

# SERVICE BULLETIN

## STINSON DIVISION

CONSOLIDATED VULTEE AIRCRAFT CORPORATION

WAYNE, MICHIGAN

TITLE Repair or reinforcement of Rudder Skins  
at Tab Hinge

BULLETIN NO. 258

MODELS AFFECTED: 108-3 -Serial Numbers 108-3502  
thru 108-4930.

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DATE May 19, 1948

A. Inspect rudder skins at points immediately adjacent to the upper and lower ends of the rudder tab hinge for cracks. If cracks are not present, we recommend the installation of reinforcement, part number 108-2602102-6, to preclude the possibility of cracking. This reinforcement is installed at the factory on airplanes bearing serial number 108-4931 and up. Installation instructions follow:

1. Detach rudder tab flexible shaft at tab end.
2. Position reinforcement, part number 108-2602102-6, as shown on drawing on page 3.
3. Attach reinforcement to rudder with two (2) Cherry Rivets CR-163-4-4 through rudder false spar and one (1) Brazier Head Rivet AN456AD4-4 through rudder skins at center of bead. Drill .128 diameter holes for rivets.

B. Where cracked rudder skins are found adjacent to the top of the rudder tab hinge, the following repairs should be made.

1. Detach rudder tab flexible shaft at tab end.
2. Install reinforcement, part number 108-2602102-6, as outlined in paragraph A above, EXCEPT DO NOT INSTALL AN456AD4-4 rivet through rudder skins.
3. Drill #40 (.098 dia.) stop hole at end of cracks in rudder skins.
4. If the rudder skin is cracked on the tab hinge side, drill out the top two rivets which attach the tab hinge to the rudder. If the skin is cracked on the side opposite the tab hinge, drill out the two top rivets on that side. Naturally, if the skins are cracked on both sides, all four rivets must be removed.
5. Install reinforcement plate, part number 108-2602103-6, over crack on tab hinge side and plate, 108-2602103-7, over crack on opposite side.
6. Drill .128 diameter holes through plate (or plates) to pick up holes from drilled out rivets. Drill .128 hole through plate (or plates) at center of skin bead. Drill additional hole through plate (or plates) so as to have three holes equally spaced on the centerline of the skin bead.
7. Attach plate (or plates) with three Brazier Head rivets AN456AD4-4 through skin beads. Use two (2) Cherry rivets CR-163-4-4 to attach plate to hinge side of rudder and two (2) Brazier Head rivets AN456AD4-3 on opposite side.

C. Where cracked rudder skins are found adjacent to the lower end of the tsb hinge, the following repairs should be made.

1. Drill a #40 (.098 dis.) stop hole at the end of the crack.
2. If the rudder skin is cracked on the tab hinge side, drill out the two bottom rivets which attach the tab hinge to the rudder. If the skin is cracked on the side opposite the tsb hinge, drill out the two bottom rivets on that side. Naturally, if the skins are cracked on both sides, all four rivets must be removed.
3. On most 108-3 models another rivet was installed directly below the rivets mentioned above. If this rivet is present, it must also be drilled out.
4. Position reinforcement plate, part number 108-2602103-10, and drill .128 diameter holes through plate to pick up holes from drilled out rivets. If the rivet mentioned under item 3 was not present it will be necessary to drill another .128 hole - see drawing. Drill a fourth .128 hole as shown on drawing.
5. Attach plate on hinge side with two Cherry Rivets CR-163-4-4 through plate and hinge. Use Brazier Head rivets AN456AD4-3 in all other holes and for attaching reinforcement plate on side opposite tab hinge.

All necessary parts, including rivets, can be secured without charge from our Service Department. These will be furnished in groups according to repairs A, B, or C. Please specify as group A, B, or C of Service Bulletin No. 258.

The following labor allowances will be made:

- "A" Repairs - 1/2 hour per plane
- "B" Repairs - 1 3/4 hours per plane
- "C" Repairs - 1 1/4 hours per plane

PARTS AND LABOR CLAIMS AGAINST THIS BULLETIN WILL BE ALLOWED UNTIL DECEMBER 1, 1948.

*George Martin*

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