Light Craft for DRB (notes from 24 apr 2013) 20 June 2013

- key points of centrebody

a_0	0 , 0	Free stream Air
b	285.7, 62.2	M = 5.8
c	333.3 , 55.0	p_0 = 900 kPa
d	347.57, 40.0	T_0 = 560 K
e	347.57 , 0.0	Initial gas Air quiescent
		p_{init} = 1 kPa ; T_{init} = 300 K

- axial distance of 24 mm on Carolyn's cowl corresponds to axial distance 285.7 mm on centrebody — so add 261.7 mm to cowl x-coordinate

Outer Surface Geometry for Intake		
Axial Dimension	Radial Dimension	Note
0.0	0.0	
b 285.7	62.2	Straight
292.1	61.8	First spline
299.0	60.8	
305.9	59.7	
312.8	58.6	
319.6	57.4	
326.5	56.2	
c 333.3	55.0	
d 347.57	40.0	Second spline
350.0	37.8	
370.0	23.79	
390.0	14.2	
410.0	7.73	
430.0	3.51	
450.0	1.07	
476.2	0.0	

"tip of cone corner" →

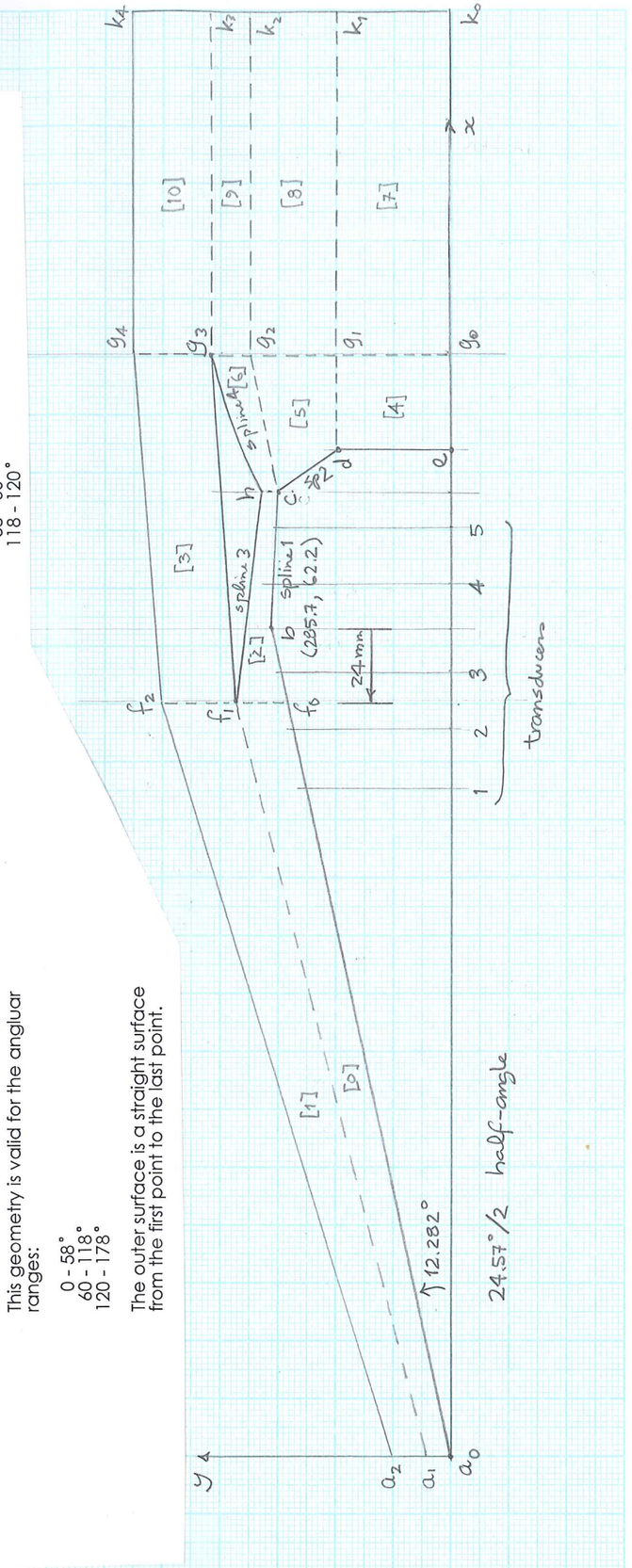
Point (347.57,40.0) marks the end of the model. Additional spline geometry is given in the table for reference.

Axial Location of Transducer Threads	
1	231.62
2	251.16
3	270.70
4	301.33
5	321.06

Inner Surface Geometry for Interior Struts		
Axial Dimension	Radial Dimension	Note
0.0	74.9	Spline
24.0	62.2	Straight
24.0	60.2	Straight
71.6	53.0	Straight
71.6	65.4	Straight
77.7	69.6	Spline
83.9	73.3	
90.5	76.4	
97.3	79.0	
104.3	81.0	
111.7	82.4	
119.3	83.3	

top corner →

This geometry is valid for the angluar ranges:
58 - 60°
118 - 120°



Inner Surface Geometry for Cowl		
local x Axial Dimension	Radial Dimension	Note
0.0	74.9	First spline
10.3	74.0	
20.5	72.9	
30.8	71.5	
41.0	70.0	
51.2	68.5	
61.4	67.0	
71.6	65.4	Second spline
77.7	69.6	
83.9	73.3	
90.5	76.4	
97.3	79.0	
104.3	81.0	
111.7	82.4	
119.3	83.3	

global x
f_1 261.7
h 333.3, 339.4
g 381.0

This geometry is valid for the angluar ranges:
0 - 58°
60 - 118°
120 - 178°

The outer surface is a straight surface from the first point to the last point.