

7F4-1 Upper Rudder Hinge Plate

Layout the cut for the Upper Hinge Plate. Measure and mark the center for the Rudder Hinge. The center hinge hole is 75mm from the back edge of 7F4-1.

Cut the center and pre-drill the Hinge Plate. Do not drill the Rudder Hinge hole at this time.



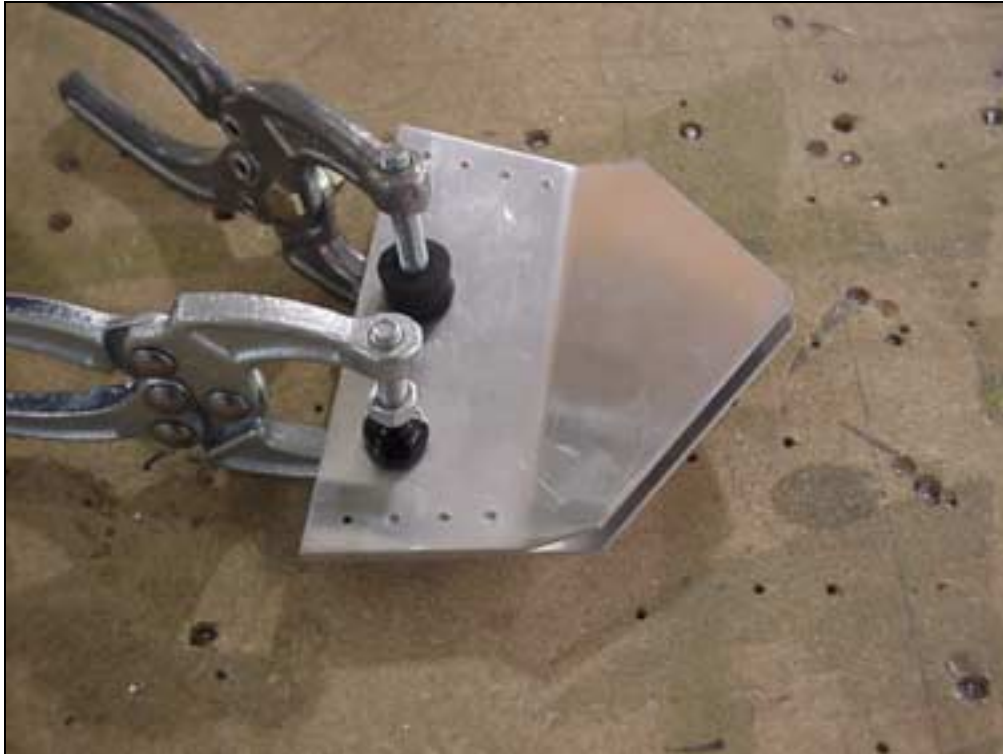
7F4-1 Upper Rudder Hinge Plate

Position the Hinge Plate on the Rear Fuselage. The Rudder Hinge hole is position 30mm behind the Rear Fuselage (refer. 7-F-4). Drill and cleco when in position. Once the Hinge Plate is correctly in position the holes can be open up to 3/16 hole for an AN3-4A Bolt.



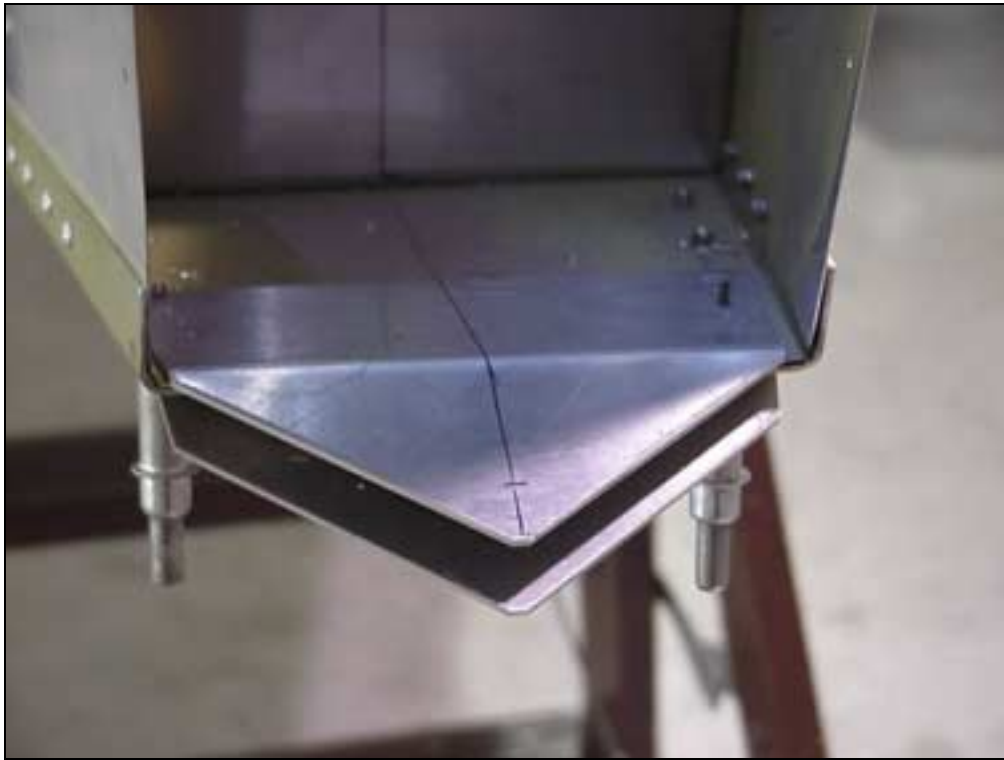
7F4-2 Lower Rudder Hinge Plates

Layout the holes and predrill the Lower Hinge Plates. This is done on the Lower Plate only, which has the bend 15mm further back (Dwg 7-F-4).



7F4-2 Lower Rudder Hinge Plates

Clamp the two plates together and drill together (7F4-2).



**7F4-2 Lower Rudder
Hinge Plates**

Position and install the Lower Hinge Plates. Make sure that the Center Hinge is 30mm from the rear Fuselage and in line with the Top Hinge Plate.



**7F4-1 Upper Hinge Plate
7F4-2 Lower Hinge Plate**

Using a small rod is very helpful in keeping the Hinge Plates in line.



7F4-3 Rear Tie Down

Cutting and positioning the Rear Tie Down.

First drill the one-inch hole on the small flange of the Tie Down.



Position the Tie Down on the Lower Plates, back drill and trim the sides to the Lower Plates.

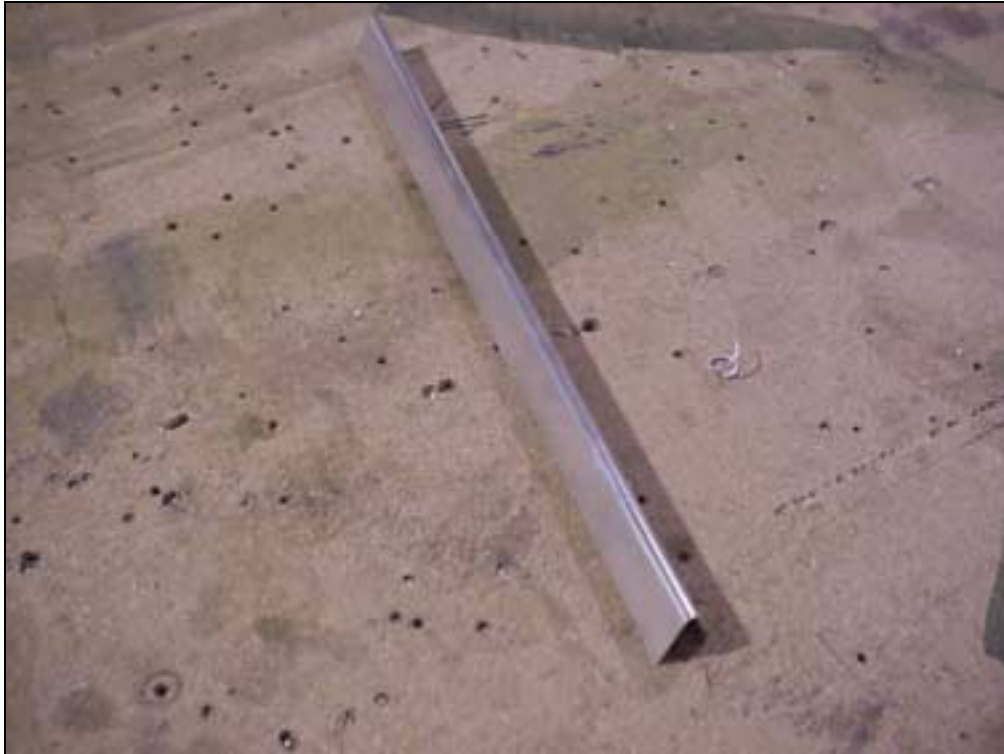
7F4-3 Rear Tie Down

Clamp together drill and rivet the two Plates together with A4 Rivets.



**7F4-2 Lower Hinge
Plates
7F4-3 Rear Tie Down**

Cleco the Tie Down Ring on the Fuselage with the brackets



"L" Angles

Cut two 'L' Angles 298mm and bend closed 45 DEG



'L' Angle

Position the 'L' Angles on the Rear Fuselage. Drill and rivet A4



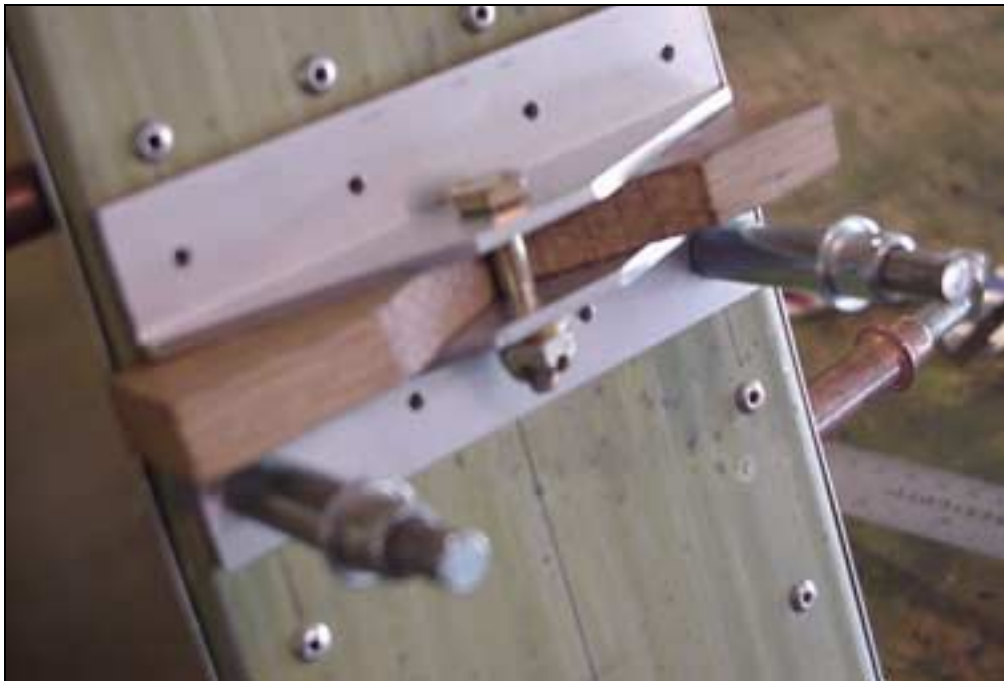
7F2-4 Upper Hinge

Cut and predrill the Upper Hinge for the Rudder. Drilling the Center Hinge hole should be done by clamping both pieces together.



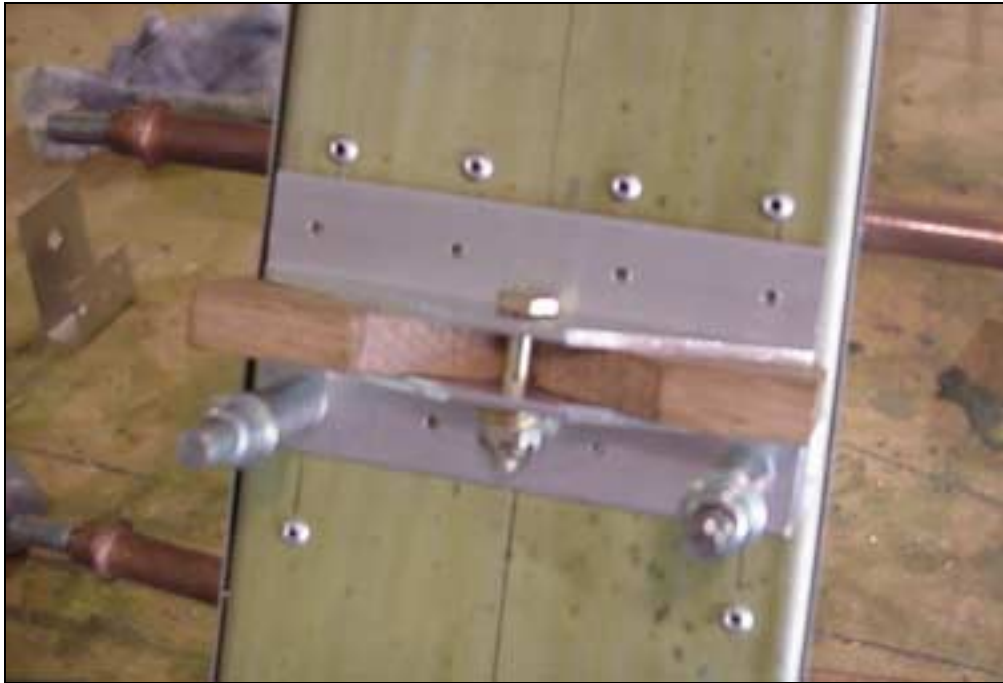
**7R2-3 Upper Hinge
7F2-1 Spar**

Extend the centerline on the Spar 7R3-1. Mark a line 305mm from the bottom of the Spar Assembly for the position of the Lower Hinge. Drill and cleco the Lower Hinge to the Spar.



**7R2-1 Spar
7R2-3 Upper Hinge**

To position the Upper Hinge it is best to bolt the two hinges together at the center. There will be a 10mm space between the Upper and Lower Hinge. Making a 10mm spacer out of wood will work.



**7R2-1 Spar
7R2-3 Upper Hinge**

Before drilling make sure that the two hinges are centered on the Spar and has the 10mm space between them. Drill and Rivet with A5 Rivets.



**7R2-1 Spar
7R2-3 Upper Hinge**

**AN3-10A Bolt
AN960-416 Washer
Bushing 1/4 O/D x .028"**

To install the Rudder to the Fuselage there is a Bushing 10mm that fits inside 7F4-1. Using 1/4 (AN960-416) washers as shims is needed on the top and bottom of 7F4-1. This Rudder is using three on the top and two on the bottom (DRG 7-R-3).



**7R2-3 Horn
7F4-2 Lower Hinge
Plates**

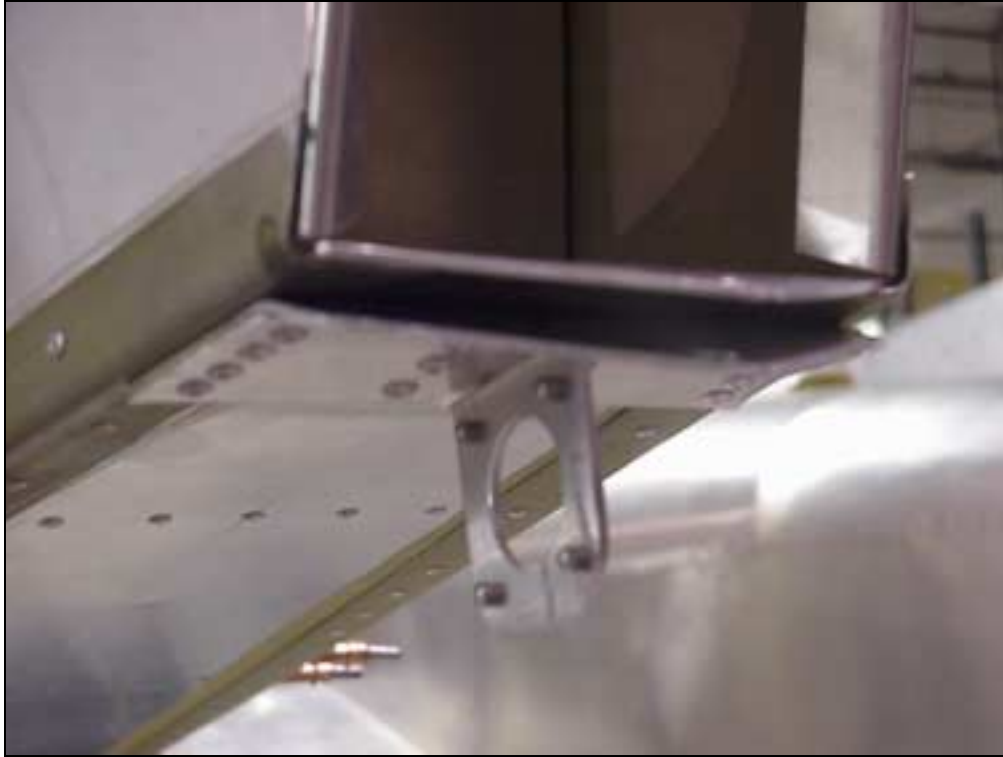
**AN3-7A Bolt
AN960-416 Washer
Bushing 1/4 O/D X .028**

The Horn (7R2-3) is using 8.5mm Bushing, which fits inside 7R2-3 Horn. This Rudder is using two 1/4 washers (AN960-416 Washer) on the top and two on the bottom.



**7R2-4 Upper Hinge
7F4-1 Upper Hinge Plate**

Once the Rudder is position correctly, the Upper Hinge and Hinge Plate can be bolted and riveted together.



**7F4-3 Rear Tie Down
7F4-2 Lower Hinge
Plates**

The Lower Plates use A5 Rivets





**7R3-4 Lower Spar
Fairing
7R3-3 Upper Spar
Fairing**

Position the Upper and Lower Spar Fairing



**7R3-4 Lower Spar
Fairing**

Position the Lower Fairing 30mm from the bottom of the Rudder Assembly.
Slide the Fairing between the Spar and Rudder Skin and back drill.



**7R3-3 Upper Spar
Fairing**

Position the Upper Fairing 40mm from the Lower Fairing 7R3-4. Don't rivet until the Horizontal Tail has been installed.



Turnbuckles
See drawing 7-C-0

Rudder stops 7C5-4