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Aerodynamics and Composites

A radiator with a shroud setup was installed on the car for the first time, marking a significant upgrade to its cooling system. This setup improves airflow direction and enhances heat dissipation efficiency, contributing to better engine temperature management.

Transmission

During dynamic testing, the primary chain lost tension. The bracket was subsequently rewelded, after the chain was re-tensioned to restore proper alignment. Additionally, the secondary driving sprocket failed due to continuous impact loading, which occurred as a result of motor shuddering. This issue was resolved by tuning the motor controller's shudder compensation parameter. Following this adjustment, the car was tested successfully, with no further instances of shuddering.

Structures

The welded tubes, gussets, and aero brackets were completed, and the installation of the safety harness was finalized. Additionally, the radiator mount was welded securely in place. Following these preparations, full dynamic testing of the car was successfully conducted.

Vehicle Dynamics

As a result of dynamic testing, the Vehicle Dynamics team prepared a comprehensive set of changes as a result of this dynamic testing, opening the door for future dynamic testing. To improve the EV's performance in crucial areas including stability and drivability, certain parameters are being adjusted.

Electronics and Controls

Complete dynamic testing of the EV was conducted during which the Latch, AMS master, and TSAL were tested as part of the complete ECS setup. The wiring harness was heat-shrunk for durability and neatness, and all the PCBs were integrated and tested during dynamic testing. During the testing process, some PCBs were redesigned to incorporate additional functionalities, ensuring improved system performance and reliability.

E-Powertrain

The 16s battery segment was successfully spot-welded, and the TSAC was updated to ensure compliance with the rules. During testing, the motor mount failed due to impact loading, requiring further reinforcement. All battery segments were prepared and made TI-ready, ensuring readiness for integration. Comprehensive testing was conducted to validate the updates and ensure system reliability.

Driverless

The Driverless team worked on Minimum curvature path planning and held meetings with international FS teams regarding Steer by Wire and Break by Wire mechanisms, and their control algorithms.

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CONTACT :**

Team Manager - Vibhas Srivastava
Contact No - +91 8460730945
Email ID- formulamanipal@manipal.edu
Website - www.formulamanipal.in



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