MINI at the 2007 Frankfurt Motor Show.
Contents.

1. MINI at the 2007 Frankfurt Motor Show. (Short Version)

The message is simple: everybody loves the new MINI!

In its design, its flair and agile handling, the MINI is a truly desirable car right from the start. And at the same time the MINI aficionado with a penchant for genuine achievements in technology will discover a wide range of convincing arguments likewise contributing to the great success of this great little car.

As the only small premium car in the world, the MINI combines top-quality finish with exemplary safety, the most advanced drivetrain technology, excellent efficiency, outstanding reliability and lasting value. And in the 2008 model year the MINI is becoming even more appealing, with the latest results of a consistent development process particularly in the area of drivetrain systems being presented at the Frankfurt Motor Show from 13–23 September 2007: Starting immediately, the four model variants MINI Cooper S, MINI Cooper, MINI One, and MINI Cooper D come with a wide range of innovations helping to further improve both fuel efficiency and emission management. Indeed, fuel consumption and CO_2 emissions are being reduced by up to 12 per cent, depending on the model.

The absolute pinnacle in all-round efficiency is the new MINI Cooper D: Accelerating to 100 km/h in 9.9 seconds, this miracle in fuel economy requires just 3.9 litres of diesel fuel for 100 kilometres in the EU test cycle, equal to 72.4 mpg imp. Such an outstanding balance of driving pleasure and fuel economy is quite unique in the small car segment, as is the MINI Cooper D's emission management with a mere 104 grams of CO_2 per kilometre setting a new benchmark, particularly in consideration of the power and torque this four-cylinder diesel has to offer: Maximum output of the engine featuring common-rail direct fuel injection and a turbocharger with variable turbine geometry is 80 kW/110 hp.

Apart from efficiency, the second great forte of this outstanding engine is torque and pulling force, with maximum torque of 240 Newton-metres or 177 lb-ft being increased for a brief spell by means of the Overboost function to an even more impressive 260 Newton-metres or 192 lb-ft. And further proof of the MINI Cooper D's superior sportiness is the car's top speed of 195 km/h or 121 mph.

Accelerating faster, filling up less often: MINI in the 2008 model year.
Surprising performance on the road, equally surprising austerity at the filling station – these are the strengths also of the gasoline engines in the new MINI in the 2008 model year. Like the MINI Cooper D, the MINI Cooper S, MINI Cooper, and MINI One all feature Brake Energy Regeneration, an Auto Start Stop function, and a gearshift point indicator. On the MINI Cooper S (128 kW/175 hp, 0–100 km/h in 7.1 seconds, top speed 225 km/h or 140 mph), average fuel consumption is down to just 6.2 litres/100 kilometres, equal to 45.6 mpg imp (CO_2 rating: 149 g/km). The MINI Cooper (88 kW/ 120 hp, 0–100 km/h in 9.1 seconds, top speed 203 km/h or 126 mph) consumes a very modest 5.4 litres per 100 kilometres, equal to 52.3 mpg imp (CO_2 rating: 129 g/km), and the figure measured on the MINI One (70 kW/ 95 hp, 0–100 km/h in 10.9 seconds, top speed 185 km/h or 115 mph) is 5.3 litres/100 kilometres, equal to 53.3 mpg imp (CO_2 rating: 128 g/km).

All versions of the MINI come as standard with a six-speed manual gearbox. And now all models are also available as an option with six-speed automatic transmission featuring Steptronic control for manual intervention in the selection of gears.

Yet another feature shared by all versions of the new MINI is that typical go-kart feeling combined with supremacy quite unique in the small car segment.

The newly developed chassis and suspension is tuned specifically to each model, giving all versions of this front-wheel-drive performer truly outstanding agility. Precision in fast bends, in turn, is guaranteed by the new Electrical Power Assisted Steering (EPAS). Since EPAS requires electric power only when really providing steering assistance or when such support is desired by the driver, it makes an additional contribution to the even greater enhancement of efficiency in the new MINI.

Safety premium-class: five stars in the Euro NCAP crash test.
MINI offers premium standard also when it comes to safety. Achieving the maximum score of five stars in the Euro NCAP crash test, the new MINI impressively confirms its comprehensive concept for occupant safety. The foundation for this best mark in a truly demanding test procedure is the particular construction of this compact car laid out for passive safety of the highest calibre. The robust body structure with its clearly defined load paths and deformation zones, just like the safety equipment fitted as standard with six airbags, three-point seat belts on all four seats and ISOFIX child seat fastening points at the rear as well as central safety electronics for on-demand control and activation of the restraint systems, is a clear expression of the great attention given to occupant safety in developing cars according to the standards of the BMW Group.

The five-star result in the Euro NCAP crash test – the best grade possible – was achieved with the new MINI Cooper. But the positive judgment clearly expressed by the testers in their NCAP (New Car Assessment Programme) applies in the same way to all other models in the series, simply because the MINI Cooper S, the MINI Cooper, the MINI One, and the MINI Cooper D all come with exactly the same series equipment dedicated to passive safety. Maximum occupant protection is therefore an obligatory factor in the event of a collision in the new MINI.

MINI all the way: likeable, agile, efficient, safe, reliable, and with lasting value.

The quality of the new MINI is also confirmed regularly by non-partisan experts, verifying time and again that this is one of the most reliable cars in its segment. According to an analysis by Allgemeiner Deutscher Automobilclub (ADAC), the MINI is the most reliable of all cars in its class currently in pro-duction and available in Germany, with the smallest number of breakdowns.

In the ADAC breakdown statistics covering some 400,000 technical assistance missions in the year 2006, the MINI thus rounds off the excellent result of the BMW Group in all segments. And the same statistics also prove the consistent, ongoing level of superior reliability maintained by MINI throughout all years of production.

Through its product quality and popularity, MINI has also achieved another top position in the market, Europe's largest car magazine "Auto Bild" only recently lauding the MINI Cooper as the "Value Champion 2007". This title confirming the lasting value of the car is based on the presumable resale value of a new MINI first registered in the year 2007 and then assessed after three years of use in 2010 by experts in the automobile market. Hence, the MINI Cooper is one of the top performers among all cars currently on sale in Germany also when it comes to lasting value: With the car fetching 69 per cent of its original sales price after this period of use, the MINI Cooper ranks second in the "Value Champion" category – and the only car able to offer even better performance is the MINI Convertible leading the ranking after three years with a resale value of 70 per cent.

The combination of all these qualities makes the new MINI a truly unique automobile. But it is only the highly expressive, unmistakable design as well as driving behaviour offering unparalleled agility that make the new MINI not only convincing, but also quite simply fascinating. Driving a MINI is not just the process of getting from A to B, but rather an expression of individual lifestyle.

A wide range of options and possibilities in customising the MINI give the purchaser huge freedom in creating a personal touch in his – or her – car. And

regardless of the individual configuration chosen, every MINI is a premium car with outstanding product substance.

Safety, efficiency, quality, reliability and lasting value, therefore, make the MINI a personality with genuine virtues in its segment. And with both fuel economy and emission control raised to an even higher standard, the MINI is now able in the 2008 model year to push up this benchmark to an even higher level.

Long live sports: the MINI John Cooper Works CHALLENGE.
The MINI CHALLENGE Clubsport Series is just as unique as the MINI itself – and the 2007 Frankfurt Motor Show sets the stage for the world debut of the new racing cars in the MINI CHALLENGE.

The new John Cooper Works CHALLENGE raises performance and power over the current series model and even the current racing version to an even higher standard, a power kit for the engine developed especially for this purpose and of course the specific demands of motorsport providing maximum output of 154 kW/210 hp. While this is the same power rating as the current sports version in the MINI CHALLENGE, optimised engine characteristics and maximum torque now increased by Overboost from 260 to 280 Newton-metres (192 to 206 lb-ft) gives the engine – and the driver – everything they need for even better performance on the track. Further points are the reduction in weight compared with the current racing version by 30 to 1,150 kg (including the driver), the optimisation of stream-lining and aerodynamics all round, and numerous modifications to the chassis and suspension.

The MINI John Cooper Works CHALLENGE accelerates to 100 km/h in just 6.1 seconds and, conversely, takes just 3.1 seconds – thanks to its special motorsport brakes – to come to a standstill again. Top speed of the new racing model, finally, is 240 km/h or 149 mph.

Given these specifications and the experience already provided by the first test drives, it is fair to say that participants in the 2008 MINI CHALLENGE are looking forward to an even more intense experience in motorsport. More torque, even faster acceleration and a higher top speed, higher lateral acceleration and traction optimised to an even higher standard – these are the strengths that make this new racing machine so superior. For the spectator on the track this means even greater excitement, even faster action, and even more thrilling duels on the race track.

(All technical data of the MINI John Cooper Works CHALLENGE is preliminary.)

2. At a Glance.

- **The MINI Cooper S in the 2008 model year.**
  MINI at its best: The MINI Cooper S is the most fascinating way to experience agility and driving pleasure in a compact car. Through its concept, body design, power unit, suspension and features, the MINI Cooper S offers the perfect combination of virtues for a lasting experience even on a very short drive. The 1.6-litre power unit of the MINI Cooper S featuring a twin-scroll turbocharger and direct gasoline injection develops maximum output of 128 kW/175 hp, accelerating the MINI Cooper S to 100 km/h in 7.1 seconds, the car then continuing all the way to its top speed of 225 or 140 mph. And when filling up the tank the driver will remain just as happy and thrilled: Brake Energy Regeneration, the Auto Start Stop function and further improvements in the interest of enhanced efficiency enable the MINI Cooper S in the 2008 model year to cover 100 kilometres in the EU test cycle on just 6.2 litres of fuel, equal to 45.6 mpg imp. The car's CO_2 rating, in turn, is now just 149 grams per kilometre.

- **The MINI Cooper in the 2008 model year.**
  The MINI Cooper likewise offers a unique combination of unlimited driving pleasure but strictly limited fuel consumption and emissions. In this case the 1.6-litre four-cylinder develops maximum output of 88 kW/ 120 hp, variable control of the intake valves featured in the power unit of the MINI Cooper being based on the BMW Group's VALVETRONIC technology. And now, entering the 2008 model year, the MINI Cooper also benefits from the latest improvements serving to optimise both fuel consumption and emissions. The result is acceleration to 100 km/h in 9.1 seconds and a top speed of 203 km/h or 126 mph on just 5.4 litres/ 100 kilometres in the EU test cycle (equal to 52.3 mpg) and a CO_2 rating of 129 grams per kilometre.

- **The MINI One in the 2008 model year.**
  When it comes to driving pleasure, it is fair to say that every MINI is superior to the competition. As the basic model in the range, even the MINI One with its 70 kW/95 hp, 1.4-litre four-cylinder offers the complete feeling of the brand in a particularly economic package. Acceleration to 100 km/h comes in 10.9 seconds, top speed is 185 km/h or 115 mph. And thanks to the complete package of efficiency boosting efficiency in every respect, the MINI One is a truly outstanding performer when it comes to fuel economy, now consuming just 5.3 litres on average for

100 kilometres in the EU combined cycle (equal to 53.3 mpg imp) and offering a CO_2 rating of just 128 grams.

- **The MINI Cooper D in the 2008 model year.**
  The ambitious driver will have no problem accelerating the MINI Cooper D to 100 km/h in 9.9 seconds and reaching a top speed of 195 km/h or 121 mph. But what is even more impressive, particularly for the driver with a penchant for maximum efficiency, is average fuel consumption of just 3.9 litres/100 kilometres (equal to 72.4 mpg imp), combined with a CO_2 rating of just 104 grams per kilometre.

  This outstanding economy is made possible by the 1.6-litre four-cylinder diesel engine with common-rail fuel injection doing an outstanding job within the engine compartment of the MINI Cooper D, developing maximum output of 80 kW/110 hp together with very muscular and powerful torque. And the diesel engine naturally also comes with Brake Energy Regeneration, Auto Start Stop, and other innovations guaranteeing this further increase in all-round efficiency.

- **World debut: the MINI John Cooper Works CHALLENGE.**
  The thrilling experience of the MINI CHALLENGE with its exciting races is already greater than ever before this year. But even more is still to come, with even more powerful acceleration, higher lateral acceleration, and a higher top speed: The MINI John Cooper Works CHALLENGE, the racing car for the 2008 season, offers all this and, as a result, even more excitement on and next to the track.

  The MINI John Cooper Works CHALLENGE will be presented for the first time at the 2007 Frankfurt Motor Show, with sales starting in spring 2008 – not just to participants in the MINI CHALLENGE. Maximum output of the 1.6-litre four-cylinder power unit with its twin-scroll turbocharger and direct fuel injection is 154 kW/210 hp, and a number of chassis components specific to motorsport as well as the John Cooper Works Aerodynamics Package have been developed especially for this unique model.

  The MINI John Cooper Works CHALLENGE has a top speed of 240 km/h or 149 mph and accelerates to 100 km/h in 6.1 seconds. And what is perhaps more impressive is that the car comes to a standstill from the same speed in 3.1 seconds. So anybody who wishes to experience the huge motorsport potential a MINI is able to offer will certainly find all the fascinating answers in the Cooper Works CHALLENGE.

  (All technical data of the MINI John Cooper Works CHALLENGE is preliminary.)

3. More Driving Pleasure, Less Fuel: The new MINI in the 2008 Model Year.

There can be no doubt about it: the new MINI outdoes itself!

Featuring a wide range of improvements for minimum fuel consumption and emissions, the only small premium car in the world is further increasing its leadership in terms of efficiency in the 2008 model year: Starting in August 2007, all new MINIs with a fixed roof will come as standard with high-tech components in and around the engine ensuring even greater economy in the consumption of fuel combined with further enhancement of driving pleasure.

This complete package of improvements made up of Brake Energy Regeneration, Auto Start Stop, and the gearshift point indicator gives the MINI Cooper S, the MINI Cooper, the MINI One, and the MINI Cooper D an unparalleled balance of driving pleasure and consumption quite unique in this performance class. The absolute champion in terms of efficiency is of course the MINI Cooper D with its 80 kW/110 hp four-cylinder diesel consuming just 3.9 litres/100 kilometres (equal to 72.4 mpg imp) in the EU test cycle and in the process reducing CO_2 emissions to just 104 grams per kilometres, a uniquely low figure in this power and performance class. Perhaps the best news is that this improvement of efficiency in all variants of the new MINI comes at the same sales prices as before, without the slightest increase or adjustment.

Pure fun when giving gas, pure power for the on-board network when applying the brakes.
Brake Energy Regeneration standard on all model variants of the new MINI is a wonderful example of the intelligent interaction of additional driving pleasure and reduced fuel consumption. Intelligent energy management serves in this case to convert engine power primarily into drive power for the wheels, with electric power for the on-board network being generated only when the car is rolling (that is in overrun) or under application of the brakes.

To achieve this effect the alternator is automatically disconnected as long as the engine is pulling the car, the power otherwise going to the alternator on a conventional vehicle now being provided in full for even faster acceleration. A sufficient supply of power to the electrical on-board system is nevertheless ensured at all times, with the alternator being activated again as soon as the MINI switches over to overrun or when the driver applies the brakes.

Battery charge is permanently monitored by the car's intelligent energy management. Appropriate regeneration phases, a defined minimum charge capacity, and the use of new AGM (absorbent glass mat) battery technology guarantee a maximum service life of the battery.

Brake Energy Regeneration enables the driver of the new MINI to enjoy a further reduction of fuel consumption and emissions regardless of his style of motoring.

The Auto Start Stop function: zero fuel consumption when idling.
The fuel consumption of all manual gearbox versions of the new MINI when idling is now virtually zero – because the engine no longer idles. The new Auto Start Stop function automatically switches off the engine when it comes to a halt, for example at the traffic lights, as soon as the driver moves the gearshift lever to its neutral positon and takes his foot off the clutch. And then, to start the engine again, all the driver has to do is press down the clutch pedal, the engine being automatically re-activated without the slightest delay.

The Auto Start Stop function ensures much greater fuel efficiency above all in city traffic. Every time the car comes to a halt, energy consumption and emissions are reduced to zero in a very simple and uncomplicated process, making the unnecessary consumption of fuel when idling a thing of the past.

The Auto Start Stop function is ready to go every time the driver switches on the engine, with the system being activated once the engine oil has reached its normal operating temperature. Under certain conditions Auto Start Stop intentionally does not switch off the engine for reasons of safety and motoring comfort.

Permanent supervision of the car's running condition as well as weather conditions enables the intelligent control system to detect situations in which ongoing operation of the engine would be recommendable – for example if the battery is almost flat and in very hot (more than 30° C) or very low (less than 3° C) outside temperatures. A further point is that the engine keeps on running in short intermediate stops as long as the temperature inside the passenger compartment has not yet reached the level pre-set on the air conditioning or if the heating is required to de-ice or de-mist the windscreen.

Yet a further point is that the system is able to distinguish between short stops and the end of a drive, not re-starting the engine automatically once the driver has unlocked his seat belt, opened the door or the engine compartment. And last but not least, the driver is able to deactivate the Auto Start Stop function at any time at the touch of a button.

Always driving in the right gear: the gearshift point indicator.
Thanks to the gearshift point indicator likewise featured as standard, the driver of a manual gearbox MINI may always focus on maximum fuel efficiency in his style of motoring. To make this possible the engine electronics permanently analyses engine speed, driving conditions and the position of the accelerator pedal, then applying this data to determine the best gear for economic motoring. Then, as soon as it is appropriate in the light of the data measured, an appropriate arrow symbol will come on in the cockpit display beneath the rev counter and the ideal gear is shown as a number.

The driver is able to activate and, respectively, de-activate the gearshift point indicator via the menu on the on-board computer A further point is that the system even notes and considers the driver's particular style of motoring, for example particularly fast acceleration.

MINI Cooper S: even greater efficiency in achieving maximum performance.
The profile of the new MINI is characterised in a particularly appropriate and up-to-date manner by the enhanced efficiency of the power units. Indeed, the MINI symbolises self-confidence through its fascinating and likeable design, just as it embodies a feeling of quality at the highest premium level and, through its great appeal, now also offers further enhancement of environmental care.

The exemplary balance of driving pleasure and economy truly outstanding not only in the small car segment is characteristic of all engine variants – and in the process the new MINI Cooper S offers efficiency of the highest standard. This top performer in the range is powered by a 1.6-litre four-cylinder com-plete with a twin-scroll turbocharger and direct gasoline injection. Maximum output is 128 kW/175 hp, and peak torque is 240 Newton-metres/177 lb-ft throughout the broad range of engine speed from 1,600 to 5,000 rpm, the Overboost function adding another 20 Nm whenever required to give the driver a maximum of 260 Nm/192 lb-ft.

Top speed is 225 km/h or 140 mph, and the MINI Cooper S accelerates to 100 km/h in just 7.1 seconds. Average fuel consumption in the EU test cycle of 6.2 litres/100 kilometres (equal to 45.6 mpg imp) (previously 6.9 litres/ 100 kilometres or 40.9 mpg imp) and a CO_2 rating of just 149 grams per kilometre (previously 164 g/km) clearly prove that this car offers the most advanced engine technology for a perfect balance of efficiency and top performance.

MINI Cooper: more driving pleasure, less fuel.
The four-cylinder normal-aspiration power unit of the new MINI Cooper develops maximum output of 88 kW/120 hp from 1.6 litres engine capacity, with peak torque of 160 Nm or 118 lb-ft at 4,250 rpm.

Intake valve control based on the BMW Group's unique VALVETRONIC technology is fully variable, with valve lift and valve opening times being adjusted infinitely and with electronic precision to current power requirements. Indeed, this innovative valve management not only ensures a particularly direct response and a high level of motoring refinement, but also helps to reduce fuel consumption and optimise the car's emission management.

The MINI Cooper accelerates to 100 km/h in 9.1 seconds and has a top speed of 203 km/h or 126 mph. Average fuel consumption of just 5.4 litres/100 kilometres or 52.3 mpg imp (previously 5.8 litres/100 kilometres or 48.7 mpg imp) in the EU test cycle and CO_2 emissions reduced to 129 grams per kilometre (previously 139 g/km) enable the MINI Cooper to raise the benchmark for efficient driving pleasure once again in the 2008 model year.

MINI One: the starting point for lasting driving pleasure.
The new MINI One offers a particularly attractive entry into the world of MINI, with a very economic rendition of the thrilling experience this unique small premium car is able to offer. The 1.4-litre four-cylinder power unit features the same high-tech components already giving the power unit of the MINI Cooper its impressive muscle and efficiency. Developing maximum of 70 kW/95 hp and peak torque of 140 Newton-metres/103 lb-ft at 4,000 rpm, the MINI One offers truly sporting performance. Acceleration to 100 km/h comes in just 10.9 seconds and the car's top speed is 185 km/h or 115 mph. Both average fuel consumption in the EU test cycle as well as emission management have been optimised to a new level, the MINI One in the 2008 model year making do with just 5.3 litres/100 kilometres or 53.3 mpg imp (previously 5.7 litres/100 kilometres, equal to 49.6 mpg imp) and CO_2 emissions amounting to just 128 grams per kilometre (previously 138 g/km).

MINI Cooper D: more economical, cleaner and more powerful than ever before.
The new MINI Cooper D demonstrates the potential of a modern diesel engine more impressively than ever before, its 1.6-litre four-cylinder power unit boasting direct fuel injection based on the common-rail principle as well as a turbocharger with variable turbine geometry ensuring an optimum surge of power at all engine speeds.

Maximum output of this newly developed diesel engine particularly light through the use of aluminium is 80 kW/110 hp, with peak torque of 240 Newton-metres/177 lb-ft between 1,750 and 2,000 rpm, increasing briefly by means of the Overboost function to 260 Nm or 192 lb-ft.

The MINI Cooper D combines fascinating pulling force with sporting performance on the road, accelerating to 100 km/h in just 9.9 seconds and reaching a top speed of 195 km/h or 121 mph.

Fuel economy and emissions management of the new MINI Cooper D are even more impressive, with average fuel consumption in the EU test cycle of just 3.9 litres/100 kilometres or 72.4 mpg imp (previously 4.4 litres/ 100 kilometres or 64.2 mpg imp) setting a new benchmark together with the CO_2 rating of 104 grams per kilometre (previously 118 g/km).

Never before, therefore, has a MINI been as efficient in saving fuel and minimising emissions. And nowhere else does a car offer as much fun at the wheel on the same kind of fuel economy and emission management. With its maximum range of 1,025 kilometres or 636 miles, finally, the MINI Cooper D also offers remarkable long-distance driving qualities.

New equipment and features for even greater driving comfort and flair.
Optionally available Cruise Control presenting the speed selected by the driver in a digital cockpit display as of August 2007 enhances driving comfort in the new MINI as of the 2008 model year to an even higher standard. A further point is that not only the MINI Cooper S, the MINI Cooper and the MINI One, but now also the MINI Cooper D is available in the 2008 model year with six-speed automatic transmission.

The range of entertainment features on board the new MINI is enhanced as of August 2008 by an USB plug including a Bluetooth function serving as an option to integrate external audio sources. This allows the user to integrate USB-compatible storage media as well as an MP3 player such as the Apple iPod via the USB port, making such features part of the MINI's entertainment system.

Access to the music available is very convenient through the control units on the audio system offering various selection criteria such as the artist or the album. And last but not least, the user is also able to connect a mobile phone through the Bluetooth interface with wireless technology.

4. Warm-up at the 2007 Frankfurt Motor Show: The MINI John Cooper Works CHALLENGE.

The new MINI has already impressively proven its sporting talent on the road. And soon the racing version of this new generation of the world's only small premium car, the new MINI John Cooper Works CHALLENGE, will be ready to go: Parallel to the ongoing MINI CHALLENGE 2007, development specialists are already working on the racing car for the next season in this unique Clubsport Series. It is indeed already clear today that the new model based on the new MINI Cooper S will be an even more thrilling racing machine offering participants in the MINI CHALLENGE 2008 an even more intense driving experience.

Even before its first start, the MINI John Cooper Works CHALLENGE stands out through a wide range of new records and benchmarks in terms of maximum torque, the power-to-weight ratio, acceleration, and top speed.

Drivers are also able to look forward to lateral acceleration, traction and stopping power never seen before, the new racing car setting new standards not "only" in terms of agility, but also in terms of safety. For spectators watching the races for the MINI CHALLENGE 2008 this means even greater excitement, even faster action and even more struggles for leadership on the track.

The MINI John Cooper Works CHALLENGE is making its debut at the 2007 Frankfurt Motor Show where the public will be able to get their first impression of the new racing car scheduled for delivery to the participating teams in spring 2008, that is in good time prior to the beginning of the MINI CHALLENGE 2008.

This will also be the first time that the car raced in the MINI CHALLENGE will be pitched against racing cars made by other manufacturers as a further new challenge in 2008, since the new MINI John Cooper Works CHALLENGE will also be delivered in race trim including all features required for superior performance and safety to customers entering other motorsport events outside the MINI CHALLENGE itself.

This is simply because, thanks to its outstanding performance and superior handling, the new MINI offers everything it takes in motorsport in order to compete successfully against other brands too.

The perfect foundation: four-cylinder power unit with twin-scroll turbocharger.

The power machine within the engine compartment of the MINI John Cooper Works CHALLENGE is the four-cylinder already demonstrating its sporting spirit in the regular version of the MINI Cooper S. As the most powerful representative of the new MINI generation, this outstanding machine offers pure fun of driving, the power of a brand-new engine, and that go-kart feeling already legendary in the market, making this a genuine exception in the small car segment.

This 1.6-litre four-cylinder features a twin-scroll turbocharger and direct gasoline injection, developing maximum output of 128 kW/175 hp at 5,500 rpm. Output per litre, therefore, is 80.1 kW or 109.5 hp – a figure which places the new MINI Cooper S very close to the most thoroughbred sports cars. Maximum torque of 240 Newton-metres or 177 lb-ft, on the other hand, is maintained consistently between 1,600 and 5,000 rpm. And whenever the driver wishes to accelerate all-out, the Overboost function briefly increases turbocharger pressure to a maximum of 260 Nm or 192 lb-ft. The outstanding strengths of the power unit in this compact performer, therefore, are spontaneous power, muscular torque and acceleration, as well as smooth, free-running engine behaviour.

The qualities of the new turbocharged engine come out clearly in everyday traffic and indeed were confirmed only recently by an international jury of experts lauding the engine in the new MINI Cooper S through the Engine of the Year Award 2007 as the winner in its category.

The 16 intake and outlet valves on the engine are masterminded by two overhead camshafts, roller-type drag arms optimised for minimum friction and hydraulic valve play compensation elements. The outlet valves are filled with sodium to meet the particularly demanding requirements of a turbocharged power unit, the intake camshaft comes with infinite phase adjustment setting valve timing to the power and performance required by the driver.

The two-piece bedplate structure of the crankcase is a highly sophisticated technology carried over from motorsport. The cylinder block and bearing housing are made of cast aluminium alloy and the camshafts are a composite structure instead of the usual casting, serving to reduce engine weight. Contrary to the conventional casting process, cam rings made of high-strength stainless steel are shrunk on to the shaft as such. The pistons, finally, running in cast-iron bushes, are cooled by splash oil and are therefore able to withstand very high temperatures and thermal conditions.

The new MINI Cooper S is the first car in its segment with a power unit featuring a twin-scroll turbocharger. This principle ensures particularly spontaneous power and performance at all times, the ducts of two cylinders each coming together within the exhaust manifold and the turbocharger. This particular arrangement reduces exhaust gas counter-pressure at low engine speeds, with the dynamic effect of the pulsating gas columns in the manifold being put to optimum use and improving the response of the turbocharger accordingly.

Turbocharger pressure is limited by a waste gate to 0.8 bar. Since the turbocharger develops its superior boost from a speed of just 1,400 rpm, there is no turbo gap, like on a turbocharged engine with conventional technology.

Direct gasoline injection based on the common-rail principle ensures a highly efficient supply of fuel in all cases, meeting the driver's current demand for power and performance. A high-pressure pump fills the stainless-steel common rail leading to all cylinders with fuel subsequently injected through the injection valves positioned at the sides of the cylinder head into the combustion chambers in an exact dosage. Four valve pockets and the combustion chamber recess in the middle of each piston, finally, ensure optimum charge stratification of the homogenous fuel/air mixture.

The optimised weight of the power unit made completely of light alloy also contributes to the sporting qualities of the car – both on the road and the race track. And the reduced load on the front axle ensures a perfect balance of weight, providing ideal conditions for supreme agility in tight bends and chicanes.

Motorsport know-how for more power and torque.
Using specific and highly appropriate technologies for extra power, the "regular" engine of the MINI Cooper S is already an outstanding performer and is now becoming a genuine high-performance power machine for the race track. Indeed, though its performance alone, the racing version prepared for the MINI CHALLENGE 2008 outperforms the current racing model, even though maximum engine output of 154 kW/210 hp is exactly the same as in the current MINI CHALLENGE racing car.

The crucial point, therefore, is that the engineers specialising in the construction of racing cars and engines, by optimising the engine's characteristics, increasing torque to an even higher level, and adding an exhaust system specifically conceived for motorsport, have put all the conditions in place for even more convincing performance.

Maximum torque is up by 20 Newton-metres or almost 15 lb-ft over the regular model, now amounting to 260 Nm or 192 lb-ft, with Overboost increasing the torque peak briefly to 280 Nm or 206 lb-ft for a particularly powerful sprint whenever required.

The enhanced torque and pulling force provided by the new engine comes to bear right from the start, with the improved elasticity and higher top speed cutting in briefly thereafter. So despite engine power remaining unchanged, new lap records are to expected in the MINI CHALLENGE 2008.

Such very fast lap times will be attributable not just to the new engine, but also to the reduction of starter weight on the new model down by 30 kilos to 1,150 kg (including the driver), aerodynamics improved all round on the car, as well as the high-performance chassis and suspension of the new MINI John Cooper Works CHALLENGE specially modified for motorsport.

Faster when sprinting, quicker in bends, earlier at a standstill.
A well-balanced package of power-enhancing improvements makes the MINI John Cooper Works CHALLENGE a truly exceptional sports machine. The new racing car sprints faster than before and offers better stopping power thanks to its specially developed motorsport brakes and the anti-lock brake system tailored specifically to racing requirements. The car is lighter than its predecessor but rests a lot more firmly on the road, achieving significantly higher speeds in bends and offering even more superior handling.

The new MINI John Cooper Works CHALLENGE accelerates to 100 km/h in just 6.1 seconds and takes only 3.1 seconds to return from the same speed to a standstill. Top speed of the new racing car is 240 km/h or 149 mph.

A further important point is the extremely fast lateral acceleration offered by the new MINI CHALLENGE racing car. This high speed in bends is indeed further enhanced by even faster acceleration out of the bend on to the next straight.

To prevent the drive wheels from spinning when leaving a bend, this is the first car in the MINI CHALLENGE to feature a limited-slip differential instantaneously conveying a larger share of the engine's power to the wheel with better traction. The limited-slip differential also available on the regular production model thus enables the driver to remain on the ideal line at an even higher speed than before.

The suspension on the new racing model comes with adjustable damper units likewise developed specifically for motorsport. This enables the driver to adjust ground clearance, damper pressure (inbound and outbound) as well as damper response to the requirements of various race tracks.

Power is transmitted to the front wheels through a six-speed manual gearbox featured as standard, and the new racing model runs on 17-inch light-alloy wheels (Borbet) in special MINI CHALLENGE design and with newly developed racing tyres (Dunlop).

The new MINI John Cooper Works CHALLENGE owes its unusually superior handling also to the highly effective improvement of body features. These enhancements are based on the John Cooper Works Aerodynamics Package, comprising a front spoiler designed specifically for motorsport, a rear diffuser, and an adjustable rear wing.

This combination of racing features ensures that this racing car not only eliminates lift forces, but even generates downforces at increasing speed, with the aerodynamic improvements being conceived to provide a perfect balance of downforces between the front and rear axles.

MINI CHALLENGE: the thrill of motorsport and lifestyle.
The premiere for the new MINI John Cooper Works CHALLENGE is the first step in continuing a unique story of success. Indeed, the MINI CHALLENGE held ever since 2004 in its current concept has quickly become one of the most attractive and popular Clubsport Series, with CHALLENGE races being held not only in Germany, but also in the Netherlands, in Belgium and in Austria. Some of these races are even held prior to major Formula 1 events, such as the European Grand Prix at Nürburgring and the Belgium Grand Prix in Spa-Francorchamps.

Through its great appeal, this Clubsport Series has indeed developed into not “just” a pan-European, but also a global phenomenon: With a MINI CHALLENGE Series already being held in New Zealand, the MINI fan thrilled by motorsport will soon also be able to enjoy these outstanding races in Australia, where yet another MINI CHALLENGE Series has been announced for 2008.

The MINI CHALLENGE owes its exceptional appeal to an innovative concept: motorsport meets lifestyle – a combination which has proved very successful and highly popular among both drivers and fans.

At the same time the drivers on the starter grid also contribute to the special atmosphere of the MINI CHALLENGE, old hands and young, up-and-coming talents in motorsport comparing their skills with celebrities from show business and other disciplines in sport.

The sporting symbol of the MINI CHALLENGE: absolute equality.
An essential point is that all drivers enter the races in technically identical cars: All MINI CHALLENGE racing cars are built to the same standard and optimised for the race track in the interest of absolute equality – an essential feature of the MINI CHALLENGE placing the emphasis on the driver's skills. To ensure an absolutely perfect balance with equal opportunities, successful drivers are required to carry extra weight in the subsequent races depending on their initial result, the winning car, for example, carrying extra ballast in the next race. And taking the example of the World Touring Car Championship, the top six drivers in the first race subsequently enter the next race in a reversed grid.

Through its superior handling alone and the wide range of safety features incorporated in the racing models, the MINI CHALLENGE is of particular interest to the beginner in motorsport and the ambitious amateur driver. A further incentive, of course, is prize money in the MINI CHALLENGE Germany 2007 alone of Euro 340,000, plus three MINIs as special prizes.

The introduction of the new racing models for the MINI CHALLENGE 2008 now enhances the sporting appeal of this innovative Club Sport Series to an even higher standard: The sporting potential of the new MINI John Cooper Works CHALLENGE offers the drivers every opportunity to set up new lap records and thrill the crowd with even fiercer battles on the track.

In future spectators will enjoy even higher speeds together with greater safety also during pitstops in the qualifying sessions, since each car is now equipped with an air pressure elevating system made of four retractable pneumatic hoists on the bottom of the car activated by compressed air in the pits and lifting up the car as required for changing tyres in a very quick and dynamic process.

At the same time the new racing model also offers enhanced safety borne out not only by the even better handling of the new MINI. For like the current racing version, the new MINI John Cooper Works CHALLENGE is equipped with a safety cage welded firmly to the body of the car.

Over and above the RECARO sports bucket seat combined in future with a six-point safety belt, all racing models will also come from now on with the HANS (Head And Neck Support) system carried over from Formula 1 and ensuring effective protection of the driver's neck area.

More performance, more action, more excitement: Fans of the MINI CHALLENGE can look forward to a fascinating racing season in 2008. And the sporting challenge will be even greater for the driver than ever before, with the MINI John Cooper Works CHALLENGE offering better opportunities to prove the racer's driving talent in spectacular manoeuvres and with even faster lap times.

So the struggle for the podium will be even more exciting than ever before in the MINI CHALLENGE 2008, with one winner being clear right from the start: the MINI John Cooper Works CHALLENGE itself.

The cars will also be entered in many other motorsport events in 2008, the MINI John Cooper Works CHALLENGE offering the ambitious racing driver an extremely competitive car for many purposes and requirements. So it is fair to say that the sporting career of the new MINI is set for new highlights.

(All technical data of the MINI John Cooper Works CHALLENGE is preliminary.)