

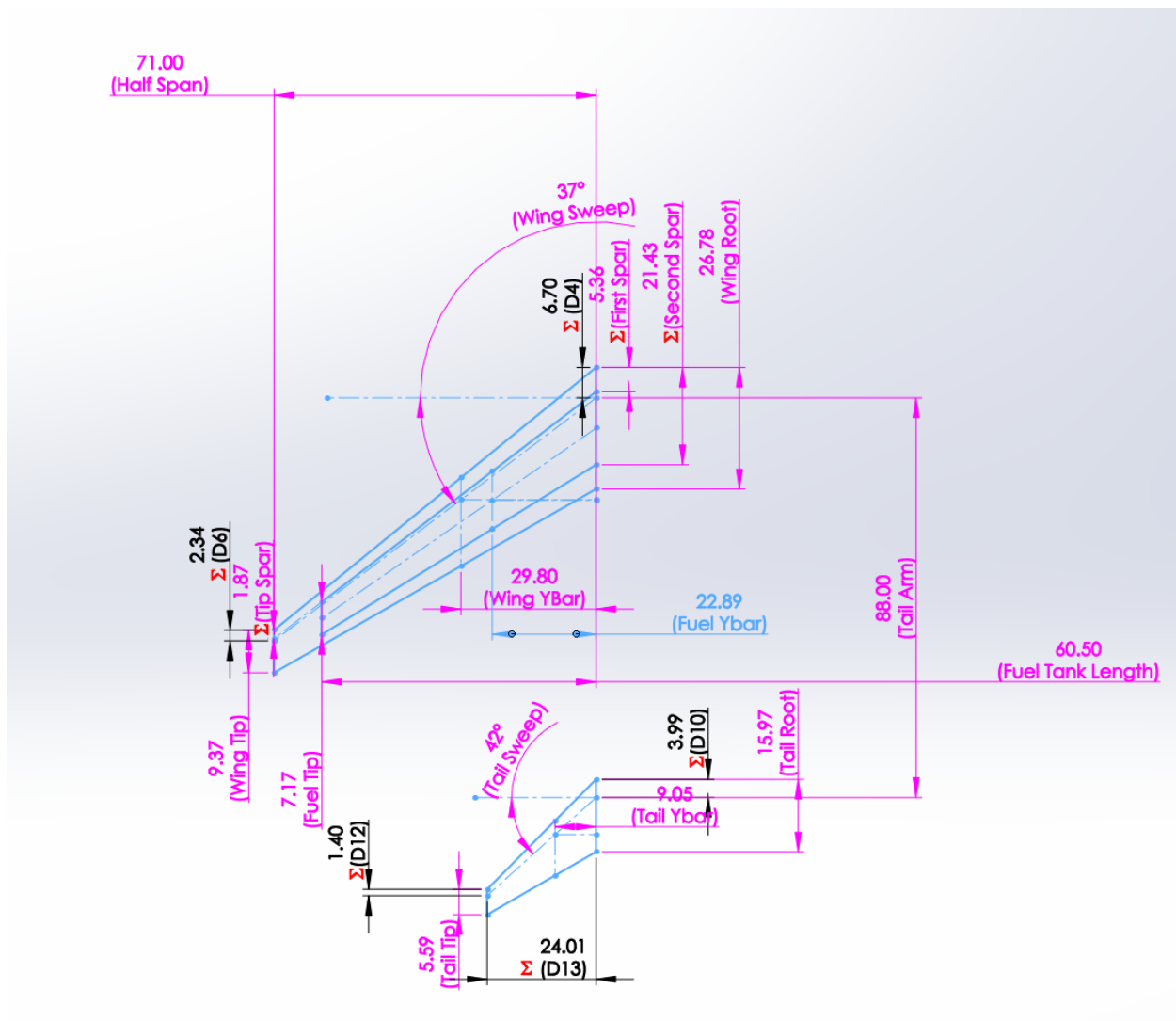
Nonstop

Constants							
Fuel Density (lbs/gal)	6.71						
Wing Sizing		Horizontal Tail Sizing		Vertical Tail Sizing		Weight Calculations	
AR	7.9	AR	4	AR	1.6	# Engines	2
Taper Ratio	0.35	Taper Ratio	0.35	Taper Ratio	0.5	Fuselage Length	191
Sweep Angle	37	Volume Coef	1.1	Volume Coef	0.08	Fuselage Width	14.4
S	2567	Tail arm	88	Tail Arm	88	W ₀	387287
b	142	Sweep Angle	42	Sweep Angle	42	W _f	225730.5
Root Chord	26.7814	S	464.9299	S	331.3764	W _f /W _{to}	0.427
Tip Chord	9.3735	b	43.12447	b	23.02612	Fuel Weight	168214.5
MAC	14.4894	Root Chord	15.97202	Root Chord	19.18843	TOW	393945
Y bar	29.8025	Tip Chord	5.590209	Tip Chord	9.594216	Fuel Weight and Density	
		MAC	8.641275	MAC	6.396144	Fuel (Gal)	25069.23
		Y bar	9.050814	Y bar	5.116915	Fuel (ft ³)	3351.053
Engine Sizing							
Max Static Sea Level Thrust	64426						
Bypass Ratio	5						
Fan Diameter (in)	105						
Engine Length (in)	170						
Nacell Diameter	115.5						
Nacell Length	275.935						

Wing, Tail, and Engine Sizing

Wing Parameters				Rectangular Frustrum Parameter			
t/c_avg	0.1305			Base Height	3.145478873		
Taper Ratio	0.35			Base Width	16.06885759		
Root Chord	26.78143			A1	50.54425207		
Fuel	3351.053	1675.526		Tip Height	1.4032823	Fuel Tip Chord	11.94791
Tank Height/(tc_avg)	0.9			Tip Width	7.168747383		
Front Spar Location/Chord	0.2			A2	10.05977632		
Rear Spar Location/Chord	0.8			Length of Tank	60.5	MAX LENGTH	71
				Vol of Tank	1676.922298		
				Centroid Location	22.88614746		

Fuel Tank Sizing



Nonstop Wing Layout Drawing

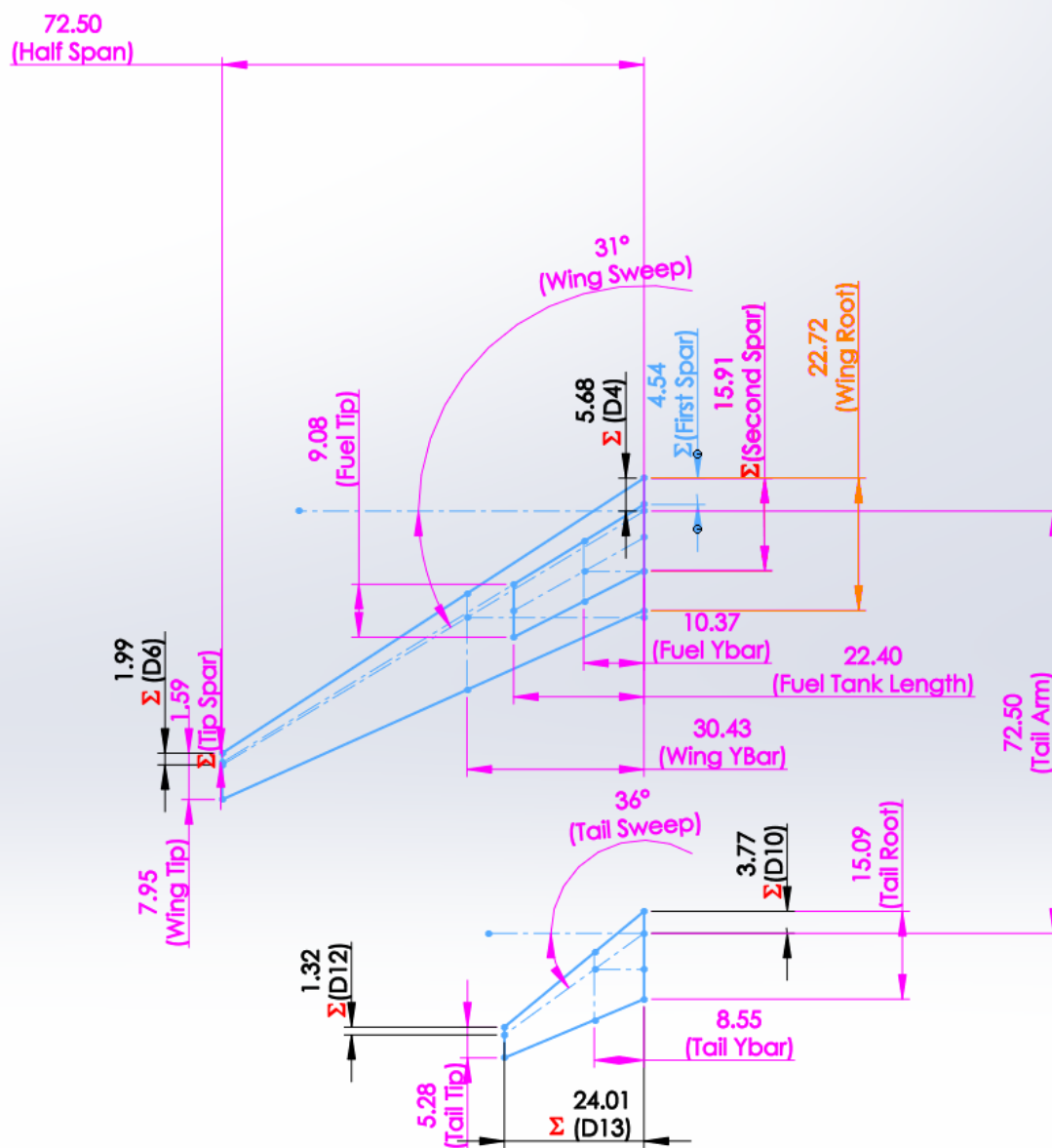
Onestop

Constants							
Fuel Density (lbs/gal)	6.71						
Wing Sizing		Horizontal Tail Sizing		Vertical Tail Sizing		Weight Calculations	
AR	9.5	AR	4	AR	1.6	# Engines	2
Taper Ratio	0.35	Taper Ratio	0.35	Taper Ratio	0.5	Fuselage Length	174
Sweep Angle	31	Volume Coef	1.1	Volume Coef	0.08	Fuselage Width	14.7
S	2224	Tail arm	72.5	Tail Arm	72.5	W_0	237646
b	145	Sweep Angle	36	Sweep Angle	36	W_f	177660.5
Root Chord	22.7229	S	414.8302	S	355.84	Wf/W_to	0.265
Tip Chord	7.953	b	40.73476	b	23.86093	Fuel Weight	64054.48
MAC	12.2937	Root Chord	15.08695	Root Chord	19.88411	TOW	241715
Y bar	30.4321	Tip Chord	5.280432	Tip Chord	9.942054	Fuel Weight and Density	
		MAC	8.162426	MAC	6.628036	Fuel (Gal)	9546.121
		Y bar	8.54927	Y bar	5.302429	Fuel (ft^3)	1276.049
Engine Sizing							
Max Static Sea Level Thrust	40141						
Bypass Ratio	5						
Fan Diameter (in)	83						
Engine Length (in)	135						
Nacell Diameter	91.3						
Nacell Length	218.801						

Wing, Tail, and Engine Sizing

Wing Parameters				Rectangular Frustrum Parameter			
t/c_avg	0.152			Base Height	3.108487356		
Taper Ratio	0.35			Base Width	11.3614304		
Root Chord	22.72286			A1	35.31686274		
Fuel	1276.049	638.0244		Tip Height	2.484217344	Fuel Tip Chord	18.15948
Tank Height/(tc_avg)	0.9			Tip Width	9.079741754		
Front Spar Location/Chord	0.2			A2	22.55605194		
Rear Spar Location/Chord	0.7			Length of Tank	22.4	MAX LENGTH	72.5
				Vol of Tank	642.8589225		
				Centroid Location	10.37000135		

Fuel Tank Sizing



Onestop Wing Layout Drawing