NOTE: For proper alignment of the cowls, the engine should be temporarily mounted on the fuselage. It is important to do as much aligning of the cowling parts as possible before much trimming is done. The existing scribe lines are approximate guide lines, but may not be exact for your installation.

STEP (1): Trim the Camlock flange of the #44010 Aft Bottom Cowling to 3/4" above the joggled edge, straight and flat.

STEP (2): File and sand the horizontal split-line edge on the #44009 Aft Top Cowling, to a straight line that will mate up properly with the joggled edge of the lower cowling.

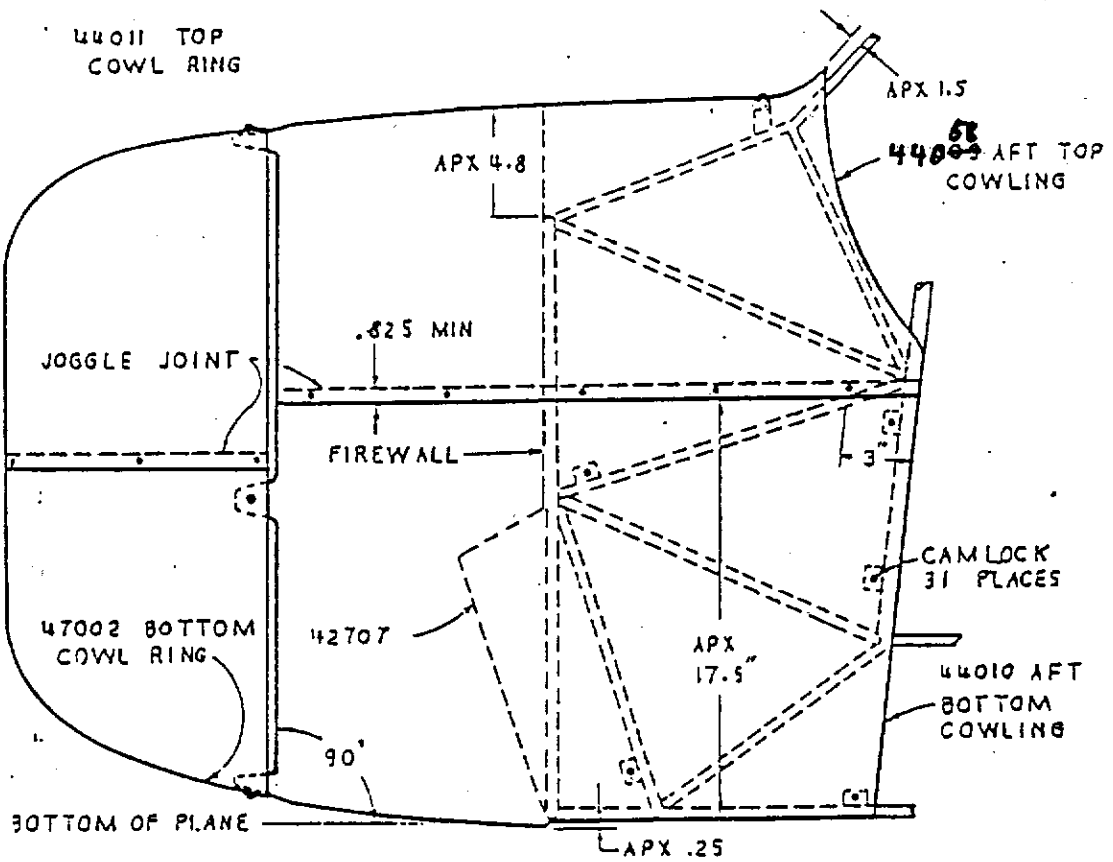
STEP (3): Remove the muffler for now, and use plastic or rubber-tipped spring clamps to temporarily clamp the #44010 Bottom Cowling to the fuselage. The split line should be approximately 17 1/2" up from the very bottom of the longerons (See Fig. E-C-1). There are five dimples molded into each side of the cowling which should line up with the holes in the Camlock tabs on the fuselage. Due to varying amounts of shrinkage in the welding process and curing of the fiberglass parts, they may not exactly match. Don't drill these Camlock holes yet.

STEP (4): Tape the #44009 or #44055 Aft Top Cowling to the #44010 Bottom Cowling. Make sure you have the front face edges flush with each other. You could clamp some strips of 1/4" thick wood or other material to both sides at the front to ensure this.

STEP (5): Trim and sand the Camlock flange of the ~~#44011~~ 42009 Bottom Cowl Ring to 3/4" above the joggled edge. Do not trim to the aft scribe line yet. Fig. E-C-1.

STEP (6): File and sand the horizontal split-line of the top cowl ring to mate with the joggled edge of the bottom cowl ring. Tape the top cowl ring in place on the bottom cowl ring be sure you have the front edges pushed in tight and flush on both parts. Locate and drill 3 (#30) holes on each side of the cowl rings for Camlocks, clecoing as you go. The front (#30) holes should be 2 3/4" back from the edge of the circular opening and the aft holes 3/4" forward of the scribe lire. Center the middle holes. All six holes should be 5/16" up from the horizontal mating edge.

NOTE: Model III Kitfoxes after serial #968 use the top cowl part number 44009. Model IV Kitfoxes use top cowl part number 44055. The standard fuel tank filler neck for the Model III and earlier Kitfoxes is P.N. E-21, the Model IV filler neck is #44056.



COWLING DETAILS
Fig. E-C-1

STEP (7): Fit the cowl ring assembly to the front of the main cowl. The top of the cowl ring and the top of the aft top cowling should form a smooth line when viewed from the side. If it doesn't, loosen the spring clamps on the aft bottom cowling and reposition the parts until you get the desired contour at the top. When you are satisfied with their location, back-drill the cowlings through the Camlock tabs.

NOTE: The prop hub normally will be slightly high in the cowl ring opening, 1" to 1 1/2" above the lateral centerline.

STEP (8): Trim the aft edges of the main cowls even with the back of the doorposts. Trim the aft edges of the #47002 and #44011 Top and Bottom Cowl Rings to or near the scribe lines, depending on alignment. When matched up with the aft cowling, they should appear flush with the front edge of the main cowl or it may look better to you with up to 1/2 inch of daylight between the main and ring cowls when viewed from the side.

STEP (9): Drill 5 Camlock holes along each side of the main cowl horizontal mating line. The aft holes should be 3" forward of the door-post scribed edge. The rest of the Camlocks will be spaced forward at approximately 5 1/2" intervals, leaving the forward holes approximately 2" aft of the front edge.

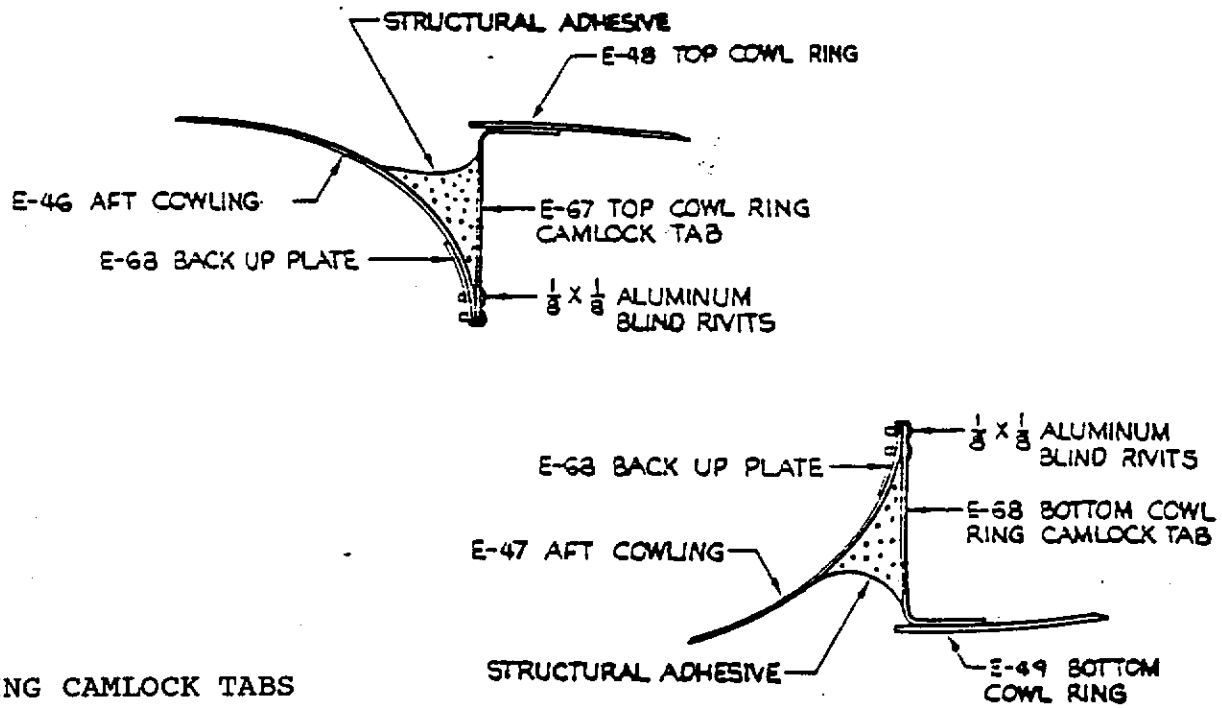
NOTE: Builders of earlier Model III kits will fasten the ring cowls to Camlock tabs on side rails that are a part of the engine mount. If you have these older style cowls you need to add two additional Camlock tabs to help support the upper and lower ring cowls. Add one to the top of the main cowl and one to the bottom as shown in Fig. E-C-2. If you have the newer style cowls just use one Camlock on each of the "bumps" on the main cowls to support the ring cowl.

NOTE: Step 10 can be completed after temporary installation of the E-26 Fuel Tank and E-21 or #44056 Filler Neck. See Fuel Tank Installation, page E-I-1.

STEP (10): After locating proper placement of the "cut out hole" for the E-21 or #44056 Filler Neck, cut a hole in the #44009 or #44055 Top Cowling using a 2" hole saw and a coarse half round file (or a 2.5" hole saw). Allow clearance for the E-20 Fuel Filler Cap.

NOTE: When aligning Camlock receptacles or using a Camlock drill guide, note that the "wing" of each winged Camlock stud falls in a direct line with the receptacle rivet holes. For Camlock installation refer to The Cover and Finish Section.

STEP (11): Cut a small notch in the rear edge of the top cowling, at the door post on each side, to allow the door latch pin to strike the door post without hitting and cracking the cowl.



COWL RING CAMLOCK TABS
Fig. E-C-2

FIREWALL

STEP (1): Build the lower section of the firewall. This section contains 42707, 42708, 42709, 42710, 42711 and 42712 parts. Drill and cleco together as shown in Fig. E-D-1. Rivet spacing should be approximately 2". Rivet the parts together using the 1/8" X 1/8" rivets. The 42712 Firewall Edge Stiffener angles should be placed directly in front of the rudder pedal return springs. Install the rivet heads on the cabin side of the firewall.

STEP (2): Remove the cowling. It's necessary to make a cutout in the firewall for the starter motor. Measure from the underside of the fuselage up to the starter motor. Add 1/2" its diameter. Measure from each side at an appropriate point. Log your measurements for the starter cutout. Remove the complete engine mount with engine attached.

STEP (3): Position the bottom flange of the firewall lower half underneath the floorboards but above the floorboard mounting angles. Slide it sideways to center it with the center of the starter motor and of the fuselage. Trim the flange to clear the fuselage tubing at the center. The top edge of the lower half of the firewall should cover the horizontal tube that runs between the outermost engine mount bushings. Clamp it in position at the top and the bottom. Be sure the top corners of the rudder pedal recesses run across the fuselage in a straight line parallel to the floor.

NOTE: The #42705 section of the firewall will be added later and should fit on the outside of the fuselage tubing beneath the floor.

STEP (4): Position the top half of the firewall with its bottom edge on the engine side and overlapping the vertical flange of the lower firewall section. Clamp in place. Lay out the rivet spacing on the lower edge of the top half with approximately 2" -2 1/2" spacing. Drill #40 holes through the two sections of firewall and into the EXACT CENTER of the horizontal tube behind it. Cleco.