

These first four pages show how to layout the leading edge of the horizontal tail ribs - to determine which is the left and right rib, as well as which end is the top of the rib.
Assembly of the Elevator Skeleton starts on Page 5 of this section.



**ELEVATOR TIP RIBS
7H1-5**

Qty = 1L + 1R

CHECK: Left and right ribs stack together with the flanges going in opposite directions.



**ELEVATOR REAR
RIBS
7H1-7**

LAYOUT: Mark the middle point of the front flange. Ref line A-A bottom right diagram on drawing 7-H-1. Also mark the center line at the end of the rib.



**ELEVATOR NOSE
RIBS
7H1-6**

Ref line A-A
drawing 7-H-1

Position the rear and nose rib on top of the Tip rib.
REFERENCE: line up the front of the nose rib with the tip rib, the front flange of the rear rib is up against the rear flange of the nose rib.



Hold the rear rib to make sure it does not shift or move, remove the nose rib and mark the middle of the flange on the tip rib. Mark the center line along the aft edge of the rib.



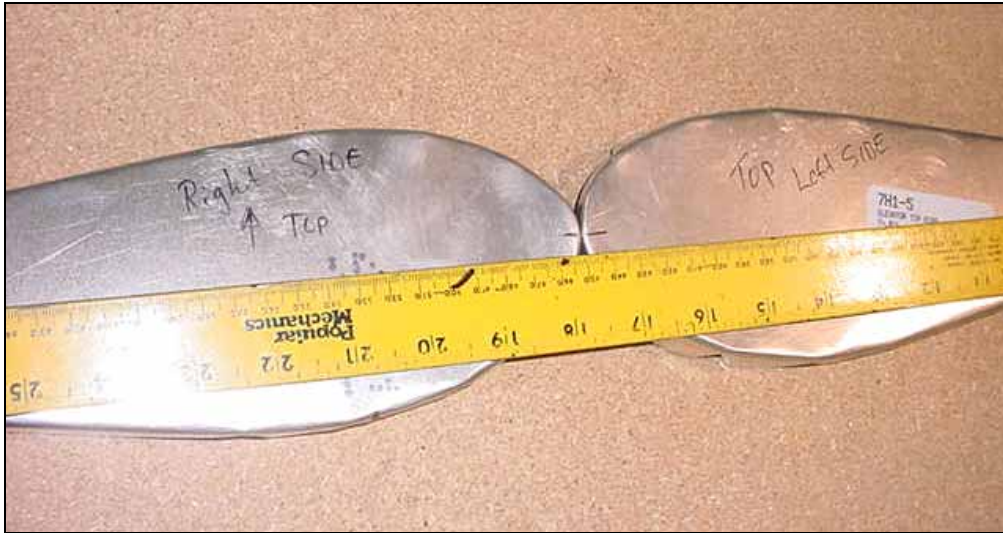
Mark the center line through the rear rib 7H1-7 on both the left and right tip rib 7H1-5

Lay a straight edge on the tip rib and connect the two marks with a straight line to the front of the rib.



Straight edge on rib center line.

Bring the L and R tip rib nose to nose. Lay a straight edge on top of the ribs, adjust the ribs to line up the center line of both ribs with the straight edge.



TOP ORIENTATION:
 Notice how the two ribs touch together at a point above the straight edge:
 Mark an arrow pointing up to identify the top side:
TOP

Identify the left and right ribs, left is determined when sitting in the aircraft facing forward.



Detail of the leading edges touching at a point above the straight reference line.



Measure up 8mm to locate the leading edge of the rib.

NOTE: The LE line is on the top side of the horizontal line Ref drawing 7H1-5

ORIENTATION: The rib flanges point inboard, see middle diagram 7-H-4. Also mark the orientation of the Nose Rib 7H1-6



The elevator skeleton parts.



7H2-8 Elevator Spar

Layout the location for 7H1-7 rear ribs on 7H2-8 spar. Mark and predrill the holes in the spar for the rear ribs.



**7H2-8 Rear Spar
7H1-7 Rear Ribs**

NOTE: The Rear Ribs
7H1-7 are symmetrical

2 ribs each side of the
aircraft center line; the rib
flange point outboard.

Mark the centerline on all rib flanges. Determine the proper orientation of the ribs from the drawings. Align the centerline of the flanges with the predrilled holes in the spar. Clamp the ribs in place, check the position of the ribs, keep the spar and ribs flanges flush on both sides of the spar. Drill and cleco the ribs to the spar.



7H1-7 Rear Rib

The ribs are installed with
the flange pointing
outboard

Drill and cleco the rear ribs to the spar.



7V6-3 Rear Rib Angle

Cut two pieces from 7V6-3 L=90mm.



**7H2-8 Elevator Spar
7V6-3 Rear Rib Angle**

Clamp angle, 7V6-3, to the spar. Keep the bracket 90 degrees to the spar's flanged edge. Drill and cleco.

CAUTION: The dimension from the center of the spar to the bracket flange is 1108mm, this should be held within one mm.



7H1-6 Elevator Nose Rib

ORIENTATION: The rib is not symmetrical, the leading edge is 8mm above the rib center line. Ref 7-H-1

Layout the correct orientation for 7H1-6 nose ribs. The more curved side is the top of the elevator (refer to 7H1 drawing). The centerline on the rib is approximately 8mm below the center of the nose radius.

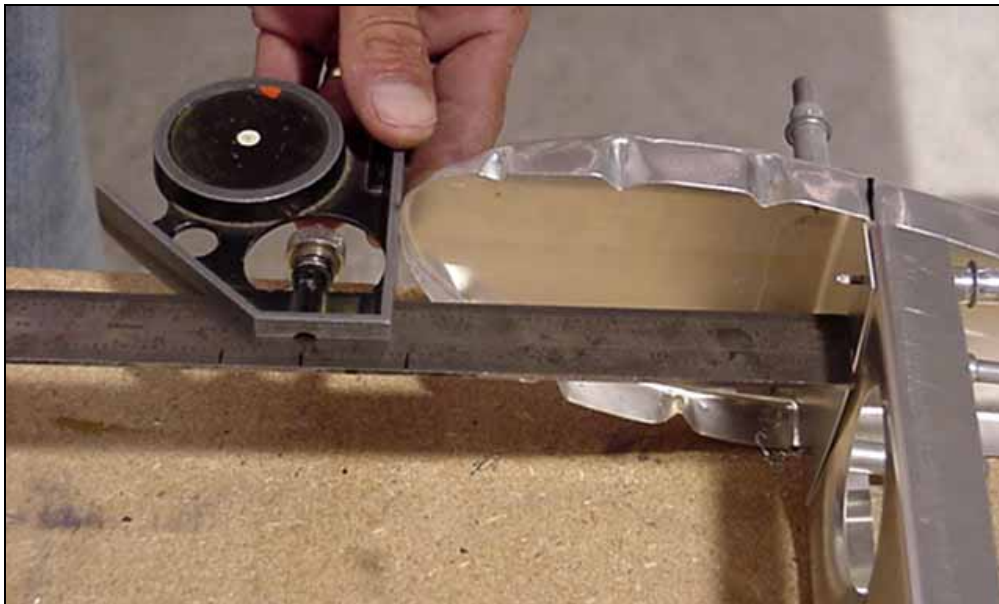


7H1-6 Elevator Nose Ribs

Align rib flange centerline with holes in spar. Square the nose rib with the elevator spar.



7H1-6 Elevator Nose Ribs



7H1-5 Elevator Tip Ribs

ORIENTATION OF TIP RIB: The flange point inboard.

Position the Elevator Tip Ribs to ends of spar. Measure the distance from the spar to the front of the elevator nose ribs (7H1-6). The distance can be set by using an adjustable square to get the proper measurement. Clamp the tip ribs to the angle 7V6-3



2 RIVETS A4

END HOLES: 7mm from top and bottom end of the Angle 7V6-3

CHECK: The 2 end holes will not interfere with the Outboard Hinge Pins 7H3-2. Ref bottom right diagram on 7-H-4

Make sure that the nose ribs are all the same length (the end-ribs have been positioned so that all four ribs touch the table).



Elevator skeleton.



7H2-9 Elevator Channel
"L" Angles Cutoffs

Cut two "L" Angles 60mm Long.



7H2-9 Elevator Channel

Position the "L" Angles flush with the ends of the channel. CHECK: outside to outside distance across the L angle is equal to the inside distance between the rear ribs 7H1-7 (approximately 260mm)



7H2-9 Elevator Channel

Securing the skeleton to the table is very helpful. Before installing the channel make sure to square the rear ribs (7H1-7).



7H2-6 Elevator Channel

2 RIVETS A4
(in each flange of the L angles)

The Elevator Channel is positioned to the rear ribs using "L" Angles. Measure back from the front flange of the elevator spar 90mm to the back of the channel. Before riveting disassemble the skeleton, deburr and apply corrosion protection.