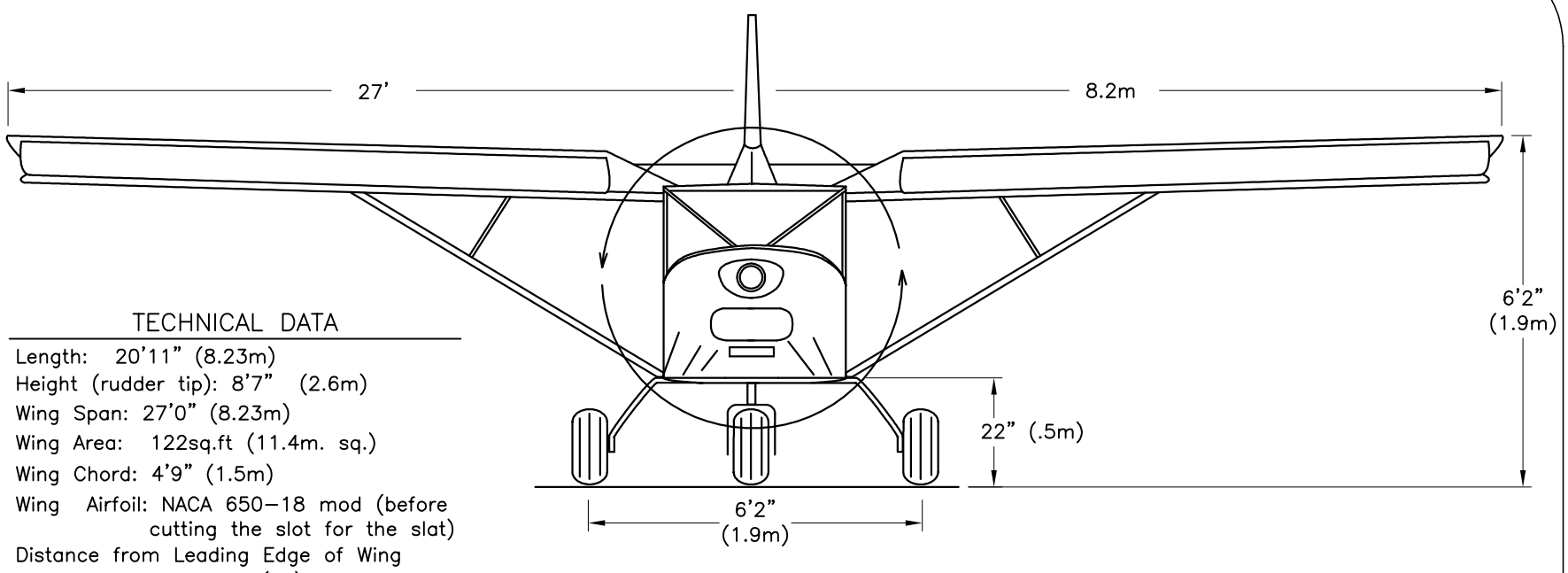
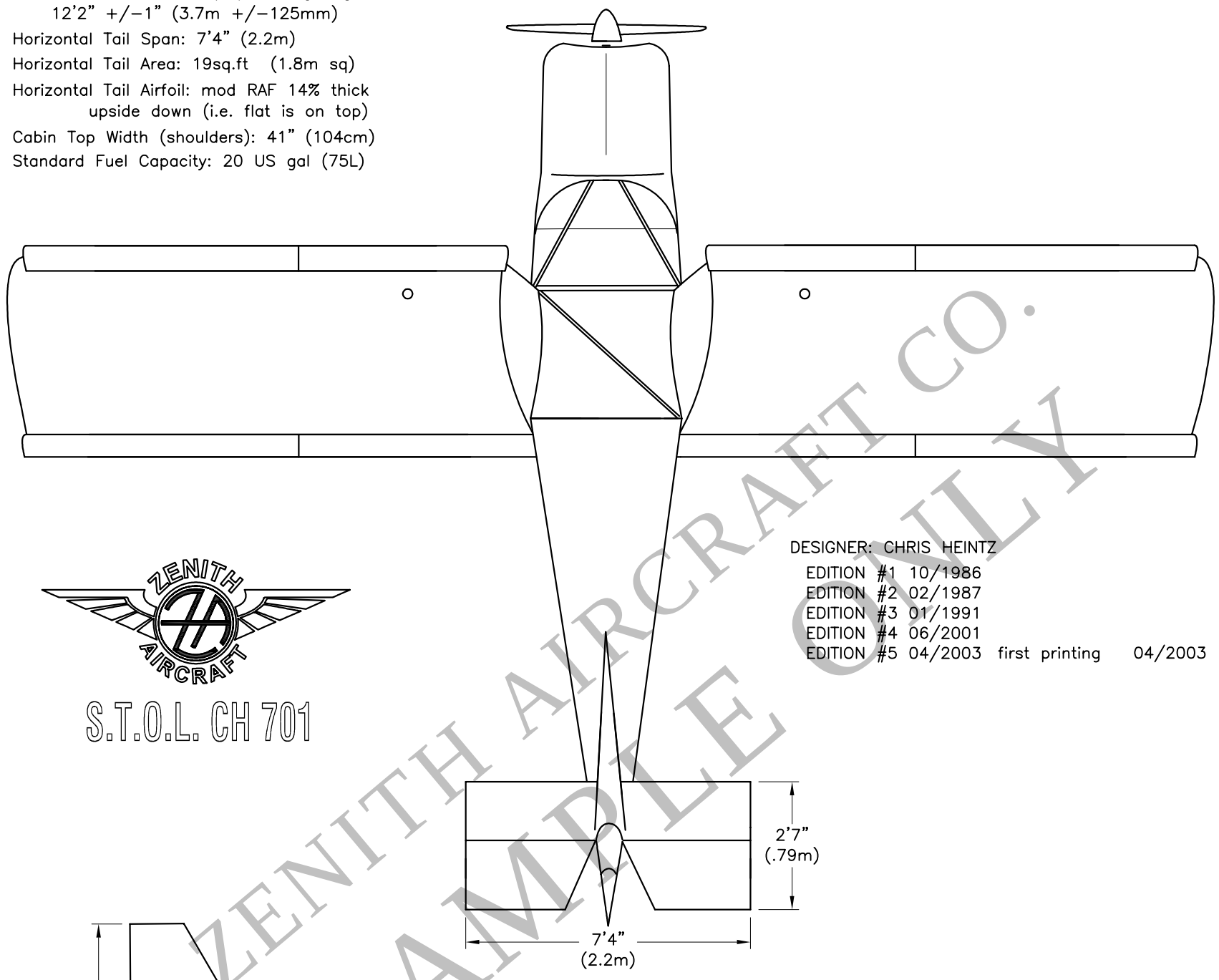


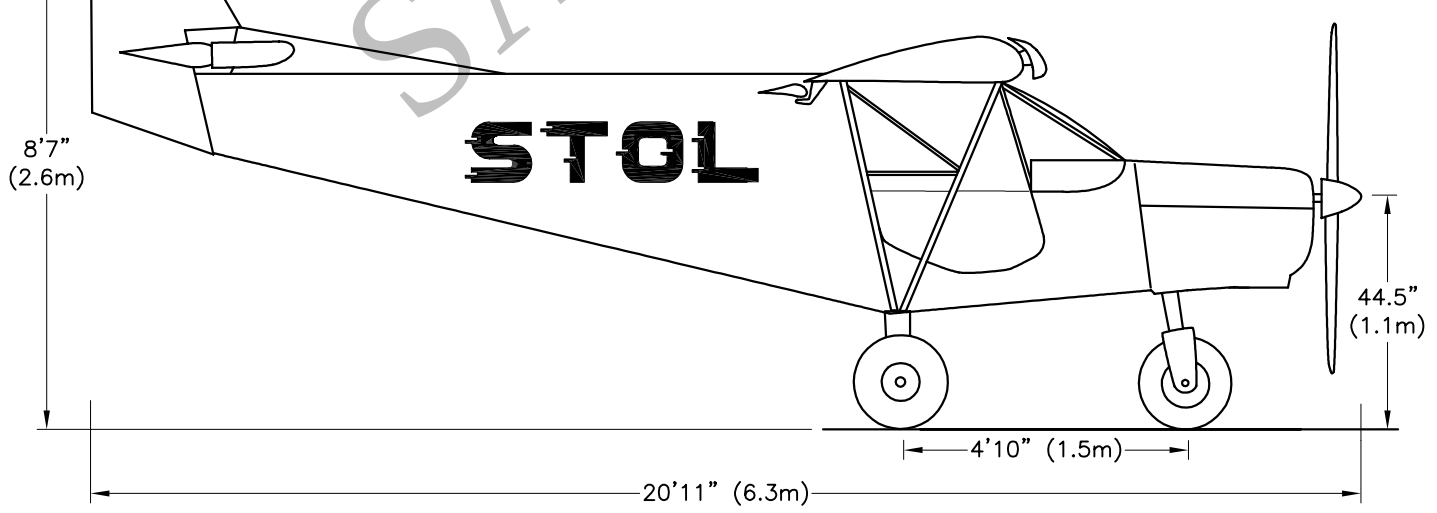
TECHNICAL DATA

Length: 20'11" (8.23m)
Height (rudder tip): 8'7" (2.6m)
Wing Span: 27'0" (8.23m)
Wing Area: 122sq.ft (11.4m. sq.)
Wing Chord: 4'9" (1.5m)
Wing Airfoil: NACA 650–18 mod (before cutting the slot for the slat)
Distance from Leading Edge of Wing to Horizontal Tail (HT) leading edge 12'2" +/–1" (3.7m +/–125mm)
Horizontal Tail Span: 7'4" (2.2m)
Horizontal Tail Area: 19sq.ft (1.8m sq)
Horizontal Tail Airfoil: mod RAF 14% thick upside down (i.e. flat is on top)
Cabin Top Width (shoulders): 41" (104cm)
Standard Fuel Capacity: 20 US gal (75L)



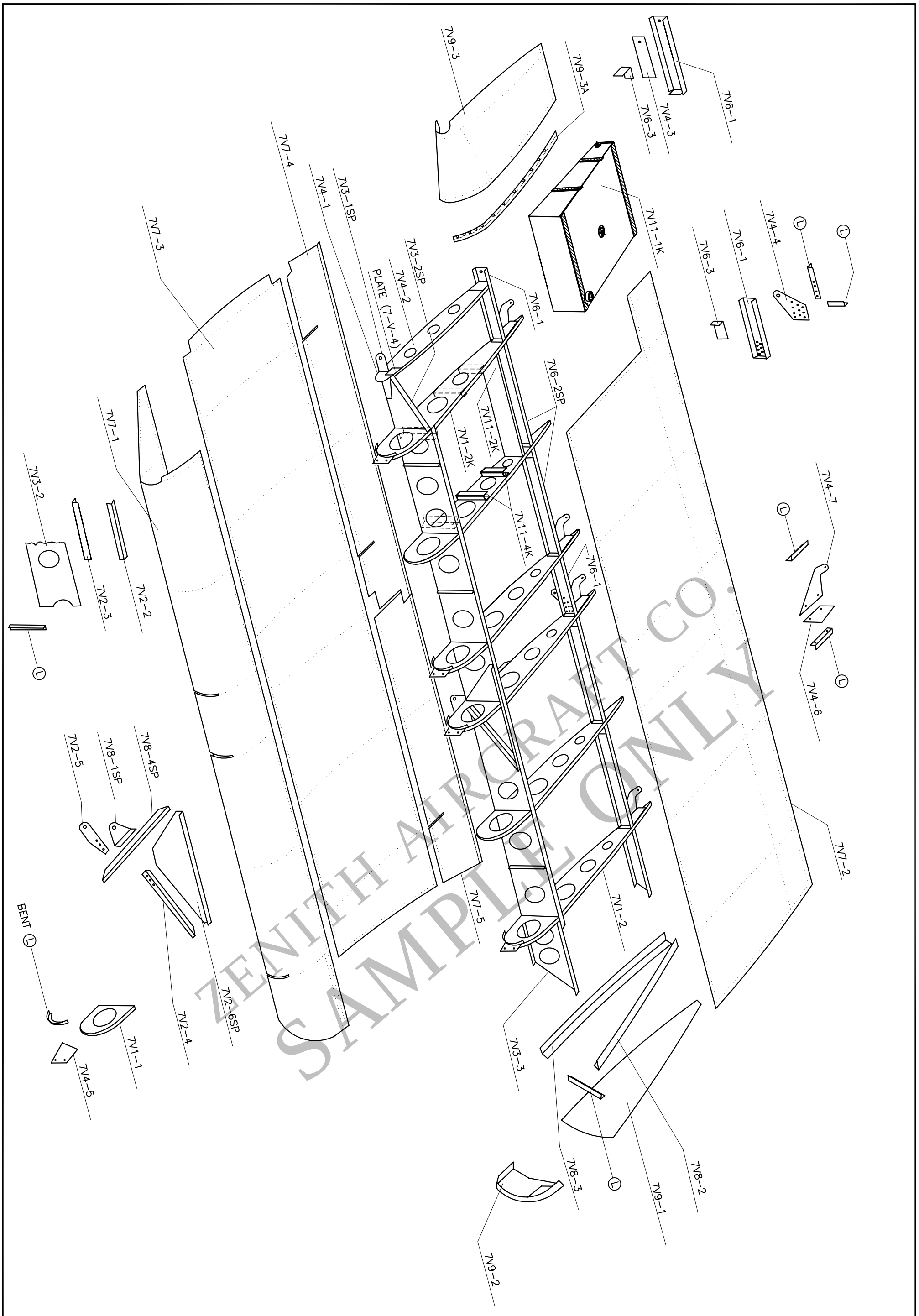
ZENITH AIRCRAFT

S.T.O.L. CH 701

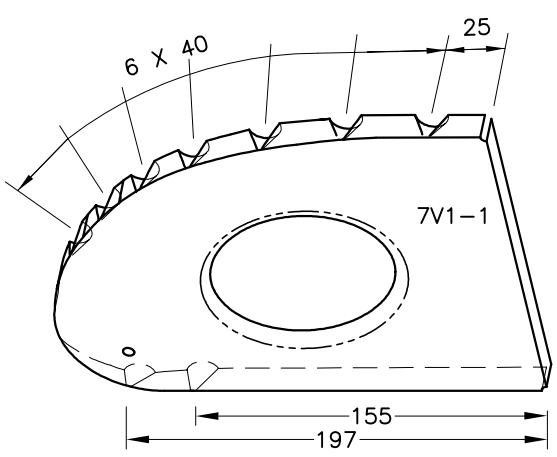


DESIGNER: CHRIS HEINTZ
EDITION #1 10/1986
EDITION #2 02/1987
EDITION #3 01/1991
EDITION #4 06/2001
EDITION #5 04/2003 first printing 04/2003

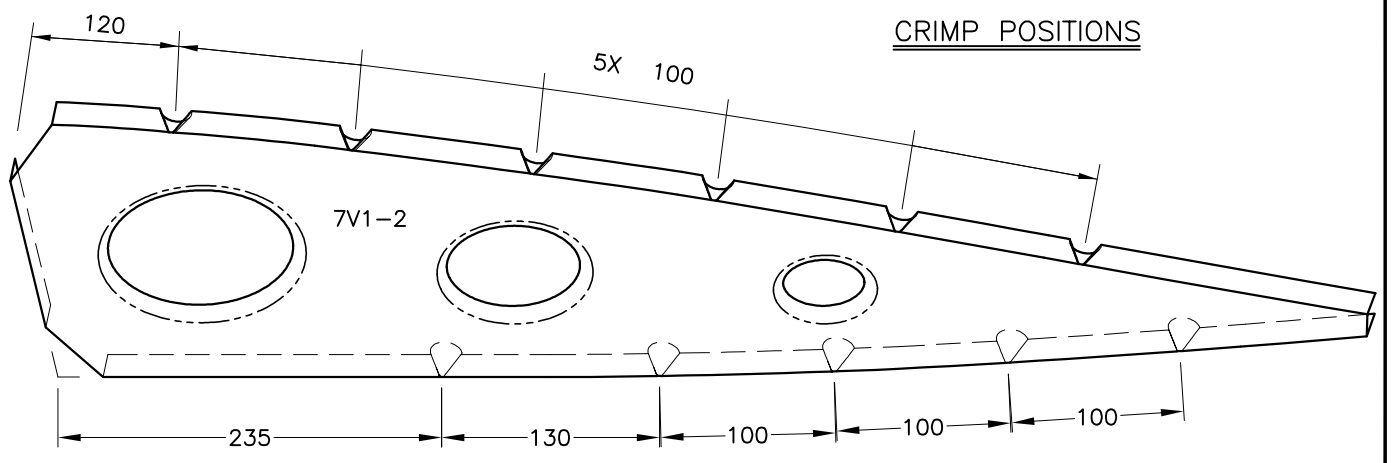
STOL CH 701	THREE VIEWS GENERAL ARRANGEMENT	7–G–1
	COPYRIGHT © 2002 CHRIS HEINTZ WWW.ZENITHAIR.COM	DATE: 04/2003



STOL CH 701	WING: EXPLODED VIEW	7-V-0
	WWW.ZENITHAIR.COM	DATE: 03/2003



7 CRIMPS IN TOP FLANGE
2 CRIMP IN BOTTOM FLANGE



6 CRIMPS IN TOP FLANGE
5 CRIMPS IN BOTTOM FLANGE

CRIMP POSITIONS

FLANGED LIGHTENING HOLE IN THE SAME DIRECTION AS THE RIB FLANGE

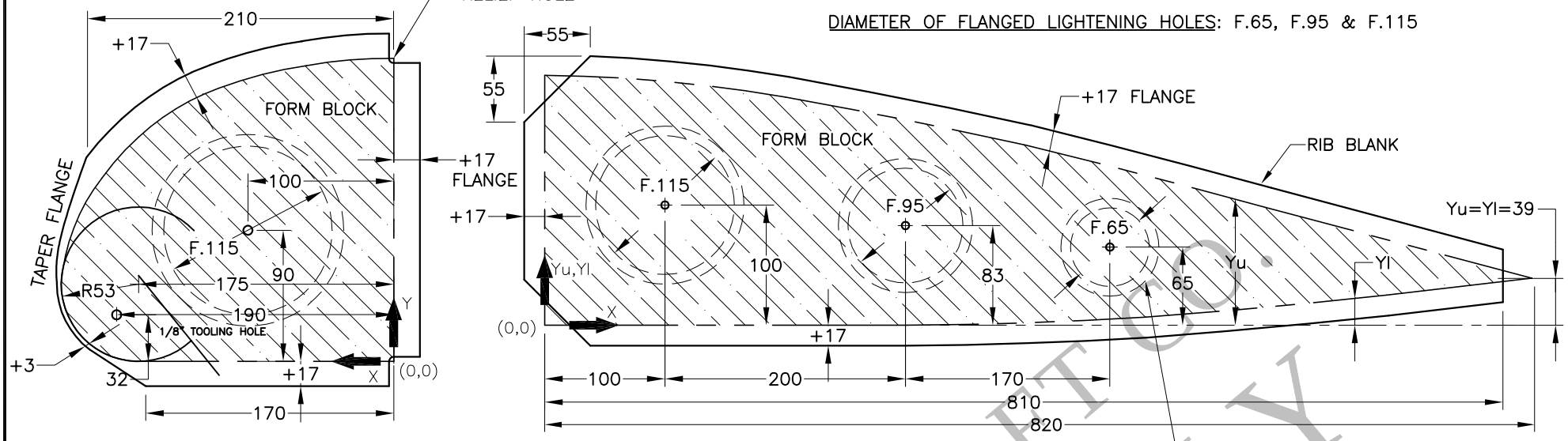
NOSE RIB FORM BLOCK

X=	0	30	60	90	120	150	175	200	220
Y=	208	207	203	197	187.5	173	154	126	90

REAR RIB FORM BLOCK

X=	0	100	200	300	400	500	600	700	810
Yu=	208	203	190	171	150	124.7	98	71.2	41.7
Yl=	0	0	0	0	2	6.7	15	25	37.8

DIAMETER OF FLANGED LIGHTENING HOLES: F.65, F.95 & F.115

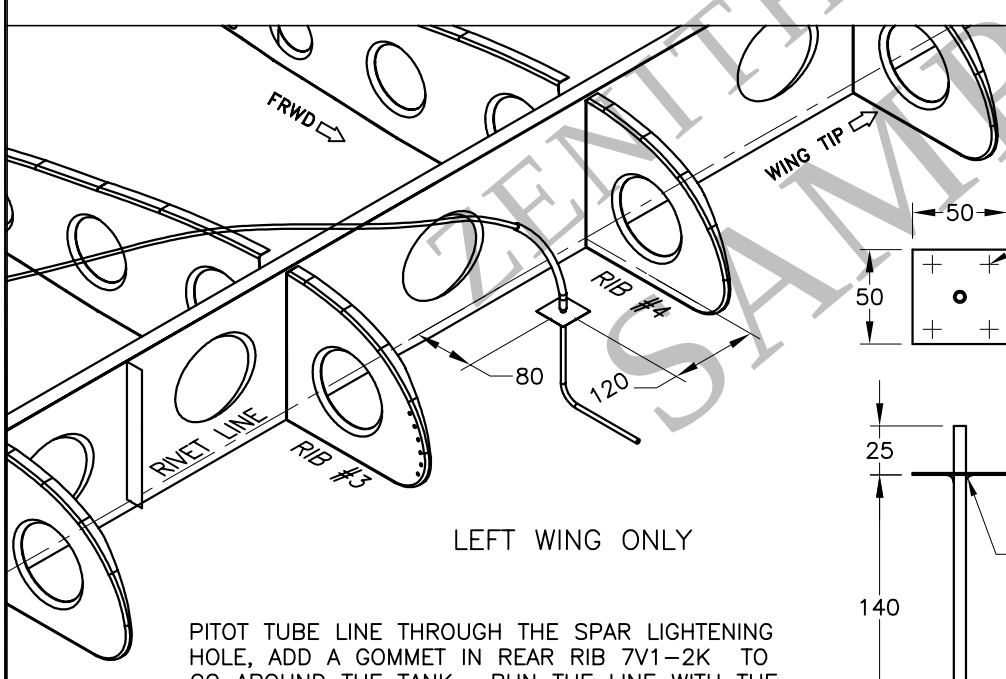


THE LEFT & RIGHT REAR RIB 7V1-2K AT STATION 280 (RR#1) DO NOT HAVE THE 65MM FLANGED LIGHTENING HOLE TO MAKE ROOM FOR THE WING TANK OUTLET

1 △0 WING NOSE RIBS
t=.025" 6061-T6 (6L & 6R REQ'D)

2 △0 WING REAR RIBS
t=.025" 6061-T6 (5L & 5R REQ'D)

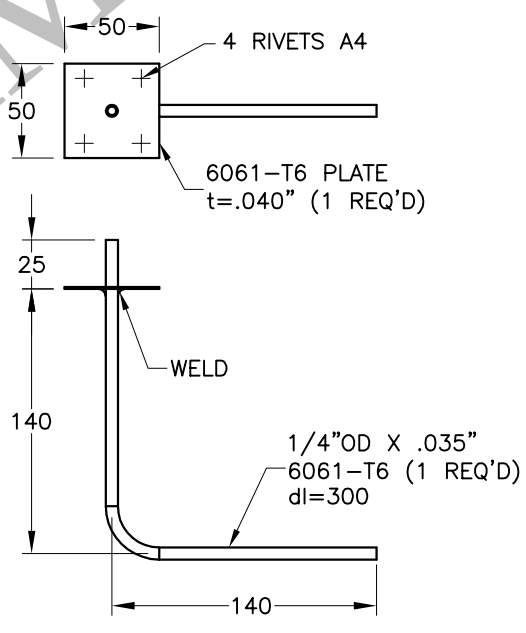
2K △0 WING REAR RIBS
t=.025" 6061-T6 (1L & 1R REQ'D)

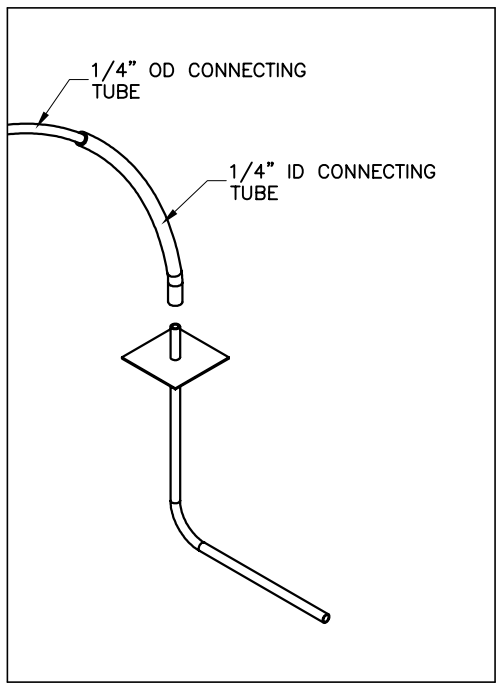


LEFT WING ONLY

PITOT TUBE LINE THROUGH THE SPAR LIGHTENING HOLE, ADD A GOMMET IN REAR RIB 7V1-2K TO GO AROUND THE TANK. RUN THE LINE WITH THE FUEL LINE AROUND THE BACK OF THE DOOR.

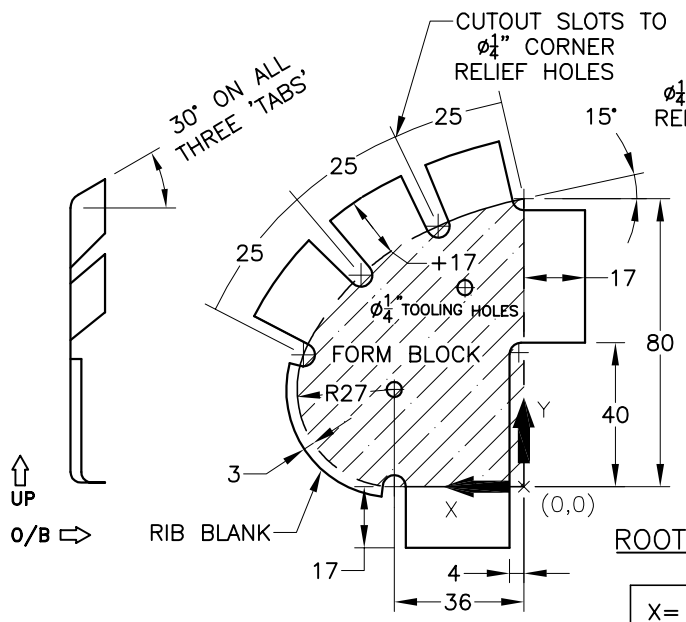
GROMMET AN931-4-7 (1/4" I/D)
DRILL 7/16" HOLE IN WEB

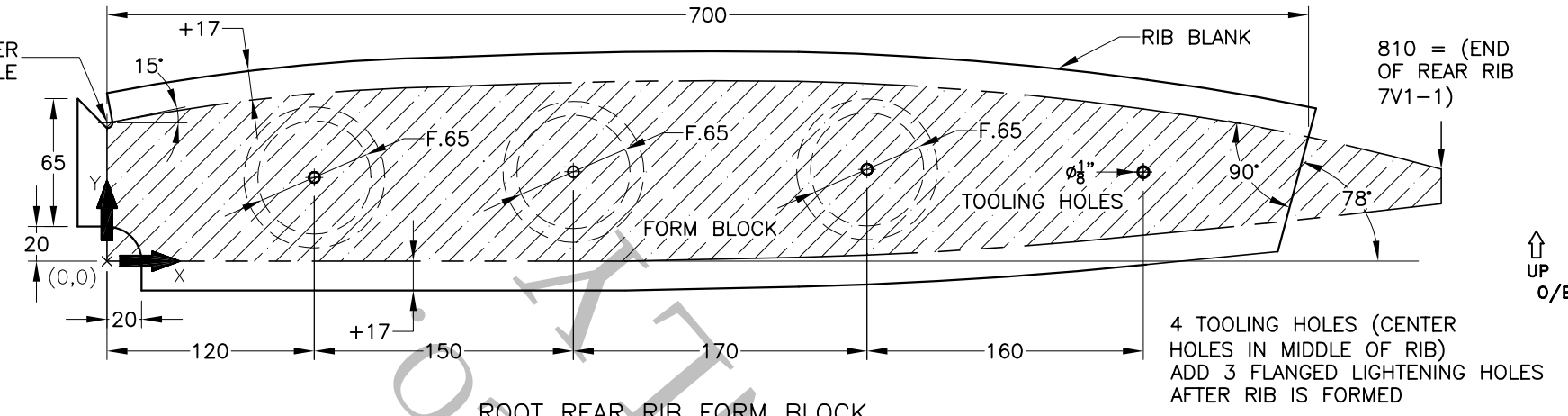


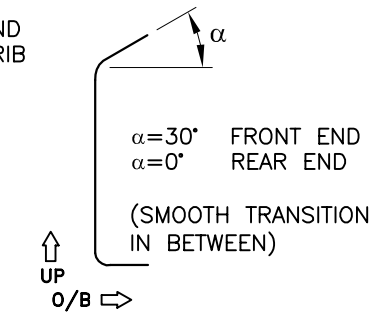


3A △0 PITOT/STATIC TUBE
WELDED ASSEMBLY (1 REQ'D)

STOL CH 701	WING RIBS PITOT TUBE	7-V-1
	COPYRIGHT © 2002 CHRIS HEINTZ WWW.ZENITHAIR.COM	DATE: 04/2003







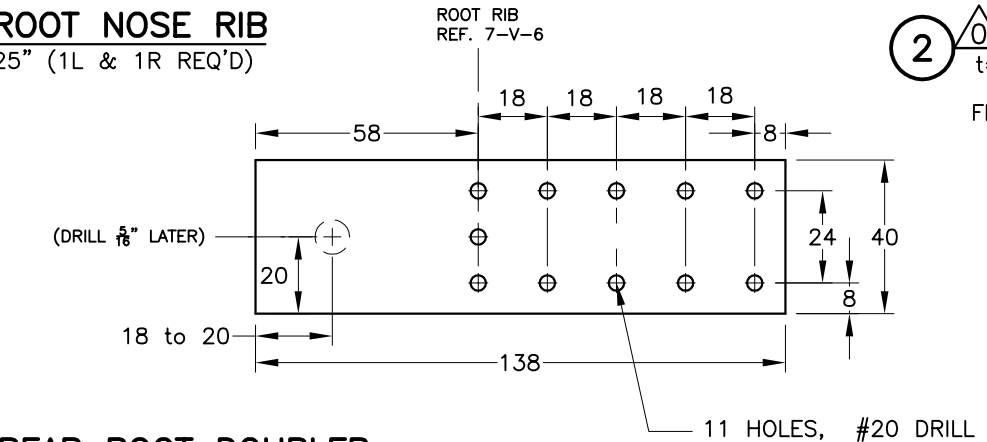
ROOT NOSE RIB FORM BLOCK

X=	0	20	36	45
Y=	80	74	66	59

ROOT REAR RIB FORM BLOCK

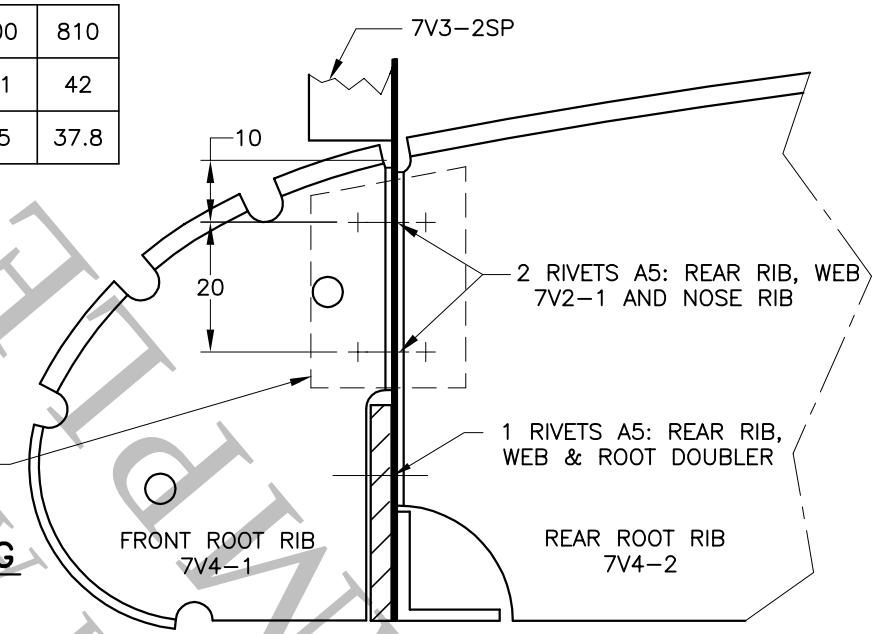
X=	0	100	200	300	400	500	600	700	810
Yu=	80	95	101	104	104	99	88	71	42
Yl=	0	0	0	0	2	6.7	15	25	37.8

1 ROOT NOSE RIB
t=.025" (1L & 1R REQ'D)



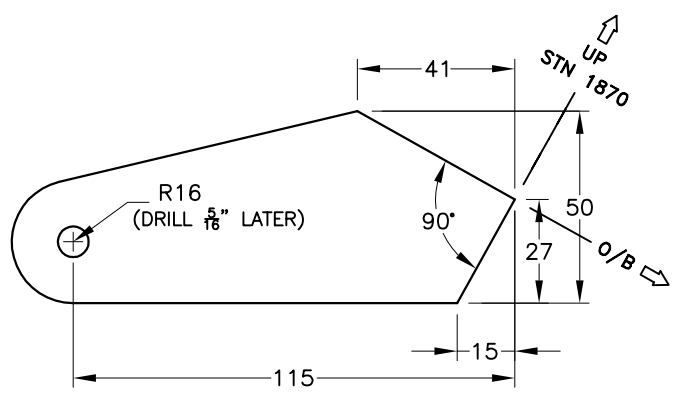
2 REAR ROOT RIB
t=.025 6061-T6 (1L & 1R REQ'D)

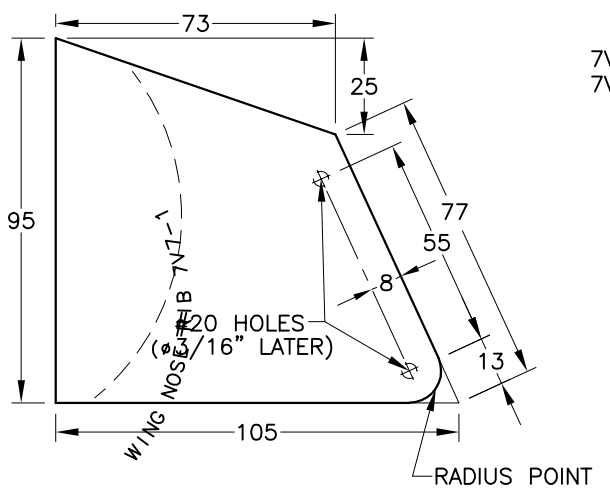
FLANGE: SEE PART 7V1-2 FOR CRIMPS LOCATION

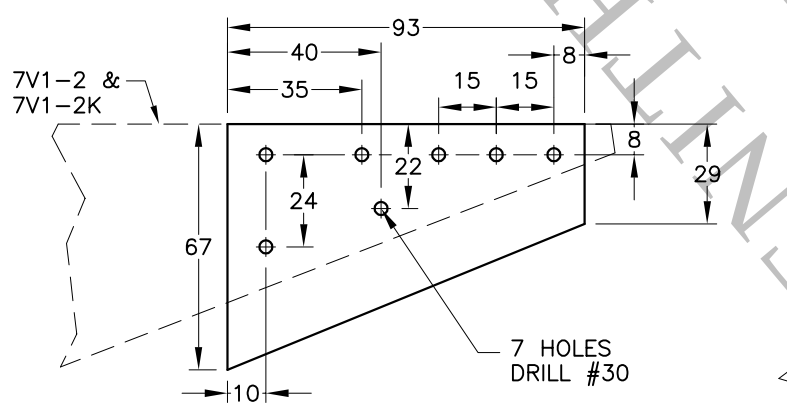


ROOT RIB DETAIL: RIVETING
STATION 10 (SEE 7-V-6)

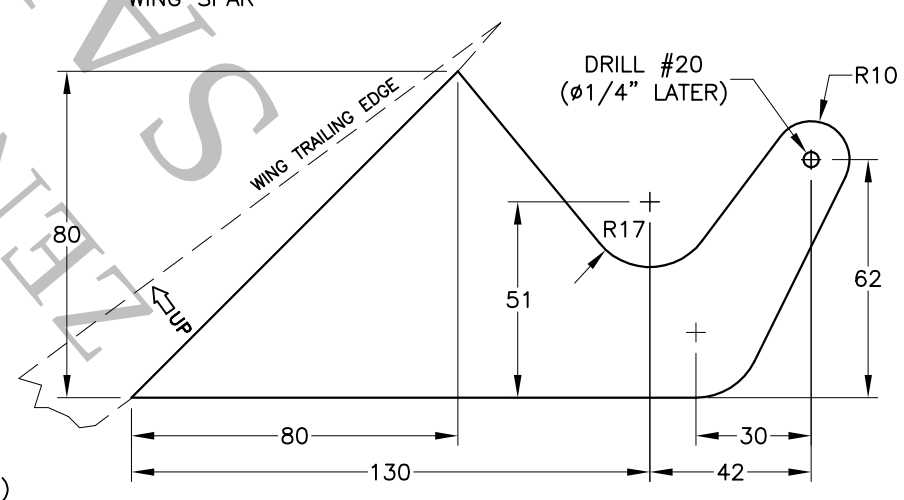
3 REAR ROOT DOUBLER
t=.090" 6061-T6 (2 REQ'D)







INSTALLATION: POSITION FRONT EDGE OF FLAPERON BRACKETS 7V4-6 BEHIND REAR CHANNELS 7V6-1 AND 7V6-2SP (CLECO TO REAR RIBS)



4 REAR UPPER STRUT FITTING
t=.090" 6061-T6 (2 REQ'D)

SEE DWG 7-V-5 FOR RIVETING

5 SLAT SUPPORTS
t=.090" 6061-T6 (8 REQ'D)

SEE DWG 7-V-5 FOR INSTALLATION

6 FLAPERON BRACKETS
t=.040" (8 REQ'D)

7 FLAPERON ARMS
t=.090" 6061-T6 (8 REQ'D)

SEE DWG 7-V-5 FOR POSITIONING

7-V-4
DATE: 03/2003

WING ROOT RIBS AND WING PARTS

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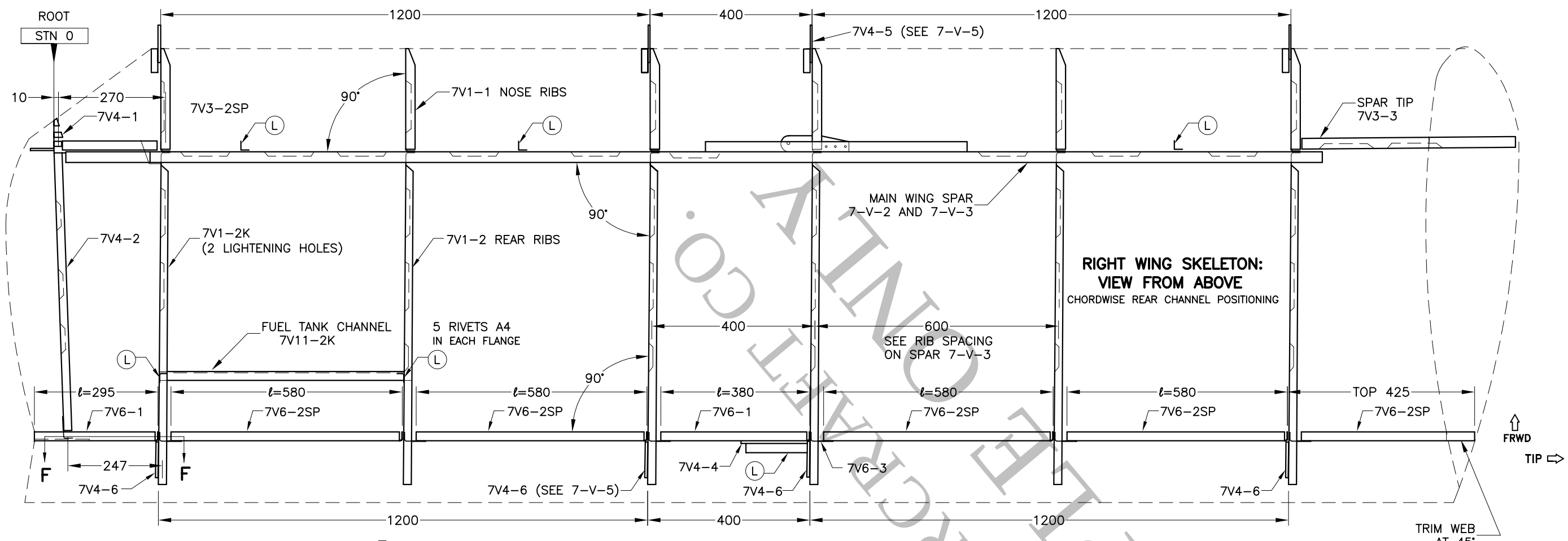
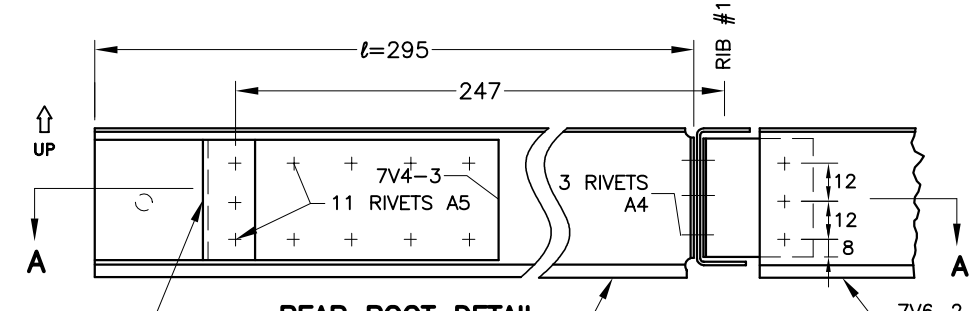
STOL CH 701

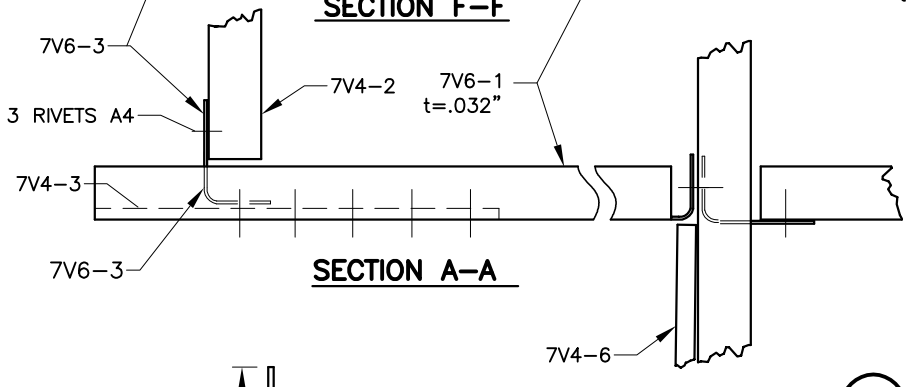
WING SKELETON AND DETAILS

STOL CH 701

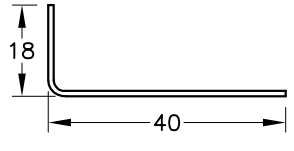




REAR ROOT DETAIL
SECTION F-F



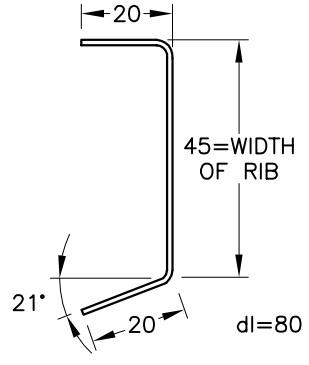
SECTION A-A



L=600
dl=57

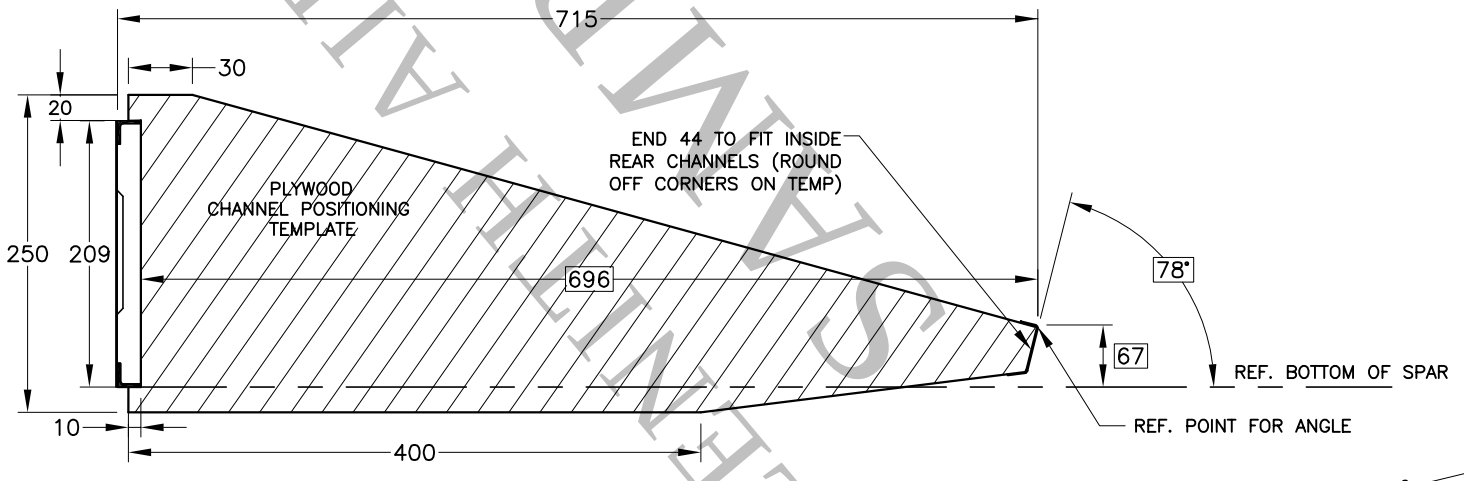
3 0 REAR RIB ANGLE
t=.025" 6061-T6 (2 REQ'D)

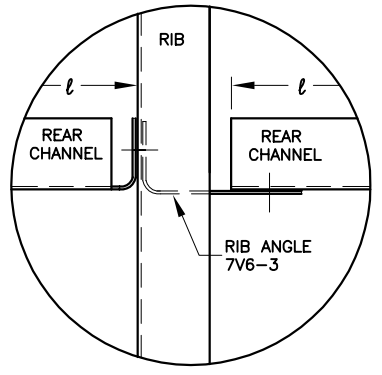
1/2" PLYWOOD TEMPLATE FOR POSITIONING THE REAR CHANNELS TO THE REAR RIBS (TEMPLATE NOTCHED AT THE FRONT TO FIT THE SPAR)



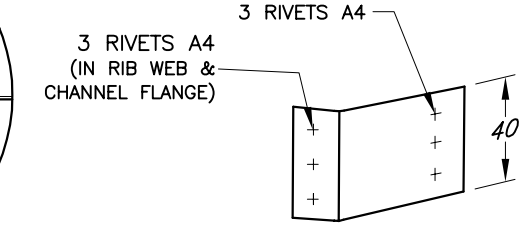
1 0 HEAVY REAR CHANNELS
t=.032" 6061-T6 (2L & 2R REQ'D)
l=400
(AT ROOT RIB & BETWEEN RIBS #3 & #4)

2SP 0 STANDARD REAR CHANNELS
SAME AS 7V6-1 BUT t=.025"
(5L & 5R REQ'D)
l=600

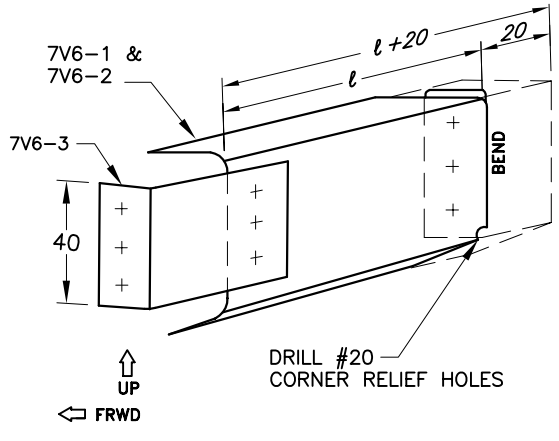


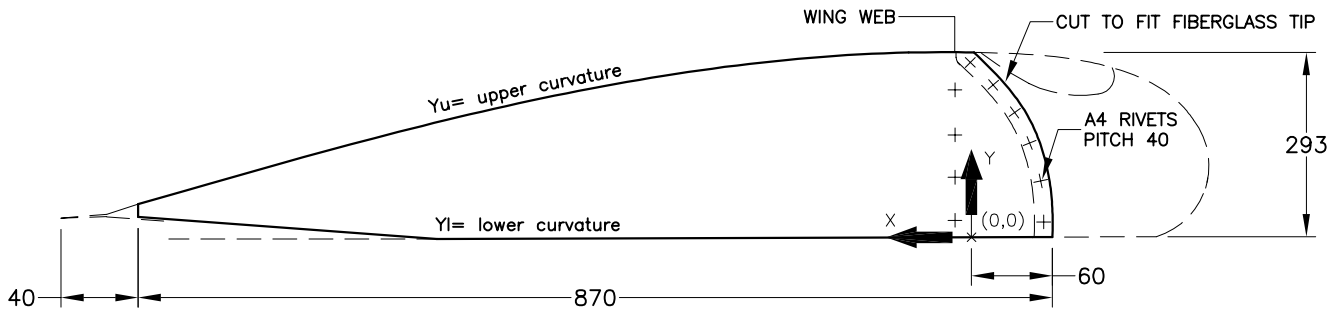


DETAIL TO SHOW FROM WHERE DISTANCES ℓ ARE MEASURED



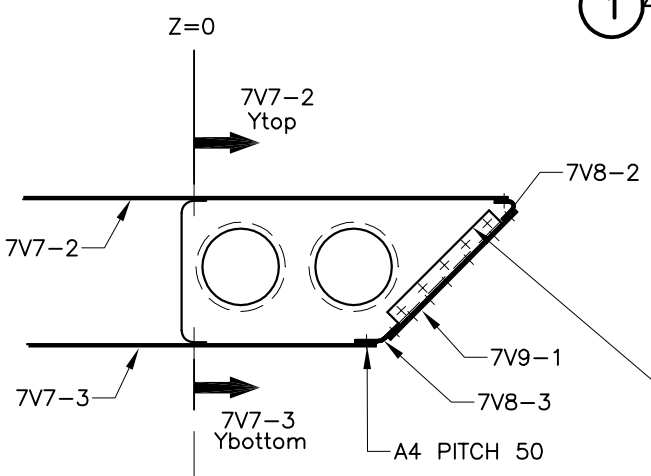
CUT OUT 40mm FROM 7V6-3
(12 REQ'D FOR 6V6-1 & 6V6-2)





1 0 WING TIP SHEET
t=.016" 6061-T6 (2 REQ'D)

2 0 FIBERGLASS TIP
FIBERGLASS (1L & 1R REQ'D)
(APPROX. 335 WIDE X 190 LONG)



TIP SHEET TRIMMING

									(0,0)	
	X=	810	700	600	500	400	300	200	100	0	60
7V9-1	Yu=	30	85	130	175	211	241	268	286	293	CURVATURE TO FIT TIP
7V9-1	Yl=	30	18	15	10	3	0	0	0	0	0

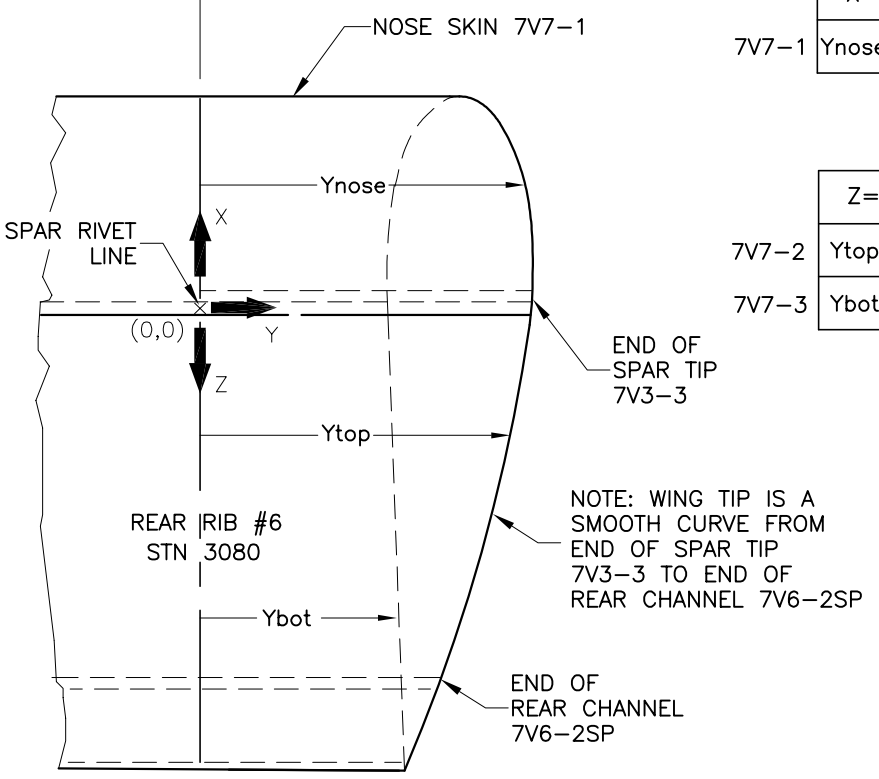
NOSE SKIN WING TIP TRIMMING

	X=	0	50	100	150	200	250	300	350	400	450	500	WING SPAR BOTTOM
7V7-1	Ynose=	505	500	490	470	445	400	350	290	270	292	292	295

REAR SKINS WING TIPTRIMMING

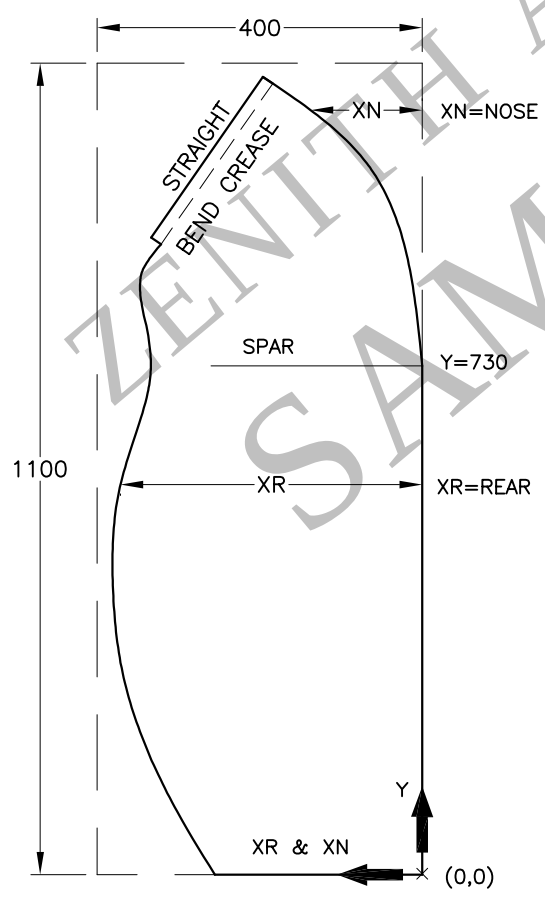
	Z=	0	100	200	300	400	500	600	REAR CHANNEL	TRAILING EDGE
7V7-2	Ytop=	505	505	505	495	480	464	440	415	385
7V7-3	Ybot=	300	310	320	330	340	350	360	370	–

STRAIGHT LINE

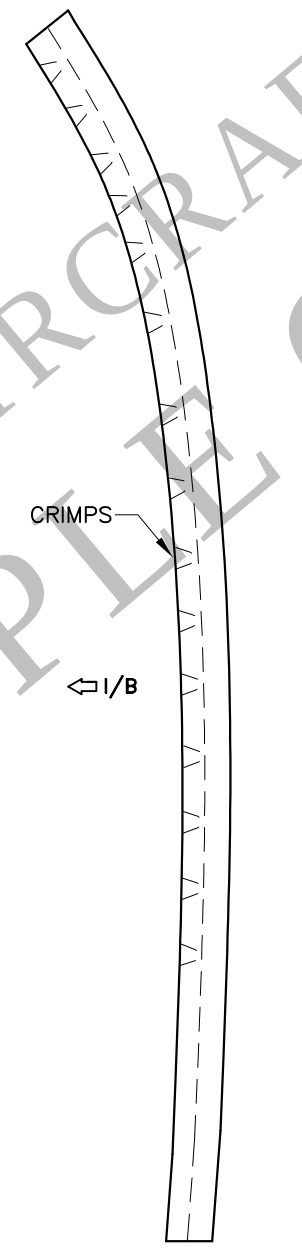


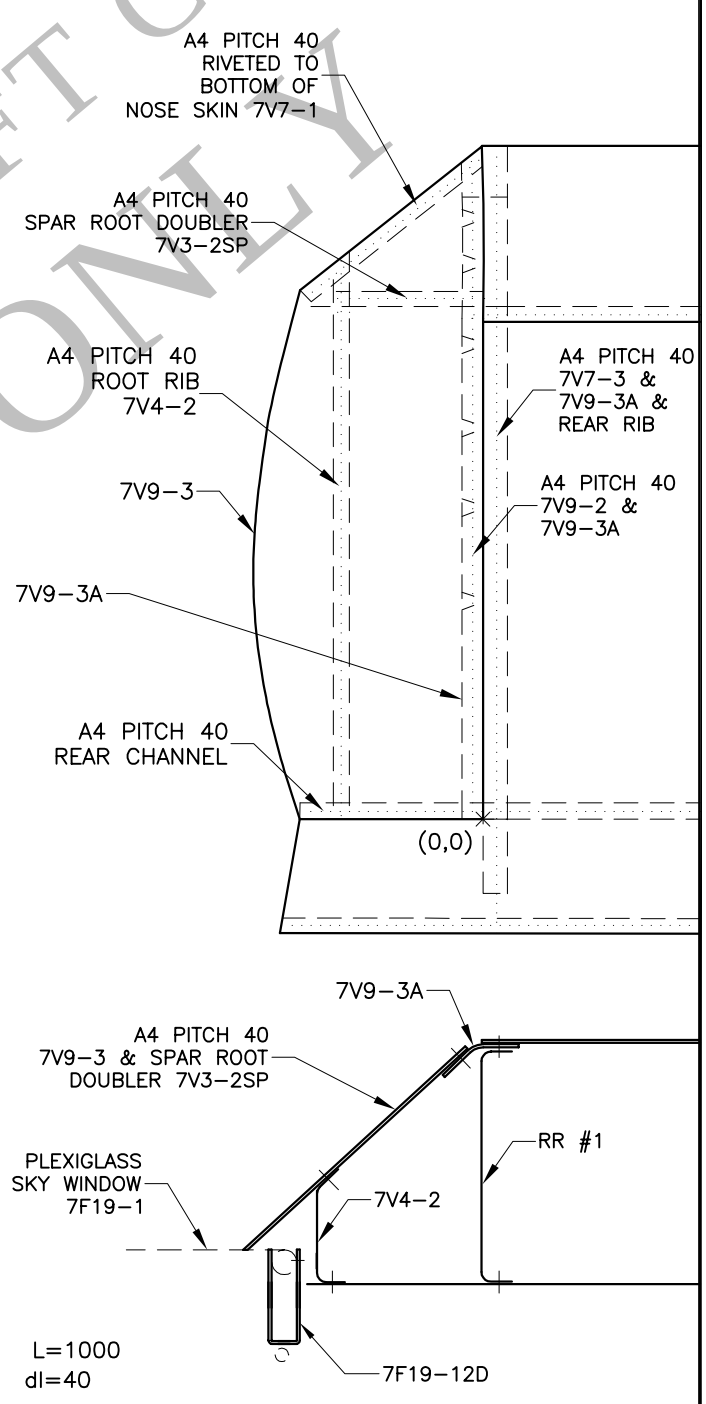
7V9-3

Y	XR	XN
0	300	–
100	330	–
200	360	–
300	385	–
400	400	–
500	408	–
600	402	–
650	392	–
700	380	–
730	375	0
790	382	–
820	365	5
840	375	–
900	–	15
950	–	35
1000	–	65
1040	–	100
1075	175	175



3 0 WING ROOT TOP SKIN
t=.016" 6061-T6 (2 REQ'D)





3A 0 WING ROOT ANGLE
t=.025" 6061-T6 (2 REQ'D)

STOL CH 701	WING TIP AND WING ROOT	7-V-9
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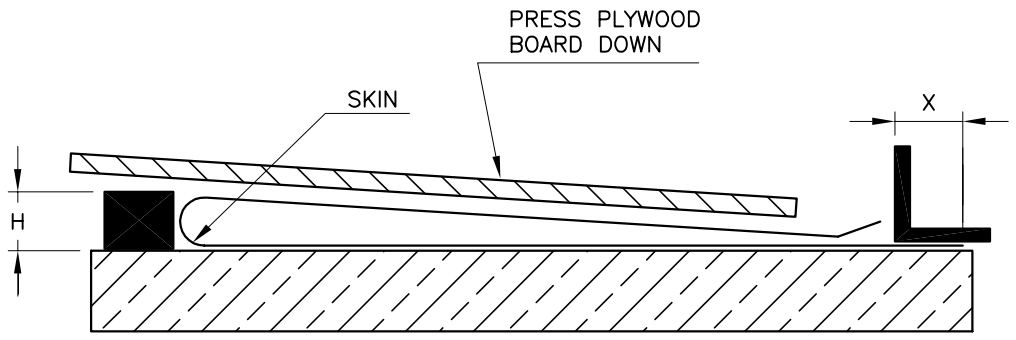
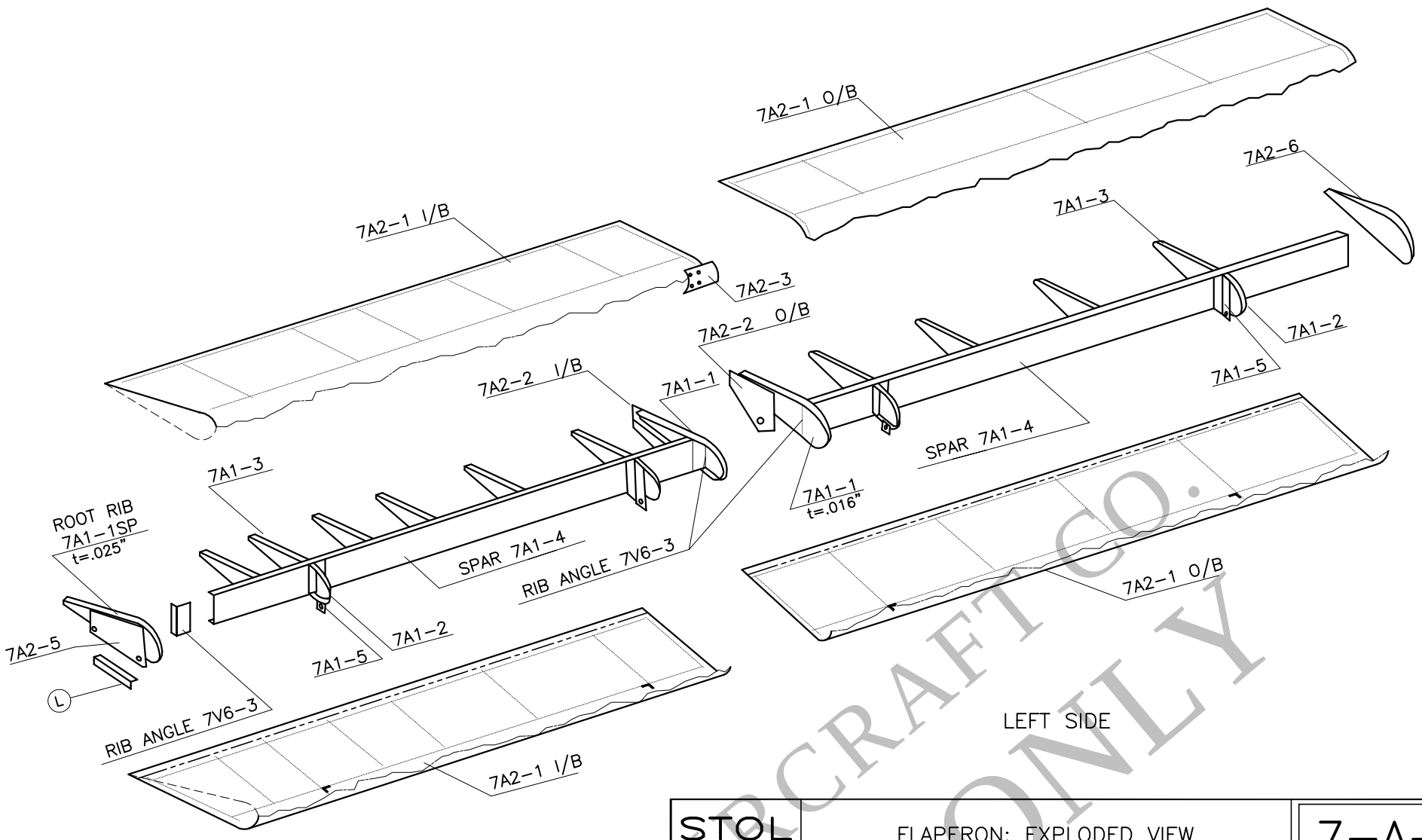


BENDING THE LEADING EDGE RADIUS;
CUT SHEET TO SIZE.
FLAPERON: BEND A 15MM FLANGE 15 DEGREES.
ELEVATOR: BEND A 18MM FLANGE 18 DEGREES.
LAY THE SKIN FLAT ON WORKBENCH TO CLAMP AN EXTRUSION DISTANCE = X FROM THE EDGE OF THE SHEET ALONG THE SIDE WITHOUT THE BENT FLANGE. CAREFULLY BRING THE OTHER EDGE ALONG THE EXTRUSION, POSITION SPACER H ALONG THE LEADING LEADING EDGE, LAY A PLYWOOD BOARD ON THE SKIN AND PRESS PLYWOOD DOWN TO SPACER H.

SKIN		H	X
FLAPERON	7A2−1	32	19
STABILIZER	7H4−1	47	19
ELEVATOR	7H4−2	47	19



LEFT SIDE

STOL CH 701	FLAPERON: EXPLODED VIEW	7−A−0
	COPYRIGHT © 2002 CHRIS HEINTZ — WWW.ZENITHAIR.COM	

LEFT SIDE

STOL CH 701	SLATS: EXPLODED VIEW	7−S−0
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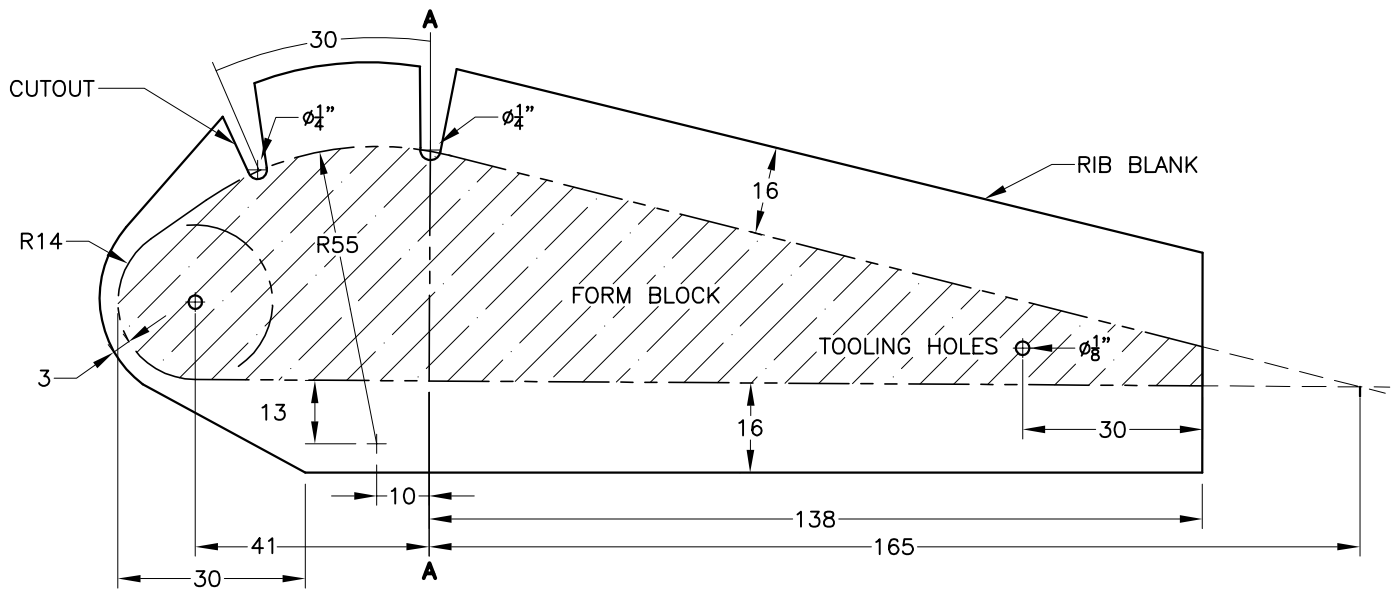
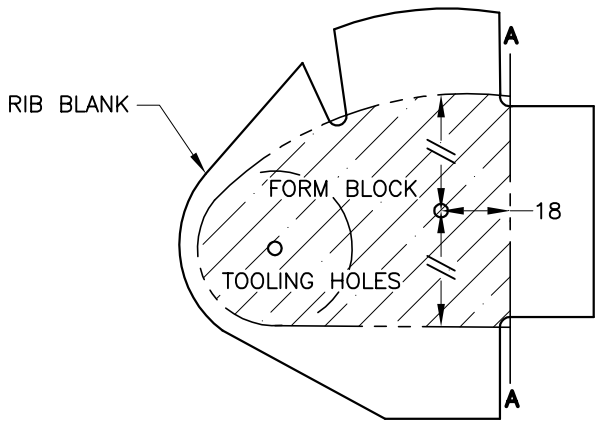
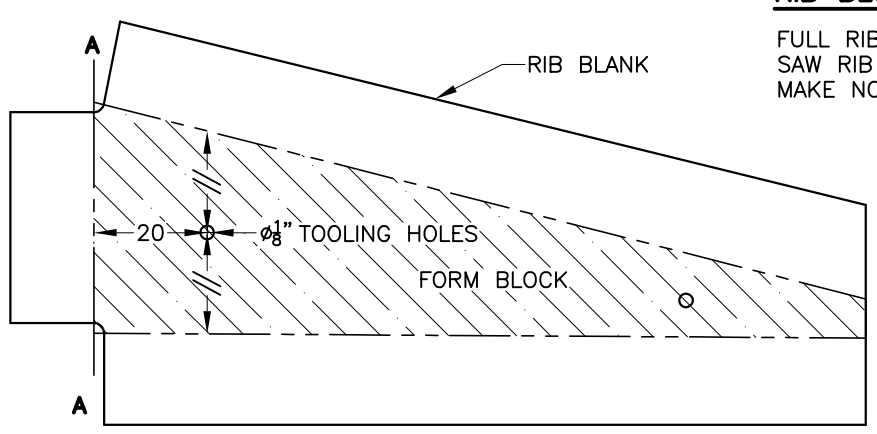


1 ⚠0 FLAPERON SPLICE END RIBS
t=.016" 6061-T6 (2L & 2R REQ'D)

1SP ⚠0 FLAPERON ROOT RIB
t=.025" 6061-T6 (1L & 1R REQ'D)



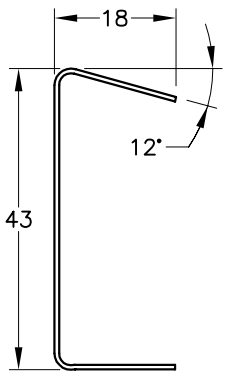


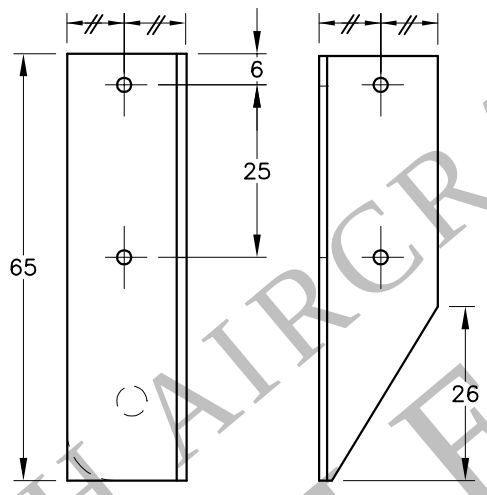
RIB BLOCK

FULL RIB = TIP RIBS & END RIBS
SAW RIB BLOCK ON LINE A-A TO MAKE NOSE RIBS & REAR RIBS

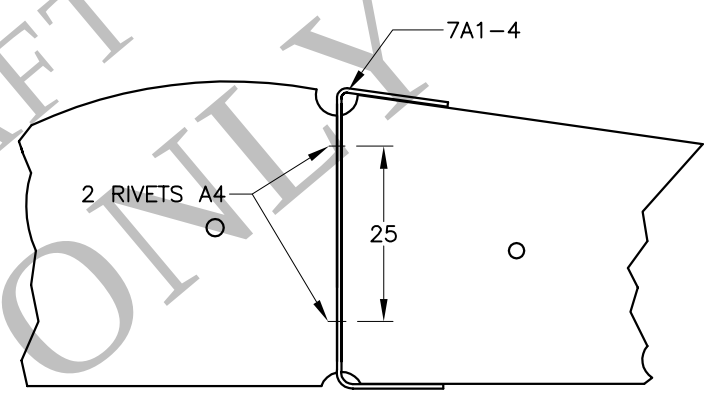
2 ⚠0 FLAPERON NOSE RIBS
t=.016" 6061-T6 (4L & 4R REQ'D)

3 ⚠0 FLAPERON REAR RIBS
t=.016" 6061-T6 (10L & 10R REQ'D)





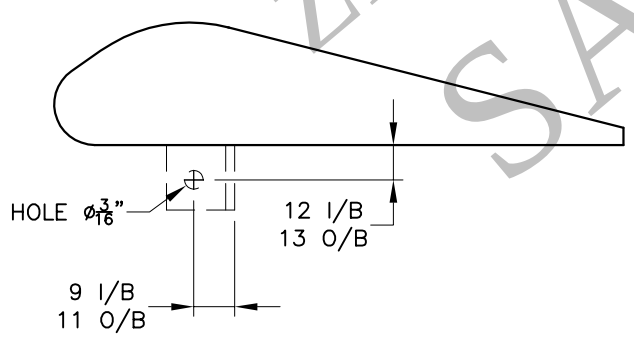
l=1790
dl=78



NOSE AND REAR RIBS RIVETING TO SPAR

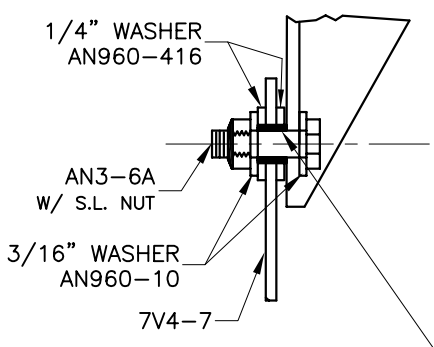
4 ⚠0 FLAPERON SPAR
t=.025" 6061-T6 (4 REQ'D)

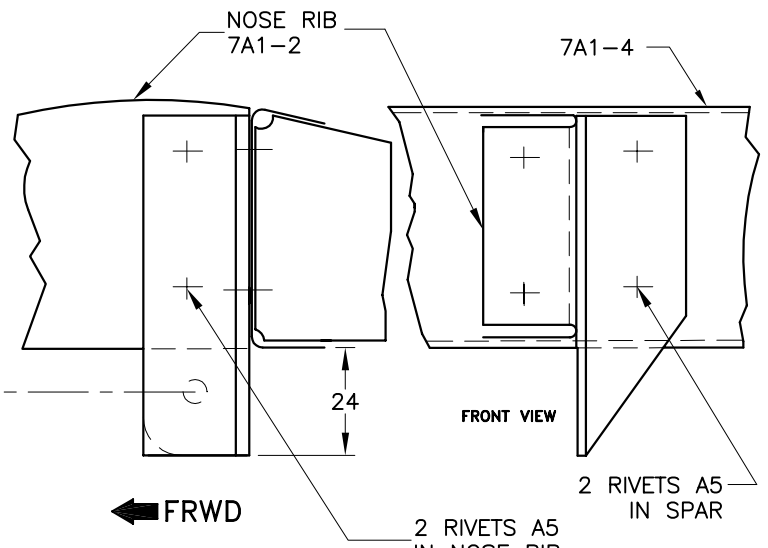
5 ⚠0 HINGE BRACKET
EXT 3/4" X 3/4" t=.093" 6061-T6 (8 REQ'D)



HINGE BRACKET 7A1-5 DRILLING

NOTE: THE HINGE PIVOT HOLES ARE DRILLED DIFFERENTLY IN THE O/B AND I/B FLAPERONS TO KEEP THE LEADING EDGE IN LINE FOR THE NOSE SPLICE 7A2-3





BUSHING
4130N TUBE 1/4"OD X .028"
LENGTH=5.5mm QTY=8

HINGE DETAIL

STOL CH 701	FLAPERONS RIBS, SPAR, HINGE BRACKETS	7-A-1
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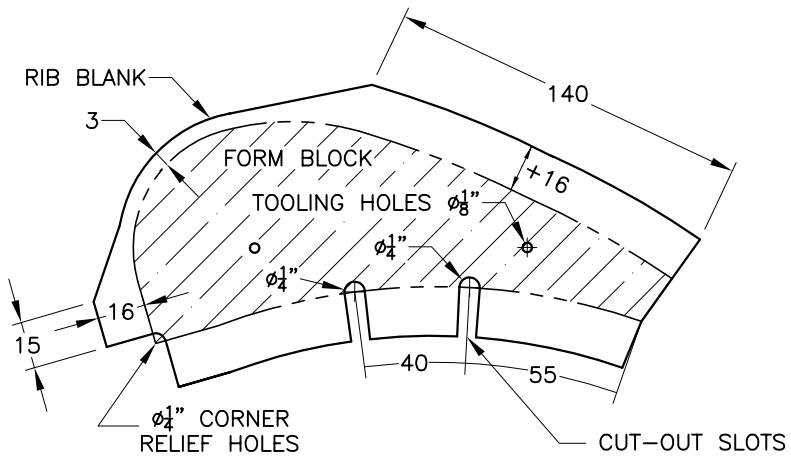
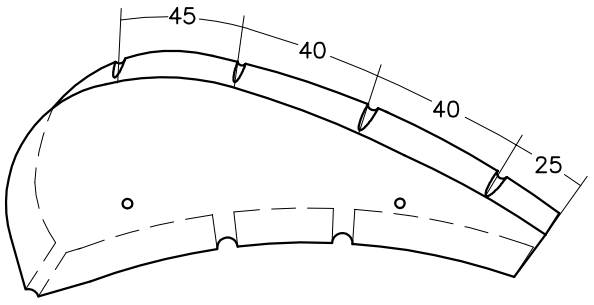
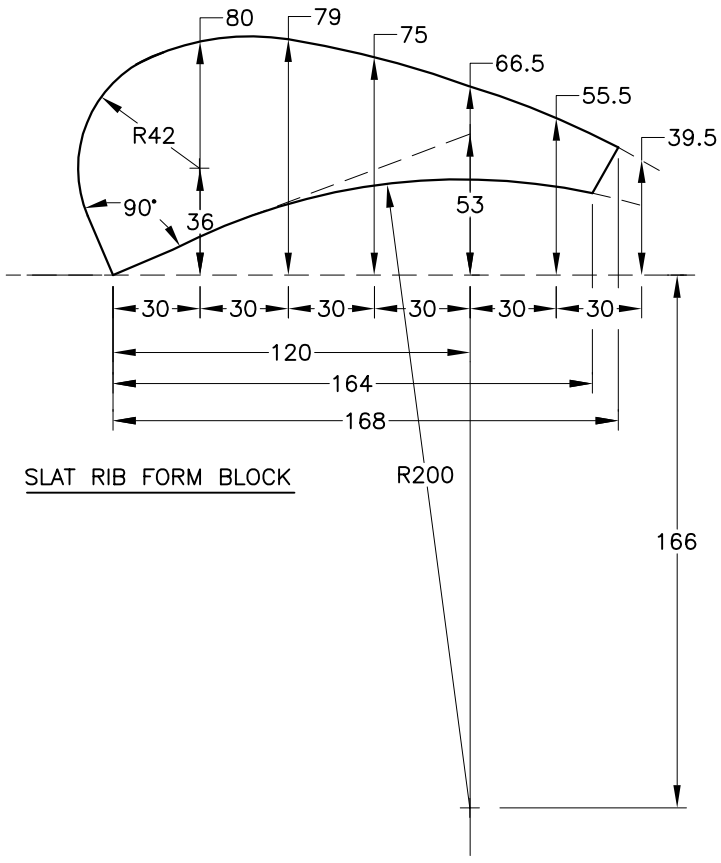
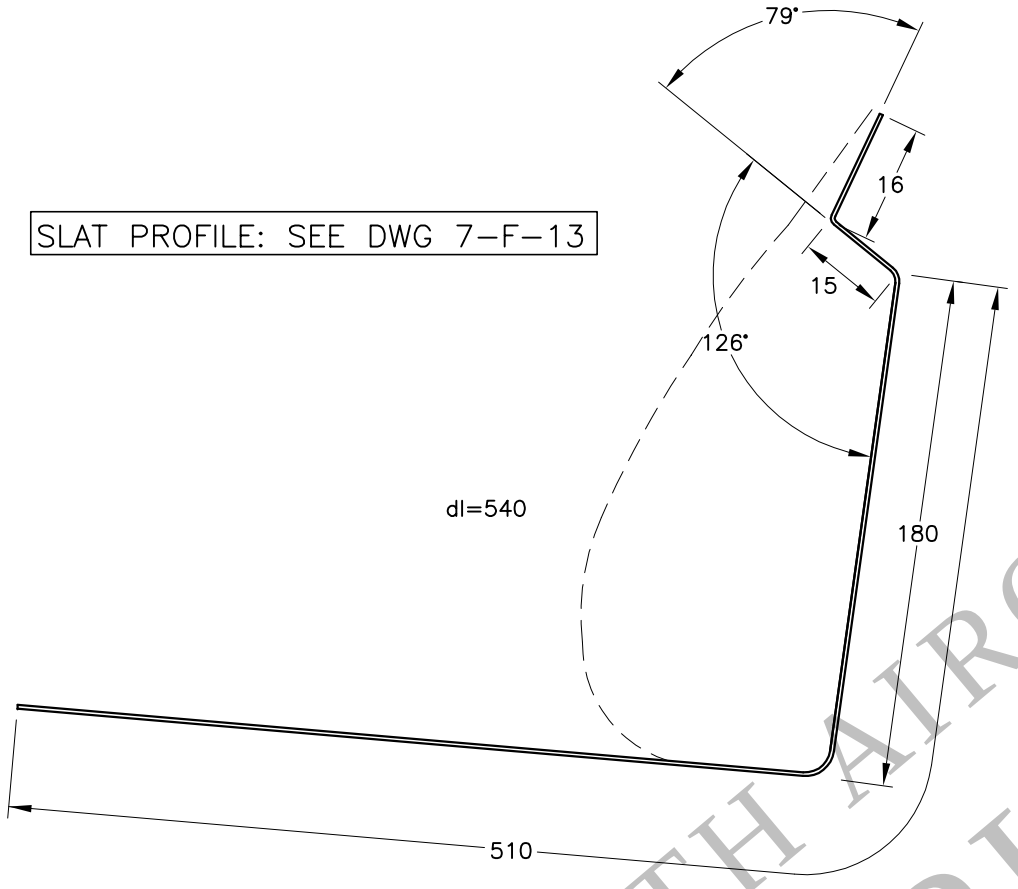


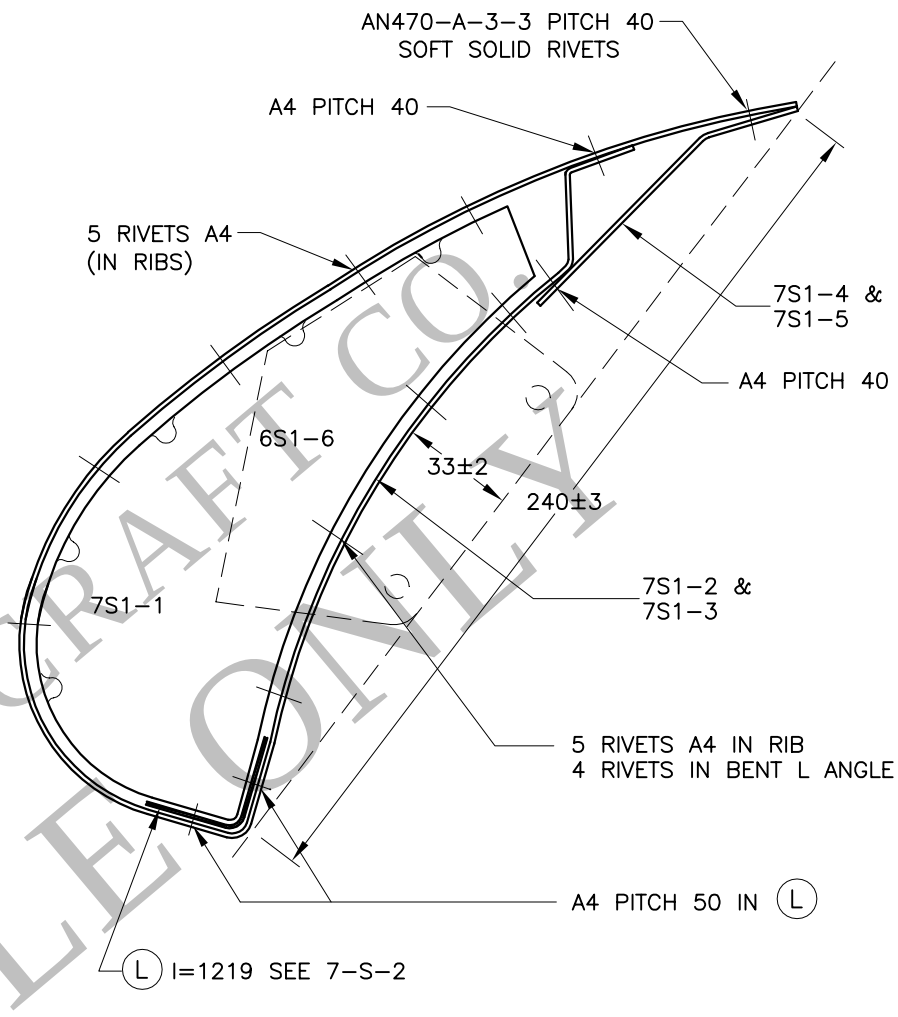




1 ⓪ SLAT RIBS
t=.016" 6061-T6 (6L & 6R REQ'D)

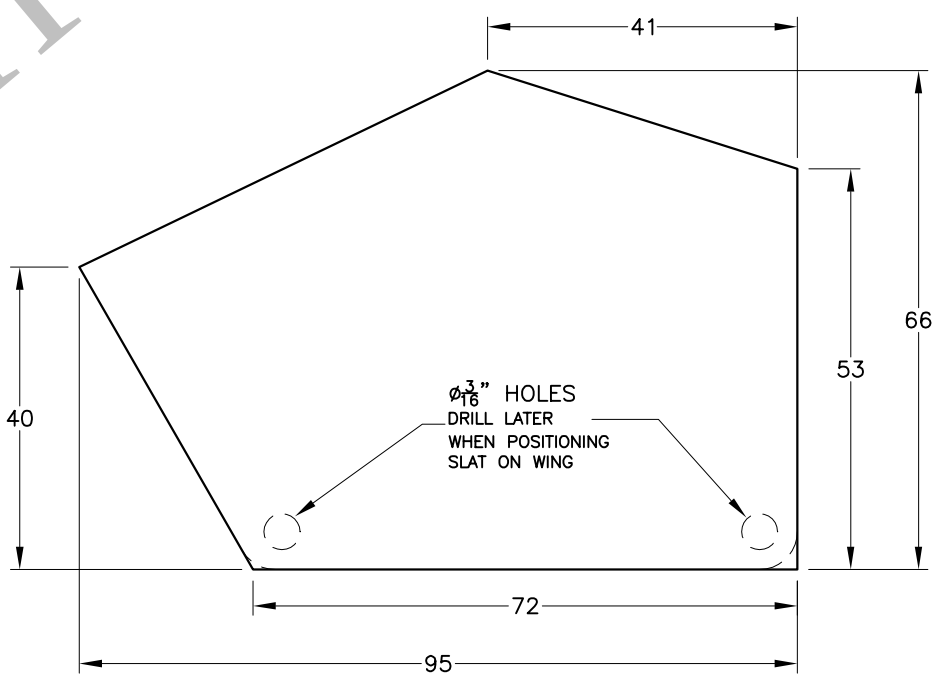
SLAT PROFILE: SEE DWG 7-F-13

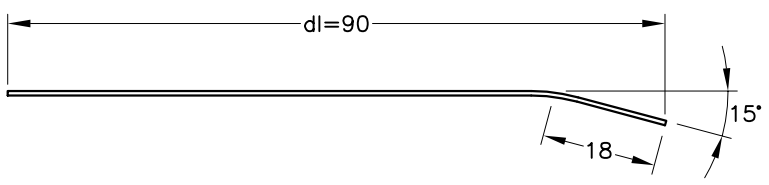




2 ⓪ I/B SLAT SKINS
t=.016" 6061-T6 (2 REQ'D)
l=1440

3 ⓪ O/B SLAT SKINS
t=.016" 6061-T6 (2 REQ'D)
l=1830



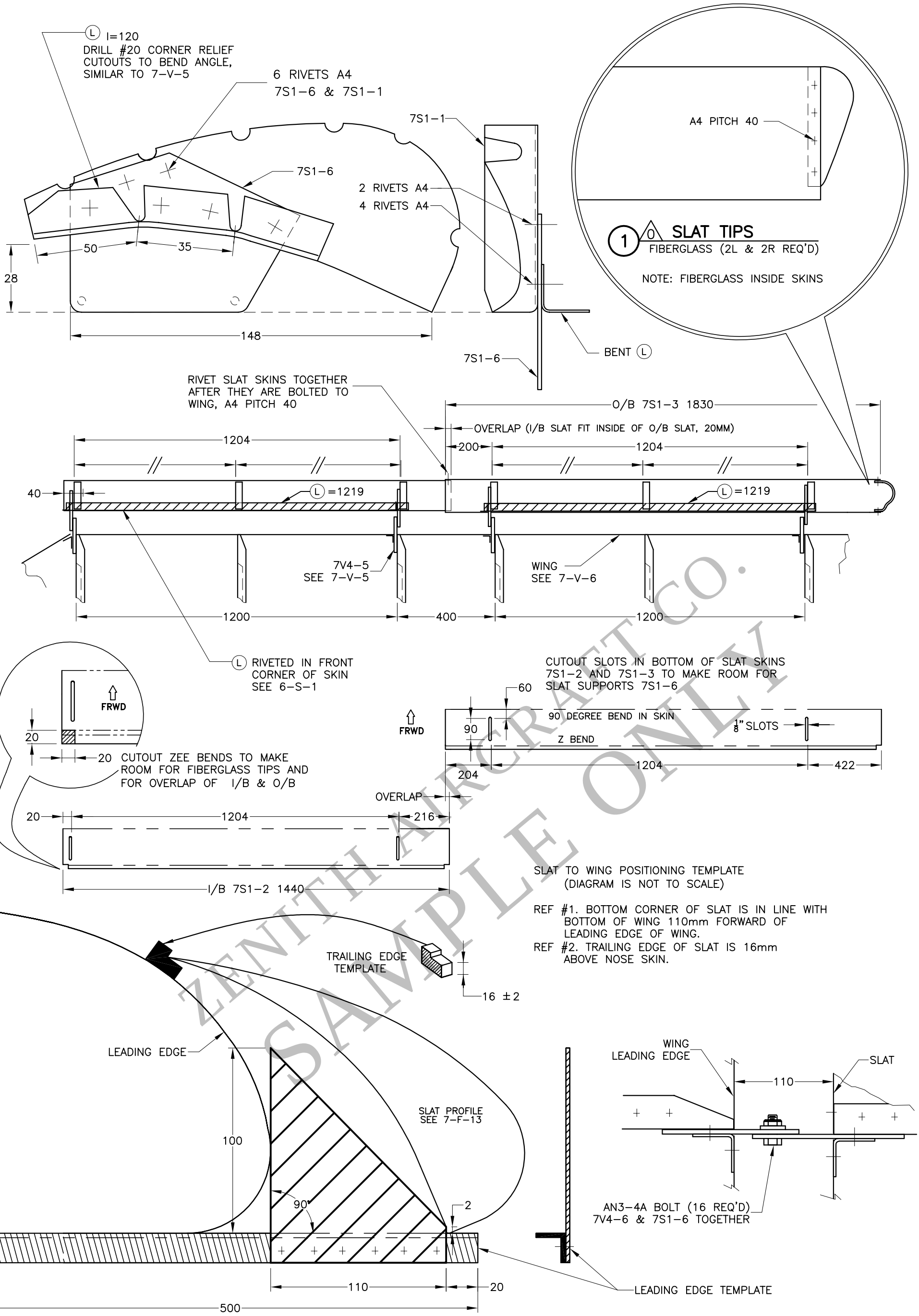


4 ⓪ I/B SLAT TRAILING EDGES
t=.025" 6061-T6 (2 REQ'D)
l=1440

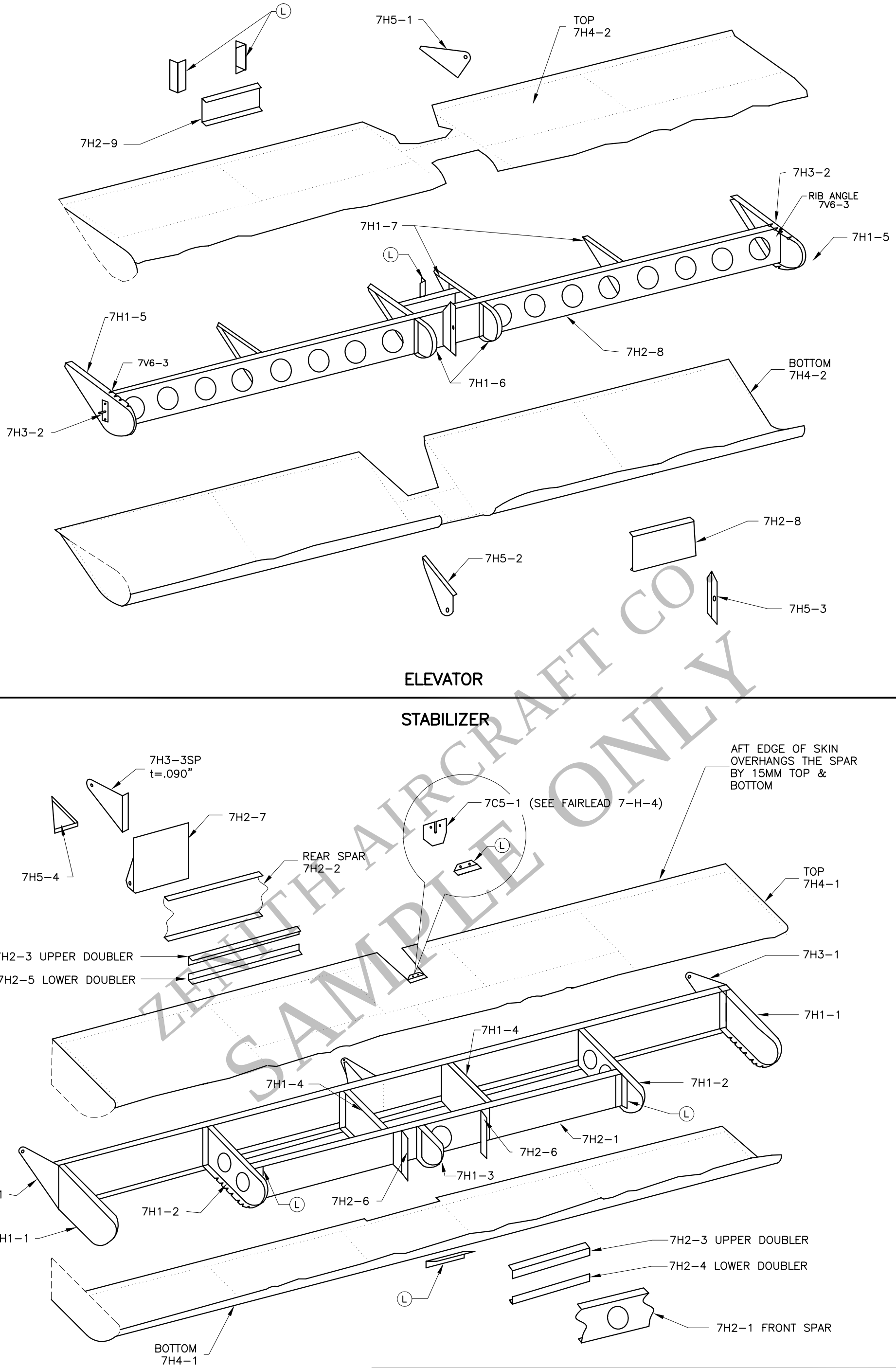
5 ⓪ O/B SLAT TRAILING EDGES
t=.025" 6061-T6 (2 REQ'D)
l=1830

6 ⓪ SLAT SUPPORTS
t=.040" 6061-T6 (8 REQ'D)

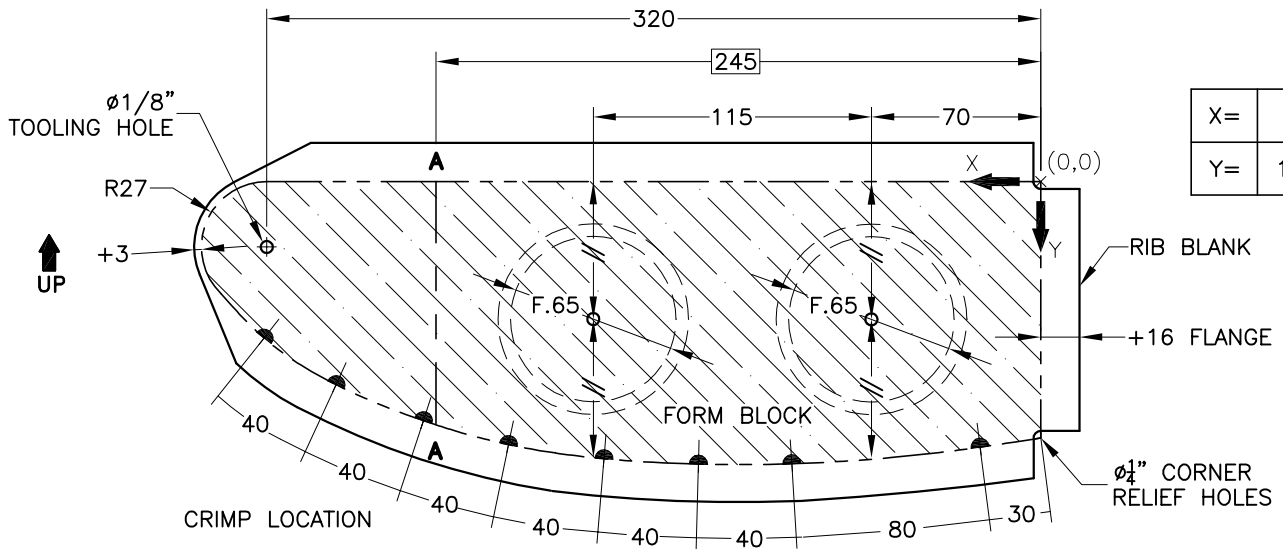
STOL CH 701	SLATS RIBS / SKINS	7-S-1
	WWW.ZENITHAIR.COM	DATE: 01/2003



STOL CH 701	SLATS TIPS	7-S-2
	COPYRIGHT © 2002 CHRIS HEINTZ — WWW.ZENITHAIR.COM	DATE: 01/2003



STOL CH 701	HORIZONTAL TAIL: EXPLODED VIEW		7–H–0
		WWW.ZENITHAIR.COM	DATE: 06/2001

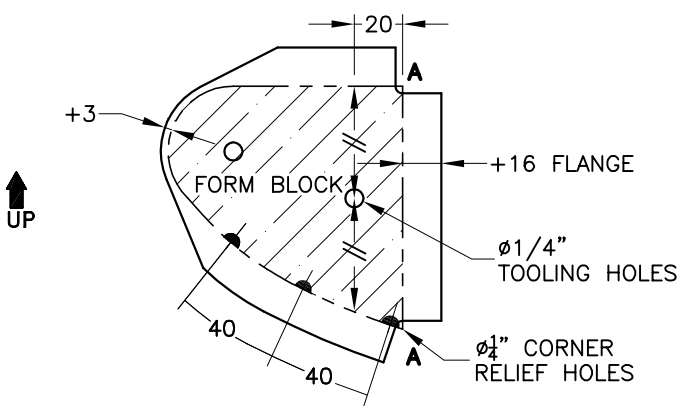


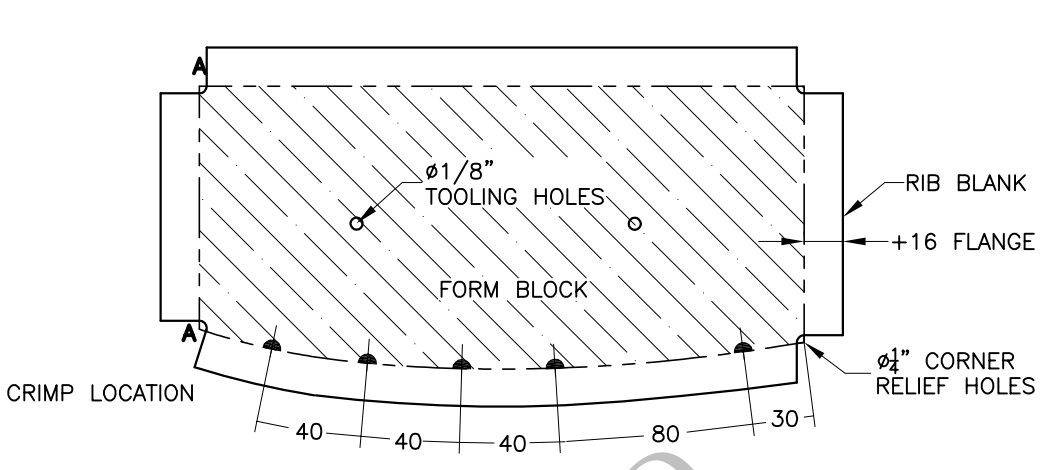
STABILIZER RIB FORM BLOCK

X=	0	50	100	150	200	250	300	325
Y=	106	112	116	117	112	100	79	60

1 0 STABILIZER TIP RIBS
t=.025" 6061–T6 (1L & 1R REQ'D)
NO LIGHTENING HOLES

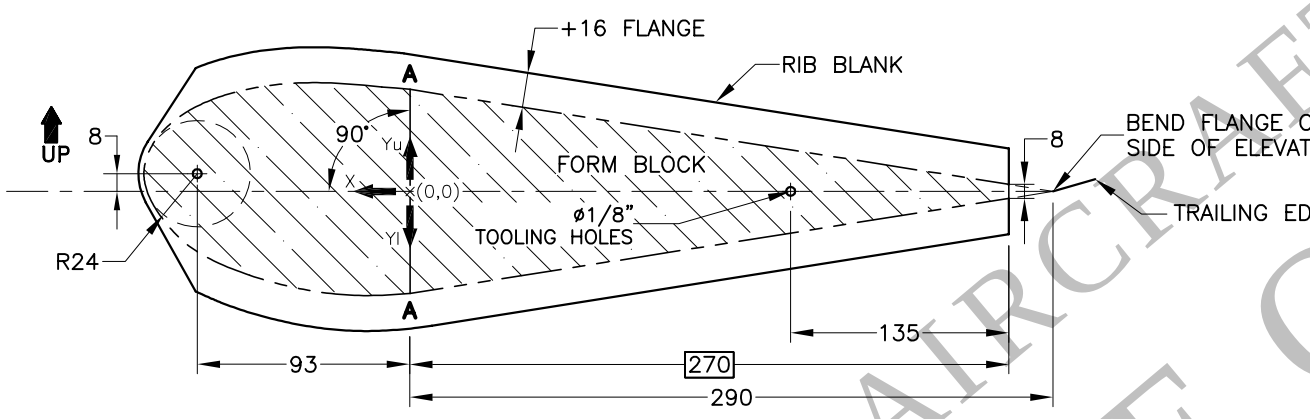
2 0 STABILIZER FULL RIBS
t=.025" 6061–T6 (1L & 1R REQ'D)





3 0 STABILIZER NOSE RIB
t=.016" OR .025" 6061–T6 (1 REQ'D)

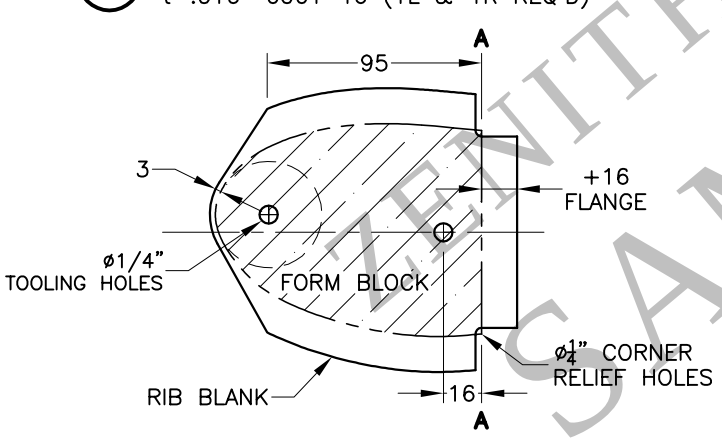
4 0 STABILIZER REAR RIBS
t=.016" 6061–T6 (1L & 1R REQ'D)

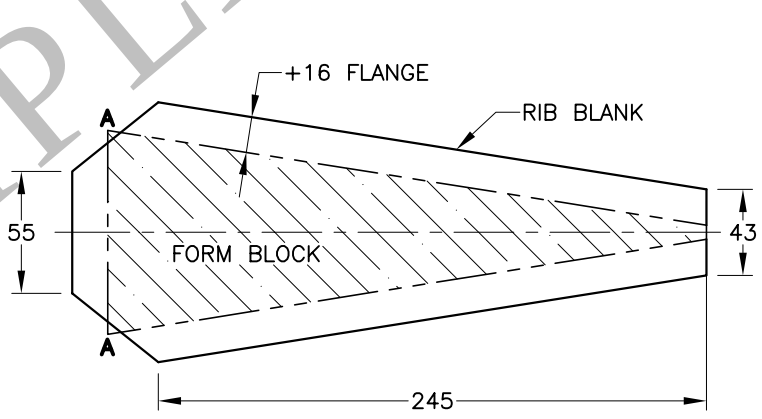


ELEVATOR RIB FORM BLOCK

X=	0	20	40	60	80	105
Yu=	46	48.5	49	48	44	33.5
Yl=	46	47	45.5	41.5	34.5	20

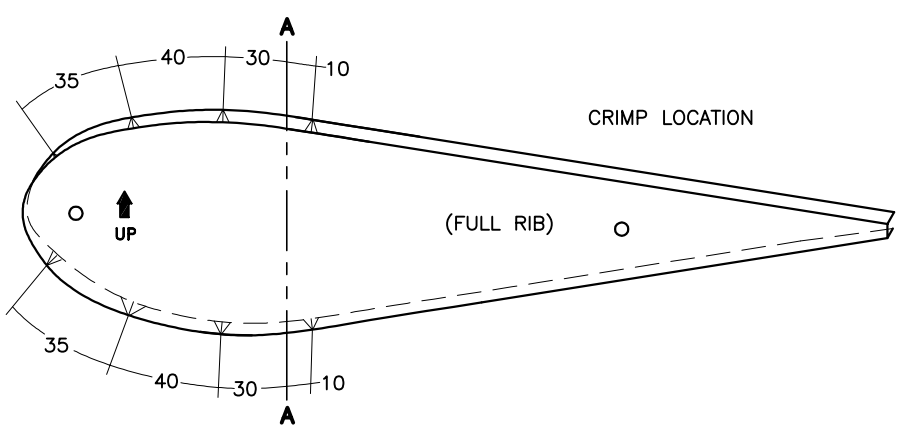
5 0 ELEVATOR TIP RIBS
t=.016" 6061–T6 (1L & 1R REQ'D)

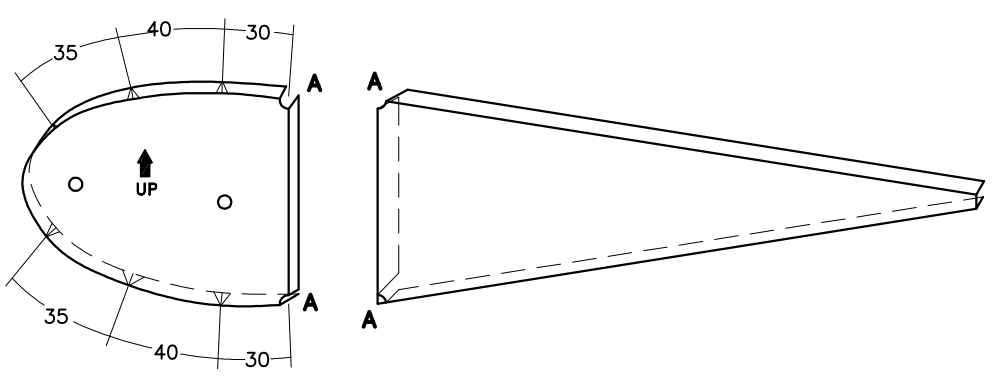




6 0 ELEVATOR NOSE RIBS
t=.016" 6061–T6 (1L & 1R REQ'D)

7 0 ELEVATOR REAR RIBS
t=.016" 6061–T6 (4 REQ'D)

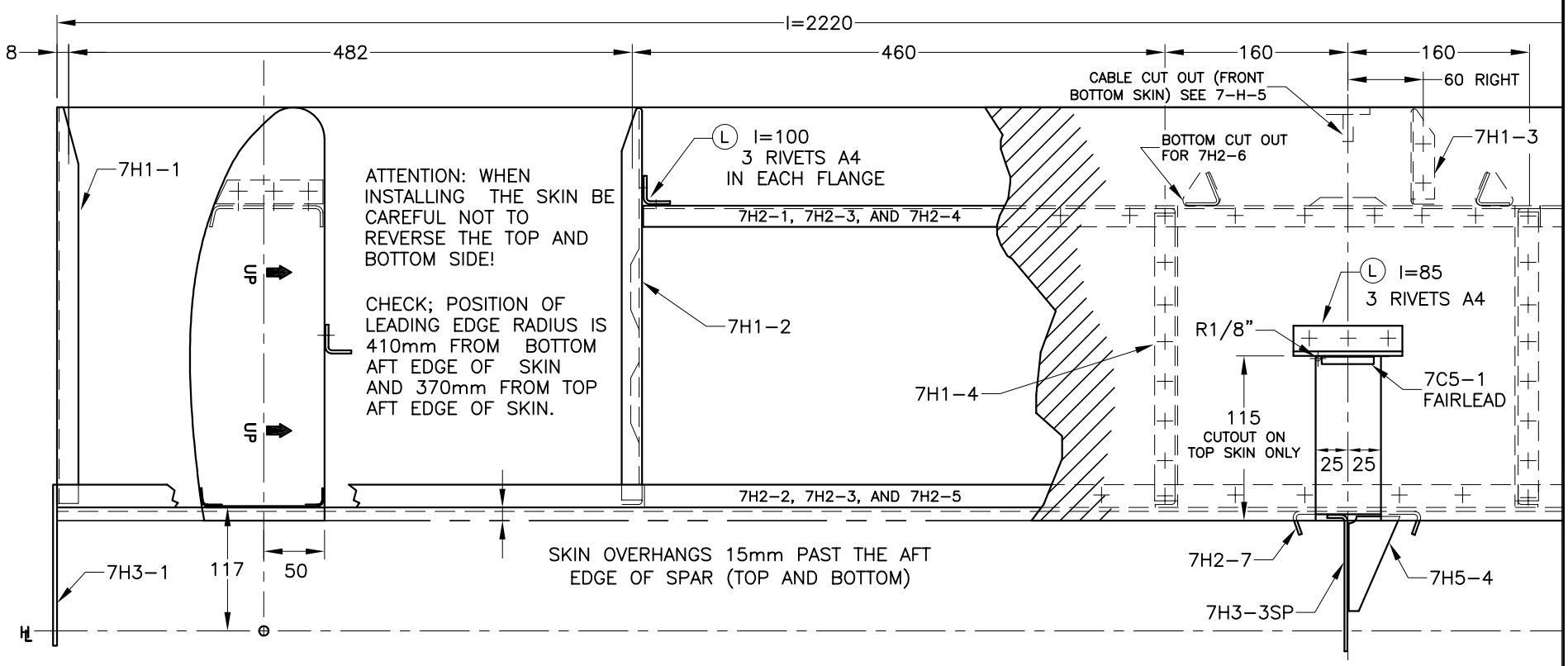




NOTE: CONNECT NOSE RIB TO REAR RIB ALONG LINE A–A TO MAKE UP THE FULL RIBS.

STOL CH 701	HORIZONTAL TAIL RIBS	7–H–1
	COPYRIGHT © 2002 CHRIS HEINTZ WWW.ZENITHAIR.COM	DATE: 03/2003

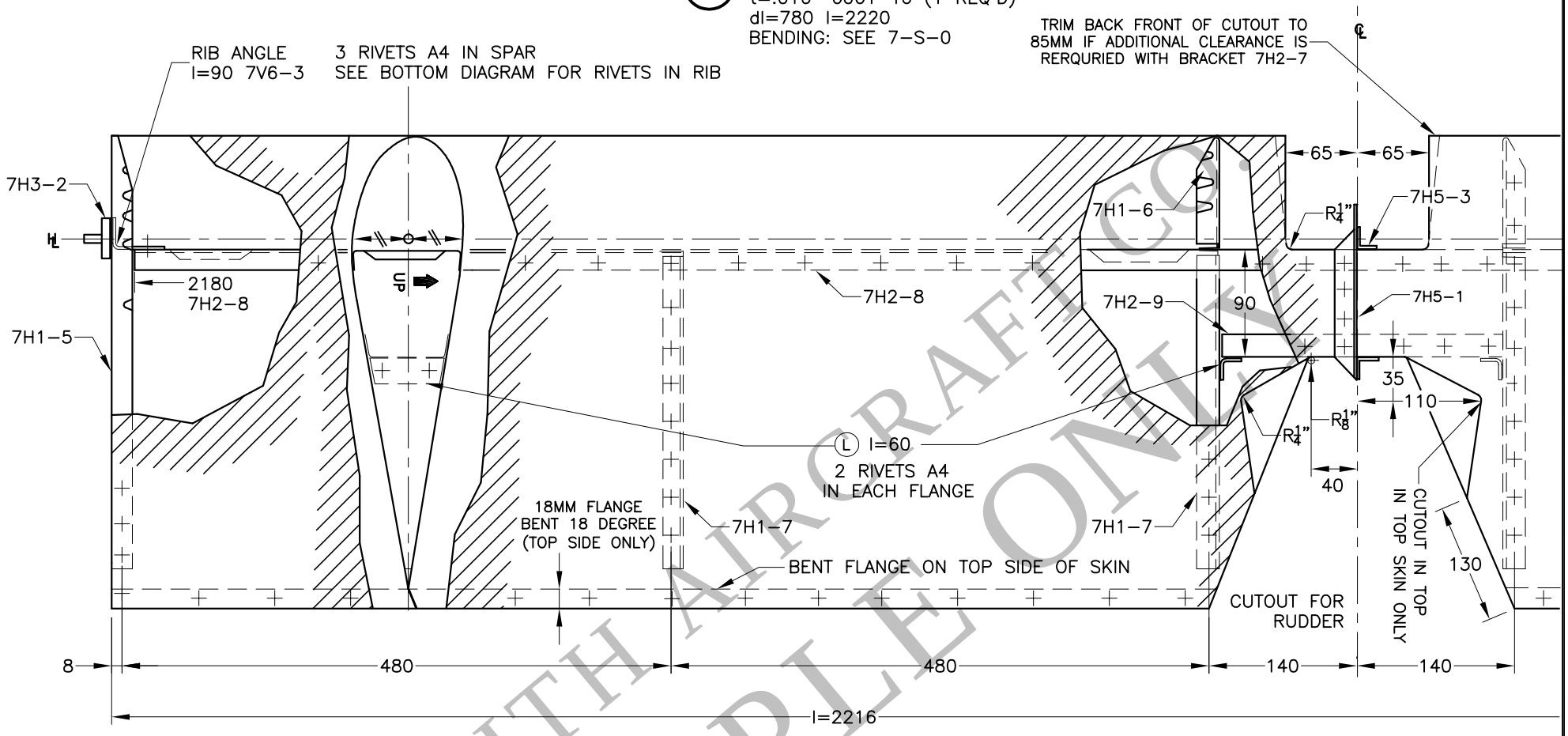
LEFT TOP VIEW RIGHT



NOTE: THE THREE HINGE POINTS 7H3-2 and 7H5-3 ARE IN LINE.

1 0△ STABILIZER SKIN

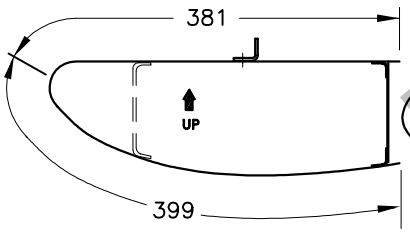
t=.016" 6061-T6 (1 REQ'D)
dl=780 l=2220
BENDING: SEE 7-S-0



2 0△ ELEVATOR SKIN

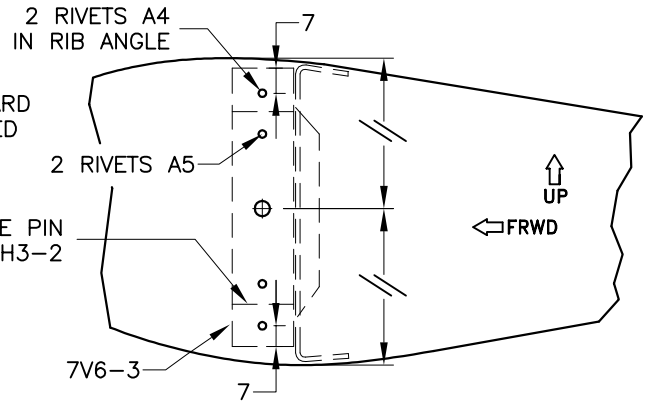
t=.016" 6061-T6 (1 REQ'D)
dl=915 l=2216
BENDING: SEE 7-S-0

TRIM TRAILING EDGE: TRIM THE BOTTOM SIDE OF THE SKIN FLUSH WITH THE AFT EDGE OF THE TOP SIDE. RIVET AND FILE. (DL IS APPROX 5MM TOO LONG)

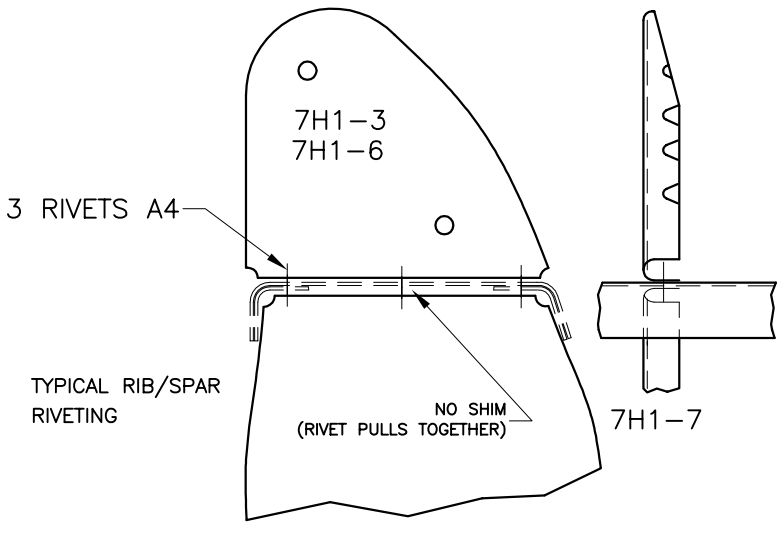


ORIENTATION: TOP SIDE OF STABILIZER SKIN IS SHORTER THAN BOTTOM SIDE BY APPROXIMATELY 18MM

NOTE: STABILIZER AND LEVATOR LEADING EDGE POINT UPWARDS! TOP SIDE OF LEVATOR SKIN IS THE SIDE WITH THE 18MM BENT FLANGE LONG AFT EDGE. ALSO, RAILING EDGE POINT UP (OPPOSITE TO AILERON 7A2-1)

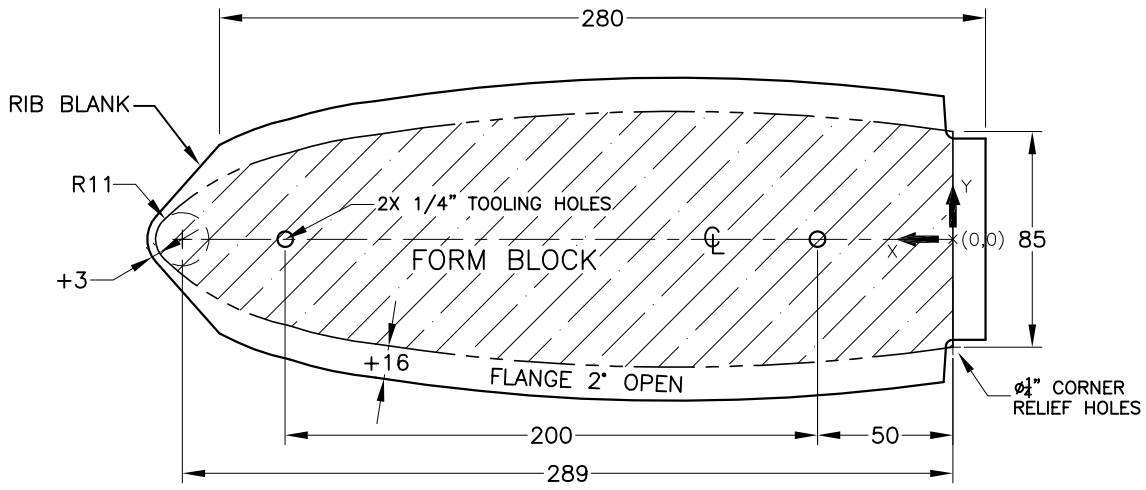


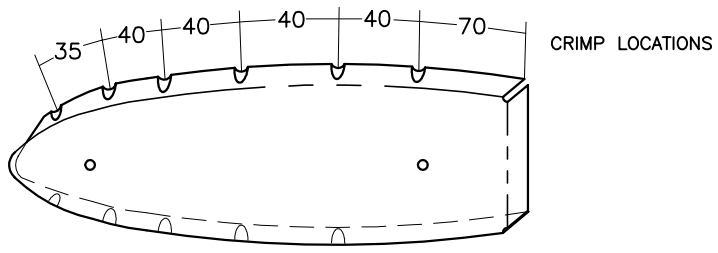
TIP RIB VIEWED FROM OUTBOARD HINGE PIN 7H3-2 IS INSTALLED WITH 2 RIVETS A5



ELEVATOR & STABILIZER RIVETS
RIB FLANGE TO SPAR: 3 RIVETS A4 (TOP & BOTTOM RIVET IN DOUBLERS)
ELEVATOR & STABILIZER SKIN TO SPAR & RIBS (AVOID CRIMPS) A4 PITCH 40
TRAILING EDGE OF ELEVATOR: AD470-A-3-3, PITCH 40

STOL CH 701	HORIZONTAL TAIL SKELETON, SKINS, AND RIVETING DETAILS	7-H-4
	COPYRIGHT © 2002 CHRIS HEINTZ WWW.ZENITHAIR.COM	DATE: 01/2003



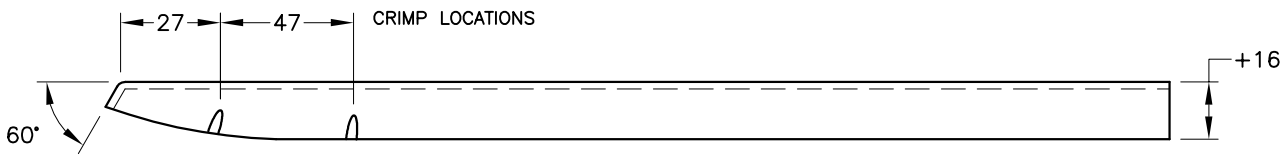


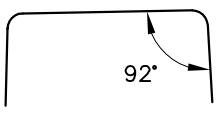
RUDDER NOSE RIB FORM BLOCK

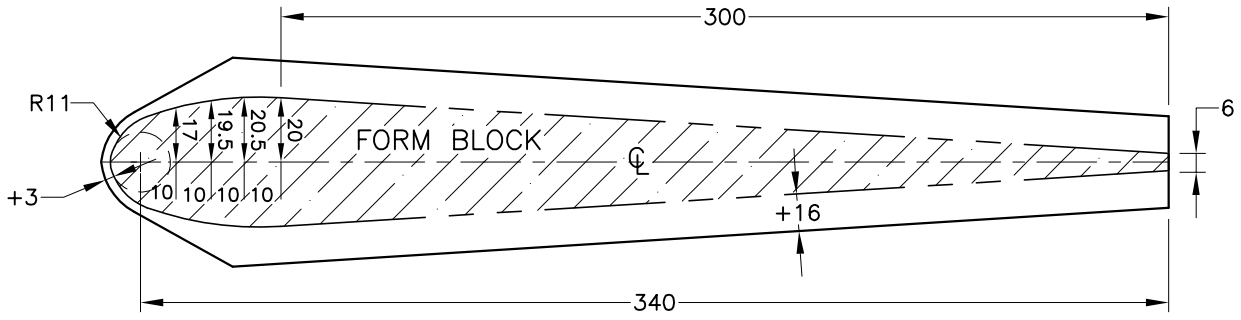
X=	0	50	100	150	200	250	275
Y=	42.5	47	49	47	42	31	23

NOTE: THE RIBS ARE SYMMETRICAL ABOUT THE CL

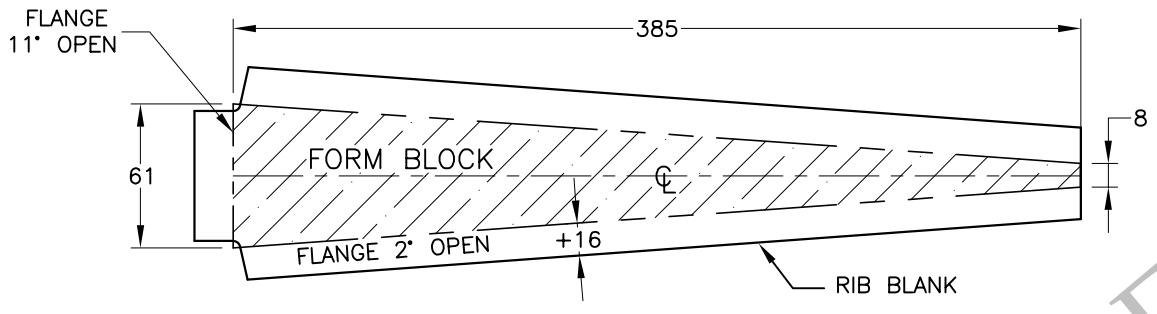
6 RUDDER NOSE RIB
t=.025" 6061-T6 (1 REQ'D)



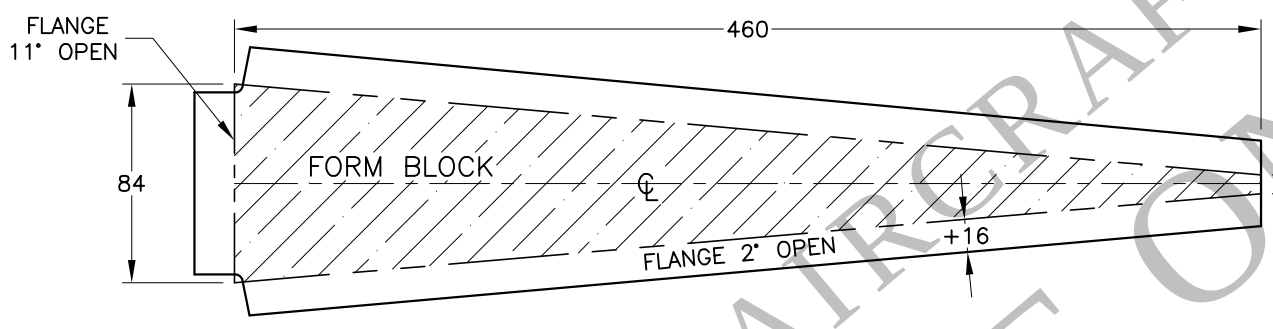




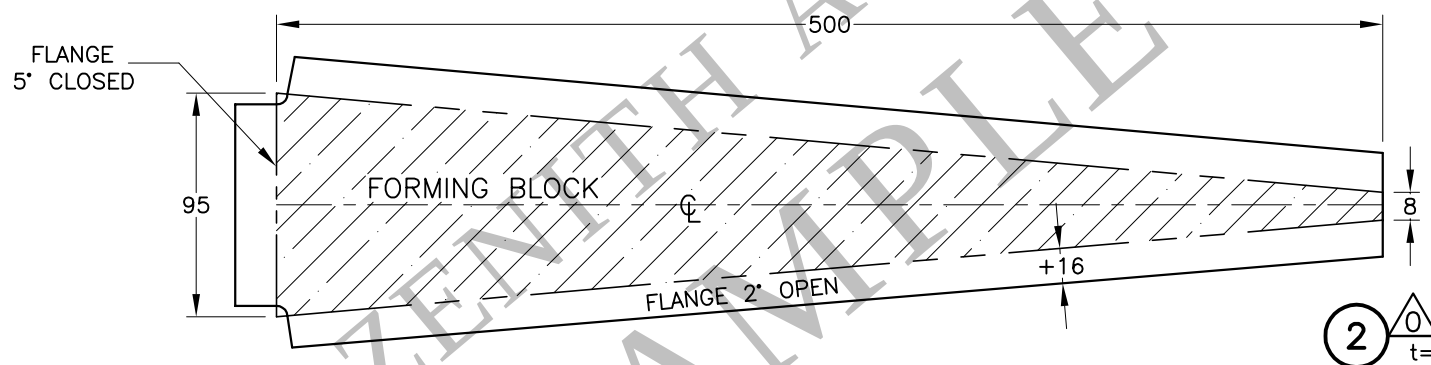
5 RUDDER TIP
t=.025" 6061-T6 (1 REQ'D)



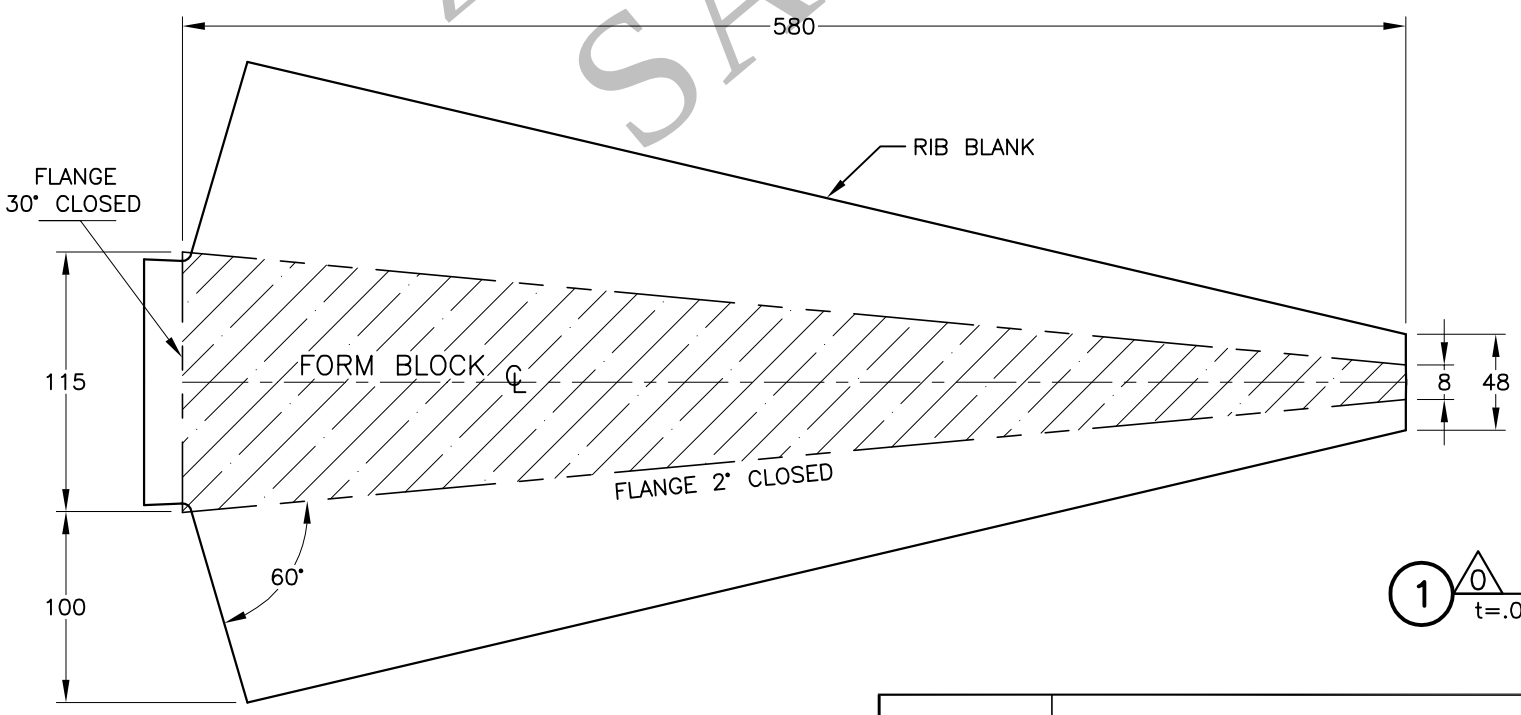
4 RUDDER REAR RIB #4
t=.016" 6061-T6 (1 REQ'D)



3 RUDDER REAR RIB #3
t=.016" 6061-T6 (1 REQ'D)



2 RUDDER REAR RIB #2
t=.016" 6061-T6 (1 REQ'D)



1 RUDDER BOTTOM RIB #1
t=.025" 6061-T6 (1 REQ'D)

STOL CH 701	VERTICAL TAIL RIBS	7-R-1
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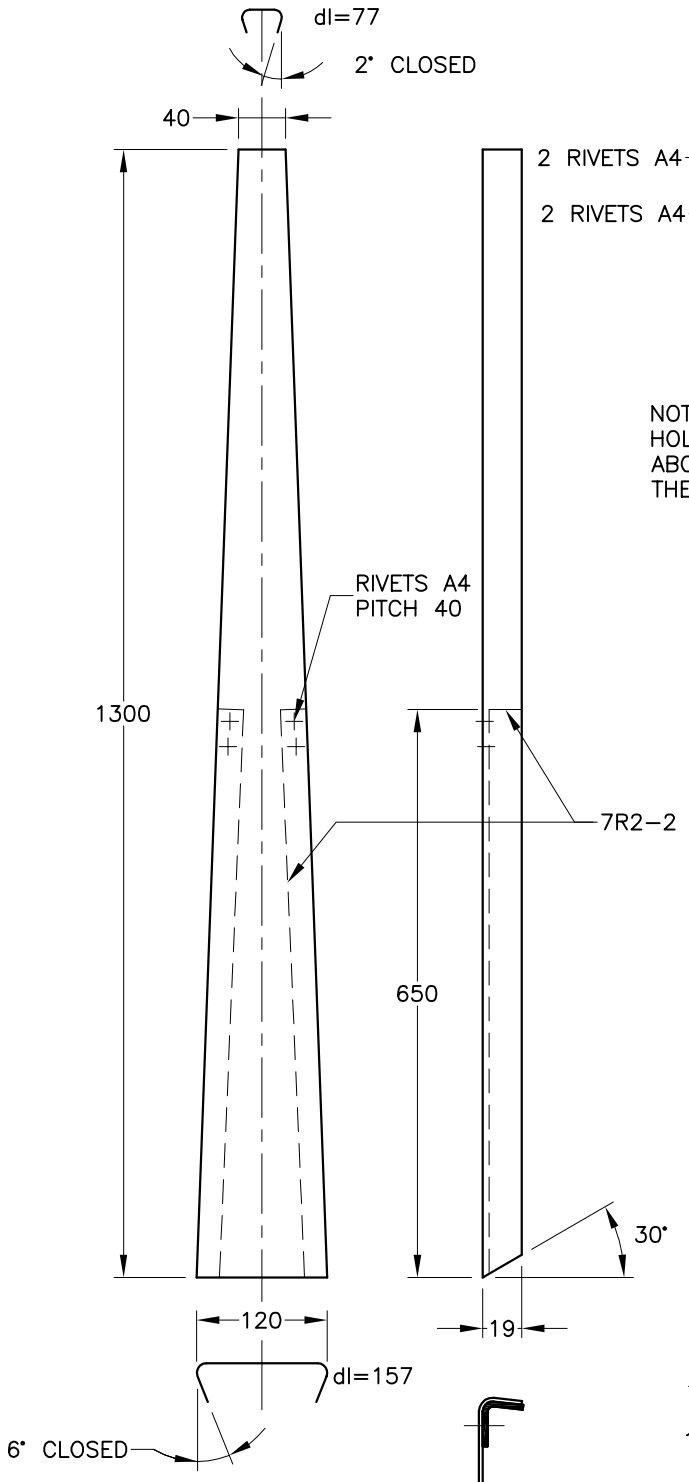
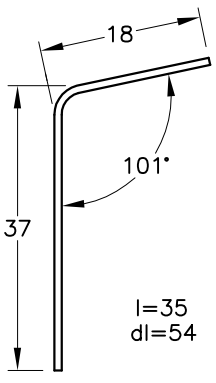
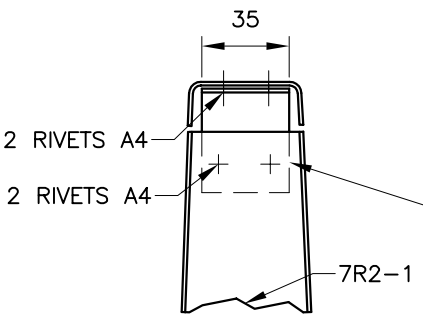


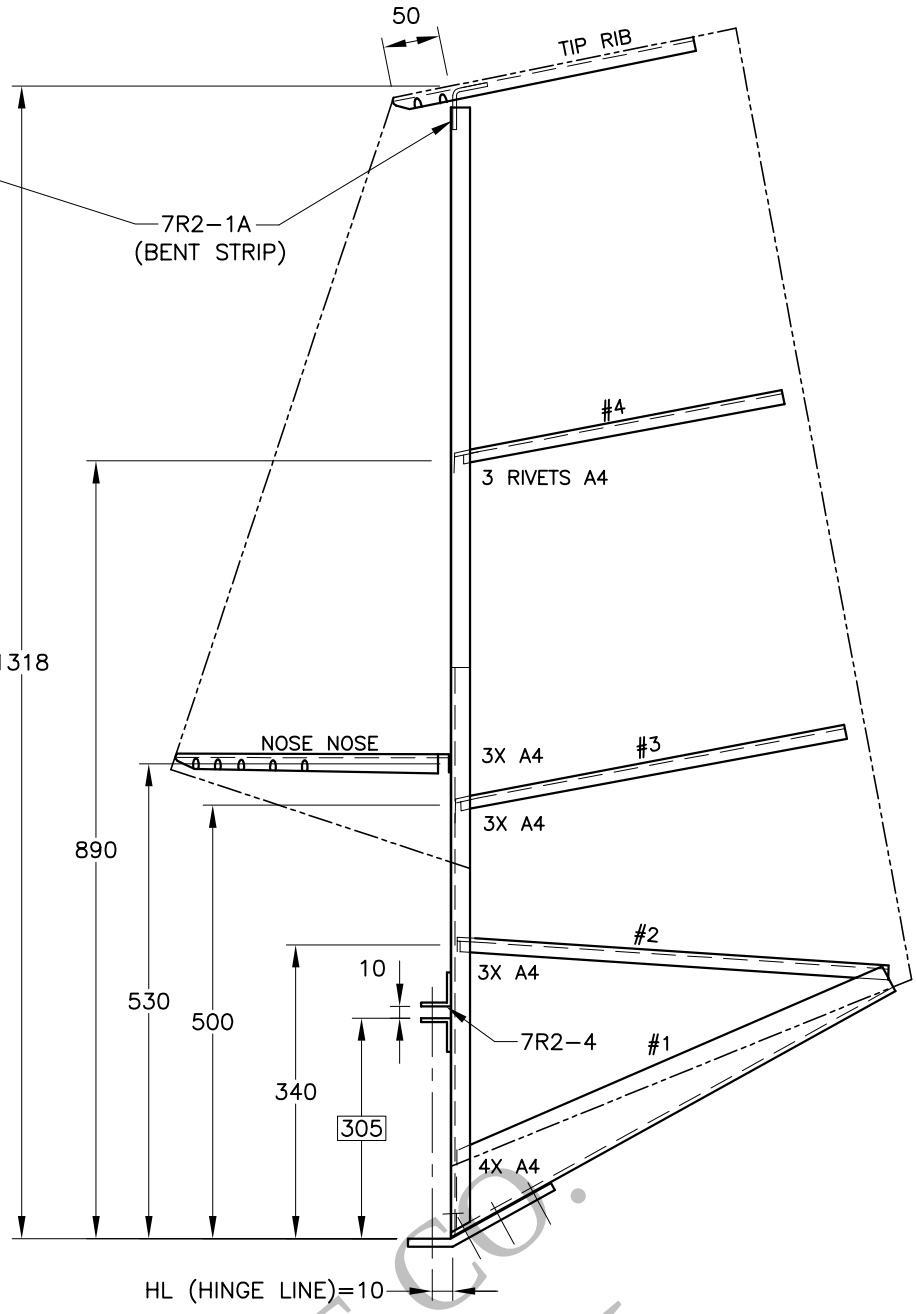
1 0 RUDDER SPAR
t=.025" 6061-T6 (1 REQ'D)

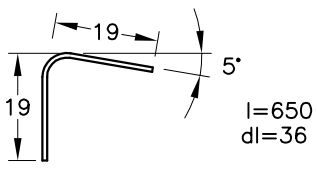


1A 0 BENT STRIP
t=.025" 6061-T6 (1 REQ'D)

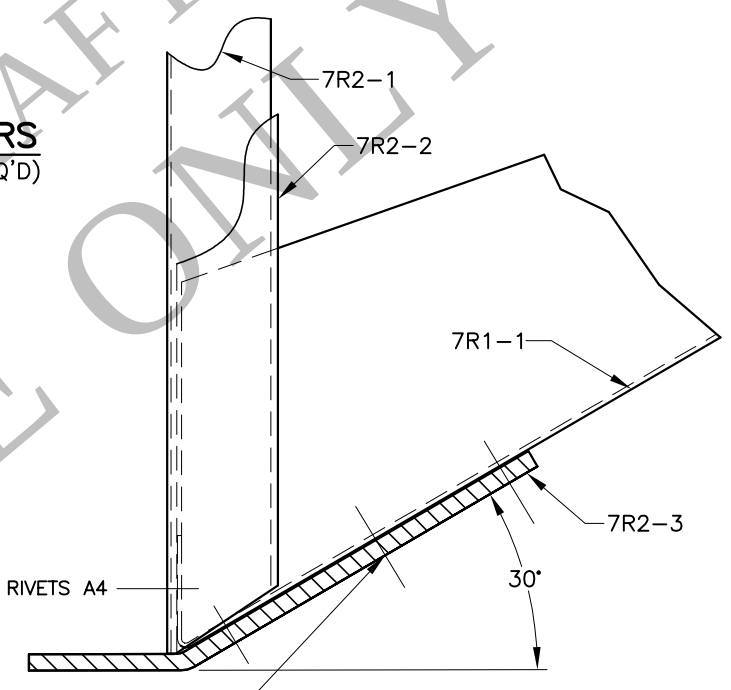


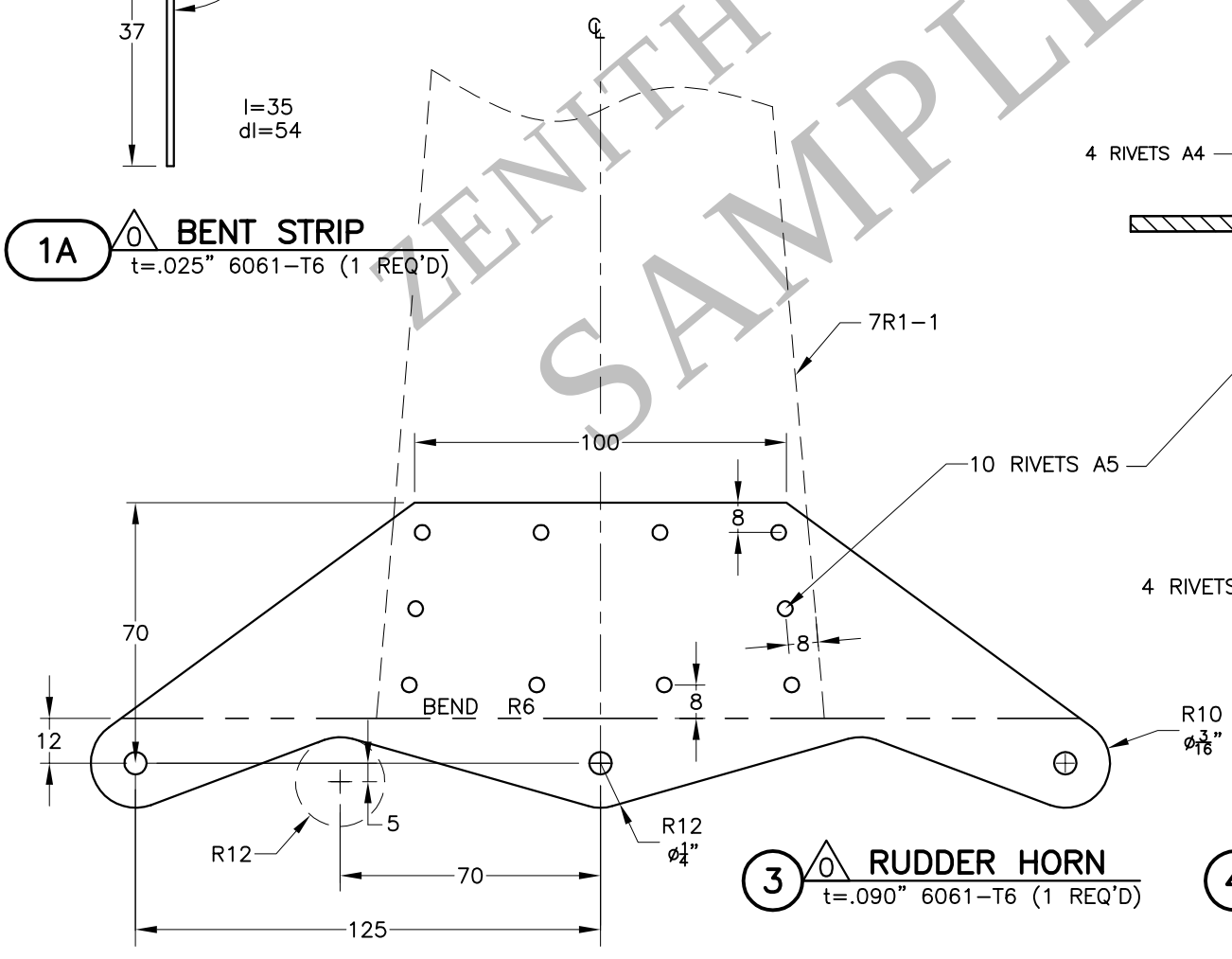
NOTE: THE BENT STRIP HOLDS THE TIP RIB ABOVE THE END OF THE SPAR



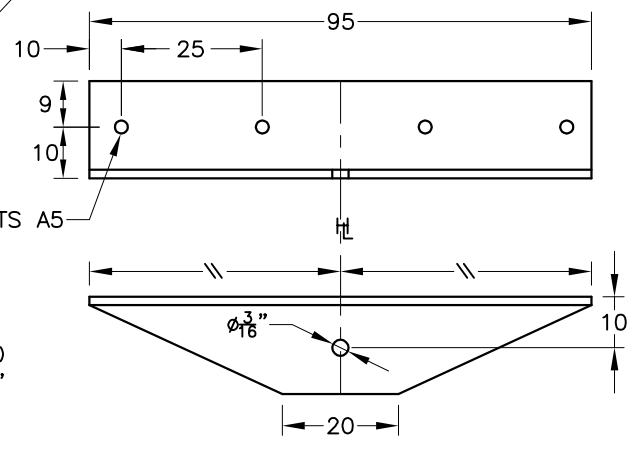


2 0 SPAR DOUBLERS
t=.032" 6061-T6 (2 REQ'D)





3 0 RUDDER HORN
t=.090" 6061-T6 (1 REQ'D)



4 1 UPPER RUDDER HINGE ANGLES
EXT 3/4" X 3/4' t=.093" 6061-T6 (2 REQ'D)

STOL CH 701	RUDDER PARTS AND SKELETON	7-R-2
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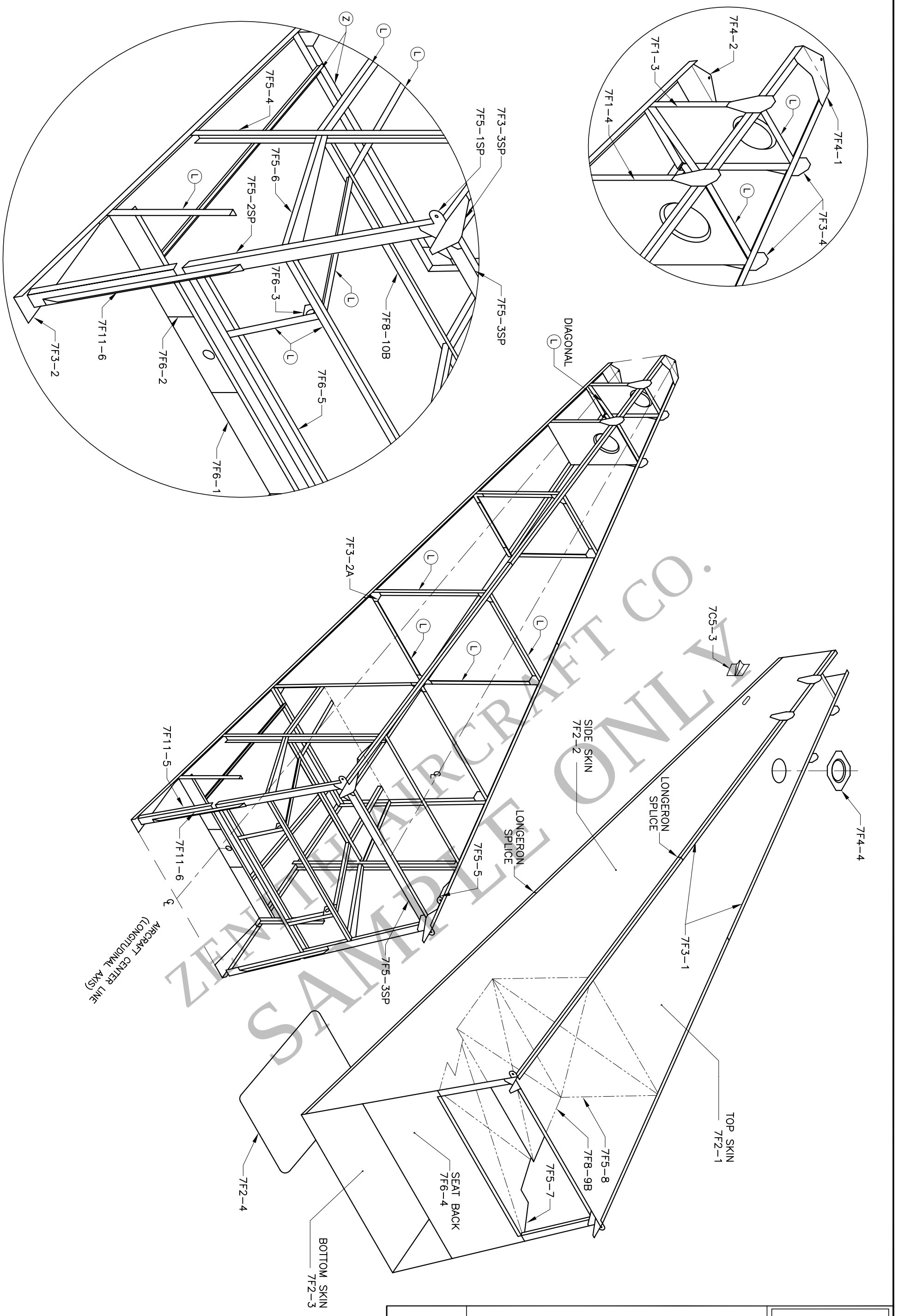
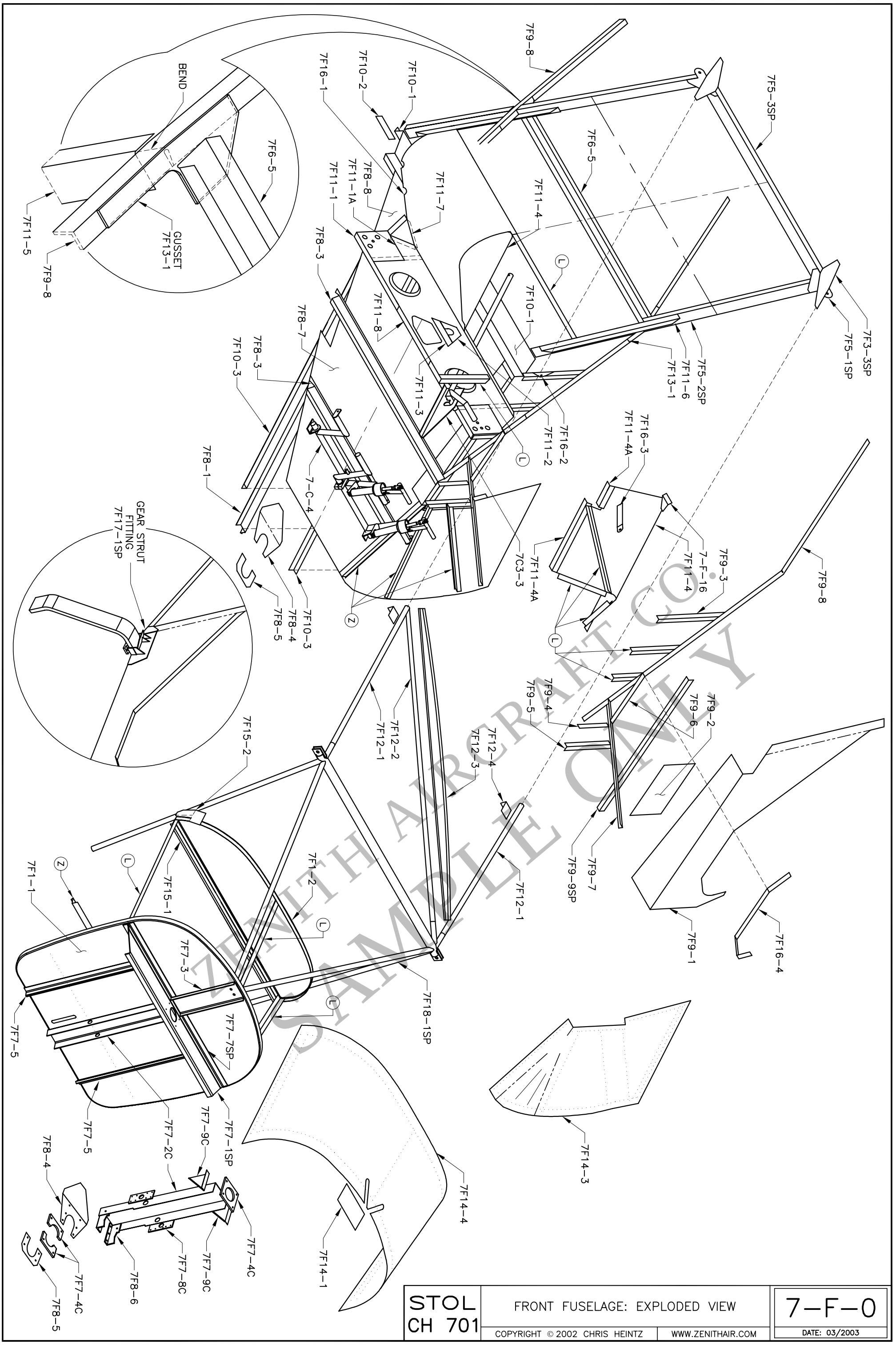


STOL CH 701	REAR FUSELAGE: EXPLODED VIEW		7-F-00
		WWW.ZENITHAIR.COM	DATE: 03/2003



STOL CH 701	FRONT FUSELAGE: EXPLODED VIEW	7-F-0
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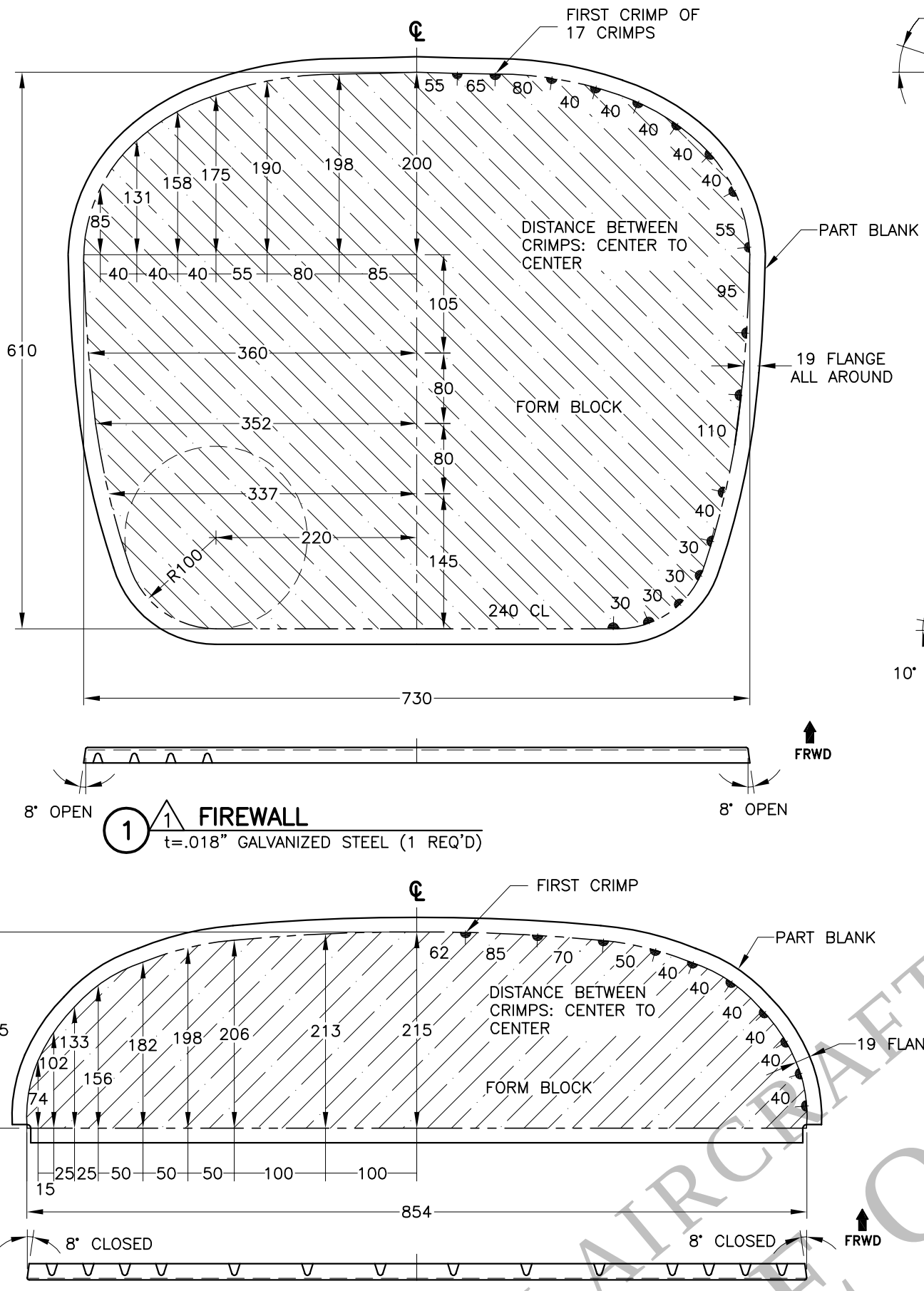
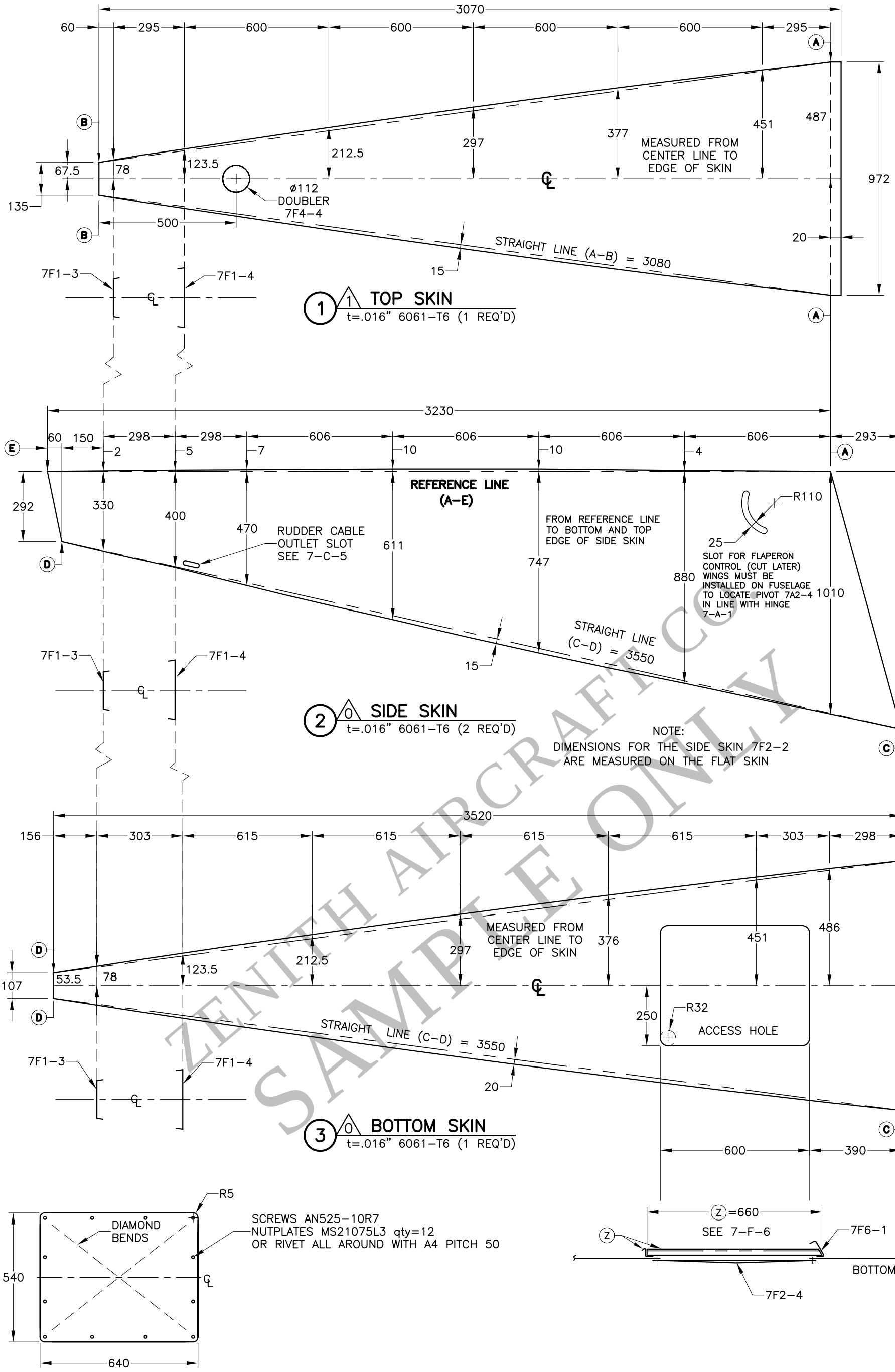


STOL CH 701	FUSELAGE FORMERS	7-F-1
	WWW.ZENITHAIR.COM	DATE: 03/2003

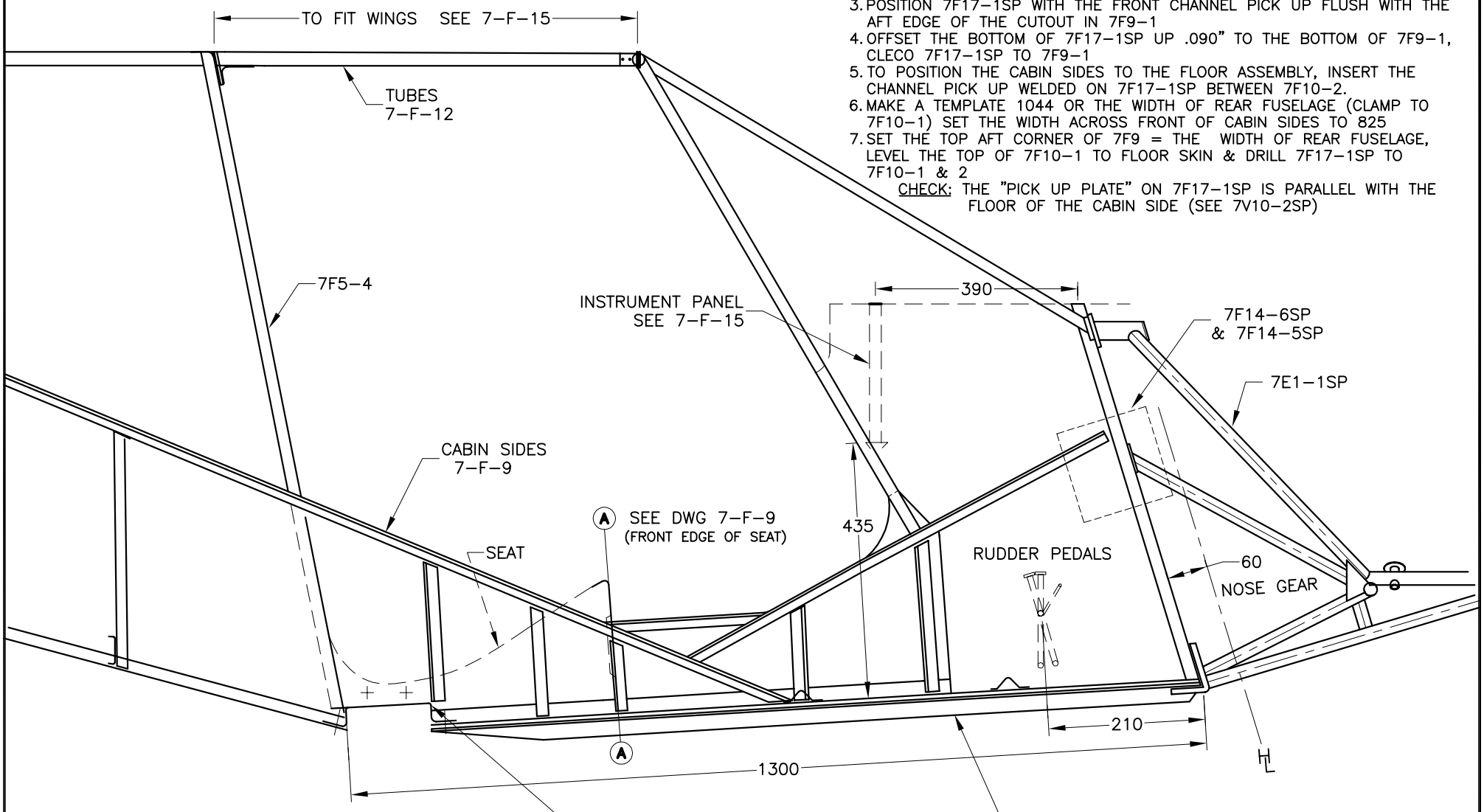


STOL CH 701	REAR FUSELAGE SKINS		7-F-2
		WWW.ZENITHAIR.COM	DATE: 01/2003

INSTALLATION SEQUENCE FOR 7F17–1SP

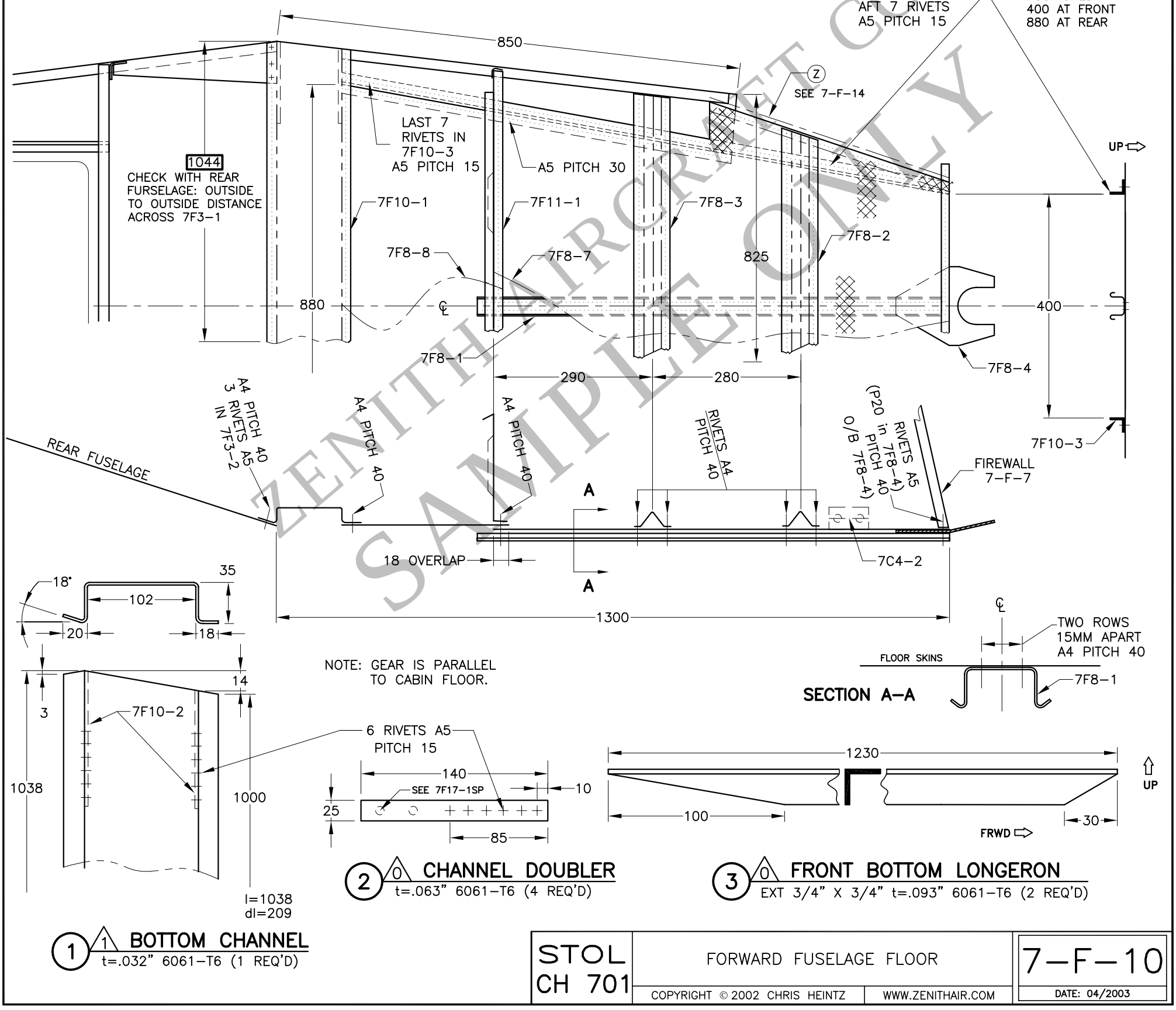
1. TAPER THE ENDS OF 7F10–1, CLECO 7F10–2 TO 7F10–1
2. ALIGN CENTER LINES & CLECO 7F8–8 TO 7F8–7 & 7F10–1 ADD 7F11–1
3. POSITION 7F17–1SP WITH THE FRONT CHANNEL PICK UP FLUSH WITH THE AFT EDGE OF THE CUTOUT IN 7F9–1
4. OFFSET THE BOTTOM OF 7F17–1SP UP .090" TO THE BOTTOM OF 7F9–1, CLECO 7F17–1SP TO 7F9–1
5. TO POSITION THE CABIN SIDES TO THE FLOOR ASSEMBLY, INSERT THE CHANNEL PICK UP WELDED ON 7F17–1SP BETWEEN 7F10–2.
6. MAKE A TEMPLATE 1044 OR THE WIDTH OF REAR FUSELAGE (CLAMP TO 7F10–1) SET THE WIDTH ACROSS FRONT OF CABIN SIDES TO 825
7. SET THE TOP AFT CORNER OF 7F9 = THE WIDTH OF REAR FUSELAGE, LEVEL THE TOP OF 7F10–1 TO FLOOR SKIN & DRILL 7F17–1SP TO 7F10–1 & 2

CHECK: THE "PICK UP PLATE" ON 7F17–1SP IS PARALLEL WITH THE FLOOR OF THE CABIN SIDE (SEE 7V10–2SP)



=NO RIVETS AT THIS STAGE

CHECK: TOP OF CUTOUT IN 7F9–1 AND BOTTOM OF EXT 7F9–3 DO NOT INTERFERE WITH BOTTOM CHANNEL 7F10–1



1 1 BOTTOM CHANNEL
t=.032" 6061–T6 (1 REQ'D)

NOTE: GEAR IS PARALLEL TO CABIN FLOOR.

2 0 CHANNEL DOUBLER
t=.063" 6061–T6 (4 REQ'D)

SECTION A–A

3 0 FRONT BOTTOM LONGERON
EXT 3/4" X 3/4" t=.093" 6061–T6 (2 REQ'D)

STOL CH 701	FORWARD FUSELAGE FLOOR	7–F–10
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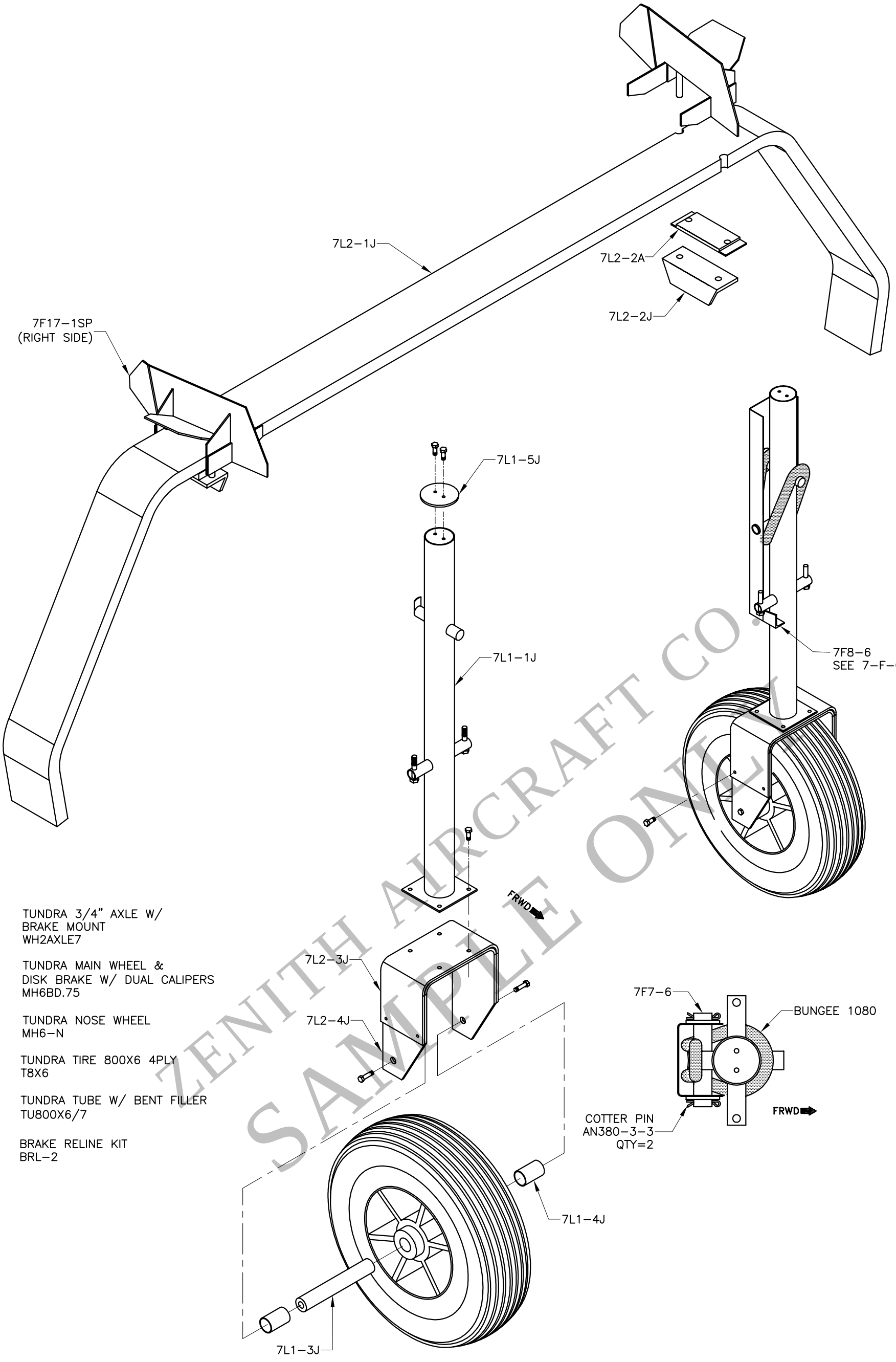

TUNDRA 3/4" AXLE W/
BRAKE MOUNT
WH2AXLE7

TUNDRA MAIN WHEEL &
DISK BRAKE W/ DUAL CALIPERS
MH6BD.75

TUNDRA NOSE WHEEL
MH6–N

TUNDRA TIRE 800X6 4PLY
T8X6

TUNDRA TUBE W/ BENT FILLER
TU800X6/7

BRAKE RELINE KIT
BRL–2

STOL CH 701	LANDING GEAR / NOSE GEAR	7–L–0
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