



# THE STYRENE SHEET TWO

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*Once Unfulfilled Desire For Model British Royal Bow Is Resolved  
First By Two Americans Know How and Then Later, By Their Show How.  
Herewith Her Tale As We Recount and Join In Asking Where Is She Now?*

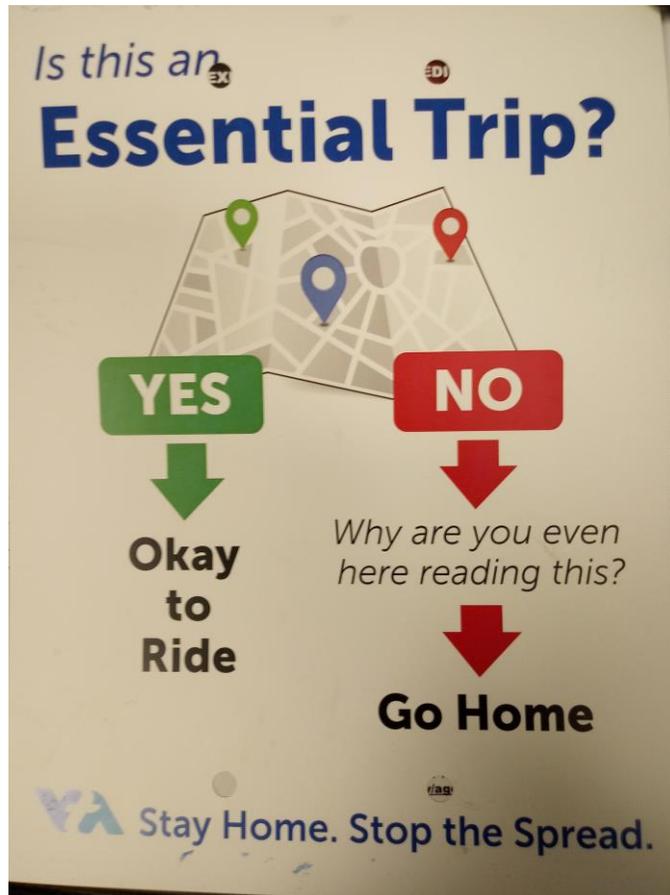


**Welcome . IN THIS ISSUE – *Modeler & Historian Jim Lund Takes Us On Journey Across Atlantic...***  
( Feature Article Begins on Page 3 )

**“ SEEMS WE ENDED UP BEING THE MARTIANS, AFTER ALL ”**

*Thanks to quite visionary H.G. Wells for his 1898 tour de force novel (it's been in print since that time, continuously) “War Of The Worlds”, concept came to me in trying to express pent up frustration with now several weeks long “shelter in place” layerings due to well known (but not really) international situation.*

*There, “overwhelmingly superior technological force and in facing the cool detached intellect of the Martians ” seemed to leave humans facing annihilation or enslavement , being no way to counter this threat to save humanity. Yet in end the smallest of terrestrial creatures stop dead these would be conquerors. Ya.*



*I grew up here in this town during the Cold War. Well recall the duck and cover drills, the air raid sirens, the Civil Defence call up when the Cuban Missile Crisis came about (my mother being one of CD volunteers for our neighborhood made me audience for “survival in case of Atomic Attack” lectures...) Whilst my dad worked on “satellite projects he could not talk at home to us about ” and other neighbor kids dads worked on missiles that would fly out of subs in that event, at same mysterious huge complex by the “ Big Hangar ”*

*We all recall the moments where someone was so sure “President X” or “Premier Y” or “Chairman Z” was just going to launch on warning thus get us all turned into so much nuclear winter snow fall or sheets of green glass. After that madness, we took a turn at being held hostage in fears of small cells of obsessed terrorists launching attacks to undermine our economies and our faith in our communities.*

*Still, we all managed for the most part to carry on. To today...*

*Now working 14 plus years in what is now deemed an “essential business” I am able such as possible, travel to work. Yet if I use the public transit, sign you read on the left snarkily tells me I better be having a good reason for doing so. If I call to get an idea where my bus or light rail is to do this, I get no answers. Go online, same result. I spend my days trying to calm my residents “a vulnerable population at high risk who put me*



*at the same”. Go to a model meeting to relax? I can no longer nor can I get any answer when this will be alleviated. I read how in Germany they have already worked out ways to begin allowing “resumption of normal activities”. Yet here, I have to carry papers showing I am part of an essential business thus have my rights to be out. All due to a bug less likely to get me than the TB or Flu risk I ran, taking that same transit. Did we destroy a village to save it? Well , Mayor?*

TABLE OF CONTENTS APRIL 2020 SST (Styrene Sheet Two)

- 1) GREAT AMERICANS REPRODUCE GREAT BRITAIN's FINEST HOUR IN SEAPLANES in form of 1/72<sup>nd</sup> SARO by W J Lund
- 3) ONE BIG BRITISH GIRL: THE ART & SOUL OF SCRATCHBUILDING A Saunders Roe Princess in decent display scale (runs to 45)

# Chapter 4: Scratch Building Big, The SARO Princess

Text & Photos: W.J. Lund

## INTRODUCTION – PROLOGUE from Editor

*A bit of prehistory* – If you go to my Editor’s Archive at [mickbmodeler.com](http://mickbmodeler.com), find 2014 February Original Styrene Sheet. There is my first encounter with this model of Jim’s, my meeting shots where this issue cover picture came from. Later on, in 2017 Jim offered me an article base that gave back story to this big bird, then he felt perhaps it would be “rehashing”. While I understood his reasoning why, I so gladly took on the material.

Yet, only now getting this interesting story out, several years after this magnificent effort saw first light of day ! Also now have answer to her berth.

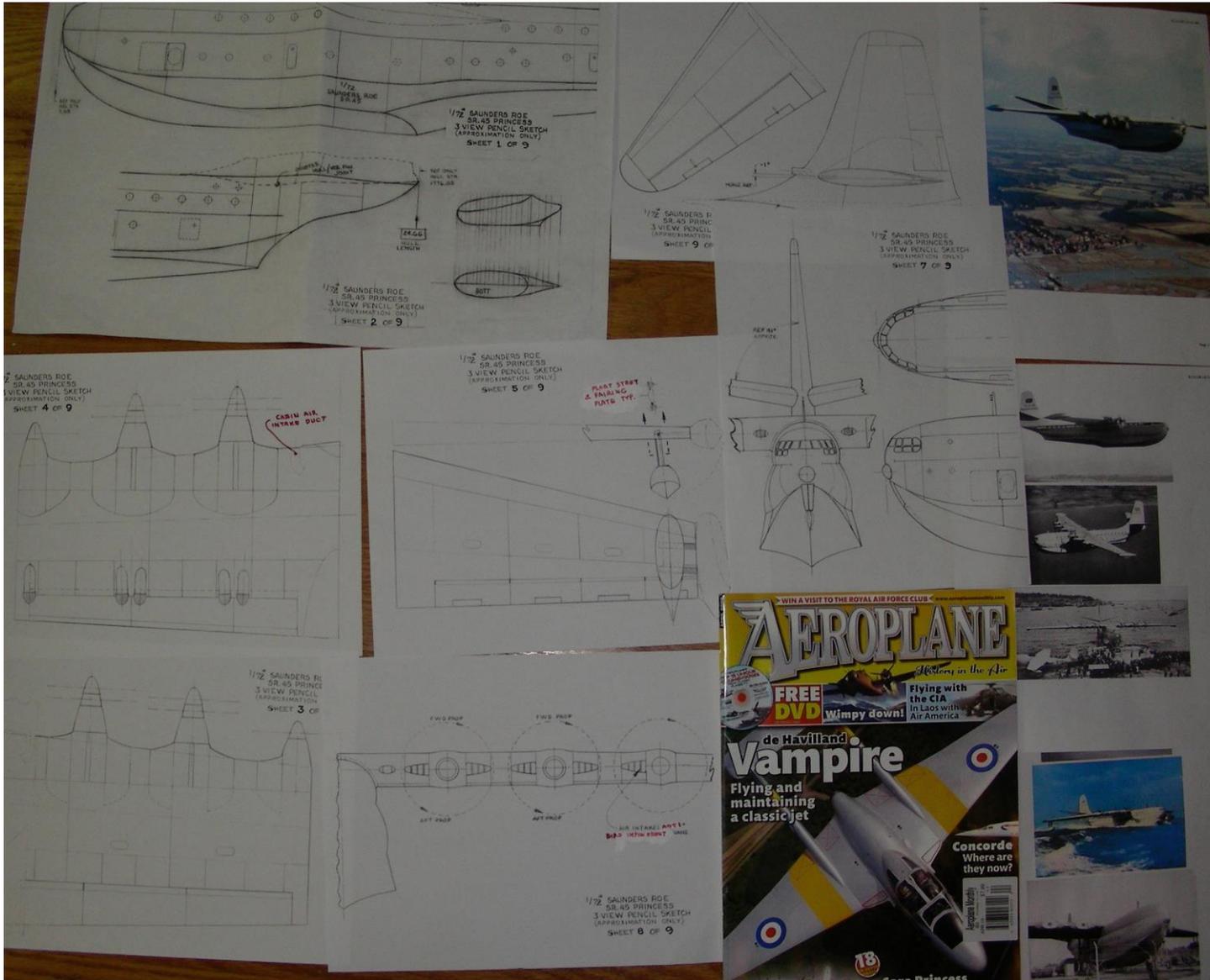


1/72 scale SARO Princess, carved out of basswood and vacuum formed by Mike Herrill, then built and photographed by Jim Lund.  
A tough job, but somebody had to do it.

**BUILDING BIG -THE SAUNDERS ROE SR-45 PRINCESS** — A 1/72 scale model of this aircraft was coveted by British flying boat enthusiasts. No kit maker anywhere in the world would touch it. Two Americans, Mike Herrill and Jim Lund, said: No problem.

Jim financed the material and Mike drew the plans, carved the masters out of basswood and vacformed .060 styrene for the kit.

Jim put it together and now we have a 1/72 Princess model.



Mike's 1/72 drawings and the cover of AEROPLANE -History of the Air- April, 2009.

This excellent English magazine had an 18 page, in detail article on the Princess.

The British website "SEAWINGS" advertised the Execuform kit of the SARO Princess in 1/72 scale, and the orders began coming in.

SEAWINGS praised the kit and recommended that it was a very doable thing, and the builder would be proud of the model. However, it appears these guys had never scratch built a model airplane. Complaints were made. I had SEAWINGS post slideshow showing how to do it.



The complaints ended, and so did the sales. Mike tells me that he sold 20 or 30 kits and never saw a photo of a completed one, other than mine.

The vacformed parts trimmed off the rectangular .060 styrene sheets.

The untrimmed items on the left are interior ducting for engine cooling.

The hull is 24.66 inches long.

Each wing half is over 18 inches long.

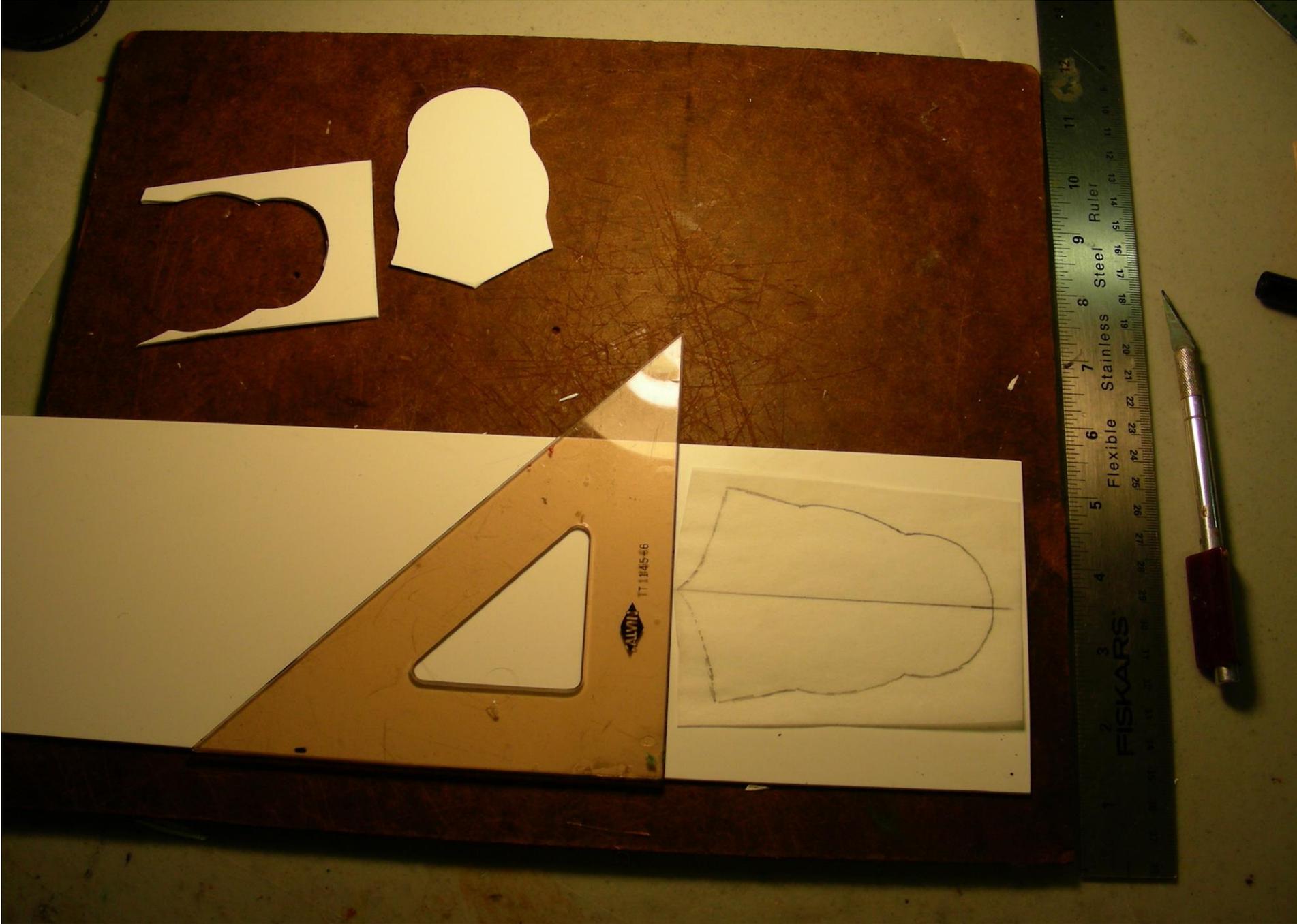
Mike said that he had not heard from SEAWINGS in 7 years.

I GOOGLED up; SARO Princess model. Just about every of my build photos came up. I clicked on the first one, SEAWINGS came up. I clicked on the buy icon, and received all the instructions on how to buy the kit. Now Mike told me that he would receive orders from Englishmen visiting friends and relatives in the States. Mail the kit to their address. That amounted to the 20 or 30 kits he sold. *Now, on to the first build of mine...*

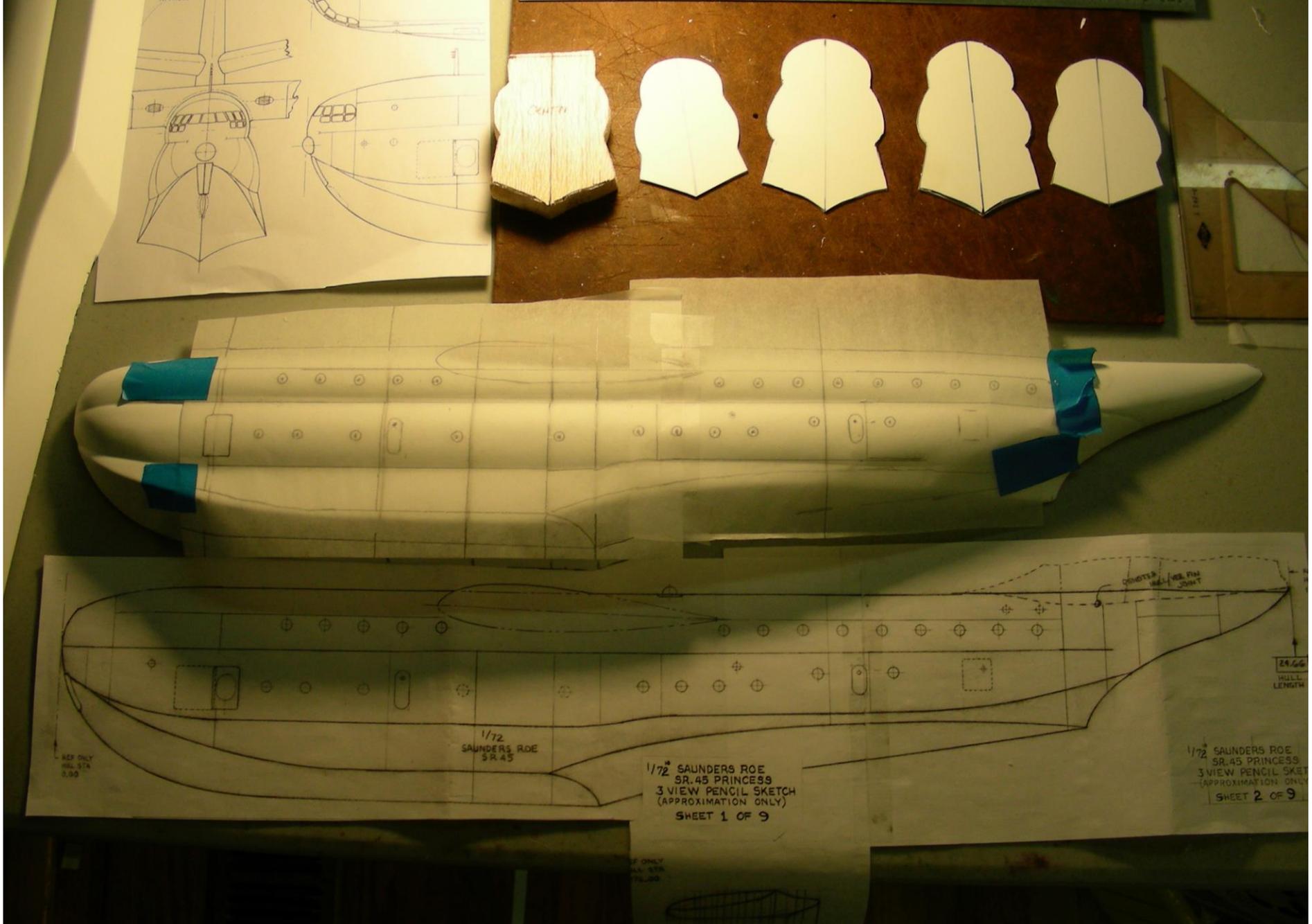
OK. The rub down process. The most tedious work. It must be done on each and every part. Anyone who has seen the movie ""The Karate Kid"" remembers the wax on and wax off scene. Rub 25 times clockwise then 25 counter clockwise. Check out the progress and continue until it's just right. A project the size of this will enhance your six-pack abs.



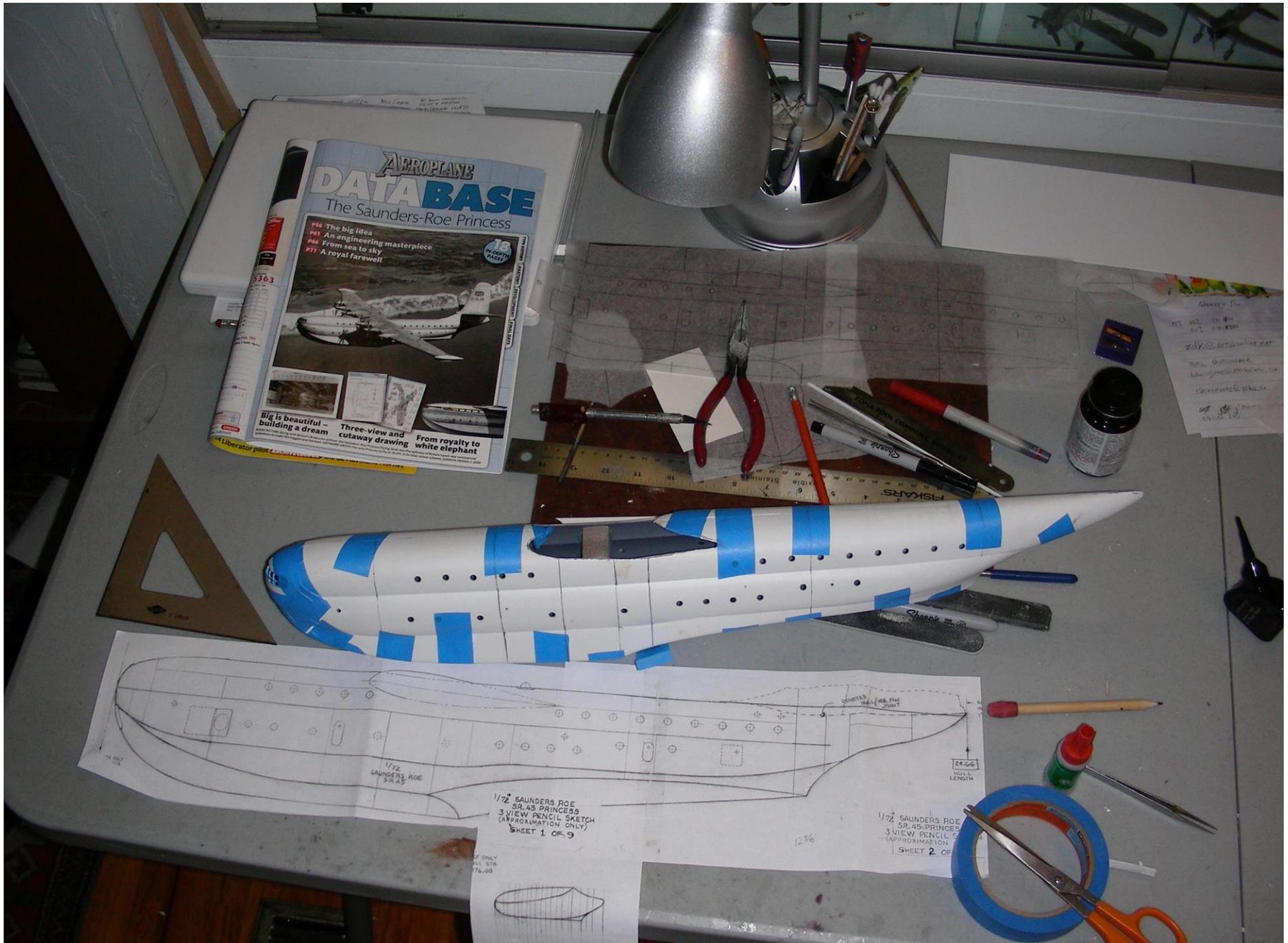
Tracing the templates onto .060 styrene sheet.



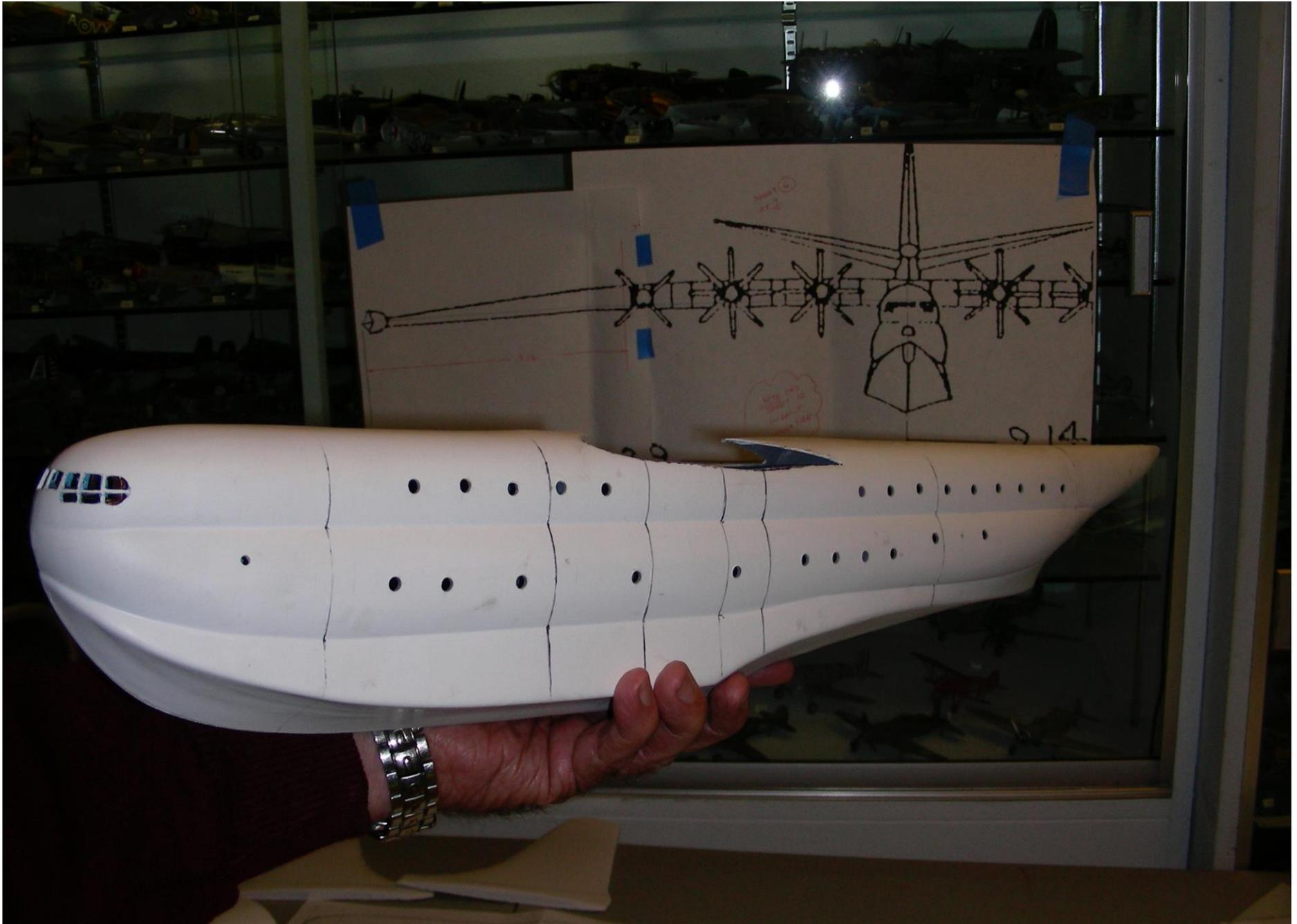
NOTE the 3/4 inch thick central balsa template to support the wing. Windows are marked out in pencil. Lucky for me, they are round. Found the right sized bit, and used my drill press for the window holes. All drawings are traced for scribing details on the vacforms.



The holes drilled and the hull is taped together for fit. The Aeroplane magazine is opened to the "DATABASE" page. An example of the hull tracing lies among the tools of the trade.

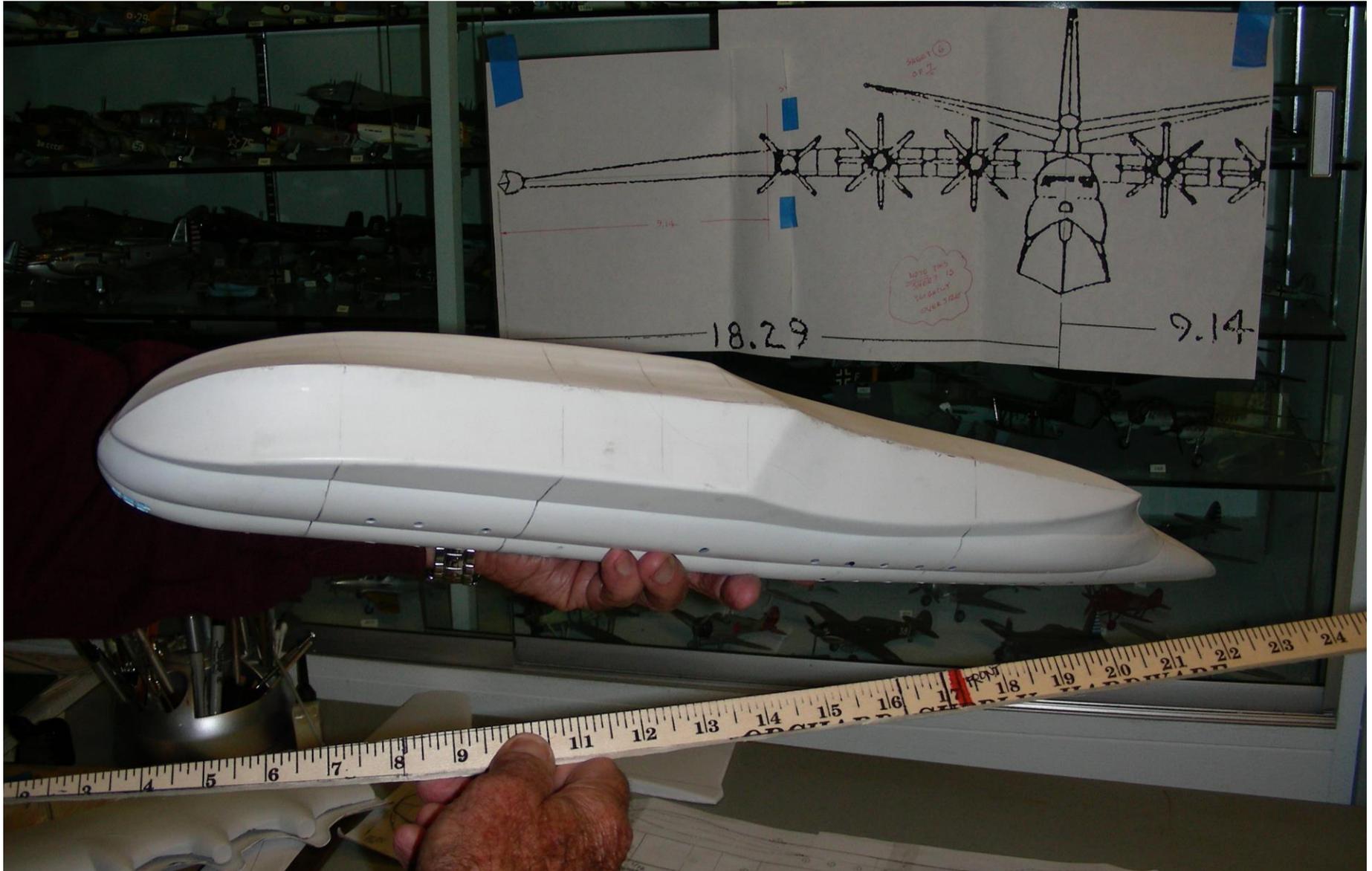


Two feet of hull complete. Cockpit windows cut out - Front office details installed and painted.- all interior bracing in place - no interior details, as the porthole windows will be filled with Kristal Klear that allow only light to be seen.

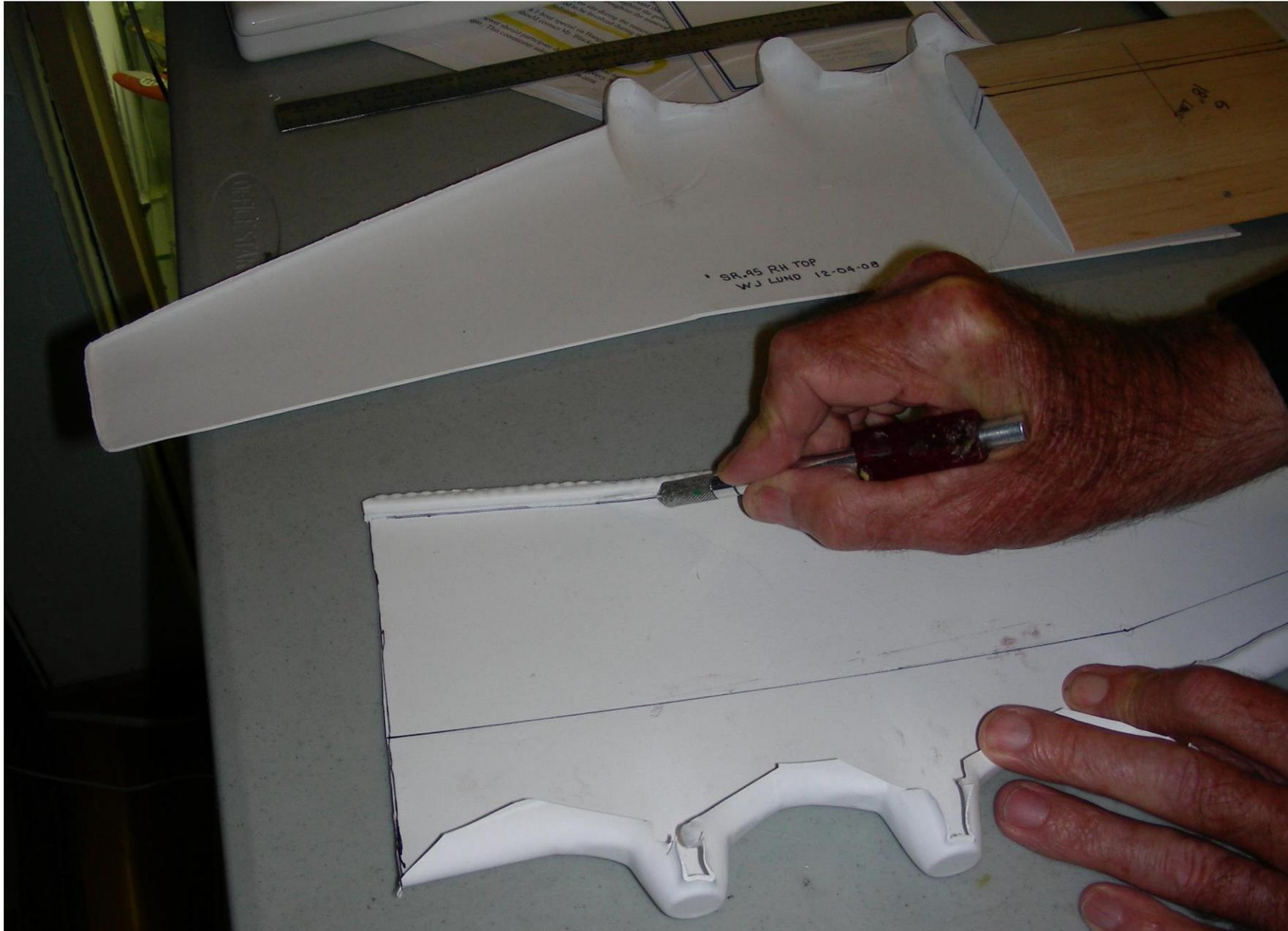


Hull bottom. In real life , this has to be the strongest aluminum configuration physically possible. Imagine hitting seawater at 100 MPH with 30,000 pounds of metal and flesh and shit (fecal matter) like that.

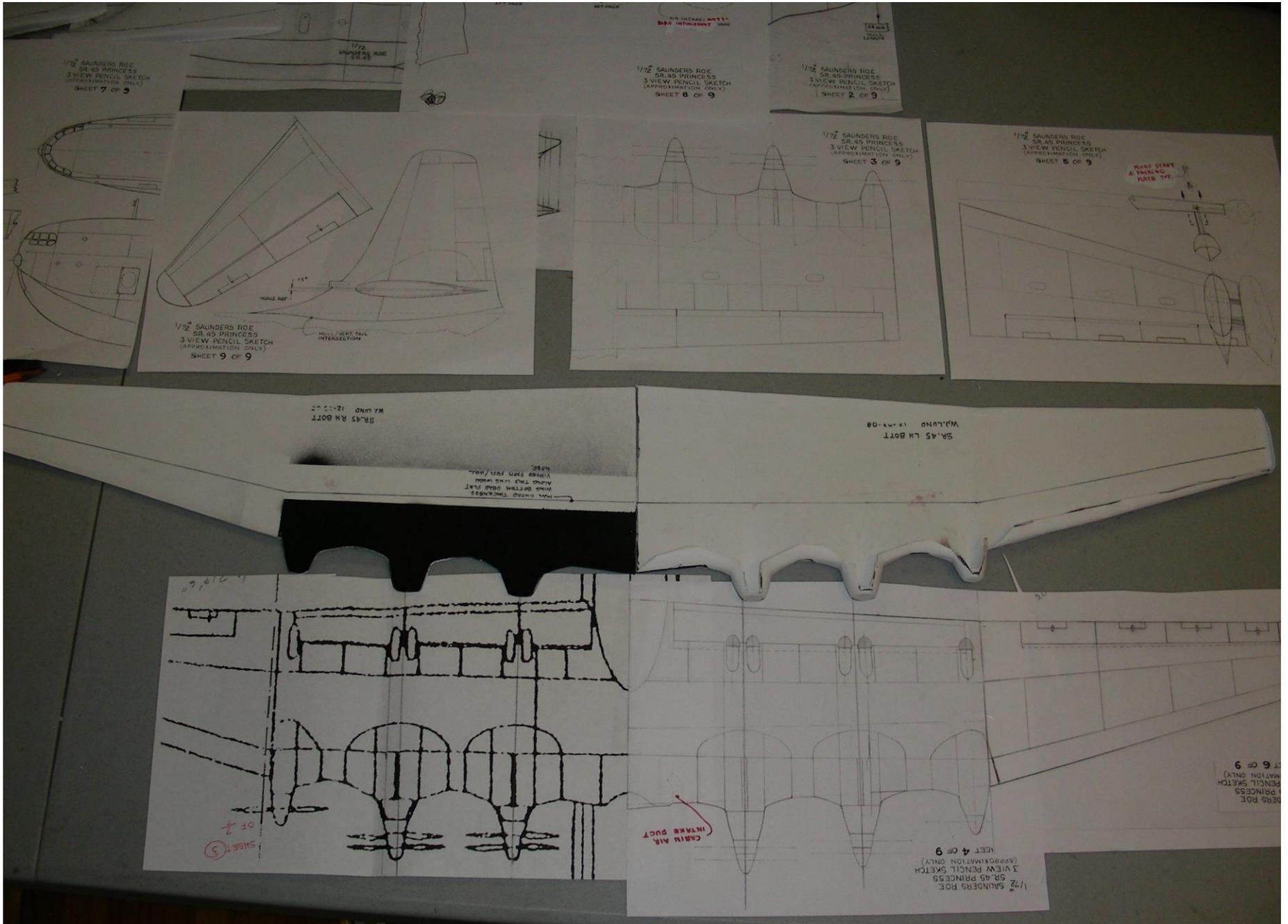
I tested this hull by tossing across the room, bashing it against the wall, and nary a mark was found upon it. It was proven to absorb a mighty impact. Done deal. Below the hull, my right hand holds the main wing spar. Cut from a handy yard stick. Dead center is marked in red at 17 and a quarter inches. The last inch and a half on the left and right wing tips need no spar.



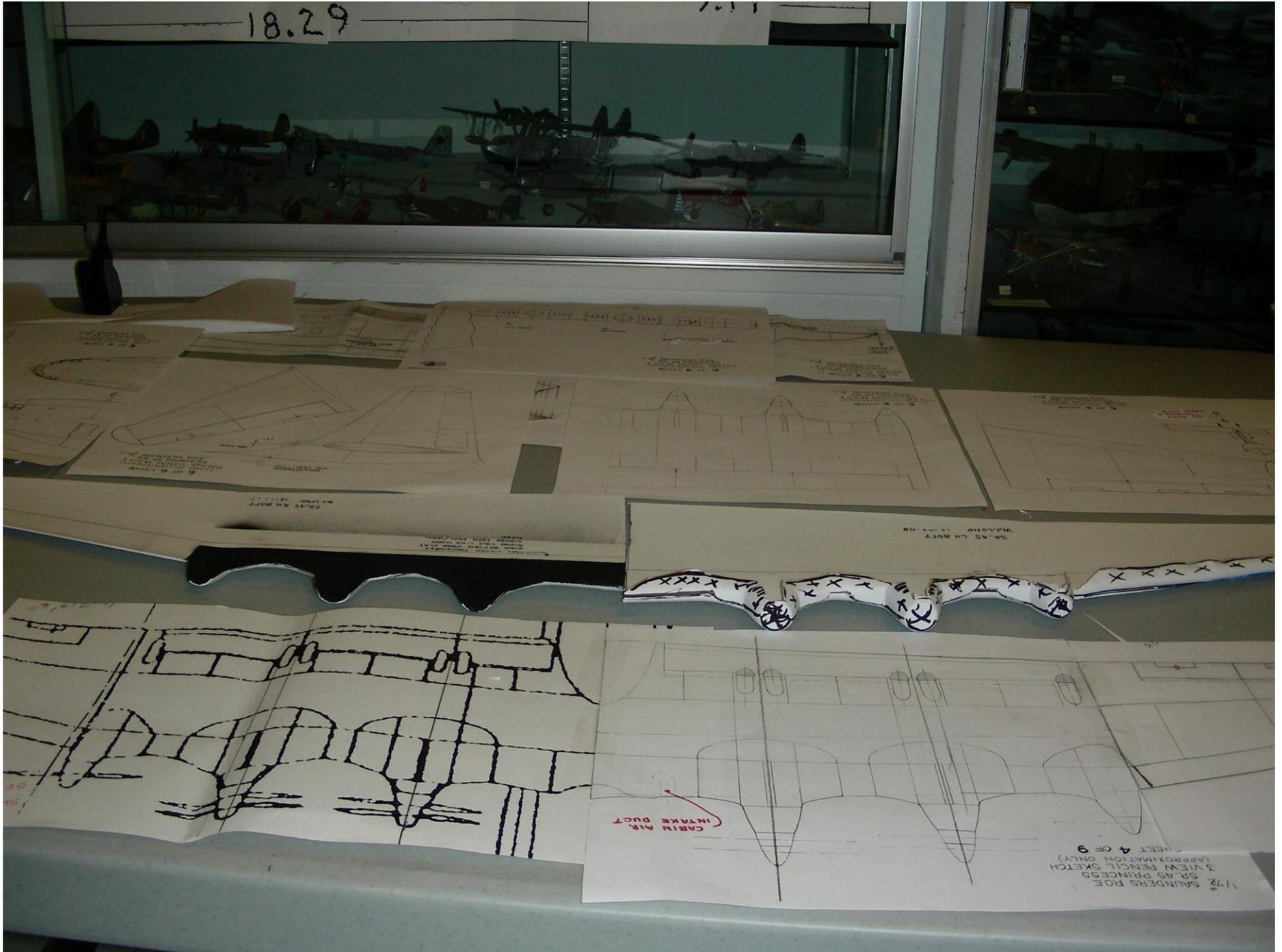
THE TRICKY PART. The engine nacelles and air intakes for the turbines. They are vacformed all the way around - both top and bottom wings. The builder can choose either top or bottom. Personally, I chose trimming the bottom off, as I like to work from the top down. Others may like bottom to top. The choice is yours. This is where the Brits balked. They couldn't figure out which way they liked it. I guess that's why we have not seen a complete build from that side of the Atlantic. NOTE: The center wood core, shaped around the styrene template inserted into RH top wing root.



Setting up the wing interior and exterior. Since I have decided not to detail unseen material, I have blacked out the “ inside the intakes area ”. However, Mike has provided ducting for those who choose to include it. Note: the left hand bottom has not yet been trimmed or painted.



PAY ATTENTION HERE! Here we see the left bottom marked for trimming. All of the "X-ed out" material is to be removed.

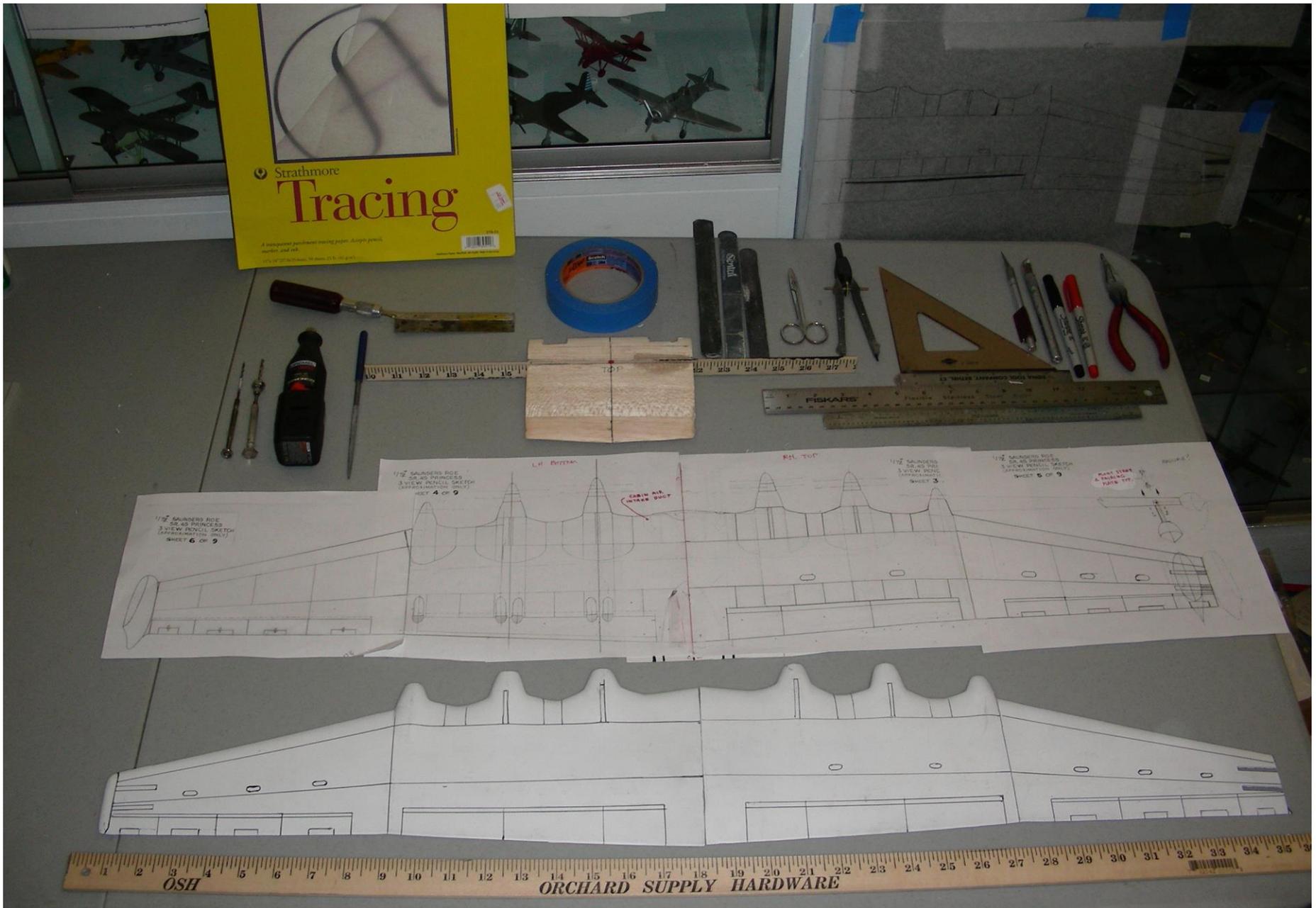


FROM THE TOP LEFT: Tools and material. Tracing paper - wood center wing core with spar inserted. Drills, files, compass, needle nose pliers, steel straight edges etc.

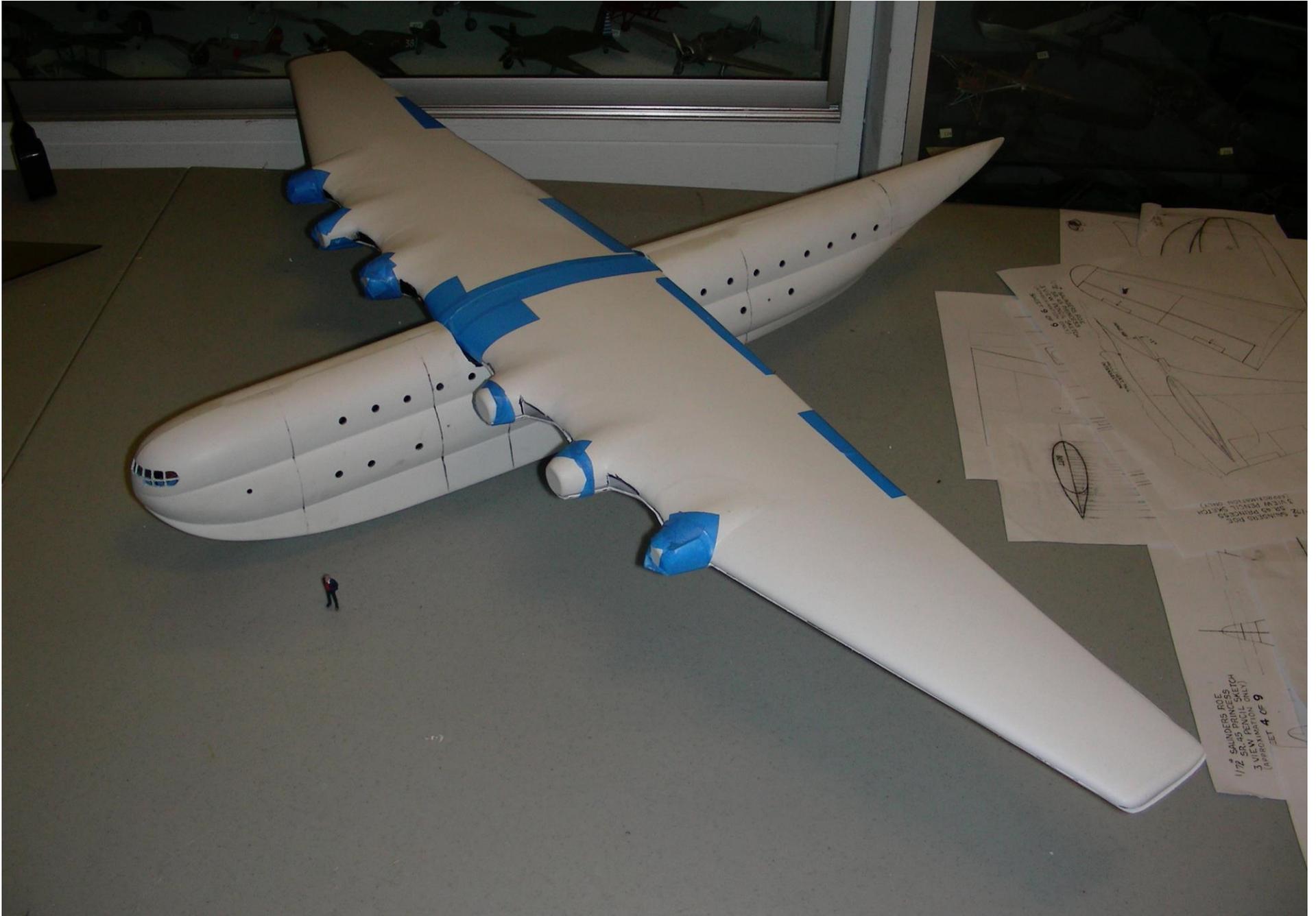
MIDDLE: Mike's 1/72 drawing traced.

LEFT: Left wing top - RIGHT: Left wing bottom.

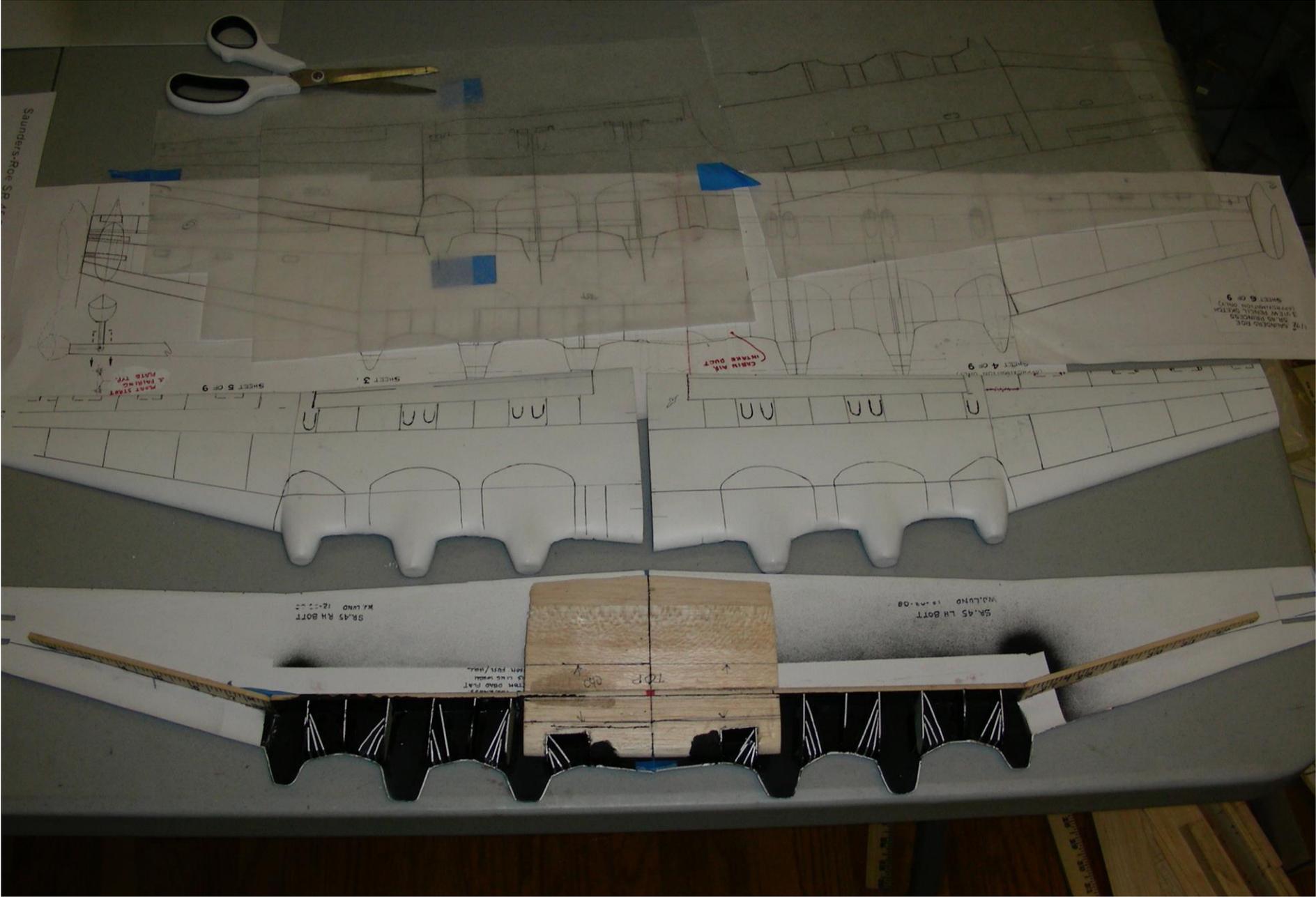
NOTE: SLOTS CUT OUT FOR THE RETRACTABLE FLOATS. Some panel lines penned in.



TOP and BOTTOM WINGS TAPED TOGETHER FOR "FIT" TEST

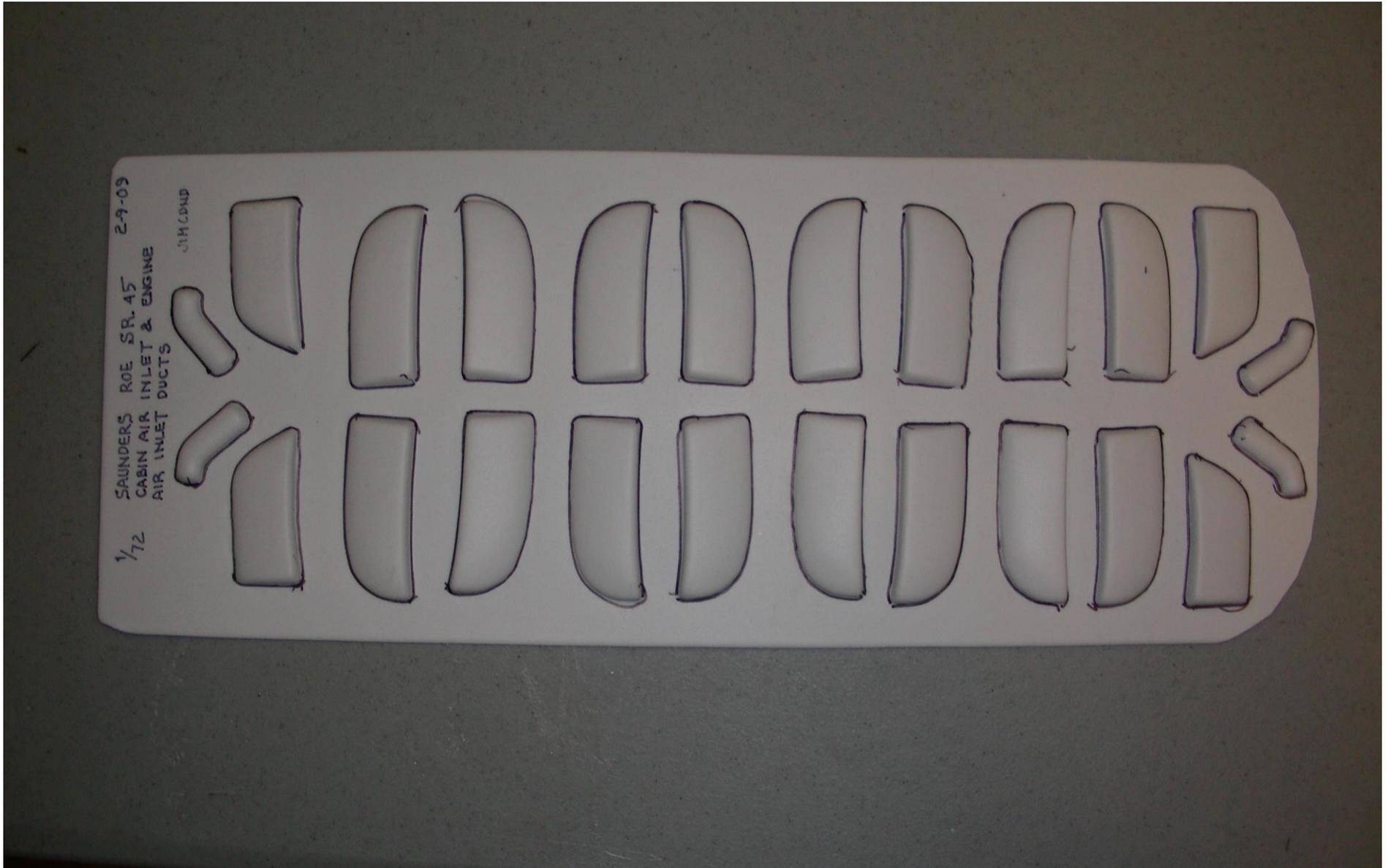


Top wing - left and right with panels marked and scored. Bottom wing with center wood core with full wooden spar (made from yardstick) and kinked in place. At this point you must install ducting if you want it. See next page.



If you are an internist, you must now cut out and fit these vacformed parts, paint and install them. If you want to install the 10 Bristol Proteus Series 600 turboprop engines with gear boxes, you must scratch build them.

The eight inboard engines are paired with counter rotating props and the two outboards are single prop. With all that work, you should provide removable panels on the top wing.



INSTALLATION OF RETRACTABLE FLOATS. A length of styrene tubing cut to match the span of the float support gear is bonded to the bottom wing. A length of styrene clad .040 soft alloy wire bent at 180 degrees is inserted into the tube. Then bend the other end at 180 degrees to form a "U" to be inserted into the float.

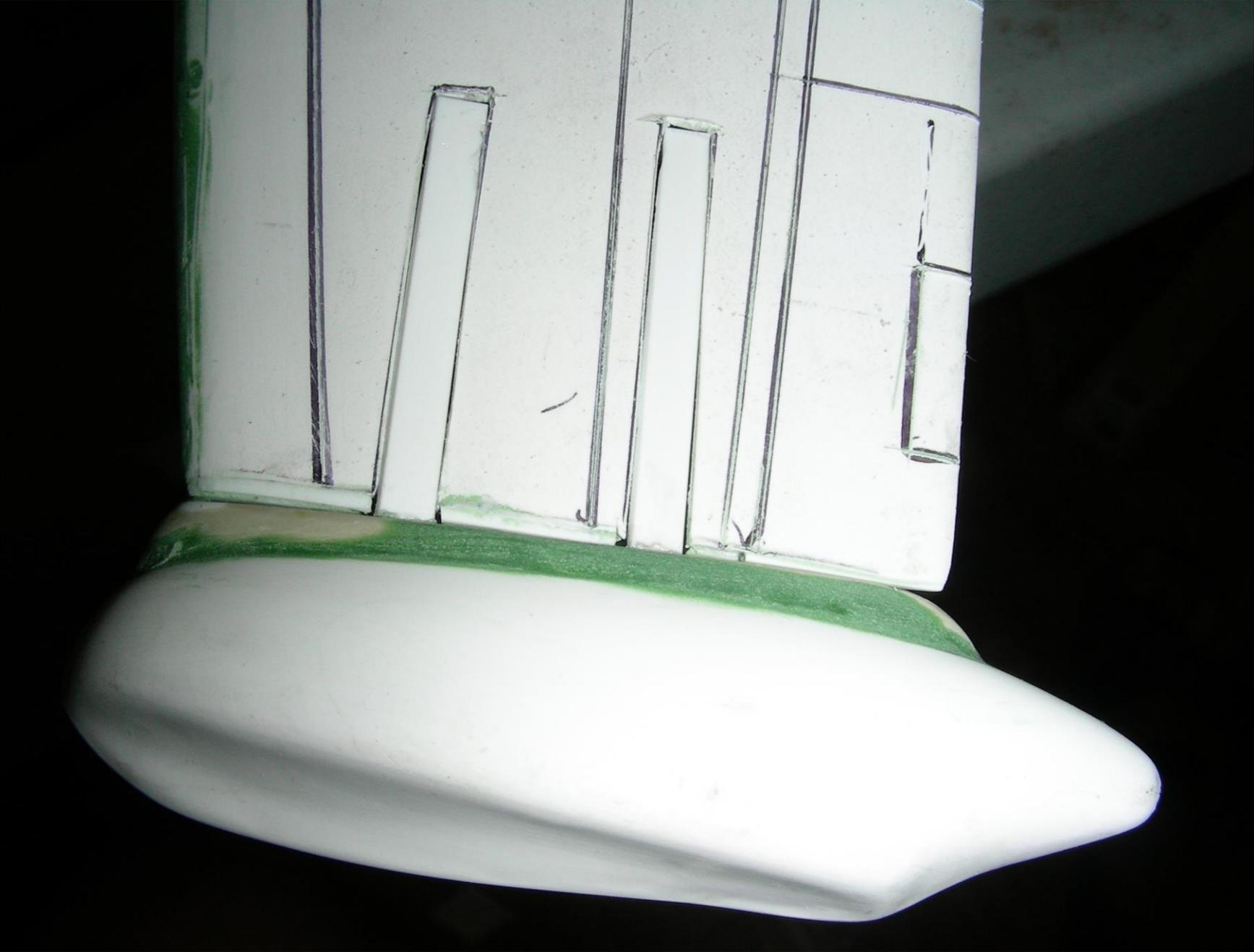


HERE we see the float attached to the wire and adjusted for fit before gluing. (make certain the float operates with precision before gluing the wire to the float). Once deployed the float will be held in place by gravity.

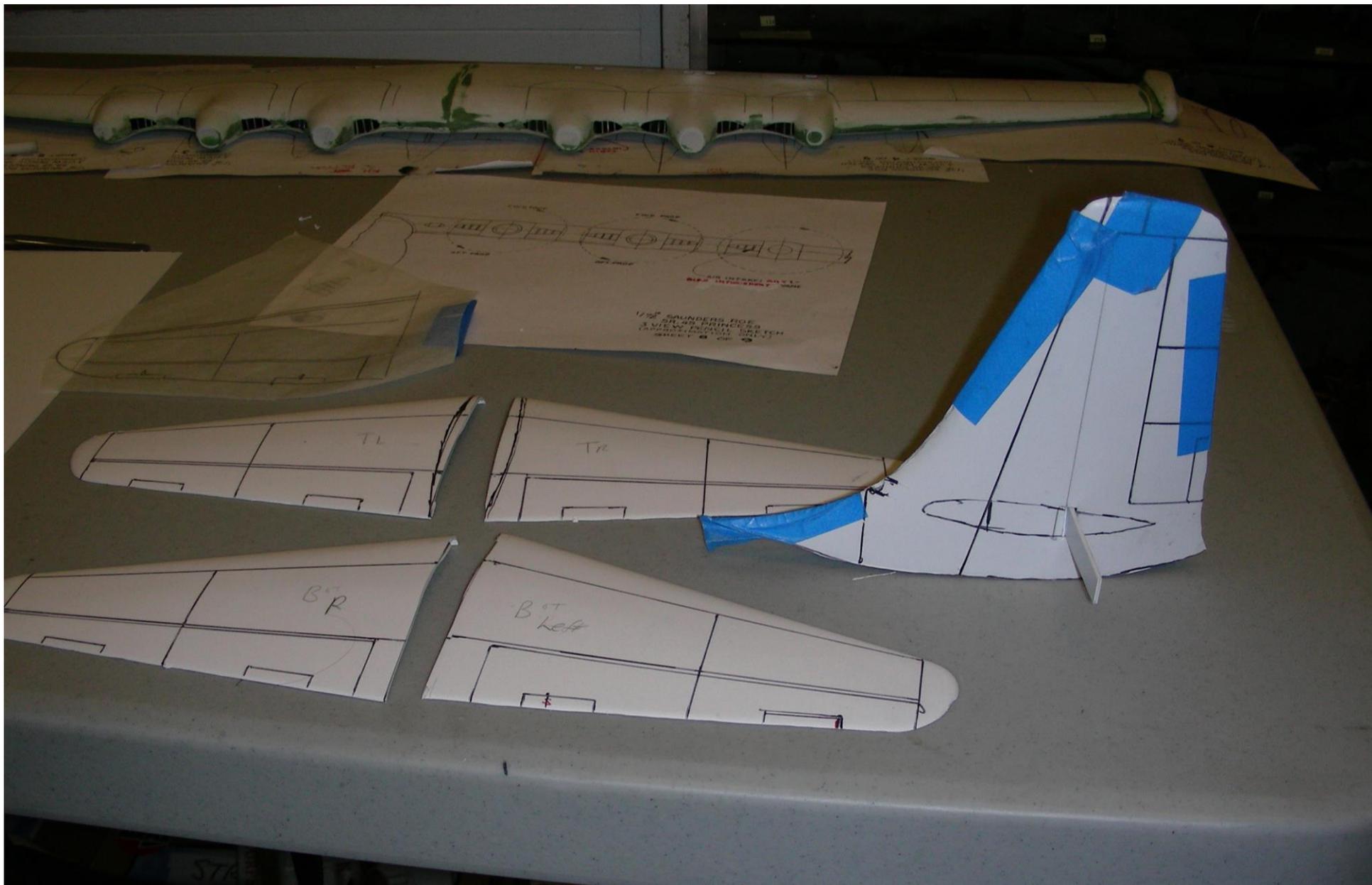
Also take note that the end plates have been installed and turbo exhaust /thrust pipe is being test fitted at this time.



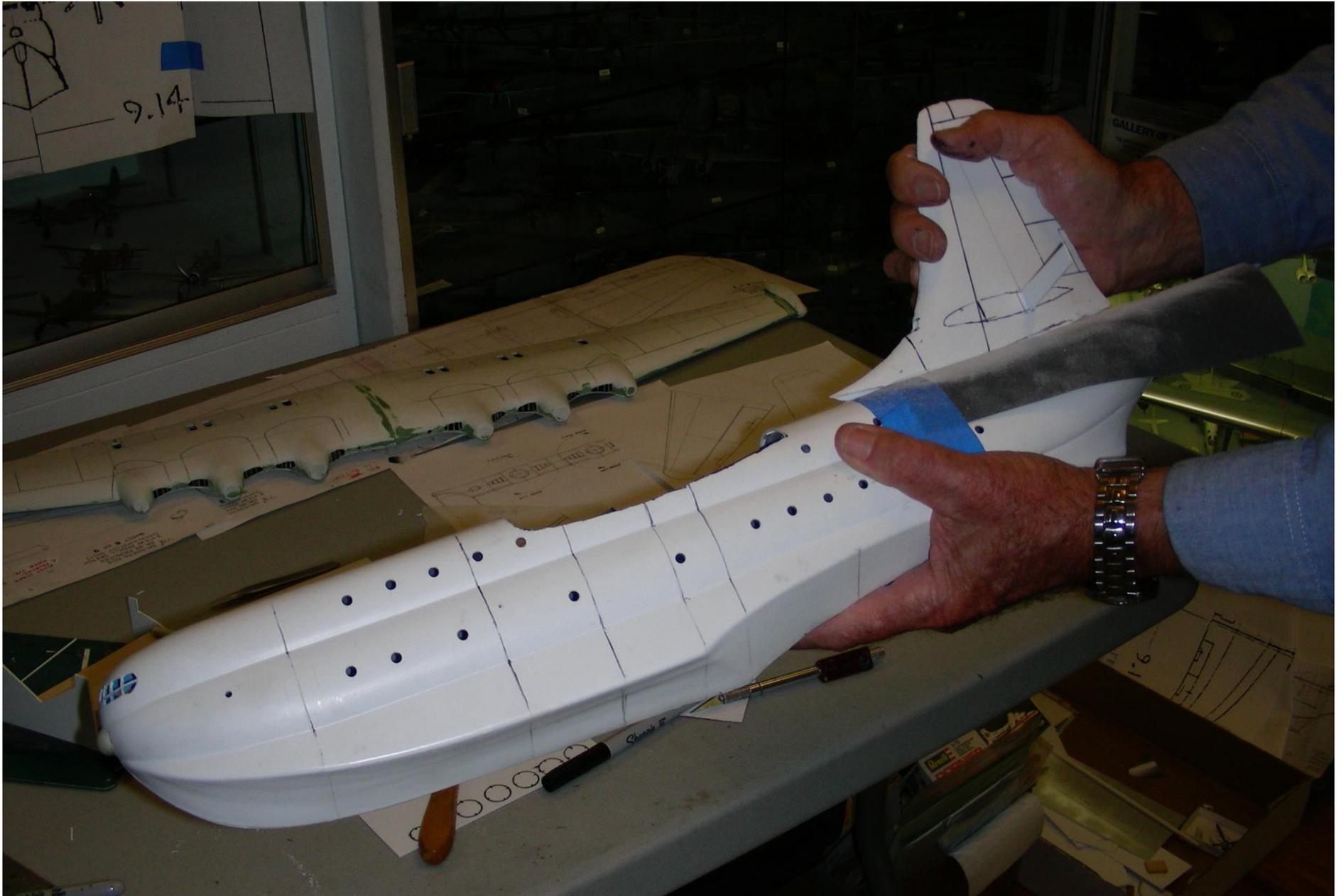
Here seen looking up at the bottom wing with the float in the retracted position. NOTE that the fairings have been bonded to their support wire snugly enough to hold firm in the retracted position and readily disengage when deployed.



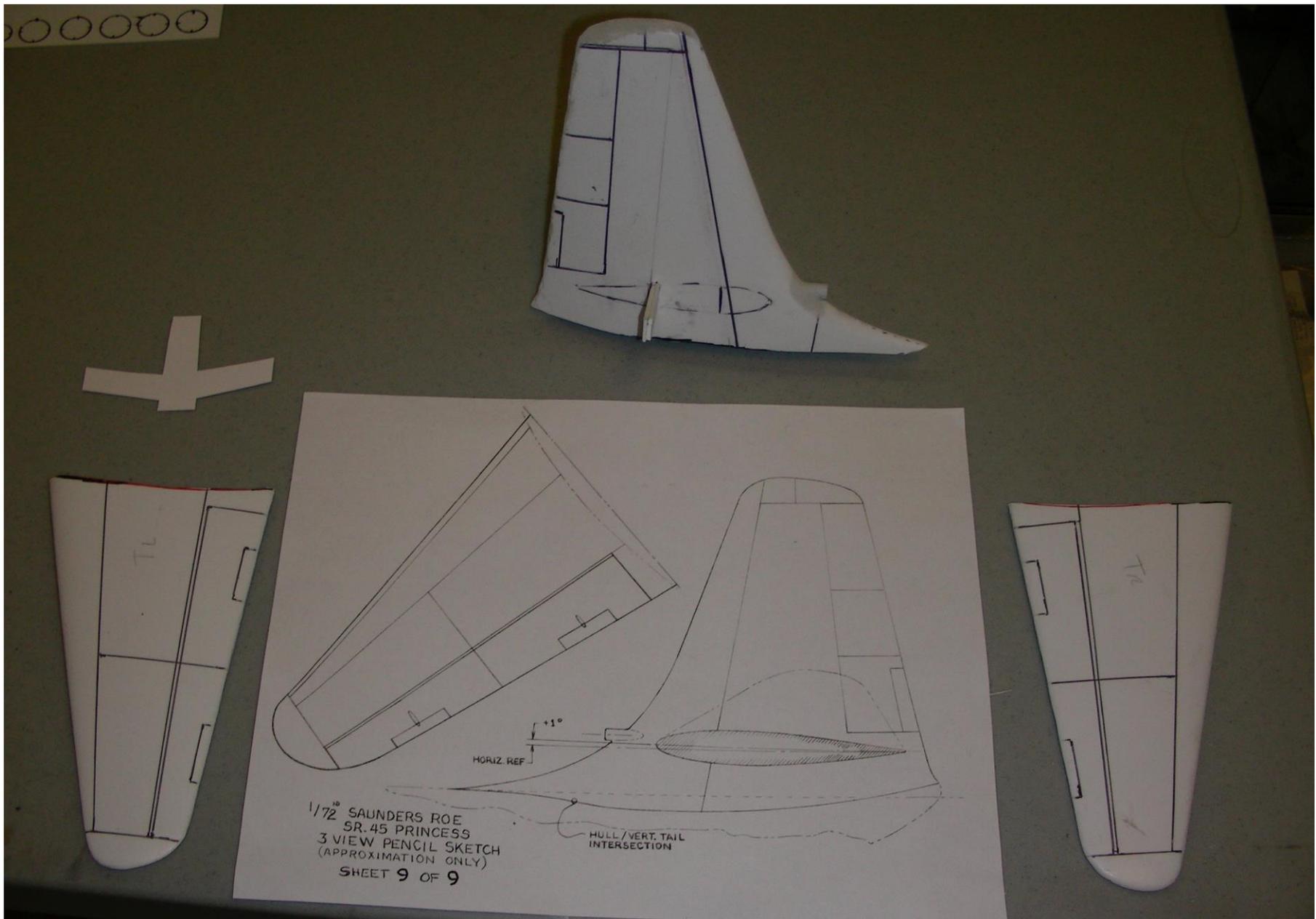
Horizontal stabilizers inked and scored. The vertical fin inked and scored, with the tube intake marked in. This unit is held together with masking tape.



THE VERTICAL FIN BEING TEST FITTED TO THE HULL Coarse sand paper is taped atop the area to be fitted. The unit is then sanded down to fit perfectly. (almost)



MIKES DRAWING IS TRACED , INKED AND SCORED ON THE VACFORMS. THE ALIGNING TEMPLATE SHOWN JUST ABOVE THE LEFT HORIZONTAL STABILIZER. THE .060 COPY SHOWN INSERTED INTO THE VERTICAL FIN WITH THE RUDDER AND STABILIZER MARKED IN INK. NOTE THE 1/8 INCH DIAMETER STYRENE TUBE IS ALREADY IN PLACE (auxiliary power unit intake).



Here the entire empennage is bonded to the hull, filled and sanded as necessary.



ANOTHER VIEW OF TAIL ASSEMBLY FIXED IN PLACE, FILLED AND SANDED AS NEEDED.



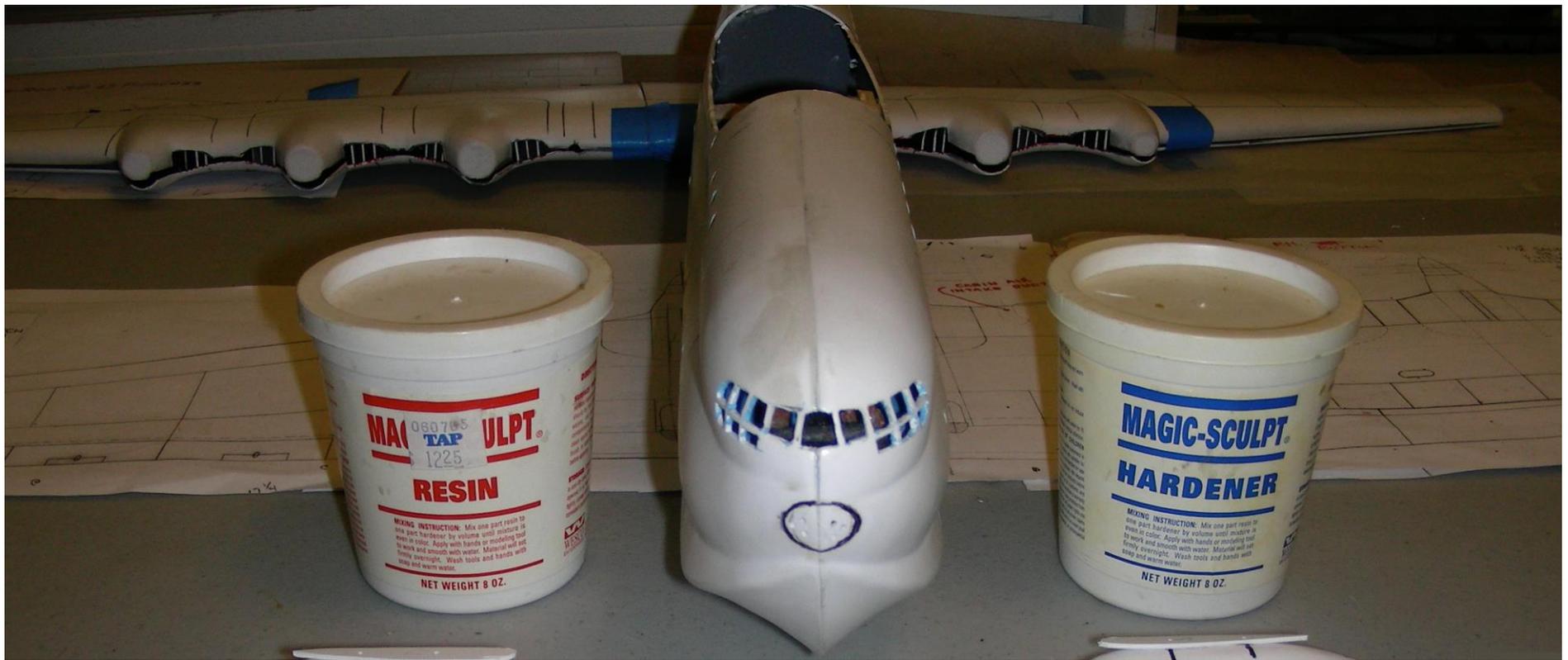
CABLE IN TAKE BRACKET

1/72 SAUNDERS SR.45 PLANE SKETCH  
3 VIEW DRAWING ONLY  
(APPROXIMATE)  
PAGE 9 OF 9

HULL / VERT. TAIL INTERSECTION

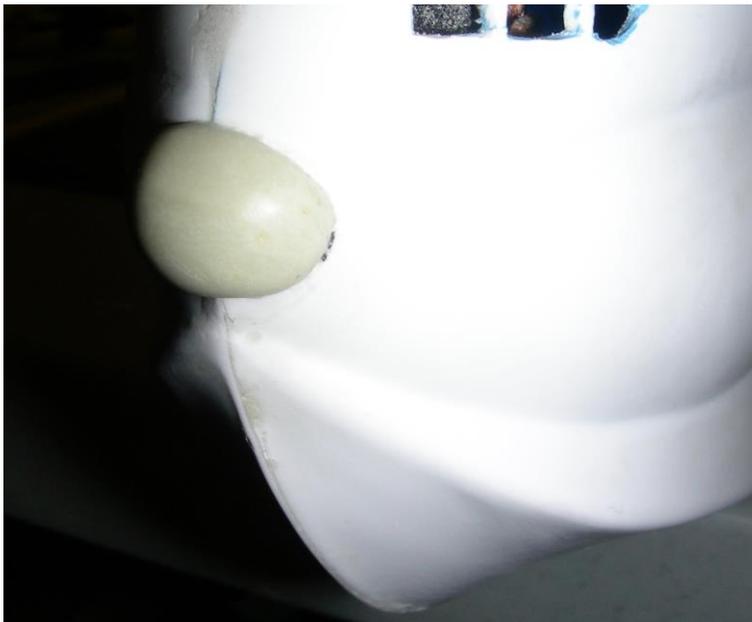
**MASKING AND PAINTING THE HULL :** The top already painted white and masked off while the bottom is painted grey. Note the pliers hold onto the thick wooden template while the demo is photographed. Rattle cans are the way to go with building big. Note the spray booth in background.





FRONT: Hull nose marked for radome. The 2 part resin is going to be used for creating the nose radome and front wing - to - hull fillets.

In the background, we see the wings taped together to check out the fit of the intake duct dividers.

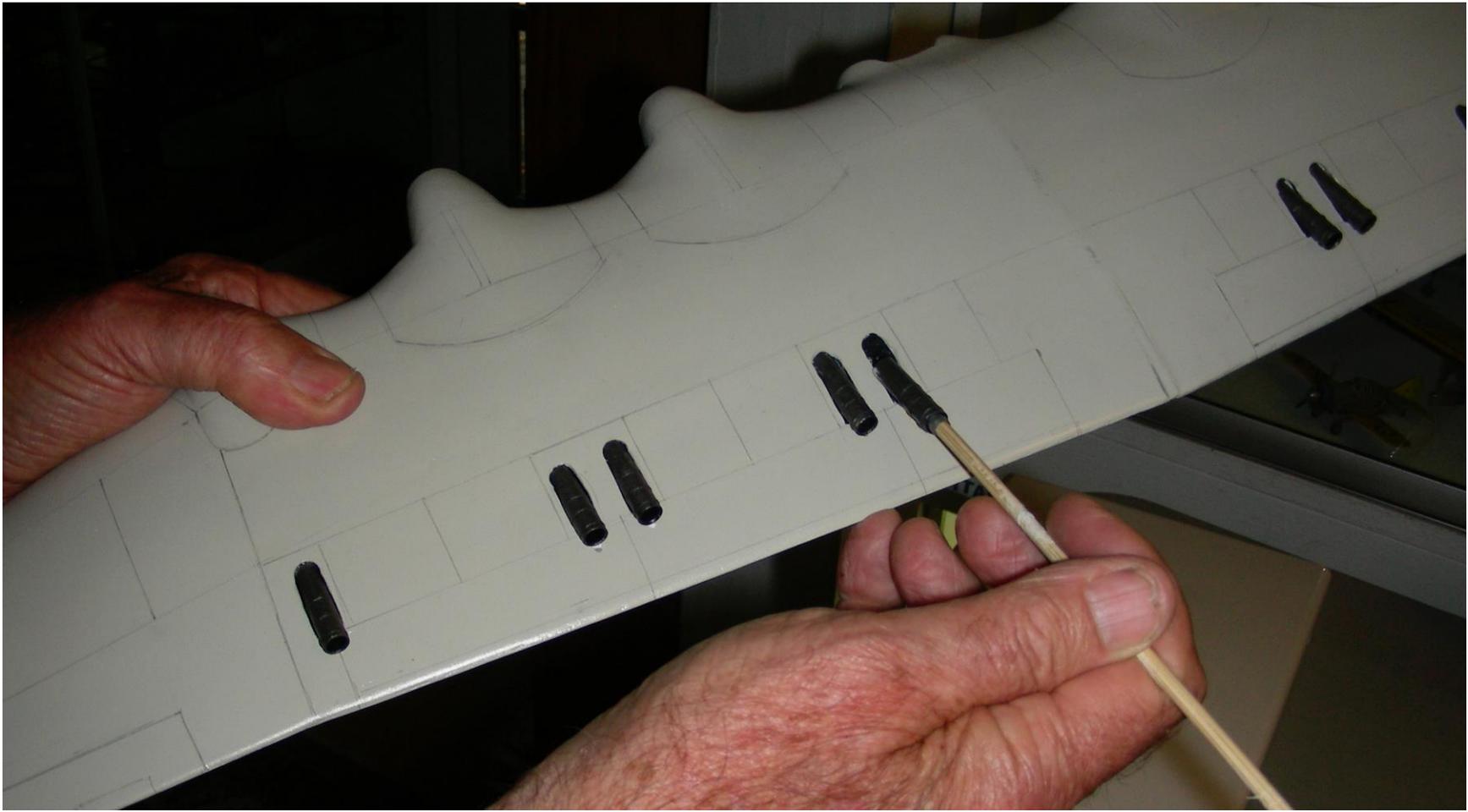


Here is a closeup of the nose radome installed.

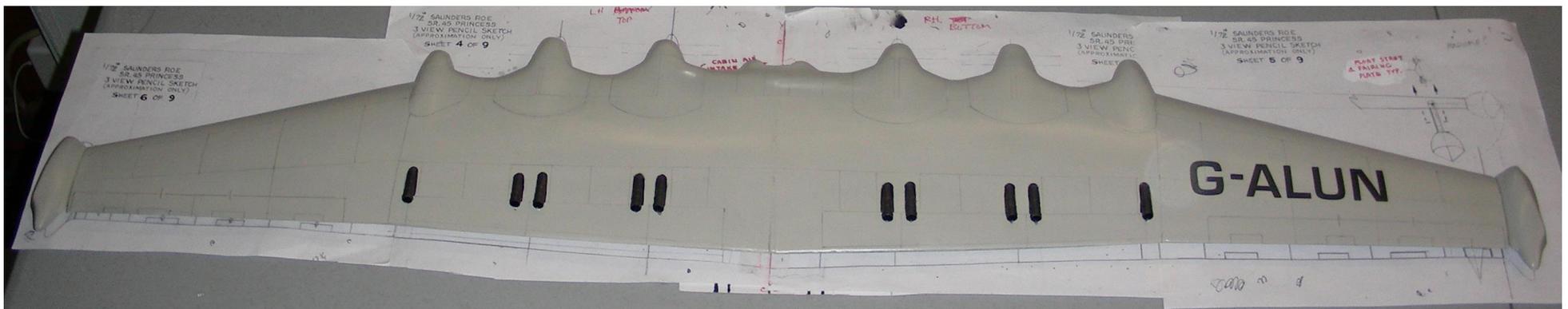
Trial fit of wing assembly to the hull. The vac formed rear fairing is in place. The front fairing/fillet will have to be created by Magic.

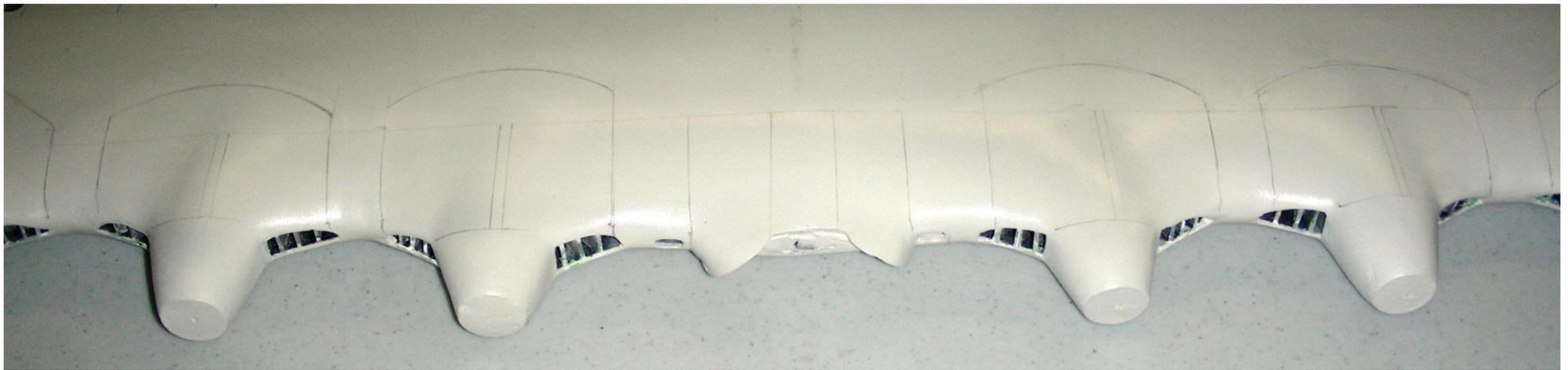




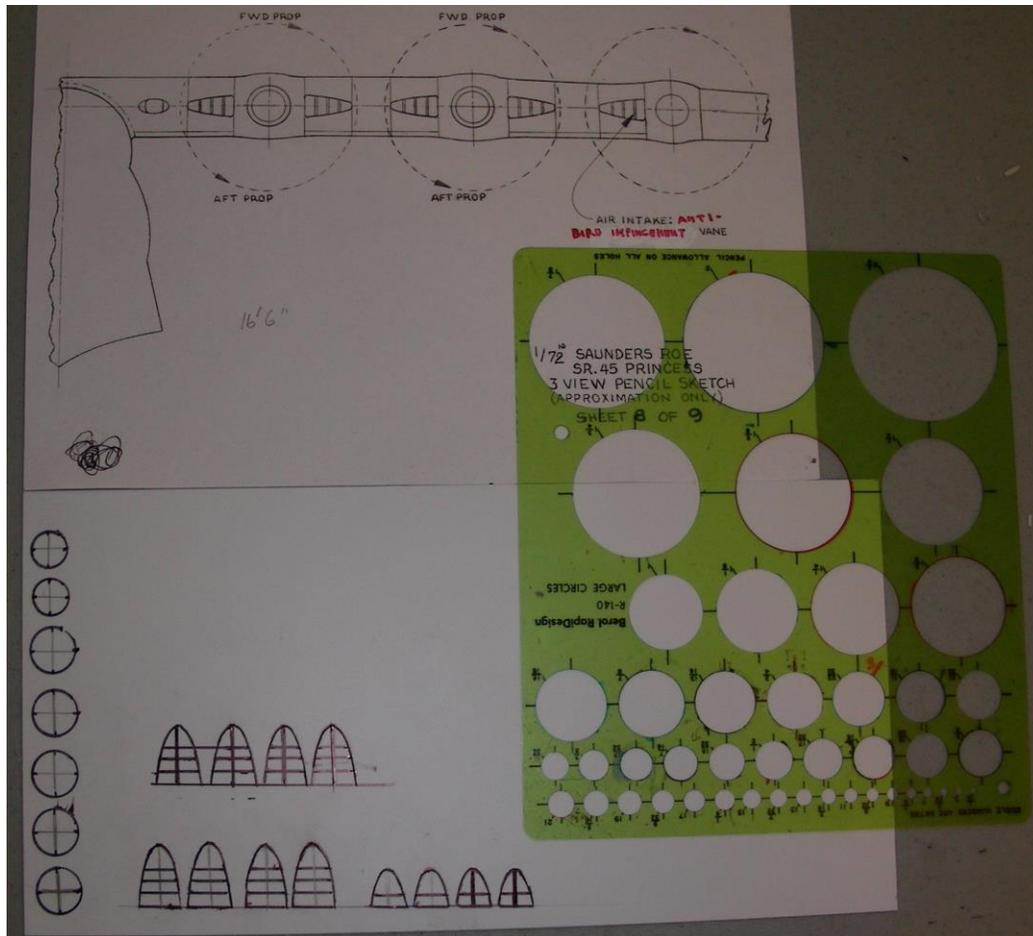


The complete wing assembly, painted and decalced, gets the exhausts installed. This technique requires an Asian skewer stick to guide them into place, as demonstrated above. The sculpted front wing fillet is visible in this photo.





**EXTERIOR INTAKE DUCT DETAIL, SHOWING THE FINISHED NACELLES AND FILLETS.** Also a fine look at finished sculpted front wing fillet before paint.  
 ( This photo is mildly out of sequence, best related to sheet 30 )



MIKE HERRILL DID NOT INCLUDE SPINNERS AND PROPS. OK, he has done more than his share. Let's get creative.

Spinner making material: Here we have Jim's drawing , 8 counter rotating spinners and 2 single spinners, shown with the tool used to create the drawing.

All of these discs and cones will be cut from .030 styrene sheet.

Here are all the cones and disks assembled. 4 inner spinners and 4 outer spinners, 2 single spinners for a total of 10 spinners.

These will be filled with Magic-Sculpt.





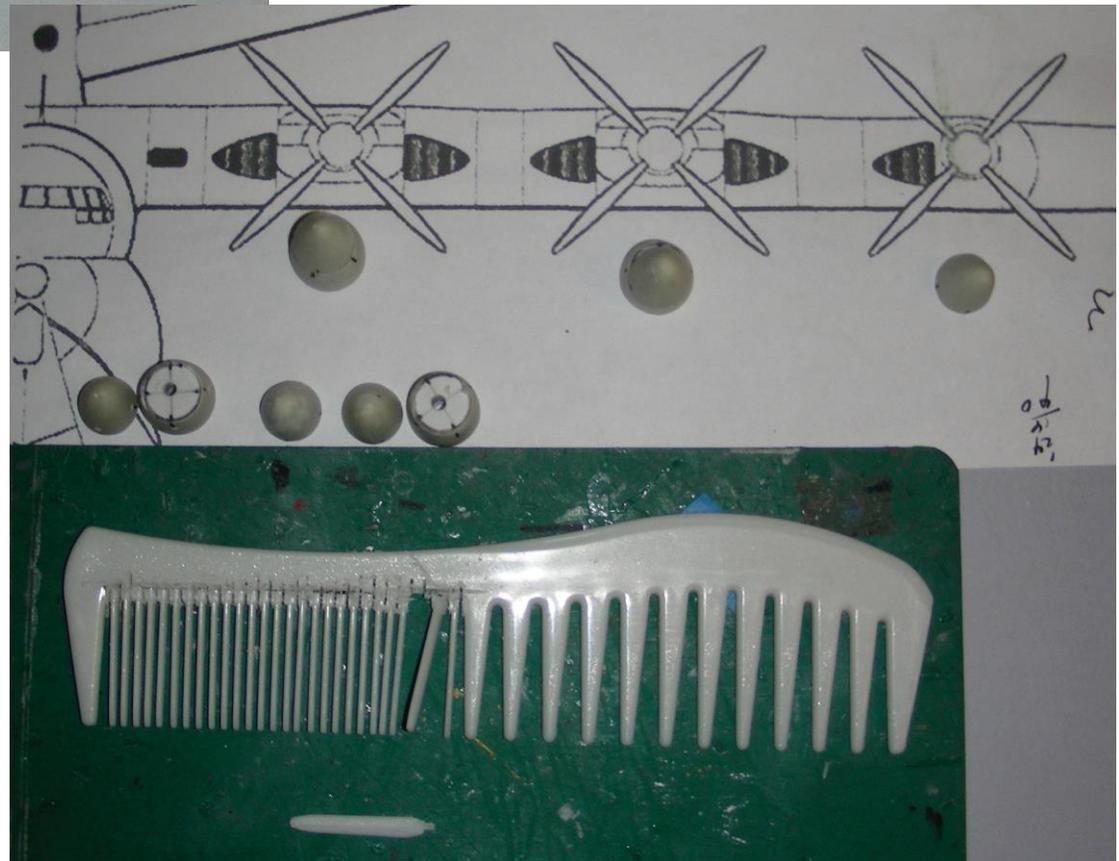
Lookie here! 4 inners, 4 outers and 2 singles, all rubbed down and polished with prop blade insertion markers.

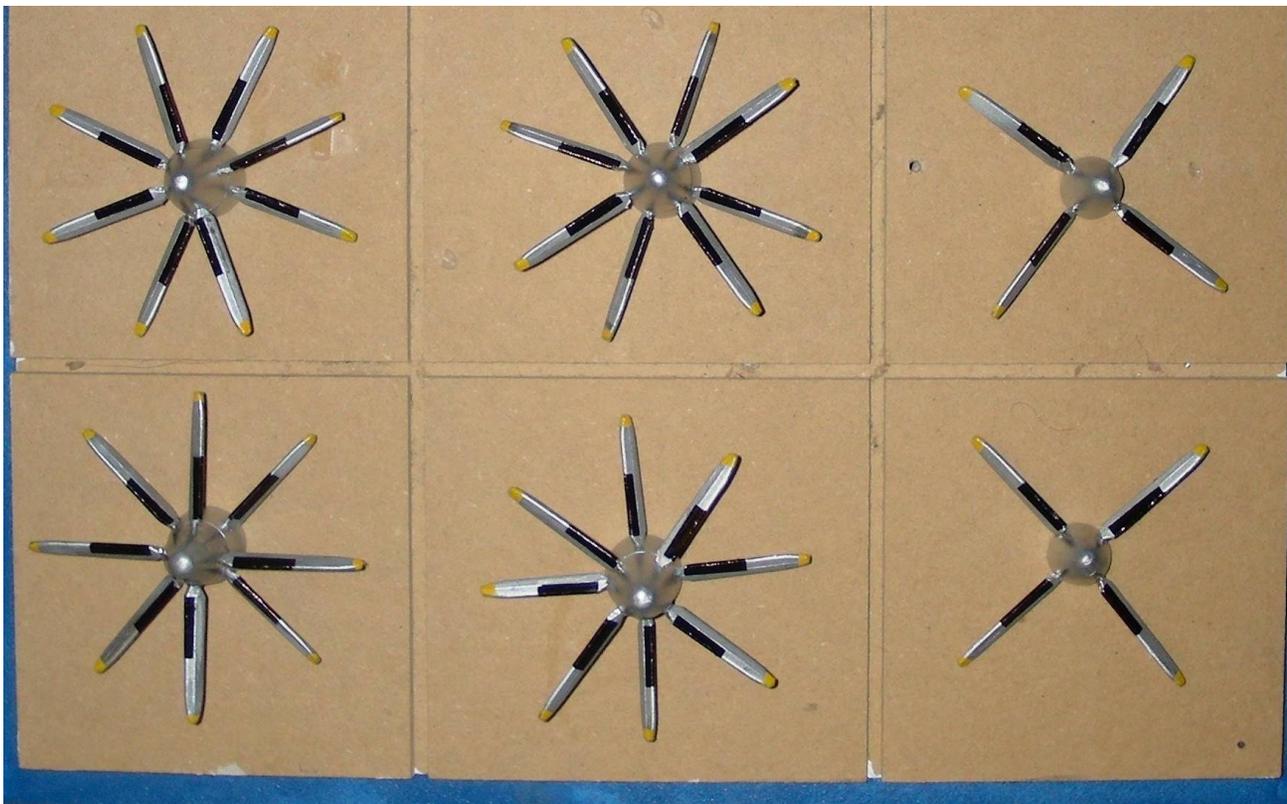
Man, that was fast!

#### THE BLADES.

I NEED 40. I SPENT SEVERAL HOURS LOOKING AT COMBS AT VARIOUS STORES. I FOUND A COMB WITH THE RIGHT SIZED TEETH. 28 EACH - SO I NEEDED TWO OF THESE COMBS TO DO THE JOB.

I PLUCKED OUT 40 TEETH. BUFFED AND POLISHED, WITH A TWIST FOR PITCH. THEN INSTALLED THEM ON THEIR SPINNERS, KEEPING IN MIND THAT WE HAVE THE FRONT BLADES GOING CLOCKWISE AND THE BACK BLADES COUNTER CLOCKWISE.





COMPLETED PROPS.

PAINTED SILVER WITH BLACK DE-ICERS  
AND YELLOW TIPS.

THE SPINNERS ARE SPRAYED WITH  
TESTORS MODEL MASTER STAINLESS STEEL  
BUFFING METALIZER.

DECAL SHEET SCRATCH BUILT BY JIM LUND  
AND PRINTED ON A LASER PRINTER AT A COPY SHOP.

Knowing what I know now, I would have hired Mika Jernfors of Finland,  
and got a professional job (Arctic Decals)

The same goes for the spinners and props. I would have made a master, and  
then have Roy Sutherland (Cooper Details/Barracudacals) make resin copies.  
(I did that with the Hughes H-4)



TOTALLY FINISHED BOAT - PAINT AND DECALS ALL DONE - READY TO ACCEPT WINGS WITH POWER.





THE TWO MAJOR COMPONENTS READY TO BE JOINED.

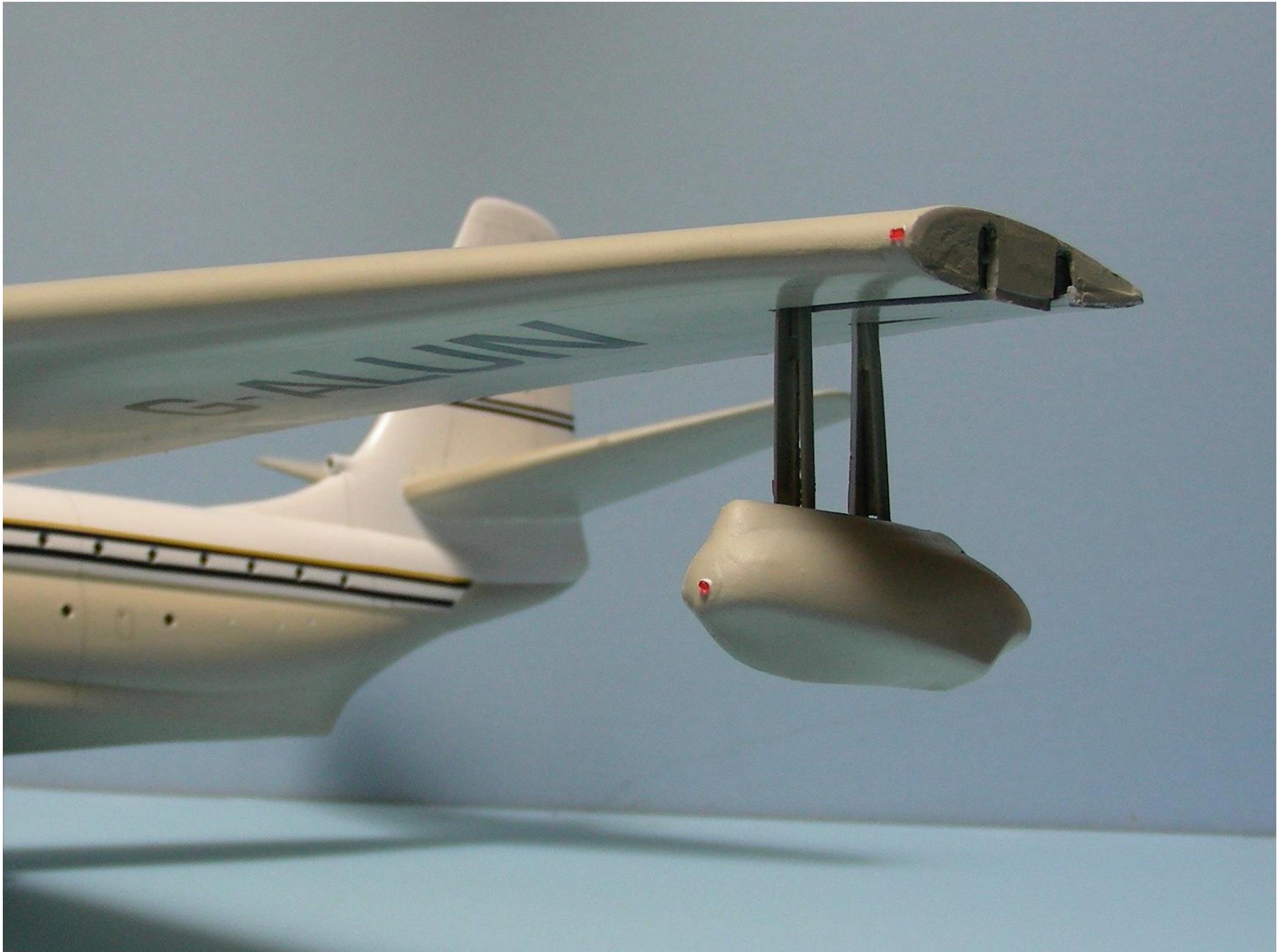
THE SPINNERS, PROPS AND REAR FAIRING ARE ADDED AFTER THE JOIN. Note wooden core at the center of the join.



FINALLY, ALL DETAILS ARE IN PLACE AND SHE'S IN THE WATER

THE PRINCESS SITTING PRETTY.





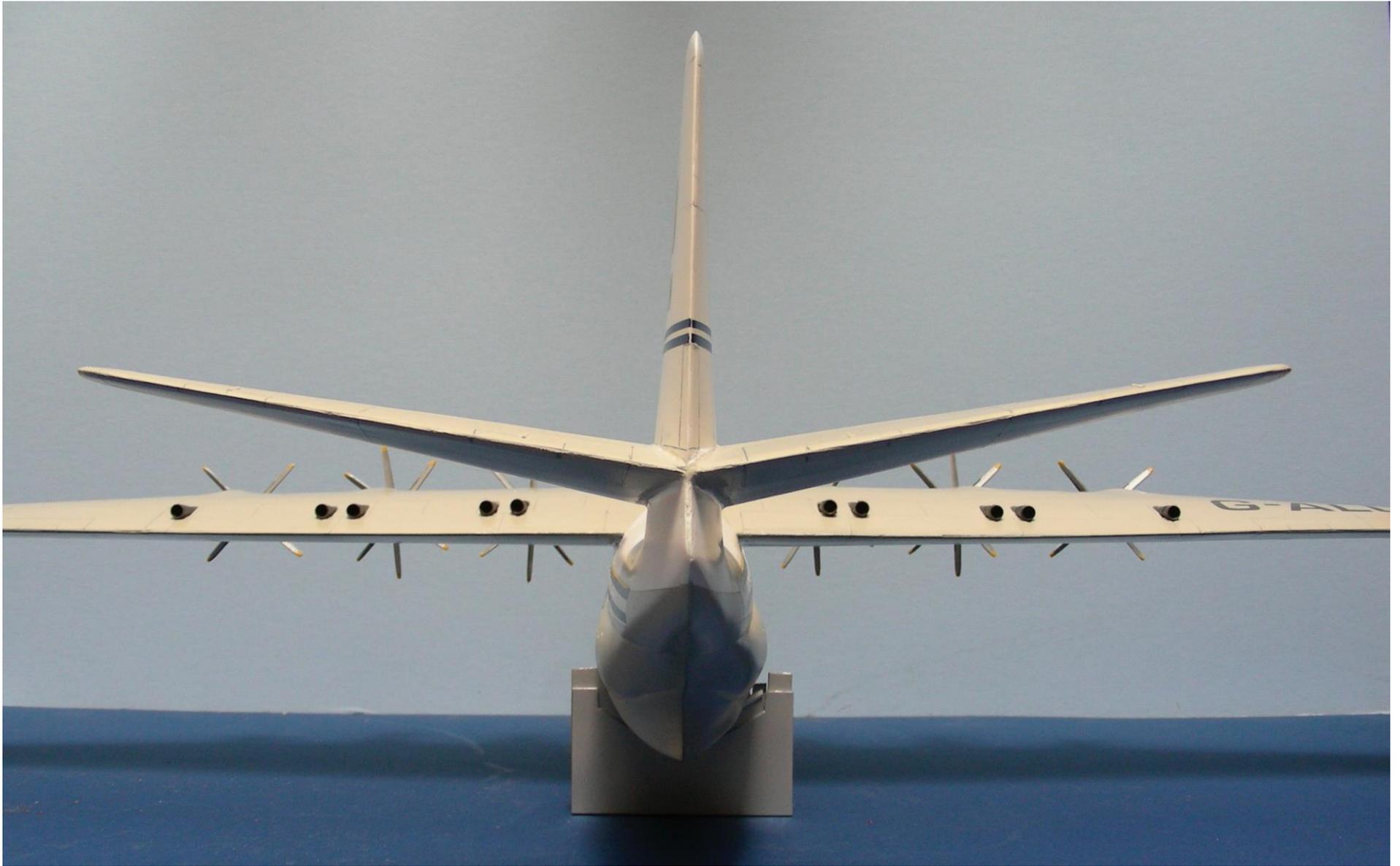
Retractable float in the down position. The red lamp on the float indicates port side (left)



FLOAT RETRACTED - FLYING POSITION. The crude hinge set up proves it can do the job!



A PRINCESS IS SOMETHING TO LOOK UP TO.



Dead on rear view. The Princess is just drop dead gorgeous from any angle. Dead is the proper adjective, as a brutal war sped up the evolution of air travel. The luxurious flying boat was bypassed when concrete runways were built at locations that facilitated the faster, more economical land based airliners. If peace had prevailed, the flying boat era would have gone from 1935 to maybe beyond 1950.

No use thinking of what could have been. Life is only a cycle between birth and death. Go forth and multiply, the other option is extinction.



A little scene cooked up for a sense of scale and time. We have to play with our toys. Adults making modeling their hobby, are reliving their childhood dreams.



Here we see two Saunders-Roe flying boats posed together. The Saunders-Roe A.36 Lerwick reconnaissance flying boat was a flawed design. 21 examples were hurriedly built during WW-2 and never performed up to expectations. Whereas the Princess performed beautifully, but at a time when technology produced a more competitive product.



**ONE LAST LOOK AT THE PRINCESS.** *I AM NOT A PERFECTIONIST, THEREFORE I CAN SAY THAT I HAD A LOT OF FUN PUTTING THIS THING TOGETHER. A HOBBY IS A FUN THING.*

This chapter of BUILDING BIG ( # 4 ) is finished. – WJL *fini*



*IN AN UPCOMING EDITION Of The SST !*

FROM THE ANNALS of Mr W J LUND

EDITOR WILL RELAY

SUCH A TALE OF TACKLING

Either this mythical beast...

Whom history in passing has not been so kind

Or this one no less mythic, but assuredly real in 1/1 terms

Which history only recently has shown greatest unkindness

STAY TUNED

SEE WHICH SHORE OF THE ATLANTIC

WE SHALL NEXT BE LANDING UPON

- *mb fini*

