Porsche Essay, Research Paper

I have narrowed down my project to just Porsche vehicles. I am not going to talk about the man behind the car to much. I have found several web sites that have criteria about Porsche and their different models and their performance. I will discuss these subjects along with others. The history of Porsche will be discussed. I will also talk about some different models such as the 911 GT3. I will also discuss the GT1 and GT3 race seriesI will also discuss Porches latest press releases.

History

The early years (the 40’s & 50’s)

1948: The very first Porsche.

The very first Porsche 356/1 developed by Ferry Porsche and his proven team is completed in the Austrian town of Gm?nd and receives technical homologation on June 8,1949: Presentation of the Cisitalia racing car.The Cisitalia racing car is presented at the Torino Motor Show, featuring a 12-cylinder dual-compressor boxer engine in mid ship arrangement, 1493 cc, 385 bhp at 10600 rpm, top speed 300 km/h (186 mph), four-wheel drive with individual drive activation of the front wheels.

1950: Porsche returns to Zuffenhausen

Porsche returns to Zuffenhausen, near Stuttgart. Thus begins a new chapter in Porsche’s history. In rooms rented from the Reutter car body factory, production facilities are set up. Porsche becomes an independent automobile factory.

1951: Porsche’s first international success in Le Mans

Professor Ferdinand Porsche Sr. dies, aged 75.

The Porsche 356 scores its first international success in motor racing, winning the 1100-cc category in the 24 Hours of Le Mans.

1953: Porsche 550 Spyder

Presentation of the Fuhrmann engine for the Porsche 550 Spyder: 1.5 liter four-cylinder, four camshafts, 110 bhp

1956: the 10,000th Porsche 356

Commemorating the 25th anniversary of the Company, the 10,000th Porsche 356 leaves the production hall. Porsche has already scored 400 victories in motor racing. The 1.5 liter 550 Spyder, driven here by Richard von Frankenberg, becomes the “shark in the pool of perch” in major races, where it competed against cars with more horsepower.

1958: Commemorating the 25th anniversary of the Company, the 10,000th Porsche 356 leaves the production hall. Porsche has already scored 400 victories in motor racing.

The 60’s and 70’s

1961: Work starts on a new six cylinder engine

Behind closed doors, work starts on a new Porsche with a six cylinder engine. The body is designed by Ferdinand Alexander Porsche, Ferry Porsche’s son.

1963: Porsche 911.At the Frankfurt International Automobile Show, Porsche presents the 911. The underlying concept of an air-cooled flat engine in the rear is retained.1964: Production start of the Porsche 911.1969: Porsche 914-4 and 914-6. Presentation of the 914-4 and 914-6 mid-engine sports cars at the Frankfurt Motor Show.Porsche for the second time wins the World Championships for works cars. For the second consecutive year, the 911 wins the Monte Carlo Rallye.

1970:The Porsche 917 (4.5-litre 12-cylinder boxer engine) shown to the public for the first time in Geneva wins virtually all races the world over, including the World Championship of Makes and the Endurance World Championship. Work starts at the Weissach Research and Development Centre.

1972: Porsche goes public. Under the guidance of Ferry Porsche as Chairman of the Supervisory Board, Porsche goes public.

1974: The first 911 Turbo

With the 911 Turbo a new era begins: exhaust: exhaust turbo charged autos.

1975: The first Transaxle sports car. Porsche introduces the 924, the first Transaxle sports car with the engine at the front, the transmission and drive wheels at the rear. Production of the “big Porsche”, the 928, starts in Stuttgart: V8 light-alloy engine, Transaxle configuration, Weissach axle. To this day the only sports car in the world ever to win the title of Sports Car of the Year.

The 80’s & 90’s

1982: The Porsche 956, the most successful racing/sports car of all times, begins its victorious career.

1985: Launch of the Porsche 959, a spearhead in new technology. A limited number are built. In 1986, it is the first sports car to win the Paris-Dakar Rally.

1988: Launch of the new 911 Carrera 4.1989: Introduction of Tiptronic four-speed automatic transmission operated either manually (as a function of load) or serving as a fully automatic transmission. Featured for the first time in the new 911 Carrera 2.

1993: Presentation of the first Boxster concept car at the Detroit Auto Show. Launch of the new 911 Carrera at the Frankfurt Motor Show.

1995: The new 911 Turbo with its bi-turbo engine becomes the first production car in the world with onboard diagnosis II, friction-welded hollow-spoke wheels and the lowest emission rating of all production cars in the market.

1996: Production starts of the all-new Porsche Boxster mid-engine roadster after only 31/2 years of development (counting from the completion of the car’s specifications). Weissach celebrates its 25th anniversary 1997: Presentation of the new Porsche 911 with a water-cooled six-cylinder boxer engine.

Models

911 GT3

Unlike other cars in its class, the new 911 GT3 wasn’t created on a computer. It’s the work of a team of engineers with hands-on experience of the world’s greatest circuits. A worthy successor to the legendary 911 Carrera RS.

The new 911 GT3 is available in two variants: as a base version and as a Club sport version. It represents the perfect symbiosis of driver and car, offering unrivaled immediacy and precision of response. It’s more agile, and has performance to spare. It’s more direct, and built with one aim in mind: to get there faster. It’s also unmistakably Porsche. Stunning performance is not an issue. This car delivers sheer driving pleasure, without any compromises. And that doesn’t just apply to the racetrack.

The new 911 GT3 is a sports car designed very much with everyday road use in mind. But with the power reserves you’d expect from a Porsche. That’s because the new 911 GT3 is also a racing car built for speed. Anything else just wouldn’t be worthy of the Porsche name.

The GT3 engine is an evolution of the power plant used in the Porsche 911 GT1, the car that brought a 50th anniversary Porsche one-two at Le Mans in 1998. The body is based on that of the 911 Carrera, while transmission, steering and chassis are all designed for motor sport success and can be set up to match individual circuit characteristics.

Boxter

The Porsche Boxster is the direct translation of probably the most classic of all roadster concepts with unmistakable Porsche styling. It embodies a unique combination of rational and emotional aspects. Opens in 12 seconds and closes again in 12 seconds. 6 cylinders, central engine, 2.5 liter displacement, 150 kW. Monobloc brakes, 2 full-size airbags, 2 seats, and also 2 luggage compartments. And, as an optional extra, 2 side airbags (POSIP – Porsche Side Impact Protection System).

Pure driving enjoyment. The Boxster combines classic characteristics with modern features, power with elegance, dynamism with design. And, because it is a Porsche, it represents driving enjoyment and suitability for day-to-day use as well as the symbiosis of active and passive safety like no other roadster. Although its design is bound to tradition, its implementation is always oriented to the technologically feasible.

The flat-six boxer engine — a powerplant Car & Driver called “one of the ten best engine designs ever”. Its name stems from the punch and counter punch of horizontally opposed pistons, while its virtues stem from decades of race-bred refinement. The latest evolution, a liquid-cooled design featuring dual overhead cams and four valves per cylinder, delivers its impressive power and mid-range punch without breaking a sweat.

The numbers tell the story: 201 horsepower at 6,000 rpm and 181 lb-ft of torque at 4,500 rpm. Perhaps even more impressive is the fact that over 80 percent of the engine’s torque is available at a low 1,750 rpm. An outstanding power-to-weight ratio of 1:6,5 also ensures that there’s always plenty of power to spare.

356

As the Porsche design team worked on a Cisitalia grand prix car, Ferdinand was thinking how he could make something like the Italian car with pieces from Volkswagen, who was the only kind of pieces and parts that he could get in Germany and Austria after the war. He did manage to build a sport car. The frame was made from a network of tubes. A Volkswagen engine was fitted in the rear, with its gearbox in front of the axle to give the car a better balance. It was a 1131 cc flat-four-air-cooled engine who was boosted from 25 bhp to 40 bhp. The torsion-bar rear suspension also had to be turned around which gave the car the characteristic over steering. The design project number 356 stated in June 1947 and the first Type 356 car ran in chassis form in March 1948. Erwin Kommenda designed the body. This basic layout held for 27 years. The first prototype was sold in July 1948 to von Senger, a Swiss dealer, for 7000 francs to help finance of more parts. It was brought back in 1958 and can be seen at the Porsche museum.

At the same time, the designers were working on a similar model, the Type 356/2. Its engine and rear suspension were the right way, it had a platform chassis, but still they used the Volkswagen mechanical layout. Von Senger and an associate Bernhard Blank, ordered 50 cars. They also arranged supplies of components and metal. The mechanical specifications varied, but the engine was about 1100 cc and top speed about 141 km/h. The 356/2 became “the 356″.

Porsche moved to Stuttgart in 1950. They rented from Reutter coachworks in Zuffenhausen because the United States Forces used the firm’s old works. The first car was finished in May 1950, 500 was produced in March 1951 and 1000 in September 1951. They had 1100 cc and 1300 cc engines. Porsche sold cars in several countries : Sweden, USA, France etc. They made several changes in 1951-52 : 1500 cc engine, one piece windscreen, ventilated steel disc wheels, stronger bumpers and they modernized the instruments. They designed a roadster for the American marked with a body of aluminum. It sold well in America from April 1952. Fewer cars were ordered with 1100 or 1300 cc engines, so the 1500 engine was offered in two stages of tune : standard and 1500 Super. Because of this bigger engine, Porsche designed a new synchronized gearbox. Larger brakes were also fitted.

In September 1955 Porsche started produce the 356A. It had a new crankcase so the engine capacity increased to 1600 cc, the maximum class capacity in Touring and Grand Touring car races. The 356 could be specified with four different engines, plus the new 1500GS Carrera, named after the marque’s successes in the Carrera Panamericana road races. Many detail changes were made to the engine room, gearbox, suspension and the steering. It had a curved windscreen and lower floor. In 1956 the Porsche company could return to its old home. The same year were Porsche number 10000 made. As production increased, fewer changes were made. In 1957 the 1300 cc engine were dropped and a deluxe version of Carrera were offered.

In 1954 the Speedster was introduced to the American marked. Of different reasons the Speedster was replaced by Speedster D, a more luxurious and expensive car. The body was made by Drauz because of the constant pressure on Reutter. The Speedster D was renamed to the D-type Convertible because of protest of the Californian people. They wanted the old Speedster.

In 1959 was the 356B introduced. It had higher headlamps, stronger bumpers, higher front and gear, weighed more, enlarged interior and a new engine, Super 90. The D-type Convertible was renamed the Roadster in deference to the Californians. The 356B Carrera, also known as Carrera 2, had its engine capacity increased to 1966 cc. Large numbers were produced to qualify if for GT racing.

The final version if 356 came in 1963, the 356C. It had disc brakes and cast-iron cylinders. Some improvements were made to the suspension. The older engines : 1600, 1600S and Super 90 were replaced by the newer 1600C. 1600 SC were replaced by 2000 GS.

959

A prototype 959 first appeared in 1983 at the Frankfurt Auto Show. The 959 is basically a 6-speed, twin turbo, 4-wheel drive 911. In fact, some of the prototypes were obvious conversions. But the real thing has only a skeletal resemblance. The skin is a thin molding of Kevlar-reinforced plastic, which attaches to a modified 911 underbody. Of the exterior panels, only the doors and the front deck are metal, and they are aluminum.

Some of the differences marked a major change in the 911 tradition. No more MacPherson struts in front and trailing arms in back: a pair of control arms now take up station at each corner of the car. Coil-over shocks are used; to keep them short enough so they don’t poke through the hood in front, the work is divided among two units per wheel. The tires are Dunlop Denloc D4’s, designed to maintain a high degree of handling even when deflated. Their sizes are 235/40/front, 255/40/rear, both VR-rated seventeen-inchers.

The engine has electronic controls for fuel, timing, and boost, patterned after those which give excellent track fuel economy to the 956 racer. The hole in the leading edge of each fender admits air to the intercooler in each rear corner. The twin turbos are located at the rear of the engine, just inboard of the coolers.

Still, it’s the 959’s drivetrain that really broke new ground. The transmission is a manual six-speed, done purely to gain one more ratio. With top speed pushed up into the 190-mph range, five speeds simply aren’t enough to cover the territory.

Like the 911, the 959 has its engine in the rear, with the differential in front and the transmission in front of that. For four-wheel drive, a prop shaft pokes forward out of the transmission to drive a front differential. the shaft is contained in a rigid torque tube that bolts directly to the front and rear housings, making the whole drivetrain a one-piece affair. So far, this is about what you’d expect of a four-wheel-drive Porsche.

In review…

356

The “ORIGINAL” Porsche, built from 1950-1965

911

The most popular Porsche ever…

912

A cheaper, more fuel efficient 911, built from 1965 to 1969 with a limited edition in 1976.

944

The “Evolution” of the 924.

959

The ULTIMATE Porsche…

968

The “Evolution” of the 944.

Boxster

The newest addition to the family. The first all new Porsche in 19 years

News & current events

The Porsche 911 GT3 hits the streets in May 1999

Super sporting vehicle with impressive performance data

Dr. Ing. h. c. F. Porsche A.G. Stuttgart is extending the 911 model range in May 1999 with a particularly sporty version: the 911 GT3 has 360 HP and accelerates from 0 to 100 km/h in 4.8 seconds. These performance data will set new standards, and at the same time are documented proof of the hidden potential of the 911 Carrera design. The 911 GT3 is the legitimate successor of the ”RS” model.

The Porsche motor sport engineers have increased the cubic capacity of the water-cooled engine from 3.4 to 3.6 liters. Thanks to numerous modifications and the use of components from the GT1 power unit as well as the transmission of the 911 GT2, the 911 GT3 has 360 HP. The maximum torque is 370 Nm at 5,000 revolutions per minute.

This performance, an increase of 20 per cent on the 911 Carrera, leads to remarkable performance data that are clearly above those of the current 300 HP Carrera. The 911 GT3 sprints from 0 to 200 km/h in 15.8 seconds (911 RS ”993” 17.8 seconds) and requires only 6.7 seconds for an acceleration from 80 to 120 km/h.

Of course, Porsche has adapted the brake system and the entire running gear to match this high performance. As a result, the 911 GT3 has even better handling properties and high active safety.

Identifying features of the 911 GT3 include a new front end, tasteful side sills, a fixed rear wing, red brake calipers and new 18-inch Sport Design wheels. The GT3 is 30 mm lower than the 911 Carrera.

The new 911 GT3, which forms the basis for homologation for use in motor sport, will be presented to the public for the first time at the Geneva Automobile Salon in March 1999. The first road vehicles will be delivered in Europe from mid-May onwards.

The Carrera 4 (The real news about Porsche)

Perfect Four-Wheel Drive for a Sports Car.The Carrera 4 continues the successful tradition of four-wheel-drive Porsche 911 models. Its drive technology is a further development of Porsche’s proven and highly successful concept, the entire process of developing the new Carrara 4 once again confirming the experience that the best way to divide power between the two axles on a rear-engine sports car is with a viscous clutch. A viscous clutch is a fully encapsulated multiple-plate unit filled with highly viscous silicone fluid. Part of this multiple-plate clutch unit is connected directly to the rear-wheel drive, the other section is connected with the front axle. Whenever wheel slip results in a difference in speed between the axles there is also slip between the plates within the viscous clutch. In that case, depending on the degree of slip, drive power is transmitted to the front axle by the viscous silicon fluid. Short Propeller Shaft Within the Frame Tunnel. A number of fundamental modifications have been introduced between the gearbox and the front axle in the process of changing over to the new model: The first point is that the drive shaft no longer runs through a rigid tube as with the transaxle principle. Instead, the new Carrera 4 features a short propeller shaft running freely within the frame tunnel. The first advantage is that this solution is about 4 kilos lighter, the second point is that it provides space for the coolant pipes now running through the tunnel for the water-cooled flat-six power unit.

Yet a further point is that the viscous clutch is no longer within the transmission itself, as it was in the past. Rather, it is now housed on the 911 Carrera 4 in the front differential casing moved far back to the rear of the car, a modification offering the big advantage that the larger differential housing and the viscous clutch apply a bit more weight on the front drive axle. This means even better front-to-rear weight distribution beneficial to the car’s driving characteristics and traction.

Four-wheel drive on the new Carrera 4 ensures that a certain amount of torque is always able to flow to the front wheels at all times. This share of power conveyed to the front varies from 5-40 per cent, depending directly on drive slip on the rear wheels.

Driving Behavior Even Better Than Before. The primary objective in this case is of course to perfect the characteristic driving behavior and the superior driving safety of the Porsche 911, thus reaching a higher standard than ever before. Four-wheel drive conveys the supreme power of the engine to the road even more smoothly and steadily than one drive axle.

Installing four-wheel drive in the floor pan of the Porsche 911 required a number of modifications. The first point is that various body components had to be modified in the region of the front axle in order to accommodate the front differential. This called for a new fuel tank shaped like a saddle and offering approximately the same volume as before. An inevitable result of the more sophisticated drive technology is a slight loss of space in the luggage compartment, which is however kept to a minimum by the folding wheel in flat arrangement on the floor. Luggage compartment capacity therefore remains adequate at 100 liters or 3.5 cu ft. And despite its more sophisticated technology the Carrera 4 remains a light and agile vehicle from the start, the coup? weighing in at 1375 kg or 3032 lb, which makes it only 55 kg or 121 lb heavier than its rear-wheel-drive Carrera counterpart.

Highlights of the Carrera 4

Permanent Four-Wheel Drive with Perfect Power Division. Benefitting from years of thorough experience with four-wheel drive systems, Porsche’s engineers have found a particularly effective solution with the Carrera 4: Variable distribution of drive forces to the front axle via a viscous clutch in the front differential guarantees excellent traction and supreme driving safety on all kinds of roads and under all weather conditions. Porsche Stability Management. The Carrera 4 is the first Porsche ever to feature PSM Porsche Stability Management, a highly sophisticated dynamic control concept serving to stabilize the car in an extreme situation by intervening in the engine management and brake system. Offering supreme stability in this way both in longitudinal and crosswise direction, PSM has been specially tuned to the typical requirements of a Porsche and the Porsche driver, ensuring that the sporting character of the car is not suppressed by premature intervention. The objective in this tuning process was therefore to offer brief but decisive driver support in conjunction with the four drive wheels whenever the car suddenly comes too close to the limits of physics.

Electronic Gas Pedal

A gas pedal incorporating a sensor to transmit electrical signals to the Motronic and an actuator operating the throttle butterfly are the essential features required for dynamic drive control with all the qualities of Porsche Stability Management. The use of such sophisticated electronics pays off not only in extreme situations, since E-Gas, as it is called, also improves the response of the engine to the accelerator and allows a further reduction of fuel consumption by adjusting the throttle butterfly perfectly to the engine control map. A further advantage is the reduction of exhaust emissions and last but not least E-Gas also provides even better cruise control.

Large-Volume Side Airbags Fitted as Standard

Apart from the full-size frontal airbags for the driver and front passenger, Porsche’s new and highly progressive Side Impact Protection System (POSIP) comes as a standard feature. It consists of two side airbags fitted in the doors and additional door lining taking up impact energy. Offering extra-large volume of no less than 30 liters, the two side airbags ensure optimum efficiency throughout the entire seat adjustment range, POSIP thus protecting the driver and his front passenger in all areas around their head, chest, arms and hips, even with the roof down and the side windows fully retracted.

Another Porsche First: Four-Wheel Drive plus Automatic Transmission

The new Carrera 4 is the first-ever Porsche allowing the customer to combine four-wheel drive both with a six-speed manual gearbox and five-speed Tiptronic S.

Exclusive Aluminum Wheels for the Carrera 4

A clear sign of distinction characterizing the Porsche 911 Carrera 4 at very first sight is provided by the 17-inch light-alloy wheels in unmistakable spoke design. Extending far inside to the hub, the spokes become wider towards the rim and merge into the base at the far outside, making the wheels look even more powerful and larger.

Discreet Signs of Distinction

Applying the principle of being “great to look at but even greater inside”, the Carrera 4 does not in any way flaunt its wares. The Carrera 4 model designation stands out in titanium colour on the engine compartment lid and is also to be admired on the black wheel hub covers. Further visible signs of distinction are the special 17-inch wheels and titanium-coloured brake calipers. Like all Porsche 911s in the 1999 model year, the Carrera 4 comes furthermore with modified headlight units, the direction indicators in the headlights and the side indicators now coming in white, while in the rear light clusters they are whitish gray and no longer orange.

Superior Driving Safety, Outstanding Driving Qualities

The springs, anti-roll bars and dampers are all specially tuned and modified to reflect the dynamic driving qualities of the four-wheel-drive model. Consistent adjustment of axle geometry to four-wheel drive and re-tuned elasticity on the front axle ensure neutral behavior all the way to extreme limits, allowing the driver to safely approach the highest possible speeds in a bend without losing control of his car.

Superior Crash Safety

Carefully defined deformation of the steel bodyshell keeps the loads acting on the car’s occupants in an accident to an absolute minimum. Throughout the entire process of developing the new Carrera, passive safety was consistently enhanced to an ever-increasing standard, the results of numerous crash tests confirming the conviction of Porsche’s engineers that they have created one of the safest high-performance sports cars in the world.

Air Drag and Lift Forces Reduced to a Minimum

The Porsche 911 offers a low drag coefficient compared with other sports cars. And at 0.58 m2, the product of drag coefficient and the frontal area of the car is also very low and therefore advantageous on the road. A further, particularly important factor is the minimization of lift forces on the 911 Carrera, the Cfa lift factor on the front axle being a mere 0.08, while rear axle lift, thanks to the spoiler automatically coming out at speed, is even lower at 0.05.

Water-Cooled Boxer Engine

An efficient cylinder charge ensured by four-valve technology and stable thermal conditions guaranteed by water cooling make Porsche’s flat-six power unit a genuine performance machine. Displacing 3.4 liters, the engine of the 911 Carrera 4 develops maximum output of 300 bhp or 221 kW. Top speed is 280 km/h or 174 mph. A further point is that the horizontally-opposed engine, through its concept alone, offers decisive benefits in the construction of a sports car: Compensation of mass forces is perfect, dimensions are kept to a minimum, and the short, stiff crankshaft allows high engine speeds.

Aluminum Suspension

All track control arms on the suspension and the two axle subframes integrated in the body are made of light alloy. In its design and dynamic driving characteristics, the front axle has been modified in accordance with the car’s four-wheel drive technology.

Four-Piston Monobloc Brake Calipers

Following positive experience in motor racing, the Porsche 911 Carrera 4, like all other Porsche models, comes with four-piston monobloc brake calipers made of light alloy. A particular advantage of this technology is the high standard of safety ensured at all times and minimum fading even under extreme conditions.

Litronic Headlights with Dynamic Range Control

The 911 Carrera 4 is available as an option with Litronic headlights, special gas-discharge units illuminating the road ahead far more brightly and thoroughly and thus significantly improving safety at night. A further contribution to your extra driving safety is the dynamic headlight range control considering not only the load the vehicle is carrying, but also any change in body angle due to dynamic driving conditions. The halogen bulbs for the high-beam headlights are surrounded by a particularly efficient free-space reflector. Whenever the driver activates the high beams, the low-beam headlights remain switched on and also move their own beam up by way of headlight range control in order to improve illumination of the road ahead. A further feature of the Litronic headlights, finally, is the headlight cleaning system.

Individual Sports Features

It almost goes without saying that the Carrera 4 can be enhanced to an even more sporting standard as an expression of the customer’s personal taste. Features available individually are sports seats with reinforced side support, 18-inch turbo-look wheels measuring 225/40 ZR 18 at the front and 265/35 ZR 18 at the rear, and – as on the coup? – a sports suspension with even firmer and shorter springs, harder dampers and reinforced anti-roll bars.

Race series

On 23rd February at 21.12, factory driver Bob Wollek started the six cylinder turbo engine of the Porsche 911 GT1 in Weissach, year 1998, for the first roll out. The third generation of the Gran Turismo, first used in 1996, is the most innovative hitherto. Although its predecessors still had the front car of the standard vehicle, project manager Norbert Singer used a carbon fiber monocoque in this case. Thanks to this made-to-measure production and other details, it was possible to lower the weight of the new 911 GT1-98 to around 950 kilograms. Other benefits of the new monocoque: greater rigidity and, as regards the shape, optimal harmony with the requirements of aerodynamics and wheel suspension. For designing the carbon fiber body and the underbody, the Racing Department spent many weeks and weekends in the two wind tunnels owned by Porsche in Weissach. The result is an even better optimized shape, which distributes the negative lift on the vehicle in the best possible way, at 4.89 meters in length, 1.99 meters in width and 1.14 meters in height. The 100 liter safety tank is now situated between the rear wall of the cockpit and the engine. At the beginning of the year the 911 GT1 passed the necessary EU crash tests for approval for use on the roads.

The drive unit: 3,162 ccm cubic capacity, four valves per cylinder, aluminum engine block and cylinder heads, water cooling. With two KKK turbochargers, limited by 33.9 millimeter restrictors in the air intakes, output approximately 550 hp at 7,200 revs. Maximum torque: 630 Nm at 5,000 revolutions. The power reaches the rear wheels via a sequential six-speed gearbox.

The wheel base of the double transverse control arm