



## LE MANS ENDURANCE SERIES

### A V12 HDi DPFS for the Peugeot 908

On 14 June 2005, Peugeot announced its decision to take up a new technological challenge: to win one of the most prestigious and most demanding motor races in the world, the Le Mans 24 Hours, with a car powered by an HDi diesel engine, equipped with a diesel particulate filter system.

This symbolic race, which attracts more than 200,000 spectators every year, will be used by Peugeot as an opportunity to showcase their brand values: reliability, dynamic performance, style illustrated by the feline lines and, finally, innovation expressed, amongst other means, by the use of environmentally friendly technology.

### Why will Peugeot be at Le Mans with a diesel engine?

The PSA Peugeot Citroën group is today a world leader in diesel technology. « Common rail direct injection » HDi technology can be found on more than 60% of vehicles sold by the brand in Europe in 2005 and more than 70% in France. In 2000, Peugeot confirmed its commitment and strategic policy to reduce exhaust emissions, by fitting as standard equipment on the HDi engine in the 607 a diesel particulate filter system. In December 2005, Peugeot celebrated the production of the millionth vehicle fitted with a diesel particulate filter system.

Today, it is the production car which brings its HDi diesel particulate filter technology to the competition arena, in order to show its qualities in extreme conditions of endurance and performance, all the while respecting the environment.

## The Peugeot HDi diesel DPFS:

The choice of engine architecture has been based on a 100° twelve-cylinder V design, with a 5.5 litre cylinder capacity.

This is the maximum cylinder capacity that regulations allow and was chosen for its efficient operation at low speed. It also enables engine power to be limited in the first instance, but also enables further development.

The number of cylinders results, on the one hand, from the wish to keep bore diameter very close to that of a production series engine, in order to make best use of Peugeot's diesel combustion knowledge and, on the other hand, to limit the stroke to a reasonable value. The V12 architecture, well known for its good balance, also reduces vibration to a minimum.

The 100° V angle, of the V12 architecture, allows the height of the centre of gravity to be lowered without affecting the torsional rigidity of the engine.

Two diesel particulate filters are mounted at the end of each of the exhaust systems. Through technology which has come directly from production cars, they will provide a guaranteed control of exhaust emissions under all operating conditions.

The two diesel particulate filters fitted to the engine being presented, carry the numbers 1.195.520 and 1.195.521 which are the numeric production numbers of the filters in the overall production total of all filters since the introduction on to Peugeot vehicles.

The level of performance expected – more than 515kW (700 bhp) of power and a torque output greater than 1.200 Nm – is without precedent in a diesel engine and is a direct result of Peugeot's current level of know-how in diesel technology, linked to the mechanical characteristics of the V12.

Bosch is one of Peugeot Sport's essential partners on this project, making an active contribution to the specification of the fuel injection components and to the engine management system.

## Peugeot Sport's engine department:

With the arrival of this new challenge, Peugeot Sport was re-organised at the end of the 2005 World Rally Championship.

Claude Guillois, under the supervision of technical manager Bruno Famin, was named as manager of the engine department thanks to his experience of race engines, supercharged engines and knowledge of production engine design.

The department is based at Peugeot Sport's Vélizy facility, which includes three engine test beds, including one for simulation.

## The next important dates:

- **28 September 2006:** presentation of the scale model at the Paris Motor Show.
- **30 September 2006:** Peugeot V12 HDi DPFS engine to be run on engine test bed.
- **Beginning December 2006:** first drive of the car by test driver Éric Hélary.

In addition to Peugeot's three main technical partners, Total, Michelin and Bosch, Eurodatacar will be working with them on the Le Mans Series programme.

15 June 2006

# Extracts from Peugeot's achievements

<b>1895</b>	<i>A Peugeot type 7 wins the Paris-Bordeaux-Paris.</i>
<b>1913, 1916, 1919</b>	<i>Peugeot three times winner of the Indianapolis 500 Miles.</i>
<b>1963, 1966, 1967, 1968</b>	<i>Four victories for the Peugeot 404, in the East African Safari.</i>
<b>1975</b>	<i>Victories for the 504 saloon in the Safari Rally, the Moroccan Rally and the Bandama Rally.</i>
<b>1976</b>	<i>Victories for the 504 in the Moroccan Rally and for the 504 V6 Coupé in the Bandama Rally.</i>
<b>1978</b>	<i>Victories for the 504 V6 Coupé in the Safari Rally and the Ivory Coast Rally.</i>
<b>1985 et 1986</b>	<i>Peugeot takes two titles in the world manufacturers championship with the 205 Turbo 16 and the two drivers titles.</i>
<b>1987, 1988, 1989, 1990</b>	<i>Peugeot wins the Paris-Dakar four times, with the 205 Turbo 16 then the 405 Turbo 16.</i>
<b>1992</b>	<i>Peugeot world sports car champion with the 905. Victory at Le Mans 24 Hours.</i>
<b>1993</b>	<i>Historical triple finish for the 905 at Le Mans 24 Hours.</i>
<b>1994</b>	<i>Peugeot Supertourisme champion of France with the 405.</i>
<b>1996 et 1997</b>	<i>Peugeot takes the title of French rally drivers champion twice in a row with the 306 Maxi.</i>
<b>1997</b>	<i>Peugeot picks up the title of Supertourisme champion of Germany with the 406.</i>
<b>2000, 2001, 2002</b>	<i>Peugeot takes three titles as world manufacturers champion with the 206 WRC and two drivers titles</i>
<b>2003</b>	<i>Drivers rally champion in France (206 WRC). Drivers rally champion in Europe (206 WRC). Drivers touring champion in Denmark (307). Drivers touring champion in Finland (206 WRC).</i>
<b>2004</b>	<i>Peugeot Supertourisme champion in France with the Coupé 406 Silhouette. Drivers rally championship title in Finland (206 WRC). Peugeot manufacturers' rally championship title in Spain. Peugeot rally champion of Portugal (206 Super 1600).</i>
<b>2005</b>	<i>Drivers rally championship in France (206 WRC). Drivers Supertourisme championship in France (407 Silhouette). Drivers rally championship title in France (206 WRC). Drivers rally title on loose surface(206 WRC). Peugeot rally champion of Hungary (206 WRC). Peugeot rally champion of Italy on loose surface and asphalt (206 WRC).</i>

# The history of diesel at Peugeot

<b>1959</b>	<i>The 403 is the first Peugeot production car to be fitted with a diesel engine.</i>
<b>1965</b>	<i>A special single seater 404 coupé diesel beats 40 world records on the Montlhéry circuit.</i>
<b>1967</b>	<i>Peugeot presents the smallest diesel engine in the world (1200 cm<sup>3</sup>) on the 204 estate at the Paris motor show.</i>
<b>1979</b>	<i>604 Turbo diesel: first car of this type to be sold into the European market.</i>
<b>1998</b>	<i>The 406 is the first Peugeot car to be fitted with a common rail diesel system.</i>
<b>2000</b>	<i>World first on the 607: it is the first car with an HDi engine to be fitted with a particulate filter (DPFS).</i>
<b>2003</b>	<i>Peugeot launches the RC Cup, a promotional formula based on the the RC Diamonds powered by an HDi engine with particulate emission filter.</i>
<b>2005</b>	<i>In December, Peugeot celebrated the production of the millionth vehicles fitted with a diesel particulate filter system (DPFS).</i>