



# **MINI WRC TEAM.**

Media Information





### Contents.

The legend returns: MINI lines up in the FIA WRC.	Page 3
Ian Robertson: "MINI is returning to its roots."	Page 5
Prodrive – a strong partner for the comeback of MINI to rallying.	Page 7
MINI WRC Team – Who is who.	Page 9
Overview of the FIA WRC Calendar.	Page 10
From Italy to Great Britain: The MINI in the 2011 WRC season.	Page 11
MINI WRC Team driver Kris Meeke in profile.	Page 17
Kris Meeke interview: "We aim to prove how competitive we are."	Page 19
MINI WRC Team driver Daniel "Dani" Sordo in profile.	Page 20
Dani Sordo interview: "We are taking this season very seriously."	Page 22
Meticulous development work the key to success.	Page 23
The MINI John Cooper Works WRC.	Page 24
International customer teams bank on MINI.	Page 27
The benchmark in the 1960s: the MINI Cooper S.	Page 28
Rauno Aaltonen: "Every child must first be nurtured."	Page 30
Historic victories: MINI in international motorsport.	Page 31
MINI WRC Team Partners.	Page 32
Press Contact.	Page 35



### **The legend returns: MINI lines up in the FIA WRC.**

**Munich**, 11<sup>th</sup> April 2011. The countdown is on to the return of MINI on the international motorsport stage. The MINI WRC Team was presented to the public during an official launch at the MINI Plant in Oxford. This season, the team will compete at selected rounds in the FIA World Rally Championship (WRC). The aim is to gain valuable experience, in order to be perfectly prepared for the complete 2012 World Championship season.

The car has been developed by Prodrive, based on the MINI Countryman. It is equipped with a 1.6-litre turbo engine derived from the MINI production models, which was developed by BMW Motorsport for use in series run according to FIA Super2000 regulations, including the World Touring Car Championship. Beside its works involvement with the MINI John Cooper Works WRC, Prodrive is supplying customer cars to private rally teams.

“The FIA World Rally Championship is the pinnacle of rallying, making it the ideal platform for demonstrating the competitive spirit of our brand,” says Ian Robertson, Member of the Board of Management, Sales and Marketing BMW Group. “Experience is a very important factor in motorsport. For that reason it is essential we learn as much as possible within a very short time, in order to make up ground on our rivals. The new regulations mean the gap to the top is smaller than it would have been at another time. We want to annoy the opposition as soon as possible.”

The MINI WRC Team will be putting its faith in experienced drivers when it faces up to the challenge of the WRC for the first time in 2011. Kris Meeke (GB) and his co-driver Paul Nagle (IR) have proven their ability in impressive style, listing the 2009 Intercontinental Rally Challenge (IRC) title as just one of their achievements. Daniel “Dani” Sordo (ES), who will compete alongside his new co-driver Carlos del Barrio (ES) in 2011, has many years of World Championship experience. Twenty nine podium finishes from 84 starts in the WRC just go to show the former Citroën works driver has what it takes to battle it out at the top.

Rallying is far from new territory for MINI. In the past, success in this popular motorsport discipline has played a crucial role in defining the brand’s image. Three victories at the Rally Monte Carlo in the 1960s made the Mini Cooper S a true legend. Mini also competed in the European Rally Championship, where it once again notched up countless triumphs.

The MINI John Cooper Works WRC has undergone an intensive programme of tests and completed thousands of kilometres. The car will make its World Championship debut at the Rally d’Italia Sardegna at the start of May. The MINI John Cooper Works S2000 already made its first appearance in the WRC at the Rally Portugal in March.





Prodrive, an experienced motorsport operation, was chosen as the partner in the quest to continue the brand's success story. The company, founded by David Richards, is viewed as one of the most respected and successful in rallying. "This project is a truly passionate opportunity," believes Richards. "MINI is a cult brand which left a lasting impression during its previous motorsport campaigns. We are both extremely happy and proud to be on board as a partner when MINI returns to rallying. We aim to use 2011 as a preparatory year, amassing experience in order to ensure we are fully competitive from the start of the following season. But let's not underestimate the task ahead of us or the stiff competition we will face on the way. However, our target is firmly set on winning the World Championship title again with MINI."

Prodrive was founded in 1984, and has established itself as one of motorsport's leading independent teams. Currently employing about 500 staff, the company is based in Banbury (GB). Among other successes, Prodrive has to date won six World Rally Championships, five British Touring Car titles, and scored three class victories in France's classic Le Mans 24 Hours.

The MINI Countryman is the youngest MINI model and also the first to be equipped with an all-wheel-drive system. Therefore this model provided the logical basis for a competitive rally derivative. The flagship MINI Cooper S Countryman is powered by a 1.6-litre, four-cylinder petrol engine, supplemented not only by a twin-scroll turbocharger and direct fuel injection, but also fully variable valve management – so offering by far the best relationship between engine power and fuel consumption in its class. The engine produces an impressive 135 kW / 184 bhp, and accelerates the MINI Cooper S Countryman from 0 to 100 km/h in 7.6 seconds.

As part of the MINIMALISM concept, a range of fuel- and emission-reducing features are fitted as standard and/or in appropriate combinations, including Brake Energy Regeneration, the Auto Start/Stop function, Shift Point Display and the need-based operation of ancillary components.

All MINI Cooper S Countryman and MINI Cooper D Countryman are optionally available with permanent MINI ALL4 all-wheel drive, with an electro-hydraulic differential positioned directly on the final drive varying the distribution from front to rear in an infinite process. Under normal driving conditions up to 50 per cent of the engine's power goes to the rear wheels; under extreme conditions up to 100 per cent, offering a new, high-traction rendition of the agile handling so typical of MINI.

"MINI powered by BMW Motorsport": The heart of the MINI John Cooper Works WRC is the 1.6-litre, four-cylinder Di turbo engine, which is also available in the MINI production models. The production engine was further developed by BMW Motorsport for the use in various categories according to FIA Super2000 regulations. The power transmission takes place via an Xtrac 6-speed, sequential gearbox. For its outings on the rally stages, the MINI Countryman chassis has been fitted with a roll cage developed by Prodrive, which exceeds the strict safety requirements of the International Automobile Federation (FIA).





### **Ian Robertson: “MINI is returning to its roots.”**

Ian Robertson, Member of the Board of Management, Sales and Marketing BMW Group, speaks about the importance of motorsport for the MINI brand, the goals in the World Rally Championship and the MINI Countryman, on which the MINI John Cooper Works WRC is based.

### **Mr Robertson, MINI is back in motorsport. What does this move mean for the brand?**

Ian Robertson: “Our involvement in the World Rally Championship effectively sees MINI returning to its roots. In the early years, success in the world of motorsport contributed significantly to the rapid rise of the MINI. Back then, people saw that this little car not only looked good in everyday traffic, but also had a sporty side. This has not changed since then. We chose the World Rally Championship for our stage in order to prove the sportiness of MINI cars to today’s generation of drivers. The commitment also reinforces the key values of the MINI brand, ‘excitement’ and ‘energy’ as well as underlining the manly side of the brand.”

### **Why is the MINI brand so well suited to rallying?**

Robertson: “On the one hand, MINI can look back on a unique success story. On the other hand, MINI is the epitome of excitement for millions of fans around the world and thrills them with its energy. This is precisely what we are able to authentically and sustainably represent through our motorsport involvement in the World Rally Championship. Thrilling rally events, ultimate performances by man and machine, and as much success as possible, of course: motorsport is pure emotion – just as MINI is for its fans.”

### **How are the roles distributed in the World Rally Championship involvement?**

Robertson: “MINI is the manufacturer of the MINI Countryman series car. It forms the basis for the MINI John Cooper Works WRC, which has been developed by Prodrive since the start of 2009. MINI is also playing the role of Team Partner. The 1.6-litre turbo engine derived from the MINI production models was developed by BMW Motorsport in Munich for use in various motorsport series. Prodrive is also responsible for our appearances in the WRC and the production of customer rally cars.”

### **What goals have you set for the first season in 2011?**

Robertson: “Anyone wanting to be successful in a World Championship must first gain experience and put in a lot of hard work. We will do that together with our partner Prodrive. David Richards’ team is very familiar with the World Rally Championship, so we can start at a very high level. Several rallies are planned for this year. In 2012 we will compete for the full season. It goes without saying we want to be competitive as quickly as possible, and I am optimistic we will succeed.”





### **When do you think you will be able to challenge Ford and Citroën for the title?**

Robertson: "Experience is a very important factor in motorsport. For that reason it is essential we learn as much as possible within a very short time, in order to make up ground on our rivals. The new regulations mean the gap to the top is smaller than it would have been at another time. We want to annoy the opposition as soon as possible. You can plan your own performance in motorsport, but not a title win. All you can do is work as hard as possible to move closer to your goal. Our goal is to win the World Championship."

### **What are the outstanding characteristics of the MINI Countryman, on which the MINI John Cooper Works WRC is based?**

Robertson: "The MINI Countryman is a car, the type of which there has never been before in the history of MINI. As a crossover it combines the classic MINI concept with the characteristics of a Sports Activity Vehicle – in a MINI that is at home far beyond the boundaries of the urban environment. It is the first MINI with four-wheel drive, which makes it predestined for the World Rally Championship. With its four doors and four seats it fits the motto: MINI on the outside, maxi on the inside. Because it is a true MINI, the Countryman is particularly low on fuel and emissions."

### **What will MINI's involvement in the Rally World Championship cost?**

Robertson: "The costs of developing a car and running it in the World Rally Championship have fallen significantly since the introduction of the new regulations. We assume the costs will be about 25 per cent lower than would have been the case in previous years. This was a huge influence on our decision to become involved. The 1.6-litre turbo engine can not only be used in the WRC, but also in other categories as the World Touring Car Championship with the BMW 320 TC. In addition, the sale of customer rally cars has a positive effect on the total calculation. The WRC offers MINI an attractive platform – with manageable costs. The cost/performance ratio is excellent."





### **Prodrive – a strong partner for the comeback of MINI to rallying.**

Prodrive is one of the world's largest and most successful motorsport and automotive technology businesses, with 500 staff operating in Europe, Australia and Asia. Today the company runs motorsport programmes for Aston Martin Racing in world sports car racing, Ford Performance Racing in the Australian V8 Supercar Series and MINI in the World Rally Championship.

The company also works with vehicle manufacturers to help develop new technologies and performance vehicles for the road, and is increasingly involved in the aerospace, marine and defence industries, manufacturing specialist components for applications as diverse as commercial passenger aircraft, satellites, nuclear submarines and racing yachts.

Prodrive is the world's leading independent motorsport business. It has won six World Rally Championship titles; five British Touring Car Championships (BTCC); three GT1 titles at Le Mans; and the Le Mans Series title in 2009; as well as managing the BAR F1 team to second place in the 2004 F1 championship.

Prodrive was behind the Subaru World Rally Team's rise to fame from 1990 to 2008. However, Prodrive's rallying history is far more than this. Over the years, it has won more than 130 international rallies with other great motorsport names like BMW, Porsche and MG. Indeed, it was with a BMW M3 that Prodrive won its first ever World Rally Championship event in Corsica in 1987.

David Richards (GB), the chairman and chief executive of the Prodrive Group, says: "I have been involved in the World Rally Championship for more than 30 years, firstly co-driving Ari Vatanen and then subsequently managing several teams. I can honestly say that in all this time, I have personally never been so excited or seen so much interest in a new entrant, as we are seeing today with MINI. In the 1960s the original little red and white Mini captured the imagination of the world and won what was then the most challenging motor race in the world, the Monte Carlo rally. More than 40 years on and people still talk about this achievement with great fondness."

In touring car racing, Prodrive has worked with BMW, Alfa Romeo, Honda, Ford and Volvo, winning BTCC titles in the 1980s, 90s and in 2000. In 2003, Prodrive moved into the Australian V8 Supercar Series, creating Ford Performance Racing, now one of the leading teams in this championship.

The same year, the team achieved its ultimate circuit racing accolade by winning the GTS class at the Le Mans 24 Hours with a Ferrari 550 GTS Maranello. Now the company manages Aston Martin Racing, which saw the British company return to sports car racing in 2005 with the DBR9. In 2007 and 2008 the team won the GT1 class at Le Mans and in 2009 its new LMP1 car took the Le Mans Series title. In September 2010, Prodrive announced it was developing an all new Aston Martin LMP1 car to challenge for outright honours at Le Mans.



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From the beginning of 2002 to the end of the 2004 season, under the stewardship of chairman, David Richards, Prodrive managed the BAR Honda Formula One Team, taking it from the middle of the grid to second in the constructors' championship.

During the 1990s, Prodrive began offering its technical expertise and project engineering skills to the mainstream automotive market. Over the years, this part of the business has grown rapidly to represent nearly half the company's turnover. The company has the capability to take concepts through to full working prototypes. It has particular expertise in the design, calibration and testing of powertrains, drivelines and vehicle dynamics, as well as control and systems integration. In recent years, it has begun to specialise in the development of emission reducing technologies such as electric and flywheel hybrids and variable compression ratio engines.

In the UK, Prodrive has its own 250-acre proving ground, including a 2.5 mile test track; low friction straights; areas for suspension and dynamics performance testing; and a high speed, six lane, mile-long straight. It is this track that has been used in the development of the new MINI John Cooper Works WRC.

"I firmly believe the new MINI John Cooper Works WRC will capture the imagination of today's generation of rally fans just as it did then," says Richards. "As in 1964, this interest will spread well beyond the world of motorsport. I have had so many people coming up to me and say they had read about the new programme and would be cheering us on. I'm therefore sure MINI's participation will lead to a rejuvenation of interest in the World Rally Championship and bring a whole new audience to this spectacle."





### **MINI WRC Team – Who is who.**

#### **David Richards – Team Principal.**

After studying accountancy, David Richards became a professional rally co-driver, finishing his competitive career by winning the World Rally Championship title with Ari Vatanen (FI) in 1981. Following the 1981 season, he devoted his time to developing his business interests, which led to the formation of his own rally team and the creation of Prodrive in 1984.

#### **Dirk Hollweg – Head of MINI Motorsport.**

Dirk Hollweg is a management engineer and has worked for BMW and MINI for 20 years. As the former head of sport and event marketing for BMW Germany, he was also responsible for hospitality in Formula 1. Hollweg gained his experience as a strategic planner, and is in charge of long-term development of motorsport for the brand. He is heading a team of motorsport and communications experts, which is based at the MINI headquarters in Munich. Their responsibilities include the WRC, the club sport series MINI Challenge and all other MINI motorsport activities.

#### **David Wilcock – Technical Director.**

David Wilcock joined Prodrive in 1988 as a race technician on the company's British Touring Car Championship (BTCC) programme with BMW. He then moved over to the rally side of the business. In 1996 Wilcock had a two year stint at the Benetton Formula One team, also based in Oxfordshire, about the same time as Prodrive chairman David Richards was running this business. He rejoined Prodrive in 1998 and continued to work on all the company's subsequent race programmes. In July 2010 he joined the MINI World Rally Car project as chief engineer.

#### **David Lapworth – Technical Mentor.**

David Lapworth attended Coventry University and graduated in 1980 with an engineering degree. He started his career at Peugeot Talbot in Coventry as an engine engineer. In 1984, Lapworth joined David Richards at Prodrive. Since then he has overseen the development of every works rally car Prodrive has created. He has had overall engineering responsibility for the MINI rally programme since its inception. As a senior practitioner in the sport, David Lapworth has been one of the leading figures in the development of technical regulations for both Super Touring and the World Rally Championship.

#### **Campbell Roy – Team Manager.**

Campbell Roy is a motorsport professional with a wide range of experience covering logistics, driver management and sponsorship negotiation. Roy is a former co-driver and has worked at the highest levels of commercial and operational motorsport. He joins the MINI WRC Team in the role of Team Manager and will play a key part in the development of the team in its first year of WRC competition.

#### **The Car Engineers.**

Teena Gade – Car Engineer Kris Meeke.  
Allen Russell – Car Engineer Dani Sordo.





### Overview of the 2011 FIA WRC Calendar.

<b>Date</b>	<b>Event</b>
10-13 February 2011	Rally Sweden
3-6 March 2011	Rally Mexico
24-26 March 2011	Rally Portugal
14-16 April 2011	Rally Jordan
5-8 May 2011	Rally Italia*
26-29 May 2011	Rally Argentina
16-19 June 2011	Rally Greece
28-31 July 2011	Rally Finland*
18-21 August 2011	Rally Germany*
8-11 September 2011	Rally Australia
29 September-2 October 2011	Rally France*
20-23 October 2011	Rally Spain*
10-13 November 2011	Rally Great Britain*

\* Planned participation of the MINI WRC Team





### 5-8 May 2011, Rally d'Italia Sardegna.

Sardinia has welcomed the FIA World Rally Championship since 2004. Before that, the infamous Rally Sanremo with its winding asphalt roads on the Riviera hosted the Italian round of the World Championship. In contrast, fine, sandy gravel awaits the rally drivers on the Mediterranean island. The centre of proceedings is the coastal town of Olbia (IT) on the north-west coast. The service park is located at the harbour, where the rally also starts and finishes.

The cars race through picturesque, hilly landscapes and along the breath-taking Costa Smeralda. In 2011, part of the route will take in the Oristano province in the west of the island for the first time. The tests are fast, but require extreme concentration from the drivers as a result of the countless tight corners.

The route is covered with a fine layer of sand, which hides a hard surface with longitudinal ruts. This tricky surface develops during the second round of stages, if not beforehand. Another test for both man and machine are the high temperatures.

#### Facts and figures.

Surface:	Gravel
Special Stages:	18
Total Length:	339.7 km
WRC debut:	2004
2010 winner (IRC):	Juho Hänninen (FI)
Record winner:	Sébastien Loeb (FR), 4 wins
Service park:	Terminal Crociere dell'Isola Bianca, Olbia (IT)
Nearest airport:	Olbia Costa Smeralda
Website:	<a href="http://www.rallyitaliasardegna.com">www.rallyitaliasardegna.com</a>

#### MINI WRC Team driver Dani Sordo says:

"We enter the WRC season in Sardinia. This fact alone makes the Rally d'Italia Sardegna one of the highlights of the year. Everyone in the team wants everything to be perfectly prepared in order to get off to a flying start. However, only at the end of the rally will we know just how good the preparation really was. I would describe this rally as treacherous. The route is really narrow in some places and the surface changes after every car. Sand and debris often make the track slippery. If both of these have been removed, you find yourself driving on hard, bumpy ground, and must adapt your driving style accordingly."





### **28-31 July 2011, Neste Oil Rally Finland.**

The Rally Finland is one of the big classics in the FIA World Rally Championship. Formerly known as the "1000 Lakes Rally", it has been a permanent and popular fixture on the World Championship calendar since 1973. Every year, hundreds of thousands of fans make the pilgrimage to the rally courses, where they are treated to extreme action.

Kris Meeke and Dani Sordo can look forward to high-speed sections, huge jumps and spectacular blind corners. There is a good reason for the Rally Finland being nicknamed the "Gravel Grand Prix". The Finns celebrate with a massive rally party when the WRC comes to town. The central point in proceedings is the university city of Jyväskylä (FI), which is situated in the middle of the Finnish Lakeland. The fans here party through the night over the course of the weekend.

The key to success in Finland is finding the right tactics. The drivers must drive accurately, but must also show an enormous amount of courage to hit top speeds. The Rally Finland has been dominated by Scandinavians in the past. Only twice have drivers from outside the region won in Finland.

#### **Facts and figures.**

Surface:	Gravel
Special Stages:	22
WRC debut:	1973
2010 winner:	Jari-Matti Latvala (FI)
Record winner:	Marcus Grönholm (FI), 7 wins
Service park:	Jyväskylä Paviljonki & Jyväskylä Harbour (FI)
Nearest airport:	Jyväskylä Airport
Website:	<a href="http://www.nesteoilrallyfinland.fi">www.nesteoilrallyfinland.fi</a>

#### **MINI WRC Team driver Kris Meeke says:**

"Finland is a real roller-coaster of a ride and one of the fastest rallies of the season, featuring many spectacular jumps. This makes it a great experience for the fans. In addition, rallying is something of a national sport in Finland. There is always a fantastic atmosphere. For the drivers, the Rally Finland is perhaps the biggest adrenalin rush of the entire season, because you can often only see a short way down the road in front of you. It is extremely important to do a good job on the 'Recce' in order to arrive safely at the finish. I can still remember 2003, when I ruined three tyres and practically had to drag the car back to the service park on its rims. It is always great fun to test yourself against the Finnish drivers. They have an advantage, as they know the gravel roads so well. However, we enjoy taking on this challenge."





### **18-21 August 2011, ADAC Rally Deutschland.**

Vineyards, Porta Nigra and Panzerplatte – rally fans immediately think of the Rally Deutschland when they hear these terms. It has been a fixture on the FIA World Rally Championship calendar since 2002 and is held in the famous wine-growing region of the Mosel, to the east of the historic city of Trier, and St. Wendeler Land to the south.

The rally is predominantly held on asphalt, although the sealed surfaces change so often that the drivers are faced with a huge challenge every year. The narrow, winding roads through the vineyards and the infamous Baumholder military training area with its giant boulders, known as “Hinkelsteins”, make the Rally Deutschland a true classic.

The service park and rally headquarters are based in Trier (DE). One of the highlights towards the end of the Rally Deutschland is the superspecial “Circus Maximus” stage, which runs around the historic Porta Nigra in the centre of Trier. The Roman gate to the city also provides the backdrop for the presentation ceremony. Since 2002, one driver has monopolised the top step of the podium: Sébastien Loeb. The Frenchman has won every WRC rally held in Germany to date.

#### **Facts and figures.**

Surface:	Tarmac
Special Stages:	19
Total Length:	288.65 km
WRC debut:	2002
2010 winner:	Sébastien Loeb (FR)
Record winner:	Sébastien Loeb (FR), 8 wins
Service park:	Messepark Trier (DE)
Nearest airport:	Luxembourg Airport
Website:	<a href="http://www.rallye-deutschland.de">www.rallye-deutschland.de</a>

#### **MINI WRC Team driver Kris Meeke says:**

“The Rally Deutschland is basically three different rallies rolled into one. It starts off on very narrow roads with tight bends winding through the Mosel vineyards. Here it is always a matter of stop, start, go – stop, start, go. The first day is technically very demanding. The second day takes you to the military training ground in Baumholder. Here, you can step on the gas for longer periods. However, the so-called ‘Panzerplatte’ is littered with large Hinkelsteins, which are actually intended to stop tanks. If these stones can stop a tank, I have no desire to hit one in a rally car. On the third day the rally heads to the Saarland region, for what is a pleasant drive on asphalt through the hinterland. Despite this, the weather can change very quickly, so you have to be prepared for anything. By the way, Dani and I were involved in a thrilling duel in the JWRC at the 2005 Rally Deutschland. Returning there now as team-mates makes this even more special for me.”





### **29 September – 2 October 2011, Rallye de France.**

The French round of the FIA World Rally Championship has been held in Alsace since 2010. Previously, the World Championship had visited the Mediterranean island of Corsica for the “Tour de Corse” since 1973. The winding mountain roads meant the Rally Corsica soon became infamous and earned it the nickname “Rally of 10,000 Corners”.

However, the Rally de France lost none of its charm when it moved to Alsace. Fans flock to the courses around Strasbourg (FR). The fans do not just come from France, but also from many neighbouring European countries. The service park is based in Strasbourg, while the route itself primarily winds through hilly forests. A demanding mixture of quick passages and slower sections awaits the drivers.

In the forests, pine needles and leaves make the roads slippery and hazardous. As if that were not enough, the teams must take into account the constantly changing weather conditions. Cool temperatures and inconsistent stage surfaces help to make the Rally de France a really tough test for all involved.

#### **Facts and figures.**

Surface:	Tarmac
WRC debut:	2010
2010 winner:	Sébastien Loeb (FR)
Service park:	Outside Strasbourg (FR)
Nearest airport:	Aéroport International Strasbourg
Website:	<a href="http://www.rallyedefrance.com">www.rallyedefrance.com</a>

#### **MINI WRC Team driver Dani Sordo says:**

“The surface in France changes frequently, which makes the rally technically demanding. The route is very hilly, particularly in the forest sections. Here, the weather decides how you can drive. Last year it rained cats and dogs, which made the surface very slippery. The Rallye de France is similar in many ways to the World Championship event in Germany. Personally, I really like driving there, as you have to be both very focused and flexible with regard to the weather conditions. The ‘Recce’ plays a major role. The pace notes must be accurate, and the co-drivers instructions must be perfect.”





### **20-23 October 2011, RACC Rally de España.**

The Spanish round of the FIA World Rally Championship has undergone many modifications in its short history. In 2005 it moved from the Costa Brava to the Costa Daurada on the other side of Barcelona. It has also had a new date from 2007, and is now contested in the autumn. Despite all the innovations, the character of the “Rally Catalunya” has changed precious little.

The wide, sweeping roads make this one of the fastest asphalt rounds of the season. The right driving style is the key here: drivers must find the optimum line in the corners in order to maximise their pace. Since 2010, however, tests on gravel have also been added to those on asphalt.

Another variable is the unstable weather. The Costa Daurada may conjure up images of glorious sunshine, but the WRC event takes place in the autumn. At this time of year, the mountains close to the coast can often whip up dense rain clouds within a matter of minutes. And when it rains, the rally course becomes extremely slippery. The rally is based at the PortAventura theme park in Salou (ES), in the Tarragona region. The Rally de España is hugely popular among spectators, who regularly flock to the stages.

#### **Facts and figures.**

Surface:	Tarmac/Gravel
WRC debut:	1973
2010 winner:	Sébastien Loeb (FR)
Record winner:	Sébastien Loeb (FR), 5 wins
Service park:	PortAventura theme park, Salou (ES)
Nearest airport:	Aeroporto de Barcelona
Website:	<a href="http://www.rallyracc.com">www.rallyracc.com</a>

#### **MINI WRC Team driver Dani Sordo says:**

“This rally is obviously very special for me, as it is my home event. Many friends and fans will be there to watch. That is fun and gives me that extra motivation to get a good result. Since the organizers moved away from driving purely on gravel, the average speed of the rally has increased significantly. Despite this, you have to bear in mind that the weather in this part of Spain can be very variable when the rally is held at the end of October. If it stays dry you can be very quick. If it rains, the speed may drop but you have to remain just as focused, as the surface becomes very slippery.”





### 10-13 November 2011, Wales Rally GB.

As one of the oldest rallies in the world, the Wales Rally GB – staged for a long time as the “RAC Rally” – has experienced all the changes within the sport. Since its beginnings as a national event, with special stages in North England, Scotland, the Lake District and the Midlands, it has developed into a permanent fixture on the international rally calendar and is extremely popular among fans.

The service park is located at the rally base in Cardiff, Wales. The capital city hosts both the start and finish of the event, as well as a special spectator stage in the “Millennium Stadium”. The stages take the drivers over private gravel tracks on Forestry Commission land, which are normally primarily used by lorries and machinery for cutting and transporting the wood.

The drivers hit top speeds on the narrow, but quick forest roads. However, after the first round of cars, dangerously deep ruts can form. Another factor that adds to the excitement is the weather, which is unpredictable at this time of year. Will it stay dry, will it rain, or will the course be shrouded in thick fog? This is a matter of concern for engineers and drivers alike. The set-up can become a real lottery.

#### Facts and figures.

Surface:	Gravel
WRC debut:	1973
2010 winner:	Sébastien Loeb (FR)
Record winner:	Hannu Mikkola (FI)/Petter Solberg (NO), both 4 wins
Service park:	Cardiff Bay (GB), around the Wales Millennium Centre
Nearest airport:	Cardiff Airport
Website:	<a href="http://www.walesrallygb.com">www.walesrallygb.com</a>

#### MINI WRC Team driver Kris Meeke says:

“The Wales Rally GB can be described in two words: cold and muddy. It is one of the very traditional rallies on the WRC calendar, and has been part of the World Championship right from the very beginning. The fact that the rally takes place in late autumn helps to make it so attractive. The cold, wet weather means the grip on the roads is changing all the time, which makes the course very challenging. I believe that the Rally Great Britain is one of the best rally routes in the world. Born in Northern Ireland, this is obviously a kind of home rally for me. In 2005 I made my WRC debut here and finished ninth, just a few seconds behind Colin McRae – something I was very proud of. It is also the finale of the WRC season for our MINI WRC Team. By then we will have had six opportunities to test ourselves against the opposition, and will know exactly where we stand.”





### **MINI WRC Team driver Kris Meeke in profile.**

After leaving Queen's University in Belfast with an honours degree in mechanical engineering, Kris Meeke spent his first three years working as a designer for a leading rally-preparation business. But it was the draw of active competition that saw him make his first move into becoming a professional rally driver after winning a competition for new rally drivers in 2000. The prize was a fully supported drive in a national rally in Wales. The following year, while competing in the Peugeot 106 Super Cup, he took his first category win at the Swansea Bay Festival National Rally. The same year, he drove a 300 bhp Group A Subaru Impreza in the Galloway Hills Rally. It was his first time in a four-wheel drive car and he clinched his first outright rally win.

In 2002, Meeke secured a contract with McRae Motorsport and drove a Super 1600 Ford Puma in the British Junior Championship. Under his mentor, Colin McRae, he managed to secure victory in the series at his first attempt, and in only his second year in rallying.

With the backing of Colin McRae, Meeke graduated to the JWRC (Junior World Rally Championship) in 2003, driving an Opel Corsa run by Team Palmer and continued to compete in the UK, winning both the British Junior and Super 1600 titles. 2004 saw him record ten fastest stages on JWRC events and take second place in the Rally of Spain.

In 2005, Meeke joined Citroen for the JWRC driving a factory supported C2 Super 1600. He set 36 fastest stage times during the year, winning the first event of the season in Monte Carlo and finishing third overall in the championship. At the end of the year, Meeke competed in a Prodrive-prepared Subaru Impreza World Rally Car on Wales Rally GB. He made an impressive debut in this car, finishing tenth overall and only 11 seconds behind his mentor, Colin McRae.

Meeke continued to compete for Citroen in the JWRC during 2006, setting more fastest stage times than anyone else, but was unable to challenge for the title due to a number of mechanical failures. Recognising his testing ability, Citroen also asked Meeke to help in the development of the Xsara WRC and the new C4 WRC, working alongside Sébastien Loeb.

In 2007 Meeke continued to build up his World Rally Car experience, competing in a Prodrive-prepared Subaru Impreza in the Irish Tarmac Championship, and winning three events from four starts. Meeke also competed in the inaugural WRC round of Rally Ireland and held sixth place after the first day.

The following year, Meeke continued to compete in Ireland, but this time in a Renault Clio Super 1600. Despite giving away significant performance, he still managed to set fastest stage times against a 20 strong field of World Rally Cars. This pace led to events with Renault Sport in Russia in the Intercontinental Rally Challenge (IRC), as well as in Spain and Germany in the WRC.

In 2009, saw Meeke return to Peugeot to compete in the IRC in the 207 Super 2000 car. With co-driver Paul Nagle, he took outright wins in Brazil, Portugal, Belgium and San Remo helping him clinch the IRC title. In 2010 he re-signed for the team and celebrated another IRC race victory and ended the season in third place overall.





### **Facts and figures – Kris Meeke.**

Born:	2 <sup>nd</sup> July 1979/Dungannon, Northern Ireland
Nationality:	British
Residence:	County Tyrone (GB)
Marital status:	Single
Co-driver:	Paul Nagle (IR)

### **Career highlights.**

2000	1 <sup>st</sup> place Peugeot talent search
2001	Peugeot Super 106 Cup
2002	1 <sup>st</sup> place British Junior Rally Championship (Ford)
2003	1 <sup>st</sup> place British Junior Rally and Super 1600 Championship (Opel)
	11 <sup>th</sup> place FIA J-WRC, Super 1600 (Opel)
2004	7 <sup>th</sup> place FIA J-WRC, Super 1600 (Opel)
2005	3 <sup>rd</sup> place FIA J-WRC, Super 1600 (Citroën) 10 <sup>th</sup> place FIA WRC Wales GB Rally (Subaru)
2006	7 <sup>th</sup> place FIA J-WRC, Super 1600 (Citroën)
2007	1 <sup>st</sup> place Irish Tarmac Championship Various starts in FIA WRC
2008	Irish Tarmac Championship (Renault)
2009	1 <sup>st</sup> place Intercontinental Rally Challenge (Peugeot)
2010	3 <sup>rd</sup> place Intercontinental Rally Challenge (Peugeot)





### **Kris Meeke interview: “We aim to prove how competitive we are.”**

Kris Meeke celebrated his biggest success in rallying in 2009 when he and co-driver Paul Nagle won the Intercontinental Rally Challenge outright. In 2011, he enters the FIA World Rally Championship with the MINI WRC Team.

In an interview Meeke speaks about this season’s programme and the high expectations facing the MINI WRC Team.

### **Kris, for 2011 only a selection of WRC events are on your schedule. Will it be a quiet season for you?**

Kris Meeke: “No, to go into a season without aiming to win is a waste. Then we may as well not even enter and save an awful lot of effort. In our instance we need to find the right balance. We can’t win the title; however, we still aim to prove how competitive we are.”

### **What does the MINI WRC Team hope to gain from entering selected events?**

Meeke: “Experience under competitive conditions. We believe we are currently up to speed. However, that can only be confirmed in direct competition. Therefore we need to use the events to ensure we are competitive as soon as possible. 2012 will be a very important year for us because then we will be judged over an entire season. Already we are feeling the weight of expectations – and gladly accept the challenge.”

### **Do you feel under pressure to perform against your team-mate Dani Sordo?**

Meeke: “Well, we are not competing wheel-to-wheel as you do in Formula One, where team-mates often push and shove. In rallying it is totally different because there is a lot of respect among the teams. We drive solely against the stopwatch, not against other teams or even our team-mates.”

### **Which event are you most looking forward to?**

Meeke: “I have no favourites. At the moment all I am hoping is that it gets under way as soon as possible so we can develop the car.”





### **MINI WRC Team driver Dani Sordo in profile.**

Daniel "Dani" Sordo has been a big name in the FIA World Rally Championship for years. The 27-year-old Spaniard is undisputedly one of the top drivers in the field. An impressive 29 podium finishes in the WRC and 102 special stage wins speak for themselves. "Dani has been competing at the very highest level for the last five years," says David Richards, Chairman of Prodrive, heaping praise on the 2005 Junior World Rally champion.

And yet the experienced Sordo will be entering uncharted waters in 2011: new team, new car, new crew, and new co-driver. Sordo has been behind the wheel for Citroën for half a decade. He now lines up alongside co-driver Carlos del Barrio for the new MINI WRC Team, which is aiming to replicate the brand's huge success of the past. Richards says: "I believe with the new MINI John Cooper Works WRC and in the right environment, he can now take the next step and add to his 29 podiums with victories on WRC events and become a challenger for a WRC title." Sordo is also more than confident: "To be part of this new team is a fantastic opportunity for me. I'm sure MINI has a big future in the sport, and I'm looking forward to working with Kris Meeke."

Sordo, together with Meeke, completed a two-day test in Sardinia in November 2010 and was immediately impressed by the new MINI Rally Car. "The first impression was excellent," confirmed Sordo after the first outings. The cooperation with Meeke also immediately worked very well. Since his first drive for the MINI WRC Team, Sordo has been applying his experience and has played a large role in the rapid development of the new car. His excellent performances over the past years have contributed significantly to Citroën winning the Manufacturers' Championship three times in succession.

Sordo began his career in motocross when he was 12 years old, achieving success also in hillclimbing, karting and touring cars. He first drove in a WRC event at the Rally Catalunya, the Spanish round of the series, in 2003 in a Mitsubishi Lancer Evo VII, finishing 18th overall. He won the Spanish Junior Rally Championship that year, and retained the title in 2004, while gaining further international experience at WRC rounds in Argentina, France and Spain.

After clinching the Junior World Rally Championship title in 2005, Sordo then joined the Kronos Total Citroën World Rally Team in 2006 when he was first paired with Loeb. Sordo finished the 2006 season with four podium places, 49 points and fifth overall in the Drivers' Championship. He has driven for the Citroën Total World Rally Team since 2007, and while in the WRC has achieved a total of 17 second place finishes, taking the third step of the podium 12 times. In 2007, Sordo finished fourth in the WRC Drivers' Championship, was placed third in the standings in 2008 and 2009 and finished the 2010 season fifth overall.





### Facts and figures Dani Sordo.

Born:	2 <sup>nd</sup> May 1983/Torrelavega, Cantabria (ES)
Nationality:	Spanish
Residence:	Puente San Miguel, Cantabria (ES)
Marital status:	Single
Co-driver:	Carlos del Barrio (ES)

### Career highlights.

2003	Spanish Junior Rally Champion
2004	FIA P-WRC outings (Group N Mitsubishi Lancer) Spanish Junior Rally Champion
2005	FIA J-WRC Champion (Citroën C2) and Spanish Champion
2006	World Rally Car debut (Kronos Citroën) 5 <sup>th</sup> place FIA WRC Drivers' Championship, four podiums
2007	4 <sup>th</sup> place FIA WRC Drivers' Championship (Citroën), seven podiums
2008	3 <sup>rd</sup> place, FIA WRC Drivers' Championship (Citroën), six podiums
2009	3 <sup>rd</sup> place FIA WRC Drivers' Championship (Citroën), 7 podiums
2010	5 <sup>th</sup> place FIA WRC Drivers' Championship (Citroën), five podiums

### FIA WRC statistics.

First WRC rally:	2003, Rally Catalunya
WRC starts:	84
Podium places:	29
Stage wins:	102
Total points:	393





### **Dani Sordo interview: “We are taking this season very seriously.”**

Dani Sordo has been considered a top FIA World Rally Championship exponent for many years. Together with new co-driver Carlos del Barrio he has now made his services available to the MINI WRC Team.

In this interview Sordo speaks about his preparations for the season ahead, and his impressions of the MINI John Cooper Works WRC.

### **Dani, together with your team-mate, Kris Meeke, you are continuing MINI’s tradition in rallying. Your comments?**

Dani Sordo: “It’s great, particularly to do so with a team as experienced as the MINI WRC Team. Mini proved in the 1960s that it could thrill the fans by winning important rallies. My first impression of the new team is that everybody is hard at work trying to be just as successful.”

### **What will be this season’s biggest challenges for MINI?**

Sordo: “In our first season in the WRC we aim to collect as much experience as possible to be in a position to attack in the second year. To not contest all rallies feels a bit strange for me at present, but this is our first season in the WRC. We plan to learn as much as possible in 2011 in order to move the car to the sharp end as soon as possible.”

### **What are your preparations for the season?**

Sordo: “First we are working on the car. We need to fine tune all technical aspects of the car for the different events. I already have a very good impression of the car. Now we need to concentrate on those vital but minor items that make a difference on rallies. I do a lot of sport to stay fit. But the most important thing for me is to gain a good feeling for the car.”

### **How would you describe the MINI John Cooper Works WRC?**

Sordo: “The car is already highly developed. For example, we have a lot of space in the cockpit, a lot more than I had previously. Here the team has put in a lot of good work. I believe there is no comparison between this car and the Classic Mini Cooper S which won the Monte Carlo Rally in the 1960s.”

### **The MINI WRC Team will not be contesting all rallies in 2011. Will this season be quieter for you?**

Sordo: “No, we are taking this season very seriously in preparation for a full programme next year. This year we will compare ourselves directly to the competition, so 2011 is a learning season for the entire team to collect experience in order to be best prepared for 2012.”





### **Meticulous development work the key to success.**

The MINI John Cooper Works WRC has been developed by Prodrive, based on the production model of the MINI Countryman, and complies with the new regulations enforced by the International Automobile Federation (FIA). The development started back in 2009 when Prodrive assembled a team of engineers, which was given complete freedom to design a new rally car. The goal was to gain a precise idea of what the ideal car must look like, in accordance with the new rules.

The engineers focussed on analysis for the initial months. Every minute detail of a rally car was mapped mathematically. This work produced some interesting results, which had a fundamental influence on the subsequent approach when designing the MINI John Cooper Works WRC and on the allocation of technical resources at Prodrive. The company examined more than a dozen cars from a variety of different manufacturers, measuring key areas such as wheel base, centre of gravity, weight, tread width, etc.

After performing detailed measurements on the production model of the MINI Countryman, it soon became clear to the Prodrive engineers this car would provide an excellent basis for a WRC car. MINI shared all the essential data with the colleagues in Banbury, so that Prodrive could apply the general design they had come up with previously to this car. One of the key requirements of the development team was to keep the servicing effort required for the MINI John Cooper Works WRC to an absolute minimum for private teams, without causing high maintenance costs. At the same time, the performance should not be compromised. Twenty five to 30 models will be manufactured per year – a relatively high number by motorsport standards. For this reason, Prodrive had to ensure the car could also be run easily and economically at remote locations around the world.

The result of these endeavours is the MINI John Cooper Works WRC. From an engineering point of view, its design is extremely linear and simple. Prodrive invested a lot of time and effort to achieve this. Among other features, all four uprights are interchangeable as are the anti-roll bars. This means customer teams require relatively few spare parts in order to run their cars. In addition, the car also offers many other innovations. These include the design of the roll cage, which makes the MINI John Cooper Works WRC extremely safe.

“I am very proud of what our team of engineers has been able to achieve,” says David Richards. “By combining the experience of David Lapworth our technical director, who has been with Prodrive since the very beginning, with the inspiration and new ideas from a team of young engineers we have been able to produce a radically new car. However, let’s not underestimate the challenge that faces us as I’m sure our competitors are working equally hard on their new cars for 2011, but if you are going to be a new entrant to any championship, there is no better time to join than when there’s a new set of technical regulations and a new tyre supplier.”





### **The MINI John Cooper Works WRC.**

The MINI John Cooper Works WRC chassis is based on the MINI Countryman road car bodyshell with the addition of a Prodrive-designed roll cage which exceeds FIA regulations. The inherent strength of the original MINI Countryman bodyshell ensured that engineers could minimise the amount of steel roll cage required to meet its safety targets. The MINI Rally Car has a uniquely designed rollcage which not only creates one of the safest rally safety cells in the world, but also makes the interior of the car one of the most spacious.

The MINI John Cooper Works WRC has Macpherson strut suspension front and rear. Prodrive has designed many of the suspension components to be fully interchangeable between the four corners of the car, for instance the front and rear anti-roll bars are the same. The suspension has been developed in collaboration with motorsport damper specialists, Öhlins. The MINI John Cooper Works WRC has three-way adjustable dampers, so that it can be tuned to specific surfaces and the needs of individual drivers. A major advantage of the MINI Countryman road car is the amount of suspension travel. This has significantly enhanced the suspension characteristics of the car giving it even better performance over rough gravel stages.

The MINI John Cooper Works WRC 1.6-litre turbo-charged direct injection engine has been developed by BMW Motorsport for deployment in various motorsport series, including the World Touring Car Championship with the BMW 320 TC. The engine is based on the standard 1.6-litre unit found in the MINI Countryman and retains the road car's cylinder block and heads before being extensively re-engineered for competition. The engine is virtually identical to that used by BMW in its World Touring Car programme, except in the MINI Rally Car it is fitted transversely in the engine bay and the ECU remapped for the unique demands of the rally stage. Under FIA regulations, the performance of the engine is limited by a 33mm air restrictor and a maximum turbo boost pressure of 2.5 bar (absolute).

The MINI John Cooper Works WRC is fitted with AP Racing brakes. In tarmac specification with the larger 18" wheels the car has 355mm four pot disc brakes on the front and rear. In gravel specification with 15" wheels, the brakes are 300mm front and rear. Unlike the production MINI Countryman there is no ABS.

Like the MINI Countryman, the MINI John Cooper Works WRC has four-wheel drive. The 1.6-litre turbo engine is mated to the drivetrain via an Xtrac six-speed sequential gearbox and AP Racing sintered twin plate clutch with the driver selecting gear via a manual shift mounted on the steering column. The car has no centre differential, and has passive limited slip plate and ramp differentials on the front and rear axles.





### **The MINI John Cooper Works WRC: Technical specifications.**

#### **Dimensions:**

Length: 4,110 mm  
Width: 1,820 mm  
Height: adjustable  
Weight: 1,200 kg (FIA regulations)

#### **Chassis:**

MINI Countryman bodyshell with Prodrive roll cage exceeding FIA regulations

#### **Aerodynamics:**

WRC rear wing, WRC front bumper

#### **Transmission:**

Permanent four wheel drive  
Front axle: Plated limited slip  
Rear axle: Plated limited slip  
Gearbox: Xtrac 6-speed sequential

#### **Suspension:**

Öhlins Prodrive Macpherson strut, 3 way adjustable

#### **Front brakes system:**

Tarmac: AP Racing four-piston brake with 355mm in diameter  
Gravel: AP Racing four-piston brake with 300mm in diameter

#### **Rear brake system:**

Tarmac: AP Racing four-piston brake with 355mm in diameter  
Gravel: AP Racing four-piston brake with 300mm in diameter

#### **Steering:**

Hydraulic power assisted

#### **Wheels:**

ATS wheels  
Tarmac: 18" diameter  
Gravel: 15" diameter

#### **Tyres:**

Michelin (FIA regulations)





### Engine:

<b>Type:</b>	Four-cylinder inline turbo engine with direct fuel injection and air restrictor
<b>Capacity:</b>	1,599cc
<b>Bore x stroke:</b>	77 x 85.8mm
<b>Compression:</b>	max. 12.5:1 (FIA regulations)
<b>Max. output:</b>	approx. 310bhp
<b>Max. torque:</b>	approx. 420Nm
<b>Max. engine speed:</b>	8,500 rpm (FIA regulations)

### Cylinder block:

Aluminium cylinder block construction with bed plate lower section

### Crankshaft:

Steel crankshaft with reduced bearing diameters

### Pistons:

Forged skirt pistons

### Conrods:

High-performance steel

### Cylinder head:

Aluminium DOHC (Double Over Head Camshaft) construction; four valves per cylinder

### Valvetrain:

Two overhead chain-driven camshafts

### Exhaust system:

Garret turbo charger, silencer, catalytic converter

### Fuel system:

Single cylinder direct injection with 200 bar

### Lubrication:

Dry sump lubrication with oil suction

### Cooling:

Water/air cooler and oil/water heat exchanger

### Flywheel:

Optimised motorsport flywheel





### **International customer teams bank on MINI.**

Beside the two MINI John Cooper Works WRC entries for Kris Meeke and Dani Sordo, a host of privately-entered MINI rally cars will contest the FIA World Rally Championship. Privateers are able to order cars complying with the Super2000 regulations, or, for those with loftier ambitions, to full WRC specification. The MINI will also contest numerous regional and national championships.

This versatility is one of the cornerstones of the FIA's new regulations, which enable privateers to contest the WRC in cars identical to those campaigned by works teams – therefore creating even more excitement.

The first MINI John Cooper Works S2000 made its debut on Rally Portugal in March. The Brazil World Rally Team entered Daniel Oliveira (BR), with PWRC champion Armindo Araujo (PT) also taking to the start in a Motorsport Italia-entered car. Rally Italia, which marks the scheduled WRC debut of the MINI WRC Team, will see Oliveira and Araujo switch to MINI John Cooper Works WRC versions. Andrea Navarra (IT) caused a stir at the Rally dell'Adriatico in early April: the local hero won his first start in the Italian Gravel Rally Championship in a MINI John Cooper Works S2000. Prodrive is preparing 12 MINI rally cars for delivery to customers across Europe.

There are three key differences between the WRC and S2000 cars: The MINI John Cooper Works WRC has optimised aerodynamics comprising a higher rear wing plus a more efficient front spoiler. On asphalt water-cooled brakes are permitted in the WRC category, while the side windows of such versions are of ultra-light composite material.

Both cars use the same powerful engine, namely the 1.6-litre turbocharged unit as fitted to MINI production cars, but optimised by BMW Motorsport for deployment in various series. Private race teams use the unit to power the BMW 320 TC in the FIA World Touring Car Championship. In both WRC and S2000 guises identically-sized restrictors are specified, although Prodrive does offer reduced restrictors for series where WRC cars are specifically banned.

Prodrive offers both the MINI John Cooper Works WRC version and the S2000 specification car to customer teams with full support packages.





### **The benchmark in the 1960s: the Mini Cooper S.**

Paddy Hopkirk (GB), Timo Mäkinen (FI) and Rauno Aaltonen (FI) made history with their Rally Monte Carlo victories in 1964, 1965 and 1967. The trio laid the foundation for the long tradition of the MINI brand in international motorsport. The Mini Cooper S was the car to beat in the 1960s.

Well before Alec Issigonis drew up his legendary drafts for the Mini, he was already friends with one of the leading racing car designers: John Cooper. Cooper purchased Morris engines to use in his single-seater junior racing cars. It was for this reason that technical director Issigonis valued his advice so highly when it came to engine designs. As a result, John Cooper was involved with the development of the Mini right from the start.

The more the Mini project took shape, the more certain Cooper became this new car would bring something to the market, for which he had been looking for a long time: the basis for a sports car that could compete with the Lotus Elite at that time. Cooper had tried with a Renault Dauphine, into which he had transplanted a Coventry Climax engine, but he was far from happy with the handling. As soon as he got his hands on one of the new, small cars he began tuning it. It was with this prototype of the Mini Cooper that he travelled, with driver Roy Salvadori, to the Italian Grand Prix in Monza. The journey to the event became a race in its own rights with Reg Parnell, a renowned racing driver who was heading to the circuit in his Aston Martin DB4. When they arrived, Cooper's new Mini was a full hour faster, more than confirming the racing car designer's suspicions about the potential of the Mini.

Cooper contacted Issigonis and proposed using the Mini to develop a small GT racing car. However, Issigonis saw his car as nothing more than an everyday vehicle. John Cooper did not give up though: he contacted George Harriman, the head of BMC, directly. The British Motor Corporation (BMC) was formed in 1952 by a consortium of British automobile manufacturers, including the brands Austin, Morris, MG and Wolseley. Harriman was impressed by Cooper's idea and agreed on a small series of 1,000 Mini Coopers, in order to test the response.

The engine must not have greater than one litre capacity. For this reason, Cooper balanced the stroke, which he had increased from 68.3 to 81.3 mm, by reducing the bore from 62.9 to 62.4 millimetres. Distributed over four cylinders, this resulted in a capacity of exactly 997cc. The compression ratio rose from 8.3 to 9.0, while larger intake valves and twin carburettors were also added. Further modifications were made to the drilled outlet openings and the crankcase was reinforced to achieve greater efficiency. Cooper also changed the transmission ratios of the individual gears in the gearbox, in order to increase the maximum speed. As a result, the engine performance rose to 55 bhp and the maximum speed to about 130 km/h. In order for the brake performance to also keep pace with the increased efficiency, Cooper mounted 7-inch Lockheed disc brakes on the front wheels. For many involved in motorsport, this car came just at the right time, and a series of successes convinced BMC that the concept had a future.





Issigonis also changed his mind now and worked together with John Cooper on the next stage of performance improvements. John Cooper had already successfully tried and tested the formula with his single-seater junior engines: small stroke and large bore, combined with more solid pins to attach the cylinder head. With this in mind, the engineers for the Cooper S selected the engine with a capacity of 848cc.

The 68.2 millimetre stroke remained unchanged, while the bore was increased to its limit of 70.6 millimetres. Cooper had now achieved two important objectives: the 1,071cc capacity remained under the planned class limit of 1,100cc and the short stroke allowed high revs. The new car now produced 70 bhp at 6,200 rpm, with the maximum rpm at 7,200.

After Rauno Aaltonen and Paddy Hopkirk had finished first and second in their class at the Rally Monte Carlo in 1963 with a Mini Cooper, Hopkirk achieved Mini's first overall victory in the new Cooper S in 1964. With a top speed of 160 km/h, the car was even more competitive than its predecessor and accelerated from 0 to 100 km/h in 13 seconds rather than 19. The foundations had been set for future triumphs at the "Monte" and the Mini Cooper S success story.





### **Rauno Aaltonen: “Every child must first be nurtured.”**

Rauno Aaltonen made Mini history in the 1960s. The Finn stepped onto the podium at the Rallye Monte-Carlo on no less than three occasions and, at the side of co-driver Henry Liddon, won the most iconic rally in the world in 1967. In addition he claimed victory in the European Rally Championship in 1965 and added several national titles in his native Finland.

In this interview, the 73-year-old talks about the return of MINI to rallying.

### **Mr Aaltonen, how do you rate the technical development in rallying since the 1960s?**

Aaltonen: “The way rallying has developed is very positive. I particularly like the four-wheel drive. To a certain degree, the sport is returning to its roots. For example, no electronic driving assistance is allowed in the WRC. Despite this, the developers at MINI John Cooper Works WRC have left no stone unturned. The modern engine management catches the eye, as does the powerful propulsion made possible by the MINI four-wheel drive system. Nevertheless pushing a rally car to the limit is still a big challenge for today’s drivers.”

### **Do you believe Kris Meeke and Dani Sordo will first have to get used to their new car?**

Aaltonen: “Kris and Dani are absolute professionals. Even after just a few outings, top drivers like them are able to push the car to the limit. The tests give reason for confidence. I am sure the MINI John Cooper Works WRC will make it very easy for the drivers to quickly get the absolute maximum out of the total package.”

### **The MINI WRC team will be starting at selected WRC rallies in 2011. What do you expect from the team in its first year?**

Aaltonen: “I always say that every child must first be nurtured. In the case of motorsport, this means it is initially all about gaining experience so you can improve the car. Even the best computers cannot provide this experience. As MINI is in such an advanced stage of technical development, the team is able to start under competitive conditions. This obviously means you are a step further into your preparations for the second season.”

### **What do you make of the production model, the MINI Countryman?**

Aaltonen: “The new MINI Countryman is an outstanding car, which I can well imagine getting for myself. It has a lot of interior space, is extremely easy to drive, and gives you that typical MINI feeling when you drive it. The MINI Countryman is a genuine surprise.”





### **Historic victories: MINI in international motorsport.**

Mini scored its first success in the year of its birth: In 1959 Pat Moss (GB) won the Mille Miglia National Rally with a Mini 850. In 1962 the Mini Cooper S first caused a stir in Monte Carlo. With Rauno Aaltonen at the wheel, the small car embarked on a David versus Goliath crusade against obviously more powerful opponents. However, just three kilometres from the end, Aaltonen, leading at the time, misjudged a corner and rolled out of the event. The following year, though, the Finn made up for this disappointment: Driving a Mini Cooper S he was placed third overall and won his class.

It would get better: During the 1963/1964 winter rally season power was increased even further. Driving spectacularly, Paddy Hopkirk (IR) was placed first overall in the Rally Monte Carlo in the tiny sprinter. Thus the Mini acquired legendary status. In 1965 Finland's Timo Mäkinen and co-driver Paul Easter (GB) repeated the Monte triumph. They were the only crew to complete thousands of kilometres without penalty – despite gruelling winter conditions. Only 35 cars – including three Mini Cooper S – made it to the finish out of a total field of 237 entries.

A hat trick was targeted for the following year. Drivers Timo Mäkinen, Rauno Aaltonen and Paddy Hopkirk sensationally achieved the feat by mounting the finish ramp in first, second and third respectively. However, bitter disappointment was to follow: The trio was disqualified after the rally's stewards decreed the Mini's headlight dipping mechanism did not conform to homologation requirements. For the general public this technicality, though, mattered little, with their enthusiasm for the three Mini drivers remaining undiminished.

Hopkirk, Aaltonen and Mäkinen entered the annals of the Rally Monte Carlo as the "Three Musketeers". The Mini's third Monte Carlo victory, achieved in 1967 by Aaltonen, was celebrated all the more enthusiastically after the events of the previous year. This time there were absolutely no doubts about the car's eligibility. In 1965 the "Rally Professor" Aaltonen had triumphed in the European Rally Championship, with Tony Ambrose (GB) and Mäkinen completing an excellent result for the Mini Cooper S by finishing second and third respectively. In addition, various Mini drivers celebrated numerous individual victories across Europe.

However, the Mini did not shine only in rallying. In the 1960s the car achieved equal success on motor racing circuits. With its sporting qualities, it became one of the definitive racing cars of the decade, with many legendary drivers starting their careers with Mini. In April 1968 Niki Lauda (AT) contested his first hill climb near Linz (AT) in a classic Mini, finishing second. Just two weeks later he scored his first victory, displaying the sort of talent which would ultimately net him three Formula One titles. Like Lauda, other Formula One world champions such as Graham Hill, Jackie Stewart, John Surtees, Jochen Rindt and James Hunt all collected their first competition experiences in a classic Mini.





### MINI WRC Team Partners.

#### **AP Racing.**

Based in the UK AP Racing is a world leader in the design, development and supply of clutch and brake systems to the global Motorsport, OE and high performance kit market. With a direct focus on technical excellence and customer care AP Racing has been instrumental in pushing the technical boundaries at the highest levels of international Motorsport for over four decades.

#### **ATS.**

With classy designs, impressive technical advantages and rational manufacturing methods, ATS has played a leading role in the alloy wheel industry for more than 40 years. In the form of its aluminium wheels, ATS brings together sophisticated styling with extreme stability and is considered as the "world champion in weight optimisation". ATS has developed from being an accessories manufacturer to one of the largest original equipment manufacturer in the world and is a global leader in casting technology for economic large-scale manufacturing. As an innovative and competent original equipment manufacturer in the automotive industry, ATS is continuously researching, developing and constructing new technical developments. These new developments can also be transferred to the sport of motor racing where they can undergo further development. ATS first attracted attention through its Formula 1 team, founded in 1977, and then became a "global player" almost overnight. Now belonging to the UNIWHEELS Group, ATS is a technological leader in the large-sized wheel sector. ATS supplies all renowned automobile manufacturers. Every year, over 1,800 employees produce around eight million wheels at the production locations in Germany and Poland.

In 2010, ATS became World Touring Car Champion through its extremely stable but extraordinarily light WTCC wheels and successfully supplied touring car racing series such as the VW Scirocco Cup, the ADAC Procar and the Seat Supercopa. In the sport of rallying, ATS has developed new, high-strength rally racing wheels for the MINI WRC Team together with Prodrive. Since 2003, ATS has been the exclusive wheel supplier for the Formula 3 Euro Series and has also been a long-time supplier of the ATS F3 Cup. In 2010, the ATS-clad Monoposti team took all three podium places at the unofficial World Final of the Formula 3 season in Macau.

#### **Castrol.**

Think Castrol and you think performance lubricants. Whether on the race track or on the road, the Castrol name is synonymous with the most technically advanced lubricants available. With operations in some 70 countries, and over 100 agencies worldwide, Castrol meets the diverse needs of customers across the globe. Best known for its automotive lubricants, Castrol also produces lubricants for commercial vehicles, construction equipment, for industry and for the marine sectors. Castrol's pioneering spirit and its involvement in the heat of competition can be traced to the company's very earliest days. Founder, Charles Wakefield believed passionately in building the Castrol brand through an association with record-breaking achievements on land, water and in the air.





As early as 1910, Wakefield produced a series of publications to chronicle Castrol's contribution to these achievements – a legacy that remains to this day. Castrol continues to follow a philosophy of using motorsport to improve its products, pushing back technological barriers and forcing lubricants to the extremes of performance in a variety of applications. Research and development is carried out in laboratories around the world, working closely with leading manufacturers, scientific and technical centres and universities. This background has earned Castrol an unparalleled reputation for innovation and quality. Today, Castrol is part of the Bp Group – one of the three largest integrated energy companies in the world employing over 90,000 employees. The combination of the Castrol and Bp lubricants businesses provides new and exciting opportunities for the future and places the company in the world's top three lubricants manufacturers.

### **Michelin.**

Motorsport and competition have always been a deeply-rooted part of Michelin's culture. From the company's first win in the Paris-Brest-Paris cycle race in 1891 to its 13<sup>th</sup> straight victory in the Le Mans 24 Hours in 2010, MICHELIN has always seen the competitive arena as a unique means to demonstrate the performance of its tyres in extreme conditions and to develop the innovations and technologies that will later be carried over to MICHELIN road tyres. MICHELIN's involvement in the FIA World Rally Championship dates back to 1973, the year it was created. Thanks to a score of six wins, MICHELIN and its partner Alpine-Renault went on to claim the inaugural Manufacturers' crown. Between 1973 and 2005, MICHELIN notched up a record of no fewer than 224 events wins and 38 world titles!

After a five-year absence from the sport, MICHELIN has this year returned to the FIA World Rally Championship, where its partners include MINI WRC Team and the new MINI John Cooper Works WRC which is about to make its debut in this fiercely competitive series. MINI continues to be seen as an emblematic name in world class rallying, and everyone recalls the Mini Cooper S's triumphs on the Monte Carlo Rally in 1964, 1965 and 1967. It's never a coincidence when you succeed in winning one of the world's toughest events three times. Indeed, just as it does for MICHELIN, Motorsport forms an integral part of MINI's genetic makeup. Michelin is proud to partner MINI in this venture.

### **MINI Financial Services.**

MINI Financial Services, a sub-brand of BMW Group Financial Services, is a business division of the BMW Group and a globally active financial services company. Financial Services offers dealers, corporate and private customers around the world customized financial services revolving around MINI automobiles: from financing and leasing, via insurance and services, to the management of large vehicle fleets. The product spectrum also includes classical banking products such as online current accounts or the credit card MINI Excitement card. The focus of all these activities is customer satisfaction. Around the whole world, about 4,000 employees of BMW Group Financial Services in more than 50 countries are engaged in offering a particularly flexible, fast and extensive service. MINI Financial Services acts as a global, profitably growing provider of premium financial and mobility services.





### **Öhlins.**

Öhlins is a major player in motorsport and has been for well over 30 years. The suspension company was founded in 1976 by Kenth Öhlin and he still holds the reins at the Swedish HQ outside Stockholm. Represented in over 50 countries, Öhlins has subsidiaries in Germany and USA with an increased presence in the UK. This success spans almost every genre on both 2 and 4 wheels, where Öhlins products can be found on many driver's vehicles and rider's motorcycles. Öhlins achievements in motorsport have led to an impressive list of well over 200 World titles won on Öhlins suspension. Today Öhlins is a major OEM supplier as well as a specialist aftermarket and motorsport manufacturer. Öhlins history with World rallying started in the late 80's and during the 90's Öhlins was dominant on the World rally scene. Öhlins cooperation with Prodrive dates back to the late 90's and has covered many areas. Working as technical partners, both Öhlins and Prodrive are now gearing up for the return of the MINI brand in WRC.

### **Stilo.**

Stilo was founded in 1999 and is the supplier of helmets and intercom systems for the MINI WRC Team. The company is owned by Ludovico Fassitelli and Elena Perini, delivering its products to 39 countries, including the United States, Australia, Japan, South Africa and South America. Top functionality is in the focus of Stilo's philosophy. Stilo products leave a sign, exactly like a stilo in our ancestors wax boards.

### **Stratasys.**

Stratasys, Inc., Minneapolis, is a maker of additive manufacturing machines for prototyping and producing plastic parts. The company markets under the brands Fortus 3D Production Systems and Dimension 3D Printers. The company also operates RedEye On Demand, a digital manufacturing service for prototypes and production parts. According to Wohlers Report 2010, Stratasys supplied more additive manufacturing systems in 2009 than any other manufacturer, making it the unit market leader for the eighth consecutive year.

Stratasys patented and owns the process known as FDM.® The process creates functional prototypes and manufactured goods directly from any 3D CAD program, using high-performance industrial thermoplastics. The company holds more than 285 granted or pending additive manufacturing patents globally. Stratasys products are used in the aerospace, defense, automotive, medical, business & industrial equipment, education, architecture, and consumer-product industries. FDM Technology is a trademark, and Fortus, FDM, Stratasys, Redeye On Demand, and Dimension are registered trademarks of Stratasys, Inc.

