

KIS4 Cruiser

BUILDERS MANUAL

S/N 4052

HORIZ STAB & ELEV

CONSTRUCTION OF THE HORIZONTAL STABILIZER

IDENTIFY PARTS - Inspect the premolded top and bottom horizontal tail skins. Note that each skin consists of a horizontal stabilizer skin and elevator skin which have been factory molded in one piece. Identify from the factory labels the top stabilizer (C104T) and top elevator (C104ET). Identify the bottom stabilizer (C104B) and bottom elevator (C104ET). The top surface is flat span wise with the leading edge radius extended further around the nose of the part. The bottom surface has a subtle crown at the center line (the tapered thickness of the horizontal surface is all taken in the bottom surface for a slight dihedral when installed, and the top has to be straight to avoid binding in the hinge line). Strip off the peel ply from all surfaces and clean away any residue from the surfaces. Using a felt pen label "top" and "bottom" on both the inside and outside of the stabilizer and elevator tops and bottoms. Also place arrows indicating forward (direction of flight) on these parts to avoid confusion when directions call out "forward face" of some member.

CUT APART STABILIZER AND ELEVATOR SECTIONS - Find the scribe lines that will part the stabilizer and elevator on the outside of each molded piece. These lines run straight across and then around the elevator balance. Note that on the bottom piece only that there is a joggle that will be used to bond a curved piece of fiberglass at a later date. Run a soft pencil along the scribe lines and at the forward part of the joggle for visibility. Cut along each line very carefully to cleanly separate the elevator and stabilizer skins. An electric saber saw with fine tooth blade or a hand saw may be used. (Razor back-saws and hack saw blades in special holders work well.) When the cuts are complete sand the edges of the stabilizer and elevator skins with a long block and 80 or 100 grit paper. Place the elevator top and bottom aside.

Some of the early horizontal kit parts may have the scribe lines for the centerline and the axial cut lines for the elevator counter weights slightly off true position. Using these scribe marks will not make an unsuitable nor dangerous part, but correcting these dimensions will lead to better symmetry of the final assembly.

