Bugatti takes part in Qatar Motor Show for first time

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Developing the Bugatti Veyron 16.4 Grand Sport presented the marque renowned for impeccable automotive solutions, aesthetics and driving dynamics with a whole new set of challenges. Significant modifications to the vehicle's complex structure were needed to enable open-top driving. Incorporating a host of new and innovative safety and equipment features, the world's fastest and most exciting roadster is even greater than before. It is immediately recognizable by its slightly higher windscreen, stylized daylights and lightweight, transparent polycarbonate roof.

The main challenge when developing the new Bugatti Veyron 16.4 Grand Sport with its removable hard-top roof resulted from the unique structure of the Veyron. An optimum combination of rigidity and lightweight engineering ensured an extremely strong but very lightweight passenger cell. As the roof was an integral part of the vehicle's structure, removing it meant the load paths had to be completely redesigned to maintain the vehicle's rigidity and safety during crashes - and the car needed to offer additional protection from side impacts and rolling. As a result, the monocoque structure was reinforced around the side skirts and the transmission tunnel.

The doors of the Grand Sport are made of carbon fibre, and house an integrated longitudinal beam. In the event of an accident, this transfers the load from the A to the B-pillar, thereby dissipating impact energy. Furthermore, the two redesigned air intakes for the 16-cylinder mid-engine now feature 10-centimetre-wide carbon-fibre elements to offer protection in the event of a roll.

The panorama roof gives both the driver and passenger a comprehensive all-round view and creates the impression of a spacious interior. In warmer climates, the polycarbonate roof offers protection against solar radiation.

When the roof is on, the Bugatti Veyron 16.4 Grand Sport can reach a top speed of 407 km/h, while speeds of up to 360 km/h are possible with the roof off. Should it rain, an innovative soft-top roof, like an umbrella, stored in the luggage compartment, can be opened up easily at any time. When this soft-top roof is on, the car can travel at up to 160 km/h.

The interior features moisture-resistant backstitched leather and a range of new equipment, including a reversing camera with a 2.7-inch monitor integrated in the rear-view-mirror, and a "Puccini" sound system with digital signal processor, especially developed for open-top driving.

More than just an open-top Veyron

"When I had the chance to test-drive the new Grand Sport for the first time, I was filled with excitement," said Pierre-Henri Raphanel, Bugatti's pilote officiel, "as soon as I shifted into second gear, I immediately knew this was a completely different car. Even with the roof on, the driving experience was more intense - I could feel it in my fingertips and at the base of my spine. The car was more precise with less understeer, almost as if you had taken some filters away from the suspension and the steering." The former Le Mans winner has probably driven more kilometres in a Veyron than anyone else, presenting the car to numerous customers and the press. "I never imagined that the driving experience could be improved so much," he said. When the roof is off, the sound of the engine, mixed with the sound of the road and the wind, creates more excitement and gives the driver the unique cabriolet feeling. "And when you hear the air intakes sucking heavily with a slurping sound behind your neck, you think you're about to be launched out of the car!" he laughs.

The Bugatti Veyron Grand Sport 16.4 will be assembled by hand at the company's head-quarters in Molsheim, France over the next few years. The standard version costs 1.4 million euros (excluding taxes and delivery). Bugatti offers many ways to customize it.