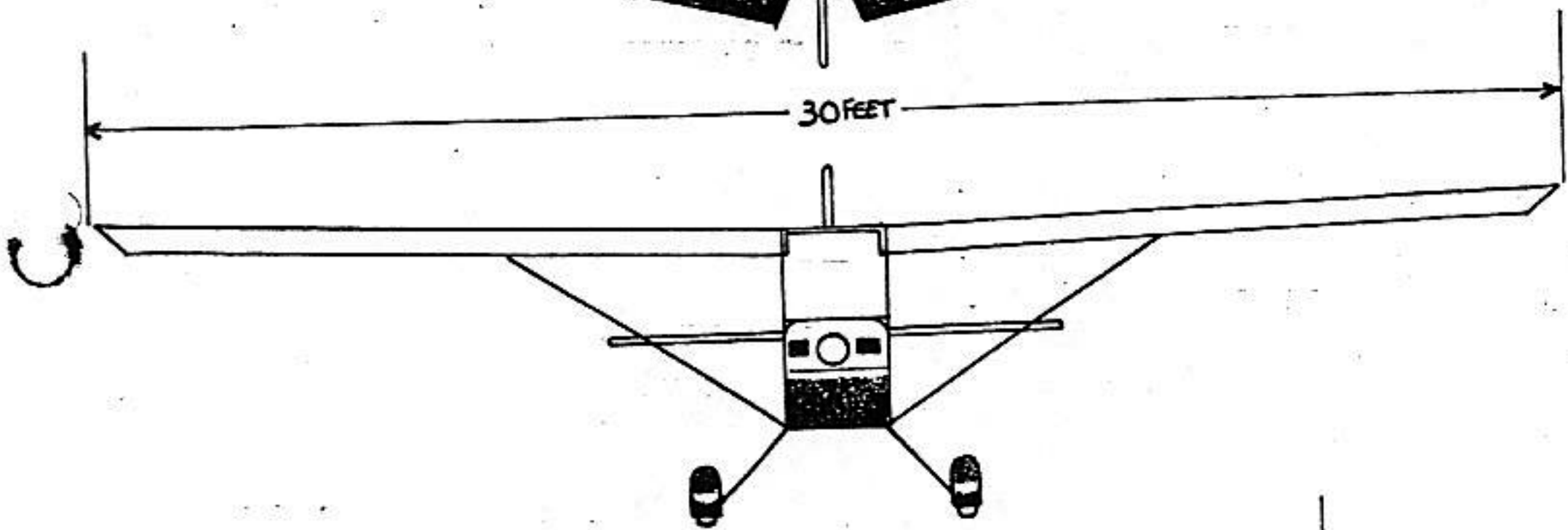
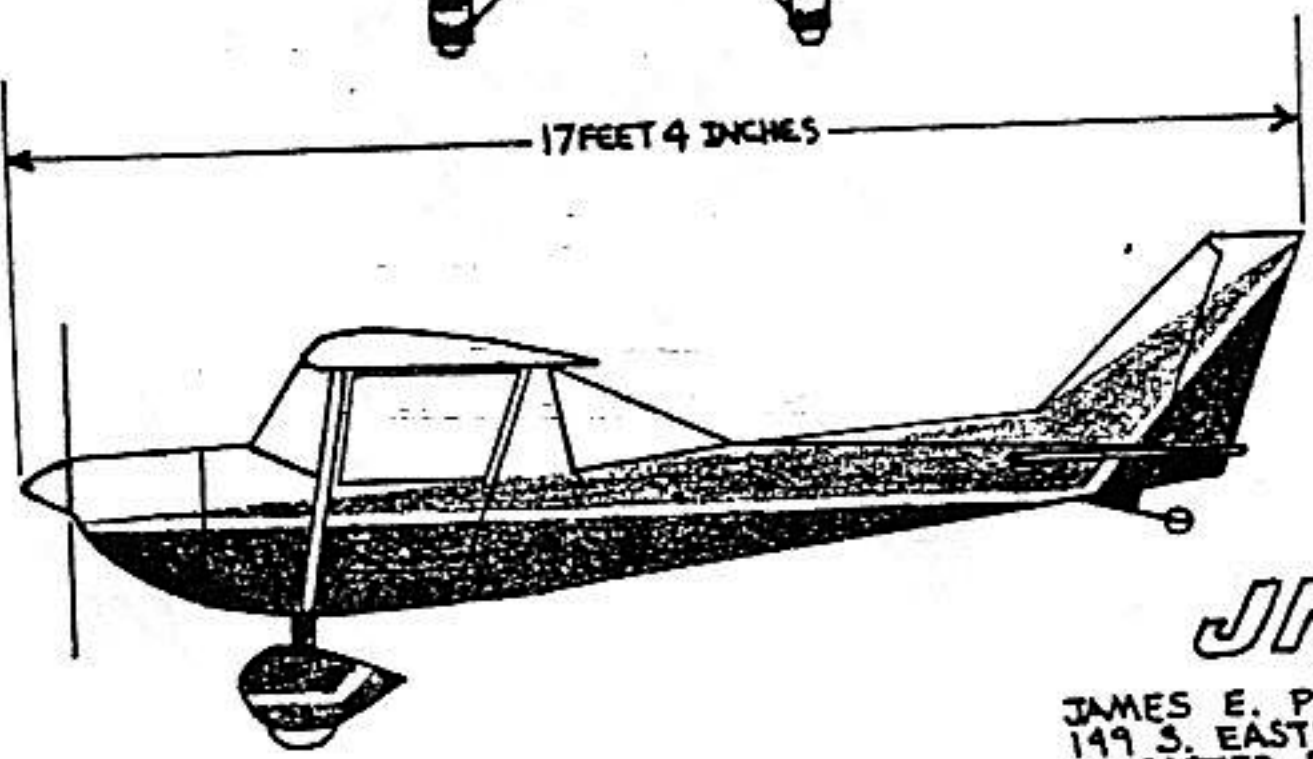


30 FEET



17 FEET 4 INCHES



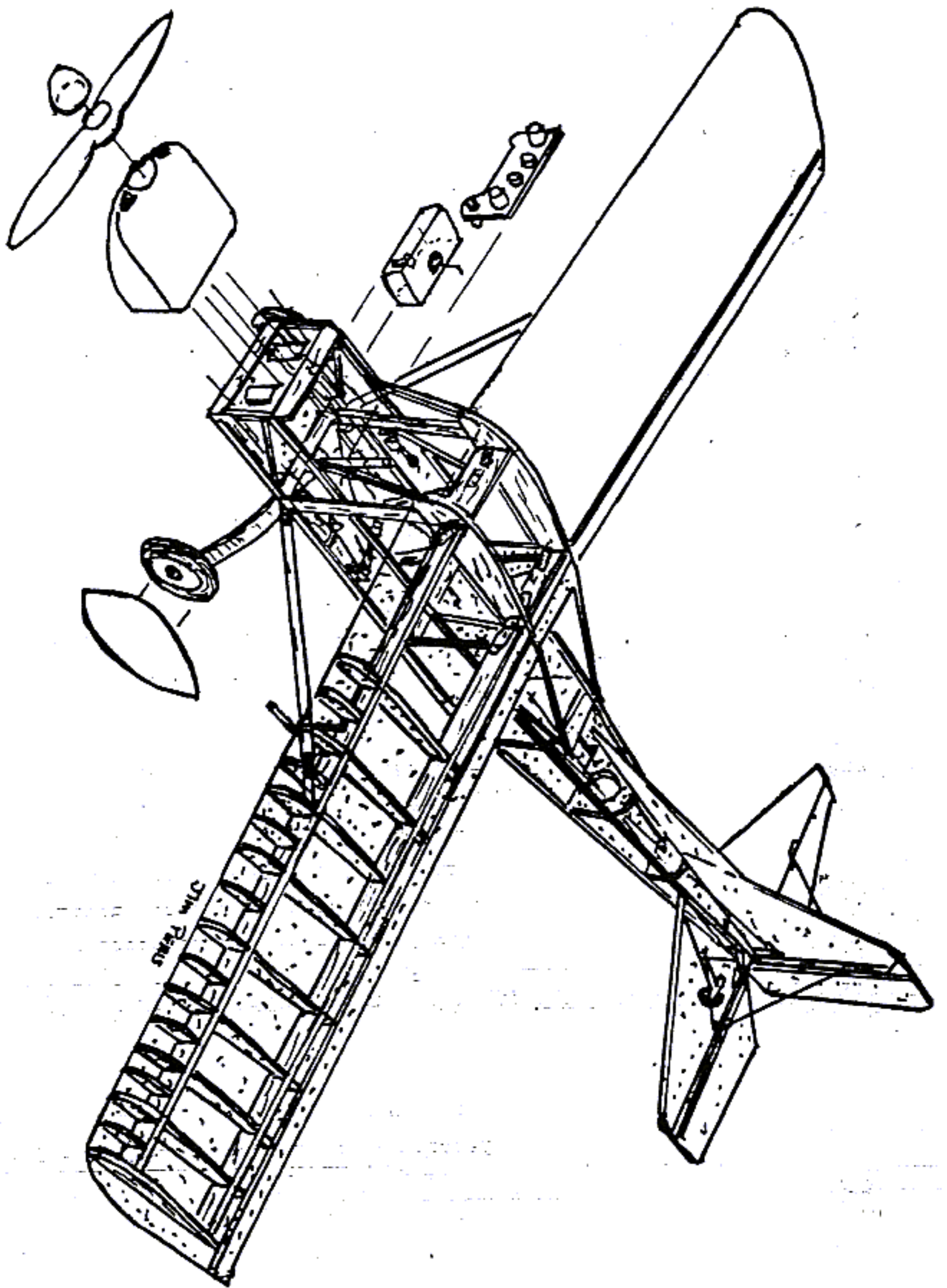
JN-1

JAMES E. PERIS
149 S. EASTLAND DRIVE
LANCASTER, PA. 17602
717-393-5928

PLANS AVAILABLE

POWER PLANT = 28 TO 40 HP
CONSTRUCTION = WOOD AND FIBERGLASS

COPYRIGHT 1987
J. PERIS



JN-1
CUT AWAY.

THE IDEA OF THE JN-1

There is a group of people that want to fly and own an aircraft, but their budget cannot justify it. The JN-1 was designed for this person. It is not necessary to follow ^{the} plans exactly. There are places where builder can modify or ^{the designer} incorporate his own ideas, cowling, wing struts, landing gear and the cabin. One thing the builder must keep in mind during construction, KEEP IT LIGHT. JN-1 performance is rated at 320 lbs.

Cost of prototype JN-1 was less than \$2500.00 and around 500 hrs. to build.

SUGGESTIONS ON MATERIALS

Piano hinges, channel aluminum, flat stock and aluminum tubing. 3/4x.058 seat from boat section, tail wheel is tool box wheel. Pullys are garage door pull ups. Bearing for control stick is the tool box wheel mounts. Compass at auto store, gas cap and mount from plastic bottle, gas gauge cork and piano wire. Lawn mower power unit, push pull type. Instrument panel plywood and glass. Wheels are wheelbarrow type with axel cut to size. Instruments are aircraft, bolts and nuts, wing struts are 4130 steel tubing also aircraft control cables. Paint is straight enamel from auto store.

Join EAA Nation Association and especially ^{the} local Chapter of EAA. This is the best way to get information needed to build and test fly your aircraft.

JN-1

DESIGNER & BUILDER. JIM PERIS

SPAN	_____	30 ft.	
LENGTH	_____	17 ft 4 in.	
HEIGHT	_____	5' 2"	
WEIGHT EMPTY	_____	320 lbs.	
WEIGHT GROSS	_____	600 lbs.	280 useful
FUEL CAPACITY	_____	5 gal.	$\frac{-35 \text{ LBS}}{245 \text{ PILOT}}$
WING CHORD	_____	55"	
WING AREA	_____	140 sq ft.	
DIHEDRAL	_____	2°	
INCIDENCE	_____	2°	
ENGINE	_____	KAWASAKI	
H. P.	_____	38	
DISPLACEMENT	_____	440 cc	
PROP. DIA.	_____	52"	
PITCH	_____	27"	
LANDING GEAR	_____	STEEL + GLASS	
MAIN WHEELS	_____	WHEEL BARROW BRACES?	
TAIL WHEEL	_____	INDUSTRIAL STEERABLE	
FUSELAGE	_____	WOOD, FOAM + GLASS	
WINGS	_____	WOOD, FOAM + GLASS	
TAIL	_____	WOOD, FOAM + GLASS	
COVERING	_____	4 1/2 oz. FIBERGLASS	
STRUTS	_____	4130 STEEL TUBING	
POWER LOADING	_____	17.1	lbs / H.P.
WING LOADING	_____	4.07	lbs / sq ft.

INSTRUCTION SHEET

FUSELAGE

SIAM - My FORMER DRYS AS A
TECH PUBL EDITOR GOT THE BEST
OF ME AND I WENT TO WORK
ON HIS PLANS ... GRATEFUL

you will

Need two 4x8 sheets of plywood for bench. Paint bench with white water based paint, level and get ready to draw plans with pencil.

PAGE 1

Draw outline with pencil for wood box structure. $\frac{1}{2} \times \frac{1}{2}$ inch square

$\frac{1}{2} \times 1$ inch, and $\frac{1}{2} \times \frac{1}{2}$ inch. Any plywood gussets should be one sixteenth.

Use finishing nails for pinning pieces in place for gussets and glueing.

Same method as model airplanes.

PAGE 2

Make rights side first, gussets are then inside when finished, flush part will automatically be outside of fuselage. Do not install stringers until later, easier to handle fuselage for other side. When making stringers etc., always cut two of each for later. Lay wax paper under the joints and start glueing stringes together. Sand all areas for glueing, stick better, including gussets. Fasten in place and staple gussets to wood. (Arrow T-32-5/16" Staple). Pull out later when dry, (24 hr.). Pick up side of fuselage from table and turn over. lay wax paper between joints and match sides. Dry 24 hrs. again. Remove staples for weight purposes.

Cut foam for sides of fuselage, remember, there are left and right sides. Foam will fill structure and cut out gussets from foam, use 5 minute epoxy glue and fasten to wood.

Lay wax paper on bench and fuselage side to bench, use weights to keep foam flat on side until cured. Outside of wood and foam will then be flush. Next step is to glass inside of fuselage pieces on bench, use bi-directional 6 oz. fiber glass and epoxy. To cure flat, lay weights on sides to flatten. (Use Mylar to separate weights from glass, leave cure 24 hrs. and lift from bench, do not forget there is a left and right side to do, so repeat process on next side.

PAGE 3

While side pieces are at this stage all blocks and door, etc. can now be put in place, cut foam and glue blocks where illustrated.

PAGE 4

Cut F-2 to F-7 out of $\frac{3}{4}$ " blue foam, also the floor boards (foam) from firewall to F-3. Lay out on bench and start to glass formers on one side. F-4, F-5, F-6 and F-7 are glassed without any wood. Lay F-2 and F-3 out (center line everything at this point with magic marker).

Lay out top and bottom wood, glue to foam and glass as one unit. Lay weights on pieces until dry 24 hrs. Flip over and glass opposite sides of all formers, floorboards two layers of 6 oz. glass on one side only, again weight and cure.

PAGE 5

Lay out a bottom center line on bench and lay Mylar around outer edge of bottom so fuselage can be taped together and not stick on bench. Mylar can be obtained at a printing shop, they use it one and throw it away. JUST ASK! Sand all surfaces for taping, make sure all formers are square and centered with a line. Lay glassed bottom on table right on the center line from firewall to F-3, line formers on table lines. Use 2" masking tape to lay up sides and formers until all line up. KEEP TAPE ON! 5 minute epoxy all formers in place, line up with a square when satisfied, cut 11 yds. of 2" glass tape, and tape formers and bottom of fuselage on all sides and edges inside fuselage. Let cure 24 hrs. 2" tape is glued in place with Safe-T-Poxy. Be sure to 5 min. glue all wood pieces on bottom of fuselage for landing gear cross sections and also longeron stiffeners. All these pieces are glassed on bottom of fuselage floorboards to secure. You now have a fuselage box structure completed.

Lay fuselage on side of drawing (PAGE 1) lay Mylar under F-3 and longeron piece to tailpost. Glue longeron piece to tailpost. Glue longeron piece to F-3 and gusset, nail into position lining up longeron. Cut 3/4" foam (PAGE 4) solid from F-3 to rudder post, 5 minute glue foam to longeron. Tape and Safe-T-Epoxy 2" glass to longeron and foam while on bench, this will hold in position - also tape to F-3. After dry turn fuselage around to other side and repeat process. Let both sides cure completely. Set fuselage in upright position on centerline on bench, pull down until F-3 is flush on bench, lay Mylar under bottom shape of rear fuselage for glueing bottom on, use a couple of large headed nails to hold into position. be sure center line is correct and also that longerons are level on bench. Mock up bottom before glueing. Pre-install for fitting only F-4, F-5 and F-6 to reassure fitting only.

Take formers out now and lay up wood triangular bottom longeron piece (PAGE 6) illustration. 5 minute into position and glass tape for strength.

When cured install formers F-4, F-5, F-6 in position with 5 minute, glass tape on both sides of formers to secure them. Let cure.

Next step is to glue rudder fin in position. Fin should be glassed first. Fin dimensions are on (PAGE 7). The wooden end of post is 5 minute in position, make sure of fit. Glue into position with all center lines in position.

Install stabilizer horn in position (PAGE 8) before piano hinge for stabilizer is installed. After satisfied with stabilizer horn position mock up stabilizer fin. (glassed first) Stabilizer piano hinge must be installed glassed and made permanent. (PAGE 9) Position piano hinge on longeron of fuselage and mock up. When satisfied, glass the mounting position before installing piano hinge. (PAGE 16) When dry (first stabilizer horn mount installed with fluss headed screws). Then position and install piano hinge to stabilizer fin. Pull out wire in hinge until later. After glassing install hinge permanent to fin and fuselage. PAGE -9 and PAGE-7 are tail surfaces to be made anytime. Glue wooden spars to foam 3/4", insert (PAGE 10) hinges per diagram, then glass with 6 oz. glass. Dorsal fin on rudder fin installed after rear deck.

Tailpost (PAGE 12) mount for tail wheel (PAGE 12) and (PAGE 11). Tailwheel mount are now glued into position. (PAGE 13,14,15) are parts for folding stabilizer. (PAGE 16) illustrates hinge position and mounting plates for tailwheel post for cable security and rudder post stiffeners. (PAGE 17) for cables to string through rudder and stabilizer for strength. (PAGE 18) is illustration of folding tail. To fold tail TWO bolts removed from elevator horn, loosen lower cable on tailwheel post then fold up.

Foam and glass pieces at cabin and front of cabin (gas tank side mounts), dorsal fin and glass outside of fuselage with 6 oz. Bi-directional fiberglass. (PAGE 4) install wooden seat mounts, cut door out and inside of cabin pieces (F-3) area. Install angle aluminum cross piece for stick control and wing strut mount and attach strut. (PAGE 19)(PAGE 5) Install stick and bellcranks and control system, (PAGE 19,20,21 & 22). Make rudder pedals. Tailwheel can be made and installed (PAGE 23). Link rudder horn and tailwheel horn together to make it steerable. (PAGE 20). Landing gear can be installed now. (PAGE 24).

The plate of aluminum rides on wood bottom of fuselage. The U-Bolt holes keep it in place, truck spring 5/16" is okay, but I found that I needed to wrap 6 oz. glass around gear leg to stiffen. I did not make a brake system, not needed to my opinion!

(PAGE 25) Gas tank is well self-explanatory. Gas cap was made for saving sake. After tank is installed, then mount instrument panel (PAGE 26). I have a plan on (PAGE 26) for a ball and bank indicator.

The firewall can be installed now, (PAGE 27). The first layer after the frame is 1/16" plywood, abestos, then stainless steel or .020 aluminum. When firewall is completed glass cowl piece around top of tank and be sure windshield piece (brace) is secured into this whole unit.

I installed engine and instruments etc. before making cowling. (PAGE 26). I used scrap foam blocks and used three (3) layers glass for stiffness.

Cabane struts should be installed when center-section is installed (PAGE 6), (PAGE 28). The main spar in center section is glassed to cabin cross piece F-2 before cabane strut is installed (PAGE 6). Drag spar is mounted where illustration on wing rib shows, this is a separate piece across top of fuselage between F-2 and F-3. Glue plywood wing rib on each side of fuselage and set 2 degrees incidence with level in wing position. Line false rib exactly, this is critical to when wing is installed. (PAGE 4). Lay out wing fittings on center section spar (front on spar as per diagram). (PAGE 29). Use center line and install with template, fittings are scale on plans (PAGE 29). Drag spar fittings are a universal type for wing folding as illustrated on (PAGE 30). Also fit on drag spar ahead of time, lay out fitting (PAGE 30 & 31). When fitted proper, foam and glass top of cabin. Glass windows in place with small strips of glass. The windshield is .100 - the rest of windows are lesser gauge.

WINGS

Paint bench again. Draw out the whole outline of wing on bench. Chalk line and straight edge front and rear spar with pencil. (PAGE 32) has all the measurements you need. SPARS -- Lumber Company handles Douglas Fir stair tread. For both wings purchase 2 stair tread 12"x3/4"x13ft. and drag spar 1/2"x3-7/8"x 13ft. The lumber yard will cut and plain to your size at a low cost. Be sure to get as straight grain as possible for both wings. IMPORTANT!!! Two (2) - 12"x3/4"x13ft. CUT TO --

2 - 7"x5/8"x13 ft.
2 - 37/8"x1/2"x13 ft.

COST LESS THAN \$100.00

Install plywood shims on spars with 5 minute Epoxy glue, Two (2) shims on each side of root fitting for fitting proper. Shim strut pieces on main spar. Shim drag spar fittings also with glue. Varnish all spars now. (PAGE 32) Cut notches at spars, drag and main for wing fitting to go thru when assembled - Root ribs only! Install drag spar fittings using template for position (PAGE 33), same with main spar (PAGE 34) Strut brace (PAGE 35). Do not install permanent so can lay out on bench without any problems. Lay out spars on bench using a 90 degree square to attain proper position. Use end of bench for leading edge measurement. Nail pieces of wood strip on this edge to hold foam in place. Lay wax paper under any place that will have to be glued, foam or wood. After spars are in position and paper under spars etc. cut 11" white foam for leading edge to main spar. Spot glue with 5 minute - put ends together to make length of wing. Secure foam to bench with a couple of large headed nails - Nail to foam only. Place spar in position and make sure everything fits before glueing. Install center section piece of foam the same as leading edge. Drag spar and trailing edge pieces the same. Nail foam in place until dry. Lay out main ribs and nose ribs with a magic marker on foam. Main ribs are blue foam and nose ribs are white foam. Mount template (PAGES 1,2,3,4 & 5) scale rib on cardboard for scale outline drawings later. A way to make ribs equal is to stack foam together and secure so that the template can be drawn on top piece of foam. You can get a knife blade for saber saw and cut four to five ribs at a time. Glue white and blue foam ribs in place with 5 minute, but sure that spars are 90 degrees at this time. All front ribs are installed first. Next, install all middle ribs with 5 minute. (blue only). This is from Main spar to drag spar. Same process all ribs are glued to spars and white foam. Next glue rear ribs using the same process as before. Illustration (PAGE 32).

When cured take the nails out of bottom foam. Start to cut white foam for the top of the wing. (all length pieces should be staggered). Leave wing on bench until finished. Fit upper wing pieces carefully - all foam should fit as good as possible, this cuts down on sanding later. Get some 1 hr. or 12 hr. epoxy glue for the top of wing, takes longer to install the top.

Leading edge pieces can be wedge cut on the inside, to get the curve required to fit over nose ribs. Use duct tape from spar to bench to hold down foam to rib, glue every ribe and along spar. Install 1" blocks or 3/4" blocks of scrap foam along top of spar (3/4" lower than top of spar) for support, and glueing. Do center piece of white foam with 12 hr. glue and lay weights on top of wing to secure, same process on trailing edge also.

ATTENTION:-----

The more careful you are about foam being even to wood the less sanding and filling you have to do. The glassing is only as good as the foam job underneath. The less fill the less work, weight and also lighter.

Glue all blocks where aileron hinges will be installed, do this before glassing. (PAGE 32). Ailerons are made from solid 2" foam (blue) block and glassed. (Install aileron horn in place (PAGE 29), before glassing wood screw piano hinge in wood after cured. Cut inspection holes at main spar drag spar and wing strut fitting. Install braces last. Make wing struts from (PAGE 36) 4130 tubing. (NOTE) If you can find Piper Cub struts or something similar - this would be a good way to go.

When wings are curing you can twist wing 1" at Trailing edge of outer panel wing tip for stability in stalls.

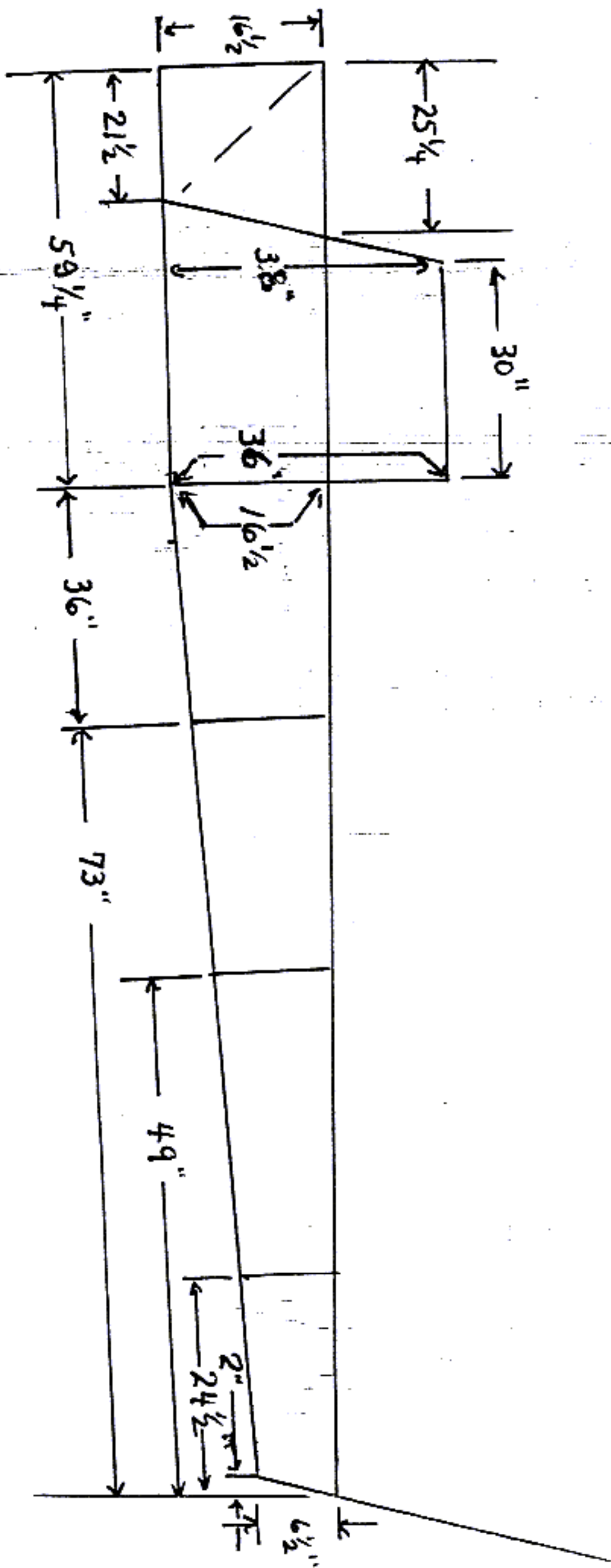
Rigging aircraft is the time taking must. A straight plane has less problems. Also track landing gear for straight rollouts.

Weight and balance is also a must. If you do not want to do this with figures at least balance plane on the center of gravity with bench and a round pipe under aircraft.

Included in plane is weight and balance sheets for JN-1 proto type. To make the Jn-1 into Ultra-Lite there would be an engine change from 72 lbs. to 28 lbs. Also the landing gear could be lightened from 12 lbs. to 4 lbs. with Piper Cub type gear. The drag spar can be shortened in an angle to wing strut and save another 8 lbs. Without the retractable tail and lighter wing struts the Aircraft can now qualify for Ultra-Lite. You would have to lengthen the firewall 7" towards the propeller.

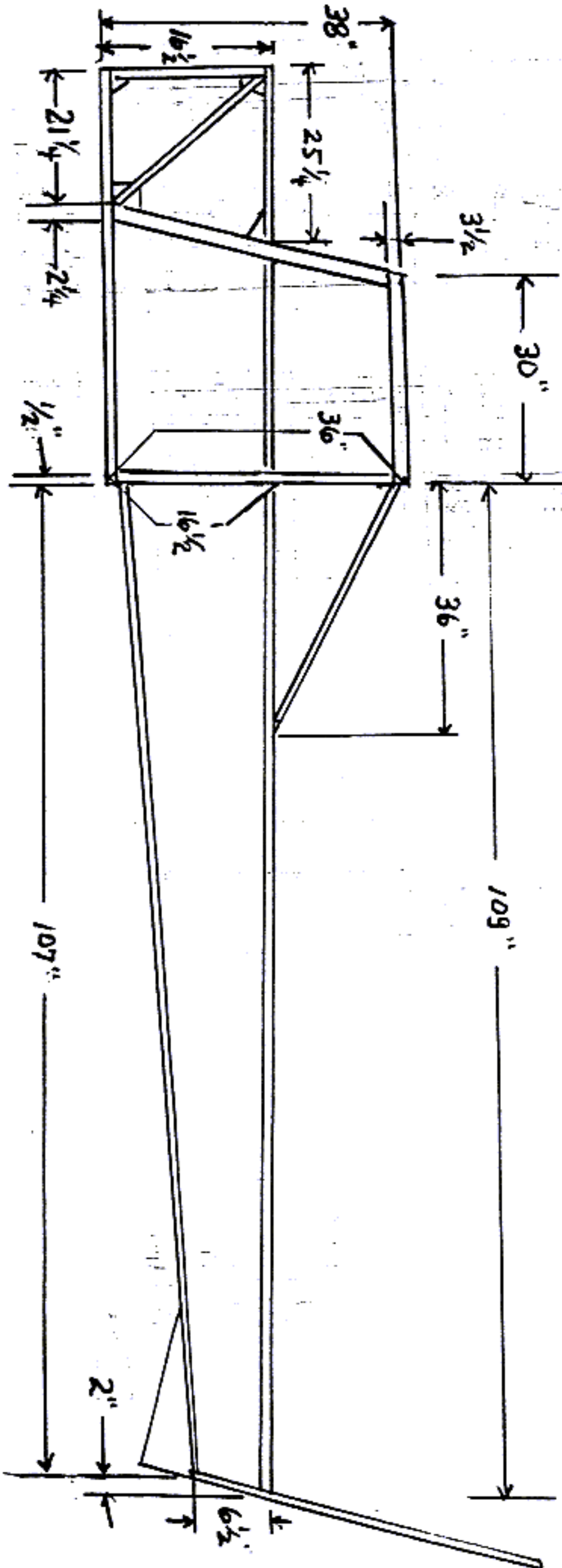
"GOOD LUCK" with your JN-1 and have a lot of good flights.

JIM PERIS, DESIGNER



FUSELAGE OUTSIDE
MEASUREMENTS

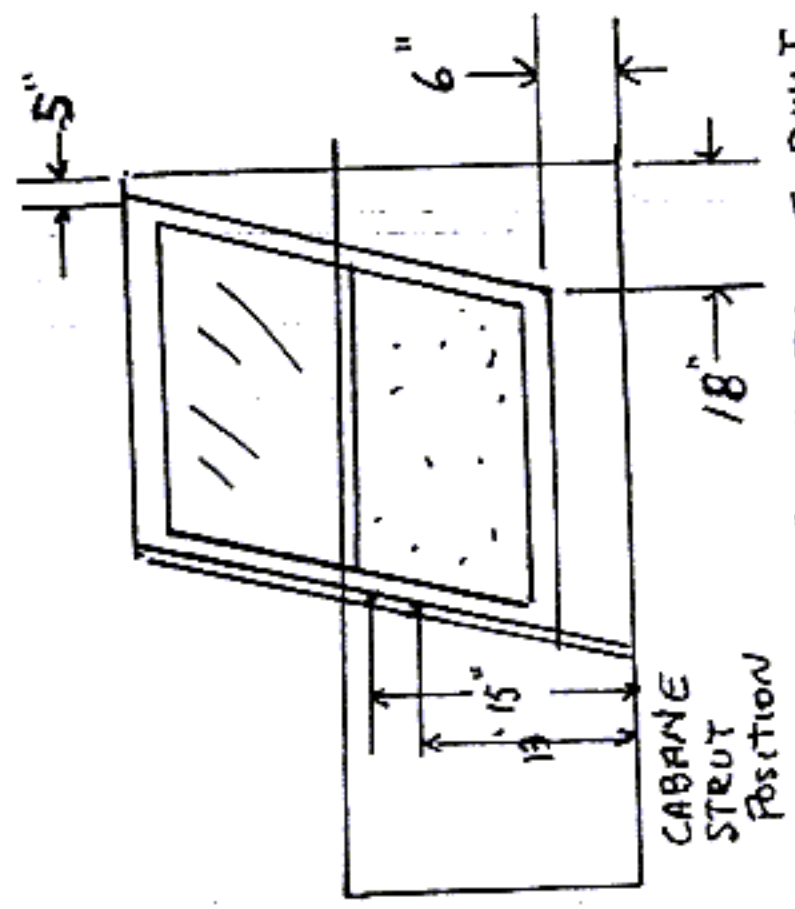
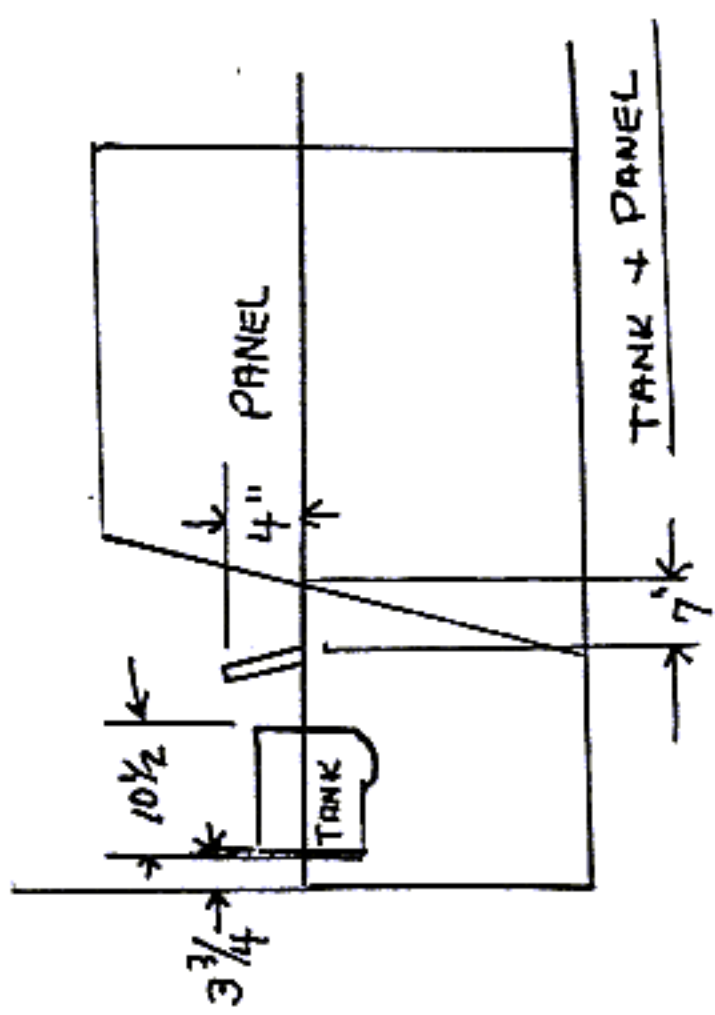
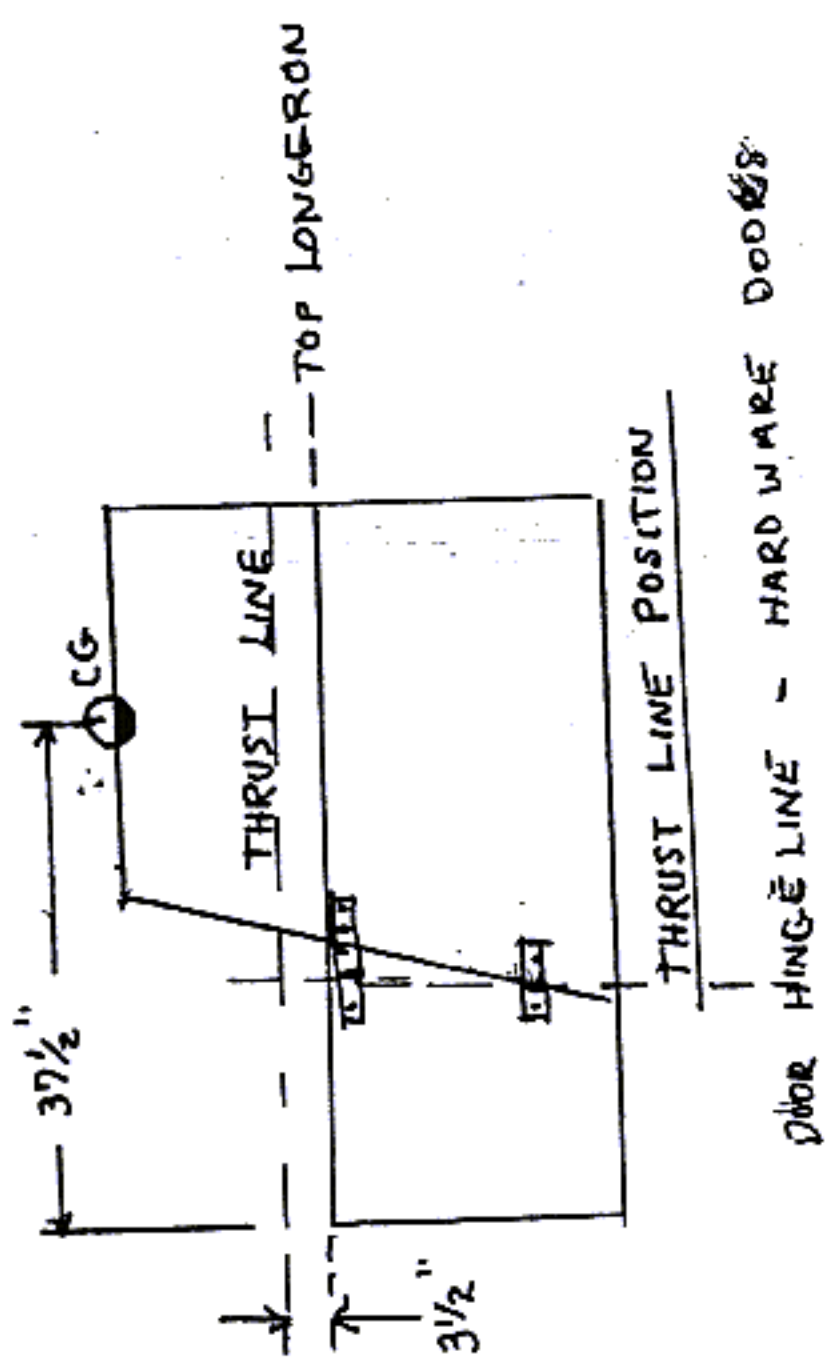
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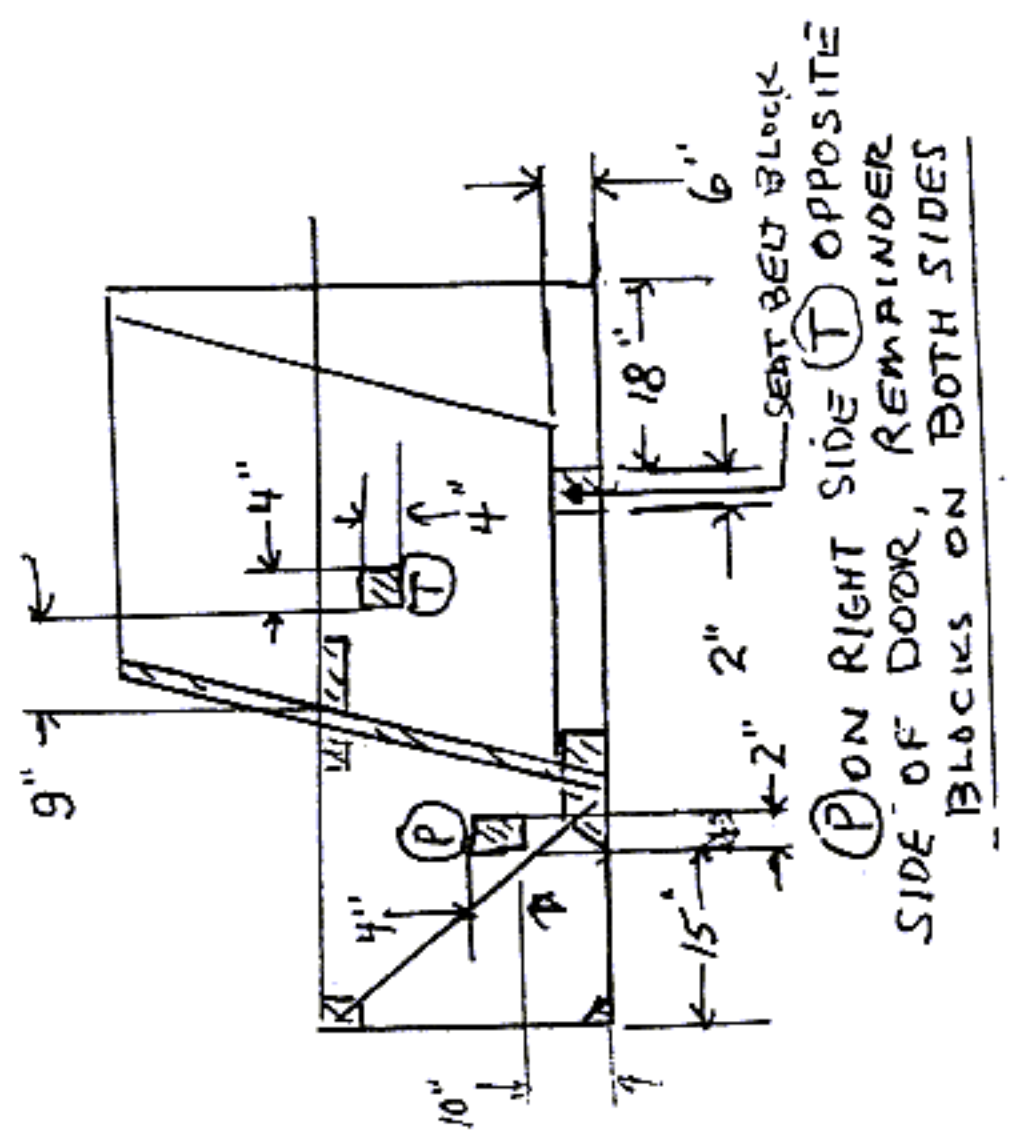
1/6" PLYWOOD
 RIB GLUED TO OUTSIDE
 TOP LONGERON
 MAKE LEFT
 & RIGHT SIDES

FUSELAGE LAYOUT
 WOOD MAKE

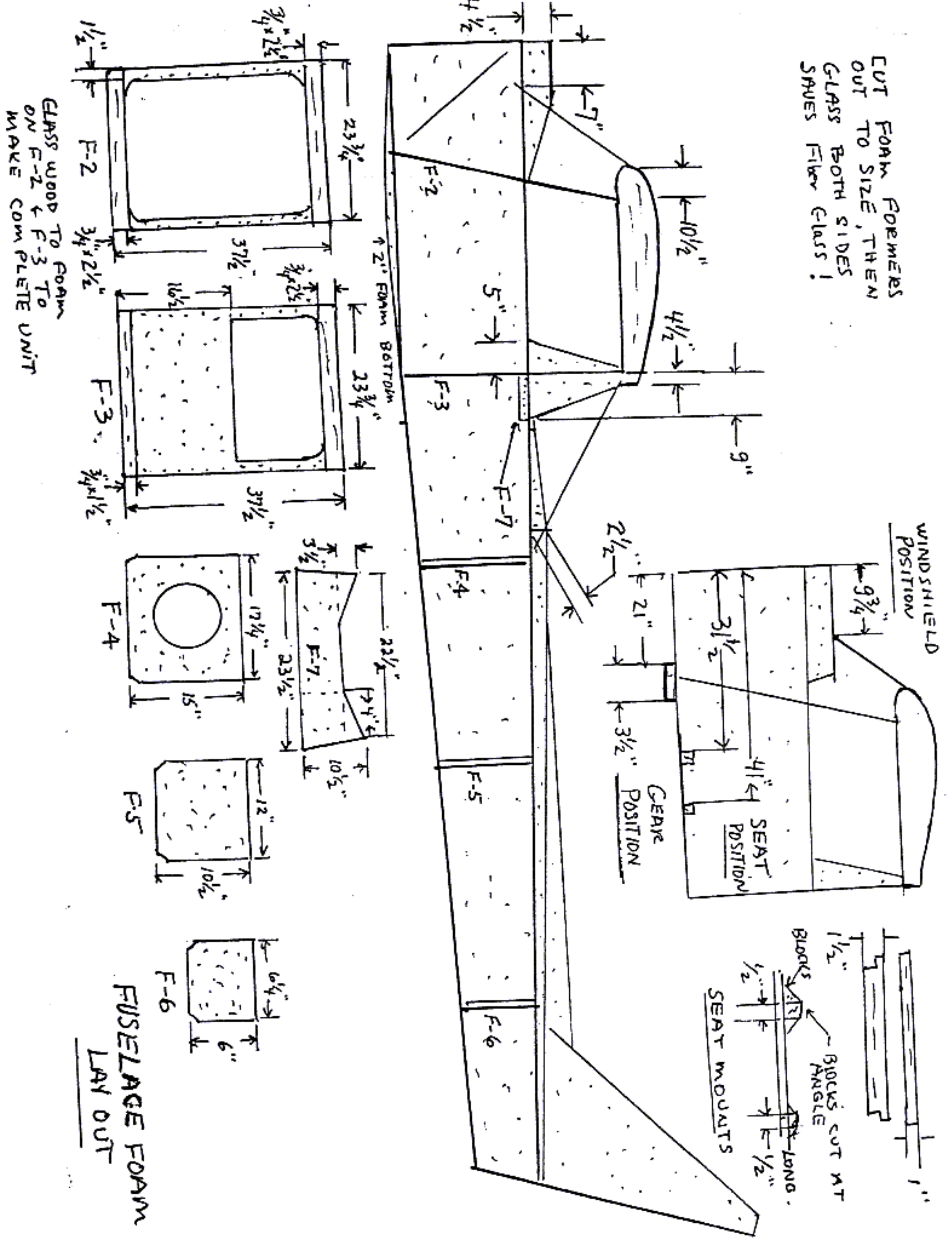
(2)



$\frac{1}{2}$ " x 2" FRAME BUILT ON EITHER SIDE - YOUR CHOICE
DOOR 1 SIDE ONLY

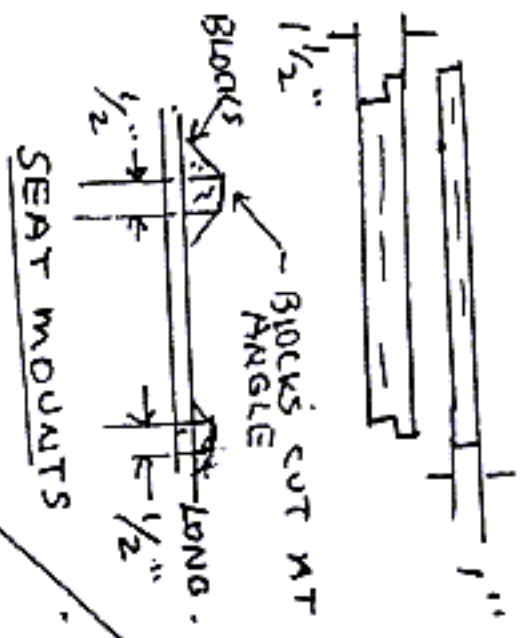


CUT FOAM FORMERS
OUT TO SIZE, THEN
GLASS BOTH SIDES
SPACES FIBER GLASS!



GLASS WOOD TO FOAM
ON F-2 & F-3 TO
MAKE COMPLETE UNIT

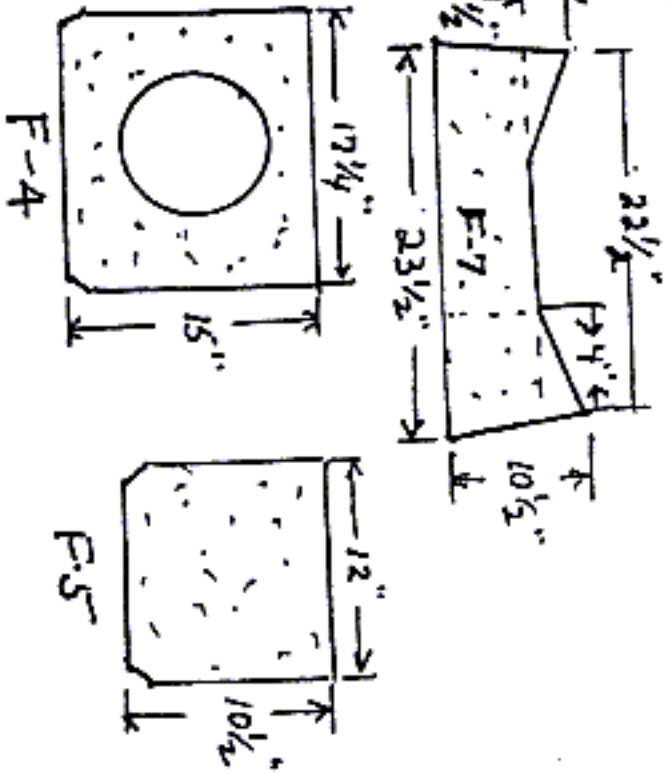
FUSELAGE FOAM
LAY OUT

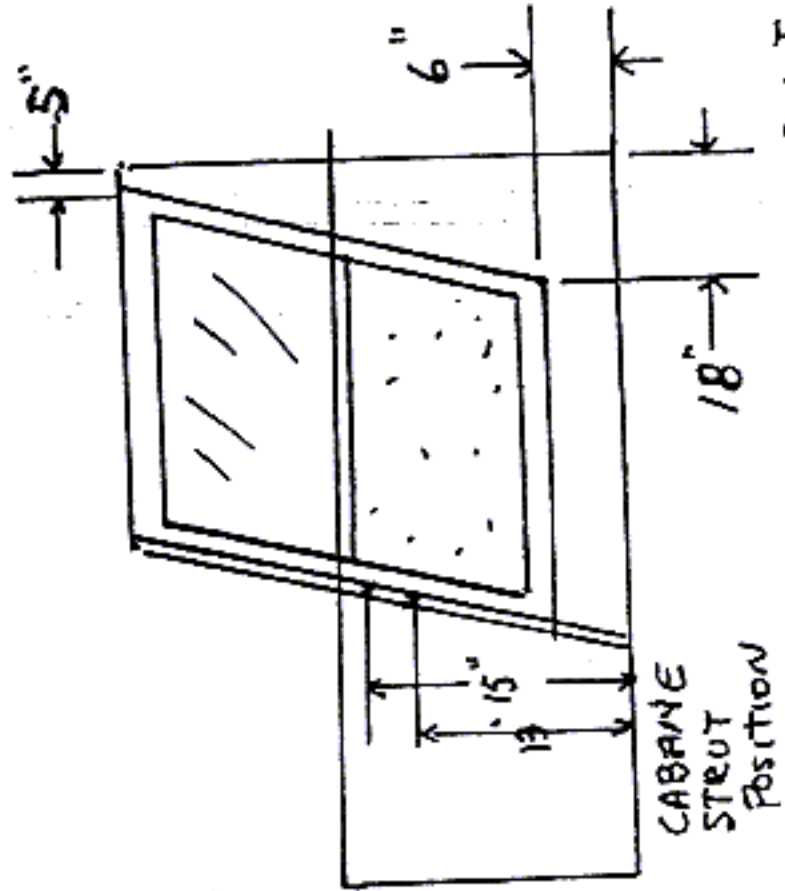
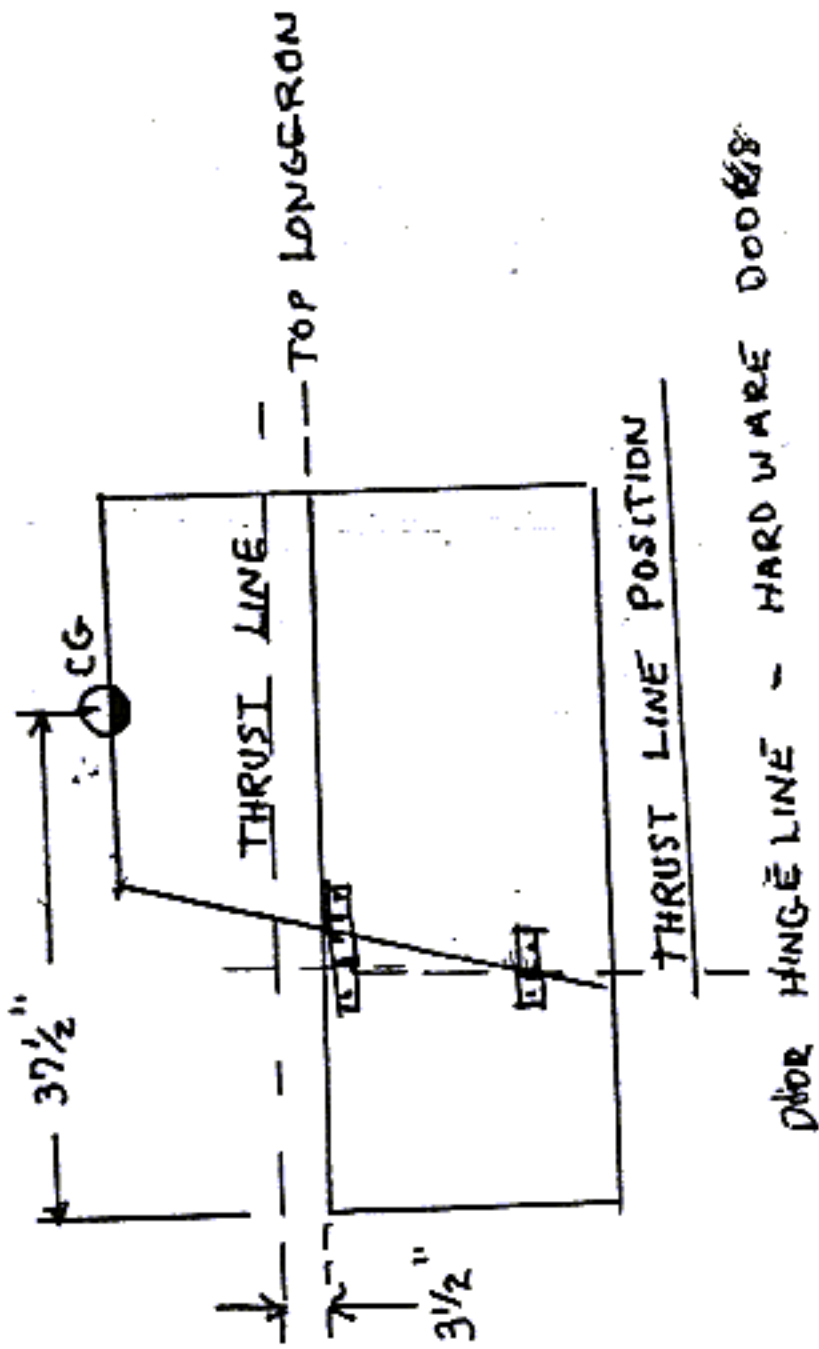


WINDSHIELD
POSITION

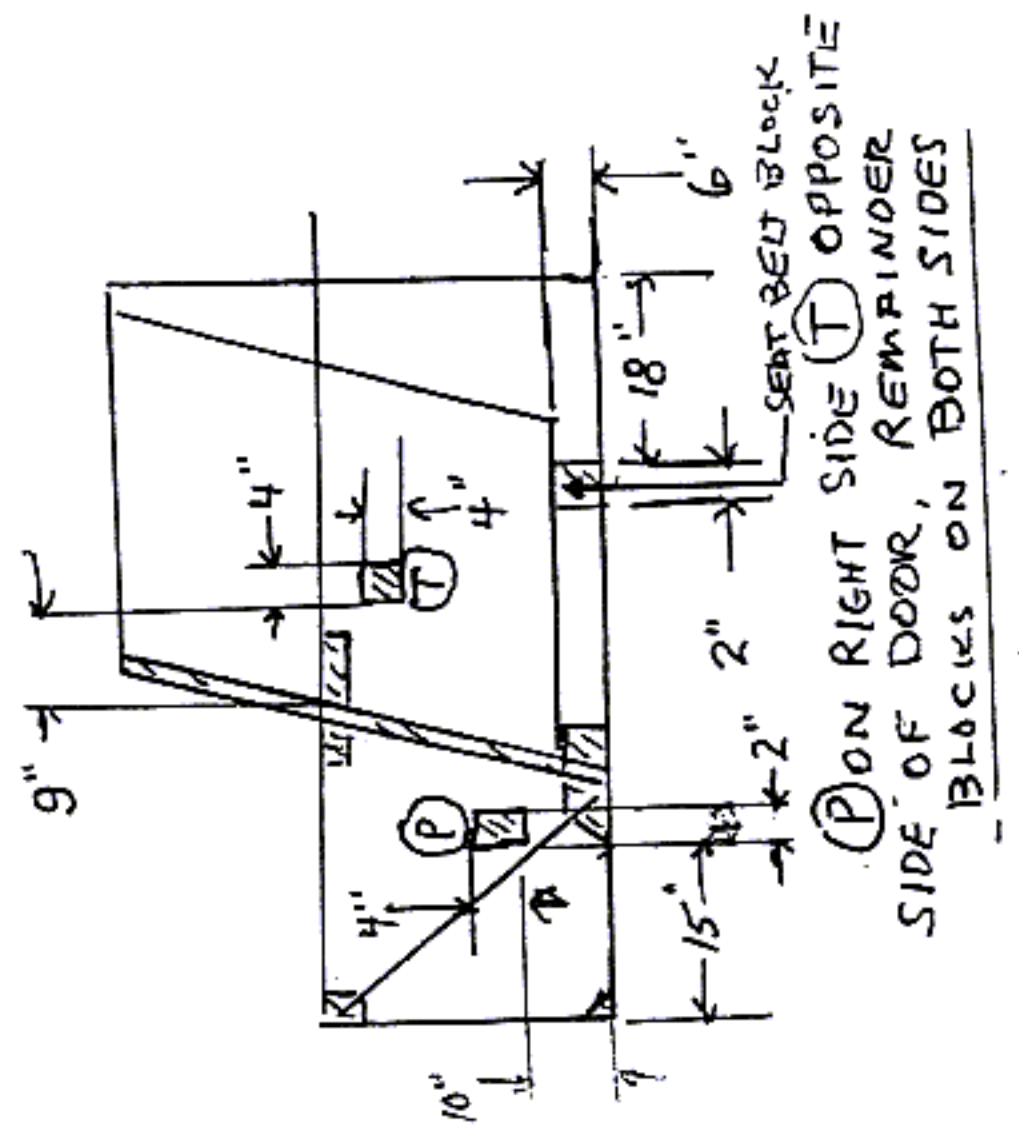
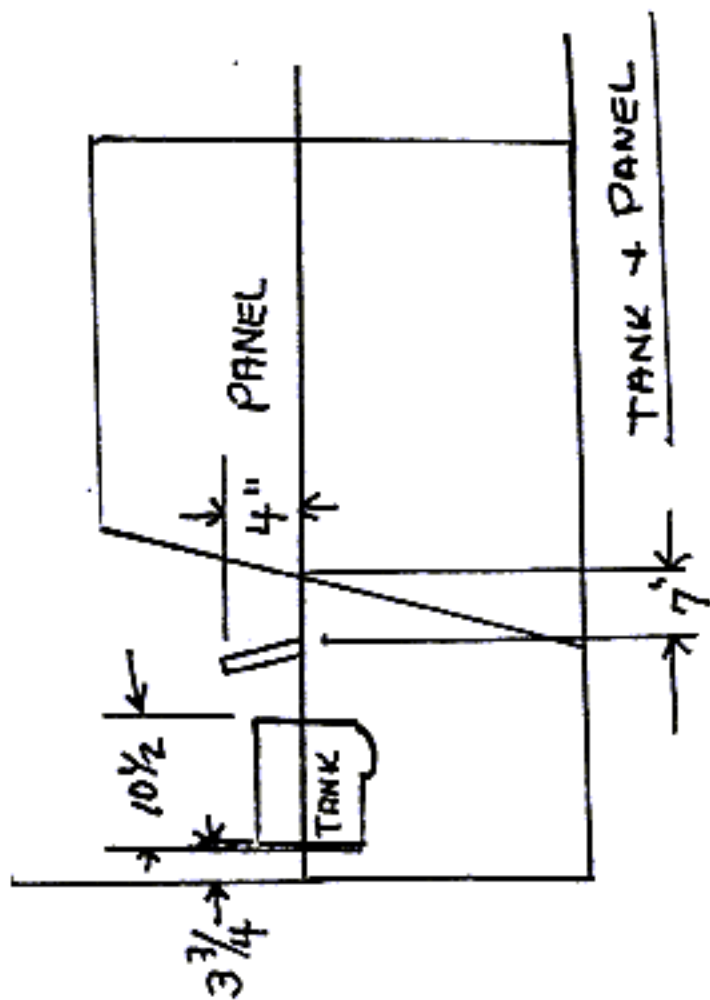
SEAT
POSITION

GEARE
POSITION

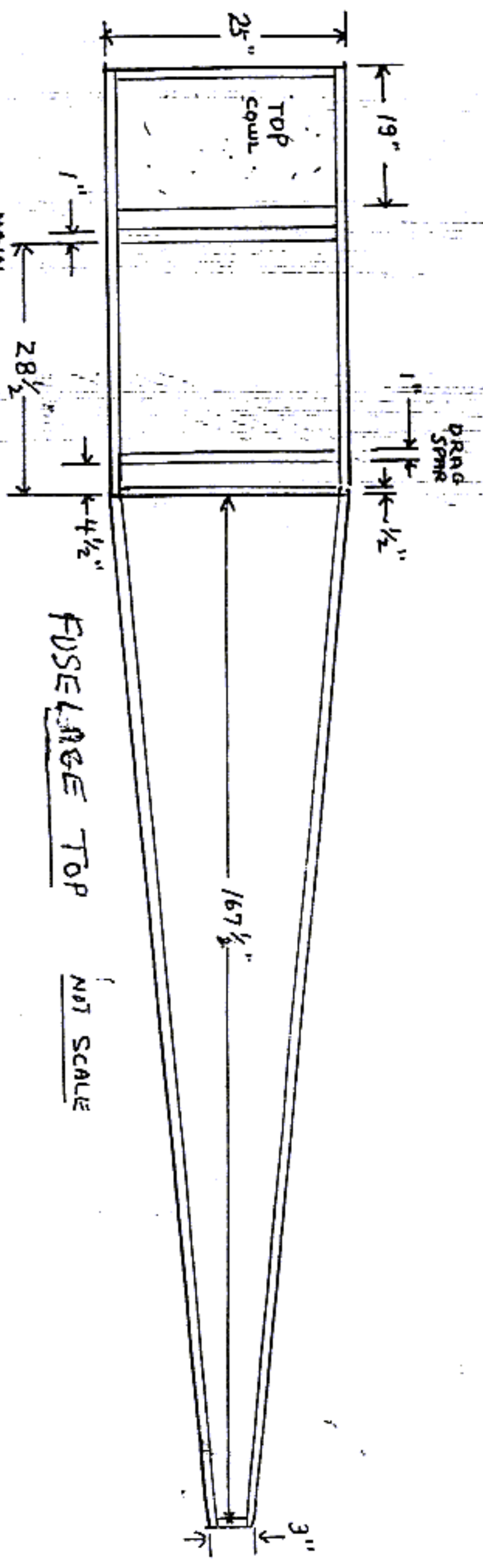




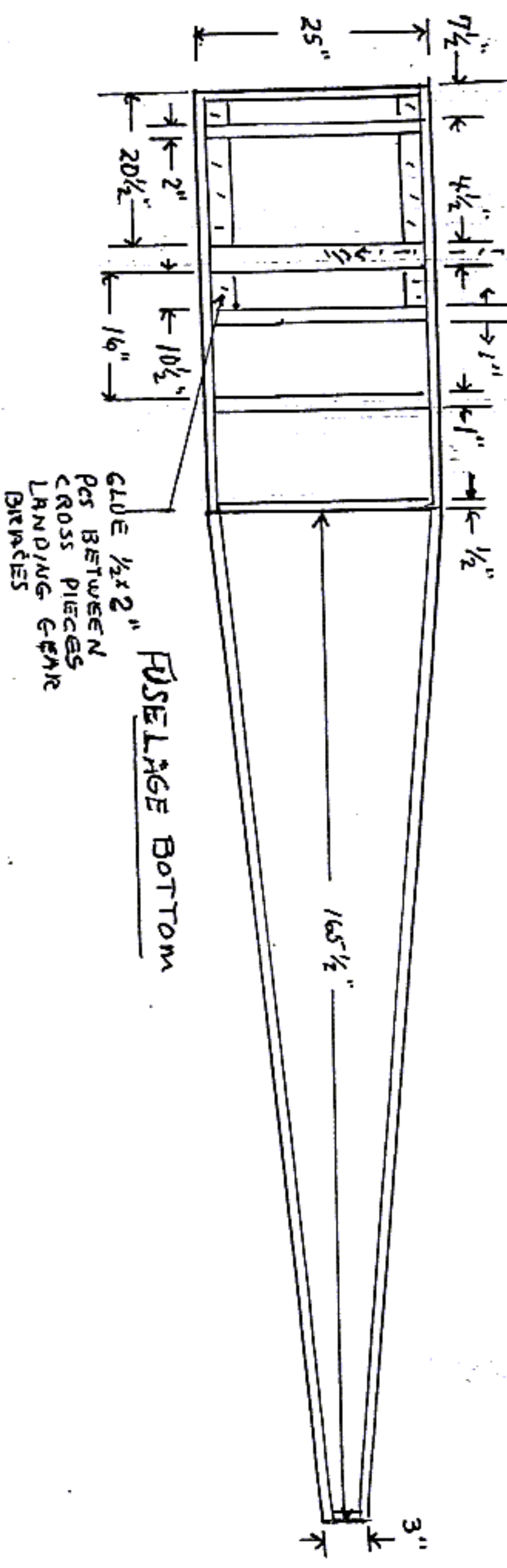
$\frac{1}{2}$ " x 2" FRAME BUILT
ON EITHER SIDE - YOUR CHOICE
DOOR 1 SIDE ONLY



SEAT BELT BLOCK
(P) ON RIGHT SIDE (T) OPPOSITE
SIDE OF DOOR, REMAINDER
BLOCKS ON BOTH SIDES

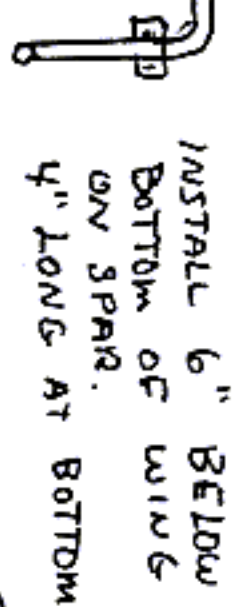


GEAR - STICK + STRUT MOUNT



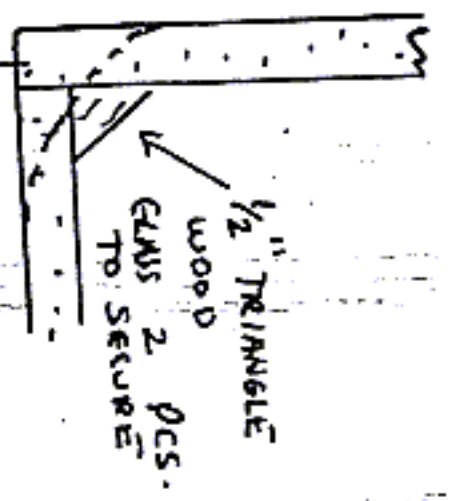
GLUE 1/2 x 2" PER BETWEEN CROSS PIECES LANDING GEAR BRACES

1/4" AUTO FUEL LINE

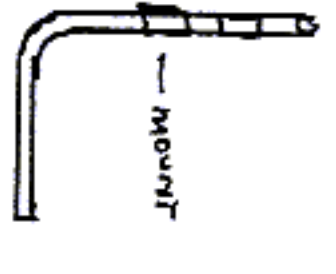


INSTALL 6" BELOW
BOTTOM OF WING
ON SPAR.
4" LONG AT BOTTOM

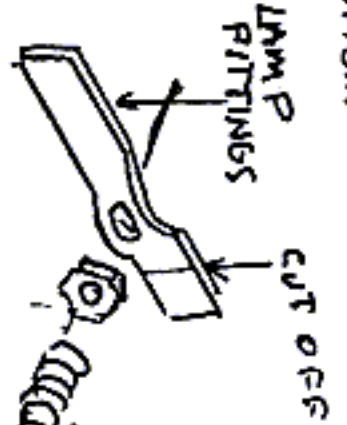
LOWER REAR LONGERON



1/2" TRIANGLE
WOOD
GLASS 2 PCS.
TO SECURE
CURED - CUT
4 SAND TO WOOD -
CUT INTO WOOD 1/8"
FOR GLASS TO SECURE

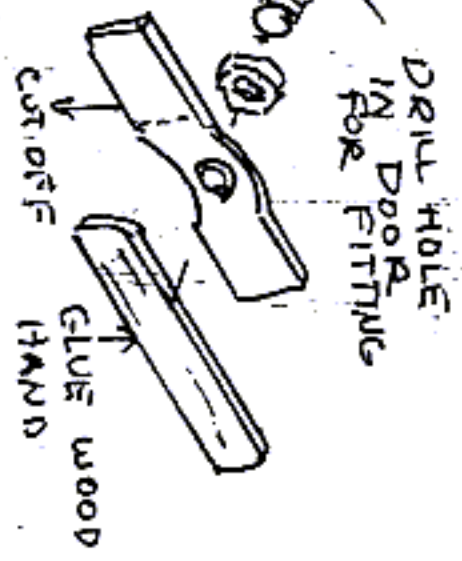


SIDE VIEW
PITOT
MOUNT



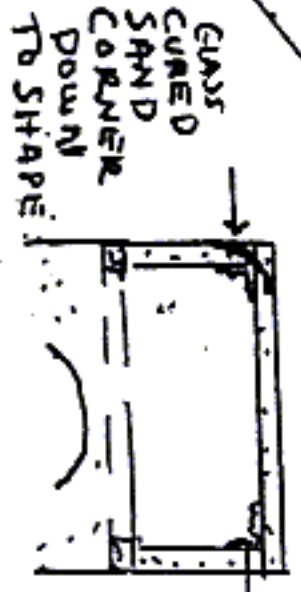
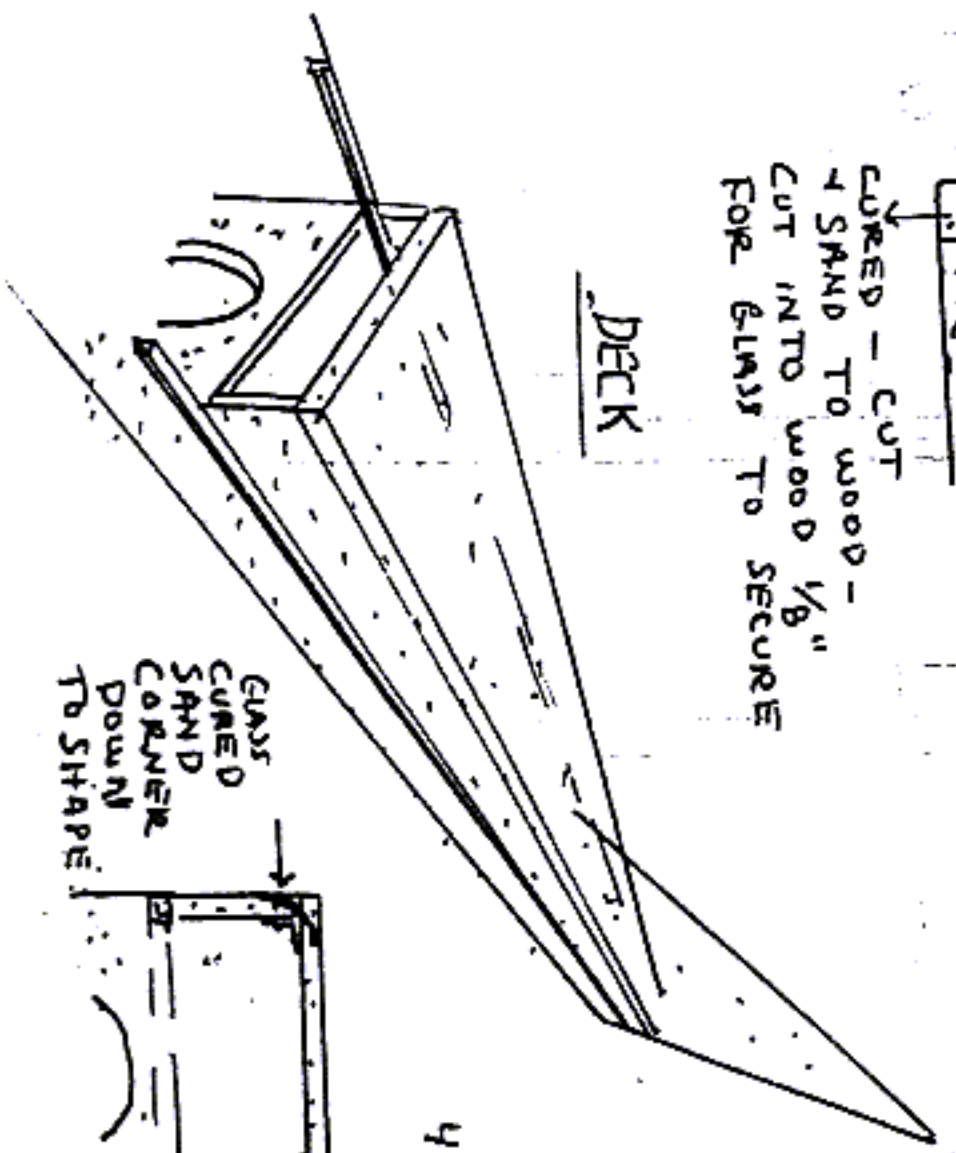
LAMP
FITTINGS
CUT OFF

DOOR HANDLE



DRILL HOLE
IN DOOR
FOR FITTING
GLUE WOOD
CUT OFF

DECK



GLASS
CURED
SAND
CORNER
DOWN
TO SHAPE

4 LAYER GLASS
CURED

2 - GLASS
STRIPS INSIDE

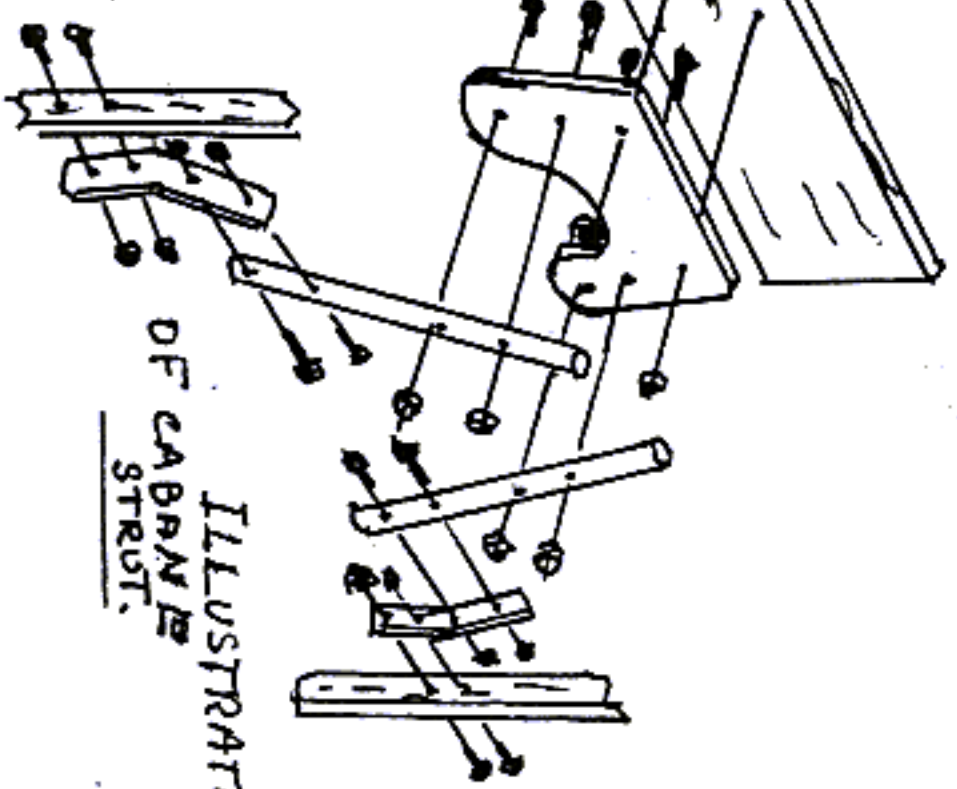
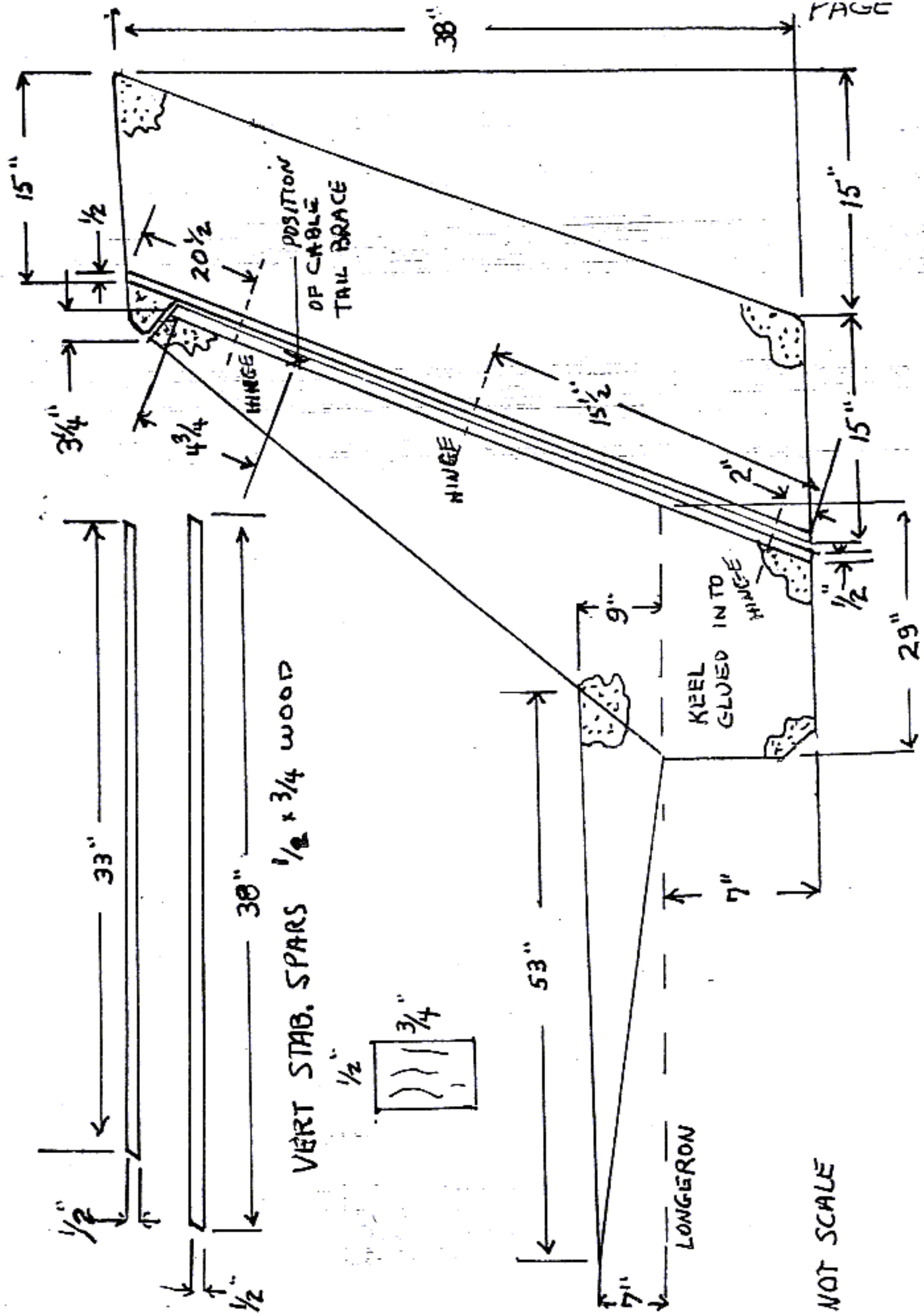


ILLUSTRATION
OF CABIN
STRUT.



VERT STAB SPARS 1/2 x 3/4 WOOD



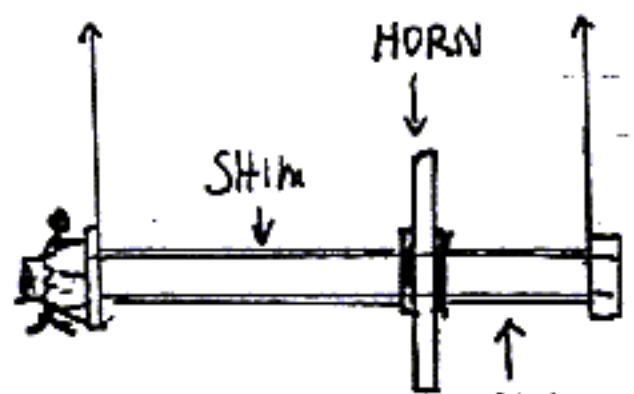
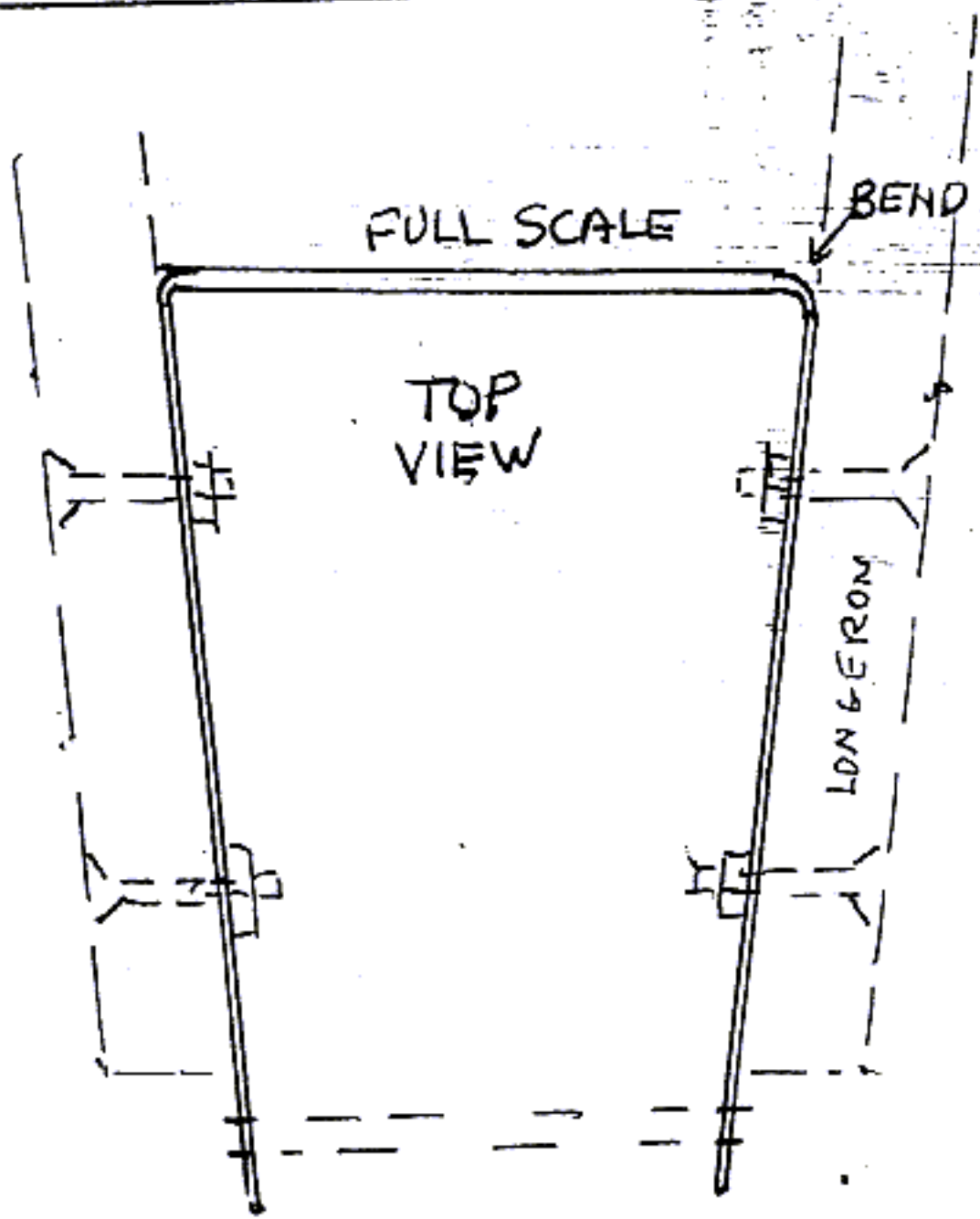
LONGERON

KEEL GLOUED INTO HINGE

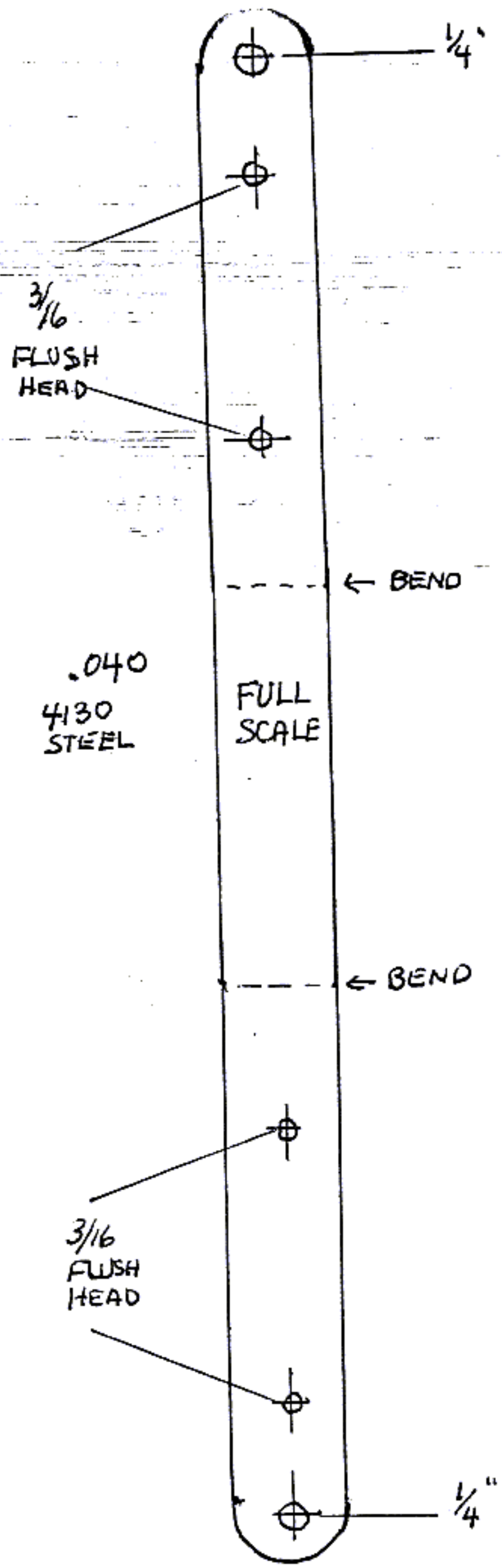
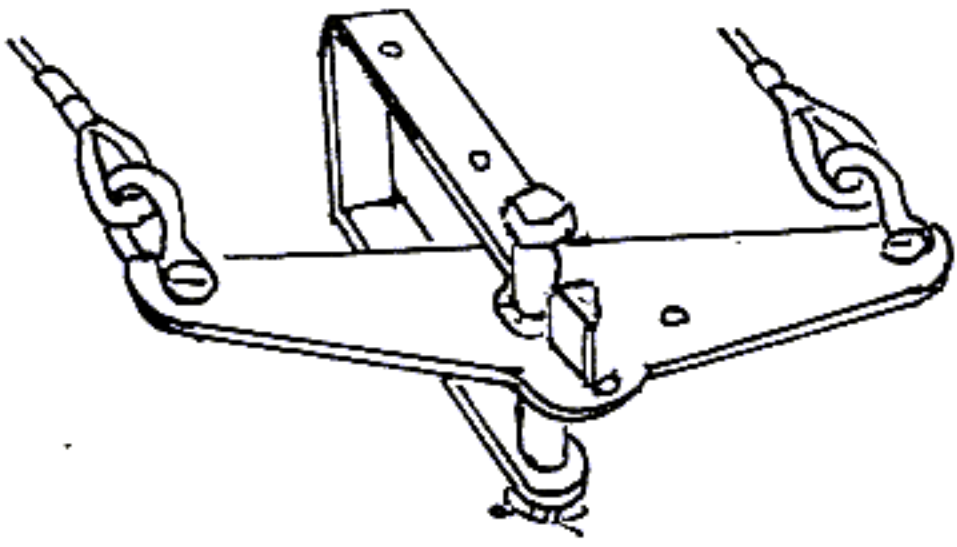
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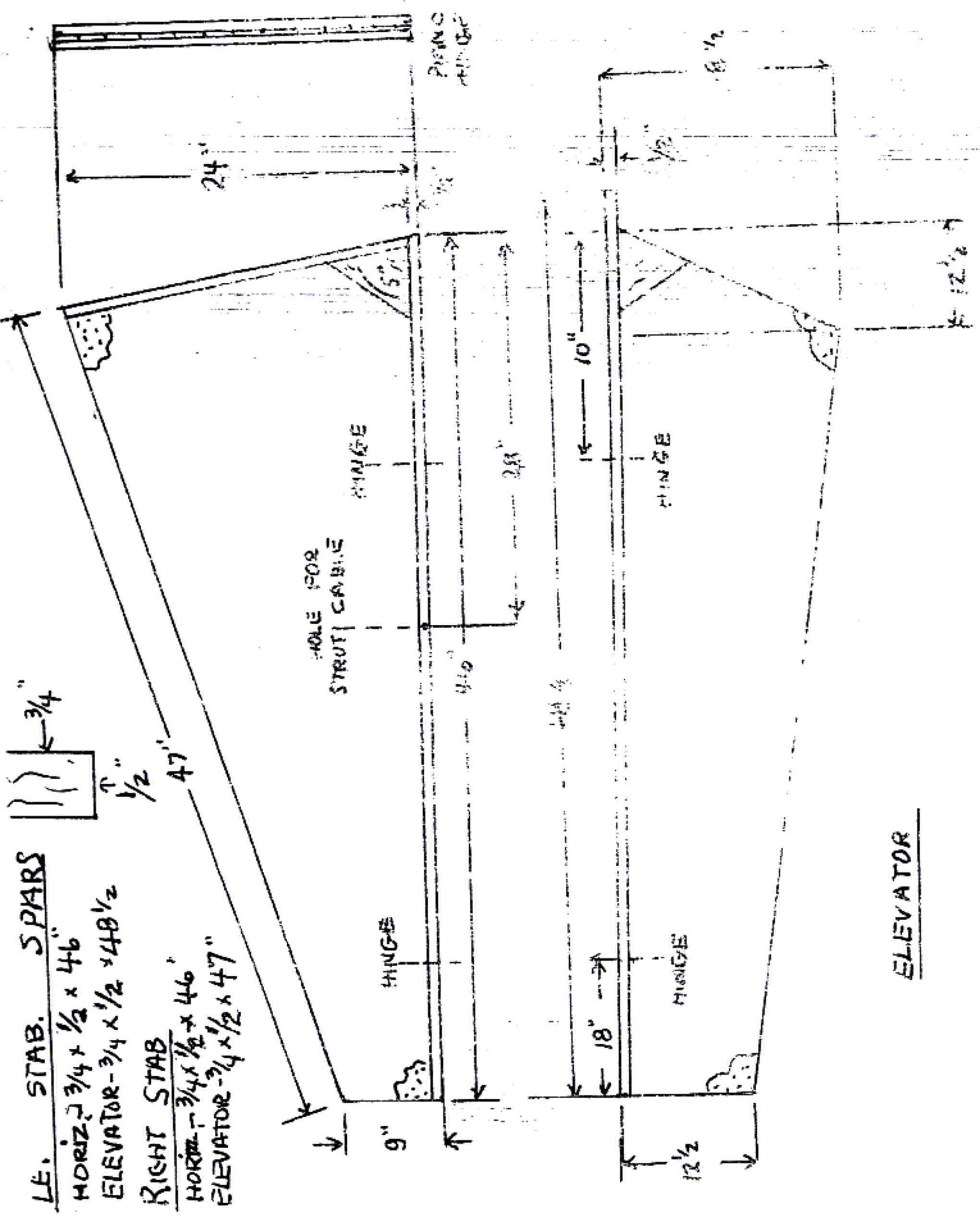
VERTICAL STAB

MOUNT FOR STAB CONTROL HORN



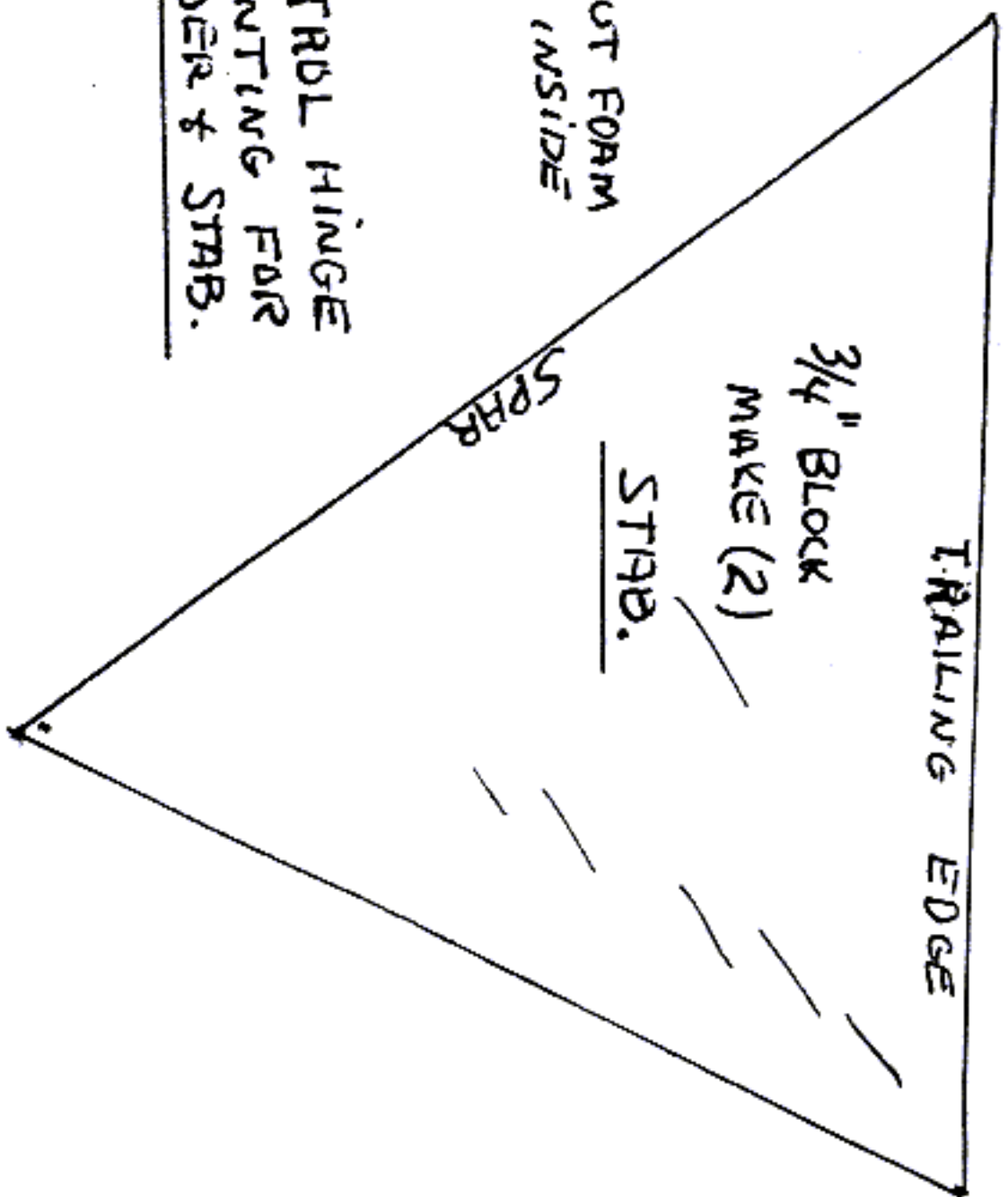
AN4-23
CASTLE NUT



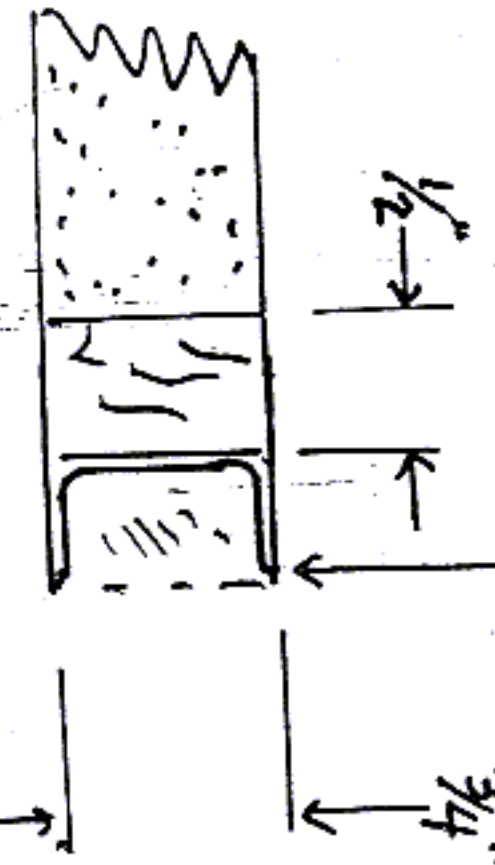


LE. STAB. SPARS
 HORIZ. $\frac{3}{4} \times \frac{1}{2} \times 46$
 ELEVATOR $\frac{3}{4} \times \frac{1}{2} \times 48\frac{1}{2}$
 RIGHT STAB
 HORIZ. $\frac{3}{4} \times \frac{1}{2} \times 46$
 ELEVATOR $\frac{3}{4} \times \frac{1}{2} \times 47$

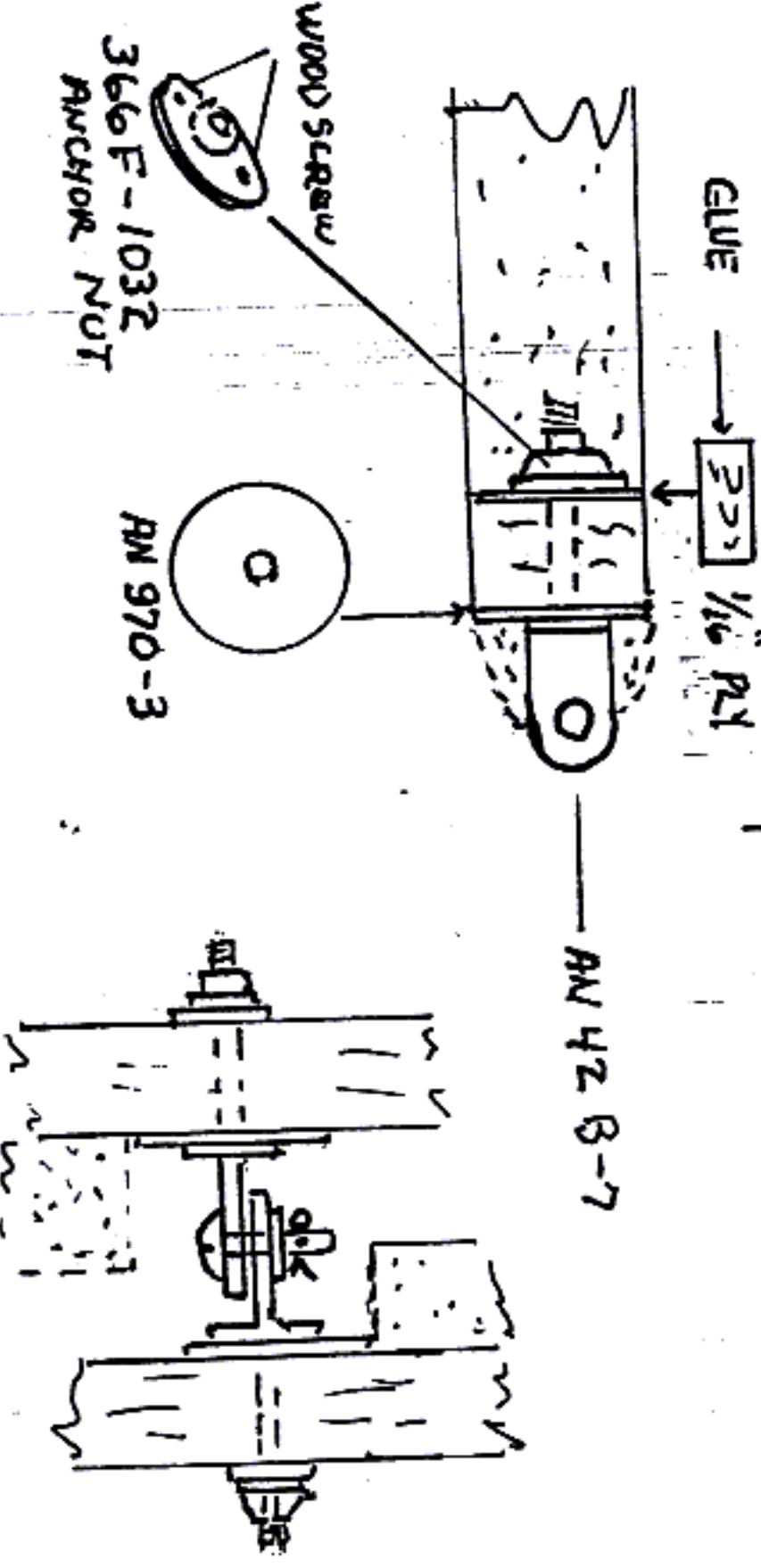
ELEVATOR



GLASS 1/2" OVERLAP
 AFTER CURED, DIG OUT FORM
 AND GLASS INSIDE



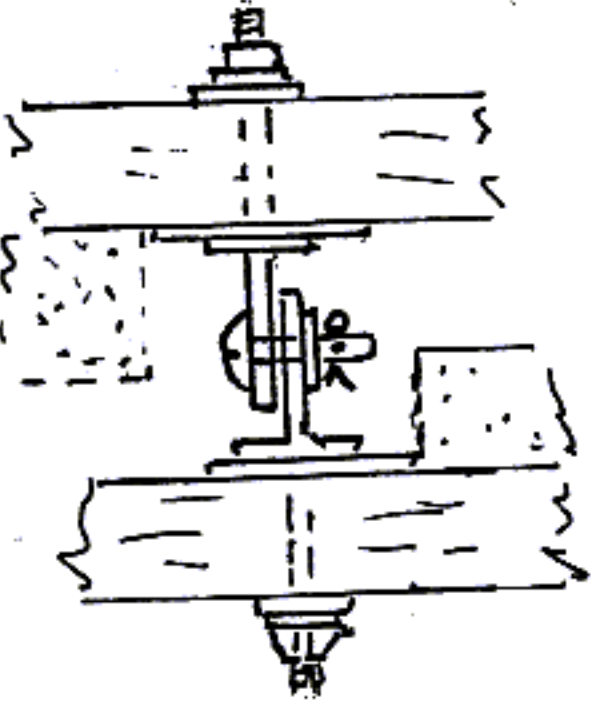
CONTRBL HINGE
 MOUNTING FOR
 RUDDER & STAB.

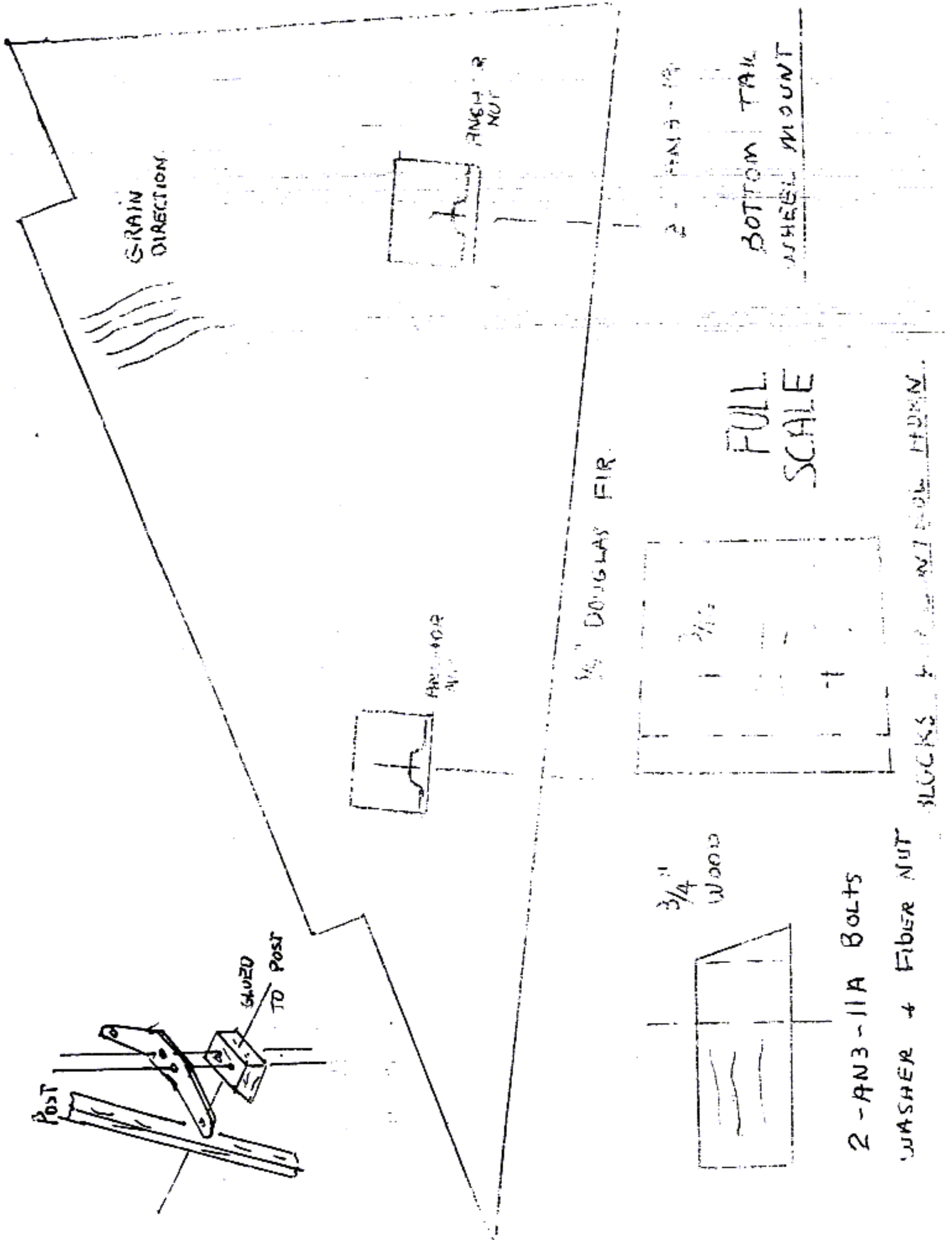


WOOD SCREW
 366F-1032
 ANCHOR NUT

AN 970-3

AN 42 B-7





GRAIN DIRECTION

FIBER NUT

2 - AN3-11A

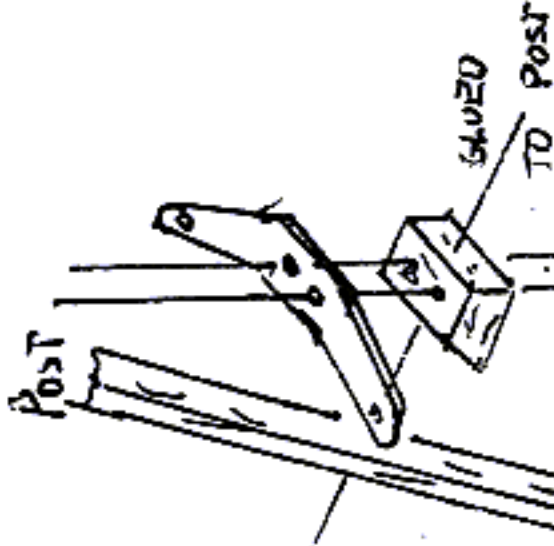
BOTTOM TAIL WASHER MOUNT

3/4" DOUGLAS FIR

FULL SCALE

FIBER NUT

BLOCKS TO BE MOUNTED HEREIN



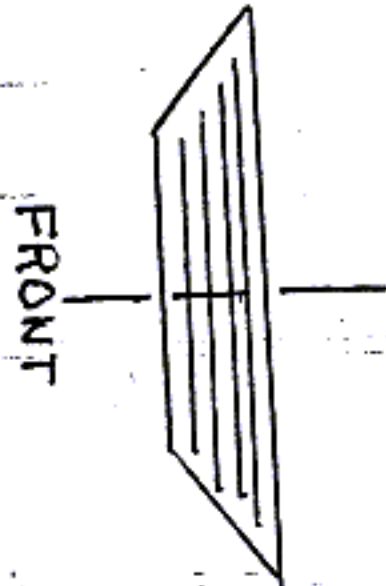
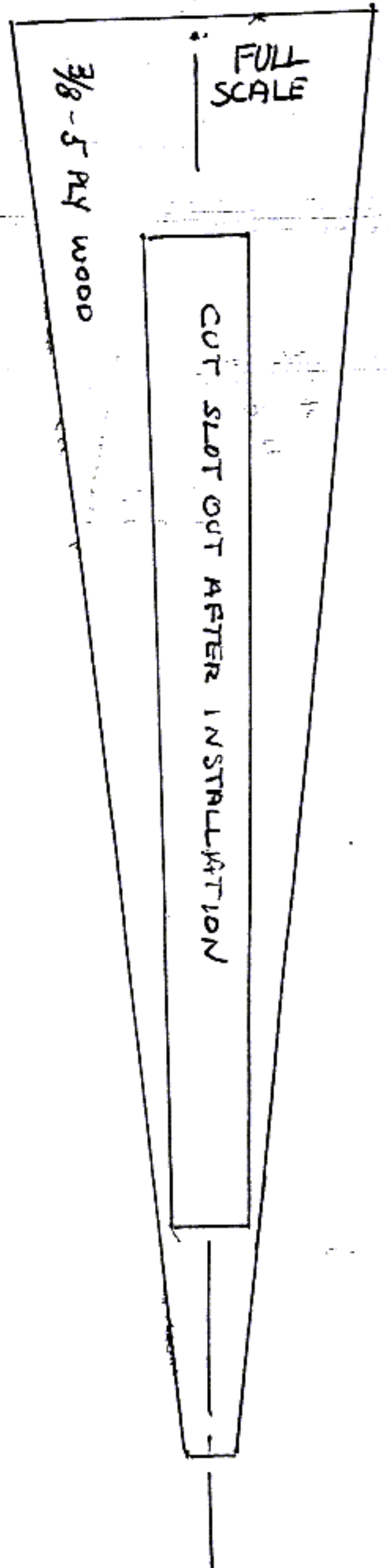
Post

SAVED TO POST

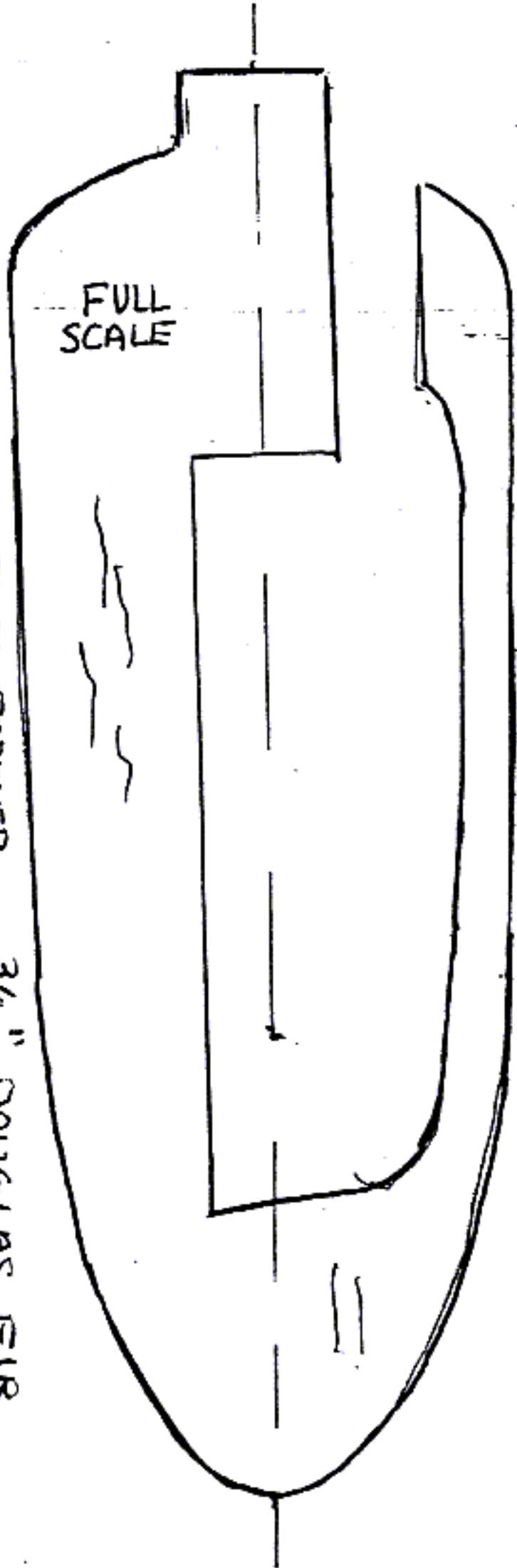
3/4" Wood

2 - AN3-11A BOLTS

WASHER + FIBER NUT



BOTTOM AND REAR
FUSE LAMP MOUNTING POST



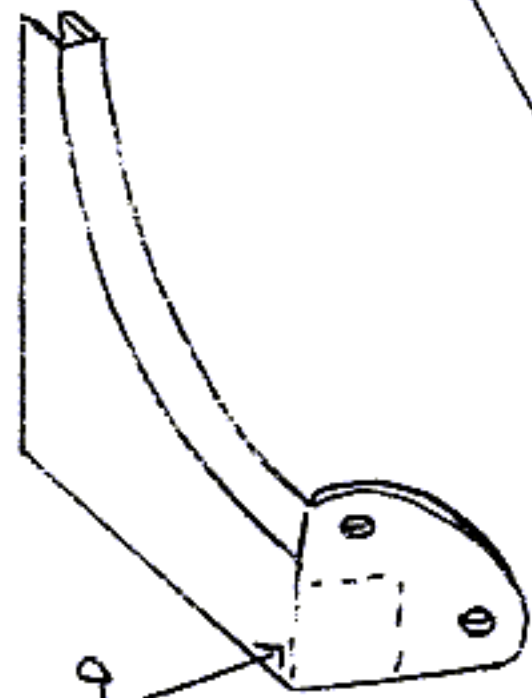
TAIL POST FORMER 3/4" DOUGLAS FIR

RIGHT ELEVATOR FITTING TO CONTROL

HDRN



.040 STEEL STRAP



9/16
H-21

WELD

STEEL STRIP

WELD

SCALE
FITTING

STRIP
RIGHT

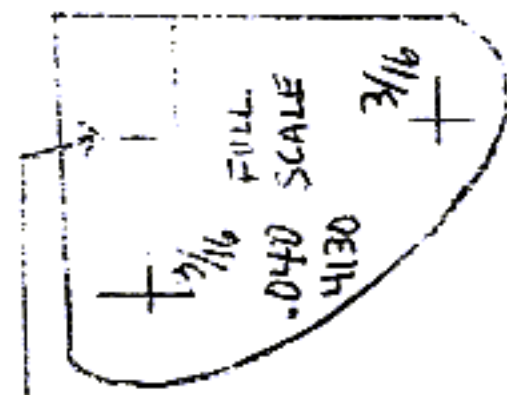
9/16

WELD

STEEL STRIP
.040

3/16

MAKE
TWO(2)



WELD

LEFT, EVAPTOR FITTING
TO CONTROL HORN

NOT SCALE

.040 STEEL STRAP 3/4"

8"

3/16
AN 3-11

OLD
4130
STEEL

FULL
SCALE
LEFT
STRAB.
LEFT

3/16

STEEL STRAP

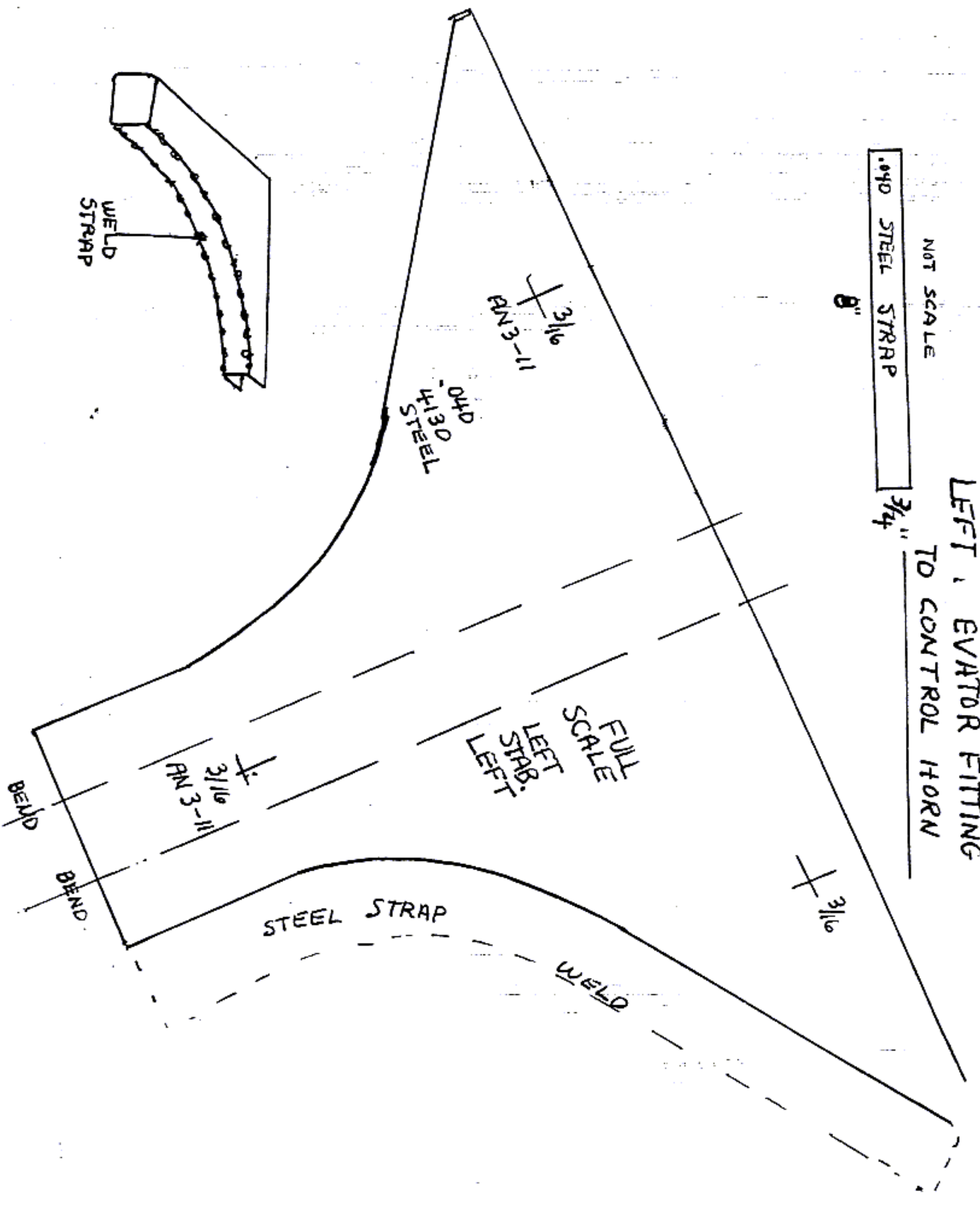
WELD

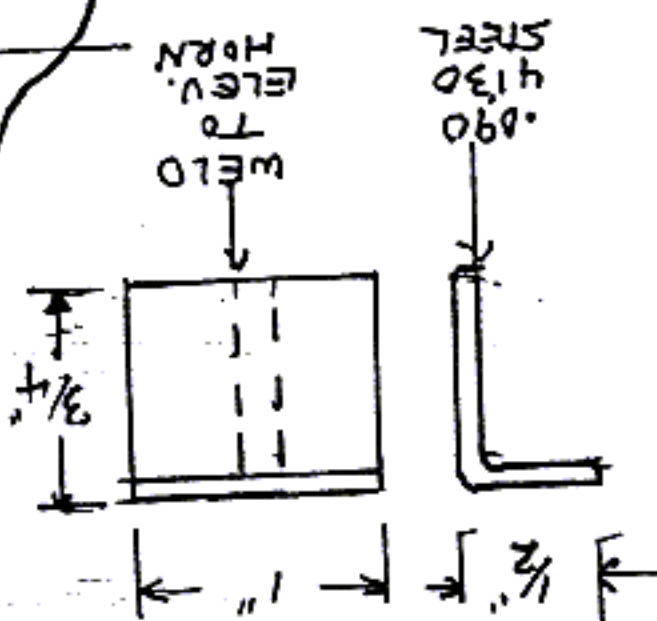
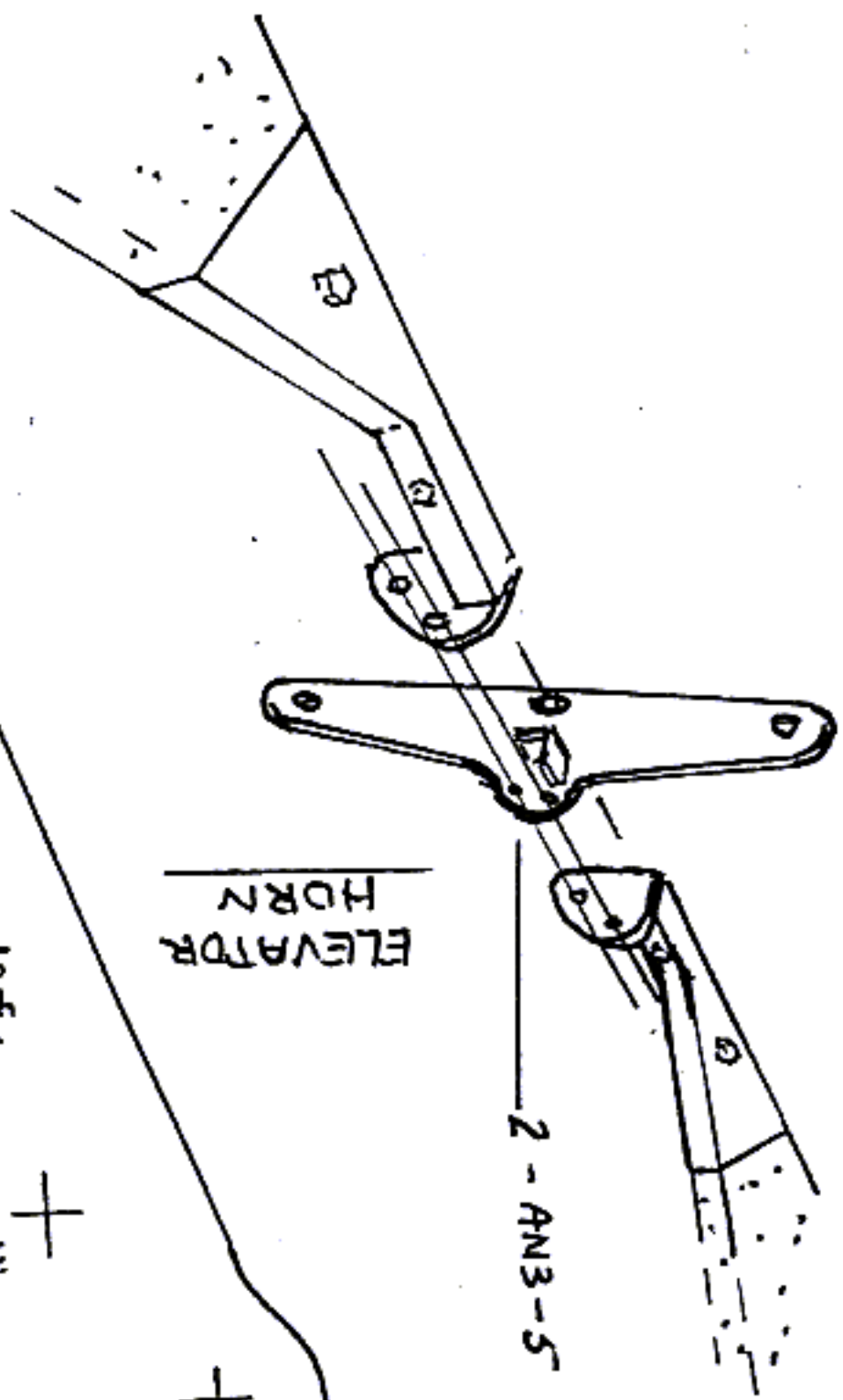
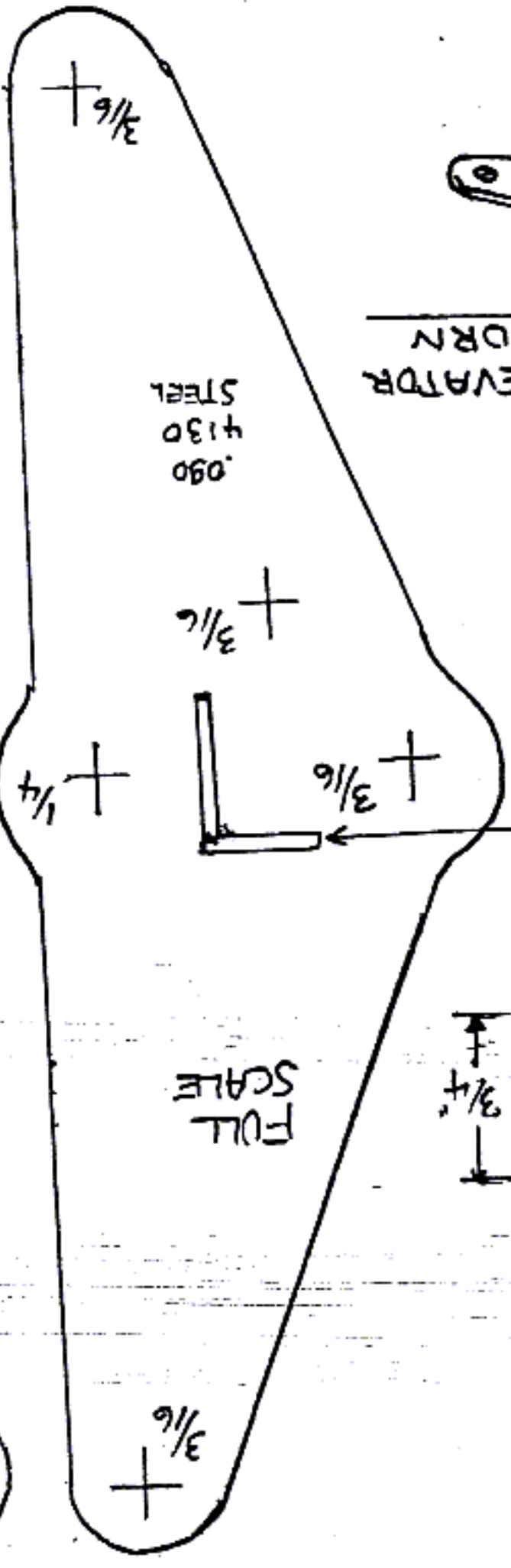
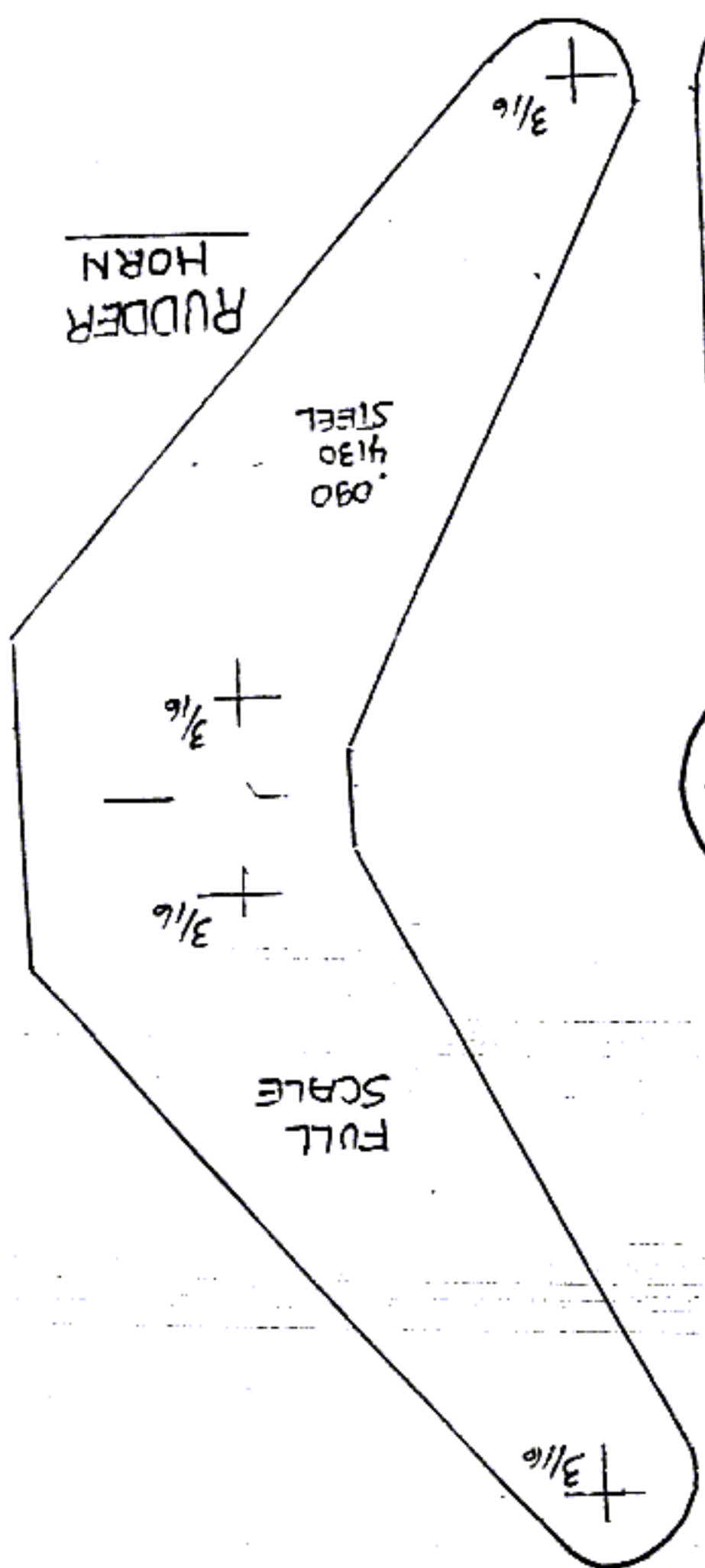
WELD
STRAP

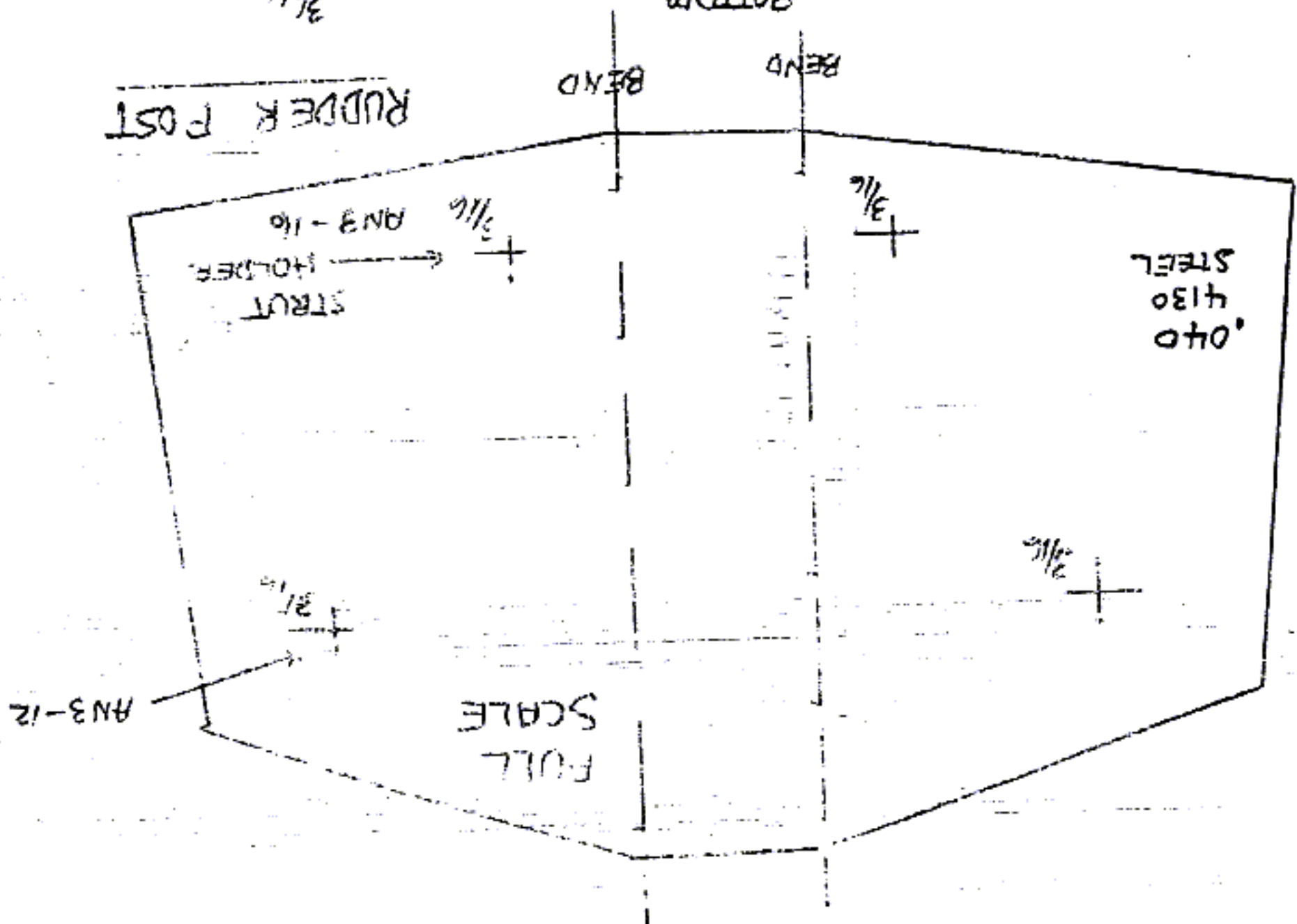
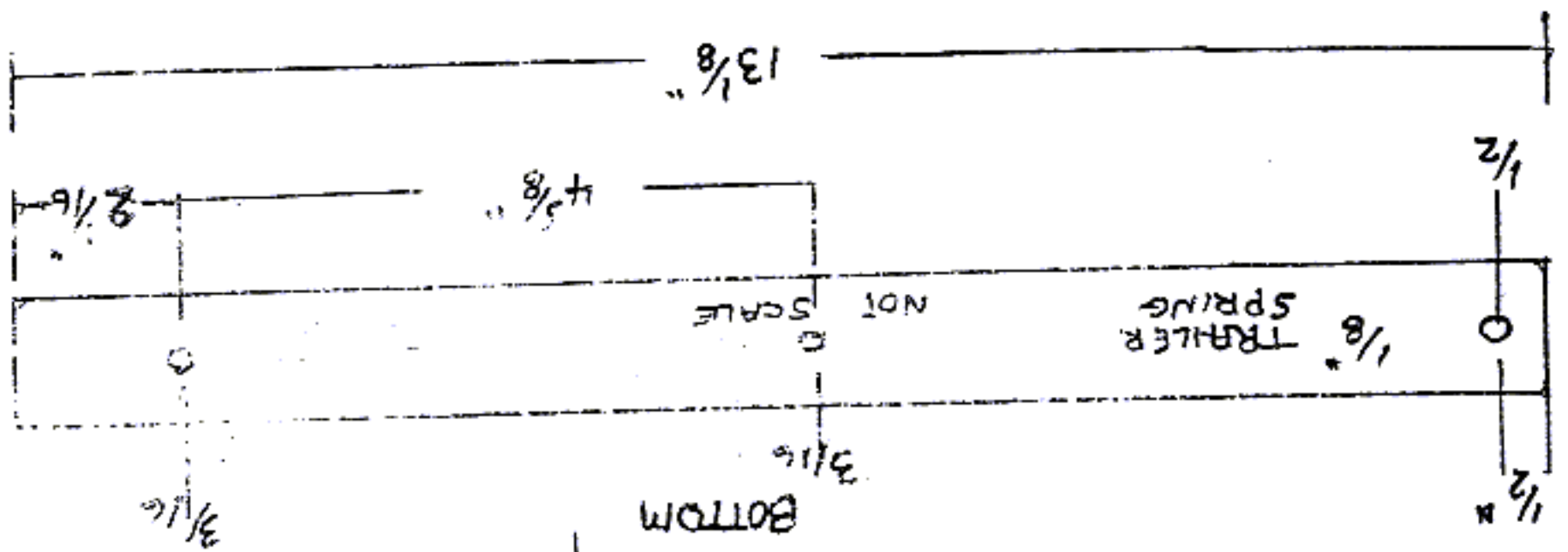
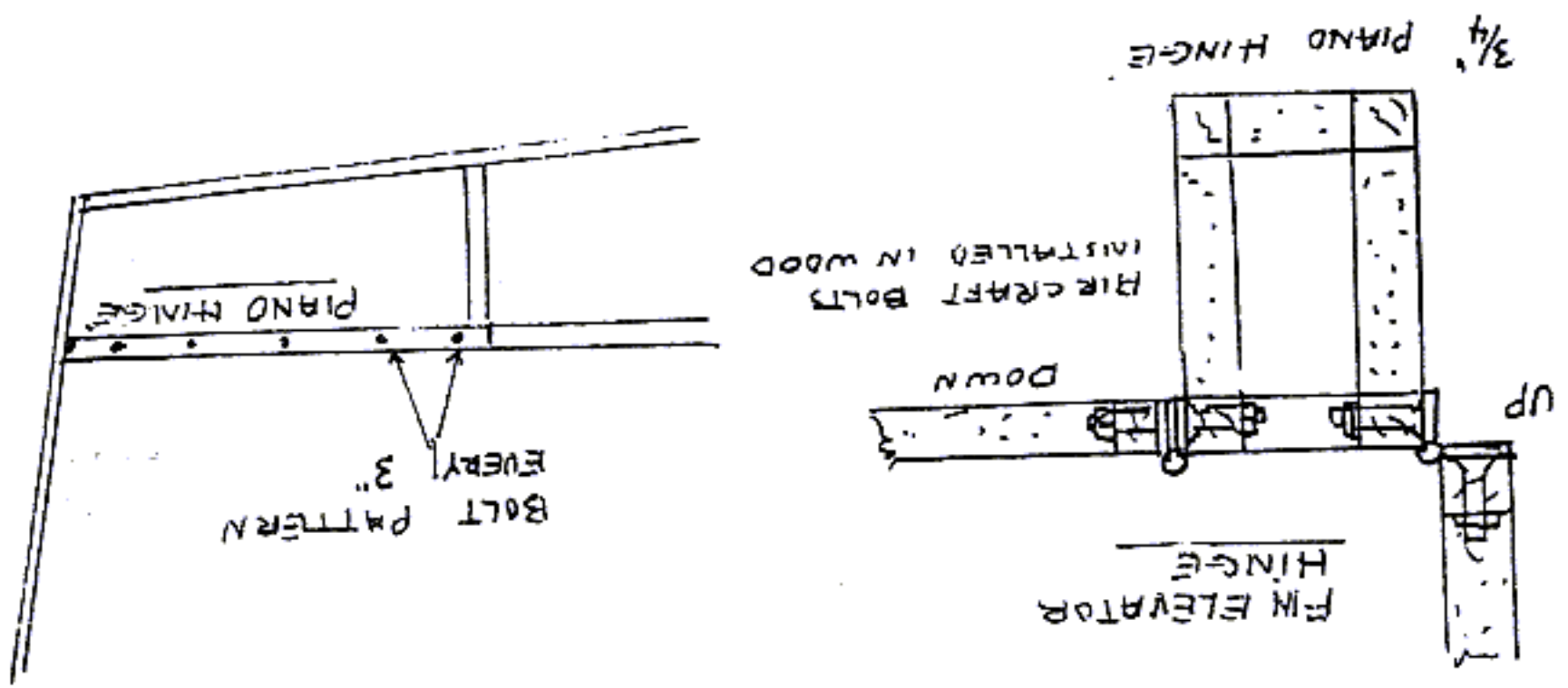
BEND

BEND

3/16
AN 3-11

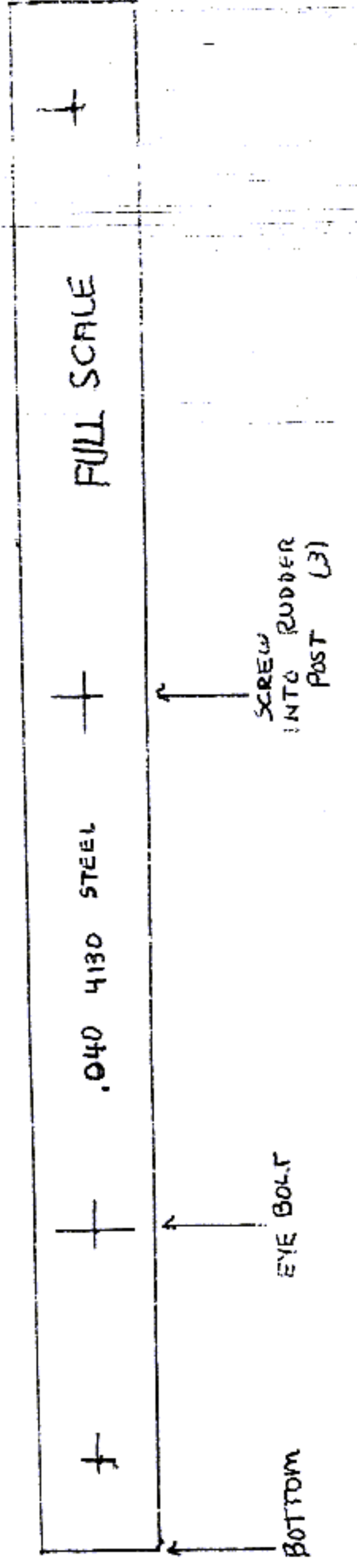




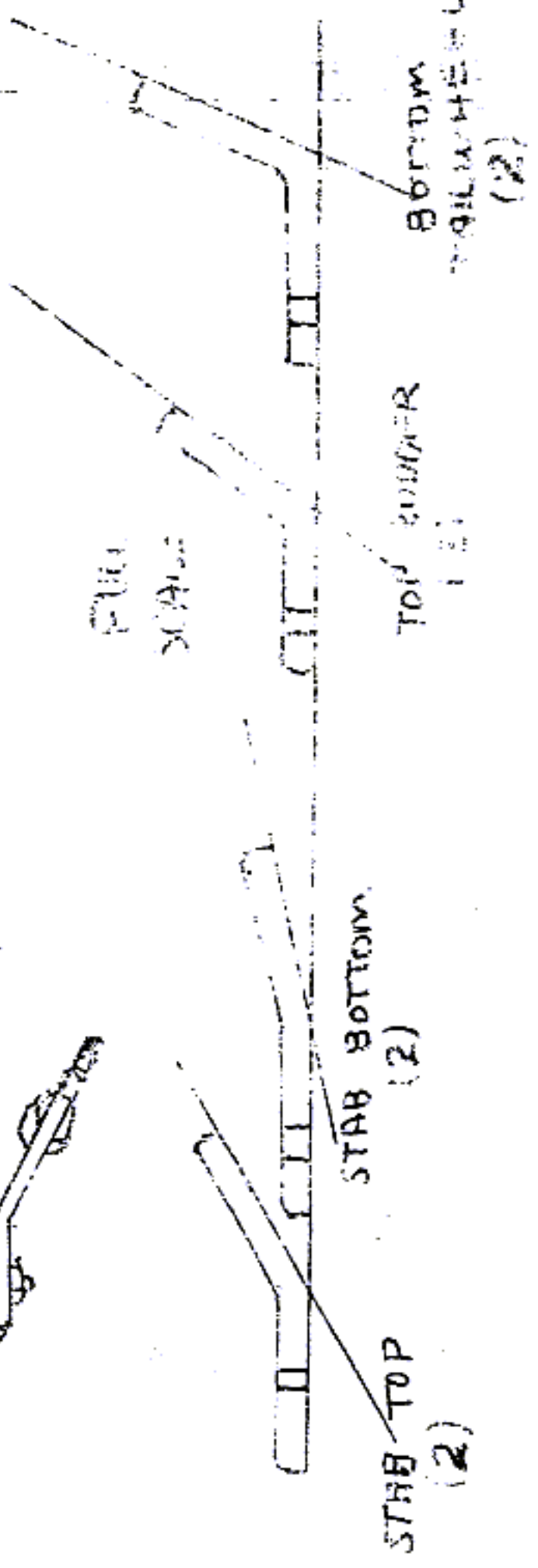
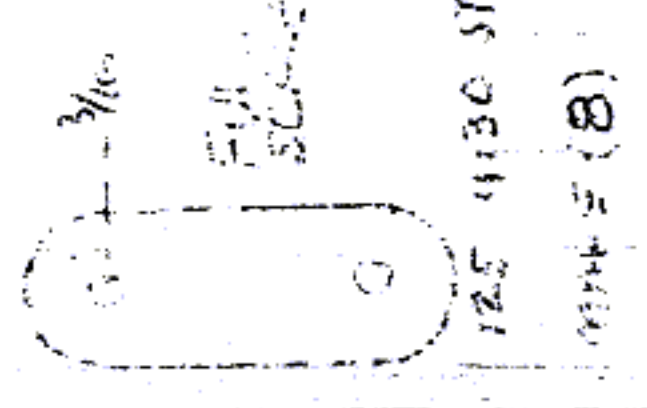
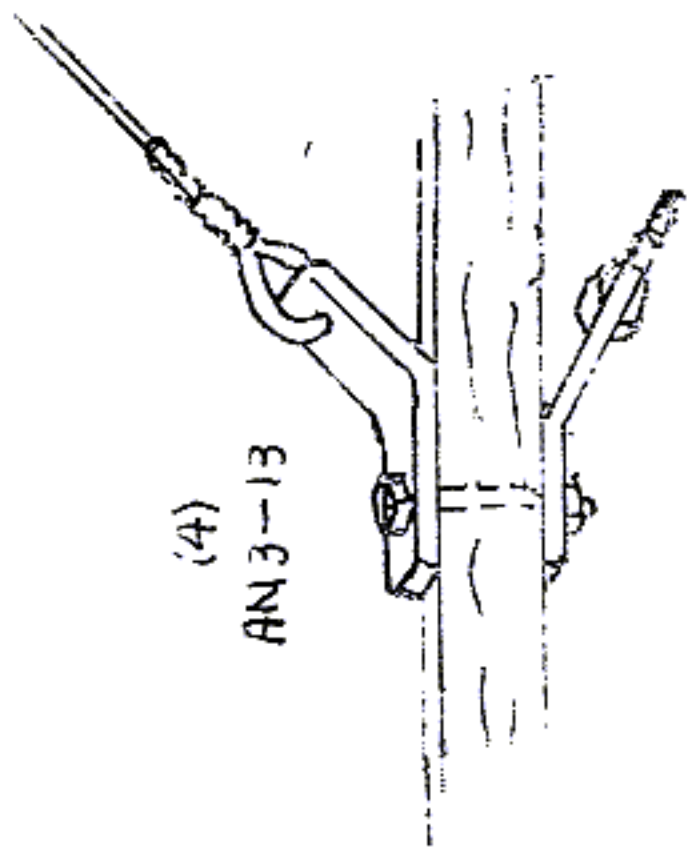
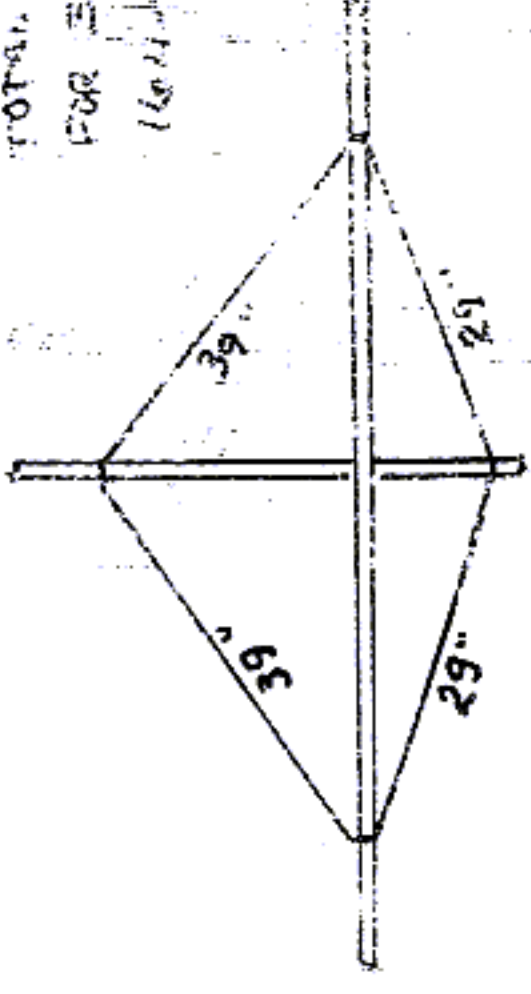


STABILIZER AND RUDDER

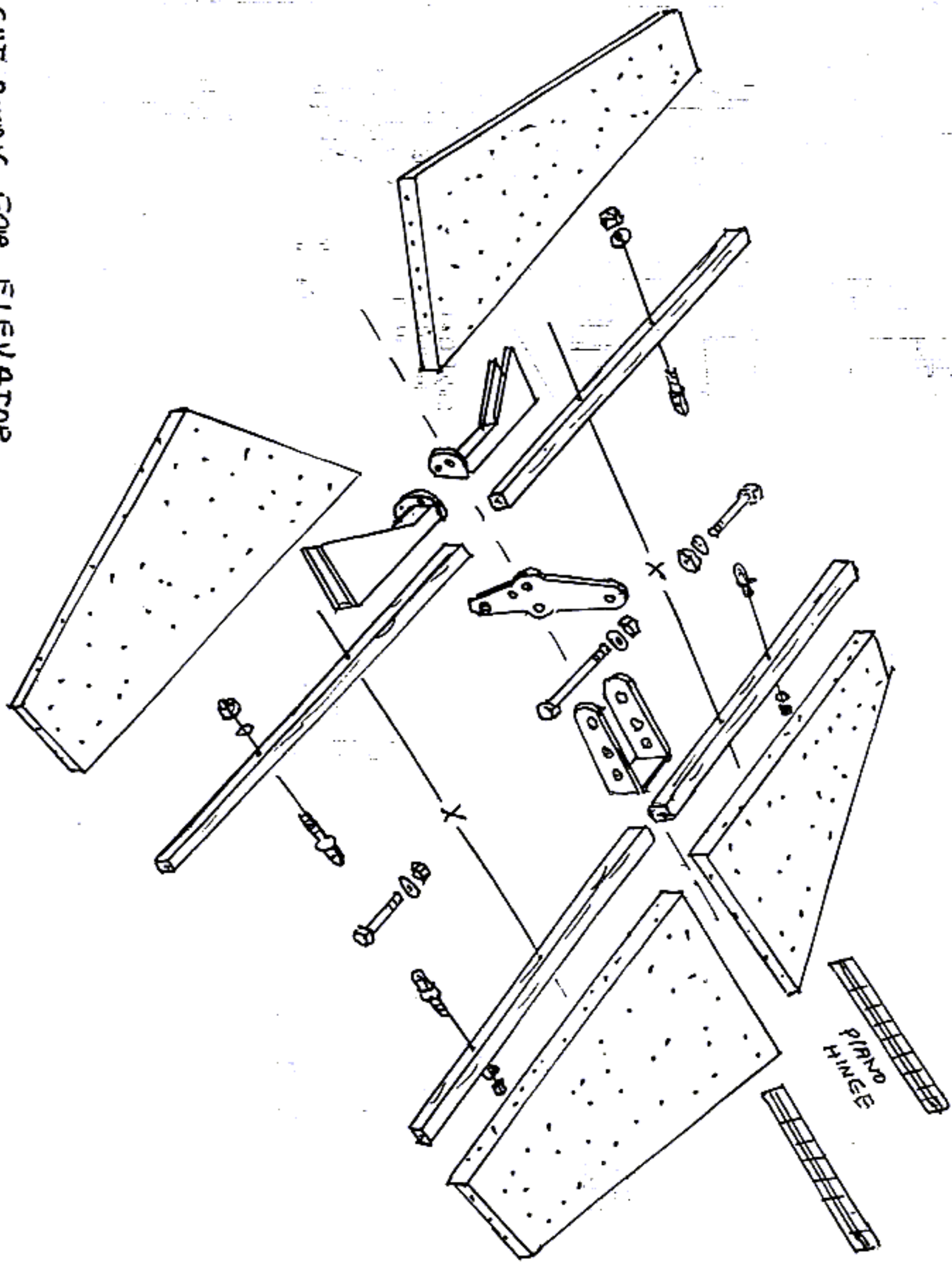
WATER

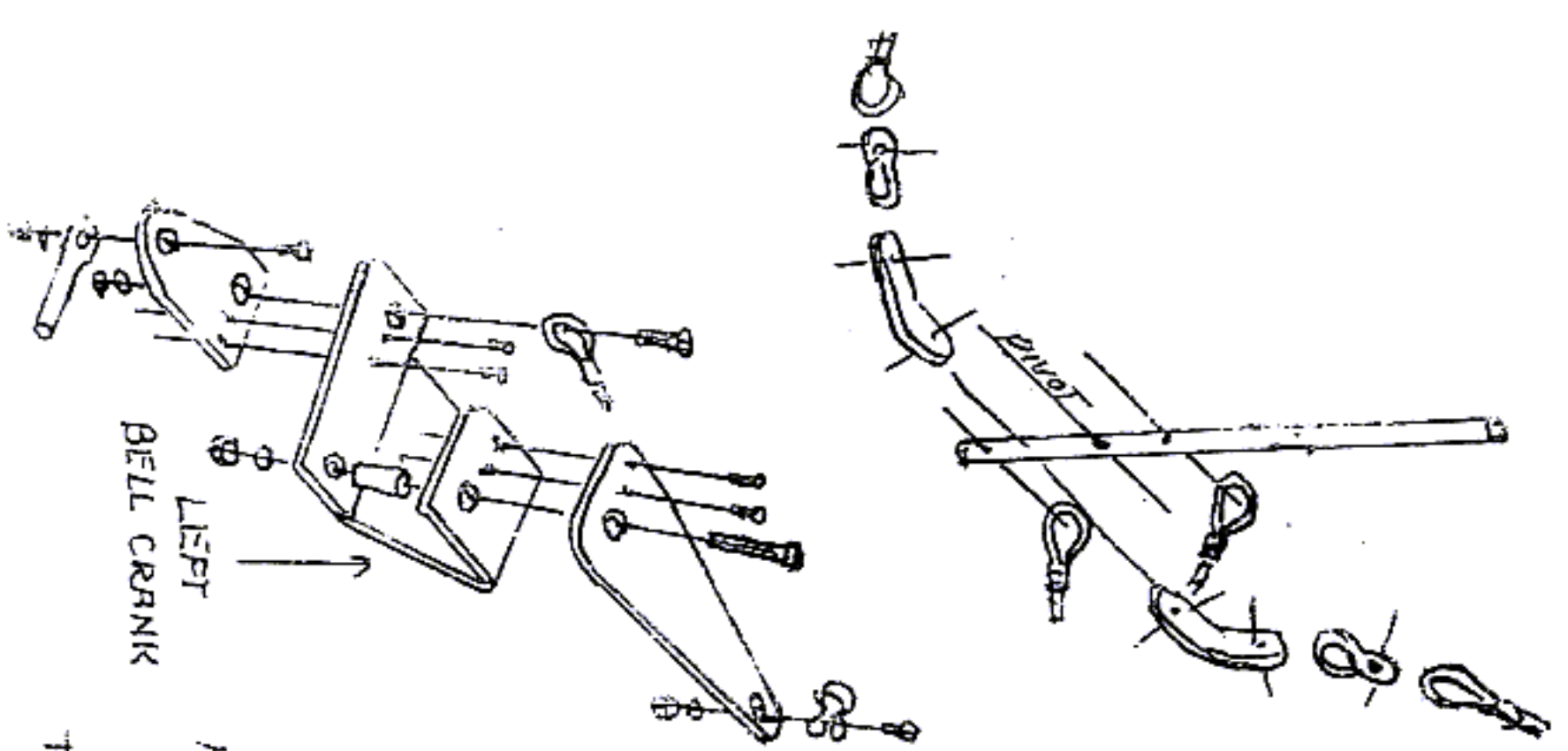


TOTAL 3/4" CABLE
FOR STAB & RUDDER
(6) 1/4" DIA



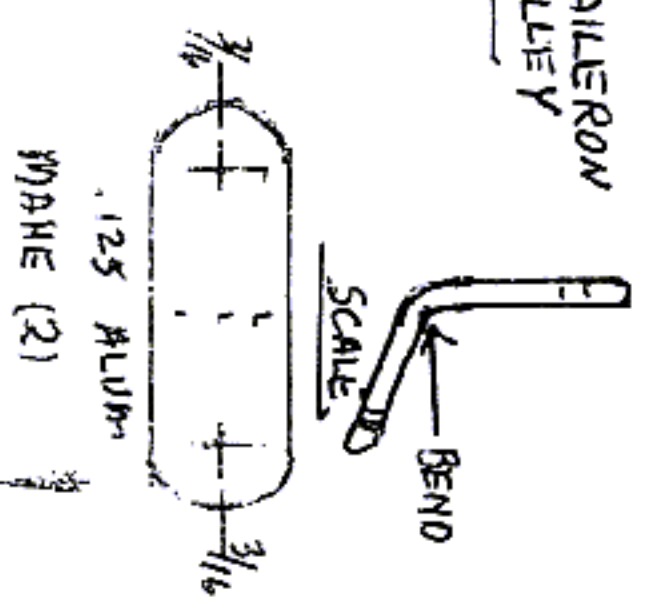
CUT AWAY FOR ELEVATOR
FOLDING SYSTEM





LEFT
BELL CRANK

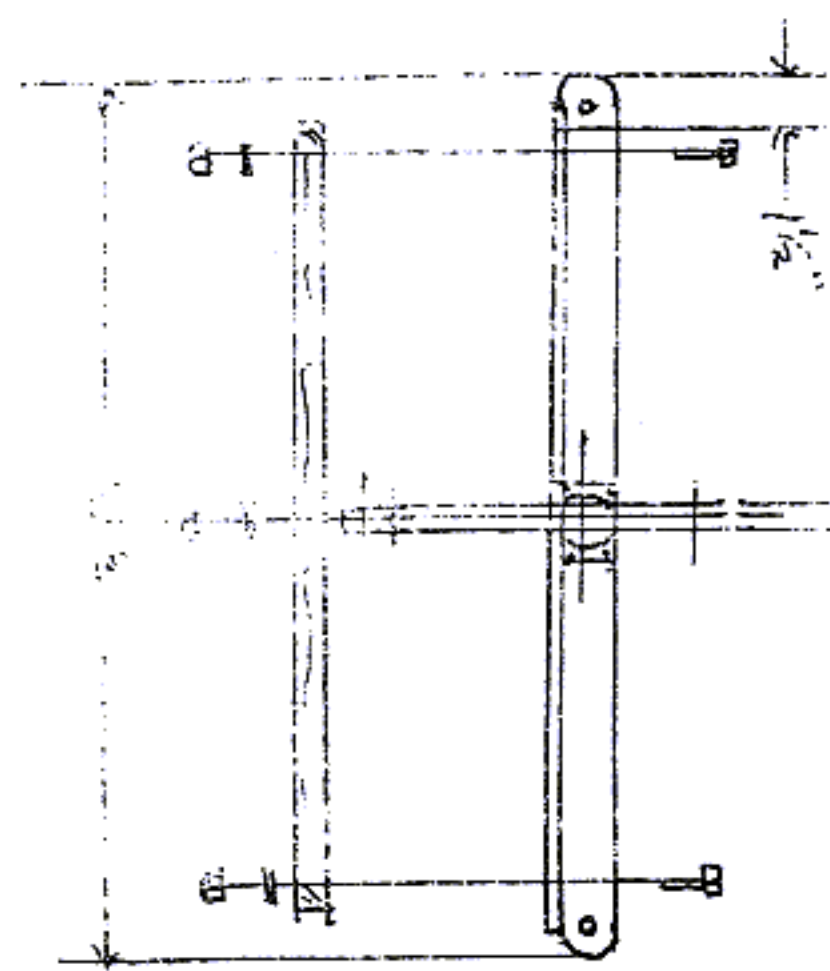
TO AILERON
PULLEY



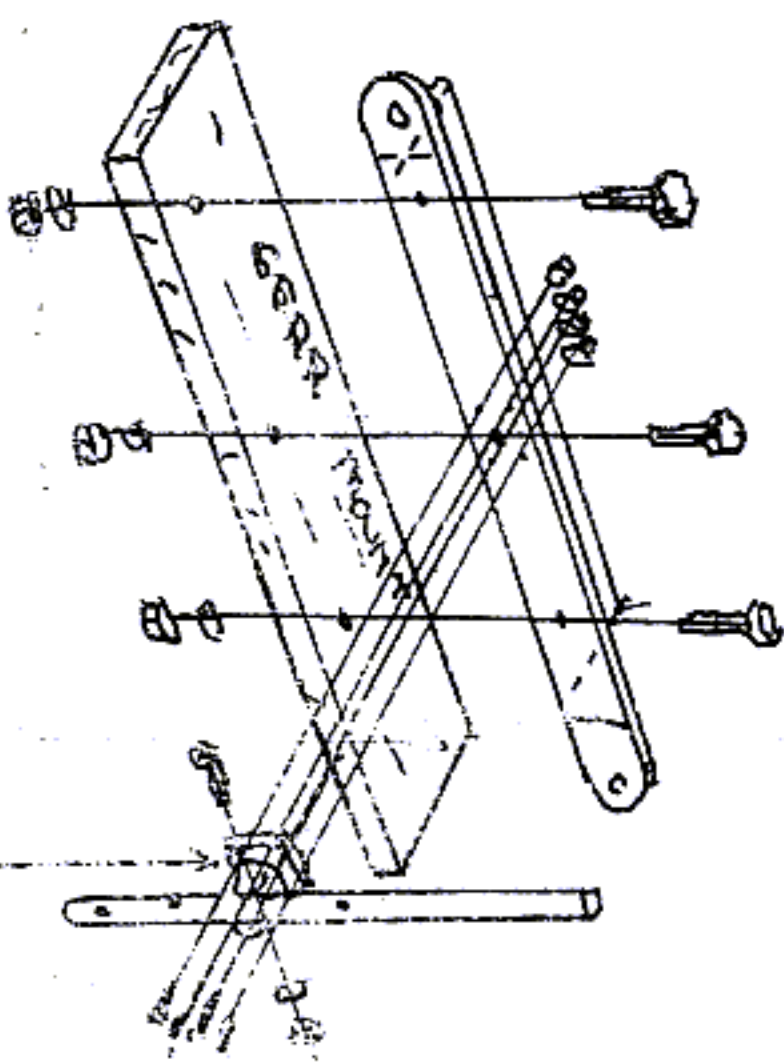
1.25 ALUM
WIPANE (2)

SCALE
BEND

RIGHT BELL CRANK
INSTALL COMPLETELY
REVERSED REMEMBER
THERE IS A LEFT & RIGHT

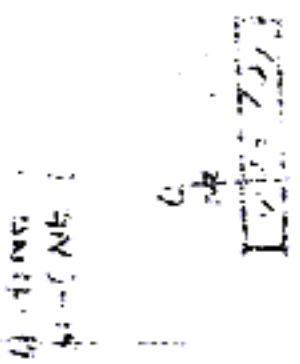


1/2"



NEEDS STRIP
WHEEL FOR
BEARING

CONTROL
STICK



1/2" x 1/2"
1.25 ALUM

SIDE
FRONT

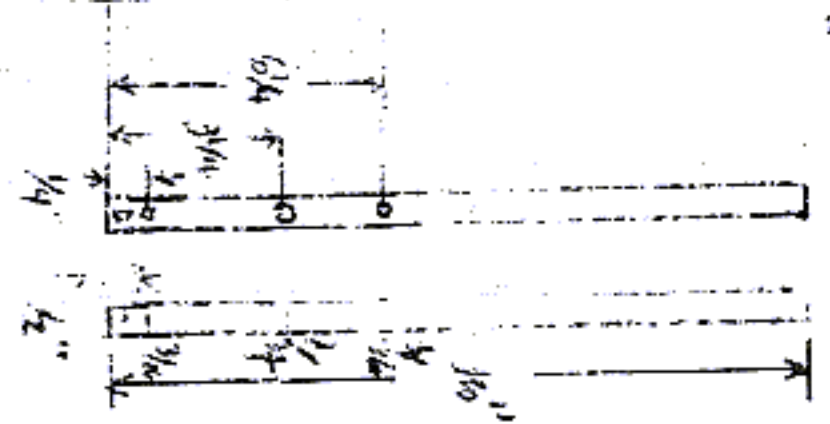
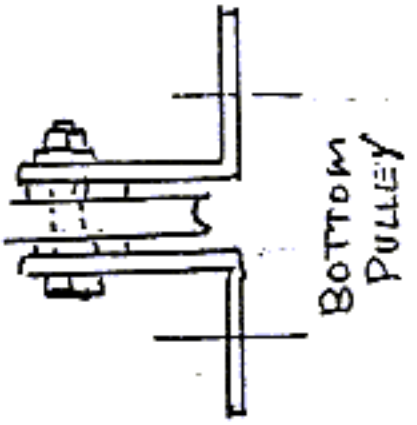
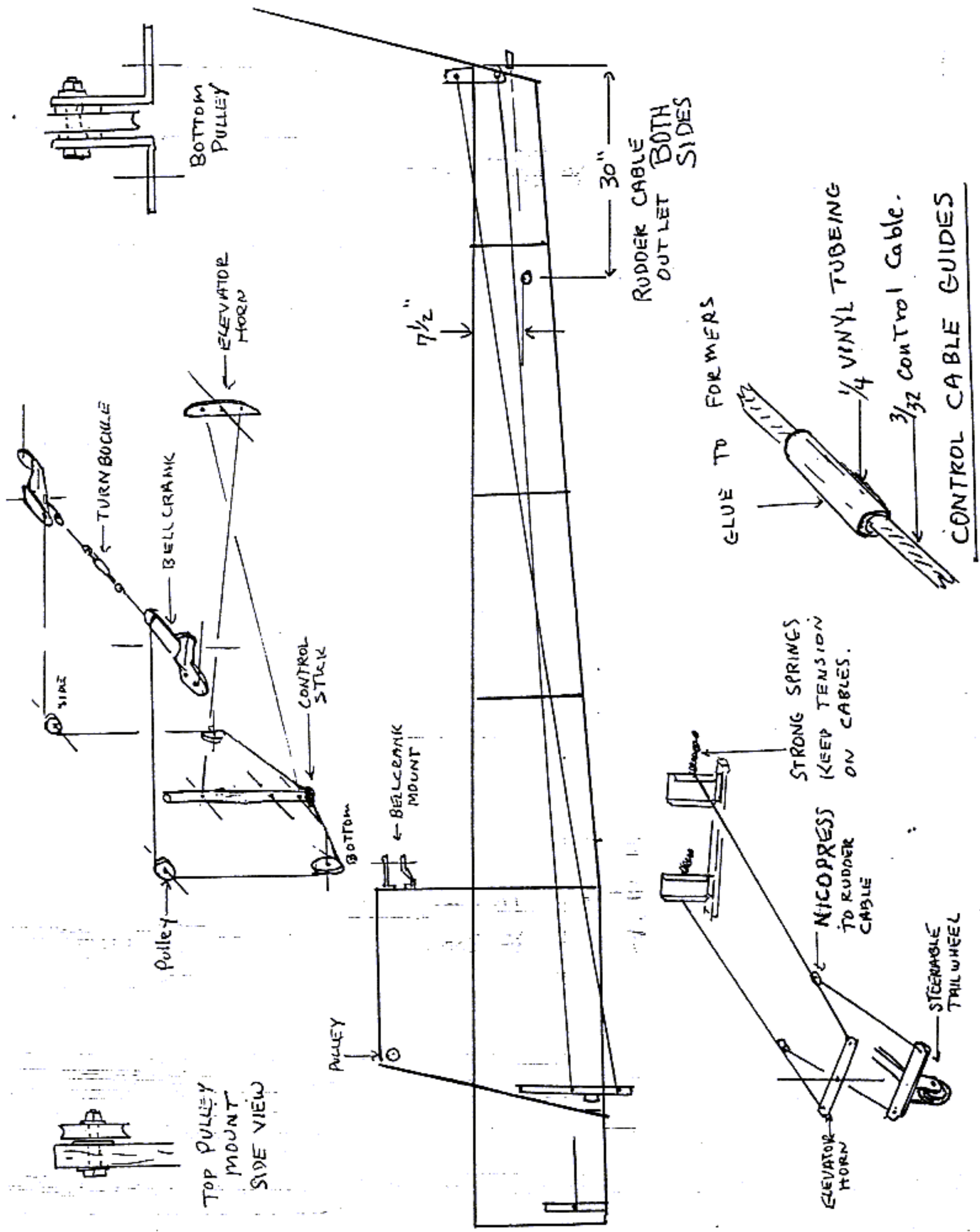


FIG 10



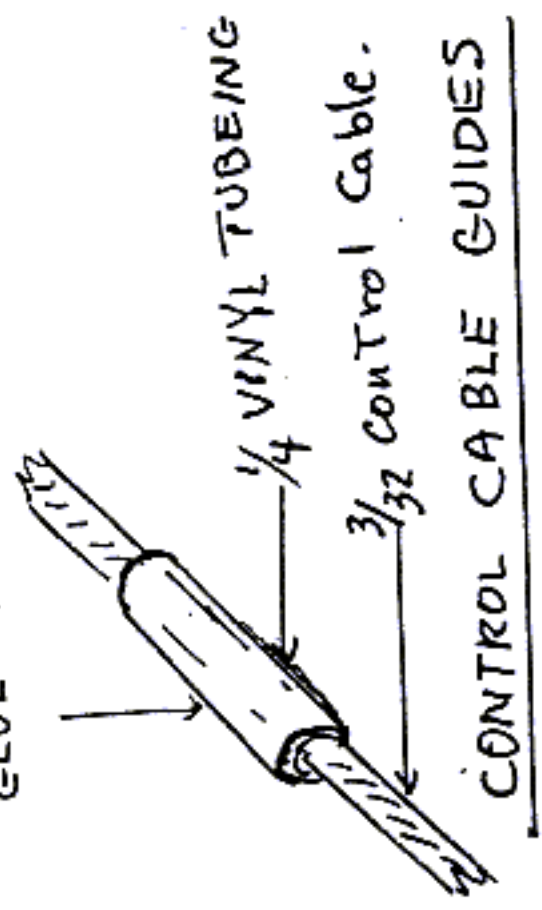
BOTTOM PULLEY



TOP PULLEY MOUNT SIDE VIEW

RUDDER CABLE OUTLET BOTH SIDES

GLUE TO FORMERS



STRONG SPRINGS (KEEP TENSION ON CABLES.)

NICOPRESS TO RUDDER CABLE

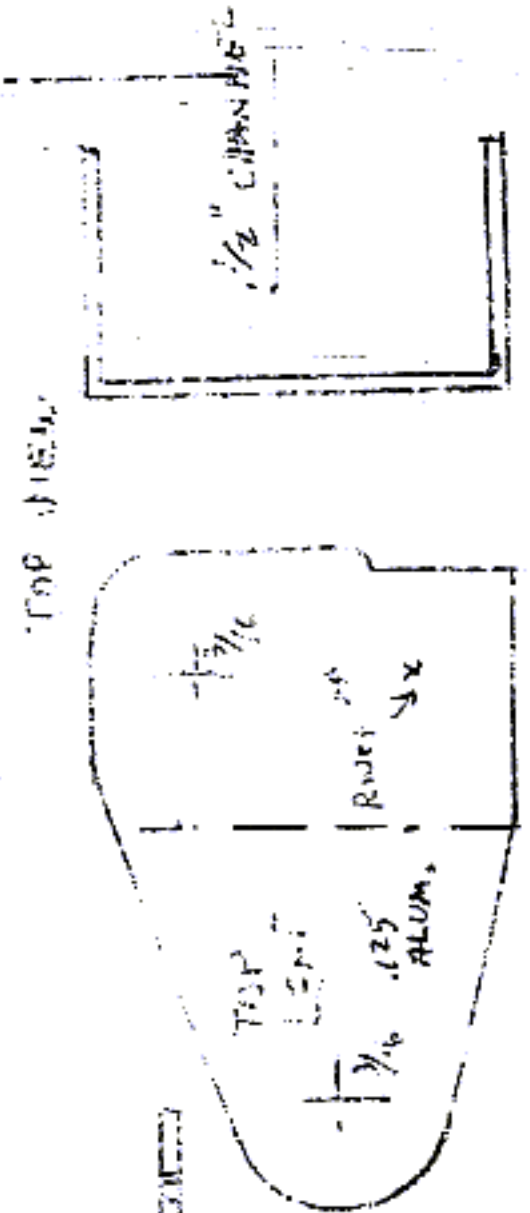
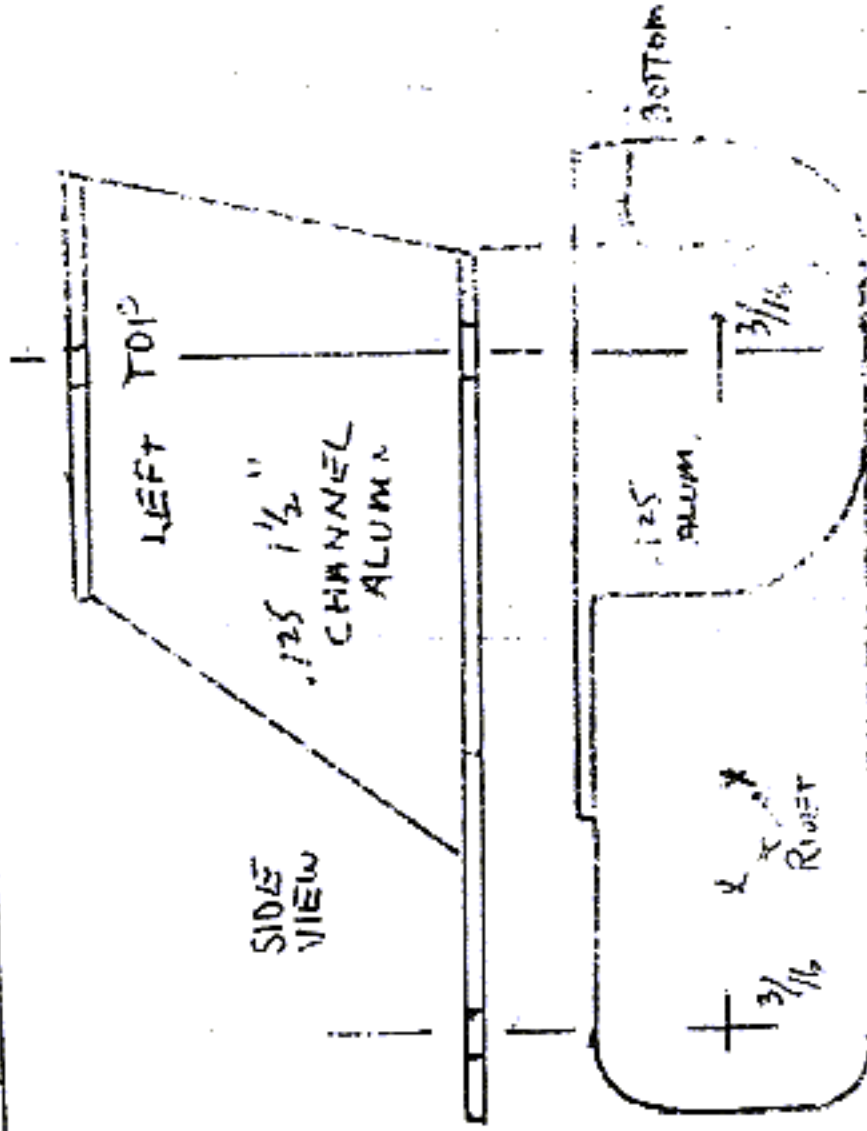
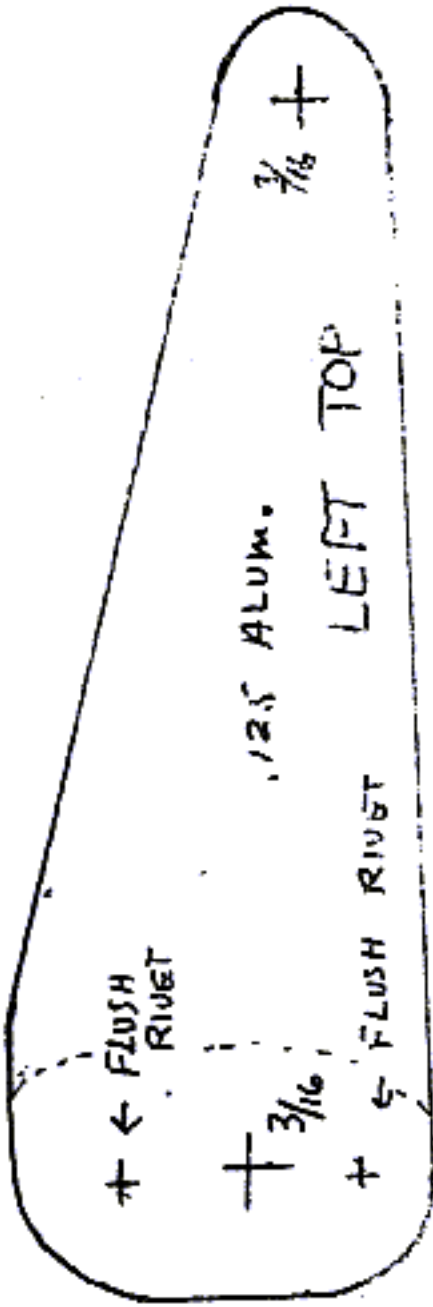
STEERABLE TRAIL WHEEL

ELEVATOR HORN

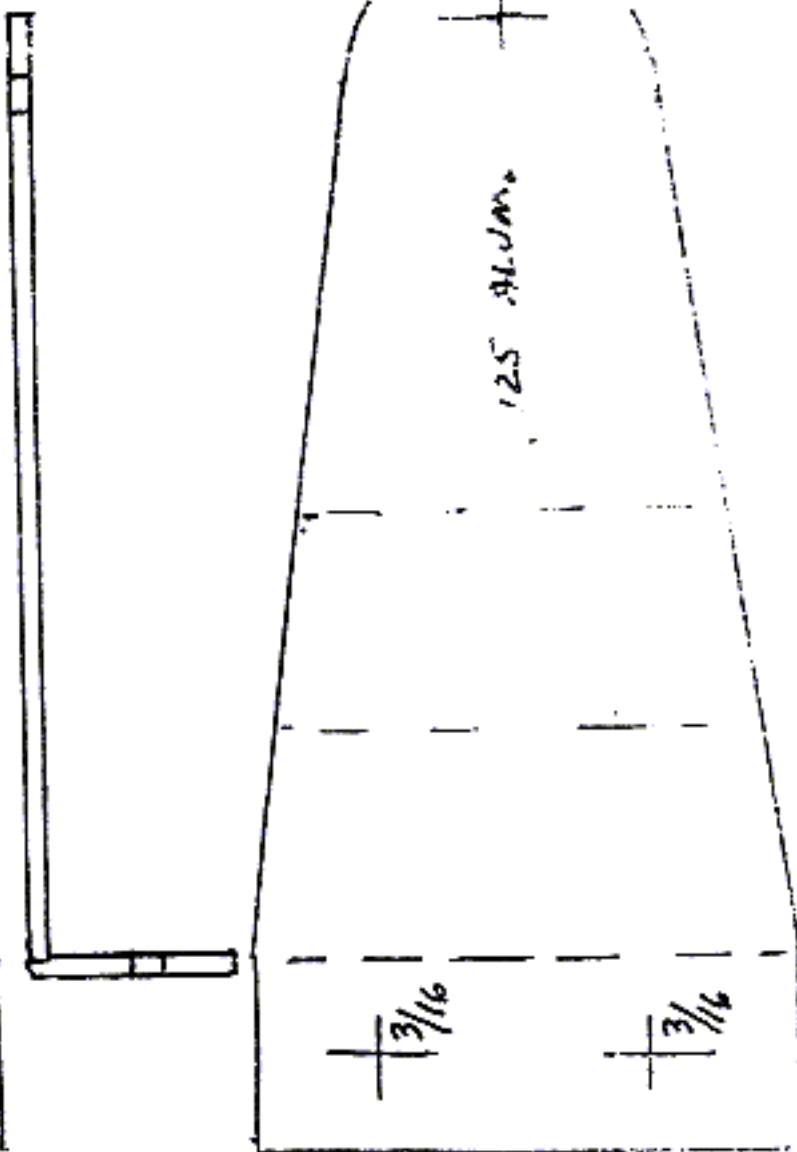
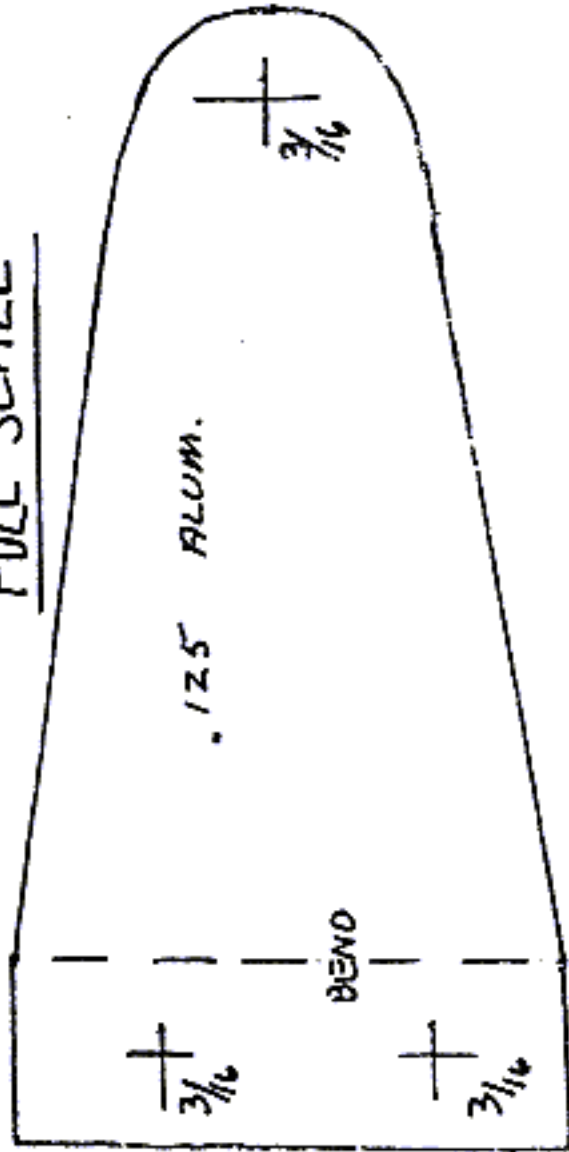
7 1/2"

30"

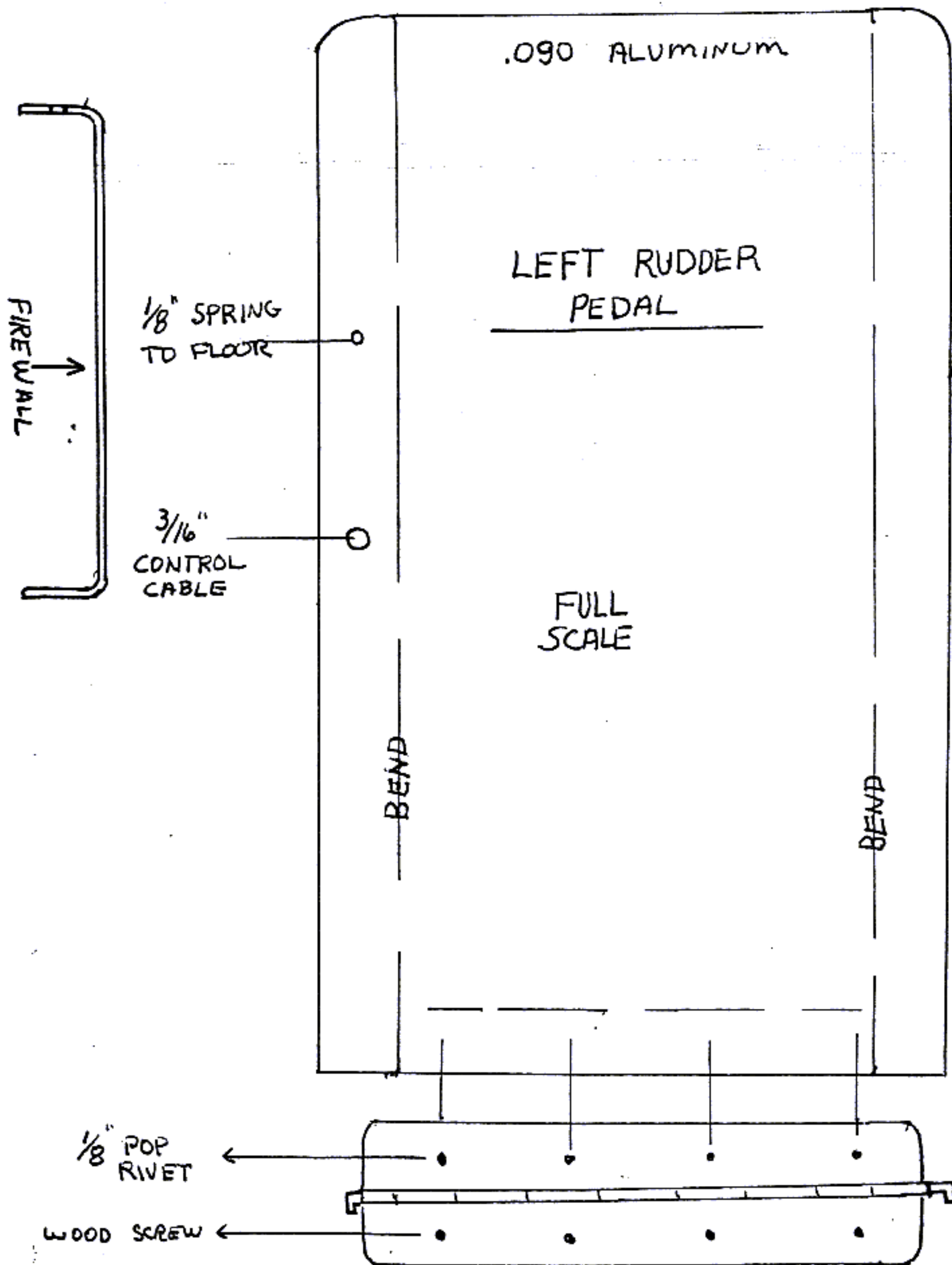
CONTROL HORN



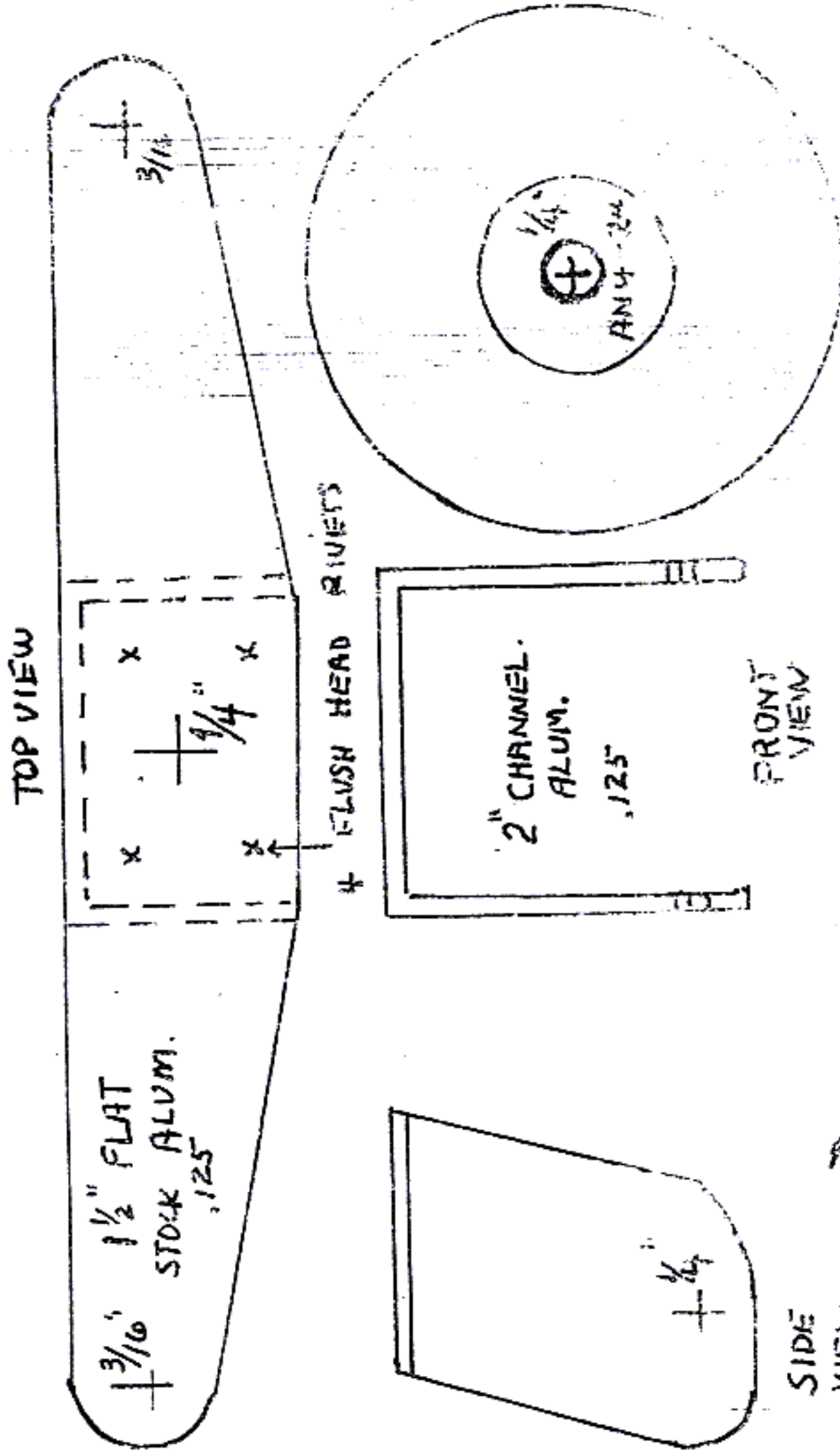
FULL SCALE



BELL CRANK MOUNTING BRACKETS 2- OF EACH



COMPLETE TAILWHEEL

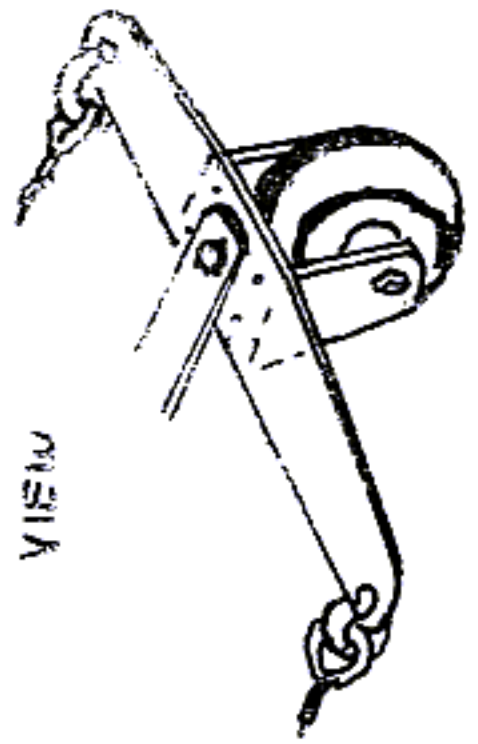


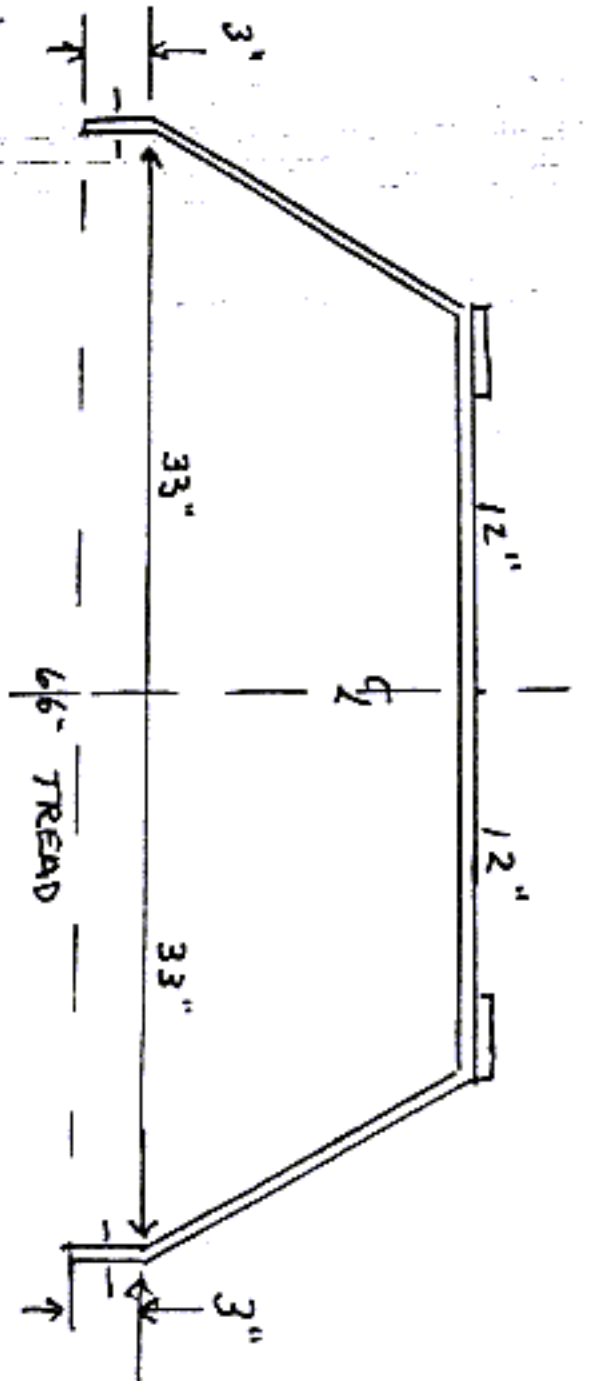
3" TOOL BOX WHEEL

FULL SCALE

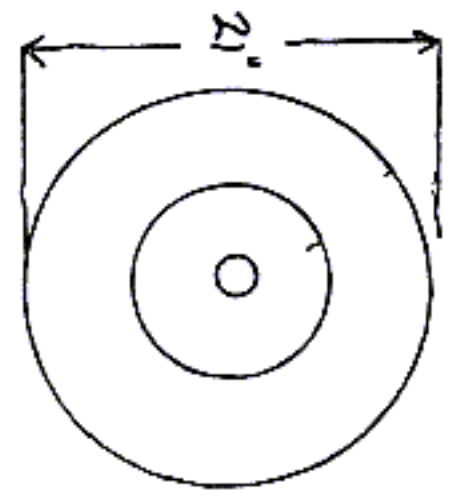
SIDE VIEW

FRONT VIEW

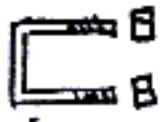




WRAPPED 3" X 1/2" ON EACH GEAR LEG TO STIFFEN. EPOXY + GLASS

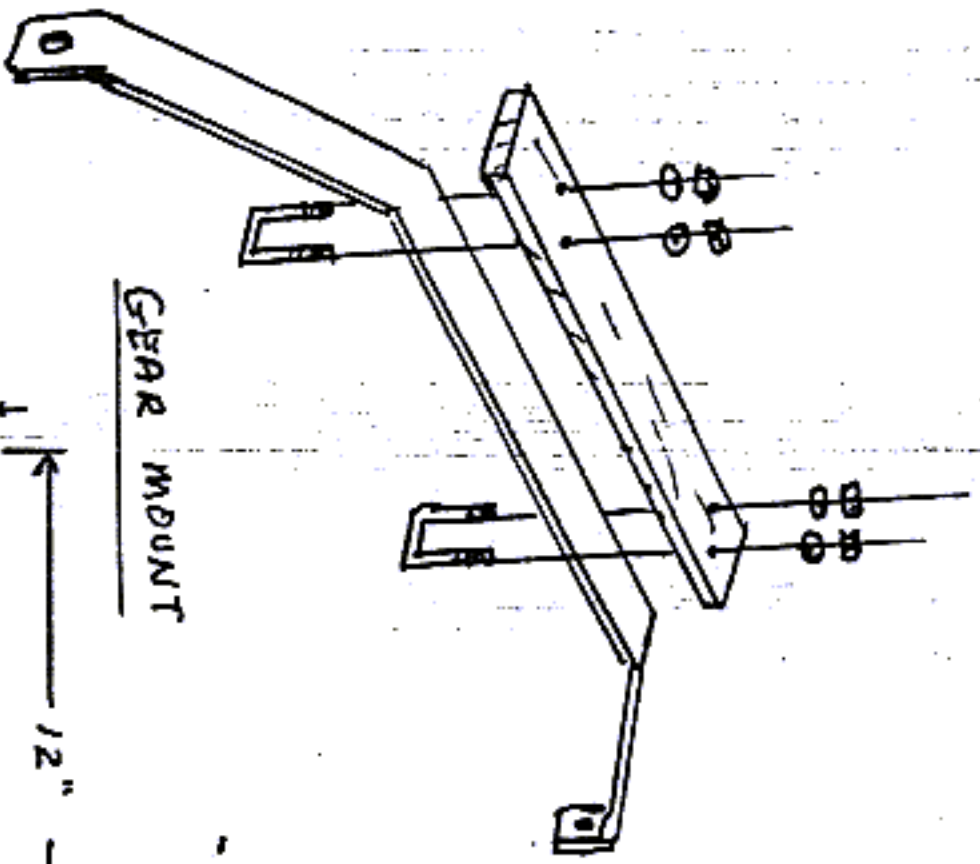


5/16" TRUCK SPRING BENT TO SPECS.



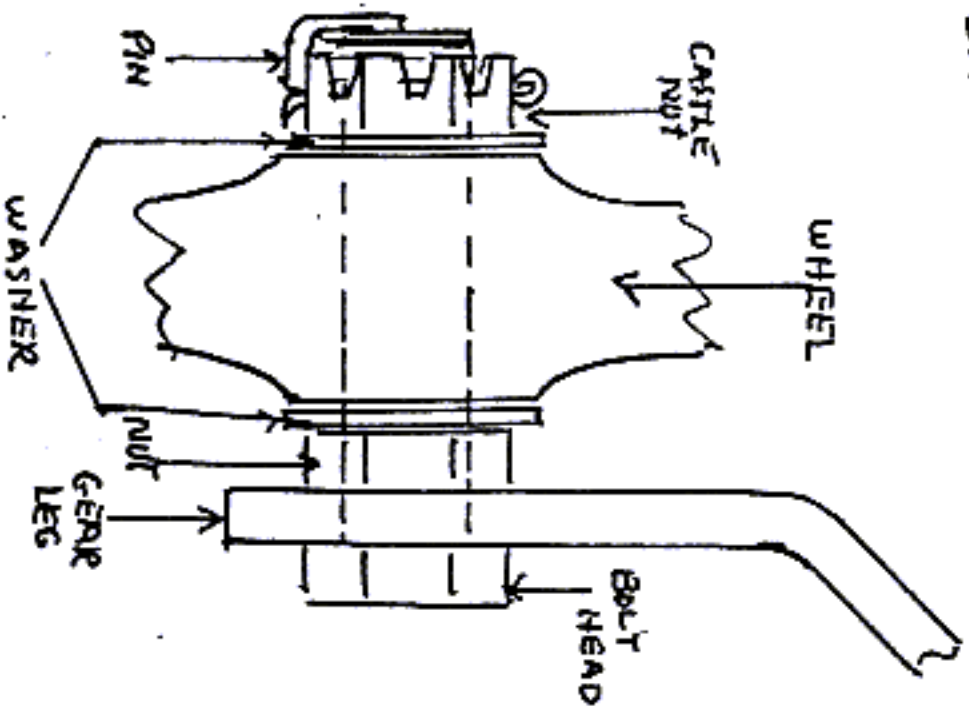
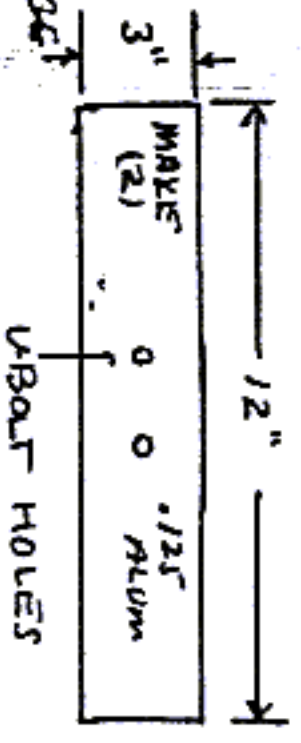
(2) HEAVY U BOLTS FROM TRUCK SPRING

5/8" x 7" BOLT
2 - AXLE



GEAR MOUNT

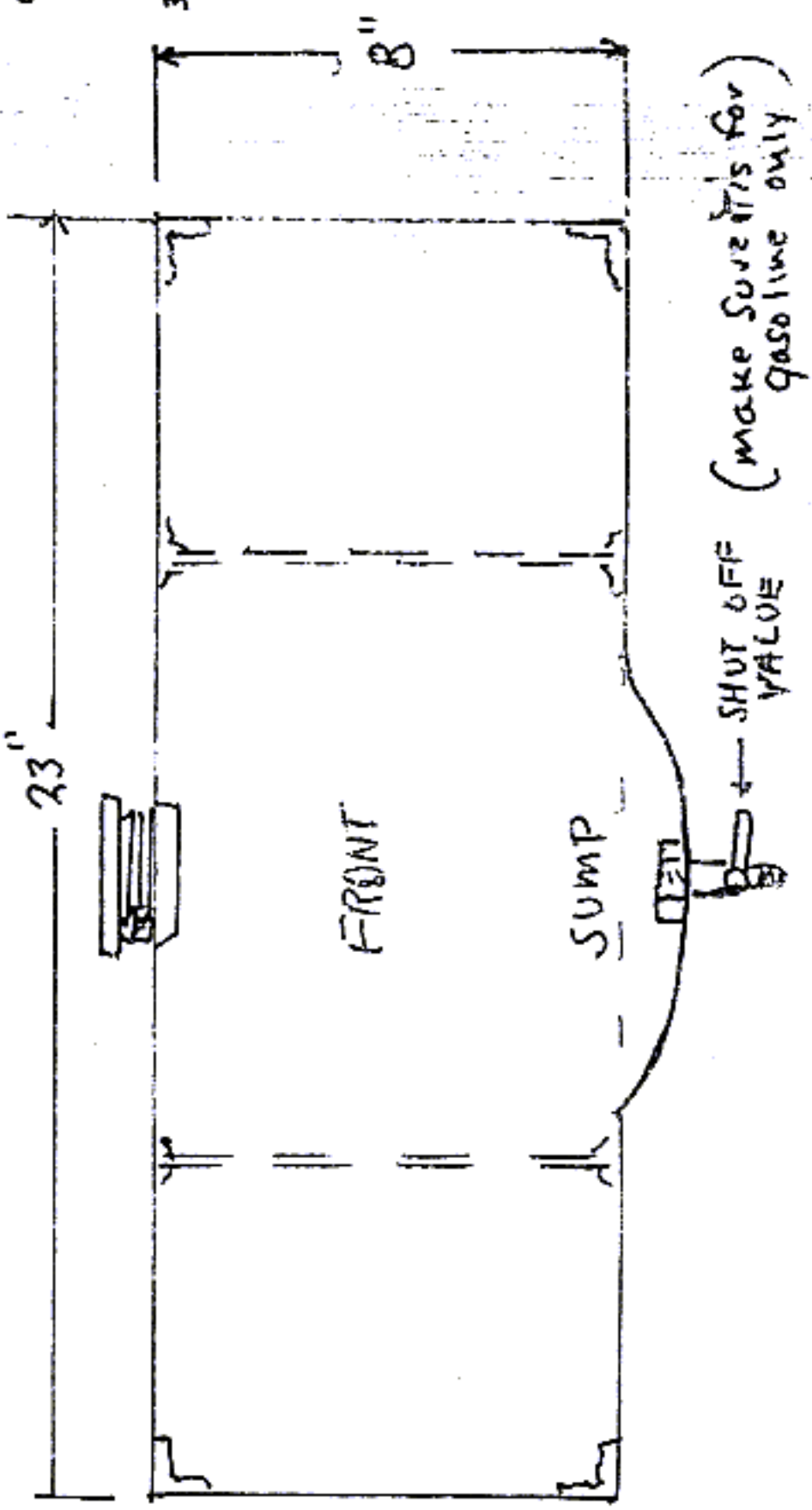
PLATE MOUNTED BETWEEN GEAR AND WOOD FUSELAGE



GAS TANK

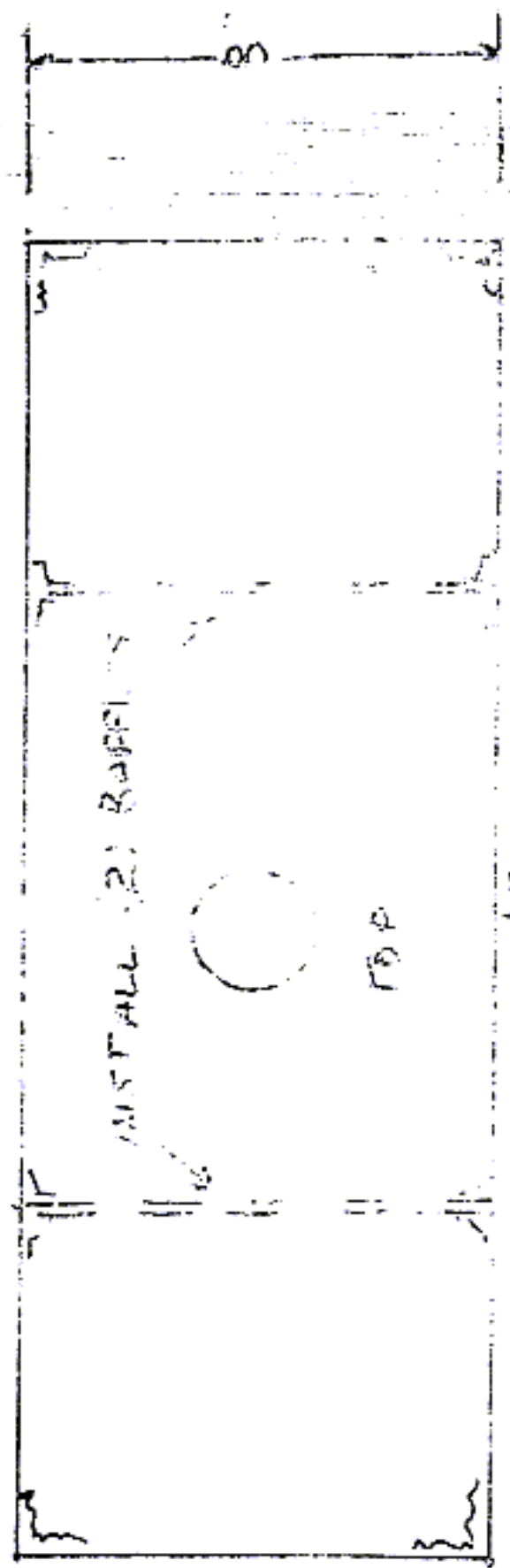
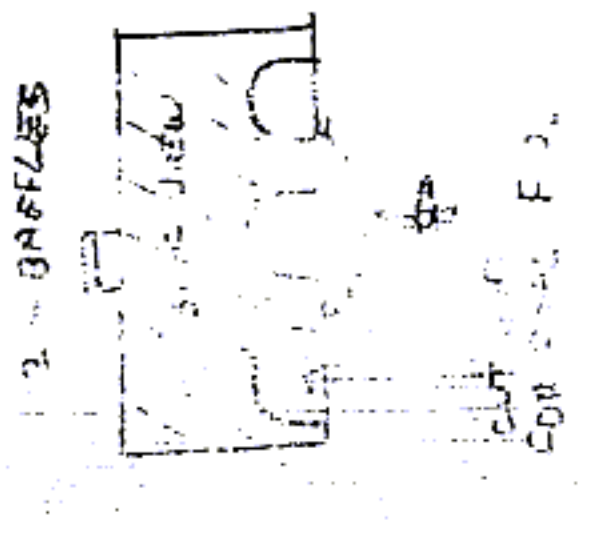
WHITE FOAM BLOCK
CLEAN OUT WITH ACETONE OR GAS.

247 CU. FT. To
9 gal. — 5 gal tank

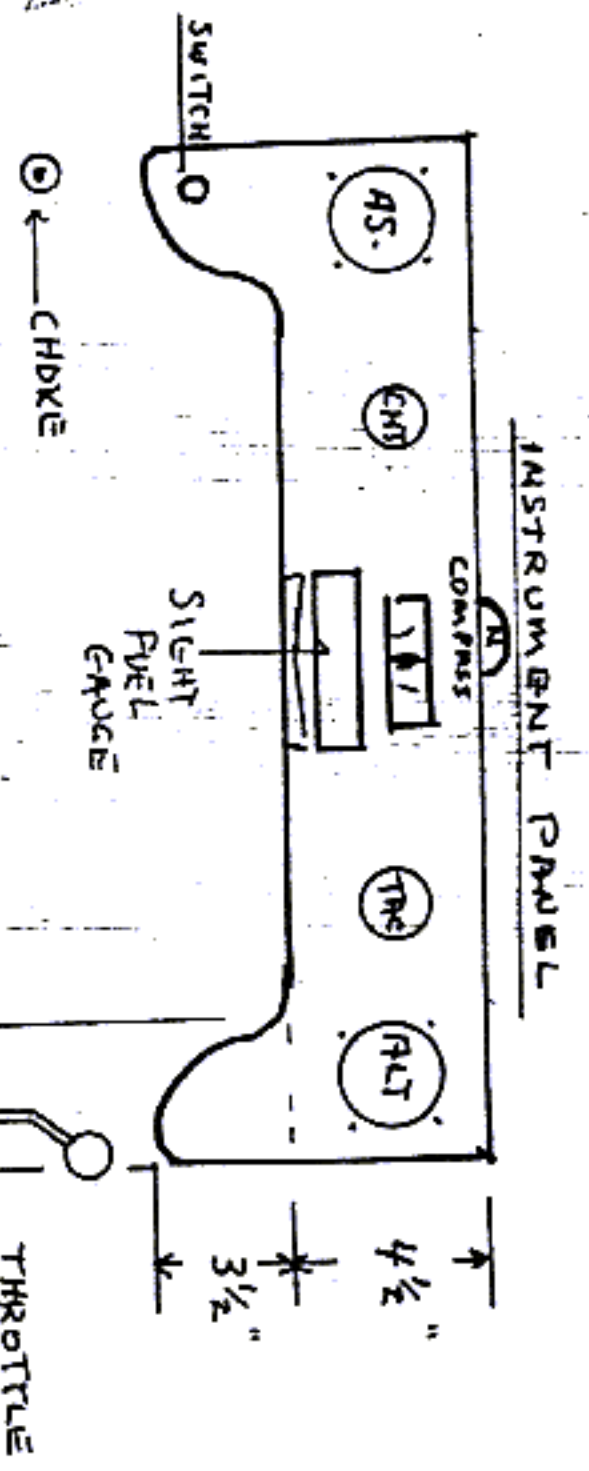


INSTALL
TOP OF TANK
LAST. TAPE
ON OUTSIDE
LEAK
CHECK
AFTER
COMPLETELY
CURED.

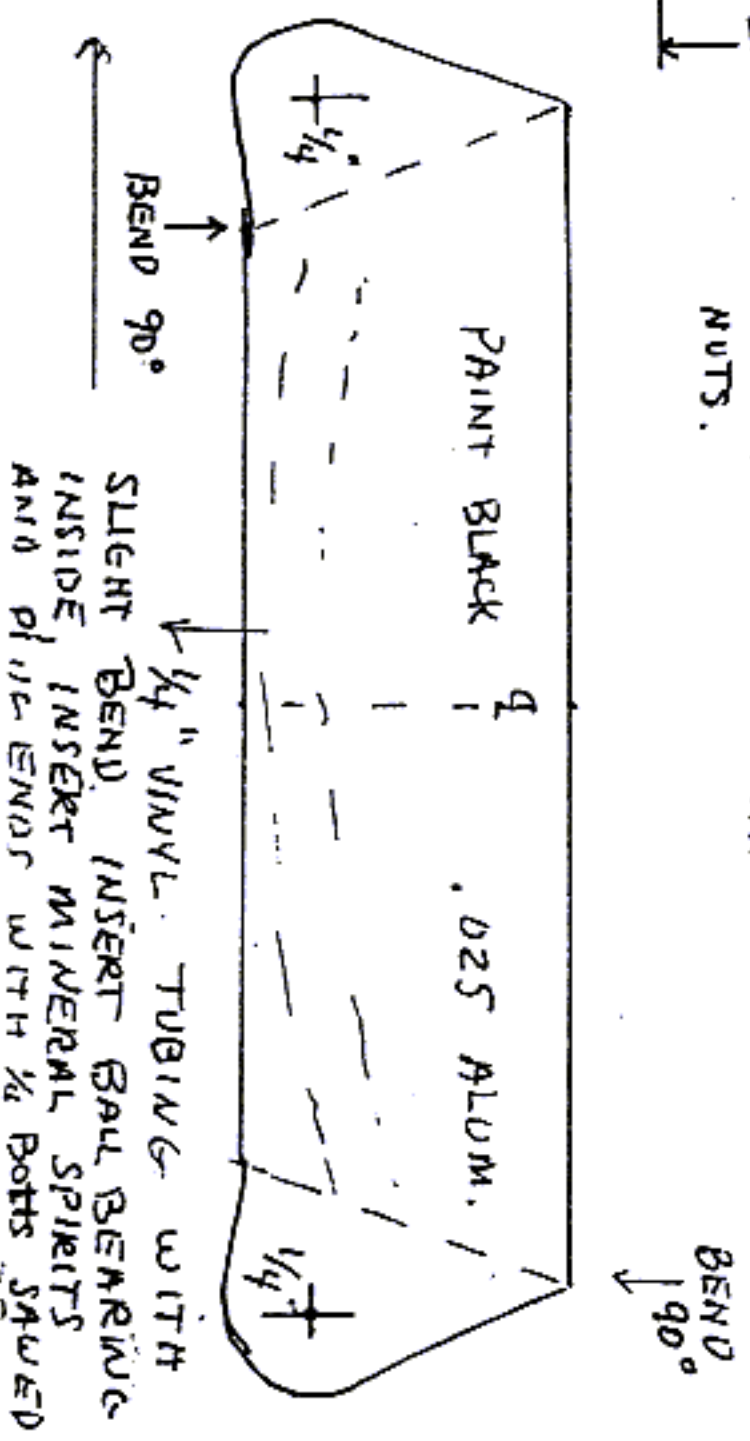
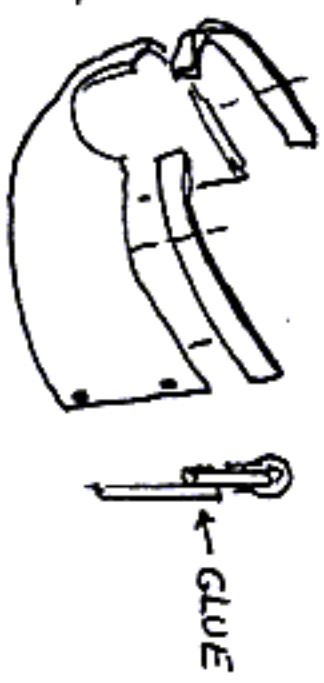
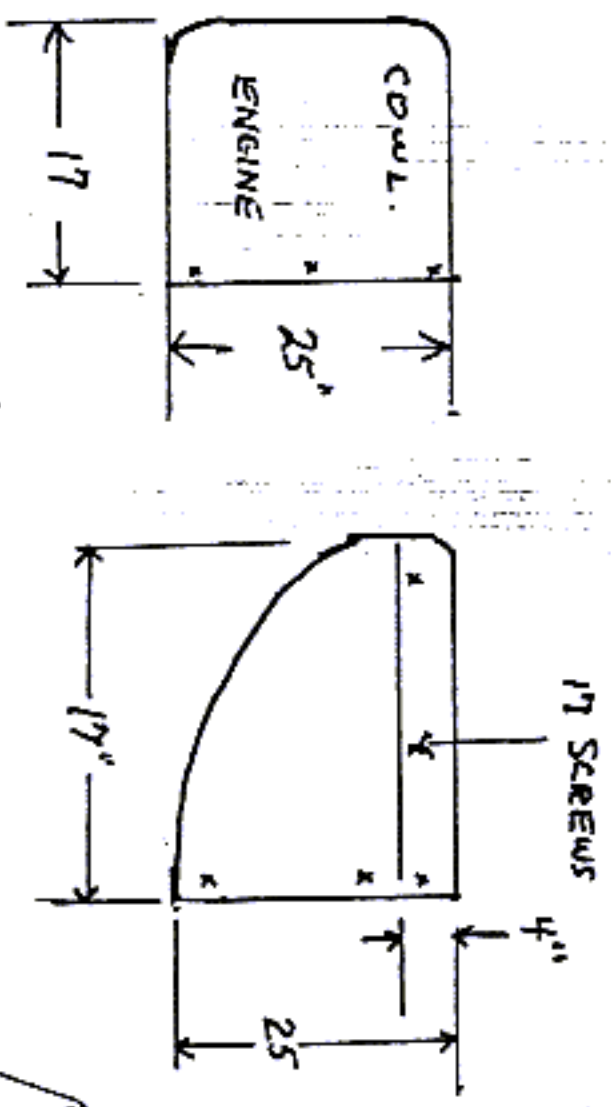
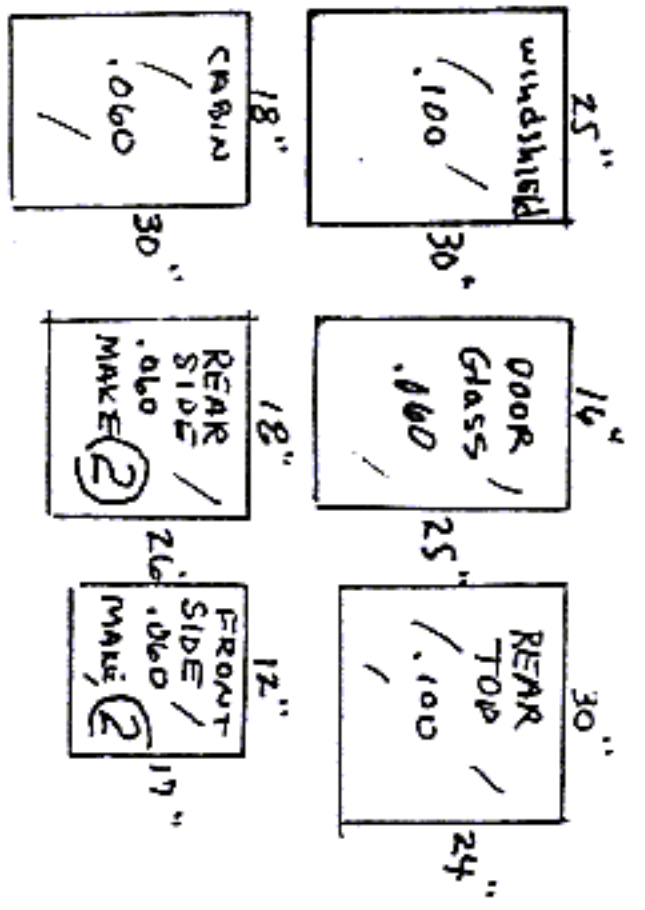
PHOTO 10

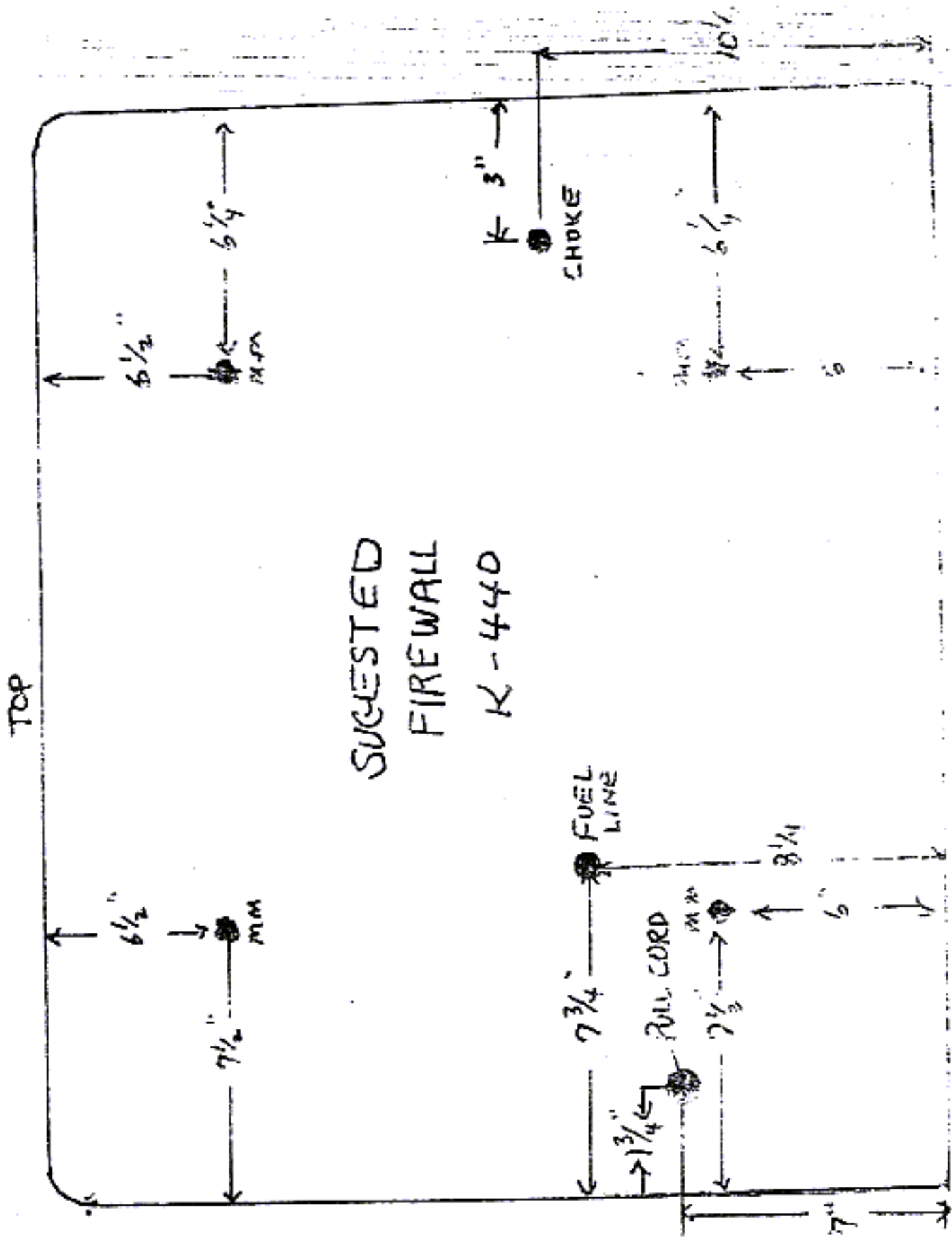


GLASS
TAPE



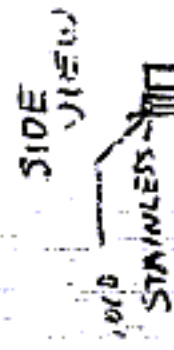
1/8" PLYWOOD WITH 1 (ONE) LAYER 603 FIBERGLASS AND EPOXY RESIN. PAINT MATERIAL DO NOT SAND.





.010 STAINLESS STEEL

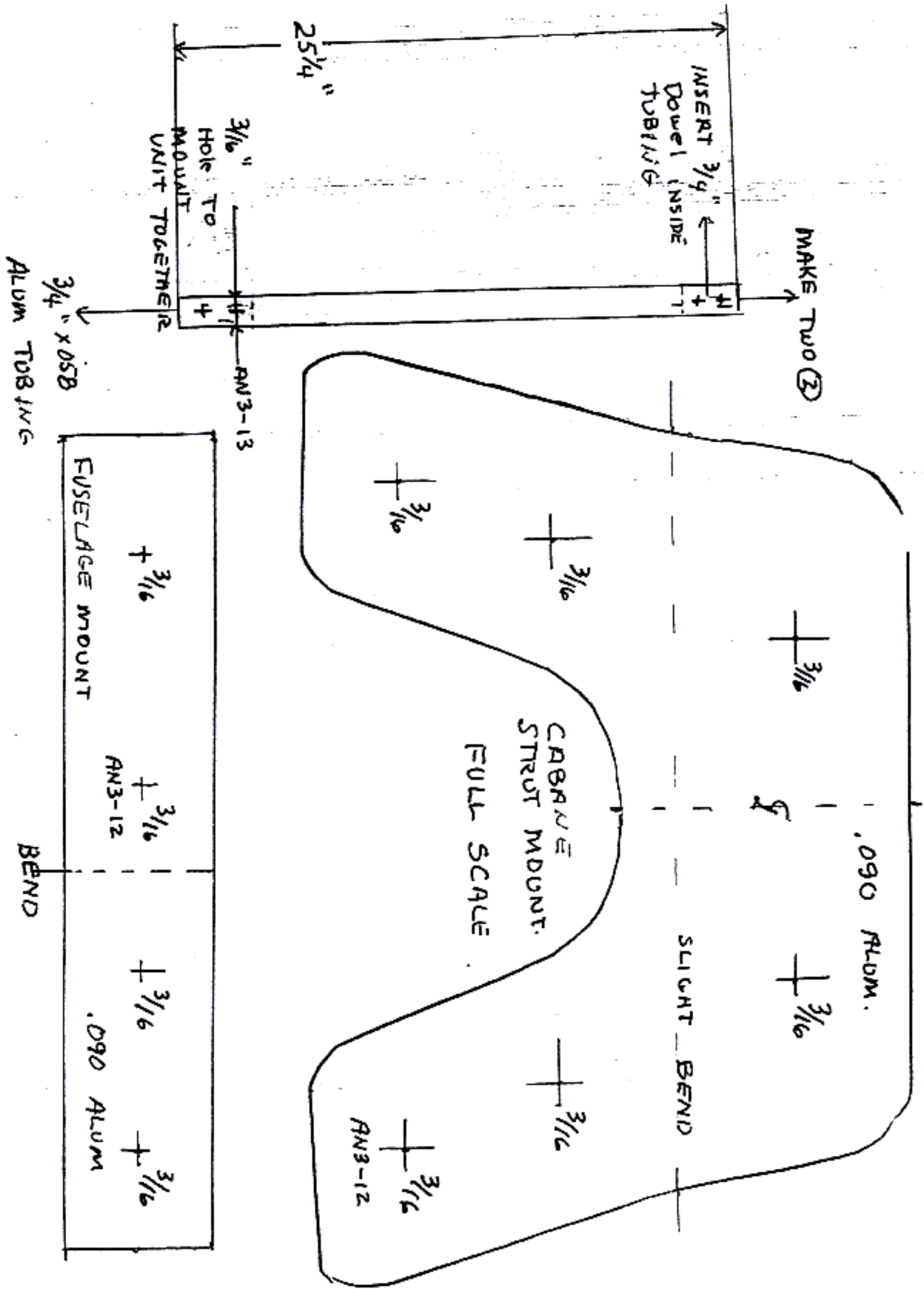
ASBESTOS BETWEEN STAINLESS AND PLYWOOD



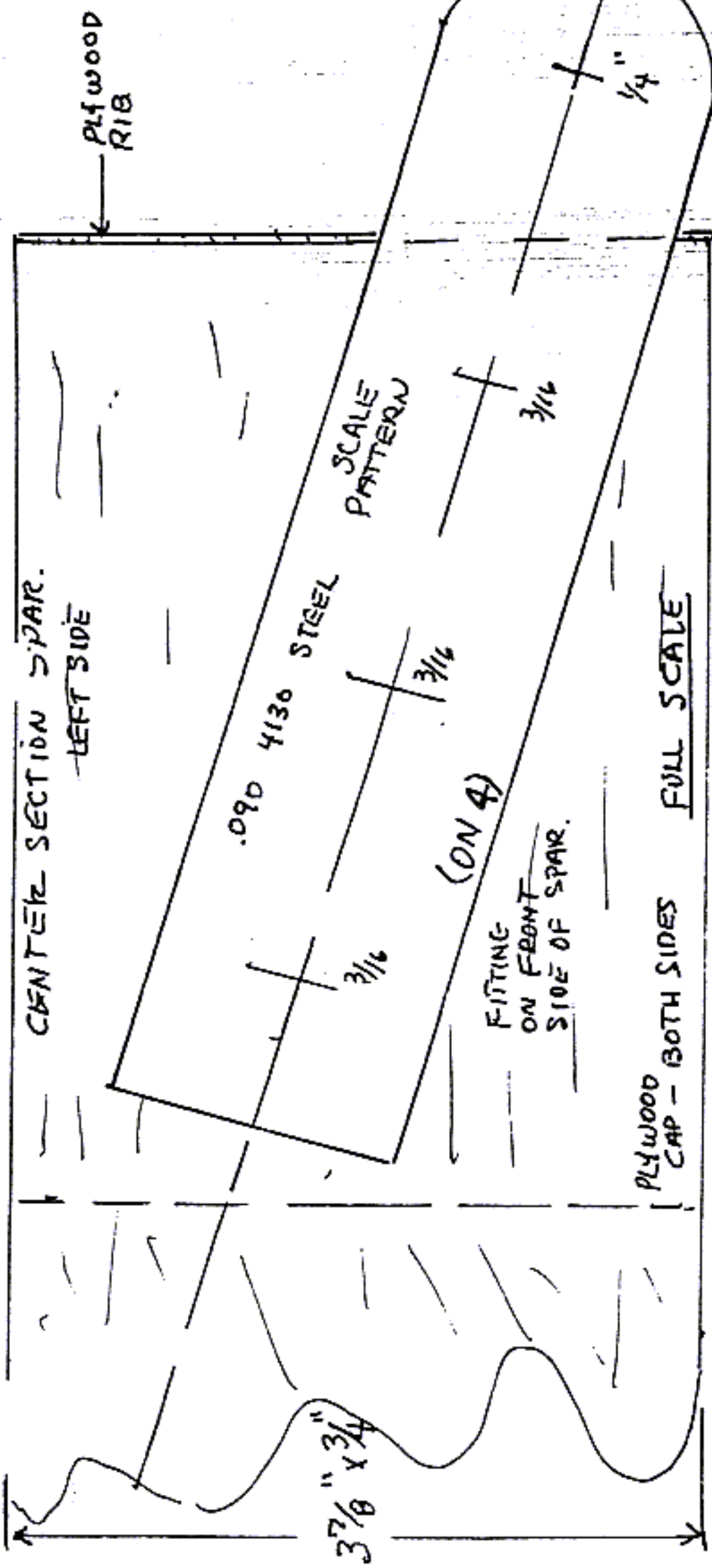
SPRINKLE

NOT SCALE.

PAGE 20



COMPLETE CARBURE STRUT



CENTER SECTION SPAR.
LEFT SIDE

PLYWOOD RIB

.090 4130 STEEL

SCALE PATTERN

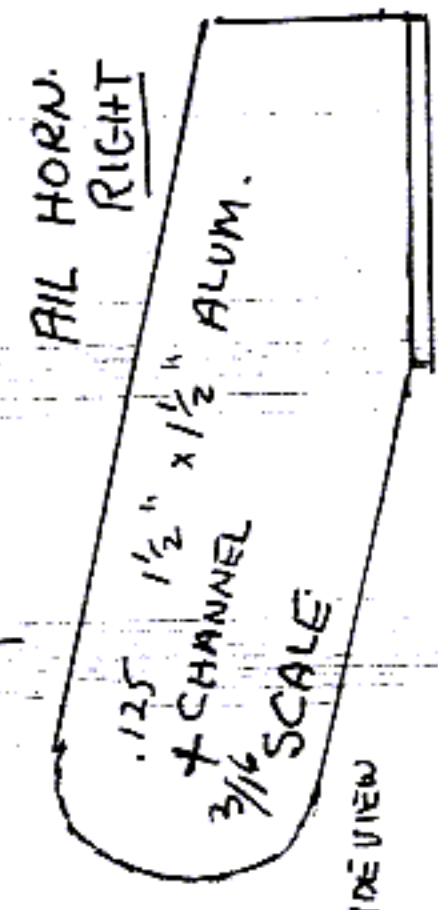
(ON 4)

FITTING ON FRONT SIDE OF SPAR.

PLYWOOD CAP - BOTH SIDES FULL SCALE

24 3/4"

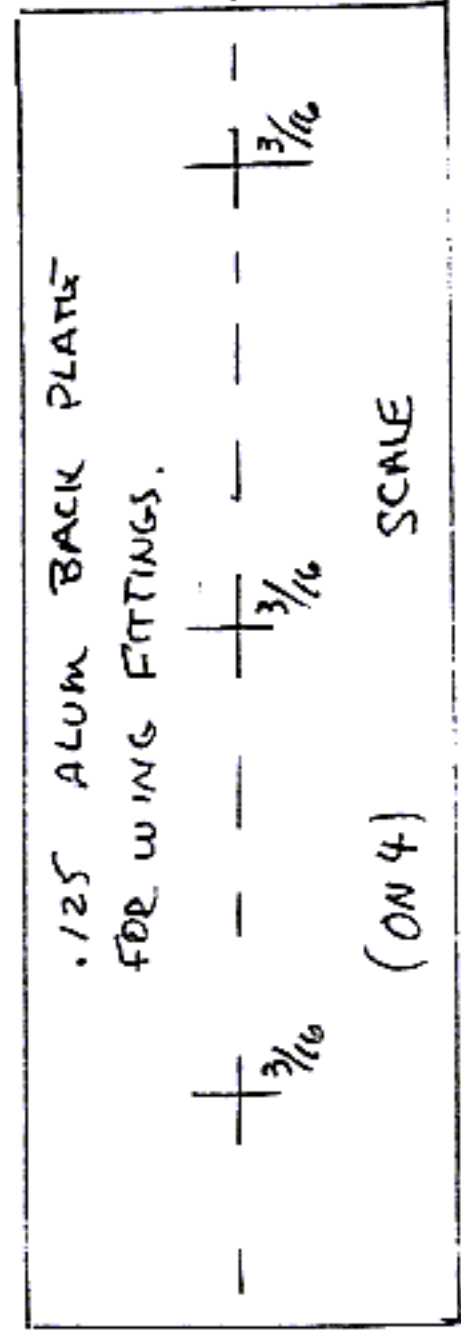
TO



AIL HORN. RIGHT

.125 1 1/2" x 1 1/2" ALUM.
7 CHANNEL
3/16 SCALE

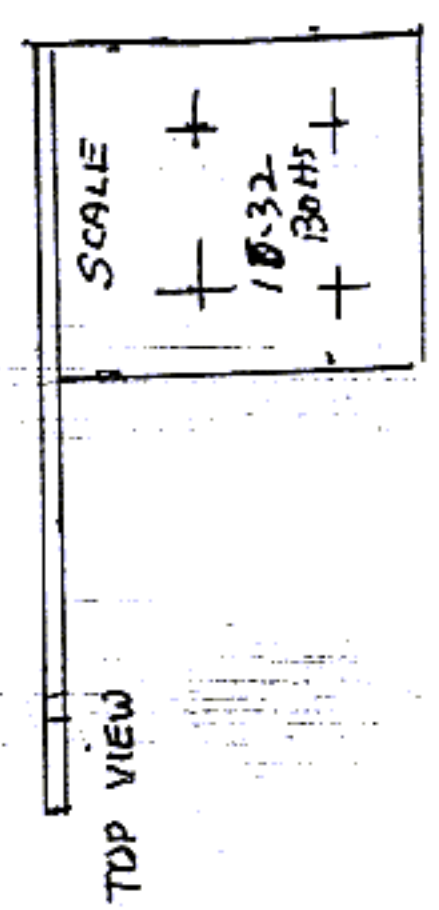
SIDE VIEW



.125 ALUM BACK PLATE FOR WING FITTINGS.

SCALE

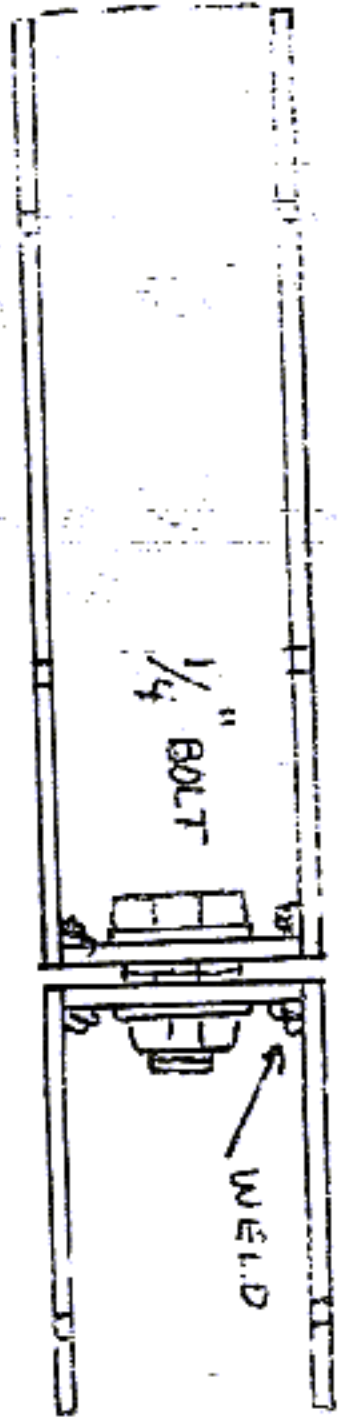
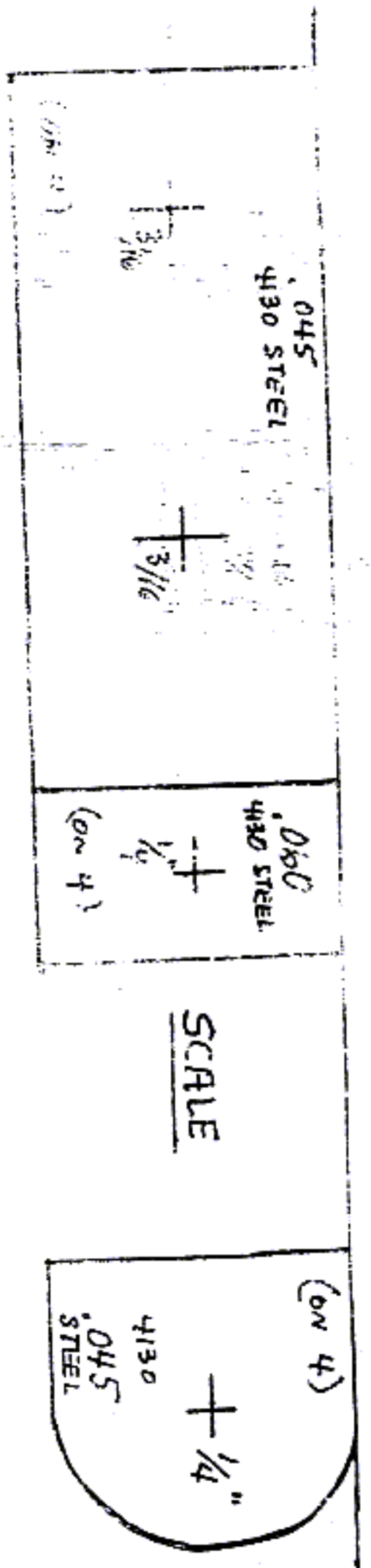
(ON 4)



TOP VIEW

SCALE

10.32
130HS



UNIVERSAL FITTING

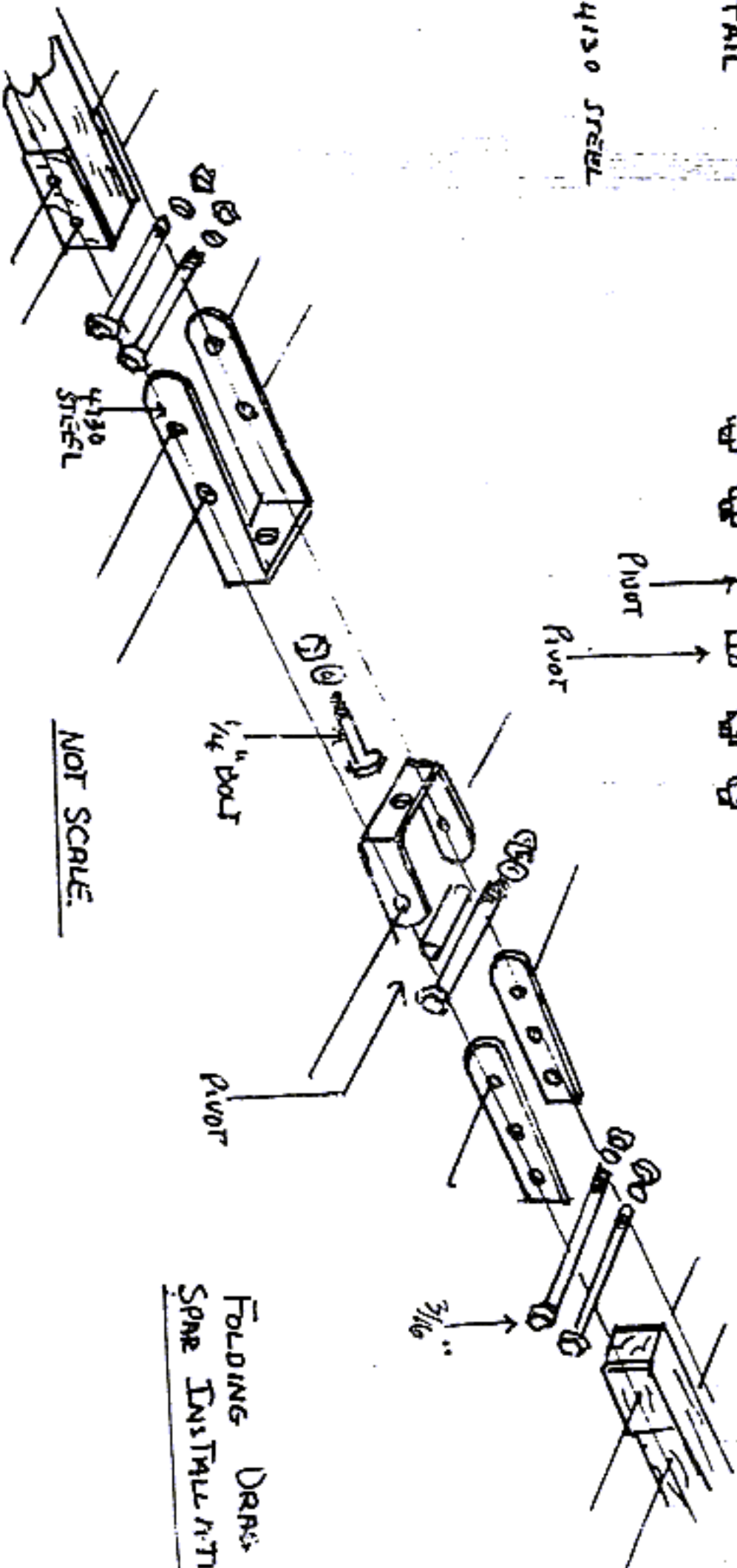
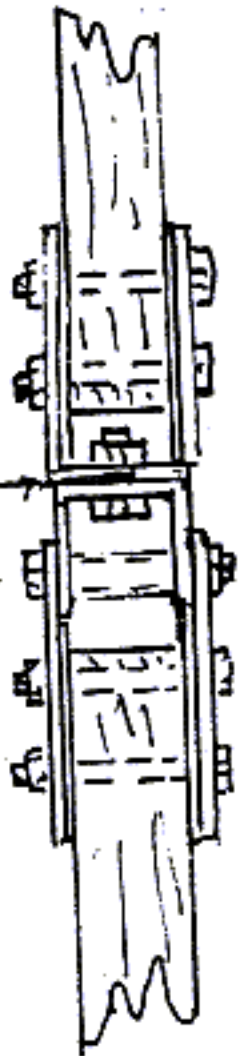
DRAG SPWR.

10 PIN REMOVAL. DROP
LEADING EDGE OF WING 90°
THEN FOLD BACK TO TAIL

PER WING

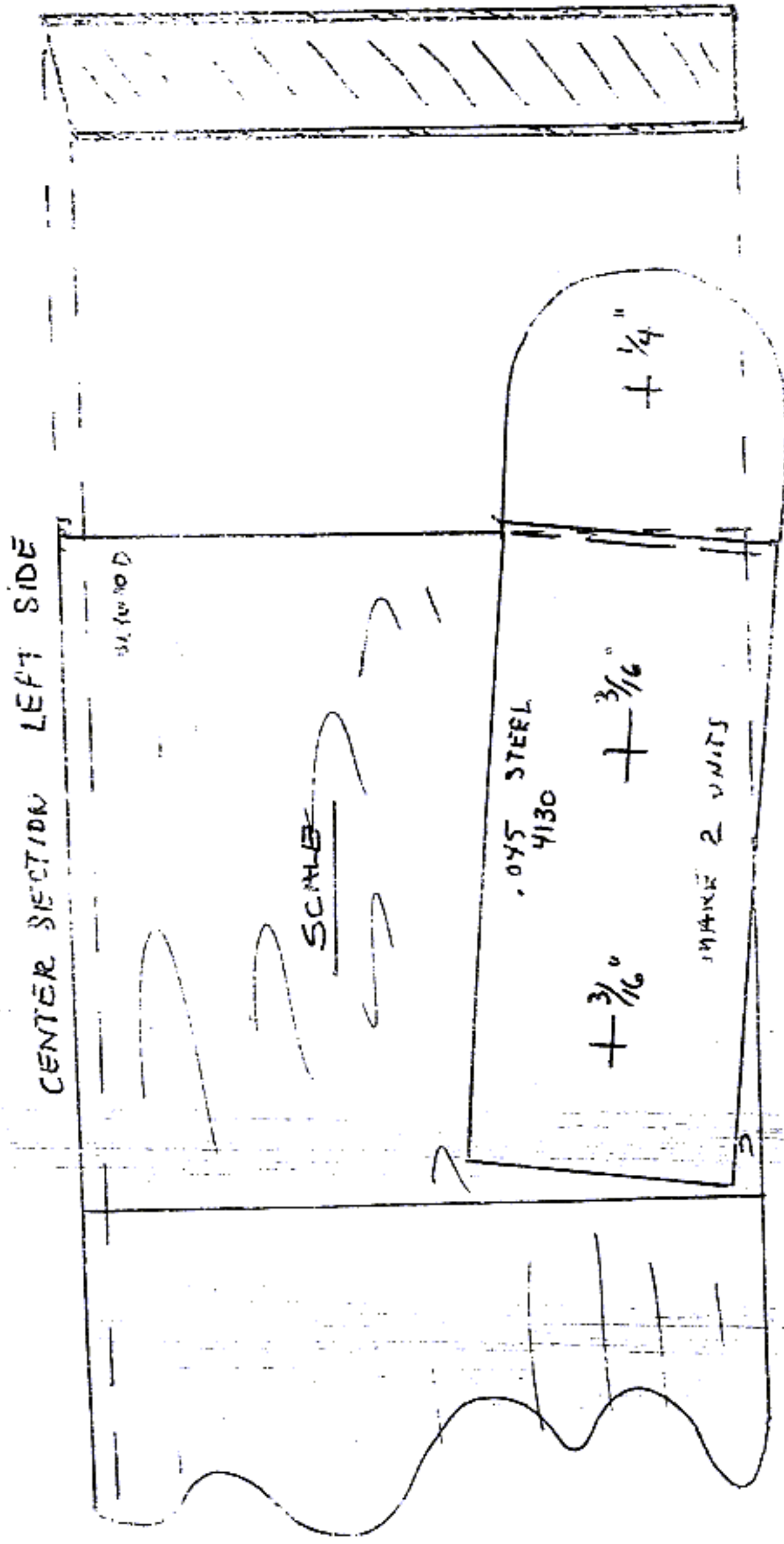
6 BOLTS
4 FITTINGS LIGHT 4130 STEEL

NO WELDING

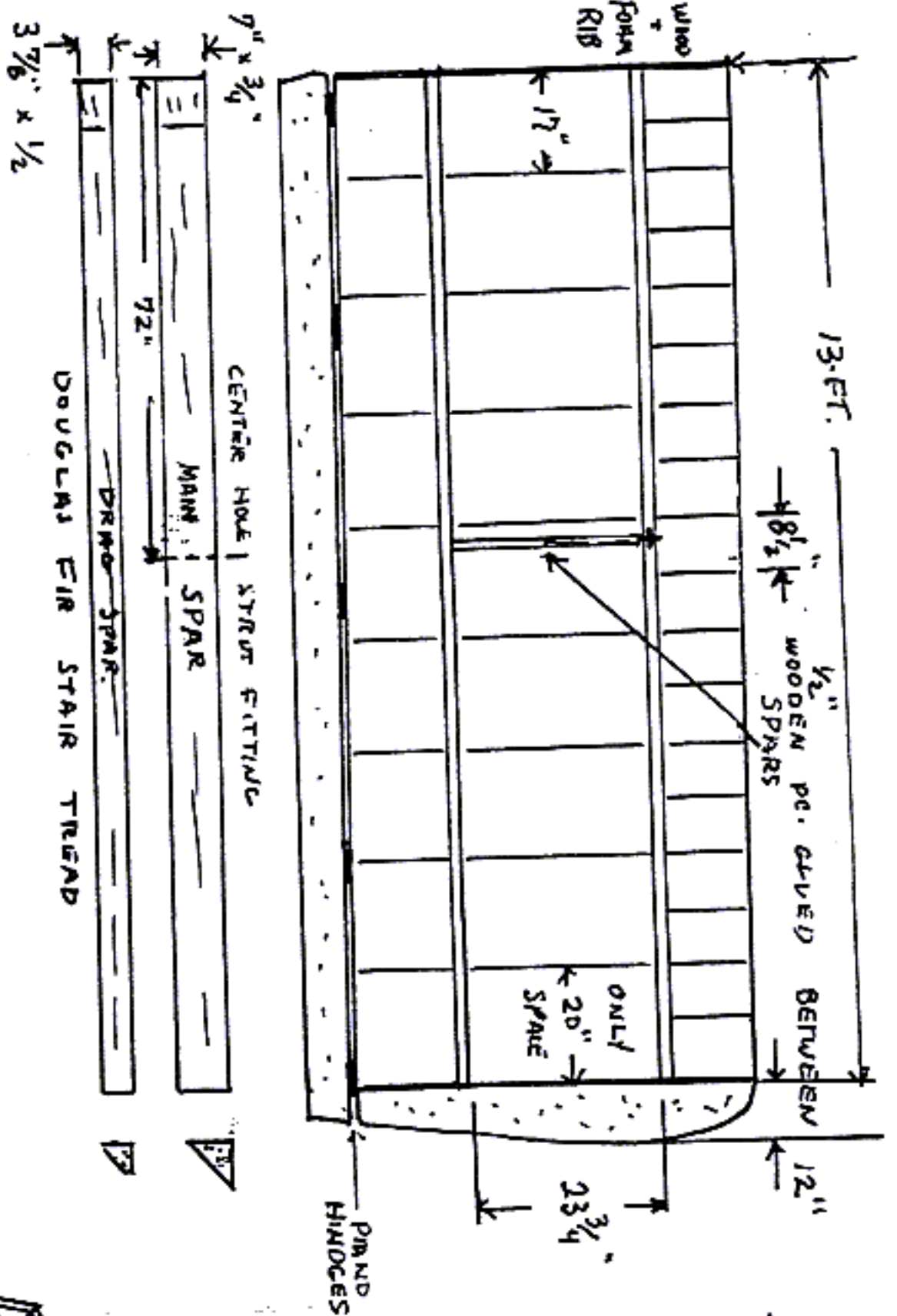


NOT SCALE.

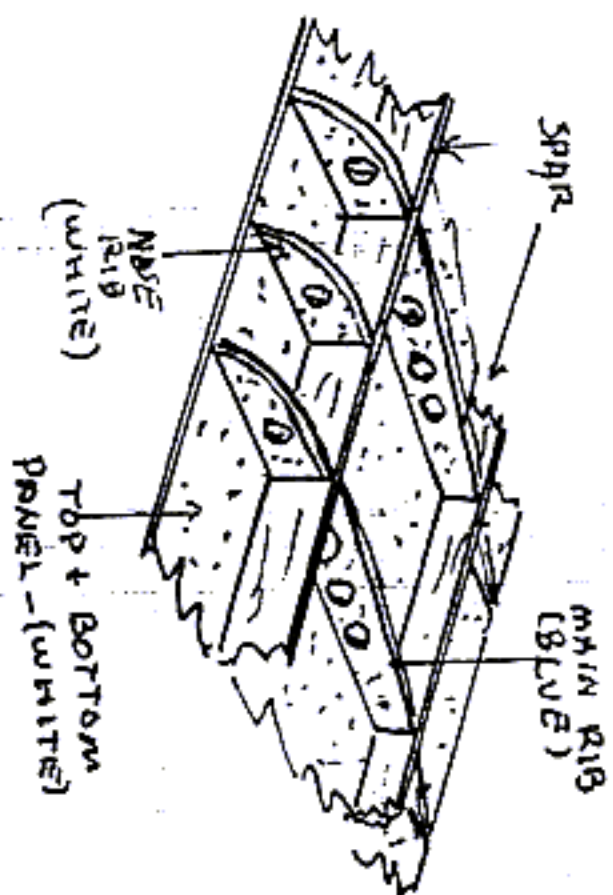
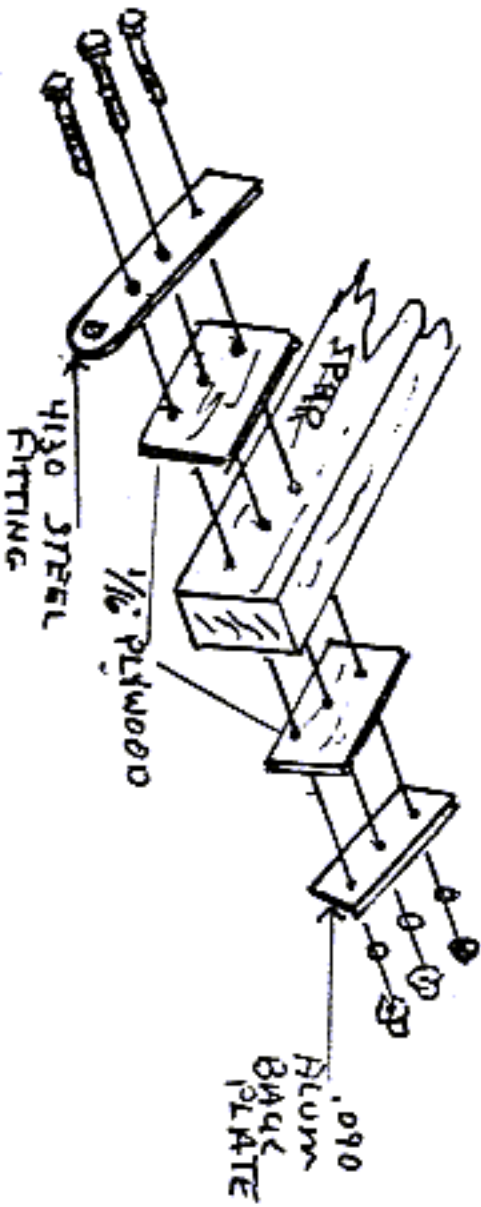
FOLDING DRAG
SPWR INSTALLATION



MOUNT AT ANGLE
TO BE ABLE TO CLEAR
FOR FOLDING WING.



INSIDE & OUTSIDE WING RIBS SOLID PLYWOOD 1/8"
 TORSION GEAR WOOD AT WING STRUT FITTING
 MAIN RIBS GLUE FOAM NOSE RIBS WHITE ALL 3/4"
 ALL STYREOFAM. WING TIP NO SPARS.
 5 MINUTE EPOXY ALL PIECES TOGETHER.



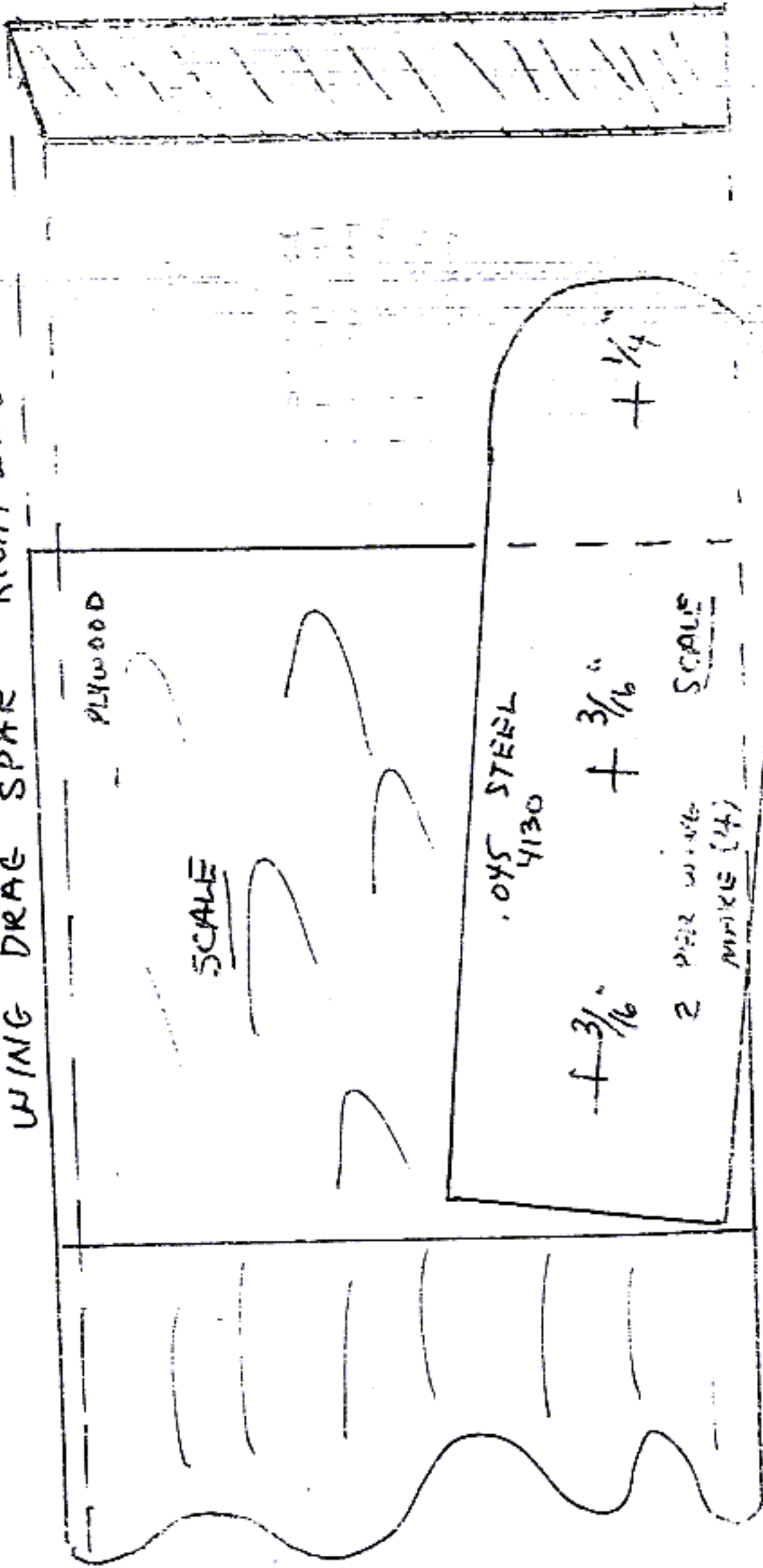
CAPS ON ALL FITTINGS GLUE

MAIN - DRAG SPAR CABIN - WING, STRUT CAPPED WITH PLY- WOOD, DRILLED AND INSTALLED AFTER VARNISHED

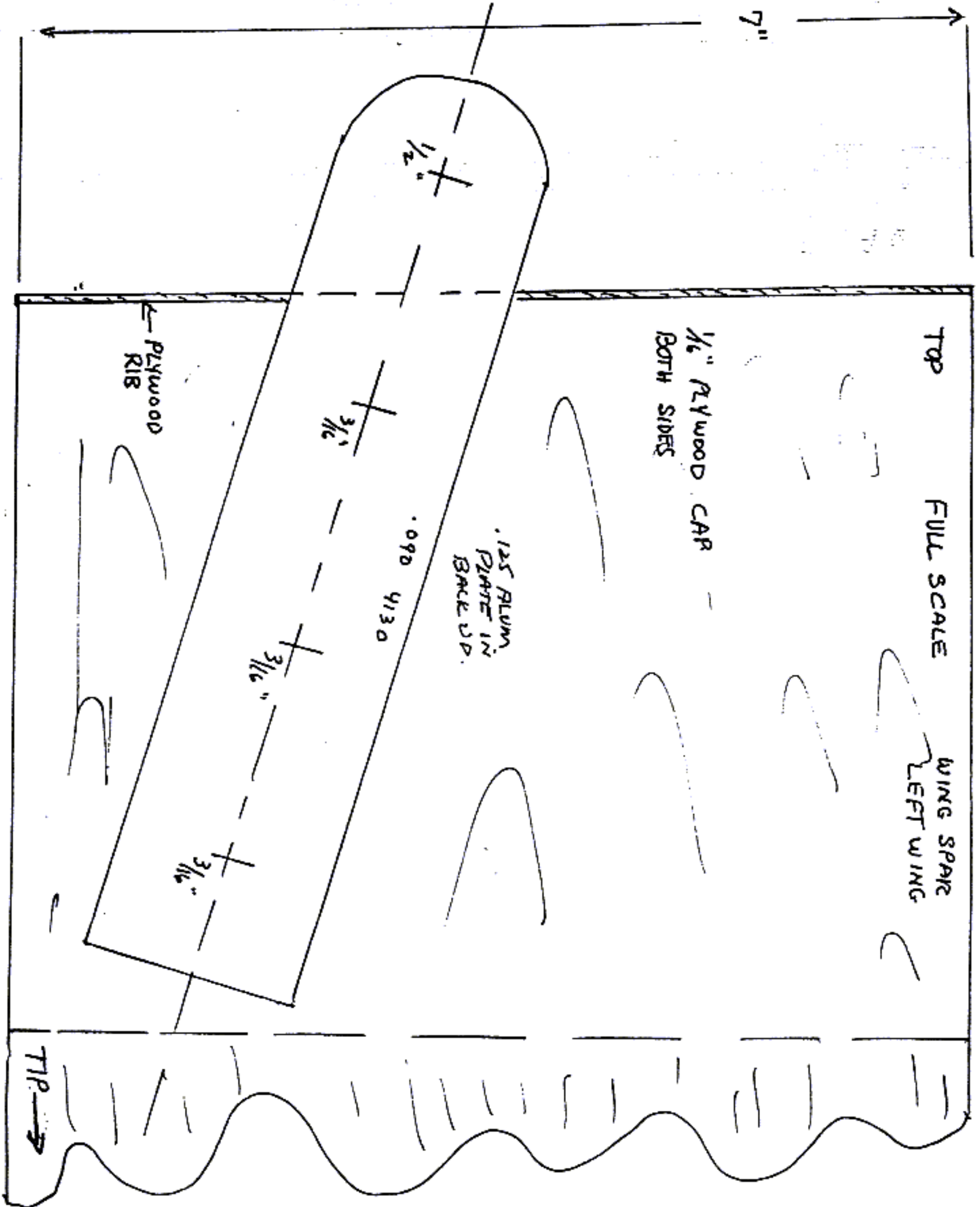
LIST OF PIECES FOR CAPS TOTAL

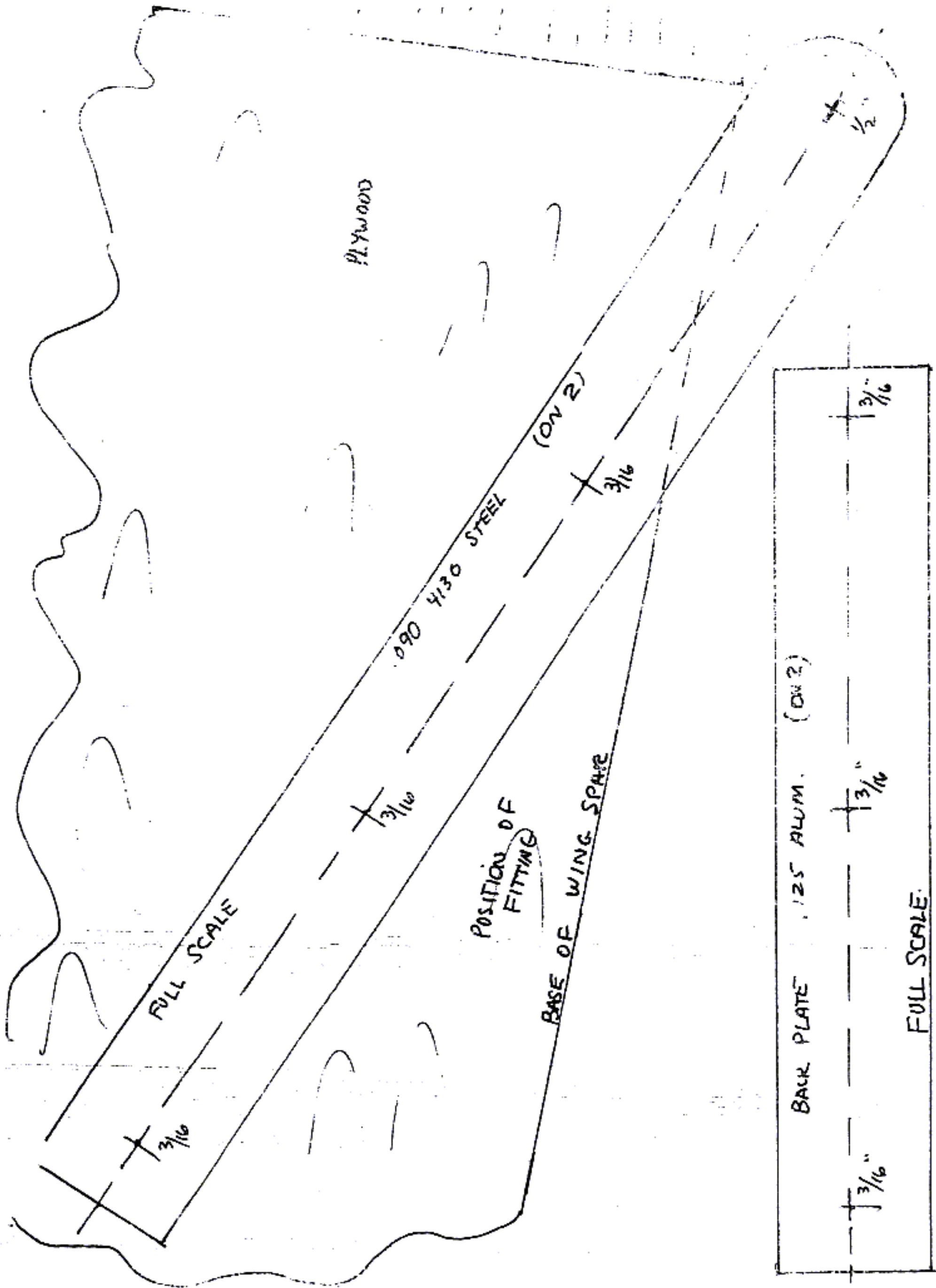
DRAG SPAR - 8	8 - 3 1/2 x 3 3/4 x 1/8"
MAIN SPAR - 8	8 - 4" x 5 1/2" x 1/8"
WING STRUT - 4	4 - 10" x 4 1/2" x 1/8"
CABIN STRUT - 2	2 - 7" x 5" x 1/8"

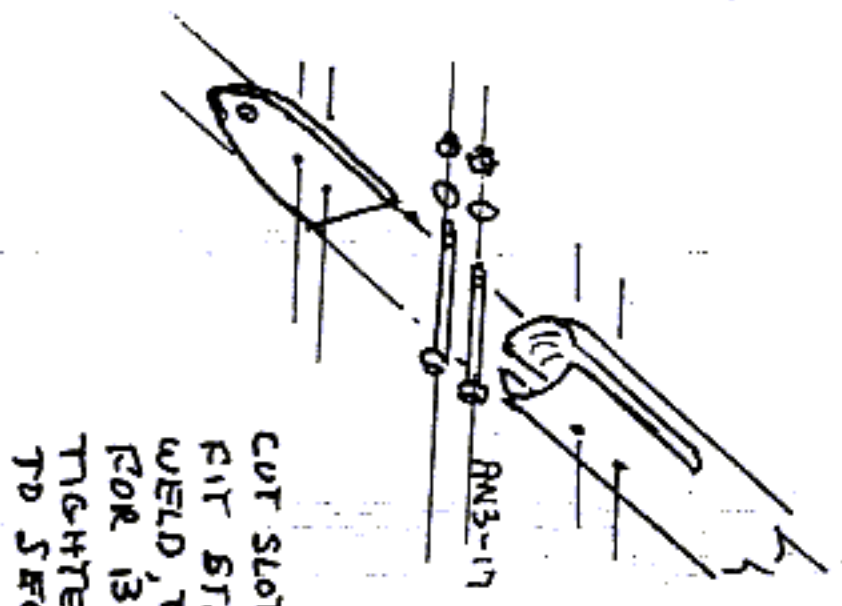
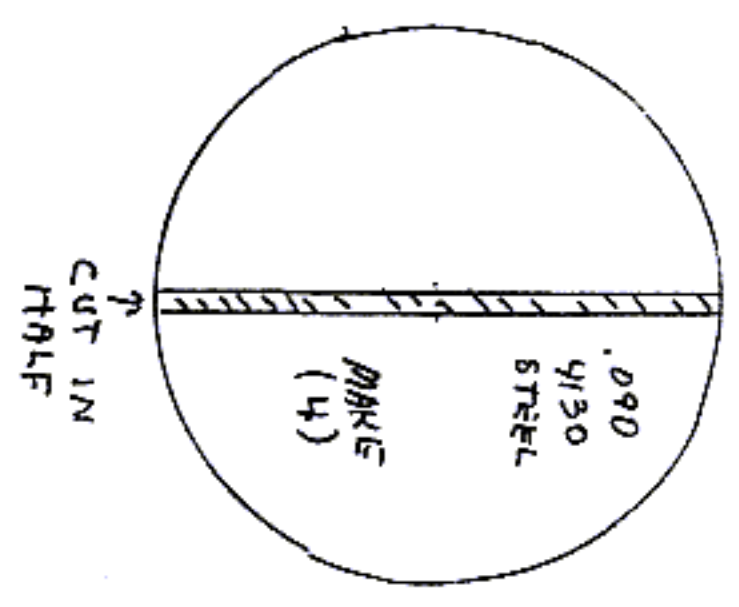
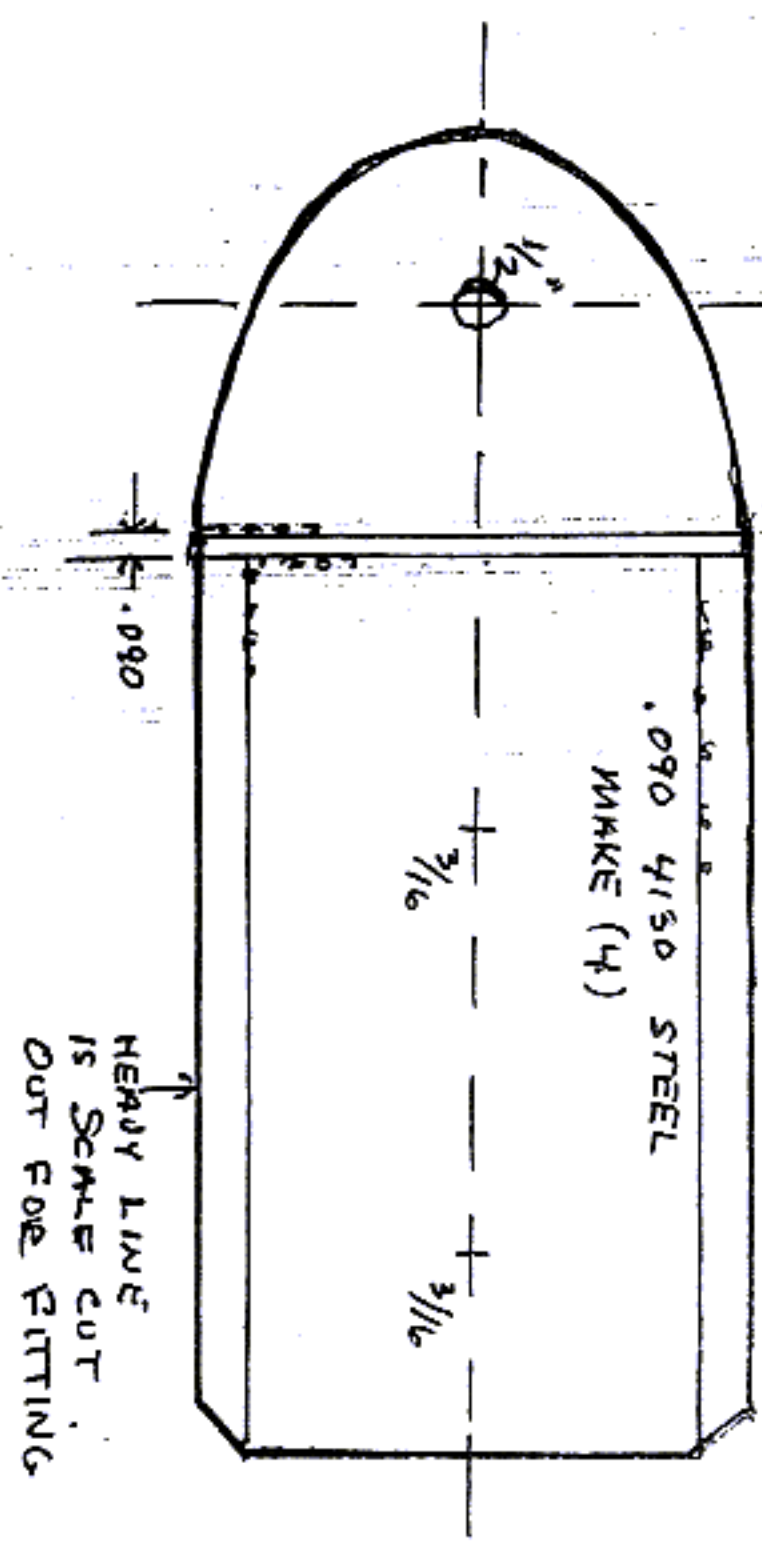
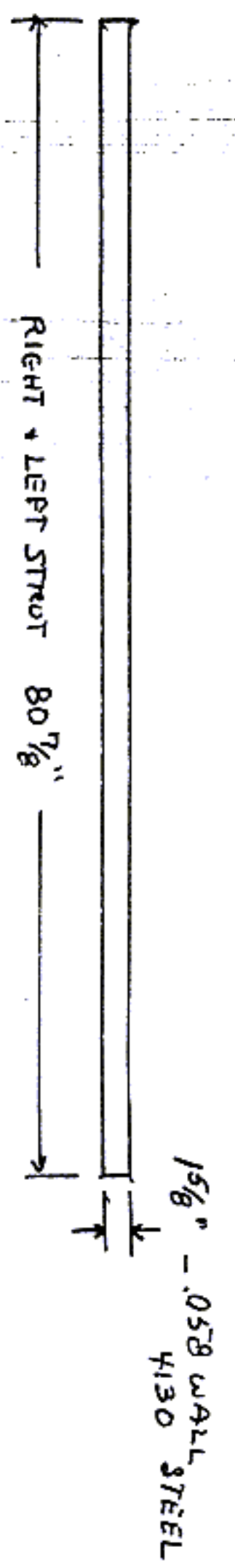
WING DRAG SPAR RIGHT WING



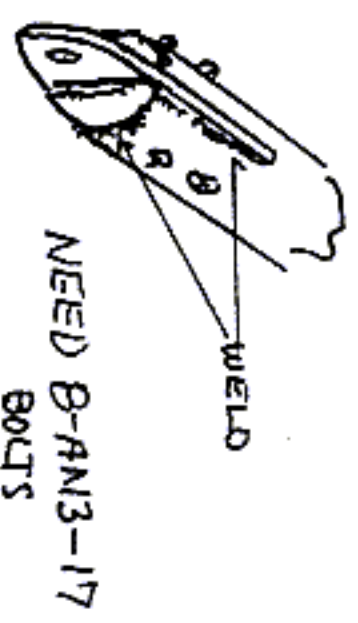
MOUNT AT ANGLE



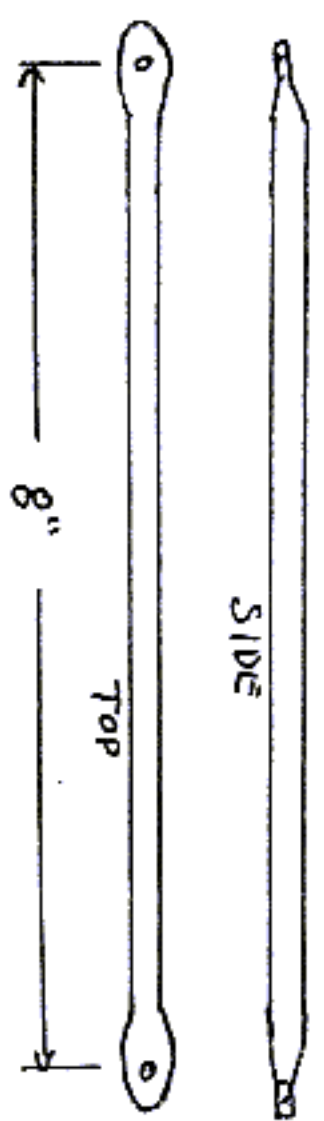




CUT SLOTS IN STRUT FIT STRUT FITTING WELD THAN DRILL FOR BOLTS LAST. TIGHTEN SLIGHTLY TO SECURE.



NEED AN3-17 BOLTS



ALL PUSH RODS 3/4" .058 ALUM TUBING

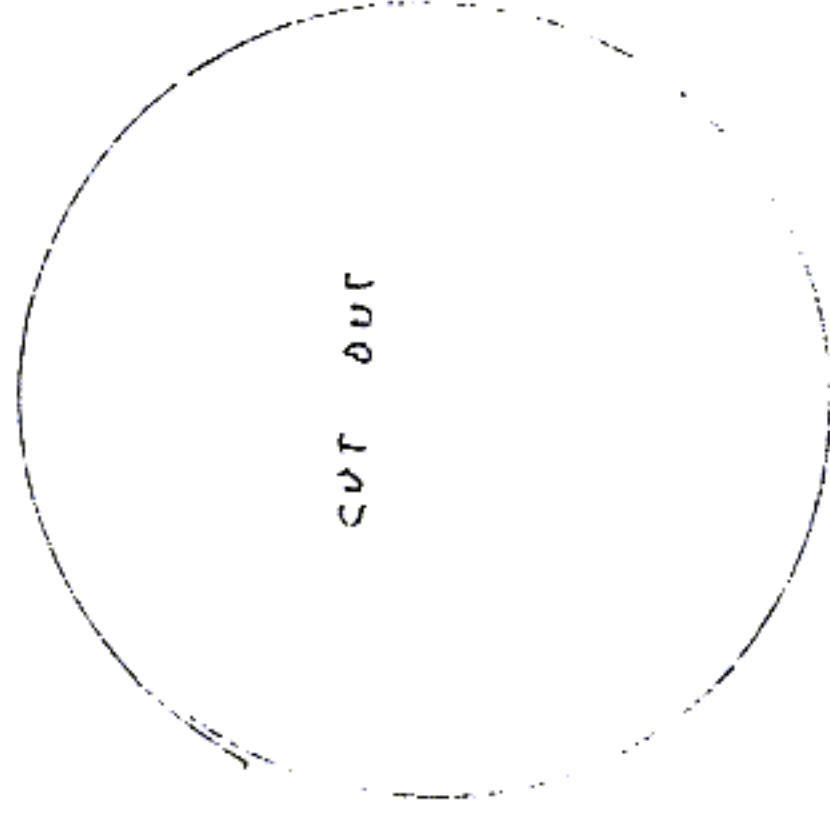
SQUEEZE ENDS OF TUBING AND DRILL 3/16" HOLES 8" C-C.

①

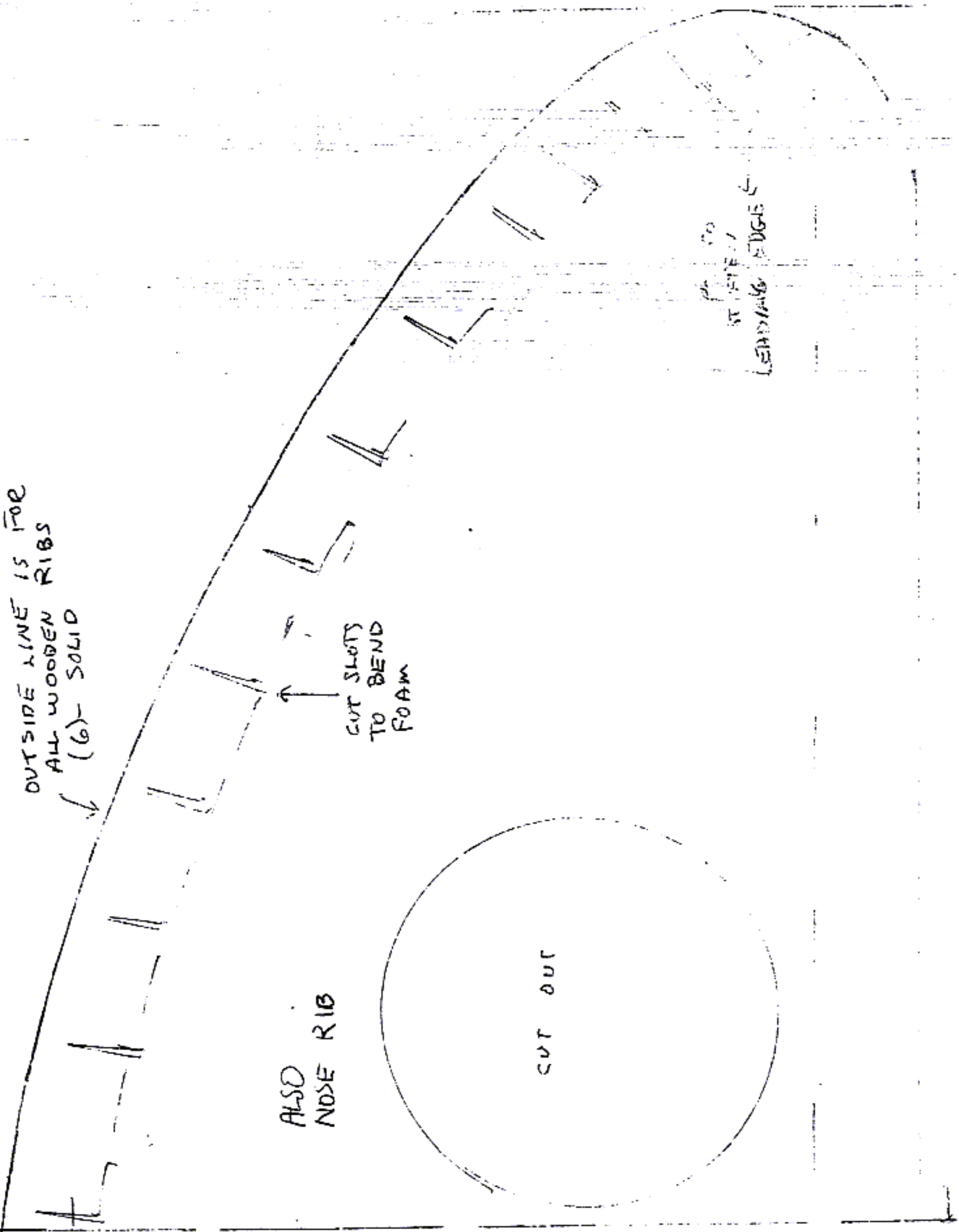
OUTSIDE LINE IS FOR
ALL WOODEN RIBS
(6) - SOLID

CUT SLOTS
TO BEND
FOAM

ALSO
NOSE RIB



STAYERS
LEADING EDGES



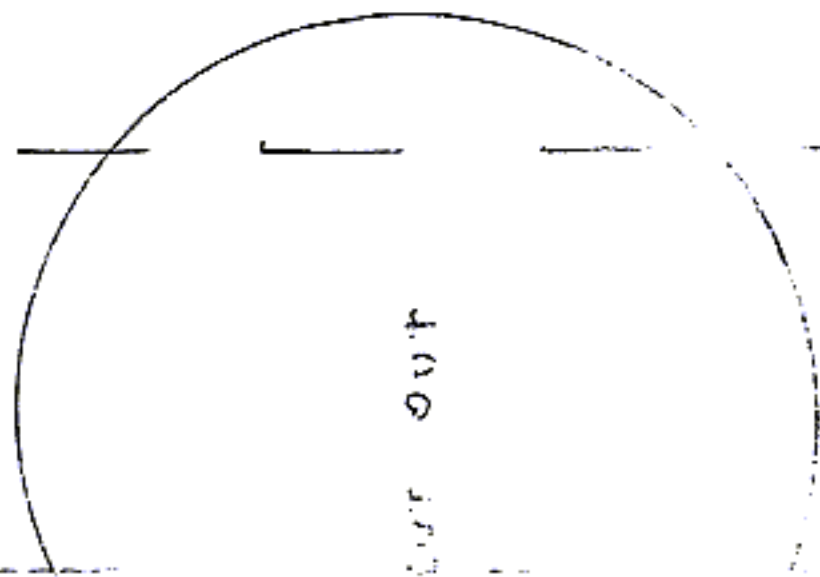
2

MAIN RIBS BLUE FOAM - 10 PER WING
NOSE RIBS WHITE FOAM - 9 PER WING

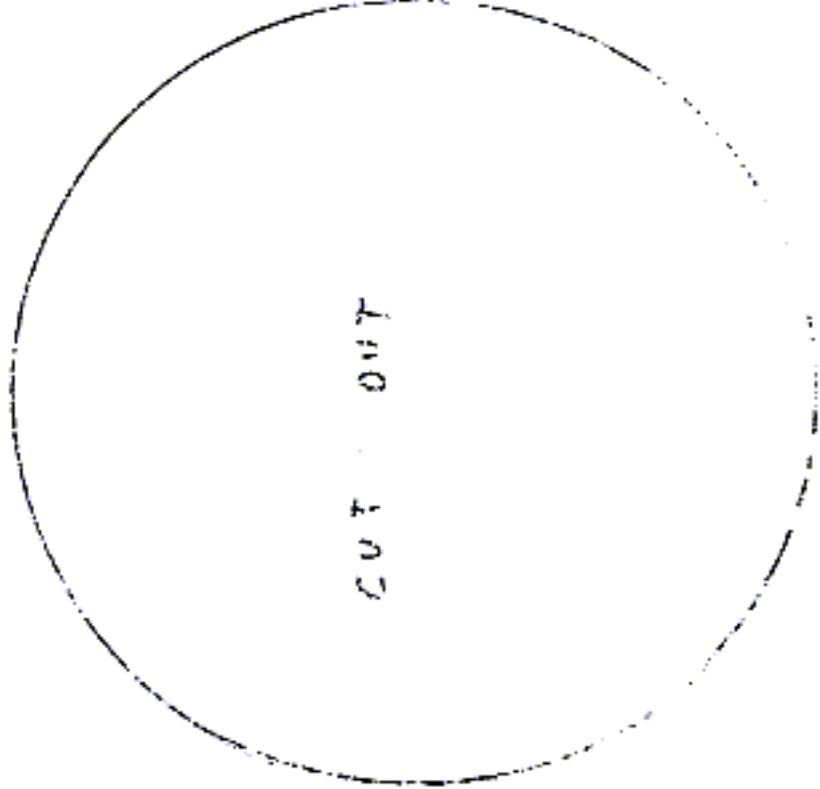
BLOCKS FOR
INSTALLING TOP
PCS.

3/4" x 7"

DOUGLAS
FIR



CUT OUT



CUT OUT

CG



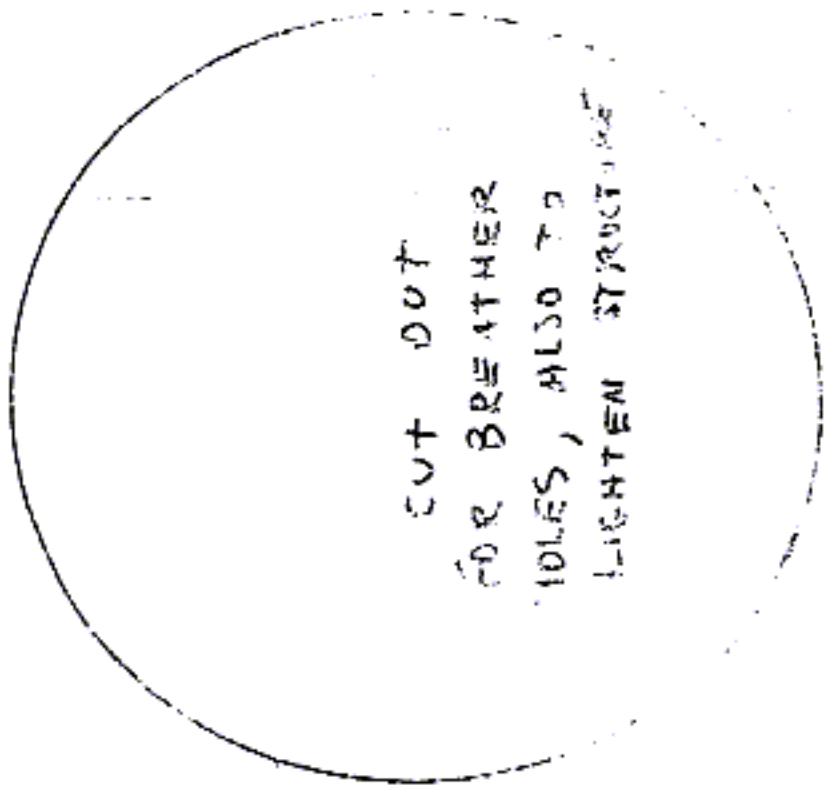
3

FULL SCALE

FOR INSTALLATION

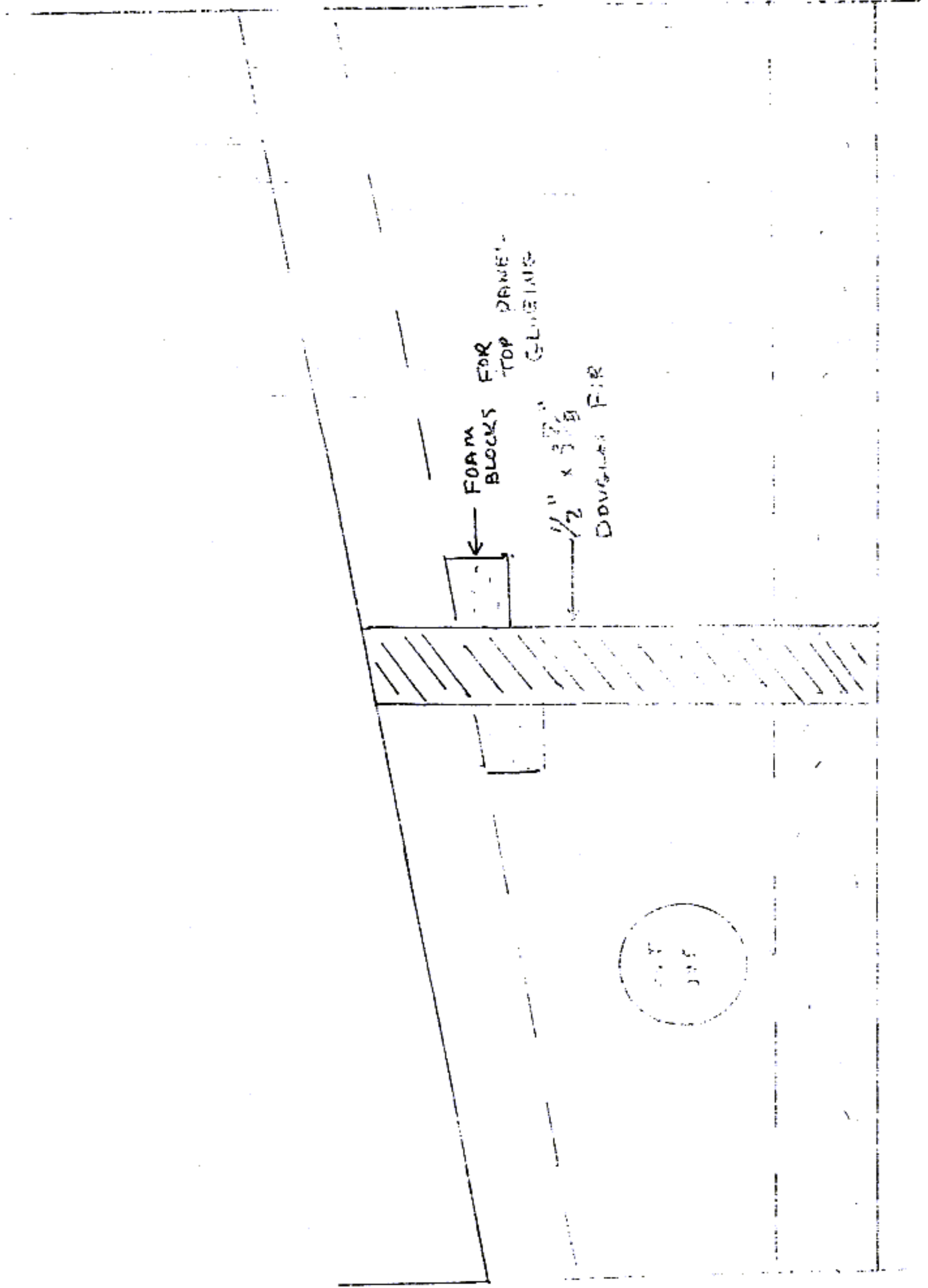
FOR MAKE UP EDGE

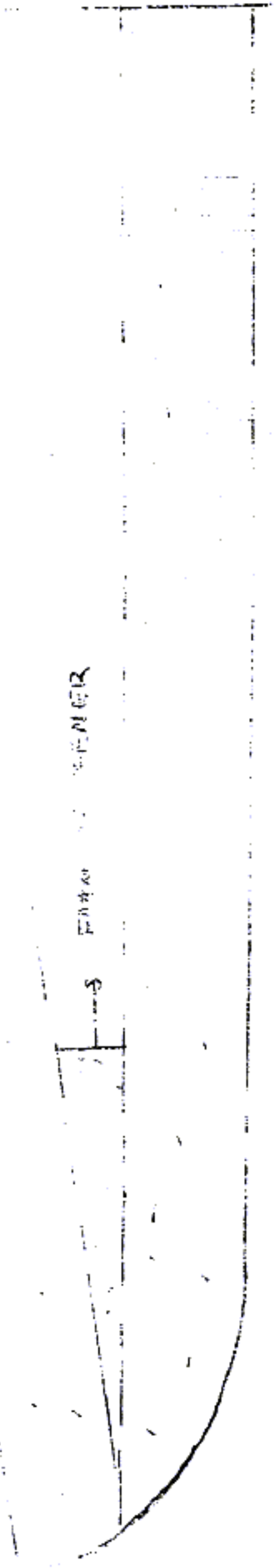
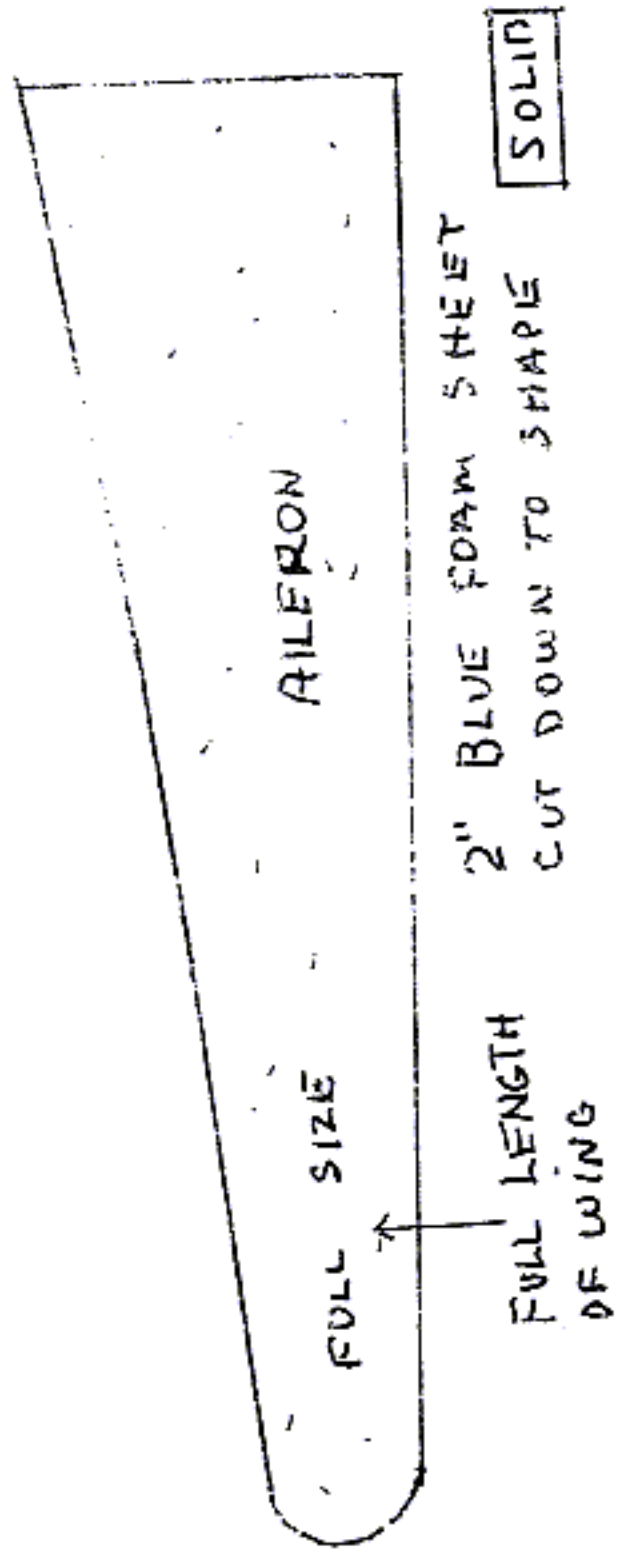
WHEN CUTTING RIBS OUT
USE INSIDE LINE
TDD + BOTTOM PANELS



CUT OUT
FOR BREATHER
HOLES, ALSO TO
LIGHTEN STRUCTURE

(4)





ESTIMATED MATERIAL LIST

BOLTS

AN3-5 — 4	AN4-4 — 3	PIANO WIRE	75"
AN3-5 — 2	AN4-4 — 3	1-2" 1000 LB. WASHERS	
AN3-6 — 6	AN4-10 — 2	1- PACE FLUSH HEAD RINGS	
AN3-11 — 6	AN4-23 — 2	17- SCREWS 5/16" TINNERMAN NUTS	
AN3-12 — 15			
AN3-13 — 42	AN-42 - 8-7 EYEBOLTS — 14	2 - 5/16" x 7" BOLTS -	
AN3-14 — 2	AN 336F - 1032 ANCHOR NUTS — 16	4-5/16" WASHERS	
AN3-15 — 5	AN 970-3 LARGE WASHERS — 16	4 - 5/16" NUTS	
AN3-16 — 1	AN 115-21 3/32 SHACKLES — 10	1- 1/2" ANCHOR PULLER	
AN3-17 — 0	AN 350-2-2 COTTER PINS — 20		
	303-9 CLEVIS PINS — 5		
NEED-100 WASHERS	3/32 STAINLESS STEEL CABLE — 30		
FOR AN-3 AND	AN 100-C4 THIMBLES 3/16 — 20		
100 Fibre AN3 NUTS.	2-G NICOPRESS 3/32 — 20		

METAL HARDWARE

.125 4130 STEEL — 12" x 12"	
.090 4130 STEEL — 12" x 12" — 8" x 6" — 5" x 10"	
.064 4130 STEEL — 12" x 12" — 10" x 12"	

PLATE GLASS

.125 ALUMINUM 1/2 x 1/2 CHANNEL — 72"	72"	12 x 17"
.125 ALUMINUM 2" x 2" CHANNEL — 36"	36"	12 x 17"
.125 ALUMINUM SHEET — 12" x 12"	12" x 12"	18 x 24"
.090 ALUMINUM SHEET — 12" x 24"	12" x 24"	18 x 24"
.010 STAINLESS STEEL SHEET — 18" x 24"	18" x 24"	16 x 25"
		18 x 24"

WING STRUTS

2 - 80 7/8" x .058 x 1 5/8" 4130 STEEL.

TRUCK SPRING 5/16" x 2" x 32"

2 - 2" HEAVY U BOLTS & NUTS

2 - WHEEL BARROW WHEELS

1 - BOAT SEAT

7/16" PIANO WIRE
 7" 1/16" PIANO WIRE
 2" 1/4 ALUM TUBING
 1" x 1" CORN

WOOD LIST DOUGLAS FIR GLUE + GLASS

1/2 x 3 1/2 x 60"	2 - 3/4 x 7" x 13 ft.	4- gal. SARE-TEPOXY
1/2 x 2 1/4 x 76"	2 - 1/2" x 3 3/8" x 13 ft.	2 PT 5 MINUTE EPOXY
1/4 x 1/4 x 116 ft.	1 - 4' x 8' 1/8" Plywood	50" x 120 ft. BI-
1/2 x 1/2 TRIANGLE 18 ft.	LAURNE MAHOAGANY SHEET.	DIRECTIONAL 4.5 oz
1/2 x 3/4 x 26 ft.		Fiber glass
3/4 x 6" x 36"	<u>FOAM</u>	
1/2 x 4 1/2 x 25"	14 - 2' x 8' x 3/4" Dow (BLUE)	
4 - 1/2 x 2" x 50"	20 - 2' x 8' x 3/4" (WHITE)	
	2 - 2' x 8' x 2" (BLUE)	

TOTAL EMPTY WEIGHT DIVIDED INTO
TOTAL 3 MOMENTS = EMPTY C.G.

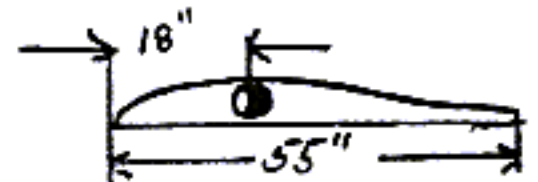
DISCRIPTION	WEIGHT	ARM	MOMENT
PASSENGER			
FUEL			
TOTAL WEIGHT			
EXTRA BAGGAGE			

CG RANGE

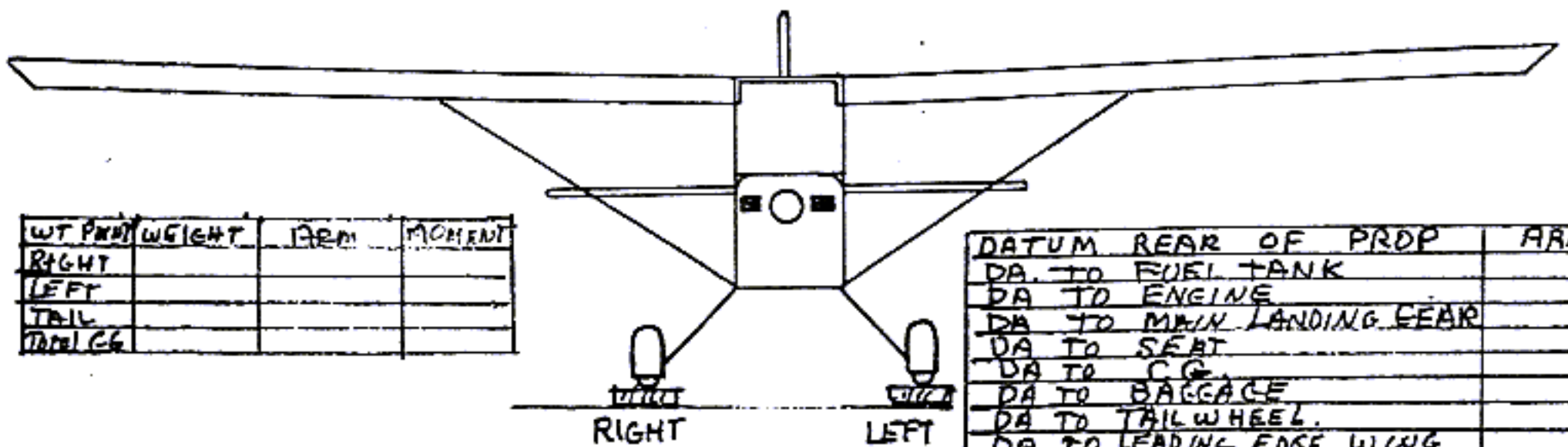
CG GROSS WEIGHT WET	
CG EMPTY WEIGHT	
CG BAGGAGE	

GROSS WEIGHT	
EMPTY WEIGHT	
CARRY LOAD	

WEIGHT POINT	SCALE READING	TARE	NET WT.

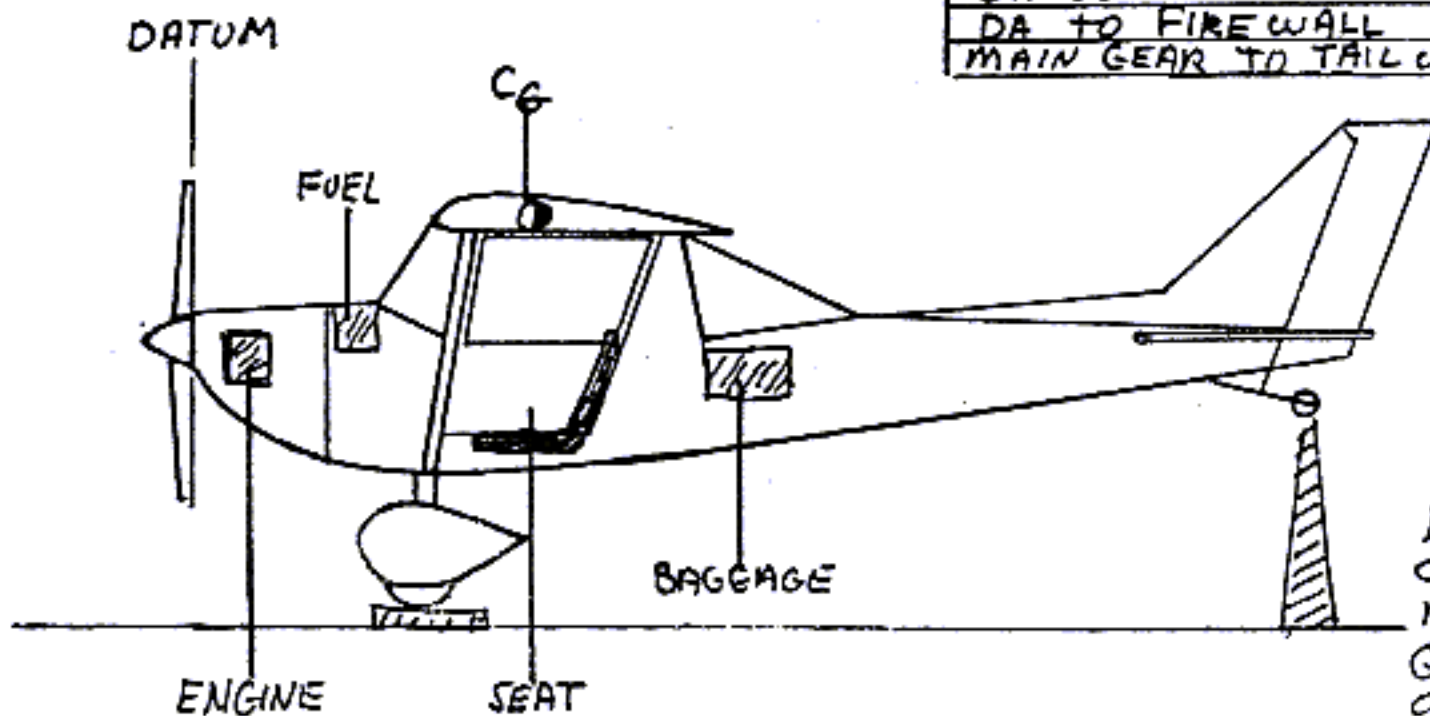


FUEL	AMOUNT	WEIGHT
PASSENGER		



WT POINT	WEIGHT	ARM	MOMENT
RIGHT			
LEFT			
TAIL			
TOTAL CG			

DATUM REAR OF PRDP	ARM
DA TO FUEL TANK	
DA TO ENGINE	
DA TO MAIN LANDING GEAR	
DA TO SEAT	
DA TO CG	
DA TO BAGGAGE	
DA TO TAIL WHEEL	
DA TO LEADING EDGE WING	
DA TO FIRE WALL	
MAIN GEAR TO TAIL WHEEL	

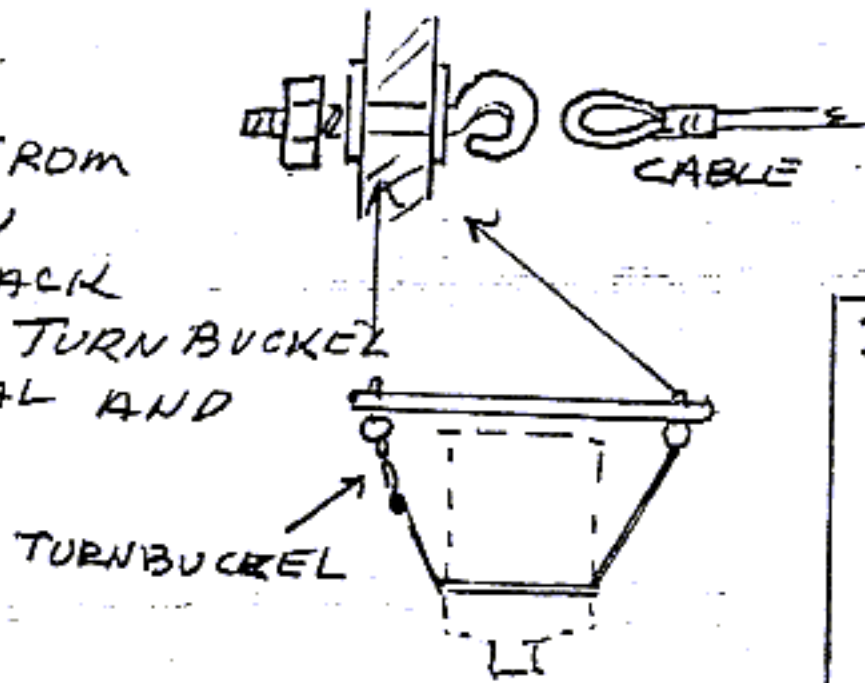


JN-1
WEIGHT
AND
BALANCE
SHEET.

LOCAL EAA
CHAPTER OR
AIRPORT CAN
GIVE INFORMATIC
ON USE OF SHEE

NOTE! SAFETY CABLE.

SAFETY CABLE FROM FIREWALL THRU ENGINE AND BACK TO FIREWALL. TURNBUCKLE IS FOR REMOVAL AND TIGHTENING.



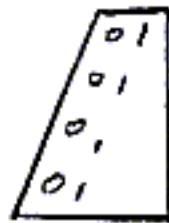
LBS.	
319	- BEFORE P1
25 1/2	PAINT + FIL
6	WHEEL PA + HARDWA
6	ADHOL + RI
1/2	SPINNER - BACK PLATE
<hr/>	
357	lbs.

NOTE! TRIM TAB.

CUT SLOT INTO RUDDER, INSERT TAB WITH 50/50 GLUE.

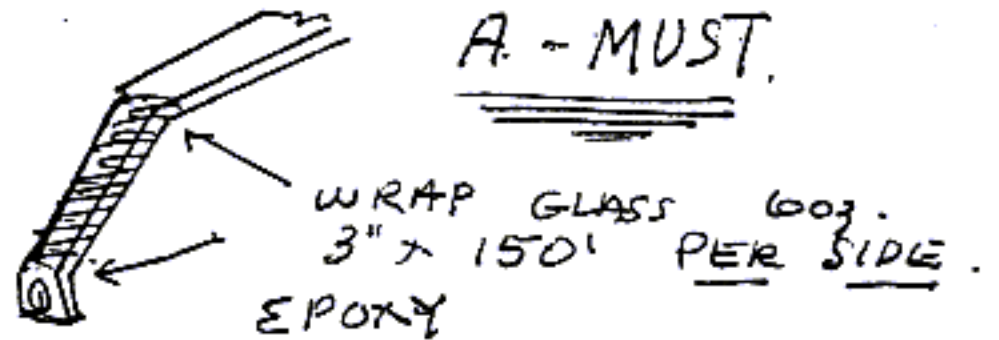


DRILL HOLES FOR EPOXY SCREWS.
TAB ALUMINUM .020



NOTE! LANDING GEAR.

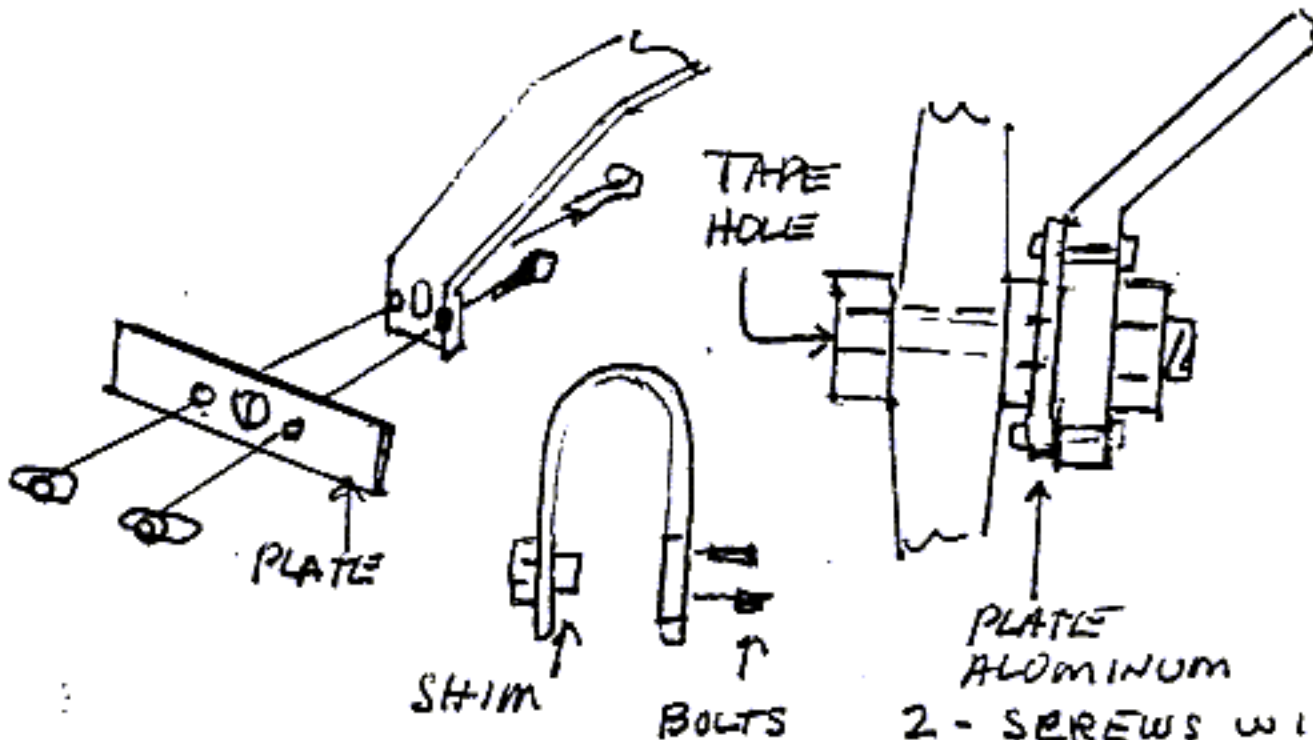
TAKE AIRCRAFT WEIGHT OFF OF GEAR TO GLASS.



NOTE! WHEEL PANTS

WHEEL PANTS MADE FROM FOAM BLOCKS + GLASSED TO SHAPE.

REVERSE 5/8 x 7" BOLT SC
BOLT HEAD IS OUTSIDE - TAP 1/4" HOLE AND THREAD 5/16MM AND INSTALL 1/4" BOLT.



UPDATE
5/1/97

PAGE 1

NOTE! RUST PROOF SCREWS, WEBBING SCREWS FOR OUTDOOR FURNITURE WEBBING - APPROX. 20 FOR 174 - COUPLING SCREWS

NOTE! STRENGTHEN AREA ON SIDES AND BOTTOM OF F-3 AREA, 2 LAYERS OF 3" STRIPS OF FIBER GLASS AND EPOXY. STRESS POINT FOR ROUGH LANDINGS

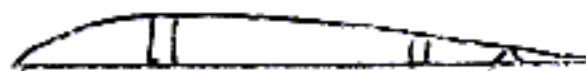
NOTE! WING RIB TEMPLATE IS SCALIS, GLUE TOGETHER AND MAKE A TEMPLATE FROM FORMICA OR WOOD THIS WILL HELP DRAWING OUT MAIN RIBS AND NOSE RIBS.

NOTE! FLOOR RUG SIZE - 3 FT. X 50"
INTERIOR - 50" X 54ds.

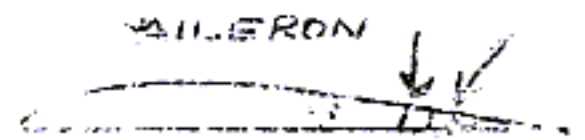
NOTE WINGS



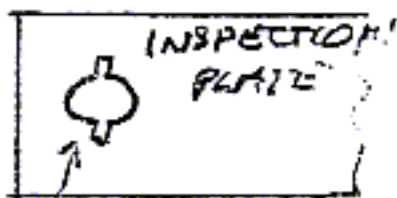
EPOXY EXTRA 3"
TAPE ON TOP SPARS
ONLY.



GAP STRIP
1 1/2" PLASTIC TAPE
ON INSIDE UNDER.
INSTALL (STICK) WITH
AILERON UP TO LIMIT
AND STICK!



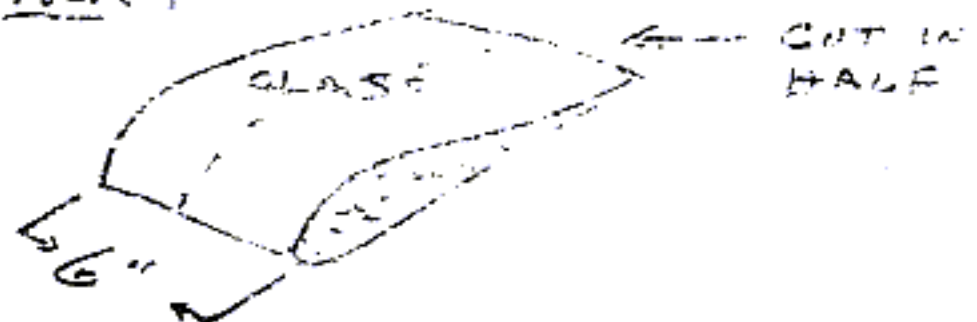
AILERON
HINGE BLOCKS
GLUED INTO
FOAM BEFORE
GLASSING.



CUT HOLE IN WING
AT DESIRED SPOT, SAVE
HOLE PIECE, MAKE SHEET
PLASTIC LID AND GLUE ON
THE FOAM. GLASS A STICK
ACROSS BOTTOM TO FIT
SLOTS IN WING, FIT INTO
SLOT AND TURN 90°.

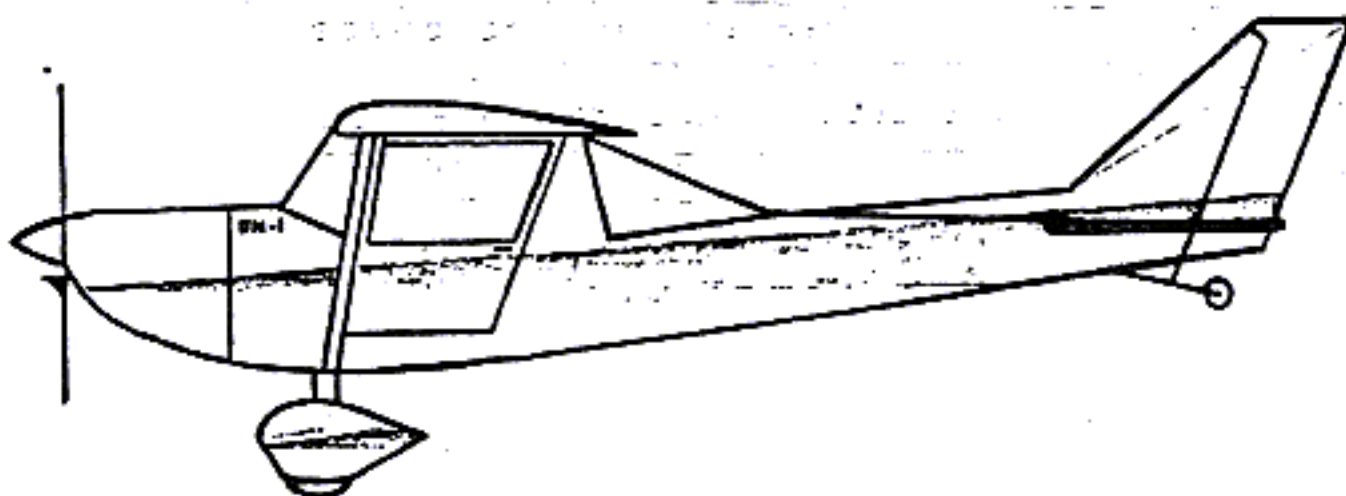


FINGER
SLOTS FOR
TURNING

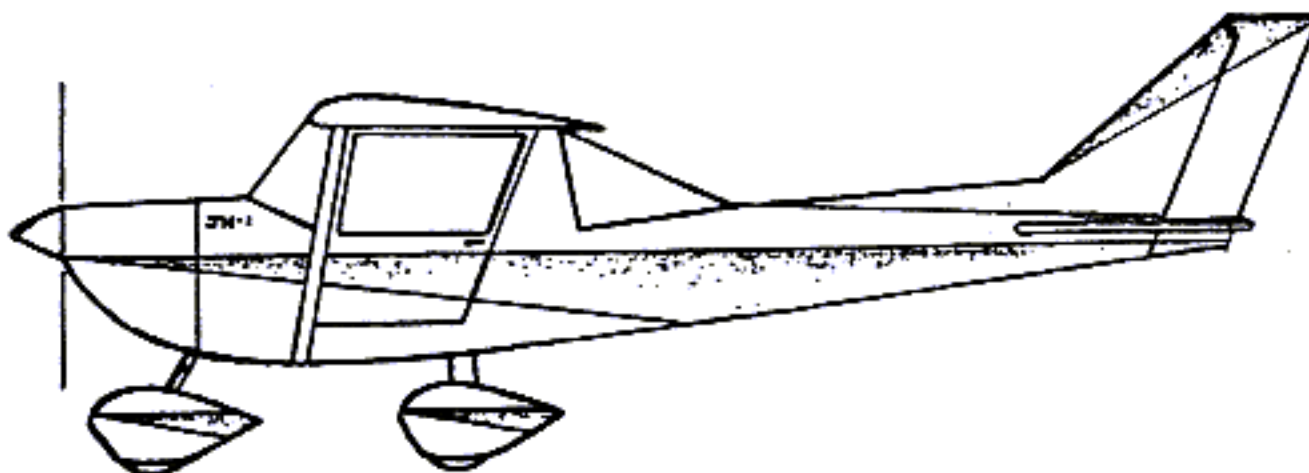


MAKE BLOCK IN AIRFOIL
SHAPE 6" WIDE - GLASS
3-4 LAYERS OF SCRAP
MATERIAL, COMPLETELY
AROUND. (TOP + BOTTOM).
WHEN CURED, CUT IN
HALF - DIG FOAM OUT
AND YOU HAVE WING
STRIPS TO FIT!

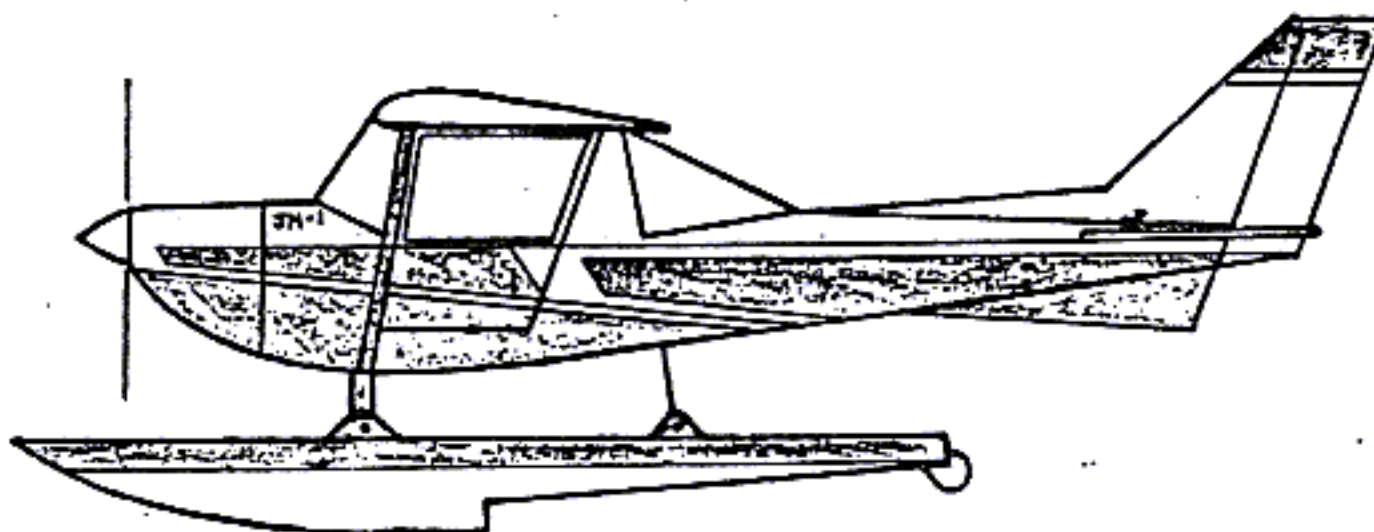
25 HP ROTEX

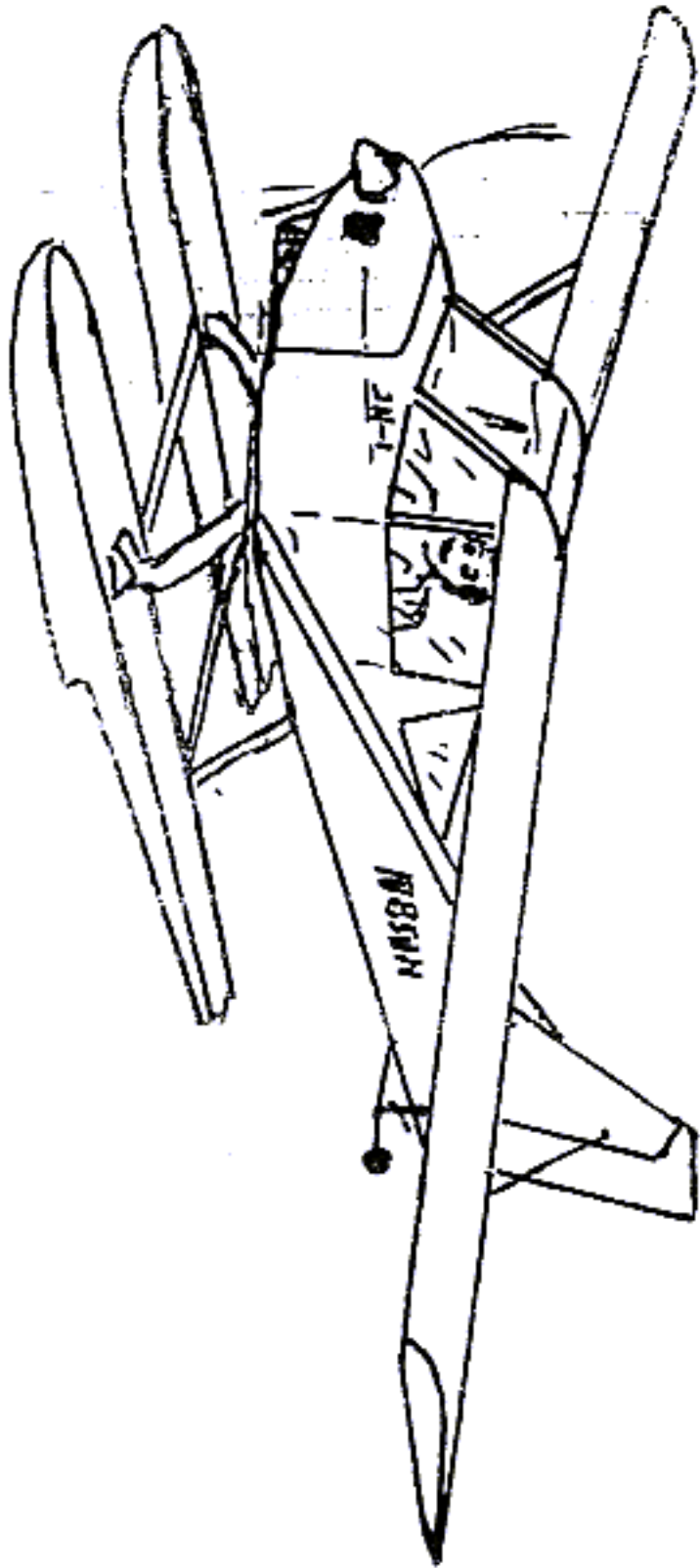


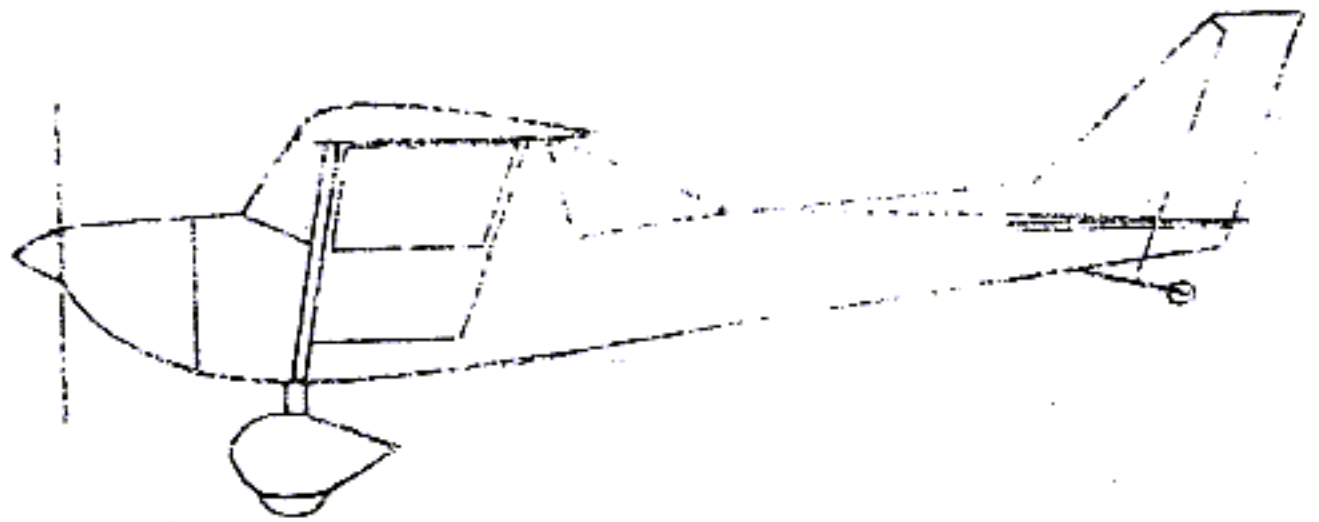
TRI - GEAR



FLOATS







J-N-1 NEWSLETTER

ISSUE No. 1

At Long Last you have a J-N newsletter. The request have been coming in daily. My name is Mike Rieker. I have been associated with light aviation for several years and am a long time friend of Jim Peris, Designer of the popular J-N. The purpose of this newsletter is to inform J-N builders and enthusiast of the progress each other is making as well as updates, safety notices and modifications. Your participation will be needed in order to keep the ball rolling. With out input from you this newsletter will be fairly one sided and loose objectivity. So keep those cards and letters coming. We will go to print with as many pages as is necessary to get you the info from others.

This newsletter will offer several regular features.

- A. Letters from You.
- B. Classifieds
- C. J-N 1 and J-N 2 updates.

If there is a need for more regular items then they will be added. Bottom line is " Tell Me What You Want To Read About." I will also try to keep on top of new products as well as services available to builders. We will accept commercial at a nominal fee, however non-commercial ads will run free of charge to subscribers. If there are any safety or service notices from engine manufactures or what or whomever, I will try to get it to you as soon as possible.

Thank you for your support.
Mike

J-N POPULARITY GROWING

Plans sales are going strong and have topped 275. There are several planes out there that should be flying any time now. The low cost to build feature of the J-N is the reason for the response. Some of the oter reasons are, the availability of parts, use of common hardware in non structural areas and the easy build design. Basic wood-working skills and a little common sense are the only required necessities to build the J-N.

J-N 1 UPDATE

Recently the ailerons were upgraded by adding 4" to the cord. The only flight characteristic that seemed to be less than superb was the aileron response. By adding 4" to the cord the area was increased by nearly 75 %. This allows more control with the same amount of stick input. If you have already made your ailerons it is a simple matter to cut the trailing edge, add the additional foam and reglass the entire surface. Write if you have any problems with your construction. It may be that you arn't the only one.

The J-N Newsletter is published monthly by MR Enterprises at 973 Green Terrace Lancaster, Pa. 17601. (717) 299-0491. Cost is \$12 year-\$15 yr.in Canada, \$20 yr. overseas. Remit U.S. Funds. PLEASE SUBMIT YOUR FLIGHT REPORTS, BUILDER REPORTS, ETC. TO ABOVE ADDRESS. ALWAYS 2 ISSUES.

LETTERS FROM YOU

Dear Mr. James Peris,
I liked the article of you and your plane in the Feb. 1988 issue of "Plane and Pilot". When I grow up I want to be a pilot. (very bad!) I want to have one of your planes too. I already have about \$1000 saved up for it! Me and my friend want to either be in the Air Force or have our own planes and live beside each other. My friend might not want to have one of your planes but I do. I like your plane because it is made different and it doesn't cost that much. I apologize that I didn't get this letter to you earlier. My friend (a man who lives beside me) gave me the magazine on Dec. 11. My neighbor has his own airstrip and his own plane. He took me a ride over the summer vacation. My grandpa took pictures of the enemy in planes in WW 2. When my mom was little he had an airstrip of his own, too. He had a Cessna. I really hope I get one of your planes when I'm older. Well, better go now. Maybe I'll write you a letter next month, too.

P.S. please write to me or call.
(you don't have to.)

Name: Kurt Kaelber
Age: 11
Address: 5821 Troy Rd.
Delaware, Ohio 43015
Phone: (614) 362-3828
2nd P.S. if you don't have time to write or call I understand.

(Well Kurt Good luck with your future in aviation. It's good to hear from future flyers. I hope some of our subscribers will take the time to drop a note to Kurt and let him know how your project is coming.)

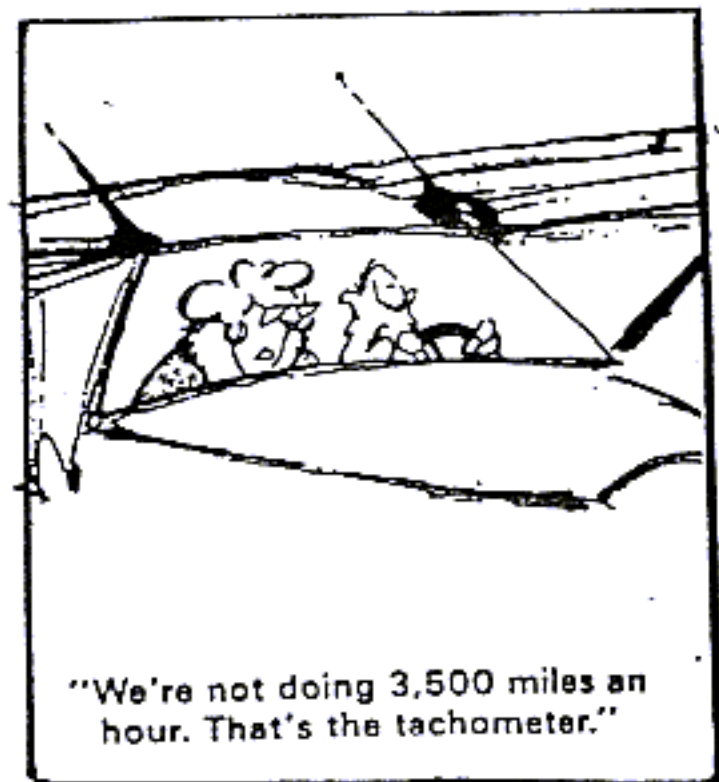
ORDER YOUR NEWS LETTER TODAY! Make check payable to, Mike Rieker. You NEED the information, You'll want the correspondence.

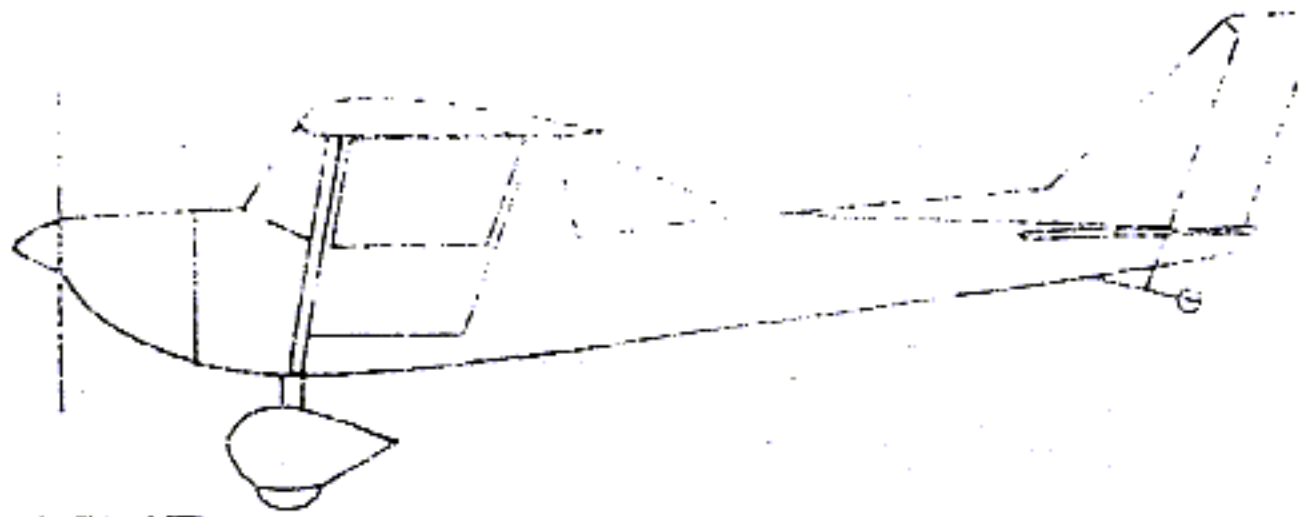
J-N 2 UPDATE

Construction has started on the J-N 2. The sides are on the table, all the wood and foam was cut, glued and gusseted and glassed. Work is expected to slow on the 2 since the start of another project has begun. The cost to build the JN-2 is not going to exceed the JN-1 by much until you get under the cowl. A 532 Rotax will probably be the power source, however there are several options available. More Later.

CLASSIFIEDS

Since this is the first issue of the newsletter there are no ads to be run. If you have an item for sale, it can be advertised at no charge to subscribers. If you have a product or service that you would like to advertise in the newsletter the cost is;
\$5.00 for the first 25 words
\$.15 for each additional word.
1/8 page \$12 1/2 page \$42
1/4 page \$22 Full page \$80
(Type setting and halftones extra, all display ads must be camera ready as no proof is available.)





JN-1 NEWSLETTER

ISSUE No. 2

NEWSLETTER WELL RECEIVED

The response to the newsletter has been pretty light but those who have responded by subscribing have said that they appreciate the existence of it. The idea, as previously stated is to share thoughts with other builders, and to answer questions you may have. The main context of the letter will be your correspondence. It is necessary to have your involvement. I do not however have stock in the U.S. Postal Service and cannot continue to send free newsletters so I'm sorry to say this will be the last freebie. If you haven't subscribed yet you will miss out on a world of information.

Mike

ACCIDENT PREDICTORS TELL THE FUTURE

After much study and comparing accident facts, psychologists conclude that there really isn't a truly accident prone personality. Rather, there are accident prone periods in our lives.

When your under stress, not well rested, and not feeling well, **WATCH OUT!**

To keep an accident prone situation from developing, check these instructions.

* **RECOGNIZE STRESS.** Any time a group of minor mishaps or near-misses happen, step back from your life to find the cause. Stress translates into too much hurry, too many things to do, or a depressed attitude. In these times awareness goes out the window. People don't consider the consequences.

* **GET FIT.** Physical fitness is a factor in safety. When the body is in good condition it responds to danger more quickly. The physically fit person is less likely to allow a dangerous situation develop. Exercise prevents obesity which leads to accident prone situations. A good workout relieves tension as well.

* **EAT WELL.** A poor diet causes weakness and allows stress to take over. Good nutrition is important, especially when life is demanding. In our cases staying powered keeps people alert, and helps them cope with emergencies.

* **DRUGS** take the edge off a sharp mind. even cough medicines and antihistamines can cause grogginess. Tranquilizers reduce your ability to drive and operate equipment, so we need not mention flying, and sleeping pills have effects that are still there during the following day.

* **SLEEP WELL.** Even shift workers can get a good nights sleep if they plan ahead. Include these steps: (a) Don't watch exciting TV for an hour before sleep. Wind down. (b) Create a bedtime ritual that signals your mind that sleep is coming. (c) Make your bed comfortable and do whatever is necessary to keep the noise and light to a minimum. Uncontrollable noise like traffic can be masked with the sound of a fan. When your in a period of high stress take time to eat and sleep well. years in the future, no one will remember if you took time to exercise today, but it could be just what you need to stay safe and well during stressful times.

Finally, if it dawns on you that your accident predictors are high, then step away from a dangerous situation. Take special care when driving, boating, doing projects around the house. Especially take care if your going to try out that new plane or

LETTERS FROM YOU

Letters.....

Dear Mike,
I am building the JN-1 in my two car garage. I was in contact with Jim a while back and he told me to hold off on the ailerons. I have made all the fuselage formers, they are to be glassed. Also made the cabin and longerons. I am making a video tape as I go along. Had to stop the project for six weeks due to the wife having me finish a lot of her projects. I will be getting back to it next week. To date I have my engine, and instruments also all the foam, wood and fiberglass. So, it is "Away We Go", till the wife has me doing something else.

Bill Fields
New Prt Richey, Fla.

(Well Bill it sounds as though you are on your way. Jim has indeed extended the trailing edge of the ailerons 4" to effect greater response. He has yet to test the plane, what with his wife recovering from a liver transplant and all, however all is better at the Peris household and since Nancy is mending quite nicely, I feel that testing is forthcoming. As you can see wifes and aviation seldom mix completely so at times you need to give in, we all do.)

Dear Mike,
Just rec'd your newsletter. Enclosed is my check for \$12 for first years subscription. I have not started to build the JN-1 yet because my wife wants a two place, so she wouldn't be left at home. So is the JN-2 a two place? Can my planes be upgraded, How much do they cost? Your newsletter is the first I had heard about the "2". Any further info would be appreciated. I'm also interested in using a VW or 1/2 VW in this plane. If you can let me know of any other builders in SO. Calif. it would be apprec.

David Reser
Cerritos CA

(The JN-2 is indeed a two place. The fuse will be longer and wider to accommodate the side by side seating. Please bear in mind that the JN-1 was a spare time project of Jim's as is the JN-2. These things take time and trial. Plans are not in the wind for quite some time. Jim has said that the "2" will use the same wing as the "1". There are several things to be tested on the JN-1, such as floats and a clipper wing version, before extensive work can be done on the "2". As info becomes available I will put it in the newsletter for all of you. Also it is my intention to get a list of subscribers printed and published. In regards to the

(cont)

use of a VW. There is no reason why a VW would not work in the JN-2 although it is heavy for use in the JN-1. Some additional work in the firewall gussets would give all the strength needed for 1/2 VW but keep in mind that this has not been tested and you should know all the weights and whats before trying to experiment on an already experimental airplane.

Good Luck.....Mike

Dear Mike,
Please send me the J-N newsletter. enclosed is \$ 12.00. I started building 2 mos. ago. This is my first plane. I made the ailerons first. Oh well, I kind of thought they were small. If I have anything helpful I'll reply. Randy Mlady
Marion, SD

(Don't it always go that way! At least your getting some glass experiance. It still amazes me how strong it is. Keep us informed as to your progress Randy and thank you for the subscription.)

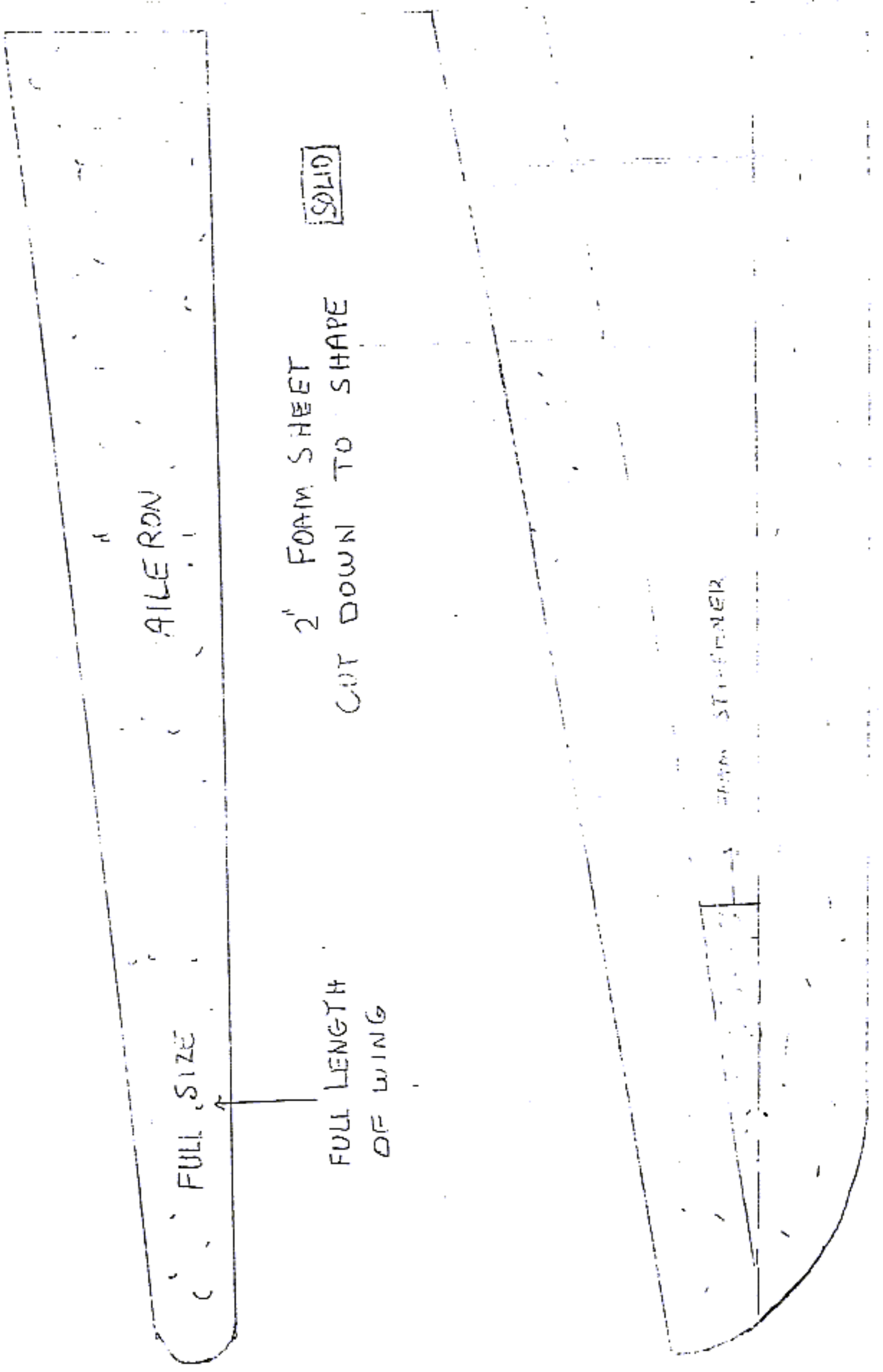
Hi Mike,
I have never built an airplane before so I am having problems understanding the plans, particularly in the aera of the tail post and assembly of the fin, rudder and stab and elevator, to the tailpost area. Hope something will be in future newsletters. Thanks.

Erling Uttech
Stevens Point WI

and this.....

Mike,
I have a question on the center section of the JN-1. I am ready to join the two centersection sides and in my mind I can't tell if the cross peices of 3/4 " fir, go above the foam floor or under it. The plans show a 3 1/2" wide piece, to attach the landing gear, mounted under the floor, but the piece to mount the control stick shows above the floor. If this is the same piece I'm confused. Are there 2 pieces? Also When adding the longeron and foam from cabin to tailpost it states to lay out the side and fasten the front end to cabin and gusset. Then 5 min. epo the foam to the top longeron and attach to the tail post?? The plans show the tailpost to be 3" wide at the outside rear. Please explain how the tailpost attaches at this point.

(cont.)



AILERON

2' FOAM SHEET
CUT DOWN TO SHAPE

SOLID

FULL LENGTH
OF WING

SPRUE STIFFENER

KAWASAKI 440 w/elec drive and elec start. From Fisser 201. Complete Chas. Watson (215)535-8746. Phila. \$500 includes motor mount.

'87 MXL II, dealer built, Stits, strobe, BRS 3, silencers. inst. \$8995 Windstar Aviation (301) 329-1995. Ask for Tom.

Buccaneer Amphibious aircraft 50hr TT, 447 Rotax, New fabric, aerothane. \$7500 Red, white, blue.

King Cobra 2 place instructional ultralight by Advanced. Black rainbow colors, Full inst. 532 Rotax 117hr. on engine. \$6950 Will deliver either aircraft on cost share basis. Del Belflower (407) 331-7950. Altamonte Spr. Fla.

'85 Tierra 277 rotax, 3axis, 40hr. TT. Hangered, Inst. VG cond. Cortney Campbell (215)525-3796.

Hummer 2-drive \$1800 Goldwing 430 cuyuna, w/reduction \$2500. Also UL-28 parachute \$150. Butch Brady (717)225-6309.

Eipper MX w/new sails, cuyuna VG. cond. \$2500. Kolb Ultrastar Cuyuna, inst. w/trailer, 100hr TT. \$4500. Dennis Heistand (717) 653-2360.

Maxair Drifter 447 Rotax Inst. Hangered. George Smith (717) 533-6299 Hershey Pa. evenings.

Roteck 2place, 50HP rotax, new Hangered. \$4500 Firm Roteck single place Rally II 40hp Rotax, 3axis, used, 10hrTT. Hangered, some inst. \$4000 Firm Tom Parsons (717)834-5270 Pa.

Standard B8M Benson Gyrocopter w/72hp Mac. 40hr. TT Mac prop, Rotocraft blades 7"cord, 12" wheels, temp gauge. Eng. develops 271 lbs. thrust. \$2500 for all. Delmer Ross (918)786-9673 Ok.

Thank you for the newsletter. It will be greatly appreciated. Harvey Larson, Anytown, MO

(Erling and Harvey here is the best answer I can give for... First of all it appears that you may have overlooked former #8. This is the fills the three inch gap at the rear. Once in place the tailpost has a home. There will be a revised drawing in the next newsletter that should clear up any questions. Also Harvey, the 3/4 piece of wood is mounted between the sides and the stick mounts to the top side and the gear mounts on the under side. The crosshatched area shown in the plans is to represent the the landing gear itself. I hope this has been some help. If not wait for the drawings next month. Mike)

AILERON DRAWINGS

This month I am including the updated drawings for the ailerons. I will try to get the updates to you as the letters or questions are published. Again I can only ask that you send me lots of questions.

Mike

THIS SPACE
RESERVED
FOR YOUR
COMMENTS



JN-1 NEWSLETTER

ISSUE # 3

LETTERS..LETTERS and MORE LETTERS

With all the letters I've been receiving I now have plenty to write about. That does not mean that you need to stop sending your letters and comments. Well Here Goes !

Dear Mike,

I think I know how the tail section goes together but I am interested in seeing more drawings to confirm this. I am presently working on the tail section. I plan to use a 447 Rotax. Are there any plans available for this installation?

This has been a fun project and I am glad to see the newsletter become available.

Thomas Bailey
SR 2 Box 777
Stillabee, TX 77656

Dear Tom,

The drawings you have are about all that are available at this time. (See the letter from Howard Evans) As far as plans for the rotax go, the mounts can be the same if you mount the engine inverted. Only the location of the bolt holes will change. Watch for updates in future newsletters.

Dear Mike,

Great Newsletter! I've not started a JN yet but have had the planes for about a year. I am a first time builder. I attempted to purchase some of the parts at Sun & Fun last year. I found that many of the AN bolt & washer numbers were incomplete as to the exact length, etc. Because of my inexperience I may not have the right parts. The exact part # would be helpful. Is there an update on this? Also Jim sent me some sug-

(cont.)

questions as to possibly keep the JN in the ultralight class. You might share them in the newsletter. Thankyou for your support of JN builders everywhere.

Box 466
Kissimmee, Fla. 32742
(407)933-0300

Dear Kent,

I am sure that you realize, that if each part was assigned a part number, the cost of the plane would be staggering. At this time I am including an AN conversion gauge which you may find helpful. In regards to purchasing the wrong parts, you will find out that when scratch building an airplane, there are no wrong parts and you can never have enough hardware. There are several ideas as to how the JN can be built as an ultralight however all will take considerable engineering and testing. By lightening the airplane concessions must be made and extreme caution must be exercised. Keep us informed as to your progress. Mike

Dear Mike,

I started cutting the foam for the cabin, but haven't done any fiberglass yet. I plan to make a two place tandem. Your thoughts would be appreciated.

Ray Breidenbach
Box 2
Reynolds, N.D. 58275

Dear Ray,
There are few problems associated with converting the JN to a two place aircraft. You as the builder will however become the designer and engineer. Weight and balance is the critical factor and you will need to do some homework on the subject. As mentioned before the wing loading is such as to accommodate a slightly higher weight. again, this wing has never been tested on a 2 place so you as the builder will bear the responsibility burden of your actions. I also feel that you will need to consider at least 40 hp or more for a 2 place. Keep us informed as to your progress.

Dear Mike,
I am about 60% on my JN project and have enjoyed the work greatly. I do appreciate the update on the ailerons and the newsletter and would like to be a part of it. I have some items I would like to list in the newsletter:
Rotax 377 w/ reduction \$200.00
Rotax 503 w/ reduction \$600.00
Cuyuna 430 w/reduction \$500.00
Kawasaki 440 w/reduction, electric start, new 54x27 prop, 30min. \$800.00
3-Rotec Rally II's Rotax, \$1200.00ea.
Wizard U/L 503 Rotax, Good cond. \$1500.00 and Misc. Rotec Parts.

Charles King
5103 Old Mayfield Rd.
Paducah, KY 42003
Phone: (502)554-3500 day
(502)554-5537 night

Dear Charles,
You sound like a serious light plane flyer or a serious collector of used parts. I am certain that many of our readers will be contacting you. There may be some tips you can give the less experienced people as time goes by. I will include your items in the classifieds next month and also in the other two newsletters I do. That goes for one and all. If you have items to sell, let me know about them.

Mike

Dear Mike,
Where were you when I needed help. I started the JN in Jan. '88 and about 400 hrs. ago. I would like to say that most of these have been the most enjoyable I have ever spent. However... there were times I cried, cussed and quit. Let's admit it guys, building an airplane isn't easy, and if you don't have the patience to see it through, don't start. I read that "building a plane isn't a big job, its a lot of little jobs". My advice is not to count the jobs ahead of you, but to marvel at the ones you've completed. If you keep sawing, gluing and glassing old father time will reward you with a beautiful bird of your very own. Just don't rash, study your plans very close at first and seek help if you don't understand them. It saves a lot of un-building. Even a trip to Lancaster to meet Jim and to see the prototype as I did last August. Jim is a fine man and a real craftsman who makes you feel welcomed in his shop. I took many pictures of the JN and without them I am not sure that I would be this far along. If anyone needs copies of these photos I will be happy to send them to you. The cost for the set is \$15' for 40 to 50 close-up detail pictures. Also if I can be of any help to first timers please write or call me. Like Mike I don't have stock in the postal service, so if you send me some stamps I'd appreciate it. As of 2/17/89 my JN is resting comfortably on it's spring gear, with tail feathers and flying wires in place. The windows and windshield are framed in and ready for glass. Controls are in and the gas tank and firewall await UPS to deliver my 503 Rotax engine mount. Anyone know of a good low time 503? I have not started on the wing yet but have a false wing in the making to be used for fitting controls, struts etc. Hope to fly in the late summer of '89.

Harold Evans
Rt 2 Box 81
St George, S.C. 29477

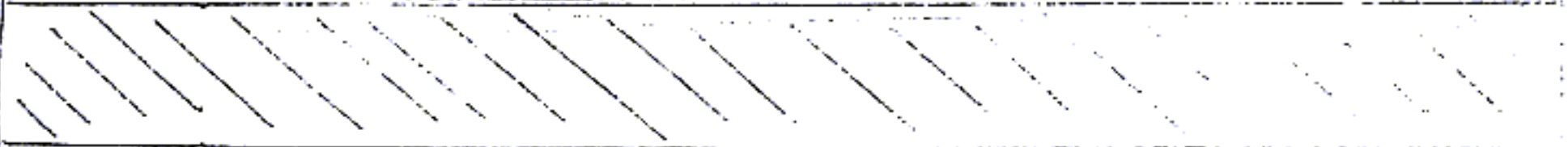
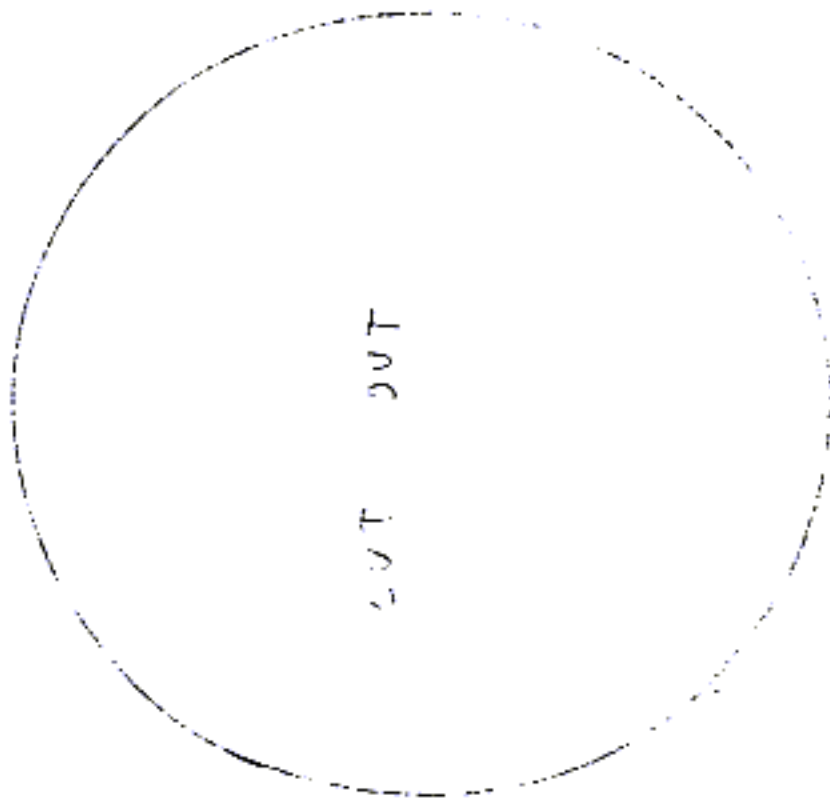
Dear Harold,
Check out Charles King for that 503. Yours is the kind of positive letters I like. There is a lot to building and you took an approach that works for you. Most builders are able to improvise enough to get the job finished. I hope to see some photos soon.

Keep us informed.
Mike

(2)

MAIN RIBS BLUE FOAM - 10 PER WING
NOSE RIBS WHITE FOAM - 9 PER WING

BLUE FOAM ON NOSE RIBS ARE O.K.
BLOCKS FOR INSTALLING TOP PCS.
5" x 17" DOUGLAS FIR

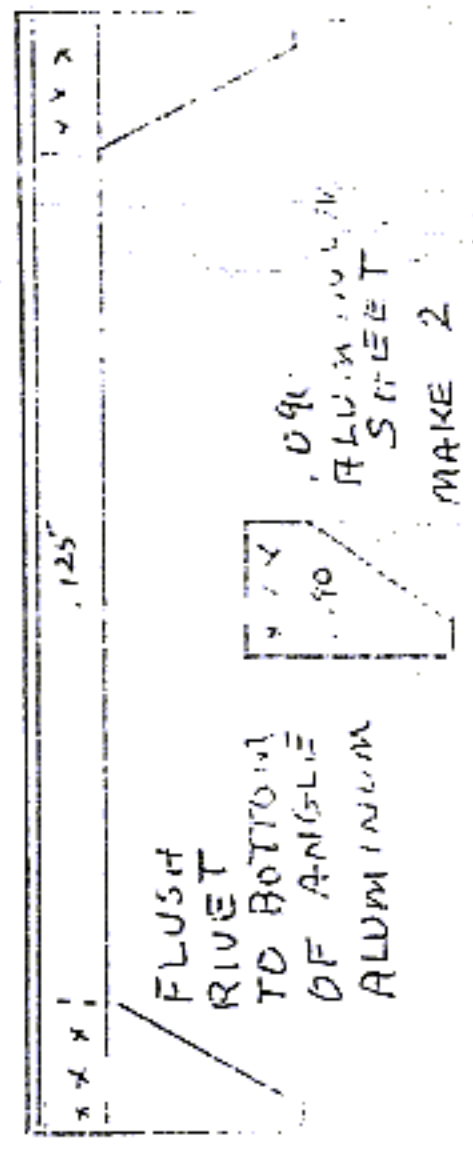


1/4 SPACER ONLY NEEDED



DATE

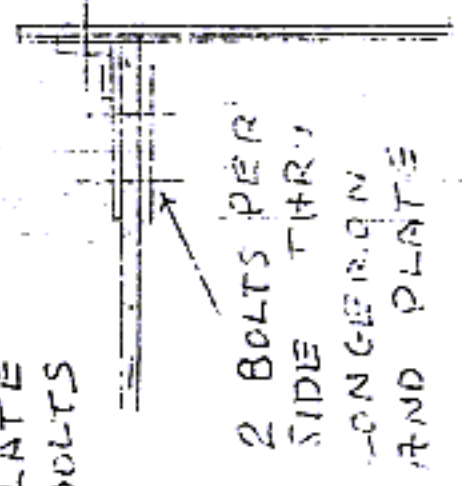
1 1/2" CHANNEL ALUMINUM
125



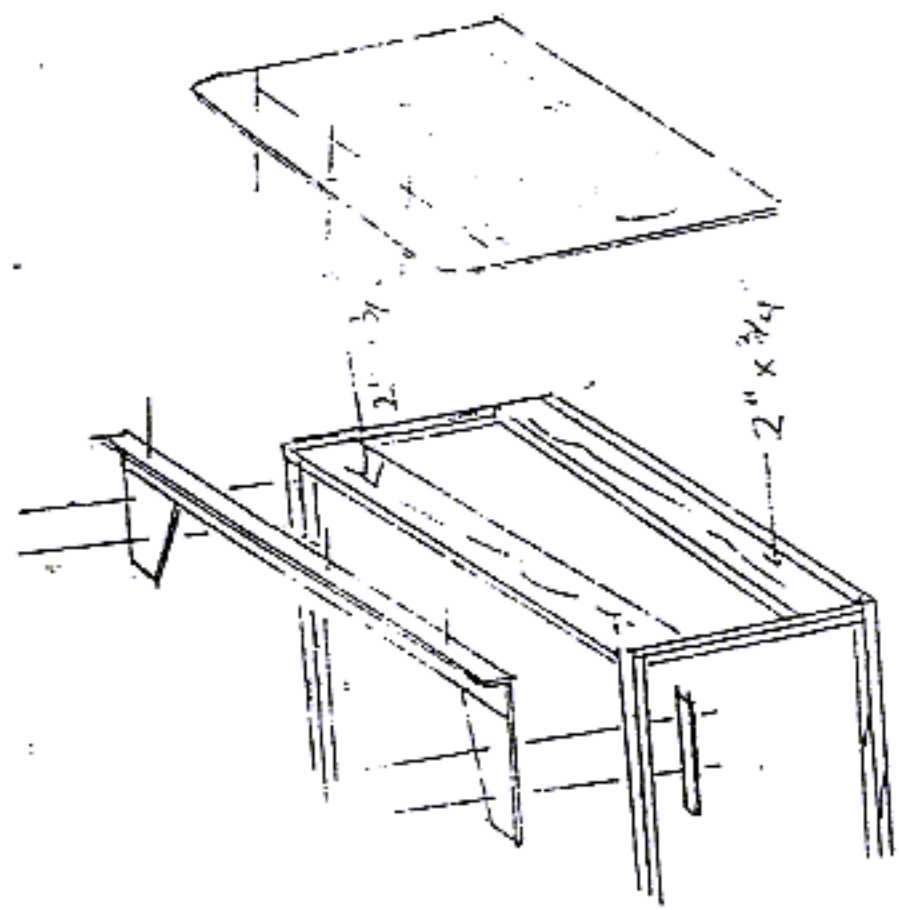
FLUSH RIVET TO BOTTOM OF ANGLE OF ALUMINUM

90° ALUMINUM SHEET MAKE 2

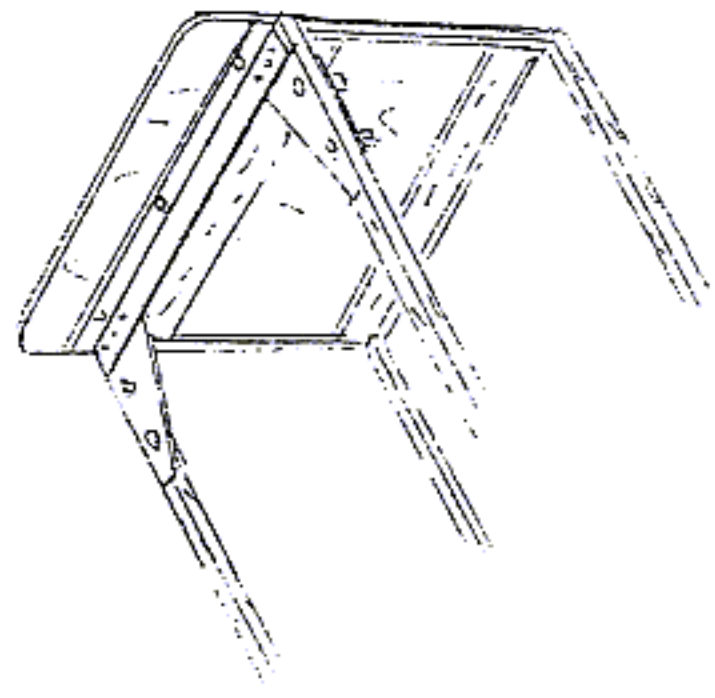
1/4" x 1/4" - .090
BOTTOM PLATE LONGERON BOLTS MAKE 2



2 BOLTS PER SIDE TRIM LONGERON AND PLATE



ROTA X OR V. W.
UP TO 65 H.P.
BEEF FIREWALL WITH ALUMINUM SHELF FROM LONGERONS TO FIRE WALL



TO BE DESIGNED

3 BOLTS PER SIDE TRIM

CLASSIFIED

WASAKI 440 w/reducer and elec
cart. From Pleser 100. Complete
Chas. Watson (215)535-8746. Phila.
\$500 includes motor mount.

'87 MXL II, dealer built, Stits-
strobe, BRS 3, silencers, inst.
\$8995 Windstar Aviation (301)
879-1995. Ask for Tom.

Buccaneer Amphibious aircraft
50hr TT, 447 Rotax. New fabric,
aerothane. \$7500 Red, white, blue.

King Cobra 2 place instructional
ultralight by Advanced. Black rain-
bow colors, Full inst 532 Rotax
117hr. on engine. \$6950. Will de-
liver either aircraft on cost
share basis. Del Belflower (407)
331-7950. Altamonte Spr. Fla.

'85 Tierra 277 rotax, 3axis, 40hr.
TT. Hangered, Inst. VG cond.
Cortney Campbell (215)525-3796.

Hummer 2-drive \$1800
Goldwing 430 cuyuna w/reduction
\$2500. Also UL-28 parachute
\$150. Butch Brady (717)225-6309.

Eipper MX w/new sails, cuyuna
VG cond. \$2500.

Kolb Ultrastar Cuyuna, inst. w/
trailer, 100hr TT. \$4500. Dennis
Heistand (717) 653-2350.

Maxair Drifter 447 Rotax Inst.
Hangered. George Smith (717)
533-6289 Hershey Pa. evenings.

UPDATE

This month's update is page 2. The
original drawing calls for white foam
to be used as nose ribs in the wing.
The main reason for this was
cost. white foam is less expen-
sive. You may however use blue
foam in this area with no ill
effects.

Another Item is Page 37. This
will interest all those who
wish to install a larger engine.
This is the installation of a

QUICKSILVER MXL 477 Rotax, 5hr SMOH
brakes, ultraprop, full instruments,
silencer kits, aux, tank, hangered
H.O. Malone (804)851-4179 (SE VA)

1984 QUICKSILVER MX good cond. h-
angered. \$2500. Barry Brame at
(717) 292-7170.

WANTED - info on pilots/manufacturers
of parasail type C/B aircraft.
Bill Perry 1-800-678-3433

Roteck 2place, 30HP rotax, new
Hangered. \$4500 Firm
Roteck single place Rally II
40hp Rotax 3axis used, 10hr TT
Hangered, some inst. \$4000 Firm.
Tom Parsons (717)834-5270 Pa

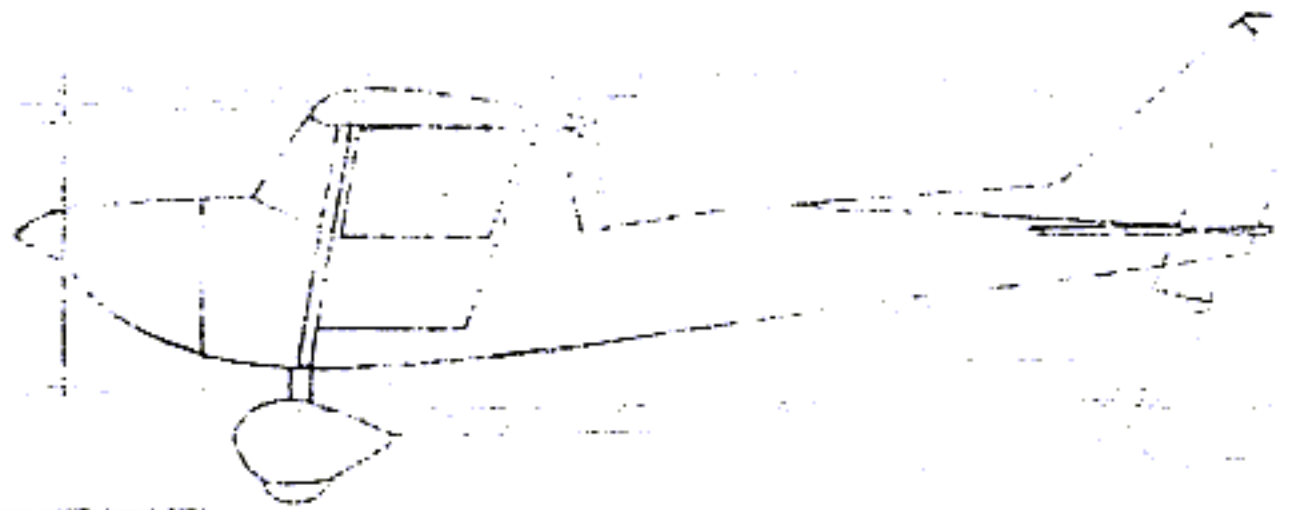
Buccaneer 447 50hr TT. New
fabric, aerothane. \$7500 Red
White & Blue. also
King Cobra 2 place, 117hr.
TT on engine, instruments. Black
rainbow colors. \$6950. Will
deliver both on cost share basis
Del Belflower (305)331-7950

This is the installation of a shelf
at the firewall to accommodate a
heavier load. The weight gain is
minimal and the strength substan-
tial. The shelf is similar to the
type used on a 45 type aircraft.
Constructed of 1/8 aluminum channel
and having 1090 ansetts, it secures
the fire wall to the longeron. The
bolt size, if you built the longeron
according to plan, will be AN-3 of
sufficient length to allow 3 threads
exposed after the nylok nut is in
place. And of course flat washers
are to be used.

Good luck and keep at it.
Mike

Classified Notice

You can send me notice of any items
you have for sale anytime, however,
please let me know if the article
sells. It will save someone the cost
of a phone call. Mike



JN-1 NEWSLETTER

ISSUE #4

FLOATS!!!!

The Floats are glassed and are in a short time going to be mounted on the JN-1. These floats are of a design that goes back a few years and were originally flown on the Heath Parasol. The construction is of glass and foam, however instead of heavy plywood. The construction is simple and if you've glassed the fuselage or wings of your JN you will surely be able to build these floats. At about 75 lbs. (with hardware), and of course you lose the weight of the wheels, the increase in weight will be only slightly noticed. To anyone who has never flown off the water, it is highly recommended that you get some time in a float plane prior to jumping into the fruits of your labor and soaking your fruit of the looms. Any I'll keep you posted, and try to get you some photos of the ship on the water.

SUBSCRIBERS LIST

Many of you have asked for a subscribers list and you will find it in this issue. These are people who subscribe to the newsletter.

HELP!!!!!!

Your letters are the only thing that I have to print in your newsletter so if I don't have letters from you, I may have to send blank sheets of paper to you each month. With only 43 subscribers, and not all are building, it is tough to

keep this a monthly publication. If you have any photos of your construction that you wish to share (black & white are best) please send them and I will include them in the newsletter.

Thanks
Mike

PHONE CALLS

I really appreciate the phone calls that I get every month from you, but I feel that your money or Ma Bell's whoever would be better spent if you were to call Jim directly. I have not built a JN-1 and have only limited building experience. For technical questions Jim will give me answers for you more readily than I. Please don't get me wrong, I enjoy talking to everyone, but I just don't want phone calls are expensive. Call any time to shoot the breeze, but I may not have the answer you are looking to get.

SO WHAT DO YOU GOT ALREADY

Please rate your construction phase for me so we can keep tabs on each others progress. I would like to use a percentage scale. For example:

Thinking about it	1%
Got the plans out	2%
Bought materials	5%
Did Table Lay out	7%
Fuselage built	15%
Fuse and wings	40%
Fuse, wings, empennage	60%
Engine and electric	75%
Interior and paint	95%
Taxied and/or crew hopped	100%
Started Working on the floats	104%

The J-N Newsletter is published monthly by MR Enterprises At 123 Green Terrace Lancaster Pa. 17601. (717) 299-0491. Cost is \$12 year. \$15 yr. in Canada. \$20 yr. overseas. Send U.S. Funds PLEASE SUBMIT YOUR FLIGHT REPORTS, BUILDER REPORTS, ETC. TO ABOVE ADDRESS. ALLOW 2 ISSUES.

LETTERS.....

Dear Jim & Mike,
.... my plans for the JN-1 is to go U/L therefor I did not care to add weight by building larger ailerons but have checked into using a 48" wing cord in same design as plans but with outboard ailerons(Kitten, Pup, & Mathews J3 Jr.) I've just started checking out Junkers style "Flaperons".

You suggest cub style landing gear to save weight. Will the framing in the bottom of the fuse take the weight of a one wheel touchdown as in a crosswind landing. A peice of 5 ply 1/4" birch could be added to tie one side to the other, possibly bottom framing could be slightly smaller with all edges glassed. This sounds like a lot of added lbs. How about your input for a strong light way. You also advised that the engine must be 7 1/2" fwd. of the C/G. My question is, would you see a problem with keeping the fire-wall as placed but extending the motor mount? Almost forgot, the "gastank". Tank and fuselage. (windscreen to cowl) will be one unit made from Clark or Klegsels, Dragonfly style. At present I'm collecting materials and checking out my ideas. Thank You

Carl E. Richards 1547 Lake Rd.
Conneaut, Ohio 44030
(216) 593-2033

Dear Carl,
Fisher aircraft use a peice of channel aluminum to mount their gear. This seams to spread the load of a one wheel landing. The shock is absorbed across the whole underside as opposed to only one side.

It would be advisable to extend the motor mounts rather than to move the firewall.

Dear Mike,
The \$47.50 spent for plans was well worth the money even if I never get to build the little plane. I have gotten hours of entertainment out of studying the plans. So much fun in fact that I realize it would be 10 times as much fun to build it. (H'mmmmm. If I can just find the time.) When I build I'll more then likely put it on floats. If

cont....

any other builders are doing the same I'd sure like to contact them or have them contact me.

Leland Crabtree
2435 170th Place S.E.
Bellview, Wash. 98008
(206)641-6060

Leland,
I have been to the Seattle area on several occasions and have enjoyed fishing in the sound. Only flying from it could be better. As you see from the first page, floats are in progress. I am as interested as all to see the floats perform. May use them on my gyro. May not. Good luck and keep us posted when you begin work on your JN-1.

Dear Mike,
... I purchased a set of plans a little over a year ago. As of yet I have nothing started. Due to (as everybody else) a full schedule and with retirement a little over a year off. I hope then I can get time to really get involved. I am sure I will have lots of questions in that th will be my first attempt at aircraft building. Perhaps this summer I can fly down and see the JN-1 and talk to both you and Jim.

Norris (Norrie) Crane
5370 Sunnyside Rd.
Middlesex N.Y. 14507

Norrie,
First of all congratulations on your retirement. I hope you can enjoy it by building airplanes or whatever you like. The beauty of the JN-1 is that it was made for first time builders. You don't have to have an engineering pedigree to construct it Help is always available from Jim or myself. Good luck. an keep us informed as to your progress.

Mike

Dear Mike,

.... I like several others am a first time builder. I found the tail post location confusing. I'm glad to see that I was not alone in my attempt to build the JN-1 as an ultralight because I can't pass the medical. Any ideas you have to reduce the weight will be helpful.

August Aubert
7710 Finch St.
Spring Grove, Ill
60081

Dear August,

As we've said before, if you modify the plane in any way you are on your own as far as testing your changes. To build the JN-1 as an U/L it must loose 80 some lbs. and "that ain't easy". DO NOT compromise safety and strength for light weight. One avenue that was discussed was to build the fuselage like the Fisher airplanes. That is, a geodetic method with stick and cloth. This is not only light weight but strong as well. A lot of change must take place in the building but the exact lines of the JN-1 could be held. Fisher has had wonderful success with his planes.

One of the reasons for this News Letter is to put you guys in touch with each other so you can share knowledge and mistakes. (Not many of the latter.)

Good Luck, Mike

Dear Mike,

After reading the notes in the last issue I still have some questions.

- 1) Harvey suggests the x-pieces on the floor are 3/4" thick. My plans show 1/2". Which is correct.
- 2) Still having trouble seeing how the tail and fuse close. Is F-8 the tail post former on page 12? If so how does all this join?
- 3) Does the tail post former glue against the stab spar and rear of longeron and fuse foam?
- 4) Since the foam filling out the cabin area must be sanded, can 1/2" be used?(same type as blue)
- 5) Is the inside of the fuse from F-6 back to the tailpost glassed over or is that unnecessary.

Lyman Erickson
Rt 3 Box 264
Donnellson, IA 52625

Dear Lyman

- 1) The plans do indeed show 1/2" to be the correct thickness.
- 2) F-8 is the tail post former.
- 3) The tail post former is to be the same as the one on the longeron and fuse.
- 4) Yes you can use 1/2" foam. Blue or tan polyurethane will work with safety poxy.
- 5) It is not necessary to glass the inside from F-6 back.

Dear Mike,

Sub. JN-1 lower longeron.

My wife, bless her little pea pickin' heart, has given me a set of JN-1 plans for Christmas. So I go out and buy all the materials, after checking the plans verrrry carefully. I am partial to tri-gear and need help in the following:

- 1) Where does the main gear mount?
- 2) More information about the nose gear hook up.
- 3) Area in question of lower longeron at rear of cabin. Is the longeron two pieces or one?

Pat Mann
2445 E. Carpenter
Davison, MI 48423

Dear Jim,

Tri-gear has never been engineered by the designer so there is no way to accurately answer your questions. The T.E.R.M. Mini Max is an aircraft that has a tri-gear as well as several others. These could give you many hints as to the construction of nose and main gear.

- 2) the lower longeron is in fact 2 pieces. After it is covered with the foam the foam is then cut and radiused to form the curved edge of the under side of the tail boom. As the foam is cut about 1/8 of the lower outside edge of the longeron must show thru for glassing.

Hope this helps. Mike

(See Figure "A" attached)

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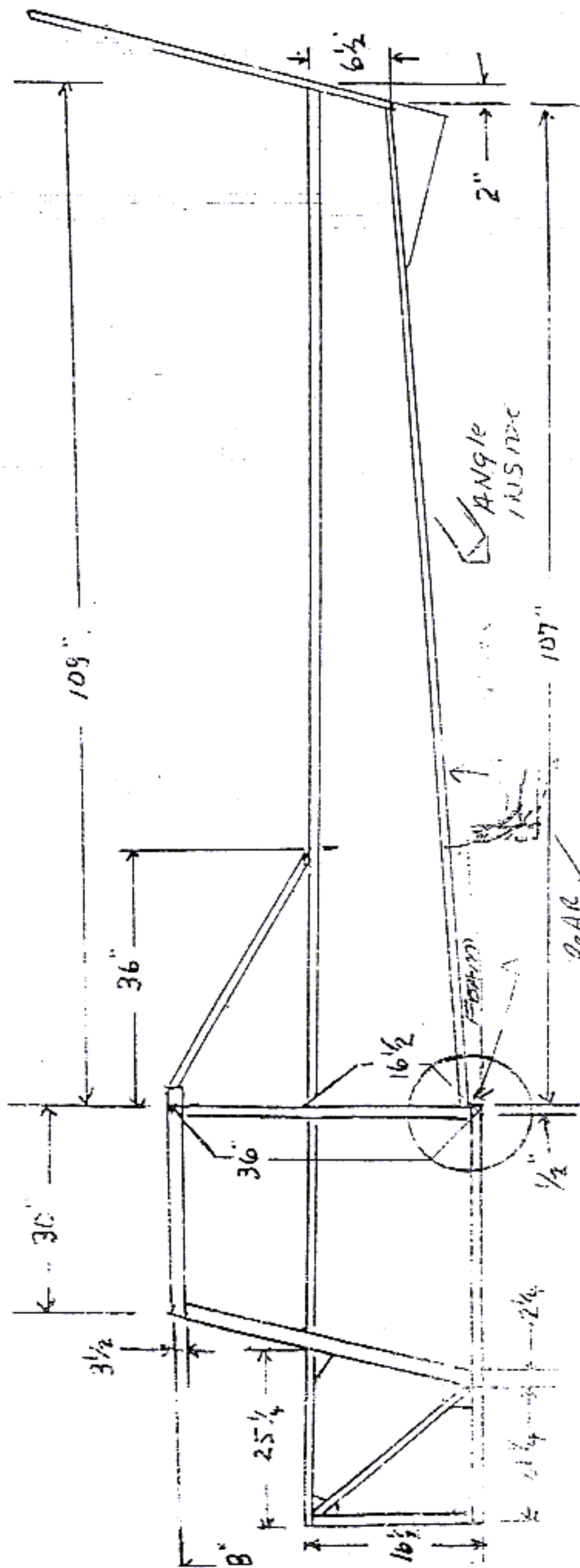
Charles King
6845 Old Mayfield Rd
Paduah, KY 42001

Carl Richards
1547 Lake Rd.
Conneaut, OH 44030

Erling D. Uttech
3917 Simonis St.
Stevens Point, WI 54481

(cont)

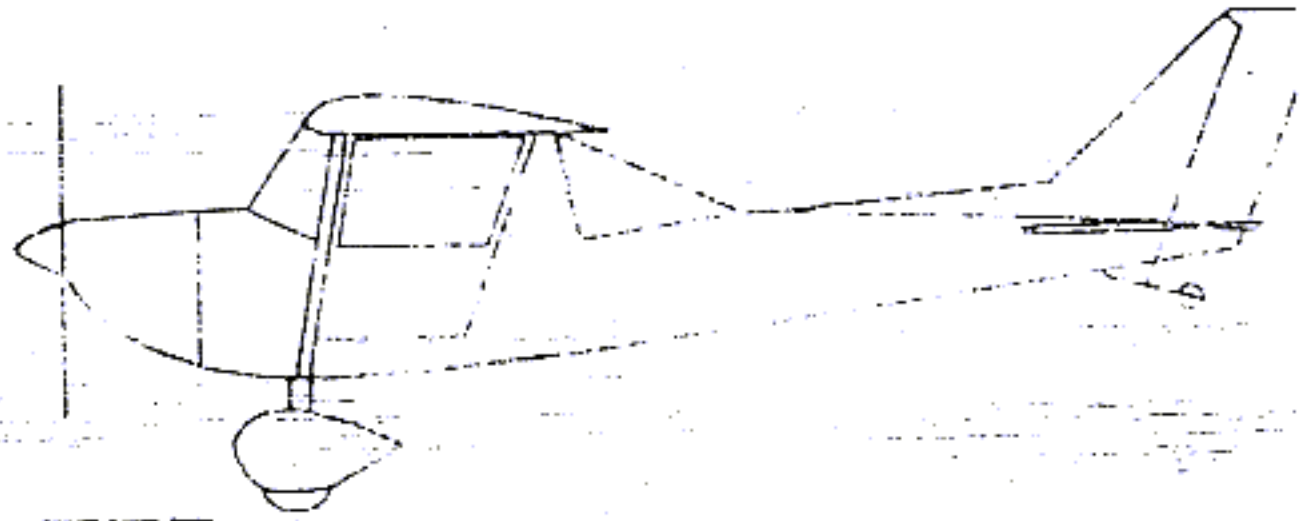
Figure A



1/16" PLYWOOD
RIB GLUED TO OUTSIDE
TOP LONGERON
MAKE LEFT
RIGHT SIDES

ALL LONGERONS AND
UP RIGHTS ARE 1/2" X 1/2"
EXCEPT WHERE INDICATED.

FUSELAGE LAYOUT



JN-1 NEWSLETTER

ISSUE # 5

IS THERE ANYBODY OUT THERE...

I am not receiving many letters from you about your projects. I suppose I should feel lucky since it makes the job of the newsletter writing a lot easier. With only 48 subscribers it is hard to get resounding response to anything, but this letter is for you, unless of course you feel I got rich doing it. Not So Bucco. Let's share those pictures.

LETTERS.....

Hello Mike,
I ordered the LN plans about 4-5 years ago. I'm still trying to figure them out. As I read the Newsletter I find many other fellows doing the same thing. I wonder if for the same reason. My reason is because of the lack of detail in the plans. I have built several things from blueprints. I study the prints until I identify with them and then start building. At this point I am not identifying with these plans. My shop is ready and so is my runway. I welcome letters from other builders of the JN. Perhaps we can help each other.

Delmer Ross (W5OGA-XW7)
Rt.1 Box 721
Grove, OK 74344

(can anyone help Delmer with his identity crisis.)

Mike,
Several weeks ago we spoke, and I said that I had started on my own project, the JN 2. I would like more info on the JN 2. Is there more info available?

(cont.)

(letters cont.)
John J.S.De Klerk
15 Harcourt Place
Amherstview, Ont.
K7N 1L6
Canada.

(Dear John.....

It saddens me deeply to have to be the one to break this news to you but, no there is no info available. As I have told others, you will be going places where no man has gone before. The JN-1 plans are a very good guide but no engineering has been done to date on the JN 2. I know that a couple of other builders are out there, so write John and share your information.

Dear Mr Rieker,

As you know I have bought a set of plans. I have not been able to start construction because of my inability to follow the plans. I feel that the drawings are very poor. I realize that the price is low, but I think it would not be possible to build the A/C without a lot of help from the designer.

James Fuller
213 Georgia St.
Clovis, NM 88101
(ONE MORE TIME..

The plans have been said by many to lack detail. I see a couple of spots that this is true, however Jim has been only too happy to answer questions. Please direct any you may have to him. I have a stack of plans that lack detail. Over the years I have bought plans of someones idea of the next godsend to aviation. Some are near sketches of someones dream. Some are less. The JN plans are terrific

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plans cont.

by comparison. Plans of this nature are designed to be a guide to the builder, not a bible. Spend several hundred dollars for Glassair or similar plans if you want detail.

Mike

(This is the last letter I'll print about plan details. More would be redundant. If your letter concerns this topic, save your ink and time.)

Dear Mike,

I am an electrical/project engineer with a pilots license and a love of airplanes. Not having an extravagant lifestyle or the money to support one, was the reason I quickly bought plans for the "affordable airplane". It finally gives me a chance to own my own plane without living in it. This newsletter will be my saving grace because I have never built anything like this before. I have started on the area most familiar to me, the dashboard, electrical system & instruments. I am installing an engine with a starter. once I finish the schematic of the system containing 2mags, taxi/landing lights, strobes, nav lights, beacon, starter and master switch, I will forward to you for distribution to all who are interested.

Brian Romano

7 Andrews St.

lot #8

Forestville, CT 06010

(Well I suppose the dash is as good a place to start as any, until you get room to start the fuselage.

I will be happy to include your schematic in the newsletter when you have it ready. Mike)

Mike,

I would like information on a Tri-gear JN-1 & JN-2, Rotax 532. Would a light nonelectric VW be too heavy for the JN.

Brian Hoyer

Box 229A

Route 2

Bloomer, WI 54724

Brian,

A tri gear has not been built but if you design one I'll be sure to print your ideas in the newsletter.

A 532 would be an excellent choice for a power plant and the mount could stay the same. Some changes would be necessary to use the VW.

Mike,

I've read that it is not wise to deviate from the plans when building an airplane. Either from need or foolishness I have. I eliminated the door, (it looked like too much work, and my mind became confused), so I redid the cabin. Open on both sides with extra bracing. These are the least of my deviations. Couldn't find any doug fir except 2x8's. Not being one to plane lots of big lumber into little sticks, I stumbled around the lumber yard for a few days, till they asked me what I was doing. "Building an airplane". "Oh", then silence. "You mean one you fly on a string." I said "No"! "You gonna sit in it?" "Yup". Laughter and hollering chuckles. Plus the ladies at the local Coast to Coast store shoot at me, when I come in, with a hand held Anti-aircraft laser gun from the toy section. Brushing all pride aside I took an Orvill & Wilber approach saying "It can be done". I used yellow pine moulding and laminated it with doug fir plywood 1/2" thick, for the top longeron & side pieces. With this method it is easy to construct an inter-locking at the top forward intersection. Using Weldwood plastic resin glue I also laminated the bottom pieces including the formers where wood is used. This also allowed me to tie the tail section longerons into the cabin using an interlocking system. It appeared to me that this is a weak area and I did not appreciate gussets in this area. I have not yet worked on the tail section. I am not convinced I will laminate plywood for the spars, this needs more research. I plan to use a 447 or 503 therefor I had to envision a motor mount that will move to adjust the C/G. I may need a mount that will slide on a 2x2 box alum. This piece will also tie into the cabin structure at some point below the cabin spar. My cabin structure is a rigid skeleton that seems very strong with out foam or glass yet. The bottom longeron of the cabin also has 2 1/2" x 1/2" plywood glued to it, that intersects and ties into the bottom cross pieces. With out the top cabin spars, it weighs 18 lbs. I will send some drawings. (Cont.)

ers Cont.

Thirdly, I plan to use foam and glass in the areas of the rear windows for strength and to cut out the heat since I will only fly in the summer. Some of these liberties with the glass and foam are easy because I only weigh 125 lbs. The 4th item is the landing gear. I love its clean lines but the weight grounds me. I have located springs. 12 lbs. without the wheels. I thought awful heavy. Any ideas how to keep the lines and loose the weight?

Lots of time, plywood, glue, ten acres, and no money!

Here on the Dakota prairie I am,
Randy Mlady
RR2, Box 70
Marion, SD 57043

P.S. Is it important that the propeller be mounted on or near the thrust line?

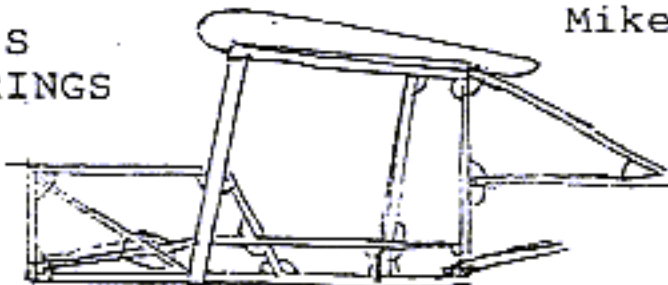
2) What is the clipped wing mentioned in the last letter?

Well Randy, your story about the lumber yard is not uncommon. Most people feel that if it didn't come out of a factory, it isn't an airplane. Your laminating will probably be stronger and OK since weight is not a big consideration. You can go to spruce in the spar if you have to. I would recommend Aircraft Spruce and Speciality as a supplier instead of your lumber yard for spar material. Depending on your final wt. the 447 or 503 will be a good choice. The mount can be as simple or complicated as you wish to make it. Fisher Prod. has a complete mount available for their 404 that works. For the landing gear, you could try a Drifter style. This is solid 4130 and tough as nails. The prop should be as close to the thrust line as possible to give longitudinal stability to the design. The clipped wing version calls for a wing that is 3' shorter overall. This version has not yet been tested.

Thanks for your letter and
Good Luck. Keep us informed.

Mike

RANDY'S
LANDERINGS



CLASSIFIEDS

KAWASAKI... \$500 includes motor mount.

'87 MXL II, dealer built, Stits. strobe, BRS 3.47encers, inst. \$8995 Windstar Aviation (301) 879-1995. Ask for Tom.

Buccaneer Amphibious aircraft 50hr TT 447 Rotax. New fabric aerothane. \$7500 Red, white, blue.

King Cobra 2 place instructional ultralight by Advanced Black bow colors, Full Inst. 332 Rotax 117hr. on engine. \$6950. Will deliver either aircraft on cost share basis. Del Belflower (407) 331-7950. Altamonte Spr. Fla.

'85 Tierra 277 rotax, 3axis, 40hr. TT. Hangered, Inst. VG cond. Courtney Campbell (215) 575-3700

Roteck 2place, 50HP rotax, new Hangered. \$4500 firm
Roteck single place Rally II 40hp Rotax, 3axis, used, 10hrTT. Hangered, some wear. \$4000 firm. Tom Parsons (717) 834-5270 Pa

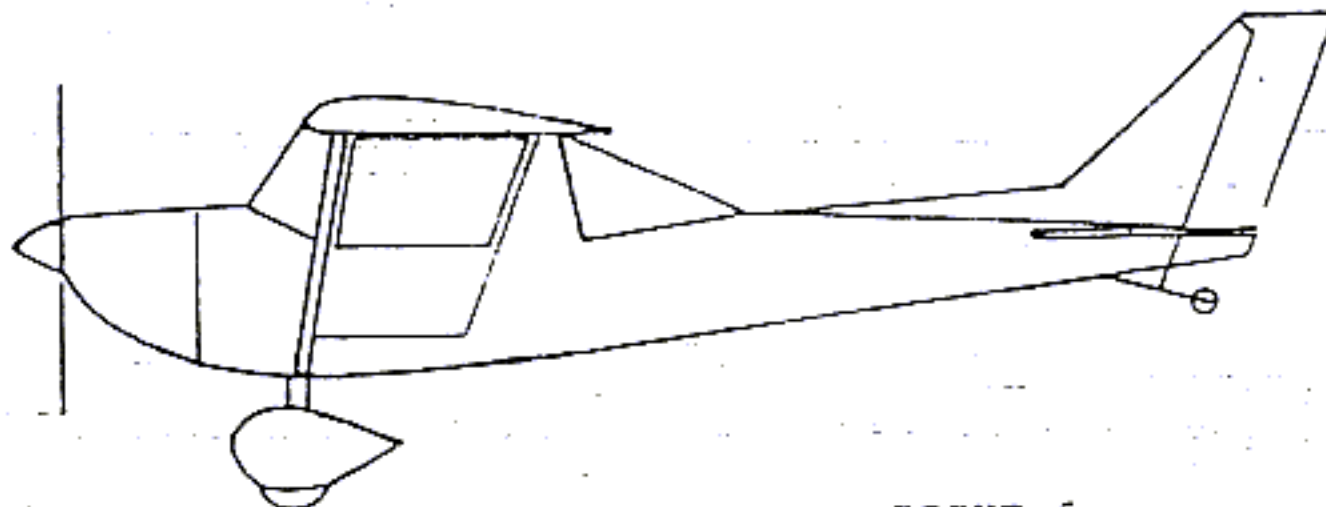
Bipper MX w/new sails, cuyuna VG cond. \$2500.
Kolb Ultrastar Cuyuna, inst. w/ trailer, 100hr TT. \$4500. Dennis Heistand (717) 658-2360

1 set of unused Baking Duce plans.
1 bale of explo-safe.
Make an offer
Leland Crabtree 2435 170th Pl. SE
Bellview, Wash. 98008
(206) 641-6060

#####

ADVERTISERS ??????

If anyone out there has a product or service you want to make available to your fellow builders please let me know and I will give you space here to advertise.



JN-1 NEWSLETTER

ISSUE 6

THE FOLLOWING UPDATES ARE TO BE CONSIDERED ADVISORY,S ONLY.

All plexi-glass for windshield, side and rear windows, should be 80 ga. material. This is as the hardware store measures it. Also... When installing the windshield, curve the front piece so that it bows out. This will prevent flexing above cruise speed.

JN-1 ON FLOATS

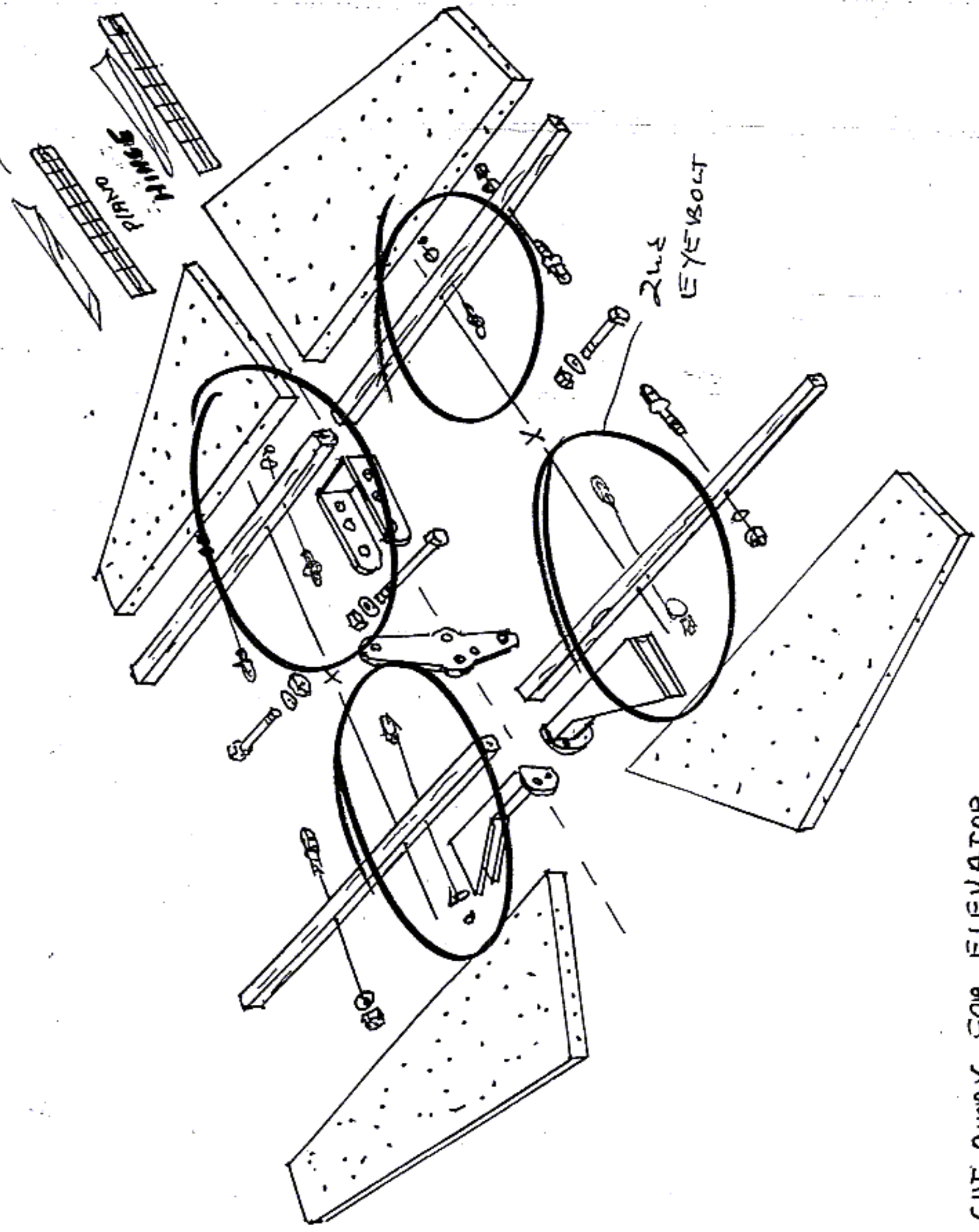
The JN-1 has seen the water, and it likes it. Preliminary taxi test showed that there is further work to do on the float brace structure before flight testing. These are floats designed by Jim. The JN took to the water like it was made to live there. The mud on the banks of the river was another story. Nothin lives there. The addition of a spray rail and some corrective surgery on the mounting brackets will bring further testing. I suppose this will be in the spring.

PAGE 18 CORRECTIONS

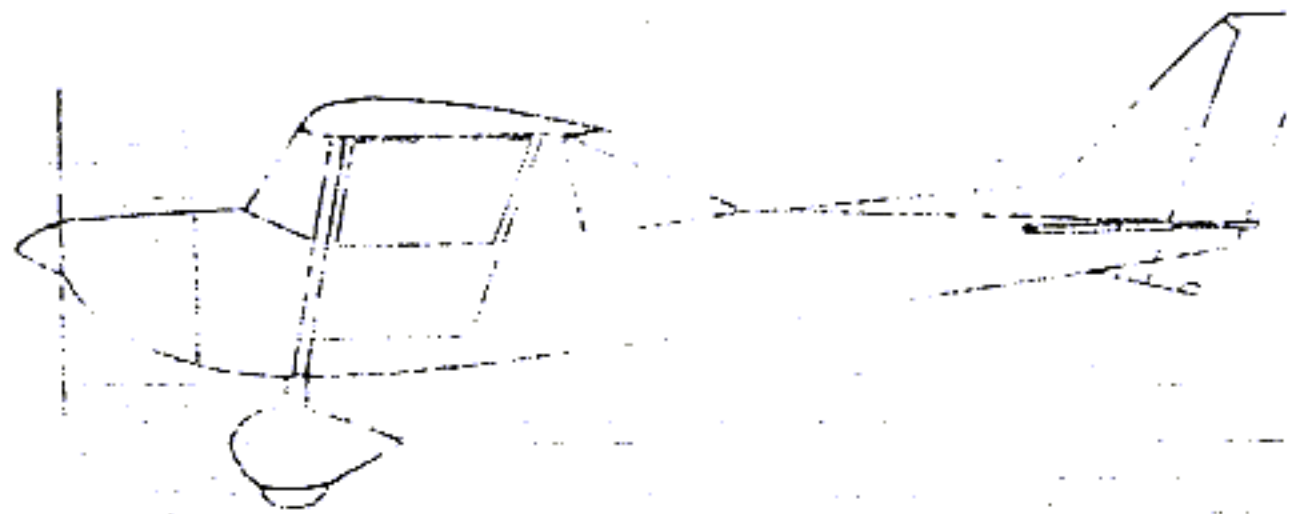
There are some corrections on page 18 of the building guide. There are 4 eyebolts missing in the original drawings. Also, if you are building the folding levator, be sure to beef the edge of the foam (where the hinge sets) with 3/4 by 3/4 wood glassed in.

GLASSING TIPS

To do an excellent job on glassing any aircraft, use 6oz. bi-directional fiberglass for the first layer. Make a slurry from Q-cell and epoxy and apply to the foam first. This acts as a filler for the foam and wood. Spread it evenly with a spatula, and lay on the 6oz. material and let it soak into the glass. Mix plain epoxy and apply over the 6oz. until it is evenly laid out. While still wet, apply the second layer of 4oz. glass and again, use plain epoxy to evenly coat the second layer. 4oz. is a closer weave and does not require much epoxy to get an even coat. While the 4oz. is soaking, take the Q-cell and sift a layer on to the glass to coat it evenly across the surface. DO NOT LET IT ON THE SURFACE LONGER THAN 30 to 45 SECONDS. Brush off the loose Q-cell (save it) and let the surface cure. Not brushing the excess Q-cell from the surface will leave bumps that will require additional sanding and we are using the Q-cell to avoid this in the first place. Make sure there are no lumps. All you want to do is fill the weave of the 4oz. material. After the epoxy has cured, sand with #80 paper then #120 and prime. Almost all the holes will be filled. Anything deep or irregular must be filled with BONDO. The results are 2 laminations strength with the 6oz. & 4oz. glass and a nice smooth surface that did not require a lot of sanding. Try it. JIM



CUT AWAY FOR ELEVATOR
FOLDING SYSTEM



JN-1 NEWSLETTER

Issue #7

LETTERS....

Mike,
 I have not rec'd any letters since #5. Have they been discontinued? I made some mistakes on my first fuselage and had to scrap it and start over. I am now back to the project and have a question. On page 5 the tailpost is 3" wide. Is that at the inside or outside of the longeron? On page 12 I see a dimension of 2 5/8". I also need some info as to how it is to be mounted.
 Bill Fields, New Port Ritchey FL

Bill,

Let me again point out that the plans are meant to be a building guide. There may well be some discrepancies in the plans but use your own judgment if you are not sure. This issues update should answer any of your questions about the aft section.

SUPPLIERS....

If your having trouble finding the parts and supplies you need to complete your project, you might try:
 KAMPEL Enterprises Inc
 8930 Carlisle Road
 Wellsville, PA 17365
 Ph. (717) 432-9688
 Fax (717) 432-5601
 Kampel offers a catalog of their
 (cont)

parts and accessories. They have a complete line of Randolph finishing products as well as Sitka spruce, aircraft plywood, AN hardware and fittings. A mainline business at Kampel is the restoration of Boeing Stearman aircraft. Drop them a line or give them a call for the free catalog.

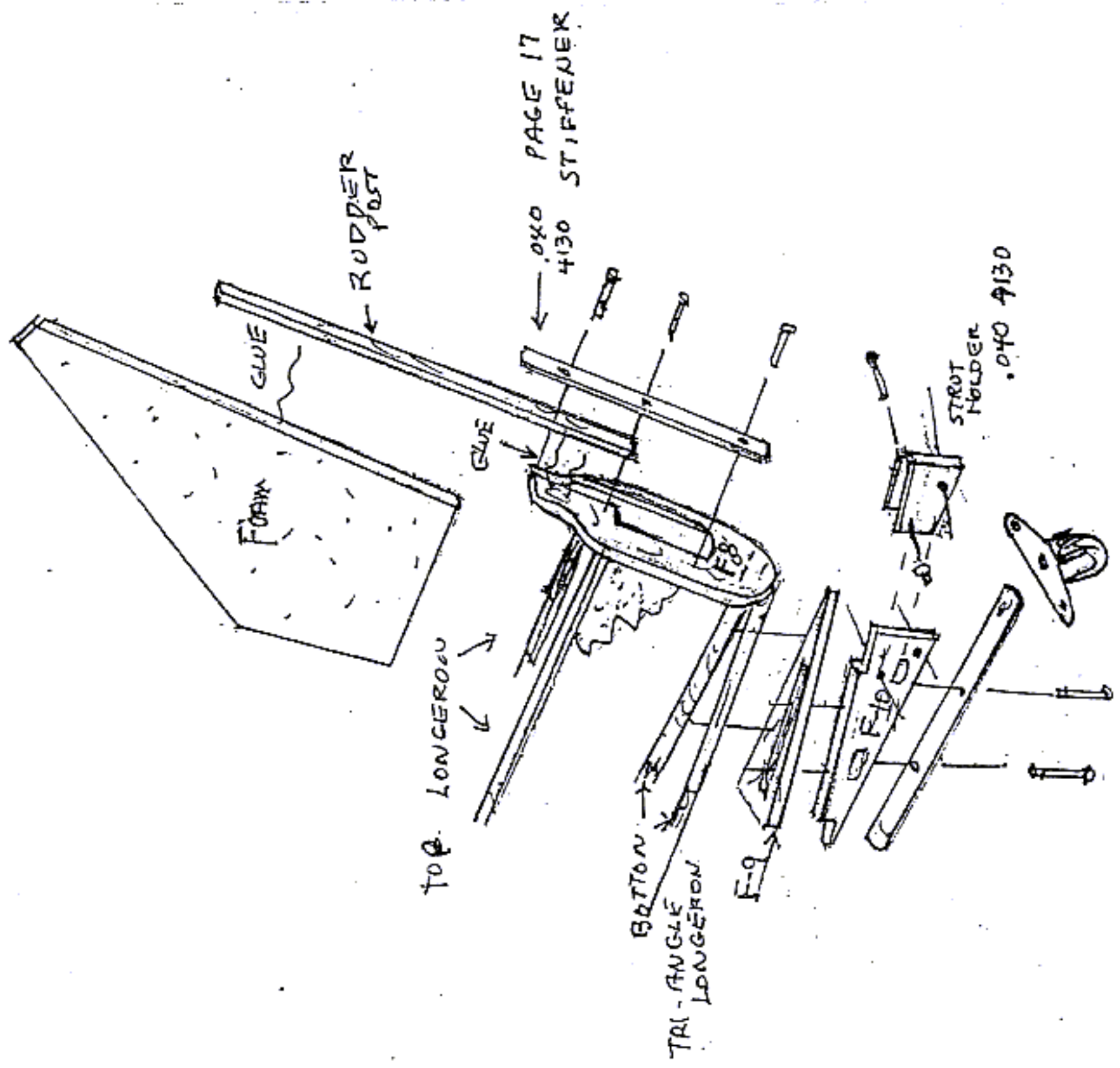
Another source of hardware as well as Alum. (6061) and Steel (4130) is:
 The Dillsburg Aeroplane Works
 114 Sawmill Rd.
 Dillsburg, PA 17019
 (717) 432-4589

Charlie Vogalsong has been in the airplane business since Icarus jumped from the rock. He has some of those hard to find pieces of hardware and metal we always seem to need. He has a complete catalog of his goods.

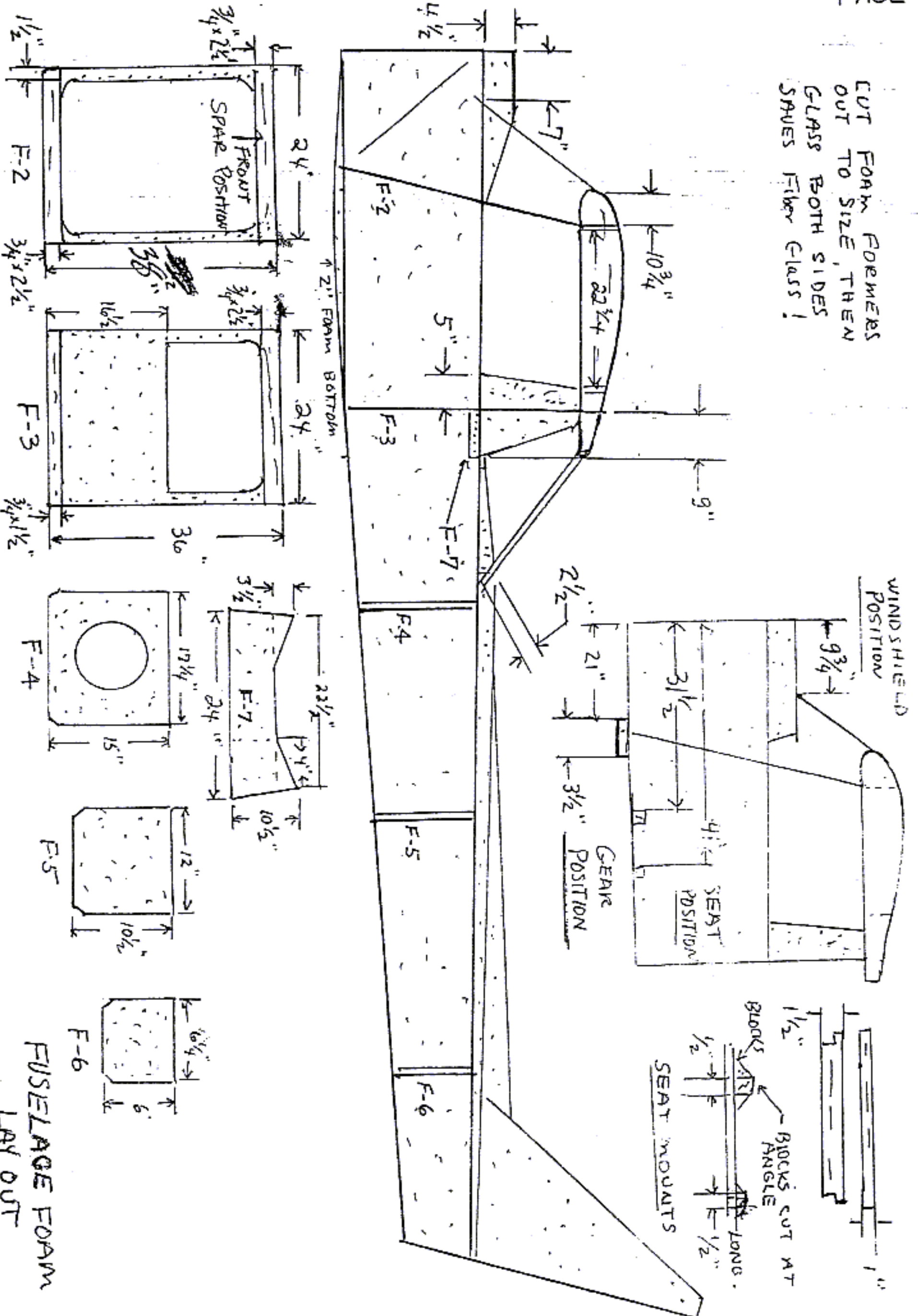
UPDATES.....

This issues updates are;
 Page 4 which has a corrected dimension for former number F-2.
 Also included is Page 12.1 which gives considerably more detail for the tailpost area. Several of you have been waiting for that one.

The J-N News letter is published irregularly by MR Enterprises at 973 Greer Terrace Lancaster, PA 17601. (717) 299-0491. It will be for a total of 14 issues and no more. Subject matter will be determined by reader input. (Rev. 4)



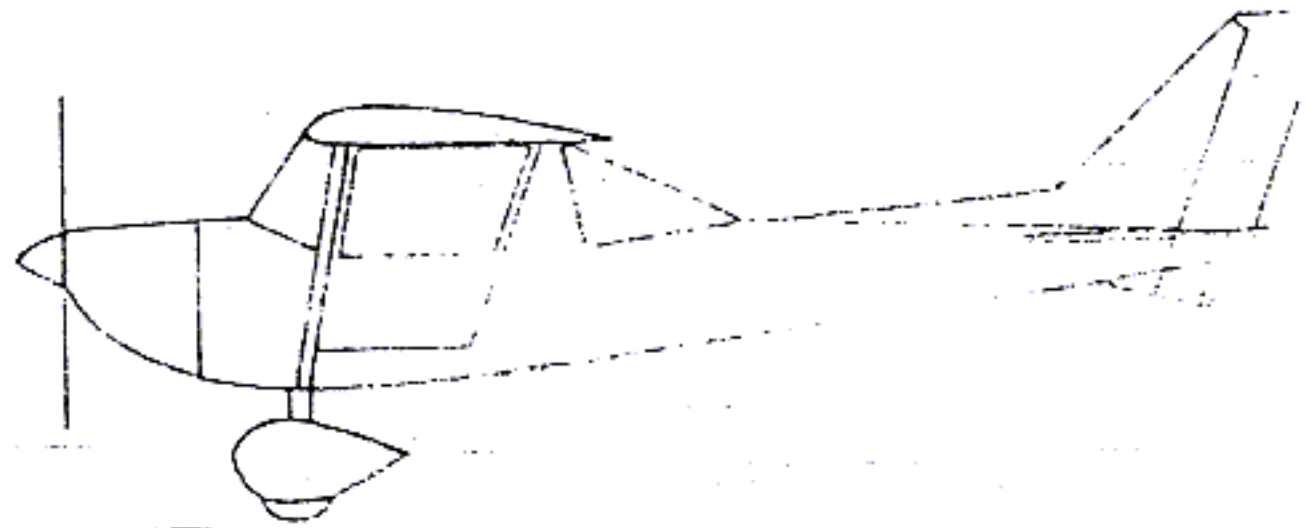
CUT FOAM FORMERS
OUT TO SIZE, THEN
GLASS BOTH SIDES
SPUES FIBER GLASS!



GLASS WOOD TO FOAM
ON F-2 & F-3 TO
MAKE COMPLETE UNIT

NOTE! DIFFERENCE IN HEIGHTS
OF F-2 & F-3 IS BUILT IN LEADING EDGE
OF F-2 AT CENTER SECTION

FUSELAGE FOAM
LAY OUT



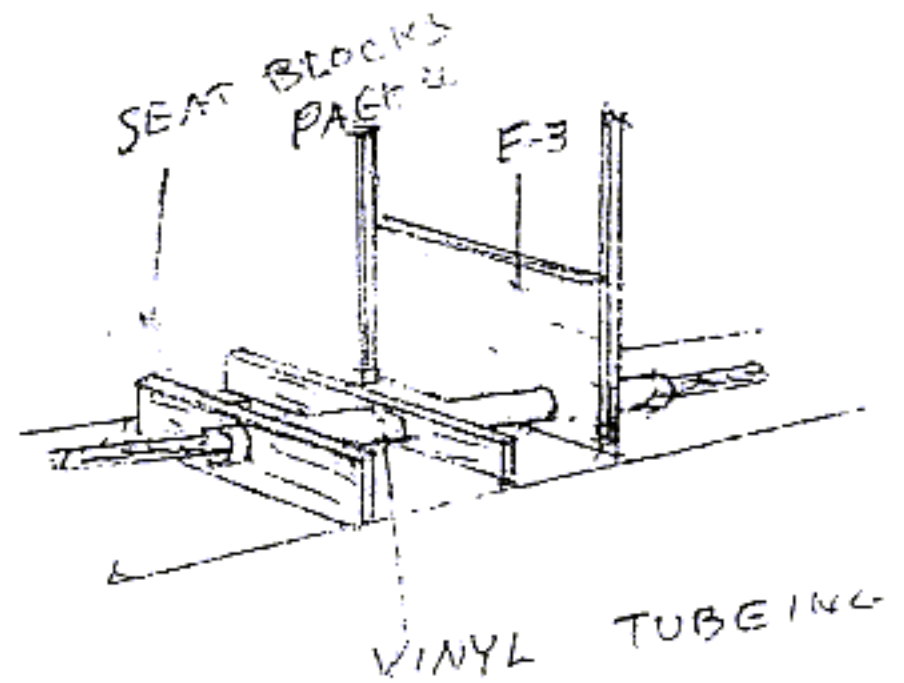
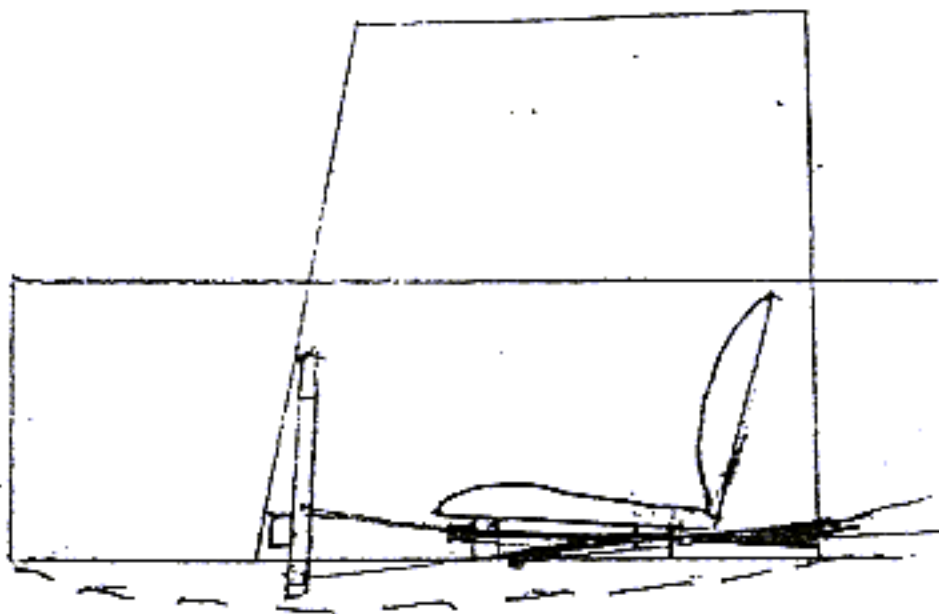
JN-1 NEWSLETTER

Issue #8

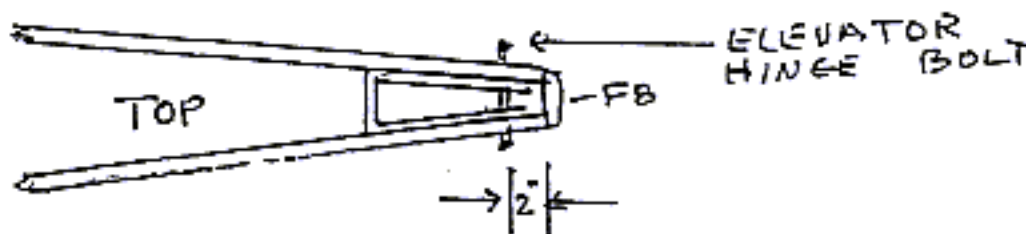
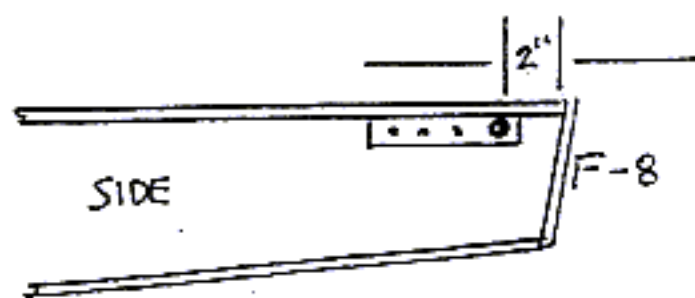
UPDATES...

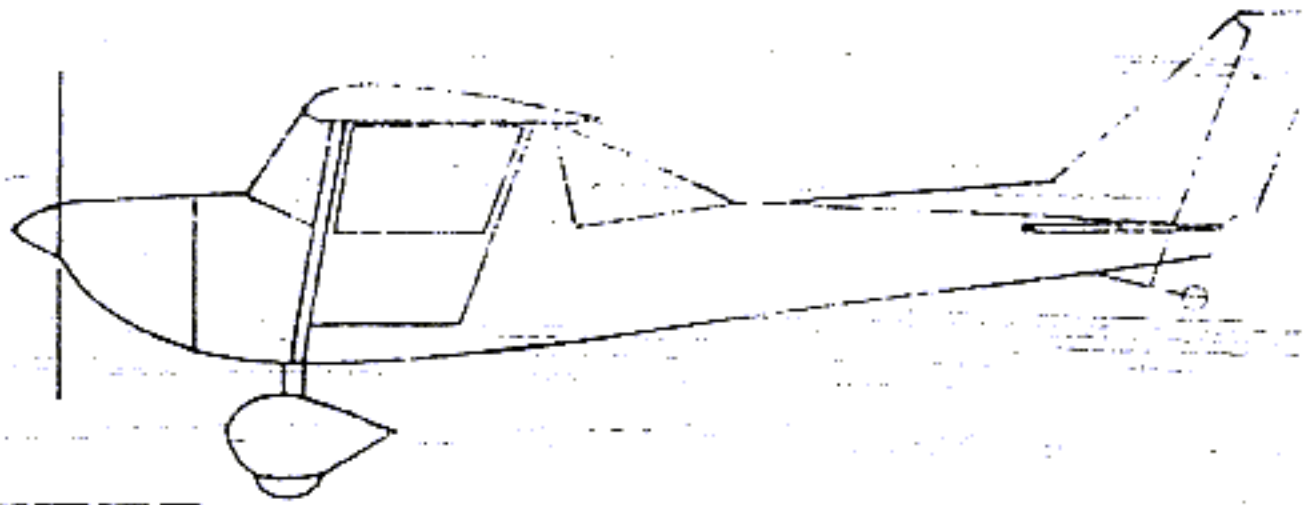
This issues update is page 20.1. This gives added detail to the area under the seat where the push rod goes to the elevator. Also is some detail concerning the elevator hinge bolt.

LETTERS...
NO LETTERS



INSTALL VINYL TUBEING UNDER SEAT AND REED SOLID UNTIL PAST F-3 FORMER TOP + BOTTOM CABLES





JN-1 NEWSLETTER

ISSUE #9

UPDATES...

This update deals with the elevator spars.

LETTERS...

Again this issue we have had no letters from anyone telling us how far along their project has come. The letters that I do get are only complaints about not getting any newsletter. Well I can tell you that I for one do not intend to waste my time, or those of you who are serious about building an airplane, on answering those letters. With nothing from you to print you'll have to be content with what I have to say.

#####

QUIZ TIME...

1- According to regulations, which statement is true regarding acrobatic flight or the use of parachutes?

- Parachutes are always required for all occupants of an aircraft when spins are practiced.
- For acrobatic flight, the visibility must be at least 5 miles and the ceiling must be 3,000 feet or more.
- Parachutes are not required when a private pilot carrying a passenger performs a power-on stall in a noseup attitude of 40° relative to the horizon.
- An intentional maneuver, not necessary for normal flight involving an abrupt change in the aircraft's attitude, is considered acrobatic flight.

2- What is the minimum altitude required for acrobatic flight?

- 3,000 feet AGL
- 2,000 feet MSL
- 1,500 feet AGL
- 1,000 feet MSL

3- What is the minimum flight visibility required for acrobatic flight?

- 5 miles
- 3 miles
- 2 miles
- 1 mile

4- Unless otherwise authorized or required by air traffic control, what is the maximum indicated airspeed at which a person may operate an aircraft below 10,000 feet MSL?

- 156 knots
- 180 knots
- 200 knots
- 250 knots

5- When flying beneath the lateral limits of a terminal control area, the maximum speed authorized is

- 250 knots.
- 200 knots.
- 180 knots.
- 156 knots.

6- The maximum indicated airspeed permitted when operating a reciprocating engine aircraft within an airport traffic area located outside a terminal control area is

- 156 knots.
- 180 knots.
- 200 knots.
- 250 knots.

7- What action should be taken if a glider and an airplane approach each other at the same altitude and on a head-on collision course?

- The airplane should give way because the glider has the right-of-way.
- The airplane should give way because it is more maneuverable.
- Both should give way to the right.
- The airplane should climb and the glider should descend so as to pass each other by at least 500 feet.

8- The minimum altitude at which an airplane may be operated over a structure which is located in a sparsely populated area is

- 1,000 feet above the ground.
- 1,000 feet above the structure.
- 500 feet above the ground.
- 1,000 feet above the structure.

1-d, 2-c, 3-b, 4-d, 5-b, 6-a, 7-c, 8-d

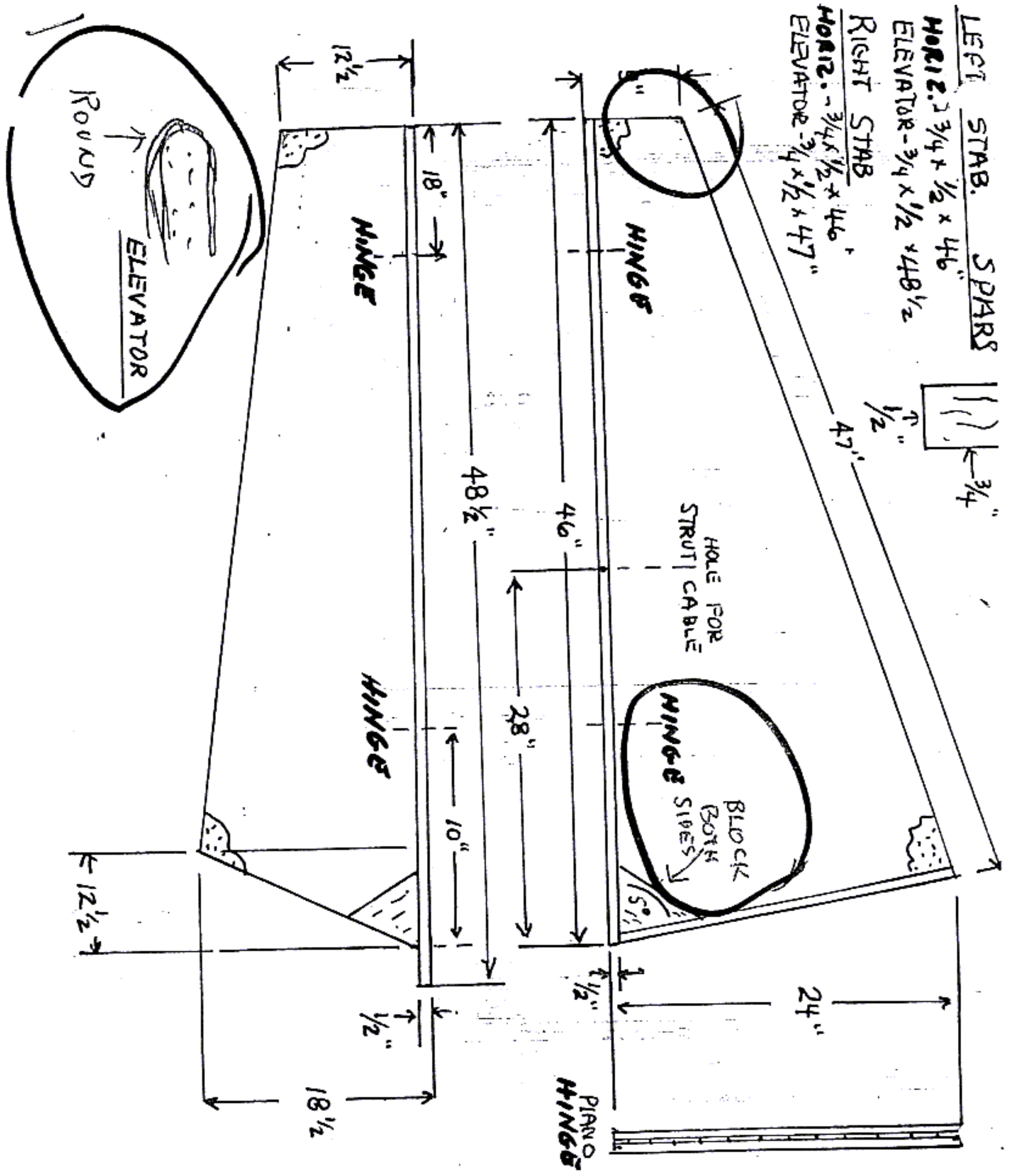
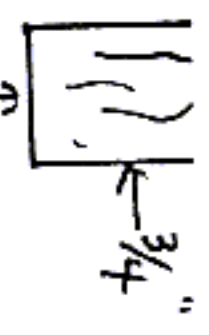
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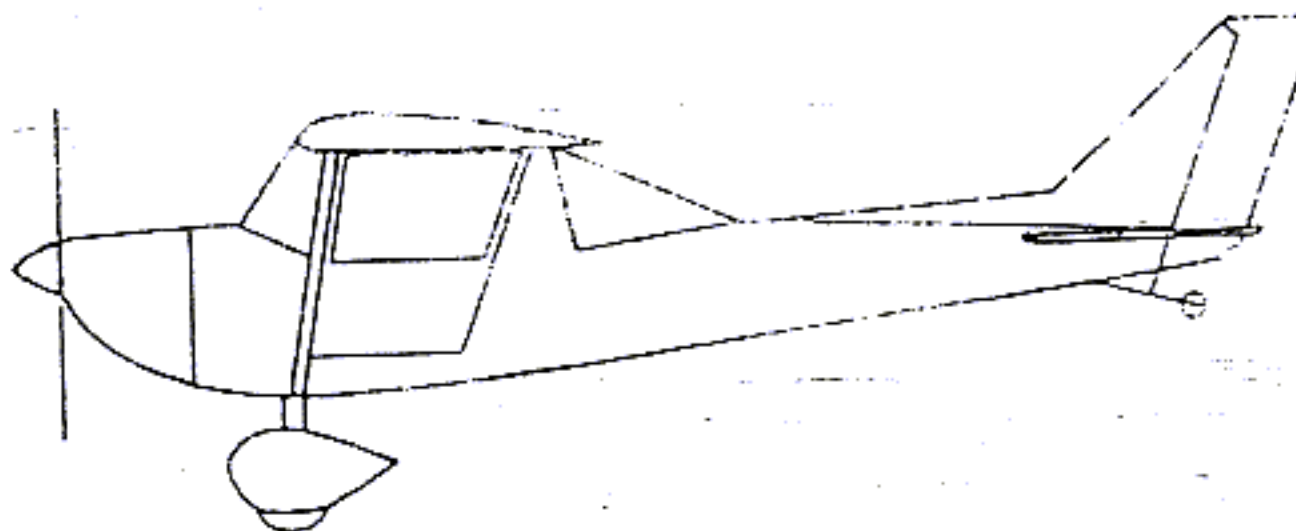
LEFT STAB. SPARS

HORIZ. $2\frac{3}{4} \times \frac{1}{2} \times 46$
ELEVATOR $-\frac{3}{4} \times \frac{1}{2} \times 48\frac{1}{2}$

RIGHT STAB

HORIZ. $-\frac{3}{4} \times \frac{1}{2} \times 46$
ELEVATOR $-\frac{3}{4} \times \frac{1}{2} \times 47$





JN-1 NEWSLETTER

ISSUE #10

UPDATE...

This update is on page 16. It for the rudder post.

QUIZ...

(cont. from issue #9)

- 9- To operate an aircraft over any congested area, a pilot should maintain an altitude of at least
- 500 feet above the highest obstacle within a horizontal radius of 500 feet.
 - 500 feet above the highest obstacle within a horizontal radius of 1,000 feet.
 - 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet.
 - 2,000 feet above the highest obstacle within a horizontal radius of 1,000 feet.
- 10- Except when necessary for takeoff or landing, what is the minimum safe altitude for a pilot to operate an aircraft anywhere?
- An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property to the surface.
 - An altitude of 500 feet over the surface and no closer than 500 feet to any person, vessel, vehicle, or structure.
 - An altitude of 500 feet above the highest obstacle within a horizontal radius of 1,000 feet.
 - An altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet.

8-01 5-6

Since
I do most of my flying in the Mojave desert, off of unimproved type fields in a MXL II. I usually have a student in the plane as well. It didn't take me long to realize that sense I fly in a remote area, if something went wrong while I was out doing a lesson, I would have only two alternatives. One, I could walk many miles through the desert, which isn't really my idea of an alternative. Or two, I could make some kind of repair and try to get back to "Home Base." If you are trying to teach some one to be responsible and fly responsible, "out repairs" really are part

of the program. So I spent considerable time making up a repair-tool kit with everything that I felt I could possibly need "in the bush." This month's issue of USUA's Ultralight flying has an excellent article about just such a kit. I carry much of the same equipment in my kit but I think there is one very important thing not in the article that I could not do without.

My L2 has 6 by 6 wheels and I have a lot of flat tires. I find them somewhat hard to fix without a pump. I had been using a small bicycle pump, but that was somewhat heavy and took up quite a bit of room. Recently I bought a "motorcycle pump" from "J.C. Whitney" Company. It is a plastic syringe about five inches long with a one way valve at the place where the needle should be. Connected to the valve is a small tube with a fitting for valve stems. It is made of plastic and weighs about nothing. I find it is easy to carry, it fits right in the kit, and works great. I carry a tube repair kit with it and have no problem fixing all but the worst flats, any where in the desert. It goes a long way to impress my students when I get us back into the air after a seemingly unrepairable situation comes up. Especially if we are miles from now where

J.C. Whitney Co. is in Chicago and it's phone number is (312) 431-6102. The pump is called "Mini air pump" It's part number is 02-4849-U. The catalog I have lists it for \$9.89. It works great for me.

Mike Michalski
15225 E Newmont Av
Lancaster Ca.
805 264 1205

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