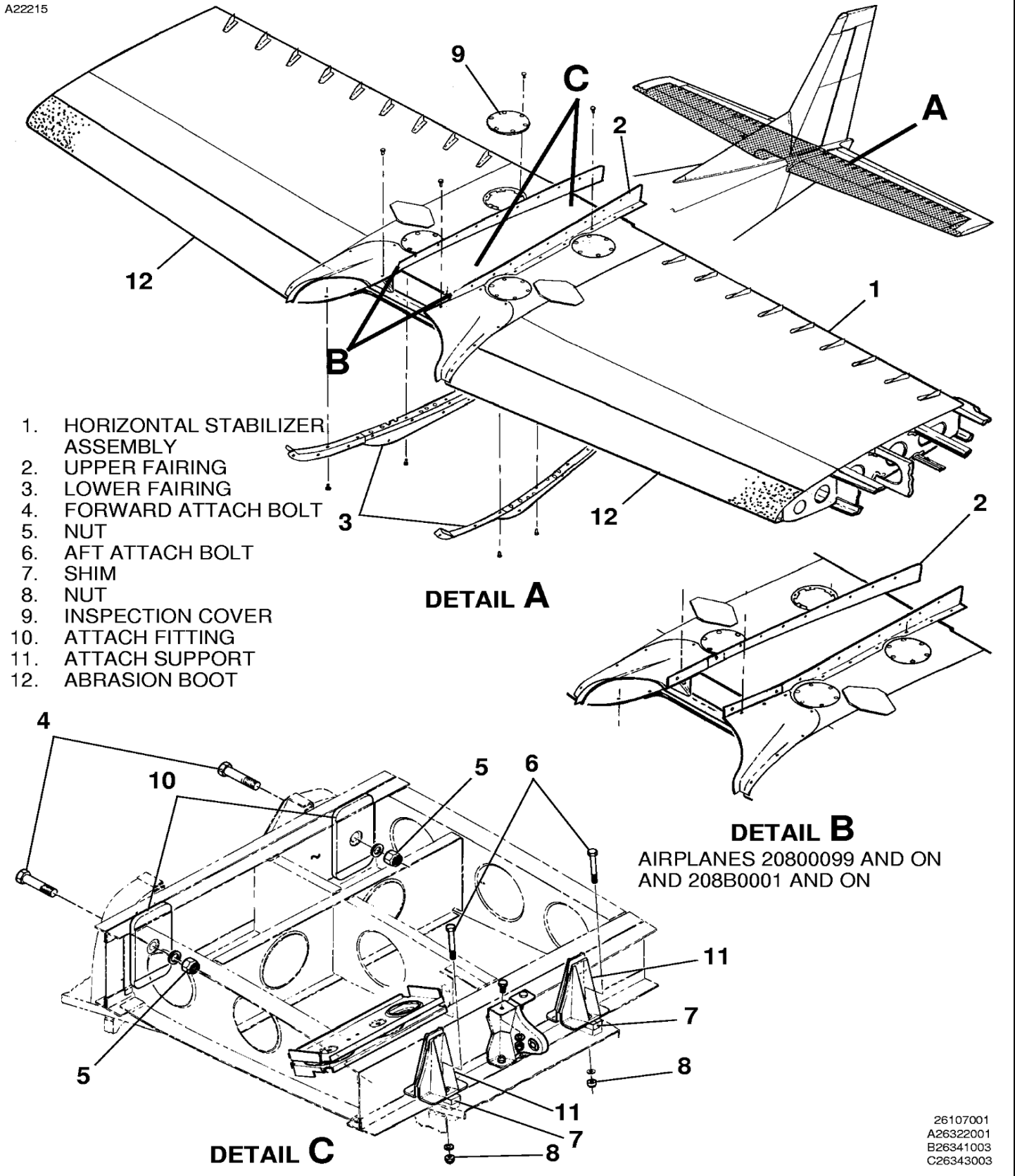
- (1) With shims (7) positioned in same relative position as removed, line up attach holes in fittings (10) and supports (11) with attach holes in tail cone structure.
- (2) Install bolts (4) and (6).
- (3) Torque nuts (5) to 480 to 690 inch-pounds.
- (4) Torque nuts (8) to exactly 70 inch-pounds.

WARNING: Upon completion of all systems installations and/or rigging, ensure that all bolts, nuts, fittings, connections, etc., are tightened and secured properly. Check installations for freedom of movement.

- (5) Connect elevator trim tab cable turnbuckles inside tail cone and rig trim tab in accordance with Chapter 27. Safety turnbuckles.
- (6) Connect elevator pushrod at elevator horn and safety.
- (7) Install four inspection covers (9).
- (8) Install vertical stabilizer in accordance with Vertical Stabilizer - Removal/Installation.
- (9) Install rudder in accordance with Rudder - Removal/Installation.
- (10) Connect tail navigation light wire at quick-disconnect.
- (11) Install stinger.

Figure 401 : Sheet 1 : Horizontal Stabilizer Installation

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