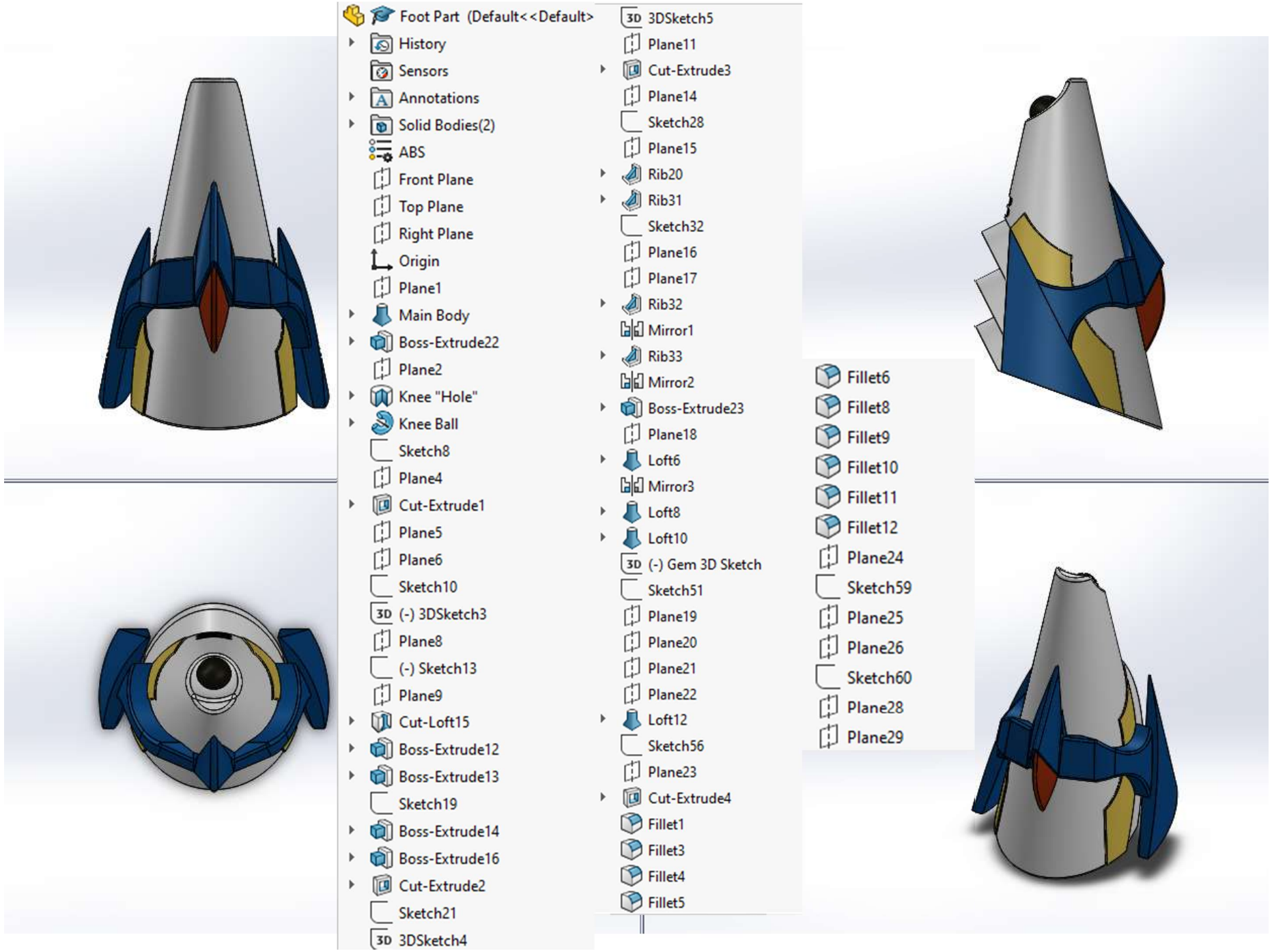
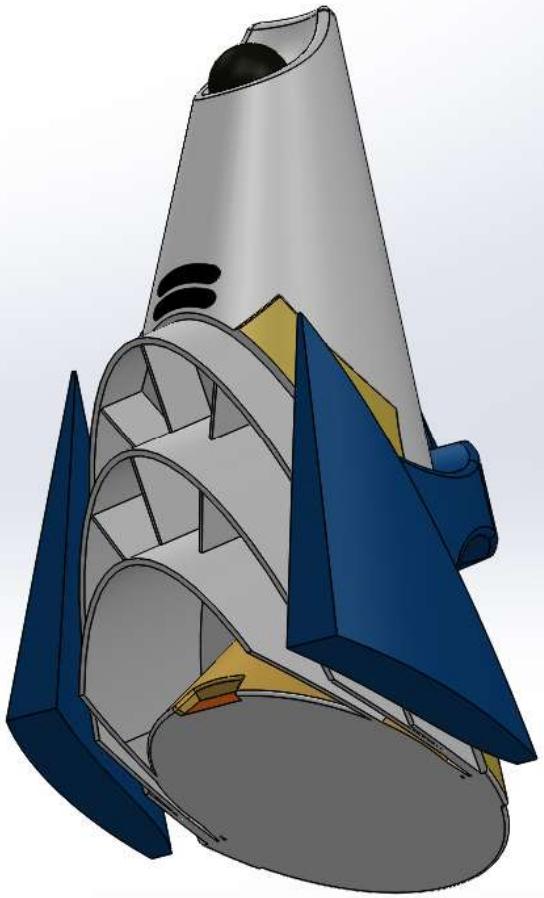
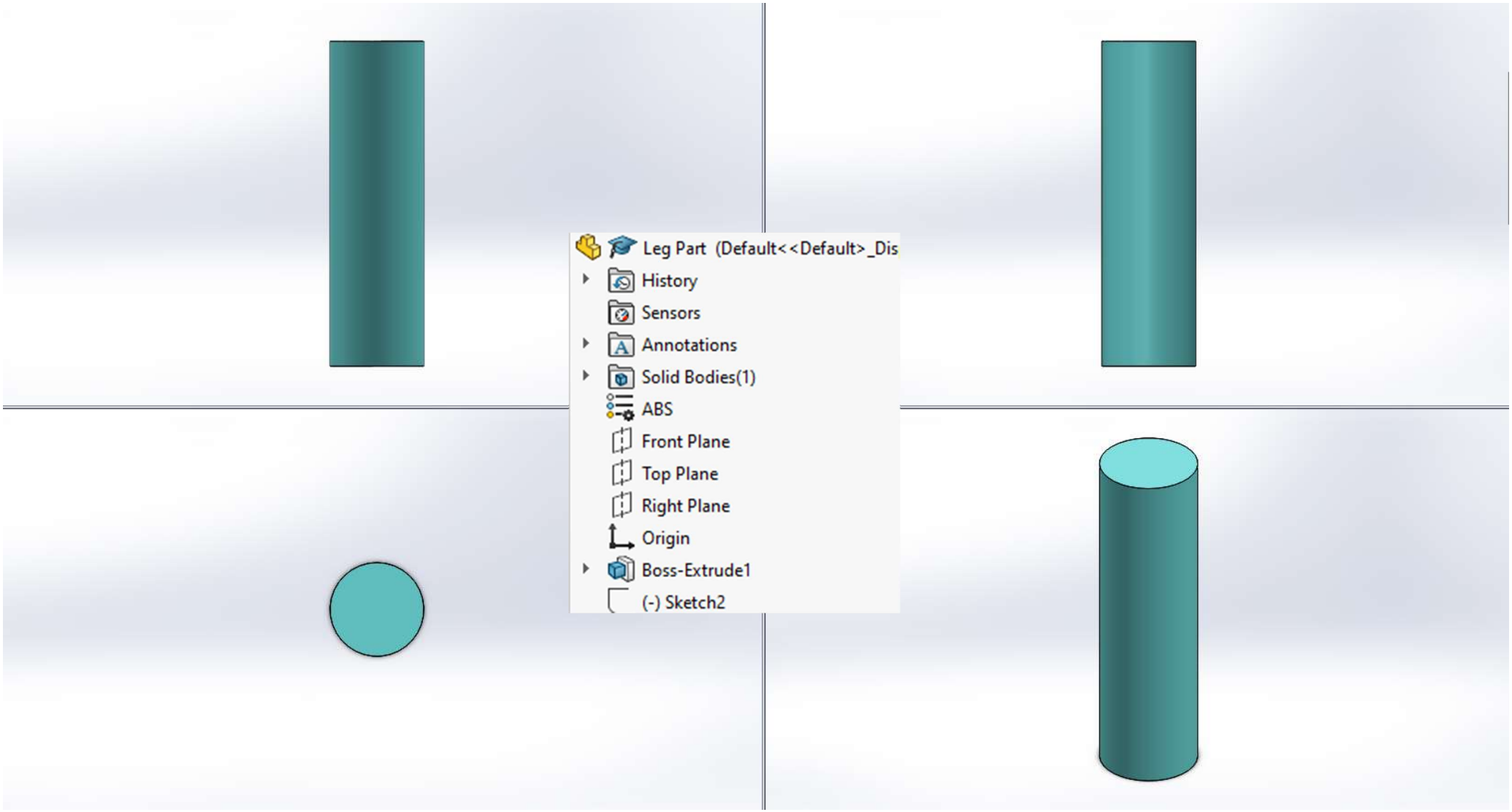
Foot Part Four-View



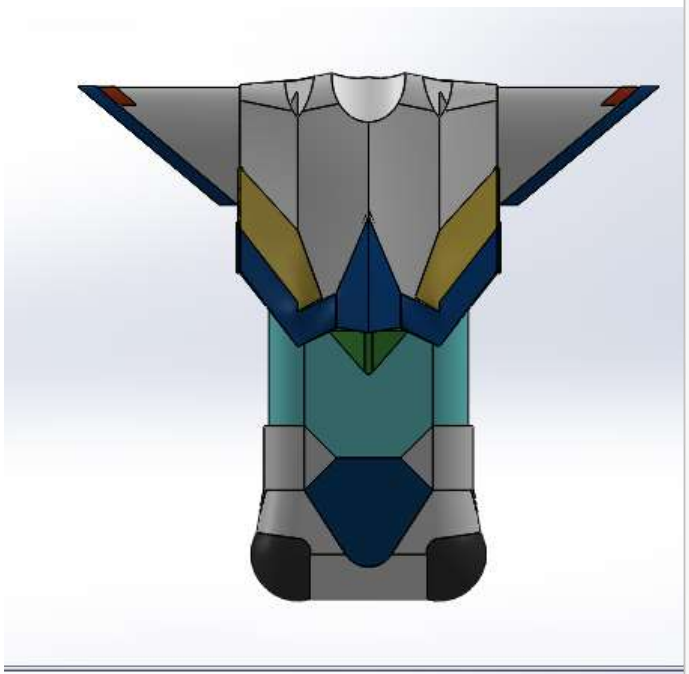
Foot Part Close-Up View

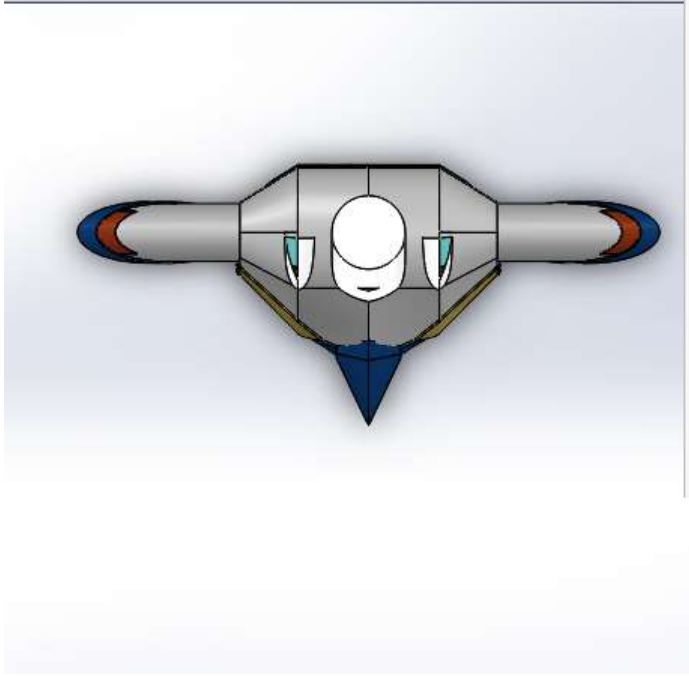


Leg Part Four-View

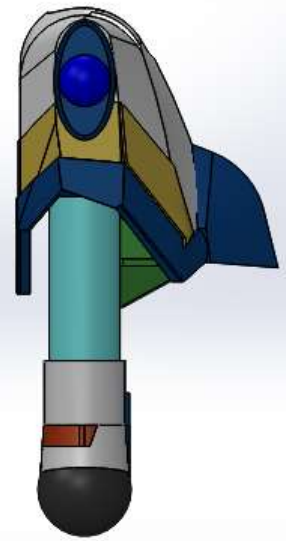


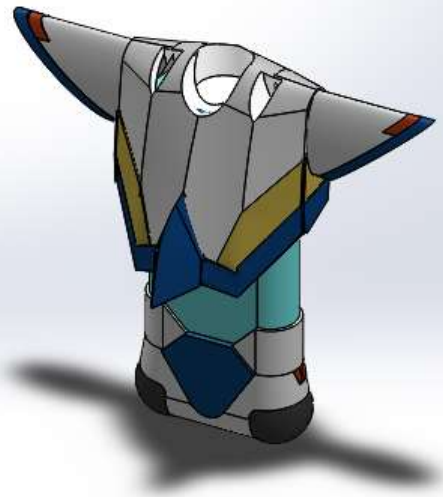
Torso Part Four-View



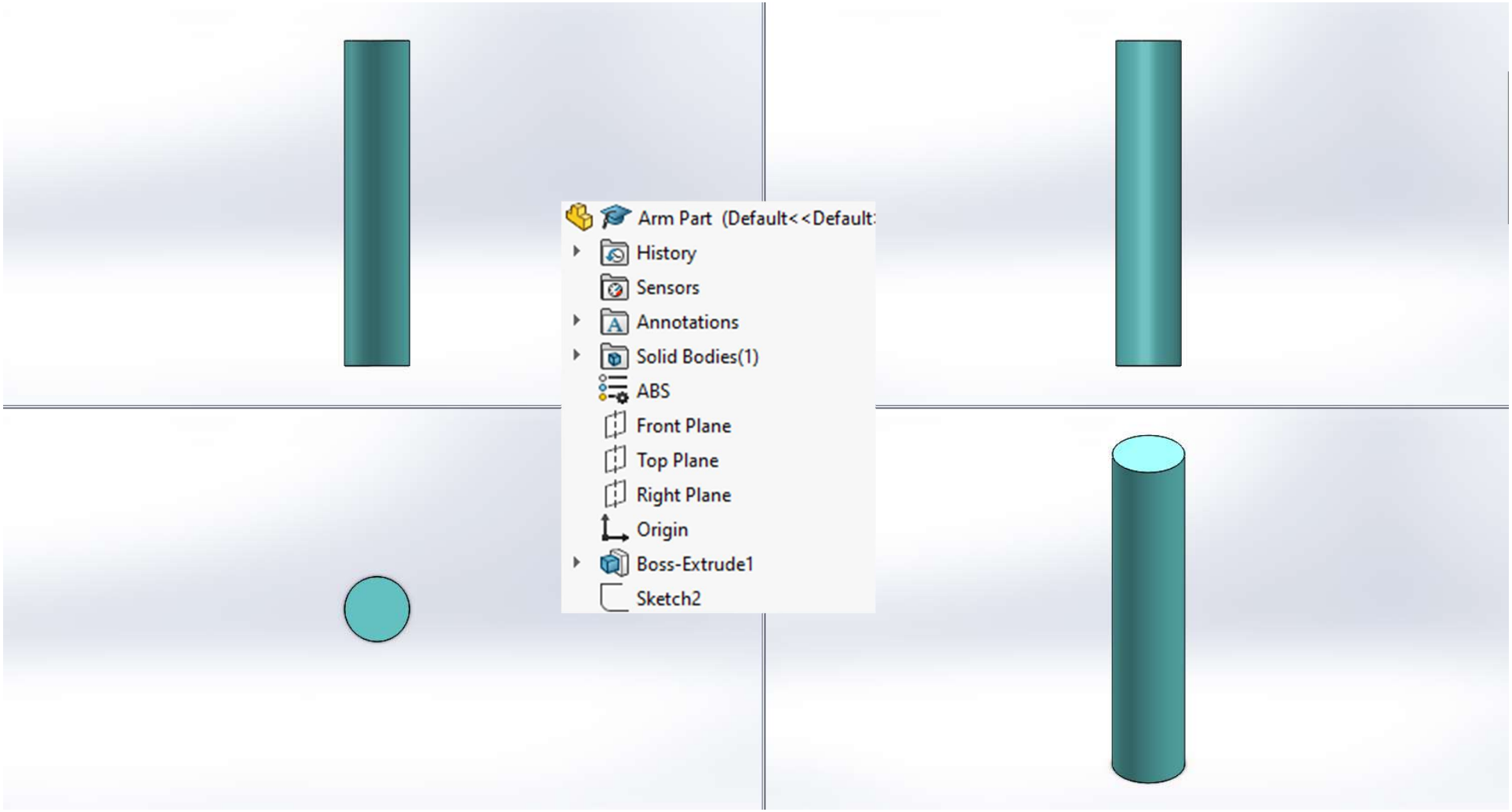


- Torso Part (Default<<Default>
  - History
  - Sensors
  - Annotations
  - Surface Bodies(1)
  - Solid Bodies(23)
  - ABS
  - Front Plane
  - Top Plane
  - Right Plane
  - Origin
  - Plane1
  - Boss-Extrude1
  - Plane2
  - Boss-Extrude2
  - Loft1
  - Sweep1
  - Revolve7
  - Plane3
  - Plane4
  - Loft10
  - Loft18
  - Loft19
  - Cut-Extrude1
  - Boss-Extrude4
  - Boss-Extrude5
  - Sketch21
  - Plane6
  - Cut-Extrude2
  - Plane7
  - Mirror2
  - Cut-Extrude5
  - Boss-Extrude6
  - Boss-Extrude8
  - Boss-Extrude9
  - Revolve8
  - Mirror3
  - Boss-Extrude22
  - Boss-Extrude34
  - Boss-Extrude35
  - Plane9
  - Cut-Extrude6
  - Plane10
  - Boss-Extrude39
  - Mirror9
  - Mirror17
  - Boss-Extrude45
  - Mirror20
  - Scale2
  - Sketch42
  - Plane12
  - Boss-Extrude47
  - Mirror21
  - Plane13
  - Loft31
  - Mirror24
  - Plane14
  - Boss-Extrude49
  - Boss-Extrude50
  - Cut-Extrude7
  - Plane15
  - Cut-Extrude9
  - Surface-Fill1
  - Cut-Extrude15
  - Mirror31
  - WING PLANE LEFT
  - WING PLANE RIGHT
  - WING CENTERLINE
  - WING ANGLED PLANE
  - Boss-Extrude51
  - Mirror34
  - Boss-Extrude57
  - Boss-Extrude60
  - Boss-Extrude62
  - Boss-Extrude64
  - Sketch63
  - Plane18
  - Boss-Extrude66
  - Mirror38
  - Mirror46
  - Cut-Extrude16
  - Boss-Extrude67
  - Mirror48
  - Plane19
  - Loft32
  - Mirror50
  - Fillet3
  - Sketch70
  - Sketch71

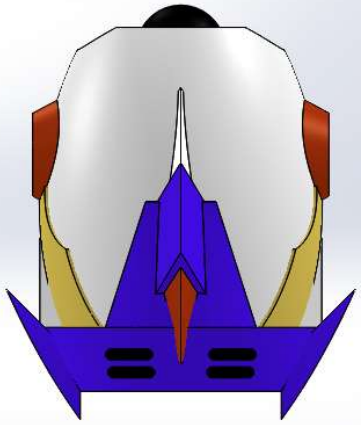


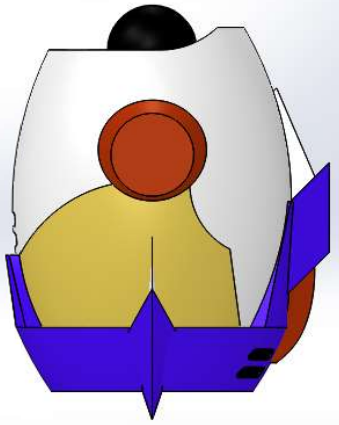


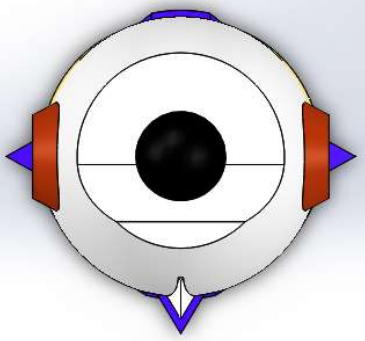
Arm Part Four-View (Thinner but slightly longer than the leg part)

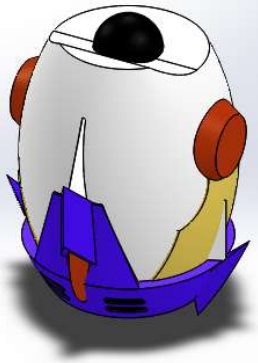


Buster Part Four-View



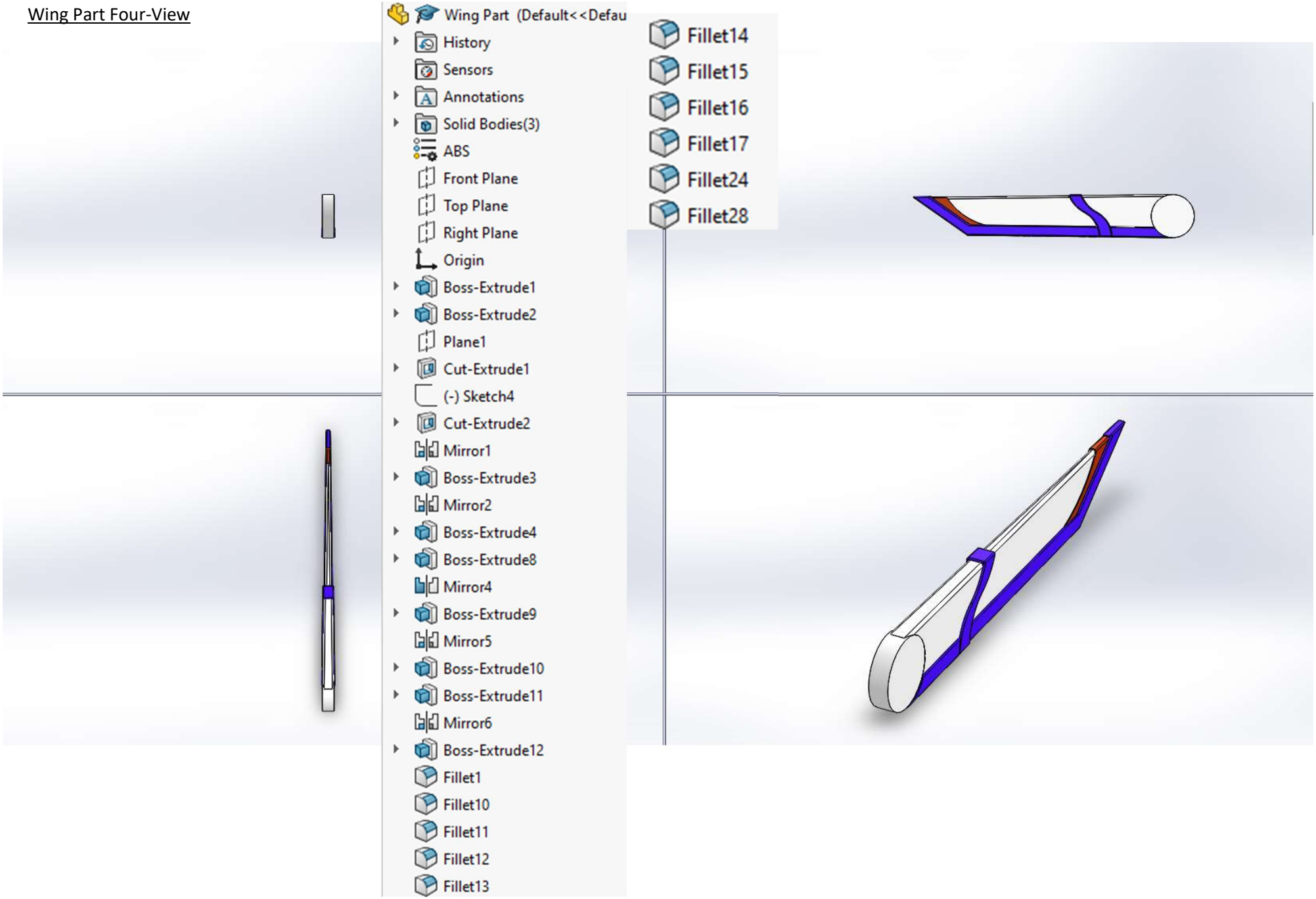




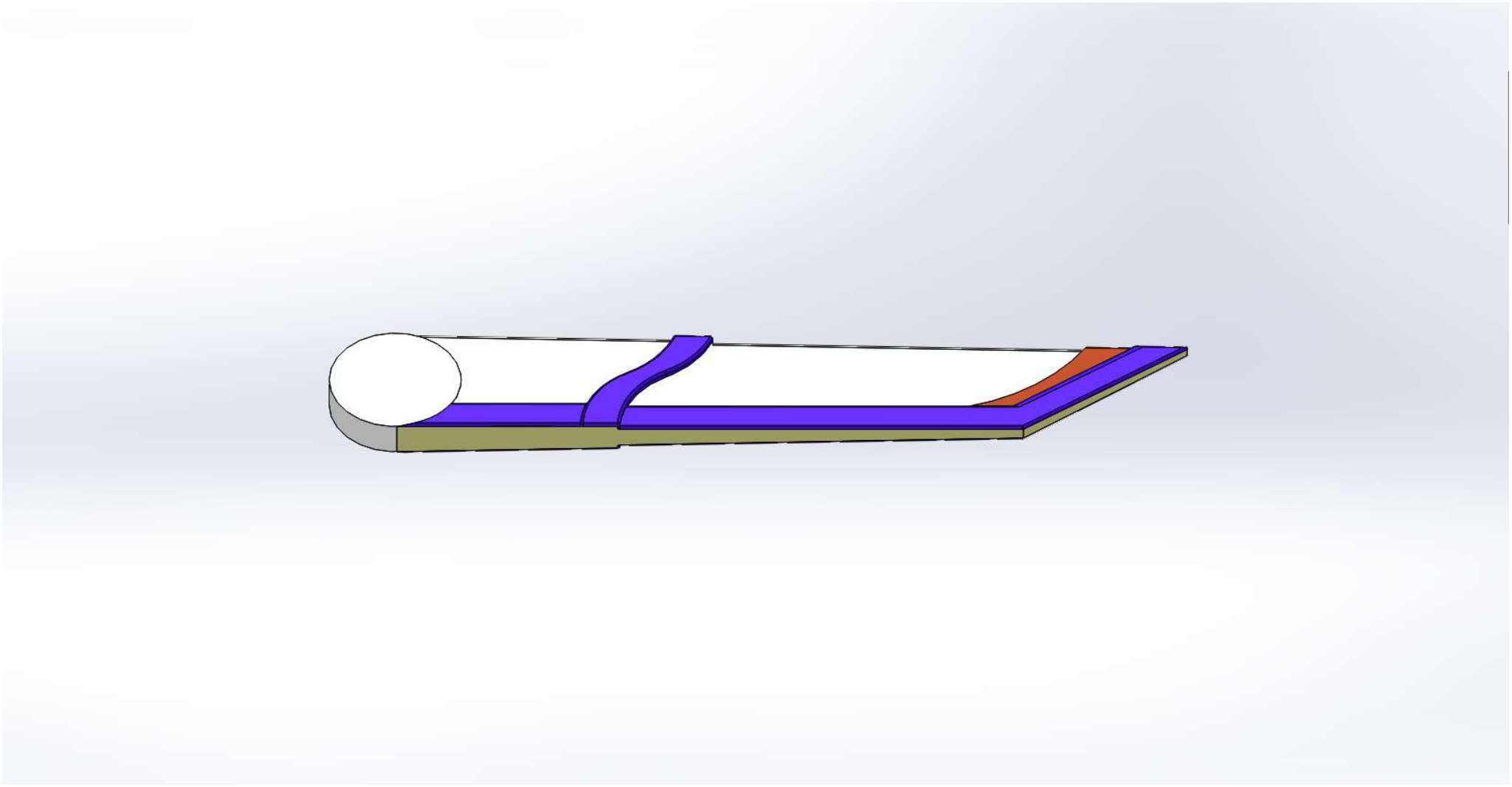


- Buster Part (Default<<Defau
- History
- Sensors
- Annotations
- Solid Bodies(10)
- ABS
- Front Plane
- Top Plane
- Right Plane
- Origin
- Revolve1
- (-) Sketch2
- Plane1
- Plane2
- Loft1
- Mirror1
- Cut-Extrude1
- Scale1
- Plane3
- Revolve3
- Sketch11
- Revolve4
- Plane4
- Loft3
- Sketch14
- Plane5
- Sketch17
- Sketch18
- Plane6
- Boss-Extrude2
- Plane7
- Sketch22
- Loft6
- Plane8
- Loft7
- (-) Sketch29
- Plane9
- Plane10
- Plane11
- Loft10
- Boss-Extrude4
- Mirror4
- Plane12
- Loft14
- Cut-Extrude2
- Boss-Extrude6
- Mirror6
- Plane13
- Cut-Extrude4
- Plane14
- Cut-Extrude5

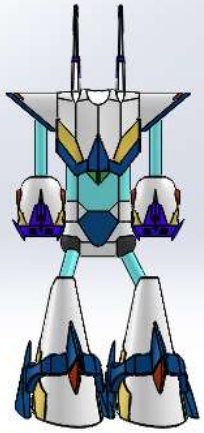
Wing Part Four-View

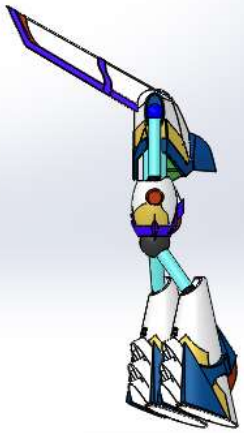


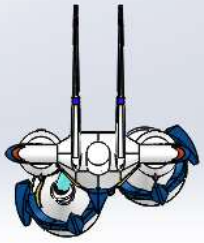
Wing Part Extra View

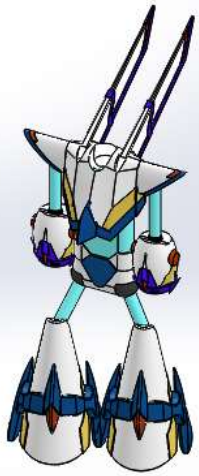


Assembly Four-View



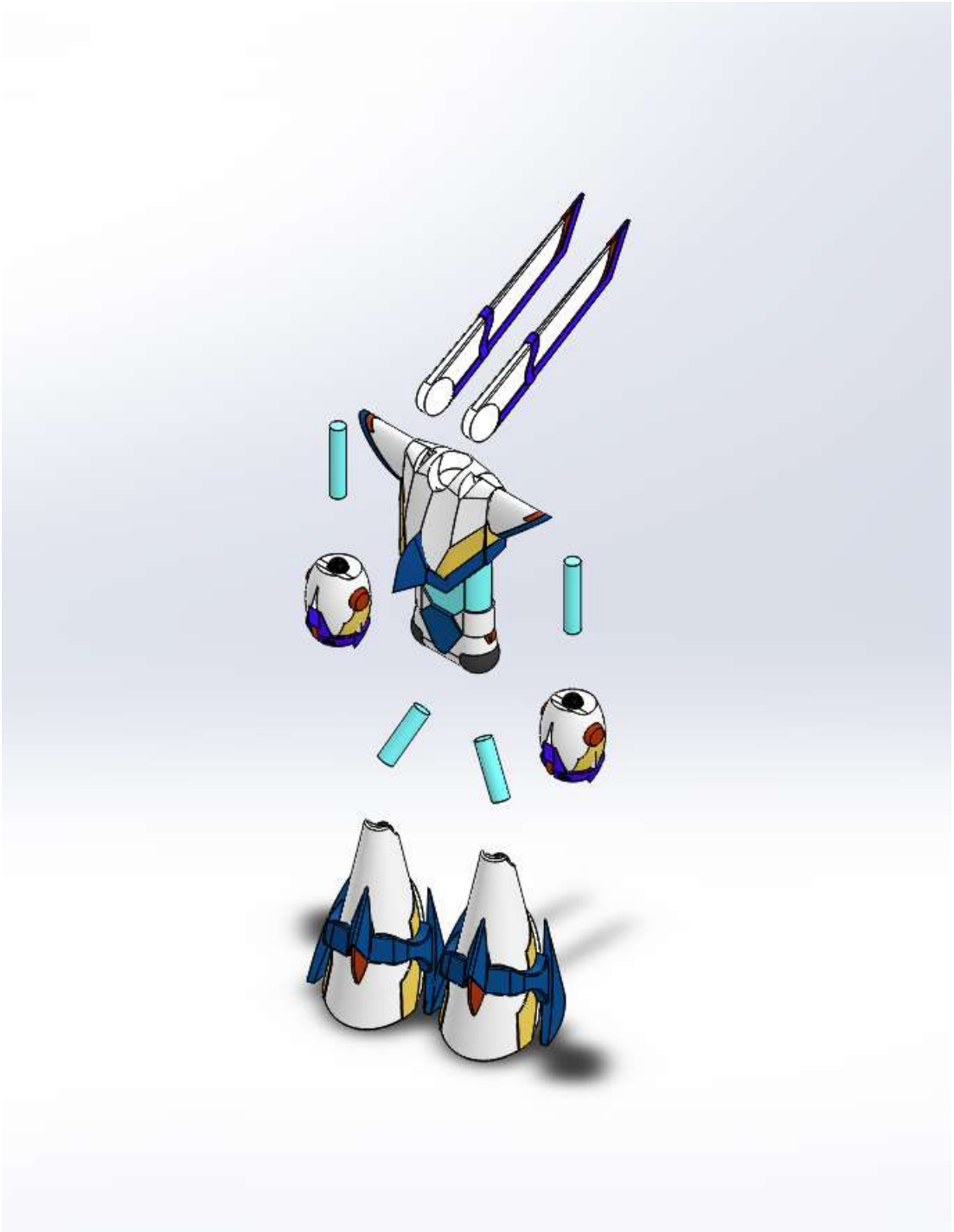


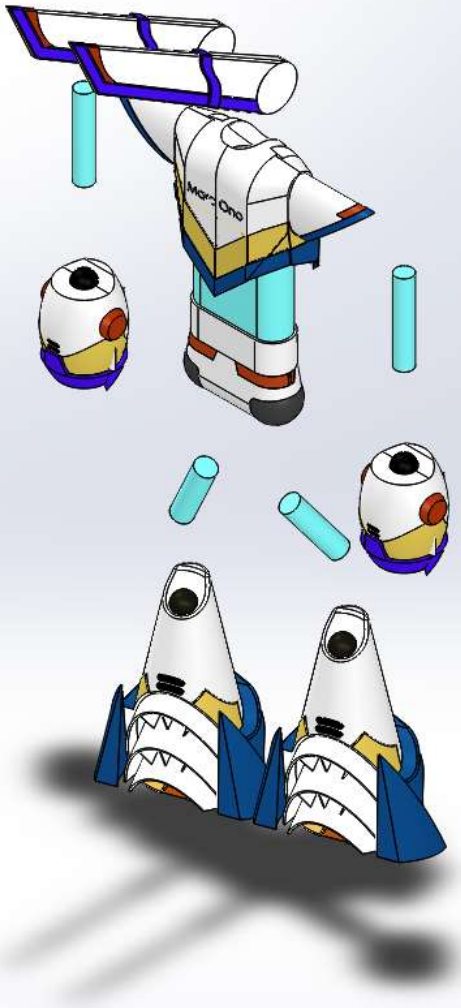




- Final Assembly (Default<Display State-1>)
  - History
  - Sensors
  - Annotations
  - Front Plane
  - Top Plane
  - Right Plane
  - Origin
  - (-) Leg Part<2> (Default<<Default>_Display State 1>)
  - (-) Foot Part<2> (Default<<Default>_Display State 1>)
  - (-) Foot Part<3> (Default<<Default>_Display State 1>)
  - (-) Leg Part<3> (Default<<Default>_Display State 1>)
  - (-) Torso Part<1> (Default<<Default>_Display State 1>)
  - (-) Wing Part<1> (Default<<Default>_Display State 1>)
  - (-) Wing Part<2> (Default<<Default>_Display State 1>)
  - (-) Arm Part<3> (Default<<Default>_Display State 1>)
  - (-) Buster Part<2> (Default<<Default>_Display State 1>)
  - (-) Arm Part<4> (Default<<Default>_Display State 1>)
  - (-) Buster Part<3> (Default<<Default>_Display State 1>)
  - Helmet Part<1> (Default<<Default>_Display State 1>)
  - Mates

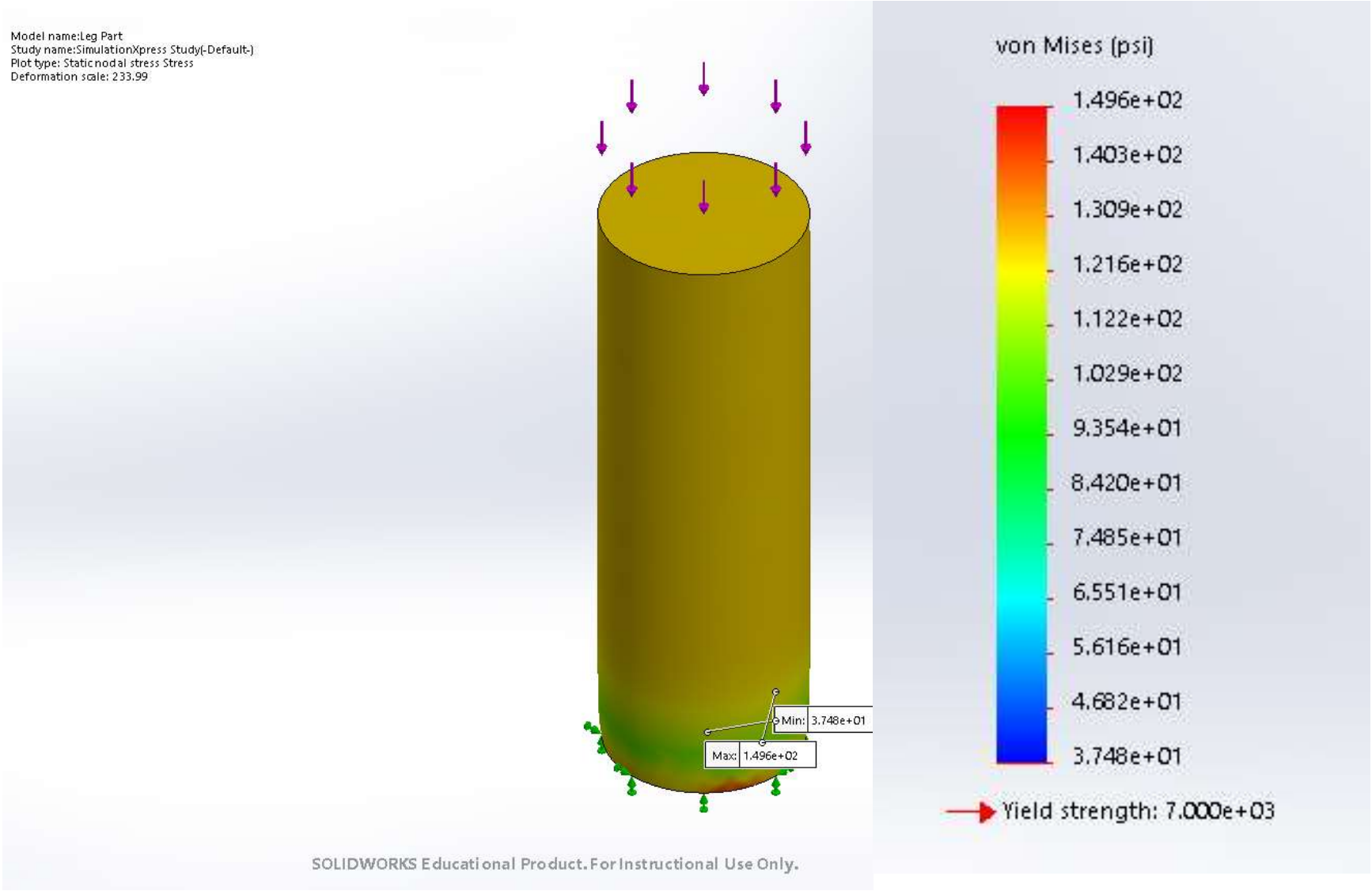
Exploded Views



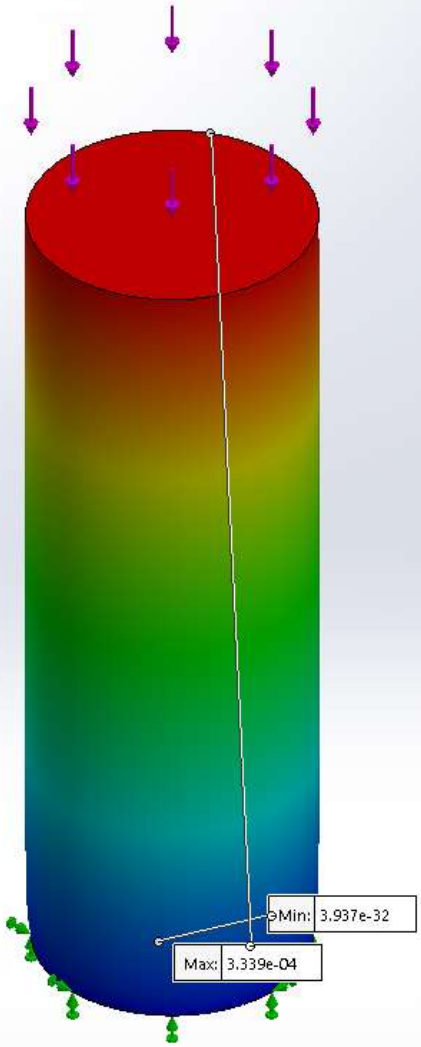


Simulation

I decided to run a simulation on the leg part, with a 5 lbf pushing down on the top, and the fixture being at the bottom. I set the material to ABS, since I dimensioned all of the parts in relation to an action figure, but since SolidWorks did not have a yield strength value for it, I copied the material and inputted the value from https://www.engineeringtoolbox.com/physical-properties-thermoplastics-d_808.html, which was 7.0 ksi. Here are the results:



Model name:Leg Part
Study name:SimulationXpress Study(-Default-)
Plot type: Static displacement Displacement
Deformation scale: 233.99



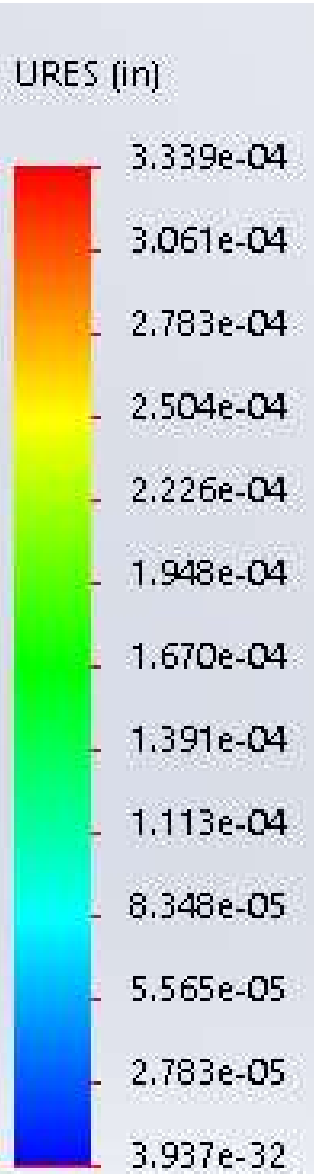


Table of Results:

Max Stress (psi)	149.6
Max Displacement (in)	0.0003339