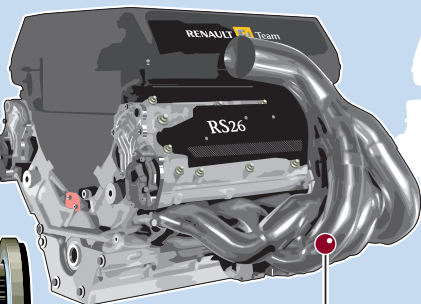


Smaller engine heralds new era for Formula One

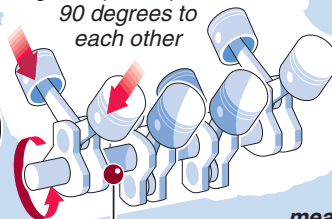
Among the innovations for the 2006 F1 season, the introduction of a smaller, less powerful 2.4 litre V8 engine – replacing the 3.0 litre V10 in use since 1998 – will have the biggest impact on car design as the consequences of its performance become apparent

V8 ENGINE: 10cm shorter than V10, minimum weight 95kg – increase of around 5-10kg. Power reduced to about 750bhp – down 15-20%. *Scuderia Toro Rosso* will run restricted *Cosworth V10* (with air restrictor and limited revs)



Less exhaust pipe mass at rear of sidepods

Eight-cylinder flat plane engine – piston pairs at 90 degrees to each other

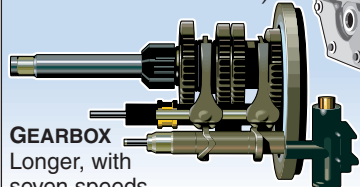


VIBRATION: Caused by imbalance in flat plane V8. Counterweights, or change in firing order, can reduce vibration

V8's lesser torque and power means engines will be running at peak revs and fully open throttles for greater proportion of race

GEARBOX

Longer, with seven speeds to make up for lower torque



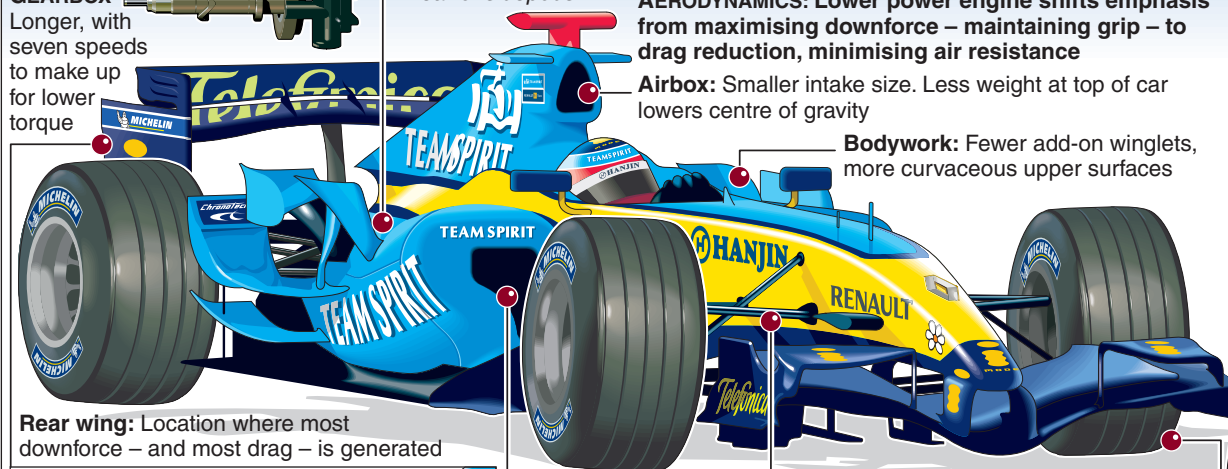
Camshaft

running at peak revs and fully open throttles for greater proportion of race

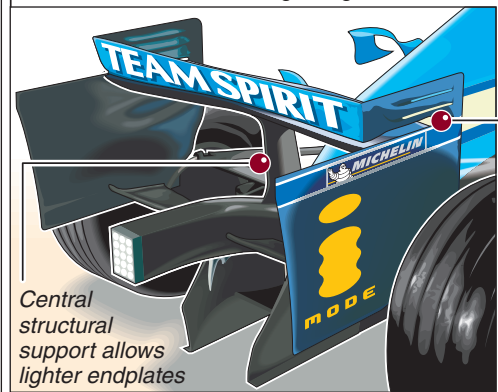
AERODYNAMICS: Lower power engine shifts emphasis from maximising downforce – maintaining grip – to drag reduction, minimising air resistance

Airbox: Smaller intake size. Less weight at top of car lowers centre of gravity

Bodywork: Fewer add-on winglets, more curvaceous upper surfaces



Rear wing: Location where most downforce – and most drag – is generated

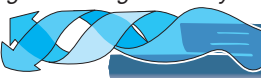


Central structural support allows lighter endplates

Sidepods: Smaller intake ducts – less heat reduction required

Endplates more shaped to increase airflow through wing, maximise downforce

Reduced vortices in airflow at rear wing and other corners give greater drag efficiency



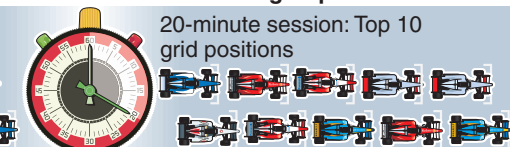
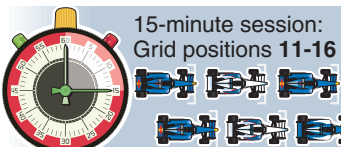
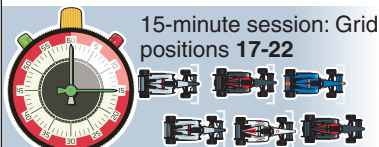
Front wing: "Zero keel" suspension – front wishbone mounted directly to chassis to improve airflow coming off front wing

Tyres: Changes during race will be allowed again. Tyre warm-up will be slower, less likelihood of overheating on hot tracks

Sets Dry Wet Extreme



QUALIFYING: New knockout format – slowest cars in each session eliminated and allocated grid position



Back 12: Cars placed in *parc ferme*. Before race, fuel load can be refilled to any level

Top 10: Fuel must be refilled to same level as at beginning of final qualifying session