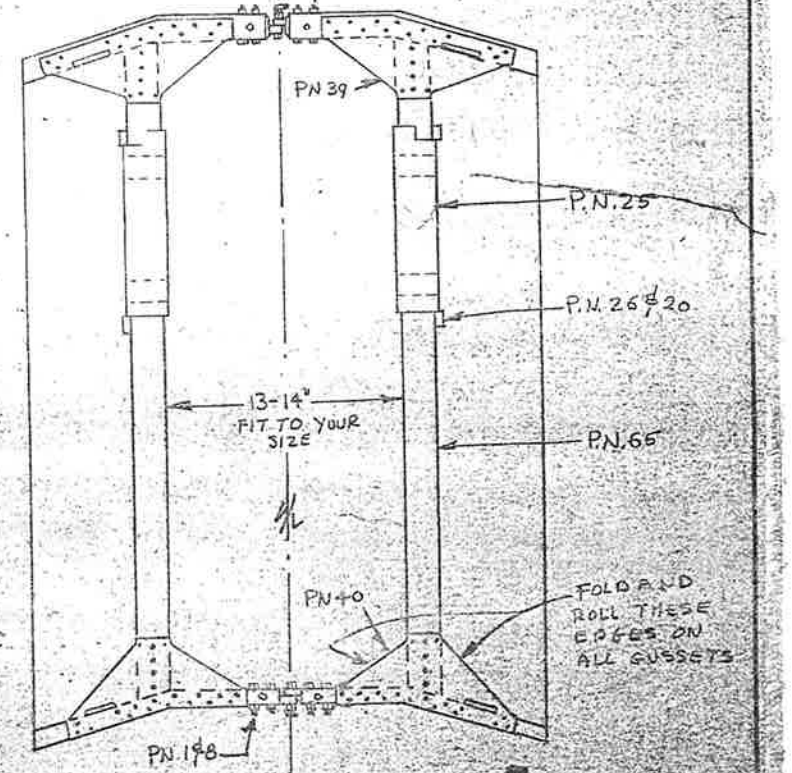
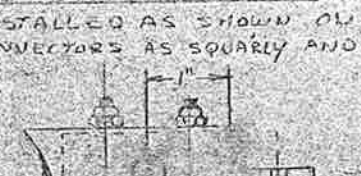
SHEET 6 FINAL ASSEMBLY

① FIT WINGS TOGETHER IN CENTER REFER TO MATERIAL LIST FOR BOLTS, NUTS, WING CONNECTORS & HANG TUBES. ALL FOUR SPARS WILL MEET SIMULTANEOUSLY IF THE LEADING EDGES OF BOTH WINGS ARE BLOCKED UP ABOUT 1 FOOT. THE TRAILING EDGE RESTING ON THE FLOOR. DEBURR INSIDE EDGES OF ALL 8 SPAR ENDS AND INSERT WING CONNECTORS IN PLACE P.N'S 23 & 24. THE UPPER CONNECTORS FIT IN 1 WAY ONLY. FIT BOLT & NUT P.N.'S 6 & 7 THE LOWER WING CONNECTORS FIT SO THAT THE BOLTS PN 5 SERVE AS HINGE PINS. (ON ASSEMBLY, THE LOWER BOLTS CONNECTING BOTH WINGS TOGETHER ARE PUT IN FIRST, THEN THE WINGS ARE HINGED UPWARDS TO MEET UPPER WING CONNECTORS AND FITTING OF THEIR 2 BOLTS) AS THE SKETCH SHOWS, THE LOWER WING CONNECTORS ARE ROTATED UNTIL THE CENTER BOLTS FRONT & REAR FACE EACH OTHER ON THE SAME AXIS FORMING A HINGE. GET THIS.

② FIT ALL 4 PAIRS OF WING CONNECTORS IN PLACE SUCH THAT THEY ARE FLUSH WITH SPAR ENDS, OR PROTRUDE A MAXIMUM OF 1/8". YOU MAY HAVE TO SLIGHTLY TRIM THE SPAR ENDS TO ACCOMPLISH THIS. WHEN ALL LOOKS GOOD, PUT ONE ALUMINUM POP-RIVIT IN EACH CONNECTOR TO LOCK IN PLACE ON SPAR. EVERYTHING SHOULD BE SQUARE & TRUE, YOU MAY HAVE TO SLIGHTLY ADJUST ANGLES OF LOWER SPARS SO THE ENDS LINE UP TOGETHER STRAIGHT. YOU CAN BEND SPARS SLIGHTLY BY SMALL SHARP JERKS RATHER THAN A GREAT HARD PULL. KEEP IN MIND SURVIVAL OF THE SPARS.

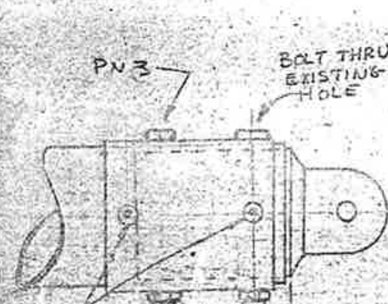
③ BOLT WING CONNECTORS TO SPARS PERMANENTLY. LOWER BOLTS ARE INSTALLED AS SHOWN ON DRAWING → BE SURE TO GO THRU CONNECTORS AS SQUARLY AND AS CENTERED AS POSSIBLE.





TYPICAL BOLT PATTERN, LOWER WING

UPPER REAR WING CONNECTOR BOLT PATTERN



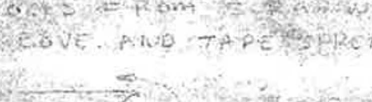
UPPER FRONT WING CONNECTOR BOLT PATTERN

IMPORTANT

AFTER FINISHING STEP 8 TAKE A BREAK, GO OUTSIDE AND WALK AROUND FOR A WHILE. THEN [illegible] THE ENTIRE [illegible] TO CHECK EACH AND EVERY ITEM FOR PROPER RIVIT, BOLT AND SWAGE.

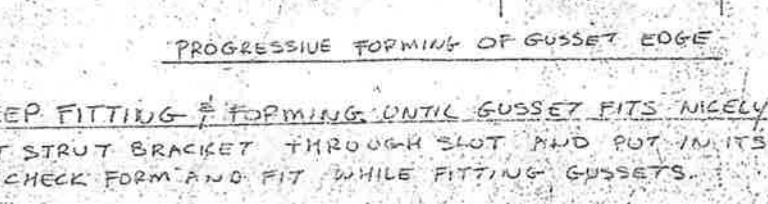
THE CRITTER IS NOW ALL TOGETHER THOUGH A LITTLE SLOPPY IN THE LOWER SECTION. THE HANG TUBES & GUSSETS WILL FINISH THE JOB.

④ SPACING OF HANG TUBES THE TUBES SHOULD BE SPACED APART A DISTANCE WHICH FITS SNUGLY [illegible] UNDER [illegible] FITS [illegible] THE HANG TUBES BETWEEN SAW HORSES OR CHAIRS AND FIT YOURSELF BETWEEN THEM AND MEASURE FOR A GOOD FIT. AN AVERAGE RANGE IS 13—14" BETWEEN INSIDE EDGES OF TUBES.
A VERY NEAT [illegible] IN PRECISE LOCATION IS TO MAKE TWO SPREADER BLOCKS FROM SCRAP WOOD. PUT TUBES IN PLACE AS PER SKETCH ABOVE. AND TAPE SPREADER BLOCKS IN PLACE.



GET TUBES EQUAL DISTANCE FROM CENTERLINE & TAPE TUBES TO FRONT & REAR SPARS WHERE THEY WILL BE RIVITED ON.
NOTE: HANG TUBE ASSEMBLIES ARE FACTORY FORMED TO FIT SPARS, DUE TO VARIATIONS IN CONSTRUCTION ETC. THEY MAY BE SLIGHTLY LONGER OR SHORTER THAN OPTIMUM.
1) SHORTER. JUST FORM A PIECE OF ALUMINUM ([illegible] FLAT) INTO A V-SHAPED CHANNEL AND [illegible] BETWEEN TUBE & SPAR.
2) LONGER FILE TO FIT.

⑤ REMOVE LOWER INBOARD STRUT BRACKETS by DRILLING OUT RIVITS. THE SLOTTED GUSSETS GO ON TOP WITH STRUT BRACKETS GOING THRU SLOT.
YOU'LL NOTE THAT EDGES OF GUSSETS WHICH RIVIT TO SPARS WILL BE ROLLED INTO A CURVE TO FIT TIGHTLY AGINST SPAR. BEST TO PRE-FORM EDGES OF ALL GUSSETS. MAKE A PENCIL MARK ABOUT 1/2" FROM EDGE OF GUSSET. LAY GUSSET OVER EDGE OF BENCH AND FORM CURVE BY LIGHTLY HAMMERING FIRST WITH GUSSET ABOUT 3/16" BEYOND EDGE OF BENCH & PROGRESSIVELY MOVING GUSSET OUT AND TAPPING UNTIL 1/2" MARK IS REACHED.



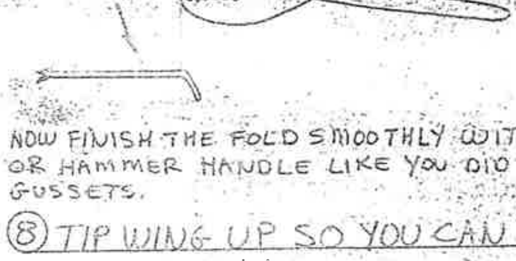
PROGRESSIVE FORMING OF GUSSET EDGE

KEEP FITTING & FORMING UNTIL GUSSET FITS NICELY ALONG SPAR. FIT STRUT BRACKET THROUGH SLOT AND PUT IN ITS LOCATION TO CHECK FORM AND FIT WHILE FITTING GUSSETS.

⑥ PUT TOP GUSSET IN PLACE AFTER FITTING STRUT BRACKET THROUGH SLOT.

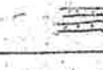
BLANK

⑦ RIVIT STRUT BRACKET IN PLACE WITH STEEL RIVITS (ALL HOLES).
RIVIT UPPER GUSSETS IN PLACE FOLLOWING RIVIT PATTERN IN MAIN SKETCH ABOVE. STEEL RIVITS.
START A FOLD ABOUT 3/8" FROM EDGE OF GUSSETS BY MARKING A LINE 3/8" FROM EDGE. CLAMP A COUPLE PIECES OF HARDWOOD OR ALUMINUM UP TO THE MARK WITH VICE GRIPS OR PLIERS, AND FOLD DOWN AS FAR AS YOU CAN EASILY.



NOW FINISH THE FOLD SMOOTHLY WITH DOWEL OR HAMMER HANDLE LIKE YOU DID WITH WING GUSSETS.

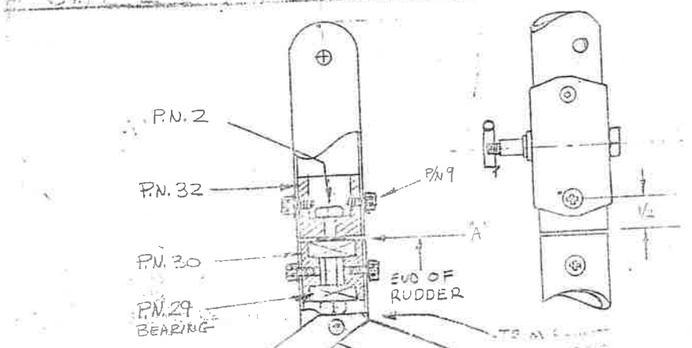
⑧ TIP WING UP SO YOU CAN WORK ON BOTTOM. FORM AND FIT LOWER GUSSETS CAREFULLY. BE SURE TO FORM AROUND STRUT BRACKETS.



DO IT WITH STEEL & YOU ARE DONE.

UFM EASY RISER		
ENGINEERING	DATE	SPECIFICATION
LARRY MAURO	3/29/76	FINAL ASSY

SHEET 7 RUDDER



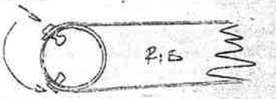
(1) PICK PARTS AS LISTED ON MATERIAL LIST.

(2) STRUT NO 6 WILL BE MADE INTO RUDDERS.
STRUT WILL HAVE DIAGONAL STRUT BRACKET P.N. 33 AT THE UPPER END.
MEASURE 1/2" DOWN FROM CENTER OF LOWER POP-RIVIT HOLE AND CUT TUBE OFF SQUARE AS SHOWN.
DRILL THE HOLE OUT TO 5/16" FOR SCREW P.N. 4. MARK AND DRILL OPPOSITE HOLE FOR 2 NO. SCREW. USE LOCK WIRE.

(3) REMAINING TUBE IS ASSEMBLED INTO A RUDDER.
LAY THE TUBE DIRECTLY OVER THE FULL SCALE BLUE PRINT. USE A HALF DOZEN OR SO NAILS TO HOLD TUBE IN PLACE WITH ONE END AT POSITION "A", THE OTHER END IS EXTRA LONG IT WILL BE TRIMMED LATER.

(4) CUT LEADING EDGE (L.E.) AND TRAILING EDGE (T.E.) TUBES TO LENGTH AS SHOWN AND ALSO NAIL IN PLACE PLACING NAILS ALONG SIDES & AT EACH END.

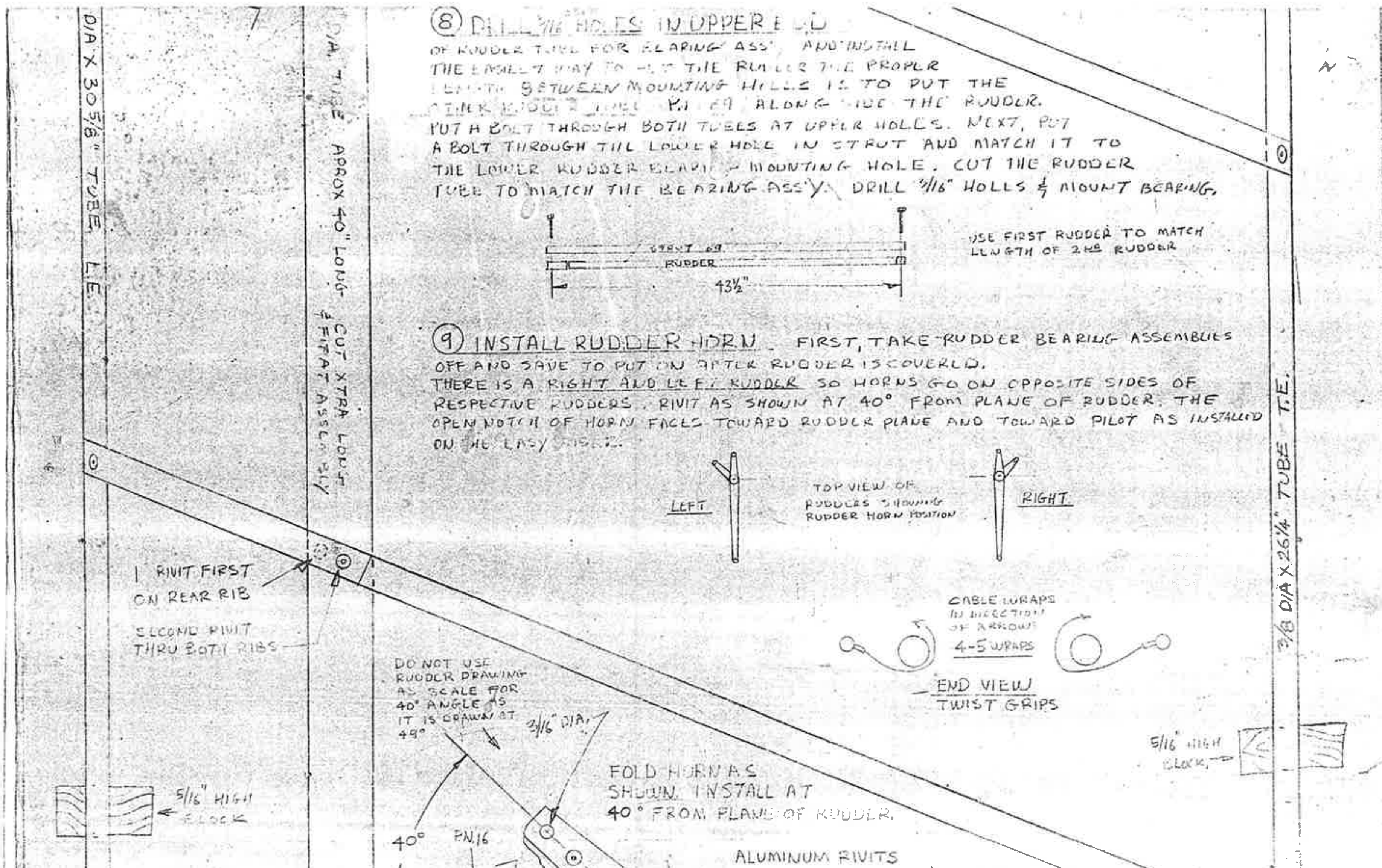
(5) FIT REAR RIBS, P.N. 55, IN PLACE AND RIVIT WITH ALUMINUM RIVITS. BLOCK-UP TRAILING EDGE WITH 5/16" BLOCKS UNDER EACH END. PUT 1 ALUMINUM RIVIT IN T.E. WRAP RIB TANG AROUND 1" TUBE AND PUT RIVIT IN END ABOUT 1/4" FROM END



BE SURE TO HOLD TUBES DOWN SECURELY AND FIT RIBS TIGHTLY AGAINST TUBES BEFORE DRILLING HOLES AND RIVITING. TURN RUDDER OVER AND COMPLETELY RIVIT RIBS TOP & BOTTOM

(6) FIT FRONT RIBS IN PLACE. OVER REAR RIBS TACK L.E. IN PLACE WITH 5/16" BLOCKS IN PLACE. RIVIT TO L.E. AND TO MAIN TUBE WITH POP RIVITS AS SHOWN.

(7) LIGHTLY HAMMER ENDS OF RIBS TO FORM AROUND L.E. & T.E. FILL OFF SHARP EDGES.



8 DRILL HOLES IN UPPER END
OF RUDDER TUBE FOR BEARING ASS' AND INSTALL
THE PROPER
BETWEEN MOUNTING HOLES IS TO PUT THE
ALONG THE RUDDER.
PUT A BOLT THROUGH BOTH TUBES AT UPPER HOLES. NEXT, PUT
A BOLT THROUGH THE LOWER HOLE IN STRUT AND MATCH IT TO
THE LOWER RUDDER MOUNTING HOLE. CUT THE RUDDER
TUBE TO MATCH THE BEARING ASS'Y. DRILL 3/16" HOLES & MOUNT BEARING.
RUDDER
43½"
USE FIRST RUDDER TO MATCH
LENGTH OF 2ND RUDDER
9 INSTALL RUDDER HORN. FIRST, TAKE RUDDER BEARING ASSEMBLIES
OFF AND SAVE TO PUT ON AFTER RUDDER IS COVERED.
THERE IS A RIGHT AND LEFT RUDDER SO HORNS GO ON OPPOSITE SIDES OF
RESPECTIVE RUDDERS. RIVIT AS SHOWN AT 40° FROM PLANE OF RUDDER. THE
OPEN NOTCH OF HORN FACES TOWARD RUDDER PLANE AND TOWARD PILOT AS INSTALLED
LEFT
TOP VIEW OF
RUDDERS SHOWING
RUDDER HORN POSITION
RIGHT
CABLE WRAPS
IN DIRECTION
OF ARROWS
4-5 WRAPS
END VIEW
TWIST GRIPS
DIA X 30 5/8" TUBE L.E.
DIA. TUBE APROX 40" LONG. CUT XTRA LONG & FIRST ASSEMBLY
3/8 DIA X 26 1/4" TUBE T.E.
1 RIVIT FIRST
ON REAR RIB
SECOND RIVIT
THRU BOTH RIBS
DO NOT USE
RUDDER DRAWING
AS SCALE FOR
40° ANGLE AS
IT IS DRAWN AT
49°
3/16" DIA.
FOLD HORN AS
SHOWN. INSTALL AT
40° FROM PLANE OF RUDDER.
5/16" HIGH
BLOCK
5/16" HIGH
BLOCK
40°
P.N.16
ALUMINUM RIVITS
RIB F.
RIB R.
NOTE:
BEFORE RIVITING
ON RUDDER HORN
FIT RUDDER ASSEMBLY
ON WING. FOLD WING DOWN
HORN IS ALSO
RIVIT.
10 CLEAN RUDDERS,
AND COVER WITH FABRIC, USE ONE SINGLE
T.E., AROUND L.E. AND BACK TO
PUT FABRIC ON SMOOTH
HORN. 3-4 COATS, DOPE.
NEXT RE-INSTALL
BE SURE NO METAL
CHIPS ARE INSIDE
TUBE OR ON
BEARINGS.
11 FIT RUDDERS
DOUBLE SWAGE BUSHING
RUDDER END OF CABLE. HOUSING COMES THROUGH
7" FROM T.E.
AND HOOK UP CABLE WITH
BOLT & NUT AS SHOWN. TAPE RUDDERS SO THEY ARE STRAIGHT
BACK, AND DIAGONAL STRUT. NOW PULL
CABLE TO TWIST GRIP AND CUT OFF
CABLE TO WRAP AROUND GRIP. TAPE TWIST GRIPS SO THEY ARE
ALL THE WAY IN AND
ALL THE WAY IN ON STOPS
P.N.2
MAKE GAP WIDE
SO BUSHING IS
VERY FREE TO
TURN
TRIM RIB OR
HORN TO
FIT HERE
P.N.8
4"
2"
P.N.30
P.N.31
DRILL 3/16" HOLE
FOR BUNGEE HERE
BUNGEE
P.N.20
DRILL 3/16
11"
12 TAPE CONTROL CABLE TO GRIPS
PUT DOWN A LAYER OF TAPE FIRST. WRAP 4-5 WRAPS OF CABLE
IN THE DIRECTION SHOWN IN STEP 9. SPACE 3/8" BETWEEN WRAPS.
USE STRIPS OF ½" ACROSS CABLE TO HOLD
IN PLACE. THEN WRAP COMPLETELY AROUND ALL CABLE SEVERAL TIMES
"MYSTIC" TAPE OR BICYCLE
TAPE OFF RUDDERS AND TWIST GRIPS
WAY OUT BY TWISTING AND CAN RETURN TO
NEUTRAL.
13 INSTALL BUNGEE RETURNS AS SHOWN—
DWG 7

SHEET 8 DETAILS AND TOOLS

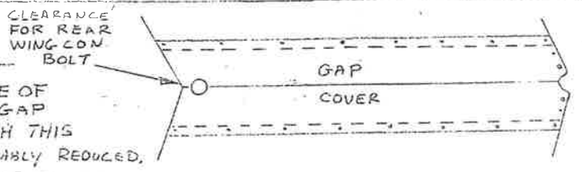
(1) GAP COVER

FURNISHED IN THE KIT IS ONE PIECE OF CLEAR LEXAN 8" X 48" P.N. 72. THE GAP BETWEEN THE TWO UPPER WINGS MUST BE COVERED WITH THIS "GAP COVER". WITHOUT IT, GLIDE RATIO & SINK RATE IS CONSIDERABLY REDUCED.

Ⓐ ASSEMBLE THE PLANE COMPLETE. NOW FIT THE COVER ACROSS THE TOP OF THE UPPER WING ROOTS. TRIM FOR A GOOD FIT, OVERLAPPING ROOT TUBES AS SHOWN.

Ⓑ NOW TAKE THE GAP COVER OFF AND MARK A LINE DOWN THE MIDDLE. CAREFULLY CUT IN TWO NEAT PIECES.

Ⓒ TAPE THE 2 HALVES TOGETHER CAREFULLY AND FIT BACK ON PLANE. TAPE IN PLACE, TRIM FRONT & REAR. REAR CLEARANCE HOLE CAN BE CUT WITH CUTTER P.N. 11. USE ALUMINUM POP RIVITS APROX EVERY 6" AS SHOWN



(2) INSPECT ALL TUBING

FOR PLANE KINKS OR DENTS, BEFORE STARTING KIT. LOOK CLOSELY AT ALL TUBING. SMALL KINKS OR DENTS CAN BE REMOVED BY USING TWO ADJACENT FILES IN OPPOSITE DIRECTIONS & SMOOTH OUT WITH EMERY CLOTH.

(3) HAVE YOUR PLANE INSPECTED

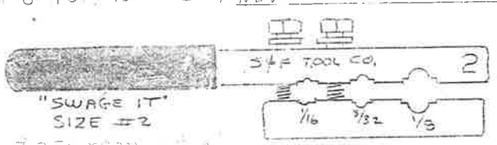
DURING CONSTRUCTION IT IS A GOOD IDEA TO HAVE ANOTHER QUALIFIED PERSON DOUBLE CHECK YOUR ASSEMBLY. THE BEST WOULD BE AN F.A.A. INSPECTOR, CALL THE LOCAL F.A.A. OFFICE AND TELL THEM YOU HAVE AN EXPERIMENTAL AIRCRAFT FOR INSPECTION. MAY HAVE TO BE REGISTERED FOR THE FUTURE PURPOSE OF INSTALLING ENGINE, CHECK WITH THEM.
A VERY QUALIFIED PERSON TO CHECK YOUR WORK IS AN AIRCRAFT MECHANIC CALLED A&P MECHANIC.

(4) PROTECTION OF LOWER WING

FROM GROUND HANDLING, BY TAPING EDGE OF WINGS WITH ½" WIDE CLOTH/VINYL TAPE SUCH AS MYSTIC TAPE AVAILABLE IN COLORS FROM YOUR LOCAL HARDWARE OR VARIETY STORE

(5) NICOPRESS TOOLS

FULL STRENGTH OF AIRCRAFT CABLE CAN BE ACCOMPLISHED ONLY BY PROPER SWAGING WITH PROPER TOOLS. THE TOOLS SHOWN ARE RECOMENDED. WITH NICOPRESS TOOLS USE ONLY "C" FOR 1/16 CABLE AND "G" FOR 3/32 CABLE, NEVER USE "C" FOR 3/32 CABLE.



$12.50 FROM E.A.A.

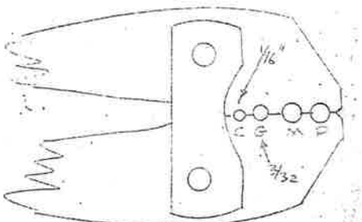
NOTE — Ⓓ SLEEVES ARE COMPRESSED LONG WAYS

Ⓔ NO SQUASHING OUT OF SLEEVES ACCEPTABLE. TOOL USED TOO SMALL


FINISHED SWAGE

THERE IS ONLY ONE CORRECT WAY TO SWAGE NICOPRESS SLEEVES, USE THE CORRECT TOOL. USING THE CORRECT CRIMP SIZE ON THE TOOL. NEVER USE ANY OTHER METHOD OR ANY OTHER TOOLS. INSTRUCTIONS ARE FURNISHED WITH EACH TOOL FOR PROPER USE

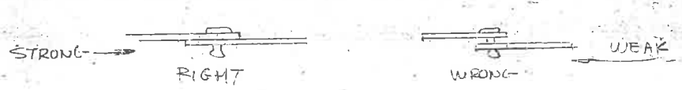
AFTER SWAGING SWAGED AREA OF
1/16" SLEEVES SHOULD BE .190" DIA. MAX.
3/32" SLEEVES SHOULD BE .265" DIA. MAX



NATIONAL TELEPHONE SUPPLY CO. OF CLEVELAND, OHIO. NICO PRESS SLEEVE TOOL MODEL 5-4-CGMP OVAL

(6) POP RIVITING

POP RIVITS WILL DEVELOP FULL STRENGTH ONLY IF THE RIVIT IS HOLDING THE METAL PARTS TIGHTLY TOGETHER. MOST OF THE STRENGTH IS DEVELOPED BY THE FRICTION OF THE 2 METAL SURFACES TOGETHER. IF THE METAL PARTS ARE SEPERATED, THE RIVIT IS UNDER SHEAR LOAD AND MAY BREAK OFF OR PULL OUT.



BEST TOOL IS U.S.M. MODEL K-111-1941 "POP" RIVE TOOL

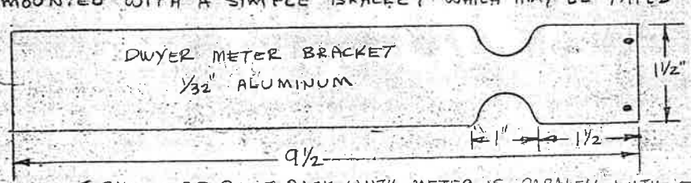
USE #30 DRILL FOR EASY INSERTION OF RIVITS. 1/8 HOLES WORK BUT ARE TIGHT CAUSING DIFFICULTY INSERTING RIVITS. ALWAYS CHECK HOLES TO SEE IF METAL PARTS ARE TIGHT TOGETHER. IF NOT, TAP SLIGHTLY TO CLOSE GAP OR FIT. ON BACK SIDE OF RIVIT GUN WHILE PULLING RIVIT TIGHT.

(7) COCKPIT PADS FRONT & REAR

THE FRONT & REAR SPARS IN THE PILOT AREA MUST BE PADDED FOR COMFORT AND SAFETY. USE FOAM SLEEPING BAG PADS WHICH ARE ½" THICK, 14" WIDE ABOUT 6FT LONG. WRAP PAD AROUND SPARS AFTER FIRST DOUBLE CHECKING WING CONNECTOR BOLTS FOR TIGHTNESS AND THAT LOCK PINS ARE IN PLACE. A COUPLE PAD COVERS OF NAUGAHYDE 14" WIDE X 16" LONG, USING SNAPS, VELCRO OR STRAPS TO HOLD IN PLACE IN FLIGHT, THE REAR PAD IS YOUR BACK REST. THE PLANE RESTS ON YOUR BACK HERE DURING GROUND HANDLING

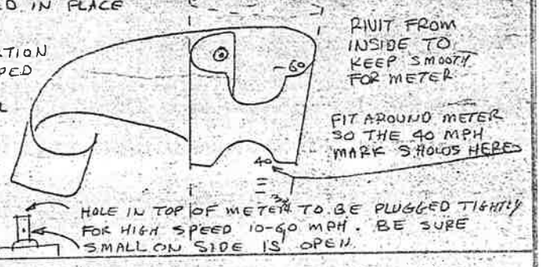
(8) WIND METER MOUNT

THE POPULAR "DWYER" HAND-HELD WIND METER IS A GOOD INDICATOR OF AIRSPEED AND SHOULD BE MOUNTED ON THE RIGHT DIAGONAL STRUT FOR GOOD VISABILITY WHILE FLYING. THE METER CAN BE MOUNTED WITH A SIMPLE BRACKET WHICH MAY BE TAPED OR CLAMPED IN PLACE



MOUNT SHOULD BE BENT BACK UNTIL METER IS PARALELL WITH FRONT STRUT
THATS THE WAY THE WIND BLOWS WHEN YOURE FLYING

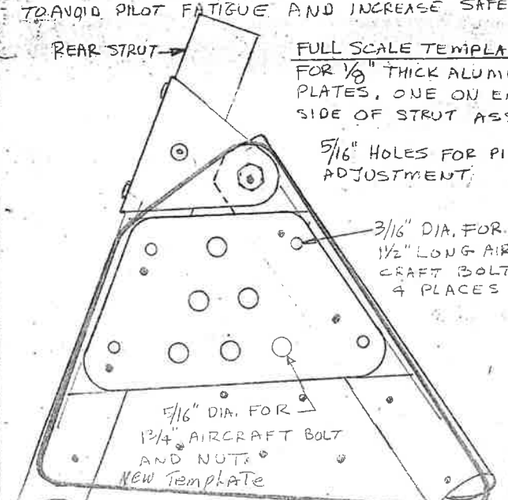
THIS PORTION IS WRAPPED AROUND DIAGONAL STRUT.

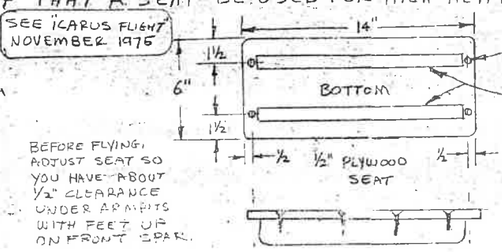


(9) SEAT MOUNTING

THE PARALELL BAR SUPPORT IS UNIQUE. IN THAT IT IS NOT NECESSARY TO HAVE A SEAT TO BE ABLE TO FLY. HOWEVER, IT IS IMPORTANT THAT A SEAT BE USED FOR HIGH ALTITUDE & DURATION FLYING TO AVOID PILOT FATIGUE AND INCREASE SAFETY

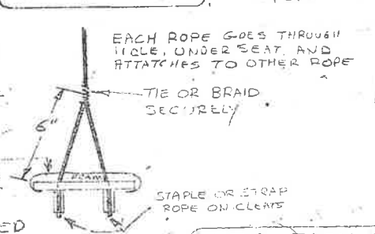
SEE "ICARUS FLIGHT" NOVEMBER 1976

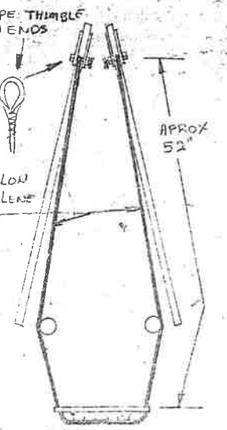




BEFORE FLYING! ADJUST SEAT SO YOU HAVE ABOUT ½" CLEARANCE UNDER ARMPITS WITH FEET UP ON FRONT SPAR.

TRY SEAT OUT CAREFULLY DO NOT USE SEAT BELT. PUT ON ONLY AFTER YOUR FLIGHT IS UNDERWAY. PUT SEAT ON BY REACHING OUTSIDE MAIN TUBES AND SLIPPING SEAT UNDERNEATH.





NOTE! A NEW IMPROVED SEAT "THE EASY SEAT" IS AVAILABLE THROUGH UFM AND UFM DEALERS.

UFM EASY RISER 3/24/76

SHEET 9 FAIRINGS

① PARTS NEEDED ARE:

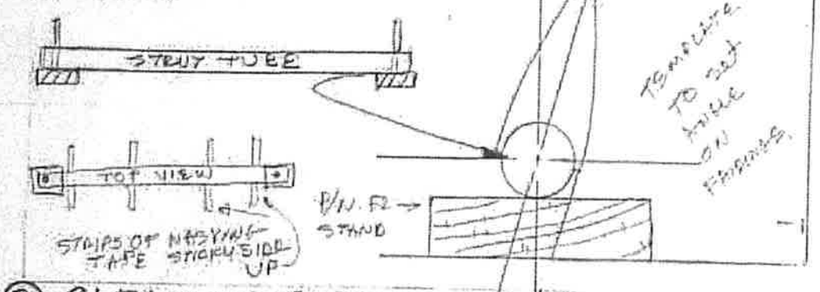
P/N'S 25, 26, 27, 28, 29, 30, 51 & 52.

TOOLS & SUPPLIES

BENCH OR TABLE, MIXING PAIL, 80 GRIT SANDPAPER, STIR STICKS, WAXED PAPER, MASKING TAPE,

② TEN STRUTS REQUIRE FAIRINGS.

THE ONLY STRUTS WITHOUT FAIRINGS ARE THE TWO INBOARD REAR STRUTS AND THE INBOARD DIAGONAL STRUTS. THE FAIRINGS ARE APPLIED TO THE STRUTS AT A 15° ANGLE TO THE CENTERLINE OF THE STRUT BOLT HOLES IN EACH STRUT. EXCEPT FOR THE TWO DIAGONAL STRUTS, USING THIS DIAGRAM AS A PATTERN. XEROX THE TEMPLATE AND GLUE IT TO A PIECE OF CEREAL BOX CARDBOARD.



③ CLEAN STRUTS WITH T.M.E.K. OR

SCOTCH BRITE AND DETERGENT AND RINSE WELL WITH WATER

④ GLUE FOAM FAIRINGS TO STRUTS.

GLUE ON TRAILING EDGE WITH FIXTURE IN STEP 2. PLACE SEVERAL STRIPS OF MASKING TAPE ACROSS UNDERNEATH THE STRUT THESE WILL BE USED TO HOLD THE FOAM TIGHT TO THE STRUT TUBE UNTIL EPOXY SETS. MIX A SMALL AMOUNT OF 5 MINUTE EPOXY AND APPLY IT SPARINGLY ALONG THE CENTER OF WHERE THE FAIRING WILL GO. FIT ONE FAIRING AT A TIME ON TO THE TUBE AND PULL DOWN TIGHT WITH THE TAPE. TRIM & FIT THE SECOND FAIRING UP AGAINST THE FIRST ONE WITH A TINY BIT OF EPOXY IN-BETWEEN.

IMPORTANT NOTE: IF ANY EPOXY GETS ON THE OUTSIDE OF THE FOAM OR BALSA IT CANNOT BE SANDED OFF; IT WILL CAUSE A GIANT LUMP. DO NOT LET ANY EPOXY TO GET ON OUTSIDE SURFACES

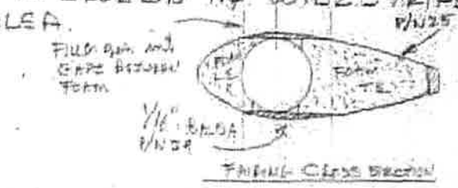
⑤ GLUE ON LEADING EDGES

THEY CAN BE GLUED ON BY EYE CHECKING THAT THE GAPS ON THE SIDES BETWEEN THE FOAM PARTS IS EQUAL.

IMPORTANT NOTE: TAKE CARE TO CHECK THE LOCATION AND ANGLE THAT FAIRINGS MUST HAVE TO TRAIL STRAIGHT BACK SAME AS THE RIBS. THERE IS A LEFT-HAND SET & A RIGHT-HAND SET.

⑥ FILL SIDE GAPS BETWEEN FOAM.

WITH LIGHT WEIGHT SPACKLING COMPOUND P/N 30 COMES WITH A PLASTIC SQUEEGIE. THE COMPOUND IS KIND OF DRY IN THE CONTAINER AND PROBABLY WON'T SPREAD WELL UNTIL A BIT OF WATER IS MIXED IN. THE GOAL IS TO GET THE AREA ON THE SIDES FLAT ENOUGH TO GLUE ON 1¼" WIDE STRIPS OF 1/16" THICK BALSA.



⑦ SAND SIDES FLAT FOR BALSA STRIPS

YOU'LL NEED A FLAT SANDING BLOCK WITH ABOUT 80 GRIT SAND PAPER GLUED TO IT. A ½" STRIP OF PREMIUM WOOD ABOUT 2" WIDE WORKS OK. SAND THE FILLER AND A LITTLE BIT OF FOAM BUT DO NOT GO TOO FAR AND SAND INTO THE TUBING. IF YOU DO THE TUBING WILL STICK UP IN THE MIDDLE SO THAT THE BALSA WON'T TOUCH ON THE EDGES - A MESS. IT'S HARD ENOUGH TO GET THE BALSA BONDED ON NICE AND FLAT ANYHOW.

⑧ BOND THE BALSA ON THE SIDES.

COVER YOUR WORK TABLE WITH WAXED-PAPER TAPE IT DOWN. NOW CUT 1½" WIDE STRIPS OF 1/16" BALSA FROM THE 4"X48" STOCK P/N 29. LOCATE THE STRIP IN THE BEST PLACE. IT'S FRONT EDGE ABOUT ⅛" BEHIND THE FRONT OF THE TUBING, MORE OR LESS! NOW YOU'LL NEED SOME THINGS TO HOLD THE BALSA DOWN WHILE EPOXY SETS. TO AVOID THE BALSA FROM SHIFTING USE A COUPLE OF STRAIGHT PINS TO LOCATE ONE EDGE OF BALSA.

I HAVE USED EITHER ONE GALLON ZIP LOCK BAGS WITH 20 OR 2 POUNDS OF RICE IN EACH ONE TO HOLD THE STRIPS DOWN WHILE THE 5 MINUTE EPOXY SETS - I WONDER IF A HEAVY RUBBER DOOR MAT MIGHT WORK BETTER? PAH! SO MANY THINGS TO TRY - SO LITTLE TIME! MIX A BIT OF 5 MIN EPOXY THEN QUICKLY SPREAD IT ON ONE SIDE OF BALSA AND SQUEEGE IT OUT TO COMPLETELY COVER SURFACE OF THE BALSA.

REMEMBER NO OOZING OUT AT THE EDGES OR EPOXY DRIPS AND WIPE.

⑨ SAND TRAILING EDGE SQUARE AND BOND

CUT STRIPS OF ⅛" BALSA A LITTLE WIDER THAN TRAILING EDGE. SQUEEGIE ON A NEAT LAYER OF 5 MINUTE EPOXY ON THE ENTIRE SURFACE OF THE BALSA AND USE STRAIGHT PINS AND MASKING TAPE TO HOLD IN PLACE.

⑩ SANDING FINAL CONTOUR OF FAIRING.

THE BASIC CONTOUR IS ALREADY IN THE FOAM. TO KEEP FROM RUINING THIS SHAPE IT IS IMPORTANT TO SAND AWAY THE BALSA SCRAP FIRST. THIS IS BEST DONE WITH THE SANDING BLOCK YOU MADE. CAREFULLY - CAREFULLY SAND THE EDGES OF THE BALSA WITHOUT TOUCHING THE FOAM AT ALL. IF YOU CAN DO THIS TRICK YOU ARE 90% DONE. THE SANDING CONTOUR BLOCK P/N 51 IS FIRST USED TO JUST CHECK THE CONTOUR AND FINALLY FOR FINISH SANDING THE FINAL CONTOUR USE NERF SPARINGLY ON THE LEADING EDGE. FINAL-FINAL SANDING SHOULD BE DONE BY EYE WITH SANDING BLOCK WHILE SIGHTING DOWN THE LENGTH OF THE STRUT

⑩ LAMINATING ON THE GLASS CLOTH.

WAX PAPER COVERED TABLE, SQUEEGIE, 10" ALUMINUM PAINTSHIELD USED AS SQUEEGIE, MIXING PAIL SMALL. CUT FIBERGLASS CLOTH P/N 27 INTO 8½" STRIP, TRIM TO 1" LONGER THAN FAIRING. WE USE WEST EPOXY 105 RESIN WITH 205 HARDNER. TO MEASURE EPOXY 5 PARTS TO ONE HARDNER USE ONE GALLON SQUARE TAPE CAN LID. USE 1" WIDE BRUSH. MIX 5 LIDS RESIN & ONE LID HARDNER BRUSH HALF OF IT ON ONE SIDE STRUT EVENLY. LAY GLASS ON STRUT WITH ½" HANGING OUT BEHIND. USE SQUEEGIE WHICH YOU CAN CURVE TO GO ALONG UNDERNEATH OF STRUT WORKING FROM CENTER TOWARDS ENDS AND WET FABRIC EVENLY WITH RESIN — THERE IS NO EXTRA RESIN SO MAKE IT FILL THE FABRIC WITH WHAT YOU HAVE. TURN OVER STRUT AND BRUSH ON ALL REMAINING RESIN. SAME WITH SQUEEGIE UNTIL ALL FABRIC HAS BEEN WETTED. NOW USING ALUMINUM CURVED PAINTSHIELD AS ANOTHER SQUEEGIE, SMOOTH THE EPOXY FROM LEADING TO TRAILING TO PULL THE FABRIC UP TIGHTLY AROUND THE FRONT AND SMOOTH IT OUT ALONG THE ENTIRE SURFACE. CLAMP A ROD OR STICK TO THE TABLE AND SLIDE STRUT OVER IT FOR CURING.

⑪ FINAL TRIM & SEAL

LET CURE OVERNIGHT. TRIM OFF EDGE WITH VERY SHARP X-ACTO OR STANLEY KNIFE AND FINAL CONTOUR IN ENDS. THEN SEAL ENDS AND TRAILING EDGE WITH A HEAVY COAT OF WEST EPOXY

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