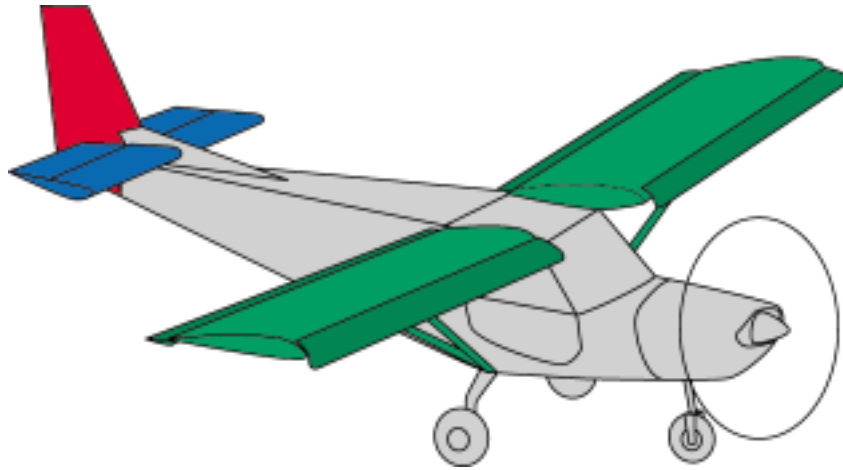


# STOL CH 801

## AIRCRAFT FINISHING “ATTACHING CONTROL SURFACES”



### SECTION 2 “Attaching the Rudder to the Fuselage”

#### Section 2

1. Bolt the rudder to the rear fuselage
2. Install the control stops
3. Install the rudder cables

#### Reference Drawings:

- 8RU-3
- 8CN-3.1
- 8CN-3.2
- 8CN-1



The optional tail light is grounded to the fuselage (and not the rudder)

file rud-attach1

The all-flying STOL CH 801 rudder. The rudder is vertical through the longitudinal axis (aircraft centerline).



Notice the stainless steel aircraft identification plate riveted to the left side of the fuselage between the horizontal frames.

file rud-attach2

The rudder is bolted at the top and bottom of the rear fuselage.



The upper rudder hinge plate 8F4-1 is drilled with a 5/16" hole for bushing 8F4-4.

The lower rudder hinge plates 8F4-2A and 8F4-2B are drilled with a 1/4" hole for an AN4-7A bolt.

file rud-attach1a

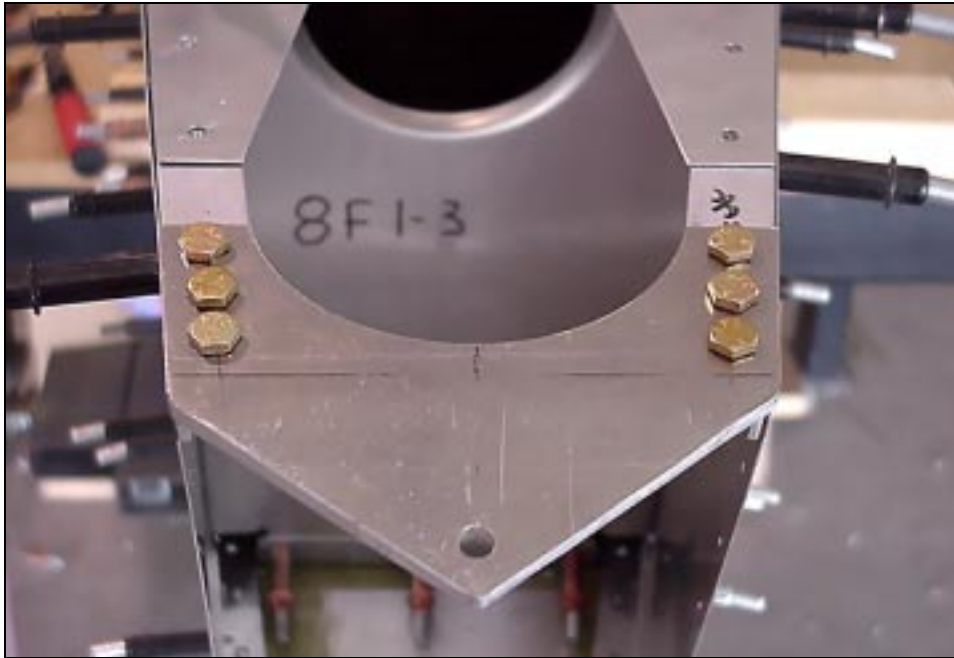
The fuselage rudder hinges.



Note: The last three rivets in the fuselage rear side skin 8F2-2A and the bottom longerons 8F3-1A are riveted later with the rudder control stop 8C5-4 (both the left and right sides).

file rud-attach2a

The lower rudder hinge plates 8F4-2A and 8F4-2B.



Detail of the upper rudder hinge plate 8F4-1.

Drilled 5/16" hole for bushing 8F4-4.

file rud-attach2a

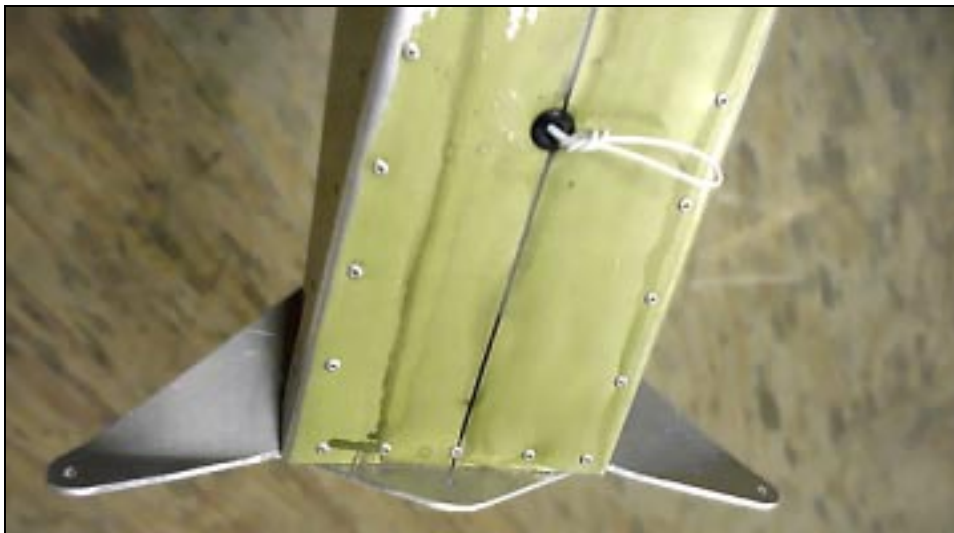


file rud-attach3a

Bushing 8F4-4 is clamped between the upper Rudder Hinge angles.

(The bolt does not turn inside the bushing: it is the bushing that turns in the 5/16" hole in 8F4-1).

1/4" holes in the two upper rudder hinge angles 8R2-4 for AN4-7A bolt (bolts to fuselage's upper rudder hinge plate 8F4-1).



file rud-attach3b

Notice the wire for the optional rudder tail light.

Rudder horn bolts to the fuselage's lower rudder hinge plates 8F4-2A and 8F4-2B (AN4-7A bolt).

Bushing 8F4-5 is clamped between the lower rudder hinge plates 8F4-2A and 8F4-2B, with the AN4-7A Bolt. The bushing turns in the 5/16" hole drilled in the horn 8F4-5.

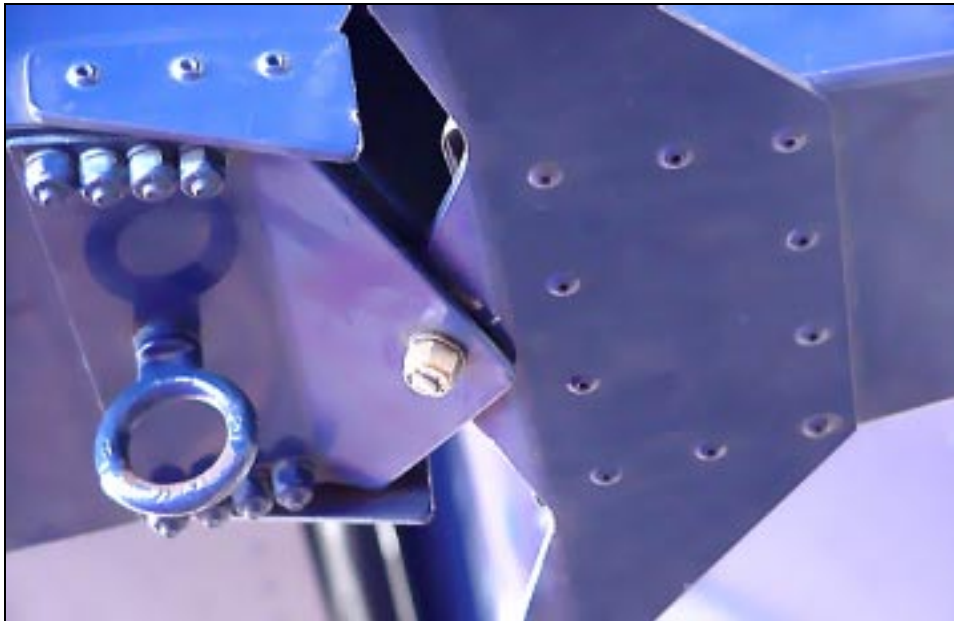
Reference **Drawing 8RU-3** for detail of bolt assembly of the upper and lower rudder hinges.



file rud-attach3

Note: Do not install the rudder stop on top of existing domed rivets – drill out fuselage rivet first and backdrill through the rudder stop and then rivet.

Rudder Control Stops: 8F4-2B: 3 A5 rivets.



file rud-attach4

The photo shows 4 bolts in the bracket. The actual number of required bolts is three per side.

(see photo rud-attach2a)

The attached rudder assembly – view from bottom (fuselage on left). The rudder is in neutral position as shown. The control stop is when the front edge of the Rudder Horn 8R2-3 makes contact with the aft edge of 8F4-2B.



file rud-attach5a

Bend the arms of the Rudder Horn down to align the turnbuckle with the cable outlet in front of the H.T. Frame.

The cables follow a straight line from the fairlead (8F2-8) to the rudder control horn 8R2-3.

To bend the arms: Use two “visegrip” pliers (protect the aluminum horn with thin sheets of plywood). Place one set of pliers in front of the bend; the other behind the bend. Push down on the front set of pliers while holding back on the back ones.



file rud-attach5b

- The right cable is connected to the right rudder pedal (shown with the toe brake pedal), connected to the right arm of the rudder control horn.
- The left cable is connected to the left rudder pedal, connected to the left arm of the rudder control horn at the tail.

**IMPORTANT:**

Refer to an Aircraft Mechanic’s Handbook on how to properly apply NicoPress sleeves.

Safety Wire: Follow standard procedures