UVic Hybrid - Additional Parts: Sidepods

The previous iteration of the vehicle (2022) only consisted of the nose cone, where the CFD results concluded marginal downforce. The aerodynamic package for this iteration will include Sidepods, Floor guard and Rear wing, to improve the vehicles downforce.

Sidepods:

The Sidepod's have **three main functions:**

1. Increase the inlet air velocity towards the entrance to the accumulator reducing battery cell temperature
2. Weather repellent/accumulator shielding
3. Real estate for sponsors

Material:

- 6 layers - 10 oz (Style 7500) Fiberglass wet layup

Mould geometry:

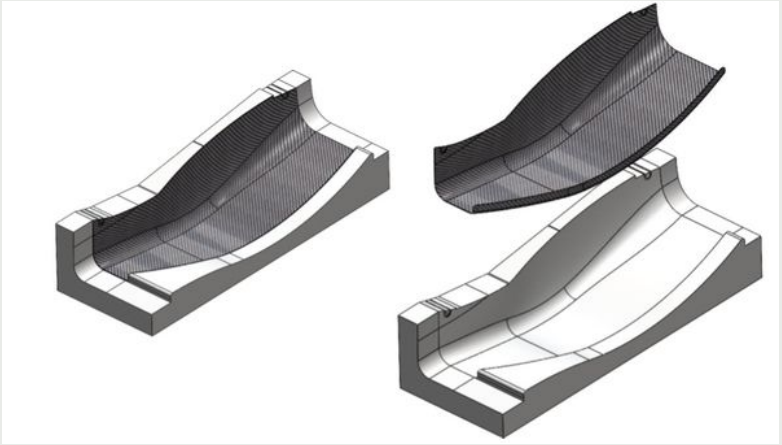
- Negative layer geometry to ensure smooth exterior surface finish

Result:

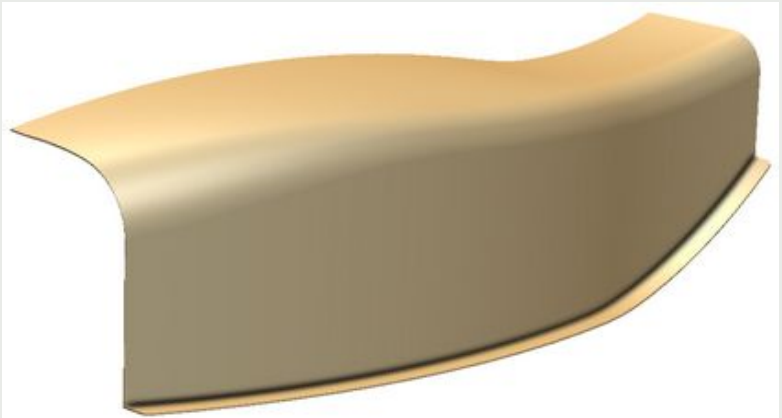
- Rigid, lightweight, durable
- Small defects/blemishes

Recommendations:

- Vacuum seal mould/part
- Apply less resin to avoid resin runaway



[8] Sidepod Negative mould geometry



[8] Sidepod

UVic Hybrid - Additional Parts: Floor Guards

Floor Guards:

The Floor Guards have **two functions**:

1. To create downforce through venturi tunnel channels. These tunnels creates a high velocity region in the middle by gradually narrowing the cross section towards the middle part.
2. Provide a seal for the sidepods

Material:

- 6 layers - 10 oz (Style 7500) Fiberglass wet layup

Mould:

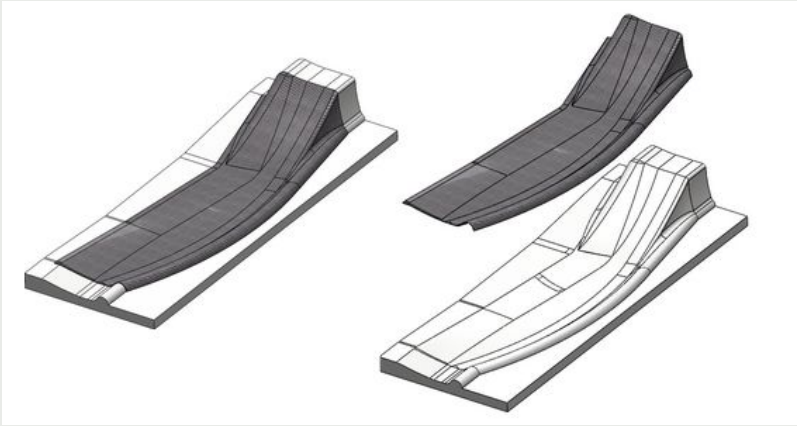
- Positive layer geometry to ensure smooth underside surface finish

Result:

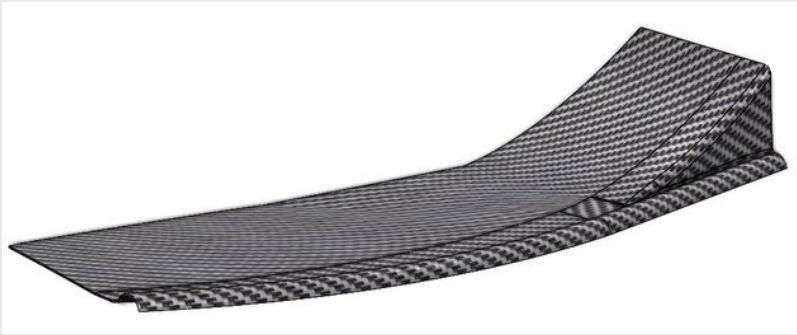
- Peel ply on the outer layer - rough surface finish
- Lightweight (7lbs each)

Recommendations:

- Apply more resin
- Vacuum seal to remove air between layers



[8] Floor Guards Negative Mould Geometry



[8] Floor Guards

UVic Hybrid - Summary: Side Pod | Floor Guard

The process for the side pods and floor guards was not adequately photographed due to time-sensitivity leading up to competition. The completed assembly, consisting of both side pods and floor guards has been photographed below.

[10] Floor guard

[11] Full assembly