FORMULA MONTHLY

JULY 2025

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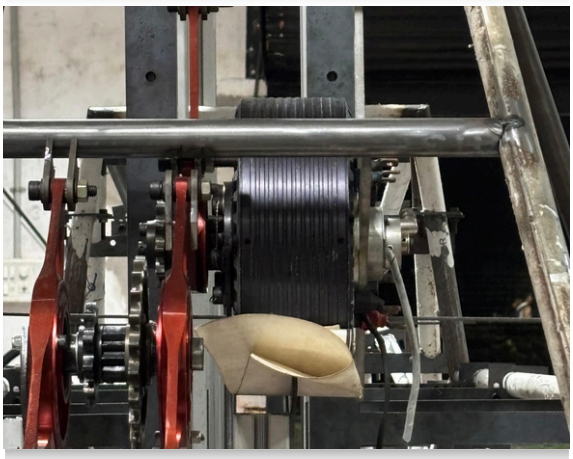
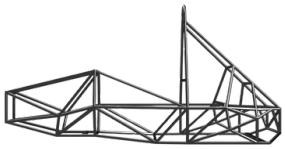
TAKE A SNEAK PEAK INTO OUR PROGRESS



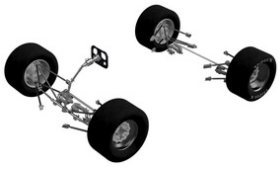


Structures

The transmission bracket position was finalized and welded, followed by chassis welding on the fixtures. Simultaneously, design work progressed on a multifunctional quick jack cum pushbar and a torsion jig, contributing to streamlined assembly and testing. These developments marked key steps in refining the car's structural integration.

Aerodynamics and composites

the Aerodynamics and Composites team has made progress across both design and manufacturing domains. The layup for all floor panels and SIS panels has been completed. Concurrently, the layup process for the front and rear wing flaps commenced. Validation of our manufactured parts was done. The design of the sidepod is currently in progress. Mounts for the aerodynamic package has been designed.



Vehicle dynamics

In July, Vehicle Dynamics made progress on carbon fibre links; testing inserts were manufactured and wishbone inserts were designed. Ackerman percentage was finalised at 69.4 percent. Progress was also made on the tyre model, and output graphs for rolling resistance variation with normal load and tyre pressure, as well as Fy vs SA graphs were output from the model

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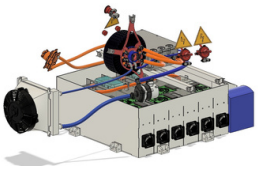
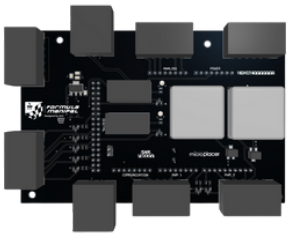
Transmission

This month, the transmission team welded the dual chain drive assembly onto the car, along with the differential. Careful consideration was taken to ensure the chain's tension and alignment. Next month, the assembly will be statically tested with the motor, to ensure that it is running properly.



E-Powertrain

This month, the E-Powertrain team successfully assembled the battery pack segments. The TSAC weight has been estimated at approximately 55 kg. Manufacturing of the Rear E-Box is progressing as planned. In parallel, the Energy Estimation and Heat Generation Determination models were developed and simulated using MATLAB and Simulink.

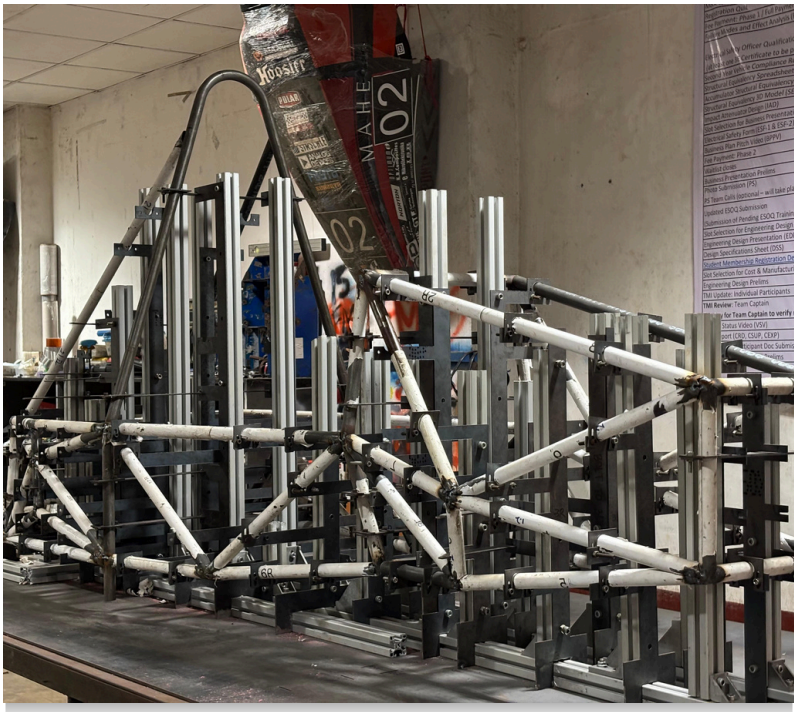


Electronics and controls

This month, the Electronics and Controls subsystem conducted functional testing of the PCBs for the upcoming vehicle. The tested components included the DAQ board (integrated with the VectorNav sensor) and the MOSFET + PDU module. Additionally, the wiring harness documentation was finalized.

Driverless

Contributed to the perception pipeline of the Formula Student Driverless Simulator and enhanced stereo camera mount designs. Simulated precharge and discharge circuitry for the main motor and controller. Currently working on harness design for the same. EBS design and development processes are also actively in progress.



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