



Audi R15 TDi



Audi followed the enormously successful R10 TDi with the R15 TDi in its campaign for a ninth outright win at Le Mans in 2009. The R15 is more aerodynamically efficient, lighter and utilises a more compact, lighter and efficient engine.

For Audi's second generation turbo-diesel sportscar, gone was the 5.5 litre V12 to be replaced by a 5.5 litre V10. Audi have always stated they are more interested in Le Mans and Sportscar racing than Formula 1 as it provides a series where the cars are more relevant to standard production road cars and development is primarily about efficiency. The new V10 delivered improvements in both fuel consumption and CO2 emissions.

The R15's output is reduced by 50 hp from the R10, now down to 600 and torques matches that down from 1100 nM to 1050. Changes to the turbo-charging and fuel

injection improved engine response and that coupled with the lighter weight resulted in a much more nimble car. The focus of Audi's diesel program with the R10 had been efficiency over speed, with the R15 Audi wanted to re-introduce the speed factor, not that the R10 was any slouch..

Dr. Wolfgang Ullrich, Head of Audi Motorsport states, "The R15 TDi has many detailed technical solutions never seen before on a sports prototype. To a certain extent we followed entirely new routes." The use of Computational Fluid Dynamics, (CFD), which Audi had used for aerodynamically tuning the 2008 DTM Championship winning A4 resulted in a rear wing suspended from the top, an elevated nose and suspension and numerous other aero details to reduce drag, improve airflow where required and increase downforce when needed.

Audi R15 TDi

- Diesel V10
- Twin Turbo
- 5499 cc / 335.6 in³
- Winner Sebring 12 Hours
Allan McNish
Tom Kristensen
Rinaldo Capello
- 600 hp
- 1050 nM
- 900 kilo 1984.2 lbs
- 5 speed Semi-Automatic



2009

Audi

R15 TDI



German

Race Le Mans

The electric sees the introduction of a lightweight lithium-ion battery as used in some hybrid vehicles. That battery powers light emitting diodes for low beam in the headlights. The use of LEDs is becoming a distinct design feature across the Audi line.

2009 was the year that car manufacturers were pulling out of race services left right and centre and Audi was no different. Management decided to forgo the American LMP1 series in favour of an all out effort for Le Mans with the Sebring 12 hour being used for testing and development. Full race results, drivers and chassis rundown for Sebring and Le Mans will follow in part 2 of this car of the day. While the R15 proved successful at Sebring we all know that Peugeot really upset the apple cart with their win at Le Mans.

Rod Halligan



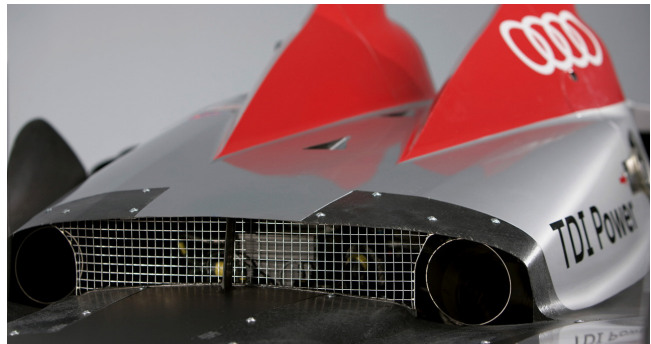
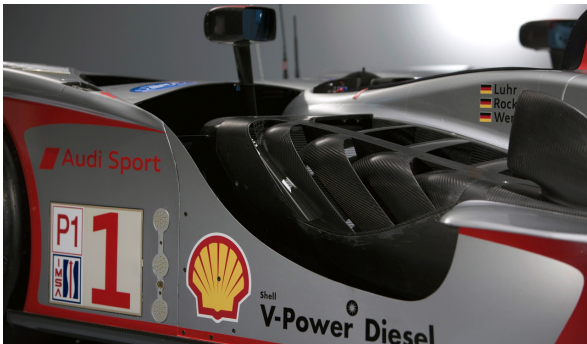
Audi R15 TDi	
Year	2009
Sebring Winner	2009
ENGINE	
Configuration	V10 Diesel
Layout	Mid Longitudinal
Induction	Twin Garrett Turbos
Valvetrain	DOHC, 4 Valves
Fuel feed	Direct Fuel Injection
Displacement	5499 cc / 335.6 in ³
Power	600 hp
Torque	1050 nm
BODY	
Carbon Fiber Monoque - Aluminum Core	
Weight	900 kilo 1984.2 lbs
Length	4650 mm 183.1 in
Width	2000 mm 78.7 in
Height	1030 mm 40.6 in
DRIVE	
Transmission	X-Trac 5 speed Sequential Sachs Ceramic Clutch
SUSPENSION	
Front	Double Wishbones Coil Springs Over Dampers, Anti-Roll Bar
Rear	Double Wishbones Coil Springs Over Dampers, Anti-Roll Bar
WHEELS / TYRES / BRAKES	
Wheels	OZ Magnesium Forged
Front tyres	33/68-18 Michelin Radial
Rear tyres	37/71-18 Michelin Radial
Front brakes	Carbon Composite Discs
Rear brakes	Carbon Composite Discs



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