

**1. Downforce Keeps Racecars on Track**

Racecars use aerodynamic elements like wings and diffusers to create downforce, pushing the car into the ground for better grip at high speeds.

**2. F1 Cars Can Drive Upside Down**

Due to extreme downforce, a Formula 1 car *could* theoretically drive upside down in a tunnel at speeds over 120 mph.

**3. Carbon Fiber is the Material of Choice**

Most racecar chassis are made from carbon fiber — it's lighter than aluminum and stronger than steel.

**4. Race Tires (Slicks) Have No Tread**

Slick tires provide maximum contact with the road. Treads are only used in wet conditions.

**5. NASCAR Uses V8 Engines**

NASCAR stock cars run naturally aspirated V8 engines that produce over 750 horsepower.

**6. F1 Engines Rev to 15,000 RPM**

Modern Formula 1 power units are hybrid V6 turbo engines that can rev up to 15,000 RPM.

**7. Brakes Use Carbon-Carbon Discs**

Racecars use carbon-carbon brake discs that can reach temperatures over 1,000°C (1,832°F) during a race.

**8. Refueling is Banned in F1**

Since 2010, Formula 1 bans refueling during races for safety and strategic reasons.

**9. Aerodynamics Matter More Than Power**

At high speeds, reducing drag and optimizing downforce often makes a bigger performance difference than adding horsepower.

**10. Racecars Use Sequential Gearboxes**

Instead of H-pattern manuals, many racecars use sequential gearboxes for faster, more reliable shifting.

**11. WEC Endurance Cars Can Race for 24 Hours**

In races like Le Mans, cars and drivers compete continuously for 24 hours, covering over 3,000 miles.

**12. Racing Fuel is Different from Pump Gas**

Race fuel typically has higher octane levels, better combustion characteristics, and sometimes includes ethanol blends or exotic additives.

**13. F1 Cars Weigh Around 798 kg (1,759 lbs)**

Including the driver, with fuel excluded, that's extremely light given the power they produce.

**14. Some Racecars Use DRS (Drag Reduction System)**

In F1, the DRS flap opens on the rear wing to reduce drag and increase straight-line speed when allowed.

### 15. Telemetry is Key to Performance

Racecars constantly transmit data (throttle, brake pressure, tire temps, etc.) to engineers for real-time strategy adjustments.

### 16. G-Forces Can Exceed 5Gs

Drivers in F1 and other series regularly experience over 5 times the force of gravity during braking and cornering.

### 17. Tires Can Last as Little as 10 Laps

Soft compounds offer extreme grip but degrade quickly, often forcing multiple pit stops.

### 18. Brake Bias is Adjustable Mid-Race

Drivers can fine-tune brake distribution between front and rear wheels using a dial or switch.

### 19. Cockpits are Designed to Be Fire-Resistant

Racecar interiors use fire-retardant materials, and drivers wear flameproof suits, gloves, and helmets.

### 20. Pit Stops Can Be as Fast as 1.8 Seconds

In Formula 1, the fastest recorded 4-tire pit stop took just 1.82 seconds by Red Bull Racing.



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