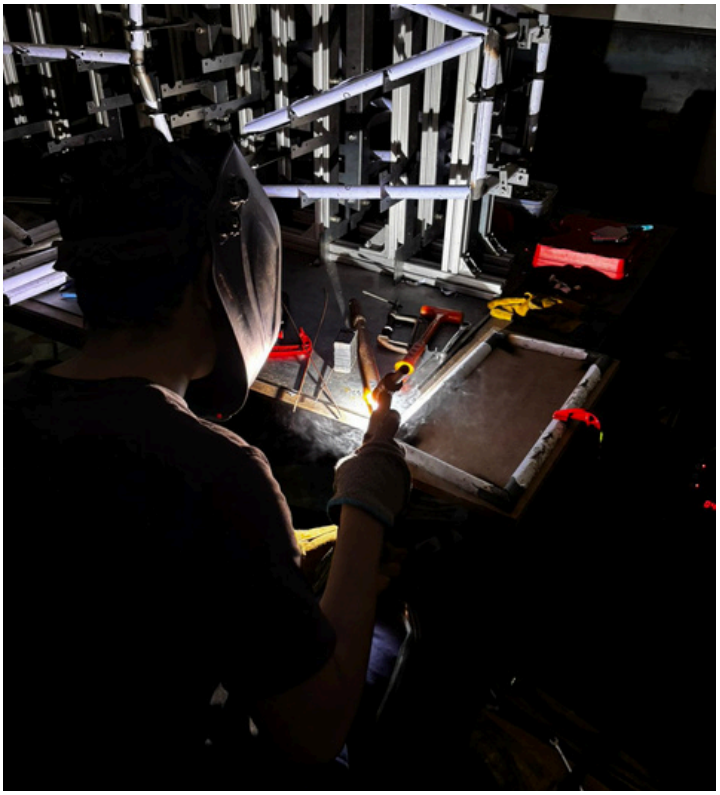
FORMULA MONTHLY

SEPTEMBER 2025

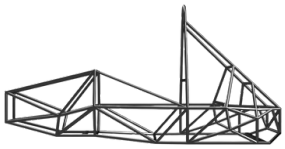
Formula Manipal
Engineered with Passion

KEEPING UP WITH FM

Formula Manipal
Engineered with Passion



TAKE A SNEAK PEAK INTO OUR PROGRESS

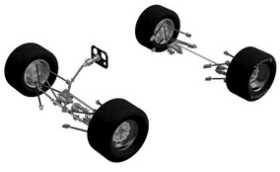


Structures

Rolling chassis fabrication has been successfully completed, with all structural nodes fully welded. This milestone marks the completion of the chassis

Aerodynamics and composites

This month, the Aerodynamics and Composites team focused on developing new iterations of the sidepod and radiator, running CFD simulations for the aeromap, manufacturing the endplate, and improving the surface finish of the existing flap elements.



Vehicle dynamics

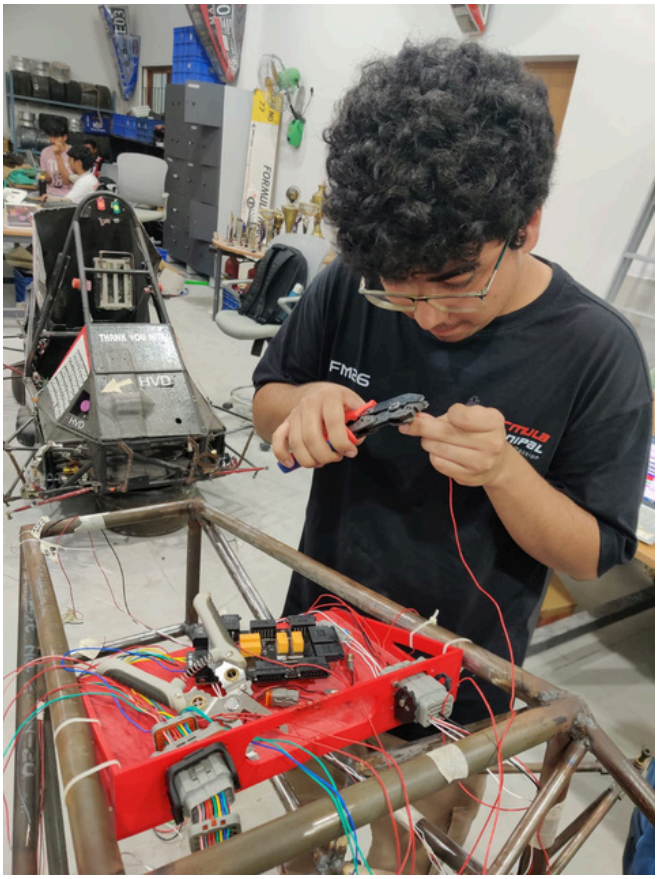
Vd inboard suspension brackets were tacked and welded
bellcranks were manufactured and installed
whole suspension assembly was installed and car was rolled to new ws
clevises were redesigned to improve clearences
working on the steering and brake system

KEEPING UP WITH FM

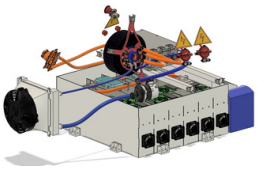
Formula Manipal
Engineered with Passion

Transmission

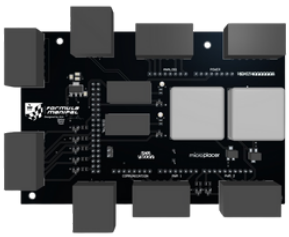
The transmission has been fully assembled and is undergoing preliminary checks to ensure accuracy and reliability. Once this stage is completed, the system will advance to static testing as the next step in performance validation



E-Powertrain



The TSAC assembly is progressing steadily, complemented by ongoing radiator design efforts aimed at optimizing thermal management. Additional composite layups are being executed to enhance the structural integrity and performance of the TSAC. Concurrently, detailed battery cell modeling and simulation are underway using Batemo, enabling accurate characterization and validation of electrochemical behavior for improved system-level performance.

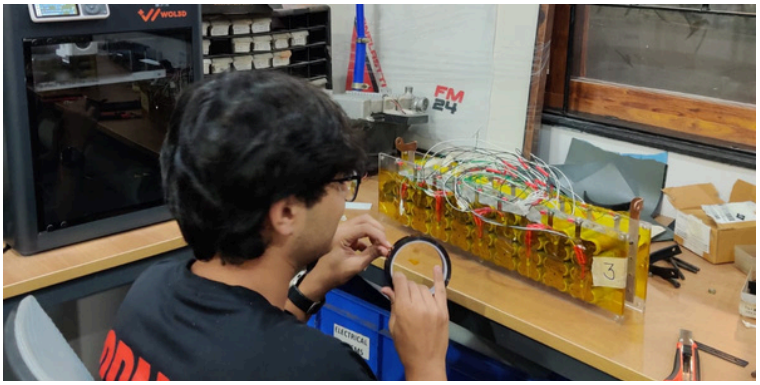


Electronics and controls

The wiring harness work is currently in progress, with successful completion of testing for individual components and PCBs. At the same time, the wiring harness documentation is being prepared in EPLAN to support accurate design and integration.

Driverless

The team has started implementing a new algorithm for Simultaneous Localization & Mapping, namely GraphSLAM
The Zed2i camera has been configured to accurately map out the cones that it detects
Motor and Motor Controller are actively being worked on, with the HV and LV already configured, software side is being worked on.
Our Motion Predictive Control algorithm is being configured to work on the FSDS simulator, along with our entire perception pipeline.



A NEW CHAPTER FOR OUR TEAM:

NEW WORKSHOP

Since 2007, our workshop has been more than just a space filled with tools, parts, and race car components—it has been the heart of our Formula Student journey. For nearly two decades, it has witnessed countless late nights, sparks from welding, the sound of engines roaring to life, and the shared determination of generations of team members striving toward the same dream: building and racing our own car.

This summer of 2025 marks the end of that chapter, we are saying goodbye to our old workshop and beginning a new era in a brand-new facility. Moving to the new workshop represents not only an upgrade in space and resources but also a symbol of how far we've come as a team. It gives us the chance to work more efficiently, to push innovation further, and to continue building on the strong foundation left by those who came before us.

We are grateful to everyone who contributed to making our old workshop a home. Now, we're excited to open this next chapter and see what the future holds in our new space. One thing is certain: the spirit, passion, and teamwork that defined us in the old workshop will carry forward stronger than ever.

THANK YOU SPONSORS

MANIPAL
ACADEMY of HIGHER EDUCATION
(Institution of Eminence Deemed to be University)

BATEMO UNDERSTANDING BATTERIES
Styrenix PERFORMANCE MATERIALS
ePLAN
eblu Ye Jodi Salamat Rahe
TOOLCON SYSTEMS
ANALOG DEVICES
TEAL TITAN ENGINEERING & AUTOMATION LIMITED
AMADA AMADA WELD TECH INDIA PVT LTD.
BENDER
ador peace of mind
Sika
FLUKE
ChassisSim The Winner's Edge
RHEINMETALL
LPS BOSSARD Proven Productivity
fracktal works
BHOR
M2M REPAIRS
EV TECH NEWS
LA DOLCE VITA DESSERT NEIGHBORHOOD

BUY A VOLT

RS 1000 OR US $20 IS ALL IT TAKES TO BE A PART OF THE FORMULA MANIPAL FAMILY!

FOR FURTHER ENQUIRIES CONTACT :

TEAM MANAGER – AMOGHA RAO
CONTACT NO : +91 9986507801
EMAIL ID- FORMULAMANIPAL@MANIPAL.EDU
WEBSITE – WWW.FORMULAMANIPAL.IN

FORMULAMANIPAL