

## F2008: Description and technical specifications



Maranello, 6th January 2008 - The F2008 is the fifty fourth single-seater built by Ferrari specifically to take part in the Formula 1 World Championship.

The design, codenamed internally as the 659, represents the Scuderia's interpretation of the regulations in force in 2008. A major new element of these is the introduction of a new electronic system to be used by all teams, known as SECU (Standard Electronic Control Unit) and produced by MES (McLaren Electronic Systems.) It consists of a single control unit and a software system, the development of which ends as the season begins. Other areas affected by rule changes are: gearbox, which must be used for four consecutive events; safety, with the introduction of higher side protection around the driver's helmet; materials, with a limit to the type of composites that can be used. As a result of these rules, there has been an increase in the weight of the car. All aerodynamic surfaces have been completely revised, however the current version will be replaced by a completely different configuration in time for the first race. In fact, an intensive and all encompassing development programme is planned to run throughout the season. The monocoque has been further cut away under the driver's legs and the side pods and engine cover are more tapered. The suspension system has been reworked and developed around the new aerodynamics.

The wheelbase and weight distribution have been adapted to meet the challenge of the new regulations and on the basis of lessons learned last year in terms of the performance of the Bridgestone tyres. Changes to the technical and sporting regulations in terms of electronics, alongside the introduction of the SECU, have led to the removal of a host of a driver aids, such as traction control and engine braking and the electronically assisted starting system, and also mean that management of the differential, engine and gearchange are much simpler. The gearbox casing is produced in carbon, while the transmission continues to be mounted longitudinally. For the second consecutive year the gearchange is fitted with a quick shift system, adapted to the SECU software and further speeded up. In dealing with the reliability aspect of the new regulations, Shell has played a key role in defining the lubricants for the gearbox. The braking system has been updated with new callipers and innovative concepts regarding cooling.



The 056 engine is mounted longitudinally and continues as a load bearing element. Its basic structure remains unchanged compared to the unit homologated at the start of last season, while its auxiliary systems, air and fuel intakes have been further developed. The technical regulations also call for the use of fuel corresponding to European Union norms, with a content of components derived from biological sources equal to 5.75%. As usual, during the design and development stages of the entire car, our technical partners played an important role. Apart from previously mentioned significant input from Shell, also worthy of note is the contribution of the Fiat Research Centre, especially in providing simulation systems and Brembo for its work in developing the braking system. As is now traditional, a great deal of attention was paid to the performance and optimising of the materials used at the design stage and through quality control, striving to maximise performance levels while attaining the highest possible safety standards.

## TECHNICAL SPECIFICATIONS

### Chassis

Carbon-fibre and honeycomb composite structure

Ferrari longitudinal gearbox  
Limited-slip differential

Semiautomatic sequential electronically controlled gearbox  
quick-shift

Number of gears: 7 + Reverse

Ventiled carbon-fibre Brembo disc brakes

Independent suspension, push-rod activated torsion springs front and rear

Weight (with water, lubricant and driver): 605 kg

BBS Wheels (front and rear): 13"

### Engine

Type: 056

Number of cylinders: 8



Cylinder block in cast  
aluminium: V 90°

Number of valves: 32

Pneumatic distribution

Total displacement: 2398 cm<sup>3</sup>

Piston bore: 98 mm

Weight: >95 kg

Magneti Marelli digital electronic injection

Magneti Marelli static  
electronic ignition

Fuel: Shell V-Power ULG 64

Lubricant: Shell SL-1098