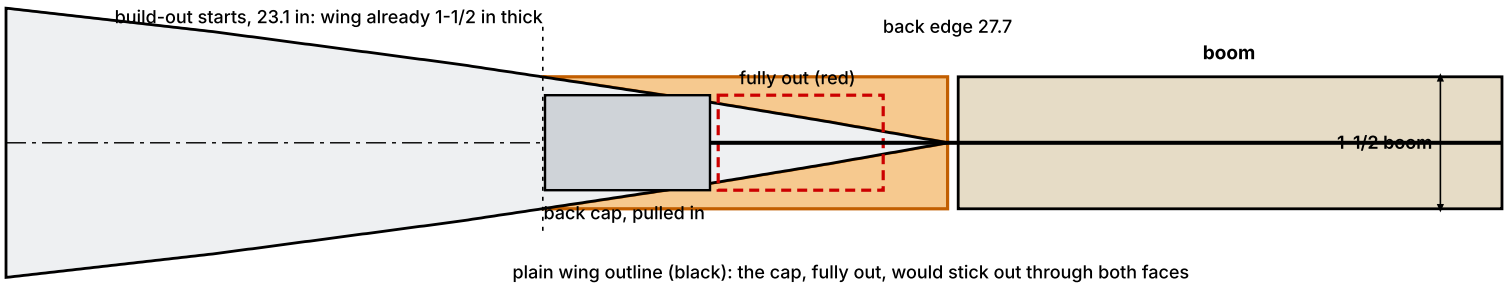
THE BUILD-OUT WHERE THE BOOM MEETS THE WING

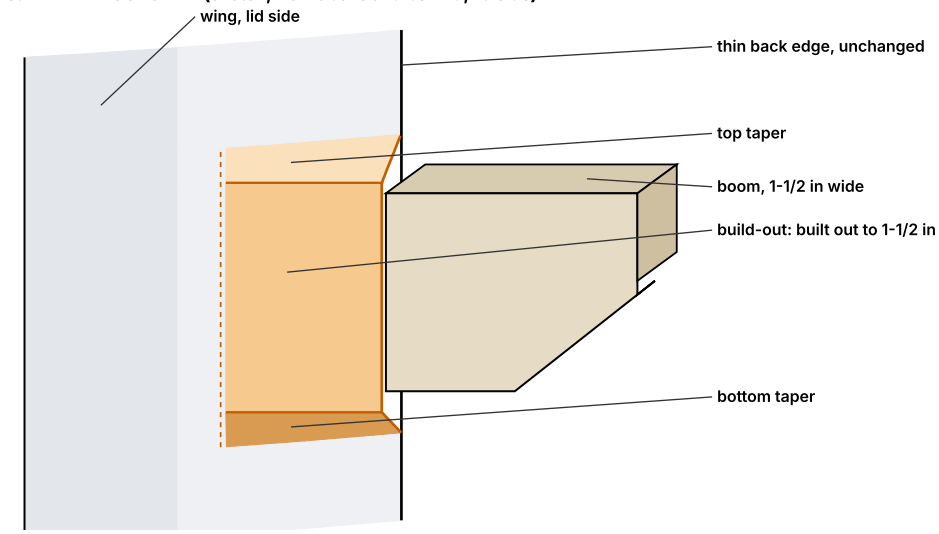
part of the boom-root pocket idea · inches

Oct 28, 2026 · idea, not decided

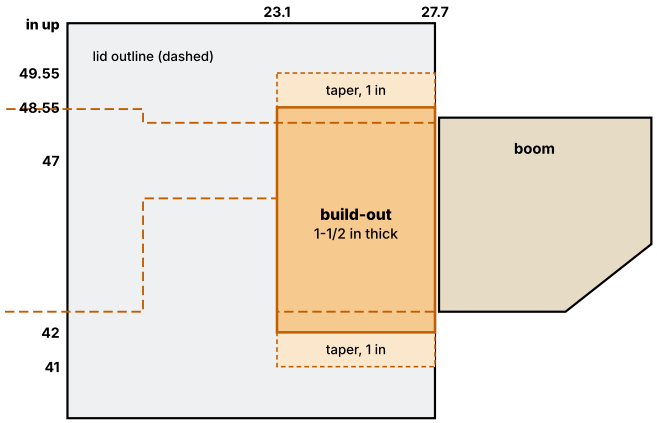
A. FROM ABOVE, AT 47 IN UP, TRUE SCALE (looking down toward the root)



C. WHAT IT LOOKS LIKE (sketch, from above and behind, lid side)



B. LOOKING AT THE BOOM FACE



BACK OF THE NOSE	PLAIN WING, OUTSIDE	WITH THE BUILD-OUT
23.1 in	1.50 in	1.50 in
24 in	1.23 in	1.50 in
25 in	0.92 in	1.50 in
26 in	0.59 in	1.50 in
27 in	0.25 in	1.50 in
27.7 in	0.00 in	1.50 in

WHAT IT IS

Over the wing's last 4.6 in, from 23.1 in back to the back edge, and only from 42 to 48.55 in up, both faces of the wing are built out flat to 1-1/2 in thick, the boom's own width. Above and below, the build-out tapers back to the plain wing over 1 in. Everywhere else the wing keeps its shape. From outside it looks as if the boom starts 4.6 in inside the wing, like the smooth joint where an airplane's tail meets its body.

WHY IT IS NEEDED

The spring link's end caps are 5/8-18 coupling nuts (Trim Actuator Guide sec 6), 1.08 in across their corners. With the actuator fully out, the back cap runs from about 25 to 27 in back. There the plain wing is only 0.8 to 0.1 in thick inside, so the cap would stick out through both skins (A). With the build-out it has about 0.15 in to spare each side. Worked out from the rib table.

HOW IT IS BUILT

Glue foam blocks to both faces before skinning, sand them flat to 3/4 in each side of the centerline, taper the top and bottom edges, and skin over them with the face. On the lid side the build-out is inside the lid outline, so it comes off with the lid; on the far side it stays.

PROS AND CONS

- **For:** the link fits at full stroke; the boom's blunt front face is hidden, the wing flows straight into the boom; both faces match, so it does not push the wing to one side.
- **Against:** about 0.1 to 0.2 lb (guess); a little more drag than a thin edge over about 7-1/2 in of the 78 in span, in the boom's own band, where the boom already sits (inferred).
- **Other ways, and why not:** slimmer round caps (7/8 in) still poke through aft of about 24-1/2 in; using less stroke depends on the horn arm, not settled yet; the link inside the boom needs a 1 in hole in a 1-1/2 in boom and puts the link out of reach under the lid.