

Renault F1 team

Sector:	Automotive
Technology:	SLA® systems, MJM printer, and OptoForm™ DCM™ machine

Mild Seven Renault F1 Team launches Advanced Digital Manufacturing (ADMSM) Center



The ADM Centre specifically concentrates on Formula 1 design and low-run production parts for the Renault F1 Team car. From the early days of their partnership with 3D Systems in 1998, the team had been gradually expanding the use of solid imaging technology from rapid prototyping to manufacturing of wind tunnel models. These steps have led to direct manufacturing of production parts for testing and racing. In 2001, the first SLA system parts were fitted into a racecar.

The facility features four SLA 7000 systems, an OptoForm direct composite manufacturing (DCM) system and a ThermoJet® printer. They provide advanced manufacturing tools to support the aerodynamic development of Renault F1 single-seat racecars. Future additions to the ADM Centre will include 3D Systems' SLS® (selective laser sintering) systems.



"3D Systems has been very responsive to the challenges posed by our environment. Together our engineers have worked for some time as a team to push the boundaries of this technology into real world applications," said Mike Gascoyne, technical director of Renault F1 Team UK.

"Digital manufacturing gives us the ability to test more parts for the same budget, which is a huge advantage for us. Not only can we build finished components a hundred times faster, but each part is infinitely more accurate."

Mike Gascoyne, technical director

"Digital manufacturing of actual components is exactly what we need for our aerodynamic program," Gascoyne added. "We can rapidly make 50 of every single part you see on the car for wind tunnel testing. After wind tunnel testing we can choose the best design."

"The changeover from last year's bodywork to a new aerodynamic package developed using ADM technology results in the Renault F1 Team racecar expected to go 1.5 seconds a lap quicker on the racetrack than earlier in the season. What's that worth in motor racing terms? You can't put a price on it." Flavio Briatore, managing director of Renault F1 Team said, "Formula 1 is an intensely competitive environment in which Renault F1 Team has historically excelled at developing crucial technological advantages over its rivals." 3D Systems technologies have become a new and effective manufacturing process to reduce both cycle time and cost. Companies are capable of building parts on demand directly from digital data.



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