<In the name of God>

TomyadAuto® Fly
A concept F1 car

COSMOS FloWorks Aerodynamic Test Result

Designer:
A.K.Langroodi

Fly dimensions:
Width: 1.800 m
Length: 4.600 m
Height: 0.900 m

Fluid:
Air without turbulence
Temperature: 293 K
Velocity: 40 m/s

Main Body Surface

Surface area [m^2]: 0.338803
CAD Fluid Area [m^2]: 0.363297

No Heat Transfer parameter is configured.

Local parameters

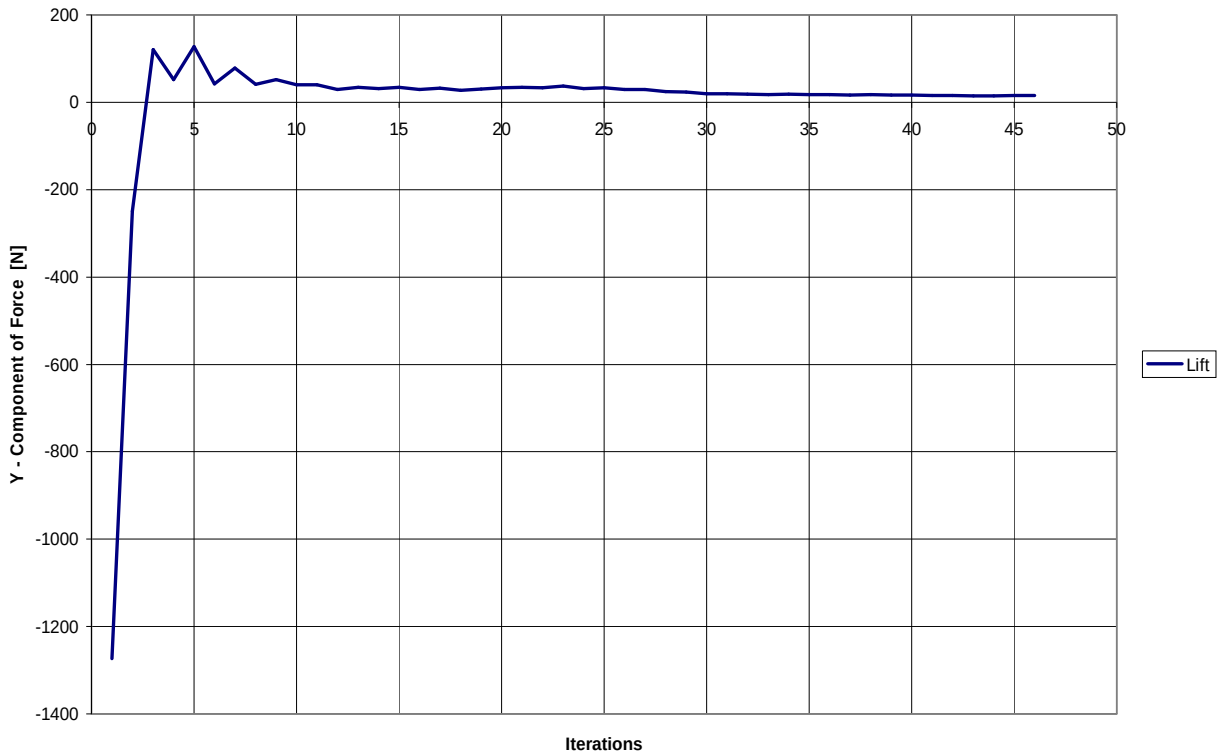
Parameter	Minimum	Maximum	Average
Pressure [Pa]	100814	103422	101389
Temperature [K]	293.786	293.946	293.85
Density [kg/m^3]	1.19839	1.22909	1.2042
Velocity [m/s]	0	0	0
Mach Number [ ]	0	0	0
Shear Stress [Pa]	7.46347E-06	3.36202	0.770857
Fluid Temperature [K]	293.786	293.946	293.85

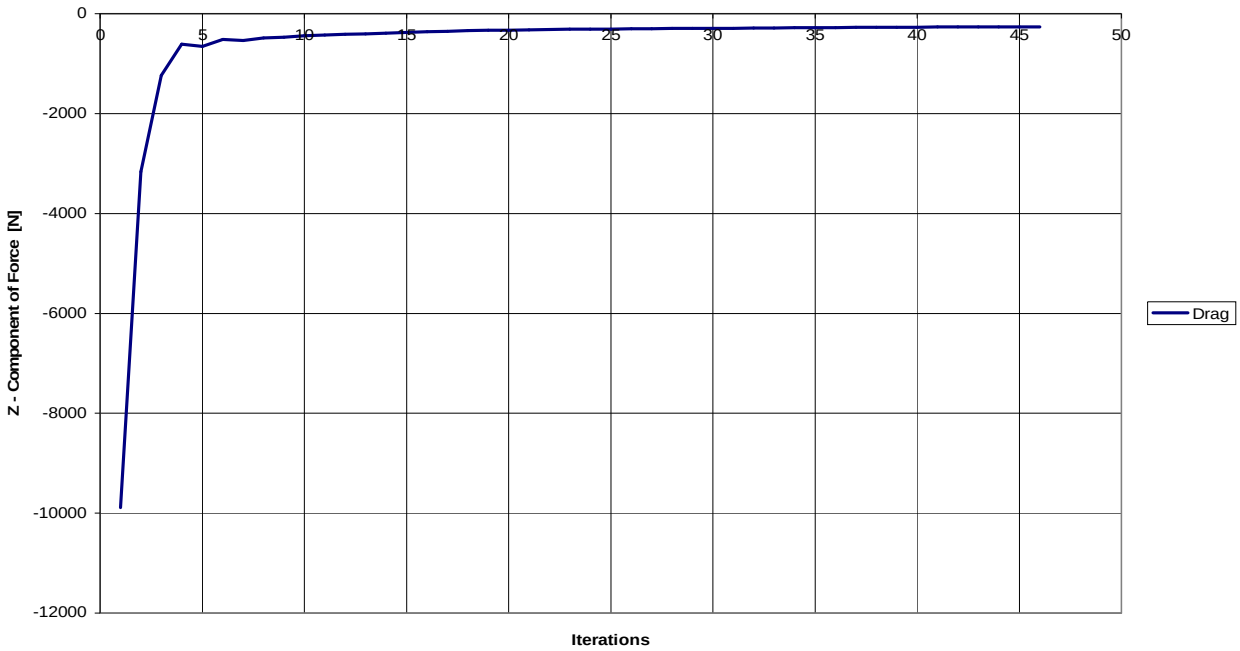
Integral parameters

Parameter	Value	X-component	Y-component	Z-component
Heat Transfer Rate [W]	0	0	0	0
Normal Force [N]	36.1149	-2.97364	-21.0265	-29.2118
Shear Force [N]	0.257207	0.0160939	0.0187751	-0.256016
Force [N]	36.3101	-2.95754	-21.0077	-29.4678
Torque [N*m]	13.5966	-5.51953	8.44783	-9.11238
Surface Area [m^2]	0.338803	0.0125581	0.00197142	0.0179057
Torque of Normal Force [N*m]	13.5394	-5.50971	8.35354	-9.1201
Torque of Shear Force [N*m]	0.0951115	-0.0098231	0.0942869	0.00772475
Uniformity Index [ ]	1			

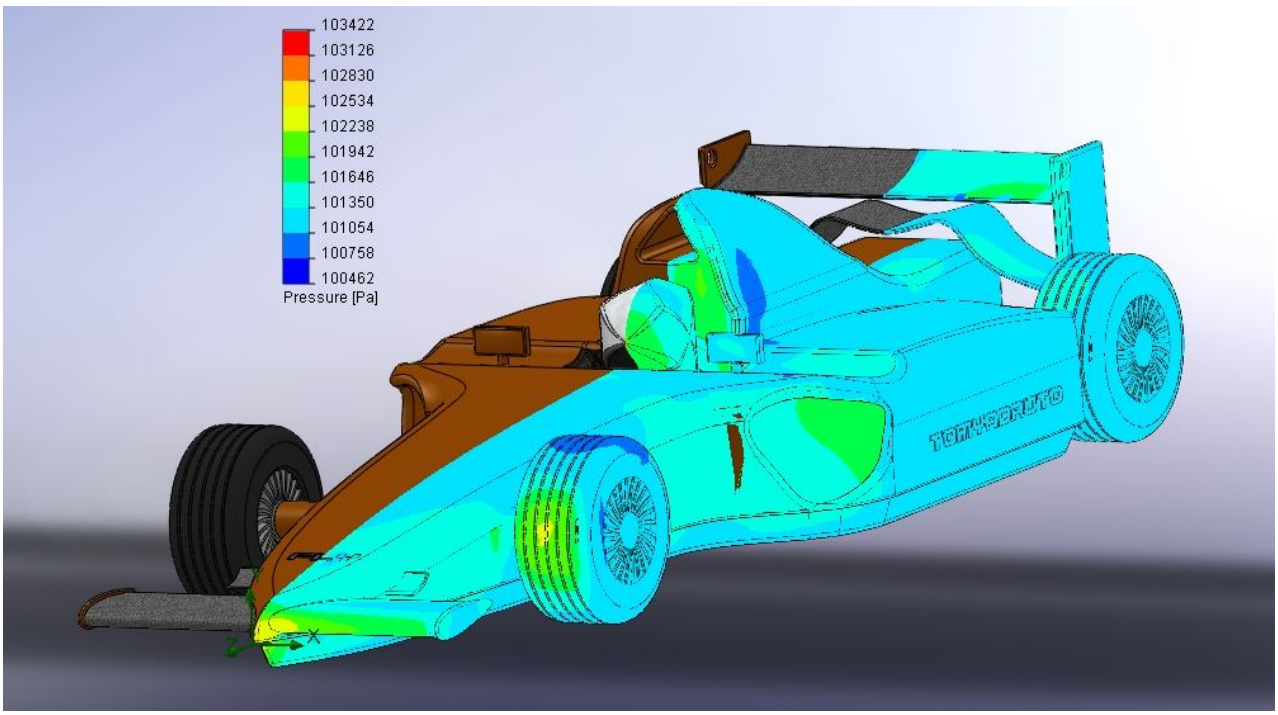
Goals:

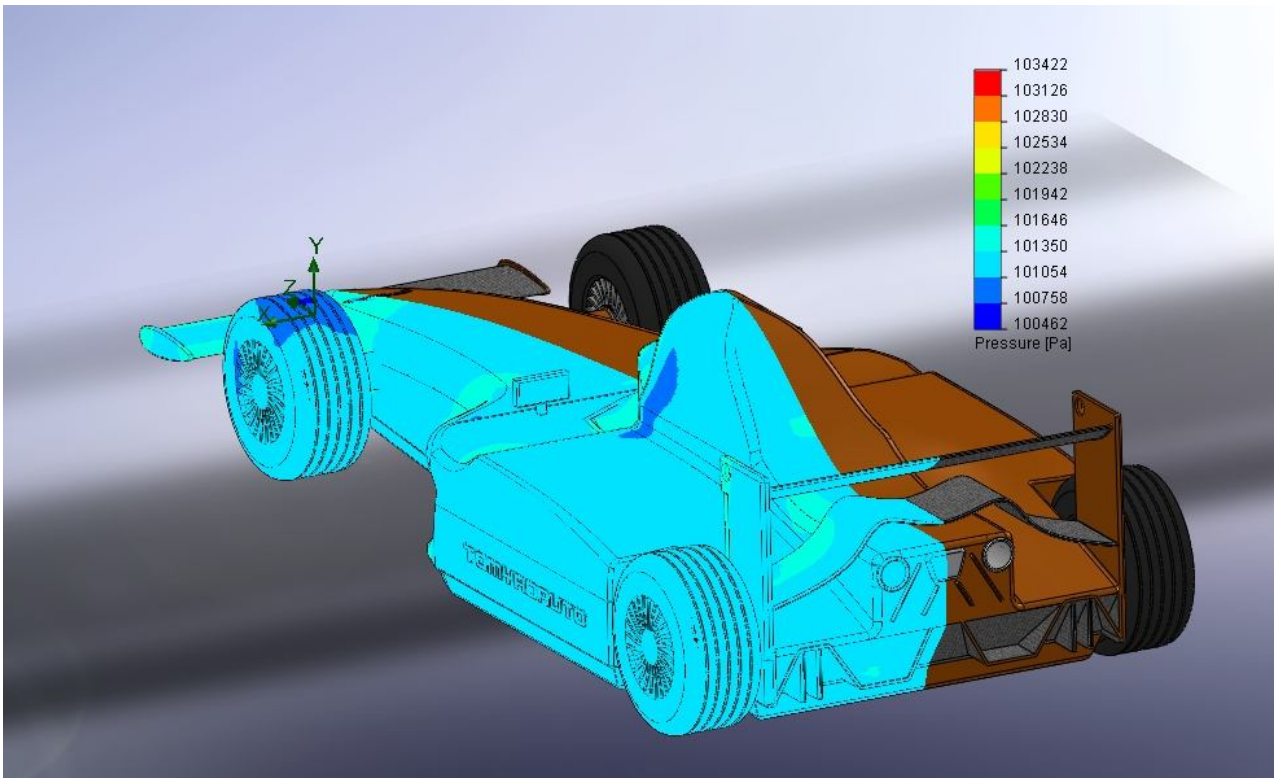
Goal Name	Value	Averaged Value	Minimum Value	Maximum Value	Delta	Criteria
Lift [N]	15.1252613	18.6198	14.7999	28.9094	14.1094891	15.0315332
Drag [N]	-265.4210148	-280.218	-303.703	-265.421	38.2816118	131.016875



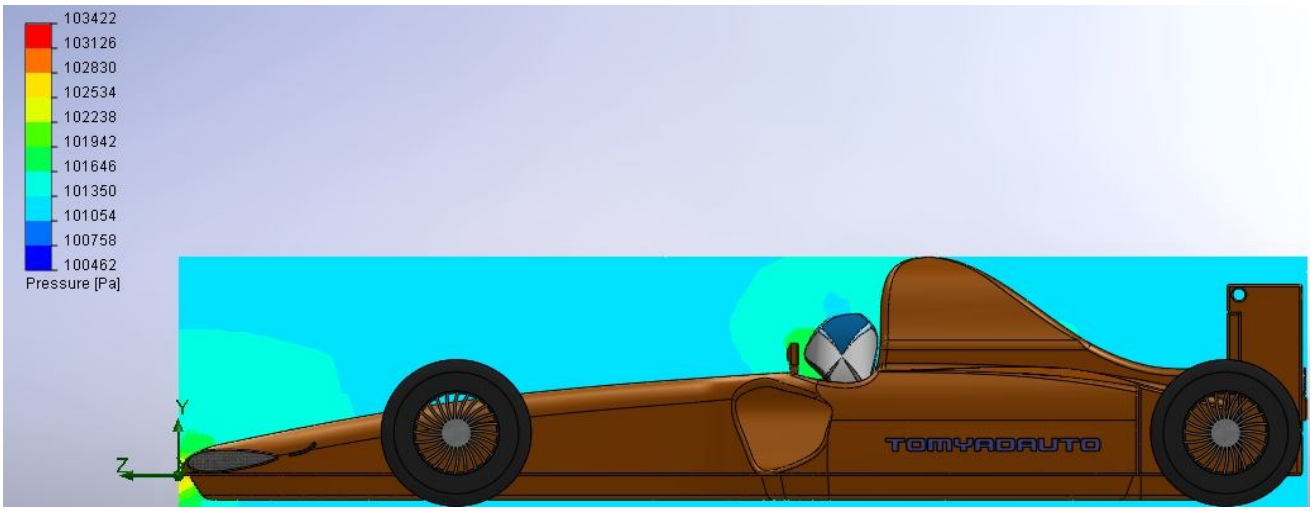

0
-2000
-4000
-6000
-8000
-10000
-12000
0
5
10
15
20
25
30
35
40
45
50
Z - Component of Force [N]
Iterations
Drag

3D Plot


103422
103126
102830
102534
102238
101942
101646
101350
101054
100758
100462
Pressure [Pa]



Right Plot



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